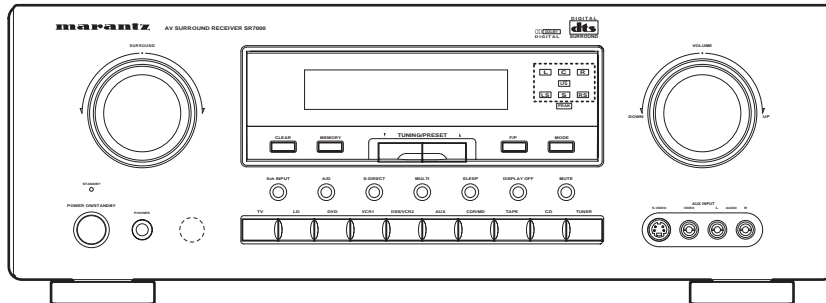


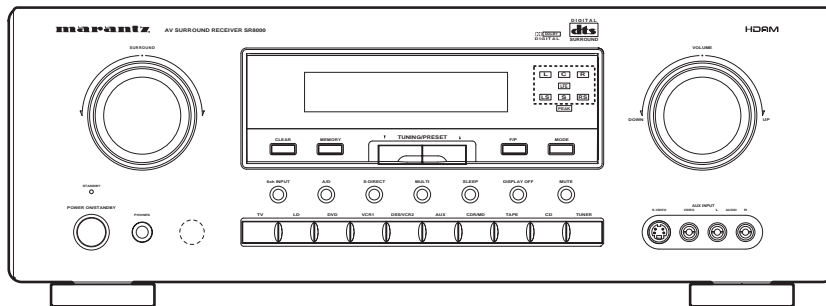
# Service Manual

**SR7000 /K1G, /N1G, /U1G  
/K1B, /N1B, /U1B  
SR8000 /K1G, /S1G, /U1B  
AV Surround Receiver**

**SR7000**



**SR8000**



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Please use this service manual with referring to the user guide ( D.F.U. ) without fail.

# marantz®

## SR7000 / SR8000

320J855010 MIT  
3120 785 22280  
First Issue 2000.02

SR7000/SR8000

## MARANTZ DESIGN AND SERVICE

Using superior design and selected high grade components, **MARANTZ** company has created the ultimate in stereo sound. Only original **MARANTZ** parts can insure that your **MARANTZ** product will continue to perform to the specifications for which it is famous.

Parts for your **MARANTZ** equipment are generally available to our National Marantz Subsidiary or Agent.

### ORDERING PARTS :

Parts can be ordered either by mail or by Fax.. In both cases, the correct part number has to be specified.

The following information must be supplied to eliminate delays in processing your order :

1. Complete address
2. Complete part numbers and quantities required
3. Description of parts
4. Model number for which part is required
5. Way of shipment
6. Signature : any order form or Fax. must be signed, otherwise such part order will be considered as null and void.

#### USA

**MARANTZ AMERICA, INC.**  
440 MEDINAH ROAD  
ROSELLE, ILLINOIS 60172  
USA  
PHONE : 630 - 307 - 3100  
FAX : 630 - 307 - 2687

#### EUROPE / TRADING

**MARANTZ EUROPE B.V.**  
P.O.BOX 80002, BUILDING SFF2  
5600 JB EINDHOVEN  
THE NETHERLANDS  
PHONE : +31 - 40 - 2732241  
FAX : +31 - 40 - 2735578

#### BRAZIL

**PHILIP DA AMAZONIA IND. ELET. ITDA**  
CENTRO DE INFORMACOES AO  
CEP 04698-970  
SAO PAULO, SP, BRAZIL  
PHONE : 0800 - 123123(Discagem Direta Gratuita)  
FAX : +55 11 534. 8988

#### PROFESSIONAL AMERICAS

**SUPERSCOPE TECHNOLOGIES, INC.**  
MARANTZ PROFESSIONAL PRODUCTS  
2640 WHITE OAK CIRCLE, SUITE A  
AURORA, ILLINOIS 60504 USA  
PHONE : 630 - 820 - 4800  
FAX : 630 - 820 - 8103

#### PROFESSIONAL AUSTRALIA

**TECHNICAL AUDIO GROUP PTY, LTD**  
558 DARLING STREET,  
BALMAIN, NSW 2041,  
AUSTRALIA  
PHONE : 61 - 2 - 9810 - 5300  
FAX : 61 - 2 - 9810 - 5355

#### CANADA

**LENBROOK INDUSTRIES LIMITED**  
633 GRANITE COURT,  
PICKERING, ONTARIO L1W 3K1  
CANADA  
PHONE : 905 - 831 - 6333  
FAX : 905 - 831 - 6936

#### AUSTRALIA

**JAMO AUSTRALIA PTY LTD**  
1 EXPO COURT, P.O. BOX 350  
MT. WAVERLEY VIC 3149  
AUSTRALIA  
PHONE : +61 - 3 - 9543 - 1522  
FAX : +61 - 3 - 9543 - 3677

#### THAILAND

**MRZ STANDARD CO.,LTD**  
746 - 754 MAHACHAI ROAD.,  
WANGBURAPAPIROM, PHRANAKORN,  
BANGKOK, 10200 THAILAND  
PHONE : +66 - 2 - 222 9181  
FAX : +66 - 2 - 224 6795

#### SINGAPORE

**WO KEE HONG (S) PTE LTD**  
WO KEE HONG CENTRE  
NO.23, LORONG 8, TOA PAYOH  
SINGAPORE 319257  
PHONE : +65 2544555  
FAX : +65 2502213

#### NEW ZEALAND

**WILDASH AUDIO SYSTEMS NZ**  
14 MALVERN ROAD MT ALBERT  
AUCKLAND NEW ZEALAND  
PHONE : +64 - 9 - 8451958  
FAX : +64 - 9 - 8463554

#### TAIWAN

**PAI- YUING CO., LTD.**  
6 TH FL NO, 148 SUNG KIANG ROAD,  
TAIPEI, 10429, TAIWAN R.O.C.  
PHONE : +886 - 2 - 25221304  
FAX : +886 - 2 - 25630415

#### MALAYSIA

**WO KEE HONG ELECTRONICS SDN. BHD.**  
SUITE 8.1, LEVEL 8, MENARA GENESIS,  
NO. 33, JALAN SULTAN ISMAIL,  
50250 KUALA LUMPUR, MALAYSIA  
PHONE : +60 3 - 2457677  
FAX : +60 3 - 2458180

#### JAPAN *Technical*

**MARANTZ JAPAN, INC.**  
35- 1, 7- CHOME, SAGAMIONO  
SAGAMIHARA - SHI, KANAGAWA  
JAPAN 228-8505  
PHONE : +81 42 748 1013  
FAX : +81 42 741 9190

#### 日本マランツ株式会社

本社 〒228-8505  
神奈川県相模原市相模大野7-35-1  
営業本部 〒150-0022  
東京都渋谷区恵比寿南1-11-9

#### KOREA

**MK ENTERPRISES LTD.**  
ROOM 604/605, ELECTRO-OFFICETEL, 16-58,  
3GA, HANGANG-RO, YONGSAN-KU, SEOUL  
KOREA  
PHONE : +822 - 3232 - 155  
FAX : +822 - 3232 - 154

### SHOCK, FIRE HAZARD SERVICE TEST :

**CAUTION :** After servicing this appliance and prior to returning to customer, measure the resistance between either primary AC cord connector pins ( with unit NOT connected to AC mains and its Power switch ON ), and the face or Front Panel of product and controls and chassis bottom.

Any resistance measurement less than 1 Megohms should cause unit to be repaired or corrected before AC power is applied, and verified before it is return to the user/customer.

Ref. UL Standard No. 1492.

In case of difficulties, do not hesitate to contact the Technical  
Department at above mentioned address.

# 1. TECHNICAL SPECIFICATIONS

## FM TUNER SECTION

Frequency Range ..... 87.5 - 108.0 MHz  
Usable Sensitivity ..... IHF 1.8  $\mu$ V/16.4 dBf  
Signal to Noise Ratio ..... Mono/Stereo 76/72 dB  
Distortion ..... Mono/Stereo 0.2 / 0.3 %  
Stereo Separation ..... 1 kHz 45 dB  
Alternate Channel Selectivity .....  $\pm$ 400 kHz 60 dB (U version)  
 $\pm$ 300 kHz 60 dB (K, N, S version)  
Image Rejection ..... 98 MHz 70dB  
Tuner Output Level ..... 1 kHz, 75 kHz Dev 800 mV (U version)  
1 kHz, 40 kHz Dev 800 mV (K, N, S version)

## AM TUNER SECTION

Frequency Range ..... AM : 520 - 1710 kHz (U version)  
AM : 531 - 1602 or 520 - 1710 kHz (K version)  
AM : 531 - 1602 kHz (S version)  
LW : 152-282 kHz / MW : 531 - 1602 kHz (N version)  
Signal to Noise Ratio ..... 50 dB  
Usable Sensitivity ..... Loop 400  $\mu$ V  
Distortion ..... 400 Hz, 30% Mod. 0.5%  
Selectivity .....  $\pm$ 20 kHz 70 dB (U version)  
 $\pm$ 18 kHz 70 dB (K, N, S version)

## AUDIO SECTION

Rated Power (SR7000)  
Stereo Mode FRONT (20 Hz - 20 kHz) ..... 8 ohms 100W / Ch (2ch driven)  
Center (40 Hz - 20 kHz) ..... 8 ohms 100W / Ch  
Surround ..... 8 ohms 100W / Ch  
Rated Power (SR8000)  
Stereo Mode FRONT (20 Hz - 20 kHz) ..... 8 ohms 105W / Ch (2ch driven)  
Center (40 Hz - 20 kHz) ..... 8 ohms 105W / Ch  
Surround ..... 8 ohms 105W / Ch  
THD Front (20 Hz - 20 kHz) ..... 8 ohms 0.05%  
Input Sensitivity/Impedance  
Linear ..... 350mV/47 kohms  
Signal to Noise Rate ( IHF A )  
Linear ..... 105 dB  
Dolby Surround Adjacent Channels Separation ..... 55 dB

## VIDEO

Television Format ..... NTSC (U version)  
PAL/NTSC (K, N, S version)  
Input Level/Impedance ..... 1 Vp-p/75 ohms  
Output Level/Impedance ..... 1 Vp-p/75 ohms  
Video Frequency Response ..... 5 Hz to 8 MHz ( - 1 dB)  
S/N ..... 60 dB

## GENERAL

Power Requirement ..... AC 120V 60 Hz (U version)  
AC 220 50/60 Hz (K version)  
AC 230V 50 Hz (N, S version)  
Power Consumption ..... 360W  
Dimension ( MAX )  
Width ..... 17-1/4 inches (440 mm)  
Width (SR8000 U only) ..... 18 inches (458 mm)  
Height ..... 6-1/4 inches (159 mm)  
Depth ..... 18-1/8 inches (460 mm)  
Weight (SR7000) ..... 33.1 lds. (14.5 kg)  
Weight (SR8000) ..... 32.0 lds. (15 kg)

## ACCESSORIES

Remote Control Unit RC7000SR (SR7000) ..... 1  
Remote Control Unit RC-18SR (SR8000) ..... 1

## Dolby Digital(AC-3) SECTION

**Output Level** ( Master Volume is set 0dB )  
Front L/R, CENTER, SURROUND L/R  
1 KHz, 0 dB FS INPUT ..... 1.1V  
SUBWOOFER  
40 Hz, 0 dB FS INPUT ..... 3.8V

### Frequency Response

Front L/R, CENTER, SURROUND L/R ( LARGE )  
20 Hz - 20 KHz ..... -1dB

### Total Harmonic Distortion

Front L/R, CENTER, SURROUND L/R ( 1 KHz ) ..... 0.01% or less  
SUBWOOFER ( 40 Hz ) ..... 0.07% or less  
Signal to Noise Ratio ( IHF-A ) ..... 96 dB  
Channel Separation ( 1 KHz ) ..... 70 dB

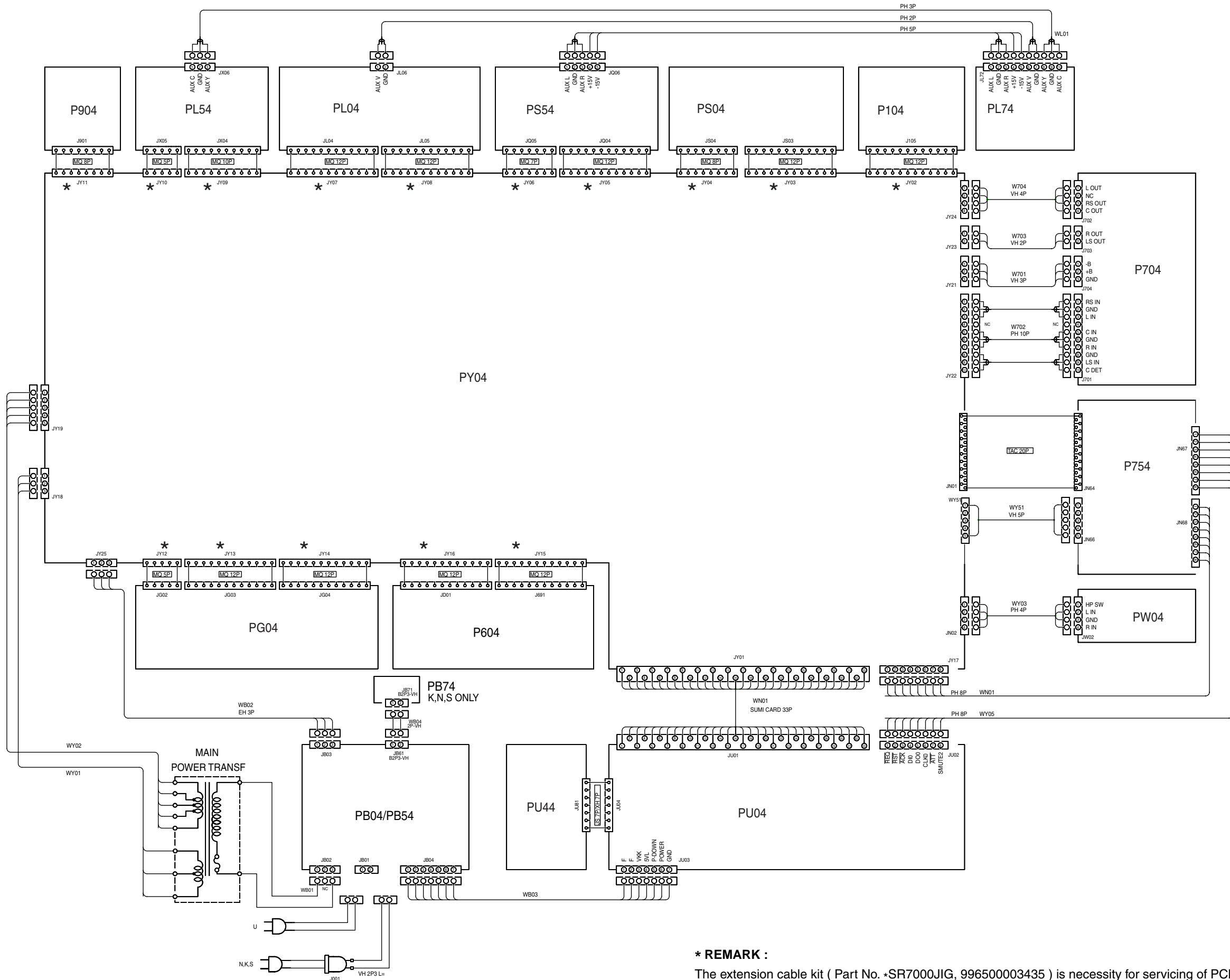
Specifications subject to change without prior notice.

**Remark : Bass signal output from Sub Woofer terminal for SR7000/SR8000**

Sub woofer output is not active while all surround modes. Please refer to the following table.

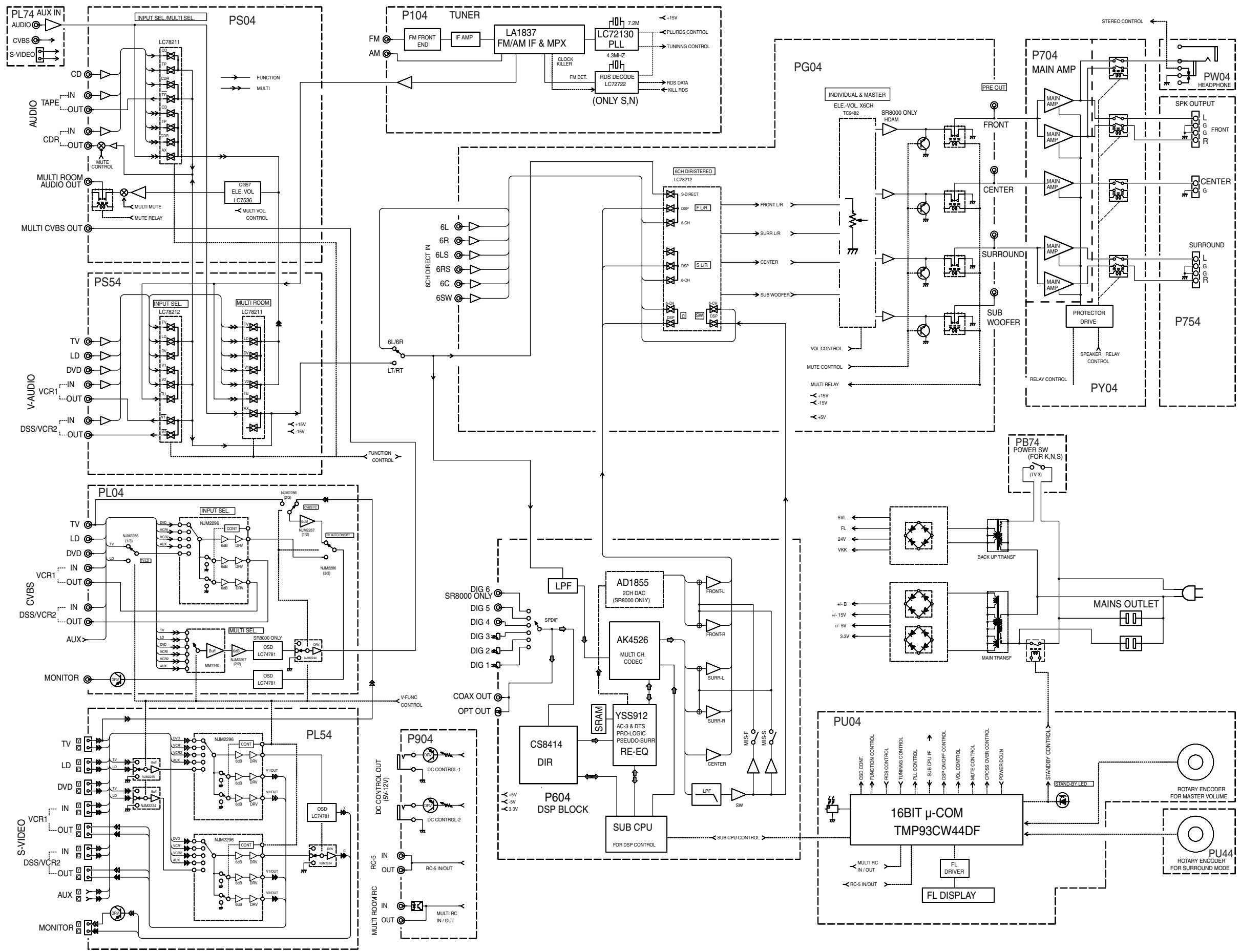
SPK setup				SubWoofer Output						
Sub Woofer	Front	Center	Rear	Dolby Digital DTS	Dolby (Pro Logic)	Hall , Matrix Movie, 5Stereo	Stereo	Source Direct		
Yes	Large	Large	Large	LFE	none	L+R	L+R	LFE		
			Small	LFE+LS+RS	none	L+R	L+R	LFE		
			None	LFE	none	L+R	L+R	LFE		
		Small	Large	LFE+C	C	L+R	L+R	LFE		
			Small	LFE+C+LS+RS	C	L+R	L+R	LFE		
			None	LFE+C	none	L+R	L+R	LFE		
		None	Large	LFE	none	L+R	L+R	LFE		
			Small	LFE+LS+RS	none	L+R	L+R	LFE		
			None	LFE	none	L+R	L+R	LFE		
		Small	Large	Large	LFE+L+R	L+R	L+R	L+R	LFE	
				Small	LFE+L+R+LS+RS	L+R	L+R	L+R	LFE	
				None	LFE+L+R	L+R	L+R	L+R	LFE	
	Small		Large	LFE+L+R+C	L+R+C	L+R	L+R	LFE		
			Small	LFE+L+R+C+LS+RS	L+R+C	L+R	L+R	LFE		
			None	LFE+L+R+C	L+R+C	L+R	L+R	LFE		
	None		Large	LFE+L+R	L+R	L+R	L+R	LFE		
			Small	LFE+LS+RS	L+R	L+R	L+R	LFE		
			None	LFE+L+R	L+R	L+R	L+R	LFE		
	None		Large	Large	Large	none	none	none	none	LFE
					Small	none	none	none	none	LFE
					None	none	none	none	none	LFE
		Small		Large	none	none	none	none	LFE	
				Small	none	none	none	none	LFE	
				None	none	none	none	none	LFE	
None		Large		none	none	none	none	LFE		
		Small		none	none	none	none	LFE		
		None		none	none	none	none	LFE		
Small		Large		Large	Prohibited	Prohibited	Prohibited	Prohibited	Prohibited	
				Small	Prohibited	Prohibited	Prohibited	Prohibited	Prohibited	
				None	Prohibited	Prohibited	Prohibited	Prohibited	Prohibited	
		Small	Large	Prohibited	Prohibited	Prohibited	Prohibited	Prohibited		
			Small	Prohibited	Prohibited	Prohibited	Prohibited	Prohibited		
			None	Prohibited	Prohibited	Prohibited	Prohibited	Prohibited		
		None	Large	Prohibited	Prohibited	Prohibited	Prohibited	Prohibited		
			Small	Prohibited	Prohibited	Prohibited	Prohibited	Prohibited		
			None	Prohibited	Prohibited	Prohibited	Prohibited	Prohibited		

## 2. WIRING DIAGRAM

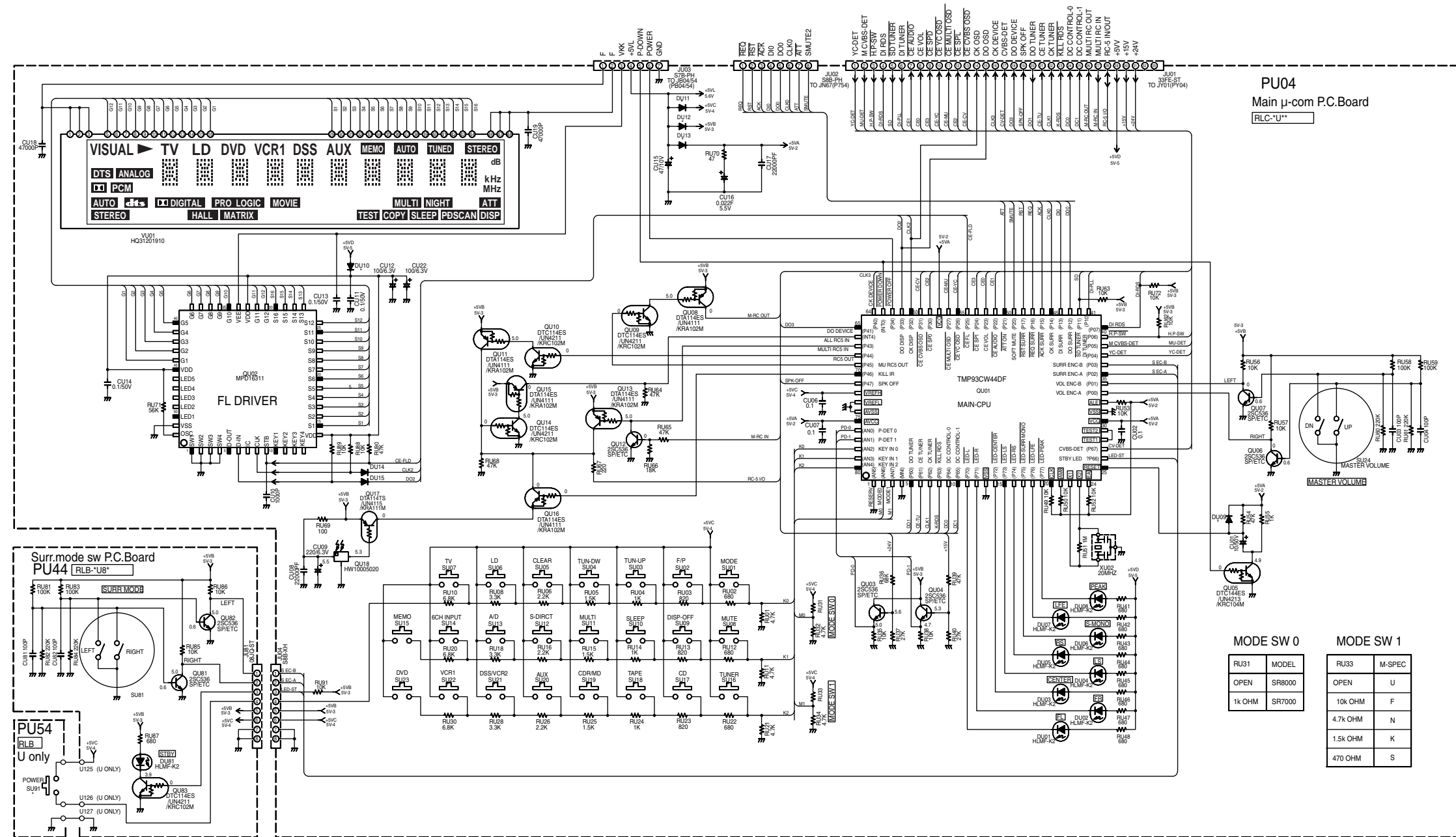


**\* REMARK :**  
 The extension cable kit ( Part No. \*SR7000JIG, 996500003435 ) is necessity for servicing of PCB's.  
 (P904, PL54, PL04, PS54, PS04, P104, PG04, P604 )

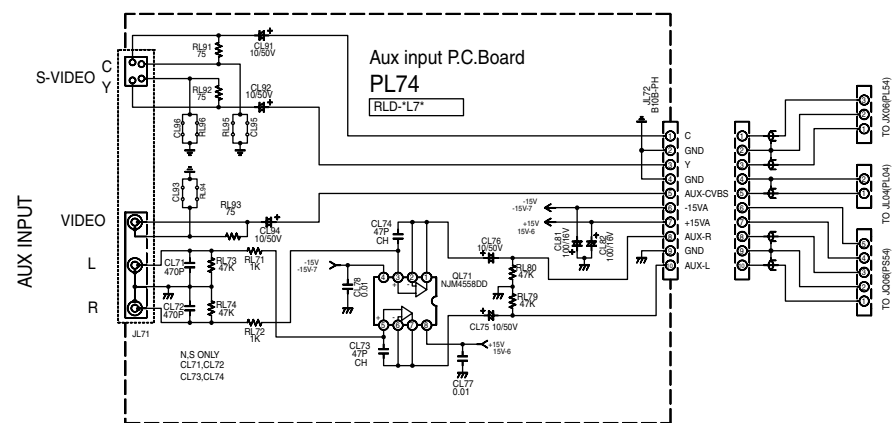
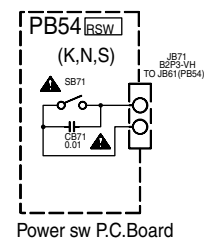
### 3. BLOCK DIAGRAM

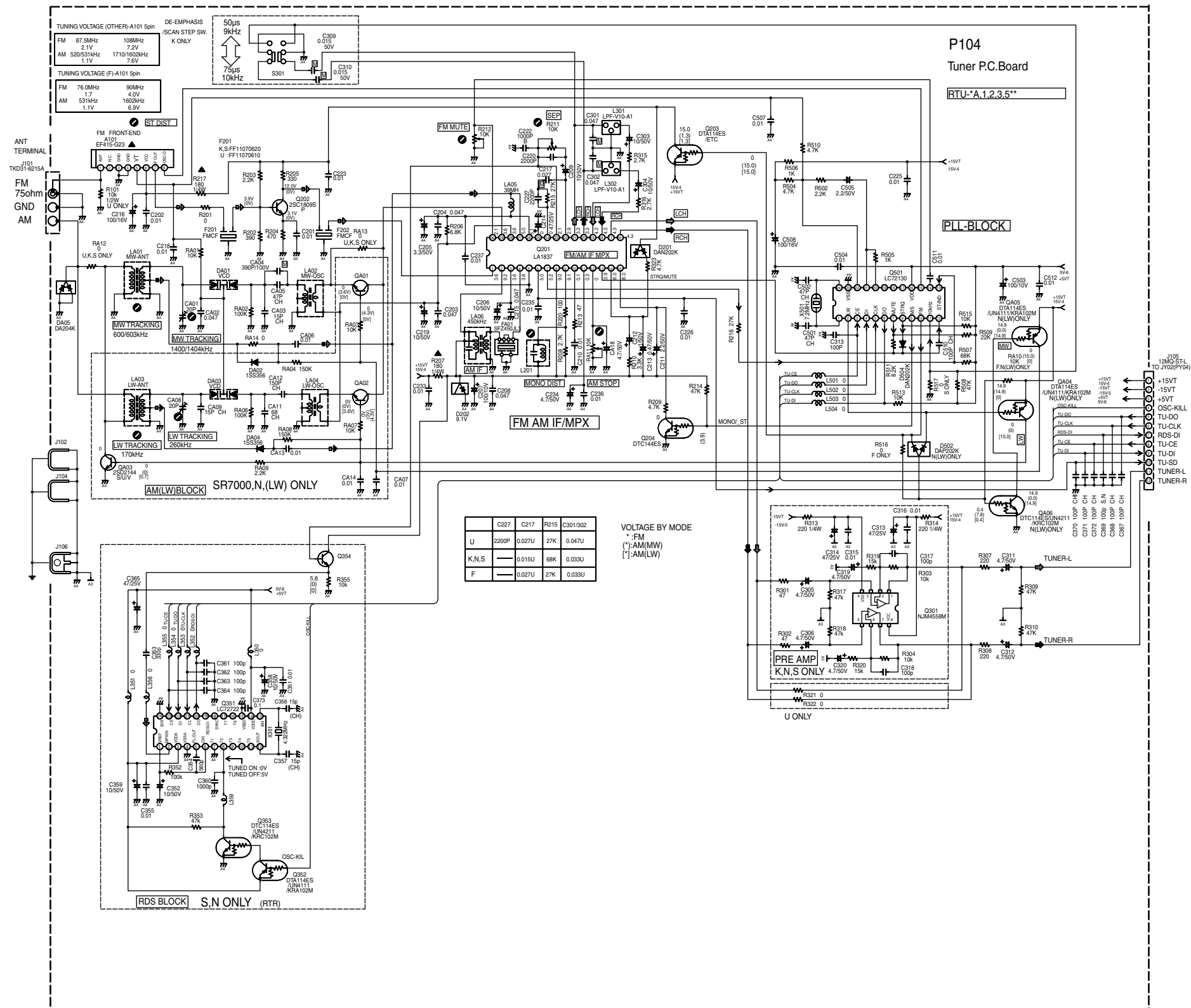


# 4. SCHEMATIC DIAGRAM

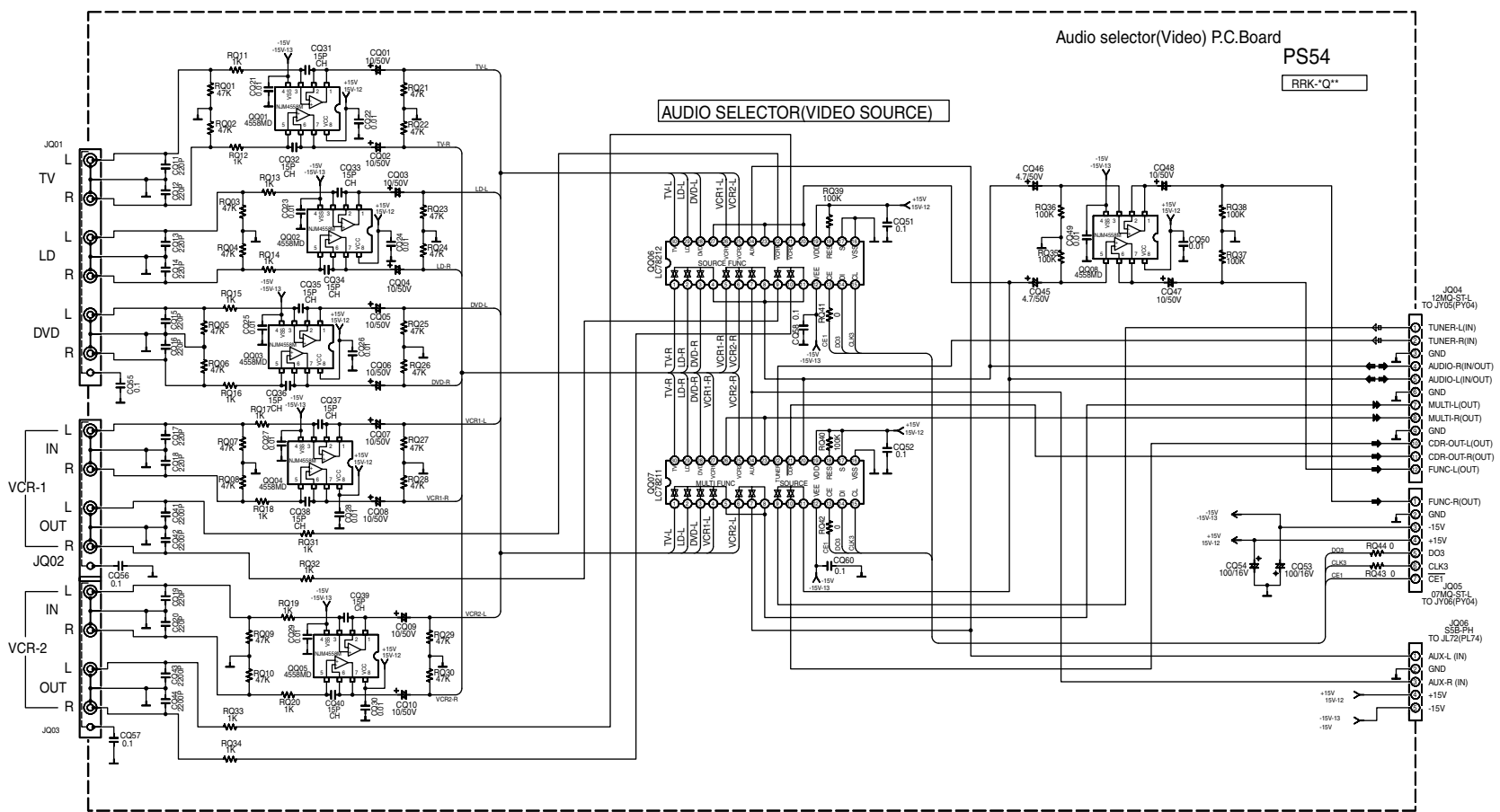
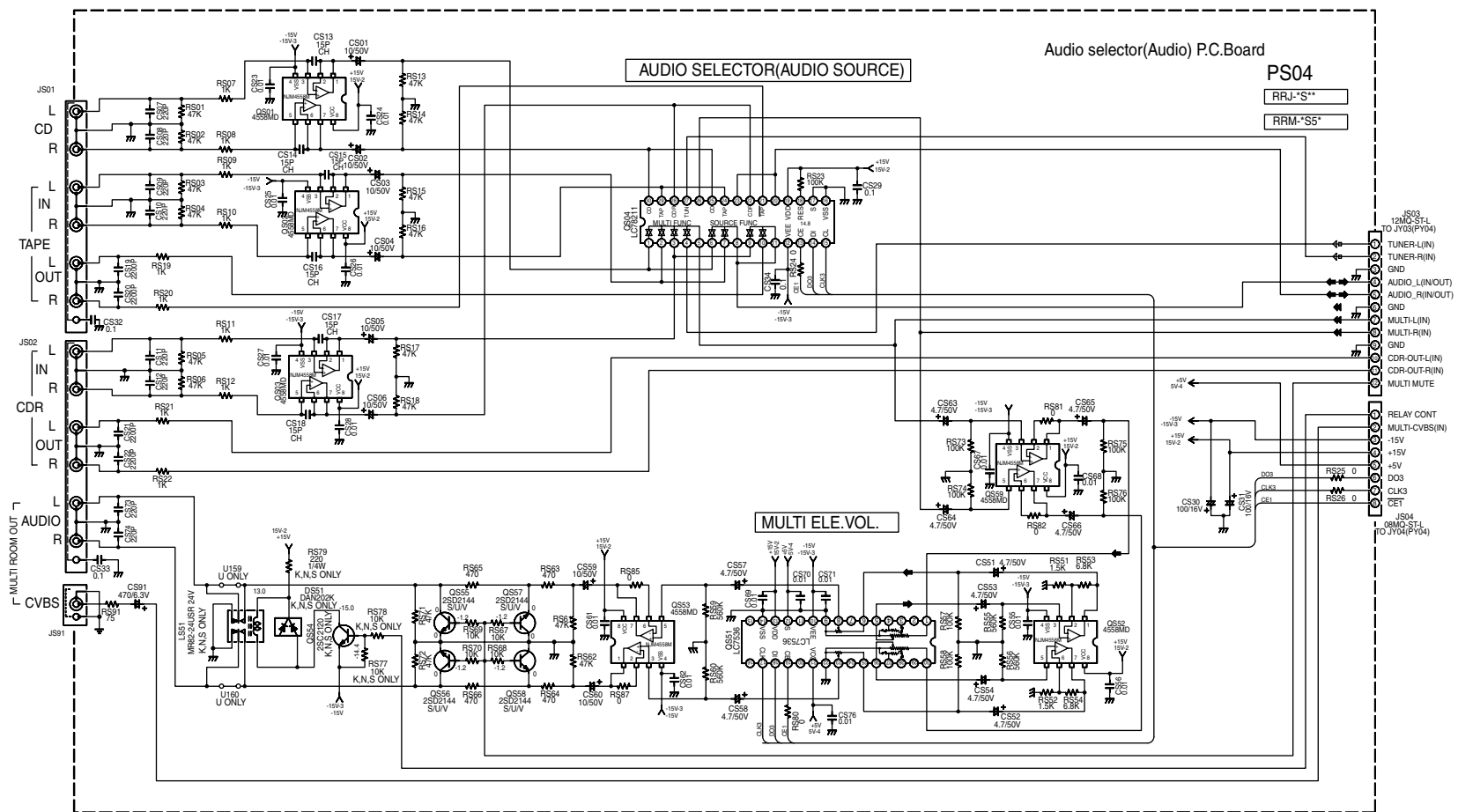


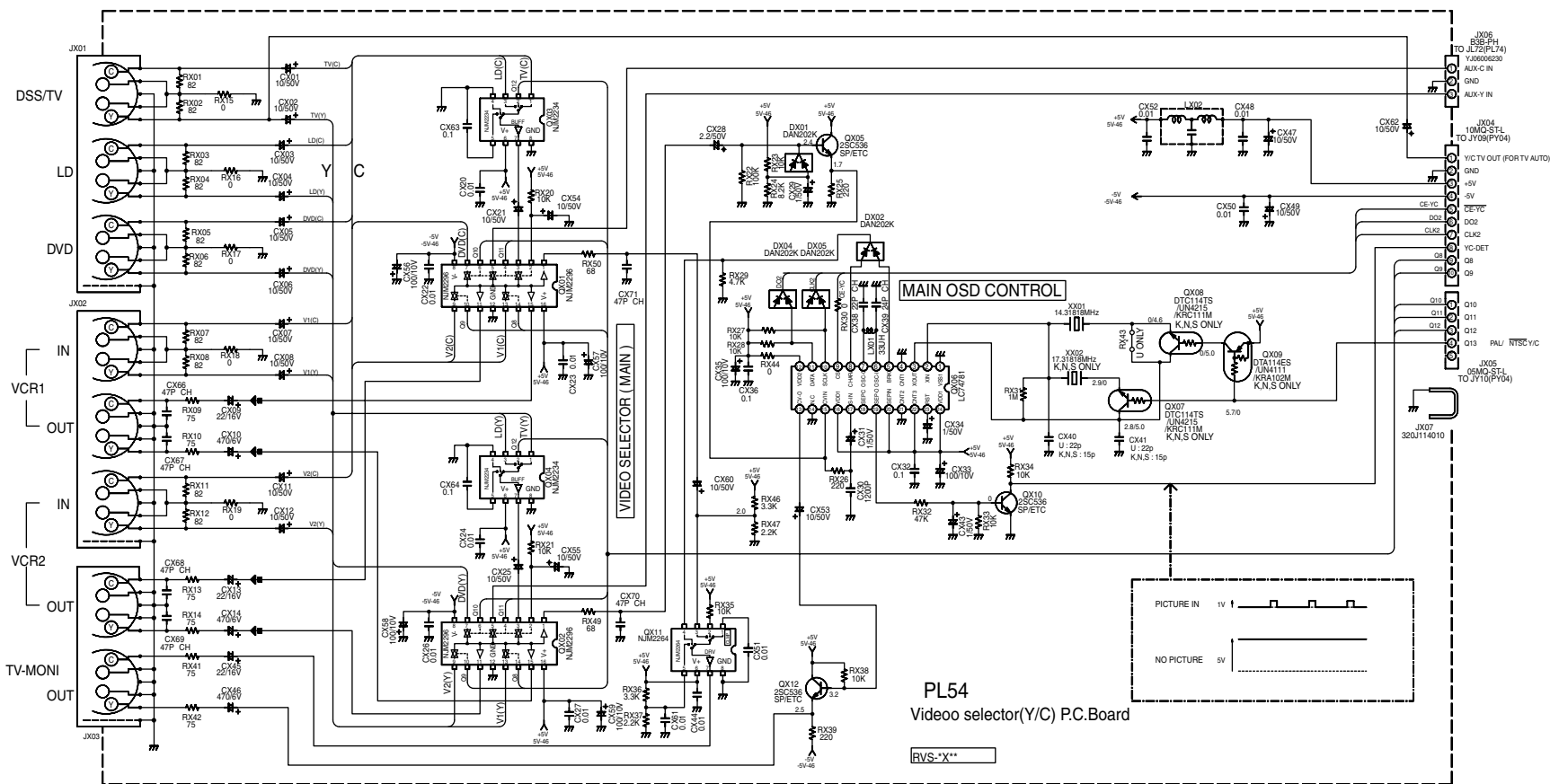
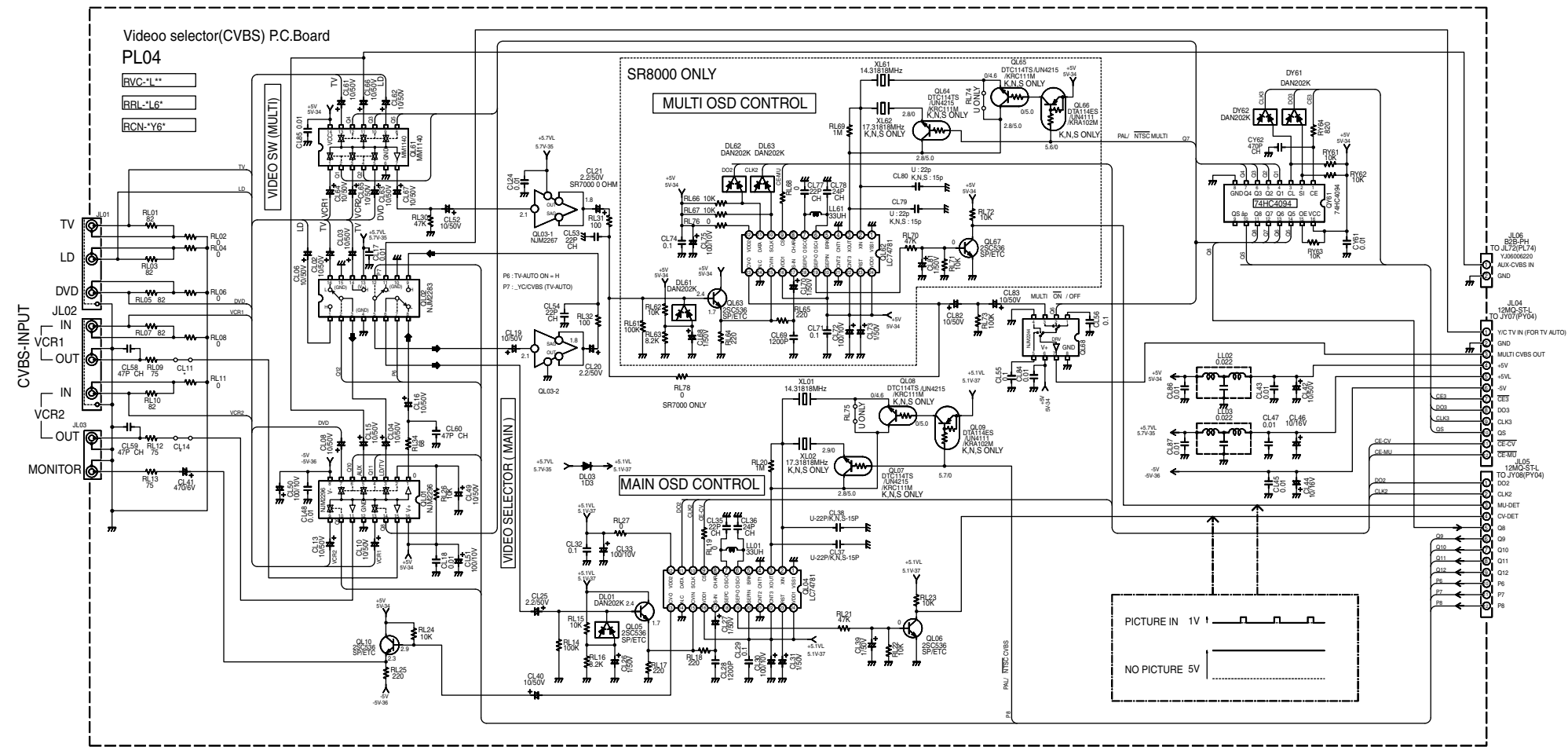
Standby sw P.C.Board



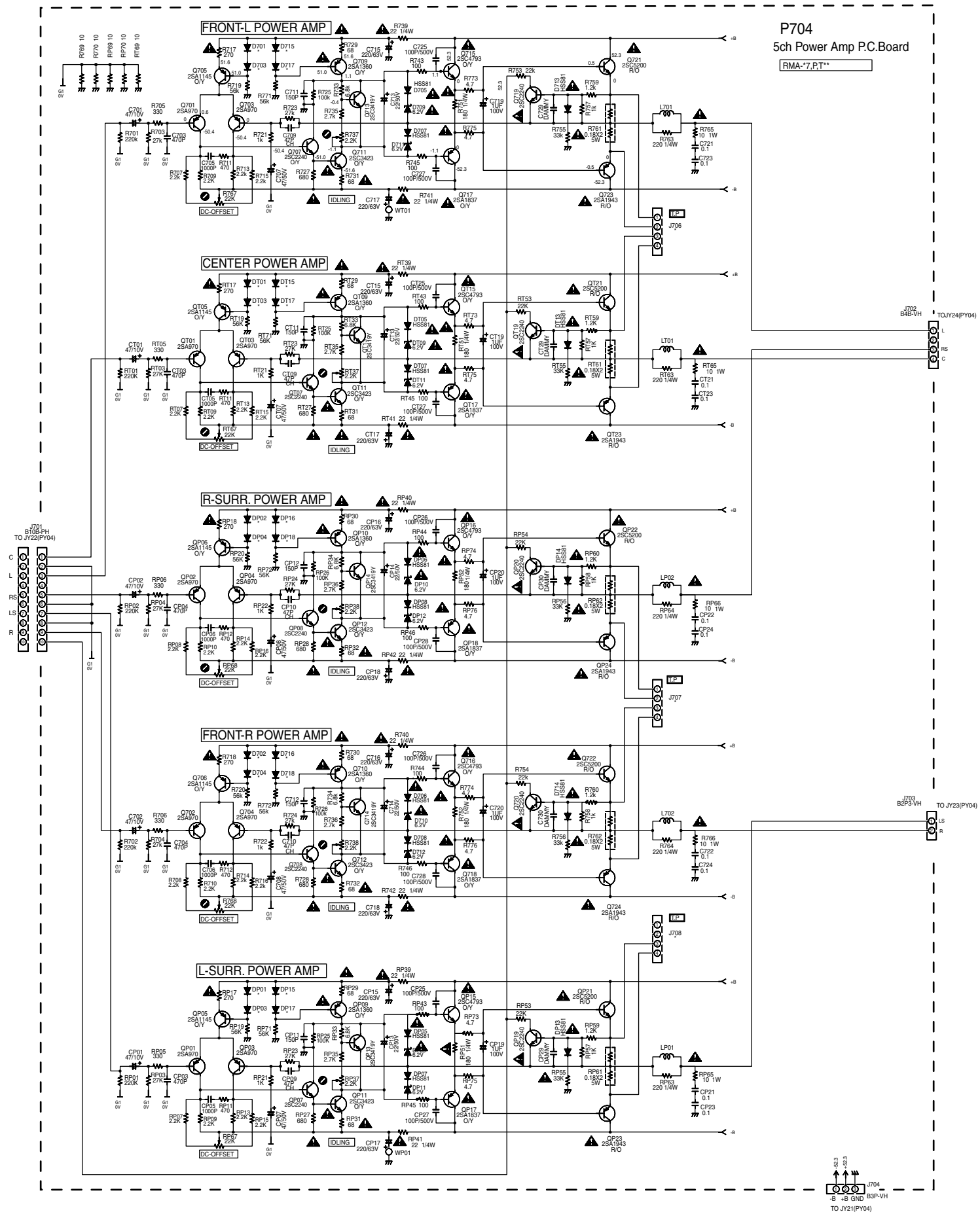




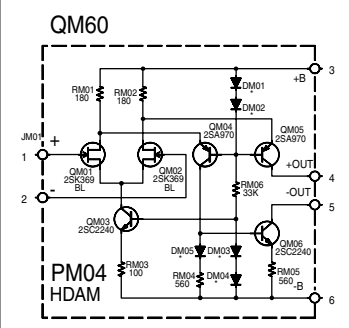
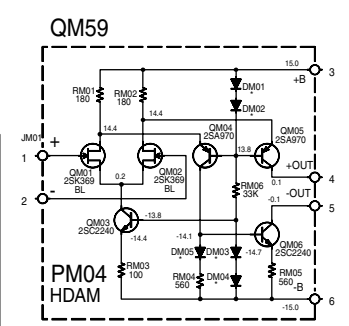
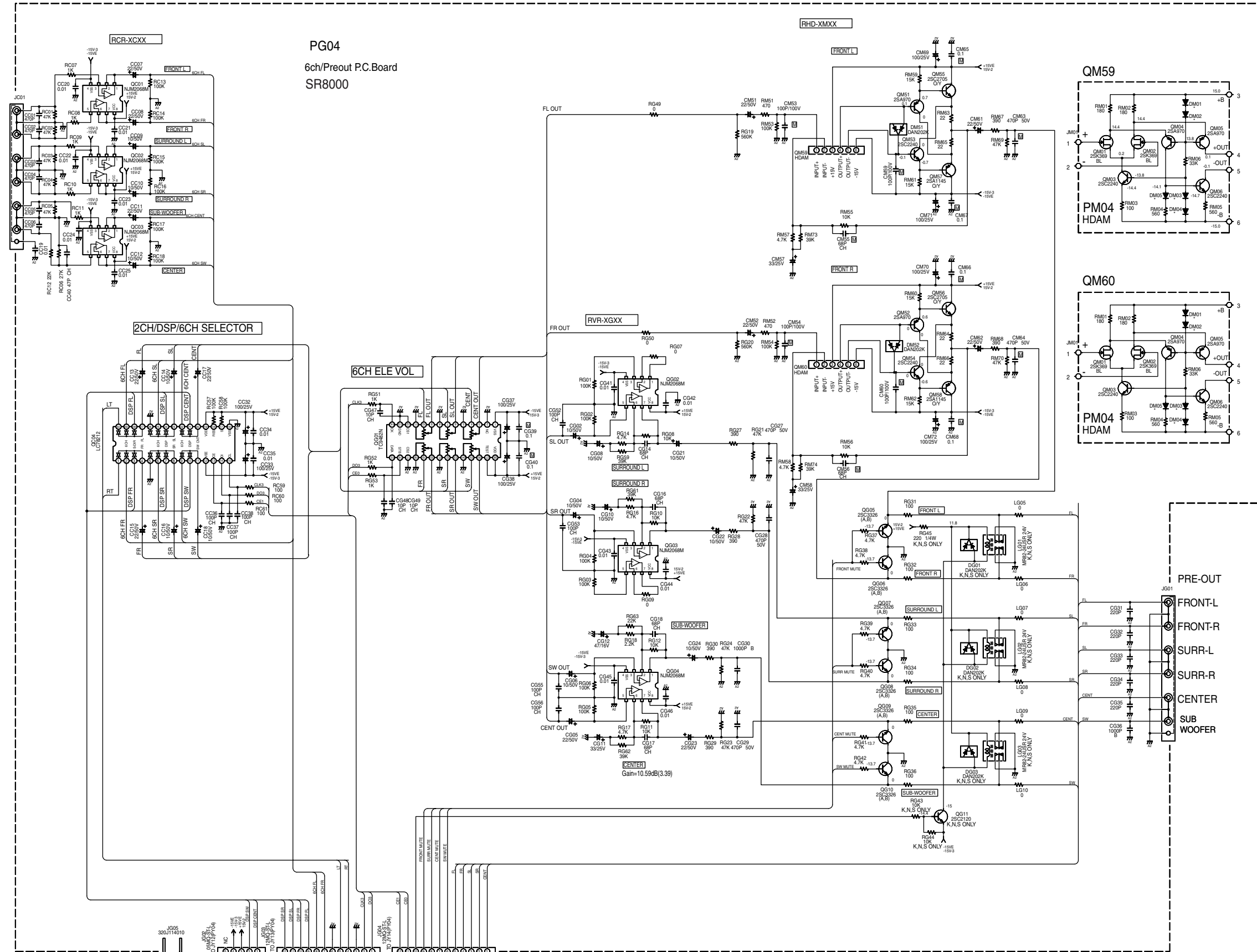




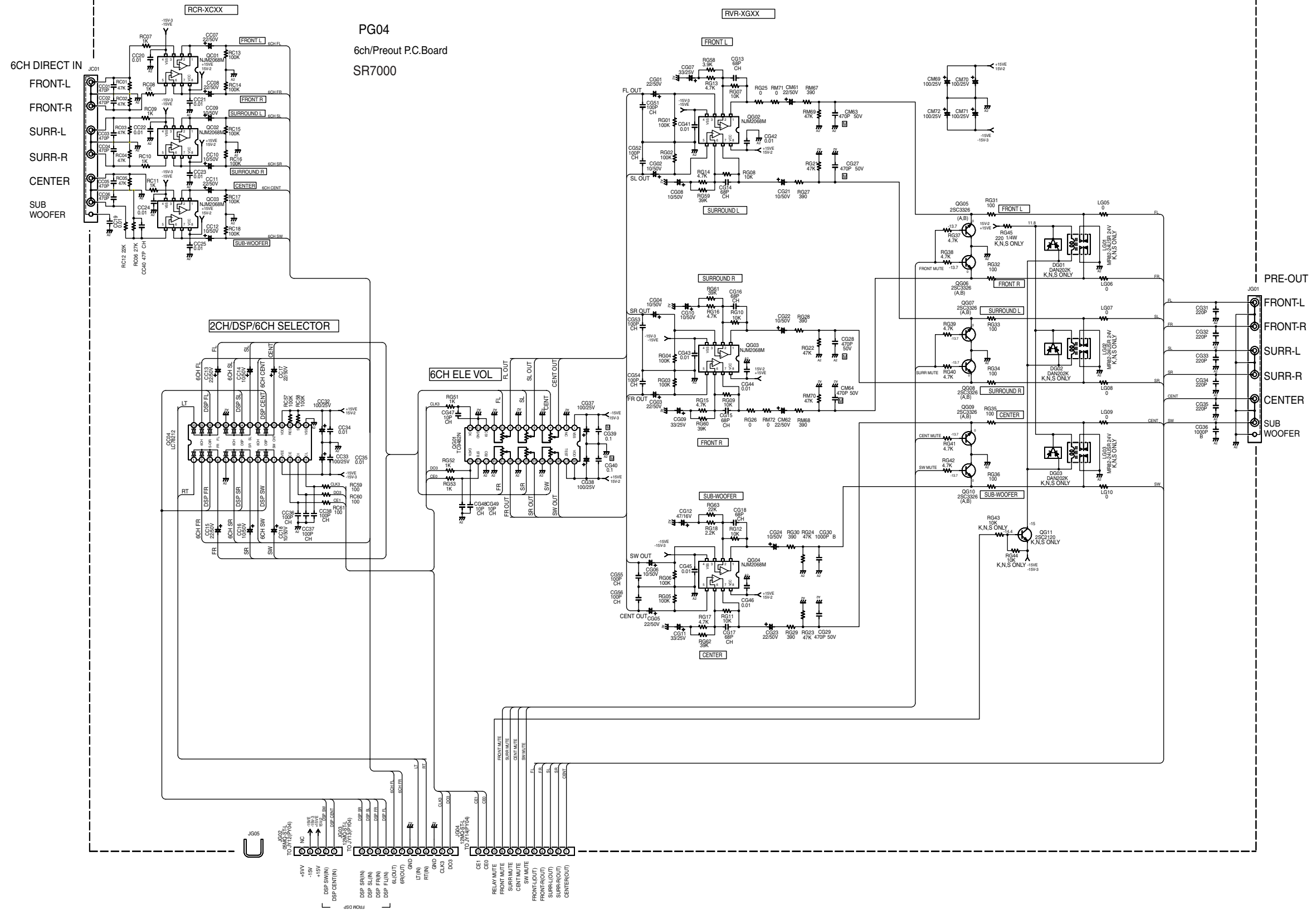
FUNC.	MAIN ROOM VIDEO SELECT						MULTI ROOM SELECT					
	Q12	Q11	Q10	Q9	Q8	P7	P6	Q5	Q4	Q3	Q2	Q1
CD	*	*	*	L	L	*	*	*	*	*	*	*
TV	L	H	H	H	H	*	L	L	H	H	*	*
LD	H	H	H	H	H	*	L	H	*	*	*	*
DVD	*	*	L	H	H	*	L	L	*	L	H	*
VCR1	*	*	*	H	L	*	L	L	*	L	L	L
DSS	*	*	L	L	H	*	L	L	*	L	L	H
AUX	*	L	H	H	H	*	L	L	L	H	*	*

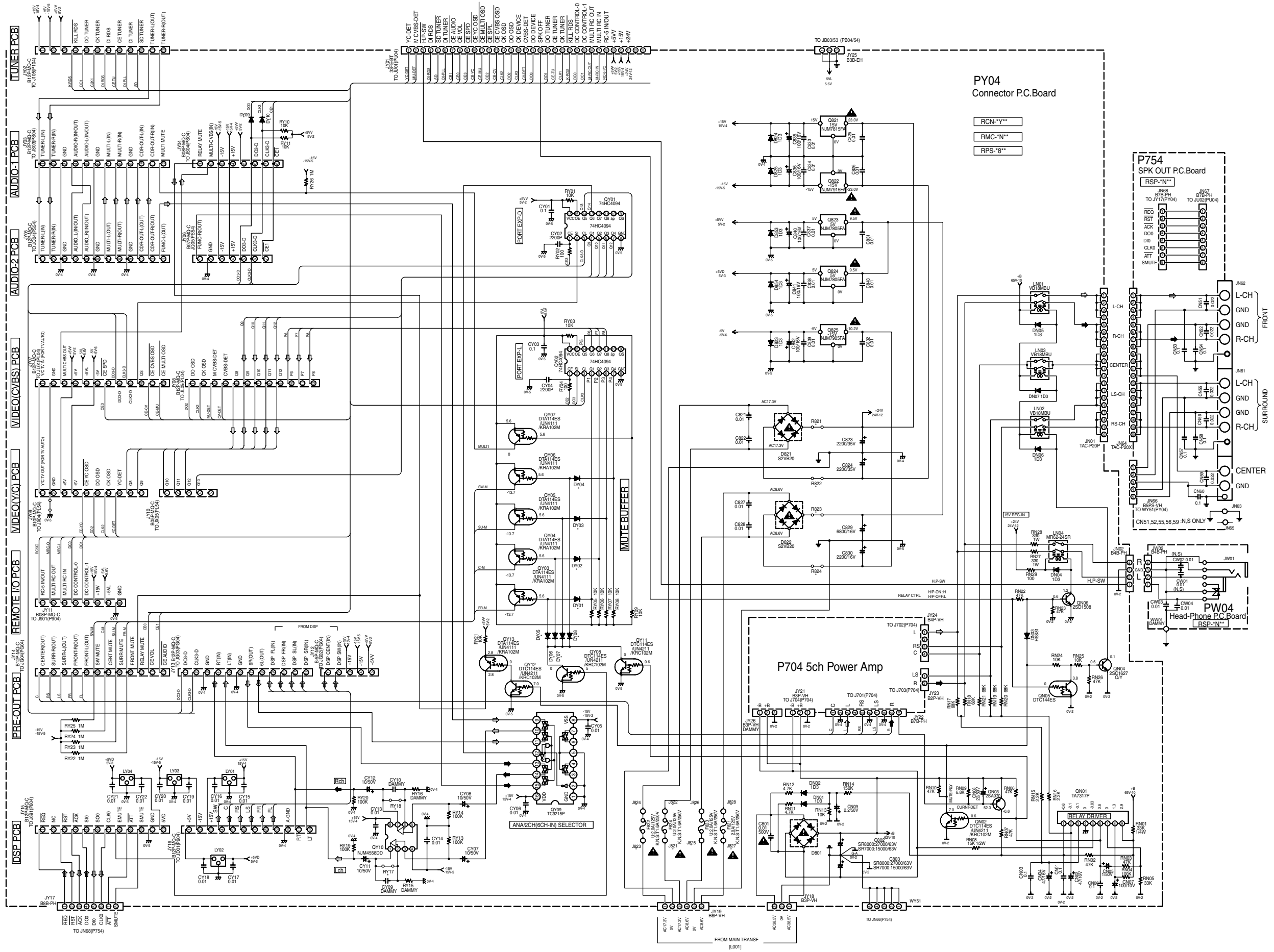


6CH DIRECT IN  
FRONT-L  
FRONT-R  
SURR-L  
SURR-R  
CENTER  
SUB WOOFER



PRE-OUT  
FRONT-L  
FRONT-R  
SURR-L  
SURR-R  
CENTER  
SUB WOOFER





PY04  
Connector P.C.Board

- RCN-'Y\*\*
- RMC-'N\*\*
- RPS-'8\*\*

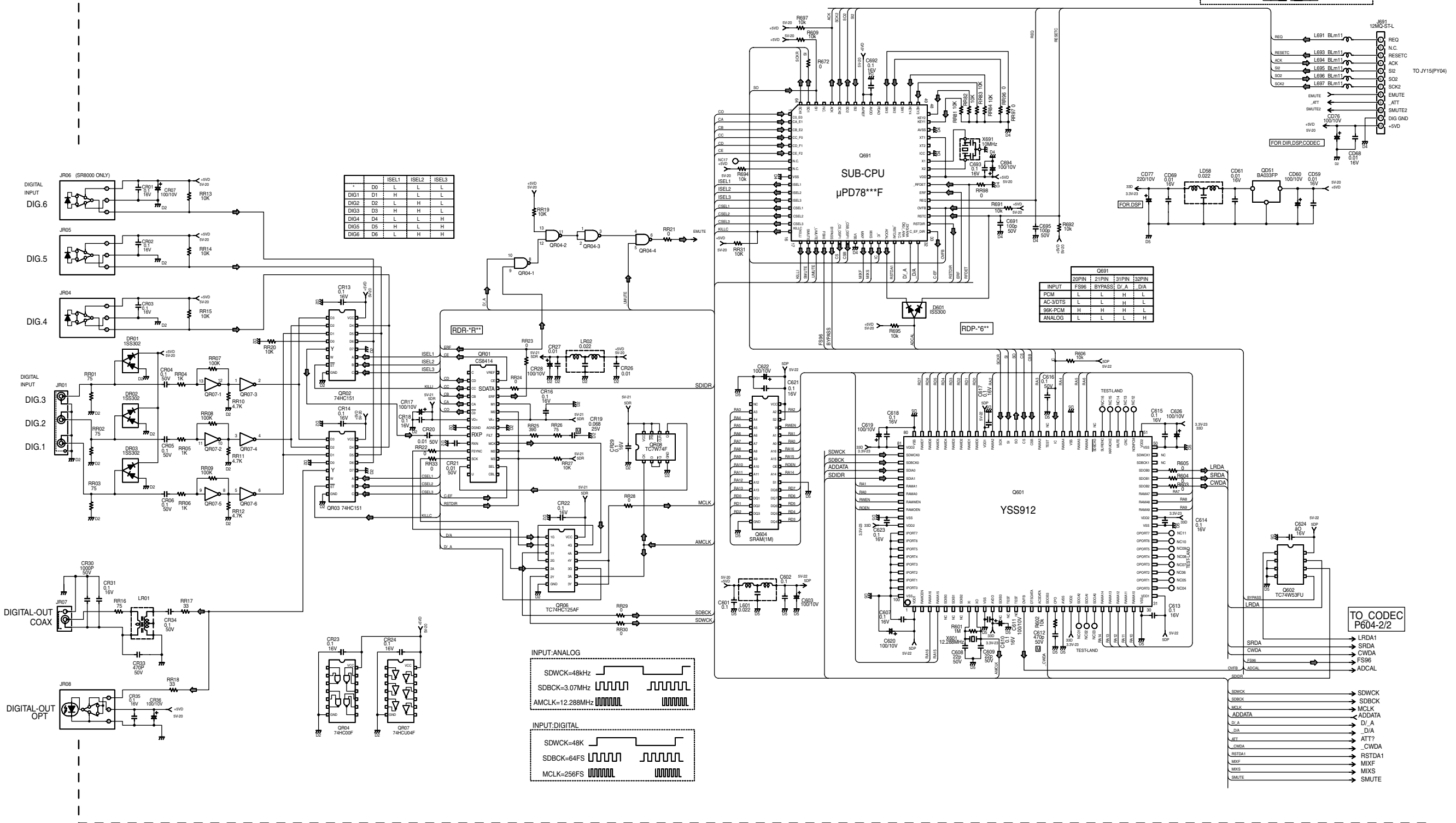
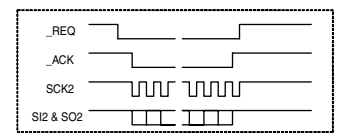
P754  
SPK OUT P.C.Board

- RSP-'N\*\*

P704 5ch Power Amp

PW04  
Head-Phone P.C.Board

P604-1/2  
DSP P.C.Board

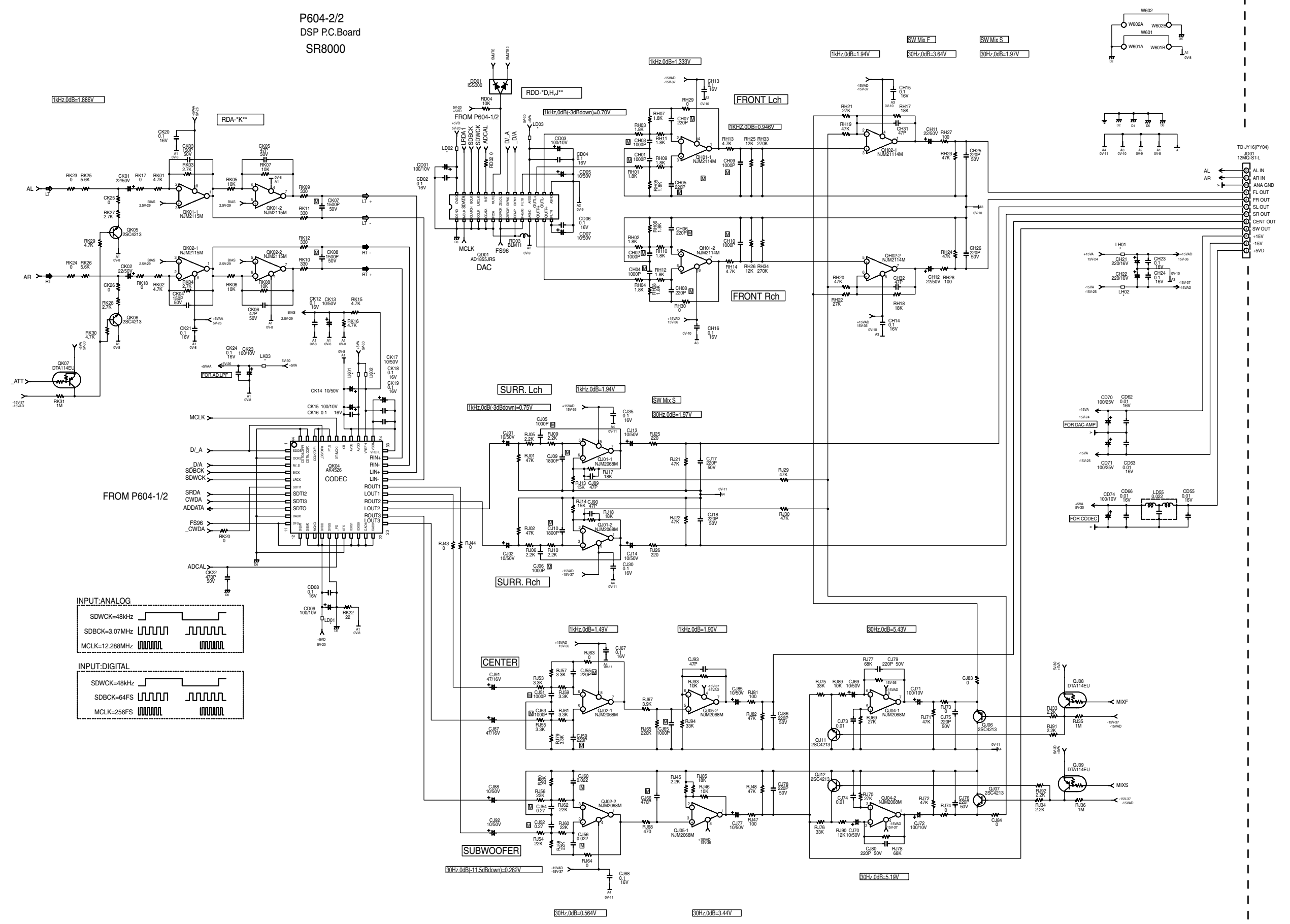


	ISEL1	ISEL2	ISEL3
DIG1	D1	H	L
DIG2	D2	L	H
DIG3	D3	H	L
DIG4	D4	L	H
DIG5	D5	H	L
DIG6	D6	L	H

INPUT	FS96	BYPASS	D/A	DIA
PCM	L	L	H	L
AC-3DTS	L	L	H	L
96K-PCM	H	H	L	L
ANALOG	L	L	L	H

TO CODEC  
P604-2/2

P604-2/2  
DSP P.C.Board  
SR8000



1kHz 0dB=1.886V

RDA-K\*\*

RDD-D,H,J\*\*

FRONT Lch

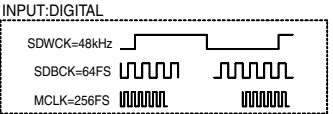
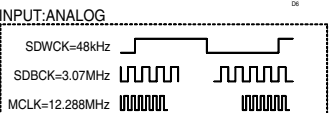
FRONT Rch

SURR Lch

SURR Rch

CENTER

SUBWOOFER



FROM P604-1/2

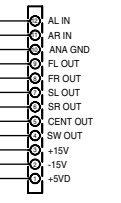
FOR DAC-AMP

FOR CODEC

MIXF

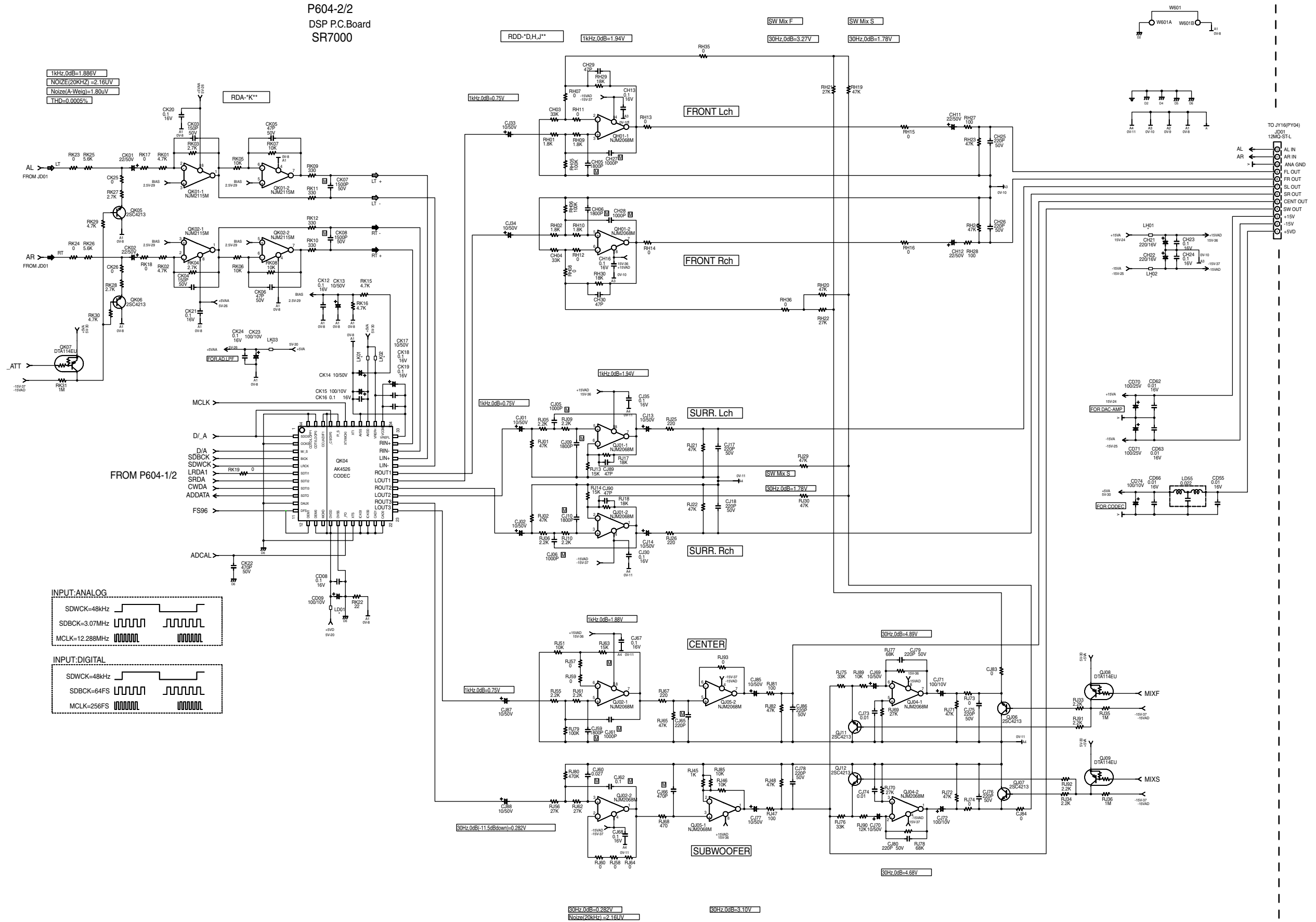
MIXS

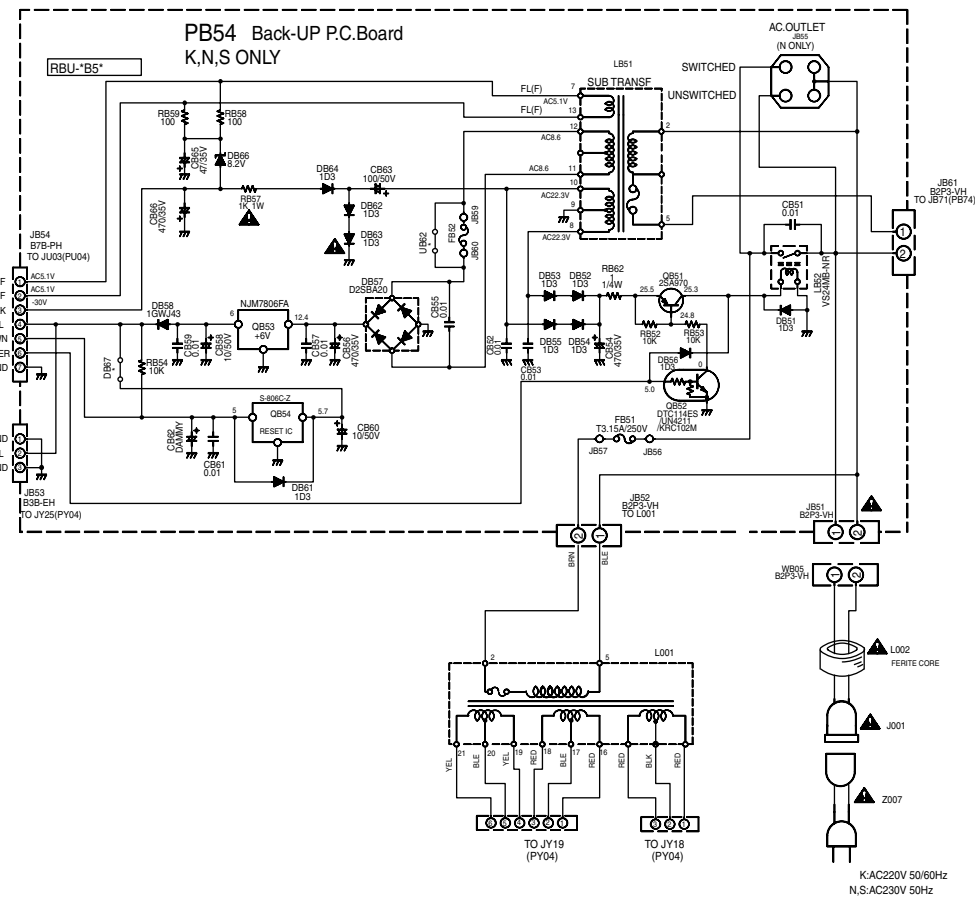
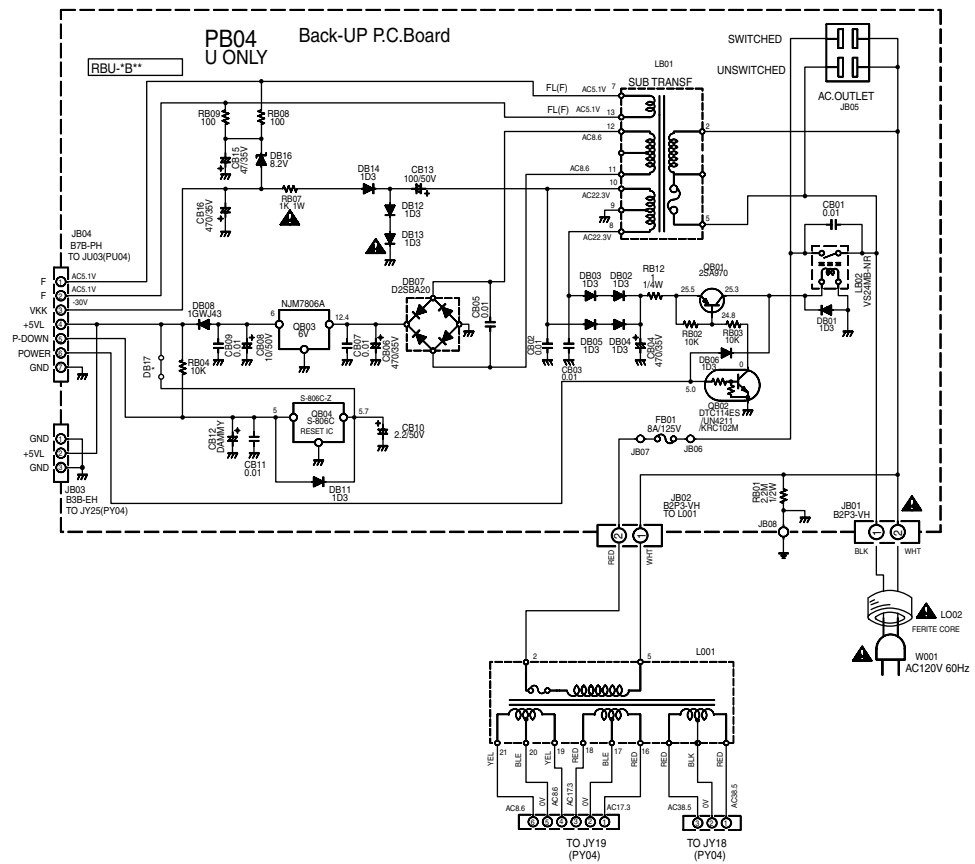
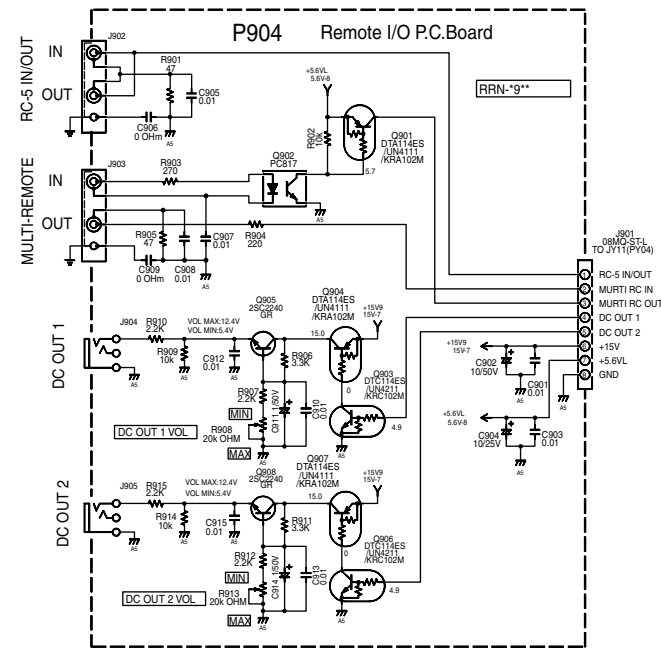
TO J716(PY04)





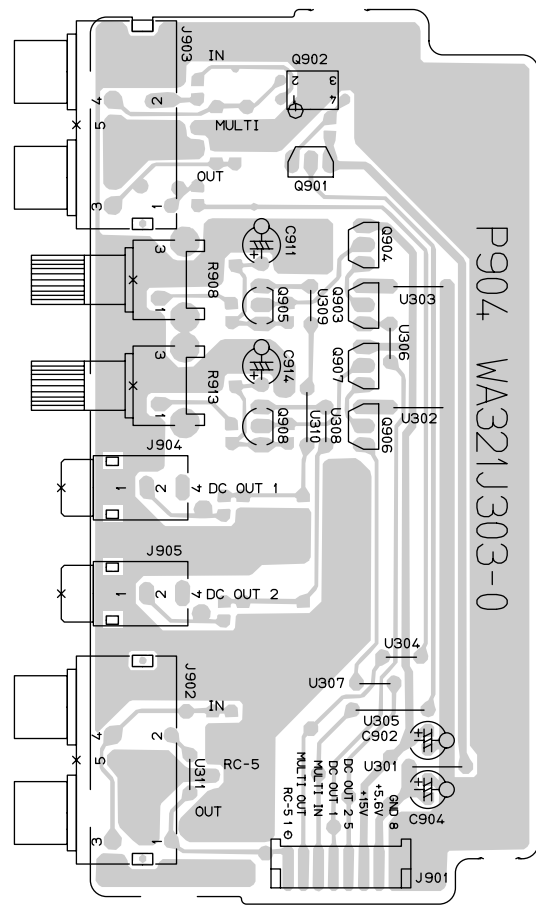
P604-2/2  
DSP P.C.Board  
SR7000





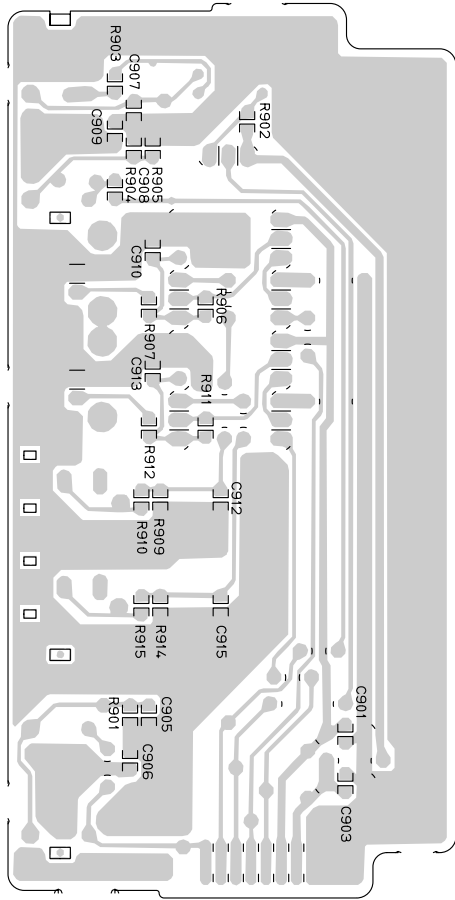
5. PARTS LOCATION

P904 (COMPONENT SIDE VIEW)

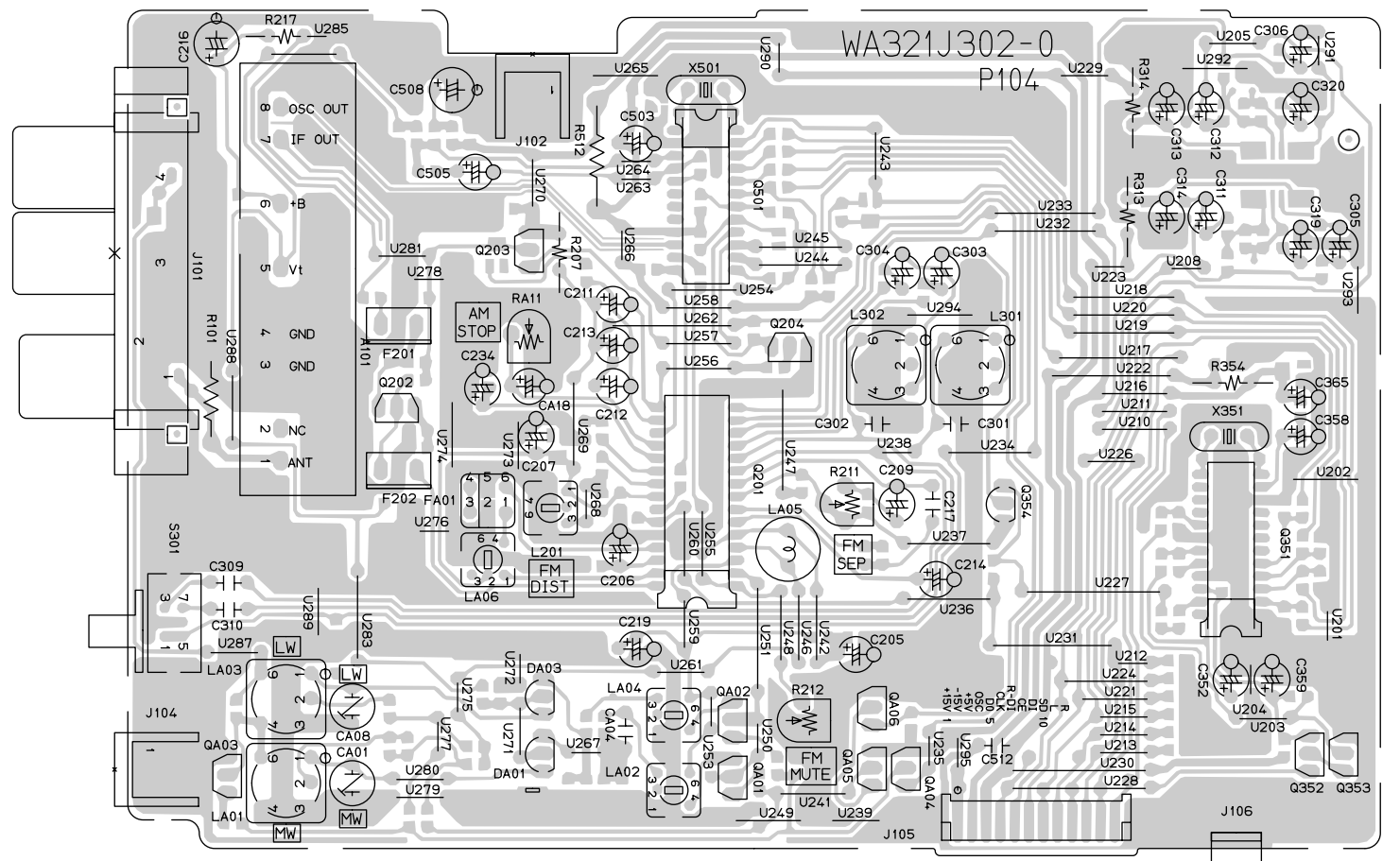


- Q901
- Q904
- Q903
- Q907
- Q908
- Q906

P904 (COPPER SIDE VIEW)

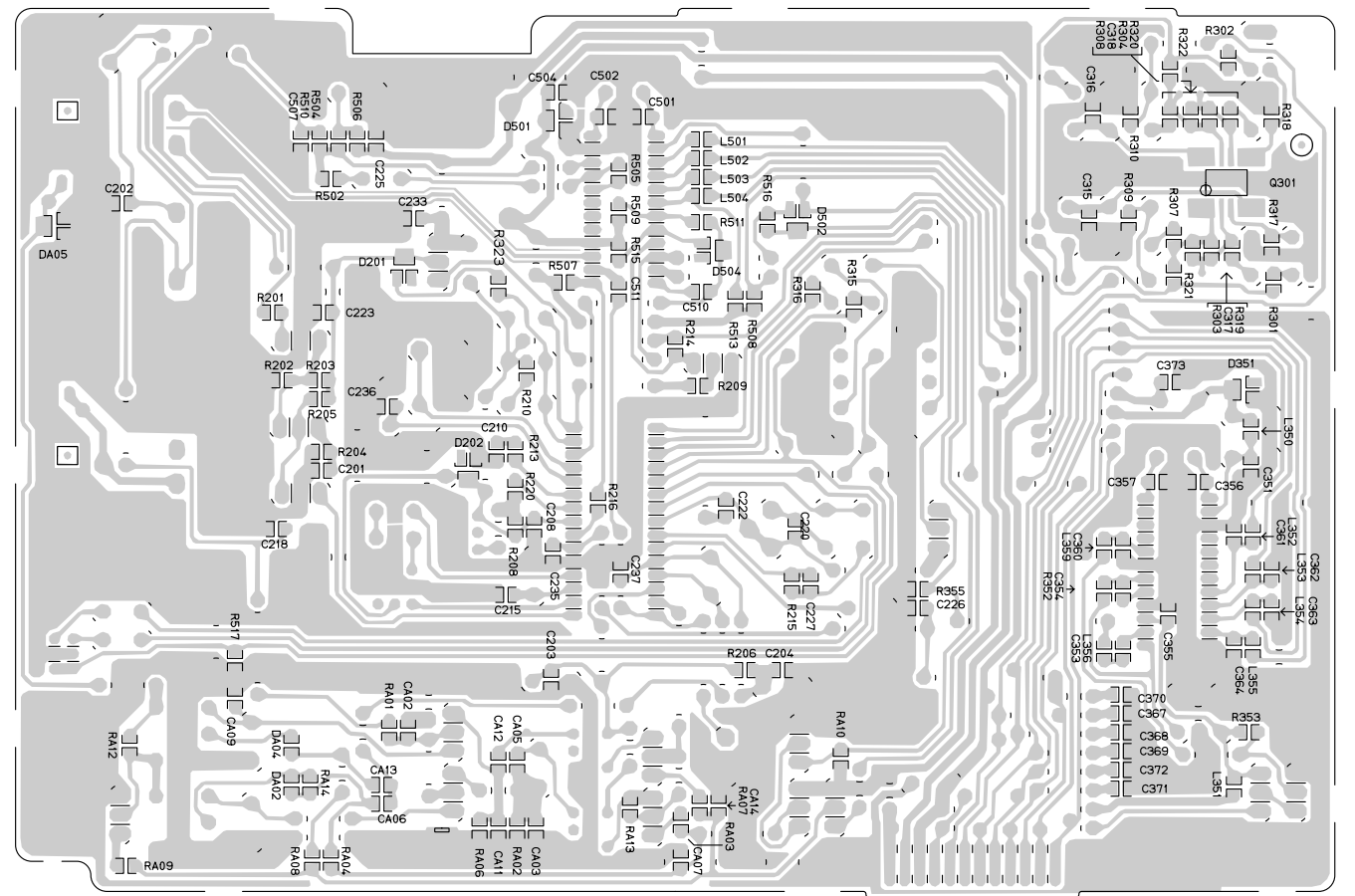


P104 (COMPONENT SIDE VIEW) Q203 Q202

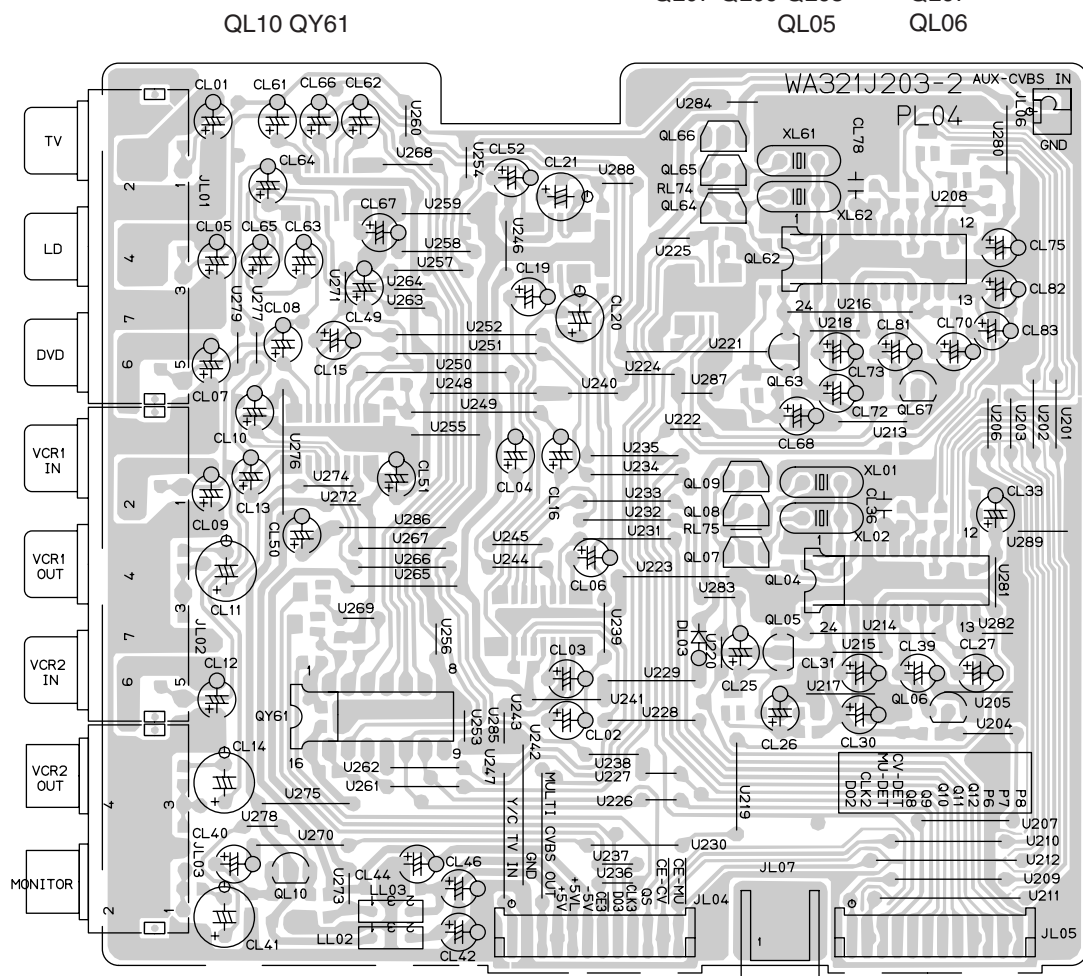


- Q501
- Q201
- Q204
- QA02
- QA01
- QA04-QA06
- Q354
- Q351
- Q352
- Q353

P104 (COPPER SIDE VIEW)



**PL04 (COMPONENT SIDE VIEW)**



QL64-QL66 QL62  
QL07-QL09 QL63  
QL05 QL67  
QL06

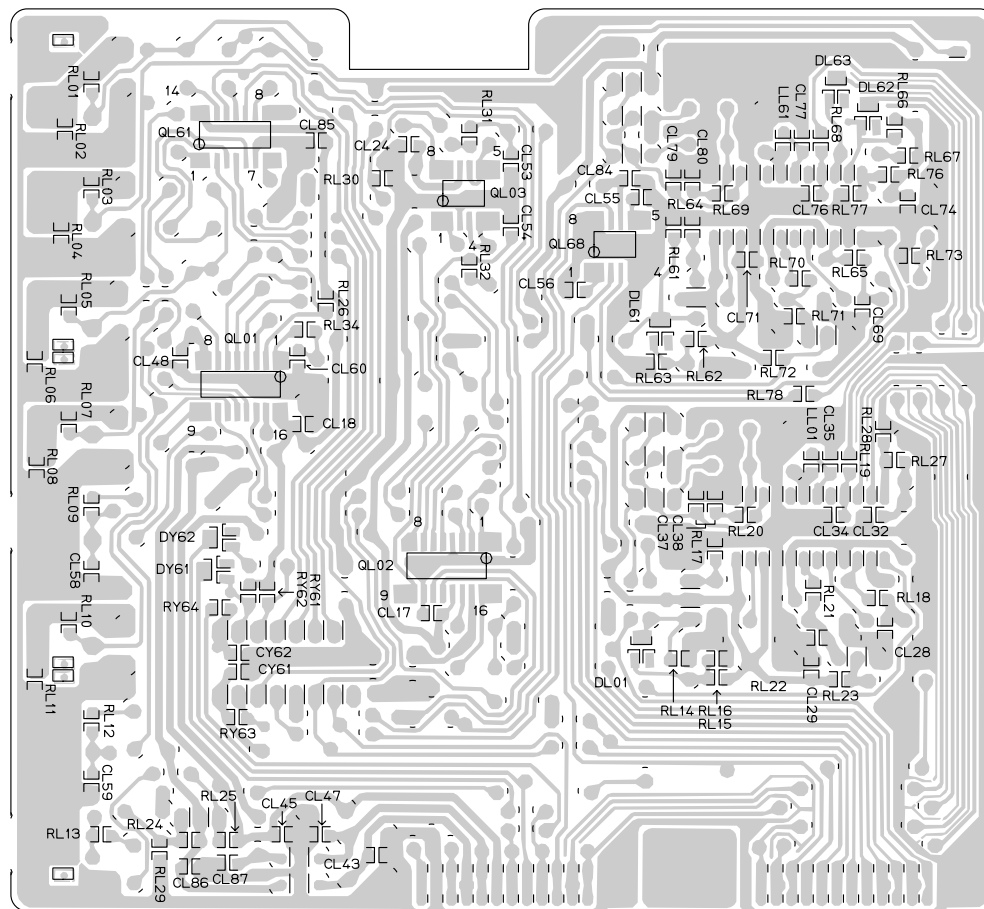
QL10 QY61

**PL04 (B)**

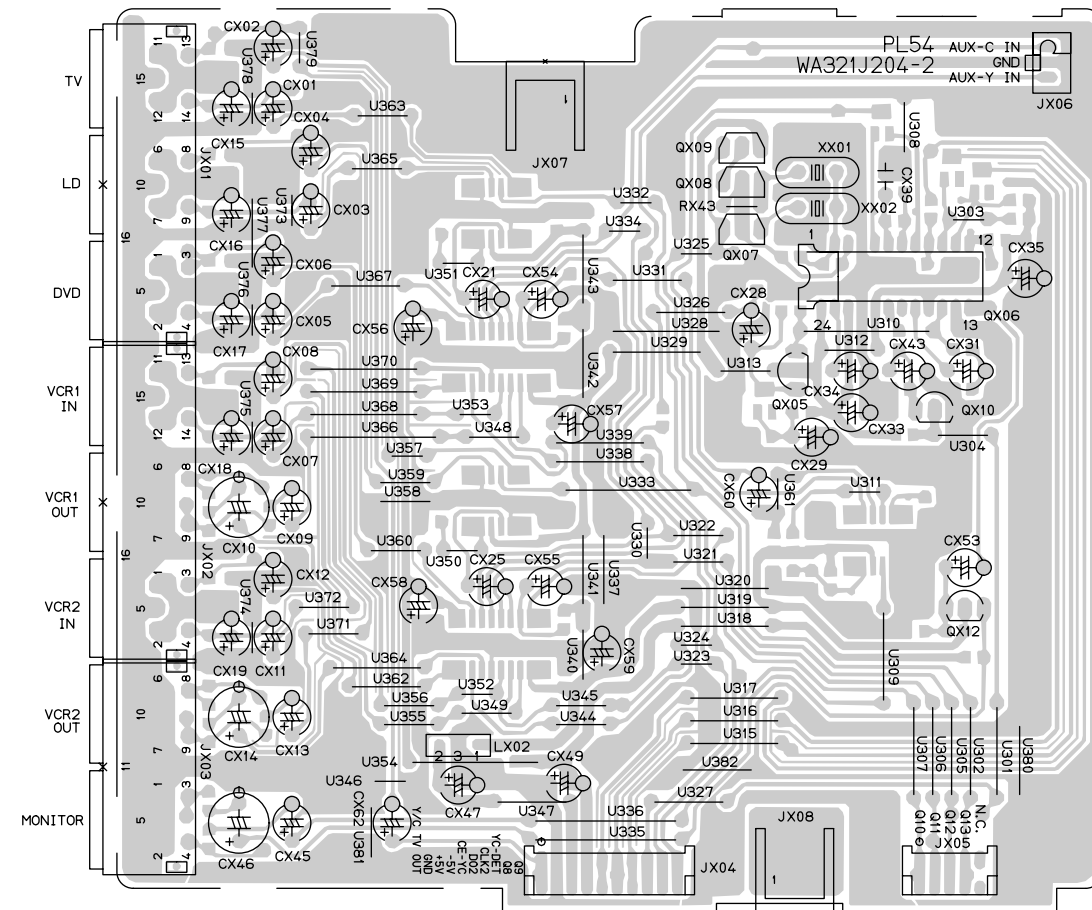
QL61  
QL01

QL03  
QL02

QL68



**PL54 (COMPONENT SIDE VIEW)**

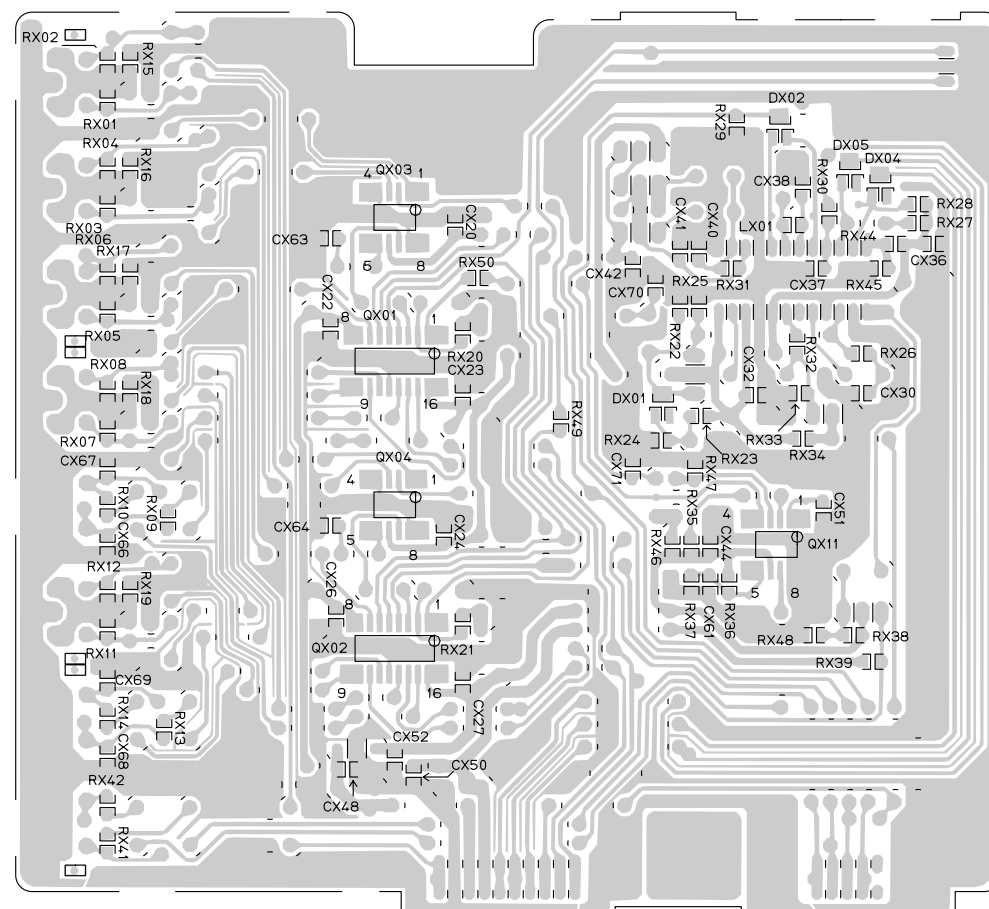


QX07-QX09  
QX05 QX06 QX10

**PL54 (B)**

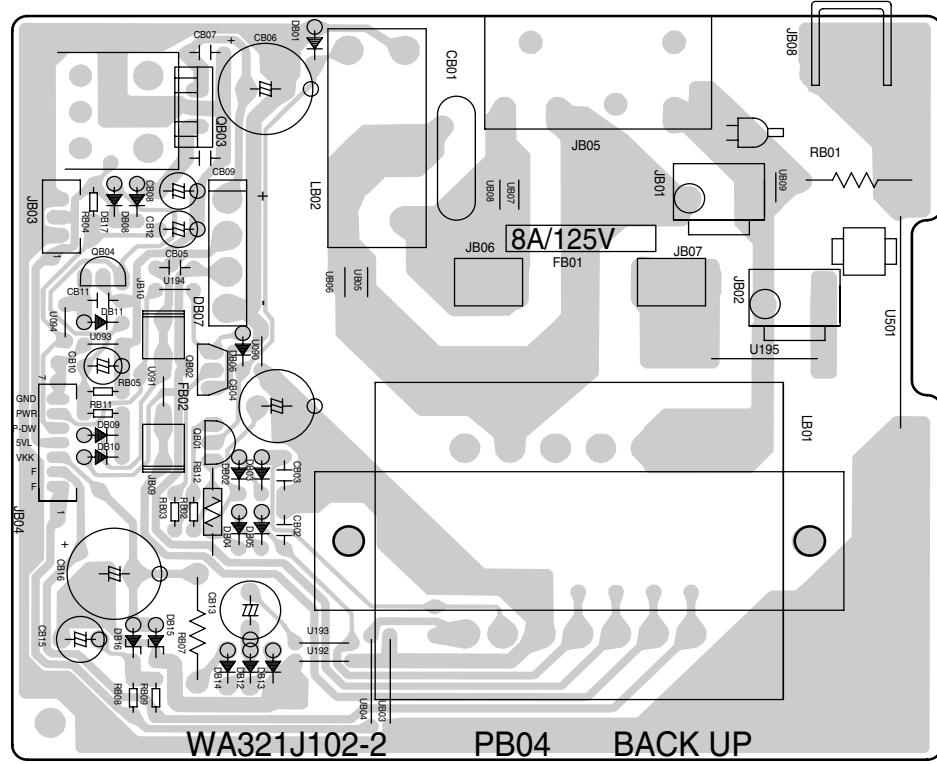
QX01 - QX04

QX11



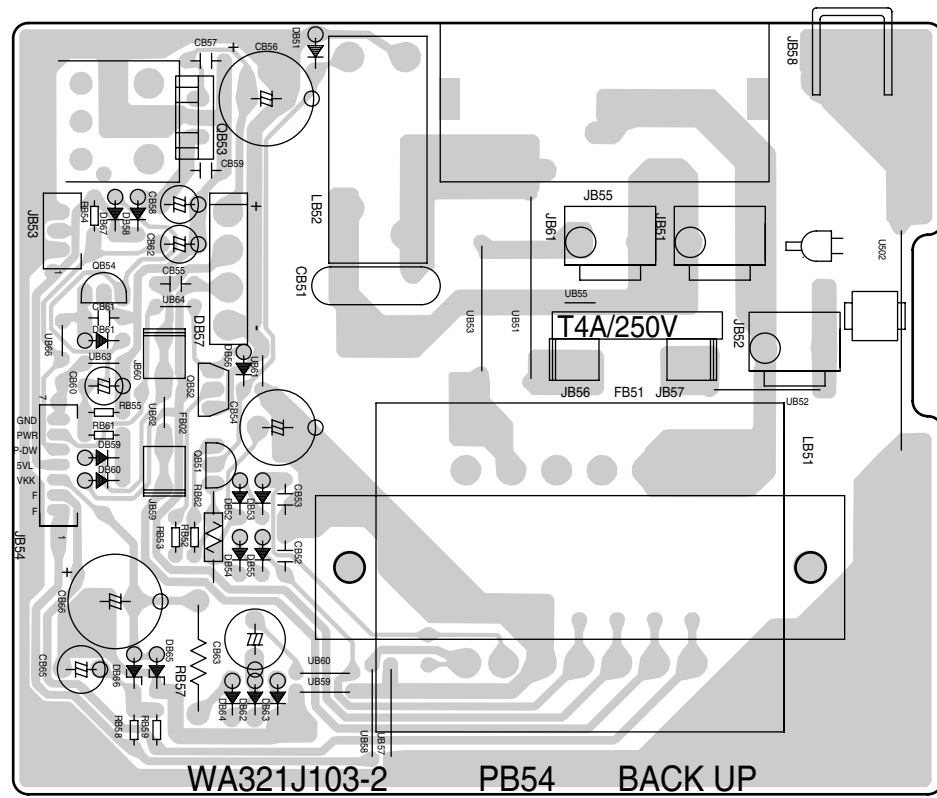
PB04 ( U ONLY )

QB03  
QB04 QB02 QB01



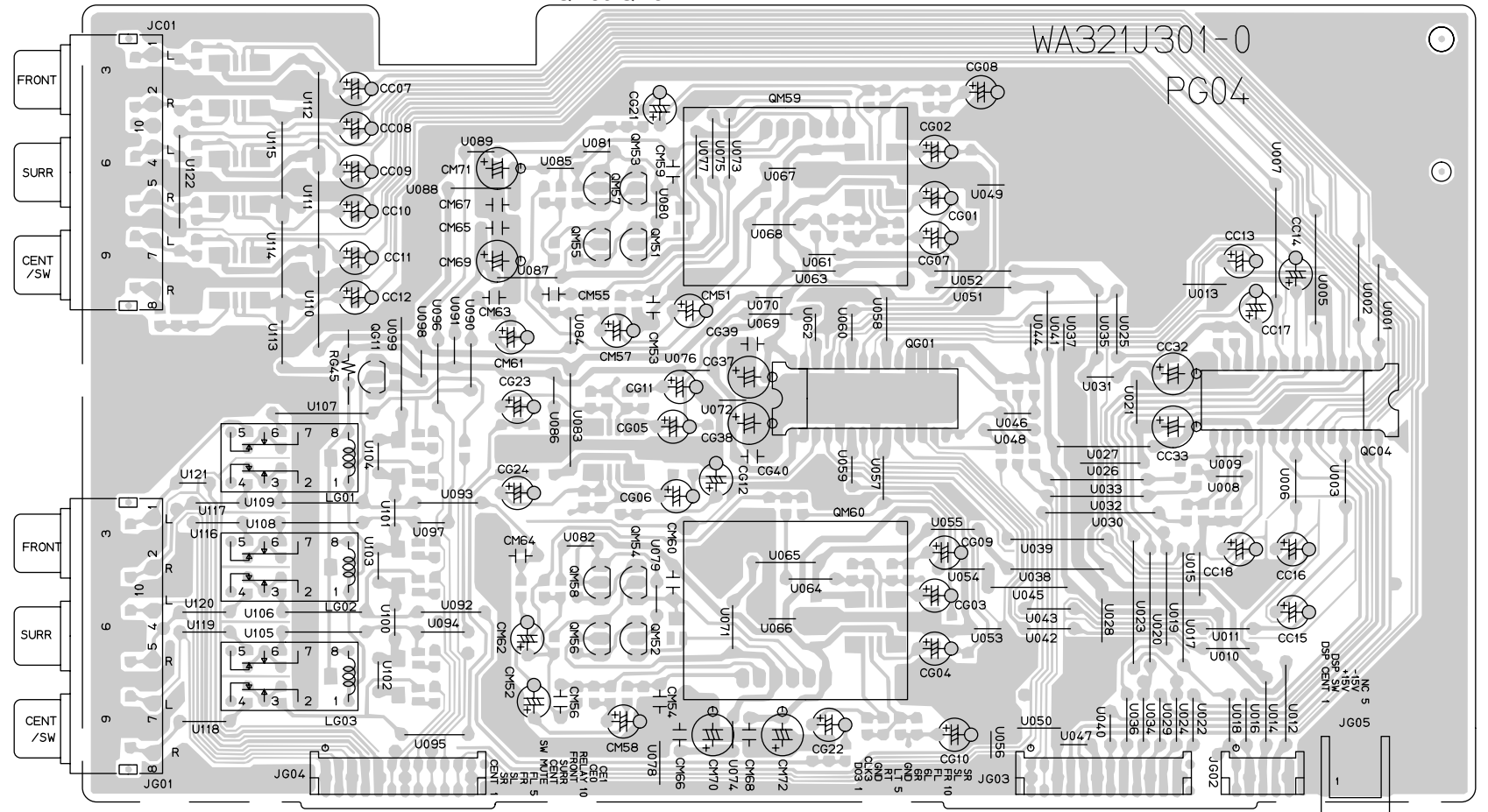
PB54 ( K, N, S ONLY )

QB53  
QB54 QB52 QB51



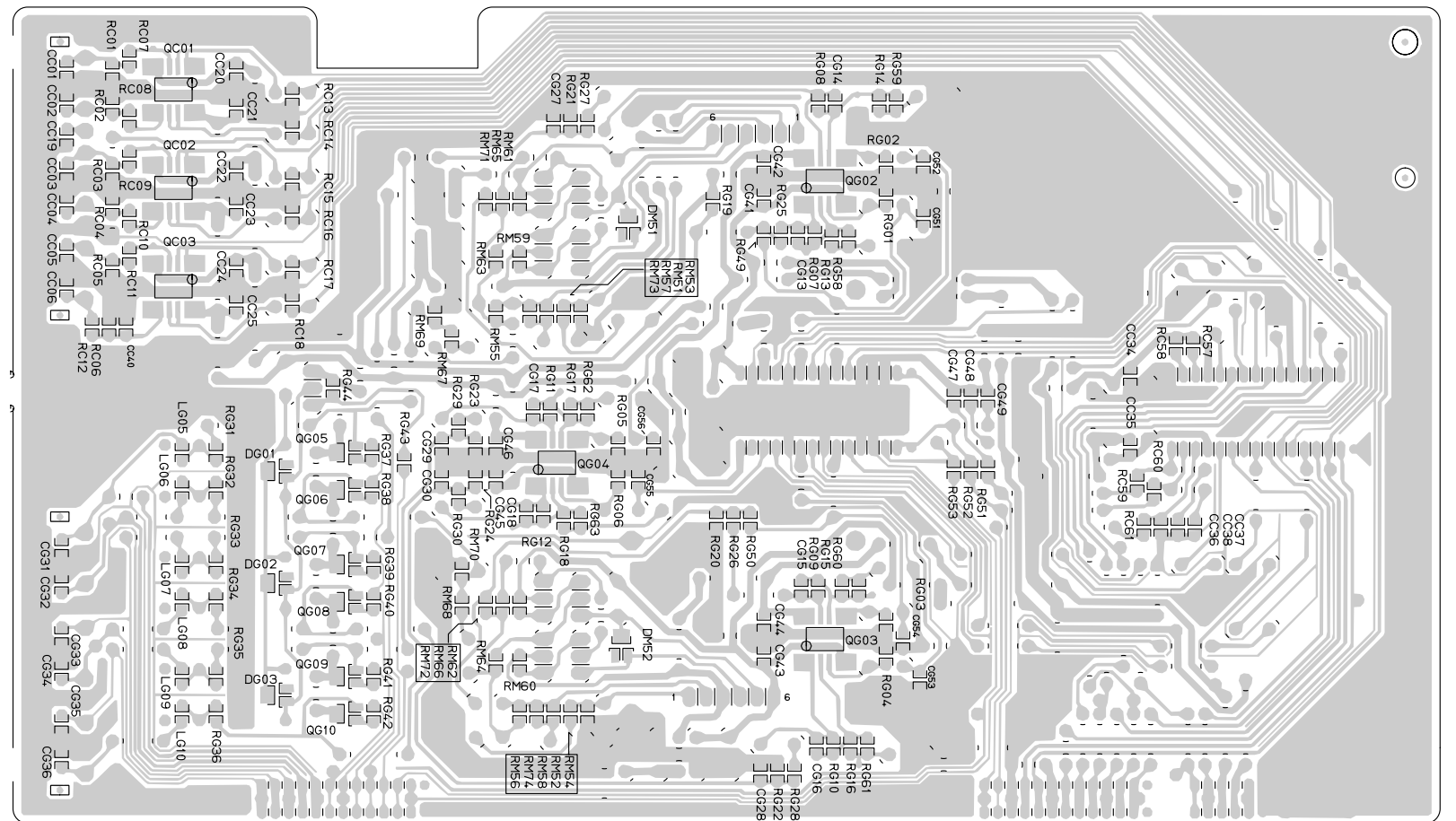
PG04 (COMPONENT SIDE VIEW)

QM57 QM53 QM59 QG01 QC04  
 QM55 QM51  
 QM58 QM54 QM60



PG04 (COPPER SIDE VIEW) QC01 - QC03 QG05 - QG10

QG02 QG03



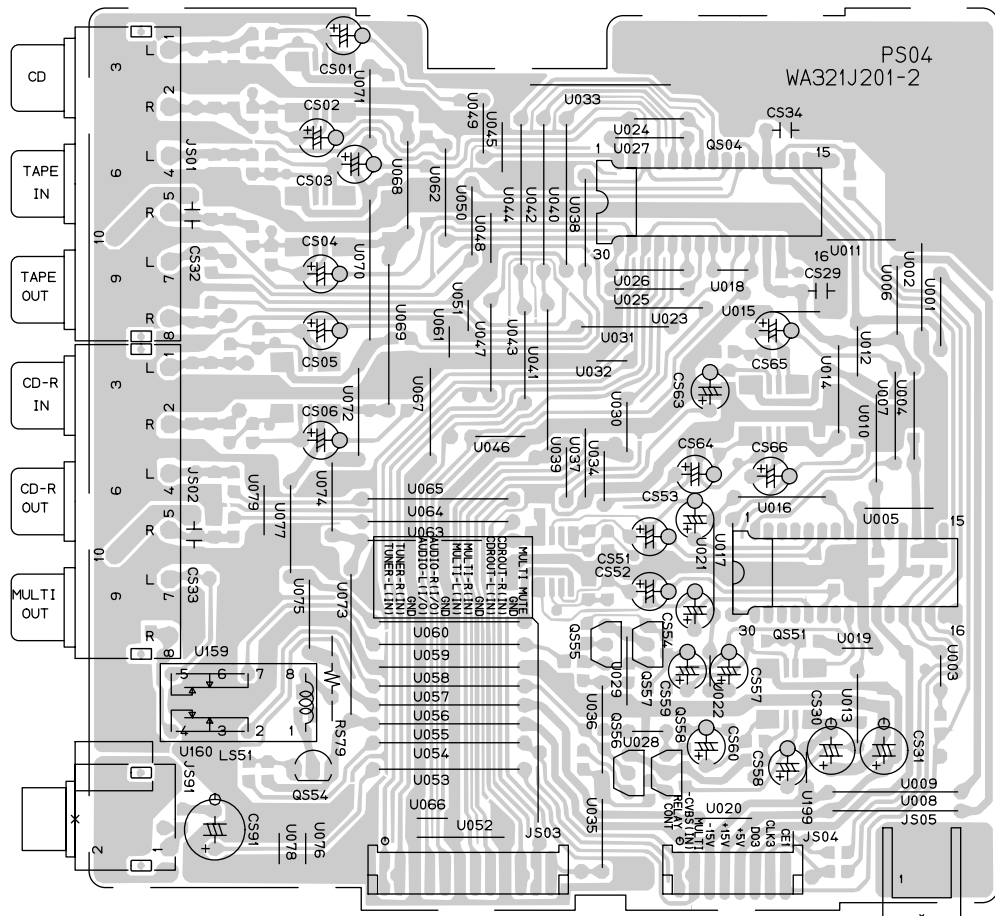
PS04 (COMPONENT SIDE VIEW)

QS54

QS04

QS55-QS58

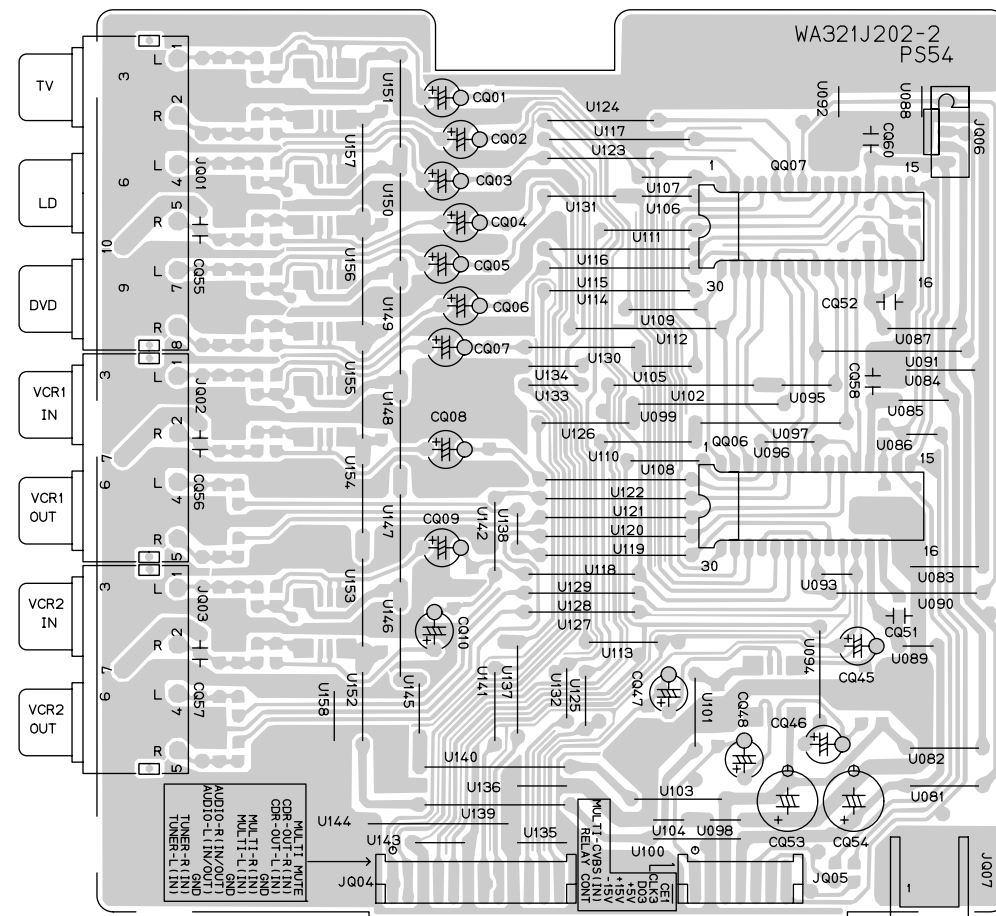
QS51



PS54 (COMPONENT SIDE VIEW)

QQ07

QQ06



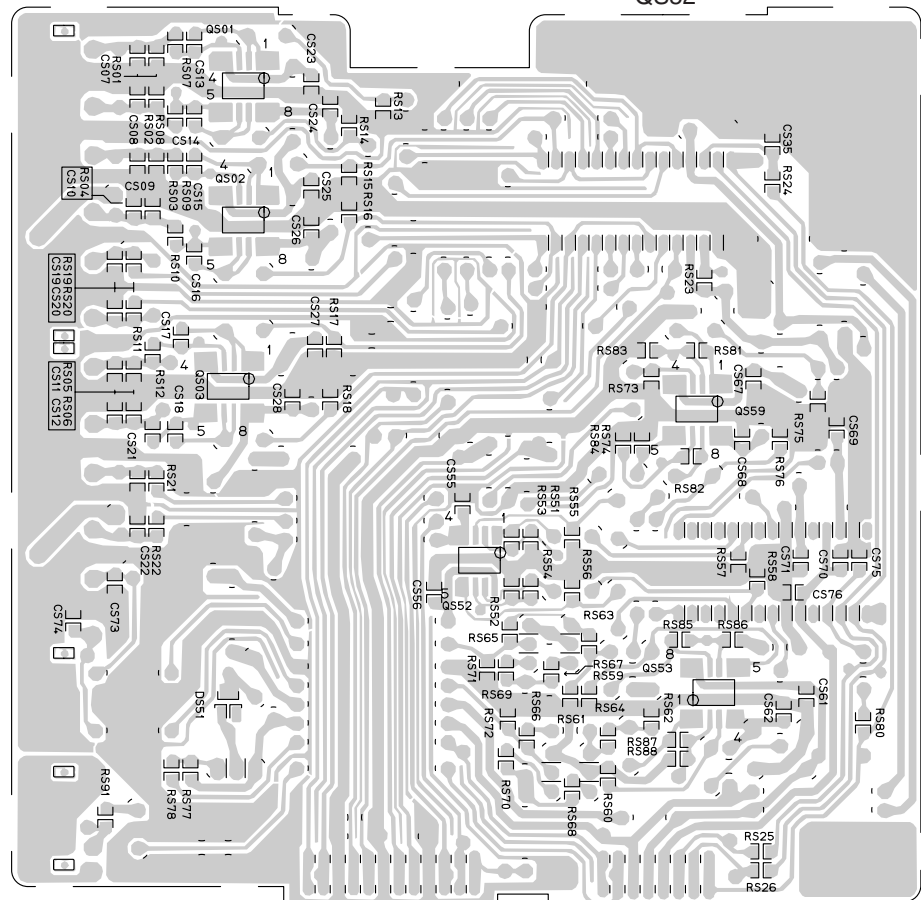
PS04 (B)

QS01 - QS03

QS52

QS59

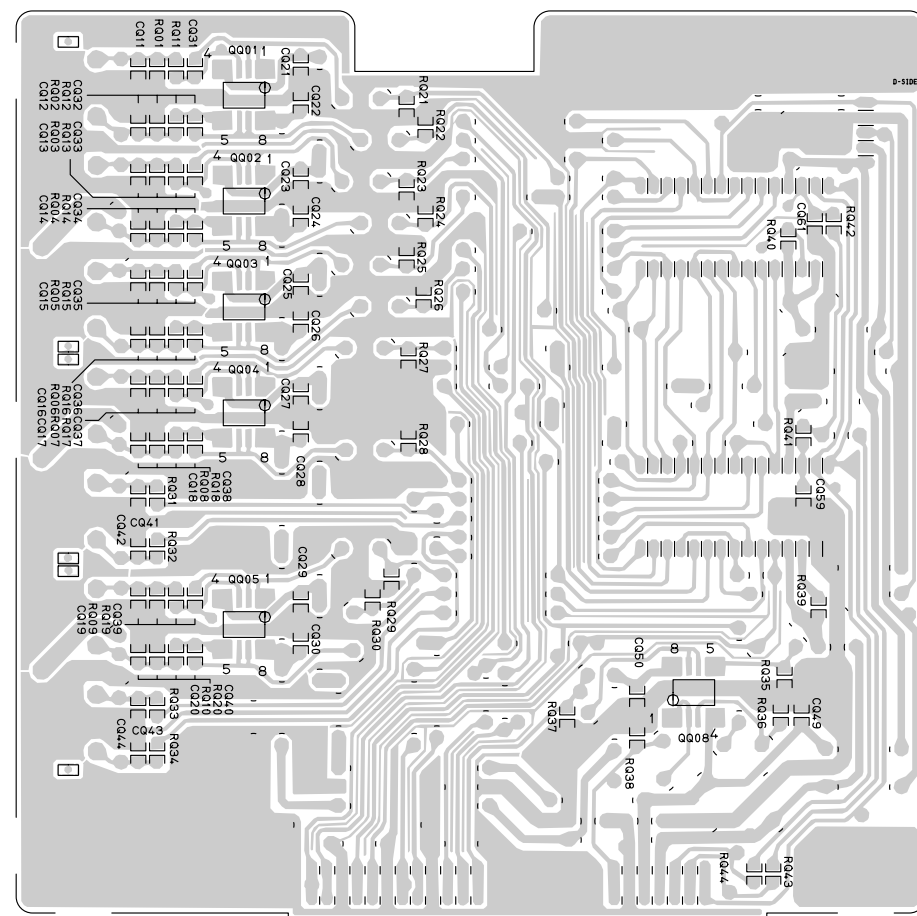
QS52



(B) : (COPPER SIDE VIEW)

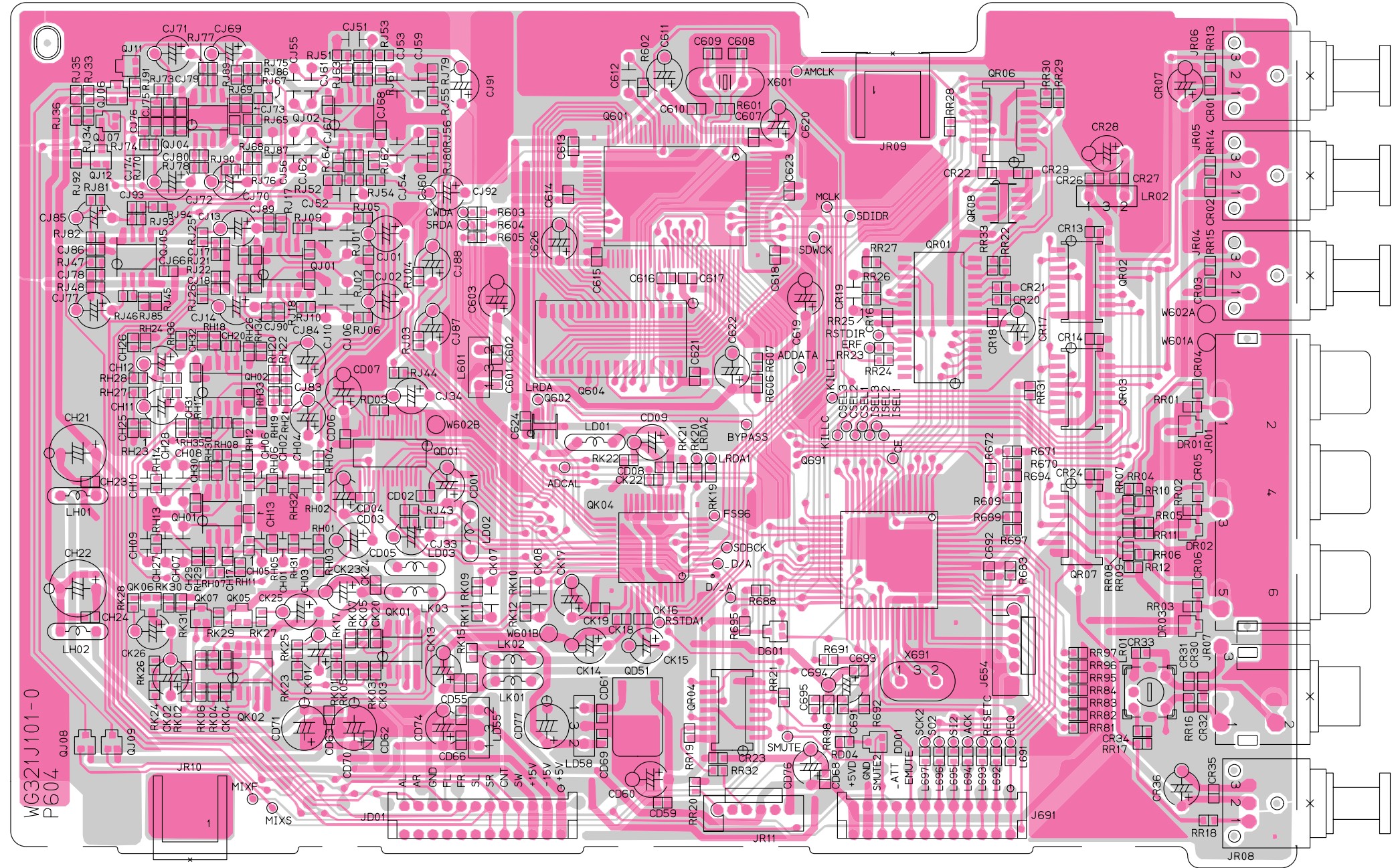
PS54 (B) QQ01 - QQ05

QQ08



**P604 (COMPONENT SIDE VIEW)**

QJ12 QJ07 QJ06 QJ11 QJ04 QJ05 QJ01 QH02 QH01 QH02 QH01 QD01 QD01 QD01 Q602 Q604 Q601 QK04 QD51 QR04 QR06 QR01 QR08 QR02 QR03 QR07







ALL COPPER SIDE VIEW

PY04

QY03 - QY08 QY11 - QY13  
QY09 QY10

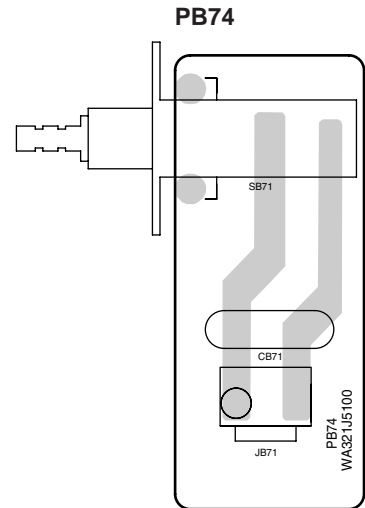
QN02 - QN06  
QN01

Q821 - Q823

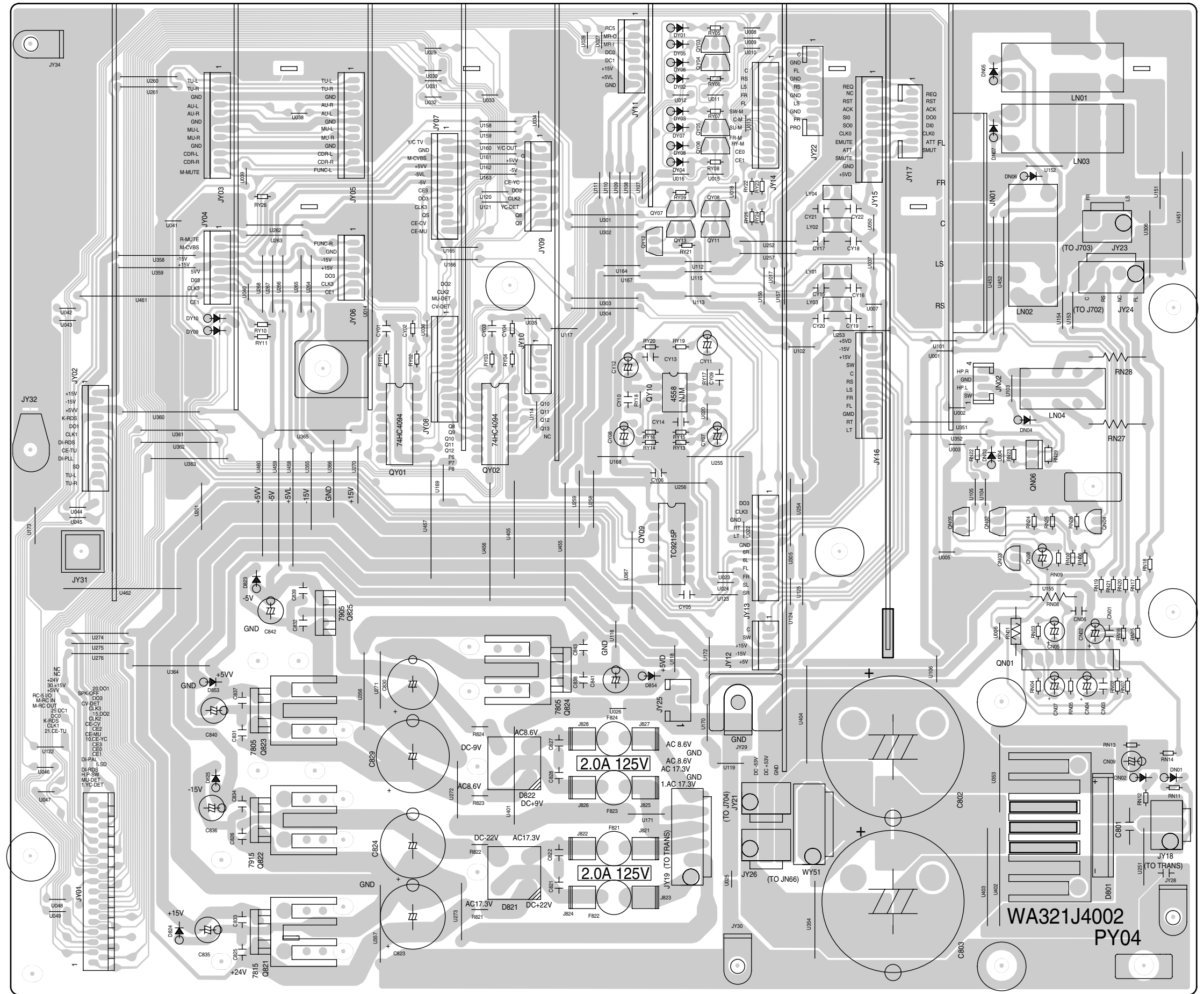
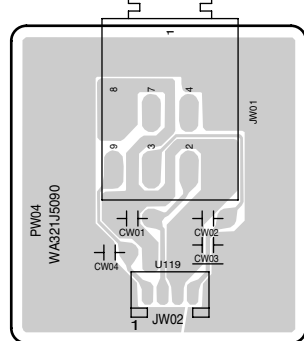
QY01

QY02

Q824



PW04



ALL COPPER SIDE VIEW

PU04

QU03 QU04  
QU06 - QU08  
QU09 - QU16

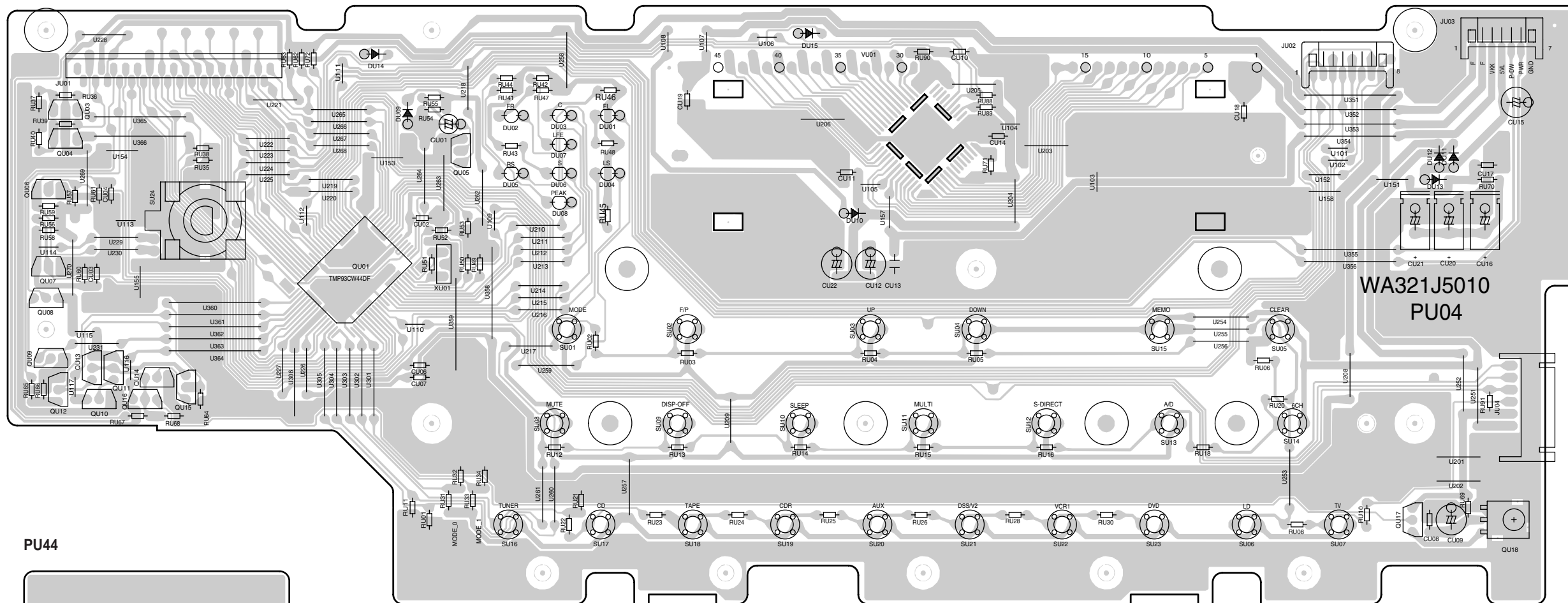
QU05

QU02

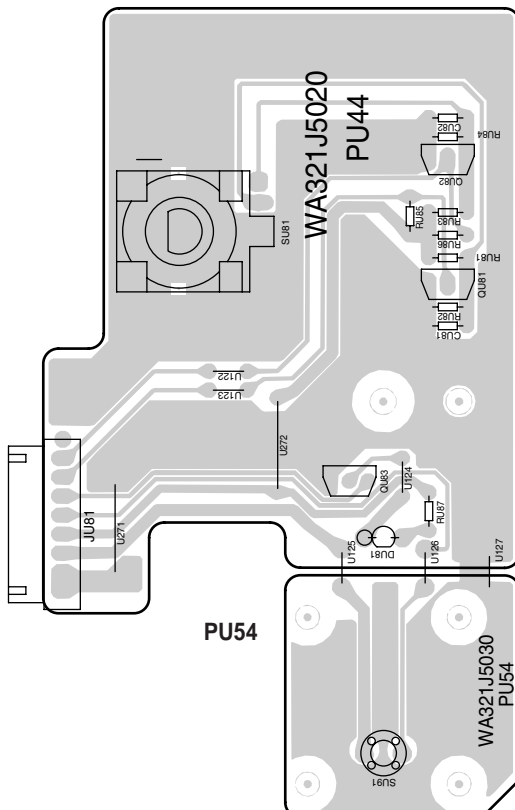
QU01

QU17

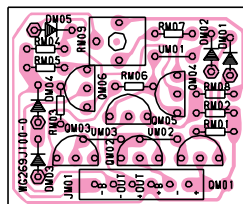
QU18



PU44

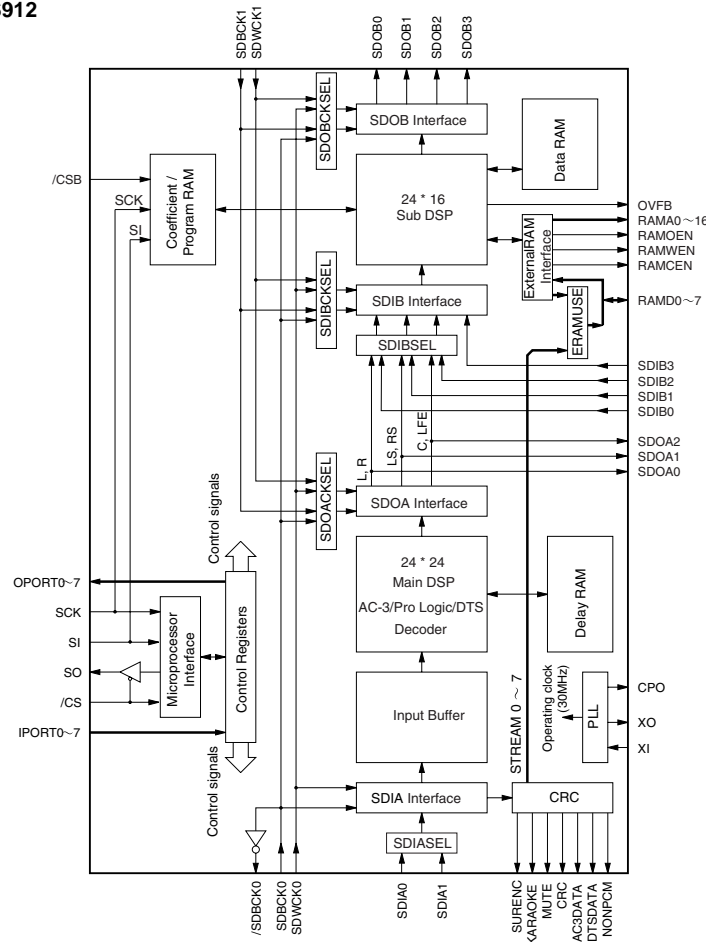


HDAM ( SR8000 ONLY )



## 6. IC DATA

### Q601:YSS912

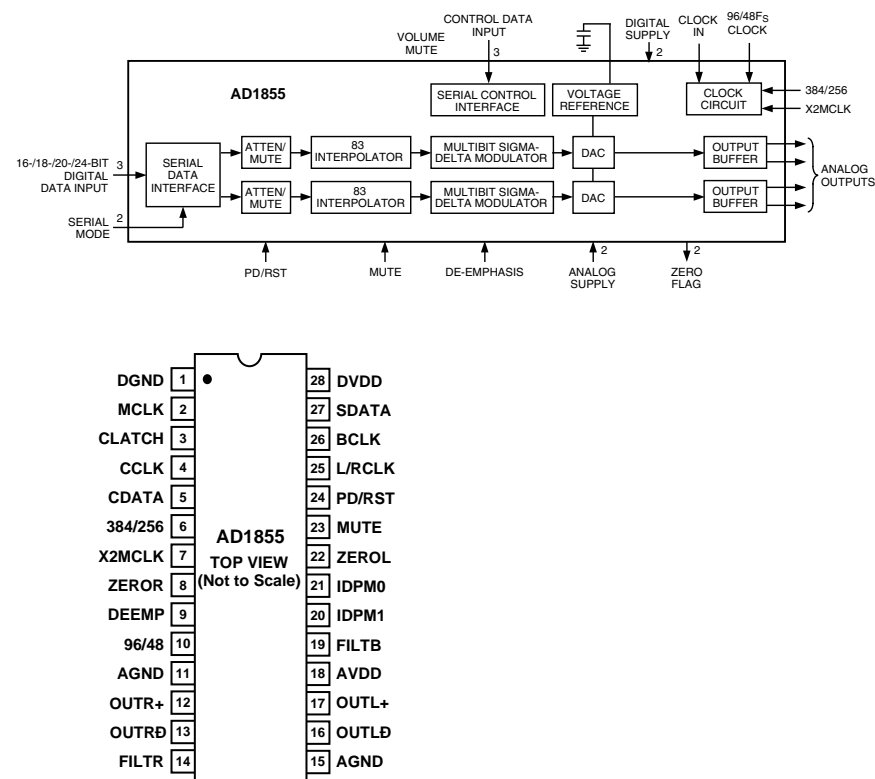


No.	NAME	I/O	FUNCTION
1	VDD1	-	+5V power supply (for I/Os)
2	RAMCEN	O	External SRAM Interface /CE
3	RAMA16	O	External SRAM Interface address 16
4	RAMA15	O	External SRAM Interface address 15
5	SDIB0	I+	PCM input 0 to Sub DSP
6	SDIB1	I+	PCM input 1 to Sub DSP
7	SDIB2	I+	PCM input 2 to Sub DSP
8	XI	I	Crystal oscillator connection or input external clock (12.288 MHz)
9	XO	O	Crystal oscillator connection
10	VSS	-	Ground
11	AVDD	-	+3.3V power supply (for PLL circuit)
12	SDIB3	I+	PCM input 3 to Sub DSP
13	TEST	O	Test terminal (to be open in normal use)
14	TEST	O	Test terminal (to be open in normal use)
15	OVFB	O	Detection of overflow at Sub DSP
16	DTSDATA	O	DTS data detection (Refer to "Status Register".)
17	AC3DATA	O	AC-3 data detection (Refer to "Status Register".)
18	SDOB3	O	PCM output from Sub DSP
19	CPO	A	Output terminal for PLL, to be connected to ground through the external analog filter circuit. (Refer to "External Circuit for PLL".)
20	AVSS	-	Ground (for PLL circuit)
21	VDD2	-	+3.3V power supply (for core logic)
22	SDOA2	O	PCM output from Main DSP (C, LFE)
23	SDOA1	O	PCM output from Main DSP (LS, RS)
24	SDOA0	O	PCM output from Main DSP (L, R)
25	RAMA14	O	External SRAM Interface address 14
26	RAMA13	O	External SRAM Interface address 13
27	RAMA12	O	External SRAM Interface address 12
28	RAMA11	O	External SRAM Interface address 11
29	RAMA10	O	External SRAM Interface address 10
30	VSS	-	Ground
31	VDD1	-	+5V power supply (for I/Os)
32	OPORT0	O	Output port for general purpose. (Refer to "OPORT Register")
33	OPORT1	O	Output port for general purpose. (Refer to "OPORT Register")
34	OPORT2	O	Output port for general purpose. (Refer to "OPORT Register")
35	OPORT3	O	Output port for general purpose. (Refer to "OPORT Register")
36	OPORT4	O	Output port for general purpose. (Refer to "OPORT Register")
37	OPORT5	O	Output port for general purpose. (Refer to "OPORT Register")
38	OPORT6	O	Output port for general purpose. (Refer to "OPORT Register")
39	OPORT7	O	Output port for general purpose. (Refer to "OPORT Register")
40	VSS	-	Ground
41	VDD2	-	+3.3V power supply (for core logic)
42	RAMA9	O	External SRAM interface address 9
43	RAMA8	O	External SRAM interface address 8
44	RAMA7	O	External SRAM interface address 7
45	SDOB2	O	PCM output from Sub DSP
46	SDOB1	O	PCM output from Sub DSP
47	SDOB0	O	PCM output from Sub DSP
48	SDBCK1	I+	Bit clock input for SDOA, SDIB, SDOB. (Refer to "SDOA, SDIB, SDOB Register")
49	SDWCK1	I+	Word clock input for SDOA, SDIB, SDOB. (Refer to "SDOA, SDIB, SDOB Register")
50	VSS	-	Ground

No.	NAME	I/O	FUNCTION
51	VDD2	-	+3.3V power supply (for core logic)
52	NONPCM	O	Detection of non PCM data. (Refer to "Status Register")
53	CRC	O	Detection of AC-3 CRC error. (Refer to "Status Register")
54	MUTE	O	Detection of auto-mute. (Refer to "Status Register")
55	KARAOKE	O	Detection of AC-3 karaoke data. (Refer to "Status Register")
56	SURENC	O	Detection of AC-3 2/0 mode Dolby surround encoded input (Refer to "Status Register")
57	/SDBCK0	O	Inverted SDBCK0 clock output (refer to "Block diagram")
58	RAMA6	O	External SRAM Interface address 6
59	RAMA5	O	External SRAM Interface address 5
60	VSS	-	Ground
61	RAMA4	O	External SRAM Interface address 4
62	/IC	Is	Initial clear
63	TEST	O	Test terminal (to be open in normal use)
64	RAMA3	O	External SRAM Interface address 3
65	/CSB	Is+	Sub DSP Chip select
66	/CS	Is	Microprocessor interface Chip select
67	SO	Ot	Microprocessor interface Serial data output
68	SI	Is	Microprocessor interface/Sub DSP Serial data input
69	SCK	Is	Microprocessor interface/Sub DSP clock input
70	RAMA2	O	External SRAM Interface address 2
71	VDD1	-	+5V power supply (for I/Os)
72	RAMD0	I/O	External SRAM Interface data (STREAM 0 output when External SRAM is not in use)
73	RAMD1	I/O	External SRAM Interface data (STREAM 1 output when External SRAM is not in use)
74	RAMD2	I/O	External SRAM Interface data (STREAM 2 output when External SRAM is not in use)
75	RAMD3	I/O	External SRAM Interface data (STREAM 3 output when External SRAM is not in use)
76	RAMD4	I/O	External SRAM Interface data (STREAM 4 output when External SRAM is not in use)
77	RAMD5	I/O	External SRAM Interface data (STREAM 5 output when External SRAM is not in use)
78	RAMD6	I/O	External SRAM Interface data (STREAM 6 output when External SRAM is not in use)
79	RAMD7	I/O	External SRAM Interface data (STREAM 7 output when External SRAM is not in use)
80	VSS	-	Ground
81	VDD2	-	+3.3V power supply (for core logic)
82	SDWCK0	I	Word clock input for SDIA, SDOA, SDIB, SDOB (Refer to "SDIA, SDOA, SDIB, SDOB Register")
83	SDBCK0	I	Bit clock input for SDIA, SDOA, SDIB, SDOB (Refer to "SDIA, SDOA, SDIB, SDOB Register")
84	SDIA0	I	AC-3/DTS bitstream (or PCM) data input for Main DSP (Refer to "SDIA Register")
85	SDIA1	I	AC-3/DTS bitstream (or PCM) data input for Main DSP (Refer to "SDIA Register")
86	RAMA1	O	External SRAM Interface address 1
87	RAMA0	O	External SRAM Interface address 0
88	RAMOEN	O	External SRAM Interface /WE
89	RAMOEN	O	External SRAM Interface /OE
90	VSS	-	Ground
91	VDD2	-	+3.3V power supply (for core logic)
92	IPORT7	I+	Input port for general purpose (Refer to "IPOINT Register")
93	IPORT6	I+	Input port for general purpose (Refer to "IPOINT Register")
94	IPORT5	I+	Input port for general purpose (Refer to "IPOINT Register")
95	IPORT4	I+	Input port for general purpose (Refer to "IPOINT Register")
96	IPORT3	I+	Input port for general purpose (Refer to "IPOINT Register")
97	IPORT2	I+	Input port for general purpose (Refer to "IPOINT Register")
98	IPORT1	I+	Input port for general purpose (Refer to "IPOINT Register")
99	IPORT0	I+	Input port for general purpose (Refer to "IPOINT Register")
100	VSS	-	Ground

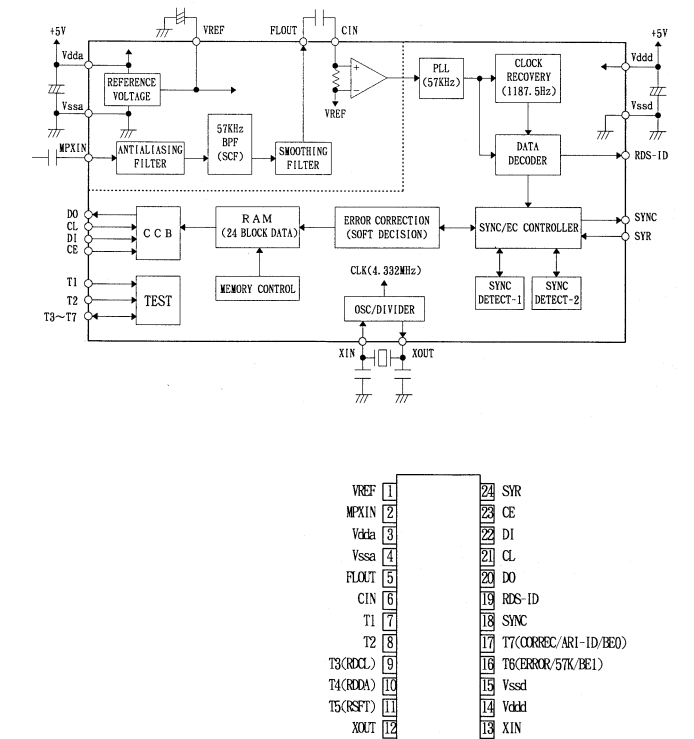
Note) Is: Schmitt trigger input terminal  
 I+: Input terminal with a pull-up resistor  
 O: Digital output terminal  
 Ot: Tri-state digital output terminal  
 A: Analog terminal

### QD01:AD1855



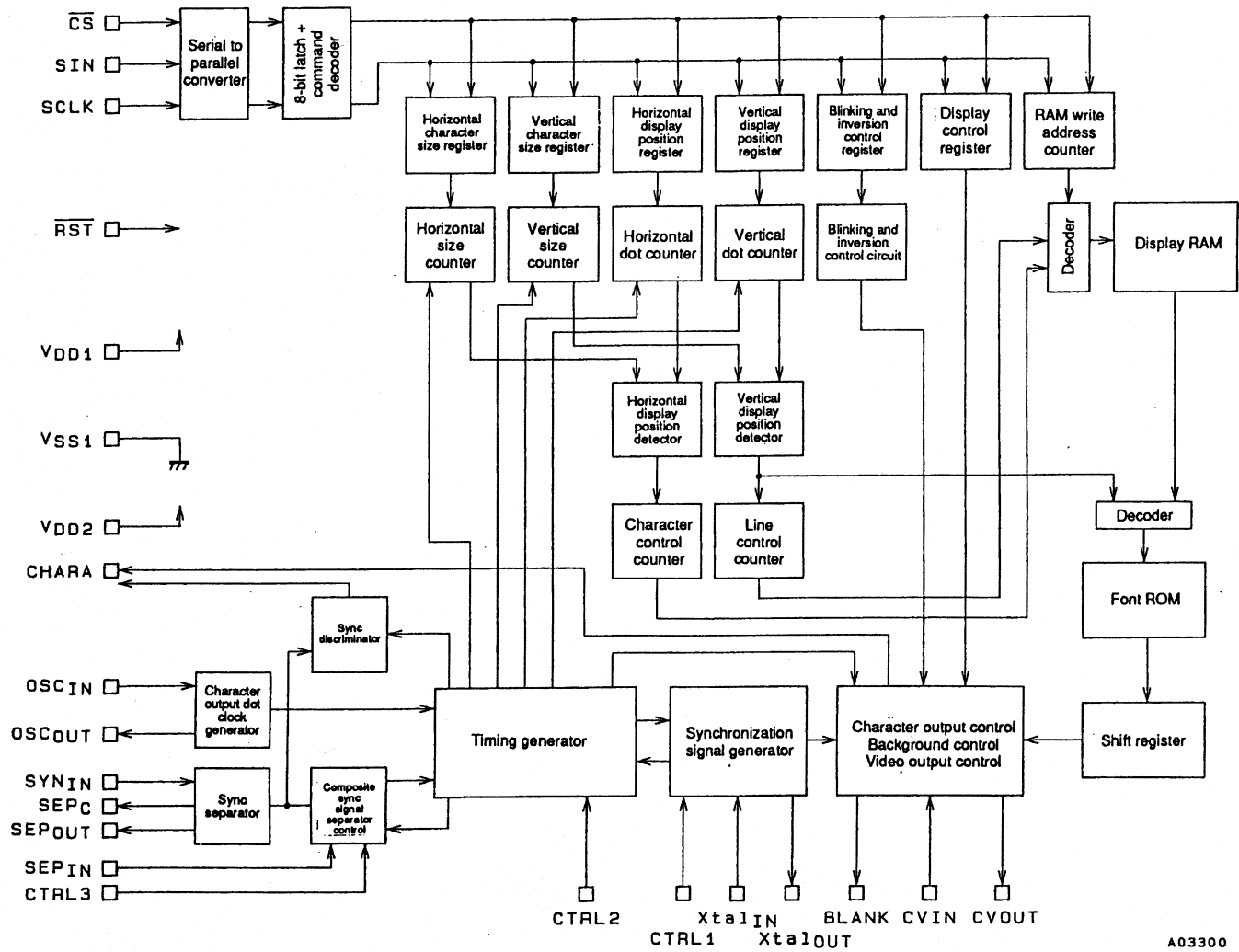
Pin	Input/Output	Pin Name	Description
1	I	DGND	Digital Ground.
2	I	MCLK	Master Clock Input. Connect to an external clock source at either 256, 384 or 512 Fs.
3	I	CLATCH	Latch input for control data. This input is rising-edge sensitive.
4	I	CCLK	Control clock input for control data. Control input data must be valid on the rising edge of CCLK. CCLK may be continuous or gated.
5	I	CDATA	Serial control input, MSB first, containing 16 bits of unsigned data per channel. Used for specifying channel specific attenuation and mute.
6	I	384/256	Selects the master clock mode as either 384 times the intended sample frequency (HI) or 256 times the intended sample frequency (LO). The state of this input should be hardwired to logic HI or logic LO, or may be changed while the AD1855 is in power-down/reset. It must not be changed while the AD1855 is operational.
7	I	X2MCLK	Selects internal clock doubler (LO) or internal clock = MCLK (HI).
8	O	ZEROR	Right Channel Zero Flag Output. This pin goes HI when Right Channel has no signal input for more than 1024 LR Clock Cycles.
9	I	DEEMP	De-Emphasis. Digital de-emphasis is enabled when this input signal is HI. This is used to impose a 50ms/15ms response characteristic on the output audio spectrum at an assumed 44.1 kHz sample rate.
10	I	96/48	Selects 48 kHz (LO) or 96 kHz Sample Frequency Control.
11, 15	I	AGND	Analog Ground.
12	O	OUTR+	Right Channel Positive line level analog output.
13	O	OUTR-	Right Channel Negative line level analog output.
14	O	FILTR	Voltage Reference Filter Capacitor Connection. Bypass and decouple the voltage reference with parallel 10m F and 0.1 mF capacitors to the AGND.
16	O	OUTL-	Left Channel Negative line level analog output.
17	O	OUTL+	Left Channel Positive line level analog output.
18	I	AVDD	Analog Power Supply. Connect to analog +5 V supply.
19	O	FILTB	Filter Capacitor connection, connect 10 mF capacitor to AGND.
20	I	IDPM1	Input serial data port mode control one. With IDPM0, defines one of four serial modes.
21	I	IDPM0	Input serial data port mode control zero. With IDPM1, defines one of four serial modes.
22	O	ZEROL	Left Channel Zero Flag Output. This pin goes HI when Left Channel has no signal input for more than 1024 LR Clock Cycles.
23	I	MUTE	Mute. Assert HI to mute both stereo analog outputs. Deassert LO for normal operation.
24	I	PD/RST	Power-Down/Reset The AD1855 is placed in a low power consumption mode when this pin is held LO. The AD1855 is reset on the rising edge of this signal. The serial control port registers are reset to the default values. Connect HI for normal operation.
25	I	L/RCLK	Left/Right clock input for input data. Must run continuously.
26	I	BCLK	Bit clock input for input data. Need not run continuously; may be gated or used in a burst fashion.
27	I	SDATA	Serial input, MSB first, containing two channels of 16, 18, 20, and 24 bits of twos complement data per channel.
28	I	DVDD	Digital Power Supply Connect to digital +5 V supply.

### Q351:LC72722

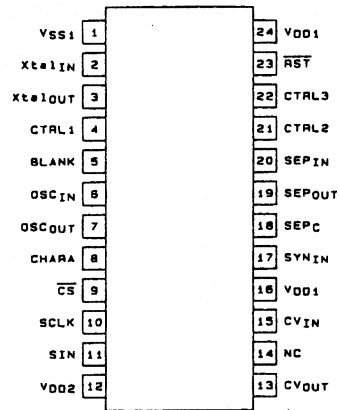


Pin	Pin Name	Pin	Pin Name
1	VREF	24	SVR
2	MPXIN	25	CE
3	Vdda	26	DI
4	Vssa	27	CL
5	FLOUT	28	DO
6	CIN	29	RDS-ID
7	T1	30	SYNC
8	T2	31	T7(CORREC/ARI-ID/BEI)
9	T3(CDCL)	32	T6(ERROR/57K/BEI)
10	T4(DDA)	33	Vssd
11	T5(RSFT)	34	Vddt
12	XOUT	35	XIN

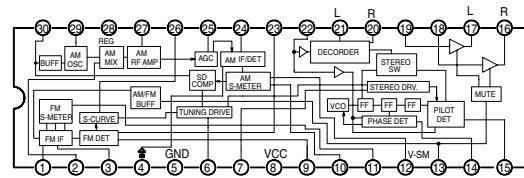
QL04,QL62,QX06:LC74781



A03300



Q201:LA1837



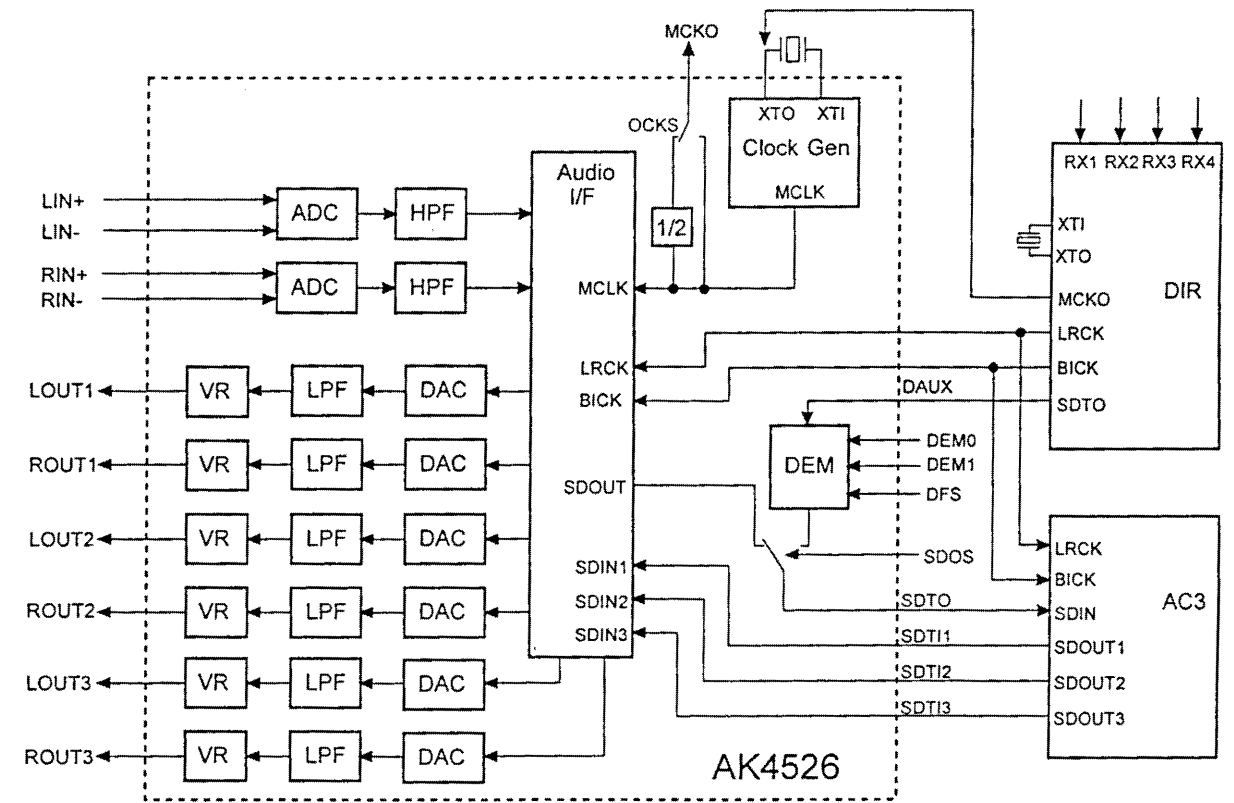
Q201 LA1837

QK04:AK4526

No.	Pin Name	I/O	Function
1	SDOS	I	SDTO Source Select Pin L: Internal ADC output, "H": DAUX input Ored with serial control register if P/S="L".
2	OCSK	I	MCKO Clock Frequency Select Pin L: MCLK, "H" MCLK12 Ored with serial control register if P/S="L".
3	M/S	I	Audio Data Master/Slave Mode Select Pin L: Slave mode, "H": Master mode
4	BICK	I/O	Audio Serial Data Clock Pin
5	LRCK	I/O	Input/Output Channel Clock Pin
6	SDTI1	I	DAC1 Audio Serial Data Input Pin
7	SDTI2	I	DAC2 Audio Serial Data Input Pin
8	SDTI3	I	DAC3 Audio Serial Data Input Pin
9	SDTO	O	Audio Serial Data Output Pin
10	DAUX	I	AUX Audio Serial Data Input Pin
11	DFS	I	Double Speed Sampling Mode Pin "L": Normal Speed, "H": Double Speed, the ADC is powered down. Ored with serial control register if P/S="L".
12	DEM1	I	De-emphasis Pin Ored with serial control register if P/S="L"
13	DEM0	I	De-emphasis Pin Ored with serial control register if P/S="L"
14	MCKO	O	Master Clock Output Pin
15	DVDD	I	Digital Power Supply Pin
16	DVSS	I	Digital Ground Pin
17	PD	I	Power-Down & Reset Pin When "L", the AK4526 is powered-down and the control registers are reset to default state. If the state of P/S, M/S, CADD-1 changes, then the AK4526 must be reset by PD.
18	XTS	I	X'tal oscillator Select/Test Mode Pin H: X'tal Oscillator selected L: External clock source selected
19	ICKS1	I	Input Clock Select 1 Pin
20	ICKS0	I	Input Clock Select 0 Pin
21	CAD1	I	Chip Address Pin Used during the serial control mode
22	CAD0	I	Chip Address Pin Used during the serial control mode.

No.	Pin Name	I/O	Function
23	LOUT3	O	Lch #3 analog output pin
24	ROUT3	O	Rch #3 analog output pin
25	LOUT2	O	Lch #2 analog output pin
26	ROUT2	O	Rch #2 analog output pin
27	LOUT1	O	Lch #1 analog output pin
28	ROUT1	O	Rch #1 analog output pin
29	LIN-	I	Lch Analog Negative Input Pin
30	LIN+	I	Lch Analog Positive Input pin
31	RIN-	I	Rch Analog Negative Input Pin
32	RIN+	I	Rch Analog Positive Input pin
33	VREFL	I	Negative Voltage Reference Input Pin, AVSS Large external capacitor is used to reduce power-supply noise
34	VCOM	O	Common Voltage Output Pin, AVDD/2
35	VREPH	I	Positive Voltage Reference Input Pin, AVDD
36	AVDD	I	Analog Power Supply Pin
37	AVSS	I	Analog Ground pin
38	XTI	I	X'tal Input Pin
39	XTO	O	X'tal Output Pin if XTS="H"
40	MCKI	I	External Master Clock Input Pin if XTS="L"
41	P/S	I	Parallel Serial Select Pin L: Serial control mode, "H": Parallel control mode
42	DIP0	I	Audio Data Interface Format Pin in parallel mode
43	CS	I	Chip Select Pin in serial mode
44	DIF1	I	Audio Data Interface Format Pin in parallel mode
45	CCLK	I	Control Data Clock Pin in serial mode
46	LOOP0	I	Loop-back Mode Pin in parallel mode
47	CDTI	I	Control Data Input Pin in serial mode
48	LOOP1	I	Loop-back Mode Pin in parallel mode
49	CDTO	O	Control Data Output Pin in serial mode

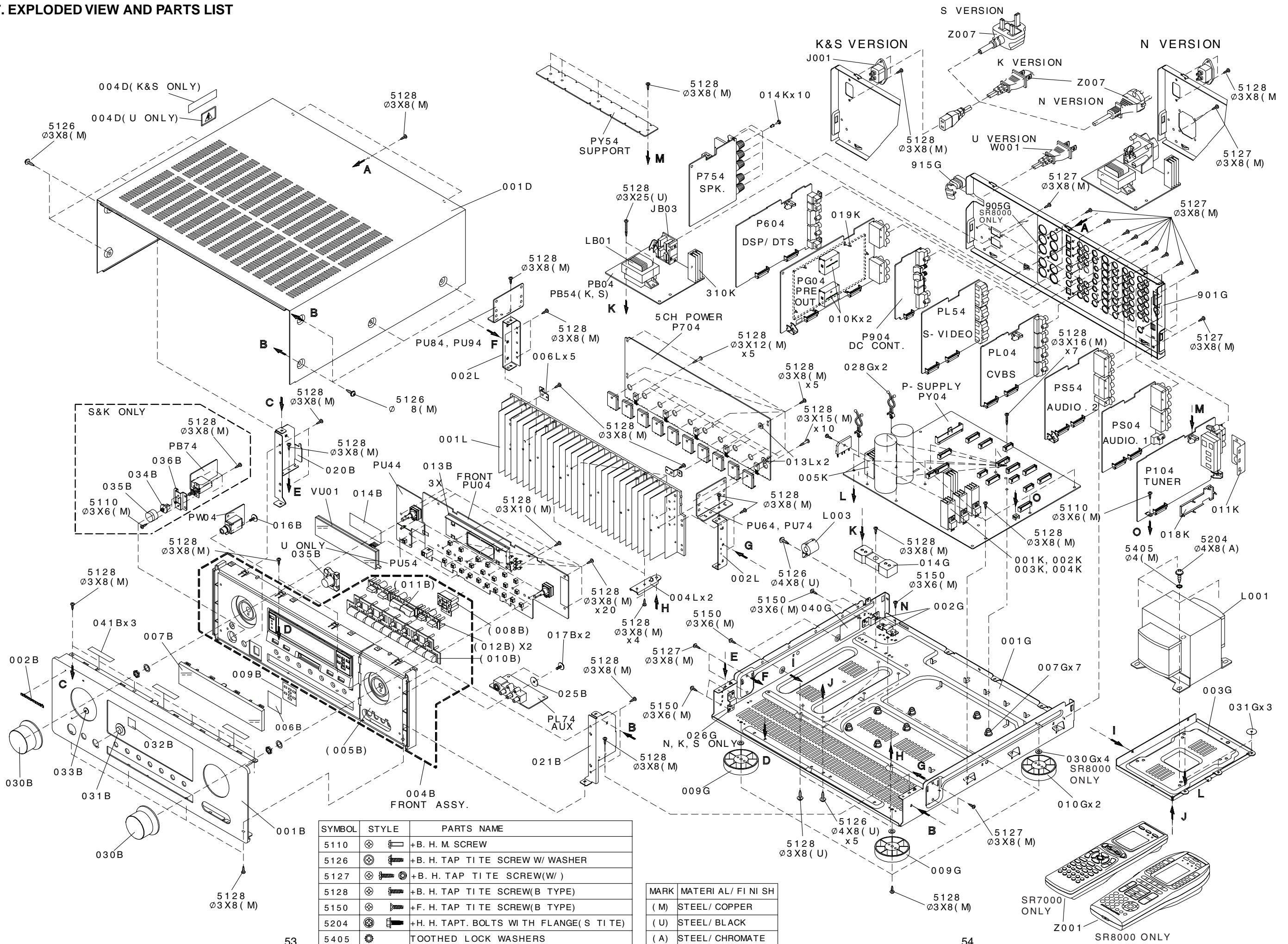
If pins XTS, ICKS0, ICKS1, PD, P/S, DFS, DEM0, DEM1, CAD0, CAD1, M/S, OCSK, SDOS are not driven then XTS, ICKS0, ICKS1, CAD0, CAD1 must be tied to either AVSS or AVDD, PD, P/S, DFS, DEM0, DEM1, M/S, OCSK, SDOS must be tied to either DVSS or DVDD



AK4526

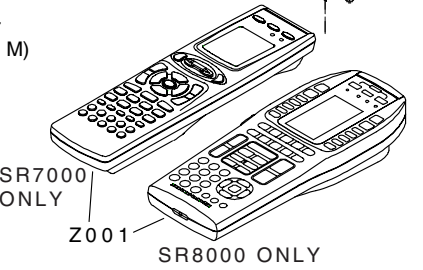


# 7. EXPLODED VIEW AND PARTS LIST



SYMBOL	STYLE	PARTS NAME
5110	⊗	+B. H. M. SCREW
5126	⊗	+B. H. TAP TI TE SCREW W/ WASHER
5127	⊗	+B. H. TAP TI TE SCREW(W/ )
5128	⊗	+B. H. TAP TI TE SCREW(B TYPE)
5150	⊗	+F. H. TAP TI TE SCREW(B TYPE)
5204	⊗	+H. H. TAPT. BOLTS WI TH FLANGE( S TI TE)
5405	⊗	TOOTHED LOCK WASHERS

MARK	MATERI AL/ FI NI SH
(M)	STEEL/ COPPER
(U)	STEEL/ BLACK
(A)	STEEL/ CHROMATE



POS. NO	VERS. COLOR	PART NO. (FOR PCS)	DESCRIPTION	PART NO. (MJI)	POS. NO	VERS. COLOR	PART NO. (FOR PCS)	DESCRIPTION	PART NO. (MJI)
001B	7000 /K1B, /N1B	996500003422	FRONT AL PANEL BLACK	320J248010	▲ W001	/U		MAINS CORD UL CSA NON-INTEGRAL	YC02000880
001B	7000 /K1G, /N1G	996500003436	FRONT AL PANEL GOLD	320J248110				<b>PACKING</b>	
001B	7000 /U1B		FRONT AL PANEL STANDBY BLACK	320J248020	001T	7000/K	996500003434	USER GUIDE SR7000	320J851350
001B	7000 /U1G		FRONT AL PANEL STNDBY GOLD	320J248120	001T	7000/N		USER GUIDE SR7000	320J851310
001B	8000 /K1G, /S1G		FRONT AL PANEL GOLD	321J248110	001T	7000/U		USER GUIDE SR7000	320J851250
001B	8000 /U1B		FRONT AL PANEL STANDBY BLACK	321J248020	001T	7000/K		USER GUIDE SR8000	321J851360
002B		482245411825	BADGE MARANTZ BADGE	185J251010	001T	7000/S		USER GUIDE SR8000	321J851350
005B	BLACK	996500003426	CHASSIS FRONT MOLD BLK	320J105020	001T	7000/U		USER GUIDE SR8000	321J851250
006B	GOLD	996500003437	CHASSIS FRONT MOLD GOLD	320J105120	Z001	7000	996500003420	REMOTE COMMANDER RC7000SR	ZK320J0010
007B		996500003427	MASK WINDOW SHEET WINDOW	312J303050	Z001	8000		REMOTE COMMANDER RC18SR	ZK300J0010
008B		996500003428	REFLECTOR LED	320J274010	▲ Z007	/K *1		MAINS CORD CCEE 10A 250V	ZC01803110
009B			MASK L R C LFE LS S RS	312J303020	▲ Z007	/K *2		MAINS CORD CCEE 10A 250V	ZC01803090
010B	BLACK	996500003429	BUTTON FUNCTION BLACK	320J270010	▲ Z007	/N *1	996500003421	MAINS CORD 10A 250V CLASS2	ZC01803120
010B	GOLD	996500003441	BUTTON FUNCTION GOLD	320J270110	▲ Z007	/N *2	482232111439	MAINS CORD 10A 250V CLASS2	ZC01803080
011B	BLACK	996500003430	BUTTON TUNING BLACK	320J270020	▲ Z007	/S *1		MAINS CORD 10A 250V	ZC01804080
011B	GOLD	996500003442	BUTTON TUNING GOLD	320J270120	▲ Z007	/S *2		MAINS CORD 10A 250V	ZC01804070
012B	BLACK	996500003431	BUTTON CENTER ESC. BLACK	320J270030				<b>SERVICE KIT</b>	
012B	GOLD	996500003443	BUTTON CENTER ESC. GOLD	320J270130	Z100		996500003435	EXTENSION WIRES (5P, 7P, 8P, 10P, 12Px2)	*SR7000JIG
013B			HOLDER FL	183J271020				* Refer to WIRING DIAGRAM	
014B			STICKER ADHESIVE FOR FL	056J122010				<b>REMARK :</b>	
019B			WASHER D16 T0.5	261J012010				*1	
025B			WASHER D16 T0.5	261J012010				FOR SR7000 ( Lot number from 01 to 12 ) and SR8000 ( Lot number from 01 to 09 )	
030B	BLACK	996500003432	KNOB MASTER BLACK	312J154010				*2	
030B	GOLD	996500001391	KNOB MASTER GOLD	312J154020				FOR SR7000 ( Lot number from 13 ) and SR8000 ( Lot number from 10 )	
031B	BLACK	996500003433	LENS IR BLACK	275W355010				<b>NOT STANDARD SPARE PARTS</b>	
031B	GOLD	996500001392	LENS IR GOLD	275W355110	001S	7000		PACKING CASE	320J801010
032B	GOLD		MASK IR	312J303030	001S	8000		PACKING CASE	321J801010
033B		996500001393	LENS STANDBY LENS	312J355010	002S			CUSHION LEFT	310J809010
034B	/K,/N,/S	996500001394	JOINT POWER	312J125010	003S			CUSHION RIGHT	310J809020
035B	BLACK	996500001975	BUTTON POWER SW BLACK	255W270010	Z002			LR6AG CP4	ZF53104000
035B	GOLD	996500001395	BUTTON POWER SW GOLD	255W270110	Z003	/K,/N,/S		EXT.ANTENNA FM 931222R	ZA02800020
035B	/U1B ONLY		BUTTON POWER SW TACT BLACK	320J270040	Z003	/U		EXT.ANTENNA FM	ZA02000070
035B	/U1G ONLY		BUTTON POWER SW TACT GOLD	320J270140	Z004			LOOP ANT COIL LA-700HB	LA00055010
009G		482246242129	LEG FRONT SIDE	183J057010	Z005	/U		PLUG ANT ADAPTOR	YP90000310
010G		482246242048	LEG REAR SIDE	183J057110	Z006	/K		JACK AC ADAPTER	YJ04001240
915G	/U		BUSHING AC CORD	450H259010				SMK S-I6116 PLRTY	
▲ J001	/K,/N,/S *1	482226731964	JACK MAINS INLET SOT-17	YJ04002250					
▲ J001	/K,/N,/S *2	996500001313	JACK MAINS INLET PW1910-H	YJ04002440					
▲ L001	7000 /K,		MAINS TRANSF. EI96-80T PIN TYPE 220V 50Hz	TS19630170					
▲ L001	7000 /N	996500003410	MAINS TRANSF. EI96-80T PIN TYPE 230V 50Hz	TS19630180					
▲ L001	7000 /U		MAINS TRANSF. EI96-80T PIN TYPE 120V 60Hz	TS19630160					
▲ L001	8000 /K		MAINS TRANSF. EI105-80T 220N 50Hz 60Hz	TS60513180					
▲ L001	8000 /S		MAINS TRANSF. EI105-80T 230V 50Hz	TS60513190					
▲ L001	8000 /U		MAINS TRANSF. EI105-80T 120V 60Hz	TS60513170					
L003	/K,/N,/U		FERRITE CORE TFCK-25-15-12	FC50250020					

## 8. SERVICE PROGRAM

### REMARK

If these service programs are set, All user preset memories will be cleared.

### 1. FACTORY mode (Tracking point memory)

This **FACTORY mode** can be use for measurement of the tuner circuit.

When the product is POWER ON, press both [ **MEMO** ] and [ **F/P** ] buttons simultaneously over 3 seconds.

FLD shows "**FACTORY**" for 3 seconds. Press [ **F/P** ] button, FLD shows "**PRESET SEL**".

The tuning frequencies are memorized as follows.

Band	VERSION	P1	P2	P3	P4
FM AUTO	K, N, S, U	90.0	98.0	106.0	87.5
[MHz]	F	78.0	83.0	88.0	76.0

Band	SCAN STEP	P5	P6	P7	P8	P9	P10	P11	P12
AM [kHz]	10 kHz(U)	600	1000	1400	520				
	9 kHz(K, N, S)	603	999	1404	531				
	MW/LW(N)	603	999	1404	171	207	270	152	531

### 2. Version of microprocessor (CPU) and FLD segment check mode

This mode is available to confirm the version of each CPU and to check all luminous segments by the following steps.

1. When the product is FACTORY mode ( Refer to above mentioned "**1. FACTORY mode**"), press [ **DISPLAY OFF** ] button.  
FLD shows "**SERVICE**" for 2 seconds.
2. Press [ **DISPLAY OFF** ] button again, then FLD shows version of program code QU01(main CPU).
3. Press [ **DISPLAY OFF** ] button again, then FLD shows version of program code Q691(DSP CPU).
4. Press [ **DISPLAY OFF** ] button again, then all segments lights and all LED lights up.
5. Press [ **DISPLAY OFF** ] button again, then then all segments lights off and all LED lights up.
6. Press [ **DISPLAY OFF** ] button again, then then each segments lights on and off.
7. Press [ **DISPLAY OFF** ] button again, then this mode will be stopped and the product will be FACTORY mode.

### 3. Input and output test mode

This mode is available for the functions as shown in Fig 1 by the following steps.

1. When the product is FACTORY mode ( Refer to above mentioned "**1. FACTORY mode**"), press both [ **MEMO** ] and [ **MODE** ] buttons simultaneously.
2. FLD shows "**AUTO D1**". By pressing both [ **MEMO** ] and [ **MODE** ] buttons simultaneously each time, the mode is changed in the following order.

Fig 1 Input and output test mode

ORDER	INDICATION for FLD	MODE FUNCTION
1	AUTO D1	Input selection mode (without using system setup menu)
2	ALL CH D1	5 or 6 channels output mode (This mode is available for 2 channels input)
3	INPULSE --	This mode is development use only
4	CD/DIG1	This mode is the same status as FACTORY mode

#### 3.1. Input selection mode (without setting to system setup menu)

This mode is available to select the input without setting to system setup menu by the following steps.

1. When FLD shows "AUTO D1"( Refer to "**3. Input and output test mode**"), the input can be shifted by pressing [ **MODE** ] button for the remote commander only each time as shown in Fig 2. ( [ **MODE** ] button is in page4 of **AMP** function for RC-18SR\*)



Fig 2. Input selection order by pressing [ **MODE** ] button each time

ORDER	INDICATION for FLD	INPUT STATUS
1	AUTO D1	DIG. 1 IN
2	AUTO D2	DIG. 2 IN
3	AUTO D3	DIG. 3 IN
4	AUTO D4	DIG. 4 IN
5	AUTO D5	DIG. 5 IN
6	AUTO D6	DIG. 6 IN
7	AUTO CD	CD IN (Analog)

**Note:** Surround mode is fixed “**AUTO**” mode automatically.

### 3.2. 5.1 channels output mode

This mode is available to output the same signal from 5 channels, even though 2 channels audio signal comes in. As the result, all channels output can be confirmed by using analog stereo signal or PCM audio signal.

AC-3 or DTS source is not necessary to output from any channel in this mode.

1. When FLD shows "ALL CH D1" (Refer to "**3. Input and output test mode**"), the input can be shifted by pressing [ **MODE** ] button for the remote commander only each time as shown in Fig 3.

( [ **MODE** ] button is in page4 of **AMP** function for RC-18SR\*)

2. Supply to 2 channels PCM signal for digital input or 2 channels analog signal for analog input. But, Left channel and Right channel of input signal should be equal.

3. Then each output from the product is the same as the input signal. (Subwoofer channel is respond to lower than 100Hz signal)

Fig 3. Input selection order by pressing [ **MODE** ] button each time

ORDER	INDICATION for FLD	INPUT STATUS
1	ALL CH D1	DIG. 1 IN
2	ALL CH D2	DIG. 2 IN
3	ALL CH D3	DIG. 3 IN
4	ALL CH D4	DIG. 4 IN
5	ALL CH D5	DIG. 5 IN
6	ALL CH D6	DIG. 6 IN
7	ALL CH CD	CD IN (Analog)

### 3.3. Cross Over circuit for SPK setup

This mode is available to confirm Cross Over circuit for SPK setup.

1. When FLD shows "ALL CH D1"(Refer to "**3. Input and output test mode**"), the Cross Over mode can be selected by pressing [ see Fig4 ] button for the remote commander only each time as shown in Fig 4. ( [ see Fig4 ] button is in page3 of **AMP** function for RC-18SR)

Fig 4. SPK set up mode

Button for RC-18SR	INDICATION for FLD	SPK setup			
		Front L/R	Center	Surr. L/R	Subwoofer
[ <b>CH+</b> ]	ALL CH D1	Large	Large	Large	ON
[ <b>LVL+</b> ]	CROSS 1	Large	Small	Small	OFF
[ <b>LVL-</b> ]	CROSS 2	Large	Small	Large	OFF

### 4. Transistor MUTE mode

In mute situation on the product, output signal is muted by Volume control IC and muting transistor.

But, this mode is available to work the muting transistor only by the following steps.

1. When the product is **FACTORY** mode ( Refer to "**1. FACTORY mode**"), press [ **MUTE** ] button for remote commander only.

2. FLD shows "**TrMUTE ON**", then muting transistor circuit is active only.

### 5. How to reset the product

When the product is **POWER ON**, press both [ **CLEAR** ] and [ **DISPLAY OFF** ] buttons simultaneously.

FLD shows "**DEFAULT**" for 3 seconds, then all memories are cleared.

#### Note

\* : The remote controller RC2000mkII is available instead of RC-18SR for [ **MODE** ] button.

## 9. ELECTRICAL ADJUSTMENTS

### 1. DC offset adjustment

Master Volume : Minimum, Speaker out : non Load

Step	Power	Channel	Adjustment Point	Test Point	Adjustment Vaule
1	on	Front L	R767	Speaker Output Terminal	± 20mV
		Center	RT67		
		Front R	R768		
		Surr. L	RP67		
		Surr. R	RT68		

Note : If the measured value is not exceed ±50mV, no need to adjust the DC offset.

### 2. Idling current adjustment

Master Volume : Minimum, Speaker out : non Load

Step	Power	Channel	Adjustment Point	Test Point	Adjustment Vaule
1	Power on	Front L	R737	J706(1p-2p) or R761	The center position
		Center	RT67	J706(3p-4p) or RT61	
		Front R	R738	J707(3p-4p) or R762	
		Surr. L	RP37	J708(3p-4p) or RP61	
		Surr. R	RP38	J707(1p-2p) or R762	
2	after 4 minutes			J***:4P Connector [between 1p-4p] R***:Emitter Resister [ 0.18Ω x 2 ]	see table for adjustment vaule

Time since power on	Idling current adjust.
1 minutes	2.8 - 3.4 mV
1 minutes 30 seconds	3.8 - 4.4 mV
2 minutes	4.8 - 5.6 mV
2 minutes 30 seconds	5.6 - 6.2 mV
3 minutes	6.2 - 6.8 mV
More than 4 minutes	6.8 - 7.4 mV

## 10. ALIGNMENT PROCEDURES

### 1. AM IF Adjustment

Step	Input Signal Source Connection	Signal Frequency	Source Signal Output Level and Modulation	Reception Frequency	Adjustment Point	Adjustment Value
1	Signal generator output to transmission *loop antenna. (*:Standard required loop)	999 kHz (K, S, N) 1000 kHz (U)	Level 300 $\mu$ V/m (50dB/m) Mod. 400 Hz 30%	Tuning point	LA06	Output level (L or R) <b>Maximum</b> at TAPE-OUT

**REMARK:** For receiving antenna, the adapted one is available.

This adjustment is not necessary normally, because the coil LA06 is preset by the original supplier.

It is necessary when the incorrect usable sense and frequency response.

### 2. AM (MW) Tracking Adjustment

Step	**Input Signal Source Connection	Signal Frequency	Source Signal Output Level and Modulation	Reception Frequency	Adjustment Point	Adjustment Value
1	Signal generator output to transmission *loop antenna. (*:Standard required loop)	603 kHz (K, S, N) 600 kHz (U)	Level 300 $\mu$ V/m (50dB/m) Mod. 400 Hz 30%	603 kHz (K, S, N) 600 kHz (U)	LA01	Output level (L or R) <b>Maximum</b> at TAPE-OUT
2		1404 kHz (K, S, N) 1400 kHz (U)	Level 300 $\mu$ V/m (50dB/m) Mod. 400 Hz 30%	1404 kHz (K, S, N) 1400 kHz (U)	CA01	Output level (L or R) <b>Maximum</b> at TAPE-OUT
3	Repeat step 1 and 2 until sensitivity be maximized.					

### 3. AM (LW) Tracking Adjustment [N version]

Step	**Input Signal Source Connection	Signal Frequency	Source Signal Output Level and Modulation	Reception Frequency	Adjustment Point	Adjustment Value
1	Signal generator output to transmission *loop antenna. (*:Standard required loop)	171 kHz	Level 500 $\mu$ V/m (54dB/m) Mod. 400 Hz 30%	171 kHz	LA03	Output level (L or R) <b>Maximum</b> at TAPE-OUT
2		270 kHz	Level 500 $\mu$ V/m (54dB/m) Mod. 400 Hz 30%	270 kHz	CA08	
3	Repeat step 1 and 2 until sensitivity be maximized.					

### 4. AM auto stop Adjustment

Step	Input Signal Source Connection	Signal Frequency	Source Signal Output Level and Modulation	Reception Frequency	Adjustment Point	Adjustment Value
1	Signal generator output to transmission *loop antenna. (*:Standard required loop)	999 kHz (K, S, N) 1000 kHz (U)	Level 500 $\mu$ V/m (54 dB/m)	999 kHz (K, S, N) 1000 kHz (U)	RA11	"TUNED" indicate on FLD
2			Level 1000 $\mu$ V/m (60 dB/m)	AUTO SCAN	Only Confirm	"TUNED" indicate on FLD

### 5. FM MONO. Distortion Adjustment

Step	Input Signal Source Connection	Signal Frequency	Source Signal Output Level and Modulation	Reception Frequency	Adjustment Point	Adjustment Value
1	Signal generator output to FM antenna terminal. (75 $\Omega$ )	98 MHz (K, N, S, U)	Level 500 $\mu$ V (54 dB) MONO 1 kHz / Dev.40kHz 53.3% (K, S) MONO 1 kHz / Dev. 75 kHz 100% (U, F)	98 MHz (P2) MONO	L201	Distortion level <b>Minimum</b> at TAPE-OUT

### 6. FM Muting Level Adjustment

Turn the variable resistor **R212** to no indication ("TUNED") point. And return that valuable resistor in opposite to the "TUNED" indicate point.

Step	Input Signal Source Connection	Signal Frequency	Source Signal Output Level and Modulation	Reception Frequency	Adjustment Point	Adjustment Value
1	Signal generator output to FM antenna terminal. (75 Ω)	98 MHz	Level 10 μV (20 dB) MONO 1 kHz / Dev.40 kHz 53.3% (K, N, S) MONO 1 kHz / Dev. 75 kHz 100% (U)	98 MHz (P2)	R212	"TUNED" indicate on FLD
2			Over mentioned level <b>+3 dB</b>			AUTO SCAN

### 7. FM STEREO Distortion Adjustment

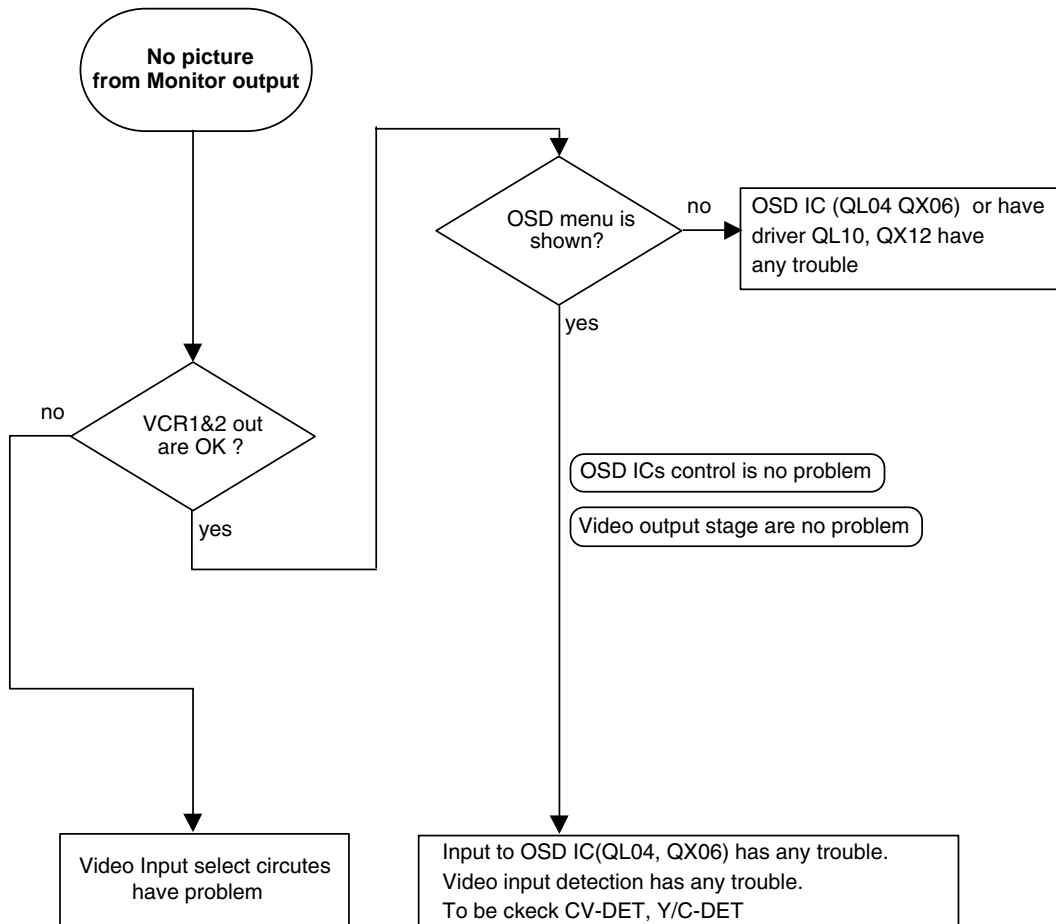
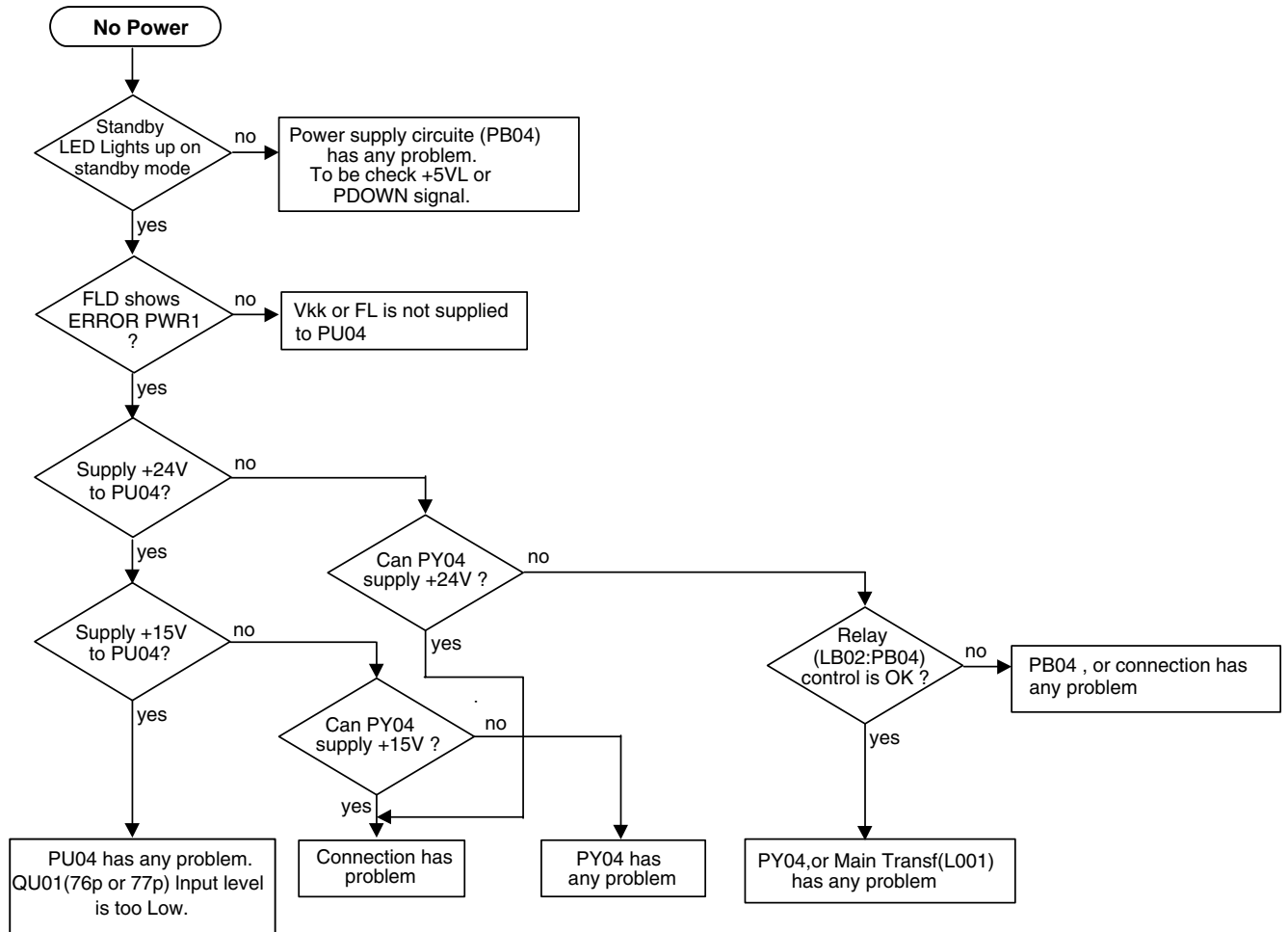
Adjust the **L channel** with the RF signal modulated only **L channel** first and confirm the **R channel** with the RF signal modulated only **R channel**.

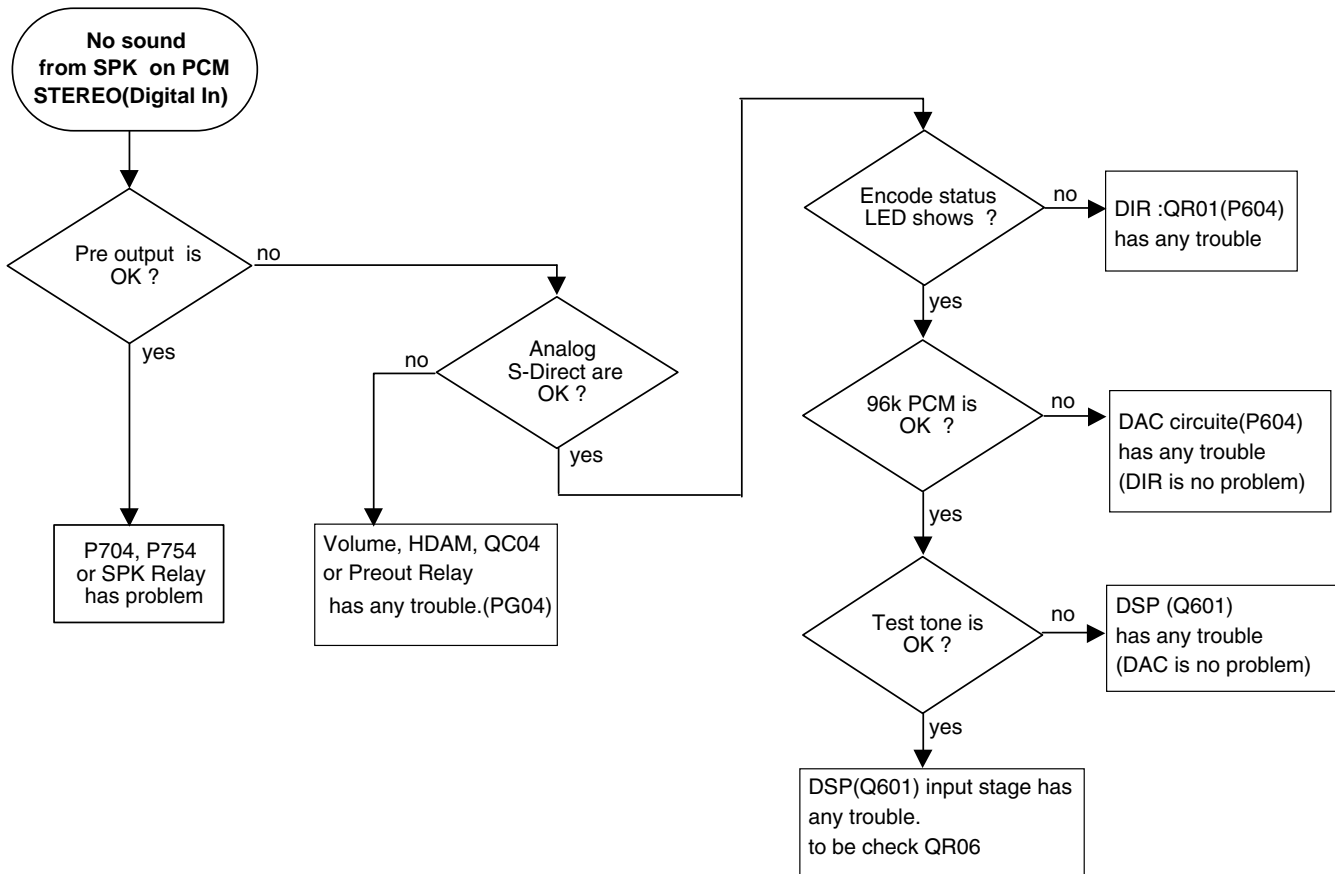
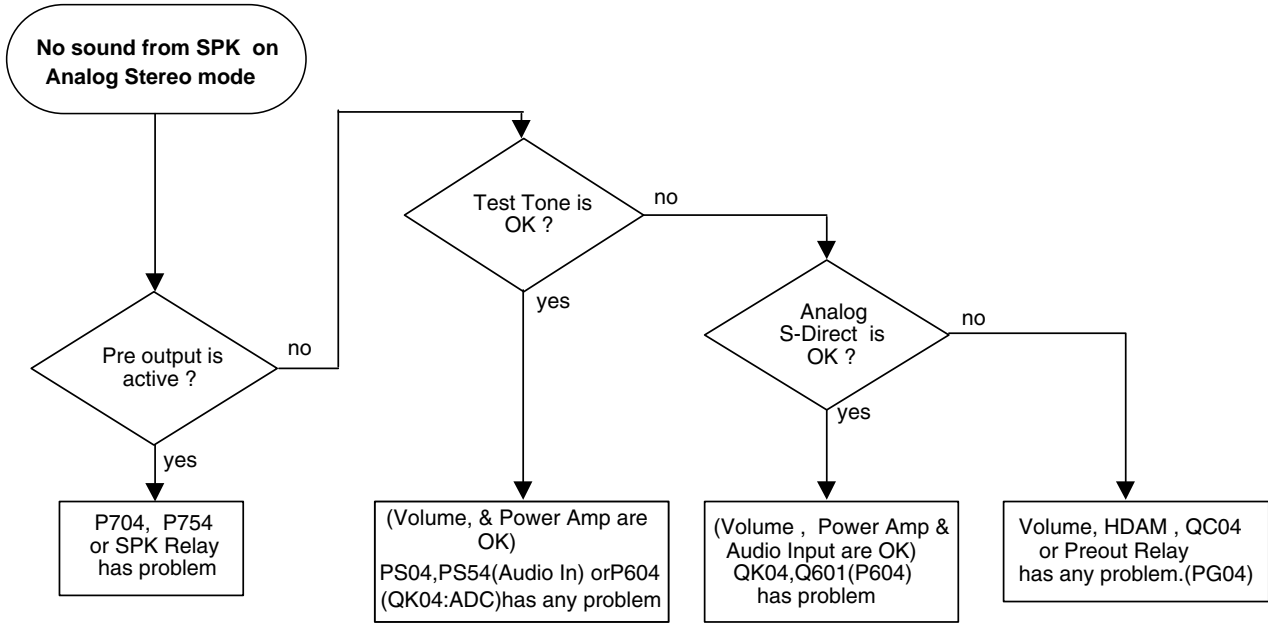
Step	Input Signal Source Connection	Signal Frequency	Source Signal Output Level and Modulation	Reception Frequency	Adjustment Point	Adjustment Value
1	Signal generator output to FM antenna terminal. (75 Ω)	98 MHz	L channel 1 kHz / Dev. 40 kHz 53.3% PILOT 19 kHz / Dev. 6 kHz 8% (K, N, S)	98 MHz (P2)	IF COIL in FRONT END	Distortion level <b>Minimum</b> at TAPE-OUT L channel
2			R channel 1 kHz / Dev. 67.5 kHz 90% PILOT 19 kHz / Dev. 6.75 kHz 9% (U)			Only Confirm

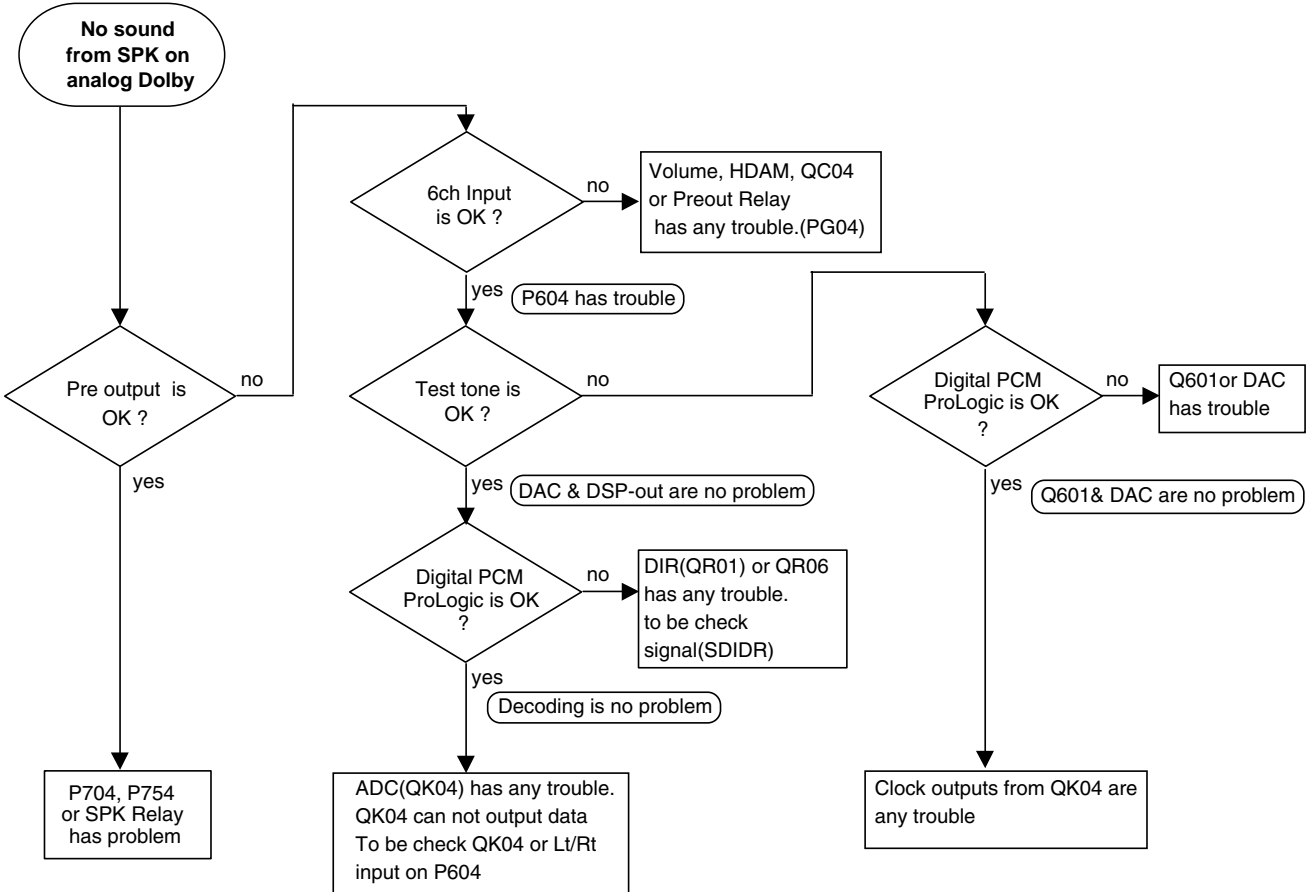
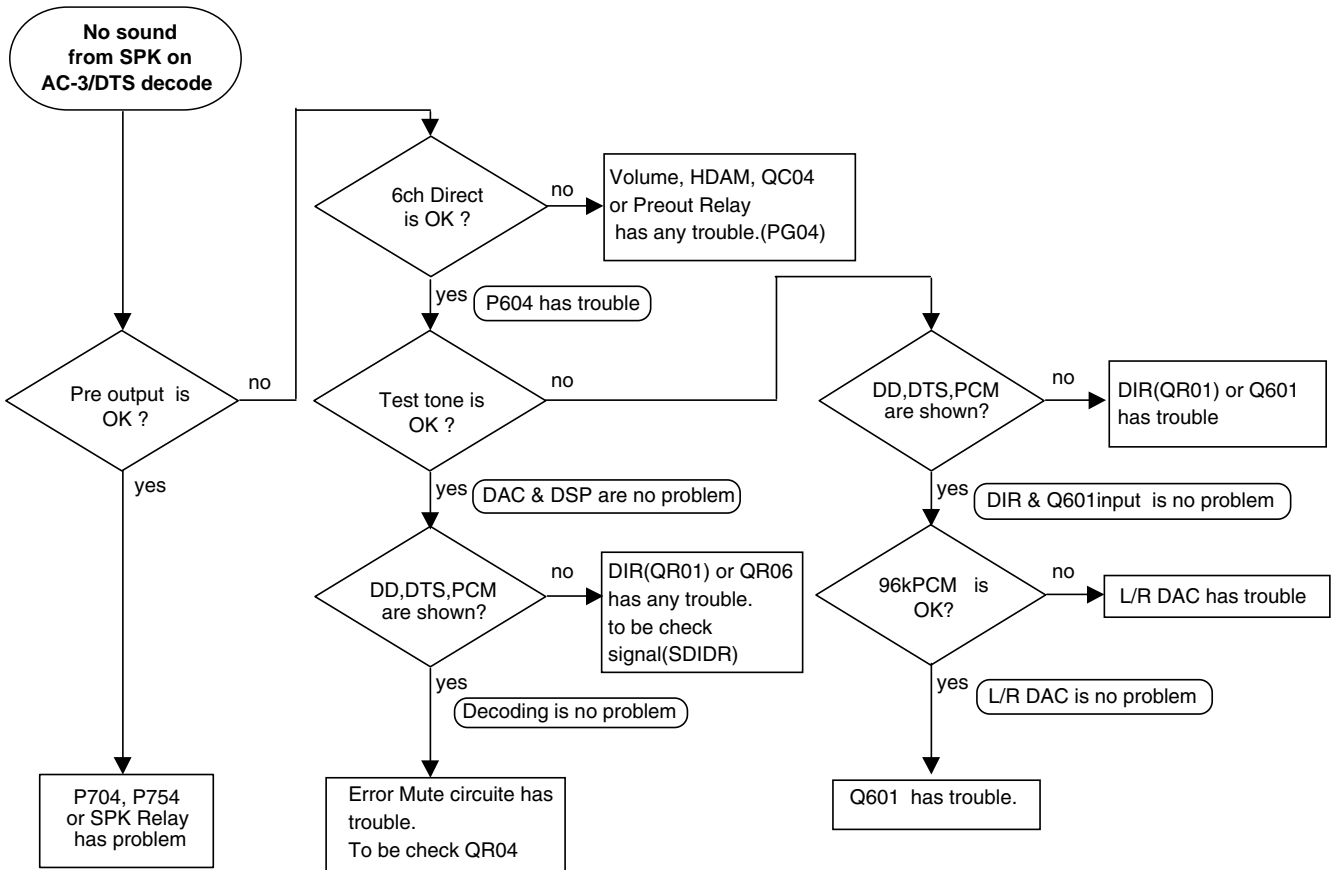
### 8. FM STEREO Separation Adjustment

Step	Input Signal Source Connection	Signal Frequency	Source Signal Output Level and Modulation	Reception Frequency	Adjustment Point	Adjustment Value
1	Signal generator output to FM antenna terminal. (75 Ω)	98 MHz	same specification as <b>FM STEREO distortion adjustment.</b> Input only L channel.	98 MHz (P2)	R211	Output level <b>Minimum</b> at TAPE-OUT R channel
2		98 MHz	same specification as <b>FM STEREO distortion adjustment.</b> Input only R channel.			98 MHz (P2)

# 11. TROUBLE SHOOTING







## 12. TECHNICAL DESCRIPTION FOR DECODER

This product has a decoder for Dolby Digital (AC-3) and DTS (Digital Theater System).

So Multi channel sound is reproduced by connecting with DVD player or LD player.

Also Dolby Pro Logic decode is available to analog audio and PCM digital audio.

Additionally, 96kHz PCM stereo audio playback is possible.

Decode circuit is consist of 4 ICs (DIR, DSP, CODEC, and CPU).

### DOLBY DIGITAL (AC-3)

Dolby Digital delivers six totally separate (discrete) channels of sound. Like Dolby Surround Pro Logic, it includes Left, Center and Right channels across the front of the room. Dolby Surround Pro Logic provides a single limited-bandwidth (100Hz to 7,000 Hz) surround channel which is typically played back in the home through two channels of amplification and two speakers. In comparison, Dolby Digital provides separate (discrete) left surround and right surround channels, for more precise localization of sounds and a more convincing, realistic ambience. And, with Dolby Digital, all five main channels are full range (3 Hz to 20,000 Hz). A subwoofer could be added to each channel, if desired.

The sixth channel, the Low Frequency Effects Channel, will, at times, contain additional bass information to maximize the impact of scenes such as explosions, crashes, etc. Because this channel has only a limited frequency response (3 Hz to 120Hz), it is sometimes referred to as the ".1" channel. When added to the 5 full range channels, the Dolby Digital system is sometimes referred to as having "5.1" channels.

### DTS

An amazing new technology for surround-sound entertainment, DTS Digital Surround is an encode/decode system that delivers six channels (5.1) of master-quality, 20-bit audio. In the encoding process, the DTS algorithm encrypts six channels of 20-bit digital audio information in the space previously allotted for only two channels of 16-bit linear PCM. Then during playback, the DTS decoder reconstructs the original six channels of 20-bit digital audio. Each of these six channels is audibly superior to the 16-bit linear PCM audio found on conventional compact discs.

### DIR (Digital audio Interface Receiver)

This circuit extract synchronized clock signals and data from SPDIF signal input.

QR01 (CS8414) generates these signals, this chip supports 96kHz sample rate.

### DSP (Digital Signal Processor for Dolby Digital/Pro Logic/DTS)

Q601 (YSS912) decode 6 channels audio from encoded data signal input.

Some effects are processed in addition to multi channel decode on HALL, MATRIX, and MOVIE mode.

### DAC (Digital to Analog Converter : QD01 /AD1855)\*

The AD1855 is a high performance, single-chip stereo, audio DAC. This chip are used for FRONT L/R channel.

### Multi channel CODEC (2 channel ADC & 4\* or 6 channel DAC)

2 channel ADC and 4 channel DAC are in QK04 (AK4526).

4\* or 6 channel analog audio signals (Front L/R SURROUND L/R, CENTER, LEF) are covered from output data of DSP.

Digital signal is converted from analog audio input for Pro Logic or other effect mode.

### SUB CPU (Q691:uPD78018FGC)

This chip controls ICs in P604 and communicate with QU01.

Connect to QU01 with serial interface lines.

\* : SR8000 only



### 13. ELECTRICAL PARTS LIST

#### ASSIGNMENT OF COMMON PARTS CODES.

##### RESISTORS

R\*\*\*: 1) GD05 × × × 140, Carbon film fixed resistor, ±5% 1/4W

R\*\*\*: 2) GD05 × × × 160, Carbon film fixed resistor, ±5% 1/6W

① — Resistance value

Examples ;

① Resistance value

0.1 Ω .... 001    10 Ω .... 100    1 kΩ .... 102    100 kΩ .... 104  
 0.5 Ω .... 005    18 Ω .... 180    2.7 kΩ .... 272    680 kΩ .... 684  
 1 Ω .... 010    100 Ω .... 101    10 kΩ .... 103    1 MΩ .... 105  
 6.8 Ω .... 068    390 Ω .... 391    22 kΩ .... 223    4.7 MΩ .... 475

Note : Please distinguish 1/4W from 1/6W by the shape of parts used actually.

##### CAPACITORS

C\*\*\*: CERAMIC CAP.

3) DD1 × × × × 370, Ceramic capacitor  
 Disc type  
 Temp.coeff.P350 ~ N1000, 50V  
 ② — Capacity value  
 ③ — Tolerance

Examples ;

② Tolerance (Capacity deviation)

±0.25 pF .... 0  
 ±0.5 pF .... 1  
 ±5% .... 5

\* Tolerance of COMMON PARTS handled here are as follows :

0.5 pF ~ 5 pF .... ±0.25 pF  
 6 pF ~ 10 pF .... ±0.5 pF  
 12 pF ~ 560 pF .... ±5%

③ Capacity value

0.5 pF .... 005    3 pF .... 030    100 pF .... 101  
 1 pF .... 010    10 pF .... 100    220 pF .... 221  
 1.5 pF .... 015    47 pF .... 470    560 pF .... 561

C\*\*\*: CERAMIC CAP.

4) DK16 × × × × 300, High dielectric constant ceramic capacitor  
 Disc type  
 Temp.chara. 2B4, 50V  
 ④ — Capacity value

Examples ;

④ Capacity value

100 pF .... 101    1000 pF .... 102    10000 pF .... 103  
 470 pF .... 471    2200 pF .... 222

C\*\*\*: 5) ELECTROLY CAP. (  $\text{⏏}$  ), 6) FILM CAP. (  $\text{⏏}$  )

5) EA × × × × × × 10, Electrolytic capacitor  
 One-way lead type, Tolerance ±20%  
 ⑤ — Working voltage  
 ⑥ — Capacity value

Examples ;

⑤ Capacity value

0.1 μF .... 104    4.7 μF .... 475    100 μF .... 107  
 0.33 μF .... 334    10 μF .... 106    330 μF .... 337  
 1 μF .... 105    22 μF .... 226    1100 μF .... 118  
 2200 μF .... 228

⑥ Working voltage

6.3V .... 006    25V .... 025  
 10V .... 010    35V .... 035  
 16V .... 016    50V .... 050

6) DF15 × × × × 350 — Plastic film capacitor  
 DF15 × × × × 310 — One-way type, Mylar ±5% 50V  
 DF16 × × × × 310 — Plastic film capacitor  
 One-way type, Mylar ±10% 50V  
 ⑦ — Capacity value

Examples ;

⑦ Capacity value

0.001 μF (1000 pF) ..... 102    0.1 μF .... 104  
 0.0018 μF ..... 182    0.56 μF .... 564  
 0.01 μF ..... 103    1 μF .... 105  
 0.015 μF ..... 153

NOTE : 1) The above CODES ( R\*\*\*, R\*\*\*, C\*\*\*, C\*\*\* and C\*\*\* ) are omitted on the schematic diagram in some case.

2) On the occasion, be confirmed the common parts on the parts list.

3) Refer to "Common Parts List" for the other common parts (R105, DD4, DK4).

#### NOTE ON SAFETY FOR FUSIBLE RESISTOR :

The suppliers and their type numbers of fusible resistors are as follows;

1. KOA Corporation

Part No. (MJI)	Type No. (KOA)	Description
NH05 × × × 140	RF25S × × × × ΩJ	(±5% 1/4W)
NH05 × × × 120	RF50S × × × × ΩJ	(±5% 1/2W)
NH85 × × × 110	RF73B2A × × × × ΩJ	(±5% 1/10W)
NH95 × × × 140	RF73B2E × × × × ΩJ	(±5% 1/4W)

\* Resistance value    Resistance value (0.1 Ω – 10 kΩ)

2. Matsushita Electronic Components Co., Ltd

Part No. (MJI)	Type No. (MEC)	Description
NF05 × × × 140	ERD-2FCJ × × ×	(±5% 1/4W)
RF05 × × × 140	ERD-2FCG × × ×	(±2% 1/4W)
NF02 × × × 140		
RF02 × × × 140		

\* Resistance value    \* Resistance value

Examples ;

\* Resistance value

0.1 Ω .... 001    10 Ω .... 100    1 kΩ .... 102    100 kΩ .... 104  
 0.5 Ω .... 005    18 Ω .... 180    2.7 kΩ .... 272    680 kΩ .... 684  
 1 Ω .... 010    100 Ω .... 101    10 kΩ .... 103    1 MΩ .... 105  
 6.8 Ω .... 068    390 Ω .... 391    22 kΩ .... 223    4.7 MΩ .... 475

#### ABBREVIATION AND MARKS

ANT. : ANTENNA	BATT. : BATTERY
CAP. : CAPACITOR	CER. : CERAMIC
CONN. : CONNECTING	DIG. : DIGITAL
HP : HEADPHONE	MIC. : MICROPHONE
μ-PRO : MICROPROCESSOR	REC. : RECORDING
RES. : RESISTOR	SPK : SPEAKER
SW : SWITCH	TRANSF. : TRANSFORMER
TRIM. : TRIMMING	TRS. : TRANSISTOR
VAR. : VARIABLE	X'TAL : CRYSTAL

#### NOTE ON SAFETY :

Symbol  $\text{⚠}$  Fire or electrical shock hazard. Only original parts should be used to replaced any part marked with symbol  $\text{⚠}$ . Any other component substitution (other than original type), may increase risk of fire or electrical shock hazard.

#### 安全上の注意 :

$\text{⚠}$  がついている部品は、安全上重要な部品です。必ず指定されている部品番号の部品を使用して下さい。





POS. NO	VERS. COLOR	PART NO. (FOR PCS)	DESCRIPTION	PART NO. (MJJ)	POS. NO	VERS. COLOR	PART NO. (FOR PCS)	DESCRIPTION	PART NO. (MJJ)
C693		482212611687	CER. CHIP 0.1μF	DK98104200	CJ53	8000		FILM 0.001μF J M 50V	DF15102350
C694		482212490353	ELECT. 100μF 10V	OA10701020	CJ54	8000		FILM 0.27μF J 50V	DF15274350
C695		482212231765	CER. 100pF 50V	DD95101300	CJ55	8000	482212110792	FILM 220pF ±10% 100V PP	OF15221540
CD01	8000	482212490353	ELECT.100μF 10V	OA10701020	CJ56	8000		FILM 0.022μF J M 50V	DF15223350
CD02	8000	482212611687	CER. CHIP 0.1μF	DK98104200	CJ59	8000	482212110792	FILM 220pF ±10% 100V PP	OF15221540
CD03	8000	482212490353	ELECT.100μF 10V	OA10701020	CJ60	8000		FILM 0.022μF J M 50V	DF15223350
CD04	8000	482212611687	CER. CHIP 0.1μF	DK98104200	CJ65		482212110792	FILM 220pF	OF15221540
CD05	8000	532212421731	ELECT.10μF 50V	OA10605020	CJ65	8000		FILM 0.001μF J M 50V	DF15102350
CD06	8000	482212611687	CER. CHIP 0.1μF	DK98104200	CJ66		482212611568	CER. 470pF 50V	DK96471300
CD07	8000	532212421731	ELECT.10μF 50V	OA10605020	CJ67		482212611687	CER. CHIP 0.1μF	DK98104200
CD08		482212611687	CER. CHIP 0.1μF	DK98104200	CJ68		482212611687	CER. CHIP 0.1μF	DK98104200
CD09		482212490353	ELECT. 100μF 10V	OA10701020	CJ69		532212421731	ELECT. 10μF 50V	OA10605020
CD55		482212611703	CER. CHIP 0.01μF	DK98103300	CJ70			ELECT. 10μF 50V	OA10605020
CD59		482212611703	CER. CHIP 0.01μF	DK98103300	CJ71		482212490353	ELECT. 100μF 10V	OA10701020
CD60		482212490353	ELECT. 100μF 10V	OA10701020	CJ72		482212490353	ELECT. 100μF 10V	OA10701020
CD61		482212611703	CER. CHIP 0.01μF	DK98103300	CJ73		482212611703	CER. CHIP 0.01μF	DK98103300
CD62		482212611703	CER. CHIP 0.01μF	DK98103300	CJ74		482212611703	CER. CHIP 0.01μF	DK98103300
CD63		482212611703	CER. CHIP 0.01μF	DK98103300	CJ75		482212210172	CER. CHIP 220pF 50V	DK96221300
CD66		482212611703	CER. CHIP 0.01μF	DK98103300	CJ76		482212210172	CER. CHIP 220pF 50V	DK96221300
CD68		482212611703	CER. CHIP 0.01μF	DK98103300	CJ77		532212421731	ELECT. 10μF 50V	OA10605020
CD69		482212611703	CER. CHIP 0.01μF	DK98103300	CJ78		482212210172	CER. CHIP 220pF 50V	DK96221300
CD70		482212441535	ELECT. 100μF 25V	OA10702520	CJ79		482212210172	CER. CHIP 220pF 50V	DK96221300
CD71		482212441535	ELECT. 100μF 25V	OA10702520	CJ80		482212210172	CER. CHIP 220pF 50V	DK96221300
CD74		482212490353	ELECT. 100μF 10V	OA10701020	CJ83		482211141305	RES. 0Ω	GD05000140
CD76		482212490353	ELECT. 100μF 10V	OA10701020	CJ84		482211141305	RES. 0Ω	GD05000140
CD77		996500001318	ELECT. 220μF 10V	OA22701020	CJ85		532212421731	ELECT. 10μF 50V	OA10605020
CH01	8000		FILM 1000pF J 50V	DF15102350	CJ86		482212210172	CER. CHIP 220pF 50V	DK96221300
CH02	8000		FILM 1000pF J 50V	DF15102350	CJ87		532212421731	ELECT. 10μF 50V	OA10605020
CH03		482211682951	RES. 33kΩ ±5% 1/6W	GG05333160	CJ87	8000	482212441539	ELECT.47μF 16V	OA47601620
CH03	8000		FILM 1000pF J 50V	DF15102350	CJ88		532212421731	ELECT. 10μF 50V	OA10605020
CH04		482211682951	RES. 33kΩ ±5% 1/6W	GG05333160	CJ89		482212233777	CER. CHIP 47pF RH 50	DD95470300
CH04	8000		FILM 1000pF J 50V	DF15102350	CJ90		482212233777	CER. CHIP 47pF RH 50	DD95470300
CH05	8000	482212110792	FILM 220pF ±10% 100V PP	OF15221540	CJ91	8000	482212441539	ELECT. 47μF 16V	OA47601620
CH06	8000	482212110792	FILM 220pF ±10% 100V PP	OF15221540	CJ92	8000	532212421731	ELECT. 10μF 50V	OA10605020
CH07	8000	482212110792	FILM 220pF ±10% 100V PP	OF15221540	CJ93	8000	482212233777	CER. CHIP 47pF RH 50	DD95470300
CH08	8000	482212110792	FILM 220pF ±10% 100V PP	OF15221540	CK01	/K,/N,/S	532212421731	ELECT. 10μF 50V RA-2	OA10605020
CH09	8000		FILM 1000pF J 50V	DF15102350	CK01	/U	532212421731	ELECT. 10μF 50V RA-2	OA10605020
CH10	8000		FILM 1000pF J 50V	DF15102350	CK02	/K,/N,/S	532212421731	ELECT. 10μF 50V RA-2	OA10605020
CH11		482212490362	ELECT. 22μF 50V	OA22605020	CK02	/U,/N,/S	532212421731	ELECT. 10μF 50V RA-2	OA10605020
CH12		482212490362	ELECT. 22μF 50V	OA22605020	CK03		482212233753	CER. CHIP 150pF ±5% CG 50V	DD95151300
CH13		482212611687	CER. CHIP 0.1μF	DK98104200	CK04		482212233753	CER. CHIP 150pF ±5% CG 50V	DD95151300
CH14	8000	482212611687	CER. CHIP 0.1μF	DK98104200	CK05		482212233777	CER. CHIP 47pF RH 50	DD95470300
CH15	8000	482212611687	CER. CHIP 0.1μF	DK98104200	CK06		482212233777	CER. CHIP 47pF RH 50	DD95470300
CH16		482212611687	CER. CHIP 0.1μF	DK98104200	CK12		482212611687	CER. CHIP 0.1μF	DK98104200
CH21		482212412404	ELECT. 220μF 16V	OA22701620	CK13		532212421731	ELECT. 10μF 50V	OA10605020
CH22		482212412404	ELECT. 220μF 16V	OA22701620	CK14		532212421731	ELECT. 10μF 50V	OA10605020
CH23		482212611687	CER. CHIP 0.1μF	DK98104200	CK15		482212490353	ELECT. 100μF 10V	OA10701020
CH24		482212611687	CER. CHIP 0.1μF	DK98104200	CK16		482212611687	CER. CHIP 0.1μF	DK98104200
CH25		482212210172	CER. CHIP 220pF 50V	DK96221300	CK17		532212421731	ELECT. 10μF 50V	OA10605020
CH26		482212210172	CER. CHIP 220pF 50V	DK96221300	CK18				
CH29	7000	482212233777	CER. CHIP 47pF RH 50	DD95470300	CK21		482212611687	CER. CHIP 0.1μF	DK98104200
CH30	7000	482212233777	CER. CHIP 47pF RH 50	DD95470300	CK22		482212611568	CER. CHIP 470pF 50V	DK96471300
CH31	8000	482212233777	CER. CHIP 47pF RH 50	DD95470300	CK23		482212490353	ELECT. 100μF 10V	OA10701020
CH32	8000	482212233777	CER. CHIP 47pF RH 50	DD95470300	CK24		482212611687	CER. CHIP 0.1μF	DK98104200
CJ01		532212421731	ELECT. 10μF 50V	OA10605020	CK25		482211141305	RES. 0Ω	GD05000140
CJ02		532212421731	ELECT. 10μF 50V	OA10605020	CK26		482211141305	RES. 0Ω	GD05000140
CJ13		532212421731	ELECT. 10μF 50V	OA10605020	CR01		482212611687	CER. CHIP 0.1μF	DK98104200
CJ14		532212421731	ELECT. 10μF 50V	OA10605020	CR02		482212611687	CER. CHIP 0.1μF	DK98104200
CJ17		482212210172	CER. CHIP 220pF 50V	DK96221300	CR03		482212611687	CER. CHIP 0.1μF	DK98104200
CJ18		482212210172	CER. CHIP 220pF 50V	DK96221300	CR04		482212613837	CER. CHIP 0.1μF 50V	DK96104200
CJ30		482212611687	CER. CHIP 0.1μF	DK98104200	CR05		482212613837	CER. CHIP 0.1μF 50V	DK96104200
CJ33	7000	532212421731	ELECT. 10μF 50V	OA10605020	CR06		482212613837	CER. CHIP 0.1μF 50V	DK96104200
CJ34	7000	532212421731	ELECT. 10μF 50V	OA10605020	CR07		482212490353	ELECT. 100μF 10V	OA10701020
CJ35		482212611687	CER. CHIP 0.1μF	DK98104200	CR13		482212611687	CER. CHIP 0.1μF	DK98104200
CJ51	8000		FILM 0.001μF J M 50V	DF15102350	CR14		482212611687	CER. CHIP 0.1μF	DK98104200
CJ52	8000		FILM 0.27μF J 50V	DF15274350	CR16		482212611687	CER. CHIP 0.1μF	DK98104200
					CR17		482212490353	ELECT. 100μF 10V	OA10701020





POS. NO	VERS. COLOR	PART NO. (FOR PCS)	DESCRIPTION	PART NO. (MJI)	POS. NO	VERS. COLOR	PART NO. (FOR PCS)	DESCRIPTION	PART NO. (MJI)
QR08		482220933519	IC TC7W74F	HC10381050	CP15 }		482212423068	ELECT. 220µF 63V M RA-2	OA22706320
J691			<b>P604-MISCELLANEOUS</b>		CP18				
JD01			PLUG SOCKET 12P 12MQ-ST-L	YP06902090	CP19		482212411533	ELECT. 1µF100V RA-2	OA10510020
JR01		482226510682	PLUG SOCKET 12P 12MQ-ST-L	YP06902090	CP20		482212411533	ELECT. 1µF100V RA-2	OA10510020
JR01	8000		TERMINAL RCA 3P BLK NI	YT02030420	CP25 }				
JR04		482221811487	TERMINAL RCA 3P BLK AU	YT02030610	CP28		482212231211	CER. 100pF 500V	DK16101550
JR05		482221811487	OPT. CONNECTOR GP1F32R	YJ15000150	CT01		482212422275	ELECT. 47µF M 10V RA-2	OA47601020
JR06	8000	482221811487	OPTICAL RECIVER GP1F32R	YJ15000150	CT05	/N	482212170437	FILM 1000pF J 100V APSV	OF15102540
JR07		482226731729	TERMINAL RCA 1P BLK NI	YT02010780	CT07		482212422276	ELECT. 47µF M 50V RA-2	OA47605020
JR07	8000	482229081638	TERMINAL RCA 1P BLK NI	YT02010790	CT09		482212231205	CER. 47pF J CH 50V BLK	DD15470300
JR08		482226731369	OPTICAL OUTPUT GP1F32T	YJ15000090	CT11	/N	996500003406	FILM 150pF J 100V APSV	OF15151540
L601		482224273843	EMI FILTER DSS306-91-F-223Z	FM12223010	CT13		482212490362	ELECT. 22µF M 50V RA-2	OA22605020
L691		482215710884	FERRITE INDUCTOR BLM11	FN31000010	CT15		482212423068	ELECT. 220µF 63V M RA-2	OA22706320
L693					CT17		482212423068	ELECT. 220µF 63V M RA-2	OA22706320
L697		482215710884	FERRITE INDUCTOR BLM11	FN31000010	CT19		482212411533	ELECT. 1µF100V RA-2	OA10510020
LD01		482252610584	FERRITE ZBF-503D-00TA	FC90090010	CT25		482212231211	CER. 100pF 500V	DK16101550
LD02	8000	482252610584	FERRITE ZBF-503D-00TA	FC90090010	CT27		482212231211	CER. 100pF 500V	DK16101550
LD03	8000	482252610584	FERRITE ZBF-503D-00TA	FC90090010					
LD55		482224273843	EMI FILTER DSS306-91-F-223Z	FM12223010				<b>P704-CAPACITORS (COMMON)</b>	
LD58		482224273843	EMI FILTER DSS306-91-F-223Z	FM12223010	<b>C***</b>			PLASTIC FILM CAPACITOR	
LH01		482252610584	FERRITE ZBF-503D-00TA	FC90090010				±5% 50V : C703 C704	
LH02		482252610584	FERRITE ZBF-503D-00TA	FC90090010				C705-C706/[K,U]	
LK01		482252610584	FERRITE ZBF-503D-00TA	FC90090010				C711-C712/[K,U] CP03-CP06	
LK02		482252610584	FERRITE ZBF-503D-00TA	FC90090010				CP11 CP12 CP21-CP24 CT03	
LK03		482252610584	FERRITE ZBF-503D-00TA	FC90090010				CT05/[K,U] CT11K,/U]	
LR01		482214260422	PULSE TRNSF.	TP41042030	<b>C***</b>			HIGH DIELECTRIC CONSTANT	
LR02		482224273843	EMI FILTER DSS306-91-F-223Z	FM12223010				CER. CAPACITOR ±10% 50V :	
X601		482224210851	CRYSTAL 12.288MHz AT-49	JX12013260				C721-C724 CT21 CT23	
X691		482224281727	SERAMIC VIB. CST10.0MTW-TF01 10.0MHz	FQ01005010				<b>P704-RESISTORS</b>	
C701		482212422275	<b>P704-5CH POWER AMP CIRCUIT BOARD</b>		▲ R709		482205022202	2.2kΩ ±5% 1/6W	GG05222160
C702		482212422275	<b>P704-CAPACITORS</b>		▲ R710		482205022202	2.2kΩ ±5% 1/6W	GG05222160
C705	/N	482212170437	ELECT. 47µF M 10V RA-2	OA47601020	▲ R713		482205022202	2.2kΩ ±5% 1/6W	GG05222160
C706	/N	482212170437	FILM 1000pF J 100V APSV	OF15102540	▲ R714		482205022202	2.2kΩ ±5% 1/6W	GG05222160
C707		482212422276	FILM 1000pF J 100V APSV	OF15102540	▲ R727 }		482205026809	68Ω 1/6W	GG05680160
C708		482212422276	ELECT. 47µF M 50V RA-2	OA47605020	▲ R732				
C709		482212231205	ELECT. 47µF M 50V RA-2	OA47605020	R737		996500001566	TRIM. VAR. 2.2kΩ VERT	RA02220760
C710		482212231205	CER. 47pF J CH 50V BLK	DD15470300	R738		996500001566	TRIM. VAR. 2.2kΩ VERT	RA02220760
C711	/N	996500003406	CER. 47pF J CH 50V BLK	DD15470300	▲ R739 }		482205022209	22Ω J 1/4W	GG05220140
C712	/N	996500003406	FILM 150pF J 100V APSV	OF15151540	▲ R742				
C713		482212490362	FILM 150pF J 100V APSV	OF15151540	▲ R743 }		482205210101	100Ω 1/6W	GG05101160
C714		482212490362	ELECT. 22µF M 50V RA-2	OA22605020	▲ R746				
C715			ELECT. 22µF M 50V RA-2	OA22605020	R747 }			JUMPER	75060501P0
C718		482212423068	ELECT. 220µF 63V M RA-2	OA22706320	R750				
C719		482212411533	ELECT. 1µF100V RA-2	OA10510020	▲ R751		482205021801	180Ω J 1/4W	GG05181140
C720		482212411533	ELECT. 1µF100V RA-2	OA10510020	▲ R752		482205021801	180Ω J 1/4W	GG05181140
C725					▲ R759		482205210122	1.2kΩ ±5% 1/6W	GG05122160
C728		482212231211	CER. 100pF 500V	DK16101550	▲ R760		482205210122	1.2kΩ ±5% 1/6W	GG05122160
CP01		482212422275	ELECT. 47µF M 10V RA-2	OA47601020	▲ R761		482211380612	FIXED 0.18Ω K 5W X2	BZ10182020
CP02		482212422275	ELECT. 47µF M 10V RA-2	OA47601020				RGC55 W/T.P	
CP07		482212422276	ELECT. 47µF M 50V RA-2	OA47605020	R762		482211380612	FIXED 0.18Ω K 5W X2	BZ10182020
CP08		482212422276	ELECT. 47µF M 50V RA-2	OA47605020				RGC55 W/T.P	
CP09		482212231205	ELECT. 47µF M 50V RA-2	OA47605020	▲ R763		482211683929	220Ω J 1/4W	GG05221140
CP10		482212231205	CER. 47pF J CH 50V BLK	DD15470300	▲ R764		482211683929	220Ω J 1/4W	GG05221140
CP13		482212490362	CER. 47pF J CH 50V BLK	DD15470300	R765		482205310109	10Ω ±5% 1W	GA05100010
CP14		482212490362	ELECT. 22µF M 50V RA-2	OA22605020	R766		482205310109	10Ω ±5% 1W	GA05100010
			ELECT. 22µF M 50V RA-2	OA22605020	R767		996500003407	TRIM. VAR. 22K VERTICAL	RA02230760
					R768		996500003407	TRIM. VAR. 22K VERTICAL	RA02230760
					▲ R773 }		482205210478	4.7Ω ±5% 1/6W	GG05047160
					▲ R776				

POS. NO	VERS. COLOR	PART NO. (FOR PCS)	DESCRIPTION	PART NO. (MJ)	POS. NO	VERS. COLOR	PART NO. (FOR PCS)	DESCRIPTION	PART NO. (MJ)	
▲ RP09		482205022202	2.2kΩ ±5% 1/6W	GG05222160				<b>P704-SEMICONDUCTORS</b>		
▲ RP10		482205022202	2.2kΩ ±5% 1/6W	GG05222160	D701					
▲ RP13		482205022202	2.2kΩ ±5% 1/6W	GG05222160	∫		482213032362		DIODE 1SS176 MA165 1SS254	HD20002000
▲ RP14		482205022202	2.2kΩ ±5% 1/6W	GG05222160	D704				30V 0.1A	
▲ RP27		482205210681	680Ω 1/6W	GG05681160	D705					
▲ RP28		482205210681	680Ω 1/6W	GG05681160	∫		482213080837		DIODE HSS81TD 150V 150mA	HD20027010
▲ RP29					D708					
∫		482205026809	68Ω 1/6W	GG05680160	D709					
▲ RP32					∫		482213083142		ZENER DIODE 6.2V	HD30621000
RP37		996500001566	TRIM. VAR. 2.2kΩ VERT	RA02220760	D712					
RP38		996500001566	TRIM. VAR. 2.2kΩ VERT	RA02220760	D713		482213080837		DIODE HSS81TD 150V 150mA	HD20027010
▲ RP39					D714		482213080837		DIODE HSS81TD 150V 150mA	HD20027010
∫		482205022209	22Ω J 1/4W	GG05220140	D715					
▲ RP42					∫		482213032362		DIODE 1SS176 MA165 1SS254	HD20002000
▲ RP43					D718				30V 0.1A	
∫		482205210101	100Ω 1/6W	GG05101160	DP01					
▲ RP46					∫		482213032362		DIODE 1SS176 MA165 1SS254	HD20002000
RP47					DP04				30V 0.1A	
∫			JUMPER	75060501P0	DP05					
RP50					∫		482213080837		DIODE HSS81TD 150V 150mA	HD20027010
▲ RP51		482205021801	180Ω J 1/4W	GG05181140	DP08					
▲ RP52		482205021801	180Ω J 1/4W	GG05181140	DP09					
▲ RP59		482205210122	1.2kΩ ±5% 1/6W	GG05122160	∫		482213083142		ZENER DIODE 6.2V	HD30621000
▲ RP60		482205210122	1.2kΩ ±5% 1/6W	GG05122160	DP12					
RP61		482211380612	FIXED 0.18Ω K 5W X2	BZ10182020	DP13		482213080837		DIODE HSS81TD 150V 150mA	HD20027010
			RGC55 W/T.P		DP14		482213080837		DIODE HSS81TD 150V 150mA	HD20027010
RP62		482211380612	FIXED 0.18Ω K 5W X2	BZ10182020	∫					
			RGC55 W/T.P		DP17		482213032362		DIODE 1SS176 MA165 1SS254	HD20002000
▲ RP63		482211683929	220Ω J 1/4W	GG05221140	DP18				30V 0.1A	
▲ RP64		482211683929	220Ω J 1/4W	GG05221140						
RP65		482205310109	10Ω ±5% 1W	GA05100010	DT01		482213032362		DIODE 1SS176 MA165 1SS254	HD20002000
RP66		482205310109	10Ω ±5% 1W	GA05100010					30V 0.1A	
RP67		996500003407	TRIM. VAR. 22kΩ VERTICAL	RA02230760	DT03		482213032362		DIODE 1SS176 MA165 1SS254	HD20002000
RP68		996500003407	TRIM. VAR. 22kΩ VERTICAL	RA02230760					30V 0.1A	
▲ RP73					DT05		482213080837		DIODE HSS81TD 150V 150mA	HD20027010
∫		482205210478	4.7Ω ±5% 1/6W	GG05047160	DT07		482213080837		DIODE HSS81TD 150V 150mA	HD20027010
▲ RP76					DT09		482213083142		ZENER DIODE 6.2V	HD30621000
					DT11		482213083142		ZENER DIODE 6.2V	HD30621000
▲ RT09		482205022202	2.2kΩ ±5% 1/6W	GG05222160	DT13		482213080837		DIODE HSS81TD 150V 150mA	HD20027010
▲ RT13		482205022202	2.2kΩ ±5% 1/6W	GG05222160	DT15		482213032362		DIODE 1SS176 MA165 1SS254	HD20002000
▲ RT27		482205210681	680Ω 1/6W	GG05681160					30V 0.1A	
▲ RT29		482205026809	68Ω 1/6W	GG05680160	DT17		482213032362		DIODE 1SS176 MA165 1SS254	HD20002000
▲ RT31		482205026809	68Ω 1/6W	GG05680160					30V 0.1A	
RT37		996500001566	TRIM. VAR. 2.2kΩ VERT	RA02220760	Q701					
▲ RT39		482205022209	22Ω J 1/4W	GG05220140	∫		482213042949		TRS. 2SA970 GR OR BL	HT109702A0
▲ RT41		482205022209	22Ω J 1/4W	GG05220140	Q704					
▲ RT43		482205210101	100Ω 1/6W	GG05101160	Q705		482213042999		TRS. 2SA1145 O OR Y	HT111452A0
▲ RT45		482205210101	100Ω 1/6W	GG05101160	Q706		482213042999		TRS. 2SA1145 O OR Y	HT111452A0
RT47			JUMPER	75060501P0	Q707		482213043233		TRS. 2SC2240 GR OR BL	HT322402A0
RT49			JUMPER	75060501P0	Q708		482213043233		TRS. 2SC2240 GR OR BL	HT322402A0
▲ RT51		482205021801	180Ω J 1/4W	GG05181140	Q709		532213061728		TRS. 2SA1360 O OR Y	HT113602A0
▲ RT59		482205210122	1.2kΩ ±5% 1/6W	GG05122160	Q710		532213061728		TRS. 2SA1360 O OR Y	HT113602A0
▲ RT61		482211380612	FIXED 0.18Ω K 5W X2	BZ10182020	Q711		532213061737		TRS. 2SC3423 O OR Y	HT334232A0
			RGC55 W/T.P		Q712		532213061737		TRS. 2SC3423 O OR Y	HT334232A0
▲ RT63		482211683929	220Ω J 1/4W	GG05221140	Q713		482213060117		TRS. 2SC3419 Y	HT334191Y0
RT65		482205310109	10Ω ±5% 1W	GA05100010					40V 0.8A PC=1.2W 5W	
RT67		996500003407	TRIM. VAR. 22K VERTICAL	RA02230760	Q714		482213060117		TRS. 2SC3419 Y	HT334191Y0
▲ RT73		482205210478	4.7Ω ±5% 1/6W	GG05047160				40V 0.8A PC=1.2W 5W		
▲ RT75		482205210478	4.7Ω ±5% 1/6W	GG05047160	Q715		482213063635	TRS. 2SC4793 O Y	HT347932A0	
					Q716		482213063635	TRS. 2SC4793 O Y	HT347932A0	
					Q717		482213063634	TRS. 2SA1837 O Y	HT118372A0	
					Q718		482213063634	TRS. 2SA1837 O Y	HT118372A0	
					Q719		482213043233	TRS. 2SC2240 GR OR BL	HT322402A0	
					Q720		482213043233	TRS. 2SC2240 GR OR BL	HT322402A0	
					▲ Q721		482213011486	TRS. 2SC5200 R OR O	HT352002A0	
								230V 15A 150W		
					▲ Q722		482213011486	TRS. 2SC5200 R OR O	HT352002A0	
								230V 15A 150W		
R***			<b>P74-RESISTORS (COMMON)</b> CARBON FILM FIXED RES. ±5% 1/6W : R701-R708 R712 R712 R715-R726 R733-R736 R753-R772 RP01-RP08 RP11 RP12 RP15-RP26 RP33-RP36 RP53-RP72 RT01 RT03 RT05 RT11 RT15 RT17 RT19 RT21 RT23 RT25 RT33 RT35 RT53 RT55 RT57 RT69 RT71							



POS. NO	VERS. COLOR	PART NO. (FOR PCS)	DESCRIPTION	PART NO. (MJI)	POS. NO	VERS. COLOR	PART NO. (FOR PCS)	DESCRIPTION	PART NO. (MJI)
▲ Q723		482213063119	TRS. 2SA1943 R OR O 230V 15A 150W	HT119432A0	KP16			TRS. KIT 2SA1837 2SC4793 HFE SELECTED RANK	HK183719C0
▲ Q724		482213063119	TRS. 2SA1943 R OR O 230V 15A 150W	HT119432A0	KP21			TRS. KIT 2SA1943 2SC5200 RR OR OO PAIR	HK194319C0
QP01					KP22			TRS. KIT 2SA1943 2SC5200 RR OR OO PAIR	HK194319C0
QP04		482213042949	TRS. 2SA970 GR OR BL	HT109702A0	KT09			TRS. KIT 2SA1360 2SC3423 PAIR O OR Y	HK136019C0
QP05		482213042999	TRS. 2SA1145 O OR Y	HT111452A0	KT15			TRS. KIT 2SA1837 2SC4793 HFE SELECTED RANK	HK183719C0
QP06		482213042999	TRS. 2SA1145 O OR Y	HT111452A0	KT21			TRS. KIT 2SA1943 2SC5200 RR OR OO PAIR	HK194319C0
QP07		482213043233	TRS. 2SC2240 GR OR BL	HT322402A0					
QP08		482213043233	TRS. 2SC2240 GR OR BL	HT322402A0					
QP09		532213061728	TRS. 2SA1360 O OR Y	HT113602A0					
QP10		532213061728	TRS. 2SA1360 O OR Y	HT113602A0					
QP11		532213061737	TRS. 2SC3423 O OR Y	HT334232A0	L701		482215770022	AIR COIL SPK CHOCK	ML08010030
QP12		532213061737	TRS. 2SC3423 O OR Y	HT334232A0	L702		482215770022	AIR COIL SPK CHOCK	ML08010030
QP13		482213060117	TRS. 2SC3419 Y 40V 0.8A PC=1.2W 5W	HT334191Y0	LP01		482215770022	AIR COIL SPK CHOCK	ML08010030
QP14		482213060117	TRS. 2SC3419 Y 40V 0.8A PC=1.2W 5W	HT334191Y0	LP02		482215770022	AIR COIL SPK CHOCK	ML08010030
QP15		482213063635	TRS. 2SC4793 O Y	HT347932A0	LT01		482215770022	AIR COIL SPK CHOCK	ML08010030
QP16		482213063635	TRS. 2SC4793 O Y	HT347932A0					
QP17		482213063634	TRS. 2SA1837 O Y	HT118372A0					
QP18		482213063634	TRS. 2SA1837 O Y	HT118372A0					
QP19		482213043233	TRS. 2SC2240 GR OR BL	HT322402A0	CN51	/N	482212230103	CER. 0.022µF Z 50V	DK18223310
QP20		482213043233	TRS. 2SC2240 GR OR BL	HT322402A0	CN52	/N	482212230103	CER. 0.022µF Z 50V	DK18223310
▲ QP21		482213011486	TRS. 2SC5200 R OR O 230V 15A 150W	HT352002A0	CN53		482212240617	CER. 0.1µF 50V	DD38104010
▲ QP22		482213011486	TRS. 2SC5200 R OR O 230V 15A 150W	HT352002A0	CN54		482212240617	CER. 0.1µF 50V	DD38104010
▲ QP23		482213063119	TRS. 2SA1943 R OR O 230V 15A 150W	HT119432A0	CN55	/N	482212230103	CER. 0.022µF Z 50V	DK18223310
▲ QP24		482213063119	TRS. 2SA1943 R OR O 230V 15A 150W	HT119432A0	CN56	/N	482212230103	CER. 0.022µF Z 50V	DK18223310
QT01		482213042949	TRS. 2SA970 GR OR BL	HT109702A0	CN57		482212240617	CER. 0.1µF 50V	DD38104010
QT03		482213042949	TRS. 2SA970 GR OR BL	HT109702A0	CN58		482212240617	CER. 0.1µF 50V	DD38104010
QT05		482213042999	TRS. 2SA1145 O OR Y	HT111452A0	CN59	/N	482212230103	CER. 0.022µF Z 50V	DK18223310
QT07		482213043233	TRS. 2SC2240 GR OR BL	HT322402A0	CN60		482212240617	CER. 0.1µF 50V	DD38104010
QT09		532213061728	TRS. 2SA1360 O OR Y	HT113602A0					
QT11		532213061737	TRS. 2SC3423 O OR Y	HT334232A0					
QT13		482213060117	TRS. 2SC3419 Y 40V 0.8A PC=1.2W 5W	HT334191Y0	JN61		482226511199	TERMINAL SPK 6P	YT01060020
QT15		482213063635	TRS. 2SC4793 O Y	HT347932A0	JN62		482226511198	TERMINAL SPK 4P	YT01040790
QT17		482213063634	TRS. 2SA1837 O Y	HT118372A0					
QT19		482213043233	TRS. 2SC2240 GR OR BL	HT322402A0					
▲ QT21		482213011486	TRS. 2SC5200 R OR O 230V 15A 150W	HT352002A0	C901		532212234098	CER. CHIP 0.01µF	DK56103300
▲ QT23		482213063119	TRS. 2SA1943 R OR O 230V 15A 150W	HT119432A0	C902		532212421731	ELECT. 10µF M 50V RA-2	OA10605020
K709			TRS. KIT 2SA1360 2SC3423 PAIR O OR Y	HK136019C0	C903		532212234098	CER. CHIP 0.01µF	DK56103300
K710			TRS. KIT 2SA1360 2SC3423 PAIR O OR Y	HK136019C0	C904		482212441534	ELECT. 10µF M 25V RA-2	OA10602520
K715			TRS. KIT 2SA1837 2SC4793 HFE SELECTED RANK	HK183719C0	C905		532212234098	CER. CHIP 0.01µF	DK56103300
K716			TRS. KIT 2SA1837 2SC4793 HFE SELECTED RANK	HK183719C0	C906		482211190892	CHIP CHIP 40Ω ±5% 1/10W	NI05000110
K721			TRS. KIT 2SA1943 2SC5200 RR OR OO PAIR	HK194319C0	C907		532212234098	CER. CHIP 0.01µF	DK56103300
K722			TRS. KIT 2SA1943 2SC5200 RR OR OO PAIR	HK194319C0	C908		532212234098	CER. CHIP 0.01µF	DK56103300
KP09			TRS. KIT 2SA1360 2SC3423 PAIR O OR Y	HK136019C0	C909		482211190892	CHIP CHIP 40Ω ±5% 1/10W	NI05000110
KP10			TRS. KIT 2SA1360 2SC3423 PAIR O OR Y	HK136019C0	C910		532212234098	CER. CHIP 0.01µF	DK56103300
KP15			TRS. KIT 2SA1837 2SC4793 HFE SELECTED RANK	HK183719C0	C911		482212441543	ELECT. 1µF M 50V RA-2	OA10505020
					C912		532212234098	CER. CHIP 0.01µF	DK56103300
					C913		532212234098	CER. CHIP 0.01µF	DK56103300
					C914		482212441543	ELECT. 1µF M 50V RA-2	OA10505020
					C915		532212234098	CER. CHIP 0.01µF	DK56103300
					R901		482205120479	CHIP 47Ω ±5% 1/10W	NI05470110
					R902		482211710833	CHIP 10kΩ ±5% 1/10W	NI05103110
					R903		482211711504	CHIP 270Ω ±5% 1/10W	NI05271110
					R904		482205120153	CHIP 220Ω ±5% 1/10W	NI05221110
					R905		482205120479	CHIP 47Ω ±5% 1/10W	NI05470110
					R906		482205120332	CHIP 3.3kΩ ±5% 1/10W	NI05332110
					R907		482211711449	CHIP 2.2kΩ ±5% 1/10W	NI05222110
					R908		996500003408	VAR. RK09D111 20kΩ B	RK02031090
					R909		482211710833	CHIP 10kΩ ±5% 1/10W	NI05103110
					R910		482211711449	CHIP 2.2kΩ ±5% 1/10W	NI05222110
					R911		482205120332	CHIP 3.3kΩ ±5% 1/10W	NI05332110

POS. NO	VERS. COLOR	PART NO. (FOR PCS)	DESCRIPTION	PART NO. (MJ)	POS. NO	VERS. COLOR	PART NO. (FOR PCS)	DESCRIPTION	PART NO. (MJ)
R912		482211711449	CHIP 2.2kΩ ±5% 1/10W	NI05222110	QB03	/U	482220973674	IC NJM7806FA +6W 1A	HC38906090
R913		996500003408	VAR. RK09D111 20kΩ B	RK02031090	QB04	/U	482220914883	IC S-806C	HC10075530
R914		482211710833	CHIP 10kΩ ±5% 1/10W	NI05103110					
R915		482211711449	CHIP 2.2kΩ ±5% 1/10W	NI05222110					
			<b>P904-SEMICONDUCTORS</b>					<b>PB04-MISCELLANEOUS</b>	
Q901		482213061227	DIG.TRS.	BA10001000	▲ FB01	/U		FUSE 8A 125V SM8 UL CSA	FS10800540
▲ Q902		482213090347	DTA114ES UN4111 10K 10K PHOTO UNIT PC-817	HW10006320	JB05	/U		JACK 2P AC OUTLET CCT1304-0212	YJ04002040
Q903		482213060588	DIG.TRS.	BA20001000	▲ LB01	/U		MAINS TRANSF. EI48-20T 120V 60Hz	TS14831010
Q904		482213061227	DIG.TRS.	BA10001000	LB02	/U	482228080773	RELAY VS24MB-NR TV-8 SEMKO LISTED	LY10240240
Q905		482213043233	TRS. 2SC2240 GR	HT322401A0					
Q906		482213060588	DIG.TRS.	BA20001000				<b>PB54-BACK UP</b>	
Q907		482213061227	DIG.TRS.	BA10001000				<b>CIRCUIT BOARD FOR K N S</b>	
Q908		482213043233	TRS. 2SC2240 GR	HT322401A0				<b>PB54-CAPACITORS</b>	
J902		996500003413	TERMINAL RCA 2P O F-G NI	YT02021640	▲ CB51	/K,/N,/S	482212233276	CER. DE7150 F 103M VA1 KC	DK17103840
J903		996500003414	TERMINAL RCA 2P G F-G NI	YT02021650	CB52	/K,/N,/S	482212230043	CER. 0.01µF Z 50V	DK18103310
J904		996500003411	JACK LGY6501-0600	YJ01004670	CB53	/K,/N,/S	482212230043	CER. 0.01µF Z 50V	DK18103310
J905		996500003411	JACK LGY6501-0600	YJ01004670	CB54	/K,/N,/S	482212441541	ELECT. 470µF M 35V RA-2	OA47703520
			<b>P904-MISCELLANEOUS</b>		CB55	/K,/N,/S	482212230043	CER. 0.01µF Z 50V	DK18103310
			TERMINAL RCA 2P O F-G NI	YT02021640	CB56	/K,/N,/S	482212441541	ELECT. 470µF M 35V RA-2	OA47703520
			TERMINAL RCA 2P G F-G NI	YT02021650	CB57	/K,/N,/S	482212230043	CER. 0.01µF Z 50V	DK18103310
			JACK LGY6501-0600	YJ01004670	CB58	/K,/N,/S	532212421731	ELECT. 10µF M 50V RA-2	OA10605020
			JACK LGY6501-0600	YJ01004670	CB59	/K,/N,/S	482212230043	CER. 0.01µF Z 50V	DK18103310
			<b>PB04-BACK UP</b>		CB60	/K,/N,/S	482212440763	ELECT. 2.2µF M 50V RA-2	OA22505020
			<b>CIRCUIT BOARD FOR U</b>		CB61	/K,/N,/S	482212230043	CER. 0.01µF Z 50V	DK18103310
			<b>PB04-CAPACITORS</b>		CB63	/K,/N,/S	482212490355	ELECT. 100µF M 50V RA-2	OA10705020
▲ CB01	/U	482212233276	CER. DE7150 F 103M VA1 KC	DK17103840	CB65	/K,/N,/S	482212480772	ELECT. 47µF M 35V RA-2	OA47603520
CB02	/U	482212230043	CER. 0.01µF Z 50V	DK18103310	CB66	/K,/N,/S	482212441541	ELECT. 470µF M 35V	OA47703520
CB03	/U	482212230043	CER. 0.01µF Z 50V	DK18103310	RB57	/K,/N,/S	482205310102	<b>PB54-RESISTORS</b>	GA05102010
CB04	/U	482212441541	ELECT. 470µF M 35V RA-2	OA47703520	RB62	/K,/N,/S	482211710158	1kΩ ±5% 1W 1Ω J 1/4W	GG05010140
CB05	/U	482212230043	CER. 0.01µF Z 50V	DK18103310					
CB06	/U	482212230043	ELECT. 470µF M 35V	EA47703510				<b>PB54-RESISTORS (COMMON)</b>	
CB07	/U	482212230043	CER. 0.01µF Z 50V	DK18103310	<b>R***</b>			CARBON FILM FIXED RES.	
CB08	/U	532212421731	ELECT. 10µF M 50V RA-2	OA10605020				±5% 1/6W :	
CB09	/U	482212230043	CER. 0.01µF Z 50V	DK18103310				RB52-RB54 RB58 RB59	
CB10	/U	482212440763	ELECT. 2.2µF M 50V RA-2	OA22505020					
CB11	/U	482212230043	CER. 0.01µF Z 50V	DK18103310				<b>PB54-SEMICONDUCTORS</b>	
CB13	/U	482212490355	ELECT. 100µF M 50V RA-2	OA10705020	DB51	/K,/N,/S	482213082421	DIODE 1D3 1A 200V	HD20002710
CB15	/U	482212480772	ELECT. 47µF M 35V RA-2	OA47603520	DB56	/K,/N,/S	482213010413	BRIDGE DIODE D2SBA20	HE20027290
CB16	/U	482212441541	ELECT. 470µF M 35V	OA47703520	DB57	/K,/N,/S	482213081247	DIODE WJ43	HD20031050
			<b>PB04-RESISTORS</b>		DB58	/K,/N,/S	482213081247		
▲ RB01	/U		2.2MΩ ±10% 1/2W FOR UL	RC10225820	DB61	/K,/N,/S	482213082421	DIODE 1D3 1A 200V	HD20002710
RB07	/U	482205310102	1kΩ ±5% 1W	GA05102010	DB64	/K,/N,/S	482213082421	DIODE 1D3 1A 200V	HD20002710
RB12	/U	482211710158	1Ω J 1/4W	GG05010140	DB66	/K,/N,/S	482213080273	ZENER DIODE 8.2V JUMPER	HD30821000 75060501P0
			<b>PB04-RESISTORS (COMMON)</b>		DB67	/K,/N,/S	482213080273		
<b>R***</b>	/U		CARBON FILM FIXED RES.		QB51	/K,/N,/S	482213042949	TRS. 2SA970 GR OR BL	HT109702A0
			±5% 1/6W :		QB52	/K,/N,/S	482213060588	DIG.TRS.	BA20001000
			RB02-RB04 RB08 RB09		QB53	/K,/N,/S	482220973674	DTC114ES UN4211 10K 10K	
			<b>PB04-SEMICONDUCTORS</b>		QB54	/K,/N,/S	482220914883	IC NJM7806FA +6W 1A	HC38906090
DB01	/U	482213082421	DIODE 1D3 1A 200V	HD20002710				IC S-806C	HC10075530
DB06	/U	482213010413	BRIDGE DIODE D2SBA20	HE20027290	▲ FB51	/K,/N,/S	482207033152	<b>PB54-SEMICONDUCTORS</b>	
DB08	/U	482213081247	DIODE WJ43	HD20031050	▲ JB55	/N	482226731952	FUSE T3.15A 250V BS LISTED	FS10315850
DB11	/U	482213082421	DIODE 1D3 1A 200V	HD20002710	▲ LB51	/K,/N,/S		JACK AC OUTLET 2P N	YJ04002080
DB14	/U	482213082421	DIODE 1D3 1A 200V	HD20002710				MAINS TRANSF.	TS14831020
DB16	/U	482213080273	ZENER DIODE 8.2V	HD30821000	LB52	/K,/N,/S	482228080773	EI48-20T 220V 50Hz	LY10240240
DB17	/U	482213080273	JUMPER	75060501P0				RELAY VS24MB-NR TV-8 SEMKO LISTED	
QB01	/U	482213042949	TRS. 2SA970 GR OR BL	HT109702A0					
QB02	/U	482213060588	DIG.TRS.	BA20001000	▲ CB71	/K,/N,/S	482212233276	<b>PB74-POWER SW</b>	
			DTC114ES UN4211 10K 10K		▲ SB71	/K,/N,/S	996500001361	<b>CIRCUIT BOARD FOR N.K.S</b>	
								CER. SPERK KILLER 0.01µF	DK17103840
								PUSH SWITCH SDDL1	SP01012470
								POWER SW TV-5	



POS. NO	VERS. COLOR	PART NO. (FOR PCS)	DESCRIPTION	PART NO. (MJJ)
RG07		482211710833	CHIP 10kΩ 1/10W	NI05103110
RG07	8000	48221190892	0kΩ 1/10W	NI05000110
RG08		482211710833	CHIP 10kΩ 1/10W	NI05103110
RG09		482211710833	CHIP 10kΩ 1/10W	NI05103110
RG09	8000	48221190892	0kΩ 1/10W	NI05000110
RG10		482211710833	CHIP 10kΩ 1/10W	NI05103110
RG11		482211710833	CHIP 10kΩ 1/10W	NI05103110
RG12		482211710833	CHIP 10kΩ 1/10W	NI05103110
RG13				
		48221190918	CHIP 4.7kΩ ±5% 1/10W	NI05472110
RG17				
RG18		482211711449	CHIP 2.2kΩ ±5% 1/10W	NI05222110
RG19	8000	482205120564	560kΩ ± 5% 1/10W	NI05564110
RG20	8000	482205120564	560kΩ ± 5% 1/10W	NI05564110
RG21				
		482211710834	CHIP 47kΩ	NI05473110
RG24				
RG25	7000	48221190892	CHIP 0Ω ±5% 1/10W	NI05000110
RG26	7000	48221190892	CHIP 0Ω ±5% 1/10W	NI05000110
RG27				
		482205120391	CHIP 390Ω ±5% 1/10W	NI05391110
RG30				
RG31				
		482205120101	CHIP 100Ω ±5% 1/10W	NI05101110
RG36				
RG37				
		48221190918	CHIP 4.7kΩ	NI05472110
RG42				
RG43	/K,/N,/S	482211710833	CHIP 10kΩ 1/10W	NI05103110
RG44	/K,/N,/S	482211710833	CHIP 10kΩ 1/10W	NI05103110
RG45	/K,/N,/S	482211390141	FUSE 220Ω G 1/4W	NF02221140
RG49	8000	48221190892	0kΩ 1/10W	NI05000110
RG50	8000	48221190892	0kΩ 1/10W	NI05000110
RG51		482205120102	CHIP 1kΩ 1/10W	NI05102110
RG52		482205120102	CHIP 1kΩ 1/10W	NI05102110
RG53		482205120102	CHIP 1kΩ 1/10W	NI05102110
RG58	7000	482205120393	CHIP 39kΩ ±5% 1/10W	NI05393110
RG59		482205120393	CHIP 39kΩ ±5% 1/10W	NI05393110
RG60	7000	482205120393	CHIP 39kΩ ±5% 1/10W	NI05393110
RG61		482205120393	CHIP 39kΩ ±5% 1/10W	NI05393110
RG62		482205120393	CHIP 39kΩ ±5% 1/10W	NI05393110
RG63		482205120223	CHIP 22kΩ ±5% 1/10W	NI05223110
RM51	8000	48221191192	470kΩ ± 5% 1/10W	NI05471110
RM52	8000	48221191192	470kΩ ± 5% 1/10W	NI05471110
RM53	8000	48221190896	100kΩ ± 5% 1/10W	NI05104110
RM54	8000	48221190896	100kΩ ± 5% 1/10W	NI05104110
RM55	8000	482211710833	10kΩ ± 5% 1/10W	NI05103110
RM56	8000	482211710833	10kΩ ± 5% 1/10W	NI05103110
RM57	8000	48221190918	4.7kΩ ± 5% 1/10W	NI05472110
RM58	8000	48221190918	4.7kΩ ± 5% 1/10W	NI05472110
RM59				
	8000	482205120153	15kΩ ± 5% 1/10W	NI05153110
RM62				
RM63				
	8000	48221191459	22kΩ ± 5% 1/10W	NI05220110
RM66				
RM67		482205120391	CHIP 390Ω ±5% 1/10W	NI05391110
RM68		482205120391	CHIP 390Ω ±5% 1/10W	NI05391110
RM69		482211710834	CHIP 47kΩ	NI05473110
RM70		482211710834	CHIP 47kΩ	NI05473110
RM71	7000	48221190892	CHIP 0Ω ±5% 1/10W	NI05000110
RM72	7000	48221190892	CHIP 0Ω ±5% 1/10W	NI05000110
RM73	8000	482205120393	39kΩ ± 5% 1/10W	NI05393110
RM74	8000	482205120393	39kΩ ± 5% 1/10W	NI05393110
			<b>PG04-SEMICONDUCTORS</b>	
DG01	/K,/N,/S	996500003401	CHIP DIODE RB425D	HZ20030210
DG02	/K,/N,/S	996500003401	CHIP DIODE RB425D	HZ20030210
DG03	/K,/N,/S	996500003401	CHIP DIODE RB425D	HZ20030210

POS. NO	VERS. COLOR	PART NO. (FOR PCS)	DESCRIPTION	PART NO. (MJJ)
DM51	8000	996500003401	CHIP DIODE RB425D	HZ20030210
DM52	8000	996500003401	CHIP DIODE RB425D	HZ20030210
QC01		482220917155	IC NJM2068M FLAT	HC10102090
QC02		482220917155	IC NJM2068M FLAT	HC10102090
QC03		482220917155	IC NJM2068M FLAT	HC10102090
QC04		482220932553	IC LC78212	HC10309030
QG01		996500003395	IC ELE.VOL TC9482N	HC10456050
QG02		482220917155	IC NJM2068M FLAT	HC10102090
QG03		482220917155	IC NJM2068M FLAT	HC10102090
QG04		482220917155	IC NJM2068M FLAT	HC10102090
QG05				
		482213011511	CHIP TRS. 2SC3326 A OR B	HX333262A0
QG10				
QG11	/K,/N,/S	482213042292	TRS. 2SC2120 O	HT321201A0
QM51	8000	482213042949	TRS 2SA970 GR OR BL	HT109702A0
QM52	8000	482213042949	TRS 2SA970 GR OR BL	HT109702A0
QM53	8000	482213043233	TRS 2SC2240 GR OR BL	HT322402A0
QM54	8000	482213043233	TRS 2SC2240 GR OR BL	HT322402A0
QM55	8000	482213043283	TRS 2SC2705 O OR Y	HT327052A0
QM56	8000	482213043283	TRS 2SC2705 O OR Y	HT327052A0
QM57	8000	482213042999	TRS 2SA1145 O OR Y	HT111452A0
QM58	8000	482213042999	TRS 2SA1145 O OR Y	HT111452A0
			<b>PG04-MISCELLANEOUS</b>	
JC01		996500003418	TERMINAL RCA 6P BLK NI	YT02060680
JC01	8000		TERMINAL RCA 6P BLK AU	YT02060690
JG01		996500003418	TERMINAL RCA 6P BLK NI	YT02060680
JG01	8000		TERMINAL RCA 6P BLK AU	YT02060690
JG02			PLUG 05MQ-ST-L	YP06902270
JG03			PLUG SOCKET 12P	YP06902090
JG04			PLUG SOCKET 12P	YP06902090
LG01	/K,/N,/S	996500001576	RELAY MR82-24USR	LY20240480
LG02	/K,/N,/S	996500001576	RELAY MR82-24USR	LY20240480
LG03	/K,/N,/S	996500001576	RELAY MR82-24USR	LY20240480
LG05				
		482211190892	CHIP 0Ω 1/10W	NI05000110
LG10				
			<b>PL04-CVBS FUNCTION CIRCUIT BOARD</b>	
			<b>PL04-CAPACITORS</b>	
CL02		532212421731	ELECT. 10μF M 50V RA-2	OA10605020
CL03		532212421731	ELECT. 10μF M 50V RA-2	OA10605020
CL04		532212421731	ELECT. 10μF M 50V RA-2	OA10605020
CL06		532212421731	ELECT. 10μF M 50V RA-2	OA10605020
CL08		532212421731	ELECT. 10μF M 50V RA-2	OA10605020
CL09		532212421731	ELECT. 10μF M 50V RA-2	OA10605020
CL10		532212421731	ELECT. 10μF M 50V RA-2	OA10605020
CL11			JUMPER	75060501P0
CL13		532212421731	ELECT. 10μF M 50V RA-2	OA10605020
CL14			JUMPER	75060501P0
CL15		532212421731	ELECT. 10μF M 50V RA-2	OA10605020
CL16		532212421731	ELECT. 10μF M 50V RA-2	OA10605020
CL17		532212234098	CER. CHIP 0.01μF	DK56103300
CL18		532212234098	CER. CHIP 0.01μF	DK56103300
CL19		532212421731	ELECT. 10μF M 50V RA-2	OA10605020
CL20		482212440763	ELECT. 2.2μF M 50V RA-2	OA22505020
CL21			JUMPER	75060501P0
CL21	8000	482212440763	ELECT. 2.2μF M 50V RA-2	OA22505020
CL24		532212234098	CER. CHIP 0.01μF	DK56103300
CL25		482212440763	ELECT. 2.2μF M 50V RA-2	OA22505020
CL26		482212441543	ELECT. 1μF M 50V RA-2	OA10505020
CL27		482212441543	ELECT. 1μF M 50V RA-2	OA10505020
CL28			CER. CHIP 1200pF	DK56122300
CL29		532212234098	CER. CHIP 0.01μF	DK56103300
CL30		482212490353	ELECT. 100μF M 10V RA-2	OA10701020
CL31		482212441543	ELECT. 1μF M 50V RA-2	OA10505020
CL32		532212234098	CER. CHIP 0.01μF	DK56103300
CL33		482212490353	ELECT. 100μF M 10V RA-2	OA10701020





POS. NO	VERS. COLOR	PART NO. (FOR PCS)	DESCRIPTION	PART NO. (MJI)	POS. NO	VERS. COLOR	PART NO. (FOR PCS)	DESCRIPTION	PART NO. (MJI)	
QX08	/K,/N,/S	482213061189	DIG.TR.S. DTC114TS UN4215 10K	BA20004000				<b>PM01-HDAM CIRCUIT BOARD [SR8000 ONLY]</b> <b>PM01-RESISTORS (COMMON)</b> CARBON FILM FIXED RES. ±5% 1/6W : ALL		
QX09	/K,/N,/S	482213061227	DIG.TR.S. DTA114ES UN4111 10K 10K	BA10001000	<b>R***</b>	8000				
QX10		482213041947	TRS. 2SC536SP ETC	HT30001000						
QX11		996500003391	IC NJM2264M JRC	HC10077090						
QX12		482213041947	TRS. 2SC536SP ETC	HT30001000						
			<b>PL54-MISCELLANEOUS</b>						<b>PM01-SEMICONDUCTORS</b>	
JX01		482226531302	TERMINAL 3P S-VIDEO NI	YT02030350	DM02	8000	482213032362		DIODE 1SS176 MA165 1SS254 30V 0.1A	HD20002000
JX01		996500001375	3P S-VIDEO JACK GOLD	YT02030350	DM05					
JX02		482226531302	TERMINAL 3P S-VIDEO NI	YT02030350	QM01	8000	482213042839		TRS. 2SK369 BL VGDS-40V PD0.4W	HF203690
JX02		996500001375	TERMINAL 3P S-VIDEO GOLD	YT02030350	QM02	8000	482213042839		TRS. 2SK369 BL VGDS-40V PD0.4W	HF203690
JX03		482226520725	TERMINAL 2P S-VIDEO NI	YT02021320	QM03	8000	482213043233		TRS. 2SC2240 GR OR BL	HT322402A0
JX03		996500001376	TERMINAL 2P S-VIDEO GOLD	YT02021520	QM04	8000	482213042949		TRS. 2SA970 GR OR BL	HT109702A0
LX01		996500003404	CHIP INDUCTANCE 33µH	LU15333010	QM05	8000	482213042949	TRS. 2SA970 GR OR BL	HT109702A0	
LX02		482224273843	EMI FILTER DSS306-91-F-223Z	FM12223010	QM06	8000	482213043233	TRS. 2SC2240 GR OR BL	HT322402A0	
XX01		482224280288	CRYSTAL 14.31818MHz	JX14001260						
XX02	/K,/N,/S	482224273903	CRYSTAL 17.31818MHz	JX17001260						
			<b>PL74-AUX INPUT CIRCUIT BOARD</b>					<b>PS04-AUDIO FUNCTION 1 CIRCUIT BOARD</b>		
			<b>PL74-CAPACITORS</b>					<b>PS04-CAPACITORS</b>		
CL71	/S		CER. 470pF K 50V	DK16471300	CS01	8000	532212421731	ELECT. 10µF M 50V RA-2	OA10605020	
CL73	/N,/S	482212231205	CER. 47pF J CH 50V BLK	DD15470300	CS06					
CL73	/S	482212231205	CER. 47pF J CH 50V BLK	DD15470300	CS07	/K,/U	532212610794	CER. CHIP 220pF	DK56221300	
CL74	/N,/S	482212231205	CER. 47pF J CH 50V BLK	DD15470300	CS07	/N,/S	532212234099	CER. CHIP 470pF	DK56471300	
CL74	/S	482212231205	CER. 47pF J CH 50V BLK	DD15470300	CS08	/K,/U	532212610794	CER. CHIP 220pF	DK56221300	
CL75		532212421731	ELECT. 10µF M 50V RA-2	OA10605020	CS08	/N,/S	532212234099	CER. CHIP 470pF	DK56471300	
CL75	8000	532212421731	ELECT. 10µF M 50V RA-2	OA10605020	CS09	/K,/U	532212610794	CER. CHIP 220pF	DK56221300	
CL76		532212421731	ELECT. 10µF M 50V RA-2	OA10605020	CS09	/N,/S	532212234099	CER. CHIP 470pF	DK56471300	
CL76	8000	532212421731	ELECT. 10µF M 50V RA-2	OA10605020	CS10	/K,/U	532212610794	CER. CHIP 220pF	DK56221300	
CL77		482212230043	CER. 0.01µF Z 50V	DK18103310	CS10	/N,/S	532212234099	CER. CHIP 470pF	DK56471300	
CL77	8000	482212230043	CER. 0.01µF Z 50V	DK18103310	CS11	/K,/U	532212610794	CER. CHIP 220pF	DK56221300	
CL78		482212230043	CER. 0.01µF Z 50V	DK18103310	CS11	/N,/S	532212234099	CER. CHIP 470pF	DK56471300	
CL78	8000	482212230043	CER. 0.01µF Z 50V	DK18103310	CS12	/K,/U	532212610794	CER. CHIP 220pF	DK56221300	
CL81		482212490354	ELECT. 100µF M 16V RA-2	OA10701620	CS12	/N,/S	532212234099	CER. CHIP 470pF	DK56471300	
CL81	8000	482212490354	ELECT. 100µF M 16V RA-2	OA10701620	CS13	/K,/U	482212233204	CER. CHIP 15pF	DD55150300	
CL82		482212490354	ELECT. 100µF M 16V RA-2	OA10701620	CS13	/N,/S	532212232452	CER. CHIP 47pF	DD55470300	
CL91		532212421731	ELECT. 10µF M 50V RA-2	OA10605020	CS14	/K,/U	482212233204	CER. CHIP 15pF	DD55150300	
CL92		532212421731	ELECT. 10µF M 50V RA-2	OA10605020	CS14	/N,/S	532212232452	CER. CHIP 47pF	DD55470300	
CL93			JUMPER	75060501P0	CS15	/K,/U	482212233204	CER. CHIP 15pF	DD55150300	
CL96			JUMPER	75060501P0	CS15	/N,/S	532212232452	CER. CHIP 47pF	DD55470300	
			<b>PL74-CAPACITORS (COMMON)</b>		CS16	/K,/U	482212233204	CER. CHIP 15pF	DD55150300	
			HIGH DIELECTRIC CONSTANT CER. CAPACITOR ±10% 50V : CL71-CL72[/N,/S]		CS16	/N,/S	532212232452	CER. CHIP 47pF	DD55470300	
			<b>PL74-RESISTORS</b>		CS17	/K,/U	482212233204	CER. CHIP 15pF	DD55150300	
RL71	8000		1kΩ ±5% 1/6W	GD05102160	CS17	/N,/S	532212232452	CER. CHIP 47pF	DD55470300	
RL91		482211141355	75Ω ±5% 1/6W	GD05750160	CS18	/K,/U	482212233204	CER. CHIP 15pF	DD55150300	
RL92		482211141355	75Ω ±5% 1/6W	GD05750160	CS18	/N,/S	532212232452	CER. CHIP 47pF	DD55470300	
RL93		482211141355	75Ω ±5% 1/6W	GD05750160	CS19					
RL94			JUMPER	75060501P0	CS22		482212233127	CER. CHIP 2200pF	DK56222300	
RL95			JUMPER	75060501P0	CS23					
RL96			JUMPER	75060501P0	CS23		532212234098	CER. CHIP 0.01µF	DK56103300	
			<b>PL74-RESISTORS (COMMON)</b>		CS28					
			CARBON FILM FIXED RES. ±5% 1/6W : RL71-RL74 RL79 RL80		CS29		482212240617	CER. 0.1µF +80%-20% 50V DC	DD38104010	
			<b>PL74-SEMICONDUCTOR</b>		CS30		482212490354	ELECT. 100µF M 16V RA-2	OA10701620	
QL71		482220983631	IC NJM4558D-D	HC10008090	CS31		482212490354	ELECT. 100µF M 16V RA-2	OA10701620	
			<b>PL74-MISCELLANEOUS</b>		CS32		482212240617	CER. 0.1µF +80%-20% 50V DC	DD38104010	
JL71		996500001347	RCA JACK 3P + S-TERMINAL	BY04040030	CS33		482212240617	CER. 0.1µF +80%-20% 50V DC	DD38104010	
					CS34		482212240617	CER. 0.1µF +80%-20% 50V DC	DD38104010	
					CS51					
					CS54		482212480067	ELECT. 4.7µF M 50V RA-2	OA47505020	
					CS55		532212234098	CER. CHIP 0.01µF	DK56103300	
					CS56		532212234098	CER. CHIP 0.01µF	DK56103300	
					CS57		482212480067	ELECT. 4.7µF M 50V RA-2	OA47505020	
					CS58		482212480067	ELECT. 4.7µF M 50V RA-2	OA47505020	
					CS59		532212421731	ELECT. 10µF M 50V RA-2	OA10605020	





POS. NO	VERS. COLOR	PART NO. (FOR PCS)	DESCRIPTION	PART NO. (MJI)	POS. NO	VERS. COLOR	PART NO. (FOR PCS)	DESCRIPTION	PART NO. (MJI)
CQ41		482212233127	CER. CHIP 2200pF	DK56222300	CU15		482212423056	ELECT 47µF 10V	EJ47601010
CQ44					CU16		482212490406	BIG ELECT CAP	EX22300530
CQ45		482212480067	ELECT. 4.7µF M 50V RA-2	OA47505020	CU17		482212240588	FMOH223ZTP16 SUPER	DA17223110
CQ46		482212480067	ELECT. 4.7µF M 50V RA-2	OA47505020	CU18		996500000368	CER. 0.022µF TP050F223Z	DA17473110
CQ47		532212421731	ELECT. 10µF M 50V RA-2	OA10605020	CU19		996500000368	CER. 0.047µF 50V	DA17473110
CQ48		532212421731	ELECT. 10µF M 50V RA-2	OA10605020	CU22		482212610935	ELECT 100µF 6.3V	EJ10700610
CQ49		532212234098	CER. CHIP 0.01µF	DK56103300				<b>PU04-RESISTORS (COMMON)</b>	
CQ50		532212234098	CER. CHIP 0.01µF	DK56103300				CARBON FILM FIXED RES.	
CQ51		482212240617	CER. 0.1µF +80%-20% 50V DC	DD38104010				±5% 1/6W :	
CQ52		482212240617	CER. 0.1µF +80%-20% 50V DC	DD38104010				RU01-RU06 RU08 RU10-RU16	
CQ53		482212490355	ELECT. 100µF M 50V RA-2	OA10705020				RU18 RU20-RU26 RU28	
CQ54		482212490354	ELECT. 100µF M 16V RA-2	OA10701620				RU30-RU32 RU33/[K]	
CQ55								RU34-RU72 RU90 RU91	
CQ58		482212240617	CER. 0.1µF +80%-20% 50V DC	DD38104010				<b>PU01-SEMICONDUCTORS</b>	
CQ60		482212240617	CER. 0.1µF +80%-20% 50V DC	DD38104010					
			<b>PS54-RESISTORS</b>		DU01				
RQ01		482211710834	CHIP 47kΩ ±5% 1/10W	NI05473110			482213011569	L.E.D. HLMF-K200	HI10005340
RQ10					DU08			#2UL RED H=9 3MM	
RQ11		482205120102	CHIP 1kΩ ±5% 1/10W	NI05102110	DU09		482213032362	DIODE 1SS176 MA165 1SS254	HD20002000
RQ20					DU15			30V 0.1A	
RQ21		482211710834	CHIP 47kΩ ±5% 1/10W	NI05473110	QU01		996500003396	MICROPROCESSOR	HU321JT10F
RQ30					QU02		482220990244	TMP93CW44ADF	HC10283060
RQ31		482205120102	CHIP 1kΩ ±5% 1/10W	NI05102110	QU03		482213041947	IC UPD1631C-AB6	HT30001000
RQ34					QU04		482213041947	FTD DRIVER	HT30001000
RQ35		482211190896	CHIP 100kΩ ±5% 1/10W	NI05104110	QU05		482213042594	TRS. 2SC2458 2SC1740S	BA20002000
RQ40					QU06		482213041947	2SC3199 ETC.	HT30001000
RQ41		482211190892	CHIP 0Ω ±5% 1/10W	NI05000110	QU07		482213041947	TRS. 2SC2458 2SC1740S	HT30001000
RQ44					QU08		482213061227	2SC3199 ETC.	HT30001000
			<b>PS54-SEMICONDUCTORS</b>		QU09		482213061227	DIG.TRS.	BA10001000
QQ01		482220983631	IC NJM4558MD	HC10035090	QU10		482213060588	DTA114ES UN4111 10K 10K	BA20001000
QQ05		482220932553	IC LC78212	HC10309030	QU11		482213060588	DIG.TRS.	BA20001000
QQ06		482220932552	IC LC78211	HC10308030	QU12		482213041947	DTC114ES UN4211 10K 10K	BA20001000
QQ07		482220983631	IC NJM4558MD	HC10035090	QU13		482213061227	DIG.TRS.	BA10001000
QQ08					QU14		482213042594	DTC114ES UN4211 10K 10K	BA10001000
JQ01		996500003417	TERMINAL RCA 6P BLK NI	YT02060660	QU15		482213061227	DIG.TRS.	BA10001000
JQ01	8000	482212610364	TERMINAL RCA 6P BLK AU	YT02060670	QU16		482213061227	DTA114ES UN4111 10K 10K	BA10001000
JQ02		996500003416	TERMINAL RCA 4P BLK NI	YT02041270	QU17		482213063211	DIG.TRS.	BA10004000
JQ02	8000	482212610364	TERMINAL RCA 4P BLK AU	YT02041280	QU18		482220916735	DTA114ES UN4111 10K 10K	BA20002000
JQ03		996500003416	TERMINAL RCA 4P BLK NI	YT02041270				DTC144ES UN4213 47K 47K	BA10001000
JQ03	8000	482212610364	TERMINAL RCA 4P BLK AU	YT02041280				DIG.TRS.	BA10001000
JQ04			PLUG SOCKET 12P	YP06902090				DTA114ES UN4111 10K 10K	BA10001000
			<b>PU01-FRONT CIRCUIT BOARD</b>					DIG.TRS.	BA10001000
			<b>PU01-CAPACITORS</b>					DTA114ES UN4111 10K 10K	BA10004000
CU01		482212421894	ELECT 10µF 16V	EJ10601610				DTA114TS UN4115 10K	HW10006020
CU02		482212611558	CER. 0.1µF Z 50V	DA17104110				PHOTO UNIT PNA4655M00HB	
CU03		482212610364	CER. 100pF UP050B101K-A	DA16101110				IR SENSOR	
CU04		482212610364	CER. 100pF UP050B101K-A	DA16101110				<b>PU01-MISCELLANEOUS</b>	
CU06		482212611558	CER. 0.1µF Z 50V	DA17104110	JU01			JACK 33FE-ST-VK-N 33PIN	YJ07020290
CU07		482212611558	CER. 0.1µF Z 50V	DA17104110	SU01				
CU08		482212240588	CER. 0.022µF TP050F223Z	DA17223110			996500000373	PUSH SWITCH EVQ11L05R	SP01013370
CU09		482212441537	ELECT. 220µF M 6.3V RA-2	OA22700620	SU23			H 5MM 160GF	
CU10		482212233639	CER. 1000pF	DA16102110	SU24		996500001348	ROTARY SWITCH ROTALY	SR02010070
CU11		482212611558	CER. 0.1µF Z 50V	DA17104110				ENCODER 36PULSE EC16B	
CU12		482212610935	ELECT 100µF 6.3V	EJ10700610	VU01		482213090319	DISPLAY UNIT 12-BT-117GNK	HQ31201410
CU13		482212240617	CER. 0.1µF +80%-20% 50V DC	DD38104010	XU01		996500001346	SERAMIC VIB. CST20 00MXW	FQ02005030
CU14		482212611558	CER. 0.1µF Z 50V	DA17104110					

POS. NO	VERS. COLOR	PART NO. (FOR PCS)	DESCRIPTION	PART NO. (MJ)	POS. NO	VERS. COLOR	PART NO. (FOR PCS)	DESCRIPTION	PART NO. (MJ)
CU81		482212610364	<b>PU44-SUB FRONT CIRCUIT BOARD</b>	DA16101110	CN03		482212240617	CER. 0.1µF +80%-20% 50V DC	DD38104010
CU82		482212610364	<b>PU44-CAPACITORS</b>	DA16101110	CN04		482212441539	ELECT. 47µF M 16V RA-2	OA47601620
			CER. 100pF UP050B101K-A		CN05		482212441543	ELECT. 1µF M 50V RA-2	OA10505020
			CER. 100pF UP050B101K-A		CN06		482212240617	CER. 0.1µF +80%-20% 50V DC	DD38104010
					CN07		482212490353	ELECT. 100µF M 10V RA-2	OA10701020
					CN08		482212490362	ELECT. 22µF M 50V RA-2	OA22605020
					CN09		482212440763	ELECT. 2.2µF M 50V RA-2	OA22505020
			<b>PU44-RESISTORS (COMMON)</b>						
			CARBON FILM FIXED RES.		CY01		482212240617	CER. 0.1µF +80%-20% 50V DC	DD38104010
			±5% 1/6W :		CY02		482212611726	CER. 2200pF	DA17222110
			RU81-RU89		CY03		482212240617	CER. 0.1µF +80%-20% 50V DC	DD38104010
					CY04		482212611726	CER. 2200pF	DA17222110
			<b>PU44-SEMICONDUCTORS</b>		CY05		482212230043	CER. 0.01µF Z 50V	DK18103310
DU81		482213011569	L.E.D. HLMF-K200 #2UL RED	HI10005340	CY06		482212230043	CER. 0.01µF Z 50V	DK18103310
QU81		482213041947	TRS. 2SC2458 2SC1740S	HT30001000	CY07	/K,/S,/U	532212421731	ELECT. 10µF 50V RA-2	OA10605020
			2SC3199 ETC.		CY07	/N	482212480543	ELECT. 10µF 35V ARS	OA10603540
QU82		482213041947	TRS. 2SC2458 2SC1740S	HT30001000	CY08	/K,/S,/U	532212421731	ELECT. 10µF 50V RA-2	OA10605020
			2SC3199 ETC.		CY08	/N	482212480543	ELECT. 10µF 35V ARS	OA10603540
QU83		482213060588	DIG.TR.S.	BA20001000	CY11	/K,/S,/U	532212421731	ELECT. 10µF 50V RA-2	OA10605020
			DTC114ES UN4211 10K 10K		CY11	/N	482212480543	ELECT. 10µF 35V ARS	OA10603540
					CY12	/K,/S,/U	532212421731	ELECT. 10µF 50V RA-2	OA10605020
					CY12	/N	482212480543	ELECT. 10µF 35V ARS	OA10603540
			<b>PU44-MISCELLANEOUS</b>		CY13				
SU81		996500001349	ROTARY SWITCH ROT ENCOD	SR02010080	CY22				
			EC16B 16PLS 16CLICK				482212230043	CER. 0.01µF Z 50V	DK18103310
			<b>PU54-TACT POWER SW CIRCUIT BOARD FOR U</b>						
SU91	/U	996500000373	PUSH SWITCH EVQ11L05R	SP01013370	R821			<b>PY04-RESISTORS</b>	
								JUMPER	75060501P0
			<b>PW04-H.P. CIRCUIT BOARD</b>		R824				
CW01	/K,/N,/S	482212230043	CER. 0.01µF Z 50V	DK18103310	RN01	▲	482205023303	33kΩ J 1/4W	GG05333140
CW02	/K,/N,/S	482212230043	CER. 0.01µF Z 50V	DK18103310	RN08		482205021503	15kΩ ±5% 1/2W	GG05153120
CW03		482212230043	CER. 0.01µF Z 50V	DK18103310	RN27		482205310331	330Ω ±5% 1W	GA05331010
CW04		482212230043	CER. 0.01µF Z 50V	DK18103310	RN28		482205310331	330Ω ±5% 1W	GA05331010
					RN29		482205210101	100Ω ±5% 1/6W	GG05101160
JW01	BLACK	482226510685	JACK HLJ2307-01-3160	YJ01004240					
JW01	GOLD	482226511525	JACK HLJ2307-01-3163	YJ01004330					
			<b>PY04-CONNECTOR P-SUPPLY CIRCUIT BOARD</b>						
			<b>PY04-CAPACITORS</b>						
C801		482212612453	CER. 0.01µF Z E 500V	DK18103560				<b>PL74-RESISTORS (COMMON)</b>	
C802		996500003388	ELECT 15000µF 63V LH6	EB15906320				CARBON FILM FIXED RES.	
C802	8000		ELECT 27000µF 63V (LH6)	EB27906330				±5% 1/6W :	
C803		996500003388	ELECT 15000µF 63V LH6	EB15906320				RN02-RN07 RN09-RN26	
C803	8000		ELECT 27000µF 63V (LH6)	EB27906330				RY01-RY14 RY19-RY20	
C821		482212230043	CER. 0.01µF Z 50V	DK18103310				RY22-RY25	
C822		482212230043	CER. 0.01µF Z 50V	DK18103310				<b>PY04-SEMICONDUCTORS</b>	
C823		482212411583	ELECT. 2200µF M 35V RA-2	OA22803520	D801		996500003398	DIODE SIP 10A 200V	HE20024290
C824		482212411583	ELECT. 2200µF M 35V RA-2	OA22803520	D821		482213033057	DIODE	HE20011290
C825					D822		482213033057	DIODE	HE20011290
					D823		482213082421	DIODE 1D3 1A 200V	HD20002710
C828		482212230043	CER. 0.01µF Z 50V	DK18103310	D824		482213082421	DIODE 1D3 1A 200V	HD20002710
C829		482212412328	ELECT. 6800µF 16V RA2	OA68801620	D825		482213082421	DIODE 1D3 1A 200V	HD20002710
C830		482212440723	ELECT. 2200µF 16V	OA22801620	D853		482213082421	DIODE 1D3 1A 200V	HD20002710
C831					D854		482213082421	DIODE 1D3 1A 200V	HD20002710
					DN01		482213082421	DIODE 1D3 1A 200V	HD20002710
C834		482212230043	CER. 0.01µF Z 50V	DK18103310	DN02		482213082421	DIODE 1D3 1A 200V	HD20002710
C835		482212490354	ELECT. 100µF M 16V RA-2	OA10701620	DN03		482213080837	DIODE HSS81TD 150V 150mA	HD20027010
C836		482212490354	ELECT. 100µF M 16V RA-2	OA10701620	DN04				
C837		482212230043	CER. 0.01µF Z 50V	DK18103310					
C838		482212230043	CER. 0.01µF Z 50V	DK18103310					
C839		482212230043	CER. 0.01µF Z 50V	DK18103310					
C840		482212490354	ELECT. 100µF M 16V RA-2	OA10701620					
C841		482212490354	ELECT. 100µF M 16V RA-2	OA10701620					
C842		482212490354	ELECT. 100µF M 16V RA-2	OA10701620					
C843		482212230043	CER. 0.01µF Z 50V	DK18103310					
CN01		482212240617	CER. 0.1µF +80%-20% 50V DC	DD38104010	▲ Q821		482220983317	IC NJM7815FA +15V 1A	HC38915090
CN02		482212441539	ELECT. 47µF M 16V RA-2	OA47601620	▲ Q822		482220961256	IC NJM7915FA	HC39915090
					▲ Q823		482220983824	IC NJM7805FA +5V	HC38905090
					▲ Q824		482220983824	IC NJM7805FA +5V	HC38905090

POS. NO	VERS. COLOR	PART NO. (FOR PCS)	DESCRIPTION	PART NO. (MJI)
▲ Q825		482220930258	IC NJM7905FA	HC39905090
QN01		482220983312	IC TA7317P	HC10042050
QN02		482213042594	DIG.TRS. DTC144ES UN4213 47K 47K	BA20002000
QN03		482213042949	TRS. 2SA970 GR OR BL	HT109702A0
QN04		482213060696	TRS. 2SC1627 O Y 8 OV 300MA 600MW TO	HT316272B0
QN05		482213042594	DIG.TRS. DTC144ES UN4213 47K 47K	BA20002000
QN06		482213060526	TRS. 2SD1508 HFE>4000	HT415080A0
QY01		532220911532	IC 74HC4094 16PIN	HC709449B0
QY02		532220911532	IC 74HC4094 16PIN	HC709449B0
QY03				
{		482213061227	DIG.TRS.	BA10001000
QY08			DTC114ES UN4211 10K 10K	
QY09		482220962784	IC TC9215P ANALOGUE SW.	HC10262050
QY10		482220983631	IC NJM4558D-D	HC10008090
QY11		482213060588	DIG.TRS. DTC114ES UN4211 10K 10K	BA20001000
QY12	/K,/N,/S	482213060588	DIG.TRS. DTC114ES UN4211 10K.10K	BA20001000
QY13	/K,/N,/S	482213061227	DIG.TRS. DTC114ES UN4211 10K.10K	BA10001000
			<b>PY04-MISCELLANEOUS</b>	
▲ F821	/K,/N,/S	482225330415	FUSE 1.6 A 250V BS LISTED	FS10160850
▲ F821	/U		FUSE 2A 125V UL CSA MITI FBT	FS10200350
▲ F822	/K,/N,/S	482225330415	FUSE 1.6 A 250V BS LISTED	FS10160850
▲ F822	/U		FUSE 2A 125V UL CSA MITI FBT	FS10200350
▲ F823	/K,/N,/S	482225330415	FUSE 1.6 A 250V BS LISTED	FS10160850
▲ F823	/U		FUSE 2A 125V UL CSA MITI FBT	FS10200350
▲ F824	/K,/N,/S	482225330415	FUSE 1.6 A 250V BS LISTED	FS10160850
▲ F824	/U		FUSE 2A 125V UL CSA MITI FBT	FS10200350
JY01			JACK 33FE-BT-VK-N 33PIN	YJ07020660
LN01		482228010305	RELAY VB-18MBU-565-UL3	LY20180020
LN02		482228010305	RELAY VB-18MBU-565-UL3	LY20180020
LN03		482228010305	RELAY VB-18MBU-565-UL3	LY20180020
LN04		996500001576	RELAY MR82-24USR	LY20240480
LY01				
{		482224273843	EMI FILTER DSS306-91-F-223Z	FM12223010
LY04				