

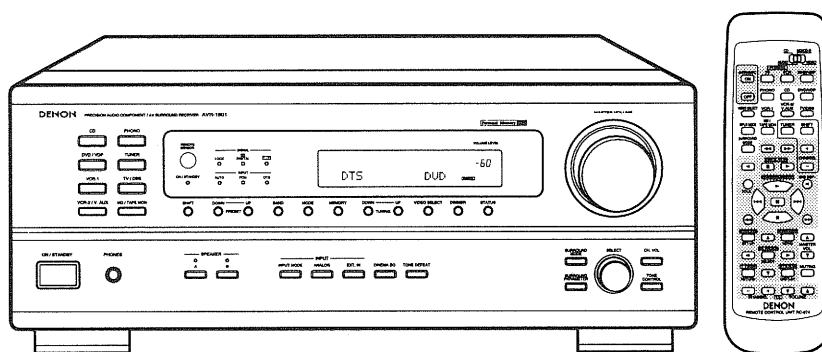
# DENON

Hi-Fi Component

## SERVICE MANUAL

# MODEL AVR-1801/881

### AV SURROUND RECEIVER



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● Some illustrations using in this service manual are slightly different from the actual set.

## NIPPON COLUMBIA CO., LTD.

## SAFETY PRECAUTIONS

The following check should be performed for the continued protection of the customer and service technician.

### LEAKAGE CURRENT CHECK

Before returning the unit to the customer, make sure you make either (1) a leakage current check or (2) a line to chassis resistance check. If the leakage current exceeds 0.5 milliamps, or if the resistance from chassis to either side of the power cord is less than 460 kohms, the unit is defective.

## SPECIFICATIONS

### ■ Audio section

#### ● Power amplifier

Rated output:	Front :	70W + 70W (8Ω/ohms, 20Hz~20kHz with 0.08% T.H.D)
		105W + 105W (6Ω/ohms, 1kHz with 0.7% T.H.D) (U.S.A., Canada & Europe Models)
		120W + 120W (6Ω/ohms, EIAJ) (Asia Model)
Center :	70W (8Ω/ohms, 20Hz~20kHz with 0.08% T.H.D)	
	105W (6Ω/ohms, 1kHz with 0.7% T.H.D) (U.S.A., Canada & Europe Models)	
	120W (6Ω/ohms, EIAJ) (Asia Model)	
Surround :	70W + 70W (8Ω/ohms, 20Hz~20kHz with 0.08% T.H.D)	
	105W + 105W (6Ω/ohms, 1kHz with 0.7% T.H.D) (U.S.A., Canada & Europe Models)	
	120W + 120W (6Ω/ohms, EIAJ) (Asia Model)	
Output terminals:	Front :	A or B 6 to 16Ω/ohms
		A + B 12 to 16Ω/ohms
	Center/ Surround :	6 to 16Ω/ohms

#### ● Analog

##### LINE input - PRE OUT

Input Sensitivity/input impedance:	200mV/47kΩ/kohms
Frequency response:	10Hz~100kHz: +1, -3dB (TONE DEFEAT ON)
S/N ratio:	100dB (IHF-A weighted) (TONE DEFEAT ON)

#### ● Phono equalizer

##### PHONO input - REC OUT

Input sensitivity/input impedance:	2.5mV/47kΩ/kohms
RIAA deviation:	±1dB (20Hz~20kHz)
S/N ratio:	74dB (IHF-A weighted, with 5mV input)
Rated output/Maximum output:	150mV/7v
Distortion factor:	0.03% (1kHz, 3V)

### ■ Video section

#### ● Standard video jacks

Input/output level and impedance:	1Vp-p, 75Ω/ohms
Frequency response:	5Hz~10MHz — +1, -3dB

#### ● S-video jacks

Input/output level and impedance:	Y (brightness) signal — 1Vp-p, 75Ω/ohms
	C (color) signal — 0.286Vp-p, 75Ω/ohms
Frequency response:	5Hz~10MHz: — +1, -3dB

### ■ Tuner section

Receiving range:	[FM] (note: μV at 75Ω/ohms, 0dBf = 1x10 <sup>-15</sup> W)	[AM]
U.S.A., Canada & Asia (for Multiple voltage) Models	87.50MHz~107.90MHz	520kHz~1710kHz
Europe & Asia (for China) Models	87.50MHz~108.00MHz	522kHz~1611kHz
Usable sensitivity:	1.0 μV (11.2dBf)	18 μV
50 dB quieting sensitivity:	MONO 1.6 μV (15.3dBf)	
	STEREO 23 μV (38.5dBf)	
S/N ratio:	MONO 80dB (IHF-A weighted)	
	STEREO 75dB (IHF-A weighted)	
Total harmonic distortion:	MONO 0.15% (1kHz)	
	STEREO 0.3% (1kHz)	

### ■ General

#### Power supply:

U.S.A., Canada Models	AC120V, 60Hz
Europe Model	AC230V, 50Hz
Asia(for Multiple voltage)Model	AC115/230V, 50/60Hz
Asia(for China)Model	AC220V, 50Hz

#### Power consumption:

Maximum external dimensions:	434 (W) × 171 (H) × 416 (D)mm (17-3/32" × 6-47/64" × 16-3/8")
Mass:	11.3kg (24 lbs 14.6 oz)

### ■ Remote control unit (RC-874)

Batteries:	R6P/AA Type(two batteries)
External dimensions:	54 (W) × 172 (H) × 27.2 (D)mm (2-1/8" × 6-49/64" × 1-5/64")
Mass:	100g (Approx. 6 oz) (including batteries)

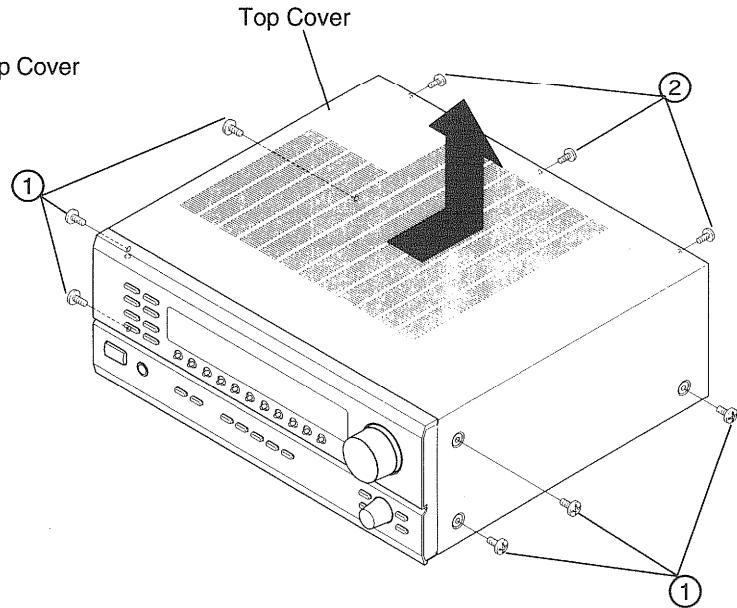
\* For purposes of improvement, specifications and design are subject to change without notice.

## DISASSEMBLY

(To reassemble reverse disassembly)

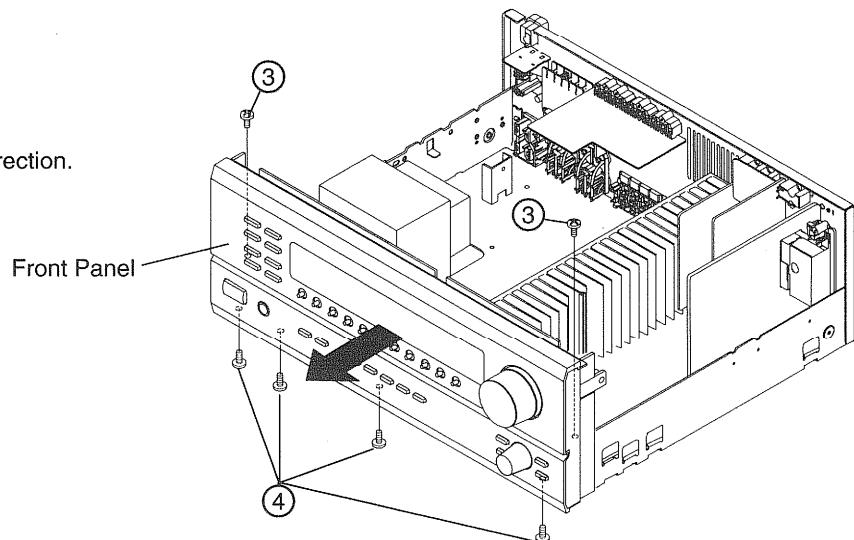
### Top Cover

Remove 6 screws ① and 3 screws ②, detach the Top Cover in the arrow direction.



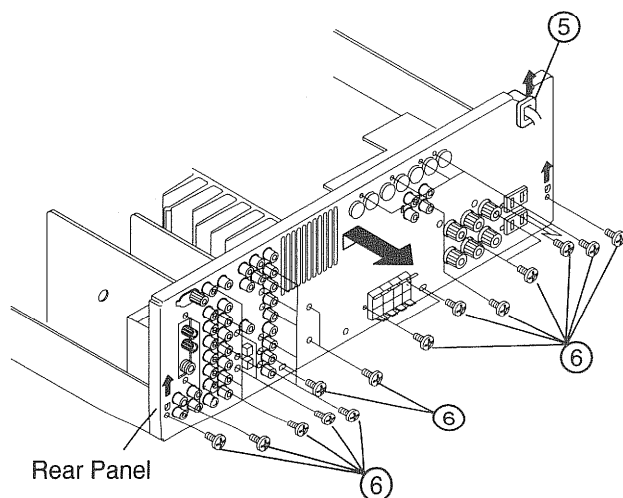
### Front Panel

1. Remove 2 screws ③.
2. Remove 4 screws ④.
3. Detach the Front Panel in the arrow direction.

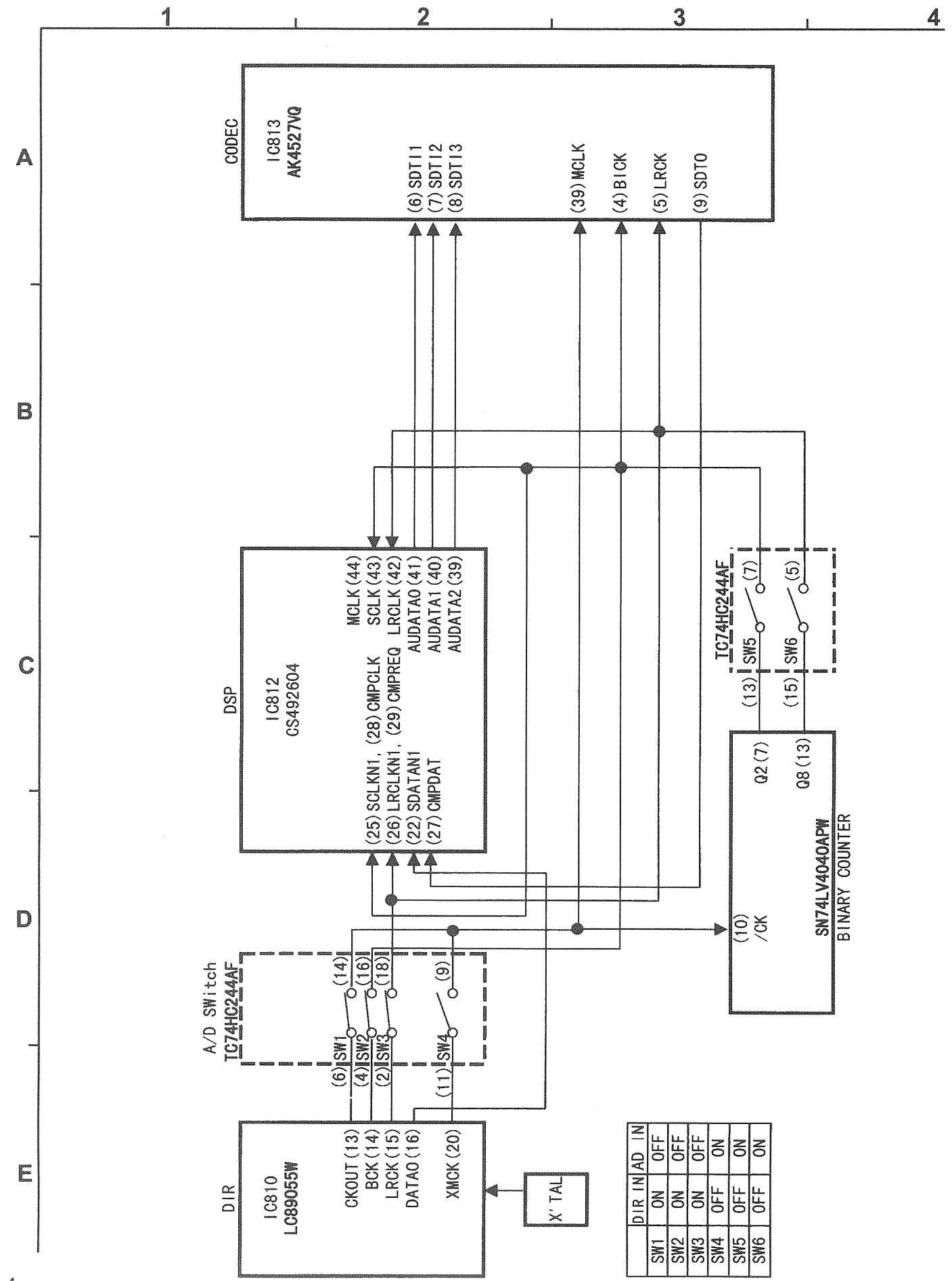


### Rear Panel

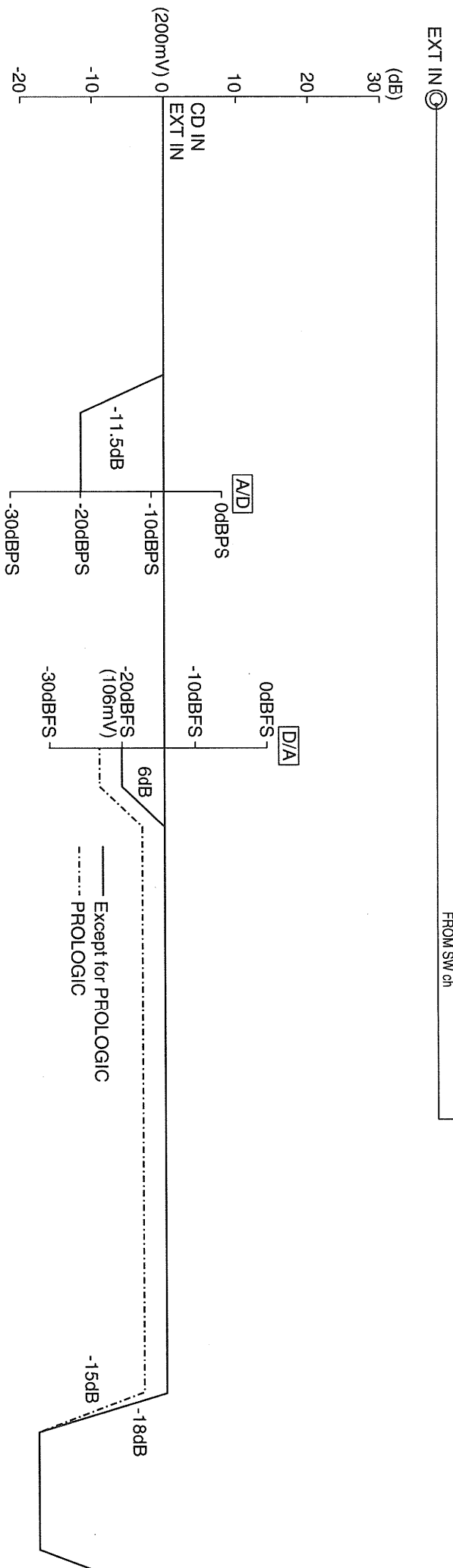
1. Remove cord bushing ⑤ from the Rear Panel.
2. Remove 35 screw ⑥.
3. While releasing 2 hooks, detach the Rear Panel in the arrow direction.



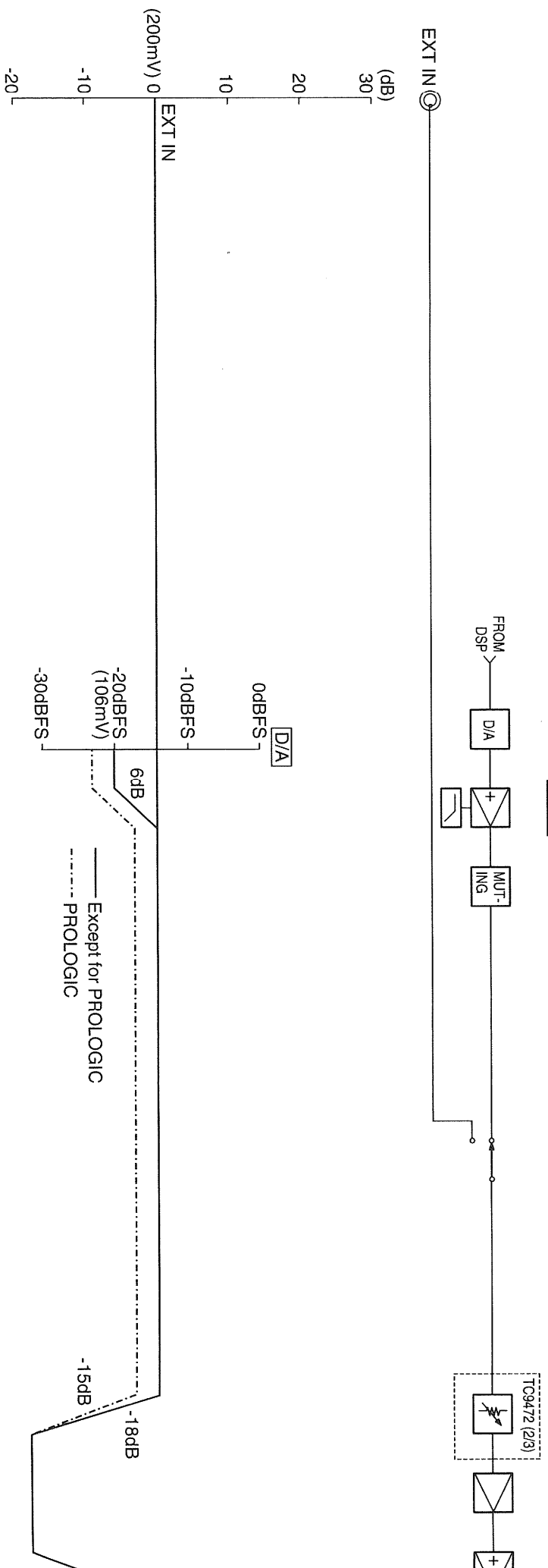
# CLOCK FLOW



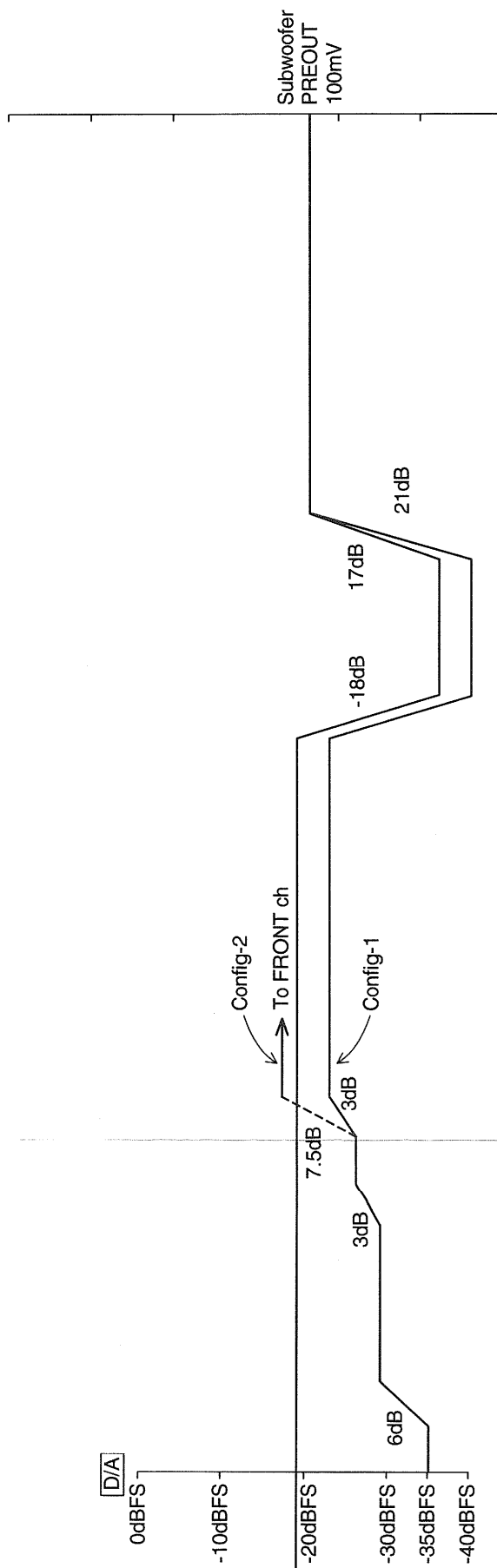
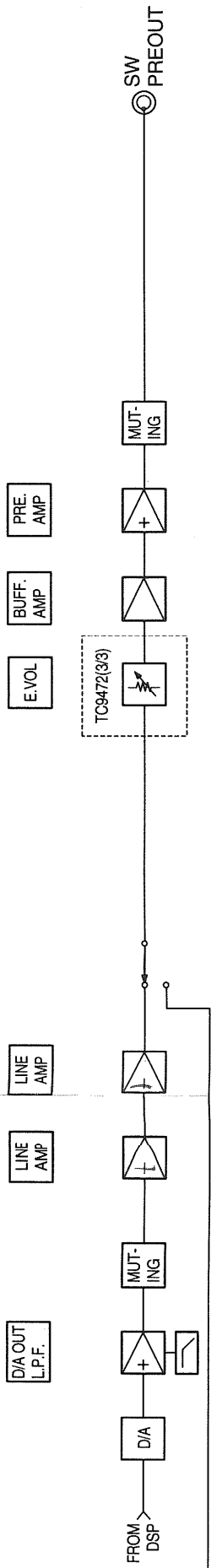
Counting: ON  
FROM SW ch



### CENTER SURROUND



3 4 5 6 7 8

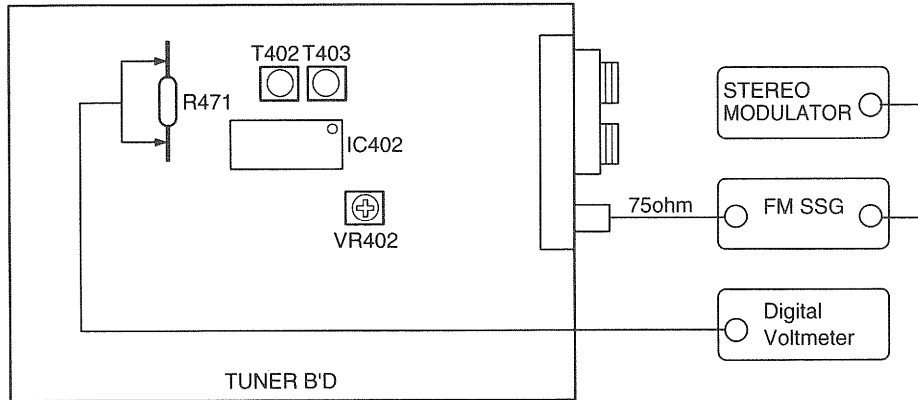


# ADJUSTMENT

## Tuner Section

### CONNECTION DIAGRAM OF MEASURING INSTRUMENTS

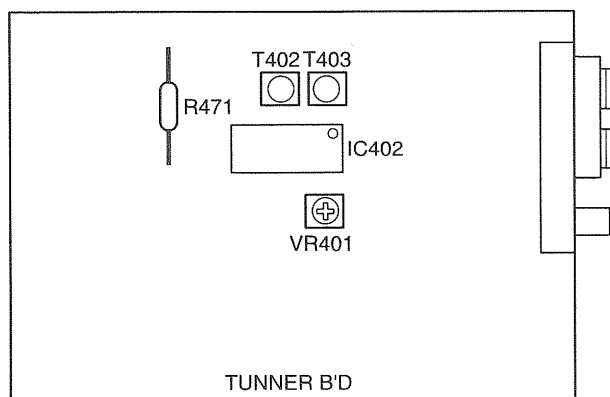
● FM



### FM ALIGNMENT

Step	Alignment Item	Tuning Frequency Setting	Input					Output		Adjustment	
			Type	Frequency	Input Level	Modulation	Coupling	Type	Connect to	Points	Adjust to
1	Center Adjustment	98.1MHz (98.0MHz)	FM SSG	98.1MHz	60dBμ	—	Antenna Terminal	Digital Voltmeter	R471	T402	± 50mV
2	Distortion	98.1MHz (98.0MHz)	FM SSG	98.1MHz	60dBμ	Mono 1kHz 100%	Antenna Terminal	Distortion Meter	Output Terminal (L)	T403	Minimum Distortion
3	Repeat Steps 1 and 2										
4	Signal Level	98.1MHz (98.0MHz)	FM SSG	98.1MHz	20dBμ	OFF	Antenna Terminal	Light "TUNED" on FL Display		VR402	20 <sup>+14</sup> <sub>-10</sub> dB

● AM



### AM ALIGNMENT

Step	Alignment Item	Frequency	Input	Output		Adjustment		Remarks
				Type	Connect to	Points	Adjust to	
1	Signal Level	999 (1000) kHz	AM SSG	—	—	VR401	Light "TUNED" on FL Display	SSG OUTPUT 74dBμ (EMF)

## Audio Section

### Idling Current

Required measurement equipment : DC Voltmeter

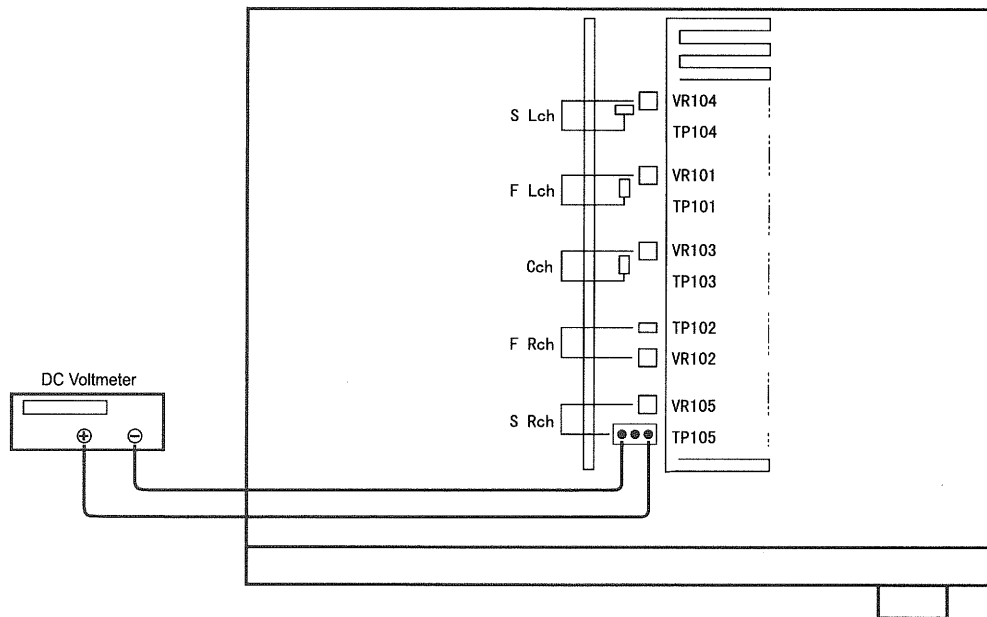
### Preparation

- (1) Avoid direct blow from an air conditioner or an electric fan, and adjust the unit at normal room temperature 15 °C ~ 30 °C (59 °F ~ 86 °F).
- (2) Presetting
  - POWER (Power source switch) → OFF
  - SPEAKER (Speaker terminal) → No load (Do not connect speaker, dummy resistor, etc.)

### Adjustment

- (1) Remove top cover and set VR101, VR102, VR103, VR104, VR105 on Amp. Unit at full counterclockwise ( ⦿ ) position.
- (2) Connect DC Voltmeter to test points (FRONT-Lch: TP101, FRONT-Rch: TP102, CENTER ch: TP103, SURROUND-Lch: TP104, SURROUND-Rch: TP105).
- (3) Connect power cord to AC Line, and turn power switch "ON".
- (4) Presetting.
 

MASTER VOLUME	: "---" counterclockwise ( ⦿ min.)
MODE	: 5CH STEREO
FUNCTION	: CD
- (5) Within 2 minutes after the power on, turn VR101 clockwise ( ⦿ ) to adjust the TEST POINT voltage to 1.5 mV ±0.5 mV DC.
- (6) After 10 minutes from the preset above, turn VR101 to set the voltage to 2 mV ±0.5 mV DC.
- (7) Adjust the Variable Resistors of other channels in the same way.

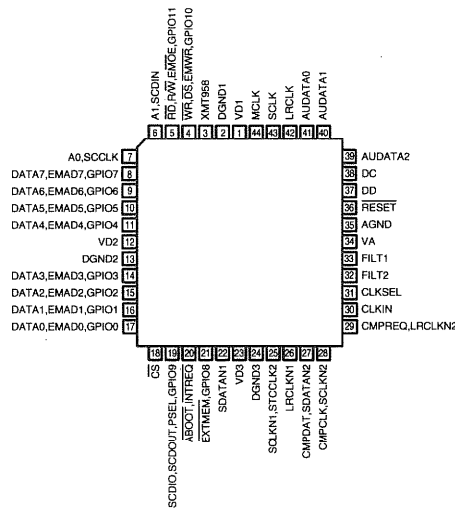




# SEMICONDUCTORS

## ● ICs

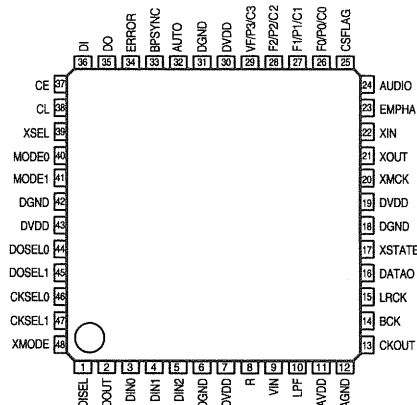
### CS492604-CLR (IC812)



### CS492604-CLR Terminal Function

Pin No.	Pin Name	Function
1	VD1	Digital positive supply
2	DGND1	Digital supply ground
3	XMT958	SPDIF transmitter output
4	WR, DS, EMWR, GPIO10	Host write strobe or host data strobe or external memory write enable or general purpose input & output number 10
5	RD, R/W, EMOE, GPIO11	Host parallel output enable or host parallel R/W or external memory output enable or general purpose input & output number11
6	A1, SCDIN	Host address bit one or SPI serial control data input
7	A0, SCCLK	Host parallel address bit zero or serial control port clock
8	DATA7, EMAD7, GPIO7	
9	DATA6, EMAD6, GPIO6	
10	DATA5, EMAD5, GPIO5	
11	DATA4, EMAD4, GPIO4	
12	VD2	Digital positive supply
13	DGND2	Digital supply ground
14	DATA3, EMAD3, GPIO3	
15	DATA2, EMAD2, GPIO2	
16	DATA1, EMAD1, GPIO1	
17	DATA0, EMAD0, GPIO0	
18	CS	Host parallel chip select, host serial SPI chip select
19	SCDIO, SCDOUT, PSEL, GPIO9	Serial control port data input and output, parallel port type select
20	INTREQ, ABOOT	Control port interrupt request, automatic boot enable
21	EXTMEM, GPIO8	External memory chip select or general purpose input & output number 8
22	SDATAN1	PCM audio data input number one
23	VD3	Digital positive supply
24	DGND3	Digital supply ground
25	SCLKN1, STCCLK2	PCM audio input bit clock
26	LRCLKN1	PCM audio input sample rate clock
27	CMPDAT, SDATAN2	PCM audio data input number two
28	CMPCLK, SCLKN2	PCM audio input bit clock
29	CMPREQ, LRCLKN2	PCM audio input sample rate clock
30	CLKIN	Master clock input
31	CLKSEL	DSP clock select
32	FILT2	Phase locked loop filter
33	FILT1	Phase locked loop filter
34	VA	Analog positive supply
35	AGND	Analog supply ground
36	RESET	Master reset input
37	DD	Reserved
38	DC	Reserved
39	AUDATA2	Digital audio output 2
40	AUDATA1	Digital audio output 1
41	AUDATA0	Digital audio output 0
42	LRCLK	Audio output sample rate clock
43	SCLK	Audio output bit clock
44	MCLK	Audio master clock

## LC89055W (IC810)

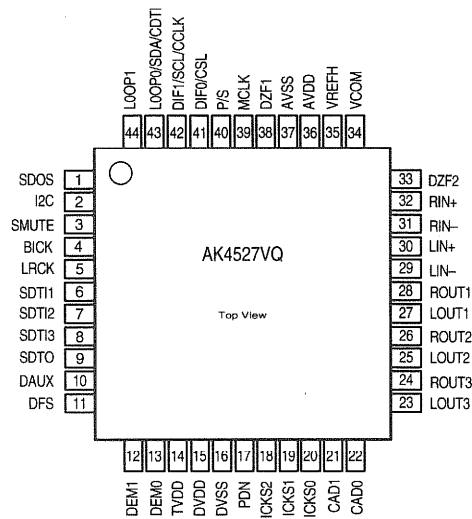


## LC89055W Terminal Function

Pin No.	Pin Name	I/O	Function
1	DISEL	I	Data input terminal (select input pin of DIN0, DIN1)
2	DOUT	O	Input bi-phase data through output terminal
3	DIN0	I	Amp built-in coaxial/optical input correspond data input terminal
4	DIN1	I	Amp built-in coaxial/optical input correspond data input terminal
5	DIN2	I	Optical input correspond data input terminal
6	DGND		Digital GND
7	DVDD		Digital power supply
8	R	I	VCO gain control input terminal
9	VIN	I	VCO free-run frequency setting input terminal
10	LPF	O	PLL loop filter setting terminal
11	AVDD		Analog power supply
12	AGND		Analog GND
13	CKOUT	O	Clock output terminal (256fs, 384fs, 512fs, X'tal osc., VCO free-run osc.)
14	BCK	O	64fs clock output terminal
15	LRCK	O	fs clock output terminal (L: Rch, H: Lch, I <sup>2</sup> S: Reverse)
16	DATAO	O	Data output terminal
17	XSTATE	O	Input data detecting result output terminal
18	DGND		Digital GND
19	DVDD		Digital power supply
20	XMCK	O	X'tal osc. clock output terminal (24.576MHz or 12.288MHz)
21	XOUT	O	X'tal osc. connection output terminal
22	XIN	I	X'tal osc. connection input terminal, external signal input possible (24.576MHz or 12.288MHz)
23	EMPHA	O	Emphasis information output terminal of channel status
24	AUDIO	O	Bit1 output terminal of channel status
25	CSFLAG	O	Top 40bit revise flag output terminal of channel status
26	F0/P0/C0	O	Input fs cal. sig. out/data type out/input word inf. output terminal
27	F1/P1/C1	O	Input fs cal. sig. out/data type out/input word inf. output terminal
28	F2/P2/C2	O	Input fs cal. sig. out/data type out/input word inf. output terminal
29	VF/P3/C3	O	Validity flag out/data type out/input word inf. output terminal
30	DVDD		Digital power supply
31	DGND		Digital GND
32	AUTO	O	Non PCM burst data transfer detect sig. output terminal
33	BPSYNC	O	Non PCM burst data preamble Pa, Pb, Pc, Pd sync sig. output terminal
34	ERROR	O	PLL lock error, data error flag output terminal
35	DO	O	CPU/IFD read data output terminal
36	DI	I	CPU I/F write data input terminal
37	CE	I	CPU I/F chip enable input terminal
38	CL	I	CPU I/F chip enable input terminal
39	XSEL	I	Frequency select input pin of XIN X'tal osc. (24.576MHz or 12.288MHz)
40	MODE0	I	Mode setting input terminal
41	MODE1	I	Mode setting input terminal
42	DGND		Digital GND
43	DVDD		Digital power supply
44	DOSEL0	I	Data output format select input terminal
45	DOSEL1	I	Data output format select input terminal
46	CKSEL0	I	Output clock select input terminal
47	CKSEL1	I	Output clock select input terminal
48	XMODE	I	Reset input terminal

- For latch-up countermeasure, set digital (DVDD) and analog (AVDD) power on/off in the same timing.

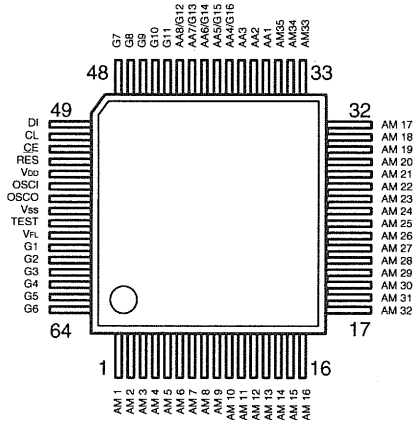
AK4527VQ (IC813)



AK4527VQ Terminal Function

Pin No.	Pin Name	I/O	Function
1	SDOS	I	SDTO source select pin, L: Internal ADC output, H: DAUX input
2	I2C	I	Serial control mode select pin, L: 3-core serial, H: I <sup>2</sup> C bus
3	SMUTE	I	Soft mute pin, H: Soft mute start, L: Release
4	BICK	I	Audio serial data clock pin
5	LRCK	I	Input 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	Auxiliary audio serial data input pin
11	DFS	I	Double speed sampling mode pin, L: Normal, H: Double
12	DEM1	I	De-emphasis-1 pin
13	DEM0	I	De-emphasis-2 pin
14	TVDD	—	Power pin for output buffer, 2.7V~5.5V
15	DVDD	—	Digital power pin, 4.5V~5.5V
16	DVSS	—	Digital GND pin, 0V
17	PDN	I	Power down & reset pin, L: Powered-down and register initialized, Reset with PDN when switching CAD0-1
18	ICKS2	I	Input clock select-2 pin
19	ICKS1	I	Input clock select-1 pin
20	ICKS0	I	Input clock select-0 pin
21	CAD1	I	Chip address-1 pin
22	CAD0	I	Chip address-0 pin
23	LOUT3	O	DAC3L channel analog out pin
24	ROUT3	O	DAC3R channel analog out pin
25	LOUT2	O	DAC2L channel analog out pin
26	ROUT2	O	DAC2R channel analog out pin
27	LOUT1	O	DAC1L channel analog out pin
28	ROUT1	O	DAC1R channel analog out pin
29	LIN-	I	L-ch analog inverted input pin
30	LIN+	I	L-ch analog non-inverted input pin
31	RIN-	I	R-ch analog inverted input pin
32	RIN+	I	R-ch analog non-inverted input pin
33	DZF2	O	0 input detect 2 pin, H: Input data of G2 is 8192 times "0" in a raw or RSTN bit "0", L: When P/S= "0"
34	VCOM	O	Common V-out pin, AVDD/2, connect large capacitor to avoid noise
35	VREFH	I	Ref. V input pin, AVDD
36	AVDD	—	Analog GND pin, 4.5V~5.5V
37	AVSS	—	Analog GND pin, 0V
38	DZF1	O	0 input detect pin, H: Input data of G1 is 8192 times "0" in a raw or RSTN bit "0", L: When P/S= "0"
39	MCLK	I	Master clock input pin
40	P/S	I	Parallel/Serail select pin, L: Serial control
41	DIF0	I	Audio data I/F format 0 pin (parallel control)
	CSN	I	Chip select pin (3-wire serial control), connect to DVDD when I <sup>2</sup> C bus control
42	DIF1	I	Audio data I/F format 1 pin (parallel control)
	SCL/CCLK	I	Control data clock pin (serial control), I <sup>2</sup> C="L": CCLK (3-wire serial), I <sup>2</sup> C="H": SCL (I <sup>2</sup> C bus)
43	LOOP0	I	Loop back mode 0 pin (parallel control), effects digital loop back ADC to all DAC
	SDA/CDTI	I/O	Control data input pin (serial control), I <sup>2</sup> C="L": CDTI (3-wire serial), I2C="H" SDA (I <sup>2</sup> C bus)
44	LOOP1	I	Loop back mode 1 pin, from SDTI1 to all DAC

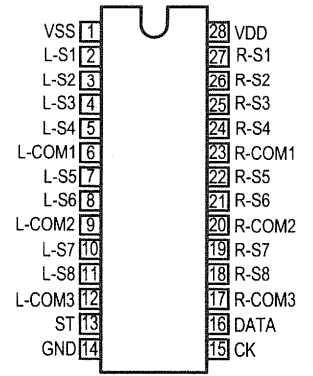
LC75721E (C301)



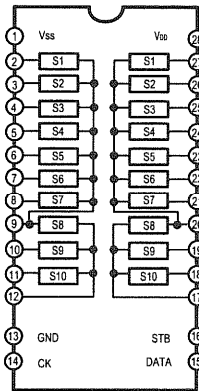
● LC75721E Terminal Function

Symbol	Function
VDD	Power terminal +5V
Vss	Power terminal GND
Vr-L	Power terminal FL drive
DI	Serial data transfer terminal
CL	DL: Data
CE	CL: Clock
	CE: Chip enable
OSC1	External CR connecting terminal
OSC0	
RES	System reset terminal
AM1~AM35	Anode output terminal
AA1~AA3	
AA4/G16	Anode/Grid output terminal
AA5/G15	
AA6/G14	
AA7/G13	
AA8/G12	
G1~G11	Grid output terminal
TEST	LSI test terminal

KIC9164AN(IC203)



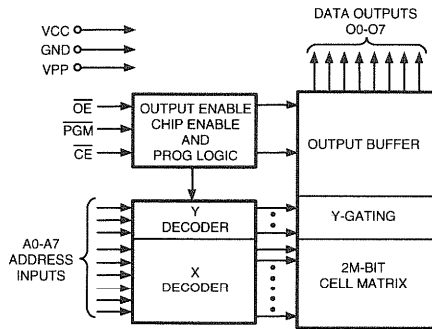
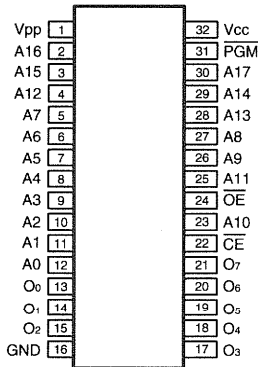
TC9273N-007(IC701)



● TC9273N Terminal Function

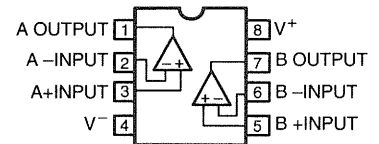
Pin No	Symbol	Name	Function
1	Vss	+Power Terminal	Dual Power Use: VDD = 8.0~17 V Single Power Use: VDD = 8.0~18V
13	GND	Digital Ground	GND=0V
28	VDD	+Power Terminal	Vss=-8.0~-17V
2~12			
12~27	S1~S10	I/O Terminal	Input terminal of analog switch.
14	CK	Clock Input	Clock input for data transfer.
15	DATA	Data Input	Serial input for switch setting.
16	STB	Strobe Input	Strobe Input Strobe input for data writing.

W27C020(IC807)

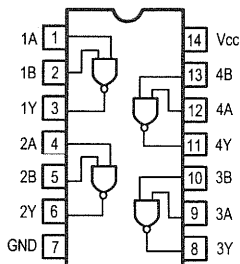


NJM2068DD

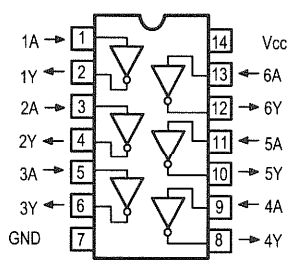
(IC205~210, 551, 702~704, 814~816)  
BA4510F (IC805, 806)



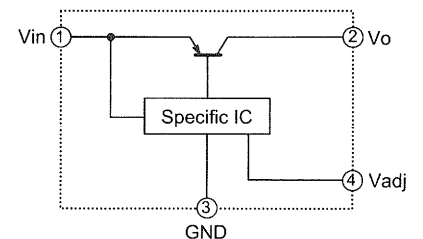
SN74LV00APW(IC822)



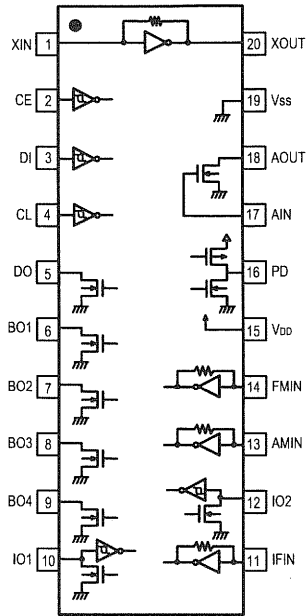
MC74HCU04AD(IC803)



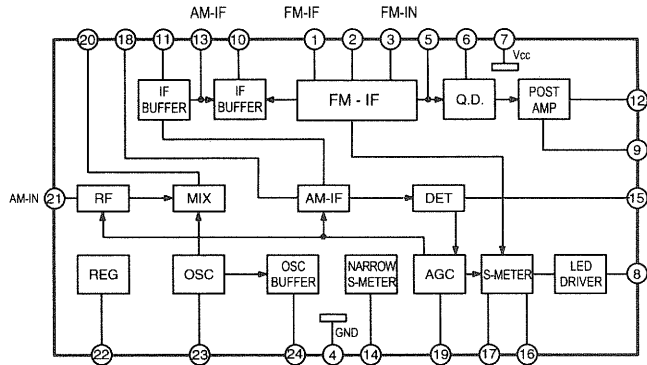
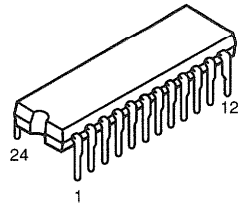
KIA78R05PI (IC653)



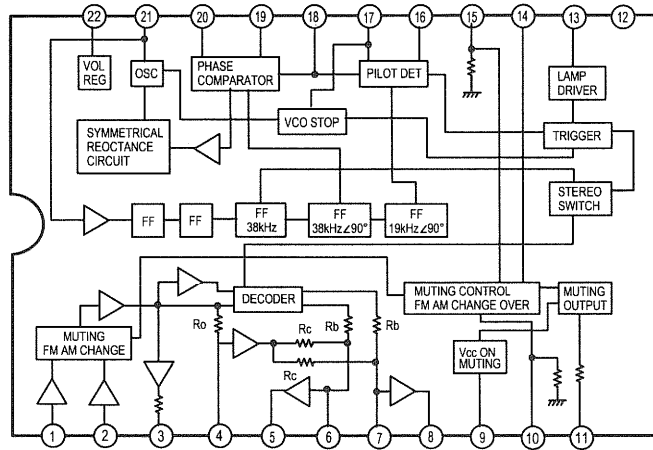
LC72131M (IC401)



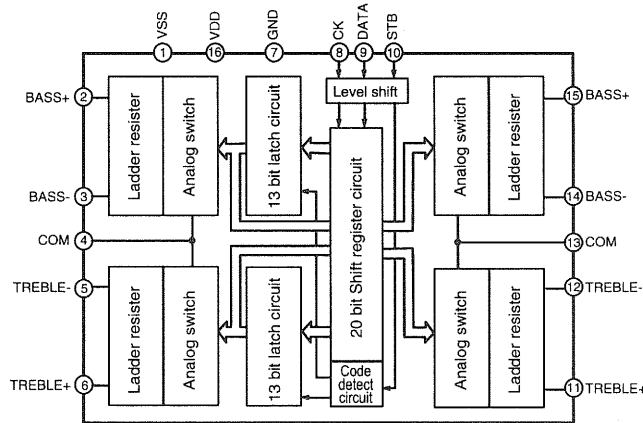
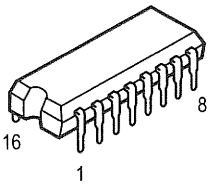
LA1266 (IC402)



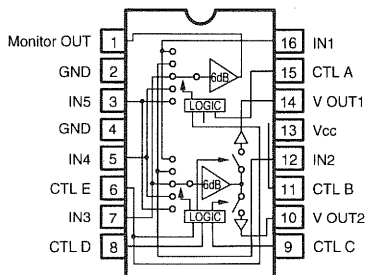
LA3401 (IC403)



TC9184AP (IC552)



BA7625 (IC601, 651, 652)



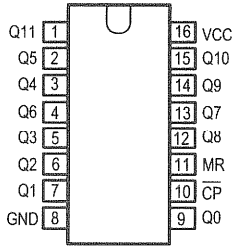
A	B	E	MONITOR OUT
L	L	*	IN 1
H	L	*	IN 2
L	H	*	IN 3
H	H	L	IN 4
H	H	H	IN 5

C	D	E	V OUT 1
L	L	*	—
H	L	*	IN 2
L	H	*	IN 3
H	H	L	IN 4
H	H	H	IN 5

C	D	E	V OUT 2
L	L	*	IN 1
H	L	*	—
L	H	*	IN 3
H	H	L	IN 4
H	H	H	IN 5

Note 1: \* mark means that feasible for either H or L.  
 Note 2: Each input terminal is provided with sink chip clamp (BA7625).  
 Each input terminal takes 20kohm at the end (BA7626).

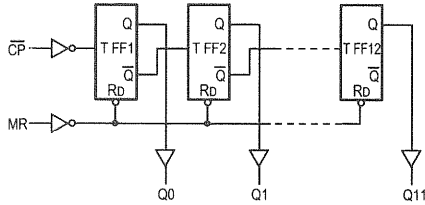
**SN74LV4040 (IC831)**



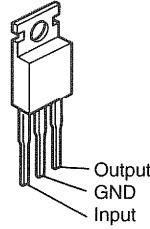
**Terminal Function**

INPUTS		OUTPUTS
CP	MR	Qn
↑	L	no change
↓	L	count
X	H	L

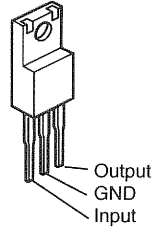
H=HIGH voltage level  
L=LOW voltage level  
X=don't care  
↑=LOW-to-HIGH clock transition  
↓=HIGH-to-LOW clock transition



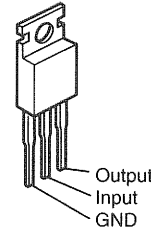
**KIA7805 (IC104)  
KA7815 (IC101)**



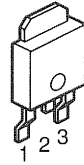
**NJM7805FA (S)  
(IC103, 829)**



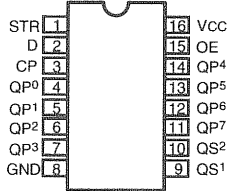
**KIA7915 (IC102)**



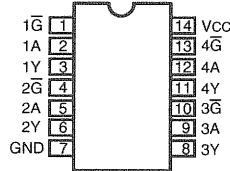
**BA033FP (IC811)**



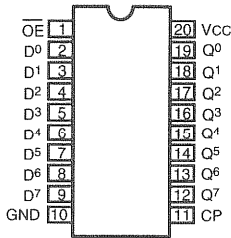
**PC74HC4094 (IC302, 602)**



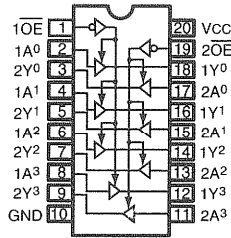
**TC74HC125D (IC821)**



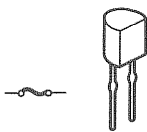
**PC74HCT574 (IC808,809)**



**DC74HCT244 (IC828,830)**



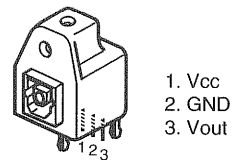
● **IC PROTECTOR**  
ICP-N15 (IC105)



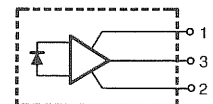
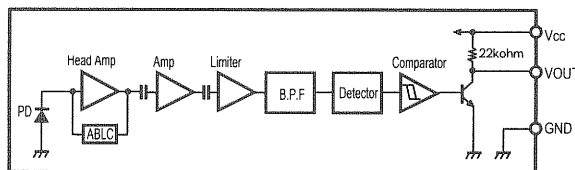
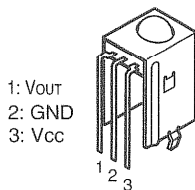
● **POSISTOR**  
P43T7D330BW16

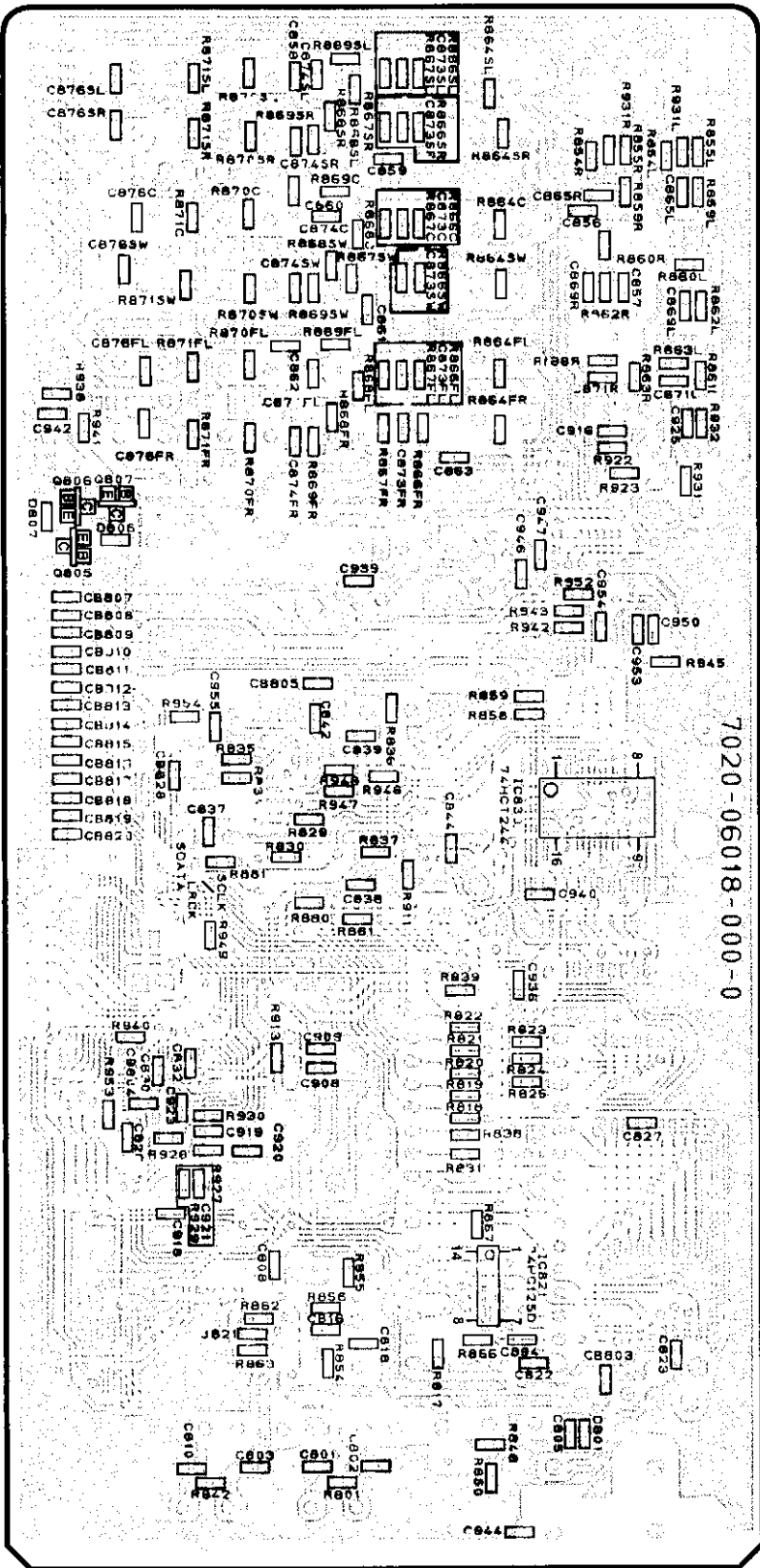


● **OPTICAL OUT**  
GP1F37R1 (IC801, 802)

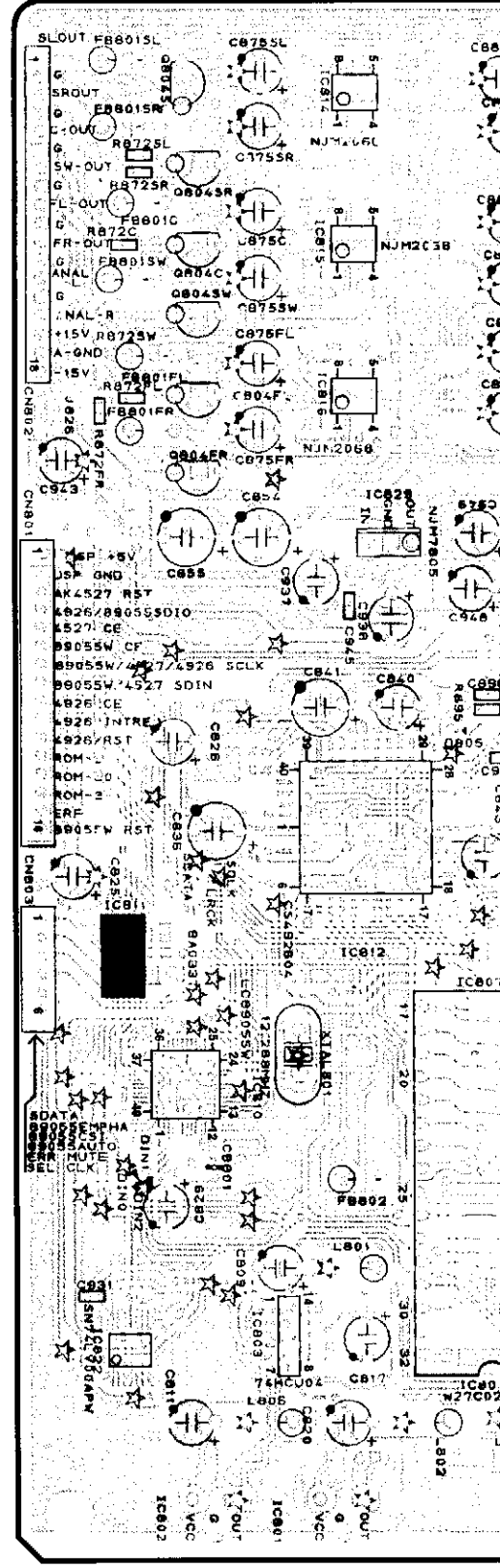


● **IR SENSOR**  
NJL64H380A(RMC301)

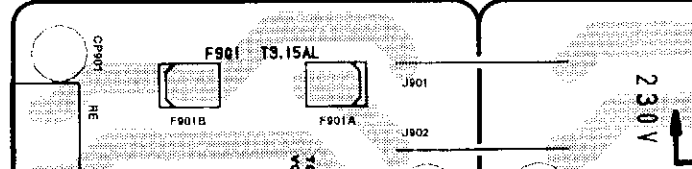




FOIL SIDE



COMPONENT SIDE



7020-06018-000-0

likely to take a long period of time for supplying, or in applying.

list. (Refer to the Schematic Diagram for those parts.)

### Capacitors

CE Type	04W Shape	1H Dielectric strength and per- formance	2R2 Capacity error	M Allowable error	BP Others
Aluminum foil electrolytic	Aluminum solid electrolytic	Tantalum electrolytic	Film	Ceramic	Ceramic
Aluminum foil electrolytic	Aluminum solid electrolytic	Tantalum electrolytic	Film	Ceramic	Ceramic
Aluminum foil electrolytic	Aluminum solid electrolytic	Tantalum electrolytic	Film	Ceramic	Ceramic
Aluminum foil electrolytic	Aluminum solid electrolytic	Tantalum electrolytic	Film	Ceramic	Ceramic
Aluminum foil electrolytic	Aluminum solid electrolytic	Tantalum electrolytic	Film	Ceramic	Ceramic

Capacity (electrolyte only)  
 2 1/2 → 2200µF  
 2 1/2 → 2200µF  
 Indicates number of zeros after effective number  
 2-digit effective number.  
 Units: µF.

2 1/2 → 2.2µF  
 2 1/2 → 2.2µF  
 2 1/2 → 2.2µF  
 1-digit effective number  
 2-digit effective number. decimal point indicated by R.  
 Units: µF.

Capacity (except electrolyte)  
 2 1/2 → 2200pF=0.0022µF  
 2 1/2 → 2200pF  
 Indicates number of zeros after effective number.  
 2-digit effective number.  
 Units: µF.

2 1/2 → 220pF  
 2 1/2 → 220pF  
 Indicates number of zeros after effective number.  
 2-digit effective number.  
 Units: pF.

When the dielectric strength is indicated in "AC", "AC" is included after the dielectric strength value.

## PARTS LIST OF P.W.B. UNIT MAIN P.W.B. UNIT

Note: The symbols in the column "Remarks" indicate the following destinations.  
 E3: U.S.A. model (OSNADA model)  
 E1: C. China model  
 E4: U.S.A. model (AVR-881)  
 E2: Europe model  
 E5: Asia model

Ref. No.	Part No.	Part Name	Remarks
<b>SEMICONDUCTORS GROUP</b>			
IC101	963 0057 903	IC KIA7815AP	J126781500060
IC102	963 0044 806	IC NJM7915FA	J126791500010
IC103	960 0196 001	IC NJM7805FA(S)	J126780500130
IC104	963 0057 709	IC KIA7805AP	J126780500360
IC105	960 0195 808	IC protector ICP-N15	J120001500030
IC701	960 0174 308	IC TC9273N-007	J080927300000
IC702-704	960 0174 502	IC NJM2068DD	J121206800000
Q104C,FL	960 0196 506	Transistor KSC1845F	J5021845F0000
FR,SL,SR	960 0196 409	Transistor 2SC1740SR	J5021740S0010
Q111-116	950 0196 904	Transistor DTC114YS (NPN)	J6020114Y0050
Q117	960 0196 409	Transistor 2SC1740SR	J5021740S0010 for E3,EU,E1,EI,HE,IT
Q161	960 0005 202	Transistor KTC3198 (Y)	J5023198Y0000
Q171	960 0196 302	Transistor KTA1268BL	J5001268B0050
Q171A,B,C	960 0305 202	Transistor KTC3198 (Y)	J5023198Y0000
Q172-177	960 0305 105	Transistor KTA1266Y	J5000916Y0050
Q178	960 0189 005	Transistor KSA916Y	J5001268B0050
Q179	960 0196 302	Transistor KTA1268BL	J5001268B0050
Q180,181	963 0020 309	Diode 1SS133T	K000013300520
D101-105	963 0020 309	Diode 1SS133T	K000013300520
D121-126	960 0197 107	Diode KBCP604	K047604000020
D13:A,131E	963 0020 309	Diode 1SS133T	K000013300520
D132	963 0046 202	Zener diode MTZJ18B	K06018F0444520
D133-134	963 0020 309	Diode 1SS133T	K000013300520
D135	963 0058 504	Zener diode MTZJ11B	K06011R0444520
D136	963 0020 309	Diode 1SS133T	K000013300520
D137	960 0117 608	Diode 1N4004A	K0404004003520
D138	960 0117 608	Diode 1N4004A	K0404004003520
D141-146	963 0020 309	Diode 1SS133T	K000013300520
D148	960 0117 608	Diode 1N4004A	K0404004003520
D149,150	963 0020 309	Diode 1SS133T	K000013300520
D151	960 0117 608	Diode 1N4004A	K0404004003520
D152,153	963 0047 405	Zener diode MTZJ7.5B	K06007R544520
D154	963 0047 405	Zener diode MTZJ7.5B	K06007R544520
R107C,FL			
FR,SL,SR			
R108C,FL	244 2043 982	Metal oxide 0.22ohm 1W	RS14B3A100,NB,ST(S)
FR,SL,SR			
R109C,FL			
FR,SL,SR			
R110C,FL			
FR,SL,SR			
R111C,FL			
FR,SL,SR			
R112C,FL	963 9003 013	Metal film 1.8 kohm 1/4W (NB)	C060018243520
FR,SL,SR			
R114C,FL			
FR,SL,SR			
R118C,FL	244 2043 937	Metal oxide 10ohm 1W	RS14B3A130,NB,ST(S)
FR,SL,SR			
R119C,FL			
FR,SL,SR			
R135,136	963 0045 203	Winding 0.1 ohm 5W	C144R10069110
R141,142	963 9003 039	Metal film 1 ohm 1/4W	C060001063050
R148,149	963 9003 039	Metal film 1 ohm 1/4W	C060001063050
R151			
R154	963 0043 108	Metal film 2.2 Mohm 1/2W for E3,EU	C060022574000
R155,156	963 9003 039	Metal film 1 ohm 1/4W	C060001063050
R179			
R181	963 0047 900	Metal film 4.7 ohm 1W	C060047R065050
R184	244 2043 937	Metal oxide 10ohm 1W	RS14B3A100,NB,ST(S)
R185	963 9003 039	Metal film 1 ohm 1/4W	C060001063050
R701L,R			
R702L,R			
708L,R			
R709L,R			
R710L,R	963 9003 071	Carbon chip 390 ohm 1/10W	C200039160200
716L,R			
R717L,R			
R718L,R			



Ref. No.	Part No.	Part Name	Remarks
VR101~105	960 0091 601	Semi fixed resistor 1 kohm	C544102015130
<b>CAPACITORS GROUP</b>			
C101C,FL, FR,SL,SR		Electrolytic 47 $\mu$ F/50V	D040470087060
C102C,FL, FR,SL,SR		Electrolytic 10 $\mu$ F/50V	D040100087050
C103C,FL, FR,SL,SR, C104C,FL, FR,SL,SR	963 9003 084	Ceramic 100pF/500V	D00410106D050
C105C,FL, FR,SL,SR	960 9003 108	Ceramic 0.022 $\mu$ F/25V	D005223594520
C107C,FL, FR,SL,SR		Mylar film 0.1 $\mu$ F/250V	D02010407H080
C131~135		Mylar film 0.1 $\mu$ F/250V	D02010407H080
C136,137	960 0177 305	Electrolytic 10000 $\mu$ F/63V	D040103088380
C138		Electrolytic 1 $\mu$ F/50V	D040010087080
C141~143	963 0021 900	Mylar film 0.047 $\mu$ F/100V	D02047306C060
C144		Electrolytic 3300 $\mu$ F/10V	D040332085010
C145	963 9003 123	Electrolytic 1000 $\mu$ F/35V	D040102085040
C146		Electrolytic 1 $\mu$ F/50V	D040010087080
C148		Electrolytic 1 $\mu$ F/50V	D040010087080
C150~152	963 0021 900	Mylar film 0.047 $\mu$ F/100V	D02047306C060
C153	963 0021 104	Electrolytic 6800 $\mu$ F/16V	D040682083000
C154		Electrolytic 47 $\mu$ F/16V	D040470083100
C157		Electrolytic 1 $\mu$ F/50V	D040010087080
C158	963 9003 136	Electrolytic 1000 $\mu$ F/25V	D040102084060
C159		Electrolytic 1 $\mu$ F/50V	D040010087080
C161		Electrolytic 10 $\mu$ F/35V	D040100085050
C171		Electrolytic 100 $\mu$ F/10V	D040101082060
C171A,B,C	963 0020 202	Ceramic 0.1 $\mu$ F/50V	D005104597530
C172,173		Electrolytic 220 $\mu$ F/6.3V	D040221081230
C174		Electrolytic 10 $\mu$ F/50V	D040100087050
C175		Electrolytic 4.7 $\mu$ F/50V	D0404R7087100
C176,177		Electrolytic 1 $\mu$ F/50V	D040010087080
C178	963 9003 149	Electrolytic 330 $\mu$ F/63V	D040331088230
△ C181	960 0177 208	Ceramic 0.0047 $\mu$ F/ 250V (AC)	D00847208K03D
C182		Electrolytic 10 $\mu$ F/100V	D04010008C050
C191~197		Ceramic 2200pF/16V	D005222773530 for E2
C198C,FL, FR,SL,SR, C199FL,FR	963 9003 194	Mylar film 0.0022 $\mu$ F/100V	D02022206C060 for E2
C251,252		Ceramic chip 0.01 $\mu$ F/50V	D01110377200
C701L,R		Ceramic chip 220pF/50V	D010221167200
C709L,R		Electrolytic 10 $\mu$ F/35V	D040100085100
C710L,R		Ceramic chip 100pF/50V	D010101167200
C711L,R		Electrolytic 220 $\mu$ F/6.3V	D040221081050
C712L,R		Mylar film 0.024 $\mu$ F/50V	D020243167050

Ref. No.	Part No.	Part Name	Remarks
C713L,R		Mylar film 0.0068 $\mu$ F/100V	D02068206C060
C714L,R		Electrolytic 4.7 $\mu$ F/50V	D0404R7087250
C715L,R		Ceramic chip 0.022 $\mu$ F/50V	D01122377200
C716L,R		Electrolytic 10 $\mu$ F/35V	D040100085100
C718L,R		Electrolytic 10 $\mu$ F/35V	D040100085100
C719L,R		Electrolytic 1 $\mu$ F/50V	D040010087080
C720L,R, C721L,R	963 9003 152	Mylar film 0.068 $\mu$ F/100V	D02068306C060
C723L,R		Electrolytic 10 $\mu$ F/35V	D040100085100
C724L,724R, C725,726 C727,728		Ceramic chip 0.01 $\mu$ F/50V	D01110377200
		Electrolytic 4.7 $\mu$ F/50V	D0404R7087250
JR251		Ceramic chip 0.01 $\mu$ F/50V	D01110377200
<b>OTHER PARTS GROUP</b>			
CN701	963 0046 707	16P connector base	L101352371610 1
CN702	963 0046 600	11P connector base	L101352371110 1
CP101	960 0197 505	2P connector base	L108202000220 1
CP102	960 0123 304	2P connector base	L104353280200 1
CP103	960 0128 901	3P connector base	L104353280300 1
CP104	960 0128 804	6P connector base	L102526700600 1
CP105	960 0123 304	2P connector base	L104353280200 1
			for E2,E1,E1C, E1H,E1T
CP106	960 0123 207	3P connector base	L102526700300 1
CP501	963 0046 901	9P connector base	L101353360910 1
CP502~504	963 0048 608	5P connector base	L101353360510 3
CP505	963 0048 705	6P connector base	L101353360610 1
CP553	963 0048 802	20P connector base	L101353362010 1
CP901	963 0048 909	3P connector base	L101220030000 1
CP931	960 0123 304	2P connector base	L104353280200 1
			for E2,E1,E1C, E1H,E1T
△ F101	960 0188 705	Fuse 8A	G650802121060 1
			for E3,EU
△ F101	960 0142 606	Fuse 2.5A	G650252251160 1
			for E2
△ F101L,R	960 0005 804	Fuse clip	G645000050010 2
			for E3,EU,E2,E1C
△ F102	960 0188 705	Fuse 8A	G650802121060 1
			for E3,EU
△ F102	963 0044 709	Fuse 3.15A	G650312251160 1
			for E2,E1C
△ F102L,102R	960 0005 804	Fuse clip	G645000050010 2
GND101,102	960 9006 600	Terminal	3790040876010 2
JK101	960 0194 304	8P speaker terminal	G598041680020 1
JK102	960 0188 608	4P speaker terminal	G612041037310 1

PROCESSOR P.W.B. UNIT

Ref. No.	Part No.	Part Name	Remarks	QTY	Ref. No.	Part No.	Part Name	Remarks
JK103	960 0194 809	2P speaker terminal	G611021078110	1	<b>SEMICONDUCTORS GROUP</b>			
△JK104	960 0187 803	AC outlet(2P)	G435204004010 for E3,EU	1	IC201	963 0057 408	IC CXP740096-124Q	J020740096124
L101C,FL, FR,SL,SR	963 0049 005	Inductor 0.5μH	D330R50000000	5	IC202	963 0057 602	IC TDA7330BD	J080733000010 for E2
L701L,R	235 9003 002	FTZ CHOKE COIL	D300700000030 for E2	2	IC203	960 0080 201	IC KIC9164AN <i>E28MO4</i>	J040916400020
LABEL	963 0059 914	FUSE LABEL(2A)	5527200040010 for E1C	1	IC204	963 0043 603	IC KIC9482F	J084948200010
RLY101-104	960 0181 702	Relay (G5PA-28 24V)	G680240502020	4	IC205~210	960 0174 502	IC NJM2068DD	J121206800000
RLY105	960 0176 500	Relay (G5V-2 24V)	G680240501010	1	IC301	960 0180 004	IC LC75721E	J127757210010
RLY106	960 0181 605	Relay (G5PA-1-8 12V)	G680120502010	1	IC302	960 0195 400	IC PC74HC4094	J040744094020
TP101~105	960 0161 405	3P connector base	L101530140310	5	RMC301	960 0181 100	IC NJL64H380A	E940643800000
—	—	Heat sink	2120043538050	1	Q201	269 0054 901	Transistor DTC144EK	J5220144E0210
—	—	Heat sink	2120044308010	1	Q202	963 0045 902	Transistor 2SC2412KT	J5222412K0210
—	—	Capacitor cover	4310002640010 for E2,E1,E1C, E1H,E1T	1	Q203,204	960 0196 807	Transistor 2SK117Y	J5441170Y0050
△—	960 0185 708	Power trans. (Mini)	8200280960010 for E3,EU	1	Q205	269 0093 904	Transistor DTA144ES	J6000144E0010
△—	960 0185 711	Power trans. (Mini)	8201280000010 for E2	1	Q206	269 0040 902	Transistor DTC144ES	J6020144E0010
△—	960 0185 737	Power trans. (Mini)	8200350150030 for E1,E1H,E1T	1	Q207,208	960 0196 807	Transistor 2SK117Y	J5441170Y0050
△—	960 0185 724	Power trans. (Mini)	8200280909010 for E1C	1	Q209	269 0093 904	Transistor DTA144ES	J6000144E0010
—	963 0018 007	Screw (2S 3×8 ZNY/BH)	B020030081B10	3	Q210	269 0040 902	Transistor DTC144ES	J6020144E0010
—	960 0188 103	2P pin jack	G601020180000	1	Q211~213	960 0196 807	Transistor 2SK117Y	J5441170Y0050
—	960 0188 200	4P pin jack	G602040610000	2	Q214	269 0046 906	Transistor DTA114ES	J6000114E0010
—	960 0188 307	6P pin jack	G603060610010	1	Q215	269 0020 906	Transistor DTC114ES	J6020114E0010
—	—	Wire clamp	4330000120000	2	Q216	269 0046 906	Transistor DTA114ES	J6000114E0010
					Q300,301	269 0055 900	Transistor DTA144EK	J5200144E0210
					Q302,304	269 0054 901	Transistor DTC144EK	J5220144E0210
					Q305	269 0055 900	Transistor DTA144EK	J5200144E0210
					Q306-314	269 0082 902	Transistor DTC114EK	J5220114E0210
					D201	960 0197 000	Diode KDS160	K005016000010
					D202	960 0117 608	Diode 1N4004A	K040400400520
					D203	963 0020 309	Diode 1SS133T	K000013300520
					D204,205	960 0197 000	Diode KDS160	K005016000010
					D206	960 0197 000	Diode KDS160	K005016000010 for E2
					D207	960 0197 000	Diode KDS160	K005016000010
					D208,209	963 0020 309	Diode 1SS133T	K000013300520
					D210~212	960 0197 000	Diode KDS160	K005016000010
					D302~304	963 0020 309	Diode 1SS133T	K000013300520
					D305~307	960 0197 000	Diode KDS160	K005016000010
					ZD201	963 0047 502	Zener diode MTZJ3.3B	K06003R344520
					ZD301	960 0095 801	Zener diode MTZJ6.8B	K06006R844520
					ZD302,303	960 0095 704	Zener diode MTZJ6.2B	K06006R244520
					ZD305,306	960 0095 704	Zener diode MTZJ6.2B	K06006R244520
					LED301~307	960 0197 204	LED PI5-RD/HL50RDRF4T	K500052015010
					LED308,309	960 0189 209	LED PI3-RD/HL-30RDRF3	K500032002080

Ref. No.	Part No.	Part Name	Remarks
<b>RESISTORS GROUP</b>			
R202		Carbon chip 1 kohm 1/10W	C200010260200
R204		Carbon chip 4.7 kohm 1/10W	C200047260200
R205		Carbon chip 10 kohm 1/10W	C200010360200
R206		Carbon chip 220 kohm 1/10W	C200022460200
R207		Carbon chip 10 kohm 1/10W	C200010360200
R209		Carbon chip 10 kohm 1/10W	C200010360200
R210FL,FR		Carbon chip 4.3 kohm 1/10W	C200043260200
R211		Carbon chip 10 kohm 1/10W	C200010360200
R212		Carbon chip 1 kohm 1/10W	C200010260200
R213FR,		Carbon chip 15 kohm 1/10W	C200015360200
R214FL,FR			
R215FL,FR		Carbon chip 100 ohm 1/10W	C200010160200
R216		Carbon chip 10 kohm 1/10W	C200010360200 for E3,EU,E2
R216FL,FR		Carbon chip 100 kohm 1/10W	C200010460200
R217		Carbon chip 15 kohm 1/10W	C200015360200 for E3,EU,E1,E1C,E1H,E1T
R217FL,FR		Carbon chip 6.2 kohm 1/10W	C200062260200
R218		Carbon chip 18 kohm 1/10W	C200018360200 for E2
R218		Carbon chip 10 kohm 1/10W	C200010360200 for E1,E1C,E1H,E1T
R220SW		Carbon chip 8.2 kohm 1/10W	C200082260200
R221SW		Carbon chip 3.6 kohm 1/10W	C200036260200
R222SW		Carbon chip 8.2 kohm 1/10W	C200082260200
R223,224		Carbon chip 10 kohm 1/10W	C200010360200 for E2
R223,224		Carbon chip 100 kohm 1/10W	C200010460200 for E3,EU,E1,E1C,E1H,E1T
R223SW		Carbon chip 100 ohm 1/10W	C200010160200
R224SW		Carbon chip 100 kohm 1/10W	C200010460200
R225		Carbon chip 2.2 Mohm 1/10W	C200022560200 for E2
R229,230	244 2051 961	Metal film 100 ohm 1W	C060010165060
R237		Carbon chip 1 kohm 1/10W	C200010260200
R239C,FL, FR,SL,SR,SW		Carbon chip 100 kohm 1/10W	C200010460200
R240C,FL, FR,SL,SR,SW		Carbon chip 100 ohm 1/10W	C200010160200
R241C,FL, FR,SL,SR,SW		Carbon chip 100 kohm 1/10W	C200010460200
R242C,FL, FR,SL,SR		Carbon chip 7.5 kohm 1/10W	C200075260200
R242SW		Carbon chip 6.8 kohm 1/10W	C200068260200
R243C,FL,FR		Carbon chip 10 kohm 1/10W	C200010360200
R244C,FL, FR,SL,SR		Carbon chip 1.3 kohm 1/10W	C200013260200
R244SW		Carbon chip 620 ohm 1/10W	C200062160200
R246C,SL, SR,SW		Carbon chip 100 kohm 1/10W	C200010460200

Ref. No.	Part No.	Part Name	Remarks
R247C,SL, SR,SW		Carbon chip 470 ohm 1/10W	C200047160200
R250		Carbon chip 470 kohm 1/10W	C200047460200
R255,256		Carbon chip 470 kohm 1/10W	C200047460200
R259		Carbon chip 10 kohm 1/10W	C200010360200
R261		Carbon chip 12 kohm 1/10W	C200012360200
R262		Carbon chip 10 kohm 1/10W	C200010360200
R263,264		Carbon chip 12 kohm 1/10W	C200012360200
R265-271		Carbon chip 470 ohm 1/10W	C200047160200
R273,274	244 2051 961	Metal film 100 ohm 1W	C060010165060
R317		Carbon chip 470 ohm 1/10W	C200047160200
R336		Carbon chip 4.7 kohm 1/10W	C200047260200
R337		Carbon chip 47 kohm 1/10W	C200047360200
R338		Carbon chip 470 ohm 1/10W	C200047160200
R339		Carbon chip 1 Mohm 1/10W	C200012260200
R340-348		Carbon chip 680 ohm 1/10W	C200068160200
R349FL		Carbon chip 56 kohm 1/10W	C200056360200
R350		Carbon chip 470 ohm 1/10W	C200047160200
R350FL~ 402FL		Carbon chip 56 kohm 1/10W	C200056360200
R407		Carbon chip 4.7 kohm 1/10W	C200047260200 for E2,E1,E1C,E1H,E1T
<b>CAPACITORS GROUP</b>			
BC201	963 0061 504	Electrolytic 8200µF/5.5V	D040822080010
C201		Electrolytic 100µF/10V	D040101082060
C201S		Ceramic 0.01µF/16V	D005103773530
C202,203		Ceramic chip 0.01µF/50V	D011103777200
C204		Electrolytic 4.7µF/50V	D0404R7087100
C205		Ceramic chip 0.1µF/50V	D011104777200 for E3,EU
C206		Electrolytic 47µF/16V	D040470083080 for E2
C207		Ceramic 0.01µF/16V	D005103773530 for E2
C208		Ceramic 270pF/50V	D005271277520 for E2
C209		Electrolytic 10µF/50V	D040100087050 for E2
C210		Ceramic chip 0.01µF/50V	D011103777200 for E2
C211		Ceramic chip 22pF/50V	D010220167200 for E2
C211SW		Ceramic chip 100pF/50V	D010101167200
C212		Ceramic chip 22pF/50V	D010220167200 for E2
C212SW		Ceramic chip 47pF/50V	D010470167200
C213-219		Ceramic chip 0.047µF/50V	D011473777200
C213FL,FR		Ceramic chip 100pF/50V	D010101167200
C218FL,FR		Ceramic chip 33pF/50V	D010330167200

Ref. No.	Part No.	Part Name	Remarks
C219FL,FR, SW,C220		Electrolytic 10μF/35V	D040100085100
C221FL,FR, C222SW, C223SL,SR		Electrolytic 10μF/35V	D040100085100
C225,226		Electrolytic 4.7μF/50V	D0404R7087100
C227		Ceramic chip 0.047μF/50V	D011473777200
C228-230		Electrolytic 10μF/35V	D040100085100
C230C, C231C,SL, SR,SW		Ceramic chip 100pF/50V	D010101167200
C231-234		Electrolytic 4.7μF/50V	D0404R7087100
C231FL,FR		Ceramic chip 100pF/50V	D010101167200
C232C,FL, FR,SW		Electrolytic 10μF/35V	D040100085100
C232SL,SR		Ceramic chip 56pF/50V	D010560167200
C233C,FL,FR		Ceramic chip 39pF/50V	D010390167200
C234C,FL,FR		Ceramic chip 2200pF/50V	D01122277200
C235,235SW		Ceramic chip 680pF/50V	D010681167200
C236		Ceramic chip 100pF/50V	D010101167200
C237		Electrolytic 1μF/50V	D040010087080
C238		Electrolytic 0.1μF/50V	D040R10087070
C239		Electrolytic 1μF/50V	D040010087080
C240		Ceramic chip 0.047μF/50V	D011473777200
C241		Electrolytic 1μF/50V	D040010087080
C242		Electrolytic 10μF/35V	D040100085100
C243,244		Ceramic chip 1000pF/50V	D010102167200
C245		Ceramic chip 0.047μF/50V	D011473777200
C246		Ceramic chip 100pF/50V	D010101167200
C246SW		Electrolytic 10μF/35V	D040100085100
C247		Electrolytic 4.7μF/50V	D0404R7087100
C248		Ceramic chip 100pF/50V	D010101167200
C249	960 9003 108	Ceramic chip 1000pF/50V	D010102167200
C250		Ceramic 0.022μF/25V	D005223594520
C251		Ceramic chip 100pF/50V	D010101167200
		Electrolytic 22μF/16V	D040220083070
C301-304		Ceramic chip 0.01μF/50V	D011103777200
C305-308		Ceramic chip 100pF/50V	D010101167200
C309		Ceramic chip 0.022μF/50V	D011223777200
C310		Ceramic chip 100pF/50V	D010101167200
C311		Ceramic chip 30pF/50V	D010300167200
C312		Ceramic chip 0.047μF/50V	D011473777200
C313		Mylar film 0.01μF/100V	D02010306C060
C314	963 0021 900	Mylar film 0.047μF/100V	D02047306C060
C315		Electrolytic 1μF/50V	D040010087080
C316		Electrolytic 10μF/50V	D040100087050
C317		Electrolytic 47μF/10V	D040470082050
C318	963 0021 900	Mylar film 0.047μF/100V	D02047306C060
C319		Electrolytic 10μF/35V	D040100085100
C320		Electrolytic 1μF/50V	D040010087080
C321	963 0021 900	Mylar film 0.047μF/100V	D02047306C060
C322		Electrolytic 33μF/50V	D040330087060

Ref. No.	Part No.	Part Name	Remarks
C323		Mylar film 0.1μF/100V	D02010406C060
C324		Electrolytic 47μF/25V	D040470084070
C325,326		Ceramic chip 100pF/50V	D010101167200
C328		Ceramic chip 0.047μF/50V	D011473777200
<b>OTHER PARTS GROUP</b>			
CB201,202	963 0053 800	BEADS INDUCTOR	7610035800020 2
CN301A	960 0197 602	17P FFC connector base	L131520441745 1
CN302	960 0197 806	3P connector cord	L000101030040 1
CN301B	960 0197 709	17P FFC connector base	L131520451745 1
CP301	963 0049 102	3P connector cord	L102526803010 1
CP401	960 0116 803	12P connector base	L101353361210 1
CP402	963 0047 104	11P connector base	L101353361110 1
CP551	963 0061 106	19P connector base	L101353361910 1
CP552	963 0049 403	18P connector base	L101353361810 1
CP601	963 0048 705	6P connector base	L101353360610 1
CP701	963 0047 201	16P connector base	L101353361610 1
CP702	963 0047 104	11P connector base	L101353361110 1
CP801	963 0047 201	16P connector base	L101353361610 1
CP802	963 0049 403	18P connector base	L101353361810 1
CP803	963 0048 705	6P connector base	L101353360610 1
CP901	963 0060 806	11P connector base	L101220110000 1
J324-326		Carbon chip 0 ohm 1/8W	C200000061300 3
J355		Carbon chip 0 ohm 1/8W	C200000061300 1
L301	960 0010 307	Inductor 10μH	D330100700520 1
L302	960 0128 008	Inductor 100μH	D330101001020 1
SW301-322	963 0045 708	Tact switch	G180000270010 22
VEC301,302	960 0181 207	Rotary encoder	G121162420400 2 for E3,EU,E2,E1T
VEC301,302	212 0422 003	Rotary encoder	G121162420400 2 for E1,E1C,E1H
X201	960 0181 003	Resonator CST12.0MTW-TF01	E830120000050 1
X202	960 0091 805	Crystal 4.332MHz	E8004R3320051 1 for E2
—	960 0184 408	FLT holder	4320200026000 1
—	960 0180 509	FLT (16-ST-42GNK)	K530164200010 1
—	—	Earth wire	L046221014580 1

## CNT P.W.B. UNIT

Ref. No.	Part No.	Part Name	Remarks	Ref. No.	Part No.	Part Name	Remarks
<b>SEMICONDUCTORS GROUP</b>				<b>RESISTORS GROUP</b>			
IC401	963 0043 700	IC LC72131	J120721310030	R401		Carbon chip 10 ohm 1/10W	C200010060200
IC402	963 0043 904	IC LA1266	J124126600010	R403		Carbon chip 470 ohm 1/10W	C200047160200
IC403	963 0044 000	IC LA3401	J124340100010	R404		Carbon chip 100 kohm 1/10W	C200010460200
IC551	960 0174 502	IC NJM2068DD	J121206800000	R405	960 9003 807	Metal film 100 ohm 1/4W	C060010163050
IC552	963 0043 506	IC TC9184AP	J080918400010	R406		Carbon chip 4.7 kohm 1/10W	C200047260200
IC601	960 0175 200	IC BA7625	J171762500000	R407		Carbon chip 470 ohm 1/10W	C200047160200
IC602	960 0195 400	IC PC74HC4094	J040744094020	R408		Carbon chip 1 Mohm 1/10W	C200012260200
IC651,652	960 0175 200	IC BA7625	J171762500000				for E3,EU,E1,E1C,E1H,E1T
IC653	963 0057 806	IC KIA78R05PI	J126780500370	R408		Carbon chip 680 ohm 1/10W	C200068160200
Q401	960 0189 102	Transistor KTC3880S-O	J5223880O0210				for E2
Q402~404	269 0083 901	Transistor DTA114EK	J5200114E0210	R409		Carbon chip 470 ohm 1/10W	C200047160200
Q405,406	960 0196 603	Transistor KTC2874B	J502287400010	R411		Carbon chip 68 kohm 1/10W	C200068360200
Q407	963 0024 208	Transistor DTC114YK	J5220114Y0210	R412		Carbon chip 5.6 kohm 1/10W	C200056260200
Q408	269 0083 901	Transistor DTA114EK	J5200114E0210	R413		Metal film 220 ohm 1/4W	C060022163050
Q409	960 0189 102	Transistor KTC3880S-O	J5223880O0210	R414		Carbon chip 2.2 kohm 1/10W	C200022260200
			for E2	R415		Carbon chip 1 kohm 1/10W	C200010260200
Q551	960 0196 700	Transistor KTC3200BL	J5023200B0050	R416		Metal film 680 ohm 1/4W	C060068163050
Q551SW, 552SW	960 0196 603	Transistor KTC2874B	J502287400010	R417		Carbon chip 1 kohm 1/10W	C200010260200
Q552	960 0196 302	Transistor KTA1268BL	J5001268B0050	R418		Carbon chip 33 kohm 1/10W	C200033360200
Q553~555	269 0046 906	Transistor DTA114ES	J6000114E0010	R420		Carbon chip 3.3 kohm 1/10W	C200033260200
Q553T	960 0196 904	Transistor DTC114YS (NPN)	J6020114Y0050	R423		Carbon chip 22 kohm 1/10W	C200022360200
Q601~603	960 0005 105	Transistor KTA1266Y	J5001266Y0050	R424		Carbon chip 4.7 kohm 1/10W	C200047260200
Q651~656	960 0005 105	Transistor KTA1266Y	J5001266Y0050	R426,427		Carbon chip 10 kohm 1/10W	C200010360200
D403	960 0197 000	Diode KDS160	K005016000010	R428		Carbon chip 3.3 kohm 1/10W	C200033260200
D404	963 0020 309	Diode 1SS133T	K000013300520	R429		Carbon chip 82 ohm 1/10W	C200082060200
D405,406	960 0197 000	Diode KDS160	K005016000010	R430	960 9003 807	Metal film 100 ohm 1/4W	C060010163050
D551,551T, 552	963 0020 309	Diode 1SS133T	K000013300520	R431		Carbon chip 5.1 kohm 1/10W	C200051260200
D552T	963 0058 601	Zener diode MTZJ12B	K06012R044520	R432		Carbon chip 10 kohm 1/10W	C200010360200
D553~561	963 0020 309	Diode 1SS133T	K000013300520	R434	960 9003 807	Metal film 100 ohm 1/4W	C060010163050
D562	960 0117 608	Diode 1N4004A	K040400400520	R435		Carbon chip 3.3 kohm 1/10W	C200033260200
D564	960 0095 607	Zener diode MTZJ5.6B	K06005R644520	R437		Carbon chip 100 kohm 1/10W	C200010460200
D565	963 0020 309	Diode 1SS133T	K000013300520	R438,439		Carbon chip 100 kohm 1/10W	C200010460200
D601~606	960 0197 000	Diode KDS160	K005016000010				for E3,EU,E1,E1C,E1H,E1T
D651~656	960 0197 000	Diode KDS160	K005016000010	R438,439		Carbon chip 180 kohm 1/10W	C200018460200
D652T	963 0061 601	Electrolytic 3300µF/10V	D040332082020				for E2
D657,658	960 0117 608	Diode 1N4004A	K040400400520	R440,441		Carbon chip 120 kohm 1/10W	C200012460200
D901,902	960 0197 000	Diode KDS160	K005016000010				for E3,EU,E1,E1C,E1H,E1T
ZD401	960 0095 500	Zener diode MTZJ5.1B	K06005R144520	R440,441		Carbon chip 220 kohm 1/10W	C200022460200
							for E2
				R442,443		Carbon chip 3.3 kohm 1/10W	C200033260200
				R444,445		Carbon chip 8.2 kohm 1/10W	C200082260200
							for E3,EU,E1,E1C,E1H,E1T
				R448		Carbon chip 2.2 kohm 1/10W	C200022260200
				R449		Carbon chip 3.9 kohm 1/10W	C200039260200
							for E2
				R450		Carbon chip 1 kohm 1/10W	C200010260200
							for E2
				R455		Carbon chip 330 ohm 1/10W	C200033160200
				R456		Carbon chip 100 ohm 1/10W	C200010160200
				R458,459		Carbon chip 4.7 kohm 1/10W	C200047260200
				R460,461	963 9003 071	Carbon chip 2.7 Mohm 1/10W	C200027560200

Ref. No.	Part No.	Part Name	Remarks
R462-465		Carbon chip 470 ohm 1/10W	C200047160200
R467,468	963 9003 071	Carbon chip 2.7 Mohm 1/10W	C200027560200
R470		Carbon chip 1 kohm 1/10W	C200010260200
R471VT		Carbon chip 220 ohm 1/10W	C200022160200
R472		Carbon chip 100 ohm 1/10W	C200010160200
R473		Carbon chip 180 ohm 1/10W	C200018160200
R473		Carbon chip 0 ohm 1/10W	C200000060200 for E2
R475		Carbon chip 12 kohm 1/10W	C200012360200
R476		Carbon chip 56 kohm 1/10W	C200056360200
R478		Carbon chip 10 kohm 1/10W	C200010360200
R479		Carbon chip 100 kohm 1/10W	C200010460200
R551SW, 552SW		Carbon chip 470 ohm 1/10W	C200047160200
R553FL ,FR		Carbon chip 100 kohm 1/10W	C200010460200
R553SW		Carbon chip 22 kohm 1/10W	C200022360200
R553T		Carbon chip 1 kohm 1/10W	C200010260200
R554SW		Carbon chip 10 kohm 1/10W	C200010360200
R554T	244 2052 928	Metal film 47 ohm 1W	C060047065060
R558FL,FR		Carbon chip 4.7 kohm 1/10W	C200047260200
R559	960 9005 902	Metal film 1.2 kohm 1/4W	C060012263050
R559FL,FR		Carbon chip 22 kohm 1/10W	C200022360200
R560FL,FR		Carbon chip 510 kohm 1/10W	C200051460200
R561FL,FR		Carbon chip 33 kohm 1/10W	C200033360200
R563FL,FR		Carbon chip 390 ohm 1/10W	C200039160200
R564FL,FR		Carbon chip 470 ohm 1/10W	C200047160200
R565	960 9005 902	Metal film 1.2 kohm 1/4W	C060012263050
R567FL,FR		Carbon chip 470 kohm 1/10W	C200047460200
R569		Carbon chip 68 ohm 1/10W	C200068060200
R570	960 9005 902	Metal film 1.2 kohm 1/4W	C060012263050
R651-658		Carbon chip 75 ohm 1/10W	C200075060200
R651T,652T	963 9003 039	Metal film 1 ohm 1/4W	C060001063050
R660		Carbon chip 10 kohm 1/10W	C200010360200
R661	244 2051 961	Metal film 100 ohm 1W	C060010165060
R662		Carbon chip 68 ohm 1/10W	C200068060200
R663		Carbon chip 10 kohm 1/10W	C200010360200
R664	244 2051 961	Metal film 100 ohm 1W	C060010165060
R665		Carbon chip 68 ohm 1/10W	C200068060200
R666		Carbon chip 10 kohm 1/10W	C200010360200
R667	244 2051 961	Metal film 100 ohm 1W	C060010165060
R671		Carbon chip 68 ohm 1/10W	C200068060200
R672		Carbon chip 10 kohm 1/10W	C200010360200
R673	244 2051 961	Metal film 100 ohm 1W	C060010165060
R674		Carbon chip 68 ohm 1/10W	C200068060200
R675		Carbon chip 10 kohm 1/10W	C200010360200
R676	244 2051 961	Metal film 100 ohm 1W	C060010165060
R677		Carbon chip 68 ohm 1/10W	C200068060200
R678		Carbon chip 10 kohm 1/10W	C200010360200
R679	244 2051 961	Metal film 100 ohm 1W	C060010165060

Ref. No.	Part No.	Part Name	Remarks
R683		Carbon chip 75 ohm 1/10W	C200075060200
R901,902		Carbon chip 200 kohm 1/10W	C200020460200
R903,904		Carbon chip 100 ohm 1/10W	C200010160200
R903H,904H		Metal film 470ohm 2W	C060047166520
R905,906		Carbon chip 200 kohm 1/10W	C200020460200
R907,908		Carbon chip 100 ohm 1/10W	C200010160200
R909,910		Carbon chip 200 kohm 1/10W	C200020460200
R911,912		Carbon chip 100 ohm 1/10W	C200010160200
R913-916		Carbon chip 220 ohm 1/10W	C200022160200
R917-920		Carbon chip 100 kohm 1/10W	C200010460200
VR401	960 0096 305	Semi fixed resistor 10kohm	C541103115000
VR402	960 0096 402	Semi fixed resistor 100kohm	C541104115000 for E2
VR402	963 0056 205	Semi fixed resistor 50kohm	C541503115000 for E3,EU,E1,E1C,E1H,E1T
VR403	963 0052 005	Semi fixed resistor 200kohm	C541204115000
<b>CAPACITORS GROUP</b>			
C401,402		Ceramic chip 1000pF/50V	D011102777200
C403		Ceramic chip 0.022µF/50V	D011223777200
C404		Ceramic 2pF/50V	D000020007050
C405		Ceramic chip 0.022µF/50V	D011223777200
C406		Ceramic chip 18pF/50V	D010180167200
C408		Ceramic 6pF/50V	D000060007050
C409		Ceramic 100pF/50V	D005101177520
C410		Ceramic 470pF/50V	D005471277520
C411		Ceramic chip 1000pF/50V	D011102777200
C412		Ceramic chip 0.022µF/50V	D011223777200
C413		Ceramic chip 100pF/50V	D010101167200
C414		Electrolytic 2.2µF/50V	D0402R2087100
C415		Electrolytic 47µF/25V	D040470084070
C416		Electrolytic 10µF/35V	D040100085100
C417		Electrolytic 100µF/16V	D040101083100
C418		Ceramic chip 0.01µF/50V	D011103777200
C419		Electrolytic 10µF/35V	D040100085100
C420,421		Ceramic chip 22pF/50V	D010220167200
C422		Ceramic chip 470pF/50V	D010471167200
C423,424		Ceramic chip 0.022µF/50V	D011223777200
C425		Electrolytic 4.7µF/50V	D0404R7087100
C426		Electrolytic 3.3µF/50V	D0403R3087100
C427		Electrolytic 4.7µF/50V	D0404R7087100
C428		Ceramic chip 0.022µF/50V	D011223777200
C430	963 0021 900	Mylar film 0.047µF/100V	D02047306C060
C431		Ceramic chip 33pF/50V	D010330167200
C432		Electrolytic 47µF/25V	D040470084070
C433		Ceramic chip 0.022µF/50V	D011223777200
C434		Electrolytic 1µF/50V	D040010087080 for E3,EU
C434		Electrolytic 0.33µF/50V	D040R33087100 for E2,E1,E1C,E1H,E1T

Ref. No.	Part No.	Part Name	Remarks	Ref. No.	Part No.	Part Name	Remarks	
C435,436		Ceramic chip 0.022μF/50V	D011223777200	C560FL,FR		Mylar film 0.0033μF/100V	D02033206C060	
C437		Electrolytic 47μF/25V	D040470084070	C561FL, 562FR		Mylar film 0.0068μF/100V	D02068206C060	
C438		Electrolytic 1μF/50V	D040010087080					
C439		Electrolytic 0.22μF/50V	D040R22087100					
C440,441		Electrolytic 1μF/50V	D040010087080	C601-604		Electrolytic 4.7μF/50V	D0404R7087100	
C442		Electrolytic 2.2μF/50V	D0402R2087100	C605		Electrolytic 470μF/6.3V	D040471081060	
C443		Electrolytic 10μF/35V	D040100085100	C606,607		Electrolytic 10μF/16V	D040100083100	
C444		Electrolytic 4.7μF/50V	D0404R7087100	C608,609		Electrolytic 470μF/6.3V	D040471081060	
C445		Electrolytic 10μF/35V	D040100085100	C610		Electrolytic 10μF/16V	D040100083100	
C446,447		Ceramic 270pF/50V	D004271067060	C611		Electrolytic 100μF/10V	D040101082060	
			for E3,EU,E2	C612		Electrolytic 100μF/16V	D040101083100	
C446,447		Ceramic 180pF/50V	D000181067060	C613		Electrolytic 1μF/50V	D040010087080	
			for E1,E1C,E1H,E1T	C614		Ceramic chip 0.047μF/50V	D011473777200	
C448,449		Ceramic 470pF/50V	D004471067060	C651-658		Electrolytic 4.7μF/50V	D0404R7087100	
			for E3,EU	C651T	963 0021 900	Mylar film 0.047μF/100V	D02047306C060	
C448,449		Ceramic 330pF/50V	D000331167070	C653T		Electrolytic 1μF/50V	D040010087080	
			for E1,E1C,E1H,E1T	C659		Electrolytic 470μF/6.3V	D040471081060	
C450,451		Electrolytic 10μF/35V	D040100085100	C660		Electrolytic 10μF/16V	D040100083100	
C452		Electrolytic 100μF/16V	D040101083100	C661		Electrolytic 470μF/6.3V	D040471081060	
C453		Ceramic chip 27pF/50V	D010270167200	C662		Electrolytic 10μF/16V	D040100083100	
			for E2,E1,E1C,E1H,E1T	C663		Electrolytic 470μF/6.3V	D040471081060	
C455		Ceramic chip 0.022μF/50V	D011223777200	C664		Electrolytic 10μF/16V	D040100083100	
			for E1,E1H,E1T	C665		Electrolytic 100μF/10V	D040101082060	
C456		Ceramic chip 680pF/50V	D010681167200	C666		Electrolytic 470μF/6.3V	D040471081060	
C457-460		Ceramic chip 100pF/50V	D010101167200	C667		Electrolytic 10μF/16V	D040100083100	
C461		Ceramic chip 22pF/50V	D010220167200	C668		Electrolytic 470μF/6.3V	D040471081060	
C462		Ceramic chip 470pF/50V	D010471167200	C669		Electrolytic 10μF/16V	D040100083100	
			for E2	C670		Electrolytic 470μF/6.3V	D040471081060	
C463		Mylar film 0.056μF/100V	D02056306C060	C671		Electrolytic 10μF/16V	D040100083100	
C464		Ceramic 3pF/50V	D000030007050	C672		Electrolytic 100μF/10V	D040101082060	
C471VT		Electrolytic 1μF/50V	D040010087080	C673,674		Electrolytic 1μF/50V	D040010087080	
C472VT		Ceramic chip 0.047μF/50V	D011473777200	C675		Electrolytic 100μF/16V	D040101083100	
				C676,677		Ceramic chip 0.047μF/50V	D011473777200	
C551		Electrolytic 2.2μF/50V	D0402R2087250	C681-683		Ceramic 100pF/50V	D005101177520	
C551M		Electrolytic 100μF/35V	D040101085100					
C551S		Ceramic 0.047μF/50V	D005473597520	C901-906		Ceramic chip 220pF/50V	D010221167200	
C551T,552T		Electrolytic 100μF/16V	D040101083100	C901H,902H		Ceramic 0.001μF/50V	D005102177530	
C552		Electrolytic 0.1μF/50V	D040R10087070	C903H		Electrolytic 1μF/50V	D040010087080	
C552FL,FR		Electrolytic 10μF/35V	D040100085100	C904H	960 9003 108	Ceramic 0.022μF/25V	D005223594520	
C553		Electrolytic 0.1μF/50V	D040R10087070	C907-910		Ceramic chip 100pF/50V	D010101167200	
C553FL,FR		Ceramic chip 100pF/50V	D010101167200	C911		Ceramic 0.01μF/50V	D004103097060	
C553T,554T		Ceramic chip 0.1μF/50V	D011104777200					
C554		Electrolytic 0.1μF/50V	D040R10087070	<b>OTHER PARTS GROUP</b>				
C554FL,FR		Electrolytic 10μF/35V	D040100085100	CF401,402	960 0187 104	Ceramic filter SFE10.7MA8	E430107000140	2
C555		Ceramic 0.01μF/16V	D005103773530				for E3,EU	
C555FL,FR		Ceramic chip 47pF/50V	D010470167200	CF401,402	960 0177 509	Ceramic filter SFE10.7MS3GH	E430107000150	2
C556		Ceramic 0.01μF/16V	D005103773530				for E2,E1,E1C, E1H,E1T	
C556FL,FR		Electrolytic 10μF/35V	D040100085100	CF403	960 0187 609	Ceramic resonator	E830450000070	1
C557		Electrolytic 10μF/35V	D040100085100					
C557FL,FR		Mylar film 0.01μF/100V	D02010306C060	CN105	963 0059 105	2P connector base	L000121020040	1
C558FL,FR		Mylar film 0.056μF/100V	D02056306C060				for E2	
C559FL,FR		Mylar film 0.022μF/100V	D02022306C060					

Ref. No.	Part No.	Part Name	Remarks	Q'ty	Ref. No.	Part No.	Part Name	Remarks	Q'ty
CN392	960 0198 009	2P connector cord	L000800020040 for E3,EU	1	J654		Carbon chip 0 ohm 1/10W	C200000060200 for E2,E1,E1C, E1H,E1T	1
CN401	960 0117 103	12P connector base	L101352371210	1	J655		Carbon chip 0 ohm 1/8W	C200000061300 for E2,E1,E1C, E1H,E1T	1
CN401E	963 0059 008	7P connector socket	L000101080050	1					
CN402	963 0046 600	11P connector base	L101352371110	1					
CN551	963 0061 009	19P connector base	L101352371910	1					
CN552	963 0050 609	18P connector base	L101352371810	1					
CN553	963 0049 801	20P connector base	L101352372010	1	L401	963 0052 102	Inductor 1μH	D3301R0001020	1
CN554	963 0059 804	15P connector cord	L000800150010	1	L402	960 0010 307	Inductor 10μH	D330100700520	1
CN601	963 0050 308	6P connector socket	L101352370610	1	L403	963 0056 409	MW IF COIL RBW07VB-K5025 BLK	D950500500010	1
CN602	963 0059 503	7P connector cord	L000181070020 for E3,EU	1	RELAY551	963 0052 607	Relay (G5V-2 DC12V)	G680120202010	1
CN602	963 0059 406	7P connector cord	L000161070010 for E2,E1,E1C, E1H,E1T	1	SW391-398	963 0045 708	Tact switch	G180000270010	8
CN901	960 0197 301	3P connector cord	L352103263300	1	SW401	963 0056 700	SLIDE SW	G060110100010 for E1,E1H,E1T	1
CN902	963 0059 600	11P connector cord	L000281110010	1	SW901	963 0056 603	Push switch	G000040890000 for E2,E1,E1C, E1H,E1T	1
CP302	963 0049 908	3P connector base	L101220030010	1					
CP392	963 0048 909	3P connector base	L101220030000 for E3,EU	1	T401	960 0186 600	MW IF COIL PCFMAF-270	D950500200000	1
CP392	963 0059 707	2P connector base	L000351020040 for E2,E1,E1C, E1H,E1T	1	T402	960 0007 349	FM DET TRANS	D951561100000	1
CP602	963 0060 602	7P connector base	L101220070010	1	T403	960 0007 352	FM DET TRANS	D951561200000	1
CP603	960 0123 207	3P connector base	L102526700300	1	T404,405	960 0071 207	MPX filter	E401500100000 for E2	2
FE401	960 0187 706	Front end	E900401010020	1	T406	960 0037 607	antibirdie filter	E403126832410 for E2	1
G901	—	1P wire	8410800010010	1	X401	960 0187 405	Crystal 7.2 MHz	E8007R2000071	1
H/SINK	—	Heat sink	2120210238000 for E2,E1,E1C, E1H,E1T	1	X402	963 0043 302	Resonator CSB456F11	E830456000050	1
J402		Carbon chip 0 ohm 1/8W	C200000061300 for EU,E2,E1, E1C,E1H,E1T	1	—	960 0184 000	Screw bracket	4010210196000	2
J403,404		Carbon chip 0 ohm 1/8W	C200000061300 for E3	2	—	963 0054 003	Shield tuner pack	3070210056000	1
J405-408		Carbon chip 0 ohm 1/8W	C200000061300 for EU,E2,E1, E1C,E1H,E1T	4	—	960 0184 602	Plaate	4470210146000	1
J551-556		Carbon chip 0 ohm 1/8W	C200000061300 for E3,EU	6	—	—	1P wire	8410800010030	1
J583,584		Carbon chip 0 ohm 1/8W	C200000061300	2	—	963 0052 403	3P antenna terminal	G593021068010	1
J585,586		Carbon chip 0 ohm 1/10W	C200000060200	2	—	960 0188 200	4P pin jack	G602040610000	1
J587		Carbon chip 0 ohm 1/8W	C200000061300 for E1,E1C,E1H,E1T	1	—	963 0061 708	Plaate	4470210196000	1
J651-653		Carbon chip 0 ohm 1/8W	C200000061300 for E2,E1,E1C, E1H,E1T	3	—	963 0057 000	1P pin jack	G600010003030	1
					—	960 0188 404	3P pin jack	G606030164020	2
					—	963 0018 007	Screw (2S 3×8 ZNY/BH)	B020030081B10 for E2,E1,E1C, E1H,E1T	1
					—	960 0181 304	3P S terminal	G402042190000	1
					—	960 0181 401	4P S terminal	G403040010010	2
					—	960 0188 307	6P pin jack	G603060610010	1
					—	960 0143 203	AC outlet	G435040110000 for E2,E1,E1H,E1T	1
					—	960 0176 209	Push switch	G000122000010 for E3,EU	1
					—	960 0187 502	Head phone jack(D6.5)	G402038400031	1
					—	960 0188 200	4P pin jack	G602040610000	1



## PRE-AMP P.W.B. UNIT

Ref. No.	Part No.	Part Name	Remarks	
<b>SEMICONDUCTORS GROUP</b>				
Q501C,FL, FR,M,SL, Q501SR, Q502M,503M	960 0196 603	Transistor KTC2874B	J502287400010	
Q502C,FL, FR,SL,SR Q503C,FL, FR,SL,SR	960 0196 205	Transistor KSA992F	J5000992F0050	
Q504C,FL, FR,SL,SR	960 0196 506	Transistor KSC1845F	J5021845F0000	
<b>RESISTORS GROUP</b>				
Q509C,FL, FR,SL,SR	960 9005 902	Metal film 1.2 kohm 1/4W	C060012263050	
Q511C,FL, FR,SL,SR	960 9004 301	Metal film 47 ohm 1/4W	C060047063050	
<b>CAPACITORS GROUP</b>				
C501C,FL, FR,SL,SR		Electrolytic 22 $\mu$ F/16V	D040220083070	
C501M,502C, FL,FR,SL,SR		Electrolytic 10 $\mu$ F/35V	D040100085100	
C503C,FL, FR,SL,SR	963 9003 165	Ceramic 220pF/500V	D009092212500	
C504C,FL, FR,SL,SR	963 9003 178	Ceramic 220pF/50V	D005221277520	
C505C,FL, FR,SL,SR	963 9003 181	Ceramic 33pF/500V	D00033006D050	
C506C,FL, FR,SL,SR		Electrolytic 100 $\mu$ F/10V	D040101082060	
C507C,FL, FR,SL,SR	963 9003 194	Mylar film 0.0022 $\mu$ F/100V	D02022206C060	
C514FL,FR		Electrolytic 10 $\mu$ F/35V	D040100085100	
<b>OTHER PARTS GROUP</b>			<b>Q'ty</b>	
CN501	963 0046 406	9P connector base	L101352370910	1
CN502~504	963 0050 201	5P connector base	L101352370510	3
CN505	963 0050 308	6P connector base	L101352370610	1
CP506	963 0060 709	8P connector base	L101220080000	1
CP554	963 0060 903	15P connector base	L101220150000	1
—	960 0184 000	Screw bracket	4010210196000	2

## DSP P.W.B. UNIT

Ref. No.	Part No.	Part Name	Remarks
<b>SEMICONDUCTORS GROUP</b>			
IC803	963 0023 500	IC MC74HCU04AD	J040740400200
IC805,806	963 0043 807	IC BA4510F	J121451000010
IC807	960 0195 002	IC W27C020	J000270200010
IC807S	963 0025 508	32P IC socket	G450320000010
IC808,809	960 0179 206	IC DC74HCT574	J040745740040
IC810	960 0195 507	IC LC89055W	J046890550010
IC811	960 0195 905	IC BA033FP	J12603R300020
IC812	960 0195 701	IC CS492604	J080492604010
IC813	960 0195 604	IC AK4527VQ <i>94C</i>	J080452700010
IC814~816	960 0174 502	IC NJM2068DD	J121206800020
IC821	960 0195 206	IC TC74HC125D	J040741250130
IC822	960 0195 109	IC SN74LV00APW	J040740000170
IC828	963 0043 409	IC DC74HCT244	J040742440080
IC829	960 0196 001	IC NJM7805FA (S)	J126780500130
IC830	963 0043 409	IC DC74HCT244	J040742440080
IC831	960 0195 303	IC SN74LV4040	J040744040020
Q804C,FL, FR,SL,SR,SW	960 0196 603	Transistor KTC2874B	J502287400010
Q805	269 0083 901	Transistor DTA114EK	J5200114E0210
Q806	269 0082 902	Transistor DTC114EK	J5220114E0210
Q807	269 0083 901	Transistor DTA114EK	J5200114E0210
D801, 805~807	960 0197 000	Diode KDS160	K005016000010
<b>RESISTORS GROUP</b>			
J824,828		Carbon chip 0 ohm 1/10W	C200000060200
R801		Carbon chip 4.7 kohm 1/10W	C200047260200
R817~825		Carbon chip 10 kohm 1/10W	C200010360200
R829		Carbon chip 0 ohm 1/10W	C200000060200
R830,831		Carbon chip 10 kohm 1/10W	C200010360200
R834,835		Carbon chip 4.7 kohm 1/10W	C200047260200
R836		Carbon chip 10 kohm 1/10W	C200010360200
R837		Carbon chip 47 ohm 1/10W	C200047060200
R838		Carbon chip 10 kohm 1/10W	C200010360200
R839,842		Carbon chip 4.7 kohm 1/10W	C200047260200
R848		Carbon chip 100 ohm 1/10W	C200010160200
R850		Carbon chip 75 ohm 1/10W	C200075060200
R854		Carbon chip 2.2 kohm 1/10W	C200022260200
R854L,R		Carbon chip 47 kohm 1/10W	C200047360200
R855		Carbon chip 100 kohm 1/10W	C200010460200
R856		Carbon chip 10 kohm 1/10W	C200010360200
R858,859		Carbon chip 0 ohm 1/10W	C200000060200
R859R, R860L,R		Carbon chip 4.7 kohm 1/10W	C200047260200
R861		Carbon chip 47 ohm 1/10W	C200047060200
R861L,R		Carbon chip 470 ohm 1/10W	C200047160200
R862,863		Carbon chip 0 ohm 1/10W	C200000060200
R862L,R		Carbon chip 4.7 kohm 1/10W	C200047260200

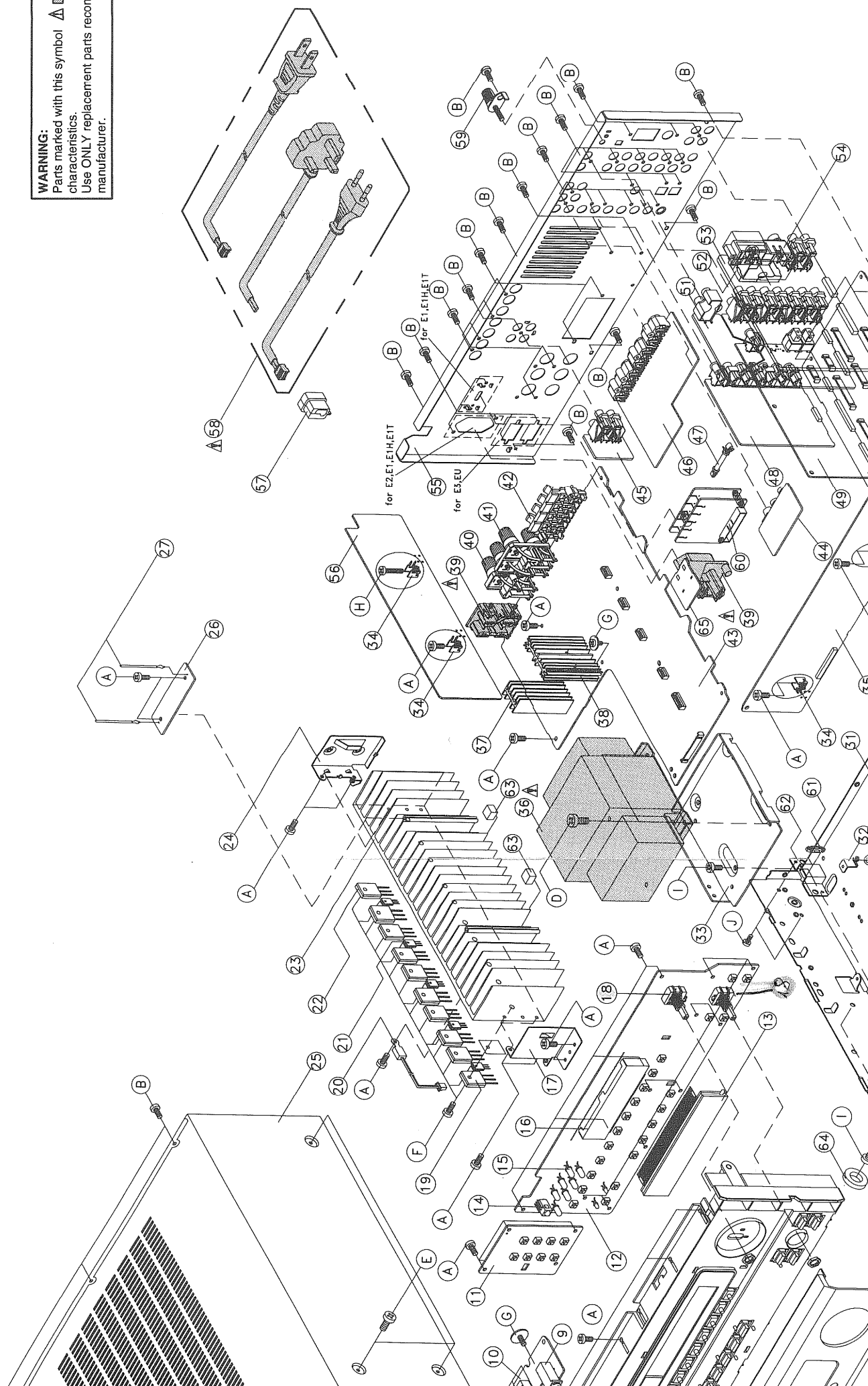
Ref. No.	Part No.	Part Name	Remarks	Ref. No.	Part No.	Part Name	Remarks
R863L,R		Carbon chip 470 ohm 1/10W	C200047160200	C817		Electrolytic 0.1μF/50V	D040R10087070
R864C,FL, FR,SL,SR,SW		Carbon chip 100 kohm 1/10W	C200010460200	C818		Ceramic chip 0.1μF/50V	D011104597200
R866		Carbon chip 10 kohm 1/10W	C200010360200	C820		Electrolytic 47μF/10V	D040470082050
R866C,FL, FR,SL,SR,SW		Carbon chip 4.7 kohm 1/10W	C200047260200	C821		Electrolytic 1000μF/6.3V	D040102081060
R867		Carbon chip 100 kohm 1/10W	C200010460200	C822,823		Ceramic chip 0.1μF/50V	D011104597200
R867C,FL, FR,SL,SR,SW		Carbon chip 4.7 kohm 1/10W	C200047260200	C824		Electrolytic 100μF/10V	D040101082060
R868C,FL, FR,SL,SR,SW				C825		Electrolytic 1μF/50V	D040010087050
R869C,FL, FR,SL,SR,SW				C826		Electrolytic 10μF/35V	D040100085050
R870C,FL, FR,SL,SR,SW		Carbon chip 1 kohm 1/10W	C200010260200	C827		Ceramic chip 0.1μF/50V	D011104597200
R871C,FL, FR,SL,SR,SW		Carbon chip 100 kohm 1/10W	C200010460200	C828		Ceramic chip 0.01μF/50V	D011103777200
R872C,FL, FR,SL,SR,SW		Carbon chip 2.2 kohm 1/10W	C200022260200	C829		Electrolytic 10μF/35V	D040100085050
R880,881		Carbon chip 47 ohm 1/10W	C200047060200	C830,832		Ceramic chip 0.1μF/50V	D011104597200
R895		Carbon chip 100 kohm 1/10W	C200010460200	C836		Electrolytic 220μF/6.3V	D040221081050
R911		Carbon chip 10 kohm 1/10W	C200010360200	C837,838		Ceramic chip 0.1μF/50V	D011104597200
R913		Carbon chip 1 Mohm 1/10W	C200010560200	C839		Ceramic chip 0.22μF/50V	D011224597200
R922		Carbon chip 4.7 kohm 1/10W	C200047260200	C840		Electrolytic 2.2μF/50V	D0402R2087250
R923		Carbon chip 6.2 kohm 1/10W	C200062260200	C841		Electrolytic 47μF/10V	D040470082050
R927		Carbon chip 75 ohm 1/10W	C200075060200	C842		Ceramic chip 0.1μF/50V	D011104597200
R928		Carbon chip 5.1 kohm 1/10W	C200051260200	C843		Electrolytic 100μF/10V	D040101082060
R929		Carbon chip 8.2 kohm 1/10W	C200082260200	C844		Ceramic chip 0.1μF/50V	D011104597200
R930		Carbon chip 3 kohm 1/10W	C200030260200	C854,855		Electrolytic 100μF/25V	D040101084060
R931		Carbon chip 6.2 kohm 1/10W	C200062260200	C856-863		Ceramic chip 0.1μF/50V	D011104597200
R931L,R		Carbon chip 18 kohm 1/10W	C200018360200	C864L,R		Electrolytic 10μF/35V	D040100085050
R932		Carbon chip 4.7 kohm 1/10W	C200047260200	C865L,R		Ceramic chip 100pF/50V	D010101167200
R938		Carbon chip 470 kohm 1/10W	C200047460200	C869L,R		Ceramic chip 100pF/50V	D010101167200
R940		Carbon chip 10 kohm 1/10W	C200010360200	C871L,R		Ceramic chip 1000pF/50V	D011102777200
R941		Carbon chip 470 ohm 1/10W	C200047160200	C873C,FL, FR,SL,SR,SW		Ceramic chip 680pF/50V	D010681167200
R942,943		Carbon chip 0 ohm 1/10W	C200000060200	C874C,FL, FR,SL,SR,SW			
R945,946		Carbon chip 0 ohm 1/10W	C200000060200	C875C,FL, FR,SL,SR,SW		Electrolytic 10μF/35V	D040100085050
R947,948		Carbon chip 0 ohm 1/10W	C200000060200	C876C,FL, FR,SL,SR,SW		Ceramic chip 3300pF/50V	D011332777200
R949		Carbon chip 47 ohm 1/10W	C200047060200	C878		Electrolytic 100μF/10V	D040101082060
R950,951		Carbon chip 0 ohm 1/10W	C200000060200	C880C,FL, FR,SL,SR,SW		Electrolytic 10μF/35V	D040100085050
R952-954		Carbon chip 100 ohm 1/10W	C200010160200	C894,896		Ceramic chip 0.1μF/50V	D011104597200
<b>CAPACITORS GROUP</b>				C908,909		Ceramic chip 27pF/50V	D010270167200
C801		Ceramic chip 0.1μF/50V	D011104597200	C916		Ceramic chip 0.1μF/50V	D011104597200
C802,803		Ceramic chip 22pF/50V	D010220167200	C917		Electrolytic 10μF/35V	D040100085050
C805		Ceramic chip 22pF/50V	D010220167200	C918		Ceramic chip 0.1μF/50V	D011104597200
C808		Ceramic chip 0.1μF/50V	D011104597200	C919		Ceramic chip 0.01μF/50V	D011103777200
C809		Electrolytic 100μF/10V	D040101082060	C920		Ceramic chip 0.1μF/50V	D011104597200
C810		Ceramic chip 0.1μF/50V	D011104597200	C921		Ceramic chip 0.01μF/50V	D011103777200
C811		Electrolytic 47μF/10V	D040470082050	C923,925		Ceramic chip 0.1μF/50V	D011104597200
C816		Ceramic chip 22pF/50V	D010220167200	C926		Electrolytic 10μF/35V	D040100085050
				C931,935		Ceramic chip 0.01μF/50V	D011103777200
				C936		Ceramic chip 0.1μF/50V	D011104597200
				C937		Electrolytic 10μF/35V	D040100085050
				C938		Electrolytic 1μF/50V	D040010087050

OTHER PARTS GROUP				Qty
C954,955 C956		Ceramic chip 0.01µF/50V Ceramic chip 1000pF/50V	D011103777200 D011102777200	
CB801, 803-805, 807-820, 828,840	963 0050 502	Chip emill	7611010000020	20
CN801 CN802 CN803	963 0046 707 963 0050 609 963 0050 308	18P connector socket 18P connector socket 6P connector socket	L101352371610 L101352371810 L101352370610	1 1 1
FB801C,F,L, FR,S,L,SR,SW, FB802L,R	963 0050 706	Beads inductor	7610035500010	8
L801,802 L803 L805 L807	963 0050 803 963 0050 900 963 0050 803 963 0050 900	Inductor 4.7µH Inductor 2.2µH Inductor 4.7µH Inductor 2.2µH	D3304R7000150 D3302R2000150 D3304R7000150 D3302R2000150	2 1 1 1
XTAL801	960 0180 907	Crystal 12.288MHz	E80012R288020	1
—	960 0180 800	Optical connector (GP1F37R1)	E100137000010	2
—	963 0052 500	1P pin jack	G6000100003100	1

F101	960 0 42 602	Fuse 2.5A	G650252251160 for E1,E1H,E1T	1
Δ F101A,B	963 0005 804	Fuse strip	G645000050010	2
Δ F102	963 0044 709	Fuse 3.15A	for E1,E1H,E1T G650312251160	1
Δ F102A,B	960 0005 804	Fuse chip	for E1,E1H,E1T G645000050010	2
Δ F901	963 0057 107	Fuse 6.3A	for E1,E1H,E1T G650632251160	1
Δ F901A,B	963 0005 804	Fuse strip	for E1,E1H,E1T G645000050010	2
JK911	960 0 43 203	AC outlet	G435040110000 for E1,E1H,E1T	1
JK912	963 0056 904	SLIDE SW	G060268320010 for E1,E1H,E1T	1
—	963 0044 602	Supporter	4070210192000 for E1,E1H,E1T	2
—	963 0051 103	Spacer	4300210062000 for E1,E1H,E1T	2

3 4 5 6 7 8

**WARNING:**  
Parts marked with this symbol  have critical characteristics.  
Use **ONLY** replacement parts recommended by the manufacturer.



51	963 0042 604	Input P.W.B assy	7025HK9907011	1	5	963 0054 809	Select knob(BK)	5080210201000	1
		Processor P.W.B assy	for E3,EU	1	5	963 0055 109	Select knob(GO),MOLD	for Black model 5087210201100	1
	963 0042 633		7025HK9907041	1	5	112 0835 015	Select knob(GO),AL	for E2(Gold model),E1T	
			for E2	1	6	963 0051 307	Lens	for E1,E1C,E1H	
	963 0042 662		7025HK9907111	1	7	963 0055 604	Inner panel(BK)	3710210023000	2
			for E1,E1C,E1H,E1T	1	7	963 0055 604	Inner panel(BK)	3217210061000	1
		Front P.W.B assy		1	7	963 0055 617	Inner panel(GO)	for Black model 3217210062000	1
		CPU P.W.B assy		1	8	960 0176 209	Push switch	for Gold mode G000122000010	1
	963 0042 701	CNT P.W.B assy	7025HK9907012	1	8	963 0056 603	Push switch	SW901 for E3,EU G000040890000	1
			for E3,EU	1	8	963 0056 603	Push switch	SW901 for E2,E1, E1C,E1H,E1T	1
	963 0042 730		7025HK9907042	1	9	960 0187 502	Head phone jack(D6.5)	G4020384000031	1
			for E2	1	13	960 0180 509	FLT (16-ST-42GNK)	K530164200010	1
	963 0042 769		7025HK9907112	1	14	960 0181 100	IC NUL64H380A	E940643800000	1
			for E1,E1C,E1H,E1T	1	14	960 0181 100	IC NUL64H380A	RMC301	1
	963 0042 743		7025HK9907032	1	15	960 0197 204	LED P15-RD/HL50RDRF4T	K500052015010	1
		Head phone P.W.B assy	for E1C	1	13	960 0180 509	FLT (16-ST-42GNK)	LED301-307	1
		Switch P.W.B assy		1	16	960 0184 408	FLT holder	4320200026000	1
		Cnt P.W.B assy		1	17	960 0181 207	Rotary encoder	4010210386000	1
		EXT-IN P.W.B assy		1	18	960 0181 207	Rotary encoder	G121162420400	2
		Preout P.W.B assy		1	18	960 0181 207	Rotary encoder	VEC301_302 for E3,EU,E2,E1T	2
		S-Video P.W.B assy		1	18	960 0181 207	Rotary encoder	VEC301_302 for E3,EU,E2,E1T	2
		Video P.W.B assy		1	18	960 0181 207	Rotary encoder	VEC301_302 for E3,EU,E2,E1T	2
		Tuner P.W.B assy		1	18	960 0181 207	Rotary encoder	VEC301_302 for E3,EU,E2,E1T	2
		Outlet P.W.B assy	for E2	1	18	212 0422 003	Rotary encoder	VEC301_302 for E1,E1C,E1H	2
	963 0042 808	Pre-Amp P.W.B assy	7025HK9907013	1	19	963 0044 107	Transistor 2SB1560Y	J5011560Y0000	5
		Pre-Amp P.W.B assy		1	19	963 0044 107	Transistor 2SB1560Y	Q102C,FL,FR,SL,SR	5
	963 0042 905	DSP P.W.B assy	7025HK9907014	1	20	960 0187 900	Posistor	F320161001020	1
		DSP P.W.B assy		1	20	960 0187 900	Posistor	F320161001020	1
		DSP P.W.B assy		1	21	963 0058 106	Transistor 2SD947F	J503947F00000	5
	963 0060 110	Voltage sel P.W.B assy	7025HK9907105	1	21	963 0058 106	Transistor 2SD947F	Q103C,FL,FR,SL,SR	5
			for E1,E1H,E1T	1	22	963 0044 204	Transistor 2SD2390Y	J5032390Y0000	5
			for E1,E1H,E1T	1	22	963 0044 204	Transistor 2SD2390Y	Q101C,FL,FR,SL,SR	5
	963 0055 303	Front panel	3067210238000	1	22	963 0044 204	Transistor 2SD2390Y	Q101C,FL,FR,SL,SR	5
			for E3	1	23	—	Heat sink	2120210128000	1
	963 0055 329	Front panel	3067210238060	1	24	960 0184 204	Heat sink bracket B	4010210386000	1
			for EU	1	25	960 0183 218	Top cover	3000210026000	1
	963 0055 316	Front panel	3067210238020	1	25	960 0183 205	Top cover	for E3,EU 3000210026001	1
			for E2(Black model)	1	25	960 0183 205	Top cover	3000210026001	1
	963 0055 413	Front panel	3067210238010	1	25	960 0183 205	Top cover	for E2(Black model)	1
			for E2(Gold model)	1	25	963 0055 507	Top cover	3000210026101	1
	963 0055 426	Front panel	3067210238040	1	25	963 0055 507	Top cover	for Gold model	1
			for E1,E1C,E1H,E1T	1	27	—	Wire clamp	4330000120000	2

34	960 0184 000	Screw bracket	4010210196000	
36	963 0056 140	Power trans	820096057001E	
36	963 0056 111	Power trans	for E3,EU 820096057003E	
36	963 0056 137	Power trans	for E2 820096057005E	
36	963 0056 124	Power trans	for E1,E1H,E1T 820096057004E	
37	—	Heat sink	for E1C 212004430801C	
38	—	Heat sink	212004353805C	
39	960 0187 303	AC outlet(2P)	G43524400401E	
39	960 0143 203	AC outlet	JK104 for E3,EU G435040110000	
40	960 0194 809	2P speaker terminal	for E2,E1,E1H,E1T G611021078110	
41	960 0188 608	4P speaker terminal	JK103	
42	960 0194 304	8P speaker terminal	G612041037314	
47	960 0184 602	PCB holder	JK102	
52	963 0054 003	Shield tuner pack	G59804168002E	
54	963 0055 701	Back panel	JK101	
55	963 0055 714	Back panel	442001071201C	
55	963 0055 730	Back panel	447021014600C	
55	963 0055 727	Back panel	307021005600C	
57	960 0192 403	Cord bush	320721025600C	
58	960 0190 104	AC cord assy	for E3 320721025605C	
58	960 0165 304	AC cord assy	for EU 320721025602C	
58	960 0185 408	AC cord assy	for E2 320721025604C	
58	960 0143 009	AC cord assy	for E1,E1H,E1T 320721025603C	
58	960 0143 009	AC cord assy	for E1C 438021000200C	

# PARTS LIST OF PACKING & ACCESSORIES

**Note:** The symbols in the column "Remarks" indicate the following destinations.  
 E3: U.S.A. model, Canada model  
 E1C: China model  
 E1H: Hong Kong model  
 E1T: Taiwan R.O.C. model  
 E2: Europe model  
 E1: Asia model

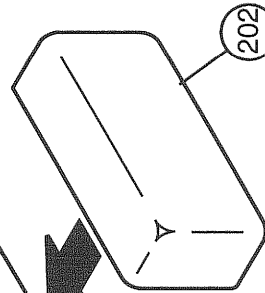
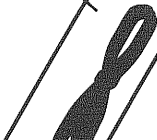
Ref. No.	Part No.	Part Name	Remarks	Q'ty
201	960 0185 601	Set poly bag	6330210019000	1
202	960 0185 504	Cushion	6230210124000	1
203	963 0054 511	Carton case	6007210140010 for E3,E2	1
203	963 0054 566	Carton case	6007210140040 for EU	1
203	963 0054 524	Carton case	6007210140030 for E1,E1C,E1T	1
203	963 0054 537	Carton case	6007210150020 for E1H	1
204	963 0045 106	Poly bag	6330000240000	1
205	963 0054 618	Instruction manual	5113598006 for E3,EU	1
205	963 0054 621	Instruction manual	5113599005 for E2	1
205	963 0054 650	Instruction manual	5113621009 for E1,E1C,E1H,E1T	1
205	963 0054 647	Instruction manual	5113623007 for E1C	1
206	515 0867 101	S.S. list	5777001620011	1
207	963 0052 306	AM loop antenna	E605010090000	1
208	963 0052 209	FM antenna	E605000030010	1
209	963 0043 001	Remoon FC-874	8300874000010	1
210	—	Battery (R6P/AA)	G670001R50010	2
211	963 0052 704	FM antenna adapter	L1090001800010	1
212	963 0061 300	AC plug adapter	L10928300310A for E1T	1
213	515 0817 009	DEL Warranty home	5778001470070 for E3,EU	1
214	—	Control label	5500014920010	2
215	—	UPC label	5507002340010 for E3	1
215	—	UPC label	5507002340050 for EU	1
215	—	EAN label	5507002340040 for E2(Black model)	1

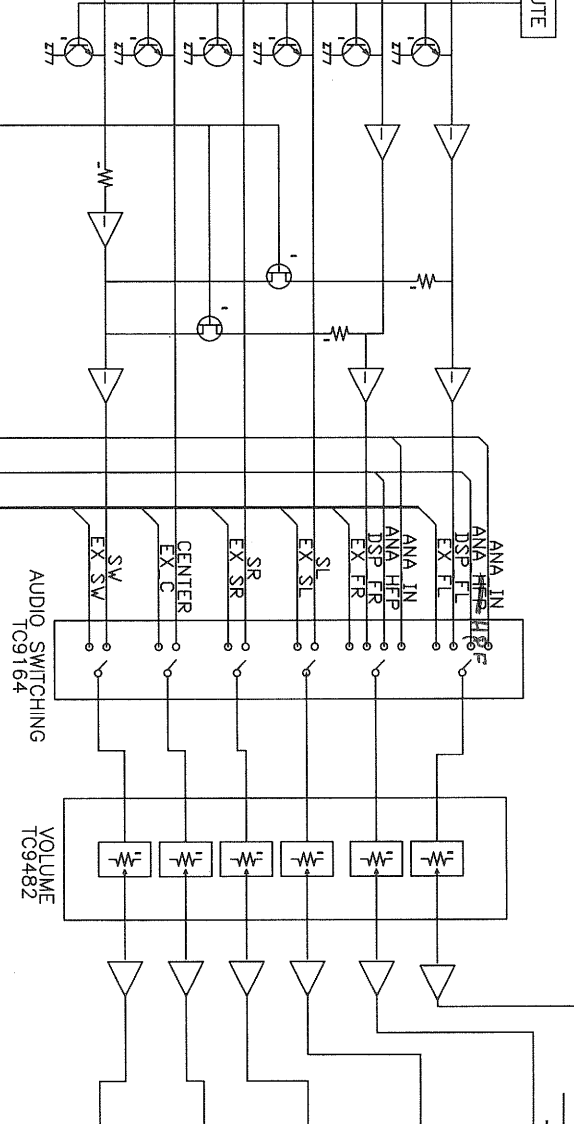
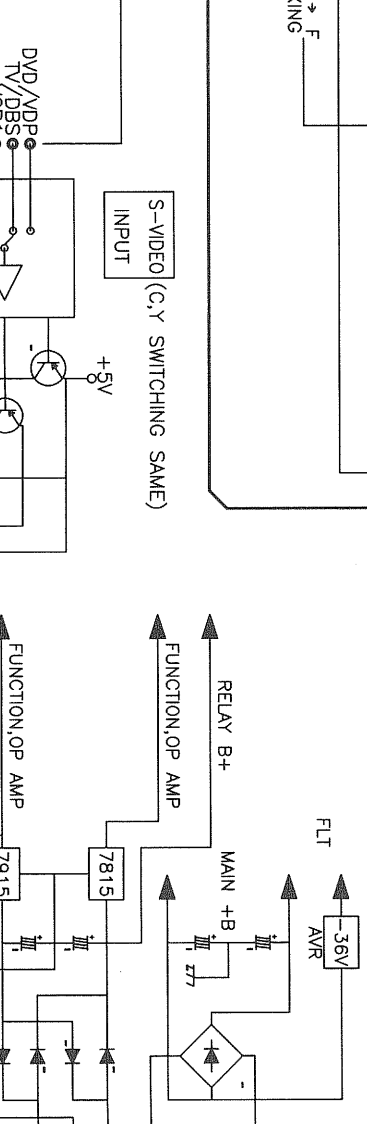
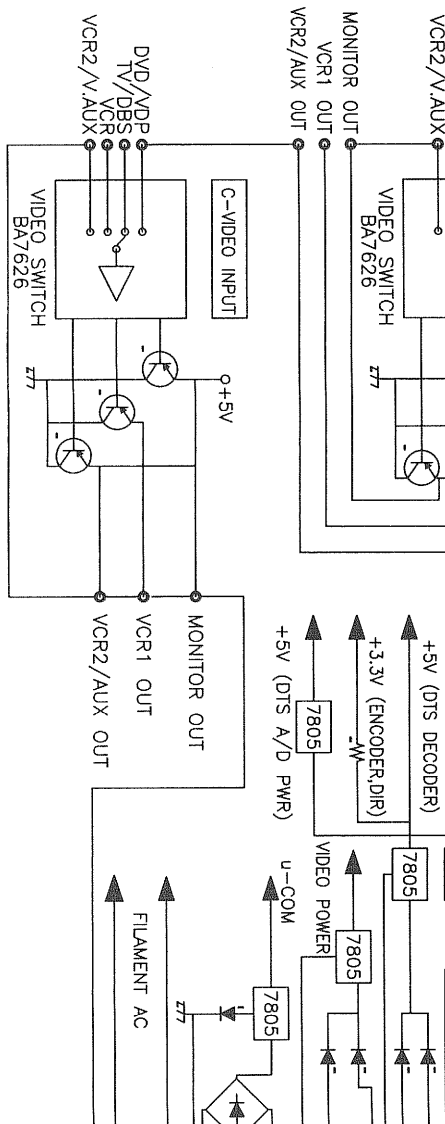
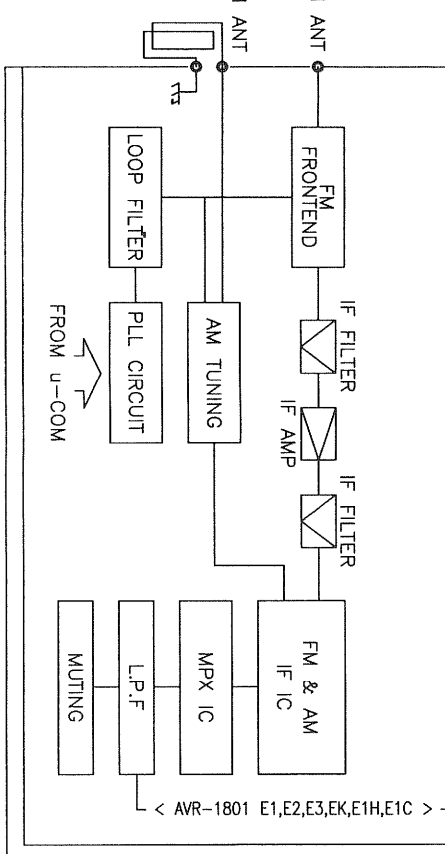
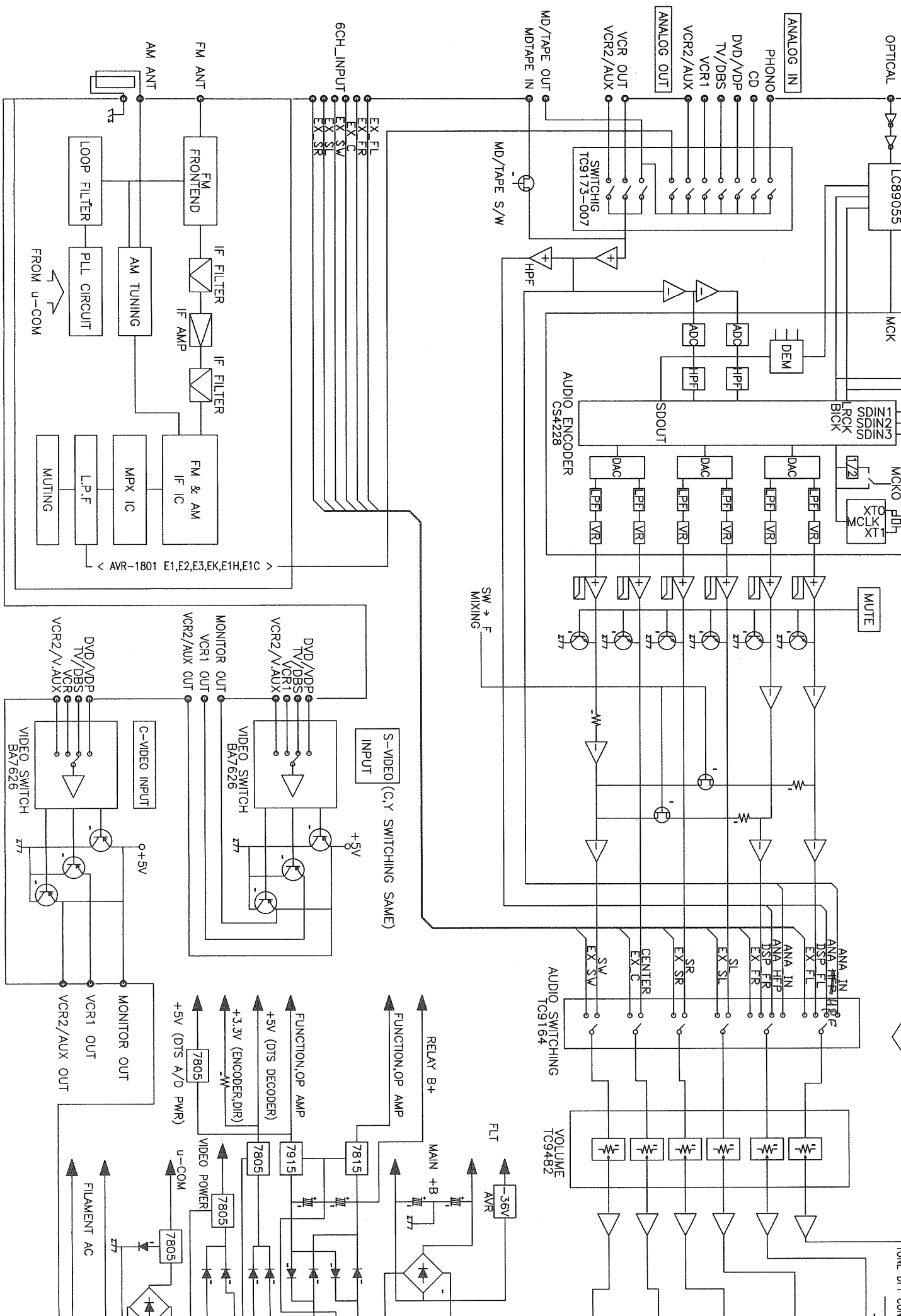
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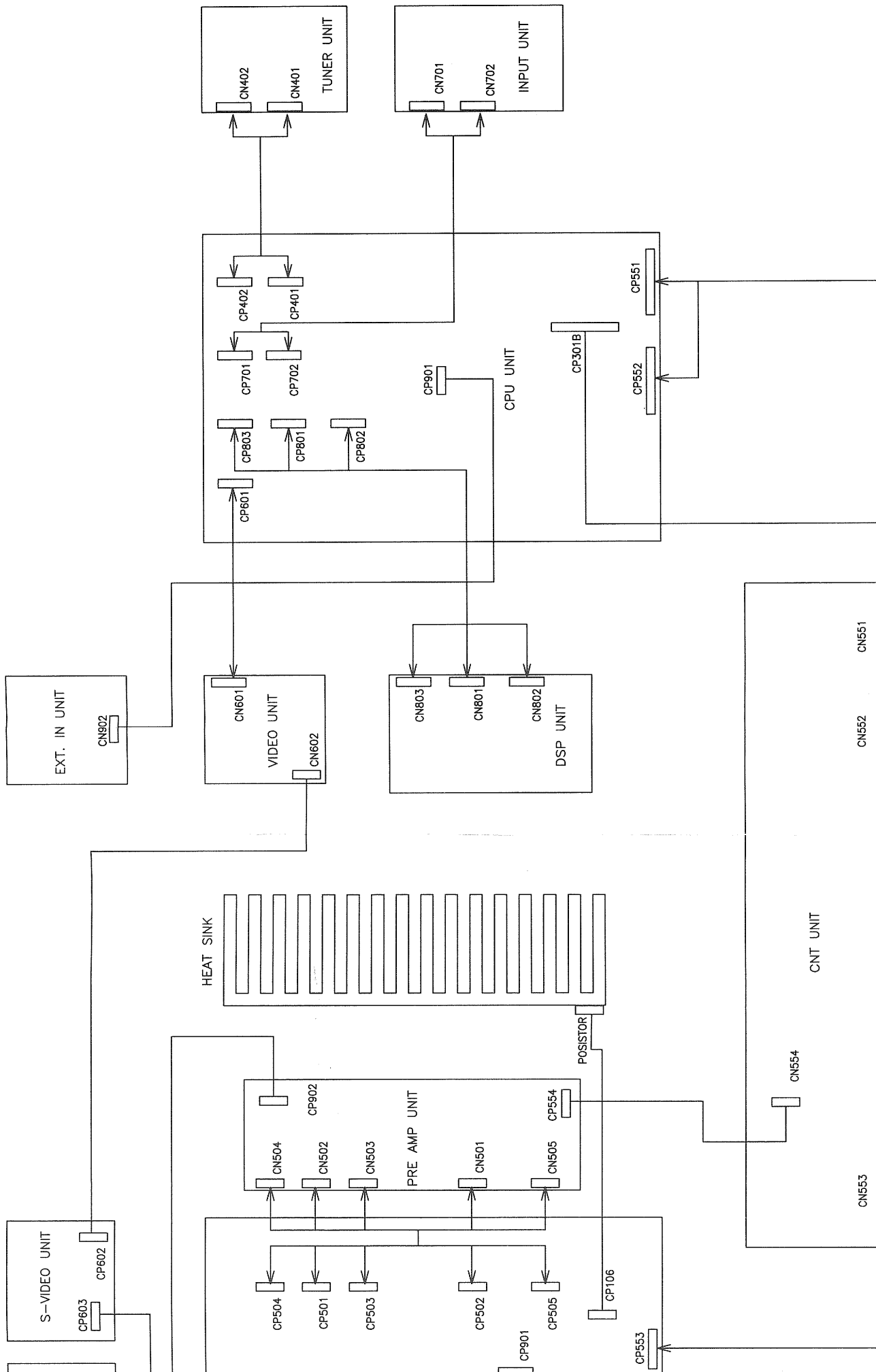
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201

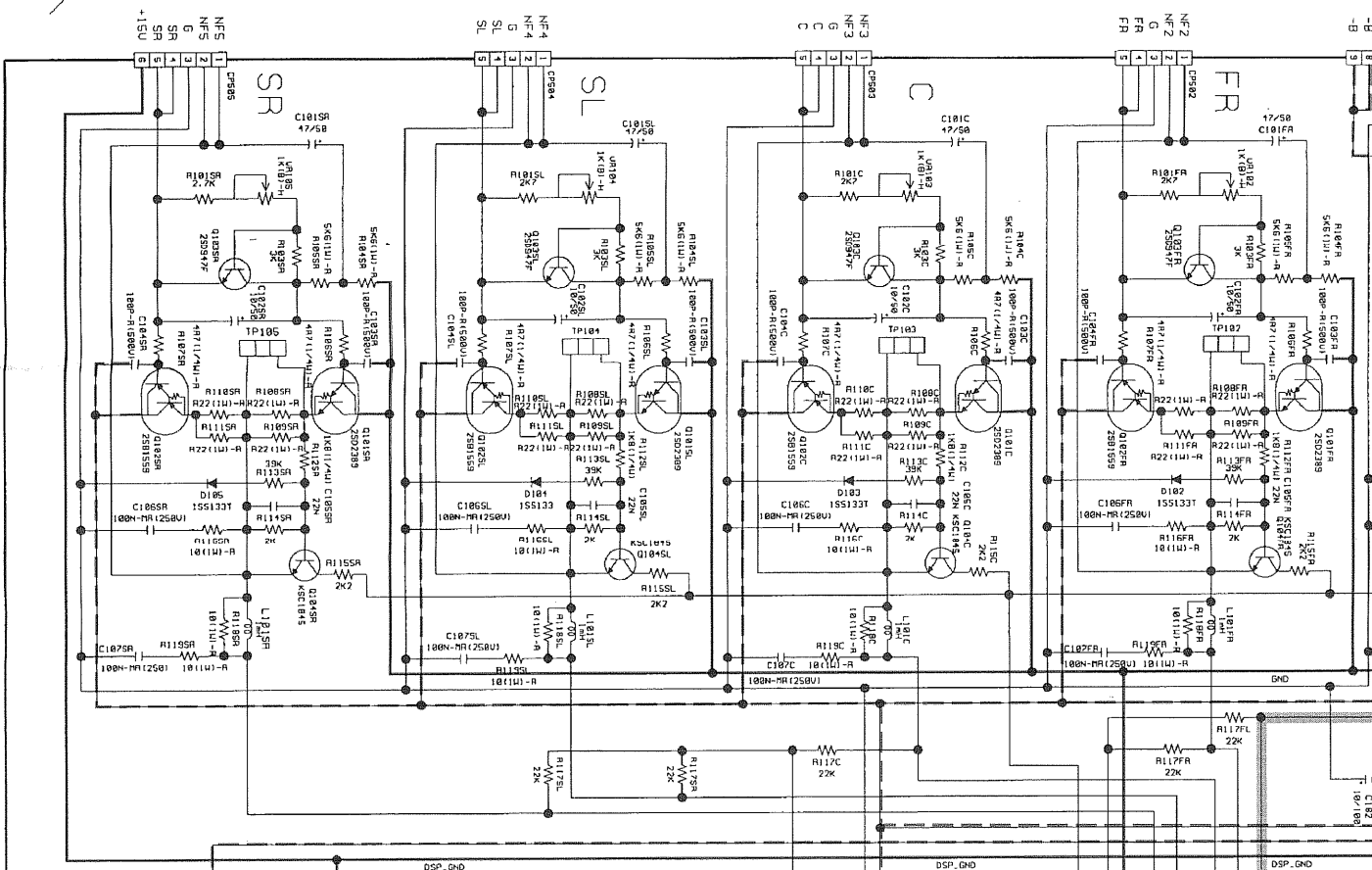
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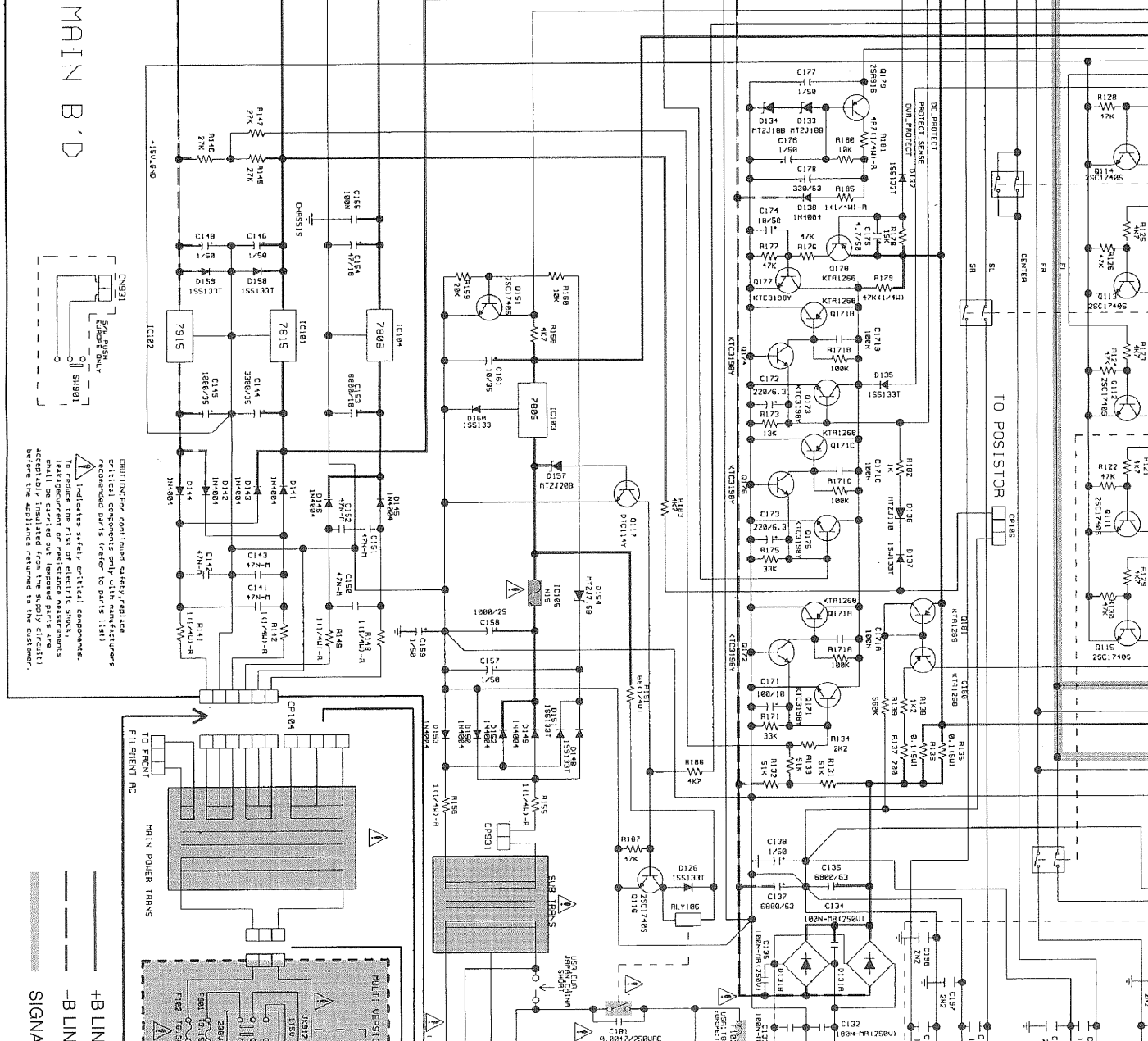


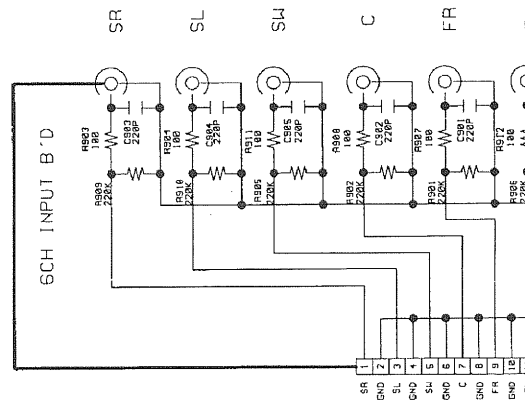
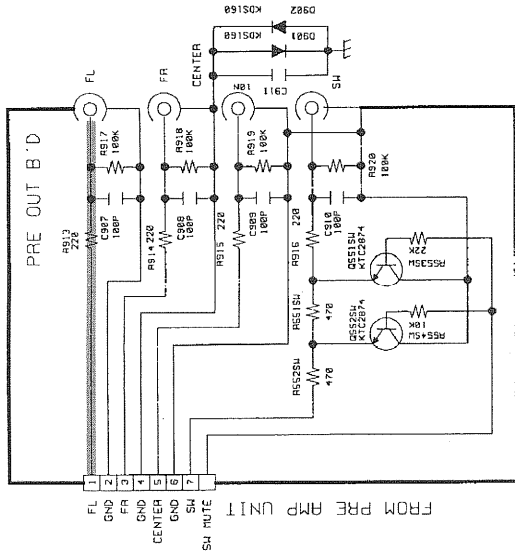
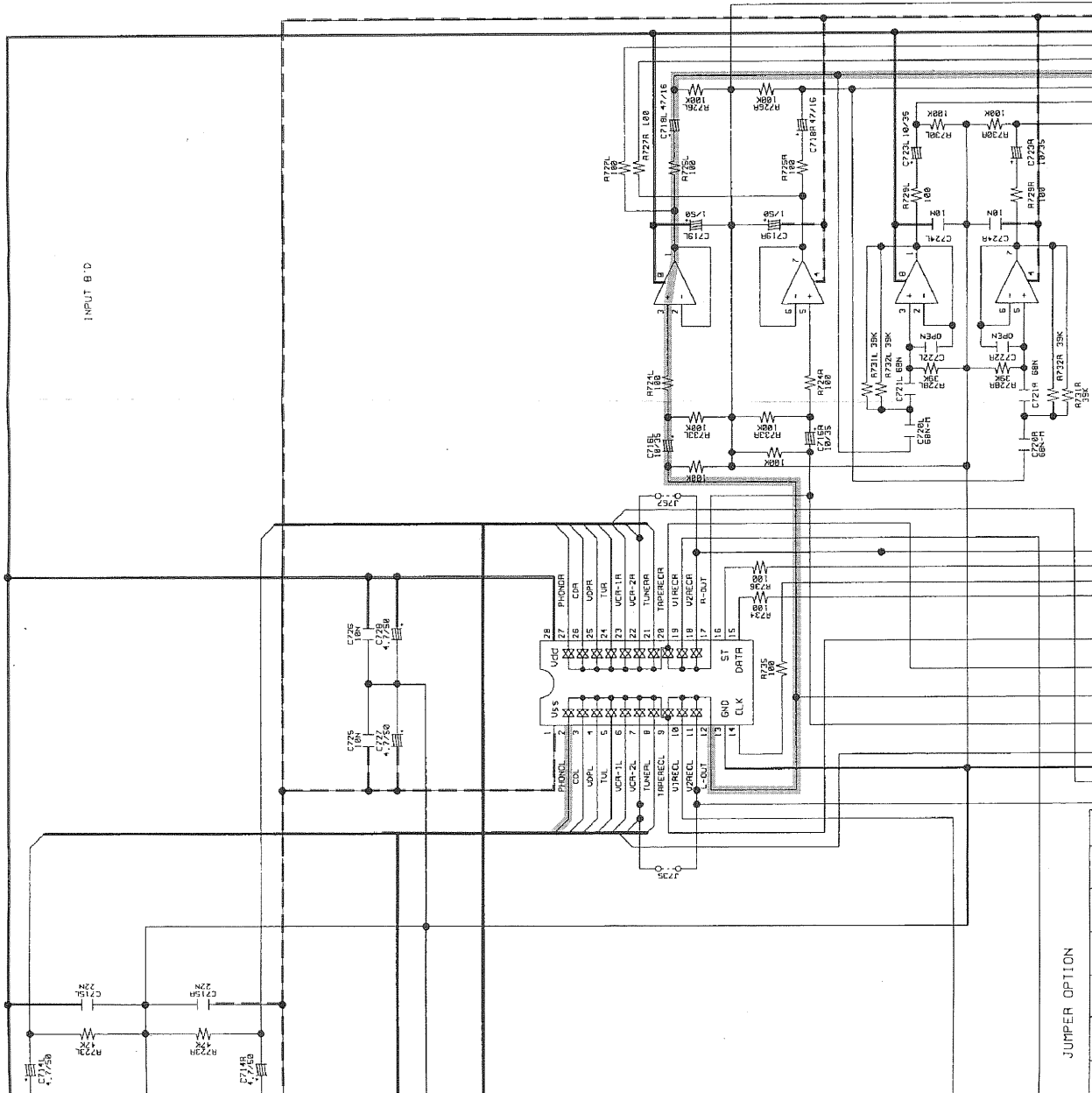




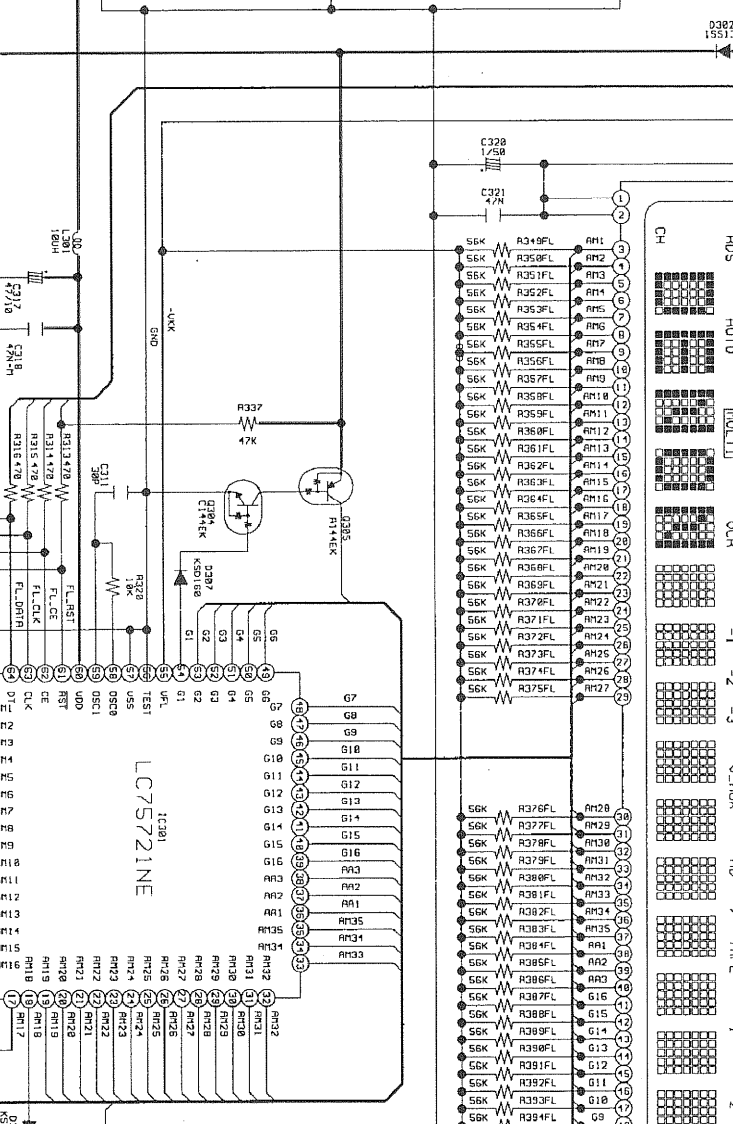
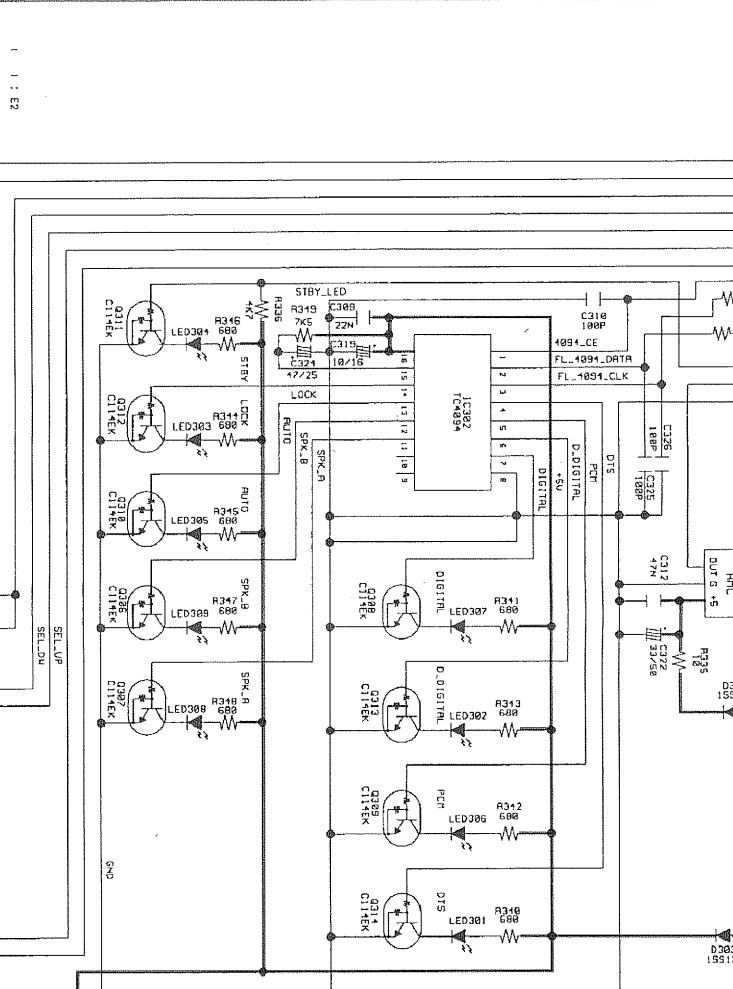
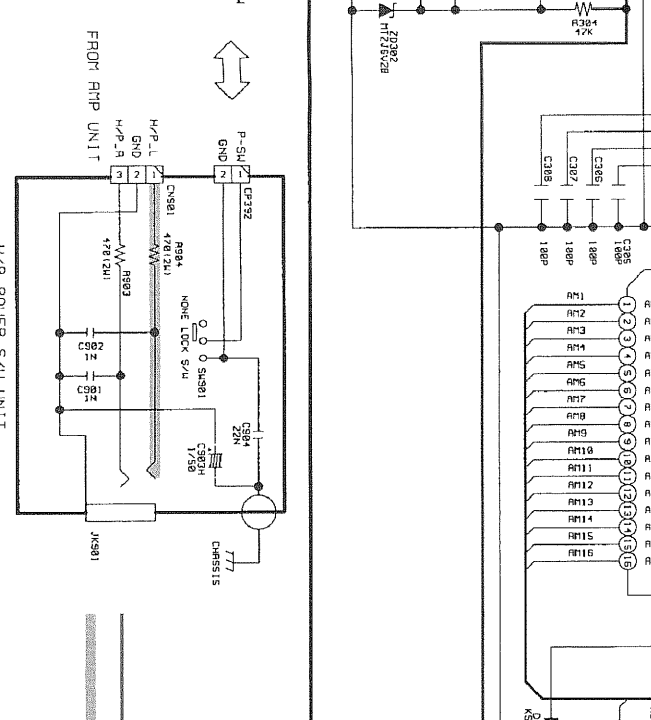
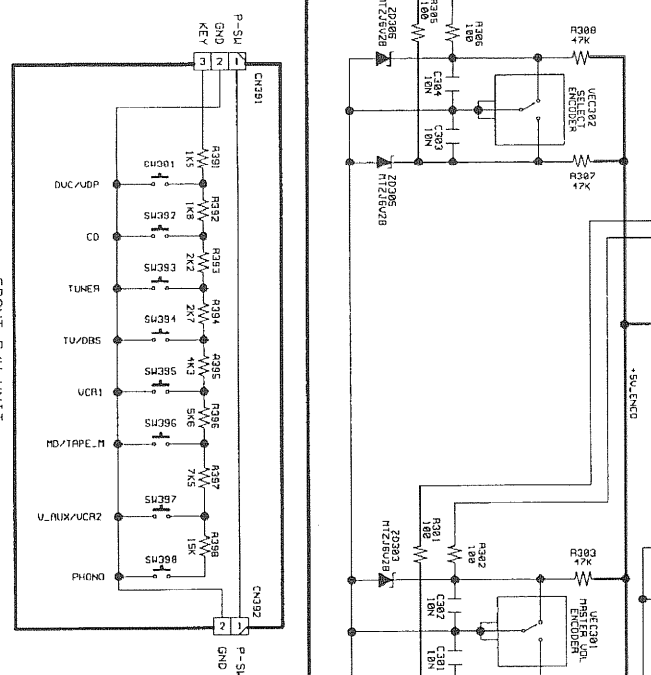
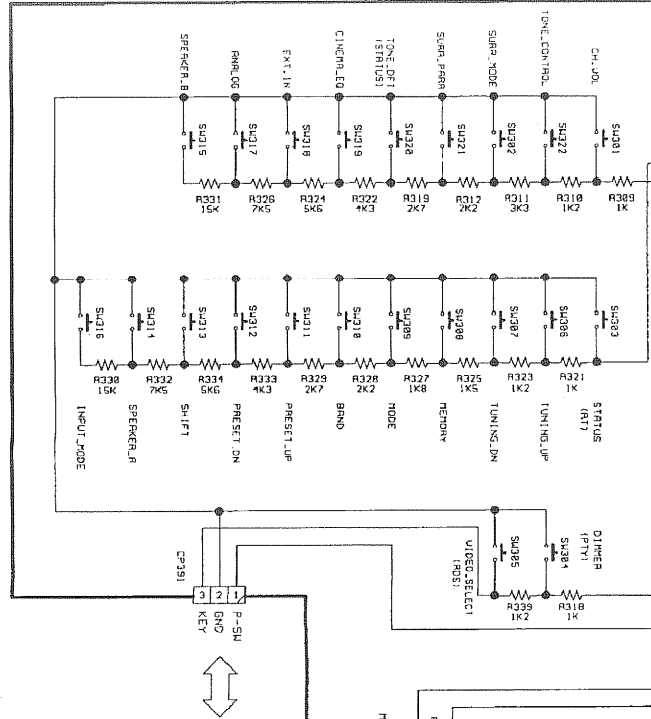


MAIN B.D





JUMPER OPTION

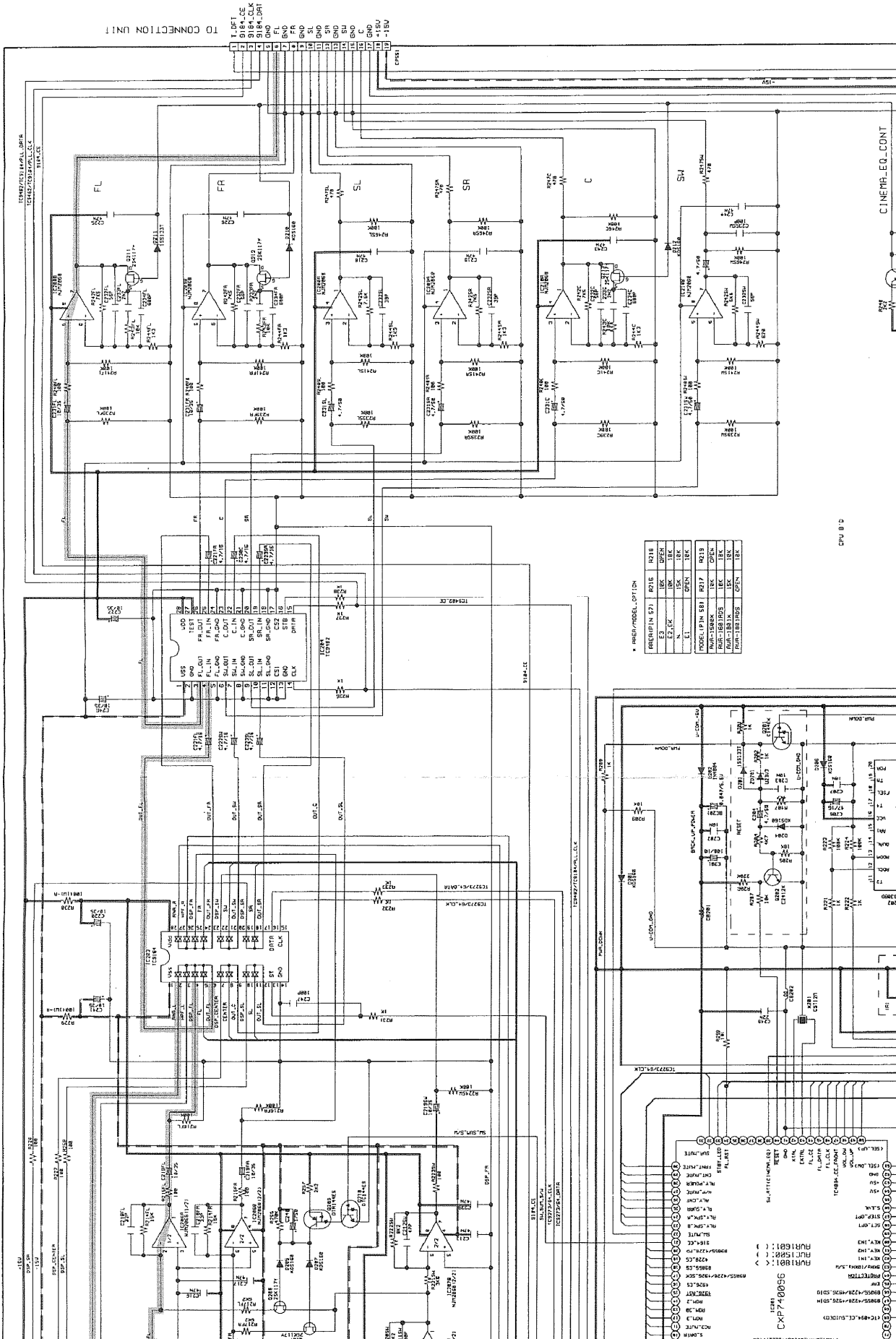


FRONT S/M UNIT

FRONT R/M UNIT

H/P, POWER S/M UNIT

+B LINE  
SIGNAL

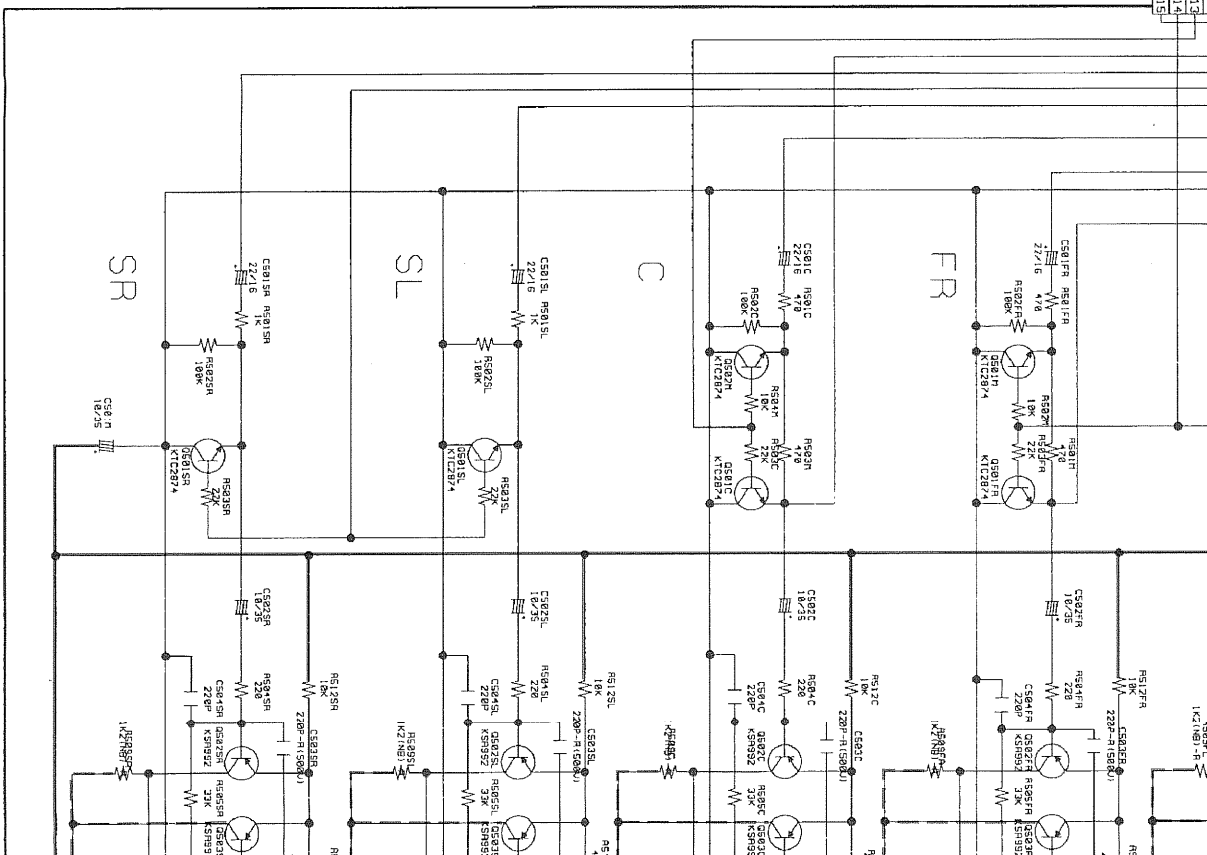
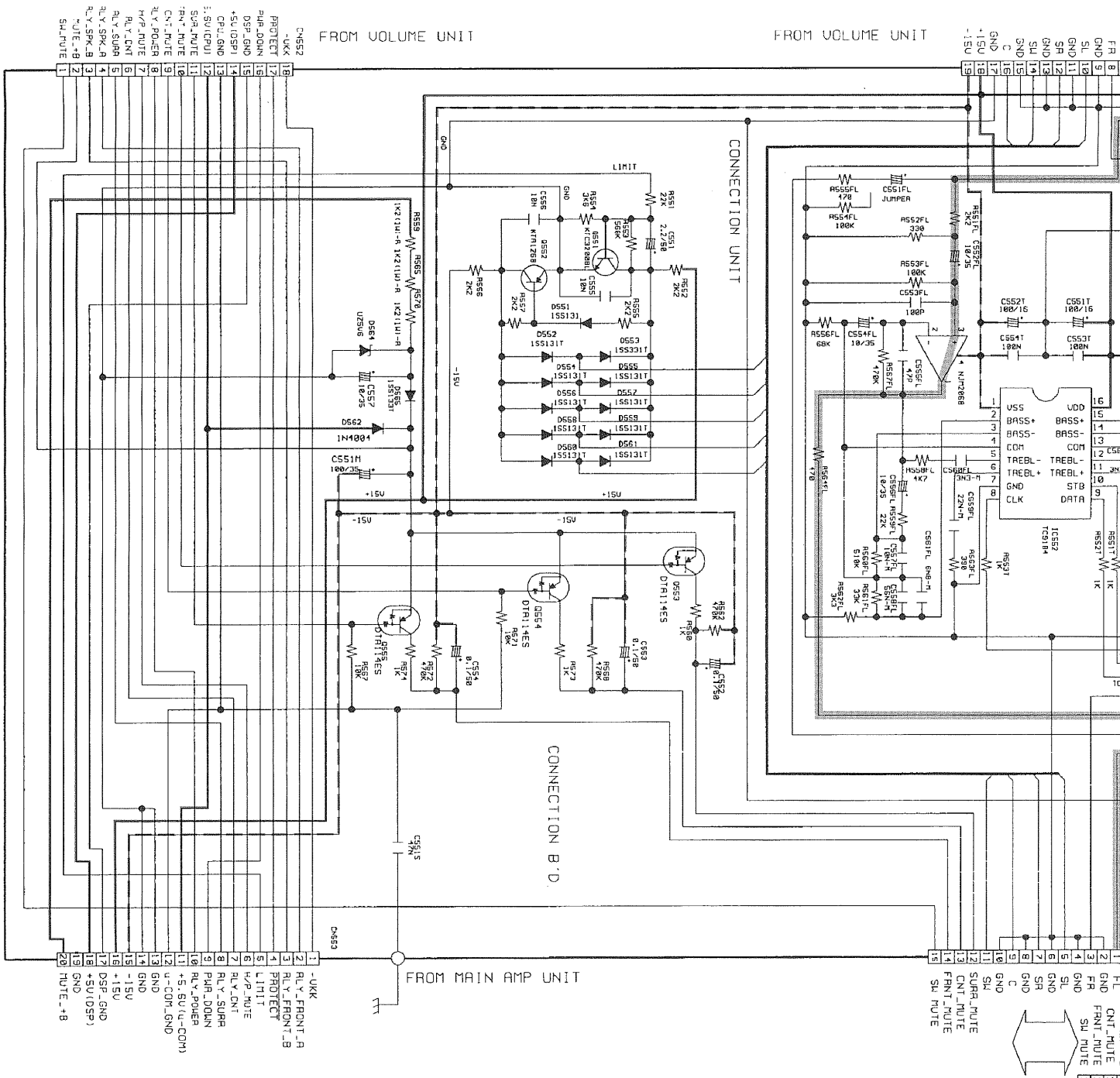


\* WHEN MODEL OPTION

MODEL PIN	R015	R016	R017	R018
1	10K	10K	10K	10K
2	10K	10K	10K	10K
3	10K	10K	10K	10K
4	10K	10K	10K	10K
5	10K	10K	10K	10K
6	10K	10K	10K	10K
7	10K	10K	10K	10K
8	10K	10K	10K	10K
9	10K	10K	10K	10K
10	10K	10K	10K	10K
11	10K	10K	10K	10K
12	10K	10K	10K	10K
13	10K	10K	10K	10K
14	10K	10K	10K	10K
15	10K	10K	10K	10K
16	10K	10K	10K	10K
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18	10K	10K	10K	10K
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25	10K	10K	10K	10K
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31	10K	10K	10K	10K
32	10K	10K	10K	10K
33	10K	10K	10K	10K
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36	10K	10K	10K	10K
37	10K	10K	10K	10K
38	10K	10K	10K	10K
39	10K	10K	10K	10K
40	10K	10K	10K	10K
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42	10K	10K	10K	10K
43	10K	10K	10K	10K
44	10K	10K	10K	10K
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63	10K	10K	10K	10K
64	10K	10K	10K	10K
65	10K	10K	10K	10K
66	10K	10K	10K	10K
67	10K	10K	10K	10K
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85	10K	10K	10K	10K
86	10K	10K	10K	10K
87	10K	10K	10K	10K
88	10K	10K	10K	10K
89	10K	10K	10K	10K
90	10K	10K	10K	10K
91	10K	10K	10K	10K
92	10K	10K	10K	10K
93	10K	10K	10K	10K
94	10K	10K	10K	10K
95	10K	10K	10K	10K
96	10K	10K	10K	10K
97	10K	10K	10K	10K
98	10K	10K	10K	10K
99	10K	10K	10K	10K
100	10K	10K	10K	10K

CUV B 0

1. 100% RATED VOLTAGE  
 2. 100% RATED CURRENT  
 3. 100% RATED POWER  
 4. 100% RATED TORQUE  
 5. 100% RATED SPEED  
 6. 100% RATED EFFICIENCY  
 7. 100% RATED FACTOR  
 8. 100% RATED LIFE  
 9. 100% RATED RELIABILITY  
 10. 100% RATED SAFETY  
 11. 100% RATED QUALITY  
 12. 100% RATED SERVICE  
 13. 100% RATED SUPPORT  
 14. 100% RATED TRAINING  
 15. 100% RATED DOCUMENTATION  
 16. 100% RATED COMPLIANCE  
 17. 100% RATED INNOVATION  
 18. 100% RATED SUSTAINABILITY  
 19. 100% RATED ETHICS  
 20. 100% RATED INTEGRITY  
 21. 100% RATED TRANSPARENCY  
 22. 100% RATED ACCOUNTABILITY  
 23. 100% RATED RESPONSIBILITY  
 24. 100% RATED COMMITMENT  
 25. 100% RATED EXCELLENCE  
 26. 100% RATED PERFORMACE  
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 34. 100% RATED COMMITMENT  
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 88. 100% RATED SUSTAINABILITY  
 89. 100% RATED ETHICS  
 90. 100% RATED INTEGRITY  
 91. 100% RATED TRANSPARENCY  
 92. 100% RATED ACCOUNTABILITY  
 93. 100% RATED RESPONSIBILITY  
 94. 100% RATED COMMITMENT  
 95. 100% RATED EXCELLENCE  
 96. 100% RATED PERFORMACE  
 97. 100% RATED INNOVATION  
 98. 100% RATED SUSTAINABILITY  
 99. 100% RATED ETHICS  
 100. 100% RATED INTEGRITY



**NOTICE**

ALL RESISTANCE VALUES IN OHM, K=1,000 OHM, M=1,000,000 OHM

EACH VOLTAGE AND CURRENT VALUE ARE MEASURED AT NO SIGNAL INPUT

CONDITION:

CIRCUIT AND PARTS ARE SUBJECT TO CHANGE WITHOUT PRIOR NOTICE.

**WARNING:**

Parts marked with the symbol  $\Delta$  have critical

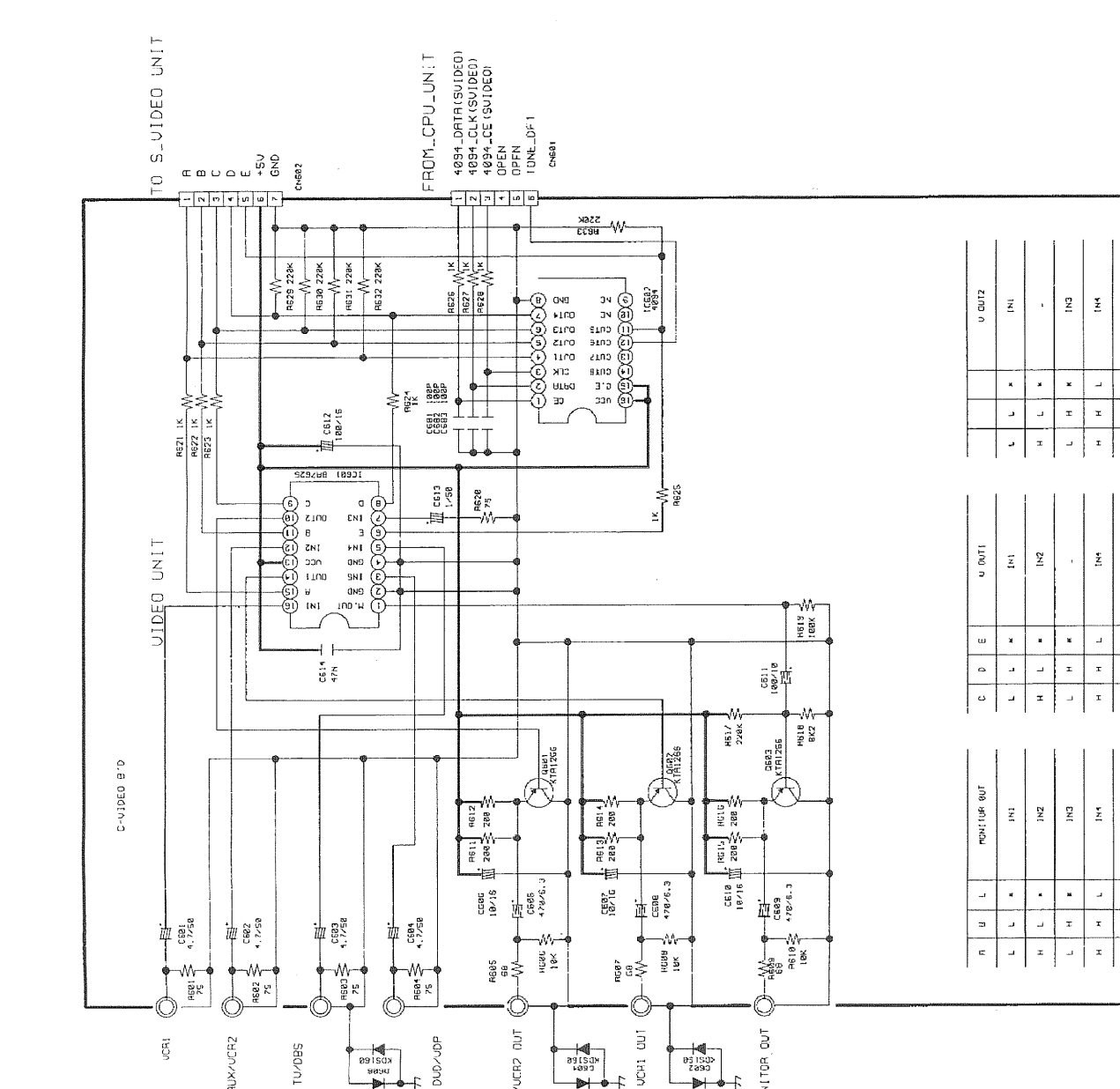
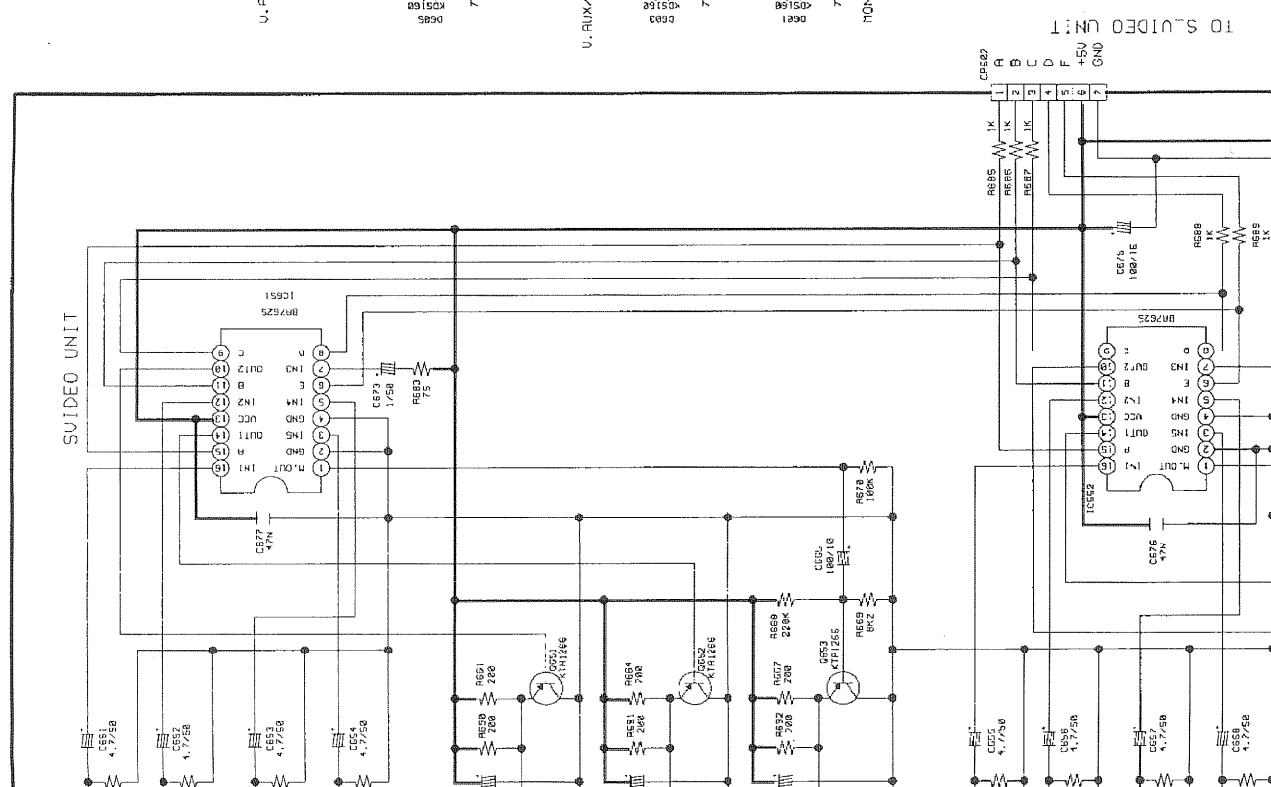
Use ONLY replacement parts recommended by the manufacturer

**CAUTION:**

Before returning the unit to the customer, make sure leakage current check or (2) a line to chassis resistance current exceeds 0.5 milliamperes, or if the resistance of the power cord is less than 460 Kohms, the unit

**WARNING:**

DO NOT return the unit to the customer until the problem is corrected.



U	L	MONITOR OUT	U OUT1	U OUT2
L	L	INI	INI	INI
H	L	IN2	IN2	-
L	H	IN3	IN3	IN3
H	H	IN4	IN4	IN4

#1	R-NO.	E3	E2	E1, C, H, T
*1	CF401, CF402	SFE10, 7MS3	SFE10, 7MS3	SFE10, 7MS3
*2	R474	-	180	-
*3	R408	1.2K	680	1.2K
*4	R471	18K	39K	39K
*5	UR402	100KB	100KB	50KB
*6	C434	1/50	0.33/50	0.33/50

#7	R-NO.	E3	E2	E1, C, H, T
*7	J442	JUMPER	-	JUMPER
*8	T405	-	INSERT	-
*9	C462	-	470P	-
*10	R438, R439	100K	100K	100K
*11	C446, C447	270P	270P	180P
*12	C448, C449	470P	-	330P

#13	R-NO.	E3	E2	E1, C, H, T
*13	R440, R441	120K	220K	120K
*14	R442, R443	3.3K	2.2K	3.3K
*15	J483, J404	JUMPER	-	JUMPER
*16	T404, T405	-	INSERT	-
*17	R444, R445	8.2K	3.3K	8.2K
*18	R446, R447	JUMPER	470	JUMPER
*19	R437	JUMPER	5K1	JUMPER

DET\_OUT  
GND  
+15V  
TUNED  
ST  
TU\_ROUTE  
S\_LVL  
PLL\_DT\_IN  
PLL\_CLK  
PLL\_DATA  
PLL\_CE  
8K  
CM401

ET, H, I, C, DM, Y  
E1, H, I, C, DM, Y  
E2 ONLY  
E3 ONLY

OPTION TABLE	E1, H, I, C, DM, Y	E2 ONLY	E3 ONLY
R457	100	100	100
C455	22N	22N	22N
R458	100	100	100
C459	22N	22N	22N
R460	100	100	100
C461	22N	22N	22N
R462	100	100	100
C463	22N	22N	22N
R464	100	100	100
C465	22N	22N	22N
R466	100	100	100
C467	22N	22N	22N
R468	100	100	100
C469	22N	22N	22N
R470	100	100	100
C471	22N	22N	22N
R472	100	100	100
C473	22N	22N	22N
R474	100	100	100
C475	22N	22N	22N
R476	100	100	100
C477	22N	22N	22N
R478	100	100	100
C479	22N	22N	22N
R480	100	100	100
C481	22N	22N	22N
R482	100	100	100
C483	22N	22N	22N
R484	100	100	100
C485	22N	22N	22N
R486	100	100	100
C487	22N	22N	22N
R488	100	100	100
C489	22N	22N	22N
R490	100	100	100
C491	22N	22N	22N

