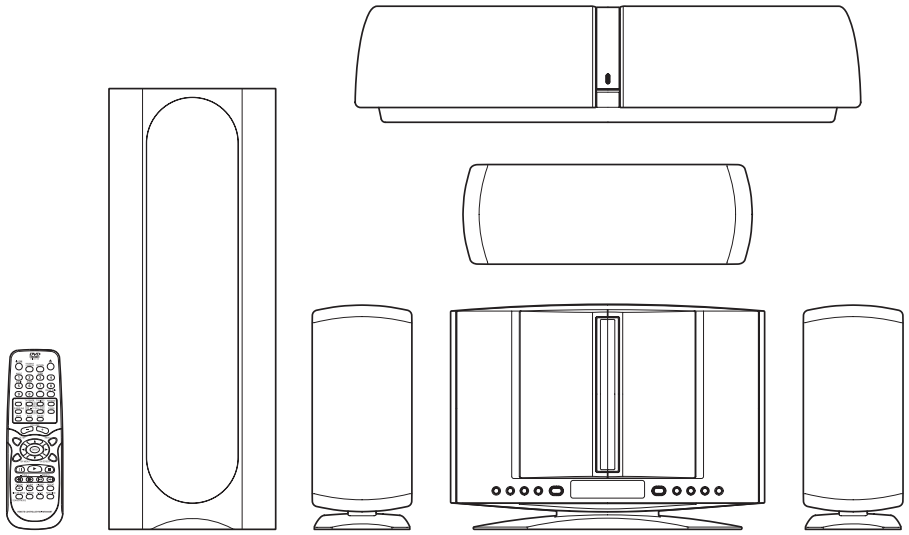
SANYO

FILE NO.

Service Manual

DVD Home Theater System

DWM-4500 (US)
DC-TS830WL (CA)



CONTENTS

PRODUCT CODE No.
129 712 00 US
129 712 04 CA

REFERENCE No. SM5810712

LASER BEAM SAFETY PRECAUTION

- Pick-up that emits a laser beam is used in this CD player section.

CAUTION :

USE OF CONTROLS OR ADJUSTMENTS OR PERFORMANCE OF PROCEDURES OTHER THAN THOSE SPECIFIED HEREIN MAY RESULT IN HAZARDOUS RADIATION EXPOSURE

LASER OUTPUT ..... 0.6 mW Max. (CW)
WAVELENGTH ..... 790 nm

DVD MECHANISM REPLACEMENT

1. Cautionary instructions in handling the assy
(Safety instructions)
Optical pickup
The laser beam used in the pickup is classified as "class 2". Exposing your eyes or skin to the beam is harmful. Take care not to do so.

(Caution against static electricity and leakage voltage)
Ground securely the work tables, tools, fixtures, soldering irons (including those made of ceramic) and measuring instruments used in the production lines and inspection departments that handle loaders. The workers shall also be grounded.

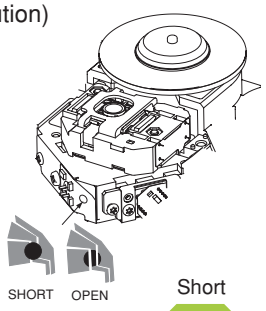
(Cautionary instructions in handling)
Do not touch the object lens when handling a loader, or the lens will be stained, resulting in inadequate playability.
There is no power supply protection circuit provided for this product or adjustment/inspection device. Short-circuiting may lead to fire or damage.
Take care so as to protect from exposure to water, the entry of metallic pieces or dew condensation.
In particular, a strong magnet adjacent to the pickup will not only get inoperative but can damage the pickup if a small metallic piece, such as a screw or swarm, enters.
The loader edge can cause injury if inadvertently handled.
Do not touch a rotating disk, or injury may result.

This product is a precision device. Handle carefully.
A shock or dropping will cause misalignment or destruction. If it should occur, refer to clause 2.
This product is so designed as to endure an initial shock equivalent to a drop from a height of approx. 90 cm under the packed condition.
After the initial shock, the resistivity will still remain at a level of 50 to 60 G, but the mechanical robustness will weaken.
Do not place in a dusty location.
The entry and deposition of dirt into or on the pickup lens or moving section will cause malfunction or degradation.

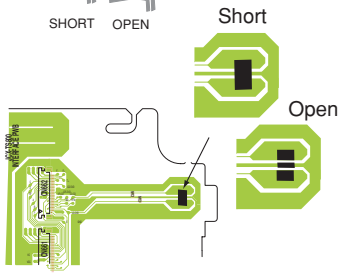
(Connectors)
Do not connect or disconnect while power is on.
Connecting or disconnecting signal wires or the main power cord when the power is on may destruct the unit or fixture.
When connecting, push all the way in securely.
An insufficient insertion may cause a bad contact, leading to an erroneous operation.
Do not connect or disconnect roughly by an excessively strong force, or a broken wire or bad contact may result.
Semiconductors are connected. Do not touch connector terminals directly.

If the worker is grounded, there is nothing to worry about static electricity, but the rust on the connector terminal surface caused by the touch may result in bad contact.

(Caution)



Before disconnecting FFC cable from mechanism, make it "SHORT" as shown left.
After connecting FFC cable to mechanism, make it "OPEN" as shown left.



Before disconnecting FFC cable from main p.w.b, make it "SHORT" as shown left.
After connecting FFC cable to main p.w.b, make it "OPEN" as shown left.

INTERFACE P.W.BOARD

(Power source)
The power source need be good in quality (free from instantaneous interruptions or noises).
A low quality power source may well cause malfunction.

(Storage)
Do not place or store in a dusty place or a place where dew condensation is possible.
The entry and deposition of dirt or dust into or on the pickup lens or moving section will cause malfunction or degradation.
Also, dew condensation causes rust; the rust penetrate into the precision part of a pickup, causing malfunction, or degrading the optical quality of the internal lens and reflector, which also leads to malfunction.

SERVICE MODE

A. Market / Region SETUP

In the initial condition for this model, Market and Region information are undefined.
In the following cases, be sure to set up Market/Region.

1. When updating the system using CD-R
   (Part code : 0PRADC9705--AC).
2. When replacing a DVD substrate.
   While Market/Region information are undefined, the message "Region Undefined" is displayed on the screen.

NOTE: Even if the condition is not under 1 or 2 above, if the message "Region Undefined" is displayed, be sure to set up Market/Region.

Undefined Market/Region display

B. How to enter Service Mode.

1. Using the buttons on the main unit
   1-1. Display on "No Disc" by Function button.
   1-2. Immediately (within one second) after pushing stop button both and power buttons simultaneously , push play button.

C. Setup Procedures

1. Displaying SERVICE MODE screen
   Display Service Mode screen following the instructions "How to enter Service Mode" above.

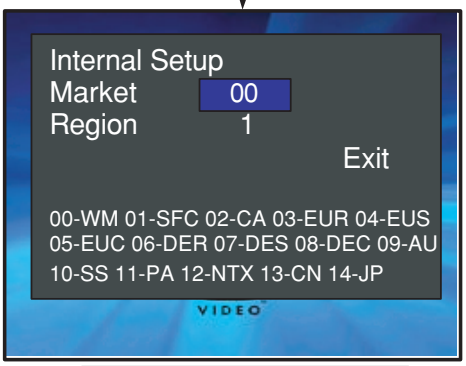
2. Displaying Internal Setup screen
   Push PRESET+/NEXT button within three seconds after operating the Service Mode display.
   On the Internal Setup screen shown on the right, set up Market and Region.

3.1. While a highlighted indicator is displayed on the right side of the Market denotation, push numeric buttons on the remote controller.
   When you push wrong number , push CLEAR button. (The indicator reset to "00")
   Be sure to input by double figures.
   Market code of WM model is "00", and CA model is "02".

3.2. Specify the code of the model in accordance with the Market/Region Setup Table above.

3.3 Once the desired code is displayed, push ▼ button to move the highlighted indicator to the Region input area.

Version of Service mode display



Screen of linternal Setup

Market Setting

4. Setting REGION code

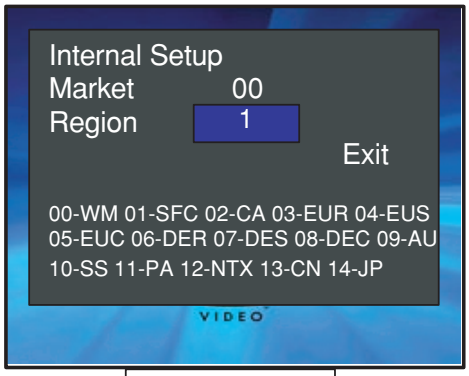
4.1 While a highlighted indicator is displayed on the right side of the Region denotation, push ENT, ► and ◄ each button on the remote controller. With each push the indicator will advance as shown below.

1 <-> 2 <-> 3 <-> 4 <-> 5 <-> 6

The region coder of US and CA is 1.

4.2 Set up the region coder currently displayed on the set.

4.3 Once the desired number is displayed, push ▼ button to move the highlighted indicator to Exit area.

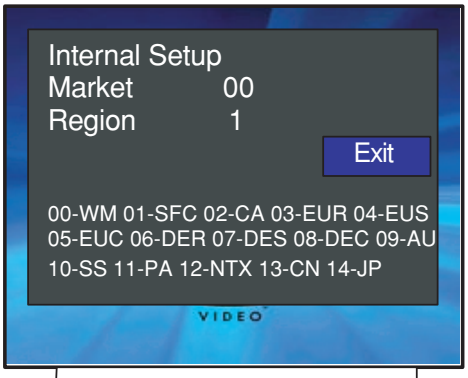


Region Setting

5. Saving settings

5.1 Make sure that the Market and Region settings are properly set.
(If any of the settings are incorrect, you can make a change by moving the indicator using ▲ button, and following procedures 3 and 4 above.)

5.2 After ensuring that the settings are all correct, push ENT button while the indicator is on Exit area.
The settings are now saved.

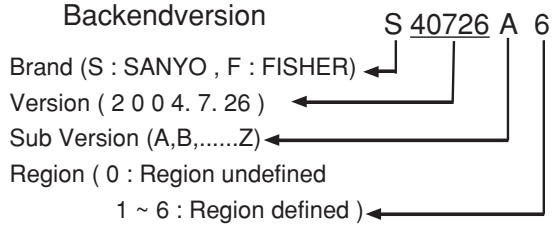


Save of Setting Data

6. Finishing settings

6.1 After a few seconds, the Internal Setup screen disappears, and then the Service Mode screen is displayed again for three seconds as shown on the right.

You should check the settings.



Version of Setting display

6.2 Power OFF.

SERVICE MODE

D. IMPORTANT NOTE

1. Once the "Market/Region" settings are written into EEPROM (IC810) on the DVD substrate, they cannot be reset.
   (However, updating the system using CD-R enables you to make new settings.)
2. While the Internal Setup screen is displayed, pushing the Power button enables you to terminate the operations without making any settings.

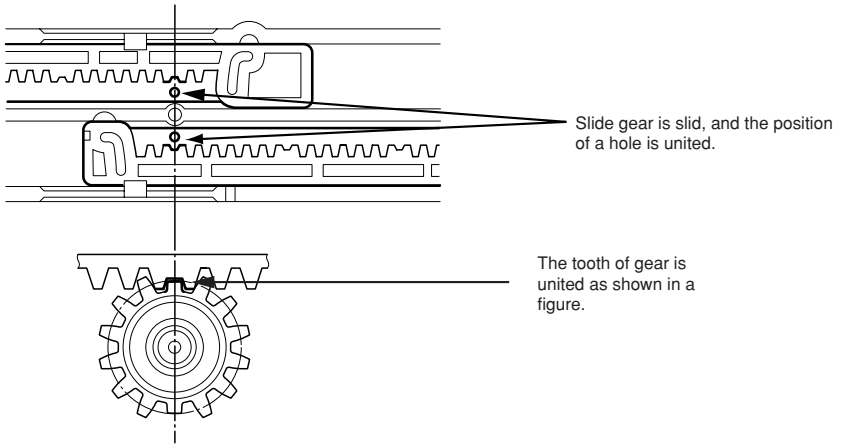
HOW TO LOAD SOFTWARE FOR MPEG P.W.BOARD

1. Power on, then open tray.
2. It take on CD-ROM for UPDATE software to the tray, and tray close.
3. TV screen display “Reading” and FL display “UPDATING”
4. For the time being, tray open and FL display "GOOD-BYE".
   (caution) The update is not completed though the tray opens.
5. When software loading finished, "GOOD-BY" on a FL display disappears.
6. Next, set up market code and region code by "SERVICE MODE"
   CD-ROM part code is "0PRADC9687--A".

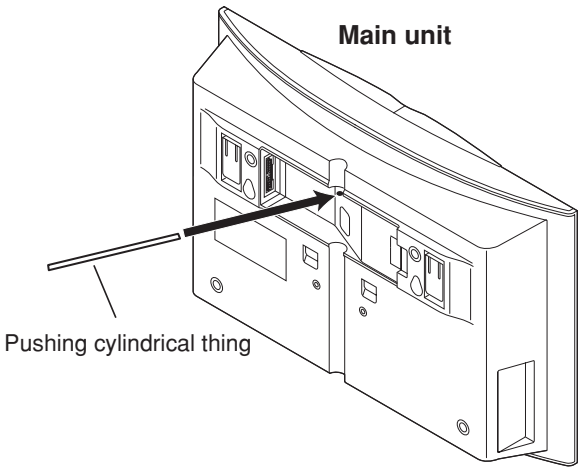
CAUTIONS FOR PWB OR IC ASSY EXCHANGE

After an MAIN board(614 332 3860) or IC ASSY(410 531 3201) exchange should carry out loading of the software by the newest CD-R, and should check operation.

How to attach gear rack

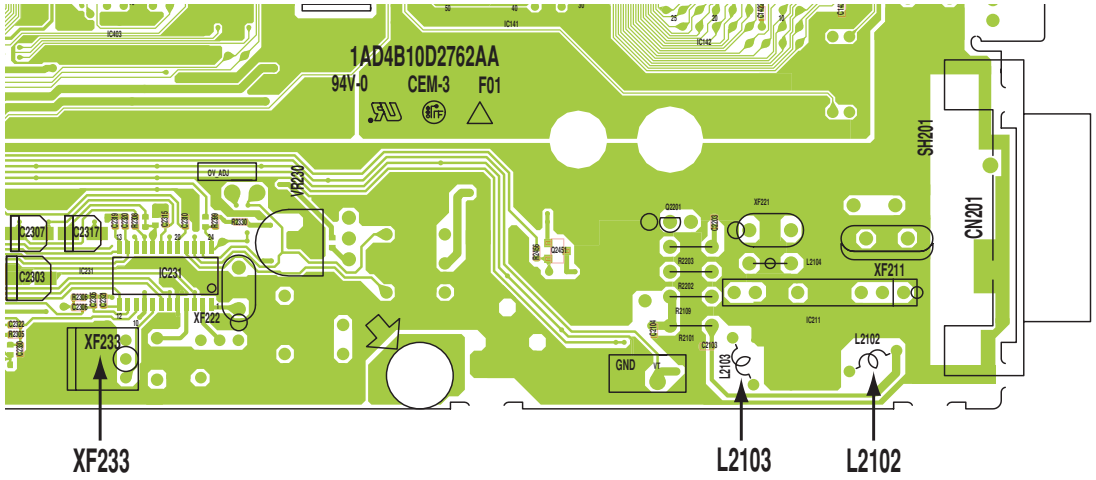


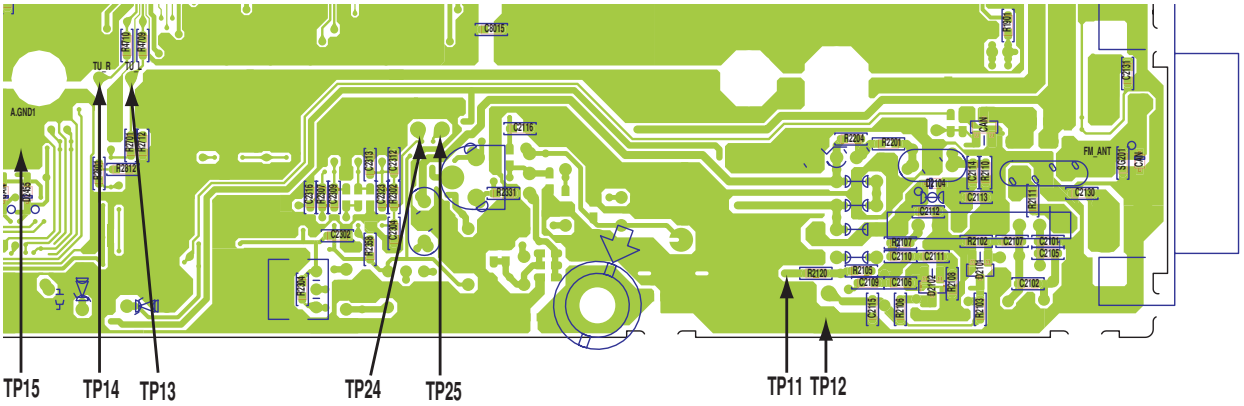
How to take out the disc.



TUNER ADJUSTMENT

- Use a plastic screw driver for adjustments.
- Speaker impedance : 8 ohms
- MODE : ST (Stereo)
- TUNING FM : 87.5 - 108MHz



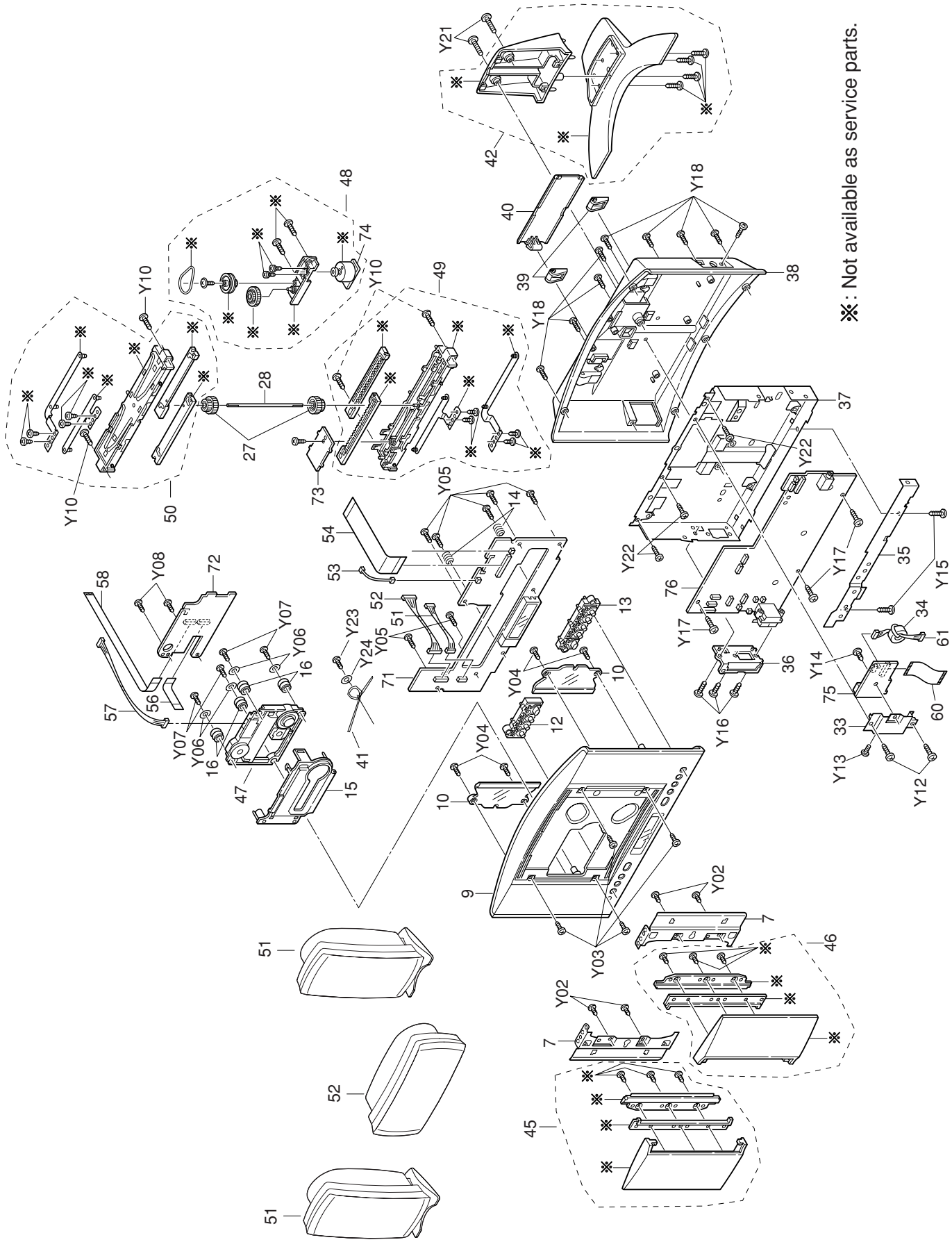


Antenna : 75Ω unbalanced direct, Modulation : 1 kHz
Dev. : ±22.5kHz(MONO), ±22.5kHz(STEREO),±6.75kHz(PILOT)
RF Level : dBuV EMF
Output Level : about 100mV at TP13, TP14, TP15

1. FM

Step	Adjusting Circuit	Connection		SG Frequency	Adjustment	Remark
		Input	Output			
1	IF Adjustment	FM Ant SG=66dBμV	IC231 3-22Pin TP24,25	98.0MHz	XF233	0.0±0.05V
2	Cover	---	TP11 (H) TP12 (E)	87.5MHz	L2103	1.1±0.1V
				108.0MHz		< 9.0V
3	Tracking	FM Ant SG=8dBμV	TP13 (L) TP14 (R) TP15 (E)	90.0MHz	L2102	Max.
				106.1MHz		

EXPLODED VIEW (CABINET & CHASSIS MAIN UNIT)



PARTS LIST

PRODUCT SAFETY NOTICE

EACH PRECAUTION IN THIS MANUAL SHOULD BE FOLLOWED DURING SERVICING. COMPONENTS IDENTIFIED WITH THE IEC SYMBOL ⚠ IN THE PARTS LIST AND THE SCHEMATIC DIAGRAM DESIGNATED COMPONENTS IN WHICH SAFETY AND PERFORMANCE CAN BE OF SPECIAL SIGNIFICANCE. WHEN REPLACING A COMPONENT IDENTIFIED BY ⚠, USE ONLY THE REPLACEMENT PARTS DESIGNATED, OR PARTS WITH THE SAME RATINGS OF RESISTANCE, WATTAGE OR VOLTAGE THAT ARE DESIGNATED IN THE PARTS LIST IN THIS MANUAL. LEAKAGE-CURRENT OR RESISTANCE MEASUREMENTS MUST BE MADE TO DETERMINE THAT EXPOSED PARTS ARE ACCEPTABLY INSULATED FROM THE SUPPLY CIRCUIT BEFORE RETURNING THE PRODUCT TO THE CUSTOMER.

CAUTION : Regular type resistors and capacitors are not listed. To know those values, refer to the schematic diagram.
Regular type resistors are less than 1/4 W carbon type and 0 ohm chip resistors.
Regular type capacitors are less than 50 V and less than 1000 μF type of Ceramic type and Electrical type.

N.S.P : Not available as service parts.

MAIN UNIT PACKING & ACCESSORIES

REF.NO.	PART NO.	DESCRIPTION
	614 245 0055	ANTENNA
	645 073 6582	CABLE,AUDIO
	645 018 6080	CABLE,VIDEO
	614 333 5481	CARTON CASE(CA)
	614 333 7294	CARTON CASE(US)
	614 333 7300	CUSHION,PAD
	614 333 7317	CUSHION,PAD,LEFT
	614 333 7324	CUSHION,PAD,RIGHT
	614 333 5504	INSTRUCTION MANUAL(CA)
	614 333 0356	INSTRUCTION MANUAL(US)
	614 333 0349	INSTRUCTION SHEET, QUICK GUIDE(US)
	645 066 4410	POLY BAG-0250X0350*NC, INST MANUAL
	645 073 9668	POLY SHEET-0700X0450*NC,SET
	645 075 7587	REMOCON,RB-DWM4500MT
51	614 333 5344	ASSY,BOX,SPEAKER, FRONT SPEAKER L/R(CA)
51	614 333 5320	ASSY,BOX,SPEAKER, FRONT SPEAKER(US)
52	614 333 5375	ASSY,BOX,SPEAKER, CENTER SPEAKER(CA)
52	614 333 5351	ASSY,BOX,SPEAKER, CENTER SPEAKER(US)
	645 076 4424	CABLE,MULTI-POLE 25P,UL
or	645 077 8049	CABLE,MULTI-POLE 25P,W/O UL
	645 075 6528	CORE,CLAMP,SPEAKER WIRE
or	645 075 6528	CORE,CLAMP,SYSTEM CABLE

MAIN UNIT CABINET & CHASSIS

REF.NO.	PART NO.	DESCRIPTION
7	614 331 3502	HOLDER,DOOR
9	614 333 5450	ASSY,CABINET,FRONT(CA)
9	614 333 0264	ASSY,CABINET,FRONT(US)
10	614 331 3113	DEC,LIGHTING(CA)
10	614 333 3845	DEC,LIGHTING(US)
12	614 331 9078	ASSY,BUTTON,LEFT
13	614 331 9085	ASSY,BUTTON,RIGHT
14	614 327 5541	SPRING,COMP,FRONT PWB
15	614 331 3045	COVER,PICK-UP
16	614 332 9459	SPACER,MECHA
27	614 331 3496	GEAR,RACK
28	614 331 3588	SHAFT,GEAR
33	614 331 3168	MOUNTING,SOCKET
35	614 331 3267	SHIELD,TOP,TU
36	614 332 9244	COVER,SOCKET,TU
37	614 331 3243	SHIELD,BOTTOM
38	614 333 7164	CABINET,REAR
39	614 331 3236	STAND,ARM
40	614 331 3151	LID,SOCKET
41	614 331 9795	SPRING,WIRE,DVD,DVD MECHA
42	614 331 9160	ASSY,STAND
45	614 333 7508	ASSY,DOOR,LEFT
46	614 333 7515	ASSY,DOOR,RIGHT
47	614 330 6627	ASSY,MECHA,MSA10B BASE, MECHANISM ASSY
48	614 331 9146	ASSY,MOUNTING,MOTOR
49	614 331 9153	ASSY,MOUNTING,BOTTOM
50	614 331 9139	ASSY,MOUNTING, TOP

MAIN UNIT FIXING PARTS

REF.NO.	PART NO.	DESCRIPTION
Y01	411 161 7409	SCR S-TPG BIN 2X5,DOOR L/R
Y02	411 192 2404	SCR S-TPG BIN 2X4,HOLDER DOOR
Y03	411 191 4409	SCR S-TPG PAN 2.3X6, DEC WINDOW FRONT
Y04	411 187 2808	SCR S-TPG BIN 2.3X8,DEC LIGHTING
Y05	411 184 0906	SCR S-TPG BIN 2.3X10,FRONT PWB
Y06	411 188 3200	WASHER Z 2.6X10X0.5,DVD MECHA
Y07	411 184 0906	SCR S-TPG BIN 2.3X10,DVD MECHA
Y08	411 184 0906	SCR S-TPG BIN 2.3X10, DVD MECHA PWB
Y10	411 021 3404	SCR S-TPG BIN 3X10, ASSY MOUNT TOP
Y12	411 098 1006	SCR S-TPG BIN 3X6,MOUNT SOCKET
Y13	411 021 2605	SCR S-TPG BIN 2.6X6,SYSTEM
Y14	411 098 1006	SCR S-TPG BIN 3X6,SYSTEM PWB
Y15	411 098 1006	SCR S-TPG BIN 3X6,SHIELD TOP TU
Y16	411 098 1006	SCR S-TPG BIN 3X6, COVER TU/BOTTOM
Y17	411 098 1006	SCR S-TPG BIN 3X6, MAIN PWB/BOTTOM
Y18	411 187 2808	SCR S-TPG BIN 2.3X8,BOTTOM/REAR
Y19	411 098 1006	SCR S-TPG BIN 3X6,BOTTOM/REAR
Y21	412 070 1908	SPECIAL SCREW,ASSY STAND
Y22	411 184 0906	SCR S-TPG BIN 2.3X10, CABINET/REAR
Y23	411 191 4409	SCR S-TPG PAN 2.3X6, SPRING WIRE DVD
Y24	411 188 3200	WASHER Z 2.6X10X0.5, SPRING WIRE DVD

MAIN UNIT ELECTRICAL-PARTS

REF.NO.	PART NO.	DESCRIPTION
34	645 051 0649	CORE,FERRITE,SOCKET-MAIN
or	645 031 7637	CORE,FERRITE,SOCKET-MAIN
51	614 331 9443	ASSY,WIRE,FRONT-DOOR SW
52	614 331 9405	ASSY,WIRE,MAIN-FRONT
53	614 331 9450	ASSY,WIRE,FRONT-MOTOR
54	645 071 4467	FLEXIBLE FLAT CABLE,MAIN-FRONT
56	645 071 4481	FLEXIBLE FLAT CABLE, MECHA-INTERFACE
57	614 331 9429	ASSY,WIRE,MAIN-MECHA
58	645 071 4474	FLEXIBLE FLAT CABLE, MAIN-INTERFACE
60	645 071 4498	FLEXIBLE FLAT CABLE,MAIN-SOCKET
61	614 331 9412	ASSY,WIRE,MAIN-SOCKET

REF.NO.	PART NO.	DESCRIPTION
	645 051 0656	CORE,FERRITE,FRONT-MAIN
or	645 042 8999	CORE,FERRITE,FRONT-MAIN
	645 051 0649	CORE,FERRITE,INTERFACE-MAIN
or	645 031 7637	CORE,FERRITE,INTERFACE-MAIN
	614 333 7287	SHIELD,MPEG

MAIN UNIT FRONT P.W.BOARD ASSY

REF.NO.	PART NO.	DESCRIPTION
71	614 332 3853	ASSY,PWB,FRONT(Only initial)
BRC61	614 331 3038	COVER,LED
BRH61	614 331 3137	HOLDER,LCD
BRH62	614 331 3144	HOLDER,LED
BRH63	614 331 3144	HOLDER,LED
BRR61	614 327 7989	REFLECTOR,LCD
BRS61	614 327 1512	DEC,SHEET,LCD
CN601	645 061 4576	SOCKET,FPC 30P
CN602	614 310 2649	PLUG,8P
or	645 006 0953	PLUG,8P
CN620	614 310 2618	PLUG,5P
or	645 006 0922	PLUG,5P
CN621	614 310 2588	PLUG,2P
or	645 006 0908	PLUG,2P
D6100	407 244 8609	LED SELS6E14C-M
D6101	407 244 8609	LED SELS6E14C-M
D6103	407 244 8500	LED SELU2E10C-P
D6104	407 221 6505	ZENER DIODE KDZ5.6V
or	407 208 9703	ZENER DIODE UDZS5.6B
or	407 179 4608	ZENER DIODE UDZ5.6B
D6110	407 149 0807	DIODE 1SS355
D6111	407 149 0807	DIODE 1SS355
D6112	407 149 0807	DIODE 1SS355
D6114	407 149 0807	DIODE 1SS355
D6115	407 149 0807	DIODE 1SS355
D6116	407 149 0807	DIODE 1SS355
DS601	407 232 4002	PHOTO DIODE SPS-440-1-VG
IC601	410 564 1007	IC LC87F74C8A-F54Z5-E
or	410 567 8102	IC LC877B48A-55N9-E
IC602	410 448 8405	IC S524A40X21-SCT0
or	410 448 8504	IC S524A40X21-SCB0
or	410 429 7908	IC AT24C02N-10SI-2.7
IC603	409 645 0602	IC PST3640U
IC604	409 441 4507	IC TA7291S(M)
L6000	645 001 4550	INDUCTOR,10U K
LCD61	645 069 2529	LCD
Q6001	405 146 2107	TR KTC3875-Y
or	405 146 2206	TR KTC3875-GR
or	405 014 4509	TR 2SC2412K-R
or	405 011 1006	TR 2SC1623-L6
Q6100	405 177 7607	TR KRC111S
or	405 144 5209	TR DTC114TKA
Q6101	405 146 2107	TR KTC3875-Y
or	405 146 2206	TR KTC3875-GR
or	405 014 4509	TR 2SC2412K-R
or	405 011 1006	TR 2SC1623-L6
Q6102	405 177 7607	TR KRC111S
or	405 144 5209	TR DTC114TKA
Q6103	405 146 2107	TR KTC3875-Y
or	405 146 2206	TR KTC3875-GR
or	405 014 4509	TR 2SC2412K-R
or	405 011 1006	TR 2SC1623-L6
Q6104	405 177 7607	TR KRC111S
or	405 144 5209	TR DTC114TKA
Q6105	405 159 0503	TR KRC107S
or	405 141 5608	TR DTC114YKA
Q6200	405 159 0503	TR KRC107S
or	405 141 5608	TR DTC114YKA
Q6201	405 159 0503	TR KRC107S
or	405 141 5608	TR DTC114YKA
Q6203	405 159 0503	TR KRC107S
or	405 141 5608	TR DTC114YKA
R6200	⚠ 402 099 5001	FUSIBLE RES 4.7 JA 1/4W
S6080	645 006 5958	SWITCH,PUSH 1P-1T
or	614 220 5471	SWITCH,TACT
or	614 240 1002	SWITCH,TACT
S6081	645 006 5958	SWITCH,PUSH 1P-1T
or	614 220 5471	SWITCH,TACT
or	614 240 1002	SWITCH,TACT
S6082	645 006 5958	SWITCH,PUSH 1P-1T
or	614 220 5471	SWITCH,TACT
or	614 240 1002	SWITCH,TACT
S6083	645 006 5958	SWITCH,PUSH 1P-1T
or	614 220 5471	SWITCH,TACT
or	614 240 1002	SWITCH,TACT
S6090	645 006 5958	SWITCH,PUSH 1P-1T
or	614 220 5471	SWITCH,TACT
or	614 240 1002	SWITCH,TACT
S6091	645 006 5958	SWITCH,PUSH 1P-1T
or	614 220 5471	SWITCH,TACT
or	614 240 1002	SWITCH,TACT
S6092	645 006 5958	SWITCH,PUSH 1P-1T
or	614 220 5471	SWITCH,TACT
or	614 240 1002	SWITCH,TACT
S6093	645 006 5958	SWITCH,PUSH 1P-1T
or	614 220 5471	SWITCH,TACT
or	614 240 1002	SWITCH,TACT
S6094	645 006 5958	SWITCH,PUSH 1P-1T
or	614 220 5471	SWITCH,TACT
or	614 240 1002	SWITCH,TACT
SG600	⚠ 645 055 3202	SURGE-ABSORBER,SURG_X
X6100	645 059 1570	OSC,CERAMIC 8.00MHZ
or	645 053 4393	OSC,CERAMIC 8.00MHZ

MAIN UNIT INTERFACE P.W.BOARD ASSY

REF.NO.	PART NO.	DESCRIPTION
72	614 331 9207	ASSY,PWB,INTERFACE(Only initial)
CN661	645 069 5032	SOCKET,FPC 24P
CN662	645 069 5032	SOCKET,FPC 24P
LUG03	645 023 8987	FIXER
LUG04	645 023 8987	FIXER

MAIN UNIT DOOR SW P.W.BOARD ASSY

REF.NO.	PART NO.	DESCRIPTION
73	614 331 0471	ASSY,PWB,DOOR SW(Only initial)
CN650	614 310 2618	PLUG,5P
or	645 006 0922	PLUG,5P
S6500	645 070 9012	SWITCH,MICRO 1P-1T
S6501	645 070 9012	SWITCH,MICRO 1P-1T
S6502	645 070 9012	SWITCH,MICRO 1P-1T
S6503	645 070 9012	SWITCH,MICRO 1P-1T

MAIN UNIT MOTOR P.W.BOARD ASSY

REF.NO.	PART NO.	DESCRIPTION
74	614 332 3846	ASSY,PWB,MOTOR(Only initial)
CN671	614 310 2588	PLUG,2P
or	645 006 0908	PLUG,2P

MAIN UNIT SOCKET P.W.BOARD ASSY

REF.NO.	PART NO.	DESCRIPTION
75	614 331 0495	ASSY,PWB,SOCKET(Only initial)
CN302	645 063 8718	SOCKET,FPC 22P
CN351	645 069 2451	SOCKET,MULTI-POLE 25P
CN391	614 310 2618	PLUG,5P
or	645 006 0922	PLUG,5P
L3500	645 034 7887	INDUCTOR,1000 OHM
or	645 020 1813	INDUCTOR,1000 OHM
or	645 045 7869	IMPEDANCE,1000 OHM P
L3501	645 034 7887	INDUCTOR,1000 OHM

PARTS LIST

REF.NO.	PART NO.	DESCRIPTION
or	645 020 1813	INDUCTOR,1000 OHM
or	645 045 7869	IMPEDANCE,1000 OHM P
L3502	645 034 7887	INDUCTOR,1000 OHM
or	645 020 1813	INDUCTOR,1000 OHM
or	645 045 7869	IMPEDANCE,1000 OHM P
L3503	645 034 7887	INDUCTOR,1000 OHM
or	645 020 1813	INDUCTOR,1000 OHM
or	645 045 7869	IMPEDANCE,1000 OHM P
L3504	645 034 7887	INDUCTOR,1000 OHM
or	645 020 1813	INDUCTOR,1000 OHM
or	645 045 7869	IMPEDANCE,1000 OHM P
L3505	645 034 7887	INDUCTOR,1000 OHM
or	645 020 1813	INDUCTOR,1000 OHM
or	645 045 7869	IMPEDANCE,1000 OHM P
L3506	645 034 7887	INDUCTOR,1000 OHM
or	645 020 1813	INDUCTOR,1000 OHM
or	645 045 7869	IMPEDANCE,1000 OHM P
L3507	645 034 7887	INDUCTOR,1000 OHM
or	645 020 1813	INDUCTOR,1000 OHM
or	645 045 7869	IMPEDANCE,1000 OHM P
L3508	645 034 7887	INDUCTOR,1000 OHM
or	645 020 1813	INDUCTOR,1000 OHM
or	645 045 7869	IMPEDANCE,1000 OHM P
L3509	645 020 1905	INDUCTOR,120 OHM
L3510	645 020 1905	INDUCTOR,120 OHM
L3511	645 020 1905	INDUCTOR,120 OHM
L3512	645 020 1905	INDUCTOR,120 OHM
L3515	645 034 7887	INDUCTOR,1000 OHM
or	645 020 1813	INDUCTOR,1000 OHM
or	645 045 7869	IMPEDANCE,1000 OHM P
L3516	645 034 7887	INDUCTOR,1000 OHM
or	645 020 1813	INDUCTOR,1000 OHM
or	645 045 7869	IMPEDANCE,1000 OHM P
L3517	645 034 7887	INDUCTOR,1000 OHM
or	645 020 1813	INDUCTOR,1000 OHM
or	645 045 7869	IMPEDANCE,1000 OHM P
L3518	645 020 2131	INDUCTOR,600 OHM

MAIN UNIT MAIN P.W.BOARD ASSY

REF.NO.	PART NO.	DESCRIPTION
76	614 332 3860	ASSY,PWB,MAIN(Only initial)
C2457	403 259 0508	NP-ELECT 1U M 50V
C2902	403 215 2201	CERAMIC 0.01U K 50V
C4901	⚠ 403 373 9302	ELECT 100U M 25V
C4904	⚠ 403 373 8305	ELECT 100U M 10V
CN110	614 310 2496	PLUG,8P
or	645 005 8134	PLUG,8P
CN120	645 037 6207	SOCKET,FFC 24P
or	645 057 2951	SOCKET,FPC 24P
CN130	614 310 2472	PLUG,6P
or	645 005 8127	PLUG,6P
CN201	645 057 1893	TERMINAL,TUNER
CN401	645 061 4446	SOCKET,FPC 30P
CN402	645 063 8695	SOCKET,FPC 22P
CN451	645 053 5215	JACK,PHONE D3.6
CN491	614 310 2465	PLUG,5P
or	645 005 9292	PLUG,5P
D1200	407 221 1807	DIODE KDS120E
or	407 179 1805	DIODE DAP222
D2101	407 241 2907	VARACTOR DI SVC230
D2102	407 241 2907	VARACTOR DI SVC230
D2104	407 149 0807	DIODE 1SS355
D2301	407 099 5402	ZENER DIODE MTZJ6.2B
D2451	407 149 0807	DIODE 1SS355
D2452	407 153 7502	ZENER DIODE GZS3.0B
D2455	407 149 0807	DIODE 1SS355
D4060	407 012 4406	DIODE 1SS133
D4901	⚠ 408 044 6208	DIODE SB240L 19C2-105
D4902	407 063 9108	ZENER DIODE MTZJ6.8B
D4903	407 063 9108	ZENER DIODE MTZJ6.8B
D4904	407 063 9108	ZENER DIODE MTZJ6.8B
D4905	407 099 5204	ZENER DIODE MTZJ5.1B
D4931	407 099 6805	ZENER DIODE MTZJ13B
IC110	409 607 8004	IC ZR36768
IC120	409 607 8103	IC ZR36707TQC
IC130	⚠ 409 438 7207	IC BA5954FP
IC132	409 168 9106	IC BA10358F
or	409 528 3805	IC NJM12904M
IC141	410 530 7804	IC M12L16161A-7TG
or	410 530 7705	IC EM636165TS-7G
or	410 530 7903	IC HY57V161610ETP-7
IC142	410 530 7804	IC M12L16161A-7TG
or	410 530 7705	IC EM636165TS-7G
or	410 530 7903	IC HY57V161610ETP-7
IC160	409 540 1605	IC LC708746V
IC161	409 543 6409	IC KRX101U
IC171	409 505 0803	IC PST3627U
IC172	410 448 8405	IC S524A40X21-SCT0
or	410 448 8504	IC S524A40X21-SCB0
or	410 429 7908	IC AT24C02N-10SI-2.7
IC211	409 016 0200	IC LA1186N-AUDIO
IC231	409 474 3201	IC LA1844ML
IC241	409 439 4502	IC LC72121M-D
IC401	409 607 8202	IC NJW1153FG1
IC402	409 426 1903	IC KIA4558F
or	409 039 7804	IC NJM4558M
IC403	409 542 9609	IC NJM2058V
IC404	409 357 2901	IC NJM4556AL
IC405	409 542 9609	IC NJM2058V
IC406	409 543 6409	IC KRX101U
IC490	⚠ 409 609 3908	IC SI-8050RD
IC491	⚠ 409 568 4602	IC PQ05DZ1U
IC492	⚠ 409 612 1403	IC PQ050DZ01Z
IC493	⚠ 409 608 0908	IC UPC37M31TJ-AZ
IC494	⚠ 409 561 6801	IC PQ12DZ5
IC810	410 531 3201	IC ASSY (IC SST39VF800A-70-4C-EK,D)
L1101	645 034 7887	INDUCTOR,1000 OHM
or	645 020 1813	INDUCTOR,1000 OHM
or	645 045 7869	IMPEDANCE,1000 OHM P
L1102	645 034 7887	INDUCTOR,1000 OHM
or	645 020 1813	INDUCTOR,1000 OHM
or	645 045 7869	IMPEDANCE,1000 OHM P
L1103	645 034 7887	INDUCTOR,1000 OHM
or	645 020 1813	INDUCTOR,1000 OHM
or	645 045 7869	IMPEDANCE,1000 OHM P
L1104	645 034 7887	INDUCTOR,1000 OHM
or	645 020 1813	INDUCTOR,1000 OHM
or	645 045 7869	IMPEDANCE,1000 OHM P
L1105	645 034 7887	INDUCTOR,1000 OHM
or	645 020 1813	INDUCTOR,1000 OHM
or	645 045 7869	IMPEDANCE,1000 OHM P
L1106	645 034 7887	INDUCTOR,1000 OHM
or	645 020 1813	INDUCTOR,1000 OHM
or	645 045 7869	IMPEDANCE,1000 OHM P
L1107	645 034 7887	INDUCTOR,1000 OHM
or	645 020 1813	INDUCTOR,1000 OHM
or	645 045 7869	IMPEDANCE,1000 OHM P
L1108	645 034 7887	INDUCTOR,1000 OHM
or	645 020 1813	INDUCTOR,1000 OHM
or	645 045 7869	IMPEDANCE,1000 OHM P
L1115	645 020 2131	INDUCTOR,600 OHM
L1116	645 020 2131	INDUCTOR,600 OHM
L1117	645 020 2131	INDUCTOR,600 OHM
L1118	645 020 1851	INDUCTOR,1000 OHM
L1119	645 020 1851	INDUCTOR,1000 OHM
L1120	645 020 2131	INDUCTOR,600 OHM
L1121	645 020 2131	INDUCTOR,600 OHM

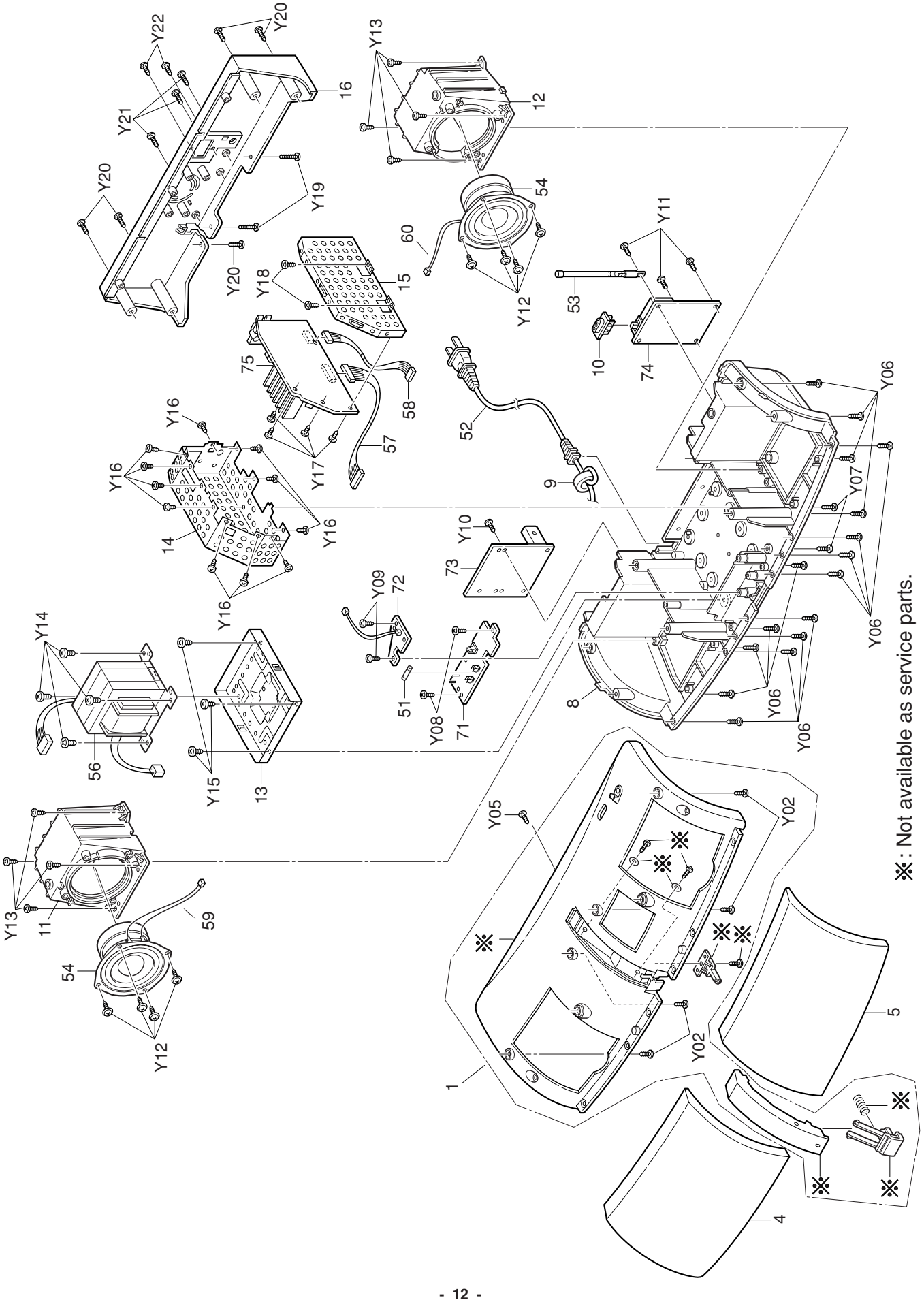
PARTS LIST

REF.NO.	PART NO.	DESCRIPTION
L1122	645 020 2131	INDUCTOR,600 OHM
L1130	645 019 0988	INDUCTOR,1000 OHM
or	645 020 2001	INDUCTOR,1000 OHM
L1131	645 034 7887	INDUCTOR,1000 OHM
or	645 020 1813	INDUCTOR,1000 OHM
or	645 045 7869	IMPEDANCE,1000 OHM P
L1132	645 034 7887	INDUCTOR,1000 OHM
or	645 020 1813	INDUCTOR,1000 OHM
or	645 045 7869	IMPEDANCE,1000 OHM P
L1133	645 034 7887	INDUCTOR,1000 OHM
or	645 020 1813	INDUCTOR,1000 OHM
or	645 045 7869	IMPEDANCE,1000 OHM P
L1201	645 034 7887	INDUCTOR,1000 OHM
or	645 020 1813	INDUCTOR,1000 OHM
or	645 045 7869	IMPEDANCE,1000 OHM P
L1202	645 020 1851	INDUCTOR,1000 OHM
L1203	645 034 7887	INDUCTOR,1000 OHM
or	645 020 1813	INDUCTOR,1000 OHM
or	645 045 7869	IMPEDANCE,1000 OHM P
L1204	645 020 1851	INDUCTOR,1000 OHM
L1205	645 020 1967	INDUCTOR,75 OHM
L1410	645 034 7887	INDUCTOR,1000 OHM
or	645 020 1813	INDUCTOR,1000 OHM
or	645 045 7869	IMPEDANCE,1000 OHM P
L1420	645 034 7887	INDUCTOR,1000 OHM
or	645 020 1813	INDUCTOR,1000 OHM
or	645 045 7869	IMPEDANCE,1000 OHM P
L1600	645 034 7887	INDUCTOR,1000 OHM
or	645 020 1813	INDUCTOR,1000 OHM
or	645 045 7869	IMPEDANCE,1000 OHM P
L1601	645 034 7887	INDUCTOR,1000 OHM
or	645 020 1813	INDUCTOR,1000 OHM
or	645 045 7869	IMPEDANCE,1000 OHM P
L2102	645 018 0163	COIL,AIR
L2103	645 018 0255	COIL,AIR
L2104	645 002 1534	INDUCTOR,8.2U K
L2451	645 001 4581	INDUCTOR,100U K
L4080	645 001 4550	INDUCTOR,10U K
L4081	645 001 4550	INDUCTOR,10U K
L4082	645 001 4550	INDUCTOR,10U K
L4181	645 001 4550	INDUCTOR,10U K
L4281	645 001 4550	INDUCTOR,10U K
L4900	⚠ 645 048 4469	INDUCTOR,22U
L4901	⚠ 645 048 4469	INDUCTOR,22U
L4902	⚠ 645 069 3977	INDUCTOR,165U
L4903	⚠ 645 048 4469	INDUCTOR,22U
L4904	645 058 3315	INDUCTOR,1U M
L4905	645 034 7887	INDUCTOR,1000 OHM
or	645 020 1813	INDUCTOR,1000 OHM
or	645 045 7869	IMPEDANCE,1000 OHM P
LUG01	645 023 8987	FIXER
LUG02	645 023 8987	FIXER
Q1200	405 158 5905	TR KTA1505-Y
or	405 035 5509	TR 2SA1036K-R
Q1201	405 158 5905	TR KTA1505-Y
or	405 035 5509	TR 2SA1036K-R
Q1202	405 146 2107	TR KTC3875-Y
or	405 146 2206	TR KTC3875-GR
or	405 014 4509	TR 2SC2412K-R
or	405 011 1006	TR 2SC1623-L6
Q1204	405 146 2107	TR KTC3875-Y
or	405 146 2206	TR KTC3875-GR
or	405 014 4509	TR 2SC2412K-R
or	405 011 1006	TR 2SC1623-L6
Q1205	405 146 2107	TR KTC3875-Y
or	405 146 2206	TR KTC3875-GR
or	405 014 4509	TR 2SC2412K-R
or	405 011 1006	TR 2SC1623-L6
Q1600	405 159 0503	TR KRC107S
or	405 141 5608	TR DTC114YKA
Q2201	405 151 4202	TR KTC3193-O
or	405 151 4103	TR KTC3193-Y
or	405 016 0806	TR 2SC2839-E
Q2451	405 151 6107	TR KRA107S
or	405 141 5707	TR DTA114YKA
Q4020	405 151 6107	TR KRA107S
or	405 141 5707	TR DTA114YKA
Q4050	405 151 6107	TR KRA107S
or	405 141 5707	TR DTA114YKA
Q4125	405 166 7007	TR KTD1304
or	405 021 2307	TR 2SD1048-X6
or	405 021 2406	TR 2SD1048-X7
Q4131	405 166 7007	TR KTD1304
or	405 021 2307	TR 2SD1048-X6
or	405 021 2406	TR 2SD1048-X7
Q4151	405 166 7007	TR KTD1304
or	405 021 2307	TR 2SD1048-X6
or	405 021 2406	TR 2SD1048-X7
Q4161	405 166 7007	TR KTD1304
or	405 021 2307	TR 2SD1048-X6
or	405 021 2406	TR 2SD1048-X7
Q4180	405 166 7007	TR KTD1304
or	405 021 2307	TR 2SD1048-X6
or	405 021 2406	TR 2SD1048-X7
Q4181	405 166 7007	TR KTD1304
or	405 021 2307	TR 2SD1048-X6
or	405 021 2406	TR 2SD1048-X7
Q4225	405 166 7007	TR KTD1304
or	405 021 2307	TR 2SD1048-X6
or	405 021 2406	TR 2SD1048-X7
Q4231	405 166 7007	TR KTD1304
or	405 021 2307	TR 2SD1048-X6
or	405 021 2406	TR 2SD1048-X7
Q4251	405 166 7007	TR KTD1304
or	405 021 2307	TR 2SD1048-X6
or	405 021 2406	TR 2SD1048-X7
Q4261	405 166 7007	TR KTD1304
or	405 021 2307	TR 2SD1048-X6
or	405 021 2406	TR 2SD1048-X7
Q4280	405 166 7007	TR KTD1304
or	405 021 2307	TR 2SD1048-X6
or	405 021 2406	TR 2SD1048-X7
Q4281	405 166 7007	TR KTD1304
or	405 021 2307	TR 2SD1048-X6
or	405 021 2406	TR 2SD1048-X7
Q4331	405 166 7007	TR KTD1304
or	405 021 2307	TR 2SD1048-X6
or	405 021 2406	TR 2SD1048-X7
Q4431	405 166 7007	TR KTD1304
or	405 021 2307	TR 2SD1048-X6
or	405 021 2406	TR 2SD1048-X7
Q4531	405 166 7007	TR KTD1304
or	405 021 2307	TR 2SD1048-X6
or	405 021 2406	TR 2SD1048-X7
Q4631	405 166 7007	TR KTD1304
or	405 021 2307	TR 2SD1048-X6
or	405 021 2406	TR 2SD1048-X7
Q4931	⚠ 405 141 3604	TR KTA1273-Y
or	⚠ 405 009 5207	TR 2SB927-S
or	⚠ 405 009 5306	TR 2SB927-T
R4905	⚠ 402 095 4206	RESISTOR 150 J- 1W
R4906	⚠ 402 095 4206	RESISTOR 150 J- 1W
R4909	⚠ 402 085 2601	RESISTOR 2.2 J- 2W
S4701	645 043 7250	SWITCH,SLIDE 2P-2TX4
SG111	⚠ 645 055 3202	SURGE-ABSORBER,SURG_X
SG112	⚠ 645 055 3202	SURGE-ABSORBER,SURG_X
SG113	⚠ 645 055 3202	SURGE-ABSORBER,SURG_X
SG114	⚠ 645 055 3202	SURGE-ABSORBER,SURG_X

PARTS LIST

REF.NO.		PART NO.	DESCRIPTION
SG115	⚠	645 055 3202	SURGE-ABSORBER,SURG_X
SG116	⚠	645 055 3202	SURGE-ABSORBER,SURG_X
SG117	⚠	645 055 3202	SURGE-ABSORBER,SURG_X
SG120	⚠	645 055 3202	SURGE-ABSORBER,SURG_X
SG130	⚠	645 055 3202	SURGE-ABSORBER,SURG_X
SG160	⚠	645 055 3202	SURGE-ABSORBER,SURG_X
SG161	⚠	645 055 3202	SURGE-ABSORBER,SURG_X
SG165	⚠	645 055 3202	SURGE-ABSORBER,SURG_X
SG201		645 055 3202	SURGE-ABSORBER
SG408	⚠	645 055 3202	SURGE-ABSORBER,SURG_X
SG409	⚠	645 055 3202	SURGE-ABSORBER,SURG_X
SG418	⚠	645 055 3202	SURGE-ABSORBER,SURG_X
SG428	⚠	645 055 3202	SURGE-ABSORBER,SURG_X
SH201		614 325 5796	SHIELD,FM ANT
VR230		645 003 5586	VR,SEMI,22K N
X1100		645 045 8293	OSC,CRYSTAL 27.000MHZ
X2451		645 023 4965	OSC,CRYSTAL 7.2MHZ
XF211		645 026 2975	FILTER,BP 108MHZ
or		614 252 1045	FILTER,LC
or		645 059 0047	FILTER,BP
XF221		645 010 7665	CERAMIC FILTER 10.70MHZ
or		645 054 1223	CERAMIC FILTER 10.70MHZ
or		614 231 0199	FILTER
or		614 030 5074	I.F FILTER
XF222		645 010 7665	CERAMIC FILTER 10.70MHZ
or		645 054 1223	CERAMIC FILTER 10.70MHZ
or		614 231 0199	FILTER
or		614 030 5074	I.F FILTER
XF233		645 039 9923	TRANS,IF 10.7MHZ
or		645 040 9981	TRANS,IF 10.7MHZ

EXPLODED VIEW (REAR SPEAKER)



PARTS LIST

PRODUCT SAFETY NOTICE

EACH PRECAUTION IN THIS MANUAL SHOULD BE FOLLOWED DURING SERVICING. COMPONENTS IDENTIFIED WITH THE IEC SYMBOL ⚠ IN THE PARTS LIST AND THE SCHEMATIC DIAGRAM DESIGNATED COMPONENTS IN WHICH SAFETY AND PERFORMANCE CAN BE OF SPECIAL SIGNIFICANCE. WHEN REPLACING A COMPONENT IDENTIFIED BY ⚠, USE ONLY THE REPLACEMENT PARTS DESIGNATED, OR PARTS WITH THE SAME RATINGS OF RESISTANCE, WATTAGE OR VOLTAGE THAT ARE DESIGNATED IN THE PARTS LIST IN THIS MANUAL. LEAKAGE-CURRENT OR RESISTANCE MEASUREMENTS MUST BE MADE TO DETERMINE THAT EXPOSED PARTS ARE ACCEPTABLY INSULATED FROM THE SUPPLY CIRCUIT BEFORE RETURNING THE PRODUCT TO THE CUSTOMER.

CAUTION : Regular type resistors and capacitors are not listed. To know those values, refer to the schematic diagram.
Regular type resistors are less than 1/4 W carbon type and 0 ohm chip resistors.
Regular type capacitors are less than 50 V and less than 1000 μF type of Ceramic type and Electrical type.

N.S.P : Not available as service parts.

REAR SPEAKAER PACKING

REF.NO.	PART NO.	DESCRIPTION
	614 333 7331	CUSHION,LEFT,REAR SP
	614 333 7348	CUSHION,RIGHT,REAR SP
	614 188 3793	INSPECTION SHEET
	645 075 2315	POLY SHEET-0150X0150*NC, ANTENNA
	645 065 8846	POLY SHEET-0650X0650*NC

REAR SPEAKER CABINET & CHASSIS

REF.NO.	PART NO.	DESCRIPTION
1	614 332 8216	ASSY,CABINET,TOP
4	614 332 8292	ASSY,NET,LEFT(US)
4	614 333 8543	ASSY,NET,LEFT(CA)
5	614 332 8308	ASSY,NET,RIGHT(US)
5	614 333 8550	ASSY,NET,RIGHT(CA)
8	614 332 8254	ASSY,CABINET,BOTTOM
10	614 332 3310	COVER,SWITCH
11	614 332 1804	MOUNTING,SP,LEFT
12	614 332 1811	MOUNTING,SP,RIGHT
13	614 332 1781	HOLDER,POWER,TRANS
14	614 332 1842	SHIELD,AMP,PWB
15	614 332 1798	MOUNTING,AMP,PWB
16	614 333 5160	ASSY,PANEL REAR(CA)
16	614 332 1828	PANEL,REAR(US)

REAR SPEAKER FIXING PARTS

REF.NO.	PART NO.	DESCRIPTION
Y02	411 021 3404	SCR S-TPG BIN 3X10, CABINET TOP-GRILLE
Y05	411 021 3404	SCR S-TPG BIN 3X10
Y06	411 098 0801	SCR S-TPG BIN 3X14, CABINET TOP-CABINET BOTT
Y07	411 098 0801	SCR S-TPG BIN 3X14, CABINET BOTTOM-MOUNTING
Y08	411 021 3404	SCR S-TPG BIN 3X10, CABINET BOTTOM- PWB DG
Y09	411 021 3404	SCR S-TPG BIN 3X10, CABINET BOTTOM- PWB LED
Y10	411 021 3404	SCR S-TPG BIN 3X10, CABINET BOTTOM- PWB DG
Y11	411 021 3404	SCR S-TPG BIN 3X10, CABINET BOTTOM- PWB ANNT
Y12	411 193 8603	SCR S-TPG BRZ+FLG 3X10, SPEAKER-MG SPEAKR
Y13	411 021 3404	SCR S-TPG BIN 3X10, CABINET BOTTOM-MG SPEAKR
Y14	411 027 3507	SCR S-TPG BIN 4X6,HOLDER P.T-P.T
Y15	411 021 7204	SCR S-TPG BIN 4X10, CABINET BOTTOM-HOLDER P.
Y16	411 098 4205	SCR S-TPG BIN 3X8, SHIELD-MOUNTING PWB AMP
Y17	411 098 4205	SCR S-TPG BIN 3X8, PWB AMP-MOUNTING PWB AM
Y18	411 021 3404	SCR S-TPG BIN 3X10, CABINET BOTTOM-MOUNTING
Y19	411 123 9106	SCR S-TPG BIN 3X20,P.REAR (BOTTOM)
Y20	411 021 3404	SCR S-TPG BIN 3X10,P.REAR (BOTTOM)
Y21	411 098 0801	SCR S-TPG BIN 3X14,P.REAR
Y22	411 021 3404	SCR S-TPG BIN 3X10,P.REAR -ELEC

REAR SPEAKER ELECTRICAL-PARTS

REF.NO.	PART NO.	DESCRIPTION
9	645 051 0656	CORE,FERRITE,FOR DG-MAIN
or	645 042 8999	CORE,FERRITE,FOR DG-MAIN
51	⚠ 423 027 4903	FUSE 125V 2A
52	⚠ 645 066 9965	CORD,POWER-1.76MK
53	645 071 5518	ANTENNA,ROD
54	645 072 7504	SPEAKER,4
or	645 076 7210	SPEAKER,4
56	⚠ 645 072 1526	TRANS,POWER
57	614 332 1927	ASSY,WIRE RX-DG
58	614 332 1934	ASSY,WIRE
59	614 332 1958	ASSY,WIRE,LCH
60	614 332 9947	ASSY,WIRE,RCH
74	645 071 4559	UNIT,WIRELESS RECEIVER
	645 051 0656	CORE,FERRITE
	645 042 8999	CORE,FERRITE

REAR SPEAKER POWER SW P.W.BOARD ASSY

REF.NO.	PART NO.	DESCRIPTION
71	614 332 8117	ASSY,PWB,SW,POWER SW(Only initial)
C3900	⚠ 403 349 3303	CERAMIC 0.01U M 250V
or	⚠ 403 366 7803	CERAMIC 0.01U M 250V
C3901	⚠ 404 088 7409	MT-POLYEST 0.1U K 250V
or	⚠ 404 080 8206	MT-POLYEST 0.1U K 250V
or	⚠ 403 376 2409	MT-POLYEST 0.1U M 250V
CN390	⚠ 645 005 9315	PLUG,2P
FPC01	645 006 4760	HOLDER,FUSE
or	645 031 7903	HOLDER,FUSE
FPC02	645 006 4760	HOLDER,FUSE
or	645 031 7903	HOLDER,FUSE
L3900	⚠ 645 038 7364	INDUCTOR,70U
R3900	⚠ 402 087 3408	RESISTOR 3.3M J- 1/2W
or	⚠ 402 099 6206	RESISTOR 3.3M J- 1/2W
or	⚠ 402 078 9501	CARBON 3.3M J- 1/2W
or	⚠ 402 078 8108	CARBON 3.3M J- 1/2W
S3900	⚠ 645 072 1496	SWITCH,PUSH POWER
WR390	⚠ 614 017 6964	TERMINAL BOARD
WR391	⚠ 614 017 6964	TERMINAL BOARD

REAR SPEAKER LED P.W.BOARD ASSY

REF.NO.	PART NO.	DESCRIPTION
72	614 332 1583	ASSY,PWB,LED(Only initial)
CN370	614 035 4911	SOCKET,DIP 2P
CN372	614 332 1941	ASSY,WIRE
D3700	407 245 2309	LED SMLA12BC4T

REAR SPEAKER DG P.W.BOARD ASSY

REF.NO.	PART NO.	DESCRIPTION
73	614 332 8100	ASSY,PWB,DG(Only initial)
C3005	403 325 2207	ELECT 3300U M 35V
C3006	403 325 2207	ELECT 3300U M 35V
C3011	403 325 0302	ELECT 2200U M 25V
C3012	403 323 5408	ELECT 1000U M 25V
CN301	645 006 1998	PLUG,5P
CN302	614 310 2526	PLUG,11P
or	645 005 8165	PLUG,11P
D3001	⚠ 407 196 5800	DIODE 1N5402BD82
D3002	⚠ 407 196 5800	DIODE 1N5402BD82
D3003	⚠ 407 196 5800	DIODE 1N5402BD82
D3004	⚠ 407 196 5800	DIODE 1N5402BD82
D3005	⚠ 407 098 3300	DIODE RL153-BF-S2
D3006	⚠ 407 098 3300	DIODE RL153-BF-S2
D3007	⚠ 407 097 8009	DIODE MPG06G
D3008	⚠ 407 097 8009	DIODE MPG06G
D3100	407 099 6805	ZENER DIODE MTZJ13B
D3101	407 099 5303	ZENER DIODE MTZJ5.6B
D3102	407 099 6805	ZENER DIODE MTZJ13B
HS310	614 331 8750	HEAT SINK
IC310	⚠ 409 605 0604	IC KIA7810API
PR301	⚠ 423 031 8607	FUSE 125V 10A
or	⚠ 645 066 9774	PROTECTOR,10A 125V
PR302	⚠ 423 031 8607	FUSE 125V 10A
or	⚠ 645 066 9774	PROTECTOR,10A 125V
PR303	⚠ 423 031 8706	FUSE 125V 7A
or	⚠ 645 066 9859	PROTECTOR,7A 125V
PR304	⚠ 423 031 8706	FUSE 125V 7A
or	⚠ 645 066 9859	PROTECTOR,7A 125V
PR310	⚠ 645 066 9651	PROTECTOR,0.25A 125V
or	⚠ 645 042 2522	PROTECTOR,0.25A 125V
PR311	⚠ 645 066 9644	PROTECTOR,0.2A 125V
or	⚠ 645 042 2515	PROTECTOR,0.2A 125V
PR312	⚠ 645 066 9644	PROTECTOR,0.2A 125V
or	⚠ 645 042 2515	PROTECTOR,0.2A 125V
Q3100	405 141 3208	TR KTC3198-Y
or	405 141 3307	TR KTC3198-GR
or	405 019 2708	TR 2SC536-F-NP
or	405 019 3804	TR 2SC536-G-NP
Q3101	405 141 3505	TR KTA1266-Y
or	405 141 3406	TR KTA1266-GR
or	405 004 4502	TR 2SA608-F-NP
or	405 004 5004	TR 2SA608-G-NP
Q3102	405 141 3208	TR KTC3198-Y
or	405 141 3307	TR KTC3198-GR
or	405 019 2708	TR 2SC536-F-NP
or	405 019 3804	TR 2SC536-G-NP
SCR31	411 098 1006	SCR S-TPG BIN 3X6

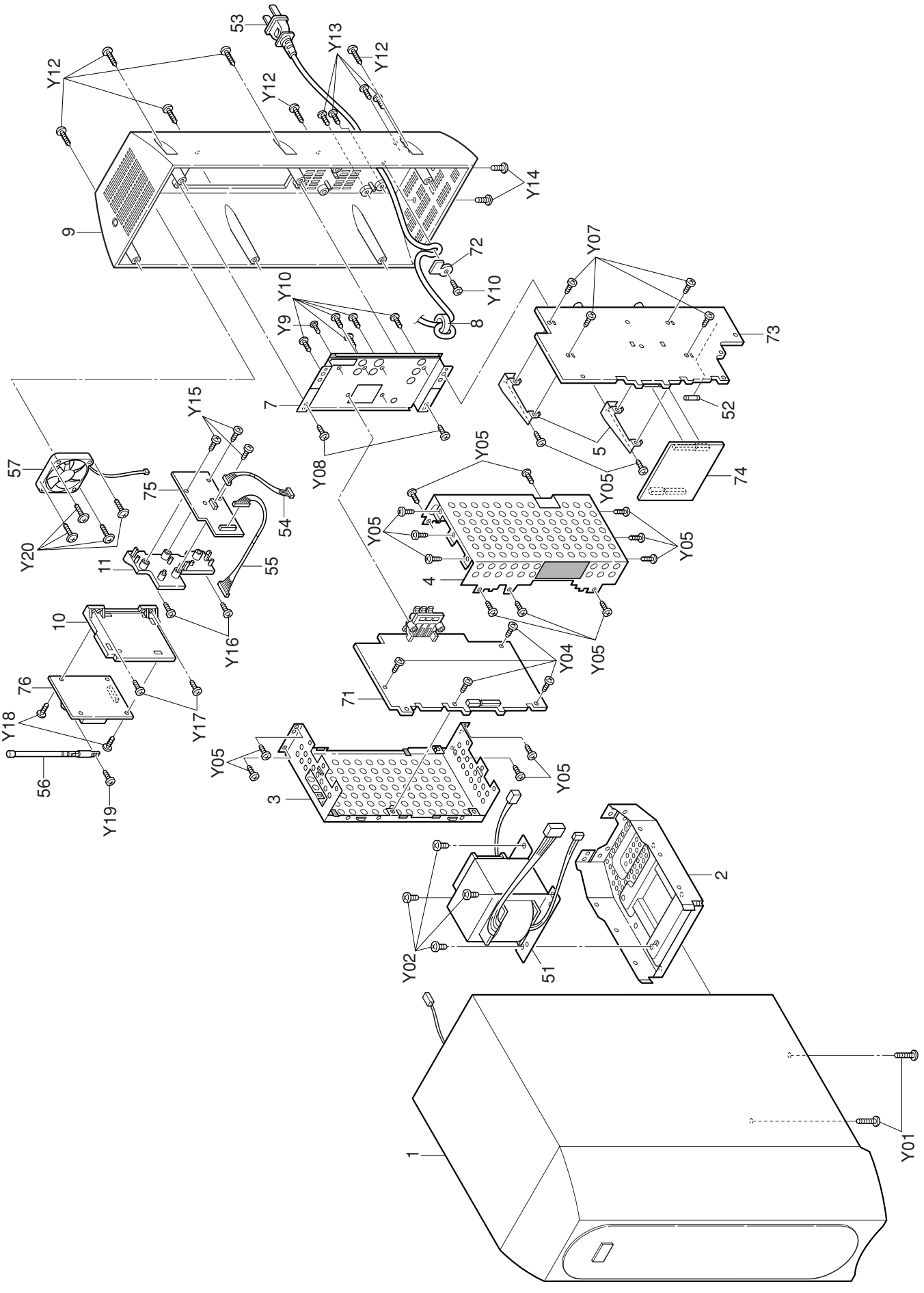
REAR SPEAKER POWER P.W.BOARD ASSY

REF.NO.	PART NO.	DESCRIPTION
75	614 332 1576	ASSY,PWB,POWER(Only initial)
C3405	403 185 0306	MT-POLYEST 0.68U J 50V
C3406	403 185 0306	MT-POLYEST 0.68U J 50V
C3407	403 185 0306	MT-POLYEST 0.68U J 50V
C3505	403 185 0306	MT-POLYEST 0.68U J 50V
C3506	403 185 0306	MT-POLYEST 0.68U J 50V
C3507	403 185 0306	MT-POLYEST 0.68U J 50V
C3604	403 374 0516	ELECT 1000U M 35V
C3605	403 390 5707	CERAMIC 0.1U K 50V
C3606	403 386 2406	CERAMIC 0.1U K 100V
C3607	403 374 0516	ELECT 1000U M 35V
CN322	614 310 2298	PLUG,2P
or	645 004 2683	PLUG,2P
CN330	645 072 9898	JACK,PHONE D3.6
CN331	614 310 2632	PLUG,7P
or	645 006 0946	PLUG,7P
CN332	614 310 2670	PLUG,11P
or	645 006 0984	PLUG,11P
CN341	645 006 1875	PLUG,2P
CN342	645 072 1489	TERMINAL,SPEAKER 2P
CN351	645 006 1875	PLUG,2P
D3201	407 099 6102	ZENER DIODE MTZJ10B
D3202	407 149 0807	DIODE 1SS355
D3300	407 149 0807	DIODE 1SS355
D3301	407 149 0807	DIODE 1SS355
D3400	407 241 7704	DIODE US1D-LF
D3401	407 241 7704	DIODE US1D-LF
D3402	407 241 7704	DIODE US1D-LF
D3410	407 149 0807	DIODE 1SS355
D3411	407 149 0807	DIODE 1SS355
D3500	407 241 7704	DIODE US1D-LF
D3501	407 241 7704	DIODE US1D-LF
D3502	407 241 7704	DIODE US1D-LF
D3600	407 241 7704	DIODE US1D-LF
HS300	614 328 5038	HEAT SINK
IC321	409 575 1908	IC PST3645U
IC330	409 521 9606	IC CD4066BCM
IC331	409 426 1903	IC KIA4558F
or	409 039 7804	IC NJM4558M
IC333	409 543 7208	IC KTC801U-Y
IC340	⚠ 409 563 1101	IC TA2022
L3301	645 006 9864	INDUCTOR,80U
L3302	645 006 9864	INDUCTOR,80U
L3305	645 006 3602	INDUCTOR,1.1UH
L3306	645 006 3602	INDUCTOR,1.1UH
L3307	645 006 3602	INDUCTOR,1.1UH
L3311	645 020 1851	INDUCTOR,1000 OHM
L3312	645 020 1851	INDUCTOR,1000 OHM
L3313	645 020 1851	INDUCTOR,1000 OHM
L3314	645 020 1851	INDUCTOR,1000 OHM
L3315	645 020 1851	INDUCTOR,1000 OHM
L3400	645 063 5144	INDUCTOR,10U M
L3401	645 075 6467	INDUCTOR,270 OHM/20MHZ
L3500	645 063 5144	INDUCTOR,10U M
L3501	645 075 6467	INDUCTOR,270 OHM/20MHZ
L3600	645 063 5137	INDUCTOR,100U K
Q3200	405 151 6107	TR KRA107S
or	405 141 5707	TR DTA114YKA
Q3201	405 159 0503	TR KRC107S
or	405 141 5608	TR DTC114YKA
Q3202	405 159 0503	TR KRC107S
or	405 141 5608	TR DTC114YKA
Q3203	405 146 2107	TR KTC3875-Y
or	405 146 2206	TR KTC3875-GR
or	405 014 4509	TR 2SC2412K-R
or	405 011 1006	TR 2SC1623-L6
Q3204	405 146 2107	TR KTC3875-Y
or	405 146 2206	TR KTC3875-GR
or	405 014 4509	TR 2SC2412K-R
or	405 011 1006	TR 2SC1623-L6
Q3205	405 151 6107	TR KRA107S
or	405 141 5707	TR DTA114YKA
Q3206	405 159 0503	TR KRC107S
or	405 141 5608	TR DTC114YKA
Q3207	405 146 1704	TR KTA1504-Y
or	405 146 9700	TR KTA1504-GR
or	405 134 5905	TR 2SA1037AK-R
or	405 002 0308	TR 2SA1037K-R
or	405 005 5508	TR 2SA812-M6
Q3208	405 159 0503	TR KRC107S
or	405 141 5608	TR DTC114YKA
Q3301	405 146 1407	TR KRC104S
or	405 138 6700	TR DTC144EKA
Q3410	405 146 2107	TR KTC3875-Y
or	405 146 2206	TR KTC3875-GR

PARTS LIST

REF.NO.		PART NO.	DESCRIPTION
or		405 014 4509	TR 2SC2412K-R
or		405 011 1006	TR 2SC1623-L6
Q3411		405 146 2107	TR KTC3875-Y
or		405 146 2206	TR KTC3875-GR
or		405 014 4509	TR 2SC2412K-R
or		405 011 1006	TR 2SC1623-L6
R3413	⚠	402 095 2202	RESISTOR 6.2 J- 2W
R3513	⚠	402 095 2202	RESISTOR 6.2 J- 2W
RY340	⚠	614 224 4531	RELAY
RY341	⚠	614 224 4531	RELAY
S3410		645 067 1982	SWITCH,SLIDE 1P-2T
SCR32		411 191 4201	SCR S-TPG BRZ+FLG 3X12
SCR33		411 191 4201	SCR S-TPG BRZ+FLG 3X12
SCR34		411 187 2808	SCR S-TPG BIN 2.3X8
SCR35		411 187 2808	SCR S-TPG BIN 2.3X8
SG330		645 055 3202	SURGE-ABSORBER
SG341		645 055 3202	SURGE-ABSORBER
SG342		645 055 3202	SURGE-ABSORBER
SG351		645 055 3202	SURGE-ABSORBER
SG352		645 055 3202	SURGE-ABSORBER
SVR34		645 006 5347	VR,SEMI,47K N
SVR35		645 006 5347	VR,SEMI,47K N

EXPLODED VIEW (SUBWOOFER SPEAKER)



PARTS LIST

PRODUCT SAFETY NOTICE

EACH PRECAUTION IN THIS MANUAL SHOULD BE FOLLOWED DURING SERVICING. COMPONENTS IDENTIFIED WITH THE IEC SYMBOL ⚠ IN THE PARTS LIST AND THE SCHEMATIC DIAGRAM DESIGNATED COMPONENTS IN WHICH SAFETY AND PERFORMANCE CAN BE OF SPECIAL SIGNIFICANCE. WHEN REPLACING A COMPONENT IDENTIFIED BY ⚠, USE ONLY THE REPLACEMENT PARTS DESIGNATED, OR PARTS WITH THE SAME RATINGS OF RESISTANCE, WATTAGE OR VOLTAGE THAT ARE DESIGNATED IN THE PARTS LIST IN THIS MANUAL. LEAKAGE-CURRENT OR RESISTANCE MEASUREMENTS MUST BE MADE TO DETERMINE THAT EXPOSED PARTS ARE ACCEPTABLY INSULATED FROM THE SUPPLY CIRCUIT BEFORE RETURNING THE PRODUCT TO THE CUSTOMER.

CAUTION : Regular type resistors and capacitors are not listed. To know those values, refer to the schematic diagram.
Regular type resistors are less than 1/4 W carbon type and 0 ohm chip resistors.
Regular type capacitors are less than 50 V and less than 1000 μF type of Ceramic type and Electrical type.

N.S.P : Not available as service parts.

SUBWOOFER SPEAKER PACKING

REF.NO.	PART NO.	DESCRIPTION
	614 332 3778	CUSHION,BOTTOM
	614 332 3761	CUSHION,TOP
	645 056 9173	POLY BAG-0150X0200*NC,AC CODE
	645 075 2315	POLY SHEET-0150X0150*NC, ANTENNA
	645 073 9651	POLY SHEET-1200X0600*NC,WOOFER

SUBWOOFER SPEAKER CABINET & CHASSIS

REF.NO.	PART NO.	DESCRIPTION
1	614 333 0530	ASSY,BOX,SPEAKER
2	614 331 3519	HOLDER,POWER,TRANS
3	614 331 3526	MOUNTING,AMP,PWB
4	614 331 3601	SHIELD,AMP,PWB
5	614 327 8498	HOLDER,PWB,DG PWB
7	614 333 1872	SHIELD,REAR(CA)
7	614 333 0561	SHIELD,REAR(US)
9	614 333 0554	PANEL,REAR
10	614 332 2108	HOLDER,PWB,TRANSMITTER
11	614 332 2115	HOLDER,PWB,SWITCH

SUBWOOFER SPEAKER FIXING PARTS

REF.NO.	PART NO.	DESCRIPTION
Y01	411 191 4607	SCR S-TPG BIN 4X16, HOLDER P.T-SP.BOX
Y02	411 027 3507	SCR S-TPG BIN 4X6,HOLDER P.T-P.T
Y04	411 098 4205	SCR S-TPG BIN 3X8, AMP PWB-MOUNTING
Y05	411 098 4205	SCR S-TPG BIN 3X8, SHIELD-MOUNTING AMP PWB
Y07	411 098 4205	SCR S-TPG BIN 3X8, DG PWB-HOLDER PWB
Y08	411 021 3404	SCR S-TPG BIN 3X10, PANEL REAR-SHIELD REAR
Y09	411 021 2605	SCR S-TPG BIN 2.6X6,SYSTEM
Y10	411 021 3404	SCR S-TPG BIN 3X10, E.PARTS-P.REAR
Y12	411 193 7705	SCR S-TPG BIN 3X16,P.REAR-SP.BOX
Y13	411 021 3404	SCR S-TPG BIN 3X10, HOLDER P.T-P.REAR
Y14	411 021 7204	SCR S-TPG BIN 4X10, PANEL REAR-HOLDER TRANS
Y15	411 021 3404	SCR S-TPG BIN 3X10,HOLDER PWB
Y16	411 021 3404	SCR S-TPG BIN 3X10, PANEL REAR-AC CODE FIXER
Y17	411 021 3404	SCR S-TPG BIN 3X10,HOLDER PWB
Y18	411 021 3404	SCR S-TPG BIN 3X10, PANEL REAR-SHIELD REAR
Y19	411 098 4205	SCR S-TPG BIN 3X8,ANNTENA
Y20	412 070 7801	SPECIAL SCREW,FAN

SUBWOOFER SPEAKER ELECTRICAL-PARTS

REF.NO.	PART NO.	DESCRIPTION
8	645 051 0656	CORE,FERRITE,FOR TRANSMITTER
or	645 042 8999	CORE,FERRITE,FOR TRANSMITTER
51	⚠ 645 069 4349	TRANS,POWER
52	⚠ 423 027 5306	FUSE 125V 4A
53	⚠ 645 037 7747	CORD,POWER-1.845MK
or	⚠ 645 032 7537	CORD,POWER-1.86MK
54	614 332 2405	ASSY,WIRE,MAIN-INTERFACE
55	614 332 9220	ASSY,WIRE,TX-INTERFACE
56	645 071 5518	ANTENNA,ROD
57	⚠ 645 075 2018	MOTOR,FAN DC 1.2W
72	⚠ 614 332 9268	PWB,HOLD
76	645 071 4542	UNIT,WIRELESS TRANSMITTER
	645 051 0656	CORE,FERRITE WIRE, MAIN-INTERFACE
	645 042 8999	CORE,FERRITE WIRE, MAIN-INTERFACE
	645 051 0656	CORE,FERRITE,FOR SPEAKER-WIRE
or	645 042 8999	CORE,FERRITE,FOR SPEAKER-WIRE

SUBWOOFER SPEAKER POWER AMP P.W.BOARD ASSY

REF.NO.	PART NO.	DESCRIPTION
71	614 332 2368	ASSY,PWB,POWER AMP(Only initial)
C4707	403 386 2307	ELECT 1000U M 50V
C4710	403 386 2307	ELECT 1000U M 50V
C4723	403 185 0207	MT-POLYEST 0.56U J 50V
C4724	403 185 0306	MT-POLYEST 0.68U J 50V
C4725	403 185 0306	MT-POLYEST 0.68U J 50V
C4726	403 185 0207	MT-POLYEST 0.56U J 50V
C4727	403 185 0306	MT-POLYEST 0.68U J 50V
C4728	403 185 0306	MT-POLYEST 0.68U J 50V
C4804	403 185 0306	MT-POLYEST 0.68U J 50V
C4805	403 185 0306	MT-POLYEST 0.68U J 50V
C4806	403 185 0207	MT-POLYEST 0.56U J 50V
C4807	403 185 0306	MT-POLYEST 0.68U J 50V
C4808	403 185 0306	MT-POLYEST 0.68U J 50V
C4809	403 184 9805	MT-POLYEST 0.22U J 50V
C4812	403 386 2307	ELECT 1000U M 50V
C4815	403 386 2307	ELECT 1000U M 50V
CN492	645 008 4522	PLUG,HOUSING 2P
CN493	645 072 1953	TERMINAL,SPEAKER 3P
CN494	645 040 1206	SOCKET,13P
CN495	645 006 1912	PLUG,6P
CN496	614 310 2298	PLUG,2P
or	645 004 2683	PLUG,2P
CN497	645 072 9898	JACK,PHONE D3.6
D4700	407 241 7704	DIODE US1D-LF
D4701	407 241 7704	DIODE US1D-LF
D4702	407 241 7704	DIODE US1D-LF
D4703	407 241 7704	DIODE US1D-LF
D4704	407 241 7704	DIODE US1D-LF
D4705	407 241 7704	DIODE US1D-LF

PARTS LIST

REF.NO.	PART NO.	DESCRIPTION
D4706	407 241 7704	DIODE US1D-LF
D4800	407 241 7704	DIODE US1D-LF
D4801	407 241 7704	DIODE US1D-LF
D4802	407 241 7704	DIODE US1D-LF
D4803	407 241 7704	DIODE US1D-LF
D4804	407 241 7704	DIODE US1D-LF
D4805	407 241 7704	DIODE US1D-LF
D4880	407 012 4406	DIODE 1SS133
D4901	407 012 4406	DIODE 1SS133
D4902	407 012 4406	DIODE 1SS133
D4906	407 099 6805	ZENER DIODE MTZJ13B
HS400	614 328 5038	HEAT SINK
HS401	614 328 5038	HEAT SINK
HS403	614 331 8750	HEAT SINK
IC470	⚠ 409 563 1101	IC TA2022
IC480	⚠ 409 563 1101	IC TA2022
IC491	409 575 1908	IC PST3645U
L4700	645 063 5137	INDUCTOR,100U K
L4701	645 070 9609	INDUCTOR,10U M
L4702	645 070 9609	INDUCTOR,10U M
L4703	645 006 3602	INDUCTOR,1.1UH
L4704	645 006 3602	INDUCTOR,1.1UH
L4730	645 076 6428	LINE FILTER
L4731	645 076 6428	LINE FILTER
L4732	645 075 6467	INDUCTOR,270 OHM/20MHZ
L4733	645 075 6467	INDUCTOR,270 OHM/20MHZ
L4800	645 070 9609	INDUCTOR,10U M
L4801	645 070 9609	INDUCTOR,10U M
L4802	645 006 3602	INDUCTOR,1.1UH
L4803	645 006 3602	INDUCTOR,1.1UH
L4831	645 076 6428	LINE FILTER
L4832	645 076 6428	LINE FILTER
L4833	645 075 6467	INDUCTOR,270 OHM/20MHZ
L4834	645 075 6467	INDUCTOR,270 OHM/20MHZ
L4900	645 006 9864	INDUCTOR,80U
L4901	645 006 9864	INDUCTOR,80U
PR490	⚠ 645 066 9644	PROTECTOR,0.2A 125V
or	⚠ 645 042 2515	PROTECTOR,0.2A 125V
Q4780	405 064 9202	TR 2SD1757K-S
Q4900	405 064 9202	TR 2SD1757K-S
Q4901	405 146 2107	TR KTC3875-Y
or	405 146 2206	TR KTC3875-GR
or	405 014 4509	TR 2SC2412K-R
or	405 011 1006	TR 2SC1623-L6
Q4902	405 146 2107	TR KTC3875-Y
or	405 146 2206	TR KTC3875-GR
or	405 014 4509	TR 2SC2412K-R
or	405 011 1006	TR 2SC1623-L6
Q4903	405 146 2107	TR KTC3875-Y
or	405 146 2206	TR KTC3875-GR
or	405 014 4509	TR 2SC2412K-R
or	405 011 1006	TR 2SC1623-L6
Q4904	⚠ 405 158 2102	TR KTC2026-Y
or	⚠ 405 138 6403	TR KTD2058Y
Q4905	405 146 2107	TR KTC3875-Y
or	405 146 2206	TR KTC3875-GR
or	405 014 4509	TR 2SC2412K-R
or	405 011 1006	TR 2SC1623-L6
Q4906	405 151 6107	TR KRA107S
or	405 141 5707	TR DTA114YKA
Q4907	405 146 2107	TR KTC3875-Y
or	405 146 2206	TR KTC3875-GR
or	405 014 4509	TR 2SC2412K-R
or	405 011 1006	TR 2SC1623-L6
Q4908	405 159 0503	TR KRC107S
or	405 141 5608	TR DTC114YKA
R4725	⚠ 402 095 2202	RESISTOR 6.2 J- 2W
R4726	⚠ 402 095 2202	RESISTOR 6.2 J- 2W
R4802	⚠ 402 095 2202	RESISTOR 6.2 J- 2W
R4803	⚠ 402 095 2202	RESISTOR 6.2 J- 2W
RY470	614 224 4531	RELAY
RY480	614 224 4531	RELAY
SCR42	411 191 4201	SCR S-TPG BRZ+FLG 3X12
SCR43	411 191 4201	SCR S-TPG BRZ+FLG 3X12
SCR44	411 191 4201	SCR S-TPG BRZ+FLG 3X12
SCR45	411 191 4201	SCR S-TPG BRZ+FLG 3X12
SCR48	411 187 2808	SCR S-TPG BIN 2.3X8
SCR49	411 187 2808	SCR S-TPG BIN 2.3X8
SCR50	411 187 2808	SCR S-TPG BIN 2.3X8
SCR51	411 187 2808	SCR S-TPG BIN 2.3X8
SCR54	411 098 1006	SCR S-TPG BIN 3X6
SG470	645 055 3202	SURGE-ABSORBER
SG471	645 055 3202	SURGE-ABSORBER
SG480	645 055 3202	SURGE-ABSORBER
SVR90	645 006 5347	VR,SEMI,47K N
SVR91	645 006 5347	VR,SEMI,47K N
SVR92	645 006 5347	VR,SEMI,47K N
SVR93	645 006 5347	VR,SEMI,47K N

SUBWOOFER SPEAKER MAIN P.W.BOARD ASSY

REF.NO.	PART NO.	DESCRIPTION
73	614 332 2351	ASSY,PWB,MAIN(Only initial)
C4011	403 325 0302	ELECT 2200U M 25V
C4018	403 419 1703	ELECT 3300U M 50V
C4019	403 419 1703	ELECT 3300U M 50V
C4020	403 325 2108	ELECT 3300U M 25V
C4032	403 325 0302	ELECT 2200U M 25V
C4037	403 325 0302	ELECT 2200U M 25V
C4038	⚠ 404 088 7409	MT-POLYEST 0.1U K 250V
or	⚠ 404 080 8206	MT-POLYEST 0.1U K 250V
or	⚠ 403 376 2409	MT-POLYEST 0.1U M 250V
C4041	⚠ 404 097 5304	CERAMIC 4700P M 400V
C4624	403 325 2108	ELECT 3300U M 25V
CN400	645 069 2451	SOCKET,MULTI-POLE 25P
CN411	645 006 1998	PLUG,5P
CN412	614 310 2748	PLUG,3P
or	645 004 2898	PLUG,3P
CN413	⚠ 645 005 9315	PLUG,2P
CN414	614 310 2625	PLUG,6P
or	645 006 0939	PLUG,6P
CN421	645 071 1329	JACK,RCA-3
CN450	645 071 4573	JACK,RCA-2
CN453	645 071 5815	TERMINAL,BOARD
CN455	645 040 1206	SOCKET,13P
CN456	645 006 1912	PLUG,6P
D4009	407 099 6805	ZENER DIODE MTZJ13B
D4010	407 099 6805	ZENER DIODE MTZJ13B
D4013	⚠ 407 219 1703	DIODE GBU8JL-BU04
D4017	⚠ 407 107 6001	DIODE RL203-BD80
D4018	⚠ 407 097 8009	DIODE MPG06G
D4019	⚠ 407 107 6001	DIODE RL203-BD80
D4020	⚠ 407 097 8009	DIODE MPG06G
D4022	⚠ 407 097 8009	DIODE MPG06G
D4023	⚠ 407 097 8009	DIODE MPG06G
D4024	⚠ 407 097 8009	DIODE MPG06G
D4025	⚠ 407 097 8009	DIODE MPG06G
D4600	407 012 4406	DIODE 1SS133
D4601	407 012 4406	DIODE 1SS133
D4602	⚠ 407 097 8009	DIODE MPG06G
FPC01	645 006 4760	HOLDER,FUSE
or	645 031 7903	HOLDER,FUSE
FPC02	645 006 4760	HOLDER,FUSE
or	645 031 7903	HOLDER,FUSE
HS460	614 331 8750	HEAT SINK
HS461	614 331 8750	HEAT SINK
HS462	614 331 8750	HEAT SINK
IC401	⚠ 409 463 6701	IC KIA7805API
IC402	⚠ 409 463 6701	IC KIA7805API

PARTS LIST

REF.NO.		PART NO.	DESCRIPTION
IC460		409 426 1903	IC KIA4558F
or		409 039 7804	IC NJM4558M
IC461	⚠	409 463 6701	IC KIA7805API
L4000	⚠	645 076 7203	LINE FILTER
L4203		645 006 3886	INDUCTOR,1U K
L4205		645 006 3886	INDUCTOR,1U K
L4206		645 006 3886	INDUCTOR,1U K
L4500		645 001 5441	INDUCTOR,2.2U K
L4501		645 001 5441	INDUCTOR,2.2U K
L4502		645 001 5441	INDUCTOR,2.2U K
L4503		645 063 5137	INDUCTOR,100U K
L4504		645 006 3602	INDUCTOR,1.1UH
L4505		645 006 3602	INDUCTOR,1.1UH
PR400	⚠	423 031 8607	FUSE 125V 10A
or	⚠	645 066 9774	PROTECTOR,10A 125V
PR401	⚠	423 031 8607	FUSE 125V 10A
or	⚠	645 066 9774	PROTECTOR,10A 125V
PR402	⚠	423 031 8706	FUSE 125V 7A
or	⚠	645 066 9859	PROTECTOR,7A 125V
PR403	⚠	423 031 8706	FUSE 125V 7A
or	⚠	645 066 9859	PROTECTOR,7A 125V
PR404	⚠	645 066 9644	PROTECTOR,0.2A 125V
or	⚠	645 042 2515	PROTECTOR,0.2A 125V
PR405	⚠	645 066 9781	PROTECTOR,2A 125V
or	⚠	645 042 2669	PROTECTOR,2A 125V
PR406	⚠	423 031 8706	FUSE 125V 7A
or	⚠	645 066 9859	PROTECTOR,7A 125V
PR407	⚠	423 031 8706	FUSE 125V 7A
or	⚠	645 066 9859	PROTECTOR,7A 125V
PR408	⚠	645 066 9781	PROTECTOR,2A 125V
or	⚠	645 042 2669	PROTECTOR,2A 125V
PR409	⚠	645 066 9736	PROTECTOR,1A 125V
or	⚠	645 042 2614	PROTECTOR,1A 125V
Q4001	⚠	405 141 3604	TR KTA1273-Y
Q4002	⚠	405 158 2102	TR KTC2026-Y
or	⚠	405 138 6403	TR KTD2058Y
Q4003	⚠	405 141 3604	TR KTA1273-Y
Q4005		405 146 1704	TR KTA1504-Y
or		405 146 9700	TR KTA1504-GR
or		405 134 5905	TR 2SA1037AK-R
or		405 002 0308	TR 2SA1037K-R
or		405 005 5508	TR 2SA812-M6
Q4006		405 146 1704	TR KTA1504-Y
or		405 146 9700	TR KTA1504-GR
or		405 134 5905	TR 2SA1037AK-R
or		405 002 0308	TR 2SA1037K-R
or		405 005 5508	TR 2SA812-M6
Q4600		405 166 7007	TR KTD1304
Q4601		405 146 2107	TR KTC3875-Y
or		405 146 2206	TR KTC3875-GR
or		405 014 4509	TR 2SC2412K-R
or		405 011 1006	TR 2SC1623-L6
Q4602		405 146 2107	TR KTC3875-Y
or		405 146 2206	TR KTC3875-GR
or		405 014 4509	TR 2SC2412K-R
or		405 011 1006	TR 2SC1623-L6
Q4603		405 146 1704	TR KTA1504-Y
or		405 146 9700	TR KTA1504-GR
or		405 134 5905	TR 2SA1037AK-R
or		405 002 0308	TR 2SA1037K-R
or		405 005 5508	TR 2SA812-M6
Q4604		405 146 1704	TR KTA1504-Y
or		405 146 9700	TR KTA1504-GR
or		405 134 5905	TR 2SA1037AK-R
or		405 002 0308	TR 2SA1037K-R
or		405 005 5508	TR 2SA812-M6
Q4605	⚠	405 141 3604	TR KTA1273-Y
Q4606		405 146 2107	TR KTC3875-Y
or		405 146 2206	TR KTC3875-GR
or		405 014 4509	TR 2SC2412K-R
or		405 011 1006	TR 2SC1623-L6
Q4607	⚠	405 159 1500	TR KTA1046-Y
or	⚠	405 138 6502	TR KTB1366Y
Q4630		405 146 2107	TR KTC3875-Y
or		405 146 2206	TR KTC3875-GR
or		405 014 4509	TR 2SC2412K-R
or		405 011 1006	TR 2SC1623-L6
Q4631		405 159 0503	TR KRC107S
or		405 141 5608	TR DTC114YKA
Q4632	⚠	405 159 1500	TR KTA1046-Y
or	⚠	405 138 6502	TR KTB1366Y
R4005	⚠	402 087 3408	RESISTOR 3.3M J- 1/2W
or	⚠	402 078 9501	CARBON 3.3M J- 1/2W
or	⚠	402 078 8108	CARBON 3.3M J- 1/2W
or	⚠	402 099 6206	RESISTOR 3.3M J- 1/2W
SCR60		411 098 1006	SCR S-TPG BIN 3X6
SCR61		411 098 1006	SCR S-TPG BIN 3X6
SCR63		411 098 1006	SCR S-TPG BIN 3X6
SG423		645 055 3202	SURGE-ABSORBER
SG424		645 055 3202	SURGE-ABSORBER
SG425		645 055 3202	SURGE-ABSORBER
SG452		645 055 3202	SURGE-ABSORBER
SG453		645 055 3202	SURGE-ABSORBER
SG455		645 055 3202	SURGE-ABSORBER
SG456		645 055 3202	SURGE-ABSORBER
SG457		645 055 3202	SURGE-ABSORBER
SG458		645 055 3202	SURGE-ABSORBER
SG459		645 055 3202	SURGE-ABSORBER
WR401	⚠	614 123 2379	TERMINAL
WR402	⚠	614 123 2379	TERMINAL

SUBWOOFER SPEAKER SOCKET P.W.BOARD ASSY

REF.NO.	PART NO.	DESCRIPTION
74	614 332 2375	ASSY,PWB,SOCKET(Only initial)
CN430	645 040 1190	PLUG,13P
CN431	645 040 1190	PLUG,13P
CN432	645 005 8455	SOCKET,6P
CN433	645 005 8455	SOCKET,6P
L4300	645 020 1813	INDUCTOR,1000 OHM
L4301	645 020 1813	INDUCTOR,1000 OHM
L4302	645 020 1813	INDUCTOR,1000 OHM
L4303	645 048 4469	INDUCTOR,22U
L4305	645 020 1813	INDUCTOR,1000 OHM
L4306	645 020 1813	INDUCTOR,1000 OHM
L4307	645 020 1813	INDUCTOR,1000 OHM
L4308	645 048 4469	INDUCTOR,22U
L4309	645 006 3602	INDUCTOR,1.1UH
L4310	645 006 3602	INDUCTOR,1.1UH
L4311	645 006 3602	INDUCTOR,1.1UH
L4312	645 020 1813	INDUCTOR,1000 OHM
L4313	645 020 1813	INDUCTOR,1000 OHM
L4314	645 020 1813	INDUCTOR,1000 OHM
L4315	645 020 1813	INDUCTOR,1000 OHM

SUBWOOFER SPEAKER TX-INTERFACE P.W.BOARD ASSY

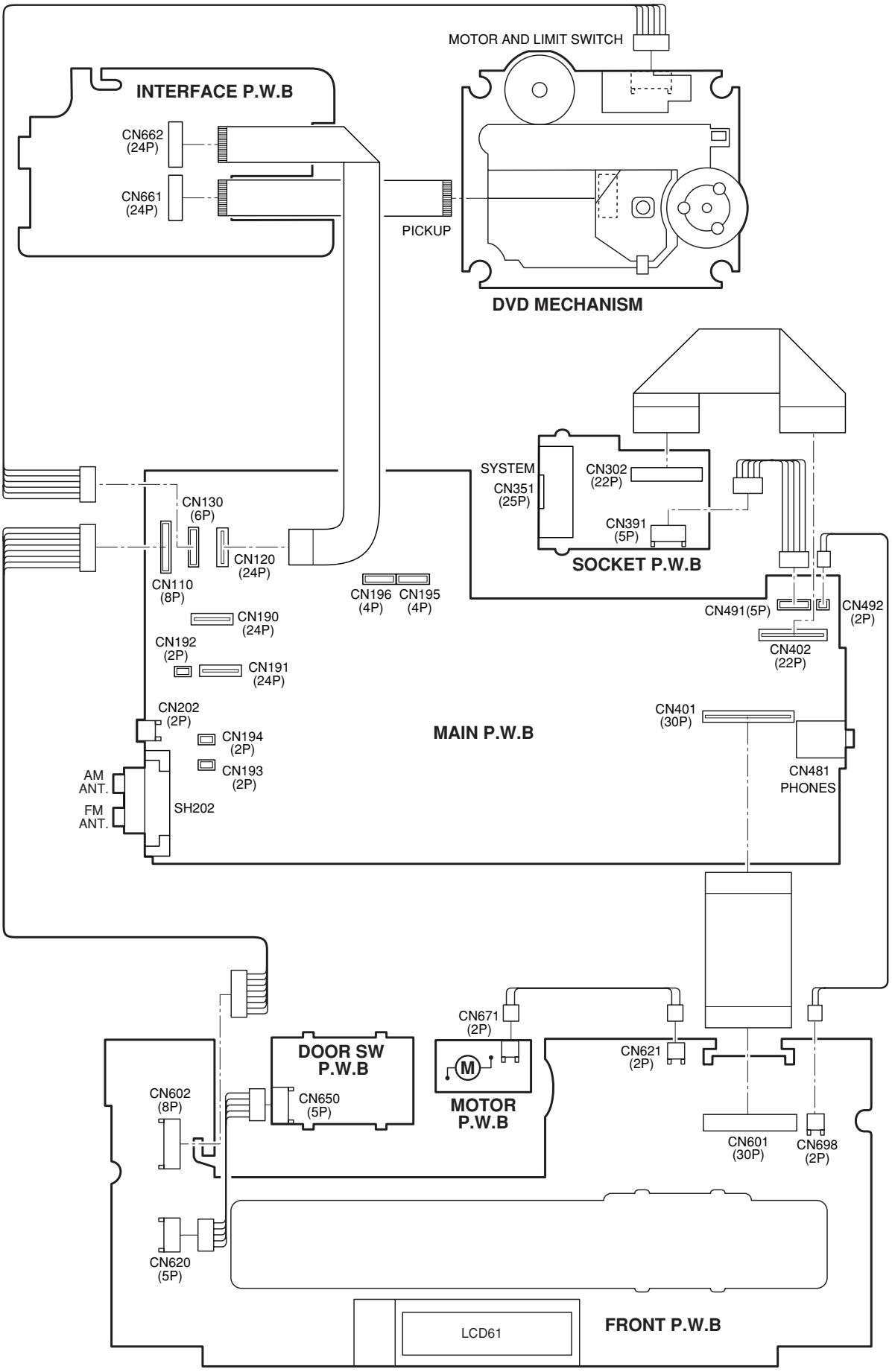
REF.NO.	PART NO.	DESCRIPTION
75	614 333 2534	ASSY,PWB,TX-INTERFACE
CN300	614 310 2472	PLUG,6P
or	645 005 8127	PLUG,6P
CN301	614 310 2496	PLUG,8P
or	645 005 8134	PLUG,8P
CN302	614 310 2472	PLUG,6P
or	645 005 8127	PLUG,6P
IC300	410 563 9905	IC LC651102F-4N01-E
IC301	409 039 8603	IC NJM4560M
IC302	409 575 1908	IC PST3645U

PARTS LIST

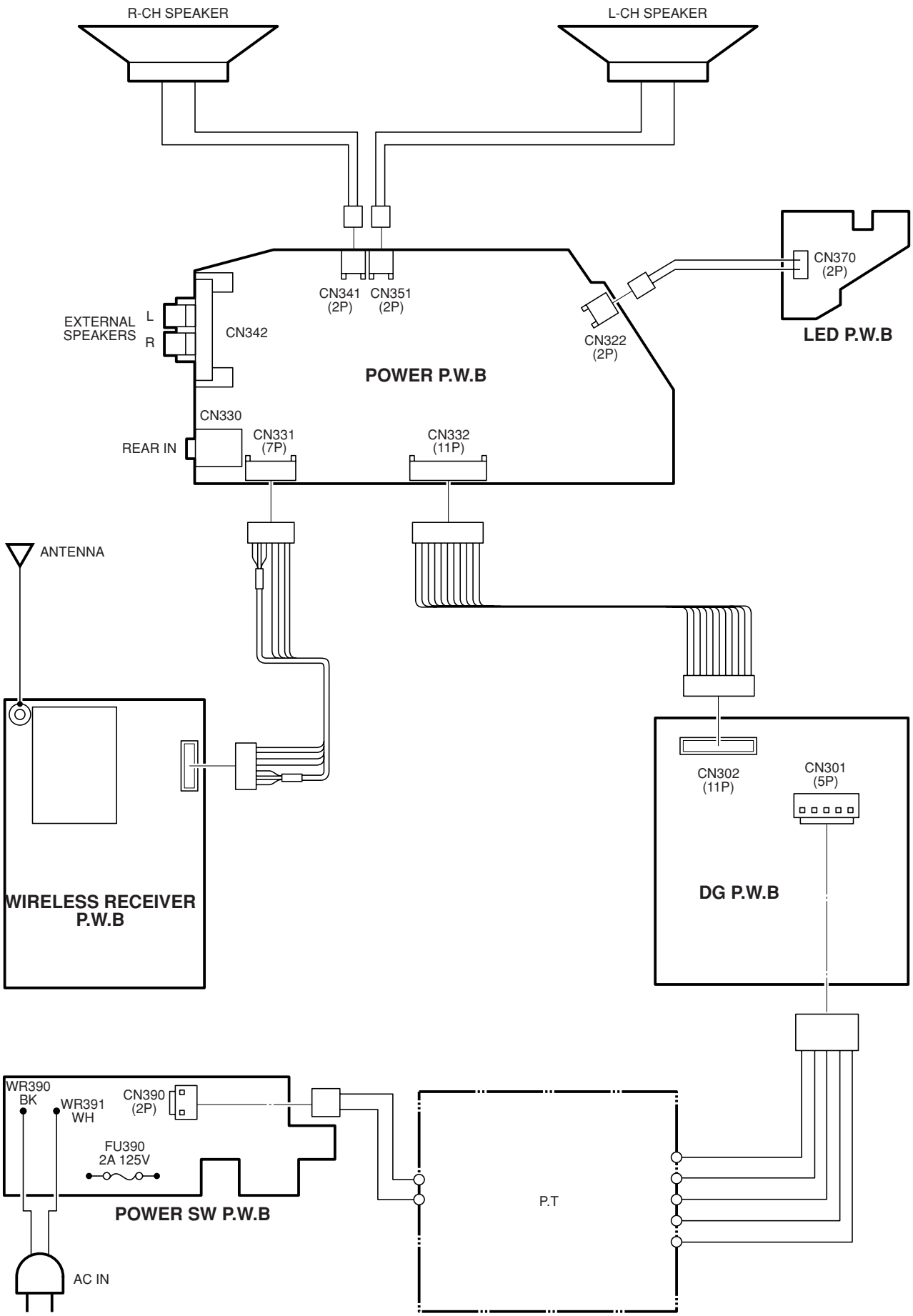
REF.NO.	PART NO.	DESCRIPTION
L3001	645 075 2223	FILTER,LP
L3002	645 075 2223	FILTER,LP
L3101	645 034 7887	INDUCTOR,1000 OHM
or	645 020 1813	INDUCTOR,1000 OHM
or	645 045 7869	IMPEDANCE,1000 OHM P
L3102	645 034 7887	INDUCTOR,1000 OHM
or	645 020 1813	INDUCTOR,1000 OHM
or	645 045 7869	IMPEDANCE,1000 OHM P
S3000	645 075 2254	SWITCH,SLIDE 2P-4T
X3000	645 059 1525	OSC,CERAMIC 4.19MHZ

NOTE

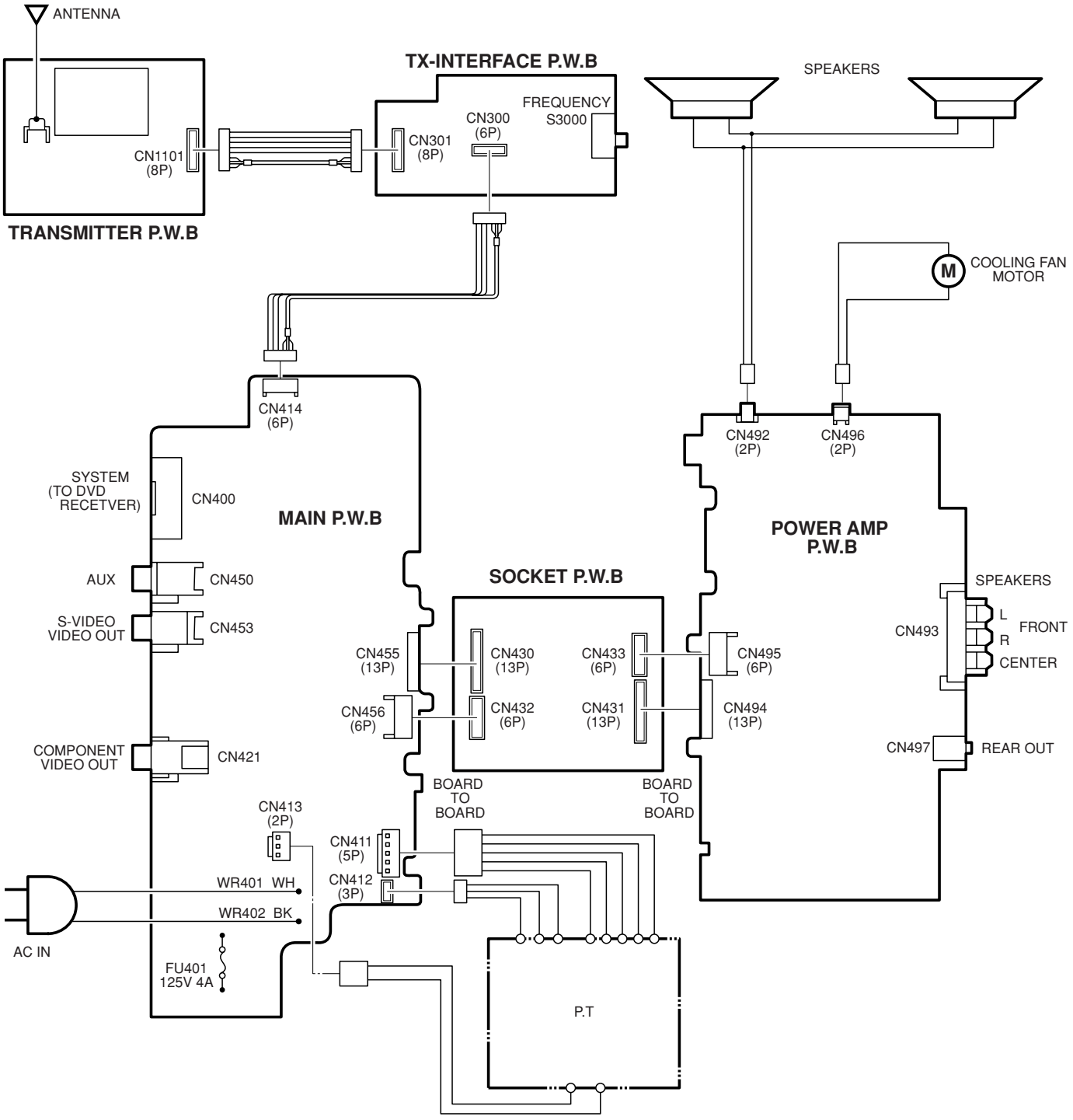
WIRING CONNECTION(MAIN UNIT)



WIRING CONNECTION(REAR SPAEKER)

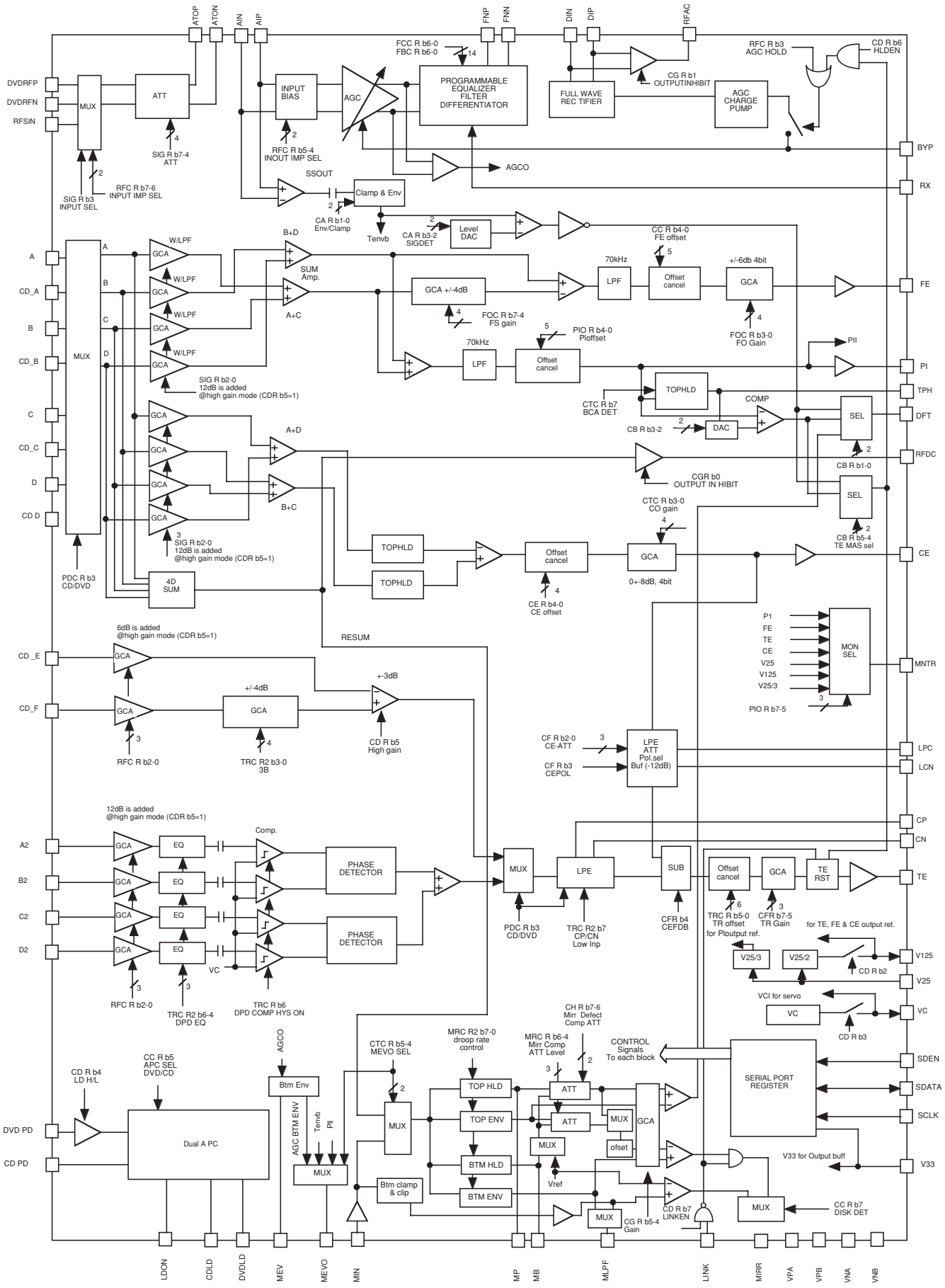


WIRING CONNECTION(SUBWOOFER SPAEKER)



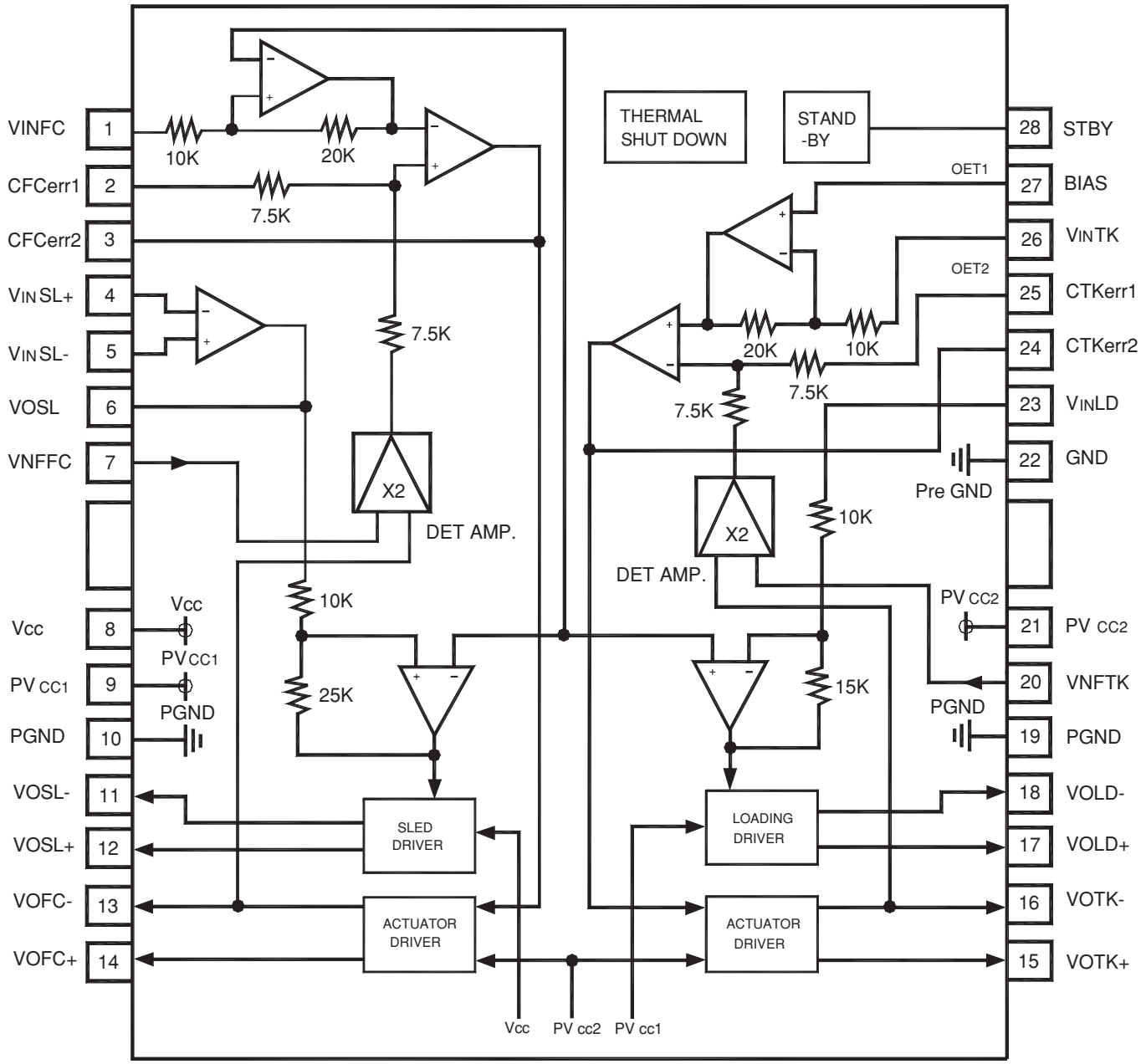
IC BLOCK DIAGRAM & DESCRIPTION

IC120 ZR36707TQC-N(READ CHANNEL)



IC BLOCK DIAGRAM & DESCRIPTION

IC103 BA5954FP(MOTOR DRIVE)



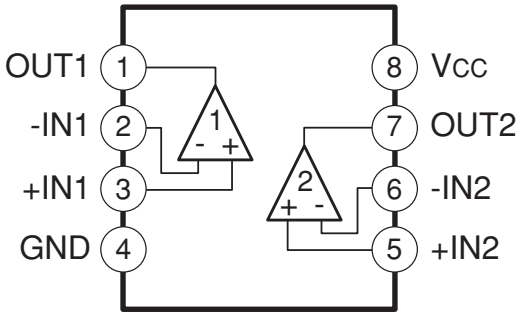
IC BLOCK DIAGRAM & DESCRIPTION

IC103 BA5954FP(MOTOR DRIVE)

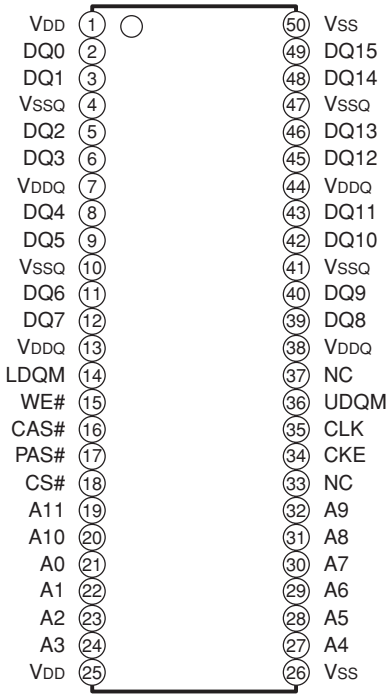
Pin No.	Pin name	Function
1.	VINFC	Focus drive input
2.	CFC err1	For connection of capacitor for the error amp filter
3.	CFC err2	For connection of capacitor for the error amp filter
4.	VINSL +	Op-amp input (+) for the sled driver
5.	VINSL -	Op-amp input (-) for the sled driver
6.	VOSL	Op-amp output for the sled driver
7.	VNFFC	Focus driver feedback pin
8.	Vcc	Vcc
9.	PV cc1	Power Vcc for sled driver block
10.	PGND	Ground for Sled Driver block
11.	VOSL -	Sled driver output (-)
12.	VOSL +	Sled driver output (+)
13.	VOFC -	Focus driver output (-)
14.	VOFC +	Focus driver output (+)
15.	VOTK +	Tracking driver output (+)
16.	VOTK -	Tracking driver output (-)
17.	VOLD +	Loading driver output (+)
18.	VOLD -	Loading driver output (-)
19.	PGND	Ground for Actuator driver block
20.	VNFTK	Tracking driver feedback pin
21.	PV cc2	Power Vcc for Actuator driver block
22.	GND	Ground
23.	VINTK	Loading driver input
24.	CTKerr2	For connection of capacitor for the error amp filter
25.	CTKerr1	For connection of capacitor for the error amp filter
26.	VINTK	Tracking driver input
27.	BLAS	Bias input
28.	STBY	Stand - By control

IC BLOCK DIAGRAM & DESCRIPTION

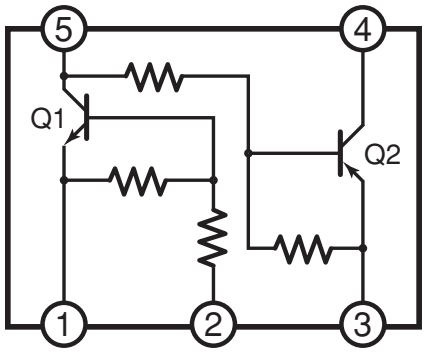
IC132 BA10358F(Dual OP. AMP.)



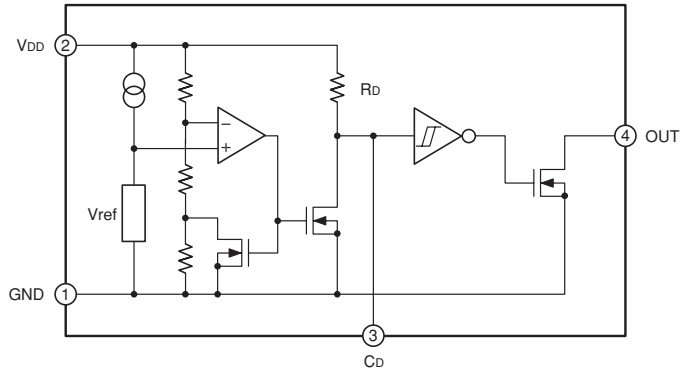
IC141, IC142 M12L1616A-7TG(SDRAM)

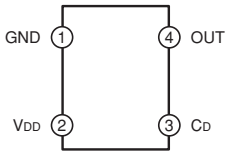


IC161,IC406 KRX101U(Switching and Drive)



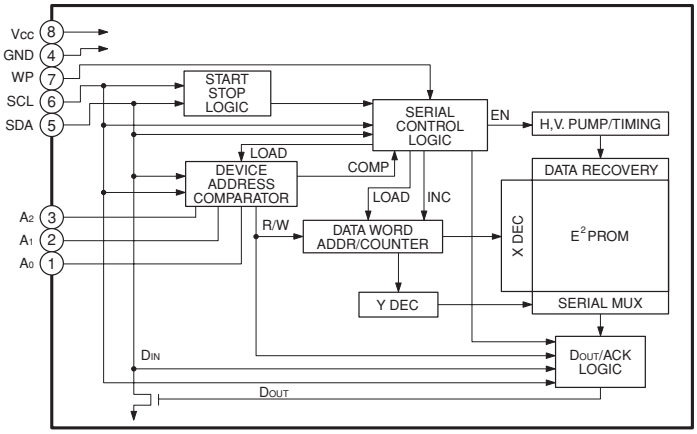
IC171 PST3627U





PIN No.	PIN NAME	FUNCTIONS
1	GND	GND Pin
2	VDD	VDD Pin / Voltage Detect Pin
3	CD	Capacitor Connect Pin with Delay
4	OUT	Reset Signal Output Pin

IC172,IC602 AT24C02N(EEPROM)



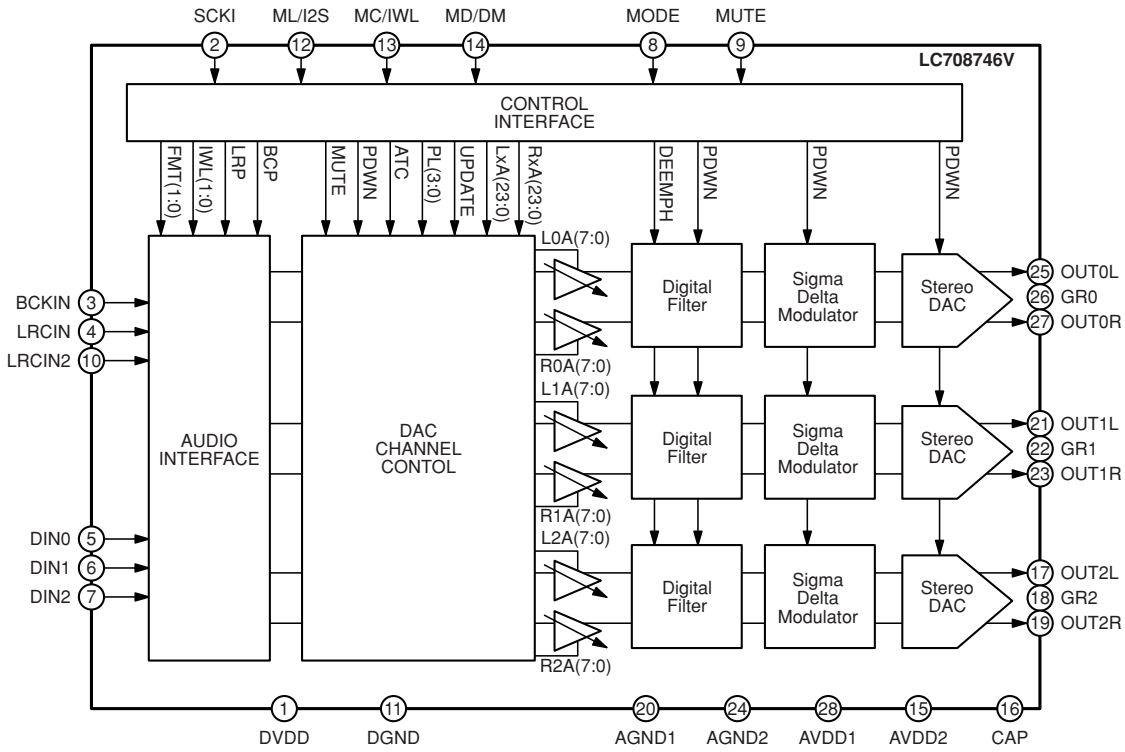
IC BLOCK DIAGRAM & DESCRIPTION

IC14, IC1421 M12L1616A-7TG(SDRAM)

Symbol	Type	Description
CLK	Input	**Clock:** CLK is driven by the system clock. All SDRAM input signals are sampled on the positive edge of CLK. CLK also increments the internal burst counter and controls the output registers.
CKE	Input	**Clock Enable:** CKE activates(HIGH) and deactivates(LOW) the CLK signal.If CKE goes low synchronously with clock(set-up and hold time same sa other inputs), the internal clock is suspended from the next clock cycle and the state of output and burst address is frozen as long as the CKE remains low. When both banks are in the idle state, deactivating the clock controls the entry to the Power Down and Self Refresh modes. CKE is synchronous except after the device enters Power Down and Self Refresh modes, where CKE becomes asynchronous until exiting the same mode. The input buffers, including CLK, are disabled during Power Down and Self Refresh modes, providing low standby power.
A11	Input	**Bank Select:** A11(BS) defines to which bank the BankActivate, Read, Write, or BankPrecharge command is being applied.
AC-A10	Input	**Address Inputs:** A0-A10 are sampled during the BankActivate command (row address A0-A10 and Read/Write command (column address A0-A7 with A10 defining Auto Precharge) to select one location out of the 256K available in the respective bank. During a Precharge command, A10 is sampled to determine if both banks are to be precharged (A10-HIGT). The address inputs also provide the op-code during a Mode Register Set command.
CS#	Input	**Chip Select:** CS# enables (sampled LOW) and disables (sampled HIGH) the command decoder. All commands are masked when CS# is sampled HIGH. CS# provides for external bank selection on systems with multiple banks. It is considered part of the command code.
RAS#	Input	**Row Address Strobe:** The RAS# signal defines the operation commands in conjunction with the CAS# and WE# signals and is latched at the positive edges of CLK. When RAS# and CS# are asserted "LOW" and CAS# is asserted "HIGH," either the BankActivate command or the Precharge command is selected by the WE# signal. When the WE# is asserted "HIGH," the BankActivate command is selected and the bank designated by BS is turned on to the active state. When the WE# is asserted "LOW," the Precharge command is selected and the bank designated by BS is switched to the idle state after the precharge operation.
CAS#	Input	**Column Address Strobe:** The CAS# signal defines the operation commands in conjunction with the RAS# and WE# signals and is latched at the positive edges of CLK. When RAS# is held "HIGH" and CS# is asserted "LOW," the column access is started by asserting CAS#"LOW." Then, the Read or Write command is selected by asserting WE# "LOW" or "HIGH."
WE#	Input	**Write Enable:** The WE# signal defines the operation commands in conjunction with the RAS# and CAS# signals and is latched at the positive edges of CLK. The WE# input is used to select the BankActivate or Precharge command and Read or Write command.
LDQM, UDQM	Input	**Data Input/Output Mask:** LDQM and HDQM are byte specific, nonpersistent I/O buffer controls. The I/O buffers are placed in a high-z state when DQM is sampled HIGH. Input data is masked when DQM is sampled HIGH during a write cycle. Output data is masked (two-clock latency) when DQM is sampled HIGH during a read cycle. UDQM masks DQ15-DQ8, and LDQM masks DQ7-DQ0.
DQC-DQ15	Input / Output	**Data I/O:** The DQ0-15 input and output data are synchronized with the positive edges of CLK. The I/Os are byte-maskable during Reads and Writes.
NC	-	**No Connect:** These pins should be left unconnected.
V_{DDQ}	Supply	**DQ Power:** Provide isolated power to DQs for improved noise immunity.(3.3V+/-0.3V)
V_{SSQ}	Supply	**DQ Ground:** Provide isolsted ground to DQs for improved noise immunity.(0V)
V_{DD}	Supply	**Power Supply:** +3.3V+/-0.3V
V_{SS}	Supply	**Ground**

IC BLOCK DIAGRAM & DESCRIPTION

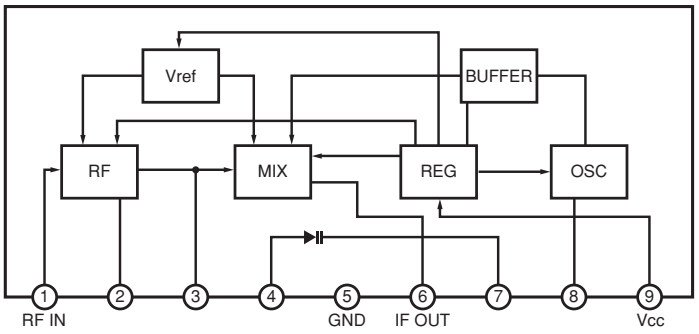
IC160 LC708746V(6ch DAC)



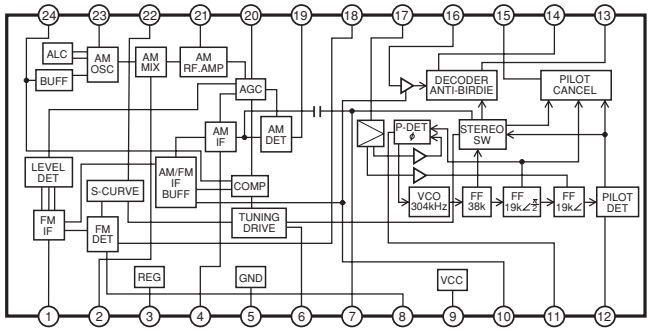
Pin No.	Name	Type	Function	
1	DVDD	Supply	Digital power source	
2	SCKI	Digital input	System clock input	
3	BCKIN	Digital input	Audio data bit clock input	
4	LRCIN	Digital input	Sampling rate clock (LRCK) input	
5	DIN0	Digital input	Channel 0 Serial audio data input	
6	DIN1	Digital input	Channel 1 Serial audio data inout	
7	DIN2	Digital inpiut	Channel 2 Serial audio data input	
8	MODE	Digital input Internal pull-up	Control mode select	
			Low= Software mode	
			High= Hardware mode	
9	MUTE	Digital bidirectional	Mute control (PCM mode)	
			Input	Output (Auto mute active)
			Low; Not mute	Low; Mute off
			High; Mute	High; Mute on
			Z; Auto mute	
10	LRCIN2	Digital input Internal pull-down	192kHz/96kHz Mode active 2nd LRCIN input	
11	DGND	Supply	Digital GND	
12	ML/I2S	Digital input Internal pull-up	Software mode; 3way serial control latch lag	
			Hardware mode; Input format selector	
13	MC/IWL	Digital input Internal pull-up	Software mode; 3way serial control clock input	
			Hardware mode; Input word length select	
14	MD/DM	Digital input	Software mode; 3way serial control data input	
			Hardware mode; Deepnhasis select	
15	AVDD2	Supply	Analogue power source	
16	CAP	Analogue output	Analogue power VREF de-coupling	
17	OUT2L	Analogue output	Lch 2 Output	
18	GR2	Analogue input	Ch 2 GND	
19	OUT2R	Analogue output	Rch 2 Output	
20	AGND1	Supply	Analogue GND	
21	OUT1L	Analogue output	Lch 1 Output	
22	GR1	Analogue input	Ch 1 GND	
23	OUT1R	Analogue output	Rch 1 Output	
24	AGND2	Supply	Analogue GND	
25	OUT0L	Analogue output	Lch 0 Output	
26	GR0	Analogue input	Ch 0 GND	
27	OUT0R	Analogue output	Rch 0 Output	
28	AVDD1	Supply	Analogue power source	

IC BLOCK DIAGRAM & DESCRIPTION

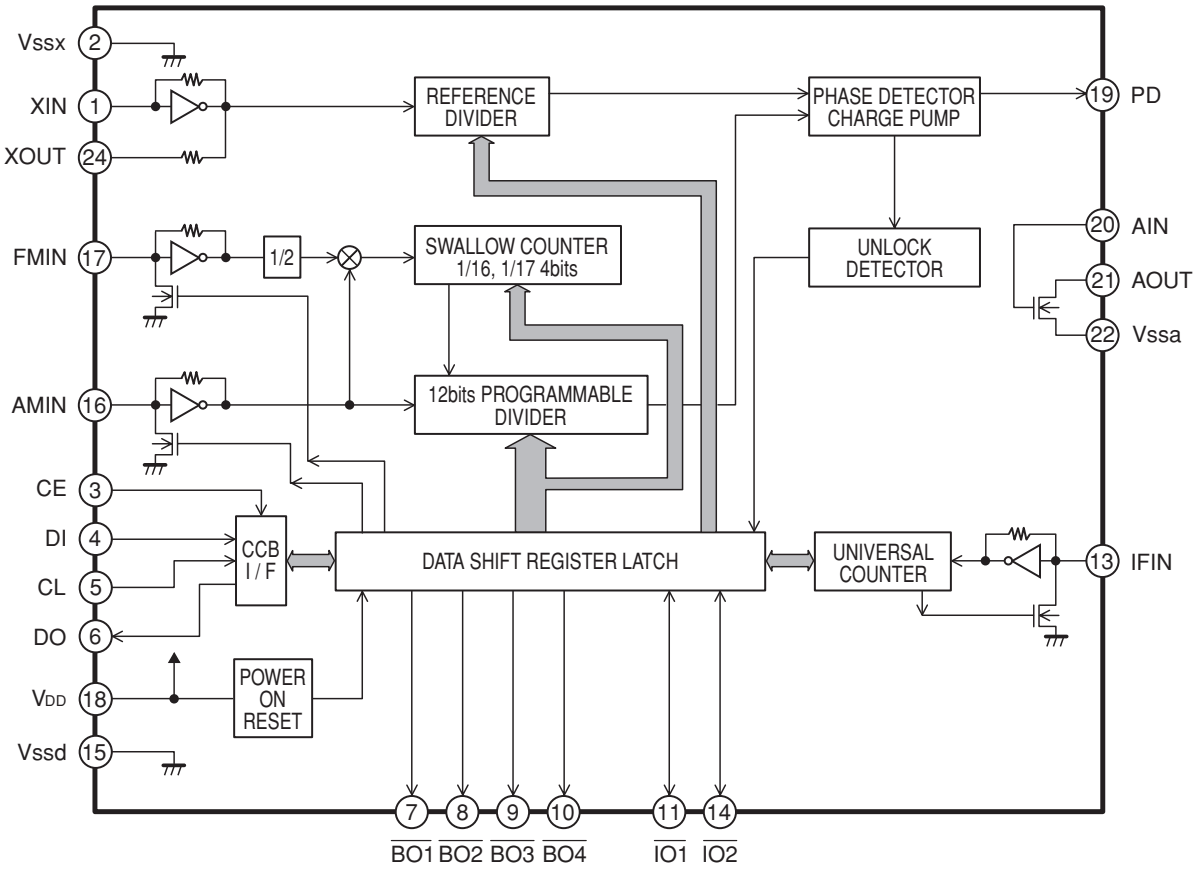
IC211 LA1186N(Diode for RM AMP,MX,OSC & AFC)



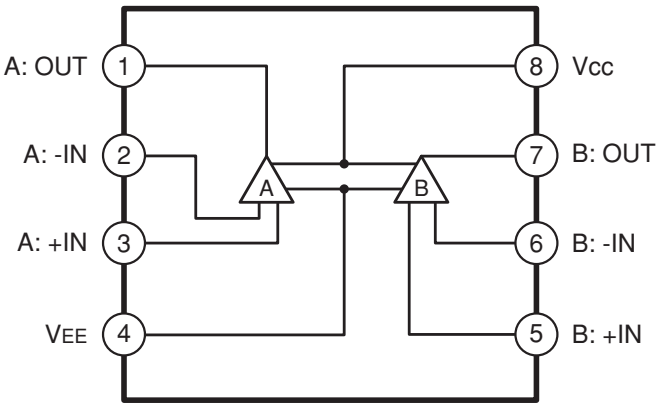
IC231 LA1844ML(AM/FM-ZF/MPX)

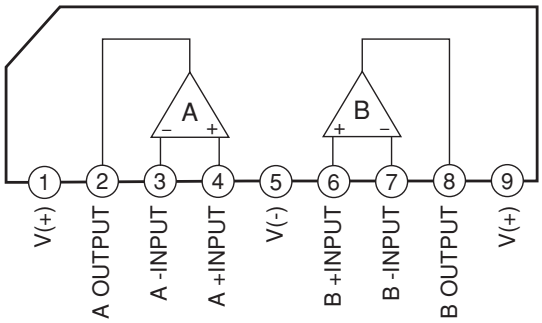


IC241 LC72121M-D(PLL)



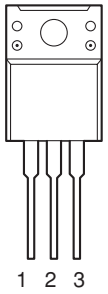
IC301 NJM4560M(OP. AMP.)



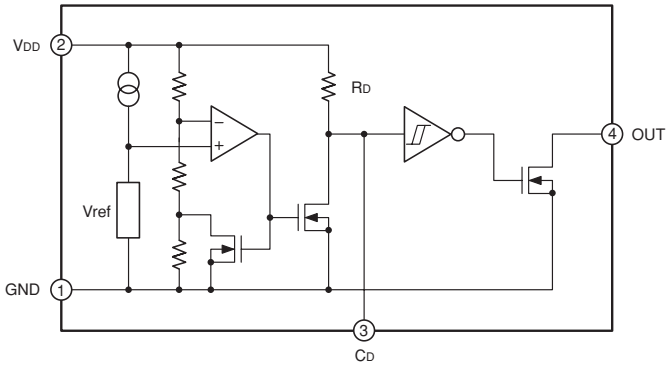


IC BLOCK DIAGRAM & DESCRIPTION

IC310 KIA7810API(Regulator)

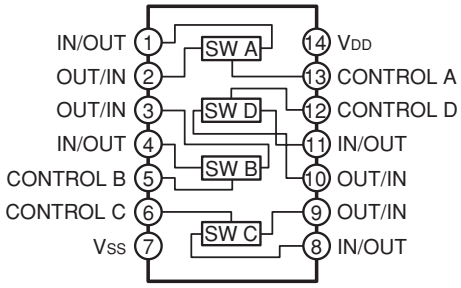


IC321, IC491, IC603 PST3645U(System reset)

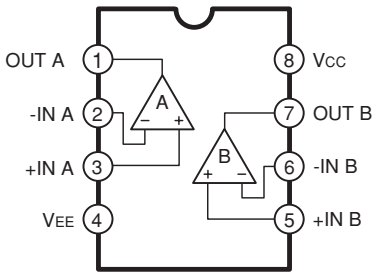


PIN No.	PIN NAME	FUNCTIONS	INTERNAL EQUIVALENT CIRCUIT
1	GND	GND Pin	Refer to BLOCK DIAGRAM
2	V_{DD}	V_{DD} Pin / Voltage Detect Pin	
3	C_D	Capacitor Connect Pin with Delay	
4	OUT	Reset Signal Output Pin	

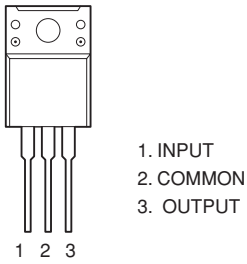
IC330 CD4066BCM(Switch)



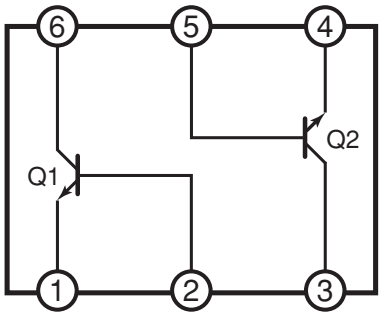
IC331, IC402, IC460 KIA4558F(OP. AMP.)



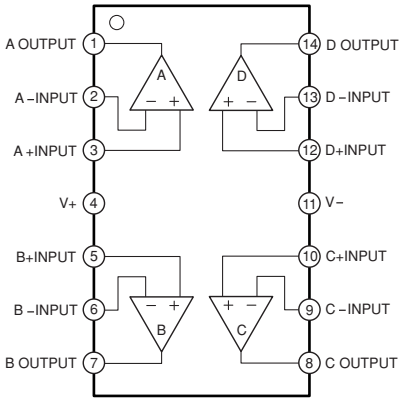
IC401, 402, IC461 KIA4558F(Regulator)



IC333 KTC801U(Switching)

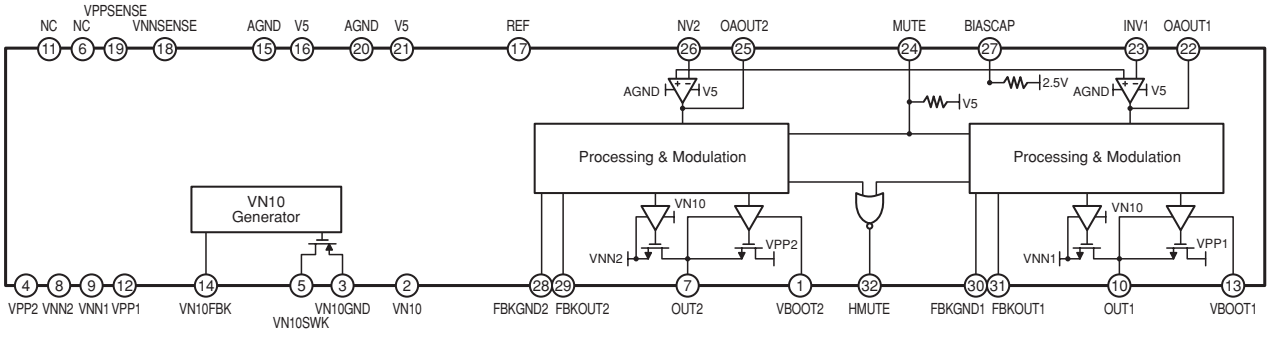


IC403, IC405 NJM2058V(OP. AMP.)



IC BLOCK DIAGRAM & DESCRIPTION

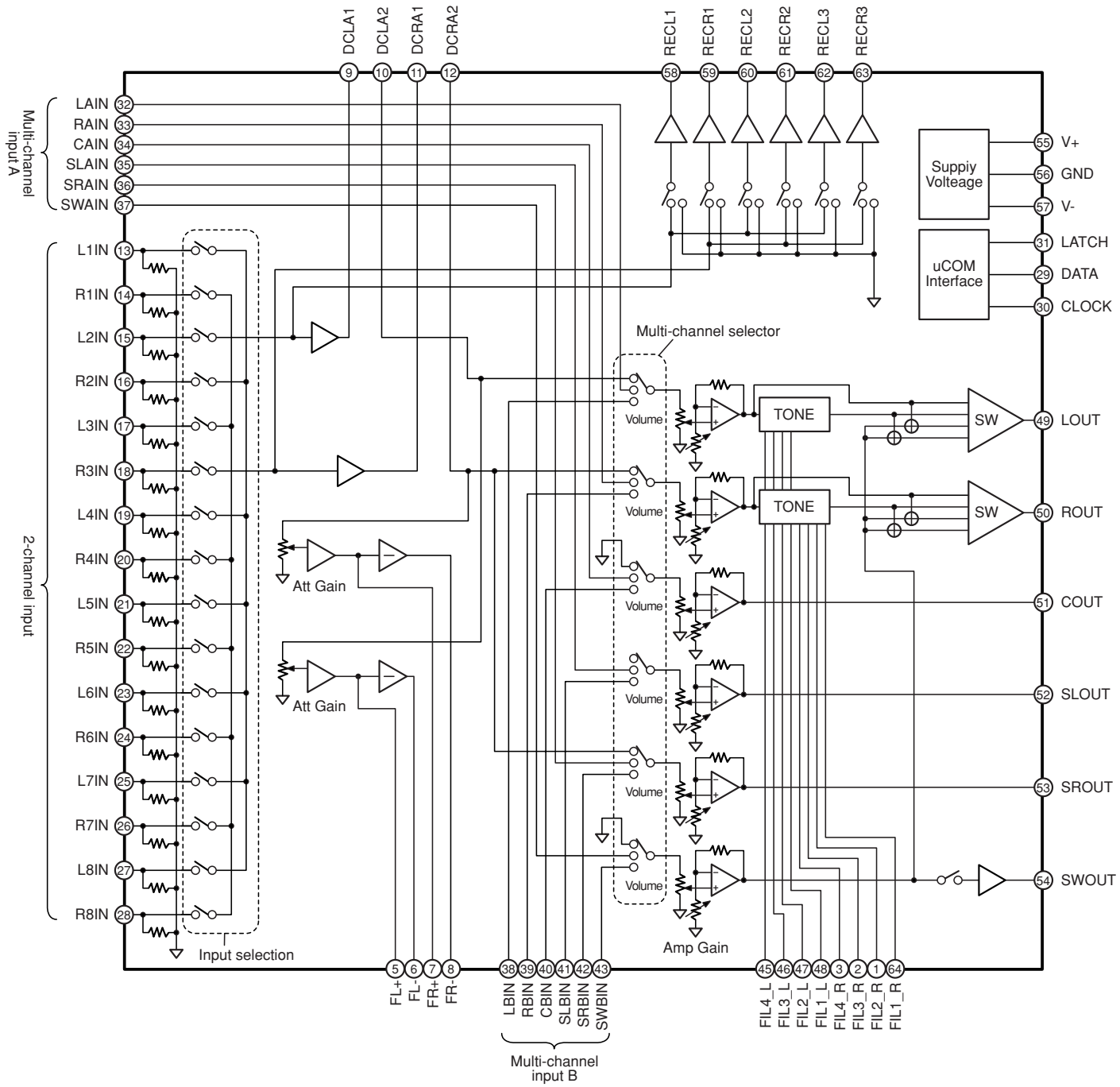
IC340, IC470, IC480 TA2022(Digital Audio Power AMP.)



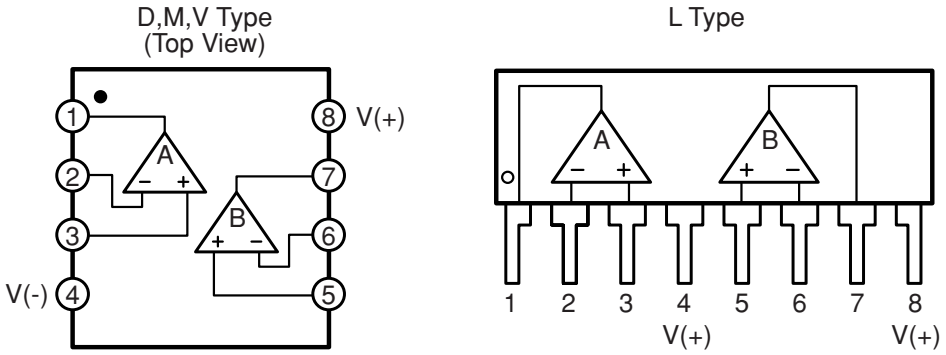
Components	Description
R_I	Inverting input resistance to provide AC gain in conjunction with RF. This input is biased at the BIASCAP voltage (approximately 2.5VDC).
R_F	Feedback resistor to set AC gain in conjunction with R1. Please refer to the Amplifier Gain paragraph, in the Application Information section.
C_I	Ac Input coupling capacitor which, in conjunction with RI, form a high pass filter aat $f_C = 1/(2\pi R I C_I)$.
R_{FBA}	Feedback divider resistor connected to V5. This resistor is normally set at 1kΩ .
R_{FBB}	Feedback divider resistor connectedto AGND. This value of this resistor depends on the supply voltage setting and helps set the TA2022 gain in conjunction with R_I,R_F,R_{FBA}, and R_{FBC}. Please see the Modulator Feedback Design paragraphs in the Application Information Section.
R_{FBC}	Feedback resistor connected from either the OUT1(OUT2) to FBKOUT1(FBKOUT2) or speaker ground to FBKGND1(FBKGND2). The value of this resistor depends on the supply voltage setting and helps set the TA2022 gain in conjunction with R_I,RF,R_{FBA}, and R_{FBB}. It should be noted that the resistor from OUT1(OUT2) to FBKOUT1 (FBKOUT2) must have a power reting of greater than $P_{DISS} = VPP^2/(2R_{FBC})$. Please see the Modulator Feedbaack Design paragraphs in the Application Information Section.
C_{FB}	Feedback delay capacitor that both lowers the idle switching frequency and filters very high frequency noise from the feedback signal, which improves amplifier performance. The value of C_{FB} should be offset between channel 1 and channel 2 so that the idle switching difference is greater than 40kHz. Please refer to the Application / Test Circuit.
R_{OFA}	Potentiometer used to manually trim the DC offset on the output of the TA2022.
R_{OFB}	Resistor that limits the manualDC offset trim range ang allows for mare precise adjustment.
R_{REF}	Bias resistor Locate close to pin 17 and ground at pin 20.
C_A	BIASCAP decoupling capacitor. Should be located close to pin 27 and grounded at pin 20.
D_B	Bootstrap diode. This diode charges up the bootsyrap capacitors when the output is low(at VNN) to drive the high side gate circuitry. Sohottky or fast recovery diode rated at least 200mA, 90V, 50nS is recommended for the bootstrap circuity. In addition, the bootstrap diode must be able to sustainthe entire VPP-VNN voltage. Thus, for most applications, a 90V(or greater) diodeshould be used.
C_B	High frequency bootstrap capacitor, whih filters the high side gate drive supply. This capacitor must be located as close to pin 13(VBOOT1) or pin 1n (VBOOT2) for reliable operation. The other side of C_B should be connected directly to the OUT1(pin 10) or OUT2(pin 7). Please refer to the Application/Test Circuit.
C_{BAUX}	Bulk bootsteap capacitor that supplements C_B during "clipping" events, which result in a reduction in thee averagee switching frequency.
R_B	Bootstrap resistor that limits C_{BAUX} charging current during TA2022 power up (bootstrap supply charging).
C_{SW}	VN10 generator filter capacitors. The high frequency capacitor (0.1uF) must be located close to pin 2 (VN10) to maximize device performance. The value of the bulk capacitor should be sized appropriately such that the VN10 voltage does not overshoot with respect to VNN during TA2022 turn on. Tripath recommends using a value of 100□F for the bulk capacitor.
L_{SW}	VN10 generator filter inductor. This inductor sized appropriately so that L_{SW} does not saturate. If the recommended inductor value of 100□H is not used, the VN10 may overshoot with respect to VNN during TA2022 turn on.
D_{SW}	Flywheel diode for the internal VN10 buck converter. This diode also prevents $VN10_{SW}$ from going more than one diode drop negative with respect to VNN. This Diode can be a Fast Recovery, Switching or Shottky, but must be rated at least 200mA, 30V, 50nS.
C_{SWFB}	VN10 generator frrdback capacitor. This capacitor, in conjunction with R_{SWFB}, filters the VN10 feedback signal such that the loop is unconditionally stable.
R_{SWFB}	VN10 generator feedback resistor. This resistor sets the nominal VN10 voltage. With R_{SWFB} equal to 1kΩ , the internally VN10 voltage will typically be 11V above VNN.
C_S	Supply decoupling for the power supply pins. For optimum performance, these components should be located close to the TA2022 and returned to their respective ground as shown in the Application/Test Circuit.
$R_{VNNSNESE}$	Overvoltage and undervoltage sense resistor for the negative supplly (VNN). Please refer to the Electrical Characteristics Section for the trip points as well as the hysteresis band. Also, please refer to the Over / Under-voltage Protection section in theApplication Information hor a detailed discussion of the internal circuit operation and external component selection.
$R_{VPPSENSE}$	Overvoltage and undervoltage sense resistor for the positive supply (VPP). Please refer to the Electrical Characteristics Section for the trip points as well as the hysteresis band. Also, please refer to the Over / Under-voltage Protection section in the Application Information for a detailed discussion of the internal circuit operation and external component selection.
C_{HBR}	Supply decoupling for the high current Half-bridge supply pins. These components must be located as close to the device as possible ro minimize supply overshoot and maximize device reliability. These capacitors should have good high frequency performance including low ESR and low ESL. In addition, the capacitor voltage rating must be twice the maximum VPP voltage.
C_Z	Zobel capacitor, which in conjunction with R_Z, terminates the output filter at high frequencies. Use a high quality film capacitor capable of sustaining the ripple current caused by the switching outputs.
R_Z	Zobel resistor, which in conjunction with C_Z, terminates the output filter st high frequencies. The combination of R_Z and C_Z minimizes peaking of the output filter under both on load conditions or with real world loads, including loudspeakers which usually exhibit a rising impedance with increasing frequency. The recommended power rating is 2 watts.
D_O	Fast Recovery diodes that minimize overshoots and undershoots of the outputs with respect to power ground during switching transitions as well as output shorts to ground. For maximum effectiveness, these diodes must be located close to the output pins and returned to their respective VPP and VNN. Also, they shouid be rated with a mazimum Forward Voltage of 1V at 10A. Please see Application/Test Circuit for VPP and VNN return pins.
L_O	Output inductor, which in conjunction with C_O, demodulates (filters) the switching waveform into an audio signal. Formss a second order filter with a cutoff frequency of $f_C = 1/(2\pi\sqrt{L_O C_O})$ and a quality factor of $Q = R_L C_O/\sqrt{L_O C_O}$. These inductors must be rated at least 10A with high linearity. Olease see Output Filter Design section for details.
C_O	Outout capacitor, which, in conjunction with LO,demodulates (filters) the switching waveform into an audio signsl. Forms a second order low-pass filter with a cutoff frequency of $f_C = 1/(2\pi\sqrt{L_O C_O})$ and a quqlity factor of $Q = R_L C_O/\sqrt{L_O C_O}$. Use a high quality film capacitor capable of sustaining the ripple current caused by the switching outputs. Electrolytic capacitors should not be used.

IC BLOCK DIAGRAM & DESCRIPTION

IC401 NJW1153FG1(6ch Electric Volume)

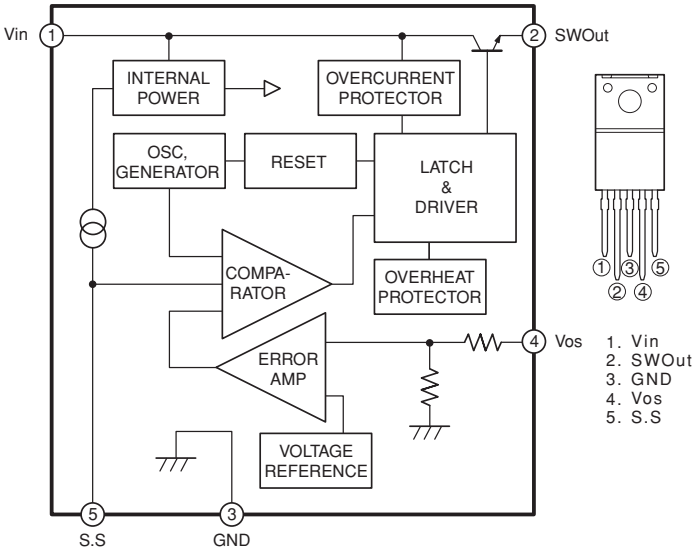


IC404 NJM4556AL(OP. AMP.)

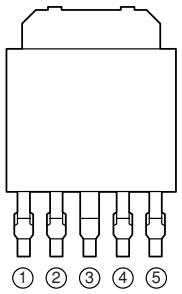


IC BLOCK DIAGRAM & DESCRIPTION

IC490 SI-8050RD(Regulator)

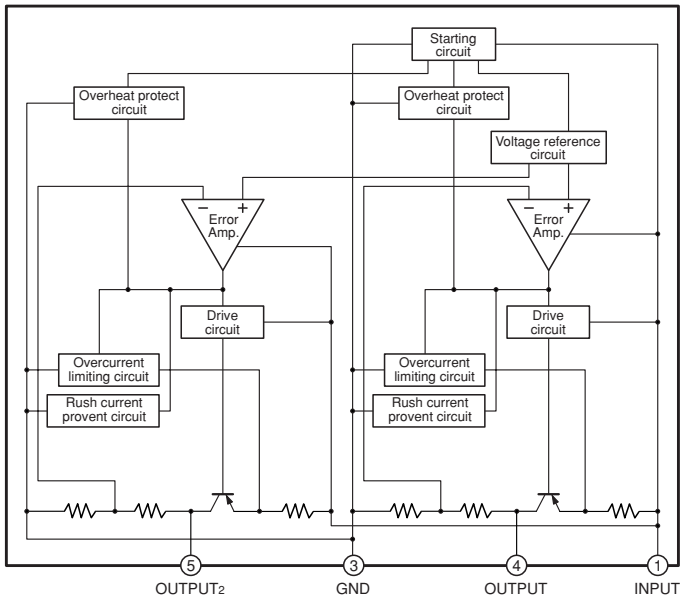


IC492, IC494 PQ050DZ01Z(Regulator)



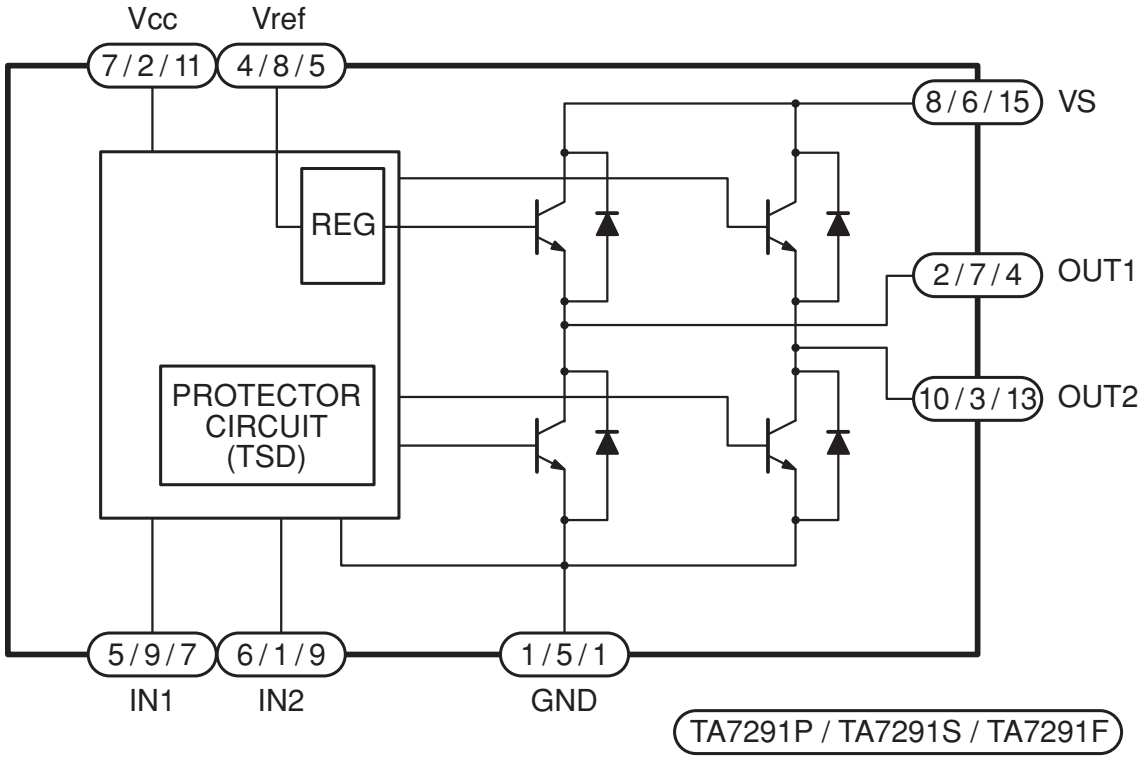
Pin No.	Symbols	Description
1	Vin	DC INPUT
2	Vc	ON/OFF CONTROL
3	Vo	DC OUTPUT
4	NC	
5	GND	

IC493 UPC37M31TJ-AZ(Regulator)



IC BLOCK DIAGRAM & DESCRIPTION

IC604 TA7291S(Driver)



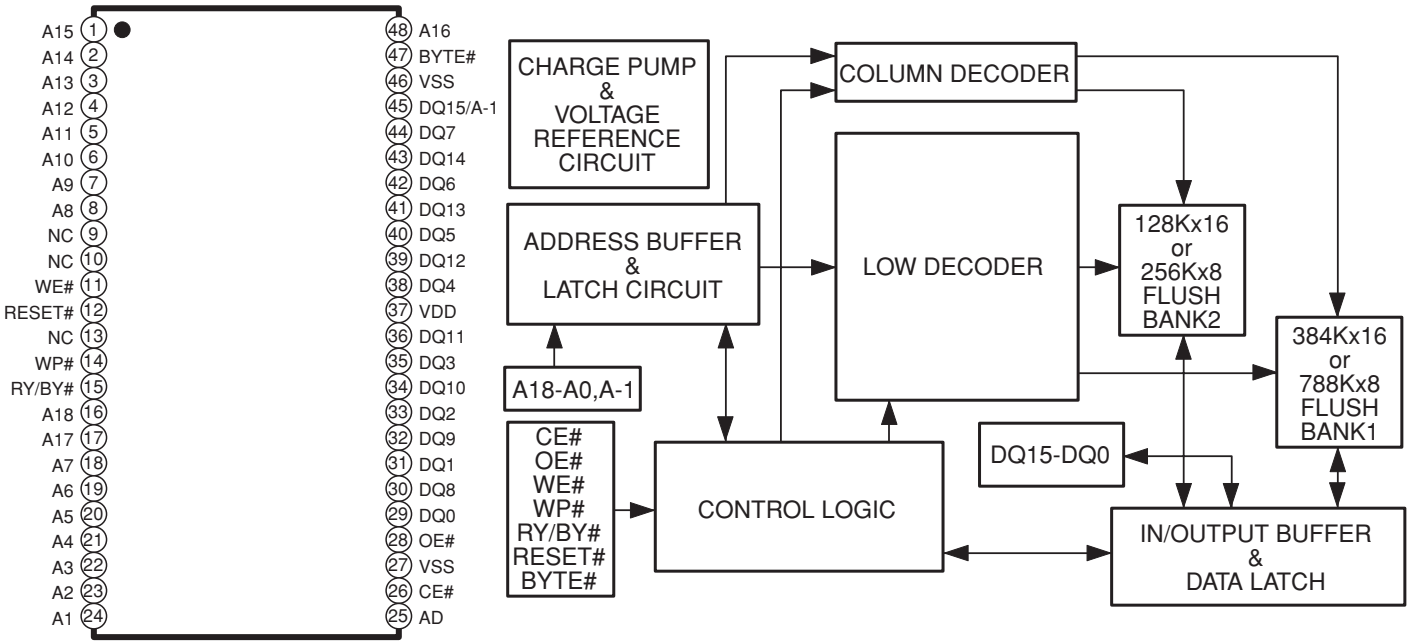
PIN FUNCTION

PIN No.			SYMBOL	FUNCTIONAL DESCRIPTION
P	S	F		
7	2	11	Vcc	Supply voltage terminal for Logic
8	6	15	Vs	Supply voltage tarminal for Motor driver
4	8	5	Vref	Supply voltage terminal for control
1	5	1	GND	GND terminal
5	9	7	IN1	Input terminal
6	1	9	IN2	Input terminal
2	7	4	OUT1	Output terminal
10	3	13	OUT2	Output terminal

P Type : PIN③, ⑨ : NC
S Type : PIN④ : NC
F Type : PIN②, ③, ⑥, ⑧, ⑩, ⑫, ⑭, and ⑯ : NC
For F Type, We recommend FIN to be connected to the GND.

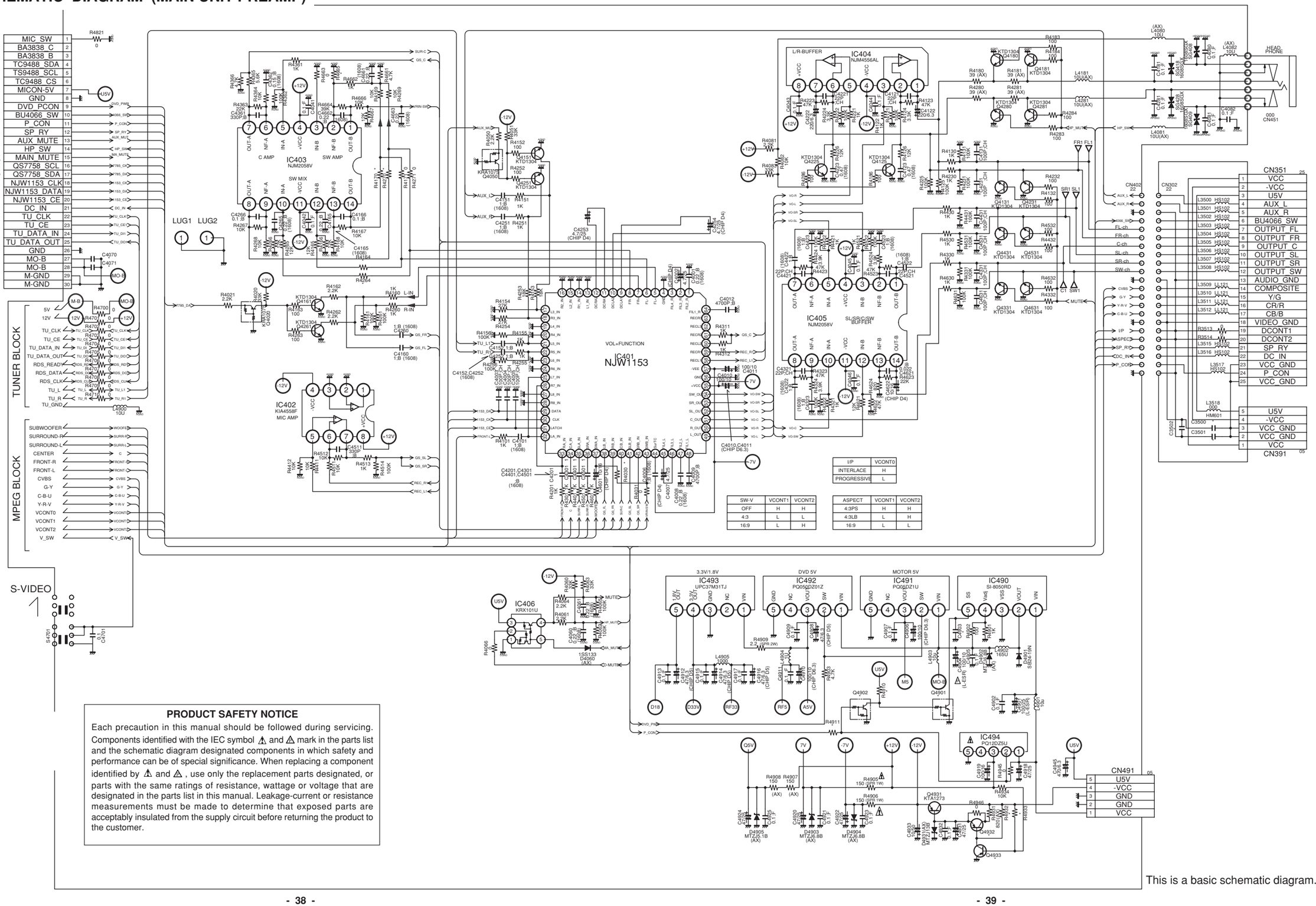
IC BLOCK DIAGRAM & DESCRIPTION

IC810 SST39VF800A(Flash)



Symbols	Pin Name	Functions
A18,A17	Bank Selective Address	Selects bank 1 when "L" and bank 2.
A16-A0,A-1	Flush Bank Address	Sapply address for flush bank.
A18-A15	Flush Bank Block Address	Select flush bank for erease.
A18-A10	Flush Bank Sector Sddress	Select flush bank sector for erease.
DQ15-DQ0	Data Input/Output	To output data during read cycle and receive input data during write cycles. Data is internaliy latched during a writecycle. The output are high inpedance when OE#,CE# is "H".
CE#	Chip Enable	To activate the flush bank when CE# is "L".
OE#	Output Enable	To activate the data output buffer .
WE#	Write Enable	To control the write, erease and program.
BYTE#	Bait Pin	Bait mode when "L" and word mode when "H".
RY/BY#	Ladey/Beje Output	Output "L" when write and ezcept "H".
WP#	Write Protect	To activate hardware write protect when "L".
RESET#	Reset	To activate hardware reset when "L".
VDD	Power Supply	2.7V~3.6V supply.
VSS	Ground	

SCHEMATIC DIAGRAM (MAIN UNIT PREAMP)



This is a basic schematic diagram.

SCHEMATIC DIAGRAM (MAIN UNIT DVD)

2CH
PCM1755DBQ (TI)

6CH
LC708746 (SANYO)
or
PCM1606E(TI)

IC120
ZR36707

IC110
ZR36768
(VADDIS 6)

IC130
BA5954FP

IC131
BA10358

IC132
BA10358

IC141
IC42S16100-7T
(16M SDRAM)

IC142
IC42S16100-7T
(16M SDRAM)

IC810 (ICX81)
SST39VF800A
(8M FLASH)

IC160
LC75702W

IC161
KRX101U

IC171
PST3627UR

IC172
AT24C02N-10SI-2.7
EEPROM(2K)

CN120
F-
F+
T+
T-
C
D
CD/DVD
RF
A
B
F
GND
VC
VCC
E
(NC)
VR-CD
VR-DVD
LD_CD
MD
HFM
(NC)
LD-DVD
GND-LD

CN130
SP-
SP+
DGND
LMTSW
SLED-
SLED+

CN110
CLOSE_SW
LASER_CURRENT
GND
DVD_READY
DVD_DATA_IN
DVD_DATA_OUT
DVD_CLK
REQUEST

CN196 DOWN_LOAD_I/F
5VD
DUPTD
DUPRD
DGND

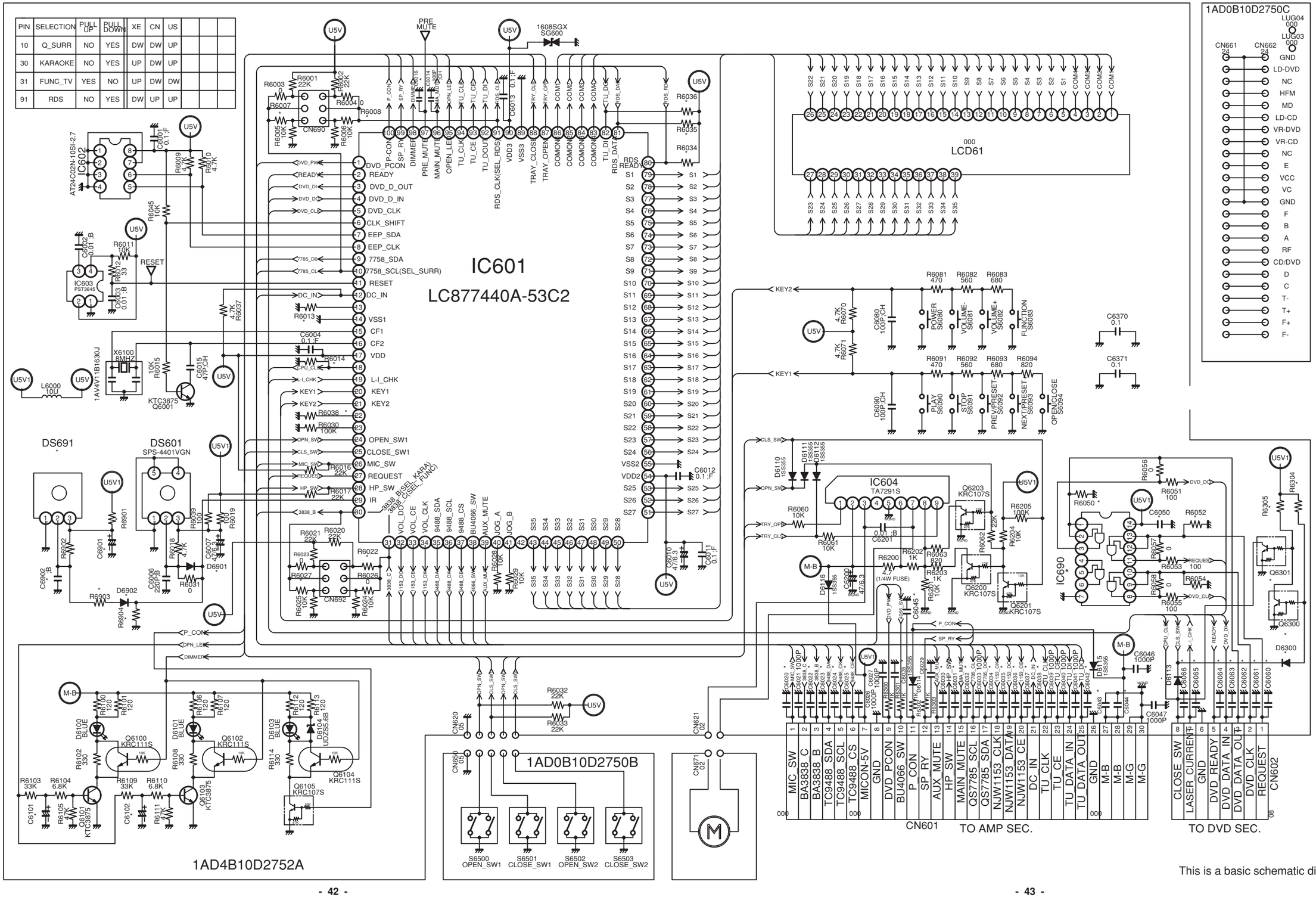
CN195 DOWN_LOAD_I/F
5VD
DUPRD
DGND
DUPTD

CVBS
G-Y
C-B-U
Y-R-V
I/P
VCONT1
VCONT2
V_SW
DVD_MUTE
FRONT-R
FRONT-L
SURROUND-R
SURROUND-L
SUBWOOFER
CENTER

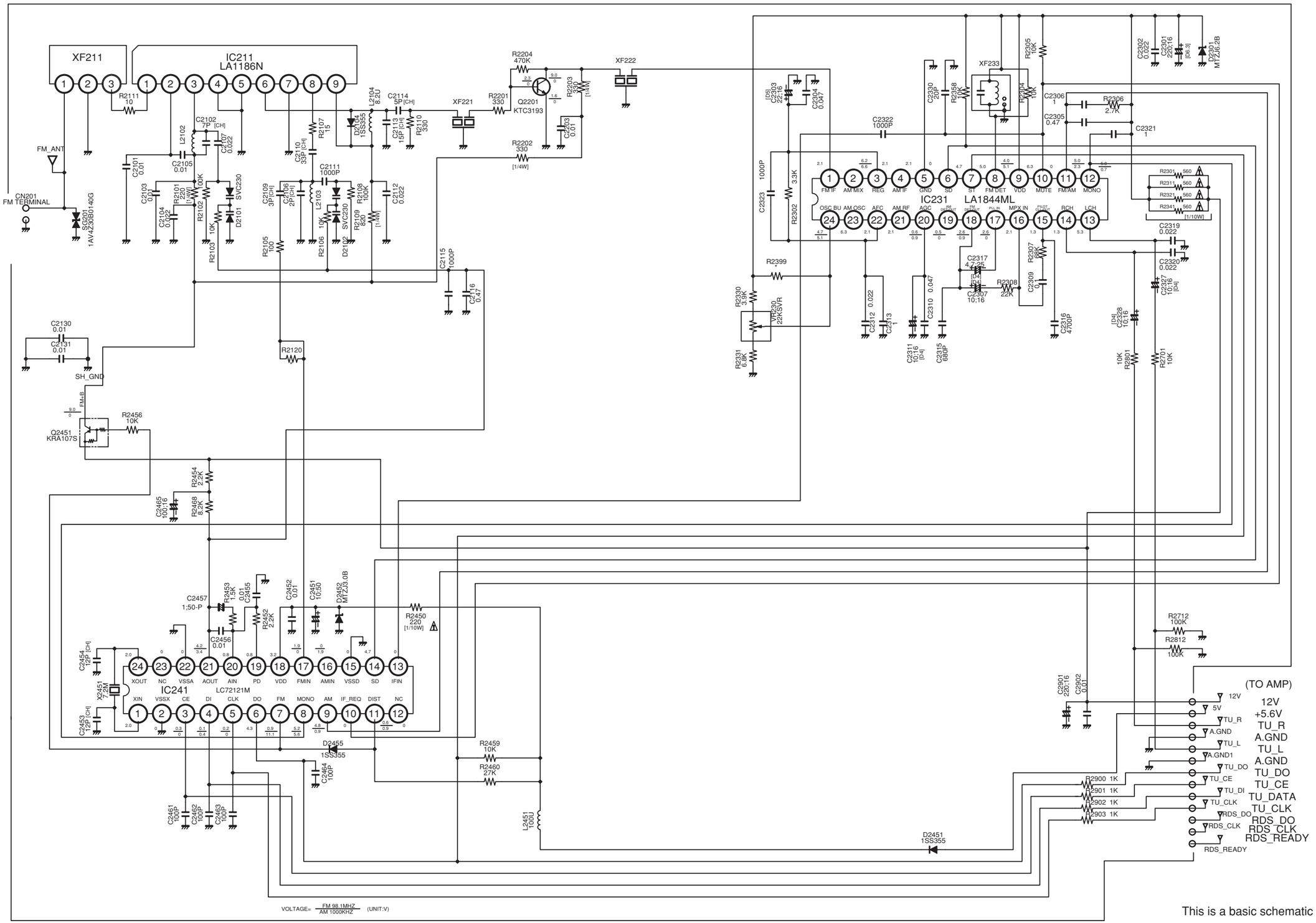
When SRAM PWB is connected, R1507 is not mounted

This is a basic schematic diagram.

PIN	SELECTION	PULL UP	PULL DOWN	XE	CN	US			
10	Q_SURR	NO	YES	DW	DW	UP			
30	KARAOKE	NO	YES	UP	DW	UP			
31	FUNC_TV	YES	NO	UP	DW	DW			
91	RDS	NO	YES	DW	UP	UP			

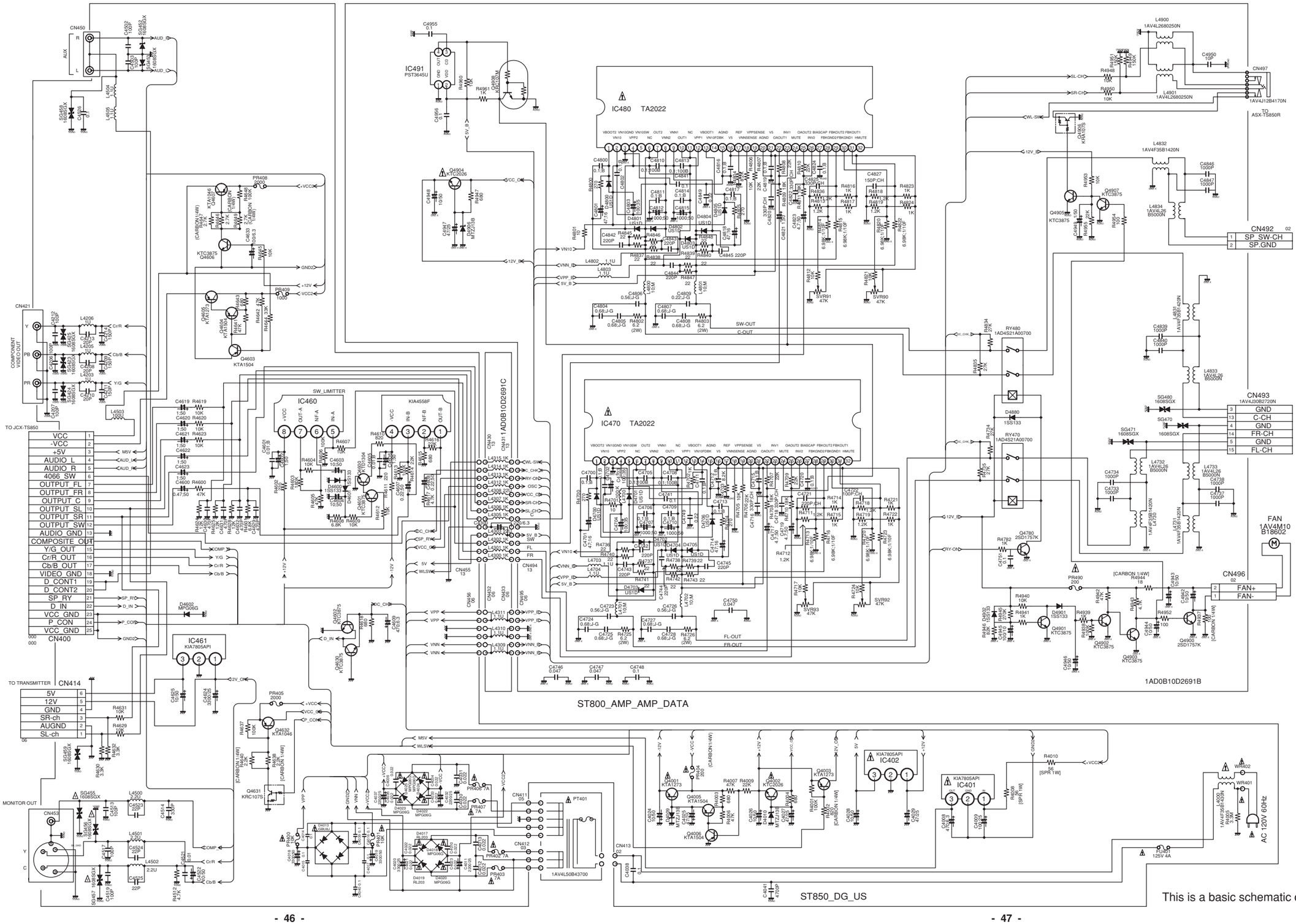


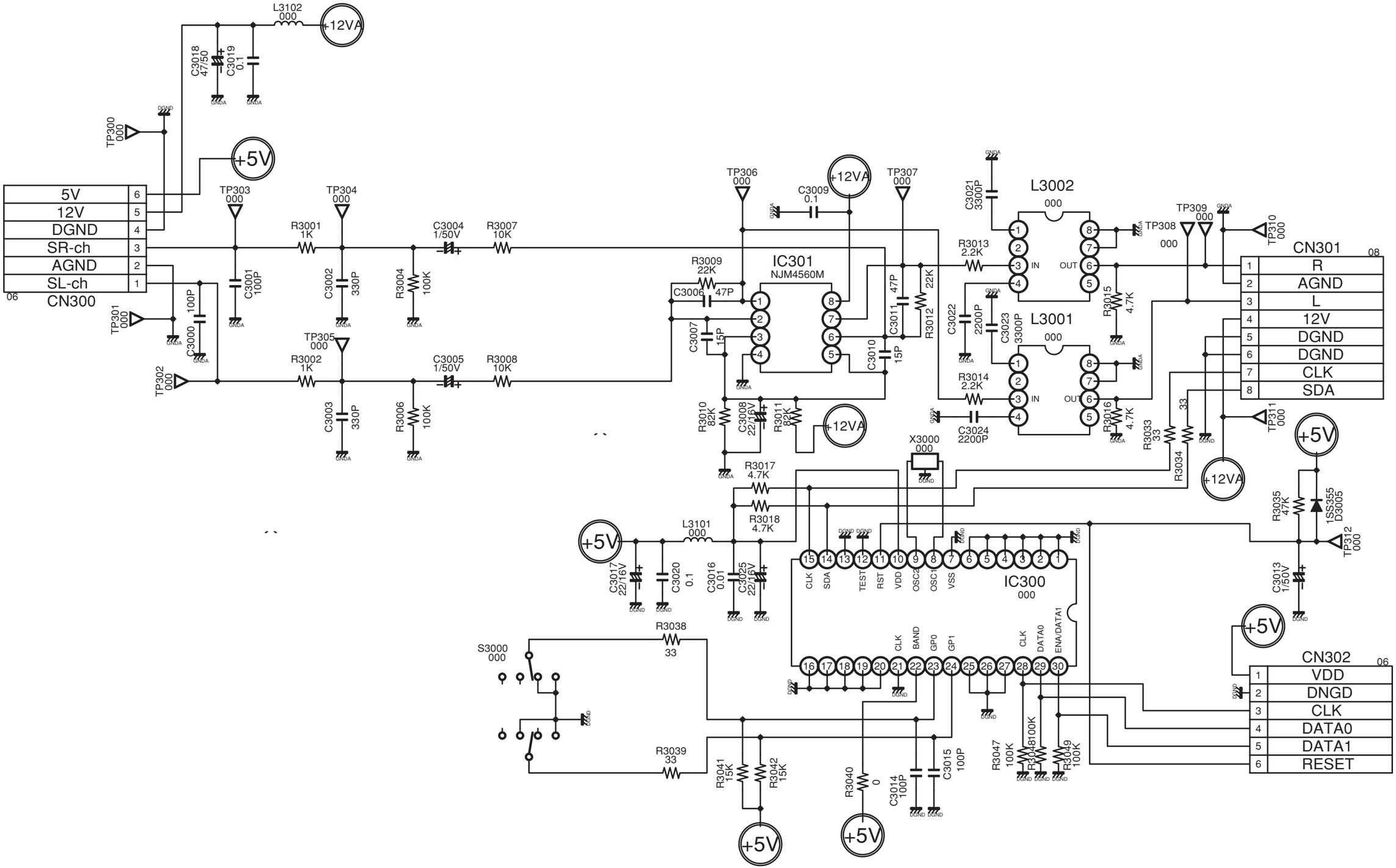
This is a basic schematic diagram.



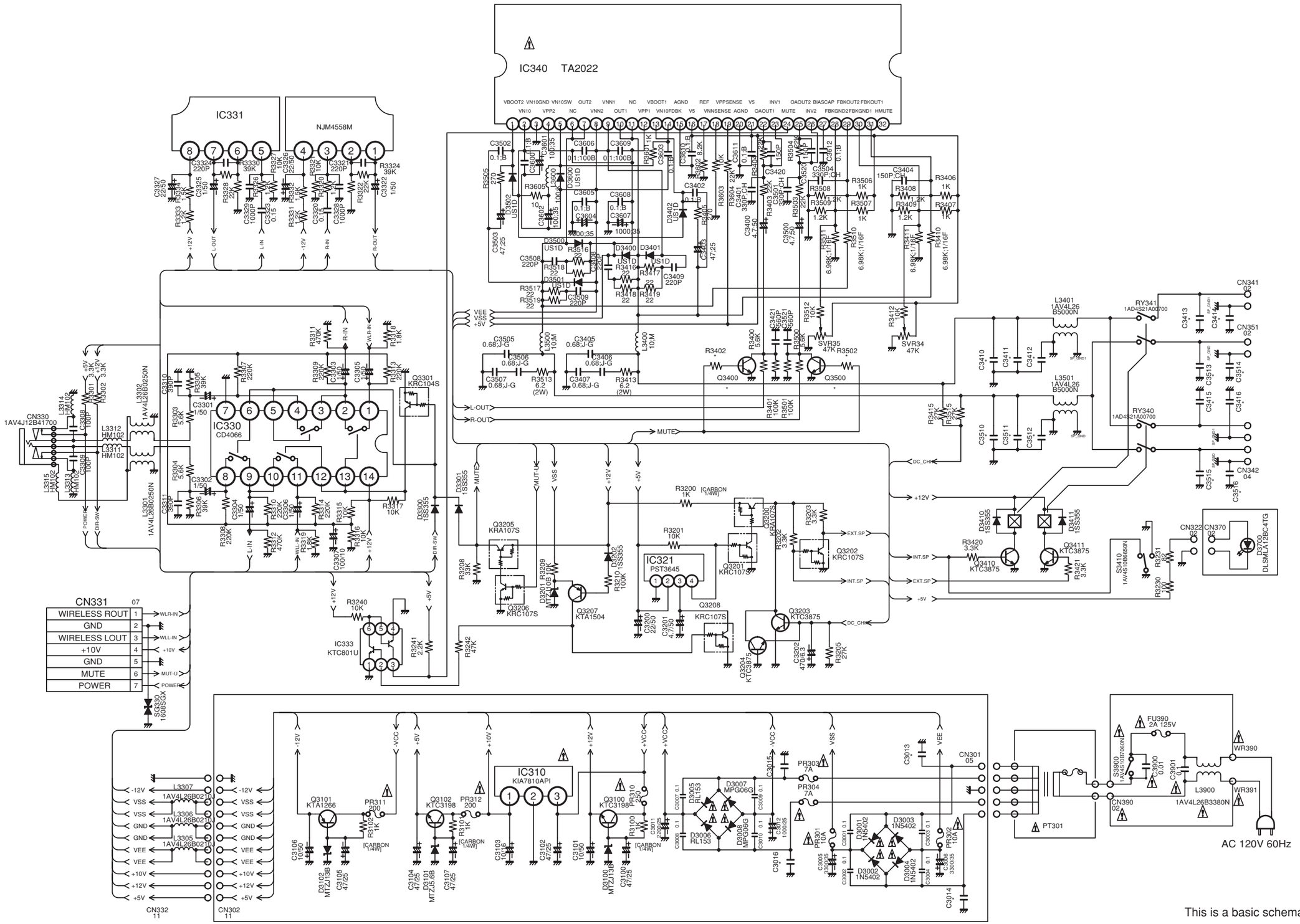
This is a basic schematic diagram.

SCHEMATIC DIAGRAM (SUBWOOFER SPEAKER MAIN)



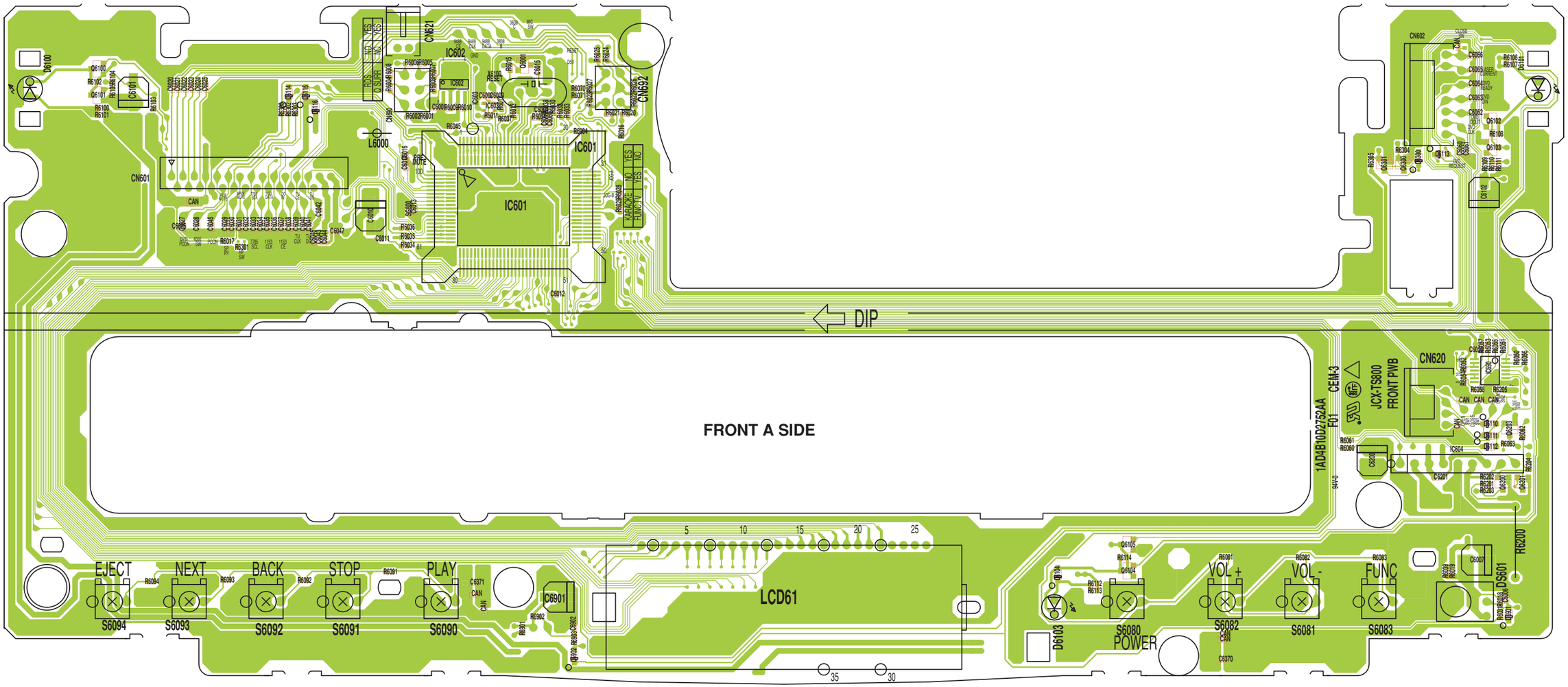


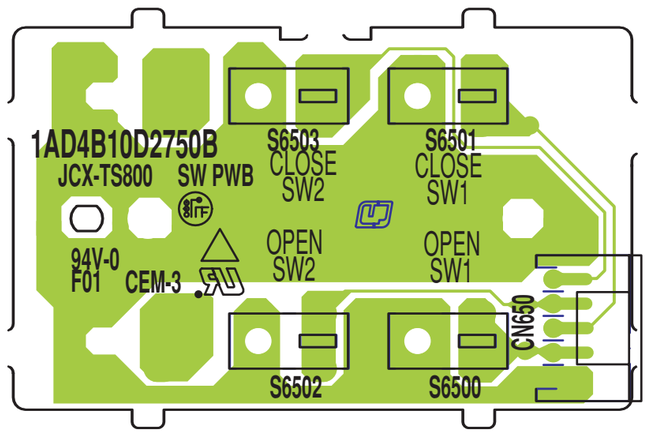
This is a basic schematic diagram.



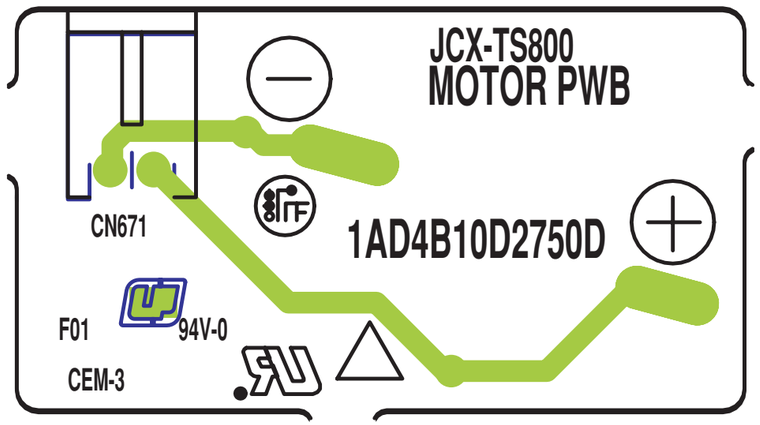
This is a basic schematic diagram.

WIRING DIAGRAM (MAIN UNIT FRONT A SIDE , DOOR SW and MOTOR)



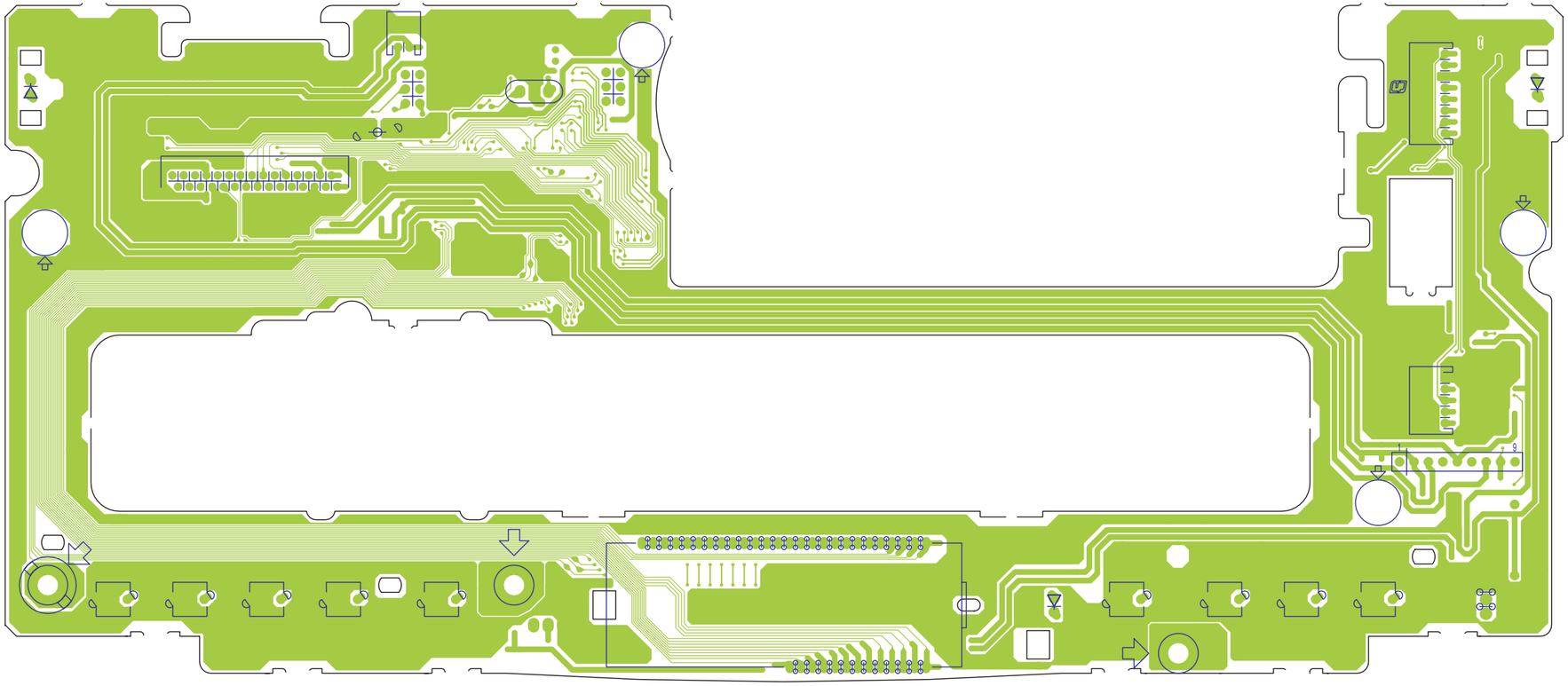


DOOR SW

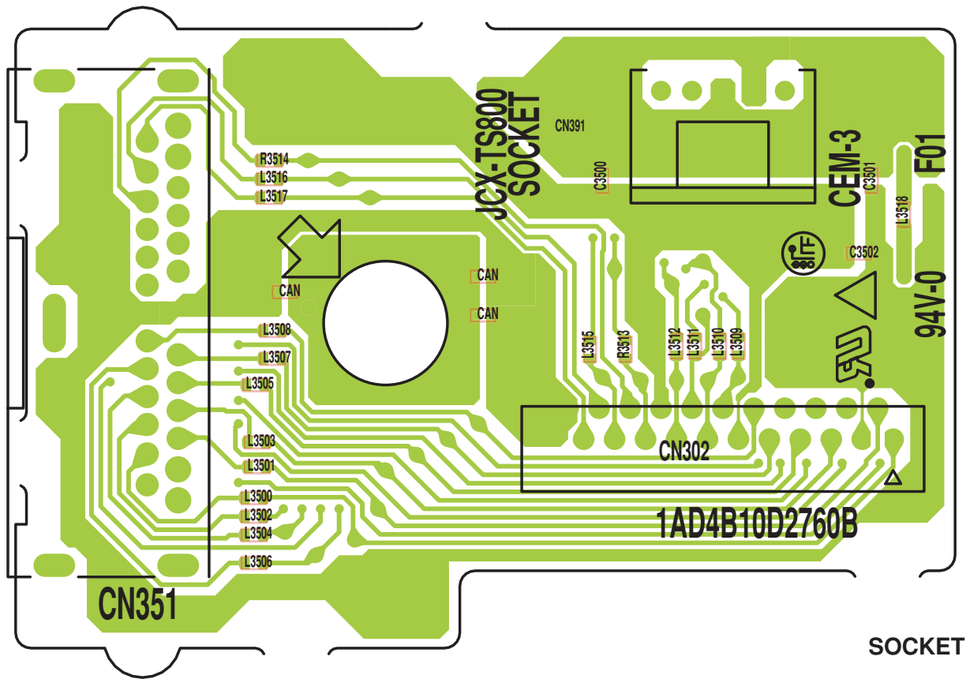


MOTOR

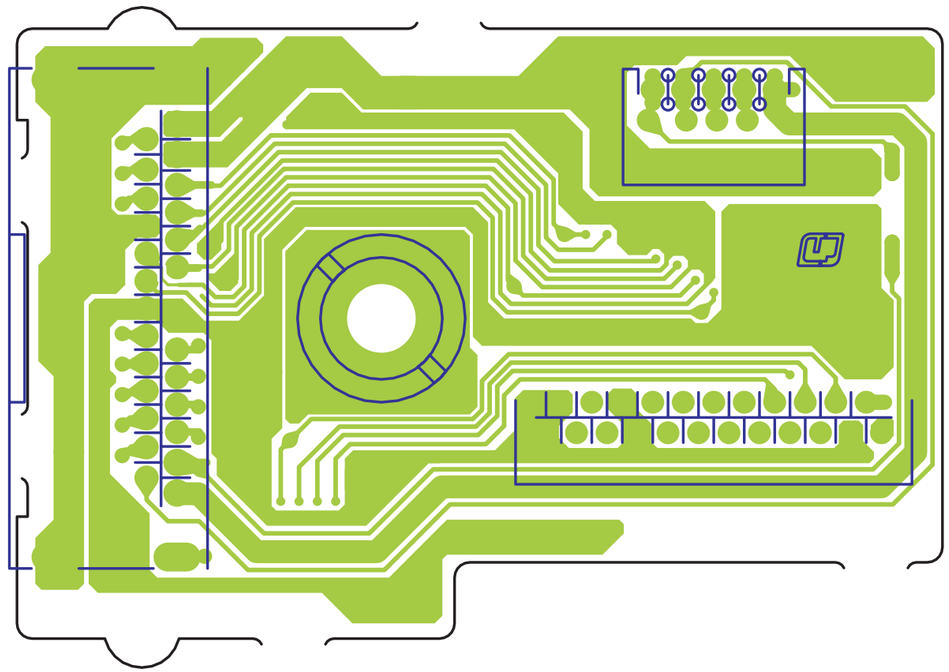
WIRING DIAGRAM (MAIN UNIT FRONT B SIDE and SOCKET)

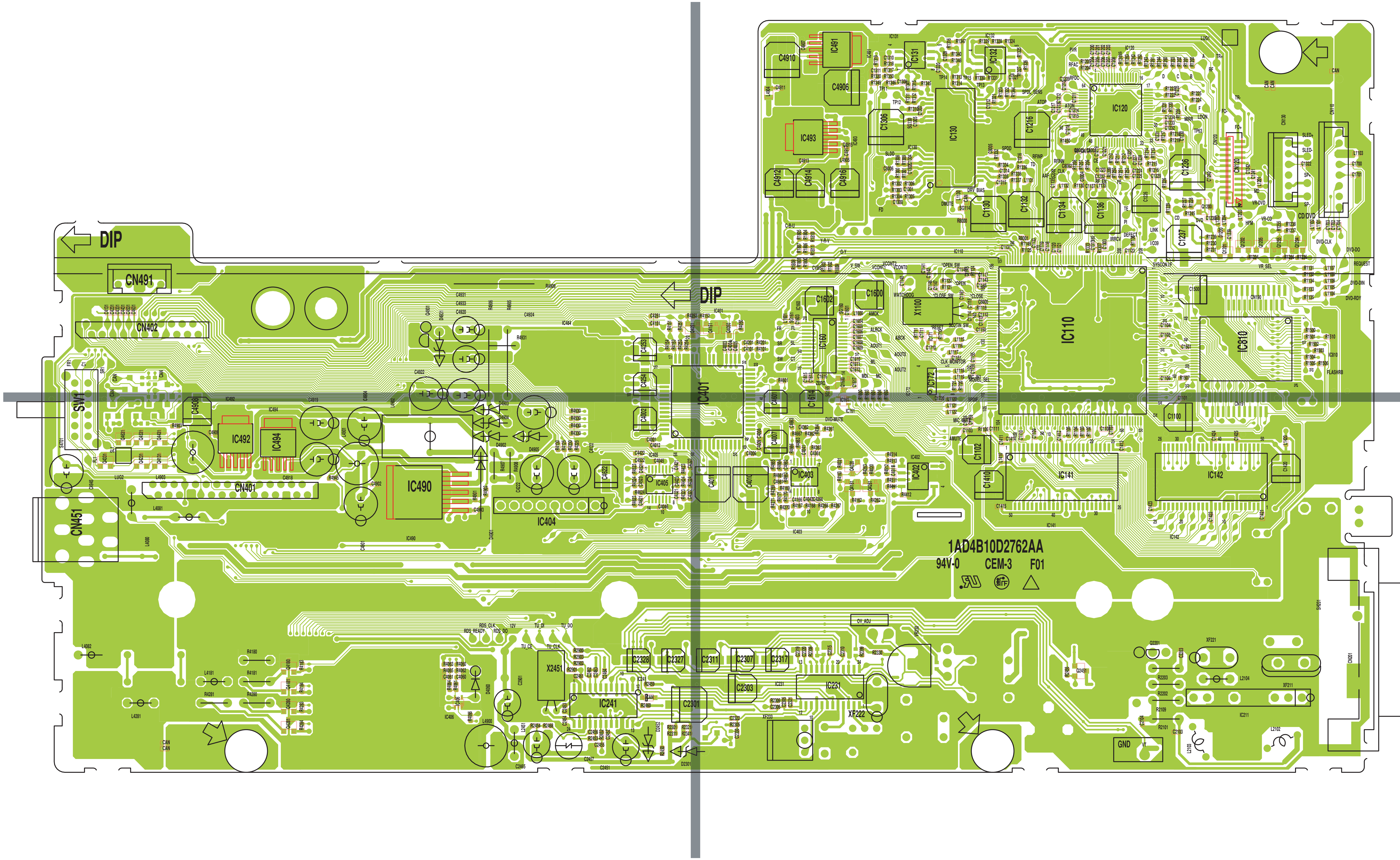


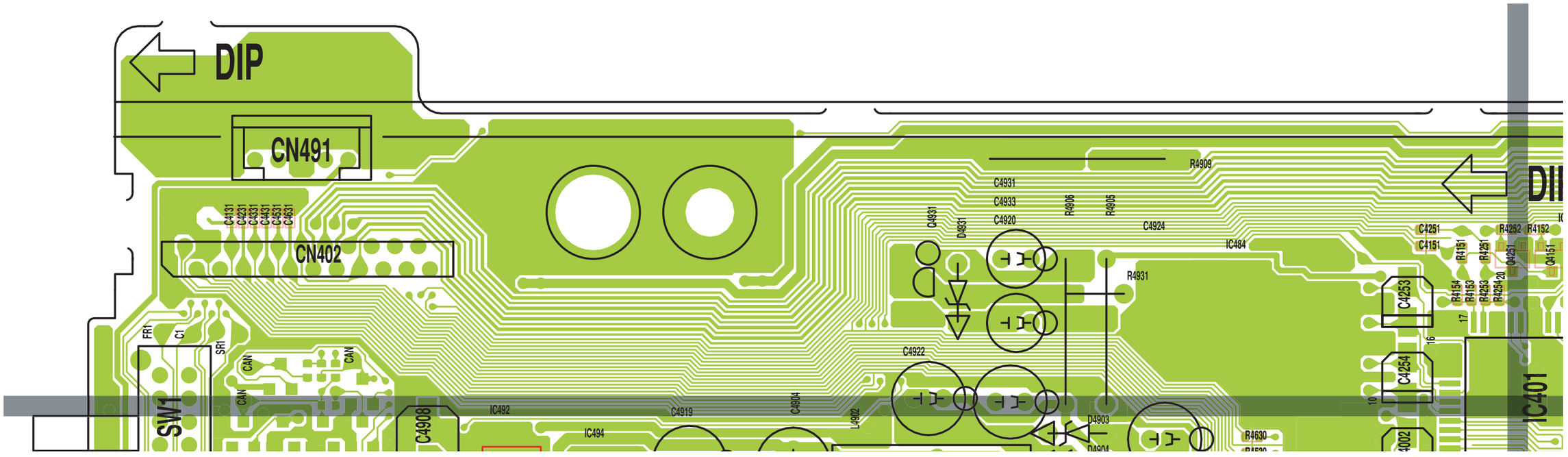
FRONT B SIDE

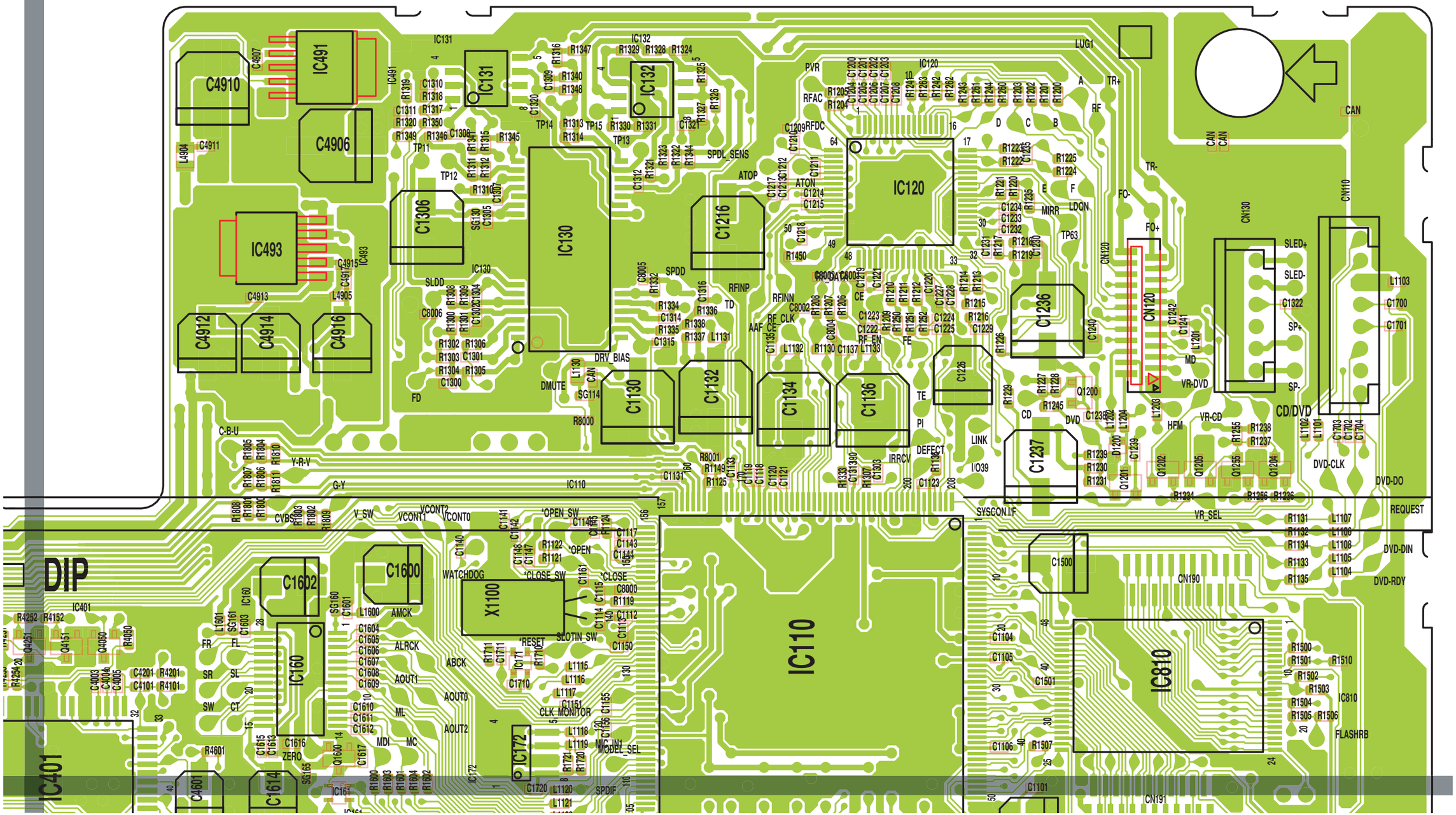


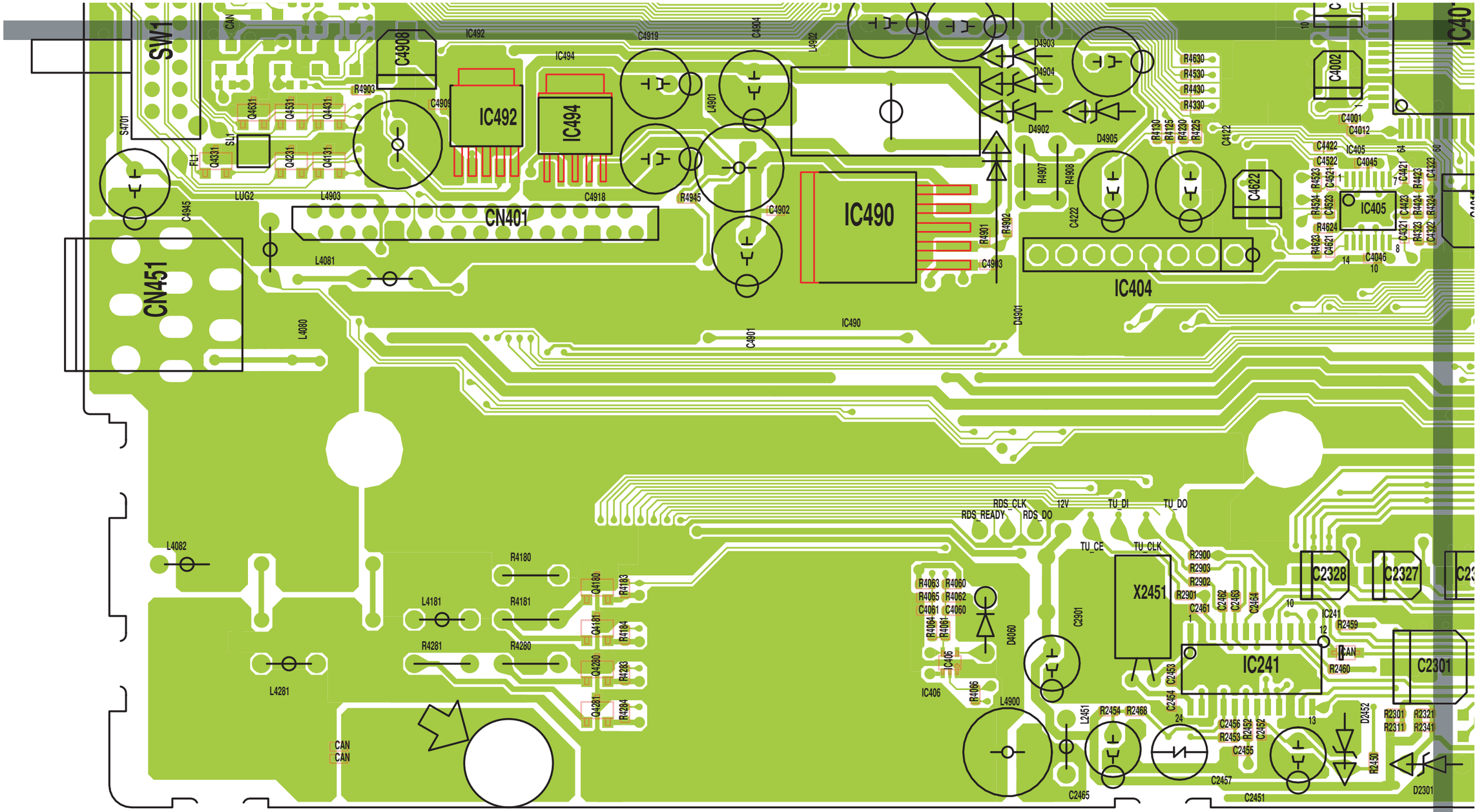
SOCKET

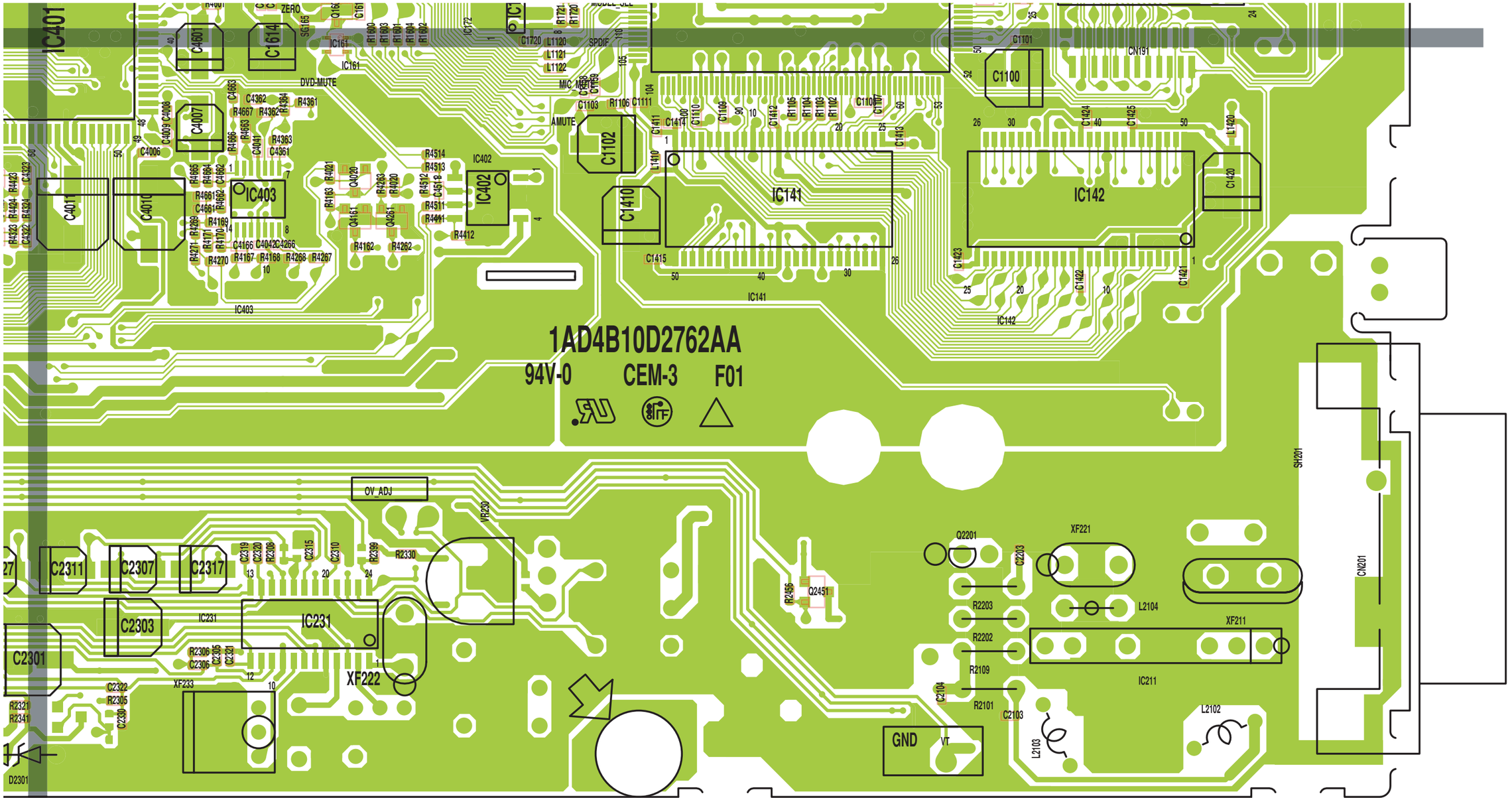



DIP
CN491
CN402
SW1
CN401
CN451
IC492
IC494
IC490
IC404
IC401
IC405
IC403
IC402
IC110
IC810
IC120
IC130
IC141
IC142
IC241
IC231
IC491
IC493
X1100
X2451
1AD4B10D2762AA
94V-0
CEM-3
F01
GND

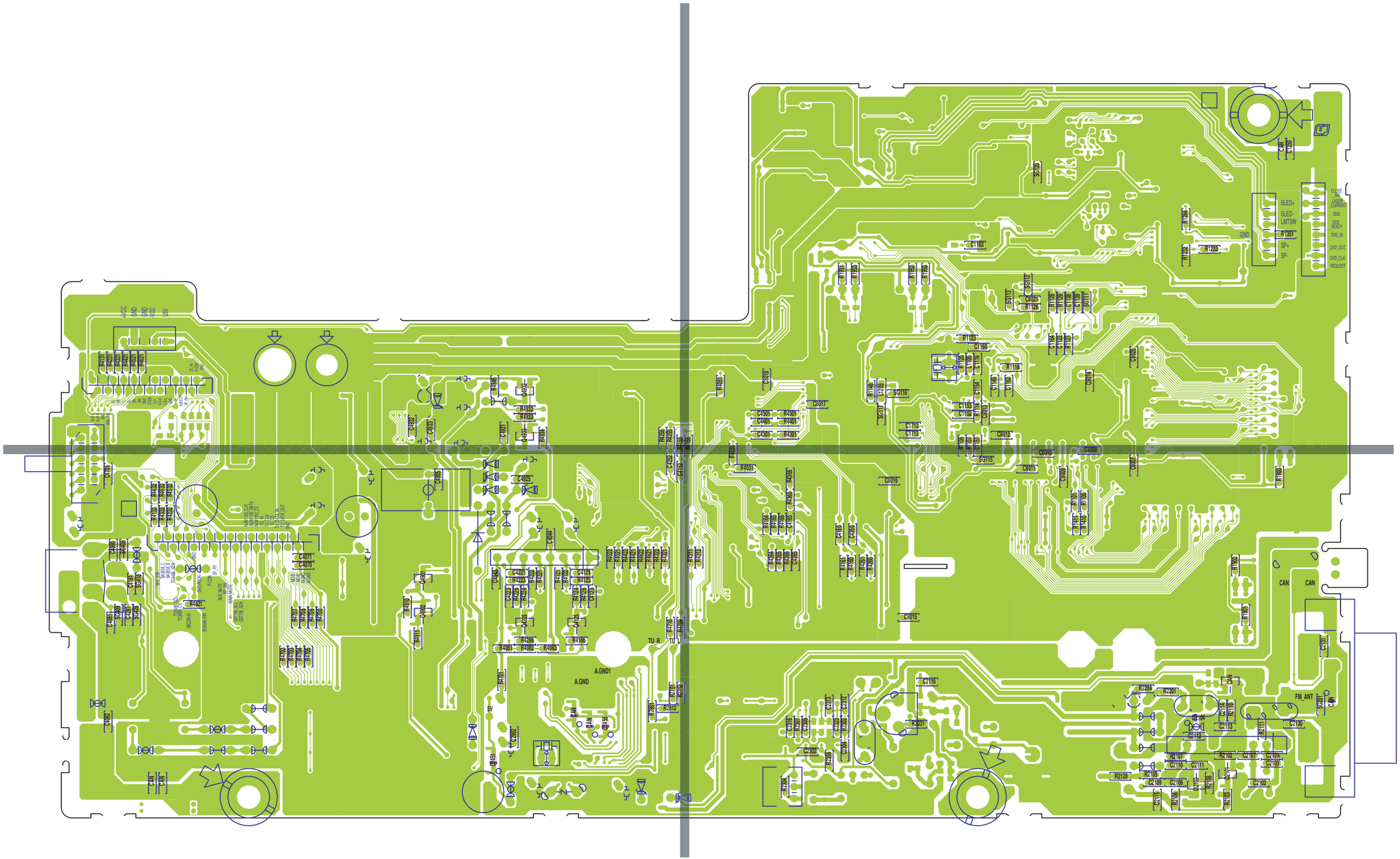

DIP
CN491
CN402
SW1
IC401
IC484
IC492
IC494
C4908
C4919
C4804
C4922
C4924
C4920
C4931
C4933
R4909
R4906
R4905
R4931
Q4931
D4931
D4903
L4902
C4253
C4254
C4251
C4151
R4252
R4152
R4154
R4153
R4253
R4251
CAN

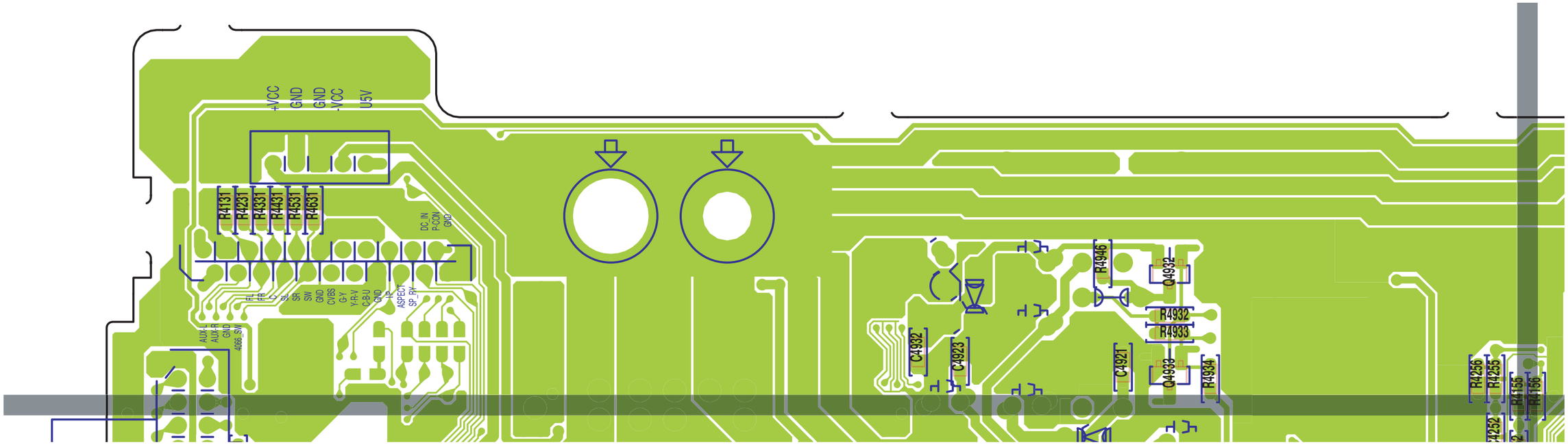

IC491
C4910
C4906
C4911
IC493
C4912
C4914
C4916
IC131
IC132
IC130
C1306
C1216
IC120
C1236
C1130
C1132
C1134
C1136
C1237
IC110
C1600
C1602
X1100
IC160
IC401
IC161
IC172
IC810
DIP
CN120
CN130
CN110
CN190
CN191
CN123
LUG1
CAN
TR+
TR-
FO-
FO+
RF
SLED+
SLED-
SP+
SP-
CD/DVD
VR-DVD
VR-CD
VR_SEL
REQUEST
DVD-DIN
DVD-RDY
DVD-CLK
DVD-DO
FLASHRB
SYSCON I/F
RFAC
RFDC
PVR
ATOP
ATON
SPDL_SENS
SPDD
SLDD
RFINP
RFINN
TD
FD
DRV_BIAS
DMUTE
TE
FE
PI
DEFECT
LINK
I/O39
IRRCV
HFM
MIRR
LDON
MD
CD
DVD
C-B-U
Y-R-V
G-Y
CVBS
V_SW
VCONT2
VCONT1
VCONT0
WATCHDOG
*OPEN_SW
*OPEN
*CLOSE_SW
*CLOSE
SLOTIN_SW
*RESET
AMCK
ALRCK
ABCK
AOUT1
AOUT0
AOUT2
MI
MC
MDI
ZERO
CLK_MONITOR
MODEL_SEL
MIC_IN1
SPDIF
RF_CLK
AAF_CE
RF_EN

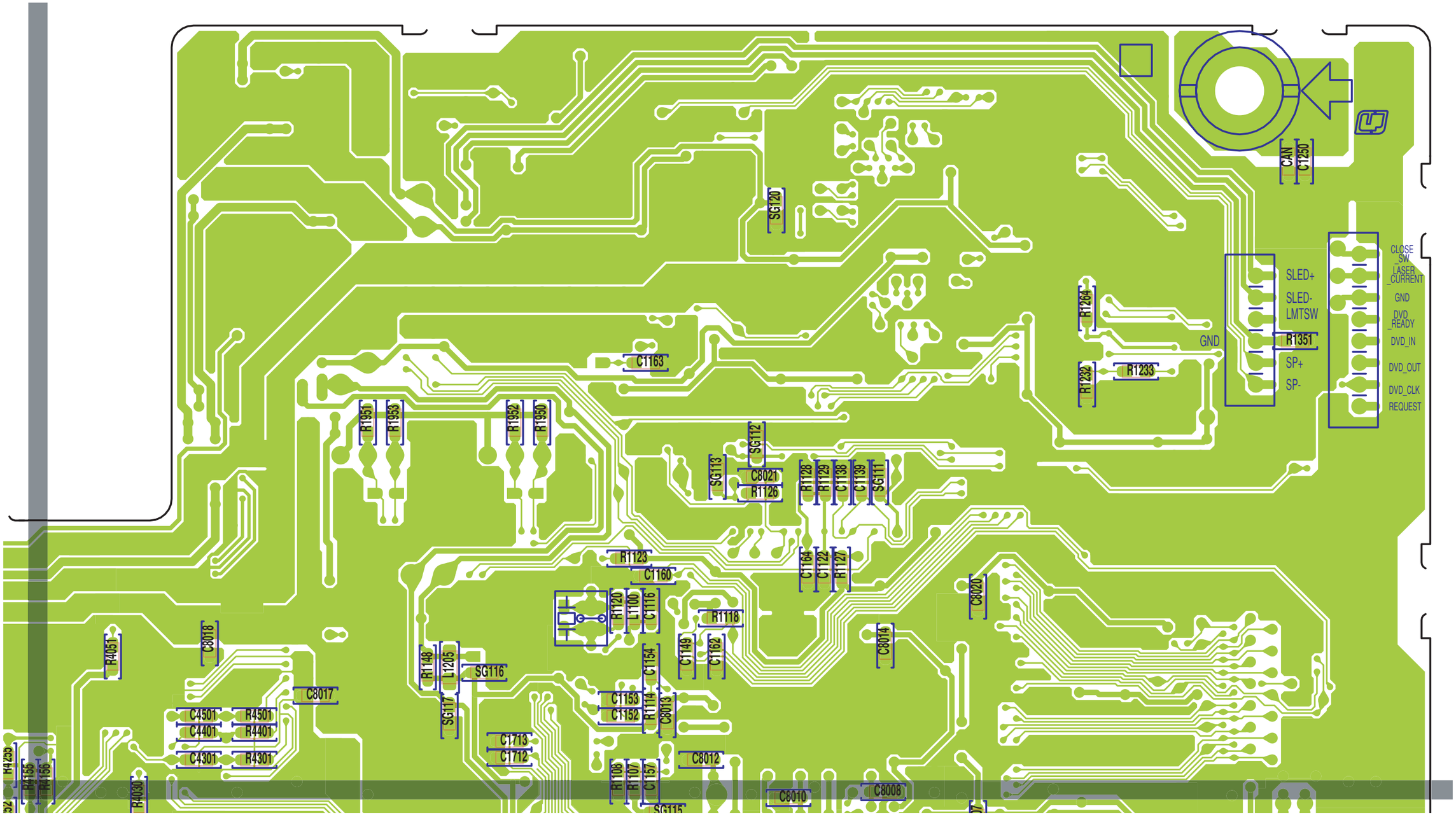

SW1
S4701
CN451
CN401
IC492
IC494
IC490
IC404
IC405
IC406
IC241
X2451
C4908
C4919
C4904
L4902
L4901
C4905
R4903
C4918
R4945
C4902
C4945
LUG2
L4903
L4081
L4080
C4901
D4903
D4904
D4902
D4905
R4907
R4908
R4902
R4901
C4903
D4901
C4222
C4122
C4622
R4630
R4530
R4430
R4330
R1130
R1125
R1230
R1225
C4002
C4001
C4012
C4422
C4522
C4045
C4421
C4423
C4323
R4523
R4524
R4624
R4623
C4523
C4621
C4321
C4322
R4423
R4424
R4324
R4323
C4046
L4082
L4281
L4181
L4281
R4180
R4181
R4280
R4281
Q4180
Q4181
Q4280
Q4281
R4183
R4184
R4283
R4284
CAN
CAN
RDS_CLK
RDS_READY
RDS_DO
12V
TU_DI
TU_DO
TU_CE
TU_CLK
R4063
R4060
R4065
R4062
C4061
C4060
R4064
R4061
C406
R4066
D4060
L4900
C2901
L2451
R2454
R2466
C2465
R2900
R2903
R2902
R2901
C2461
C2462
C2463
C2464
C2453
C2454
C2456
R2453
C2452
C2455
C2457
C2451
C2328
C2327
C2301
R2459
R2460
D2452
R2301
R2311
R2321
R2341
R2430
D2301

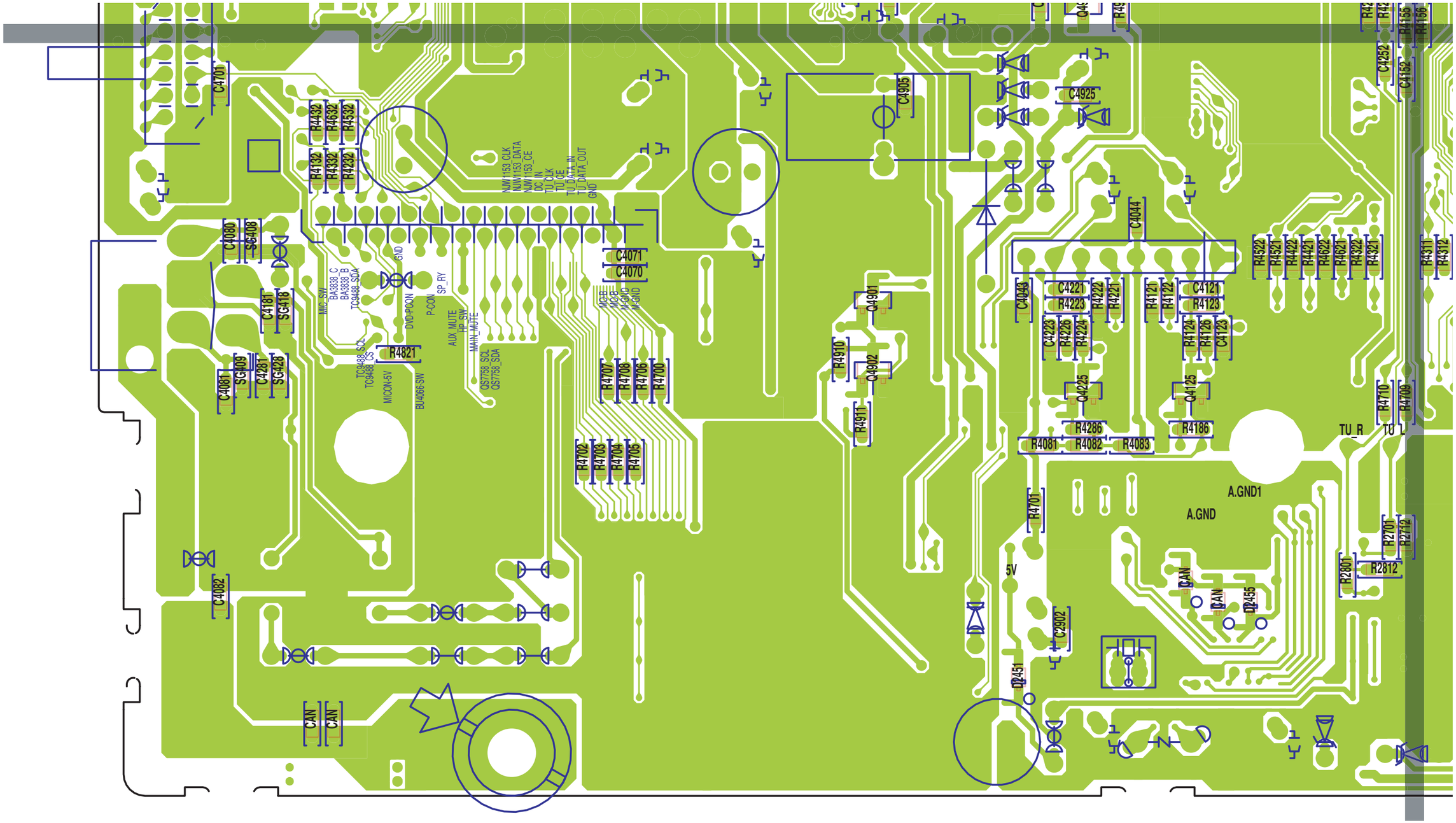

IC401
C4001
C1614
ZERO
IC161
DVD-MUTE
C4007
C4006
C4011
C4010
IC403
IC402
C4020
C4161
C4261
R4162
R4262
R4514
R4513
R4512
C4518
R4511
R4411
R4412
C1103
R1106
C1111
AMUTE
C1102
C1410
IC141
C1414
C1411
C1415
C1101
C1100
CN191
C1424
C1425
L1420
C1420
IC142
C1423
C1422
C1421
1AD4B10D2762AA
94V-0 CEM-3 F01
SH201
OV_ADJ
VR230
C2311
C2307
C2317
C2303
C2301
IC231
XF222
XF233
D2301
Q2201
XF221
L2104
XF211
IC211
R2203
R2202
R2109
R2101
C2104
C2103
L2102
L2103
GND
VT
CN201
R2456
Q2451

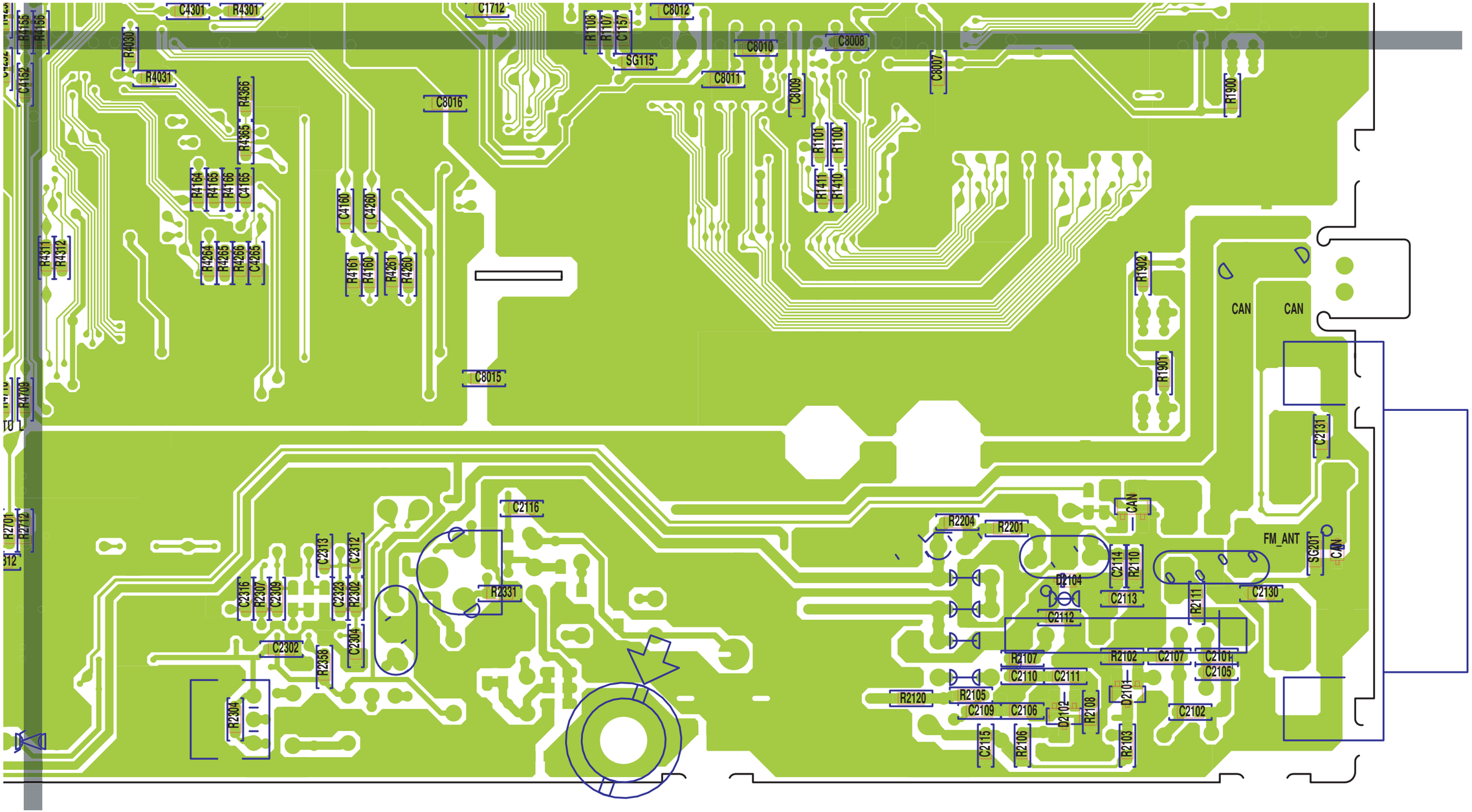
WIRING DIAGRAM (MAIN UNIT DVD/PREAMP/TUNER B SIDE)



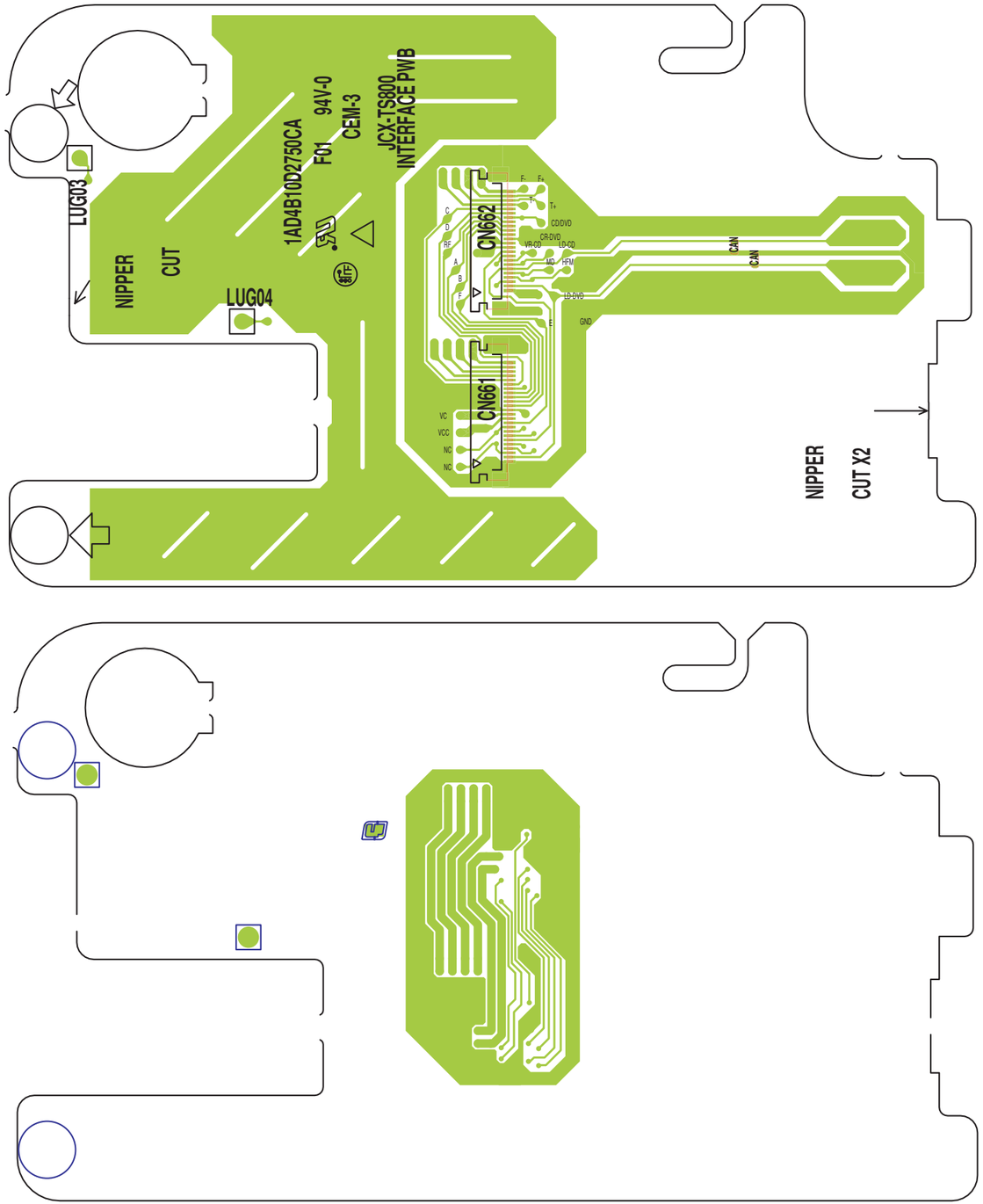

+VCC
GND
GND
-VCC
U3V
R4131
R4231
R4331
R4431
R4531
R4631
DC IN
P-CON
GND
AUX-L
AUX-R
GND
MODE_SW
RL
FR
SB
SR
SW
GND
CVBS
G-Y
Y-R-V
B-B-U
GND
HP
ASPEC
SP- PIX
R4946
Q4932
R4932
R4933
C4932
C4923
C4921
Q4933
R4934
R4256
R4255
R4155
R4766


CAN
C1250
SG120
SLED+
SLED-
LMTSW
SP+
SP-
GND
R1264
R1232
R1233
R1351
CLOSE SW
LASER_CURRENT
GND
DVD_READY
DVD_IN
DVD_OUT
DVD_CLK
REQUEST
C1163
R1351
R1353
R1352
R1350
SG112
SG113
C8021
R1126
R1128
R1129
C1138
C1139
SG111
R1123
C1160
C1164
C1122
R1127
C6020
R1120
L1100
C1116
R1118
C8014
C1149
C1162
C1154
R1148
L1205
SG116
SG117
C1153
C1152
R1114
C8013
C8018
R4051
C8017
C4501
R4501
C4401
R4401
C4301
R4301
C1713
C1712
C8012
R1108
R1107
C1157
C8010
C8008
SG115
R4030
R4156
R4155
R4235

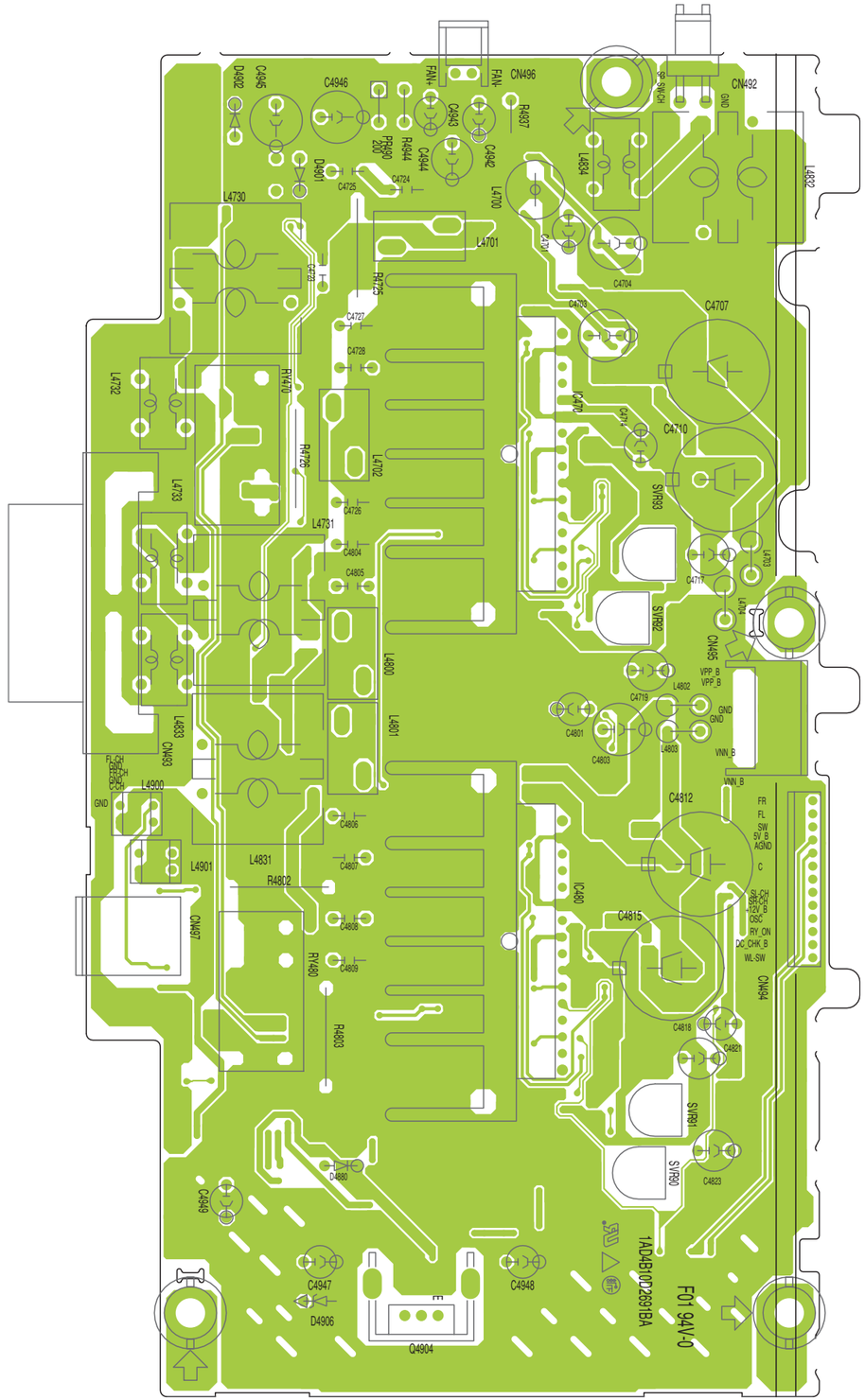

C4101
R4432
R4632
R4532
R4132
R4332
R4232
C4080
SG408
C4181
SG418
C4081
SG409
C4281
SG428
C4082
CAN
CAN
NJW1153_CLK
NJW1153_DATA
NJW1153_CE
DC_IN
TU_CLK
TU_CE
TU_DATA_IN
TU_DATA_OUT
GND
GND
MIC_SW
BA3838_C
BA3838_B
TC9488_SDA
TC9488_SCL
TC9488_CS
MICON-5V
DVD-PCON
P-CON
SP_RY
AUX_MUTE
HP_SW
MAIN_MUTE
BU4066-SW
QS758_SCL
QS758_SDA
R4821
C4071
C4070
MCB
MCB
M-GND
M-GND
R4707
R4708
R4706
R4700
R4702
R4703
R4704
R4705
C4905
C4925
Q4901
R4910
Q4902
R4911
C4044
C4003
C4221
R4223
R4222
R4221
C4223
R4226
R4224
Q4225
R4121
R4122
C4121
R4123
R4124
R4126
C4123
Q4125
R4286
R4081
R4082
R4083
R4186
R4522
R4521
R4422
R4421
R4622
R4621
R4322
R4321
R4431
R4312
C4252
C4152
R4155
R4156
R4710
R4709
TU_R
TU_L
R4701
A.GND1
A.GND
5V
C2902
DD451
CAN
CAN
DD435
R2701
R2712
R2801
R2812


C4301
R4301
C1712
C8012
R1108
R1107
C1157
SG115
C8010
C8008
C8007
C8011
C8009
R1900
C8016
R4030
R4031
R4366
R4365
C4152
R4155
R4156
R4164
R4165
R4166
C4165
C4160
C4260
R4317
R4312
R4264
R4265
R4266
C4265
R4161
R4160
R4261
R4260
R1101
R1100
R1411
R1410
R1902
R1901
C8015
R4709
CAN
CAN
C2131
R2701
R2712
C2116
R2204
R2201
CAN
FM_ANT
SG201
CAN
C2313
C2312
C2316
R2307
C2309
C2323
R2302
C2304
R2331
D2104
C2114
R2110
C2113
C2130
R2111
C2112
C2302
R2356
R2107
R2102
C2107
C2101
C2105
C2110
C2111
R2120
R2105
C2109
C2106
D2102
R2108
D2103
C2102
R2304
C2115
R2106
R2103

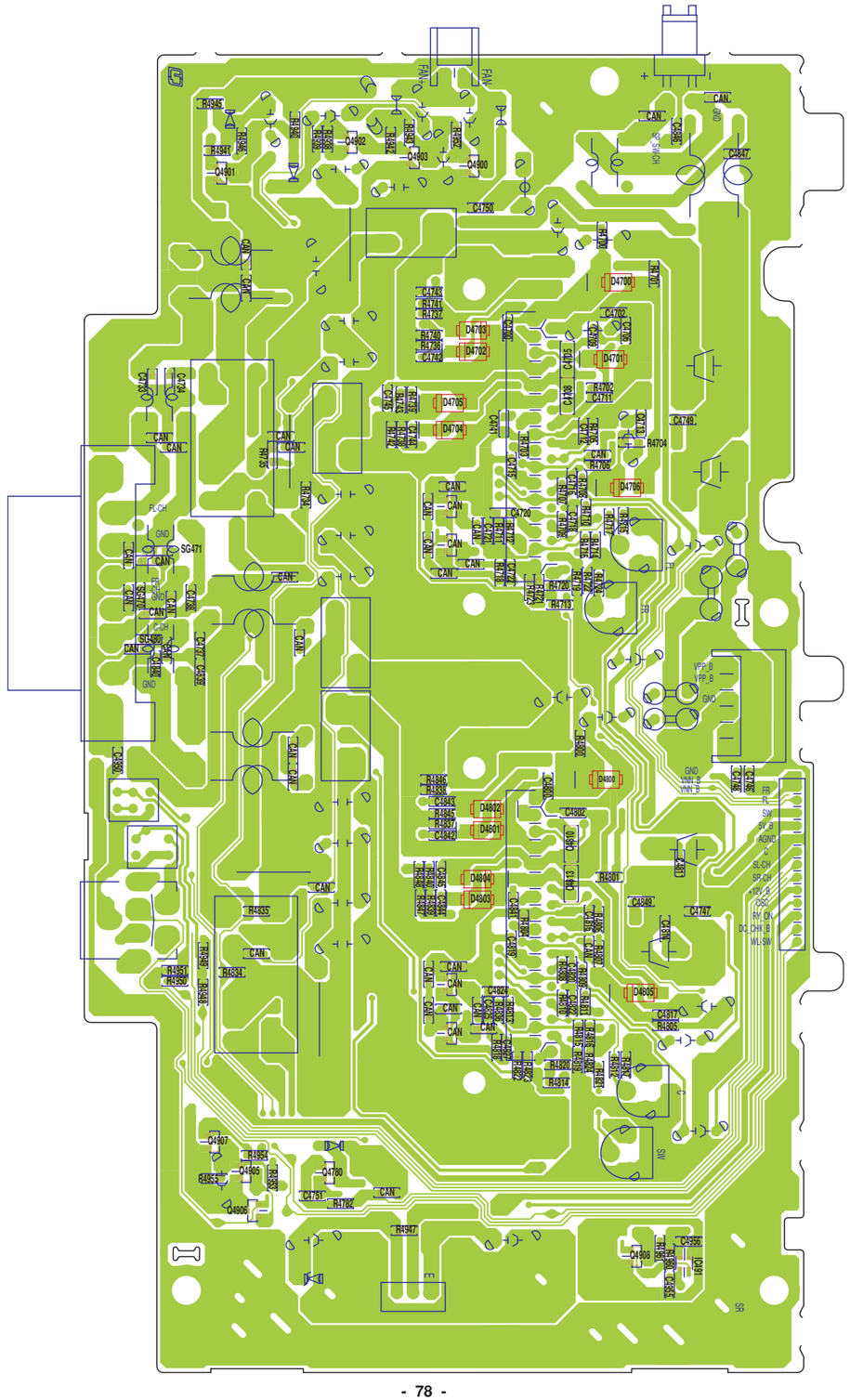
WIRING DIAGRAM (MAIN UNIT INTERFACE)



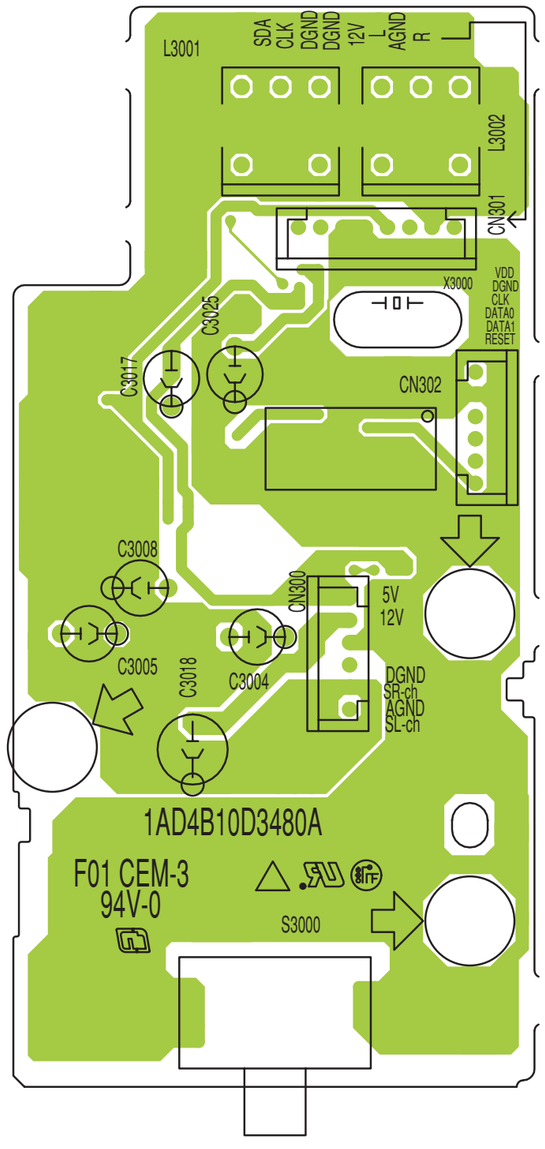
WIRING DIAGRAM (SUBWOOFER SPEAKER POWER A SIDE)

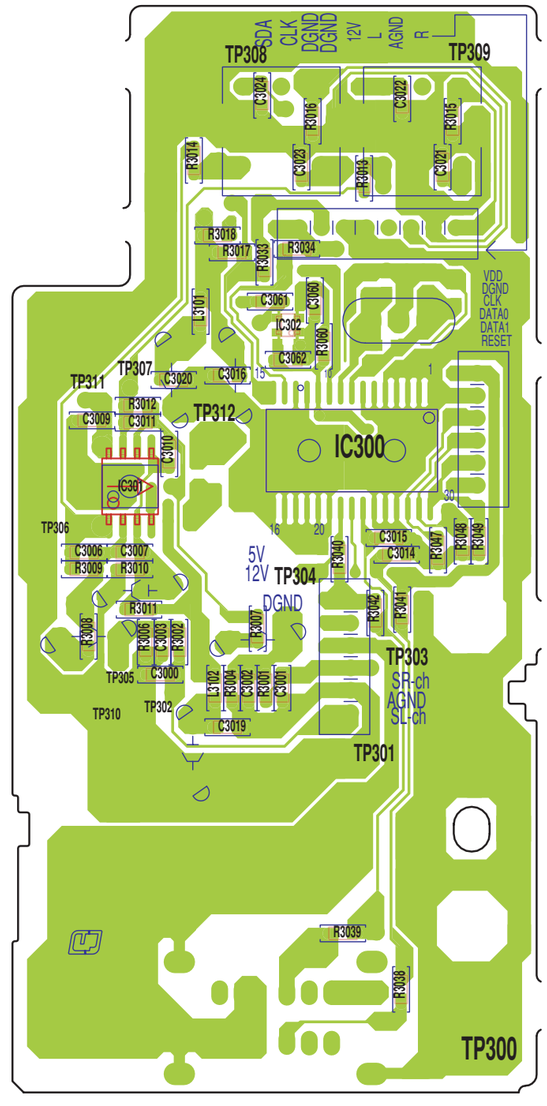


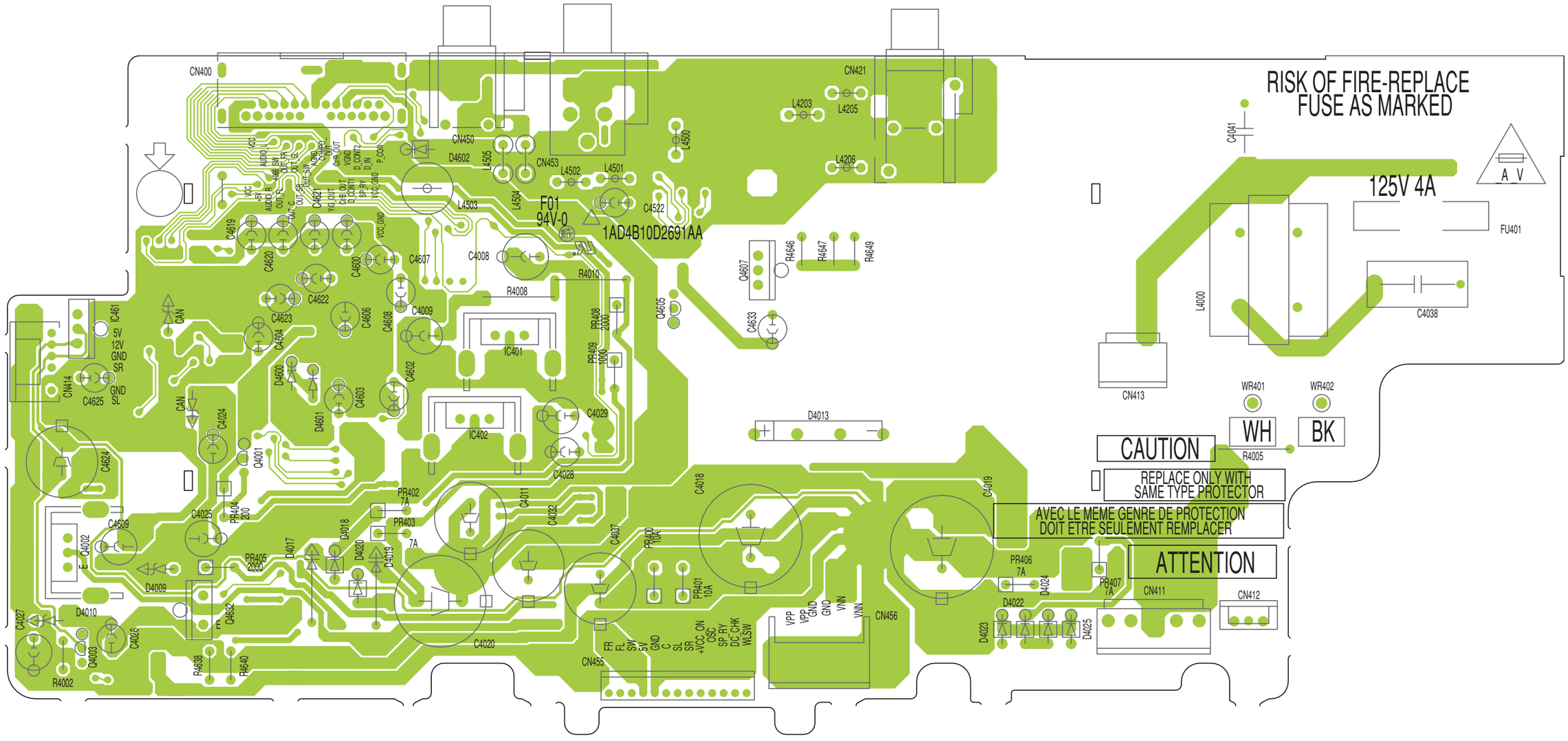
WIRING DIAGRAM (SUBWOOFER SPEAKER POWER B SIDE)



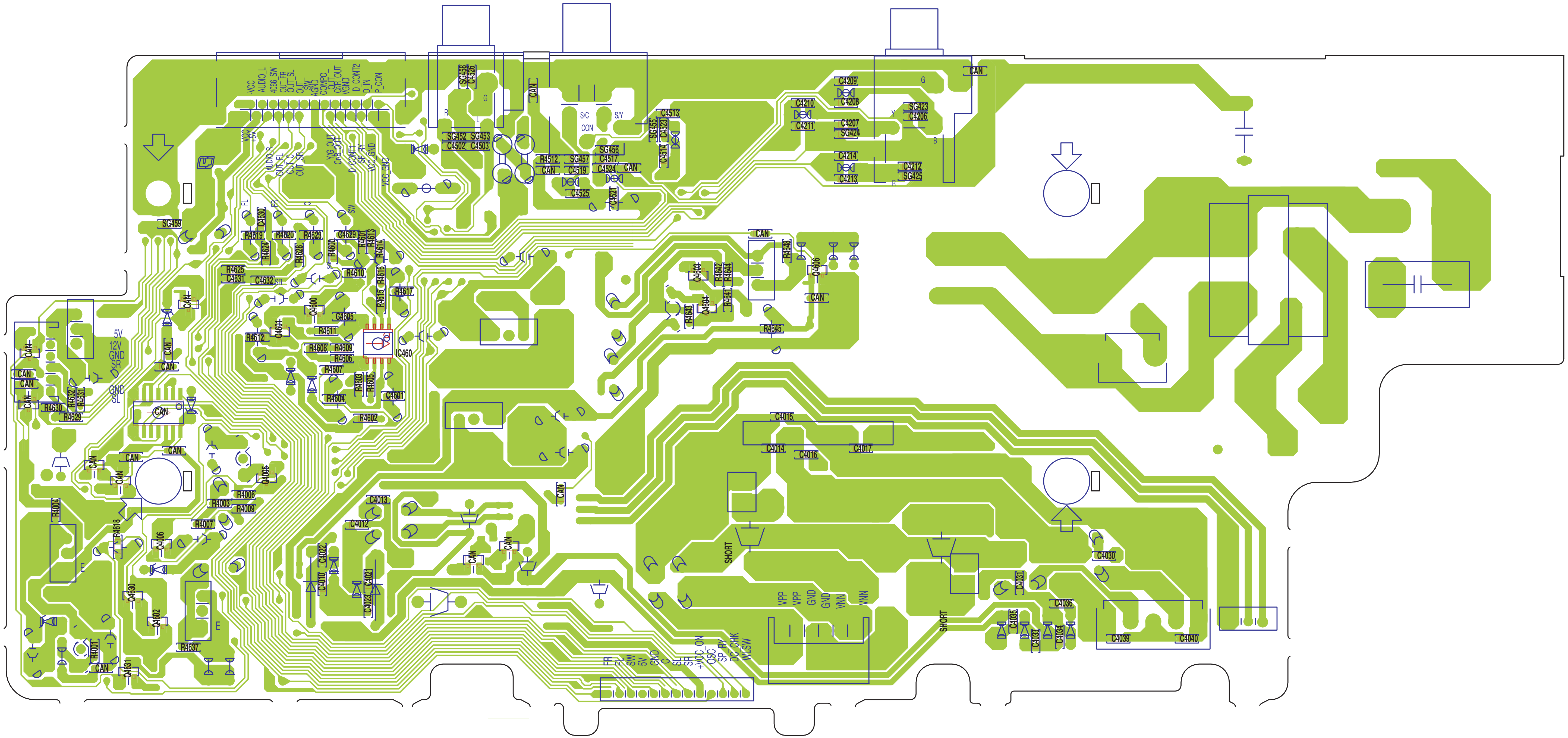
WIRING DIAGRAM (SUBWOOFER SPEAKER TX-INTERFACE)



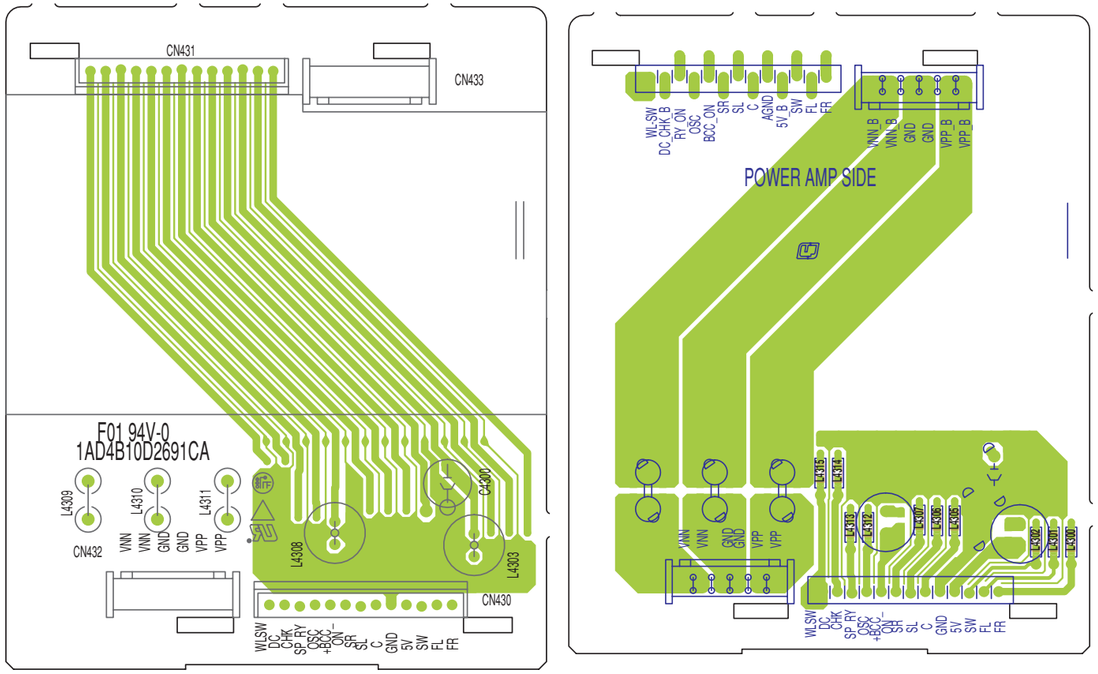



CN400
CN421
CN450
CN453
D4602
L4505
L4500
L4203
L4205
L4206
L4502
L4501
L4503
L4504
F01
94V-0
1AD4B10D2691AA
C4522
C4619
C4620
C4621
C4600
C4607
C4008
R4010
R4008
C4622
C4623
C4606
C4608
C4009
C4604
IC401
PR408
2000
PR409
1000
Q4605
Q4607
R4646
R4647
R4649
C4633
IC461
5V
12V
GND
SR
GND
SL
CN414
C4625
CAN
D4600
C4603
C4602
D4601
C4024
Q4001
C4624
IC402
C4029
C4026
D4013
C4011
C4032
C4018
C4019
PR402
7A
PR403
7A
C4025
PR404
200
C4609
Q4002
D4018
D4017
D4020
D4019
PR405
2000
D4009
Q4632
D4010
C4027
C4026
Q4003
R4002
R4638
R4640
C4020
C4037
PR400
10A
PR401
10A
CN455
FR
FL
SW
5V
GND
C
SL
SR
+VCC_ON
OSC
SP_RY
DC_CHK
WLSW
CN456
VPP
VPP
GND
GND
VNN
VNN
PR406
7A
D4024
D4022
D4023
D4025
PB407
7A
CN411
CN412
RISK OF FIRE-REPLACE
FUSE AS MARKED
C4041
125V 4A
A V
FU401
L4000
C4038
CN413
WR401
WR402
WH
BK
R4005
CAUTION
REPLACE ONLY WITH
SAME TYPE PROTECTOR
AVEC LE MEME GENRE DE PROTECTION
DOIT ETRE SEULEMENT REMPLACER
ATTENTION

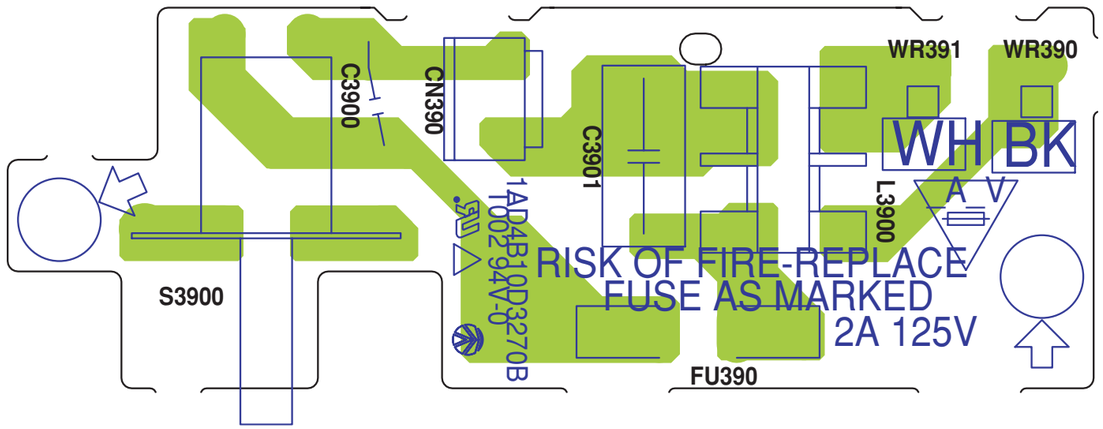
WIRING DIAGRAM (SUBWOOFER SPEAKER MAIN B SIDE)



WIRING DIAGRAM (SUBWOOFER SPEAKER SOCKET , SW)

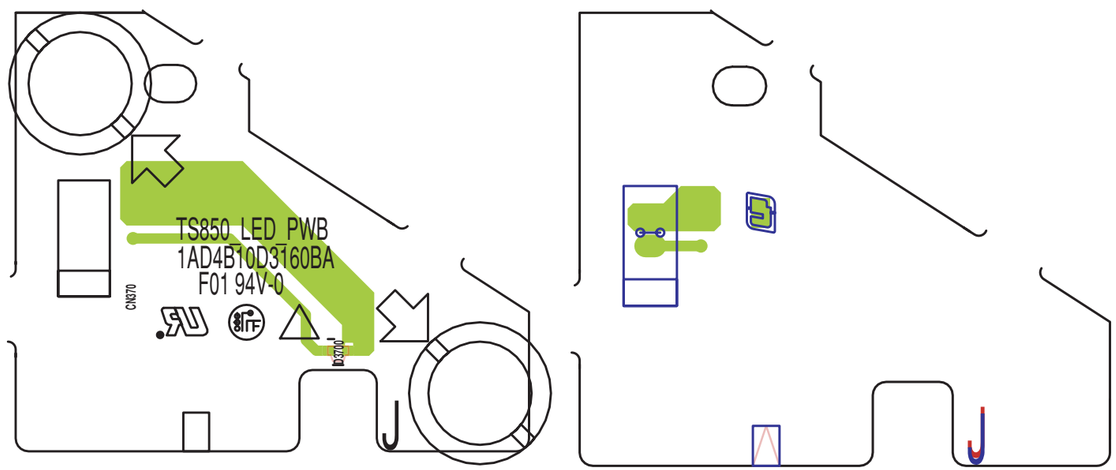


SOCKET

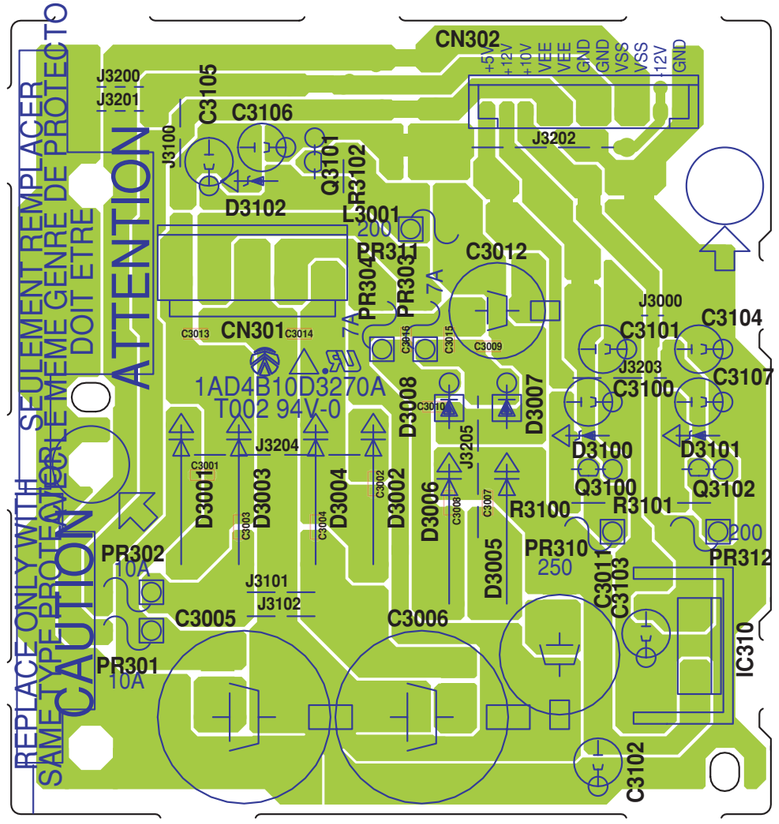


SW

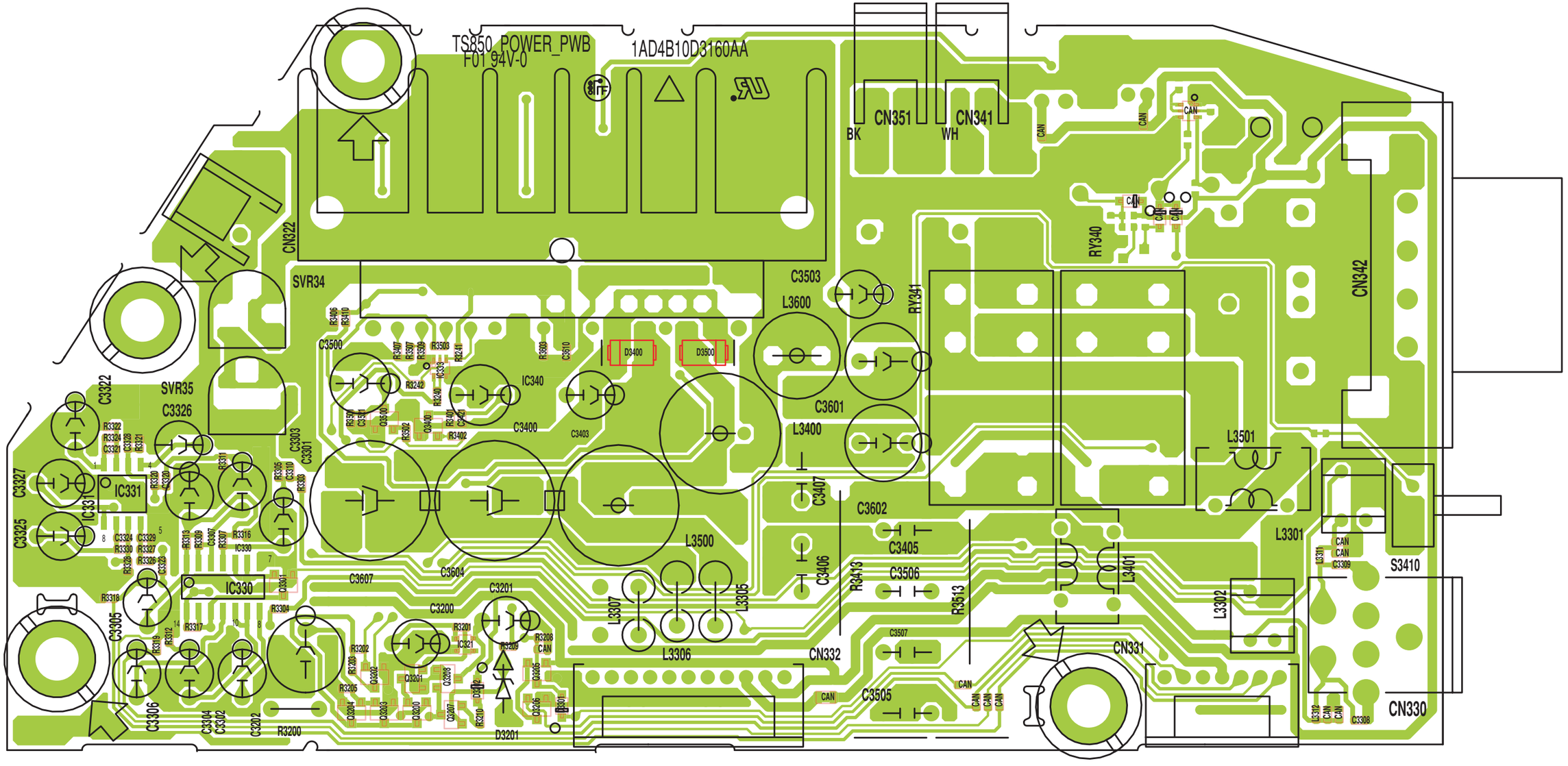
WIRING DIAGRAM (REAR SPEAKER LED,DG)



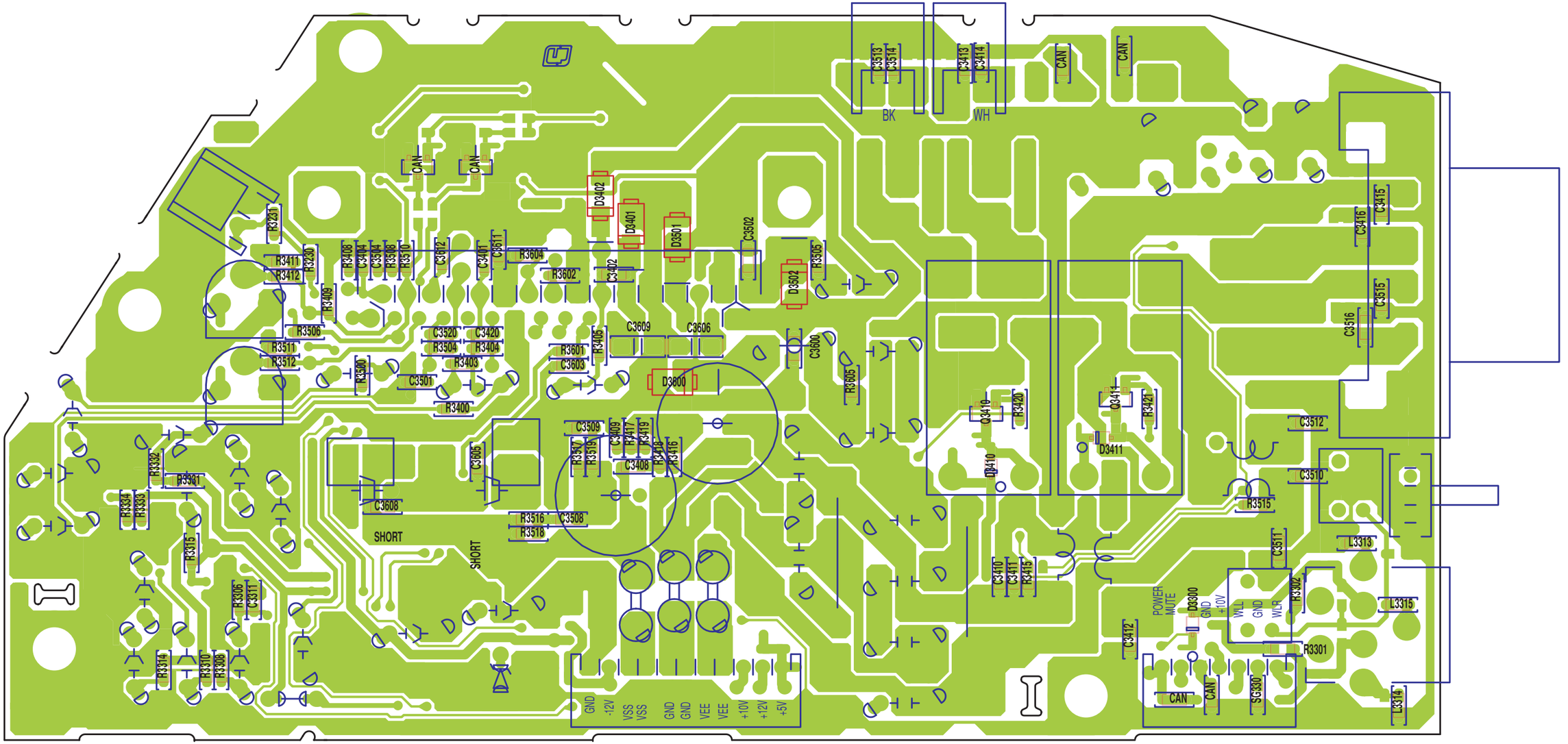
LED



DG


TS850_POWER_PWB
F01 94V-0
1AD4B10D3160AA
CN351
CN341
BK
WH
CAN
CN322
SVR34
C3503
L3600
RY341
RY340
CN342
C3322
SVR35
C3326
C3500
IC340
C3400
C3403
C3601
L3400
L3501
C3327
IC331
C3325
C3407
C3602
C3405
L3500
L3301
S3410
C3506
C3406
R3413
R3513
L3401
C3607
C3604
C3201
C3200
IC330
L3307
L3305
L3306
C3507
CN332
CN331
C3505
L3302
C3305
C3306
C3304
C3302
C3202
R3200
D3201
CN330
C3308
C3309

WIRING DIAGRAM (REAR SPEAKER POWER)



Feb./ '05 / BB Printed in Japan