ORDER NO. AD0305100C8

Service Manual

Tuner/ Amplifier

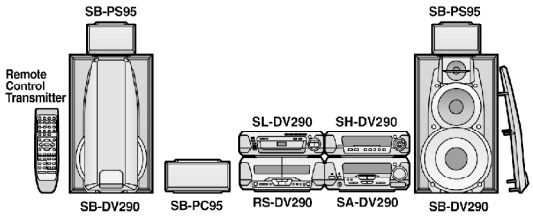
SA-DV290EE / SA-DV290GN

Colour

(S).....Silver Type

System: SC-DV290

Because of unique interconnecting cables, when a compact requires service, send or bring in the entire system.



SPECIFICATIONS

Specification

■ Amplifier section

Power output (L/R both channel driven)		
Stereo Mode		
DIN	1 kHz THD 1%/6 Ω (High)	2×25 W
	100 Hz THD 1%/8 Ω (Low)	2×45 W
RMS	1 kHz THD 10%/6 Ω (High)	2×35 W
	100 Hz THD 10%/8 Ω (Low)	2×65 W
PRO LOGIC mode		
DIN	FRONT	
	1 kHz THD 1%/6 Ω (High)	2×25 W
	100 Hz THD 1%/8 Ω (Low)	2×45 W
	SURROUND 1 kHz THD 1%/8 Ω	2×30 W
	CENTER 1 kHz THD 1%/8 Ω	60 W
RMS	FRONT	
	1 kHz THD 10%/6 Ω (High)	2×35 W
	100 Hz THD 10%/8 Ω (Low)	2×65 W
	SURROUND 1 kHz THD 10%/8 Ω	2×40 W
	CENTER 1 kHz THD 10%/8 Ω	80 W
PMPO 1 kHz/High 6 Ω, Low 8 Ω,		
CENT. 8 Ω, SURR. 8 Ω		3000 W
Total harmonic distortion		
Rated power at 1 kHz		1% (6 Ω)
Half power at 1 kHz		0.1% (6 Ω)
Load impedance		
FRONT (High)		6 Ω
FRONT (Low)		8 Ω
SURROUND		8 Ω
CENTER		8 Ω
DIGITAL S. WOOFER		
Center frequency		60 Hz
LEVEL (VOL -20 db)		MID +3 db
		MAX +6 db

■ FM tuner section

Frequency range	87.50—108.00 MHz
	(0.05 MHz steps)
Sensitivity	1.8 μ V (IHF usable)
S/N 26 db	1.5 μ V
S/N	
MONO	70 db (75 db, IHF)
Antenna terminal(s)	75 Ω (unbalanced)

■ AM tuner section

Frequency range	522—1629 kHz (9 kHz steps)
	520—1630 (10 kHz steps)
Sensitivity (S/N 20 db)	500 μ V/m

■ Timer section

Clock	Quartz-lock type
Function	Play timer (1 time, daily),

Function	Play timer (1 time, daily),
	Rec timer (1 time, daily)
	Sleep (120 min, 30 min intervals)
Setting intervals (Play/Rec)	1 minute—23 hours 59 minutes
	(1 min intervals)

■ General

Power supply	
(For (GN) area)	AC 230—240V 50Hz
(For (EE) area)	AC 230V 50Hz
Power consumption	230 W
Standby	0.5 W
Dimensions (W×H×D)	293×118.5×345 mm
Mass	5.3 kg

Nots
1.Design and specifications are subject to change without notice.
2.Dimensions and weight are approximate.
3.Total harmonic distortion is measured by the digital spectrum analyzer.

■ System/SC-DV290

Sound processor: SH-DV290, DVD/ Video CD/ CD changer: SL-DV290, Tuner/ Amplifier: SA-DV290 , Cassette Deck: RS-DV290, Speakers: Front* (SB-DV290),Center* (SB-PC95),Surround* (SB-PS95) (*Madein MESA.)

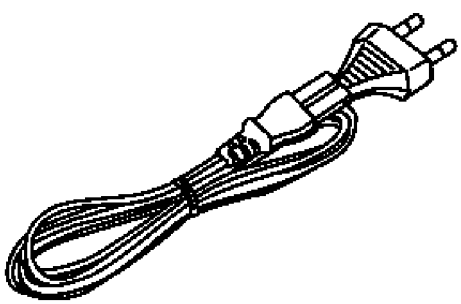
⚠ WARNING

This service information is designed for experienced repair technicians only and is not designed for use by the general public.
It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempting to service a product.
Products powered by electricity should be serviced or repaired only by experienced professional technicians. Any attempt to service or repair the product or products dealt with in this service information by anyone else could result in serious injury or death.

Technics

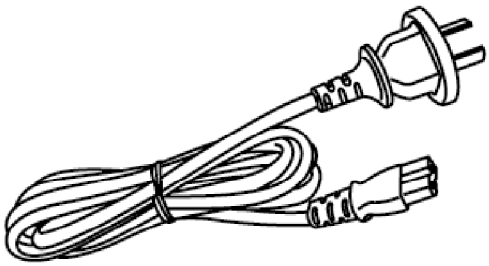
1. Accessories

- AC mains lead for (EE) areas (RJA0019-2X).....1 pc.

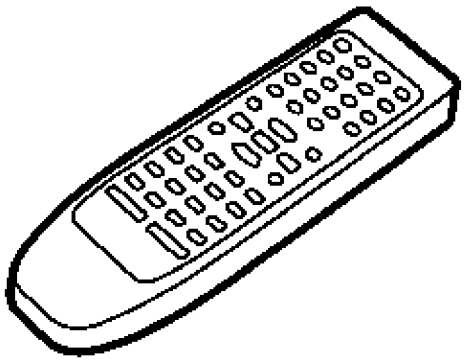


- AC mains lead for (GN) area

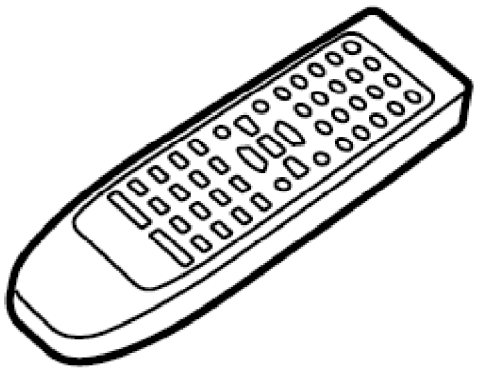
(RJA0035-2X).....1 pc.



- Remote control for (EE) area
  (EUR7702290).....1 pc.

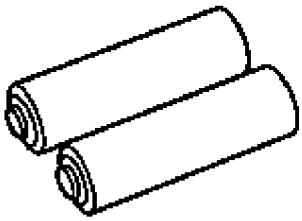


- Remote control for (GN) area
  (EUR7702300).....1 pc.

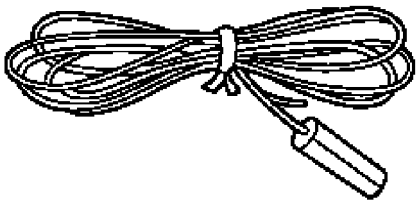


- Remote control batteries
  (R6/LR6,"AA",UM-3).....1 pc.

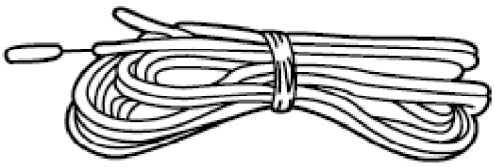
Note: These are available on sales route.



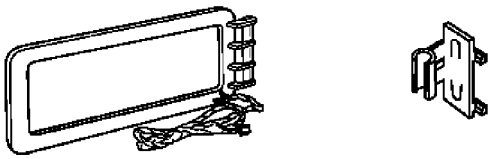
- FM indoor antenna for (EE) area
(N1EAYY000002).....1 pc.



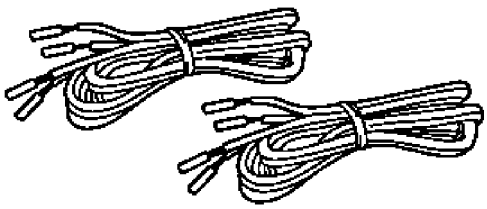
- FM indoor antenna for (GN) area
(N1EAYY000001).....1 pc.



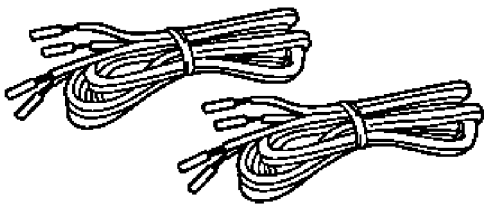
- AM loop antenna set
(N1DAEYA00008).....1 pc.



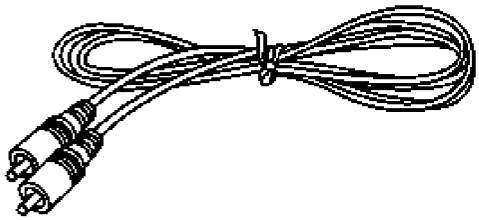
- Speaker leads
(REE1234-1).....2 pc.
(Red/Black)



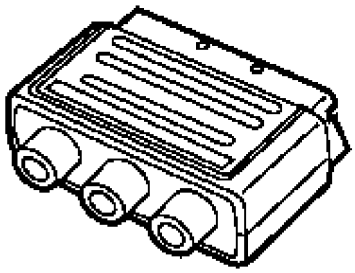
(REE1233-1).....2 pc.
(Gray/Blue)



- Video cord
(K2JA2A000018).....1 pc.



- RCAJ adaptor for (EE) area
(K1JZ24D00002).....1 pc.



2. Before Repair and Adjustment

1. **Turn off the power supply. Using a 10 Ω , 10W resistor, connect both ends of power supply capacitors (C701-704) in order to discharge the voltage.**
2. **Before turning the power supply on, after completion of repair, slowly apply the primary voltage by using a power supply voltage controller to make sure that the consumed current at 50 Hz in NO SIGNAL mode should be shown below with respectto supplyvoltage230 V/240 V.**

Areas	(EE)		(GN)	
Power supply voltage	AC 230V		AC 230-240V	
Consumed current	50 Hz	130-380 mA	50 Hz	130-380 mA

3. About the Protection Circuitry

The protection circuitry may have operated if either of the following conditions is noticed:

***No sound is heard when the power is supplied.**
***Sound stops during a performance.**
The functions of this circuitry is to prevent circuitry damage, for example, the positive and negative speaker connection wires are "shorted", or if speaker systems with an impedande less than the indicated rated impedance of thisunitareused.
If this occurs, follow the procedure outlined below:

1. Press the STANDBY⏻/ON button, switch to STANDBY mode.

2. Determine the cause of the problem and correct it.

3. Press the STANDBY⏻/ON button once again, supply the power.

Note:

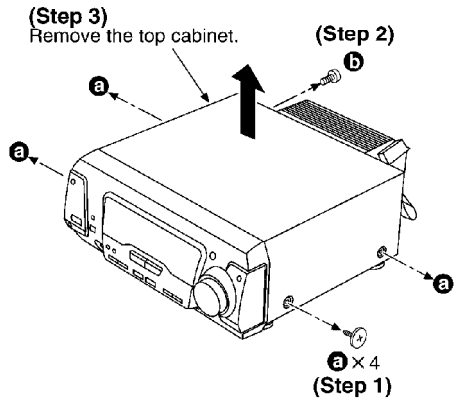
When the protection circuitry functions, the unit will not operate unless the STANDBY⏻/ON button is first switched STANDBY and then ON again.

4. Operating Instructions

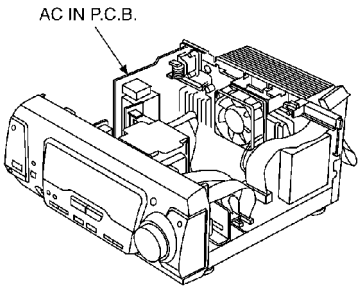
5. Operation Checks and Component Replacement Procedures

- This section describes procedures for checking the operation of the major printed circuit boards and replacing the main components.
- For reassembly after operation checks or replacement, reverse the respective procedures. Special reassembly procedures are described only when required.

5.1. Checking for the AC IN P.C.B.

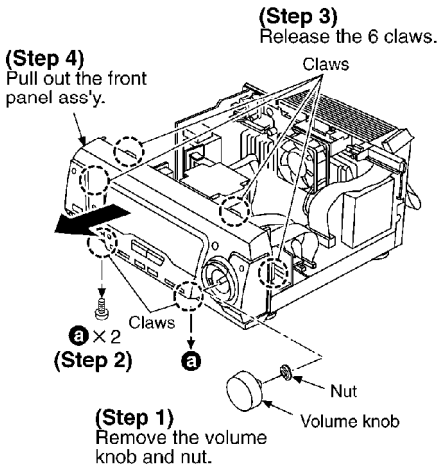


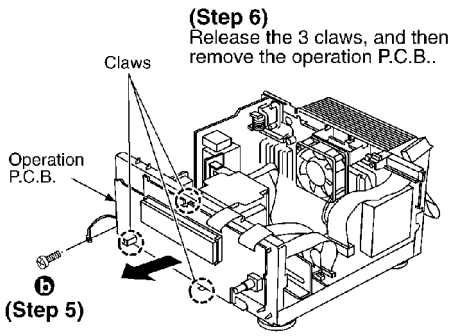
- Check the AC IN P.C.B. as shown below.



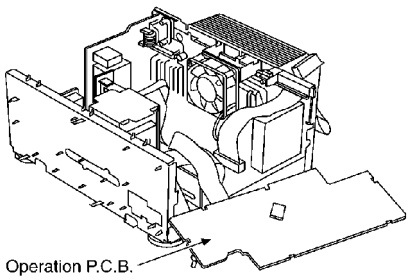
5.2. Checking for the operation P.C.B.

- Follow the (Step 1) - (Step 3) of item 5.1.



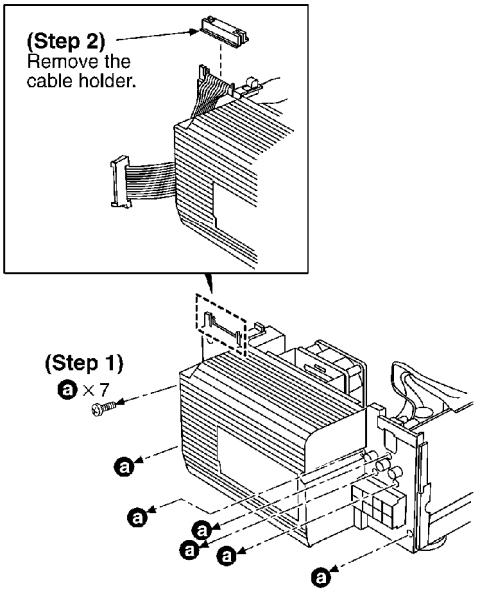


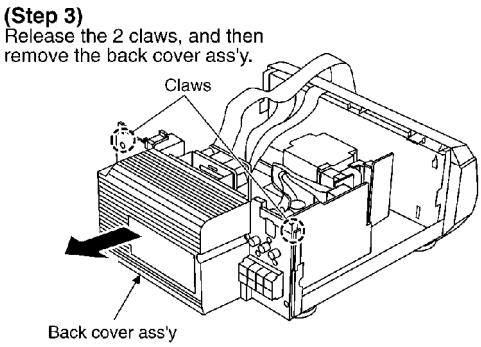
- Check the operation P.C.B. as shown below.

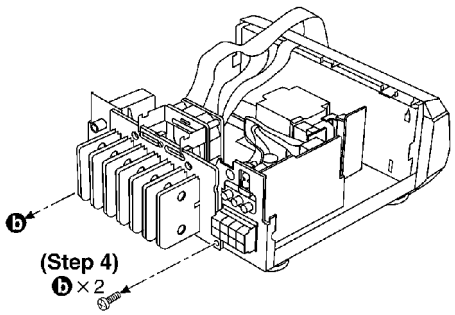


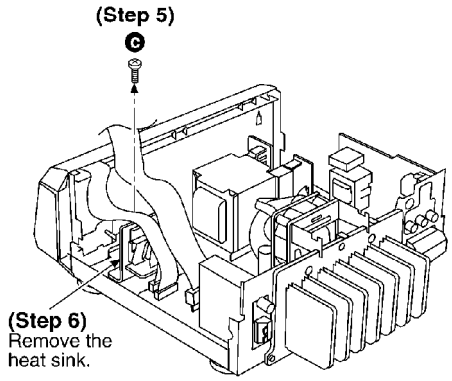
5.3. Checking for the main P.C.B.

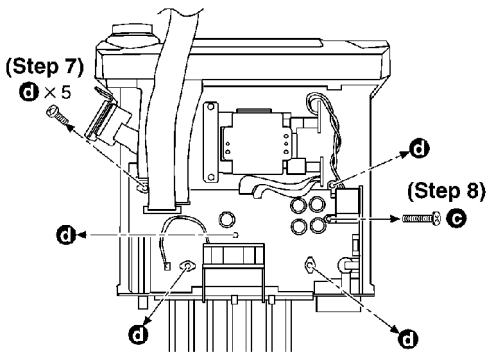
- Follow the (Step 1) - (Step 3) of item 5.1.

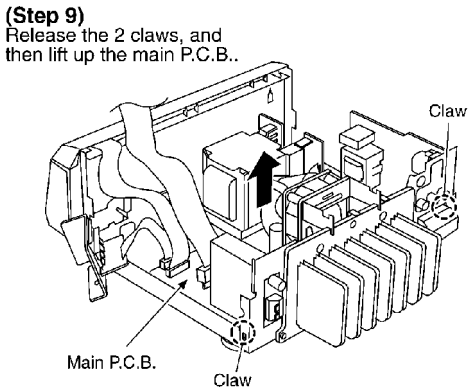




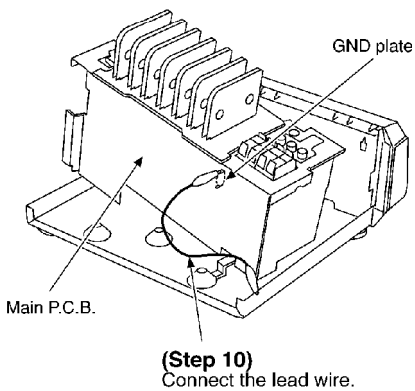






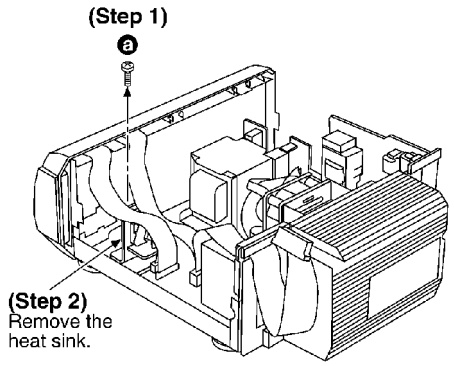


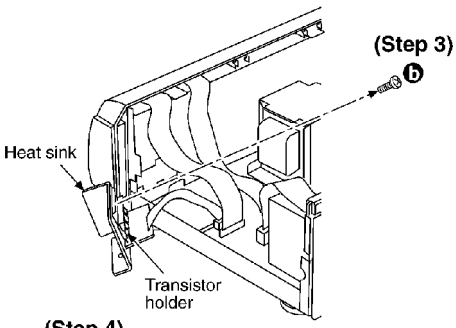
- Check the main P.C.B. as shown below.



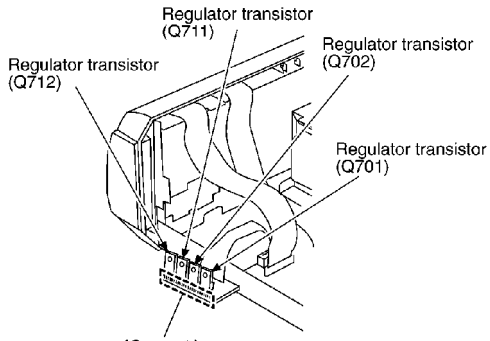
5.4. Replacement for the regulator transistor

- Follow the (Step 1) - (Step 3) of item 5.1.





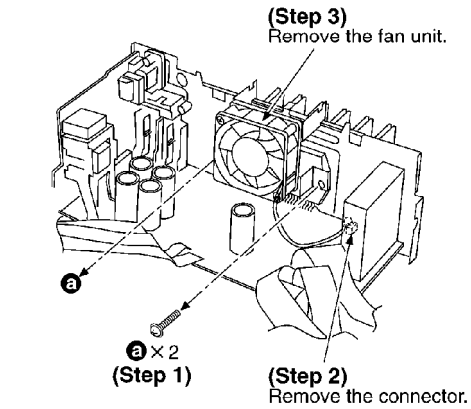
(Step 4)
Remove the heat sink and transistor holder.

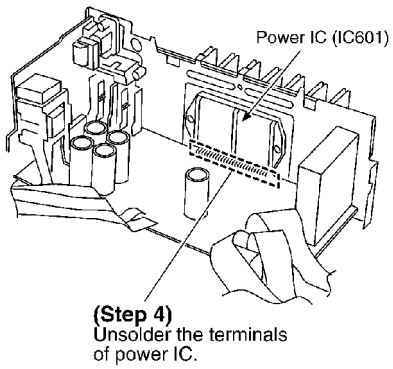


(Step 3)
Unsolder the terminals of
regulator transistors.

5.5. Replacement for the power IC

- Follow the (Step 1) - (Step 3) of item 5.1.
- Follow the (Step 1) - (Step 6) of item 5.2.
- Follow the (Step 1) - (Step 10) of item 5.3.





NOTE:
When mounting the power IC apply silicone conpound (RFKX0002) to the rear side of power IC.

6. Self-Diagnostic Function

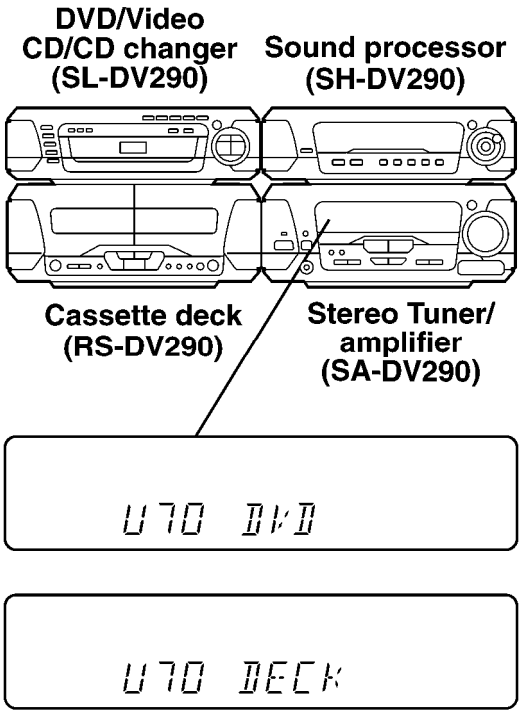
This unit equipped with a self-diagnostic function which, in the event of a malfunction, automatically displays a code indicating the nature of the malfunction.
Use this self-diagnostic function when servicing the unit.

6.1. To display the malfunction code

U70 DVD: **Automatically displays on the**
U70 DECK: **tuner/amplifier when a malfunction occurs. Refer to Fig. 6-1.**

F61: **Automatically displays on the tuner/amplifier when a malfunction occurs. Refer to Fig. 6-1.**

Fig. 6-1



6.2. To return to the normal display

1. For U70 DVD/U70 DECK

- Press an any operation button on the tuner/amplifier.
- To re-display the code, switch the power off (POWER STANDBY button), and then switch power back on again.

2. For F61

- If F61 is displayed, the power will automatically be switched off and the standby indicator will light up.
- F61 will be displayed for 3 seconds, and then the clock will be displayed.
- To re-display the code, switch the power on. F61 will be re-displayed, and then after 3 seconds the clock will be displayed and the power will automatically switch off.

6.3. Display contents

6.3.1. U70 DVD, U70 DECK / (displayed automatically)

- Problem or condition

A bus-line communications error has occurred as a result of the flat cables being inserted incorrectly, thus preventing the system from operating.

- If U70 is displayed on the tuner/amplifier, the Cassette deck or DVD Changer cannot be operated by remote control.
- Correction Procedure

1. To check for correct insertion of the flat cables.

   - Insert each connectors until you hear a click.
   - Insert the flat cables at the back of the unit in the order indicated. Refer to Fig. 6-2.
     Make sure the white side of the cables is on your right side. Refer to Fig. 6-3.

Fig. 6-2.

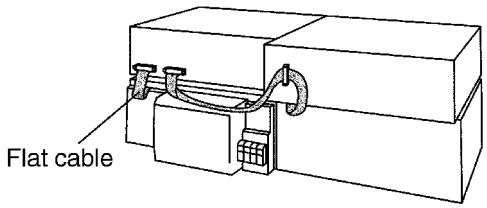
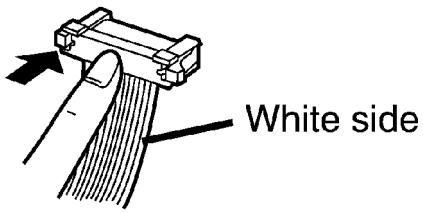


Fig. 6-3.



2. Breakage of the flat cables. (Check and replace.)
3. If the problem is not corrected by items 1 and 2 above, this indicates a faulty IC.
   SA-DV290:
   IC901 (C2BBFD000404)
   SL-DV290:
   IC401 (C2BBFD000402)
   RS-DV290:
   IC701 (M38503M2406F)
   Check these ICs and replace.

6.3.2. F61

- Problem or condition
  When the power switch is switched on, it automatically switches back off, making it impossible to switch power on.

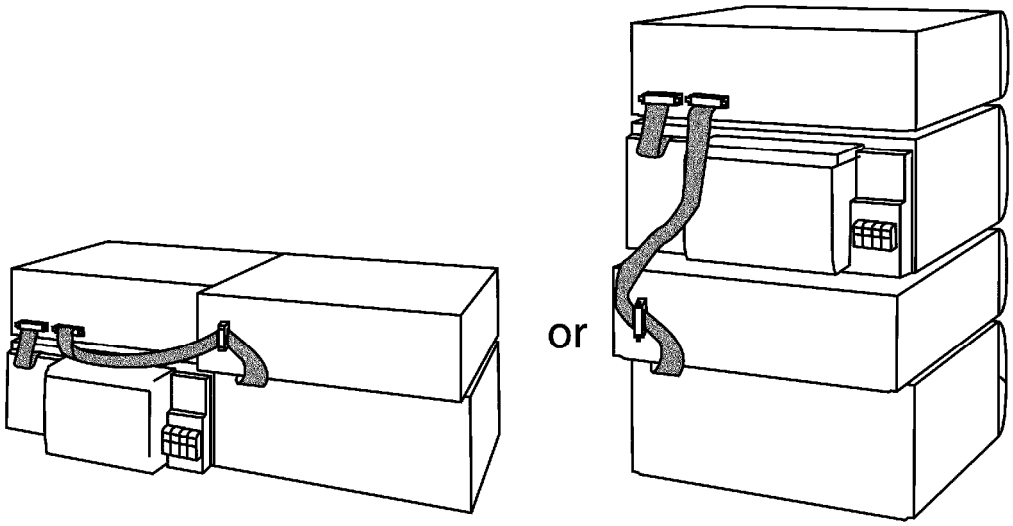
- Correction procedure

Faulty Tuner/Amplifier (SA-DV290) output IC (IC601).
(When a DC voltage is applied to speaker terminals.)

7. To Supply Power Source

This unit SA-DV290 is designed to operate on power supplied form system connected.
For system connection, refer to Fig. 7-1.

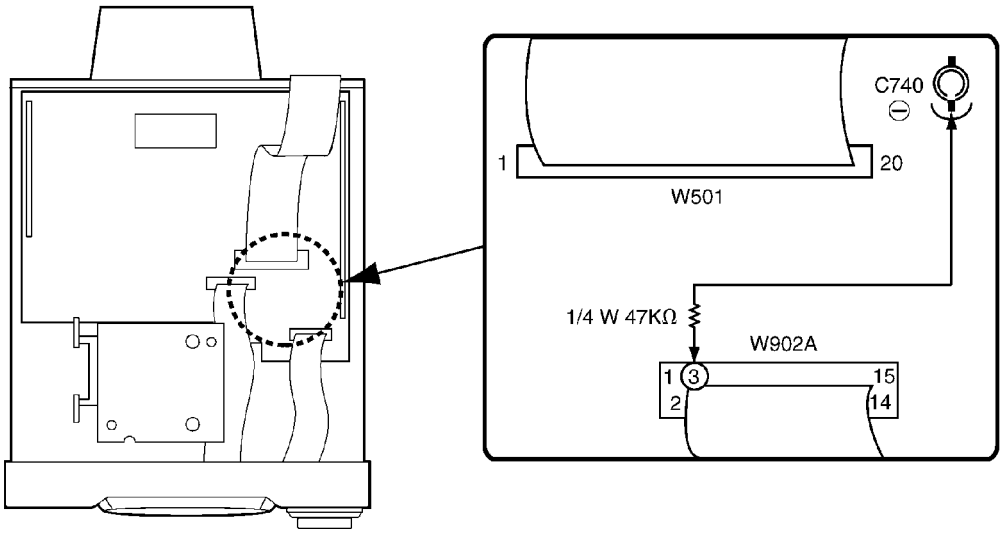
Fig. 7-1.



When the unit SA-DV290 has to test and service alone, use the following method to supply power source.

1. **Short the section between W902A Pin 3 and C740 (-) (GND). (Refer to Fig. 7-2.)**
2. **Connect this unit to an AC power supply cord.**
   (This unit come to stand-by mode.)
3. **Turn the unit ON.**

Fig. 7-2.



Notes:
Use only this method when checking the voltage etc..
In case of checking operations, use the system connections to supply power source.

8. Schematic Diagram Notes

8.1. Type Illustration of IC's, Transistors and Diodes

8.2. Schematic Diagram Notes

- This schematic diagram may be modified at any time with the development of new technology.

Notes:

- S901: Power Standby/on (⏻/I) switch.
- S902: Clock/timer (CLOCK/TIMER) switch.
- S903: Demo (-DEMO) switch.
- S904: Play timer/record timer (PLAY/ REC) switch.
- S905: FM mode (FM AUTO/MONO) switch.
- S906: Tuning mode (TUNING MODE) switch.
- S907: Set (SET) switch.
- S908: Source input (INPUT SELECTOR) switch.
- S909: Echo (ECHO) switch. For [GN] area.
- S910: Tuning (TUNING, ∨) switch. For [EE] area.
S910: Tuning (TUNING, ∨, ♭) switch. For [GN] area.
- S911: Tuning (TUNING, ∧) switch. For [EE] area.
S911: Tuning (TUNING, ∧, #) switch. For [GN] area.
- S912: Tuner/band (TUNER/BAND) switch.

- S913: Digital super woofer (DIGITAL S. WOOFER) switch.
- S914, 915: RDS display mode (RDS, PS-DISP, MODE-PTY) switches.
  For [EE] area.
  S914, 915: KARAOKE, Voice mute (KARAOKE, V.MUTE) switch.
  For [GN] area.
- S916: Key control (KEY CON) switch. For [GN] area.
- S917: MIC effect (MIC EFFECT, LOUNGE) switch. For [GN] area.
- S918: MIC effect (MIC EFFECT, CHORUS) switch. For [GN] area.
- VR901: Main volume V.R..
- Indicated voltage values are the standard values for the unit measured by the DC electronic circuit tester (high-impedance)with the chassis taken as standard. Therefore, there may exist some errors in the voltage values, depending on the internalimpedanceofthe DC circuit tester.
  No mark: Power ON
- Important safety notice:
  Components identified by ⚠ mark have special characteristics important for safety.
  Furthermore, special parts which have purposes of fire-retardant (resistors), high-quality sound (capacitors), low-noise (resistors), etc. are used.
  When replacing any of components, be sure to use only manufacture's specified parts shown in the parts list.

Caution!

- Secondary trouble can be prevented by taking care during repair.
- IC and LSI are sensitive to static electricity.
- Cover the parts boxes made of plastics with aluminum foil.
- Ground the soldering iron.
- Put a conductive mat on the work table.
- Do not touch the legs of IC or LSI with the fingers directly.
- Voltage and signal lines
  : Positive voltage line
  : Negative voltage line
  : Audio signal line
  : Tuner signal line
  : MIC signal line

9. Schematic Diagram

10. Printed Circuit Board Diagram

11. Block Diagram

12. Wiring Connection Diagram

13. Terminal Function of ICs

13.1. IC901 (C2BBFD000404): System Control/FL Drive

Pin No.	Terminal Name	I/O	Function
1	CHECK	I	Clock check signal input
2	LC72 DO	O	PLL data signal output for tuner unit (Z101)
3	LC72 CE	O	Chip enable signal output for tuner unit (Z101)
4	LC72 DI/ ST	I	IF count data/stereo detect signal input from tuner unit (Z101)
5	LC72 CK	O	Clock signal output for tuner unit (Z101)
6	ST/ AV.6CH	O	Signal select output
7	NC	—	Not used, open
8			
9	SEL TUNER	—	Not used, open
10	SEL/ TUNER	—	Not used, connected to GND
11	AC IN	I	Power failure detect signal input
12	RESET	I	Reset signal input
13	X IN	I	Oscillator connected terminal (32.7kHz)
14	X OUT	O	
15	V_{SS}	—	GND terminal
16	XC IN	I	Oscillator connected terminal (6 MHz)
17	XC OUT	O	
18	V_{DD} 1	I	Power supply terminal
19	KEY TU	I	Operation key signal input
20	KEY KARAOKE	I	Operation key signal input

Pin No.	Terminal Name	I/O	Function
21	SH REQ	O	Request signal output to Sound Processor
22	NC(GND)	—	Not used, connected to GND
23	VR JOGB	I	Volume control signal input
24	VR JOGA		
25	MIC DET	I	Microphone connecting detect signal input (Not used, connected to V_{DD})
26	HP SW	I	Headphone connecting detect signal input
27	RDS CLK	I	RDS clock signal input
28	RDS DATA	I	RDS data signal input
29	REMOCON	I	Remote control signal input
30-37	8G-1G	O	Grid signal output
38-45	P1-P8	O	Segment signal output
46	V_{DD} 3	I	Power supply terminal
47-50	P9-P12	O	Segment signal output
51	-VP	I	Power supply terminal (Negative)
52-71	P13-P32	O	Segment signal output
72	V_{DD} 4	I	Power supply terminal
73-78	P33-P38	O	Segment signal output
79	REGIN0	—	Not used, connected to GND
80	REGIN1		
81	STANDBY	O	LED (STANDBY) drive signal output
82	TIMER	O	LED (TIMER) drive signal output
83	S.W.LED	O	LED (DIGITAL S.WOOFER) drive signal output
84	LOUNGE	—	LED (LOUNGE) drive signal output (Not used, connected to GND)

Pin No.	Terminal Name	I/O	Function
85	CHORUS	—	LED (CHORUS) drive signal output (Not used, connected to V_{DD})
86	MUTE	O	Muting signal output
87	NC	—	Not used, oppen
88	POWER	O	Power control signal output
89	V_{SS} 2	—	GND terminal
90	V_{DD} 2	I	Power supply terminal
91	MUTE2	O	Muting signal output
92	NC	—	Not used, open
93	MUTE3	O	Muting signal output
94	SH CS	I/O	Chip select signal for Sound Processor
95	SH DO	O	Serial communication signal to Sound Processor (Data signal output)
96	SH DI	I	Serial communication signal to Sound Proccessor (Data signal input)
97	SH CK	I	Serial communication signal to Sound Processor (Clock signal input)
98	E DET	I	Unusual condition detect signal input
99	CR TIMER	—	Not used, open
100	SD	I	Station detector signal input from tuner unit (Z101)

14. Replacement Parts List

Notes:

*** Important safety notice:**

Components identified by ⚠ mark have special characteristics important for safety. / Furthermore, special parts which have purposes of fire-retardant (resistors), high-quality sound (capacitors), low-noise (resistors), etc. are used. / Whenreplaciganyof components, be sure to use only manufacture's specified parts shown in the parts list.

*** The parenthesized indications in the Remarks columns specify the areas. / Parts without these indications can be used for all areas.**

*** Remote Control Ass'y: Supply period for three years from terminal of production.**
*** Capacity values are in microfarads (uF) unless specified otherwise, P=Pico-farads(pF), F=Farads (F)**
*** Resistance values are in ohms, unless specified otherwise, 1K= 1,000 (OHM), 1M=1,000K (OHM)**
***The markings (RTL) indicate that the retention time is limited for these items. After the discontinuation of these assemblies in production, it will no longer be available.**
***All parts are supplied by SPC.**

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
1	RGN2398-K	NAME PLATE	1	(EE)
1	RGN2399-K	NAME PLATE	1	(GN)
2	RMQ1018	GASKET	1	
3	REM0115	FAN UNIT	1	
4	REX0967	SYSTEM CONNECT.ASS'Y(20P)	1	
5	J0KD00000028	FERRITE CORE	1	
6	RGW0386-S	KNOB,VOLUME	1	
7	RHN90001	NUT	1	
8	RKA0106-N	FOOT RING	4	
9	RKF0606AD-K1	BACK COVER	1	(EE)
9	RKF0606AE-K1	BACK COVER	1	(GN)
10	RKW0581-1V	FL WINDOW	1	
11	RMF0284	CUSHION	1	(GN)
12	RMN0427A	CABLE HOLDER	1	
13	RYP1168-S	FRONT PANEL ASS'Y	1	(EE)
13	RYP1168A-S	FRONT PANEL ASS'Y	1	(GN)
13-1	RGB0025-A	TECHNICS BADGE	1	
13-2	RGU1748-Q	BUTTON,MIC EFFECT	1	(GN)
14	SHG1654	RUBBER	4	
15	XTB3+10JFZ	SCREW	12	
16	XTB3+20JFZ	SCREW	1	
17	XTB3+8JFZ	SCREW	12	
18	XTW3+15T	SCREW	2	
19	XTB3+12FFZ	SCREW	1	
20	XTBS3+8JFZ1	SCREW	2	
21	RHD30007-1S	SCREW	4	
22	RKM0395G-2S	TOP CABINET	1	
23	XTBS3+10JFZ1	SCREW	1	
24	RAN0005EM-2	TUNER PACK(Z101)	1	(EE)
24	ENG06502Q	TUNER PACK(Z101)	1	(GN)
25	RMN0526	FL HOLDER	1	
26	RMN0744	FAN SUPPORTER	1	
27	RMN0745	FAN SUPPORTER	1	
28	REZ1300	WIRE ASS'Y	1	
29	REZ1205	WIRE ASS'Y	1	(GN)
30	RGW0178-1S	KNOB,MIC VOL	1	(GN)
31	XTB3+8JFZ	SCREW	1	(GN)

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
A1	EUR7702290	REMOTE CONTROL	1	(EE)
A1	EUR7702300	REMOTE CONTROL	1	(GN)
A1-1	UR64EC2337E	BATTERY COVER	1	
A2	K2JA2A000018	VIDEO CORD	1	
A3	REE1233-1	SPEAKER LEADS(GRAY/BLUE)	1	
A4	REE1234-1	SPEAKER LEADS(RED/BLACK)	1	
A5	RJA0019-2X	AC MAINS LEAD	1	(EE) ⚠
A5	RJA0035-2X	AC MAINS LEAD	1	(GN) ⚠
A7	RQCA0801	QUICK SET-UP GUIDE	1	
A8	RQT6895-R	O/I BOOK	1	(EE) Russian
A9	RQT6894-B	O/I BOOK	1	English
A10	N1EAYY000002	FM INDOOR ANTENNA	1	(EE)
A10	N1EAYY000001	FM INDOOR ANTENNA	1	(GN)
A11	N1DAEYA00008	AM LOOP ANTENNA	1	
A13	K1JZ24D00002	RCAJ ADAPTOR	1	(EE)
C151	ECA1CAK100XB	16V 10U	1	(EE)
C152	ECBT1H331KB3	50V 330P	1	(EE)
C153	ECBT1H102KB3	50V 1000P	1	(EE)
C154	ECBT1H561KB3	50V 560P	1	(EE)
C155	ECBT1H102KB3	50V 1000P	1	(EE)
C156,57	ECBT1H470J3	50V 47P	2	(EE)
C158,59	ECEA0JKS470	6.3V 47U	2	(EE)
C160	ECBT1H102KB3	50V 1000P	1	(EE)
C201,02	F1D1H1040002	50V 0.1U	2	
C371	ECA0JAK101XB	6.3V 100U	1	
C395,96	F1D1H473A012	50V 0.047U	2	
C401	ECBT1H223KB5	50V 0.022U	1	F1D1H223A012 (GN)
C403	ECBT1C472KR5	16V 4700P	1	F1D1C472A010 (GN)
C404	RCE1HKA3R3BG	50V 3.3U	1	F2A1H3R3A015 (GN)
C405	ECBT1H102KB3	50V 1000P	1	(GN)
C406	ECEA1EKS4R7	25V 4.7U	1	(GN)
C407	ECBT1H103KB5	50V 0.01U	1	F1E1H1030001 (GN)
C408	ECBT1H223KB5	50V 0.022U	1	F1D1H223A012 (GN)
C409	ECEA1HKS010	50V 1U	1	(GN)
C410	F2A1C100A034	16V 10U	1	(GN)
C411	ECBA1H101KB3	50V 100P	1	(GN)
C412	ECBT1H102KB3	50V 1000P	1	(GN)
C413	ECEA1HKS010	50V 1U	1	(GN)
C414	ECA1CAM471XB	16V 470U	1	(GN)
C415	ECEA1HKS010	50V 1U	1	(GN)
C416	ECA1CAK100XB	16V 10U	1	(GN)
C417	ECBT1H223KB5	50V 0.022U	1	F1D1H223A012 (GN)
C421	F1D1H1040002	50V 0.1U	1	(GN)
C509,10	ECBT1H103KB5	50V 0.01U	2	F1E1H1030001
C550	ECBT1H103KB5	50V 0.01U	1	F1E1H1030001
C551	ECA1HAK2R2XB	50V 2.2U	1	
C552	ECBT1H103KB5	50V 0.01U	1	F1E1H1030001
C554	ECA1CAM221XB	16V 220U	1	
C555	ECEA1HSN010	50V 1U	1	
C556	ECEA1CKN100	16V 10U	1	
C559	ECBT1H103KB5	50V 0.01U	1	F1E1H1030001

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
C601,02	ECA1CAK100XB	16V 10U	2	
C603,04	ECBT1H471KB3	50V 470P	2	
C605,06	ECBT1H102KB3	50V 1000P	2	
C607,08	ECBT1H471KB3	50V 470P	2	
C609,10	ECBT1H560J3	50V 56P	2	
C611	F1D1H390A006	50V 39P	1	
C612	ECBT1H150JC3	50V 15P	1	
C613,14	ECBT1H470J3	50V 47P	2	
C616	ECEA1HKNR47B	50V 0.47U	1	
C617,18	ECKR2H103ZU	500V 0.01U	2	
C619-21	F1D1H1040002	50V 0.1U	3	
C622	F2A1A1010020	10V 100U	1	
C624-31	F1D1H1040002	50V 0.1U	8	
C632	F1D1H473A012	50V 0.047U	1	
C633,34	F1D1H1040002	50V 0.1U	2	
C635-37	F1D1H473A012	50V 0.047U	3	
C639-44	ECBT1H102KB3	50V 1000P	6	
C645,46	F1D1H473A012	50V 0.047U	2	
C647-50	ECBT1H102KB3	50V 1000P	4	
C651	F1D1H473A012	50V 0.047U	1	
C652	ECBT1H102KB3	50V 1000P	1	
C655,56	ECA1CAK100XB	16V 10U	2	
C659,60	ECA1CAK100XB	16V 10U	2	
C664	ECA1CAK100XB	16V 10U	1	
C701-04	ECA1VM472E	35V 4700U	4	
C705	ECBT1H103KB5	50V 0.01U	1	F1E1H1030001
C706	RCE1VKA100BG	35V 10U	1	F2A1V1000011
C707,08	F1D1H473A012	50V 0.047U	2	
C709	ECQV1H104JM3	50V 0.1U	1	
C710	F1D1H473A012	50V 0.047U	1	
C714	ECBT1H102KB3	50V 1000P	1	
C715	ECA1EAM682XE	25V 6800U	1	
C717	ECA1CAK330XB	16V 33U	1	
C718	ECA1EAM101XB	25V 100U	1	
C719,20	F1D1H473A012	50V 0.047U	2	
C721	F2A1A1010020	10V 100U	1	
C722	ECA1EAM101XB	25V 100U	1	
C723,24	F1D1H473A012	50V 0.047U	2	
C725	ECA1CAK470XB	16V 47U	1	
C731	ECBT1H102KB3	50V 1000P	1	
C732	ECBT1H223KB5	50V 0.022U	1	F1D1H223A012
C733	F1D1H473A012	50V 0.047U	1	
C734	RCE1HKA3R3BG	50V 3.3U	1	F2A1H3R3A015
C735	F1D1H473A012	50V 0.047U	1	
C737	ECA1HAM101XB	50V 100U	1	
C740	ECA1CAK100XB	16V 10U	1	
C741	ECQE1104KF3	100V 0.1U	1	
C753	F1B1H1030001	50V 0.01U	1	
C754	ECBT1H103KB5	50V 0.01U	1	F1E1H1030001
C755	ECA1CAM102X	16V 1000U	1	
C758	ECBT1H103KB5	50V 0.01U	1	F1E1H1030001
C759	RCE1AKA470BG	10V 47U	1	F2A1A470A011
C761	ECQE1104KF3	100V 0.1U	1	
C791	ECKWRS102MBC	250V 1000P	1	⚠

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
C901	EEAFC0J101B	6.3V 100U	1	
C902	F2A1A102A018	10V 1000U	1	
C903,04	ECBT1H103KB5	50V 0.01U	2	F1E1H1030001
C905	ECBT1H102KB3	50V 1000P	1	
C907,08	ECBT1H471KB3	50V 470P	2	
C909	ECBT1H102KB3	50V 1000P	1	
C910	ECBT1H200JC5	50V 20P	1	F1D1H200A015
C911	F1D1H180A006	50V 18P	1	
C912	F1D1H1040002	50V 0.1U	1	
C914	ECA1HAK2R2XB	50V 2.2U	1	
C915	ECBT1H103KB5	50V 0.01U	1	F1E1H1030001
C916	EEAFC0J101B	6.3V 100U	1	
C917	ECBT1H103KB5	50V 0.01U	1	F1E1H1030001
C918	ECA0JAK101XB	6.3V 100U	1	
C919,20	ECA1EAK220XB	25V 22U	2	
C921	ECBT1H102KB3	50V 1000P	1	
C922	ECA1VAK330XB	35V 33U	1	
C923,24	F1D1H1040002	50V 0.1U	2	
C925,26	ECBT1H102KB3	50V 1000P	2	
C927,28	ECA1EAK220XB	25V 22U	2	
C931	ECEA1CKN100	16V 10U	1	
CN601	RJU057W012	CONNECTOR(12P)	1	K1KB12B00033
CN602	RJU057W008	CONNECTOR(8P)	1	K1KB08B00034
CN701-13	RJS1A1101T1	CONNECTOR(1P)	13	
CN781	RJS10T5ZA	CONNECTOT(10P)	1	K1MP10A00007
CN904	RJS4T5ZA	CONNECTOR(4P)	1	K1MP04A00007 (GN)
CP101	K1KA11A00093	CONNECTOR(11P)	1	
CP601	RJT057W012-1	CONNECTOR(12P)	1	K1KA12A00160
CP602	RJT057W008-1	CONNECTOR(8P)	1	K1KA08A00187
D151	MA4051M	DIODE	1	MAZ40510M (EE)
D201	MAZ40560MF	DIODE	1	
D306	SELS5223C	LED	1	B3AAA0000486
D500	MA165TA5	DIODE	1	MA2C16500E
D551,52	MA165TA5	DIODE	2	MA2C16500E
D553	MA700	DIODE	1	MA2C700
D554	MA165TA5	DIODE	1	MA2C16500E
D555	MA4100M	DIODE	1	MAZ41000MF
D558	MA165TA5	DIODE	1	MA2C16500E
D581-83	B0AAMM000009	DIODE	3	
D601,02	SB360L6508	DIODE	2	B0JAPG000014
D607	1SS291TA	DIODE	1	
D611	MA4051M	DIODE	1	MAZ40510M
D657-59	MA165TA5	DIODE	3	MA2C16500E
D701-04	1N5402BF	DIODE	4	
D705	B0AAMM000009	DIODE	1	
D711	B0AAMM000009	DIODE	1	
D718	B0JANG000008	DIODE	1	
D720	B0JANG000008	DIODE	1	
D721	MA4300M	DIODE	1	MAZ43000M
D723	MA4150-M	DIODE	1	MAZ41500M
D725	MA4082LTA	DIODE	1	MAZ40820LF

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
D730	MA4091H	DIODE	1	MAZ40910H
D737	MA4082LTA	DIODE	1	MAZ40820LF
D738-40	MA165TA5	DIODE	3	MA2C16500E
D741-44	B0AAMM000009	DIODE	4	
D745	MA4051M	DIODE	1	MAZ40510M
D746	B0AAMM000009	DIODE	1	
D747	MA4068L	DIODE	1	MAZ40680L
D751,52	1N5402BF	DIODE	2	
D753-55	B0AAMM000009	DIODE	3	
D756,57	MA700	DIODE	2	MA2C700
D758	MA165TA5	DIODE	1	MA2C16500E
D761	B0AAMM000009	DIODE	1	
D901,02	1SS291TA	DIODE	2	
D904	MA165TA5	DIODE	1	MA2C16500E
D905	1SS291TA	DIODE	1	
D906,07	MA165TA5	DIODE	2	MA2C16500E
D931	MA165TA5	DIODE	1	MA2C16500E
D933	MA165TA5	DIODE	1	MA2C16500E (EE)
D935	MA165TA5	DIODE	1	MA2C16500E (GN)
D951	LNJ301MPUJAD	LED	1	
D952,53	LNJ301MPUJAD	LED	2	(GN)
D954	SELS5923C	LED	1	B3ADA0000083
D961	MA4075M	DIODE	1	MAZ40750M
D973	MA4030M	DIODE	1	MAZ40300M
D974	MA165TA5	DIODE	1	MA2C16500E
F1	K5D202BL0001	FUSE	1	⚠
FL901	A2BB00000115	FL DISPLAY TUBE	1	
FP791,92	K5G502AA0002	FUSE PROTECTOR	2	⚠
IC151	C1BB00000527	IC	1	(EE)
IC201	C0JBAR000292	IC	1	
IC401	C1BA00000152	IC	1	(GN)
IC601	RSN311W64B	IC	1	
IC901	C2BBFD000404	IC	1	
JK551	K1KA02A00008	CONNECTOR(2P)	1	
JK601,02	K4BC04B00028	JACK,SPEAKERS	2	
JK603	K2HA103B0015	JACK,SPEAKERS	1	
JK701	K2AA2B000002	JACK,AC INLET	1	⚠
JK901,02	RJJ65MA01	JACK,MIC	2	K2HB102J0032 (GN)
JK903	RJJ37TN02-C	JACK,HEADPHONES	1	K2HC103A0009
L151,52	ELEXT101KA9	COIL	2	(EE)
L153	G0C1R0JA0019	COIL	1	(EE)
L401	RLQA3R3JT1-Y	COIL	1	G0C3R3JA0019 (GN)
L601-06	RLQYR73MW1-0	COIL	6	G0ZZ00001606
L701	ELF15N035AN	COIL	1	⚠
L901	G0C100JA0019	COIL	1	
L902	G0C1R0JA0019	COIL	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
P1	RPG4396	PACKING CASE(SA)	1	
P1	RPG4397	PACKING CASE(RS)	1	
P1	RPG4398	PACKING CASE(SH)	1	
P1	RPG4399	PACKING CASE(SL)	1	
P2	RPN1194	POLYFOAM(SA)	1	
P2	RPN1195-2	POLYFOAM(RS)	1	
P2	RPN1196	POLYFOAM(SH)	1	
P2	RPN1197	POLYFOAM(SL)	1	
P3	SPP740-1	PROTECTION COVER	4	
P4	RPF0139-1	PROTECTION BAG(ACCESS.)	1	
P5	RPG6349	PACKING CASE(SYSTEM)	1	(EE)
P5	RPG6350	PACKING CASE(SYSTEM)	1	(GN)
P6	RPQ0951	PAD	1	
PCB1	REP3337K-M	MAIN P.C.B. ASS'Y	1	[RTL](EE)
PCB1	REP3337L-M	MAIN P.C.B. ASS'Y	1	[RTL](GN)
PCB2	REP3338A-S	SUB P.C.B. ASS'Y	1	[RTL](EE)
PCB2	REP3338B-S	SUB P.C.B. ASS'Y	1	[RTL](GN)
Q401	2SC5398RSTA	TRANSISTOR	1	B1AACF000059 (GN)
Q503	2SC5398RSTA	TRANSISTOR	1	B1AACF000059
Q551	2SA1995RSTA	TRANSISTOR	1	B1ACDF000006
Q553	B1AAGC000006	TRANSISTOR	1	
Q554	2SA1995RSTA	TRANSISTOR	1	B1ACDF000006
Q555	B1AAGC000006	TRANSISTOR	1	
Q556	2SC5398RSTA	TRANSISTOR	1	B1AACF000059
Q557	2SA1995RSTA	TRANSISTOR	1	B1ACDF000006
Q601,02	2SC5398RSTA	TRANSISTOR	2	B1AACF000059
Q605-10	B1AAGC000006	TRANSISTOR	6	
Q612	UN411FTA	TRANSISTOR	1	UNR411F00A
Q701	2SD2374PQAU	TRANSISTOR	1	2SD23740J1AU
Q702	2SB1548PQAU	TRANSISTOR	1	2SB15480J1AU
Q703,04	2SD2137PQTA	TRANSISTOR	2	2SD21370PA
Q705	2SA1995RSTA	TRANSISTOR	1	B1ACDF000006
Q707	2SB14170JA	TRANSISTOR	1	
Q708	UN4211	TRANSISTOR	1	UNR4211
Q709	B1AAGC000006	TRANSISTOR	1	
Q711,12	2SB1548PQAU	TRANSISTOR	2	2SB15480J1AU
Q723	2SC3940AQSTA	TRANSISTOR	1	2SC3940ARA
Q725	2SC5398RSTA	TRANSISTOR	1	B1AACF000059
Q726	2SC3940AQSTA	TRANSISTOR	1	2SC3940ARA
Q791	B1AAGC000006	TRANSISTOR	1	
Q901	UN4212	TRANSISTOR	1	UNR4212
Q902	UN411FTA	TRANSISTOR	1	UNR411F00A
R151,52	ERDS2FJ102	1/4W 1K	2	(EE)
R153,54	ERDS2FJ104	1/4W 100K	2	(EE)
R155	ERDS2FJ121	1/4W 120	1	(EE)
R157,58	ERDS2FJ102	1/4W 1K	2	(EE)
R202-05	ERDS2FJ104	1/4W 100K	4	
R211	ERDS2FJ271	1/4W 270	1	
R229,30	ERDS2FJ102	1/4W 1K	2	
R401,02	ERDS2FJ681	1/4W 680	2	(GN)
R403	ERDS2FJ223	1/4W 22K	1	(GN)

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
R404	ERDS2FJ471	1/4W 470	1	(GN)
R405	ERDS2FJ472	1/4W 4.7K	1	(GN)
R406	ERDS2FJ474	1/4W 470K	1	(GN)
R407	ERDS2FJ472	1/4W 4.7K	1	(GN)
R409	ERDS2FJ472	1/4W 4.7K	1	(GN)
R410	ERDS2FJ222	1/4W 2.2K	1	(GN)
R411	ERDS2FJ331	1/4W 330	1	(GN)
R412	ERDS2TJ105	1/4W 1M	1	(GN)
R415	ERDS2FJ471	1/4W 470	1	(GN)
R416	ERDS2FJ331	1/4W 330	1	(GN)
R421	ERDS2FJ223	1/4W 22K	1	(GN)
R509-12	ERDS2FJ470	1/4W 47	4	
R544	ERDS2FJ103	1/4W 10K	1	
R546,47	ERDS2TJ183	1/4W 18K	2	
R551	ERDS2TJ183	1/4W 18K	1	
R552	ERDS2FJ473	1/4W 47K	1	
R555	ERDS2FJ223	1/4W 22K	1	
R556	ERDS2FJ104	1/4W 100K	1	
R557	ERDS2FJ103	1/4W 10K	1	
R558	ERDS2FJ222	1/4W 2.2K	1	
R559	ERDS2FJ472	1/4W 4.7K	1	
R560,61	ERDS2FJ104	1/4W 100K	2	
R563,64	ERDS2TJ272T	1/4W 2.7K	2	
R566	ERDS2FJ683	1/4W 68K	1	
R567	ERG1SJ220	1W 22	1	
R568	ERDS2FJ101	1/4W 100	1	
R569	ERDS2FJ103	1/4W 10K	1	
R570	ERDS2TJ225	1/4W 2.2M	1	
R572	ERDS2FJ153	1/4W 15K	1	
R591	ERDS2FJ472	1/4W 4.7K	1	
R597,98	ERDS2FJ222	1/4W 2.2K	2	
R601-04	ERDS2FJ332	1/4W 3.3K	4	
R605,06	ERDS2FJ472	1/4W 4.7K	2	
R607-09	ERDS2FJ563	1/4W 56K	3	
R610	ERDS2FJ154	1/4W 150K	1	
R611,12	ERDS2FJ563	1/4W 56K	2	
R614,15	ERDS2FJ472	1/4W 4.7K	2	
R617,18	ERDS2FJ472	1/4W 4.7K	2	
R619,20	ERDS2TJ124	1/4W 120K	2	
R621	ERDS2FJ154	1/4W 150K	1	
R622,23	ERDS2TJ124	1/4W 120K	2	
R624	ERDS2FJ154	1/4W 150K	1	
R627	ERDS2FJ474	1/4W 470K	1	
R628	ERDS2FJ223	1/4W 22K	1	
R631,32	ERDS2TJ392	1/4W 3.9K	2	
R635	ERDS2FJ222	1/4W 2.2K	1	
R637	ERDS2FJ153	1/4W 15K	1	
R638	ERDS2FJ683	1/4W 68K	1	
R639,40	ERDS1FJ100	1/2W 10	2	
R641,42	ERDS2FJ100	1/4W 10	2	
R643,44	ERDS1FJ100	1/2W 10	2	
R645,46	ERDS2FJ100	1/4W 10	2	
R647	ERDS2FJ271	1/4W 270	1	
R648	ERD2FCG121	1/4W 120	1	

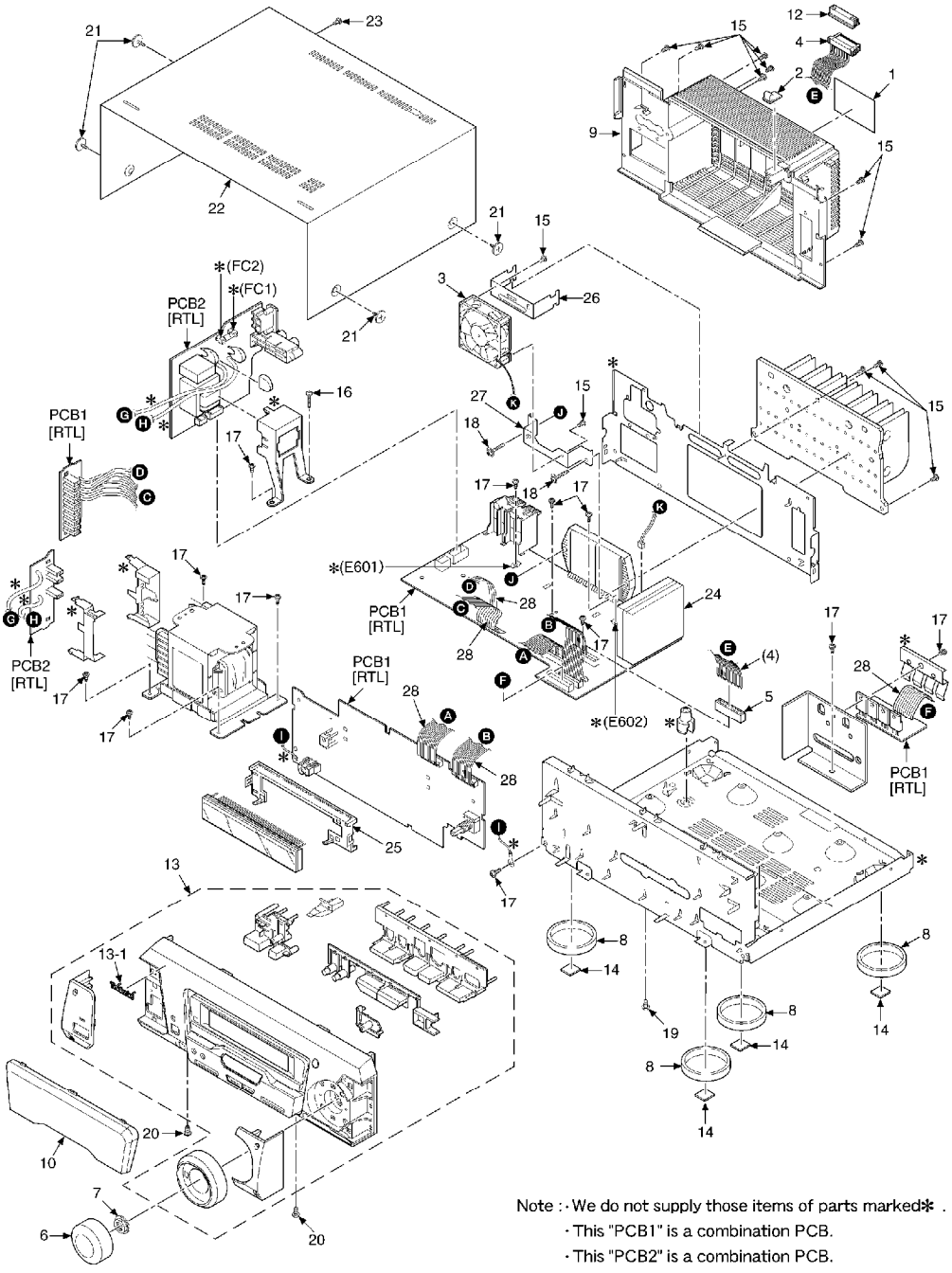
Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
R649-52	ERDS1FJ100	1/2W 10	4	
R683-86	ERDS2FJ102	1/4W 1K	4	
R687,88	ERDS2FJ152	1/4W 1.5K	2	
R691	ERDS1FJ680	1/2W 68	1	
R692,93	ERDS2FJ102	1/4W 1K	2	
R694	ERDS2FJ223	1/4W 22K	1	
R695	ERDS2FJ471	1/4W 470	1	
R696	ERDS2FJ473	1/4W 47K	1	
R708	ERDS2FJ472	1/4W 4.7K	1	
R712	ERDS2FJ222	1/4W 2.2K	1	
R719	ERDS2FJ332	1/4W 3.3K	1	
R720	ERDS2TJ392	1/4W 3.9K	1	
R721	ERD2FCJ4R7	1/4W 4.7	1	
R722	ERQ16NKW2R2E	1/6W 2.2	1	
R723	ERDS2FJ562	1/4W 5.6K	1	
R724	ERDS2TJ392	1/4W 3.9K	1	
R725	ERDS2FJ100	1/4W 10	1	
R727	ERDS2TJ392	1/4W 3.9K	1	
R729	ERDS2FJ221	1/4W 220	1	
R738	ERDS2TJ392	1/4W 3.9K	1	
R739	ERDS2FJ473	1/4W 47K	1	
R749	ERDS2FJ102	1/4W 1K	1	
R753,54	ERX1SJR47	1W 0.47	2	
R761	ERG1SJ221	1/2W 220	1	
R763	ERDS2FJ472	1/4W 4.7K	1	
R764	ERDS2FJ331	1/4W 330	1	
R765	ERDS1FJ471	1/2W 470	1	
R767	ERG1SJ270	1W 27	1	
R768	ERDS2FJ101	1/4W 100	1	
R769	ERG1SJ270	1W 27	1	
R771	ERDS2FJ222	1/4W 2.2K	1	
R772	ERDS2FJ223	1/4W 22K	1	
R773,74	ERDS1FJ180	1/2W 18	2	
R776	ERDS2FJ103	1/4W 10K	1	
R777	ERDS2FJ102	1/4W 1K	1	
R793	ERDS2TJ1R0	1/4W 1.0	1	(EE)
R794	ERDS2FJ473	1/4W 47K	1	
R794A	ERQ16NKW1R0E	1/6W 1	1	(GN)
R795	ERDS2TJ392	1/4W 3.9K	1	
R796,97	ERDS2FJ2R2	1/4W 2.2	2	
R798	ERQ16NKW2R2E	1/6W 2.2	1	
R901	ERDS2FJ821	1/4W 820	1	
R902	ERDS2FJ102	1/4W 1K	1	
R903	ERDS2FJ122	1/4W 1.2K	1	
R904	ERDS2FJ152	1/4W 1.5K	1	
R905	ERDS2FJ182	1/4W 1.8K	1	
R906	ERDS2FJ222	1/4W 2.2K	1	
R907	ERDS2FJ332	1/4W 3.3K	1	
R908	ERDS2FJ472	1/4W 4.7K	1	(GN)
R909	ERDS2FJ182	1/4W 1.8K	1	
R910	ERDS2FJ222	1/4W 2.2K	1	
R911	ERDS2FJ332	1/4W 3.3K	1	
R912	ERDS2FJ472	1/4W 4.7K	1	
R913	ERDS2FJ821	1/4W 820	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
R914	ERDS2FJ102	1/4W 1K	1	
R915	ERDS2FJ122	1/4W 1.2K	1	
R916	ERDS2FJ152	1/4W 1.5K	1	
R918	ERDS2FJ103	1/4W 10K	1	
R919	ERDS2FJ153	1/4W 15K	1	
R921,22	ERDS2FJ103	1/4W 10K	2	
R924,25	ERDS2FJ102	1/4W 1K	2	
R926	ERDS2FJ222	1/4W 2.2K	1	
R928	ERDS2FJ473	1/4W 47K	1	
R929-32	ERDS2FJ102	1/4W 1K	4	
R934-36	ERDS2FJ101	1/4W 100	3	
R937	ERDS2FJ103	1/4W 10K	1	
R939	ERDS2FJ152	1/4W 1.5K	1	
R940,41	ERDS2FJ102	1/4W 1K	2	
R942	ERDS2FJ222	1/4W 2.2K	1	
R943	ERDS2FJ101	1/4W 100	1	
R944	ERDS2FJ222	1/4W 2.2K	1	
R945	ERDS2FJ101	1/4W 100	1	
R946	ERDS2FJ102	1/4W 1K	1	
R947,48	ERDS2FJ104	1/4W 100K	2	(GN)
R949	ERDS2FJ472	1/4W 4.7K	1	
R950	ERDS2FJ101	1/4W 100	1	
R951	ERDS2FJ334	1/4W 330K	1	
R952	ERDS2TJ106T	1/4W 10M	1	
R953	ERDS2FJ101	1/4W 100	1	
R954	ERDS2FJ104	1/4W 100K	1	
R956-58	ERDS2FJ102	1/4W 1K	3	
R959	ERDS2FJ470	1/4W 47	1	
R960	ERDS2FJ152	1/4W 1.5K	1	
R961,62	ERDS2FJ223	1/4W 22K	2	
R965,66	ERDS2TJ392	1/4W 3.9K	2	
R969	ERDS2TJ272T	1/4W 2.7K	1	
R974	ERDS2FJ102	1/4W 1K	1	
R975	ERDS2FJ223	1/4W 22K	1	
R976	ERDS2FJ104	1/4W 100K	1	
R986	ERDS2FJ152	1/4W 1.5K	1	
R987,88	ERDS2FJ102	1/4W 1K	2	
R990	ERDS2FJ104	1/4W 100K	1	
R991	ERDS2FJ473	1/4W 47K	1	
R992	ERDS2FJ221	1/4W 220	1	(GN)
R993,94	ERDS2FJ104	1/4W 100K	2	
R995	ERDS2FJ221	1/4W 220	1	
R996,97	ERDS2FJ151	1/4W 150	2	
R998	ERDS2FJ221	1/4W 220	1	(GN)
R999	ERDS2FJ104	1/4W 100K	1	
RL702	K6B1AEA00003	RELAY	1	⚠
S901-08	EVQ11G05R	SW,OPERATION	8	
S909	EVQ11G05R	SW,OPERATION	1	(GN)
S910-15	EVQ11G05R	SW,OPERATION	6	
S916-18	EVQ11G05R	SW,OPERATION	3	(GN)

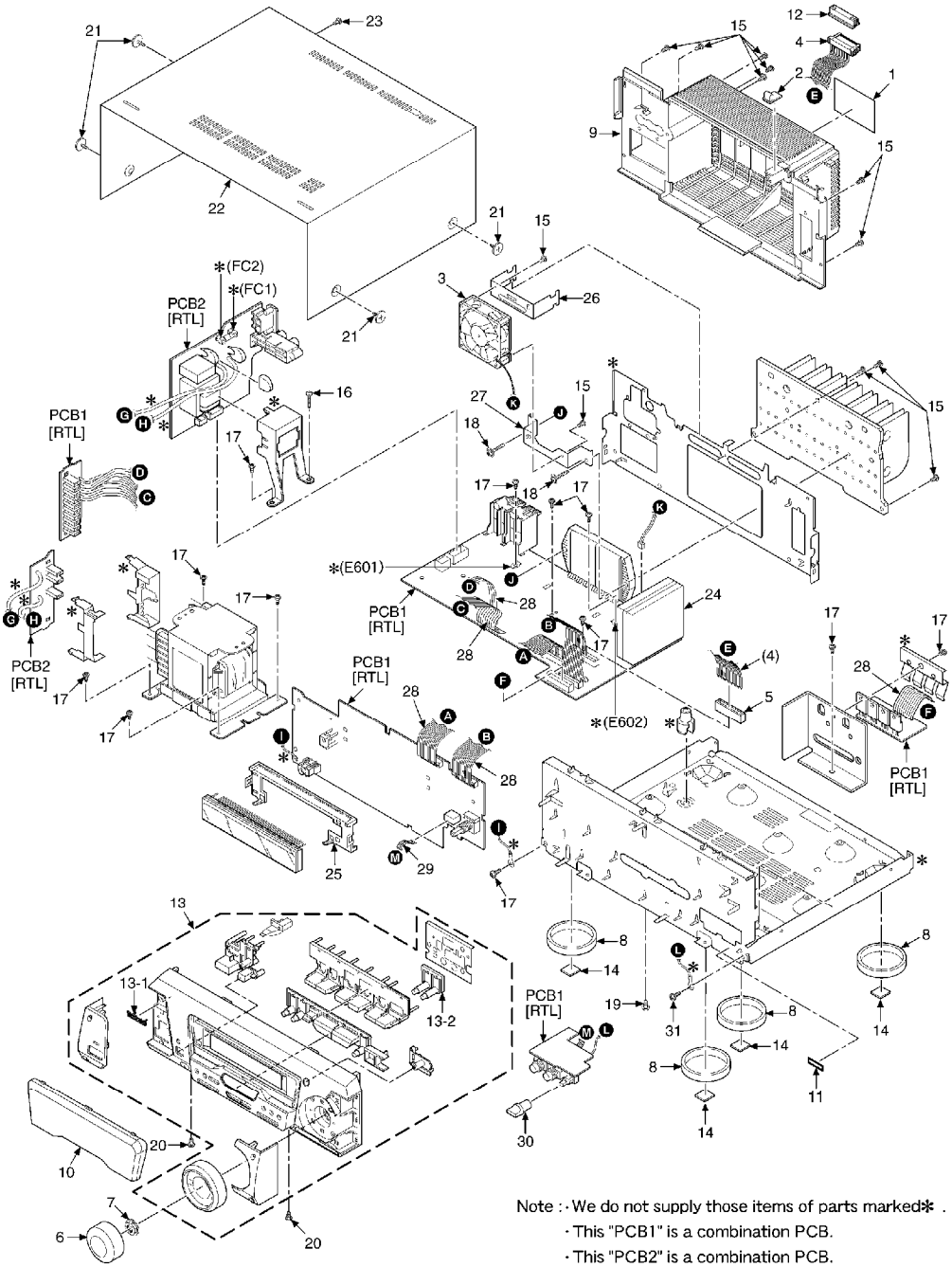
Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
T701	ETP76VST617A	POWER TRANSFORMER	1	⚠
T702	ETP28KBZ21BG	POWER TRANSFORMER	1	⚠
VR401	EVUE27FK3B53	V.R.,MIC VOLUME	1	(GN)
VR901	EVQVBXFK124B	V.R.,VOLUME	1	
X151	H0H433400001	OSCILLATOR	1	(EE)
X901	EF0EC6004T4	OSCILLATOR	1	EFOEC6004T4
X902	H0A327200027	OSCILLATOR	1	
Z701	ENC471D5A	ZNR	1	J0LG00000008 ⚠
Z901	B3RAD0000028	REMOTE SENSOR	1	

15. Cabinet Parts Location

15.1. SA-DV290EE

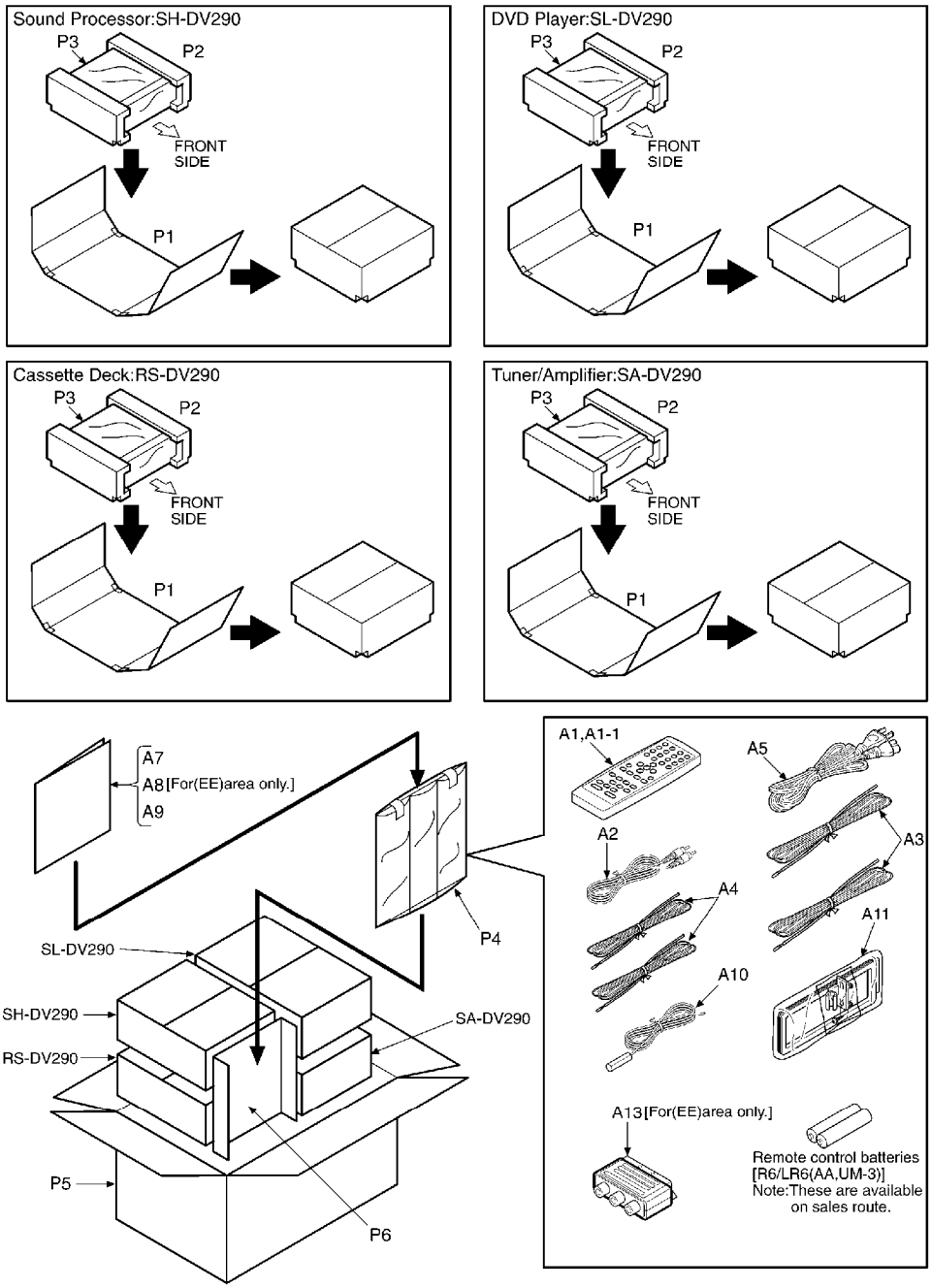


15.2. SA-DV290GN



Note : · We do not supply those items of parts marked✻ .
· This "PCB1" is a combination PCB.
· This "PCB2" is a combination PCB.

16. Packaging



17. Schematic Diagram for printing with A4 size

K0305 YH/HM

B MAIN CIRCUIT

: POSITIVE VOLTAGE LINE
: NEGATIVE VOLTAGE LINE :AUDIO SIGNAL LINE

IC601
RSN311W64B
POWER AMP

Q556
2SC5398RSTA
MOTOR DRIVE

Q557
2SA1995RSTA
MOTOR DRIVE

Q555
2SD2144STA
SIGNAL LEVEL DET.

Q551
2SA1995RSTA
SIGNAL LEVEL DET.

Q554
2SA1995RSTA
SIGNAL LEVEL DET.

Q553
2SD2144STA
MOTOR DRIVE

FAN MOTOR

Q601,602
2SC5398RSTA
PROTECTOR

Q607
Q608
Q605
Q605,607,608
2SD2144STA
MUTING

Q503
2SC5398RSTA
SWITCHING

Q708
UN4211TA
SWITCHING (POWER)

Q709
2SD2144STA
SWITCHING (POWER)

Q704
Q703,704
2SD2137PQTA
REGULATOR

Q703
REGULATOR

Q601
Q602

D607
1SS291TA

D703
1N5402BM21

D704
1N5402BM21

D658
MA165TA

D659
MA165TA

D657
MA165TA

D602
SB360L6508

D601
SB360L6508

C POWER SUPPLY CIRCUIT

Q711,712
2SB1548PQAU
REGULATOR

Q712
Q711

Q702
2SB1548PQAU
REGULATOR

Q701
2SD2374PQAU
REGULATOR

Q725
2SC5398RSTA
STABILIZER

Q705
2SA1995RSTA
STABILIZER

SA-DV290(EE,GN) MAIN,POWER SUPPLY CIRCUIT DIAGRAM

25 26 27 28 29 30 31 32 33 34 35 36

: POSITIVE VOLTAGE LINE
: NEGATIVE VOLTAGE LINE
: AUDIO SIGNAL LINE

B MAIN CIRCUIT

L605 R649 10 — B
L602 R640 10 — C
L606 R650 10 — A
L601 R639 10 — D

JK601
HF(6 Ω)
LF(8 Ω)
Lch
JK602
HF(6 Ω)
LF(8 Ω)
Rch
SPEAKERS

R651 10, C635 0.047, C627 0.1, C629 0.1, C637 0.047
R652 10, C636 0.047, C626 0.1, C628 0.1, C632 0.047, R642 10, C620 0.1, C630 0.1
R641 10, C621 0.1, C631 0.1

CP601
1 GND
2 GND
3 C OUT
4 C OUT
5 GND
6 GND
7 GND
8 GND
9 SUR L OUT
10 SUR L OUT
11 SUR R OUT
12 SUR R OUT

CP602
1 ECO
2 SH SYNC
3 SA SYNC
4 D.GND
5 BU5V
6 RS13V
7 +B
8 NC

W722A
D S1
E S2
F S3
G S4

W721A
1 S1
2 S2
3 S3
4 S4
C 5 AC1
D 6 CT
H 7 AC2
F 8 S7
E 9 FL2
10 FL1

D AC IN CIRCUIT

CN601
GND 1
GND 2
C OUT 3
C OUT 4
GND 5
GND 6
GND 7
GND 8
SUR L IN 9
SUR L IN 10
SUR R IN 11
SUR R IN 12
A / B / C

JK603
A CENTER(8 Ω)
C R ch
B L ch
SPEAKERS
SURROUND(8 Ω)

L604 R644 10, C651 0.047, C652 1000P, C646 0.047, C644 1000P
L603 R643 10, C624 0.1, R646 10, C634 0.1, R645 10, C633 0.1, C625 0.1, C645 0.047, C643 1000P

CN602
ECO 1
SH SYNC 2
SA SYNC 3
D.GND 4
BU5V 5
RS13V 6
+B 7
NC 8

R712 2.2K
R795 3.9K
D745 MA4051MTA
R772 22K
D746 RL1N4003N02
Q726 2SC3940AQSTA REGULATOR 6V 10.7V 6.7V
C754 0.01
C758 0.01
R777 1K
D740 MA165STA
C759 10V47
D747 MA4068LTA
R771 27K
Q791 2SD2144STA RELAY DRIVE 0V 0.7V
R794 47K
D711 RL1N4003N02
R773 18
R774 18
C755 16V1000
D741 RL1N4003N02
D743 RL1N4003N02
C753 0.01
D742 RL1N4003N02
D744 RL1N4003N02
T702
F1 T2A
L701
JK701
AC IN
230-240V 50Hz ···[GN]
230 50Hz ·····[EE]
AC9.4V
Z701
RL702
D500 MA165TA
C791 1000P
W2/W3
W1
6V

E POWER TRANSFORMER (A) CIRCUIT

For [GN] area.
R794A 1
R793 1 — For [EE] area.

W722B
S1 1 — A
S2 2 — B
S3 3 — C
S4 4 — D

FP791 K5G502AA0002
FP792 K5G502AA0002

S1 1
S2 2
S3 3
S4 4
AC1 5
CT 6
AC2 7
S7 8
FL2 9
FL1 10
W721B

R798 2.2

CN701
CN702
CN703
CN704
CN705
CN706
CN707
CN708
CN709
CN710

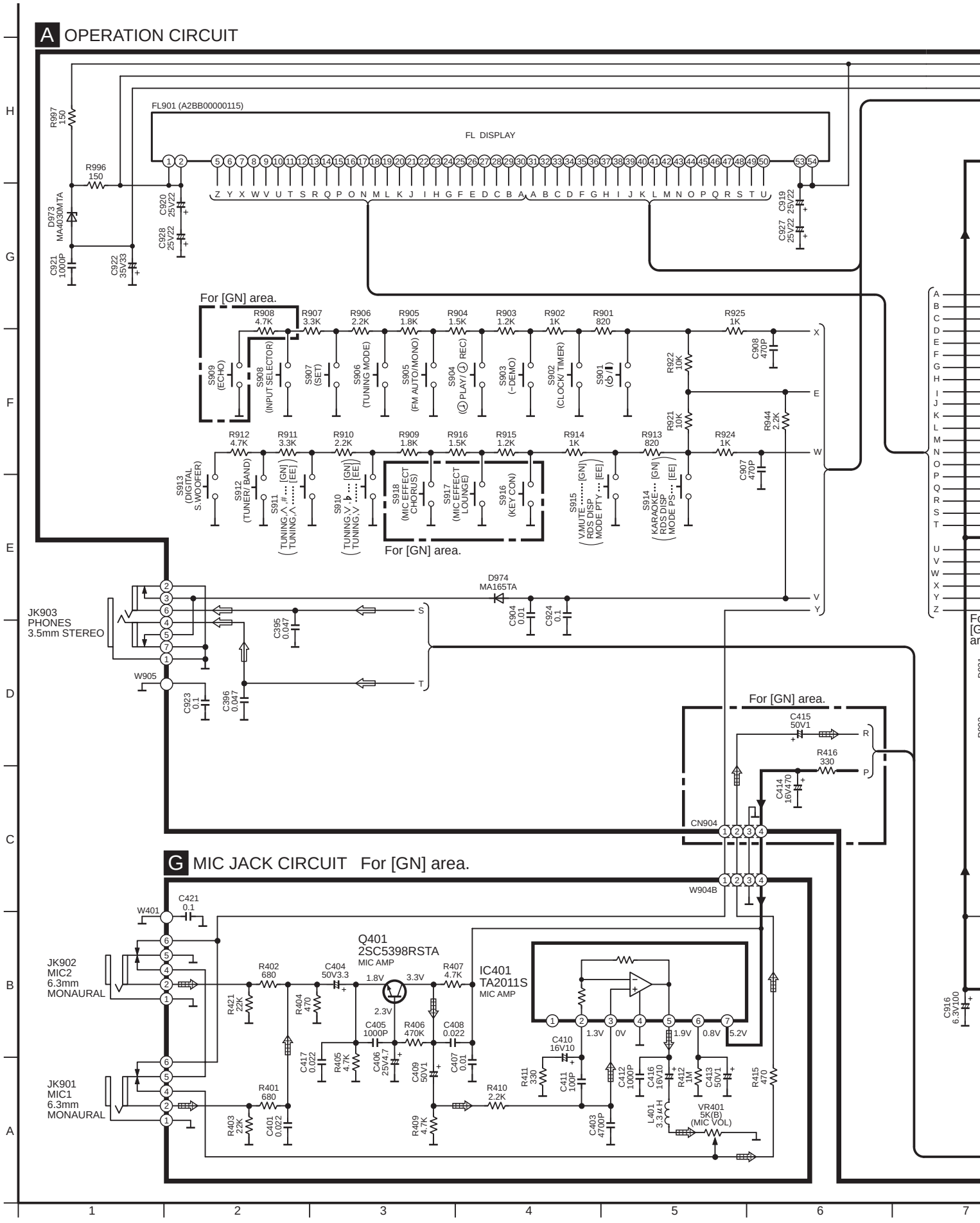
F POWER TRANSFORMER (B) CIRCUIT

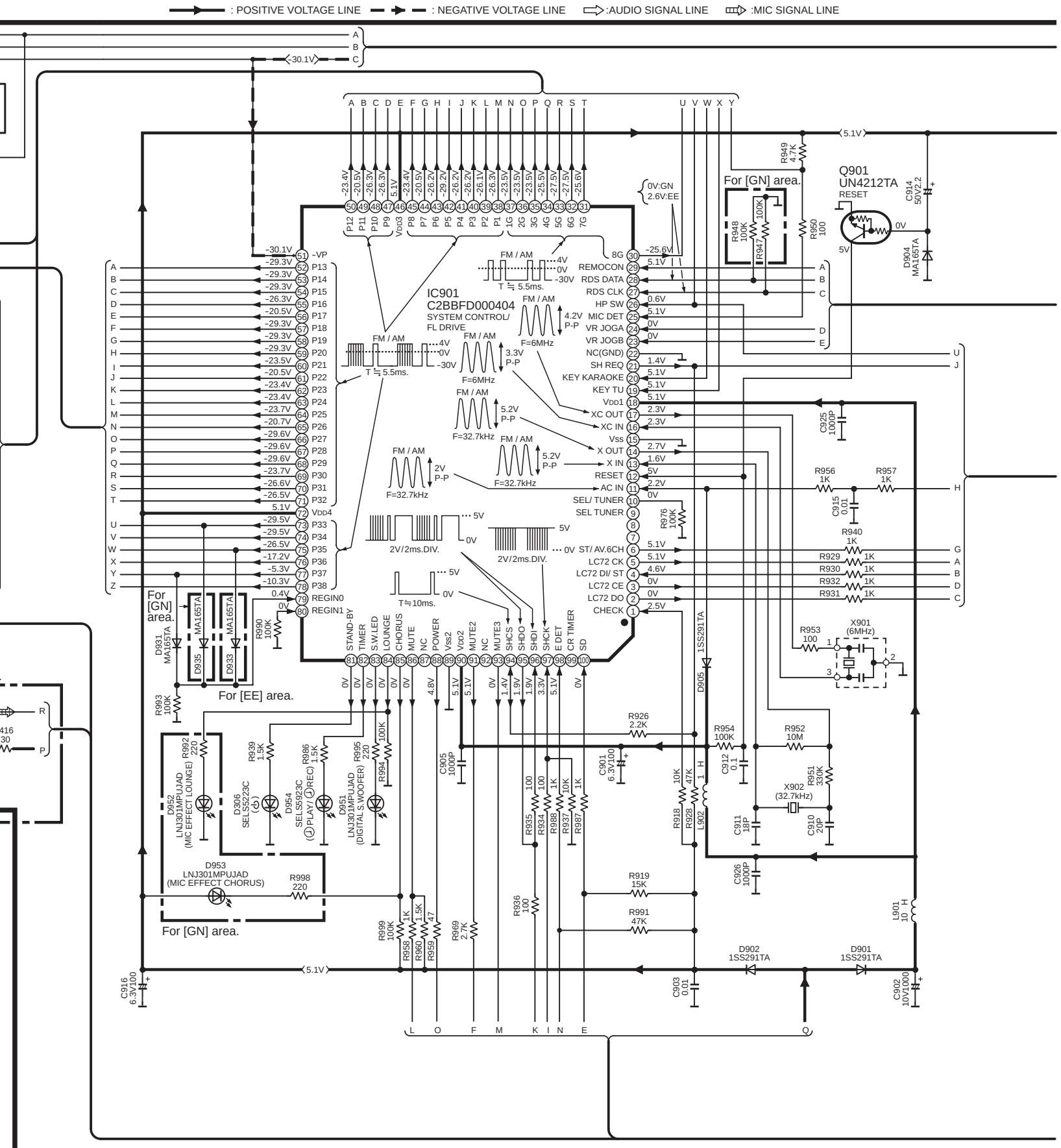
T701
CN711 — W1
CN712 — For [EE] area. W3
CN713 — For [GN] area. W2

AC22.6V
AC22.6V
AC11.7V
AC11.7V
AC 29.2V
AC4.7V

SA-DV290(EE,GN) MAIN, AC IN, POWER TRANSFORMER(A)&(B) CIRCUIT DIAGRAM

37 38 39 40 41 42 43 44 45 46 47 48
H G F E D C B A

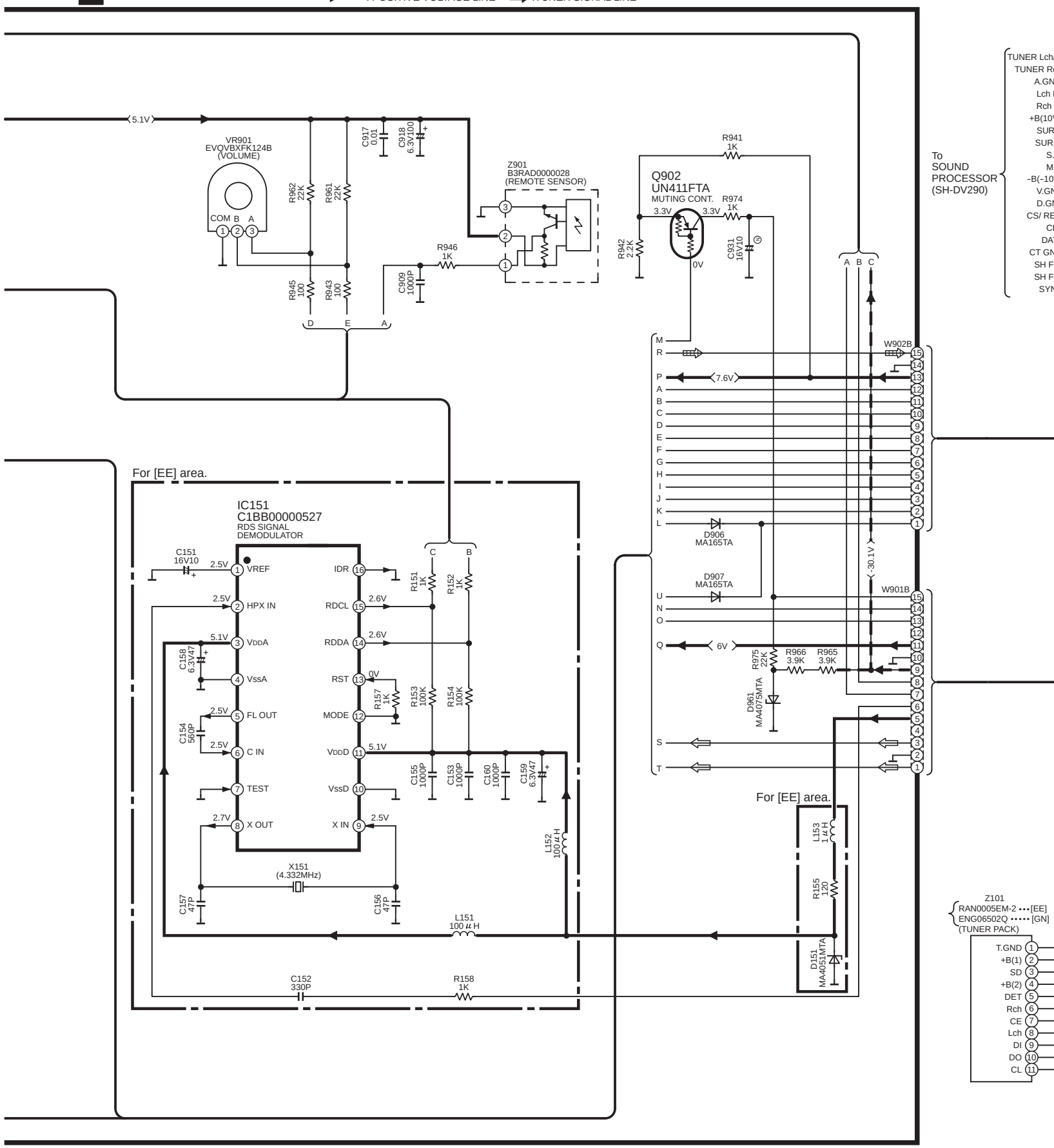

A OPERATION CIRCUIT
FL901 (A2BB00000115)
FL DISPLAY
R997 150
R996 150
D973 MA4030MTA
C920 25V22
C928 25V22
C921 1000P
C922 35V33
C919 25V22
C927 25V22
For [GN] area.
R908 4.7K
R907 3.3K
R906 2.2K
R905 1.8K
R904 1.5K
R903 1.2K
R902 1K
R901 820
R925 1K
S909 (ECHO)
S908 (INPUT SELECTOR)
S907 (SET)
S906 (TUNING MODE)
S905 (FM AUTO/MONO)
S904 (▷II PLAY/ REC)
S903 (–DEMO)
S902 (CLOCK/ TIMER)
S901 (⏻/I)
R922 10K
C908 470P
R921 10K
R944 2.2K
R912 4.7K
R911 3.3K
R910 2.2K
R909 1.8K
R916 1.5K
R915 1.2K
R914 1K
R913 820
R924 1K
S913 (DIGITAL S.WOOFER)
S912 (TUNER/ BAND)
S911 (TUNING ∧ #.... [GN] TUNING ∧ ..... [EE])
S910 (TUNING ∨ ▷ [GN] TUNING ∨ ..... [EE])
S918 (MIC EFFECT CHORUS)
S917 (MIC EFFECT LOUNGE)
S916 (KEY CON)
S915 (V.MUTE ..... [GN] RDS DISP MODE PTY ... [EE])
S914 (KARAOKE .... [GN] RDS DISP MODE PS ... [EE])
C907 470P
For [GN] area.
D974 MA165TA
C904 0.01
C924 0.1
JK903 PHONES 3.5mm STEREO
C395 0.047
W905
C923 0.1
C396 0.047
For [GN] area.
C415 50V1
R416 330
C414 16V470
CN904
G MIC JACK CIRCUIT For [GN] area.
W904B
W401
C421 0.1
JK902 MIC2 6.3mm MONAURAL
JK901 MIC1 6.3mm MONAURAL
Q401 2SC5398RSTA MIC AMP
IC401 TA2011S MIC AMP
R402 680
C404 50V3.3
R407 4.7K
1.8V
3.3V
2.3V
R421 22K
R404 470
C405 1000P
R406 470K
C408 0.022
C417 0.022
R405 4.7K
C406 25V4.7
C409 50V1
C407 0.01
R401 680
R403 22K
C401 0.022
R409 4.7K
R410 2.2K
1.3V
0V
1.9V
0.8V
5.2V
C410 16V10
R411 330
C411 100P
C412 1000P
C416 16V10
R412 1M
C413 50V1
R415 470
C403 4700P
L401 3.3μH
VR401 5K(B) (MIC VOL)
C916 6.3V100



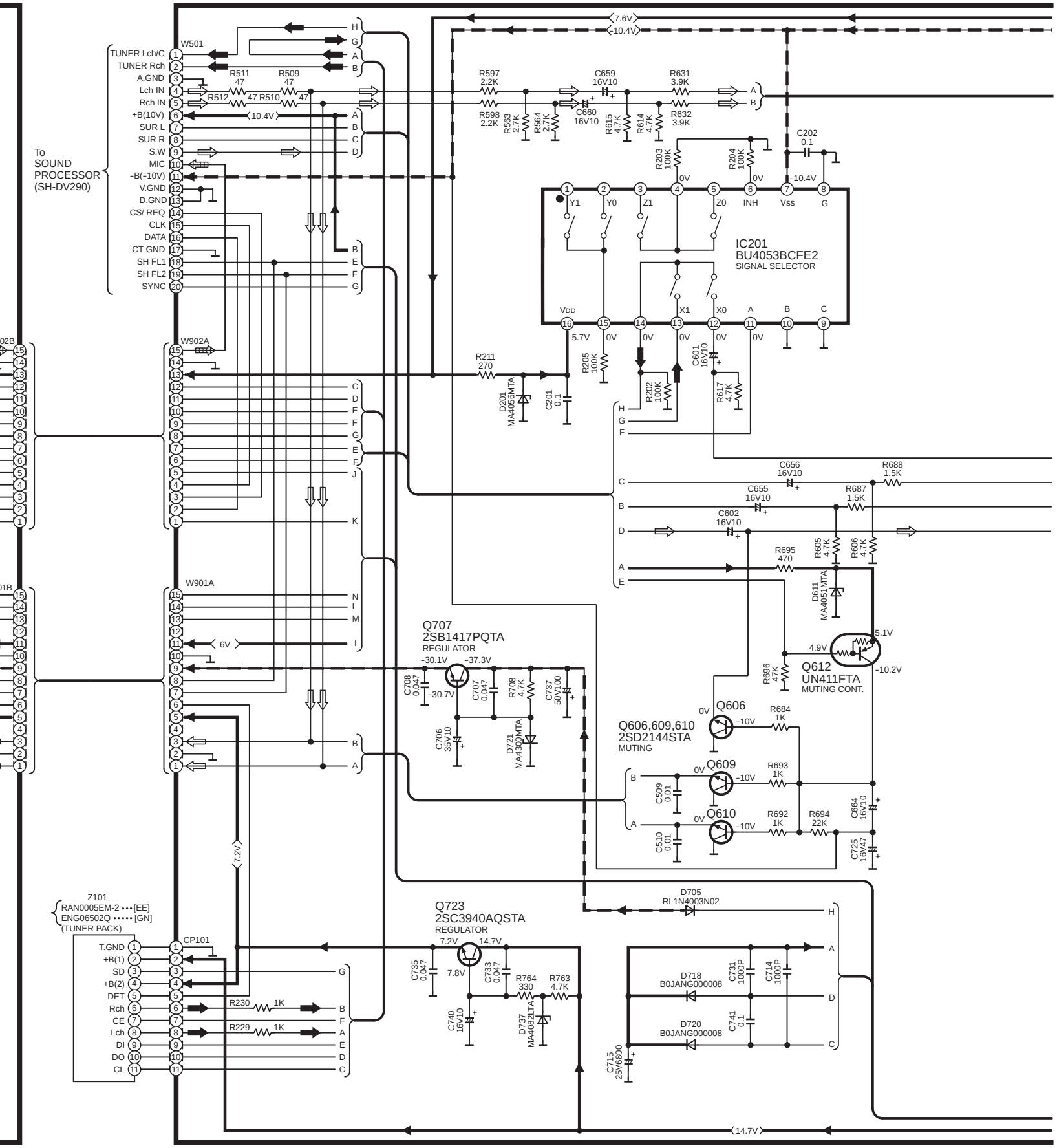
SA-DV290(EE,GN) OPERATION,MIC JACK CIRCUIT DIAGRAM

A OPERATION CIRCUIT

: NEGATIVE VOLTAGE LINE
: POSITIVE VOLTAGE LINE
:AUDIO SIGNAL LINE
:MIC SIGNAL LINE
:TUNER SIGNAL LINE

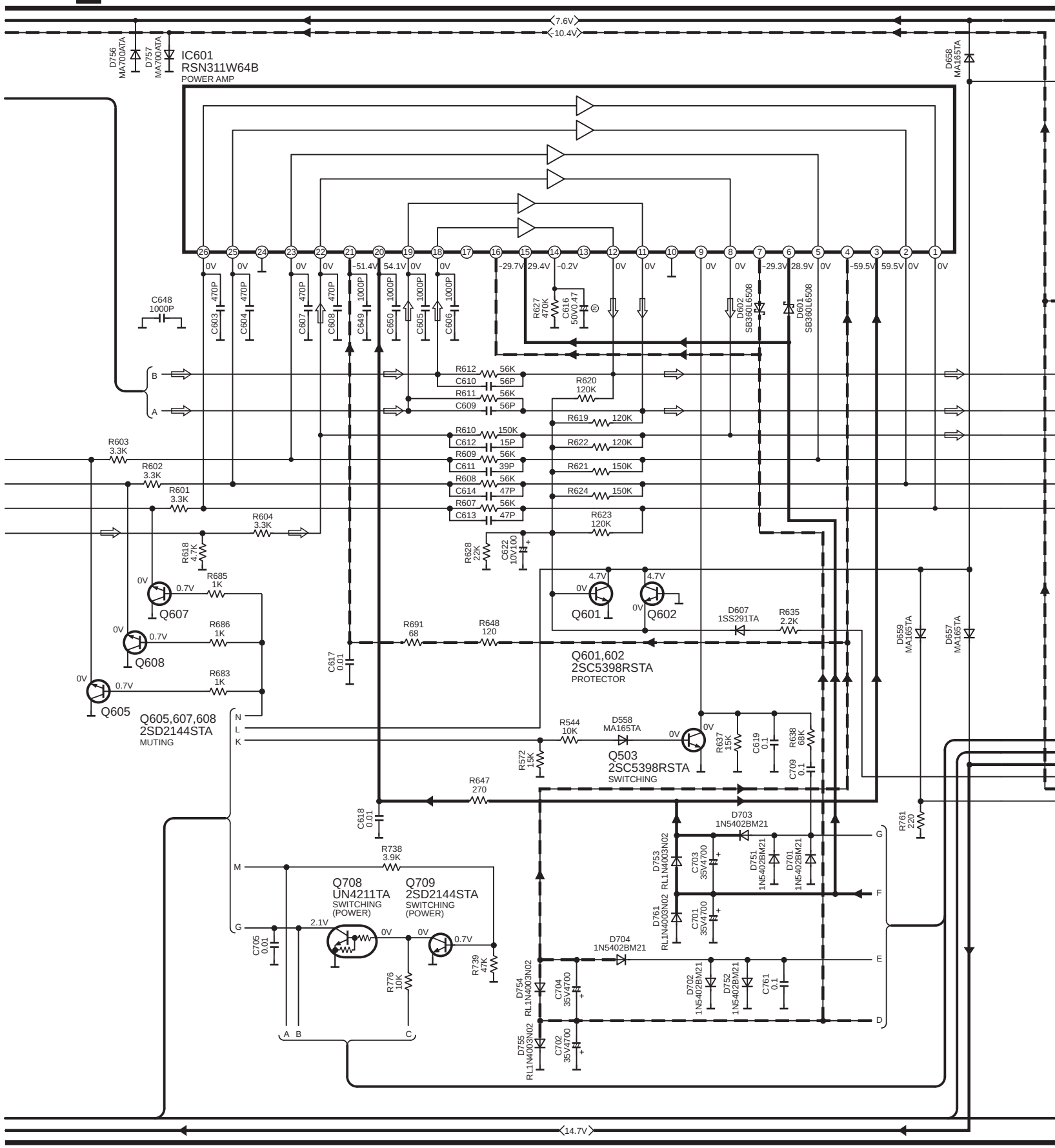


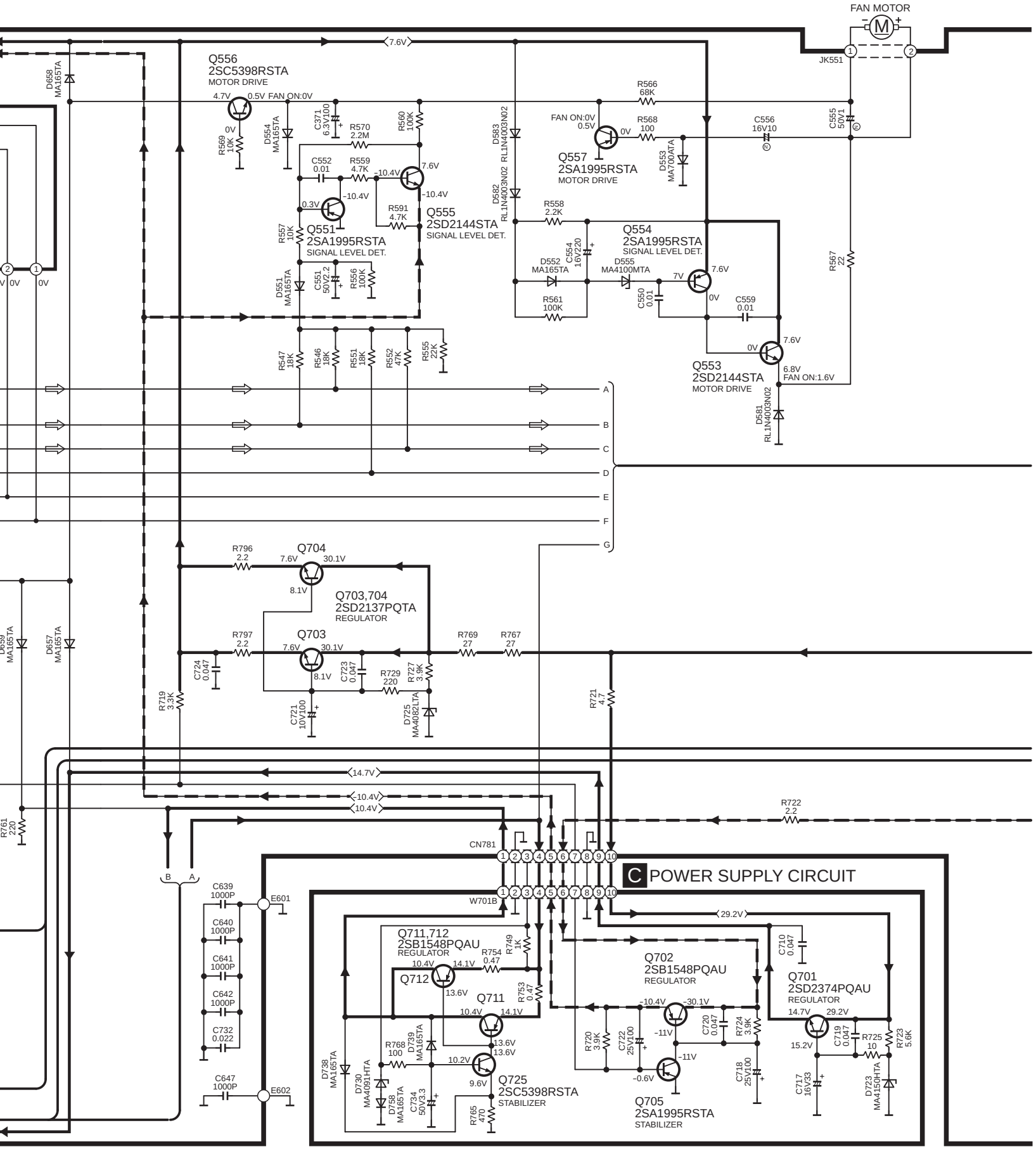
B MAIN CIRCUIT



B MAIN CIRCUIT

: POSITIVE VOLTAGE LINE
: NEGATIVE VOLTAGE LINE :AUDIO SIGNAL LINE

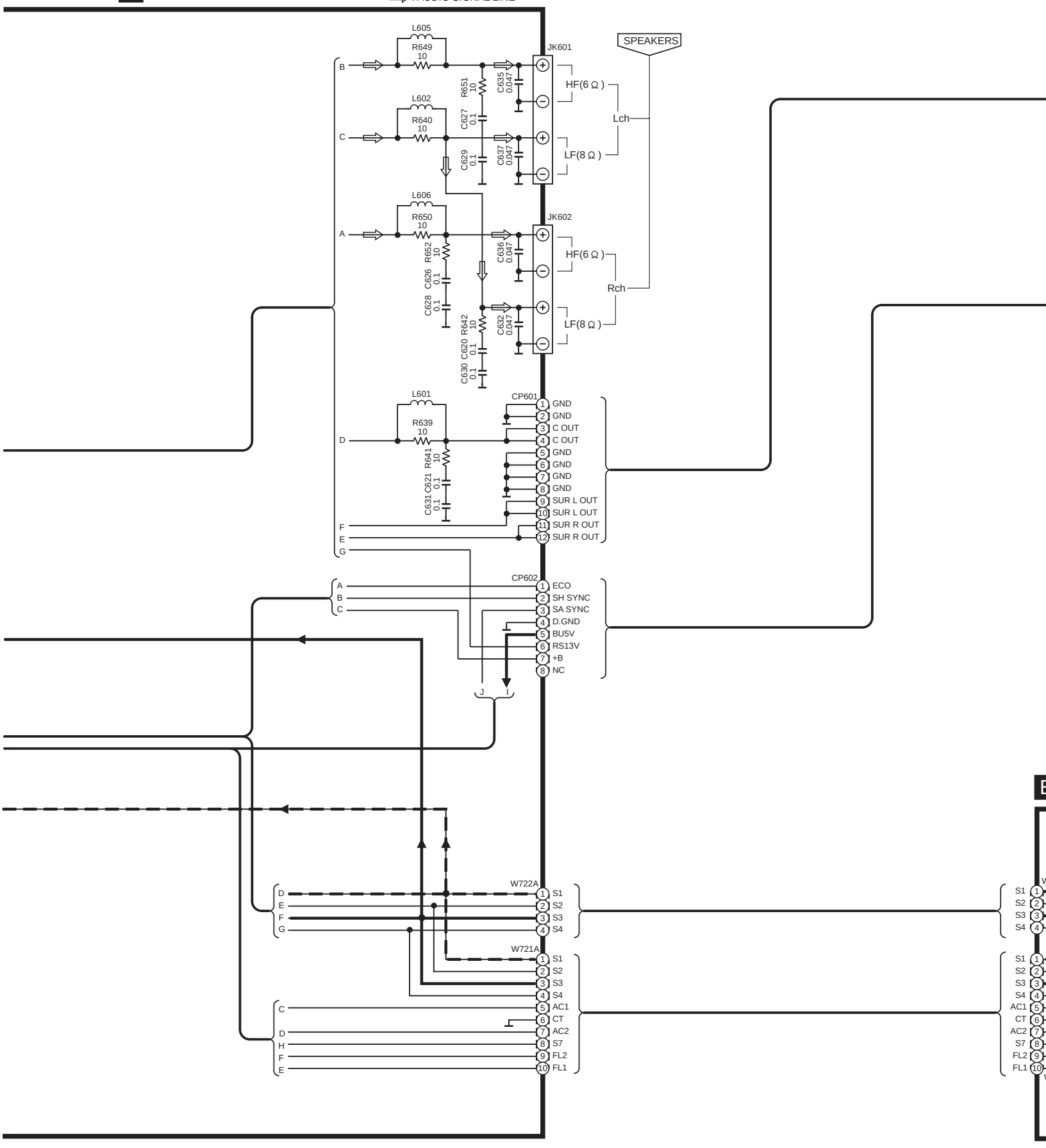


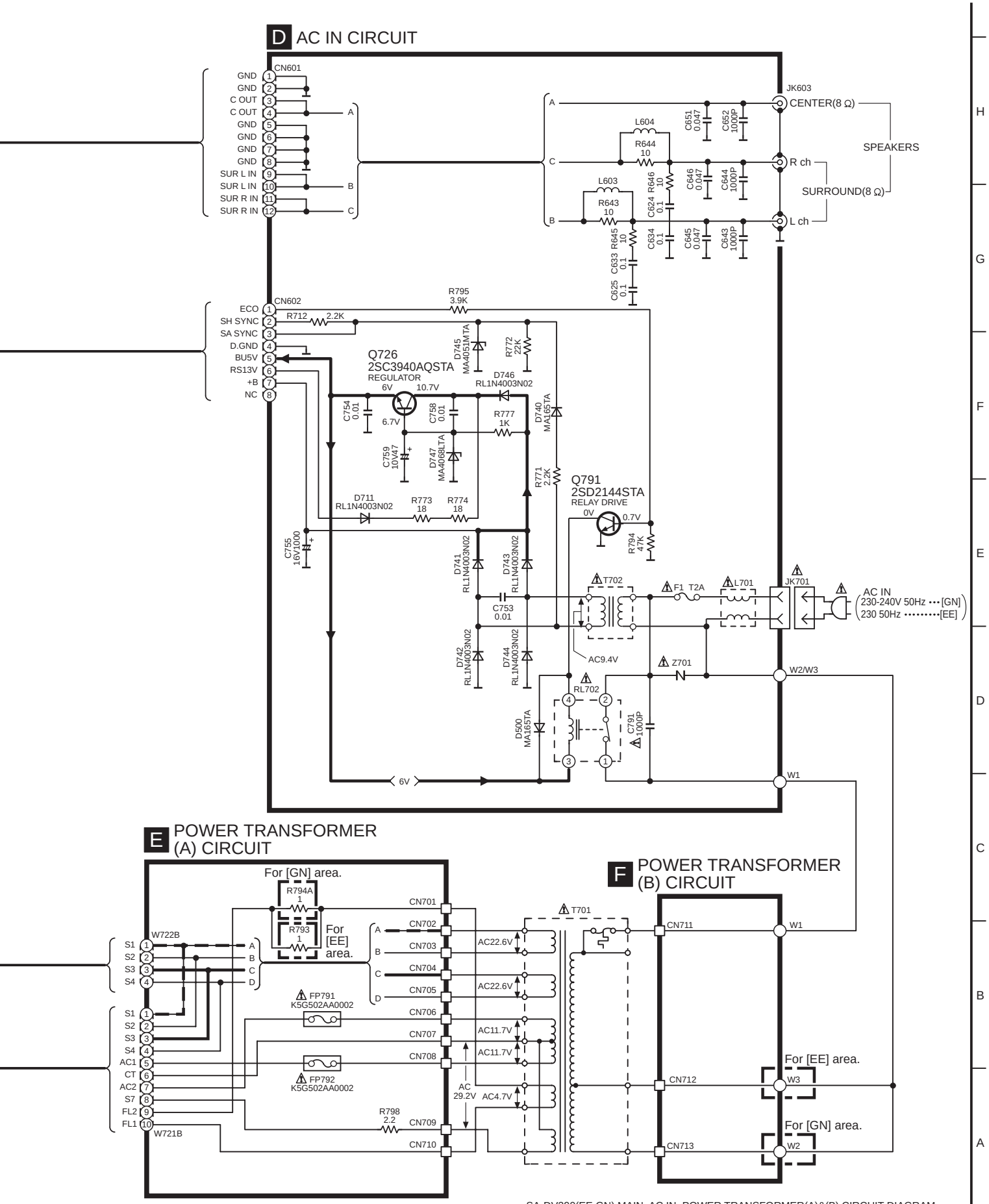


SA-DV290(EE,GN) MAIN,POWER SUPPLY CIRCUIT DIAGRAM

B MAIN CIRCUIT

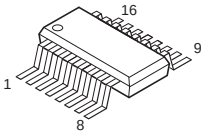
: POSITIVE VOLTAGE LINE
: NEGATIVE VOLTAGE LINE
: AUDIO SIGNAL LINE



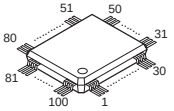


SA-DV290(EE,GN) MAIN, AC IN, POWER TRANSFORMER(A)&(B) CIRCUIT DIAGRAM

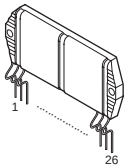
BU4053BCFE2
C1BB00000527



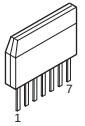
C2BBFD000404



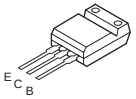
RSN311W64B



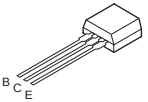
TA2011S



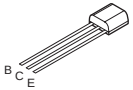
2SB1417PQTA
2SD2137PQTA



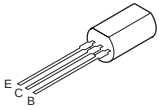
2SD2144STA



2SA1995RSTA
2SC5398RSTA



2SC3940AQSTA



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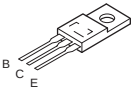
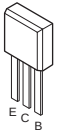
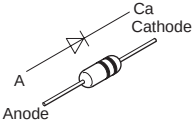
2SD2374PQAU



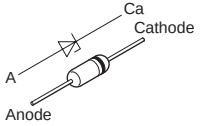
UN411FTA
UN4211TA
UN4212TA



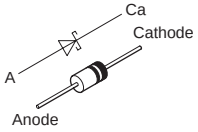
1SS291TA
MA700ATA



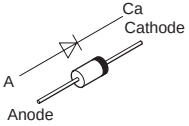
MA4100MTA
MA4150HTA
MA4300MTA

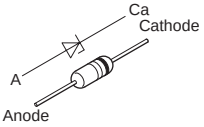


SB360L6508



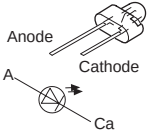
1N5402BM21
RL1N4003N02
B0JANG000008



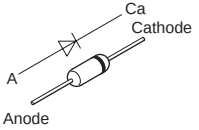


MA4030MTA
MA4051MTA
MA4056MTA
MA4068LTA
MA4075MTA
MA4082LTA
MA4091HTA

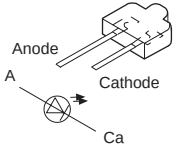
LNJ301MPUJAD

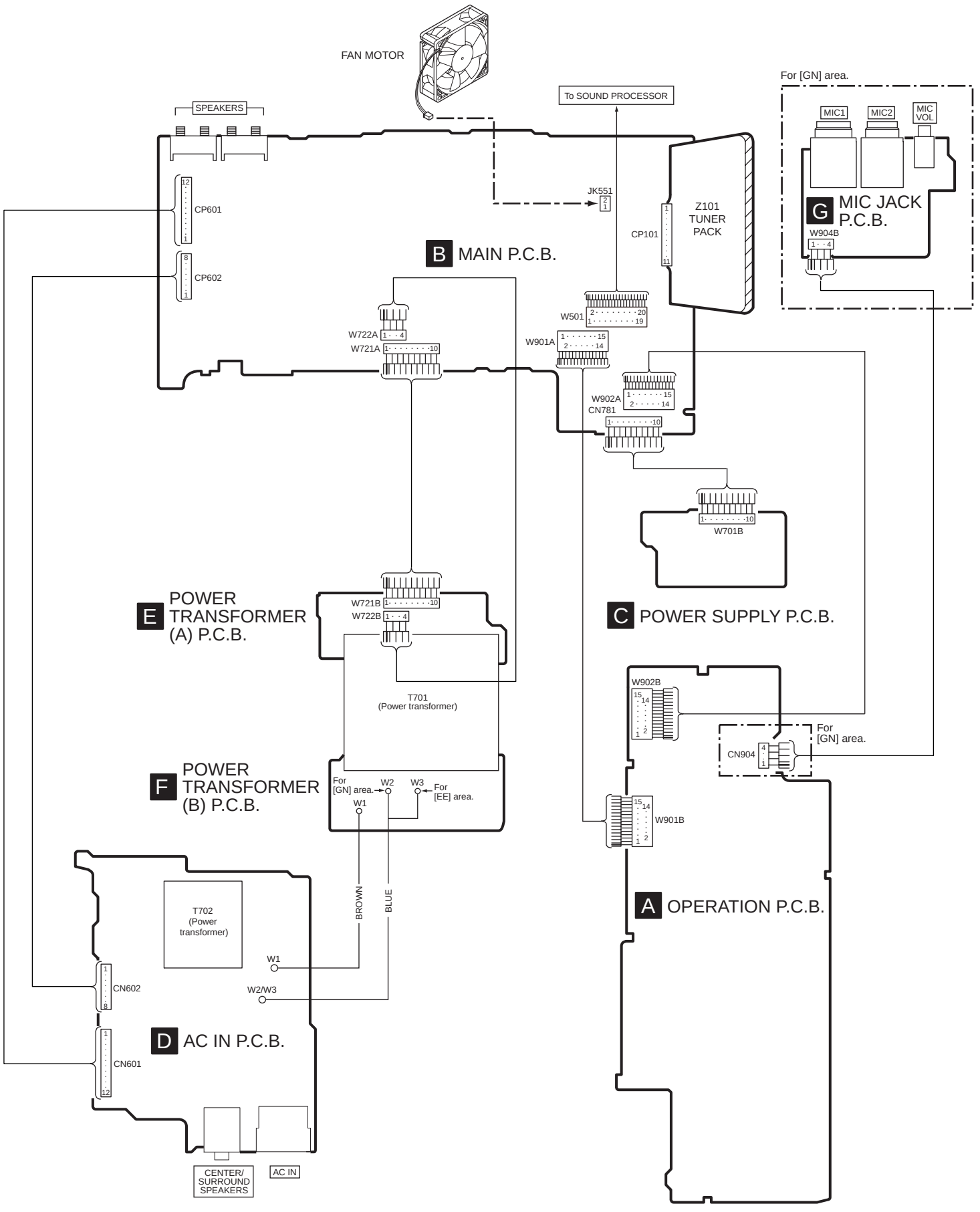


MA165TA

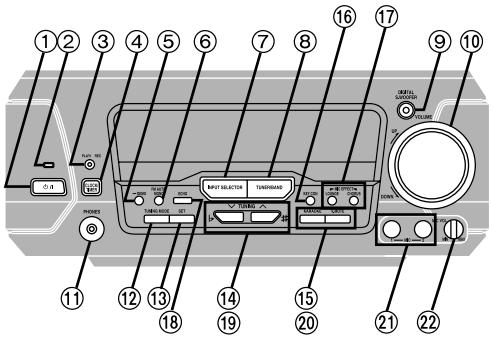


SELS5223C
SELS5923C

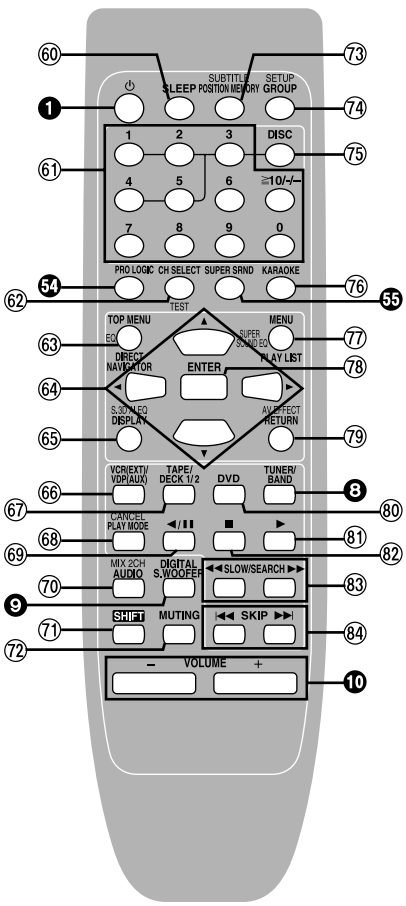



FAN MOTOR
SPEAKERS
To SOUND PROCESSOR
For [GN] area.
MIC1
MIC2
MIC VOL
G MIC JACK P.C.B.
W904B
JK551
CP601
CP602
CP101
Z101 TUNER PACK
B MAIN P.C.B.
W501
W722A
W721A
W901A
W902A
CN781
W701B
E POWER TRANSFORMER (A) P.C.B.
W721B
W722B
T701 (Power transformer)
C POWER SUPPLY P.C.B.
W902B
CN904
For [GN] area.
F POWER TRANSFORMER (B) P.C.B.
For [GN] area.
W1
W2
W3
For [EE] area.
W901B
A OPERATION P.C.B.
T702 (Power transformer)
BROWN
BLUE
W1
W2/W3
CN602
CN601
D AC IN P.C.B.
CENTER/ SURROUND SPEAKERS
AC IN

A



B



A Stereo tuner/amplifier

① **Standby/on switch (⏻/I)**
Press to switch the unit from on to standby mode or vice versa. In standby mode, the unit is still consuming a small amount of power.
② **Standby indicator (⏻)**
When the unit is connected to the AC mains supply, this indicator lights up in standby mode and goes out when the unit is turned on.
③ **Play timer/record timer button and indicator (◴PLAY/◴REC)**
④ **Clock/timer button (CLOCK/TIMER)**
⑤ **Demo button (–DEMO)**
⑥ **FM mode button (FM AUTO/MONO)**
⑦ **Source input button (INPUT SELECTOR)**
⑧ **Tuner/band button (TUNER/BAND)**
⑨ **Digital super woofer button and indicator (DIGITAL S.WOOFER)**
⑩ **Volume control (VOLUME)**
⑪ **Headphone jack (PHONES)**
⑫ **Tuning mode button (TUNING MODE)**
⑬ **Set button (SET)**
[For (EE) area]
⑭ **Tuning buttons (∨, ∧ TUNING)**
⑮ **RDS display mode button (RDS, PS–DISP MODE–PTY)**
[For (GN) area]
⑯ **Key control button (KEY CON)**
⑰ **MIC effect buttons (MIC EFFECT, LOUNGE, CHORUS)**
⑱ **Echo button (ECHO)**
⑲ **Tuning, Key up/down buttons (∨, ∧ TUNING, ♭, ♯)**
⑳ **KARAOKE, Voice mute buttons (KARAOKE, V.MUTE)**
㉑ **Microphone jacks (1–MIC–2)**
㉒ **Microphone volume control (MIC VOL)**

B Remote control

Buttons ❶, ❽, ❾, ❿, ⓴ and ㉕ function in the same way as the controls on the main unit.

㊿ **Sleep timer button (SLEEP)**
(61) **Numbered buttons (1–9, 0, ≧10/-/–)**
(62) **Channel select, Test signal button (CH SELECT, TEST)**
(63) **Top menu, Direct navigator, EQ button (TOP MENU, DIRECT NAVIGATOR, EQ)**
(64) **Cursor buttons (◄, ►, ▲, ▼)**
(65) **Display, Super 3D AI EQ button (DISPLAY, S.3D AI EQ)**
(66) **Input select button [VCR (EXT)/VDP (AUX)]**
(67) **Tape select, deck 1/deck 2 select button (TAPE/DECK 1/2)**
(68) **Play mode, Cancel button (PLAY MODE, CANCEL)**
(69) **Disc pause, Tape reverse play button (◄/❚❚)**
(70) **Audio select, 2 channel down mixing button (AUDIO, MIX 2CH)**
(71) **Shift button (SHIFT)**
To operate functions labeled in orange, press [SHIFT] and then the corresponding button at the same time.
(72) **Muting button (MUTING)**
(73) **Position memory, Subtitle select button (POSITION MEMORY, SUBTITLE)**
(74) **Group, Initial setting button (GROUP, SETUP)**
(75) **Disc button (DISC)**
(76) **[For (GN) area]**
Karaoke, Karaoke effect button (KARAOKE, KARAOKE EFFECT)
(77) **Menu, Play list, Super sound EQ button (MENU, PLAY LIST, SUPER SOUND EQ)**
(78) **Enter button (ENTER)**
(79) **Return, AV effect button (RETURN, AV EFFECT)**
(80) **DVD button (DVD)**
(81) **Disc play, Tape forward play button (►)**
(82) **Disc stop, Tape stop button (■)**
(83) **Disc slow/search buttons (◄◄, ►► SLOW/SEARCH)**
(84) **Disc skip buttons (|◄◄, ►►| SKIP)**

FM ANT

AM ANT

8 (6)

Lch (Rch)

Z101 TUNER PACK
(RAN0005EM-2:EE
ENG06502Q:GN)

SD 3 | CE 7 | DI 9 | CL 11 | DO 10 | DET 5 | GND 1 | +15V 2 | +7V 4

+B1 +B2

For [EE] area.

C1BB00000527
IC151
RDS SIGNAL DEMODULATOR

+B2

3,11 VDDA/D | 1 VREF | 5 FLOUT | 6 CIN

REFERENCE VOLTAGE

PLL (57kHz)

CLOCK RECOVERY (1187.5kHz)

VREF

4,10 VssA/D

2 MPX IN → ANTIALIASING FILTER → 57kHz BPF (SCF) → SMOOTHING FILTER

DATA DECODER → RDCL 15, RDDR 14

7 TEST → TEST

CLK(4.332MHz)

OSC/DIVIDER

RDS-ID DETECT/ RAM → IDR 16

XIN 9 | XOUT 8 | MODE 12 | RST 13

X151 (4.332MHz)

To SOUND PROCESSOR BLOCK DIAGRAM

W501

1 TUNER L/C
2 TUNER Rch
3 A.GND
4 Lch IN
5 Rch IN
6 +B(10V) ← +B5
7 SUR L
8 SUR R
9 S.W
10 MIC
11 -B(-10V) ← -B3
12 V.GND
13 D.GND
14 CS/REQ
15 CLK
16 DATA
17 CT.GND
18 SH FL1 ← FL1
19 SH FL2 ← FL2
20 SYNC

Rch

Rch

Rch

From POWER TRANSFORMER

SHSYNC

BU4053BCFE2
IC201
SIGNAL SELECTOR

13 X1
14 X0
12
1
Y1 15
2 Y0
8 G
SW CONT.
+B4 16 VDD
-B3 7 VSS
A 11 | B 10 | C 9

For [GN] area.

TA2011S
IC401

MIC2
MIC1

Q401
MIC AMP
MIC AMP
+B4
VR401 (MIC VOL)

+B8

25 MIC DET

C2BBFD000404
IC901
SYSTEM CONTROL / FL DRIVE

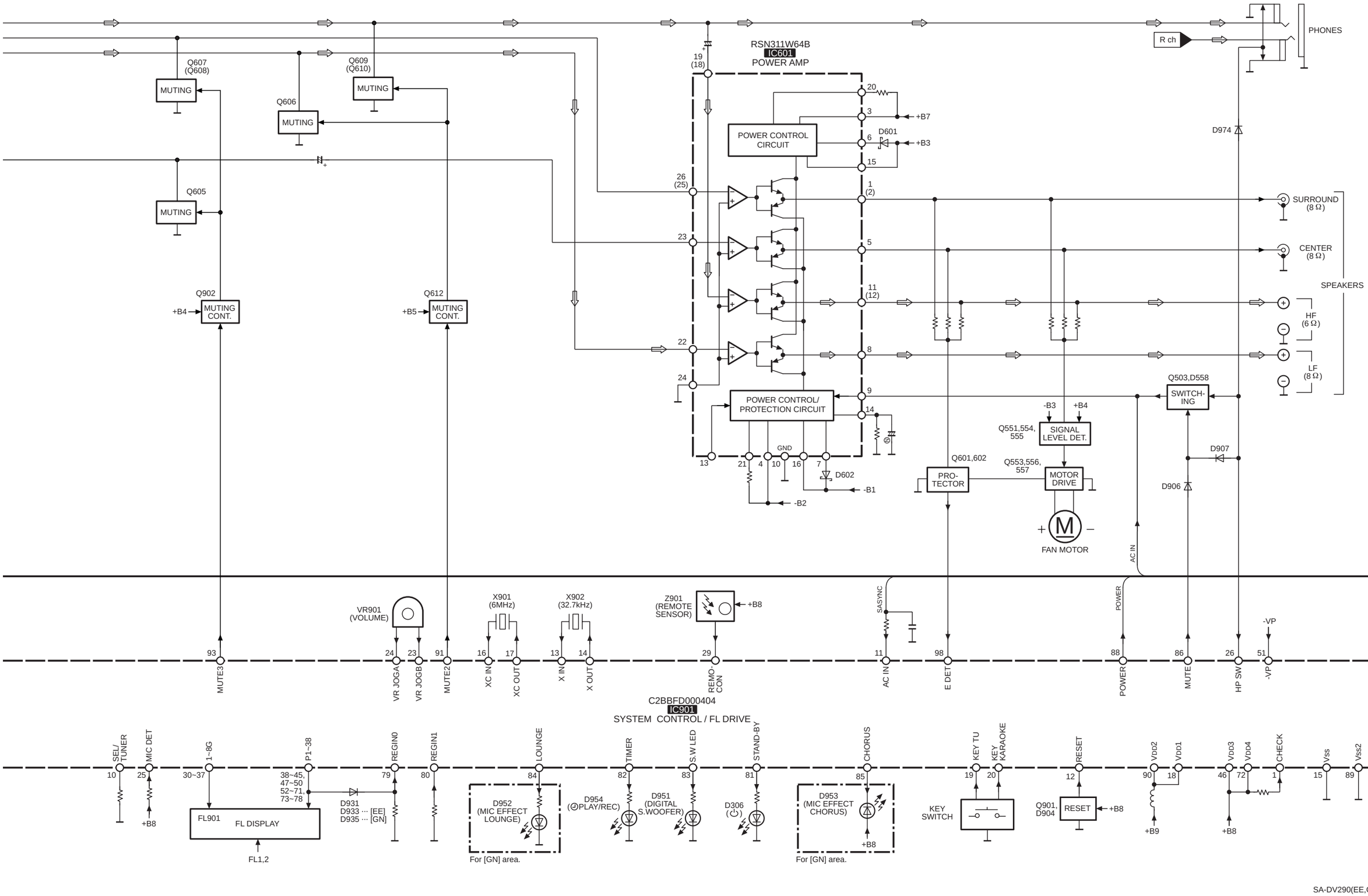
96 SH DI | 95 SH DO | 97 SH CK | 94 SH CS | 21 SH REQ | 6 ST/AV 6CH

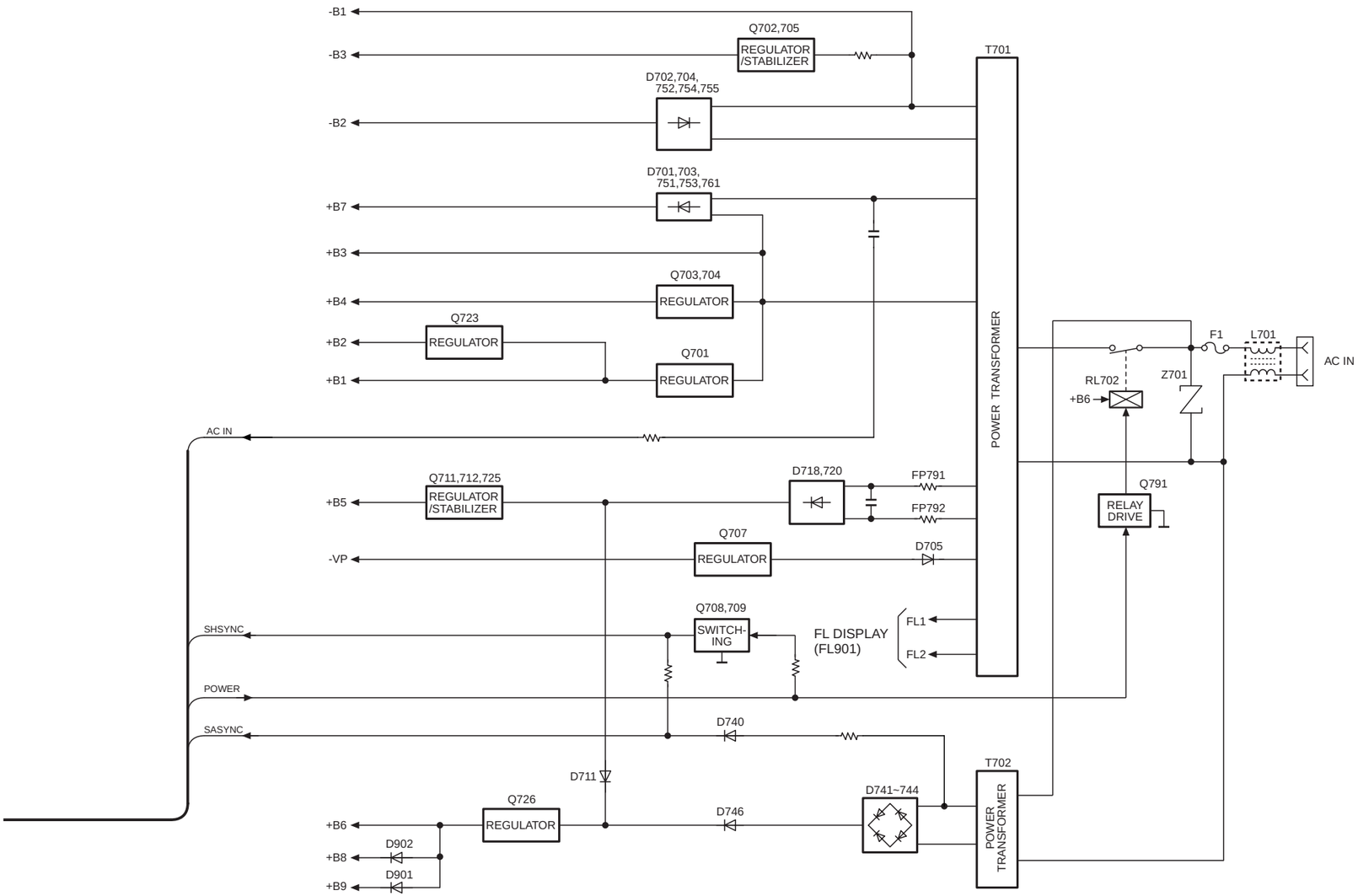
3 LC72 CE | 4 LC72 DI/ST | 5 LC72 CK | 2 LC72 DO | 100 SD | 28 RDS DATA | 27 RDS CLK

SD | CE1 | DATA1 | CLK1 | DATA IN | RDDR | RDCL

CE1 | DATA IN | CLK1 | DATA1 | SD | RDDR | RDCL

For [GN] area.

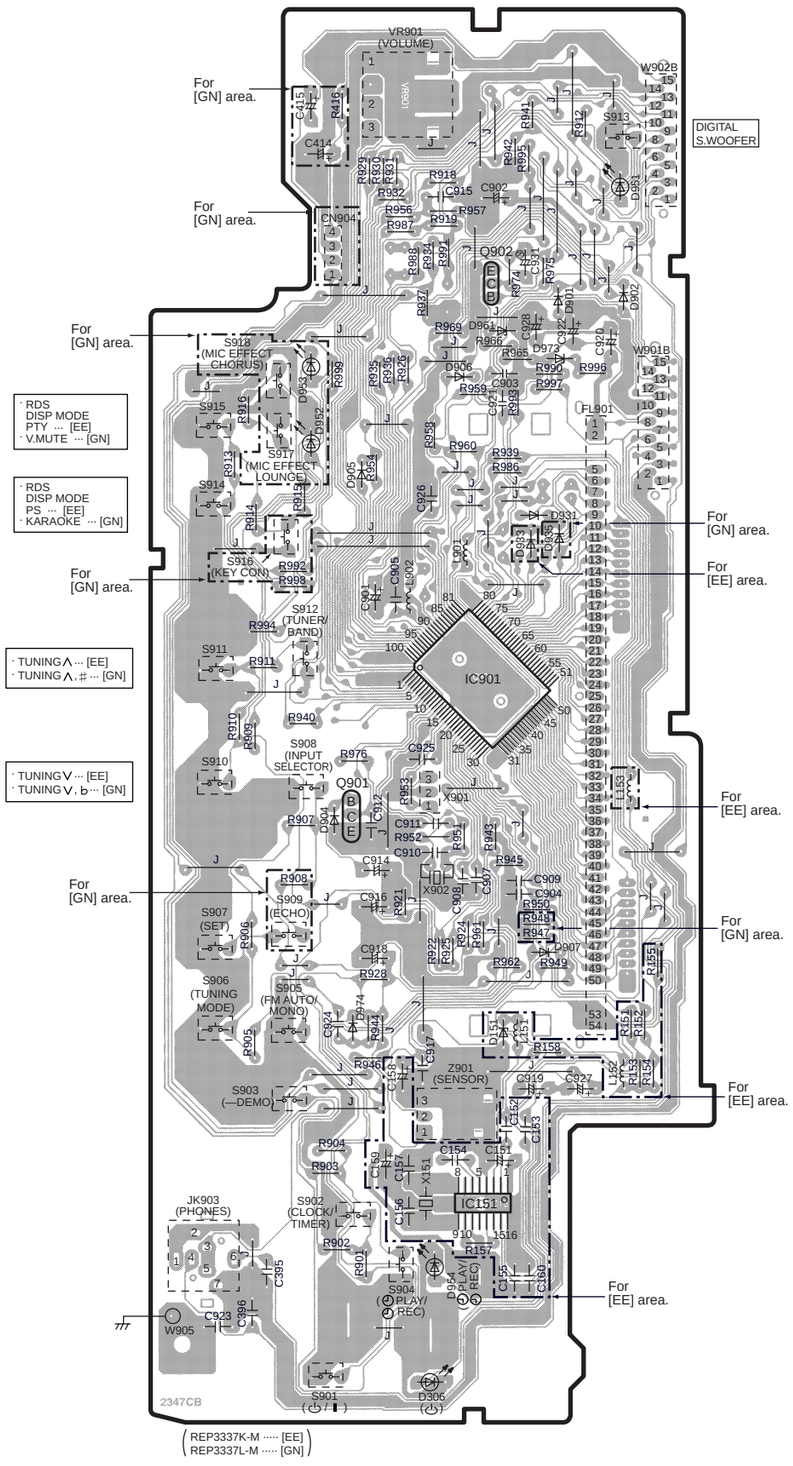

RSN311W64B
IC601
POWER AMP
19 (18)
20
3
+B7
6
D601
+B3
15
POWER CONTROL CIRCUIT
26 (25)
1 (2)
23
5
11 (12)
22
8
24
9
14
POWER CONTROL/ PROTECTION CIRCUIT
GND
13
21
4
10
16
7
D602
-B1
-B2
R ch
PHONES
D974
SURROUND (8 Ω)
CENTER (8 Ω)
SPEAKERS
HF (6 Ω)
LF (8 Ω)
Q503,D558
SWITCH-ING
D907
D906
-B3
+B4
Q551,554, 555
SIGNAL LEVEL DET.
Q553,556, 557
MOTOR DRIVE
Q601,602
PRO-TECTOR
M
FAN MOTOR
AC IN
Q607 (Q608)
MUTING
Q606
MUTING
Q609 (Q610)
MUTING
Q605
MUTING
Q902
+B4
MUTING CONT.
Q612
+B5
MUTING CONT.
VR901 (VOLUME)
X901 (6MHz)
X902 (32.7kHz)
Z901 (REMOTE SENSOR)
+B8
SASYNC
93
MUTE3
24
VR JOGA
23
VR JOGB
91
MUTE2
16
XC IN
17
XC OUT
13
X IN
14
X OUT
29
REMO-CON
11
AC IN
98
E DET
88
POWER
86
MUTE
26
HP SW
51
-VP
-VP
C2BBFD000404
IC901
SYSTEM CONTROL / FL DRIVE
SEL/ TUNER
10
MIC DET
25
+B8
1~8G
30~37
FL901
FL DISPLAY
FL1,2
P1~38
38~45, 47~50 52~71, 73~78
D931
D933 ··· [EE]
D935 ··· [GN]
REGIN0
79
REGIN1
80
LOUNGE
84
D952 (MIC EFFECT LOUNGE)
For [GN] area.
TIMER
82
D954 (PLAY/REC)
S.W LED
83
D951 (DIGITAL S.WOOFER)
STAND-BY
81
D306 (⏻)
CHORUS
85
D953 (MIC EFFECT CHORUS)
+B8
For [GN] area.
KEY TU
19
KEY KARAOKE
20
KEY SWITCH
RESET
12
Q901, D904
RESET
+B8
VDD2
90
VDD1
18
+B9
VDD3
46
VDD4
72
CHECK
1
+B8
VSS
15
VSS2
89



NOTES : ● SIGNAL LINE
⇨ : AUDIO SIGNAL
➡ : TUNER SIGNAL
⇨ : MIC SIGNAL
● ( ) indicates pin No. Right channel.

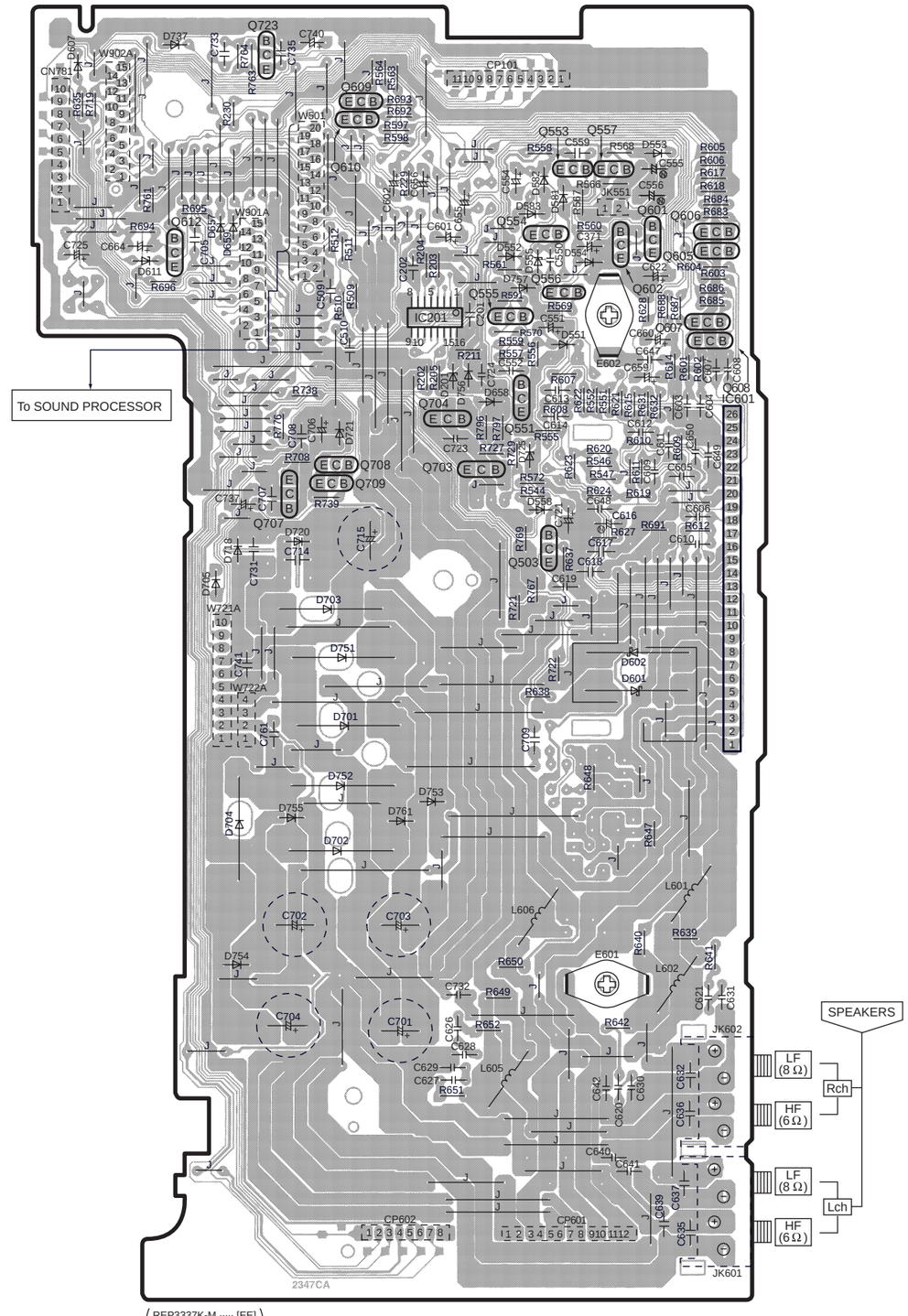
Note: This printed circuit board diagram may be modified at any time with the development of new technology.

A OPERATION P.C.B.



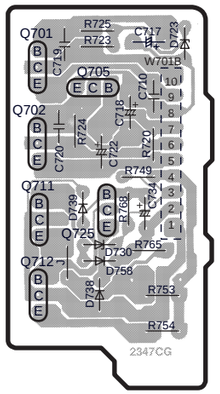
(REP3337K-M ····· [EE]
REP3337L-M ····· [GN])

B MAIN P.C.B.



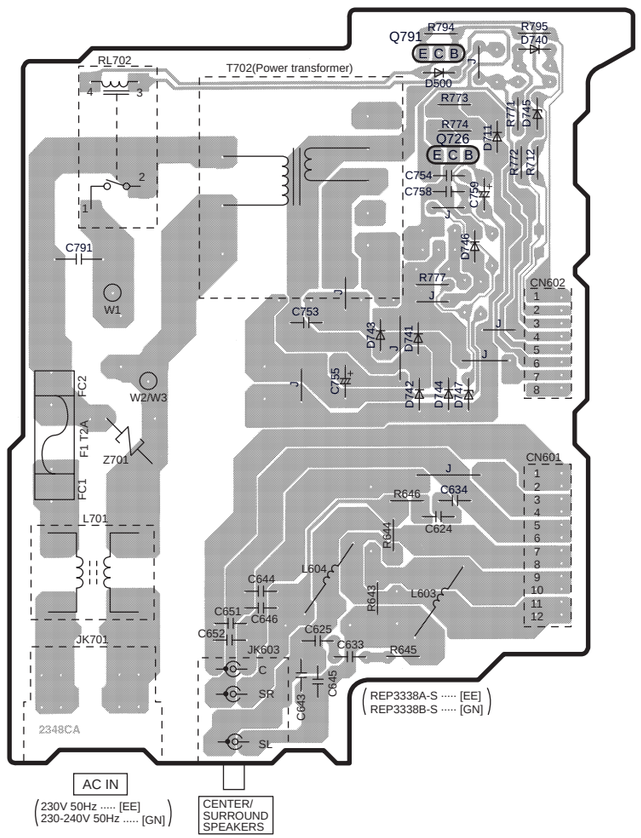
(REP3337K-M ····· [EE]
REP3337L-M ····· [GN])

C POWER SUPPLY P.C.B.

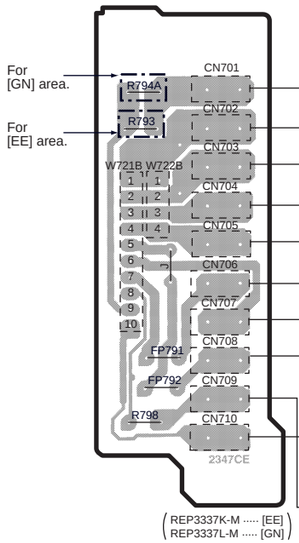


(REP3337K-M ..... [EE]
REP3337L-M ..... [GN])

D AC IN P.C.B.

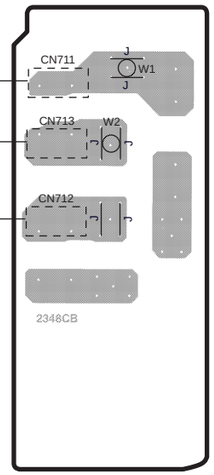


E POWER TRANSFORMER (A) P.C.B.



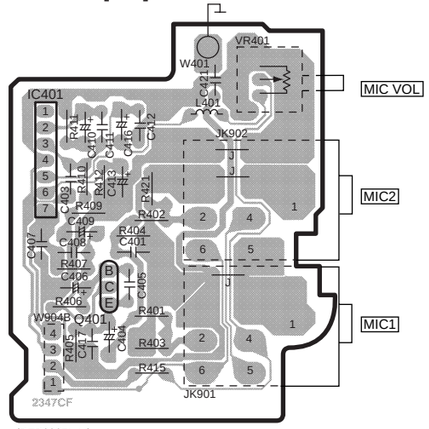
(REP3337K-M ..... [EE]
REP3337L-M ..... [GN])

F POWER TRANSFORMER (B) P.C.B.



(REP3338A-S ..... [EE]
REP3338B-S ..... [GN])

G MIC JACK P.C.B.
For [GN] area.



(REP3337L-M)

SA-DV290(EE,GN) POWER SUPPLY, AC IN, POWER TRANSFOMER(A)&(B), MIC JACK P.C.B.

A OPERATION CIRCUIT

: POSITIVE VOLTAGE LINE — : NEGATIVE VOLTAGE LINE — :AUDIO SIGNAL LINE — :MIC SIGNAL LINE

FL901 (A2BB00000115)

FL DISPLAY

IC901
C2BBFD000404
SYSTEM CONTROL/
FL DRIVE

Q901
UN4212TA
RESET

For [GN] area.

For [EE] area.

G MIC JACK CIRCUIT For [GN] area.

Q401
2SC5398RSTA
MIC AMP

IC401
TA2011S
MIC AMP

JK903
PHONES
3.5mm STEREO

JK902
MIC2
6.3mm
MONAURAL

JK901
MIC1
6.3mm
MONAURAL

SA-DV290(EE,GN) OPERATION,MIC JACK CIRCUIT DIAGRAM

A OPERATION CIRCUIT

: NEGATIVE VOLTAGE LINE
: POSITIVE VOLTAGE LINE
:AUDIO SIGNAL LINE
:TUNER SIGNAL LINE
:MIC SIGNAL LINE

5.1V
VR901 EVQVBXFK124B (VOLUME)
COM B A
R962 22K
R961 22K
C917 0.01
C918 6.3V100
R945 100
R943 100
D E A
Z901 B3RAD0000028 (REMOTE SENSOR)
R946 1K
C909 1000P
R941 1K
Q902 UN411FTA MUTING CONT.
3.3V
R974 1K
R942 2.2K
C931 16V10
0V
A B C
M R P A B C D E F G H I J K L
W902B
7.6V
D906 MA165TA
D907 MA165TA
-30.1V
U N O Q S T
W901B
6V
R975 22K
R966 3.9K
R965 3.9K
D961 MA4075MTA

For [EE] area.

IC151 C1BB00000527 RDS SIGNAL DEMODULATOR
C151 16V10
2.5V VREF
2.5V HPX IN
5.1V VDDA
VSSA
2.5V FL OUT
2.5V C IN
TEST
2.7V X OUT
IDR
2.6V RDCL
2.6V RDDA
0V RST
MODE
5.1V VDDD
VSSD
X IN 2.5V
C158 6.3V47
C154 560P
X151 (4.332MHz)
C157 47P
C156 47P
C152 330P
L151 100μH
R158 1K
C B
R151 1K
R152 1K
R153 100K
R154 100K
R157 1K
C155 1000P
C153 1000P
C160 1000P
C159 6.3V47
L152 100μH
L153 1.4μH
R155 120
D151 MA4051MTA

To SOUND PROCESSOR (SH-DV290)
W501
TUNER Lch/C
TUNER Rch
A.GND
Lch IN
Rch IN
+B(10V)
SUR L
SUR R
S.W
MIC
-B(-10V)
V.GND
D.GND
CS/ REQ
CLK
DATA
CT GND
SH FL1
SH FL2
SYNC
H G A B
R511 47
R509 47
R512 47
R510 47
10.4V
A B C D
B E F G
W902A
C D E F G E F J K
W901A
N L M I
B A
7.2V
Z101 RAN0005EM-2 ••• [EE] ENG06502Q ••••• [GN] (TUNER PACK)
CP101
T.GND
+B(1)
SD
+B(2)
DET
Rch
CE
Lch
DI
DO
CL
R230 1K
R229 1K
G B F A E D C

7.6V
10.4V
R597 2.2K
R598 2.2K
R563 2.7K
R564 2.7K
C659 16V10
C660 16V10
R631 3.9K
R632 3.9K
R615 4.7K
R614 4.7K
A B
R203 100K
R204 100K
C202 0.1
0V
-10.4V
IC201 BU4053BCFE2 SIGNAL SELECTOR
1 2 3 4 5 6 7 8
Y1 Y0 Z1 Z0 INH Vss G
VDD 16 15 14 13 12 11 10 9
5.7V 0V 0V 0V 0V 0V
X1 X0 A B C
R205 100K
R202 100K
C601 16V10
R617 4.7K
R211 270
D201 MA4056MTA
C201 0.1
H G F
C656 16V10
R688 1.5K
C655 16V10
R687 1.5K
C602 16V10
R695 470
R605 4.7K
R606 4.7K
D611 MA4051MTA
C B D A E
4.9V
5.1V
-10.2V
R696 47K
Q612 UN411FTA MUTING CONT.
Q707 2SB1417PQTA REGULATOR
-30.1V
-37.3V
-30.7V
C708 0.047
C707 0.047
R708 4.7K
C737 50V100
C706 35V10
D721 MA4300MTA
Q606,609,610 2SD2144STA MUTING
Q606
Q609
Q610
0V
-10V
R684 1K
R693 1K
R692 1K
R694 22K
B A
C509 0.01
C510 0.01
C664 16V10
C725 16V47
D705 RL1N4003N02
Q723 2SC3940AQSTA REGULATOR
7.2V
14.7V
7.8V
C735 0.047
C733 0.047
R764 330
R763 4.7K
C740 16V10
D737 MA4082LTA
H A D C
D718 B0JANG000008
D720 B0JANG000008
C731 1000P
C714 1000P
C741 0.1
C715 25V6800
14.7V

SA-DV290(EE,GN) OPERATION, MAIN CIRCUIT DIAGRAM

13 14 15 16 17 18 19 20 21 22 23 24