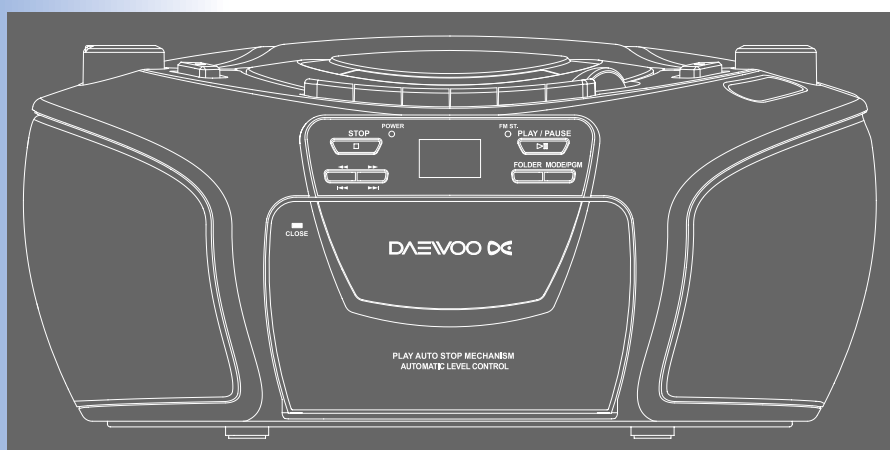


SN: 9CD???????

Service Manual

PORTABLE STEREO CD RADIO CASSETTE RECORDER

Model : SP-701AG



PORTABLE STEREO CD RADIO CASSETTE RECORDER

Model : SP-701AG

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Safety Precautions

WARNING: TO PREVENT FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

	CAUTION RISK OF ELECTRIC SHOCKS DO NOT OPEN	
CAUTION : TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.		
	THIS SYMBOL IS INTENDED TO ALERT THE USER TO THE PRESENCE OF UNINSULATED "DANGEROUS VOLTAGE" WITHIN THE PRODUCT'S ENCLOSURE THAT MAY BE SUFFICIENT MAGNITUDE TO CONSTITUTE A RISK OF ELECTRIC SHOCK TO PERSONS.	
	THIS SYMBOL IS INTENDED TO ALERT THE USER TO THE PRESENCE OF IMPORTANT OPERATING AND MAINTENANCE (SERVICING) INSTRUCTIONS IN THE LITERATURE ACCOMPANYING THE APPLIANCE.	

CAUTION

TO PREVENT ELECTRIC SHOCK, DO NOT USE THIS POLARIZED AC PLUG WITH AN EXTENSION CORD, RECEPTACLE OR OTHER OUTLET UNLESS THE BLADES CAN BE FULLY INSERTED TO PREVENT BLADE EXPOSURE.

LASER SAFETY

THIS UNIT EMPLOYS A LASER. ONLY QUALIFIED SERVICE PERSONNEL SHOULD REMOVE THE COVER OR ATTEMPT TO SERVICE THIS DEVICE DUE TO POSSIBLE EYE INJURY.

CAUTION : USE OF ANY CONTROLS, ADJUSTMENTS, OR PROCEDURES OTHER THAN THOSE SPECIFIED HEREIN MAY RESULT IN HAZARDOUS RADIATION EXPOSURE.

CAUTION : TO PREVENT ELECTRIC SHOCK, MATCH WIDE BLADE OF PLUG TO WIDE SLOT, FULLY INSERT.

ATTENTION : POUR EVITER LES CHOCs ELECTRIQUES, INTRODUIRE LA LAME LA PLUS LARGE DE LA FICHE DANS LA BORNE CORRESPONDANTE DE LA PRISE ET POUSSER JUSQU'AU FOND.

Important Safety Instructions

- All the safety and operating instructions should be read before the appliance is operated.
- The safety and operating instructions should be retained for future reference.
- All warnings on the appliance and in the operating instructions should be adhered to.
- All operating and use instructions should be followed.

1. Water and Moisture - The appliance should not be used near water - for example, near a bathtub, washbowl, kitchen sink,

laundry tub, in a wet basement, or near a swimming pool, and the like.

PORTABLE CART

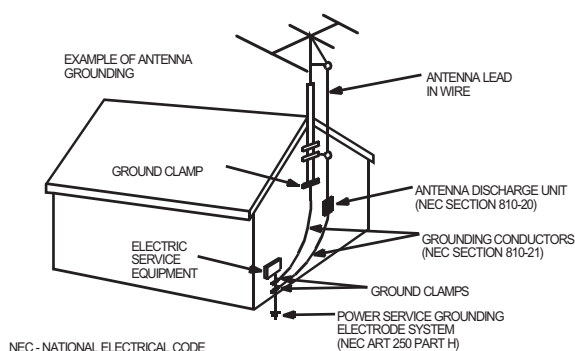


Figure 2

2. Carts and Stands - The appliance should be used only with a cart or stand that is recommended by the manufacturer.
3. An appliance and cart combination should be moved with care. Quick stops, excessive force, and uneven surfaces may cause the appliance and cart combination to overturn.
4. Wall or Ceiling Mounting - The appliance should be mounted to a wall or ceiling only as recommended by the manufacturer.
5. Ventilation - The appliance should be situated so that its location or position does not interfere with its proper ventilation. For example, the appliance should not be situated on a bed, sofa, rug, or similar surface that may block the ventilation openings; or, placed in a built-in installation, such as a bookcase or cabinet that may impede the flow of air through the ventilation openings.
6. Heat - The appliance should be situated away from heat sources such as radiators, heat registers, stoves, or other appliances (including amplifiers) that produce heat.
7. Power Sources - The appliance should be connected to a power supply only of the type described in the operating instructions or as marked on the appliance.
8. Grounding or Polarization - The precautions that should be taken so that the grounding or polarization means of an appliance is not defeated.
9. Power - Cord Protection - Power-supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to cords at plugs, convenience receptacles, and the point where they exit from the appliance.
10. Protective Attachment Plug - If the appliance is equipped with an attachment plug having overload protection. This is a safety feature. See Instruction Manual for replacement or resetting of protective device. If replacement of the plug is required, be sure the service technician has used a replacement plug specified by the manufacturer that has the same overload protection as the original plug.
11. Cleaning - The appliance should be cleaned only as recommended by the manufacturer.
12. Power Lines - An outdoor antenna should be located away from power lines.

Safety Precautions

13. Outdoor Antenna Grounding - If an outside antenna is connected to the receiver be sure the antenna system is grounded so as to provide some protection against voltage surges and built-up static charges. Article 810 of the National Electrical Code, ANSI/NFPA 70, provides information with regard to proper grounding of the mast and supporting structure, grounding of the lead-in wire to an antenna-discharge unit, size of grounding conductors, location of antenna-discharge unit, connection to grounding electrodes and requirements for the grounding electrode. See Figure 1.



14. Non-use Periods - The power cord of the appliance should be unplugged from the outlet when left unused for a long period of time.

15. Object and Liquid Entry - Care should be taken so that objects do not fall and liquids are not spilled into the enclosure through openings.

16. Damage Requiring Service - The appliance should be serviced by qualified service personnel when:

- a) The power-supply cord or the plug has been damaged; or
- b) Objects have fallen, or liquid has been spilled into the appliance; or
- c) The appliance has been exposed to rain; or
- d) The appliance does not appear to operate normally or exhibits a marked change in performance; or
- e) The appliance has been dropped, or the enclosure damaged.

17. Servicing - The user should not attempt to service the appliance beyond that described in the operating instructions. All other servicing should be referred to qualified service personnel.

Specifications

2

▶ GENERAL

Power Supply : AC 120/127V 60Hz for America
AC 220/230V 50Hz for Europe

Power Consumption : 12 Watt

Output Power(RMS) : 1.2 W x 2

Terminal impedance : Speaker 4 ohm / Phones 32 ohm

Unit Dimensions : 300(L) x 220(W) x 141(H) mm

Net Weight : 2.0 kg

Gross Weight : 2.6 kg

2

▶ CASSETTE SECTION

Tape Speed : 4.75 cm/sec

Recording System : AC BIAS

Erasing System: MAGNET

Frequency Response : 125 ~ 6300 Hz

▶ CD SECTION

Channels : 2 Channels

S/N Ratio : 50 dB

Sampling Frequency : 44.1 kHz

Disc Size : 75 or 120 mm

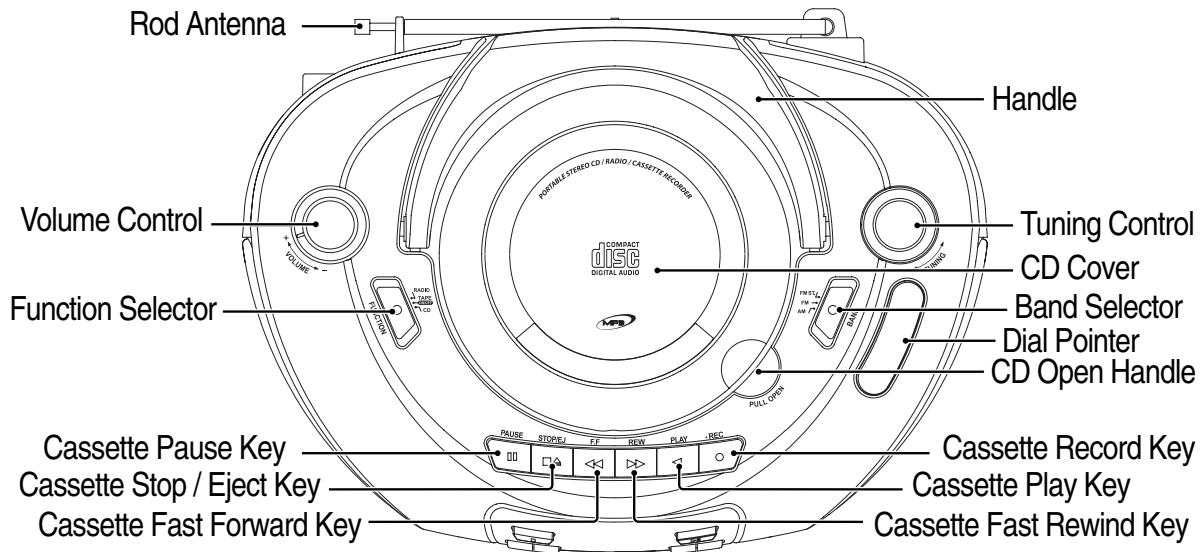
▶ RADIO SECTION

Tuning Frequency AM : 522 ~ 1620 KHz for Europe / AM : 530 ~ 1710 KHz for America

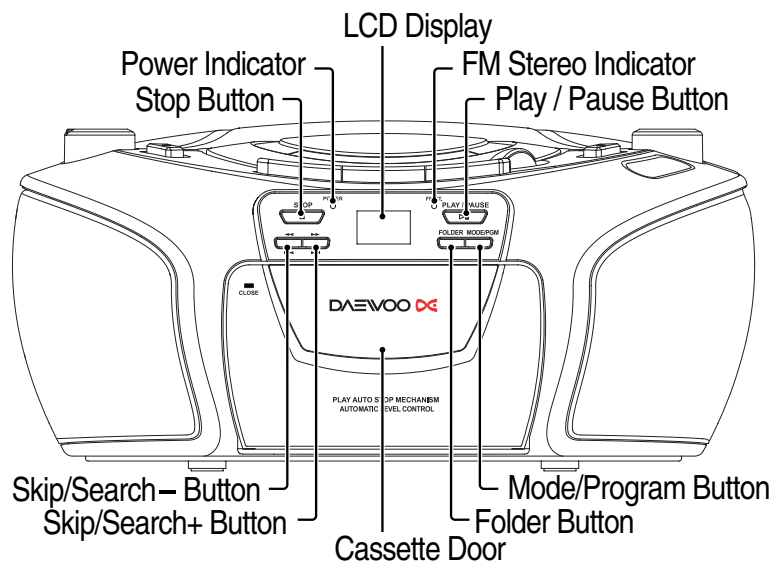
FM : 87.5 ~ 108 MHz

Location of Users Controls

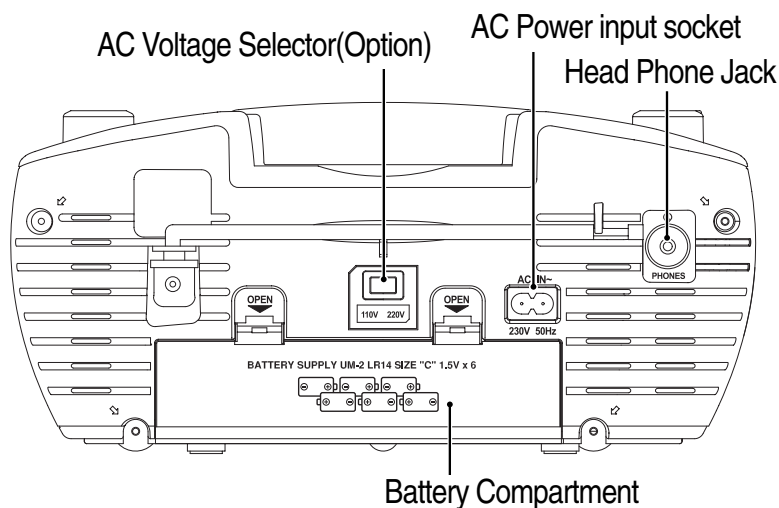
▶ Front View



▶ Front View

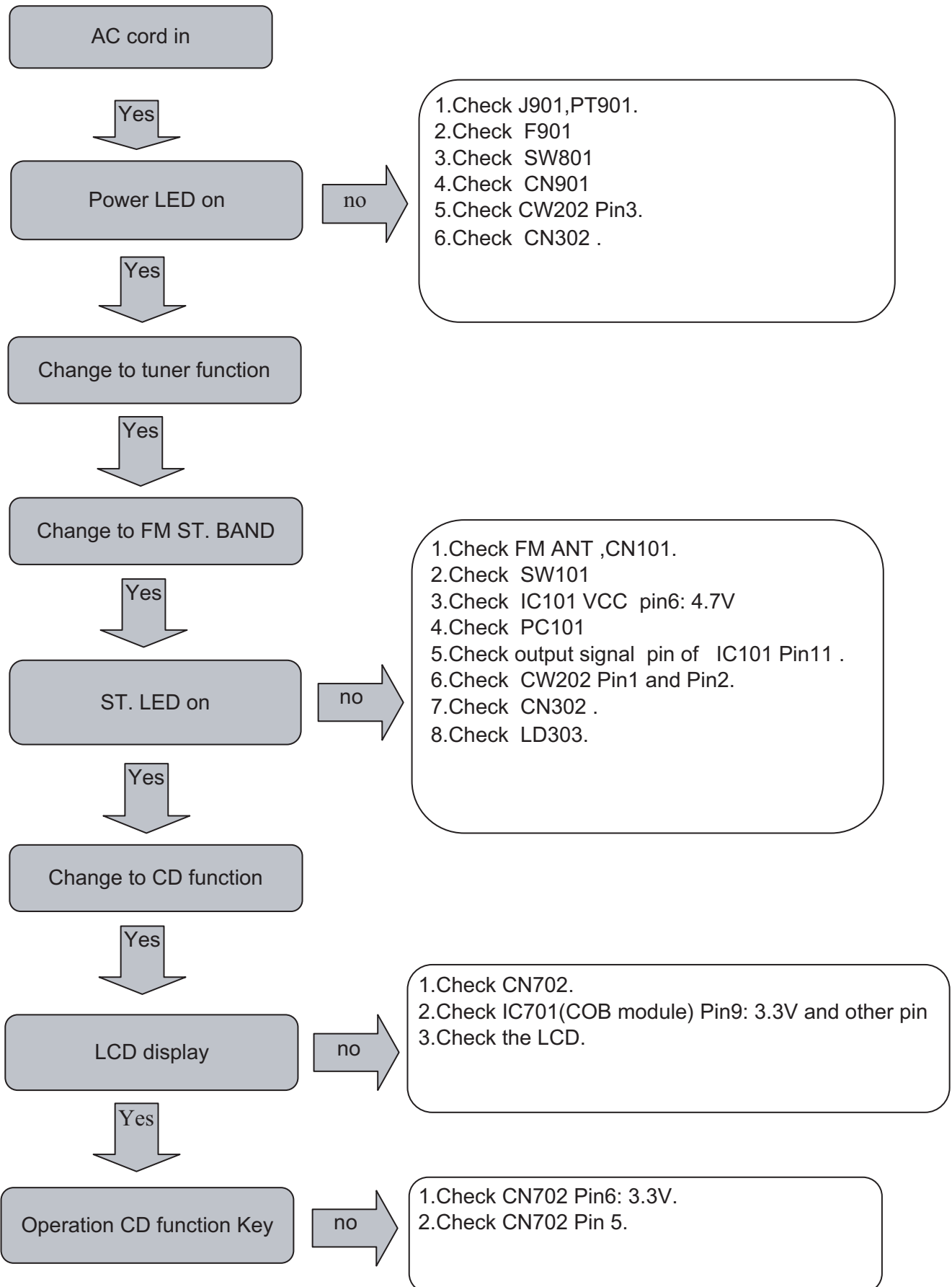


▶ Rear View



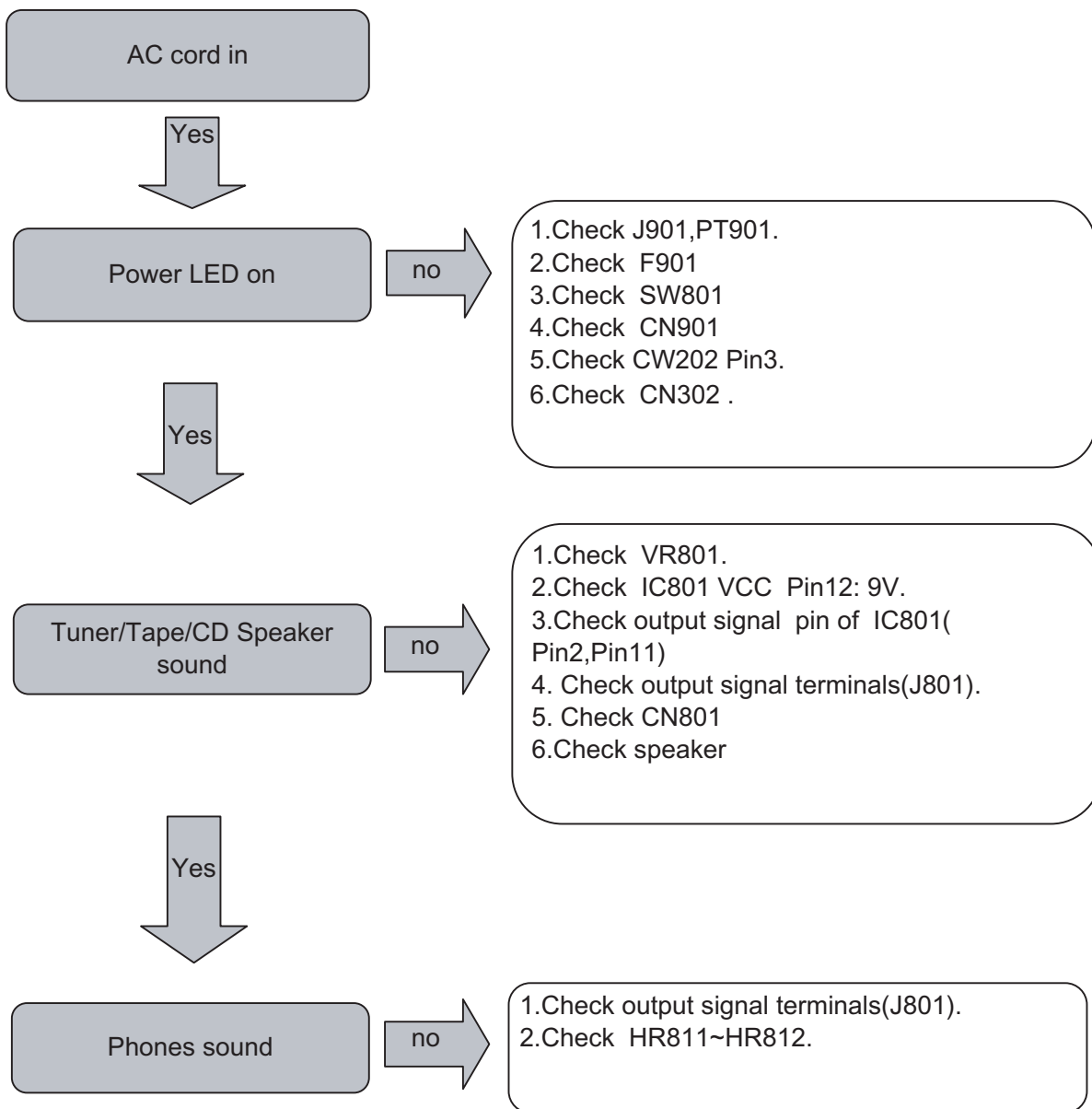
Trouble Shooting Guide

• FRONT Section



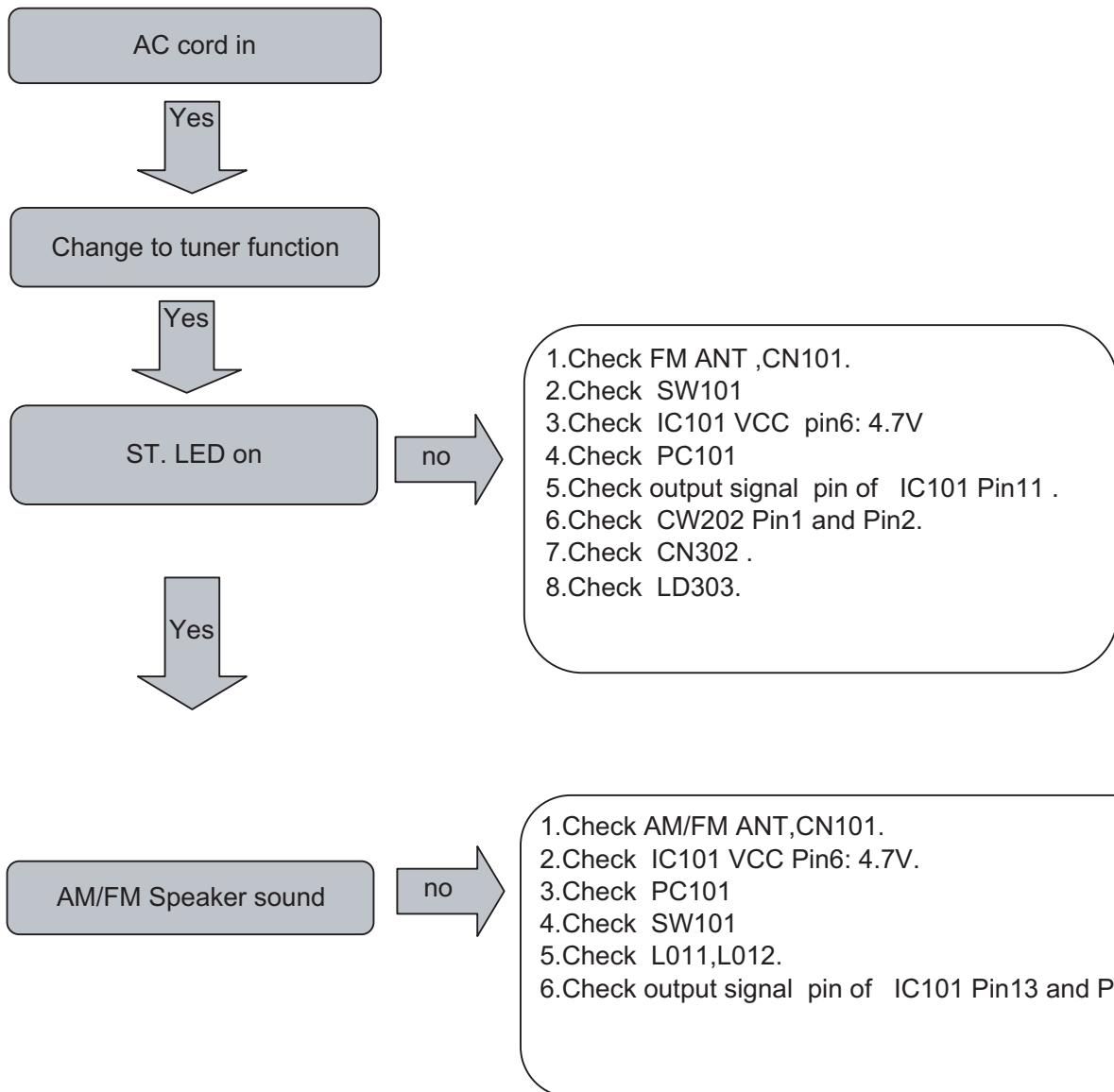
Trouble Shooting Guide

• POWER & AMP Section



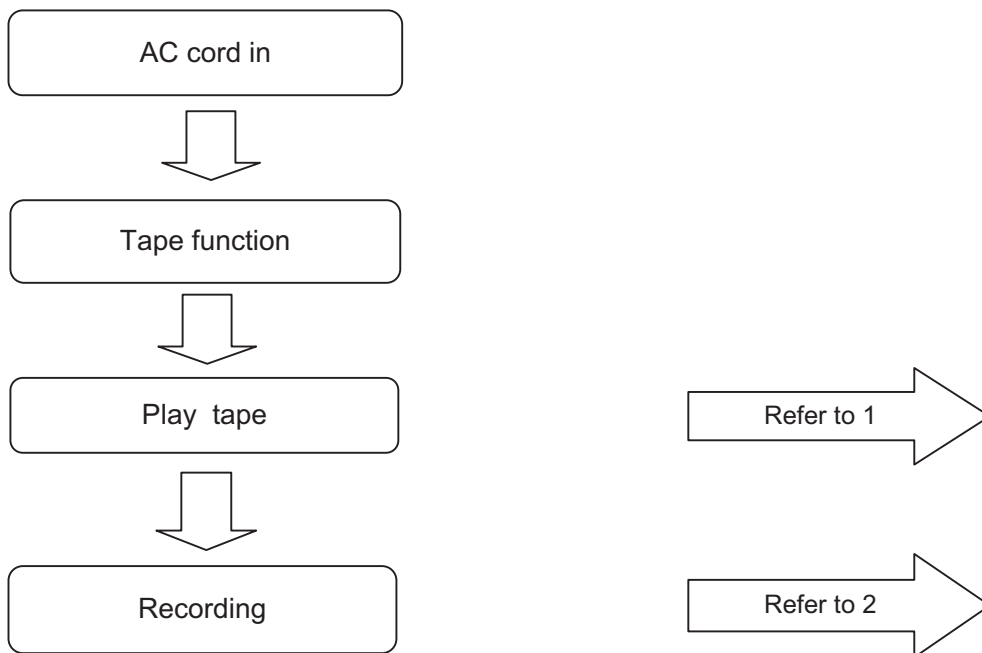
Trouble Shooting Guide

• TUNER Section

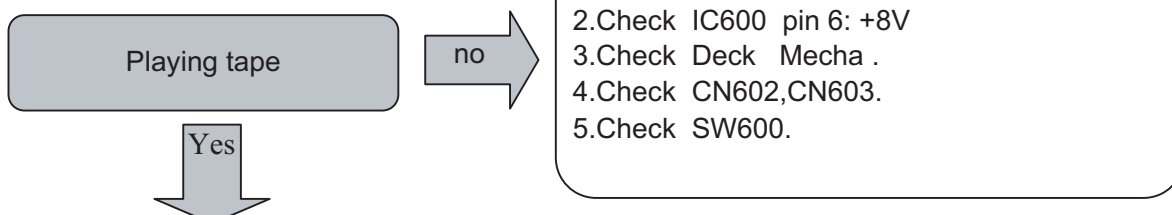


Trouble Shooting Guide

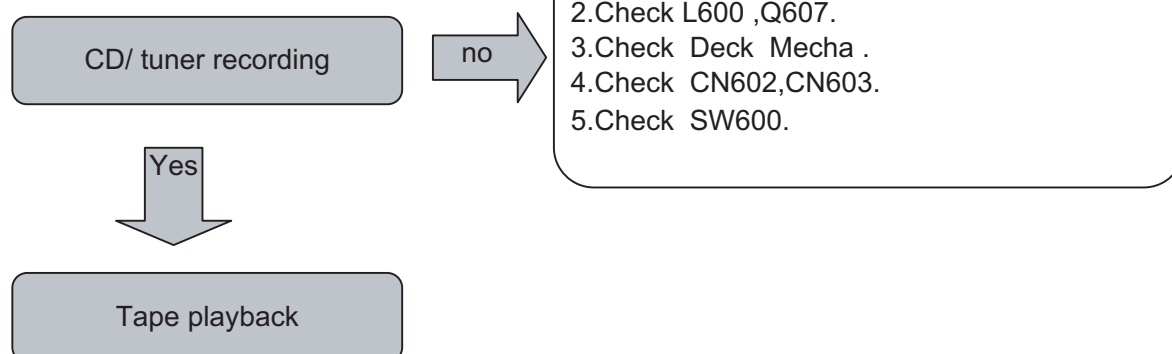
• TAPE Section



1.Play tape

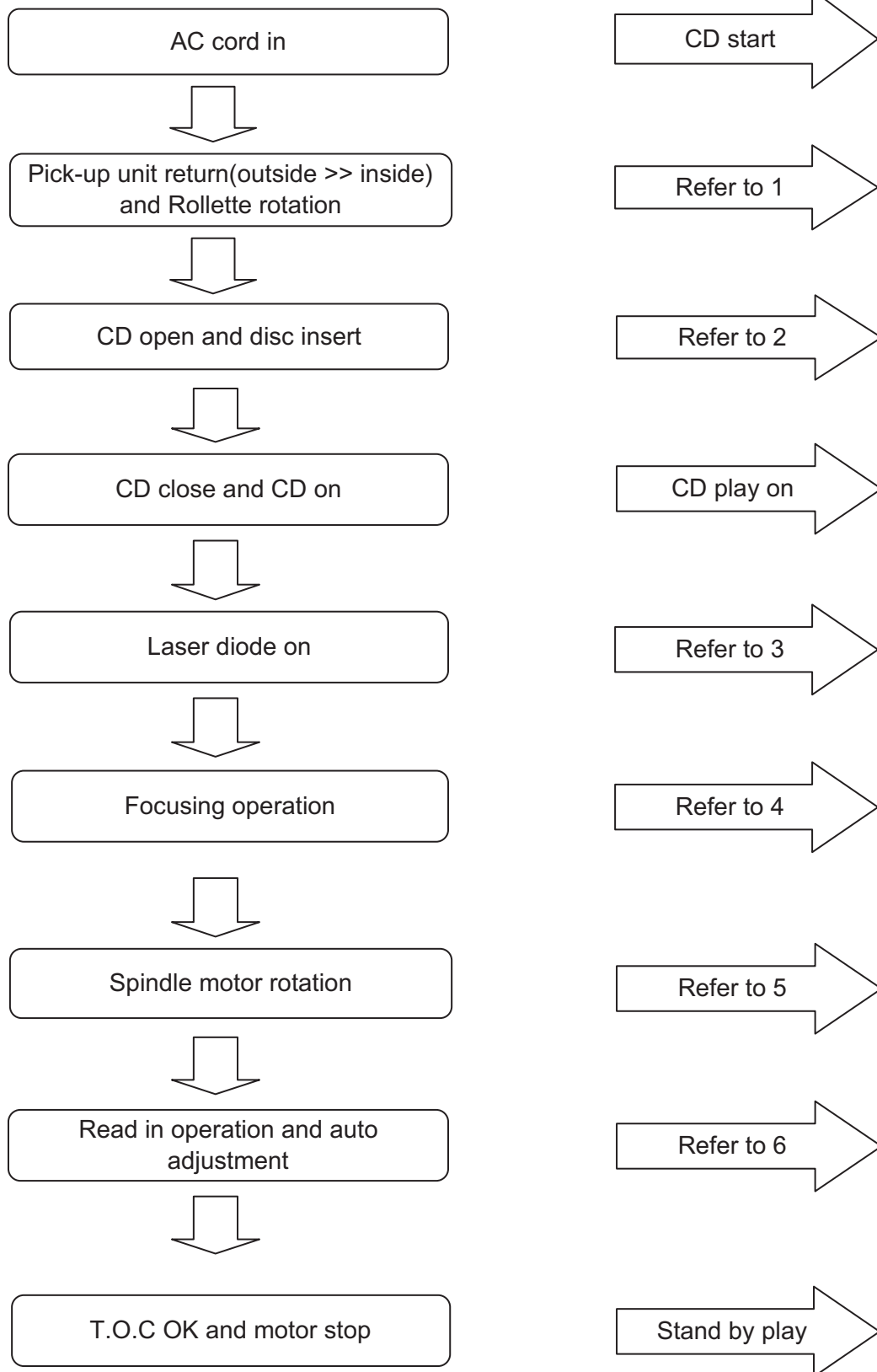


2.Recording



Trouble Shooting Guide

• CD/MP3 Section



Trouble Shooting Guide

1. Pick-up unit return and roulette rotation

AC cord in

Yes

Initializing CD

no

Yes

CD open and disc insert

1. Check SW801
2. Check Q901 collector:8V
3. Check +3.3V (IC503 pin7)
4. Check +3.3V (IC501 pin10/18/35/58/61/73/86)
5. Check (IC502 CD6392CB 26th, 27th)SP+ 3.75V , SP- 3.62V
6. Check SPDO +1.98V (IC501 S5L8020 pin6)
7. Check (IC502 CD6392CB pin16, pin17)SL- 3.6V,SL+ 3.7V.
8. Check CD Board(Around IC solder short,cold soldering)
9. Check CN500,CN501

2. CD open and disc insert

CD open and disc insert

Yes

CD close and cd on

3. Laser diode on

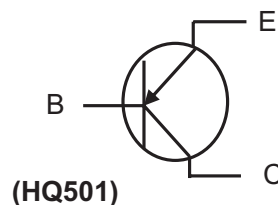
Laser diode on

no

Yes

Focusing operation

1. Check +1.8V LD on(HQ501 collector)
2. Check +2.1V (HQ501base pin) >>>in case of play



(HQ501)

	STOP	PLAY
C	0V	1.8V
B	3.3V	2.1V
E	3.3V	2.8V

4. Focusing operation

Focusing operation

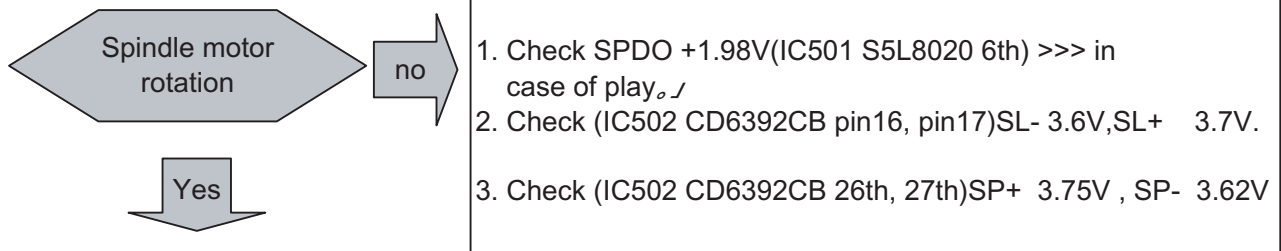
no

Yes

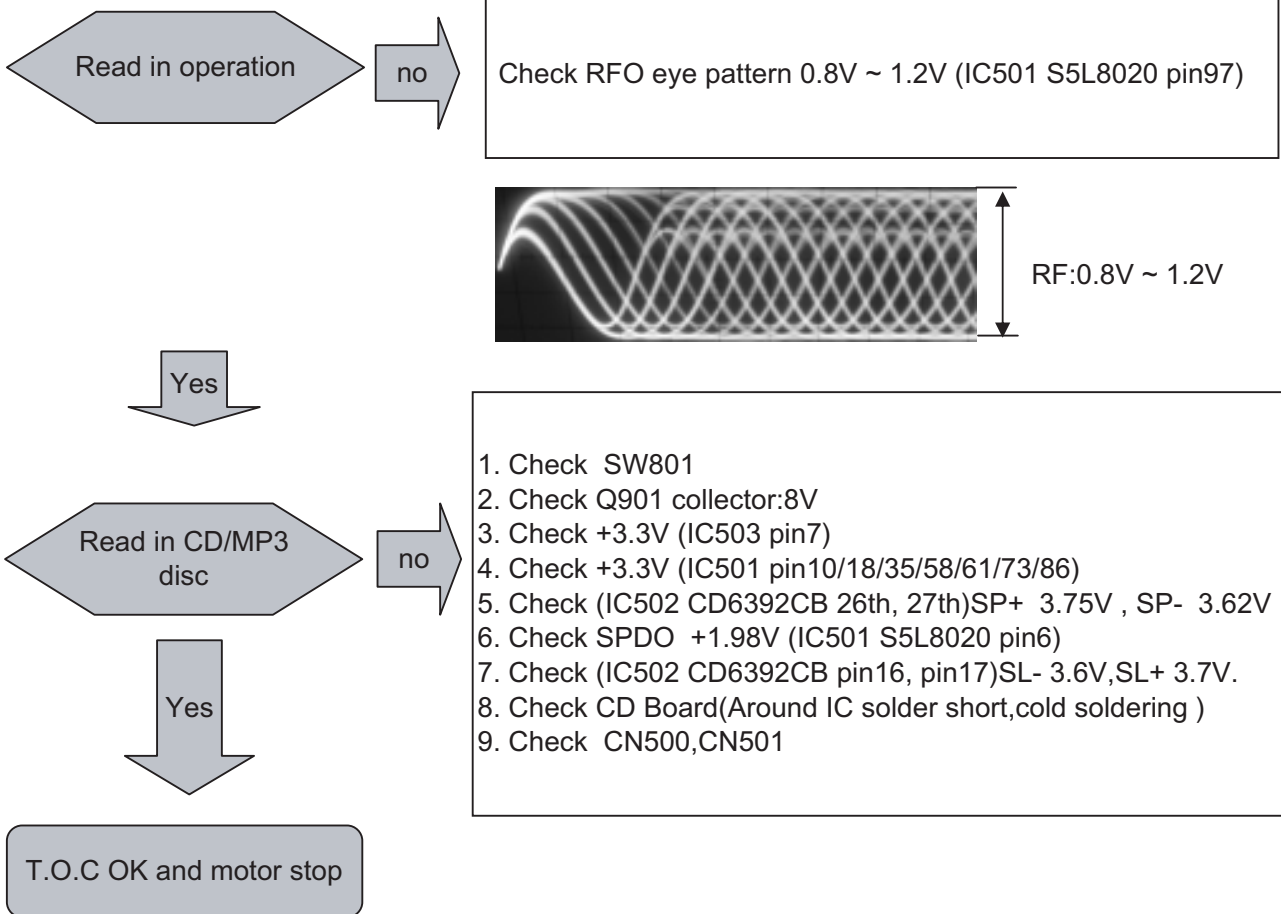
1. Check (IC502 CD6392CB pin1, pin2)
1pin 3.5V >> 3.7V, pin13 3.4V >> 3.6V >>> in case of play
2. Check +1.85V(IC502 CD6392CB pin4,pin5)

Trouble Shooting Guide

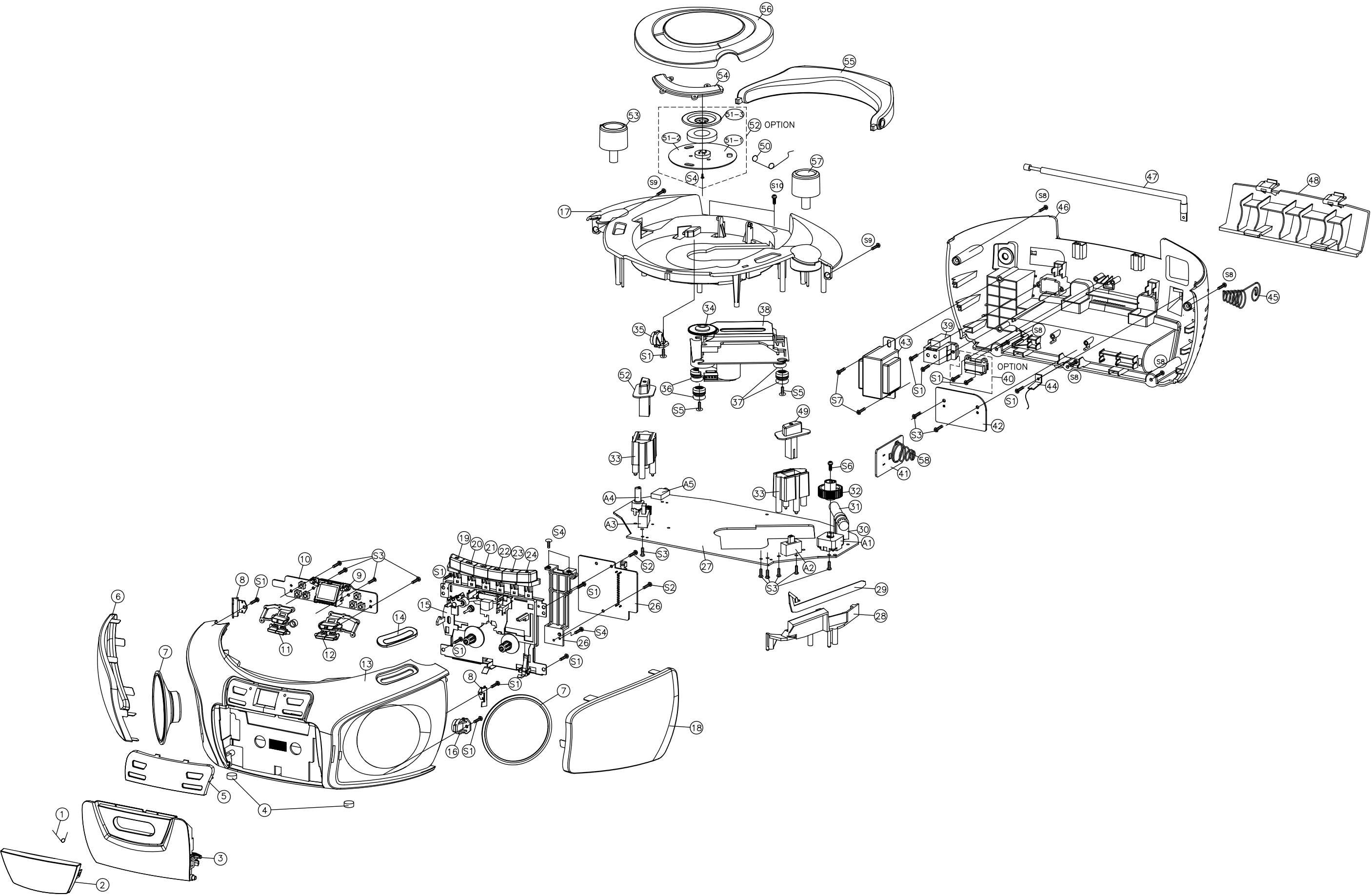
5. Spindle motor rotation



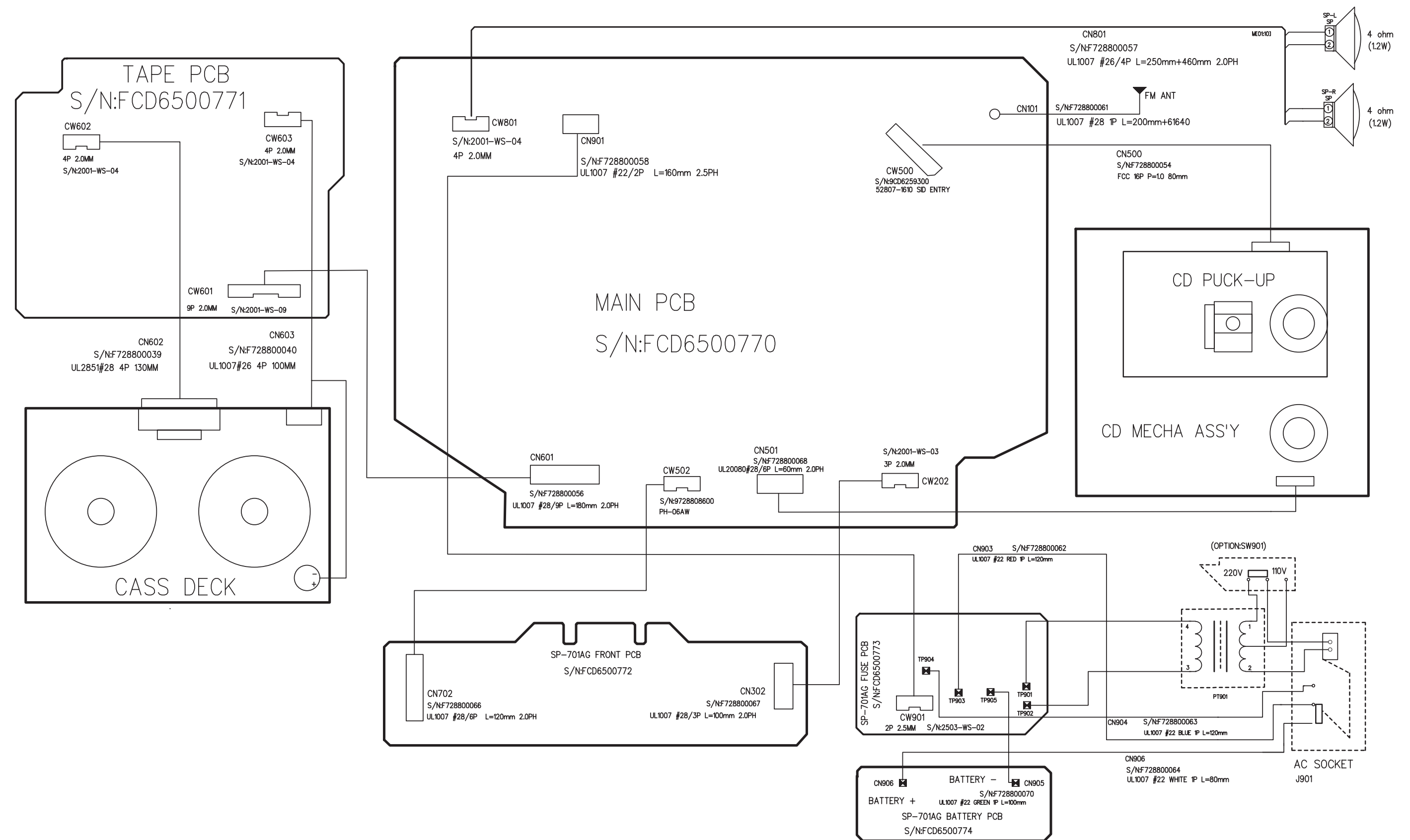
6. Read in operation



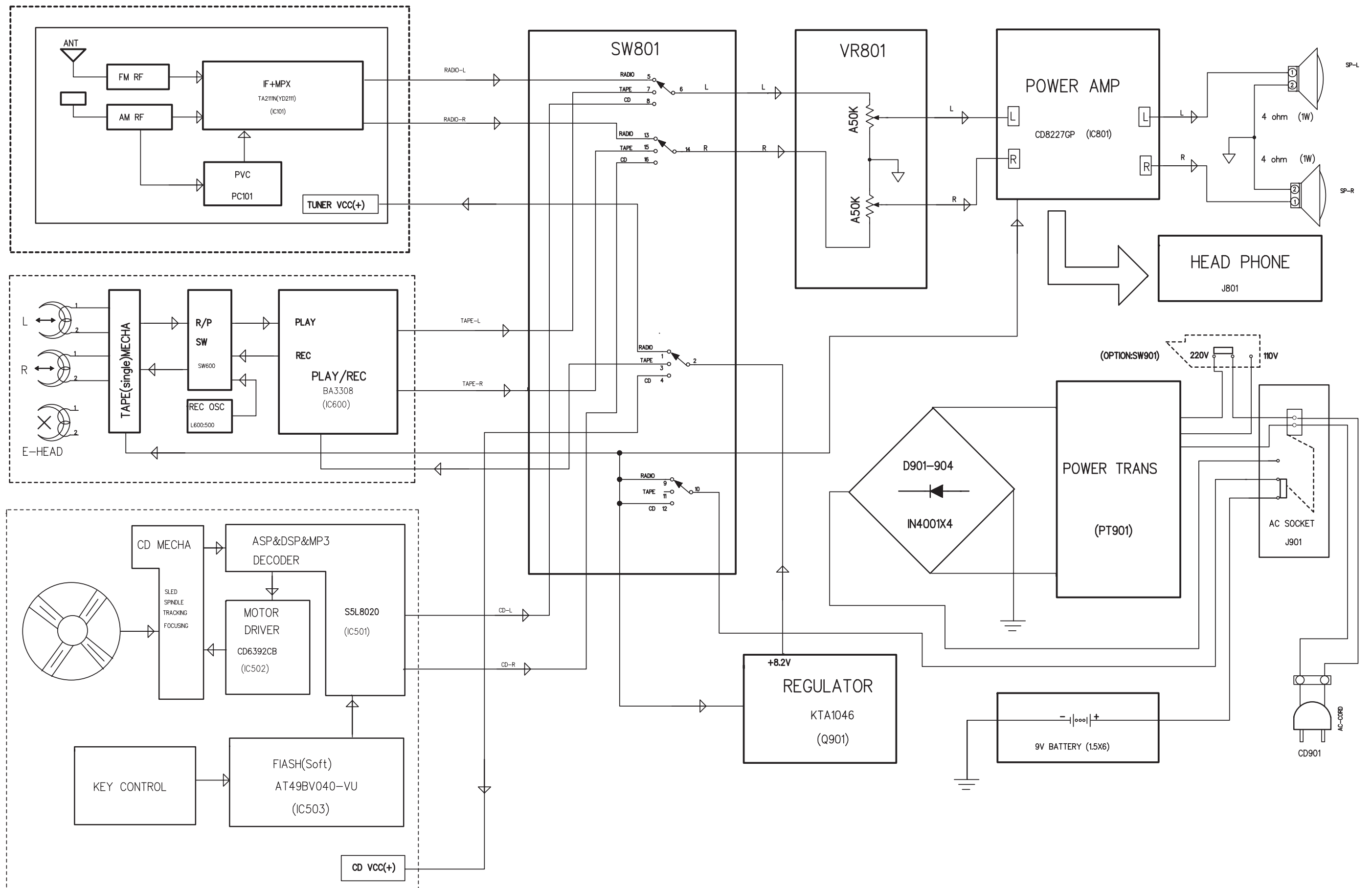
Exploded View



Wiring Diagram

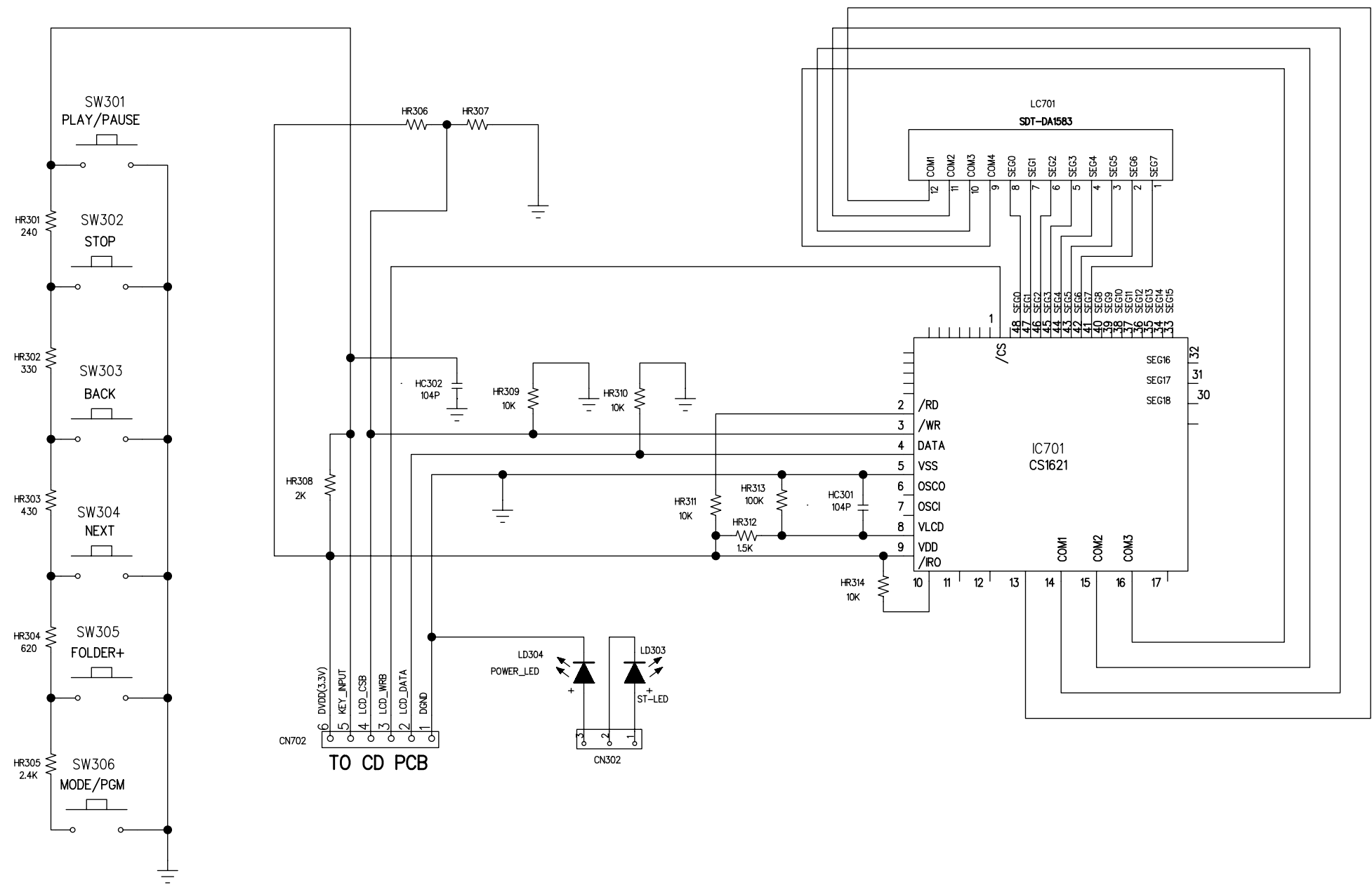


Block Diagram

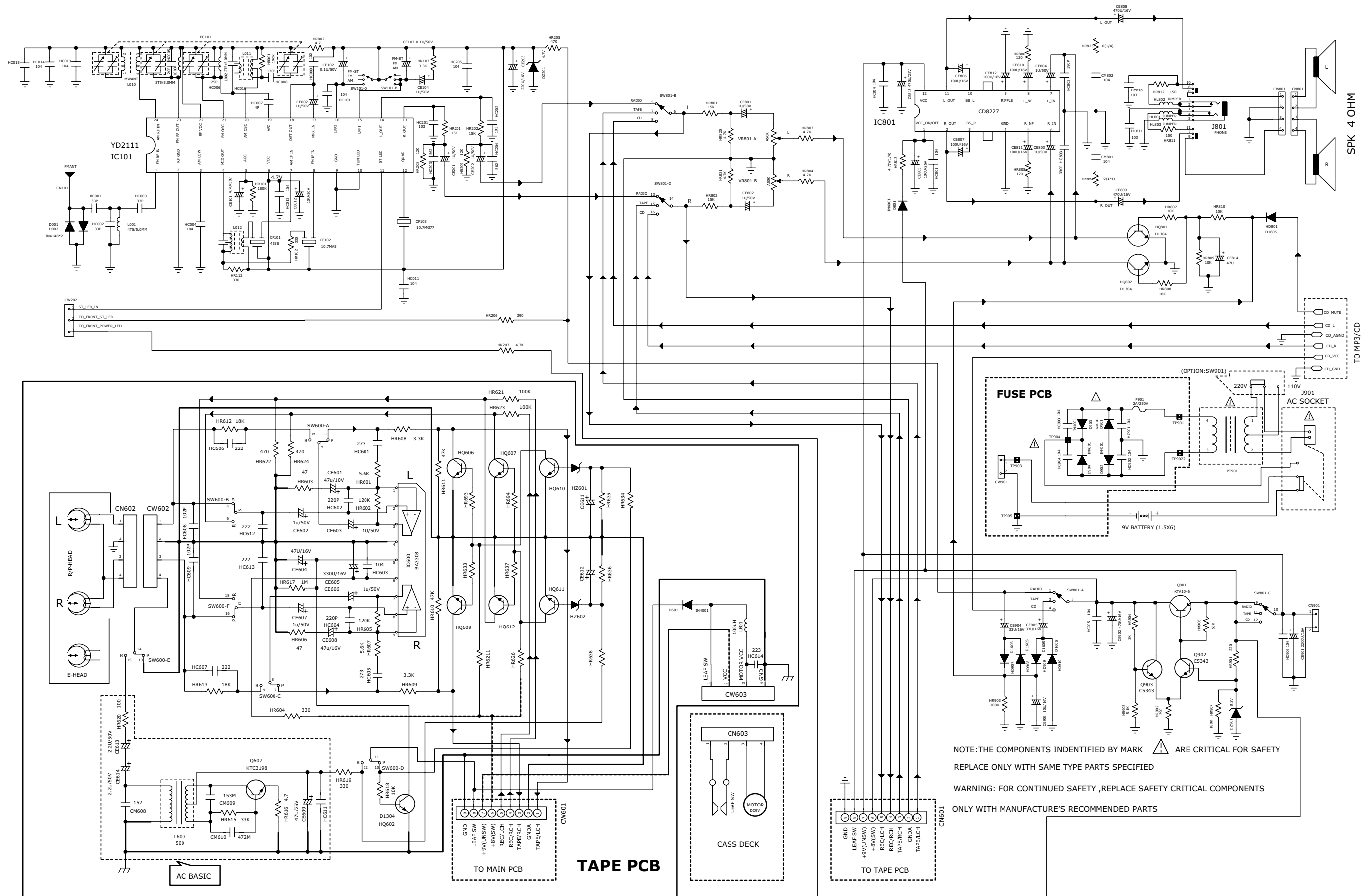


Schematic Diagram

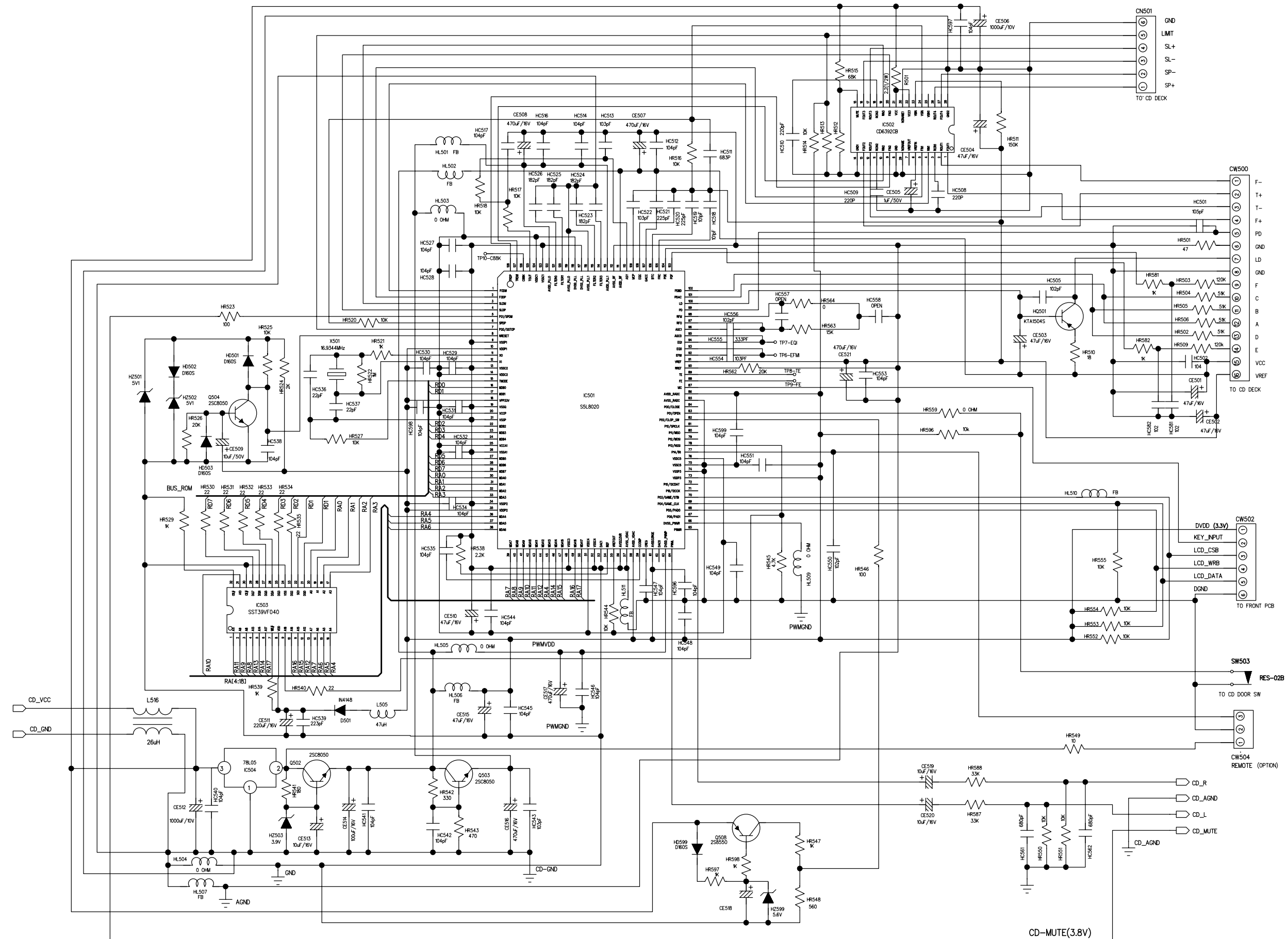
● FRONT Section



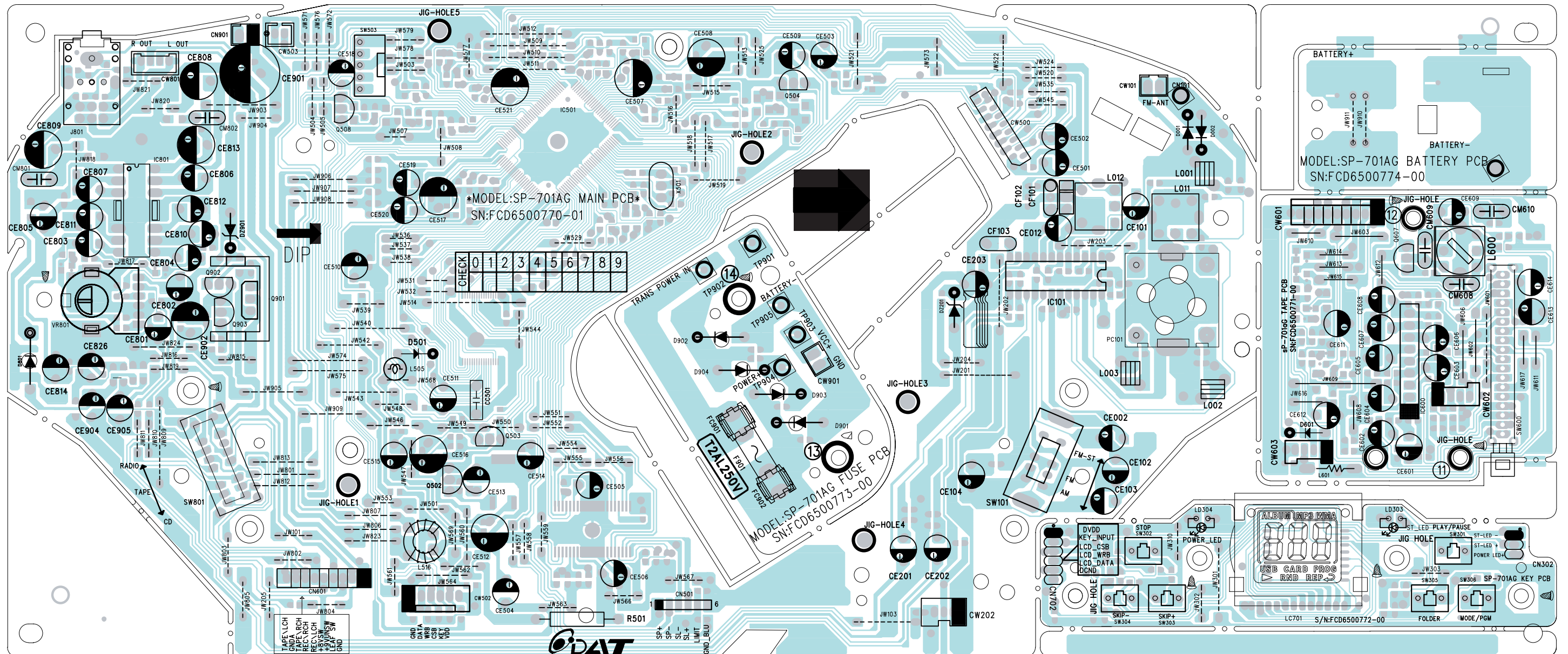
- **MAIN Section**



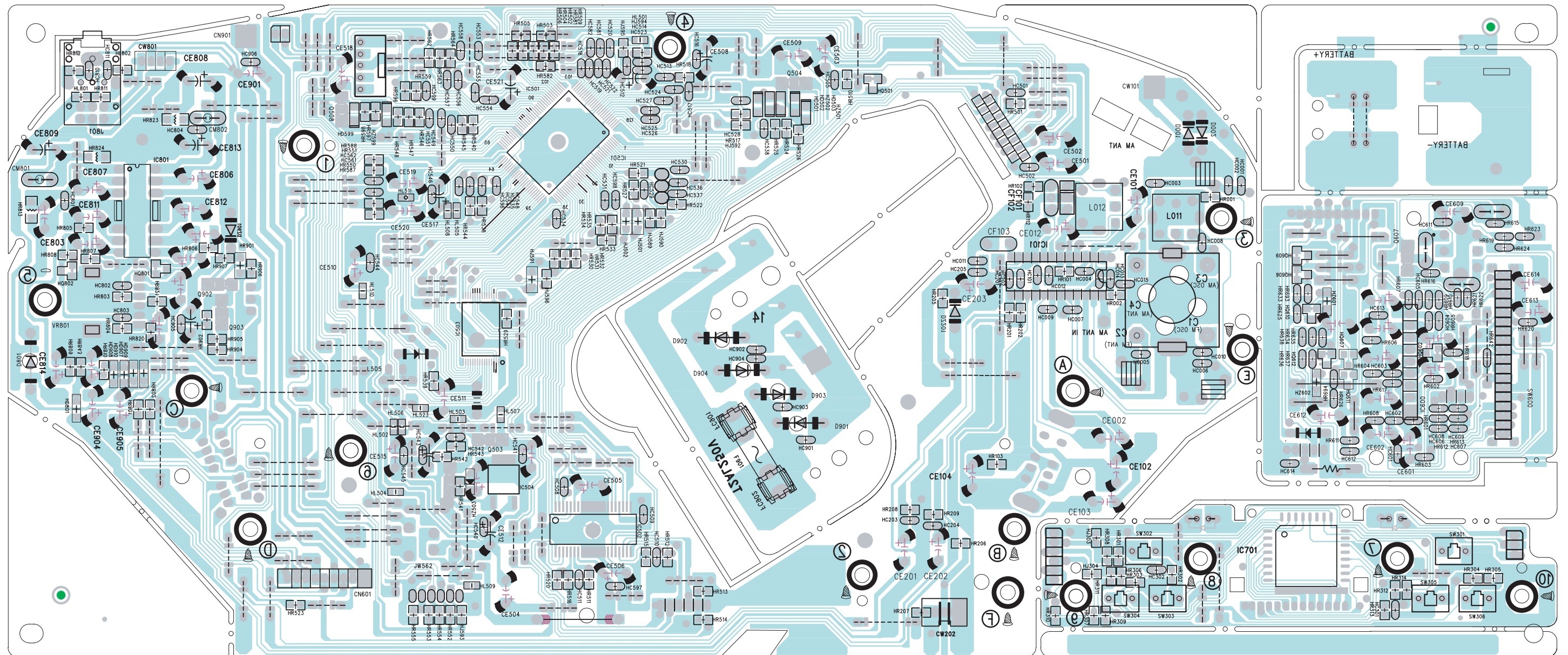
- **CD/MP3 Section**



- **Top View**



- **Bottom View**



APPENDIX - ELECTRICAL PART LIST

PCB MAIN AS				
LOC	PART-CODE	PART-NAME	PART-DESC	Remark
CN101	F728800061	WIRE LEAD	UL1007 #28 1P L=200mm+61640	
CN500	F728800054	CONN AS	FCC 16P P=1.0 80mm	
CN501	F728800068	CONN AS	UL20080#28/6P L=60mm 2.0PH	
CN601	F728800056	CONN AS	UL1007 #28/9P L=180mm 2.0PH	
CN801	F728800057	CONN AS	UL1007 #26/4P L=250mm+460mm 2.0PH	
CN901	F728800058	CONN AS	UL1007 #22/2P L=160mm 2.5PH	
CW101	2001-WS-02	WAFER	2P 2.0MM	
CW202	2001-WS-03	WAFER	3P 2.0MM	
CW500	9CD6259300	WAFER	52807-1610 SID ENTRY	
CW502	9728808600	WAFER	PH-06AW	
CW801	2001-WS-04	WAFER	4P 2.0MM	
D001,D002,D501	DZN4148---	DIODE	IN4148 AUTO 52MM	
D801	DIN4001---	DIODE	IN4001	
DZ201	DZTZ4R7B--	DIODE ZENER	UZ-4.7B	
DZ901	DZTZ5R1B--	DIODE ZENER	UZ-5.1B	
HD501,HD502,HD503				
HD599,HD801,HD907				
HD908,HD909,HD910	DZDS160---	DIODE SW CHIP	KDS160(KDS511)	
HL501,HL502				
HL506,HL507,HL511	HLB102MF1B	CHIP BEAD	0.2A 1KΩ 1608	
HQ501	TZTA1504S-	TR CHIP	KTA1504S	
HQ801,HQ802	TZTD1304--	TR CHIP	KTD1304	
HZ501,HZ502,HZ599	DRLZ5R1B--	DIODE ZENER CHIP	RLZ5.1B	
HZ503	DMTZ3R9B--	DIODE ZENER CHIP	UDZ3.9B 17X12	
IC101	1TA2111N--	IC	TA2111N(YD2111)	
IC501	1S5L8020--	IC	S5L8020	
IC502	1CD6392CB-	IC	CD6392CB	
IC503	1AT49BV040	IC	AT49BV040-VU	
IC504	1AZ7805DTR	IC	AZ7805DTR-E1	
IC801	1CD8227GP-	IC	CD8227GP	
J801	F736300006	JACK H/P	R-PJ3506	
L001	FLA139K005	COIL FM ANT	5mm X 0.8mm X 4.5T(1.3uH)	
L002	FLO838K002	COIL FM OSC	5mm X 0.8mm X 2.5T(0.83uH)	
L003	FLR119K001	COIL FM RF	5mm X 0.8mm X 3.5T(1.1uH)	
L010A	FCD6810400	BAR AM ANT	AP1070	
L010B	FLA560K004	COIL AM ANT	AM-120TS:20TS	
L011	FLO361K003	COIL AM OSC	ML10-37B	
L012	F110AYW001	IFT AM	TF10-19	
L505	FLC470K007	COIL CHOKE	NPK0406-470K	
L516	FLC260K006	COIL CHOKE	NTC10*5*5-260M	
PC101	FC134P001D	PVC	TU-CAP 20-126P 20X20A	
SW101	FS30202A03	SW SLIDE	SS23E01G7	
SW503	5SD0102A12	SW/OPEN	RES-02B	
SW801	FS30403A04	SW SLIDE	SK43D03M	
VR801	FV150KF01A	ROTARY VOLUME	R1212G13A1-A50K	
Q502,Q503,Q504	TZTC8050-D	TR	KTC8050-D	
Q508	TZS8550Y--	TR	S8550	
Q901	TZTA1046Y-	TR	KTA1046Y (KTA1366Y) AUTO	
Q902,Q903	TZTC3198Y-	TR	KTC3198Y (2SC5343) AUTO	
R501	RD-2Y229J-	R CARBON FILM	1/2W 2.2 OHM J	

APPENDIX - ELECTRICAL PART LIST

LOC	PART-CODE	PART-NAME	PART-DESC	Remark
X501	5PQZTT1693	RESONATOR CERA	QTTT16.93MMX(3PIN)	

PCB FUSE AS

LOC	PART-CODE	PART-NAME	PART-DESC	Remark
CN903	F728800062	WIRE LEAD	UL1007 #22 RED 1P L=120mm	
CN904	F728800063	WIRE LEAD	UL1007 #22 BLUE 1P L=120mm	
CN905	F728800070	WIRE LEAD	UL1007 #22 GREEN 1P L=100mm	
CW901	2503-WS-02	WAFER	2P 2.5MM	
D901,D902				
D903,D904	DIN4001---	DIODE	IN4001	
F901	5FSGB2022L	FUSE	VDE TL 2A 250V MF51	
J901	F736300007	JACK AC/SOCKET	TC08-115-02	
PT901	5TP8041F59	TRANS POWER	EI=41X24 230V/50HZ	European Option
	5TP1041F60	TRANS POWER	EI=41X24 127V/60HZ	American option
	5TP0041F61	TRANS POWER	EI=41X24 127V/230V,60HZ/50HZ	Brazilian option
	5TPB041F70	TRANS POWER	EI=41X24 240V/50HZ	Australian option

PCB BATTERY AS

LOC	PART-CODE	PART-NAME	PART-DESC	Remark
CN906	F728800064	WIRE LEAD	UL1007 #22 WHITE 1P L=80mm	

PCB FRONT AS

LOC	PART-CODE	PART-NAME	PART-DESC	Remark
CN302	F728800067	CONN AS	UL1007 #28/3P L=100mm 2.0PH	
CN702	F728800066	CONN AS	UL1007 #28/6P L=120mm 2.0PH	
IC701	1CS1621---	IC	CS1621	
LD303	DZLR332MC3F	LED	SLR332MC3F(GREEN)PI3	
LD304	DZLR332VC3F	LED	SLR332VC3F(RED)PI3	
LC701	DA1583F001	LCD	SDT-DA1583-RP-0	
SW301,SW302				
SW303,SW304				
SW305,SW306	5S50101Z67A-2	SW TACT	THVV502GAA	

PCB TAPE AS

LOC	PART-CODE	PART-NAME	PART-DESC	Remark
CN602	F728800039	CONN AS	UL2851#28 4P 130MM	
CN603	F728800040	CONN AS	UL1007#26 4P 100MM	
CW601	2001-WS-09	WAFER	9P 2.0MM	
CW602,CW603	2001-WS-04	WAFER	4P 2.0MM	
D601	DZN4148---	DIODE	IN4148 AUTO 52MM	
IC600	1BA3308H--	IC TAPE AMP	BA3308	
SW600	5S30602A02	SW SILDE	R-PS 6205C	
Q607	TZTC3198Y-	TR	KTC3198Y (2SC5343) AUTO	
L600	5L00000500	COIL BIAS OSC	0500 10X10 BK	
L601	5CPZ101K02	COIL PEAKING	100 UH K (AXIAL 3.5 MM)	

CABINET PANEL AS

LOC	PART-CODE	PART-NAME	PART-DESC	Remark
10	9CD8500600	SPEAKER UNIT	3", 4ohm, 3~5W	

PACKING AS

LOC	PART-CODE	PART-NAME	PART-DESC	Remark
CD901	F736909006	CORD AC	1500mm/H03VVH2-F 2X0.75mm2(VDE)	European Option
	F736909007	CORD AC	1500mm/SPT-2 18AWGX2C(UL)	American option

Rautz

DAT

DAEWOO DAT CO., LTD.