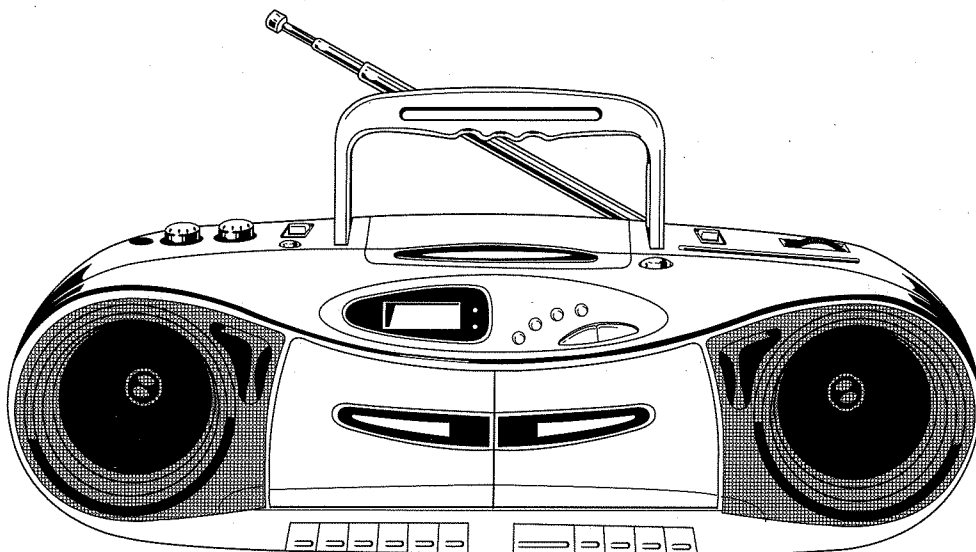


RADIO CASSETTE RECORDER WITH COMPACT DISC PLAYER



SPECIFICATION

GENERAL

Frequency response	: 20~20000Hz
Speaker	: Woofer : ϕ 100mm x 2(4 W)
Maximum output	: 2W(DC)/CH
Power source	: AC : See label rating DC : 9V (D x 6)
Power consumption	: 14W
Dimension	: 560(W)X213(D)X180(H)mm
Weight	: 3.4Kg (Without batteries)
Headphone jack	: ϕ 3.5mm

RADIO

Frequency range	FM : 88~108MHz AM : 530~1705KHz(OPTION) 530~1605KHz LW : 150~285KHz(OPTION) SW : 6~18MHz(OPTION)
I.F	FM : 10.7MHz
Antenna	FM : Telescopic rod antenna AM : Ferrite bar antenna

TAPE

Track system	: 4 track 2 channel
Recording system	: AC bias (DECK A)
Erasing system	: Magnetic erasing (DECK A)
Monitor system	: Variable monitor
Frequency response	: Normal 50~10000Hz CrO ₂ /METAL (PB)
Tape speed	: 4.75cm/sec (Normal speed) 9.5cm/sec (High speed)
Tape drive system	: Capstan belt driven
Tape loading system	: Front loading
Motor system	: DC synchronous 2 speed motor (DC 9V)
Signal to Noise Ratio	: 40 dB
Separation	: 35 dB
Total Harmonic Distortion	: 2%

COMPACT DISC PLAYER

Frequency range	: 20 ~ 20,000Hz
Signal to Noise ratio	: 82 dB (at 1KHz) with filter
THD	: 0.1% (at 1KHz with 30KHz L.P.F)
D/A Conversion	: 16 bits

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■ SAFETY PRECAUTION

1. CLASS 1 LASER PRODUCT

This compact disc player is classified as a CLASS 1 laser product.

2. LASER WARNING LABEL

The label shown below may be affixed or not according to country.

(UL)

(CSA)

(EU)

This Product Complies with
DHHS Rules 21CFR, Sub
chapter J.At date of Manu-
facture.

CERTIFIED ONLY TO CANADIAN
ELECTRICAL CODE.

CERTIFIE EN VERTU DU CODE
CANADIAN DE LELETRICITE
SEULEMENT

CLASS1
LASER PRODUCT

Location : Enclosure back.

(SCAN)

ADVARSEL : USYNLIG LASER-
STRÅLING VED ÅBNING,NÅR
SIKKERHEDSAFBRYDERE ER
UDE AF FUNKTION UNDGA
UDSAETTELSE FOR STRÅLING.

(EU)



UL : Manufactured for U.S.A Market.
CSA : Manufactured for Canadian Market.
EU : Manufactured for European Market.
SCAN : Manufactured for Scandinavian Market.

Location : on the disc clasper or inner side of CD door or nearby CD chassis.

3. LASER BEAM WARNING

- ADVERSEL** — USYNLIG LASERSTRÅLING VED ÅBNING, NÅR SIKKERHEDSAFBRYDERE ER UDE AF FUNKTION. UNDGA UDSAETTELSE FOR STRÅLING.
- VARNING** — OSYNLIG LASERSTRÅLNING NÅR DENNA DELÄR ÖPPNAD OCH SPÄRR ÄR URKOPPLAD. STRALEN ÄR FARLIG.
- VARITUS** — LAITE SISÄLTÄÄ LASERDIODIN, JOKA LÄHETTÄÄ NÄKYMÄTÖNTÄ SILMILLE VAARALLISTA LASERSATEILYÄ.
- CAUTION** — INVISIBLE LASER RADIATION WHEN OPEN AND INTERLOCKS DEFEATED. AVOID EXPOSURE TO BEAM.

4. LASER DIODE SPECIFICATION (OPTICAL PICK-UP)

- Material : AlGaAs
- Wavelength : 760-800nm
- Emission duration : Continuous
- Laser Output : 0.2mW
- * This output is the value measured at distance 1.6mm from the objective lens surface on the optical pick-up block.
- Classification : CLASS 1

5. WARNING FOR SERVICING

- WARNING** : When servicing, do not approach the LASER exit with the eye too closely. In case it is necessary to confirm LASER beam emission, be sure to observe from a distance of more than 30cm from the surface of the objective lens on the optical pick-up block.
- VARNING** : När underhållningsarbeten utförs, närma dig försiktigt och se inte på laserutstrålningen på för nära håll. Ifall det är nödvändigt att betrygga laserstrålens utströmning. Var säker att kontrollera detta från ett avstånd av mer än 30cm (11.81 inch.) från den objektiva linsens yta på den optiska utsändningspunkten.
- ADVARSEL** : Når repareringsarbejdet udfoeres, naerm dig forsigtigt og se ikke på laserudstrålingen på for naer hånd. It ilfaeldet at det er noedvaendigt at bestemme laserstrålens udstråling. Vaer sikker på kontrollere dette fra en afstand af mere end 30cm (11.81 inch.) fra den objektive linses overflade på den optiske udsendningspunkt.
- VAROITUS** : Silmiä on varottava viemästä liian läbeie Laser-poistokanavaa huoiion aikana. Jos on välttämätöntä varmista Laser-Säteen päästö, pusyttels sitä tarkasteltaessa vähintään 30cm etäiydyellä optisen lukon objektiivinlinssin pinnasta.

■ SERVICING NOTE

1. Disconnect power supply cord before separating cabinet for servicing as you may experience an electric shock.
2. Avoid repairing under direct sunshine and heat which may cause cabinet, transistor and IC to be transformed or misoperate.
3. Use a soft cotton swab moistened with warm water or neutral cleaner when parts of a unit need to be cleaned.
4. When replacing parts with safety features built in, be sure to use specified parts with same specifications only.
5. Avoid repairing the set near a TV or any other magnetic forces.
6. Disconnect the plug from wall socket during electric storm to reduce the risk of damage.
7. Be careful of electrostatic damage when replacing the control IC such as μ -COM, LSI and pick-up.
8. Be sure not to separate the pick-up from the unit and not to touch the ALPC (Automatic Laser Power Control) circuit.

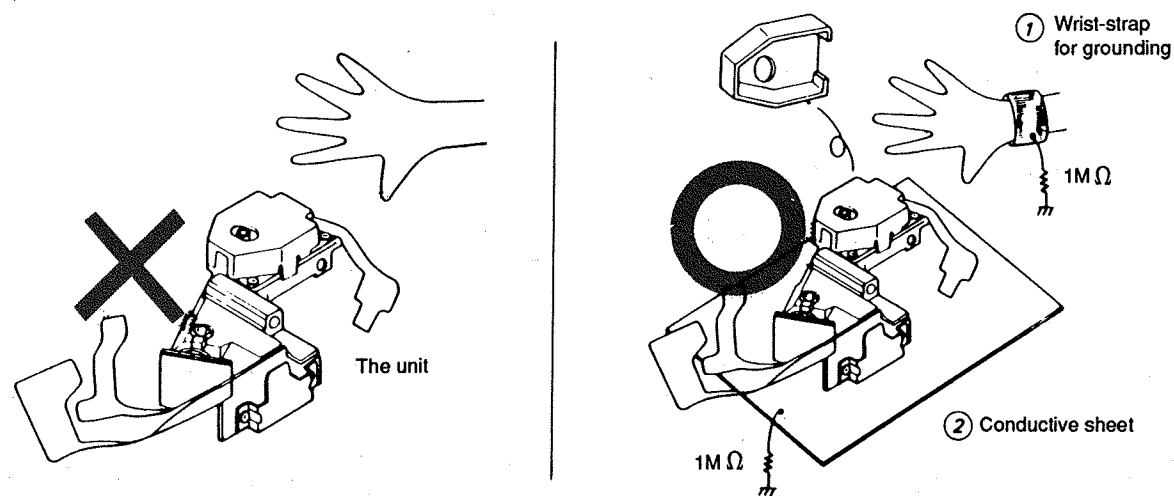
HANDLING THE OPTICAL PICK-UP

- * The laser diode in the optical pick up may suffer electrostatic breakdown because of potential static electricity from clothing and your body.

The following method is recommended.

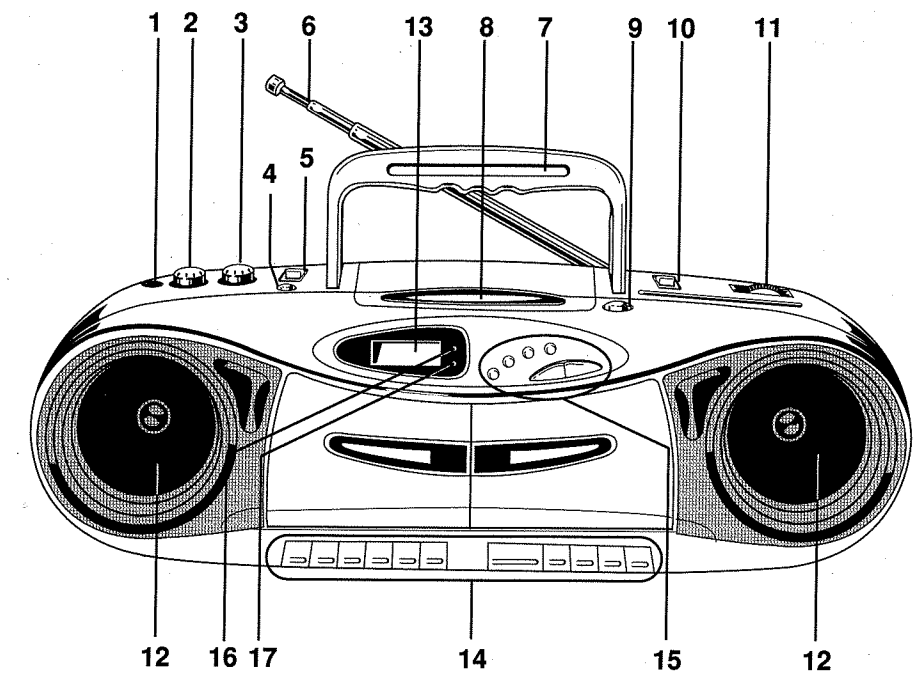
1. Place a conductive sheet on the workbench. (The black sheet used as wrapping for repair parts.)
2. Place the set on the conductive sheet so that the chassis is grounded to the sheet.
3. Place your hands on the conductive sheet. (This gives them the same ground as the sheet.)
4. Remove the optical pick up block.
5. Perform work on top of the conductive sheet.
Be careful not to let your clothes or any other static sources touch the unit.

- * Be sure to put on a wrist-strap grounded to the sheet.
- * Be sure to lay a conductive sheet made of copper etc. which is grounded to the table.

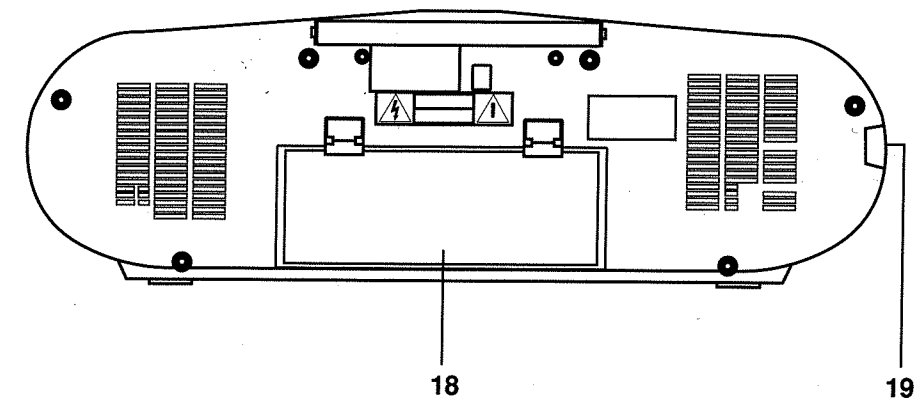


■ LOCATION OF CONTROLS

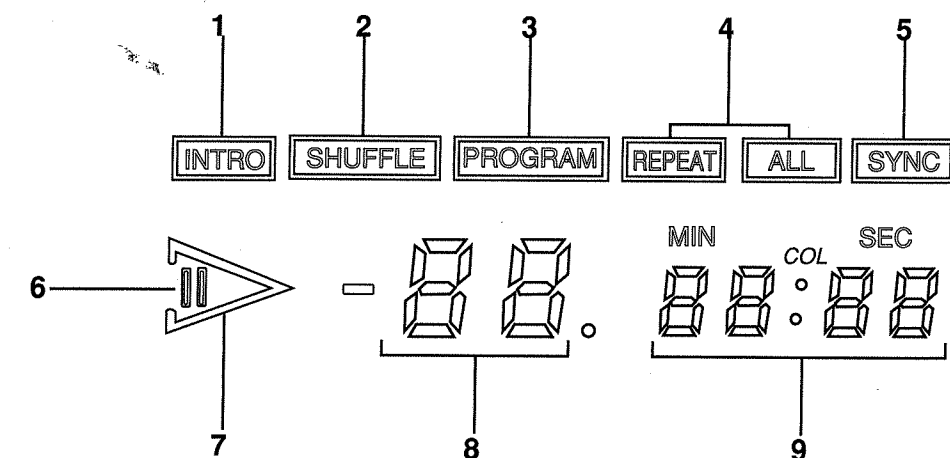
1. FRONT PANEL



2. REAR PANEL



3. CD OPERATION LCD



1. FRONT PANEL

1. HEADPHONE JACK
2. VOLUME CONTROL
3. TONE CONTROL
4. TAPE SEL BUTTON (CrO₂ PB/NORMAL)/
MODE (FM-MONO/FM-STEREO)/
BEAT CUT BUTTON
5. FUNCTION SELECTOR
(TAPE,RADIO OFF/CD/RADIO)
DUBBING SPEED (NOR/HIGH)
6. TELESCOPIC ANTENNA
7. HANDLE
8. CD DOOR
9. PUSH OPEN BUTTON (CD)
10. BAND SELECTOR (FM/AM)
11. TUNING KNOB
12. SPEAKER (L,R)
13. CD OPERATION LCD
14. DECK OPERATION BUTTONS
RECORD BUTTON (DECK A ONLY)
PLAY BUTTON
REW BUTTON
F.FWD BUTTON
STOP/EJECT BUTTON
PAUSE BUTTON
15. CD OPERATION BUTTONS
SKIP & SEARCH (◀▶ , ▶▶) BUTTON
PROGRAM BUTTON
MODE BUTTON
STOP BUTTON
PLAY/PAUSE BUTTON)
16. POWER INDICATOR
17. FM STEREO INDICATOR

2. REAR PANEL

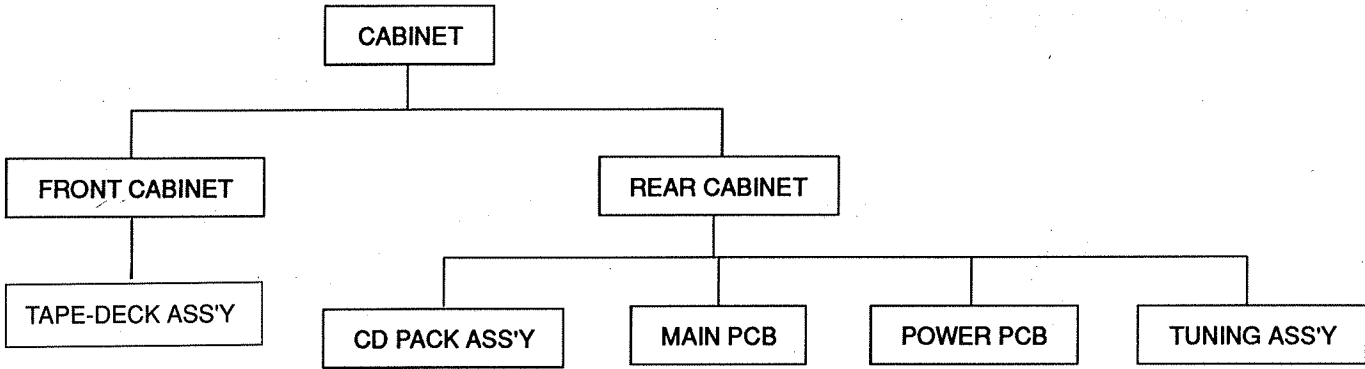
18. BATTERY COMPARTMENT
19. AC IN ~ SOCKET (MOUNTED ON SIDE)

3. CD OPERATION LCD

1. INTRO INDICATOR
2. SHUFFLE INDICATOR
3. PROGRAM INDICATOR
4. REPEAT,ALL INDICATOR
5. SYNC INDICATOR
6. PAUSE INDICATOR
7. PLAY INDICATOR
8. TRACK NUMBER INDICATOR
9. TIME INDICATOR

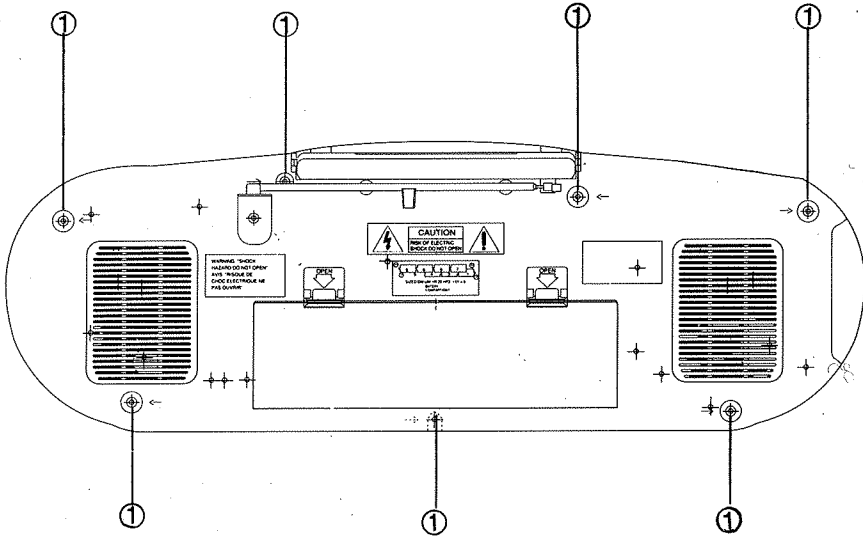
DISASSEMBLY INSTRUCTION

- Be sure to unplug power cord and remove batteries before disassembling the unit.



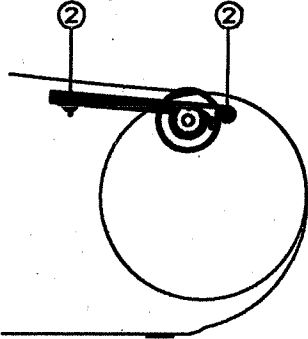
1. CABINET (FRONT/REAR)

- 1) Release 7 screws (1)
- 2) Split Front and Back cabinet



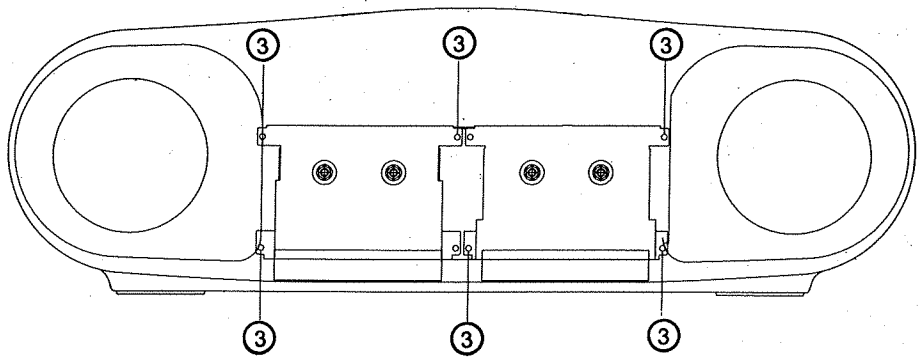
2. TUNING ASSEMBLY

- 1) Release 2 screws (2)
- 2) Remove tuning assembly



3. CASSETTE DECK ASSEMBLY

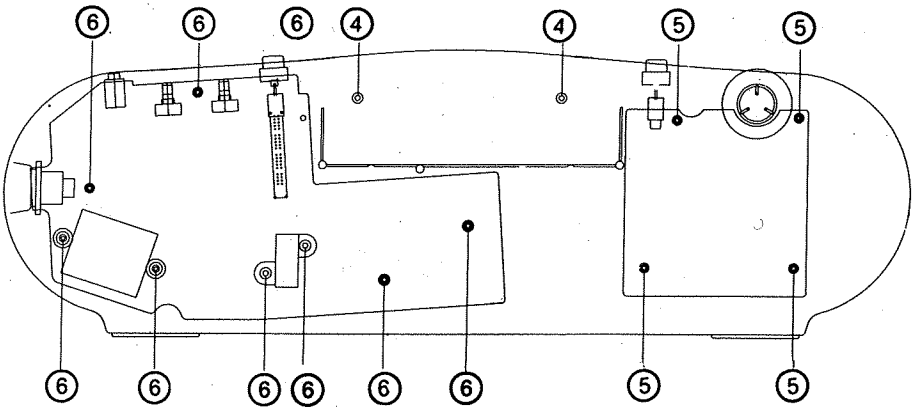
- 1) Release 6 screws ③ from the Front Cabinet.
- 2) Remove cassette deck assembly.



Front Cabinet

4. CD PACK ASSEMBLY & MAIN PCB

- 1) Release 2 screws ④ .
- 2) Remove CD pack assembly from the Back cabine
- 3) Release 9 screws ⑥ .
- 4) Remove main PCB.



5. TUNER PCB

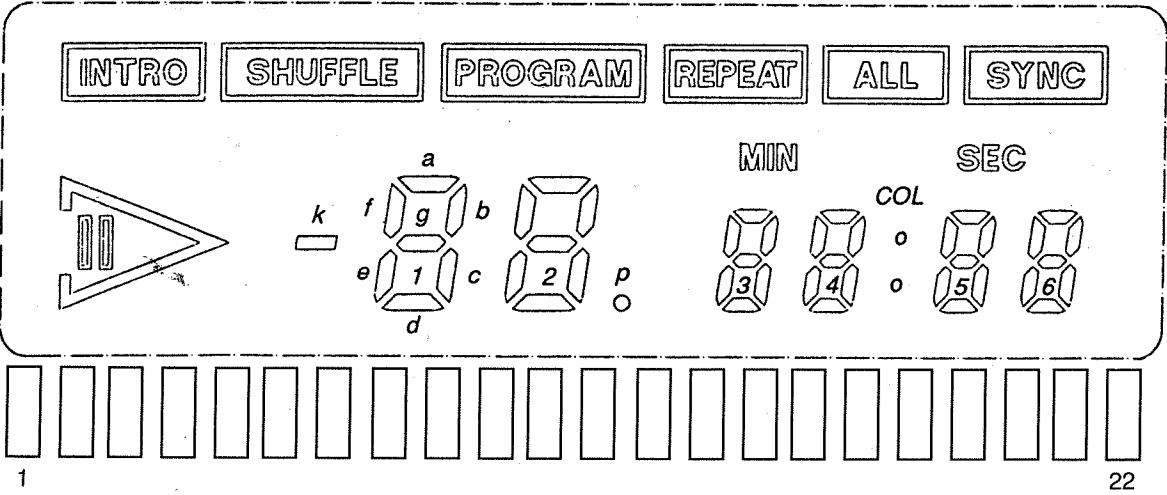
- 1) Release 4 screws ⑤ .
- 2) Remove Tuner PCB.

DESCRIPTION OF LCD SEGMENTS

If one or all of the LCD Segments (see segment diagram below) don't work, check if IC7530 and LCD pins are properly connected refering to the chart below.

No	1	2	3	4	5	6	7	8	9	10	11	12	13	14
COM1	COM1			INTRO	K	1a		SHUFFLE	2a	P	PROGRAM	3a	MIN	REPEAT
COM2		COM2		▷	1f	1g	1b	2f	2g	2b	3f	3g	3b	4f
COM3			COM3	□□	1e	1d	1c	2e	2d	2c	3e	3d	3c	4e

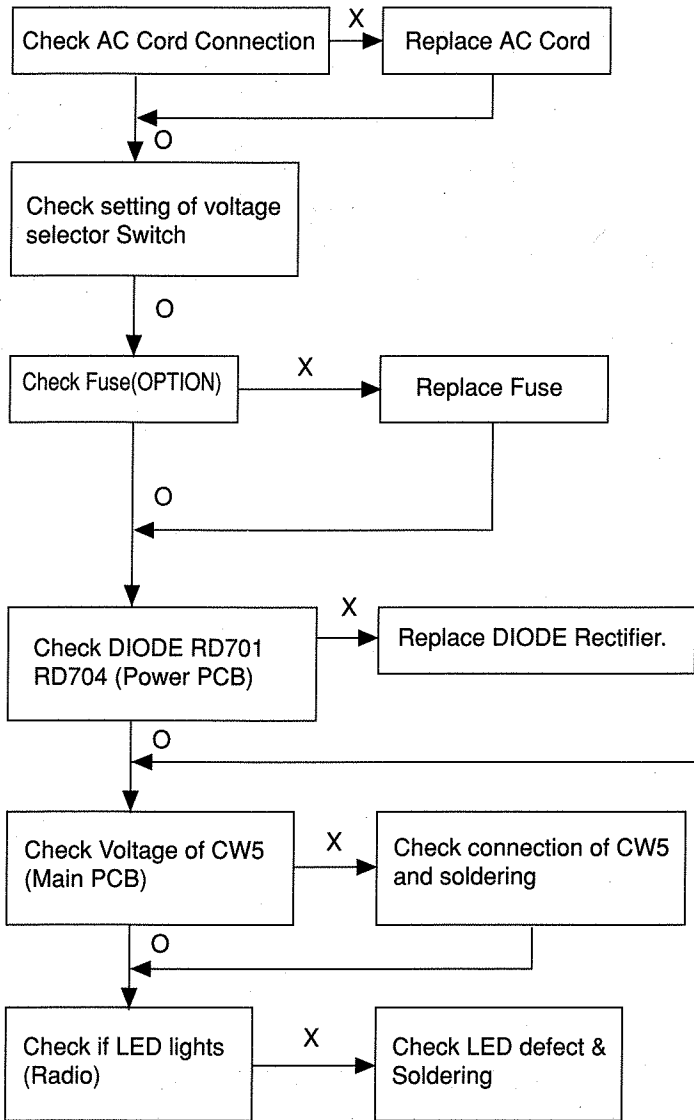
No	15	16	17	18	19	20	21	22
COM1	4a	COL	ALL	5a	SEC	SYNC	6a	
COM2	4g	4b	5f	5g	5b	6f	6g	6b
COM3	4d	4c	5e	5d	5c	6e	6d	6c



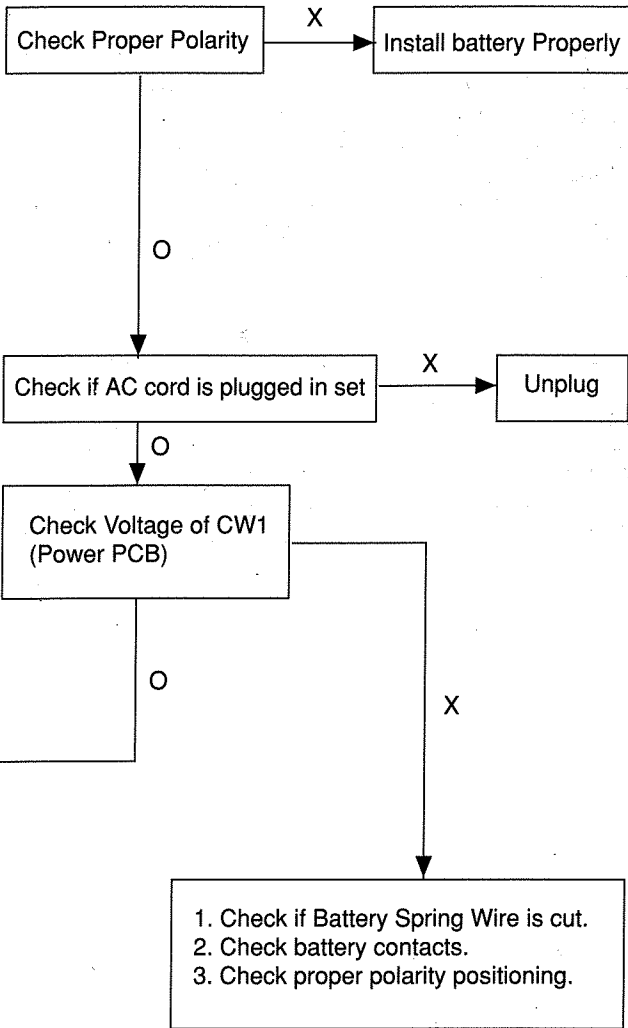
■ TROUBLE SHOOTING CHART

1. RADIO CASSETTE SECTION

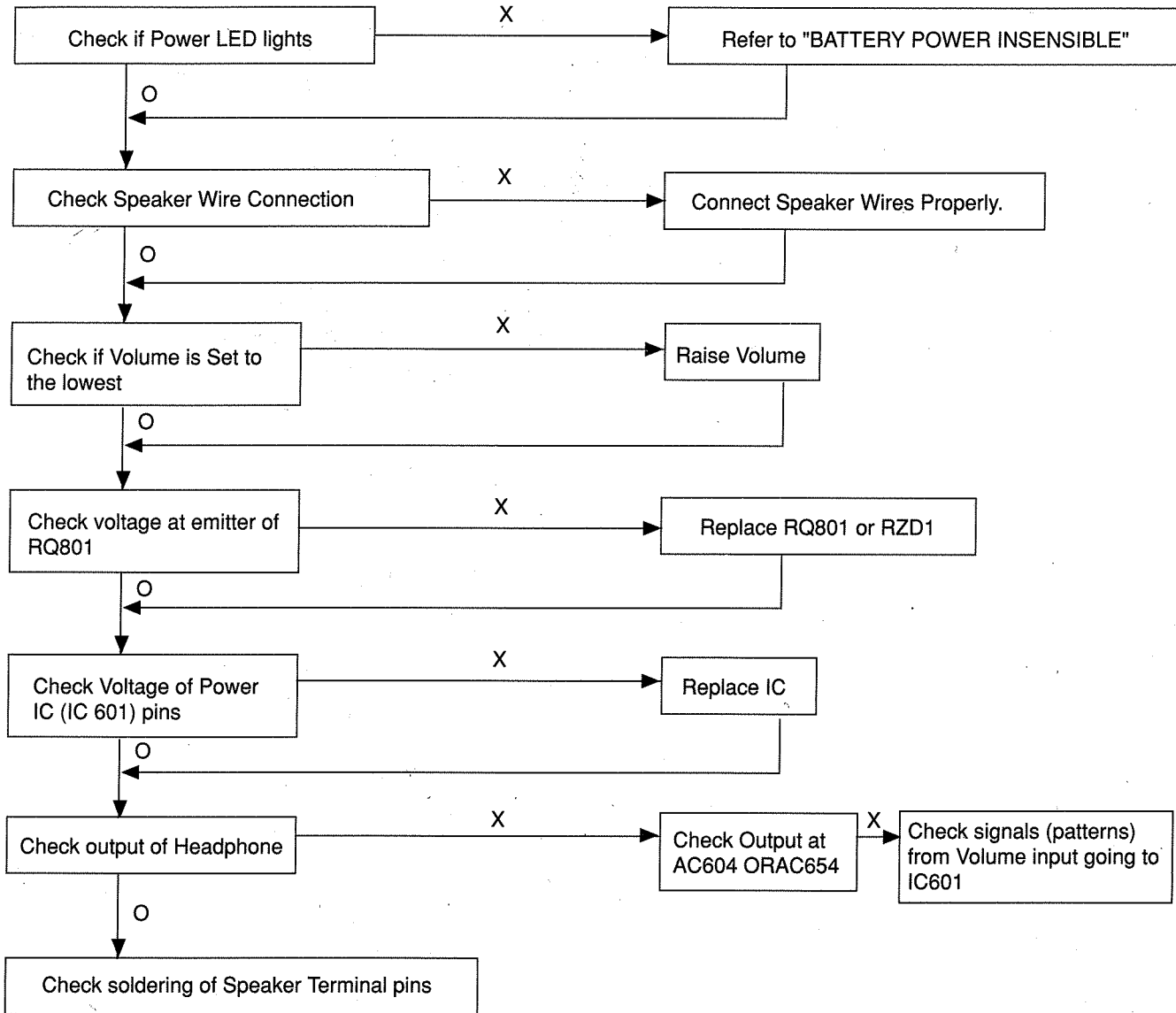
1) AC POWER INSENSIBLE



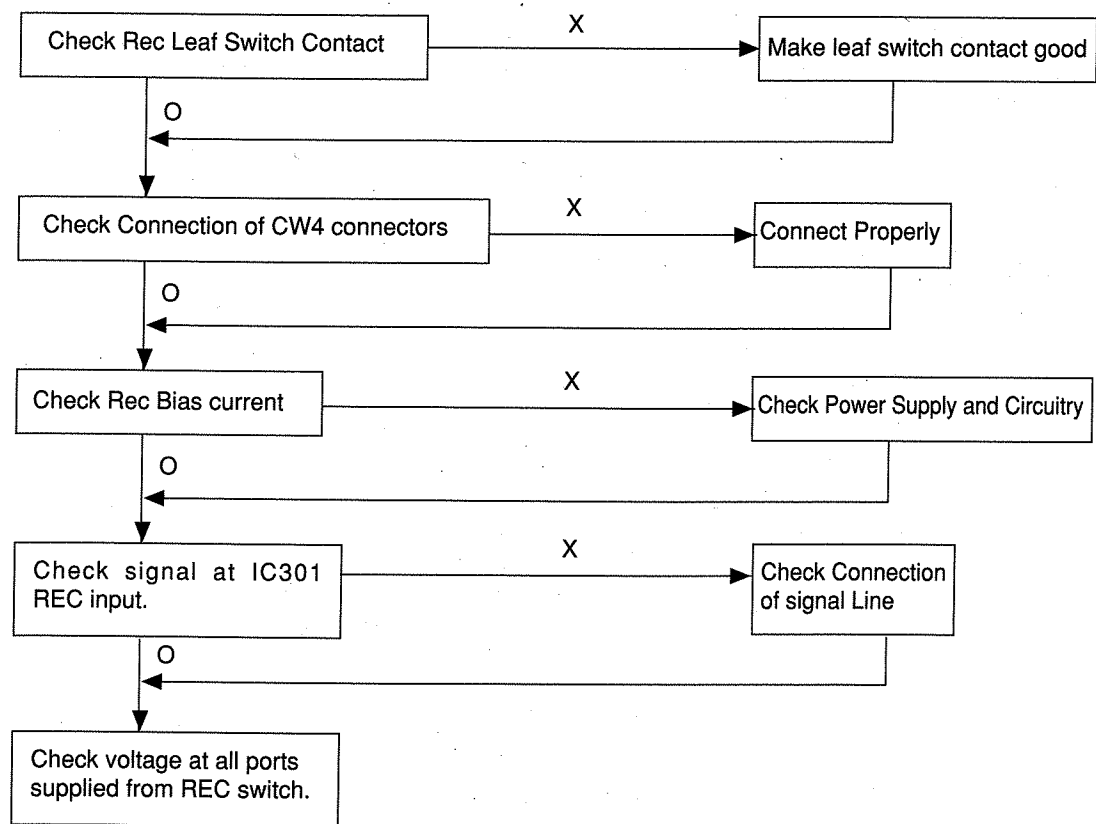
2) BATTERY POWER INSENSIBLE



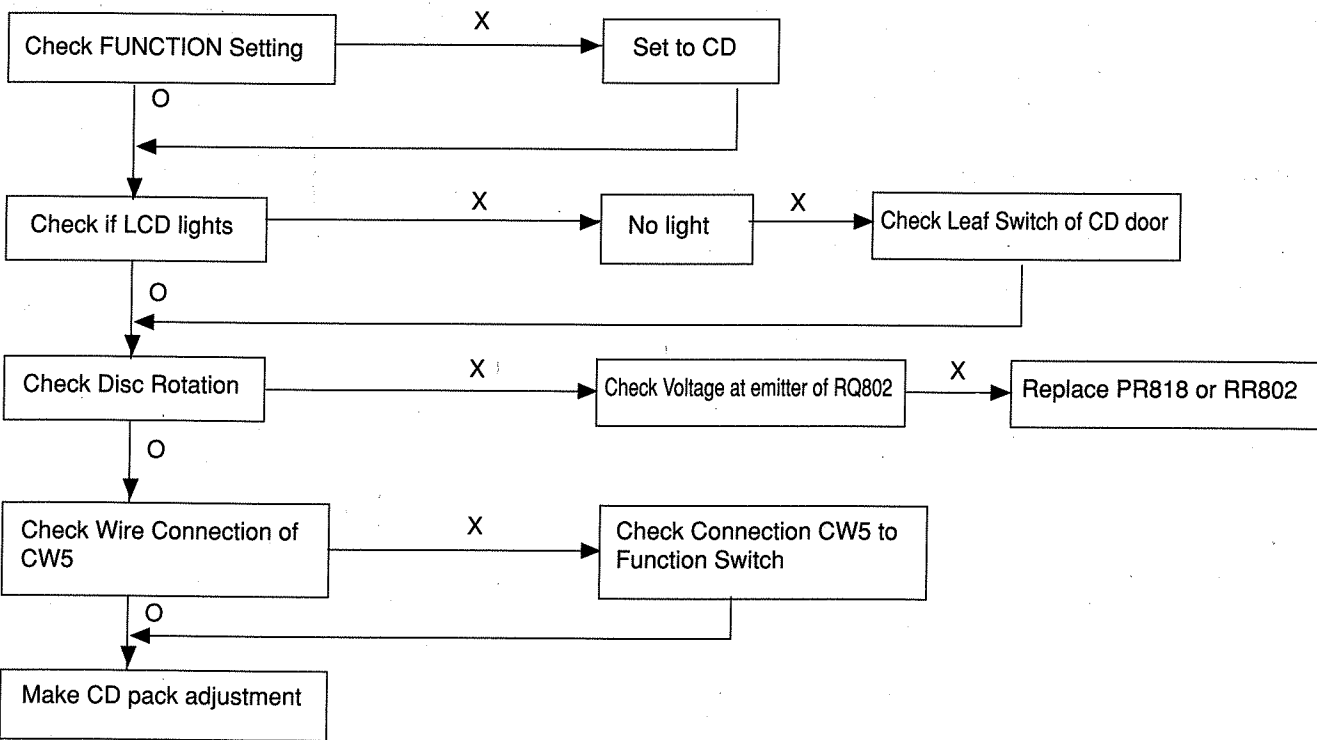
3) NO AUDIO OUTPUT



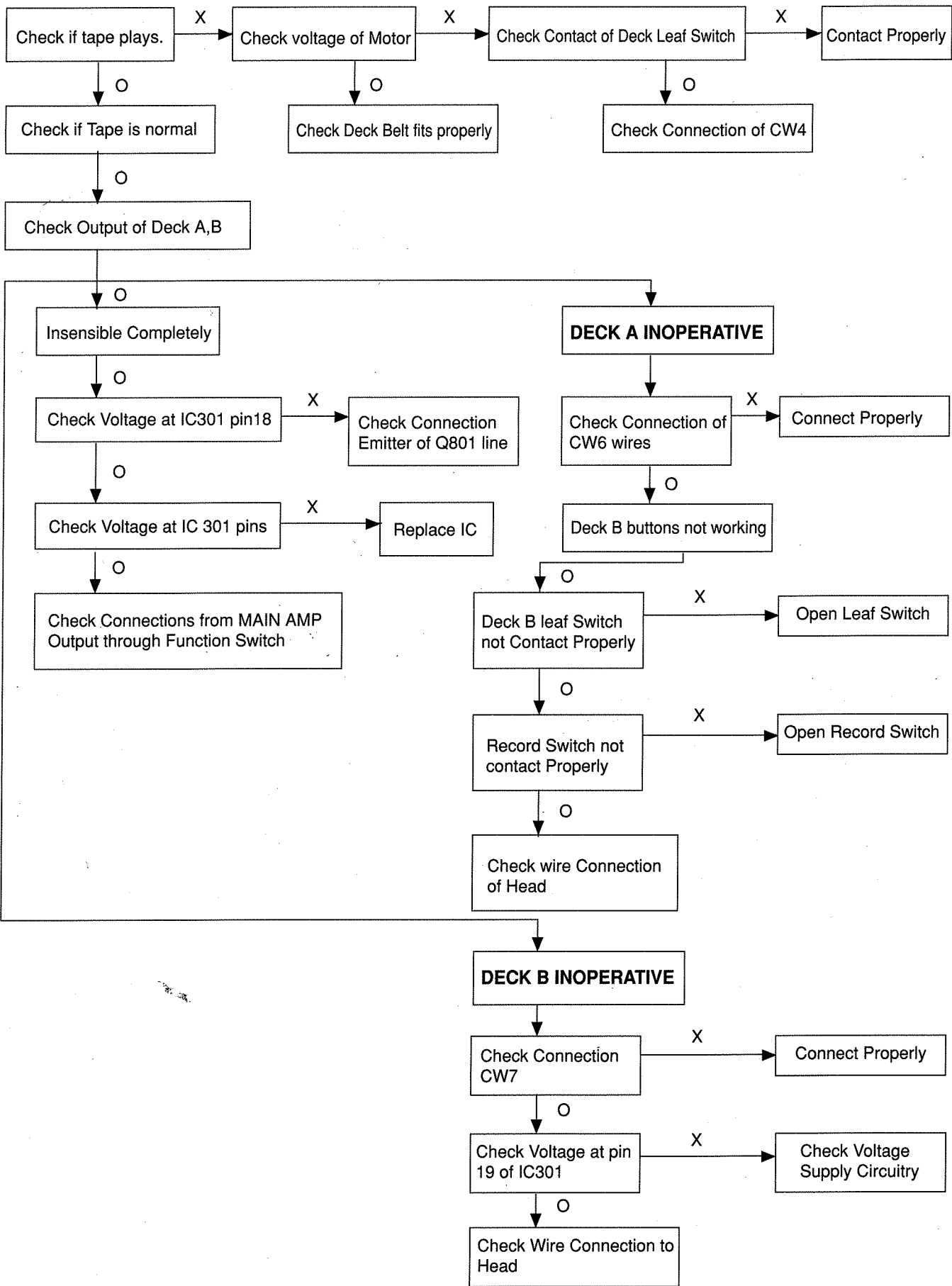
4) RECORDING NOT WORKING



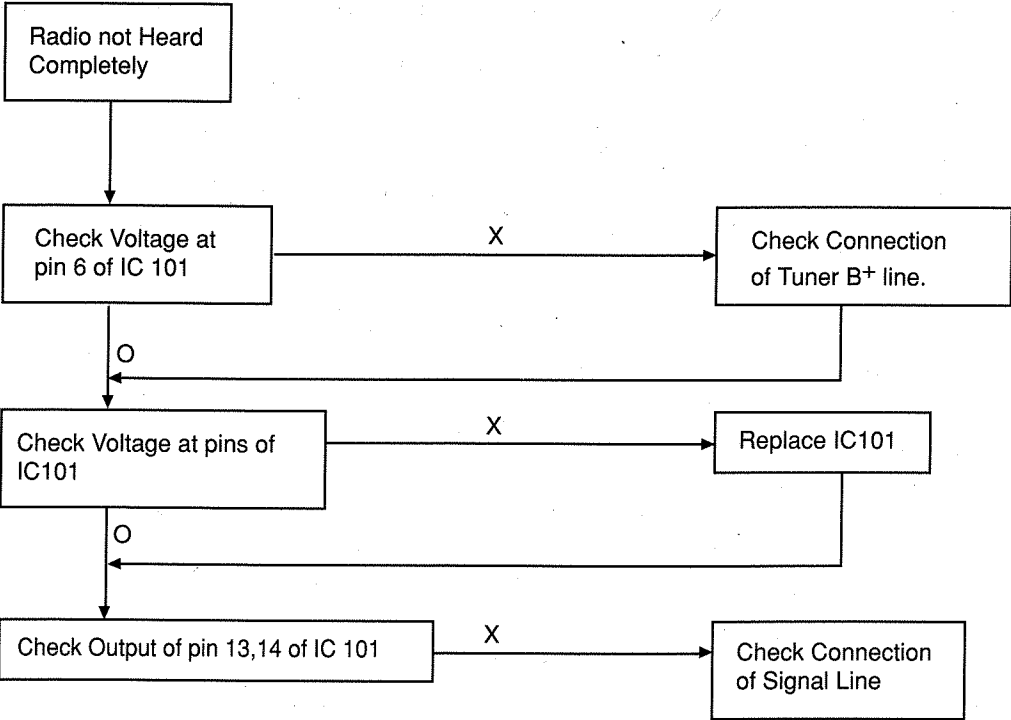
5) COMPACT DISC INOPERATIVE



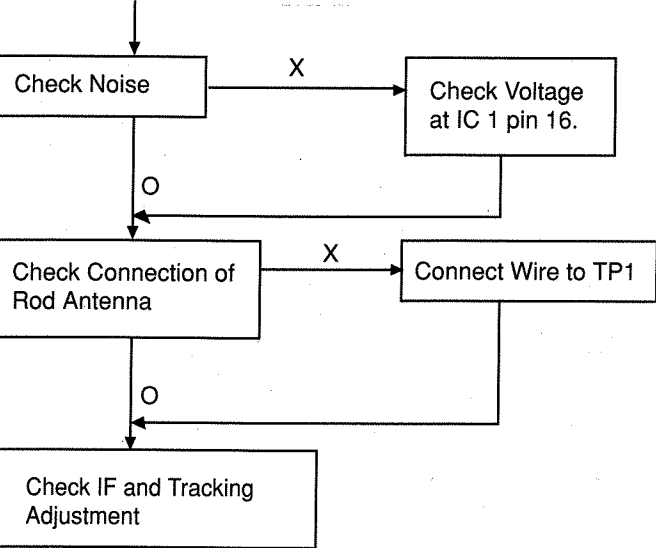
6) TAPE NOT WORKING



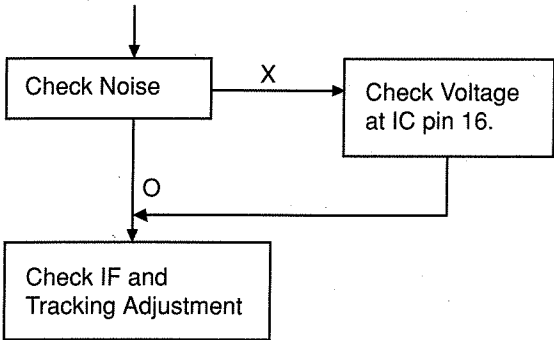
7) RADIO INSENSIBLE



FM INSENSIBLE



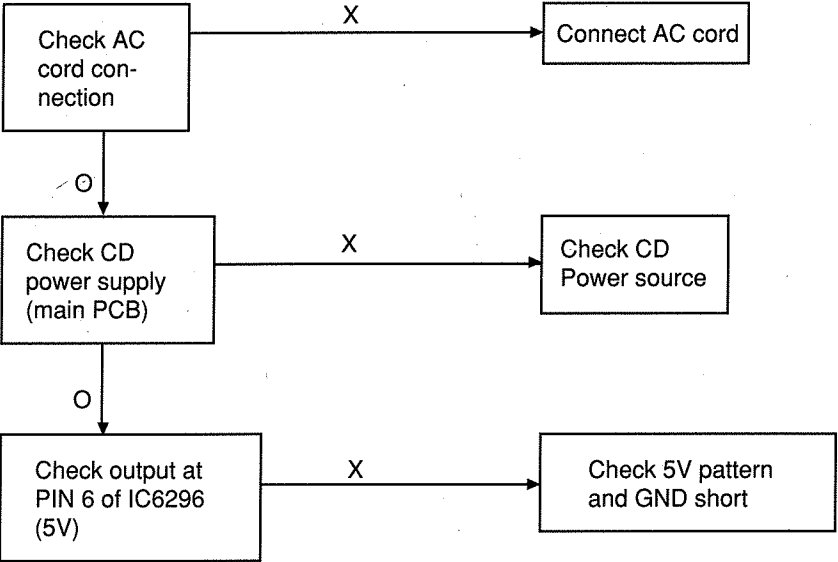
AM INSENSIBLE



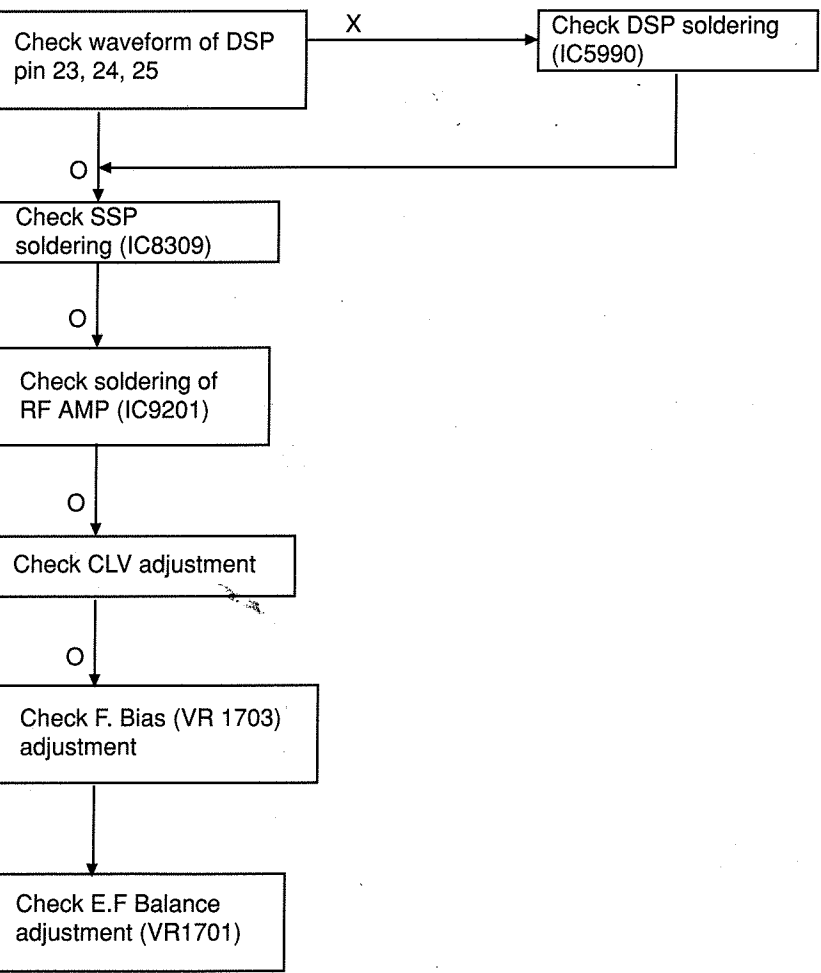
2. CD SECTION

* Refer to Schematic Diagram

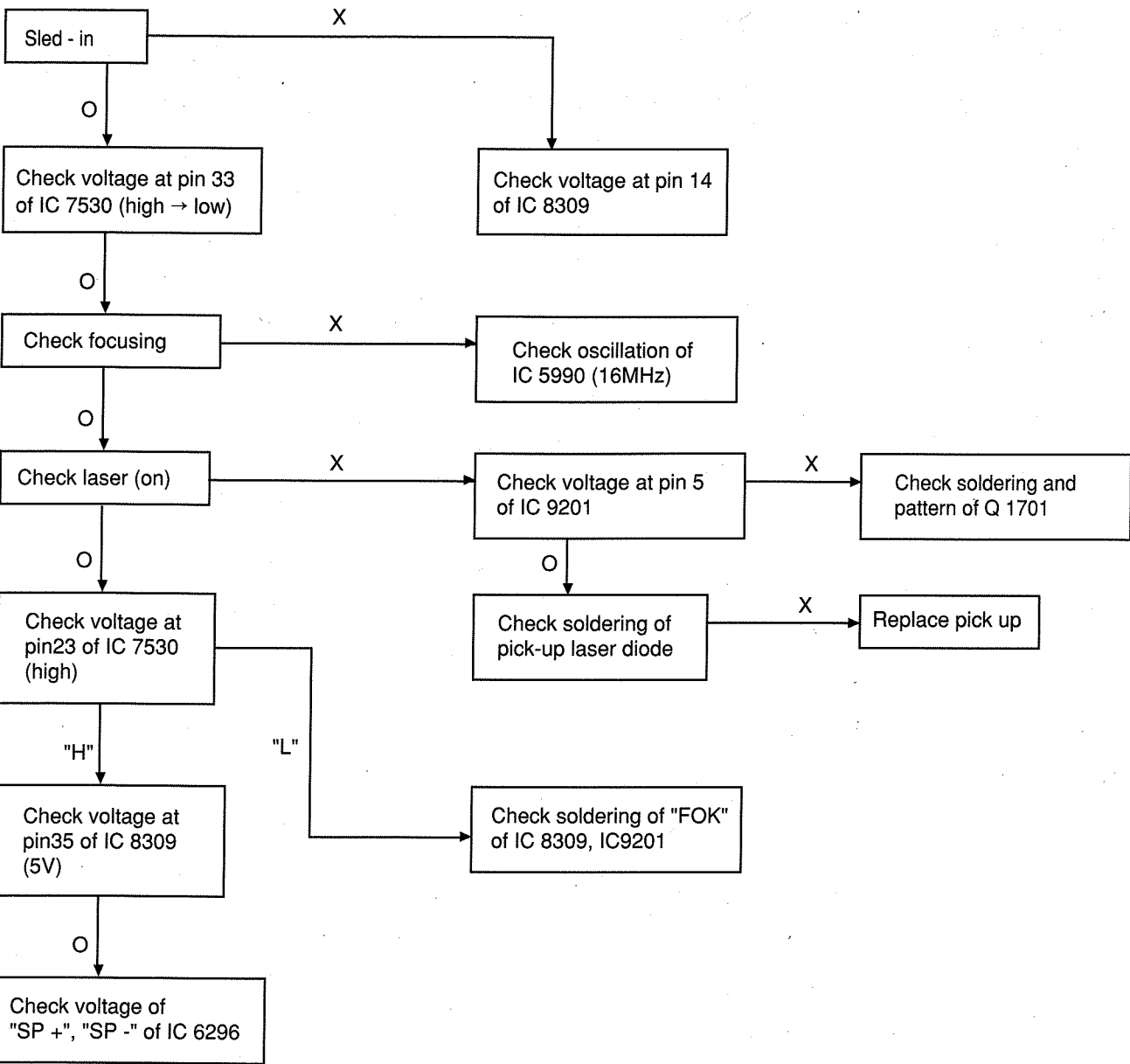
1) POWER NOT SENSIBLE



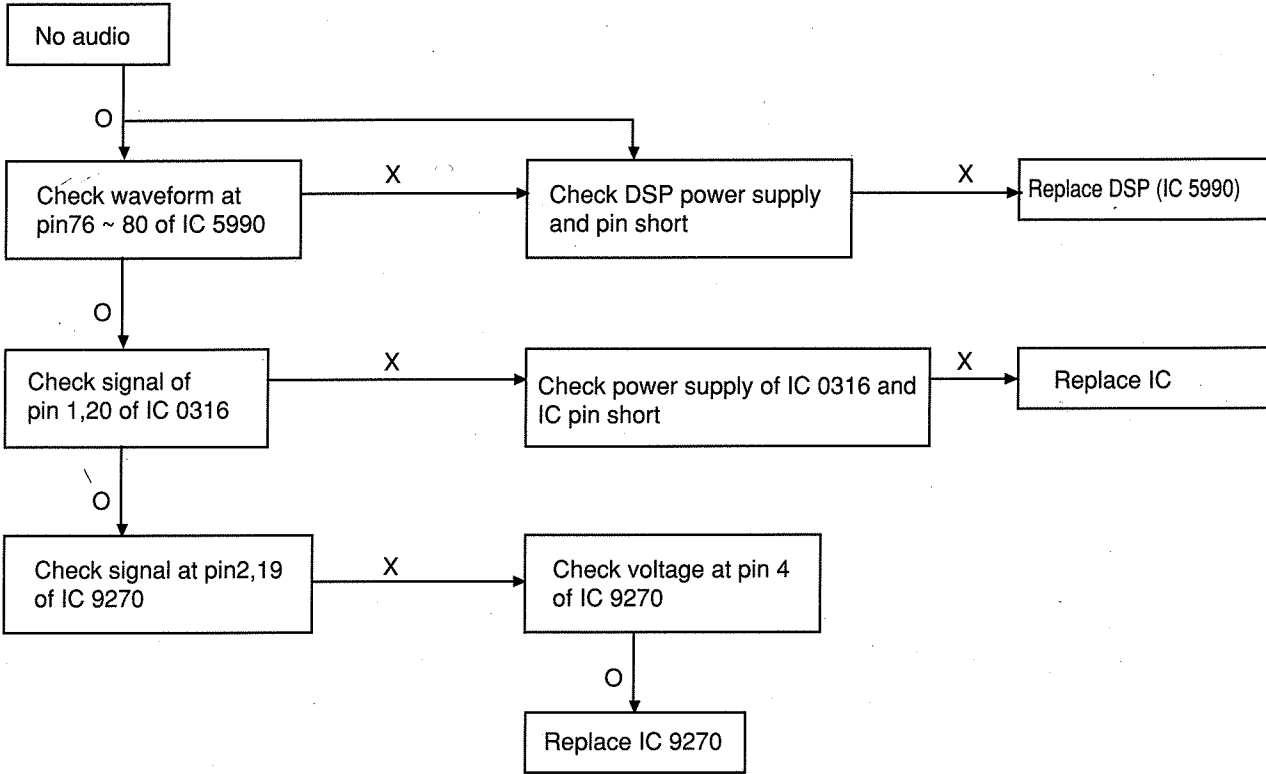
2) LEAD-IN NOT WORKING



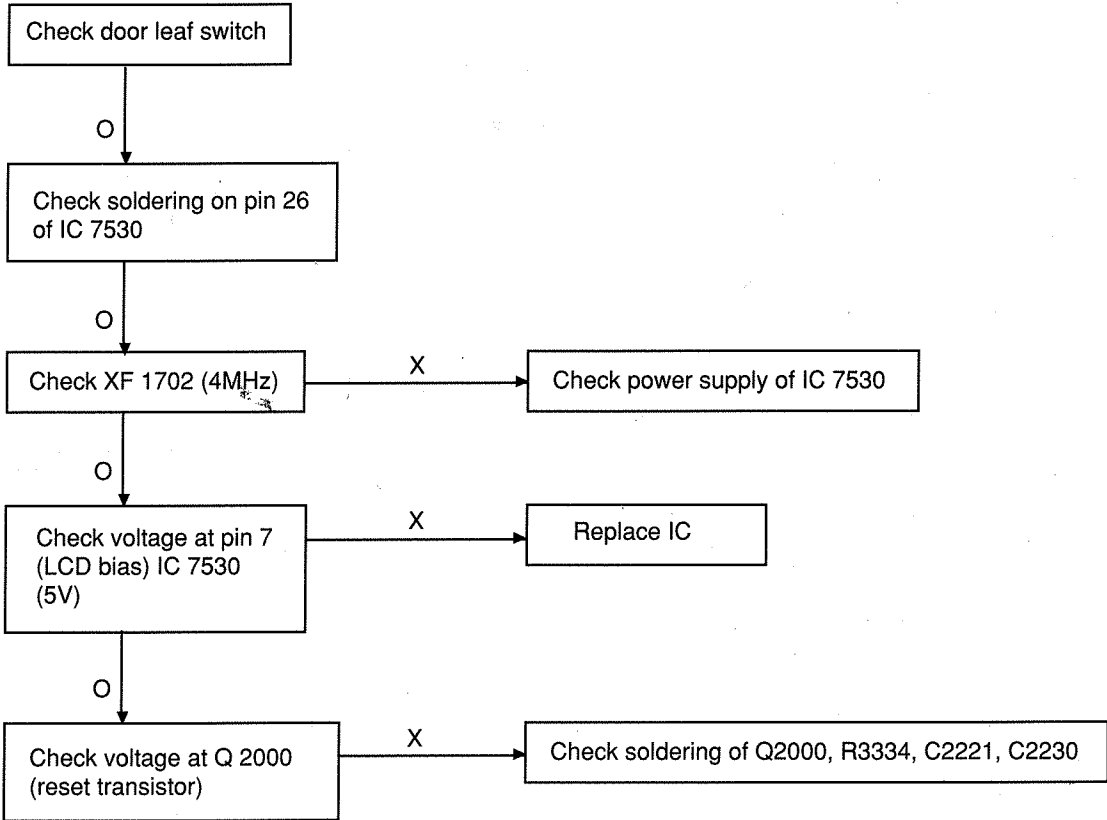
3) DISC NOT ROTATING



4) NO AUDIO



5) DISPLAY NOT WORKING



■ ADJUSTMENT

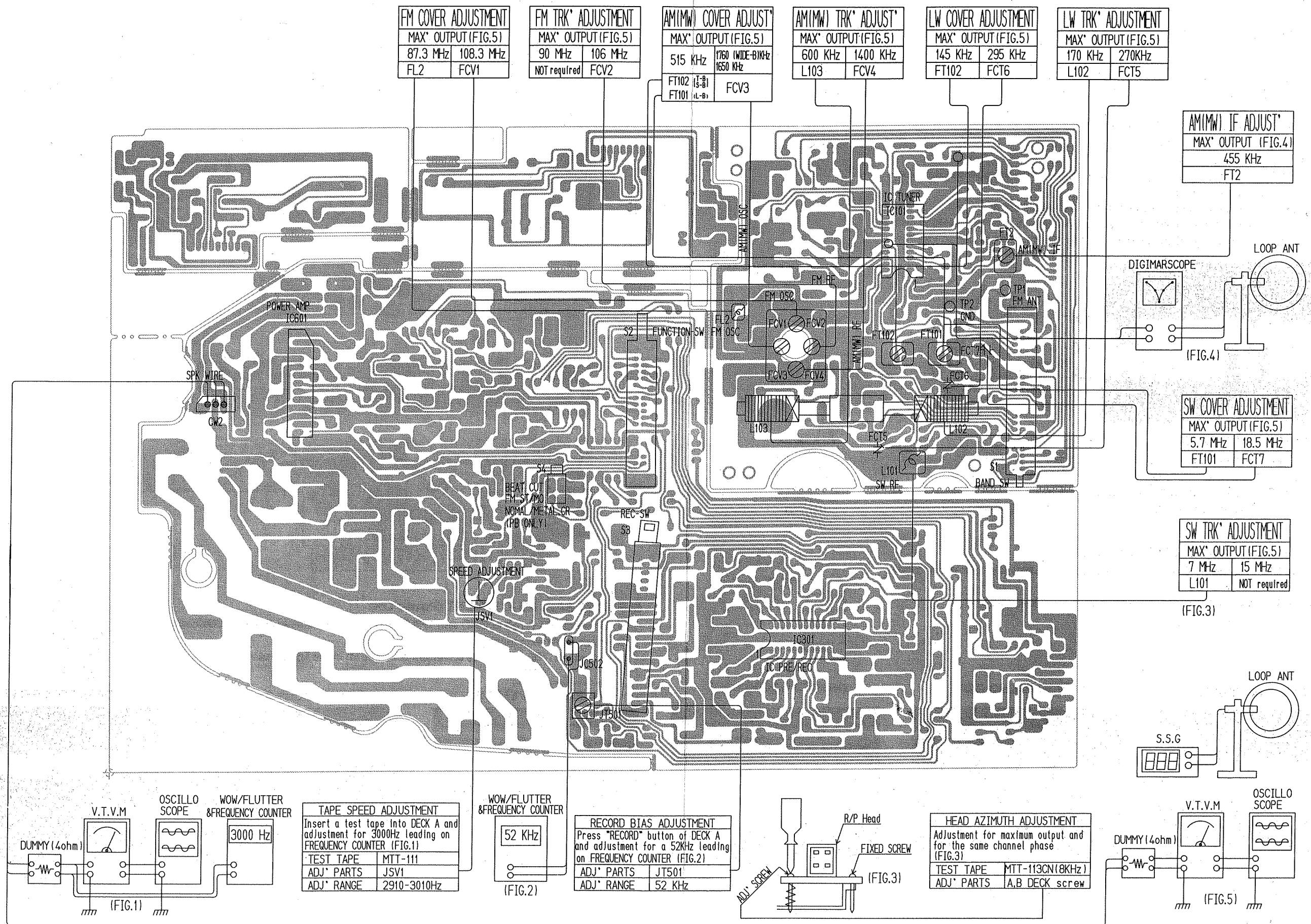
● INSTRUMENTS AND TOOLS

1. AM STANDARD SIGNAL GENERATOR
2. FM STANDARD SIGNAL GENERATOR
3. FM/AM IF GENERATOR: 10.7MHZ, 455KHZ (465KHZ).
4. OSCILLOSCOPE
5. OUTPUT METER: LEVEL METER OR AC VOLTMETER.
6. LOOP ANTENNA
7. DUMMY LOAD (4 ohm)
8. SW DUMMY ANT.
9. FREQUENCY COUNTER
10. FM STEREO MODULATOR

● IMPORTANT

1. Check the power source voltage.
2. Select desired Band and Function.
3. Set Tone Control at mid position
4. Modulate AM to 30% amplitude with 400Hz signal and FM to 22.5KHz deviation with 400Hz signal.
5. Set Volume Control to approximately 50mW (4ohm)

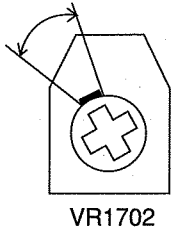
■ MAIN & TUNER ADJUSTMENT



2. CD ADJUSTMENT

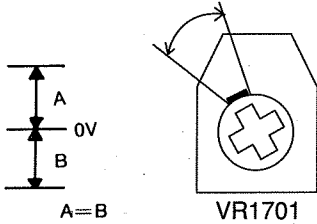
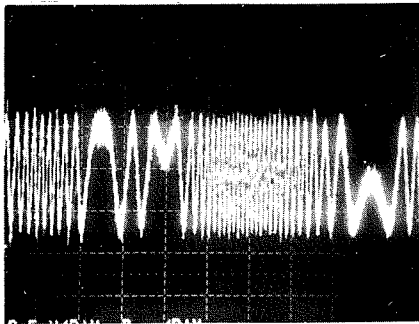
1) CLV ADJUSTMENT

- 10: 1 damping probe.
- A. Turn power on without loading a disc.
 - B. Connect S2 (Asymetry ; short)
 - C. Connect TP10 to GND and TP2 to positive terminal on the Frequency Counter.
 - D. Adjust VR 1702 so that the Frequency Counter reads $4.28\text{MHz} \pm (0.01\text{MHz})$
 - E. Disconnect S2.



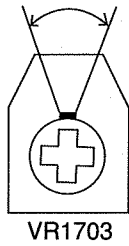
2) EF BALANCE ADJUSTMENT (Power On)

- A. Set Oscilloscope Time/Div to 2mS.
- B. Set Oscilloscope Volt/Div to 0.5V.
- C. Connect TP1 (Vref) to GND and TP4 (T.G) to positive terminal on the oscilloscope.
- D. Press PLAY with loading a disc.
- E. Adjust VR1704 all the way counter clockwise. (Intermittent sound)
- F. Adjust VR1701 so that the waveform is equally symmetrical refer to waveform below.
- G. Adjust VR1704 so that Sound comes out normally (Nearly mid-position of VR1704).



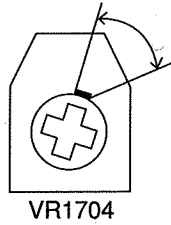
3) FOCUS BIAS ADJUSTMENT

- A. Turn power on without loading a disc.
- B. Set Oscilloscope Vol/Div to 0.1 Vdc
- C. Connect TP1 (Vref) to GND and TP3 (F.G) to positive terminal on the oscilloscope.
- D. Adjust VR1703 so that the voltage is 0 mV DC on the oscilloscope.



4) TRACKING GAIN ADJUSTMENT (Power On)

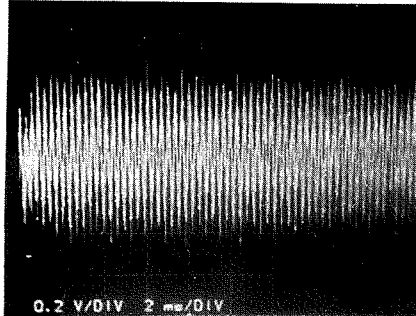
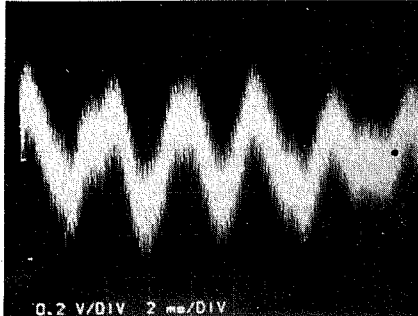
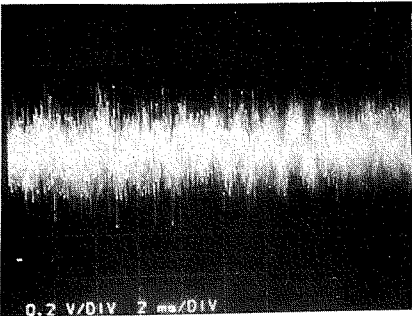
- A. Connect TP1 (Vref) to GND and TP4 (T.G) to positive terminal on the oscilloscope.
- B. Press PLAY with loading a disc.
- C. Adjust VR1704 so that Waveform is as shown in the figure below.



(NORMAL WAVEFORM)

(LOW TRACKING GAIN)

(HIGH TRACKING GAIN)



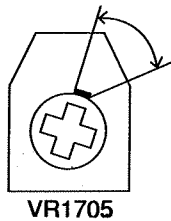
VOLT/DIV : 0.2V
TIME/DIV : 2mS

VOLT/DIV : 0.2V
TIME/DIV : 2mS

VOLT/DIV : 0.2V
TIME/DIV : 2mS

5) FOCUS GAIN ADJUSTMENT (Power ON)

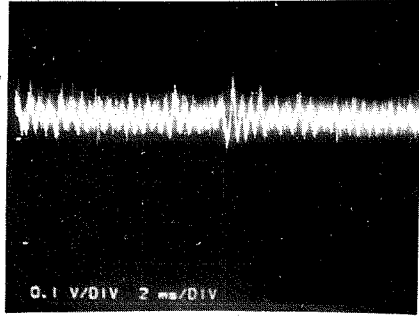
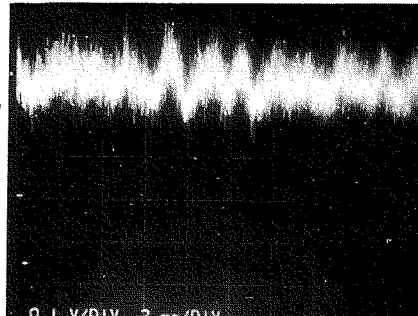
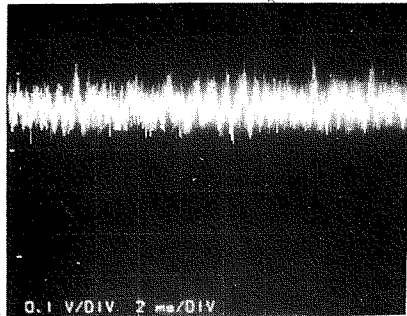
- A. Connect TP1 (Vref) to GND and TP3 (F.G) to positive terminal on the oscilloscope.
- B. Press PLAY with loading a disc.
- C. Adjust VR1705 so that the waveform is as shown in the figure below.



(NORMAL WAVEFORM)

(LOW FOCUS GAIN)

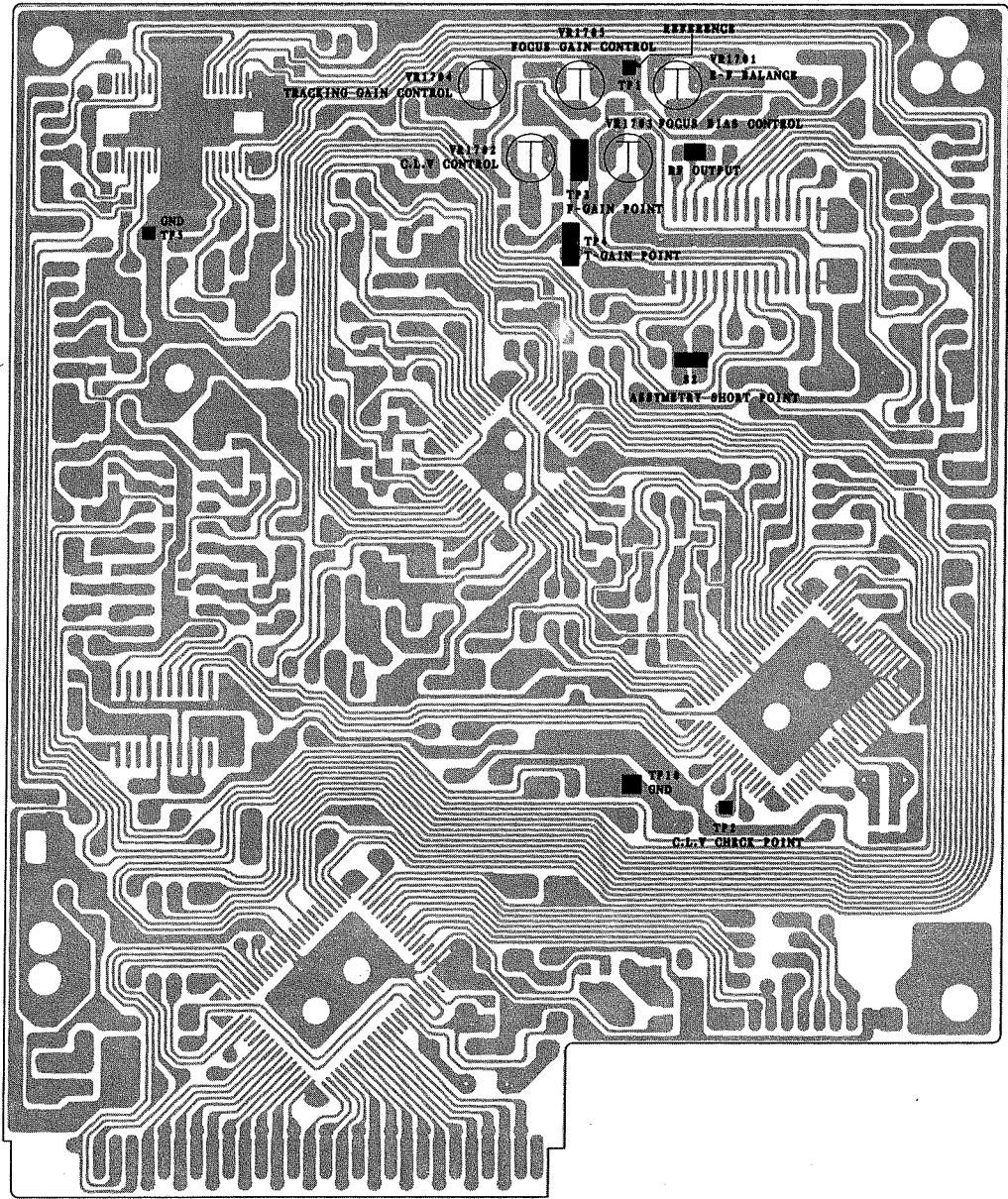
(HIGH FOCUS GAIN)



VOLT/DIV : 0.1V
TIME/DIV : 2mS

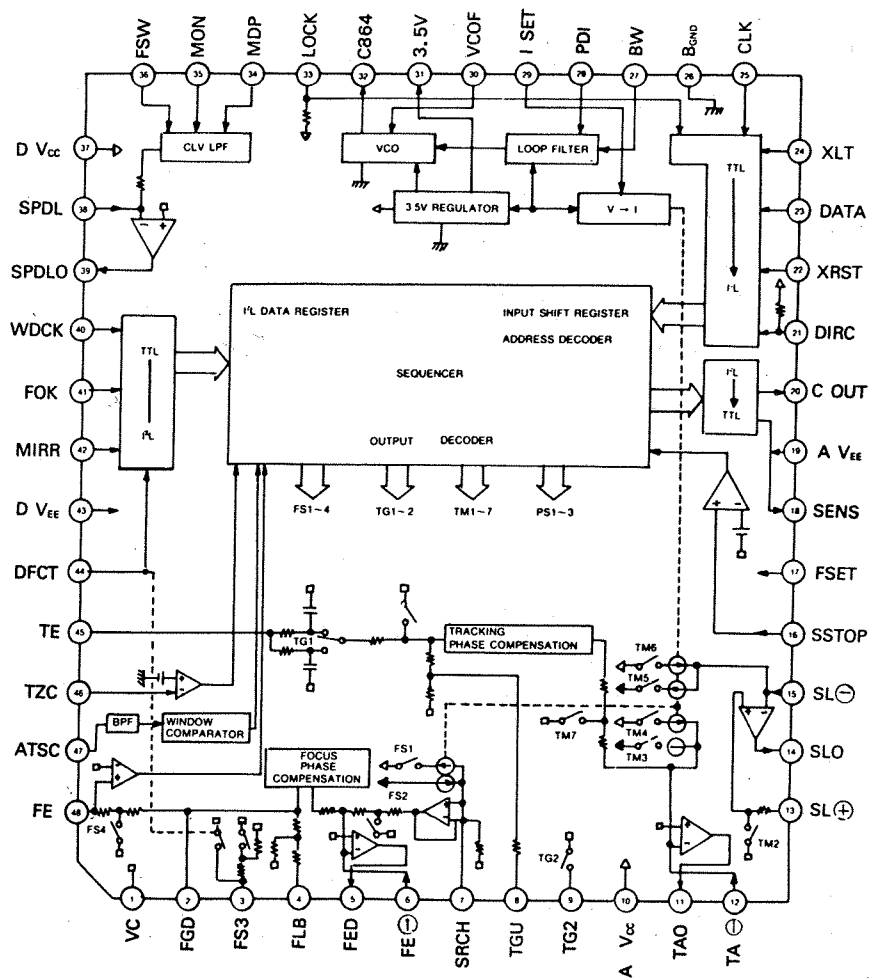
VOLT/DIV : 0.1V
TIME/DIV : 2mS

VOLT/DIV : 0.1V
TIME/DIV : 2mS

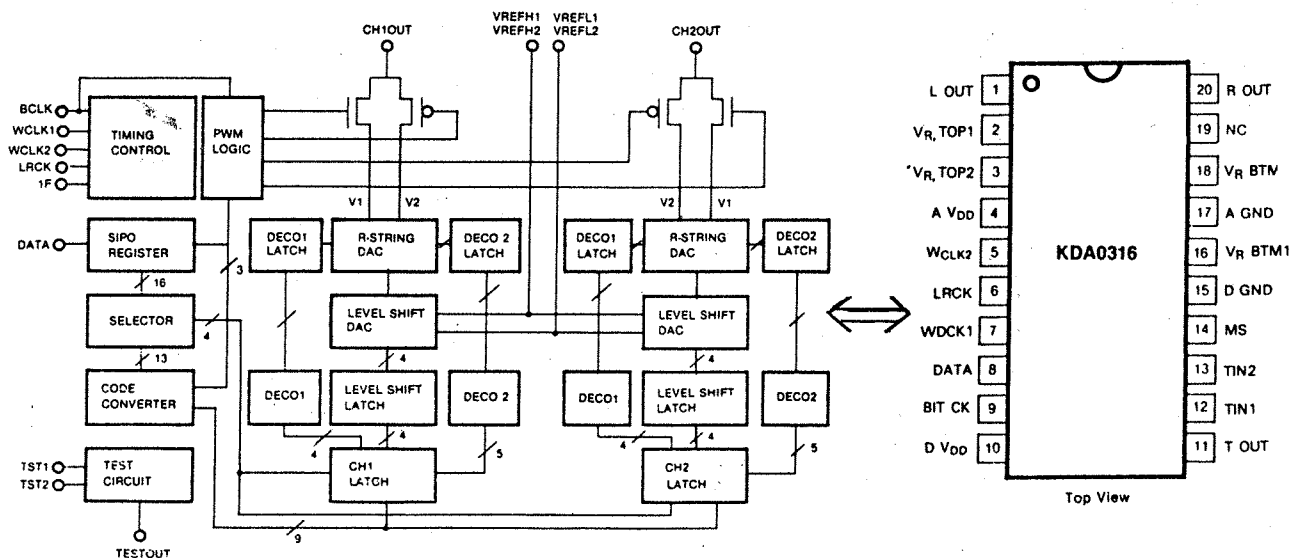


IC AND TR LEAD LAY OUT

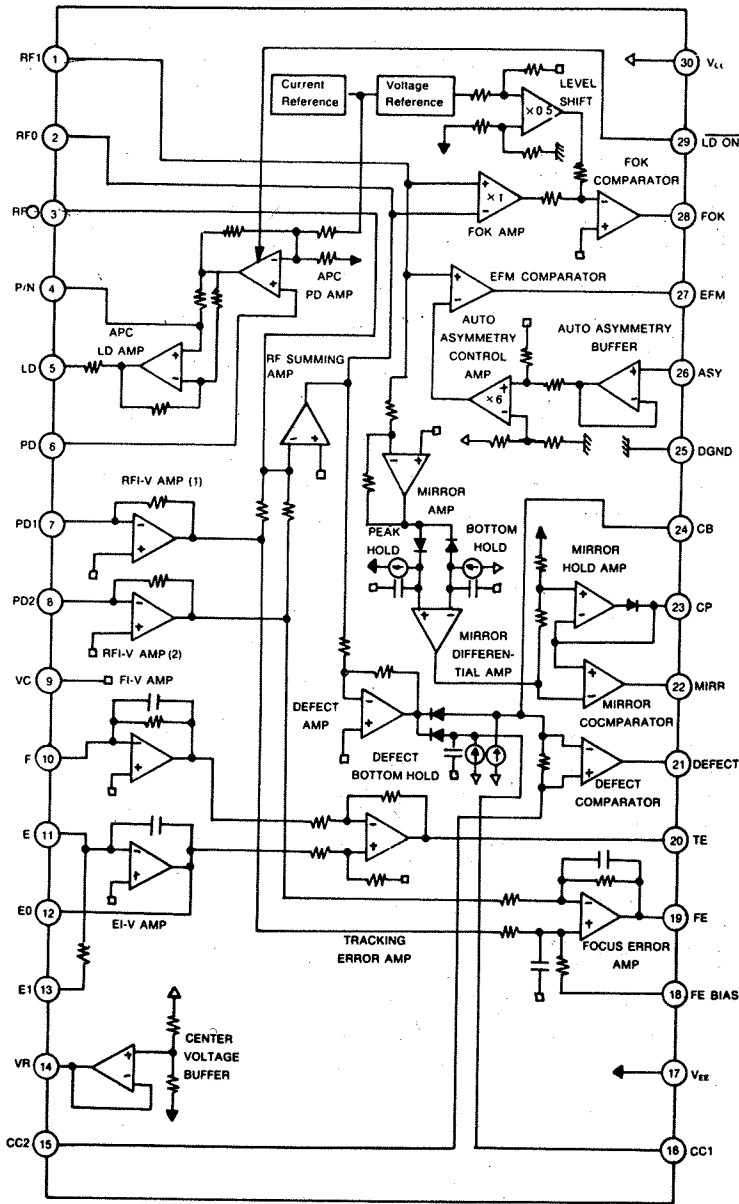
● KA8309 (SERVO SIGNAL PROCESSOR) : IC8309



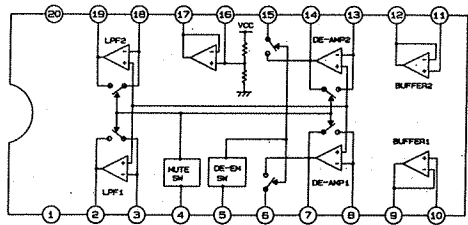
● KDA0316LD (D/A CONVERTOR) : IC0316



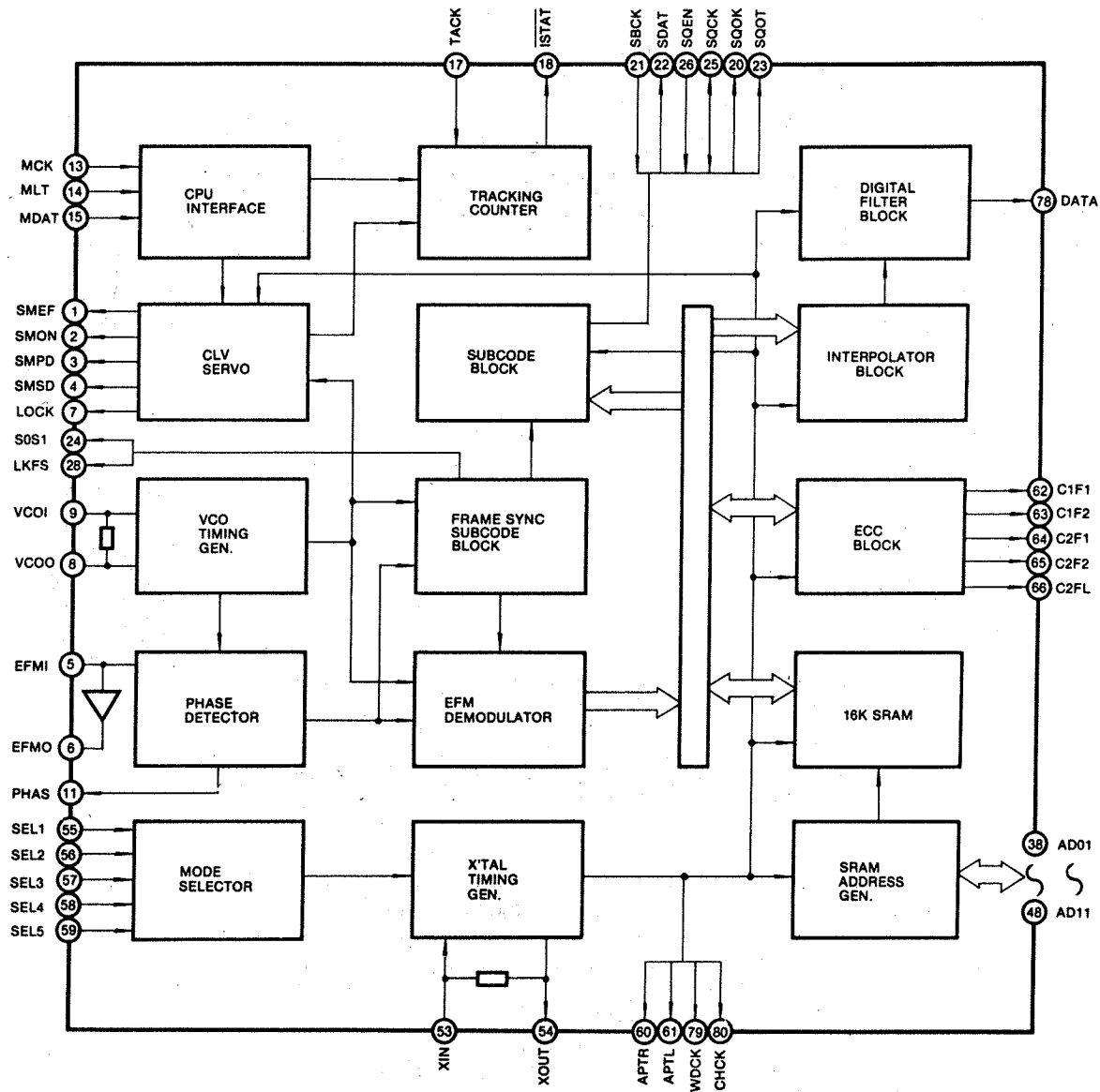
● KA9201(RF AMP) : IC9201



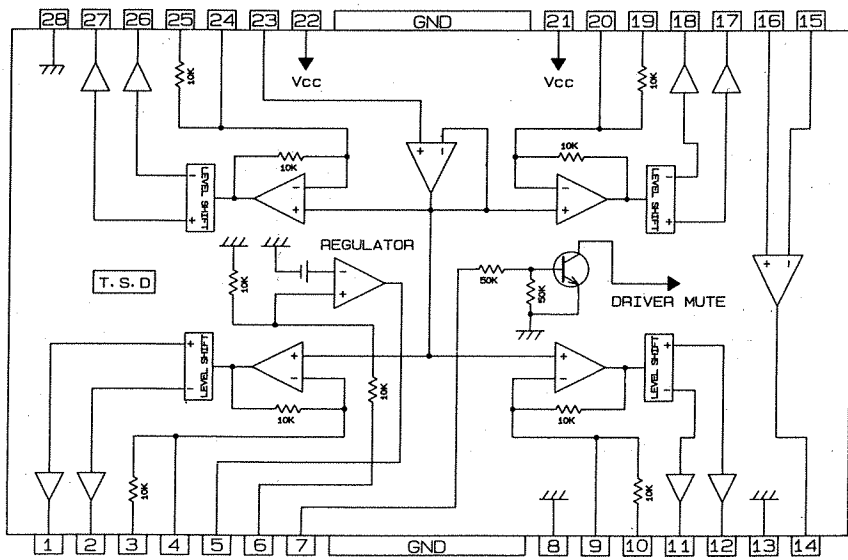
● KA9270(IC9270)



● KS5990 (DIGITAL PROCESSOR) : IC5990

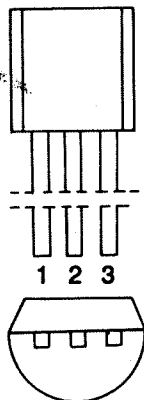


● BA6296FP : (IC6296)



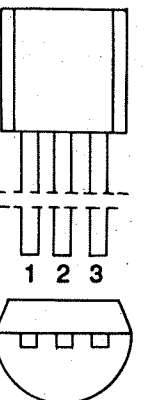
TRANSISTOR

KSR1003
KSR1007



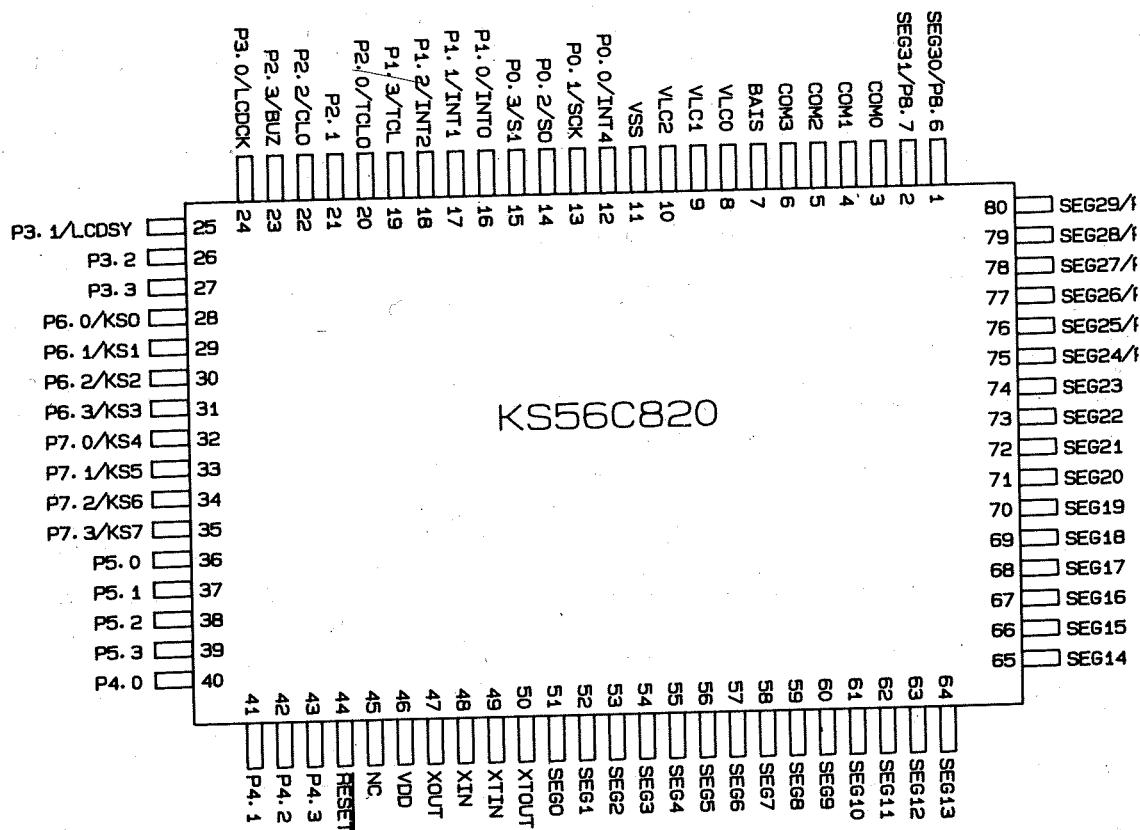
TRANSISTOR

KSB



1. EMITTER 2. COLLECTOR 3. BASE 1. EMITTER 2. BASE 3. COLLECTOR

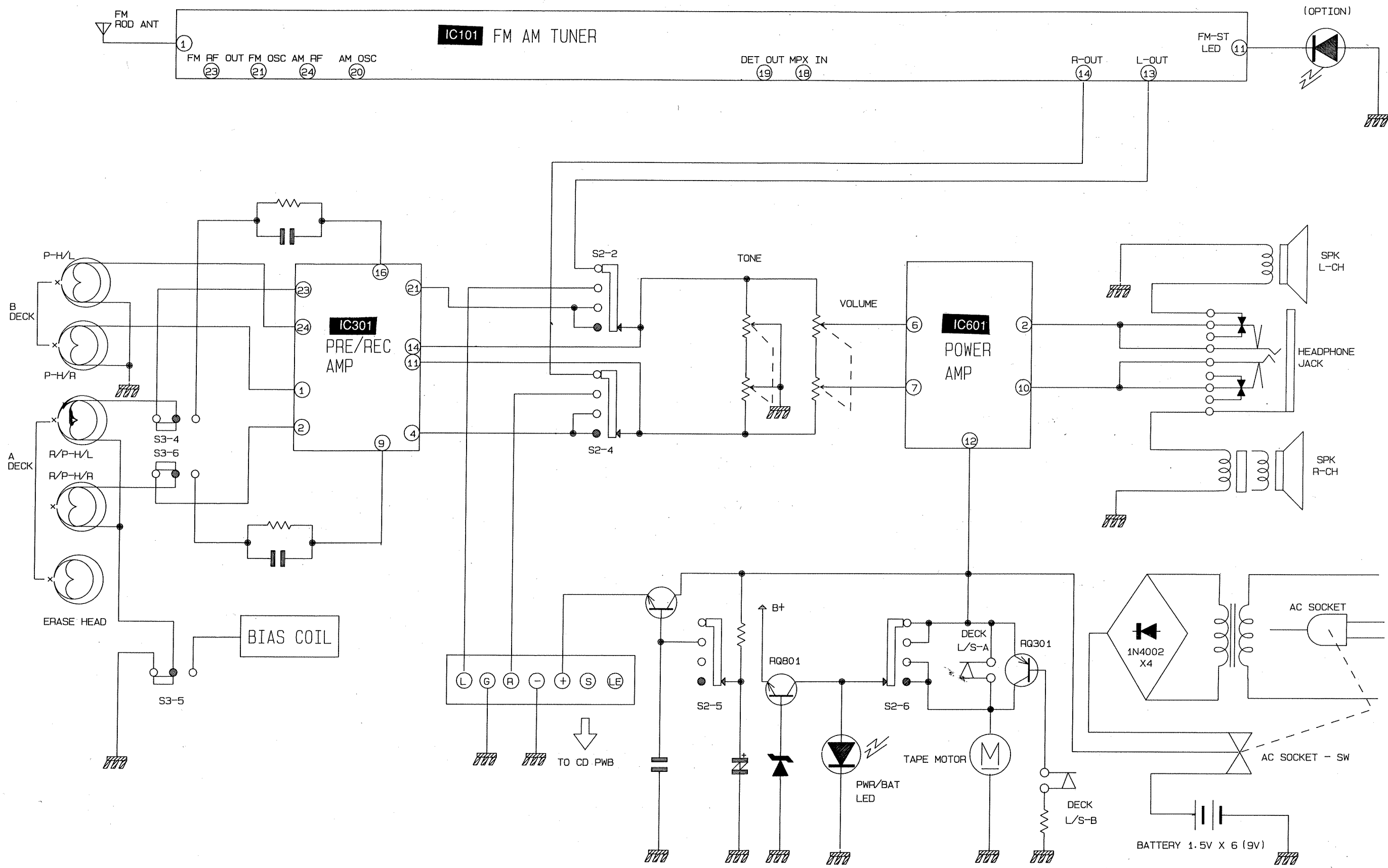
● KS56C820 (MICOM) : IC7530



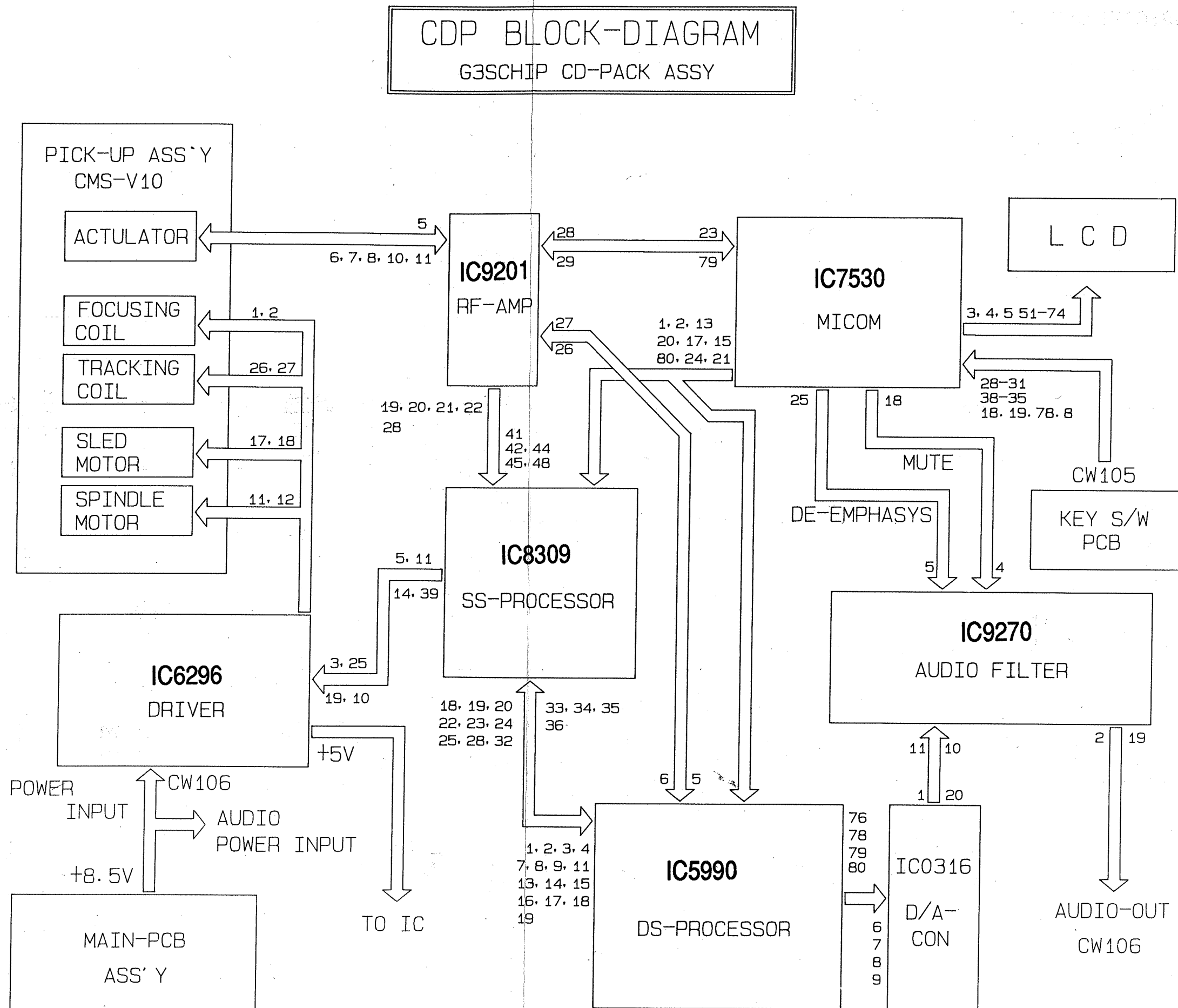
Pin Name	Pin Description	
P1.0-P1.3	4-bit Input	Internal pull-up resistor can be specified in 4-bit unit by software
P2, P7	4-bit Input/Output	
P3, P6	I/O mode selectable in 1-bit unit by software	
P4, P5	4-bit input/output, N-ch open drain	
P8.0-P8.7	Outputs in 1-bit unit (shared with segment outputs)	
SEG0-SEG23	Segment output for LCD display	
SEG24-SEG31	Segment output for LCD display (shared with Port 8)	
COM0-COM3	Common signal output for LCD display	
VLC0-VLC2	LCD power supply pin	
BIAS	LCD power supply control pin for 3/5V operating	
LCDCK	LCD clock output for display expansion	
LCDSY	LCD sync. clock output for display expansion	
TCL	Timer/Counter external clock input	
TCLO	Timer/Counter clock output	
INT0, 1, 2, 4	External interrupt input	
CLO	Clock output	
BUZ	2KHz clock output for buzzer	
KS0-KS7	Semi-interrupt input detecting external falling edge	
SCK, SI, SO	SCK: serial clock, SI: serial input, SO: serial output	
XIN, XOUT	Crystal/Ceramic or RC clock I/O for Main-system clock	
XTIN1 XTOUT	Crystal clock I/O pins for sub-system clock	

BLOCK DIAGRAM

1. RADIO CASSETTE SECTION

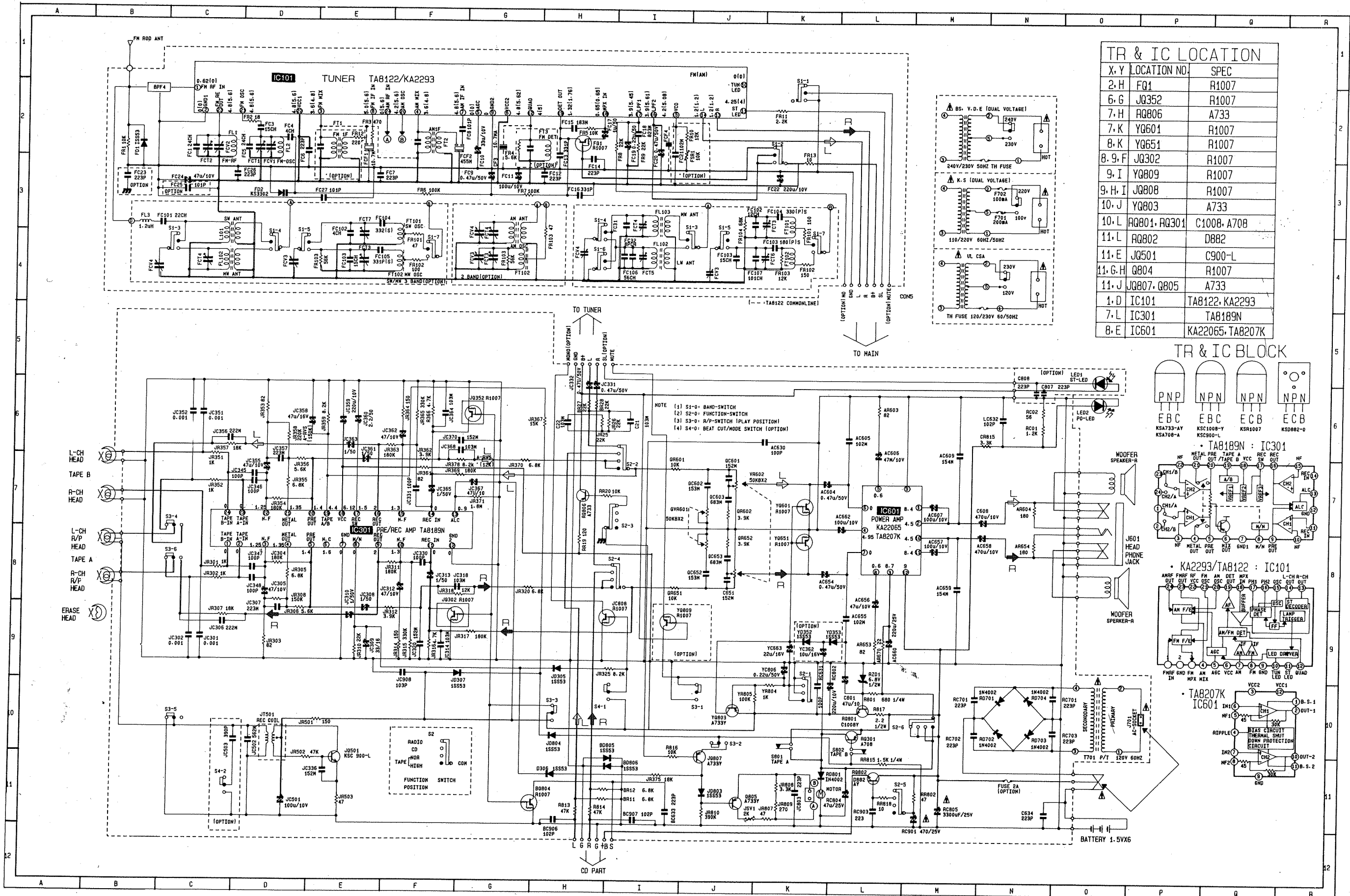


2. CD SECTION



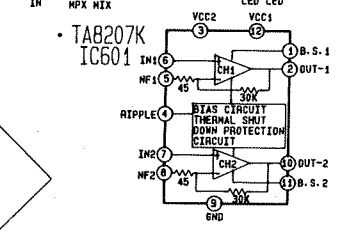
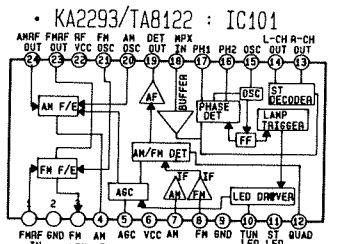
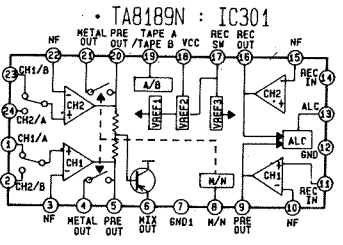
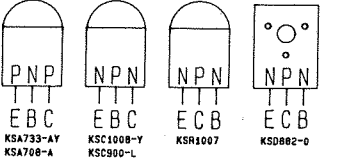
SCHEMATIC DIAGRAM

1. RADIO CASSETTE SECTION



TR & IC LOCATION		
X.Y	LOCATION NO.	SPEC
2.H	FQ1	R1007
6.G	JQ352	R1007
7.H	RQ806	A733
7.K	YQ601	R1007
8.K	YQ651	R1007
8.9.F	JQ302	R1007
9.I	YQ809	R1007
9.H.I	JQ808	R1007
10.J	YQ803	A733
10.L	RQ801, RQ301	C100B, A708
11.L	RQ802	D882
11.E	JQ501	C900-L
11.G.H	Q804	R1007
11.J	JQ807, Q805	A733
1.D	IC101	TA8122, KA2293
7.L	IC301	TA8189N
8.E	IC601	KA22065, TA8207K

TR & IC BLOCK



2. CDP SECTION

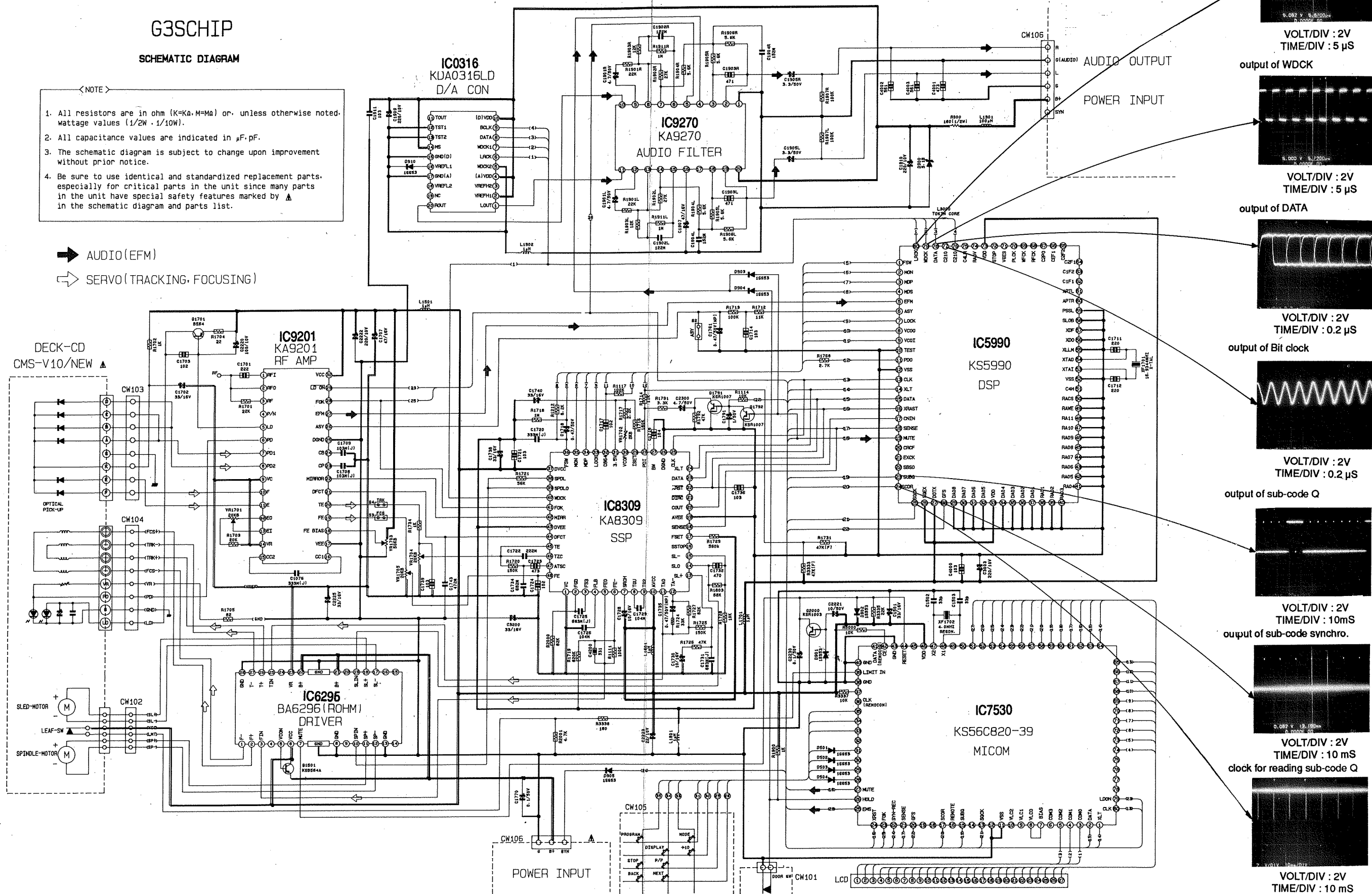
G3SCHIP

SCHEMATIC DIAGRAM

<NOTE>

1. All resistors are in ohm (K=K ohm, M=M ohm) or, unless otherwise noted, wattage values (1/4, 1/8W).
2. All capacitance values are indicated in μF , pF.
3. The schematic diagram is subject to change upon improvement without prior notice.
4. Be sure to use identical and standardized replacement parts, especially for critical parts in the unit since many parts in the unit have special safety features marked by Δ in the schematic diagram and parts list.

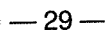
1. All resistors are in ohm (K = K ohm, M = M ohm) of, unless otherwise noted, wattage values (1/4, 1/8W).
2. All capacitance values are indicated in μF , PF.
3. The schematic diagram is subject to change upon improvement without prior notice.
4. Be sure to use specified part only, when replacement is required.



1. RADIO CASSETTE SECTION

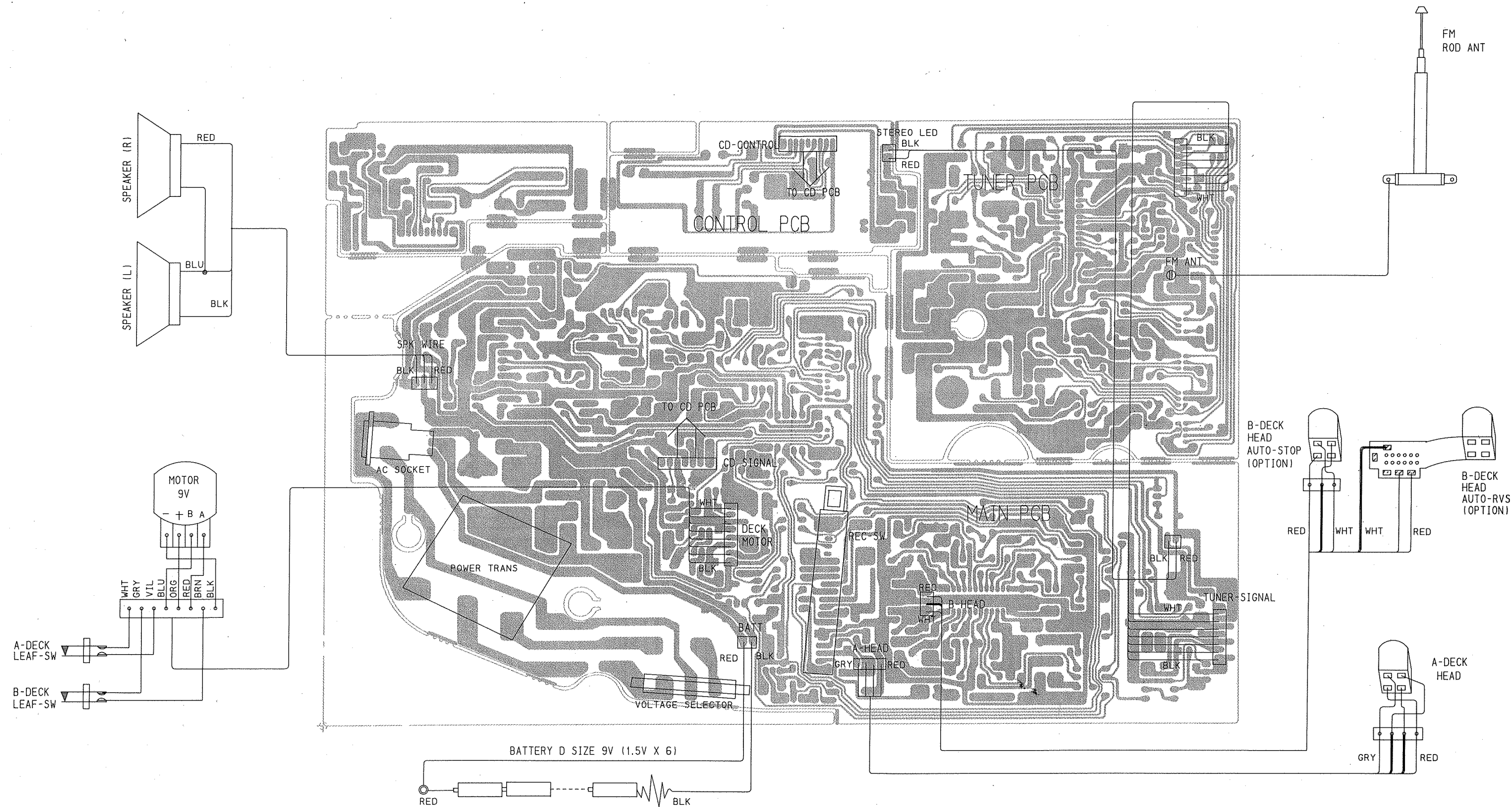


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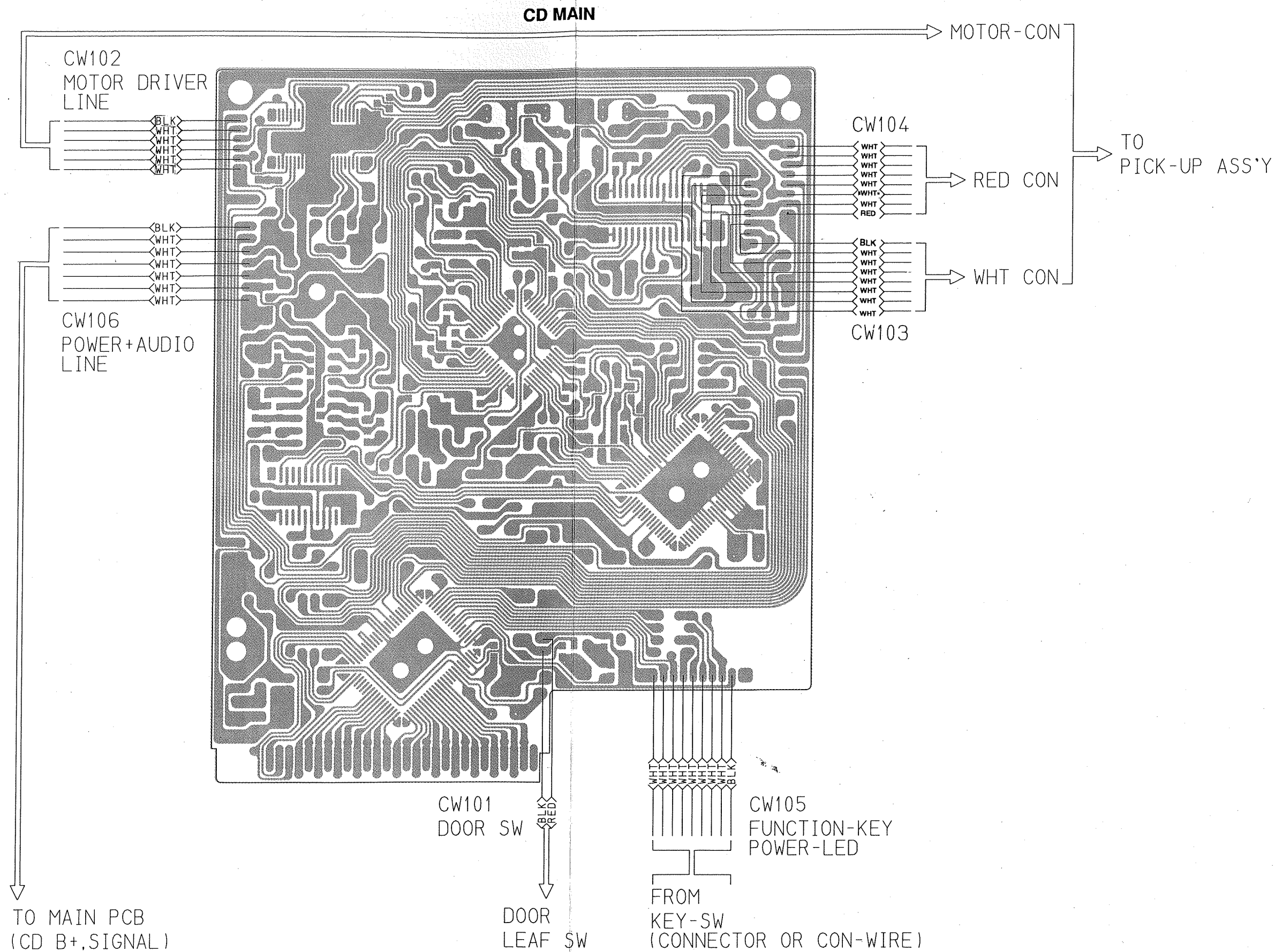


WIRING DIAGRAM (PARTS SIDE)

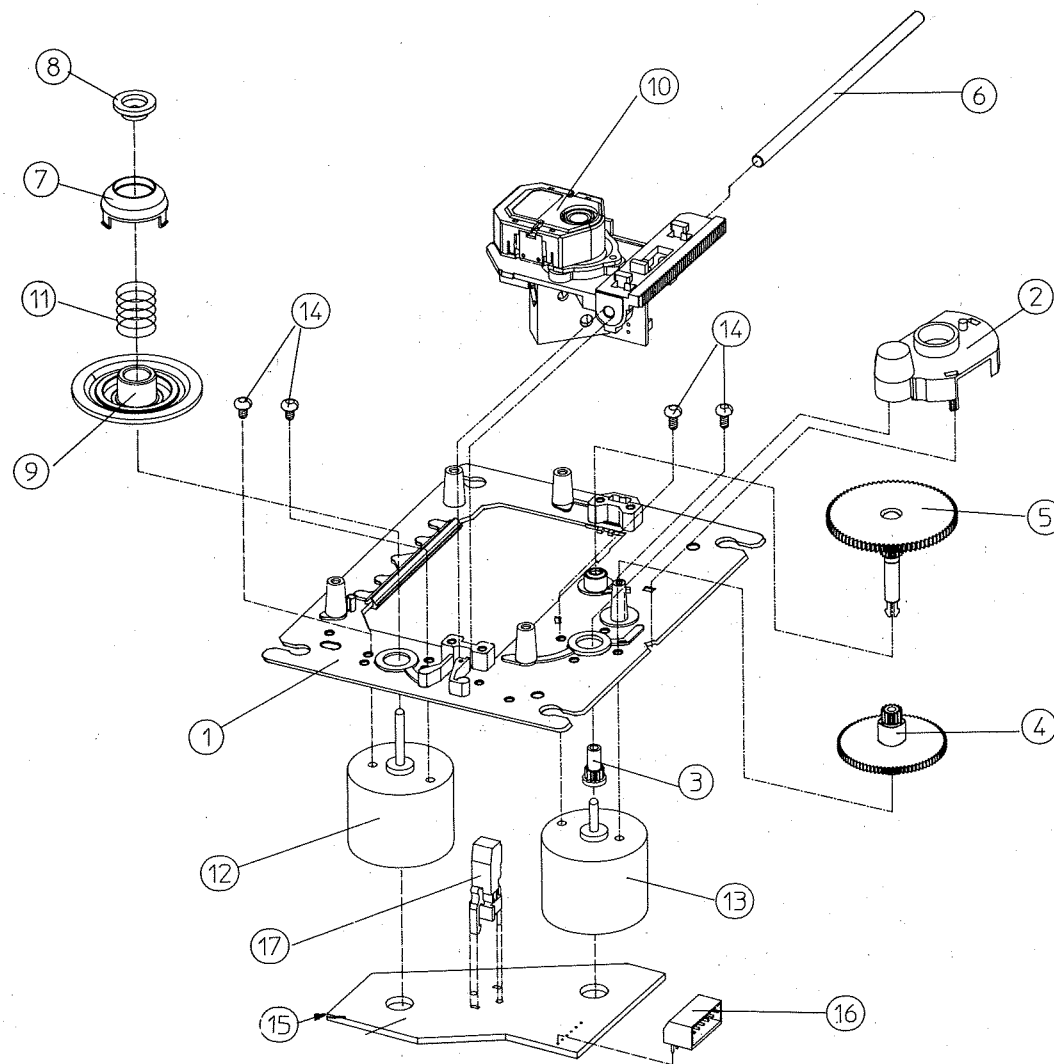
1. RADIO CASSETTE SECTION



2. CDP SECTION



■ CD DECK EXPLODED VIEW (CMS-V30A)



● PARTS LIST

NO	CODE NO.	DESCRIPTION & SPECIFICATION	Q'TY
1	12201-0052-00	CHASSIS-DECK (M) ; CMS-V30 BLK POM	1
2	13313-0057-00	COVER-GEAR ; CMS-V30 BLK ABS	1
3	11474-0017-00	GEAR (A) ; CMS-V30 M0.3 Z13 SP POM	1
4	11474-0018-00	GEAR (B) ; SMS-V30 M0.3 Z14 /Z82 SP POM	1
5	11474-0019-00	GEAR (C) ; CMS-V30 M0.3 Z16/Z90 SP POM	1
6	11404-0041-00	SHAFT-PU ; CMS-V30 D30 L79 SUS420J2	1
7	15253-503-010	CENTER-RING ; ABS +GS 20%	1
8	16034-504-510	CENTER-KNOB ; ABS 94HB	1
9	15253-503-520	T/TABLE (M) ; ABS +GS 20%	1
10	*SOH90T4N	LASER PICK-UP ; POTATABLE CDP	1
11	16674-559-410	SPRING-T/TABLE ; OS STS-W PI0.4 D11 O/L 11.0 CMS-V10	1
12	14769-057-240	MOTOR-SPINDLE ; RF -310T (SHAFT 18.9)	1
13	14769-057-250	MOTOR-FEED ; RF -310T (SHAFT 10.9)	1
15	16029-0147-00	PCB-SUB ; CMS-V30A T1.6 W163 L108 FR-1	1/8
16	13349-139-061	CONNECTOR-WAFER ; 53015 -0610 2M/M	1
17	13564-601-100	SWITCH-LEAF ; MSW-1731CVC	1

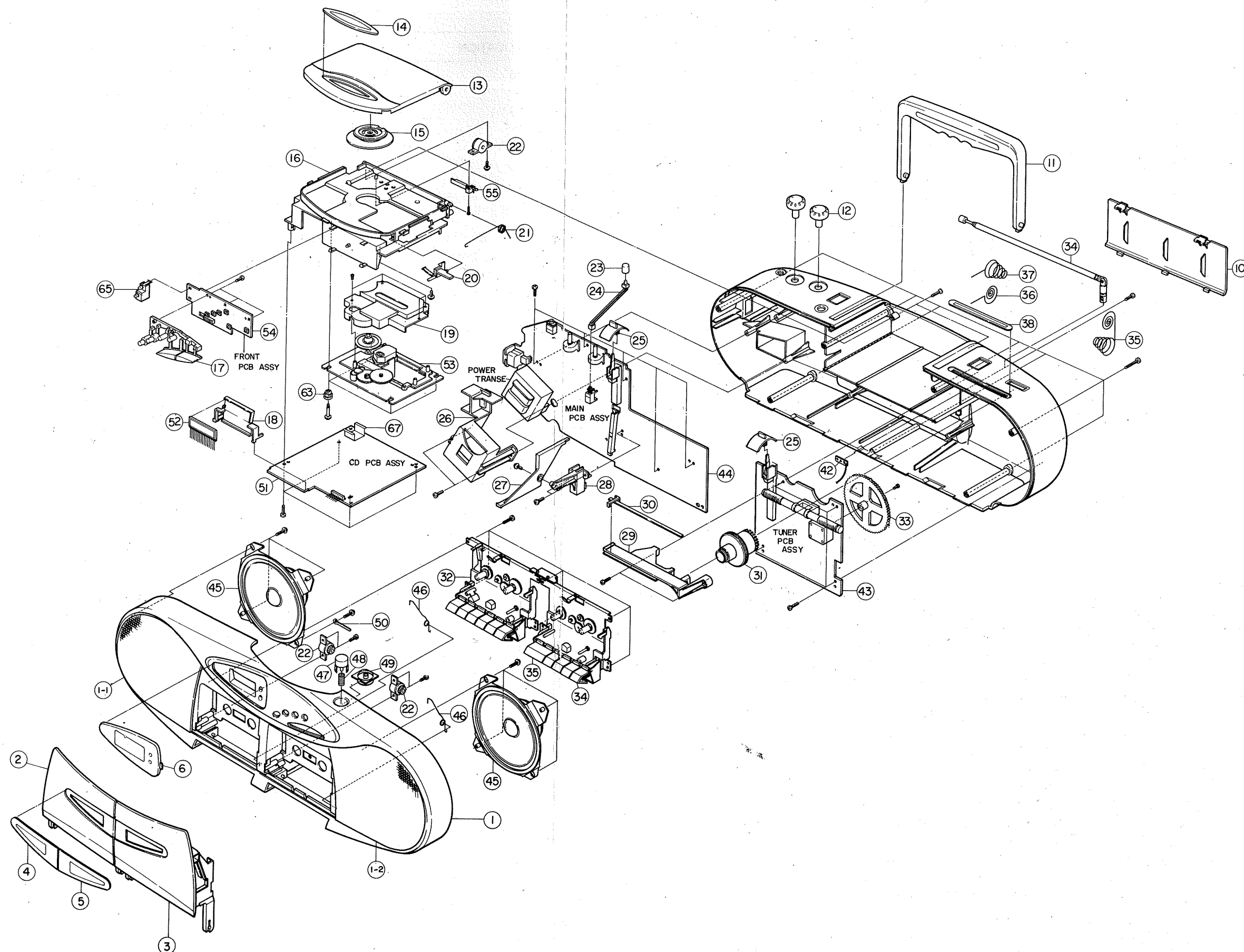
Parts which are not described in the CD DECK list are not serviceable.
If you need any other parts except those described, apply CD DECK ASSY.

■ CD PACK PARTS LIST

⚠ indicates parts for circuit safe guarding purpose. Therefore, when replacing, be sure to use specified parts only.

LOCATION	CODE NO.	DESCRIPTION & SPECIFICATION	Q'TY	REMARK
IC0316	12109-303-150	IC-DAC ; KDA0316LD (BULK)	1	
IC5990	12119-203-770	IC-DS PROCESSOR ; KS5990/KS59910	1	
IC8309	12119-203-780	IC-SS PROCESSOR ; KA8309	1	
IC6296	B4012-0073	IC-LINEAR ; BA6296FP	1	
IC9201	12119-203-790	IC-RF AMP ; KA9201	1	
IC9270	A4012-0064	IC-AUDIO FILTER ; KA9270	1	
IC7530	12109-303-691	IC-MICOM ; KS56C820-39	1	
Q1501	12149-202-050	TRANSISTOR ; KSB564A-Y	1	
Q2000	12159-301-780	TR-DIGITAL ; KSR1003	1	
Q1791, 1792	12159-301-800	TR-DIGITAL ; KSR1007	2	
D901~D905,D910	12169-301-290	DIODE-SW ; 1SS53/1N4148 CT ; 6PF	6	
D501~D504	12169-301-290	DIODE-SW ; 1SS53/1N4148 CT ; 6PF	4	
L1501,1601,1701,1801,1902	12429-411-109	COIL-CHOKE ; BAL03ST1ROM	5	
L1901	12429-411-101	COIL-CHOKE ; BAL02TB 101K, 100UH	1	
XF1702	14534-504-043	CERAMIC-RESONATOR ; CSA 4.00MG	1	
SF1701	14539-401-050	X-TAL ; HC18U 16.9344MHz	1	
VR1701,1704,1705	11249-102-044	VR-SEMI TAPE-H ; DVN-DJA A03B24 (20K)	3	
VR1703	11249-102-064	VR-SEMI TAPE-H ; DVN-DJA A03B24 (50K)	1	
VR1702	11249-102-104	VR-SEMI TAPE-H ; DVN-DJA A03B23 (2K)	1	
LCD	12339-104-690	LCD-CD ; LE0636AP	1	
D900	12169-403-310	DIODE-ZENER ; 5.1B	1	

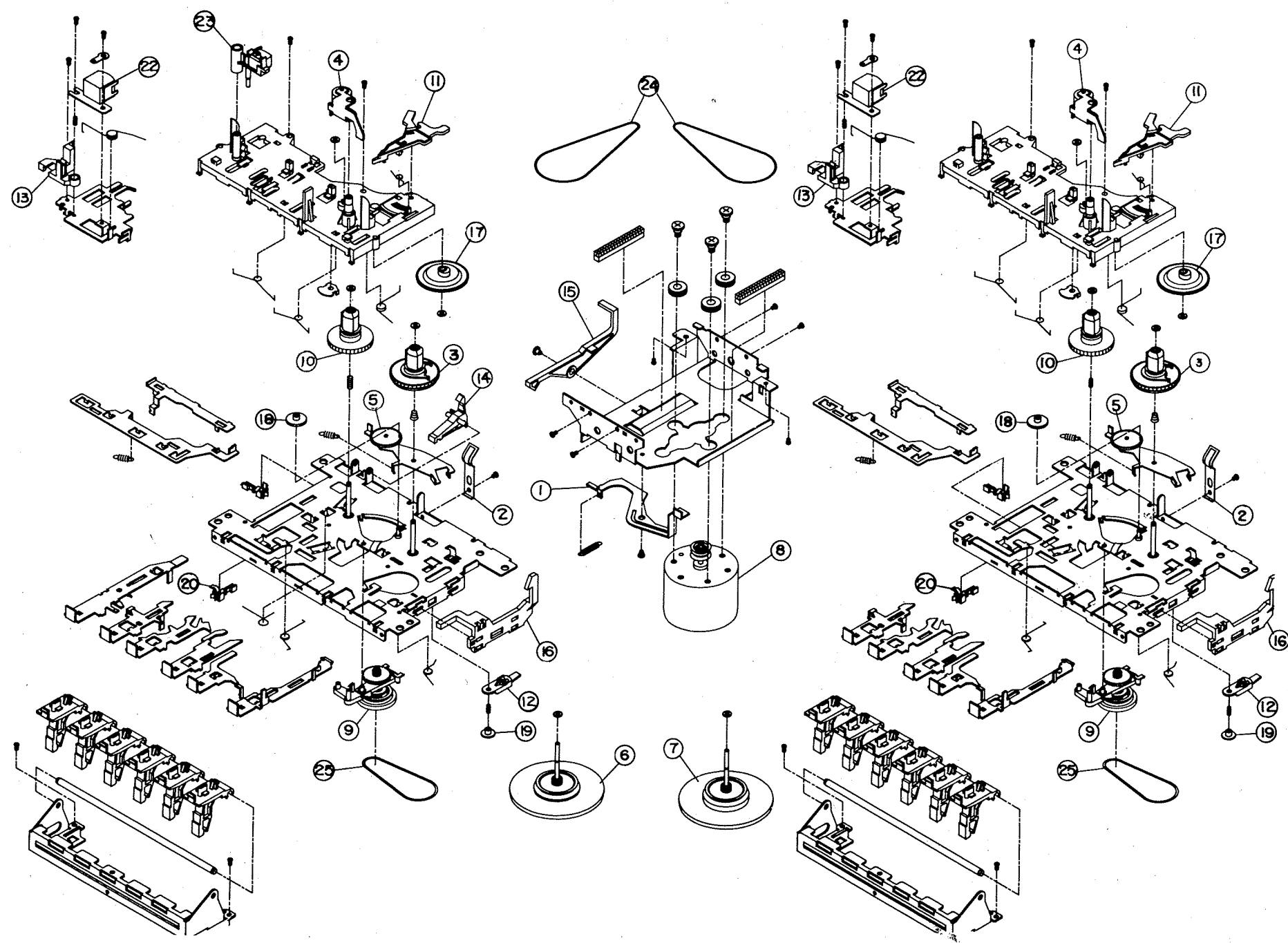
EXPLODED VIEW



■ MECHANICAL PARTS LIST

NO	CODE-NO.	DESCRIPTION & SPECIFICATION	REMARK	Q'TY
1	12000-0121-00	CABINET-FRONT ; MIPS DEEP BLUE	OPTIONAL	1
2	14042-0059-00	DOOR-CASSETTE L ; ABS DEEP BLUE		1
3	14042-0060-00	DOOR-CASSETTE R ; ABS DEEP BLUE		1
4	14074-0140-00	WINDOW-CASSETTE L ; PC T0.5		1
5	14074-0141-00	WINDOW-CASSETTE R ; PC T0.5		1
6	14074-0142-00	WINDOW LCD ; ACRYL		1
9	12000-0020-03	CABINET-BACK ; MIPS DEEP BLUE		1
10	14103-0004-03	LID-BATTERY ; MIPS DEEP BLUE		1
11	14033-0012-00	HANDLE ; ABS DEEP BLUE		1
12	14084-0326-00	KNOB-VOLUME ; ABS BLK		2
13	14042-0063-00	DOOR-CD ; ABS DEEP BLUE		1
14	14074-0143-00	WINDOW-CD ; ACRYL		1
15	16603-511-840	CHUCK-PLATE ; ABS + GF BLK		1
16	12201-0011-00	CHASSIS-CD ; ABS BLK		1
17	14082-0323-00	KNOB-CD FUNCTION ; ABS BLK		1
18	13323-0012-00	HOLDER-LCD ; ABS BLK		1
19	16033-507-010	COVER-PICK UP ; ABS BLK		1
20	11533-0003-00	LEVER-EJECT ; POM BLK		1
21	16674-586-010	SPRING-CD DOOR ; SWP Ø1.0		1
22	15214-506-011	DAMPER ASS'Y ; POM PD-790		3
23	17624-634-610	KNOB-DSL ; ABS BLK		1
24	15254-515-610	LINK-DSL ; ABS BLK		1
25	17624-619-010	KNOB-LEVER ; ABS BLK		2
26	13313-0039-00	COVER-P/T ; ABS BLK		1
27	11534-0028-00	LEVER-REC ; POM NAT		1
28	13354-0026-00	GUIDE-REC ; POM BLK		1
29	12203-0012-00	CHASSIS-TUNING ; ABS BLK		1
30	14164-0004-00	INDICATOR ; P.P WHT		1
31	14084-0045-00	KNOB-TUNING ; ABS BLK		1
32	17159-0061-00	DECK-CASSETTE ; ADR2013FW		1
33	15214-510-410	WHEEL-DRUM ; ABS BLK		1
34	14509-316-050	ANT-ROD ; 5.2PI 728MM		1
35	16674-531-820	SPRING-BATTERY (+, -) L SWP PI1.0		1
36	16674-531-610	SPRING-BATTERY, B ; SWP PI1.0		1
37	16674-531-710	SPRING-BATTERY, C ; SWP PI1.2		1
38	14074-0036-00	WINDOW-SCALE ; PC T0.5		1
39	17008-130-105	SCREW PH ; +3 x 10		1
40	17448-130-201	SCREW TAP ; B-3x20 FE FZY		7
41	17458-230-103	SCREW TAP ; 3 x 10 FZB		2
42	16624-513-310	BRKT-ANT ; SPTT T0.3		1
43	19100-004-111	TUNER PCB ASS'Y		
44	19000-029-770	MAIN PCB ASS'Y		
45	14209-118-240	GENERAL-SPEAKER ; 5.0W 40HM		2
46	12724-0064-00	SPRING-DOOR ; PWR Ø 0.8		2
47	17624-628-010	KNOB-CD EJECT ; ABS BLK		1
48	16674-573-410	SPRING-PUSH ; SUS Ø0.35		1
49	16604-539-310	HOLDER-EJECT ; ABS BLK		1
50	16634-515-110	CLAMPER-WIRE ; DALB-2		1
51	19000-025-530	CD-PCB ASS'Y		1
52	12339-104-690	LCD-CD ; LE0636AP		1
53	14929-407-010	DECK-CD ; CMS-V10/A		1
54		FRONT PCB ASS'Y		1
55	13564-601-060	SWITCH-LEAF ; MSW-0080		1
63	16174-503-410	RUBBER-CD ; SILICON WHT		4
65	13324-0048-00	HOLDER;LED ; ABS BLK		1
66	17048-126-051	SCREW-RH ; 2.6x5		1
67	11124-0008-00	HEAT SINK ; Bs S T0.5		1
68	17458-230-101	SCREW-TAP TITE BH ; 2S-3x10 FZ FZY	OPTIONAL	8

CASSETTE DECK EXPLODED VIEW
 (ADR2013FW) AUTO STOP

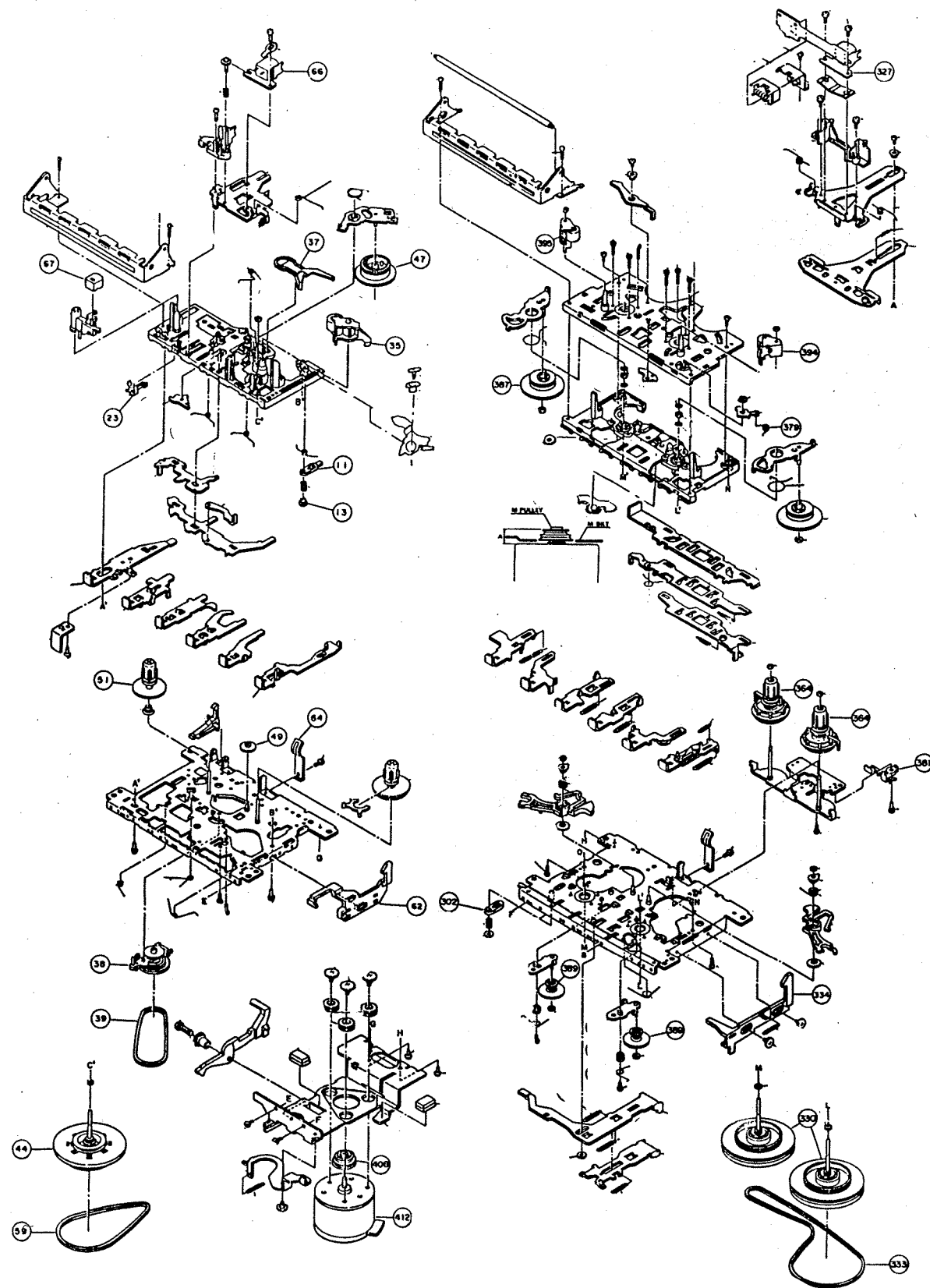


• PARTS LIST

Ref. NO.	CODE No.	DESCRIPTION & SPECIFICATION	Q'TY	REMARK
1	17159-0046-00	DECK-CASSETTE ; ADR2013FW	1	A'SSY
2	10000-607-186	LEVER-SYNCHRO ; 11134-01280AA	1	
3	10000-607-146	SP PACK ; 51299-02506XC	2	
4	10000-607-101	TAKE UP REEL ASSY ; ADR28-010	2	
5	10000-607-103	PINCH ARM ASSY ; ADR26-001	2	
6	10000-607-104	IDLER ARM ASSY ; ADR02-042	2	
7	10000-607-105	FLYWHEEL GEAR S ASSY ; ADR15-021	1	
8	10000-607-106	FLYWHEEL GEAR D ASSY ; ADR15-022	1	
9	10000-502-011	MOTOR ; EG530YD9B	1	
10	10000-607-108	F/R ARM ASSY ; ADR22-012	2	
11	10000-607-109	SUPPLY REEL GEAR ASSY	2	
12	10000-607-117	ARM-SENSOR 11102-00530AA	2	
	10000-607-111	PAUSE LOCK CAM	2	

Ref. NO.	CODE No.	DESCRIPTION & SPECIFICATION	Q'TY	REMARK
13	10000-607-113	HEAD BASE MSS ; 11105-00031A	2	
14	10000-607-145	REC SAFETY LEVER ; 11134-01000AA	1	
15	10000-607-184	RELEASE LEVER ; 11134-01240AA	1	
16	10000-607-160	LEVEL EJECT(F) ; 11134-01220AA	2	
17	10000-607-114	CAM GEAR	2	
18	10000-607-115	F.F GEAR ; 11128-00055AA	2	
19	10000-607-116	PAUSE CAP ; 11116-00011AA	2	
20	10000-607-178	LEAF SW(MAIN) ; MSW1541XACV	2	
22	10000-523-008	R/P HEAD ; MS15R-AA2N1	2	
23	10000-607-162	ARM-MAGNETIC ; 11102-00520AA	1	
24	10000-607-159	BELT MAIN ; 59.7PIX 1.0T	2	
25	10000-607-156	BELT SUB ; 34.7 PIX 1.0T	2	
26	10000-607-128	BUTTON KNOB 11133-00010AA	12	

(TN521ZSW-407Z) AUTO REVERSE



● PARTS LIST

NO.	CODE-NO.	DESCRIPTION & SPECIFICATION	Q'TY
	17159-0061-00	TN521ZSW-407Z	
11	10000-268-011	PAUSE LEVER ; 1821-14-55	1
13	10000-268-013	PAUSE STOPPER ; 1921-14-11	
23	10000-268-023	LEAF SWITCH ; MSW-1541T	1
35	10000-268-035	PINCH ROLLER ARM ASSY ; 1921-04-301	1
37	10000-268-038	SENSING LEVER ; 1921-26-04	1
38	10000-268-039	RF CLUCH ASSY ; 1921-07-302	1
39	10000-268-040	RF BELT ; 1921-07-03	1
44	10000-268-044	FLYWHEEL ASSY ; 1921-09-303	1
47	10000-268-047	CAM GEAR ; 1921-26-02	1
49	10000-268-049	FF GEAR ; 1821-10-70	1
51	10000-268-051	SUPPLY REEL ASSY ; 1921-05-304	1
52	10000-268-052	TAKE UP REEL ASSY ; 1921-05-303	1
53	10000-268-053	SENSOR ; 1921-05-06	1
59	10000-268-159	MAIN BELT ; 1821-12-173	1
62	10000-268-062	EJECT SLIDE LEVER ; 1921-13-02	1
64	10000-268-064	PACK SPRING ; 1821-10-93	1
66	10000-523-008	R/P HEAD ; MS15RAA2NI	1
67	10000-542-002	E-HEAD ; PHK380-MS16A	1
302	10000-186-011	PAUSE LEVER ; 1821-01-15	1
327	10000-524-021	PB HEAD ; MR35P-KF243	1
330	10000-601-065	FLYWHEEL ASSY ; 1851-12-501	2
333	10000-601-066	MAIN BELT ; 1821-12-142	1
334	10000-601-010	EJECT SLIDE LEVER ; 1851-17-03	1
364	10000-601-057	REEL ASSY ; 1851-11-501	2
379	10000-601-015	TURN OVER SPRING ; 1851-03-02	1
381	10000-601-058	LEAF SW ; MSW1290CV	1
384	10000-601-019	T-CAM GEAR (F) ; 1851-05-03	1
387	10000-601-022	T-CAM GEAR (R) ; 1851-06-02	1
389	10000-601-061	FF GEAR ; 1851-07-03	2
394	10000-601-054	PINCH ROLLER (F) ASSY ; 1851-09-501	1
395	10000-601-055	PINCH ROLLER (R) ASSY ; 1851-10-501	1
408	10000-268-108	MOTOR PULLEY (MA) ; 1851-14-31	1
412	10000-502-011	MOTOR ; EG530YD9B	1

Parts which are not described in the DECK list are Inot serviceable.
If you need any other parts except those described, apply DECK ASS'Y

■ ELECTRICAL PARTS LIST

1. MAIN SECTION

⚠ indicates parts for circuit safe guarding purpose. Therefore, when replacing, be sure to use specified parts only.

LOCATION	CODE NO.	DESCRIPTION & SPECIFICATION	Q'TY	REMARK
QVR601	11209-804-020	VR-DOUBLE ; RK16K12E0 Z01 53B	1	
VR602	11219-149-010	VR-DOUBLE ; RK16K12L0 Z01 53A	1	
JSV1	11249-102-104	VR-SEMI TAPE-H ; EVN-DJA A03B23(2K)	1	
JC503	11407-017-391	C-CERAMIC ; CC 45T SL 50V 390-J	1	
AC609, 659	11505-713-154	C-POLYESTER ; TAPING 0.15MF-J 50V	2	
JC502	11505-713-562	C-POLYESTER ; CQ921T M 50V 0.0056M-J	1	
C21,22,JC314,364,368,318	11505-714-103	C-POLYESTER ; CQ921T M 50V 0.01M-K	6	
JC336,370,320,306,356	11505-714-152	C-POLYESTER ; CQ921T M 50V 0.0015M-K	5	
QC602, 652	11505-714-153	C-POLYESTER ; CQ921T M 50V 0.015M-K	2	
JC306, 356	11505-714-222	C-POLYESTER ; CQ921T M 50V 0.0022M-K	2	
JC357, 307	11505-714-223	C-POLYESTER ; CQ921T M 50V 0.022M-K	2	
QC603, 653	11505-714-683	C-POLYESTER ; CQ921T M 50V 0.068M-K	2	
AC662,657,607,JC501	11608-102-104	C-ELECTROLYTIC ; SMS T 10V 100M (5x11)	4	
RC802,JC359	11608-102-224	C-ELECTROLYTIC ; SMS T 10V 220M (6.3x11)	2	
AC608, 658	11608-102-471	C-ELECTROLYTIC ; SMS T 10V 470M (8x11.5)	2	
JC305,355,362,312,367	11608-102-473	C-ELECTROLYTIC ; SMS T 10V 47M (5x11)	8	
AC606,656,C801				
YC663	11608-103-223	C-ELECTROLYTIC ; SMS T 16V 22M (5x11)	1	
JC309	11608-103-333	C-ELECTROLYTIC ; SMS T 16V 33M (5x11)	1	
JC358	11608-103-473	C-ELECTROLYTIC ; SMS T 16V 47M (5x11)	1	
AC660	11608-104-221	C-ELECTROLYTIC ; SMS T 25V 220M (8x11.5)	1	
RC901	11608-104-471	C-ELECTROLYTIC ; SHL T 25V 470M (10x12.5)	1	
RC804	11608-104-473	C-ELECTROLYTIC ; SMS T 25V 47M (5x11)	1	
JC308,361,310,313,363,365	11608-106-102	C-ELECTROLYTIC ; SMS T 50V 1M (5x11)	6	
YC806	11608-106-221	C-ELECTROLYTIC ; SMS T 50V 0.22M (5x11)	1	
JC360	11608-106-222	C-ELECTROLYTIC ; SMS T 50V 2.2M (5x11)	1	
AC604,654,JC332,333	11608-106-471	C-ELECTROLYTIC ; SMS T 50V 0.47M (5x11)	4	
RC805	11609-154-332	C-ELECTROLYTIC ; SMS 25V 3300M (16x31.5)	1	
IC301	12109-401-840	IC-PRE/REC ; TA8189N	1	
IC601	12119-101-290	IC-POWER AMP ; TA8207K	1	
YQ803,Q805,RQ806,JQ807	12149-101-520	TRANSISTOR ; KSA733-Y, TAPE	4	
RQ301	12149-101-560	TRANSISTOR ; KSA708-Y, TAPE	1	
JQ501	12149-301-840	TRANSISTOR ; KSC900-L, TAPE	1	
RQ801	12149-301-930	TRANSISTOR ; KSC1008-Y, TAPE	1	⚠
RQ802	12149-401-900	TRANSISTOR ; KSD882-0	1	
YQ601,651,BQ804,JQ302,352,808	12159-301-800	TR-DIGITAL ; R1007/108M/124XS	6	
RD701,702,703,704,801	12169-201-090	DIODE-RECTIFIER ; 1N 4002, TAPE	5	⚠
JD803,804,306,307,305	12169-301-290	DIODE-SW ; 1SS53/1N4148, CT ; 6PF	7	
BD805, 806				

LOCATION	CODE NO.	DESCRIPTION & SPECIFICATION	Q'TY	REMARK
REDI	12169-403-690	DIODE-ZN ; 500MW UZ-6.8 BH	1	⚠
JT501	12619-012-811	COIL-SEVEN CAN ; 1R65HH T-BIAS	1	
CW5, CN1	13078-477-120	CONNECTOR-WIRE/B.S ; 5264-07/5395-07 10	2	
J601	13339-101-502	JACK-HEADPHONE ; SHQ9085-01-142 (GRN)	1	
CW1, 3	13349-512-561	CONNECTOR-WAFER ; STICK 5267-02A 2P-TYP	2	
CW6	13349-512-562	CONNECTOR-WAFER ; STICK 5267-04A 4P-TYP	1	
CW4	13349-512-569	CONNECTOR-WAFER ; STICK 5267-08A 8P-TYP	1	
CW2, 7	13349-527-502	CONNECTOR-WAFER ; STICK 5267-03A 3P	2	
S4	13529-920-220	SWITCH-PUSH ; R2320615 2C-2P	1	
P.T(OPTIONAL)	12869-224-050	TRANS-POWER ; EI AC 230/240V 50Hz	1	⚠
P.T(OPTIONAL)	12869-224-060	TRANS-POWER ; EI AC 115/230V 60/50Hz	1	⚠
P.T(OPTIONAL)	12869-224-070	TRANS-POWER ; EI AC 120/230V 60/50Hz	1	⚠
P.T(OPTIONAL)	12869-224-080	TRANS-POWER ; EI AC 110/220V 60Hz	1	⚠
J701(OPTIONAL)	13354-501-320	SOCKET-2P SW(CP) ; HSC 1466-01-0101	1	⚠
J701(OPTIONAL)	13354-501-310	SOCKET-2P SW(EP) ; HSC 1463-01-0101	1	⚠
RV701(OPTIONAL)	13599-502-020	VOLT SELECTOR ; PCB 00120354 220/110V	1	⚠
RV701(OPTIONAL)	13599-502-060	VOLT SELECTOR ; PCB 00120353L 120/220V	1	⚠

2. CONTROL PCB ASS'Y

LOCATION	CODE NO.	DESCRIPTION & SPECIFICATION	Q'TY	REMARK
LED1, 2	12309-115-330	LED ; KLR124	2	
CN3	13078-472-115	CONNECTOR-WIRE/B.S ; 5264-02/5395-02 10	1	
	13324-0048-00	HOLDER-LED ; ABS BLK RCD1365	1	
CW10	13349-168-091	CONNECTOR-WAFER ; 2MM 52084-0910 9P	1	
PLAY,STOP,BACK, NEXT, MODE,PROG	13559-901-100	SWITCH-TACT ; SKHV10910A	6	

3. TUNER PCB ASS'Y

LOCATION	CODE-NO.	DESCRIPTION & SPECIFICATION	Q'TY	REMARK
FC15	11505-714-183	C-POLYESTER ; CQ921T M 50V 0.018M-K	1	
FC18	11505-714-823	C-POLYESTER ; CQ921T M50V 0.082M-K	1	
FC11	11608-102-104	C-ELECTROLYTIC ; SMS T 10V 100M (5x11)	1	
FC22	11608-102-224	C-ELECTROLYTIC ; SMS T 10V 220M (6.3x11)	1	
FC10	11608-102-333	C-ELECTROLYTIC ; SMS T 10V 33M (5x11)	1	
FC24	11608-102-473	C-ELECTROLYTIC ; SMS T 10V 47M (5x11)	1	
FC17	11608-106-102	C-ELECTROLYTIC ; SMS T 50V 1M (5x11)	1	
FC19	11608-106-221	C-ELECTROLYTIC ; SMS T 50V 0.22M (5x11)	1	
FC20, 9	11608-106-471	C-ELECTROLYTIC ; SMS T 50V 0.47M (5x11)	2	
FQ1	12159-301-800	TR-DIGITAL ; R1007/108M/124XS	1	
FD1	12169-301-290	DIODE-SW ; 1SS53/1N4148, CT ; 6PF	1	
FD2	12169-501-160	DIODE-AFC ; KS3302	1	
FT2	12749-202-133	TRANS-IF, AM, A ; 7M/M CAN W/STICK	1	
TP1, 2	13124-100-710	TAP-STUD ; 0.5T SPC1 BT2	1	
CON9	13349-512-568	CONNECTOR-WAFER ; STICK 5267-07A 7P-TYP	1	
FCF1	14529-301-753	FILTER-CERAMIC ; SEE 10.7MS3G-A-TF21	1	
CF3	14529-302-923	CERAMIC-FILTER ; CDA10.7MG16-A-TF01	1	
BPF4	14529-403-010	FILTER-L, C; PFW-B4 RF-PF TYPE	1	
FCF4	14539-504-050	CERAMIC-RESONATOR ; CSB 456 F18	1	
IC101	A4012-0072	IC-LINEAR ; KA2293 DIP FM/AM	1	
FC4	11407-052-409	C-CERAMIC ; CC45T CH 50V 4-C	1	
FC3	11407-057-150	C-CERAMIC ; CC45T CH 50V 15-J	1	
FC1, 5	11407-057-240	C-CERAMIC ; CC45T CH 50V 24-J TAPE	2	
FVC1-4	11819-309-510	VARICON-POLY ; P2S-22BGLT A/C-54	1	
L103	12513-249-627	COIL-AM ANT ASS'Y ; PI 8X60 570UH	1	
FL1	12609-132-430	COIL-H, SPRING ; 4T R8P4D CCW CLS N-ADJ	1	
FT102	12619-058-603	COIL-AM OSC 290UH	1	
S1	13549-801-210	SWITCH-LEVER ; 00221013S 2C-2P	1	
FCF2	14529-315-010	CERAMIC-FILTER ; SFU 455B	1	
FC31	11407-052-209	C-CERAMIC ; CC45T CH 50V 2-C	1	
FC4	11407-052-409	C-CERAMIC ; CC45T CH 50V 4-C	1	
FC107	11407-057-101	C-CERAMIC ; CC45T CH 50V 100-J	1	
FC102	11407-057-120	C-CERAMIC ; CC45T CH 50V 12-J	1	
FC3, 103	11407-057-150	C-CERAMIC ; CC45T CH 50V 15-J	2	
FC1, 5	11407-057-240	C-CERAMIC ; CC45T CH 50V 24-J TAPE	2	
FC106	11407-057-560	C-CERAMIC ; CH56-J	1	
FC32	11407-057-809	C-CERAMIC ; CC45T CH50 8-J	1	
FC23	11448-010-223	CONDENSER AIXAL-LEAD ; 25V TP 050F22000	1	
FC104	11509-452-070	C-POLYSTYRENE ; CQ 09 S 50V 180-J	1	
FC103	11509-452-100	C-POLYSTYRENE ; CQ09S 50V 330-J	1	

LOCATION	CODE-NO.	DESCRIPTION & SPECIFICATION	Q'TY	REMARK
FCV1-4	11819-309-380	VARICON-POLY ; P2S-22BPT A/C-H	1	
FCT5, 6	11829-512-030	C-TRIMMER ; TZ03R 20PF	2	
FL2	12450-314-341	COIL-BOBBIN ; 7MM 1R 6/8 0.32UH + -7% AX	1	
L102, 103	12514-281-577	COIL-ANT ASSY ; 285UH/3.5MH 8x10 0 LW/MW	1	
FL1	12609-132-430	COIL-H, SPRING ; 4T R8P4D CCW CLS N-ADJ	1	
FT101	12619-050-703	COIL-SEVEN CAN ; AQ 200UH FMW (TA8167)	1	
FT102	12619-177-902	COIL-SEVEN CAN ; AQ 560UH FLW BRN	1	
S1	13549-801-310	SWITCH-LEVER ; T0083002 8C-3P A-SHORTIN	1	
FCF2	14529-315-010	CERAMIC-FILTER ; SFU 455B	1	
FC4, 102	11407-052-409	C-CERAMIC ; CC45T CH 50V 4-C	2	
FC3, 103	11407-057-150	C-CERAMIC ; CC45T CH 50V 15-J	2	
FC101	11407-057-220	C-CERAMIC ; CC45T CH 50V 22-J	1	
FC1, 5	11407-057-240	C-CERAMIC ; CC45T CH50V 24-J TAPE	2	
FC23	11448-010-223	CONDENSER AIXAL LEAD ; 25V TP 050F22000	1	
FC103	11509-452-100	C-POLYSTYRENE ; CQ09S 50V 330-J	1	
FC104	11509-452-220	C-POLYSTYRENE ; CQ 09 S 50V 3300-J	1	
FCV1-4	11819-309-380	VARICON-POLY ; P2S-22BPT A/C-H	1	
FCT7	11829-512-030	C-TRIMMER ; TZ03R 20PF	1	
FL3	12429-070-350	COIL-CHOKE ; AX 1.2UH-03 (LAL03TB1R2M)	1	
FL2	12450-314-341	COIL-BOBBIN ; 7MM 1R 6/8 0.32UH+ -7% AX	1	
L101	12509-805-020	COIL-ANT, SW ; 9.5M/M	1	
L103	12516-203-376	COIL-ANT ASSY ; 280UH AR8X60 MW/SW	1	
FL1	12609-132-430	COIL-H, SPRING ; 4T R8P4D CCW CLS N-ADJ	1	
FT102	12619-050-703	COIL-SEVEN CAN ; AQ 200UH FMW (TA8167)	1	
FT102	12619-173-126	COIL 7 CAN ; 2.73NH AQ FSW GREEN	1	
S1	13549-801-200	SWITCH-LEVER ; 00830299 8C-3P ALL SHORT	1	
FCF2	14529-315-010	CERAMIC-FILTER ; SFU 455B	1	
FCV1-4	11819-309-550	VARICON-POLY ; P2S-22DPT A/C-H55	1	
FCT5, 6	11829-512-030	C-TRIMMER ; TZ03R 20PF	2	
FC104	11509-452-070	C-POLYSTYRENE ; CQ 09 S 50V 180-J	1	
FC103	11509-452-100	C-POLYSTYRENE ; CQ 09 S 50V 330-J	1	
L103, 102	12514-281-577	COIL-ANT ASSY ; 285 μ H/3.5MH AR8x100MW/LW	1	
FT101	12619-050-703	COIL-SEVEN CAN ; AQ 200 μ H FMW	1	
FT102	12619-177-902	COIL-SEVEN CAN ; AQ 560 μ H FLW BRN	1	
S1	13549-801-310	SWITCH-LEVER ; T0083002 8C-3P A-SHORTING	1	
FL1	12601-060-916	COIL SPRING ; PI4.5 x 5T, PI0.6D CW 0.148 μ H	1	
FL2	12601-050-916	COIL SPRING ; PI4.5 x 5T, PI0.6D CW 0.12 μ H	1	
B.P.F	14529-713-060	FILTER-L, C PRINTED ; BPE B1 (64-108)	1	OPTIONAL

■ ABBREVIATION LIST

AC	: Alternating Current	mm	: millimeter
AM	: Amplitude Modulation	mV	: milli Volt
AMP	: Amplifier	mW	: milli Watt
ANT	: Antenna		
ASS'Y	: Assembly	NF	: Negative Feedback
		nm	: nanometer
BLK	: Black	ORG	: orange
BLU	: Blue	OSC	: Oscillator
BPF	: Band Pass Filter		
CD	: Compact Disc	PCB	: Printed Circuit Board
CF	: Ceramic Filter	PLL	: Phase Locked Loop
CH	: Channel	P/T	: Power Transformer
CIRC	: Cross Interleave Reed Solomon Code		
cm	: centimeter	R	: Right
COM	: Common	RAM	: Random Access Memory
		REG	: Regulator
D	: Depth	RF	: Radio Frequency
D/A	: Digital/Analog	ROM	: Read Only Memory
dB	: deciBel	R/P	: Record/Play
DC	: Direct Current		
DTS	: Digital Tuning System	sec	: second
EA	: Each	SPK	: Speaker
EQ	: Equalizer	SSG	: Standard Signal Generator
		SW	: Switch
F/F	: Flip Flop	TP	: Test Point
FM	: Frequency Modulation	TRANS	: Transformer
GND	: Ground	V	: Volt
GRN	: Green	VIO	: VIOlet
GRY	: Gray	VCO	: Voltage Controlled Oscillator
		VR	: Variable Resistor
H	: Height, High	Vref	: Reference Voltage
IC	: Integrated Circuit	V/SEL	: Voltage Selector
IF	: Intermediate Frequency	VTVM	: Vacuum Tube Volt Meter
IFT	: Intermediate Frequency Transformer		
I/O	: Input/Output	W	: Watt, Weight
		WHT	: White
Kg	: Kilogram	X	: crystal
L	: Left, Low		
LCD	: Liquid Crystal Display		

* Product 1994. 10. 1

* Date : 1994. 10. 25

* Buyer SME

* Bulletin: # 14739-0047-06-001

* Model RCD1230

This number is subject to service manual code No.

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2. PCB Pattern and Marking diagram	2~3
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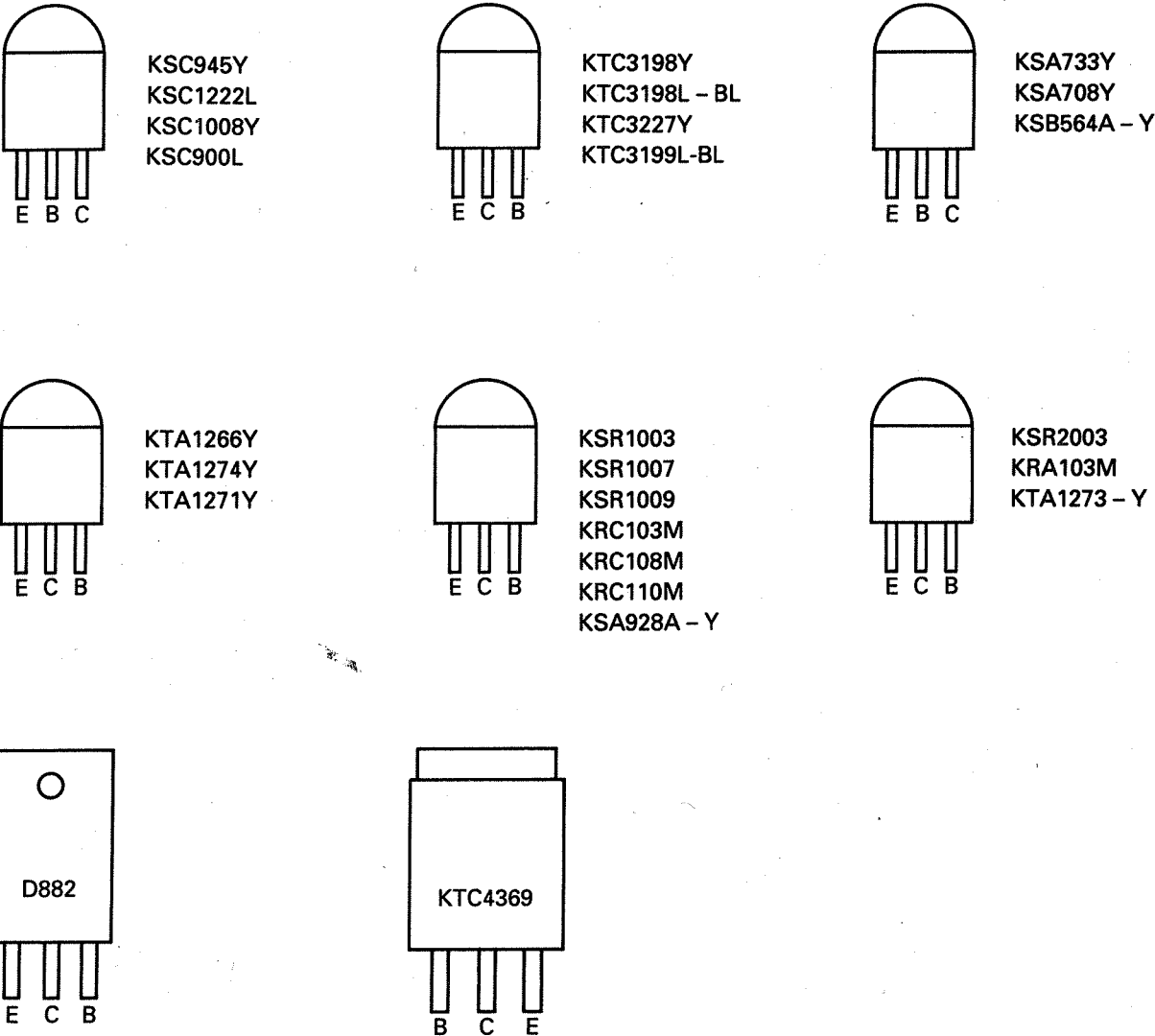
* TYPE A : Original parts

* TYPE B : Interchangeable parts

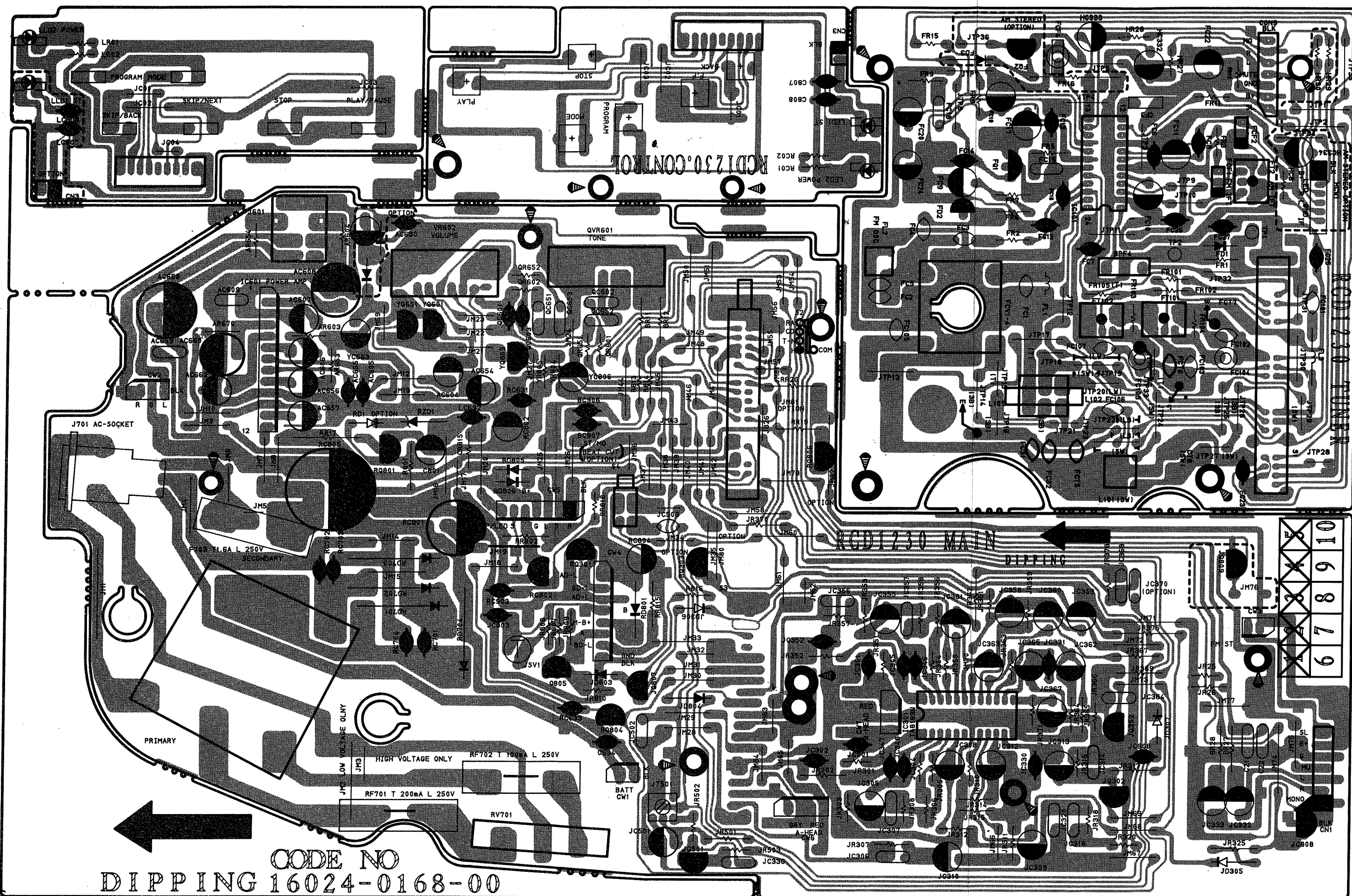
Change TR option list

	TYPE A	TYPE B	REMARK
	KSC945Y	KTC3198Y	SEE ATTENTION
	KSC1222L	KTC3199L-BL	SEE ATTENTION
	KSC1008Y	KTC3227Y	SEE ATTENTION
	KSC900L	KTC3198L-BL	SEE ATTENTION
	KSA733Y	KTA1266Y	SEE ATTENTION
	KSA708Y	KTA1274Y	SEE ATTENTION
	KSB564AY	KTA1271Y	SEE ATTENTION
	KSR1003	KRC103M	PIN TO PIN
	KSR1007	KRC108M	PIN TO PIN
	KSR1009	KRC110M	PIN TO PIN
	KSR2003	KRA103M	PIN TO PIN
	KSA928A-Y	KTA1273-Y	PIN TO PIN
	KSD882-0	KTC4369-0	CHANGE SIDE PIN TO PIN

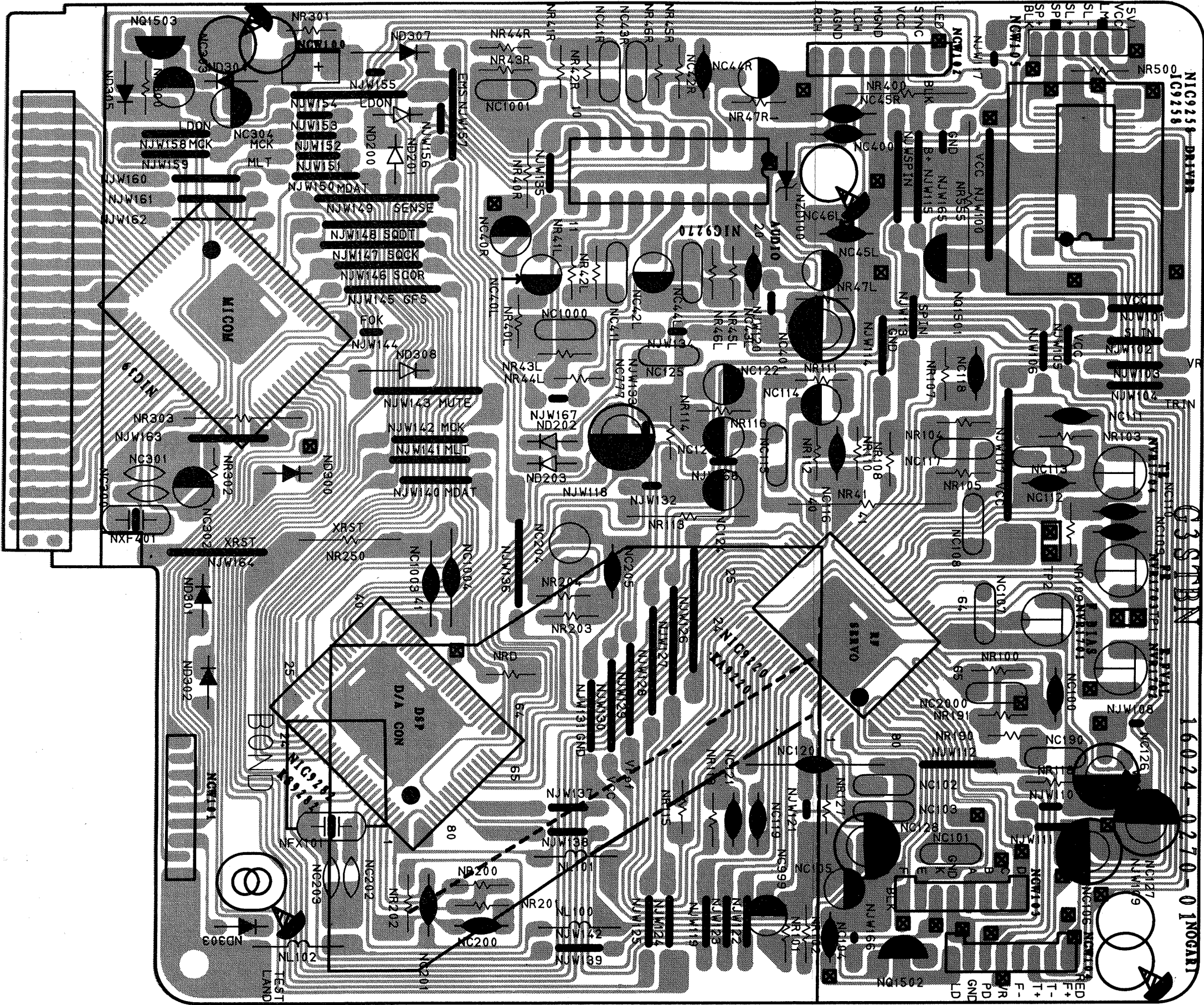
NTION : TYPE A(1~7) IS CENTER BASE TR,TYPE A(8~13) IS CENTER COLLECTOR TR AND
TYPE B IS CENTER COLLECTOR TR



(1) Main section



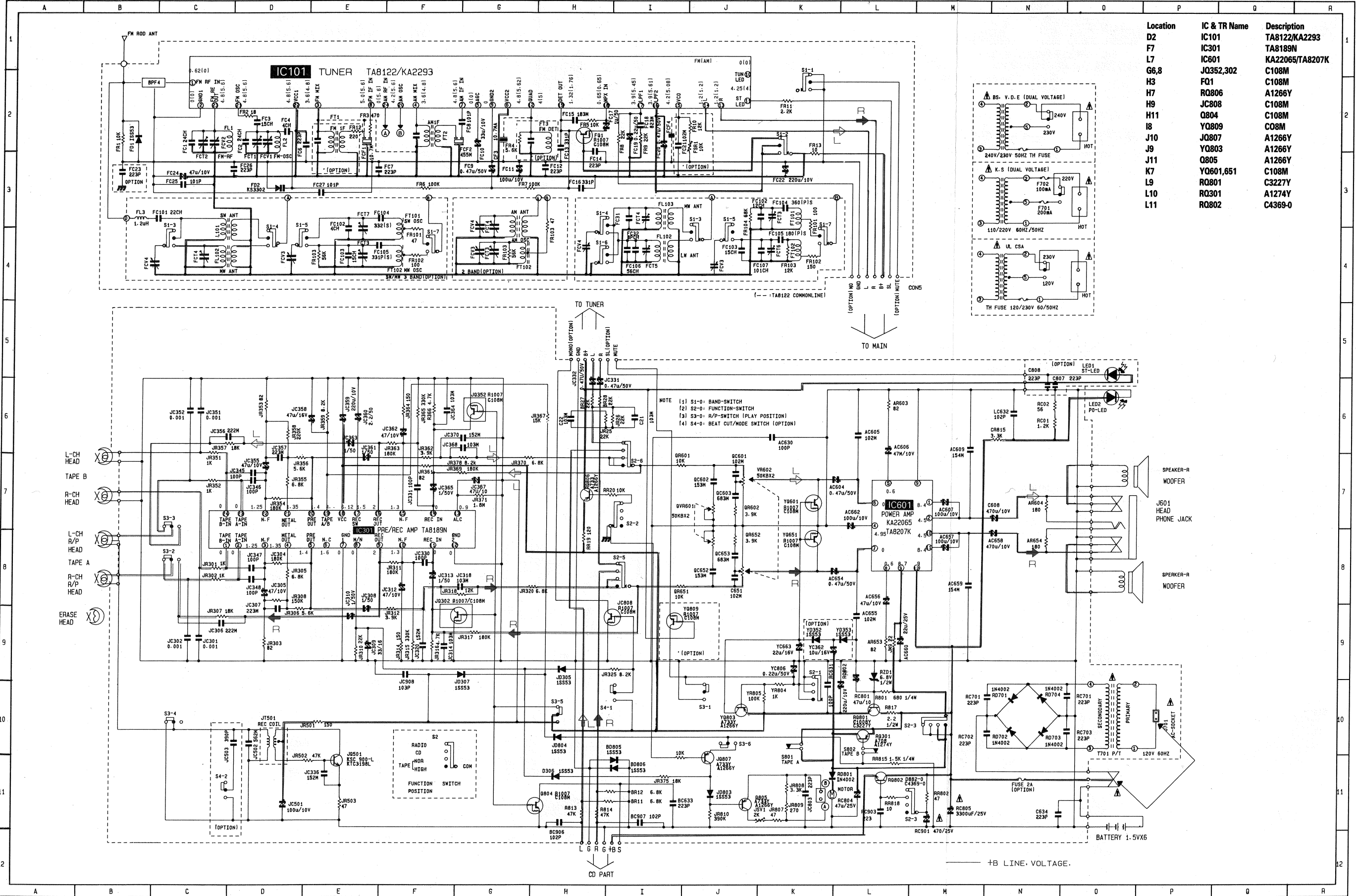
2) CDP section



3. Schematic diagram

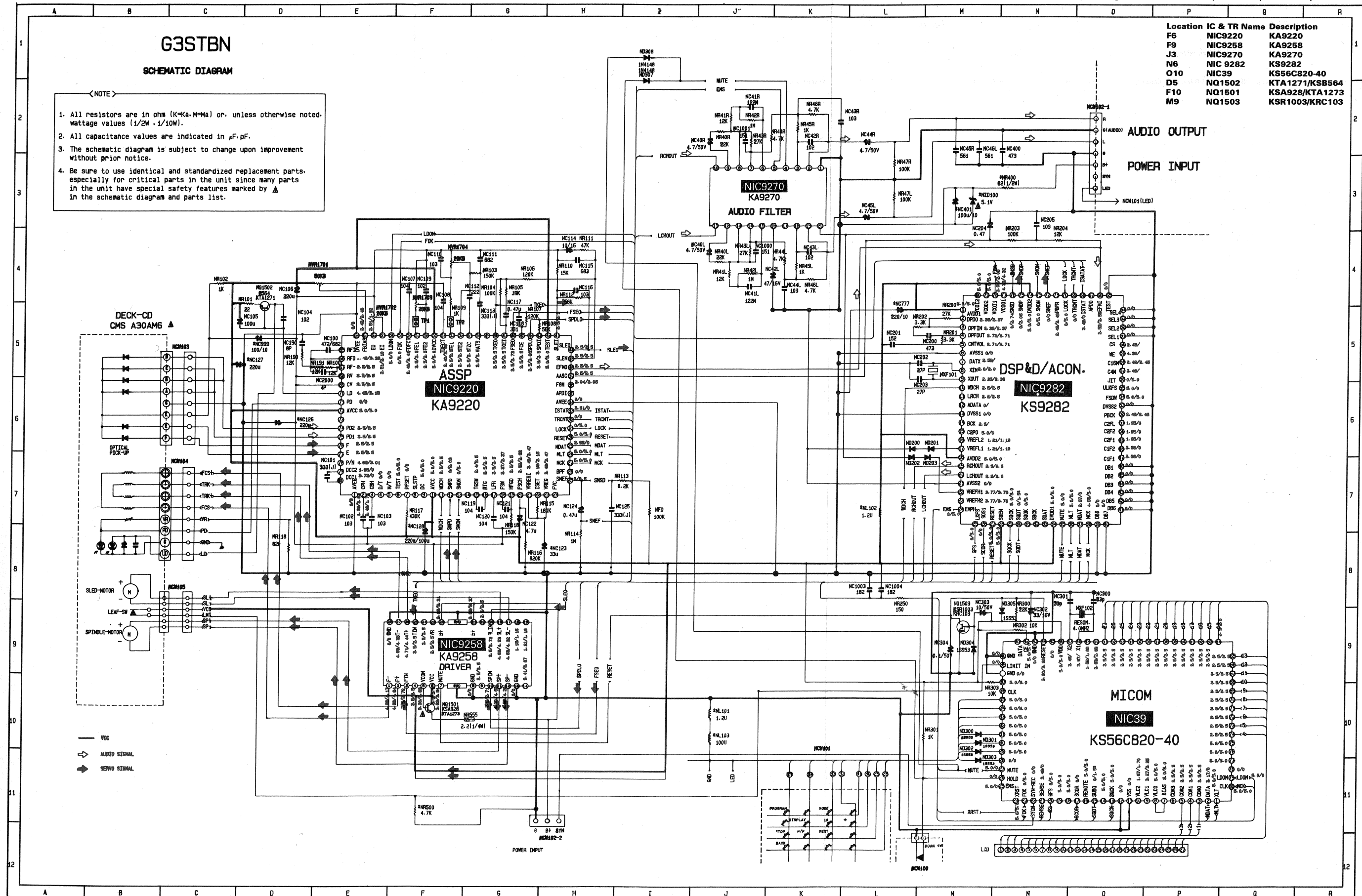
(1) Main section

- 1. The unit of all resistors is Ω unless otherwise stated. (K : $K\Omega$, M : $M\Omega$). All resistors are 1/4W or 1/8W unless otherwise stated.
- 2. The unit of all capacitors is μF unless otherwise stated. (P : PF).
- 3. The schematic diagram is subject to change upon improvement without prior notice.
- 4. Δ indicates parts for circuit safe guarding purposes. Therefore, when replacing be sure to use specified parts only.



(2) CDP section

1. The unit of all resistors is Ω unless otherwise stated. (K : K Ω , M : M Ω). All resistors are 1/4W or 1/8W unless otherwise stated.
2. The unit of all capacitors is μF unless otherwise stated. (P : PF).
3. The schematic diagram is subject to change upon improvement without prior notice.
4.  indicates parts for circuit safe guarding purposes. Therefore, when replacing be sure to use specified parts only.



4. TR list

TYPE A			TYPE B			
	SAMSUNG		KEC			
Location No.	Code No.	Description	Code No.	Description	Q'TY	Remark
JQ302, 352 JC808, BQ804 YQ601, 651, FQ1	12159-301-800	KSR1007	12159-301-800	KRC108M	7	MAIN PCB, TUNER PCB
RQ801	12149-301-930	KSC1008-Y	A4050-0197	KTC3227-Y	1	MAIN PCB
JQ501	12149-301-840	KSC900-L	A4050-0189	KTC3198L-BL	1	MAIN PCB
RQ806, YQ803 JQ807, Q805	12149-101-520	KSA733-Y	A4050-0156	KTA1266-Y	4	MAIN PCB
RQ802	12149-401-900	KSD882-0	A4052-0073	KTC4369-0	1	MIAN PCB
NQ1052	12149-202-050	KSB564A-Y	A4050-0186	KTA1271 -Y	1	CD PCB
NQ1501	12139-201-100	KSA928A	12139-201-100	KTA1273-Y	1	CD PCB
NQ1503	12159-301-780	KSR1003	12159-301-780	KRC103M	1	CD PCB
RQ301	12149-101-560	KSA708-Y	A4050-0196	KTA1274-Y	1	MAIN PCB