

Technical Manual

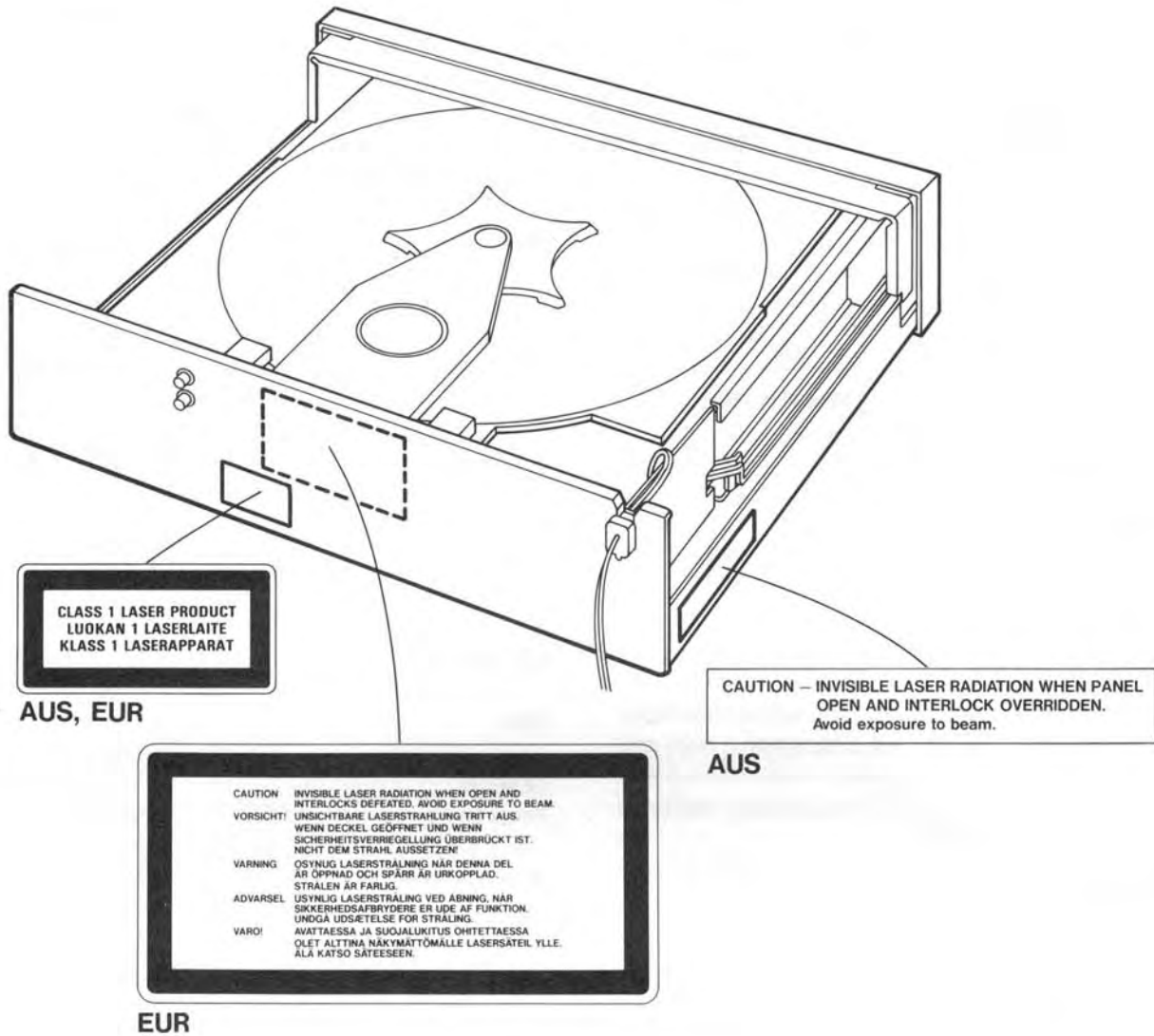
COMPACT DISC CHANGER RCC-940AX

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<p>Serial No. Beginning</p>

SAFETY CERTIFICATION / CERTIFICAT DE SÉCURITÉ



DOC REGULATION

"THIS DIGITAL APPARATUS DOES NOT EXCEED THE CLASS B LIMITS FOR RADIO NOISE EMISSIONS FROM DIGITAL APPARATUS AS SET OUT IN THE RADIO INTERFERENCE REGULATIONS OF THE CANADIAN DEPARTMENT OF COMMUNICATIONS."

REGULATION DOC

"LE PRÉSENT APPAREIL NUMÉRIQUE N'ÉMET PAS DE BRUITS RADIOÉLECTRIQUES DÉPASSANT LES LIMITES APPLICABLES AUX APPAREILS NUMÉRIQUES DE LA CLASSE B PRESCRITES DANS LE RÉGLEMENT SUR LE BROUILLAGE RADIO ÉLECTRIQUE ÉDICTÉ PAR LE MINISTÈRE DES COMMUNICATIONS DU CANADA."

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

ATTENTION— L'EMPLOI D'ORGANES DE COMMANDE OU DE RÉGLAGE, OU L'EXÉCUTION DE PROCÉDURES, AUTRES QUE CEUX SPÉCIFIÉS DANS LE MODE D'EMPLOI, PEUT PROVOQUER UNE EXPOSITION DANGEREUSE AU RAYONNEMENT.

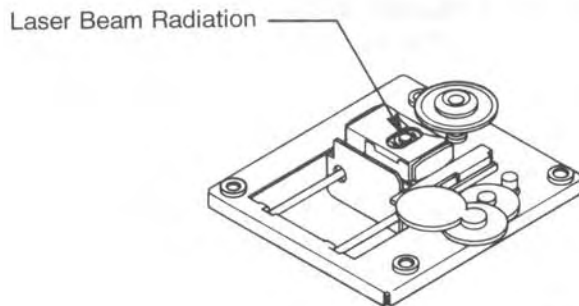
LASER SAFETY

This unit employs a laser. Only a qualified service person should remove the cover or attempt to service this device, due to possible eye injury.

SPECIFICATIONS

System	Digital Compact Disc Changer Drawer Type 5-disc Rotary Changer	Program Reset	with CLEAR button
AUDIO CHARACTERISTICS			
Frequency Response	20 – 20,000 Hz \pm 1 dB	Checking Program	with RECALL button (in STOP mode)
Harmonic Distortion	Less than 0.003% (1 kHz)	Random Play (Shuffle Play)	with Remote Control
S/N Ratio	More than 100 dB	Intro Scan	with Remote Control
Wow and Flutter	Quartz precision	Pause	Each selection
Channel Separation	More than 100 dB (1 kHz)	Disc Loading	Front Loading
Output Voltage max.	2 Vrms	DIGITAL SIGNAL PROCESSING	
FUNCTIONS			
Disc Selection	with DISC NO. Buttons (1–5)	Optical Pickup	3-beam laser
Track Selection	with MUSIC SKIP ▶▶I and I◀◀ buttons	Error Correction	CIRC
Index Selection	with SEARCH/INDEX ▶▶ and ◀◀ buttons (normal mode only)	Sampling Frequency	44.1 kHz
Forward/Back	2-Speed Search with sound	D/A Conversion	Bitstream
Each/Remain/ Total Time Display	with TIME button during PLAY mode	Filter	18 bits 8 times over sampling
Program	32 selection	GENERAL	
Repeat Tracks	One/All/Program	Power Source	120 V, 50/60 Hz 230 V, 240 V, 50/60 Hz
		Power Consumption	20 Watts
		Dimensions (W×H×D)	440×115×394 mm (17-1/3"×4-1/2"×15-1/2")
		Weight	13.88 lbs / 6.3 kg

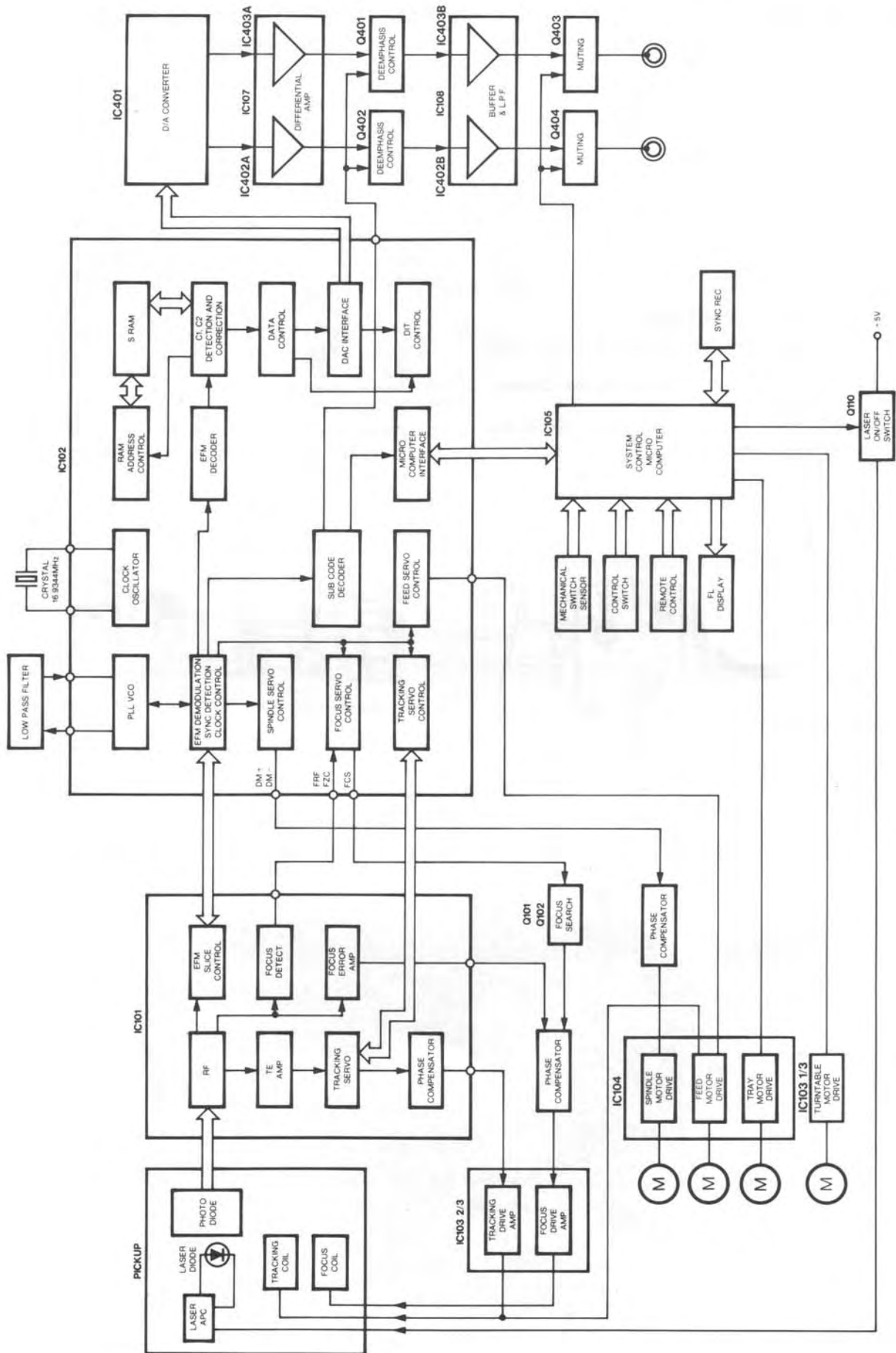
LASER BEAM RADIATION SPOT



Laser Diode Properties

Material: Ga-Al-As
 Wavelength: 755 – 815 nm (25°C)
 Laser Output: Continuous Wave max.0.5 mW

FUNCTIONAL BLOCK DIAGRAM



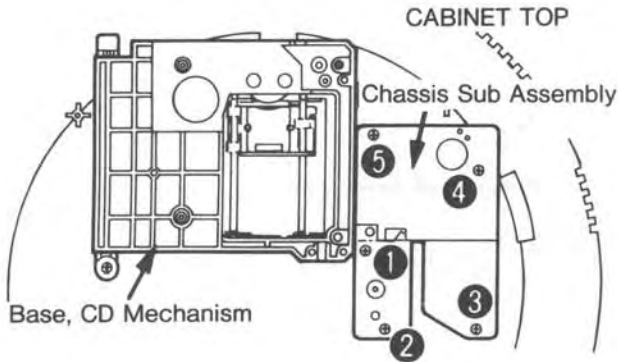
DISASSEMBLY INSTRUCTIONS

GENERAL REMARKS

- Before disassembling the unit, spread a soft rubber mat or a cloth on the workbench to avoid scratches and grease stains.
- Do not use a material which is likely to cause static electricity because transistors and ICs may be easily damaged by it.
- Reassemble the unit, noting the kinds of screws, the soldering and arrangement of the leads. Refer to "Schematic Diagram and Exploded Views" for correct assembly.
- Reassemble in reverse order.

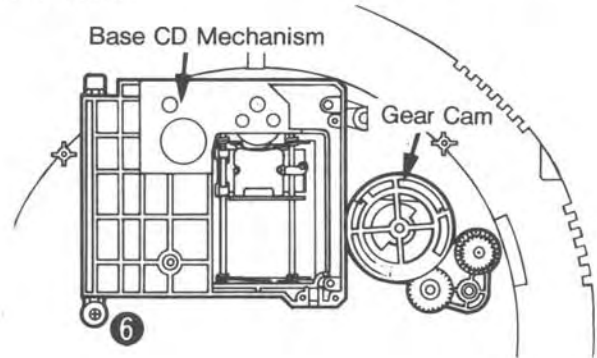
CHASSIS SUB ASSY REMOVAL

1. Remove the screws from the Cover and detach the Cover from the unit.
2. Remove the five screws (1 ~5) fastening the Chassis Sub Assy to the Cabinet Top.
3. When installing the Chassis Sub Assy, fix it by screws in numerical order.
4. Reassemble in reverse order.

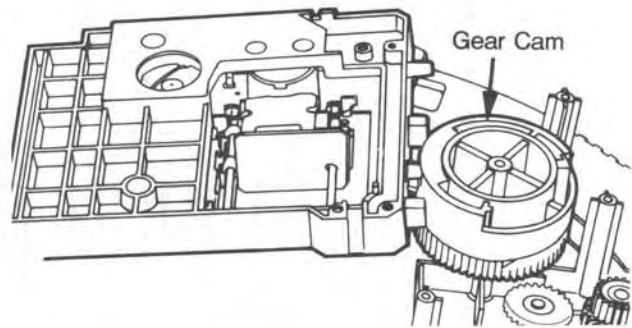


BASE, CD MECHANISM REMOVAL

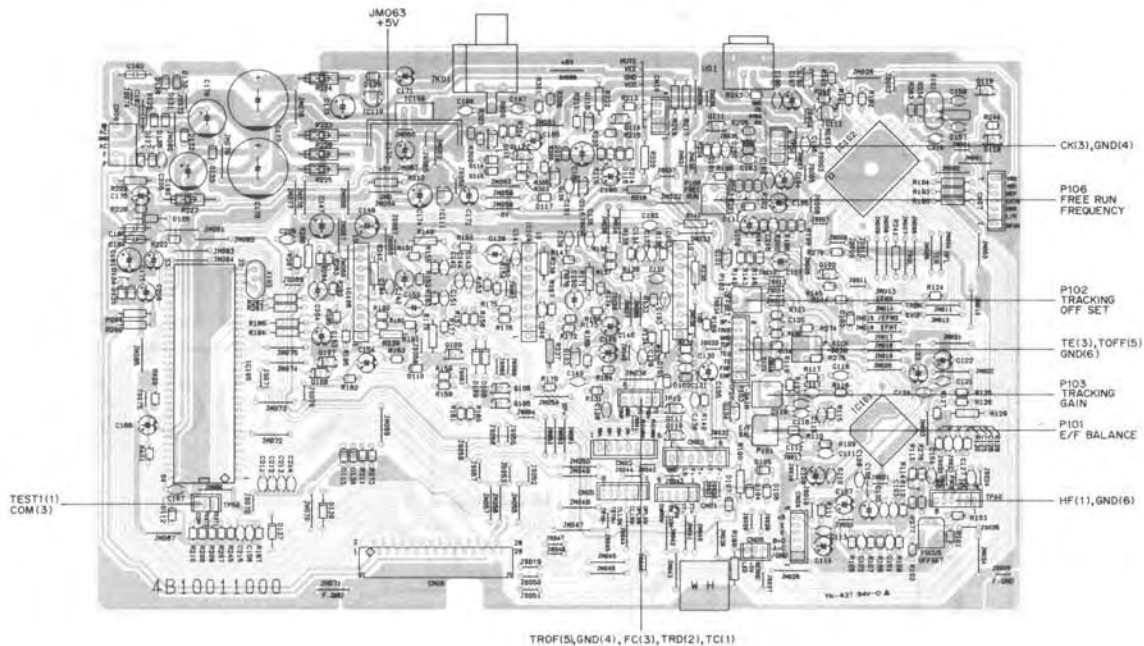
1. Remove the Chassis Sub Assy by following the instructions for it.
2. Remove the screw (6) fastening the Base CD Mechanism.



3. Remove the Base CD Mechanism by taking out the movable boss from the up and down movable groove on the side of the Gear Cam.
4. Reassemble in reverse order.



P.C.BOARD ALIGNMENT POINTS (TOP VIEW)



ADJUSTMENT PROCEDURES

BEFORE CHECKING OR ADJUSTING CD PLAYER

1. Procedures for all adjustments for the CD player from start to finish are described below.
2. If no problems are found after each item is checked when the pick-up is replaced, there is no need to adjust all items again.

SETTING OF INITIAL POSITION OF VOLUME

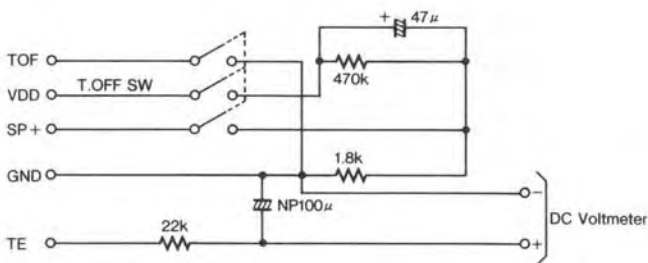
1. Set the variable resistors to the initial positions listed below:
 - P101 (E/F BALANCE) Mechanical Center
 - P102 (TRACKING OFFSET) Mechanical Center
 - P103 (TRACKING GAIN) Mechanical Center
 - P106 (FREE RUN FREQUENCY) ... Mechanical Center

PLL (VCO) FREE RUN FREQUENCY ADJUSTMENT

1. Connect the frequency counter between the VCO test jumper CK and GND. (Use a 10: 1 Probe)
2. Push the POWER button to switch the power on and push the STOP button.
3. Adjust the P106 until the frequency counter indicator reads 4.32 MHz ~ 4.33 MHz.

E/F BALANCE ADJUSTMENT

1. Short the between test jumper TEST1 and COM on the Main P.C.Board to the TEST mode.
2. Connect the measurement circuit shown below to the test terminal TOF, SP+, TE, GND and test jumper +5V (JM063).
3. Connect a DC voltmeter to the output of the measurement circuit shown below.
4. Place the test disc (Modern Wave II) on the Disc Tray, and play the fourth item on the disc.
5. Switch on the T.OFF of the measurement circuit shown below.



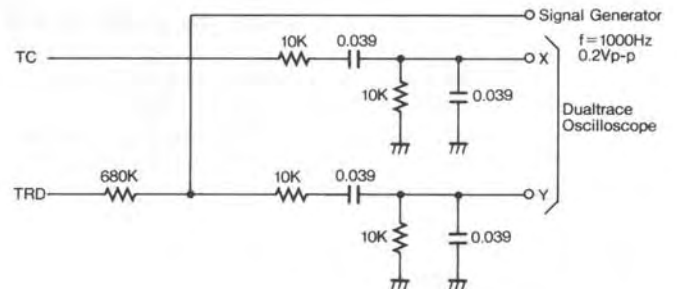
6. Adjust P101 so that the DC voltmeter reading is 0 V ± 50 mV.

CONFIRMING TE LEVEL

1. Play the fourth item on the test disc (Modern Wave II).
2. Connect an oscilloscope to the test jumper TE, and check that its TE level is in the range at more than 2 V (P-P).
3. If the results of the above procedure are not satisfactory, the pick-up is damaged.

TRACKING GAIN ADJUSTMENT

The measurement circuit diagrammed below must be used in order to adjust tracking gain correctly.



1. Apply P103 to the position of Mechanical center position, and place the test disc (Modern Wave II) on the Disc Tray.
2. Connect the measurement circuit described in the last section to the test jumper TC (tracking coil) and TRD. (Use 680kΩ Resistor)
3. Push the POWER button to switch the power on and PLAY the first item on the test disc. Now apply a signal of 1000 Hz and 0.2 Vp-p from the signal generator to the measurement circuit.
4. Set the oscilloscope to X-Y operation, and while observing the lissajous waveform adjust P103 to the point where the phase difference is 90° as shown in Fig.1 below.

NOTE:

If these adjustments are performed, the TRACKING OFFSET must also be adjusted.



Fig. 1

ADJUSTMENT PROCEDURES (Continued)

CONFIRMING HF LEVEL & 3T JITTER VALUE

If no jitter counter is available, this check does not have to be performed.

1. Play the fourth item on the test disc (Modern Wave II).
2. Connect an oscilloscope to the test jumper **HF** and check that its **HF** level is in the range $2.0 \text{ V}_{p-p} \sim 3.3 \text{ V}_{p-p}$. (Use a 10: 1 Probe)
3. Connect a jitter counter to test jumper **HF** and check that the 3T jitter value is less than 25 ns.
(Window width: 600 ns \sim 850 ns, Set Level: 2.5 V)
4. Now play the tenth item on the test disc and check that the jitter value is less than 25 ns again.

4. Push the **POWER** button to switch the power on and **PLAY** the First and Last Track No. on the disc.
5. If the DC Voltmeter reading is not in the ranges $0 \text{ V} \pm 0.2 \text{ V}$ for inner tracks and $0 \text{ V} \pm 0.35 \text{ V}$ for outer tracks, then the turntable height must be readjusted. Raise the turntable higher if the DC voltmeter indicator is on the plus (+) side, and lower it if it is on the minus (-) side. (With this circuit, 1V represents movement of approximately 0.55 mm \sim 0.65 mm).

TRACKING OFFSET ADJUSTMENT

1. Push the **POWER** button to switch the power on and push the **STOP** button.
2. Connect a DC voltmeter to the test jumper **TC** (tracking coil) and short the test jumper **TROF** to **GND**.
3. In this condition check that the DC voltmeter indicator is in the range $100 \text{ mV} \pm 20 \text{ mV}$, and adjust P102 if it is not.

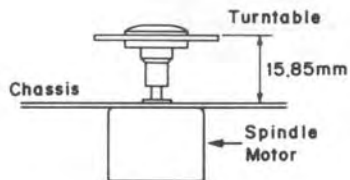
NOTE:

Perform this adjustment once again after adjusting the E/F BALANCE and TRACKING GAIN signals.

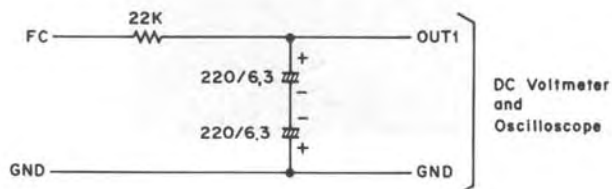
TURNTABLE HEIGHT ADJUSTMENT

This adjustment must be performed when the Spindle Motor is replaced.

1. The turntable should be mounted so that its upper surface is $15.85 \text{ mm} \pm 0.1 \text{ mm}$ above the surface of the chassis.



2. Place the test disc (Modern Wave II) on the turntable.
3. Connect a DC voltmeter and an oscilloscope via the low-pass filter shown below to the test jumper **FC**.



SAFETY CERTIFICATION

The Digital Compact Disc Player reads the disc signal by detecting the laser beam. It must be avoided for the human body to directly receive the beam. Especially human eyes are badly affected by the beam. Therefore, the unit is equipped with an interlock to prevent the unnecessary laser outputs.

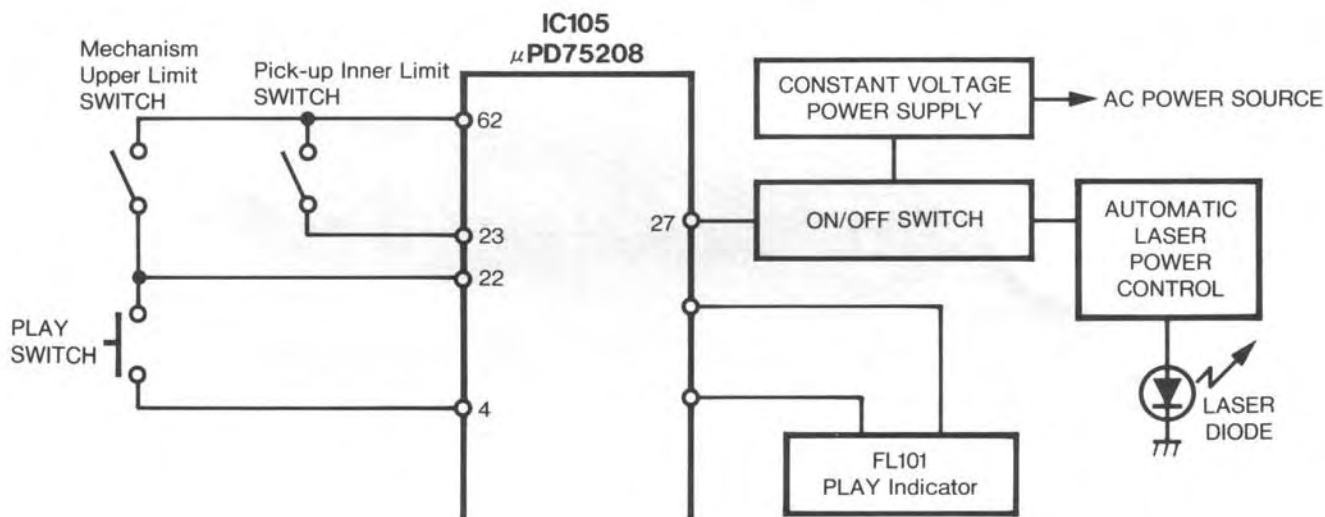
The laser outputs are controlled by the injection or cutoff of the constant voltage source to the laser diode with Pin 27 of IC105 (μ PD75208). When Pin 27 is in "L" (Low) level, the laser emits the beam. When Pin 27 is in "H" (High) level, the laser does not emit the beam.

Pin 27 is set in "H" level when the unit is loaded with the disc and it reads the index signals or when the unit is set in the play mode after that. When the unit reads the index signals and the following two conditions are met, the laser emits the beam.

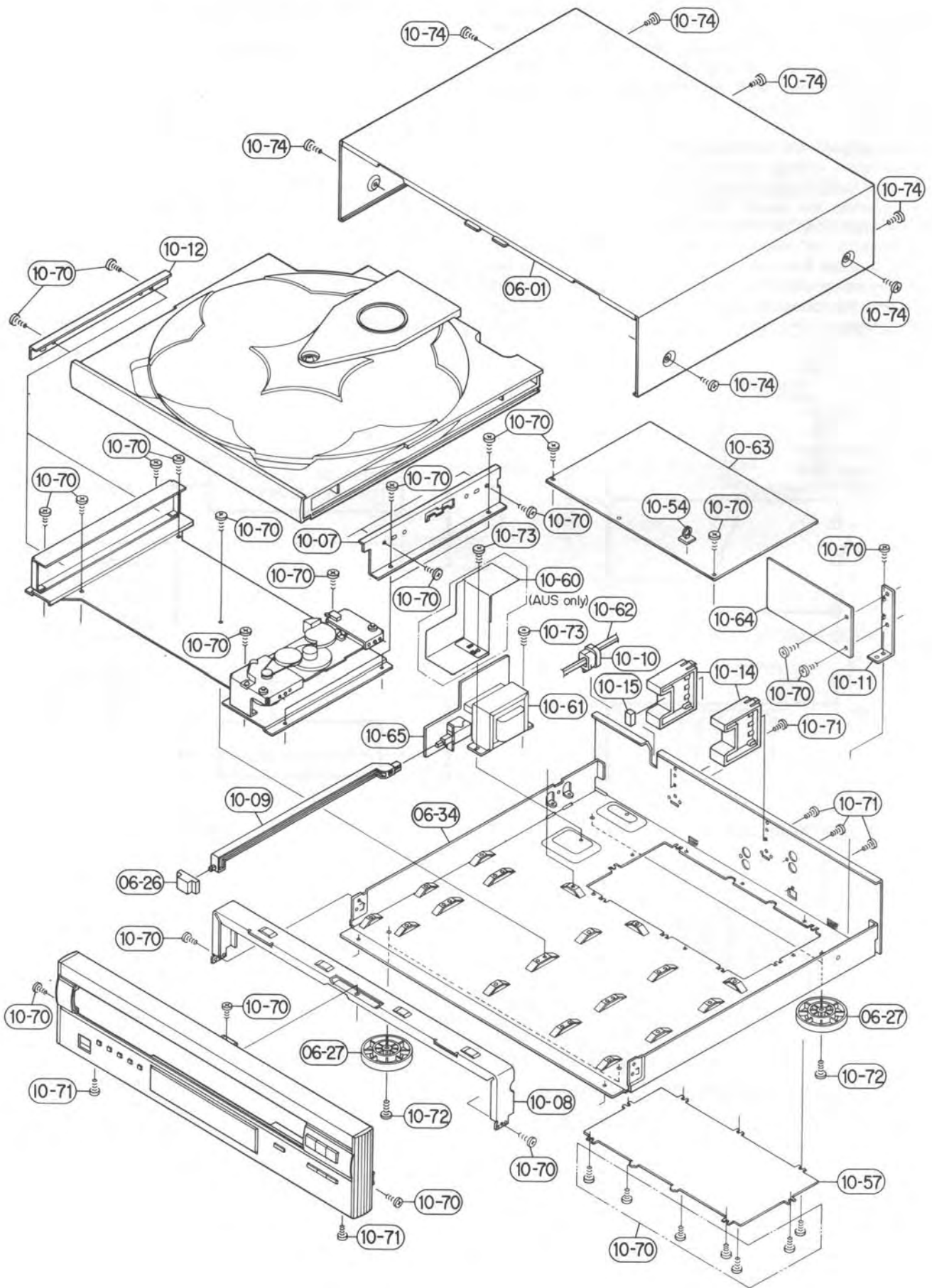
- 1) When the Mechanism Upper Limit Switch is on.
- 2) When the Pick-up Inner Limit Switch is on.
- 3) The pickup is located at the area of the minimum internal circumference.

After the above conditions are met and the index signals have been read, the laser emits the beam when the following two conditions are met.

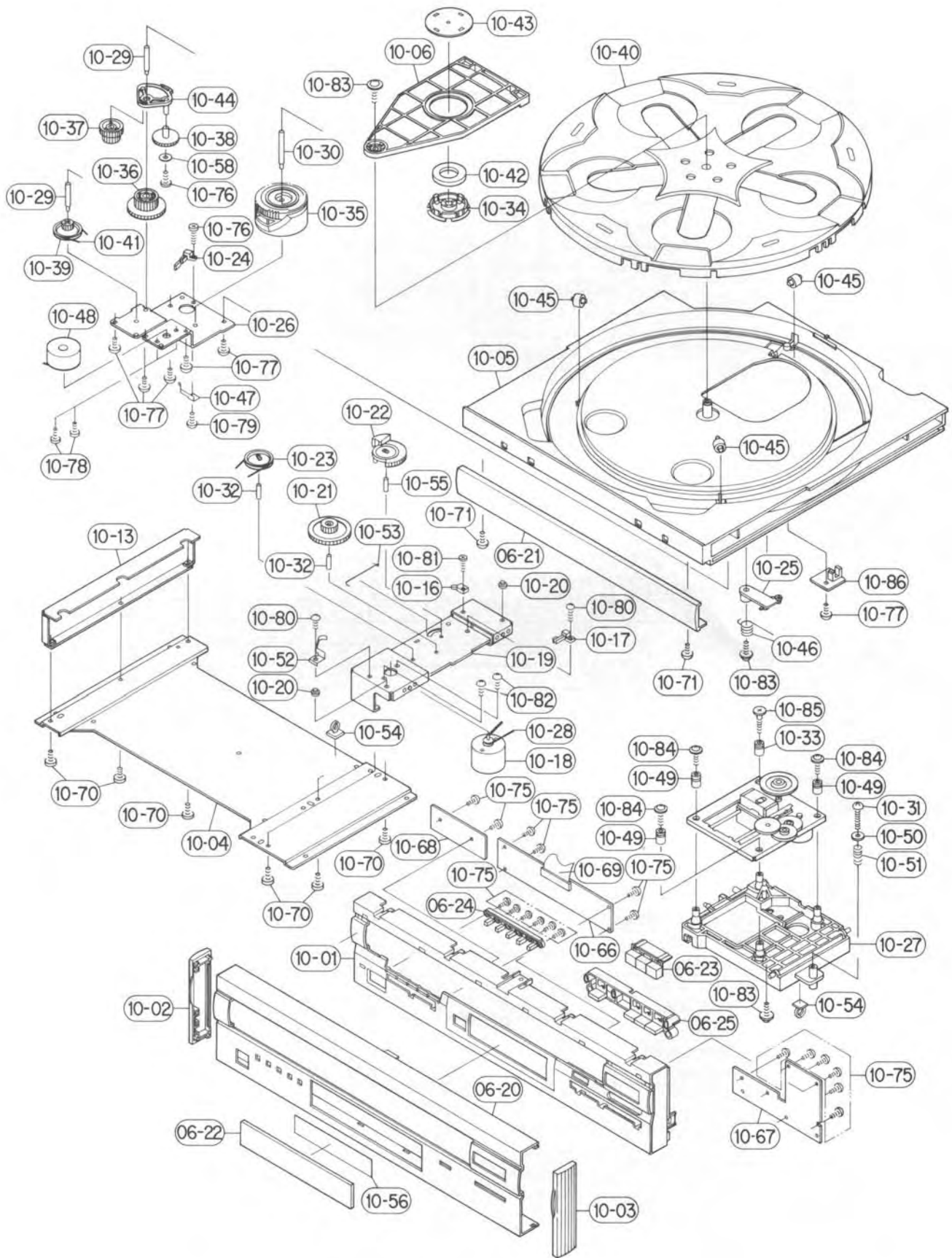
- 1) When the PLAY button is pressed.
- 2) When the PLAY indicator is on.



CABINET & CHASSIS EXPLODED VIEW (1)



CABINET & CHASSIS EXPLODED VIEW (2)



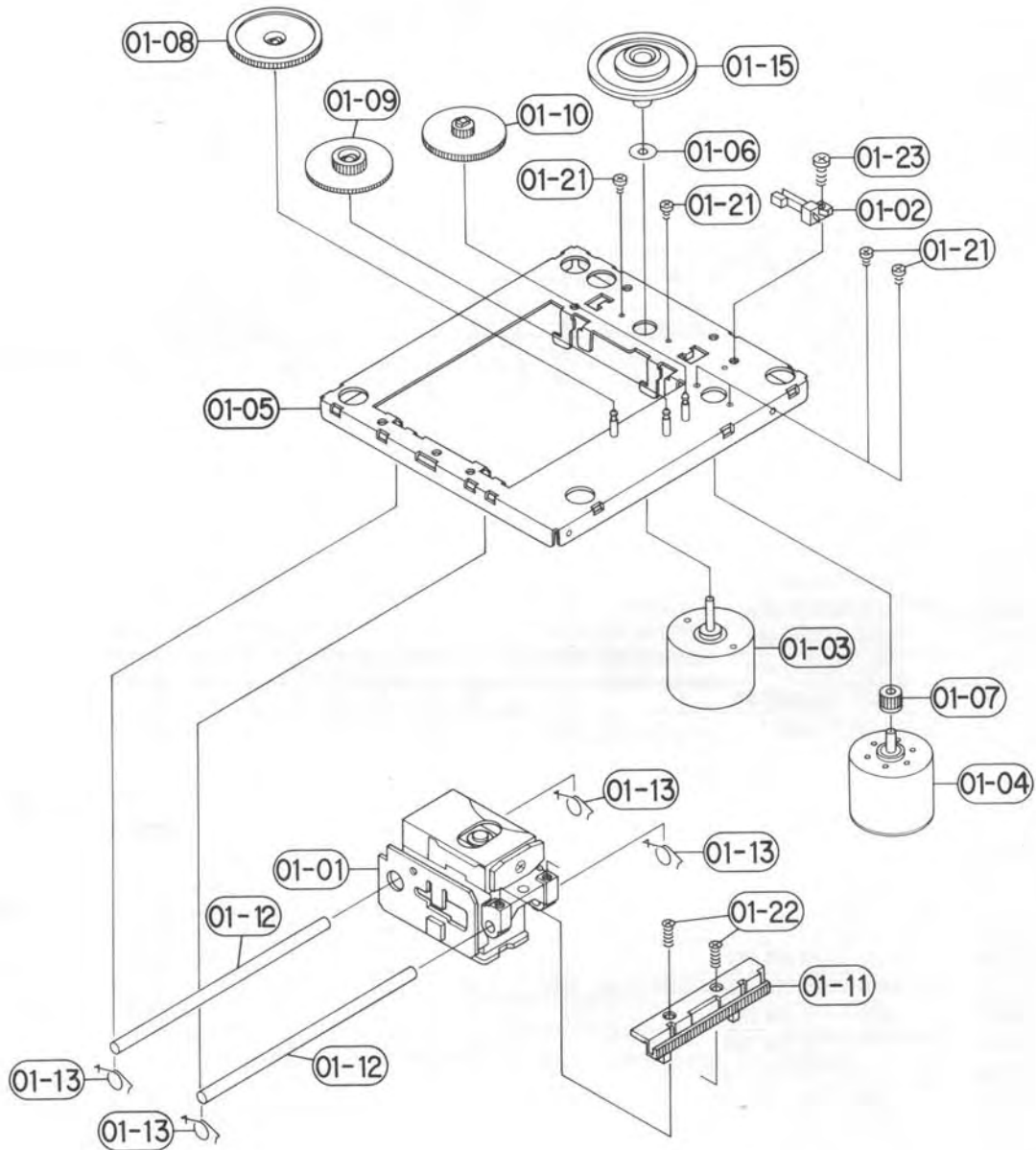
CABINET PARTS LIST

Ref. No.	Part No.	Description	RCC-940AX							
			USA	CND	EUR	AUS				
06-01	2121001100	COVER	1	1	1	1				
06-20	2152004000	PANEL,FRONT	1	1	1	1				
06-21	2144002500	DECORATION	1	1	1	1				
06-22	2164003400	WINDOW	1	1	1	1				
06-23	2175009400	BUTTON,TACT3	1	1	1	1				
06-24	2175009600	BUTTON,TACT5	1	1	1	1				
06-25	2175009500	BUTTON,TACT4	1	1	1	1				
06-26	2174003800	KNOB,PUSH	1	1	1	1				
06-27	2251001300	FOOT	4	4	4	4				
06-34	2311001308	CHASSIS	1	1						
06-34	2311001311	CHASSIS			1					
06-34	2311001310	CHASSIS				1				
10-01	2141002200	ESCUTCHEON	1	1	1	1				
10-02	2154000900	PANEL,SIDE(L)	1	1	1	1				
10-03	2154000910	PANEL,SIDE(R)	1	1	1	1				
10-04	2311001100	CHASSIS,SUB	1	1	1	1				
10-05	2111002300	CABINET,TOP	1	1	1	1				
10-06	2121A08000	COVER,CD	1	1	1	1				
10-07	2321000200	BRACKET-M,CH	1	1	1	1				
10-08	2338002200	ANGLE	1	1	1	1				
10-09	2351001000	JOINT	1	1	1	1				
10-10	2446000200	BUSHING NIFC02271	1	1	1	1				
10-11	2338002300	ANGLE	1	1	1	1				
10-12	2322A08500	BRACKET-M,LEFT	1	1	1	1				
10-13	2332A01100	BASE LEFT	1	1	1	1				
10-14	2366000100	STOPPER	2	2	2	2				
10-15	2448000406	PAD	1	1	1	1				
10-16	A231207010	LEVER SW 1P1T, OPEN LIMIT	1	1	1	1				
10-17	A231979890	LEVER SW. INNER LIMIT	1	1	1	1				
10-18	A527971630	MOTOR, ROTARY	1	1	1	1				
10-19	2332A01000	BASE RIGHT	1	1	1	1				
10-20	2373A04700	POST	2	2	2	2				
10-21	2511A08000	GEAR,LOAD	1	1	1	1				
10-22	2511A08101	GEAR,RETURN	1	1	1	1				
10-23	2524A01200	PULLEY	1	1	1	1				
10-24	A231207110	LEAF,SW. UP/DOWN	1	1	1	1				
10-25	0721A00400	ASSY,LEVER	1	1	1	1				
10-26	2312A00800	CHASSIS,SUB	1	1	1	1				
10-27	2332A00600	BASE CD MECHANISM	1	1	1	1				
10-28	2563A01700	BELT,SQUARE	1	1	1	1				
10-29	2372A01600	SHAFT,GEAR LOAD	2	2	2	2				
10-30	2372A01700	SHAFT,GEAR CAM	1	1	1	1				
10-31	SM4025001E	SCR PAN 4X25	1	1	1	1				
10-32	2771A03500	PIN GEAR	2	2	2	2				
10-33	2443A04900	CUSHION RUBBER	1	1	1	1				
10-34	2451A03500	HOLDER,DISC	1	1	1	1				
10-35	2511A05900	GEAR,CAM	1	1	1	1				
10-36	2511A06000	GEAR,LOAD	1	1	1	1				
10-37	2511A06100	GEAR,PINION	1	1	1	1				
10-38	2511A06200	GEAR,IDLER	1	1	1	1				
10-39	2524A00800	PULLEY,GEAR	1	1	1	1				
10-40	2541001300	TURNTABLE,CHANGER	1	1	1	1				
or	2541A00500	TURNTABLE,CHANGER	1	1	1	1				
10-41	2563A01000	BELT,SQUARE	1	1	1	1				
10-42	2641A01300	MAGNET,DISC CLAMP	1	1	1	1				

CABINET PARTS LIST (Continued)

Ref. No.	Part No.	Description	RCC-940AX							
			USA	CND	EUR	AUS				
10-43	2642A00500	YOKE,MAGNET	1	1	1	1				
10-44	2721A02900	LEVER,CHANGE	1	1	1	1				
10-45	2751A00300	ROLLER,T.T	3	3	3	3				
10-46	2813A03300	SPRING,LEVER LOCK	1	1	1	1				
10-47	2814A02700	SPRING,PLATE	1	1	1	1				
10-48	4M10A01600	MOTOR 6.0V, TURNTABLE	1	1	1	1				
10-49	E445946700	CUSHION RUBBER	3	3	3	3				
10-50	SW4512000E	WASHER Z 4.5X12X1	1	1	1	1				
10-51	E852949500	SPRING,DAMPER	1	1	1	1				
10-52	2814A04600	SPRING,PLATE	1	1	1	1				
10-53	2815A00400	SPRING,WIRE	1	1	1	1				
10-54	2453000101	CRAMP WIRE	3	3	3	3				
10-55	2771A05600	PIN,GEAR RETURN	1	1	1	1				
10-56	2431000700	FILTER	1	1	1	1				
10-57	2311001350	CHASSIS	1	1	1	1				
10-58	2383000800	SPECIAL WASHER	1	1	1	1				
10-60	2462005600	SHEET TRANS				1				
10-63	OB10011002	ASSY,PCB,MAIN	1	1	1	1				
10-64	OB10011201	ASSY,PCB,DAC	1	1	1	1				
10-65	OB10012131	ASSY,PCB,POWER	1	1						
10-65	OB10012142	ASSY,PCB,POWER			1					
10-65	OB10012161	ASSY,PCB,POWER				1				
10-66	OB10011101	ASSY,PCB,DISPLAY	1	1	1	1				
10-67	OB10011111	ASSY,PCB,SW-1	1	1	1	1				
10-68	OB10011121	ASSY,PCB,SW-2	1	1	1	1				
10-69	4W30004797	WIRE JUMPER 29P	1	1	1	1				
or	4W30002197	WIRE JUMPER 29P	1	1	1	1				
10-70	SF306R001E	SCR S-TPG BIN 3X6	36	36	36	36				
10-71	SF308R001M	SCR S-TPG BIN 3X8	8	8	8	8				
10-72	SF4012009E	SCR S-TPG BIN M4X12	4	4	4	4				
10-73	SF406R014E	SCR S-TPG TR S4X6	2	2	2	2				
10-74	SF408R009M	SCR S-TPG BIN 4X8	7	7	7	7				
10-75	SF266R000E	SCR S-TPG BRZ 2.6X6	18	18	18	18				
10-76	SF205R001E	SCR S-TPG BIN 2X5	2	2	2	2				
10-77	SF308R000E	SCR S-TPG BRZ 3X8	6	6	6	6				
10-78	SM262R001E	SCR S-TPG PAN 2.6X2	2	2	2	2				
10-79	SF266R003E	SCR S-TPG PAN 2.6X6	1	1	1	1				
10-80	SF266R004E	S-TPG PAN 2.6X6	2	2	2	2				
10-81	ST178R000M	SCR TPG PAN 1.7X8	1	1	1	1				
10-82	SM263R000E	SCR S-TPG BIN 2.6X3	2	2	2	2				
10-83	M420128300	SCREW	3	3	3	3				
10-84	E421944800	BRTS-BM2.6X14SEMS	3	3	3	3				
10-85	2381001900	SPECIAL SCREW	1	1	1	1				
10-86	OB10010600	ASSY,PCB/SENSOR	1	1	1	1				

CD MECHANISM EXPLODED VIEW



CD MECHANISM PARTS LIST

Ref. No.	Part No.	Description	Q'ty	Ref. No.	Part No.	Description	Q'ty
MECHANISM							
01-01	0A41A06500	ASSY, PICKUP, LASER, 90EC2	1	01-10	E551983200	GEAR LOAD S	1
01-02	A231971865	LEAF SWITCH (INNER SW)	1	01-11	E551983300	GEAR RACK	1
01-03	A527971820	MOTOR (SPINDLE)	1	01-12	E751989000	SHAFT PICKUP	2
01-04	A527971762	MOTOR (FEED)	1	01-13	2813A00400	SPRING TORSION	4
01-05	B311930500	CHASSIS ASSY	1	01-15	B522900300	TURNTABLE ASSY	1
01-06	2383000900	WASHER, SPECIAL	1	01-21	SE172R502A	SCR PAN PCS1.7×2.5	4
01-07	E551966800	GEAR MOTOR	1	01-22	SE205R000A	SCR FLT PCS2×5	2
01-08	E551983000	GEAR PINION	1	01-23	SF266R004E	SCR S-TPG PAN2.6×6	1
01-09	E551983100	GEAR LOAD B	1				

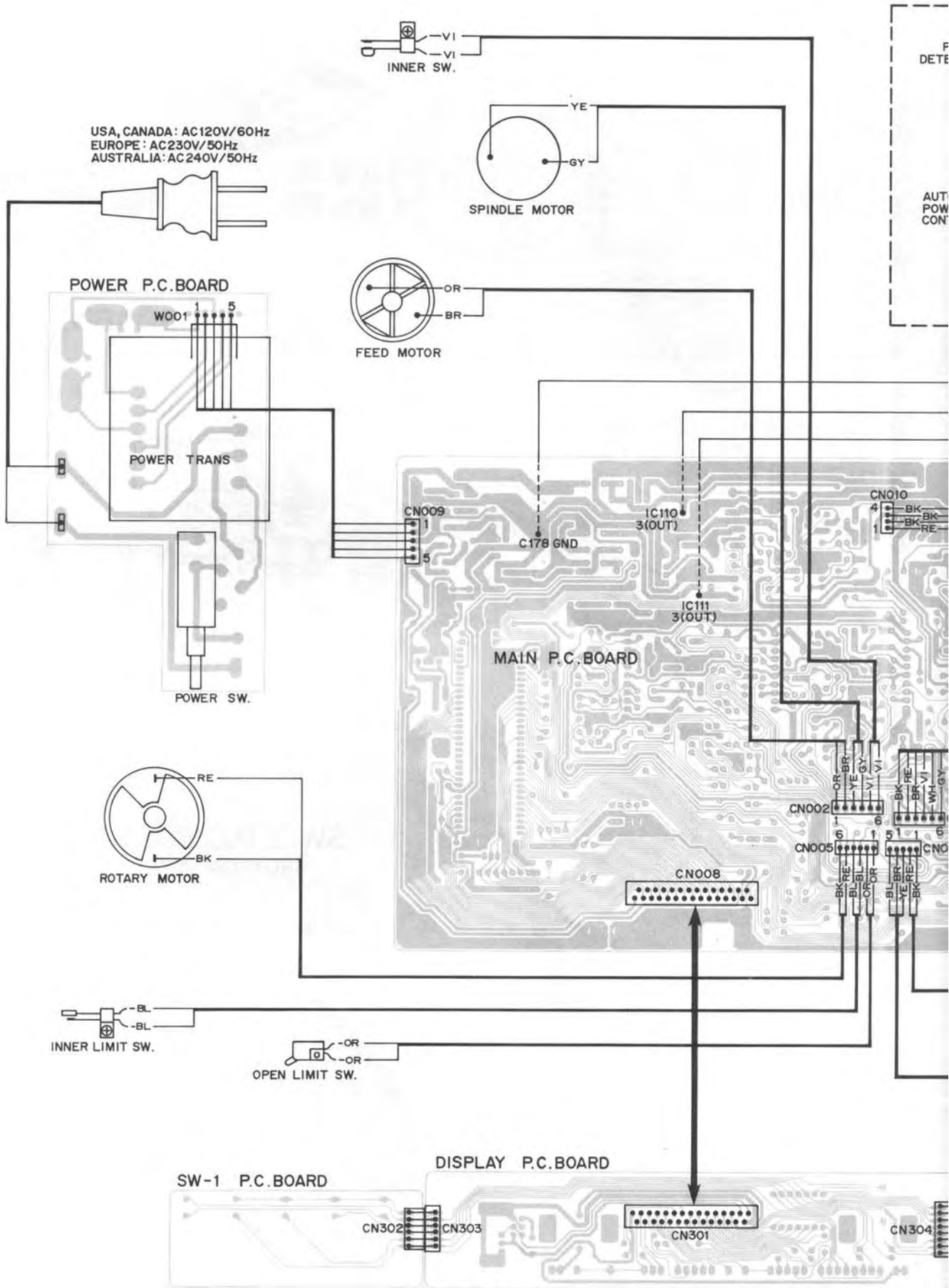
P.C.BOARD PARTS LIST

Ref. No.	Part No.	Description	Q'ty	Ref. No.	Part No.	Description	Q'ty
	OB10011002	MAIN P.C.B. ASSY		P106	4R30000212	POTENTIOMETER 100KB	1
CN08	4J10002829	PLUG 29P	1	Q100	T2SA60801C	TR 2SA608-F-NP-AA	1
C177	CE1C33206N	ELECT 3300U M 16V	1	Q101	T2SC33300C	TR 2SC3330-S-AC	1
C178	CE1C33206N	ELECT 3300U M 16V	1	or	T2SC33301C	TR 2SC3330-T-AC	1
D101	DDGMB0100A	DIODE GMB01-BT	1	Q102	T2SA13400C	TR 2SA1346-AC	1
D102	DDGMB0100A	DIODE GMB01-BT	1	Q103	T2SC34000C	TR 2SC3400-AC	1
D103	DDGMB0100A	DIODE GMB01-BT	1	Q104	T2SA13400C	TR 2SA1346-AC	1
D104	DDGMB0100A	DIODE GMB01-BT	1	Q105	T2SC34000C	TR 2SC3400-AC	1
D105	DDGMB0100A	DIODE GMB01-BT	1	Q106	T2SC34000C	TR 2SC3400-AC	1
D106	DDGMB0100A	DIODE GMB01-BT	1	Q107	T2SC34000C	TR 2SC3400-AC	1
D107	DDGMB0100A	DIODE GMB01-BT	1	Q108	T2SC34000C	TR 2SC3400-AC	1
D108	DDGMB0100A	DIODE GMB01-BT	1	Q109	T2SC34000C	TR 2SC3400-AC	1
D109	DDGMB0100A	DIODE GMB01-BT	1	Q110	T2SA15200C	TR 2SA1529-AA	1
D110	DDGMB0100A	DIODE GMB01-BT	1	Q111	T2SC34000C	TR 2SC3400-AC	1
D111	DDGMB0100A	DIODE GMB01-BT	1	Q114	T2SA13100C	TR 2SA1317-S-AC	1
D112	DDGMB0100A	DIODE GMB01-BT	1	or	T2SA13101C	TR 2SA1317-T-AC	1
D113	DDGMB0100A	DIODE GMB01-BT	1	Q115	T2SC34000C	TR 2SC3400-AC	1
D116	DDGMB0100A	DIODE GMB01-BT	1	Q116	T2SC33300C	TR 2SC3330-S-AC	1
D117	DDGMB0100A	DIODE GMB01-BT	1	or	T2SC33301C	TR 2SC3330-T-AC	1
D118	DZGZS7.00A	DIODE GZS7.5Y-BT	1	Q118	T2SC34000C	TR 2SC3400-AC	1
D125	DD1A3-I00C	DIODE 1A3-I	1	Q119	T2SA13400C	TR 2SA1346-AC	1
or	DDERA1500C	DIODE ERA15-02	1	Q120	T2SC34000C	TR 2SC3400-AC	1
D126	DDGMB0100A	DIODE GMB01-BT	1	U01	4U23A00800	CONVERTER E/O PLT102	1
D127	DDGMB0100A	DIODE GMB01-BT	1	or	4U23A00200	CONVERTER E/O TOTX-1	1
D128	DD1A3-I00C	DIODE 1A3-I	1	X101	A225971101	CRYSTAL	1
or	DDERA1500C	DIODE ERA15-02	1	X102	4V10A01100	RESONATOR,CERAMIC	1
D129	DD1A3-I00C	DIODE 1A3-I	1	R223	4R51000402	FUSIBLE 4.7 J 1/2W	1
or	DDERA1500C	DIODE ERA15-02	1	R224	4R51000402	FUSIBLE 4.7 J 1/2W	1
D130	DD1A3-I00C	DIODE 1A3-I	1	R225	4R51000404	FUSIBLE 0.47 J 1/2W	1
or	DDERA1500C	DIODE ERA15-02	1	R226	4R51000404	FUSIBLE 0.47 J 1/2W	1
D131	DD1A3-I00C	DIODE 1A3-I	1				
or	DDERA1500C	DIODE ERA15-02	1				
D132	DD1A3-I00C	DIODE 1A3-I	1				
or	DDERA1500C	DIODE ERA15-02	1				
D133	DD1A3-I00C	DIODE 1A3-I	1				
or	DDERA1500C	DIODE ERA15-02	1	OB10011201	DAC PCB ASSY		
D134	DZGZS2400A	ZENER DIODE GZS24Z-BT	1	JK401	4J12001000	JACK RCA 2P S	1
D135	DZGZS5.00A	ZENER DIODE GZS5.1Y-BT	1	IC401	4D61002801	IC SAA7350AGP	1
D136	DDGMB0100A	DIODE GMB01-BT	1	IC402	QNM55300N	IC NJM5532S	1
D137	DDGMB0100A	DIODE GMB01-BT	1	IC403	QNM55300N	IC NJM5532S	1
D138	DDGMB0100A	DIODE GMB01-BT	1	Q401	T2SD10101C	TR 2SD1012-G-SPA-AC	1
D139	DDGMB0100A	DIODE GMB01-BT	1	Q402	T2SD10101C	TR 2SD1012-G-SPA-AC	1
IC101	QLA920000N	IC LA9200NM	1	Q403	T2SD10101C	TR 2SD1012-G-SPA-AC	1
IC102	QYM712101N	IC YM7121C	1	Q404	T2SD10101C	TR 2SD1012-G-SPA-AC	1
IC103	QLA651000N	IC LA6510	1				
IC104	QLA651000N	IC LA6510	1				
IC105	4D61002401	IC UPD75208CW-B27	1				
IC106	QLA651000N	IC LA6510	1				
IC109	QBA178M00N	IC BA178M05	1				
or	QMC780500N	IC MC7805CT	1				
IC110	QNJM78L00C	IC NJM78L06A(T3)	1				
IC111	QNJM79L00C	IC NJM79L06A(T3)	1				
IC112	4D61003300	IC PST523	1				
P101	4R30000212	POTENTIOMETER 100KB	1				
P102	4R30000209	POTENTIOMETER 20KB	1				
P103	4R30000212	POTENTIOMETER 100KB	1				

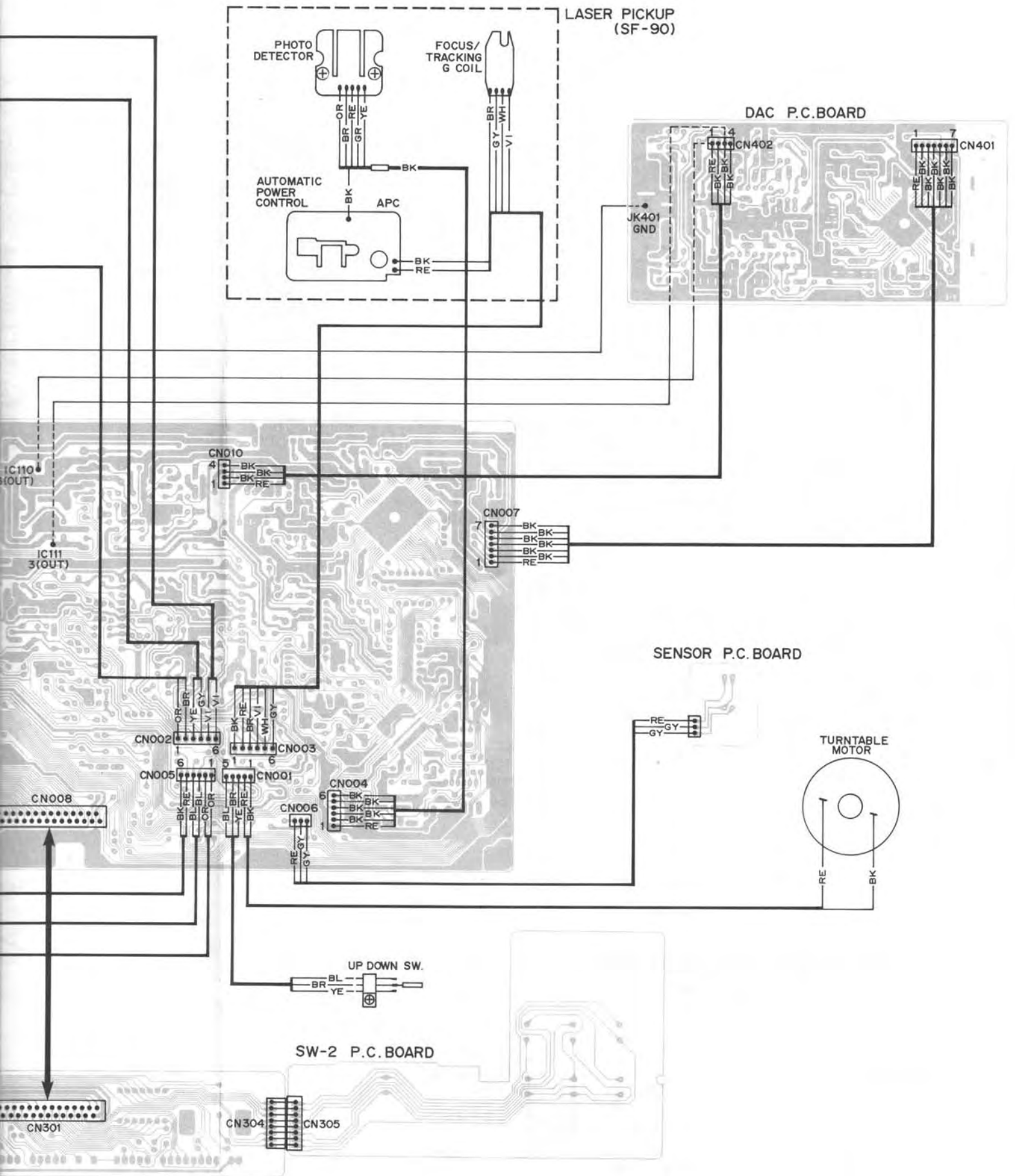
P.C.BOARD PARTS LIST(Continued)

Ref. No.	Part No.	Description	Q'ty	Ref. No.	Part No.	Description	Q'ty
	OB10011101	DISPLAY PCB ASSY			OB10012142	POWER PCB ASSY (EUR)	
CN301	4J10002829	PLUG 29P	1	10-61	△4L50002840	POWER TRANS	1
CN304	4J10002308	PLUG PIN HEADER 8P	1	10-62	△A243200500	POWER CORD	1
					M611401400	COVER SAFETY	1
D301	DDGMB0100A	DIODE GMB01-BT	1	C001	△A223970970	CAPACITOR 0.01MF 400V	1
D302	DDGMB0100A	DIODE GMB01-BT	1	EC001	A237200830	EC TERMINAL 1P	1
D303	DDGMB0100A	DIODE GMB01-BT	1	EC002	A237200830	EC TERMINAL 1P	1
D304	DDGMB0100A	DIODE GMB01-BT	1	F001	△4J20000100	FUSE HOLDER	2
D305	DDGMB0100A	DIODE GMB01-BT	1	F002	△4J20000100	FUSE HOLDER	2
D306	DDGMB0100A	DIODE GMB01-BT	1	F001	△FR63C2T00X	FUSE 250V 0.63A	1
D307	DDGMB0100A	DIODE GMB01-BT	1	F002	△FR63C2T00X	FUSE 250V 0.63A	1
D308	DDGMB0100A	DIODE GMB01-BT	1				
D309	DDGMB0100A	DIODE GMB01-BT	1	S003	△4S11A03300	SWITCH PUSH	1
FL01	4T41000201	FL TUBE CF1047CB	1	W001	4J11000805	SOCKET HOLDER,5P	1
U001	4D61004800	IC GP1U571X	1	W001	4W30002853	WIRE 5P	1
	OB10011111	SW-1 PCB ASSY			OB10012161	POWER PCB ASSY (AUS)	
CN302	4J10002306	PLUG PIN HEADER 6P	1	10-61	△4L50002860	POWER TRANS	1
SW08	4S14000100	SWITCH,TACT	1	10-62	△A243200350	POWER CORD	1
SW09	4S14000100	SWITCH,TACT	1		M611401400	COVER SAFETY	1
SW10	4S14000100	SWITCH,TACT	1	C001	△A223970970	CAPACITOR 0.01MF 400V	1
SW11	4S14000100	SWITCH,TACT	1	EC001	A237200830	EC TERMINAL 1P	1
SW12	4S14000100	SWITCH,TACT	1	EC002	A237200830	EC TERMINAL 1P	1
	OB10011121	SW-2 PCB ASSY		F001	△4J20000100	FUSE HOLDER	2
CN305	4J10002408	PLUG SOCKET 8P	1	F002	△4J20000100	FUSE HOLDER	2
SW01	4S14000100	SWITCH,TACT	1	F001	△FR63C2T00X	FUSE 250V 0.63A	1
SW02	4S14000100	SWITCH,TACT	1	F002	△FR63C2T00X	FUSE 250V 0.63A	1
SW03	4S14000100	SWITCH,TACT	1	S003	△4S11A03300	SWITCH PUSH	1
SW04	4S14000100	SWITCH,TACT	1	W001	4J11000805	SOCKET HOLDER,5P	1
SW05	4S14000100	SWITCH,TACT	1	W001	4W30002853	WIRE 5P	1
SW06	4S14000100	SWITCH,TACT	1				
SW07	4S14000100	SWITCH,TACT	1				
	OB10012131	POWER PCB ASSY (USA/CND)					
10-61	△4L50002830	POWER TRANS	1				
10-62	△4W10002100	POWER CORD	1				
	M611401400	COVER SAFETY	1				
C001	△A223970970	CAPACITOR 0.01MF 400V	1				
EC001	A237200830	EC TERMINAL 1P	1				
EC002	A237200830	EC TERMINAL 1P	1				
S003	△4S11A03300	SWITCH PUSH	1				
W001	4J11000805	SOCKET HOLDER,5P	1				
W001	4W30002853	WIRE 5P	1				

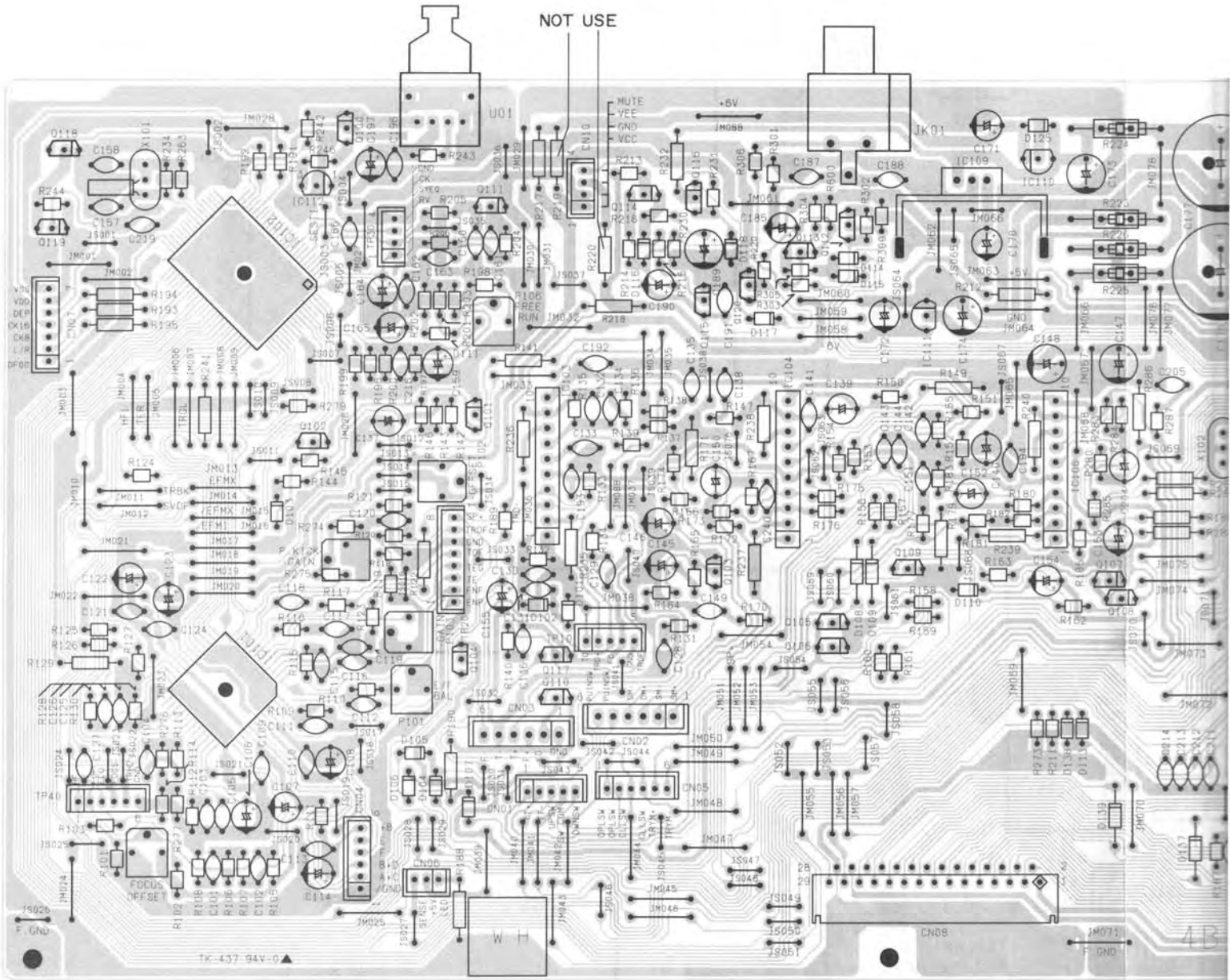
POINT TO POINT WIRING



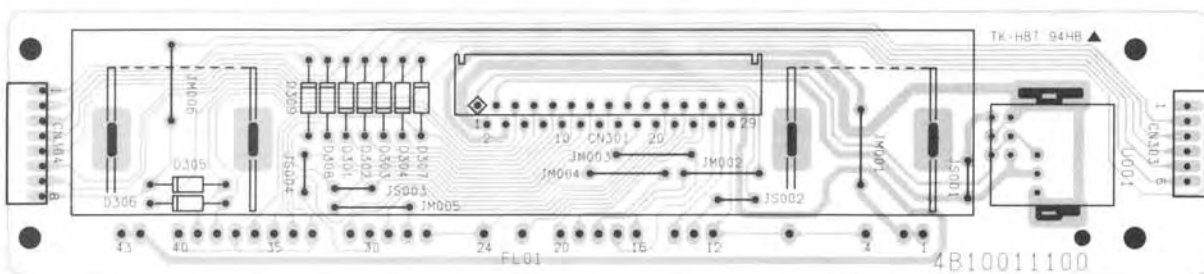
POINT TO POINT WIRING DIAGRAM

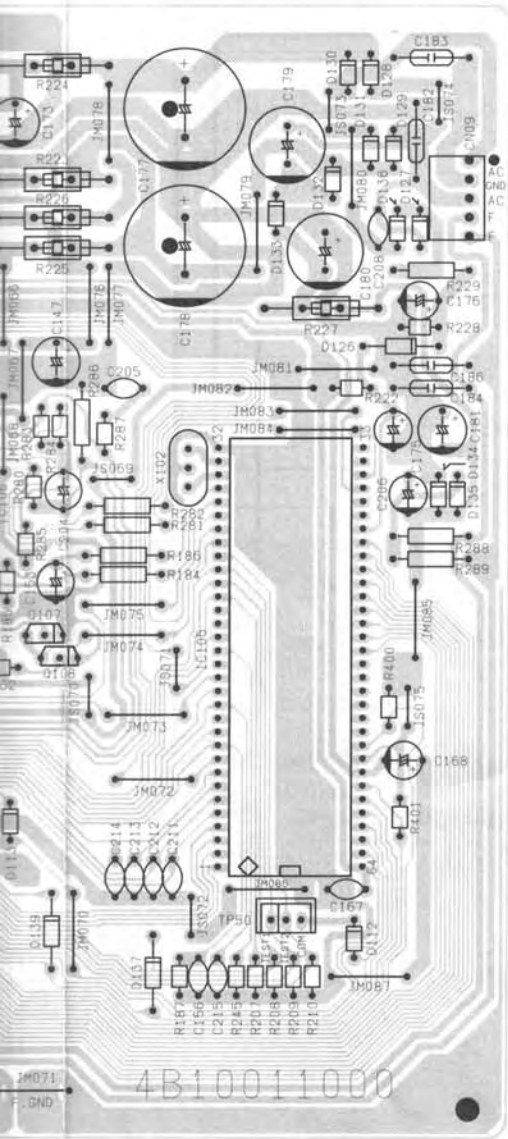


MAIN P.C.BOARD (BOTTOM VIEW)

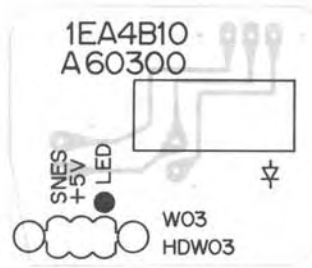


DISPLAY P.C.BOARD (BOTTOM VIEW)

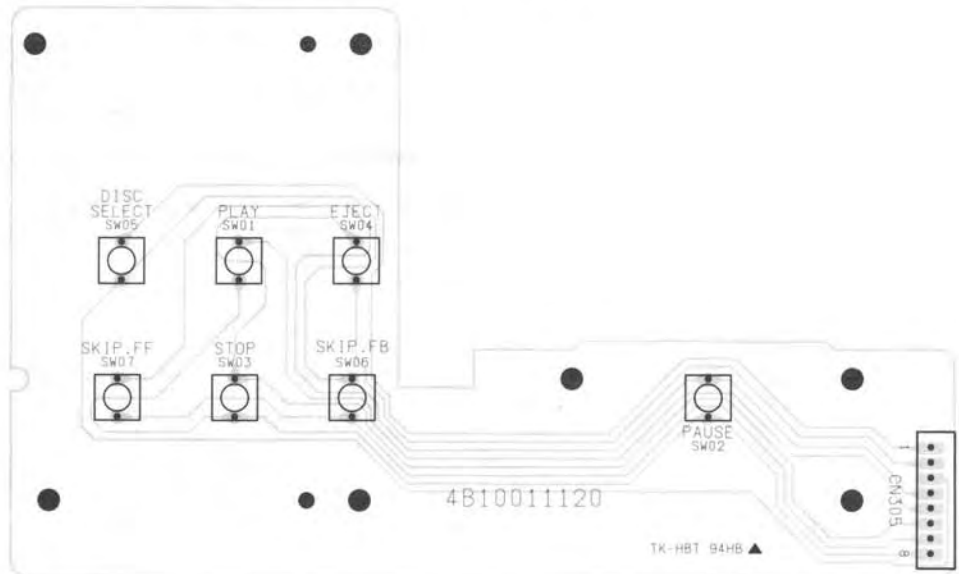




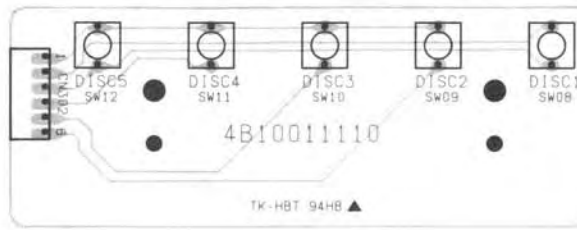
SENSOR P.C.BOARD (BOTTOM VIEW)



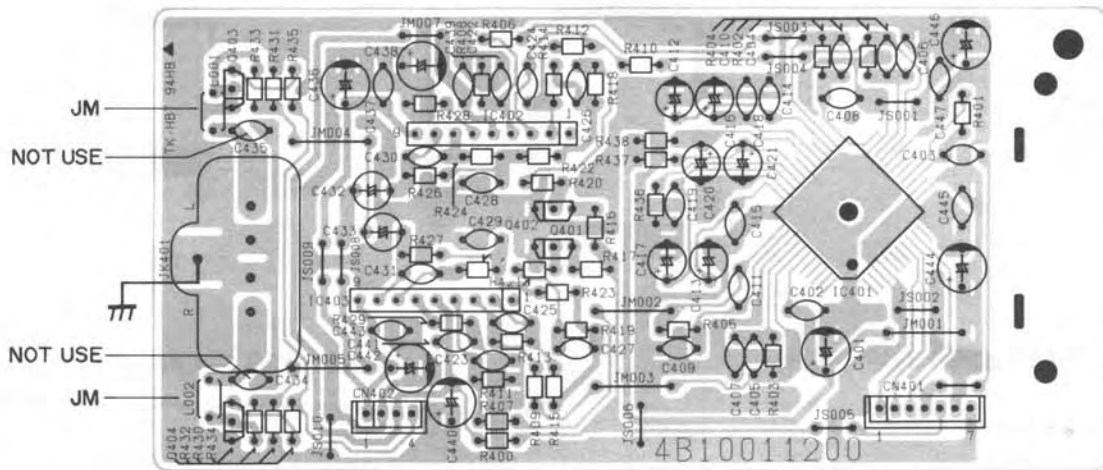
SW-2 P.C.BOARD (BOTTOM VIEW)



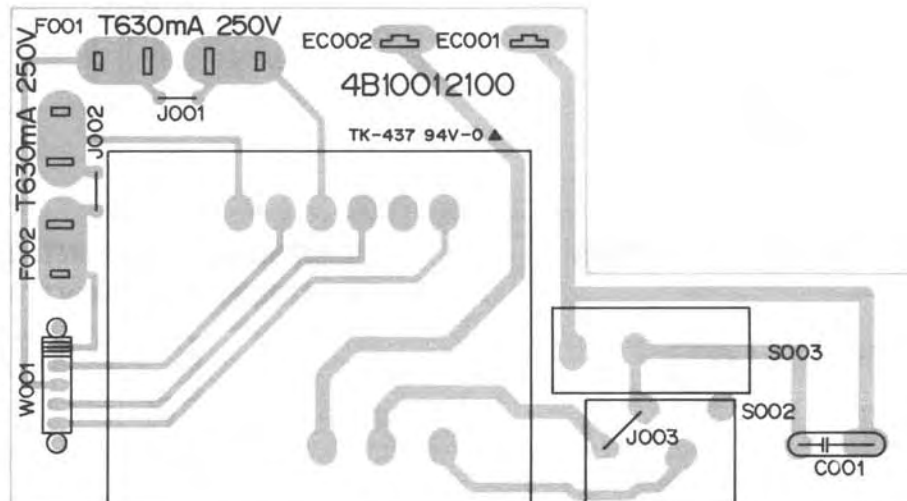
SW-1 P.C.BOARD (BOTTOM VIEW)



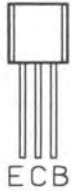



SYNC P.C.BOARD (BOTTOM VIEW)



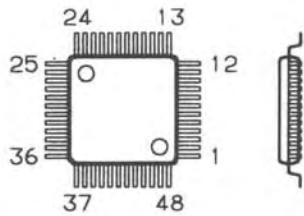
POWER P.C.BOARD (BOTTOM VIEW)



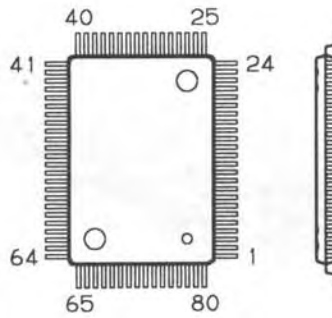
IC & TRANSISTOR LEAD IDENTIFICATION

TRANSISTOR	FRONT VIEW	BOTTOM VIEW	TRANSISTOR	FRONT VIEW	BOTTOM VIEW
2SA1529 2SA608			2SA1317 2SA1346 2SC3330 2SC3400 2SD1012		
TERMINAL NAME					
B → BASE C → COLLECTOR E → EMITTER					

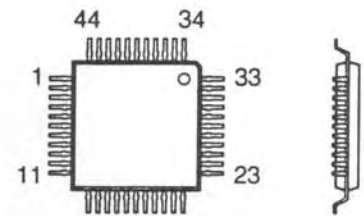
LA9200NM TOP/SIDE VIEWS



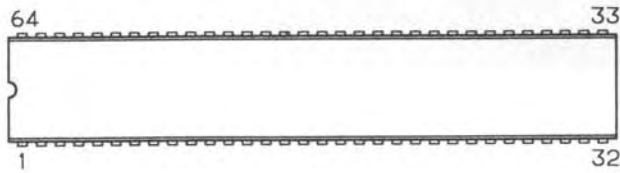
YM7121C TOP/SIDE VIEWS



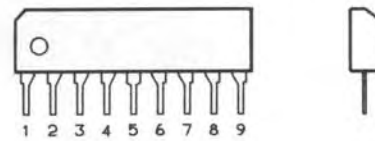
SAA7350 TOP/SIDE VIEWS



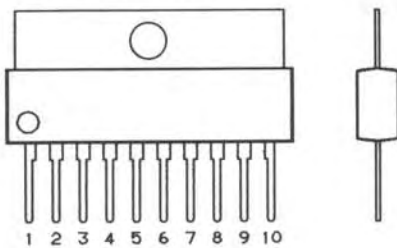
UPD75208 TOP VIEW



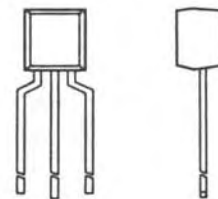
NJM5532S FRONT/SIDE VIEWS



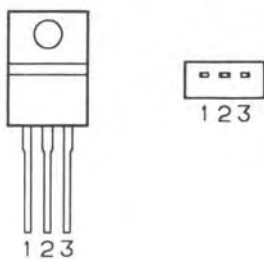
LA6510 FRONT/SIDE VIEWS



PST523C FRONT/SIDE VIEWS

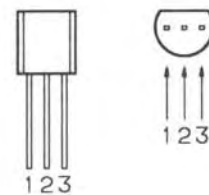


MC7805CT FRONT/BOTTOM VIEWS



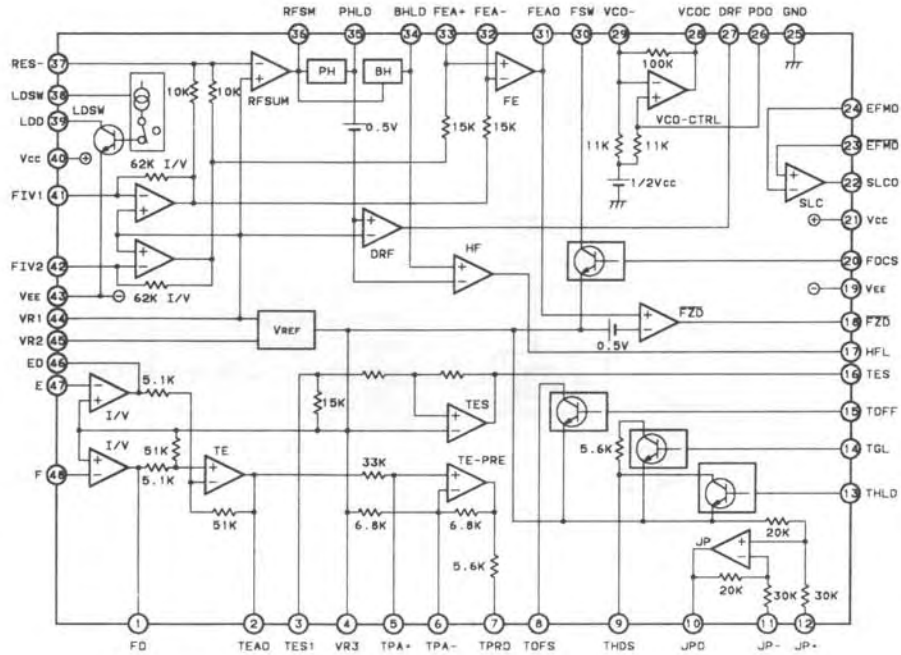
NJM78L06A(T3) FRONT/BOTTOM VIEWS

NJM79L06A(T3) FRONT/BOTTOM VIEWS

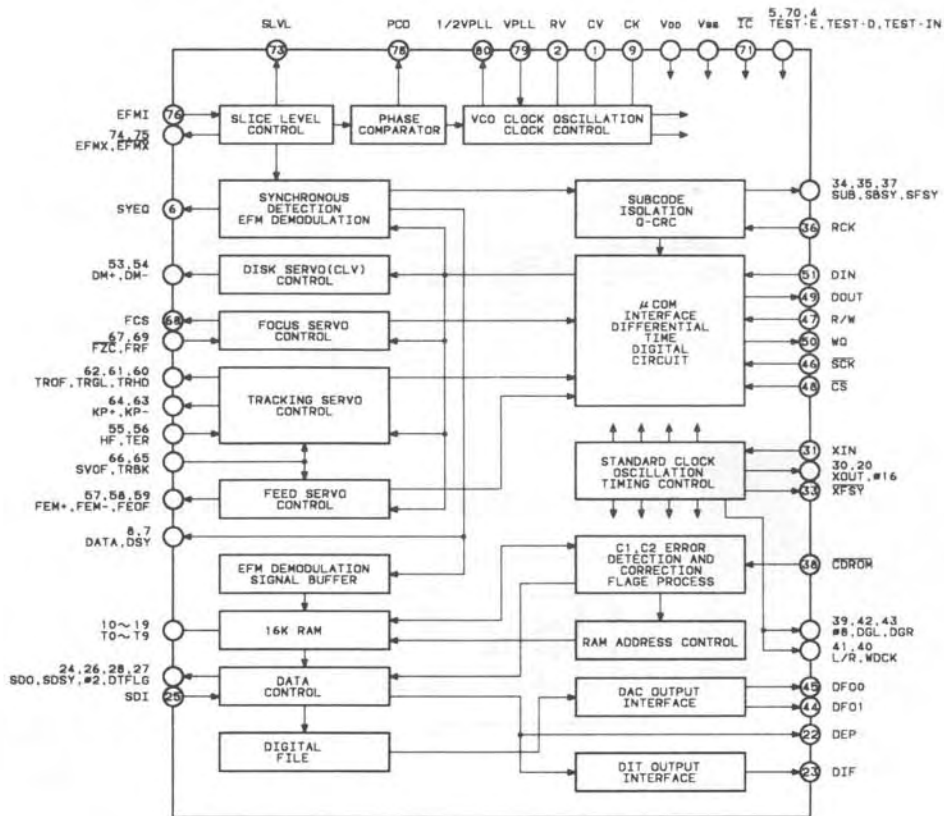


IC BLOCK DIAGRAM

LA9200NM BLOCK DIAGRAM

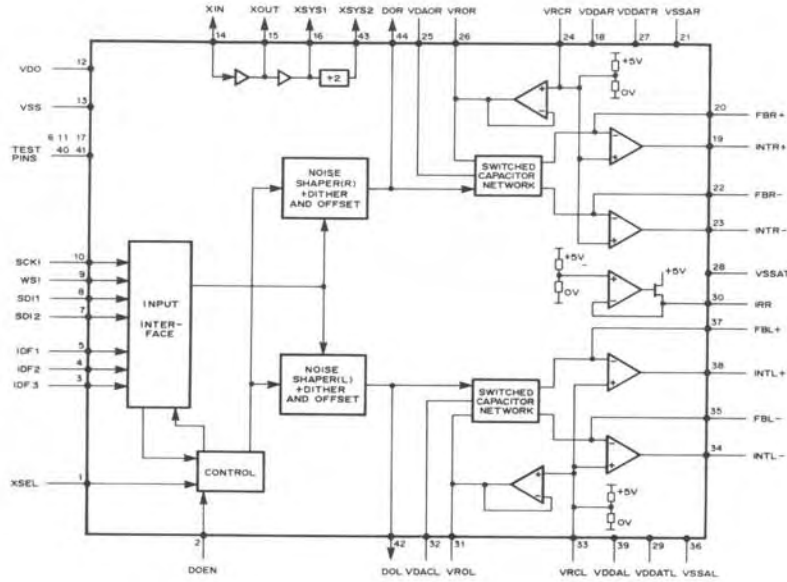


YM7121C BLOCK DIAGRAM

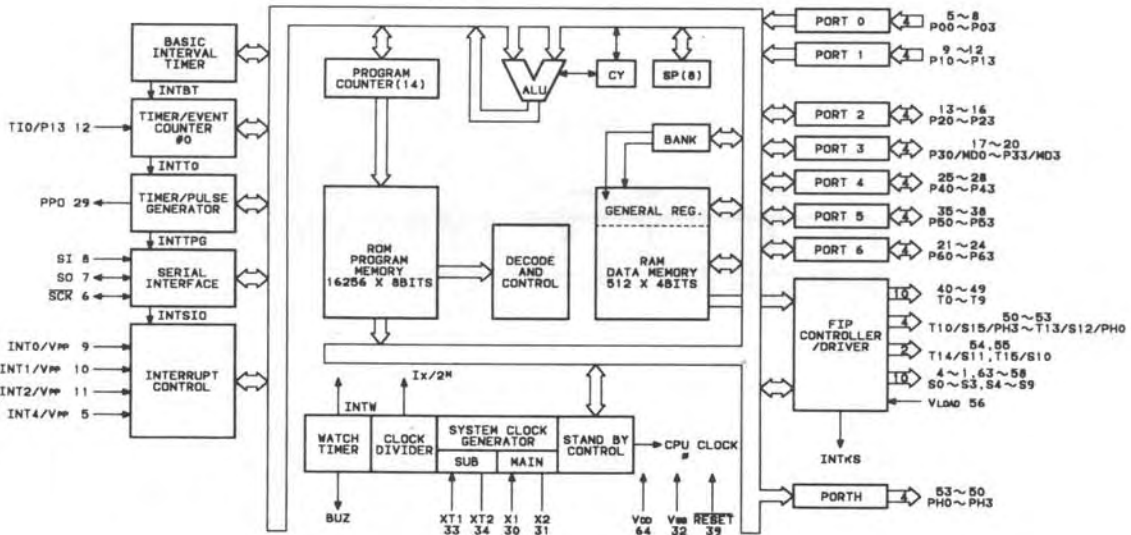


IC BLOCK DIAGRAM (Continued)

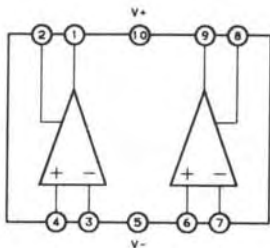
SAA7350 BLOCK DIAGRAM



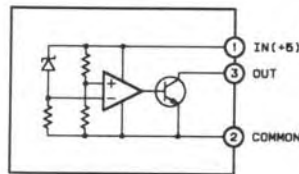
UPD75208 BLOCK DIAGRAM



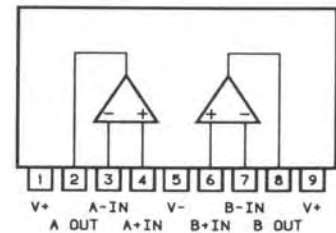
LA6510 BLOCK DIAGRAM



PST523C BLOCK DIAGRAM

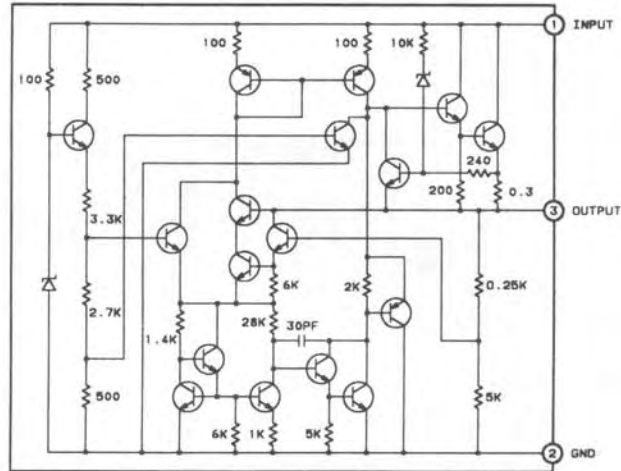


NJM5532S BLOCK DIAGRAM

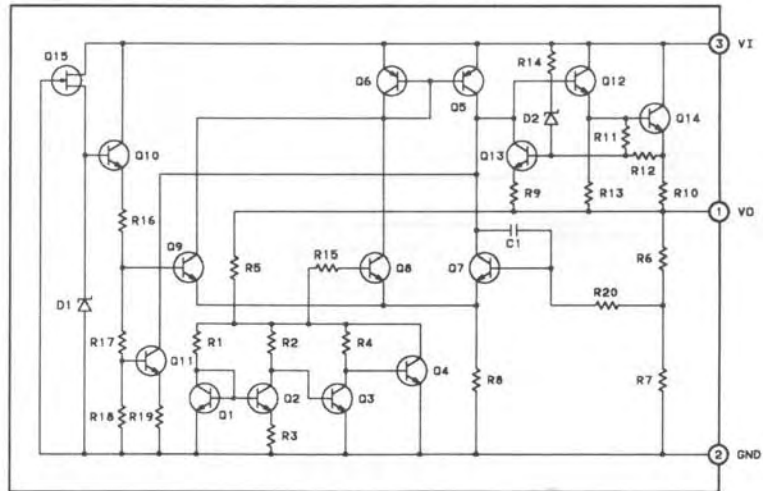


IC BLOCK DIAGRAM (Continued)

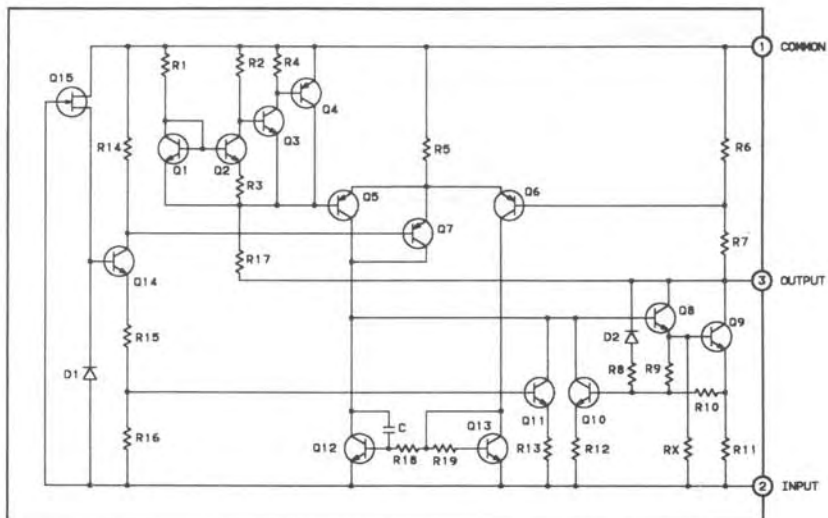
MC7805CT BLOCK DIAGRAM



NJM78L06A(T3) BLOCK DIAGRAM



NJM79L06A(T3) BLOCK DIAGRAM



REFERENCE VOLTAGE

IC PIN NUMBER DC VOLTAGES																					
SYMBOL No.	DEVICE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
IC101	LA9200NM	0V	0V	0V	0V	0V	0V	0V	0V	0V	0V	0V	0V	0V	0V	5V	4V	4V	4V	-5V	0V
		21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
		5V	2V	3V	3V	0V	3V	0V	3V	3V	0V	0V	1V	1V	0V	0V	0V	0V	4V	0V	5V
		41	42	43	44	45	46	47	48												
		0V	0V	-5V	0V	0V	0V	0V	0V												

IC PIN NUMBER DC VOLTAGES																					
SYMBOL No.	DEVICE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
IC102	YM7121C	2V	3V	5V	5V	5V	0V	0V	1V	2V	5V	5V	5V	5V	5V	5V	5V	5V	0V	0V	2V
		21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
		0V	0V	3V	0V	0V	3V	3V	0V	0V	2V	2V	5V	5V	0V	0V	0V	0V	5V	2V	3V
		41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
		3V	2V	2V	0V	0V	5V	0V	0V	0V	0V	0V	0V	0V	0V	4V	4V	0V	0V	5V	0V
		61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
		0V	5V	0V	0V	4V	5V	4V	0V	0V	5V	5V	5V	3V	3V	3V	2V	0V	2V	4V	2V

IC PIN NUMBER DC VOLTAGES											
SYMBOL No.	DEVICE	1	2	3	4	5	6	7	8	9	10
IC103	LA6510	0.7V	0V	0V	0V	-13.2V	-11.5V	-11.3V	-1.5V	1.5V	12V

IC PIN NUMBER DC VOLTAGES											
SYMBOL No.	DEVICE	1	2	3	4	5	6	7	8	9	10
IC104	LA6510	-1.8V	1.8-V	0V	0V	-13.2V	0V	0V	12.2V	12.2V	12.2V

IC PIN NUMBER DC VOLTAGES																						
SYMBOL No.	DEVICE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
IC105	μPD75208	-26V	-13V	-2V	-13V	0V	5V	0V	0V	5V	5V	0V	0V	0V	5V	5V	0V	0V	0V	5V		
		21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	
		2V	2V	2V	0V	5V	0V	5V	0V	0V	2V	2V	0V	0V	5V	0V	0V	0V	0V	5V	-27V	
		41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	
		-27V	-27V	-27V	-27V	-27V	-27V	-27V	-27V	-27V	-30V	-30V	-30V	-30V	-30V	-30V	-19V	-30V	-6V	-23V	-20V	-30V
		61	62	63	64																	
		-16V	-16V	-2V	5V																	

IC PIN NUMBER DC VOLTAGES											
SYMBOL No.	DEVICE	1	2	3	4	5	6	7	8	9	10
IC106	LA6510	-1.8V	1.8-V	0V	0.2V	-13.2V	0V	0V	2.5V	-2.5V	12.6V

IC PIN NUMBER DC VOLTAGES				
SYMBOL No.	DEVICE	1	2	3
IC109	MC7805CT	11V	0V	5V

IC PIN NUMBER DC VOLTAGES				
SYMBOL No.	DEVICE	1	2	3
IC110	NJM78L06	11V	0V	6V

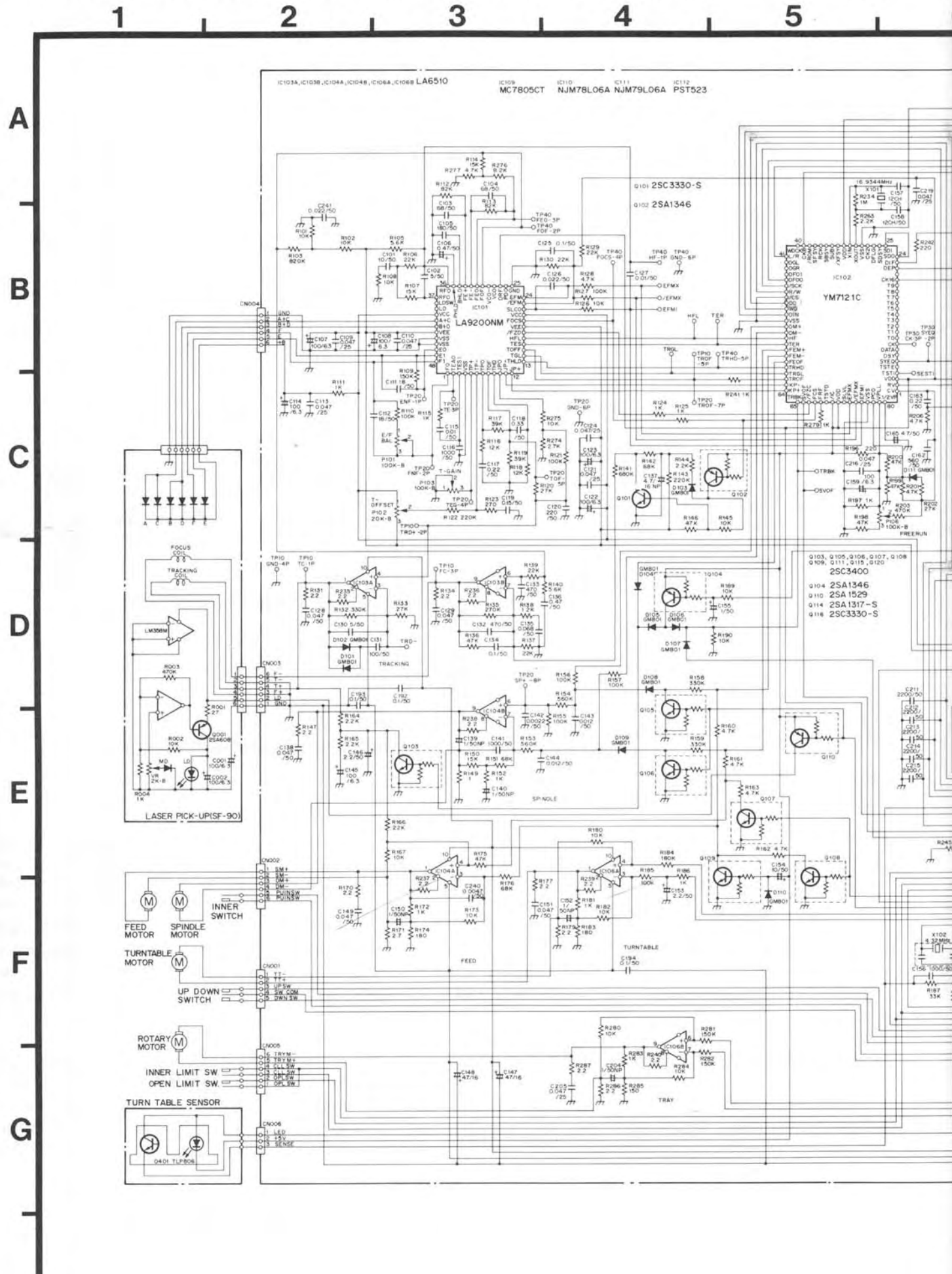
IC PIN NUMBER DC VOLTAGES				
SYMBOL No.	DEVICE	1	2	3
IC111	NJM79L06	-6V	-11V	0V

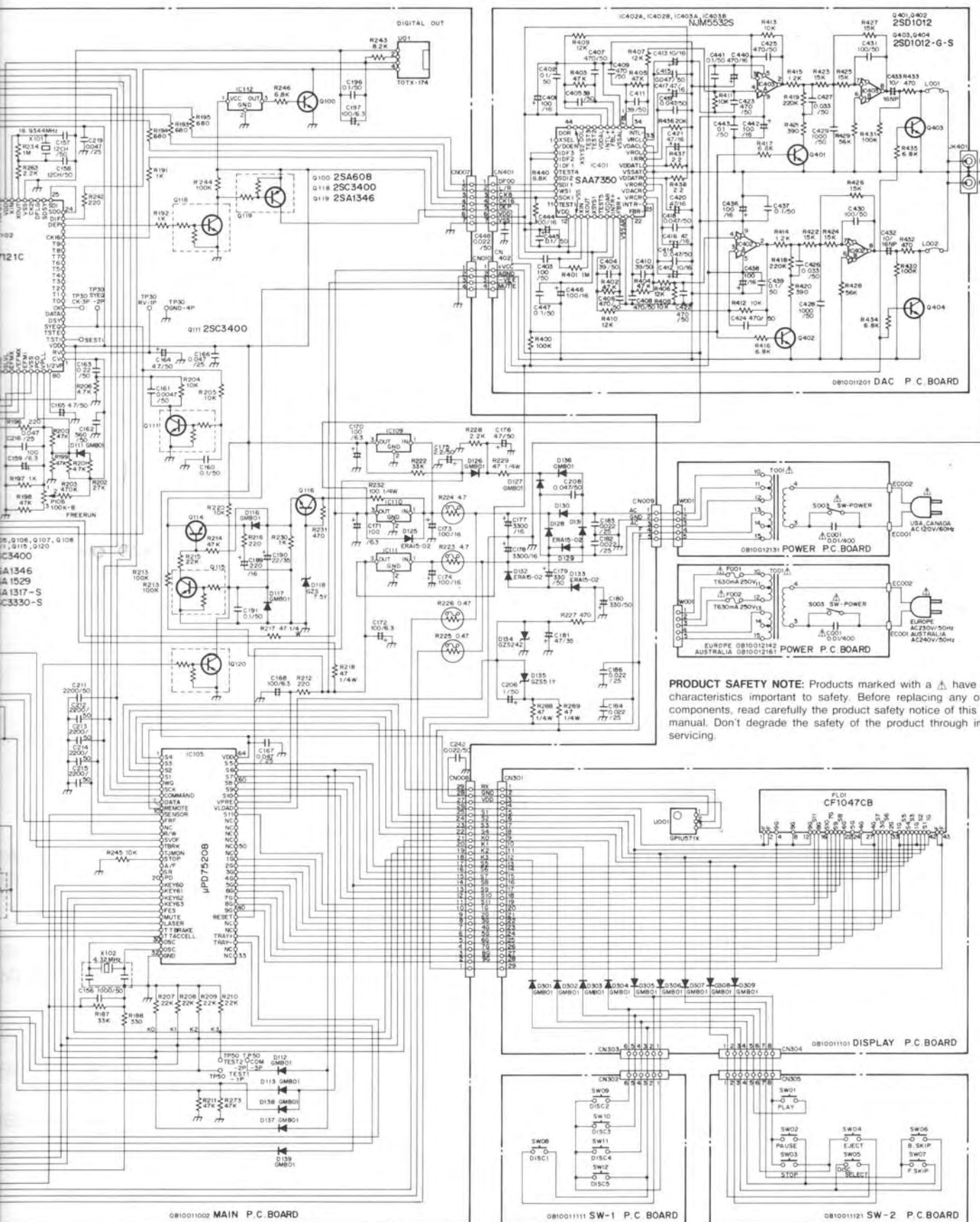
IC PIN NUMBER DC VOLTAGES																					
SYMBOL No.	DEVICE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
IC401	SAA7350	5V	5V	0V	0V	5V	5V	5V	0V	3.2V	2.7V	0V	5V	0V	1.9V	2.5V	2.9V	0V	5V	2.6V	2.6V
		21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
		0.4V	2.6V	2.6V	2.6V	0.4V	2.6V	5V	0.4V	5V	2.6V	2.6V	0.4V	2.6V	2.6V	2.6V	0.4V	2.6V	2.6V	5V	5V
		41	42	43	44																
		5V	0V	3.6V	0V																

IC PIN NUMBER DC VOLTAGES										
SYMBOL No.	DEVICE	1	2	3	4	5	6	7	8	9
IC402	NJM5532S	2.6V	2.4V	2.5V	1.4V	1.0V	0.6V	2.3V	2.3V	2.5V

IC PIN NUMBER DC VOLTAGES										
SYMBOL No.	DEVICE	1	2	3	4	5	6	7	8	9
IC403	NJM5532S	2.5V	2.4V	2.5V	1.4V	1.0V	0.6V	2.3V	2.3V	2.5V

SCHEMATIC DIAGRAM **RCC940AX** Compact Disc Changer





PRODUCT SAFETY NOTE: Products marked with a Δ have special characteristics important to safety. Before replacing any of these components, read carefully the product safety notice of this service manual. Don't degrade the safety of the product through improper servicing.

- NOTES:**
- All resistors values are indicated in "ohm" (K=10³, M=10⁶).
 - All capacitors values are indicated in "µF" (p=10⁻¹²).
 - All voltages indicated on the schematics are measured under the following conditions:
 - Use a V.T.V.M
 - All voltages - 10% with respect to chassis ground
 - No signals at input terminals
 - AC input at 230 or 240 volts 50Hz, and 120 volts 60 Hz
 - This is a basic schematic diagram