

TC-TX77

SERVICE MANUAL

AEP Model
UK Model



Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation. "DOLBY" and the double-D symbol $\square\square$ are trademarks of Dolby Laboratories Licensing Corporation.

Model Name Using Similar Mechanism	TC-S1
Tape Transport Mechanism Type	TCM-9700HLD

SPECIFICATIONS

Tape section

Track method

4-track, 2-channel stereo

Fast forward time

Approx. 120 seconds (for C-60)

Frequency response**(with DOLBY NR set to OFF)**

TYPE-IV tape:

30 - 15,000 Hz, ± 3 dB

20 - 16,000 Hz, ± 6 dB

TYPE-II tape:

30 - 15,000 Hz, ± 3 dB

20 - 16,000 Hz, ± 6 dB

TYPE-I tape:

30 - 14,000 Hz, ± 3 dB

20 - 15,000 Hz, ± 6 dB

Overall S/N ratio

57 dB (TYPE-IV tape)

Distortion

315 Hz, tertiary higher harmonic

distortion: 1.8% (TYPE-II tape)

Recording level: 250 nWb/m

Max. recording level audio**compensation (for a TYPE-IV tape)**

DOLBY NR C: 73 dB

DOLBY NR B: 66 dB

DOLBY NR OFF: 58 dB

General

Power requirements

220 - 230 V AC, 50/60 Hz

Power consumption

14 watts

Dimensions (w/h/d)

Approx. 280 × 90 × 348.5 mm,
incl. projecting parts and controls

Mass

Approx. 3.5 kg

Supplied accessories

Audio cords (2)

Audio bus cable (1)

Design and specifications are subject to change without notice.

STEREO CASSETTE DECK



SONY®

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SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK \triangle OR DOTTED LINE WITH MARK \triangle ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

SECTION 1 GENERAL

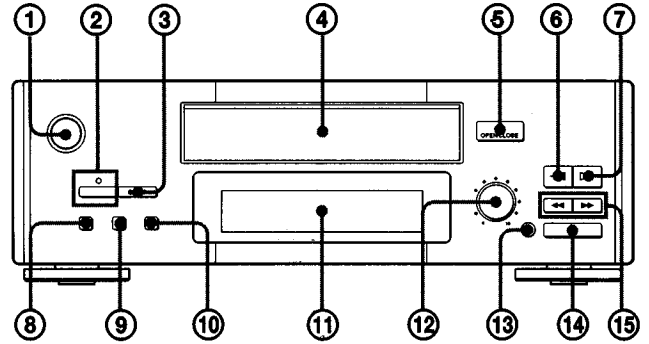
This section is extracted from instruction manual.

Index to Parts and Controls

Front Panel (see Fig. A)

- ① POWER switch
- ② CD SYNC button/indicator
- ③ ● REC button
- ④ Cassette tape tray
- ⑤ ≡ OPEN/CLOSE button
- ⑥ ◀ (reverse side play) button
- ⑦ ▶ (front side play) button
- ⑧ DOLBY NR button
- ⑨ RESET button
- ⑩ DIRECTION button
- ⑪ Display window
- ⑫ REC LEVEL control
- ⑬ || (pause) button
- ⑭ ■ (stop) button
- ⑮ ◀◀/▶▶ (fast-forward, rewind and AMS) buttons

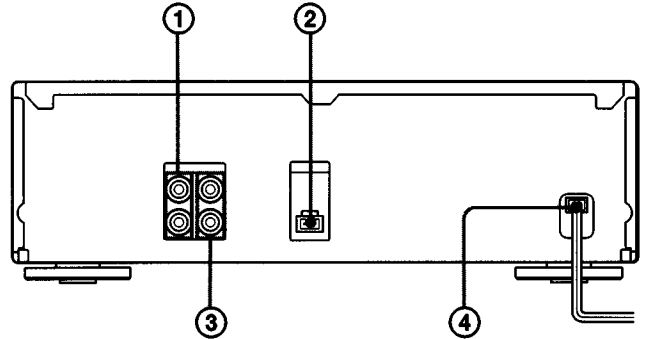
A



B

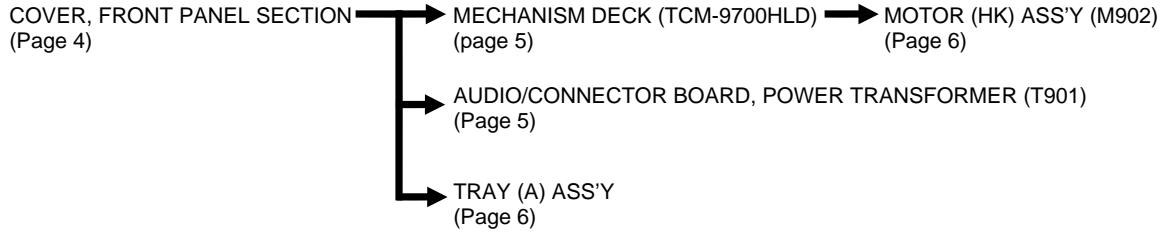
Rear Panel (see Fig. B)

- ① TAPE IN jacks
- ② AU BUS connector
- ③ TAPE OUT jacks
- ④ AC power cord



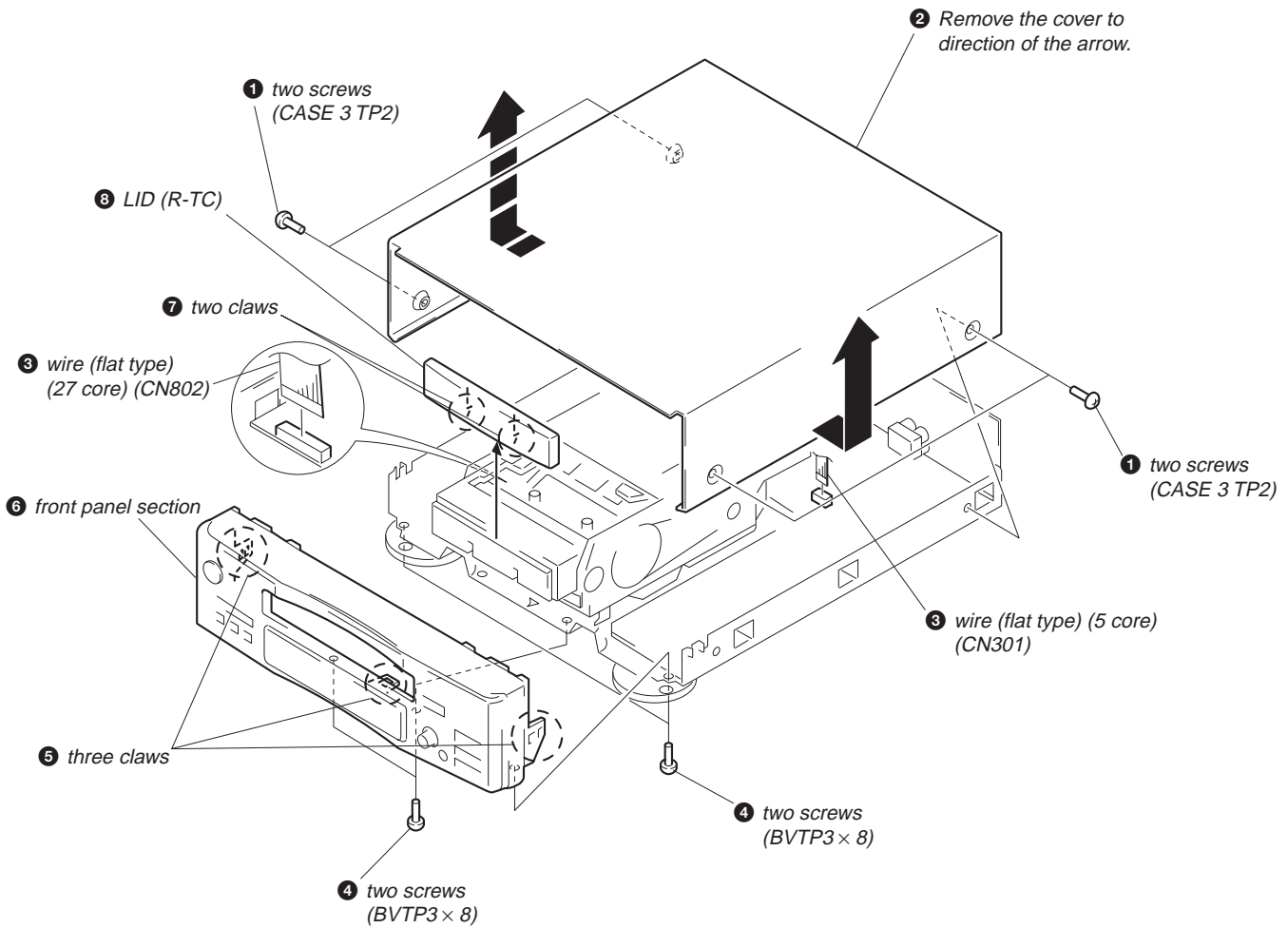
SECTION 2 DISASSEMBLY

• This set can be disassembled in the order shown below.

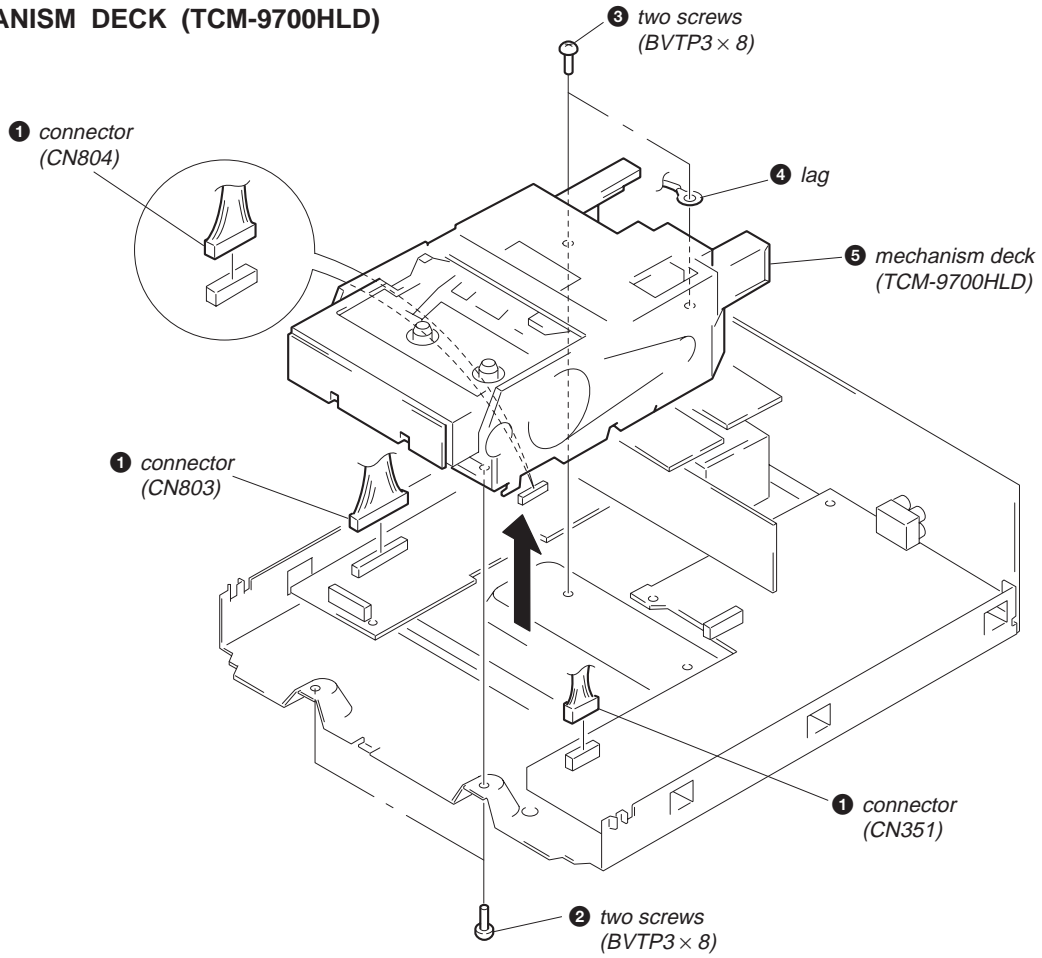


Note: Follow the disassembly procedure in the numerical order given.

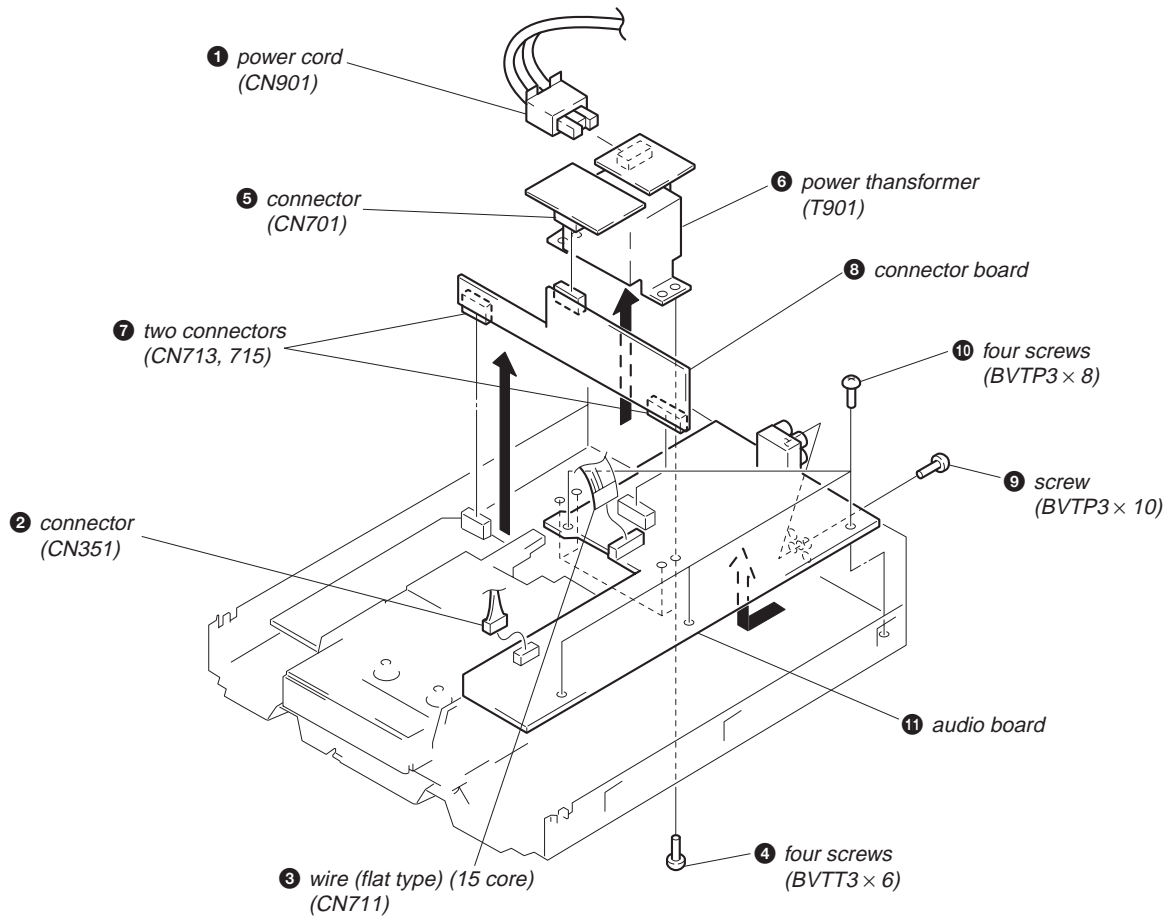
COVER, FRONT PANEL SECTION



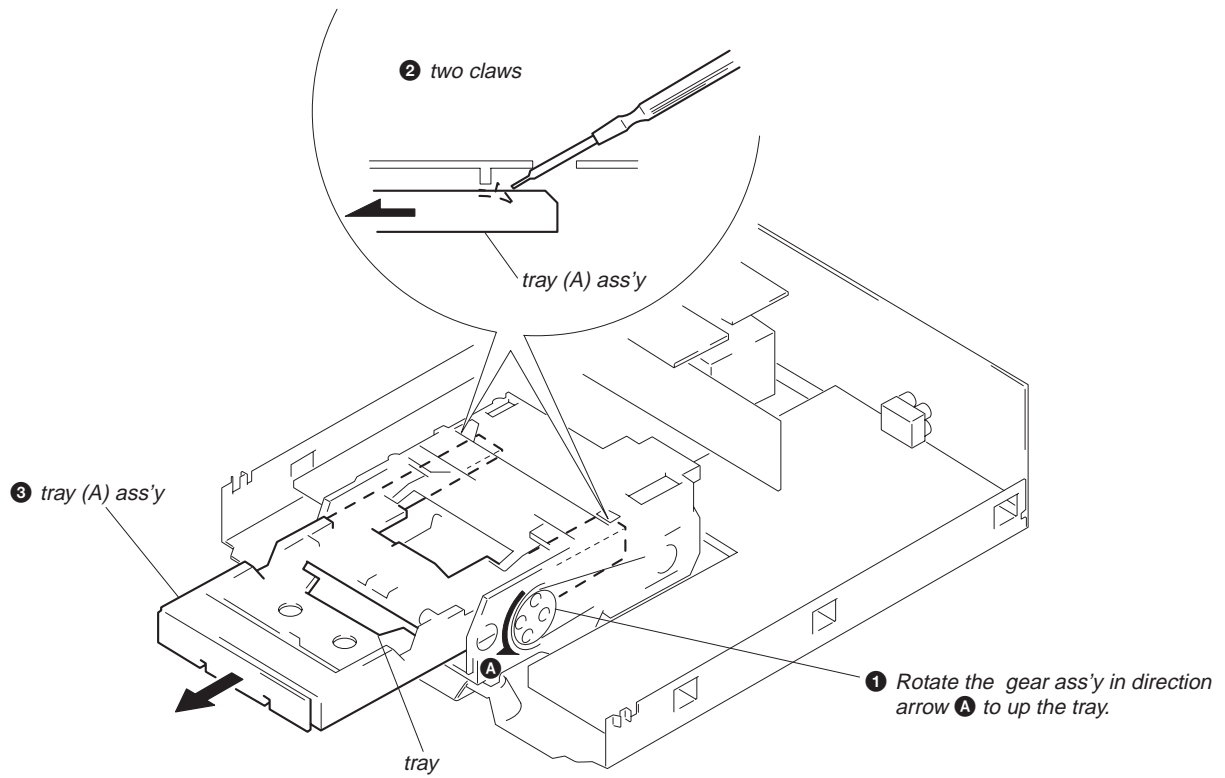
MECHANISM DECK (TCM-9700HLD)



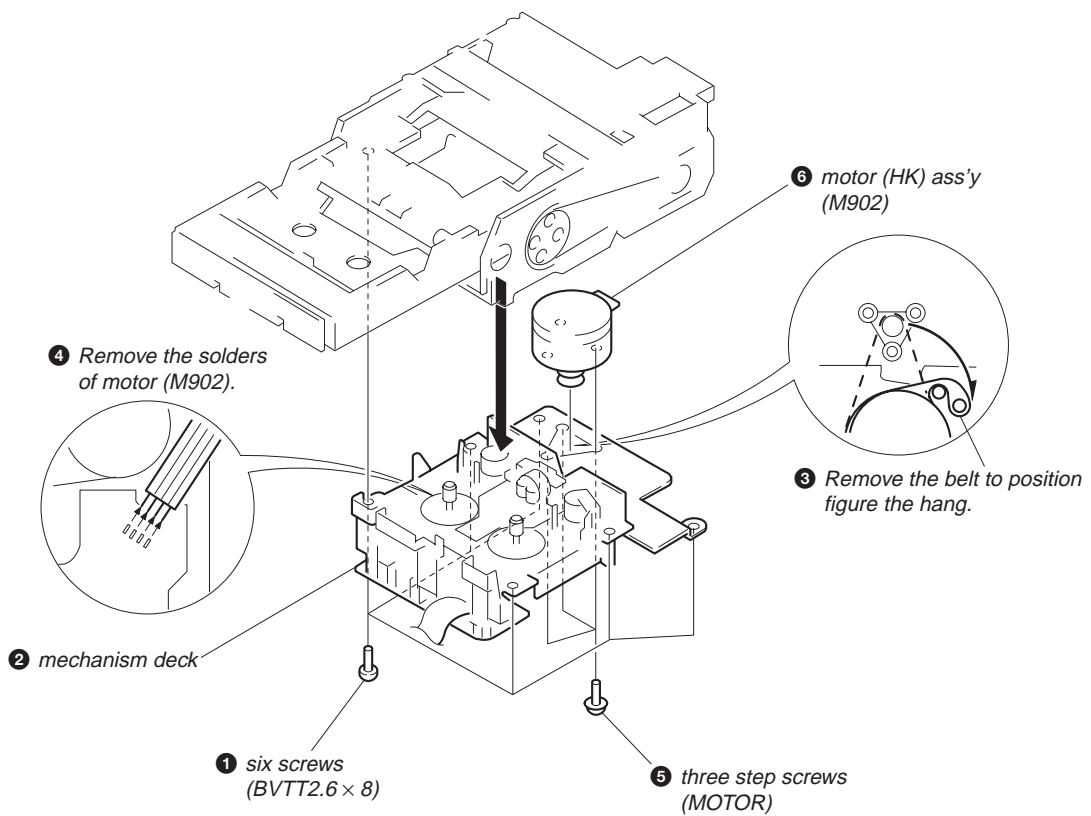
AUDIO/CONNECTOR BOARD, POWER TRANSFORMER (T901)



TRAY (A) ASS'Y



MOTOR (HK) ASS'Y (M902)



SECTION 3 MECHANICAL ADJUSTMENTS

PRECAUTION

1. Clean the following parts with a denatured-alcohol-moistened swab:

record/playback/earth head	pinch roller
rubber belts	capstan
idlers	
2. Demagnetize the record/playback head with a head demagnetizer. (Do not bring the head demagnetizer close to the erase head.)
3. Do not use a magnetized screwdriver for the adjustments.
4. After the adjustments, apply suitable locking compound to the parts adjusted.
5. The adjustments should be performed with the rated power supply voltage unless otherwise noted.

Torque Measurement

Mode	Torque Meter	Meter Reading
FWD	CQ-102C	30 – 65 g•cm (0.42 – 0.90 oz•inch)
FWD Back tension		1.5 – 6 g•cm (0.021 – 0.083 oz•inch)
REV	CQ-102RC	30 – 65 g•cm (0.42 – 0.90 oz•inch)
REV Back tension		1.5 – 6 g•cm (0.021 – 0.083 oz•inch)
FF, REW	CQ-201B	70 – 130 g•cm (0.98 – 1.80 oz•inch)

SECTION 4 ELECTRICAL ADJUSTMENTS

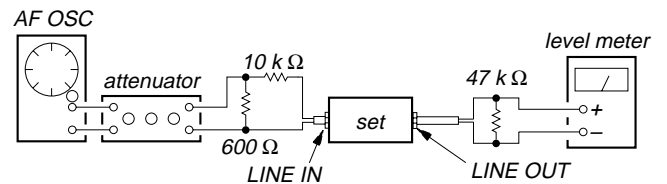
PRECAUTION

1. The adjustment should be performed in the publication. (Be sure to make playback adjustment at first.)
2. The adjustments and measurement should be performed for both L-CH and R-CH.
 - Switch position

DOLBY NR switch	: OFF
DIRECTION switch	: ⇄
 - Standard record position

Deliver the standard input signal level to input jack and set the REC LEVEL (RV301) control to obtain the standard output signal level as follows.

– Record Mode –



Standard Input Level

Input terminal	LINE IN
source impedance	10 kΩ
input signal level	0.5 V (– 3.8 dB)

Standard Output Level

Output terminal	LINE OUT (L-CH)
load impedance	47 kΩ
output signal level	0.5 V (– 3.8 dB)

Test Tape

Type	Signal	Used for
P-4-A100	10 kHz, – 10 dB	Azimuth Adjustment
P-4-L300	315 Hz, 0 dB	PB Level Adjustment
WS-48B	3 kHz, 0 dB	Tape Speed Adjustment

0 dB = 0.775 V

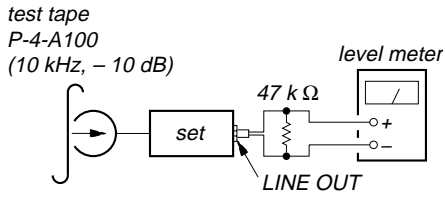
Test Mode

With the POWER turned OFF, short the test point CN801 (2P) on the SYSTEM CONTROL board (making IC801 pin ⑩ “L”) and turn the POWER ON. Thus, the TEST mode will be activated. If a recording is done in the TEST mode, the REC MEMORY mode becomes active where the tape is rewound by the amount of recording when a rewinding is executed after recording. After adjustment, make the CN801 (2P) open to release the TEST mode.

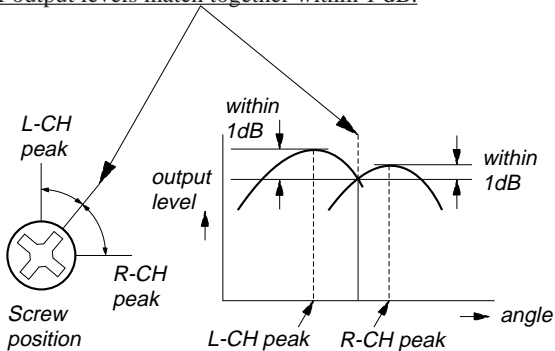
Record/Playback Head Azimuth Adjustment

Procedure:

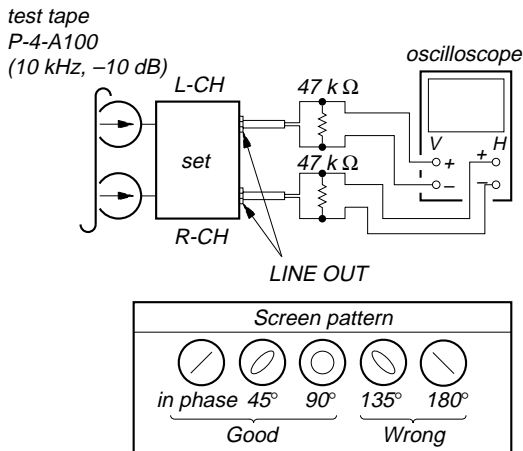
1. Mode: REV playback



2. Turn the adjustment screw for the maximum output levels. If these levels do not match, turn the adjustment screw until both of output levels match together within 1 dB.

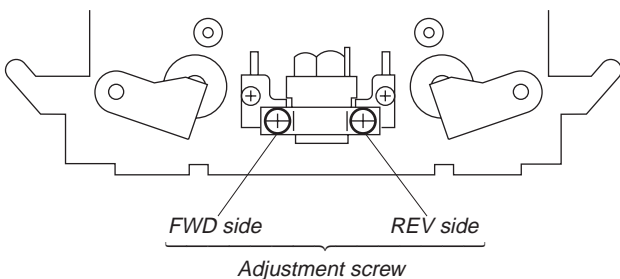


3. Phase Check
Mode: REV playback



4. Set in the FWD mode and repeat the step 1 to 3.
5. After the adjustment, lock the screw with locking compound.

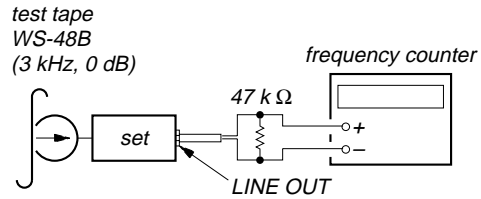
Adjustment Location: Record/Playback head



Tape Speed Adjustment

Procedure:

Mode: FWD playback



1. Set to FWD playback mode.
2. Adjust RV801 so that the frequency counter reading becomes $3,000 \pm 90$ Hz.
3. Confirm that the deviation between tape top and tape end is within 3%.

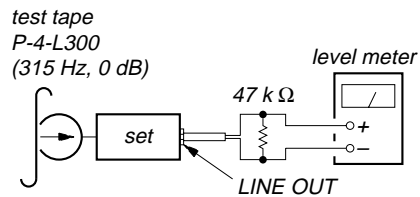
Adjustment Location: SYSTEM CONTROL board (See page 10)

Sample Value of Wow and flutter: 0.3% or less W.RMS (WS-48B)

Playback Level Adjustment

Procedure:

Mode: FWD playback



Adjust RV151 (L-CH) and RV251 (R-CH) so that the reading on level meter meets the adjustment limits below.

Adjustment Limits:

LINE OUT level: -7.7 ± 0.5 dB (0.301 to 0.338 V)

Level difference between channels: within 2 dB

Check that the LINE OUT level does not change even if Playback and Stop operation is repeated several times.

Adjustment Location: AUDIO board (See page 10)

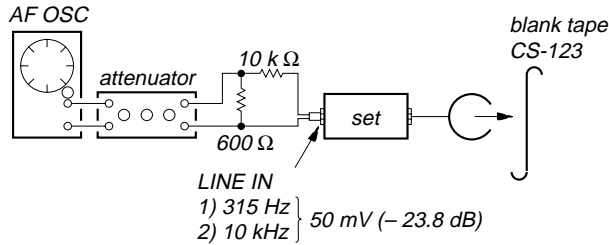
Record BIAS Adjustment

Setting:

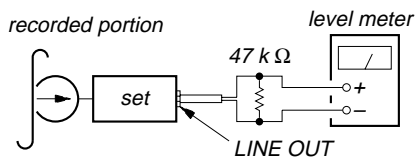
REC LEVEL control: Standard record position (See page 7)
Set to the TEST mode (REC MEMORY mode). (See page 7)

Procedure:

1. Mode: Record



2. Mode: Playback



3. Confirm playback the signal recorded in step 1 become adjustment level as follows.
4. If these levels do not adjustment level, adjust the RV152 (L-CH) and RV252 (R-CH) to repeat step 1 and 2.

Adjustment Level: Playback output of 10 kHz to playback output of 315 Hz: ± 0.5 dB.

Adjustment Location: AUDIO board (See page 10)

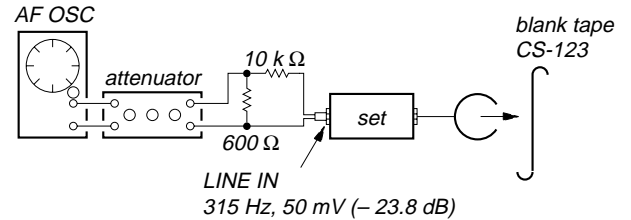
Record Level Adjustment

Setting:

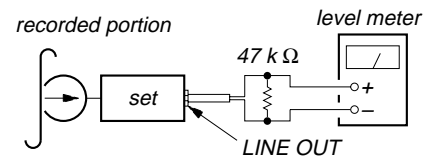
REC LEVEL control: Standard record position (See page 7)
Set to the TEST mode (REC MEMORY mode). (See page 7)

Procedure:

1. Mode : Record



2. Mode: Playback



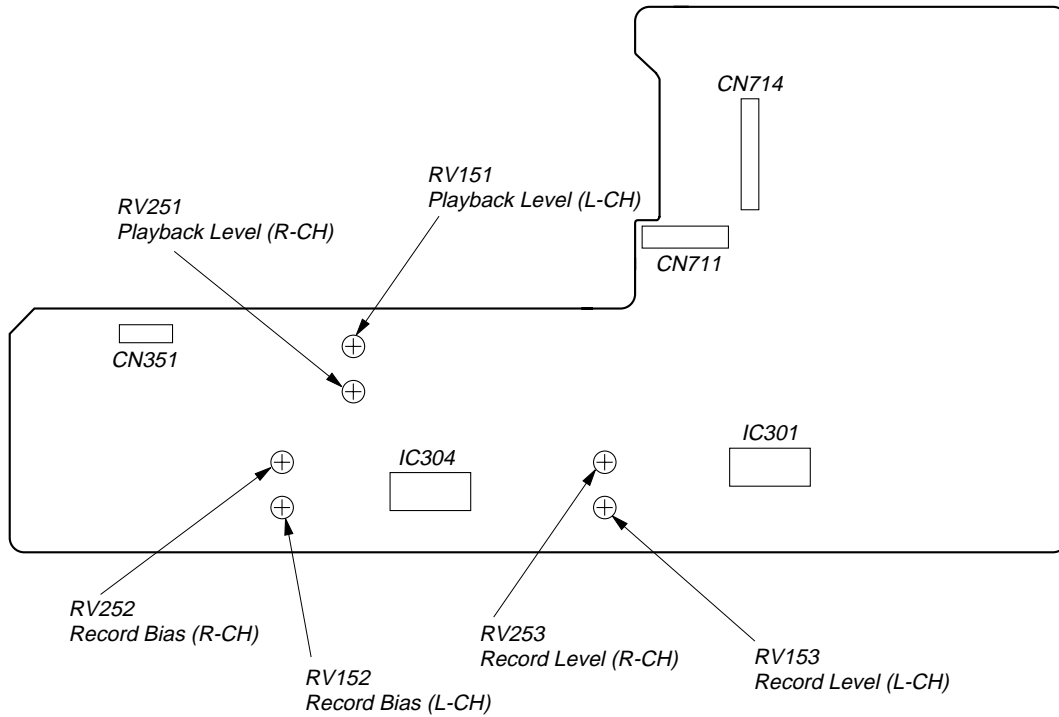
3. Confirm playback the signal recorded in step 1 become adjustment level as follows.
4. If these levels do not adjustment level, adjust RV153 (L-CH) and RV253 (R-CH) to repeat step 1 and 2.

Adjustment Level: -23.8 ± 0.5 dB (47 to 53 mV)

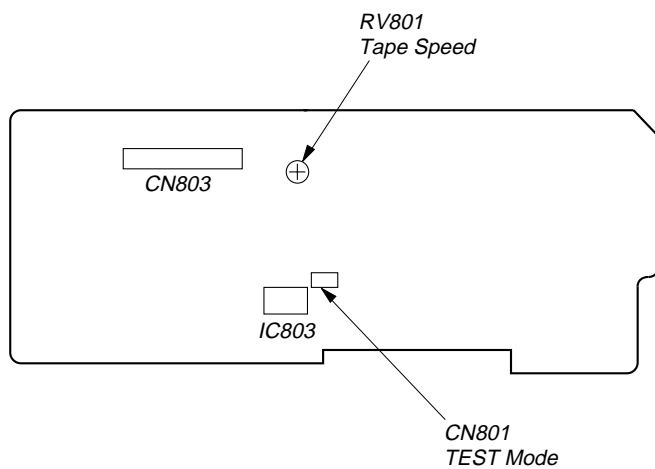
Adjustment Location: AUDIO board (See page 10)

• Adjustment Parts Location

[AUDIO BOARD] (Component Side)



[SYSTEM CONTROL BOARD] (Component Side)



SECTION 5 DIAGRAMS

5-1. IC PIN FUNCTION DESCRIPTION

SYSTEM CONTROL BOARD IC801 M38172M4-150FP (SYSTEM CONTROL)

Pin No.	Pin Name	I/O	Function
1	METER-R	I	Digital peak level meter signal input (R-ch)
2	METER-L	I	Digital peak level meter signal input (L-ch)
3	KEY-Y	I	Key input (A/D convert input) *1
4	KEY-X	I	
5	FWD-TAB	I	Record proof detection input from S902 (FWD side) "H": Not nail
6	CHROM SW	I	Tape type detection input from S903 "L": Type I
7	RVS-TAB	I	Record proof detection input from S904 (REV side) "H": Not nail
8	METAL SW	I	Metal cassette detection input from S906
9	PLAY SW	I	Playback and stop detection input from S907 "L": Playback
10	TEST MODE	I	Test mode terminal Normal: "H" Test mode: "L"
11	POWER OUT	O	Audio and mechanism power on/off output "L": Off
12	POWER DET	I	Primary power on/off input "H": On
13	CLOSE	O	Loading motor (M901) drive output *2
14	OPEN	O	
15	—	—	Not used (Fixed at "L")
16	—	—	
17	—	—	
18	—	—	
19	—	—	
20	—	—	
21	CLOCK	O	Clock signal output to back-up memory (IC803)
22	DATA	I/O	Data signal input/output to back-up memory (IC803)
23	RELAY	O	Relay drive output "L": On
24	BIAS	O	Control output to recording bias switch (Q352) "L": On
25	AU BUS-OUT	O	Audio bus output
26	AU BUS-IN	I	Audio bus input
27	RESET	I	Reset input
28	X CIN	I	Not used (Fixed at "L")
29	X COUT	O	Not used (Open)
30	X IN	I	Main system clock input (4 MHz)
31	XOUT	O	Main system clock output (4 MHz)
32	V _{SS}	—	Ground
33	REC MUTE	O	Recording mute on/off control output "L": Mute on
34	LINE MUTE	O	Line mute on/off control output "L": Mute on
35	—	—	Not used (Fixed at "L")
36	PB MUTE	O	Playback mute on/off control output "L": Mute on
37	REC/PB	O	Mode control output to DOLBY NR amplifier (IC301) When recording: "L"
38	DOLBY B/C	O	DOLBY B/C select signal output "L": DOLBY C, "H": DOLBY B
39	DOLBY ON/OFF	O	DOLBY on/off select signal output "L": DOLBY On, "H": DOLBY Off
40	—	—	Not used (Open)
41	—	—	Not used (Open)
42	—	—	Not used (Open)
43	CD SYNC	O	Control output to CD SYNC LED (D851)
44	P17	O	Segment signal output to fluorescent indicator tube (FLT851)
45	P16	O	
46	P15	O	

Pin No.	Pin Name	I/O	Function
47	P14	O	Segment signal output to fluorescent indicator tube (FLT851)
48	P13	O	
49	P12	O	
50	P11	O	
51	P10	O	
52	P9	O	
53	P7	O	
54	P6	O	
55	P5	O	
56	P4	O	
57	P3	O	
58	P2	O	
59	P1	O	
60	G5	O	
61	G4	O	
62	G3	O	
63	G2	O	
64	G1	O	
65	TYPE 1	O	Tape type output "H": Normal position
66	TYPE 2	O	Tape type output "H": High position
67	TYPE 4	O	Tape type output "H": Metal position
68	—	—	Not used (Fixed at "L")
69	—	—	
70	—	—	
71	SOLENOID	O	Plunger (PM901) drive output "H": On
72	CAPSTAN	O	Capstan/reel motor (M902) drive output "H": On
73	Vcc	—	Power supply (+5 V)
74	Vee	—	Ground
75	AVss	—	Ground for A/D converter
76	Vref	I	Reference voltage (+5 V) for A/D converter
77	HALF	I	Cassette half detection input from S905
78	AMS IN	I	AMS input
79	LIMIT SW	I	Loading detection input from S901 Open: "L", Close: "M", COM: "H"
80	PULSE	I	Rotary detection input from PH901

***1 Key Input**

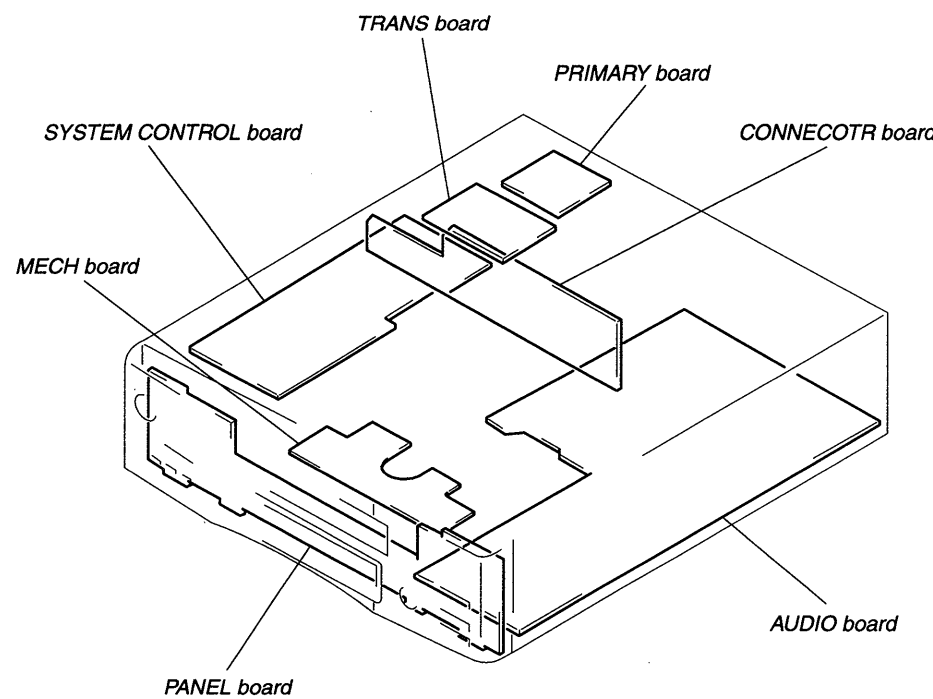
Voltage Input port	0 V	0.45 V	1.19 V	2.19 V	3.2 V	3.98 V	4.48 V	5.0 V
Pin ④, KEY-X	Open/Close ⊞	STOP ■	PAUSE ⏸	FWD ▷	REV ◁	CD SYNC	—	Not key input
Pin ③, KEY-Y	POWER ON/OFF	REW ◀◀	FF ▶▶	REC ●	RESET	DIRECTION	DOLBY NR	Not key input

***2 Loading Motor (M901)**

	IN	OUT	BRAKE
CLOSE ⑬	H	L	H
OPEN ⑭	L	H	H

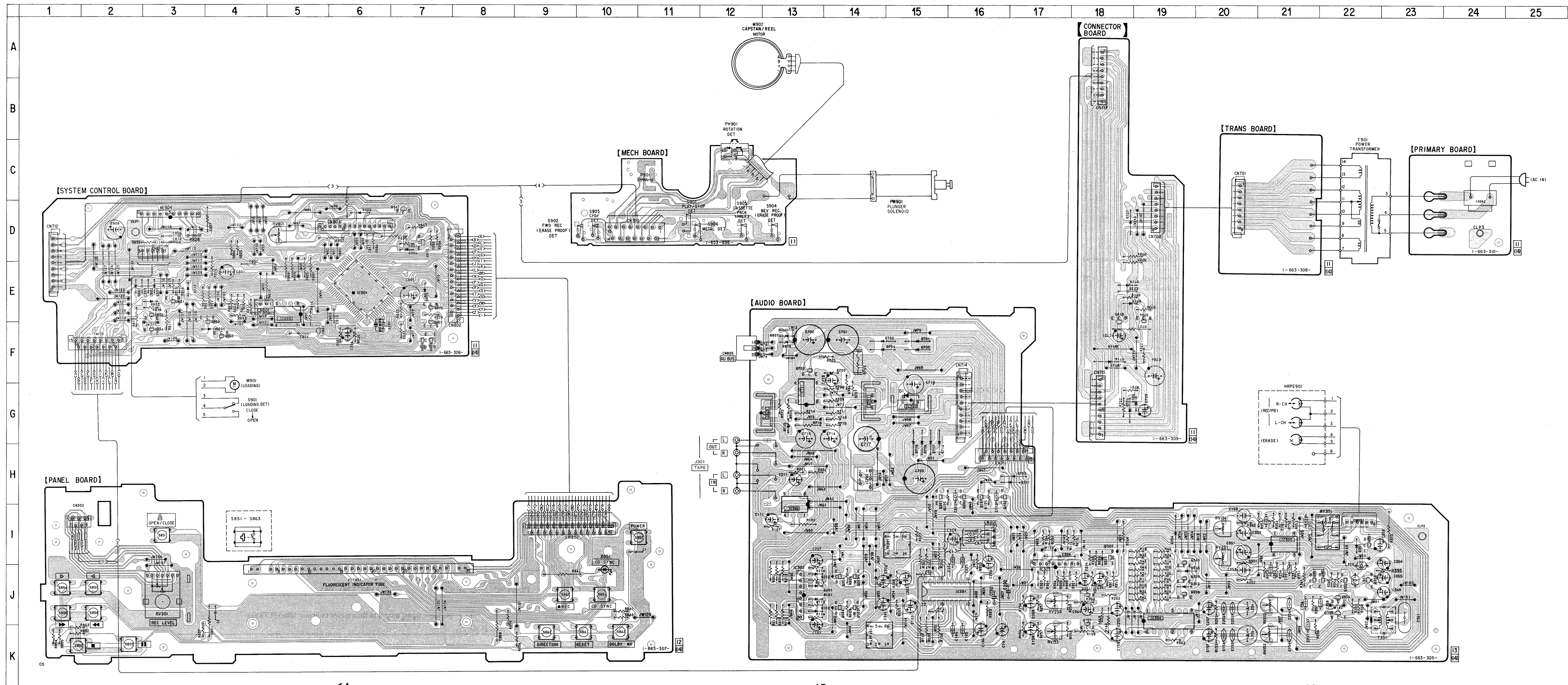
5-2. PRINTED WIRING BOARDS

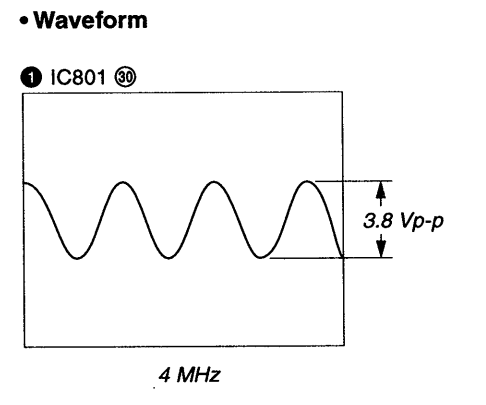
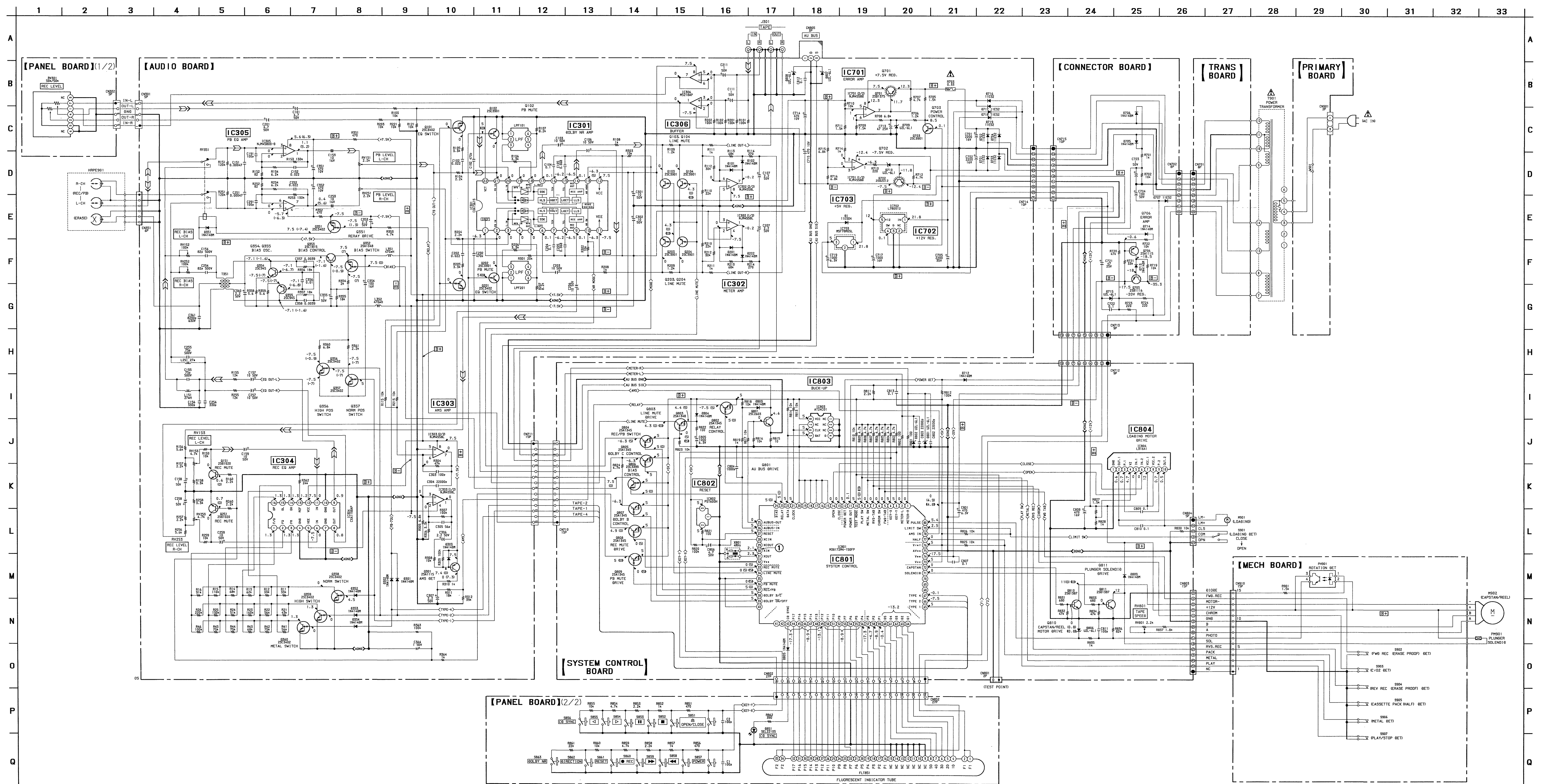
• Circuit Boards Location



• Semiconductor Location

Ref. No.	Location	Ref. No.	Location
D1	G-15	IC701	G-13
D101	J-13	IC702	H-14
D102	J-13	IC703	G-15
D201	J-13	IC801	E-6
D202	J-13	IC802	F-5
D301	H-17	IC803	E-5
D302	H-17	IC804	D-3
D303	I-18		
D351	I-22	Q101	H-16
D352	J-19	Q102	H-16
D353	J-19	Q103	J-14
D354	I-19	Q104	J-14
D701	F-15	Q151	J-18
D702	F-14	Q201	H-15
D703	F-15	Q202	H-16
D704	F-14	Q203	J-14
D705	G-19	Q204	J-14
D706	G-18	Q251	J-18
D707	D-18	Q301	I-18
D709	F-14	Q351	I-22
D710	G-13	Q352	J-22
D712	E-3	Q353	J-22
D713	E-18	Q354	J-22
D714	F-18	Q355	J-22
D715	E-18	Q356	J-22
D716	G-15	Q357	J-21
D717	G-15	Q358	J-19
D718	G-15	Q359	J-19
D719	G-15	Q360	I-19
D801	E-3	Q701	G-14
D802	E-2	Q702	G-13
D803	E-3	Q703	F-13
D804	F-4	Q705	E-18
D805	E-7	Q706	E-19
D806	D-7	Q801	E-3
D807	F-13	Q802	E-3
D808	F-13	Q803	F-4
D809	D-6	Q804	F-7
D851	J-10	Q805	E-7
		Q806	F-3
IC301	J-16	Q807	F-7
IC302	J-13	Q808	F-4
IC303	J-17	Q809	F-7
IC304	J-19	Q810	D-7
IC305	I-21	Q811	D-7
IC306	I-13		





Note on Schematic Diagram:

- All capacitors are in μF unless otherwise noted. pF: μF 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and $\frac{1}{2}$ W or less unless otherwise specified.
- Δ : internal component.
- \square : fusible resistor.
- \square : panel designation.

Note: The components identified by mark Δ or dotted line with mark Δ are critical for safety. Replace only with part number specified.

- \square B+ : B+ Line.
- \square B- : B- Line.
- \square : adjustment for repair.
- ⊕ : Voltages and waveforms are dc with respect to ground under no-signal conditions.
- no mark : POWER ON (STOP)
- () : REC
- >>> : PB
- ⊕ : Voltages are taken with a VOM (Input impedance 10 M Ω). Voltage variations may be noted due to normal production tolerances.
- ⊕ : Waveforms are taken with an oscilloscope. Voltage variations may be noted due to normal production tolerances.
- ⊕ : Circled numbers refer to waveforms.
- ⊕ : Signal path.
- ⊕ : PB
- ⊕ : REC

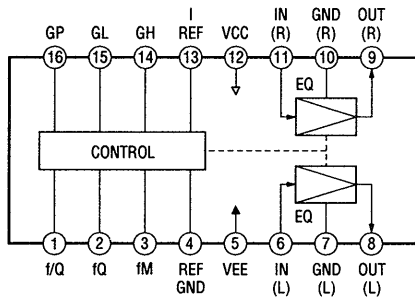
Note on Printed Wiring Board:

- \square : parts extracted from the component side.
- \square : parts extracted from the conductor side.
- \square : parts mounted on the conductor side.
- \square : indicates side identified with part number.
- Δ : internal component.

• IC Block Diagrams

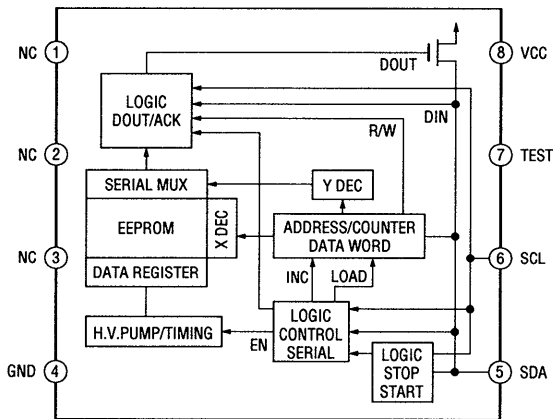
– AUDIO Board –

IC304 CXA1198AP

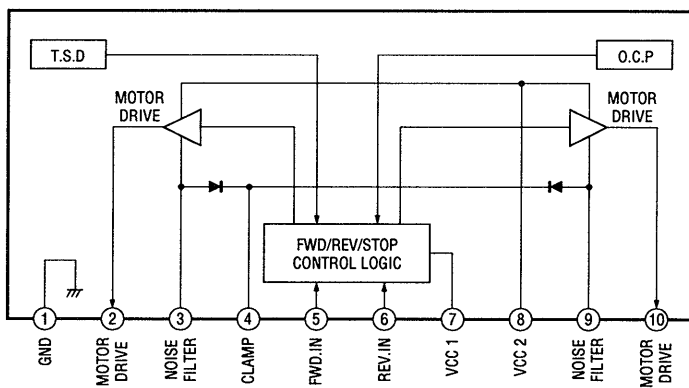


– SYSTEM CONTROL Board –

IC803 AT24C01-10PC



IC804 LB1641



SECTION 6 EXPLODED VIEWS

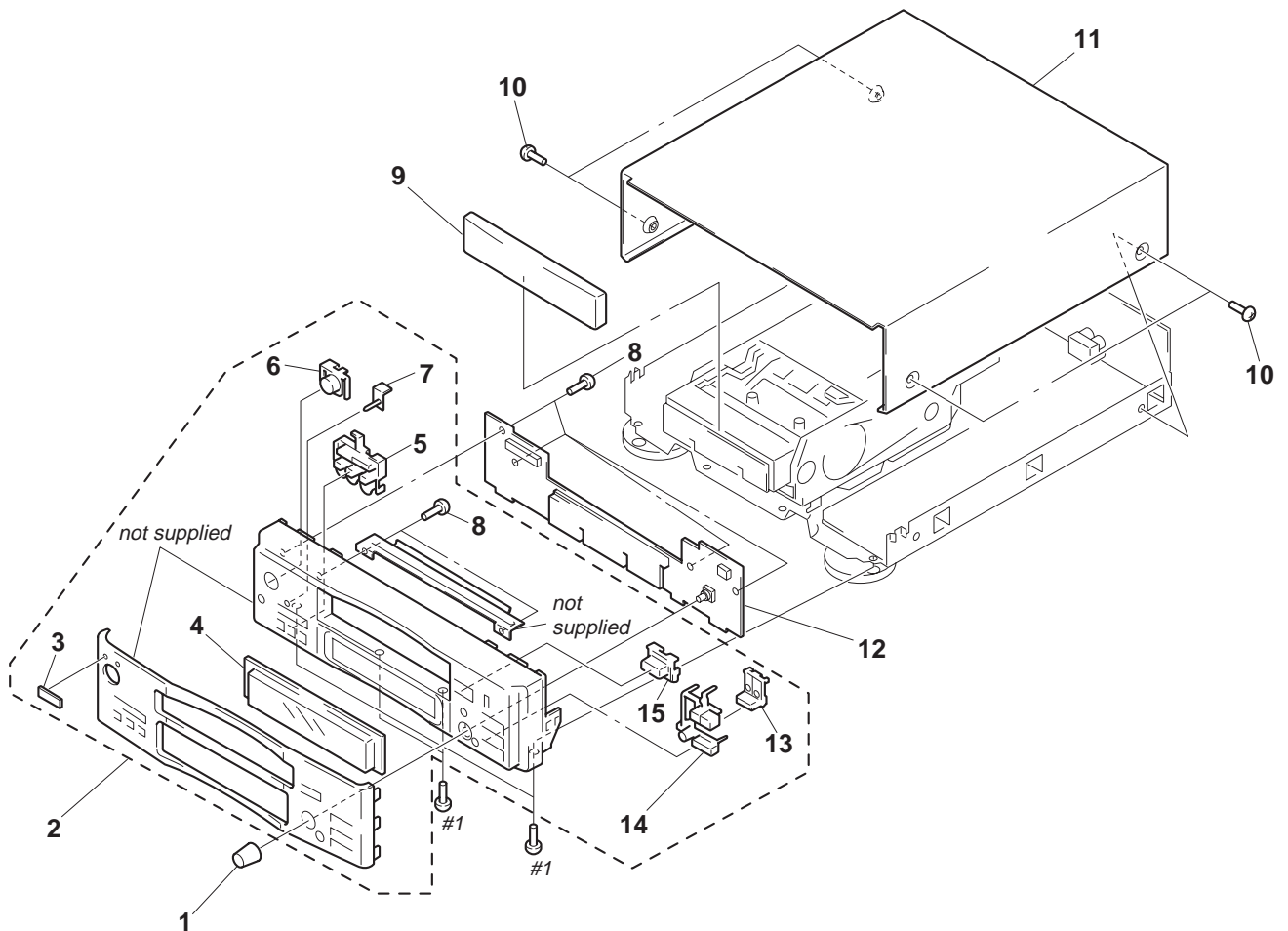
NOTE:

- -XX and -X mean standardized parts, so they may have some difference from the original one.
- Color Indication of Appearance Parts
Example:
KNOB, BALANCE (WHITE) . . . (RED)
 ↑ ↑
 Parts Color Cabinet's Color

- Items marked “*” are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.
- Hardware (# mark) list and accessories and packing materials are given in the last of the electrical parts list.

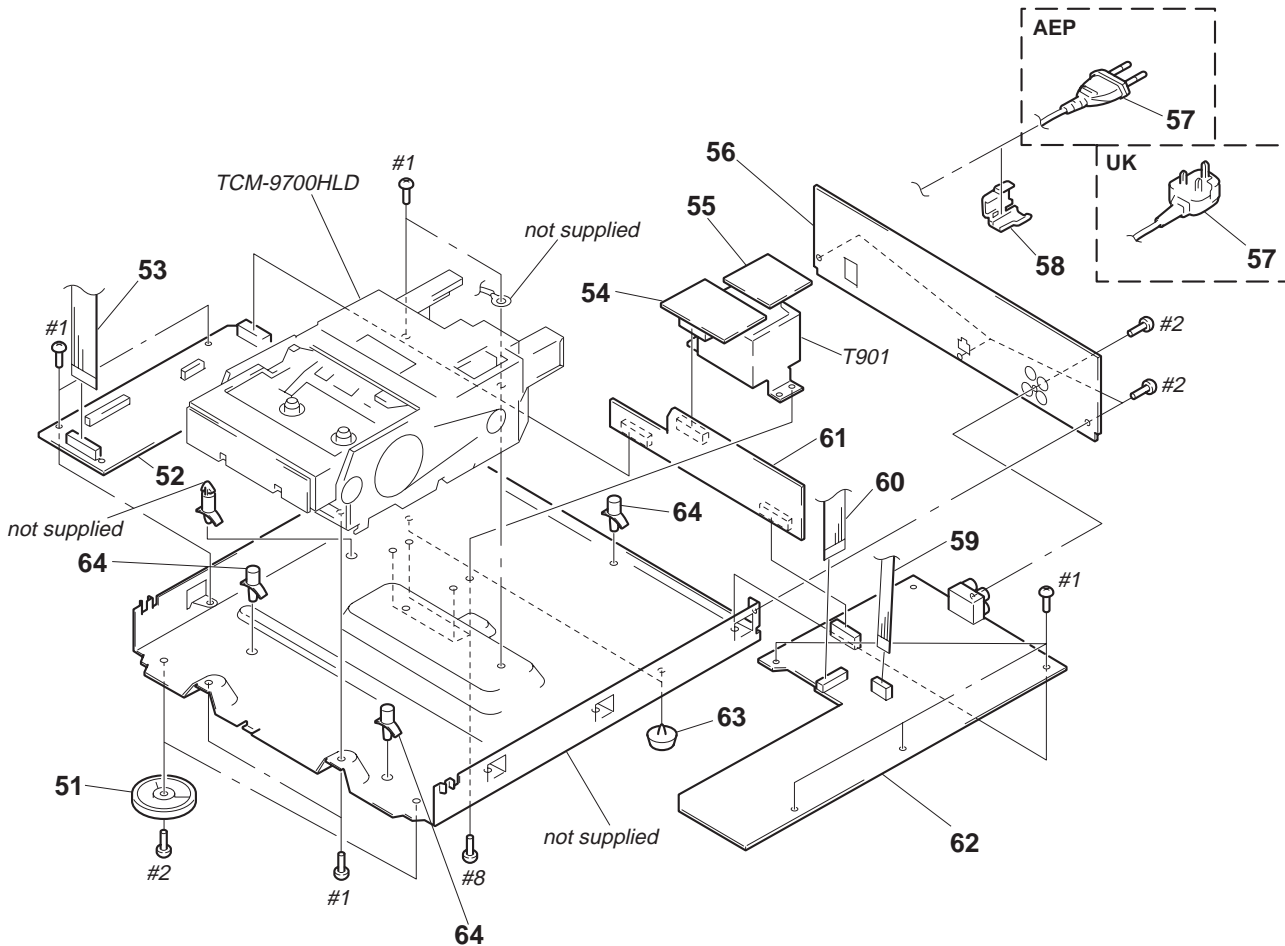
The components identified by mark Δ or dotted line with mark Δ are critical for safety. Replace only with part number specified.

(1) COVER, FRONT PANEL SECTION



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
1	4-985-926-01	KNOB		9	3-939-653-01	LID (R-TC)	
2	X-3372-679-1	PANEL ASSY, FRONT		10	3-363-099-01	SCREW (CASE 3 TP2)	
3	4-962-708-01	EMBLEM (4-A), SONY		* 11	3-939-652-11	COVER	
4	3-939-648-01	WINDOW (TC)		* 12	A-2007-717-A	PANEL BOARD, COMPLETE	
5	3-939-646-01	BUTTON (REC) (CD SYNC. ● REC)		13	3-939-643-01	BUTTON (FF) (◀▶▶▶)	
6	3-939-645-01	BUTTON (POWER)		14	3-939-642-01	BUTTON (PLAY) (◀▶▶▶▶▶▶▶▶▶)	
7	3-939-647-01	INDICATOR (TC)		15	3-939-644-01	BUTTON (EJECT) (⏏)	
8	4-951-620-01	SCREW (2.6X8), +BVTP					

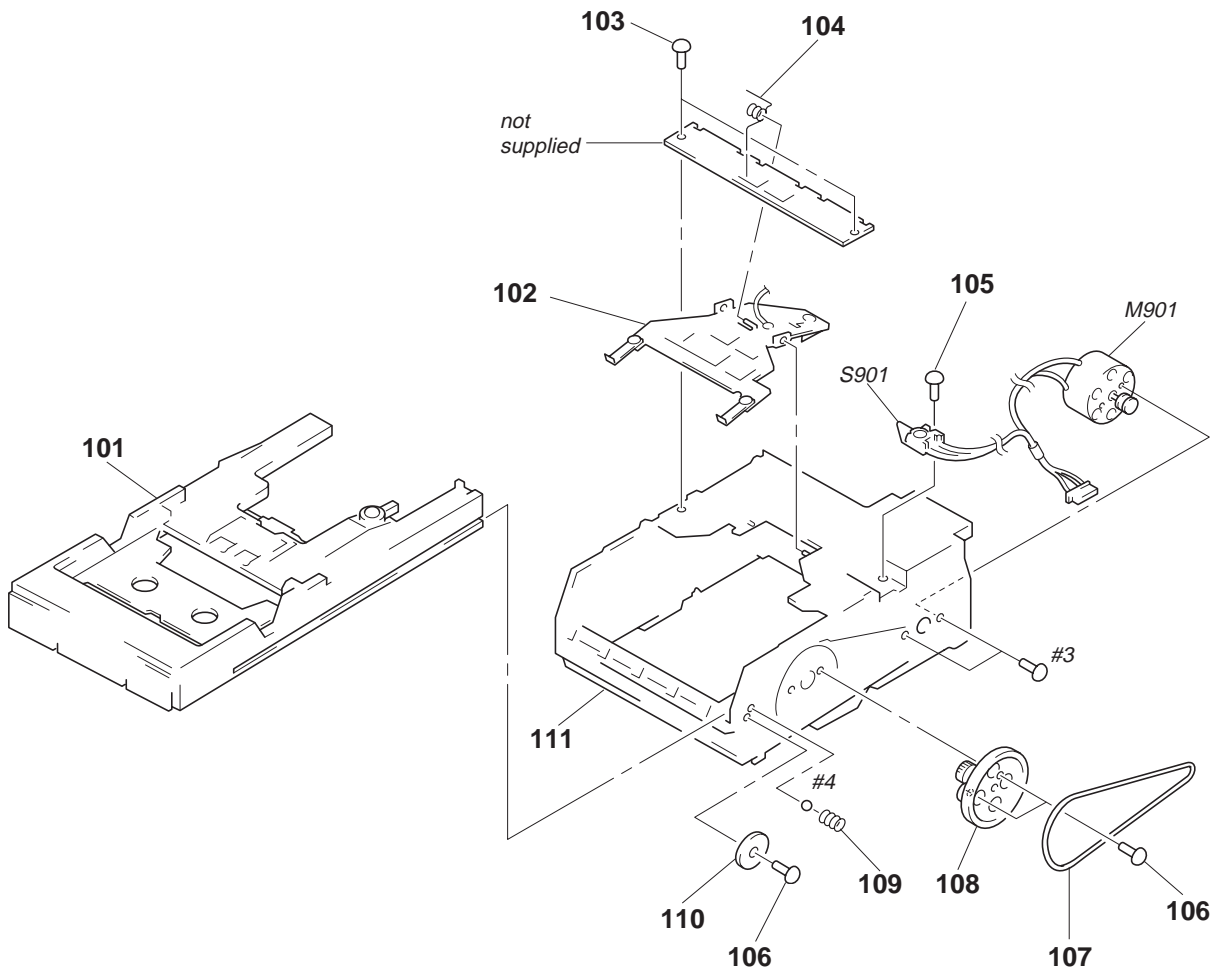
(2) CHASSIS SECTION



The components identified by mark \triangle or dotted line with mark \triangle are critical for safety. Replace only with part number specified.

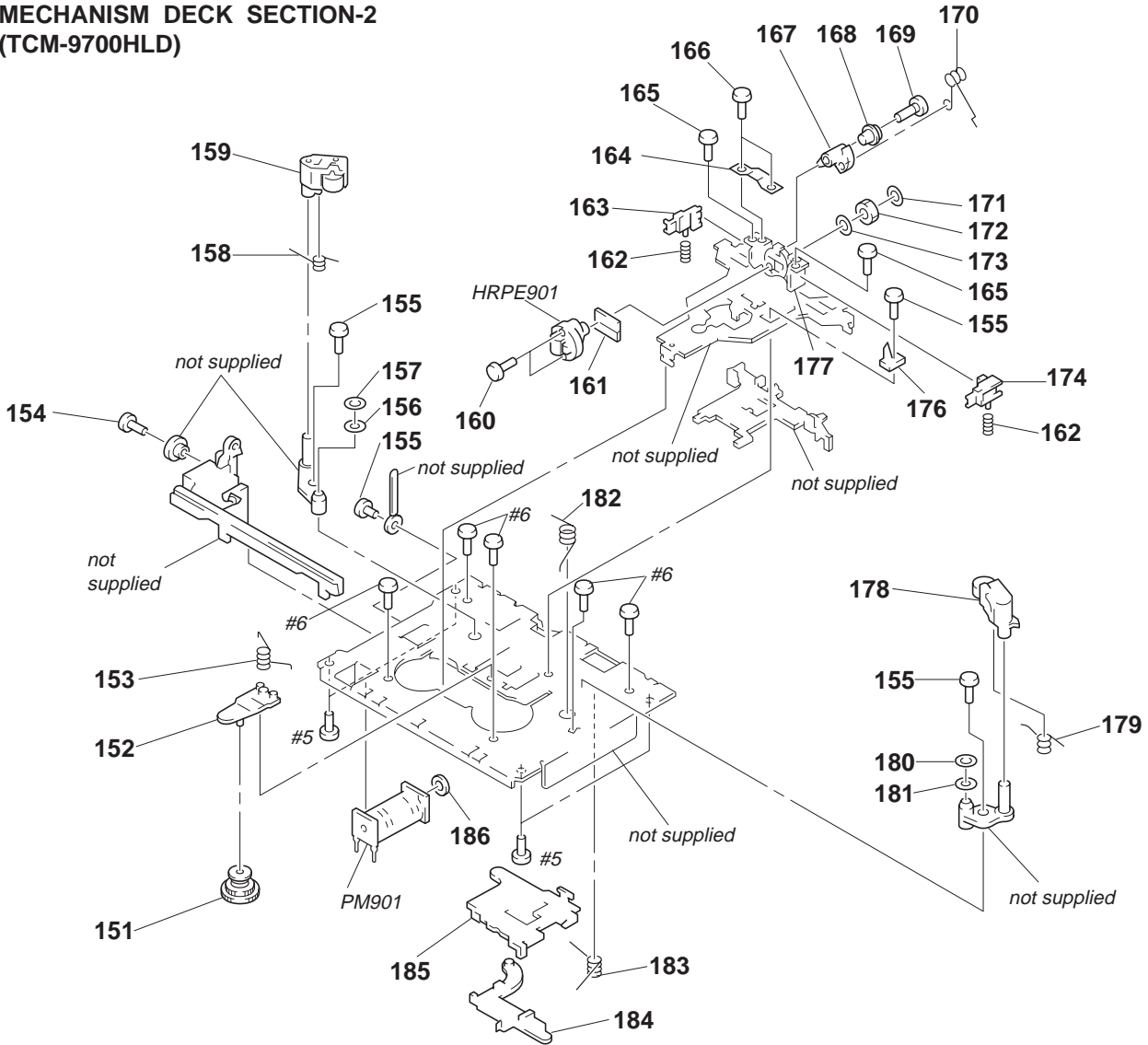
Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
51	4-977-699-11	LEG (F)		* 58	3-703-244-00	BUSHING (2104), CORD	
* 52	A-2007-716-A	SYSTEM CONTROL BOARD, COMPLETE		59	1-696-981-11	WIRE (FLAT TYPE) (5 CORE)	
53	1-773-247-11	WIRE (FLAT TYPE) (27 CORE)		60	1-773-009-11	WIRE (FLAT TYPE) (15 CORE)	
* 54	1-663-308-11	TRANS BOARD		* 61	1-663-309-11	CONNECTOR BOARD	
* 55	1-663-310-11	PRIMARY BOARD		* 62	A-2007-715-A	AUDIO BOARD, COMPLETE	
* 56	3-939-651-11	PANEL, BACK		63	4-965-822-01	FOOT	
\triangle 57	1-575-651-21	CORD, POWER (AEP)		* 64	3-350-847-21	HOLDER, PCB	
\triangle 57	1-696-571-21	CORD, POWER (UK)		\triangle T901	1-431-302-11	TRANSFORMER, POWER	

**(3) MECHANISM DECK SECTION-1
(TCM-9700HLD)**



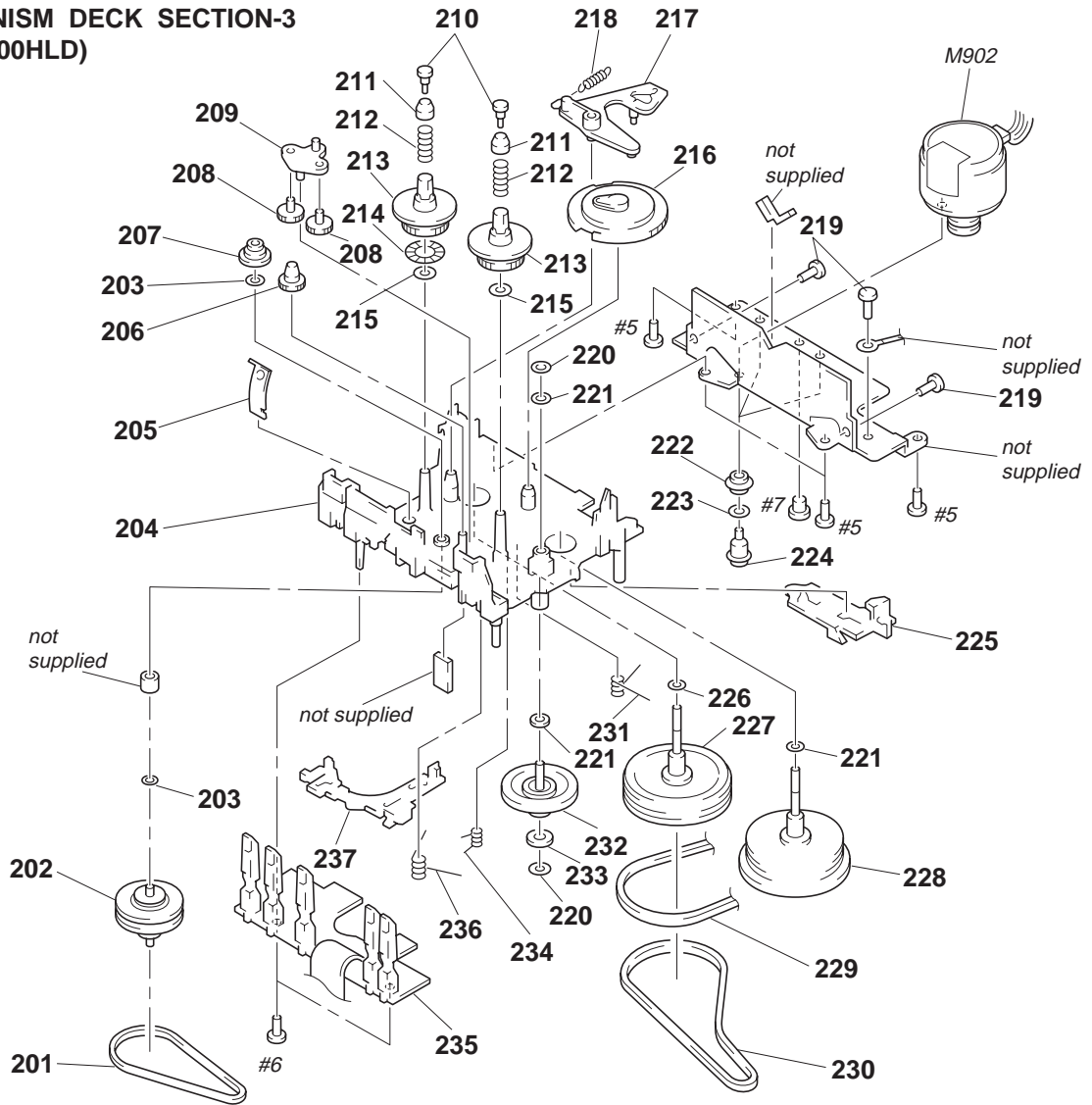
Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
101	A-2004-430-A	TRAY (A) ASSY		108	X-3369-090-1	GEAR ASSY	
102	A-2004-429-A	CLAMP (B) ASSY		109	3-918-629-01	SPRING (A), COMPRESSION	
103	3-917-502-01	SCREW (2X8), +BTT		110	3-918-630-01	WASHER, FLAT	
104	3-917-501-01	SPRING, TOGGLE		111	3-917-496-01	CHASSIS (MAIN)	
105	3-917-498-01	SCREW (2.6X6), +BTT		M901	X-3369-091-1	MOTOR ASSY (LOADING)	
106	3-917-497-01	SCREW (2.6X5), +BTT		S901	1-762-989-11	SWITCH, ROTARY (LOADING DET)	
107	3-917-499-01	BELT					

**(4) MECHANISM DECK SECTION-2
(TCM-9700HLD)**



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
151	A-2004-436-A	GEAR ASSY, PLAY		170	3-917-530-01	SPRING (RETURN), TOGGLE	
152	3-917-549-01	ARM, PLAY		171	3-917-534-01	WASHER, POLY-SLIDER	
153	3-917-553-01	SPRING (PLAY ARM), TOGGLE		172	3-917-527-01	GEAR (ROTATION)	
154	3-917-566-01	SCREW (2X6), +PTT		173	3-917-540-01	WASHER, POLY-SLIDER	
155	3-917-565-01	SCREW (2X4), +PTT		174	3-917-538-01	GUIDE (L), TAPE	
156	3-917-558-01	WASHER, POLY-SLIDER		176	3-917-529-01	GUIDE (CASSETTE)	
157	3-917-561-01	WASHER, NYLON		177	X-3369-095-1	PLATE ASSY, HEAD	
158	3-917-556-01	SPRING (P ROLLER ARM R), TOGGLE		178	A-2004-435-A	ARM (L) ASSY, P ROLLER	
159	A-2004-434-A	ARM (R) ASSY, P ROLLER		179	3-917-557-01	SPRING (P ROLLER ARM L), TOGGLE	
160	3-917-533-01	SCREW (HEAD RVS)		180	3-917-562-01	WASHER, NYLON	
161	3-917-532-01	CLAMP, HEAD WIRE		181	3-917-559-01	WASHER, POLY-SLIDER	
162	3-917-537-01	SPRING (TAPE GUIDE), COMPRESSION		182	3-917-555-01	SPRING (HEAD CHASSIS H), TOGGLE	
163	3-917-539-01	GUIDE (R), TAPE		183	3-917-554-01	SPRING (SHIFT H), TOGGLE	
164	3-917-524-01	SPRING (AZIMUTH)		184	3-917-550-01	ARM, SELECT	
165	3-917-541-01	SCREW (2X5)		185	3-917-547-01	LEVER, SHIFT	
166	3-917-531-01	SCREW (AZIMUTH)		186	3-917-568-01	WASHER, POLY-SLIDER	
167	3-917-528-01	GEAR (RETURN)		HRPE901	11-500-156-11	HEAD (RECORD) (REC/PB/ERASE)	
168	3-917-526-01	COLLAR		PM901	3-917-560-01	SOLENOID	
169	3-917-536-01	SCREW (POWER LOCK)					

**(5) MECHANISM DECK SECTION-3
(TCM-9700HLD)**



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
201	3-917-608-01	BELT (HK-3), DRIVE		220	3-917-604-01	WASHER, POLY-SLIDER	
202	X-3369-099-1	CLUTCH (HK) ASSY		221	3-701-437-11	WASHER	
203	3-917-599-01	WASHER, POLY-SLIDER		222	3-917-623-01	CUSHION, MOTOR RUBBER	
* 204	X-3369-098-1	BASE (HK) ASSY, MECHANICAL		223	3-917-622-01	WASHER (B), FLAT	
205	3-917-580-01	SPRING (PACK KH)		224	3-917-620-01	SCREW (MOTOR), STEP	
206	3-917-582-01	GEAR, REW		225	3-917-588-01	SELECT, SHIFT LEVER	
207	3-917-581-01	GEAR, CLUTCH		226	3-917-601-01	WASHER, POLY-SLIDER	
208	3-917-584-01	GEAR, FR		227	3-917-592-01	FLYWHEEL (RD) (HK) ASSY	
209	3-917-583-01	ARM, FR		228	3-917-593-01	FLYWHEEL (LD) (HK) ASSY	
210	3-917-587-01	BUSHING (B), REEL		229	3-917-606-01	BELT (HK-1), DRIVE	
211	3-917-586-01	CAP (A), REEL		230	3-917-607-01	BELT (HK-2), DRIVE	
212	3-917-594-01	SPRING (REEL C), COMPRESSION		231	3-917-596-01	SPRING, TOGGLE	
213	3-917-585-01	GEAR, REEL		232	3-917-603-01	PULLEY (FLYWHEEL C) ASSY	
214	3-917-600-01	SEAL, REFLECT		233	3-917-605-01	WASHER, NYLON	
215	3-917-602-01	FELT, REEL		234	3-917-595-01	SPRING (CLUTCH ARM), TOGGLE	
216	3-917-589-01	GEAR, PLAY CAM		* 235	1-653-898-11	MECH BOARD	
217	3-917-590-01	ARM, TRIGGER		236	3-917-598-01	SPRING (BRAKE ARM), TOGGLE	
218	3-917-597-01	SPRING (TRIGGER ARM), TENSION		237	3-917-591-01	ARM, BRAKE	
219	3-917-565-01	SCREW (2X4), +PTT		M902	X-3369-100-1	MOTOR (HK) ASSY (CAPSTAN/REEL)	

**SECTION 7
ELECTRICAL PARTS LIST**

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- **RESISTORS**
All resistors are in ohms.
METAL: Metal-film resistor.
METAL OXIDE: Metal oxide-film resistor.
F: nonflammable

- Items marked "***" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- **SEMICONDUCTORS**
In each case, u: μ , for example:
uA. . . : μ A. . . uPA. . . : μ PA. . .
uPB. . . : μ PB. . . uPC. . . : μ PC. . .
uPD. . . : μ PD. . .
- **CAPACITORS**
uF: μ F
- **COILS**
uH: μ H

The components identified by mark Δ or dotted line with mark Δ are critical for safety. Replace only with part number specified.

When indicating parts by reference number, please include the board.

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
*	A-2007-715-A	AUDIO BOARD, COMPLETE *****		C291	1-162-282-31	CERAMIC	100PF 10% 50V
				C292	1-162-290-31	CERAMIC	470PF 10% 50V
				C301	1-126-964-11	ELECT	10uF 20% 50V
				C302	1-126-964-11	ELECT	10uF 20% 50V
*	3-309-144-21	HEAT SINK		C303	1-162-282-31	CERAMIC	100PF 10% 50V
	7-685-871-01	SCREW +BVTT 3X6 (S)		C304	1-161-494-00	CERAMIC	0.022uF 25V
		< CAPACITOR >		C305	1-162-217-31	CERAMIC	56PF 5% 50V
C101	1-126-963-11	ELECT	4.7uF 20% 50V	C306	1-126-961-11	ELECT	2.2uF 20% 50V
C102	1-137-372-11	FILM	0.022uF 5% 50V	C307	1-126-961-11	ELECT	2.2uF 20% 50V
C103	1-126-964-11	ELECT	10uF 20% 50V	C351	1-126-925-11	ELECT	470uF 20% 10V
C104	1-136-165-00	FILM	0.1uF 5% 50V	C352	1-126-925-11	ELECT	470uF 20% 10V
C105	1-136-163-00	FILM	0.068uF 5% 50V	C353	1-126-961-11	ELECT	2.2uF 20% 50V
C106	1-126-964-11	ELECT	10uF 20% 50V	C354	1-126-933-11	ELECT	100uF 20% 16V
C107	1-126-961-11	ELECT	2.2uF 20% 50V	C355	1-126-960-11	ELECT	1uF 20% 50V
C111	1-126-960-11	ELECT	1uF 20% 50V	C356	1-137-370-11	FILM	0.01uF 5% 50V
C151	1-130-467-00	MYLAR	470PF 5% 50V	C357	1-137-436-11	FILM	0.0039uF 5% 50V
C152	1-137-372-11	FILM	0.022uF 5% 50V	C358	1-137-436-11	FILM	0.0039uF 5% 50V
C153	1-107-714-11	ELECT	10uF 20% 16V	C360	1-126-961-11	ELECT	2.2uF 20% 50V
C154	1-107-610-11	CERAMIC	82PF 5% 500V	C361	1-136-562-11	FILM	0.0082uF 5% 630V
C155	1-107-609-11	CERAMIC	75PF 5% 500V	C364	1-126-960-11	ELECT	1uF 20% 50V
C156	1-102-820-00	CERAMIC	330PF 5% 50V	C701	1-126-768-11	ELECT	2200uF 20% 16V
C157	1-126-964-11	ELECT	10uF 20% 50V	C702	1-126-768-11	ELECT	2200uF 20% 16V
C158	1-126-960-11	ELECT	1uF 20% 50V	C705	1-126-953-11	ELECT	2200uF 20% 35V
C159	1-126-964-11	ELECT	10uF 20% 50V	C713	1-104-664-11	ELECT	47uF 20% 25V
C191	1-162-282-31	CERAMIC	100PF 10% 50V	C714	1-126-925-11	ELECT	470uF 20% 10V
C192	1-162-290-31	CERAMIC	470PF 10% 50V	C715	1-126-925-11	ELECT	470uF 20% 10V
C201	1-126-963-11	ELECT	4.7uF 20% 50V	C717	1-126-767-11	ELECT	1000uF 20% 16V
C202	1-137-372-11	FILM	0.022uF 5% 50V	C719	1-126-916-11	ELECT	1000uF 20% 6.3V
C203	1-126-964-11	ELECT	10uF 20% 50V	C812	1-164-159-11	CERAMIC	0.1uF 50V
C204	1-136-165-00	FILM	0.1uF 5% 50V			< CONNECTOR >	
C205	1-136-163-00	FILM	0.068uF 5% 50V	* CN301	1-568-824-11	SOCKET, CONNECTOR 5P	
C206	1-126-964-11	ELECT	10uF 20% 50V	* CN351	1-564-708-11	PIN, CONNECTOR (SMALL TYPE) 6P	
C207	1-126-961-11	ELECT	2.2uF 20% 50V	* CN711	1-568-834-11	SOCKET, CONNECTOR 15P	
C211	1-126-960-11	ELECT	1uF 20% 50V	* CN714	1-565-501-11	CONNECTOR, BOARD TO BOARD 10P	
C251	1-130-467-00	MYLAR	470PF 5% 50V	* CN805	1-565-561-11	PIN, CONNECTOR 3P (AU BUS)	
C252	1-137-372-11	FILM	0.022uF 5% 50V			< DIODE >	
C253	1-107-714-11	ELECT	10uF 20% 16V	D1	8-719-210-21	DIODE 11EQS04	
C254	1-107-610-11	CERAMIC	82PF 5% 500V	D101	8-719-987-63	DIODE 1N4148M	
C255	1-107-609-11	CERAMIC	75PF 5% 500V	D102	8-719-987-63	DIODE 1N4148M	
C256	1-102-820-00	CERAMIC	330PF 5% 50V	D201	8-719-987-63	DIODE 1N4148M	
C257	1-126-964-11	ELECT	10uF 20% 50V	D202	8-719-987-63	DIODE 1N4148M	
C258	1-126-960-11	ELECT	1uF 20% 50V	D301	8-719-987-63	DIODE 1N4148M	
C259	1-126-964-11	ELECT	10uF 20% 50V				

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
D302	8-719-987-63	DIODE 1N4148M		Q354	8-729-194-57	TRANSISTOR 2SC945-P	
D303	8-719-987-63	DIODE 1N4148M		Q355	8-729-194-57	TRANSISTOR 2SC945-P	
D351	8-719-987-63	DIODE 1N4148M		Q356	8-729-900-80	TRANSISTOR DTC114ES	
D352	8-719-987-63	DIODE 1N4148M		Q357	8-729-900-80	TRANSISTOR DTC114ES	
D353	8-719-987-63	DIODE 1N4148M		Q358	8-729-900-80	TRANSISTOR DTC114ES	
D354	8-719-987-63	DIODE 1N4148M		Q359	8-729-900-80	TRANSISTOR DTC114ES	
D701	8-719-200-82	DIODE 11ES2		Q360	8-729-900-80	TRANSISTOR DTC114ES	
D702	8-719-200-82	DIODE 11ES2		Q701	8-729-141-83	TRANSISTOR 2SB1094-LK	
D703	8-719-200-82	DIODE 11ES2		Q702	8-729-209-15	TRANSISTOR 2SD2012	
D704	8-719-200-82	DIODE 11ES2		Q703	8-729-900-74	TRANSISTOR DTC143TS	
D709	8-719-933-33	DIODE HZS6A1L				< RESISTOR >	
D710	8-719-933-33	DIODE HZS6A1L		R11	1-249-435-11	CARBON 33K	5% 1/4W
D716	8-719-200-82	DIODE 11ES2		R12	1-249-435-11	CARBON 33K	5% 1/4W
D717	8-719-200-82	DIODE 11ES2		R13	1-247-874-11	CARBON 62K	5% 1/4W
D718	8-719-200-82	DIODE 11ES2		R14	1-249-439-11	CARBON 68K	5% 1/4W
D719	8-719-200-82	DIODE 11ES2		R15	1-247-880-11	CARBON 110K	5% 1/4W
D807	8-719-933-33	DIODE HZS6A1L		R16	1-247-878-00	CARBON 91K	5% 1/4W
D808	8-719-933-33	DIODE HZS6A1L		R21	1-247-870-11	CARBON 43K	5% 1/4W
		< IC >		R22	1-249-438-11	CARBON 56K	5% 1/4W
IC301	8-752-060-46	IC CXA1561S		R23	1-247-884-11	CARBON 160K	5% 1/4W
IC302	8-759-505-55	IC NJM4558L		R24	1-247-872-11	CARBON 51K	5% 1/4W
IC303	8-759-505-55	IC NJM4558L		R25	1-247-883-00	CARBON 150K	5% 1/4W
IC304	8-752-060-64	IC CXA1198AP		R26	1-247-887-00	CARBON 220K	5% 1/4W
IC305	8-759-710-59	IC NJM4580D-D		R41	1-249-438-11	CARBON 56K	5% 1/4W
IC306	8-759-634-51	IC M5218AP		R42	1-247-876-11	CARBON 75K	5% 1/4W
IC701	8-759-634-51	IC M5218AP		R43	1-249-439-11	CARBON 68K	5% 1/4W
IC702	8-759-802-23	IC L780S12		R44	1-247-876-11	CARBON 75K	5% 1/4W
IC703	8-759-604-35	IC M5F78M05L		R45	1-247-876-11	CARBON 75K	5% 1/4W
		< JACK >		R46	1-249-441-11	CARBON 100K	5% 1/4W
J301	1-695-188-31	JACK, PIN 4P (TAPE (IN/OUT))		R101	1-249-441-11	CARBON 100K	5% 1/4W
		< COIL >		R102	1-249-441-11	CARBON 100K	5% 1/4W
L151	1-410-780-11	INDUCTOR 27mH		R103	1-249-429-11	CARBON 10K	5% 1/4W
L251	1-410-780-11	INDUCTOR 27mH		R104	1-249-421-11	CARBON 2.2K	5% 1/4W
L351	1-414-223-11	INDUCTOR 470uH		R105	1-247-843-11	CARBON 3.3K	5% 1/4W
L352	1-414-223-11	INDUCTOR 470uH		R106	1-247-843-11	CARBON 3.3K	5% 1/4W
		< FILTER >		R107	1-249-428-11	CARBON 8.2K	5% 1/4W
LPF101	1-236-087-11	FILTER, LOW PASS		R108	1-249-417-11	CARBON 1K	5% 1/4W
LPF201	1-236-087-11	FILTER, LOW PASS		R109	1-249-418-11	CARBON 1.2K	5% 1/4W
		< TRANSISTOR >		R110	1-249-433-11	CARBON 22K	5% 1/4W
Q101	8-729-900-80	TRANSISTOR DTC114ES		R111	1-249-417-11	CARBON 1K	5% 1/4W
Q102	8-729-900-74	TRANSISTOR DTC143TS		R112	1-247-866-11	CARBON 30K	5% 1/4W
Q103	8-729-900-74	TRANSISTOR DTC143TS		R113	1-249-439-11	CARBON 68K	5% 1/4W
Q104	8-729-900-74	TRANSISTOR DTC143TS		R114	1-249-410-11	CARBON 270	5% 1/4W
Q151	8-729-142-25	TRANSISTOR 2SD1020-HFE		R115	1-249-429-11	CARBON 10K	5% 1/4W
Q201	8-729-900-80	TRANSISTOR DTC114ES		R121	1-249-429-11	CARBON 10K	5% 1/4W
Q202	8-729-900-74	TRANSISTOR DTC143TS		R151	1-247-881-00	CARBON 120K	5% 1/4W
Q203	8-729-900-74	TRANSISTOR DTC143TS		R152	1-249-404-00	CARBON 82	5% 1/4W
Q204	8-729-900-74	TRANSISTOR DTC143TS		R153	1-247-882-11	CARBON 130K	5% 1/4W
Q251	8-729-142-25	TRANSISTOR 2SD1020-HFE		R154	1-247-850-11	CARBON 6.2K	5% 1/4W
Q301	8-729-119-76	TRANSISTOR 2SA1175-HFE		R155	1-249-430-11	CARBON 12K	5% 1/4W
Q351	8-729-900-80	TRANSISTOR DTC114ES		R156	1-249-426-11	CARBON 5.6K	5% 1/4W
Q352	8-729-422-57	TRANSISTOR UN4111		R157	1-249-421-11	CARBON 2.2K	5% 1/4W
Q353	8-729-281-53	TRANSISTOR 2SC1815-GR		R158	1-247-843-11	CARBON 3.3K	5% 1/4W
				R159	1-249-429-11	CARBON 10K	5% 1/4W
				R160	1-249-421-11	CARBON 2.2K	5% 1/4W
				R201	1-249-441-11	CARBON 100K	5% 1/4W
				R202	1-249-441-11	CARBON 100K	5% 1/4W

AUDIO

CONNECTOR

Ref. No.	Part No.	Description	Remark
R203	1-249-429-11	CARBON 10K	5% 1/4W
R204	1-249-421-11	CARBON 2.2K	5% 1/4W
R205	1-247-843-11	CARBON 3.3K	5% 1/4W
R206	1-247-843-11	CARBON 3.3K	5% 1/4W
R207	1-249-428-11	CARBON 8.2K	5% 1/4W
R208	1-249-417-11	CARBON 1K	5% 1/4W
R209	1-249-418-11	CARBON 1.2K	5% 1/4W
R210	1-249-433-11	CARBON 22K	5% 1/4W
R211	1-249-417-11	CARBON 1K	5% 1/4W
R212	1-247-866-11	CARBON 30K	5% 1/4W
R213	1-249-439-11	CARBON 68K	5% 1/4W
R214	1-249-410-11	CARBON 270	5% 1/4W
R215	1-249-429-11	CARBON 10K	5% 1/4W
R221	1-249-429-11	CARBON 10K	5% 1/4W
R251	1-247-881-00	CARBON 120K	5% 1/4W
R252	1-249-404-00	CARBON 82	5% 1/4W
R253	1-247-882-11	CARBON 130K	5% 1/4W
R254	1-247-850-11	CARBON 6.2K	5% 1/4W
R255	1-249-430-11	CARBON 12K	5% 1/4W
R256	1-249-426-11	CARBON 5.6K	5% 1/4W
R257	1-249-421-11	CARBON 2.2K	5% 1/4W
R258	1-247-843-11	CARBON 3.3K	5% 1/4W
R259	1-249-429-11	CARBON 10K	5% 1/4W
R260	1-249-421-11	CARBON 2.2K	5% 1/4W
R301	1-215-452-00	METAL 20K	1% 1/4W
R302	1-249-429-11	CARBON 10K	5% 1/4W
R303	1-249-429-11	CARBON 10K	5% 1/4W
R304	1-249-437-11	CARBON 47K	5% 1/4W
R305	1-249-427-11	CARBON 6.8K	5% 1/4W
R306	1-247-843-11	CARBON 3.3K	5% 1/4W
R307	1-249-441-11	CARBON 100K	5% 1/4W
R308	1-249-429-11	CARBON 10K	5% 1/4W
R309	1-249-441-11	CARBON 100K	5% 1/4W
R310	1-249-417-11	CARBON 1K	5% 1/4W
R311	1-249-432-11	CARBON 18K	5% 1/4W
R312	1-249-436-11	CARBON 39K	5% 1/4W
R351	1-249-413-11	CARBON 470	5% 1/4W
R352	1-249-413-11	CARBON 470	5% 1/4W
R353	1-249-425-11	CARBON 4.7K	5% 1/4W
R354	1-247-838-00	CARBON 2K	5% 1/4W
R355	1-249-432-11	CARBON 18K	5% 1/4W
R356	1-249-432-11	CARBON 18K	5% 1/4W
R357	1-249-432-11	CARBON 18K	5% 1/4W
R358	1-249-390-11	CARBON 5.6	5% 1/4W
R359	1-249-390-11	CARBON 5.6	5% 1/4W
R360	1-249-427-11	CARBON 6.8K	5% 1/4W
R361	1-249-421-11	CARBON 2.2K	5% 1/4W
R362	1-215-454-00	METAL 24K	1% 1/4W
R363	1-249-441-11	CARBON 100K	5% 1/4W
R364	1-249-417-11	CARBON 1K	5% 1/4W
△R703	1-219-137-11	FUSIBLE 0.33	10% 1/4W
R705	1-249-419-11	CARBON 1.5K	5% 1/4W
R706	1-249-418-11	CARBON 1.2K	5% 1/4W
R707	1-249-425-11	CARBON 4.7K	5% 1/4W

Ref. No.	Part No.	Description	Remark
R708	1-249-427-11	CARBON 6.8K	5% 1/4W
R709	1-249-419-11	CARBON 1.5K	5% 1/4W
R710	1-249-429-11	CARBON 10K	5% 1/4W
R711	1-249-419-11	CARBON 1.5K	5% 1/4W
R712	1-249-425-11	CARBON 4.7K	5% 1/4W
R713	1-249-409-11	CARBON 220	5% 1/4W
R714	1-249-417-11	CARBON 1K	5% 1/4W
R715	1-249-427-11	CARBON 6.8K	5% 1/4W
R716	1-249-427-11	CARBON 6.8K	5% 1/4W
< VARIABLE RESISTOR >			
RV151	1-241-762-11	RES, ADJ, CARBON 2.2K	
RV152	1-241-767-21	RES, ADJ, CARBON 100K	
RV153	1-238-599-11	RES, ADJ, CARBON 4.7K	
RV251	1-241-762-11	RES, ADJ, CARBON 2.2K	
RV252	1-241-767-21	RES, ADJ, CARBON 100K	
RV253	1-238-599-11	RES, ADJ, CARBON 4.7K	
< RELAY >			
RY351	1-515-614-11	RELAY	
< TRANSFORMER >			
T351	1-429-316-11	TRANSFORMER, BIAS OSCILLATION	

*	1-663-309-11	CONNECTOR BOARD	

< CAPACITOR >			
C703	1-126-301-11	ELECT 1uF	20% 50V
C704	1-126-968-11	ELECT 100uF	20% 50V
C721	1-104-664-11	ELECT 47uF	20% 25V
C722	1-164-159-11	CERAMIC 0.1uF	50V
< CONNECTOR >			
* CN702	1-565-484-11	CONNECTOR, BOARD TO BOARD 8P	
* CN713	1-565-485-11	CONNECTOR, BOARD TO BOARD 9P	
* CN715	1-565-486-11	CONNECTOR, BOARD TO BOARD 10P	
< DIODE >			
D705	8-719-987-63	DIODE 1N4148M	
D706	8-719-987-63	DIODE 1N4148M	
D707	8-719-200-82	DIODE 11ES2	
D713	8-719-987-63	DIODE 1N4148M	
D714	8-719-987-63	DIODE 1N4148M	
D715	8-719-933-33	DIODE HZS6A1L	
< TRANSISTOR >			
Q705	8-729-140-04	TRANSISTOR 2SB1116A-L	
Q706	8-729-119-76	TRANSISTOR 2SA1175-HFE	
< RESISTOR >			
R701	1-249-417-11	CARBON 1K	5% 1/4W
R702	1-249-429-11	CARBON 10K	5% 1/4W

The components identified by mark △ or dotted line with mark △ are critical for safety. Replace only with part number specified.

CONNECTOR	MECH	PANEL	PRIMARY	SYSTEM CONTROL
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Ref. No.	Part No.	Description				Remark		Ref. No.	Part No.	Description				Remark
R719	1-249-429-11	CARBON	10K	5%	1/4W			R856	1-249-413-11	CARBON	470	5%	1/4W	
R720	1-249-437-11	CARBON	47K	5%	1/4W			R857	1-249-417-11	CARBON	1K	5%	1/4W	
R721	1-249-435-11	CARBON	33K	5%	1/4W			R858	1-249-421-11	CARBON	2.2K	5%	1/4W	
R722	1-249-429-11	CARBON	10K	5%	1/4W			R859	1-249-425-11	CARBON	4.7K	5%	1/4W	
R723	1-249-409-11	CARBON	220	5%	1/4W			R860	1-249-429-11	CARBON	10K	5%	1/4W	
R724	1-249-409-11	CARBON	220	5%	1/4W			R861	1-249-433-11	CARBON	22K	5%	1/4W	

*	1-653-898-11	MECH BOARD								< VARIABLE RESISTOR >				

		< CONNECTOR >						RV301	1-225-383-11	RES, VAR, CARBON 50K/50K (REC LEVEL)				
CN901	1-766-700-11	SOCKET, CONNECTOR 15P								< SWITCH >				
		< PHOTO INTERRUPTER >						S851	1-554-303-21	SWITCH, TACTILE (≡ OPEN/CLOSE)				
PH901	8-719-710-02	PHOTO REFLECTOR NJL5165K-A						S852	1-554-303-21	SWITCH, TACTILE (■)				
		(ROTATION DET)						S853	1-554-303-21	SWITCH, TACTILE (▨)				
		< RESISTOR >						S854	1-554-303-21	SWITCH, TACTILE (▷)				
R901	1-249-419-11	CARBON	1.5K	5%	1/4W			S855	1-554-303-21	SWITCH, TACTILE (◁)				
		< SWITCH >						S856	1-554-303-21	SWITCH, TACTILE (CD SYNC)				
S902	1-762-114-11	SWITCH, LEAF						S857	1-554-303-21	SWITCH, TACTILE (POWER)				
		(FWD REC (ERASE PROOF) DET)						S858	1-554-303-21	SWITCH, TACTILE (◀◀)				
S903	1-572-335-11	SWITCH, LEAF (CrO2 DET)						S859	1-554-303-21	SWITCH, TACTILE (▶▶)				
S904	1-762-114-11	SWITCH, LEAF						S860	1-554-303-21	SWITCH, TACTILE (● REC)				
		(REV REC (ERASE PROOF) DET)						S861	1-554-303-21	SWITCH, TACTILE (RESET)				
S905	1-572-335-11	SWITCH, LEAF (CASSETTE PACK (HALF) DET)						S862	1-554-303-21	SWITCH, TACTILE (DIRECTION)				
S906	1-572-335-11	SWITCH, LEAF (METAL DET)						S863	1-554-303-21	SWITCH, TACTILE (DOLBY NR)				
S907	1-762-113-11	SWITCH, LEAF (PLAY/STOP DET)						*****						

*	A-2007-717-A	PANEL BOARD, COMPLETE						*	1-663-310-11	PRIMARY BOARD				
		*****								< CONNECTOR >				
		< CAPACITOR >						* CN901	1-580-230-31	PIN, CONNECTOR (PC BOARD) 2P				
		< DIODE >						*****						
C1	1-162-282-31	CERAMIC	100PF	10%	50V			*	A-2007-716-A	SYSTEM CONTROL BOARD, COMPLETE				
C2	1-162-282-31	CERAMIC	100PF	10%	50V					*****				
		< CONNECTOR >								< CAPACITOR >				
* CN302	1-568-848-11	SOCKET, CONNECTOR 5P						C801	1-126-935-11	ELECT	470uF	20%	6.3V	
* CN852	1-568-869-11	SOCKET, CONNECTOR 27P						C802	1-161-494-00	CERAMIC	0.022uF		25V	
		< DIODE >						C803	1-161-494-00	CERAMIC	0.022uF		25V	
D851	8-719-057-09	DIODE LNJ801LPDJA (CD SYNC)						C804	1-162-294-31	CERAMIC	0.001uF	10%	50V	
		< FLUORESCENT INDICATOR TUBE >						C805	1-126-916-11	ELECT	1000uF	20%	6.3V	
FLT851	1-517-317-21	INDICATOR TUBE, FLUORESCENT						C806	1-126-963-11	ELECT	4.7uF	20%	50V	
		< RESISTOR >						C807	1-164-159-11	CERAMIC	0.1uF		50V	
R851	1-249-413-11	CARBON	470	5%	1/4W			C808	1-126-935-11	ELECT	470uF	20%	16V	
R852	1-249-417-11	CARBON	1K	5%	1/4W			C809	1-164-159-11	CERAMIC	0.1uF		50V	
R853	1-249-421-11	CARBON	2.2K	5%	1/4W			C810	1-164-159-11	CERAMIC	0.1uF		50V	
R854	1-249-425-11	CARBON	4.7K	5%	1/4W			C811	1-162-282-31	CERAMIC	100PF	10%	50V	
R855	1-249-429-11	CARBON	10K	5%	1/4W			C813	1-164-159-11	CERAMIC	0.1uF		50V	
		< CONNECTOR >						* CN710	1-568-834-11	SOCKET, CONNECTOR 15P				
		< SWITCH >						* CN712	1-565-500-11	CONNECTOR, BOARD TO BOARD 9P				
		< PHOTO INTERRUPTER >						* CN801	1-564-505-11	PLUG, CONNECTOR 2P				
		< RESISTOR >						* CN802	1-568-842-11	SOCKET, CONNECTOR 27P				
		< PHOTO INTERRUPTER >						* CN803	1-564-717-11	PIN, CONNECTOR (SMALL TYPE)15P				
		< PHOTO INTERRUPTER >						CN804	1-564-707-11	PIN, CONNECTOR (SMALL TYPE) 5P				

SYSTEM CONTROL

TRANS

Ref. No.	Part No.	Description	Remark
< DIODE >			
D712	8-719-987-63	DIODE 1N4148M	
D801	8-719-933-33	DIODE HZS6A1L	
D802	8-719-933-33	DIODE HZS6A1L	
D803	8-719-987-63	DIODE 1N4148M	
D804	8-719-987-63	DIODE 1N4148M	
D805	8-719-987-63	DIODE 1N4148M	
D806	8-719-933-33	DIODE HZS6A1L	
D809	8-719-987-63	DIODE 1N4148M	
< IC >			
IC801	8-759-360-85	IC M38172M4-150FP	
IC802	8-759-165-85	IC PST600H-T	
IC803	8-759-248-66	IC AT24C01-10PC	
IC804	8-759-822-09	IC LB1641	
< TRANSISTOR >			
Q801	8-729-230-45	TRANSISTOR 2SC2458-YGR	
Q802	8-729-900-65	TRANSISTOR DTA144ES	
Q803	8-729-422-57	TRANSISTOR UN4111	
Q804	8-729-900-65	TRANSISTOR DTA144ES	
Q805	8-729-900-65	TRANSISTOR DTA144ES	
Q806	8-729-900-89	TRANSISTOR DTC144ES	
Q807	8-729-900-65	TRANSISTOR DTA144ES	
Q808	8-729-900-65	TRANSISTOR DTA144ES	
Q809	8-729-900-65	TRANSISTOR DTA144ES	
Q810	8-729-801-93	TRANSISTOR 2SD1387	
Q811	8-729-801-93	TRANSISTOR 2SD1387	
< RESISTOR >			
R801	1-247-807-31	CARBON 100 5% 1/4W	
R802	1-247-807-31	CARBON 100 5% 1/4W	
R803	1-249-425-11	CARBON 4.7K 5% 1/4W	
R804	1-249-425-11	CARBON 4.7K 5% 1/4W	
R805	1-249-425-11	CARBON 4.7K 5% 1/4W	
R806	1-249-425-11	CARBON 4.7K 5% 1/4W	
R807	1-249-425-11	CARBON 4.7K 5% 1/4W	
R808	1-249-425-11	CARBON 4.7K 5% 1/4W	
R809	1-249-425-11	CARBON 4.7K 5% 1/4W	
R810	1-249-429-11	CARBON 10K 5% 1/4W	
R811	1-249-421-11	CARBON 2.2K 5% 1/4W	
R812	1-249-441-11	CARBON 100K 5% 1/4W	
R813	1-249-429-11	CARBON 10K 5% 1/4W	
R814	1-249-429-11	CARBON 10K 5% 1/4W	
R815	1-249-393-11	CARBON 10 5% 1/4W	
R816	1-249-429-11	CARBON 10K 5% 1/4W	
R817	1-249-429-11	CARBON 10K 5% 1/4W	
R818	1-249-429-11	CARBON 10K 5% 1/4W	
R819	1-249-417-11	CARBON 1K 5% 1/4W	
R820	1-249-441-11	CARBON 100K 5% 1/4W	
R821	1-247-807-31	CARBON 100 5% 1/4W	
R822	1-247-807-31	CARBON 100 5% 1/4W	
R823	1-249-429-11	CARBON 10K 5% 1/4W	
R824	1-249-425-11	CARBON 4.7K 5% 1/4W	

Ref. No.	Part No.	Description	Remark
R825	1-249-429-11	CARBON 10K 5% 1/4W	
R826	1-249-429-11	CARBON 10K 5% 1/4W	
R827	1-249-419-11	CARBON 1.5K 5% 1/4W	
R828	1-249-417-11	CARBON 1K 5% 1/4W	
R830	1-249-429-11	CARBON 10K 5% 1/4W	
R831	1-249-415-11	CARBON 680 5% 1/4W	
R832	1-249-437-11	CARBON 47K 5% 1/4W	
R833	1-249-415-11	CARBON 680 5% 1/4W	
R834	1-249-437-11	CARBON 47K 5% 1/4W	
R835	1-249-417-11	CARBON 1K 5% 1/4W	
R836	1-249-440-11	CARBON 82K 5% 1/4W	
R837	1-249-420-11	CARBON 1.8K 5% 1/4W	
< VARIABLE RESISTOR >			
RV801	1-241-762-11	RES, ADJ, CARBON 2.2K	
< VIBRATOR >			
X801	1-577-358-21	VIBRATOR, CERAMIC (4MHZ)	

*	1-663-308-11	TRANS BOARD	

< CONNECTOR >			
* CN701	1-565-499-11	CONNECTOR, BOARD TO BOARD 8P	

MISCELLANEOUS			

53	1-773-247-11	WIRE (FLAT TYPE) (27 CORE)	
△ 57	1-575-651-21	CORD, POWER (AEP)	
△ 57	1-696-571-21	CORD, POWER (UK)	
59	1-696-981-11	WIRE (FLAT TYPE) (5 CORE)	
60	1-773-009-11	WIRE (FLAT TYPE) (15 CORE)	
HRPE9011-500-156-11		HEAD (RECORD) (REC/PB/ERASE)	
M901	X-3369-091-1	MOTOR ASSY (LOADING)	
M902	X-3369-100-1	MOTOR (HK) ASSY (CAPSTAN/REEL)	
PM901	3-917-560-01	SOLENOID	
S901	1-762-989-11	SWITCH, ROTARY (LOADING DET)	
△ T901	1-431-302-11	TRANSFORMER, POWER	

HARDWARE LIST			

#1	7-685-646-79	SCREW +BVTP 3X8 TYPE2 N-S	
#2	7-685-647-79	SCREW +BVTP 3X10 TYPE2 N-S	
#3	7-621-775-10	SCREW +B 2.6X4	
#4	7-671-113-01	STEAL, BALL 3	
#5	7-685-534-19	SCREW +BTP 2.6X8 TYPE2 N-S	
#6	7-685-104-19	SCREW +P 2X6 TYPE2 NON-SLIT	
#7	7-682-544-04	SCREW +P 3X3	
#8	7-685-871-01	SCREW +BVTT 3X6 (S)	

The components identified by mark △ or dotted line with mark △ are critical for safety. Replace only with part number specified.

<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Remark</u>
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ACCESSORIES & PACKING MATERIALS

1-558-271-11		CORD, CONNECTION (AUDIO 1.0m)	
1-574-314-11		CORD (WITH CONNECTOR) (AU BUS)	
3-860-361-11		MANUAL, INSTRUCTION (ENGLISH, FRENCH, SPANISH, PORTUGUESE) (AEP, UK)	
3-860-361-21		MANUAL, INSTRUCTION (GERMAN, DUTCH, SWEDISH, ITALIAN) (AEP)	

