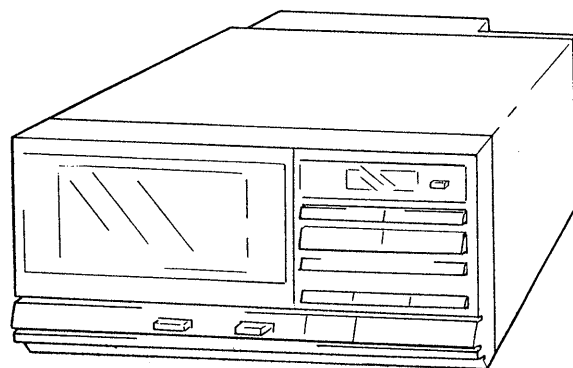


TC-R707/R707M

SERVICE MANUAL



*US Model
AEP Model*

TC-R707M

*UK Model
E Model*

West German Model

TC-R707

- TC-R707 is the STEREO CASSETTE DECK in FH-707R/909CD/909R.
- TC-R707M is the STEREO CASSETTE DECK in MHC-2000.

SPECIFICATIONS

Recording system 4-track 2-channel stereo

Frequency response

DOLBY NR OFF (DIN)

With TYPE IV cassette (Sony METAL-ES)

40 to 15,000 Hz (± 3 dB)

With TYPE II cassette (Sony UX-S)

40 to 14,000 Hz (± 3 dB)

With TYPE I cassette (Sony HF-X)

40 to 13,000 Hz (± 3 dB)

Wow and flutter 0.1% WRMS (NAB)

$\pm 0.2\%$ (DIN)

General

Dimensions

TC-R707

Approx. 220 × 120 × 270 mm (w/h/d)

(8 $\frac{3}{4}$ × 4 $\frac{3}{4}$ × 10 $\frac{3}{4}$ inches)

TC-R707M

Approx. 245 × 120 × 270 mm (w/h/d)

(9 $\frac{3}{4}$ × 4 $\frac{3}{4}$ × 10 $\frac{3}{4}$ inches)

Weight

Approx. 2.5 kg (5 lb 9 oz) net

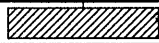
Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation.
"DOLBY" and the double-D symbol  are trademarks of Dolby Laboratories Licensing Corporation.

Model Name Using Similar Mechanism	NEW
Tape Transport Mechanism Type	TCM-170RB8

MODEL IDENTIFICATION

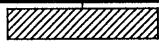
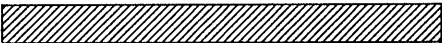
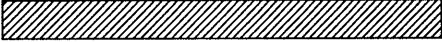
US, AEP, UK, E model

TC-R707
TC-R707M

SONY® MODEL NO. 
STEREO CASSETTE DECK
SERIAL NO.
MADE IN JAPAN

West Germany model

FH-909R
MHC-2000

SONY® MODEL NO. 
STEREO CASSETTE DECK

TC-R707M : STEREO CASSETTE DECK

SERIAL NO.
MADE IN JAPAN

STEREO CASSETTE DECK
SONY®



SEE ADDITIONAL
INFORMATION

SERVICING NOTE

REPAIRING PRECAUTION

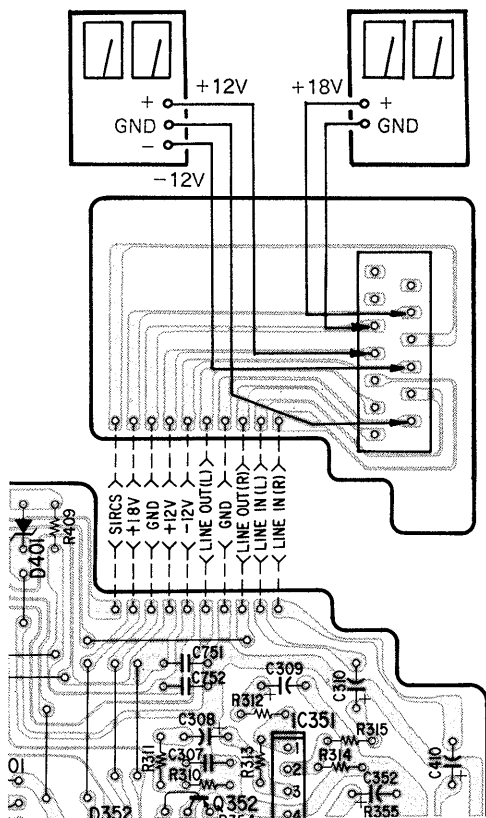
[To apply B+ voltage]

The power of this unit is fed from amplifier.

Because of this, connect the regulated power supply as illustrated below when this unit alone operates.

regulated dc power supply
(1.5–2.0A)

regulated dc power supply
(1.5–2.0A)

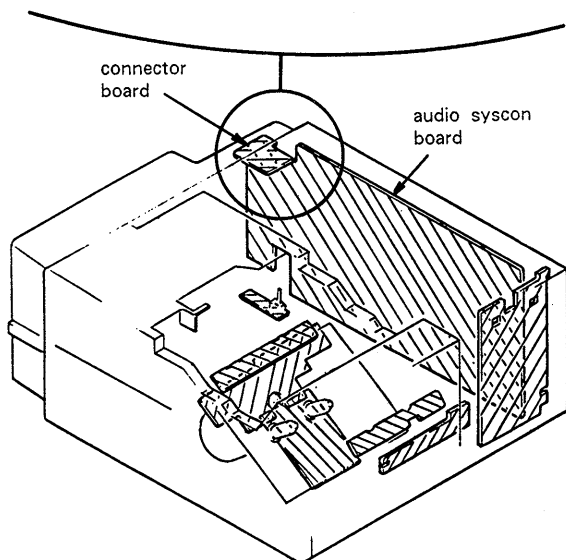
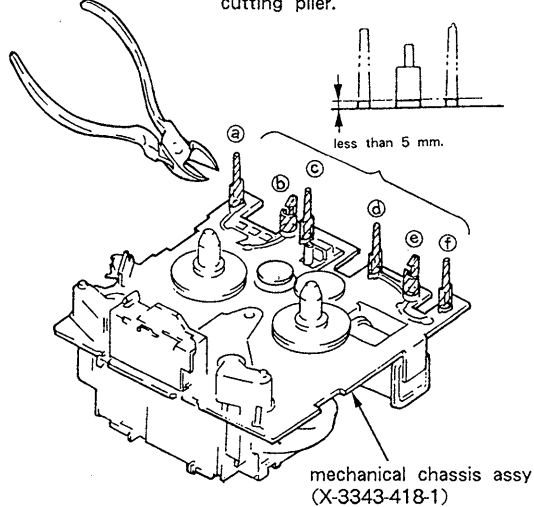


NOTE ON REPLACEMENT OF MECHANISM CHASSIS ASSEMBLY

The mechanism chassis assembly is supplied as shown below with the bosses ① to ⑥ on service.

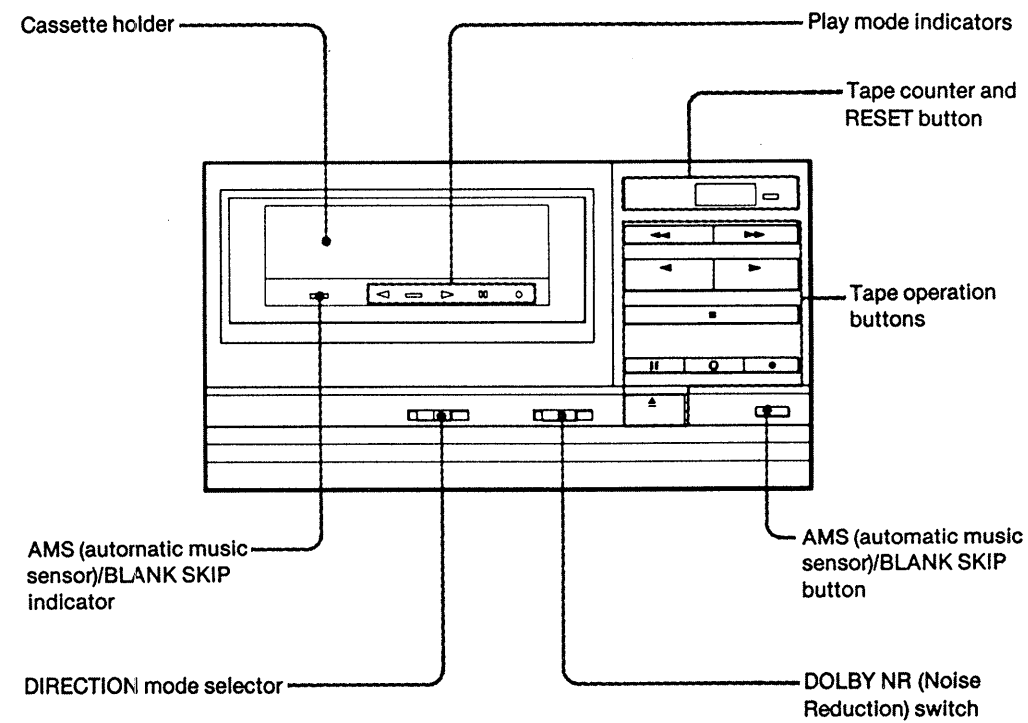
On replacement please finish as shown in the figure.

Cut the bosses ① to ⑥ with such as cutting plier.



SECTION 1 GENERAL

1-1. LOCATION OF CONTROLS

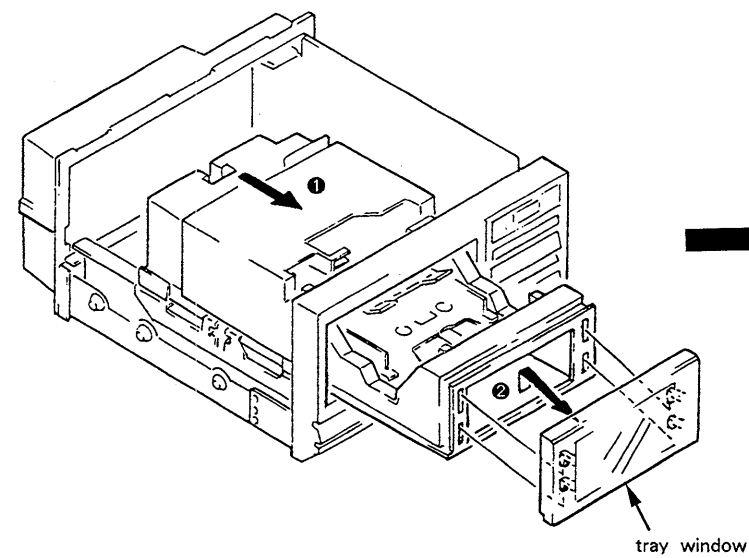


SECTION 2 DISASSEMBLY

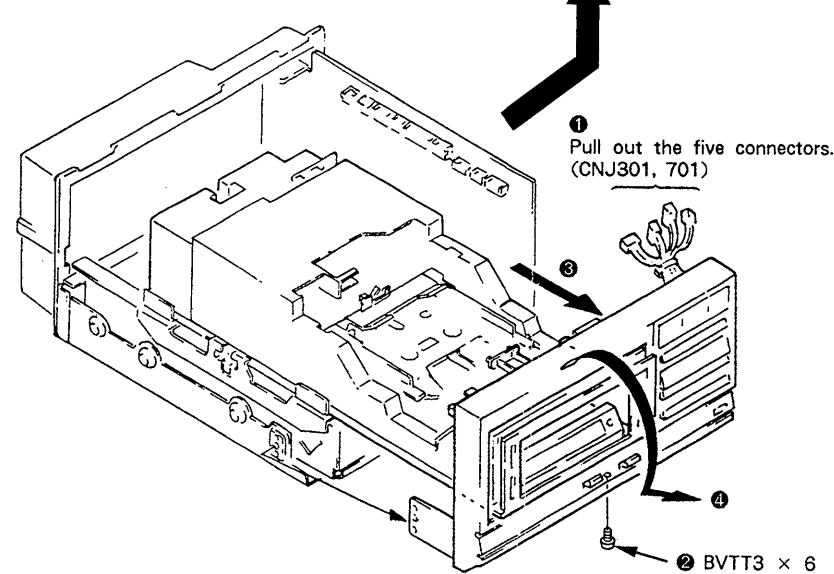
Note : Follow the disassembly procedure in the numerical order given.

2-1. REMOVAL

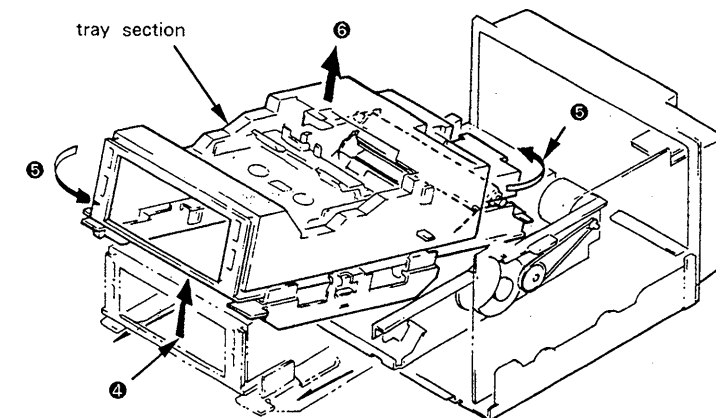
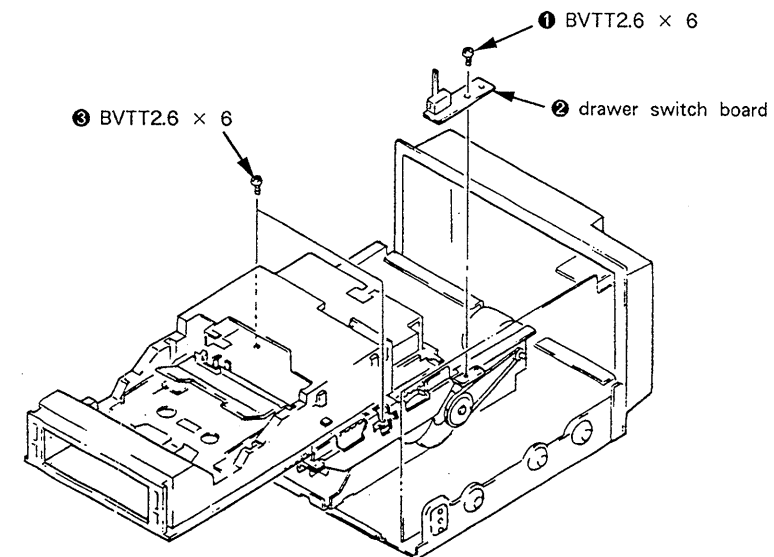
TRAY WINDOW



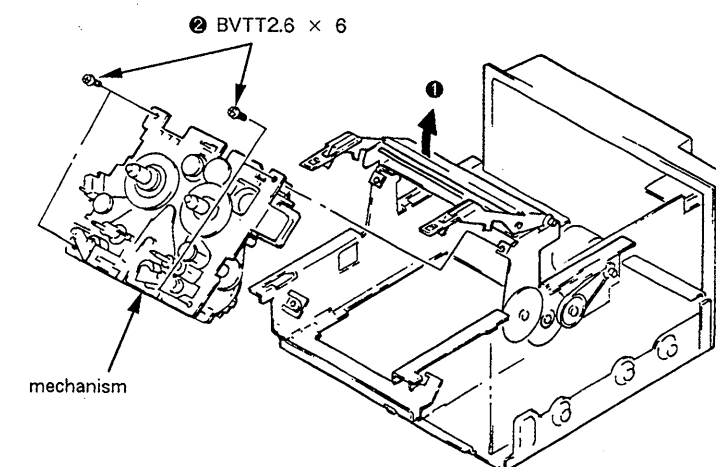
FRONT PANEL



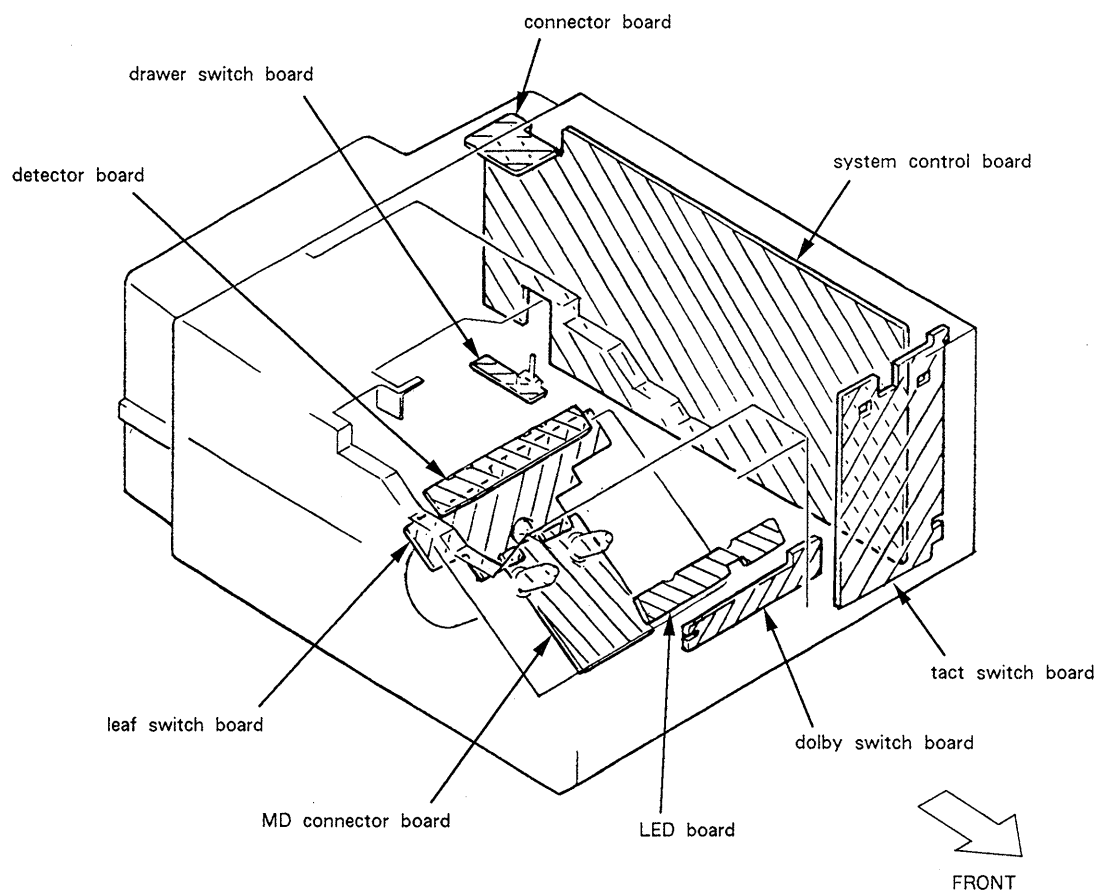
TRAY SECTION



MECHANISM



CIRCUIT BOARDS LOCATION



SECTION 3
DIAGRAMS

3-1. PRINTED WIRING BOARDS

— Conductor Side —

• Semiconductor Lead Layouts

BA3308
μPC4570HA-1

2SB1013
2SD1387

CXA1101P
CXA1198P

2SC634SP
2SC3401
2SC3901

LC6528C-3175

2SD774-3

M5218L

2SK246Y

MB88514B-524N

10E2
US1060M
UZL-7H2
UZL-7L2

BN1A4M

AA2222S
PG2222S
PR2222S

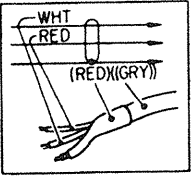
• Semiconductor Location

Ref. No.	Location	Ref. No.	Location
D11	A-5	Q11	B-16
D101	I-13	Q12	B-7
D301	G-12	Q101	H-13
D302	G-11	Q151	J-11
D351	H-10	Q152	J-12
D352	H-14	Q153	J-11
D401	G-13	Q301	I-11
D501	J-10	Q302	H-12
D601	J-12	Q303	G-11
D602	J-13	Q351	H-11
D603	J-13	Q352	H-14
D604	J-13	Q401	I-11
D605	H-10	Q402	I-12
D606	H-10	Q403	H-11
D701	G-9	Q501	J-10
D702	H-9	Q502	J-10
D703	H-9	Q601	I-14
D704	J-7	Q602	I-14
D706	E-2	Q603	H-10
D707	E-3	Q604	H-10
D708	E-3	Q605	H-10
D709	E-4	Q606	H-10
D710	E-4	Q702	H-8
D711	E-2	Q703	G-8
D712	J-9	Q705	H-9
D713	J-9	Q706	H-9
D714	J-9	Q707	H-7
D715	J-9	Q708	H-7
D716	J-9	Q709	H-8
D717	J-9	Q710	H-8
D718	J-9	Q711	H-8
D719	I-9	Q712	I-7
		Q725	J-16
		Q726	H-8

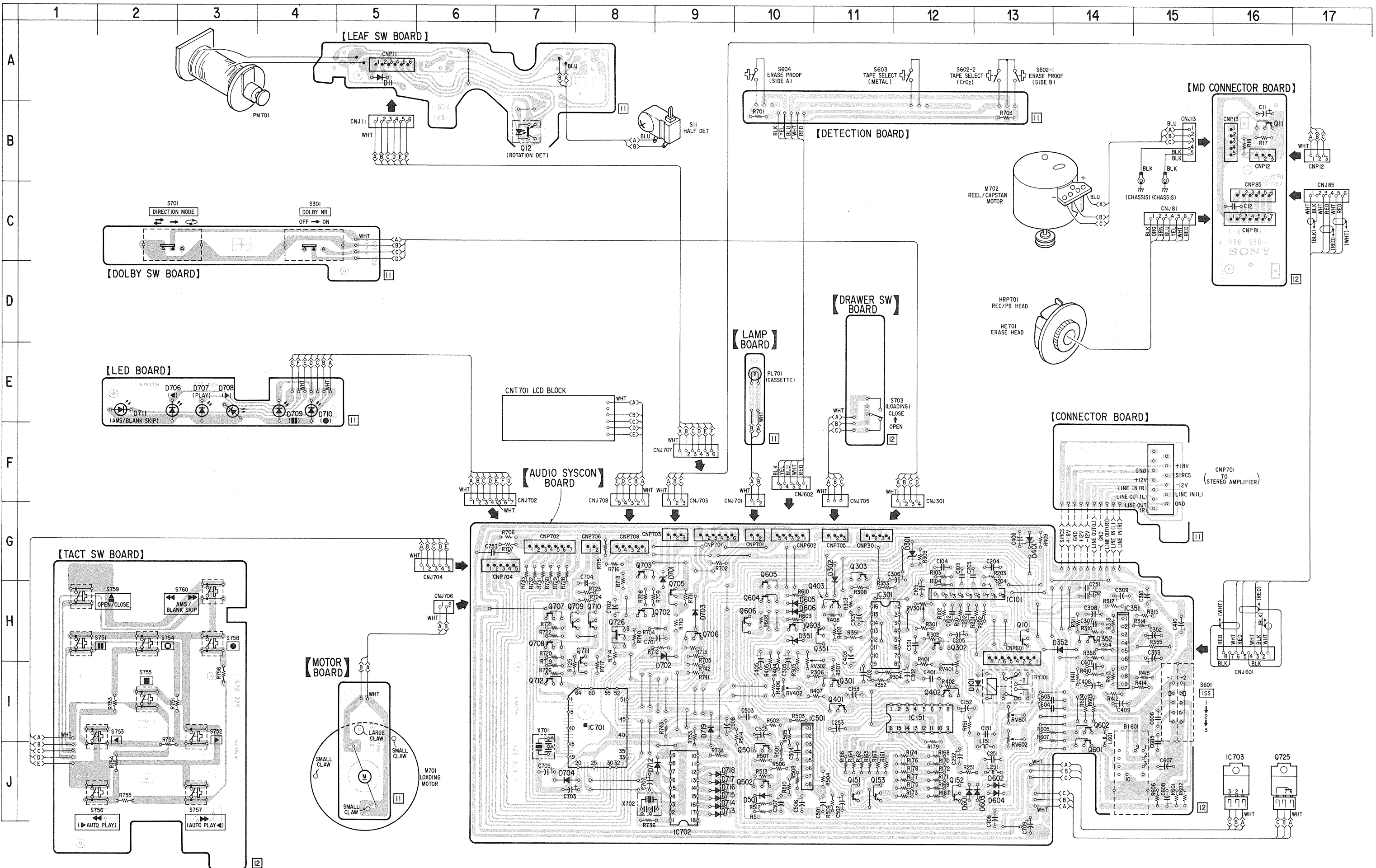
Ref. No.	Location	Ref. No.	Location
IC101	H-13		
IC151	H-12		
IC301	H-11		
IC351	H-14		
IC501	I-10		
IC701	I-8		
IC702	J-9		
IC703	J-16		

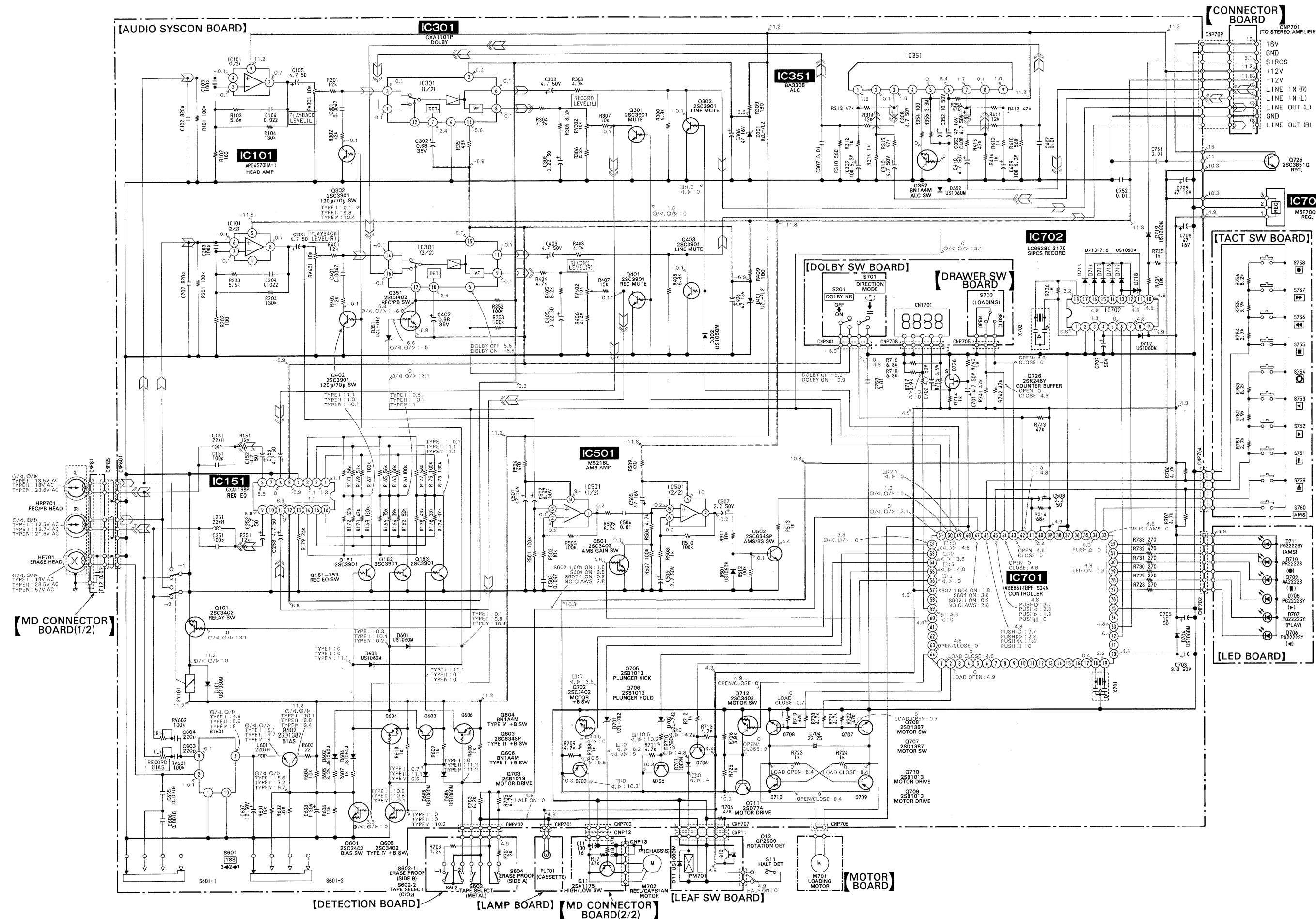
Note

- Color code or sleeving over the end of the jacket.



- — : parts extracted from the component side.
- — : parts extracted from the conductor side.
- ■ : parts mounted on the conductor side.





Note :

- 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 $\frac{1}{4}$ W or less unless otherwise specified.
- Switch

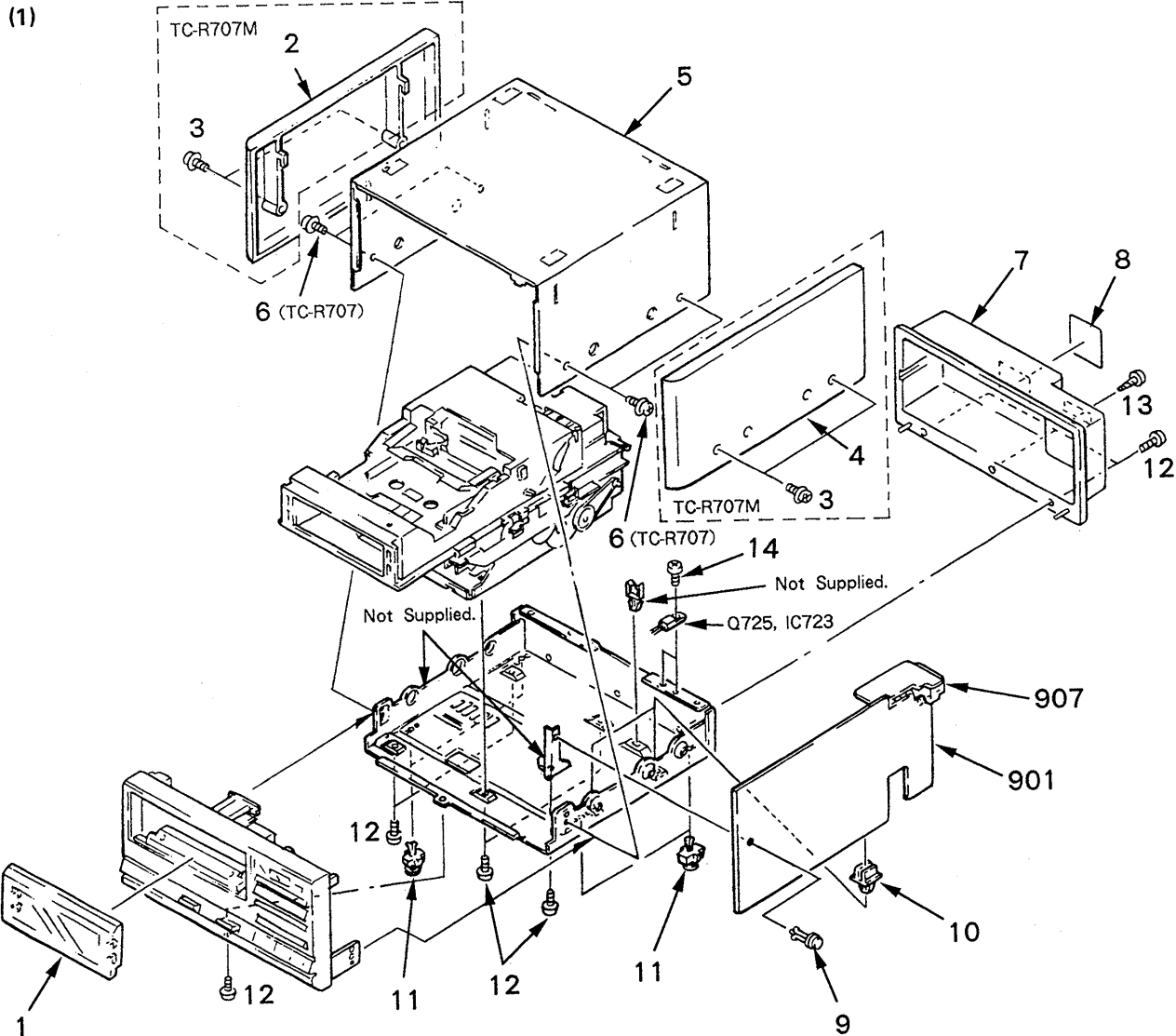
Ref. No.	Switch	Position
S11	HALF DET	OFF
S301	DOLBY NR	OFF
S601	ISS	1
S602-1	ERASE PROOF (SIDE B)	OFF
S602-2	TAPE SELECT (CrO ₂)	OFF
S603	TAPE SELECT (METAL)	OFF
S604	ERASE PROOF (SIDE A)	OFF
S701	DIRECTION MODE	↔
S703	LOADING	OPEN
S751	⏸ (PAUSE)	OFF
S752	▶ (FWD)	OFF
S753	◀ (REV)	OFF
S754	◀ (REC MUTE)	OFF
S755	■ (STOP)	OFF
S756	◀ (REW)	OFF
S757	● (FF)	OFF
S758	● (REC)	OFF
S759	OPEN/CLOSE	OFF
S760	AMS/BLANK SKIP	OFF

- : B+ Line.
- : B- Line.
- : adjustment for repair.
- AC voltage readings in the bias oscillator with a VTVM.
- Voltage and waveforms are dc with respect to ground under no-signal (PLAY mode) conditions.
- no mark :
- : FWD ◀ : REV □ : STOP
- : FF ◀ : REW ○ : REC
- Voltage are taken with a VOM (50 k Ω /V).
- Voltage variations may be noted due to normal production tolerances.
- Signal path.
- : PB ○ : REC

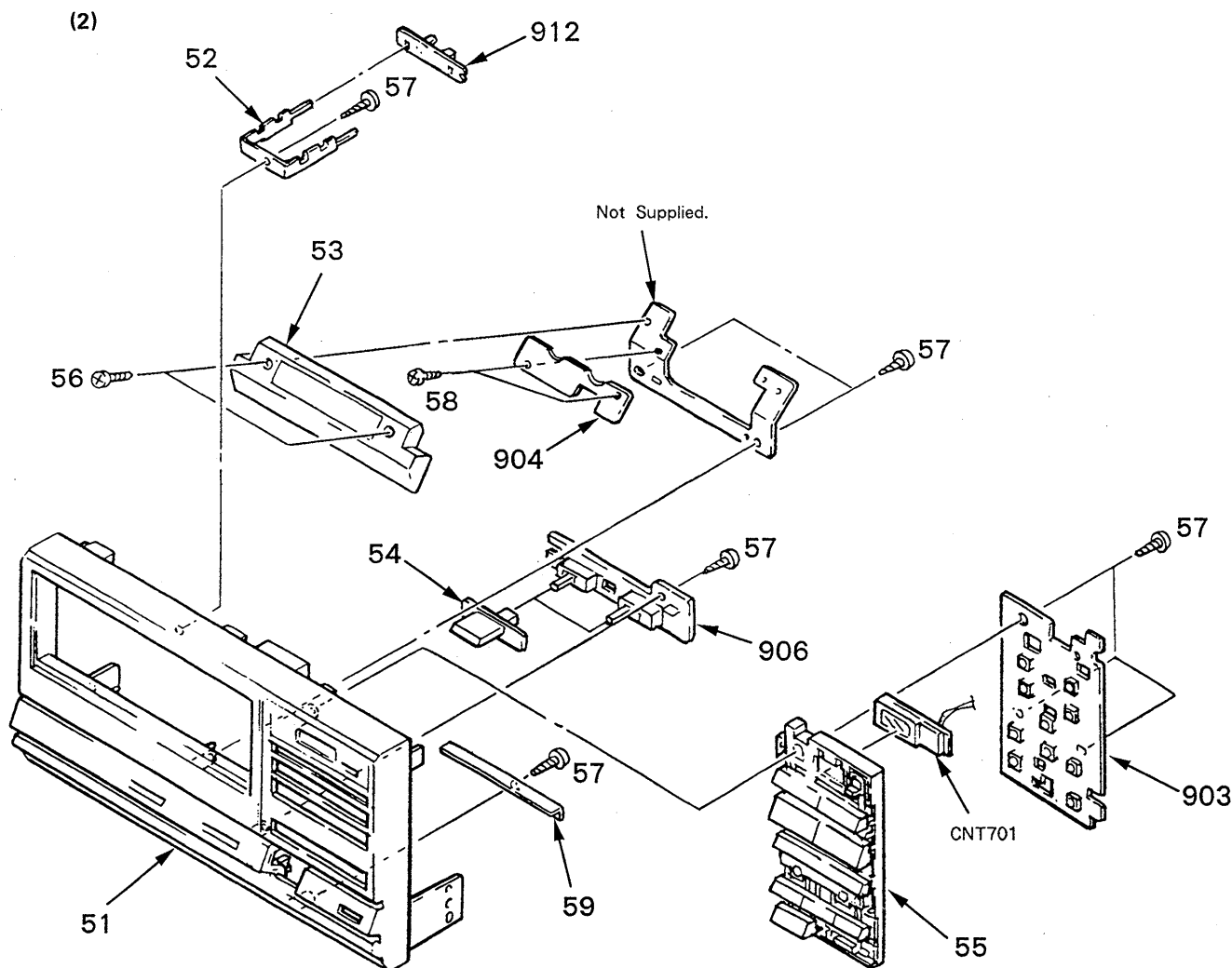
EXPLODED VIEWS

NOTE:

- The mechanical parts with no reference number in the exploded views are not supplied.
- The construction parts of an assembled part are indicated with a collation number in the remark column.
- Items marked "★" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- Due to standardization, parts with part number suffix -XX and -X may be different from the parts specified in the components used on the set.
- Color Indication of Appearance Parts
Example:
(RED) ... KNOB, BALANCE (WHITE)
↑ Cabinet's Color ↑ Parts Color



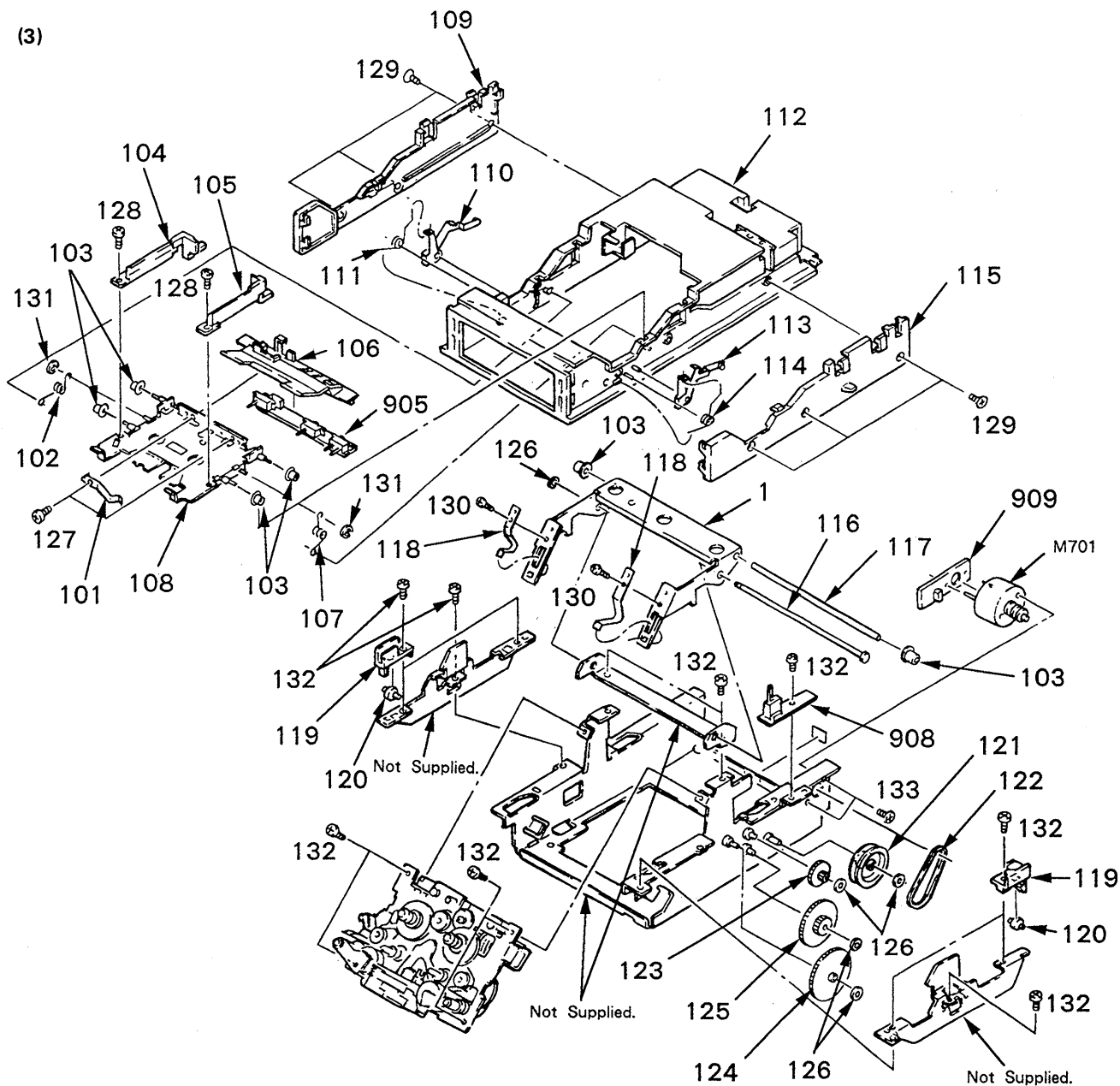
No.	Part No.	Description	Remarks	No.	Part No.	Description	Remarks
1	X-3332-540-1	WINDOW (TRAY) ASSY		9	3-531-576-11	RIVET	
2	4-925-525-01	(R707M)...PLATE (B-L), SIDE		10	*3-642-310-00	HOLDER, CIRCUIT BOARD	
3	4-886-821-51	(R707M)...SCREW, CASE, (M3X14)		11	X-4902-937-1	FOOT ASSY, RUBBER	
4	4-925-524-01	(R707M)...PLATE (B-R), SIDE		12	7-682-147-01	SCREW +BVTT 3X6 (S)	
5	4-920-118-21	CASE		13	7-685-646-79	SCREW +BVTP 3X8 TYPE2 N-S	
6	3-7-4-366-01	(R707)...SCREW (CASE), M3X8		14	7-685-872-01	SCREW +BVTT 3X8	
7	*3-346-251-01	PANEL, BACK		901	*A-2095-632-A	MOUNTED PCB, SYSTEM CONTROL	
8	*3-346-268-01	(R707:UK,E).....LABEL, MODEL NUMBER		907	*1-626-329-11	PC BOARD, CONNECTOR	
	*3-346-269-01	(R707:West Germany)..LABEL, MODEL NUMBER		IC703	8-759-604-29	IC M5F7805	
	*3-346-271-01	(R707M:AEP,US).....LABEL, MODEL NUMBER		Q725	8-729-303-61	TRANSISTOR 2SC3851G	
	*3-346-272-01	(R707M:West Germany) ...LABEL, MODEL NUMBER (AE4)					



No.	Part No.	Description	Remarks
51	X-3332-542-1	(US,UK,AEP,West Germany) ...PANEL ASSY, FRONT (WHITE)	
	X-3332-543-1	(E).....PANEL ASSY, FRONT (GOLD)	
52	*3-346-219-01	BRACKET (LAMP)	
53	X-3332-539-1	COVER ASSY	
54	3-346-246-01	KNOB (DOLBY)	
55	3-346-262-01	(US,UK,AEP,West Germany)...BUTTON (WHITE)	
	3-346-262-11	(E).....BUTTON (GOLD)	

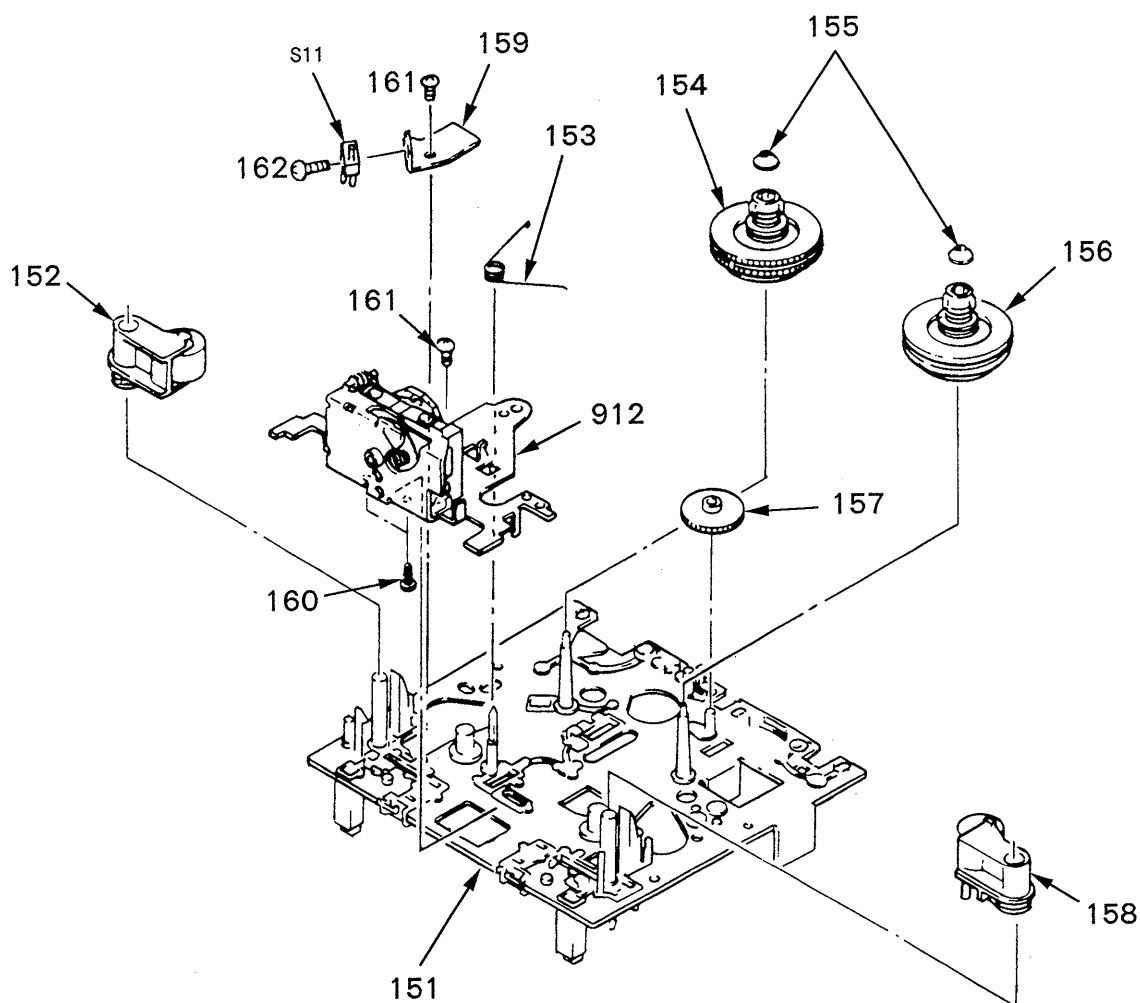
No.	Part No.	Description	Remarks
56	7-621-772-50	SCREW +B 2X10	
57	7-685-133-19	SCREW +BTP 2.6X6 TYPE2 N-S	
903	*1-626-325-11	PC BOARD, TACT SWITCH	
904	*1-626-326-11	PC BOARD, LED	
906	*1-626-328-11	PC BOARD, DOLBY SWITCH	
912	*1-626-330-11	PC BOARD, LAMP	
CNJ701	1-808-362-11	DISPLAY PANEL, LIQUID CRYSTAL	

(3)

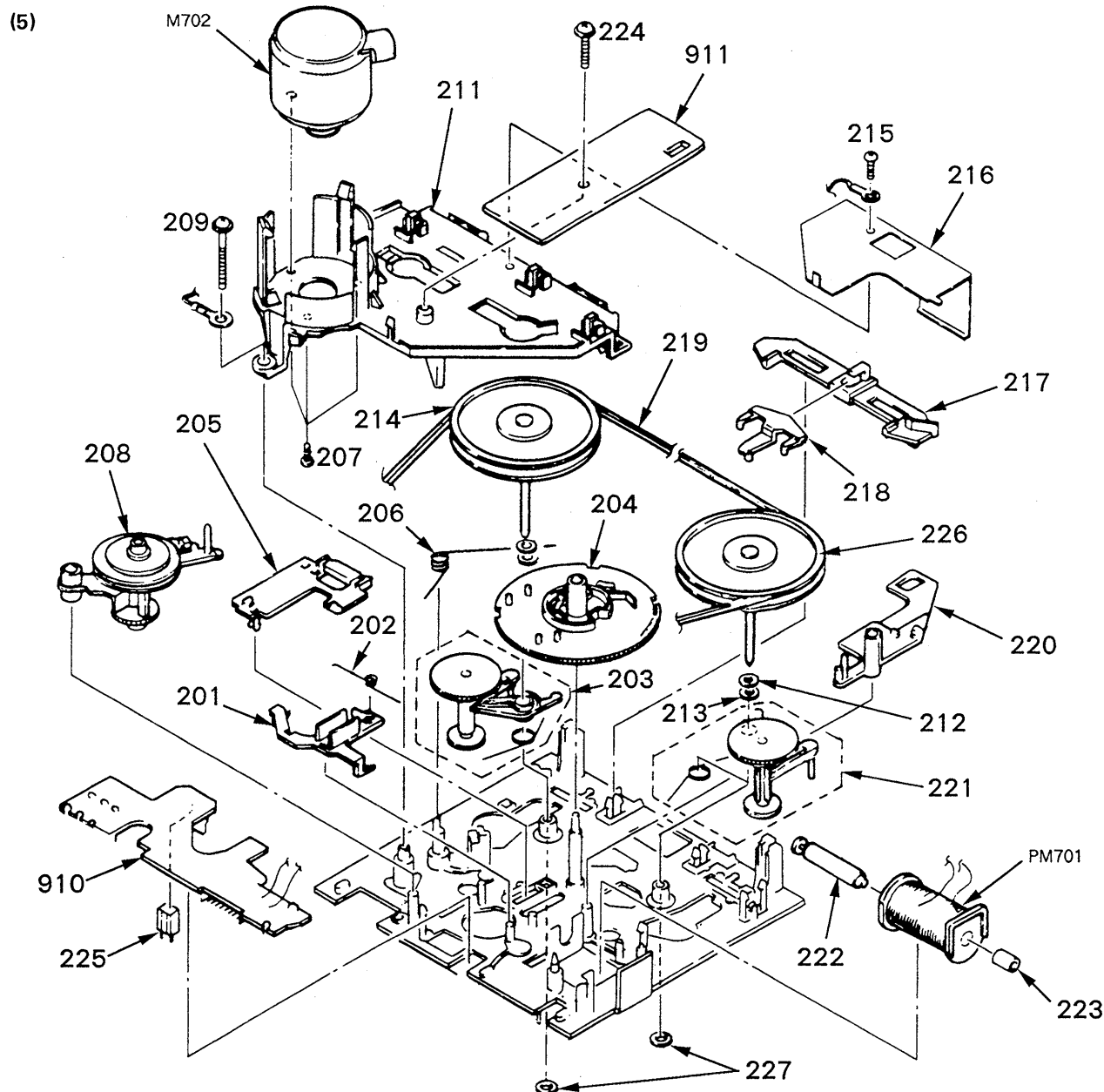


No.	Part No.	Description	Remarks	No.	Part No.	Description	Remarks
101	3-346-210-01	SPRING (CASSETTE PUSH), LEAF		119	*3-346-244-01	HOLDER (TRAY)	
102	3-346-236-01	SPRING (RETAINER LEFT)		120	*3-346-216-01	ROLLER (GUIDE)	
103	3-346-223-01	ROLLER		121	3-346-213-01	PULLEY (LOADING)	
104	*3-346-227-01	GUIDE (CASSETTE LEFT)		122	3-346-287-01	BELT	
105	*3-346-226-01	GUIDE (CASSETTE RIGHT)		123	3-346-289-01	GEAR (C)	
106	*3-346-250-01	HOLDER (SELECTOR)		124	3-346-215-01	GEAR (B)	
107	3-346-237-01	SPRING (RETAINER RIGHT)		125	3-346-214-01	GEAR (A)	
108	*X-3332-541-1	RETAINER ASSY, CASSETTE		126	3-558-708-21	WASHER, STOPPER	
109	*3-346-256-01	PLATE (LEFT), SIDE		127	7-685-133-19	SCREW +BTP 2.6X6 TYPE2 N-S	
110	*X-3332-538-1	LEVER (LEFT) ASSY		128	7-627-853-48	PRECISION SCREW +P 2X4 TYPE 3	
111	3-346-234-01	SPRING		129	7-685-233-19	SCREW +KTP 2.6X6 TYPE2NON-SLIT	
112	*3-346-255-01	TRAY (CASSETTE)		130	7-685-860-09	SCREW +BVTT 2.6X4 (S)	
113	*X-3332-537-1	LEVER (RIGHT) ASSY		131	7-624-105-04	STOP RING 2.3, TYPE -E	
114	3-346-235-01	SPRING		132	7-621-770-67	SCREW +BVTT 2.6X6 (S)	
115	*3-346-257-01	PLATE (RIGHT), SIDE		133	7-621-775-08	SCREW +B 2.6X3	
116	*3-346-229-01	SHAFT (FULCRUM)		905	*1-626-327-11	PC BOARD, DETECTION	
117	*3-346-230-01	SHAFT (LEVER)		908	*1-626-331-11	PC BOARD, DRAWER SWITCH	
118	3-346-211-01	SPRING, LEAF		909	*1-626-332-11	PC BOARD, MOTOR	
				M701	X-3332-550-1	MOTOR ASSY (LOADING)	

(4)



No.	Part No.	Description	Remarks	No.	Part No.	Description	Remarks
151	*X-3343-418-1	CHASSIS ASSY, MECHANICAL		158	X-3343-402-1	LEVER (PINCH LEVER FWD) ASSY	
152	X-3343-403-1	LEVER (PINCH LEVER REV) ASSY		159	*3-343-478-01	BRACKET (SW)	
153	3-343-401-01	SPRING, TORSION		160	7-685-102-19	SCREW +P 2X4 NON-SLIT TYPE 2	
155	3-343-439-01	CAP (REEL TABLE)		161	7-621-773-86	SCREW +BVT 2.6X4 (S)	
156	X-3343-401-1	TABEL ASSY, REEL		162	7-621-772-30	SCREW +B 2X6	
157	3-343-411-01	GEAR (FF GEAR)		912	A-2108-123-A	PC BOARD ASSY, HEAD	



No.	Part No.	Description	Remarks	No.	Part No.	Description	Remarks
201	3-343-453-01	SLIDER (BRAKE PLATE)		218	3-343-462-01	LEVER	
202	3-343-429-01	SPRING, TORSION		219	3-343-426-01	BELT (CAPSTAN BELT SQUARE)	
203	X-3343-406-1	LEVER (TU ARM REV) ASSY		220	*3-343-456-01	LEVER (PM LEVER)	
204	3-343-470-01	GEAR (CAM GEAR)		221	X-3343-405-1	LEVER (TU ARM FWD) ASSY	
205	*3-343-461-01	SLIDER		222	*3-343-425-01	ARBOR (MOVABLE IRON ARBOR), IRON	
206	3-343-430-01	SPRING, TORSION		223	*3-343-424-01	ARBOR (FIXED IRON ARBOR), IRON	
207	7-627-556-28	SCREW +P 2.6X3.5		224	3-343-404-01	SCREW (PTPHW 2X10)	
208	X-3343-414-1	LAVER (FR ARM) ASSY		225	*3-343-419-01	HOLDER (S SENSER A)	
209	3-343-403-01	SCREW (PTTWH 2X18)		226	X-3343-416-1	FLYWHEEL (REV) COMPLETE ASSY	
211	*X-3343-407-1	BASE (THRUST RETAINER) ASSY		227	3-343-473-01	WASHER, NYLON	
212	4-605-835-11	WASHER (2.6), POLYSLIDER		254	X-3343-415-1	TABEL (REV) ASSY, REEL	
213	3-307-482-00	WASHER, LUMILER		258	7-621-770-67	SCREW +BVTT 2.6X6 (S)	
214	X-3343-411-1	FLYWHEEL COMPLETE ASSY		910	*1-624-148-13	PC BOARD, LEAF SW	
215	7-685-102-19	SCREW +P 2X4 NON-SLIT TYPE 2		911	*1-626-217-11	PC BOARD, MD CONNECTOR	
216	*3-343-471-01	PLATE, SHIELD		M702	X-3343-408-1	MOTOR ASSY (REEL/CAPSTAN)	
217	*3-343-457-01	SLIDER (REVERSE SLIDER)		PM701	1-454-456-11	SOLENOID, PLUNGER	

SECTION 5

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.
- Items marked "★" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- If there are two or more same circuits in a set such as a stereophonic machine, only typical circuit parts may be indicated and capacitors and resistors in other same circuits may be omitted.

CAPACITORS:MF: μ F, PF: μ F.**RESISTORS**

- All resistors are in ohms.
- F: nonflammable

COILS

- MMH: mH, UH: μ H

SEMICONDUCTORSIn each case, U: μ , for example:UA...: μ A..., UPA...: μ PA...,
UPC...: μ PC, UPD...: μ PD...

Ref.No.	Part No.	Description					Ref.No.	Part No.	Description				
901	*A-2095-632-A	MOUNTED PCB, SYSTEM CONTROL					C405	1-124-464-11	ELECT	0.22MF	20%	50V	
902	A-2108-123-A	PC BOARD ASSY, HEAD					C406	1-124-477-11	ELECT	47MF	20%	16V	
903	*1-626-325-11	PC BOARD, TACT SWITCH					C407	1-161-379-00	CERAMIC	0.01MF	30%	16V	
904	*1-626-326-11	PC BOARD, LED					C408	1-124-927-11	ELECT	4.7MF	20%	50V	
905	*1-626-327-11	PC BOARD, DETECTION					C409	1-124-443-00	ELECT	100MF	20%	6.3V	
906	*1-626-328-11	PC BOARD, DOLBY SWITCH					C410	1-124-927-11	ELECT	4.7MF	20%	50V	
907	*1-626-329-11	PC BOARD, CONNECTOR					C501	1-124-477-11	ELECT	47MF	20%	16V	
908	*1-626-331-11	PC BOARD, DRAWER SWITCH					C502	1-124-902-00	ELECT	0.47MF	20%	50V	
909	*1-626-332-11	PC BOARD, MOTOR					C503	1-136-161-00	FILM	0.047MF	5%	50V	
910	*1-624-148-13	PC BOARD, LEAF SW					C504	1-161-379-00	CERAMIC	0.01MF	30%	16V	
911	*1-626-217-11	PC BOARD, MD CONNECTOR					C505	1-124-477-11	ELECT	47MF	20%	16V	
912	A-2108-123-A	PC BOARD ASSY, HEAD					C506	1-124-925-11	ELECT	2.2MF	20%	50V	
912	*1-626-330-11	PC BOARD, LAMP					C507	1-124-925-11	ELECT	2.2MF	20%	50V	
BI601	1-464-934-11	OSCILLATION UNIT, BIAS					C508	1-124-925-11	ELECT	2.2MF	20%	50V	
C11	1-126-101-11	ELECT	100MF	20%	16V		C603	1-162-286-31	CERAMIC	220PF	10%	50V	
C12	1-161-379-00	CERAMIC	0.01MF	30%	16V		C604	1-162-286-31	CERAMIC	220PF	10%	50V	
C102	1-162-293-31	CERAMIC	820PF	10%	50V		C605	1-106-349-00	MYLAR	0.0018MF	10%	100V	
C103	1-162-282-31	CERAMIC	100PF	10%	50V		C606	1-106-349-00	MYLAR	0.0018MF	10%	100V	
C104	1-136-157-00	FILM	0.022MF	5%	50V		C607	1-123-875-11	ELECT	10MF	20%	50V	
C105	1-124-927-11	ELECT	4.7MF	20%	50V		C608	1-124-499-11	ELECT	1MF	20%	50V	
C151	1-162-282-31	CERAMIC	100PF	10%	50V		C701	1-124-927-11	ELECT	4.7MF	20%	50V	
C152	1-124-927-11	ELECT	4.7MF	20%	50V		C702	1-124-927-11	ELECT	4.7MF	20%	50V	
C153	1-124-927-11	ELECT	4.7MF	20%	50V		C703	1-123-382-00	ELECT	3.3MF	20%	50V	
C202	1-162-293-31	CERAMIC	820PF	10%	50V		C704	1-124-282-00	ELECT	22MF	20%	25V	
C203	1-162-282-31	CERAMIC	100PF	10%	50V		C705	1-123-875-11	ELECT	10MF	20%	50V	
C204	1-136-157-00	FILM	0.022MF	5%	50V		C707	1-124-499-11	ELECT	1MF	20%	50V	
C205	1-124-927-11	ELECT	4.7MF	20%	50V		C708	1-124-477-11	ELECT	47MF	20%	16V	
C251	1-162-282-31	CERAMIC	100PF	10%	50V		C709	1-124-477-11	ELECT	47MF	20%	16V	
C252	1-124-927-11	ELECT	4.7MF	20%	50V		C751	1-161-379-00	CERAMIC	0.01MF	30%	16V	
C253	1-124-927-11	ELECT	4.7MF	20%	50V		C752	1-161-379-00	CERAMIC	0.01MF	30%	16V	
C301	1-130-479-00	MYLAR	0.0047MF	5%	50V		C753	1-161-379-00	CERAMIC	0.01MF	30%	16V	
C302	1-131-346-00	TANTALUM	0.68MF	10%	35V		CNJ701	1-808-362-11	DISPLAY PANEL, LIQUID CRYSTAL				
C303	1-124-927-11	ELECT	4.7MF	20%	50V		CNP11	*1-564-499-11	PIN, CONNECTOR 6P				
C305	1-124-464-11	ELECT	0.22MF	20%	50V		CNP12	*1-564-337-00	PIN, CONNECTOR 3P				
C306	1-124-477-11	ELECT	47MF	20%	16V		CNP13	*1-564-707-11	PIN, CONNECTOR (SMALL TYPE) 5P				
C307	1-161-379-00	CERAMIC	0.01MF	30%	16V		CNP18	*1-564-718-11	PIN, CONNECTOR (SMALL TYPE) 2P				
C308	1-124-927-11	ELECT	4.7MF	20%	50V		CNP81	*1-564-709-11	PIN, CONNECTOR (SMALL TYPE) 7P				
C309	1-124-443-00	ELECT	100MF	20%	6.3V		CNP85	*1-564-708-11	PIN, CONNECTOR (SMALL TYPE) 6P				
C310	1-124-927-11	ELECT	4.7MF	20%	50V		CNP301	*1-564-338-00	PIN, CONNECTOR 4P				
C352	1-123-875-11	ELECT	10MF	20%	50V		CNP601	*1-564-710-11	PIN, CONNECTOR (SMALL TYPE) 8P				
C353	1-124-477-11	ELECT	47MF	20%	16V		CNP602	*1-564-707-11	PIN, CONNECTOR (SMALL TYPE) 5P				
C401	1-130-479-00	MYLAR	0.0047MF	5%	50V		CNP701	*1-564-336-00	PIN, CONNECTOR 2P				
C402	1-131-346-00	TANTALUM	0.68MF	10%	35V		CNP702	*1-564-341-11	PIN, CONNECTOR 7P				
C403	1-124-927-11	ELECT	4.7MF	20%	50V		CNP703	*1-564-337-00	PIN, CONNECTOR 3P				

Ref.No.	Part No.	Description
	CNP704*1-564-339-00	PIN, CONNECTOR 5P
	CNP705*1-564-337-71	PIN, CONNECTOR 3P
	CNP706*1-564-336-71	PIN, CONNECTOR 2P
	CNP707*1-564-340-00	PIN, CONNECTOR 6P
	CNP708*1-564-707-11	PIN, CONNECTOR (SMALL TYPE) 5P
	CNP709 1-564-610-21	CONNECTOR, BOARD TO BOARD
	CNP710*1-565-291-11	SOCKET, CONNECTOR 13P
D11	8-719-000-26	DIODE US1060M
D101	8-719-000-26	DIODE US1060M
D301	8-719-000-76	DIODE UZL-7L2
D302	8-719-000-26	DIODE US1060M
D351	8-719-000-96	DIODE UZL-7H2
D352	8-719-000-26	DIODE US1060M
D401	8-719-000-78	DIODE UZL-7L2
D501	8-719-000-26	DIODE US1060M
D601	8-719-000-26	DIODE US1060M
D602	8-719-000-26	DIODE US1060M
D603	8-719-000-26	DIODE US1060M
D604	8-719-000-26	DIODE US1060M
D605	8-719-000-26	DIODE US1060M
D606	8-719-000-26	DIODE US1060M
D701	8-719-000-96	DIODE UZL-7H2
D702	8-719-000-96	DIODE UZL-7H2
D703	8-719-200-77	DIODE 10E2N
D704	8-719-000-26	DIODE US1060M
D706	8-719-922-23	DIODE PG2222SX
D707	8-719-922-23	DIODE PG2222SX
D708	8-719-922-23	DIODE PG2222SX
D709	8-719-907-53	DIODE AA2222S
D710	8-719-922-21	DIODE PR2222S
D711	8-719-922-23	DIODE PG2222SX
D712	8-719-000-26	DIODE US1060M
D713	8-719-000-26	DIODE US1060M
D714	8-719-000-26	DIODE US1060M
D715	8-719-000-26	DIODE US1060M
D716	8-719-000-26	DIODE US1060M
D717	8-719-000-26	DIODE US1060M
D718	8-719-000-26	DIODE US1060M
D719	8-719-000-26	DIODE US1060M
IC101	8-759-112-93	IC UPC4570HA-1
IC151	8-752-032-60	IC CXA1198P
IC301	8-752-031-83	IC CXA1101P
IC351	8-759-939-73	IC BA3308
IC501	8-759-600-02	IC M5218L
IC701	8-759-972-68	IC MB88514B-524N
IC702	8-759-803-33	IC LC6528C-3175
IC703	8-759-604-29	IC M5F7805

Ref.No.	Part No.	Description
L151	1-410-779-21	INDUCTOR 22MMH
L251	1-410-779-21	INDUCTOR 22MMH
L601	1-408-425-00	INDUCTOR 220UH
M701	X-3332-550-1	MOTOR ASSY (LOADING)
M702	X-3343-408-1	MOTOR ASSY (REEL/CAPSTAN)
PL701	1-518-633-11	LAMP, PILOT
PM701	1-454-456-11	SOLENOID, PLUNGER
Q11	8-729-117-54	TRANSISTOR 2SA1175
Q12	8-719-939-23	TRANSISTOR GP2S09-C
Q101	8-729-806-28	TRANSISTOR 2SC3402
Q151	8-729-806-26	TRANSISTOR 2SC3901
Q152	8-729-806-26	TRANSISTOR 2SC3901
Q153	8-729-806-26	TRANSISTOR 2SC3901
Q301	8-729-806-26	TRANSISTOR 2SC3901
Q302	8-729-806-26	TRANSISTOR 2SC3901
Q303	8-729-806-26	TRANSISTOR 2SC3901
Q351	8-729-806-28	TRANSISTOR 2SC3402
Q352	8-729-115-15	TRANSISTOR BN1A4M
Q401	8-729-806-26	TRANSISTOR 2SC3901
Q402	8-729-806-26	TRANSISTOR 2SC3901
Q403	8-729-806-26	TRANSISTOR 2SC3901
Q501	8-729-806-28	TRANSISTOR 2SC3402
Q502	8-729-600-27	TRANSISTOR 2SC634SP
Q601	8-729-806-26	TRANSISTOR 2SC3402
Q602	8-729-801-93	TRANSISTOR 2SD1387
Q603	8-729-600-27	TRANSISTOR 2SC634SP
Q604	8-729-115-15	TRANSISTOR BN1A4M
Q605	8-729-806-28	TRANSISTOR 2SC3402
Q606	8-729-115-15	TRANSISTOR BN1A4M
Q702	8-729-806-28	TRANSISTOR 2SC3402
Q703	8-729-801-83	TRANSISTOR 2SB1013
Q705	8-729-801-83	TRANSISTOR 2SB1013
Q706	8-729-801-83	TRANSISTOR 2SB1013
Q707	8-729-801-93	TRANSISTOR 2SD1387
Q708	8-729-801-93	TRANSISTOR 2SD1387
Q709	8-729-801-83	TRANSISTOR 2SB1013
Q710	8-729-801-83	TRANSISTOR 2SB1013
Q711	8-729-177-42	TRANSISTOR 2SD774-3
Q712	8-729-806-26	TRANSISTOR 2SC3402
Q725	8-729-303-61	TRANSISTOR 2SC3851G
Q726	8-729-224-61	TRANSISTOR 2SK246Y
R14	1-249-408-11	CARBON 180 5% 1/4W
R17	1-249-437-11	CARBON 47K 5% 1/4W
R18	1-249-437-11	CARBON 47K 5% 1/4W

Ref.No. Part No. Description

R101	1-249-441-11	CARBON	100K	5%	1/4W
R102	1-249-405-11	CARBON	100	5%	1/4W
R103	1-249-426-11	CARBON	5.6K	5%	1/4W
R104	1-215-472-00	CARBON	130K	5%	1/4W
R151	1-249-430-11	CARBON	12K	5%	1/4W
R161	1-249-441-11	CARBON	100K	5%	1/4W
R162	1-249-440-11	CARBON	82K	5%	1/4W
R163	1-249-439-11	CARBON	68K	5%	1/4W
R164	1-249-436-11	CARBON	39K	5%	1/4W
R165	1-249-438-11	CARBON	56K	5%	1/4W
R166	1-249-464-00	CARBON	75K	5%	1/4W
R167	1-249-441-11	CARBON	100K	5%	1/4W
R168	1-249-878-00	CARBON	200K	5%	1/4W
R169	1-215-462-00	CARBON	51K	5%	1/4W
R170	1-249-437-11	CARBON	47K	5%	1/4W
R171	1-249-438-11	CARBON	56K	5%	1/4W
R172	1-249-440-11	CARBON	82K	5%	1/4W
R173	1-215-472-00	CARBON	130K	5%	1/4W
R174	1-249-437-11	CARBON	62K	5%	1/4W
R175	1-249-441-11	CARBON	100K	5%	1/4W
R176	1-249-435-11	CARBON	33K	5%	1/4W
R177	1-249-438-11	CARBON	56K	5%	1/4W
R178	1-215-460-00	CARBON	43K	5%	1/4W
R179	1-215-454-00	CARBON	24K	5%	1/4W
R201	1-249-441-11	CARBON	100K	5%	1/4W
R202	1-249-405-11	CARBON	100	5%	1/4W
R203	1-249-426-11	CARBON	5.6K	5%	1/4W
R204	1-215-472-00	CARBON	130K	5%	1/4W
R251	1-249-430-11	CARBON	12K	5%	1/4W
R301	1-249-430-11	CARBON	12K	5%	1/4W
R302	1-249-430-11	CARBON	12K	5%	1/4W
R303	1-249-425-11	CARBON	4.7K	5%	1/4W
R304	1-249-425-11	CARBON	4.7K	5%	1/4W
R305	1-249-428-11	CARBON	8.2K	5%	1/4W
R306	1-249-421-11	CARBON	2.2K	5%	1/4W
R307	1-249-429-11	CARBON	10K	5%	1/4W
R308	1-249-427-11	CARBON	6.8K	5%	1/4W
R309	1-249-408-11	CARBON	180	5%	1/4W
R310	1-249-414-11	CARBON	560	5%	1/4W
R311	1-249-430-11	CARBON	12K	5%	1/4W
R312	1-249-417-11	CARBON	1K	5%	1/4W
R313	1-249-437-11	CARBON	47K	5%	1/4W
R314	1-249-417-11	CARBON	1K	5%	1/4W
R315	1-249-437-11	CARBON	47K	5%	1/4W
R351	1-215-460-00	CARBON	43K	5%	1/4W

Ref.No. Part No. Description

R352	1-249-441-11	CARBON	100K	5%	1/4W
R353	1-249-441-11	CARBON	100K	5%	1/4W
R354	1-249-405-11	CARBON	100	5%	1/4W
R355	1-210-825-00	SOLID	3.3M	5%	1/4W
R356	1-249-413-11	CARBON	470	5%	1/4W
R401	1-249-430-11	CARBON	12K	5%	1/4W
R402	1-249-430-11	CARBON	12K	5%	1/4W
R403	1-249-425-11	CARBON	4.7K	5%	1/4W
R404	1-249-425-11	CARBON	4.7K	5%	1/4W
R405	1-249-428-11	CARBON	8.2K	5%	1/4W
R406	1-249-421-11	CARBON	2.2K	5%	1/4W
R407	1-249-429-11	CARBON	10K	5%	1/4W
R408	1-249-427-11	CARBON	6.8K	5%	1/4W
R409	1-249-408-11	CARBON	180	5%	1/4W
R410	1-249-414-11	CARBON	560	5%	1/4W
R411	1-249-430-11	CARBON	12K	5%	1/4W
R412	1-249-417-11	CARBON	1K	5%	1/4W
R413	1-249-437-11	CARBON	47K	5%	1/4W
R414	1-249-417-11	CARBON	1K	5%	1/4W
R415	1-249-437-11	CARBON	47K	5%	1/4W
R501	1-247-881-00	CARBON	120K	5%	1/4W
R502	1-249-429-11	CARBON	10K	5%	1/4W
R503	1-249-441-11	CARBON	100K	5%	1/4W
R504	1-249-413-11	CARBON	470	5%	1/4W
R505	1-249-428-11	CARBON	8.2K	5%	1/4W
R506	1-249-425-11	CARBON	4.7K	5%	1/4W
R507	1-249-441-11	CARBON	100K	5%	1/4W
R508	1-249-417-11	CARBON	1K	5%	1/4W
R509	1-249-413-11	CARBON	470	5%	1/4W
R510	1-249-441-11	CARBON	100K	5%	1/4W
R511	1-249-429-11	CARBON	10K	5%	1/4W
R512	1-249-441-11	CARBON	100K	5%	1/4W
R513	1-249-417-11	CARBON	1K	5%	1/4W
R514	1-249-439-11	CARBON	68K	5%	1/4W
R601	1-249-432-11	CARBON	18K	5%	1/4W
R602	1-249-436-11	CARBON	39K	5%	1/4W
R603	1-249-397-11	CARBON	22	5%	1/4W
R604	1-249-429-11	CARBON	10K	5%	1/4W
R605	1-249-428-11	CARBON	8.2K	5%	1/4W
R606	1-215-448-00	CARBON	13K	5%	1/4W
R607	1-249-417-11	CARBON	1K	5%	1/4W
R608	1-249-417-11	CARBON	1K	5%	1/4W
R609	1-249-417-11	CARBON	1K	5%	1/4W
R610	1-249-417-11	CARBON	1K	5%	1/4W
R701	1-215-432-00	CARBON	3K	5%	1/4W

Ref.No.	Part No.	Description			
R702	1-215-440-00	CARBON	6.2K	5%	1/4W
R703	1-249-418-11	CARBON	1.2K	5%	1/4W
R704	1-249-437-11	CARBON	47K	5%	1/4W
R705	1-249-425-11	CARBON	4.7K	5%	1/4W
R706	1-249-425-11	CARBON	4.7K	5%	1/4W
R707	1-249-425-11	CARBON	4.7K	5%	1/4W
R708	1-249-417-11	CARBON	1K	5%	1/4W
R709	1-249-425-11	CARBON	4.7K	5%	1/4W
R710	1-249-417-11	CARBON	390	5%	1/4W
R711	1-249-425-11	CARBON	4.7K	5%	1/4W
R712	1-249-417-11	CARBON	1K	5%	1/4W
R713	1-249-425-11	CARBON	4.7K	5%	1/4W
R714	1-249-417-11	CARBON	1K	5%	1/4W
R715	1-249-424-11	CARBON	3.9K	5%	1/4W
R716	1-249-427-11	CARBON	6.8K	5%	1/4W
R717	1-249-424-11	CARBON	3.9K	5%	1/4W
R718	1-249-427-11	CARBON	6.8K	5%	1/4W
R719	1-249-437-11	CARBON	47K	5%	1/4W
R720	1-249-425-11	CARBON	4.7K	5%	1/4W
R721	1-249-425-11	CARBON	4.7K	5%	1/4W
R722	1-249-437-11	CARBON	47K	5%	1/4W
R723	1-249-417-11	CARBON	1K	5%	1/4W
R724	1-249-417-11	CARBON	1K	5%	1/4W
R725	1-249-417-11	CARBON	1K	5%	1/4W
R726	1-249-424-11	CARBON	3.9K	5%	1/4W
R728	1-249-410-11	CARBON	270	5%	1/4W
R729	1-249-410-11	CARBON	270	5%	1/4W
R730	1-249-410-11	CARBON	270	5%	1/4W
R731	1-249-410-11	CARBON	270	5%	1/4W
R732	1-249-413-11	CARBON	470	5%	1/4W
R733	1-249-410-11	CARBON	270	5%	1/4W
R734	1-249-429-11	CARBON	10K	5%	1/4W
R735	1-249-417-11	CARBON	1K	5%	1/4W
R736	1-247-903-00	CARBON	1M	5%	1/4W
R740	1-247-903-00	CARBON	1M	5%	1/4W
R741	1-249-437-11	CARBON	47K	5%	1/4W
R742	1-249-437-11	CARBON	47K	5%	1/4W
R743	1-249-437-11	CARBON	47K	5%	1/4W
R751	1-249-422-11	CARBON	2.7K	5%	1/4W
R752	1-249-424-11	CARBON	3.9K	5%	1/4W
R753	1-249-428-11	CARBON	8.2K	5%	1/4W
R754	1-249-422-11	CARBON	2.7K	5%	1/4W
R755	1-249-424-11	CARBON	3.9K	5%	1/4W
R756	1-249-428-11	CARBON	8.2K	5%	1/4W

Ref.No.	Part No.	Description
RV301	1-228-994-00	RES, ADJ, CARBON 10K
RV302	1-228-994-00	RES, ADJ, CARBON 10K
RV401	1-228-994-00	RES, ADJ, CARBON 10K
RV402	1-228-994-00	RES, ADJ, CARBON 10K
RV601	1-228-997-00	RES, ADJ, CARBON 100K
RV602	1-228-997-00	RES, ADJ, CARBON 100K
RY101	1-515-614-11	RELAY
S11	1-570-771-11	SWITCH (HALF DET)
S301	1-570-157-21	SWITCH, SLIDE (DOLBY NR)
S601	1-554-798-31	SWITCH, SLIDE (ISS)
S602	1-571-486-11	SWITCH, MICRO (ERASE PROOF/TAPE SELECT)
S603	*1-571-487-11	SWITCH, MICRO (TAPE SELECT)
S604	*1-571-487-11	SWITCH, MICRO (ERASE PROOF)
S701	1-570-157-21	SWITCH, SLIDE (DIRECTION MODE)
S703	1-571-300-11	SWITCH, ROTARY (LOADING)
S751	1-553-856-00	SWITCH, KEY BOARD (PAUSE)
S752	1-553-856-00	SWITCH, KEY BOARD (FWD)
S753	1-553-856-00	SWITCH, KEY BOARD (REV)
S754	1-553-856-00	SWITCH, KEY BOARD (REC MUTE)
S755	1-553-856-00	SWITCH, KEY BOARD (STOP)
S756	1-553-856-00	SWITCH, KEY BOARD (REW)
S757	1-553-856-00	SWITCH, KEY BOARD (FF)
S758	1-553-856-00	SWITCH, KEY BOARD (REC)
S759	1-553-856-00	SWITCH, KEY BOARD (OPEN/CLOSE)
S760	1-553-856-00	SWITCH, KEY BOARD (AMS)
X701	1-567-771-11	VIBRATOR, CERAMIC
X702	1-567-772-11	VIBRATOR, CERAMIC

TC-R707/R707M

SONY[®] SERVICE MANUAL

US Model
AEP Model
TC-R707M

UK Model
E Model

West Germany Model
TC-R707

SUPPLEMENT-1

File this supplement with the service manual.

1-1. MECHANICAL ADJUSTMENT

PRECAUTION

1. Clean the following parts with a denatured-alcohol-moistened swab:
record/playback/erase head rubber belts
capstan
pinch roller
idlers
2. Demagnetize the head with a head demagnetizer.
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

Torque	Torqu meter	Meter reading
FWD	CQ-102C	30 to 60 g·cm (0.42 to 0.83 oz·inch)
FWD Back tension	CQ-102C	1 to 5 g·cm (0.01 to 0.07 oz·inch)
FF, REW	CQ-201B	100 to 170 g·cm (1.39 to 2.36 oz·inch)

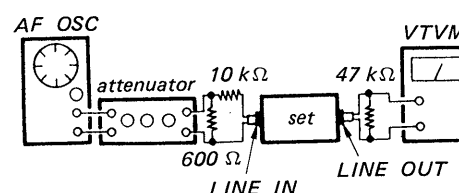
1-2. ELECTRICAL ADJUSTMENTS

Note: The adjustment should be performed in the order given in this service manual.

The adjustments should be performed for both L-CH and R-CH.

- Switches and controls should be set as follows unless otherwise specified.
DOLBY NR switch: OFF
ISS switch: 2
- Standard Record:
Deliver the standard input signal level to the input jack and control the attenuator to obtain the standard output signal level.

— Record Mode —



Standard Input Level

	LINE IN
Source impedance	10 kΩ
Input level	0.44 V (−5 dB)

Standard Output Level

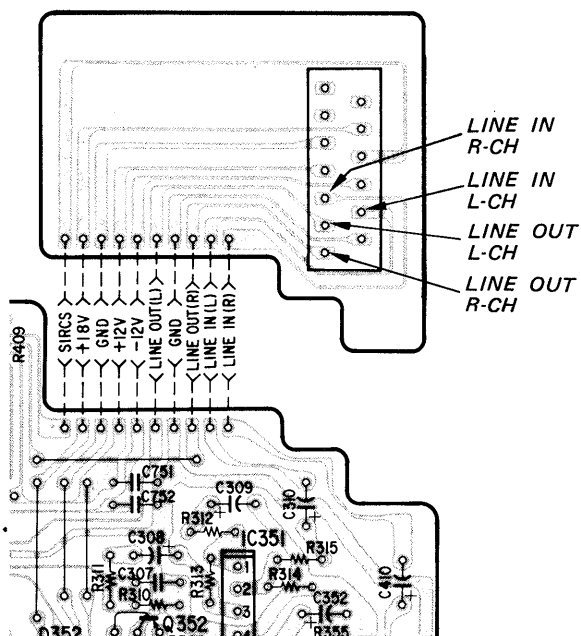
	LINE OUT
Load impedance	47 kΩ
Output level	0.245 V (−10 dB)

Test Tape

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

Location of LINE IN/OUT:

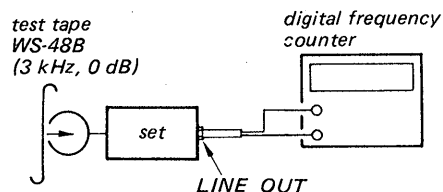
[CONNECTOR BOARD]



Tape Speed Adjustment

Procedure:

1. Mode: playback

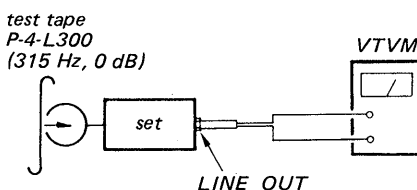


Specifications:

2,910 to 2,970 Hz

Playback Level Adjustment

Procedure:



Adjust RV301 (L-CH), RV401 (R-CH) so that the specifications are satisfied.

Specification:

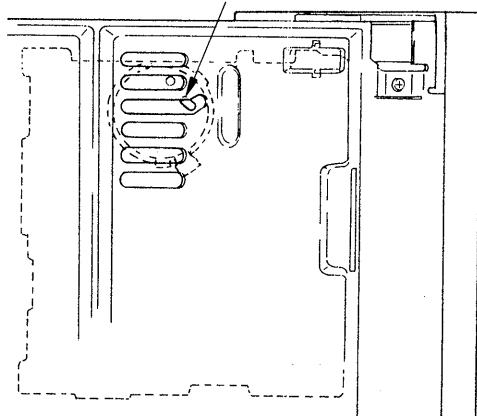
LINE OUT level: 0.22 V to 0.28 V
(-11 dB to -9 dB)

Level difference between channels:

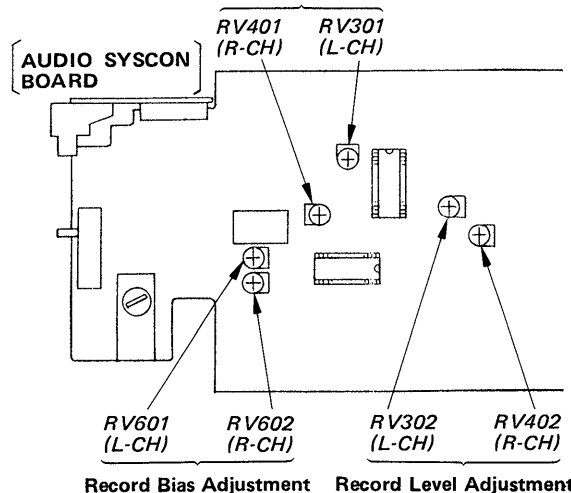
Less than 1.0 dB check that the check point level does not change in playback mode while changing the mode from playback to stop several times.

Adjustment Location:

Tape Speed Adjustment (bottom side)



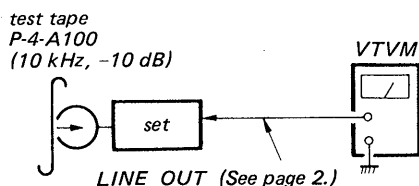
Playback Level Adjustment



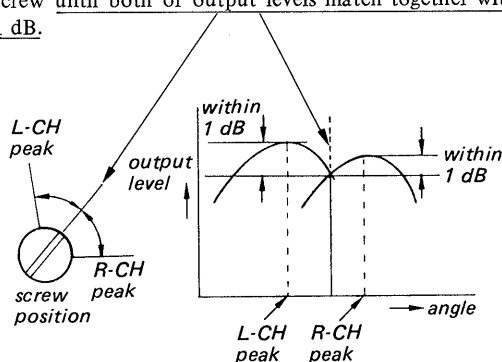
Record/Playback Head Azimuth Adjustment

Procedure:

1. Mode: playback

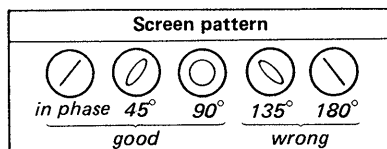
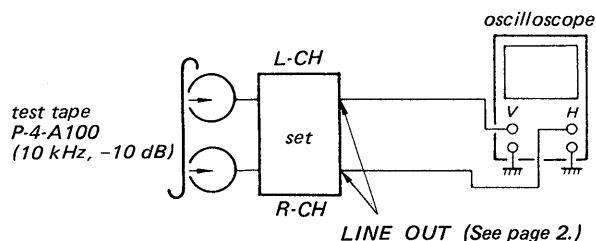


2. Turn the adjustment screw for the maximum output levels. If these levels do not match, turn the adjustment screw until both of output levels match together within 1 dB.



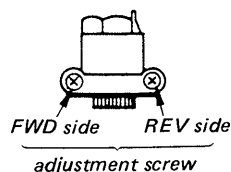
3. Phase check

Mode: forward playback



4. Set in the reverse mode and repeat steps 1-2.
5. After the adjustment, lock the screws with locking compound.

Adjustment Location:

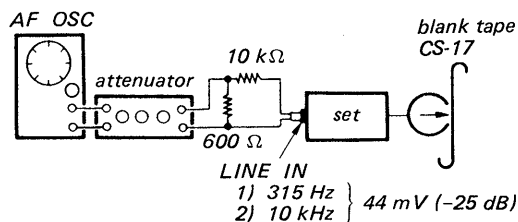


Record Bias Adjustment

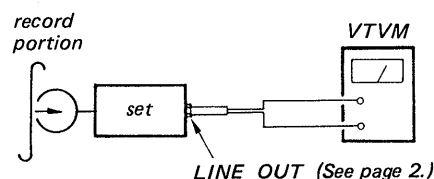
Procedure:

See page 2 for location of LINE IN.

1. Mode: record



2. Mode: playback



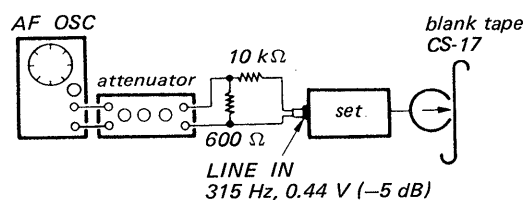
Confirm that the 10 kHz playback output is -0.5 dB to 0.5 dB relative to the 315 Hz output. If necessary, adjust RV601 (L-CH), RV602 (R-CH) and repeat the steps given above.

Record Level Adjustment

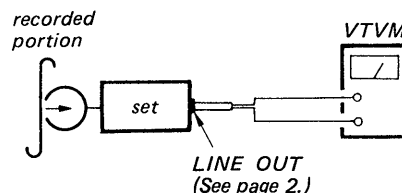
Procedure:

See page 2 for location of LINE IN.

1. Mode: record



2. Mode: playback



3. Playback the signal recorded in step 1. Confirm that the signal level is within the specification below. If necessary, adjust RV302 (L-CH), RV402 (R-CH) and repeat steps 1 to 3.

Specification:

LINE OUT point (see page 2) level:
0.22 V to 0.28 V (-11 dB to -9 dB)

TC-R707/R707M

SONY. SERVICE MANUAL

*US Model
AEP Model
E Model
TC-R 707 M*

*UK Model
E Model
West Germany Model
TC-R 707*

SUPPLEMENT-2

File this supplement with the service manual.

- TC-R 707 M has been added for E model.
- TC-R 707 M (E Model) is the STEREO CASSETTE DECK in FH 919 CD.

- TC-R 707 M (E Model) is almost same as TC-R 707 (E Model).

As only the difference from TC-R 707 (E Model) is described in this supplement-2.

<i>Page</i>	<i>No.</i>	<i>Description</i>	<i>Part No.</i>	
			<i>TC-R 707 M(E Model)</i>	<i>TC-R 707(E Model)</i>
12	2	PLATE(B-L), SIDE	4-925-525-01	Not used
	3	SCREW, CASE (Mx 14)	4-886-821-51	Not used
	4	PLATE(B-R),SIDE	4-925-524-01	Not used
	8	LABEL, MODEL NUMBER	* 3-346-271-01	* 3-346-268-01

TC-R707/R707M

SONY SERVICE MANUAL

US Model
AEP Model
TC-R707M

UK Model
E Model

German Model
TC-R707

CORRECTION-1

File this correction with the Service Manual.

 : Corrected portion (Service Manual page 14)

INCORRECT		CORRECT		
No.		No.	Part No.	Description
1		134	X-3332-548-1	LEVER ASSY, CASSETTE RETAINER
