

# WM-EX808/EX808HG

## SERVICE MANUAL



AEP Model  
UK Model  
WM-EX808HG  
E Model  
Tourist Model  
WM-EX808

# WALKMAN

Model Name Using Similar Mechanism	WM-EX88
Tape Transport Mechanism Type	MT-WMEX808-60


### SPECIFICATIONS

Battery life (hours)

Battery	Playback
Rechargeable NC-6WM fully charged	Approx. 4.5
Sony SUM-3 (NS)	Approx. 4
Sony alkaline AM3 (N)	Approx. 13
NC-6WM with Sony AM3 (N)	Approx. 17.5

For maximum performance we recommend the use of an alkaline battery.

Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation.

"DOLBY" and the double-D symbol  are trademarks of Dolby Laboratories Licensing Corporation.

CASSETTE PLAYER  
**SONY**®



## TABLE OF CONTENTS

<u>Section</u>	<u>Title</u>	<u>Page</u>
SECTION 1.	SERVICING NOTE .....	3
SECTION 2.	GENERAL	
	Parts Identification .....	4
SECTION 3.	DISASSEMBLY	
3-1.	Removal of Case (TC) Assy .....	5
3-2.	Removal of Cassette lid (TC) Assy .....	5
3-3.	Removal of Main board .....	6
3-4.	Removal of Belt .....	6
SECTION 4.	ADJUSTMENTS	
4-1.	Mechanical Adjustments .....	7
4-2.	Electrical Adjustments .....	7
SECTION 5.	IC PIN FUNCTIONS .....	8
SECTION 6.	DIAGRAMS	
6-1.	Block Diagram .....	9
6-2.	Printed Wiring Board .....	11
6-3.	Schematic Diagram .....	15
6-4.	Semiconductor Lead Layouts .....	19
SECTION 7.	EXPLODED VIEWS	
7-1.	Case Section .....	20
7-2.	Chassis Section .....	21
7-3.	Mechanism Block Section (MT-WMEX808-60) .....	22
SECTION 8.	ELECTRICAL PARTS LIST .....	23

### Notes on chip component replacement

- Never reuse a disconnected chip component.
- Notice that the minus side of a tantalum capacitor may be damaged by heat.

### Flexible Circuit Board Repairing

- Keep the temperature of the soldering iron around 270 °C during repairing.
- Do not touch the soldering iron on the same conductor of the circuit board (within 3 times).
- Be careful not to apply force on the conductor when soldering or unsoldering.

## SECTION 1 SERVICING NOTE

Hall element H701 mounted on the main board is used to detect rotation of the reels. Because it is mounted on the main board, when the main board is being removed, rotation of the reels cannot be detected and the auto-off/tape-end detector circuit does not operate correctly.

Switch S702 (N/R switch) is also mounted on the main board. Therefore, without the main board, the head cannot be placed in playback position, and power cannot be supplied to the circuitry of the playback system.

When the main board is being removed, follow the procedures below, in order to check operation of the mechanisms of the tape deck and to check voltages supplied to each circuit.

### NOTE:

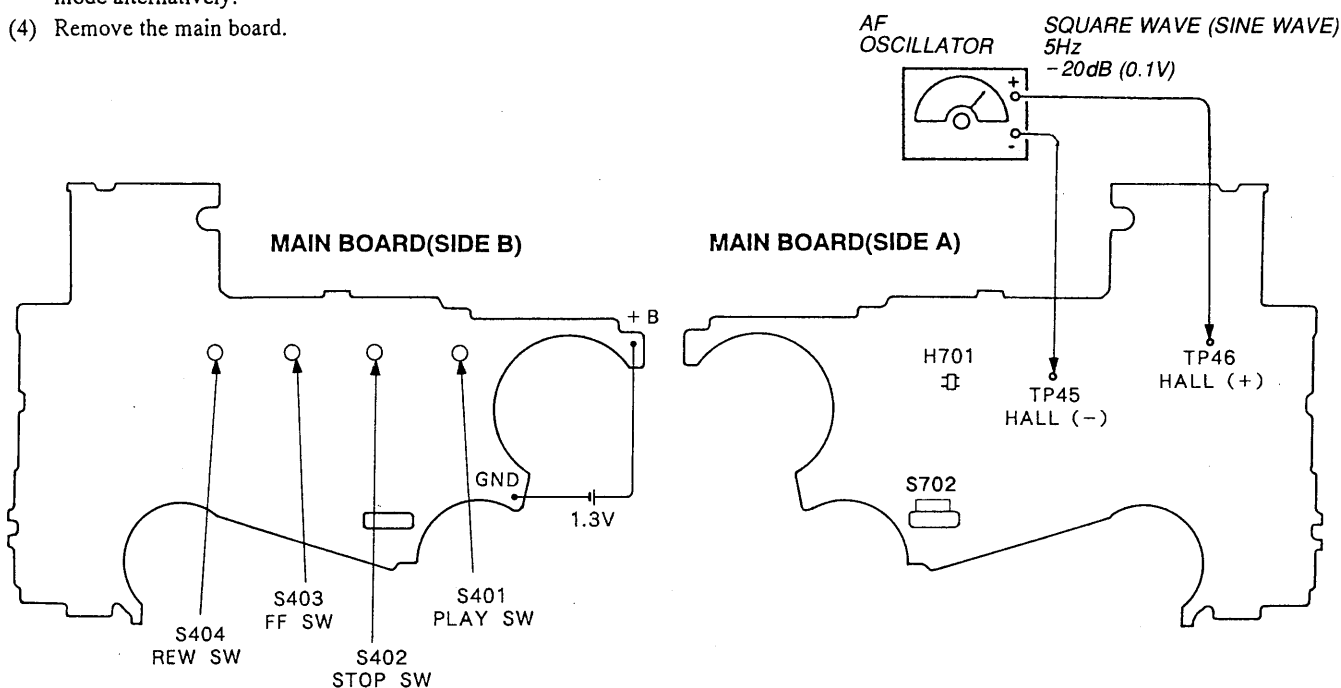
Do not change the setting position of switch S701 when removing the main board. If it has been changed accidentally, or if the desired mode cannot be set with the switch, adjust the setting again after the main board is installed.

### FF/REW mode

- (1) Apply a square wave signal or a sine wave signal to hall element H701. (See the figure on the right.)
- (2) Press the STOP switch for selecting STOP mode.
- (3) Press the FF or REW switch.
- (4) Remove the main board.

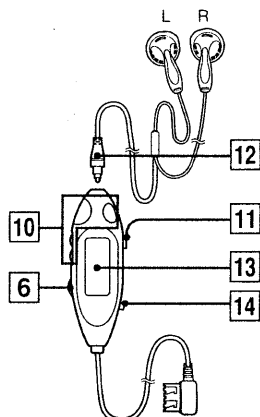
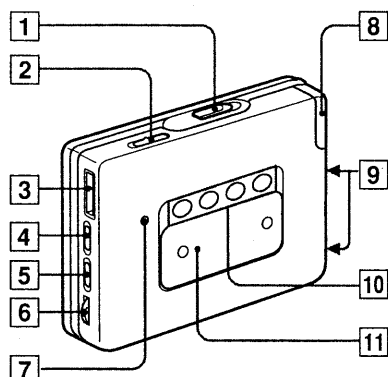
### PLAY mode

- (1) Apply a square wave signal or a sine wave signal to hall element H701. (See the figure on the right.)
- (2) Press the STOP switch for selecting STOP mode.
- (3) Press the PLAY switch. With the main board installed, pressing the PLAY switch selects the FWD or REV mode alternatively.
- (4) Remove the main board.



## SECTION 2 GENERAL

This section is extracted from instruction manual.



### Parts Identification (See illustration )

- 1 **OPEN switch**
- 2 **EX DBB (Dynamic Bass Boost) selector**  
To listen to heavy and powerful sound, set it to MID (middle) or MAX (maximum).
- 3 **REMOTE (remote controller/headphones) jack**
- 4 **◀ • ▶ (playback mode)/BL SKIP (blank skip) selector**  
▶ : Plays back both sides of the cassette once. When the playback starts from the reverse side of the cassette, the unit shuts off automatically at the end of that side.  
◀ ▶ : Plays back both sides of the cassette continuously and fast-forward the tape to the next track if there is a blank space longer than 12 seconds. (Blank skip function\*1)
- 5 **NR (Dolby Noise Reduction) switch**  
To listen to a tape recorded in the Dolby B NR system, set it to ON.
- 6 **VOL (volume) control**
- 7 **BATT (battery) indicator**
- 8 **Battery compartment for the rechargeable battery**
- 9 **Battery connecting points (for supplied battery case)**
- 10 **Tape operational buttons**  
◀ ▶ (playback/tape transport direction change) button  
To change the tape transport direction, press it during playback.  
■ (stop) button  
FF (fast-forward)/AMS button  
To fast-forward the tape, press it while the unit is in the stop mode.  
To listen to the next track from the beginning, press it once during playback. (AMS\*3 function)  
To listen to the other side of the cassette from the beginning, press it twice during playback. (Skip reverse function)  
REW (rewind)/AMS button  
To rewind the tape rapidly, press it while the unit is in the stop mode.  
To listen to the current track from the beginning, press it once during playback. (AMS function)  
To listen to the currently played back side of the cassette from the beginning, press it twice during playback. (Auto play function)
- 11 **Main unit: Hold cover**  
Remote controller: HOLD switch  
To prevent accidentally pressing the operation buttons on the main unit or remote controller, close the hold cover or set the HOLD switch to HOLD.
- 12 **Micro plug**
- 13 **Display window**
- 14 **AVLS\*4 (Automatic Volume Limiter System) selector**  
To limit the maximum volume, set it the either 1 or 2.

#### \*1 Blank skip function

If there is a blank space longer than 12 seconds on a tape, the unit automatically fast-forwards the tape to the next track and the playback will start.

The blank skip function cannot be used on the tapes which are recorded by some recording equipments. In this case, fast-forward the tape.

#### \*3 AMS function

The AMS (Automatic Music Sensor) function may not operate properly in the following situations.

- There are noises in the spaces between tracks.
- A blank space is less than four seconds long.
- A track includes a long pause or continues at low volume for several seconds.

#### \*4 AVLS function

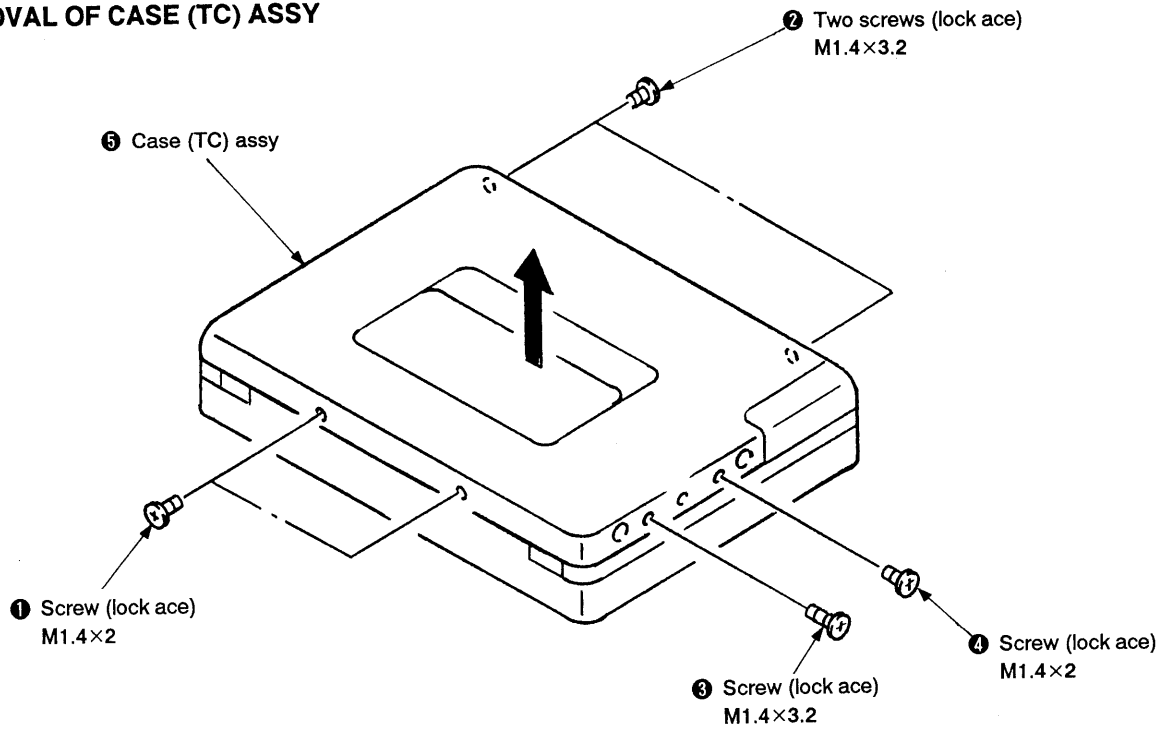
The AVLS selector on the remote controller allows you to limit the maximum volume of your WALKMAN personal stereo without degrading the sound quality.

- When the AVLS selector is set to either position 1 or 2, the volume will be kept at a moderate level without the degradation of the sound quality, even if you attempt to turn the volume up higher.
- The reproduced sound may be distorted or unstable due to the kind of music being played back. If this happens, turn down the volume.
- When the AVLS selector is turned off, you will be able to enjoy the full volume capability of your WALKMAN personal stereo.

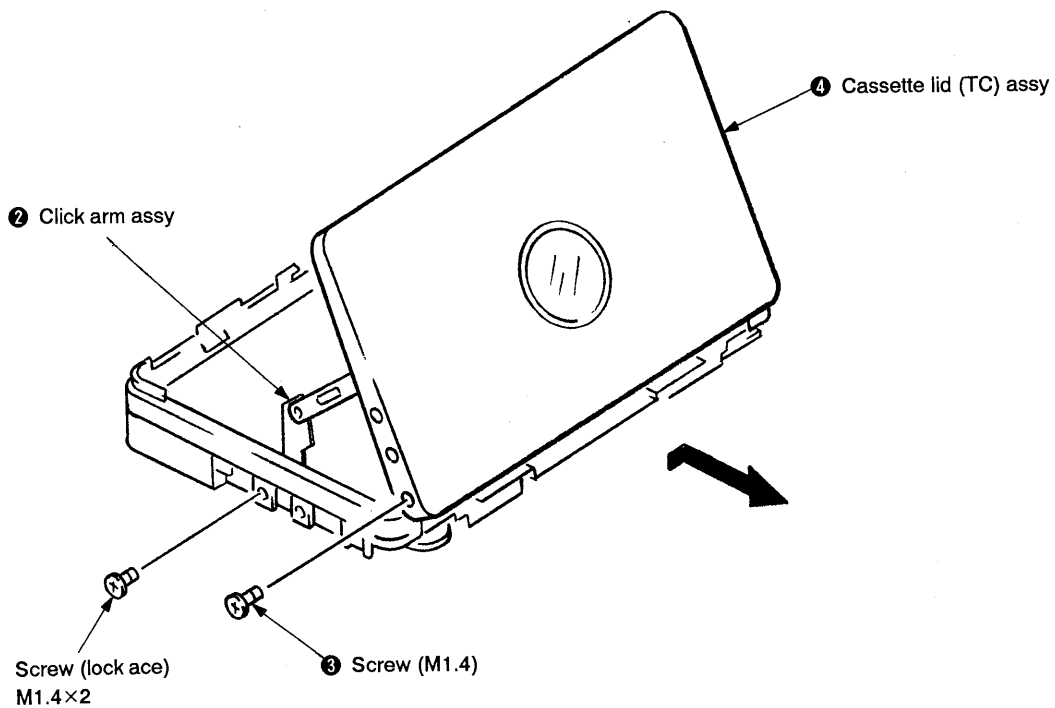
## SECTION 3 DISASSEMBLY

**Note:** Follow the installation procedure in the numerical order given.

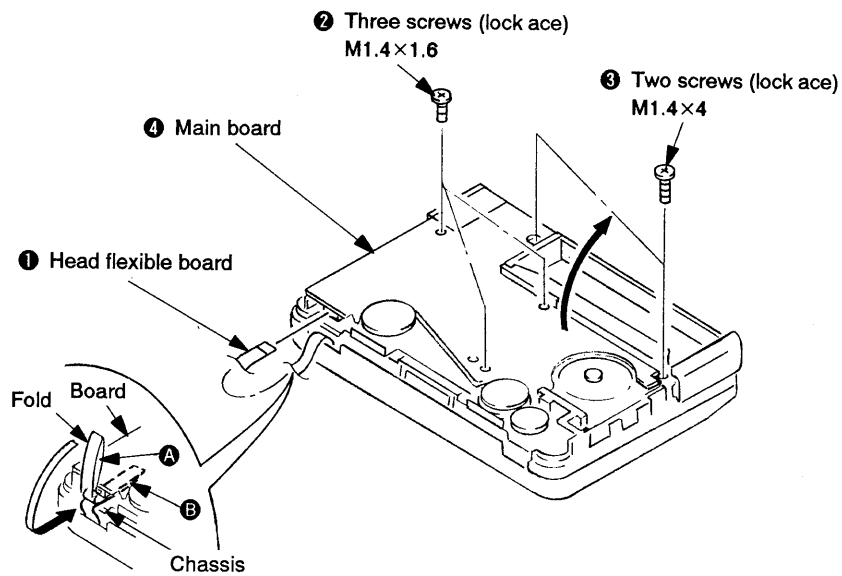
### 3-1. REMOVAL OF CASE (TC) ASSY



### 3-2. REMOVAL OF CASSETTE LID (TC) ASSY

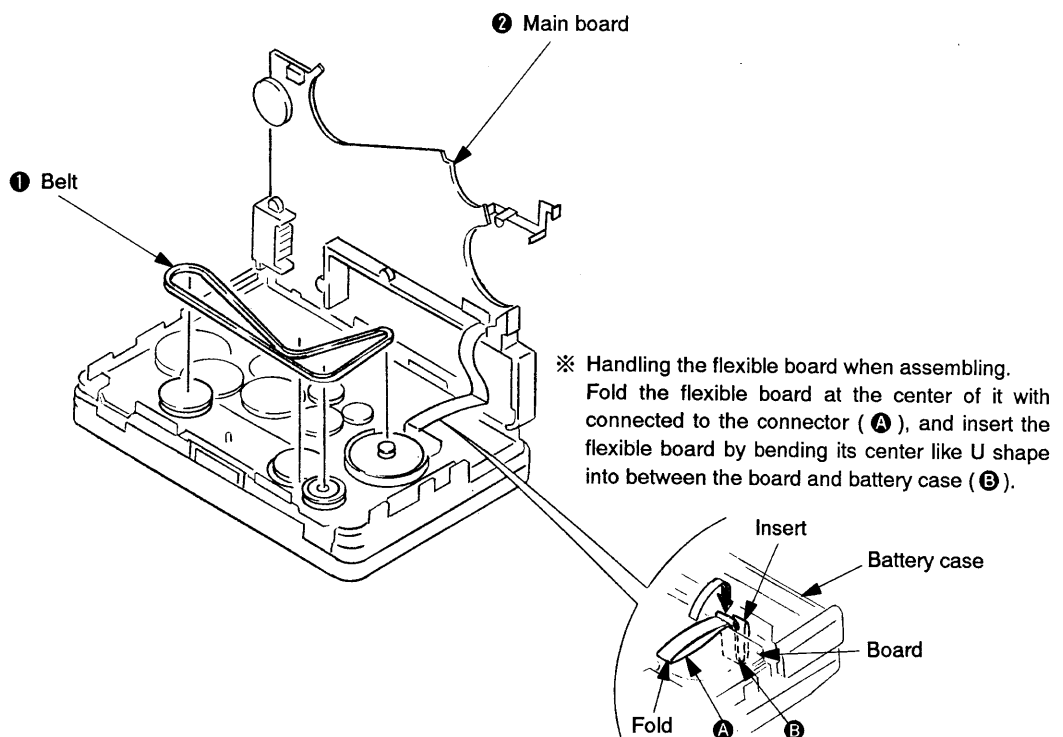


### 3-3. REMOVAL OF MAIN BOARD



※ Handling the flexible board when assembling.  
Fold the flexible board at the center of it with connected to the connector (A), and insert the flexible board into between the board and chassis (B) as shown below.

### 3-4. REMOVAL OF BELT



※ Handling the flexible board when assembling.  
Fold the flexible board at the center of it with connected to the connector (A), and insert the flexible board by bending its center like U shape into between the board and battery case (B).

## SECTION 4 ADJUSTMENTS

### 4-1. MECHANICAL ADJUSTMENTS

#### PRECAUTION

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

playback head	rubber belts
capstan	idlers
pinch roller	
- Demagnetize the playback head with a head demagnetizer.
- Do not use a magnetized screwdriver for the adjustments.
- After the adjustments, apply suitable locking compound to the parts adjusted.
- The adjustments should be performed with the rated power supply voltage (1.3V) unless otherwise noted.

#### Torque Measurement

Mode	Torque meter	Meter reading
FWD	CQ-102C	21 – 38 g·cm (0.29 – 0.53 oz·inch)
FWD Back Tension		0.5 – 3 g·cm (0.01 – 0.04 oz·inch)
REV	CQ-102RC	21 – 38 g·cm (0.29 – 0.53 oz·inch)
REV Back Tension		0.5 – 3 g·cm (0.01 – 0.04 oz·inch)
FF	CQ-201B	more than 60 g·cm (more than 0.84 oz·inch)
REW		

#### Tape Pulling Force Measurement

Mode	Torque meter	Meter reading
FWD	CQ-403A	more than 40 g (more than 1.4 oz)
REV	CQ-403R	

### 4-2. ELECTRICAL ADJUSTMENTS

#### PRECAUTION

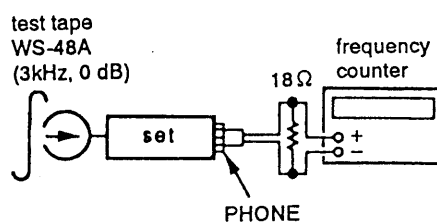
- Power supply voltage : 1.3V
- Switch position  
DOLBY NR switch : OFF  
EX DBB switch : NORM
- For electrical adjustments, use the supplied plug conversion adaptor (Part No. 1-691-322-11)

#### Test Tape

Type	Signal	Used for
WS-48A	3 kHz, 0 dB	Tape Speed Adjustment

#### TAPE SPEED ADJUSTMENT

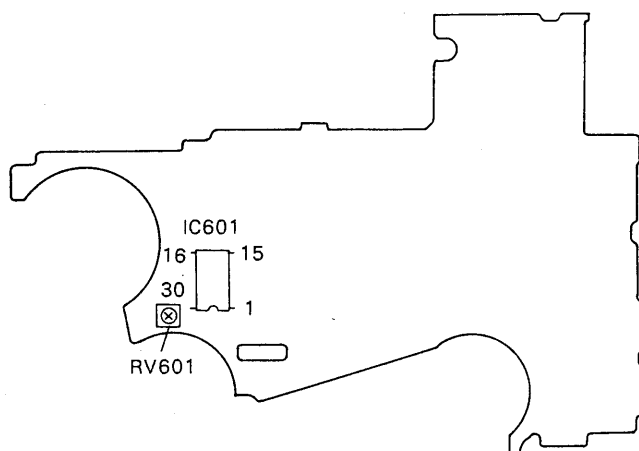
##### Procedure :



- Play back WS-48A (tape center portion) in FWD mode. Adjust the RV601 so that the frequency counter reads  $3,000 \pm 30\text{Hz}$ .
- Play back WS-48A (tape center portion) in REV mode. Confirm that the reading of frequency counter is within 2.5% from the reading in step 1.

#### Adjustment Parts Location Diagram :

##### MAIN BOARD — SIDE A —



## SECTION 5

### IC PIN FUNCTIONS

#### IC701 SYSTEM CONTROL IC (MSM6576-CFX1219)

Pin No.	Pin Name	I/O	INT	ACT	Function
1	DIR MODE	I	–	–	“H”=SHUT OFF MODE, “L”=ENDLESS MODE (BL. SKIP ON)
2	TC/CF	I	–	–	Microcomputer initial setting. “H”=TC, “L”=CF.
3	NC	I	–	–	Not used.
4	RESET	–	–	–	Reset pin. “H”=RESET.
5	TEST1	–	–	–	Test pin (Fixed at “L”)
6	TEST2	–	–	–	Test pin (Fixed at “L”)
7	TEST3	–	–	–	Test pin (Fixed at “L”)
8	MUTE CTL	O	L	H	Muting control. “L”=MUTE ON.
9	F/R CTL	O	L	H	Head selection. “H”=FWD, “L”=REV.
10	DDC CTL	O	L	H	Booster and amplifier power supply control. “H”=DDC ON.
11	AMP MODE CTL	O	L	H	Amplifier mode switching. “H”=TUNER MODE, “L”=TC MODE.
12	NC	O	–	–	Not used.
13	SCLK1	I/O	H	H	CF/TC communication clock (I/O)
14	DATA1	O	H	L	Communication data (O=OPEN)
15	XXT	–	–	–	Connected to crystal oscillator.
16	XT	–	–	–	Connected to crystal oscillator.
17	VDD	–	–	–	1.5V power supply
18	VSS1	–	–	–	GND
19	VCM	–	–	–	Boosts power supply voltage.
20	VCP	–	–	–	Boosts power supply voltage.
21	VSS2	–	–	–	Boosts power supply voltage.
22	VEE	–	–	–	Boosts power supply voltage.
23	HALL (+)	I	–	–	Connected to hole element detected by rotation.
24	HALL (–)	I	–	–	Connected to hole element detected by rotation.
25	COMP IN	I	–	–	Operation button signal input pin.
26	XRMUM	I	–	–	L=remote commander microcomputer on. outputs when “H” (TC only).
27	BEEP	–	–	–	BEEP signal output pin.
28	AMS IN	I	–	–	With/No sound input pin. “H”=with sound.
29	XRADIO PW	I	–	–	Not used.
30	XREV SW	I	–	–	MD condition check. “L”=REV SW ON.
31	XFWD SW	I	–	–	MD condition check. “L”=FWD SW ON.
32	MOTOR CTL	O	L	H	Motor control output pin. “H”=MOTOR ON.
33	MOTOR DIR	O	L	H	Motor rotating direction control. “L”=Forward direction, “H”=Reverse direction.
34	MOTOR BRK	O	L	H	Motor brake control. “H”=BRAKE ON.
35	PM CTL	O	L	H	PM operation timing (“H”=plunger activated.)
36	BATT DET1	I	–	–	Battery voltage detection (1)
37	BATT DET2	I	–	–	Battery voltage detection (2)
38	TAPE SW	I	–	–	With/No tape detection. “H”=NO TAPE (returned to OFF+A side when taken out.)
39	VDD	–	–	–	1.5V power supply
40	LED	O	L	H	LED operation. “H”=Lights. (OFF when LOW BATT.)
41	RQT	O	L	H	
42	AMS CTL	O	–	–	With/No sound detection level control. “H”=FF/REW mode.
43	CE CTL	O	L	H	Not used.
44	A/B	I	–	–	“H”=MD FWD on A side, “L”=MD FWD on B side.



The schematic diagram illustrates the internal circuitry of a portable cassette player, centered around four main integrated circuits (ICs): IC301, IC701, IC703, and IC601.

- IC301 (EQ AMP, DOLBY NR, EX DBB, PW AMP):** This IC handles the audio signal path. It includes an EQ amplifier, a Dolby Noise Reduction (NR) section, an EX DBB (Dolby B) section, and a Power Amplifier (PW AMP). The input signal from the HP901 playback head is processed through these stages before being sent to the speakers (L and R).
- IC701 (SYSTEM CONTROL):** This microcontroller manages the overall system. It receives inputs from various switches (Tape, Play, Stop, Fast Forward, Rewind, Eject, etc.) and controls the motor drive, the display (LED), and the power management (AMS, BEEP, MUTE, etc.).
- IC703 (BATT DET):** This IC is responsible for battery detection and monitoring. It provides status signals (AMS IN, AMS CTL, BEEP, MUTE CTL, F/R CTL, AMP MODE CTL, BDC CTL) to the system control IC.
- IC601 (MOTOR DRIVE):** This IC controls the motor drive circuit. It receives signals from the system control IC and drives the motor (M901) through a series of transistors and diodes. It also includes a rotation sensor (H701) and a reset circuit (Q701).

The diagram also shows various passive components like resistors, capacitors, and diodes, as well as mechanical components like the motor and switches. The power supply section includes a battery pack (NC-6WM) and a 1.5V regulator.


## 6-2. PRINTED WIRING BOARD

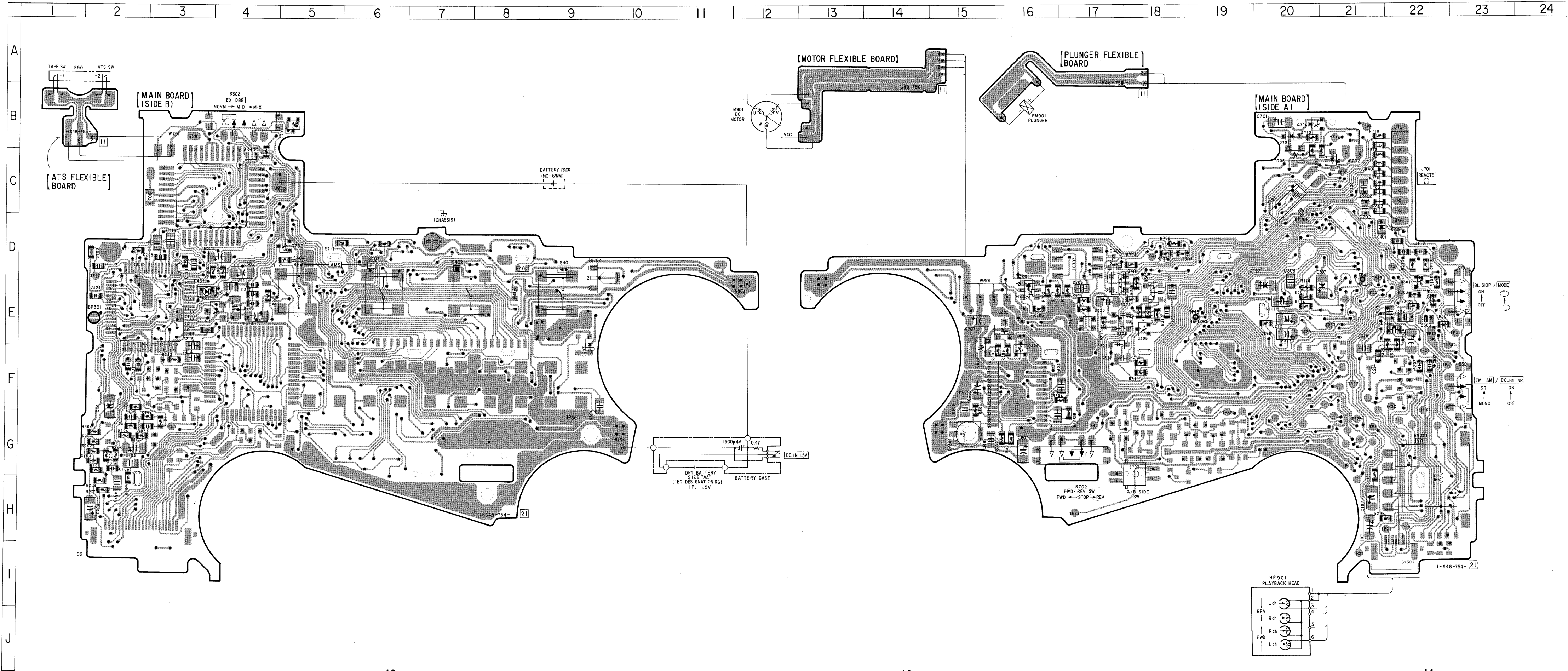
• See page 19 for Semiconductor Lead Layouts

- **Semiconductor Location**

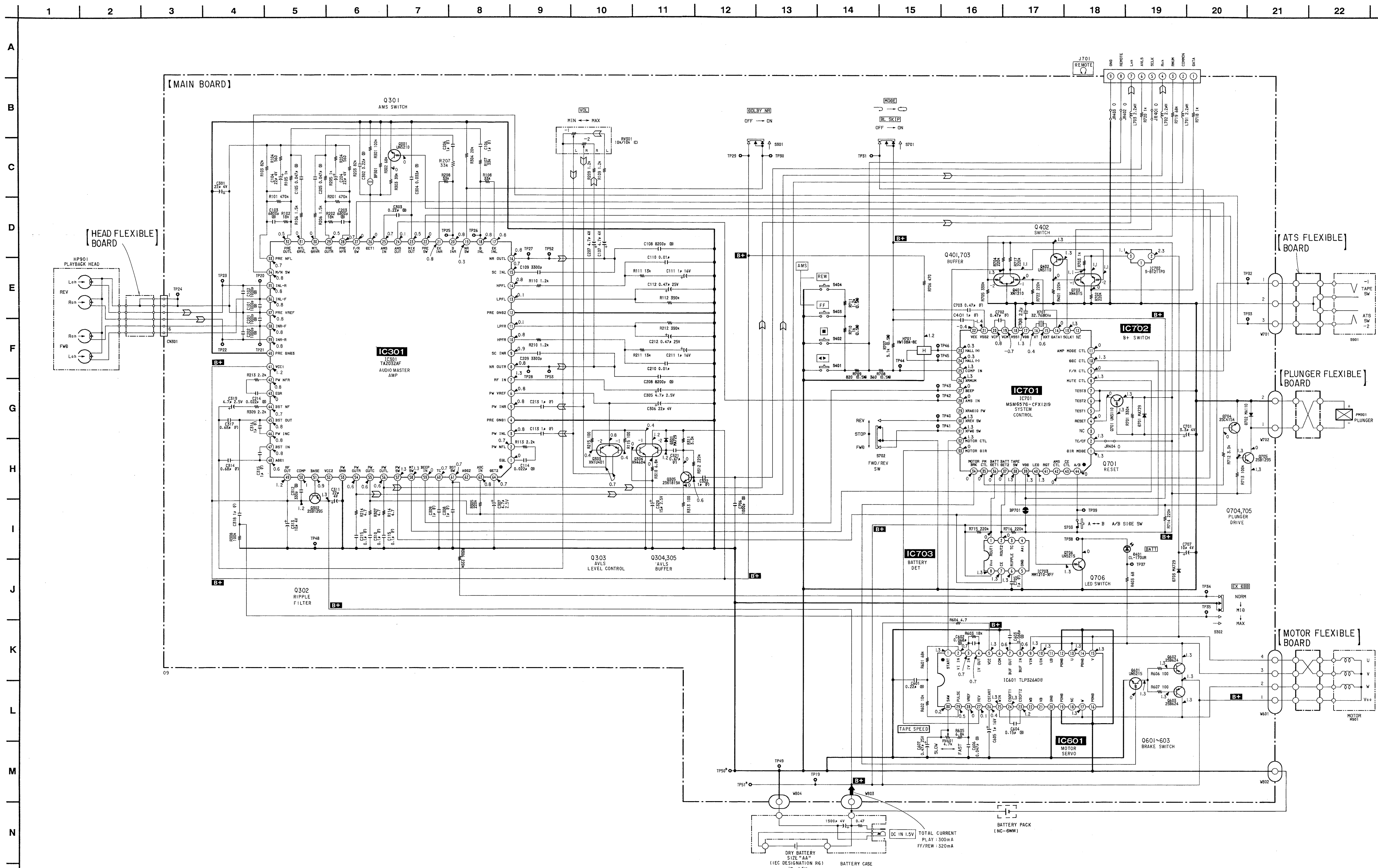
Ref. No.	Location
D301	E-17
D401	E-3
D701	B-20
D702	C-21
D703	E-9
IC301	E-2
IC601	F-16
IC701	C-3
IC702	D-9
IC703	D-17
Q301	D-22
Q302	E-3
Q303	D-18
Q304	E-17
Q305	E-18
Q401	D-17
Q402	D-17
Q601	E-16
Q602	E-16
Q603	F-15
Q701	B-5
Q703	D-16
Q704	B-20
Q705	C-20
Q706	D-5

### Note

- : Through hole.
-  : Pattern on the side which is seen.  
(The other layer's patterns are not indicated.)



## 6-3. SCHEMATIC DIAGRAM

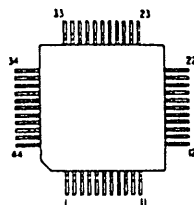


## 6-4. SEMICONDUCTOR LEAD LAYOUTS

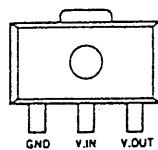
**MM1210-XFF**



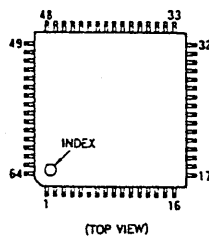
**MSM6576-CFX1219**



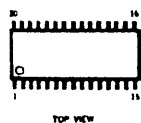
**S-81211PG-PA**



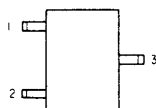
**TA2032AF**



**TLP326ADB**



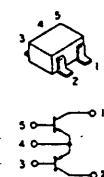
**UN5110-QRS**



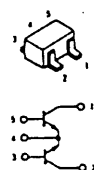
**UN5210**  
**UN5215**  
**2SB1295-UL6**  
**2SB624-BV345**  
**2SC4116-YG**  
**2SC4154-F**



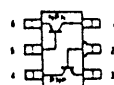
**XN1U401**



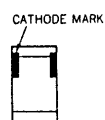
**XN1210**



**XN4315**  
**XN4604**



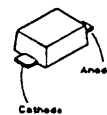
**CL-170UR-CD**



**MA110**



**MA729**



## SECTION 7

### EXPLODED VIEWS

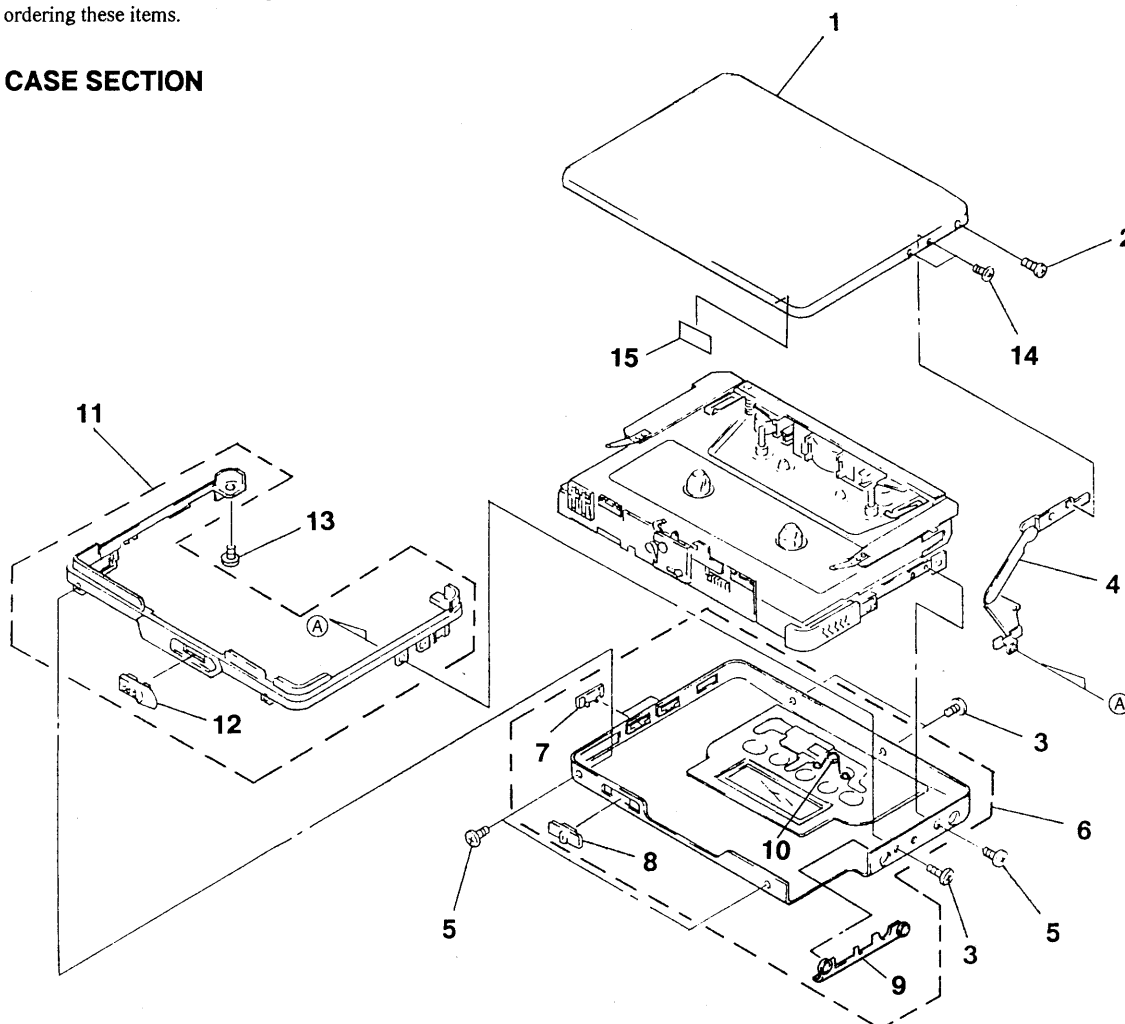
#### NOTE:

- -XX, -X mean standardized parts, so they may have some difference from the original one.
- 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 is given in the last of this parts list.

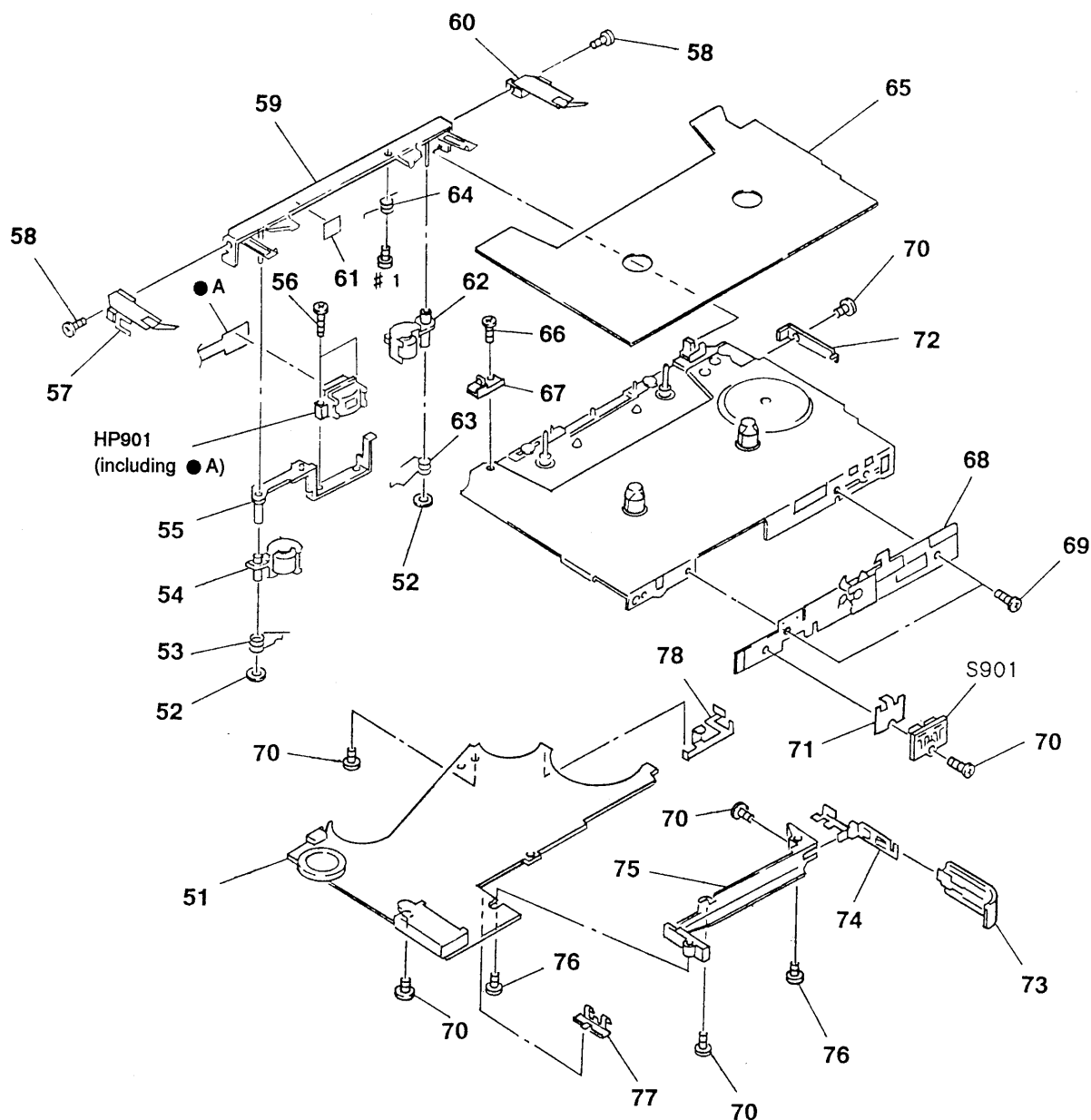
The components identified by mark or dotted line with mark are critical for safety. Replace only with part number specified.

#### 7-1. CASE SECTION



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
1	X-3367-110-1	LID (TC) ASSY, CASSETTE (BLACK:EX808)		7	3-905-326-21	KNOB (MODE) (BLUE:EX808)	
1	X-3367-234-1	LID (TC) ASSY, CASSETTE (SILVER:EX808)		7	3-905-326-31	KNOB (MODE) (EX808HG)	
1	X-3367-235-1	LID (TC) ASSY, CASSETTE (BLUE:EX808)		8	3-905-327-01	KNOB (DBB) (BLACK:EX808)	
1	X-3367-236-1	LID (TC) ASSY, CASSETTE (ORANGE:EX808)		8	3-905-327-11	KNOB (DBB) (SILVER, ORANGE:EX808)	
1	X-3367-246-1	LID (TC) ASSY, CASSETTE (EX808HG)		8	3-905-327-21	KNOB (DBB) (BLUE:EX808)	
2	3-907-009-01	SCREW (M1. 4) (SILVER, ORANGE:EX808) (EX808HG)		8	3-905-327-31	KNOB (DBB) (EX808HG)	
2	3-907-009-11	SCREW (M1. 4) (BLACK, BLUE:EX808)		9	3-905-328-01	PLATE, ORNAMENTAL	
3	3-704-197-11	SCREW (M1. 4X2), LOCKING (SILVER, ORANGE:EX808) (EX808HG)		10	3-905-391-01	SPRING (HOLD)	
3	3-704-197-13	SCREW (M1. 4X2), LOCKING (BLACK, BLUE:EX808)		11	X-3367-087-1	ORNAMENT ASSY, REEL (BLACK, BLUE:EX808)	
4	X-3367-264-1	ARM ASSY, CLICK		11	X-3367-230-1	ORNAMENT ASSY, REEL (SILVER, ORANGE:EX808) (EX808HG)	
5	3-365-611-91	SCREW (M1. 4) (SILVER, ORANGE:EX808) (EX808HG)		12	3-905-305-01	KNOB (OPEN) (BLACK, BLUE:EX808)	
5	3-365-611-95	SCREW (M1. 4) (BLACK, BLUE:EX808)		12	3-905-305-11	KNOB (OPEN) (SILVER, ORANGE:EX808) (EX808HG)	
6	X-3367-108-1	CASE (TC) ASSY (BLACK:EX808)		13	3-704-197-01	SCREW (M1. 4X1. 6), LOCKING (SILVER, ORANGE:EX808) (EX808HG)	
6	X-3367-231-1	CASE (TC) ASSY (SILVER:EX808)		14	3-704-197-01	SCREW (M1. 4X1. 6), LOCKING (SILVER, ORANGE:EX808) (EX808HG)	
6	X-3367-232-1	CASE (TC) ASSY (BLUE:EX808)		14	3-704-197-03	SCREW (M1. 4X1. 6), LOCKING (BLACK, BLUE:EX808)	
6	X-3367-233-1	CASE (TC) ASSY (ORANGE:EX808)		15	3-355-447-01	SPACER (OPEN)	
6	X-3367-245-1	CASE (TC) ASSY (EX808HG)					
7	3-905-326-01	KNOB (MODE) (BLACK:EX808)					
7	3-905-326-11	KNOB (MODE) (SILVER, ORANGE:EX808)					

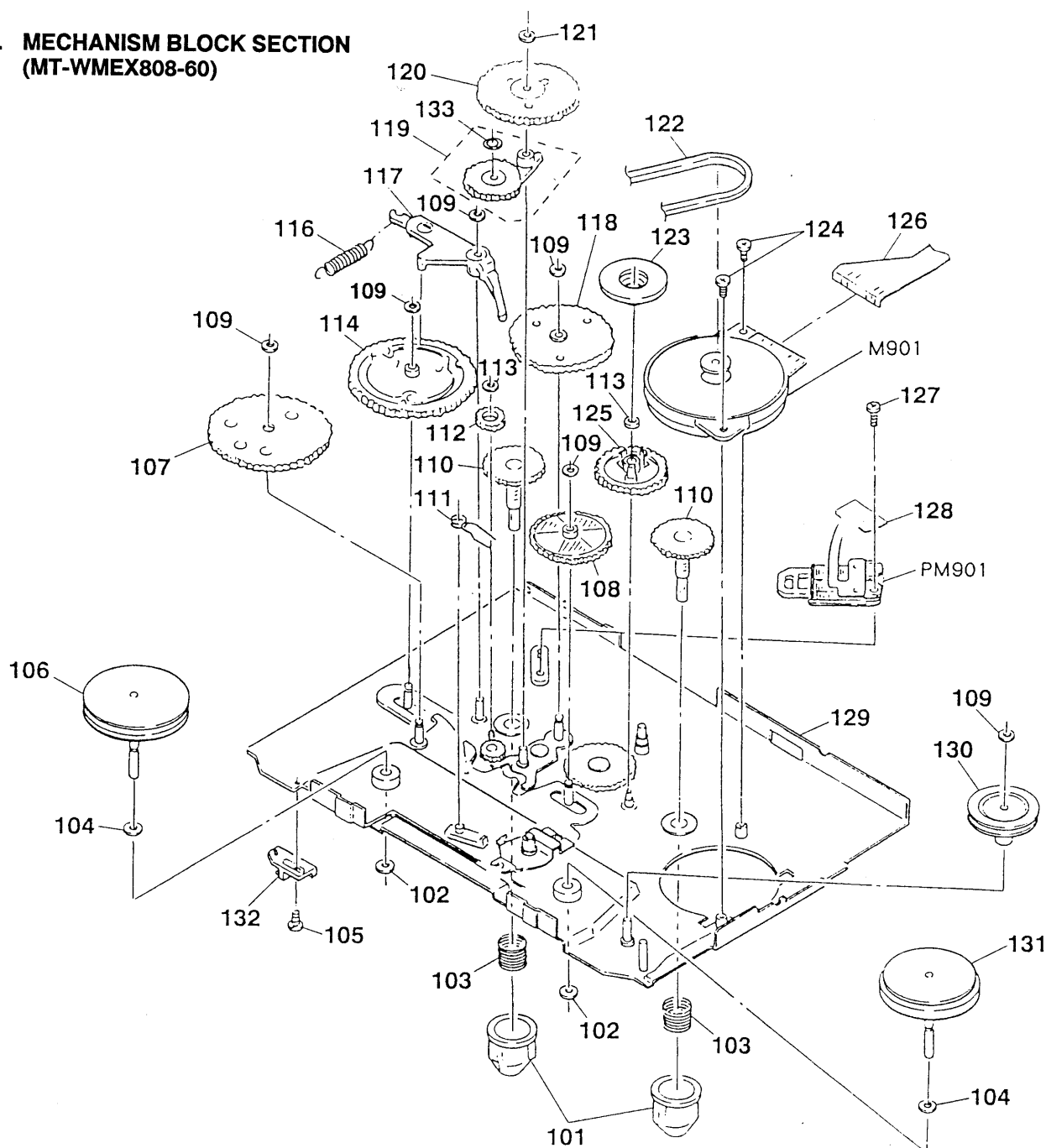
## 7-2. CHASSIS SECTION



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
51	A-3016-437-A	MAIN BOARD, COMPLETE		68	X-3367-086-1	BRACKET ASSY	
52	3-380-362-11	WASHER		69	3-366-892-01	SCREW (M1.4X1.1)	
53	3-379-057-01	SPRING (RPR)		70	3-704-197-01	SCREW (M1.4X1.6), LOCKING	
54	X-3362-560-1	PINCH LEVER (R) ASSY		71	1-648-755-11	ATS FLEXIBLE BOARD	
* 55	3-388-290-01	LEVER (N), HEAD		72	3-905-288-01	BRACKET (L)	
56	3-704-413-31	SCREW (M1.4X7.2)		73	3-905-383-01	LID (TC), BATTERY CASE (BLACK:EX808)	
57	X-3367-262-1	HOLDER (TC-R) ASSY, CASSETTE		73	3-905-383-11	LID (TC), BATTERY CASE (SILVER:EX808)	
58	3-704-197-21	SCREW (M1.4X2.5), LOCKING		73	3-905-383-21	LID (TC), BATTERY CASE (BLUE:EX808)	
59	X-3367-023-1	HOLDER ASSY (U)		73	3-905-383-31	LID (TC), BATTERY CASE (ORANGE:EX808)	
60	X-3367-263-1	HOLDER (TC-L) ASSY, CASSETTE		73	3-906-138-01	LID (HG), BATTERY CASE (EX808HG)	
* 61	3-357-732-01	SPACER (SUB CHASSIS)		74	X-3367-088-1	TERMINAL BOARD ASSY, BATTERY	
62	X-3362-559-1	PINCH LEVER (N) ASSY		75	3-905-306-01	HOLDER, BATTERY	
63	3-379-056-01	SPRING (RPN)		76	3-704-197-61	SCREW (M1.4X4), LOCKING	
64	3-365-769-01	SPRING (H)		77	3-905-310-01	TERMINAL BOARD (MINUS), BATTERY	
65	3-905-385-01	COVER (TC), MD		78	3-905-311-01	TERMINAL BOARD (CASE)	
66	3-704-197-91	SCREW (M1.4X1.8), LOCKING		HP901	1-543-953-12	HEAD, MAGNETIC (PLAYBACK)	
67	3-373-397-01	GUIDE, HOLDER (NR)		S901	1-692-606-11	SWITCH, LEAF (TAPE/ATS DET)	



**7-3. MECHANISM BLOCK SECTION  
(MT-WMEX808-60)**



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
101	3-365-801-01	TABLE, REEL		119	X-3362-555-1	FR ASSY	
102	3-331-007-21	WASHER		120	3-365-754-01	GEAR (M)	
103	3-366-058-01	SPRING, COMPRESSION		121	3-349-859-61	WASHER	
104	3-354-407-11	WASHER		122	3-365-765-01	BELT	
105	3-704-197-91	SCREW (M1.4X1.8), LOCKING		123	3-905-287-01	MAGNET	
106	X-3362-552-1	WHEEL (N) ASSY, CAPSTAN		124	3-331-047-03	SCREW (M1.4X1.8), SPECIAL HEAD	
107	3-365-755-01	GEAR (K)		125	3-904-926-01	GEAR (MA)	
108	X-3362-553-1	GEAR (B)		126	1-648-756-11	MOTOR FLEXIBLE BOARD	
109	3-349-859-51	WASHER		127	3-366-521-51	SCREW (M1.4X3.5)	
110	3-365-750-01	GEAR (REEL)		128	1-648-758-11	PLUNGER FLEXIBLE BOARD	
111	3-365-785-01	SPRING (NR SELECTION)		129	X-3367-022-1	CHASSIS ASSY (UT)	
112	3-365-783-01	GEAR (E)		130	3-365-760-01	PULLEY (REVERSE)	
113	3-361-258-01	BUSHING (A)		131	X-3362-551-1	WHEEL (R) ASSY, CAPSTAN	
114	3-365-800-01	GEAR, CAM		132	3-373-397-01	GUIDE (NR), HOLDER	
116	3-365-766-01	SPRING (TRIGGER), TENSION		133	3-331-007-01	WASHER	
117	3-365-802-01	LEVER (AR), TRIGGER		M901	1-541-971-11	MOTOR	
118	X-3362-554-1	CLUTCH ASSY		PM901	1-454-529-21	SOLENOID, PLUNGER	





# MAIN

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
< DIODE >				R102	1-216-836-11	METAL CHIP	18K 5% 1/16W
D301	8-719-420-51	DIODE MA729		R103	1-216-844-11	METAL CHIP	82K 5% 1/16W
D401	8-719-026-34	DIODE CL-170UR-CD		R104	1-216-818-11	METAL CHIP	560 5% 1/16W
D701	8-719-420-51	DIODE MA729		R105	1-216-821-11	METAL CHIP	1K 5% 1/16W
D702	8-719-404-46	DIODE MA110		R106	1-216-823-11	METAL CHIP	1.5K 5% 1/16W
D703	8-719-420-51	DIODE MA729		R107	1-216-839-11	METAL CHIP	33K 5% 1/16W
< HOLE ELEMENT >				R108	1-216-839-11	METAL CHIP	33K 5% 1/16W
H701	8-719-042-61	ELEMENT, HALL HW-108AFT-DE		R109	1-216-822-11	METAL CHIP	1.2K 5% 1/16W
< IC >				R110	1-216-822-11	METAL CHIP	1.2K 5% 1/16W
IC301	8-759-155-37	IC TA2032AF		R111	1-216-994-11	METAL GLAZE	13K 5% 1/16W
IC601	8-759-996-13	IC TLP326ADB		R112	1-216-852-11	METAL CHIP	390K 5% 1/16W
IC701	8-759-180-32	IC MSM6576-CFX1219		R113	1-216-825-11	METAL CHIP	2.2K 5% 1/16W
IC702	8-759-190-80	IC S-81211PG-PA		R114	1-216-793-11	METAL GLAZE	4.7 5% 1/16W
IC703	8-759-180-33	IC MM1210-XFF		R115	1-216-809-11	METAL CHIP	100 5% 1/16W
< JACK >				R201	1-216-853-11	METAL CHIP	470K 5% 1/16W
J701	1-750-634-11	JACK 9P (REMOTE)		R202	1-216-836-11	METAL CHIP	18K 5% 1/16W
< JUMPER RESISTOR >				R203	1-216-844-11	METAL CHIP	82K 5% 1/16W
JR401	1-216-864-11	METAL CHIP	0 5% 1/16W	R204	1-216-818-11	METAL CHIP	560 5% 1/16W
JR402	1-216-864-11	METAL CHIP	0 5% 1/16W	R205	1-216-821-11	METAL CHIP	1K 5% 1/16W
JR403	1-216-864-11	METAL CHIP	0 5% 1/16W	R206	1-216-823-11	METAL CHIP	1.5K 5% 1/16W
JR404	1-216-864-11	METAL CHIP	0 5% 1/16W	R207	1-216-839-11	METAL CHIP	33K 5% 1/16W
< COIL >				R208	1-216-839-11	METAL CHIP	33K 5% 1/16W
L701	1-412-983-31	INDUCTOR	2.2uH	R209	1-216-822-11	METAL CHIP	1.2K 5% 1/16W
L702	1-412-983-31	INDUCTOR	2.2uH	R210	1-216-822-11	METAL CHIP	1.2K 5% 1/16W
L703	1-412-983-31	INDUCTOR	2.2uH	R211	1-216-994-11	METAL GLAZE	13K 5% 1/16W
< TRANSISTOR >				R212	1-216-852-11	METAL CHIP	390K 5% 1/16W
Q301	8-729-420-44	TRANSISTOR UN5210		R213	1-216-825-11	METAL CHIP	2.2K 5% 1/16W
Q302	8-729-807-87	TRANSISTOR 2SB1295-UL6		R214	1-216-793-11	METAL GLAZE	4.7 5% 1/16W
Q303	8-729-023-27	TRANSISTOR XN1U401		R215	1-216-809-11	METAL CHIP	100 5% 1/16W
Q304	8-729-425-25	TRANSISTOR XN4604		R301	1-216-845-11	METAL CHIP	100K 5% 1/16W
Q305	8-729-230-63	TRANSISTOR 2SC4116-YG		R302	1-216-843-11	METAL CHIP	68K 5% 1/16W
Q401	8-729-022-66	TRANSISTOR XN1210		R303	1-216-840-11	METAL CHIP	39K 5% 1/16W
Q402	8-729-422-51	TRANSISTOR UN5110-QRS		R304	1-218-292-11	METAL GLAZE	20K 5% 1/16W
Q601	8-729-420-50	TRANSISTOR UN5215		R305	1-216-849-11	METAL CHIP	220K 5% 1/16W
Q602	8-729-141-48	TRANSISTOR 2SB624-BV345		R306	1-216-849-11	METAL CHIP	220K 5% 1/16W
Q603	8-729-141-48	TRANSISTOR 2SB624-BV345		R307	1-216-793-11	METAL GLAZE	4.7 5% 1/16W
Q701	8-729-422-51	TRANSISTOR UN5110-QRS		R308	1-216-845-11	METAL CHIP	100K 5% 1/16W
Q703	8-729-422-18	TRANSISTOR XN4315		R309	1-216-825-11	METAL CHIP	2.2K 5% 1/16W
Q704	8-729-602-21	TRANSISTOR 2SC4154-F		R310	1-216-831-11	METAL CHIP	6.8K 5% 1/16W
Q705	8-729-807-87	TRANSISTOR 2SB1295-UL6		R311	1-216-827-11	METAL CHIP	3.3K 5% 1/16W
Q706	8-729-420-50	TRANSISTOR UN5215		R312	1-216-849-11	METAL CHIP	220K 5% 1/16W
< RESISTOR >				R313	1-216-809-11	METAL CHIP	100 5% 1/16W
R101	1-216-853-11	METAL CHIP	470K 5% 1/16W	R401	1-216-849-11	METAL CHIP	220K 5% 1/16W
				R403	1-216-807-11	METAL CHIP	68 5% 1/16W
				R601	1-216-843-11	METAL CHIP	68K 5% 1/16W
				R602	1-216-833-11	METAL CHIP	10K 5% 1/16W
				R603	1-216-836-11	METAL CHIP	18K 5% 1/16W
				R604	1-216-793-11	METAL GLAZE	4.7 5% 1/16W
				R605	1-216-831-11	METAL CHIP	6.8K 5% 1/16W
				R606	1-216-809-11	METAL CHIP	100 5% 1/16W

# MAIN

# MOTOR FLEXIBLE

# PLUNGER FLEXIBLE

Ref.No.	Part No.	Description	Remark
R607	1-216-809-11	METAL CHIP 100 5% 1/16W	
R701	1-216-851-11	METAL CHIP 330K 5% 1/16W	
R702	1-216-849-11	METAL CHIP 220K 5% 1/16W	
R703	1-216-821-11	METAL CHIP 1K 5% 1/16W	
R704	1-216-849-11	METAL CHIP 220K 5% 1/16W	
R705	1-216-851-11	METAL CHIP 330K 5% 1/16W	
R706	1-216-817-11	METAL CHIP 470 5% 1/16W	
R707	1-218-345-11	METAL CHIP 9.1K 0.50% 1/16W	
R708	1-218-269-11	METAL CHIP 360 0.50% 1/16W	
R709	1-216-820-11	METAL CHIP 820 5% 1/16W	
R710	1-216-821-11	METAL CHIP 1K 0.50% 1/16W	
R711	1-216-822-11	METAL CHIP 1.2K 0.50% 1/16W	
R712	1-216-827-11	METAL CHIP 3.3K 5% 1/16W	
R713	1-216-845-11	METAL CHIP 100K 5% 1/16W	
R714	1-216-849-11	METAL CHIP 220K 5% 1/16W	
R715	1-216-849-11	METAL CHIP 220K 5% 1/16W	
R716	1-216-849-11	METAL CHIP 220K 5% 1/16W	
R717	1-216-849-11	METAL CHIP 220K 5% 1/16W	
R718	1-216-821-11	METAL CHIP 1K 5% 1/16W	
R719	1-216-843-11	METAL CHIP 68K 5% 1/16W	
R720	1-216-821-11	METAL CHIP 1K 5% 1/16W	
R722	1-216-849-11	METAL CHIP 220K 5% 1/16W	
< VARIABLE RESISTOR >			
RV301	1-241-748-11	RES, VAR, CARBON 10K/10K (VOL)	
RV601	1-223-229-21	RES, ADJ, METAL GLAZE 4.7K	
< SWITCH >			
S301	1-573-922-21	SWITCH, SLIDE (DOLBY NR)	
S302	1-692-605-11	SWITCH, SLIDE (EX DBB)	
S401	1-692-453-11	SWITCH, KEY BOARD (◀▶)	
S402	1-692-453-11	SWITCH, KEY BOARD (■)	
S403	1-692-453-11	SWITCH, KEY BOARD (AMS FF)	
S404	1-692-453-11	SWITCH, KEY BOARD (AMS REW)	
S701	1-573-922-21	SWITCH, SLIDE (MODE/BL SKIP)	
S702	1-572-581-11	SWITCH, SLIDE (FWD/REV)	
S703	1-692-377-41	SWITCH, PUSH (A/B SIDE)	
< VIBRATOR >			
X701	1-579-258-11	VIBRATOR, CRYSTAL (32.768kHz)	
*****			
	1-648-756-11	MOTOR FLEXIBLE BOARD	
		*****	
< MOTOR >			
M901	1-541-971-11	MOTOR	
*****			

Ref.No.	Part No.	Description	Remark
	1-648-758-11	PLUNGER FLEXIBLE BOARD	
		*****	
		< PLUNGER SOLENOID >	
PM901	1-454-529-21	SOLENOID, PLUNGER	
*****			
		MISCELLANEOUS	
		*****	
71	1-648-755-11	ATS FLEXIBLE BOARD	
HP901	1-543-953-12	HEAD, MAGNETIC (PLAYBACK)	
M901	1-541-971-11	MOTOR	
PM901	1-454-529-21	SOLENOID, PLUNGER	
S901	1-692-606-11	SWITCH, LEAF (TAPE/ATS DET)	
*****			
		ACCESSORIES & PACKING MATERIALS	
		*****	
	1-466-663-11	REMOTE CONTROL UNIT (RM-77E) (AEP, UK)	
	1-467-200-11	REMOTE CONTROL UNIT (RM-WM7E) (with LCD)	
		(E, Tourist, AEP)	
	1-528-231-11	BATTERY, NICKEL CADMIUM (NC-6WM)	
		(E, Tourist, UK)	
*	1-528-231-22	BATTERY, NICKEL CADMIUM (NC-6WM) (AEP)	
	1-528-251-11	BATTERY CHARGER (BC-7S) (AEP, UK)	
	1-528-445-11	BATTERY CHARGER (BC-8AT) (E, Tourist)	
	1-550-640-11	BATTERY CASE (BLACK:Tourist) (E, AEP, UK)	
	1-550-937-11	BATTERY CASE	
		(SILVER, BLUE, ORANGE:Tourist)	
	1-569-007-11	ADAPTOR, CONVERSION 2P (AEP, UK)	
	1-691-322-11	ADAPTOR, PLUG	
*	3-376-784-11	CUSHION	
	3-377-276-01	CASE, CARRYING	
*	3-382-452-01	CASE, ACCESSORY (AEP, UK)	
	3-757-431-11	MANUAL, INSTRUCTION	
		(ENGLISH, FRENCH, SPANISH) (AEP:with RM-77E) (UK)	
	3-757-431-41	MANUAL, INSTRUCTION	
		(JAPANESE, ENGLISH) (Tourist)	
	3-757-431-51	MANUAL, INSTRUCTION	
		(GERMAN, DUTCH, SWEDISH) (AEP:with RM-77E)	
	3-757-431-61	MANUAL, INSTRUCTION	
		(ITALIAN, PORTUGUESE) (AEP:with RM-77E)	
	3-757-431-71	MANUAL, INSTRUCTION	
		(ENGLISH, FRENCH, SPANISH) (AEP:with RM-WM7E) (E)	
	3-757-431-81	MANUAL, INSTRUCTION	
		(GERMAN, DUTCH, SWEDISH) (AEP:with RM-WM7E)	
	3-757-431-91	MANUAL, INSTRUCTION	
		(ITALIAN, PORTUGUESE) (AEP:with RM-WM7E)	
*	3-906-697-01	INDIVIDUAL CARTON (Tourist, E)	
*	3-906-699-01	INDIVIDUAL CARTON (AEP, UK)	

<u>Ref.No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Remark</u>
	8-953-537-90	HEADPHONE MDR-E741MP//K SET	
	X-3329-657-1	ATTACHMENT ASSY	
*****			
		*****	
		HARDWARE LIST	
		*****	
#1	7-627-553-17	PRECISION SCREW +P 2X2 TYPE 3	

# WM-EX808/EX808HG

---

**SONY®**  
**SERVICE MANUAL**

*AEP Model*  
*UK Model*  
WM-EX808HG  
*E Model*  
*Tourist Model*  
WM-EX808

## **SUPPLEMENT-1**


File this supplement with the service manual.

<p><b>Subject : 1. MAIN BOARD circuit change</b> <b>2. CORRECTIONS</b></p>
--

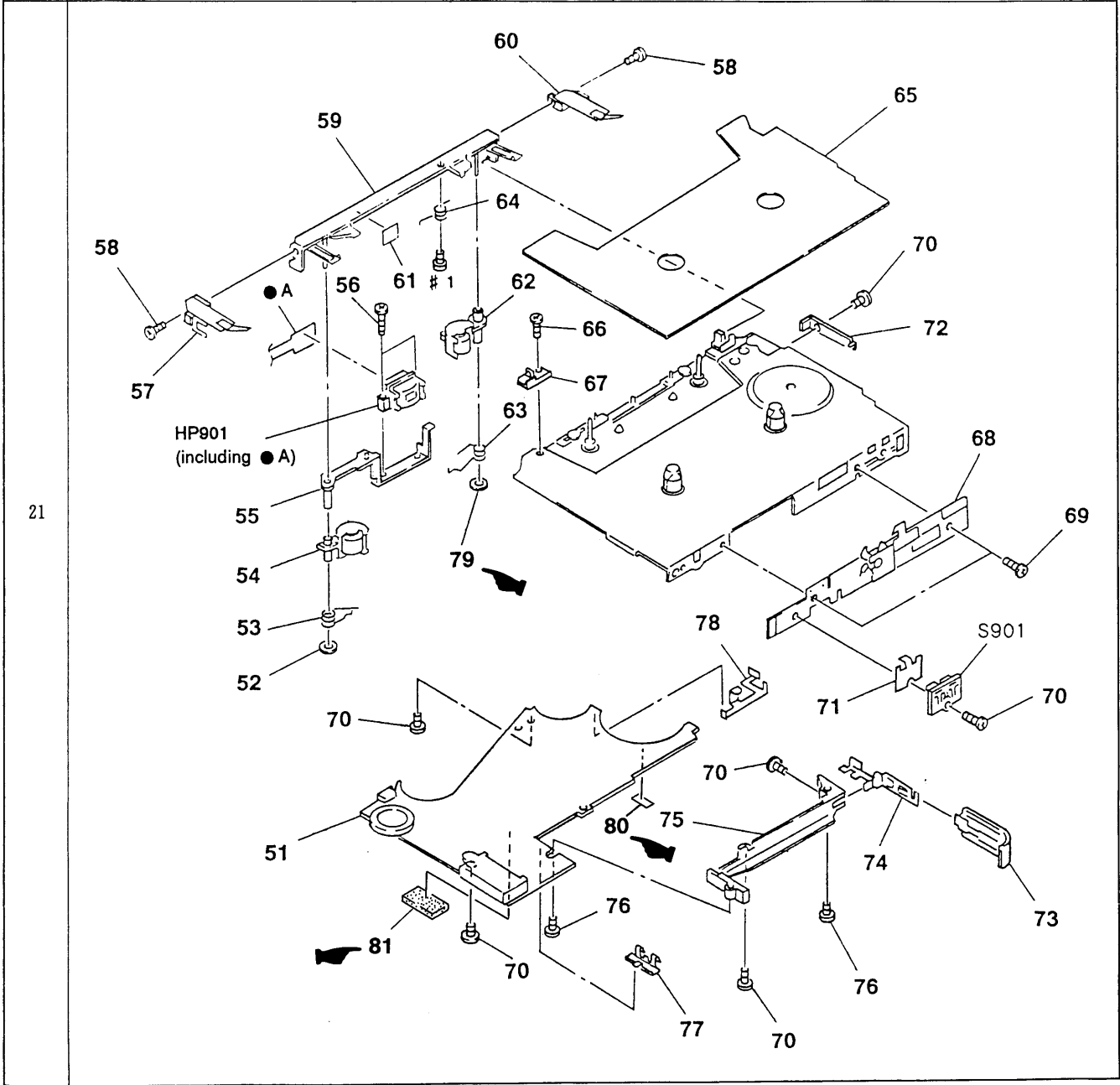
(RPC-94030)

• CORRECTIONS

Modified points are indicates as follows.

 : indicator corrected portion.

Page	INCORRECT			CORRECT	
	Ref.No.	Part No.	Description	Part No.	Description
21	79			3-380-362-01	WASHER
	81			4-017-441-01	CUSHION (B)
	80			3-841-069-02	SPACER
22	102	3-331-007-21	WASHER	3-348-993-01	WASHER
	129	X-3367-022-1	CHASSIS ASSY (UT)	X-3367-021-1	CHASSIS ASSY (UT)
25	1-528-231-11	BATTERY, NICKEL CADMIUM (NC-6WM) (E, Tourist, UK)		1-528-543-11	BATTERY, NICKEL CADMIUM (NC-6WM) (E, AEP, UK)
	1-528-231-22	BATTERY, NICKEL CADMIUM (NC-6WM) (AEP)		1-528-231-22	BATTERY, NICKEL CADMIUM (NC-6WM) (Tourist)
	1-528-251-11	BATTERY CHARGER (BC-7S) (AEP, UK)		1-528-251-11	BATTERY CHARGER (BC-7S) (AEP)
				1-528-252-11	BATTERY CHARGER (BC-7S) (UK)



• CHANGED PARTS

Pag	FORMER			NEW	
	Ref. No.	Part No.	Description	Part No.	Description
20	6	X-3367-108-1	CASE (TC) ASSY (BLACK: EX808)	X-3367-108-5	CASE (TC) ASSY (BLACK: EX808)
	6	X-3367-231-1	CASE (TC) ASSY (SILVER: EX808)	X-3367-231-5	CASE (TC) ASSY (SILVER: EX808)
	6	X-3367-232-1	CASE (TC) ASSY (BLUE: EX808)	X-3367-232-5	CASE (TC) ASSY (BLUE: EX808)
	6	X-3367-233-1	CASE (TC) ASSY (ORANGE: EX808)	X-3367-233-5	CASE (TC) ASSY (ORANGE: EX808)
	6	X-3367-245-1	CASE (TC) ASSY (EX808HG)	X-3367-245-5	CASE (TC) ASSY (EX808HG)
21	HP901	1-543-953-12	HEAD, MAGNETIC (PLAYBACK)	1-500-101-11	HEAD, MAGNETIC (PLAYBACK)
25	HP901	1-543-953-12	HEAD, MAGNETIC (PLAYBACK)	1-500-101-11	HEAD, MAGNETIC (PLAYBACK)

• MAIN BOARD CIRCUIT CHANGE

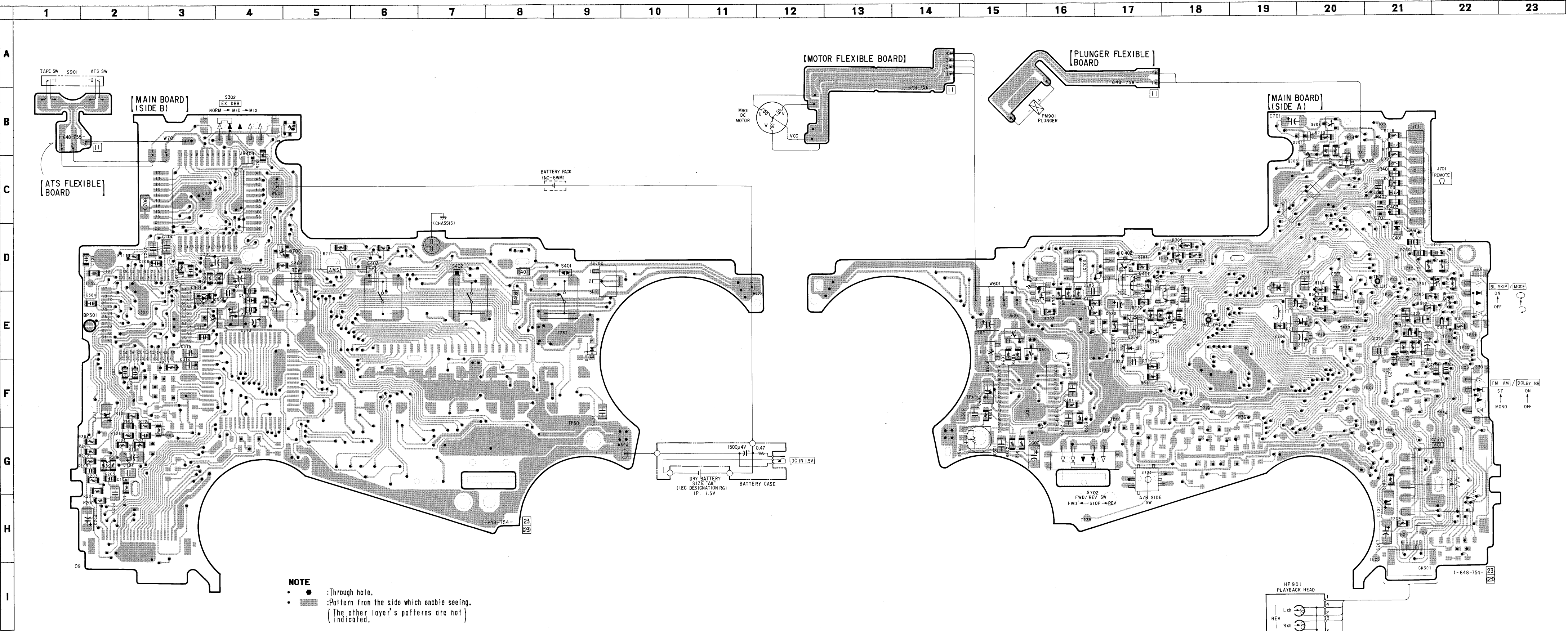
[ELECTRICAL PARTS LIST]

Pag	Board	Ref.No.	FORMER				NEW			
23	PLUNGER FLEXIBLE	PM901	1-454-529-21 SOLENOIDE, PLUNGER				1-454-674-21 SOLENOIDE, PLUNGER			
	MAIN	C302	1-164-489-11 CERAMIC CHIP	0. 22uF	10%	25V	1-164-336-11 CERAMIC CHIP	0. 33uF		25V
		C303	1-164-489-11 CERAMIC CHIP	0. 22uF	10%	25V	1-164-222-11 CERAMIC CHIP	0. 22uF		25V
		C603	1-164-344-11 CERAMIC CHIP	0. 068uF	10%	25V	1-163-036-00 CERAMIC CHIP	0. 068uF		50V
		C606	1-163-809-11 CERAMIC CHIP	0. 047uF	10%	25V	1-163-035-00 CERAMIC CHIP	0. 047uF		50V
24		IC701	8-759-180-32 IC MSM6576-CFX1219				8-759-254-30 IC MSM6576-32GS-K			
		L701	1-412-983-31 INDUCTOR 2. 2uH				1-414-385-11 INDUCTOR, FERRITE BEAD			
		L702	1-412-983-31 INDUCTOR 2. 2uH				1-414-385-11 INDUCTOR, FERRITE BEAD			
		L703	1-412-983-31 INDUCTOR 2. 2uH				1-414-385-11 INDUCTOR, FERRITE BEAD			
25		R707	1-218-345-11 METAL CHIP	9. 1K	0. 50%	1/16W	1-218-870-11 METAL CHIP	9. 1K	0. 50%	1/16W
		R708	1-218-269-11 METAL CHIP	360	0. 50%	1/16W	1-218-836-11 METAL CHIP	360	0. 50%	1/16W
		R709	1-216-820-11 METAL CHIP	820	5%	1/16W	1-218-845-11 METAL CHIP	820	0. 50%	1/16W
		R710	1-216-821-11 METAL CHIP	1K	0. 50%	1/16W	1-218-692-11 METAL CHIP	1K	0. 50%	1/16W
		R711	1-216-822-11 METAL CHIP	1. 2K	0. 50%	1/16W	1-218-694-11 METAL CHIP	1. 2K	0. 50%	1/16W
		S301	1-572-922-21 SWITCH, SLIDE (DOLBY NR)				1-572-922-11 SWITCH, SLIDE (DOLBY NR)			
		S701	1-572-922-21 SWITCH, SLIDE (MODE/BL SKIP)				1-572-922-11 SWITCH, SLIDE (MODE/BL SKIP)			
		S703	1-692-377-41 SWITCH, PUSH (A/B SIDE)				1-692-377-31 SWITCH, PUSH (A/B SIDE)			
	MISCELLANEOUS	HP901	1-543-953-12 HEAD, MAGNETIC (PLAYBACK)				1-500-101-11 HEAD, MAGNETIC (PLAYBACK)			
		PM901	1-454-529-21 SOLENOID, PLUNGER				1-454-674-21 SOLENOID, PLUNGER			

PRINTED WIRING BOARD

• Semiconductor Location

Ref. No.	Location
D301	E-17
D401	E-3
D701	B-20
D702	C-21
D703	E-9
IC301	E-2
IC601	F-16
IC701	C-3
IC702	D-9
IC703	D-17
Q301	D-22
Q302	E-3
Q303	D-18
Q304	E-17
Q305	E-18
Q401	D-17
Q402	D-17
Q601	E-16
Q602	E-16
Q603	F-15
Q701	B-5
Q703	D-16
Q704	B-20
Q705	C-20
Q706	D-5



NOTE  
• :Through hole.  
• :Pattern from the side which enable seeing.  
(The other layer's patterns are not indicated.)



