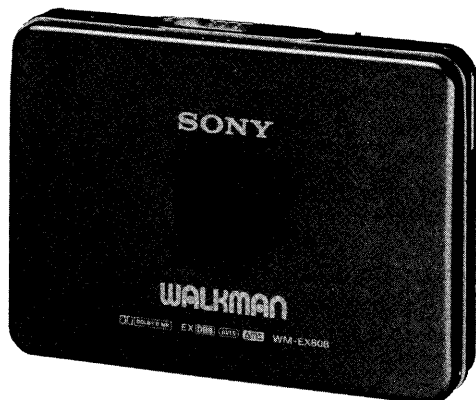


WM-EX808/EX808HG

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 $\square\square$ are trademarks of Dolby Laboratories Licensing Corporation.

CASSETTE PLAYER
SONY[®]



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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:

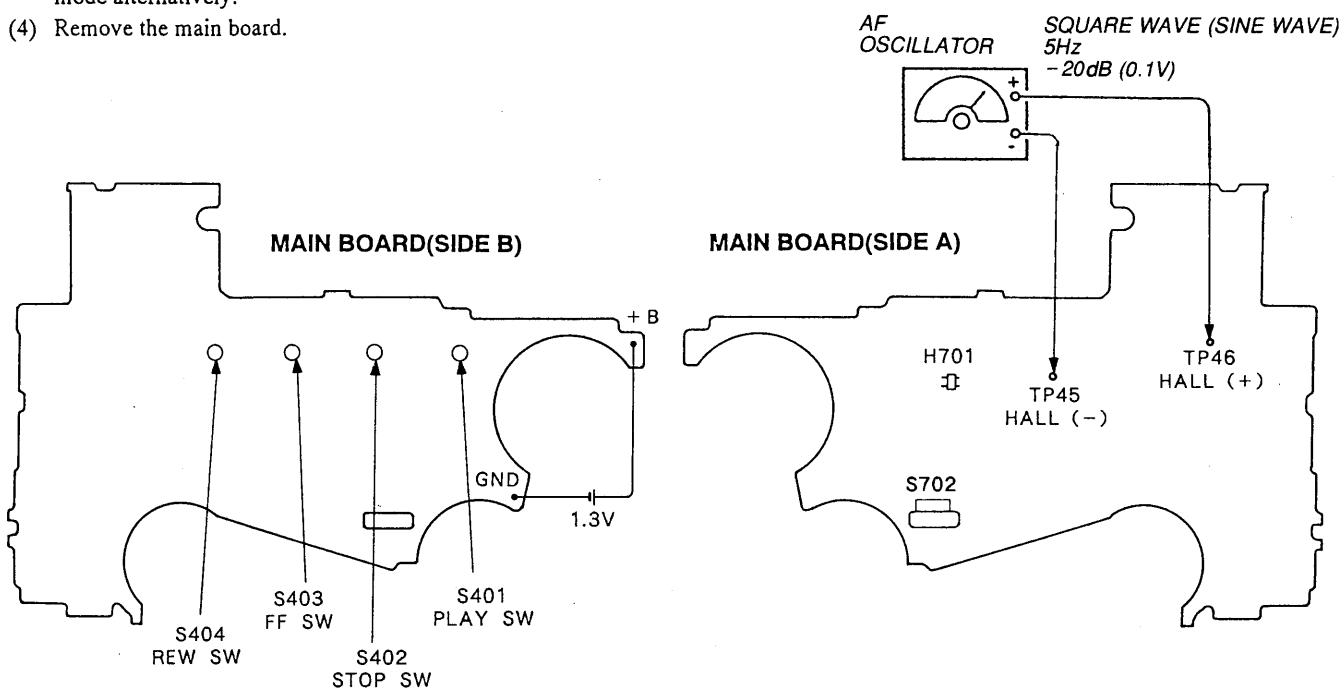
Do not change the setting position of switch S701 when removing the main board. If it has been changed accidentally, or if the desired mode cannot be set with the switch, adjust the setting again after the main board is installed.

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.

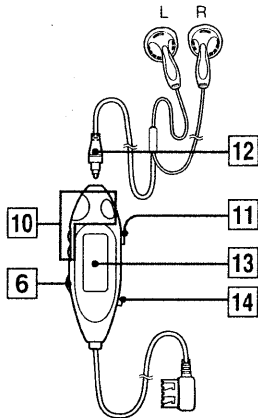
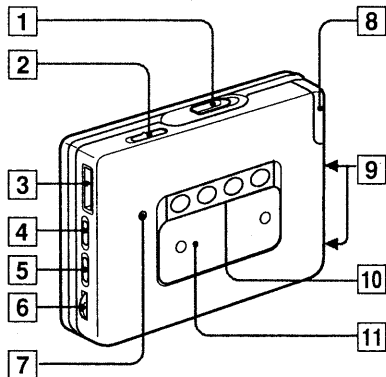
PLAY mode

- (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

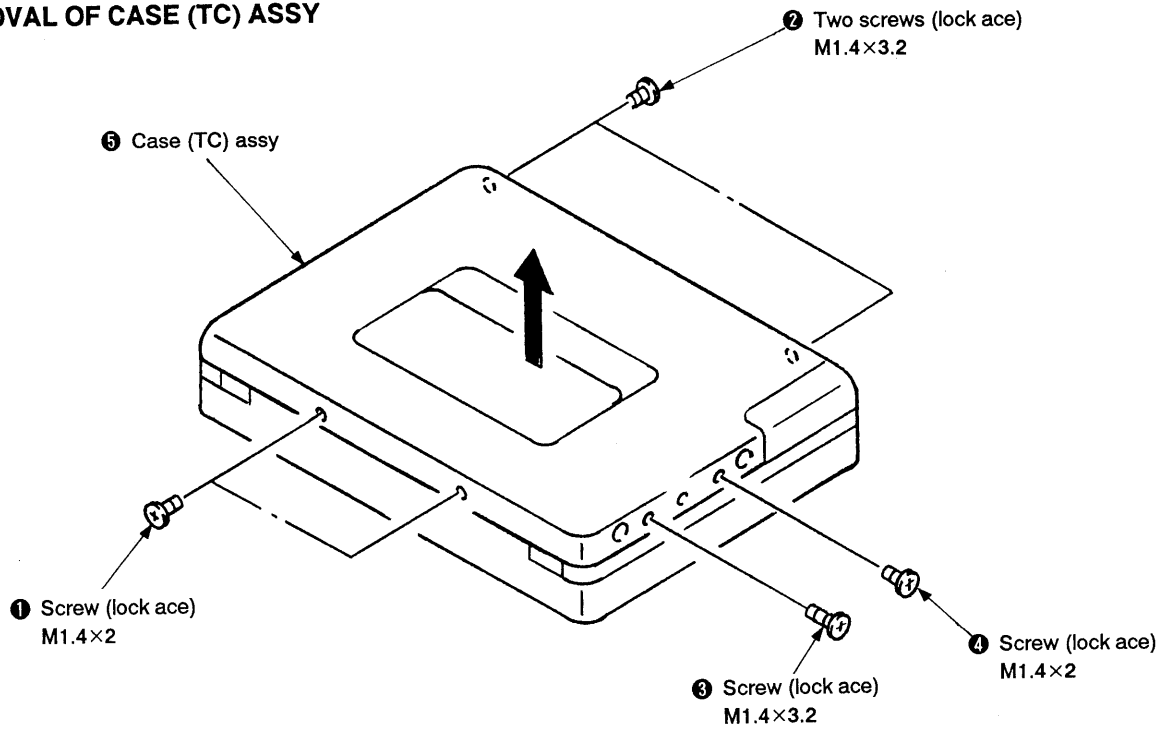
The AVLS selector on the remote controller allows you to limit the maximum volume of your WALKMAN personal stereo without degrading the sound quality.

- 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.

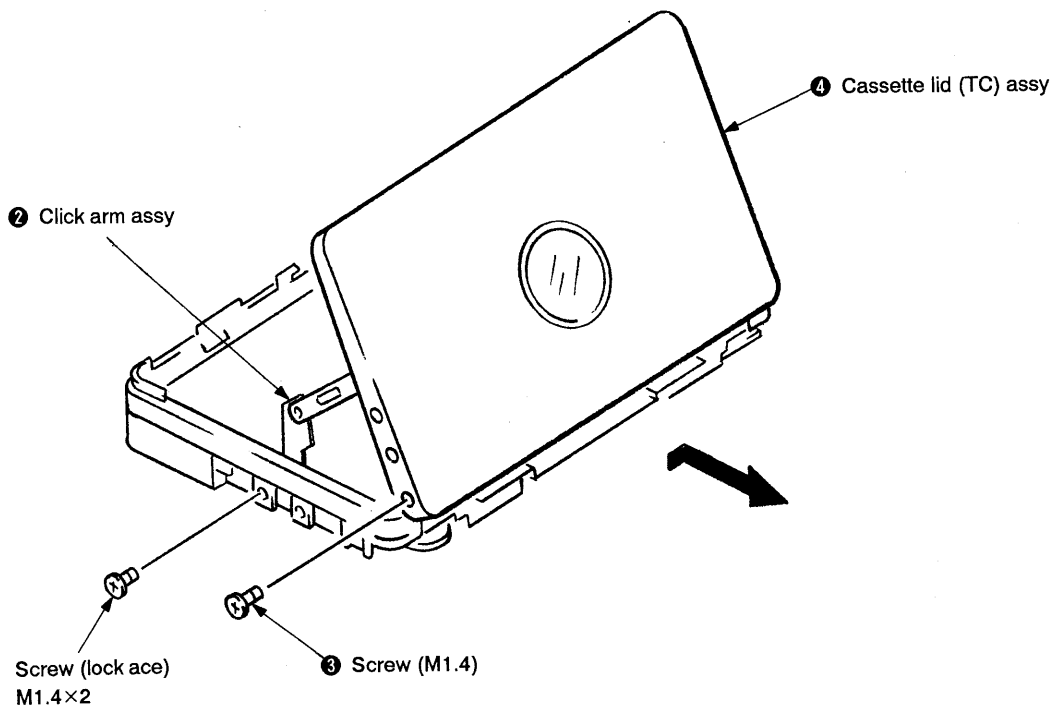
SECTION 3 DISASSEMBLY

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

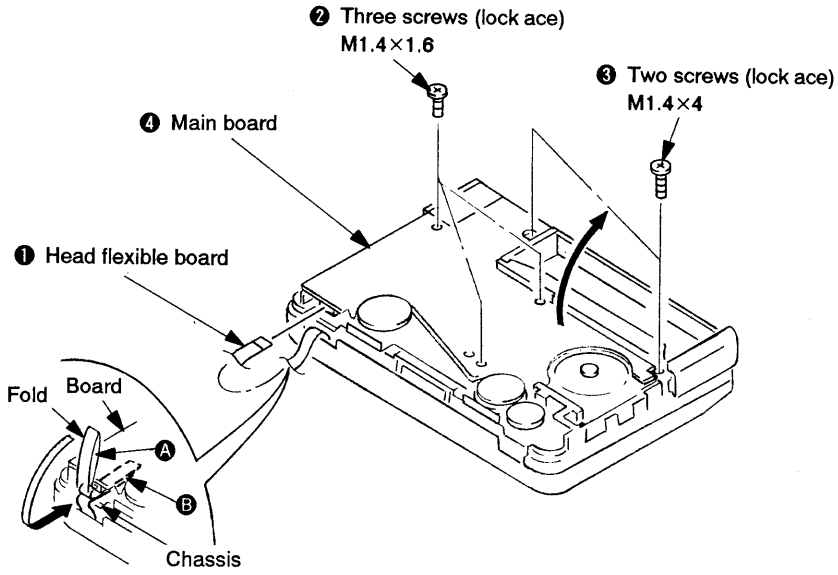
3-1. REMOVAL OF CASE (TC) ASSY



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

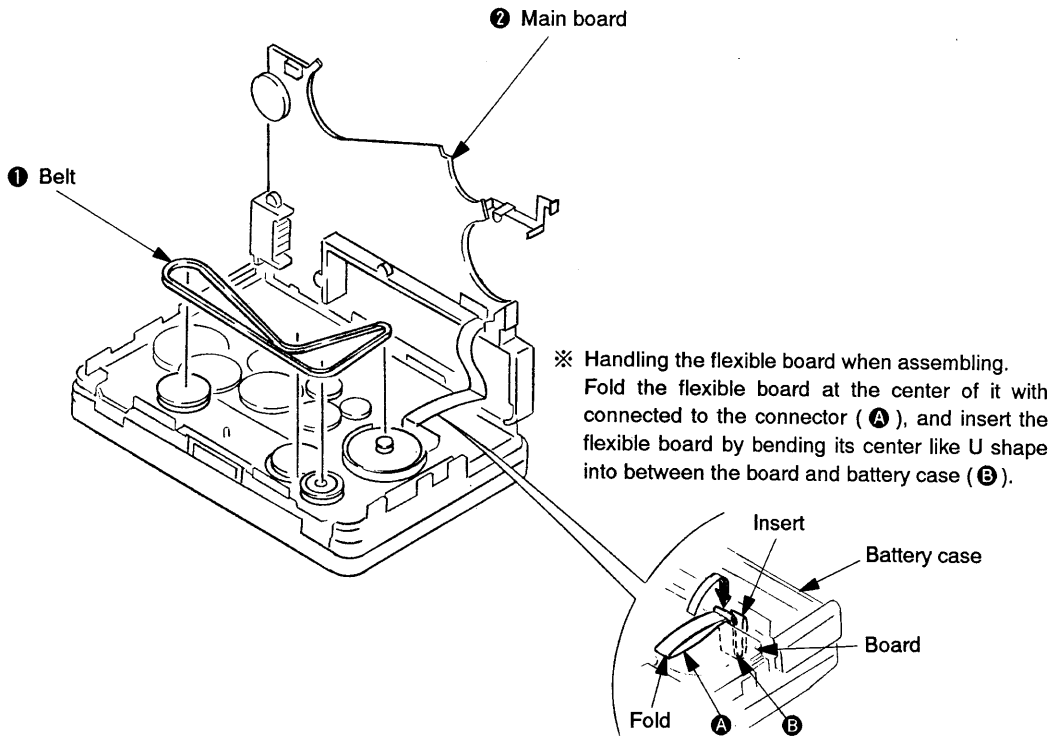


3-3. REMOVAL OF MAIN BOARD



※ 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



SECTION 4 ADJUSTMENTS

4-1. MECHANICAL ADJUSTMENTS

PRECAUTION

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

playback head	rubber belts
capstan	idlers
pinch roller	
2. Demagnetize the playback 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 (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

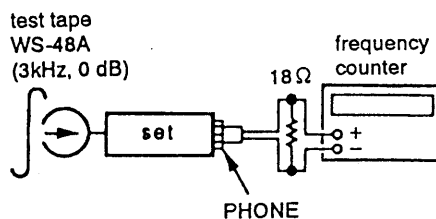
1. Power supply voltage : 1.3V
2. Switch position
 - DOLBY NR switch : OFF
 - EX DBB switch : NORM
3. For electrical adjustments, use the supplied plug conversion adaptor (Part No. 1-691-322-11)

Test Tape

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

TAPE SPEED ADJUSTMENT

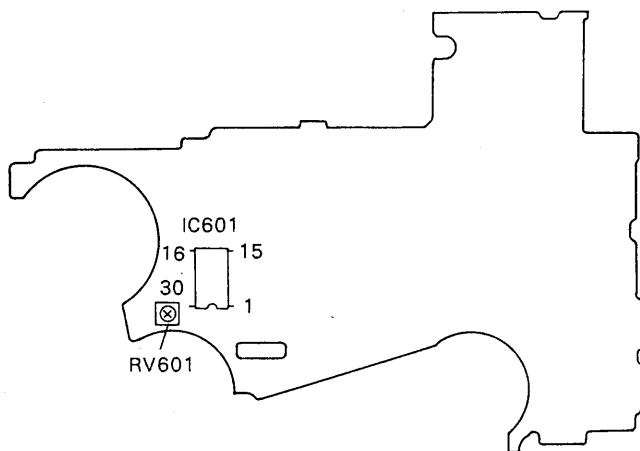
Procedure :



1. Play back WS-48A (tape center portion) in FWD mode. Adjust the RV601 so that the frequency counter reads $3,000 \pm 30\text{Hz}$.
2. 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 —



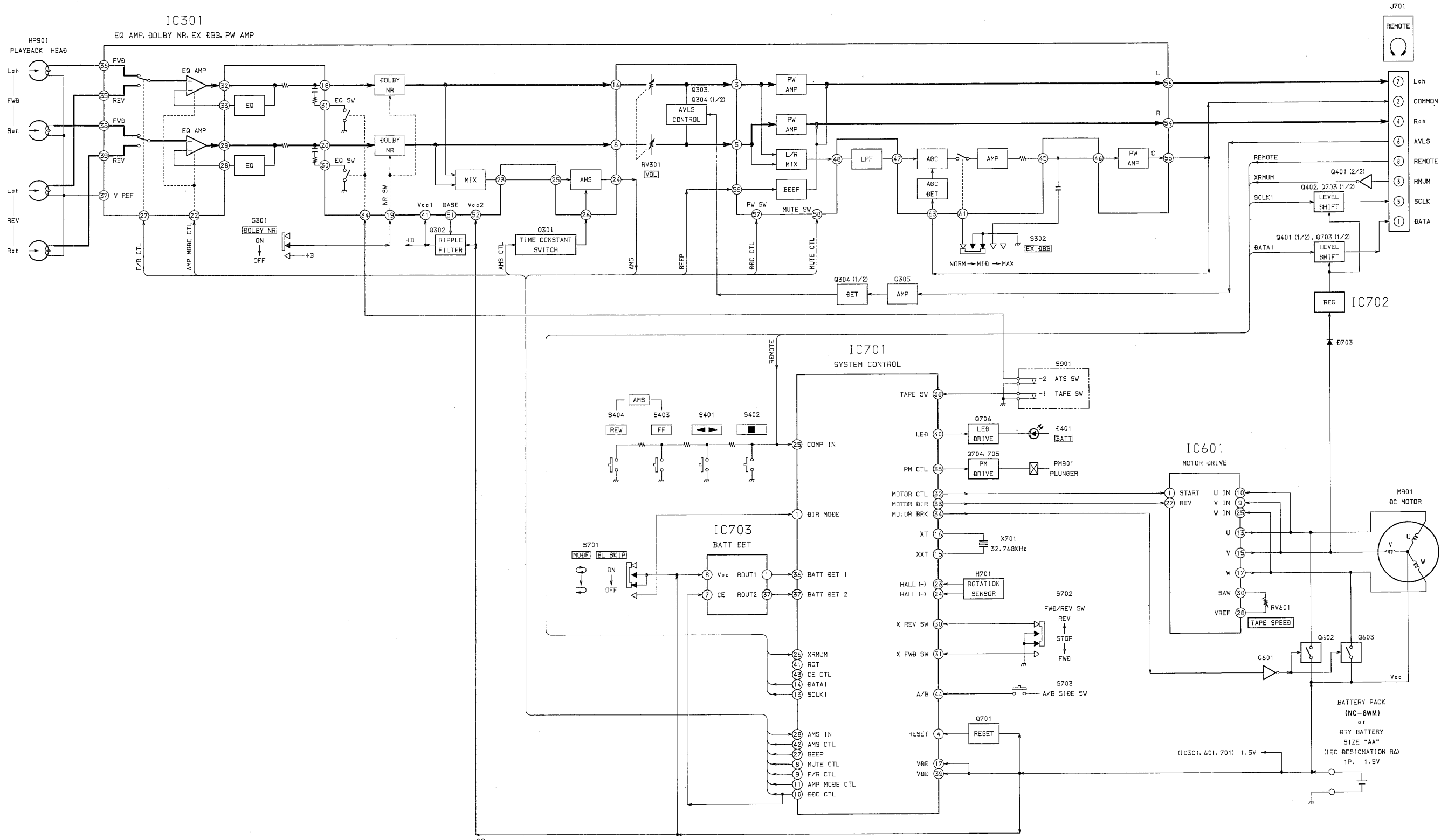
SECTION 5 IC PIN FUNCTIONS

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.

SECTION 6
DIAGRAMS

6-1. BLOCK DIAGRAM

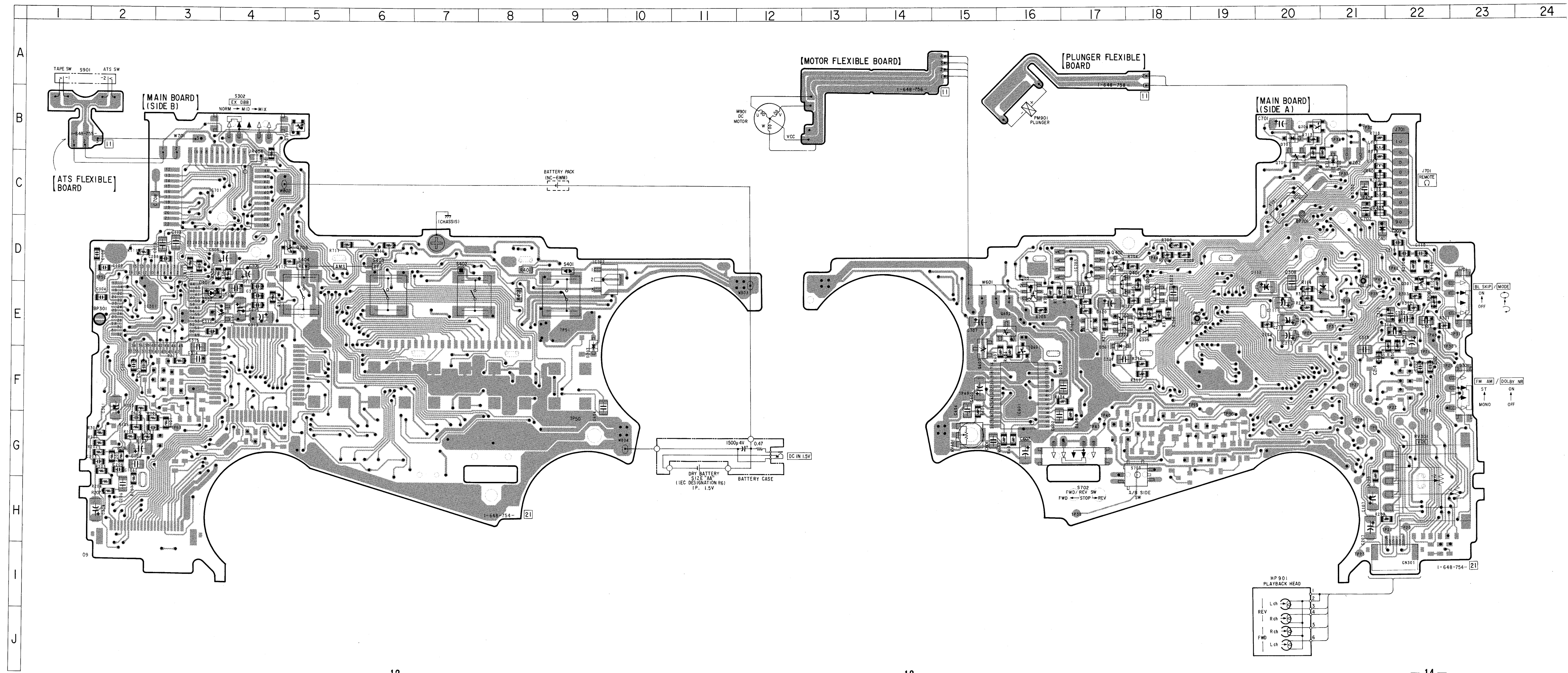


6-2. PRINTED WIRING BOARD
 • See page 19 for Semiconductor Lead Layouts.

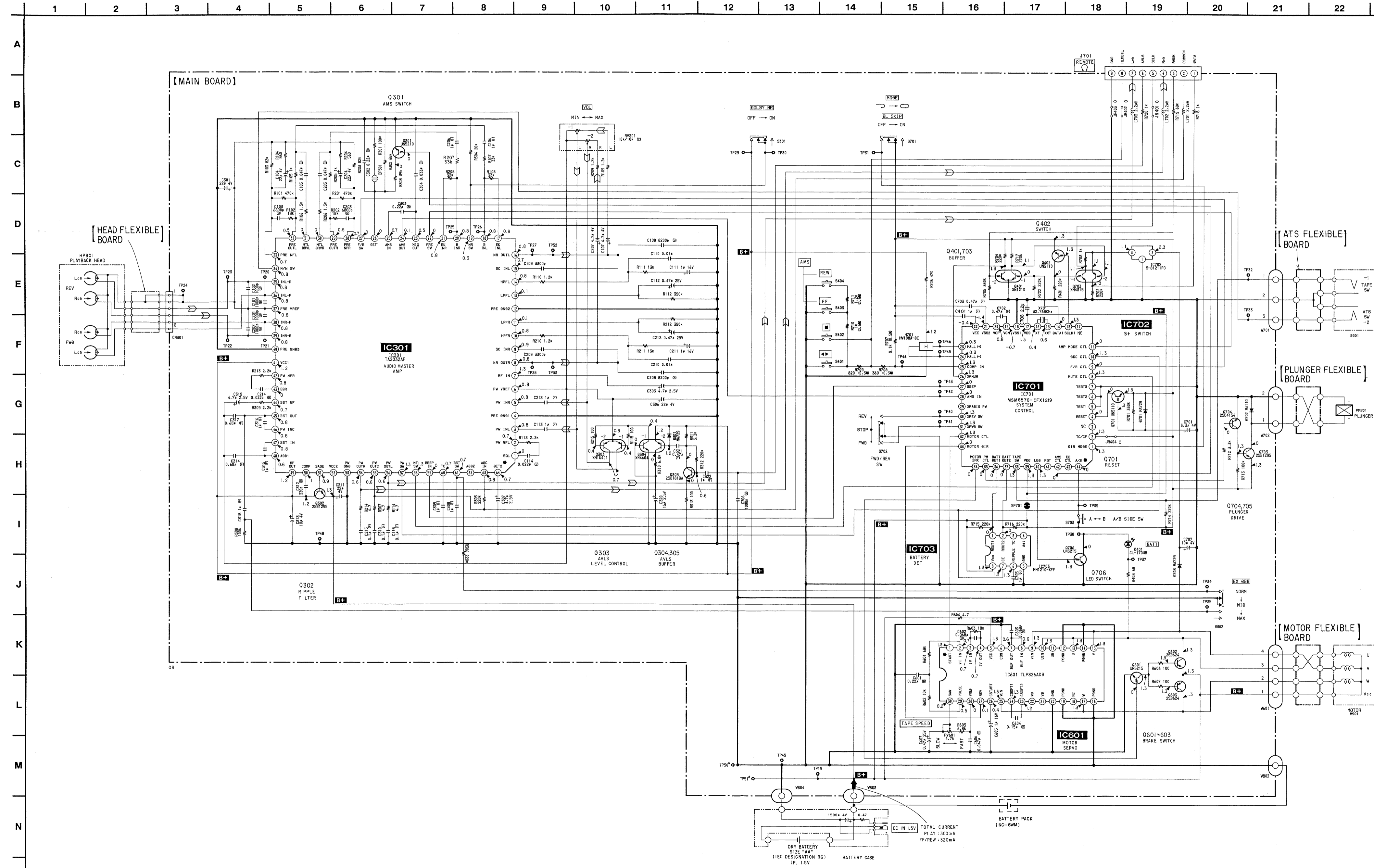
• Semiconductor Location

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.)

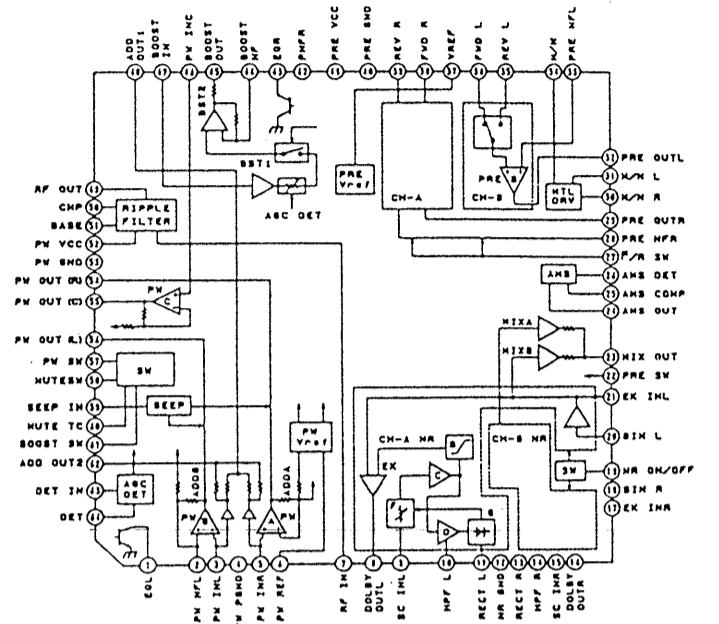


6-3. SCHEMATIC DIAGRAM

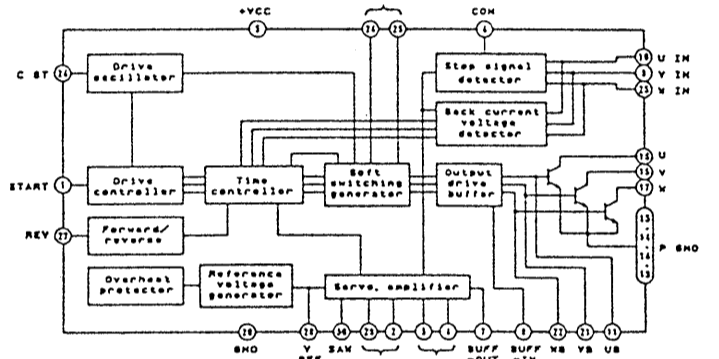


IC BLOCK DIAGRAMS

IC301 TA2032AF



IC601 TLP326ADB



- Note:**
- All capacitors are in μF unless otherwise noted. pF = 10^{-12}F , 50WV or less are not indicated except for electrolytics and tantalums.
 - All resistors are in Ω and $1/4\text{W}$ or less unless otherwise specified.
 - % indicates tolerance.
 - % indicates tolerance.
 - : panel designation
 - B+ : B+ Line
 - ⊠ : adjustment for repair.
 - Total current is measured with no cassette installed.
 - Supply 1.3Vdc from the battery terminal as regulated power voltage
 - Voltage and waveforms are dc with respect to ground under no-signal conditions.
 - Voltages are taken with a VOM (Input impedance $10\text{k}\Omega$). Voltage variations may be noted due to normal production tolerances.
 - Signal path.
 - ⊠ : PB

6-4. SEMICONDUCTOR LEAD LAYOUTS

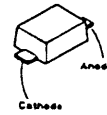
MM1210-XFF



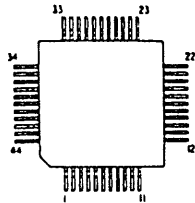
UN5210
UN5215
2SB1295-UL6
2SB624-BV345
2SC4116-YG
2SC4154-F



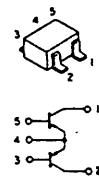
MA729



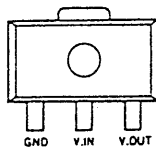
MSM6576-CFX1219



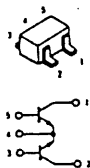
XN1U401



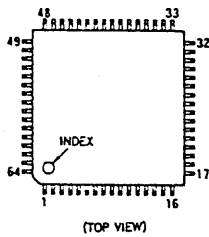
S-81211PG-PA



XN1210



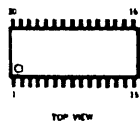
TA2032AF



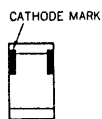
XN4315
XN4604



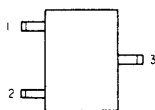
TLP326ADB



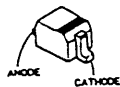
CL-170UR-CD



UN5110-QRS



MA110



SECTION 7 EXPLODED VIEWS

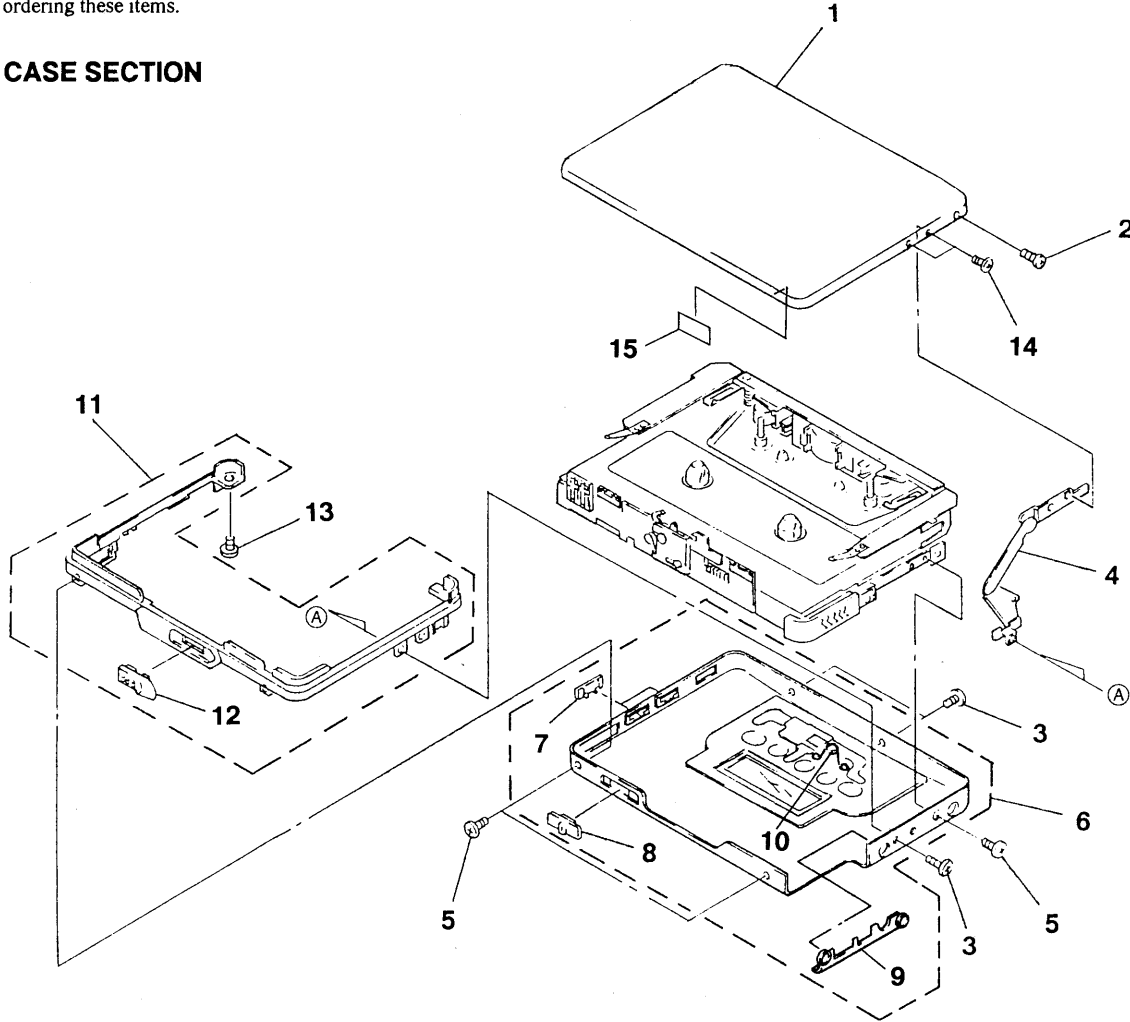
NOTE:

- -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.

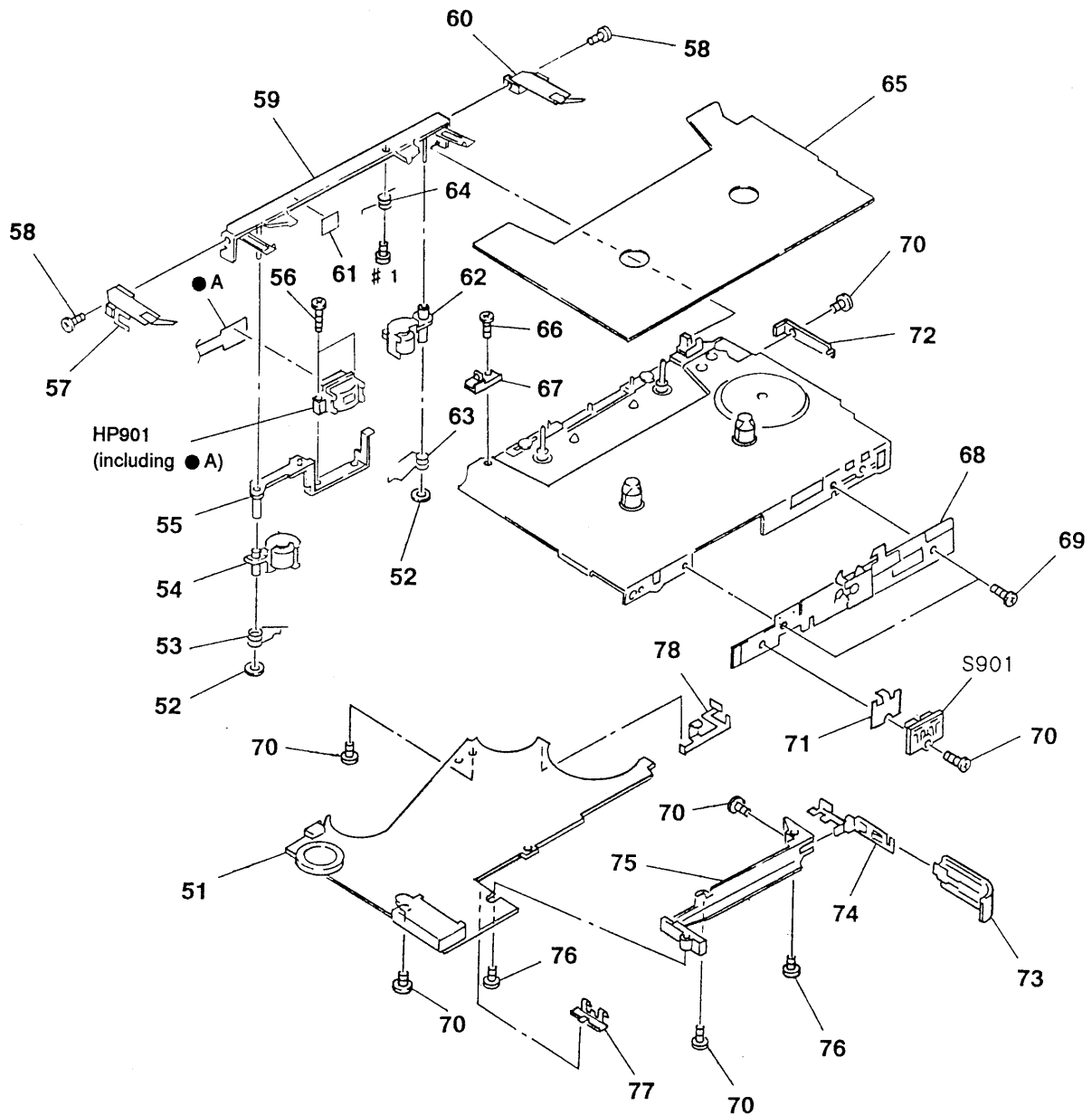
The components identified by mark or dotted line with mark are critical for safety. Replace only with part number specified.

7-1. CASE SECTION



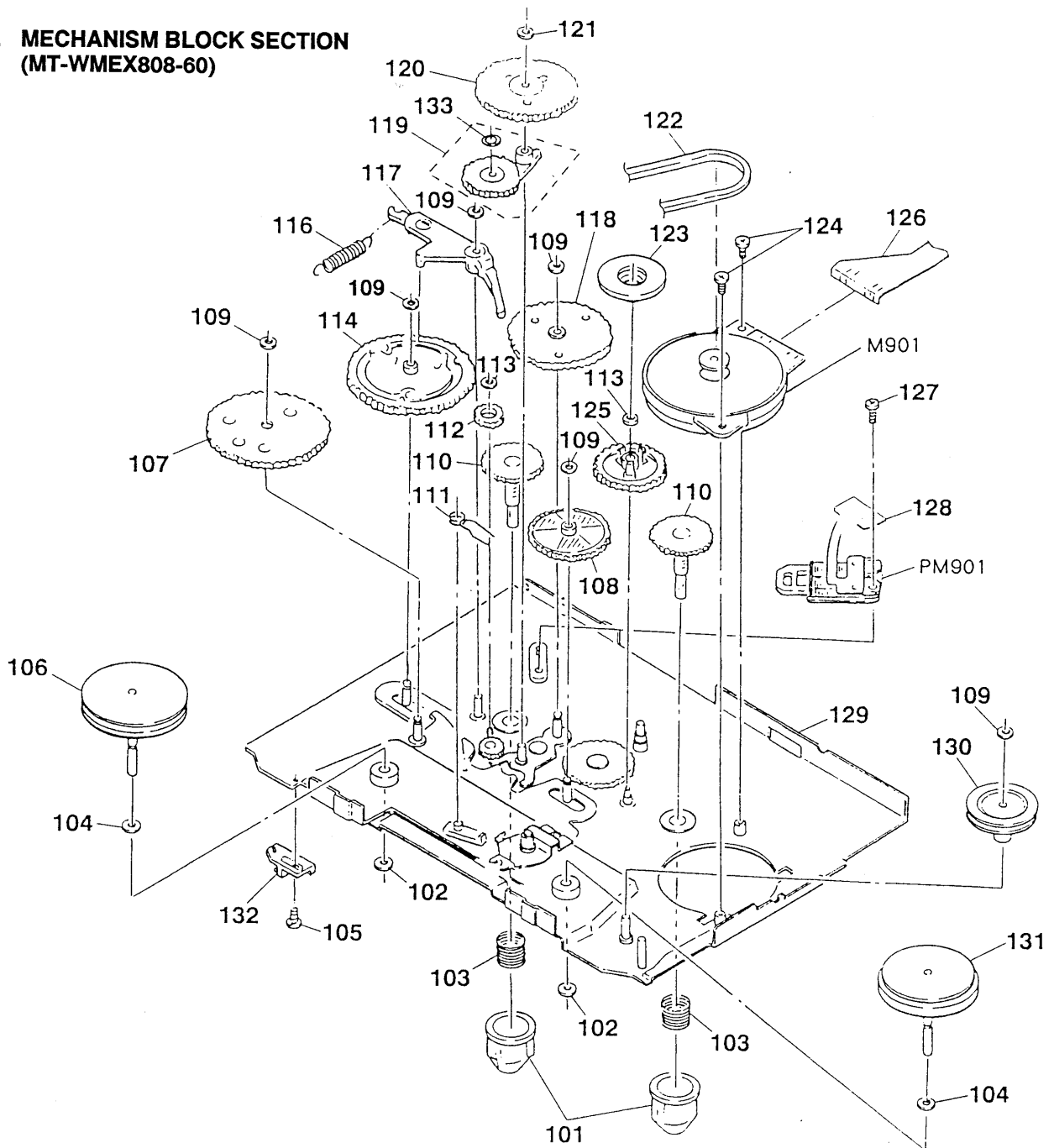
Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
1	X-3367-110-1	LID (TC) ASSY, CASSETTE (BLACK:EX808)		7	3-905-326-21	KNOB (MODE) (BLUE:EX808)	
1	X-3367-234-1	LID (TC) ASSY, CASSETTE (SILVER:EX808)		7	3-905-326-31	KNOB (MODE) (EX808HG)	
1	X-3367-235-1	LID (TC) ASSY, CASSETTE (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	

SECTION 8 ELECTRICAL PARTS LIST

NOTE:

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 name.

- 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, -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
• Color Indication of Appearance Parts Example:
KNOB, BALANCE (WHITE) ... (RED)

- 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
• Hardware (# mark) list is given in the last of this parts list.

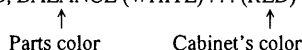


Table with columns: Ref. No., Part No., Description, Remark. Includes entries for board descriptions, switches, and capacitors (C101-C215).

Table with columns: Ref. No., Part No., Description, Remark. Lists various electronic components (C301-C708) and a connector (CN301).

MAIN

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

WM-EX808/EX808HG

<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.

Subject : 1. MAIN BOARD circuit change
2. CORRECTIONS

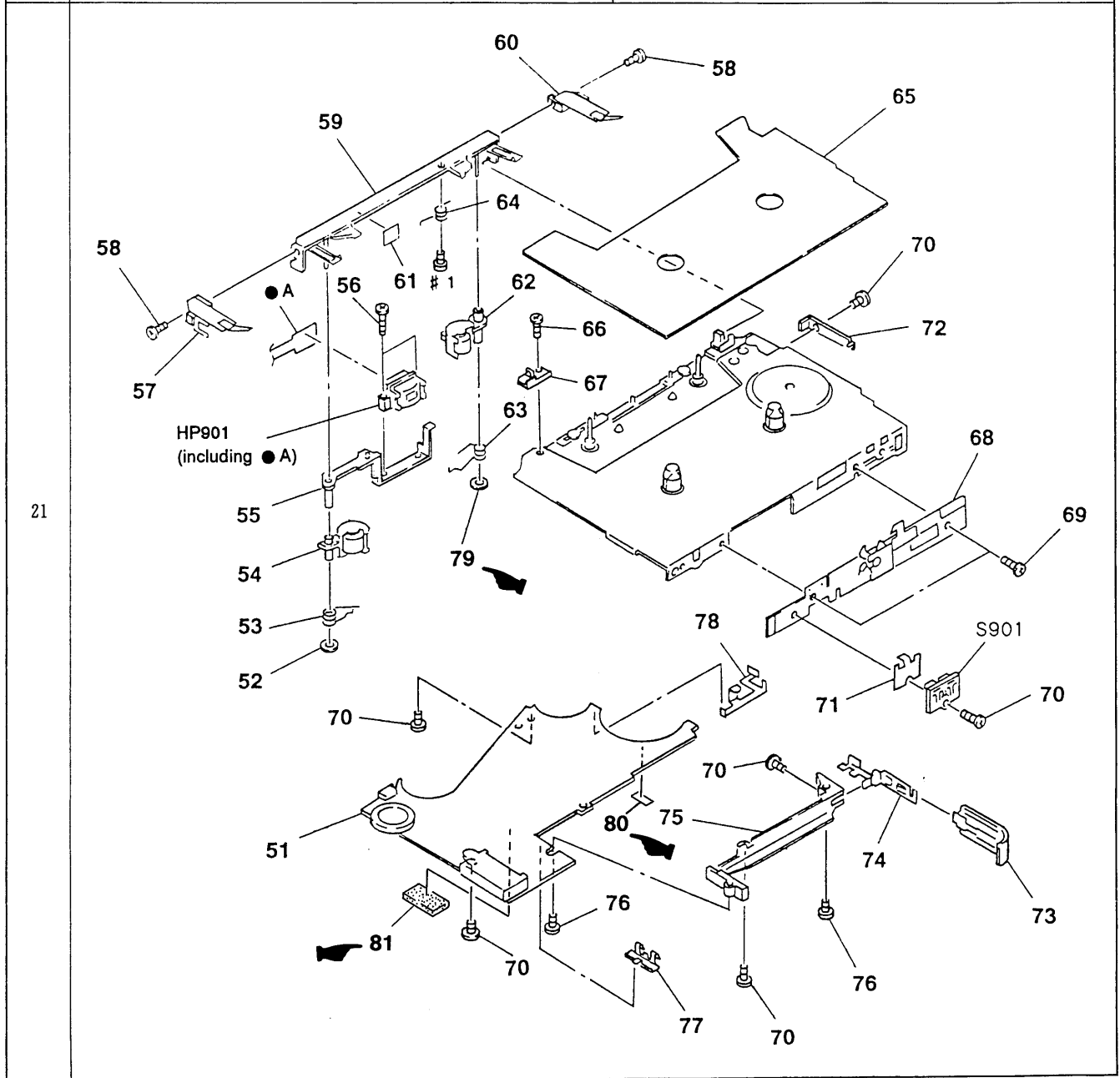
(RPC-94030)

• **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	
	<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Part No.</u>	<u>Description</u>
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

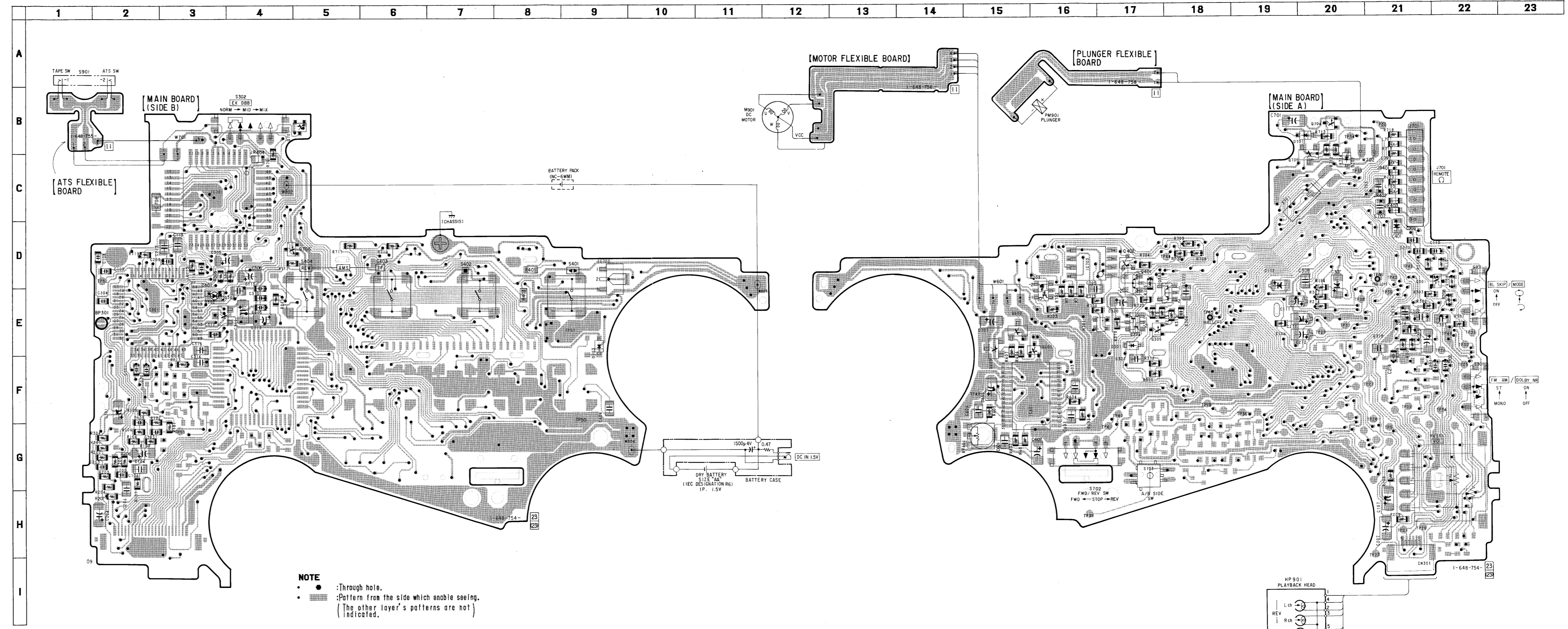
[ELECTRICAL PARTS LIST]

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

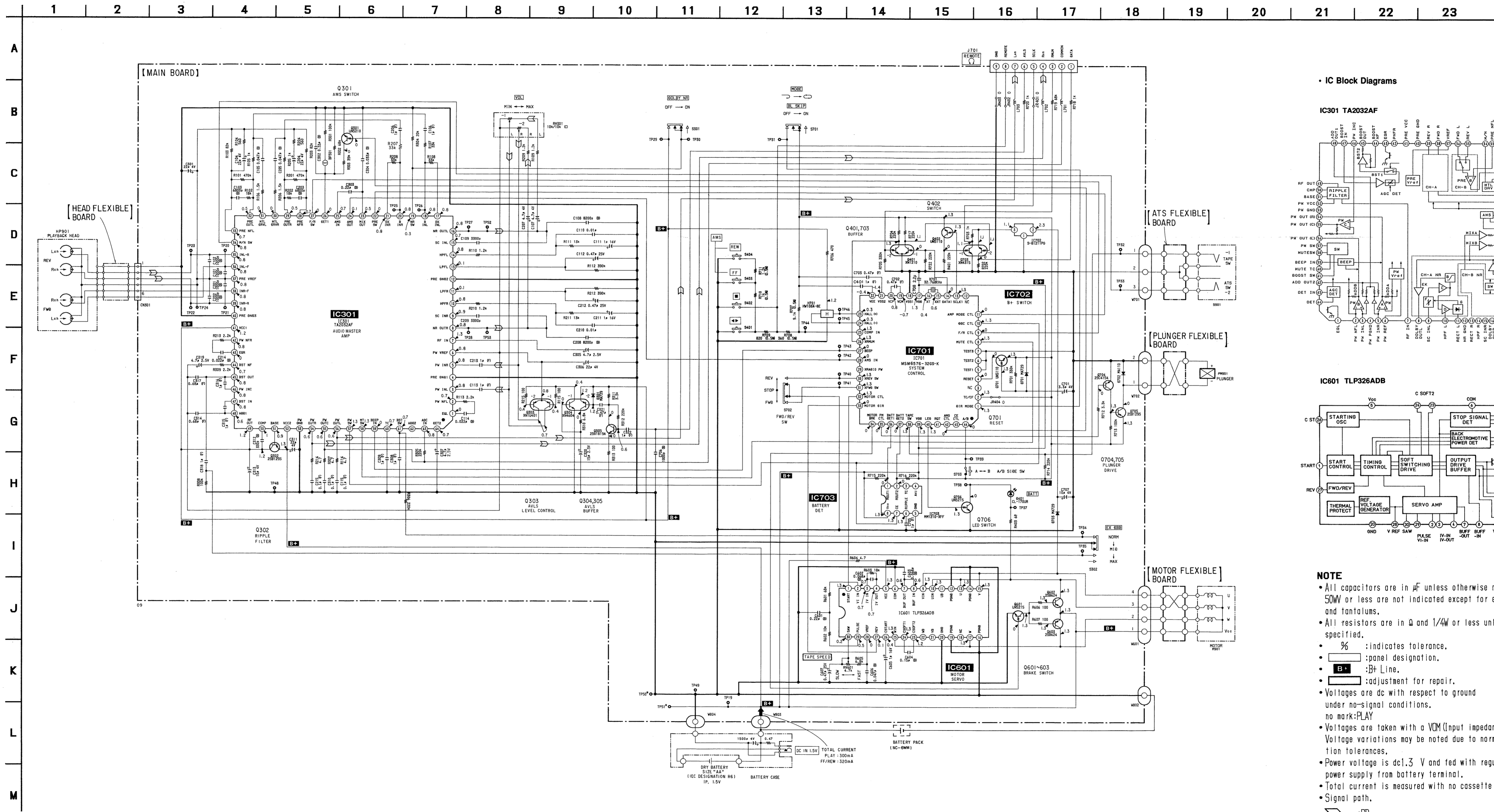
• Semiconductor Location

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

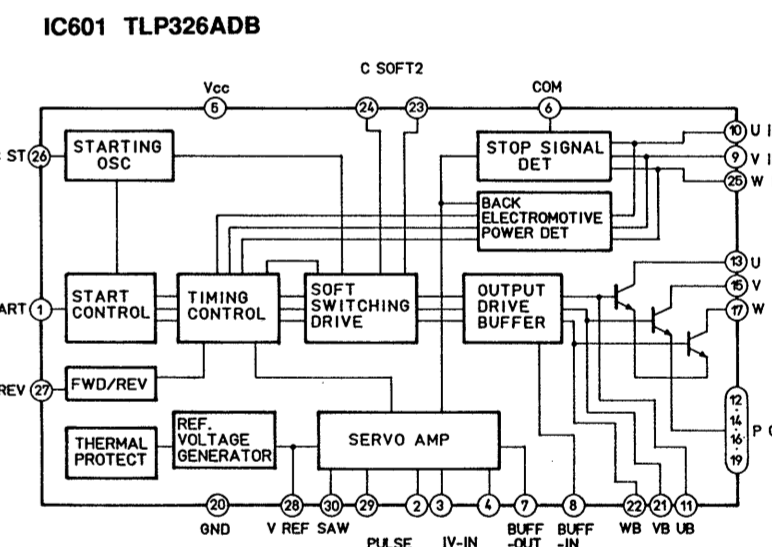
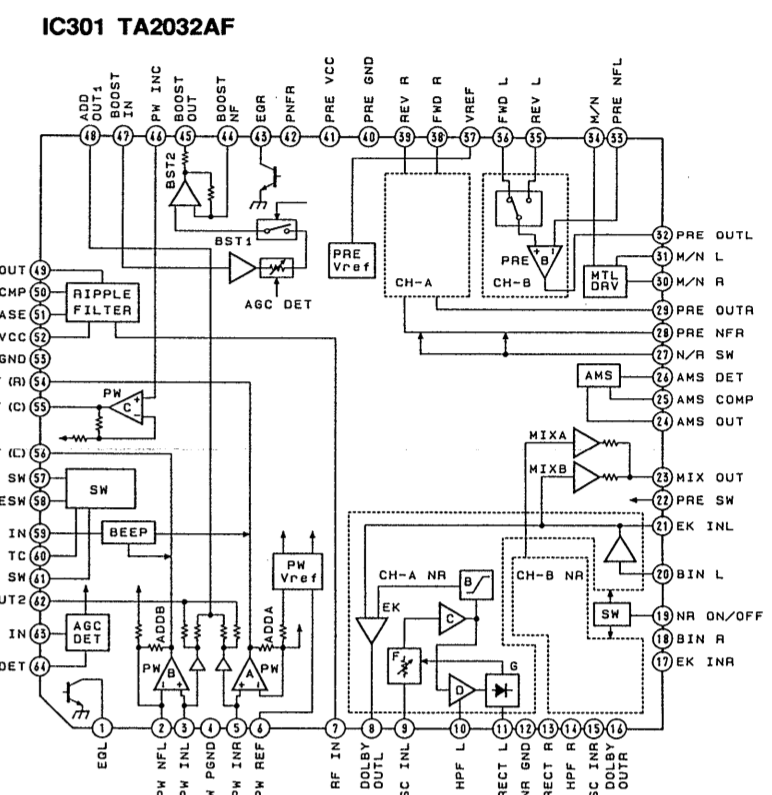


NOTE
 • :Through hole.
 • :Pattern from the side which enable seeing.
 (The other layer's patterns are not indicated.)

SCHEMATIC DIAGRAM



IC Block Diagrams



NOTE

- All capacitors are in μF unless otherwise noted. $\text{pF} = \mu\text{F} / 100$.
- 50W or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and $1/4\text{W}$ or less unless otherwise specified.
- $\%$: tolerance.
- \square : panel designation.
- $\text{B}+$: B+ Line.
- \square : adjustment for repair.
- Voltages are dc with respect to ground under no-signal conditions.
- no mark:PLAY
- Voltages are taken with a VOM (Input impedance $10\text{M}\Omega$). Voltage variations may be noted due to normal production tolerances.
- Power voltage is dc 1.3 V and fed with regulated dc power supply from battery terminal.
- Total current is measured with no cassette installed.
- Signal path.
- \square : PB