

# WM-3300

## SERVICE MANUAL

*US Model  
Canadian Model  
AEP Model  
E Model*



### SPECIFICATIONS

Output	PHONES jack: stereo minijack
Power requirements	3 V DC --- Two size AA (R6) batteries
Battery life	Sony alkaline AM3 (N): approx. 8 h Sony SUM-3 (NS): approx. 4 h
Dimensions	Approx. 143 x 89 x 38 mm (w/h/d) (5 3/4 x 3 5/8 x 1 1/2 inches)
Mass	Approx. 190 g (6.7 oz.)
Accessory supplied	Stereo headphones (1)

Design and specifications are subject to change without notice.

CASSETTE PLAYER  
**SONY**®



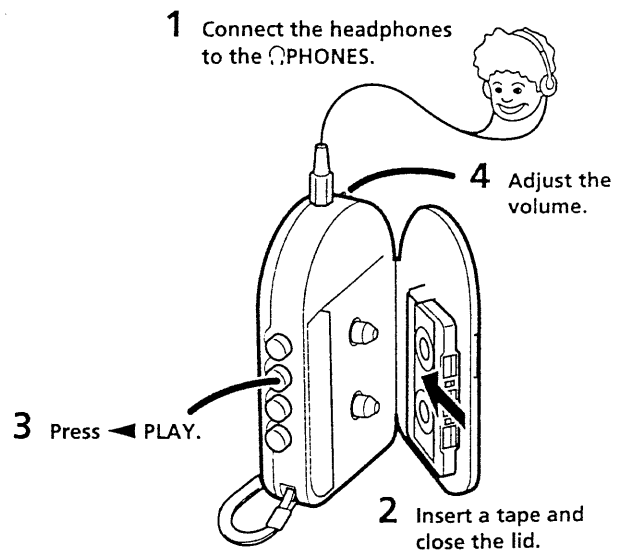
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### Flexible Circuit Board Repairing

- 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 GENERAL



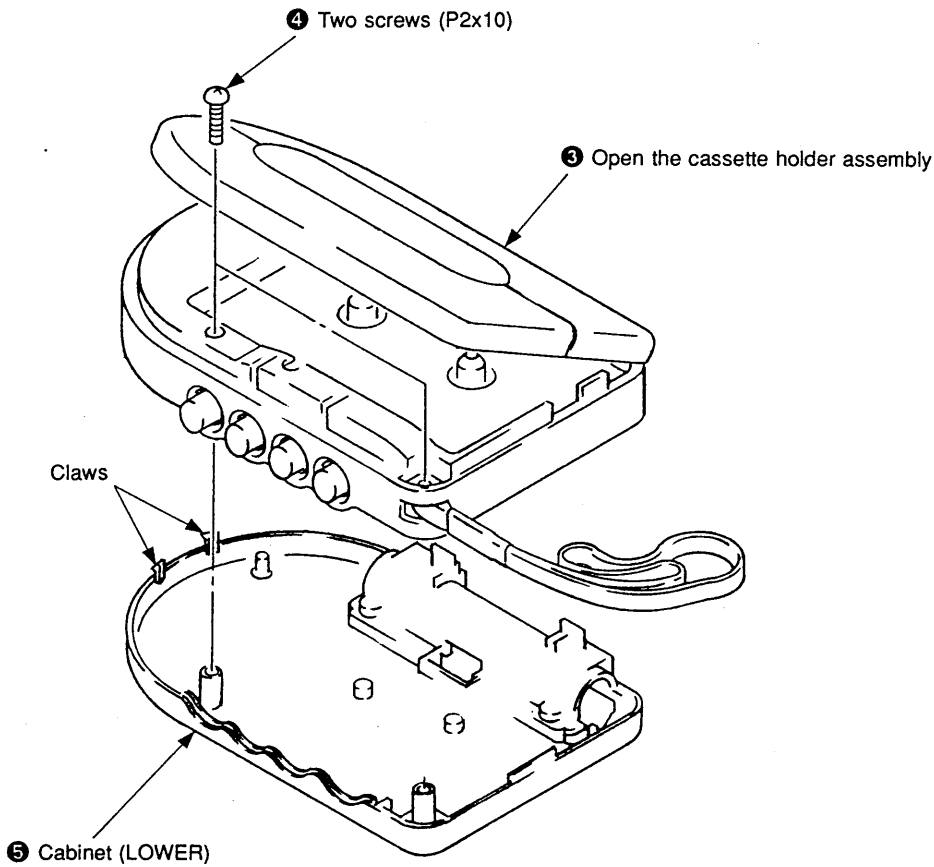
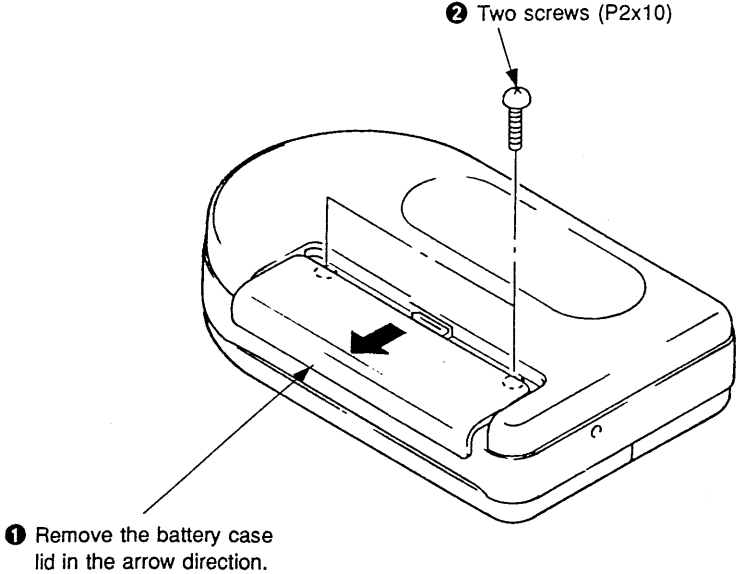
### Additional operations

- Press to stop playback.
- ⏪ Press to fast-forward.
- ⏩ Press to rewind.

When the tape reaches to its end while fast-forwarding or rewinding it, be sure to press ■STOP.

# SECTION 2 DISASSEMBLY

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



## SECTION 3 ADJUSTMENTS

### 3-1. MECHANICAL ADJUSTMENTS

#### PRECAUTION

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

playback head	pinch roller
capstan	rubber belts
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 (2.5V) unless otherwise noted.

#### Torque Measurement

Torque	Torque Meter	Meter Reading
Forward	CQ-102D	20 — 45 g · cm (0.28 — 0.62 oz · inch)
Fast Forward	CQ-201B	55 — 130 g · cm (0.77 — 1.8 oz · inch)
Rewind	CQ-201B	55 — 150 g · cm (0.77 — 2.1 oz · inch)
Back Tension	CQ-102D	1.0 — 3.0 g · cm (0.014 — 0.041 oz · inch)

### 3-2. ELECTRICAL ADJUSTMENTS

#### PRECAUTION

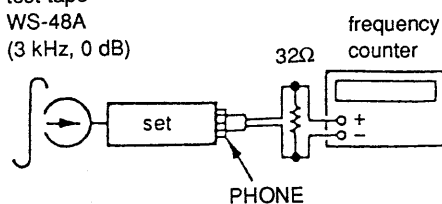
- VOLUME : maximum

#### Test Tape

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

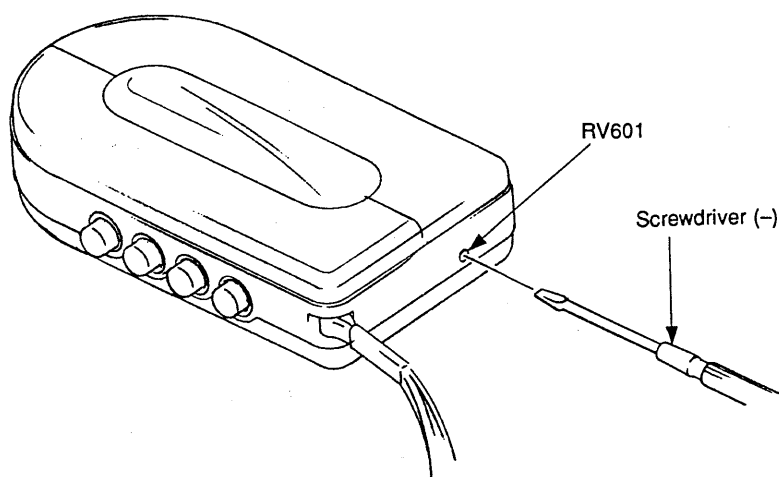
#### Tape speed adjustment

Procedure : test tape  
WS-48A  
(3 kHz, 0 dB)



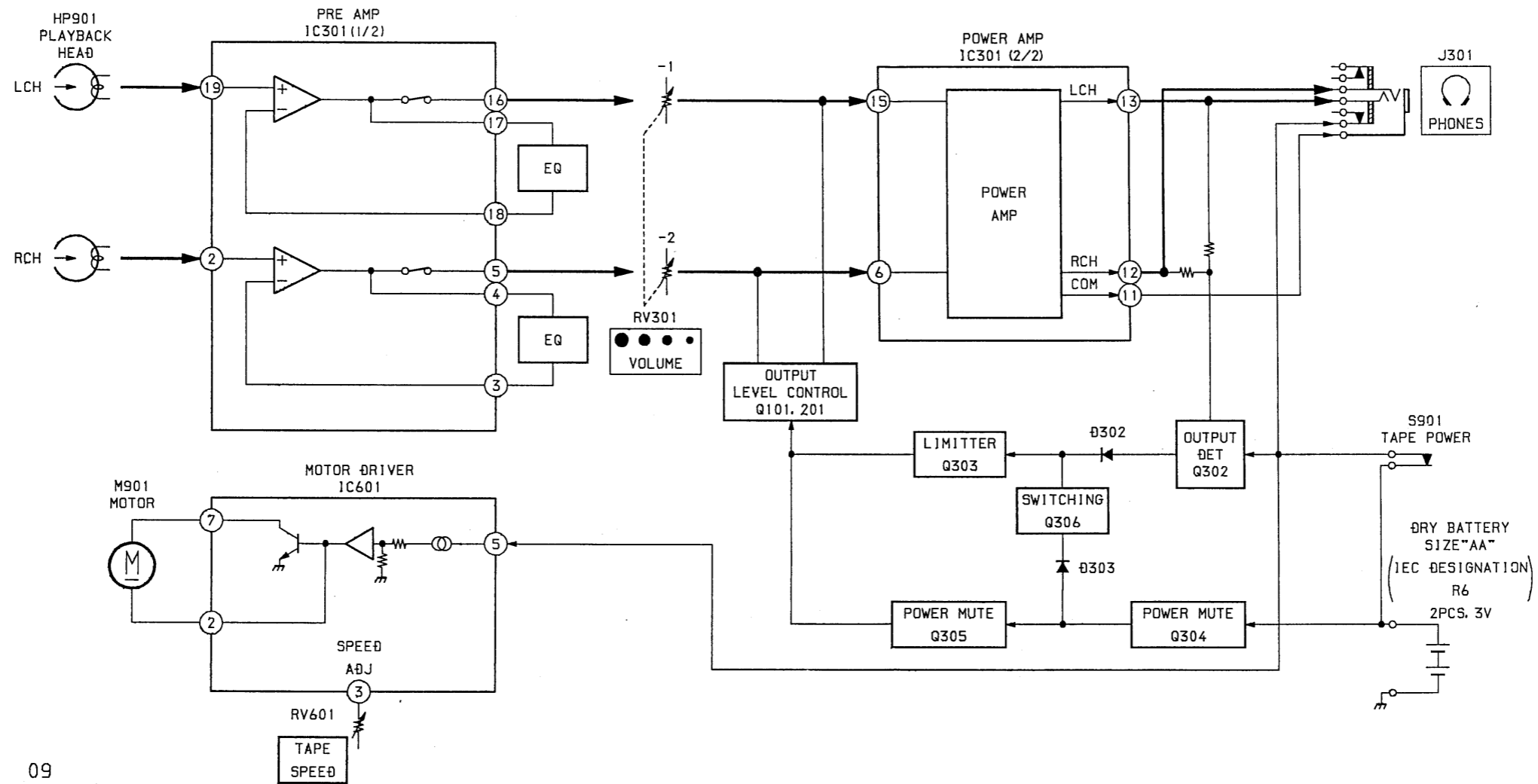
1. Play back WS-48A (tape center portion) in reverse mode. Adjust the RV601 so that the frequency counter reads 3,000Hz ± 10 Hz.

#### Adjustment Location :



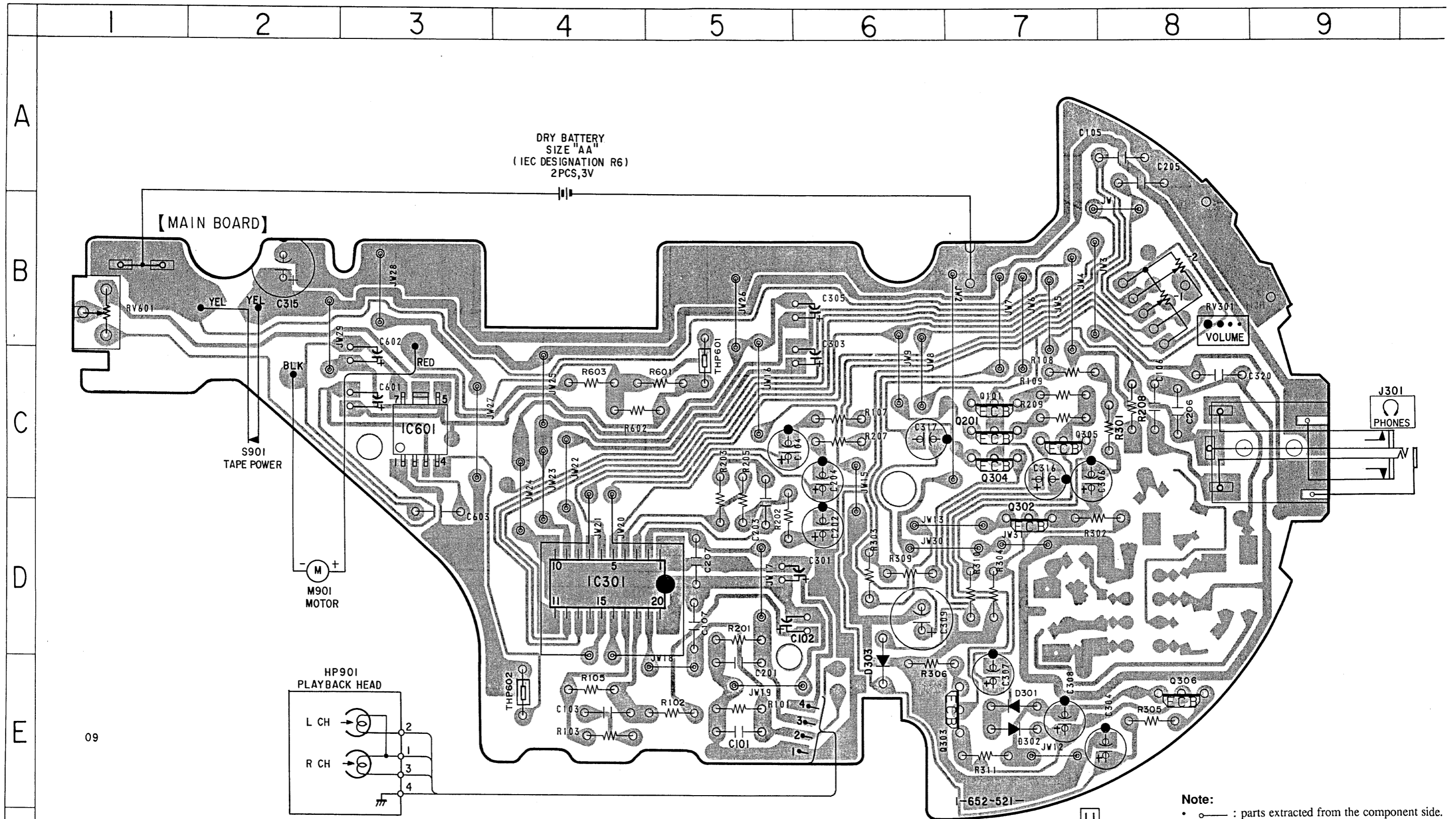
SECTION 4  
DIAGRAMS

4-1. BLOCK DIAGRAM



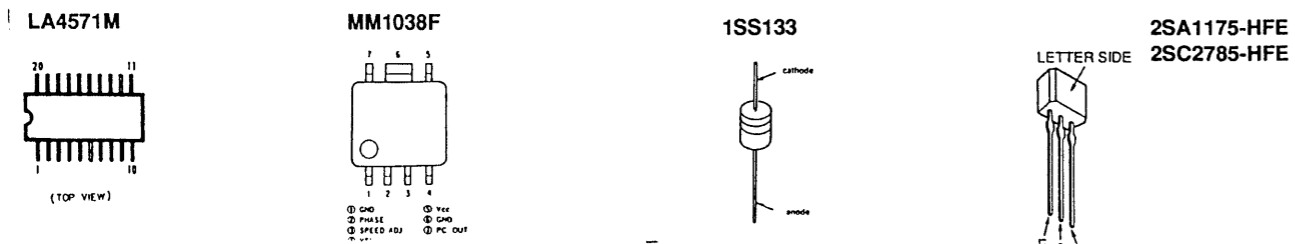
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4-2. PRINTED WIRING BOARD



**Note:**  
 • — : parts extracted from the component side.  
 • — : parts extracted from the conductor side.  
 • ■ : Pattern from the side which enable seeing.

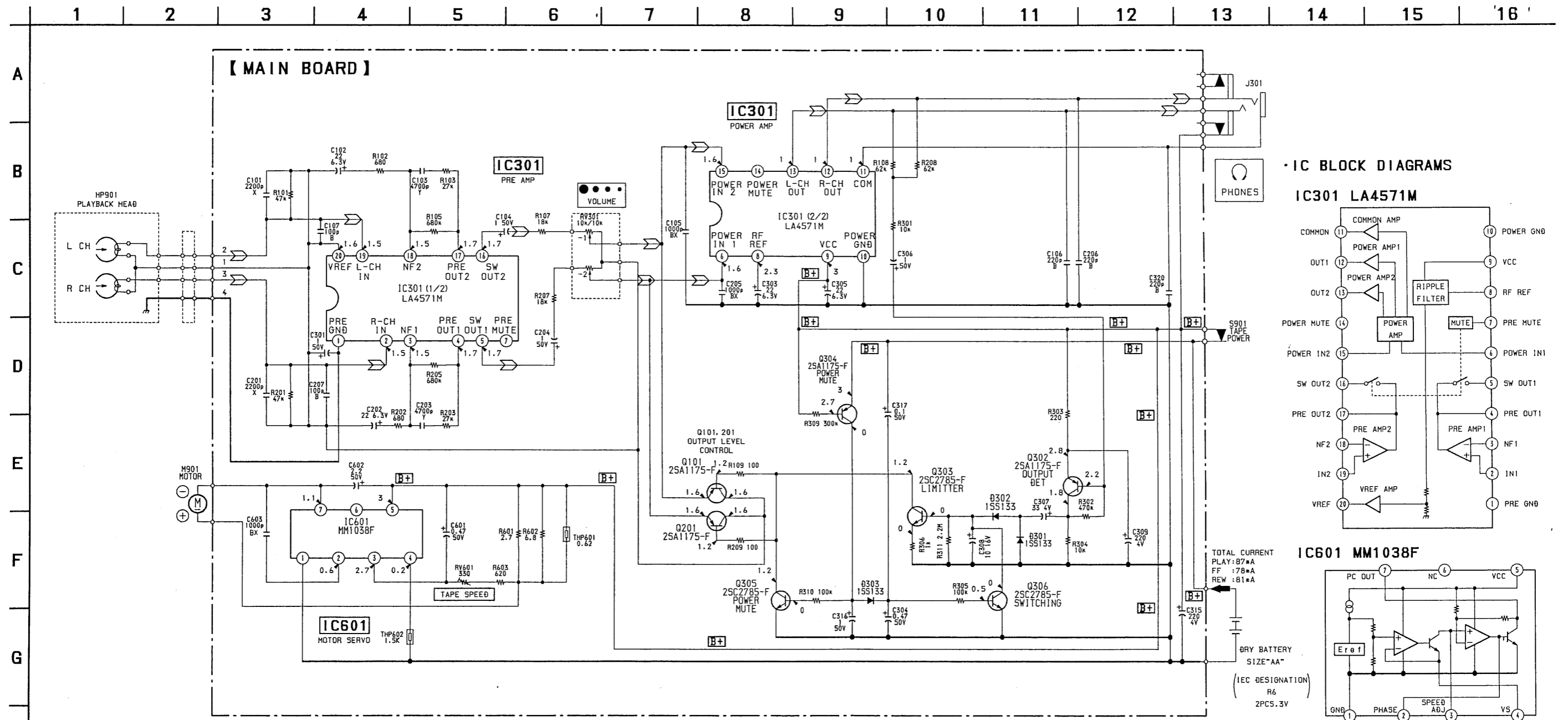
• Semiconductor Lead Layouts



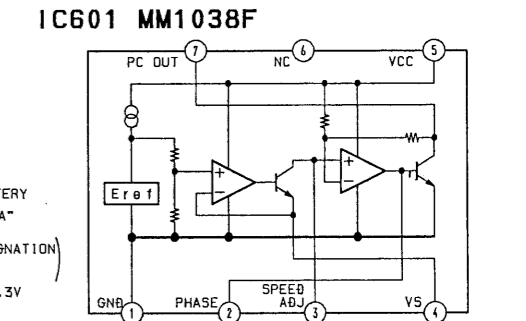
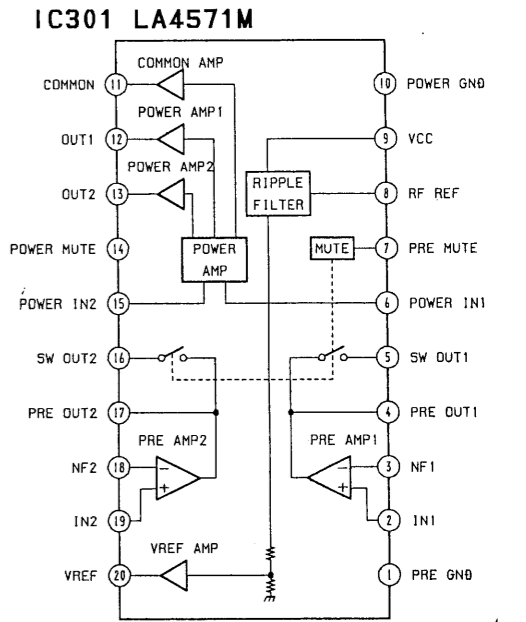
• Semiconductor Location

Ref. No.	Location	Ref. No.	Location	Ref. No.	Location	Ref. No.	Location
D301	E-7	IC301	D-4	Q201	C-7	Q305	C-7
D302	E-7	IC601	C-3	Q302	D-7	Q306	E-8
D303	E-6	Q101	C-7	Q303	E-6		
				Q304	C-7		

4-3. SCHEMATIC DIAGRAM



IC BLOCK DIAGRAMS



NOTE

- All capacitors are in  $\mu F$  unless otherwise noted. pF:  $\mu F$
- 50W or less are not indicated except for electrolytics and tantalums.
- All resistors are in  $\Omega$  and  $1/4W$  or less unless otherwise specified.
- Panel designation.
- Signal path.
- PLAY
- [B+] :B+ Line.
- [ ] :adjustment for repair.
- Power voltage is dc 3.0 V and fed with regulated dc power supply from battery terminal.
- Voltages and waveforms are dc with respect to ground in playback mode.
- Voltages are taken with a VOM (Input impedance  $10M\Omega$ ). Voltage variations may be noted due to normal production tolerances.
- Total current is measured with no cassette installed.

# SECTION 5

## EXPLODED VIEWS

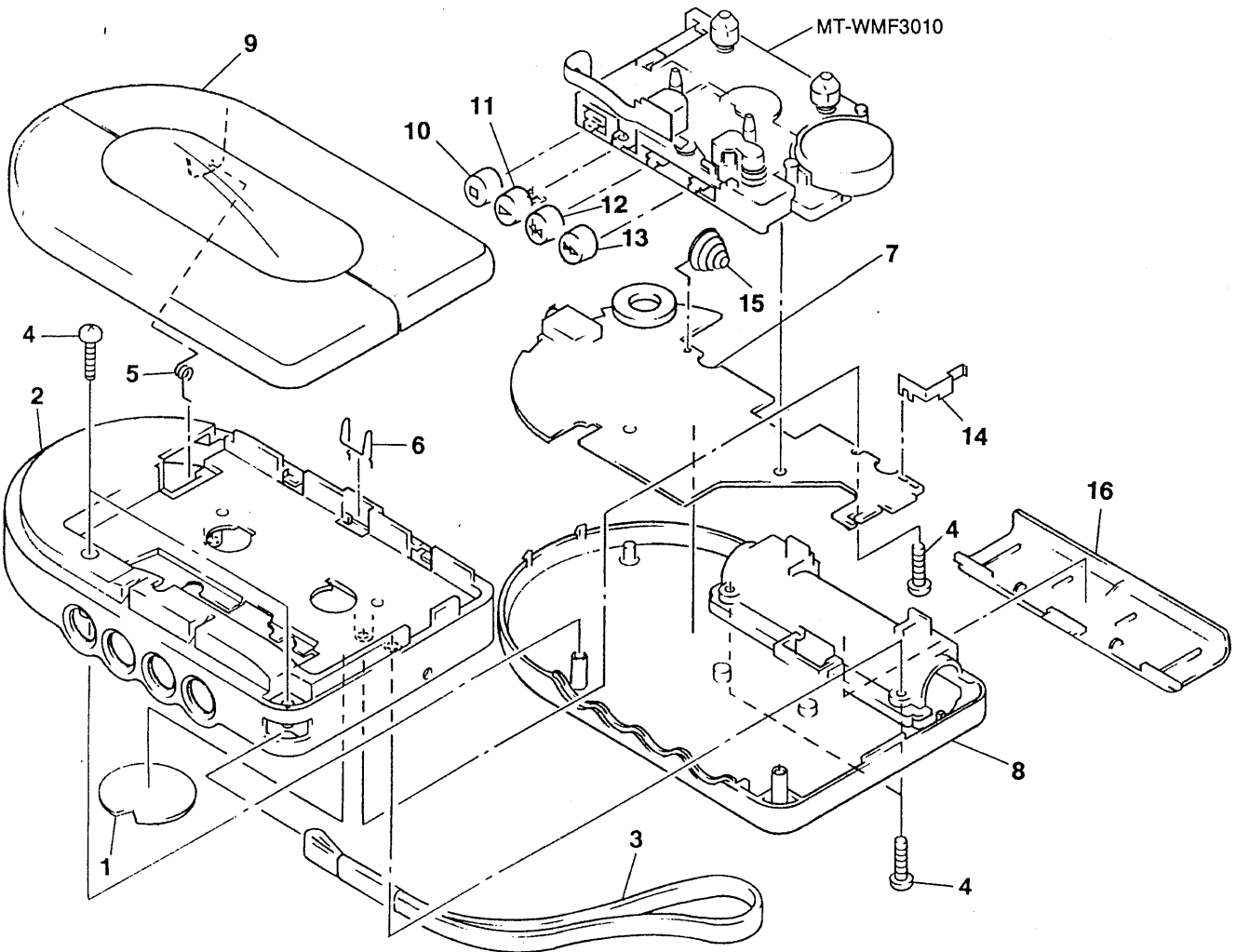
SEE ADDITIONAL  
INFORMATION

**NOTE:**

- Items marked " \* " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- Color Indication of Appearance Parts Example:  
KNOB, BALANCE (WHITE) . . . (RED)  

↑
↑  
 Parts color    Cabinet's color
- The mechanical parts with no reference number in the exploded views are not supplied.

### 5-1. CABINET SECTION



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
* 1	3-915-662-01	PLATE, SHIELD		10	3-913-291-01	BUTTON (STOP)	
2	3-913-304-01	CABINET (UPPER) (B)		11	3-913-290-01	BUTTON (PLAY)	
3	3-389-342-01	STRAP, HAND		12	3-913-293-01	BUTTON (REW)	
4	7-685-106-19	SCREW +P 2X10 TYPE2 NON-SLIT		13	3-913-292-01	BUTTON (FF)	
5	3-913-286-01	SPRING, CASSETTE UP		14	3-913-288-01	TERMINAL (+), BATTERY	
6	3-913-285-01	DETENT, CASSETTE		15	3-913-289-01	TERMINAL (-), BATTERY	
7	A-4542-206-A	MAIN BOARD, COMPLETE		16	3-913-298-01	LID, BATTERY CASE	
8	3-913-297-01	CABINET (LOWER)					
9	A-4540-307-A	HOLDER ASSY, CASSETTE					



# MAIN

## SECTION 6 ELECTRICAL PARTS LIST

**NOTE:**

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.
- Items marked "\*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- Color Indication of Appearance Parts Example:  
 KNOB, BALANCE (WHITE) . . . (RED)  
 ↑                                    ↑  
 Parts color    Cabinet's color
- CND : Canadian model
- IT : Italian model

- RESISTORS  
 All resistors are in ohms  
 METAL: Metal-film resistor  
 METAL OXIDE: Metal Oxide-film resistor  
 F : nonflammable
- SEMICONDUCTORS  
 In each case, u:  $\mu$ , for example:  
 uA...:  $\mu$  A..., uPA...:  $\mu$  PA...,  
 uPB...:  $\mu$  PB..., uPC...:  $\mu$  PC...,  
 uPD...:  $\mu$  PD...
- CAPACITORS  
 uF :  $\mu$  F
- COILS  
 uH :  $\mu$  H

Ref.No.	Part No.	Description	Remark	Ref.No.	Part No.	Description	Remark
	A-4542-206-A	MAIN BOARD, COMPLETE *****				< IC >	
	3-913-288-01	TERMINAL (+), BATTERY		IC301	8-759-821-89	IC LA4571M	
	3-913-289-01	TERMINAL (-), BATTERY		IC601	8-759-999-06	IC MM1038F	
		< CAPACITOR >				< JACK >	
				J301	1-568-748-11	JACK (☉) PHONES)	
						< TRANSISTOR >	
C101	1-161-375-00	CERAMIC	0.0022uF 20%	16V			
C102	1-126-153-11	ELECT	22uF 20%	6.3V			
C103	1-161-377-00	CERAMIC	0.0047uF 30%	16V			
C104	1-126-160-11	ELECT	1uF 20%	50V			
C105	1-162-294-31	CERAMIC	0.001uF 10%	50V			
C106	1-162-286-31	CERAMIC	220PF 10%	50V			
C107	1-162-282-31	CERAMIC	100PF 10%	50V			
C201	1-161-375-00	CERAMIC	0.0022uF 20%	16V			
C202	1-126-153-11	ELECT	22uF 20%	6.3V			
C203	1-161-377-00	CERAMIC	0.0047uF 30%	16V			
C204	1-126-160-11	ELECT	1uF 20%	50V			
C205	1-162-294-31	CERAMIC	0.001uF 10%	50V			
C206	1-162-286-31	CERAMIC	220PF 10%	50V			
C207	1-162-282-31	CERAMIC	100PF 10%	50V			
C301	1-126-160-11	ELECT	1uF 20%	50V			
C303	1-126-153-11	ELECT	22uF 20%	6.3V			
C304	1-124-465-00	ELECT	0.47uF 20%	50V			
C305	1-126-153-11	ELECT	22uF 20%	6.3V			
C306	1-126-160-11	ELECT	1uF 20%	50V			
C307	1-124-431-00	ELECT	33uF 20%	4V			
C308	1-126-157-11	ELECT	10uF 20%	16V			
C309	1-124-434-00	ELECT	220uF 20%	4V			
C315	1-124-434-00	ELECT	220uF 20%	4V			
C316	1-126-160-11	ELECT	1uF 20%	50V			
C317	1-124-463-00	ELECT	0.1uF 20%	50V			
C320	1-162-286-31	CERAMIC	220PF 10%	50V			
C601	1-124-465-00	ELECT	0.47uF 20%	50V			
C602	1-124-257-00	ELECT	2.2uF 20%	50V			
C603	1-162-294-31	CERAMIC	0.001uF 10%	50V			
		< DIODE >				< RESISTOR >	
D301	8-719-901-33	DIODE 1SS133				R101	1-247-871-11 CARBON 47K 5% 1/4W
D302	8-719-901-33	DIODE 1SS133				R102	1-247-827-11 CARBON 680 5% 1/4W F
D303	8-719-901-33	DIODE 1SS133				R103	1-249-434-11 CARBON 27K 5% 1/4W
						R105	1-247-899-11 CARBON 680K 5% 1/4W
						R107	1-249-432-11 CARBON 18K 5% 1/4W
						R108	1-247-874-11 CARBON 62K 5% 1/4W
						R109	1-247-807-31 CARBON 100 5% 1/4W
						R201	1-247-871-11 CARBON 47K 5% 1/4W
						R202	1-247-827-11 CARBON 680 5% 1/4W F
						R203	1-249-434-11 CARBON 27K 5% 1/4W
						R205	1-247-899-11 CARBON 680K 5% 1/4W
						R207	1-249-432-11 CARBON 18K 5% 1/4W
						R208	1-247-874-11 CARBON 62K 5% 1/4W
						R209	1-247-807-31 CARBON 100 5% 1/4W
						R301	1-247-855-31 CARBON 10K 5% 1/4W
						R301	1-249-429-11 CARBON 10K 5% 1/4W
						R302	1-247-895-00 CARBON 470K 5% 1/4W
						R303	1-249-409-11 CARBON 220 5% 1/4W F
						R304	1-247-855-11 CARBON 10K 5% 1/4W
						R305	1-247-879-11 CARBON 100K 5% 1/4W
						R306	1-249-417-11 CARBON 1K 5% 1/4W F
						R309	1-247-890-11 CARBON 300K 5% 1/4W
						R310	1-247-879-11 CARBON 100K 5% 1/4W
						R311	1-259-880-11 CARBON 2.2M 5% 1/4W
						R601	1-249-386-11 CARBON 2.7 5% 1/4W

<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>				<u>Remark</u>
R602	1-249-391-11	CARBON	6.8	5%	1/4W	
R603	1-247-826-00	CARBON	620	5%	1/4W	
< VARIABLE RESISTOR >						
RV301	1-238-072-11	RES, VAR, CABON 10K/10K (VOLUME)				
RV601	1-223-691-11	RES, ADJ, METAL GLAZE 330				
< THERMISTOR (POSITIVE) >						
THP601	1-810-566-11	THERMISTOR, POSITIVE 0.62				
THP602	1-810-567-11	THERMISTOR, POSITIVE 1.5K				
*****						
ACCESSORIES & PACKING MATERIALS						
*****						
	3-758-623-11	MANUAL, INSTRUCTION (ENGLISH, FRENCH, SPANISH, ITALIAN) (CND, AEP, IT)				
	3-758-623-21	MANUAL, INSTRUCTION (ENGLISH) (US, E)				
	3-758-623-41	MANUAL, INSTRUCTION (GERMAN, DUTCH, SWEDISH, PORTUGUESE) (AEP)				
*	3-911-611-01	CUSHION (UPPER)				
*	3-911-612-01	CUSHION (LOWER)				
*	3-911-613-01	INDIVIDUAL CARTON (US, E)				
*	3-911-615-01	INDIVIDUAL CARTON (AEP, IT, CND)				
	8-953-491-91	HEADPHONE MDR-007L/RK SET				



# WM-3300

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## SONY® SERVICE MANUAL

*US Model  
Canadian Model  
AEP Model  
E Model*

### SUPPLEMENT-1

File this Supplement with the Service Manual.

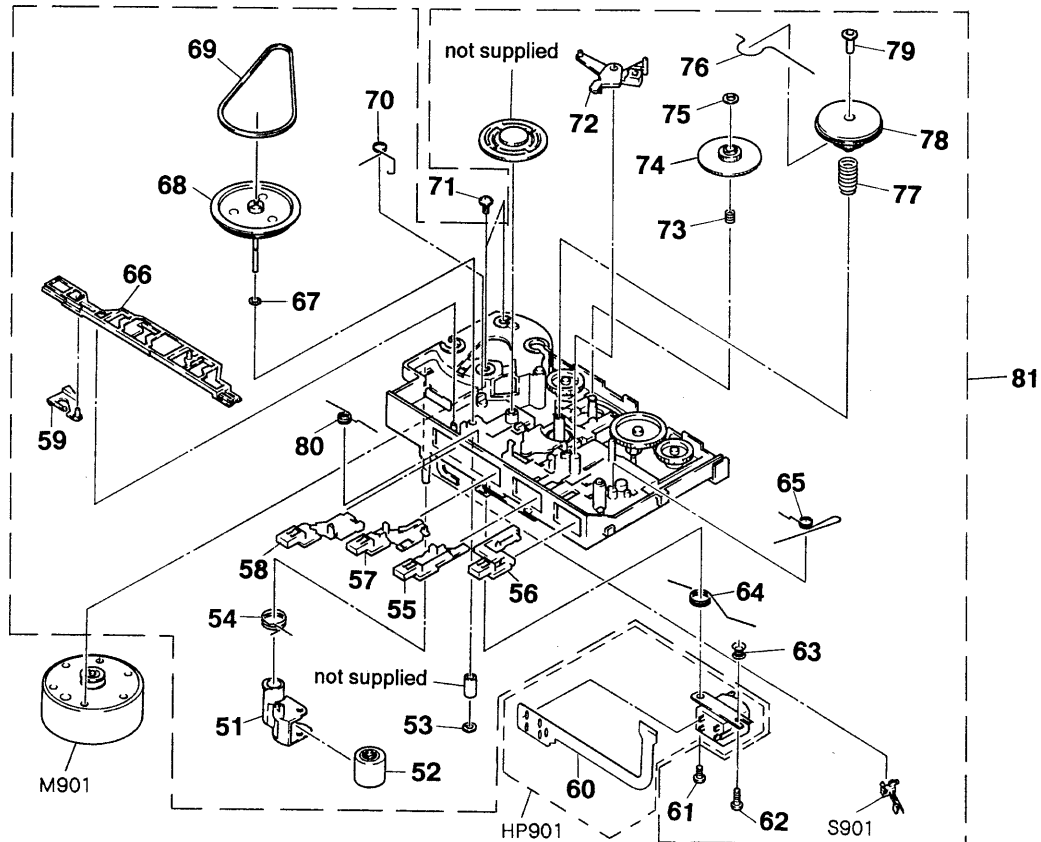
Subject :  
• Mechanism Deck Section (MT-WMF3010)

## EXPLODED VIEWS AND PARTS LIST

### NOTE:

- Items marked “ \* ” are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- -XX, -X mean standardized parts, so they may have some difference from the original one.
- The mechanical parts with no reference number in the exploded views are not supplied.

### MECHANISM DECK SECTION (MT-WMF3010)



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
51	3-381-850-01	ARM (PINCH) (F)		68	3-381-887-01	FW ASSY	
52	3-381-860-01	PINCH ROLLER		69	3-381-880-01	BELT	
53	3-381-882-01	WASHER (FWF STOPPER)		70	3-905-685-01	SPRING (CAPSTAN GROUND)	
54	3-382-340-01	SPRING		71	3-381-883-01	SCREW (MOTOR)	
55	3-905-686-01	LEVER (PLAY)		72	3-381-851-01	ARM (CANCEL) (T)	
56	3-381-852-01	LEVER (STOP)		73	3-381-868-01	SPRING (UPPER & LOWER)	
57	3-381-854-01	LEVER (REW)		74	3-381-842-01	GEAR (TU)	
58	3-381-853-01	LEVER (FF)		75	3-905-704-01	WASHER (UPPER & LOWER)	
59	3-388-295-01	ARM (SW)		76	3-381-877-01	SPRING (SENSOR)	
60	1-645-751-11	FLEXIBLE BOARD		77	3-381-867-01	SPRING (CLUTCH)	
61	3-905-687-01	SCREW (HEAD FIXED)		78	X-3365-597-1	CLUTCH ASSY	
62	3-381-884-01	SCREW (HEAD)		79	3-381-885-01	BUSHING	
63	3-381-878-01	SPRING (AZIMUTH)		80	3-381-866-01	SPRING (FR LEVER)	
64	3-905-683-01	SPRING		81	X-3367-146-1	DECK ASSY, MECHANICAL	
65	3-905-684-01	SPRING (STOP LOCK)		HP901	1-543-994-11	HEAD, MAGNETIC (RECORD/PLAYBACK)	
66	3-905-679-01	PLATE, LOCK		M901	X-3365-530-1	MOTOR ASSY	
67	3-381-881-01	WASHER (THRUST)		S901	1-692-302-11	SWITCH, LEAF (TAPE POWER)	