

WM-FS111

SERVICE MANUAL

Ver 1.0 1999.03



*US Model
Canadian Model
AEP Model
E Model*

Model Name Using Similar Mechanism	NEW
Tape Transport Mechanism Type	MF-WMFS111-114

SPECIFICATIONS

Radio Frequency	FM : 87.6 – 108 MHz (North, Central and South America) 87.5 – 108 MHz (Italy and Saudi Arabia) 65 – 107.9 MHz (Eastern Europe) 87.6 – 107.9 MHz (Other countries) AM : 530 – 1,710 kHz (North, Central and South America) 526.5 – 1,606.5 kHz (Italy and Saudi Arabia) 531 – 1,602 kHz (Other countries)
Power Requirements	3 V DC Batteries R6 (AA) × 2
Dimensions	104.0 × 122.0 × 48.7 mm (4 1/8 × 4 7/8 × 1 15/16 inches) (w/h/d) incl. projecting parts and controls
Mass	Approx. 300 g (10.6 oz) Approx. 380 g (13.5 oz) incl. batteries and a cassette
Supplied Accessories	• Stereo headphones or stereo earphones (1) • Belt clip (1)

Design and specifications are subject to change without notice.

RADIO CASSETTE PLAYER

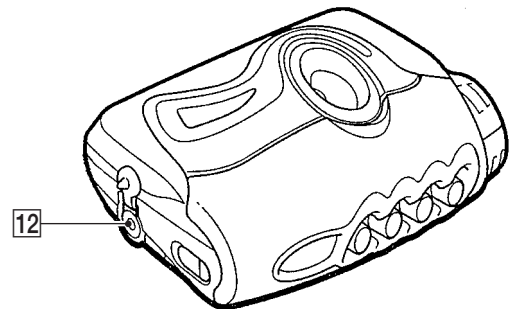
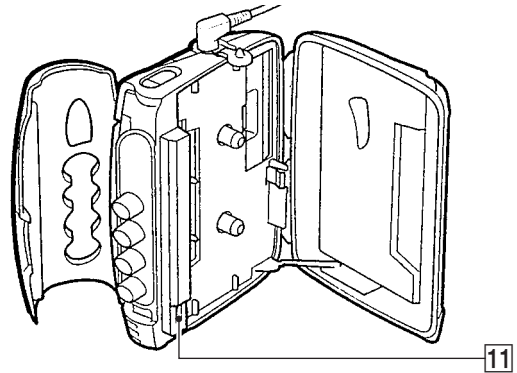
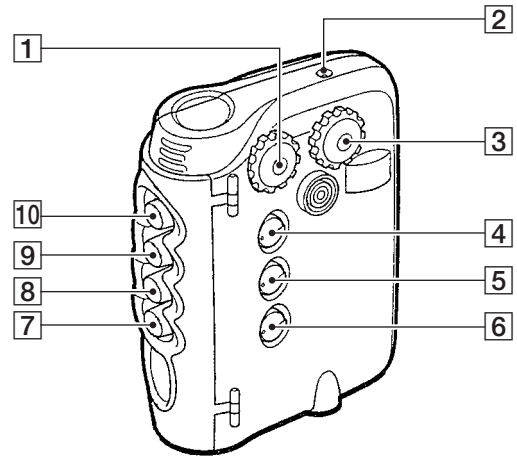
SONY®



SECTION 1 GENERAL

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- 1** ▲VOL (volume) knob
- 2** BATT (battery) lamp
- 3** TUNING knob
- 4** FUNCTION selector
- 5** AVLS selector
- 6** MEGA BASS selector
- 7** ►► REW button
- 8** ► PLAY button
- 9** ◀◀ FF button
- 10** ■ STOP button
- 11** TAPE/FM MODE switch (AEP, E Model)
TAPE/FM SENS switch (US, CND, MX Model)
- 12** Ⓞ jack

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

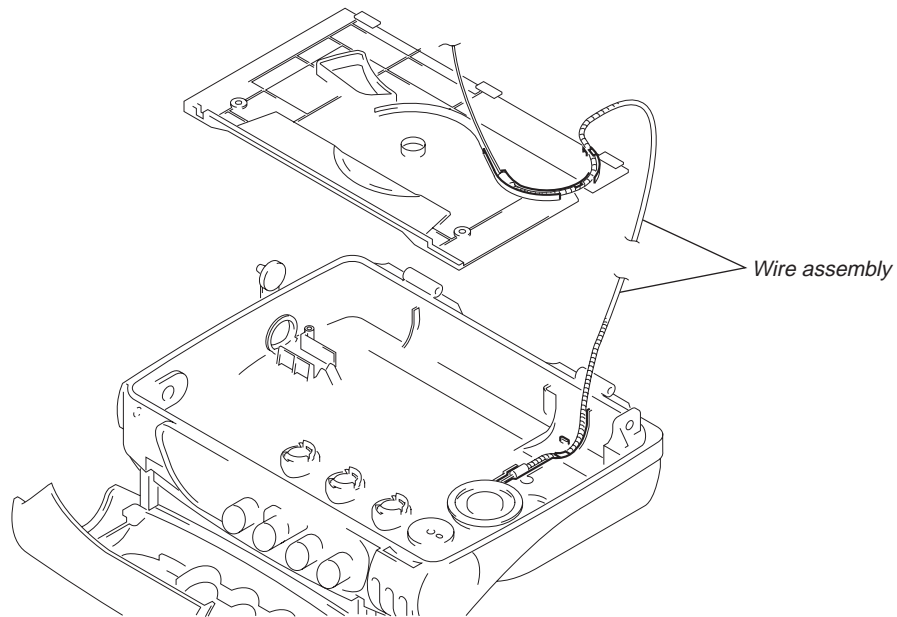
- Keep the temperature of soldering iron around 270°C during repairing.
- Do not touch the soldering iron on the same conductor of the circuit board (within 3 times).
- Be careful not to apply force on the conductor when soldering or unsoldering.

- Abbreviation
- CND : Canadian model
- MX : Mexican model

SECTION 2 SERVICE NOTE

2-1. HOW TO INSTALL THE WIRE ASSEMBLY

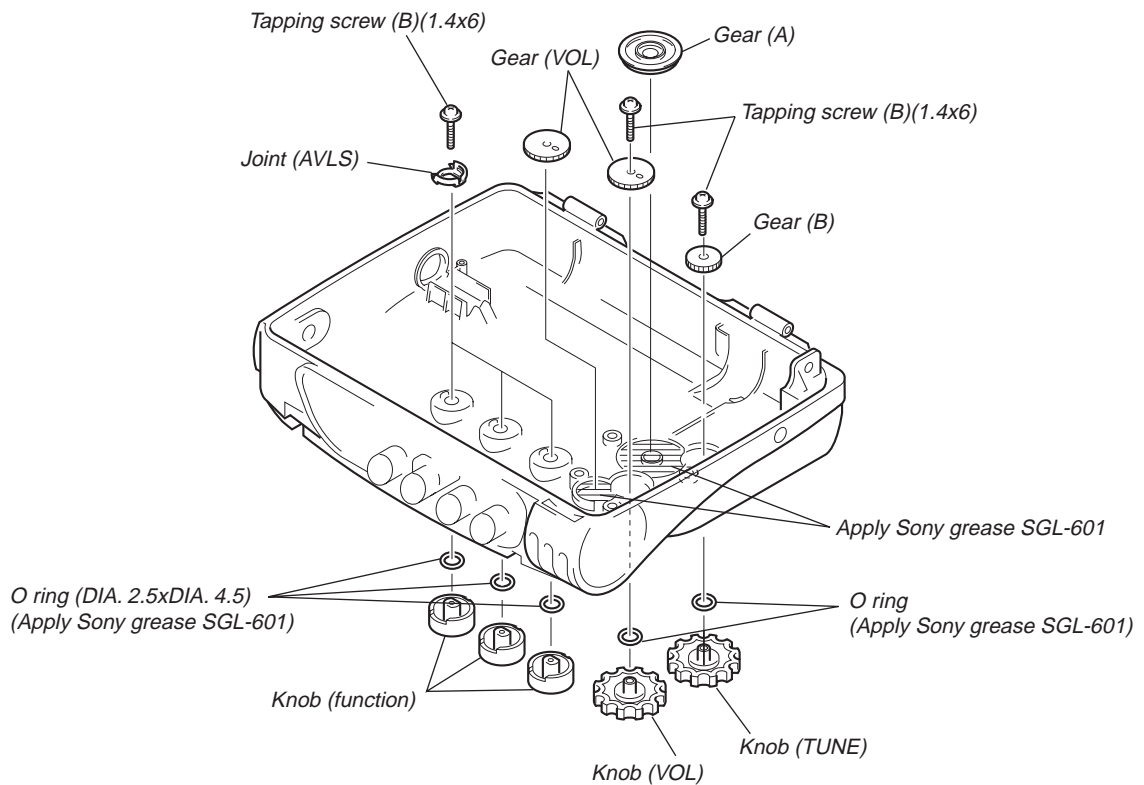
- To install the wire assembly, route the wire assembly in the correct position referring to the illustration below.



2-2. WATER PROOF SECTION

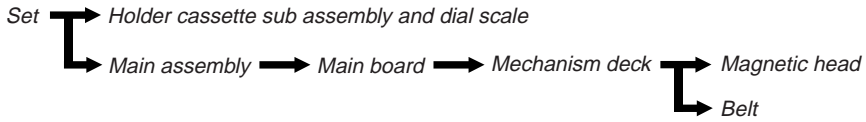
NOTE : In case the parts in the figure are removed for repair, treat them to protect from water drop following the instructions in the figure (spread grease, bond etc.)

- sony grease SGL-601 : 7-651-000-10



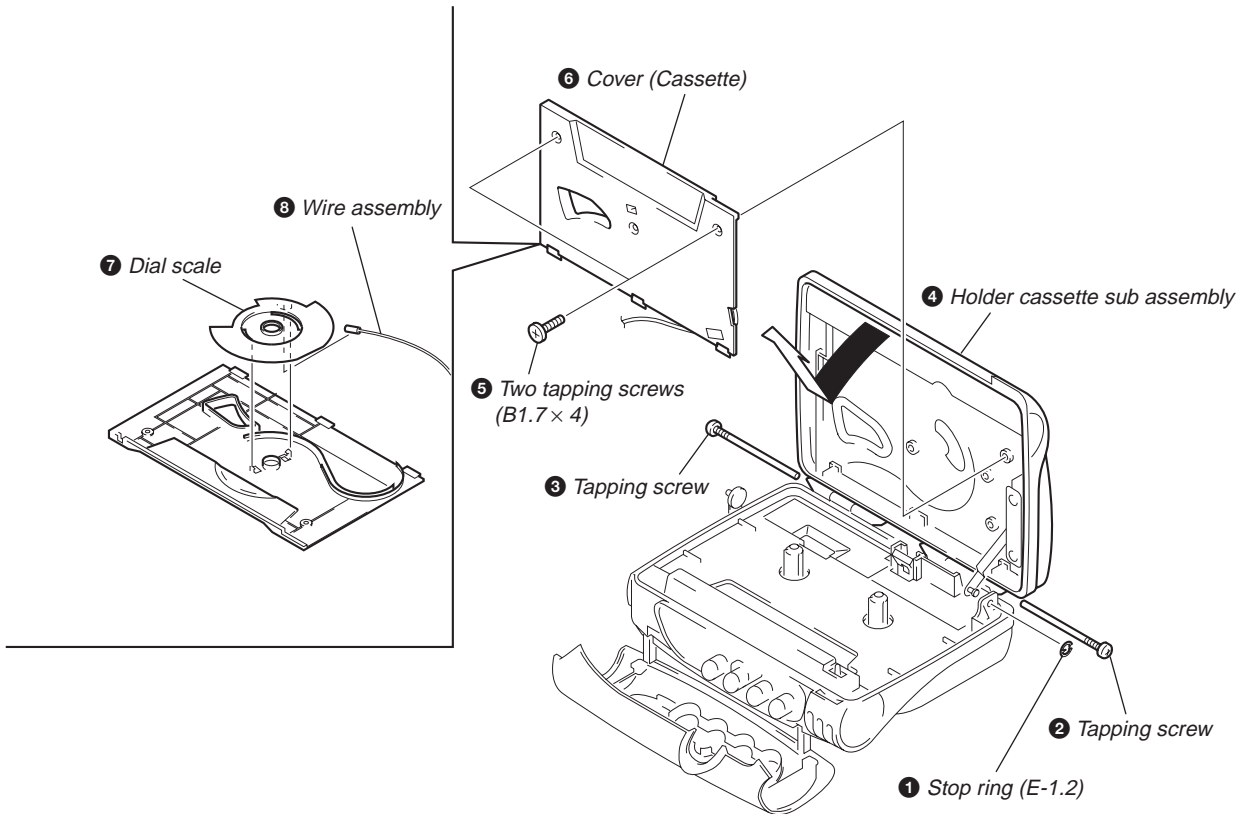
SECTION 3 DISASSEMBLY

Note : Disassemble the unit in the order as shown below.

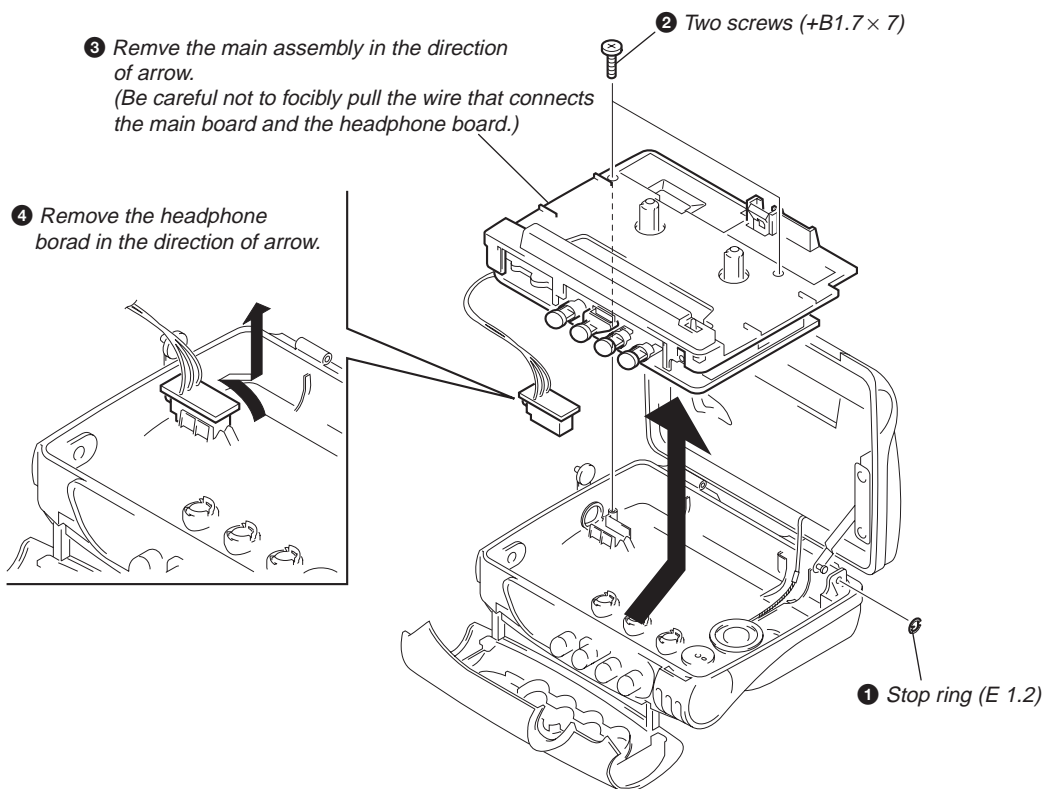


Note : Follow the disassembly procedure in the numerical order given.

3-1. HOLDER CASSETTE SUB ASSEMBLY AND DIAL SCALE

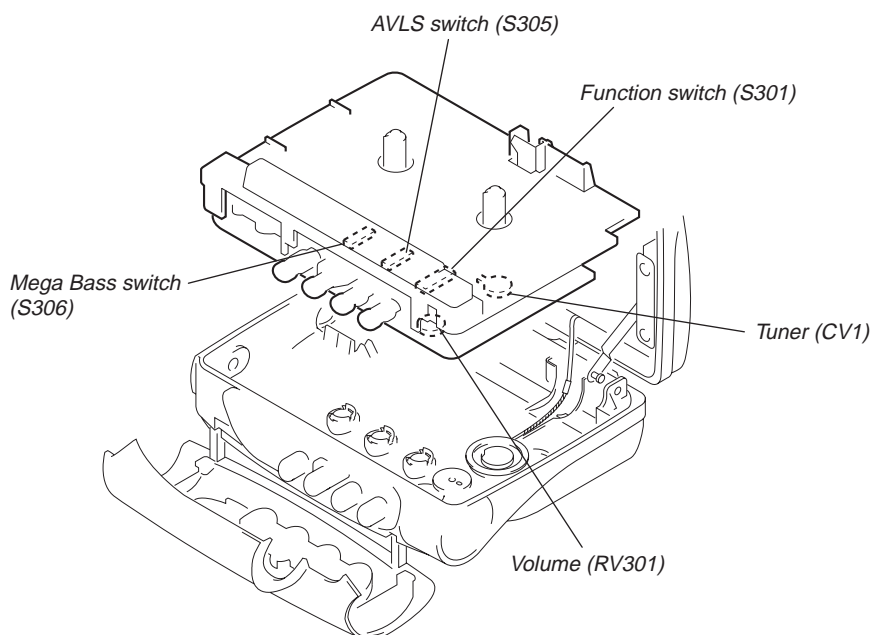


3-2. MAIN ASSEMBLY

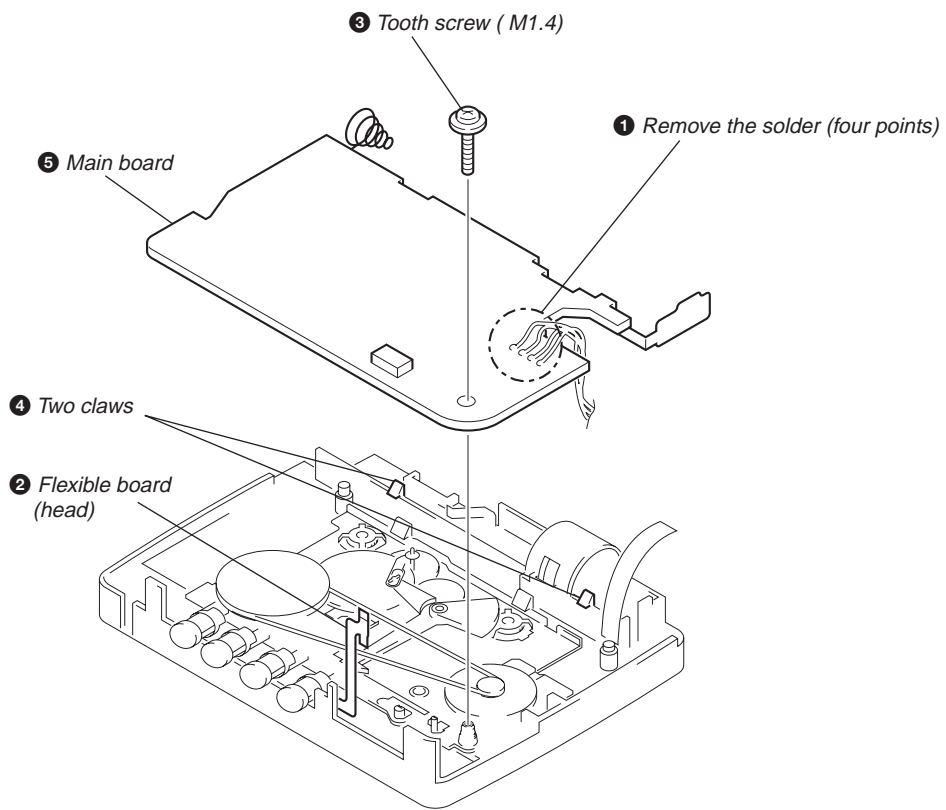


CAUTION WHEN ASSEMBLING THE MAIN ASSEMBLY

- Assemble the main assembly in a way that each switch mates with the corresponding knob each other.

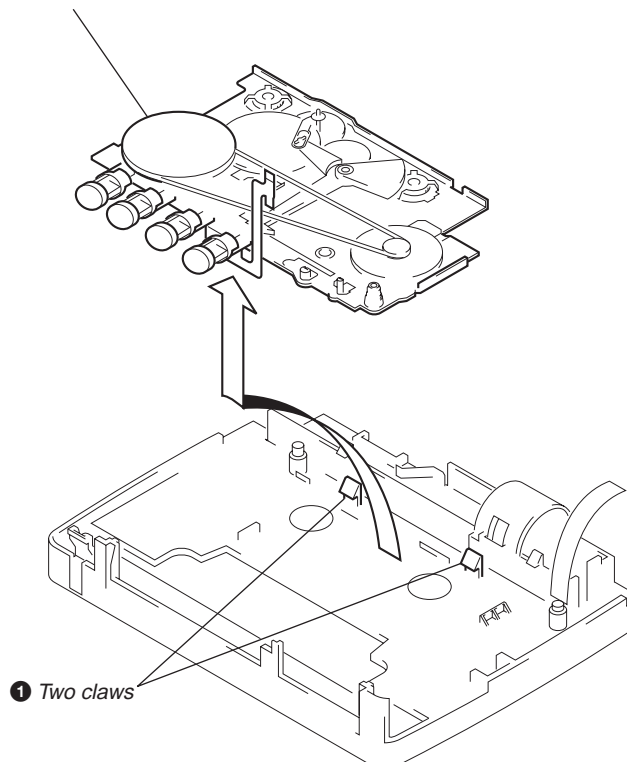


3-3. MAIN BOARD

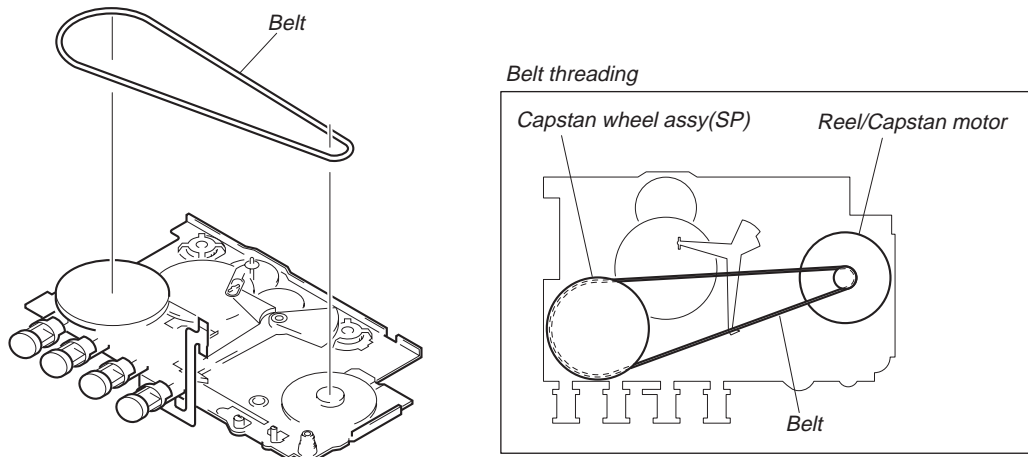


3-4. MECHANISM DECK

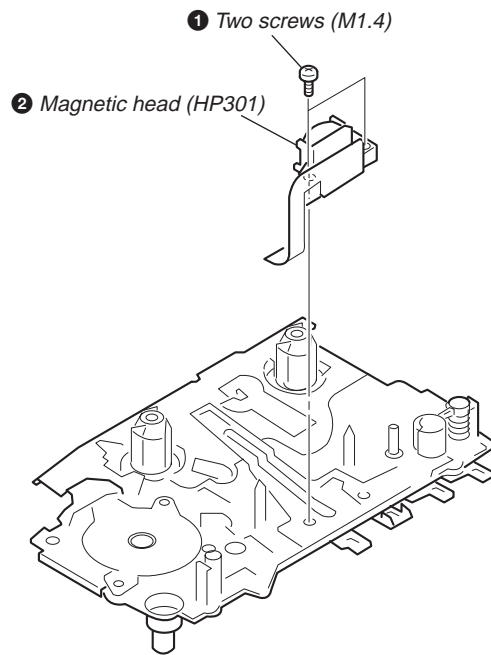
② Remove the mechanism deck in the direction of arrow.



3-5. BELT



3-6. MAGNETIC HEAD



SECTION 4 MECHANICAL ADJUSTMENT

PRECAUTION

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

playback head	pinch roller
rubber belts	capstan
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.

Torque Measurement

Mode	Torque Meter	Meter Reading
FWD	CQ-102C	20 to 42 g•cm (0.27 to 0.58 oz•inch)
FWD Back Tension	CQ-102C	More than 2.0g•cm (More than 0.027 oz•inch)
FF, REW	CQ-201B	More than 50 g•cm (More than 0.69 oz•inch)

SECTION 5 ELECTRICAL ADJUSTMENT

TAPE SECTION

0dB=0.775V

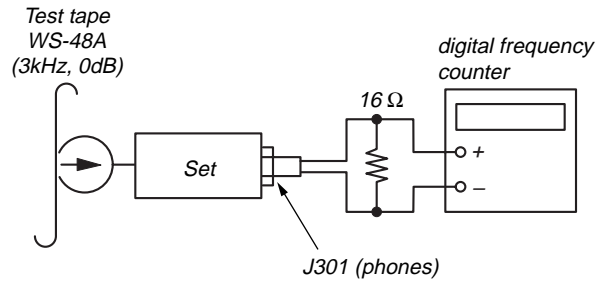
Test Tape

Tape	Signal	Used for
WS-48A	3 kHz, 0 dB	Tape speed adjustment

Tape Speed Adjustment

Procedure:

Mode: Playback



Adjustment Value: normal tape speed

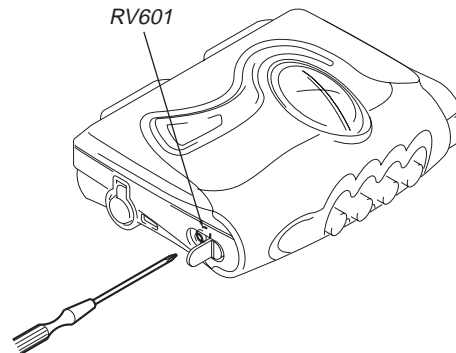
Adjust the tape speed adjustment RV601, so that the frequency counter reading becomes 2,985Hz.

Specification Value:

Digital frequency counter
2,970 to 3,000Hz

Frequency difference between the beginning and the end of the tape should be within 1.5% (45Hz).

Adjustment Location:

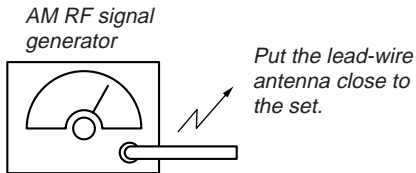


TUNER SECTION

0 dB = 1 μ V

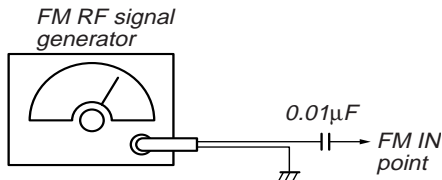
- Switch Location
 VOLUME : MAX
 MEGA BASS : OFF
 AVLS : NORMAL

[AM]
 BAND: AM
 Signal generator

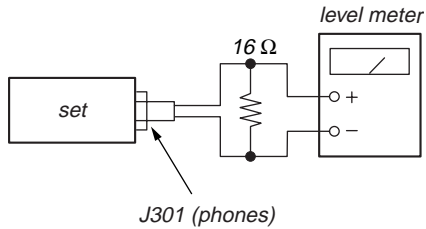


30% amplitude modulation by 400Hz signal.
 Output level : as low as possible

[FM]
 BAND : FM
 Signal generator



75kHz(100%) amplitude modulation by 1kHz signal.
 Output level: as low as possible



- Repeat the procedures in each adjustment several times for the maximum level meter indication.
- The frequency coverage and tracking adjustments should be finally done by the trimmer capacitors.

AM IF ADJUSTMENT	
Adjust for a maximum reading on level meter.	
T1	455kHz

AM TRACKING ADJUSTMENT	
Adjust for a maximum reading on level meter.	
L1	620kHz
CT1	1,400kHz

AM FREQUENCY COVERAGE ADJUSTMENT	
Adjust for a maximum reading on level meter.	
L4	520kHz
CT4	1,750kHz[1,680kHz]

FM TRACKING ADJUSTMENT	
Adjust for a maximum reading on level meter.	
L2	86.5MHz
CT2	109.5MHz

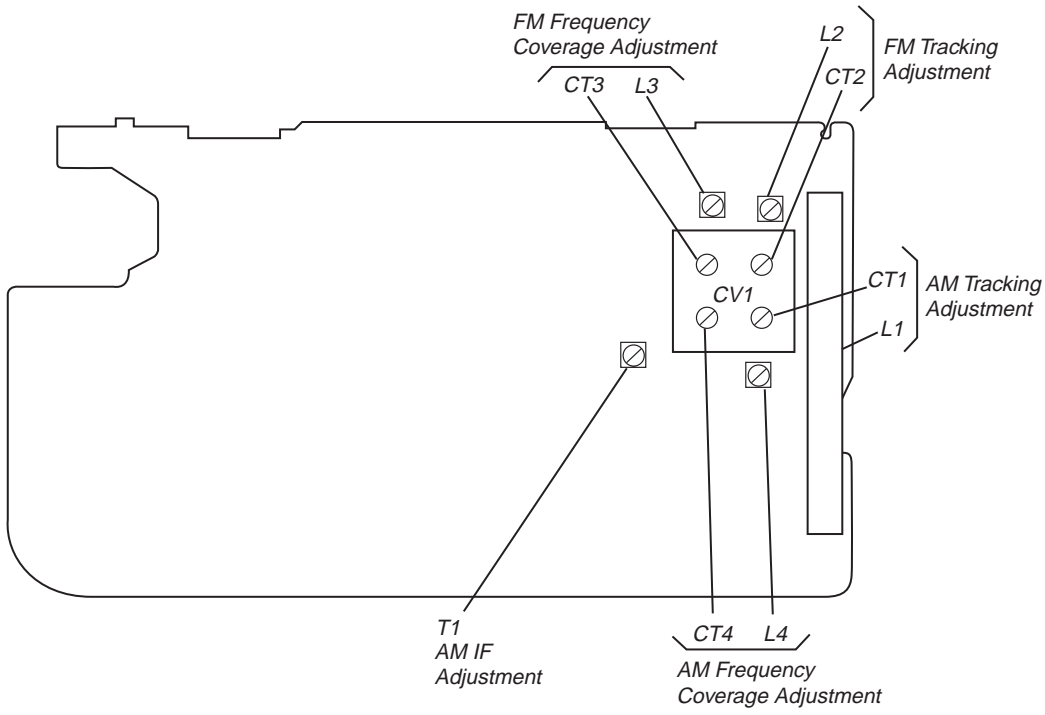
FM FREQUENCY COVERAGE ADJUSTMENT	
Adjust for a maximum reading on level meter.	
L3	86.5MHz
CT3	109.5MHz

[] : AEP, E Model

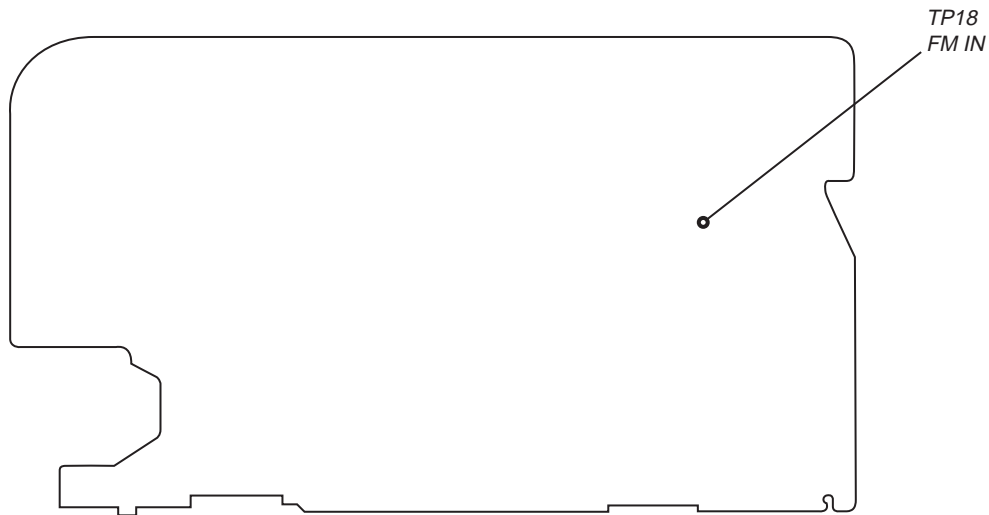
Adjustment Location: Main board (See page 10)

[MAIN BOARD]

— Component side —

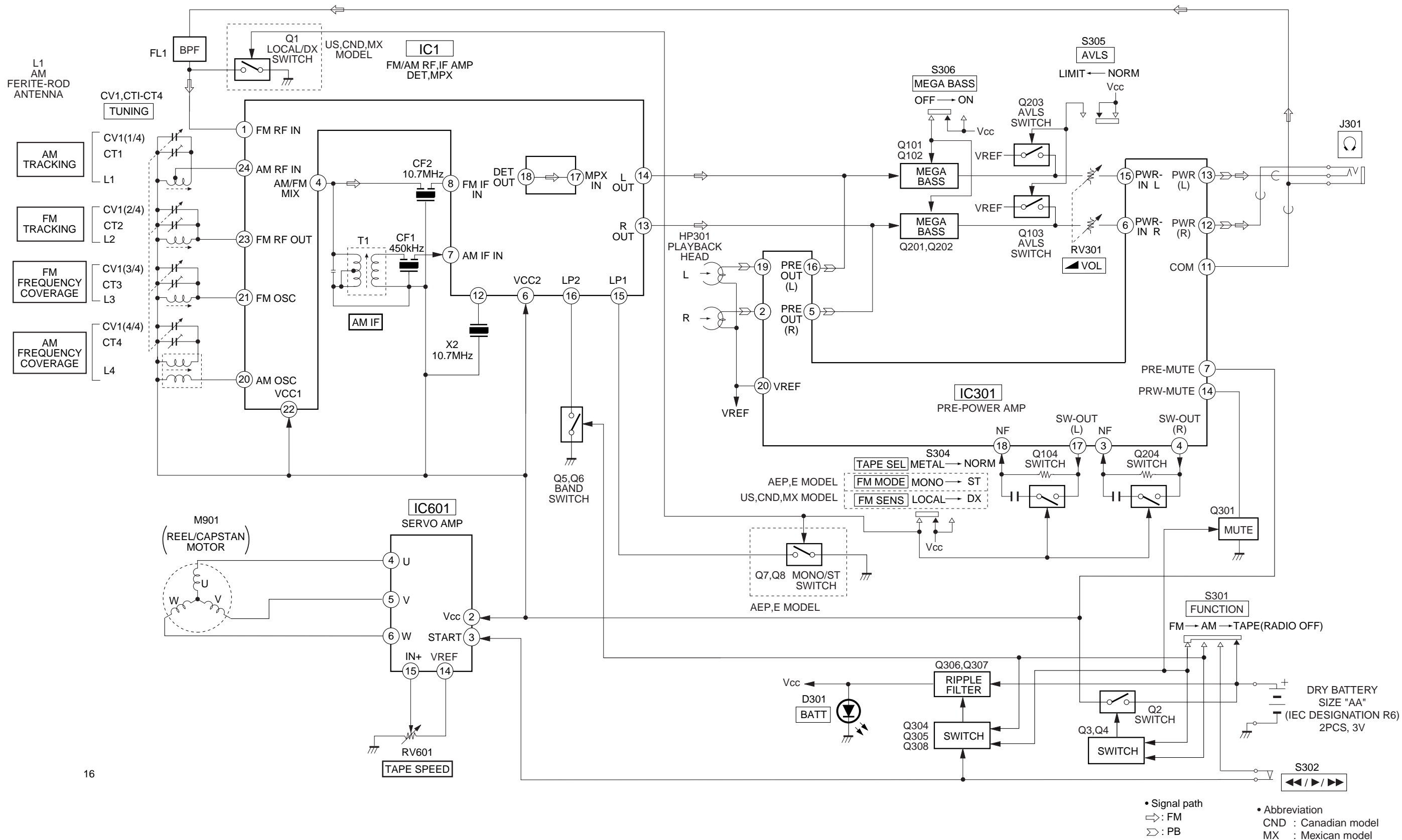


— Conductor side —

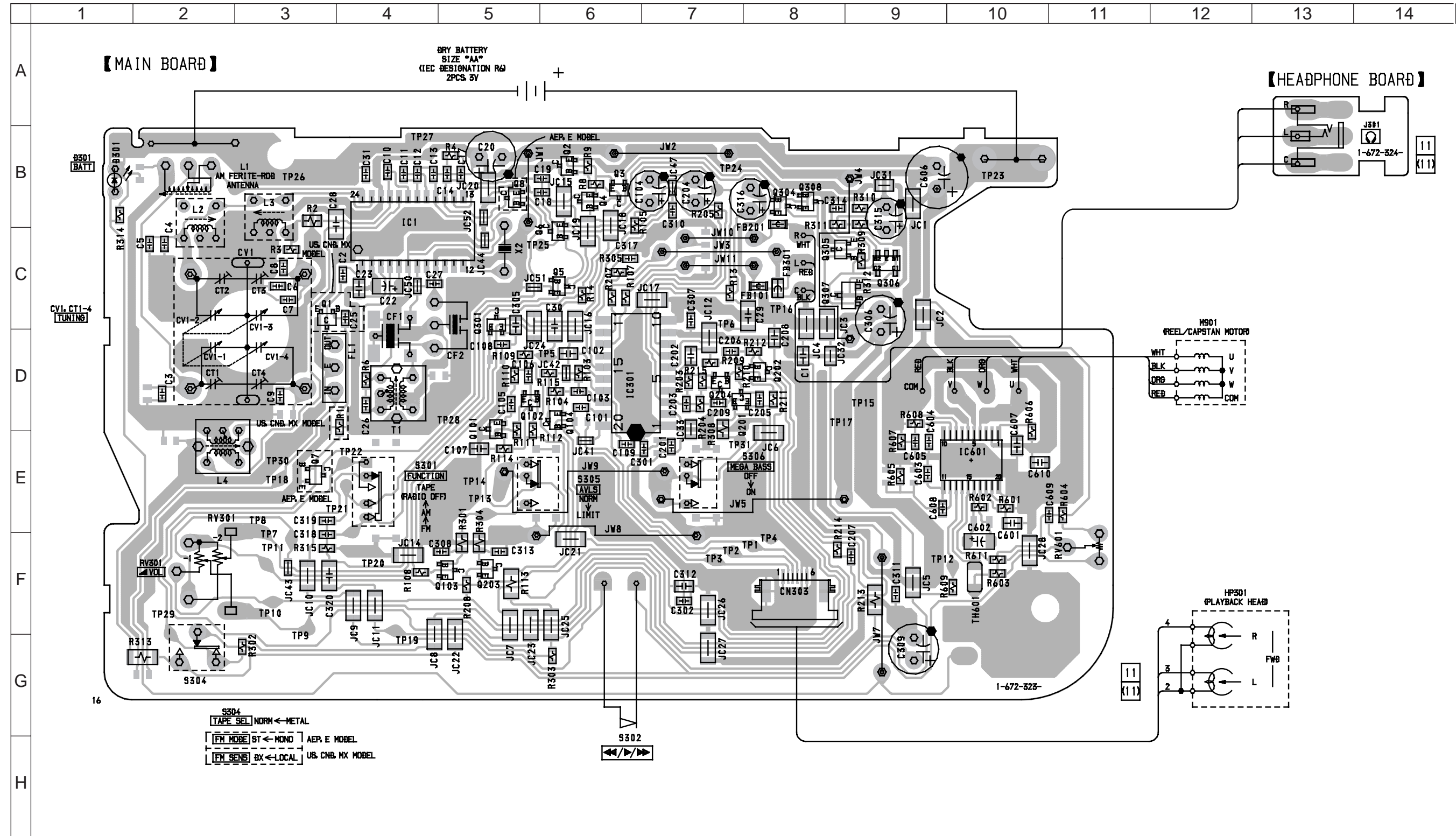


SECTION 6
DIAGRAMS

6-1. BLOCK DIAGRAM



6-2. PRINTED WIRING BOARD



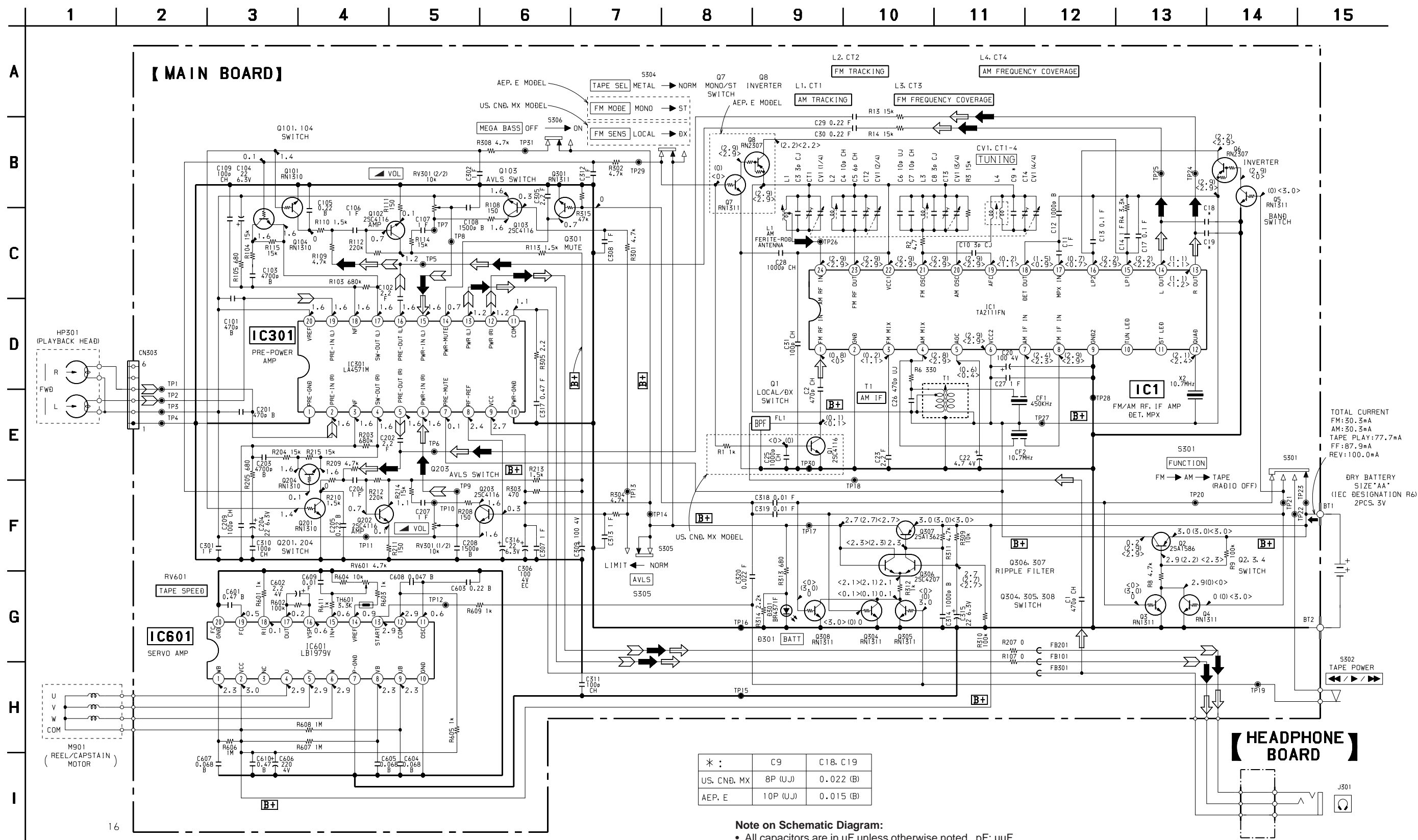
• Semiconductor Location

Ref. No.	Location	Ref. No.	Location	Ref. No.	Location
D301	B-1	Q6	C-6	Q301	C-5
IC1	B-4	Q7	E-3	Q304	B-8
IC301	D-6	Q8	B-5	Q305	C-8
IC601	E-10	Q101	D-5	Q306	C-9
Q1	C-3	Q102	D-5	Q307	C-7
Q2	B-6	Q103	F-5	Q308	B-8
Q3	B-6	Q104	D-6		
Q4	B-6	Q201	D-7		
Q5	C-6	Q202	D-8		
		Q203	F-5		
		Q204	D-7		

Note on Printed Wiring Board:

- : parts extracted from the component side.
- : parts extracted from the conductor side.
- ▨ : Pattern from the side which enables seeing.
- Abbreviation
CND : Canadian model
MX : Mexican model

6-3. SCHEMATIC DIAGRAM



TOTAL CURRENT
 FM: 30.3mA
 AM: 30.3mA
 TAPE PLAY: 77.7mA
 FF: 87.9mA
 REV: 100.0mA

DRY BATTERY
 SIZE "AA"
 (IEC DESIGNATION R6)
 2PCS. 3V

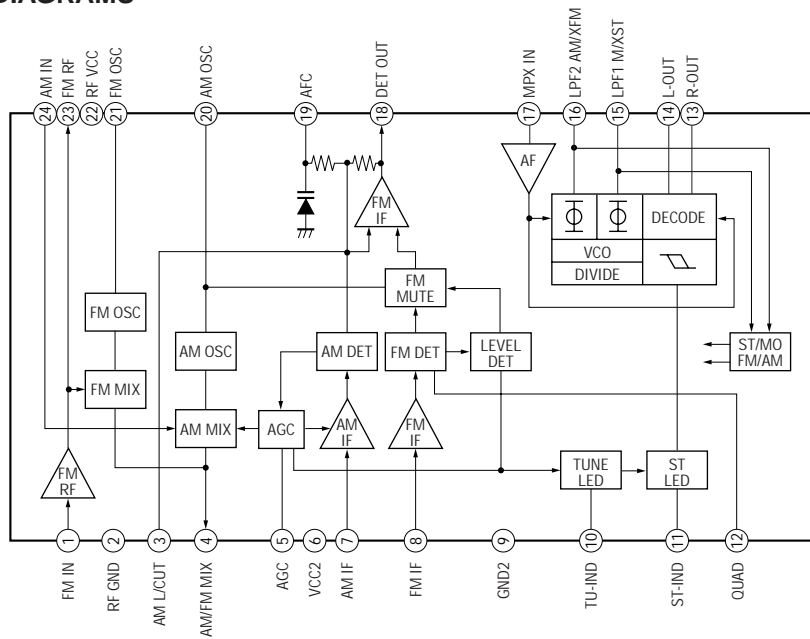
*	C9	C18, C19
US. CND. MX	8P (UJ)	0.022 (B)
AEP. E	10P (UJ)	0.015 (B)

Note on Schematic Diagram:

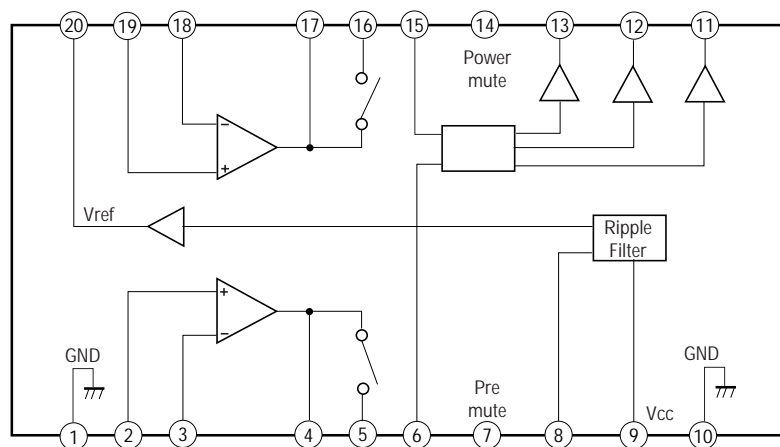
- All capacitors are in μF unless otherwise noted. pF : μpF 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and $1/4\text{W}$ or less unless otherwise specified.
- : panel designation.
- B+: B+ Line.
- : adjustment for repair.
- Power voltage is dc 3V and fed with regulated dc power supply from battery terminal.
- Voltages are dc with respect to ground under no-signal (detuned) conditions.
- no mark: PB
- (): FM
- < >: AM
- Voltages are taken with a VOM (Input impedance 10M Ω). Voltage variations may be noted due to normal production tolerances.
- Signal path.
- : FM
- : AM
- : PB
- Abbreviation
- CND: Canadian model
- MX: Mexican model

6-4. IC BLOCK DIAGRAMS

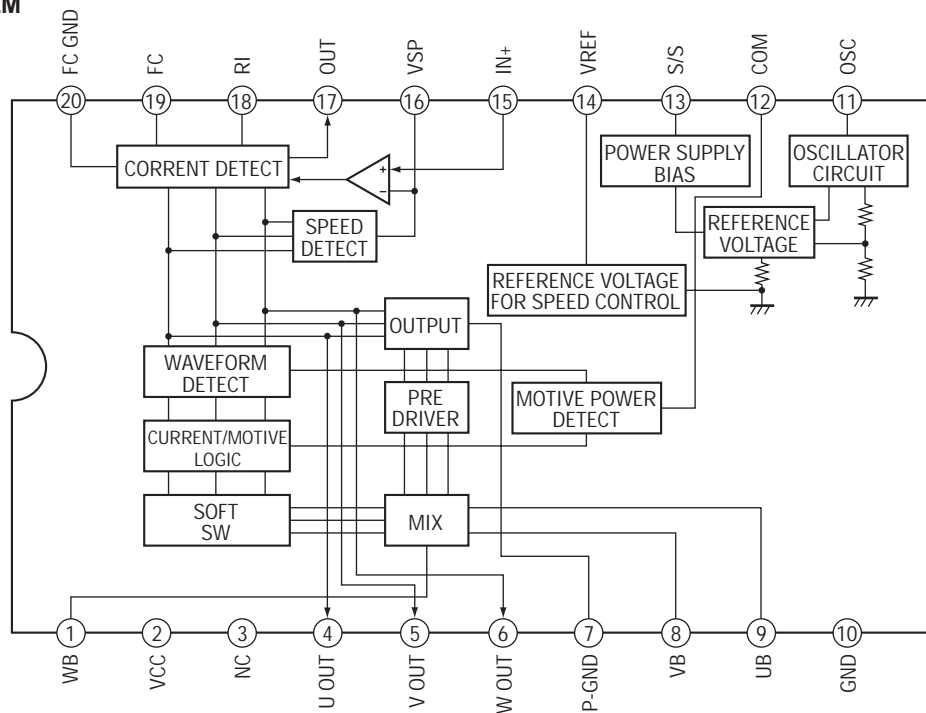
IC1 TA2111F-(EL)



IC301 LA4571M-T1



IC601 LB1979V-TLM



SECTION 7 EXPLODED VIEWS

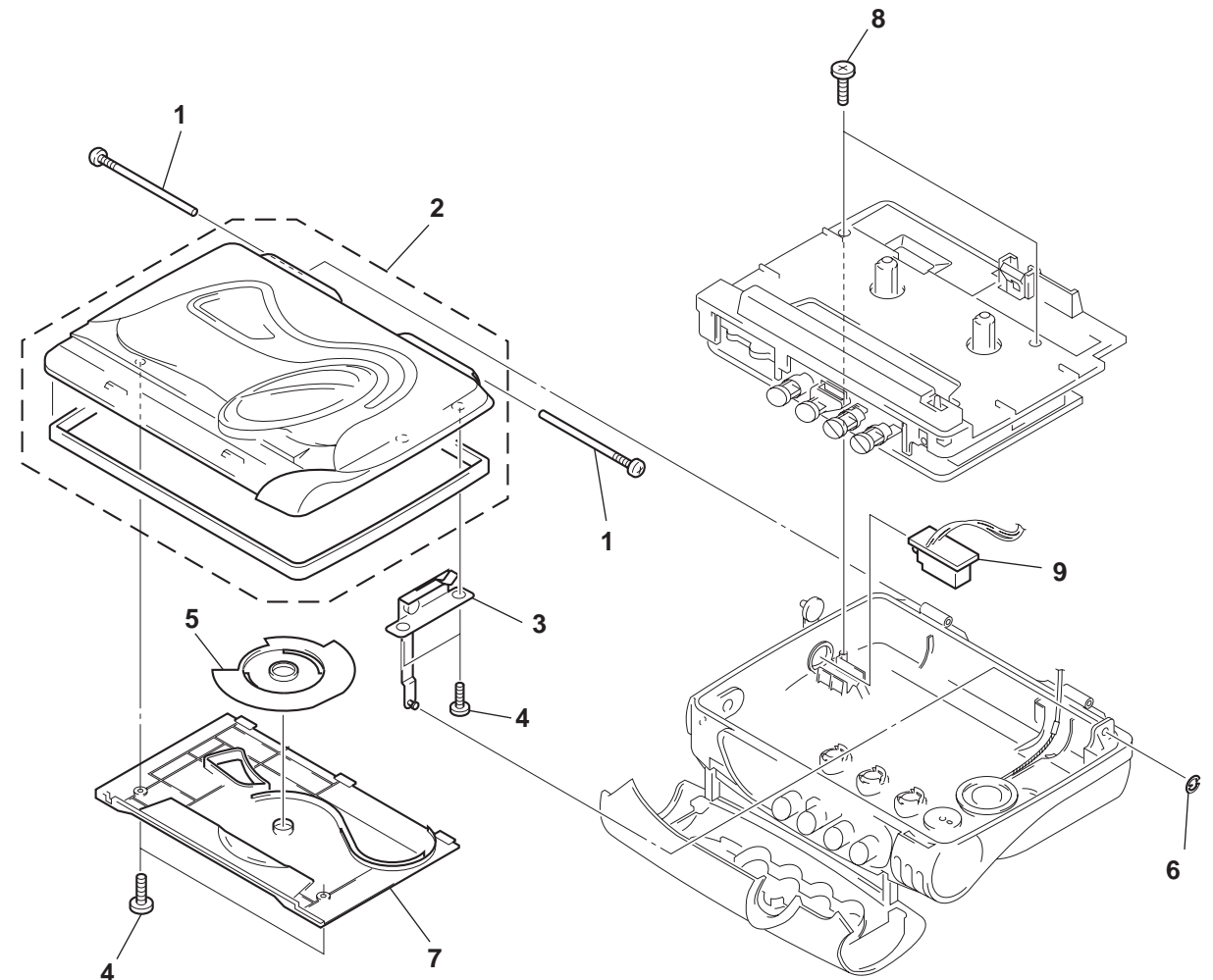
NOTE:

- XX, -X mean standardized parts, so they may have some differences 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.
- Color Indication of Appearance Parts Example: KNOB, BALANCE (WHITE) ← Cabinet's Color

- The mechanical parts with no reference number in the exploded views are not supplied.
- Abbreviation
CND : Canadian model
MX : Mexican model

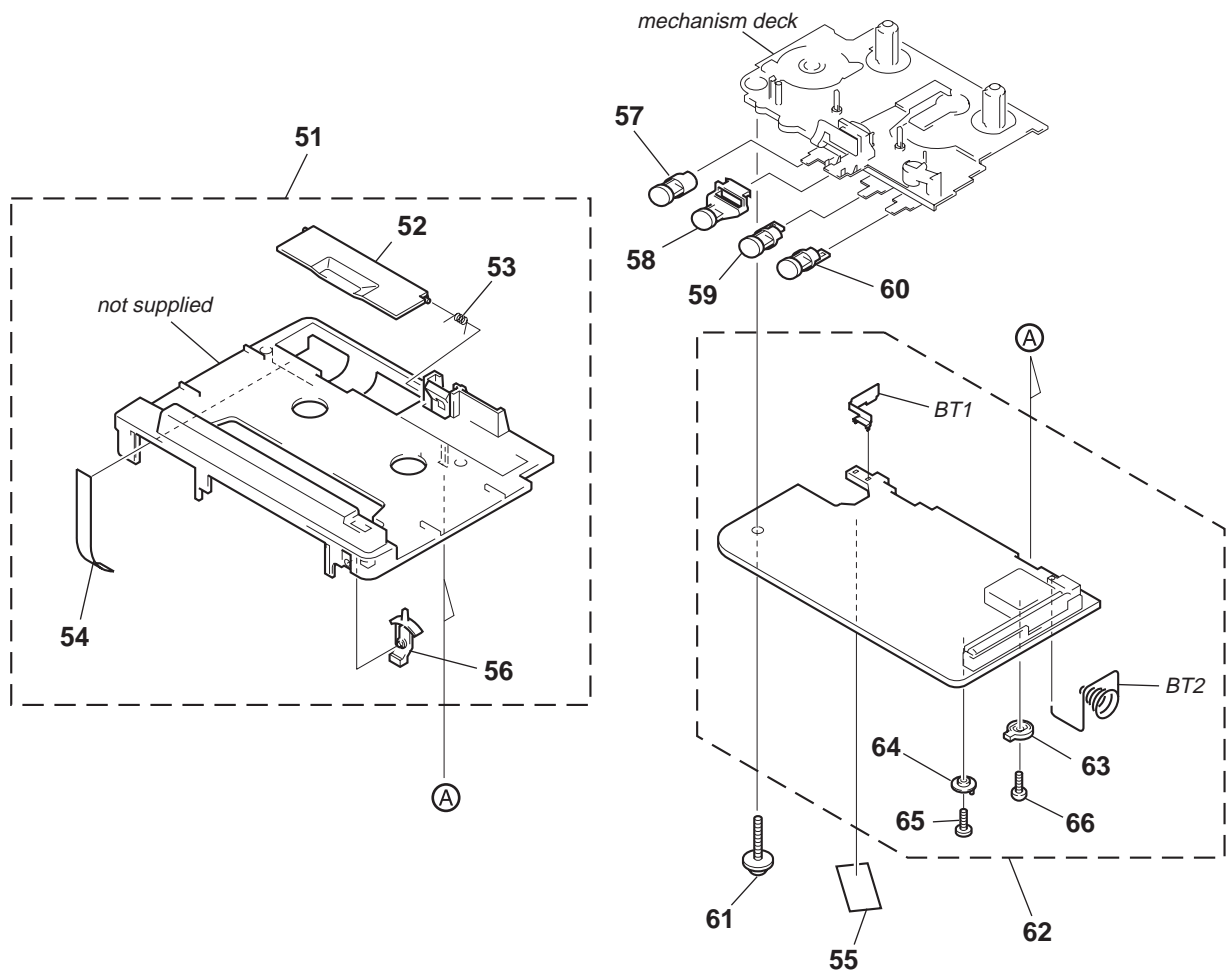
When indicating parts by reference number, please include the board name.

7-1. HOLDER CASSETTE ASSY SECTION



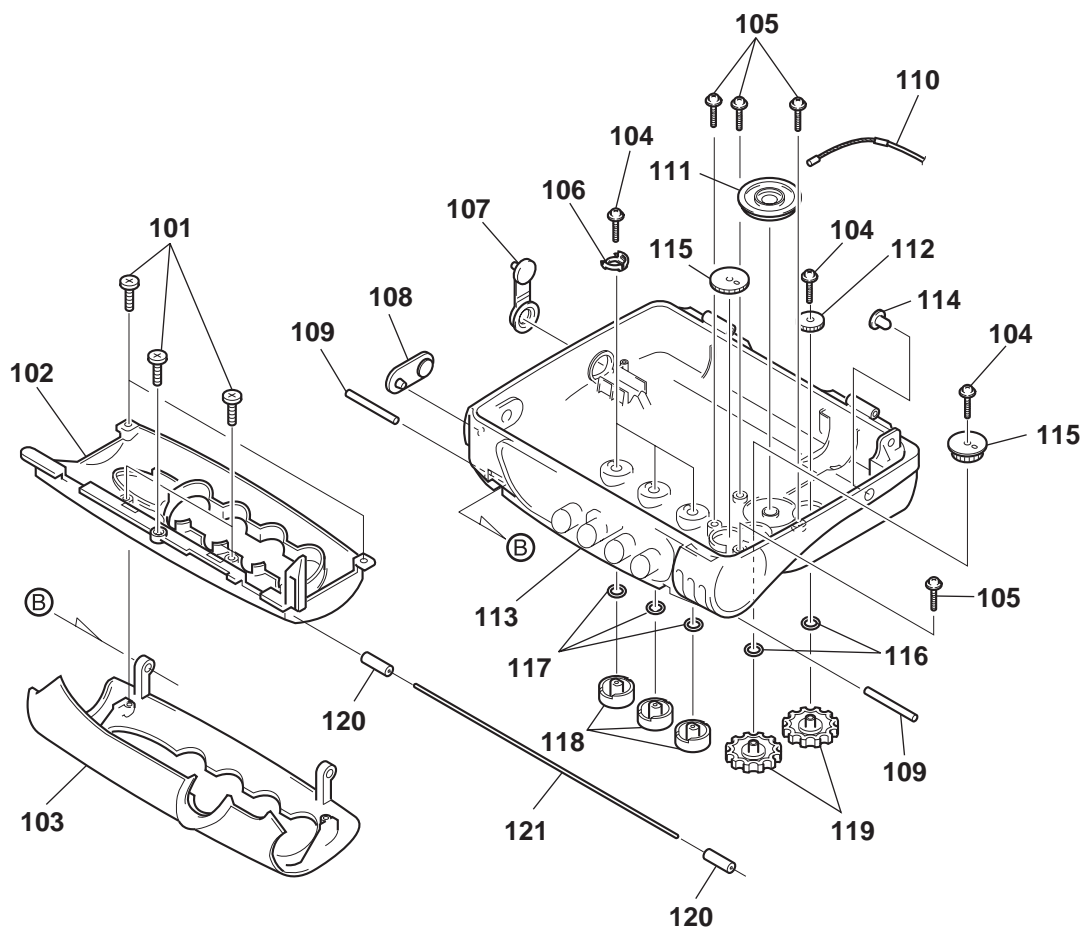
Ref. No.	Part No.	Description	Remarks	Ref. No.	Part No.	Description	Remarks
1	3-386-373-01	SCREW, TAPPING		5	3-032-167-01	SCALE, DIAL (US,CND,MX)	
2	X-3377-167-1	CASSETTE SUB ASSY, HOLDER (YELLOW)		5	3-032-167-11	SCALE, DIAL (AEP,E)	
2	X-3377-168-1	CASSETTE SUB ASSY, HOLDER (BLACK) (CND)		6	7-624-101-04	STOP RING 1.2 (E TYPE)	
2	X-3377-169-1	CASSETTE SUB ASSY, HOLDER (BLUE) (CND)		7	3-032-144-01	COVER(CASSETTE)	
3	X-3369-989-1	ARM ASSY		8	3-318-203-82	SCREW(B1.7 × 7), TAPPING	
4	3-318-203-62	SCREW(B1.7 × 4), TAPPING		* 9	1-672-324-11	HEADPHONE BOARD	

7-2. MAIN BOARD SECTION



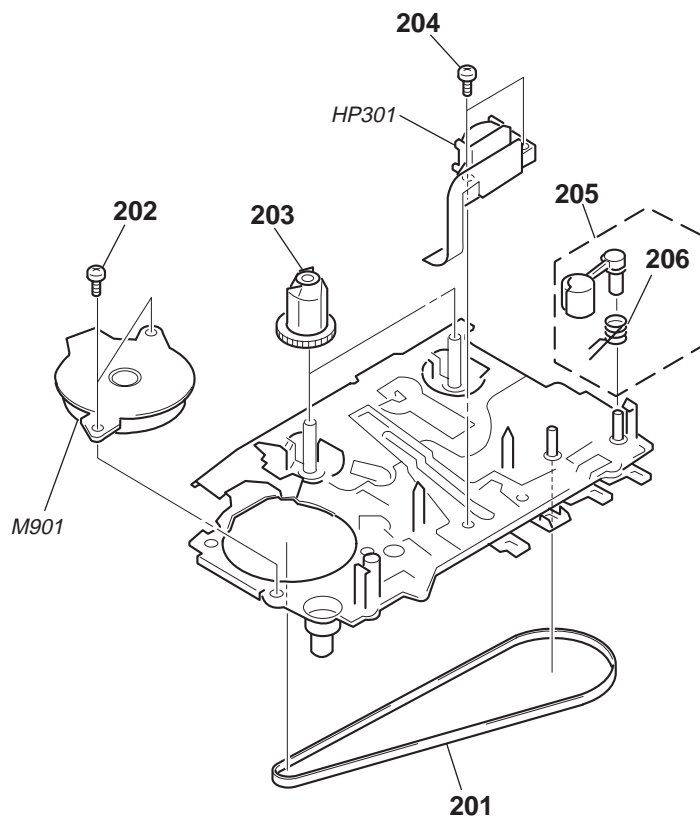
Ref. No.	Part No.	Description	Remarks	Ref. No.	Part No.	Description	Remarks
51	X-3377-165-1	CHASSIS SUB ASSY (AEP,E)		60	3-032-146-01	BUTTON (STOP)	
51	X-3377-166-1	CHASSIS SUB ASSY (US,CND,MX)		61	3-921-955-01	SCREW (M1.4), TOOTH (WH)	
52	3-934-020-31	LID,BATTERY CASE		62	A-3021-212-A	MAIN BOARD, COMPLETE (US,CND,MX)	
53	3-936-792-01	SPRING, TORSION		62	A-3021-214-A	MAIN BOARD, COMPLETE (AEP,E)	
54	3-032-153-01	SHEET, BATTERY		63	3-934-023-01	JOINT (VOL)	
55	3-831-441-99	SPACER, KNOB		64	3-934-003-01	JOINT (TUNE)	
56	3-934-005-01	KNOB(DX-LOCAL)		65	7-627-850-57	SCREW,Precision +P 1.4 × 3.5	
57	3-032-148-01	BUTTON (REW)		66	3-386-374-01	SCREW(1.7)	
58	3-032-145-01	BUTTON (PLAY)		BT1	3-921-878-01	TERMINAL BOARD, BATTERY	
59	3-032-147-01	BUTTON (FF)		BT2	3-032-149-01	SPRING, BATTERY COIL	

7-3. CABINET (REAR) ASSY SECTION



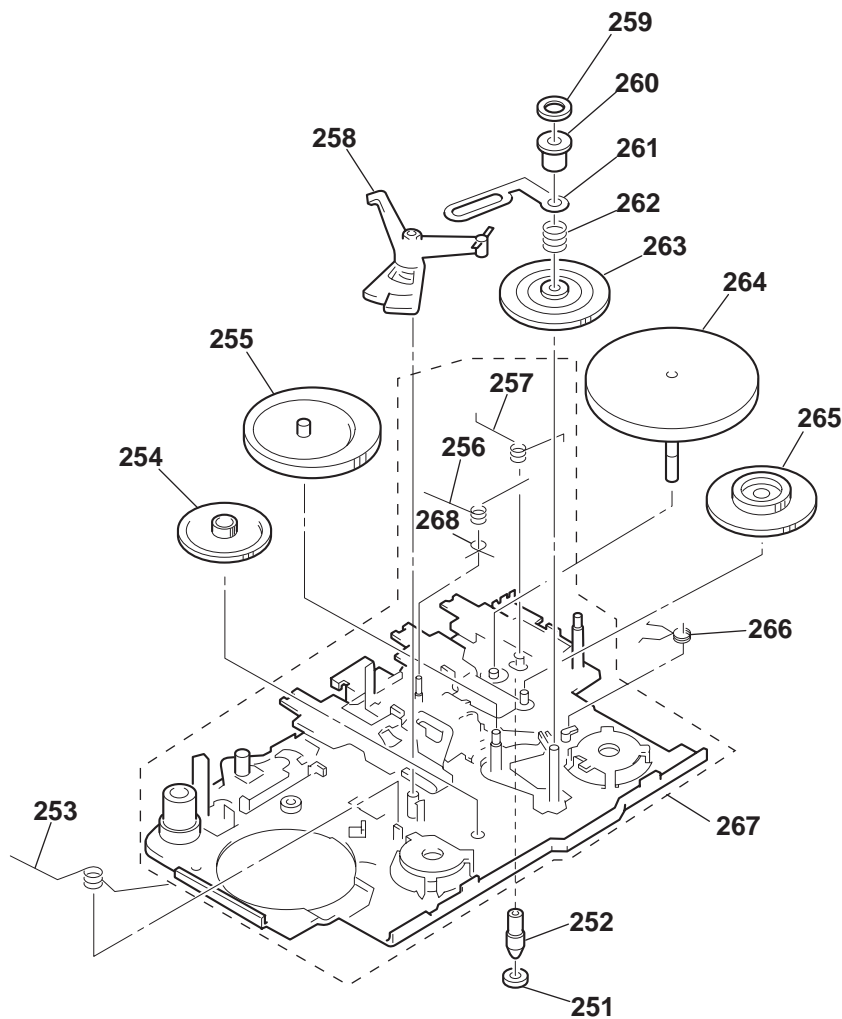
Ref. No.	Part No.	Description	Remarks	Ref. No.	Part No.	Description	Remarks
101	3-318-203-62	SCREW (B1.7 × 4), TAPPING		113	3-032-165-11	CABINET (REAR) (BLACK) (CND)	
102	3-032-164-01	PLATE, LOCK		113	3-032-165-21	CABINET (REAR) (BLUE) (CND)	
103	3-032-163-01	BUCKLE (YELLOW)		114	3-914-156-01	WINDOW, LED	
103	3-032-163-11	BUCKLE (BLACK) (CND)		115	3-934-002-01	GEAR (VOL)	
103	3-032-163-21	BUCKLE (BLUE) (CND)		116	3-012-927-01	RING, O	
104	3-318-201-61	SCREW (B) (1.4 × 6), TAPPING		117	3-326-560-02	RING (DIA. 2.5 × DIA. 4.5), O	
105	3-381-629-11	SCREW, (B) (1.4 × 3), TAPPING		118	3-032-159-01	KNOB (FUNCTION) (YELLOW)	
106	3-032-162-01	JOINT (AVLS)		118	3-032-159-11	KNOB (FUNCTION) (BLACK) (CND)	
107	3-386-371-01	PACKING, HP JACK		118	3-032-159-21	KNOB (FUNCTION) (BLUE) (CND)	
108	3-922-447-01	PACKING, DC JACK		119	3-032-158-01	KNOB (VOL.TUNE) (YELLOW)	
109	3-023-112-01	SHAFT (BUCKLE)		119	3-032-158-11	KNOB (VOL.TUNE) (BLACK) (CND)	
110	X-3376-867-1	WIRE ASSY		119	3-032-158-21	KNOB (VOL.TUNE) (BLUE) (CND)	
111	3-032-156-01	GEAR (A)		120	3-009-870-01	ROLLER (BUCKLE)	
112	3-032-157-01	GEAR (B)		121	3-033-952-01	SHAFT (BUCKLE)	
113	3-032-165-01	CABINET (REAR) (YELLOW)					

**7-4. MECHANISM DECK SECTION 1
(MF-WMFS111-114)**



<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Remarks</u>	<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Remarks</u>
201	3-013-560-11	BELT		205	X-3369-749-1	PINCH LEVER (N) ASSY	
202	3-703-816-31	SCREW (M1.4), SPECIAL HEAD		206	3-920-996-01	SPRING (PINCH N)	
203	3-019-776-01	GEAR (REEL-S)		HP301	1-500-517-11	HEAD, MAGNETIC (PLAYBACK)	
204	3-703-816-73	SCREW (M1.4), SPECIAL HEAD		M901	1-763-073-11	MOTOR (REEL/CAPSTAN) (WITH PULLEY)	

**7-5. MECHANISM DECK SECTION 2
(MF-WMFS111-114)**



Ref. No.	Part No.	Description	Remarks	Ref. No.	Part No.	Description	Remarks
251	3-921-797-01	WASHER		260	3-019-778-01	SLEEVE (MS)	
252	3-921-003-01	BEARING		261	3-921-335-01	WASHER, LEVER	
253	3-938-628-01	SPRING (PLAY-CP)		262	3-920-990-01	SPRING (UD), COMPRESSION	
254	3-019-773-01	GEAR (AS)		263	3-019-774-01	GEAR (BS)	
255	X-3374-598-1	CLUTCH ASSY (S)		264	X-3369-747-1	WHEEL ASSY (SP), CAPSTAN	
256	3-022-093-01	SPRING (FR-S)		265	3-019-775-01	GEAR (DS)	
257	3-022-094-01	SPRING (STOP-S)		266	3-036-664-01	SPRING (FR LEVER OWN)	
258	3-019-777-01	LEVER (OWS), DETECTION		267	X-3377-081-1	CHASSIS (COMP) ASSY (GL/O-CS)	
259	3-728-091-01	WASHER, STOPPER		268	3-025-454-01	SPRING(SW-S)	

SECTION 8 ELECTRICAL PARTS LIST

MAIN

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX, -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.

- CAPACITORS:
uF: μ F
- RESISTORS
All resistors are in ohms.
METAL: metal-film resistor
METAL OXIDE: Metal Oxide-film resistor
F: nonflammable
- COILS
uH: μ H

- SEMICONDUCTORS
In each case, u: μ , for example:
uA...: μ A..., uPA..., μ PA...,
uPB..., μ PB..., uPC..., μ PC...,
uPD..., μ PD...

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

- Abbreviation
CND : Canadian model
MX : Mexican model

Ref. No.	Part No.	Description	Remarks	Ref. No.	Part No.	Description	Remarks
	A-3021-212-A	MAIN BOARD, COMPLETE (US,CND,MX) *****		C27	1-115-156-11	CERAMIC CHIP 1uF	10V
	A-3021-214-A	MAIN BOARD, COMPLETE (AEP,E) *****		C28	1-163-205-00	CERAMIC CHIP 0.001uF 5%	50V
	3-386-374-01	SCREW(1.7)		C29	1-163-081-00	CERAMIC CHIP 0.22uF	25V
	3-934-003-01	JOINT(TUNE)		C30	1-163-081-00	CERAMIC CHIP 0.22uF	25V
	3-934-023-01	JOINT(VOL)		C31	1-162-927-11	CERAMIC CHIP 100PF 5%	50V
	7-627-850-57	SCREW,PRECISION +P 1.4 x 3.5		C101	1-162-962-11	CERAMIC CHIP 470PF 10%	50V
		< BATTERY >		C102	1-164-505-11	CERAMIC CHIP 2.2uF	1 6V
BT1	3-921-878-01	TERMINAL BOARD, BATTERY		C103	1-162-968-11	CERAMIC CHIP 0.0047uF	10% 50V
BT2	3-032-149-01	SPRING, BATTERY COIL		C104	1-126-153-11	ELECT 22uF	20% 6.3V
		< CAPACITOR >		C105	1-115-467-11	CERAMIC CHIP 0.22uF	10% 10V
C1	1-163-133-00	CERAMIC CHIP 470PF	5% 50V	C106	1-115-156-11	CERAMIC CHIP 1uF	10V
C2	1-164-315-11	CERAMIC CHIP 470PF	5% 50V	C107	1-164-346-11	CERAMIC CHIP 1uF	16V
C3	1-162-908-11	CERAMIC CHIP 3PF	0.25PF 50V	C108	1-162-965-11	CERAMIC CHIP 0.0015uF	10% 50V
C4	1-162-915-11	CERAMIC CHIP 10PF	0.5PF 50V	C109	1-162-927-11	CERAMIC CHIP 100PF	5% 50V
C5	1-162-911-11	CERAMIC CHIP 6PF	0.5PF 50V	C201	1-162-962-11	CERAMIC CHIP 470PF	10% 50V
C6	1-162-997-11	CERAMIC CHIP 10PF	0.5PF 50V	C202	1-164-505-11	CERAMIC CHIP 2.2uF	16V
C7	1-162-915-11	CERAMIC CHIP 10PF	0.5PF 50V	C203	1-162-968-11	CERAMIC CHIP 0.0047uF	10% 50V
C8	1-162-908-11	CERAMIC CHIP 3PF	0.25PF 50V	C204	1-126-153-11	ELECT 22uF	20% 6.3V
C9	1-162-939-11	CERAMIC CHIP 8PF	0.5PF 50V	C205	1-115-467-11	CERAMIC CHIP 0.22uF	10% 10V
			(US,CND,MX)	C206	1-115-156-11	CERAMIC CHIP 1uF	10V
C9	1-162-997-11	CERAMIC CHIP 10PF	0.5PF 50V	C207	1-115-156-11	CERAMIC CHIP 1uF	10V
			(AEP,E)	C208	1-163-011-11	CERAMIC CHIP 0.0015uF	10% 50V
C10	1-162-908-11	CERAMIC CHIP 3PF	0.25PF 50V	C209	1-162-927-11	CERAMIC CHIP 100PF	5% 50V
C11	1-115-156-11	CERAMIC CHIP 1uF	10V	C301	1-115-156-11	CERAMIC CHIP 1uF	10V
C12	1-162-964-11	CERAMIC CHIP 0.001uF	10% 50V	C302	1-115-156-11	CERAMIC CHIP 1uF	10V
C13	1-164-156-11	CERAMIC CHIP 0.1uF	25V	C305	1-164-505-11	CERAMIC CHIP 2.2uF	16V
C14	1-115-156-11	CERAMIC CHIP 1uF	10V	C306	1-124-433-00	ELECT 100uF	20% 4V
C17	1-164-156-11	CERAMIC CHIP 0.1uF	25V	C307	1-115-156-11	CERAMIC CHIP 1uF	10V
C18	1-164-227-11	CERAMIC CHIP 0.022uF	10% 25V	C308	1-115-156-11	CERAMIC CHIP 1uF	10V
			(US,CND,MX)	C309	1-124-433-00	ELECT 100uF	20% 4V
C18	1-164-245-11	CERAMIC CHIP 0.015uF	10% 25V	C310	1-162-927-11	CERAMIC CHIP 100PF	5% 50V
			(AEP,E)	C311	1-162-927-11	CERAMIC CHIP 100PF	5% 50V
C19	1-164-227-11	CERAMIC CHIP 0.022uF	10% 25V	C312	1-164-346-11	CERAMIC CHIP 1uF	16V
			(US,CND,MX)	C313	1-115-156-11	CERAMIC CHIP 1uF	10V
C19	1-164-245-11	CERAMIC CHIP 0.015uF	10% 25V	C314	1-162-964-11	CERAMIC CHIP 0.001uF	10% 50V
			(AEP,E)	C315	1-126-153-11	ELECT 22uF	20% 6.3V
C20	1-124-433-00	ELECT 100uF	20% 4V	C316	1-126-153-11	ELECT 22uF	20% 6.3V
C22	1-109-935-11	TANTAL. CHIP 4.7uF	20% 4V	C317	1-113-619-11	CERAMIC CHIP 0.47uF	10V
C23	1-164-505-11	CERAMIC CHIP 2.2uF	16V	C318	1-162-974-11	CERAMIC CHIP 0.01uF	50V
C25	1-115-416-11	CERAMIC CHIP 1000PF	5% 25V	C319	1-162-974-11	CERAMIC CHIP 0.01uF	50V
			(US,CND,MX)	C320	1-163-063-00	CERAMIC CHIP 0.022uF	50V
C26	1-164-362-11	CERAMIC CHIP 470PF	5% 50V	C601	1-107-823-11	CERAMIC CHIP 0.47uF	10% 16V
				C602	1-135-187-21	TANTAL. CHIP 2.2uF	20% 4V
				C603	1-115-467-11	CERAMIC CHIP 0.22uF	10% 10V
				C604	1-110-563-11	CERAMIC CHIP 0.068uF	10% 16V

MAIN

Ref. No.	Part No.	Description	Remarks	Ref. No.	Part No.	Description	Remarks
C605	1-110-563-11	CERAMIC CHIP	0.068uF 10% 16V	JC22	1-216-296-91	SHORT	0
C606	1-124-434-00	ELECT	220uF 20% 4V	JC23	1-216-296-91	SHORT	0
C607	1-164-344-11	CERAMIC CHIP	0.068uF 10% 25V	JC24	1-216-296-91	SHORT	0
C608	1-165-176-11	CERAMIC CHIP	0.047uF 10% 16V	JC25	1-216-296-91	SHORT	0
C609	1-162-974-11	CERAMIC CHIP	0.01uF 50V	JC26	1-216-296-91	SHORT	0
C610	1-107-823-11	CERAMIC CHIP	0.47uF 10% 16V	JC27	1-216-296-91	SHORT	0
		< FILTER >		JC28	1-216-296-91	SHORT	0
CF1	1-781-300-21	FILTER, CERAMIC (450kHz)		JC31	1-216-295-91	SHORT	0
CF2	1-767-736-71	FILTER ASSY, CERAMIC (10.7MHz)		JC32	1-216-295-91	SHORT	0
		< CONNECTOR >		JC33	1-216-295-91	SHORT	0
CN303	1-750-346-21	CONNECTOR, FFC/EPC (ZIF) 6P		JC41	1-216-864-11	METAL CHIP	0 5% 1/16W
		< VARIABLE CAPACITOR >		JC42	1-216-864-11	METAL CHIP	0 5% 1/16W
CV1	1-151-653-11	CAP, VARIABLE (US,CND,MX)		JC43	1-216-864-11	METAL CHIP	0 5% 1/16W
CT1-4	1-151-653-11	CAP, ADJ (US,CND,MX)		JC44	1-216-864-11	METAL CHIP	0 5% 1/16W
CV1	1-151-654-11	CAP, VARIABLE (AEP,E)		JC47	1-216-864-11	METAL CHIP	0 5% 1/16W
CT1-4	1-151-654-11	CAP, ADJ (AEP,E)		JC50	1-216-864-11	METAL CHIP	0 5% 1/16W
		< DIODE >		JC51	1-216-864-11	METAL CHIP	0 5% 1/16W
D301	8-719-984-02	LED BR4371F (BATT)		JC52	1-216-864-11	METAL CHIP	0 5% 1/16W
		< FERRITE BEAD >				< COIL >	
FB101	1-414-760-21	FERRITE	0uH	L1	1-754-052-11	ANTENNA, FERRITE-ROD	
FB201	1-414-760-21	FERRITE	0uH	L2	1-416-960-11	COIL(WITH CORE)	
FB301	1-414-813-11	FERRITE	0uH	L3	1-416-959-11	COIL(WITH CORE)	
		< FILTER >		L4	1-416-958-11	COIL(OSC)	
FL1	1-236-711-21	FILTER, BAND PASS				< TRANSISTOR >	
		< IC >		Q1	8-729-231-74	TRANSISTOR 2SC4116GL-TE85L (US,CND,MX)	
IC1	8-759-493-20	IC TA2111F-(EL)		Q2	8-729-230-60	TRANSISTOR 2SA1586YG-TE85L	
IC301	8-759-821-89	IC LA4571M-T1		Q3	8-729-014-12	TRANSISTOR RN1311-TE85L	
IC601	8-759-447-73	IC LB1979V-TLM		Q4	8-729-014-12	TRANSISTOR RN1311-TE85L	
		< JUMPER CHIP >		Q5	8-729-014-12	TRANSISTOR RN1311-TE85L	
JC1	1-216-296-91	SHORT	0	Q6	8-729-028-76	TRANSISTOR RN2307-TE85L	
JC2	1-216-296-91	SHORT	0	Q7	8-729-014-12	TRANSISTOR RN1311-TE85L (AEP,E)	
JC3	1-216-296-91	SHORT	0	Q8	8-729-028-76	TRANSISTOR RN2307-TE85L (AEP,E)	
JC4	1-216-296-91	SHORT	0	Q101	8-729-421-26	TRANSISTOR RN1310-TE85L	
JC5	1-216-296-91	SHORT	0	Q102	8-729-231-74	TRANSISTOR 2SC4116GL-TE85L	
JC6	1-216-296-91	SHORT	0	Q103	8-729-231-74	TRANSISTOR 2SC4116GL-TE85L	
JC7	1-216-296-91	SHORT	0	Q104	8-729-421-26	TRANSISTOR RN1310-TE85L	
JC8	1-216-296-91	SHORT	0	Q201	8-729-421-26	TRANSISTOR RN1310-TE85L	
JC9	1-216-296-91	SHORT	0	Q202	8-729-231-74	TRANSISTOR 2SC4116GL-TE85L	
JC10	1-216-296-91	SHORT	0	Q203	8-729-231-74	TRANSISTOR 2SC4116GL-TE85L	
JC11	1-216-296-91	SHORT	0	Q204	8-729-421-26	TRANSISTOR RN1310-TE85L	
JC12	1-216-296-91	SHORT	0	Q301	8-729-014-12	TRANSISTOR RN1311-TE85L	
JC14	1-216-296-91	SHORT	0	Q304	8-729-014-12	TRANSISTOR RN1311-TE85L	
JC15	1-216-296-91	SHORT	0	Q305	8-729-014-12	TRANSISTOR RN1311-TE85L	
JC16	1-216-296-91	SHORT	0	Q306	8-729-014-86	TRANSISTOR 2SC4207-YGRTE85L	
JC17	1-216-296-91	SHORT	0	Q307	8-729-230-72	TRANSISTOR 2SA1362-YG-EL	
JC18	1-216-296-91	SHORT	0	Q308	8-729-014-12	TRANSISTOR RN1311-TE85L	
JC19	1-216-296-91	SHORT	0			< RESISTOR >	
JC20	1-216-296-91	SHORT	0	R1	1-216-821-11	METAL CHIP	1K 5% 1/16W (US,CND,MX)
JC21	1-216-296-91	SHORT	0	R2	1-216-308-00	METAL CHIP	4.7 5% 1/10W
				R3	1-216-835-11	METAL CHIP	15K 5% 1/16W
				R4	1-216-827-11	METAL CHIP	3.3K 5% 1/16W
				R6	1-216-815-11	METAL CHIP	330 5% 1/16W
				R8	1-216-829-11	METAL CHIP	4.7K 5% 1/16W
				R9	1-216-845-11	METAL CHIP	100K 5% 1/16W
				R13	1-216-835-11	METAL CHIP	15K 5% 1/16W
				R14	1-216-835-11	METAL CHIP	15K 5% 1/16W
				R103	1-216-855-11	METAL CHIP	680K 5% 1/16W

Ref. No.	Part No.	Description	Remarks	Ref. No.	Part No.	Description	Remarks
R104	1-216-835-11	METAL CHIP	15K 5% 1/16W			< SWITCH >	
R105	1-216-819-11	METAL CHIP	680 5% 1/16W				
R107	1-216-864-11	METAL CHIP	0 5% 1/16W	S301	1-692-605-31	SWITCH, SLIDE (FUNCTION)	
R108	1-216-811-11	METAL CHIP	150 5% 1/16W	S302	1-771-092-21	SWITCH, PUSH (1 KEY) (◀▶/▶▶)	
R109	1-216-829-11	METAL CHIP	4.7K 5% 1/16W	S304	1-762-624-11	SWITCH, SLIDE (TAPE/FM SENS) (US,CND,MX)	
R110	1-216-823-11	METAL CHIP	1.5K 5% 1/16W	S304	1-762-624-11	SWITCH, SLIDE (TAPE/FM MODE) (AEP,E)	
R111	1-216-811-11	METAL CHIP	150 5% 1/16W	S305	1-771-586-11	SWITCH, LEVER (SLIDE) (AVLS)	
R112	1-216-849-11	METAL CHIP	220K 5% 1/16W	S306	1-771-586-11	SWITCH, LEVER (SLIDE) (MEGA BASS)	
R113	1-216-202-00	RES,CHIP	1.5K 5% 1/8W			< TRANSFORMER >	
R114	1-216-835-11	METAL CHIP	15K 5% 1/16W				
R115	1-216-835-11	METAL CHIP	15K 5% 1/16W	T1	1-411-722-11	TRANSFORMER, IF	
R203	1-216-855-11	METAL CHIP	680K 5% 1/16W			< THERMISTOR >	
R204	1-216-835-11	METAL CHIP	15K 5% 1/16W	TH601	1-810-794-11	THERMISTOR, POSITIVE	
R205	1-216-819-11	METAL CHIP	680 5% 1/16W			< VIBRATOR >	
R207	1-216-864-11	METAL CHIP	0 5% 1/16W				
R208	1-216-811-11	METAL CHIP	150 5% 1/16W	X2	1-767-736-71	FILTER ASSY, CERAMIC (10.7MHz)	
R209	1-216-829-11	METAL CHIP	4.7K 5% 1/16W	*****			
R210	1-216-823-11	METAL CHIP	1.5K 5% 1/16W	*	1-672-324-11	HEADPHONE BOARD	
R211	1-216-811-11	METAL CHIP	150 5% 1/16W	*****			
R212	1-216-849-11	METAL CHIP	220K 5% 1/16W			< JACK >	
R213	1-216-202-00	RES,CHIP	1.5K 5% 1/8W	J301	1-565-376-11	JACK (♁)	
R214	1-216-835-11	METAL CHIP	15K 5% 1/16W	*****			
R215	1-216-835-11	METAL CHIP	15K 5% 1/16W			MISCELLANEOUS	
R301	1-216-065-91	RES,CHIP	4.7K 5% 1/10W	*****			
R302	1-216-829-11	METAL CHIP	4.7K 5% 1/16W				
R303	1-216-817-11	METAL CHIP	470 5% 1/16W	BT1	3-921-878-01	TERMINAL BOARD, BATTERY	
R304	1-216-065-91	RES,CHIP	4.7K 5% 1/10W	BT2	3-032-149-01	SPRING, BATTERY COIL	
R305	1-216-789-11	METAL CHIP	2.2 5% 1/16W	HP301	1-500-517-11	HEAD, MAGNETIC (PLAYBACK)	
R308	1-216-065-91	RES,CHIP	4.7K 5% 1/10W	M901	1-763-073-11	MOTOR (REEL/CAPSTAN) (WITH PULLEY)	
R309	1-216-833-91	RES,CHIP	10K 5% 1/16W	*****			
R310	1-216-845-11	METAL CHIP	100K 5% 1/16W			ACCESSORIES & PACKING MATERIALS	
R311	1-216-829-11	METAL CHIP	4.7K 5% 1/16W	*****			
R312	1-216-821-11	METAL CHIP	1K 5% 1/16W	3-032-171-01		CLIP(BELT)	
R313	1-216-194-00	METAL CHIP	680 5% 1/8W	3-037-307-01		STOPPER (BUCKLE)	
R314	1-216-825-11	METAL CHIP	2.2K 5% 1/16W	3-326-162-08		WASHER, POLYETHYLENE, SLIT	
R315	1-216-841-11	METAL CHIP	47K 5% 1/16W	3-378-331-21		SCREW,CARRYING CASE	
R601	1-216-821-11	METAL CHIP	1K 5% 1/16W	3-864-882-11		MANUAL, INSTRUCTION	
R602	1-216-845-11	METAL CHIP	100K 5% 1/16W	(ENGLISH/FRENCH/GERMAN/ITALIAN)			
R603	1-216-821-11	METAL CHIP	1K 5% 1/16W	(US,CND,AEP)			
R604	1-216-833-91	RES,CHIP	10K 5% 1/16W	3-864-882-21		MANUAL, INSTRUCTION	
R605	1-216-821-11	METAL CHIP	1K 5% 1/16W	(SPANISH/PORTUGUESE/DUTCH/			
R606	1-216-857-11	METAL CHIP	1M 5% 1/16W	SWEDISH/FINNISH)(AEP)			
R607	1-216-857-11	METAL CHIP	1M 5% 1/16W	3-864-882-31		MANUAL, INSTRUCTION	
R608	1-216-857-11	METAL CHIP	1M 5% 1/16W	(ENGLISH/SPANISH/TRADITIONAL CHINESE/			
R609	1-216-821-11	METAL CHIP	1K 5% 1/16W	KOREAN)(E)			
R611	1-216-821-11	METAL CHIP	1K 5% 1/16W	3-864-882-41		MANUAL, INSTRUCTION (SPANISH) (MX)	
		< VARIABLE RESISTOR >		8-953-284-90		HEADPHONE MDR-W014LP/RK SET	
RV301	1-225-184-11	RES, VAR, CARBON 10K/10K (▲VOL)		(BLACK)(CND)			
RV601	1-241-916-11	RES, ADJ, CARBON 4.7K		8-953-284-91		HEADPHONE MDR-W014LP/YK SET (YELLOW)	
				8-953-284-92		HEADPHONE MDR-W014LP/LK SET(BLUE)	
				(CND)			

