

WM-EX910

SERVICE MANUAL

Ver 1.0 2000.10

E Model
Chinese Model



Photo: Blue model

Manufactured under license from Dolby Laboratories.
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Model Name Using Similar Mechanism	NEW
Tape Transport Mechanism Type	MT-WMEX910-162

SPECIFICATIONS

Frequency response(Dolby NR off)

Playback: 30 - 18 000 Hz

Output

Headphones (⌀ jack)

Load impedance 8 - 300 Ω

Power requirements

1.5 V

One rechargeable battery

One R6 (size AA) battery

Dimensions(w/h/d)

Approx. 76.3 × 108.4 × 17.6 mm

(3¹/₈ × 4³/₈ × 2³/₃₂ inches)

Mass

Approx. 140 g (5.0 oz.)

Supplied accessories

Battery case (1)

Stereo headphones or earphones with remote control (1)

Battery charger (1)

Rechargeable battery (NC-6WM, 1.2V, 600 mAh, Ni-Cd) (1)

Rechargeable battery carrying case (1)

Carrying pouch (1)

Design and specifications subject to change without notice.

Battery life (Approx. hours)

(in playback) (EIAJ*)

Rechargeable NC-6WM fully charged 20

Sony alkaline LR6 (SG)** 66

Rechargeable NC-6WM Sony alkaline LR6 (SG) used together 84

* Measured value by the standard of EIAJ (Electronic Industries Association of Japan). (Using a Sony HF series cassette tape)

**When using a Sony LR6 (SG) “STAMINA” alkaline dry battery (produced in Japan).

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.

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK \triangle OR DOTTED LINE WITH MARK \triangle ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

SECTION 1 SERVICING NOTES

This set detects the rotation of the idler gear (A) (side S and side T) using the photo reflector (PH701, 702). The PH701, 702 are mounted on the MAIN board, therefore the idler gear (A) (side S and side T) cannot be detected with the MAIN board removed. As a result, the motor (M601) cannot be controlled, causing malfunction.

Further, the DIRECTION switch (S702) is also mounted on the MAIN board, and with the board removed, the mechanism position cannot be detected and the operation is not changed over.

Therefore, when the voltage check is executed with the MAIN board removed, follow the procedure provided below.

1. Setting

- 1) Refer to "3. DISASSEMBLY", and remove the MAIN board.
- 2) Connect the MAIN board to the motor (M601) and the plunger (PM701) using jumper wires. These can be connected easily with the use of the extension tool (Part No. 1-769-143-11) (ten in one set).
- 3) Short the lands by solder.
- 4) Connect the AF oscillator to the TP31 (PH-S), TP32 (PH-T) and the TP (GND).
- 5) Supply 1.3 V to the battery terminals using the regulated power supply.

2. Preset state

To set the PLAY, FF, REW modes, the preset state must be set.

- 1) Check that the slider (NR) and the DIRECTION switch (S702) are set to the center position. If not, set the preset state as follows.
- 2) Move the DIRECTION switch (S702) to the side, which the slider (NR) is facing.
- 3) The slider (NR) will move when the regulated power supply switch is set to OFF once and then set to ON. Move the DIRECTION switch (S702) according to this timing and set to the center position.

3. FF, REW modes

- 1) Check that the preset state is set.
- 2) Input the square wave or sine wave to the TP31 (PH-S), TP32 (PH-T) and the TP (GND).
- 3) Move the jog lever (S703) toward **[FF]** or **[REW]**.

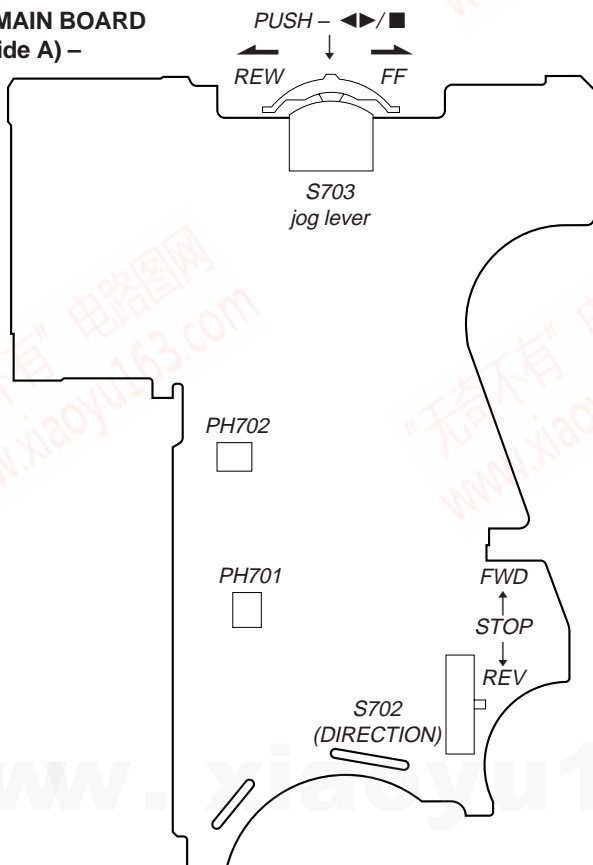
4. PLAY mode

- 1) Check that the preset state is set.
- 2) Input the square wave or sine wave to the TP31 (PH-S), TP32 (PH-T) and the TP (GND).
- 3) Press the jog lever (S703) will move the slider (NR) once towards the side REV and then to the side FWD. Move the DIRECTION switch (S702) according to this timing will set the PLAY mode (side FWD). Press the jog lever (S703) another time for a second and move the DIRECTION switch (S702) according to the movement of the slider (NR) will set the PLAY mode (side REV).

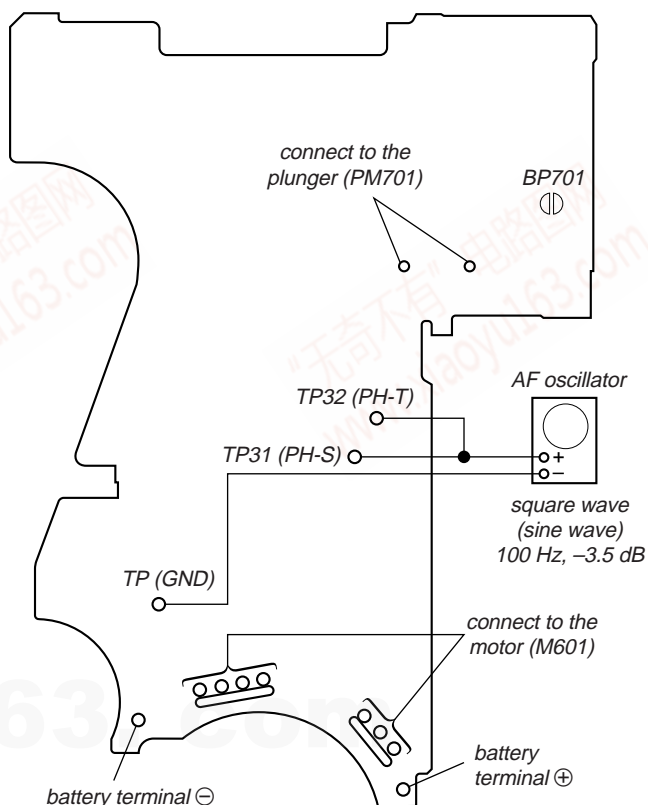
Note 1: If the above fails, perform from preset again.

Note 2: When using headphones, the timing for move the DIRECTION switch (S702) can be determined from the beep sound.

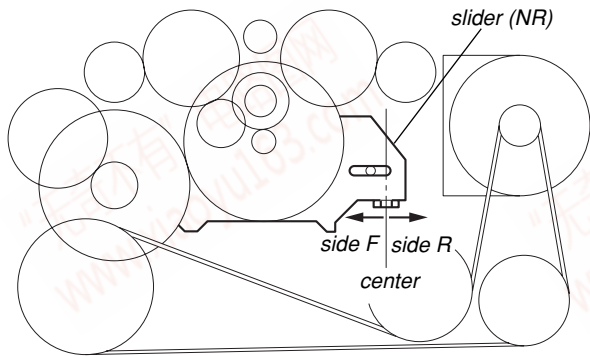
- MAIN BOARD
(Side A) -



- MAIN BOARD (Side B) -

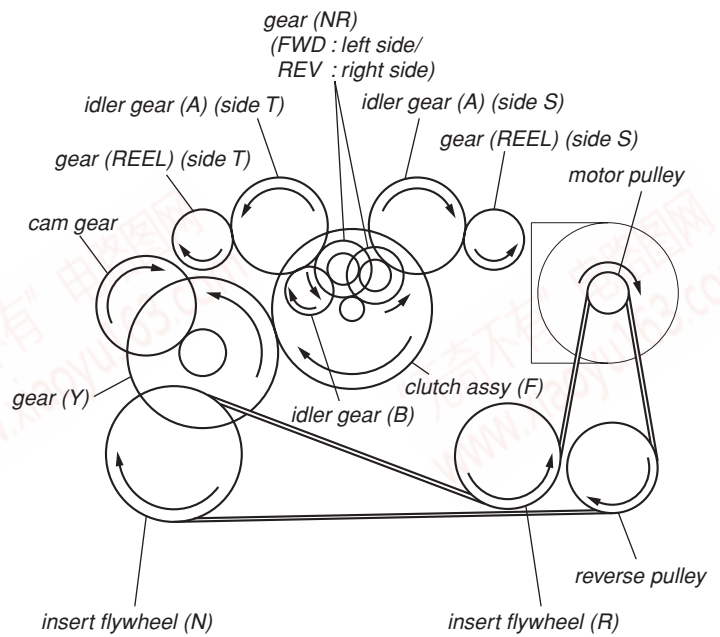


Slider (NR)

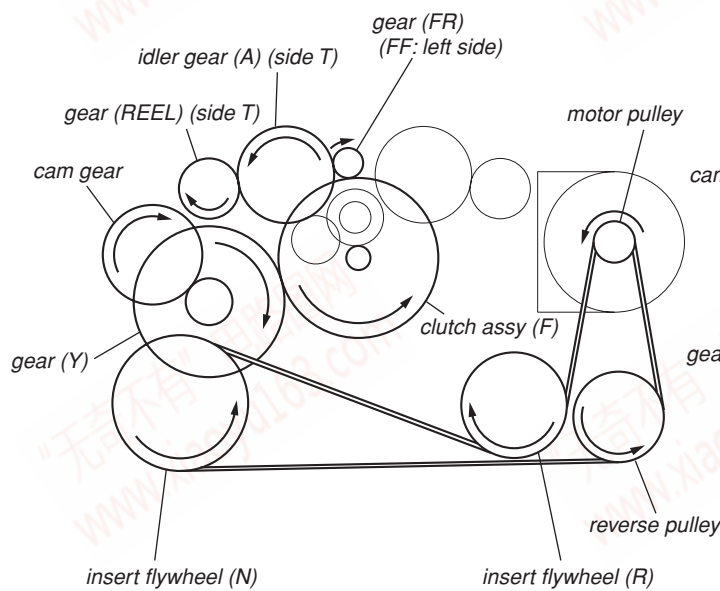


Rotation system

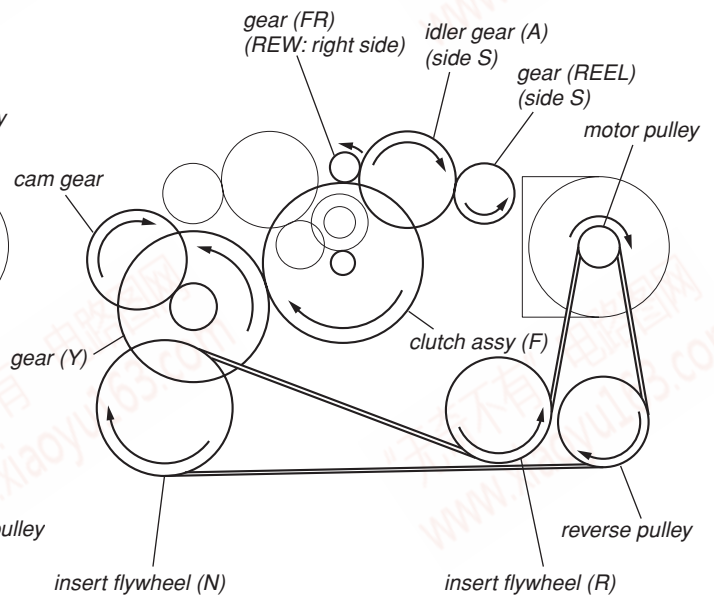
Rotation system during PLAY.



Rotation system during FF.

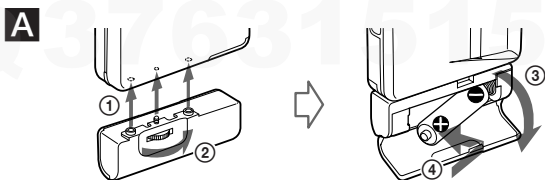


Rotation system during REW.



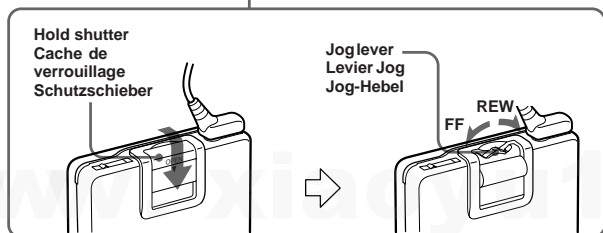
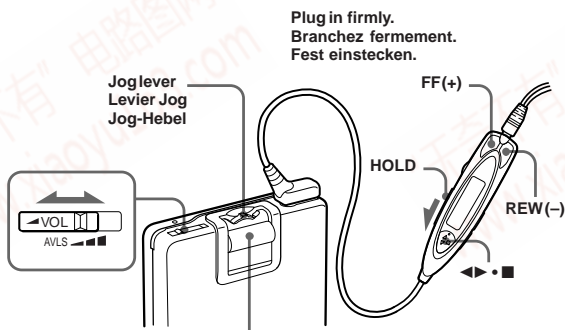
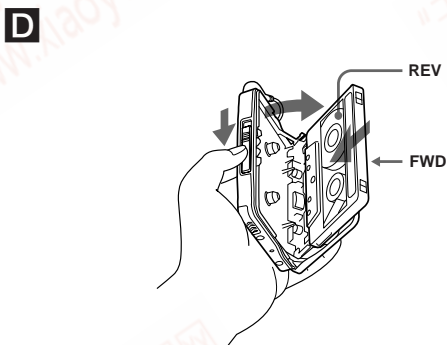
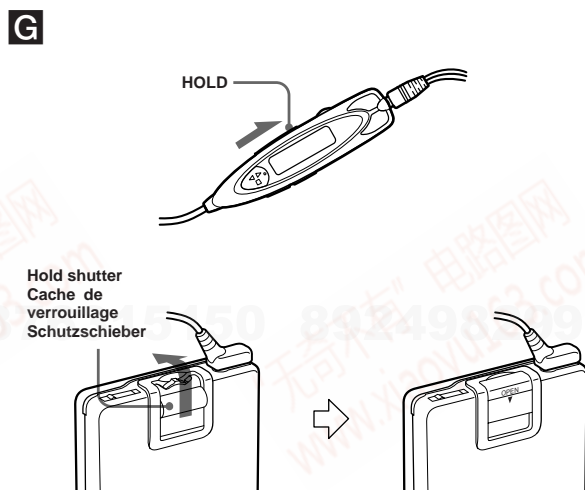
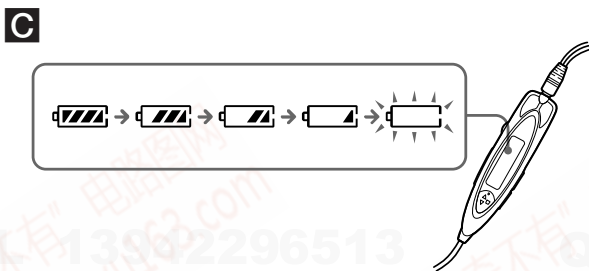
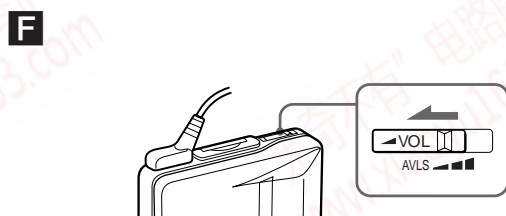
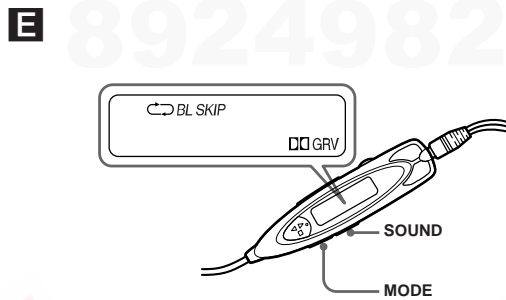
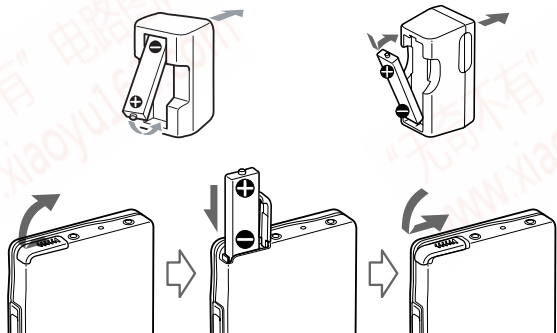
SECTION 2 GENERAL

This section is extracted from instruction manual.



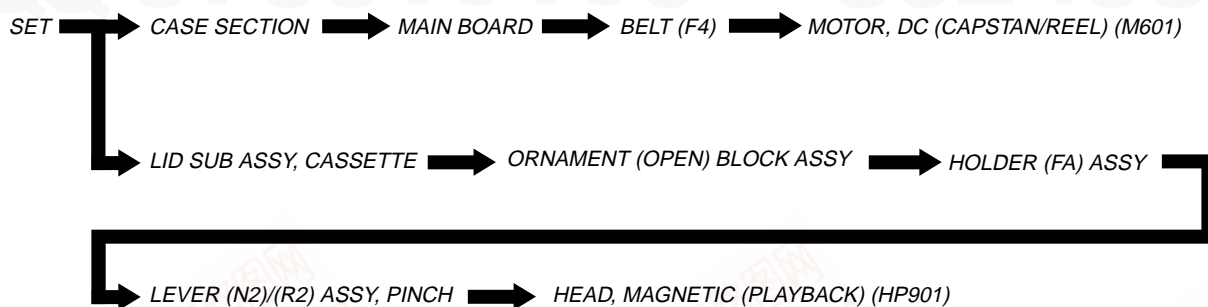
B UK, Australian, and Hong Kong model
Modèle pour le Royaume-Unie, l'Australie et Hong-Kong
Modell für GB, Australien und Hongkong

Other models
Autres modèles
Andere Modelle



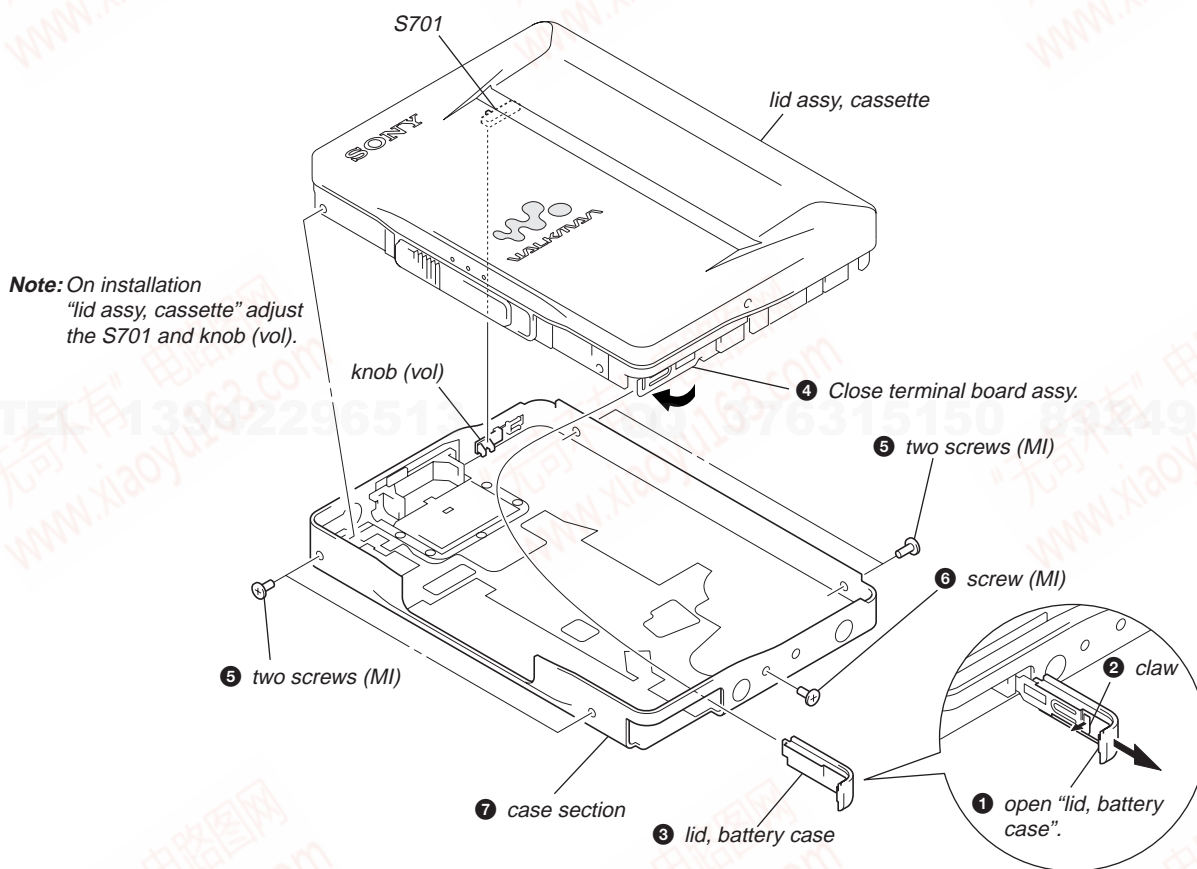
SECTION 3 DISASSEMBLY

• This set can be disassembled in the order shown below.

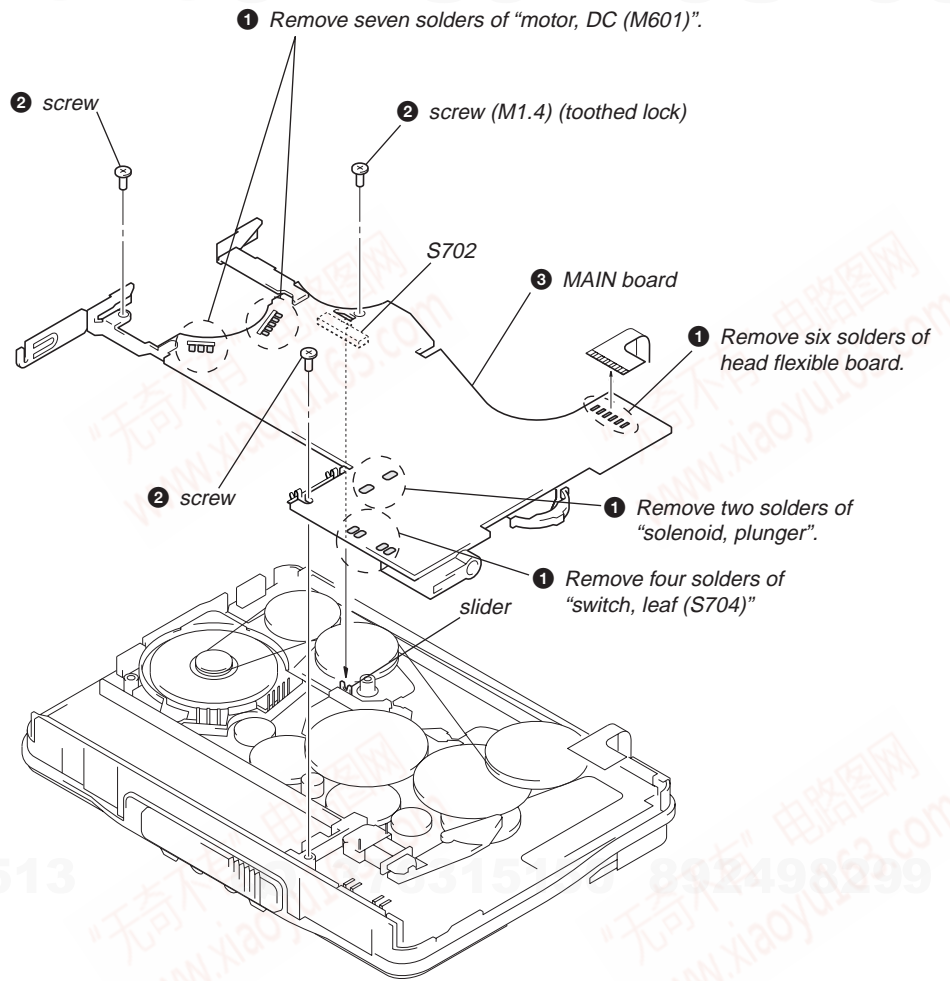


Note: Follow the disassembly procedure in the numerical order given.

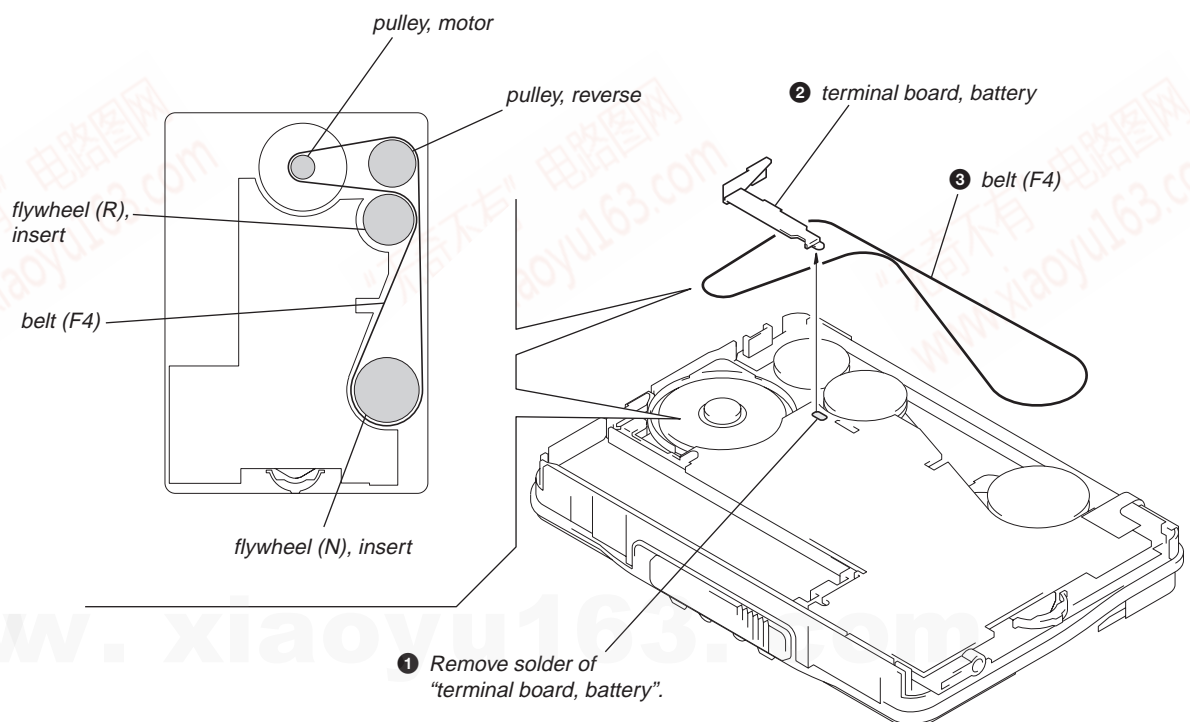
CASE SECTION



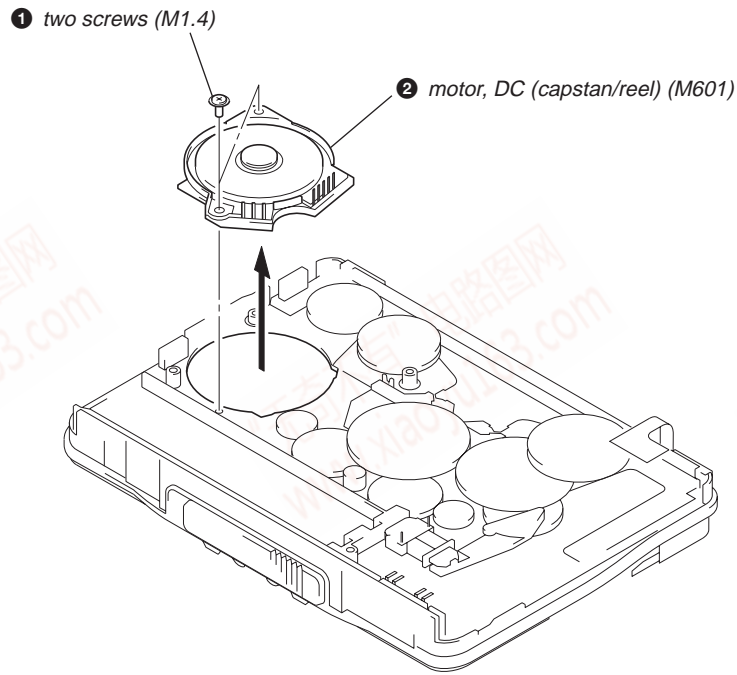
MAIN BOARD



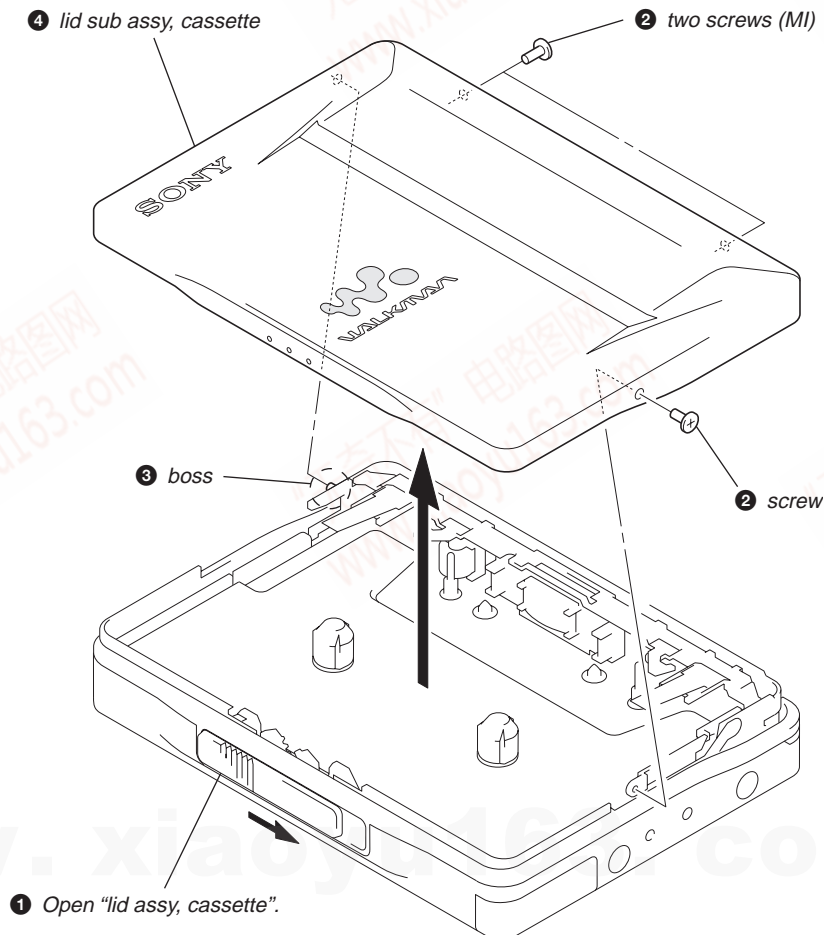
BELT (F4)



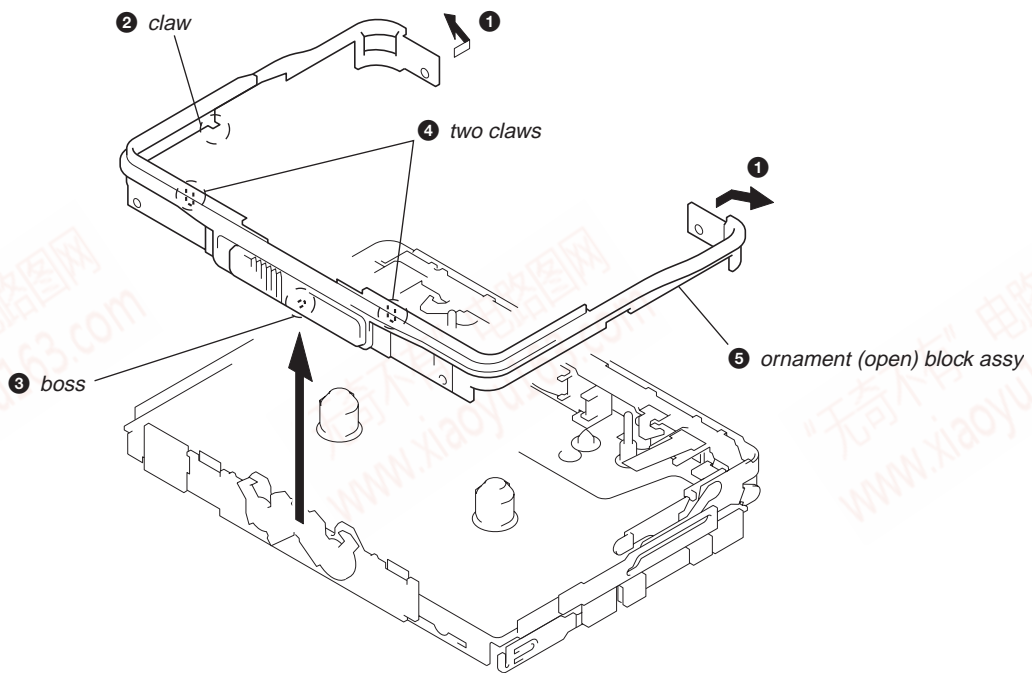
MOTOR, DC (CAPSTAN/REEL) (M601)



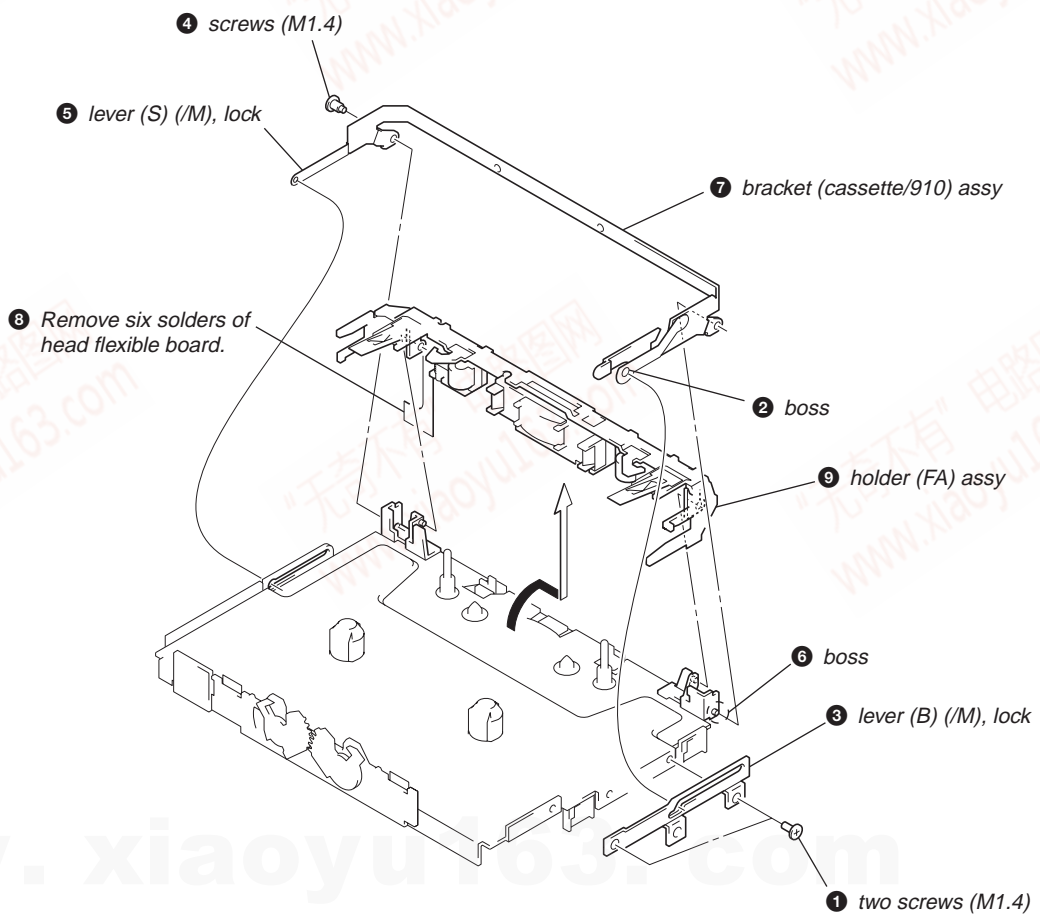
LID SUB ASSY, CASSETTE



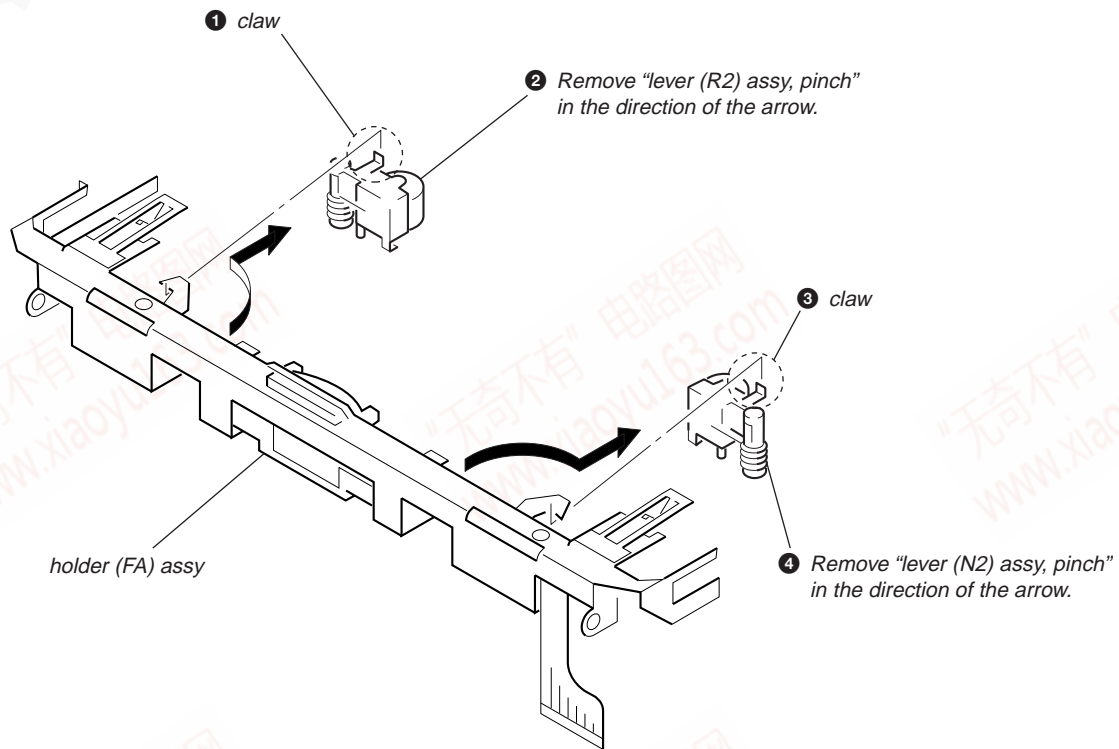
ORNAMENT (OPEN) BLOCK ASSY



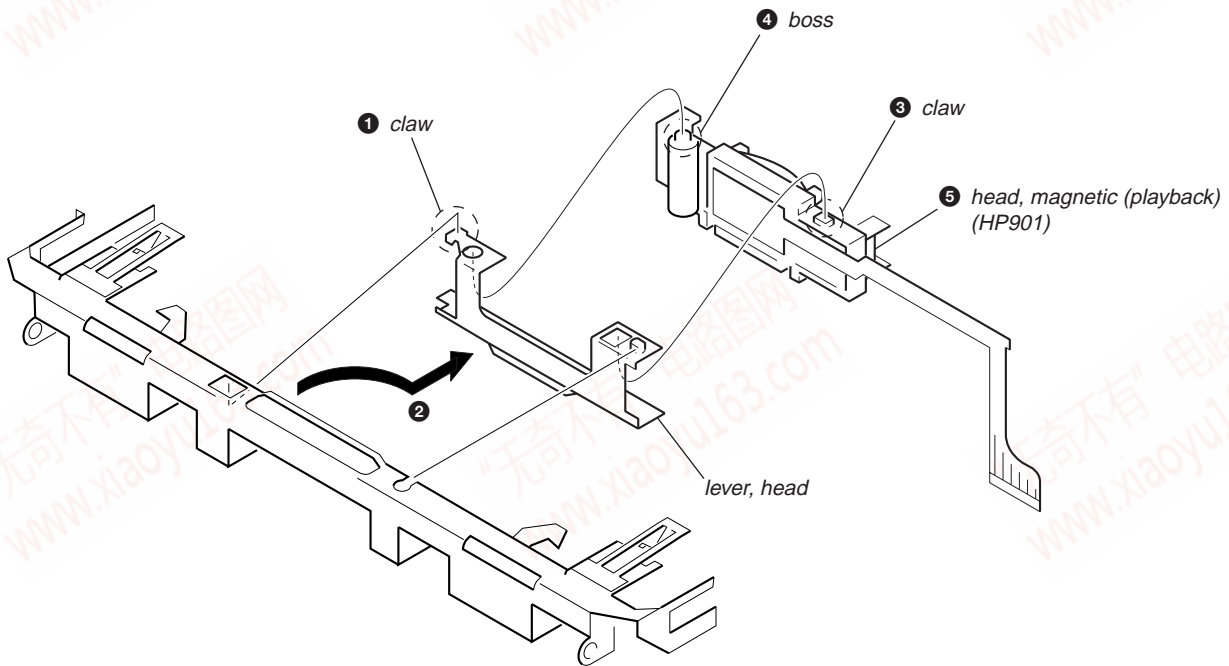
HOLDER (FA) ASSY



LEVER (N2)/(R2) ASSY, PINCH



HEAD, MAGNETIC (PLAYBACK) (HP901)



SECTION 4 MECHANICAL ADJUSTMENTS

PRECAUTION

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

playback head	pinch roller
rubber belts	capstan
- Demagnetize the playback head with a head demagnetizer. (Do not bring the head demagnetizer close to the erase head.)
- Do not use a magnetized screwdriver for the adjustments.
- The adjustments should be performed with the rated power supply voltage (1.3 V) unless otherwise noted.

Torque Measurement

Mode	Torque Meter	Meter Reading
FWD	CQ-102C	(1.47 – 2.94 mN•m) 15 – 25 g•cm (0.22 – 0.36 oz•inch)
FWD Back Tension		(0.029 – 0.196 mN•m) 0.3 – 2.0 g•cm (0.004 – 0.01 oz•inch)
REV	CQ-102RC	(1.47 – 2.94 mN•m) 15 – 25 g•cm (0.22 – 0.36 oz•inch)
REV Back Tension		(0.029 – 0.196 mN•m) 0.3 – 2.0 g•cm (0.004 – 0.01 oz•inch)
FF, REW	CQ-201B	(more than 3.43 mN•m) more than 35 g•cm (more than 0.5 oz•inch)

SECTION 5 ELECTRICAL ADJUSTMENTS

PRECAUTION

- Specified voltage : 1.3 V (DC)
- Switch position
VOL, AVLS : Center
- Remote control setting
HOLD switch : OFF
VOL knob : MAX
DOLBY NR : OFF
SOUND mode : Normal

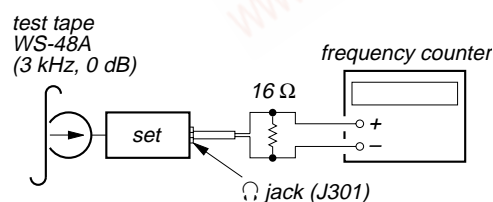
0 dB=0.775 V

Test tape

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

Tape Speed Adjustment

Setting:



Procedure:

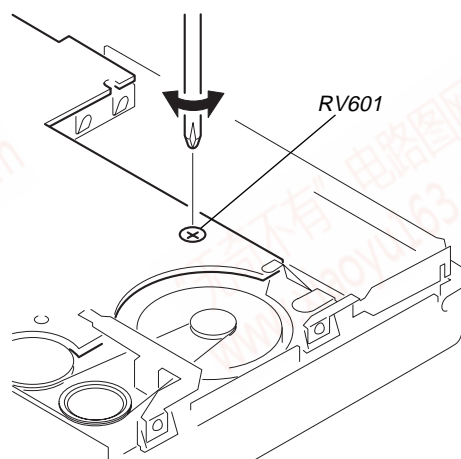
- Playback WS-48A (tape center) in the FWD state.
- Adjust RV601 so that the frequency counter reading becomes 3,000 Hz.

Specification Values: 2,985 to 3,015 Hz

- Playback WS-48A (tape center) in the REV state. Check that the frequency counter reading is within 2.0% (approx.60 Hz) of the reading of step 1.

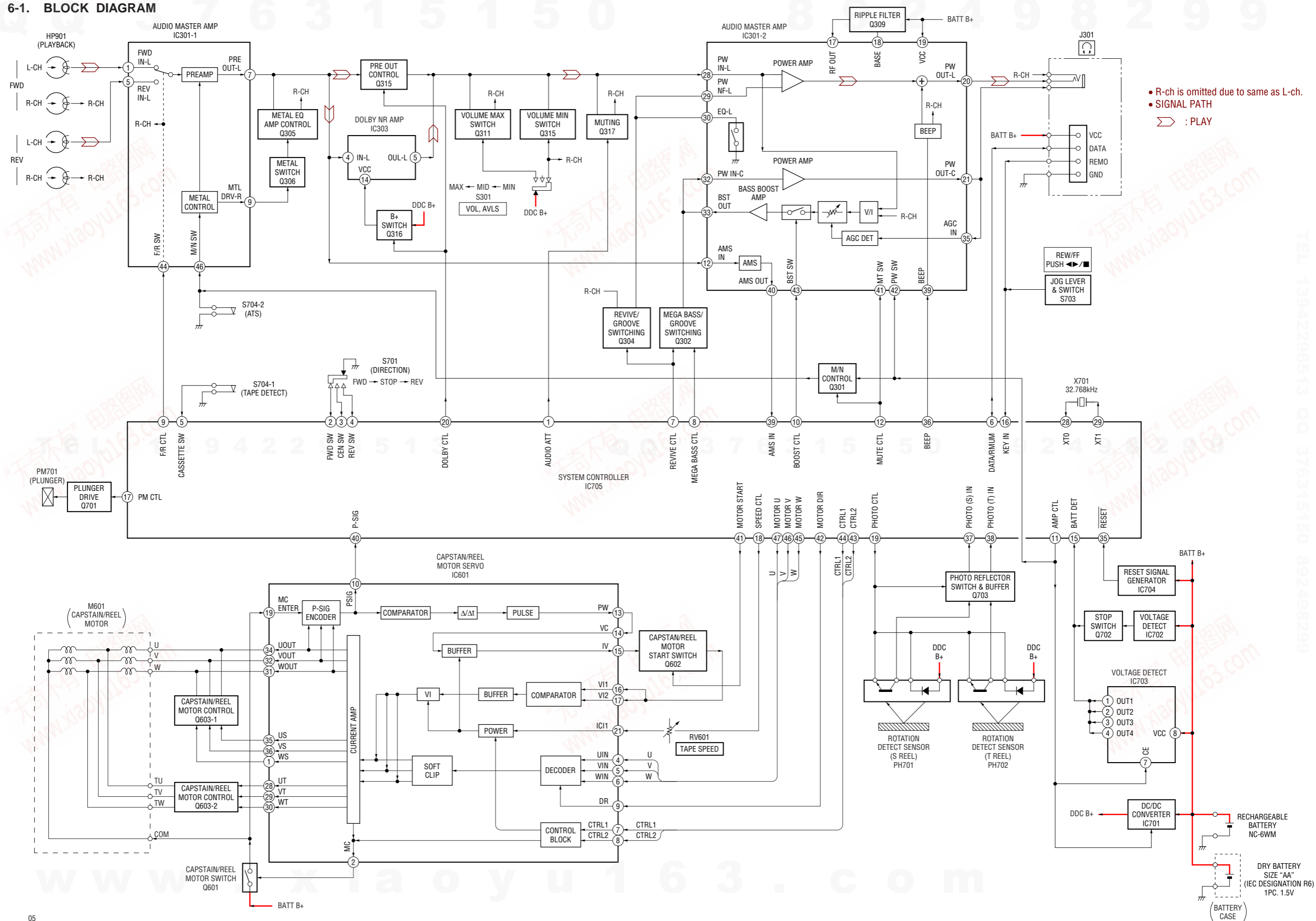
Adjustment Location:

– MAIN BOARD –



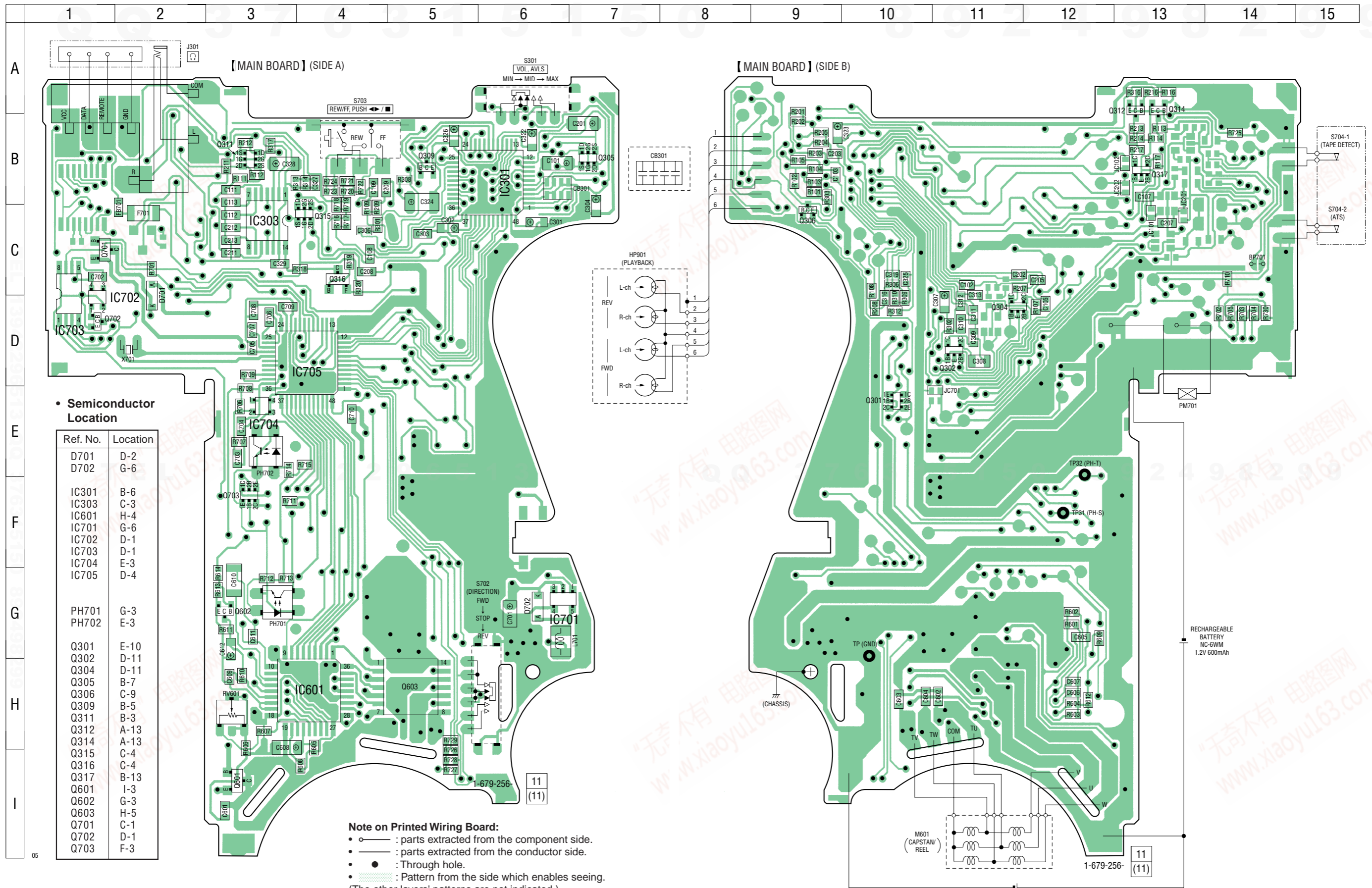
SECTION 6 DIAGRAMS

6-1. BLOCK DIAGRAM

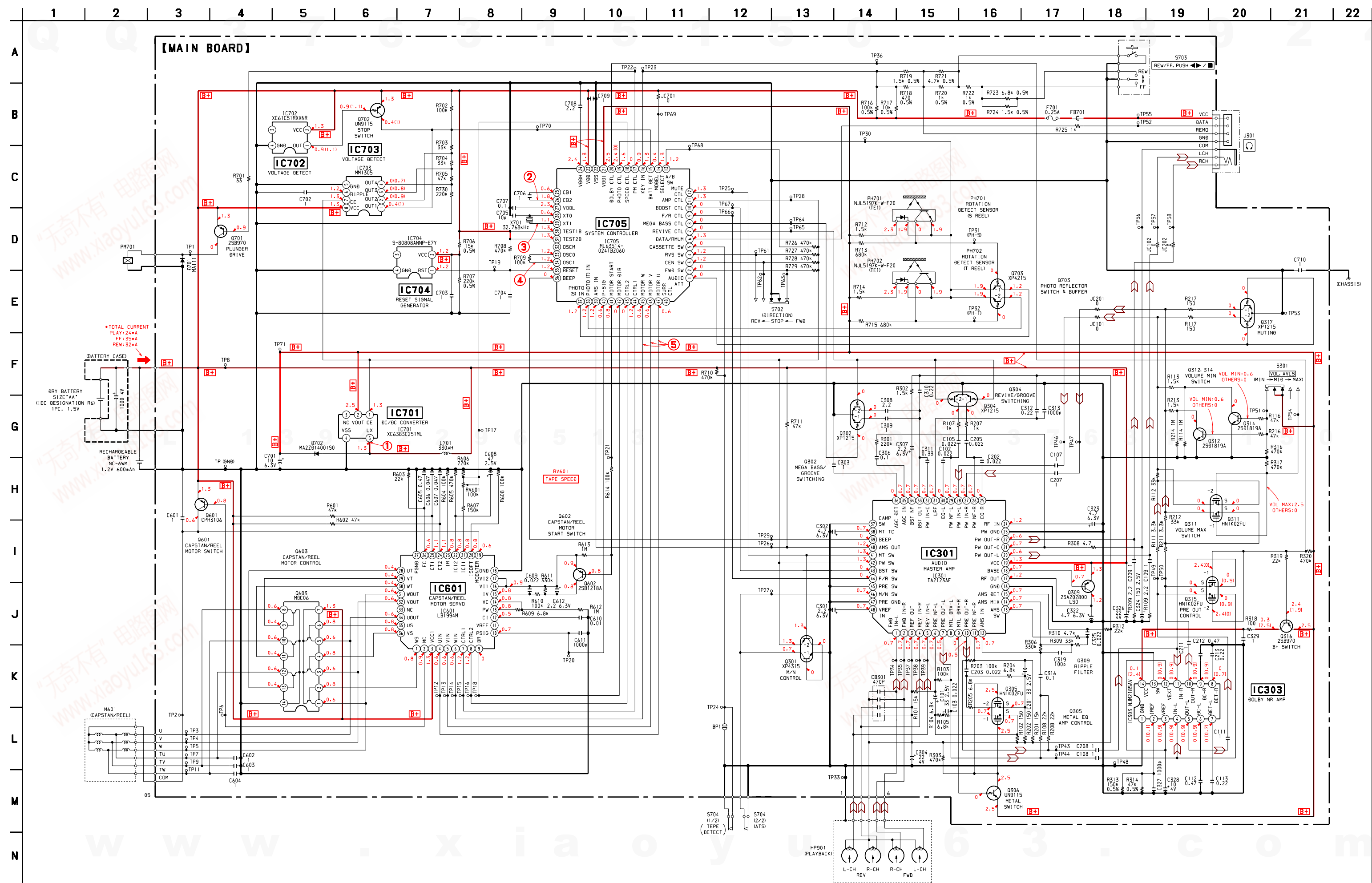


WM-EX910

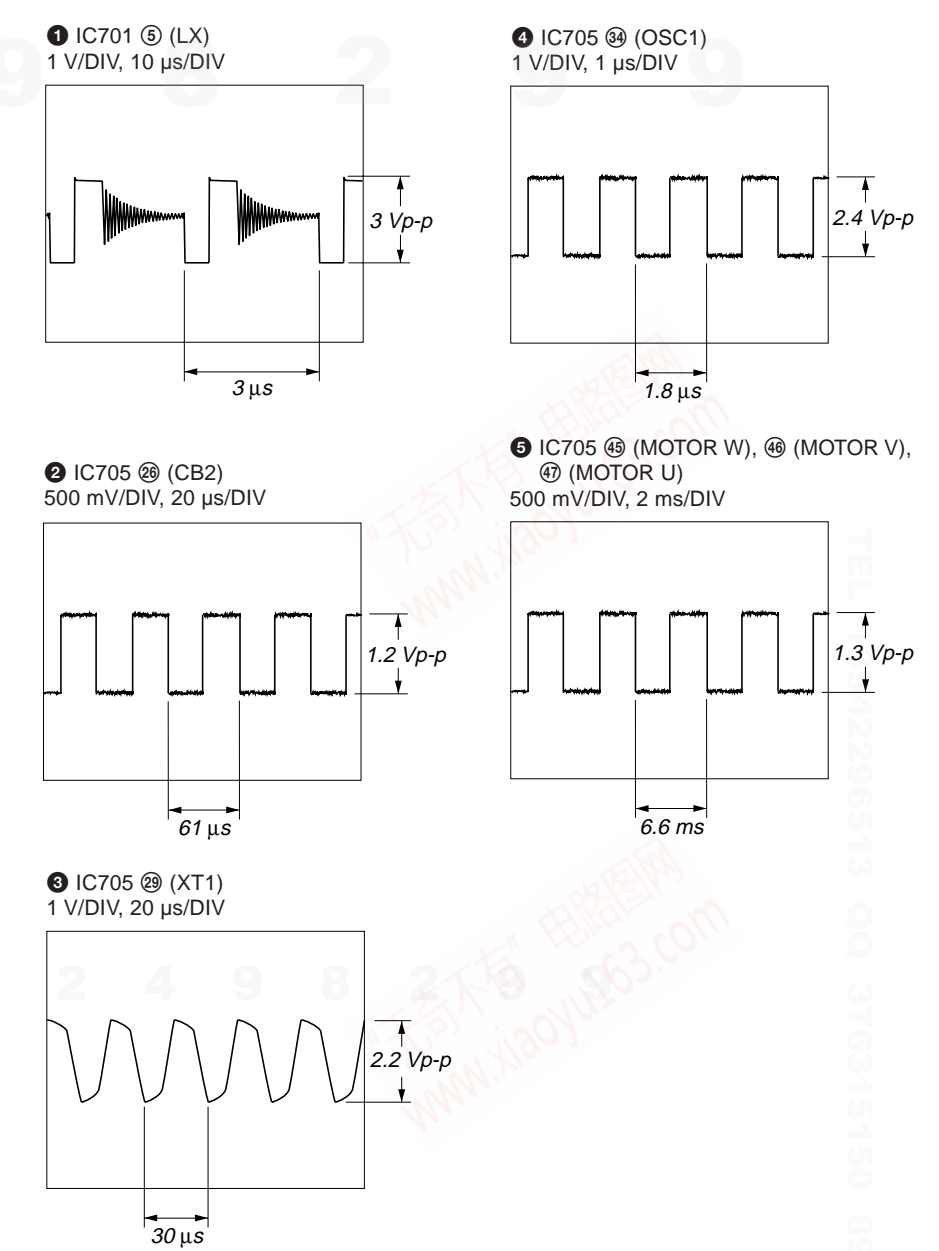
6-2. PRINTED WIRING BOARD



6-3. SCHEMATIC DIAGRAM • See page 20 for IC Block Diagrams.

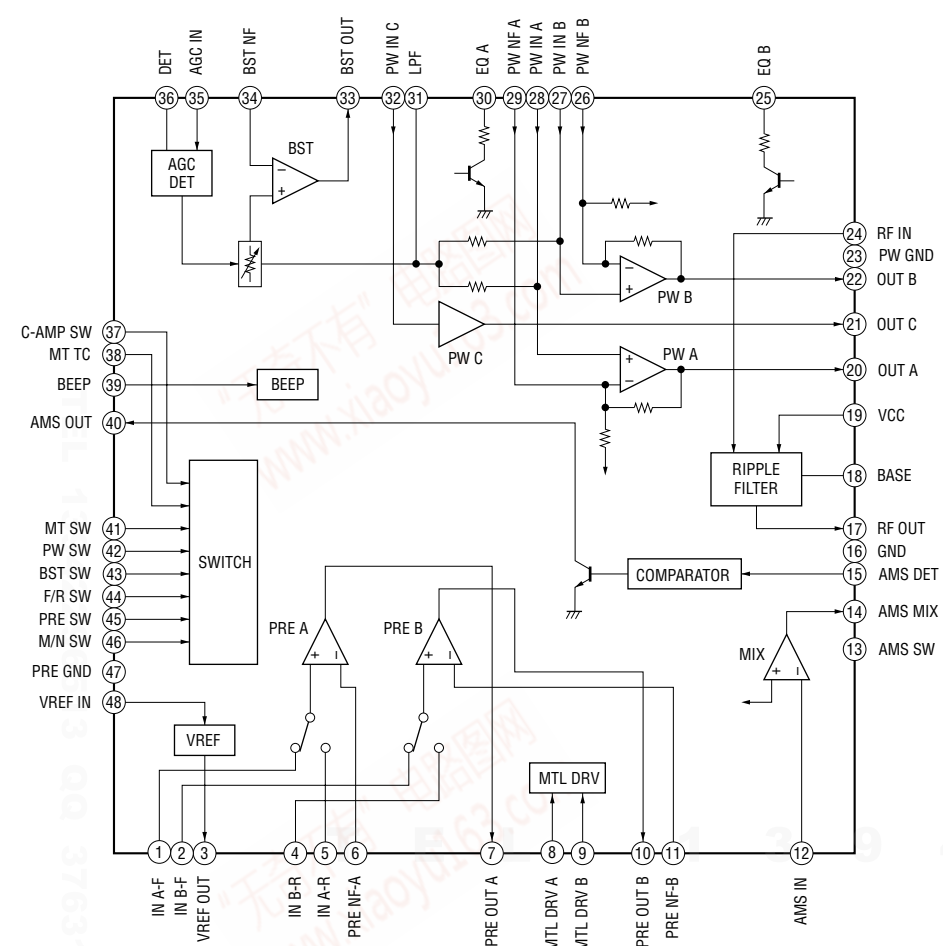


• Waveforms

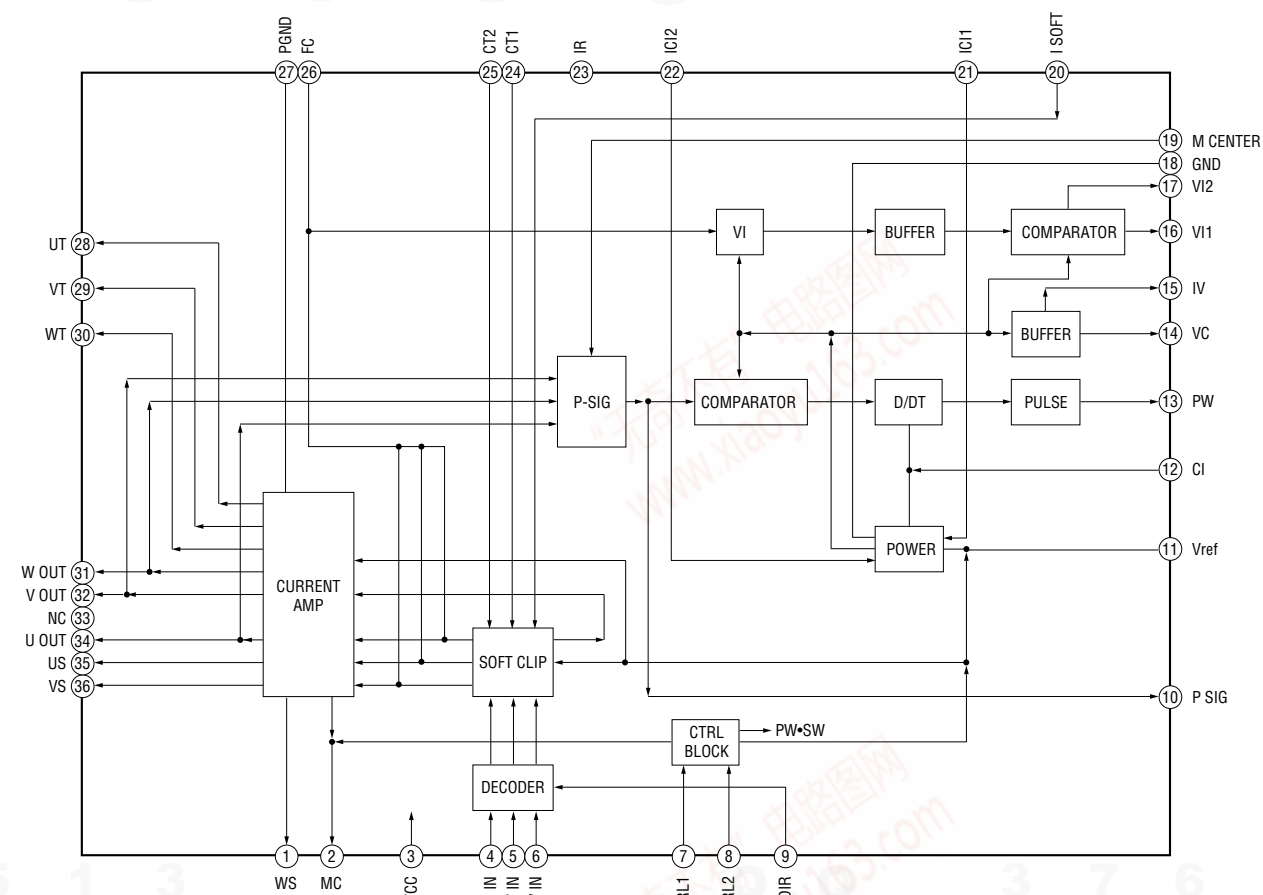


- Note on Schematic Diagram:**
- All capacitors are in μF unless otherwise noted. pF: μF/100
 - 50 WV or less are not indicated except for electrolytics and tantalums.
 - All resistors are in Ω and 1/4 W or less unless otherwise specified.
 - % : indicates tolerance.
 - : panel designation.
 - : B+ Line.
 - + : B+ Line.
 - : adjustment for repair.
 - Power voltage is dc 1.3 V and fed with regulated dc power supply from battery terminal.
 - Voltages and waveforms are dc with respect to ground under no-signal conditions.
 - no mark : PLAY
 - () : STOP
 - [] : DOLBY NR ON
 - Voltages are taken with a VOM (Input impedance 10 MΩ). Voltage variations may be noted due to normal production tolerances.
 - Waveforms are taken with an oscilloscope. Voltage variations may be noted due to normal production tolerances.
 - Circled numbers refer to waveforms.
 - Signal path.
 - ⊃ : PLAY

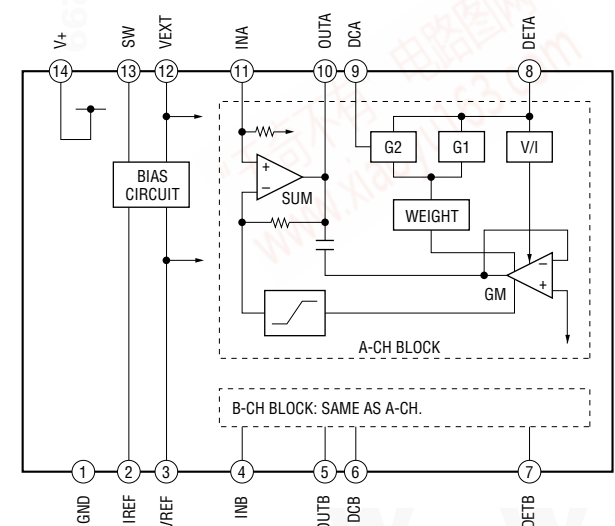
• IC Block Diagrams
IC301 TA2123AF (EL)



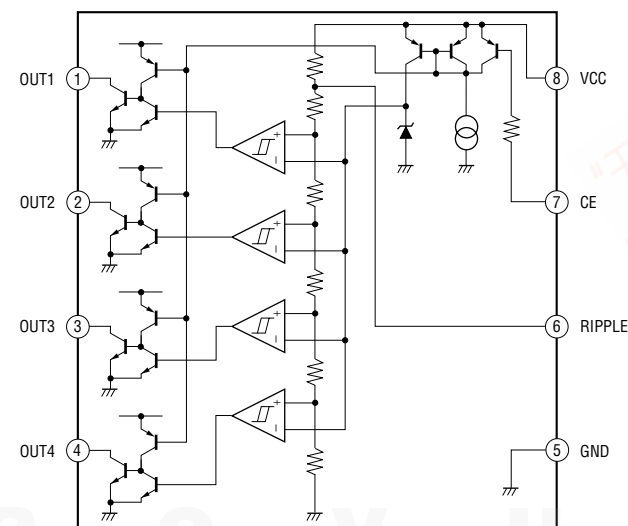
IC601 LB1994M-TLM



IC303 NJM2185AV-TE2



IC703 MM1305BWBE



6-4. IC PIN FUNCTION DESCRIPTION

• MAIN BOARD IC705 ML63514-024TBZ060 (SYSTEM CONTROLLER)

Pin No.	Pin Name	I/O	Description
1	AUDIO ATT	O	Audio attenuate control signal output It attenuates, when cue/review "H": attenuate
2	FWD SW	I	Tape direction switch (S702) input terminal "L": forward position
3	CEN SW	I	Tape direction switch (S702) input terminal "L": center position
4	RVS SW	I	Tape direction switch (S702) input terminal "L": reverse position
5	CASSETTE SW	I	Cassette tape detect switch (S704-1) input terminal "L": cassette detected, "H": no cassette
6	DATA/RMUM	I/O	Communication serial data output to the remote commander, and connection detect signal input of the remote commander
7	REVIVE CTL	O	Emphasizing sound control signal output to the TA2123AF (IC301) "L": normal/mega bass/groove, "H": revive
8	MEGA BASS CTL	O	Emphasizing sound control signal output to the TA2123AF (IC301) "L": normal/groove, "H": mega bass/revive
9	F/R CTL	O	Forward/reverse selection signal output to the TA2123AF (IC301) "L": forward direction, "H": reverse direction
10	BOOST CTL	O	Bass boost control signal output to the TA2123AF (IC301) "L": off, "H": on
11	AMP CTL	O	Also, this is used as control signal output for power on/off to the TA2123AF (IC301), DC/DC converter (IC701) and voltage detector (IC703) "L": power off, "H": power on
12	MUTE CTL	O	Power on mute control signal output to the TA2123AF (IC301) "L": mute on
13	A/B SW	I	Detection signal input of side A or B "L": side A, "H": side B Not used
14	MODEL SELECT	I	Model destination setting terminal Fixed at "H" in this set
15	BATT DET	I	Battery voltage detection signal input (A/D input)
16	KEY IN	I	Key input from the main unit or remote commander (A/D input)
17	PM CTL	O	Plunger drive signal output terminal "L": plunger on
18	SPEED CTL	O	Motor speed control signal output to the capstan/reel motor driver IC (IC601) "L": normal speed, "H": 1/2 speed
19	PHOTO CTL	O	Control signal output to the idler gear rotation detect circuit "L": rotation detect circuit on
20	DOLBY CTL	O	Power on/off control signal output to the Dolby NR circuit "L": Dolby NR on
21	VDD1	—	Power supply terminal (+2.5V) (for external interface)
22	VSS	—	Ground terminal
23	VDD	—	Power supply terminal (+1.5V)
24	VDDH	—	Power supply terminal (+2.5V) (for back-up boost)
25, 26	CB1, CB2	—	Connected to capacitor for the boost power supply
27	VDDL	—	Power supply terminal (for internal logic)
28	XT0	I	Main system clock input terminal (32.768kHz MHz)
29	XT1	O	Main system clock output terminal (32.768kHz MHz)
30, 31	TST1B, TEST2B	I	Test input terminal Normally: fixed at "H"
32	OSCM	—	Connected to capacitor for the oscillator Not used (open)
33	OSC0	I	Connected to resistor for the high speed CR oscillator (550 kHz)
34	OSC1	O	Connected to resistor for the high speed CR oscillator (550 kHz)
35	RESET	I	System reset signal input from the reset signal generator (IC704) "L": reset "H" is input for several 100 msec after power on, then it changes to "H"
36	BEEP	O	Beep sound signal output to the TA2123AF (IC301)
37	PHOTO (S) IN	I	Rotation detect signal input of the capstan/reel motor (M601) It detects rotation of the idler gear (A) (side S)
38	PHOTO (T) IN	I	Rotation detect signal input of the capstan/reel motor (M601) It detects rotation of the idler gear (A) (side T)
39	AMS IN	I	Whether a music is present or not from TA2123AF (IC301) is detected at auto music sensor "L": music is present, "H": music is not present

Pin No.	Pin Name	I/O	Description
40	P-SIG	I	P-SIG signal input from the capstan/reel motor driver IC (IC601)
41	MOTOR RESTART	O	Motor restart control signal output to the capstan/reel motor driver IC (IC601) “L”: restart the motor
42	MOTOR DIR	O	Motor direction control signal output to the capstan/reel motor driver IC (IC601) “L”: clockwise, “H”: counterclockwise
43, 44	CTRL1, CTRL2	O	Mode selection signal output to the capstan/reel motor driver IC (IC601)
45	MOTOR W	O	Motor control signal output to the capstan/reel motor driver IC (IC601) (W phase)
46	MOTOR V	O	Motor control signal output to the capstan/reel motor driver IC (IC601) (V phase)
47	MOTOR U	O	Motor control signal output to the capstan/reel motor driver IC (IC601) (U phase)
48	SURROUND CTL	O	Surround circuit control signal output terminal Not used (open)

TEL 13942296513 QQ 376315150 892498299

TEL 13942296513 QQ 376315150 892498299

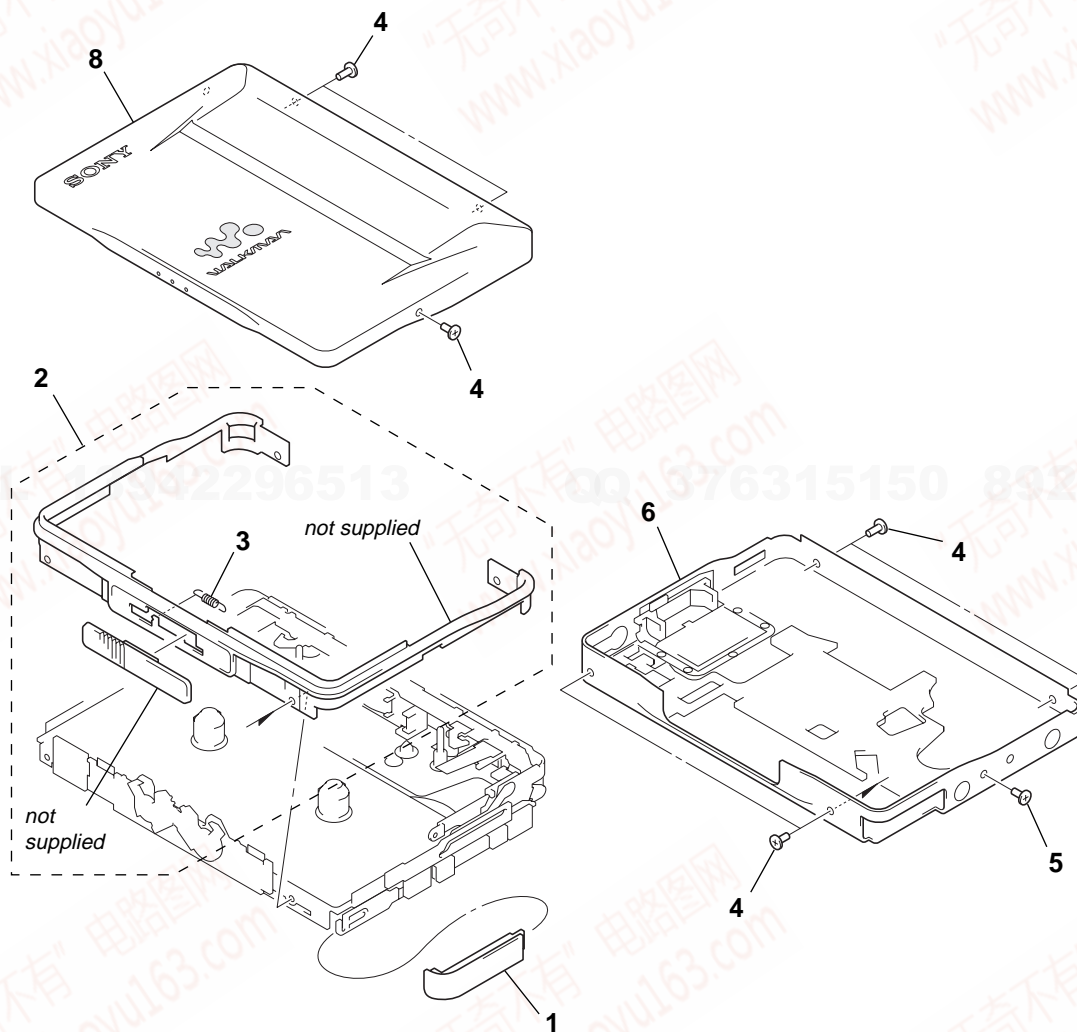
SECTION 7 EXPLODED VIEWS

NOTE:

- -XX and -X mean standardized parts, so they may have some difference from the original one.
- Color Indication of Appearance Parts
Example:
KNOB, BALANCE (WHITE) . . . (RED)
 ↑ ↑
 Parts Color Cabinet's Color

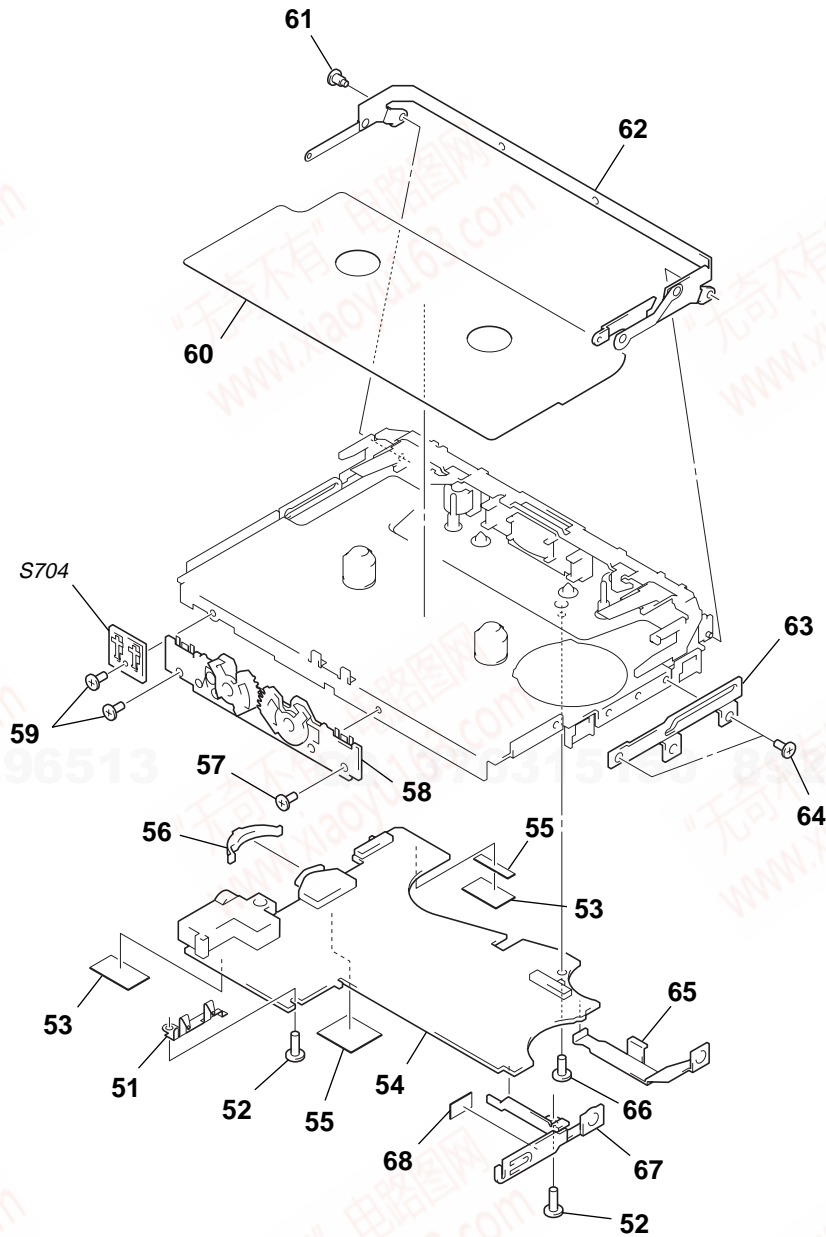
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.
- Accessories and packing materials are given in the last of the electrical parts list.

(1) CASE SECTION



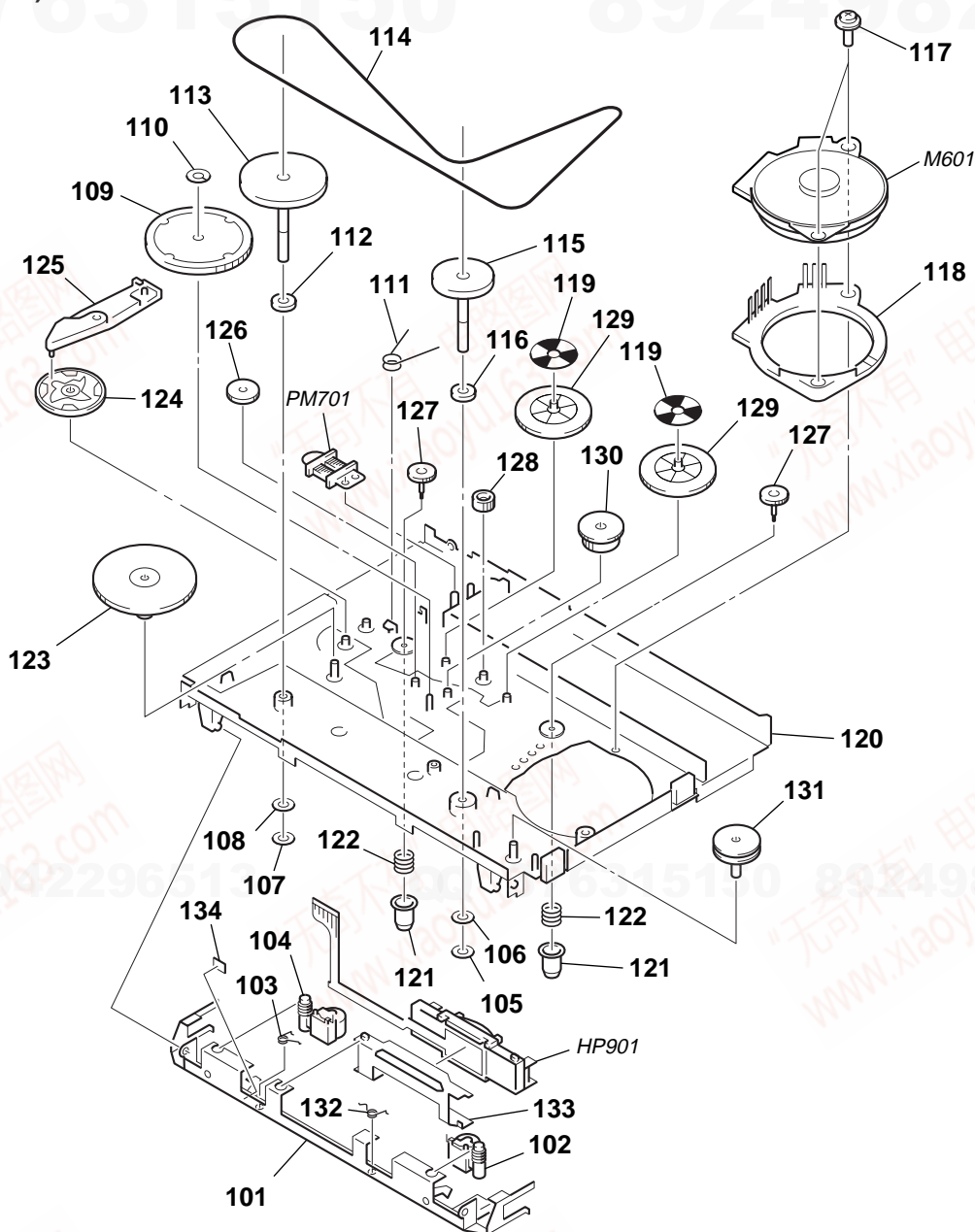
Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
1	3-221-642-11	LID, BATTERY CASE (BLUE)		5	4-218-229-11	SCREW (1.4), MI (BLUE)	
1	3-221-642-21	LID, BATTERY CASE (PINK)		6	X-3379-836-1	CASE SUB ASSY (L) (BLUE)	
1	3-221-642-31	LID, BATTERY CASE (SILVER)		6	X-3379-837-1	CASE SUB ASSY (P) (PINK)	
2	A-3052-259-A	ORNAMENT (OPEN) BLOCK ASSY		6	X-3379-839-1	CASE SUB ASSY (S) (SILVER)	
3	3-029-220-11	SPRING, TENSION		8	X-3379-840-1	LID SUB ASSY (L), CASSETTE (BLUE)	
4	4-218-229-25	SCREW (1.4), MI (PINK, SILVER)		8	X-3379-841-1	LID SUB ASSY (P), CASSETTE (PINK)	
4	4-218-229-27	SCREW (1.4), MI (BLUE)		8	X-3379-843-1	LID SUB ASSY (S), CASSETTE (SILVER)	
5	4-218-229-09	SCREW (1.4), MI (PINK, SILVER)					

(2) MAIN BOARD SECTION



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
51	3-038-056-01	TERMINAL BOARD (MINUS) (/M)		61	3-365-630-41	SCREW (M1.4)	
52	3-375-114-41	SCREW		62	X-3379-431-1	BRACKET (CASSETTE/910) ASSY	
53	3-224-837-01	SHEET (ATS)		63	3-038-054-01	LEVER (B) (/M), LOCK	
* 54	A-3021-344-A	MAIN BOARD, COMPLETE		64	3-704-197-01	SCREW (M1.4), SPECIAL HEAD	
55	3-224-466-01	SHEET (BOARD)		65	3-029-213-01	TERMINAL BOARD, BATTERY	
56	4-225-239-01	KNOB (JOG)		66	3-345-648-71	SCREW (M1.4), TOOTHED LOCK	
57	3-366-892-01	SCREW (M1.4)		67	X-3377-726-1	TERMINAL BOARD ASSY (/M)	
58	X-3377-717-1	BRACKET ASSY (/M)		68	3-031-460-01	SHEET (BT)	
59	4-963-883-51	SCREW (M1.4), PRECISION PAN		S704	1-762-553-11	SWITCH, LEAF	
60	3-221-643-51	COVER, MD					

(3) MECHANISM DECK SECTION
(MT-WMEX910-162)



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
101	X-3377-589-1	HOLDER (FA) ASSY /M		120	X-3377-584-1	CHASSIS ASSY (FA)	
102	X-3377-995-1	LEVER (R2) ASSY, PINCH		121	3-010-274-02	TABLE, REEL	
103	3-038-611-01	SPRING (HD2)		122	3-010-954-01	SPRING (BT), COMPRESSION	
104	X-3377-994-1	LEVER (N2) ASSY, PINCH		123	3-029-282-01	GEAR (Y)	
105	3-029-276-01	WASHER (STOPPER R)		124	3-029-285-01	GEAR, CAM	
106	3-029-289-01	WASHER		125	3-029-284-01	LEVER, TRIGGER	
107	3-029-275-01	WASHER (STOPPER N)		126	3-029-281-01	GEAR, IDLER (B)	
108	3-029-278-01	WASHER		127	3-010-273-02	GEAR (REEL)	
109	X-3376-813-1	CLUTCH ASSY (FM)		128	3-029-273-01	GEAR (FR)	
110	3-932-724-21	WASHER		129	3-029-283-01	GEAR, IDLER (A)	
111	3-040-897-01	SPRING (TGA), TORSION		130	3-029-286-01	GEAR (NR)	
112	3-386-694-01	WASHER		131	3-029-288-01	PULLEY, REVERSE	
113	3-029-306-11	FLYWHEEL (N), INSERT		132	3-046-789-01	SPRING (HDA)	
114	3-220-035-01	BELT (F4)		133	3-038-610-01	LEVER, HEAD	
115	3-029-268-11	FLYWHEEL (R), INSERT		134	3-033-757-01	SHEET (H)	
116	3-007-428-01	WASHER (R)		HP901	1-500-623-11	HEAD, MAGNETIC (PLAYBACK)	
117	3-029-765-01	SCREW (M1.4), TOOTHED LOCK		M601	1-763-559-11	MOTOR, DC (CAPSTAN/REEL) (WITH PULLEY)	
118	3-029-883-01	RETAINER (F1), MOTOR		PM701	1-454-674-31	SOLENOID, PLUNGER	
119	3-007-433-01	SHEET (N), REFLECTION					

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 and -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

- 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

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.

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
*	A-3021-344-A	MAIN BOARD, COMPLETE *****		C327	1-164-937-11	CERAMIC CHIP 0.001uF	10% 16V
		< CAPACITOR >		C328	1-135-201-11	TANTALUM CHIP 10uF	20% 4V
C101	1-107-520-11	TANTALUM CHIP 33uF	20% 2.5V	C329	1-115-156-11	CERAMIC CHIP 1uF	10V
C102	1-107-819-11	CERAMIC CHIP 0.022uF	10% 16V	C601	1-125-837-11	CERAMIC CHIP 1uF	10% 6.3V
C103	1-107-819-11	CERAMIC CHIP 0.022uF	10% 16V	C602	1-115-156-11	CERAMIC CHIP 1uF	10V
C105	1-107-819-11	CERAMIC CHIP 0.022uF	10% 16V	C603	1-115-156-11	CERAMIC CHIP 1uF	10V
C107	1-115-156-11	CERAMIC CHIP 1uF	10V	C604	1-115-156-11	CERAMIC CHIP 1uF	10V
C108	1-115-156-11	CERAMIC CHIP 1uF	10V	C605	1-117-863-11	CERAMIC CHIP 0.47uF	10% 6.3V
C109	1-115-156-11	CERAMIC CHIP 1uF	10V	C606	1-119-923-81	CERAMIC CHIP 0.047uF	10% 10V
C110	1-115-156-11	CERAMIC CHIP 1uF	10V	C607	1-119-923-81	CERAMIC CHIP 0.047uF	10% 10V
C111	1-115-156-11	CERAMIC CHIP 1uF	10V	C608	1-119-663-11	TANTALUM CHIP 47uF	20% 2.5V
C112	1-117-863-11	CERAMIC CHIP 0.47uF	10% 6.3V	C609	1-107-819-11	CERAMIC CHIP 0.022uF	10% 16V
C113	1-115-467-11	CERAMIC CHIP 0.22uF	10% 10V	C610	1-127-671-91	CERAMIC CHIP 10000PF	5% 50V
C201	1-107-520-11	TANTALUM CHIP 33uF	20% 2.5V	C611	1-164-937-11	CERAMIC CHIP 0.001uF	10% 16V
C202	1-107-819-11	CERAMIC CHIP 0.022uF	10% 16V	C612	1-113-600-11	TANTALUM CHIP 2.2uF	20% 6.3V
C203	1-107-819-11	CERAMIC CHIP 0.022uF	10% 16V	C701	1-135-259-11	TANTALUM CHIP 10uF	20% 6.3V
C205	1-107-819-11	CERAMIC CHIP 0.022uF	10% 16V	C702	1-115-156-11	CERAMIC CHIP 1uF	10V
C207	1-115-156-11	CERAMIC CHIP 1uF	10V	C703	1-115-156-11	CERAMIC CHIP 1uF	10V
C208	1-115-156-11	CERAMIC CHIP 1uF	10V	C704	1-115-156-11	CERAMIC CHIP 1uF	10V
C209	1-115-156-11	CERAMIC CHIP 1uF	10V	C705	1-164-850-11	CERAMIC CHIP 10PF	0.5PF 16V
C211	1-115-156-11	CERAMIC CHIP 1uF	10V	C706	1-115-156-11	CERAMIC CHIP 1uF	10V
C212	1-117-863-11	CERAMIC CHIP 0.47uF	10% 6.3V	C707	1-125-777-11	CERAMIC CHIP 0.1uF	10% 10V
C213	1-115-467-11	CERAMIC CHIP 0.22uF	10% 10V	C708	1-125-838-11	CERAMIC CHIP 2.2uF	10% 6.3V
C301	1-113-600-11	TANTALUM CHIP 2.2uF	20% 6.3V	C709	1-115-156-11	CERAMIC CHIP 1uF	10V
C302	1-125-926-11	TANTALUM CHIP 4.7uF	20% 6.3V	C710	1-115-156-11	CERAMIC CHIP 1uF	10V
C303	1-115-156-11	CERAMIC CHIP 1uF	10V	CB301	1-127-575-21	CERAMIC CHIP 470PF	50V
C304	1-127-895-11	TANTALUM CHIP 22uF	20% 4V			< DIODE >	
C306	1-107-820-11	CERAMIC CHIP 0.1uF	16V	D701	8-719-073-01	DIODE MA111- (K8). SO	
C307	1-113-600-11	TANTALUM CHIP 2.2uF	20% 6.3V	D702	8-719-072-70	DIODE MA2ZD14001SO	
C308	1-164-505-11	CERAMIC CHIP 2.2uF	16V			< FUSE >	
C309	1-125-837-11	CERAMIC CHIP 1uF	10% 6.3V	F701	1-576-439-21	FUSE (SMD) (0.25A)	
C310	1-115-467-11	CERAMIC CHIP 0.22uF	10% 10V			< FERRITE BEAD >	
C311	1-165-112-11	CERAMIC CHIP 0.33uF	16V	FB701	1-414-760-21	FERRITE BEAD	
C312	1-165-128-11	CERAMIC CHIP 0.22uF	16V			< IC >	
C313	1-164-937-11	CERAMIC CHIP 0.001uF	10% 16V	IC301	8-759-579-12	IC TA2123AF (EL)	
C316	1-107-820-11	CERAMIC CHIP 0.1uF	16V	IC303	8-759-488-80	IC NJM2185AV-TE2	
C319	1-164-874-11	CERAMIC CHIP 100PF	5% 16V	IC601	8-759-553-51	IC LB1994M-TLM	
C322	1-125-926-11	TANTALUM CHIP 4.7uF	20% 6.3V	IC701	8-759-553-28	IC XC6383C251ML	
C323	1-125-926-11	TANTALUM CHIP 4.7uF	20% 6.3V	IC702	8-759-692-22	IC XC61CS1RXXNR	
C324	1-125-976-11	TANTALUM CHIP 150uF	20% 2.5V				
C325	1-107-819-11	CERAMIC CHIP 0.022uF	10% 16V				
C326	1-127-895-11	TANTALUM CHIP 22uF	20% 4V				

MAIN

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
IC703	8-759-438-27	IC MM1305BWBE		R202	1-218-943-11	RES-CHIP 150 5%	1/16W
IC704	8-759-572-21	IC S-80808ANNP-E7Y-T2		R203	1-218-977-11	RES-CHIP 100K 5%	1/16W
IC705	8-759-833-30	IC ML63514-024TBZ060		R204	1-218-963-11	RES-CHIP 6.8K 5%	1/16W
		< JACK >		R205	1-218-963-11	RES-CHIP 6.8K 5%	1/16W
J301	1-779-867-81	JACK (○)		R207	1-218-953-11	RES-CHIP 1K 5%	1/16W
		< SHORT >		R208	1-218-969-11	RES-CHIP 22K 5%	1/16W
JC101	1-218-990-11	SHORT 0		R209	1-244-161-81	RES-CHIP 2.2 5%	1/16W
JC102	1-218-990-11	SHORT 0		R211	1-218-959-11	RES-CHIP 3.3K 5%	1/16W
JC201	1-218-990-11	SHORT 0		R212	1-218-971-11	RES-CHIP 33K 5%	1/16W
JC202	1-218-990-11	SHORT 0		R213	1-218-955-11	RES-CHIP 1.5K 5%	1/16W
JC701	1-218-990-11	SHORT 0		R214	1-218-989-11	RES-CHIP 1M 5%	1/16W
		< COIL >		R216	1-218-973-11	RES-CHIP 47K 5%	1/16W
L701	1-412-034-11	INDUCTOR 330uH		R217	1-218-943-11	RES-CHIP 150 5%	1/16W
		< PHOTO REFLECTOR >		R301	1-218-981-11	RES-CHIP 220K 5%	1/16W
PH701	8-749-016-56	REFLECTOR NJL5197K-W-F20 (TE1)		R302	1-218-955-11	RES-CHIP 1.5K 5%	1/16W
PH702	8-749-016-56	REFLECTOR NJL5197K-W-F20 (TE1)		R303	1-218-985-11	RES-CHIP 470K 5%	1/16W
		< TRANSISTOR >		R306	1-218-983-11	RES-CHIP 330K 5%	1/16W
Q301	8-729-425-46	TRANSISTOR XP4315-TXE		R308	1-220-803-81	RES-CHIP 4.7 5%	1/16W
Q302	8-729-426-36	TRANSISTOR XP1215-TXE		R309	1-218-971-11	RES-CHIP 33K 5%	1/16W
Q304	8-729-426-36	TRANSISTOR XP1215-TXE		R310	1-218-961-11	RES-CHIP 4.7K 5%	1/16W
Q305	8-729-038-06	TRANSISTOR HN1K02FU (TE85L)		R312	1-218-969-11	RES-CHIP 22K 5%	1/16W
Q306	8-729-037-63	TRANSISTOR UN9115J- (TX). SO		R313	1-208-939-11	METAL CHIP 150K 0.5%	1/16W
Q309	8-729-053-70	TRANSISTOR 2SA202800LS0		R314	1-208-927-11	METAL CHIP 47K 0.5%	1/16W
Q311	8-729-038-06	TRANSISTOR HN1K02FU (TE85L)		R316	1-218-985-11	RES-CHIP 470K 5%	1/16W
Q312	8-729-230-63	TRANSISTOR 2SC4116-YG		R317	1-218-985-11	RES-CHIP 470K 5%	1/16W
Q314	8-729-230-63	TRANSISTOR 2SC4116-YG		R318	1-218-941-11	RES-CHIP 100 5%	1/16W
Q315	8-729-038-06	TRANSISTOR HN1K02FU (TE85L)		R319	1-218-969-11	RES-CHIP 22K 5%	1/16W
Q316	8-729-046-89	TRANSISTOR 2SB970-S (TX). SO		R320	1-218-985-11	RES-CHIP 470K 5%	1/16W
Q317	8-729-426-36	TRANSISTOR XP1215-TXE		R601	1-218-973-11	RES-CHIP 47K 5%	1/16W
Q601	8-729-043-94	TRANSISTOR CPH3106-PM-TL		R602	1-218-973-11	RES-CHIP 47K 5%	1/16W
Q602	8-729-420-24	TRANSISTOR 2SB1218A-QRS		R603	1-218-969-11	RES-CHIP 22K 5%	1/16W
Q603	8-729-039-36	TRANSISTOR MDC06TR		R604	1-218-977-11	RES-CHIP 100K 5%	1/16W
Q701	8-729-046-89	TRANSISTOR 2SB970-S (TX). SO		R605	1-218-985-11	RES-CHIP 470K 5%	1/16W
Q702	8-729-037-63	TRANSISTOR UN9115J- (TX). SO		R606	1-218-981-11	RES-CHIP 220K 5%	1/16W
Q703	8-729-427-51	TRANSISTOR XP4215-TXE		R607	1-218-979-11	RES-CHIP 150K 5%	1/16W
		< RESISTOR >		R608	1-218-977-11	RES-CHIP 100K 5%	1/16W
R101	1-218-967-11	RES-CHIP 15K 5%	1/16W	R609	1-218-963-11	RES-CHIP 6.8K 5%	1/16W
R102	1-218-943-11	RES-CHIP 150 5%	1/16W	R610	1-218-977-11	RES-CHIP 100K 5%	1/16W
R103	1-218-977-11	RES-CHIP 100K 5%	1/16W	R611	1-218-983-11	RES-CHIP 330K 5%	1/16W
R104	1-218-963-11	RES-CHIP 6.8K 5%	1/16W	R612	1-218-989-11	RES-CHIP 1M 5%	1/16W
R105	1-218-963-11	RES-CHIP 6.8K 5%	1/16W	R613	1-218-989-11	RES-CHIP 1M 5%	1/16W
R107	1-218-953-11	RES-CHIP 1K 5%	1/16W	R614	1-218-977-11	RES-CHIP 100K 5%	1/16W
R108	1-218-969-11	RES-CHIP 22K 5%	1/16W	R701	1-218-935-11	RES-CHIP 33 5%	1/16W
R109	1-244-161-81	RES-CHIP 2.2 5%	1/16W	R702	1-218-977-11	RES-CHIP 100K 5%	1/16W
R111	1-218-959-11	RES-CHIP 3.3K 5%	1/16W	R703	1-218-971-11	RES-CHIP 33K 5%	1/16W
R112	1-218-971-11	RES-CHIP 33K 5%	1/16W	R704	1-218-971-11	RES-CHIP 33K 5%	1/16W
R113	1-218-955-11	RES-CHIP 1.5K 5%	1/16W	R705	1-218-973-11	RES-CHIP 47K 5%	1/16W
R114	1-218-989-11	RES-CHIP 1M 5%	1/16W	R706	1-208-711-11	METAL CHIP 15K 0.5%	1/16W
R116	1-218-973-11	RES-CHIP 47K 5%	1/16W	R707	1-208-943-11	METAL CHIP 220K 0.5%	1/16W
R117	1-218-943-11	RES-CHIP 150 5%	1/16W	R708	1-218-985-11	RES-CHIP 470K 5%	1/16W
R201	1-218-967-11	RES-CHIP 15K 5%	1/16W	R709	1-218-977-11	RES-CHIP 100K 5%	1/16W
				R710	1-218-985-11	RES-CHIP 470K 5%	1/16W
				R711	1-218-973-11	RES-CHIP 47K 5%	1/16W
				R712	1-218-955-11	RES-CHIP 1.5K 5%	1/16W
				R713	1-218-987-11	RES-CHIP 680K 5%	1/16W
				R714	1-218-955-11	RES-CHIP 1.5K 5%	1/16W
				R715	1-218-987-11	RES-CHIP 680K 5%	1/16W
				R716	1-208-935-11	METAL CHIP 100K 0.5%	1/16W

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Ref. No.	Part No.	Description	Quantity	Percentage	Remark
R717	1-208-707-11	METAL CHIP	10K	0.5%	1/16W
R718	1-208-675-11	METAL CHIP	470	0.5%	1/16W
R719	1-208-687-11	METAL CHIP	1.5K	0.5%	1/16W
R720	1-208-683-11	METAL CHIP	1K	0.5%	1/16W
R721	1-208-699-11	RES-CHIP	4.7K	0.5%	1/16W
R722	1-208-683-11	METAL CHIP	1K	0.5%	1/16W
R723	1-208-703-11	METAL CHIP	6.8K	0.5%	1/16W
R724	1-208-687-11	METAL CHIP	1.5K	0.5%	1/16W
R725	1-218-953-11	RES-CHIP	1K	5%	1/16W
R726	1-218-985-11	RES-CHIP	470K	5%	1/16W
R727	1-218-985-11	RES-CHIP	470K	5%	1/16W
R728	1-218-985-11	RES-CHIP	470K	5%	1/16W
R729	1-218-985-11	RES-CHIP	470K	5%	1/16W
R730	1-218-981-11	RES-CHIP	220K	5%	1/16W

< VARIABLE RESISTOR >

RV601 1-223-325-21 RES, ADJ, METAL GLAZE 100K

< SWITCH >

S301 1-692-605-11 SWITCH, SLIDE (VOL, AVLS)
S702 1-771-475-21 SWITCH, SLIDE (DIRECTION)
S703 1-771-816-21 SWITCH, LEVER (SLIDE)
(REW/FF, PUSH ◀▶/■)

< VIBRATOR >

X701 1-579-258-11 VIBRATOR, CRYSTAL (32.768kHz)

MISCELLANEOUS

HP901 1-500-623-11 HEAD, MAGNETIC (PLAYBACK)
M601 1-763-559-11 MOTOR, DC (CAPSTAN/REEL) (WITH PULLEY)
PM701 1-454-674-31 SOLENOID, PLUNGER
S704 1-762-553-11 SWITCH, LEAF

ACCESSORIES & PACKING MATERIALS

1-528-543-22 BATTERY, NI-CD (NC-6WM)
△ 1-528-661-15 BATTERY CHARGER (BC-7DR) (Korean)
△ 1-528-822-13 BATTERY CHARGER (BC-7DN) (Chinese)
1-759-700-22 CASE, BATTERY
3-008-521-01 CASE, BATTERY CHARGE
3-221-647-11 MANUAL, INSTRUCTION
(ENGLISH, KOREAN, CHINESE)
3-222-163-01 POUCH, CARRYING
8-953-304-90 RECEIVER MDR-E805SP
A-3052-256-A REMOTE CONTROL ASSY(RM-WME23L)

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

WM-EX910

QQ 376315150

892498299

TEL 13942296513 QQ 376315150 892498299

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