

WM-DDIII

SERVICE MANUAL

Refer to MDR-15L Service Manual issued previously for information of headphones supplied with this set.

AEP Model

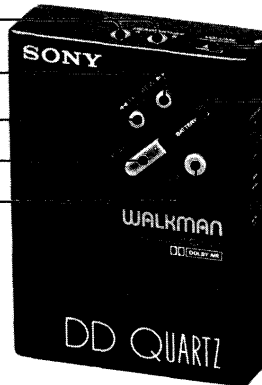
HEADPHONES jacks (stereo minijacks)

REW ►► (rewind) button

◄◄ FF (fast forward) button

◄ PLAY button

■ STOP button



VOLUME control

BATTERY indicator

DOLBY NR switch

TAPE selector

Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation. "DOLBY" and the double-D symbol **DD** are trademarks of Dolby Laboratories Licensing Corporation.

PHOTO: BLACK TYPE

SPECIFICATIONS

Tape track

4-track 2-channel stereo

Fast winding time

Approx. 2 min. with Sony Cassette C-60

Frequency response

40–15,000 Hz

Wow and flutter

±0.13% (DIN)

0.08% WRMS (NAB)

Power output

Headphones:

20 mW + 20 mW (at 10% harmonic distortion)

load impedance 32 ohms

at DC operation

Outputs

Two HEADPHONES jacks (stereo minijacks)

load impedance 8–300 ohms

Power requirements

3 V DC, two R6 (size AA) batteries

DC IN 3 V jack accepts:

EBP-500 battery case (optional) for use on

two R20 (size D) batteries

AC-D2M AC power adaptor (optional) for use

on 220 V AC, 50 Hz

DCC-70 or DCC-127A car battery cord (optional) for use with 12 V car battery

(For connection with the DCC-127A, the optional PC-200 DC plug adaptor is required.)

Battery life

Batteries	Continuous playback hours
Sony batteries SUM-3 (NS)	Approx. 4
Sony alkaline batteries AM3	Approx. 9

For maximum performance we recommend the use of alkaline batteries.

Similar Mechanism Set	WM-DD
Tape Transport Mechanism Type	DD-100

Dimensions

Approx. 79.7 × 110 × 32.8 mm (w/h/d)

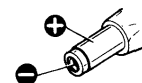
(3¹/₄ × 4³/₈ × 1⁵/₁₆ inches)

incl. projecting parts and controls

Weight

Approx. 290 g (10.3 oz) incl. batteries,
not incl. other accessories

Note: If a car battery cord or an AC power adaptor not manufactured by Sony is used, a fuse must be installed in the battery cord or the AC power adaptor and the polarity of the plug must be as illustrated.



FEATURES

- **Disc Drive system** assures accurate and stable tape transport, greatly reducing wow and flutter.
- **Dolby NR system** reduces tape hiss noise.
- **Tape selector** for optimum playback with standard tapes as well as high-performance tapes.
- **Two HEADPHONES jacks** allow two persons to listen to tape playback together.

STEREO CASSETTE PLAYER

SONY®

Replacing chip components

All chip components should be connected and disconnected, using a tapered soldering iron [temperature of the iron tip: less than 280°C (536°F)], a pair of tweezers and braided wire.

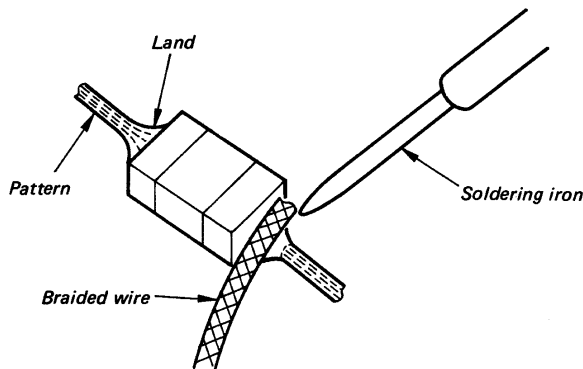
Precautions for replacement

1. Do not disconnect the chip component forcefully. Otherwise, the pattern may peel off.
2. Never re-use a disconnected chip component. Dispose of all old chip components.
3. To protect the chip component, heating time for attaching the component should be within 3 seconds.

○ Removing chip components

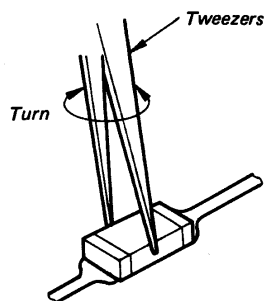
(1) Removing solder at electrode

Remove the solder at the electrode, using a thin braided wire. Do not remove the solder of the part (chip component) attached adjacent to the electrode.



(2) Disconnecting chip components

Turn the tweezers with the soldering iron alternately applied to both electrodes, and the chip component will be disconnected. Take careful precautions while disconnecting, because if the chip component is forcefully removed the land may peel off. Never re-use a disconnected chip component.



(3) Smoothing the soldered surface

After disconnecting the chip component, remove the solder by using a braided wire to smooth the land surface.

○ Connecting chip components

The value of chip components is not displayed on the main body. Take due precautions to avoid mixing new chip components with other ones.

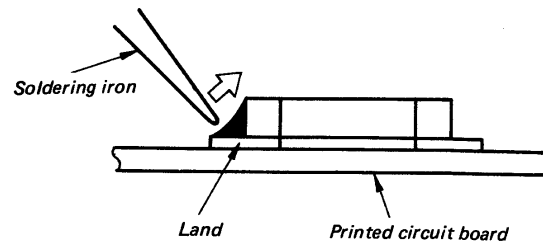
(1) Applying solder to land on one side

Apply a thin layer of solder to the land on one side where the chip component is to be connected. Too much solder may cause bridging.



(2) Speedy soldering

Hold the chip component at the desired position, using tweezers, and apply the soldering iron in the arrow-marked direction. To protect the chip component, heating time should be within 3 seconds.



(3) Speedy soldering of electrode on the other side

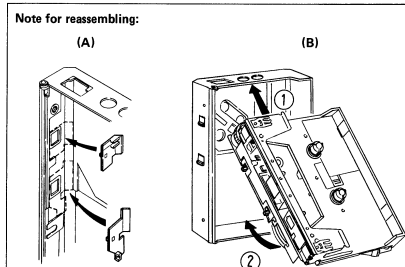
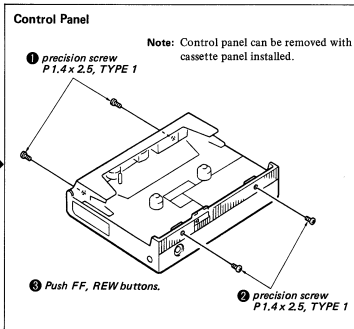
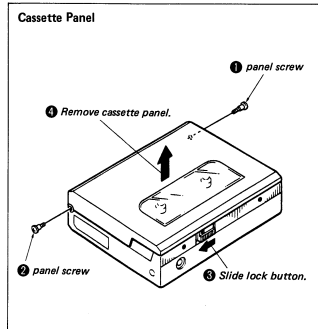
Solder the electrode on the other side in the same way as in (2) above.

SECTION 1 MECHANICAL OPERATION

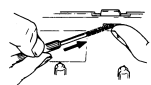
MECHANICAL OPERATION in this set is the same as that of model WM-DD, so refer to WM-DD service manual previously issued for MECHANICAL OPERATION.

SECTION 2 DISASSEMBLY

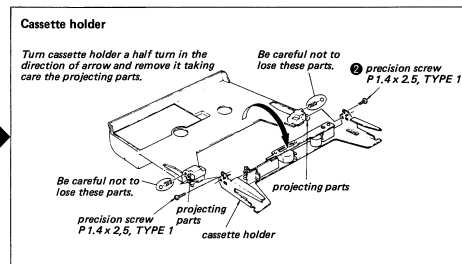
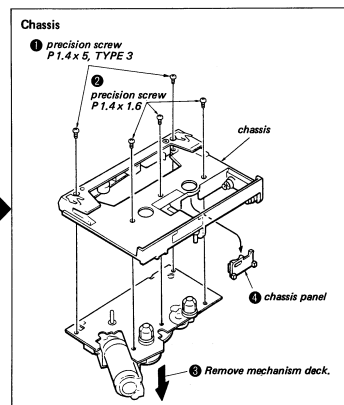
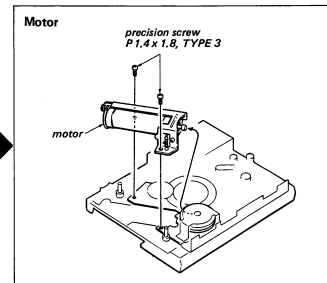
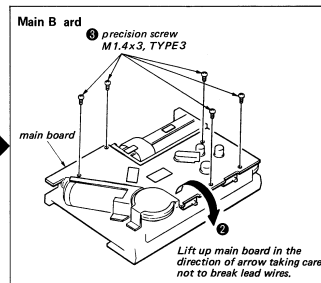
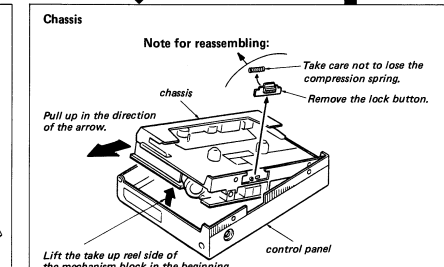
Note: Follow the disassembly procedure in the numerical order given.



(Installing the compression spring)



A) Insert the portion (A) of DOLBY BUTTON and TAPE BUTTON into the slit as shown.
B) Set the control panel up. Set DOLBY SWITCH and TAPE SWITCH on the main board at OFF position and METAL. Then put the mechanical unit into the control panel following the numbers 1 and 2.



Pinch roller and head can be replaced.

SECTION 3 ADJUSTMENTS

PRECAUTION

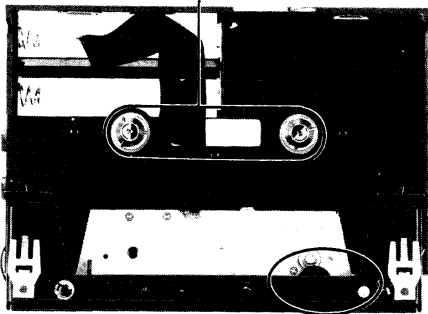
1. Clean the following parts with a denatured-alcohol-moistened swab:
 playback head pinch roller
 capstan
2. Demagnetize the playback head with a head demagnetizer.
3. Do not use a magnetized screwdriver for the adjustments.
4. After the adjustments, apply suitable locking compound to the parts adjusted.
5. The adjustments should be performed with the rated power supply voltage unless otherwise noted.

3-1. MECHANICAL ADJUSTMENT

Torque Measurement

Perform with 2.5 V DC power.

	Torque meter	Meter reading
FWD	CQ-102C	22 – 46 g·cm (0.3 – 0.63 oz·inch)
FF, REW	CQ-201B	More than 65 g·cm (More than 9.04 oz·inch)
Back Tension	CQ-102C	1 – 3.5 g·cm (0.01 – 0.05 oz·inch)
Tape Pulling Force	CQ-403	More than 80 g·cm (More than 11.12 oz·inch)



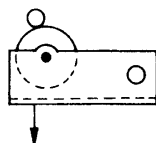
Pinch Roller Pressure Adjustment

— Playback Mode —

1. Pull the spring scale in the direction shown by the arrow.
2. Slowly return the pinch roller and read the spring scale just when the pinch roller starts rotating.

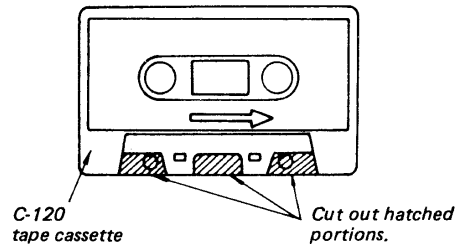
Specification:

170 ± 20 g (5.3 ~ 6.7 oz)

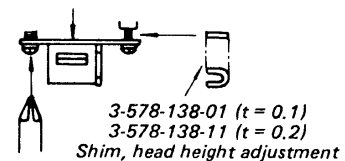
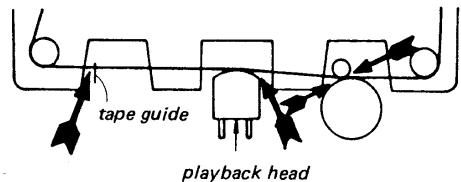


Head Height Adjustment

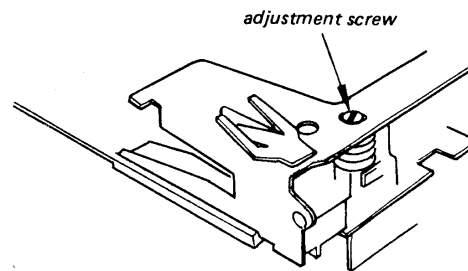
1. Prepare an adjustment cassette as shown below.



2. In playback mode and viewing from the front, adjust the head heights to eliminate tape curl and tape twist at portions shown by the arrow.

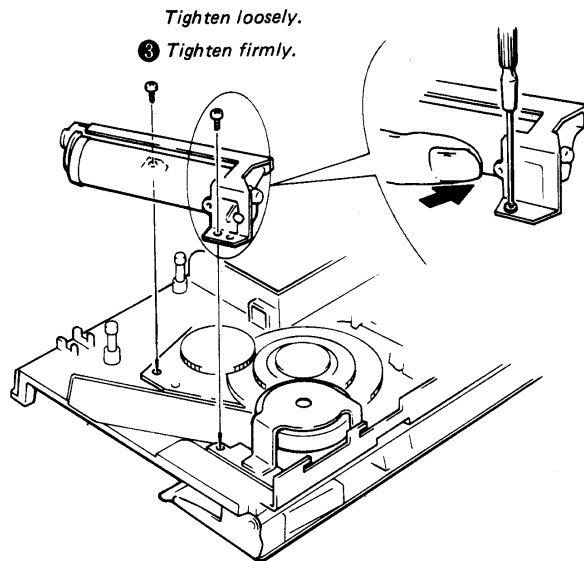


3. If necessary, adjust the height of the tape-guide by turning the adjustment screw.



4. Apply locking compound on adjustment screw.

1. Motor section installation



- ① Tighten screw loosely.
- ② Tighten screw while pressing the motor section lightly in the direction of the arrow.
- ③ Tighten the screw.

2. Wow & flutter and motor position

1. Adjust with the adjustment screw so that rotor thrust play is within 0.1mm. (When confirming play, press motor down so that the motor pulley and rotor rubber section do not touch.)
2. Wow & flutter adjustment

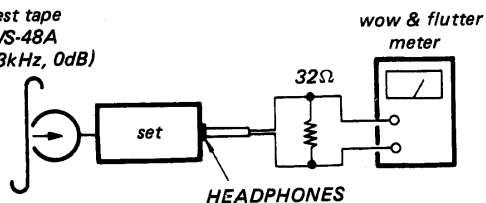
Setting:

Power supply voltage: 2.5V
 Tape: Adjust by using end portion of tape.
 VOLUME control: mechanical mid
 TAPE SELECT switch: NORM
 DOLBY NR switch: OFF

Procedure:

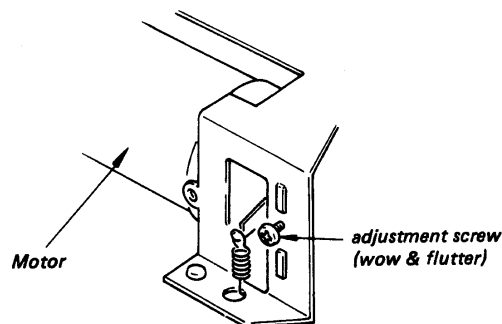
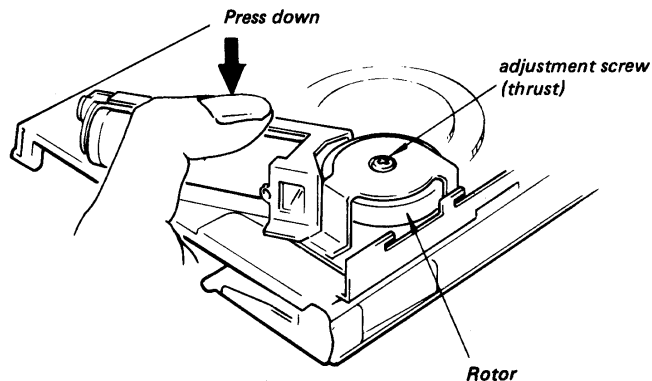
- ① Mode: playback

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



Turn the adjustment screw so that the wow and flutter meter reads minimum (less than 0.12% W-RMS).

- ② At 2V power supply voltage, confirm normal FWD operation.
- ③ When ① and ② are not satisfied, repeat adjustment again starting with "Motor Section Installation".



2.2. ELECTRICAL ADJUSTMENTS

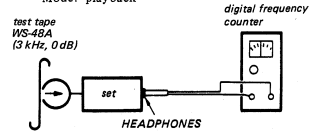
Tape Speed Adjustment

Setting:

VOLUME control: mechanical mid
TAPE SELECT switch: NORM
DOLBY NR switch: OFF

Procedure:

Mode: playback

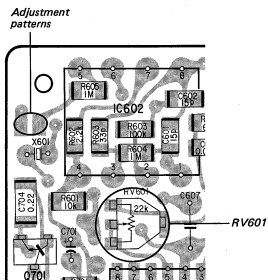
- test tape WS-48A (3 kHz, 0 dB)
- 
1. Open the solder bridge shown below.
 2. Turn RV601 so that frequency reading becomes in 3090 Hz \pm 10 Hz. (at the ending part of the test tape)
 3. Resolder the adjustment patterns opened in step 2 above. Now frequency reading should become in 3000 Hz \pm 9 Hz.

Specification:

Digital frequency counter
3000 Hz \pm 9 Hz

Adjustment Location:

— main board —



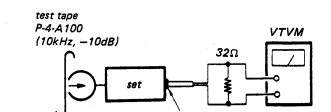
Playback Head Azimuth Adjustment

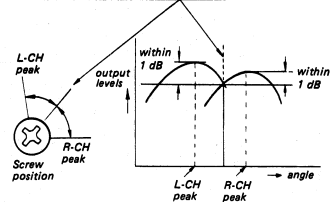
Setting:

VOLUME control: mechanical mid
TAPE SELECT switch: NORM
DOLBY NR switch: OFF

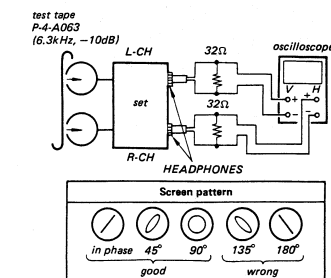
Procedure:

1. Mode: playback

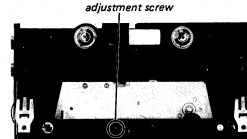
- test tape P-4-A100 (10 kHz, -10 dB)
- 
2. Turn the adjustment screw for the maximum output levels. If these levels do not match, turn the adjustment screw until both of output levels match together within 1 dB.



3. Phase Check
Mode: playback



Adjustment Location:



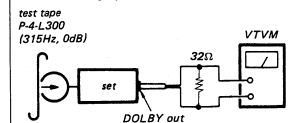
Playback Level Adjustment

Setting:

VOLUME control: mechanical mid
TAPE SELECT switch: NORM
DOLBY NR switch: OFF

Procedure:

Mode: playback

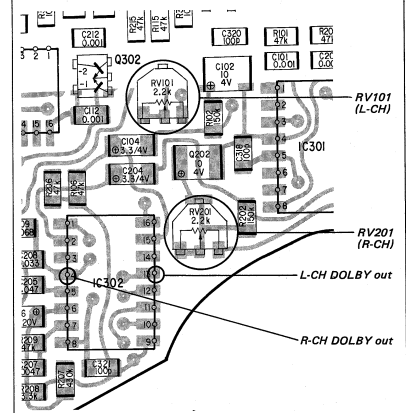
- test tape P-4-L300 (315 Hz, 0 dB)
- 
- DOLBY out
(Refer to the following figure for DOLBY out point.)

Specification:

- DOLBY out level: 0.073 V (-20.5 ± 0.2 dB)
- 1) If necessary, adjust RV101 (L-CH) and RV201 (R-CH) for the specification.
 - 2) Confirm that the output level of DOLBY out is not changed when repeating playback and stop.

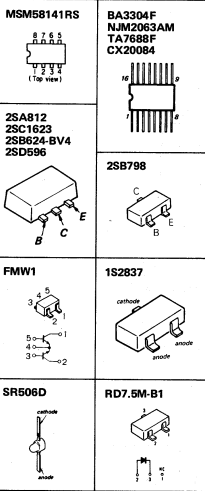
Adjustment Location:

— main board —



SECTION 4 DIAGRAMS

Semiconductor Lead Layouts



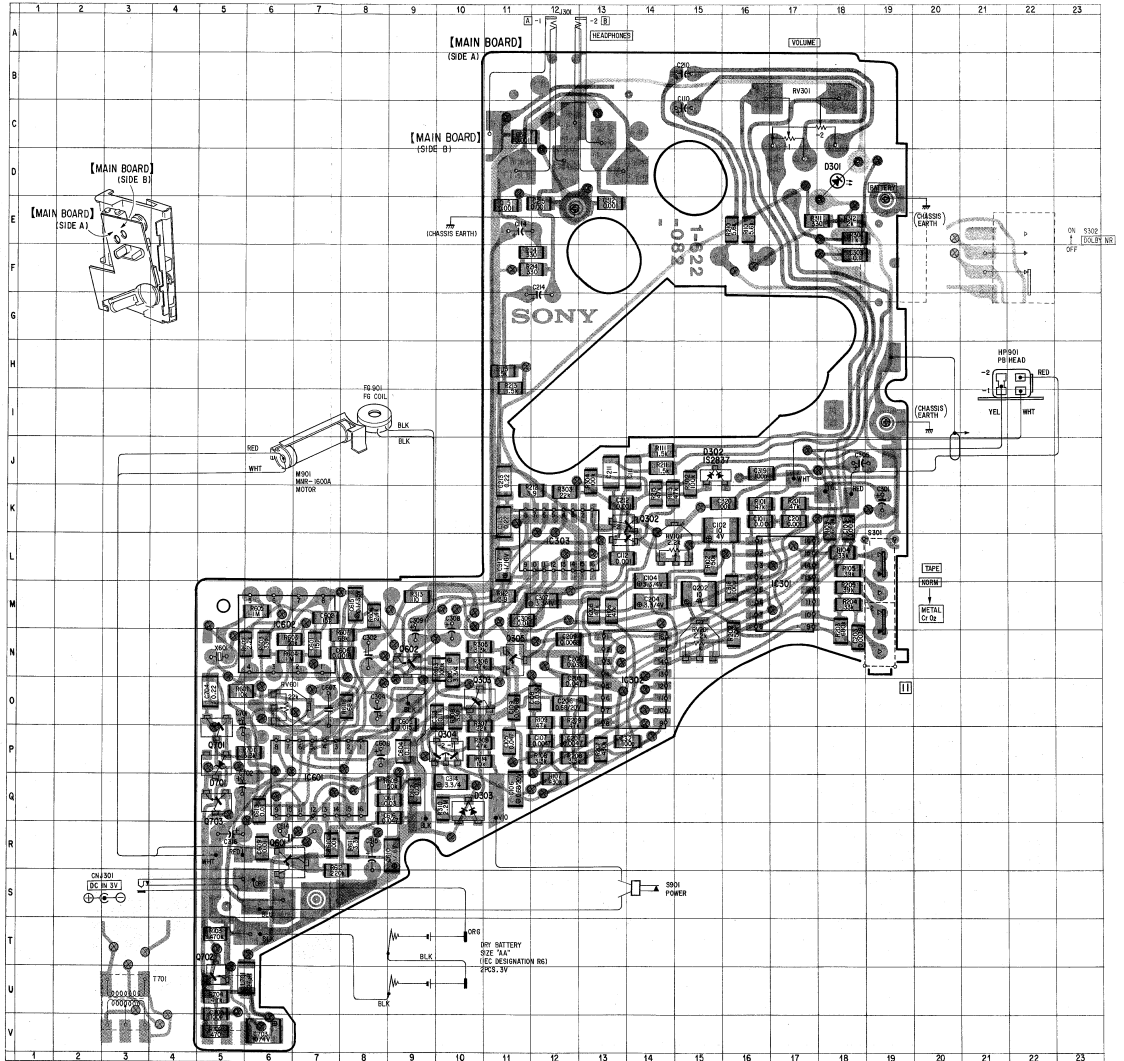
Semiconductor Location

Ref. N.	Description	R. f. No.	Description
D301	D-18	Q302	K-13
D302	J-15	Q303	O-10
D303	Q-10	Q304	P-10
D701	P-5	Q305	N-11
IC301	M-17	Q601	R-6
IC302	O-14	Q602	N-9
IC303	L-12	Q701	P-5
IC601	Q-7	Q702	U-5
IC602	N-6	Q703	Q-5

N ts:

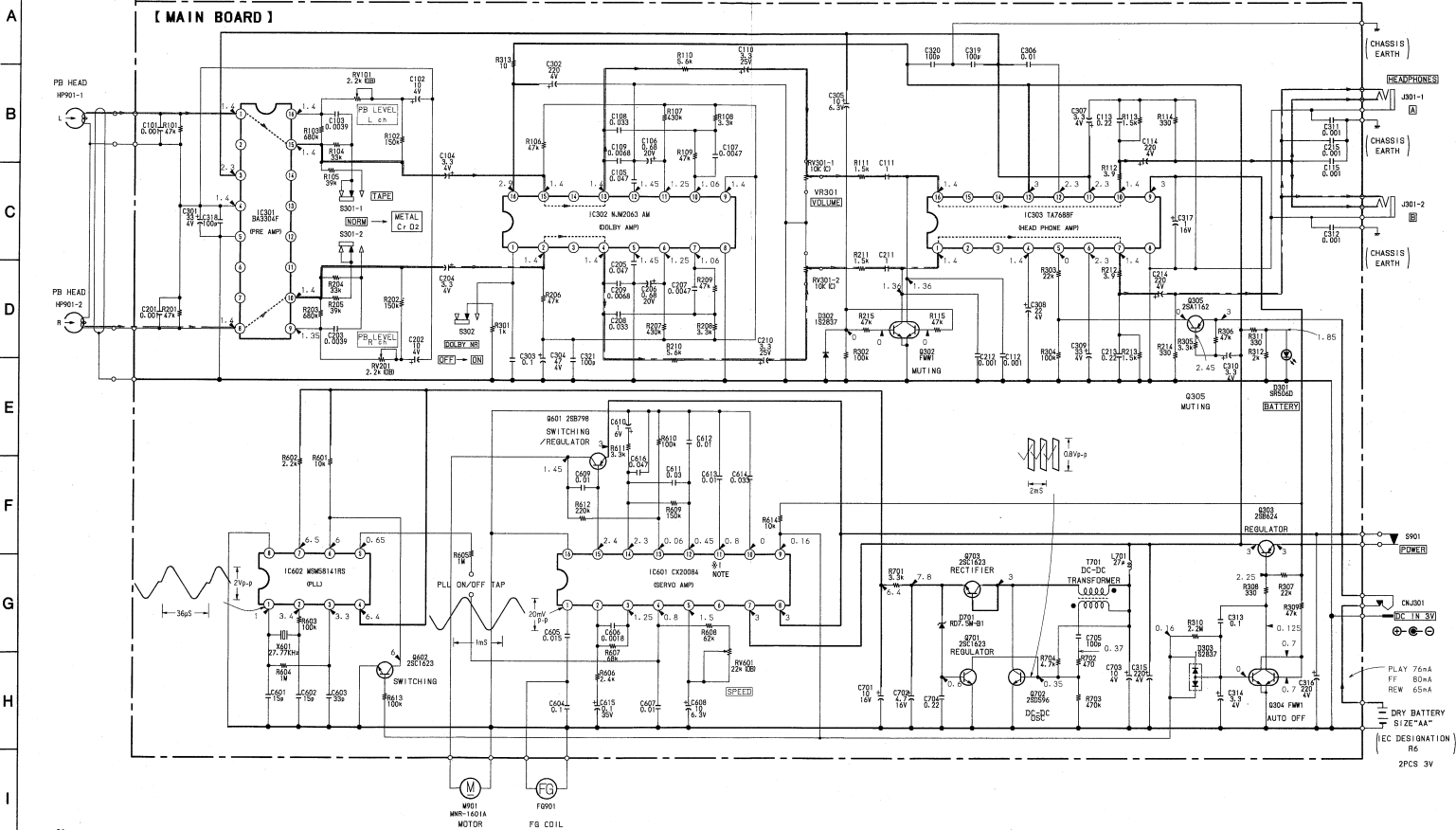
- : parts extracted from the component side.
- : parts extracted from the conductor side.
- : part mounted on the conductor side.
- ⊙ : Through hole.
- ▨ : component-side pattern.

3-1. MOUNTING DIAGRAM



WM-DD III

3-2. SCHEMATIC DIAGRAM



N te:

All capacitors are in μF unless otherwise noted. pF : μF 50WV or less are not indicated except for electrolytics and tantalums.
All resistors are in Ω and $\frac{1}{4}\text{W}$ or less unless otherwise specified

 : L-CH signal path
 : R-CH signal path

- : B+ bus.

☐ : adjustment for repair.

Power voltage is 3 V and fed with regulated dc power supply from
Voltage variations may be noted due to normal production tolerances.

Waveforms are taken to ground in PLAY mode by using oscilloscope.
Voltage variations may be noted due to normal production tolerances.

Switches:

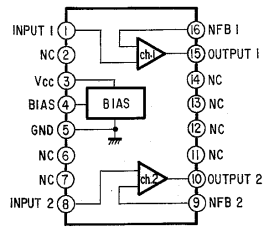
Ref. No.	Switch	Position
S301	TAPE	NORM
S302	DOLBY NR	OFF
S901	POWER	ON

*1

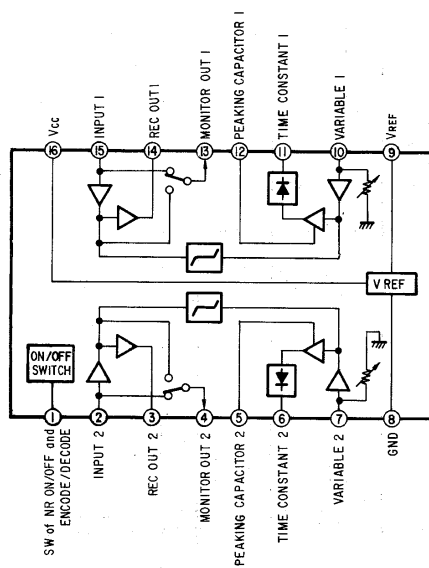
- Touching the pin No. 11 of IC601 with the tester probe causes an extra vibration inside the IC, which will be heard from the phones as a high-pitched sound.
- If the pin No. 11 of IC601 is touched with the tester probe, the voltage there will increase, and after about 1 second it will get higher than 0.8V, so that the motor M901 will stop.

IC BLOCK DIAGRAMS

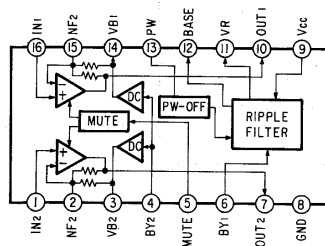
IC301 BA3304F



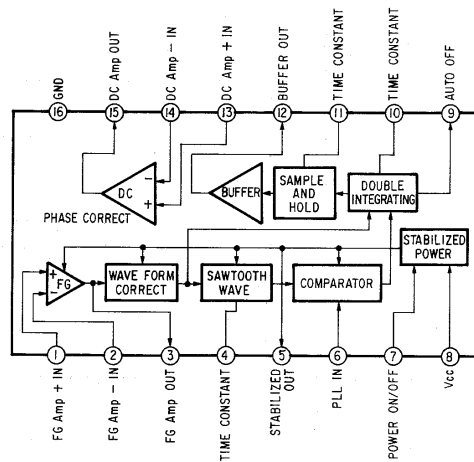
IC302 NJM2063AM



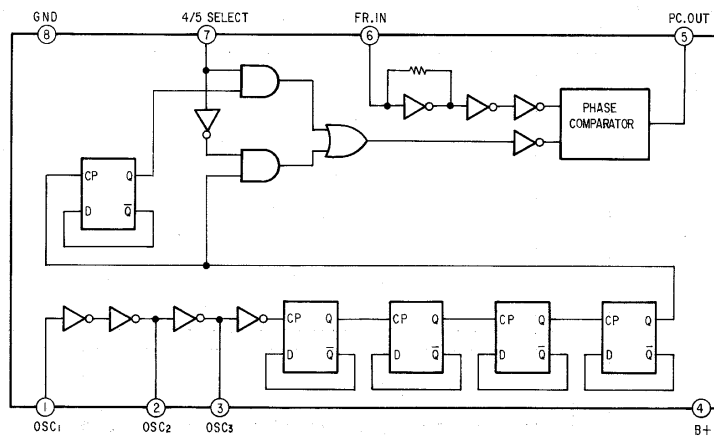
IC303 TA7688F



IC601 CX20084



• IC602 MSM58141RS



REVISED

SECTION 5

EXPLODED VIEWS AND PARTS LIST

NOTE:

• The mechanical parts with no reference number in the exploded views are not supplied.

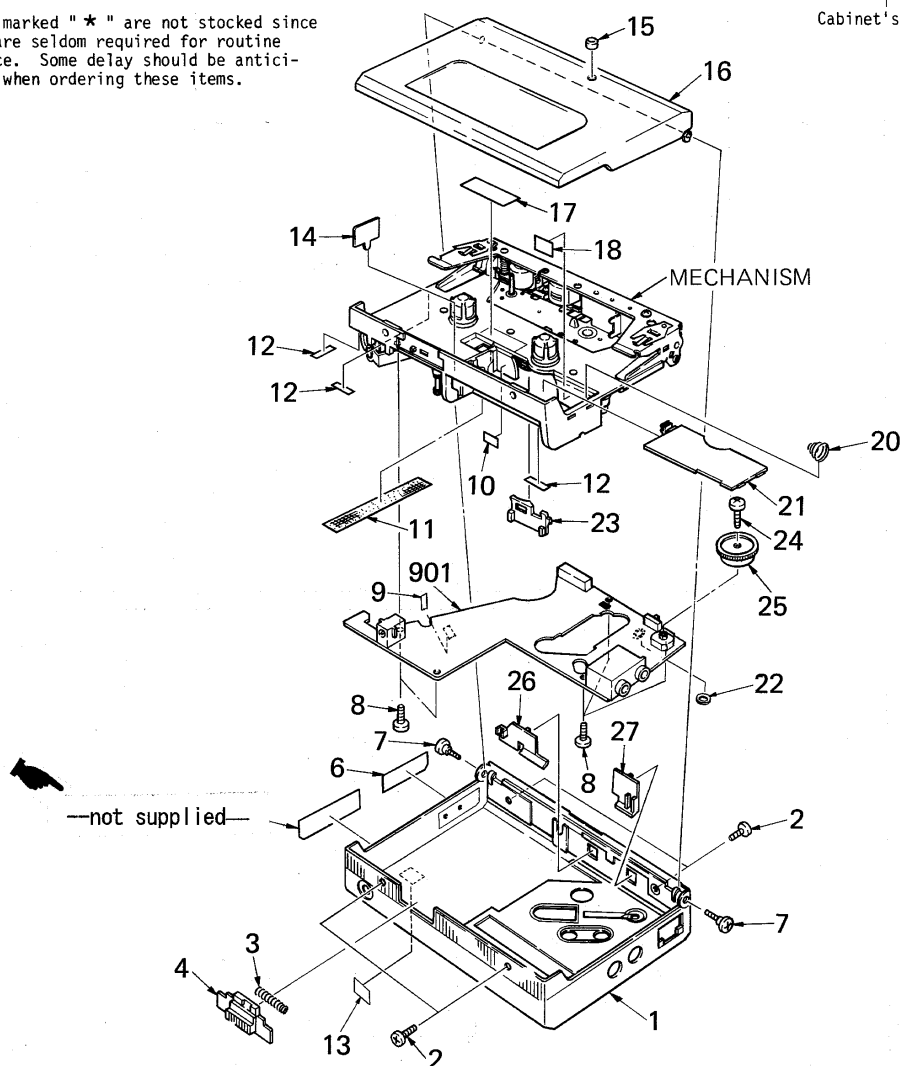
• Items marked " * " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

• The construction parts of an assembled part are indicated with a collation number in the remark column.

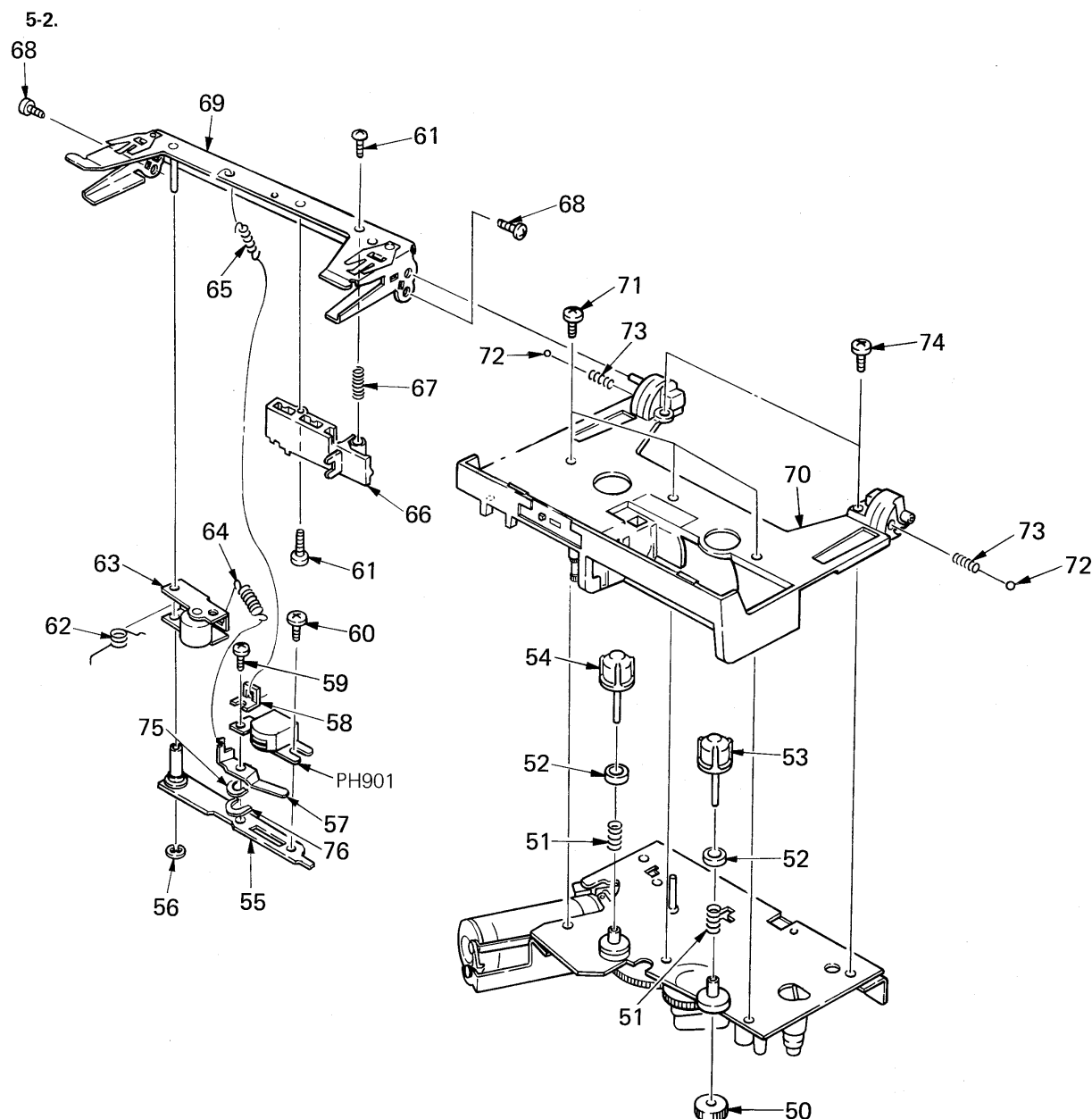
• Color Indication of Appearance Parts
Example: (RED) KNOB, BALANCE
(WHITE)

Cabinet's Color Parts' Color

5-1.



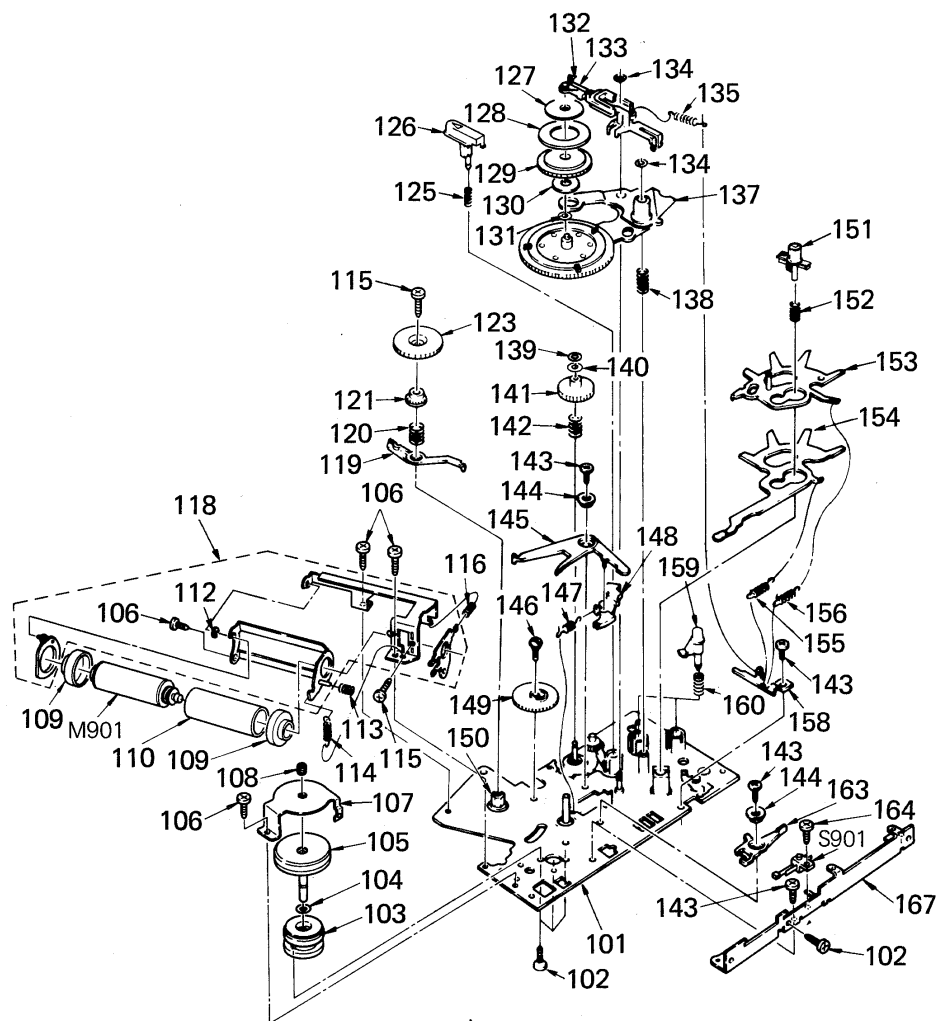
No.	Part No.	Description	Remarks	No.	Part No.	Description	Remarks
1	X-3310-950-1 X-3310-951-1 X-3310-952-1	(SILVER)...PANEL ASSY, CONTROL (BLACK)...PANEL ASSY, CONTROL (RED).....PANEL ASSY, CONTROL		15	3-578-232-00 3-578-232-11 3-578-232-21	(SILVER)...ORNAMENT, ADJUSTMENT HOLE (RED).....ORNAMENT, ADJUSTMENT HOLE (BLACK)....ORNAMENT, ADJUSTMENT HOLE	
2	3-704-246-31 3-704-246-32	(SILVER).....SCREW (P1.4X2.5) (BLACK,RED)...SCREW (P1.4X2.5)		16	X-3310-953-1 X-3310-954-1 X-3310-955-1	(SILVER)...PANEL ASSY, CASSETTE (BLACK)....PANEL ASSY, CASSETTE (RED).....PANEL ASSY, CASSETTE	
3	3-310-947-00	SPRING, COMPRESSION		17	3-578-101-00	PLATE, ORNAMENTAL	
4	3-310-983-02	BUTTON, LOCK		18	*3-701-999-00	LABEL, SERIAL NUMBER	
5	3-324-435-01 3-324-435-11	(SILVER,RED)...LABEL, D (BLACK).....LABEL, D	not supplied not supplied	20	3-578-236-00	SPRING (BATTERY)	
6	*3-324-430-01 *3-324-430-11	(SILVER).....LABEL, MODEL NUMBER (BLACK,RED)...LABEL, MODEL NUMBER		21	3-578-115-00	LID, BATTERY CASE	
7	3-307-831-00	SCREW, PANEL		22	*3-324-415-01	CUSHION	
8	3-335-797-21	SCREW (M1.4X3), TOOTHED LOCK		23	3-578-114-00	PANEL, CHASSIS	
9	3-831-441-11	CUSHION (B)		24	7-627-850-58	SCREW, PRECISION +P 1.4X3.5	
10	9-911-838-XX	CUSHION, METER		25	3-324-431-01	KNOB, VOL	
11	9-911-816-01	CLOTH, DRAWER, BATTERY		26	3-310-979-01	BUTTON, SELECTION, TAPE	
12	3-831-441-XX	SPACER		27	3-310-978-01	BUTTON, SELECTION, NR (DOLBY)	
13	3-703-710-01	STICKER, SONY SYMBOL (12)		901	A-3216-178-A	PC BOARD ASSY, MAIN	
14	3-578-109-00	CONTACT					



No.	Part No.	Description	Remarks
50	3-578-158-00	GEAR, S	
51	3-578-123-00	SPRING, COMPRESSION	
52	3-310-958-00	WASHER	
53	X-3578-126-0	CLAW ASSY, REEL	
54	X-3578-115-0	CLAW ASSY, REEL	
55	*X-3578-105-0	CHASSIS ASSY, HEAD	
56	3-578-254-00	RING, RETAINING, E1.2	
57	3-578-181-00	SPRING, HEAD	
58	3-310-971-01	HOOK, SPRING	
59	7-627-553-37	SCREW, PRECISION +P 2X3	
60	7-627-554-17	SCREW, PRECISION +P 2X3.5	
61	7-627-553-98	SCREW, PRECISION +P 2X8	
62	3-578-146-00	SPRING	
63	X-3578-137-0	PINCH ROLLER ASSY	
64	3-578-220-00	SPRING, TENSION	

No.	Part No.	Description	Remarks
65	3-545-588-00	SPRING, TENSION	
66	X-3310-935-1	COVER ASSY, ERASE HEAD	
67	3-578-128-00	SPRING, COMPRESSION	
68	7-627-551-28	SCREW, PRECISION +P 1.4X2.5	
69	X-3310-908-0	HOLDER ASSY	
70	X-3310-910-0	CHASSIS ASSY	
71	7-627-850-48	+P 1.4X1.6	
72	7-671-112-01	STEEL, BALL (2m/m)	
73	3-578-127-00	SPRING, COMPRESSION	
74	7-627-851-27	SCREW, PRECISION +P 1.4X5	
75	3-578-138-01	SEAM (t=0.1)	
76	3-578-138-11	SEAM (t=0.2)	
HP901	1-543-423-11	HEAD, MAGNETIC (PLAYBACK)	

5-3.



No.	Part No.	Description	Remarks
101	*X-3310-909-0	CHASSIS ASSY, SUB	
102	7-627-451-87	SCREW, PRECISION +K 1.4X2.2	
103	X-3310-907-0	STATOR ASSY	
104	3-701-438-01	WASHER	
105	X-3310-905-0	ROTOR ASSY	
106	7-627-850-79	SCREW, PRECISION +P 1.4X1.8 TYPE3	
107	3-310-930-00	PLATE, THRUST	
108	3-547-625-00	SCREW, THRUST ADJUST	
109	3-310-939-00	RUBBER, VIBRATION PROOF	
110	3-310-938-00	PLATE, SHIELD	
112	7-624-102-04	STOP RING 1.5, TYPE -E	
113	3-310-993-01	SPRING, COMPRESSION	
114	3-310-948-00	SPRING, TENSION	
115	7-627-851-17	SCREW, PRECISION +P 1.4X4.5	
116	3-310-921-00	SPRING, COMPRESSION	
118	X-3310-932-1	MOTOR BRACKET	
119	3-578-154-00	LEVER, DETECTION	
120	3-578-124-00	SPRING, COMPRESSION	
121	3-578-244-01	GEAR, FF	
123	3-310-914-00	GEAR, FWD	
125	3-578-249-00	SPRING, COMPRESSION (FWD BUTTON)	
126	X-3310-949-1	BUTTON ASSY, PLAY	
127	3-310-916-00	PLATE (B), HYSTERESIS	
128	3-310-920-00	PLATE (C), HYSTERESIS	
129	3-310-915-11	GEAR (B), DRIVING	
130	3-578-276-11	WASHER (10)	
131	3-578-224-00	WASHER (1.2 t=0.25)	
132	3-578-130-00	SPRING	
133	X-3578-121-0	LEVER ASSY, FWD	
134	3-578-224-11	WASHER (1.2 t=0.188)	

No.	Part No.	Description	Remarks
135	3-310-959-00	SPRING, TENSION	
137	X-3578-142-0	LEVER (A) ASSY, DRIVING	
138	3-578-199-00	SPRING, COMPRESSION	
139	3-578-265-00	WASHER	
140	3-310-992-01	WASHER (t=0.13)	
	3-310-992-11	WASHER (t=0.1)	
	3-310-992-21	WASHER (t=0.08)	
141	3-578-162-00	GEAR, REW	
142	3-578-221-00	SPRING, COMPRESSION	
143	3-578-267-00	SCREW (+P1.4X1.6), PRECISION	
144	*3-578-149-00	SHAFT, LEVER (A), SHUT-OFF	
145	3-578-157-00	LEVER (B), SHUT-OFF	
146	3-578-214-00	SHAFT, GEAR, SHUT-OFF	
147	3-578-126-00	SPRING, TENSION	
148	3-305-509-00	LEVER (A), SHUT-OFF	
149	3-578-178-00	GEAR, SHUT-OFF	
150	3-578-151-00	SHAFT, GEAR, FWD	
151	X-3310-948-1	BUTTON ASSY, STOP	
152	3-578-121-00	SPRING, COMPRESSION	
153	X-3578-114-0	PLATE ASSY, LOCK	
154	3-310-935-00	LEVER, SWITCH	
155	3-561-627-00	SPRING, TENSION	
156	3-578-277-00	SPRING, TENSION	
158	*3-578-196-00	HOOK, SPRING	
159	X-3310-947-1	BUTTON ASSY, F.R	
160	3-578-278-00	SPRING, COMPRESSION	
163	3-578-183-00	LEVER, RETURN, S	
164	7-627-850-18	SCREW, PRECISION +P 1.4X2.5	
167	X-3310-936-1	BRACKET ASSY, PANEL	
M901	X-3310-922-1	MOTOR	
S901	1-553-226-00	SWITCH, LEAF (POWER)	

SECTION 6

ELECTRICAL 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.
- If there are two or more same circuits in a set such as a stereophonic machine, only typical circuit parts may be indicated and capacitors and resistors in other same circuits may be omitted.

CAPACITORS:

MF:μF, PF:μμF.

RESISTORS

- All resistors are in ohms.
- F : nonflammable

COILS

• MMH : mH, UH : μH

SEMICONDUCTORS

In each case, U : μ, for example:

UA....: μA..., UPA....: μPA..., UPC....: μPC,

UPD....: μPD...

ELECTRICAL PARTS					
Ref.No.	Part No.	Description			
901	A-3216-178-A	PC BOARD ASSY, MAIN			
C101	1-163-141-00	CERAMIC CHIP 0.001MF	10%	50V	
C102	1-135-104-00	TANTAL. CHIP 10MF	20%	4V	
C103	1-163-016-00	CERAMIC CHIP 0.0039MF	10%	50V	
C104	1-135-103-00	TANTAL. CHIP 3.3MF	20%	4V	
C105	1-163-035-00	CERAMIC CHIP 0.047MF	10%	25V	
C106	1-135-087-21	TANTAL. CHIP 0.68MF	10%	20V	
C107	1-163-017-00	CERAMIC CHIP 0.0047MF	5%	50V	
C108	1-163-034-00	CERAMIC CHIP 0.033MF	5%	25V	
C109	1-163-019-00	CERAMIC CHIP 0.0068MF	10%	50V	
C110	1-124-436-00	ELECT 3.3MF	20%	25V	
C111	1-162-638-11	CERAMIC CHIP 1MF		16V	
C112	1-163-141-00	CERAMIC CHIP 0.001MF	10%	50V	
C113	1-163-081-00	CERAMIC CHIP 0.22MF		25V	
C114	1-124-434-00	ELECT 220MF	20%	4V	
C115	1-163-141-00	CERAMIC CHIP 0.001MF	10%	50V	
C201	1-163-141-00	CERAMIC CHIP 0.001MF	10%	50V	
C202	1-135-104-00	TANTAL. CHIP 10MF	20%	4V	
C203	1-163-016-00	CERAMIC CHIP 0.0039MF	10%	50V	
C204	1-135-103-00	TANTAL. CHIP 3.3MF	20%	4V	
C205	1-163-035-00	CERAMIC CHIP 0.047MF	10%	25V	
C206	1-135-087-21	TANTAL. CHIP 0.68MF	10%	20V	
C207	1-163-017-00	CERAMIC CHIP 0.0047MF	5%	50V	
C208	1-163-034-00	CERAMIC CHIP 0.033MF	5%	25V	
C209	1-163-019-00	CERAMIC CHIP 0.0068MF	10%	50V	
C210	1-124-436-00	ELECT 3.3MF	20%	25V	
C211	1-162-638-11	CERAMIC CHIP 1MF		16V	
C212	1-163-141-00	CERAMIC CHIP 0.001MF	10%	50V	
C213	1-163-081-00	CERAMIC CHIP 0.22MF		25V	
C214	1-124-434-00	ELECT 220MF	20%	4V	
C215	1-163-141-00	CERAMIC CHIP 0.001MF	10%	50V	
C301	1-124-431-00	ELECT 33MF	20%	4V	
C302	1-124-434-00	ELECT 220MF	20%	4V	
C303	1-163-038-00	CERAMIC CHIP 0.1MF		25V	
C304	1-124-432-00	ELECT 47MF	20%	4V	
C305	1-124-435-00	ELECT 10MF	20%	6.3V	
C306	1-163-021-00	CERAMIC CHIP 0.01MF	5%	50V	
C307	1-135-103-00	TANTAL. CHIP 3.3MF	20%	4V	
C308	1-124-430-00	ELECT 22MF	20%	4V	
C309	1-124-431-00	ELECT 33MF	20%	4V	
C310	1-135-103-00	TANTAL. CHIP 3.3MF	20%	4V	
C311	1-163-141-00	CERAMIC CHIP 0.001MF	10%	50V	
C312	1-163-141-00	CERAMIC CHIP 0.001MF	10%	50V	
C313	1-163-038-00	CERAMIC CHIP 0.1MF		25V	
C314	1-135-103-00	TANTAL. CHIP 3.3MF	20%	4V	
C315	1-124-434-00	ELECT 220MF	20%	4V	

ELECTRICAL PARTS					
Ref.No.	Part No.	Description			
C316	1-124-434-00	ELECT 220MF	20%	4V	
C317	1-135-091-00	TANTAL. CHIP 1MF	10%	16V	
C318	1-163-117-00	CERAMIC CHIP 100PF	10%	50V	
C319	1-163-117-00	CERAMIC CHIP 100PF	10%	50V	
C320	1-163-117-00	CERAMIC CHIP 100PF	10%	50V	
C321	1-163-117-00	CERAMIC CHIP 100PF	10%	50V	
C601	1-163-097-00	CERAMIC CHIP 15PF	5%	50V	
C602	1-163-097-00	CERAMIC CHIP 15PF	5%	50V	
C603	1-163-105-00	CERAMIC CHIP 33PF	5%	50V	
C604	1-163-038-00	CERAMIC CHIP 0.1MF		25V	
C605	1-163-023-00	CERAMIC CHIP 0.015MF	10%	50V	
C606	1-163-012-00	CERAMIC CHIP 0.0018MF	10%	50V	
C607	1-130-483-00	MYLAR 0.01MF	5%	50V	
C608	1-124-435-00	ELECT 10MF	20%	6.3V	
C609	1-163-021-00	CERAMIC CHIP 0.01MF	5%	50V	
C610	1-135-091-00	TANTAL. CHIP 1MF	10%	16V	
C611	1-163-810-00	CERAMIC CHIP 0.03MF	10%	25V	
C612	1-163-021-00	CERAMIC CHIP 0.01MF	5%	50V	
C613	1-163-021-00	CERAMIC CHIP 0.01MF	5%	50V	
C614	1-130-489-00	MYLAR 0.033MF	5%	50V	
C615	1-135-070-00	TANTAL. CHIP 0.1MF	20%	35V	
C616	1-163-035-00	CERAMIC CHIP 0.047MF	10%	25V	
C701	1-124-462-00	ELECT 10MF	20%	16V	
C702	1-124-461-11	ELECT 4.7MF	20%	16V	
C703	1-135-104-00	TANTAL. CHIP 10MF	20%	4V	
C704	1-163-081-00	CERAMIC CHIP 0.22MF		25V	
C705	1-163-117-00	CERAMIC CHIP 100PF	10%	50V	
CNJ301	1-507-723-00	JACK, EXTENTION POWER			
D301	8-719-104-37	LED SR506D			
D302	8-719-100-05	DIODE 1S2837			
D303	8-719-100-05	DIODE 1S2837			
D701	8-719-106-22	DIODE RD7.5M-B1			
HP901	1-543-423-11	HEAD, MAGNETIC (PLAYBACK)			
IC301	8-759-910-18	IC BA3304F			
IC302	8-759-701-07	IC NJM2063AM			
IC303	8-759-200-95	IC TA7688F			
IC601	8-759-909-45	IC CX20084			
IC602	8-759-958-14	IC MSM5814IRS			
J301	1-507-727-00	JACK 2P (PHONES)			
L701	1-410-209-51	INDUCTOR CHIP 27UH			
M901	X-3310-922-1	MOTOR			
Q302	8-729-903-10	TRANSISTOR FMW1			
Q303	8-729-106-44	TRANSISTOR 2SB624-BV4			
Q304	8-729-903-10	TRANSISTOR FMW1			

ELECTRICAL PARTS

Ref.No.	Part No.	Description
Q305	8-729-100-76	TRANSISTOR 2SA812
Q601	8-729-101-07	TRANSISTOR 2SB798
Q602	8-729-100-66	TRANSISTOR 2SC1623
Q701	8-729-100-66	TRANSISTOR 2SC1623
Q702	8-729-159-64	TRANSISTOR 2SD596
Q703	8-729-100-66	TRANSISTOR 2SC1623
R101	1-216-089-00	METAL CHIP 47K 5% 1/10W
R102	1-216-101-00	METAL CHIP 150K 5% 1/10W
R103	1-216-117-00	METAL CHIP 680K 5% 1/10W
R104	1-216-085-00	METAL CHIP 33K 5% 1/10W
R105	1-216-748-11	METAL CHIP 39K 5% 1/10W
R106	1-216-089-00	METAL CHIP 47K 5% 1/10W
R107	1-216-112-00	METAL CHIP 430K 5% 1/10W
R108	1-216-061-00	METAL CHIP 3.3K 5% 1/10W
R109	1-216-089-00	METAL CHIP 47K 5% 1/10W
R110	1-216-067-00	METAL CHIP 5.6K 5% 1/10W
R111	1-216-053-00	METAL CHIP 1.5K 5% 1/10W
R112	1-216-306-11	METAL CHIP 3.9 5% 1/10W
R113	1-216-053-00	METAL CHIP 1.5K 5% 1/10W
R114	1-216-037-00	METAL CHIP 330 5% 1/10W
R115	1-216-089-00	METAL CHIP 47K 5% 1/10W
R201	1-216-089-00	METAL CHIP 47K 5% 1/10W
R202	1-216-101-00	METAL CHIP 150K 5% 1/10W
R203	1-216-117-00	METAL CHIP 680K 5% 1/10W
R204	1-216-085-00	METAL CHIP 33K 5% 1/10W
R205	1-216-748-11	METAL CHIP 39K 5% 1/10W
R206	1-216-089-00	METAL CHIP 47K 5% 1/10W
R207	1-216-112-00	METAL CHIP 430K 5% 1/10W
R208	1-216-061-00	METAL CHIP 3.3K 5% 1/10W
R209	1-216-089-00	METAL CHIP 47K 5% 1/10W
R210	1-216-067-00	METAL CHIP 5.6K 5% 1/10W
R211	1-216-053-00	METAL CHIP 1.5K 5% 1/10W
R212	1-216-306-11	METAL CHIP 3.9 5% 1/10W
R213	1-216-053-00	METAL CHIP 1.5K 5% 1/10W
R214	1-216-037-00	METAL CHIP 330 5% 1/10W
R215	1-216-089-00	METAL CHIP 47K 5% 1/10W
R301	1-216-049-00	METAL CHIP 1K 5% 1/10W
R302	1-216-097-00	METAL CHIP 100K 5% 1/10W
R303	1-216-081-00	METAL CHIP 22K 5% 1/10W
R304	1-216-097-00	METAL CHIP 100K 5% 1/10W
R305	1-216-061-00	METAL CHIP 3.3K 5% 1/10W
R306	1-216-089-00	METAL CHIP 47K 5% 1/10W
R307	1-216-081-00	METAL CHIP 22K 5% 1/10W
R308	1-216-037-00	METAL CHIP 330 5% 1/10W
R309	1-216-089-00	METAL CHIP 47K 5% 1/10W
R310	1-216-129-00	METAL CHIP 2.2M 5% 1/10W
R311	1-216-037-00	METAL CHIP 330 5% 1/10W
R312	1-216-056-00	METAL CHIP 2K 5% 1/10W
R313	1-216-001-00	METAL CHIP 10 5% 1/10W
R601	1-216-073-00	METAL CHIP 10K 5% 1/10W
R602	1-216-057-00	METAL CHIP 2.2K 5% 1/10W
R603	1-216-097-00	METAL CHIP 100K 5% 1/10W
R604	1-216-121-00	METAL CHIP 1M 5% 1/10W
R605	1-216-121-00	METAL CHIP 1M 5% 1/10W

ELECTRICAL PARTS

Ref.No.	Part No.	Description
R606	1-216-058-00	METAL CHIP 2.4K 5% 1/10W
R607	1-216-093-00	METAL CHIP 68K 5% 1/10W
R608	1-216-092-00	METAL CHIP 62K 5% 1/10W
R609	1-216-101-00	METAL CHIP 150K 5% 1/10W
R610	1-216-097-00	METAL CHIP 100K 5% 1/10W
R611	1-216-061-00	METAL CHIP 3.3K 5% 1/10W
R612	1-216-105-00	METAL CHIP 220K 5% 1/10W
R613	1-216-097-00	METAL CHIP 100K 5% 1/10W
R614	1-216-073-00	METAL CHIP 10K 5% 1/10W
R701	1-216-061-00	METAL CHIP 3.3K 5% 1/10W
R702	1-216-041-00	METAL CHIP 470 5% 1/10W
R703	1-216-113-00	METAL CHIP 470K 5% 1/10W
R704	1-216-065-00	METAL CHIP 4.7K 5% 1/10W
RV101	1-237-299-11	RES, ADJ, METAL GLAZE 2.2K (PB LEVEL)
RV201	1-237-299-11	RES, ADJ, METAL GLAZE 2.2K (PB LEVEL)
RV301	1-230-485-11	RES, VAR, CARBON 10K/10K (VOLUME)
RV601	1-237-301-11	RES, ADJ, METAL GLAZE 22K (SPEED)
S301	1-553-280-00	SWITCH, SLIDE (NOR/METAL CrO2)
S302	1-554-585-00	SWITCH, SLIDE (M-N)(DOLBY NR)
S901	1-553-226-00	SWITCH, LEAF (POWER)
T701	1-447-697-00	TRANSFORMER, DC-DC CONVERTOR
X601	1-567-260-11	VIBRATOR, CRYSTAL (27.77kHz)

ACCESSORY & PACKING MATERIAL

Part No.	Description
3-318-523-01	SPACER
3-318-524-01	CUSHION
3-324-436-01	INDIVIDUAL CARTON
3-324-439-01	CASE, CARRYING
3-570-631-61	BAG, POLYETHYLENE
3-703-895-01	LABEL, COLOR (BLACK)
3-703-905-01	LABEL, COLOR (RED)
3-703-906-01	LABEL, COLOR (SILVER)
3-704-016-01	LABEL, COLOR (BLACK)
3-704-026-01	LABEL, COLOR (RED)
3-704-027-01	LABEL, COLOR (SILVER)
3-765-927-11	MANUAL, INSTRUCTION
3-765-927-41	MANUAL, INSTRUCTION
8-951-092-90	MDR-15L SET

Sony Corporation
Audio Group

9-952-670-11

(Including 9-952-670-91)