

WM-F75

SERVICE MANUAL

US Model
Canadian Model
AEP Model
UK Model
E Model



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SPECIFICATIONS

Tape Transport Mechanism Type MT-WMF75-29

Radio section

Frequency range FM: 87.6–108 MHz (for US, Canadian, AEP, UK, E Model)
87.6–107 MHz (for W-Germany Model)
AM: 530–1,605 kHz
Antenna FM: Headphone cord antenna
AM: Built-in ferrite bar antenna

Tape player section and general

Tape track 4-track 2-channel stereo
Fast winding time 2 min. 30 sec. with Sony C-60 cassette
Frequency response 40–15,000 Hz (with metal tapes or CrO₂ tapes)
40–15,000 Hz (with normal tapes)
Output Headphones jack (stereo minijack)
load impedance 8–300 ohms
Power output 10 mW + 10 mW
at 10% harmonic distortion at ac operation

Battery life

Batteries	FM/AM reception	Playback
Sony SUM-3(NS) New Super or Eveready No. 1015	17	4
Sony Eveready AM3 alkaline or Eveready No. 91 alkaline	35	8

(hours)

For maximum performance, we recommend the use of alkaline batteries.

Power requirements

3V dc, two size AA batteries (IEC designation R6)
DC IN 3V jack accepts:
Sony EBP-500 battery case (optional)
for use on two size D batteries (IEC designation R20)
Sony AC-D2 ac power adaptor (optional)
for use on 120 V ac, 60 Hz (US, Canadian Model)
for use on 240 V ac, 50 Hz (UK Model)
for use on 220 V ac, 50 Hz (AEP Model)
for use on 110, 120 or 220 V ac, 50/60 Hz (E Model)
Sony DCC-70 car battery cord (optional)
for use with 12V car battery
Approx. 97.7×117.1×37.6 mm (w/h/d)
(3⁷/₈×4⁵/₈×1¹/₂ inches)
incl. projecting parts and controls
Approx. 93.7×115.8×34.6 mm (w/h/d)
(3³/₄×4⁵/₈×1³/₈ inches)
excl. projecting parts and controls
Approx. 320g (11.3oz) incl. batteries excl. other accessories

Dimensions

Weight



FM/AM
STEREO CASSETTE PLAYER
SONY®

SERVICING NOTES

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.

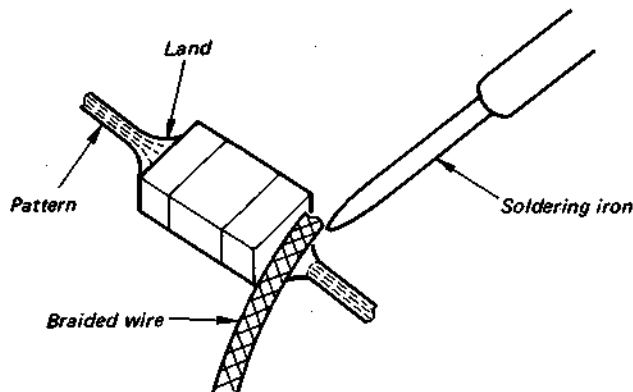
Precautions for replacement

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**

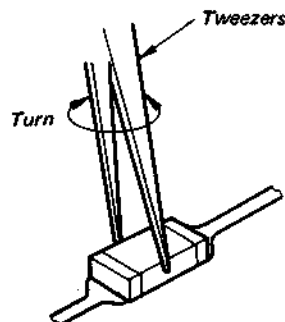
(1) **Removing solder at electrode**

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.

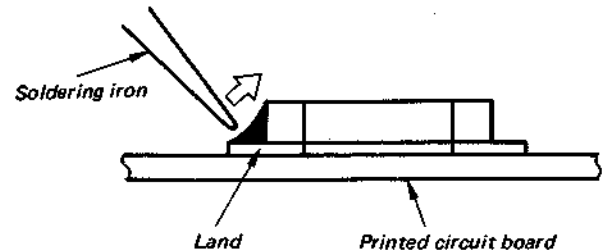
(1) **Applying solder to land on one side**

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.

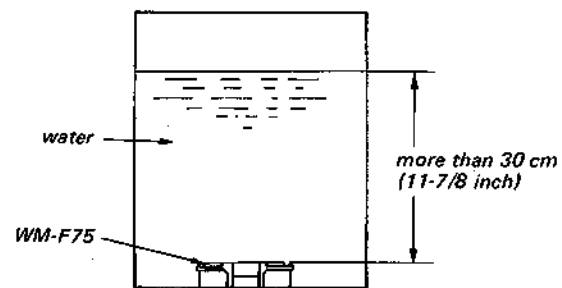
SECTION 1
BLOCK DIAGRAM

NOTE ON REPAIR

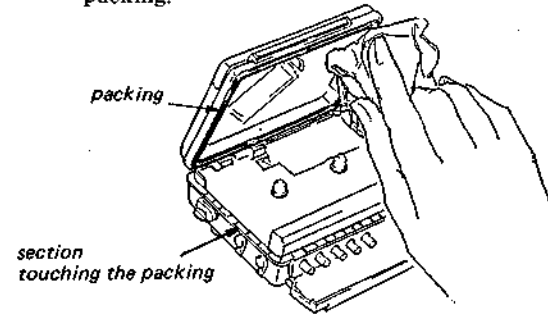
This model is waterproof so be sure to confirm waterproofing after repair.

WATERPROOF CHECK

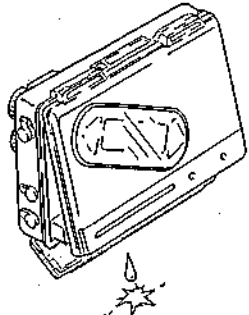
- (1) Perform with the ornamental sheet, knob ornamental plate and ornamental plate (A), (C) removed. (See page 5.)
(If there is leakage when checking with them on, they must be replaced with new ones.)
- (2) Insert batteries or a cassette tape in the set.
(So that it will sink.)
- (3) Place in more than 30 cm of water for 30 minutes.
(Close DC jack and packing firmly.)



- (4) Remove from the water after 30 minutes and wipe off all moisture.
- (5) Check all operations. (If water has entered, abnormal operation will occur.)
- (6) Open the cassette case and wipe off all moisture on the packing and case sections touching the packing.



- (7) Shake the set and confirm that no water comes out.

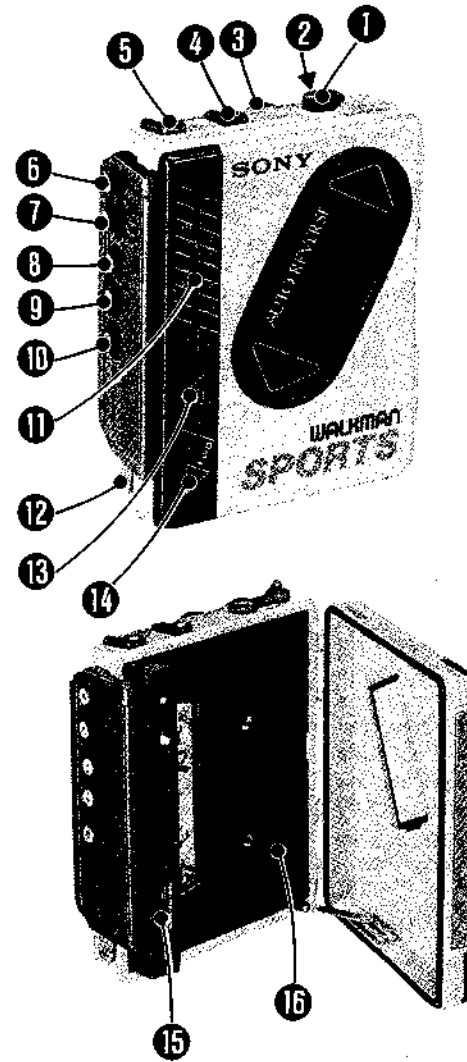


- (8) When waterproofing is confirmed, mount the ornamental sheet and ornamental plate assy (A).
(Wipe off the water on the screw to prevent rusting.)

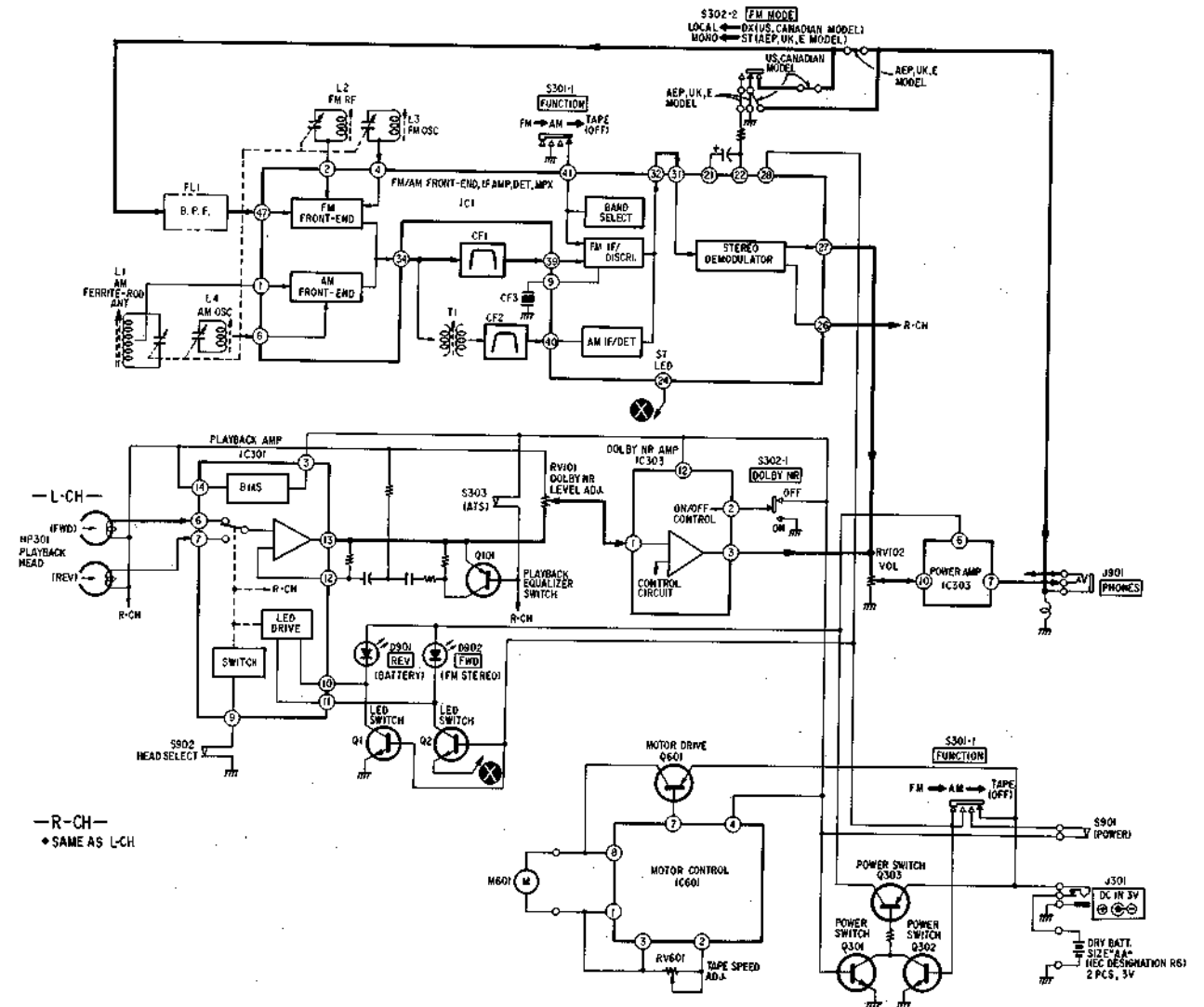
IF LEAKAGE OCCURS DURING WATERPROOF CHECK:

Dry the mechanism section and amp board, jack, etc. with a hairdryer, perform waterproofing procedures again and recheck starting with step (1).

PARTS IDENTIFICATION



- ① PHONES (headphones) jack
- ② TUNING knob
- ③ VOL (volume) control
- ④ DOLBY NR (noise reduction)/FM SENS (sensitivity) selector
- ⑤ FUNCTION selector
- ⑥ ■ (stop) button
- ⑦ ▼ (playback) button
- ⑧ ▲ (fast reverse) button
- ⑨ ▼ (fast forward) button
- ⑩ ▼ DIRECTION (tape transport direction) button
- ⑪ Dial scale
- ⑫ DC IN 3V (external power input) jack
- ⑬ REV ▸ (reverse)/FM STEREO indicator
- ⑭ ◀ FWD (forward)/BATTERY indicator
- ⑮ DIRECTION MODE switch
- ⑯ Battery compartment



SECTION 2

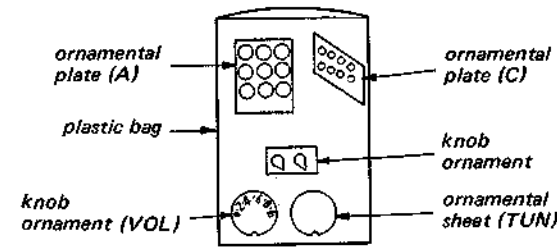
REMOVAL AND ASSEMBLY OF WATERPROOFED SECTION

ORNAMENTAL PLATE ASSEMBLY FOR REPLACEMENT PART

When knob ornament or ornamental plate is removed, be sure to order the following assembled parts for replacement.

Part No.	Color	Description
X-3326-510-1	Yellow	ornamental plate ass'y
X-3326-510-2	Red	
X-3326-510-3	Gray	

Assembled parts

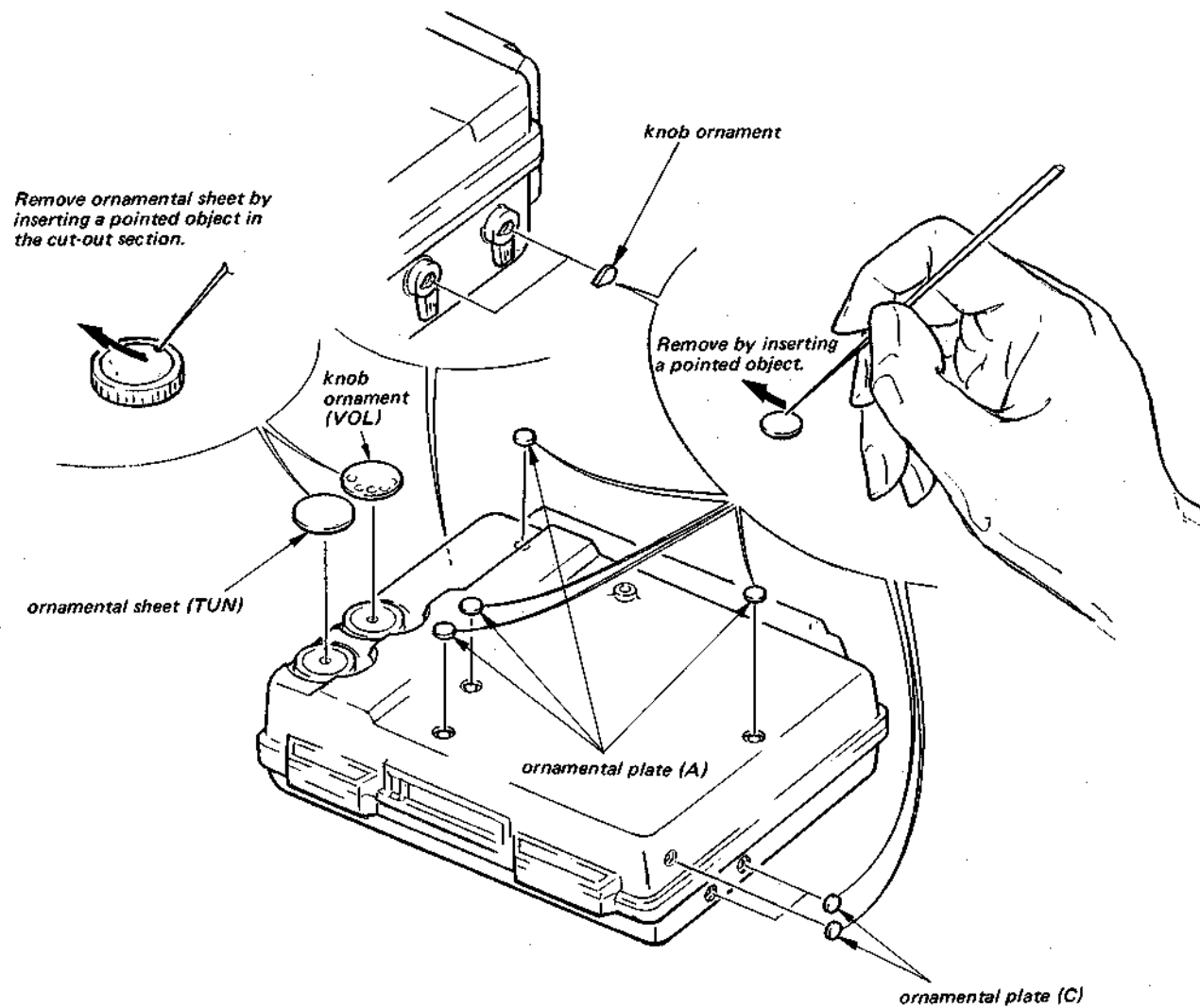


WATERPROOFING REPAIR MATERIALS

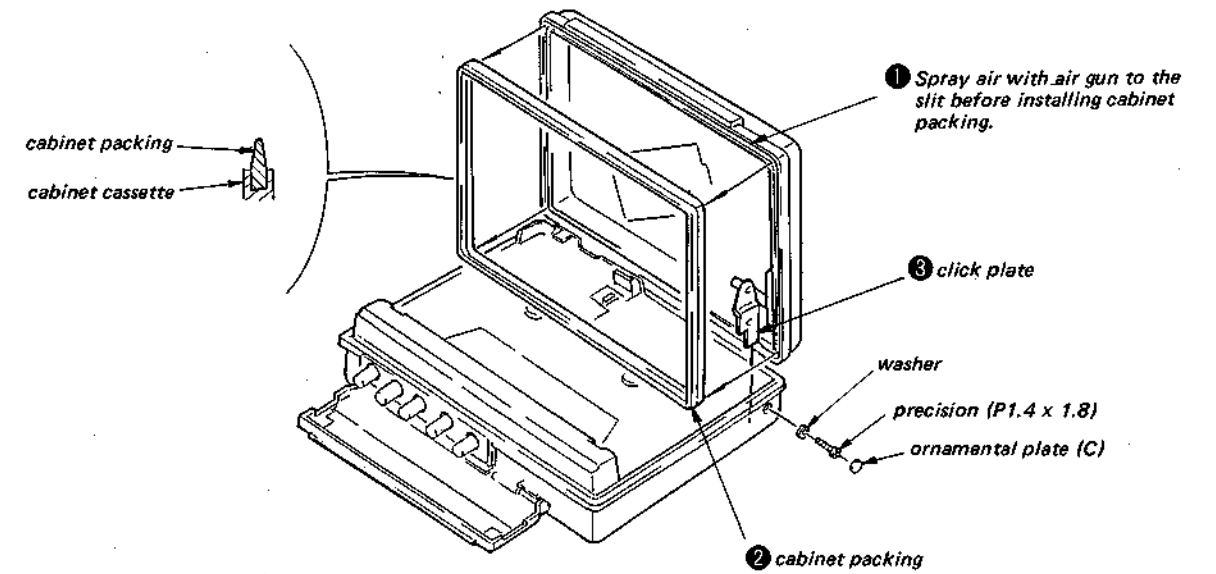
- Sony grease: SGL-501 7-662-001-62
- Sony bond: SC-108

REMOVED ORNAMENTAL SHEET

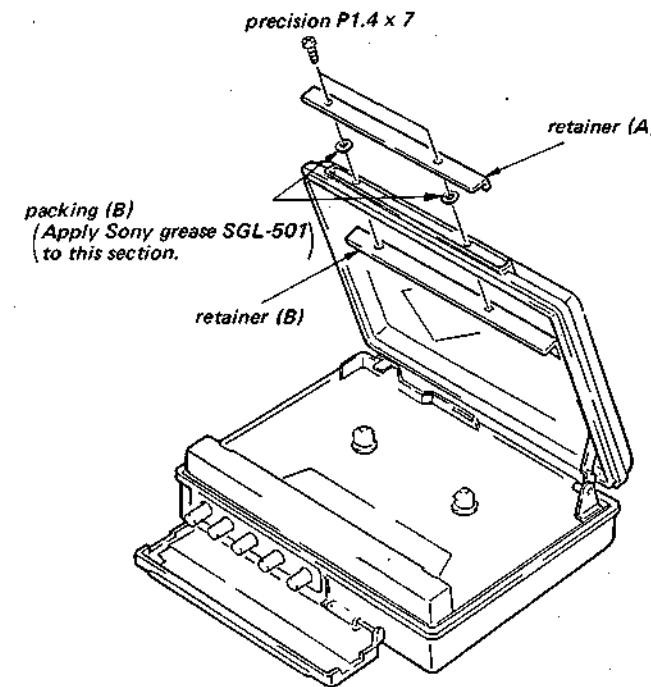
- Replace with a new part when reassembling.



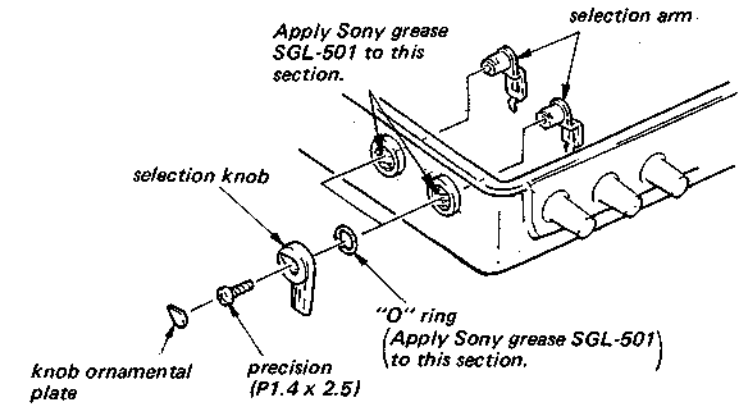
REPLACEMENT OF CABINET PACKING



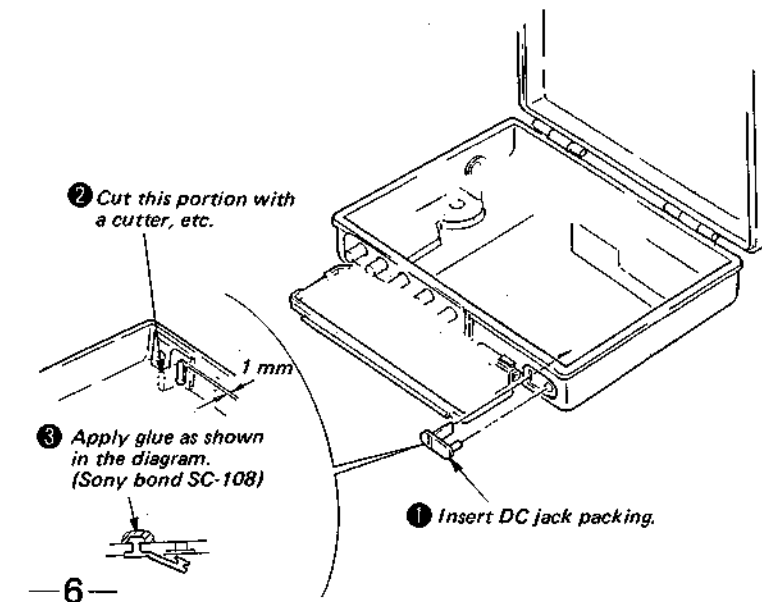
REPLACEMENT OF PACKING (B)



REPLACEMENT OF SELECTION KNOB



REPLACEMENT OF DC JACK PACKING



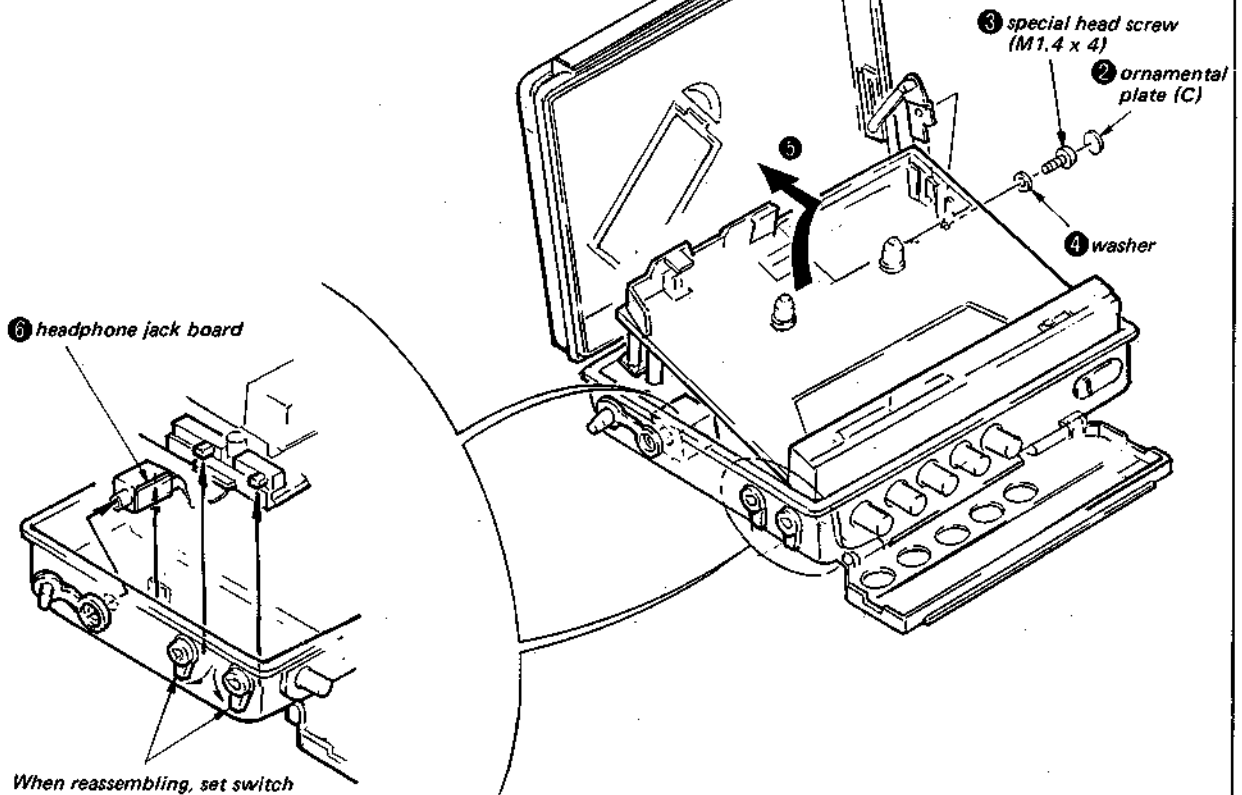
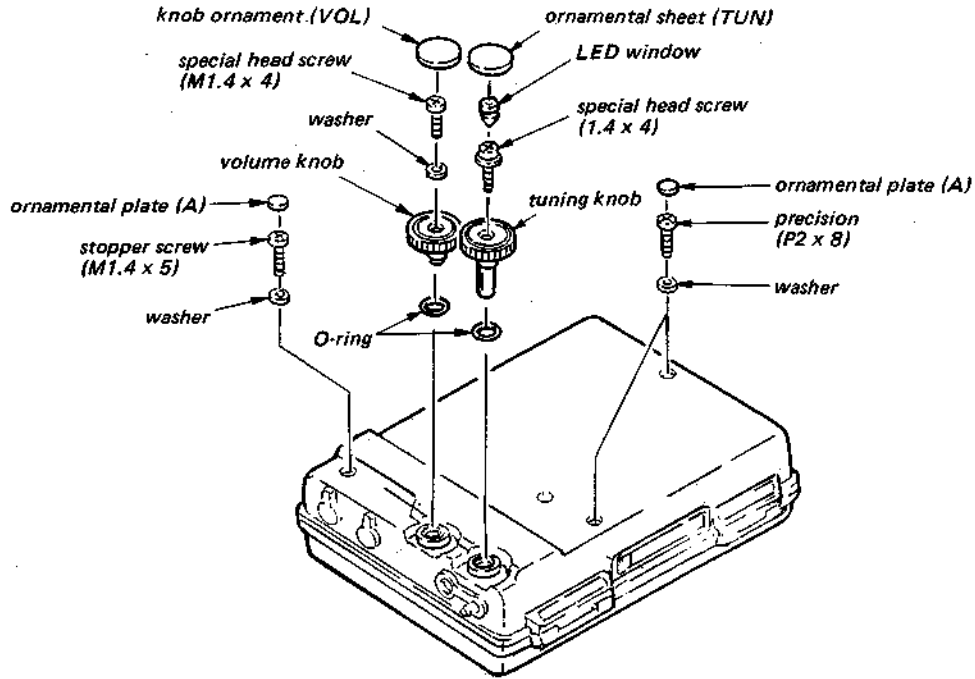
SECTION 3 DISASSEMBLY

3-1. REMOVAL

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

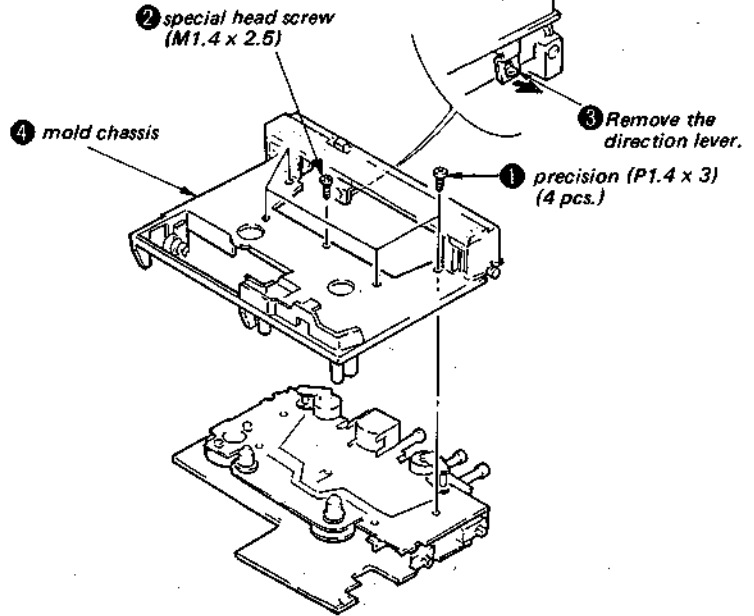
CABINET

①

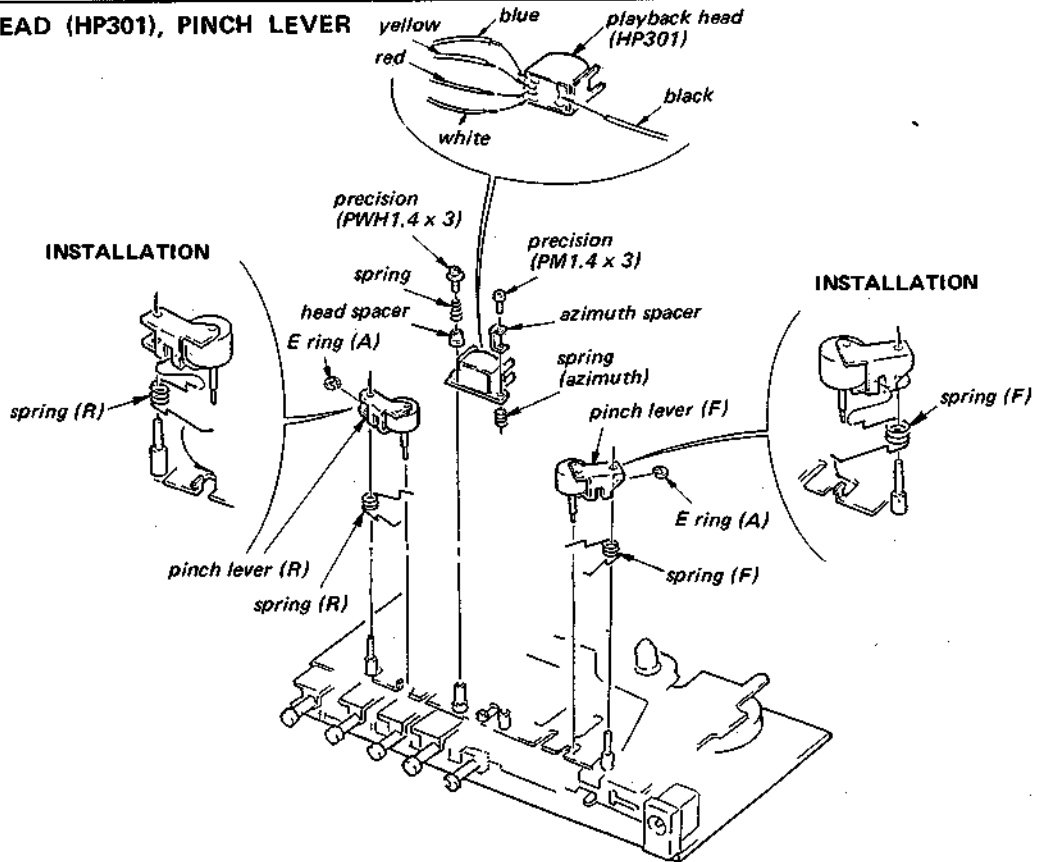


CABINET
(See page 7.)

MOLD CHASSIS

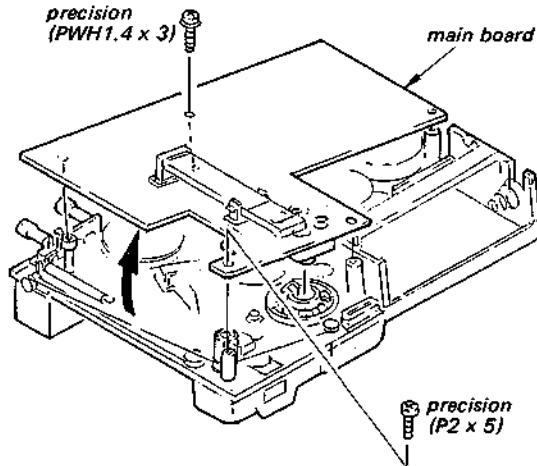


PLAYBACK HEAD (HP301), PINCH LEVER

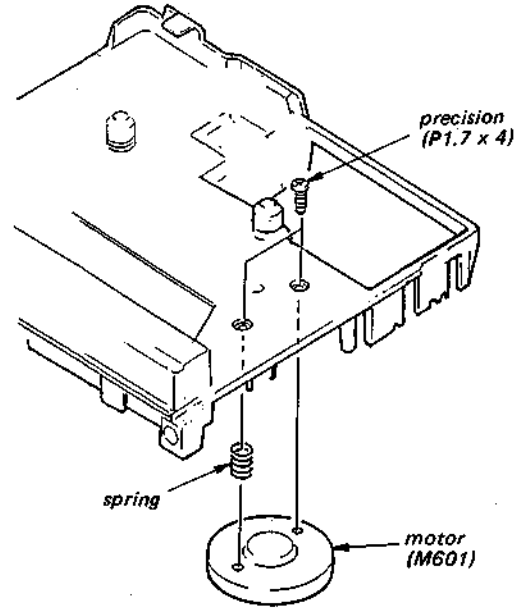


CABINET
(See page 7.)

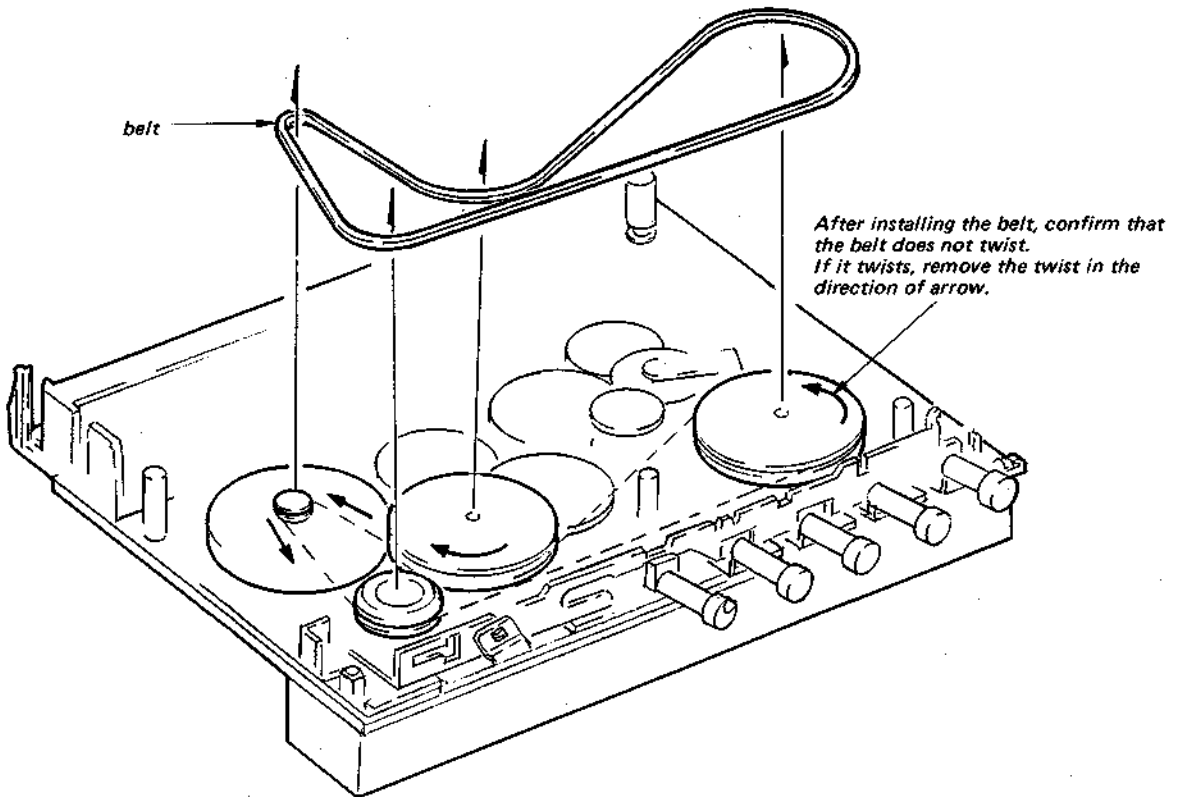
MAIN BOARD



MOTOR (M601)

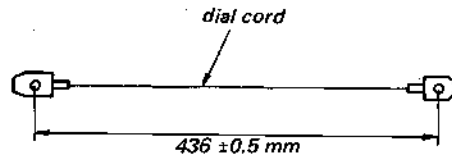


BELT

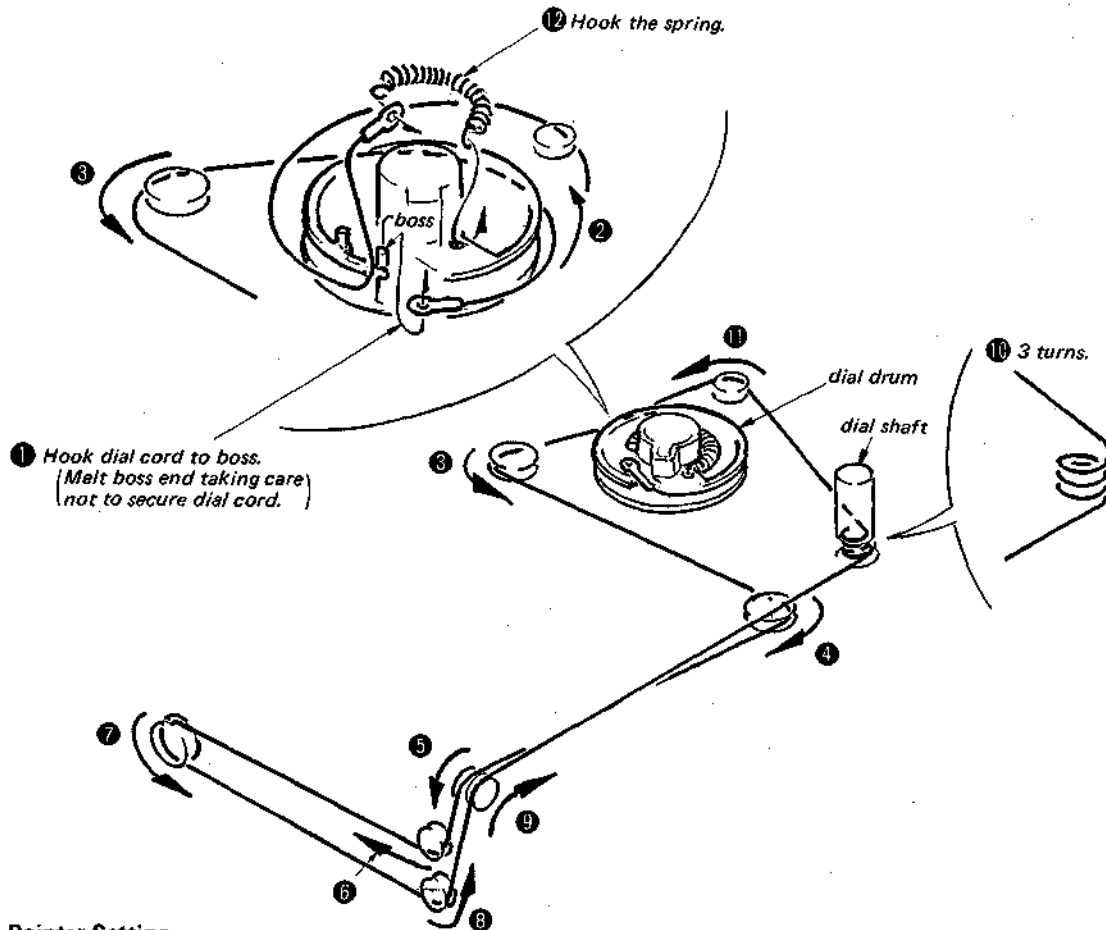


3-2 DIAL CORD STRINGING

1) Dial Cord Preparation

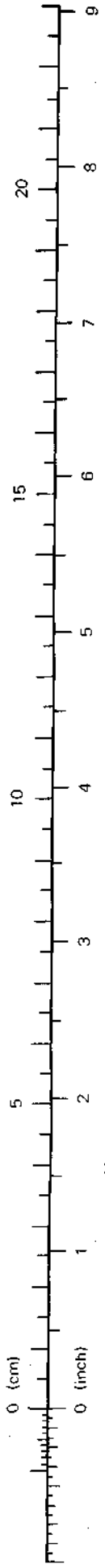
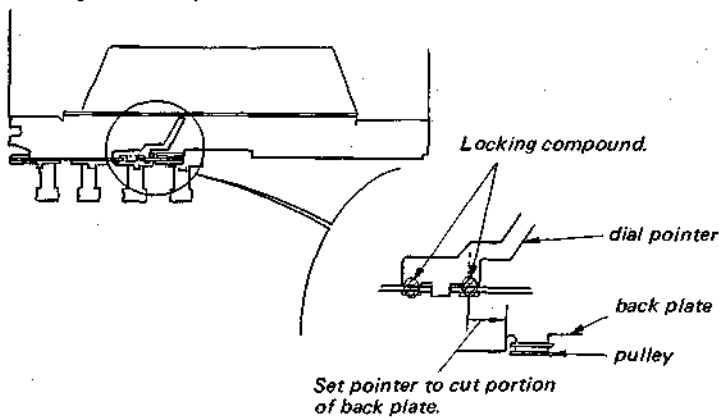


2) Dial Cord Stringing



3) Pointer Setting

Turn the tuning shaft fully clockwise.



SECTION 4 ADJUSTMENTS

PRECAUTION

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

playback head	pinch roller
erase head	rubber belts
capstan	idlers
2. Demagnetize the record/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.

4-1. TORQUE MEASUREMENT

Mode	Torque meter	Meter reading
FWD	CQ-102C	20 – 35 g·cm (0.28 – 0.49 oz·inch)
FWD Back Tension		2 – 4.5 g·cm (0.03 – 0.06 oz·inch)
REV	CQ-102RB	20 – 35 g·cm (0.28 – 0.49 oz·inch)
REV Back Tension		2 – 4.5 g·cm (0.03 – 0.06 oz·inch)
FF, REW	CQ-201B	more than 60 g·cm (0.83 oz·inch)

4-2. TAPE TENSION MEASUREMENT

Mode	Tension meter	Meter reading
FWD	CQ-403A	more than 60 g (2.1 oz)
REV	CQ-403R	more than 60 g (2.1 oz)

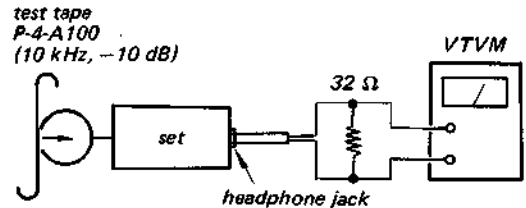
4-3. ELECTRICAL ADJUSTMENTS

PB Head Azimuth Adjustment

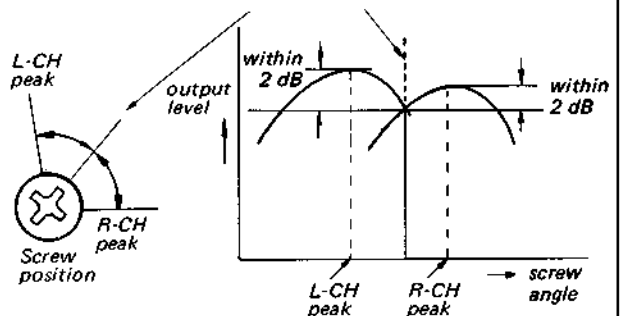
Adjust for both in FWD direction and REV direction.

Procedure:

1. Mode: playback (FWD and REV)



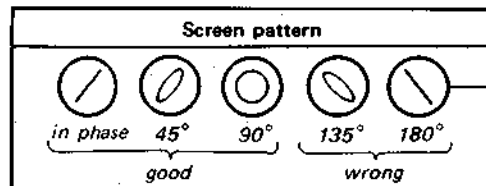
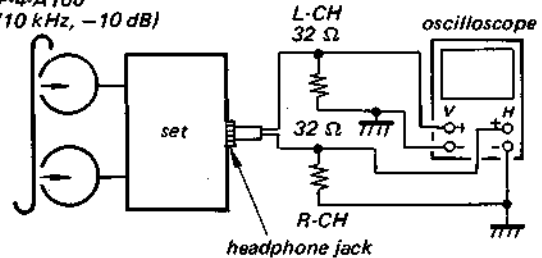
2. Turn the adjustment screw for the maximum output levels. If these levels do not match, turn the adjustment screw until both of output levels match together within 2 dB.



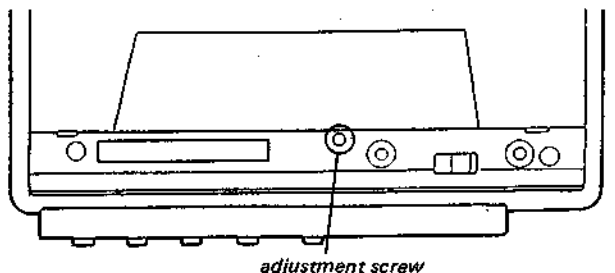
3. Phase Check

Mode: playback (FWD and REV)

test tape
P-4-A100
(10 kHz, -10 dB)



Adjustment Location:



Tape Speed Adjustment

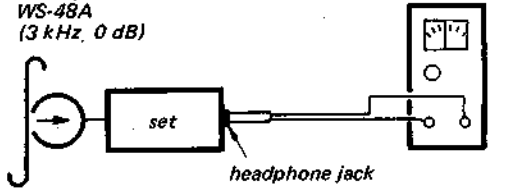
Setting:

VOL control: mechanical mid

Procedure:

Mode: playback

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



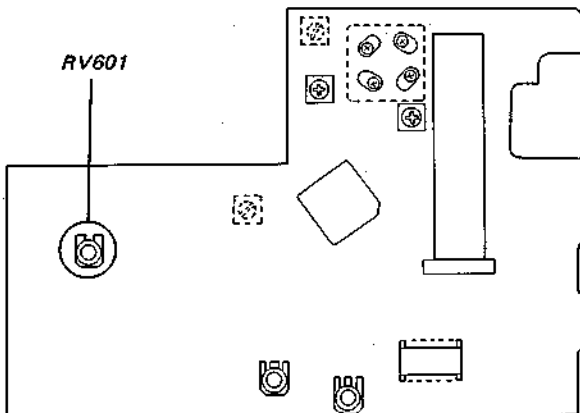
1. Play back the end of the tape in FWD mode and adjust RV601 for the specification.
2. Reverse the tape and confirm that the frequency difference between the beginning of the tape in FWD mode and the end of the tape in REV mode is within $\pm 1.5\%$ (± 45 Hz).
3. Reverse the tape again, confirm that the frequency difference between the end of the tape in FWD mode and the beginning of the tape in REV mode is within $\pm 1.5\%$ (± 45 Hz). If it is not, replace flywheel R.

marking on flywheel R	no slit 	one slit 	two slits
the tape speed of the beginning of the tape in REV mode against that of the end of the tape in FWD mode	no slit	one slit	two slits
	slow ← → fast		

Specification:

Speed checker	Digital frequency counter
$\pm 3\%$	2,910 - 3,090 Hz

Adjustment Location: main board



Dolby NR Level Adjustment

Setting:

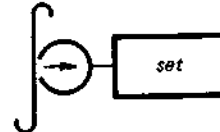
DOLBY NR switch: OFF

VOL control: minimum

Procedure:

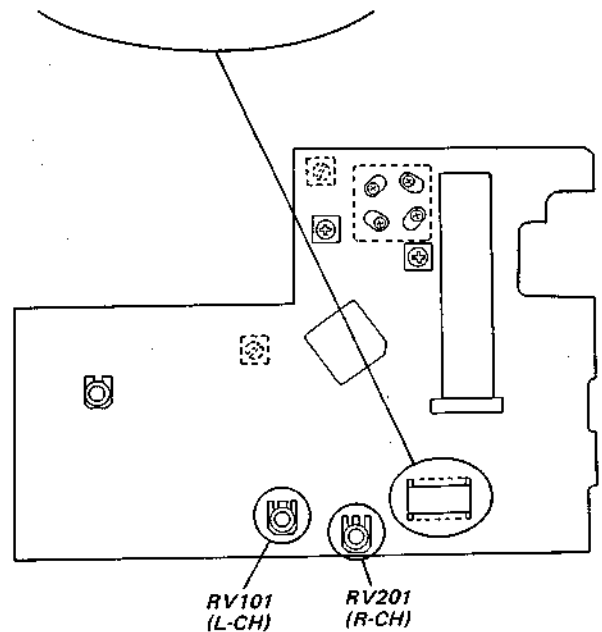
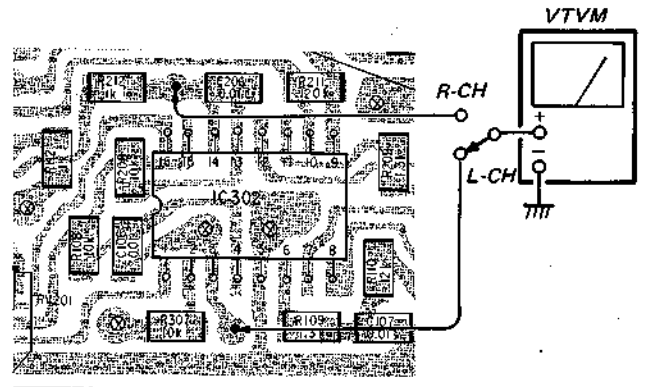
1. Mode: playback

test tape
P-4-L300
(315 Hz, 0 dB)



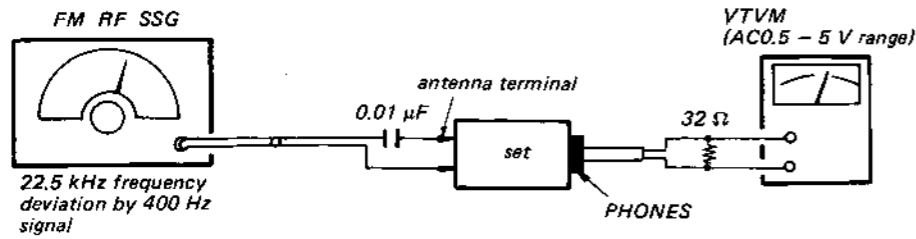
Adjust RV101 (L-CH) and RV201 (R-CH) for 28.5 to 35.8 mV (-28.7 to -26.7 dB) reading on VTVM.

Adjustment Location: main board.



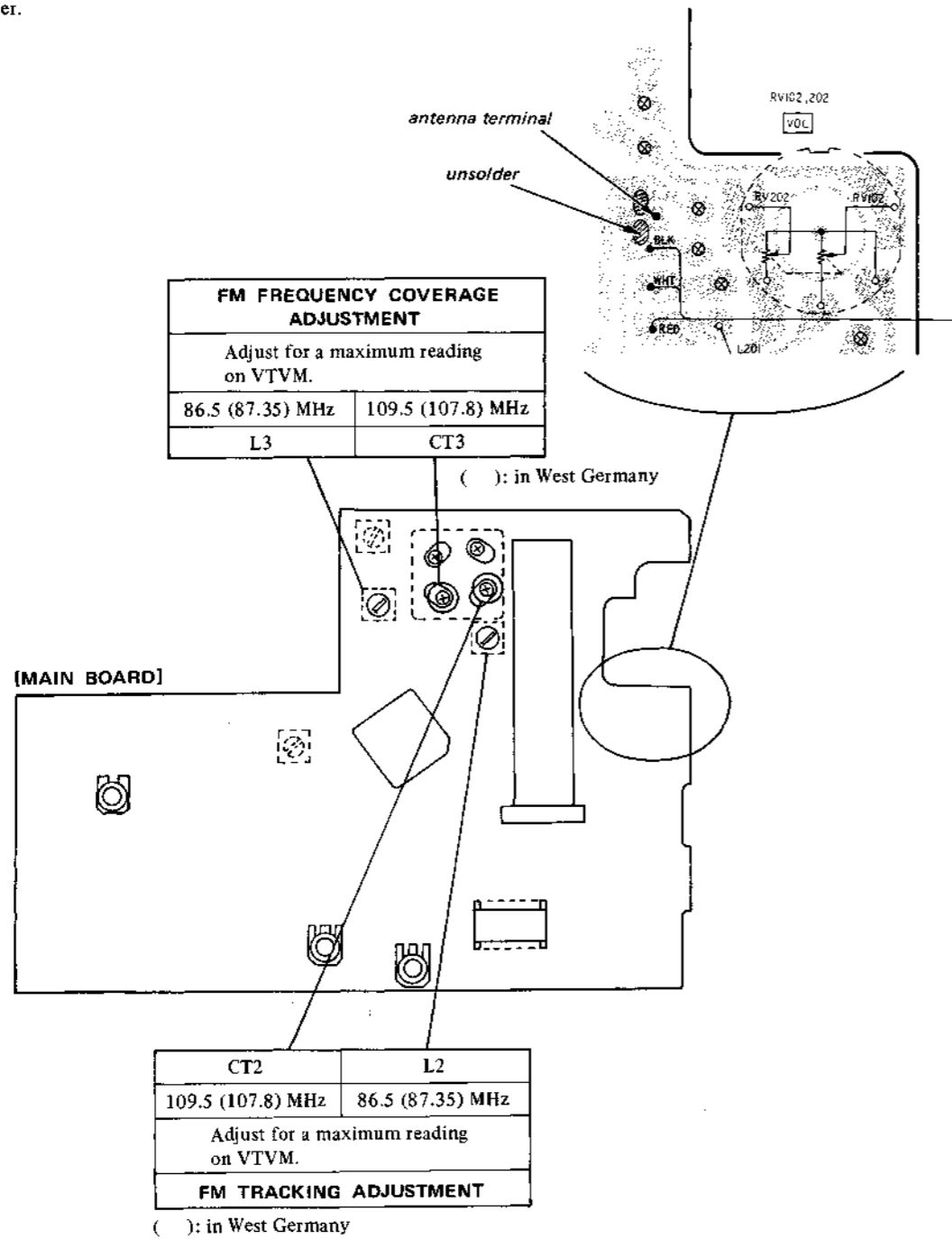
RADIO SECTION

• **FM SECTION**

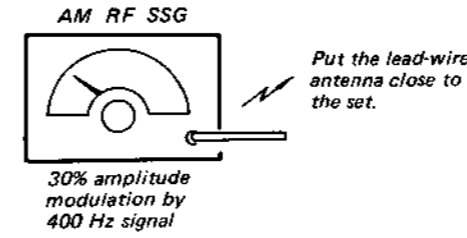


- Repeat the procedures in each adjustment several times, and the frequency coverage and tracking adjustments should be finally done by the trimmer capacitors.

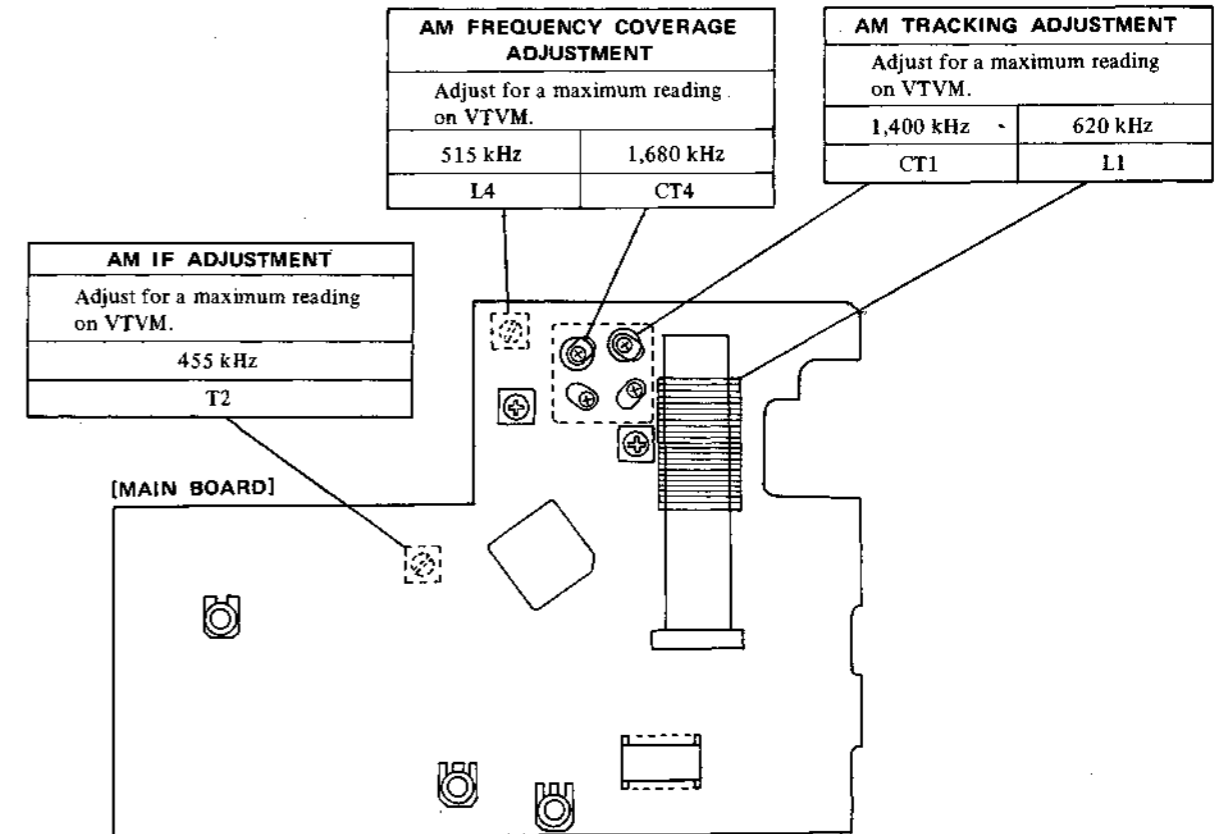
- Solder.



• **AM SECTION**



- Repeat the procedures in each adjustment several times, and the frequency coverage and tracking adjustments should be finally done by the trimmer capacitors.



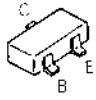
SECTION 5
DIAGRAMS

WM-F75 WM-F75

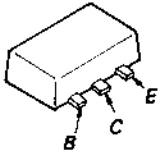
5-1. MOUNTING DIAGRAM
— Conductor Side —

• Semiconductor Lead Layouts

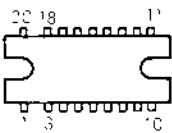
2SA1162
DTA114TK
DTC114YK



2SB956-S

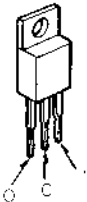


AN6612S

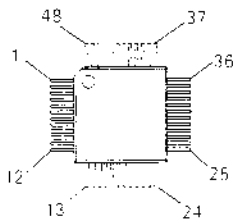


(Top view)

BA3404F
BA5206BF
CX20085



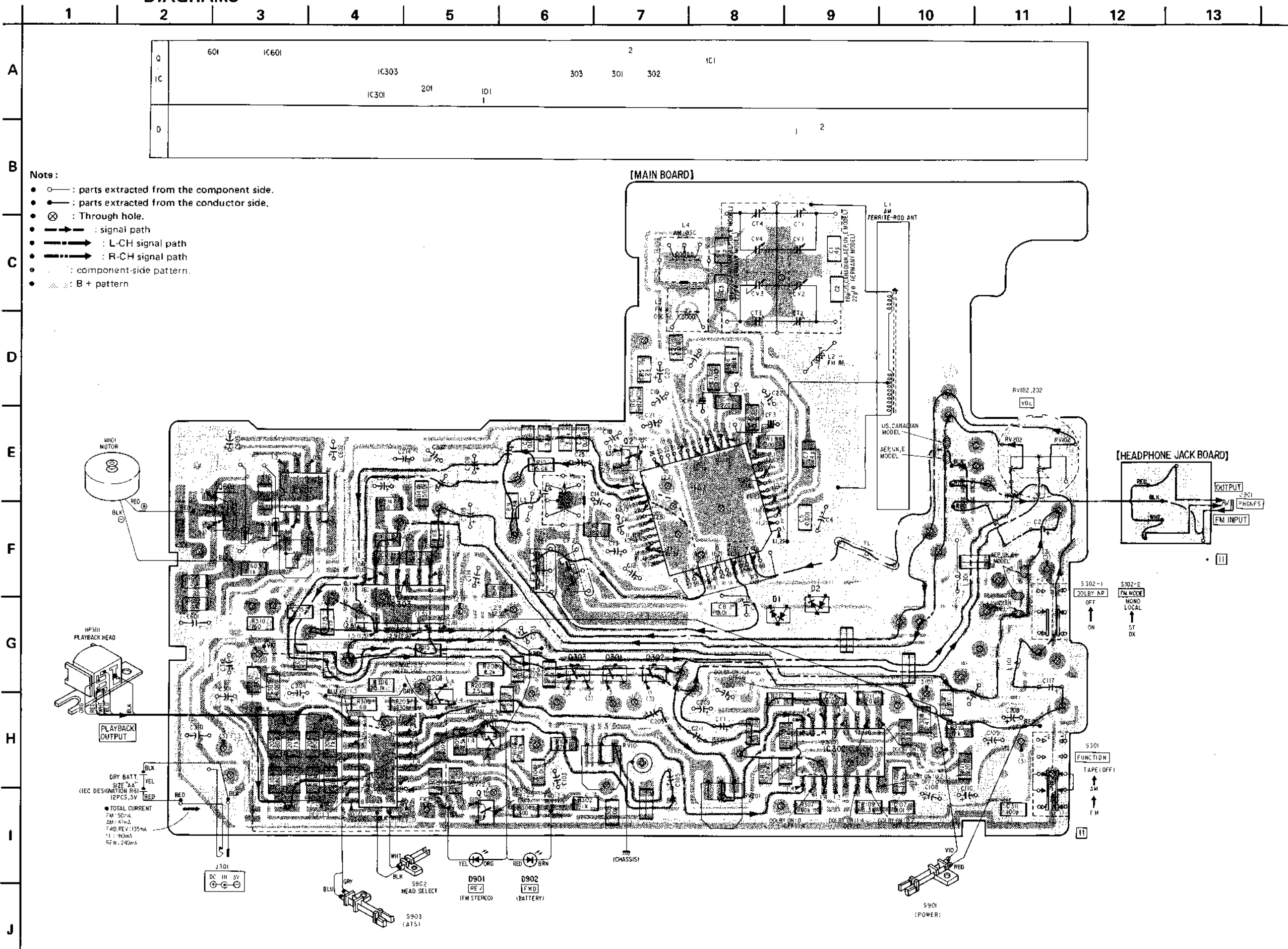
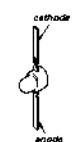
CX20029



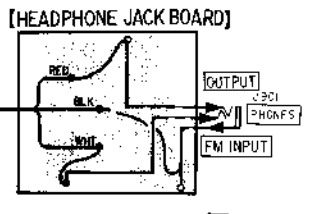
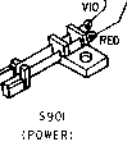
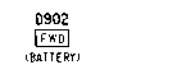
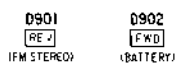
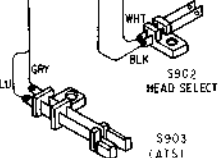
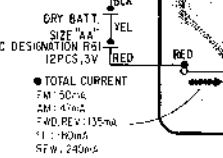
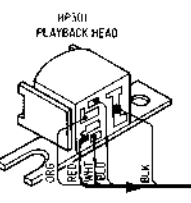
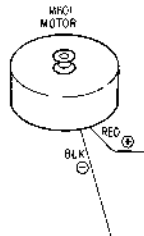
DA204K



SR106D

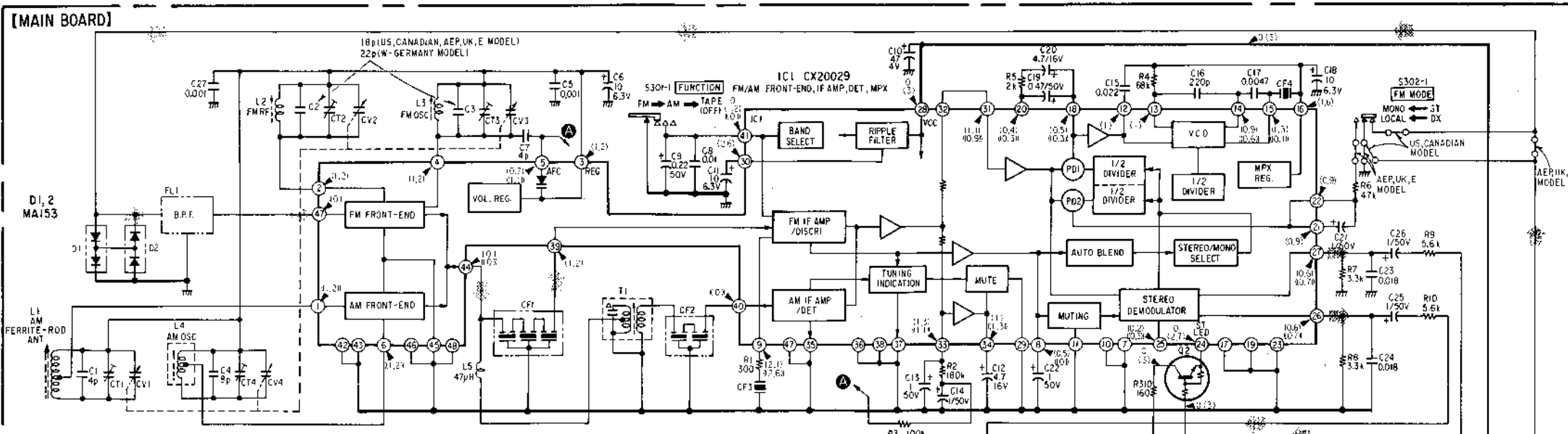


- Notes:
- : parts extracted from the component side.
 - : parts extracted from the conductor side.
 - ⊗ : Through hole.
 - : signal path
 - : L-CH signal path
 - : R-CH signal path
 - : component-side pattern.
 - ⊙ : B + pattern



● TOTAL CURRENT
FM: 50mA
AM: 4mA
FM/RE: 135mA
I: 10mA
S.F.W.: 240ms

A
B
C
D
E
F
G
H
I
J

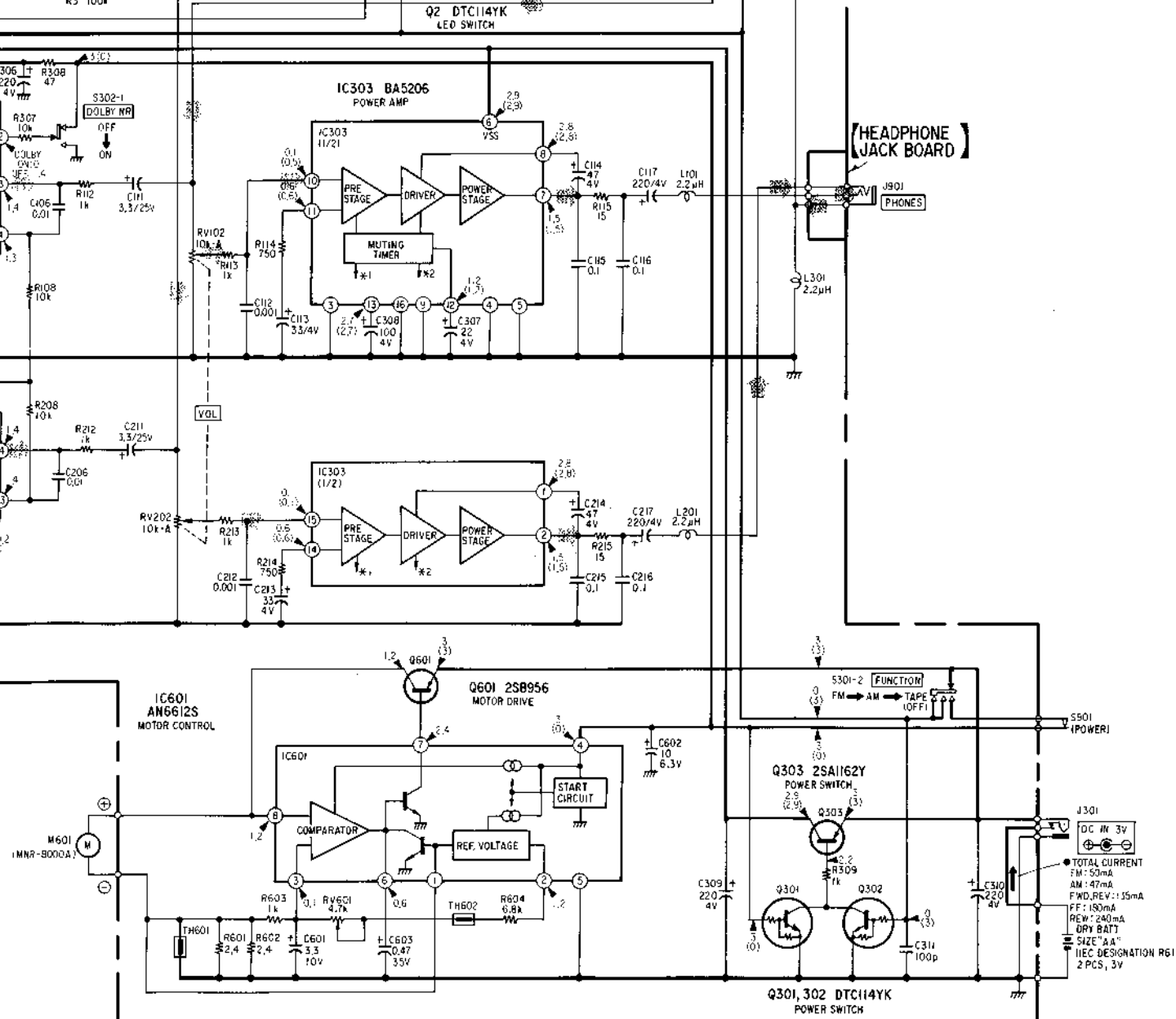


Note:

- All capacitors are in μF unless otherwise noted, pF: μpF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and $\frac{1}{2}W$ or less unless otherwise specified.
- : signal path.
- △ : internal component.
- : B+ bus.
- : adjustment for repair.
- Total current is measured with no cassette installed.
- no mark: TAPE MODE
- < > : FM/AM MODE
- { } : FM MODE
- () : AM MODE

- Power voltage is DC 3 V and fed with regulated dc power supply from DC IN 3 V jack. Voltages are dc with respect to ground in no signal mode. Voltage variations may be noted due to normal production tolerances.
- Switch

Ref. No.	Switch	Position
S301	FUNCTION	FM
S302-1	DOLBY NR	OFF
S302-1	FM SENS (MODE)	DX (ST)
S901	POWER	OFF
S902	ATC (AUTO TAPE SELECT)	OFF
S903	HEAD SELECT	OFF



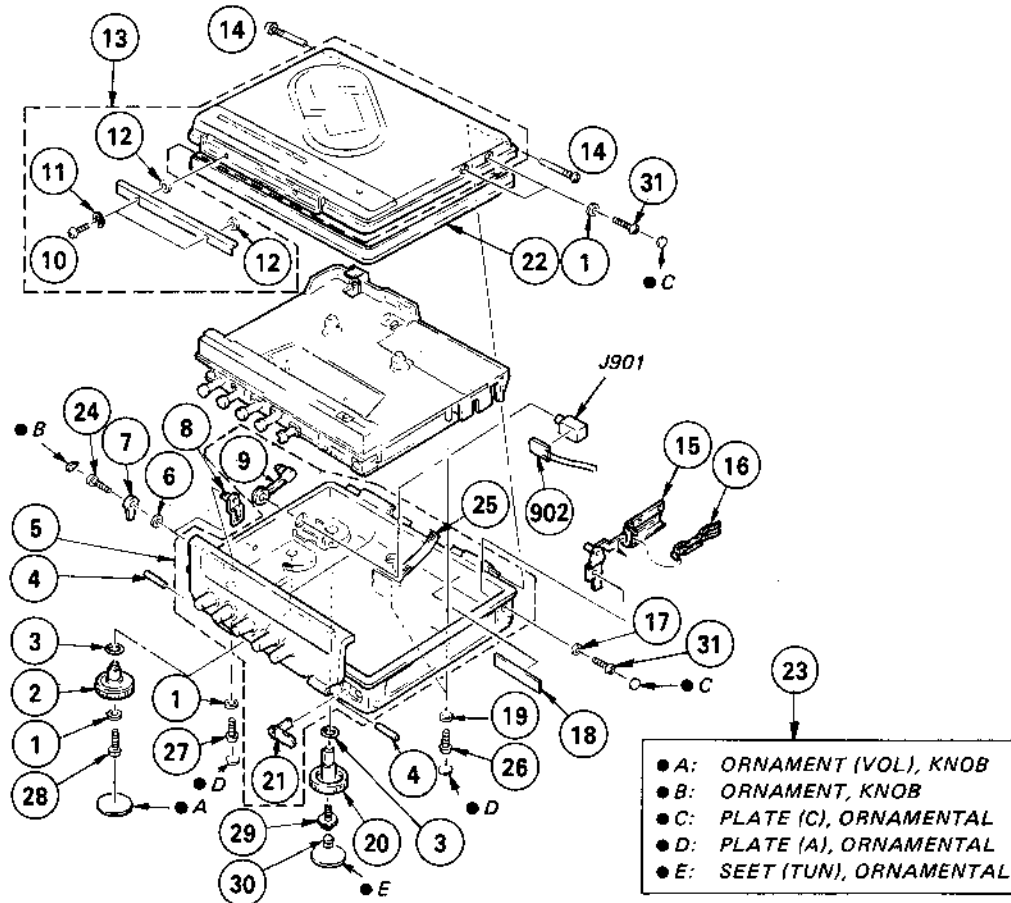
SECTION 6
EXPLODED VIEWS AND PARTS LIST

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.

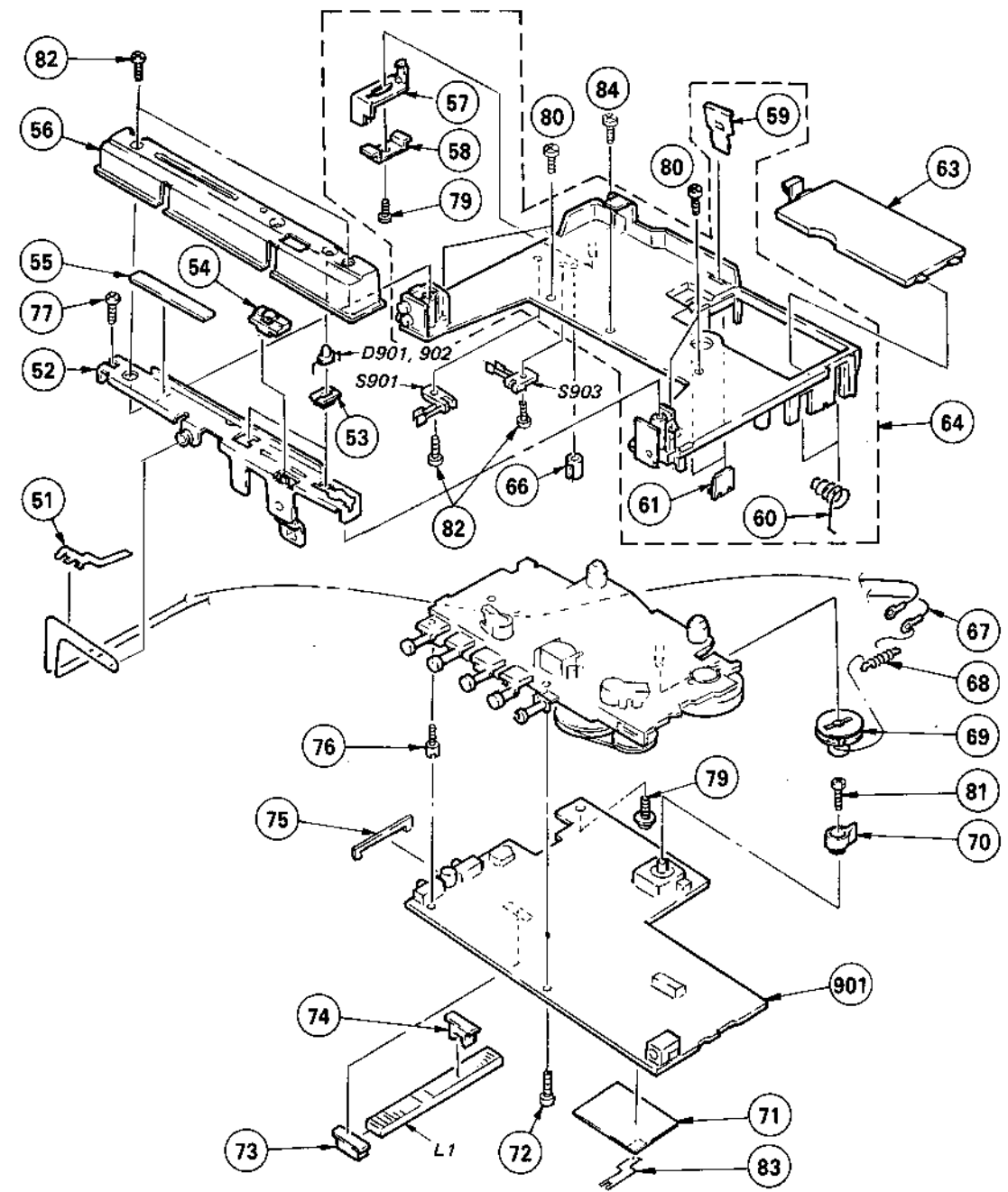
The construction parts of an assembled part are indicated with a collation number in the remark column.

(1)

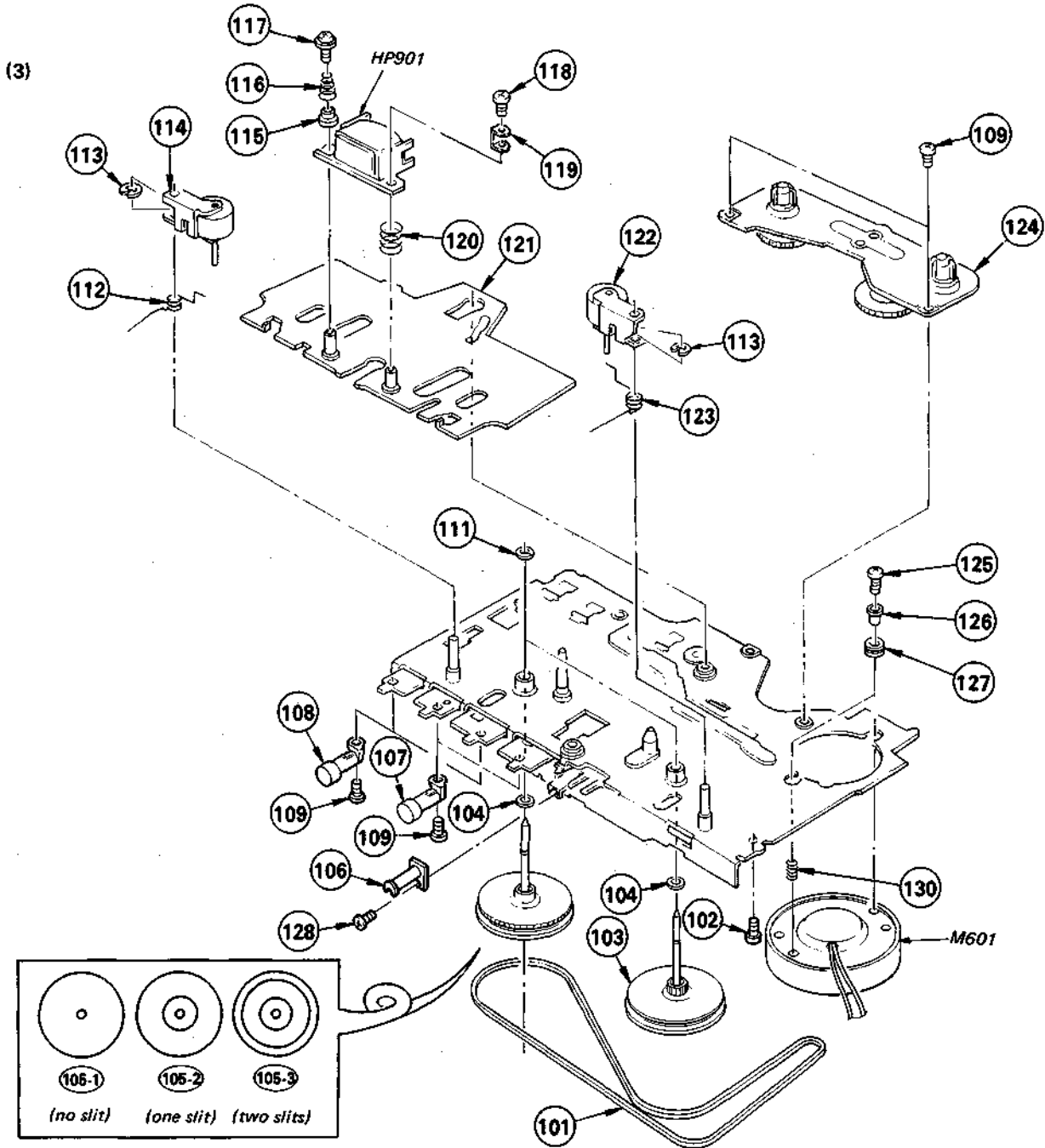


No.	Part No.	Description	Remarks	No.	Part No.	Description	Remarks
1	3-326-135-01	WASHER		14	3-326-536-11	SCREW, TAPPING	
2	3-326-508-01	KNOB, VOLUME		15	X-3326-506-1	PLATE ASSY, CLICK	
3	3-326-553-01	RING, O		16	3-326-549-01	SPRING	
4	3-649-266-00	PIN, PARALLEL		17	3-321-885-01	WASHER, STOPPER	
5	X-3326-515-1 (US, Canadian: YELLOW)	CONTROL CABINET ASSY		18	*3-701-999-00	LABEL, SERIAL NUMBER	
	X-3326-516-1 (AEP: YELLOW)	CONTROL CABINET ASSY		19	3-326-136-01	WASHER	
	X-3326-517-1 (UK, E: YELLOW)	CONTROL CABINET ASSY		20	3-326-509-01	KNOB, TUNING	
	X-3326-515-2 (US, Canadian: RED)	CONTROL CABINET ASSY		21	3-312-826-00	PACKING, DC JACK	
	X-3326-515-3 (US, Canadian: GRAY)	CONTROL CABINET ASSY		22	3-326-137-01	PACKING, CABINET	
	X-3326-516-2 (AEP: GRAY)	CONTROL CABINET ASSY		23	X-3326-510-1 (YELLOW)	SHEET ASSY, ORNAMENTAL	
	X-3326-517-2 (UK, E: GRAY)	CONTROL CABINET ASSY			X-3326-510-2 (RED)	SHEET ASSY, ORNAMENTAL	
					X-3326-510-3 (GRAY)	SHEET ASSY, ORNAMENTAL	
6	3-326-560-01	RING, O		24	7-627-551-28	SCREW, PRECISION +P 1.4X2.5	
7	3-326-507-01	KNOB, SELECTION		25	9-911-816-01	RIBBON, BATTERY	
8	X-3326-505-1	ARM ASSY, SELECTION		26	7-685-105-14	TAPPING +P 2X8 NON-SLIT	
9	3-326-520-01	PACKING, HP JACK		27	3-305-528-21	SCREW, STOPPER M1.4X5	
10	3-326-145-11	SCREW (M1.7X6)		28	3-703-816-11	SCREW (M1.4X4.0), SPECIAL HEAD	
11	3-701-436-11	WASHER, PLASTIL (t=0.25)		29	3-703-502-51	SCREW	
12	3-326-149-01	PACKING (B)		30	3-326-519-01	WINDOW, LED	
13	X-3326-513-1 (US, Canadian, AEP, UK, E: YELLOW)	FRONT CABINET ASSY		31	3-703-816-01	SCREW (M1.4X2.0), SPECIAL HEAD	
	X-3326-514-1 (W-GERMANY: YELLOW)	FRONT CABINET ASSY		902	*1-616-126-11	PC BOARD, HEADPHONE JACK	
	X-3326-513-2 (US, Canadian: RED)	FRONT CABINET ASSY		J901	1-507-851-00	JACK (PHONES)	
	X-3326-513-3 (US, Canadian, AEP, UK, E: GRAY)	FRONT CABINET ASSY					
	X-3326-514-3 (W-GERMANY: GRAY)	FRONT CABINET ASSY					

(2)

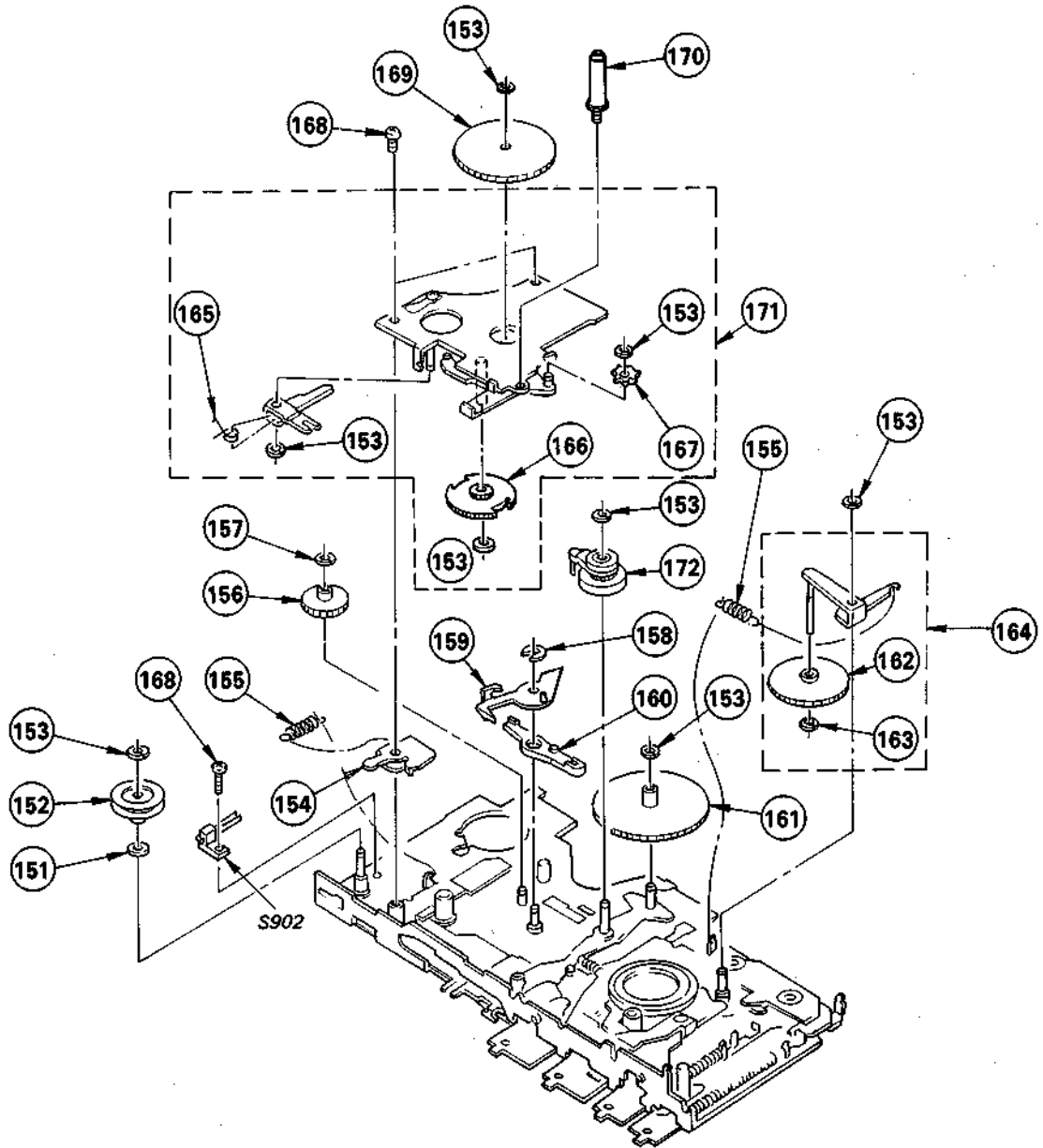


No.	Part No.	Description	Remarks	No.	Part No.	Description	Remarks
51	3-326-524-01	POINTER		69	*3-326-511-01	DRUM, DIAL	
52	X-3326-508-1	PLATE ASSY, BACK		70	3-326-512-01	ADAPTOR, DRUM	
53	3-326-516-01	HOLDER, LED		71	*3-326-551-01	PLATE (A), SHIELD	
54	3-326-510-01	KNOB, MODE, REVERSE		72	3-703-502-31	SCREW, PWH 1.4X3	
55	3-326-559-01	SHEET, DIAL BACK		73	3-326-515-01	HOLDER, FERRITE-ROD ANTENNA	
				74	3-326-515-11	HOLDER, ANTENNA	
56	3-326-545-01	COVER, HEAD		75	*3-326-565-01	PLATE (B), SHIELD	
57	*3-326-527-01	LEVER, ATS		76	3-326-535-01	SHAFT (A), FITTING, PC BOARD	
58	*3-326-528-01	RETAINER, ATS LEVER		77	7-627-553-67	SCREW, PRECISION P2X5	
59	3-326-112-01	SPRING		79	7-685-103-14	SCREW +P 2X5 TYPE2 NON-SLIT	
60	3-326-530-01	SPRING		80	7-627-850-28	SCREW, PRECISION P1.4X3	
61	3-326-529-01	TERMINAL BOARD, PLUS		81	7-627-552-37	SCREW, PRECISION +P 1.7X3	
63	3-326-544-01	LID, BATTERY CASE		82	7-685-104-19	SCREW +P 2X6 TYPE2 NON-SLIT	
64	X-3326-509-1	CHASSIS ASSY, MOLD		83	*3-326-566-01	PLATE (C), SHIELD	
66	3-326-552-01	SHAFT, DIAL		84	3-703-816-42	SCREW (M1.4X2.5), SPECIAL HEAD	
67	9-911-825-52	STRING, DIAL		901	A-3215-762-A (US, Canadian, AEP, UK, E)	PC BOARD ASSY, MAIN	
68	3-326-567-01	SPRING, TENSION			A-3215-806-A (W-GERMANY)	PC BOARD ASSY, MAIN	



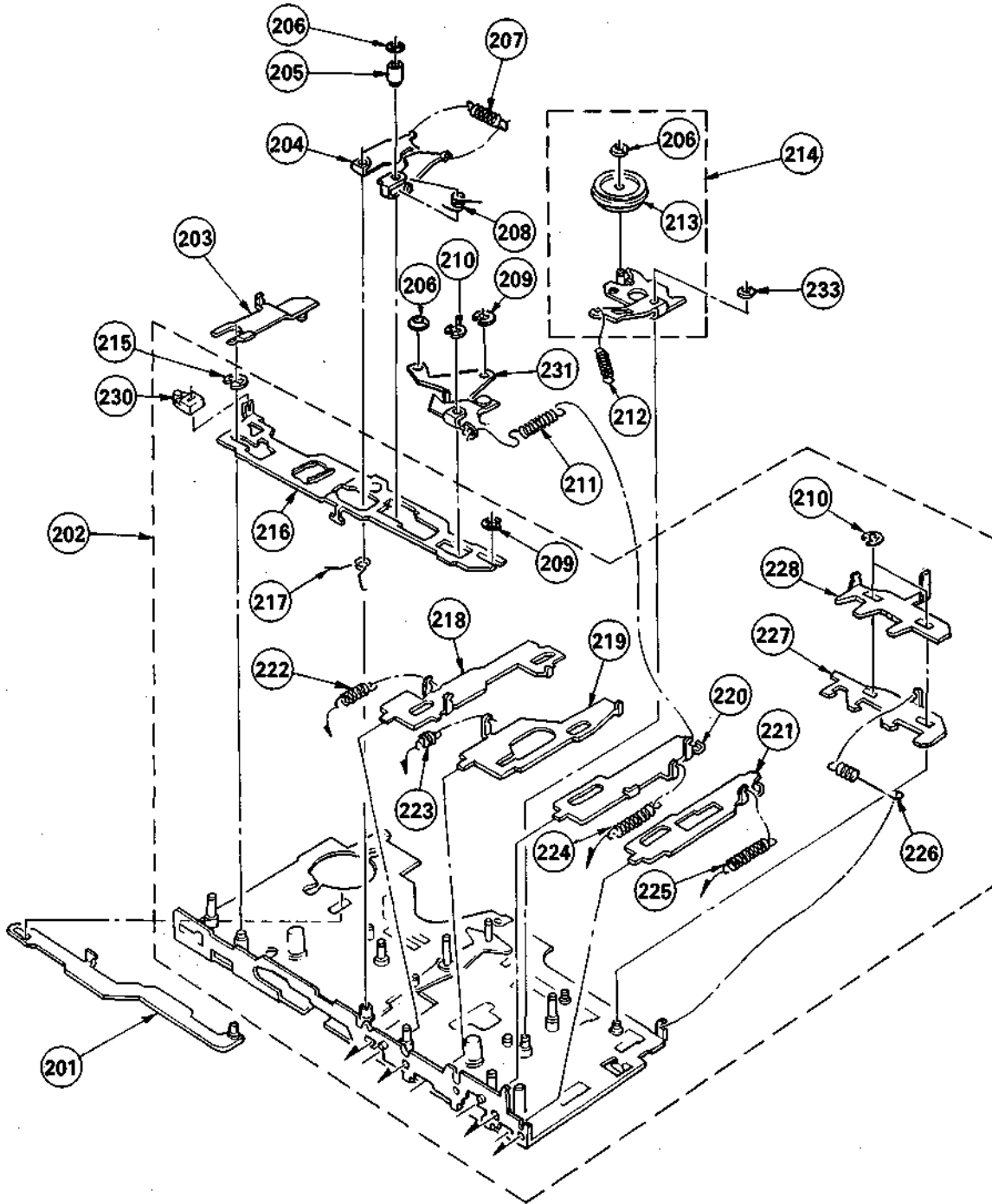
No.	Part No.	Description	Remarks	No.	Part No.	Description	Remarks
101	3-325-387-01	BELT		117	3-703-502-12	SCREW	
103	X-3325-206-1	FLYWHEEL (F) ASSY		118	7-627-551-58	SCREW, PRECISION +P 1.4X3	
104	3-321-489-01	WASHER		119	3-325-396-01	SPACER, AZIMUTH	
105-1	X-3325-212-1	FLYWHEEL (R) ASSY		120	3-325-380-01	SPRING, COMPRESSION (AZIMUTH)	
105-2	X-3325-213-1	FLYWHEEL (R) ASSY			3-325-380-11	SPRING, COMPRESSION (AZIMUTH)	
105-3	X-3325-214-1	FLYWHEEL (R) ASSY		121	X-3324-930-1	CHASSIS ASSY, HEAD	
106	3-326-550-01	BUTTON, D		122	X-3324-919-1	PINCH LEVER (F) ASSY	
107	*3-326-125-01	BUTTON (B), MIDWAY		123	3-325-331-01	SPRING (F)	
108	*3-326-122-01	BUTTON (A), MIDWAY			3-325-331-11	SPRING (F)	
109	7-627-451-17	SCREW, PRECISION +K 1.4X2.5		124	X-3326-503-1	TABLE ASSY, REEL	
111	3-321-483-11	RING, RETAINING		125	7-627-552-48	SCREW, PRECISION +P 1.7X4	
112	3-325-332-01	SPRING (R)		126	3-325-385-01	SPACER, MOTOR	
	3-325-332-11	SPRING (R)		127	3-570-770-00	CUSHION (A), MOTOR	
113	3-590-768-00	RING (A), E		128	7-703-816-01	SCREW (M1.4X2.0), SPECIAL HEAD	
114	X-3324-920-1	PINCH LEVER (R) ASSY		129	*3-324-723-01	CAP, SHIELD	
115	3-325-358-01	COLLAR, AZIMUTH		130	3-325-395-01	SPRING, COMPRESSION	
116	3-318-106-01	SPRING (H), COMPRESSION					

(4)



No.	Part No.	Description	Remarks	No.	Part No.	Description	Remarks
151	3-325-306-01	WASHER (DIA. 1.6)		161	3-325-324-01	GEAR, IDLER	
152	3-325-393-01	PULLEY, MIDWAY		162	3-324-947-01	GEAR, FR	
153	3-570-615-00	POLY-WASHER (DIA.1.2)		163	3-315-384-11	WASHER, STOPPER	
154	3-324-993-01	LEVER, SELECTION, DERECTION		164	*X-3324-912-1	LEVER ASSY, FR GEAR	
155	3-325-349-01	SPRING, TENSION		165	3-324-996-01	SPRING	
156	3-325-323-01	GEAR, CAM		166	3-325-363-01	GEAR, D	
157	3-325-394-01	WASHER, STOPPER		167	3-324-967-01	GEAR, MODE CHANGE	
	3-325-394-11	WASHER, STOPPER		168	3-703-816-01	SCREW (M1.4X2.0), SPECIAL HEAD	
	3-325-394-21	WASHER, STOPPER		169	3-324-949-01	GEAR, SHUT-OFF	
158	3-325-386-01	RING (A), C		170	3-326-501-01	SHAFT (B) PCB HOLDER	
159	3-325-357-01	LEVER, SHUT-OFF		171	*X-3326-121-1	CHASSIS COMPLETE ASSY, D	
160	3-325-326-01	LEVER (B), SHUT-OFF		172	X-3324-921-3	LIMITER ASSY, FWD	

(5)



No.	Part No.	Description	Remarks	No.	Part No.	Description	Remarks
201	X-3324-923-1	SLIDER ASSY, SHUT-OFF		217	3-325-341-01	SPRING	
202	*X-3326-504-1	LEVER ASSY, CONTROL		218	3-325-365-11	LEVER, FF	
203	X-3324-922-1	LEVER ASSY, MODE SELECTION		219	3-325-325-11	LEVER, REW	
204	3-325-265-01	LEVER (C), IDLER		220	3-325-399-11	LEVER (B), FWD	
205	3-325-263-01	COLLAR (B), IDLER		221	3-325-397-	LEVER (B), RA	
206	3-570-615-00	POLY-WASHER (DIA.1.2)		222	3-325-350-01	SPRING, TENSION (POWER TENSION)	
207	3-325-318-01	SPRING, TENSION		223	3-325-345-01	SPRING, TENSION	
208	3-325-266-01	SPRING		224	3-326-561-01	SPRING (POWER TENSION), TENSION	
209	3-590-768-00	RING (A), E		225	3-325-383-01	SPRING, TENSION	
210	3-578-254-00	RING, RETAINING, E1.2		226	3-326-130-01	SPRING, TENSION	
211	3-325-288-01	SPRING (POWER TENSION), TENSION		227	3-326-131-01	PLATE (D), LOCK	
212	3-325-348-01	SPRING, TENSION		228	3-326-132-01	LEVER (D), SW	
213	X-3325-205-1	IDLER ASSY, FWD		229	3-325-347-01	SPRING, TENSION	
214	X-3324-931-1	IDLER COMPLETE ASSY, FWD		230	3-326-518-01	LEVER, D SWITCH	
215	7-624-104-04	STOP RING 2.0, TYPE -E		231	X-3324-926-1	LEVER ASSY, H	
216	X-3324-924-1	SLIDER ASSY, D		232	3-325-264-01	LEVER (B), IDLER	
				233	3-578-224-21	WASHER, STOPPER	

SECTION 7
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-3215-762-A	(US,Canadian,AEP,UK,E) ...PC BOARD ASSY, MAIN			
	A-3215-806-A	(W-GERMANY)...PC BOARD ASSY, MAIN			
902	*1-616-126-11	PC BOARD, HEADPHONE JACK			
C1	1-163-087-00	CERAMIC CHIP 4PF	0.25PF	50V	
C2	1-163-099-00	(US,Canadian,AEP,UK,E) ...CERAMIC CHIP 18PF 5%	50V		
C2	1-163-101-00	(W-GERMANY)...CERAMIC CHIP 22PF 5%	50V		
C3	1-163-588-91	(US,Canadian,AEP,UK,E) ...CERAMIC CHIP 18PF 5%	50V		
C3	1-163-101-00	(W-GERMANY)...CERAMIC CHIP 22PF 5%	50V		
C4	1-163-225-00	CERAMIC CHIP 8PF	0.25PF	50V	
C5	1-163-141-00	CERAMIC CHIP 0.001MF	10%	50V	
C6	1-124-435-00	ELECT 10MF	20%	6.3V	
C7	1-163-087-00	CERAMIC CHIP 4PF	0.25PF	50V	
C8	1-163-021-00	CERAMIC CHIP 0.01MF	5%	50V	
C9	1-124-464-11	ELECT 0.22MF	20%	50V	
C10	1-124-432-00	ELECT 47MF	20%	4V	
C11	1-124-435-00	ELECT 10MF	20%	6.3V	
C12	1-124-461-11	ELECT 4.7MF	20%	16V	
C13	1-124-438-00	ELECT 1MF	20%	50V	
C14	1-124-438-00	ELECT 1MF	20%	50V	
C15	1-163-033-00	CERAMIC CHIP 0.022MF		50V	
C16	1-163-125-00	CERAMIC CHIP 220PF	5%	50V	
C17	1-163-017-00	CERAMIC CHIP 0.0047MF	10%	50V	
C18	1-124-435-00	ELECT 10MF	20%	6.3V	
C19	1-124-465-00	ELECT 0.47MF	20%	50V	
C20	1-124-461-11	ELECT 4.7MF	20%	16V	
C21	1-124-438-00	ELECT 1MF	20%	50V	
C22	1-124-438-00	ELECT 1MF	20%	50V	
C23	1-163-024-00	CERAMIC CHIP 0.018MF	10%	50V	
C24	1-163-024-00	CERAMIC CHIP 0.018MF	10%	50V	
C25	1-124-438-00	ELECT 1MF	20%	50V	
C26	1-124-438-00	ELECT 1MF	20%	50V	
C27	1-163-141-00	CERAMIC CHIP 0.001MF	10%	50V	
C101	1-163-137-00	CERAMIC CHIP 680PF	5%	50V	
C102	1-163-137-00	CERAMIC CHIP 680PF	5%	50V	
C103	1-124-431-00	ELECT 33MF	20%	4V	
C104	1-163-021-00	CERAMIC CHIP 0.01MF	5%	50V	
C105	1-124-437-00	ELECT 2.2MF	20%	35V	
C106	1-163-021-00	CERAMIC CHIP 0.01MF	5%	50V	
C107	1-163-021-00	CERAMIC CHIP 0.01MF	5%	50V	
C108	1-131-344-00	(W-GERMANY)...TANTALUM 0.33MF	10%	35V	
C108	1-131-405-00	(US,Canadian,AEP,UK,E)... TANTALUM 0.33MF	20%	35V	
C109	1-131-346-00	(W-GERMANY)...TANTALUM 0.68MF	20%	35V	
C109	1-131-407-00	(US,Canadian,AEP,UK,E)... TANTALUM 0.68MF	20%	35V	

ELECTRICAL PARTS

Ref.No.	Part No.	Description			
C110	1-131-341-00	(W-GERMANY)...TANTALUM 0.1MF	20%	35V	
C110	1-131-402-00	(US,Canadian,AEP,UK,E)... TANTALUM 0.1MF	20%	35V	
C111	1-124-436-00	ELECT 3.3MF	20%	25V	
C112	1-163-141-00	CERAMIC CHIP 0.001MF	10%	50V	
C113	1-124-431-00	ELECT 33MF	20%	4V	
C114	1-124-432-00	ELECT 47MF	20%	4V	
C115	1-163-038-00	CERAMIC CHIP 0.1MF		25V	
C116	1-163-038-00	CERAMIC CHIP 0.1MF		25V	
C117	1-124-434-00	ELECT 220MF	20%	4V	
C201	1-163-137-00	CERAMIC CHIP 680PF	5%	50V	
C202	1-163-137-00	CERAMIC CHIP 680PF	5%	50V	
C203	1-124-431-00	ELECT 33MF	20%	4V	
C204	1-163-021-00	CERAMIC CHIP 0.01MF	5%	50V	
C205	1-124-437-00	ELECT 2.2MF	20%	35V	
C206	1-163-021-00	CERAMIC CHIP 0.01MF	5%	50V	
C207	1-163-021-00	CERAMIC CHIP 0.01MF	5%	50V	
C208	1-131-344-00	(W-GERMANY)...TANTALUM 0.33MF	10%	35V	
C208	1-131-405-00	(US,Canadian,AEP,UK,E)... TANTALUM 0.33MF	20%	35V	
C209	1-131-346-00	(W-GERMANY)...TANTALUM 0.68MF	10%	35V	
C209	1-131-407-00	(US,Canadian,AEP,UK,E)... TANTALUM 0.68MF	20%	35V	
C210	1-131-402-00	(W-GERMANY)...TANTALUM 0.1MF	10%	35V	
C210	1-131-402-00	(US,Canadian,AEP,UK,E)... TANTALUM 0.1MF	20%	35V	
C211	1-124-436-00	ELECT 3.3MF	20%	25V	
C212	1-163-141-00	CERAMIC CHIP 0.001MF	10%	50V	
C213	1-124-431-00	ELECT 33MF	20%	4V	
C214	1-124-432-00	ELECT 47MF	20%	4V	
C215	1-163-038-00	CERAMIC CHIP 0.1MF		25V	
C216	1-163-038-00	CERAMIC CHIP 0.1MF		25V	
C217	1-124-434-00	ELECT 220MF	20%	4V	
C301	1-124-432-00	ELECT 47MF	20%	4V	
C302	1-163-117-00	CERAMIC CHIP 100PF	5%	50V	
C303	1-163-141-00	CERAMIC CHIP 0.001MF	10%	50V	
C304	1-124-431-00	ELECT 33MF	20%	4V	
C305	1-163-117-00	CERAMIC CHIP 100PF	5%	50V	
C306	1-124-433-00	ELECT 100MF	20%	4V	
C307	1-124-430-00	ELECT 22MF	20%	4V	
C308	1-124-433-00	ELECT 100MF	20%	4V	
C309	1-124-434-00	ELECT 220MF	20%	4V	
C310	1-124-434-00	ELECT 220MF	20%	4V	
C311	1-163-117-00	CERAMIC CHIP 100PF	5%	50V	
C312	1-124-438-00	ELECT 1MF	20%	50V	

ELECTRICAL PARTS

Ref.No.	Part No.	Description
C601	1-131-501-00	TANTALUM 3.3MF 10% 10V
C602	1-124-435-00	ELECT 10MF 20% 6.3V
C603	1-131-345-00	(W-GERMANY)...TANTALUM 0.47MF 10% 35V
C603	1-131-406-00	(US,Canadian,AEP,UK,E).... TANTALUM 0.47MF 20% 35V
CF1	1-567-166-00	FILTER, CERAMIC
CF2	1-567-177-00	FILTER, CERAMIC
CF3	1-567-166-00	FILTER, CERAMIC
CF4	1-567-164-00	VIBRATOR, CERAMIC
CTI-4 CV1-4	1-151-453-00	CAP, TUNING, POLYETHYLENE
D1	8-719-914-42	DIODE DA204K
D2	8-719-914-42	DIODE DA204K
D901	8-719-101-06	DIODE SR106D
D902	8-719-101-06	DIODE SR106D
FL1	1-235-171-00	FILTER, BAND PASS
HP301	8-825-537-51	HEAD, PLAYBACK PP238-3604D
IC1	8-759-908-89	IC CX20029
IC301	8-759-909-64	IC BA3404F
IC302	8-759-908-08	IC CX20085
IC303	8-759-919-92	IC BA52068F
IC601	8-759-400-12	IC AN6612S
J301	1-507-723-00	JACK, EXTERNAL POWER (DC IN 3V)
J901	1-507-851-00	JACK (PHONES)
JP301	1-216-295-00	METAL CHIP 0 5% 1/10W
JP302	1-216-296-00	METAL CHIP 0 5% 1/8W
JP303	1-216-296-00	METAL CHIP 0 5% 1/8W
JP304	1-216-296-00	METAL CHIP 0 5% 1/8W
L1	1-402-162-11	ANTENNA, FERRITE-ROD (MW)
L2	1-459-520-11	(W-GERMANY)...COIL (WITH CORE)(FM RF)
L2	1-459-615-11	(US,Canadian,AEP,UK,E) ...COIL (WITH CORE)(FM RF)
L3	1-459-418-00	COIL (WITH CORE)(FM OSC)
L4	1-405-989-00	COIL, OSC (AM OSC)
L5	1-410-029-11	MICRO INDUCTOR 47UH
L101	1-410-013-11	MICRO INDUCTOR 2.2UH
L201	1-410-013-11	MICRO INDUCTOR 2.2UH
L301	1-410-013-11	MICRO INDUCTOR 2.2UH
M601	8-835-136-01	MOTOR, DC (MNR-8000A)
Q1	8-729-900-52	TRANSISTOR DTC114YK
Q2	8-729-900-52	TRANSISTOR DTC114YK
Q101	8-729-900-51	TRANSISTOR DTA114TK
Q201	8-729-900-51	TRANSISTOR DTA114TK
Q301	8-729-900-52	TRANSISTOR DTC114YK
Q302	8-729-900-52	TRANSISTOR DTC114YK

ELECTRICAL PARTS

Ref.No.	Part No.	Description
Q303	8-729-216-22	TRANSISTOR 2SA1162
Q601	8-729-400-16	TRANSISTOR 2SB956-S
R1	1-216-036-00	METAL CHIP 300 5% 1/10W
R2	1-216-103-00	METAL CHIP 180K 5% 1/10W
R3	1-247-879-00	CARBON 100K 5% 1/6W
R4	1-216-093-00	METAL CHIP 68K 5% 1/10W
R5	1-216-056-00	METAL CHIP 2K 5% 1/10W
R6	1-216-089-00	METAL CHIP 47K 5% 1/10W
R7	1-216-061-00	METAL CHIP 3.3K 5% 1/10W
R8	1-216-061-00	METAL CHIP 3.3K 5% 1/10W
R9	1-216-067-00	METAL CHIP 5.6K 5% 1/10W
R10	1-216-067-00	METAL CHIP 5.6K 5% 1/10W
R101	1-216-089-00	METAL CHIP 47K 5% 1/10W
R102	1-216-089-00	METAL CHIP 47K 5% 1/10W
R103	1-216-109-00	METAL CHIP 330K 5% 1/10W
R104	1-216-033-00	METAL CHIP 220 5% 1/10W
R105	1-216-070-00	METAL CHIP 7.5K 5% 1/10W
R106	1-216-071-00	METAL CHIP 8.2K 5% 1/10W
R108	1-216-073-00	METAL CHIP 10K 5% 1/10W
R109	1-216-052-00	METAL CHIP 1.3K 5% 1/10W
R110	1-216-075-00	METAL CHIP 12K 5% 1/10W
R111	1-216-099-00	METAL CHIP 120K 5% 1/10W
R112	1-216-049-00	METAL CHIP 1K 5% 1/10W
R113	1-216-049-00	METAL CHIP 1K 5% 1/10W
R114	1-216-046-00	METAL CHIP 750 5% 1/10W
R115	1-216-005-00	METAL CHIP 15 5% 1/10W
R201	1-216-089-00	METAL CHIP 47K 5% 1/10W
R202	1-216-089-00	METAL CHIP 47K 5% 1/10W
R203	1-216-109-00	METAL CHIP 330K 5% 1/10W
R204	1-216-033-00	METAL CHIP 220 5% 1/10W
R205	1-216-070-00	METAL CHIP 7.5K 5% 1/10W
R206	1-216-071-00	METAL CHIP 8.2K 5% 1/10W
R208	1-216-073-00	METAL CHIP 10K 5% 1/10W
R209	1-216-052-00	METAL CHIP 1.3K 5% 1/10W
R210	1-216-075-00	METAL CHIP 12K 5% 1/10W
R211	1-216-099-00	METAL CHIP 120K 5% 1/10W
R212	1-216-049-00	METAL CHIP 1K 5% 1/10W
R213	1-216-049-00	METAL CHIP 1K 5% 1/10W
R214	1-216-046-00	METAL CHIP 750 5% 1/10W
R215	1-216-005-00	METAL CHIP 15 5% 1/10W
R301	1-216-049-00	METAL CHIP 1K 5% 1/10W
R302	1-216-049-00	METAL CHIP 1K 5% 1/10W
R303	1-216-036-00	METAL CHIP 300 5% 1/10W
R304	1-216-036-00	METAL CHIP 300 5% 1/10W

ELECTRICAL PARTS

Ref.No.	Part No.	Description			
R305	1-216-021-00	METAL CHIP	68	5%	1/10W
R306	1-216-066-00	METAL CHIP	5.1K	5%	1/10W
R307	1-216-073-00	METAL CHIP	10K	5%	1/10W
R308	1-216-017-00	METAL CHIP	47	5%	1/10W
R309	1-216-049-00	METAL CHIP	1K	5%	1/10W
R310	1-216-030-00	METAL CHIP	160	5%	1/10W
R601	1-216-135-00	METAL CHIP	2.4	5%	1/8W
R602	1-216-135-00	METAL CHIP	2.4	5%	1/8W
R603	1-216-049-00	METAL CHIP	1K	5%	1/10W
R604	1-216-218-00	METAL CHIP	6.8K	5%	1/8W
RV101	1-230-676-11	RES, ADJ, METAL GLAZE 10K			
RV102	1-230-593-11	RES, VAR, CARBON 10K/10K (VOL)			
RV201	1-230-676-11	RES, ADJ, METAL GLAZE 10K			
RV202	1-230-593-11	RES, VAR, CARBON 10K/10K (VOL)			
RV601	1-228-357-00	RES, ADJ, METAL GLAZE 4.7K			
S301	1-554-843-11	SWITCH, SLIDE (FUNCTION)			
S302	1-570-114-11	SWITCH, SLIDE (DOLBY NR/FM SENS)			
S901	1-554-595-00	SWITCH, LEAF (POWER)			
S902	1-554-938-11	SWITCH, REEF (HEAD SELECT)			
S903	1-554-595-00	SWITCH, LEAF (ATS)			
T1	1-404-444-00	TRANSFORMER, IF 455KHZ			
TH601	1-806-800-11	THERMISTOR (POSITIVE)			
TH602	1-806-363-11	THERMISTOR (POSITIVE)			

ACCESSORY & PACKING MATERIAL

Part No.	Description
3-326-141-01	CUSHION
3-326-142-01	CASE, ACCESSORY
3-326-554-01	CUSHION
3-326-555-01	(US).....INDIVIDUAL CARTON
3-326-556-01	(Canadian,AEP,UK)...INDIVIDUAL CARTON
3-326-567-01	MAT, MIRROR
3-579-788-00	WASHER, STOPPER
3-703-913-01	{GRAY}.....LABEL, COLOR
3-703-924-01	{YELLOW}...LABEL, COLOR
3-760-506-11	{UK,E}.....MANUAL, INSTRUCTION
3-760-506-21	{US,Canadian}...MANUAL, INSTRUCTION
3-760-506-31	{Canadian}.....MANUAL, INSTRUCTION
3-760-506-41	{AEP,UK}.....MANUAL, INSTRUCTION
3-795-748-21	(US)...SAFETY INSTRUCTIONS, HEADPHONE
8-952-216-93	(E:GRAY).....MDR-E245/G SET
8-952-216-94	(E:YELLOW).....MDR-E245/Y SET
8-952-229-90	(US,Canadian,AEP,UK:YELLOW)...MDR-A25L/Y SET
8-952-229-92	(US,Canadian,AEP,UK:GRAY)....MDR-A25L/G SET
8-952-229-93	(RED).....MDR-A25L/R SET
X-3326-110-1	CASE ASSY, CARRYING