


# WM-F100II

## SERVICE MANUAL

US Model  
Canadian Model



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

Model Name Using Similar Mechanism	WM-100II/102
Tape Transport Mechanism Type	MF-WMF-102-01

0 dB = 0.775 V

### SPECIFICATIONS

#### Cassette player section

##### Tape track

4-track 2 channel stereo

##### Fast winding time

Approx. 3 min. 20 sec. with Sony C-60 cassette

##### Frequency response (DOLBY NR off)

40-15,000Hz (with the TAPE selector set to CrO<sub>2</sub>/METAL)

40-15,000Hz (with the TAPE selector set to NORM)

#### Radio section

##### Frequency range

FM: 87.6-108 MHz

AM: 530-1,650 kHz

##### Antennas

FM: Headphones cord antenna

AM: Built-in ferrite bar antenna

#### General

##### Power output

4mW + 4mW at DC operation (at 10% harmonic distortion)

##### Power requirements

1.5V DC

Size AA (R6P) battery

Rechargeable battery

DC IN 1.5V jack accepts:

Sony AC-D1M AC power adaptor (optional) for use with 120V AC, 60 Hz

Sony EBP-10 battery case (optional)

for use on two size AA (R6P) batteries

Sony DCC-70 car battery cord (optional) for use with 12V car battery

##### Battery life (hours)

Battery	Tape playback	FM reception
Sony battery SUM-3 (NS)	Approx. 2	Approx. 10
Sony alkaline battery AM3	Approx. 5.5	Approx. 25
Sony Rechargeable battery NC-5WM (fully charged)	Approx. 2	Approx. 10

For maximum performance we recommend the use of alkaline battery.

##### Dimensions

not incl. projecting parts and controls

Approx. 69.8 × 110.8 × 21.5 mm (w/h/d)

(2 3/4 × 4 3/8 × 3/8 inches)

with rechargeable battery case attached

Approx. 69.8 × 119.4 × 21.5 mm (w/h/d)

(2 3/8 × 4 3/4 × 3/8 inches)

with battery case attached

incl. projecting parts and controls

Approx. 74.6 × 112.6 × 23.9 mm (w/h/d)

(3 × 4 1/2 × 3/16 inches)

with rechargeable battery case attached

Approx. 74.6 × 121.2 × 23.9 mm (w/h/d)

(3 × 4 3/4 × 3/16 inches)

with battery case attached

##### Weight

Approx. 200g (7.1 oz) incl. rechargeable battery case and rechargeable battery not incl. other accessories

Approx. 200g (7.1 oz) incl. battery and battery case not incl. other accessories

##### Accessories supplied

Rechargeable battery (1)

Battery charger (1)

Stereo headphones (open-air type, 1)

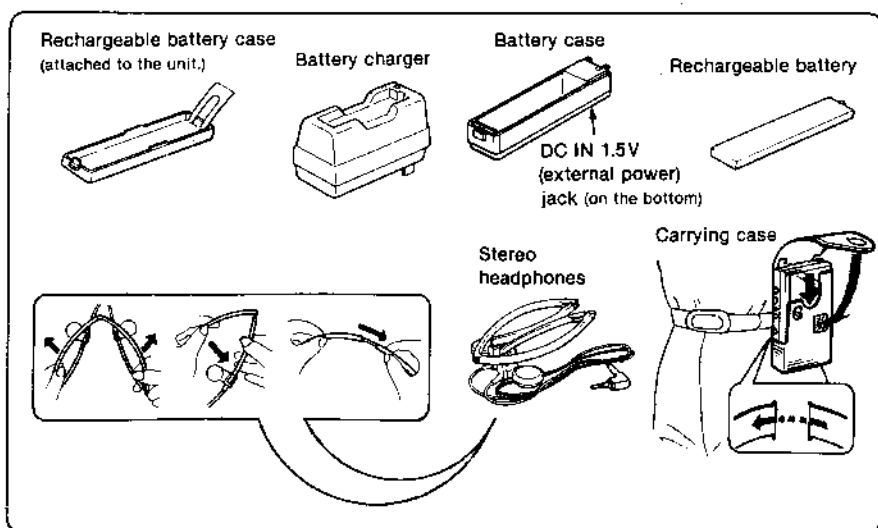
Rechargeable battery case (attached to the unit, 1)

Battery case (1)

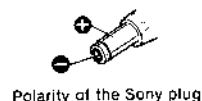
Carrying case (1)

# FM/AM STEREO CASSETTE PLAYER

# SONY®



**Note:** Use only the recommended AC power adaptor or car battery cord manufactured by Sony. Polarity of the plugs of other manufacturers may be different.

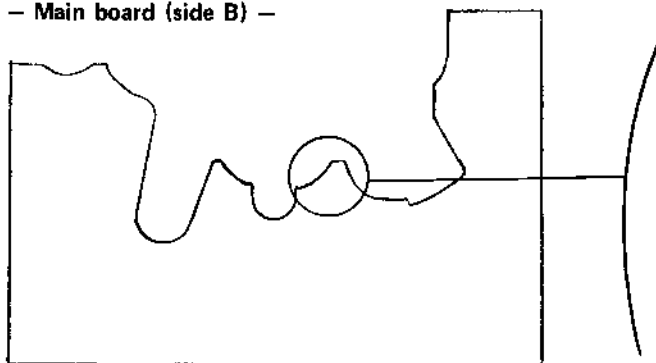


## SERVICING NOTES

This set detects rotation of reel table by PH701 (Photo interrupter).

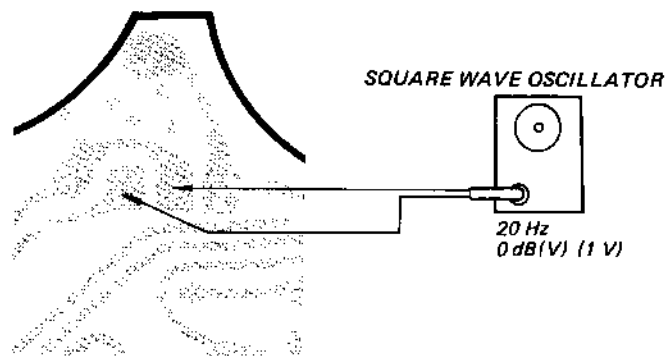
It cannot be detected when the main board is removed, because PH701 is mounted on the main board.

— Main board (side B) —



Therefore, the auto off circuit and tape end detection will misoperate.

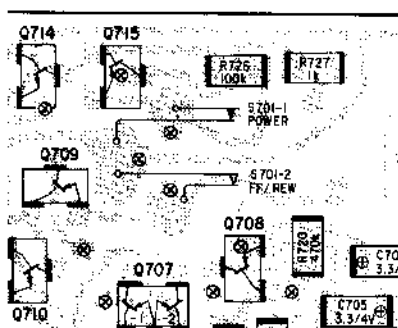
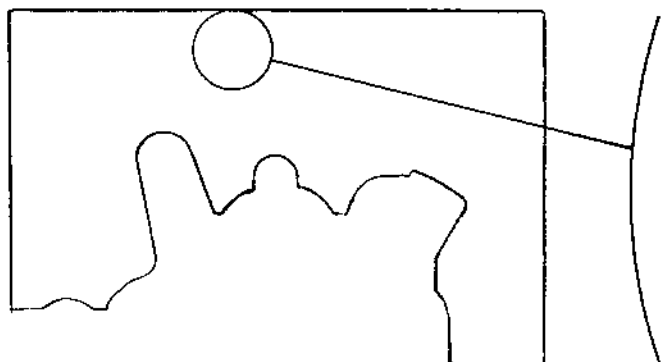
Operation check can be done by the method shown below even when the main board is removed.



For PLAY, press the ► button and turn only the POWER switch ON.

• For FF and REW, press ►► or ◀◀ button and turn both POWER switch and FF/REW switch ON.

— Main board (side A) —



**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.

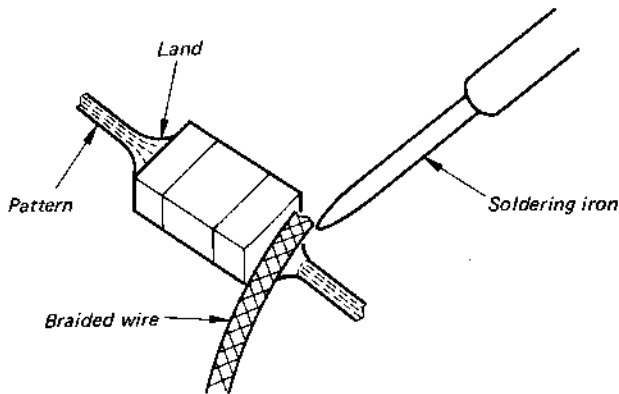
**Precautions for replacement**

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**

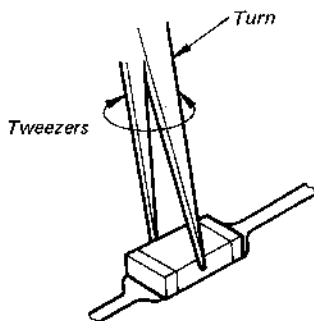
(1) **Removing solder at electrode**

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.

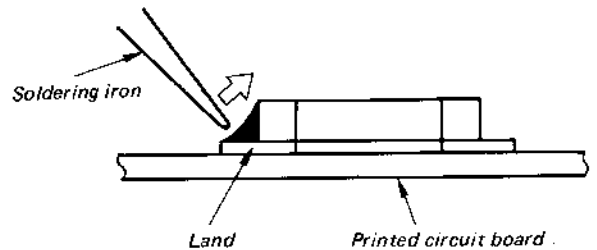
(1) **Applying solder to land on one side**

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.

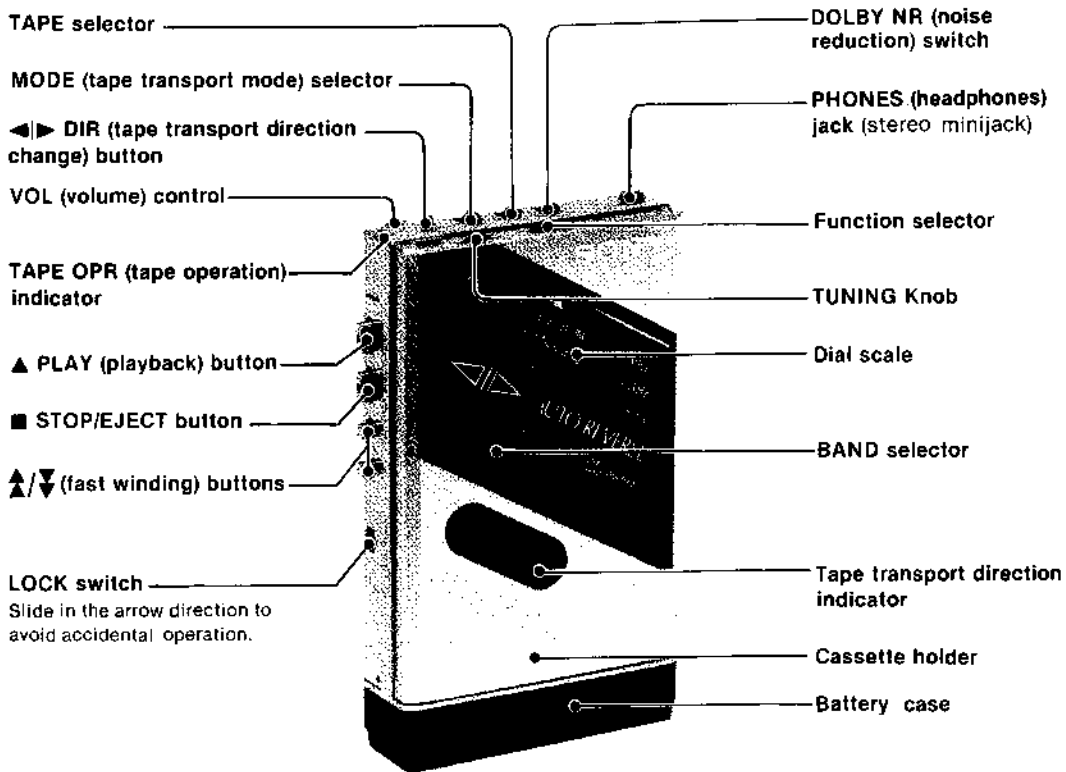
## Flexible Circuit Board Repairing

1. Keep the temperature of the soldering iron at  $270^{\circ} \pm 10^{\circ}\text{C}$  during repairing.
2. Do not touch the soldering iron more than 4 seconds or 3 times on the same conductor of the circuit board.
3. Do not apply force on the conductor when soldering or unsoldering.

## Tip of soldering iron



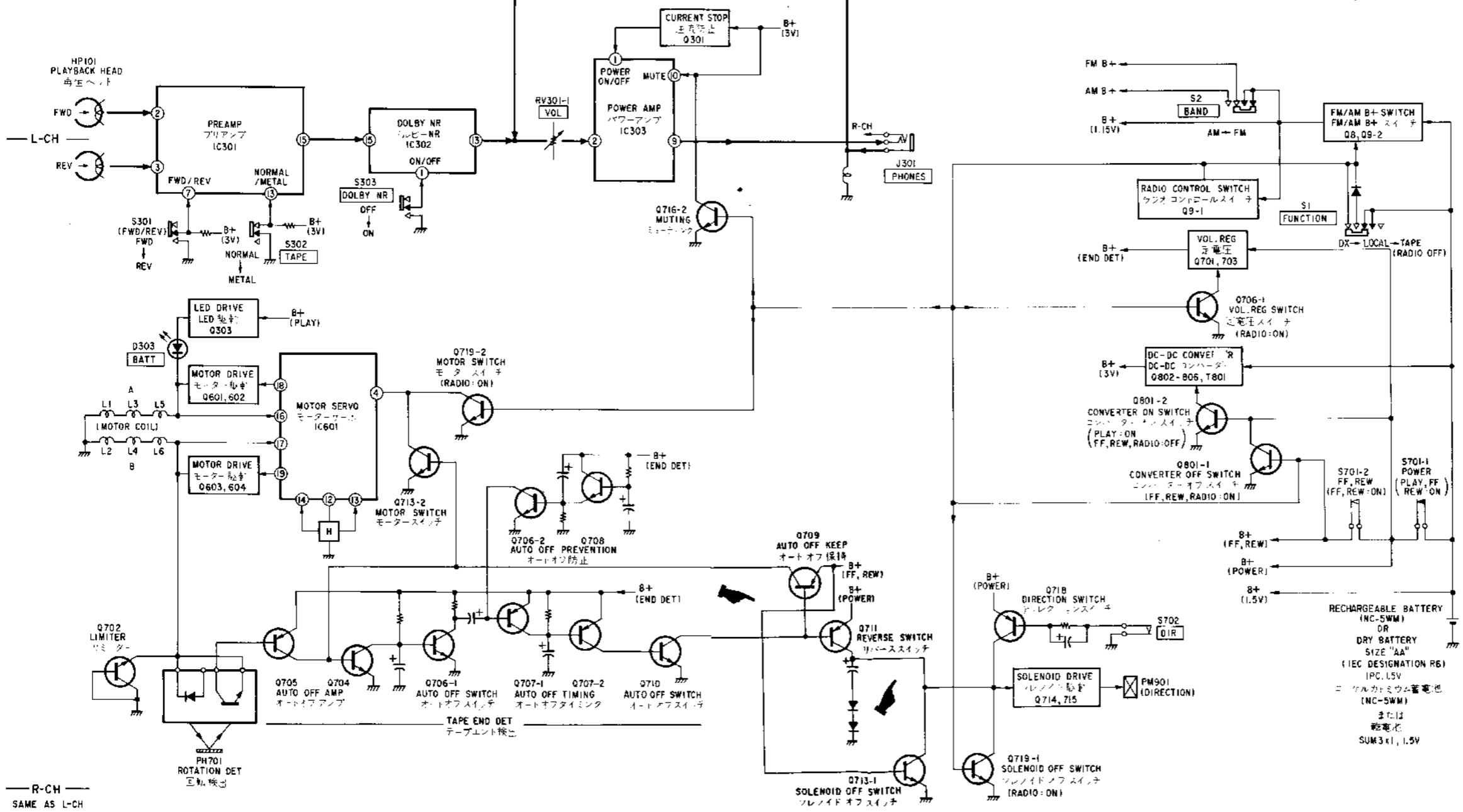
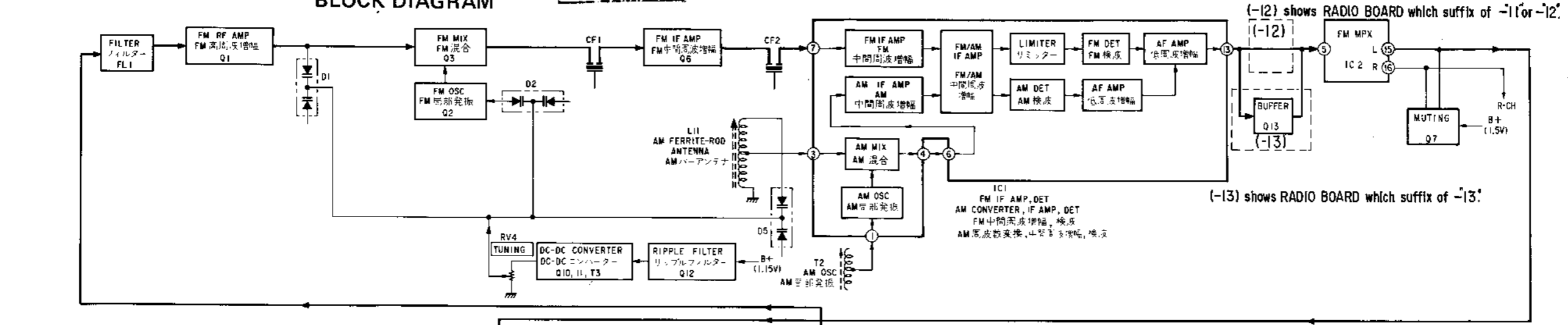
## LOCATION OF CONTROLS



REVISED

SECTION 1  
BLOCK DIAGRAM

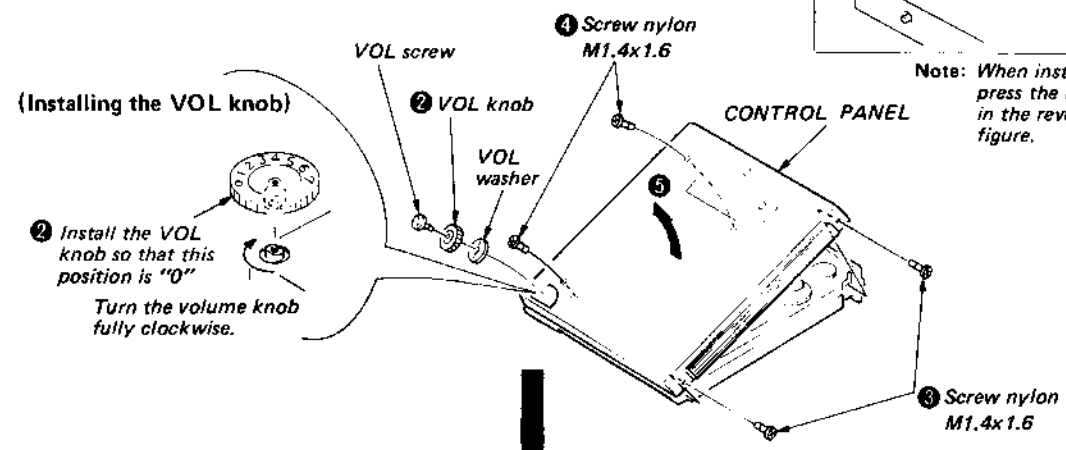
REVISED



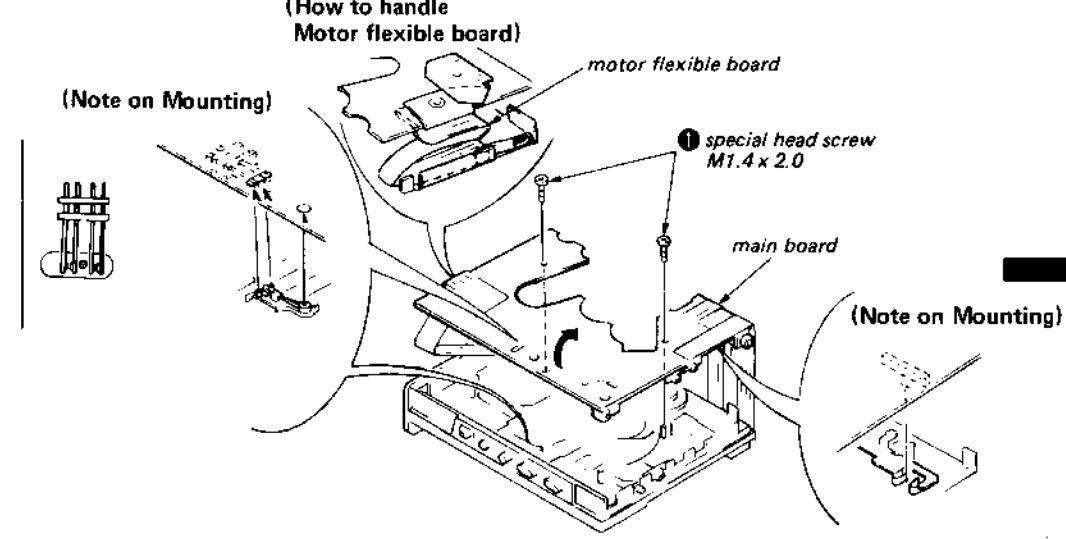
R-CH  
SAME AS L-CH

SECTION 2  
DISASSEMBLY

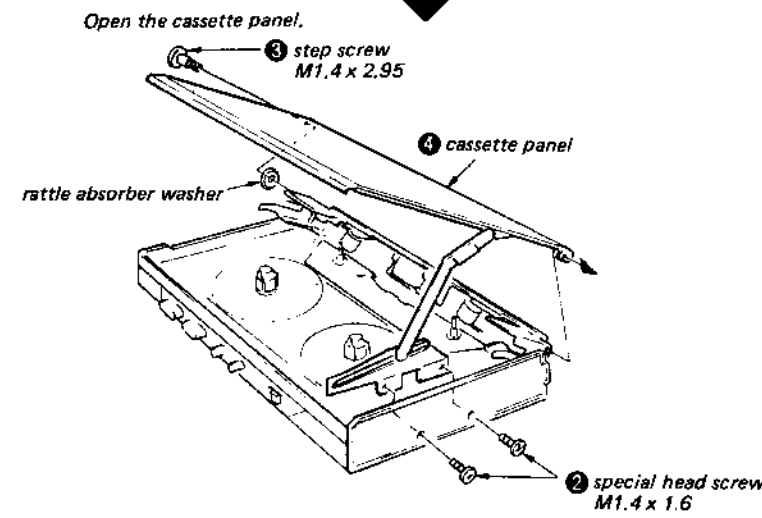
Note: Follow the disassembly procedure in the numerical order given.  
CONTROL PANEL



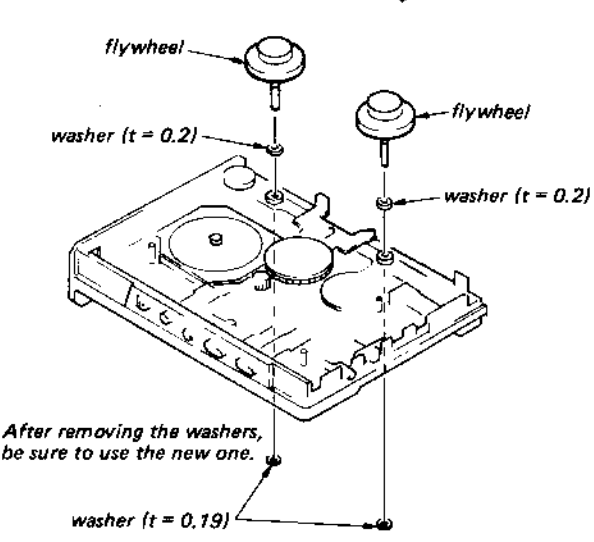
MAIN BOARD



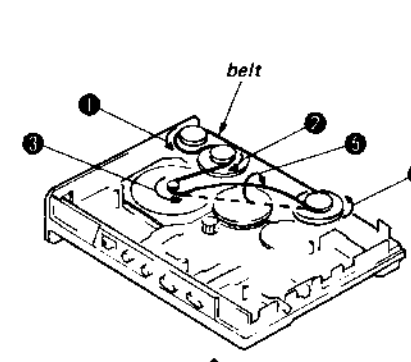
CASSETTE PANEL



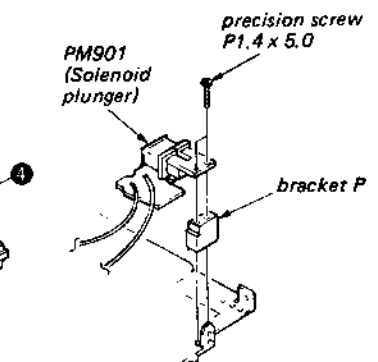
FLYWHEEL



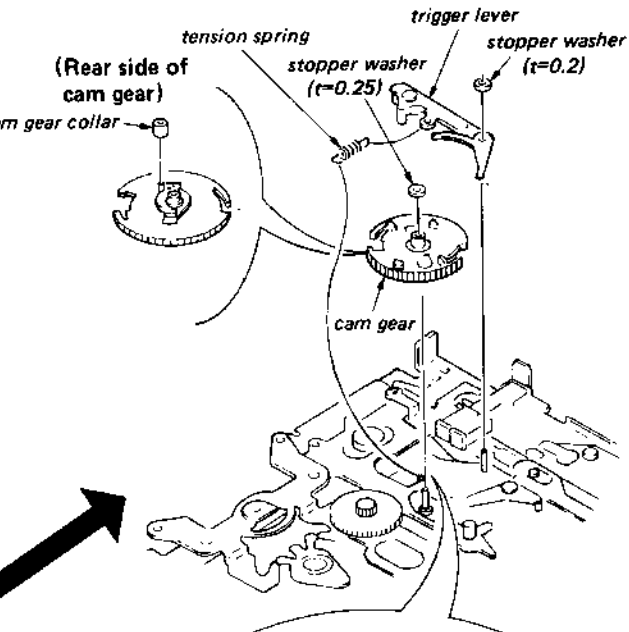
INSTALLING THE BELT



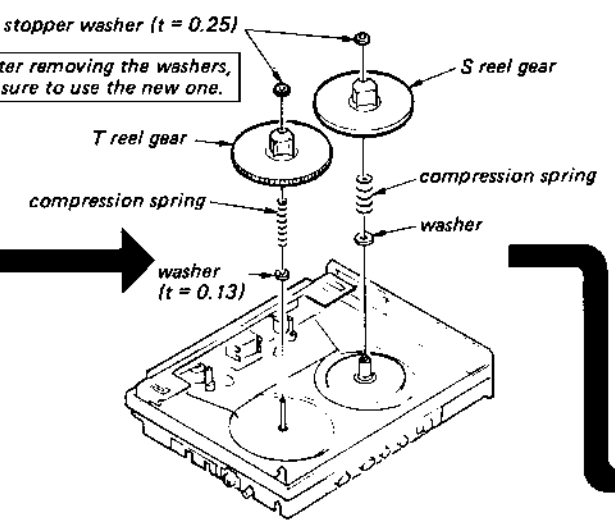
SOLENOID PLUNGER



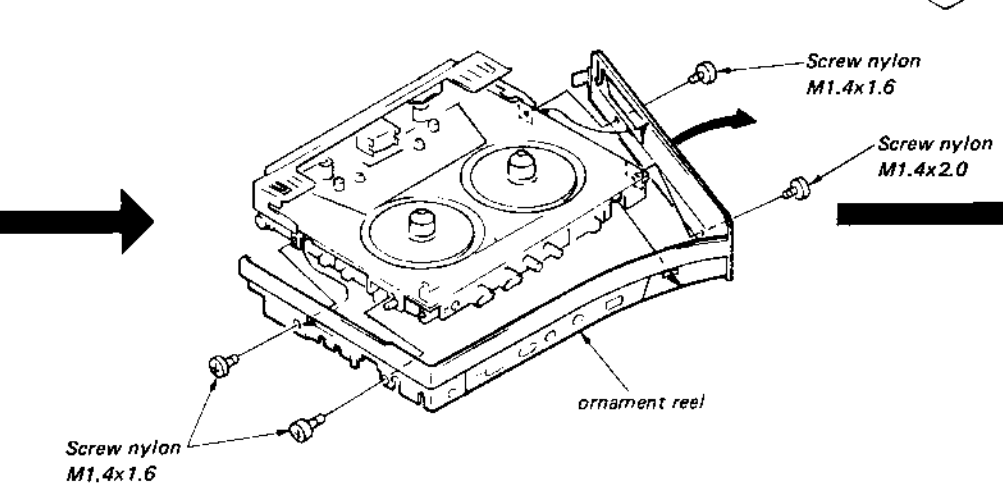
TRIGGER LEVER, CAM GEAR



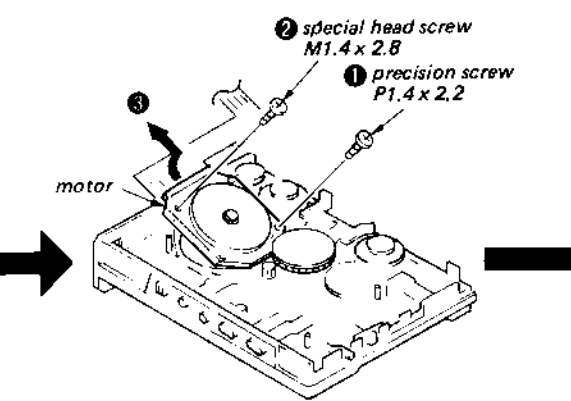
REEL GEAR



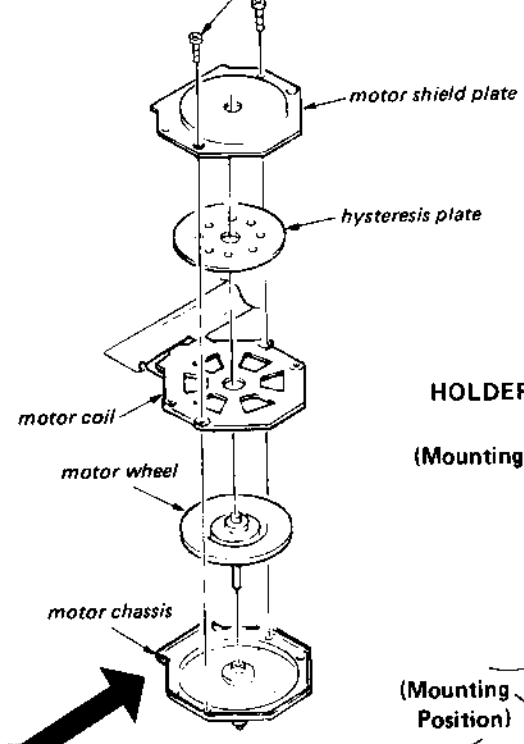
ORNAMENT REEL



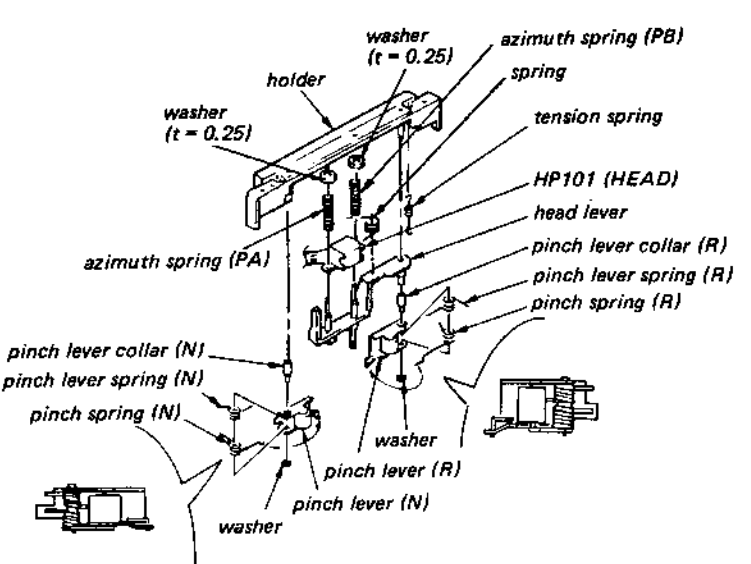
MOTOR



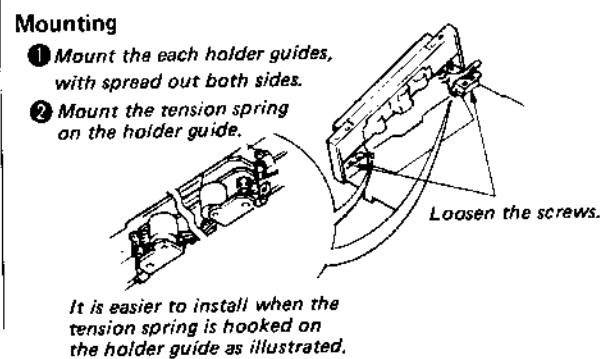
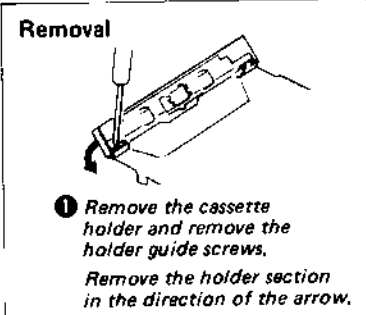
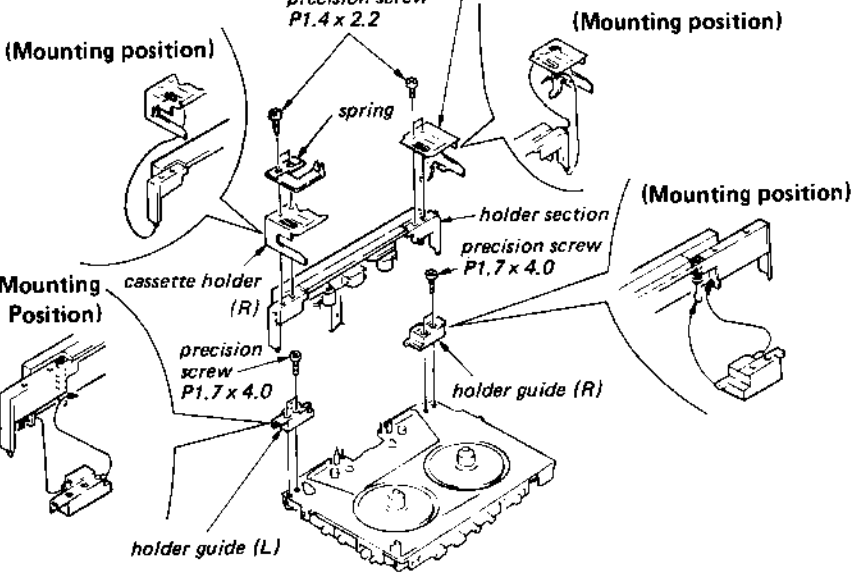
MOTOR COIL



HEAD, PINCH ROLLER



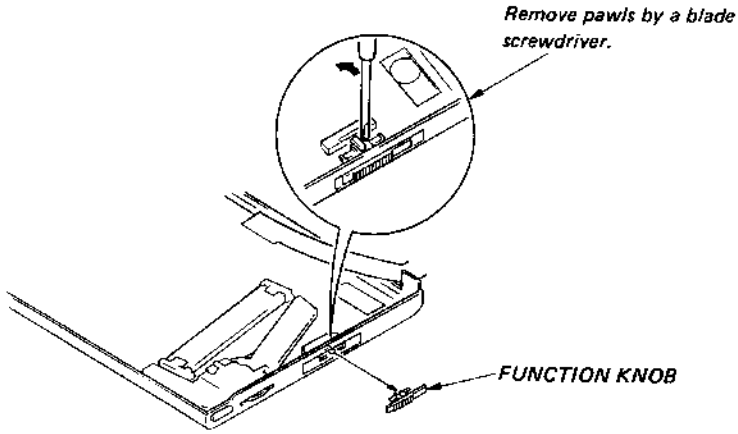
HOLDER



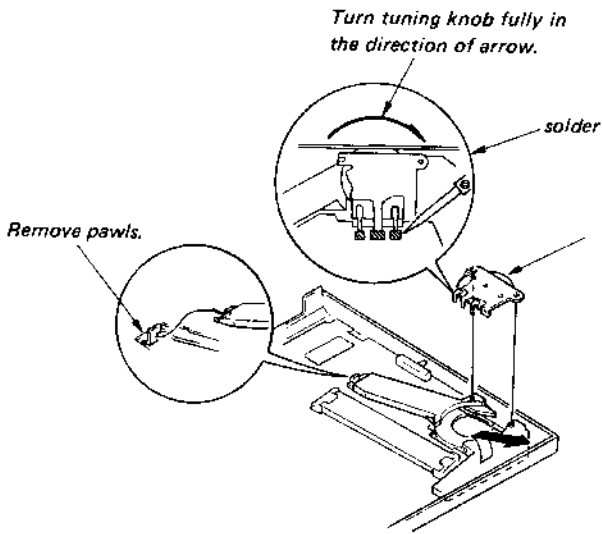
# WM-F100II

## TUNER SECTION

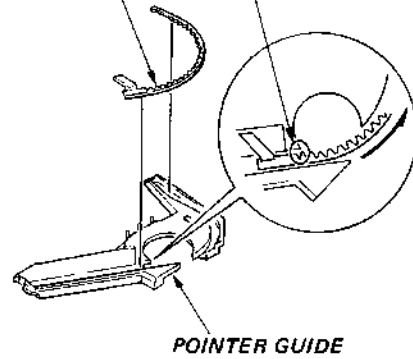
### FUNCTION KNOB



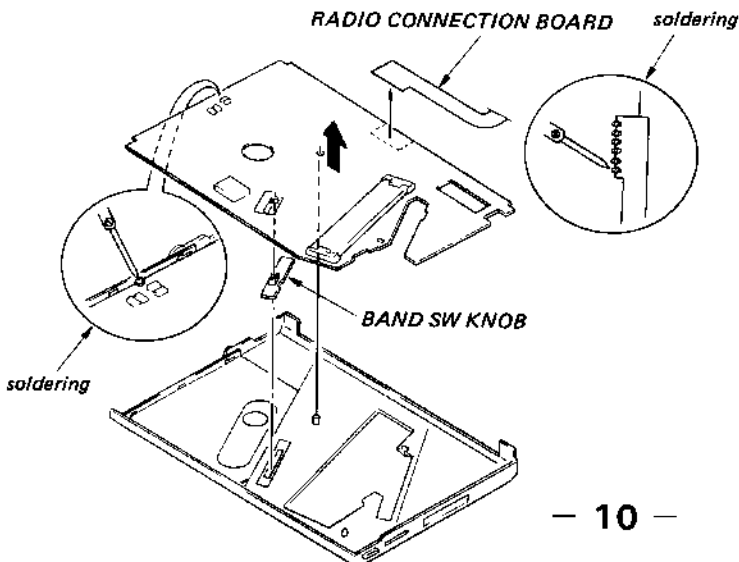
### POINTER RACK



POINTER RACK Turn the pointer fully clockwise and set the first tooth of pointer rack to the hollowed position of pointer guide.



### TUNER BOARD



**SECTION 3  
ADJUSTMENTS**

**MECHANICAL ADJUSTMENTS AND MEASUREMENT**

**PRÉCAUTION**

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

playback head	rubber belts
capstan	idlers
pinch roller	
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 (1.3V) unless otherwise noted.

**Torque Measurement**

Mode	Torque Meter	Meter Reading
FWD	CQ-102C	23 – 40 g·cm 0.32 – 0.55 oz·inch
FWD Back Tension		1.5 – 3 g·cm 0.02 – 0.04 oz·inch
REV	CQ-102RB	23 – 40 g·cm 0.32 – 0.55 oz·inch
REV Back Tension		1.5 – 3 g·cm 0.02 – 0.04 oz·inch
FF	CQ-201B	more than 60 g·cm more than 0.83 oz·inch
REW		more than 60 g·cm more than 0.83 oz·inch

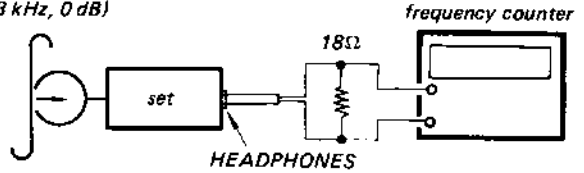
**Tape Pulling Force Measurement**

Mode	Tension Meter	Meter Reading
FWD	CQ-403A	more than 50 g more than 1.76 oz
REV	CQ-403R	more than 50 g more than 1.76 oz

**Tape Speed Adjustment**

**Procedure:**

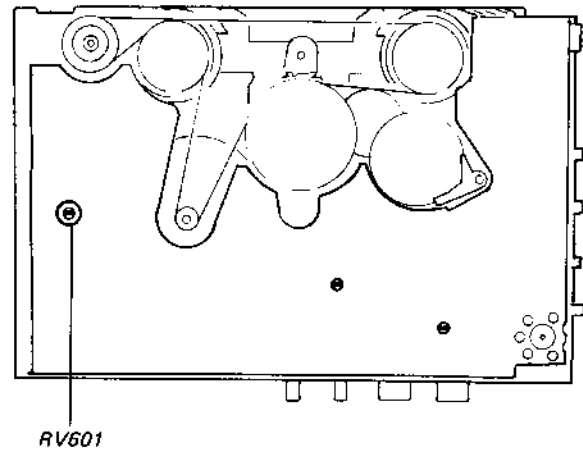
*test tape  
WS-48A  
(3 kHz, 0 dB)*



1. Play back WS-48A (Tape center portion) in FWD mode.  
Adjust the RV601 so that the frequency counter reads 3,000 Hz  $\pm$  10 Hz.
2. Play back WS-48A (Tape center portion) in REV mode.  
Confirm that the reading of frequency counter is within 1.5% from the reading in step 1.

**Adjustment Location:**

*Main Board – Side B –*



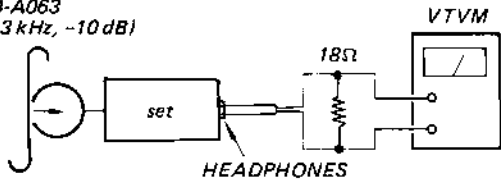


## Playback Head Azimuth Adjustment

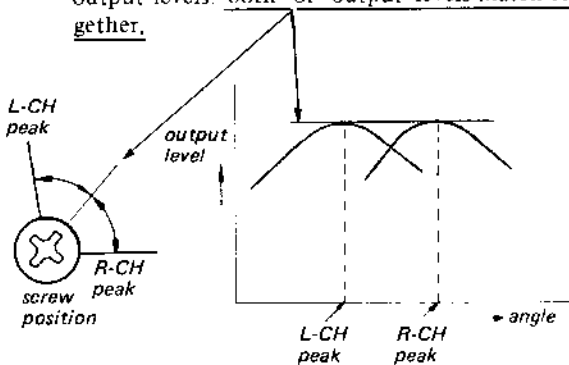
### Procedure:

1. Playback mode

test tape  
P-4-A063  
(6.3 kHz, -10 dB)

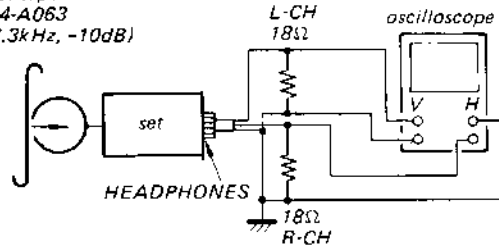


2. Turn the adjustment screw for the maximum output levels. both of output levels match together.



3. Phase Check

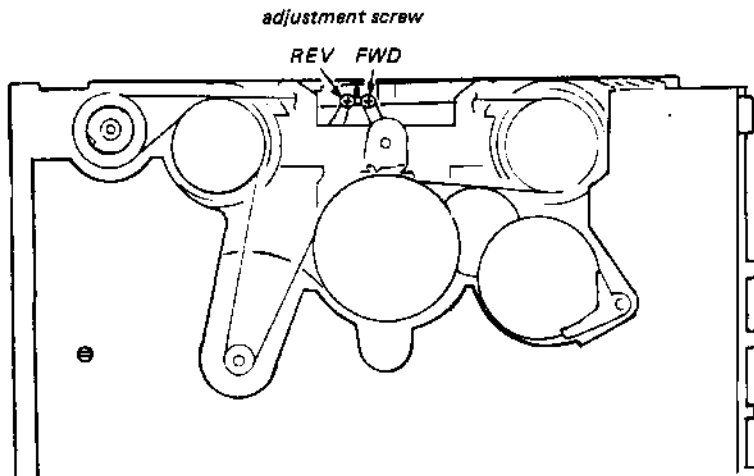
test tape  
P-4-A063  
(6.3 kHz, -10 dB)



Screen Pattern				
in phase	45°	90°	135°	180°
good			wrong	

4. Press the stop button.
5. Open and close the cassette holder and make sure that playback level does not decrease.
6. Adjustment should be made in both directions of FWD and REV.  
Adjustment screws should be stopped turning in the clockwise direction.  
After the adjustment, lock the screws with locking compound.

### Adjustment Location:



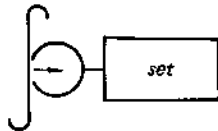
**Playback Level Adjustment**

DOLBY NR switch . . . . . OFF  
VOL knob . . . . . MINIMUM

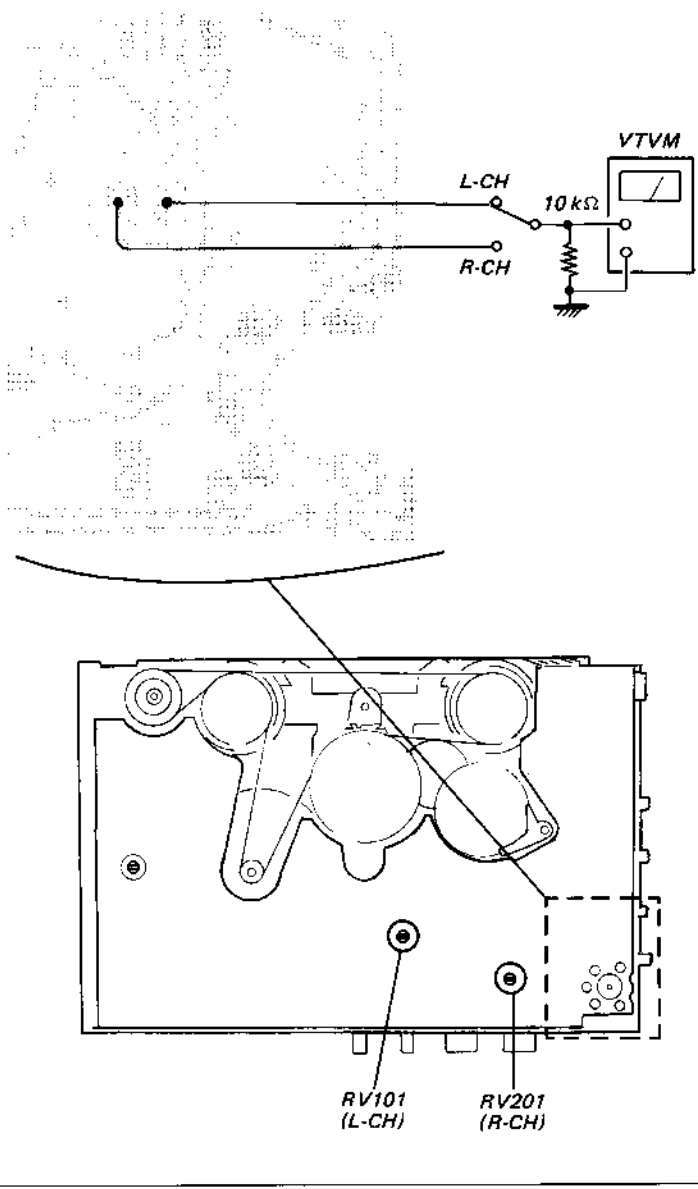
**Procedure:**

1. Playback mode

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



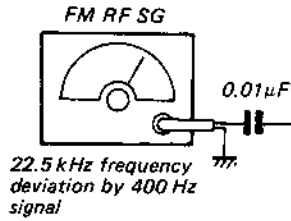
2. Adjust RV101 (L-CH), RV201 (R-CH) so that the VTVM reading is  $-20.5 \pm 0.5$  dB (0.07 V – 0.077 V).



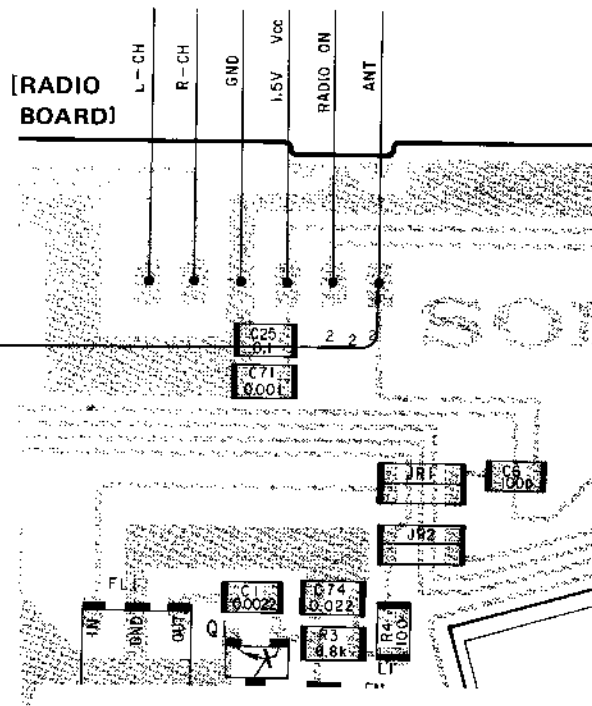
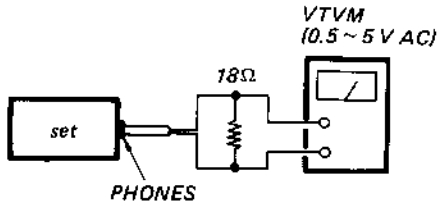
## FM Section

### Setting:

FUNCTION switch: RADIO, DX  
 BAND switch: FM



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

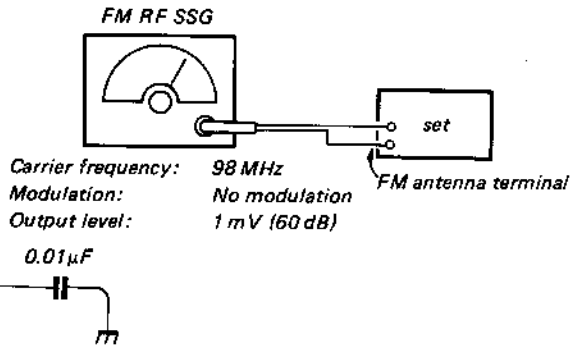
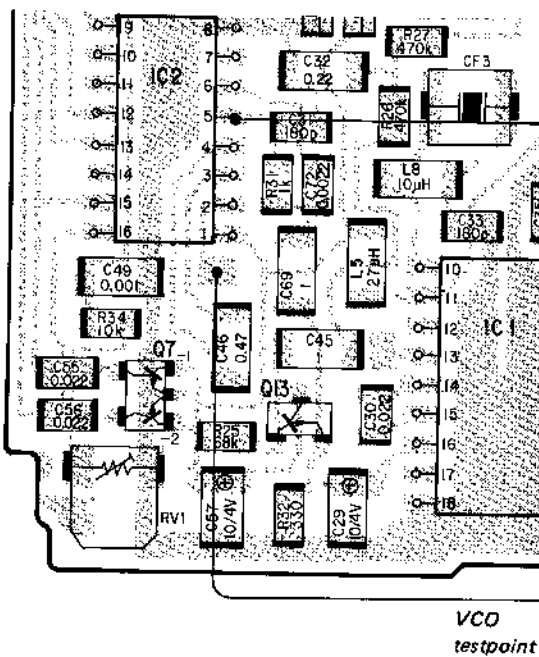


### VCO Adjustment

#### Procedure:

1. Tune the set to 98 MHz
2. Adjust RV1 for 19 kHz  $\pm$ 20 Hz reading on the frequency counter.

#### [RADIO BOARD]



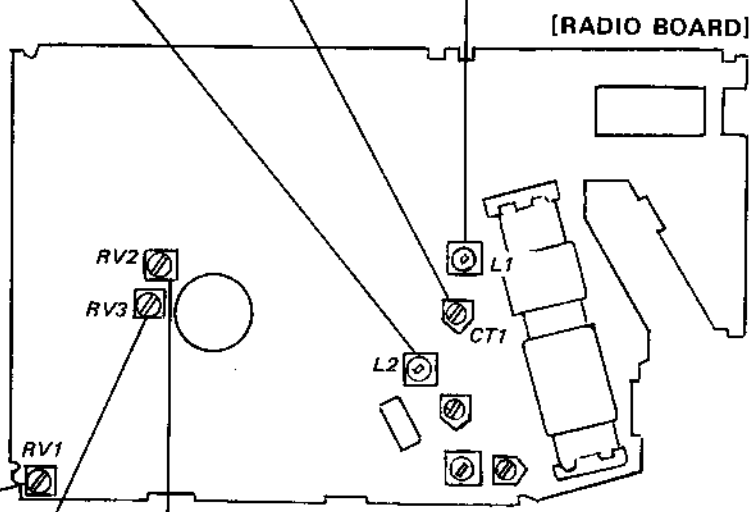
frequency counter

VCO testpoint

RV1

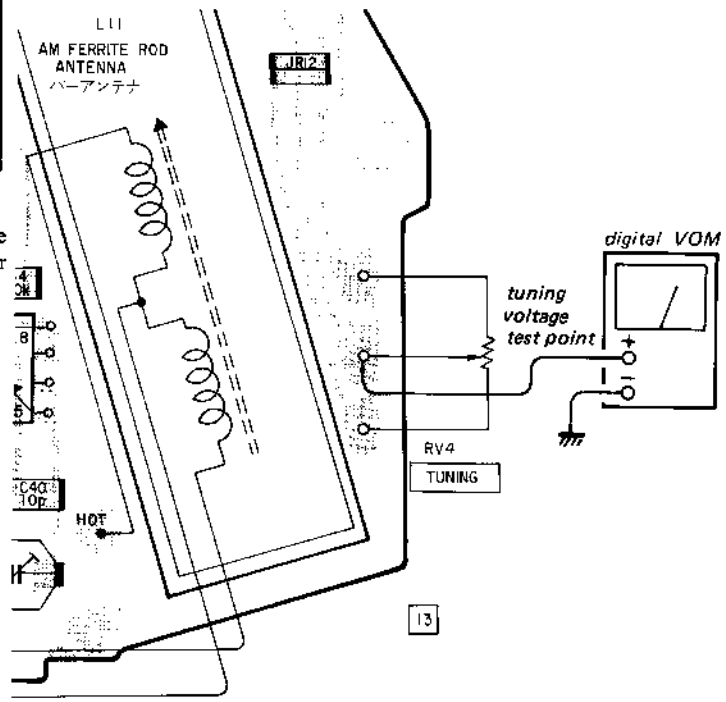
FM FREQUENCY COVERAGE ADJUSTMENT	
Adjust for a maximum VTVM reading.	
86.5 MHz	109.5 MHz
L2	CT1

FM TRACKING ADJUSTMENT	
Adjust for a maximum VTVM reading.	
L1	86.5 MHz



RV3	RV2
VOM 1V	VOM 9V
Minimum receiving frequency	Maximum receiving frequency
TUNING VOLTAGE ADJUSTMENT*	

[RADIO BOARD]



\* FM frequency coverage adjustment and the tracking adjustment should be performed after the tuning voltage adjustment.

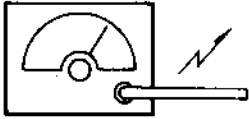
# WM-F100II

## AM Section

### Setting:

FUNCTION SW: RADIO, DX  
 BAND SW: AM

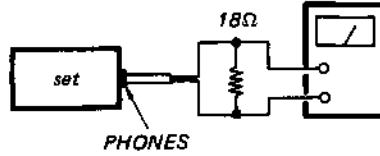
#### AM RF SSG



30% amplitude modulation by 400Hz signal

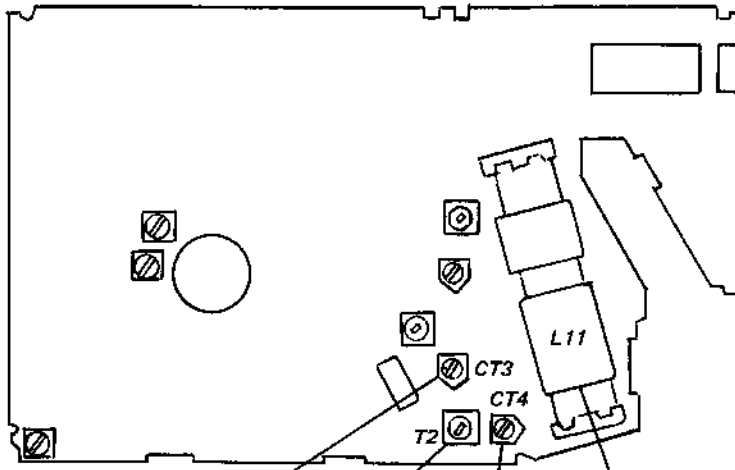
Put the lead-wire antenna close to the set.

#### VTVM (range: 0.5 - 5V ac)



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

### [RADIO BOARD]



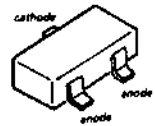
CT3	T2
1,680 kHz	515 kHz
Adjust for a maximum reading on VTVM.	
<b>AM FREQUENCY COVERAGE ADJUSTMENT</b>	

CT4	L11
1,400 kHz	620 kHz
Adjust for a maximum reading on VTVM.	
<b>AM TRACKING ADJUSTMENT</b>	

## Semiconductor Lead Layouts (Radio board)

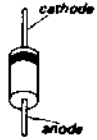
2SA812  
2SB624-BV4  
2SC1623  
2SC2223  
2SC2714Y  
2SC2736  
2SC2757  
2SD596

1S2837

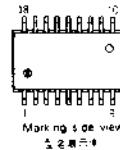


FMG4  
TAB6E

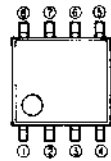
1S2823



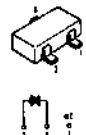
CX10053



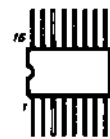
KV1260M



RD10M-B2



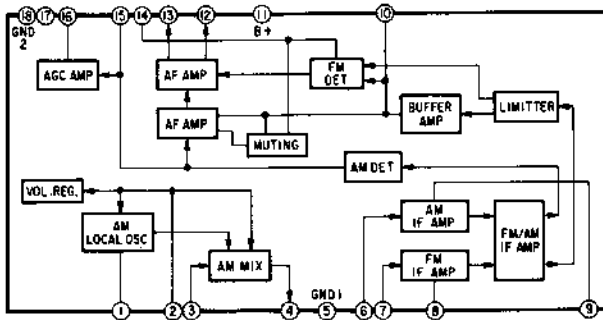
CX10054



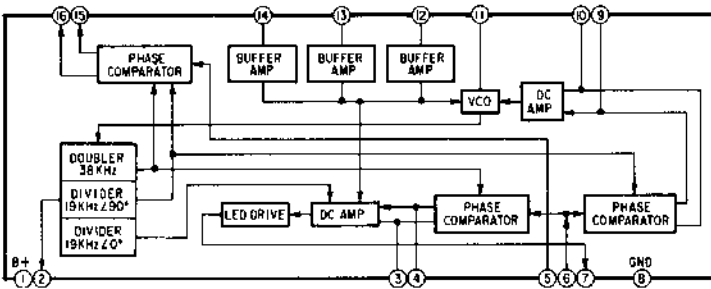
SVC203



IC1 CX10053



IC2 CX10054



### Note for SCHEMATIC DIAGRAM (Radio Section):

- All capacitors are in  $\mu\text{F}$  unless otherwise noted.  $\text{pF}$ :  $\mu\mu\text{F}$
- 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in  $\Omega$  and  $1/4\text{W}$  or less unless otherwise specified.
- : FM signal path.
- : AM signal path.
- : Playback signal path.
- $\Delta$  : internal component.
- : B+ bus.
- : adjustment for repair.
- Total current is measured with no cassette installed.
- Voltages are dc with respect to ground unless otherwise noted.
- Readings are taken under no-signal conditions with a VOM (50  $\text{k}\Omega/\text{V}$ ).
- ( ( ) ) : FM
- << >> : AM
- Voltage variations may be noted due to normal production tolerances.
- Power voltage is 1.5V and fed with regulated dc power supply from BATTERY TERMINAL.
- Voltages are dc with respect to ground in STOP mode.
- Voltage variations may be noted due to normal production tolerances.




### Switches

Ref. N .	Switch	Position
S1	FUNCTION	FM STEREO
S2	BAND	FM FM

## Notes for SCHEMATIC DIAGRAM (Audio Section):

All capacitors are in  $\mu\text{F}$  unless otherwise noted.  $\text{pF}$ :  $\mu\mu\text{F}$   
50WV or less are not indicated except for electrolytics and tantalums.

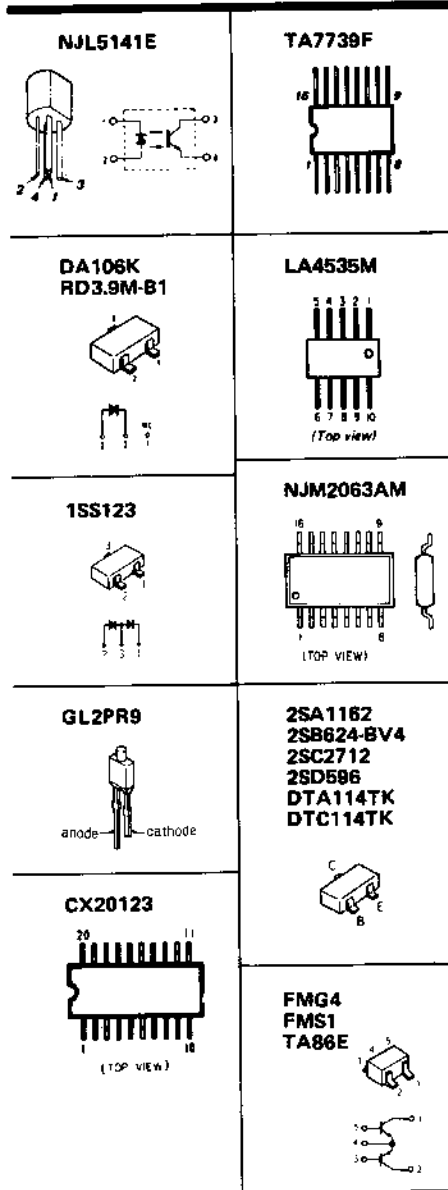
All resistors are in  $\Omega$  and  $\frac{1}{4}\text{W}$  or less unless otherwise specified.

- ①  : L-CH signal path
- ②  : R-CH signal path
- ③  : B+ bus
- ④ Total current is measured with no cassette installed.
- ⑤ Readings are taken under no signal conditions with a VOM (50  $\text{k}\Omega/\text{V}$ )  
No mark : PLAY  
( ) : When the square wave of 20 Hz, 0 dB (0.775 V) is applied to collector of photo transistor (PH/PC1).
- ⑥ Power voltage is 1.5 V and fed with stabilized power supply from DC IN jack.  
Voltages are dc with respect to ground in STOP mode.
- ⑦ Waveforms are taken to ground in no-signal mode by using oscilloscope.  
Voltage variations may be noted due to normal production tolerances.

### Switches

Ref. No.	Switch	Position
S301	FWD/RVS	FWD
S302	TAPE	NORMAL
S303	DOLBY NR	OFF
S701-1	POWER	ON
S701-2	FF/REW	OFF
S702	DIR	OFF

## Semiconductor Lead Layouts (Main board)



SECTION 4  
DIAGRAMS

4-1. MOUNTING DIAGRAM

Radio Section (FORMER)

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
---	---	---	---	---	---	---	---	---	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----

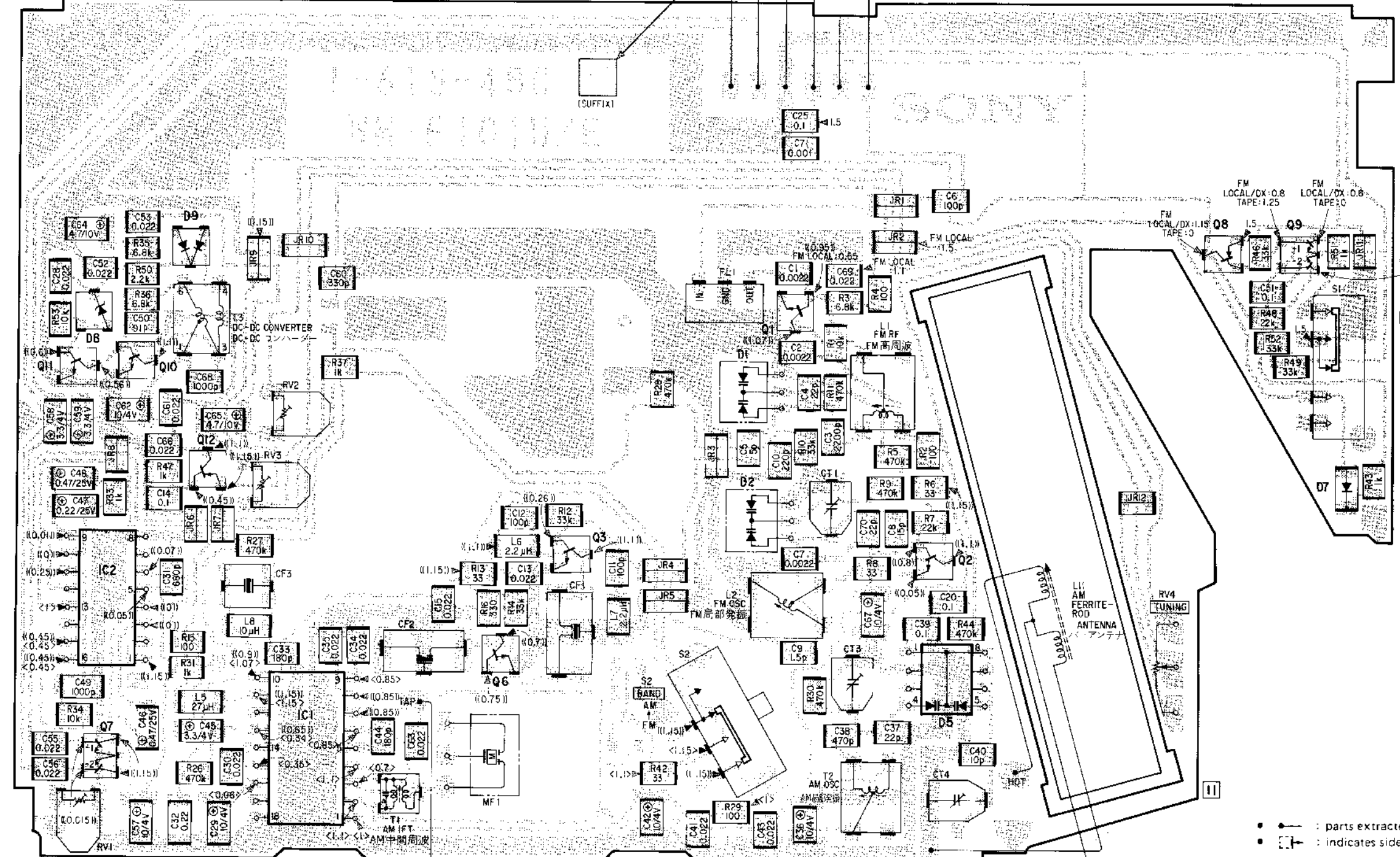
See page 17 for Semiconductor Lead Layouts, IC BLOCK DIAGRAM.

**RADIO BOARD**  
ラジオ基板

**RADIO FLEXIBLE BOARD**  
ラジオフレキシ基板



This MOUNTING DIAGRAM shows RADIO BOARD which part-number suffix of 11 or 12. When replacing the parts, refer to 12 of ELECTRICAL PARTS LIST.



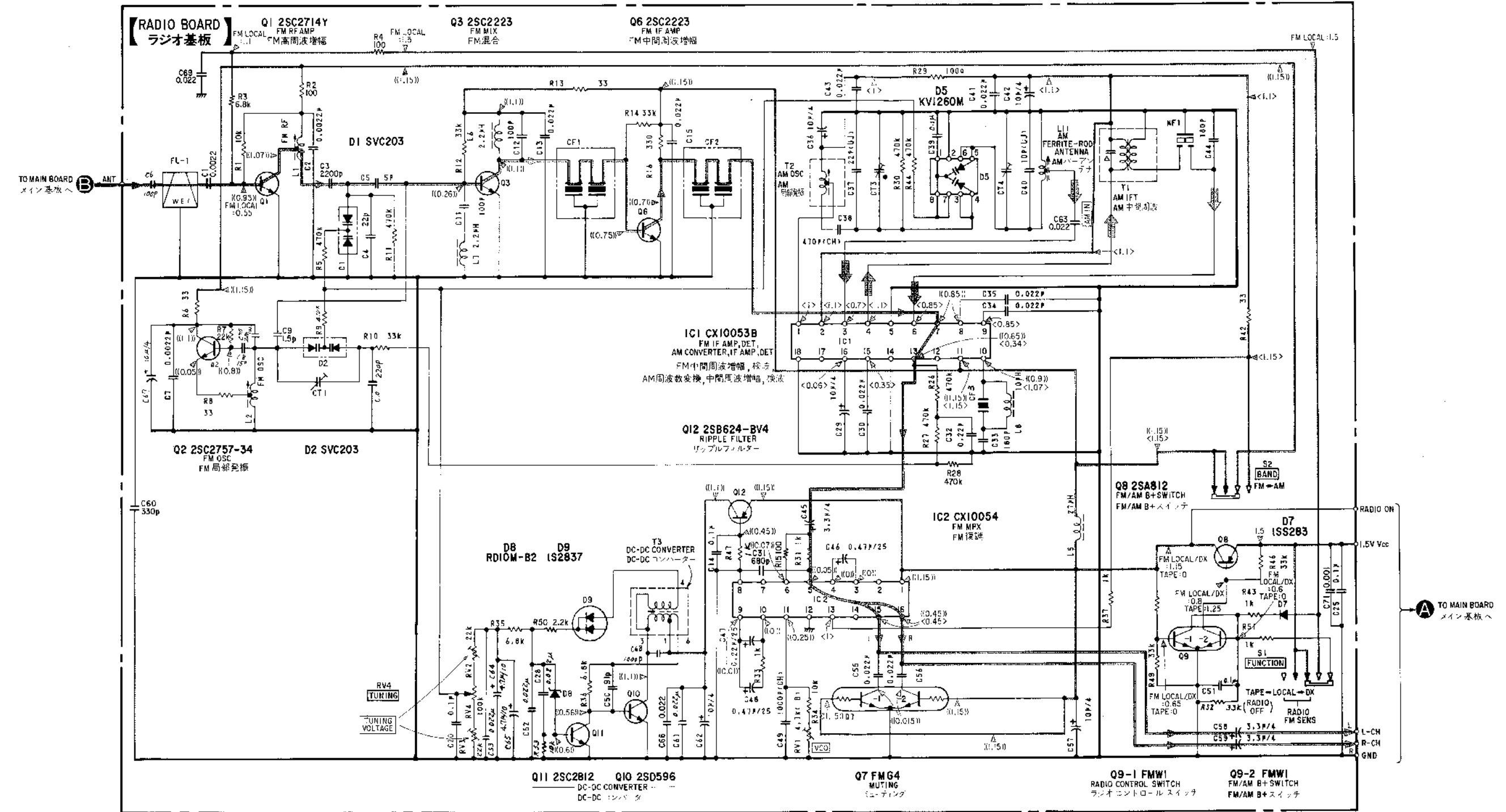
- : parts extracted from the conductor side.
- : indicates side identified with part number.

4-3. SCHEMATIC DIAGRAM

Radio Section (FORMER)

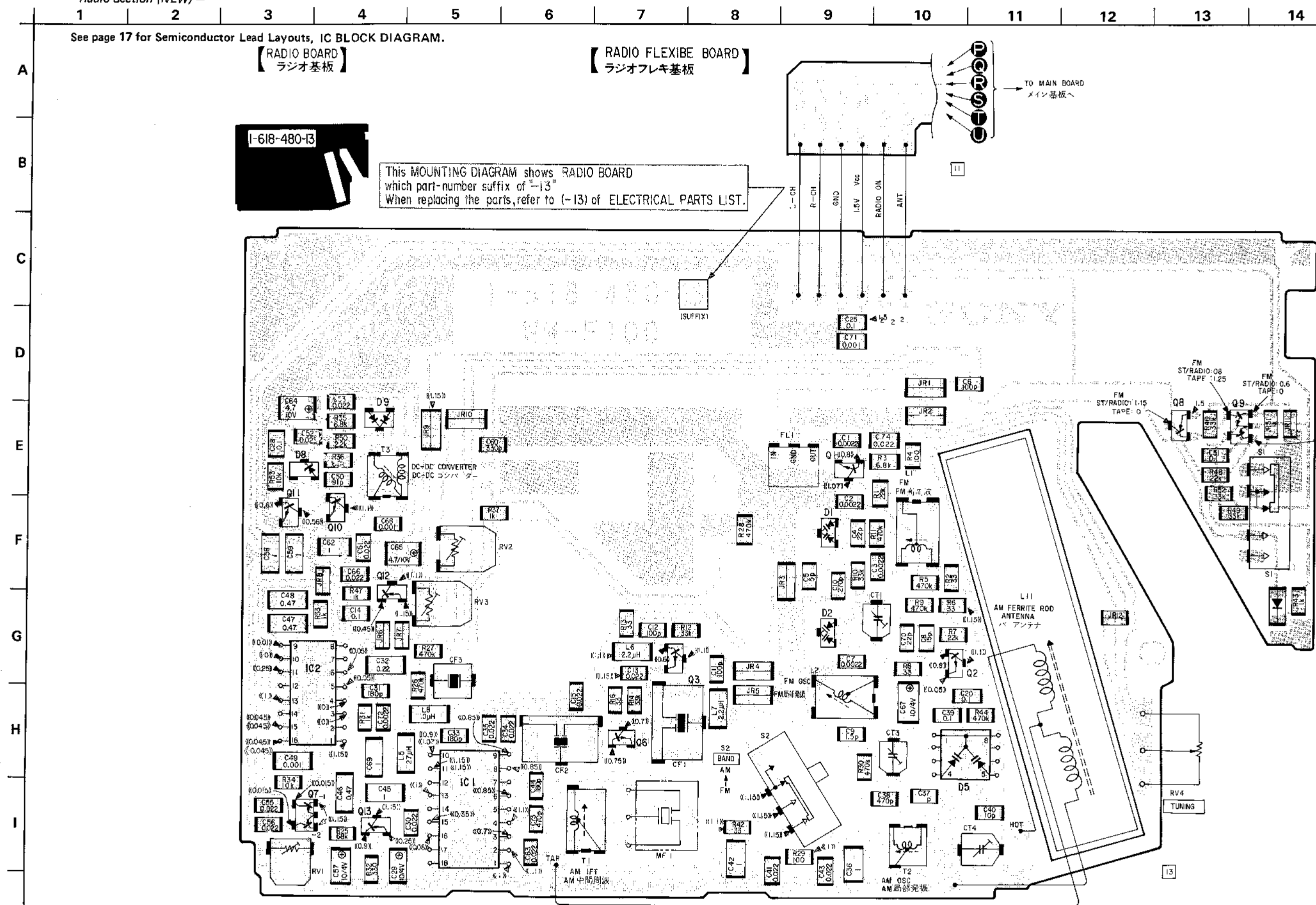
See page 17 for Note.

This SCHEMATIC DIAGRAM shows RADIO BOARD which part-number suffix of 11 or 12. When replacing the parts, refer to 12 of the ELECTRICAL PARTS LIST.





4-3. MOUNTING DIAGRAM  
- Radio Section (NEW) -

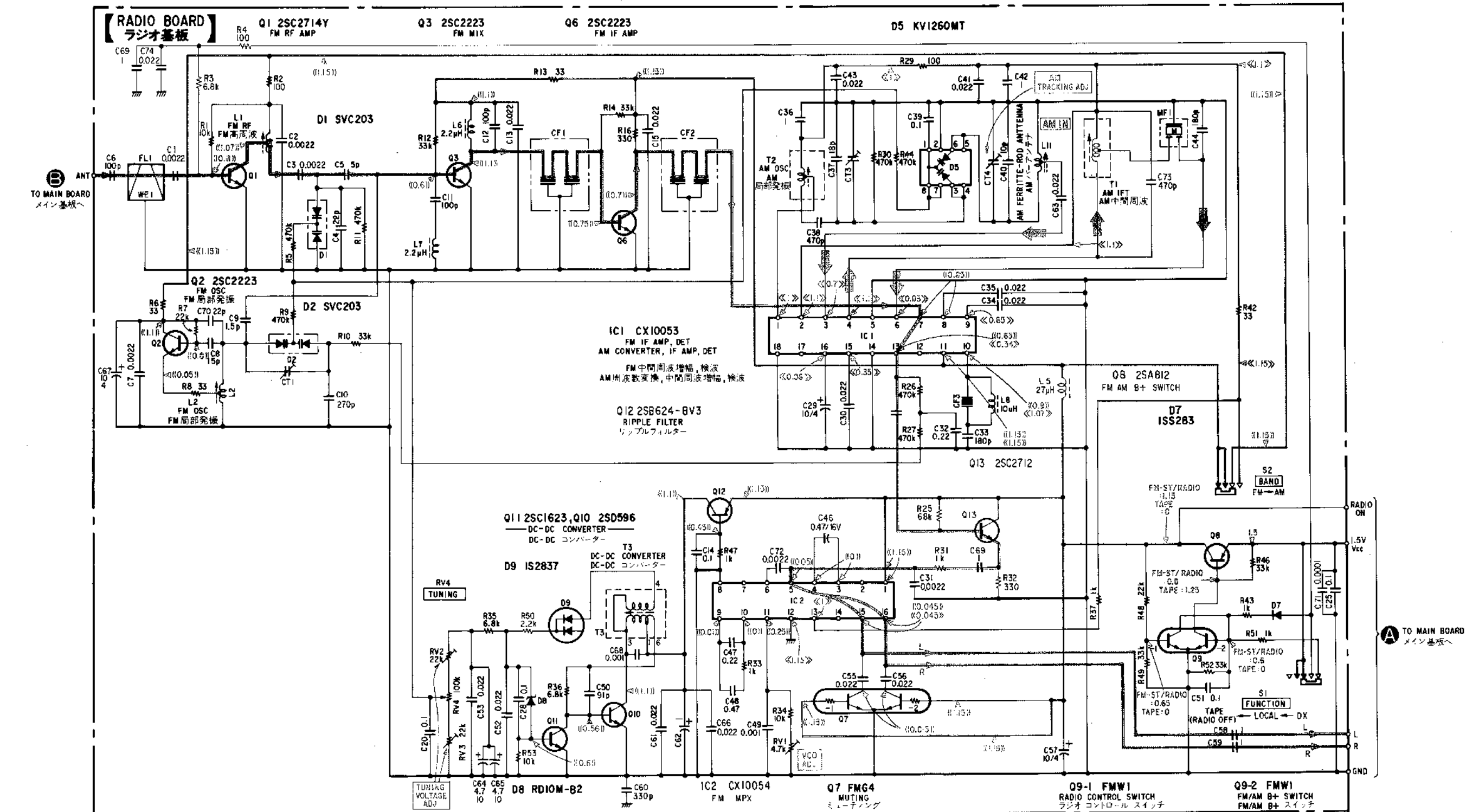


- : parts extracted from the conductor side.
- : indicates side identified with part number.

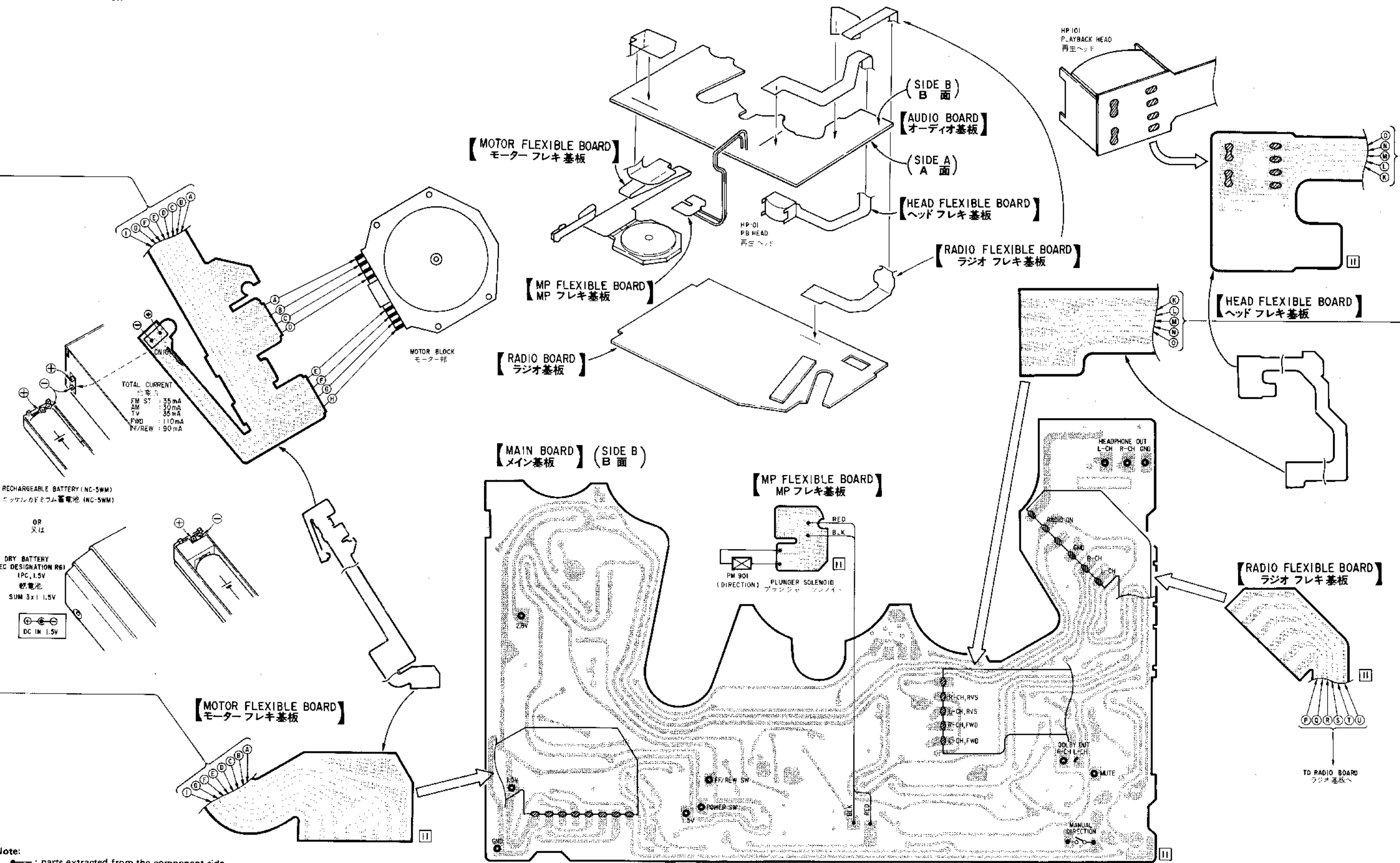
4-4. SCHEMATIC DIAGRAM  
- Radio Section (NEW) -

See page 17 for Note.

This SCHEMATIC DIAGRAM shows RADIO BOARD which part-number suffix of "13". When replacing the parts, refer to "13" of the ELECTRICAL PARTS LIST.



4-4. MOUNTING DIAGRAM  
- Audio Section -

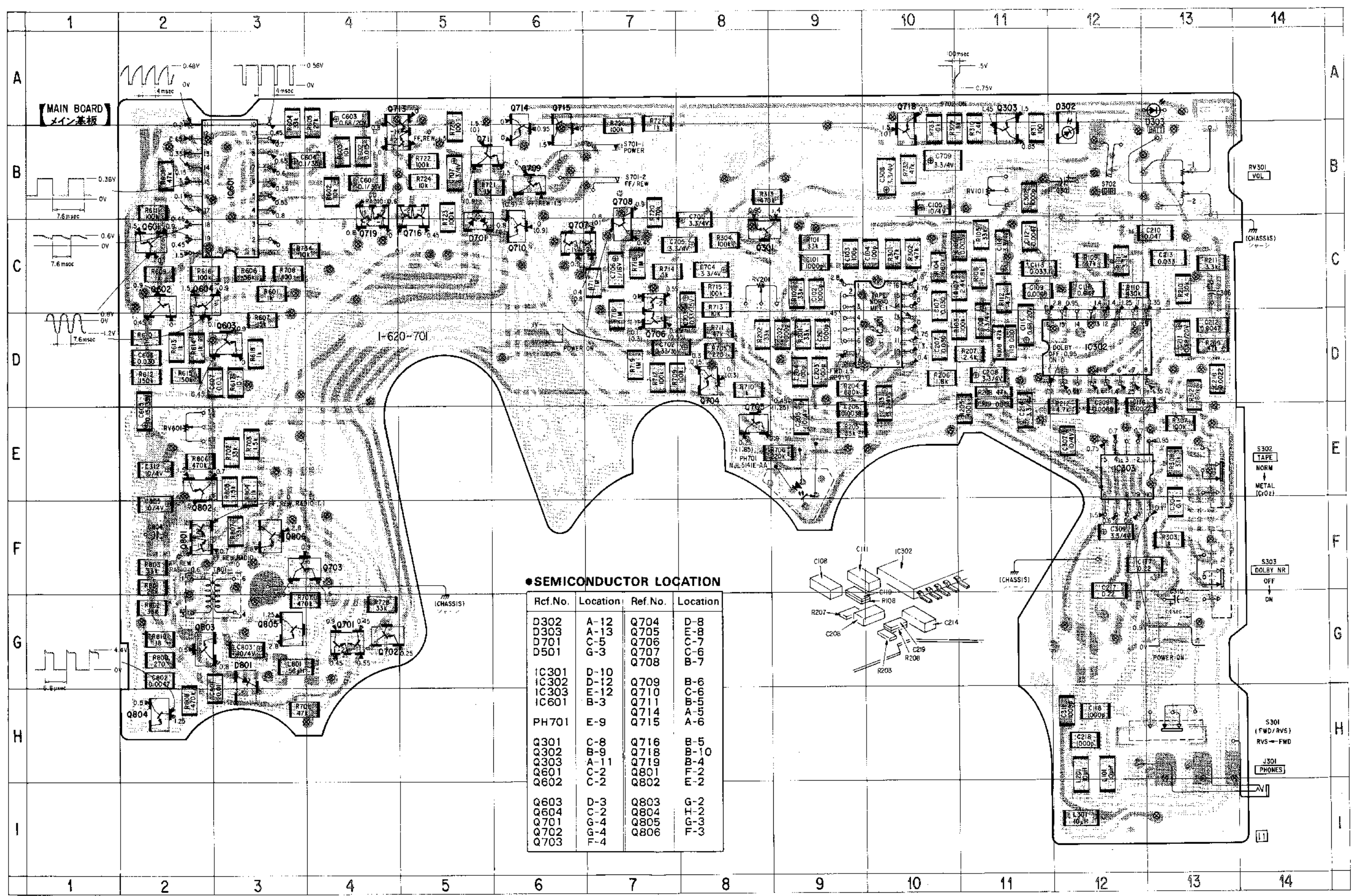


Note:  
 ● : parts extracted from the component side.  
 ⊙ : Through hole.  
 ○ : component-side pattern.

WM-F100II WM-F100II

See page 18 for Semiconductor Lead Layouts and Note.

WM-F100II WM-F100II

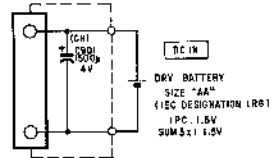
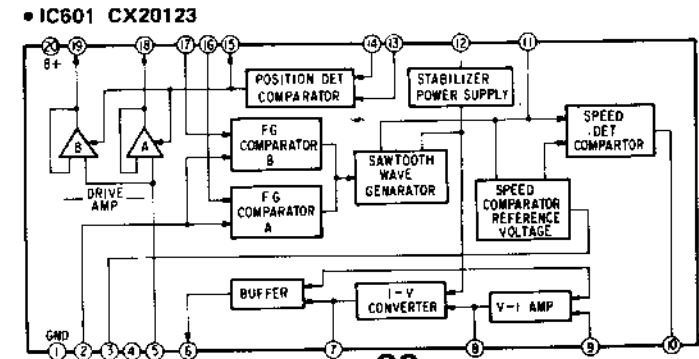
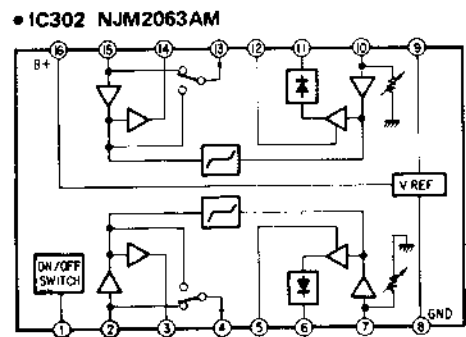
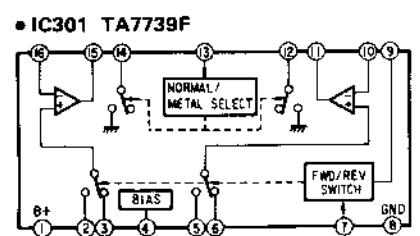
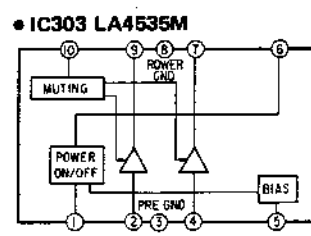
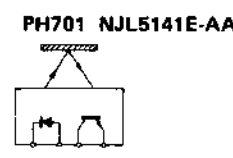
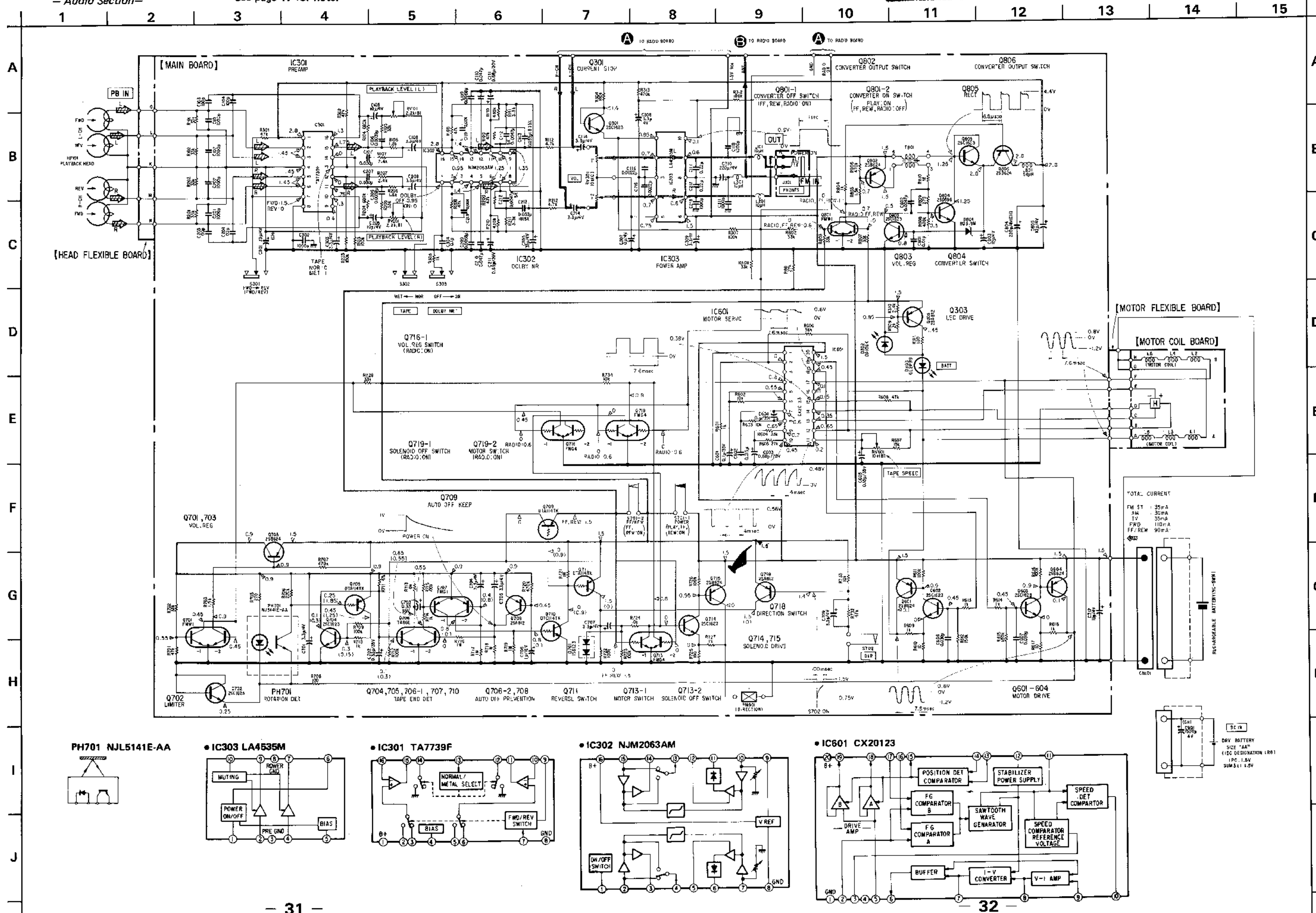


4-5. SCHEMATIC DIAGRAM  
— Audio Section —

See page 17 for note.

WM-F100 II WM-F100 II

REVISED



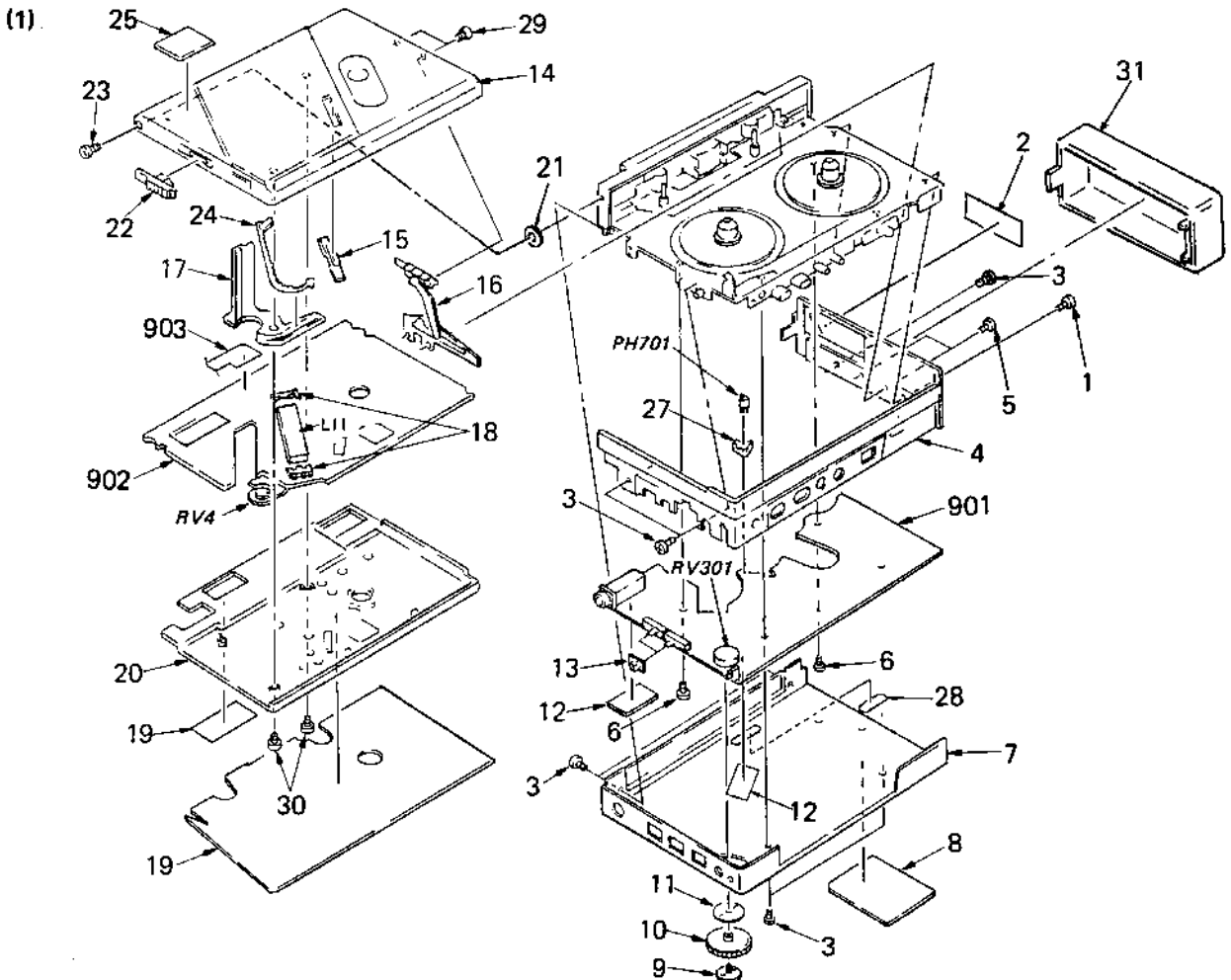
TOTAL CURRENT

FM ST	35mA
FM	30mA
TV	35mA
FWD	110mA
FF/REW	90mA

**SECTION 5  
EXPLODED VIEWS AND PARTS LIST**

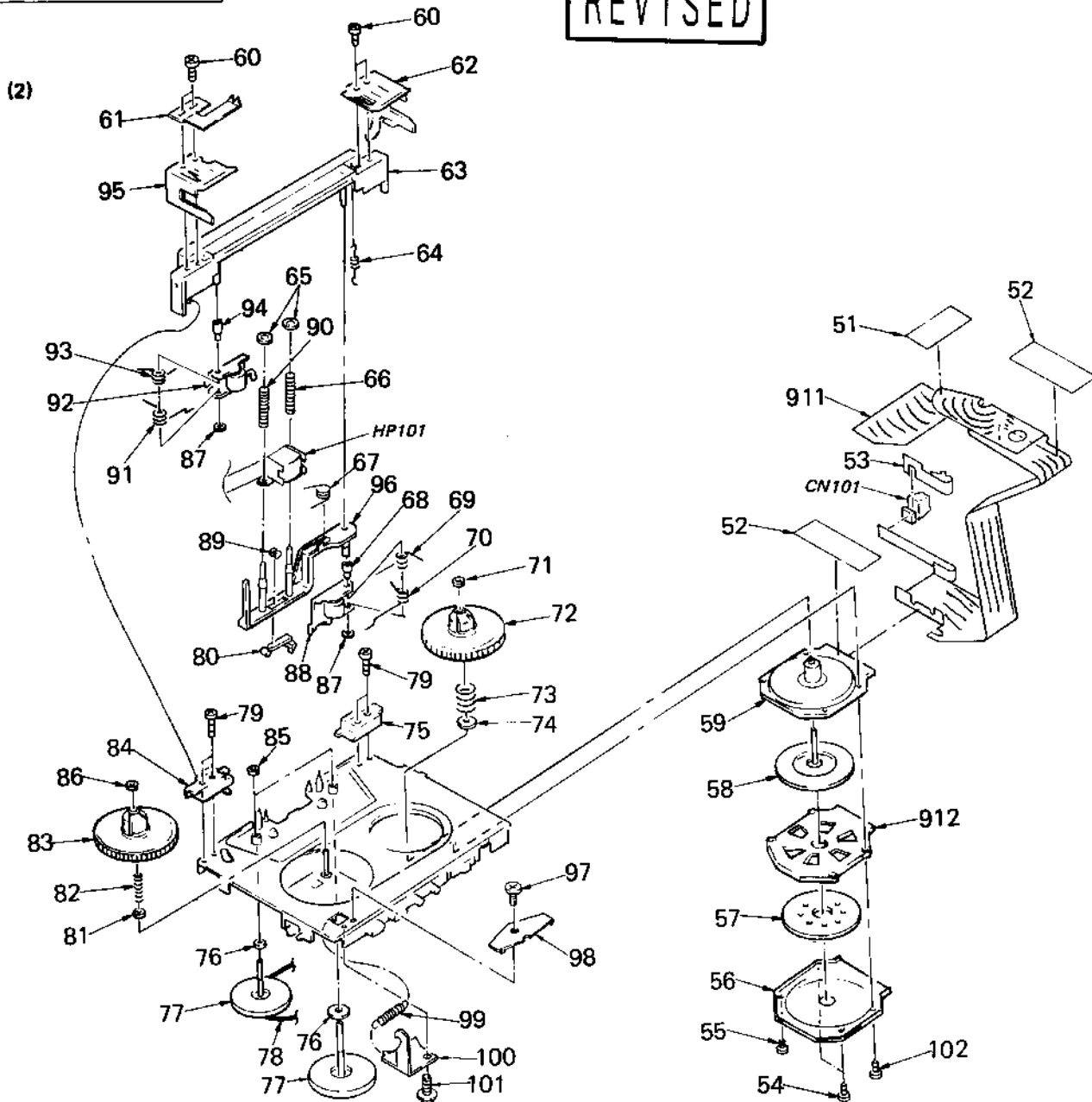
**NOTE:**

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.



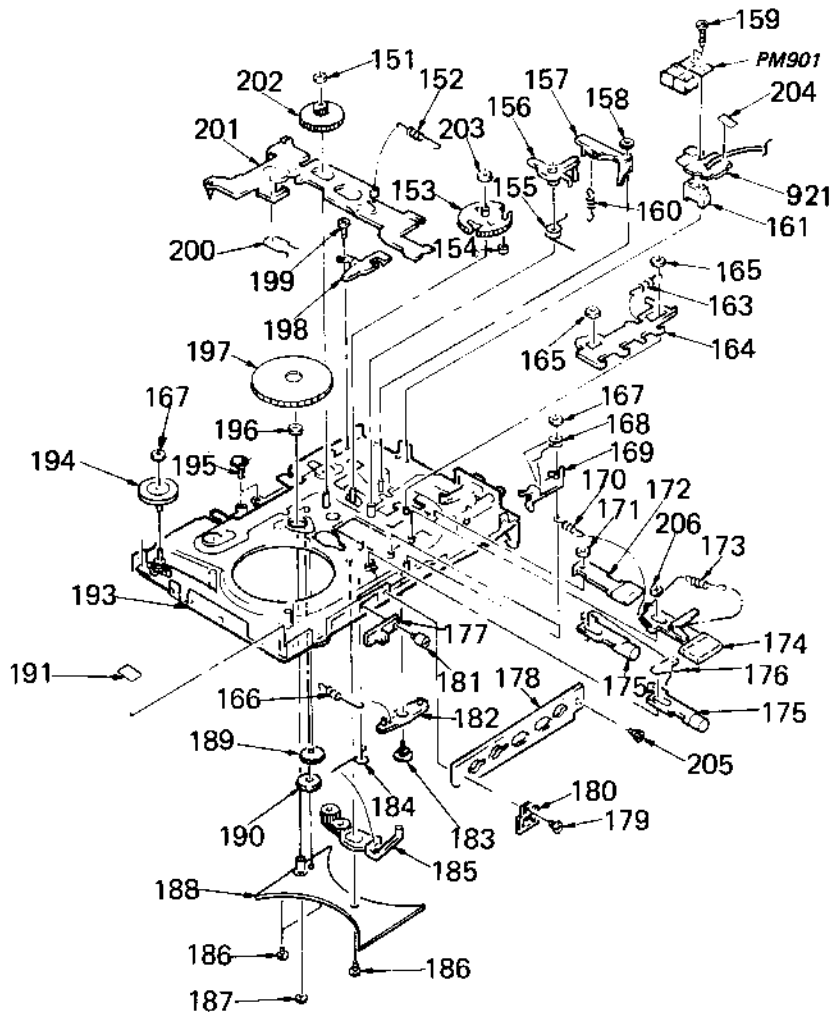
No.	Part No.	Description	Remarks	No.	Part No.	Description	Remarks
1	3-704-197-11	SCREW (M1.4X2.0), NYLON		19	*3-331-021-01	SHEET (A), BLIND	
2	*3-701-999-00	LABEL, SERIAL NUMBER		20	3-329-758-01	PLATE, BLIND, PANEL	
3	3-704-197-01	SCREW (M1.4X1.6), NYLON		21	3-563-124-11	WASHER, RATTLE ABSORBER	
4	3-335-952-01	ORNAMENT (F), REEL		22	3-329-749-11	KNOB, FUNCTION	
5	3-703-816-31	SCREW (M1.4X1.6), SPECIAL HEAD		23	3-329-766-01	SCREW (M1.4X2.95),STEP	
6	3-703-816-01	SCREW (M1.4X2.0), SPECIAL HEAD		24	3-329-753-01	RACK, POINTER	
7	X-3329-732-1	(BLACK)PANEL ASSY,CONTROL		25	3-703-710-01	STICKER, SONY SYMBOL	
	X-3329-733-1	(SILVER)PANEL ASSY,CONTROL		27	3-329-761-01	ADJUSTOR, REFLECTOR	
8	3-338-621-01	(SILVER)...LABEL, MODEL NUMBER		28	3-333-162-01	SHEET, AZIMUTH HOLE (SILVER)	
	3-338-621-11	(BLACK).....LABEL, MODEL NUMBER			3-333-162-11	SHEET, AZIMUTH HOLE (BLACK)	
9	3-315-308-00	SCREW, CONTROL		29	7-627-451-07	SCREW, PRECISION +K 1.4X1.6	
10	3-329-767-01	KNOB, VOL		30	3-703-816-32	SCREW (M1.4X1.6), SPECIAL HEAD	
11	3-315-467-00	WASHER, CONTROL		31	X-3329-740-1	CASE (B) ASSY, R BATTERY (FOR RECHARGEABLE BATTERY)	
12	3-831-441-XX	CUSHION, CABINET UPPER 10X7X0.3		901	A-3070-183-A	PC BOARD ASSY, AU	
13	3-329-762-01	KNOB, SW		902	A-3089-238-A	PC BOARD ASSY, TUNER	
14	X-3329-782-1	(BLACK)...PANEL ASSY, CASSETTE		903	1-617-100-11	PC BOARD, RADIO CONNECTION	
	X-3329-783-1	(SILVER)...PANEL ASSY, CASSETTE		L11	1-402-182-21	ANTENNA, FERRITE-ROD (MW)	
15	3-329-747-01	KNOB, BAND SW		PH701	8-719-751-43	DIODE WJLS141E-AB	
16	X-3329-738-1	BRACKET (T) ASSY, ARM		RV4	1-237-139-11	RES, VAR, CARBON 100K (TUNING)	
17	3-329-757-01	GUIDE, POINTER		RV301	1-230-955-11	RES, VAR, CARBON 10K/10K (VOL)	
18	3-329-748-01	HOLDER, ANTENNA					

REVISED



No.	Part No.	Description	Remarks	No.	Part No.	Description	Remarks
51	3-831-441-XX	CUSHION, CABINET UPPER 10X7X0.3		82	3-331-013-01	SPRING COMPRESSION (T REEL)	
52	3-703-929-01	SPACER, SWITCH, SHEET PETP (A)		83	X-3329-705-1	GEAR (R) ASSY, T REEL	
53	3-335-977-01	SPRING		84	3-329-736-01	GUIDE (RIGHT), HOLDER	
54	3-703-816-92	SCREW (M1.4X2.8), SPECIAL HEAD		85	3-331-007-01	WASHER STOPPER	
55	3-703-816-62	SCREW (M1.4X2.2), SPECIAL HEAD		86	3-578-242-21	WASHER	
56	3-333-126-01	PLATE (R), SHIELD, MOTOR		87	3-331-036-11	WASHER	
57	3-333-173-01	PLATE (S), HYSTERESIS		88	X-3329-602-1	PINCH LEVER (R) ASSY	
58	A-3133-236-A	WHEEL BLOCK ASSY, MOTOR		89	3-333-102-01	SHAFT AZIMUTH	
59	X-3329-625-1	CHASSIS ASSY, MOTOR		90	3-337-943-01	SPRING, COMPRESSION	
60	7-627-551-97	SCREW, PRECISION +P 1.4X2.2		91	3-329-642-01	SPRING (N)	
61	3-331-059-02	SPRING EARTH		92	X-3329-601-1	PINCH LEVER (N) ASSY	
62	3-329-713-01	HOLDER (LEFT), CASSETTE		93	3-329-640-01	SPRING (N), PINCH LEVER	
63	X-3329-708-1	HOLDER (TD) ASSY		94	3-329-637-01	COLLAR, PINCH LEVER	
64	3-331-012-01	SPRING, (HOLDER), TENSION		95	3-329-714-01	HOLDER (RIGHT), CASSETTE	
65	3-335-902-01	WASHER		96	X-3329-765-1	LEVER ASSY, HEAD	
66	3-337-942-01	SPRING, COMPRESSION		97	3-333-124-01	SCREW (M1.4), STEP, PRECISION	
67	3-337-963-11	SPRING, HEAD LEVER		98	*3-335-942-01	LEVER (B), EJECT	
68	3-331-027-01	COLCER (R), PINCH LEVER		99	3-337-964-01	SPRING, TENSION (EJECT LEVER A)	
69	3-329-643-01	SPRING, (R) PINCH LEVER		100	*3-335-943-01	LEVER (A), EJECT	
70	3-329-641-01	SPRING (R)		101	3-703-502-01	SCREW	
71	3-315-384-11	WASHER, STOPPER (S REEL GEAR DRIVING)		102	3-703-816-91	SCREW (M1.4X2.8), SPECIAL HEAD	
72	3-329-729-01	GEAR, SUPPLY REEL		911	1-617-017-11	PC BOARD, MOTOR CONNECTION	
73	3-331-014-01	SPRING COMPRESSION (S REEL)		912	1-462-230-11	COIL, MOTOR (STATOR)	
74	3-320-354-01	WASHER		CN101	1-506-573-12	CONNECTOR 2P	
75	3-329-737-01	GUIDE (LEFT), HOLDER		HP101	1-543-310-11	HEAD, MAGNETIC (PLAYBACK)	
76	3-321-394-21	WASHER					
77	X-3329-670-1	FLYWHEEL ASSY (N)					
78	3-329-695-01	BELT					
79	7-627-552-48	SCREW, PRECISION +P 1.7X4					
80	3-333-101-01	LEVER AZIMUTH					
81	3-315-414-00	WASHER					

(3)



No.	Part No.	Description	Remarks	No.	Part No.	Description	Remarks
151	3-315-384-11	WASHER, STOPPER		181	3-329-697-01	SCREW, STEP PRECISION	
152	3-337-962-01	SPRING, TENSION (DRIVING LEVER)		182	X-3329-617-1	LEVER (B) ASSY, DRIVING	
153	3-329-730-01	GEAR, CAM		183	3-331-056-01	SHAFT, DRIVING LEVER (B)	
154	3-329-693-01	COLLAR, CAM GEAR		184	3-329-699-01	SPRING, RETURN FR LEVER (B)	
155	3-329-700-01	SPRING, SHUT-OFF LEVER (A)		185	X-3329-626-1	LEVER (B) ASSY, F.R	
156	3-329-733-01	LEVER (A), SHUT-OFF		186	3-331-047-01	SCREW (M1.4X1.4), SPECIAL HEAD	
157	X-3329-615-1	LEVER ASSY, TRIGGER		187	3-331-007-01	WASHER STOPPER	
158	3-315-384-21	WASHER, TRIGGER LEVER		188	X-3329-618-1	COVER ASSY, REEL	
159	7-627-551-37	SCREW, PRECISION +P 1.4X5		189	3-329-688-01	GEAR (A), T	
160	3-331-011-01	SPRING (TRIGGER LEVER), TENSION		190	3-329-689-01	GEAR (B), T	
161	3-331-041-01	BRACKET, P		191	3-327-119-01	SHEET PET P (B)	
163	3-331-009-01	SPRING (LOCK LEVER), TENSION		193	X-3329-754-1	CHASSIS (A) ASSY	
164	3-329-731-01	LEVER, LOCK		194	3-329-686-01	WHEEL, REVERSE	
165	3-578-224-01	WASHER		195	3-331-097-01	SCREW AZIMUTH	
166	3-331-918-01	SPRING, TENSION (DRIVING LEVER B)		196	3-321-394-21	WASHER	
167	3-331-936-11	WASHER		197	X-3329-628-1	PULLEY COMPLETE ASSY, MIDWAY	
168	3-329-702-01	SPRING, SW LEVER		198	3-329-685-01	SPRING, (A) NR	
169	3-329-692-05	LEVER, SW		199	3-331-008-01	SCREW (M1.4X1.1)(1), PRECISION	
170	3-331-010-01	SPRING (STOP LEVER, TENSION)		200	3-329-698-01	SPRING, (B) NR	
171	3-578-242-21	WASHER		201	X-3329-755-1	LEVER (AD) (P) ASSY, DRIVING	
172	X-3329-679-1	LEVER ASSY, PLAY		202	3-329-687-01	GEAR, DRIVING	
173	3-331-111-01	SPRING TENSION		203	3-578-242-11	WASHER	
174	X-3329-678-1	LEVER ASSY, STOP		204	3-703-929-01	SPACER, SWITCH, SHEET PETP (A)	
175	X-3329-696-1	LEVER (A) ASSY, FR		205	3-703-816-31	SCREW (M1.4X1.6), SPECIAL HEAD	
176	3-331-016-01	SPRING FR		206	3-331-036-01	WASHER	
177	3-329-769-01	KNOB, SAFETY LOCK		921	1-617-019-11	PC BOARD, MP FLEXIBLE	
178	*3-329-734-01	HOLDER, BUTTON		PM901	1-454-406-11	SOLENOID, PLUNGER	
179	3-703-816-02	SCREW (M1.4X2.0), SPECIAL HEAD					
180	3-331-043-01	SPRING					

## 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 : V, for example:  
UA...: µA..., UPA...: µPA..., UPC...: µPC,  
UPD...: µPD...

### ELECTRICAL PARTS

Ref.No.	Part No.	Description			
901	A-3070-183-A	PC BOARD ASSY, AU			
902	A-3089-238-A	PC BOARD ASSY, TUNER			
903	1-617-100-11	PC BOARD, RADIO CONNECTION			
911	1-617-017-11	PC BOARD, MOTOR CONNECTION			
912	1-462-230-11	COIL, MOTOR (STATOR)			
921	1-617-019-11	PC BOARD, MP FLEXIBLE			
C1	1-163-013-00	CERAMIC CHIP 0.0022MF	20%	50V	
C2	1-163-013-00	CERAMIC CHIP 0.0022MF	20%	50V	
C3	1-163-013-00	CERAMIC CHIP 0.0022MF	20%	50V	
C4	1-163-101-00	CERAMIC CHIP 22PF	5%	50V	
C5	1-163-088-00	CERAMIC CHIP 5PF	0.25PF	50V	
C6	1-163-117-00	CERAMIC CHIP 100PF	10%	50V	
C7	1-163-013-00	CERAMIC CHIP 0.0022MF	20%	50V	
C8	1-163-097-00	CERAMIC CHIP 15PF	5%	50V	
C9	1-163-084-00	CERAMIC CHIP 1.5PF	0.25PF	50V	
C10	1-163-125-00	(-12)...CERAMIC CHIP 220PF	5%	50V	
C10	1-163-127-00	(-13)...CERAMIC CHIP 270PF	5%	50V	
C11	1-163-117-00	CERAMIC CHIP 100PF	10%	50V	
C12	1-163-117-00	CERAMIC CHIP 100PF	10%	50V	
C13	1-163-033-00	CERAMIC CHIP 0.022MF	10%	25V	
C14	1-163-038-00	CERAMIC CHIP 0.1MF		25V	
C15	1-163-033-00	CERAMIC CHIP 0.022MF	10%	25V	
C20	1-163-038-00	CERAMIC CHIP 0.1MF		25V	
C25	1-163-038-00	CERAMIC CHIP 0.1MF		25V	
C28	1-163-033-00	(-12)...CERAMIC CHIP 0.022MF	5%	25V	
C28	1-163-038-00	(-13)...CERAMIC CHIP 0.1MF		25V	
C29	1-135-104-00	TANTAL. CHIP 10MF	10%	4V	
C30	1-163-033-00	CERAMIC CHIP 0.022MF	10%	25V	
C31	1-163-137-00	(-12)...CERAMIC CHIP 680PF	5%	50V	
C31	1-163-123-00	(-13)...CERAMIC CHIP 180PF	5%	50V	
C32	1-163-081-00	CERAMIC CHIP 0.22MF		25V	
C33	1-163-123-00	CERAMIC CHIP 180PF	5%	50V	
C34	1-163-033-00	CERAMIC CHIP 0.022MF	10%	25V	
C35	1-163-033-00	CERAMIC CHIP 0.022MF	10%	25V	
C36	1-135-104-00	(-12)...TANTAL. CHIP 10MF	10%	4V	
C36	1-162-638-11	(-13)...CERAMIC CHIP 1MF		16V	
C37	1-163-101-00	(-12)...CERAMIC CHIP 22PF	5%	50V	
C37	1-163-163-00	(-13)...CERAMIC CHIP 18PF	5%	50V	
C38	1-163-133-00	CERAMIC CHIP 470PF	5%	50V	
C39	1-163-038-00	CERAMIC CHIP 0.1MF		25V	
C40	1-163-093-00	CERAMIC CHIP 10PF	5%	50V	
C41	1-163-033-00	CERAMIC CHIP 0.022MF	10%	25V	
C42	1-135-104-00	(-12)...TANTAL. CHIP 10MF	10%	4V	
C42	1-162-638-11	(-13)...CERAMIC CHIP 1MF		16V	

### ELECTRICAL PARTS

Ref.No.	Part No.	Description			
C43	1-163-033-00	CERAMIC CHIP 0.022MF	10%	25V	
C44	1-163-123-00	CERAMIC CHIP 180PF	5%	50V	
C45	1-135-103-00	(-12)...TANTAL. CHIP 3.3MF	10%	4V	
C45	1-162-638-11	(-13)...CERAMIC CHIP 1MF		16V	
C46	1-162-637-11	CERAMIC CHIP 0.47MF		16V	
C47	1-163-081-00	CERAMIC CHIP 0.22MF		25V	
C48	1-162-637-11	CERAMIC CHIP 0.47MF		16V	
C49	1-163-205-00	CERAMIC CHIP 0.001MF	5%	50V	
C50	1-163-117-00	(-12)...CERAMIC CHIP 100PF	5%	50V	
C50	1-163-116-00	(-13)...CERAMIC CHIP 91PF	5%	50V	
C51	1-163-038-00	CERAMIC CHIP 0.1MF		25V	
C52	1-163-033-00	CERAMIC CHIP 0.022MF	10%	25V	
C53	1-163-033-00	CERAMIC CHIP 0.022MF	10%	25V	
C55	1-163-033-00	CERAMIC CHIP 0.022MF	10%	25V	
C56	1-163-033-00	CERAMIC CHIP 0.022MF	10%	25V	
C57	1-135-104-00	TANTAL. CHIP 10MF	10%	4V	
C58	1-135-103-00	(-12)...TANTAL. CHIP 3.3MF	10%	4V	
C58	1-162-638-11	(-13)...CERAMIC CHIP 1MF		16V	
C59	1-135-103-00	(-12)...TANTAL. CHIP 3.3MF	10%	4V	
C59	1-162-638-11	(-13)...CERAMIC CHIP 1MF		16V	
C60	1-163-129-00	CERAMIC CHIP 330PF	10%	50V	
C61	1-163-033-00	CERAMIC CHIP 0.022MF	10%	25V	
C62	1-135-104-00	(-12)...TANTAL. CHIP 10MF	10%	4V	
C62	1-162-638-11	(-13)...CERAMIC CHIP 1MF		16V	
C63	1-163-033-00	CERAMIC CHIP 0.022MF	10%	25V	
C64	1-135-096-21	TANTAL. CHIP 4.7MF	10%	10V	
C65	1-135-096-21	TANTAL. CHIP 4.7MF	10%	10V	
C66	1-163-033-00	CERAMIC CHIP 0.022MF	10%	25V	
C67	1-135-104-00	TANTAL. CHIP 10MF	10%	4V	
C68	1-163-141-00	CERAMIC CHIP 0.001MF	20%	50V	
C69	1-163-033-00	(-12)...CERAMIC CHIP 0.022MF	10%	25V	
C69	1-162-638-11	(-13)...CERAMIC CHIP 1MF		16V	
C70	1-163-101-00	CERAMIC CHIP 22PF	5%	50V	
C72	1-163-013-00	(-13)...CERAMIC CHIP 0.0022MF	20%	50V	
C73	1-163-133-00	(-13)...CERAMIC CHIP 470PF	5%	50V	
C74	1-163-033-00	(-13)...CERAMIC CHIP 0.022MF	10%	25V	
C101	1-163-141-00	CERAMIC CHIP 0.001MF	10%	50V	
C102	1-163-141-00	CERAMIC CHIP 0.001MF	10%	50V	
C103	1-163-117-00	CERAMIC CHIP 100PF	5%	50V	
C104	1-163-117-00	CERAMIC CHIP 100PF	5%	50V	
C105	1-135-104-00	TANTAL. CHIP 10MF	10%	4V	
C106	1-163-016-00	CERAMIC CHIP 0.0039MF	10%	50V	
C107	1-163-810-00	CERAMIC CHIP 0.03MF	10%	25V	
C108	1-135-103-00	TANTAL. CHIP 3.3MF	10%	4V	
C109	1-163-019-00	CERAMIC CHIP 0.0068MF	10%	50V	

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(-12).....shows part-number suffix of RADIO board -11or-12  
(-13).....shows part-number suffix of RADIO board -13

## ELECTRICAL PARTS

Ref.No.	Part No.	Description			
C110	1-163-075-00	CERAMIC CHIP 0.047MF	10%	25V	
C111	1-135-087-21	TANTAL. CHIP 0.68MF	10%	20V	
C112	1-163-017-00	CERAMIC CHIP 0.0047MF	5%	50V	
C113	1-163-074-00	CERAMIC CHIP 0.033MF	5%	25V	
C114	1-135-103-00	TANTAL. CHIP 3.3MF	10%	4V	
C116	1-163-013-00	CERAMIC CHIP 0.0022MF	10%	50V	
C117	1-163-081-00	CERAMIC CHIP 0.22MF		25V	
C118	1-163-141-00	CERAMIC CHIP 0.001MF	10%	50V	
C119	1-163-141-00	CERAMIC CHIP 0.001MF	10%	50V	
C201	1-163-141-00	CERAMIC CHIP 0.001MF	10%	50V	
C202	1-163-141-00	CERAMIC CHIP 0.001MF	10%	50V	
C203	1-163-117-00	CERAMIC CHIP 100PF	5%	50V	
C204	1-163-117-00	CERAMIC CHIP 100PF	5%	50V	
C205	1-135-104-00	TANTAL. CHIP 10MF	10%	4V	
C206	1-163-016-00	CERAMIC CHIP 0.0039MF	10%	50V	
C207	1-163-810-00	CERAMIC CHIP 0.03MF	10%	25V	
C208	1-135-103-00	TANTAL. CHIP 3.3MF	10%	4V	
C209	1-163-019-00	CERAMIC CHIP 0.0068MF	10%	50V	
C210	1-163-075-00	CERAMIC CHIP 0.047MF	10%	25V	
C211	1-135-087-21	TANTAL. CHIP 0.68MF	10%	20V	
C212	1-163-017-00	CERAMIC CHIP 0.0047MF	5%	50V	
C213	1-163-074-00	CERAMIC CHIP 0.033MF	5%	25V	
C214	1-135-103-00	TANTAL. CHIP 3.3MF	10%	4V	
C216	1-163-013-00	CERAMIC CHIP 0.0022MF	10%	50V	
C217	1-163-081-00	CERAMIC CHIP 0.22MF		25V	
C218	1-163-141-00	CERAMIC CHIP 0.001MF	10%	50V	
C219	1-163-141-00	CERAMIC CHIP 0.001MF	10%	50V	
C301	1-124-431-00	ELECT 33MF	20%	4V	
C302	1-163-141-00	CERAMIC CHIP 0.001MF	10%	50V	
C303	1-135-103-00	TANTAL. CHIP 3.3MF	10%	4V	
C304	1-163-038-00	CERAMIC CHIP 0.1MF		25V	
C305	1-124-431-00	ELECT 33MF	20%	4V	
C307	1-135-104-00	TANTAL. CHIP 10MF	10%	4V	
C308	1-135-103-00	TANTAL. CHIP 3.3MF	10%	4V	
C309	1-135-103-00	TANTAL. CHIP 3.3MF	10%	4V	
C310	1-124-413-00	ELECT 220MF	20%	4V	
C311	1-163-141-00	CERAMIC CHIP 0.001MF	10%	50V	
C312	1-135-104-00	TANTAL. CHIP 10MF	10%	4V	
C601	1-135-070-00	TANTAL. CHIP 0.1MF	10%	35V	
C602	1-163-023-00	CERAMIC CHIP 0.015MF	10%	50V	
C603	1-135-087-21	TANTAL. CHIP 0.68MF	10%	20V	
C604	1-135-070-00	TANTAL. CHIP 0.1MF	10%	35V	
C605	1-135-071-21	TANTAL. CHIP 0.15MF	10%	35V	
C606	1-163-810-00	CERAMIC CHIP 0.03MF	10%	25V	
C607	1-163-810-00	CERAMIC CHIP 0.03MF	10%	25V	
C701	1-135-103-00	TANTAL. CHIP 3.3MF	10%	4V	
C702	1-135-073-00	TANTAL. CHIP 0.33MF	10%	35V	
C703	1-135-073-00	TANTAL. CHIP 0.33MF	10%	35V	
C704	1-135-103-00	TANTAL. CHIP 3.3MF	10%	4V	
C705	1-135-103-00	TANTAL. CHIP 3.3MF	10%	4V	
C706	1-135-091-00	TANTAL. CHIP 1MF	10%	16V	
C707	1-135-103-00	TANTAL. CHIP 3.3MF	10%	4V	
C709	1-135-103-00	TANTAL. CHIP 3.3MF	10%	4V	
C801	1-163-021-00	CERAMIC CHIP 0.01MF	10%	50V	
C802	1-163-017-00	CERAMIC CHIP 0.0047MF	10%	50V	
C803	1-135-104-00	TANTAL. CHIP 10MF	10%	4V	
C804	1-124-413-00	ELECT 220MF	20%	4V	
C805	1-135-104-00	TANTAL. CHIP 10MF	10%	4V	

## ELECTRICAL PARTS

Ref.No.	Part No.	Description			
CF1	1-567-338-65	FILTER, CERAMIC			
CF2	1-567-338-65	FILTER, CERAMIC			
CF3	1-567-338-65	FILTER, CERAMIC			
CN101	1-506-573-12	CONNECTOR 2P			
CT1	1-141-333-11	(-12)...CAP, VAR, TRIMMER (CHIP TYPE)			
CT1	1-141-313-11	(-13)...CAP, VAR, TRIMMER (CHIP TYPE)			
CT3	1-141-333-11	(-12)...CAP, VAR, TRIMMER (CHIP TYPE)			
CT3	1-141-313-11	(-13)...CAP, VAR, TRIMMER (CHIP TYPE)			
CT4	1-141-333-11	(-12)...CAP, VAR, TRIMMER (CHIP TYPE)			
CT4	1-141-313-11	(-13)...CAP, VAR, TRIMMER (CHIP TYPE)			
D1	8-719-908-57	DIODE SVC203			
D2	8-719-908-57	DIODE SVC203			
D5	8-719-928-03	DIODE KV1260			
D7	8-719-118-21	DIODE 1SS283			
D8	8-719-106-53	DIODE RD10M			
D9	8-719-100-05	DIODE 1S2837			
D302	8-719-908-30	DIODE DA106K			
D303	1-807-305-11	DIODE GL2PR9 (LED)(BATT)			
D701	8-719-101-23	DIODE 1SS123			
D801	8-719-105-57	DIODE RD3.9M-B1			
FL1	1-235-279-00	FILTER, BAND PASS			
HP101	1-543-310-11	HEAD, MAGNETIC (PLAYBACK)			
IC1	8-759-910-52	IC CX10053			
IC2	8-759-913-53	IC CX10054			
IC301	8-759-203-85	IC TA7739F			
IC302	8-759-701-07	IC NJM2063AM			
IC303	8-759-802-80	IC LA4535M			
IC601	8-752-012-32	IC CX20123			
J301	1-562-974-11	JACK (PHONES)			
JR1	1-216-296-00	METAL CHIP	0	5%	1/8W
JR2	1-216-296-00	METAL CHIP	0	5%	1/8W
JR3	1-216-296-00	METAL CHIP	0	5%	1/8W
JR4	1-216-296-00	METAL CHIP	0	5%	1/8W
JR5	1-216-296-00	METAL CHIP	0	5%	1/8W
JR6	1-216-295-00	METAL CHIP	0	5%	1/10W
JR7	1-216-295-00	METAL CHIP	0	5%	1/10W
JR9	1-216-296-00	METAL CHIP	0	5%	1/8W
JR10	1-216-296-00	METAL CHIP	0	5%	1/8W
JR11	1-216-295-00	METAL CHIP	0	5%	1/10W
JR12	1-216-295-00	METAL CHIP	0	5%	1/10W
L1	1-459-641-11	COIL (WITH CORE)			
L2	1-459-642-11	COIL (WITH CORE)			
L5	1-410-209-51	INDUCTOR CHIP 27UH			
L6	1-410-196-11	INDUCTOR CHIP 2.2UH			
L7	1-410-196-11	INDUCTOR CHIP 2.2UH			
L8	1-410-204-41	INDUCTOR CHIP 10UH			
L11	1-402-182-21	ANTENNA, FERRITE-ROD (MW)			
L101	1-410-204-41	INDUCTOR CHIP 10UH			
L201	1-410-204-41	INDUCTOR CHIP 10UH			
L301	1-410-204-41	INDUCTOR CHIP 10UH			
L801	1-410-213-51	INDUCTOR CHIP 56UH			
MF1	1-567-383-00	(-12)...FILTER, CERAMIC			
MF1	1-567-693-11	(-13)...FILTER, CERAMIC			
PH701	8-719-751-43	DIODE NJL5141E-AB			
PM901	1-454-406-11	SOLENOID, PLUNGER			

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## ELECTRICAL PARTS

Ref.No.	Part No.	Description
Q1	8-729-200-87	TRANSISTOR 2SC2714Y
Q2	8-729-102-23	TRANSISTOR 2SC2757
Q3	8-729-102-06	TRANSISTOR 2SC2223
Q6	8-729-102-06	TRANSISTOR 2SC2223
Q7	8-729-902-93	TRANSISTOR FMG4
Q8	8-729-216-22	TRANSISTOR 2SA1162
Q9	8-729-902-38	TRANSISTOR TA86E
Q10	8-729-159-64	TRANSISTOR 2SD596
Q11	8-729-271-29	TRANSISTOR 2SC2712
Q12	8-729-162-44	TRANSISTOR 2SB624-BV4
Q13	8-729-271-29	(-13)... TRANSISTOR 2SC2712
Q301	8-729-271-29	TRANSISTOR 2SC2712
Q303	8-729-216-22	TRANSISTOR 2SA1162
Q601	8-729-162-44	TRANSISTOR 2SB624-BV4
Q602	8-729-271-29	TRANSISTOR 2SC2712
Q603	8-729-271-29	TRANSISTOR 2SC2712
Q604	8-729-162-44	TRANSISTOR 2SB624-BV4
Q701	8-729-902-38	TRANSISTOR TA86E
Q702	8-729-271-29	TRANSISTOR 2SC2712
Q703	8-729-162-44	TRANSISTOR 2SB624-BV4
Q704	8-729-271-29	TRANSISTOR 2SC2712
Q705	8-729-900-51	TRANSISTOR DTA114TK
Q706	8-729-902-38	TRANSISTOR TA86E
Q707	8-729-902-96	TRANSISTOR FMS1
Q708	8-729-216-22	TRANSISTOR 2SA1162
Q709	8-729-900-51	TRANSISTOR DTA114TK
Q710	8-729-902-99	TRANSISTOR DTCL14TK
Q711	8-729-900-51	TRANSISTOR DTA114TK
Q713	8-729-902-93	TRANSISTOR FMG4
Q714	8-729-271-29	TRANSISTOR 2SC2712
Q715	8-729-162-44	TRANSISTOR 2SB624-BV4
Q716	8-729-902-93	TRANSISTOR FMG4
Q718	8-729-216-22	TRANSISTOR 2SA1162
Q719	8-729-902-93	TRANSISTOR FMG4
Q801	8-729-902-38	TRANSISTOR TA86E
Q802	8-729-162-44	TRANSISTOR 2SB624-BV4
Q803	8-729-271-29	TRANSISTOR 2SC2712
Q804	8-729-159-64	TRANSISTOR 2SD596
Q805	8-729-271-29	TRANSISTOR 2SC2712
Q806	8-729-162-44	TRANSISTOR 2SB624-BV4
R1	1-216-073-00	METAL CHIP 10K 5% 1/10W
R2	1-216-025-00	METAL CHIP 100 5% 1/10W
R3	1-216-069-00	METAL CHIP 6.8K 5% 1/10W
R4	1-216-025-00	METAL CHIP 100 5% 1/10W
R5	1-216-113-00	METAL CHIP 470K 5% 1/10W
R6	1-216-013-00	METAL CHIP 33 5% 1/10W
R7	1-216-081-00	METAL CHIP 22K 5% 1/10W
R8	1-216-013-00	METAL CHIP 33 5% 1/10W
R9	1-216-113-00	METAL CHIP 470K 5% 1/10W
R10	1-216-085-00	METAL CHIP 33K 5% 1/10W
R11	1-216-113-00	METAL CHIP 470K 5% 1/10W
R12	1-216-085-00	METAL CHIP 33K 5% 1/10W
R13	1-216-013-00	METAL CHIP 33 5% 1/10W
R14	1-216-085-00	METAL CHIP 33K 5% 1/10W
R15	1-216-025-00	(-12)...METAL CHIP 100 5% 1/10W
R16	1-216-037-00	METAL CHIP 330 5% 1/10W
R25	1-216-093-00	(-13)...METAL CHIP 68K 5% 1/10W
R26	1-216-113-00	METAL CHIP 470K 5% 1/10W

## ELECTRICAL PARTS

Ref.No.	Part No.	Description
R27	1-216-113-00	METAL CHIP 470K 5% 1/10W
R28	1-216-113-00	METAL CHIP 470K 5% 1/10W
R29	1-216-025-00	METAL CHIP 100 5% 1/10W
R30	1-216-113-00	METAL CHIP 470K 5% 1/10W
R31	1-216-049-00	METAL CHIP 1K 5% 1/10W
R32	1-216-037-00	(-13)...METAL CHIP 330 5% 1/10W
R33	1-216-049-00	METAL CHIP 1K 5% 1/10W
R34	1-216-073-00	METAL CHIP 10K 5% 1/10W
R35	1-216-069-00	METAL CHIP 6.8K 5% 1/10W
R36	1-216-069-00	METAL CHIP 6.8K 5% 1/10W
R37	1-216-049-00	METAL CHIP 1K 5% 1/10W
R42	1-216-013-00	METAL CHIP 33 5% 1/10W
R43	1-216-049-00	METAL CHIP 1K 5% 1/10W
R44	1-216-113-00	METAL CHIP 470K 5% 1/10W
R46	1-216-085-00	METAL CHIP 33K 5% 1/10W
R47	1-216-049-00	METAL CHIP 1K 5% 1/10W
R48	1-216-081-00	METAL CHIP 22K 5% 1/10W
R49	1-216-085-00	METAL CHIP 33K 5% 1/10W
R50	1-216-049-00	(-12)...METAL CHIP 1K 5% 1/10W
R50	1-216-057-00	(-13)...METAL CHIP 2.2K 5% 1/10W
R51	1-216-049-00	METAL CHIP 1K 5% 1/10W
R52	1-216-085-00	METAL CHIP 33K 5% 1/10W
R53	1-216-073-00	METAL CHIP 10K 5% 1/10W
R101	1-216-085-00	METAL CHIP 33K 5% 1/10W
R102	1-216-085-00	METAL CHIP 33K 5% 1/10W
R103	1-216-097-00	METAL CHIP 100K 5% 1/10W
R104	1-216-117-00	METAL CHIP 680K 5% 1/10W
R105	1-216-085-00	METAL CHIP 33K 5% 1/10W
R106	1-216-055-00	METAL CHIP 1.8K 5% 1/10W
R107	1-216-058-00	METAL CHIP 2.4K 5% 1/10W
R108	1-216-089-00	METAL CHIP 47K 5% 1/10W
R109	1-216-089-00	METAL CHIP 47K 5% 1/10W
R110	1-216-112-00	METAL CHIP 430K 5% 1/10W
R111	1-216-061-00	METAL CHIP 3.3K 5% 1/10W
R112	1-216-065-00	METAL CHIP 4.7K 5% 1/10W
R201	1-216-085-00	METAL CHIP 33K 5% 1/10W
R202	1-216-085-00	METAL CHIP 33K 5% 1/10W
R203	1-216-097-00	METAL CHIP 100K 5% 1/10W
R204	1-216-117-00	METAL CHIP 680K 5% 1/10W
R205	1-216-085-00	METAL CHIP 33K 5% 1/10W
R206	1-216-055-00	METAL CHIP 1.8K 5% 1/10W
R207	1-216-058-00	METAL CHIP 2.4K 5% 1/10W
R208	1-216-089-00	METAL CHIP 47K 5% 1/10W
R209	1-216-089-00	METAL CHIP 47K 5% 1/10W
R210	1-216-112-00	METAL CHIP 430K 5% 1/10W
R211	1-216-061-00	METAL CHIP 3.3K 5% 1/10W
R212	1-216-065-00	METAL CHIP 4.7K 5% 1/10W
R301	1-216-089-00	METAL CHIP 47K 5% 1/10W
R302	1-216-089-00	METAL CHIP 47K 5% 1/10W
R303	1-216-049-00	METAL CHIP 1K 5% 1/10W
R304	1-216-097-00	METAL CHIP 100K 5% 1/10W
R307	1-216-097-00	METAL CHIP 100K 5% 1/10W
R308	1-216-085-00	METAL CHIP 33K 5% 1/10W
R309	1-216-056-00	METAL CHIP 2K 5% 1/10W
R310	1-216-058-00	METAL CHIP 2.4K 5% 1/10W
R311	1-216-025-00	METAL CHIP 100 5% 1/10W

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## ELECTRICAL PARTS

Ref.No.	Part No.	Description			
R312	1-216-103-00	METAL CHIP	180K	5%	1/10W
R313	1-216-113-00	METAL CHIP	470K	5%	1/10W
R601	1-216-049-00	METAL CHIP	1K	5%	1/10W
R602	1-216-073-00	METAL CHIP	10K	5%	1/10W
R603	1-216-073-00	METAL CHIP	10K	5%	1/10W
R604	1-216-085-00	METAL CHIP	33K	5%	1/10W
R605	1-216-083-00	METAL CHIP	27K	5%	1/10W
R606	1-216-091-00	METAL CHIP	56K	5%	1/10W
R607	1-216-077-00	METAL CHIP	15K	5%	1/10W
R608	1-216-089-00	METAL CHIP	47K	5%	1/10W
R609	1-216-049-00	METAL CHIP	1K	5%	1/10W
R610	1-216-001-00	METAL CHIP	10	5%	1/10W
R611	1-216-097-00	METAL CHIP	100K	5%	1/10W
R612	1-216-101-00	METAL CHIP	150K	5%	1/10W
R613	1-216-049-00	METAL CHIP	1K	5%	1/10W
R614	1-216-049-00	METAL CHIP	1K	5%	1/10W
R615	1-216-101-00	METAL CHIP	150K	5%	1/10W
R616	1-216-097-00	METAL CHIP	100K	5%	1/10W
R617	1-216-001-00	METAL CHIP	10	5%	1/10W
R618	1-216-049-00	METAL CHIP	1K	5%	1/10W
R701	1-216-089-00	METAL CHIP	47K	5%	1/10W
R702	1-216-085-00	METAL CHIP	33K	5%	1/10W
R703	1-216-053-00	METAL CHIP	1.5K	5%	1/10W
R705	1-216-035-00	METAL CHIP	270	5%	1/10W
R706	1-216-105-00	METAL CHIP	220K	5%	1/10W
R707	1-216-113-00	METAL CHIP	470K	5%	1/10W
R708	1-216-025-00	METAL CHIP	100	5%	1/10W
R709	1-216-097-00	METAL CHIP	100K	5%	1/10W
R710	1-216-049-00	METAL CHIP	1K	5%	1/10W
R711	1-216-089-00	METAL CHIP	47K	5%	1/10W
R712	1-216-097-00	METAL CHIP	100K	5%	1/10W
R713	1-216-113-00	METAL CHIP	10K	5%	1/10W
R714	1-216-049-00	METAL CHIP	1K	5%	1/10W
R715	1-216-097-00	METAL CHIP	100K	5%	1/10W
R716	1-216-121-00	METAL CHIP	1M	5%	1/10W
R717	1-216-121-00	METAL CHIP	1M	5%	1/10W
R718	1-216-121-00	METAL CHIP	1M	5%	1/10W
R719	1-216-121-00	METAL CHIP	1M	5%	1/10W
R720	1-216-113-00	METAL CHIP	470K	5%	1/10W
R721	1-216-121-00	METAL CHIP	1M	5%	1/10W
R722	1-216-097-00	METAL CHIP	100K	5%	1/10W
R723	1-216-097-00	METAL CHIP	100K	5%	1/10W
R724	1-216-073-00	METAL CHIP	10K	5%	1/10W
R725	1-216-025-00	METAL CHIP	100	5%	1/10W
R726	1-216-097-00	METAL CHIP	100K	5%	1/10W
R727	1-216-049-00	METAL CHIP	1K	5%	1/10W
R728	1-216-085-00	METAL CHIP	33K	5%	1/10W
R732	1-216-089-00	METAL CHIP	47K	5%	1/10W
R733	1-216-073-00	METAL CHIP	10K	5%	1/10W
R734	1-216-073-00	METAL CHIP	10K	5%	1/10W
R801	1-216-083-00	METAL CHIP	27K	5%	1/10W
R802	1-216-085-00	METAL CHIP	33K	5%	1/10W
R803	1-216-085-00	METAL CHIP	33K	5%	1/10W
R804	1-216-049-00	METAL CHIP	1K	5%	1/10W

## ELECTRICAL PARTS

Ref.No.	Part No.	Description			
R805	1-216-053-00	METAL CHIP	1.5K	5%	1/10W
R806	1-216-113-00	METAL CHIP	470K	5%	1/10W
R807	1-216-085-00	METAL CHIP	33K	5%	1/10W
R808	1-216-113-00	METAL CHIP	470K	5%	1/10W
R809	1-216-035-00	METAL CHIP	270	5%	1/10W
R810	1-216-007-00	METAL CHIP	18	5%	1/10W
RV1	1-230-989-11	RES, ADJ, METAL GLAZE	4.7K		{VCO}
RV2	1-230-991-11	RES, ADJ, METAL GLAZE	22K		{TUN.ADJ.HI}
RV3	1-230-991-11	RES, ADJ, METAL GLAZE	22K		{TUN.ADJ.LO}
RV4	1-237-139-11	RES, VAR, CARBON	100K		{TUNING}
RV101	1-237-002-11	RES, ADJ, METAL GLAZE	2.2K		{L LEVEL}
RV201	1-237-002-11	RES, ADJ, METAL GLAZE	2.2K		{R LEVEL}
RV301	1-230-955-11	RES, VAR, CARBON	10K/10K		{VOL}
RV601	1-237-004-11	RES, ADJ, METAL GLAZE	10K		{TAPE SPEED}
S1	1-570-402-11	SWITCH, SLIDE			{FUNCTION}
S2	1-570-397-11	SWITCH, SLIDE			{BAND}
S301	1-570-396-11	SWITCH, SLIDE			{FWD/RVS}
S302	1-570-397-11	SWITCH, SLIDE			{TAPE}
S303	1-570-397-11	SWITCH, SLIDE			{DOLBY NR}
S701	1-570-548-11	SWITCH, LEAF			{POWER}{FF/REW}
S702	1-570-395-11	SWITCH, LEAF			{DIR}
T1	1-404-583-11	(-12)...IFT			
T1	1-404-690-11	(-13)...TRANSFORMER, IF			
T2	1-406-177-11	COIL			
T3	1-448-302-11	TRANSFORMER, DC-DC CONVERTER			
T801	1-447-864-11	TRANSFORMER, DC-DC CONVERTER			

## ACCESSORY & PACKING MATERIAL

Part No.	Description
1-528-176-11	BATTERY, STORAGE (NC-5WM)
1-528-221-11	BATTERY CHARGER (BC-7F)
3-335-959-01	CUSHION
3-335-960-01	LID, CUSHION
3-335-961-01	SPACER
3-335-973-01	INDIVIDUAL CARTON
3-337-974-01	CASE, CARRYING
3-701-622-00	BAG, POLYETHYLENE
3-703-895-01	LABEL, COLOR (BLACK)
3-703-906-01	LABEL, COLOR (SILVER)
3-704-086-01	LABEL (BLACK), GENERAL DISCERN
3-704-087-01	LABEL (SILVER), GENERAL DISCERN
3-765-699-11	MANUAL, INSTRUCTION
3-795-748-21	SAFETY INSTRUCTIONS, HEADPHONE
8-952-266-94	HEADPHONE MDR-A10L/B SET
X-3329-739-1	CASE (B) ASSY, BATTERY (FOR DRY BATTERY)

There are three types of RADIO BOARD.  
When repairing, verify the part-number suffix  
refer to MOUNTING DIAGRAM.

(-12).....shows part-number suffix of RADIO board -11or-12  
(-13).....shows part-number suffix of RADIO board -13

