

Service Manual

FM-LM-MW-SW Stereo
Radio Cassette Recorder

Radio Cassette
RX-FW17L

(Black) (Silver)
(Red) (White)



This is the Service Manual
for the following areas.

- Z** ... For all European
areas except **E** **G**.
- E** ... For United Kingdom.
- G** ... For F.R. Germany.

RX-CW30 MECHANISM SERIES

■ SPECIFICATIONS

General:

Power Requirement: AC; **Z**[**G**].....220V, 50Hz
[**E**].....240V, 50Hz
Battery; 9V (Six "D" Size Flashlight
Batteries)
(Panasonic UM-1 or equivalent)

Power Consumption: 14W (AC only)

Power Output: 7W (3.5W×2)...MPO
7W (3.5W×2)...RMS (max.)

Speaker: 10cm PM Dynamic Speaker (3Ω)

Output: Headphones; 32Ω, φ3.5

Dimensions: 502mm(W)×143mm(H)×130mm(D)

Weight: 2.5kg without batteries

Radio Section:

Radio Frequency Range: FM; 87.5~108MHz
LW; 150~285kHz (2000~1060m)
MW; 520~1610kHz (577~186m)
SW; 5.9~18MHz (50.8~16.7m)

Intermediate Frequency: FM; 10.7MHz
AM (LW/MW/SW); 455kHz
(470kHz...[**E**] only)

Sensitivity: FM; 3μV/50mW output
(-3dB Limit Sens)
LW; 120μV/m/50mW output
MW; 150μV/m/50mW output
SW; 6μV/50mW output

Tape Deck Section:

TAPE [1]
Frequency Response: 70~13,000Hz (with normal tape)
Tape Speed: 4.8cm/s
Track System: 4-track 2 channel stereo playback

Tape Deck Section:

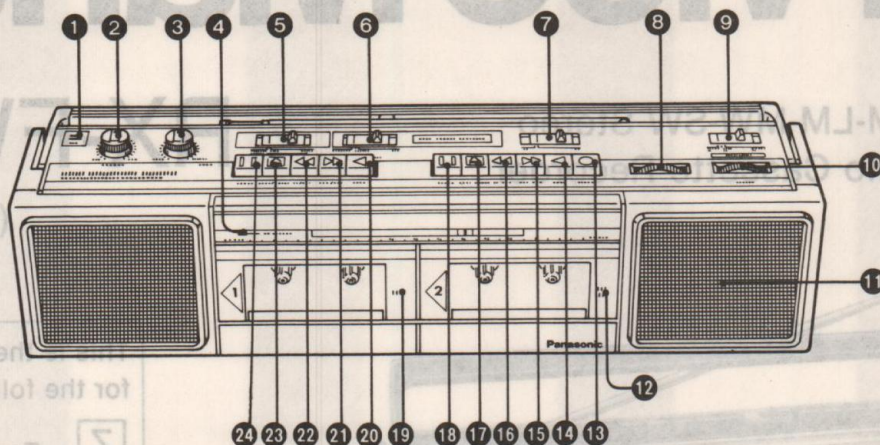
TAPE [2]
Frequency Response: 70~13,000Hz (with normal tape)
Recording System: AC bias, Magnet erase
Tape Speed: 4.8cm/s
Track System: 4-track 2 channel stereo recording
and playback

Design and specifications are subject to change without notice.

Panasonic

Matsushita Electric Trading Co., Ltd.
P.O. Box 288, Central Osaka Japan

LOCATION OF CONTROLS AND COMPONENTS



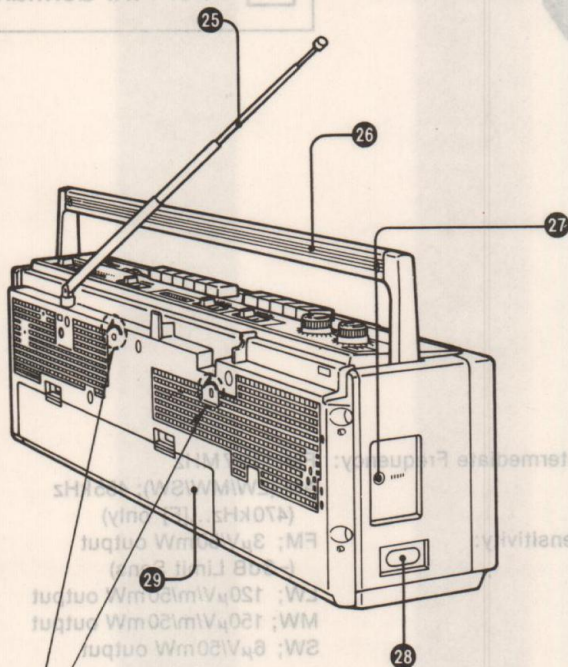
- 1 Built-in Microphone (MIC)
- 2 Volume Control (VOLUME)
- 3 Tone Control (TONE)
- 4 FM Stereo Indicator (FM STEREO)
- 5 Function Selector (SELECTOR)
- 6 Editing Selector (EDITING)
- 7 Band Selector (BAND)
- 8 Fine Tuning Control (FINE TUNING)
- 9 Mode Selector/Beat Proof Switch (MODE/B.P)
- 10 Tuning Control (TUNING)
- 11 Speakers

TAPE 2 CONTROLS

- 12 Cassette Compartment
- 13 Record Button (● RECORD)
- 14 Playback Button (◀ PLAY)
- 15 Rewind Button (▶▶ REWIND)
- 16 Fast Forward Button (◀◀ FF)
- 17 Stop/Eject Button (■ STOP/EJECT)
- 18 Pause Button (|| PAUSE)

TAPE 1 CONTROLS

- 19 Cassette Compartment
- 20 Playback Button (◀ PLAY)
- 21 Rewind/Review Button (▶▶ REW/REV)
- 22 Fast Forward/Cue Button (◀◀ FF/CUE)
- 23 Stop/Eject Button (■ STOP/EJECT)
- 24 Pause Button (|| PAUSE)



When the tape is caught in the pinch roller, etc. Release the tape by turning the pulley on the motor with the screwdriver in the direction of the arrow.

- 25 Telescopic Antenna
- 26 Handle
- 27 Headphones Jack (PHONES)

When using the headphones, avoid listening to sound at excessive volume levels, because it may injure your ears.

- 28 AC Socket (AC IN ~)
- 29 Battery Compartment

DISASSEMBLY INSTRUCTIONS

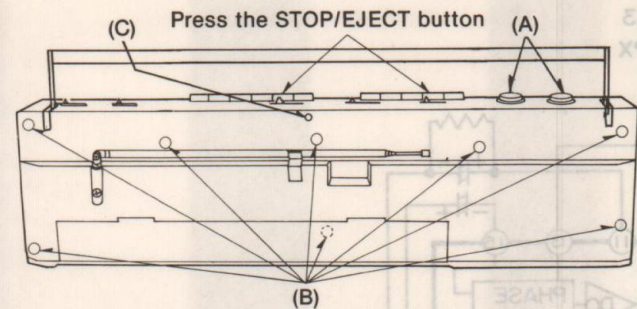


Fig. 1

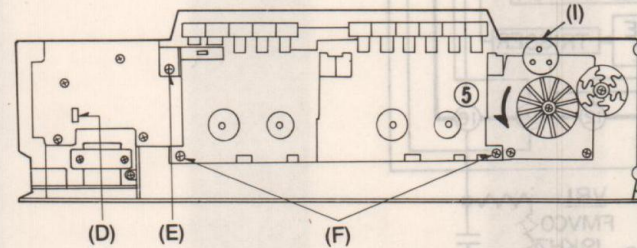


Fig. 2

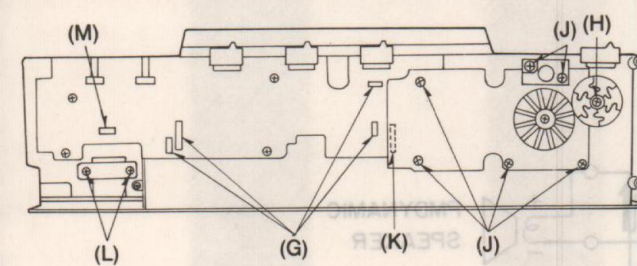


Fig. 3

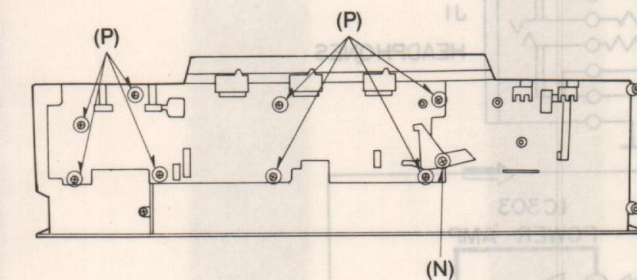


Fig. 4

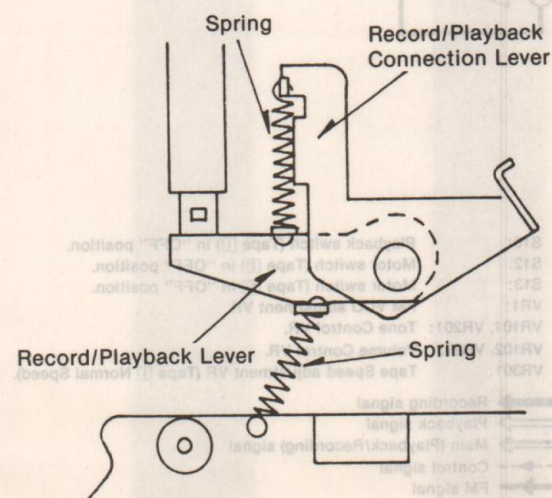


Fig. 5

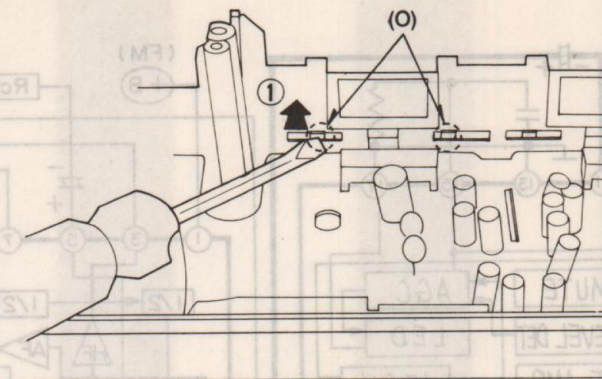


Fig. 6

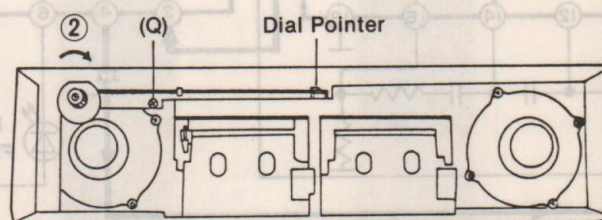


Fig. 7

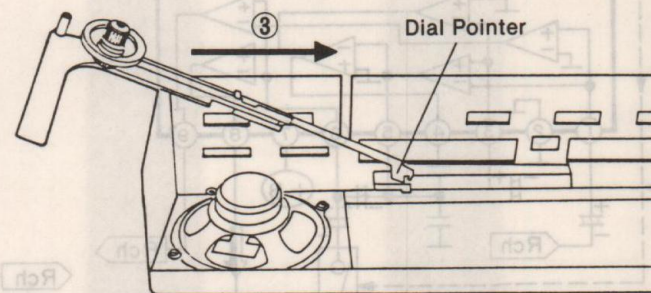


Fig. 8

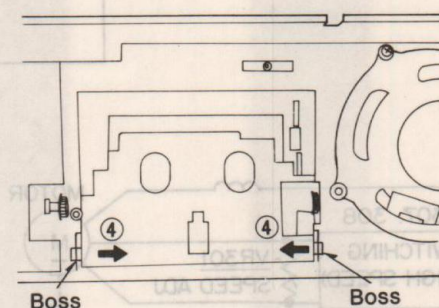
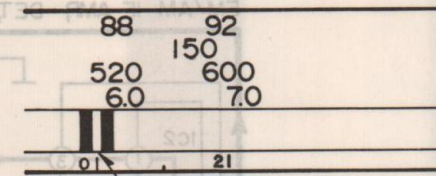


Fig. 9

• Precautions for attachment of front panel (Dial setting point)



Dial Pointer

Fig. 10

1. Line up the dial pointer with the position shown in the figure.
2. Turn the variable capacitor drum all the way in the direction of arrow ⑤. (See Fig. 2)

• Precautions for removing mechanism buttons

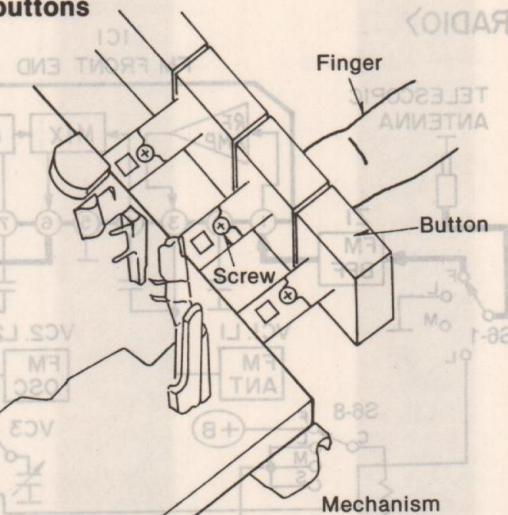


Fig. 11

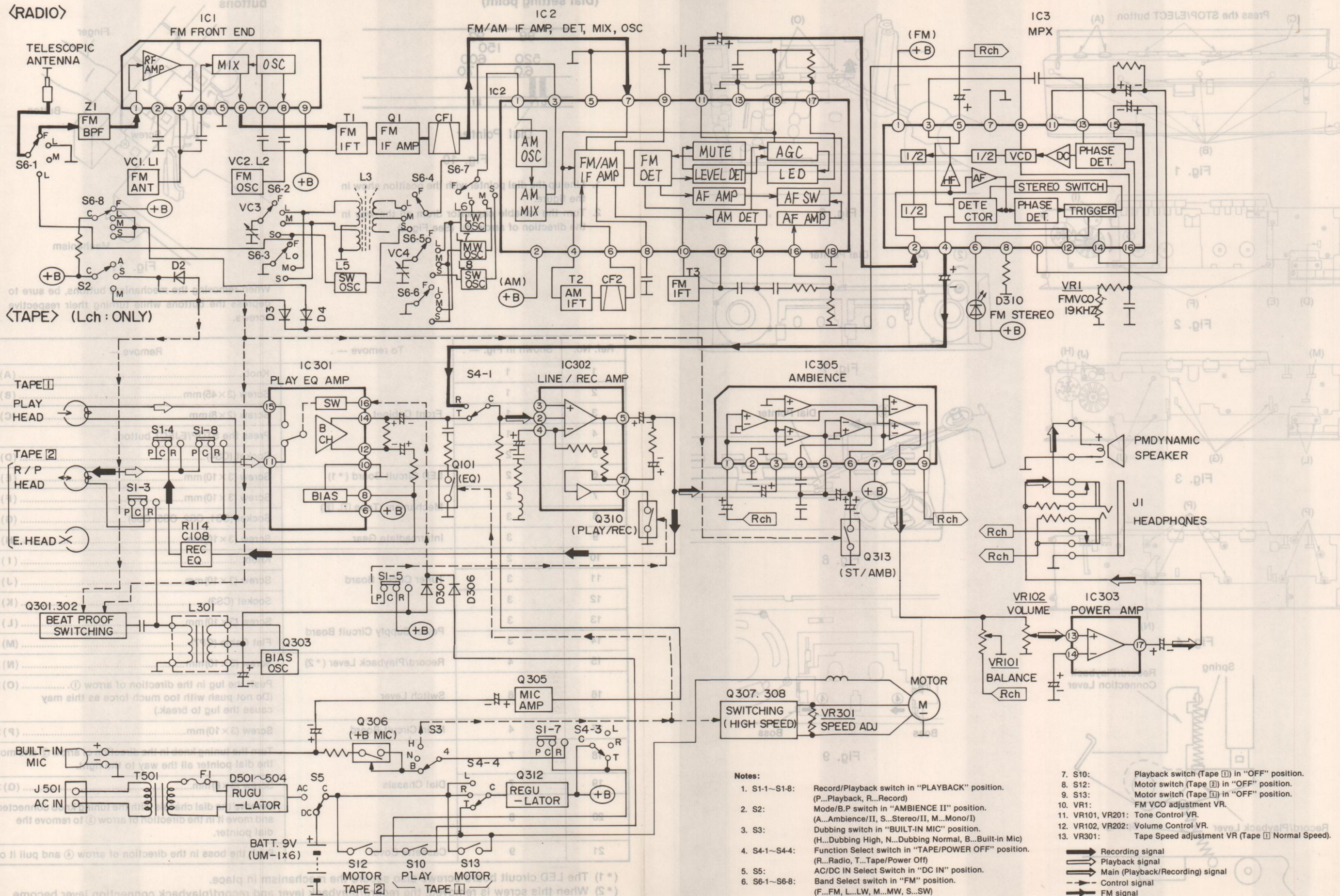
When removing the mechanism buttons, be sure to depress the buttons while turning their respective screws.

Ref. No.	Shown in Fig. —	To remove —	Remove —
1	1	Front Cabinet	Knob..... (A) × 2
2	1		Screw (3 × 45) mm..... (B) × 8
3	1		Screw (2 × 8) mm..... (C) × 1
4	1		Press the STOP/EJECT button.
5	2		Socket (CS4)..... (D) × 1
6	2	LED Circuit Board (* 1)	Screw (3 × 10) mm..... (E) × 1
7	2	Mechanism (Tape ①, ②)	Screw (3 × 10) mm..... (F) × 2
8	3		Socket (CS1, CS2, CS5, CS6)..... (G) × 4
9	3	Intermediate Gear	Screw (3 × 10) mm..... (H) × 1
10	2	Tuner Circuit Board	Knob..... (I) × 1
11	3		Screw (3 × 10) mm..... (J) × 6
12	3		Socket (CS3)..... (K) × 1
13	3	Power Supply Circuit Board	Screw (3 × 10) mm..... (L) × 2
14	3		Flat Cable (CP7)..... (M) × 1
15	4	Record/Playback Lever (* 2)	Screw (3 × 10) mm..... (N) × 1
16	6	Switch Lever	Push the lug in the direction of arrow ①. (O) × 2 (Do not push with too much force as this may cause the lug to break.)
17	4	Main Circuit Board	Screw (3 × 10) mm..... (P) × 8
18	7	Dial Chassis	Turn the tuning knob in the direction of arrow ② and move the dial pointer all the way to the right.
19	7		Screw (3 × 8) mm..... (Q) × 1
20	8		Remove the dial chassis with the tuning knob connected and move it in the direction of arrow ③ to remove the dial pointer.
21	9	Cassette Cover	Push the boss in the direction of arrow ④ and pull it off.

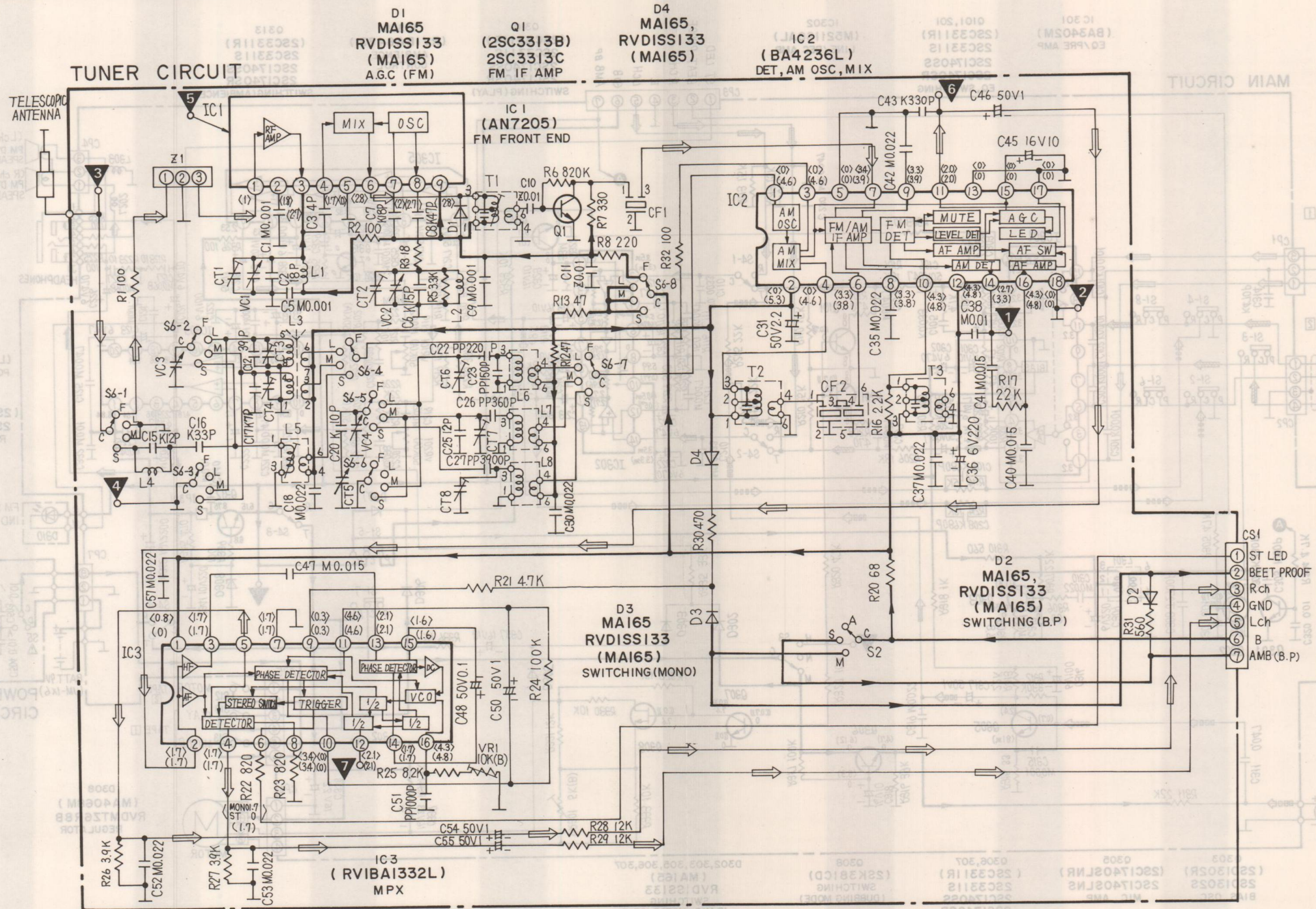
(* 1) The LED circuit board screws also secure the mechanism in place.

(* 2) When this screw is removed, the record/playback lever and record/playback connection lever become separate, so attach them as shown in Fig. 5 in assembly.

BLOCK DIAGRAM



SCHEMATIC DIAGRAM (for Tuner Section)



Notes:

- S2: Mode/B.P switch in "AMBIENCE/II" position.
(A...AMBIENCE/II, S...STEREO/II, M...MONO/I)
- S6-1~S6-8: Band Select switch in "FM" position.
(F...FM, L...LW, M...MW, S...SW)
- VR1: FM VCO adjustment VR.

- DC voltage measurements are taken with electronics voltmeter from negative terminal of battery.
() ...FM position, () ...AM position
- Described in schematic diagram are two types of numbers; the supply parts number and production parts number for transistors and diodes.

One type number is used for supply parts number and production parts number which they are identical.

e.g. Q1

2SC2412NRTB, LNSTB— Production parts number
[2SC2412]— Supply parts number

- The mark (▼) shows test point. e.g. ▼=test point 1.

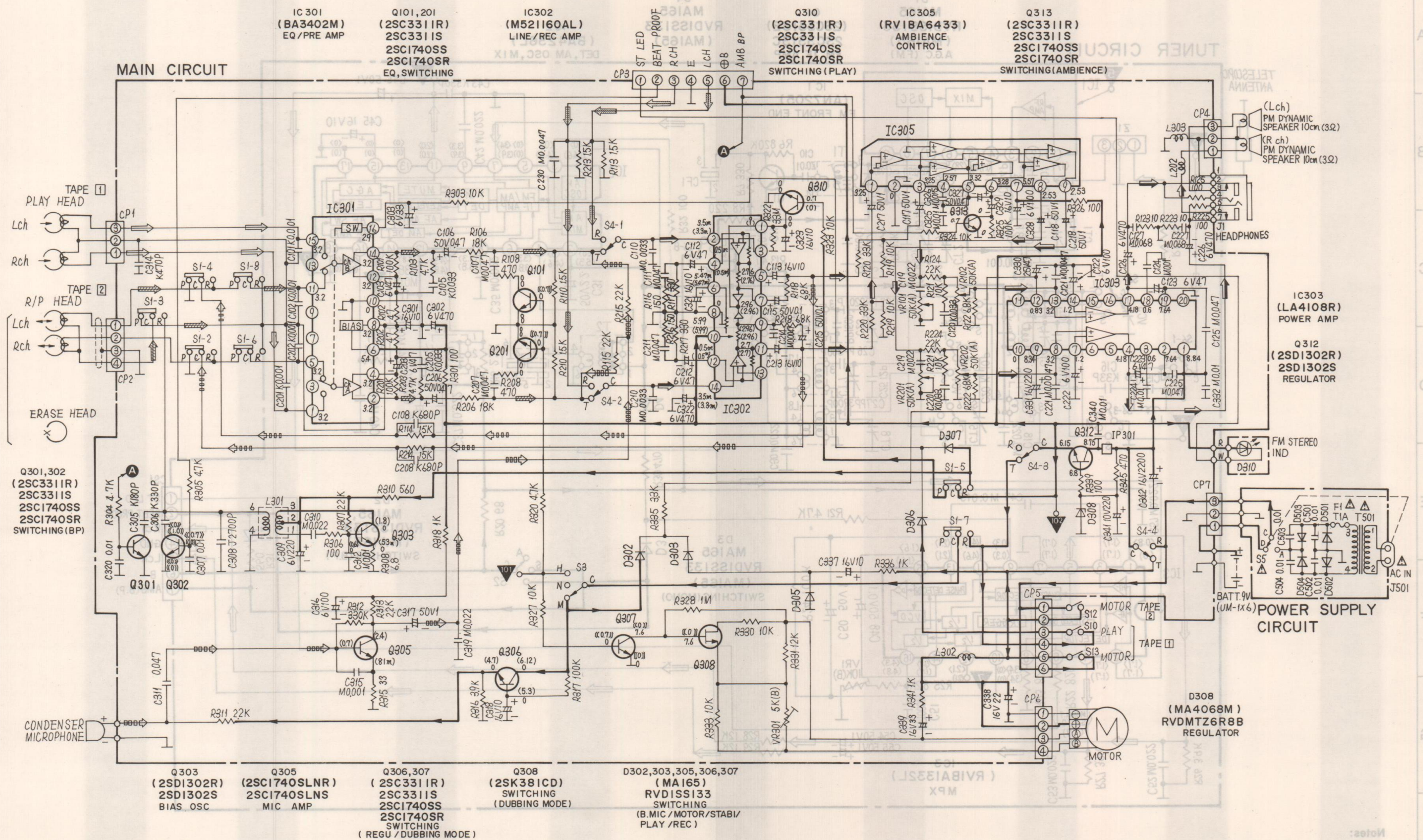
- The supply parts number is described alone in the replacement parts list.

• This schematic diagram may be modified at any time with the development of new technology.

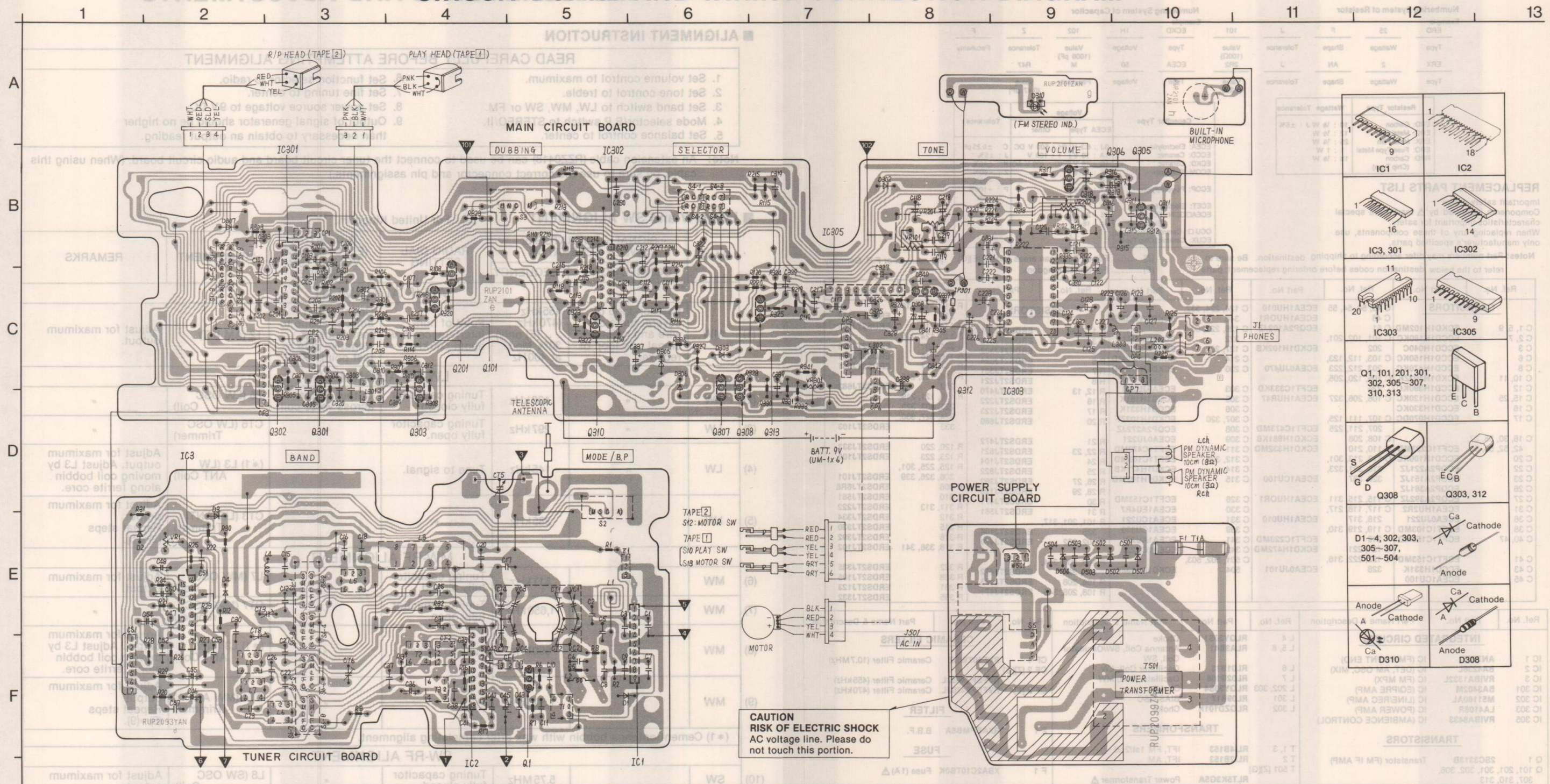
→ FM Signal

→ +B Voltage Line

SCHEMATIC DIAGRAM (for Main Section)



CIRCUIT BOARD AND WIRING CONNECTION DIAGRAM



Notes: (for Schematic Diagram)

1. S1-1~S1-8: Record/Playback switch in "PLAYBACK" position.
(P...Playback, R...Record)
2. S3: Dubbing switch in "BUILT-IN MIC" position.
(H...Dubbing High, N...Dubbing Normal, B...Built-in Mic)
3. S4-1~S4-4: Function Selector switch in "TAPE/POWER OFF" position.
(R...Radio, T...Tape/Power Off)
4. S5: AC/DC IN Select switch in "DC IN" position.
5. S10: Playback switch (Tape [1]) in "OFF" position.
6. S12: Motor switch (Tape [2]) in "OFF" position.
7. S13: Motor switch (Tape [1]) in "OFF" position.
8. VR101, VR201: Tone control VR.
9. VR102, VR202: Volume control VR.
10. VR301: Tape Speed adjustment VR (TAPE [1] Normal speed).
11. DC voltage measurement are taken with electronics voltmeter from negative terminal of battery.
No mark...Playback position, ()...Recording position,
()...BP (I) position, ()...B.P (II) position,
()...Normal speed dubbing mode,
()...High speed dubbing mode.
12. Battery current:
No signal 96 mA
Maximum output
Radio 747 mA

13. Described is schematic diagram are two types of numbers; the supply parts number and production parts number for transistors and diodes.
One type number is used for supply parts number and production parts number which they are identical
e.g. Q1
2SC2412NRTB, LNSTB— Production parts number
[2SC2412]— Supply parts number
14. The mark (▼) shows test point. e.g. ▼=test point 1.
15. Important safety notice
Components identified by ▲ mark have special characteristics important for safety.
When replacing any of these components, use only manufacturer's specified parts.
16. The supply parts number is described alone in the replacement parts list.

• This schematic diagram may be modified at any time with the development of new technology.

CR AND ELECTRICAL REPLACEMENT PARTS LIST

ELECTRICAL PARTS LIST

Numbering System of Resistor

Example	ERD	25	F	J	101
Type	Wattage	Shape	Tolerance	Value (1000)	2R2
ERX	2	AN	J		
Type	Wattage	Shape	Tolerance	Value (2.20)	

Resistor Type	Wattage	Tolerance
ERD: Carbon	10 : 1/8 W J : ±5%	
ERG: Metal Film	12 : 1/2 W	
ERX: Metal Film	25 : 1/4 W	
ERO: Fuse Type Metal	1 : 1 W	
RRD: Carbon (Chip Type)	18 : 1/8 W	

Numbering System of Capacitor

Example	ECKD	1H	102	Z	F
Type	Voltage	Value (1000 pF)	Tolerance	Peculiarity	
ECEA	50	M	R47		
Type	Voltage	Peculiarity	Value (0.47 μF)		

Capacitor Type	Voltage		Tolerance
	ECEA Type	Other	
ECEA: Electrolytic	0J : 6.3 V	2H : 500 V DC	C : ±0.25 pF
ECCD: Ceramic	1A : 10 V	1 : 100 V	J : ±5%
ECKD: Ceramic	1C : 16 V	DKC : 400 V AC	K : ±10%
EQCM: Polyester	1E : 25 V		Z : +80% -20%
	1H : 50 V		
ECQP: Polypropylene	1V : 35 V		P : +100% -0%
	50 : 50 V		
ECET: Electrolytic			
ECEA□□□□: Non Polar	25 : 25 V		
Electrolytic	16 : 16 V		
QCU □: Ceramic (Chip Type)			
ECUX: Ceramic (Chip Type)			

REPLACEMENT PARTS LIST

Important safety notice
Components identified by Δ mark have special characteristics important for safety.
When replacing any of these components, use only manufacturer's specified parts.

Notes: Part numbers may differ according to shipping destination. Be sure to refer to the below destination codes before ordering replacement parts.

[Z]..... For all European areas except [E][G]. [G]..... For F.R. Germany.
[E]..... For United Kingdom.

Ref. No.	Part No.	Ref. No.	Part No.	Ref. No.	Part No.	Ref. No.	Part No.	Ref. No.	Part No.
CAPACITORS					RESISTORS				
C 1, 5, 9	ECKD1H102MD	C 46, 50, 54, 55	ECEA1HU010	C 124, 224, 332, 340	ECKD1H103MD	R 110, 113, 210, 213	ERDS2TJ152		
C 2, 7	ECCD1H180KC	C 48	ECEA1HU0R1	C 126, 226, 302, 322	ECQP2A102JZ	R 114, 214	ERDS2TJ153		
C 3	ECCD1H040C	C 51	ECKD1H102KB	C 127, 227	ECEA0JU471	R 115, 124, 215, 224, 307	ERDS2TJ223		
C 6	ECCD1H150KC	C 101, 102, 201, 202	ECEA0JU470	C 128	ECCD1H472MD	R 116, 216	ERDS2TJ151		
C 8	ECCD1H470KC	C 103, 112, 123, 203, 212, 223	ECFT1C333KD	C 210	ECKD1H472MD	R 117, 217	ERDS2TJ331		
C 10, 11	ECCD1H103ZF	C 105, 120, 205, 220	ECEA1HUR47	C 303	ECEA0JU330	R 118, 122, 218, 222	ERDS2TJ682		
C 12	ECCD1H390KC	C 106, 206, 327	ECFT1C473MD	C 305	ECCD1H181K	R 119, 121, 219, 221, 303, 323, 324, 327, 330, 333	ERDS2TJ103		
C 15, 25	ECCD1H120KC	C 107, 111, 125, 207, 211, 225	ECCD1H331K	C 306	ECCD1H103ZF	R 120, 220	ERDS2TJ333		
C 16	ECCD1H330KC	C 108, 208	ECCD1H681KB	C 307, 320	ECQP2A272JZ	R 123, 223	ERDS2TJ100		
C 17	ECCD1H070DC	C 110, 210	ECCD1H332MD	C 308	ECEA0JU221	R 125, 225, 301, 306, 326, 339	ERDS2TJ101		
C 18, 30, 35, 37, 42, 52, 53, 57	ECFT1C223MD	C 113, 213, 301, 318, 321, 323, 329, 337	ECEA1CU100	C 309	ECFT1C473MD	R 126, 226	ERDS2TJ123		
C 20	ECCD1H100KC	C 115, 215, 311	ECEA1HU0R1	C 311	ECFT1C103MD	R 128, 228	ERDS2TJ471		
C 22	ECQP2A221JZ	C 117, 118, 217, 218, 317	ECEA1HU010	C 312, 325	ECCD1H471KB	R 130	ERDS2TJ561		
C 23	ECQP2A151JZ	C 119, 219, 310, 319	ECFT1C223MD	C 314	ECCD1H102MD	R 101, 201, 317, 325	ERDS2TJ104		
C 26	ECQP2A361JZ	C 121, 221	ECCD1H472MD	C 315	ECEA1AU221	R 102, 202	ERDS2TJ470		
C 27	ECQP2A392JZ	C 122, 222, 316, 328	ECEA0JU101	C 316	ECEA1CU222	R 103, 203, 304, 305, 320	ERDS2TJ472		
C 31	ECEA1HU2R2			C 326	ECFT1C153MD	R 106, 206	ERDS2TJ183		
C 36	ECEA0JU221			C 330	ECEA1EU4R7	R 108, 208, 345	ERDS2TJ471		
C 38	ECFT1C103MD			C 331	ECEA1CU221				
C 40, 47	ECFT1C153MD			C 339	ECEA1CU330				
C 41	ECFT1C153MD			C 341	ECEA1AU221				
C 43	ECCD1H331K			C 342	ECEA1CU222				
C 45	ECEA1CU100			C 501, 502, 503, 504	ECKD1H103ZF				

Ref. No.	Part No.	Part Name & Description	Ref. No.	Part No.	Part Name & Description	Ref. No.	Part No.	Part Name & Description
INTEGRATED CIRCUITS			CERAMIC FILTERS			FILTER		
IC 1	AN7205	IC (FM FRONT END)	L 4	RLQY30S1	Choke	CF 1	RVF107WDZ	Ceramic Filter (10.7MHz)
IC 2	BA4236L	IC (DET, AM OSC, MIX)	L 5, 8	RLA3B41	Antenna Coil, SW/Oscillator Coil, SW	CF 2 [Z][G]	RVFSFZ455JL	Ceramic Filter (455kHz)
IC 3	RVIBA1332L	IC (FM MPX)	L 6	RL01B13	Oscillator Coil, LW	CF 2 [E]	RVFSFZ470JL	Ceramic Filter (470kHz)
IC 301	BA3402M	IC (EQ/PRE AMP)	L 7	RL02B108	Oscillator Coil, MW	FUSE		
IC 302	M51160AL	IC (LINE/REC AMP)	L 202, 303	RLQY30S4	Choke	Z 1	RXABPMB6A	B.B.F.
IC 303	LA4108R	IC (POWER AMP)	L 301	RL09B17	BIAS OSC	SWITCHES		
IC 305	RVIBA6433	IC (AMBIENCE CONTROL)	L 302	RLQZD101K	Choke	S 1	RSS4H04Z	Slide Switch (Band, Tuner Section)
TRANSISTORS			TRANSFORMERS			S 1	RSH2H03W	REC/PLAY
Q 1	2SC3313B	Transistor (FM IF AMP)	T 1, 3	RLI4B153	IFT, FM 1st/2nd	S 2	RSS3A15Z	Slide Switch (MONO/ST/AMB Tuner Section)
Q 101, 201, 301, 302, 306, 307, 310, 313	2SC3311R	Transistor (EQ SWITCHING, SWITCHING)	T 2	RLI2B153	IFT, AM	S 3	RSS3A15Z	Slide Switch (Dubbing)
Q 303, 312	2SD1302R	Transistor (BIAS OSC, REGULATOR)	T 501 [Z][G]	RLT5K3G5A	Power Transformer Δ	S 4	RSS2D24Y	Slide Switch (Function Selector)
Q 305	2SC1740SLNR	Transistor (MIC AMP)	T 501 [E]	RLT5K3A4A	Power Transformer Δ	S 10	RFA42Z	Leaf Switch (Play)
Q 308	2SK381CD	Transistor (SWITCHING)	VARIABLE CAPACITORS			S 12, 13	RFA49Z	Leaf Switch (Motor)
DIODES & RECTIFIERS			TRIMMER CONDENSERS			JACKS		
D 1, 2, 3, 4	MA165	Diode (SWITCHING)	VC 1, 2, 3, 4 (CT1, 2, 4, 7)	RCV4RC2V2K	Variable Capacitor	J 1	RJJD7S2Z	Jack, Headphone
D 302, 303, 305, 306, 307	MA165	Diode (SWITCHING)	CT 3, 6, 8	RCVCTC20U	Trimmer	J 501 [Z][G]	RJJA6Z	Jack, AC IN (with S5) Δ
D 308	MA4068M	Diode (REGULATOR)	CT 5	RCVMFTPC7B	Trimmer	J 501 [E]	RJJA7Z	Jack, AC IN (with S5) Δ
D 310	LN012301PH	LED, FM ST/TV	VARIABLE RESISTORS			IC PROTECTOR		
D 501, 502, 503, 504	RVD1SR35	Diode (RECTIFIER)	VR 1	EVND4AA00B14	FM VCO Adjustment VR, 10kΩ (B)	IP 301	RAHICPN5	IC Protector
COILS			VR 101, 201	EWCUHAF15A54	Tone Control, 50kΩ (A)			
L 2 [Z][E]	RLD4Y53	Oscillator Coil, FM	VR 102, 202	EWCUHAF10A54	Volume Control, 50kΩ (A)			
L 2 [G]	RL04N214	Oscillator Coil, FM	VR 301	EVND4AA00B53	Tape Speed Adjustment VR, 5kΩ (B)			
L 3	RLF6W9	Antenna Coil, MW						

MEASUREMENTS AND ADJUSTMENTS

ALIGNMENT INSTRUCTION

READ CAREFULLY BEFORE ATTEMPTING ALIGNMENT

1. Set volume control to maximum.
2. Set tone control to treble.
3. Set band switch to LW, MW, SW or FM.
4. Mode selector/B.P switch to STEREO/II.
5. Set balance control to center.
6. Set function selector to radio.
7. Set fine tuning to center.
8. Set power source voltage to 9V DC.
9. Output of signal generator should be no higher than necessary to obtain an output reading.

Note: An extension cable (RZZ0418) can be used to connect the tuner circuit board and audio circuit board. (When using this cable, be sure to use the correct connector and pin assignments.)

LW, MW and SW ALIGNMENT

[E]... For United Kingdom.

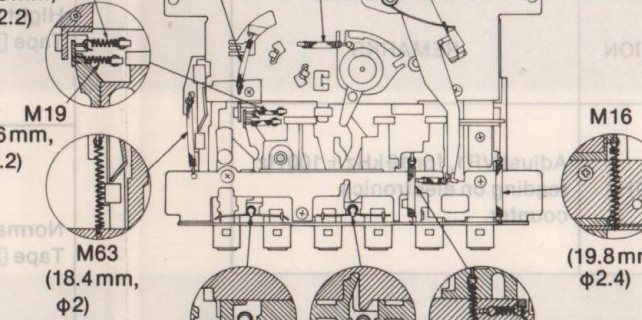
BAND	SIGNAL GENERATOR or SWEEP GENERATOR	RADIO DIAL SETTING	INDICATOR (ELECTRONICS VOLTMETER or SCOPE)	ADJUSTMENT	REMARKS
AM-IF ALIGNMENT					
(1) MW	Fashion loop of several turns of wire and radiate signal into loop of receiver.	455kHz (470kHz ...[E] only) 30% Mod. at 400 Hz	Point of non-interference. (on/about 600kHz)	Connect vert. amp. of scope to test point ▼. Negative side to test point ▼.	T2 (AM IFT) Adjust for maximum output.
LW-RF ALIGNMENT					
(2) LW	"	136kHz	Tuning capacitor fully closed.	Output meter across voice coil.	L6 (LW OSC Coil) "
(3) LW	"	297kHz	Tuning capacitor fully open.	"	CT6 (LW OSC Trimmer) "
(4) LW	"	145kHz	Tune to signal.	"	(* 1) L3 (LW ANT Coil) Adjust for maximum output. Adjust L3 by moving coil bobbin along ferrite core.
(5) LW	"	285kHz	"	"	CT3 (LW ANT Trimmer) Adjust for maximum output. Repeat steps (2)~(5).
MW-RF ALIGNMENT					
(6) MW	"	511kHz	Tuning capacitor fully closed.	"	L7 (MW OSC Coil) Adjust for maximum output.
(7) MW	"	1,650 kHz	Tuning capacitor fully open.	"	CT7 (MW OSC Trimmer) "
(8) MW	"	550kHz	Tune to signal.	"	(* 1) L3 (MW ANT Coil) Adjust for maximum output. Adjust L3 by moving coil bobbin along ferrite core.
(9) MW	"	1,500kHz	"	"	CT4 (MW ANT Trimmer) Adjust for maximum output. Repeat steps (6)~(9).
(* 1) Cement antenna bobbin with wax after completing alignment.					
SW-RF ALIGNMENT					
(10) SW	Connect to test point ▼ through ceramic capacitor (10pF). Negative side to test point ▼.	5.75 MHz	Tuning capacitor fully closed.	"	L8 (SW OSC Coil) Adjust for maximum output.
(11) SW		18.8 MHz	Tuning capacitor fully open.	"	CT8 (SW OSC Trimmer) "
(12) SW		5.9 MHz	Tune to signal.	"	L5 (SW ANT Coil) Adjust for maximum output. Repeat steps (10)~(12).

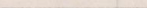
Description

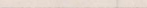
— 18 —

● **SPRING LOCATION (Rear View)**

- M115 (14.5mm, $\Phi 2.2$) M40



Ref NO.	M12	M14	M16	M19	M21	M24	M30	M36	M40	M63	M92	M99	M101	M106	M115	M130	M138
	5.1 x 3.2		198 x 2.4	106 x 2.2	83 x 2.2				99 x 2.2	18.4 x 2	14.5 x 2.5		149 x 2.7	9.8 x 2.3	14.5 x 2.2	15.5 x 2.7	
		10.5 x 10.5				10 x 10	5 x 18	4 x 17				25 x 25					8 x 6

Ref NO.	M12	M14	M16	M19	M21	M24	M30	M36	M40	M63	M92	M99	M101	M106	M115	M130	M138
	5.1 x 3.2		198 x 2.4	106 x 2.2	83 x 2.2				99 x 2.2	18.4 x 2	14.5 x 2.5		149 x 2.7	9.8 x 2.3	14.5 x 2.2	15.5 x 2.7	
		10.5 x 10.5				10 x 10	5 x 18	4 x 17				25 x 25					8 x 6

GAD **Z E G** Printed in Japan (H)
H.M/(A.T)

Service Manual

Supplement

Radio Cassette

RX-FW17
RX-FW17L
RX-FW17F

Please file and use this supplement manual together with the original service manuals for the below models.

Model No.	Order No.
RX-FW17	☐ L GAD8606558A3
RX-FW17L	☐ Z ☐ E ☐ G GAD8602511C2
RX-FW17L	☐ I GAD8607428A2
RX-FW17L	☐ F GAD8603524A2
RX-FW17F	☐ X ☐ XC GAD8604545C3

Color

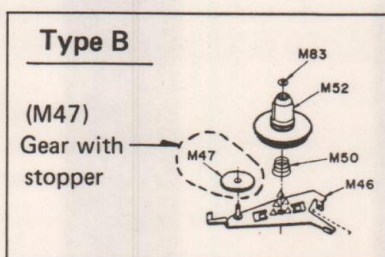
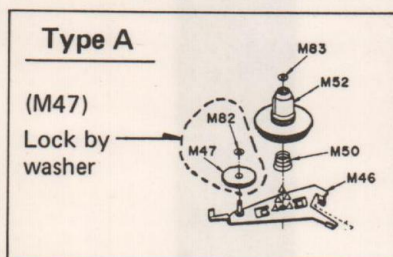
(K) ... Black Type
(R) ... Red Type
(S) ... Silver Type
(W) ... White Type

Area

Country Code	Area	Color
☐ Z	All European areas except ☐ E ☐ G	(K)
☐ E	United Kingdom	(R)
☐ G	F.R. Germany	(S)
☐ I	Italy and Finland	(W)
☐ F	France	
☐ X	Asia, Latin America, Middle East and Africa	(K)
☐ XC	Saudi Arabia	(R)
☐ L	Australia	(W)

MODIFICATION OF TAKE UP ROLLER GEAR

- There are two types (A and B) of the take-up roller gears (M47).
- When replacing the gear (M47), other types (A and B) whose part number are RFKVXFM25M.



Note: Attach the washer supplied with the gear (RFKVXFM25M).



REPLACEMENT PARTS LIST

Ref. No.	Part Name & Description	Change of Part No.		Remarks
		ORIGINAL	➡ NEW	
MECHANISM				
M47	GEAR Ass'y	RFG61Z	RFKVXFM25M	