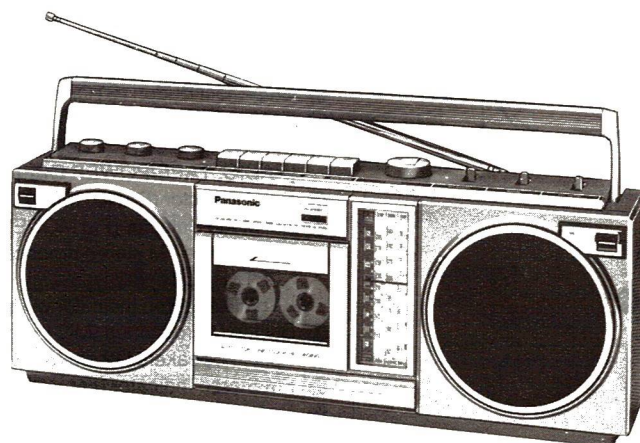


Service Manual

Radio Cassette
RX-4930L
 (Metallic Brown)
 (Silver)

FM-LW-MW-SW
 Stereo Radio Cassette Recorder



This is the Service Manual
 for the following areas.

- Z** ...For all European
 areas except United
 Kingdom and Germany.
- E** ...For United Kingdom.
- F** ...For France.
- I** ...For Italy.

■ SPECIFICATIONS

General:

Power Requirement: AC; **Z**, **F**, **I** ...220 v, 50 Hz
E ...240 V, 50 Hz (only for U.K.)
 Battery; 9 V (Six "D" Size Flashlight
 Batteries)
 (Panasonic UM-1 or equivalent)
 Power Consumption: 13 W (AC only)
 Power Output: 8 W (4 W×2)...RMS (max.)
 8 W (4 W×2)...MPO
 5 W (2.5 W×2)...DIN (for Sweden)
 Speaker: 12 cm (5") PM Dynamic Speaker (3Ω)
 Output: HEADPHONES; 32Ω
 Dimensions: 475 mm(W)×183 mm(H)×132 mm(D)
 (18¹/₁₆×7³/₁₆×5³/₁₆)"
 Weight: 2.7 kg (5 lb. 15 oz.) without batteries

Radio Section:

Radio Frequency
 Range: FM; 87.5~108 MHz
 LW; 150~285 kHz (2000~1060 m)
 MW; 520~1610 MHz (577~186 m)
 SW; 5.9~18 MHz (50.8~16.7 m)
 Intermediate Frequency: FM; 10.7 MHz
Z, **F**, **I** ...AM (LW/MW/SW); 455 kHz
E ...AM (LW/MW/SW); 470 kHz
 Sensitivity: FM; 3.5μV (−3 dB Limit sense)
 LW; 141μV/m/50 mW output
 MW; 112μV/m/50 mW output
 SW; 8.9μV/50 mW output

Tape Deck Section:

Frequency Response: 80~8,000 Hz (with normal tape)
 Recording system: DC bias, MAGNET erase
 Tape Speed: 4.8 cm/s, (1⁷/₈ ips)
 Program Time: 1 hour with C-60 cassette tape
 Track System: 4-track 2 channel stereo recording and
 playback

Design and specifications are subject to change without notice.

Panasonic

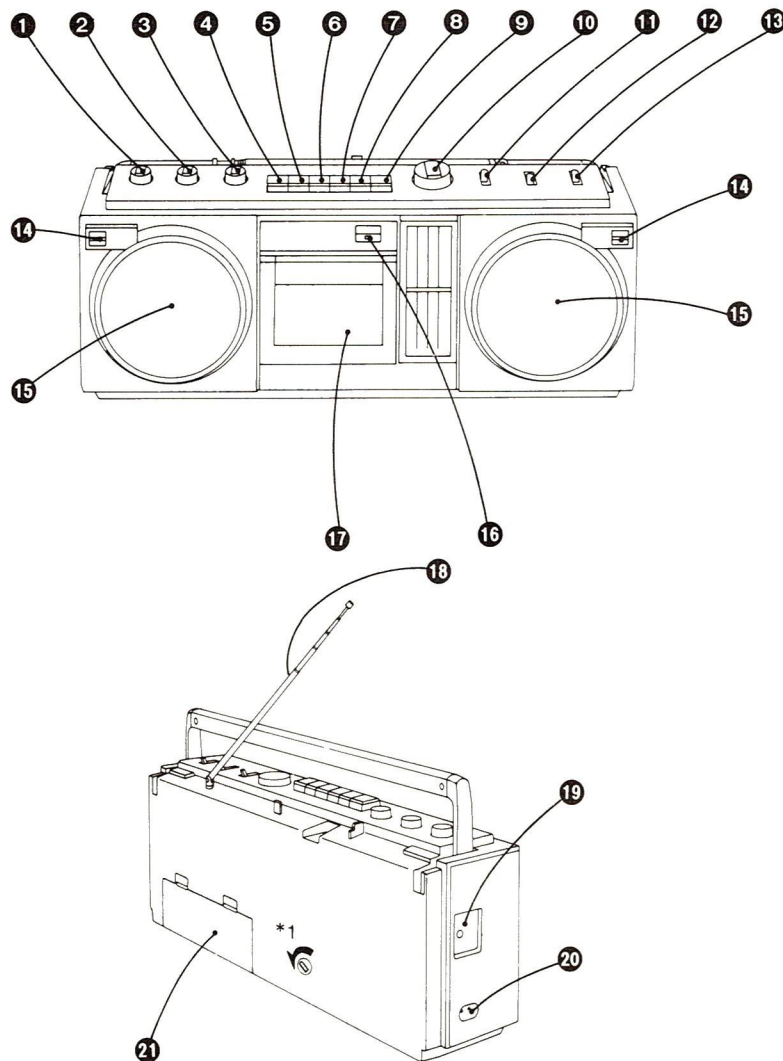
Matsushita Electric Trading Co., Ltd.
 P.O. Box 288, Central Osaka Japan

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• LOCATION OF CONTROLS AND COMPONENTS	2
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LOCATION OF CONTROLS AND COMPONENTS



- 1 Tone Control (TONE)
- 2 Balance Control (BALANCE)
- 3 Volume Control (VOLUME)
- 4 Pause Button (PAUSE)
- 5 Fast Forward Button (FF)
- 6 Rewind Button (REWIND)
- 7 Playback Button (PLAY)
- 8 Record Button (RECORD)
- 9 Stop/Eject Button (STOP/EJECT)
- 10 Tuning Control (TUNING)
- 11 Function Selector (SELECTOR)
[RADIO, TAPE/POWER OFF]
- 12 Band Selector (BAND) [FM STEREO, FM, AM]
- 13 FM Mode Selector (FM MODE)
• To receive FM stereo broadcasts, set the FM Mode Selector to "STEREO".
The FM Stereo Indicator will light during stereo broadcasts.
- 14 Built-in Microphones (MIC)
- 15 Built-in Speakers [12 cm (5") 3Ω]
- 16 FM Stereo Indicator (FM STEREO)
- 17 Cassette Compartment
- 18 Telescopic Antenna
- 19 Headphone Jack (PHONES) [M3/Ø3.5, 32Ω]
- 20 AC Socket (AC IN ~)
- *1 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.
- 21 Battery Compartment

DISASSEMBLY INSTRUCTIONS

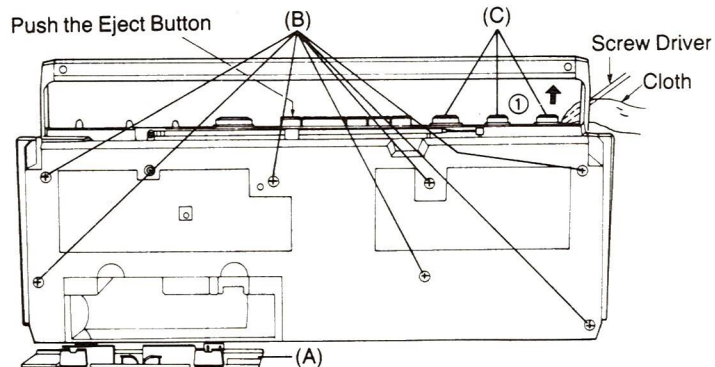


Fig. 1

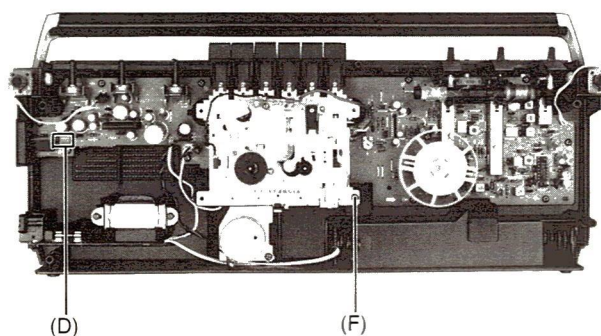


Fig. 2

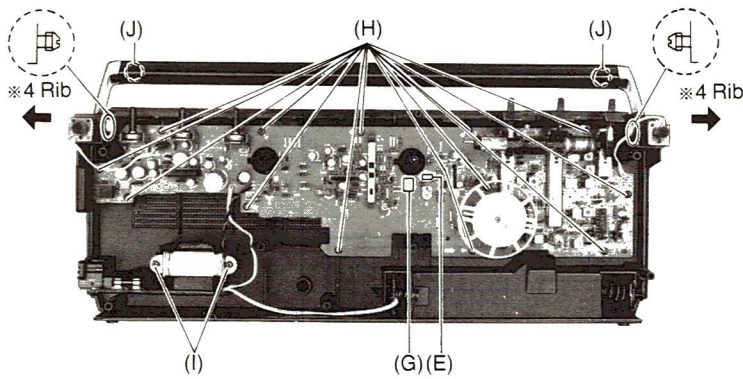


Fig. 3

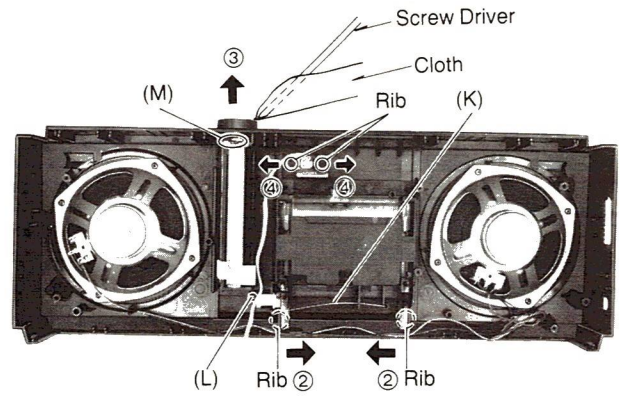
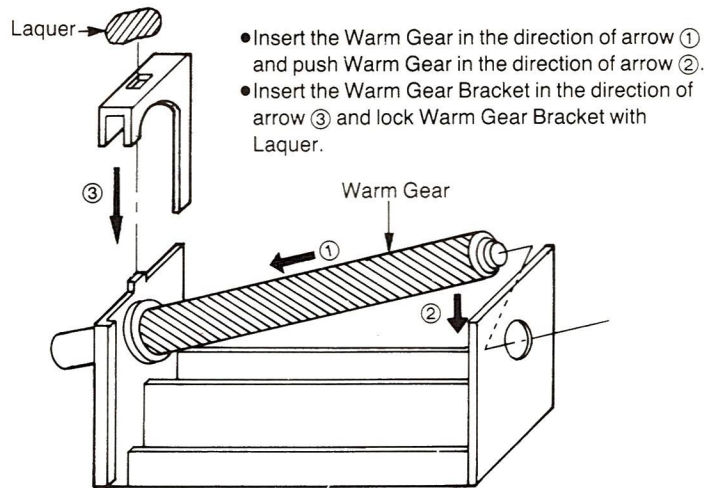


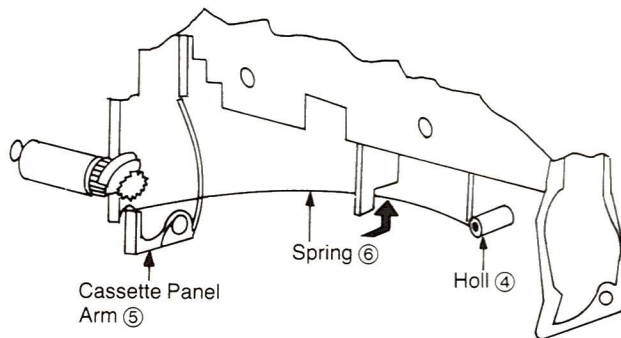
Fig. 4

■ HOW TO REPLACE

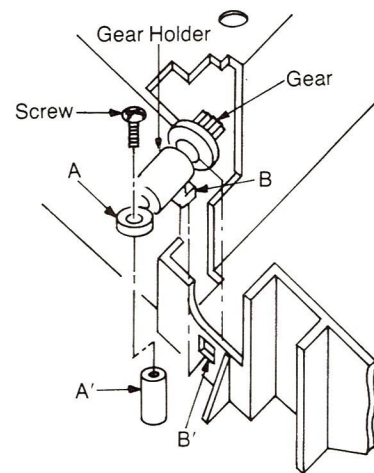
(Warm Gear)



(Cassette Spring)



(Gear and Gear Holder)



- During installation simultaneously fit in A and A', B and B'.
- Fix the Gear Holder by the screw.

- Insert the spring into the holi ④ and hook to the Cassette Panel Arm ⑤.
- Push the Spring in the direction of arrow ⑤ and hook to the rib.

Ref. No.	Procedure	Shown in Fig.—	To remove—	Remove—
1	1~6	1	Front Cabinet (*1, 2)	Battery Cover (A)×1
2		1		Screw (3×35) (B)×7
3		1		Remove the knob in the direction of arrow ① (C)×3
4		1		Push the Eject Button
5		2		Socket (D)×1
6		3		Socket (E)×1
7	1~8	2	Mechanism	Screw (3×12) (F)×1
8		3		Socket (G)×1

Ref. No.	Procedure	Shown in Fig.—	To remove—	Remove—
9	1~9	3	Main Circuit Board	Screw (3×12) (H)×12
10	1~6, 10	3	Power Transformer	Screw (3×12) (I)×2
11	1~6, 11	3	Handle (※3)	Screw (3×8) (J)×2
12	1~6, 12~14	4	Cassette Panel	Spring (K)×1
13		4		Screw (3×12) (L)×1
14		4		To remove Cassette Panel, push the rib in the direction of arrow ②.
15	1~6, 15, 16	4	Warm Gear	Remove the adhesion by Knife (M)
16		4		Remove the knob in the direction of arrow ③.
17	1~6, 17	4	LED Circuit Board	Remove the LED Circuit Board in the direction of arrow ④.

※1. Turn the dial drum to fully counter-clockwise.

※2. Turn the tuning shaft to fully counter-clockwise.

※3. To remove the handle, first remove two screw (J) and open the handle arm as shown in direction of the arrow in Fig. 3.

※4. To remove the handle arm, cut the rib of handle arm.

MEASUREMENTS AND ADJUSTMENTS

■ ALIGNMENT INSTRUCTIONS

READ CAREFULLY BEFORE ATTEMPTING ALIGNMENT

- Set volume control to maximum.
- Set tone control to maximum.
- Set bass and treble control to center.
- Set band switch to LW, MW, SW or FM.
- Set balance control to center.
- Set function selector to radio.
- Set power source voltage to 9 V DC.
- Output of signal generator should be no higher than necessary to obtain an output reading.

■ LW, MW and SW ALIGNMENT

BAND	SIGNAL GENERATOR or SWEEP GENERATOR		RADIO DIAL SETTING	INDICATOR (ELECTRONICS VOLTMETER or SCOPE)	ADJUSTMENT	REMARKS
	CONNECTIONS	FREQUENCY				
AM-IF ALIGNMENT						
(1)	MW	Fashion loop of several turns of wire and radiate signal into loop of receiver.	455 kHz 30% Mod. at 400 Hz	Point of non-interference. (on/ about 600 kHz)	Output meter across voice coil.	T3 (AM IFT) Adjust for maximum output.
LW-RF ALIGNMENT						
(2)	LW	"	136 kHz	Tuning capacitor fully closed.	"	L8 (LW OSC Coil) "
(3)	LW	"	297 kHz	Tuning capacitor fully open.	"	CT5 (LW OSC Trimmer) "
(4)	LW	"	145 kHz	Tune to signal.	"	(• 1) L5 (LW ANT Coil) Adjust for maximum output. Adjust L5 by moving coil bobbin along ferrite core.
(5)	LW	"	285 kHz	"	"	CT3 (LW ANT Trimmer) Adjust for maximum output. Repeat steps (2)~(5).
MW-RF ALIGNMENT						
(6)	MW	"	511 kHz	Tuning capacitor fully closed.	"	L9 (MW OSC Coil) Adjust for maximum output.
(7)	MW	"	1,650 kHz	Tuning capacitor fully open.	"	CT6 (MW OSC Trimmer) "
(8)	MW	"	550 kHz	Tune to signal.	"	(• 1) L6 (MW ANT Coil) Adjust for maximum output. Adjust L6 by moving coil bobbin along ferrite core.
(9)	MW	"	1,500 kHz	"	"	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 ❶ through ceramic capacitor (10 pF) Negative side to test point ❷.	5.75 MHz	Tuning capacitor fully closed.	"	L10 (SW OSC Coil) Adjust for maximum output.
(11)	SW		18.8 MHz	Tuning capacitor fully open.	"	CT7 (SW OSC Trimmer) "
(12)	SW		5.9 MHz	Tune to signal.	"	L7 (SW ANT Coil) Adjust for maximum output. Repeat steps (10)~(12).

■ FM ALIGNMENT

FM ALIGNMENT

BAND	SIGNAL GENERATOR or SWEEP GENERATOR		RADIO DIAL SETTING	INDICATOR (ELECTRONICS VOLTMETER or SCOPE)	ADJUSTMENT	REMARKS
	CONNECTIONS	FREQUENCY				
FM-IF ALIGNMENT						
(1)	FM	High side thru. 0.001 μ F to test point ∇ . Negative side to test point ∇ .	10.7 MHz (SWP.)	Point of non-interference. (on/ about 90 MHz)	Connect vert. amp. of scope to test point ∇ . Negative side to test point ∇ .	T1 (FM 1st IFT) Adjust for maximum amplitude. (Refer to fig. 3).
(2)	FM	"	"	"	"	T2 (FM 2nd IFT) Adjust for maximum amplitude. (Refer to fig. 4).
FM-RF ALIGNMENT						
(3)	FM	Connect to test point ∇ through FM dummy antenna. Negative side to test point ∇ .	86.2 MHz	Variable capacitor fully closed.	Output meter across voice coil.	L4 (FM OSC Coil) (-2) Adjust for maximum output.
(4)	FM		109.3 MHz	Variable capacitor fully open.	"	CT2 (FM OSC Trimmer) "
(5)	FM		90 MHz	Tune to signal.	"	L3 (FM ANT Coil) "
(6)	FM		106 MHz	"	"	CT1 (FM ANT Trimmer) (-2) Adjust for maximum output. Repeat steps (3)~(6).
(-2) Three output responses will be present; proper tuning is the center frequency.						

(-2) Three output responses will be present; proper tuning is the center frequency.

■ SEPARATION ALIGNMENT

ITEM	FM SIGNAL GENERATOR SOURCE CONNECTION	EQUIPMENT CONNECTION ELECTRONIC COUNTER	ADJUSTMENT	SPECIFICATION	REMARKS
Adjustment of pilot signal.	98 MHz, 60 dB (CW) Connect to test point ∇ through FM dummy antenna. Negative side to test point ∇ .	∇ ...(+) ∇ ...(-)	VR1	19 kHz	Adjust VR1, for 19 kHz (± 150 Hz) reading on electronics counter.

■ AUDIO ADJUSTMENT

ITEM	INPUT	MEASUREMENT POINT	SPECIFICATION	ADJUSTMENT POINT	REMARKS
Azimuth	QZZCFM (8 kHz, -20 dB)	SP OUT (AC voltmeter & Oscilloscope)	Maximum output.	Azimuth screw	Playback mode (Refer to Fig. 2)
Tape speed	QZZCWAT (3 kHz)	SP OUT (Frequency counter)	3000 $\pm$ 90 Hz	Motor Volume	Playback mode (Refer to Fig. 2)

■ ALIGNMENT POINT

* Please refer to Circuit Board and Wiring Connection Diagram which is located test point.

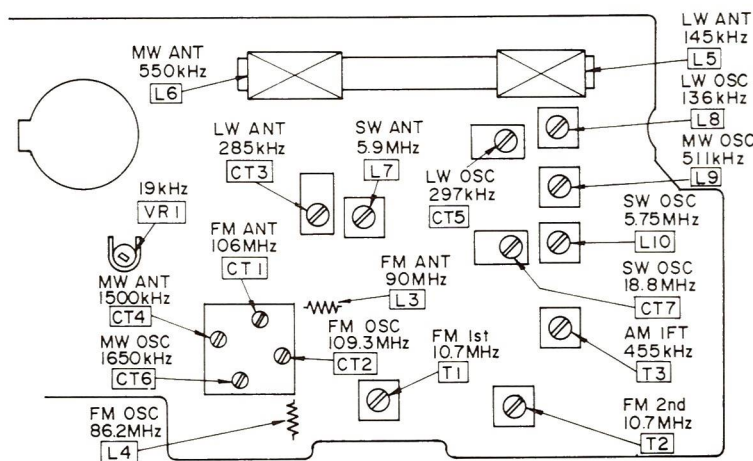


Fig. 1

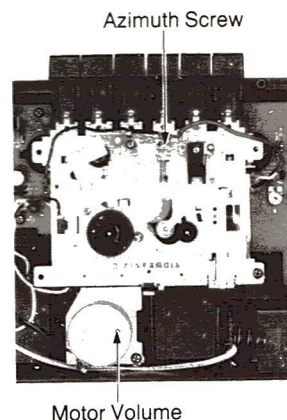


Fig. 2

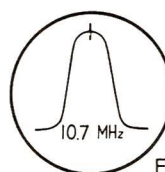


Fig. 3

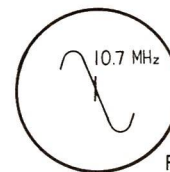
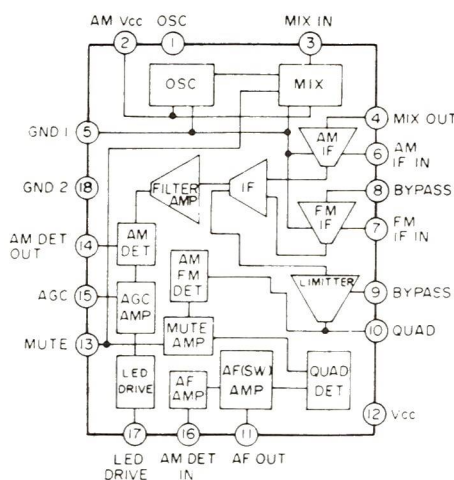


Fig. 4

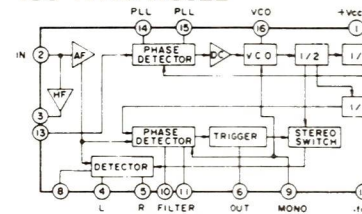
Ref No.	Part No.	Function Name	Zone
IC1	RVITA7358P	FM FRONT END	A.3
IC2	AN7220A	FM/AM IF AMP. DET.	B.7
IC3	RVIBA1332L	FM OSC. MIX	B.10
IC301	AN7310	FM MPX	E.5
IC302	RVIBA5406	EQ/PRE AMP	D.10
Q1	2SC1675	FM IF AMP	A.5
Q101	2SA733	REC AGC	F.4
Q201	2SA733	REC AGC	F.4
Q301	2SC2001	REGULATOR	G.8
D1	RVDIN4148	AGC	
D101	RVDIN4148	AGC RECT	
D201	RVDIN4148	AGC RECT	
D301	LN012176P	FM STEREO IND	
D302	RVDTZ6R8C	REGULATOR	
D303	RVD1SR35	RECT	
D304	RVD1SR35	RECT	
D305	RVD1SR35	RECT	
D306	RVD1SR35	RECT	

■ IC BLOCK DIAGRAM

IC2 RVIBA4232L



IC3 RVIBA1332L



ELECTRICAL PARTS LIST

Numbering System of Resistor

Example	ERD	25	F	J	101
Type	Wattage	Shape	Tolerance	Value	(100Ω)
ERX	2	AN	J	2R2	(2.2Ω)
Type	Wattage	Shape	Tolerance	Value	(2.2Ω)

Numbering System of Capacitor

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

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

Capacitor Type	Voltage		Tolerance
	ECEA Type	Other	
ECEA: Electrolytic	QJ: 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%
ECQM: Polystyrene	1E: 25 V		Z : +80%, -20%
ECQP: Polypropylene	1H: 50 V		P : +100%, -0%
ECET: Electrolytic	1V: 35 V		
ECEA□□□□: Non Polar Electrolytic	50: 50 V		
QCU □: Ceramic (Chip Type)	25: 25 V		
ECUX: Ceramic (Chip Type)	16: 16 V		

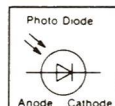
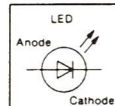
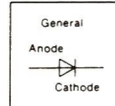
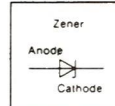
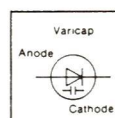
Notes:

- S1: FM Mode switch in "MONO" position.
- S2-1~S2-8: Band switch in "FM" position. (1...SW, 2...MW, 3...LW, 4...FM)
- S3-1~S3-6: Function switch in "TAPE/OFF" position. (1...TAPE/OFF, 2...RADIO)
- S4-1~S4-6: Record/playback switch in "playback" position. (1...Playback, 3...Record)
- S5: Motor ON/OFF switch in "OFF" position.
- S6: AC/DC IN select switch in "DC IN" position.
- VR1: VCO oscillator frequency adjust VR.
- VR101, 201: Tone control.
- VR102, 202: Volume control.
- VR301: Balance control.
- The mark (▼) shows test point e.g. ▼=test point 1.
- DC voltage measurement are taken with electronics voltmeter from negative terminal of battery.
< >...FM position, ()...AM position,
[]...Recording position, No mark...Playback position.
- Battery current: No signal 67 mA
Maximum output (radio) 1000 mA
Maximum output (tape) 1018 mA

14. Important safety notice

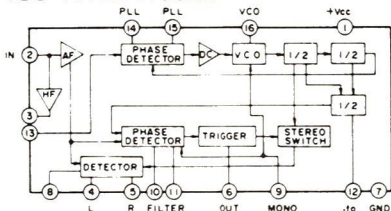
Components identified by ▲ mark have special characteristics important for safety.

When replacing any of these components, use only manufacturer's specified parts.

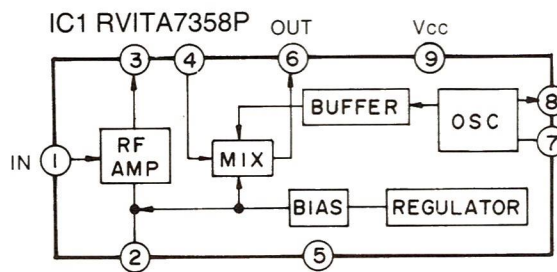
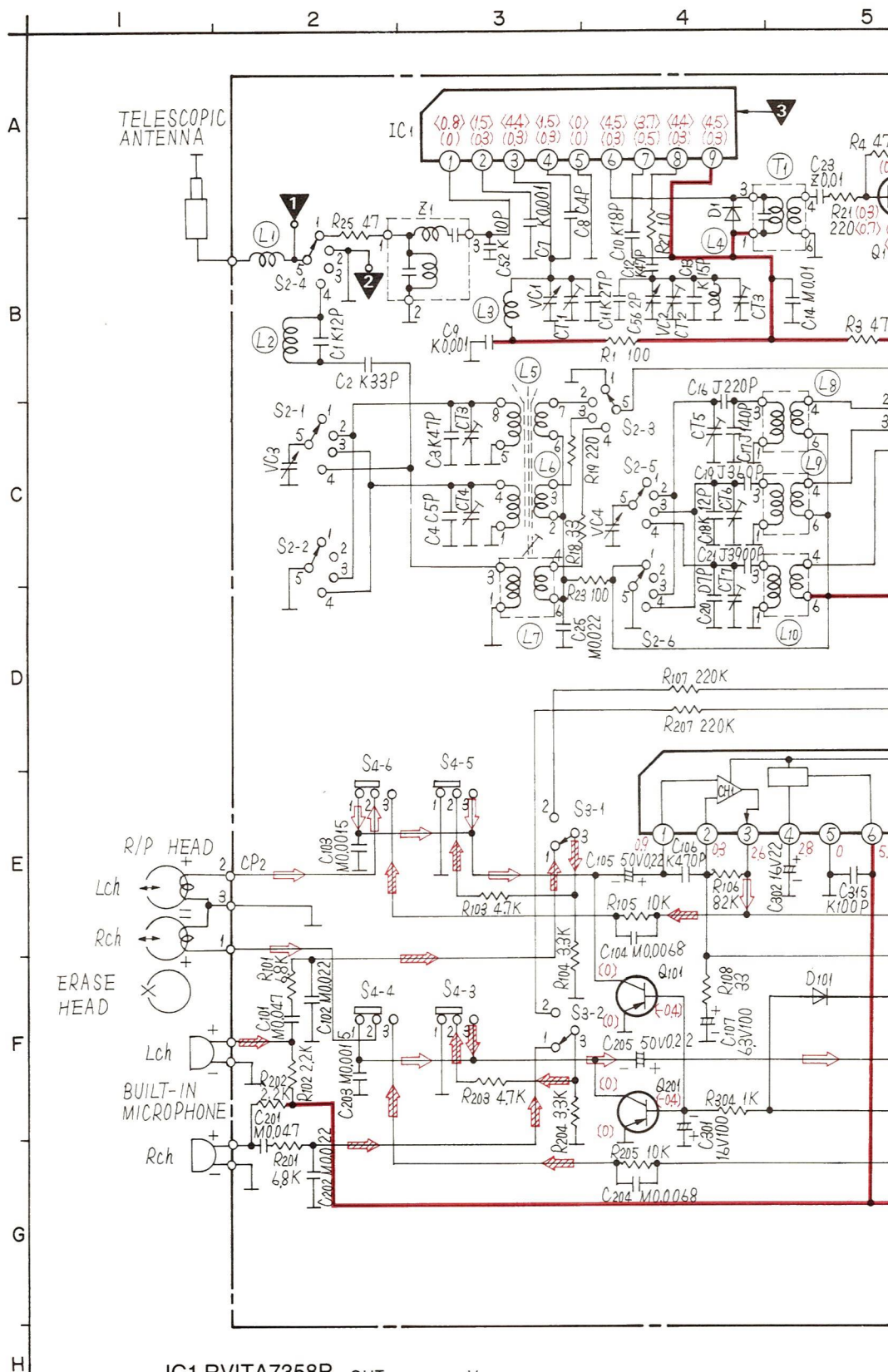


- + ⑥ Voltage Line
- ➡ Tape (PLAYBACK) Signal Line
- ➡ Tape (RECORD) Signal Line

Ref. No.	Part. No.	Ref. No.	Part. No.
CAPACITORS			
C1	ECCD1H120KC	C217	ECCD1H470K
C2	ECCD1H330KC	C218	ECCD1H470K
C3	ECCD1H470K	C219	ECCD1H470K
C4	ECCD1H050C	C301	ECCD1H050C
C7	ECKD1H102KB	C302	ECCD1H050C
C8	ECCD1H040C	C303	ECCD1H102KB
C9	ECKD1H102KB	C304	ECCD1H040C
C10	ECCD1H180KC	C305	ECCD1H102KB
C11	ECCD1H200KC	C306	ECCD1H180KC
C12	ECCD1H470K	C307	ECCD1H200KC
C13	ECCD1H150KT	C308	ECCD1H470K
C14	ECKD1H103MD	C309	ECCD1H150KT
C16	ECQP2A221JZ	C310	ECCD1H103MD
C17	ECMS05141JH	C311	ECQP2A221JZ
C18	ECCD1H120KC	C312	ECMS05141JH
C19	ECQP2A361JZ	C314	ECCD1H120KC
C20	ECCD1H070DC	C315	ECQP2A361JZ
C21	ECQP2A392JZ	R1	ECCD1H070DC
C23	ECKD1H103ZF	R3	ECQP2A392JZ
C24	ECKD1H103MD	R4	ECKD1H103ZF
C25	ECFT1E223MD	R5	ECKD1H103MD
C26	ECFT1E223MD	R6	ECFT1E223MD
C27	ECCD1H181K	R7	ECFT1E223MD
C28	ECFT1E473MD	R8	ECCD1H181K
C29	ECFT1E473MD	R10	ECFT1E473MD
C30	ECCD1H470K	R11	ECFT1E473MD
C31	ECCD1H330KC	R12	ECCD1H470K
C32	ECEA0JS470	R13	ECCD1H330KC
C33	ECEA1HS100	R14	ECEA0JS470
C35	ECFT1E223MD	R15	ECEA1HS100
C36	ECEA50ZR1	R16	ECFT1E223MD
C38	ECFT1E473MD	R17	ECEA50ZR1
C39	ECCD1H331K	R18	ECFT1E473MD
C40	ECEA50Z1	R19	ECCD1H331K
C41	ECFT1E153MD	R20	ECEA50Z1
C42	ECEA50Z1	R21	ECFT1E153MD
C43	ECEA50ZR1	R22	ECEA50Z1
C44	ECQG1H102KZ	R23	ECEA50ZR1
C47	ECEA1AS101	R24	ECQG1H102KZ
C48	ECCD1H101K	R25	ECEA1AS101
C49	ECCD1H101K	R27	ECCD1H101K
C50	ECFT1E223MD	R28	ECCD1H101K
C51	ECCD1H330KC	R29	ECFT1E223MD
C52	ECCD1H100KC	R101	ECCD1H330KC
C54	ECCD1H331K	R102	ECCD1H100KC
C55	ECKD1H102MD	R103	ECCD1H331K
C56	ECCD1H020C	R104	ECKD1H102MD
C101	ECFT1E473MD	R105	ECCD1H020C
C102	ECFT1E223MD	R106	ECFT1E473MD
C103	ECKD1H152MD	R107	ECFT1E223MD
C104	ECKD1H682MD	R108	ECKD1H152MD
C105	ECEA50ZR22	R109	ECKD1H682MD
C106	ECKD1H471KB	R110	ECEA50ZR22
C107	ECEA1AS101	R111	ECKD1H471KB
C108	ECEA50Z1	R112	ECEA1AS101
C109	ECFT1E333MD	R113	ECEA50Z1
C110	ECFT1E683MD	R114	ECFT1E333MD
C111	ECFT1E153MD	R115	ECFT1E683MD
C112	ECEA50ZR22	R116	ECFT1E153MD
C113	ECEA50Z1	R117	ECEA50ZR22
C114	ECKD1H102MD	R201	ECEA50Z1
C116	ECCD1H181K	R202	ECKD1H102MD
C117	ECEA1AS101	R203	ECCD1H181K
C118	ECEA0JS471	R204	ECEA1AS101
C119	ECFT1C104MD	R205	ECEA0JS471
C201	ECFT1E473MD	R206	ECFT1C104MD
C202	ECFT1E223MD	R207	ECFT1E473MD
C203	ECKD1H152MD	R208	ECFT1E223MD
C204	ECKD1H682MD	R209	ECKD1H152MD
C205	ECEA50ZR22	R210	ECKD1H682MD
C206	ECKD1H471KB	R211	ECEA50ZR22
C207	ECEA1AS101	R212	ECKD1H471KB
C208	ECEA50Z1	R213	ECEA1AS101
C209	ECFT1E333MD	R214	ECEA50Z1
C210	ECFT1E683MD	R215	ECFT1E333MD
C211	ECFT1E153MD	R216	ECFT1E683MD
C212	ECEA50ZR22	R217	ECFT1E153MD
C213	ECEA50Z1	R301	ECEA50ZR22
C214	ECKD1H102MD	R302	ECEA50Z1
C216	ECCD1H181K	R303	ECKD1H102MD
		R304	ECCD1H181K



Ref. No.	Part. No.	Ref. No.	Part. No.
CAPACITORS			
C1	ECCD1H120KC	C217	ECEA1AS101
C2	ECCD1H330KC	C218	ECEA0JS471
C3	ECCD1H470K	C219	ECFT1C104MD
C4	ECCD1H050C	C301	ECEA1AS101
C7	ECKD1H102KB	C302	ECEA1ES220
C8	ECCD1H040C	C303	ECEA1AS101
C9	ECKD1H102KB	C304	ECKD1H103ZF
C10	ECCD1H180KC	C305	ECEA1AS221
C11	ECCD1H200KC	C306	ECEA1ES222
C12	ECCD1H470K	C307	ECEA1ES470
C13	ECCD1H150KT	C308	ECEA1CS102
C14	ECKD1H103MD	C309	ECKD1H103ZF
C16	ECQP2A221JZ	C310	ECKD1H103ZF
C17	ECMS05141JH	C311	ECKD1H103ZF
C18	ECCD1H120KC	C312	ECKD1H103ZF
C19	ECQP2A361JZ	C314	ECEA1AS101
C20	ECCD1H070DC	C315	ECCD1H101K
C21	ECQP2A392JZ	RESISTORS	
C23	ECKD1H103ZF	R1	ERD25FJ101
C24	ECKD1H103MD	R3	ERD25FJ470
C25	ECFT1E223MD	R4	ERD25TJ474
C26	ECFT1E223MD	R5	ERD25FJ471
C27	ECCD1H181K	R6	ERD25FJ101
C28	ECFT1E473MD	R7	ERD25FJ221
C29	ECFT1E473MD	R8	ERD25FJ681
C30	ECCD1H470K	R10	ERD25FJ562
C31	ECCD1H330KC	R11	ERD25FJ470
C32	ECEA0JS470	R12	ERD25FJ222
C33	ECEA1HS100	R13	ERD25FJ101
C35	ECFT1E223MD	R14	ERD25FJ472
C36	ECEA50ZR1	R15	ERD25FJ681
C38	ECFT1E473MD	R16	ERD25FJ682
C39	ECCD1H331K	R17	ERD25FJ102
C40	ECEA50Z1	R18	ERD25FJ330
C41	ECFT1E153MD	R19	ERD25FJ221
C42	ECEA50Z1	R20	ERD25TJ473
C43	ECEA50ZR1	R21	ERD25FJ221
C44	ECQG1H102KZ	R22	ERD25FJ221
C47	ECEA1AS101	R23	ERD25FJ101
C48	ECCD1H101K	R24	ERD25FJ470
C49	ECCD1H101K	R25	ERD25FJ470
C50	ECFT1E223MD	R27	ERD25FJ100
C51	ECCD1H330KC	R28	ERD25FJ101
C52	ECCD1H100KC	R29	ERD25FJ101
C54	ECCD1H331K	R101	ERD25FJ682
C55	ECKD1H102MD	R102	ERD25FJ222
C56	ECCD1H020C	R103	ERD25FJ472
C101	ECFT1E473MD	R104	ERD25FJ332
C102	ECFT1E223MD	R105	ERD25FJ103
C103	ECKD1H152MD	R106	ERD25TJ823
C104	ECKD1H682MD	R107	ERD25TJ184
C105	ECEA50ZR22	R108	ERD25FJ330
C106	ECKD1H471KB	R109	ERD25FJ562
C107	ECEA1AS101	R110	ERD25FJ392
C108	ECEA50Z1	R111	ERD25FJ472
C109	ECFT1E333MD	R112	ERD25FJ1R0
C110	ECFT1E683MD	R113	ERD25FJ472
C111	ECFT1E153MD	R114	ERD25FJ103
C112	ECEA50ZR22	R115	ERD25FJ222
C113	ECEA50Z1	R116	ERD25FJ101
C114	ECKD1H102MD	R117	ERD25FJ151
C116	ECCD1H181K	R201	ERD25FJ682
C117	ECEA1AS101	R202	ERD25FJ222
C118	ECEA0JS471	R203	ERD25FJ472
C119	ECFT1C104MD	R204	ERD25FJ332
C201	ECFT1E473MD	R205	ERD25FJ103
C202	ECFT1E223MD	R206	ERD25TJ823
C203	ECKD1H152MD	R207	ERD25TJ184
C204	ECKD1H682MD	R208	ERD25FJ330
C205	ECEA50ZR22	R209	ERD25FJ562
C206	ECKD1H471KB	R210	ERD25FJ392
C207	ECEA1AS101	R211	ERD25FJ472
C208	ECEA50Z1	R212	ERD25FJ1R0
C209	ECFT1E333MD	R213	ERD25FJ472
C210	ECFT1E683MD	R214	ERD25FJ103
C211	ECFT1E153MD	R215	ERD25FJ222
C212	ECEA50ZR22	R216	ERD25FJ101
C213	ECEA50Z1	R217	ERD25FJ151
C214	ECKD1H102MD	R301	ERD25FJ101
C216	ECCD1H181K	R302	ERD25FJ102
		R303	ERD25FJ470
		R304	ERD25FJ102



SCHEMATIC DIAGRAM MOD

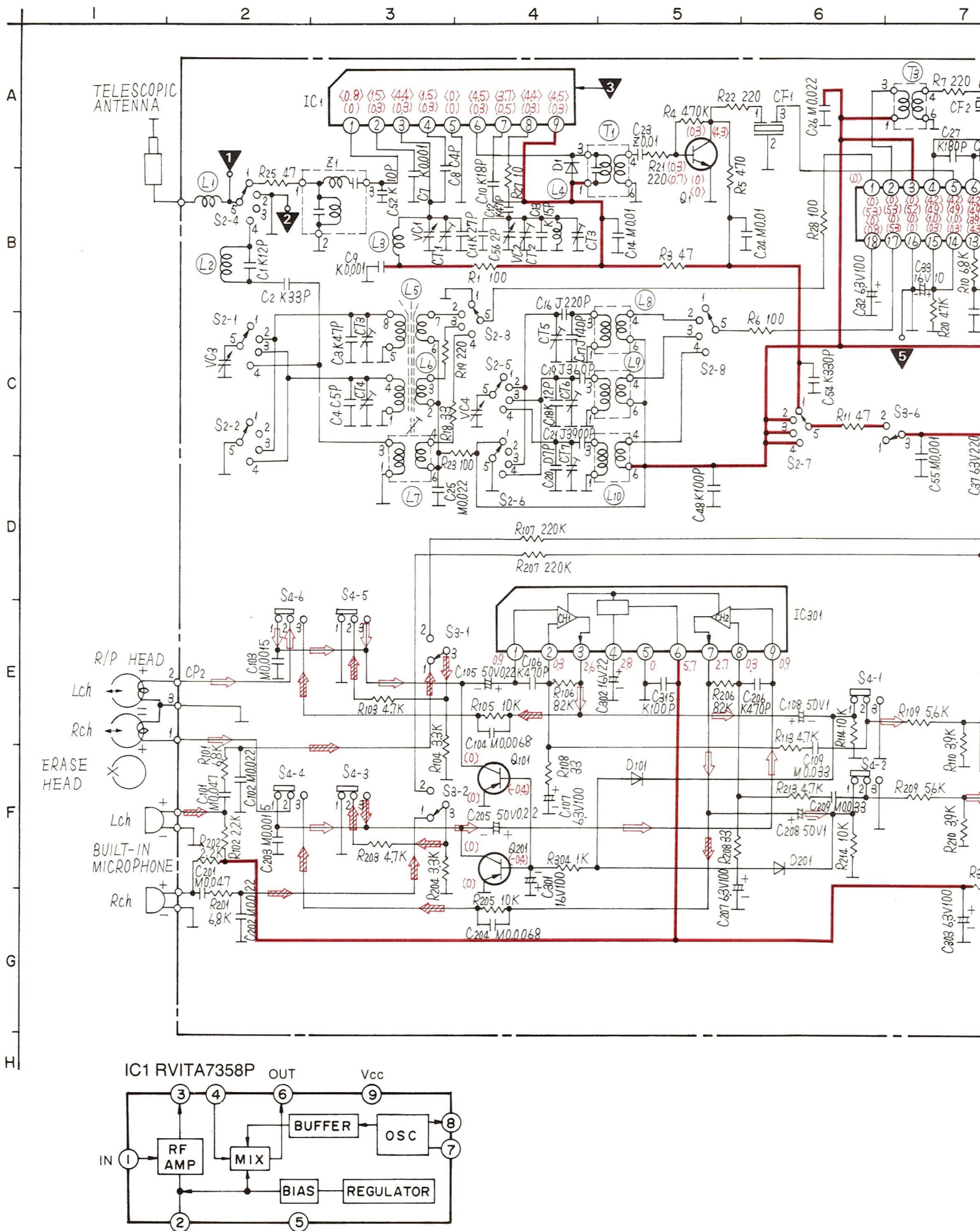
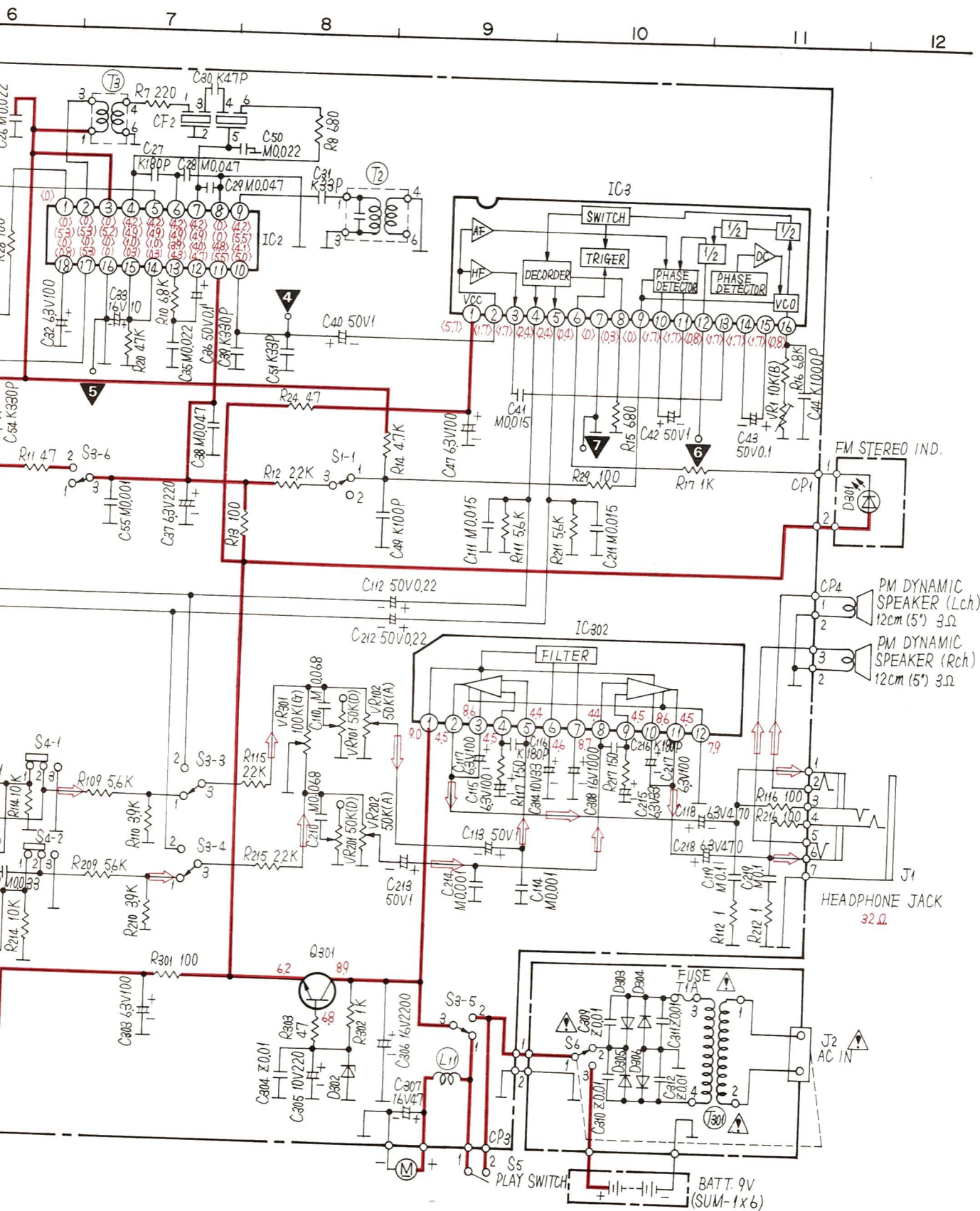
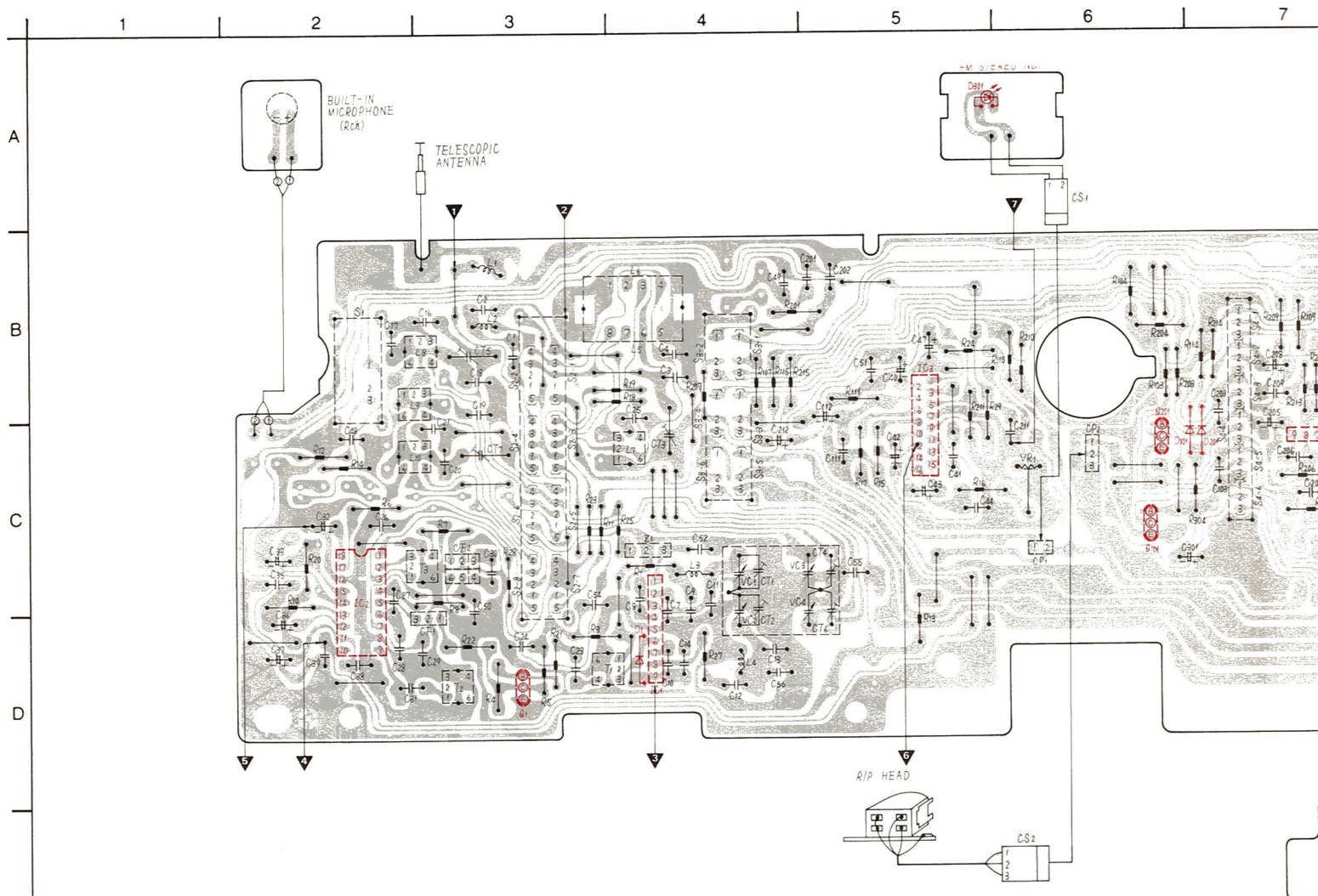


DIAGRAM MODEL RX-4930L



CIRCUIT BOARD AND WIRING CONNECTION



REPLACEMENT PARTS LIST

Important safety notice
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When replacing any of these components, use only manufacturer's specified parts.

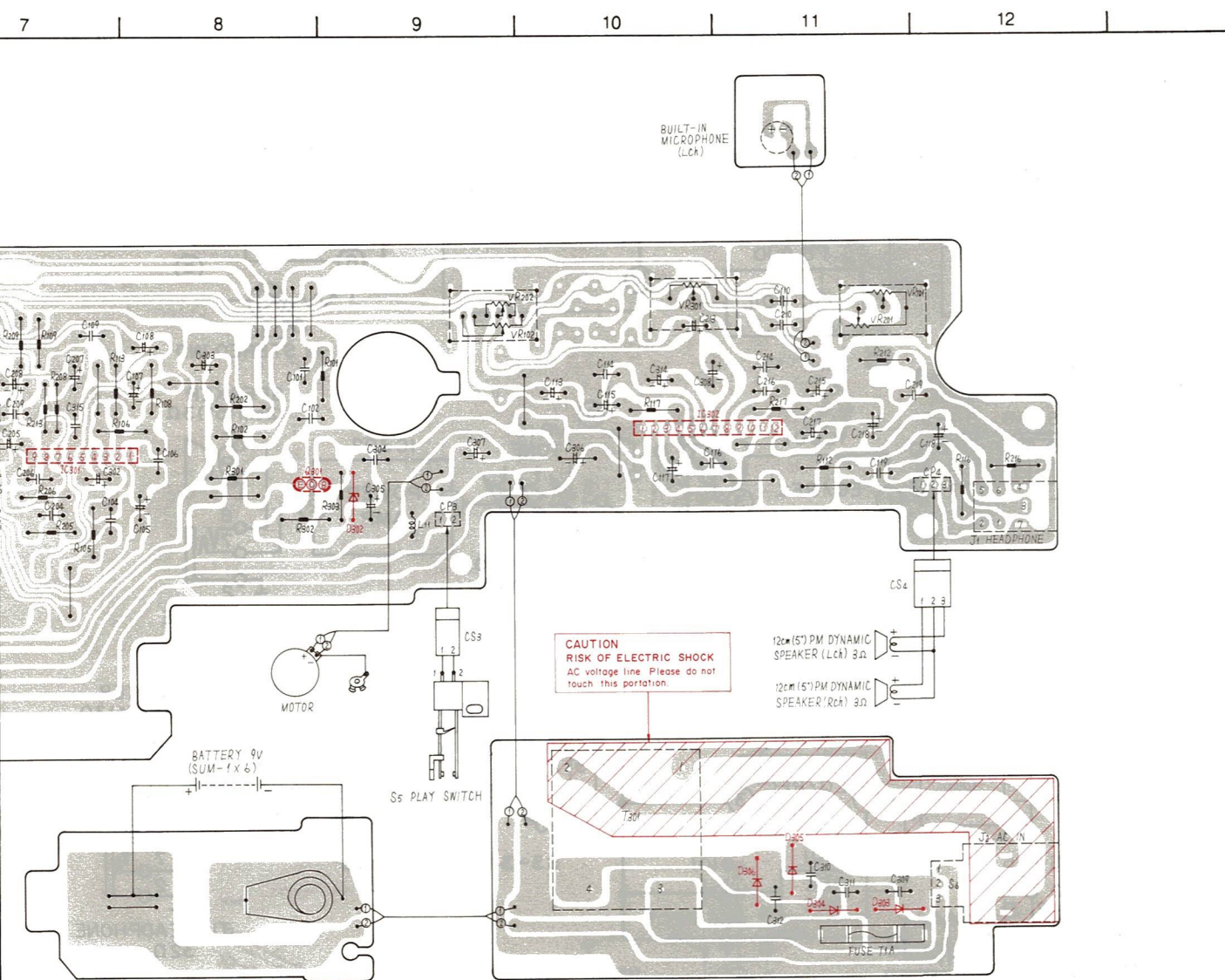
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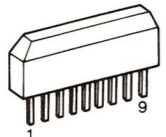
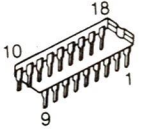
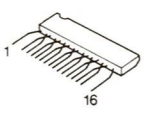
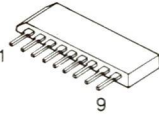
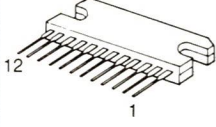
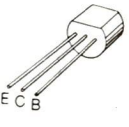
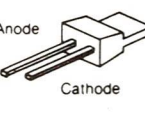
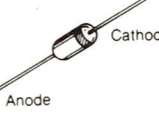
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[ZS]... For all European areas except United Kingdom (Silver)
[IT]... For Italy (Metallic Brown)
[IS]... For Italy (Silver)

[FT]... For France (Metallic Brown)
[FS]... For France (Silver)
[IT]... For Italy (Metallic Brown)
[IS]... For Italy (Silver)

Ref. No.	Part. No.	Part Name & Description	Ref. No.	Part. No.	Part Name & Description	Ref. No.	Part. No.	Part Name & Description
INTEGRATED CIRCUITS			TRANSFORMERS			CERAMIC FILTERS		
IC1	RVITA7358P	IC	T1,2	RLI4B153	IFT, FM 1st. 2nd	CF1	RVFSFE107MAZ	Ceramic Filter, 10.7 MHz
IC2	AN7220A	IC	T3	RLI2B153	IFT, AM	CF2 [ET]	QCRZZ470A7W	Ceramic Filter, 470 kHz
IC3	RVIBA1332L	IC	T301 [ZT]	RLT5K3G3A	Power Transformer Δ	CF2 [ZT] [ZS]	RVFSFZ455B	Ceramic Filter, 455 kHz
IC301	AN7310	IC	[ZS] [FT] [FS]			[FT] [FS] [IT]		
IC302	RVIBA5406	IC	[IT] [IS]			[IS]		
TRANSISTOR			T301 [ET]	RLT5K3E2A	Power Transformer Δ	SPARK KILLERS		
Q1	2SC1675K1	Transistor (Si)	VARIABLE CAPACITORS			Z1	RXABPWB5W	Component Combination
Q101,201	2SA733-P1	Transistor (Ge)	TRIMMER CONDENSER			SWITCHES		
Q301	2SC2001K1	Transistor (Si)	VC1~4	RCV4RC2RA	Variable Capacitor/with Trimmer Capacitor (CT1,2,4,6)	S1	RST2A09Z	Switch, FM Mode
DIODES & RECTIFIERS			VARIABLE RESISTORS			S2	RST4H10Z	Switch, Band
D1,101,201	RVDIN4148	Diode (Si)	CT3	RCVPL30A	Trimmer Capacitor	S3	RST2F11Z	Switch, Function
D301	LN012176P	LED, FM Stereo	CT5	RCVPL20A	Trimmer Capacitor	S4	RSH2F08Z	Switch, Record/Playback
D302	RVDZT6R8C	Diode (Si)	CT7	RCVPL10A	Trimmer Capacitor	JACKS		
D303~306	RVDISR35	Diode (Si)	COILS			J1	RJJ1D27Z	Jack, Headphone
COILS			VR1	EVNK4AA00B14	Variable Resistor, 10 k Ω (B)	J2 (S6) [ZT]	RJJ1A4Z	Jack, AD/DC IN Δ
L3	RLD4Y44	Antenna Coil, FM	VR101,201	EWCVHAF20D54	Variable Resistor, 50 k Ω (D)	[ZS] [FT] [FS]		
L4	RLD4Y43	Oscillator Coil, FM	VR102,202	EWCUHAF20A54	Variable Resistor, 50 k Ω (A)	[IT] [IS]		
L5,6	RLF6W7	Antenna Coil, LW/MW	VR301	EW7HMAF20G15	Variable Resistor, 100 k Ω (G)	J2 (S6) [ET]	RJJ1A5Z	Jack, AC/DC IN Δ
L7	RLA3B41	Antenna Coil, SW						
L8	RL01B12	Oscillator Coil, LW						
L9	RL02B108	Oscillator Coil, MW						
L10	RL03B87	Oscillator Coil, SW						
L11	RLQZG470K	Choke Coil						

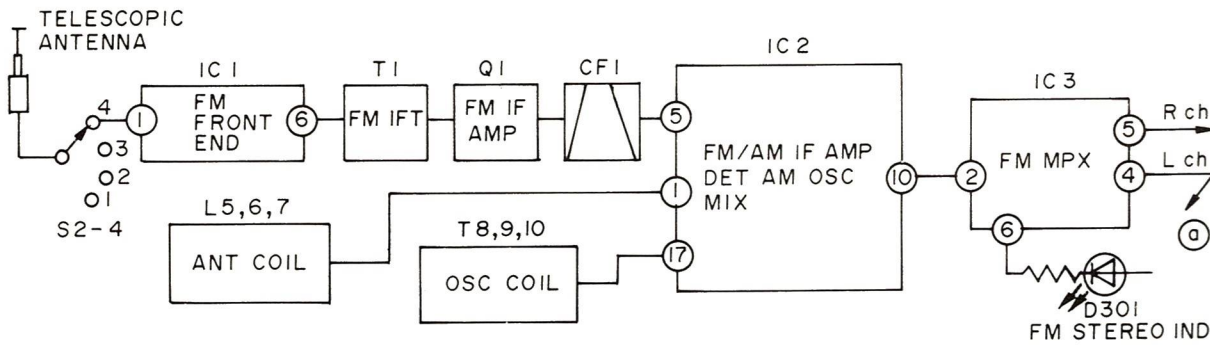
SECTION DIAGRAM MODEL RX-4930L



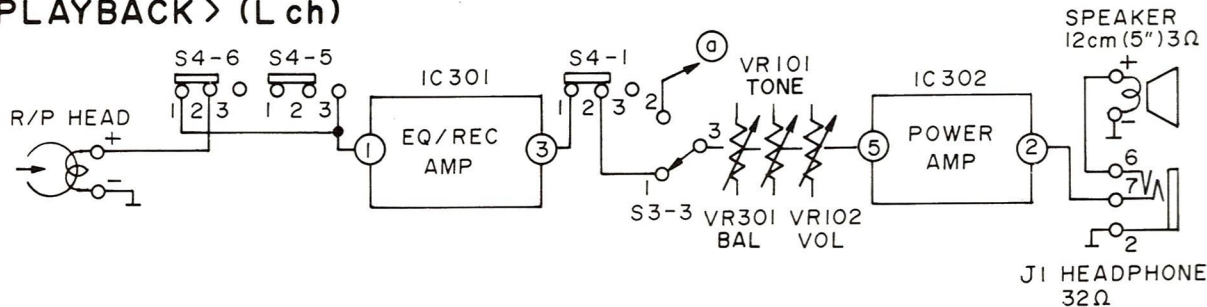
 IC1	 IC2	 IC3	 IC301
 IC302	 Q1, 101, 201, 301	 D301	 D1, 101, 201, 302~306

BLOCK DIAGRAM

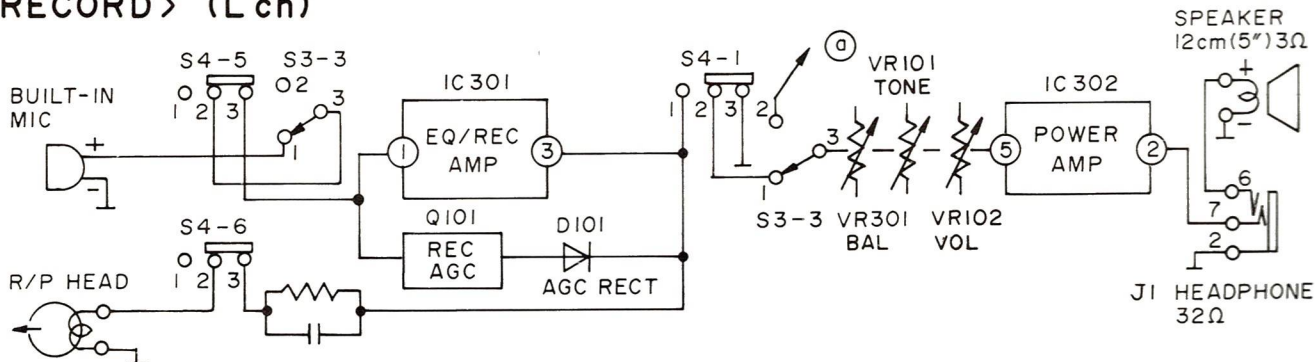
<RADIO>



<PLAYBACK> (L ch)



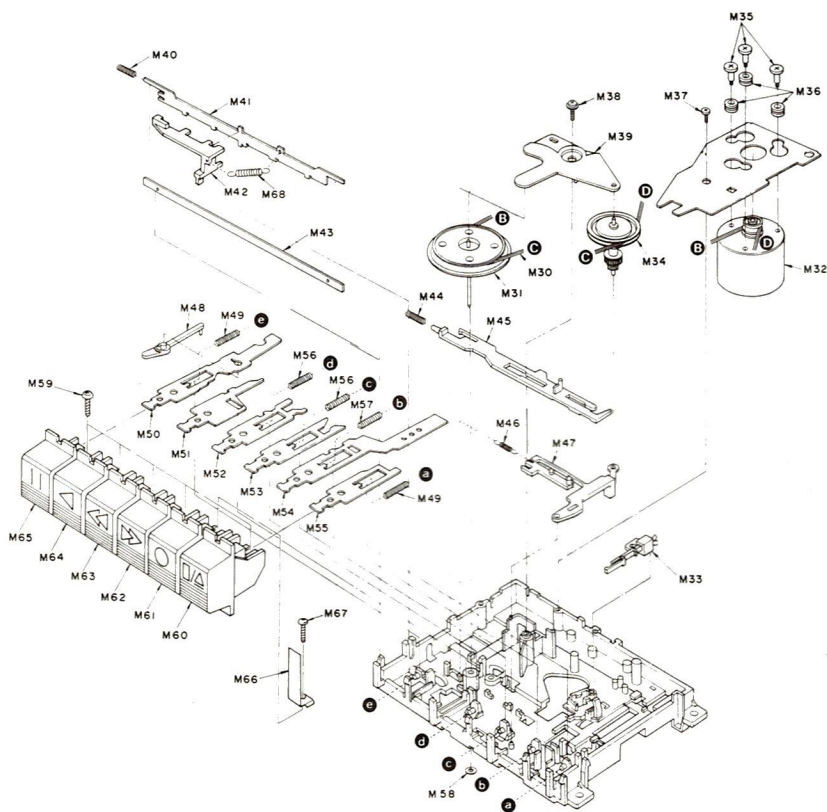
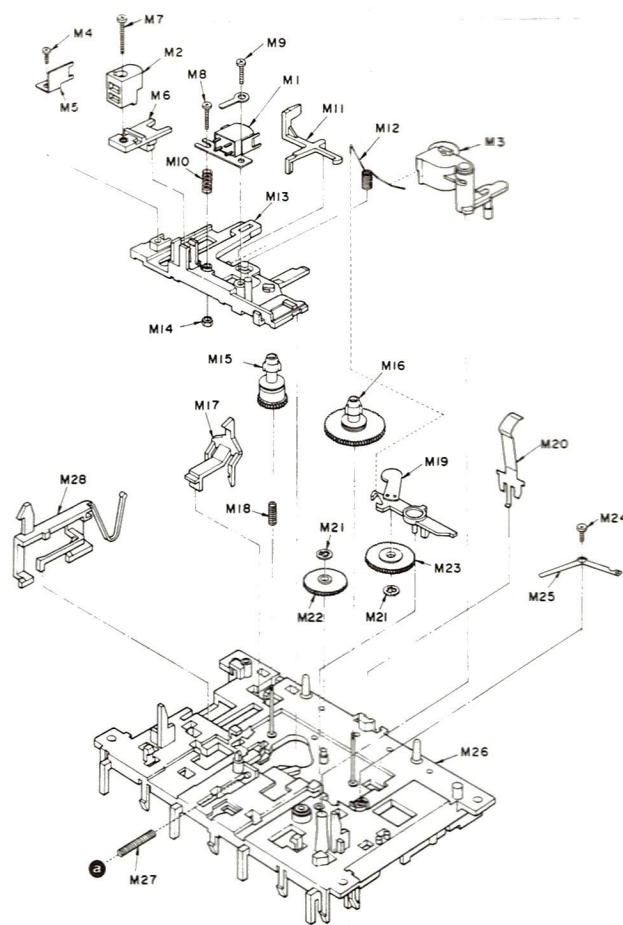
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MECHANISM PARTS LOCATION

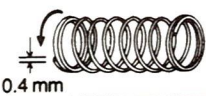
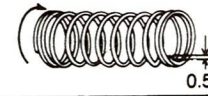
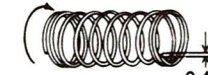
Ref. No.	Part. No.	Part Name & Description	Ref. No.	Part. No.	Part Name & Description
MECHANICAL PARTS					
M1	RJH2E4Y	Record/Playback Head	M32	RFM20Z	Motor Ass'y with Pulley
M2	QWY2127Z	Erase Head	M34	RFK9Z	Idle Ass'y
M3	RFR16Z	Pinch Roller Ass'y	M35	QHQ122Z	Screw, Motor Ass'y M'tg
M4	XTN2+6B	Screw, Tape Guide M'tg	M36	QBG1539	Rubber, Motor Ass'y
M5	RFD107Z	Tape Guide	M37	XTN3+8B	Screw, Motor Bracket M'tg
M6	RFE32Z	Erase Head Base	M38	XTW26+10	Screw, Flywheel Holder M'tg
M7	XTN26+15B	Screw, Erase Head M'tg	M39	RFD155Z	Flywheel Holder
M8	XTN2+10B	Screw, Azimuth Adjust	M40	RFS343Z	Spring, Lock Lever
M9	XTN2+8B	Screw, Record/Playback Head M'tg	M41	RFY284Z	Lever, Lock
M10	RFS338Z	Spring, Azimuth Adjust	M42	RFY431Z	Acting Plate
M11	RFY91Z	Lever, Auto Stop	M43	RFY286Z	Lever Holder
M12	RFS337Z	Spring, Arm	M44	RFS342Z	Spring, Lever Holder
M13	RFU23Z	Head Base	M45	RFY283Z	Lever Holder
M14	RFE122Z	Nut, Record/Playback Head M'tg	M46	RFS156Z	Spring, Fast Forward, Rewind Lever
M15	RFJ31Z	Take Up Reel Table Ass'y	M47	RFY282Z	Lever, Fast Forward, Rewind
M16	RFJ32Z	Supply Reel Table Ass'y	M48	RFY287Z	Arm, Pause
M17	RFY279Z	Lever, Erase Safety	M49	RFS340Z	Spring, Pause Lever etc.
M18	RFS339Z	Spring, Back Tension	M50	RFY288Z	Lever, Pause
M19	RFY281Z	Playback Arm	M51	RFY289Z	Lever, Playback
M20	RUS580Z	Spring, Cassette Holder	M52	RFY290Z	Lever, Fast Forward
M21	RFX39Y	Speed Nut, Fast Forward, Playback Gear	M53	RFY291Z	Lever, Rewind
M22	RFG19Z	Fast Forward Gear	M54	RFY292Z	Lever, Record
M23	RFG44Z	Playback Gear	M55	RFY293Z	Lever, Stop/Eject
M24	XTN26+6B	Screw, Earth Lug M'tg	M56	RFS147Z	Spring, Rewind Lever, etc.
M25	RFE123Z	Earth Lug	M57	RFS344Z	Spring, Record Lever
M26	RFU24Z	Mechanism Base Ass'y	M58	RFE58Z	Oil Stopper
M27	RFS153Z	Spring, Head Base	M59	XTN3+10F	Screw, Mechanism Button M'tg
M28	RFY280Z	Lever, Eject Slide	M60	RBC624Z	Button, Stop/Eject
M30	RFB32Z	Main Belt	M61	RBC623Z	Button, Record
M31	RFF21Z	Flywheel Ass'y	M62	RBC622Z	Button, Rewind

Ref. No.	Part. No.	Part Name & Description
M63	RBC621Z	Button, Fast Foward
M64	RBC620Z	Button, Playback
M65	RBC619Z	Button, Pause
M66	RUS574Z	Spring, Record/Playback
M67	XTV3+8G	Screw, Record/Playback Spring M'tg.
M68	RFS148Z	Spring, Acting Plate

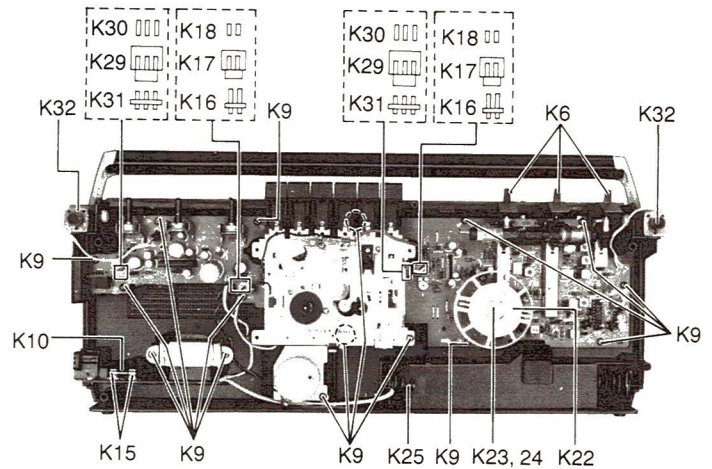
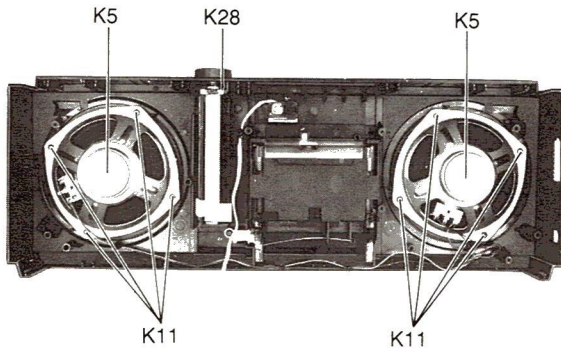
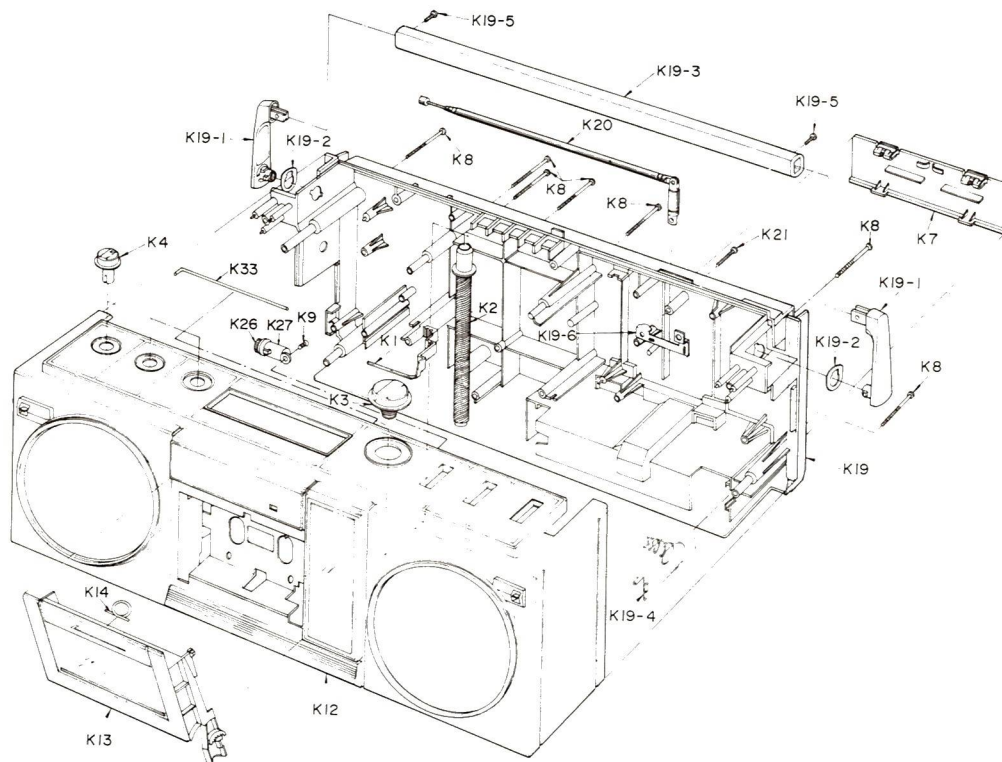


Specification

Pressure of pressure roller	330 ± 50 gr
Wow and flutter	Less than 0.35% (WRMS)
Takeup Tension	50 ± 15 gr-cm
FF Tension	70 ± $\frac{30}{20}$ gr-cm
REW Tension	70 ± $\frac{30}{20}$ gr-cm

Ref. No.	SPRING
M62	 0.4 mm
M63	 0.5 mm
M64	 0.4 mm

CABINET PARTS LOCATION



REPLACEMENT PARTS LIST

Important safety notice

Components identified by $\frac{1}{2}$ mark have special characteristics important for safety.
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Note:

[ZT]... For all European areas except United Kingdom (Metallic Brown)

[ZS]... For all European areas except United Kingdom (Silver)

[ET]... For United Kingdom (Metallic Brown)

[FT]... For France (Metallic Brown)

[FS]... For France (Silver)

[IT]... For Italy (Metallic Brown)

[IS]... For Italy (Silver)

Ref. No.	Part. No.	Part Name & Description	Ref. No.	Part. No.	Part Name & Description	Ref. No.	Part. No.	Part Name & Description
CABINET PARTS								
K1 [ZT] [ET]	RDP262Z	Pointer Dial	K10	XBA2C10TR0	Fuse T1A $\frac{1}{2}$	K19-2	RKX257Z	Washer Handle
[FT] [IT]			K11	XTV3+10G	Screw, Speaker M'tg.	K19-3 [ZT]	RKX311Z	Handle
K1 [ZS] [FS]	RDP262Z1	Pointer Dial	K12 [ZT] [FT]	RYMX4930LZ91	Front Cabinet Ass'y	[ET] [FT] [IT]		
[IS]			[IT]			K19-3 [ZS]	RKX311Z1	Handle
K2	RDG5807Y	Warm Gear	K12 [ZS] [FS]	RYMX4930LZK8	Front Cabinet Ass'y	[FS] [IS]		
K3 [ZT] [ET]	RYTX4930LZKS	Tuning Knob Ass'y	[IS]			K19-4	RJC931Z	Terminal Battery +/-
[FT] [IT]			K12 [ET]	RYMX4930LE91	Front Cabinet Ass'y $\frac{1}{2}$	K19-5	XTB3+8CFN	Screw, Handle M'tg
K3 [ZS] [FS]	RYTX4930LZK1	Tuning Knob Ass'y	K13 [ZT] [ET]	RYQX4930LZBR	Cassette Panel Ass'y	K19-6	RJT874Z	Terminal Antenna
[IS]			[FT] [IT]					
K4 [ZT] [ET]	RBN670X	Knob, Tone, Valance, Volume	K13 [ZS] [FS]	RYQX4930LZSL	Cassette Panel Ass'y			
[FT] [IT]			[IS]			K20	XEARR225EAY	Telescopic Antenna
K4 [ZS] [FS]	RBN670X1	Knob, Tone, Valance, Volume	K14	RUS577Z	Spring, Cassette Tape	K21	XYN3+F15F	Screw, Telescopic Antenna M'tg.
[IS]			K15	QTF1054	Fuse Holder	K22	RDG5699Z	Drum Dial
K5	RAS12P07Z	Speaker	K16	RJP2G1Z	Plug, 2 Pin	K23	XSN26+8	Screw, Dial Drum M'tg
K6 [ZT] [ET]	RBS226Z	Knob, Selector, Band, FM Mode	K17	RJS2L1Z	Socket, 2 Pin	K24	XWA26B	Washer, Dial Drum M'tg.
[FT] [IT]			K18	RJT462Z	Terminal, Socket	K25	RJC511Z	Terminal Battery, -
K6 [ZS] [FS]	RBS226Z1	Knob, Selector, Band, FM Mode	K19 [FT]	RYFX4930LZFK	Rear Cabinet Ass'y	K26	RDG5729Z	Soft Gear
[IS]			K19 [ZT]	RYFX4930LZKS	Rear Cabinet Ass'y	K27	RME337Z	Holder, Soft Gear
			K19 [ZS]	RYFX4930LZK7	Rear Cabinet Ass'y	K28	RUL719Z	Bracket, Warm Gear
			K19 [FS]	RYFX4930LZF7	Rear Cabinet Ass'y	K29	RJS3L3Z	Socket, 3 Pin
K7 [ZT] [ET]	RKK224Y	Battery Cover	K19 [ET]	RYFX4930LZEK	Rear Cabinet Ass'y $\frac{1}{2}$	K30	RJT707Z	Terminal, Socket
[FT] [IT]			K19 [IT]	RYFX4930LZIK	Rear Cabinet Ass'y	K31	RJP3G1Z	Plug, 3 Pin
K7 [ZS] [FS]	RKK224Y7	Battery Cover	K19 [IS]	RYFX4930LZL7	Rear Cabinet Ass'y	K32	RJM151Z	Built-in Microphone
[IS]			K19-1	RKX248Z	Arm, Handle	K33	RUS534Z	Spring, Cassette Panel
K8	XTN3+35G	Screw, Cabinet M'tg.						
K9	XTV3+12G	Screw, Circuit Board, etc. M'tg.						

ACCESSORIES AND PACKING MATERIALS

REPLACEMENT PARTS LIST

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 [FS]... For France (Silver)
 [IT]... For Italy (Metallic Brown)
 [IS]... For Italy (Silver)

Ref. No.	Part. No.	Part Name & Description
ACCESSORIES		
[ET]	RJA43Z	Power Cord, AC Δ
[ZT] [ZS]	RJA20Z	Power Cord, AC Δ
[FT] [FS] [IT]		
[IS]	RQX4477Z	Instruction Book
PACKINGS		
	RPN9473Z	Pad
	RPK1843Z	Gift Box
	XZB60X45A01	Polyethylene Cover
[ET]	QQC1023	AC Cord Label