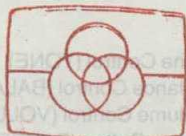


Service Manual

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

FM-LW-MW-SW
Stereo Radio Cassette Recorder



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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**, **E**, **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, **E**, **I** ...AM (LW/MW/SW); 455 kHz
E...AM (LW/MW/SW); 470 kHz
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

Sensitivity:

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

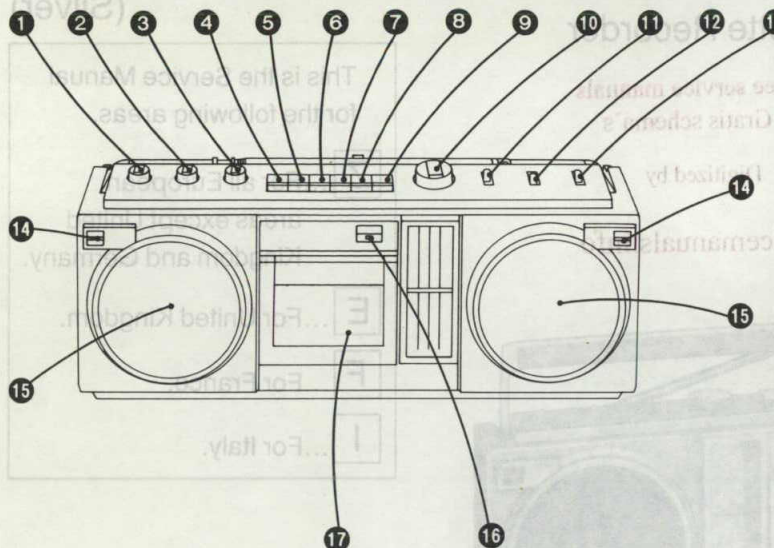
Matsushita Electric Trading Co., Ltd.
P.O. Box 288, Central Osaka Japan

CONTENTS

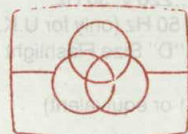
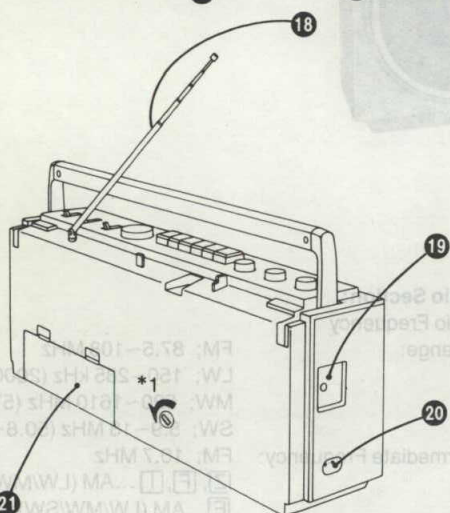
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LOCATION OF CONTROLS AND COMPONENTS



- 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



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DISASSEMBLY INSTRUCTIONS

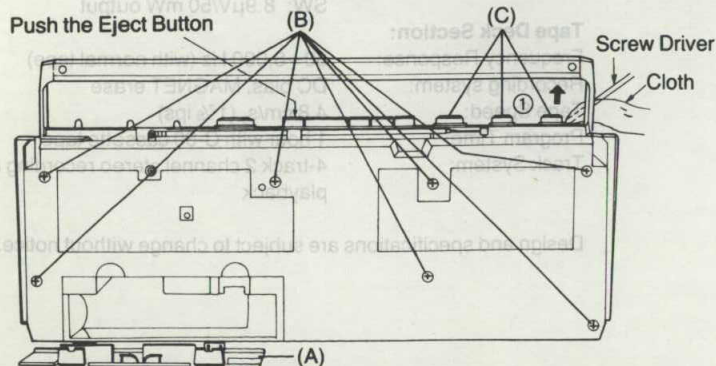


Fig. 1

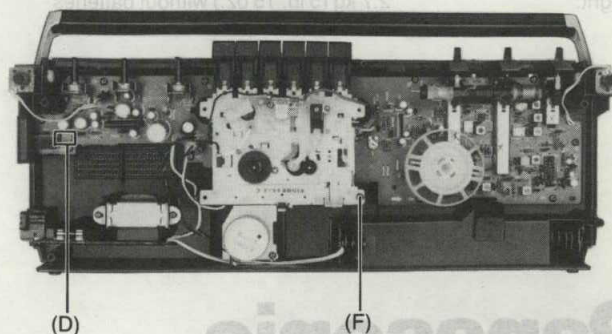


Fig. 2

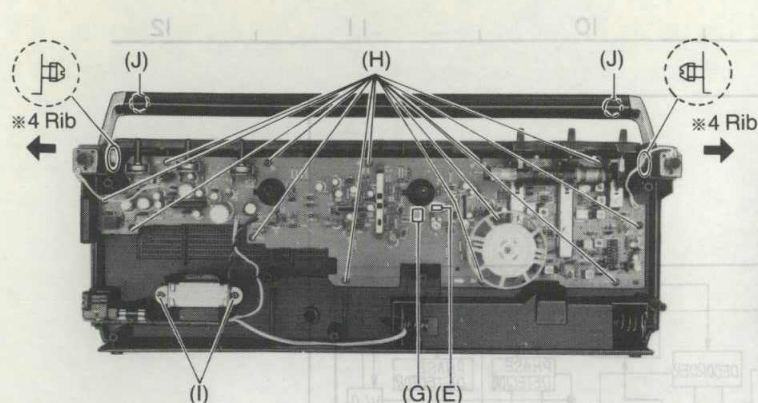
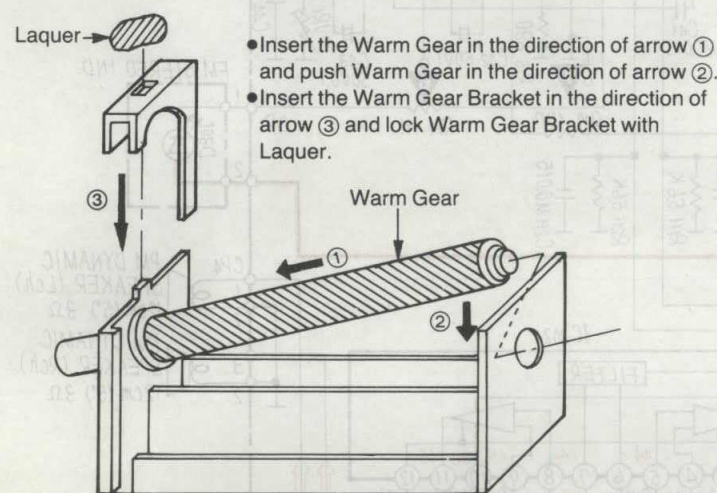


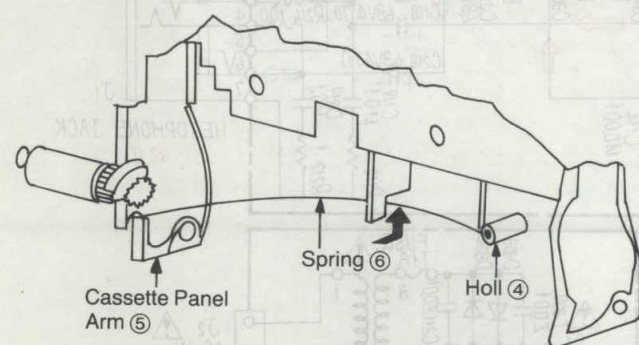
Fig. 3

HOW TO REPLACE

(Warm Gear)



(Cassette Spring)



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

- Insert the spring into the holl 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		Battery Cover (A)×1
2		1		Screw (3×35) (B)×7
3	1~6	1	Front Cabinet (※1, 2)	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		2		Screw (3×12) (F)×1
8	1~8	3	Mechanism	Socket (G)×1

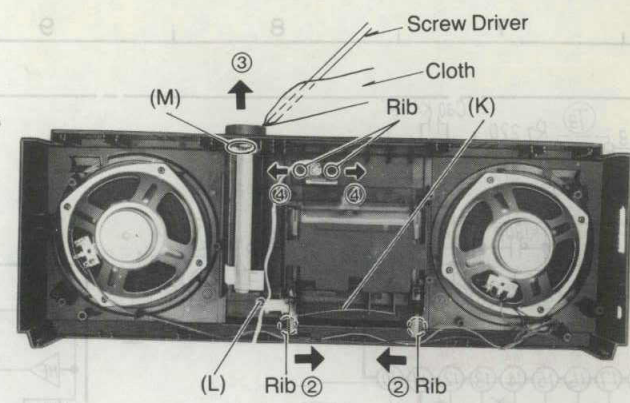
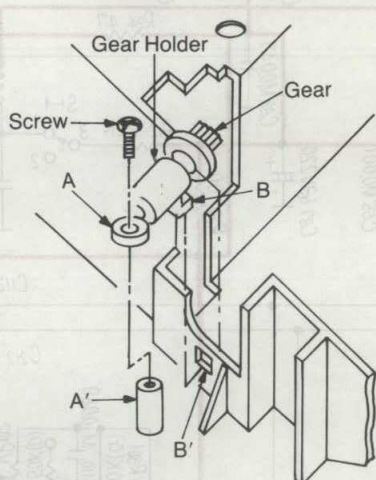


Fig. 4

(Gear and Gear Holder)



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		4		Spring (K)×1
13	1~6, 12~14	4	Cassette Panel	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

1. Set volume control to maximum.
2. Set tone control to maximum.
3. Set bass and treble control to center.
4. Set band switch to LW, MW, SW or FM.
5. Set balance control to center.
6. Set function selector to radio.
7. Set power source voltage to 9 V DC.
8. 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 CONNECTIONS	FREQUENCY	RADIO DIAL SETTING	INDICATOR (ELECTRONICS VOLT-METER or SCOPE)	ADJUSTMENT	REMARKS
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		5.75 MHz	Tuning capacitor fully closed.	"	L10 (SW OSC Coil)	Adjust for maximum output.
(11) SW	Connect to test point ▼ through ceramic capacitor (10 pF) Negative side to test point ▼.	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

BAND	SIGNAL GENERATOR or SWEEP GENERATOR		RADIO DIAL SETTING	INDICATOR (ELECTRONICS VOLT-METER 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.							

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±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.

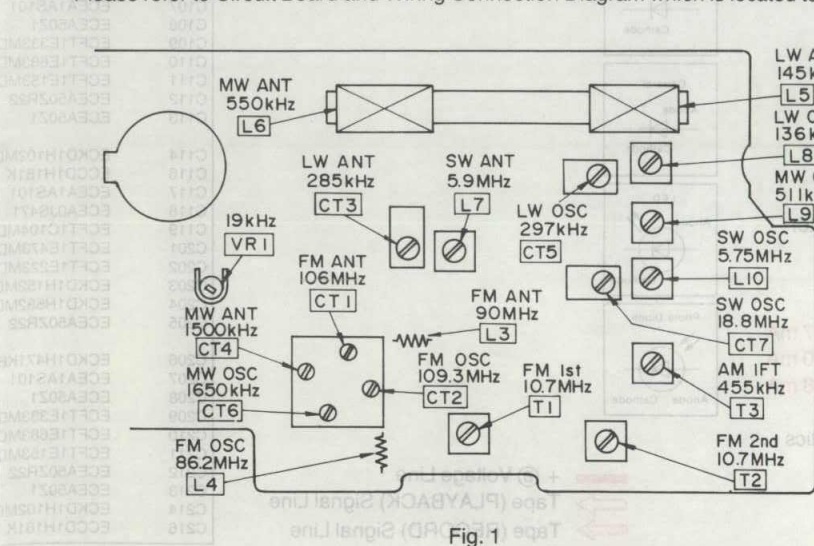


Fig. 1

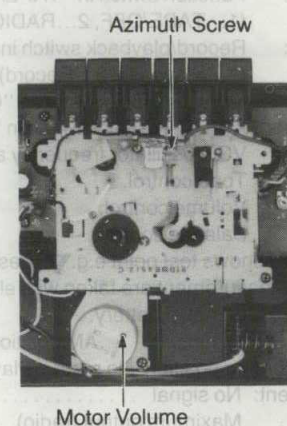


Fig. 2

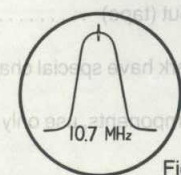
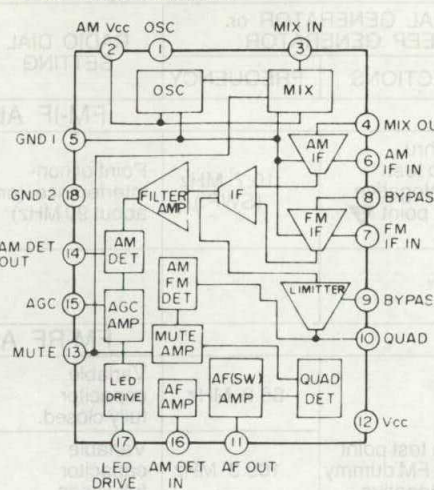


Fig. 3

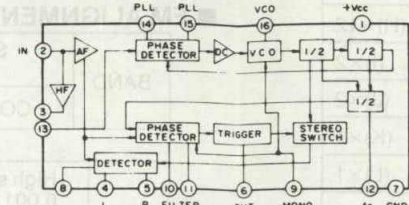


Fig. 4

IC BLOCK DIAGRAM IC2 RVIBA4232L

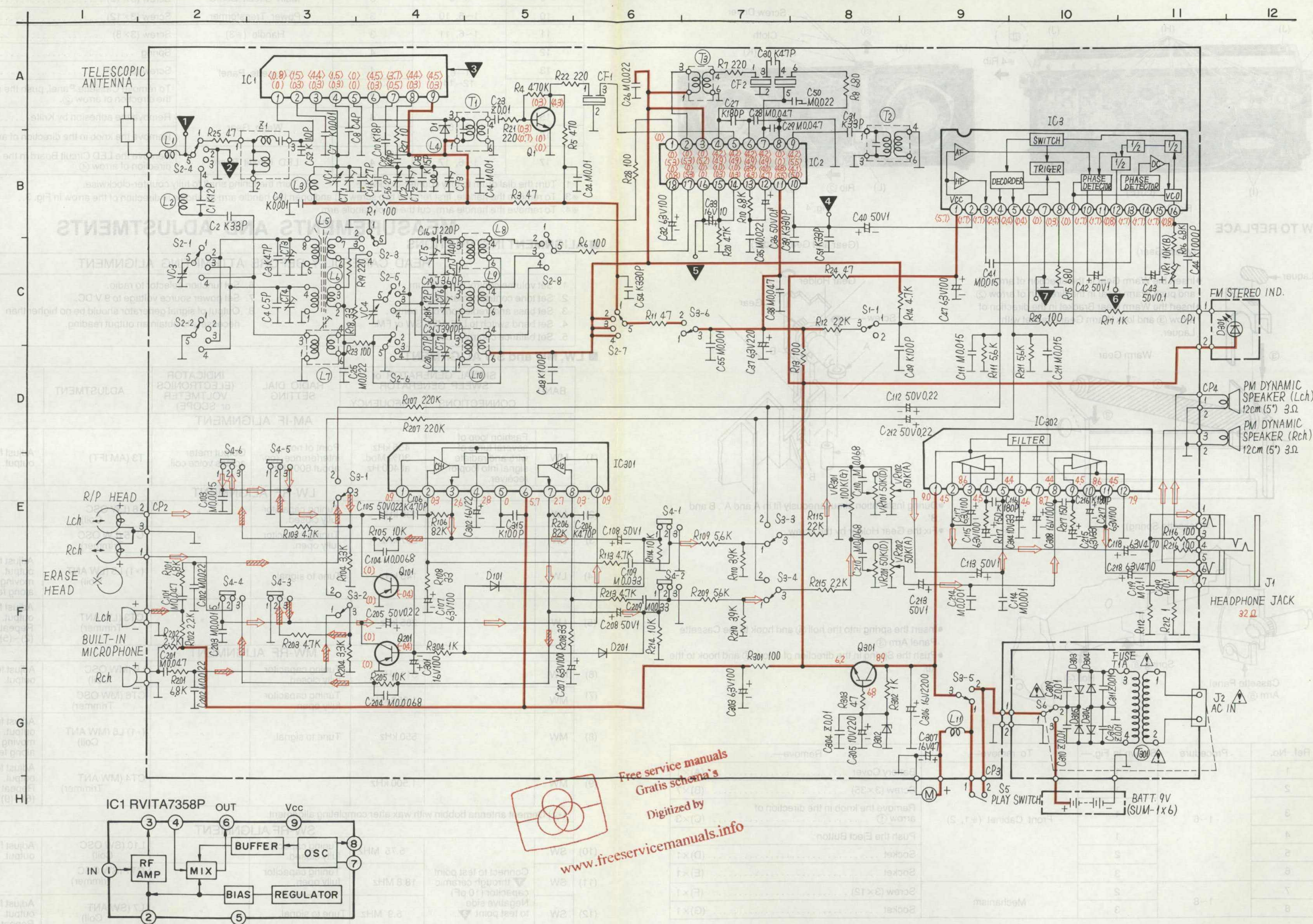


IC3 RVIBA1332L



Ref. No.	Part. No.	Ref. No.	Part. No.
C1	ECDD1H120KC	C217	ECEA1AS101
C2	ECDD1H330KC	C218	ECEAJS471
C3	ECDD1H470K	C219	ECFT1C104MD
C4	ECDD1H050C	C301	ECEA1AS101
C7	ECDD1H102KB	C302	ECEA1ES220
C8	ECDD1H040C	C303	ECEA1AS101
C9	ECDD1H102KB	C304	ECKD1H103ZF
C10	ECDD1H180KC	C305	ECEA1AS221
C11	ECDD1H200KC	C306	ECEA1ES222
C12	ECDD1H470K	C307	ECEA1ES470
C13	ECDD1H150KT	C308	ECEA1CS102
C14	ECKD1H103MD	C309	ECKD1H103ZF
C16	ECQP2A221J	C310	ECKD1H103ZF
C17	ECMS05141UH	C311	ECKD1H103ZF
C18	ECDD1H120KC	C312	ECKD1H103ZF
C19	ECQP2A361JZ	C314	ECEA1AS101
C20	ECDD1H070DC	C315	ECDD1H101K
C21	ECQP2A392JZ	R1	ERD25FJ101
C23	ECKD1H103ZF	R3	ERD25FJ470
C24	ECKD1H103MD	R4	ERD25TJ474
C25	ECFT1E223MD	R5	ERD25FJ471
C26	ECFT1E223MD	R6	ERD25FJ101
C27	ECDD1H181K	R7	ERD25FJ221
C28	ECFT1E473MD	R8	ERD25FJ681
C29	ECFT1E473MD	R10	ERD25FJ562
C30	ECDD1H470K	R11	ERD25FJ470
C31	ECDD1H330KC	R12	ERD25FJ222
C32	ECEAJS470	R13	ERD25FJ101
C33	ECEA1HS100	R14	ERD25FJ472
C35	ECFT1E223MD	R15	ERD25FJ681
C36	ECEA50ZR1	R16	ERD25FJ682
C38	ECFT1E473MD	R17	ERD25FJ102
C39	ECDD1H331K	R18	ERD25FJ330
C40	ECEA50Z1	R20	ERD25TJ473
C41	ECFT1E153MD	R21	ERD25FJ221
C42	ECEA50Z1	R22	ERD25FJ221
C43	ECEA50ZR1	R23	ERD25FJ101
C44	ECQG1H102KC	R24	ERD25FJ470
C47	ECEA1AS101	R25	ERD25FJ100
C48	ECDD1H101K	R27	ERD25FJ101
C49	ECDD1H101K	R28	ERD25FJ101
C50	ECFT1E223MD	R29	ERD25FJ101
C51	ECDD1H330KC	R101	ERD25FJ682
C52	ECDD1H100KC	R102	ERD25FJ222
C54	ECDD1H331K	R103	ERD25FJ472
C55	ECKD1H102MD	R104	ERD25FJ332
C56	ECDD1H020C	R105	ERD25FJ103
C101	ECFT1E473MD	R106	ERD25TJ823
C102	ECFT1E223MD	R107	ERD25TJ184
C103	ECKD1H152MD	R108	ERD25FJ330
C104	ECKD1H682MD	R109	ERD25FJ562
C105	ECEA50ZR22	R110	ERD25FJ392
C106	ECKD1H471KB	R111	ERD25FJ472
C107	ECEA1AS101	R112	ERD25FJ1R0
C108	ECEA50Z1	R113	ERD25FJ472
C109	ECFT1E333MD	R114	ERD25FJ103
C110	ECFT1E683MD	R115	ERD25FJ222
C111	ECFT1E153MD	R116	ERD25FJ101
C112	ECEA50ZR22	R117	ERD25FJ151
C113	ECEA50Z1	R201	ERD25FJ682
C114	ECKD1H102MD	R202	ERD25FJ222
C115	ECDD1H181K	R203	ERD25FJ472
C116	ECEA1AS101	R204	ERD25FJ332
C118	ECEAJS471	R205	ERD25FJ103
C119	ECFT1C104MD	R206	ERD25TJ823
C201	ECFT1E473MD	R207	ERD25TJ184
C202	ECFT1E223MD	R208	ERD25FJ330
C203	ECKD1H152MD	R209	ERD25FJ562
C204	ECKD1H682MD	R210	ERD25FJ392
C205	ECEA50ZR22	R211	ERD25FJ472
C206	ECKD1H471KB	R212	ERD25FJ1R0
C207	ECEA1AS101	R213	ERD25FJ472
C208	ECEA50Z1	R214	ERD25FJ103
C209	ECFT1E333MD	R215	ERD25FJ222
C210	ECFT1E683MD	R216	ERD25FJ101
C211	ECFT1E153MD	R217	ERD25FJ151
C212	ECEA50ZR22	R301	ERD25FJ101
C213	ECEA50Z1	R302	ERD25FJ102
C214	ECKD1H102MD	R303	ERD25FJ470
C216	ECKD1H181K	R304	ERD25FJ102

SCHEMATIC DIAGRAM MODEL RX-4930L



ELECTRICAL PARTS LIST

Numbering System of Resistor

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

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 uF)		

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

Capacitor Type	ECEA Type	Other	Tolerance
ECEA: Electrolytic	OU: 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%
ECOM: Polyester	1E: 25 V		Z: +80%, -20%
ECOP: Polypropylene	1H: 50 V		P: +100%, -0%
ECET: Electrolytic	1V: 35 V		
ECEA000: Non Polar Electrolytic	50: 50 V		
QCUC: Ceramic (Chip Type)	25: 25 V		
ECUX: Ceramic (Chip Type)	16: 16 V		

Notes:

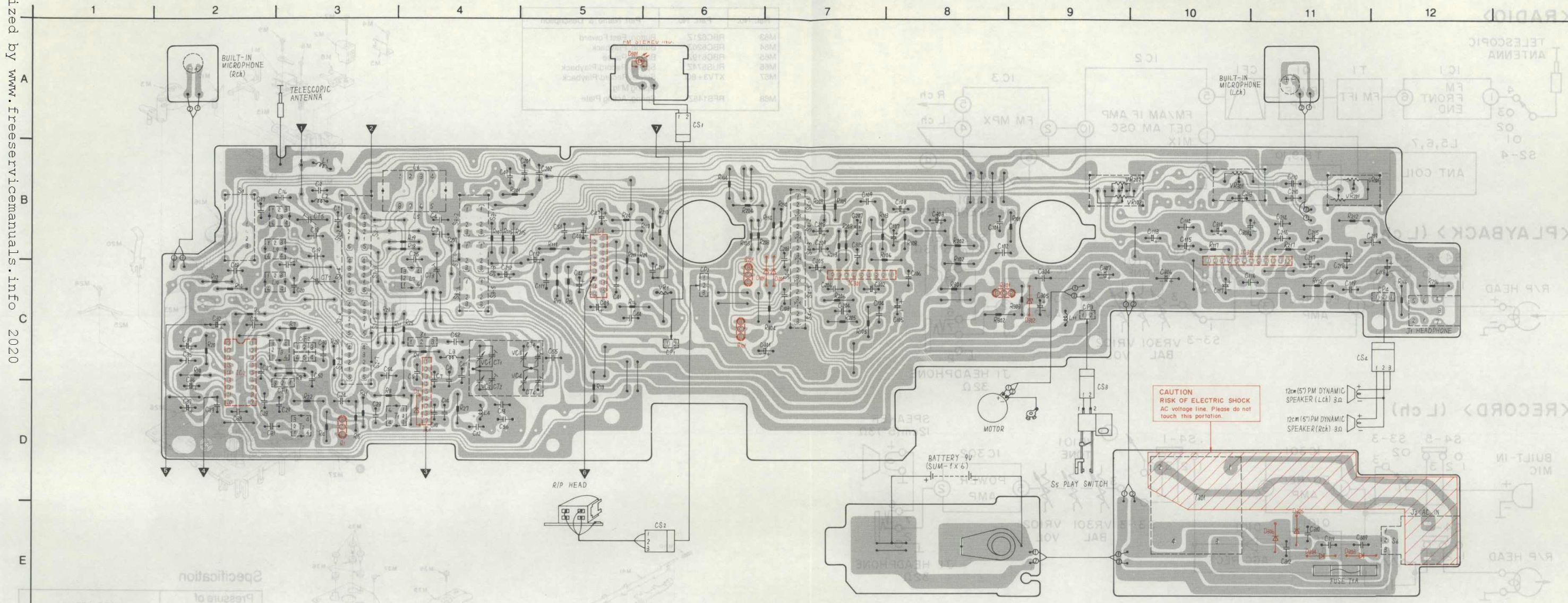
- S1: FM Mode switch in "MONO" position.
- S2-1~S2-8: Band switch in "FM" position. (1...SW, 2...MW, 3...LW, 4...FM)
- S3-1~S3-6: Function switch in "TAPE/OFF" position. (1...TAPE/OFF, 2...RADIO)
- S4-1~S4-6: Record/playback switch in "playback" position. (1...Playback, 3...Record)
- S5: Motor ON/OFF switch in "OFF" position.
- S6: VCO IN select switch in "DC IN" position.
- VR1: AC 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.
- Battery current: No signal 67 mA
Maximum output (radio) 1000 mA
Maximum output (tape) 1018 mA

- 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.

- + Ⓢ Voltage Line
- Tape (PLAYBACK) Signal Line
- Tape (RECORD) Signal Line

CIRCUIT BOARD AND WIRING CONNECTION DIAGRAM MODEL RX-4930L

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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.

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)

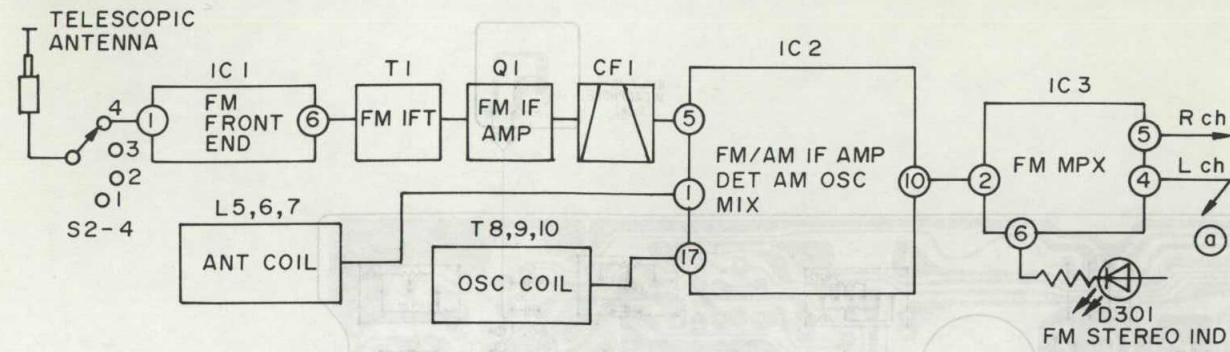
Ref. No.	Part. No.	Part Name & Description	Ref. No.	Part. No.	Part Name & Description	Ref. No.	Part. No.	Part Name & Description
INTEGRATED CIRCUITS			TRANSFORMERS			CERAMIC FILTERS		
IC1	RVITA7358P	IC	T1,2	RLI4B153	IFT, FM 1st. 2nd	CF1	RVFSFE107MAZ	Ceramic Filter, 10.7 MHz
IC2	AN7220A	IC	T3	RLI2B153	IFT, AM	CF2 [ET]	QCRZZ470A7W	Ceramic Filter, 470 kHz
IC3	RVIBA1332L	IC	T301 [ZT]	RLT5K3G3A	Power Transformer ⚠	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 ⚠	SPARK KILLERS		
Q1	2SC1675K1	Transistor (Si)	VARIABLE CAPACITORS			Z1	RXABPWB5W	Capomnent Combination
Q101,201	2SA733-P1	Transistor (Ge)	VC1~4	RCV4RC2RA	Variable Capacitor/with Trimmer Capacitor (CT1,2,4,6)	SWITCHES		
Q301	2SC2001K1	Transistor (Si)	TRIMMER CONDENSER			S1	RST2A09Z	Switch, FM Mode
DIODES & RECTIFIERS			CT3	RCVPL30A	Trimmer Capacitor	S2	RST4H10Z	Switch, Band
D1,101,201	RVDIN4148	Diode (Si)	CT5	RCVPL20A	Trimmer Capacitor	S3	RST2F11Z	Switch, Function
D301	LN012176P	LED, FM Stereo	CT7	RCVPL10A	Trimmer Capacitor	S4	RSH2F08Z	Switch, Record/Playback
D302	RVDZ6R8C	Diode (Si)	VARIABLE RESISTORS			JACKS		
D303~306	RVDISR35	Diode (Si)	VR1	EVNK4AA00B14	Variable Resistor, 10 kΩ (B)	J1	RJJ1D27Z	Jack, Headphone
COILS			VR101,201	EWCVHAF20D54	Variable Resistor, 50 kΩ (D)	J2 (S6) [ZT]	RJJ1A4Z	Jack, AD/DC IN ⚠
L3	RLD4Y44	Antenna Coil, FM	VR102,202	EWCUHAF20A54	Variable Resistor, 50 kΩ (A)	[ZS] [FT] [FS]		
L4	RLD4Y43	Oscillator Coil, FM	VR301	EW7MAF20G15	Variable Resistor, 100 kΩ (G)	[IT] [IS]		
L5,6	RLF6W7	Antenna Coil, LW/MW	J2 (S6) [ET] RJJ1A5Z Jack, AC/DC IN ⚠					
L7	RLA3B41	Antenna Coil, SW						
L8	RL01B12	Oscillator Coil, LW						
L9	RL02B108	Oscillator Coil, MW						
L10	RL03B87	Oscillator Coil, SW						
L11	RLQZG470K	Choke Coil						

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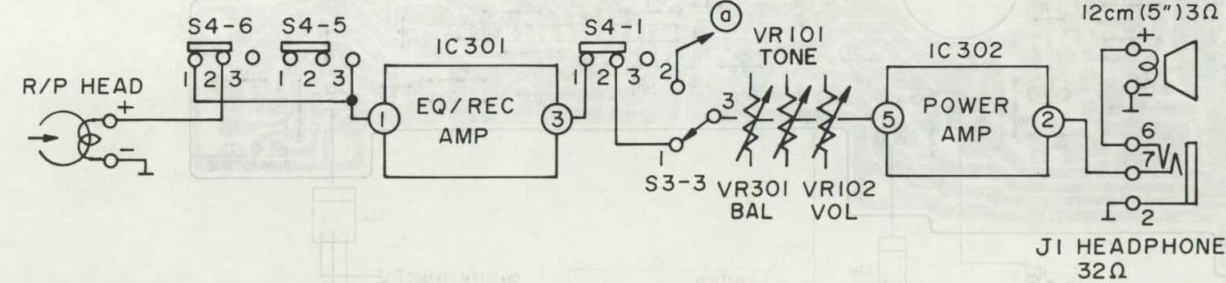
IC1, IC2, IC3, IC301, IC302, Q1, 101, 201, 301, D301, D1, 101, 201, 302~306

BLOCK DIAGRAM

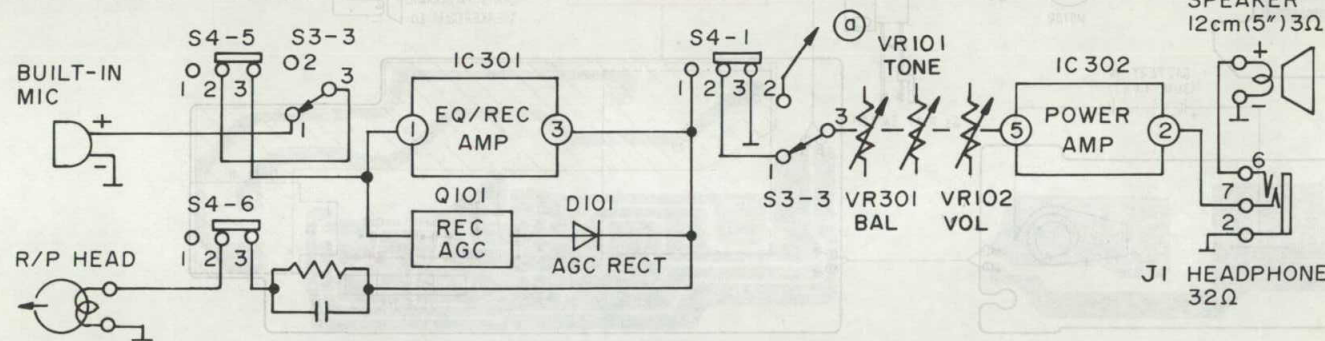
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<PLAYBACK> (L ch)



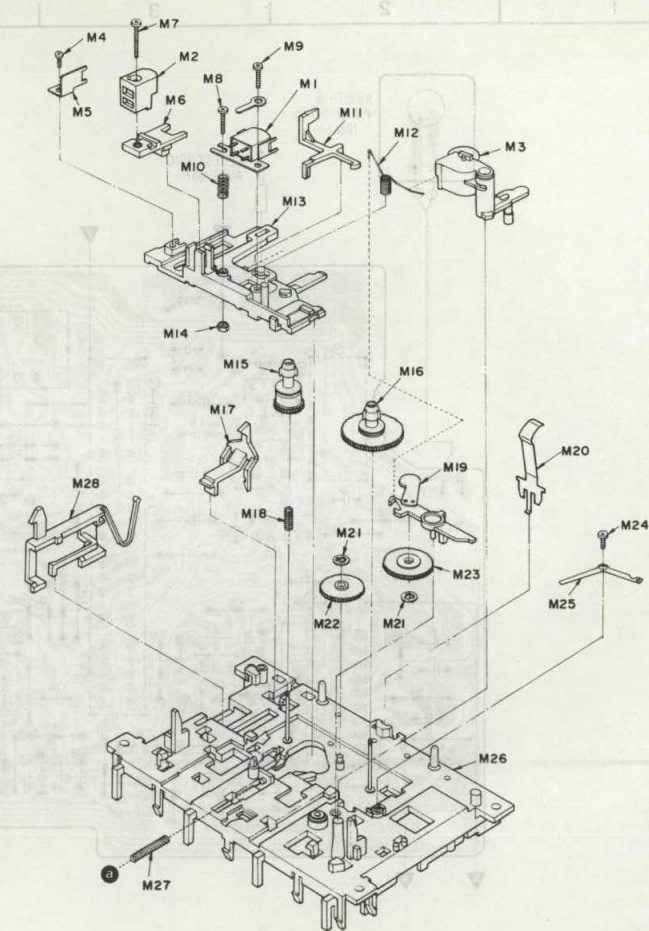
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MECHANISM PARTS LOCATION

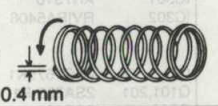
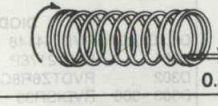
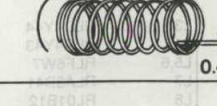
Ref. No.	Part. No.	Part Name & Description	Ref. No.	Part. No.	Part Name & Description
MECHANICAL PARTS					
M1	RJH2E4Y	Record/Playback Head	M32	RFM20Z	Motor Ass'y with Pulley
M2	QWY2127Z	Erase Head	M34	RFK9Z	Idler Ass'y
M3	RFR16Z	Pinch Roller Ass'y	M35	QHQ1223	Screw, Motor Ass'y M'tg
M4	XTN2+6B	Screw, 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 Forward
M64	RBC620Z	Button, Playback
M65	RBC619Z	Button, Pause
M66	RUS574Z	Spring, Record/Playback
M67	XTV3+8G	Screw, Record/Playback
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± ³⁰ / ₂₀ gr-cm
REW Tension	70± ³⁰ / ₂₀ gr-cm

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

RX-4930L DEUTSCH

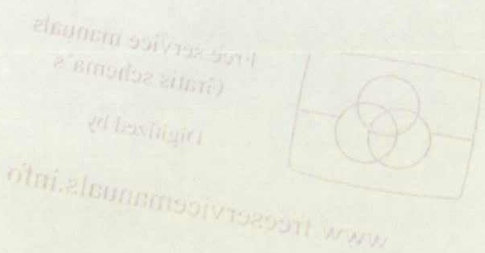
TECHNISCHE DATEN

Allgemeines:		
Stromversorgung:	Wechselstrom: 220 V, 50 Hz Batterien: 9 V (sechs Trockenbatterien der Größe "D": National UM-1 o.ä.)	Empfindlichkeit: UKW: 3,5µV bei 50 mW Ausgangsleistung LW: 141µV/m bei 50 mW Ausgangsleistung MW: 112µV/m bei 50 mW Ausgangsleistung KW: 8,9µV bei 50 mW Ausgangsleistung
Leistungsaufnahme:	13 W (bei Netzbetrieb)	
Ausgangsleistung:	max. 8 W (2×4 W) eff.	
Lautsprecher:	Dynamischer PM-Lautsprecher, Ø12 cm (3Ω)	Tonbandteil: Frequenzgang: 80~8.000 Hz (Normalband) Aufnahmesystem: Gleichstrom-Vormagnetisierung, Magnetiöschung
Ausgangsimpedanzen:	HEADPHONES: 32Ω	Bandgeschwindigkeit: 4,8 cm/s
Abmessungen (B×H×T):	475×183×132 mm	Spieldauer: 1 Stunde mit Cassette C-60
Gewicht (ohne Batterien):	2,7 kg	Spurlage: Stereoaufnahme und -wiedergabe auf 4 Spuren/2 Kanälen

Empfangsteil:		
Wellenbereiche:	UKW: 87,5~108 MHz LW: 150~285 kHz (2000~1060 m) MW: 520~1610 kHz (577~186 m) KW: 5,9~18 MHz (50,8~16,7 m)	Änderungen vorbehalten.
Zwischenfrequenz:	UKW: 10,7 MHz LW/MW/KW: 455 kHz	

BEZEICHNUNGEN IN DER SCHEMATISCHEN DARSTELLUNG

- Bemerkungen:**
- S1: UKW-Betriebsartenwahl auf „MONO“.
 - S2-1~S2-8: Wellenbereichsschalter auf „FM“.
(1=SW, 2=MW, 3=LW, 4=FM)
 - S3-1~S3-6: Funktionsschalter auf „TAPE/OFF“.
(1=TAPE/OFF, 2=RADIO)
 - S4-1~S4-6: Aufnahme-/Wiedergabeschalter auf „Wiedergabe“.
(1...Wiedergabe, 3...Aufnahme)
 - S5: EIN/AUS-Schalter des Motors auf „OFF“.
 - S6: Wahlschalter für Gleichstrom- oder Wechselstrombetrieb auf „DC IN“.
 - VR1: Einstellung der spannungsgesteuerten Oszillatorfrequenz.
 - VR101, 201: Klangregler.
 - VR102, 202: Lautstärkeregler.
 - VR301: Balanceregler.
 - Die Markierung (▼) bezeichnet einen Meßpunkt, z.B. ▼=Meßpunkt 1.
 - Alle Gleichspannungen sind mit einem Elektronikvoltmeter vom negativen Batterieanschluß aus zu messen.
< >...Stellung „FM“, ()...Stellung „AM“, []...Stellung „Aufnahme“, Nein marke...Stellung „Wiedergabe“.
 - Batteriestrom: ohne Signal 67 mA
bei maximaler Ausgangsleistung (Radio) 1000 mA
bei maximaler Ausgangsleistung (Cassette) 1018 mA
 - Zur Betriebssicherheit die im Schaltplan mit A gekennzeichneten Bauteile sind für einen sicheren Betrieb dieses Gerätes besonders wichtig und sollten daher nur durch Originalbauteile ersetzt werden.



ABGLEICH

VORGANGSWEISE BEIM ABGLEICH

- BITTE DIESEN ABSCHNITT VOR DEM ABGLEICH SORGFÄLTIG DURCHLESEN
- Den Lautstärkeregler in die Maximalposition stellen.
 - Den Klangregler in die Maximalposition stellen.
 - Den Baßregler und den Höhenregler in die Mittelposition stellen.
 - Den Wellenbereichsschalter auf LW, MW, KW oder UKW stellen.
 - Den Balanceregler in die Mittelposition stellen.
 - Den Funktionsschalter auf „radio“ stellen.
 - Eine Gleichspannung von 9 V anlegen.
 - Der Signalgeneratorausgang sollte nicht größer sein, als für eine Ausgangsanzeige unbedingt notwendig ist.

LW-, MW- und KW- ABGLEICH

WEL-LEN-BAND	SIGNALGENERATOR oder WOBELGENERATOR	STELLUNG DES ABSTIMM-REGLERS	MESSGERÄT (ELEKTRONIK-VOLTMETER oder OSZILLOSKOP)	ABGLEICH	BEMERKUNGEN
	ANSCHLÜSSE	FREQUENZ			
AM-ZF-ABGLEICH					
(1) MW	Aus einem Draht einige Schleifenwindungen bilden und das Signal in die Empfängerschleife abstrahlen.	455 kHz, 30% mod. (Modulationsfrequenz 400 Hz)	Der Abstimmungspunkt, wo keine Interferenz auftritt (ungefähr bei 600 kHz)	T3 (AM-ZF-Abgleich)	Die maximale Ausgangsleistung einstellen.
LW-HF-ABGLEICH					
(2) LW	"	136 kHz	Drehkondensator ganz geschlossen.	L8 (LW-Oszillatorschleife)	"
(3) LW	"	297 kHz	Drehkondensator ganz aufgedreht.	CT5 (LW-Oszillatortrimmer)	"
(4) LW	"	145 kHz	Das Signal abstimmen.	(+1) L5 (LW-Antennenschleife)	Die maximale Ausgangsleistung einstellen. L5 durch Verschieben am Ferritkern abgleichen.
(5) LW	"	285 kHz	"	CT3 (LW-Antennentrimmer)	Die maximale Ausgangsleistung einstellen. Die Schritte (2) bis (5) wiederholen.
MW-HF-ABGLEICH					
(6) MW	"	511 kHz	Drehkondensator ganz geschlossen.	L9 (MW-Oszillatorschleife)	die maximale Ausgangsleistung einstellen.
(7) MW	"	1.650 kHz	Drehkondensator ganz aufgedreht.	CT6 (MW-Oszillatortrimmer)	"
(8) MW	"	550 kHz	Das Signal abstimmen.	(+1) L6 (MW-Antennenschleife)	Die maximale Ausgangsleistung einstellen. L6 durch Verschieben am Ferritkern abgleichen.
(9) MW	"	1.500 kHz	"	CT4 (MW-Antennentrimmer)	Die maximale Ausgangsleistung einstellen. Die Schritte (6) bis (9) wiederholen.
KW-HF ABGLEICH					
(+1) Nach beendetem Abgleich ist der Antennenschleifenkörper mit Wachs zu befestigen.					
(10) KW		5,75 MHz	Drehkondensator ganz geschlossen.	L10 (KW-Oszillatorschleife)	Die maximale Ausgangsleistung einstellen.
(11) KW	Über einen Keramik-kondensator (10 pF) an den Meßpunkt ▼ anschließen. Den negativen Ausgang an den Meßpunkt ▼ anschließen.	18,8 MHz	Drehkondensator ganz aufgedreht.	CT7 (KW-Oszillatortrimmer)	"
(12) KW		5,9 MHz	Das Signal abstimmen.	L7 (KW-Antennenschleife)	Die maximale Ausgangsleistung einstellen. Die Schritte (10) bis (12) wiederholen.

UKW-ABGLEICH

WEL-LEN-BAND	SIGNALGENERATOR oder WOBELGENERATOR	STELLUNG DES ABSTIMM-REGLERS	MESSGERÄT (ELEKTRONIK-VOLTMETER oder OSZILLOSKOP)	ABGLEICH	BEMERKUNGEN
	ANSCHLÜSSE	FREQUENZ			
UKW-ZF-ABGLEICH					
(1) UKW	Über einen 0,001 µF-Kondensator an den Meßpunkt ▼ anschließen. Den negativen Ausgang an den Meßpunkt ▼ anschließen.	10,7 MHz (SWP.)	Der Abstimmungspunkt, wo keine Interferenz auftritt (ungefähr bei 90 MHz).	T1 (1. UKW-ZF-Abgleich)	Die Vertikal-amplitude des Oszilloskops an den Meßpunkt ▼ anschließen. Den negativen Ausgang an den Meßpunkt ▼ anschließen. Die Maximalamplitude einstellen. (Siehe Abb. 3.)
(2) UKW	"	"	"	T2 (2. UKW-ZF-Abgleich)	Die Maximal-amplitude einstellen. (Siehe Abb. 4.)
UKW-HF-ABGLEICH					
(3) UKW	Übereine künstliche UKW-Antenne an den Meßpunkt ▼ anschließen. Den negativen Ausgang an den Meßpunkt ▼ anschließen.	87,5 MHz	Drehkondensator ganz geschlossen.	L4 (UKW-Oszillatorschleife)	(+2) Die maximale Ausgangsleistung einstellen.
(4) UKW	"	108 MHz	Drehkondensator ganz aufgedreht.	CT2 (UKW-Oszillatortrimmer)	"
(5) UKW	"	90 MHz	Das Signal abstimmen.	L3 (UKW-Antennenschleife)	"
(6) UKW	"	106 MHz	"	CT1 (UKW-Antennentrimmer)	(+2) Die maximale Ausgangsleistung einstellen. Die Schritte (3) bis (6) wiederholen.
(+2) Es gibt drei verschiedene Ausgangsfrequenzkurven. Stimmen Sie die Mittelfrequenz ab.					

KANAL TRENNUNGSABGLEICH

PRÜFUNG	UKW-MESSENDER SOURCE-ANSCHLUSS	GERÄTEAN-SCHLUSS (ELEKTRO-NISCHER ZÄHLER)	EINSTELLUNG	ANGABEN	BEMERKUNGEN
Einstellung des Pilottons	98 MHz, 60 dB Am Prüfpunkt ▼ über eine künstliche UKW-Antenne anschließen, die negative Seite mit dem Prüfpunkt ▼ verbinden.	▼ ... (+) ▼ ... (-)	VR1	19 kHz	Mit dem elektronischen Zähler den Spannungskonstanthalter (VR1) auf 19 kHz (±150 Hz) einstellen.

BAND-ABGLEICH

EINSTELLUNG	EINGANG	MESSPUNKT	MESSWERT	EINSTELL-PUNKT	BEMERKUNGEN
Azimut	QZZCFM (8 kHz, -20 dB)	Kopfhörereruchse (AC Voltmeter & oszilloskop)	Die maximale Ausgangsleistung einstellen.	Azimut-Einstellschraube	bei Wiedergabe (Siehe Abb. 2.)
Band Geschwindigkeit	QZZCWAT (3 kHz)	Kopfhörererbuchse (Frequenzzähler)	3000±90 Hz	Motor	bei Wiedergabe (Siehe Abb 2)

RX-4930L FRANÇAIS

SPECIFICATIONS

Généralités:		
Alimentation:	c.a. 220 V, 50 Hz Piles: 9 V (six piles sèches de dimension D) (National UM-1 ou équivalent)	Fréquence intermédiaire: FM: 10,7 MHz AM (GO/PO/OC): 455 kHz
Consommation:	13 W (C.A. seulement)	Sensibilité: FM: 3,5µV pour une sortie de 50 mW GO: 141µV/m pour une sortie de 50 mW PO: 112µV/m pour une sortie de 50 mW OC: 8,9µV pour une sortie de 50 mW
Puissance de sortie:	8 W (4 W×2)...RMS (max.)	
Enceinte acoustique:	Haut-parleur des graves: haut-parleur dynamique 12 cm à aimant fixe (3Ω)	
Sortie:	HEADPHONE: 32Ω	
Dimensions (l×h×Pr) cm:	475×183×132 (18"1/16×7"3/16×5"3/16)"	
Poids kg:	2,7 sans piles	
Section radio:		
Gamme de fréquence ratio:	FM: 87,5 à 108 MHz GO: 150 à 285 kHz (2000 à 1060 m) PO: 520 à 1610 kHz (577 à 186 m) OC: 5,9 à 18 MHz (50,8 à 16,7 m)	Section platine magnétophone: Réponse de fréquence: 80 à 8.000 Hz (avec bande normale) Système d'enregistrement: Polarisation C.C., effacement magnétique Vitesse de bande: 4,8 cm/sec. Durée de lecture: 1 heure avec cassette C-60 Pistes: Enregistrement et lecture stéréo 4 pistes, 2 canaux
Ces spécifications sont sujettes à des changements sans préavis.		

SYMBOLES UTILISES DANS LE SCHEMA

- Remarques:**
- S1: Sélecteur de mode FM sur la position stéréo
 - S2-1~S2-8: Sélecteur de gamme d'onde en position "FM".
(1..."SW", 2..."MW", 3..."LW", 4..."FM")
 - S3-1~S3-6: Commutateur de fonction en position "TAPE/OFF"
(1..."TAPE/OFF", 2..."RADIO")
 - S4-1~S4-6: Commutateur enregistrement/lecture en position "playback".
(1...Lecture, 3...Enregistrement)
 - S5: Commutateur "ON/OFF" du moteur en position "OFF".
 - S6: Sélecteur C.A./C.C. en position "DC IN".
 - VR1: Réglage de fréquence de l'oscillateur VCO.
 - VR101, 201: Commande de tonalité.
 - VR102, 202: Potentiomètre de volume.
 - VR301: Commande de balance.
 - La marque (▼) signale un point de vérification. Ex.: ▼=point de vérification 1.
 - La tension C.C. est mesurée au moyen d'un voltmètre électronique à partir de la borne négative de la pile.
< >...Position FM, ()...Position AM,
[]...Position Enregistrement,
Non marque...Position Lecture.
 - Courant des piles: Pas de signal 67 mA
Sortie maximum (Radio) 1000 mA
Sortie maximum (Bande) 1018 mA
 - Remarque importante concernant la sécurité
Les pièces marquées A ont des caractéristiques spéciales, importantes pour la sécurité.
Lors du remplacement d'une de ces pièces, n'utiliser que les pièces spécifiées par le fabricant.

ALIGNEMENTS

INSTRUCTIONS D'ALIGNEMENT

AVANT DE PROCEDER AUX ALIGNEMENTS, LIRE ATTENTIVEMENT CE QUI SUIT	
1. Placer le potentiomètre de volume au maximum.	6. Placer le sélecteur de fonctions sur "radio".
2. Placer la commande de tonalité au maximum.	7. Régler la tension sur 9 V C.C.
3. Placer les commandes des graves et aigus au centre.	8. Régler la sortie du générateur étalonné de façon à ne pas surcharger les circuits.
4. Placer le sélecteur de bande sur GO, PO, DC ou FM.	
5. Placer la commande de balance au centre.	

ALIGNEMENT GO, PO, et OC

BANDE	GENERATEUR ETALONNE ou GENERATEUR DE BALAYAGE		POSITION DE L'AIGUILLE SUR LE CADRAN	INDICATEUR (VOLTMETRE ou OSCILLOSCOPE ELECTRO- NIQUES)	REGLAGE	OBSERVATIONS
	BRANCHEMENTS	FREQUENCE				
ALIGNEMENT IF sur AM						
PO	Faire une boucle de plusieurs tours de fil et émettre le signal dans la boucle du récepteur.	455 kHz (modulation de 30% à 400 Hz)	Point de non- interférence. (à/ environ 600 kHz)	Voltmètre branché à la bobine oscillatrice.	T3 (AM IFT)	Régler pour une sortie maximum.
ALIGNEMENT HF sur GO						
GO	"	136 kHz	Condensateur variable totalement fermé.	"	L8 (bobine d'oscillateur GO)	"
GO	"	297 kHz	Condensateur variable ouvert à fond.	"	CT5 (trimmer d'oscillateur GO)	"
GO	"	145 kHz	Syntoniser sur le signal.	"	(+1) L5 (bobine d'antenne GO)	Régler pour une sortie maximum en glissant la bobine L5 le long du noyau en ferrite.
GO	"	285 kHz	"	"	CT3 (trimmer d'antenne GO)	Régler pour une sortie maximum. Refaire les étapes (2) à (5).
ALIGNEMENT HF sur PO						
PO	"	511 kHz	Condensateur variable totalement fermé.	"	L9 (bobine d'oscillateur PO)	Régler pour une sortie maximum.
PO	"	1.650 kHz	Condensateur variable ouvert à fond.	"	CT6 (trimmer d'oscillateur PO)	"
PO	"	550 kHz	Syntoniser sur le signal.	"	(+) L6 (bobine d'antenne PO)	Régler pour une sortie maximum en glissant la bobine L6 le long du noyau en ferrite.
PO	"	1.500 kHz	"	"	CT4 (trimmer d'antenne PO)	Régler pour une sortie maximum. Refaire les étapes (6) à (9).
(+1) Soceller la bobine d'antenne à la cire après avoir achevé l'alignement.						
ALIGNEMENT HF sur OC						
OC	Brancher au point ▼ par un condensateur en céramique (10 pF) Côté négatif au point ▼.	5,75 mHz	Condensateur variable totalement fermé.	"	L10 (bobine d'oscillateur OC)	Régler pour une sortie maximum.
OC		18,8 MHz	Condensateur variable ouvert à fond.	"	CT7 (trimmer d'oscillateur OC)	"
OC		5,9 MHz	Syntoniser sur le signal.	"	L7 (bobine d'antenne OC)	Régler pour une sortie maximum. Refaire les étapes (10) à (12).

ALIGNEMENT FM

BANDE	GENERATEUR ETALONNE ou GENERATEUR DE BALAYAGE		POSITION DE L'AIGUILLE SUR LE CADRAN	INDICATEUR (VOLTMETRE ou OSCILLOSCOPE ELECTRO- NIQUES)	REGLAGE	OBSERVATIONS
	BRANCHEMENTS	FREQUENCE				
ALIGNEMENT IF sur FM						
FM	Brancher au point ▼ via 0,001 µF. Côté négatif au point ▼.	10,7 MHz (SWP.)	Point de non- interférence. (à/environ 90 MHz)	Brancher la sonde vert. de l'oscilloscope au point ▼. Côté négatif au point ▼.	T1 (FM 1 ^{ère} IFT)	Régler pour une amplitude maximum. (Voir fig. 3)
FM	"	"	"	"	T2 (FM 2 ^{ème} IFT)	Régler pour une amplitude maximum. (Voir fig. 4.)
ALIGNEMENT HF sur FM						
FM	Brancher au point ▼ via une antenne fictive FM. Côté négatif au point ▼.	86.2 MHz	Condensateur variable totalement fermé.	Voltmètre bran- ché à la bobine oscillatrice.	L4 (bobine d'oscillateur FM)	(+2) Régler pour une sortie maximum.
FM		109,3 MHz	Condensateur variable ouvert à fond.	"	CT2 (trimmer d'oscillateur FM)	"
FM		90 MHz	Syntonsiser sur le signal.	"	L3 (bobine d'antenne FM)	"
FM		106 MHz	"	"	CT1 (trimmer d'antenne FM)	(+2) Régler pour une sortie maximum. Refaire les étapes (3) à (6).
(+2) Il y aura trois réponses de sortie; la syntonisation adéquate est la fréquence du milieu.						

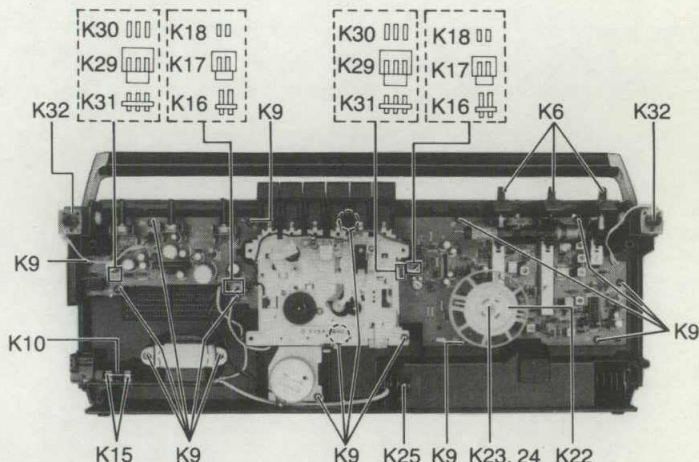
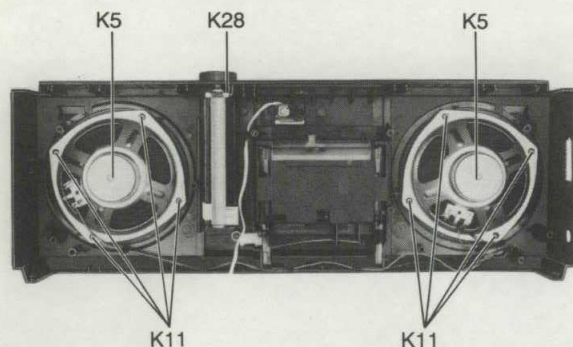
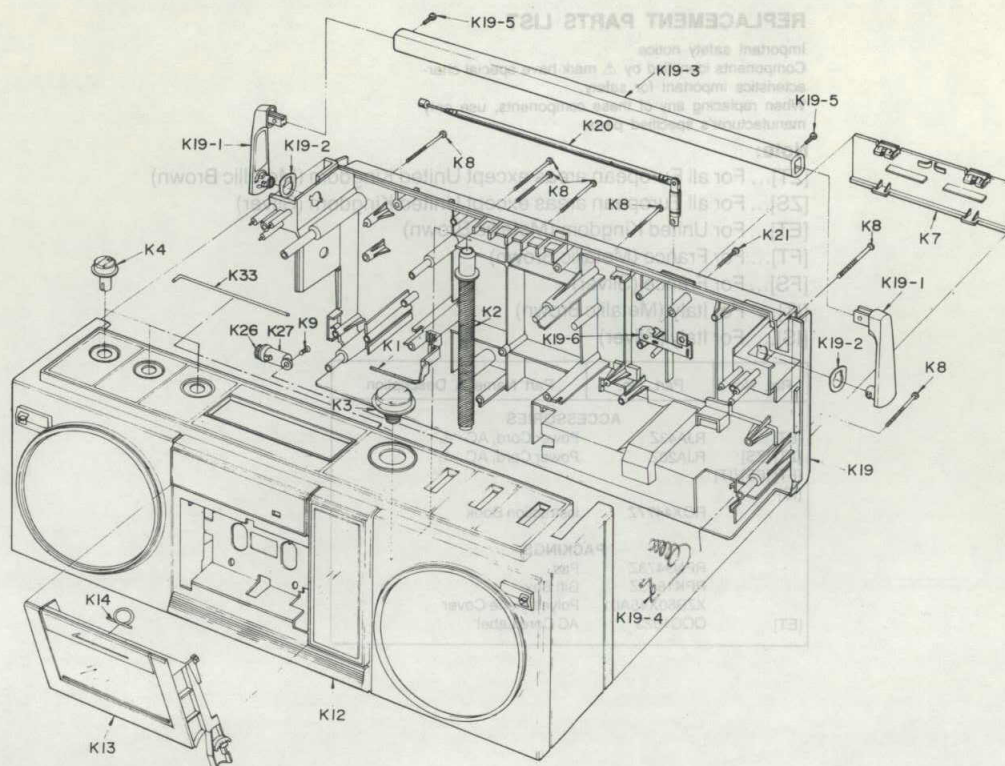
ALIGNEMENT DE LA SEPARATION

ELEMENT	GENERATEUR DE SIGNAUX FM BRANCHEMENT SUR LA SOURCE	BRANCHEMENT A L'EQUIPMENT (COMPTEUR ELECTRONIQUE)	REGLAGE	SPECIFICATION	REMARQUES
Réglage du signal pilote.	98 MHz, 60 dB Brancher au point de coupure ▼ par l'intermédiaire d'une antenne FM fictive, Côté négatif au point de coupure ▼.	▼...(+) ▼...(-)	VR1	19 kHz	Régler VR1 pour 19 kHz (±150 Hz) en effectuant la lecture sur le compteur électronique.

ALIGNEMENTS CORDE

ELEMENT	ENTREE	POINT DE MESURE	SPECIFICATION	POINT DE REGLAGE	OBSERVATIONS
Azimuth	QZZCFM (8 kHz, -20 dB)	Prise casque (AC Voltmeter & Oscilloscope)	Régler pour une sortie maximum.	Vis d'azimut	Mode de lecture (Voir fig. 2)
Corde Vitesse	QZZCWAT (3 kHz)	Prise casque (Compteur de fréquence)	3000±90 Hz	Automobile	Mode de lecture (Voir fig. 2)

CABINET PARTS LOCATION



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.

Note:

[ZT]... For all European areas except United Kingdom (Metallic Brown) [FS]... For France (Silver)
[ZS]... For all European areas except United Kingdom (Silver) [IT]... For Italy (Metallic Brown)
[ET]... For United Kingdom (Metallic Brown) [IS]... For Italy (Silver)
[FT]... For France (Metallic Brown)

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 Δ	K19-2	RKX257Z	Washer Handle
K1 [ZS] [FS]	RDP262Z1	Pointer Dial	K11	XTV3+10G	Screw, Speaker M'tg.	K19-3 [ZT]	RKX311Z	Drum Dial
K2	RDG5807Y	Warm Gear	K12 [ZT] [FT]	RYMX4930LZ91	Front Cabinet Ass'y	[ET] [FT] [IT]	RKX311Z1	Handle
K3 [ZT] [ET]	RYTX4930LZKS	Tuning Knob Ass'y	[IS]			[FS] [IS]		
K3 [ZS] [FS]	RYTX4930LZK1	Tuning Knob Ass'y	K12 [ZS] [FS]	RYMX4930LZK8	Front Cabinet Ass'y	K19-4	RJC931Z	Terminal Battery +/-
K4 [ZT] [ET]	RBN670X	Knob, Tone, Valance, Volume	[IS]			K19-5	XTB3+8CFN	Screw, Handle M'tg
K4 [ZS] [FS]	RBN670X1	Knob, Tone, Valance, Volume	K12 [ET]	RYMX4930LE91	Front Cabinet Ass'y Δ	K19-6	RJT874Z	Terminal Antenna
K5	RAS12P07Z	Speaker	K13 [ZT] [ET]	RYQX4930LZBR	Cassette Panel Ass'y			
K6 [ZT] [ET]	RBS226Z	Knob, Selector, Band, FM Mode	[FT] [IT]					
K6 [ZS] [FS]	RBS226Z1	Knob, Selector, Band, FM Mode	K13 [ZS] [FS]	RYQX4930LZSL	Cassette Panel Ass'y			
K7 [ZT] [ET]	RKK224Y	Battery Cover	[IS]			K20	XEARR225EAY	Telescopic Antenna
K7 [ZS] [FS]	RKK224Y7	Battery Cover	K14	RUS577Z	Spring, Cassette Tape	K21	XYN3+F15F	Screw, Telescopic Antenna M'tg.
K8	XTN3+35G	Screw, Cabinet M'tg.	K15	QTF1054	Fuse Holder	K22	RDG5699Z	Drum Dial
K9	XTV3+12G	Screw, Circuit Board, etc. M'tg.	K16	RJP2G1Z	Plug, 2 Pin	K23	XSN26+8	Screw, Dial Drum M'tg
			K17	RJS2L1Z	Socket, 2 Pin	K24	XWA26B	Washer, Dial Drum M'tg.
			K18	RJT462Z	Terminal, Socket	K25	RJC511Z	Terminal Battery, -
			K19 [FT]	RYFX4930LZFK	Rear Cabinet Ass'y	K26	RDG5729Z	Soft Gear
			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]	RYFX4930LZL7	Rear Cabinet Ass'y	K29	RJS3L3Z	Socket, 3 Pin
			K19 [ET]	RYFX4930LZEK	Rear Cabinet Ass'y Δ			
			K19 [IT]	RYFX4930LZIK	Rear Cabinet Ass'y	K30	RJT707Z	Terminal, Socket
			K19 [IS]	RYFX4930LZL7	Rear Cabinet Ass'y	K31	RJP3G1Z	Plug, 3 Pin
			K19-1	RKX248Z	Arm, Handle	K32	RJM151Z	Built-in Microphone
						K33	RUS534Z	Spring, Cassette Panel

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