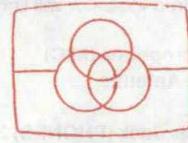


Service Manual

Stereo Radio Cassette Recorder



Free service manuals

Gratis schema's

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www.freeservicemanuals.info

Radio Cassette

RX-4936L

(Black) (Silver)

This is the Service Manual for the following areas.

<input checked="" type="checkbox"/> Z	...For all European areas except <input type="checkbox"/> E <input type="checkbox"/> I
<input type="checkbox"/> G	<input checked="" type="checkbox"/> Y
<input type="checkbox"/> E	...For United Kingdom.
<input type="checkbox"/> I	...For Italy.
<input type="checkbox"/> G	...For F.R. Germany.
<input type="checkbox"/> Y	...For Spain and Greece.

Color Variation

<input type="checkbox"/> Z	<input type="checkbox"/> E	<input type="checkbox"/> I	<input type="checkbox"/> G	<input type="checkbox"/> Y
Black Silver	Silver	Black Silver	Black Silver	Black Silver

■ SPECIFICATIONS

General:

Power Requirement: AC; ... 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 (3.5Wx2) ...MPO
 7W (3.5Wx2) ...RMS (max.)

Speaker: 12cm (5") PM Dynamic Speaker (3Ω)

1.5cm (9/16") Ceramic Speaker Tweeter (2.5KΩ)

Headphones; 32Ω, φ3.5

Dimensions: 463(W)×233(H)×104(D)mm
 (183/16"×91/8"×41/16")

Weight: 2.5kg (5 lb 5 oz) without batteries

Radio Section:

Radio Frequency Range: FM; 87.5~108MHz
 LW; 148.5~285kHz (2020~1052m)
 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; 3.2µV/50mW output
 (-3dB Limit Sens)
 LW; 141µV/m/50mW output
 MW; 125µV/m/50mW output
 SW; 7.9µV/50mW output

Tape Deck Section:

Frequency Response:
 Recording System:
 Tape Speed:
 Track System:
 80~11,000Hz (with normal tape)
 AC bias, Magnet erase
 4.8cm/s, (17/8ips)
 4-track 2 channel stereo recording and playback

Fast Forward and Rewind Time:

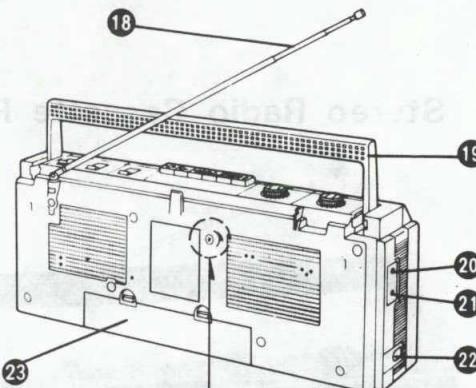
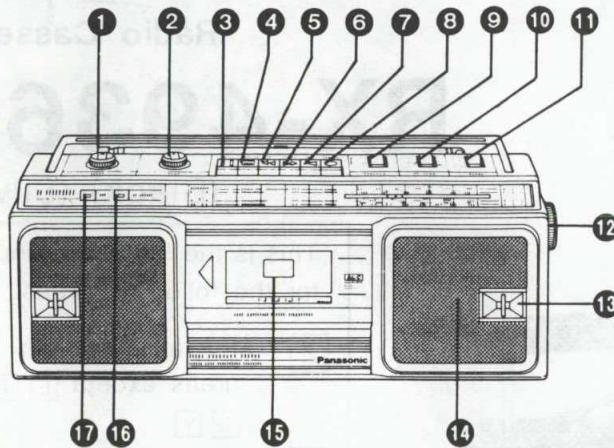
Approx 95 seconds with C-60 cassette tape

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

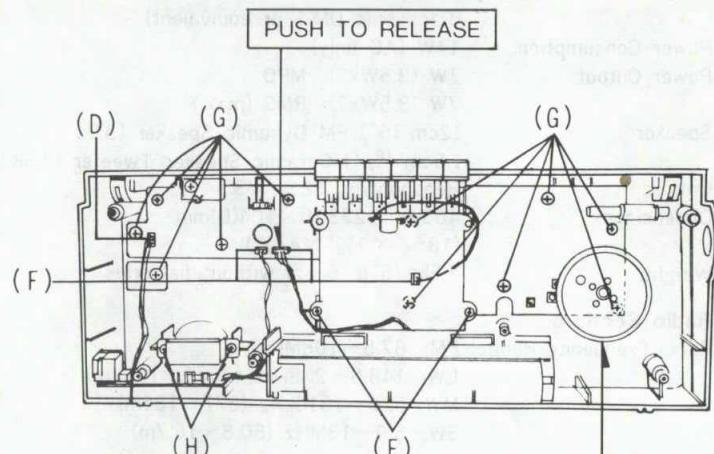
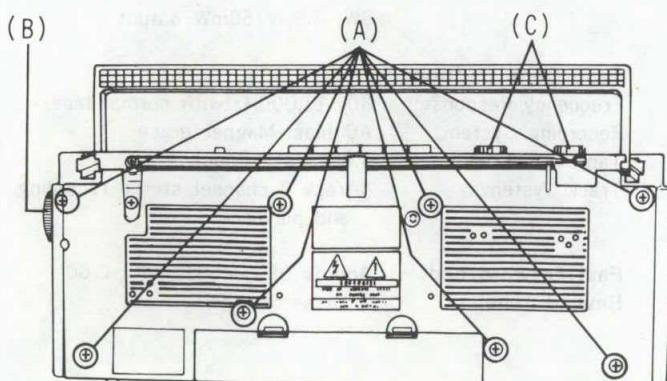


When the tape is caught in the pinch roller, etc. Release the tape by turning the pulley on the motor with the screwdriver in the direction of the arrow.

- ① Volume Control (VOLUME)
- ② Tone Control (TONE)
- ③ Pause Button (II PAUSE)
- ④ Stop/Eject Button (STOP/EJECT)
- ⑤ Fast Forward/Cue Button (FF/CUE)
- ⑥ Rewind/Review Button (REW/REV)
- ⑦ Playback Button (PLAY)
- ⑧ Record Button (RECORD)
- ⑨ Function Selector (SELECTOR)
- ⑩ FM Mode Selector/Beat Proof Switch (FM MODE/B.P)
- ⑪ Band Selector (BAND)
- ⑫ Tuning Control (TUNING)
- ⑬ Speakers [Tweeter] 1.5cm (5/16") 2.5K Ω
- ⑭ Speakers [Woofer] 12cm (5") 3 Ω

- ⑮ Cassette Compartment
- ⑯ FM Stereo Indicator (FM STEREO)
- To receive FM stereo broadcasts, set the FM Mode Selector to "STEREO". The FM Stereo Indicator will light during stereo broadcasts.
- ⑰ Built-in Microphone (MIC)
- ⑱ Telescopic Antenna
- ⑲ Handle
- ⑳ Headphones Jack (PHONES) 32 Ω ϕ 3.5
- ㉑ DIN Connector Jack (REC/PLAY)
- ㉒ AC Socket (AC IN ~)
- ㉓ Battery Compartment

DISASSEMBLY INSTRUCTIONS



Notes:

1. Set the variable capacitor to minimum position.
2. Turn the tuning knob clockwise to end scale position.
3. Before inserting radio PWB into front cabinet, it must be assured that the shaft of Variable capacitor inserts into the cavity of tuning knob completely.

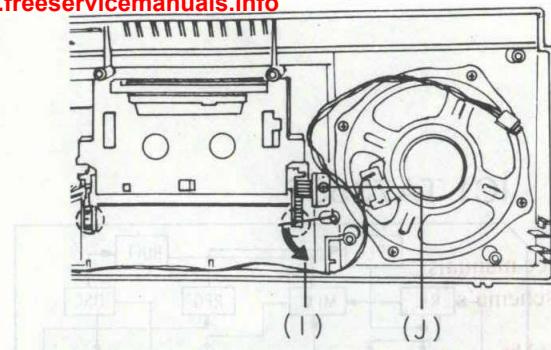


Fig. 5

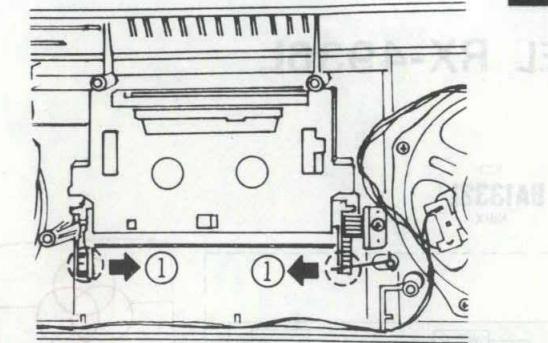
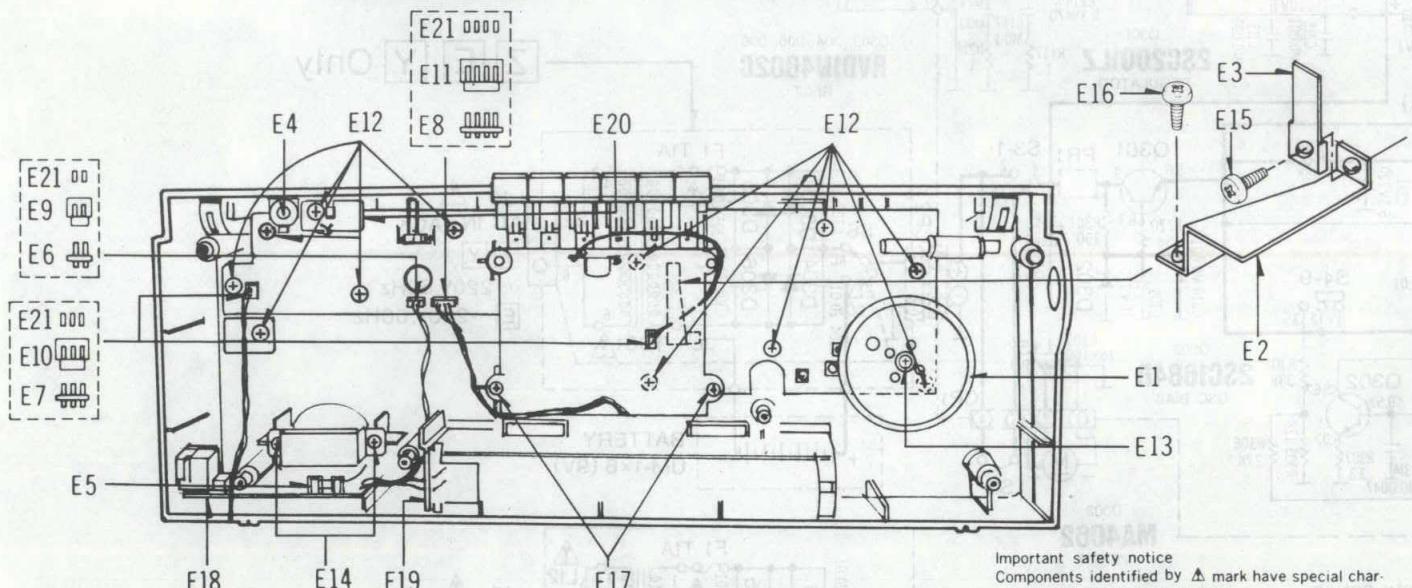


Fig. 6

Ref. No.	Shown in Fig.—	To remove—	Remove
1	3	Front Cabinet	Screw(3×30)mm(A)×8
2			Pullout the tuning knob(B)×1
3			Pullout the volume and tone knob(C)×2
4			Socket(D)×1
5	4	P.W.B. & Mechanism	Screw(3×12)mm(E)×2
6			Socket(F)×3
7			Screw(3×8)mm(G)×12
8			Screw(3×12)mm(H)×2
9	5	Cassette Panel	Spring(I)×1
10			Screw(3×12)mm(J)×1
11			To remove Cassette Panel, Push the rib in the direction of arrow

ELECTRICAL PARTS LOCATION



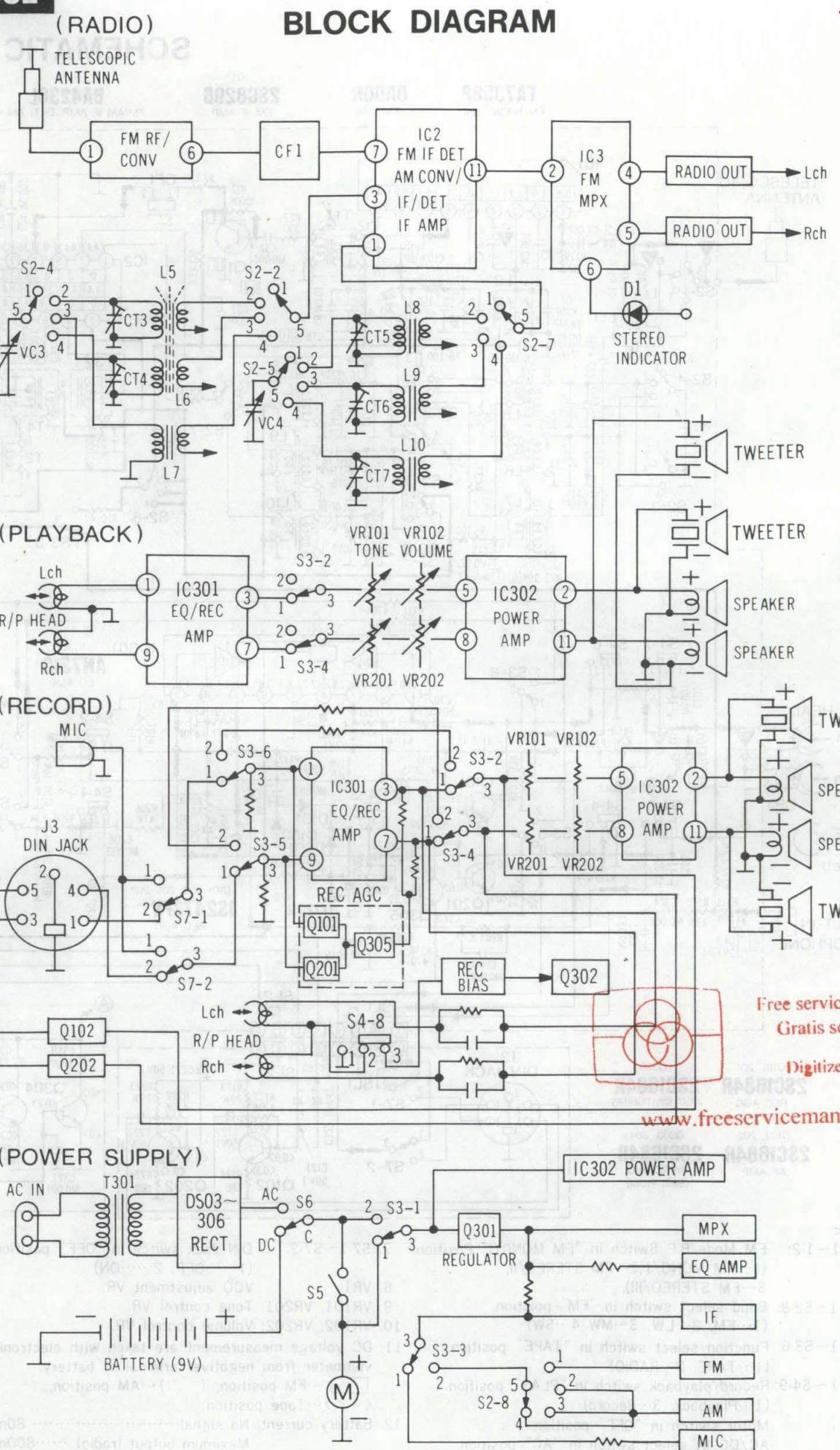
Important safety notice
Components identified by Δ mark have special characteristics important for safety.
When replacing any of these components, use only manufacturer's specified parts.

REPLACEMENT PARTS LIST

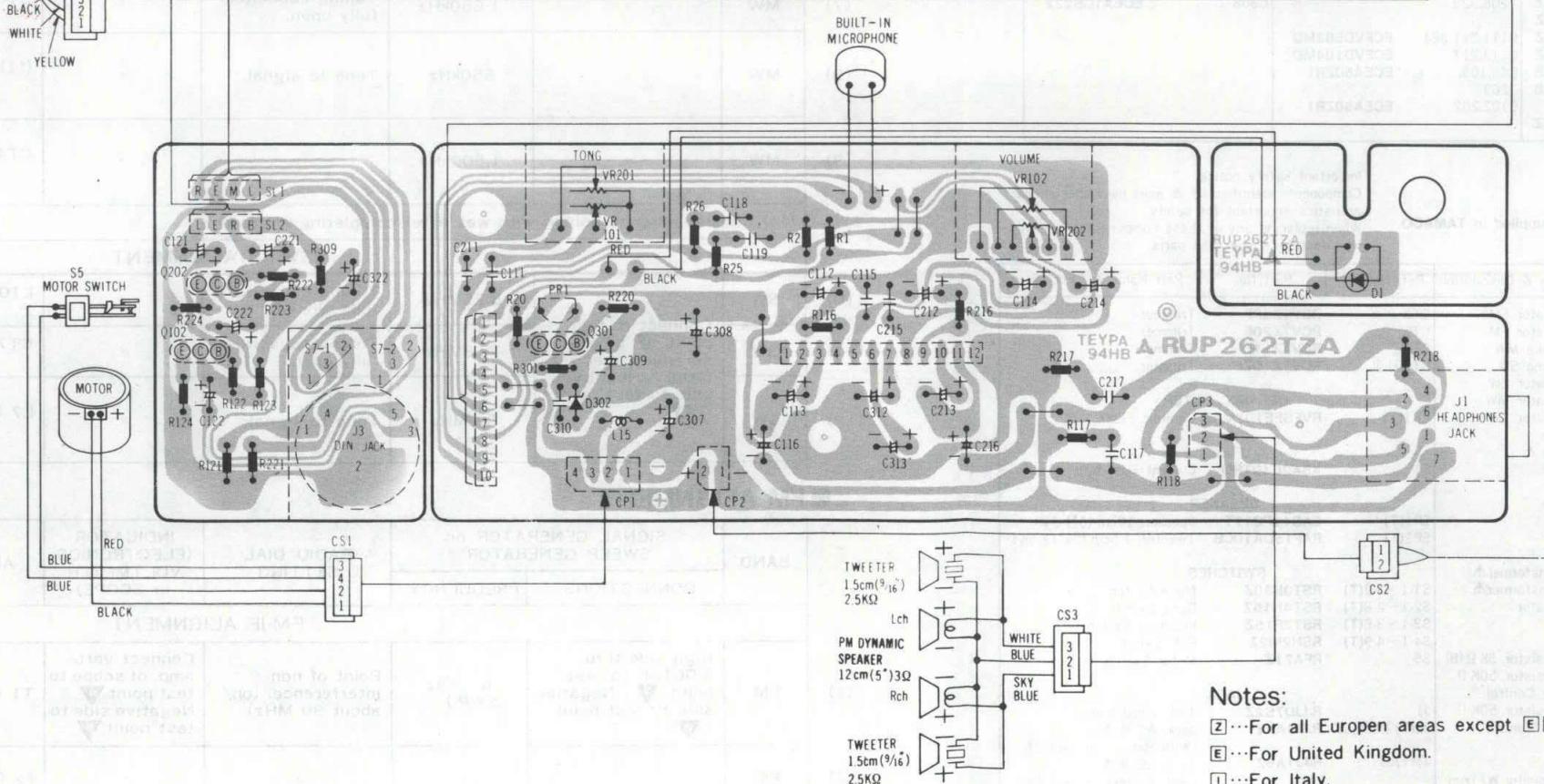
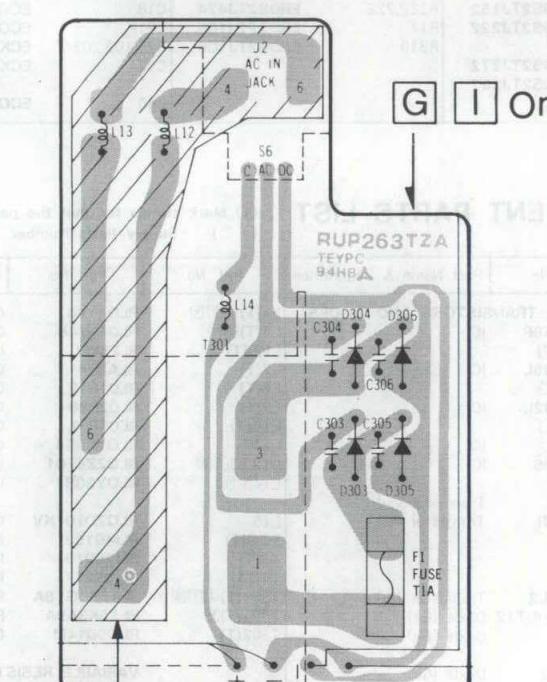
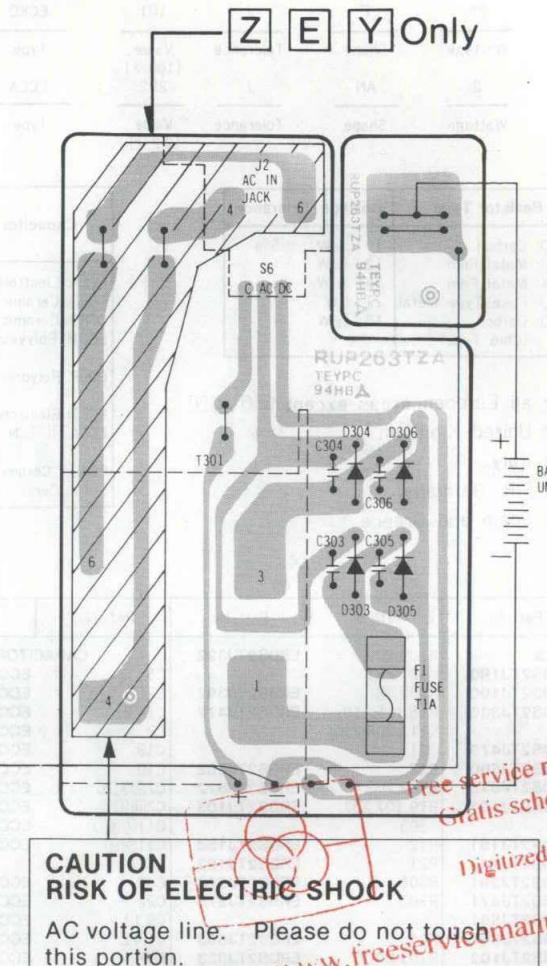
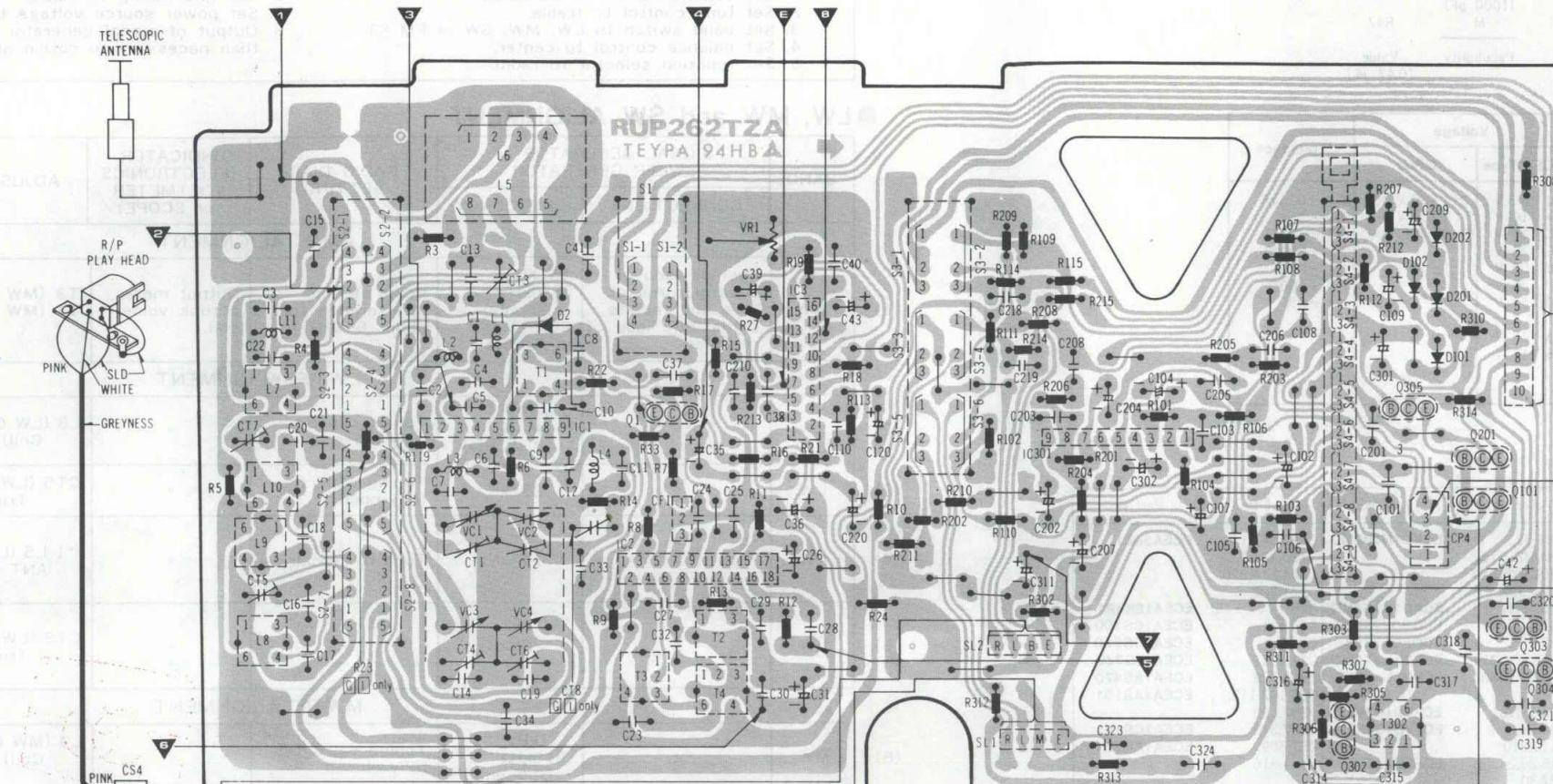
(T) Mark stands for that the parts are supplied in TAMACO.

Ref. No.	Part No.	Part Name & Description	Ref. No.	Part No.	Part Name & Description
E1(T)	RDG204TZ	Drum Gear	E8	RJP4G1Z	Plug 4P
E2(T)	RMD005TZ	R/P Angle	E9	RJS2L1Z	Socket 2P
E3(T)	RUS202TZ	R/P Spring	E10	RJS3L1Z	Socket 3P
E4(T)	RJM142Y	Microphone	E11	RJS4T1Z	Socket 4P
E5(T)	SJT34	Fuse Holder Δ	E12	XTW3+8CR	Screw P.W.B.
E6	RJP2G1Z	Plug 2P	(E12,14,17)	XWG3	Washer, (Service Parts only)
E7	RJP3G1Z	Plug 3P	E13	XYN26+C6	Screw Drum
			(E13)	XWA26B	Washer, (Service Parts only)
			E21	RJT462Z	Contact

BLOCK DIAGRAM



CIRCUIT BOARD AND WIRING CONNECTION DIAGRAM MODEL RX-4936L



Notes:

- [Z] For all European areas except E I G Y
- [E] For United Kingdom.
- [I] For Italy.
- [G] For F.R. Germany.
- [Y] For Spain and Greece.

CAUTION
RISK OF ELECTRIC SHOCK

AC voltage line. Please do not touch this portion.

MEASUREMENTS AND ADJUSTMENTS

ELECTRICAL PARTS LIST

Numbering System of Resistor

Example	ERD	25	F	J	101	Example	ECKD	1H	102	Z	F
Type	Wattage	Shape	Tolerance	Value (100Ω)	2R2	Type	Voltage	Value (1000 pF)	M	R47	Peculiarity
ERX	2	AN	J	Value (2.2Ω)		ECEA	50				
Type	Wattage	Shape	Tolerance	Value (2.2Ω)		Type	Voltage	Peculiarity	Value (0.47 pF)		

Resistor Type	Wattage Tolerance
ERD: Carbon	10: $\frac{1}{2}$ W: $\pm 5\%$
ERG: Metal Film	12: $\frac{1}{2}$ W
ERX: Metal Film	25: $\frac{1}{4}$ W
ERO: Fuse Type Metal	1: 1W
RRD: Carbon (Chip Type)	18: $\frac{1}{8}$ W

□...For all European areas except E I G Y
 E...For United Kingdom.
 I...For Italy.
 G...For F.R. Germany.
 Y...For Spain and Greece.

Numbering System of Capacitor

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

Capacitor Type	Voltage		Tolerance
	ECEA Type	Other	
ECEA: Electrolytic	0J : 6.3 V	2H : 500 V DC	C : $\pm 0.25\%$
ECCD: Ceramic	1A : 10 V	1 : 100 V	J : $\pm 5\%$
ECKD: Ceramic	1C : 16 V	DKC : 400 V AC	K : $\pm 10\%$
ECQM: Polyester	IE : 25 V		Z : $\pm 20\%$
ECOP: Polypropylene	1H : 50 V		-20%
ECET: Electrolytic	1V : 35 V		P : $\pm 100\%$
ECEA□□□: Non Polar Electrolytic	50 : 50 V		-0%
ECU□: Ceramic (Chip Type)	25 : 25 V		
ECUX: Ceramic (Chip Type)	16 : 16 V		

Ref. No.	Part No.	Ref. No.	Part No.	Ref. No.	Part No.	Ref. No.	Part No.	Ref. No.	Part No.
RESISTORS	ERDS2TJ1R0	R109,209, 121,221	ERDS2TJ392	C5	CAPACITORS	C4,6,32, 37,101,115, 201,215,310,	ECKD1H102MD	C39,104,114, 120,121,122, 204,214,220,	ECEA50Z1
R307	ERDS2TJ100	R23□□	ERDS2TJ392	C2	ECCD1H060CC	321,322		221,222	
R4,9,104, 204,309	ERDS2TJ330	R15,106,110, 113,206,210, 213	ERDS2TJ472	C14,21	ECCD1H070DC	C105,205	ECKD1H152MD	C26	ECEA1EK4R7
R8,10	ERDS2TJ470	R13	ERDS2TJ562	C10	ECCD1H120K	C317	ECQ50242JZ	C35,301	ECEA1CS100
R24,302	ERDS2TJ560	R13	ERDS2TJ822	C7□□□	ECCD1H200KC	C20	ECQ50392JZ	C302	ECEA0CS220
R119	ERDS2TJ820	R103,203	ERDS2TJ103	C7□□	ECCD1H240KC	C303,304,305,	ECKD1H472MD	C112,212	ECEA1JS330
R5,6,118, 218,311	ERDS2TJ101	R19,107,207, 305		C11□□□	ECCD1H220JC	306	ECKD1H103ZF	C313,322	ECEA1AS470
R124,224	ERDS2TJ151	R12	ERDS2TJ153	C11□□	ECCD1H200JC	C8,29,315	ECFVD103MD	C36,107,113, 207,213	ECEA1AS101
R3,116,216	ERDS2TJ221	R21	ERDS2TJ183	C33	ECCD1H330KC	C34,38,	ECFVD153MD	C307,312	ECEA1CS101
R301	ERDS2TJ391	R306	ERDS2TJ223	C22	ECCD1H390KC	110,210	ECFVD223MD	C31,309, 311,316	ECEA1AS221
R112,312,314	ERDS2TJ471	R303	ERDS2TJ273	C9,13	ECCD1H470KC	C15,23,24,			
R20	ERDS2TJ561			C1,41	ECCD1H560KC	27,30			
R18	ERDS2TJ681	R11	ERDS2TJ563	C7	ECQ50141JZ	C28,108,	ECFVD333MD	C116,216	ECEA0JS471
R105,115, 205,215,308	ERDS2TJ102	R101,201, 111,211	ERDS2TJ823	C16	ECQ50221JZ	208,323		C308	ECEA1CS222
R33	ERDS2TJ152	R122,222	ERDS2TJ334	C18	ECQ50361JZ	C111,211,324	ECFVD683MD		
R7,14,15, 114,214	ERDS2TJ222	R17	ERDS2TJ474	C319	ECQ50371JZ	C117,217	ECFVD104MD		
R123,223	ERDS2TJ272	R310	ERDS2TJ105	C25,103,203	ECKD1H471KB	C43,109,	ECEA50ZR1		
R102,108,202, 208,312,313	ERDS2TJ332		ERDS2TJ106	C12	ECKD1H102KB	209			
				C40	ECQ50102KZ	C102,202	ECEA50ZR1		

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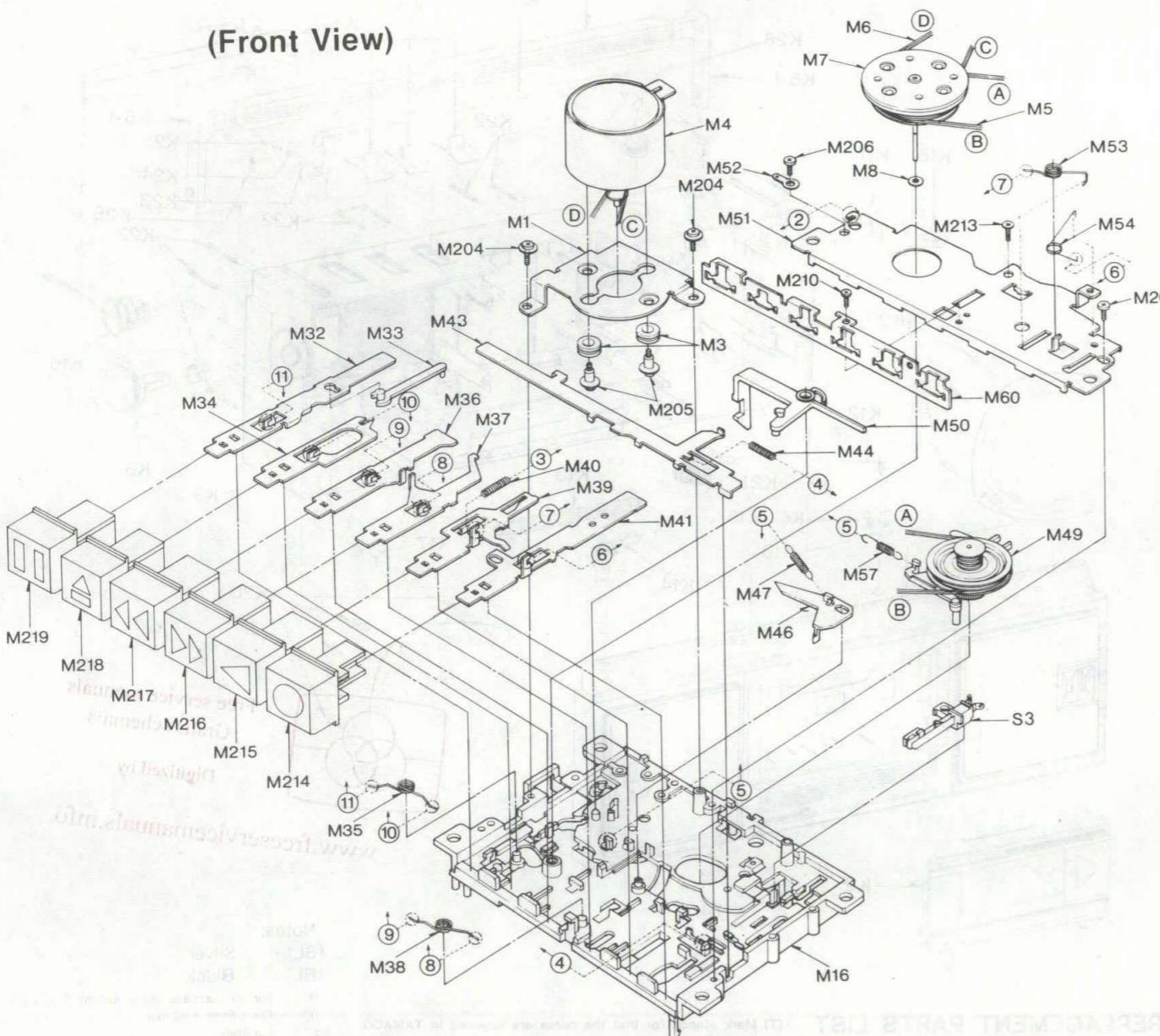
REPLACEMENT PARTS LIST

(T) Mark stands for that the parts are supplied in TAMACO.
 ()...Supply Parts Number

Ref. No.	Part No.	Part Name & Description	Ref. No.	Part No.	Part Name & Description	Ref. No.	Part No.	Part Name & Description
INTEGRATED CIRCUIT, TRANSISTORS AND DIODES								
IC1	RVITA7358P	IC	L4(T)□□□	RLD4Y43	Coil, Oscillator FM	CT3	RCVTZ30F	Trimmer
	(TA7358P)		L4(T)□□	RL04N148	Coil, Oscillator FM	CT5	RCVTZ20F	Trimmer
IC2	RVIBA4236L	IC	L5,6(T)	RLF6W7	Coil, Antenna MW	CT7	RCVTZ11F	Trimmer
	(BA4236L)		L7(T)	RLA3B41	Coil, Antenna SW	CT8□□	RCVTZ10ZF	Trimmer
IC3	RVIBA1332L	IC	L8(T)	RL01B12	Coil, Oscillator LW			
	(BA1332L)		L9(T)	RL02B86	Coil, Oscillator MW			
IC301	AN7310	IC	L10(T)	RL03B87	Coil, Oscillator SW			
IC302	RVIBA5406	IC	L11	RLQY30S4	Coil, Choke			
	(BA5406)		L12,13□□	RLQZ2470	Coil, Choke Δ			
Q1	2SC829B	Transistor (Si)	L14□□	RLQY30S1	Coil, Choke	F1	XBA2C10TRO	Current Fuse Δ
Q101,102	2SC1684R	Transistor (Si)	L15	RLQZD101KV	Coil, Choke	SP1(T)	EAS12P311T	Speaker, 12cm (5") 3Ω
201,202			T1,2(T)	RL4B153	IFT, FM	SP2(T)	RAF15DA10CB	Tweeter, 1.5cm (5/8") 2.5KΩ
302,303			T3(T)	RL2B216	IFT, MW			
304,305			T4(T)	RLI2B217	IFT, MW			
Q301	2SC2001L2	Transistor (Si)	T301(T)□□□	RLT5K3G18A	Power Transformer Δ	S1-1~1-2(T)	RST3B30Z	Mode Switch
D1(T)	RVDL562HDT12	Diode (Ge)	T301(T)□	RLT5K3A9A	Power Transformer Δ	S2-1~2-8(T)	RST4H16Z	Band Switch
D2(T)	20A90	Diode (Ge)	T302(T)	RL09B14M	Coil, Oscillator	S3-1~3-6(T)	RST2F15Z	Function Switch
D101,201	1S2473FV	Diode (Ge)				S4-1~4-9(T)	RSH2I02Z	R/P Switch
D302	MA4062	Diode (Ge)				S5	RFA71Z	Motor Switch
D303,304, 305,306(T)	RVD1N4002	Diode (Ge)	VR1(T)	RVV1A53B2	Variable Resistor, 5KΩ (B)			
PR1	RAH1CPN5	PROTECTOR	VR101,201(T)	RVV2B6A54	Variable Resistor, 50KΩ (A) Volume Control			
				RVV2B7A54	Variable Resistor, 50KΩ (A) Volume Control	J1	RJJD7S2Z	JACK
						J2(T)□□□	RJJ1A4Y	Jack, Headphones</td

MECHANISM PARTS LOCATION

(Front View)



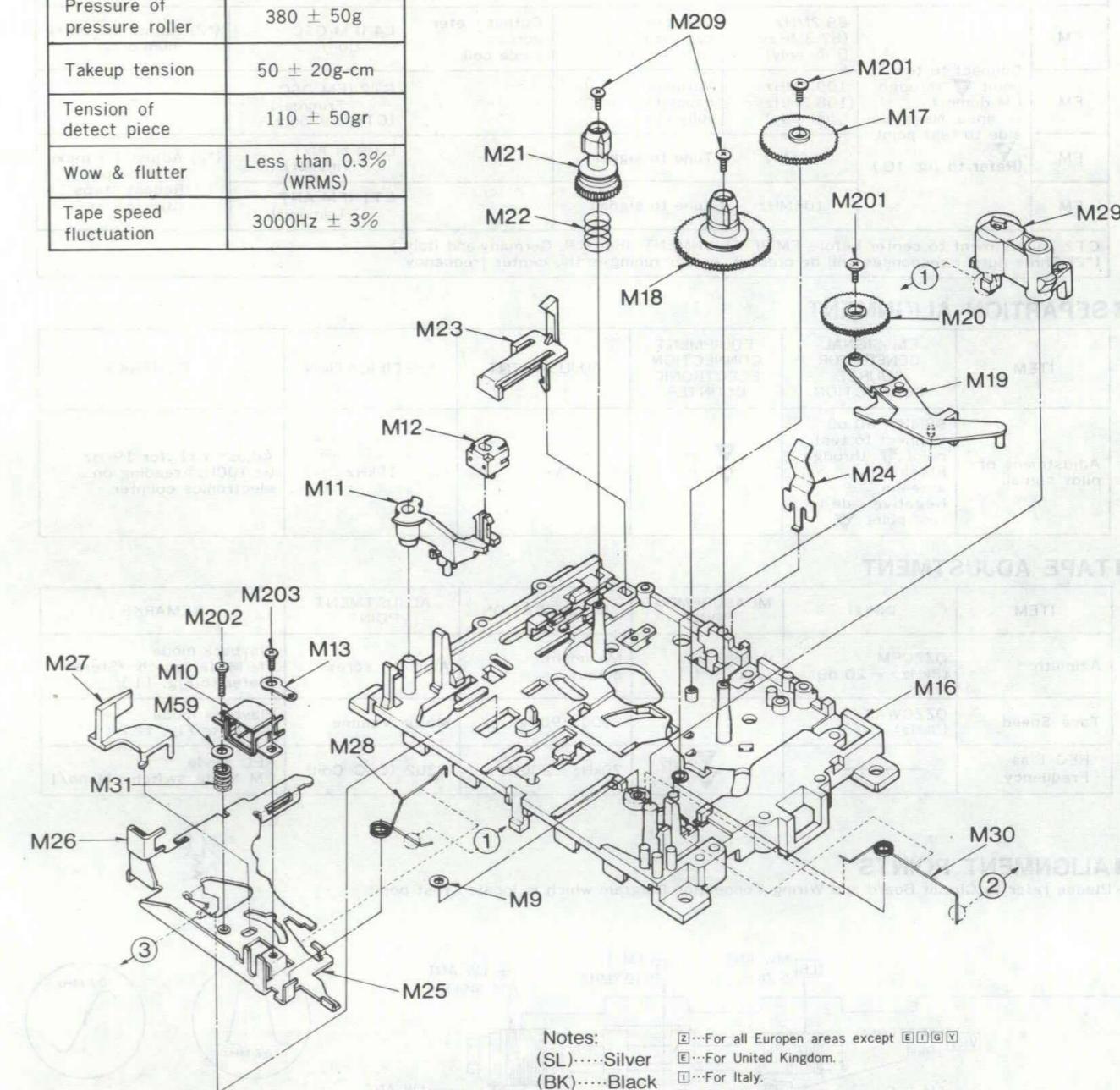
REPLACEMENT PARTS LIST

Ref. No.	Part No.	Part Name & Description	Ref. No.	Part No.	Part Name & Description
MECHANICAL PARTS					
M1	RFD270Z	Motor Plate	M22	RFS631Z	Spring
M3	RFI43Z	Rubber Cushion	M23	RFY692Z	Inter Lock Arm
M4(T)	RFM87Z	Motor Ass'y	M24	RFS632Z	Cassette Spring
M5	RFB72Z	Belt	M25	RFU90Z	Head Base
M6	RFB73Z	Belt Flywheel	M26	RFE294Z	Tape Guide
M7	RFF43Z	Flywheel Ass'y	M27	RFE295Z	Tape Sensor
M8	RFN114Z	Flywheel Washer	M28	RFS633Z	Pinch Arm Spring
M9	RFN168Z	Washer	M29	RFR39Z	Pinch Arm Ass'y
M10	RJH4C33Y	R/P Head	M30	RFS634Z	Earth Spring
M11	RFY691Z	Erase Head Arm	M31	RFS635Z	Azimuth C. Spring
M12	RJH2C15XY	Erase Head	M32	RFY693Z	Pause Lever
M13	RFE293Z	Lug Plate	M33	RFY694Z	Pause Arm
M16	RFU89Z	Chassis	M34	RFY695Z	Stop, Eject Lever
M17	RFG92Z	F. F Gear	M35	RFS636Z	Spring
M18	RFJ60Z	Takeup Reel Ass'y	M36	RFY696Z	FF Lever
M19	RFD702Z	Idler Arm	M37	RFY697Z	REW Lever
M20	RFG93Z	Idler Gear	M38	RFS637Z	Spring
M21	RFJ61Z	Supply Reel	M39	RFY698Z	Play Lever
			M40	RFS638Z	Spring

Rear View

SPECIFICATION

Pressure of pressure roller	380 ± 50g
Takeup tension	50 ± 20g-cm
Tension of detect piece	110 ± 50gr
Wow & flutter	Less than 0.3% (WRMS)
Tape speed fluctuation	3000Hz ± 3%



Notes:

- (E) ...For all European areas except (I) (G) (Y)
- (E) ...For United Kingdom.
- (I) ...For Italy.
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- (Y) ...For Spain and Greece.

REPLACEMENT PARTS LIST

(T) Mark stands for that the parts are supplied in TAMACO.

Ref. No.	Part No.	Part Name & Description	Ref. No.	Part No.	Part Name & Description
M41	RFY699Z	REC Lever	M205	RFE305Z	Motor Screw
M43	RFY700Z	Function Lever	M206	RFE306Z	Screw
M44	RFS639Z	Spring	M209	RFE307Z	Bush B
M46	RFY701Z	Arm	M210	RFE309Z	Screw
M47	RFS619Z	Spring	M213	RFE308Z	Bush C
M49	RQF48Z	RF Pulley Arm Ass'y	M214(T)	RBC237TZ	Button REC (SL)
M50	RFY703Z	Eject Arm	M214(T)	RBC237TZ1	Button REC (BK)
M51	RFU91Z	Plate	M215(T)	RBC238TZ	Button Play (SL)
M52	RFE296Z	Earth Lug	M215(T)	RBC238TZ1	Button Play (BK)
M53	RFS640Z	Spring	M216(T)	RBC239TZ	Button REW (SL)
M54	RFS626Z	Spring	M216(T)	RBC239TZ1	Button REW (BK)
M57	RFS627Z	Spacer C	M217(T)	RBC240TZ	Button FF (SL)
M59	RFE310Z	Lever Holder	M217(T)	RBC240TZ1	Button FF (BK)
M60	RFD271Z	Bush, Screw	M218(T)	RBC241TZ	Button Stop/Eject (SL)
M201	RFE304Z	Screw	M218(T)	RBC241TZ1	Button Stop/Eject (BK)
M202	XSN2+8	Screw	M219(T)	RBC242TZ	Button Pause (SL)
M203	XSN2+3	Screw	M219(T)	RBC242TZ1	Button Pause (BK)
M204	XTW26+8	Screw			

BAND	SIGNAL GENERATOR or SWEEP GENERATOR		RADIO DIAL SETTING	INDICATOR (ELECTRONICS VOLTMETER or SCOPE)	ADJUSTMENT	REMARKS
	CONNECTIONS	FREQUENCY				
FM-RF ALIGNMENT						
FM	Connect to test point 1 through FM dummy antenna. Negative side to test point 2. (Refer to fig. 10.)	86.2MHz (87.3MHz... <input type="checkbox"/> <input checked="" type="checkbox"/> only)	Variable capacitor fully closed.	Output meter across voice coil.	L4 (FM OSC Coil)	(*2) Adjust for maximum output.
FM		109.2MHz (108.3MHz... <input type="checkbox"/> <input checked="" type="checkbox"/> only)	Variable capacitor fully open.	"	CT2 (FM OSC Trimmer) (CT8 <input type="checkbox"/> <input checked="" type="checkbox"/> only)	"
FM		90MHz	Tune to signal.	"	L3 (FM ANT Trimmer)	(*2) Adjust for maximum output.
FM		106MHz	Tune to signal.	"	CT1 (FM ANT Trimmer)	Repeat steps (3)~(6).

■ SEPARATION ALIGNMENT

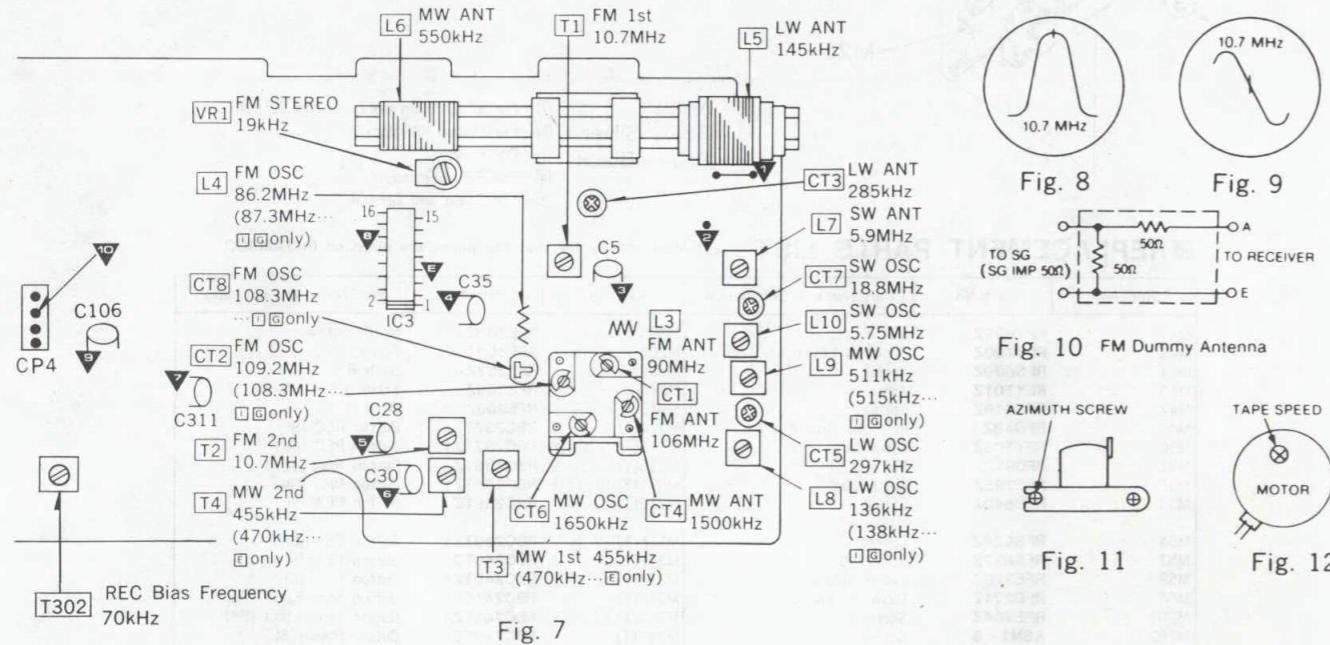
ITEM	FM SIGNAL GENERATOR SOURCE CONNECTION	EQUIPMENT CONNECTION ELECTRONIC COUNTER	ADJUSTMENT	SPECIFICATION	REMARKS
Adjustment of pilot signal.	98MHz, 60 dB Connect to test point 1 through FM dummy antenna. Negative side to test point 2 .	B ...(+) E ...(-)	VR1	19kHz	Adjust VR1, for 19kHz (± 100 Hz) reading on electronics counter.

■ TAPE ADJUSTMENT

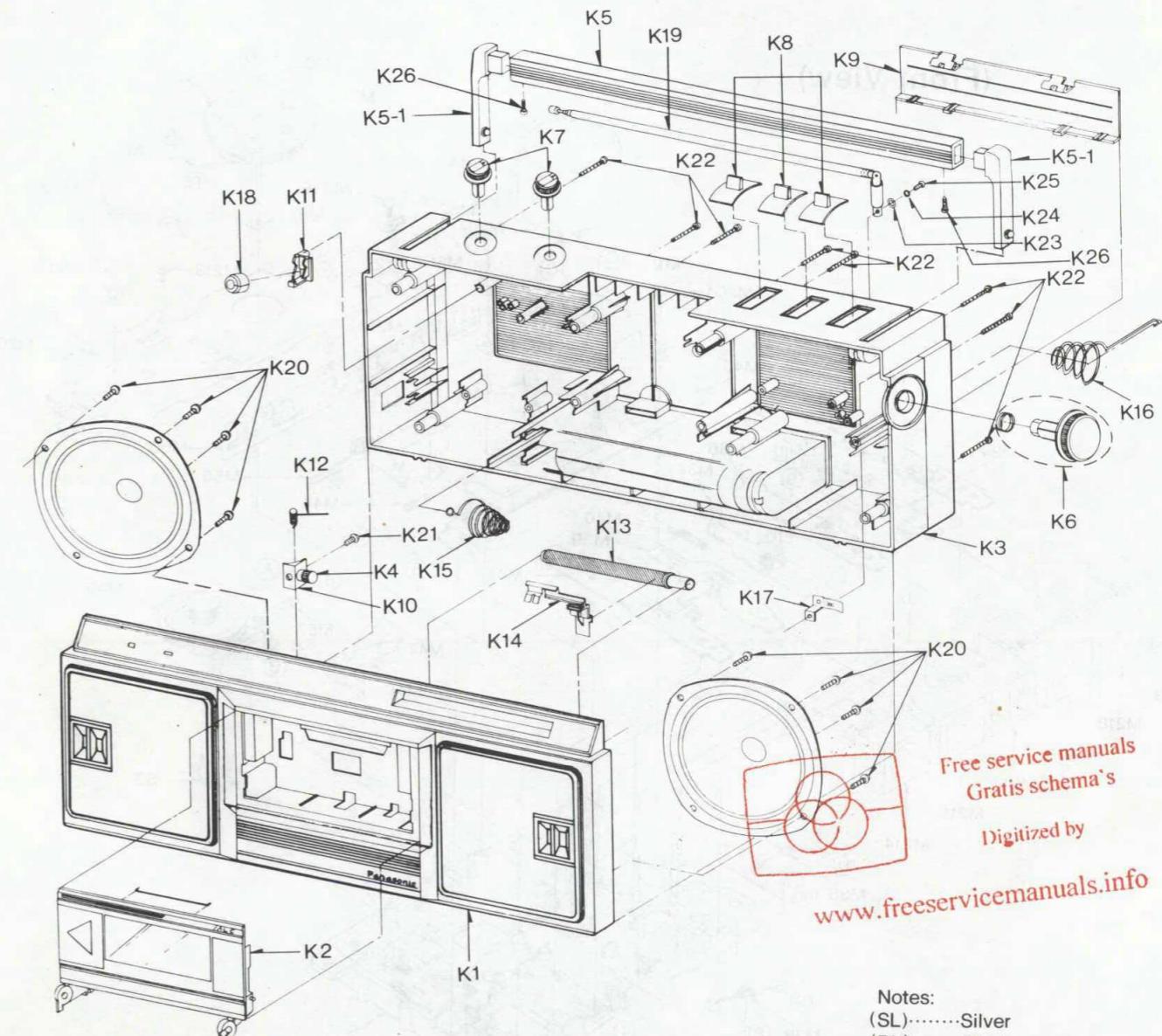
ITEM	INPUT	MEASUREMENT POINT	SPECIFICATION	ADJUSTMENT POINT	REMARKS
Azimuth	QZZCFM (8kHz, -20 dB)	Headphones Jack (32 Ω)	Maximum output.	Azimuth screw	Playback mode FM Mode switch → Stereo (Refer to Fig. 11.)
Tape Speed	QZZCWAT (3kHz)	"	3000 ± 90Hz	Motor Volume	Playback mode (Refer to Fig. 12.)
REC Bias Frequency	_____	▼...(+) ▼...(-)	70kHz ± 200Hz	T302 (OSC Coil)	REC Mode FM Mode switch → Mono/

■ ALIGNMENT POINTS

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



CABINET PARTS LOCATIONS



Free service manuals
Gratis schema's
Digitized by

Notes:
(SL).....Silver
(BL).....Black

[E].....For all European areas except **E** **I** **G** **Y**
E.....For United Kingdom.
I.....For Italy.
G.....For F. R. Germany.
Y.....For Spain and Greece.

REPLACEMENT PARTS LIST (T)

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.

Ref. No.	Part No.	Part Name & Description	Ref. No.	Part No.	Part Name & Description	Ref. No.	Part No.	Part Name & Description
CABINET PARTS								
K1(T)                                                <img alt="checkmark"								