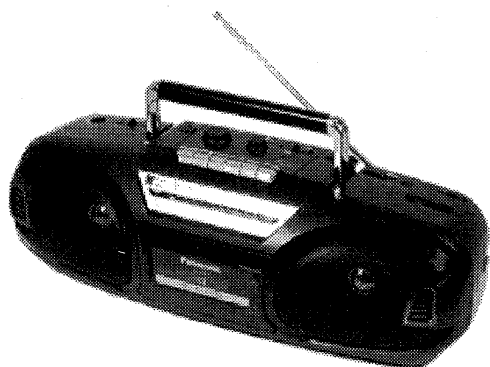


Service Manual

Stereo Radio Cassette Recorder

Radio Cassette
RX-FS50

**Colour**

(K) ... Black Type

Areas

(GU) Asia, Latin America,
Middle East and Africa.
(GC) Saudi Arabia, Kuwait,
Singapore, Malaysia.

Tape Deck: SG20 Mechanism Series**Specifications****Radio:****Frequency range:**

FM	88 – 108 MHz
MW	530 – 1605 kHz
SW1	2.3 – 7.0 MHz
SW2	7.0 – 22.0 MHz

Intermediate frequency:

FM	10.7 MHz
AM(MW/SW1/SW2)	455 kHz

Sensitivity:

FM	4.5 μ V/ 50 mW output (-3dB Limit Sens)
AM	125.9 μ V/ m / 50 mW output (Max Sens)
SW1	63.1 μ V/ m/ 50 mW output (Max Sens)
SW2	4.7 μ V/ 50 mW output (Max Sens)

Tape recorder:

Track system:	4 track 2 channel stereo
Recording system:	AC bias
Erasing system:	Magnet
Monitor system:	Variable sound monitor
Frequency range	
Normal:	70–13000 Hz
Tape speed:	4.8 cm/s

General:**Power requirement:**

AC	110 – 127 V/ 220 – 240 V, 50/60 Hz
	Power consumption: 13 W
Battery	9 V (Six R20/ LR20, D, UM-1 batteries)
	• Do not use rechargeable type batteries.
	60 W (30 W x 2)... PMPO

Power output:**Speakers:**

Woofers	10 cm PM Dynamic speaker, 6 Ω
Tweeter	1.5 cm Ceramic speaker
Output:	Headphones; 32 Ω , ϕ 3.5
Dimensions (W x H x D):	480 x 171 x 160 mm
Weight:	2.8 kg without batteries

Note: Design and specifications are subject to change without notice.
Weight and dimensions are approximate.

⚠ WARNING

This service information is designed for experienced repair technicians only and is not designed for use by the general public. It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempting to service a product. Products powered by electricity should be serviced or repaired only by experienced professional technicians. Any attempt to service or repair the product or products dealt with in this service information by anyone else could result in serious injury or death.

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• TAPE SPEED ALIGNMENT

Test Tape	Equipment Connection	Adjustment	Specification	Remarks
QZZCWAT	Headphones Jack(32Ω) [Fabricate the plug as shown in Fig.2 and then connect the lead wires of the plug to the measuring instrument.]	MOTOR VR (Shown in Fig.5)	3000 ± 60 Hz	1. Set the unit to 'TAPE' position. 2. Playback the middle part of the test tape (QZZCWAT). 3. Adjust motor VR for output of 3000 ± 60 Hz shown on frequency counter.

• Alignment Points

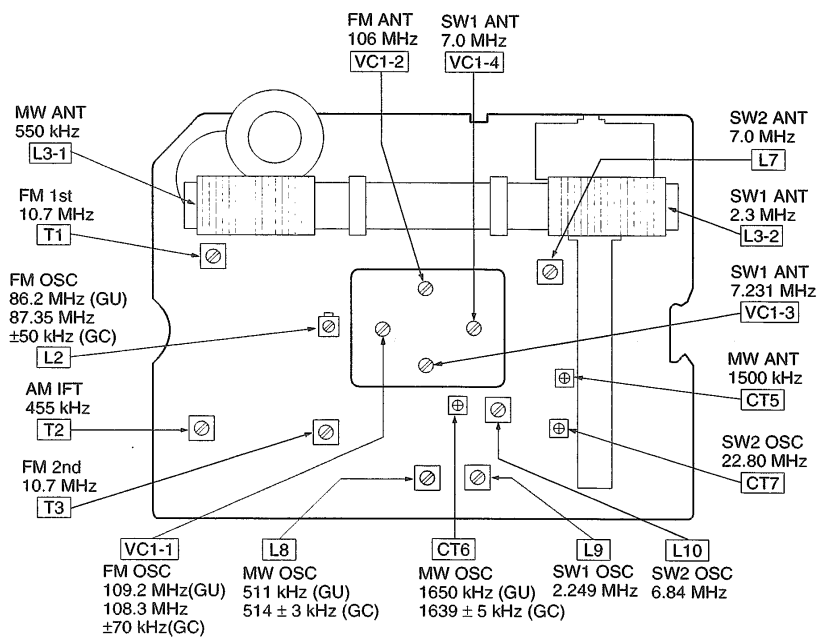


Fig.1

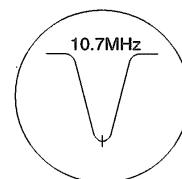


Fig.3

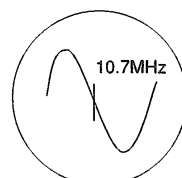


Fig.4

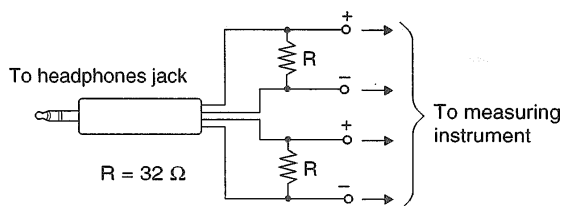


Fig.2

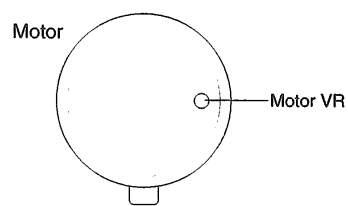
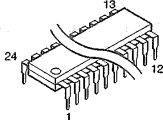
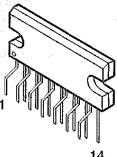
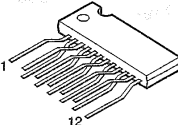
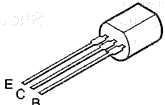

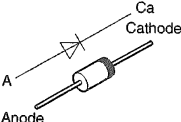
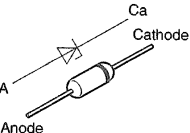
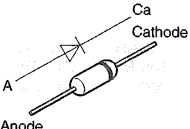
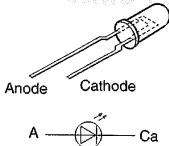


Fig.5

■ Type Illustration of IC's, Transistors and Diodes

<p>LA1828</p> 	<p>LA4663</p> 	<p>BA3313L</p> 	 <p>2SC829D 2SC2001K 2SA1127-S 2SC1685-QNC</p>	
<p>RVTDT144EST</p> 	<p>RL154M11</p> 	<p>MTZJ6R8BTA</p> 	<p>RVD1SS133TA</p> 	<p>SLR342VC</p> 

■ Schematic Diagram

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

	Page
A Tuner Circuit	13
B Main Circuit	14, 15
C Power Supply Circuit	15
D Battery Terminal Circuit	15

Notes:

- S1-1 ~ S1-8 : Selector switch to "FM" position.
(F...FM, M...MW, S1...SW1, S2...SW2)
- S301-1 ~ S301-4 : Function select switch to "TAPE/OFF" position.
(T...TAPE/OFF, R...RADIO)
- S302-1 ~ S302-6 : Record/Playback select switch to "PLAYBACK" position.
(P...PLAYBACK, R...RECORD)
- S303 : FM mode/BP select switch to "MONO/I" position.
(M/I...MONO/I, S/II...STEREO/II)
- S2 : Motor switch.
- S901 : Voltage select switch "110 - 127V" position.
- VR301-1, VR301-2 : Tune adjustment.
- VR302-1, VR302-2 : Volume adjustment.

- DC voltage measurements are taken with electronics voltmeter.
The negative terminal of the battery provides negative meter connection point.
No mark...TAPE PLAYBACK, < > ... FM, () ...AM.

• Important safety notice

Components identified by \triangle mark have special characteristics important for safety.

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

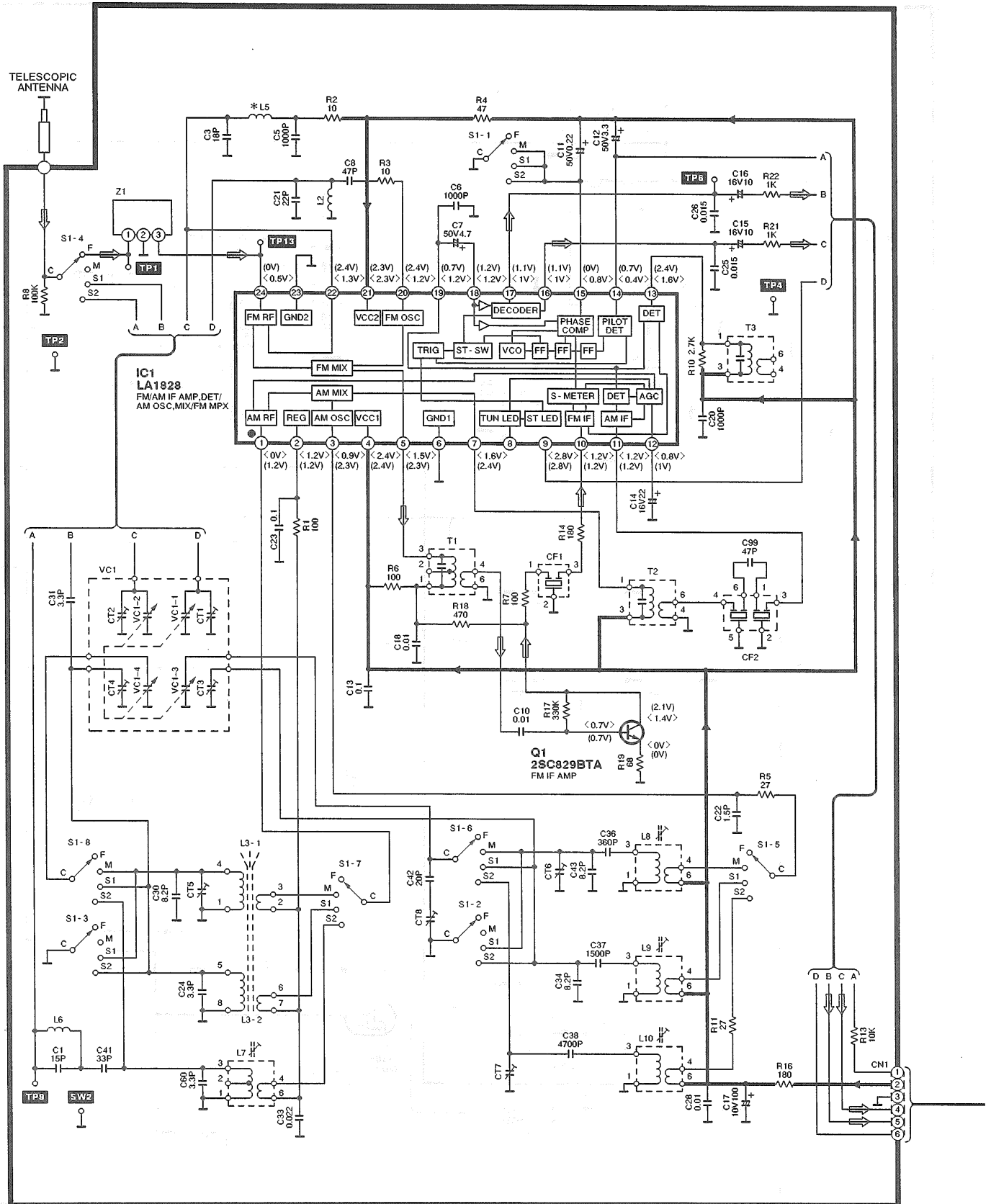
- * mark indicate printed coil.




• Signal lines

- \Rightarrow : FM signal line
- \Rightarrow : Record signal line
- \Rightarrow : + B line
- \Rightarrow : Tape playback signal line
- \Rightarrow : Main signal line

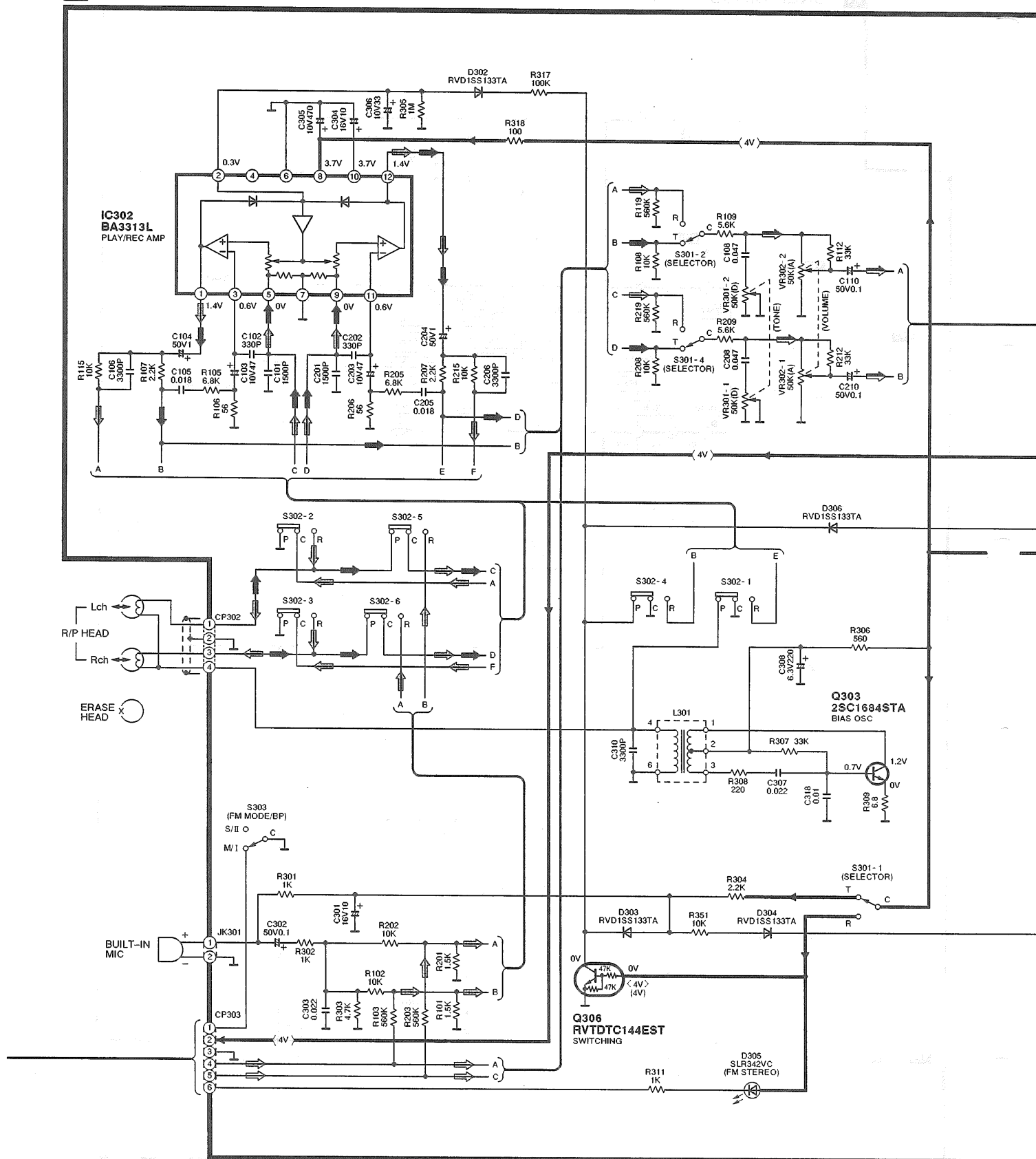
• Signal lines ➡ : FM signal line

A TUNER CIRCUIT (P.C.Board: on page 17)



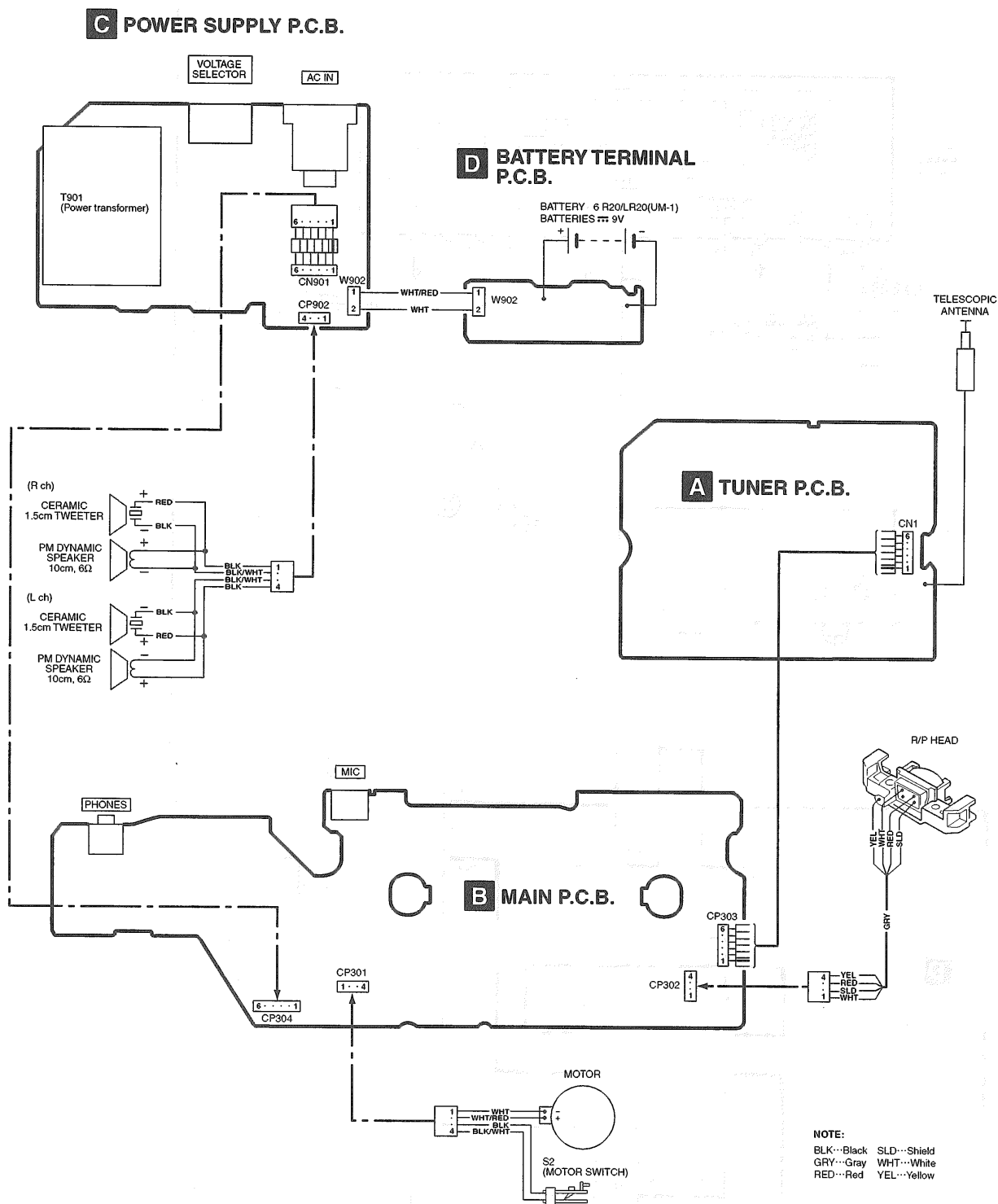
• Signal lines  : FM signal line  : Tape playback signal line  : Record signal line  : Main signal line

B MAIN CIRCUIT (P.C.Board: on page 18)





■ Wiring Connection Diagram



Mechanism Parts Location

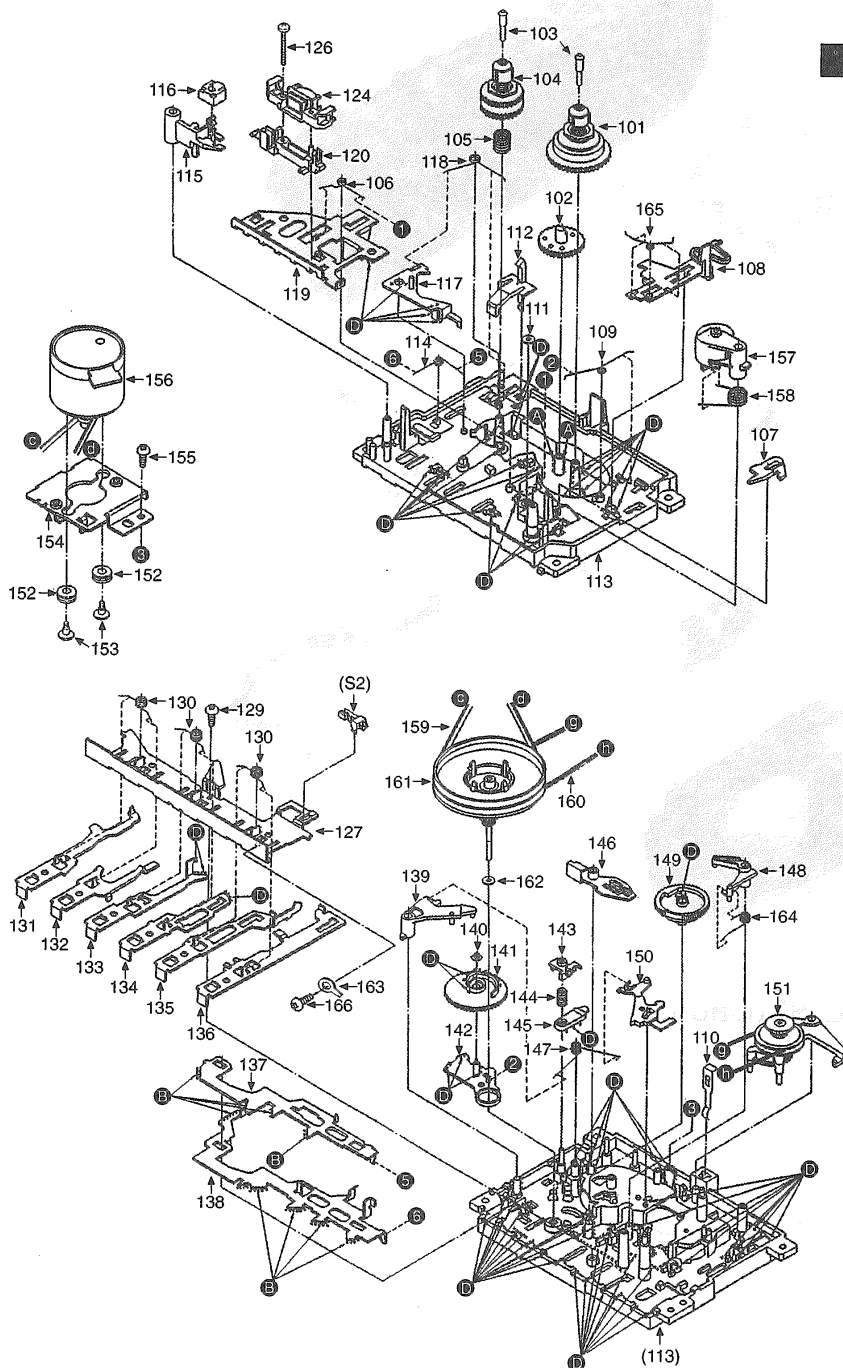
Note:

When changing mechanism parts, apply the specified grease to areas marked "XX" as shown in the diagram.

Ref. No.	Part No.
A	SZZ0L25
B	RZZ0L06
D	SZZ0L30

Specifications

Playback torque	20 ~ 550 g.cm
Fast Forward torque	60 ~ 150 g.cm
Rewind torque	60 ~ 150 g.cm
Wow & Flutter	0.25 % (WRMS)



Replacement Parts List (Mechanism)

Ref. No.	Part No.	Part name & Description	Pcs.	Remarks
101	RXR0004	TAKE UP REEL ASS'Y	1	
102	RDG0059	FF RELAY GEAR	1	
103	RMS0055-1	REEL SHAFT	2	
104	RXR0005	SUPPLY REEL ASS'Y	1	
105	RMB0125	SPRING	1	
106	RMB0047	SPRING	1	
107	RML0076	EJECT SELECTION LVR	1	
108	RMM0029	EJECT SLIDE LEVER	1	
109	RMB0048	SPRING	1	
110	RMC0061	SPRING	1	
111	RHW16009	CAPSTAN WASHER	1	
112	RML0081-2	RECORD SAFETY LEVER	1	
113	RFU189ZA	MECHANISM BASE ASS'Y	1	
114	RMB0046-1	SPRING	1	
115	RML0080	ERASE HEAD ARM	1	
116	RBR2CY009	ERASE HEAD	1	
117	RML0116	BRAKE ARM	1	
118	RMB0109-1	SPRING	1	
119	RMA0896	HEAD PANEL	1	
120	RMQ0384	HEAD BASE	1	
124	RBR4CY016-M	R/P HEAD	1	
126	XTN2+14F	SCREW	1	
127	RMA0109	BACK PLATE	1	
129	XTN2+6J	SCREW	1	
130	RMB0043-1	SPRING	3	
131	RMM0027	PAUSE ROD	1	
132	RMM0026	STOP ROD	1	
133	RMM0025	FF ROD	1	
134	RMM0024	REW ROD	1	
135	RMM0023	PLAY ROD	1	
136	RMM0028	REC ROD	1	
137	RML0078	FUNCTION PLATE	1	
138	RML0077	LOCK PLATE	1	
139	RML0072-1	AS RELEASE LEVER	1	
140	RMR0227	IDLER GEAR BUSH	1	
141	RDG0057-1	IDLER GEAR	1	
142	RML0074	IDLER LEVER	1	
143	RMR0211	PAUSE BUSH	1	
144	RMB0053	SPRING	1	
145	RML0082	PAUSE LEVER	1	
146	RML0071	SWAY LEVER	1	
147	RMB0045	AS SPRING	1	
148	RXL0042	TRIGGER LEVER ASS'Y	1	
149	RDK0005	CAM GEAR	1	
150	RML0073-1	AS PROTECT LEVER	1	
151	RXP0014	RF CLUTCH ASS'Y	1	
152	RMG0102	MOTOR RUBBER CUSHION	2	
153	RHD26002	SCREW	2	
154	RMA0108	MOTOR BRACKET	1	
155	XTN26+8J	SCREW	1	
156	RFM187ZA	MOTOR ASS'Y	1	
157	RXP0015	PINCH ROLLER ASS'Y	1	
158	RMB0049	SPRING	1	
159	RDV0021	BELT, MAIN	1	
160	RDV0006-1	RF BELT	1	
161	RXF0012	FLYWHEEL ASS'Y	1	
162	RHW21008	FLYWHEEL WASHER	1	
163	RJR0033	EARTH LUG	1	
164	RMB0044	TRIGGER SPRING	1	
165	RME0098-2	EJECT SLIDE LEVER SP	1	
166	XTN2+4F	EARTH LUG SCREW	1	