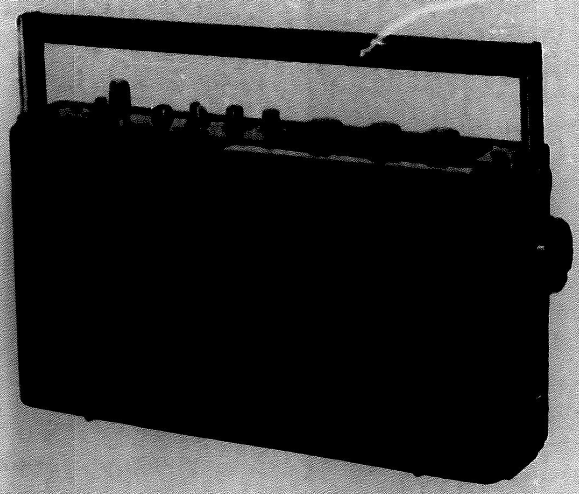
Service Manual

NATIONAL
RADIO
PANASONIC



AM 3-BAND PORTABLE RADIO WITH CASSETTE RECORDER

MODEL R-510B

■ SPECIFICATIONS

Frequency Range:	MW 525~1605 kHz (571~187m) SW1 2.3~7.0 MHz (130~42.9m) SW2 7.0~22.0 MHz (42.9~13.9m)
Intermediate Frequency:	AM (MW & SW) 455 kHz
Sensitivity:	MW 30μV/m for 50mW Output SW1 30μV/m for 50mW Output SW2 5μV for 50mW Output
Power Output:	1.5W Maximum
Power Source:	AC 115/200/220/240V 50-60 Hz or 6V (Four "C" Size Flashlight Batteries) (NATIONAL UM-2 or equivalent)
Power Consumption:	10W (AC Only)
Speaker:	10 cm (4") PM Dynamic Speaker
Dimensions:	263(Wide) x 144(High) x 72(Deep)mm (10⅜" x 5⅝" x 2⅞")
Weight:	2.5 kg. (5½ lb.) without batteries
Impedance:	Speaker .....8Ω Earphone Jack .....8Ω Phono Jack.....100kΩ Microphone Jack 500Ω

MATSUSHITA ELECTRIC
MATSUSHITA ELECTRIC TRADING CO., LTD.
P. O. Box 288, Central Osaka, Japan

ORDER NO. RD-966

■ TO REMOVE TAPE DECK

1. Remove four (4) control knobs.
2. Remove two (2) cover screws, nos. 1 and 2, as illustrated in fig. 1.
3. Remove cabinet back cover.
4. Pull out plug to whip antenna.
5. Remove one (1) cover screw, no. 6, as illustrated in fig. 2.
6. Push the eject button.
7. Pull out plugs and sockets to meter, microphone and speaker, as illustrated in fig. 5.
8. Remove cabinet front cover.
9. Pull out sockets to tape deck, as illustrated in fig. 3 and 5.
10. Remove four (4) tape deck screws, nos. 1~4, as illustrated in fig. 4.
11. Remove tape deck from cabinet.
12. To reassemble, reverse the above procedure.

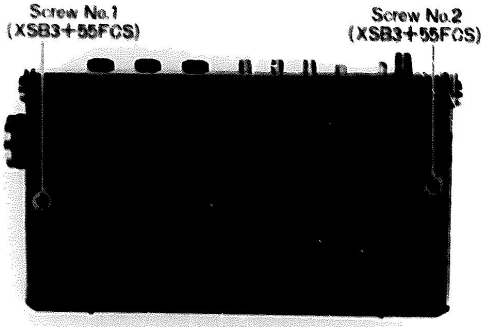


Fig. 1

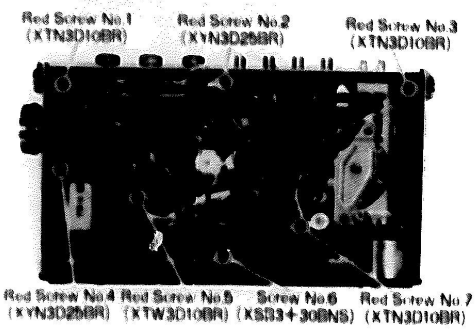


Fig. 2

■ TO REMOVE PCB

1. Remove tape deck from cabinet. (Refer to tape deck removal instructions.)
2. Pull out plug and socket to EXT. power jack and sub PCB as illustrated in fig. 5.
3. Remove six (6) red PCB screws, nos. 1, 2, 3, 4, 5 & 7, as illustrated in fig. 2.
4. Remove PCB from cabinet.
5. To reassemble, reverse the above procedure.

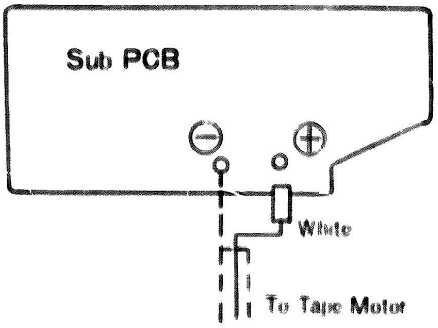


Fig. 3

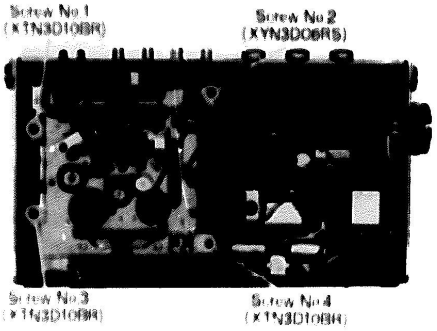


Fig. 4

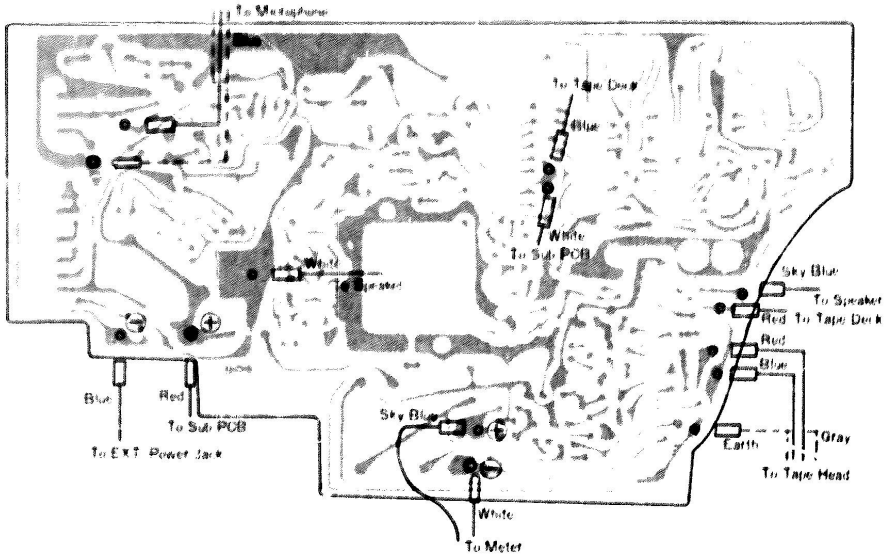


Fig. 5

DIAL CORD INSTALLATION GUIDE

1. Remove PCB from cabinet. (Refer to PCB removal instructions)
2. Remove two (2) dial assembly screws, as illustrated in fig. 7 and 8.
3. Remove dial assembly from PCB.
4. Turn dial drum to fully counter-clockwise.
5. Dial cord length is 70 cm (27⅝").
6. Arrows (1~8) indicate correct order and direction of installation dial cord, as illustrated in fig. 9.
7. Cement dial cord ends.

TO MOUNT DIAL SCALE

1. Turn tuning gang shaft to fully clockwise.
2. Turn tuning shaft fully counter-clockwise.
3. Mount dial assembly to PCB.
4. Turn tuning shaft to fully clockwise.
5. Attach dial cord to scale bracket.
6. Set dial scale bracket to the start point of bracket guide, as illustrated in fig. 6.
7. Cement dial cord.

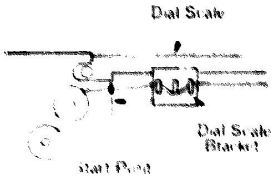


Fig. 6

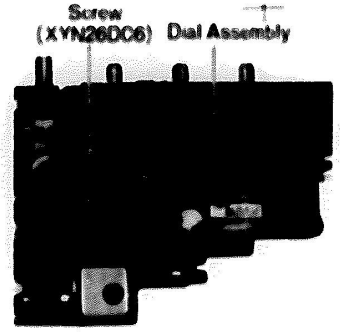


Fig. 7

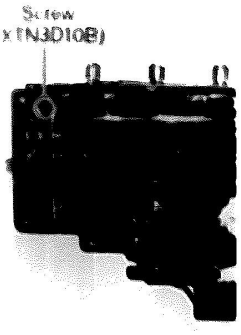


Fig. 8

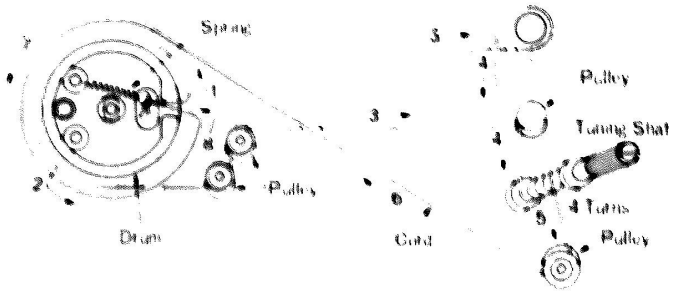
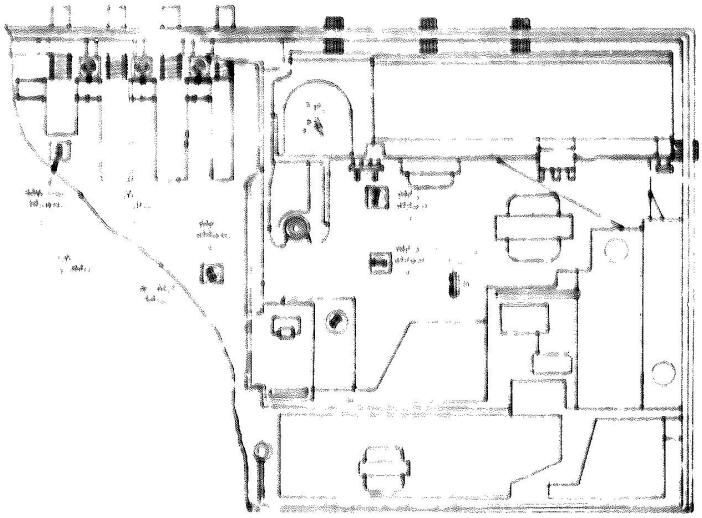
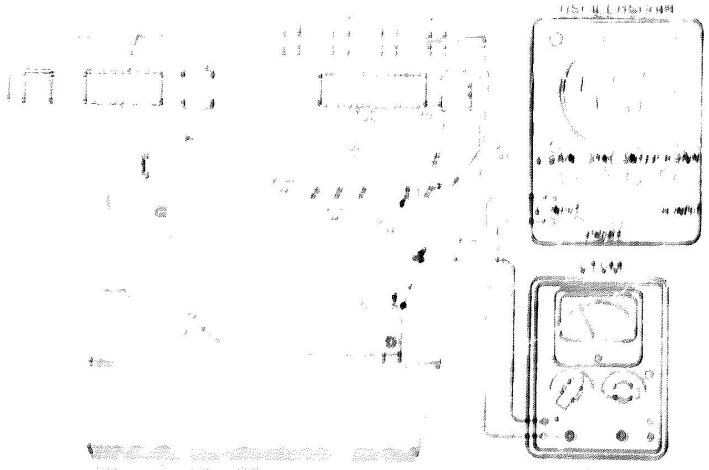


Fig. 9

ALIGNMENT POINTS

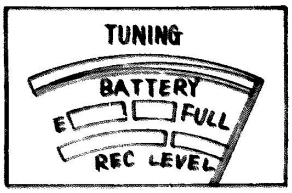




■ TUNING/BATTERY/REC LEVEL METER ADJUSTMENT

1. RADIO RECEIVER SETTING
   - Set radio switch to ON.
   - Set band selector switch to MW.
   - Set volume control to minimum.

2. REMARKS
   Adjust R_{15} so that the pointer of level meter stays as shown in figure right.



■ ALIGNMENT INSTRUCTIONS

READ CAREFULLY BEFORE ATTEMPTING ALIGNMENT

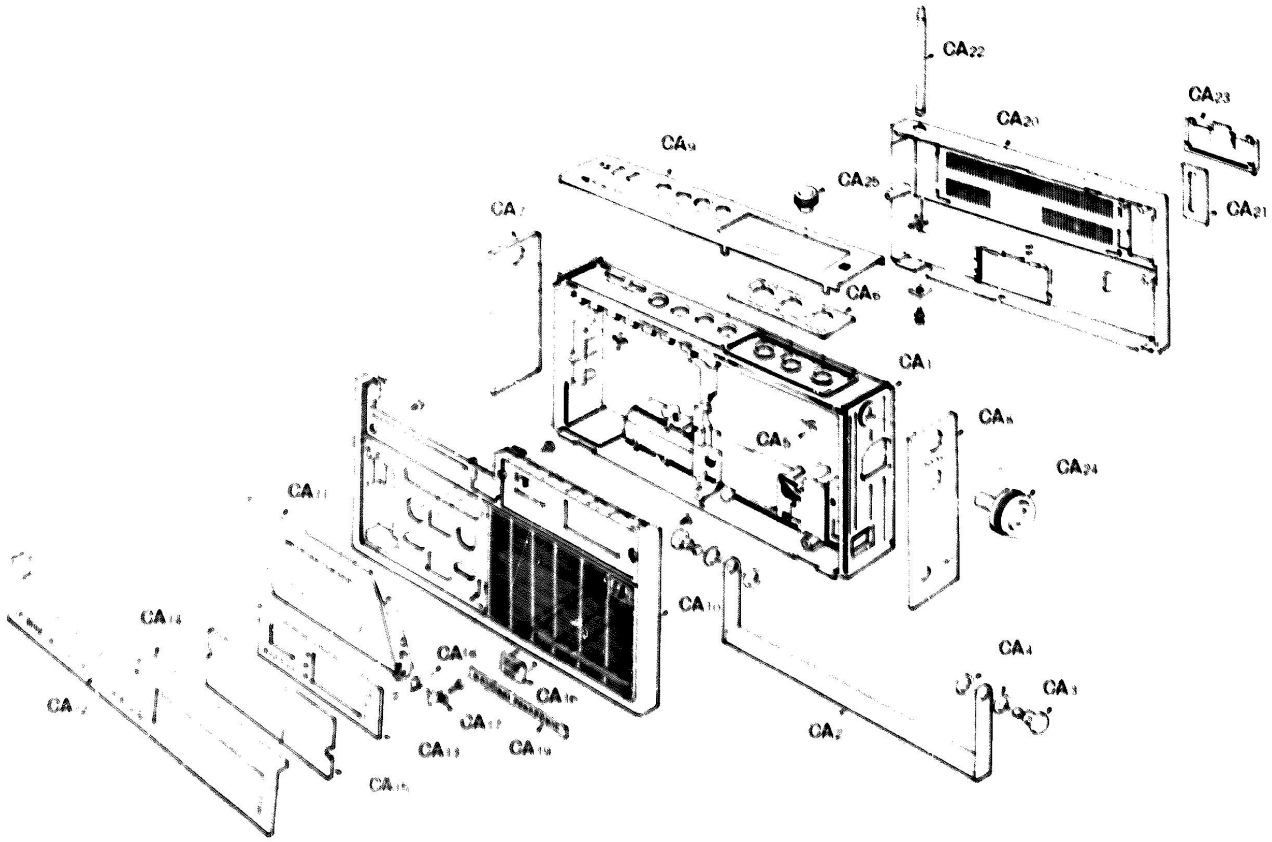
Notes:
1. Set volume control to maximum or minimum (Step 8).
2. Set tone control to treble.
3. Set band selector switch to MW, SW_1 or SW_2.
4. Set mixing volume to OFF.
5. Set sleep and monitor switch to OFF. (Step 8—Monitor ON)
6. Set RADIO switch to ON or OFF (Step 8).
7. Set power source voltage to 3 volts DC.
8. Set tape selector switch to recording (Step 8).

	SIGNAL GENERATOR or SWEEP GENERATOR CONNECTIONS	SIGNAL GENERATOR or SWEEP GENERATOR FREQUENCY	RADIO DIAL SETTING (DISTANCE)	INDICATOR (VTVM or SCOPE)	ADJUSTMENT	REMARKS
	MW ALIGNMENT					
(1)	Fashion loop of several turns of wire and radiate signal into loop of receiver.	455 kHz 30% Mod. with 400Hz.	Point of non-interference. (on/about 600kHz)	Output meter across voice coil.	T_1 (1st IFT) T_2 (2nd IFT) T_3 (3rd IFT)	Adjust for maximum output.
(2)	〃	550 kHz	550 kHz (5.3mm (3/16"))	〃	L_4 (OSC Coil) (*) L_1 (ANT Coil)	Adjust for maximum output. Adjust L_1 by moving coil bobbin along ferrite core.
(3)	〃	1500 kHz	1500 kHz (50.4mm (1 7/8"))	〃	C_{13} (OSC Trimmer) C_2 (ANT Trimmer)	Adjust for maximum output. Repeat steps (2) and (3).
	SW_1 ALIGNMENT					
(4)	〃	2.3 MHz	2.3 MHz (1.9mm (1/16"))	〃	L_5 (OSC Coil) (*) L_2 (ANT Coil)	Adjust for maximum output. Adjust L_2 by moving coil bobbin along ferrite core.
(5)	〃	7 MHz	7 MHz (53.7mm (2 1/8"))	〃	C_{17} (OSC Trimmer) C_4 (ANT Trimmer)	Adjust for maximum output. Repeat steps (4) and (5).
	(*)Cement antenna bobbin with wax after completing alignment.					
	SW_2 ALIGNMENT					
(6)	Connect to whip antenna through 10mmf capacitor Common to chassis	7 MHz	7 MHz (1.9mm (1/16"))	〃	L_6 (OSC Coil) L_3 (ANT Coil)	Adjust for maximum output.
(7)	〃	22 MHz	22 MHz (53.1mm (2 1/8"))	〃	C_{23} (OSC Trimmer) C_7 (ANT Trimmer)	Adjust for maximum output. Repeat steps (6) and (7).

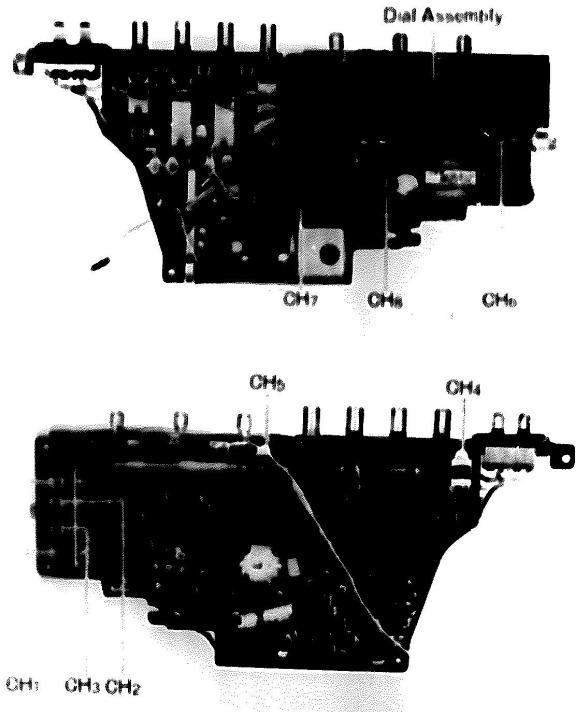
RECORDING BIAS ALIGNMENT

	CIRCUIT	VTVM CONNECTION	ADJUSTMENT	REMARKS
(8)	RECORDING BIAS	Connect positive side to test point TP_4 and negative side to POINT 'A'.	R_{32} (Recording Bias Control)	Adjust R_{32} for 33mV of VTVM reading.

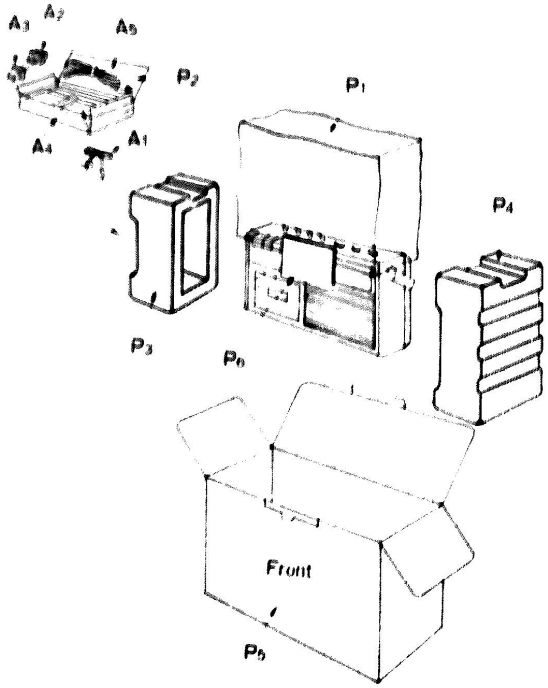
■ CABINET PARTS LOCATIONS



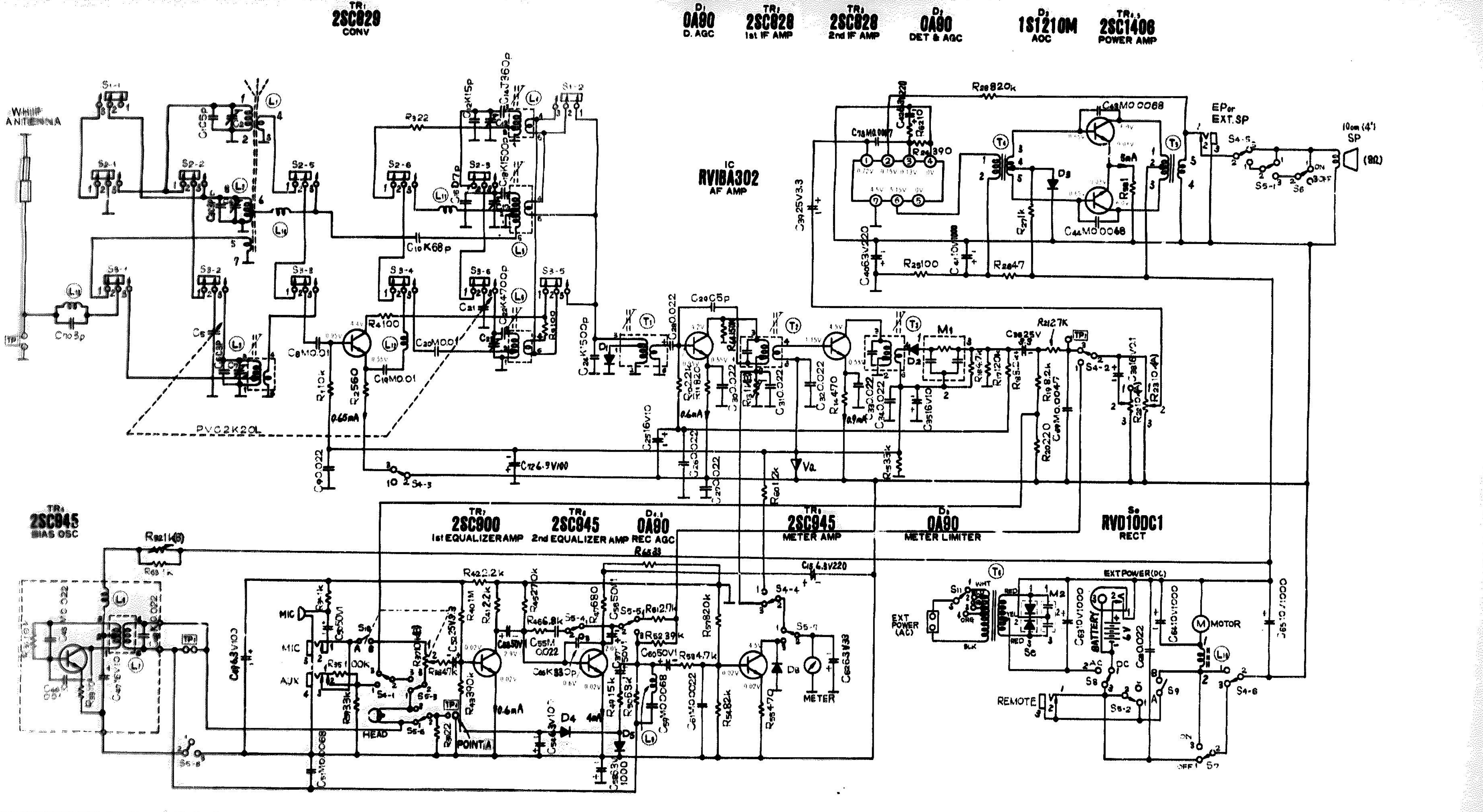
■ CHASSIS PARTS LOCATIONS



■ ACCESSORIES & PACKING PARTS LOCATIONS



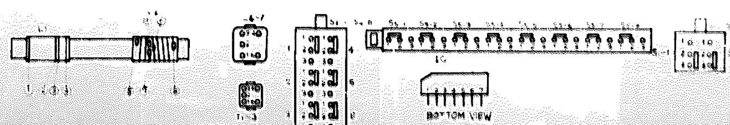
Schematic Diagram - Model R-510B



C	1 2 3 4 5 6 7 8 9 10 12 13 14 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 39 33 73 34 42 40 38 41 36 69 43 44 38 45 46 47 48 49 50 51 52 72 53 54 55 68 56 37 58 59 60 61 15 62 63 64 68 65
R	1 2 3 4 9 10 65 11 64 19 14 15 24 25 62 16 17 18 19 20 21 26 27 28 22 23 58 32 33 63 34 35 59 37 38 39 40 41 42 43 45 46 47 49 50 61 52 53 57 54 55 60

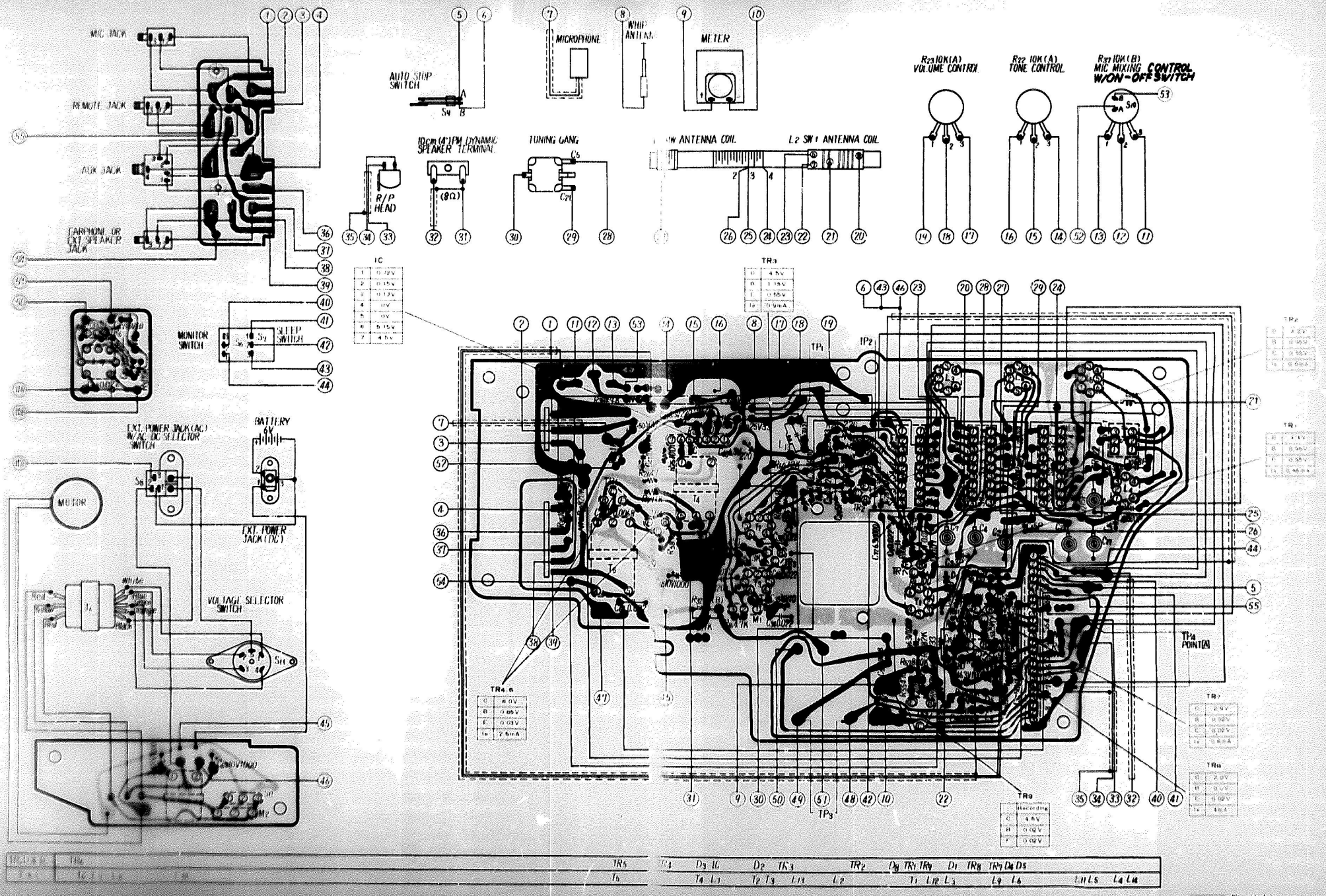
Notes:

1. S_{1-1}~S_{3-6}: Band selector switch in "MW" position.
2. S_{4-1}~S_{4-5}: Radio switch in "ON" position.
3. S_{5-1}~S_{5-8}: Recording-Play switch in "Play" position.
4. S_6: Monitor switch in "ON" position.
5. S_7: Sleep switch in "OFF" position.
6. S_8: AC-DC selector switch in "DC" position.
7. S_9: Auto stop switch in "OFF" position.
8. S_{10}: Mixing ON-OFF switch in "OFF" position.
9. S_{11}: Voltage selector switch in "110V" position.
10. DC voltage measurements are taken with circuit tester 10kΩ/V from negative terminal of battery.
    $TR_{1\sim5}$ & IC......Radio position
    TR_7 & 8......Playback position
    TR_9......Recording position
11. Battery current: No signal..............................27mA
    Maximum output 390mA

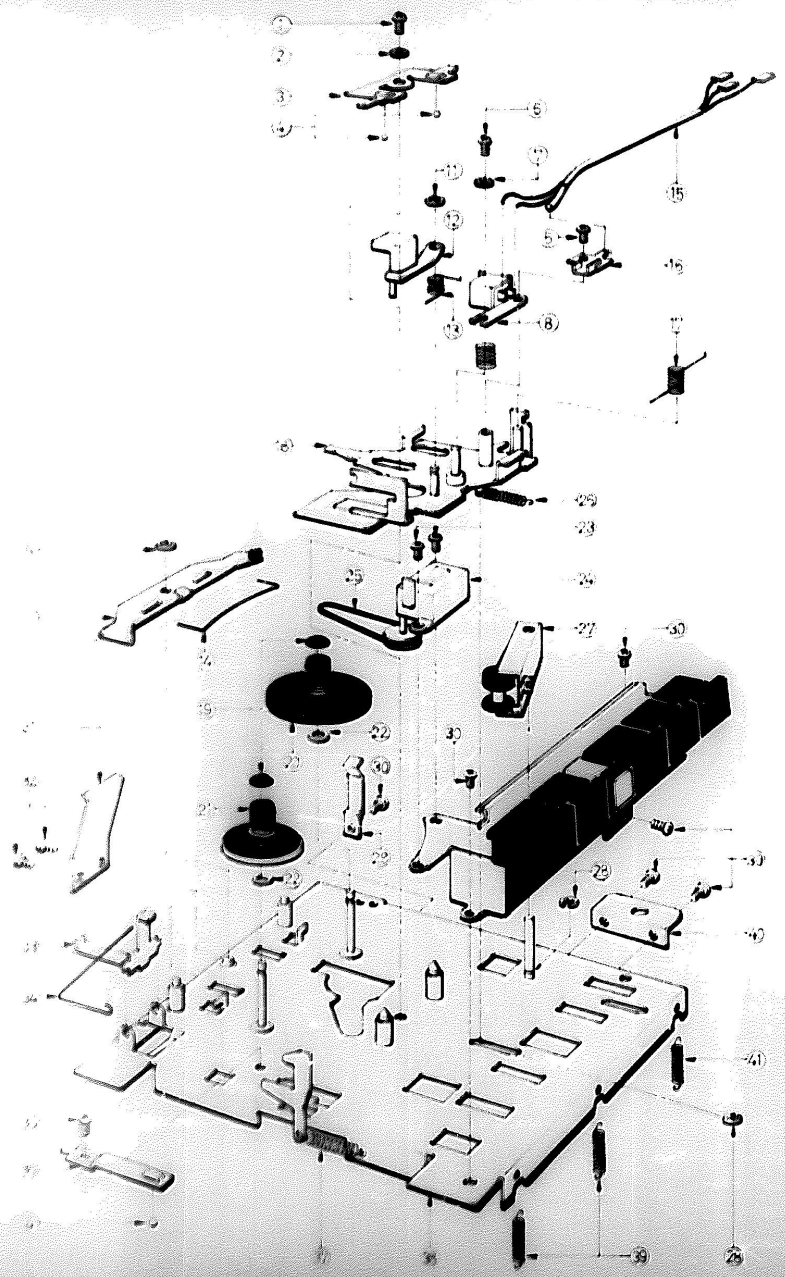


47-8

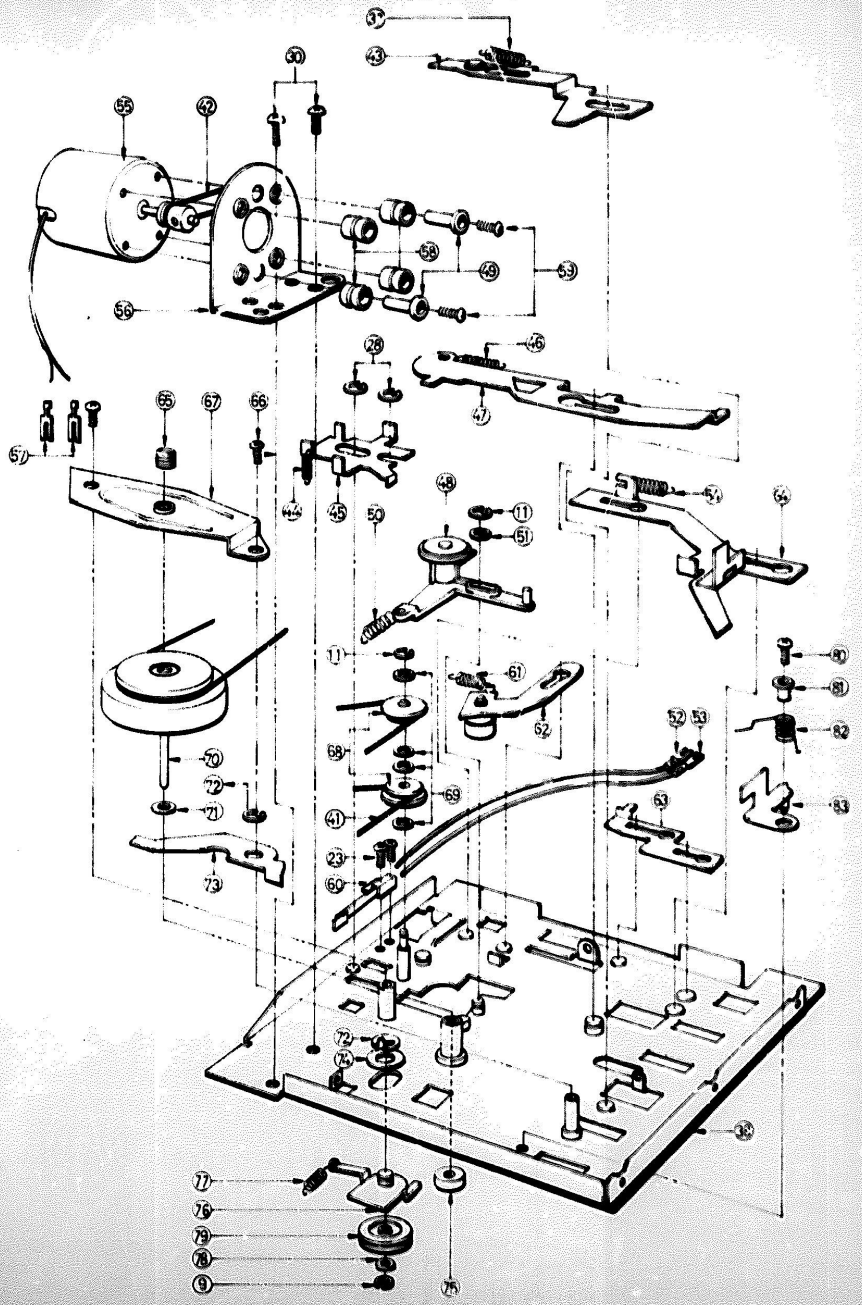
Circuit Board Wiring View-Model R-510B



Earth Line



(Top View)



(Bottom View)

REPLACEMENT PARTS LIST

NOTES
1. Part numbers are indicated on most mechanical parts. Please use this part number for parts orders.
2. ∖ indicates the New Parts.
3. X Z rank: X rank parts will cover 80% of repair work. X + Y rank parts will cover 95% of repair work. Z rate parts are less necessary.
4. ● mark indicates 18 serrations parts.

Ref.No.	Part No.	Description	Per Set Pcs	Remarks
INTEGRATED CIRCUIT, TRANSISTORS AND DIODES				
IC	RVIBA302	AF Amplifier	1	∖ X
TR1	2SC829	Converter	1	X
TR2,3	2SC828	1st,2nd IF Amplifier	2	X
TR4,5	2SC1406	Power Amplifier	2	∖ X
TR6,8,9	2SC945	Bias Oscillator,2nd Equalizer Amplifier Motor Amplifier	3	X
TR7	2SC900	1st Equalizer Amplifier	1	X
D1,2,4,5,6	0A90	D AGC Detector & AGC	5	X
D3	IS1210M	Operation Compensator	1	X
RECTIFIER				
D7	RVD10001	Rectifier	1	X
VR	EVV320D1R212	Operation Compensator (Variable)	1	X
COILS AND TRANSFORMERS				
L1,2	RLF6F62-D	MW & SW1 Antenna Coil	1	∖ X
L3	RLA3B5-M	SW2 Antenna Coil	1	X
L4	RLO2B5A-M	MW Oscillator Coil	1	X
L5	RLO3B0-M	SW1 Oscillator Coil	1	X
L6	RLO3B9-M	SW2 Oscillator Coil	1	X
L7	RLO9C10-1	Recording Oscillator Coil	1	∖ X
L8	RLQ2562-1-Q	Choke Coil	1	Y
L9	RLM1A1-Y	Choke Coil	1	Y
L10	RLT6E3-Y	Choke Coil	1	∖ X
L11,12	RLQY505-5	Choke Coil	2	Y
L13	RLQY755-5	Choke Coil	1	Y
L14	RLQY755-3-Q	Choke Coil	1	∖ Y
T1	RLI2B124-M	1st IF Transformer	1	X
T2	RLI2B250-M	2nd IF Transformer	1	X
T3	RLI2B450-M	3rd IF Transformer	1	X
T4	RLT3F33-A	Input Transformer (P.P 1.4kΩ : 1.4kΩ)	1	X
T5	RLT2G12-A	Output Transformer (P.P 45Ω : 8Ω)	1	X
T6	RLT5J19-J	Power Transformer	1	∖ X
	RMERB10BX	Bias Oscillator Block	1	∖ X
RESISTORS				
R33,62	ERD18EJ100	10Ω, 1/4W, 5%, Carbon	2	Y
R1,39	ERD18EJ220	22Ω, 1/4W, 5%, Carbon	2	Y
R26	ERD18EJ470	47Ω, 1/4W, 5%, Carbon	1	Y
R4,9,25	ERD18EJ101	100Ω, 1/4W, 5%, Carbon	3	Y
R20	ERD18EJ221	220Ω, 1/4W, 5%, Carbon	1	Y
R24	ERD18EJ331	330Ω, 1/4W, 5%, Carbon	1	Y
R47	ERD18EJ681	680Ω, 1/4W, 5%, Carbon	1	Y
R11	ERD18EJ821	820Ω, 1/4W, 5%, Carbon	1	Y
R18,66	ERD18EJ471	470Ω, 1/4W, 5%, Carbon	2	Y
R42	ERD18EJ561	560Ω, 1/4W, 5%, Carbon	1	Y
R27,34	ERD18EJ102	1kΩ, 1/4W, 5%, Carbon	2	Y
R10,41,43	ERD18EJ222	2.2kΩ, 1/4W, 5%, Carbon	3	Y
R61	ERD18EJ272	2.7kΩ, 1/4W, 5%, Carbon	1	Y
R15,58	ERD18EJ332	3.3kΩ, 1/4W, 5%, Carbon	2	Y
R16,38,53	ERD18EJ472	4.7kΩ, 1/4W, 5%, Carbon	3	Y
R48,50	ERD18EJ562	5.6kΩ, 1/4W, 5%, Carbon	2	Y
R13,19	ERD18EJ822	8.2kΩ, 1/4W, 5%, Carbon	2	Y
R1,31	ERD18EJ103	10kΩ, 1/4W, 5%, Carbon	2	Y
R49	ERD18EJ153	15kΩ, 1/4W, 5%, Carbon	1	Y
R52	ERD18EJ393	39kΩ, 1/4W, 5%, Carbon	1	Y
R54	ERD18EJ823	82kΩ, 1/4W, 5%, Carbon	1	Y
R60	ERD18EJ123	12kΩ, 1/4W, 5%, Carbon	1	Y
R35	ERD18EJ104	100kΩ, 1/4W, 5%, Carbon	1	Y
R17	ERD18EJ124	120kΩ, 1/4W, 5%, Carbon	1	Y
R45	ERD18EJ274	270kΩ, 1/4W, 5%, Carbon	1	Y
R63	ERD18EJ394	390kΩ, 1/4W, 5%, Carbon	1	Y
R28,57	ERD18EJ824	820kΩ, 1/4W, 5%, Carbon	2	Y
R62	ERD18EJ105	1MΩ, 1/4W, 5%, Carbon	1	Y
R21	ERD18EJ275	2.7MΩ, 1/4W, 5%, Carbon	1	Y
R5	ERD20EM105Z	1MΩ, 1/2W, 20%, Solid	1	Y
R59	ERM12YK105	1MΩ, 1/2W, 10%, Metal	1	Y
R51	ERD18EJ331	330Ω, 1/4W, 5%, Carbon	1	Y
R64	ERD18EJ154	150kΩ, 1/4W, 5%, Carbon	1	Y
VARIABLE RESISTORS				
RV2,21	EVH12AK15B14	10kΩ B, TONE & VOLUME Control	2	∖ X ●
RV7	EVH0ATK15B14	10kΩ B, MIC MIXING Control	1	∖ X ●
RV13,32	EVLTAAA10B13	1kΩ B, Motor Control, Recording Bias Control	2	X
CAPACITORS				
C1,26,27,28,31,32,33,64,66	ECKE1H223PF	0.022μF, 50WV, +80%, Ceramic	10	Z
C6,7,9,20	ECKE1H103KG	0.01μF, 50WV, ±20%, Ceramic	3	Z
C1,29	ECCD1H050CC	5PF, 50WV, ±0.25%, Ceramic	2	Z
C16	ECCD1H070DC	7PF, 50WV, ±0.5%, Ceramic	1	Z
C10	ECMS05680K-H	68PF, 50WV, ±10%, Mica	1	Z
C14	ECQS1361JZ	360PF, 125WV, ±5%, Styrol	1	Z
C18,24	ECQS05152KZ	1500PF, 50WV, ±10%, Styrol	2	Z
C22	ECQS05472KZ	4700PF, 50WV, ±10%, Styrol	1	Z
C3,8,70	ECCD1H030C	3PF, 50WV, ±0.25%, Ceramic	3	Z
C61	ECQG05222MZ-N	0.0022μF, 50WV, ±20%, Polyester	1	Z
C69,73	ECQG05472MZ-N	0.0047μF, 50WV, ±20%, Polyester	2	Z
C43,44,51,59	ECQG05682MZ-N	0.0063μF, 50WV, ±20%, Polyester	4	Z
C46	ECQG05103MZ-N	0.01μF, 50WV, ±20%, Polyester	1	Z
C45,55	ECQG05223MZ-N	0.022μF, 50WV, ±20%, Polyester	2	Z
C48	ECQM05223KZ	0.022μF, 50WV, ±10%, Polyester	1	∖ Z
C38	ECAG16ER1	0.1μF, 16WV, Electrolyte	1	Y
C62	ECEA6V33	33μF, 6.3WV, Electrolyte	1	Y
C49,54,72	ECEA6V100	100μF, 6.3WV, Electrolyte	3	Y
C15,40,42	ECEA6V220	220μF, 6.3WV, Electrolyte	3	Y
C41,63,64,65	ECEA10V1000	1000μF, 10WV, Electrolyte	4	Y
C25,35,47	ECEA16V10	10μF, 16WV, Electrolyte	3	Y
C36,39,52	ECEA25V3R3	3.3μF, 25WV, Electrolyte	3	Y
C37,50,53,56,60	ECEA50V1	1μF, 50WV, Electrolyte	5	Y
C58	ECEA6V1000	1000μF, 6.3WV, Electrolyte	1	Y
C68	ECCD1H331K	330PF, 50WV, ±10%, Ceramic	1	Z
C17	ECCD1H150K	15PF, 50WV, ±10%, Ceramic	1	Z
VARIABLE CAPACITORS				
CB,21	PVG2K20L	Tuning Gang	1	X
C2,4,7,13,17,23	RCV1T-16MR	Trimmer	6	X
COMPONENT COMBINATIONS				
M1	RxAF203247IR	0.01mfd+2,470Ω	1	Y
M2	RxAF103P22HD	0.01mfd+2	1	Y
SWITCHES				
S1-1 - S4-6	RSH405A	Band Selector & Radio Switch	1	∖ X
S5-1 - S5-8	RSH52A	Recording-play Switch	1	∖ X
S6,7	RST23A5	Monitor & Stop Switch	1	N X
S11	RSR20-1	Voltage Selector Switch	1	X
SPEAKER				
SP	RA510P05SH	16cm 4" PM Dynamic Speaker (8Ω)	1	∖ X
CABINET				
	●RXMR510BX	Cabinet Body Complete	1	∖ X
CA1	RKM199AS	Cabinet Only(Not Available Order RXMR510BX)	(1)	
CA2	RK43H5B	Handle,Cabinet	1	∖ X
CA3	RK125A	Metal Fitting,Handle M'tg	2	Y
CA4	RNN1020	Washer,Handle M'tg	4	Z
CA5	RME11D	Bracket,Handle M'tg	2	Z
CA6	RGH324A	Indicating Plate,VOLUME,TONE etc Mark	1	∖ Z
CA7	RGH406A	Ornament,Cabinet Left Side	1	∖ Z
CA8	RGH406B	Ornament,Cabinet Right Side	1	∖ Z
CA9	RGH410A	Indicating Plate,Cabinet Upper Side	1	∖ Z
	RJL206A	Terminal,Battery + Side	1	Z
	RJL206B	Spring,Battery - Side	1	Z
	●RYF1R510BX	Cover Complete,Cabinet Front	1	∖ X
CA10	RKF134AS	Cover Only,(Not Available Order RYF1R510BX)	(1)	
CA11	RKL9012A	Cover,Cassette Tape	1	∖ Y
	●RYER510BX	Escutcheon Assembly	1	∖ X
CA12	RGK331A	Indicating Plate (		
CA13	RGK332A	Indicating Plate ((Not Available		
CA14	RGL41A	Escutcheon Order RYCR510BX)		
CA15	RGP187A	Panel,Dial (		
CA16	RGK412A	Ornament,MIC Mark	1	∖ Z
CA17	RHH419A	Bracket,Tape Cover M'tg	1	∖ Z
CA18	RUS121A	Spring,Tape Cover M'tg	1	∖ Z
CA19	RGB96B	Badge,NATIONAL PANASONIC Mark	1	∖ Z
	●RYF2R510BX	Cover Complete,Cabinet Back	1	∖ X
CA20	RKF140A	Cover Only,Cabinet Back(Not Available Order RYF2R510BX)	(1)	
CA21	RGK339A	Indicating Plate,MIC,AUX Mark	1	∖ Z
CA22	XEARV102KASY	Whip Antenna	1	∖ X
CA23	RKK62A	Cover,Battery Compartment	1	∖ X
CA24	RBN102AK	Knob,Tuning	1	∖ X ●
CA25	RBN181AK	Knob,Volume,Tone & MIC Mixing	3	∖ X ●
	RHR931A	Cover,Microphone	1	Z
	RJM110A	Microphone	1	X
	XSB3+30BNS	Screw,Cover M'tg	1	Z
	XSB3+55FGS	Screw,Cover M'tg	2	Z

Ref.No.	Part No.	Description	Per Set (Pcs.)	Remarks
		CHASSIS		
	RSM2514A	Meter, Triple Indicator	1	N X
	RJJ29C	Jack, EXT. Power Jack (AC)	1	Y
	RJJ60A	Jack Assembly (with Plate)	1	N X
CH1	RJJ32B	Jack, Earphone & MIC	2	Y
CH2	RJJ58A	Jack, Remote	1	Y
	RJJ59A	Jack, EXT. Power Jack (DC 6V)	1	N Y
CH3	RJJ50A	Jack, AUX	1	Y
CH4	RMA5038A	Bracket, Core Antenna (Large)	1	N Y
CH5	RMA5039A	Bracket, Core Antenna (Small)	1	N Y
	RMS45	Bracket, (Large) Speaker M'tg	1	Z
	RMS12A	Bracket, (Small) Speaker M'tg	1	Z
	RMV22AS	Bracket, Tuning Gang	1	N Z
	RMW58A	Bracket, Voltage Selector Switch	1	N Z
	RME48A	Bracket, Microphone M'tg	1	N Z
	RUV256A	Cover, Monitor & Sleep Switch	1	N Z
	RHG4B	Rubber, Tuning Gang	1	Z
	XYN26DC6	Screw, Drum M'tg	1	Z
	XYN3DC6S	Screw, Tuning Gang & Switch M'tg	4	Z
	XTN3D10B	Screw, Dial Assembly M'tg	1	Z
	XTN3D10BR	Red Screw, Tape Deck M'tg	3	Z
	XTN3D10BR	Red Screw, PCB M'tg	3	Z
	XTW3D10BR	Red Screw, P C B M'tg	1	Z
	RDYR610BX	Dial Scale Assembly	1	N X
	RUA138A	Bracket		
	RUS119A	Spring		
	RDY15B	Shaft		
	RDY17A	Shaft		
	RDR20-3	Pulley (Not Available Order RDYR610BX)		
	RDR21-1	Pulley		
	RDF9A	Shaft		
	RDF10A	Shaft		

Ref.No.	Part No.	Description	Per Set (Pcs.)	Remarks
	RKD9008A	Scale		
	RNW150-2	Washer		
CH6	RD19050AK	Shaft, Tuning	1	N Y
	RME11D	Bracket, Shaft M'tg	1	Z
CH7	RDD361B	Drum, Dial	1	N Y
	RDS4060A	Spring, Dial	1	Y
CH8	RDZ05A	Cord, Dial (500m)	1 Roll	Y
		ACCESSORIES		
A1	EAE1FB	Magnetic Earphone	1	Y
A2	RJP74	Plug, Power Source (British Type)	1	Y
A3	RJP75	Plug, Power Source (Continental Type)	1	Y
A4	RJN5A	Cassette Tape	1	Y
A5	RJA21C	AC Cord, Power Source	1	Y
		PACKING		
P1	RPP80A	Polyethylene Cover	1	Z
P2	RPE86A	Accessory Box	1	Z
	RPN9090A	Pad (Complete)	1	N Z
P3	RPN1250A	Left Pad (Not Available Order RPN9090A)		
P4	RPN1251A	Right		
P5	RPG897A	Carton Box	1	N Z
P6	RQX5476A	Instruction Book	1	N Y

TAPE DECK ASSEMBLY

Ref.No.	Part No.	Description	Per Set (Pcs.)	Remarks
	RJD15AS	Tape Deck Assembly	1	N X
1	XSN26DB	Screw, Pressure Spring M'tg	1	Z
2	RMQ293A	Lock Washer, Pressure Spring M'tg	1	N Z
3	RMQ294A	Pressure Spring, Head Base	1	N Z
4	RMQ295A	Ball Bearing	3	N Z
5	RMQ296A	Screw, R/P Head M'tg	1	N Z
6	RMQ297A	Screw, R/P Head M'tg	1	N Z
7	RMQ298A	Lock Washer, R/P Head M'tg	1	N Z
8	RJH8A	R/P Head	1	N X
9	XUC15FW	E Ring, Brake Arm & Idler M'tg	2	Z
10	RMQ299A	Brake Arm Assembly	1	N Z
11	XUC2FW	E Ring, Erase Head Arm M'tg	3	
12	RMQ300A	Erase Head Arm Assembly	1	N Y
13	RMQ301A	Spring, Erase Head Arm	1	N Y
14	RMQ302A	Spring, Brake	1	N Y
15	RMQ303A	Lead Wire, R/P Head	1	N X
16	RMQ304A	Wire Holder, R/P Head Lead Wire	1	N Z
17	RMQ305A	Spring, Pinch Arm	1	N Y
18	RMQ306A	Head Base Assembly	1	N Z
19	RMQ125A	Cap, Reel Table	2	Y
20	RMQ307A	Takeup Reel Table Assembly	1	N Y
21	RMQ308A	Supply Reel Table Assembly	1	N Y
22	RMQ309A	Washer, Reel Table M'tg	2	N Z
23	XSN2+4	Screw, Counter & Motor Switch M'tg	4	Z
24	RMQ310A	Counter	1	N X
25	RMQ311A	Belt, Counter	1	N X
26	RMQ312A	Spring, Head Base	1	N Y
27	RMQ313A	Pinch Roller Assembly	1	N X
28	RMQ314A	E Ring, Pinch Roller & etc M'tg	4	N Z
29	RMQ315A	Holder, Cassette Tape	1	N Y
30	XYN26DC4	Screw, Holder & etc M'tg	6	Z
31	RMQ316A	Spring, Cassette Tape	1	N Z
32	XSN26D4	Screw, Spring M'tg	2	Z
33	RMQ317A	Safety Lever	1	N Z
34	RMQ318A	Spring, Safety Lever	1	N Y
35	XSN2+4	Screw, Pressure Plate M'tg	1	Z
36	RMQ319A	Pressure Plate, Head Base	1	N Z
37	RMQ320A	Spring, F F Rod	2	N Y
38	RMQ321A	Spring, Tape Selector Switch	2	N Y
40	RMQ322A	Bracket, Tape Deck	1	N Z
41	RMQ323A	Spring, Button Stopper	1	N Y
42	RMQ324A	Belt, Motor	1	N X
43	RMQ325A	Fast Forward Rod Assembly	1	N Z
44	RMQ326A	Spring, Selector Rod	1	N Y
45	RMQ327A	Selector Rod	1	N Z
46	RMQ328A	Spring, Recording Rod	1	N Z
47	RMQ329A	Rewind Rod	1	N Z
48	RMQ330A	Pressure Roller Assembly	1	N Z
49	RMQ331A	Cover, Motor M'tg	2	N Z
50	RMQ332A	Spring, Pressure Roller	1	N Z
51	RMQ333A	Washer, Pressure Roller M'tg	1	N Z
52	RJS34A-(X)	Socket, Motor Switch	1	Z
53	RJS34A-(X)	Socket, Motor Switch	1	Z
54	RMQ334A	Spring, Recording Rod	1	N Z
55	MHT35F6R	Motor	1	N Z
56	RMQ335A	Bracket, Motor	1	N Z
57	RJS34A-(X)	Socket, Motor	2	Z
58	RMQ171A	Rubber, Motor M'tg	4	Z
59	XSN26DB	Screw, Motor M'tg	2	Z
60	RMQ336A	Motor Switch	1	N Z
61	RMQ337A	Spring, Rewind Roller	1	N Y
62	RMQ338A	Rewind Roller Assembly	1	N Z
63	RMQ339A	Eject Rod	1	N Z
64	RMQ340A	Recording Rod	1	N Z
65	RMQ341A	Screw, Flywheel Bracket M'tg	1	N Z
66	XYN3DC6S	Screw, Flywheel Bracket M'tg	2	Z
67	RMQ342A	Bracket, Flywheel	1	N Z
68	RMQ343A	Pulley, Belt	2	N Z
69	RMQ344A	Washer, Pulley M'tg	4	N Z
70	RMQ345A	Flywheel	1	N Z
71	RMQ346A	Washer, Flywheel M'tg	1	N Z
72	XUC4FW	E Ring, Stop Rod & Idler Bracket M'tg	2	Z
73	RMQ347A	Stop Rod	1	N Z
74	RMQ348A	Washer, Idler M'tg	1	N Z
75	RMQ349A	Capstan Roller	1	N Z
76	RMC350A	Bracket, Idler	1	N Z
77	RMQ351A	Spring, Idler	1	N Y
78	RMQ352A	Washer, Idler M'tg	1	N Z
79	RMQ353A	Idler	1	N X
80	XSN26DB	Screw, Stop Lever M'tg	1	Z
81	RMQ354A	Spacer, Stop Lever M'tg	1	N Z
82	RMQ355A	Spring, Stop Lever	1	N Y
83	RMQ356A	Stop Lever	1	N Z
84	RMQ357A	Button Assembly, Tape Selector	1	N Y