

Service Manual

Mini Cassette

RQ-330

(Black)

Mini Cassette Recorder



This is the Service Manual for the following areas.

[Z]...For all European areas except United Kingdom.

[ZE]...For United Kingdom.

■ SPECIFICATIONS

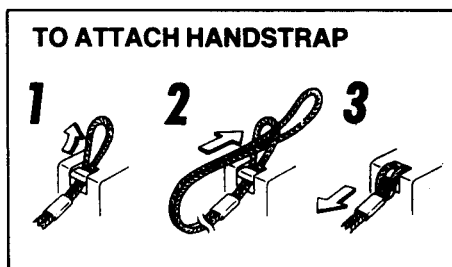
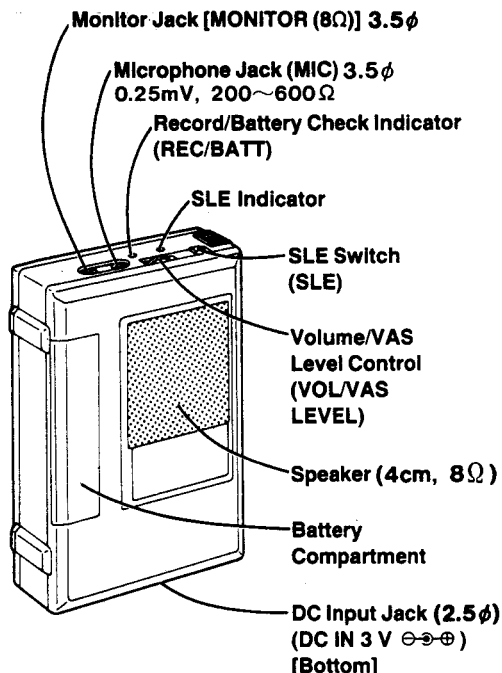
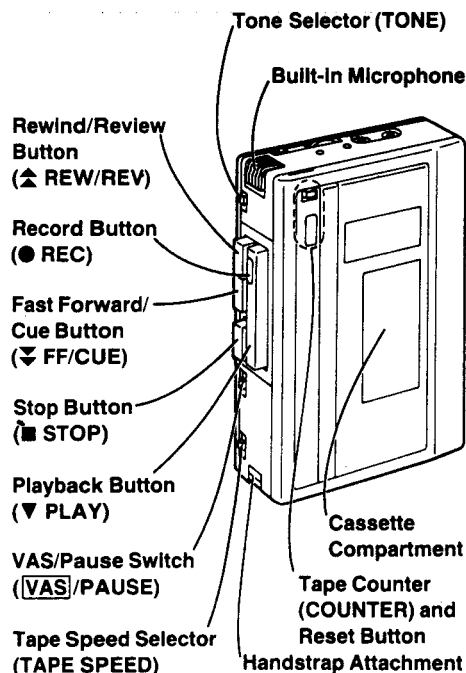
Power Requirement:	Battery; 3V (Two "AA" size batteries) (Panasonic UM-3 or equivalent)	Program Time:	1 hour with C-60 cassette tape
AC; (Z).....	220V, 50Hz with optional AC adaptor RD-9443HS	Input:	Mic; sensitivity 0.25mV/applicable microphone impedance 200-600 Ω , ϕ 3.5
(ZE).....	240V, 50Hz with optional AC adaptor RD-9443HE	DC in;	3V (mini jack) ϕ 2.5
Motor:	Electric governor motor	Output:	Monitor; 8 Ω , ϕ 3.5
Power Output:	420mW (R.M.S. max)	Speaker:	4cm PM dynamic speaker (8 Ω)
Frequency Response:	180-7,000Hz	Dimensions:	85 \times 113.5 \times 36.5 mm
Tape Speed:	1 $\frac{7}{8}$ ips (4.8cm/s)	Weight:	230g, without batteries
Track System:	2-track monaural 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

LOCATION OF CONTROLS AND COMPONENTS



DISASSEMBLY INSTRUCTIONS

■ Removing the Cassette Lid

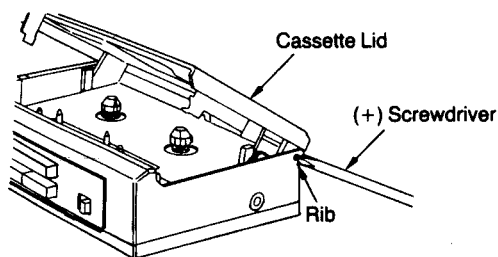


Fig. 1

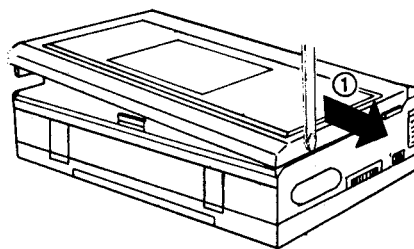


Fig. 2

1. Open the cassette lid.
2. Remove the cassette lid by pressing its rib with the tip of a (+) screwdriver. (Fig.1)
3. Push the cassette lid in the direction of arrow ①, and disconnect the inside boss. (Fig.2)
4. Remove the spring (A). (Fig. 3)

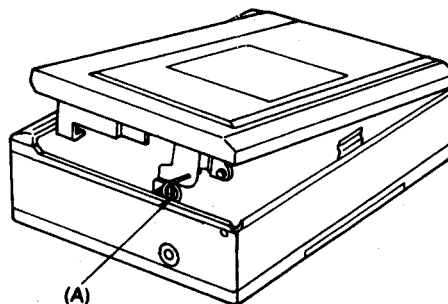


Fig. 3

■ How to Replace the Cassette Lid Spring

1. Fit Part (A) on the shaft of the front cabinet.
2. Insert part (B) in the hole in the cassette lid.
3. Fit the boss (C) in the cassette lid (same on right side).

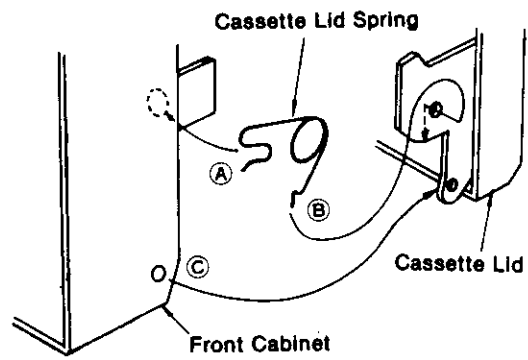


Fig. 4

■ Remove the Rear Cabinet

1. Remove the screw (B) (2×10)mm×4

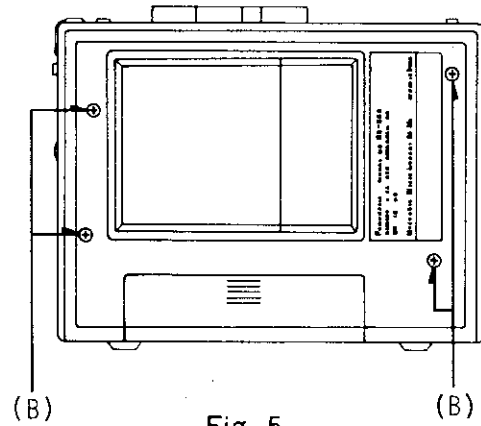


Fig. 5

■ Remove the Front Cabinet

1. Remove the deck screw (C) (1.7×4.5)mm×4.

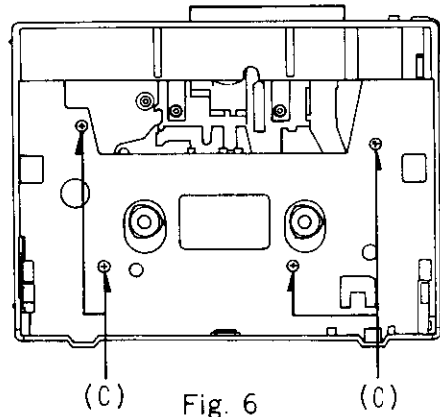


Fig. 6

■ Remove the Circuit board

1. Remove the chassis screw (D) (2×16)mm×1.
2. When you screw, don't loss washer.

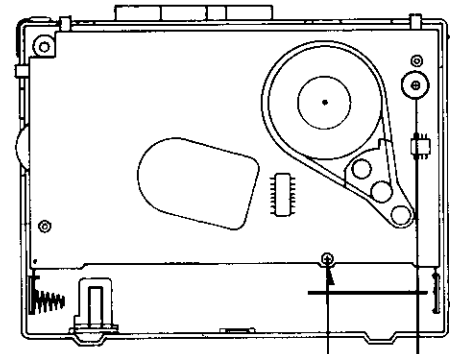


Fig. 7

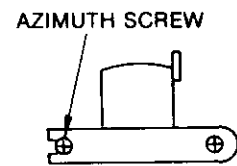


Fig. 8

MEASUREMENTS AND ADJUSTMENTS

■ ALIGNMENT INSTRUCTION

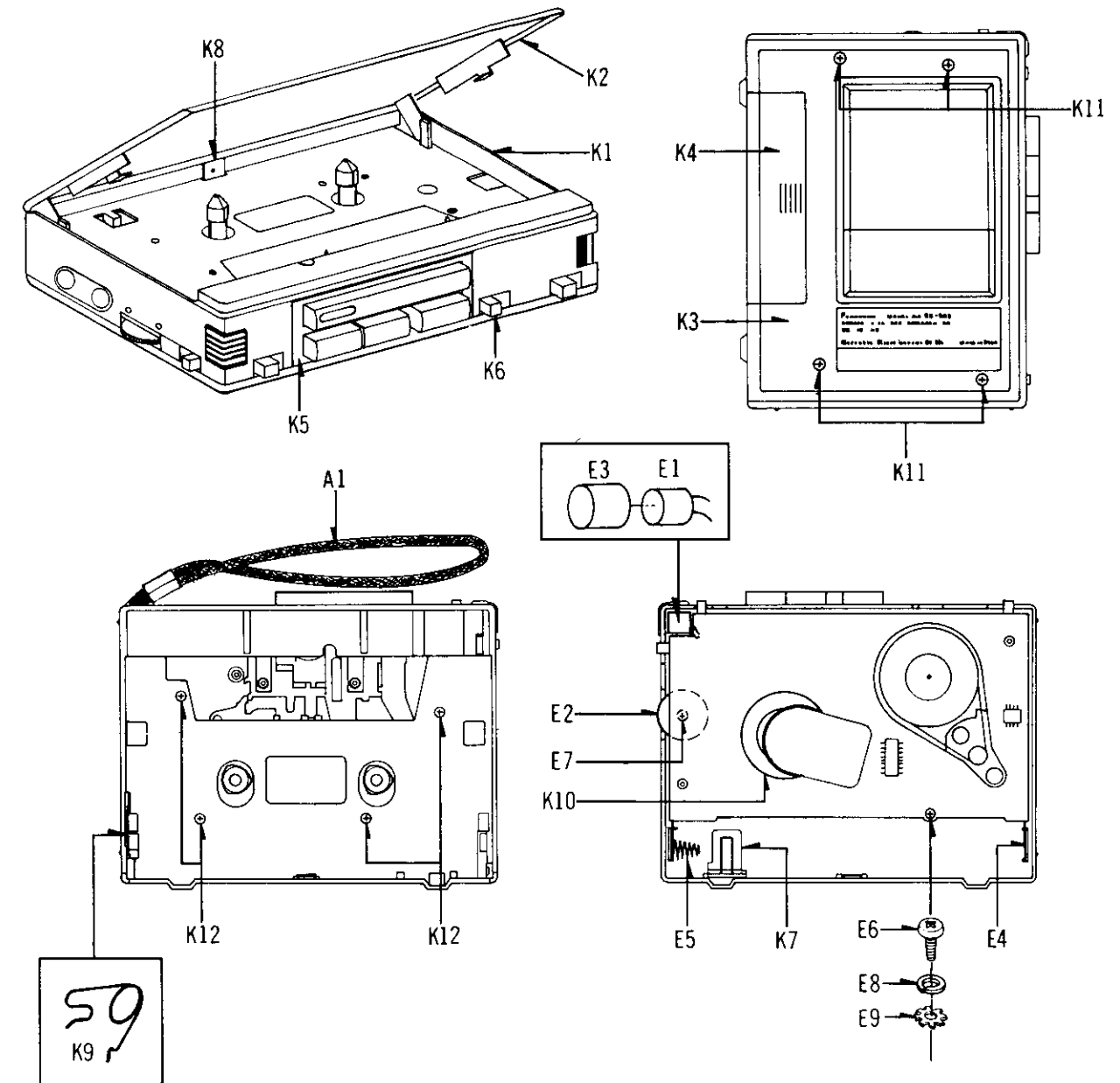
READ CAREFULLY BEFORE ATTEMPTING ALIGNMENT

1. Set volume control to maximum.
2. Set VAS/PAUSE switch to OFF.
3. Set SLE switch to OFF.
4. Set TAPE SPEED switch to NORMAL.
5. Set TONE switch to high.
6. Set power source voltage to 3V DC.

■ ADJUSTMENT

ITEM	INPUT	MEASUREMENT POINT	SPECIFICATION	ADJUSTMENT POINT	REMARKS
Head azimuth	QZZCAA (6.3kHz, -10dB)	Monitor jack (8Ω)	Maximum output	Head adjustment screw (Fig. 8)	Playback mode
Tape speed	QZZCWAT	Monitor jack (8Ω)	3000±60Hz	VR1 (Fig. 7)	(1) Playback the test tape. (2) Adjust VR1 to obtain counter readings within specified tolerances.

CABINET AND ELECTRICAL PARTS LOCATION



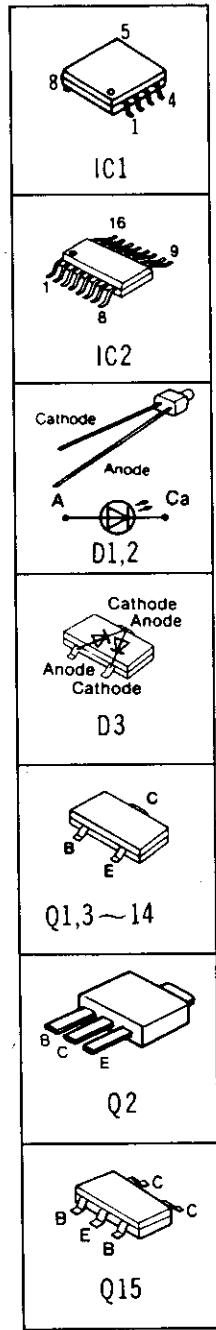
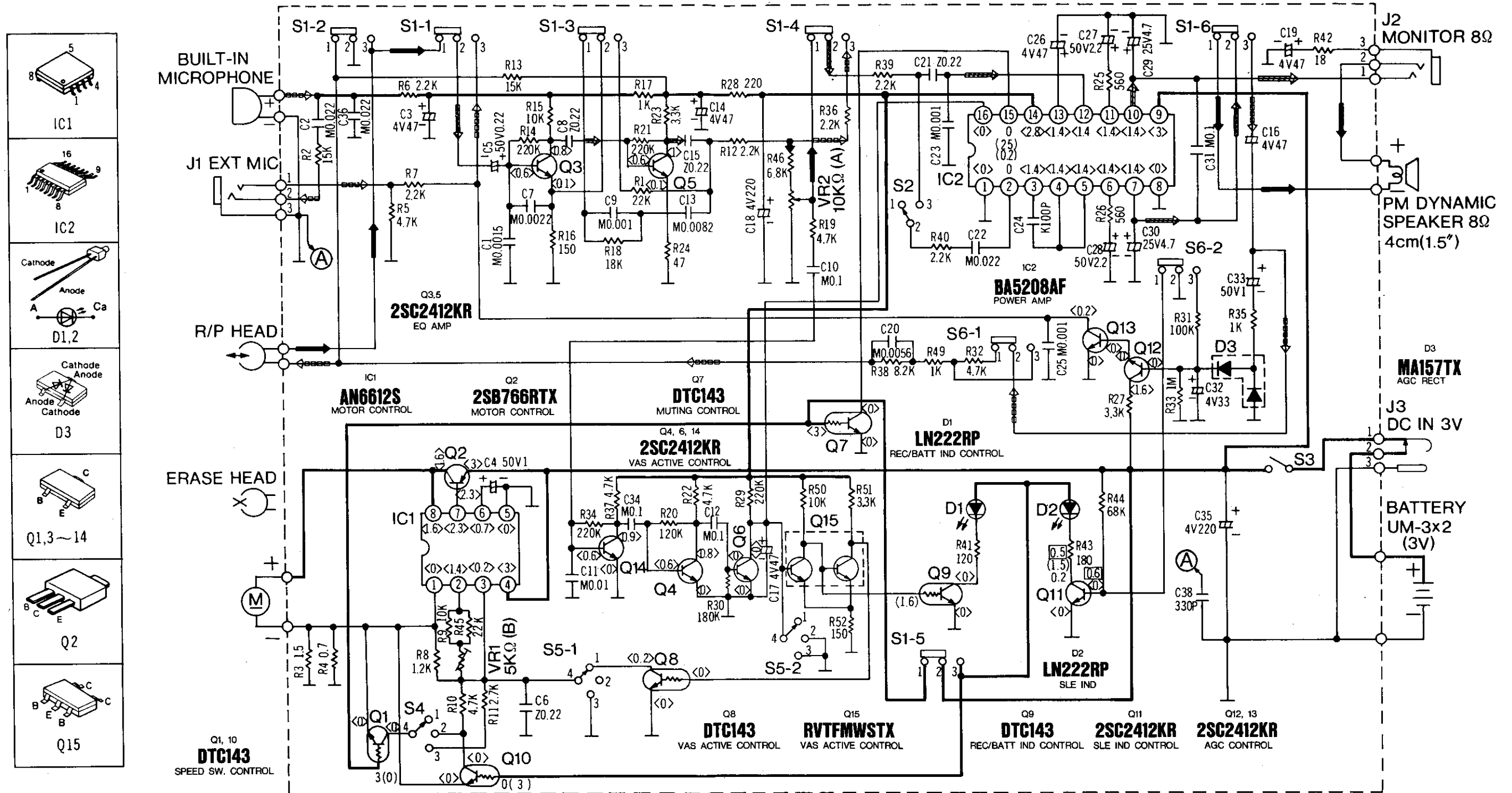
■ REPLACEMENT PARTS LIST

(T) Indicates parts that are supplied by TAMACO.

Ref. No.	Part No.	Part Name & Description	Ref. No.	Part No.	Part Name & Description
CABINET PARTS					
K1(T)	RYMQ330ZKT	Front Cabinet Ass'y	E6	XTN2+16F	Screw (Earth For Deck)
K2(T)	RYOQ330ZKT	Cassette Cover Ass'y	E7(T)	XSH14+3	Screw, Volume Knob
K3(T)	RYFQ330ZKT	Rear Cabinet Ass'y	E8	XWA2B	Spring Washer
K4(T)	RYNQ330MKT	Battery Cover Ass'y	E9(T)	XWE2×4BN	Washer
K5(T)	RKE206TZ	Sky Cabinet	ACCESSORY		
K6(T)	RBD226TZ	Slide Knob	A1(T)	RKH210TZ	Handle Strap
K7(T)	RHE204TZ	Safety Lever (REC)	PACKING MATERIALS		
K8(T)	RJS231TZ	Tape Spring	P1(T)	RPK383TZ	Gift Box
K9(T)	RUS232TZ	Cass. Cover Spring	P2(T)	RPP315TZ	Polyethylene Cover
K10(T)	RMX207TZ	Himeklon	P3(T)	RPN1361TZ	Polylon
K11	XTNR2+10CFN	Screw Cabinet	PRINTED MATERY		
K12	XTN17+45EFC	Screw Deck	Y1(T)	RQX582TZ	Instruction Book
ELECTRICAL PARTS					
E1	WM063Y110	MIC			
E2(T)	RBT237TZ	Knob, Volume			
E3(T)	RHG230TZ	MIC Gum			
E4(T)	RJC260TZ	Spring Battery(+)			
E5(T)	RJC261TZ	Spring Battery(-)			

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SCHEMATIC DIAGRAM

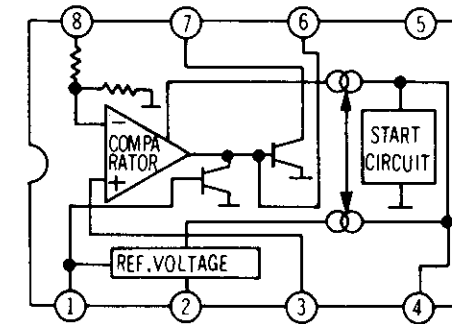


NOTES:

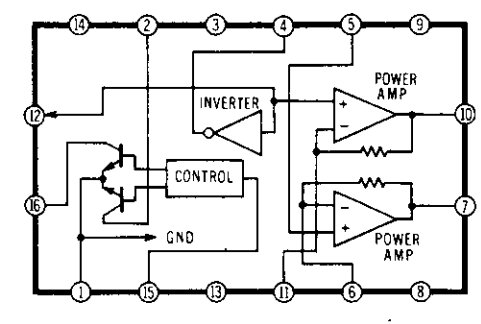
- S1-1~S1-6: Record/Playback select switch in "PLAYBACK" position.
(1...PLAYBACK, 3...RECORD)
- S2: Tone switch in "HIGH" position.
(1...High, 3...Low)
- S3: Motor Switch in "OFF" position.
- S4: Tape speed switch in "HIGH" position.
(1...High, 2...Normal, 3...Low)
- S5-1~S5-2: PAUSE/VAS/OFF Switch in "VAS" position.
(1...VAS, 2...PAUSE OFF, 3...PAUSE on)
- S6-1~S6-2: SLE Switch in "OFF" position.
(1...OFF, 3...ON)

- VR1: Tape Speed Control VR.
- VR2: Volume Control VR.
- DC Voltage measurement are taken with electronics voltmeter from negative terminal of battery.
No mark...PLAY position, < >PLAY and REC position.
()...REC position. □ SLE REC position.
- Battery current: No signal110mA
Maximum output370mA
- ▶ Playback Signal Line
 - ◻◻◻◻◻ Record Signal Line
 - ▨▨▨▨▨ Playback/Record Signal Line
 - + B Line

IC1 AN6612S

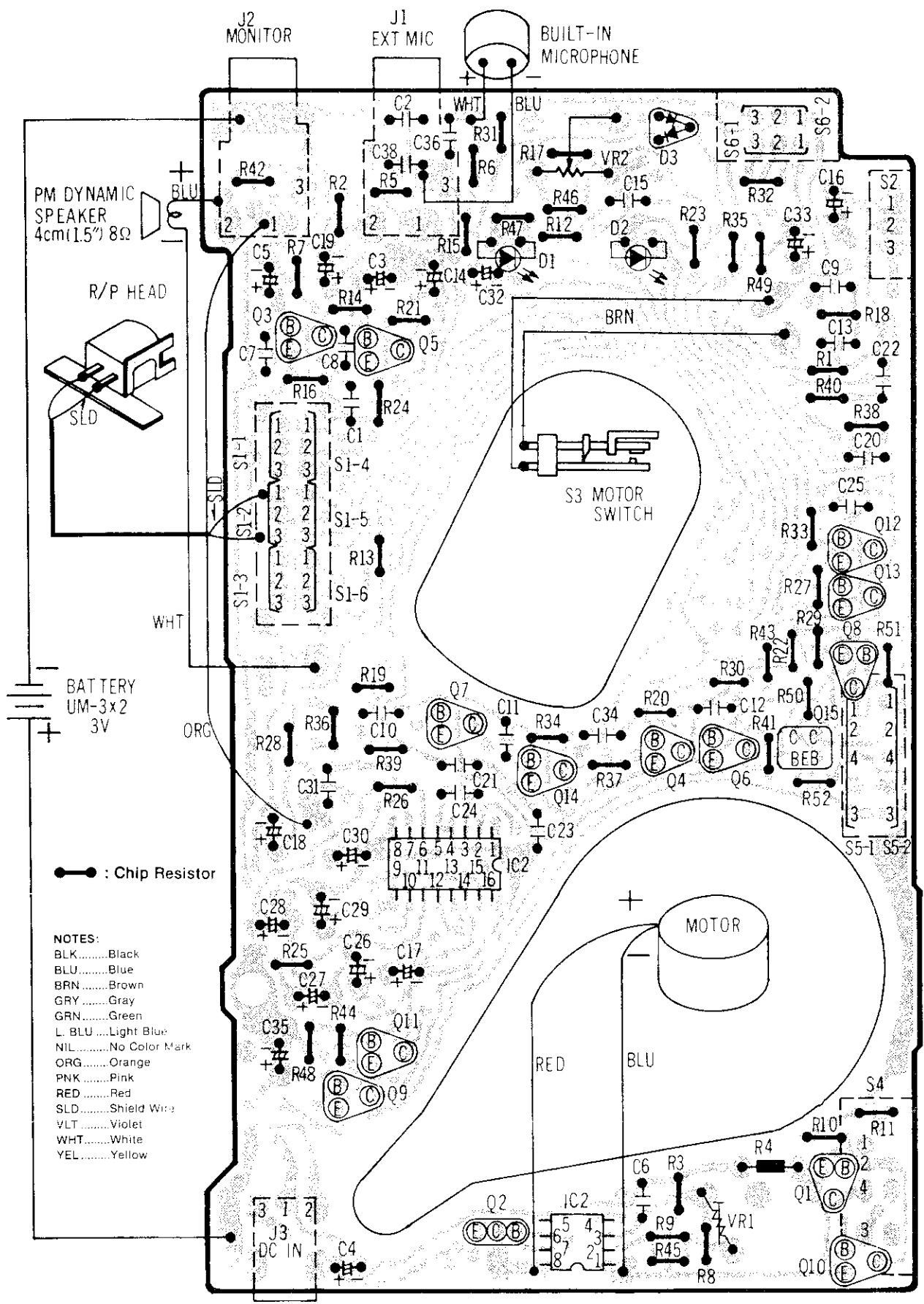


IC2 BA5208AF



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CIRCUIT BOARD AND WIRING CONNECTION DIAGRAM



RESISTORS & CAPACITORS PARTS LIST

Numbering System of Resistor

Example:

ERD	25	F	J	101
Type	Wattage	Shape	Tolerance	Value (100Ω)
ERJ	6G	C	J	2R2
Type	Wattage	Shape	Tolerance	Value (2.2Ω)

Numbering System of Capacitor

Example:

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

Resistor Type	Wattage	Tolerance
ERD: Carbon Resistor	10 : 1/8W	F : ±1%
ERC: Solid Resistor	25 : 1/4W	G : ±2%
ERF: Incombustible Box-Shaped Resistor	50 : 1/2W	J : ±5%
ERF: Wire-Wound Resistor	18 : 1/2W	K : ±10%
ERF: Wire-Wound Resistor	14 : 1/4W	M : ±20%
ERG: Metal Oxide-Film Resistor	12 : 1/2W	
ERG: Metal Oxide-Film Resistor	1 : 1W	
ERG: Metal Oxide-Film Resistor	2 : 2W	
ERM: Wire-Wound Resistor	3 : 3W	
ERM: Wire-Wound Resistor	S1 : 1/2W	
ERO: Superstable Resistor	S2 : 1/4W	
ERO: Metal Film Resistor	6G : 1/8W	
ERO: Metal Film Resistor	8G : 1/4W	
ERX: Metal-Film Resistor		
RRJ: Chip Resistor		
ERJ: Chip Resistor		

* Capacity are in microfarads (μF) unless specified otherwise, P=Pico-farads.
 * Resistance are in ohms (Ω), unless specified otherwise, 1K=1,000Ω, 1M=1,000KΩ

Capacitor Type	Voltage	Tolerance
ECCD: Ceramic Capacitor (Chitacon)	(ECCD, ECKD Type) 1H : 50V DC 2H : 500V DC	K : ±10% M : ±20%
ECKD: Ceramic Capacitor (Chitabari)	(ECFD Type) C : 12V DC D : 25V DC	Z : ±80% J : ±5%
ECFD: Semiconductor Ceramic Capacitor (ECQ Type)	E : 50V DC	J : ±5% G : ±2%
ECE: Electrolytic Capacitor	05 : 50WV DC 1 : 100WV DC	F : ±1% C : ±0.25pF
ECS: Tantalum Fixed Electrolytic Capacitor	(ECE, ECS Type) 0G : 4V 0J : 6.3V	D : ±0.5pF F : ±1pF
ECQ: Polystyrene Film Capacitor	1A : 10V 1C : 18V 1E : 25V 1V : 35V	
ECQS: Polystyrene Film Capacitor	1H : 50V 1J : 63V 2A : 100V	
ECOS: Polypropylene Film Capacitor		
ECQV: T.F. Capacitor		
ECU: Chip Capacitor		
RCU: Cylindrical Ceramic Capacitor		
ECBT: Cylindrical Ceramic Capacitor		

REPLACEMENT PARTS LIST

(T) Indicates parts that are supplied by TAMACO.

Ref. No.	Part No.	Part Name & Description
INTEGRATED CIRCUIT, TRANSISTORS AND DIODES		
IC1	AN66123	IC
IC2	BA5208AF	IC
Q1,7,8,9	DTC143	Transistor (Si)
Q2	2SB766RTX	Transistor (Si)
Q3,4,5,6	2SC2412KR	Transistor (Si)
Q15	RVTFMW5TX	Transistor
D1,2	LN222RP	Diode (LED)
D3(T)	MA157TX	Diode
VARIABLE RESISTORS		
VR1(T)	RVNCA53B4	Variable Resistor, 5KΩ (B)
VR2(T)	RVV1H10A14	Variable Resistor, 300Ω (A: Volume Control)
SPEAKER		
SP(T)	EAS4P304T	Speaker
SWITCHES		
S1(T)	RSH2F17Z	R/P Switch
S2	RSS2A32Y	Slide Switch (Tone)
S3	RFA7BZA	Leaf Switch
S4	RSS3B35Y	Slide Switch (Speed)
S5	RSS3B27Z	Slide Switch (VAS)
S6(T)	RSS2B54X	Slide Switch (SLE)
JACKS		
J1,2	RJJD3M6Z	MIC/Monitor Jack
J3	RJJB2Z	DC IN Jack

Ref. No.	Part No.	Ref. No.	Part No.
RESISTORS			
R1,45	RRD18XJ223	C1	ECUX1H152MD
R2,13	RRD18XJ153	C2,22,36	ECUX1H223MD
R3	RRD18XJ1R5	C3,14,16	ECEA0GK470
R4	RRSA43JR70	17,19,26	
R5,10,19,22,32,37	RRD18XJ472	C4,33	ECEA1HK010
R6,7,12,36,39,40	RRD18XJ222	C5	ECEA1HKR22
R8	RRD18XJ122	C6,8,15,21	ECUX1E224ZF
R9(T)	TSR18E15J103	C7	ECUX1H222MD
R11	RRD18XJ272	C9,23,25	ECUX1H102MD
R14,21,29,34	RRD18XJ224	C10,12,31	ECUX1E104MD
R15,50	RRD18XJ103	.34	ECUX1H103MD
R16,52	RRD18XJ151	C11	
R17,35,49	RRD18XJ102	C13	ECUX1H822MD
R18	RRD18XJ183	C18	ECEA0GKS221
R20	RRD18XJ124	C20	ECUX1H562MDD
R23,27,51	RRD18XJ332	C24	ECUX1H101JC
R24	RRD18XJ470	C27,28	ECEA1HK2R2
R25,26	RRD18XJ561	C29,30	ECEA1EK4R7
R28	RRD18XJ221	C32	ECEA0GK330
R30	RRD18XJ184	C35	ECEA0GK221
R31	RRD18XJ104	C38	RCBC1H331KC
R33	RRD18XJ105		
R38	RRD18XJ822		
R41	RRD18XJ121		
R42	RRD18XJ180		
R43	RRD18XJ181		
R44	RRD18XJ683		
R46	RRD18XJ682		

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MECHANISM PARTS LOCATION

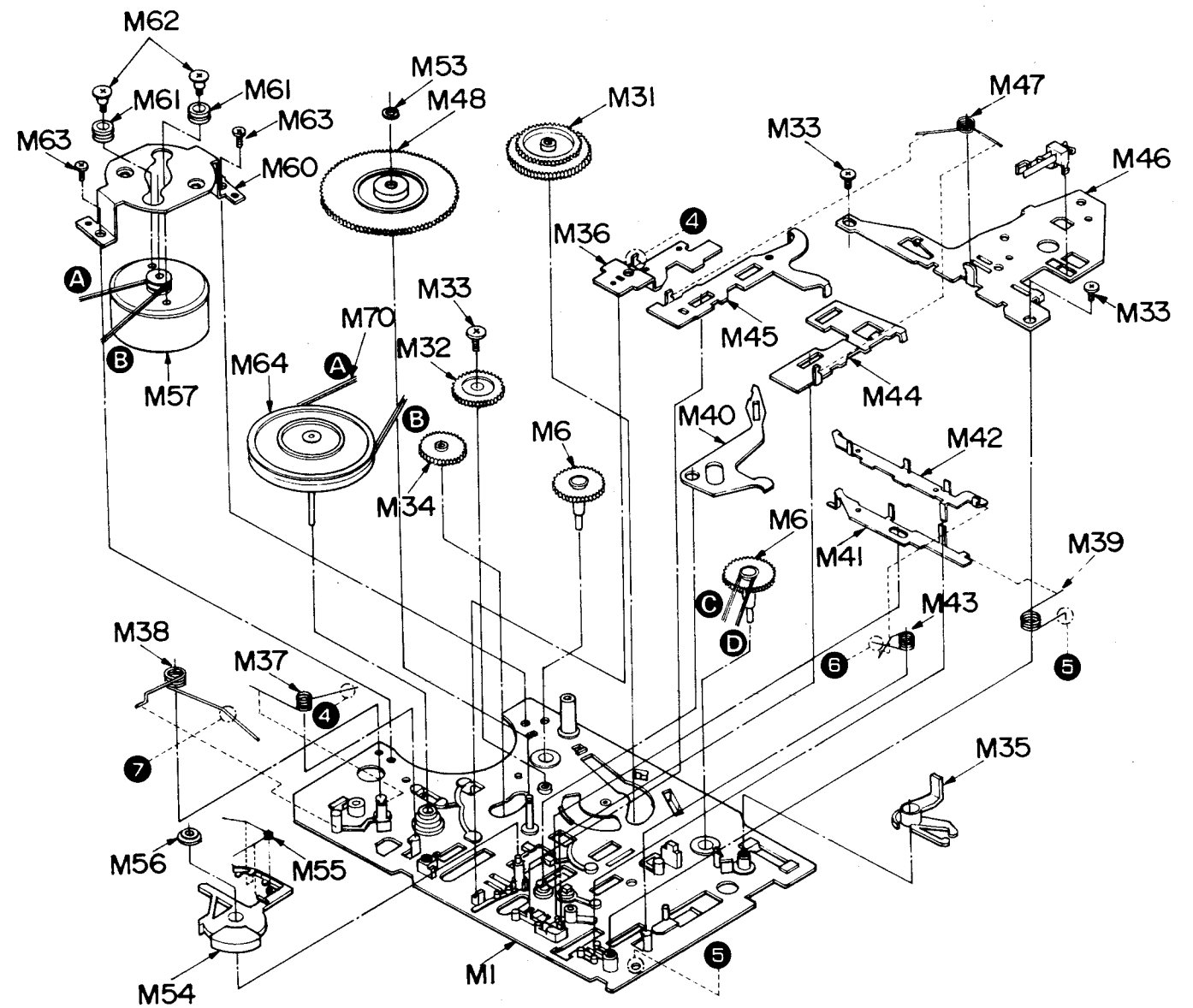
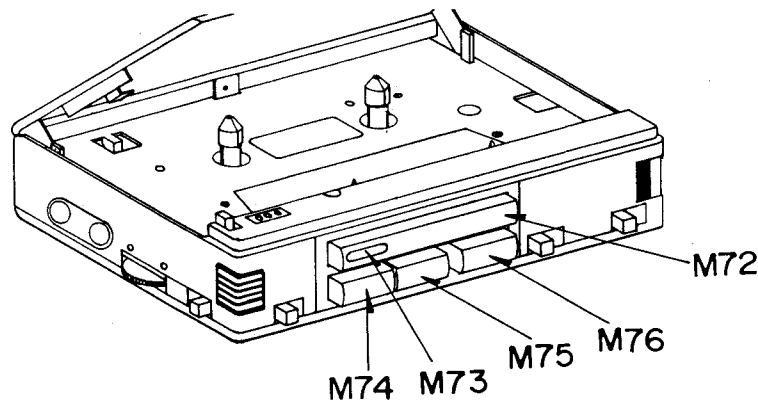
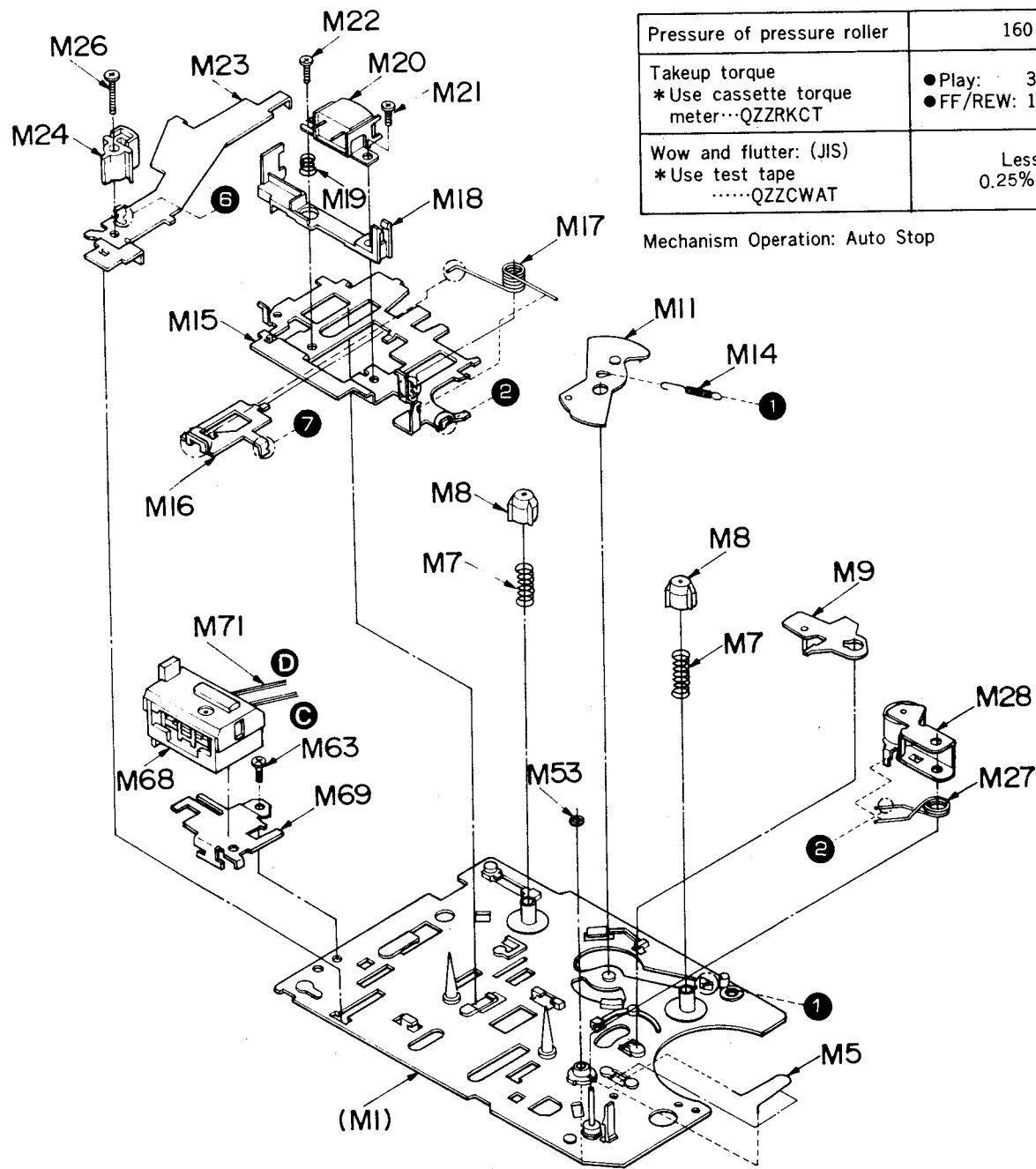
Front View

Rear View

SPECIFICATIONS

Pressure of pressure roller	160 ± 40g
Takeup torque *Use cassette torque meter...QZZRKCT	● Play: 36 ± 14g·cm ● FF/REW: 110 ± 50g·cm
Wow and flutter: (JIS) *Use test tapeQZZCWAT	Less than 0.25% (WRMS)

Mechanism Operation: Auto Stop



REPLACEMENT PARTS LIST

(T) Indicates parts that are supplied by TAMACO.

Ref. No.	Part No.	Part Name & Description	Ref. No.	Part No.	Part Name & Description	Ref. No.	Part No.	Part Name & Description
MECHANICAL PARTS								
M1	RFU115ZA	Chassis Ass'y	M27	RFS697ZA	Spring	M53	RFN202ZA	Washer
M5	RFS692ZA	Spring	M28	RFR43ZA	Pinch Roller Ass'y	M54	RFY784ZA	AS Lever
M6	RFG100ZA	Reel Gear	M31	RFG101ZA	Center Gear	M55	RFS703ZA	Spring
M7	RFS693ZA	Spring	M32	RFG102ZA	FF Gear	M56	RFX154ZA	Gear Bush
M8	RFJ69ZA	Reel	M33	RFE304Z	Screw	M57(T)	RFM113ZA	Motor Ass'y
M9	RFD318ZA	Play Gear Plate Ass'y	M34	RFG103ZA	Play Gear	M60	RFD320ZA	Motor Bracket
M11	RFY775ZA	Gear Lever Ass'y	M35	RFY777ZA	Rec Arm	M61	RFI48ZA	Rubber
M14	RFS694ZA	Spring	M36	RFY778ZA	Stop Lever	M62	RFE366ZA	Screw
M15	RFU116ZA	Head Base	M37	RFS698ZA	Spring	M63	XQN16+CF3	Screw
M16	RFD319ZA	Play Plate	M38	RFS699ZA	Spring	M64	RFF50Z	Flywheel
M17	RFS695ZA	Spring	M39	RFS700ZA	Spring	M68(T)	RSE241ZA	Counter
M18	RFE362ZA	Head Guide	M40	RFY779ZA	F, R Lever	M69	RFD321ZA	Counter Bracket
M19	RFS696ZA	Spring	M41	RFY780ZA	Switch Lever	M70	RFB81ZA	Motor Belt
M20(T)	RJHOC03YYAB	R/P Head	M42	RFY781ZA	Lock Lever	M71	RFB82ZA	Counter Belt
M21	RFE363ZA	Screw	M43	RFS784ZA	Spring	M72(T)	RBC262TZ	Button Play
M22	RFE364ZA	Screw	M44	RFY782ZA	REW Lever	M73(T)	RBC263TZ	Button REC
M23	RFY776ZA	Rec Lever	M45	RFY783ZA	FF Lever	M74(T)	RBC264TZ	Button REW
M24	RFH17ZA	Earse Head Ass'y	M46	RFS67ZA	Lever Guide	M75(T)	RBC265TZ	Button FF
M26	XQN2+10F	Screw	M47	RFS702ZA	Spring	M76(T)	RBC266TZ	Button Stop
			M48	RFG104ZA	Friction Gear Ass'y			