

Service Manual

Portable Cassette
RQ-2739

AC/Battery Portable Cassette Recorder
Features Tone Control and Tape Counter

This is the Service Manual for the following areas.

- ☐ For all European areas except United Kingdom.
(Non AC power voltage selectable type)
- ☒ For all European areas except United Kingdom.
(AC power voltage selectable type)
- ☒ For United Kingdom.
(Non AC power voltage selectable type)



RQ-2745 MECHANISM SERIES

Specifications

Power requirement:	AC: 110 — 125/200 — 240 V, 50-60 Hz 220 V, 50 Hz for Scandinavian countries 240 V, 50 Hz for United Kingdom. Battery: 6 V (four R14 size dry batteries) Power consumption: 6 W Car/boat battery; with optional car/boat adaptor RP-917
Motor:	Mechanical governor motor
Power output:	700 mW...RMS (max.)
Frequency range:	100 — 7,000 Hz
Tape speed:	4.8 cm/s
Fast forward and rewind time:	Approx. 90 seconds with C-60 cassette tape
Track system:	2-track monaural recording and playback
Jacks:	DIN; input sensitivity 15.8 mV, input impedance 9 k Ω output impedance 6.8 k Ω optional Panasonic microphone RP-3305
Speaker:	DC IN: 6 V 8 cm PM dynamic speaker
Dimensions:	13.9 cm(W) $\times$ 4.8 cm(H) $\times$ 25.9 cm(D)
Weight:	900 g, without batteries

Specifications are subject to change without notice.

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LOCATION OF CONTROLS AND COMPONENTS

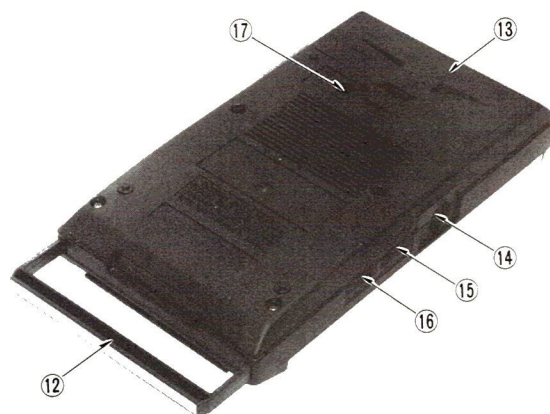
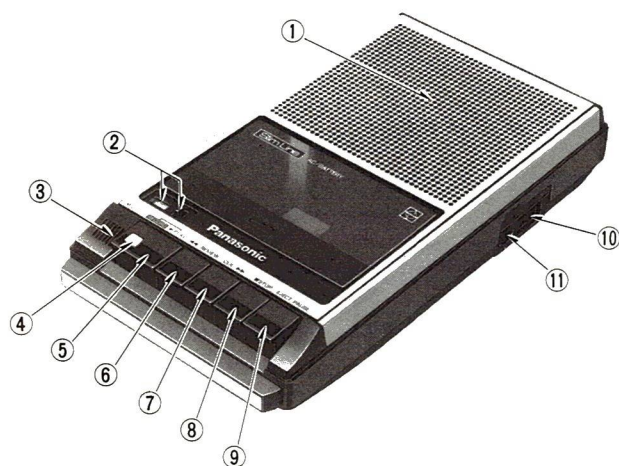


Fig. 1

- | | | |
|----------------------------|--|------------------------------------|
| ① Built-in speaker | ⑧ Stop button | ⑮ Tone control |
| ② Counter and reset button | ⑨ Eject/pause button | ⑯ Volume control |
| ③ Built-in microphone | ⑩ AC IN socket | ⑰ AC power voltage select switch |
| ④ Record button | ⑪ DC IN jack | ※For all European areas except |
| ⑤ Playback button | ⑫ Handle | United Kingdom. |
| ⑥ Rewind/review button | ⑬ Battery cover | (AC power voltage selectable type) |
| ⑦ Fast forward/cue button | ⑭ Record/playback connection jack (DIN socket) | |

DISASSEMBLY INSTRUCTIONS

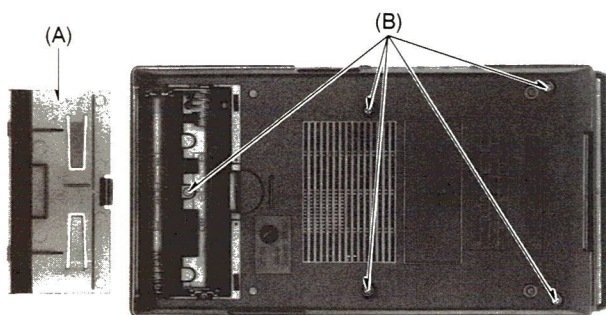


Fig. 2

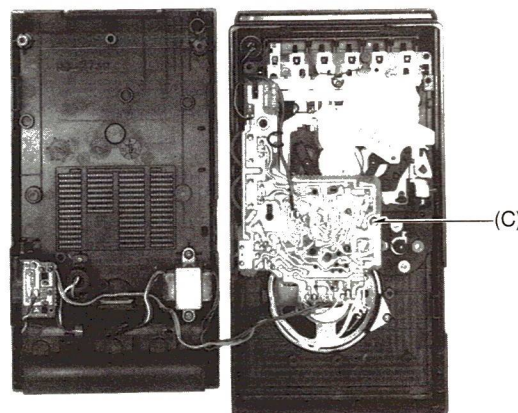


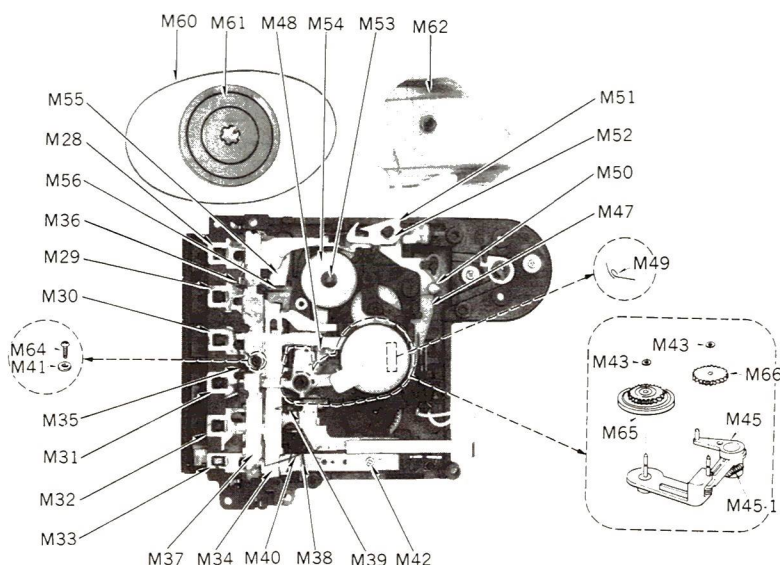
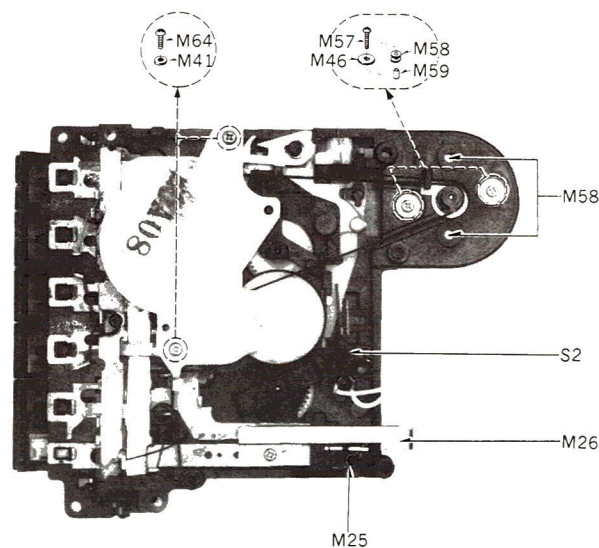
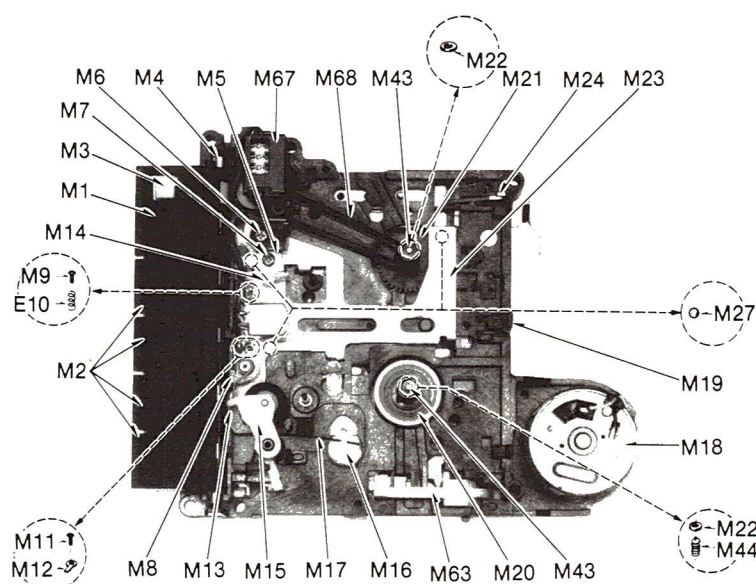
Fig. 3

Procedure	To remove —	Remove —	Shown in fig. —
1	Bottom case	• Battery cover (A) • 5 screws (B)	2
2	P.C.B. and mechanism	• 1 screw (C)	3

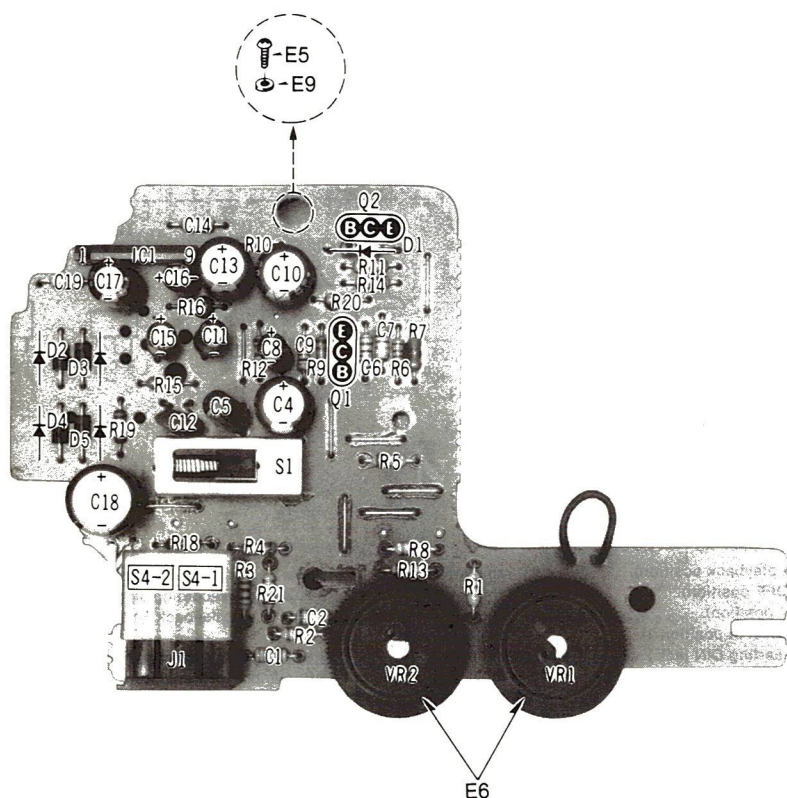
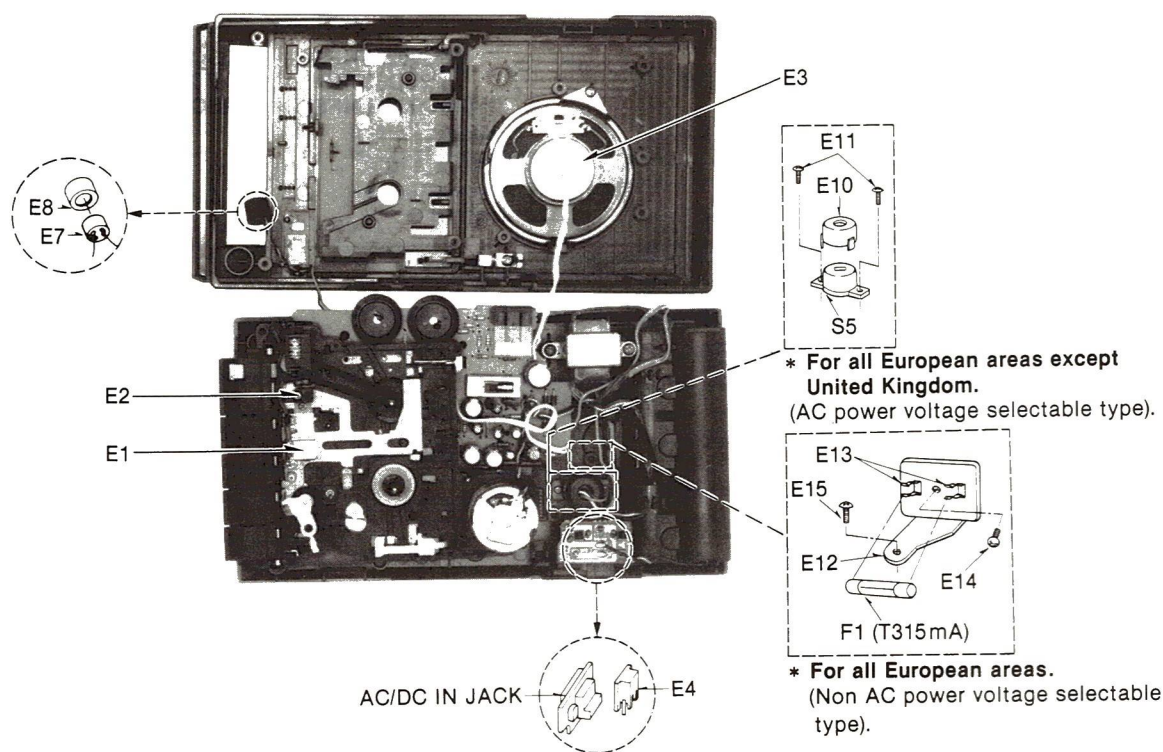
REPLACEMENT PARTS LIST

Ref. No.	Part No.	Part Name & Description
MECHANICAL PARTS		
M1	QGO1864	Playback Button Assembly
M2	QGO1863	Push Button Assembly (Rewind/Review, Fast Forward/ Cue, Stop, Eject/Pause)
M3	QGO1632	Record Button
M4	QMN2534	Button Shaft
M5	QMG0084	Tape Guide
M6	XTN26+8B	Screw $\pm 2.6 \times 8$
M7	XSN26+3	Screw $\pm 2.6 \times 3$
M8	QMZ1234	Head Spacer
M9	XSN2+8	Head Adjustment Screw
M10	QBC1322	Head Adjustment Spring
M11	XSN2+6	Screw $\pm 2 \times 6$
M12	QJT0039	Lug Terminal
M13	QBN1703	Pressure Roller Spring
M14	QML3534	Auto-Stop Detection Lever
M15	QXL1325	Pressure Roller Arm Assembly
M16	QML3536	Idler Lever
M17	QBN1702	Idler Spring
M18	QXU0191	Motor Assembly
M19	QBN1711	Cassette Retainer Spring
M20	QXD0113	Takeup Reel Table Assembly
M21	QDR1141	Supply Reel Table
M22	QBJ3224	Washer
M23	QMK1819	Head Base Plate
M24	QML3527	Erase Safety Lever
M25	QBN1704	Erase Safety Lever Spring
M26	QBP1858	Recording Spring
M27	QDK1012	Steel Ball 2.5 ϕ
M28	QMR1782	Eject/Pause Rod
M29	QMR1781	Stop Rod
M30	QMR1780	Fast Forward/Cue Rod
M31	QMR1779	Rewind/Review Rod
M32	QMR1778	Playback Rod
M33	QMR1777	Record Rod
M34	QMR1783	Lock Rod
M35	QBN1708	Fast Wind Rod Spring
M36	QBN1709	Stop Rod Spring
M37	QMF2085	Rod Holding Plate
M38	QBN1707	Playback Rod Spring
M39	QBT1890	Base Plate Retainer Spring
M40	QBN1706	Record Rod Spring
M41	XWG26	Washer 2.6 ϕ
M42	XTN26+4B	Screw $\pm 2.6 \times 4$
M43	QBW2008	Snap Ring
M44	QBC1272	Back Tension Spring
M45	QXL1327	Fast Wind Frame Assembly
M45-1	QBN1710	Fast Wind Lever Spring
M46	XWA26B	Washer 2.6 ϕ
M47	QML3531	Change Lever
M48	QML3526	Review Lever
M49	QBN1712	Fast Forward Spring
M50	QBN1701	Change Lever Spring
M51	QML3528	Pause Lock Lever
M52	QBN1705	Pause Lock Lever Spring
M53	QBW2046	Snap Ring
M54	QX10109	Idler Assembly
M55	QMR1784	Auto-Stop Detection Rod
M56	QBT1889	Auto-Stop Detection Rod Spring
M57	XSN26+8	Screw $\pm 2.6 \times 8$
M58	QBG1420	Motor Cushion
M59	QMC0079	Motor Collar
M60	QDB0267	Flywheel Belt
M61	QXF0156	Flywheel Assembly
M62	QXH0318	Flywheel Holding Plate Assembly
M63	QML3532	Cassette-up Lever
M64	XTN26+10B	Screw $\pm 2.6 \times 10$
M65	QXG1045	Fast Wind Pulley Assembly
M66	QDG1193	Rewind Gear
M67	QDC0121	Tape Counter
M68	QDB0268	Counter Belt

MECHANICAL PARTS LOCATION



ELECTRICAL 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.

Ref. No.	Part No.	Part Name & Description
ELECTRICAL PARTS		
E1	QWY0137Z	Record/Playback Head
E2	QWY2139	Erase Head
E3	EAS8P28SG	Speaker
E4	QTW1135	AC/DC IN Socket Cover
E5	XTN3+10B	Tapping Screw $\oplus 3 \times 10$
E6	QGT1414	Volume Knob
E7	WM034Z	Electret Condenser Microphone
E8	QBG1616	Microphone Rubber
E9	XWG3	Washer 3ϕ
E10	$\square$ RUV426ZB	Switch Cover (for S5)
* For all European areas except United Kingdom. (AC power voltage selectable type)		
E11	$\square$ XTN23+8B	Tapping Screw $\oplus 2.3 \times 8$
* For all European areas except United Kingdom. (AC power voltage selectable type)		
E12	$\square$ QMAK0134	Fuse Angle
* For all European areas. (Non AC power voltage selectable type)		
E13	$\square$ Δ QTF1027	Fuse Holder
* For all European areas. (Non AC power voltage selectable type)		
E14	$\square$ XSN3+5	Screw $\oplus 3 \times 5$
* For all European areas. (Non AC power voltage selectable type)		
E15	$\square$ XTN3+6B	Tapping Screw $\oplus 3 \times 6$
* For all European areas. (Non AC power voltage selectable type)		

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Socket
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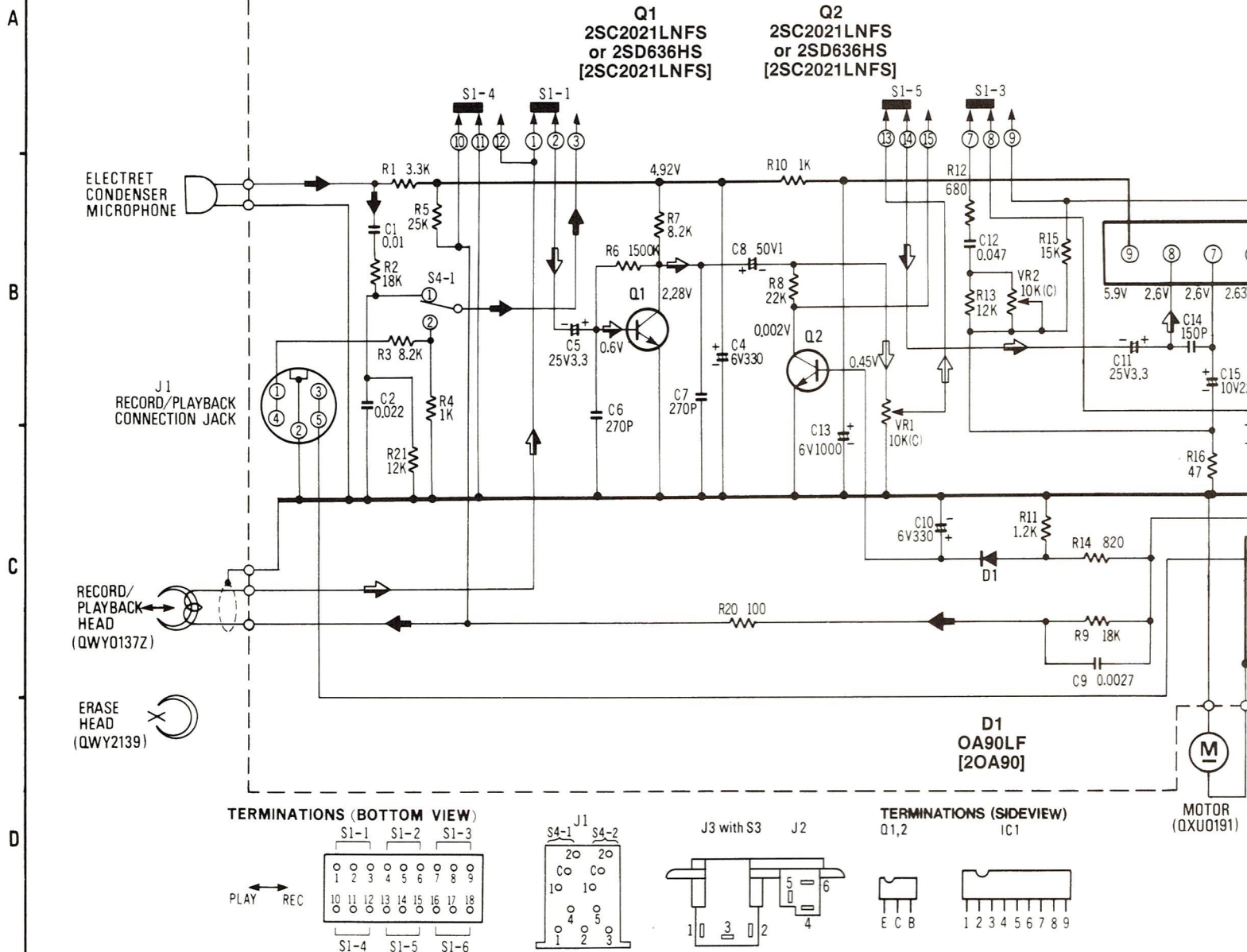
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23NYY
331
IR3
71KBY72MXY
331
IR3
3MXY02
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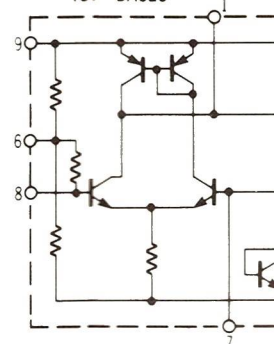
SCHEMATIC DIAGRAM



NOTES:

- S1-1—S1-6Record/playback switch (shown in playback position).
- S2Power ON/OFF switch (shown in OFF position).
- S3AC/DC select switch (shown in DC position).
- S4-1, S4-2Input and output select switch (shown in position 1).
(This switch will be selected by inserting DIN jack.)
1.....Built-in MIC and speaker,
2.....Record/playback connection socket (DIN jack).
- S5AC power voltage select switch.
* For all European areas except United Kingdom.
(AC power voltage selectable type).
- VR1Volume control.
- VR2Tone control.
- Resistance are in ohms (Ω), 1/4 watt unless specified otherwise.
K = 1,000 Ω .
- Capacity are in microfarads (μ F) unless specified otherwise.
P = Pico-farads.
- All voltage values shown in circuitry are under no signal condition and record mode with volume control at minimum position.
For measurement, use VTVM.

- ($\Rightarrow$) this arrow indicates the flow of the playback signal.
- ($\Rightarrow$) this arrow indicates the flow of the recording signal.
- ($\Rightarrow$) this arrow indicates the flow of the playback and recording signal in combination.
- Described in the schematic diagram are two types of numbers; the supply parts number and production parts number for transistors and diodes. One type of number is used for supply parts number and production parts number when they are identical.
- e.g. Q1
2SC2021LNFS ← Production parts number
or 2SD636HS
[2SC2021LNFS] ← Supply parts number
D2
SM1A02 ← Production parts number
[SM112] ← Supply parts number
- The supply parts number is described alone in the replacement parts list.

EQUIVALENT CIRCUIT
IC1 BA526

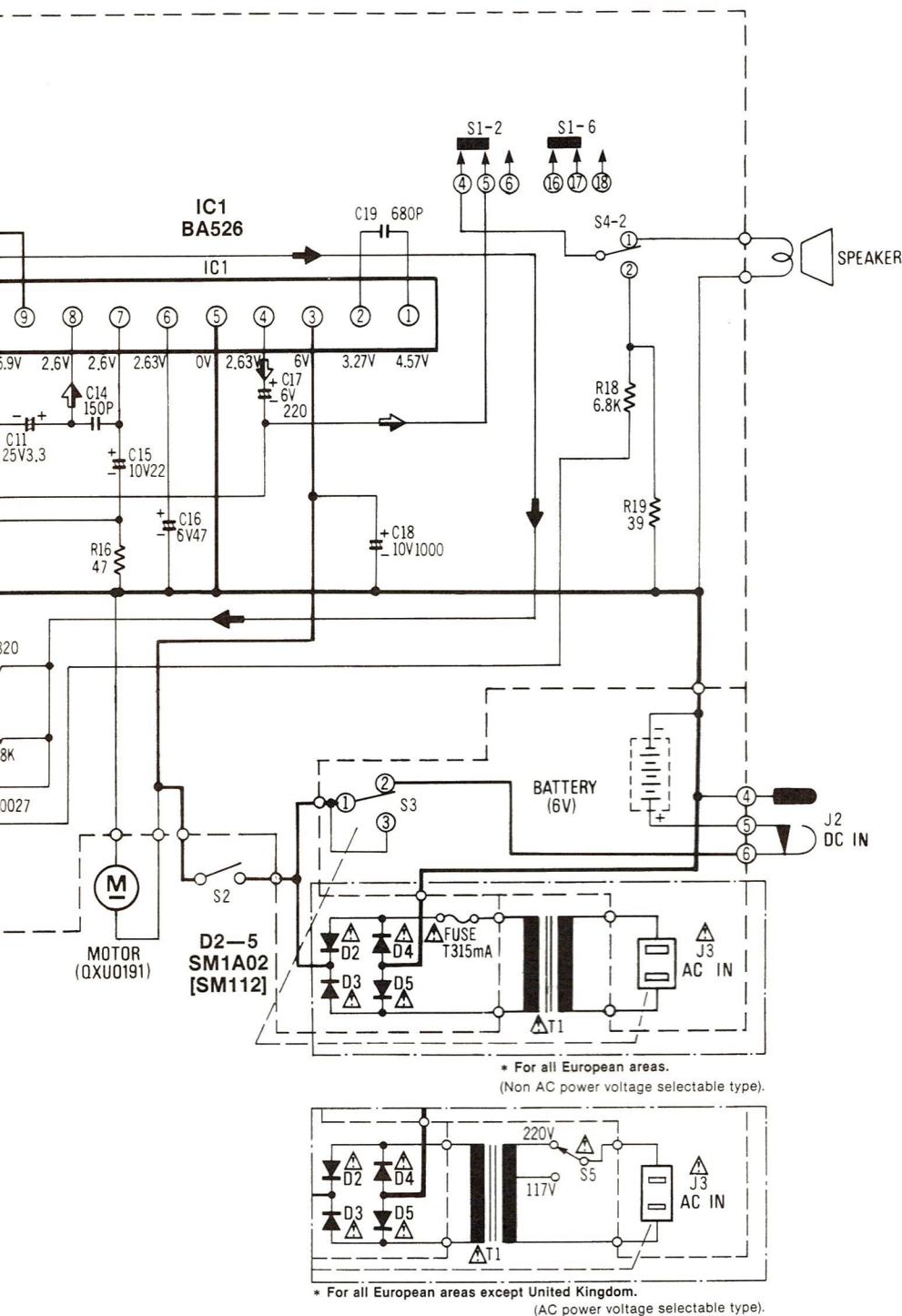
NOTES: RESISTORS

ERD...Carbon
ERG...Metal-oxide
ERS...Metal-oxide
ERO...Metal-film
ERX...Metal-film
ERQ...Fuse type metallic
ERC...Solid
ERF...Cement

CAPACITORS

ECBA...Ceramic
ECGD...Ceramic
ECKD...Ceramic
ECCD...Ceramic
ECF...Ceramic
ECQM...Polyester film
ECQE...Polyester film
ECQF...Polypropylene

ECE...Electrolytic
ECEON...Non polar electrolytic
EQS...Polystyrene
EQSD...Tantalum
QCS...Tantalum



REPLACEMENT PARTS LIST

Important safety notice

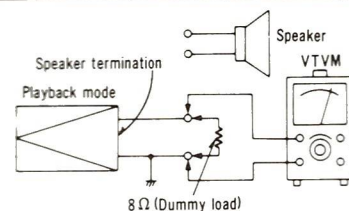
Components identified by Δ mark have special characteristics important for safety.
When replacing any of these components, use only manufacturer's specified parts.

Ref. No.	Part No.	Part Name & Description
TRANSFORMER		
T1	Δ QLPD50AHX	Power Transformer
*For all European areas except United Kingdom. (Non AC power voltage selectable type)		
T1	Δ QLPD54AHX	Power Transformer
*For all European areas except United Kingdom. (AC power voltage selectable type)		
	Δ QLPZ17AHX	"
*For United Kingdom. (Non AC power voltage selectable type)		
SWITCHES		
S1	QSS6212T	Slide Switch (Record/Playback Selector)
S2	QSB0170	Leaf Switch (Power ON/OFF)
S3	Refer to J3	AC/DC Select Switch
S4	Refer to J1	Leaf Switch (Input and Output Selector)
S5	Δ RSR2A01ZAH	Rotary Switch (AC Power Voltage Selector)
*For all European areas except United Kingdom. (AC power voltage selectable type)		
FUSE		
F1	Δ XBAQ0006	Fuse (T315mA)
*For all European areas. (Non AC power voltage selectable type)		
JACKS		
J1	QJS0799H	Record/Playback Connection Socket
J2, 3	Δ QJS0328	AC/DC IN Socket with Switch (S3)

Ref. No.	Part No.	Ref. No.	Part No.
RESISTORS			
R1	ERD25FJ332	C2	ECBA1C223NYY
R2	ERD25TJ183	C4	ECEA1AS331
R3	ERD25FJ822	C5	ECEA50Z3R3
R4	ERD25FJ102	C6, 7	ECBA1H271KBY
R5	ERD25TJ253	C8	ECEA50Z1
R6	ERD25TJ155	C9	ECBA1H272MXY
R7	ERD25FJ822	C10	ECEA1AS331
R8	ERD25TJ223	C11	ECEA50Z3R3
R9	ERD25TJ183	C12	ECFDD473MXY
R10	ERD25FJ102	C13	ECEA0JS102
R11	ERD25FJ122	C14	ECBA1H151KBY
R12	ERD25FJ681	C15	ECEA1ES220
R13	ERD25TJ123	C16	ECEA1AS470
R14	ERD25FJ821	C17	ECEA1AS221
R15	ERD25TJ153	C18	ECEA1AS102
R16	ERD25FJ470	C19	ECBA1H681KBY
R18	ERD25FJ682	TRANSISTORS	
R19	ERD25FJ390	Q1, 2	2SC2021LNFS
R20	ERD25FJ101	DIODES & RECTIFIERS	
R21	ERD25TJ123	D1	20A90
VARIABLE RESISTORS		D2, 3, 4, 5	Δ SM112
VR1, 2	EVJ56AT12C14	INTEGRATED CIRCUIT	
CAPACITORS		IC1	BA526
C1	ECBA1E103NXY		

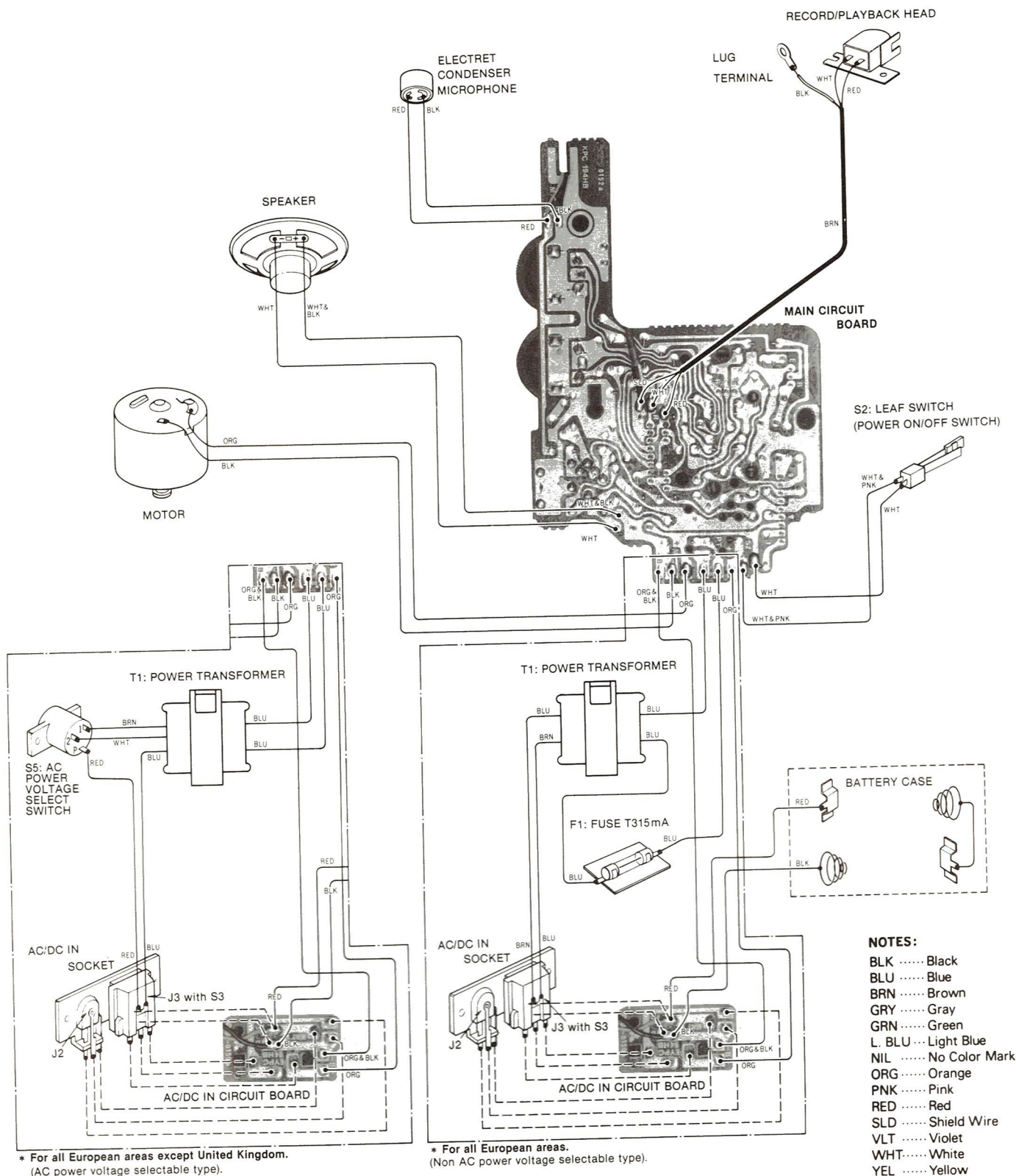
SPECIFICATIONS

Recording bias current	200 $\pm$ 20 μ A
Standard recording input level	DIN: -36 $\pm$ 4 dB
Overall frequency response	200 Hz: -1 $\pm$ 5 dB 1 kHz: 0 dB 5 kHz: -5 $\pm$ 6 dB
Playback output level	More than 1.7 V
* Use test tape: QZZCFM (315 Hz, 0 dB)	

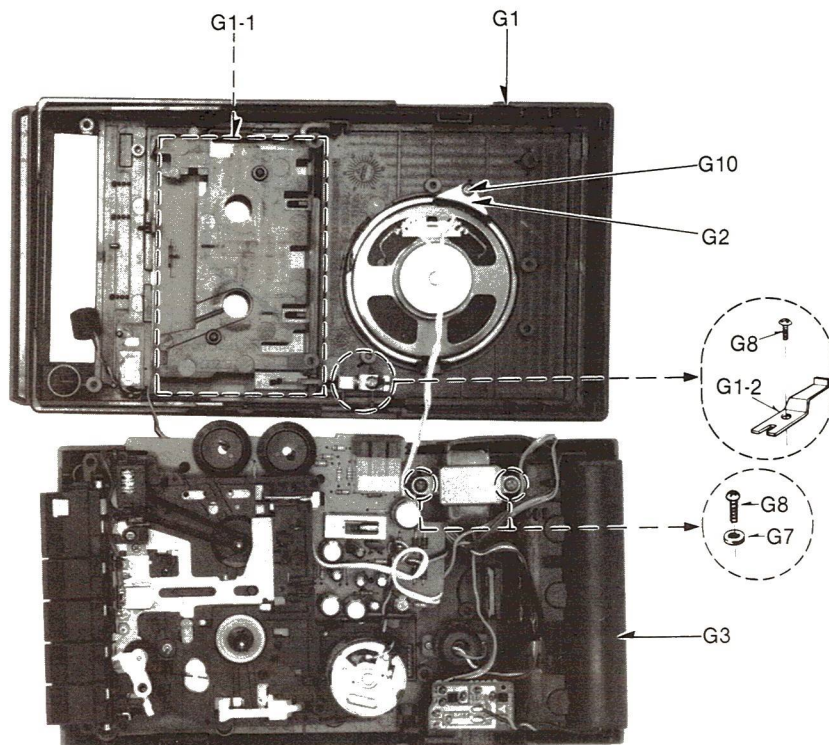


Notes: 1. Cut the speaker lead wire.
2. Connect 8 Ω instead of SP.

WIRING CONNECTION DIAGRAM



CABINET PARTS LOCATION



REPLACEMENT PARTS LIST

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Ref. No.	Part No.	Part Name & Description
CABINET PARTS		
G1	QYMK0355W	Main Case Assembly
G1-1	QKFK0066	Cassette Lid
G1-2	QBP0074	Lid Spring
G2	QKT1364	Speaker Holding Metal
G3	Δ QYMK0358T	Bottom Case Assembly
*For all European areas. (Non AC power voltage selectable type)		
	Δ QYMK0357T	"
*For all European areas except United Kingdom. (AC power voltage selectable type)		
G3-1	QJB0111	Battery Terminal (+)
G3-2	QBN8007	Battery Spring-A (-)
G3-3	QBN8022	Battery Spring-B (-)
G4	Δ QGSK1321	Main Name Plate
*For all European areas except United Kingdom. (Non AC power voltage selectable type)		
	Δ QGSK1319	"
*For United Kingdom. (Non AC power voltage selectable type)		
G5	QKFK0058	Battery Cover Assembly
G6	QYH0087	Handle
G7	XWG3	Washer 3 ϕ
G8	XTN3+8B	Tapping Screw $\oplus 3 \times 8$
G9	XTN3+30B	Tapping Screw $\oplus 3 \times 30$
G10	XTN3+6B	Tapping Screw $\oplus 3 \times 6$
ACCESSORIES		
A1	Δ RJA20ZC-K	AC Power Cord
*For all European areas except United Kingdom. (Non AC power voltage selectable type)		
	Δ QFC1103	"
*For all European areas except United Kingdom. (AC power voltage selectable type)		
	Δ RJA43ZC-K	"
*For United Kingdom. (Non AC power voltage selectable type)		
A2	QQT3090	Instruction Book
PACKINGS		
P1	QPNK1232	Inside Carton
P2	QPC0024	Cushion (Lower Side)
P3	QPSK1098	Pad (Style "L")
P4	QPSK1099	Pad (Upper Side)
P5	QPC0022	Poly Bag (For UNIT)

