

# Service Manual

Stereo Cassette Player

Mini Cassette

## RQ-J60

(Silver, Black, Red,  
Pink, Yellow, Blue)



### Color Variation

Area	Color
Z E	Silver, Black, Red, Pink, Yellow and Blue
X L	Silver, Black and Red

This is the Service Manual for the following areas.

**Z** ...For all European areas except United Kingdom.

**E** ...For United Kingdom.

**X** ...For Asia, Latin America, Middle East and Africa areas.

**L** ...For Australia.

## RQ-J60 MECHANISM SERIES

### ■ SPECIFICATIONS

Power requirement:

Battery; 3V (two UM-3, "AA" size batteries)

**Z**...AC; 220V, 50Hz with optional AC adaptor RD-9443HS

**E**...AC; 240V, 50Hz with optional AC adaptor RD-9443HE

**X**...AC; 110~127/220~240V, 50/60Hz with optional AC Adaptor RD-9443H

**L**...AC; 240V, 50Hz with optional AC Adaptor RD-9443HA

Power output:

30mW (15mW×2)...RMS (max.)

Motor:

Electrical governor motor

Frequency range:

150~8,000Hz

Track system:

4-track 2-channel stereo playback with stereo headphones

Tape speed:

4.8cm/s

Fast forward and rewind time: Approx. 160 seconds with C-60 cassette tape

Input:

DC in; 3V (mini jack)  $\phi$ 2.5

Output:

Headphones; 32 $\Omega$ / $\phi$ 3.5

Dimensions:

86mm(W)×114mm(H)×37mm(D)

Weight:

215g without batteries

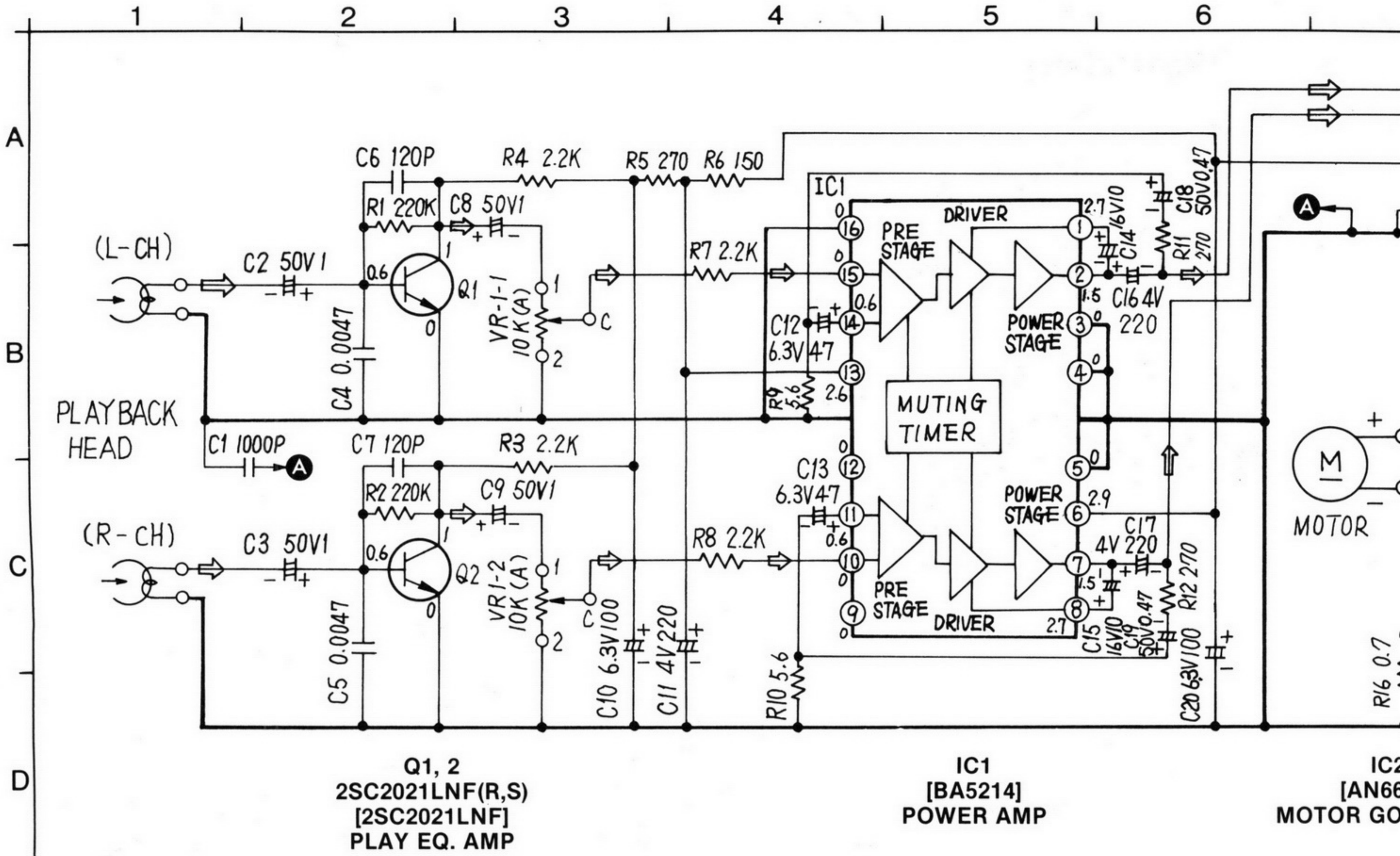
Weights and dimensions shown are approximate.

Design and specifications are subject to change without notice.

**National / Panasonic**

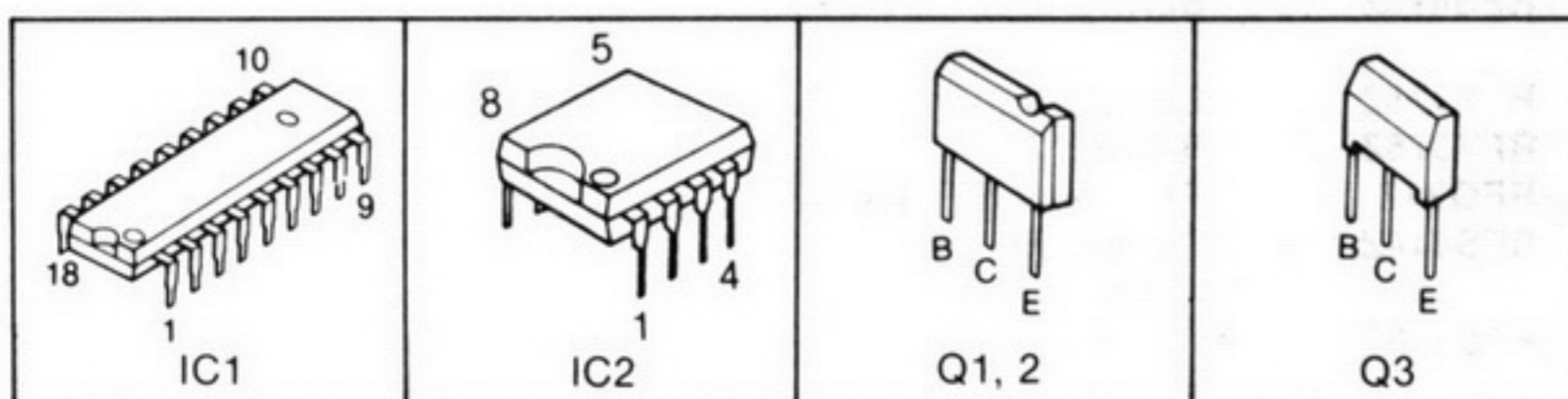
**Matsushita Electric Trading Co., Ltd.**  
P.O. Box 288, Central Osaka Japan

# SCHEMATIC DIAGRAM



**NOTES:**

- S1 .....Power ON/OFF switch (shown in OFF position).
- VR1-1, 1-2 .....Volume control.
- VR2 .....Tape speed adjustment VR.
- Resistance are in ohms ( $\Omega$ ), 1/4 watt unless specified otherwise.  
1K = 1,000 $\Omega$ , 1M = 1,000 K $\Omega$ .
- Capacity are in microfarads ( $\mu$ F) unless specified otherwise.  
P = Pico-farads.
- All voltage values shown in circuitry are under no signal condition and playback mode with volume control at maximum position.  
For measurement, use VTVM.
- (  $\Rightarrow$  ) this arrow indicates the flow of the playback signal.
- 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  
[2SD636] — Supply parts number  
D1  
OA90MTA — Production parts number  
[OA90] — Supply parts number
- The supply parts number is described alone in the replacement parts list.
- **This schematic diagram may be modified at any time with the development of new technology.**



**ELECTRICAL PARTS LIST**

**Numbering System of Resistor**

Example	ERD	25	F	J	101	Example	ECKD
Type	Wattage	Shape	Tolerance	Value (100 $\Omega$ )	Type	ECEA	
ERX	2	AN	J	2R2	Type		
Type	Wattage	Shape	Tolerance	Value (2.2 $\Omega$ )	Type		

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

**Numbering System of Capacitor**

Example	ECKD
Type	Type
ECEA	
Type	

**Capacitor Type**

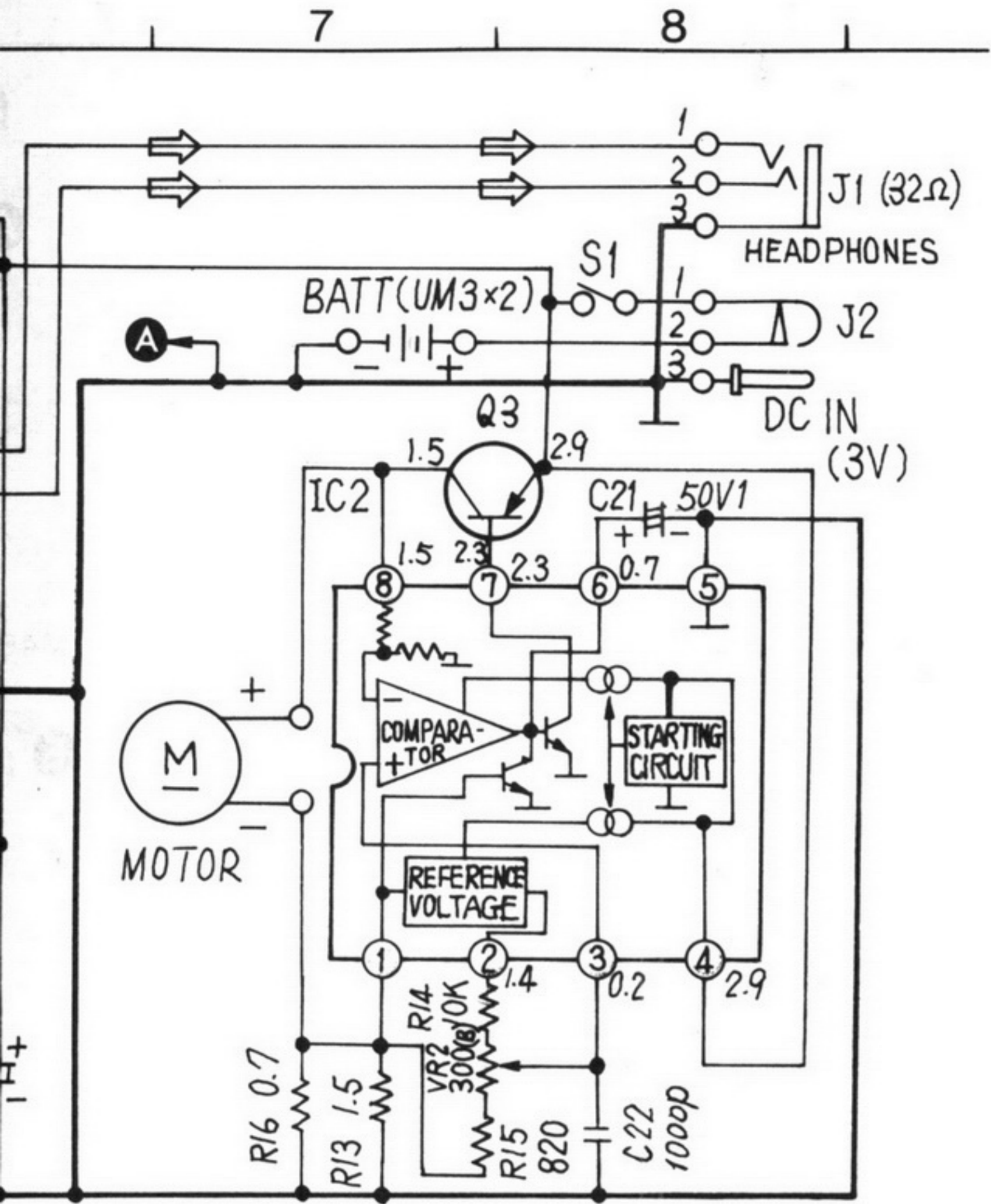
- ECEA: Electrolytic
- ECCD: Ceramic
- ECKD: Ceramic
- ECQM: Polyester
- ECQP: Polypropylene
- ECET: Electrolytic
- ECEA□□□N: Non Polarized Electrolytic
- QCU □: Ceramic (Chip)
- ECUX: Ceramic (Chip)

**REPLACEMENT PARTS LIST**

Ref. No.	Part No.	Part Name & Description
<b>INTEGRATED CIRCUITS</b>		
IC 1	BA5214	IC (Power AMP)
IC 2	AN6612	IC (Motor Governor)
<b>TRANSISTORS</b>		
Q 1, 2	2SC2021LNF	Transistor, Si
Q 3	2SB909	Transistor, Si
<b>VARIABLE RESISTORS</b>		
VR 1	EVUBAAT50A14	Volume Control, 10k $\Omega$ (A)
VR 2	QVNBK0AA00301	Tape Speed Adjustment VR, 300 $\Omega$
<b>SWITCHES</b>		
S 1	RFA49Z	Leaf Switch (Play)
<b>JACKS</b>		
J 1	RJJ1D26Z	Jack, Headphones
J 2	RJB2Z	Jack, DC IN

Ref. No.	Part No.
<b>CAPACITORS</b>	
C 1, 22	ECKD1H102ZF
C 2, 3	ECEA1HK010
C 4, 5	ECFDD472MX
C 6, 7	ECKD1H121KB
C 8, 9	ECEA1HKS010
C 10	ECEA0JKS101
C 11	ECEA0GKS221
C 12, 13	ECEA0JK470
C 14, 15	ECEA1CK100
C 16, 17	ECEA0GK221
C 18, 19	ECEA1HKR47
C 20	ECEA0JK101
C 21	ECEA1HK010

■ SPRING LOCATION (for Mechanism Parts Location)



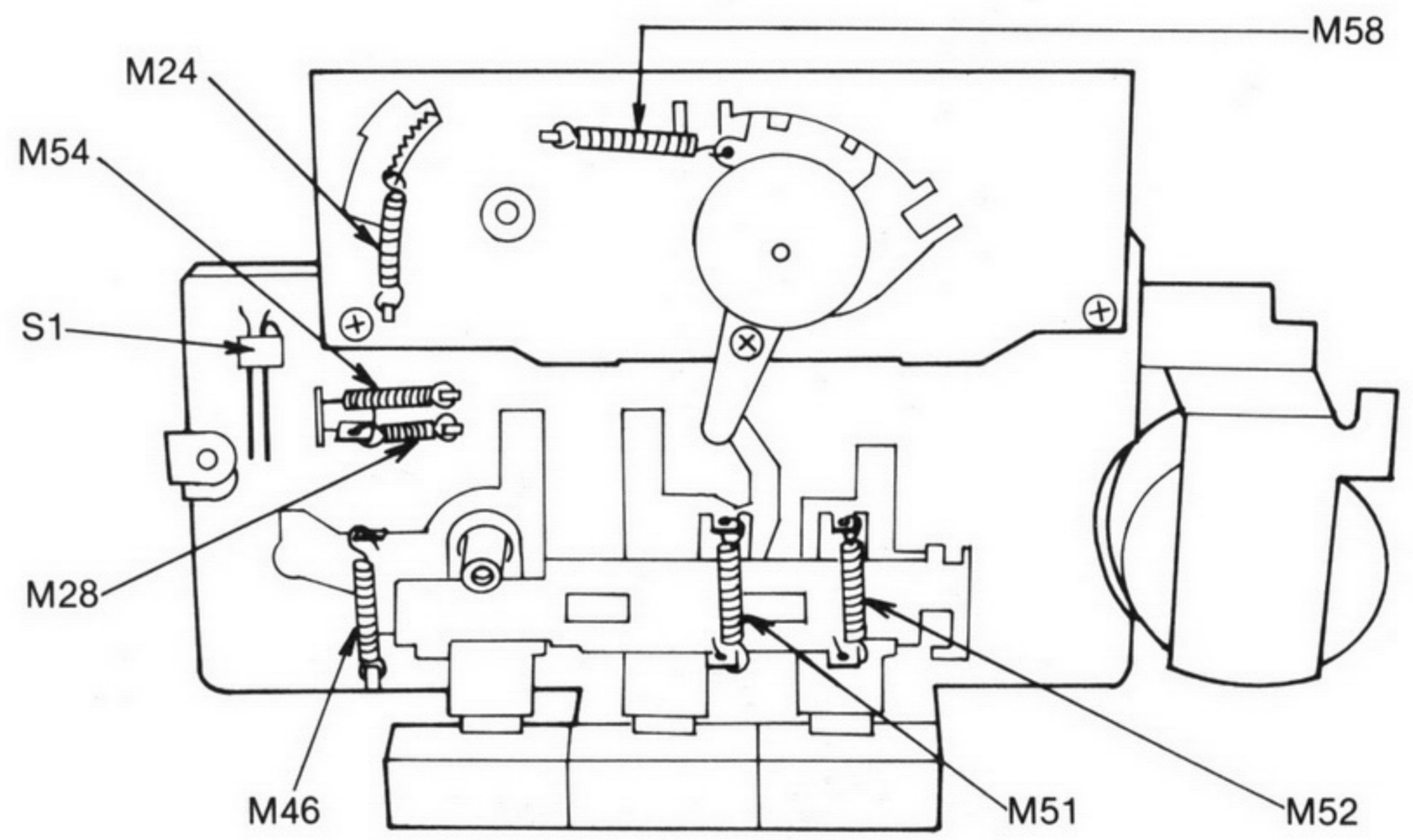
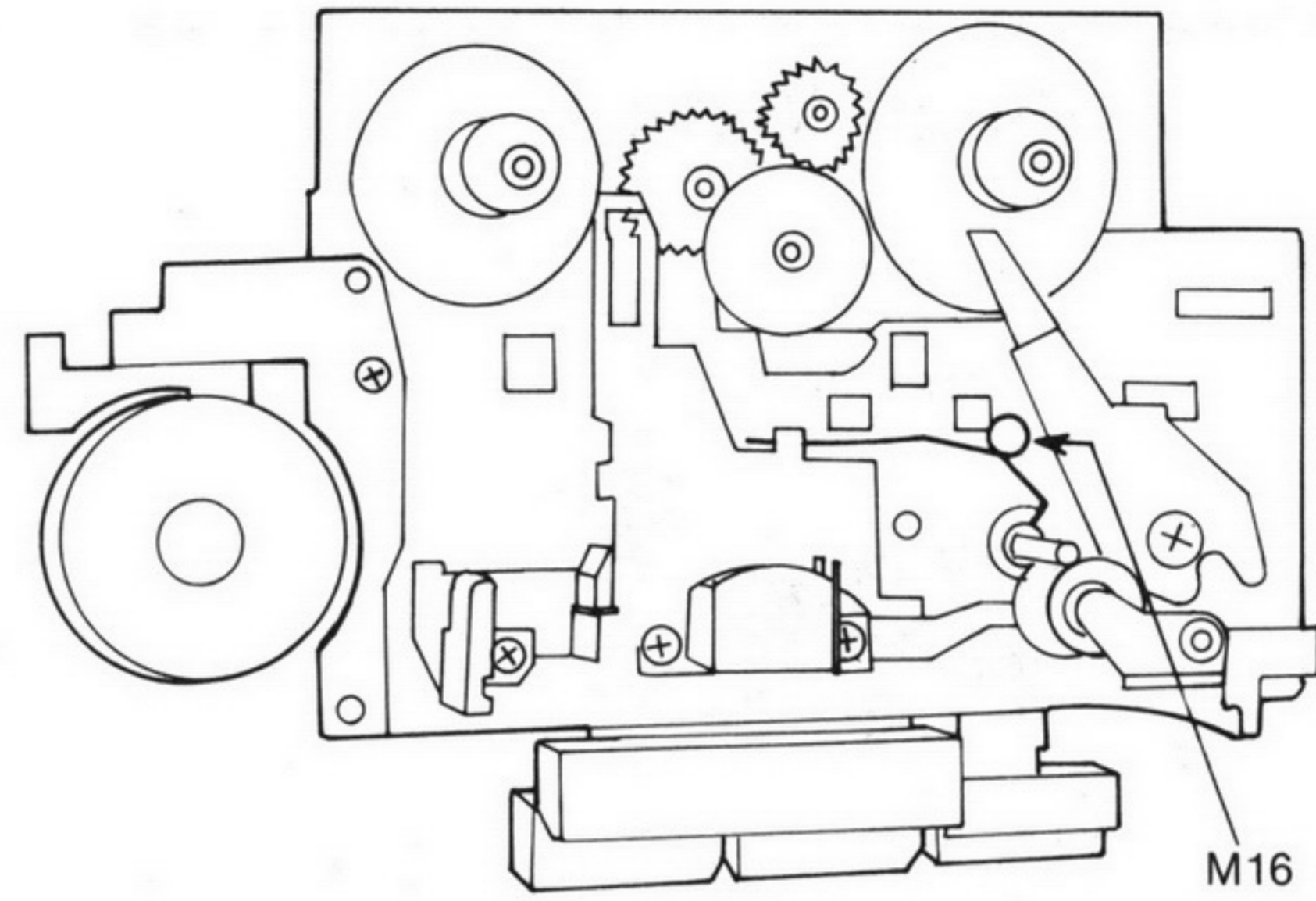
IC2  
[AN6612]  
MOTOR GOVERNOR

Q3  
2SB909M  
[2SB909]  
MOTOR DRIVER

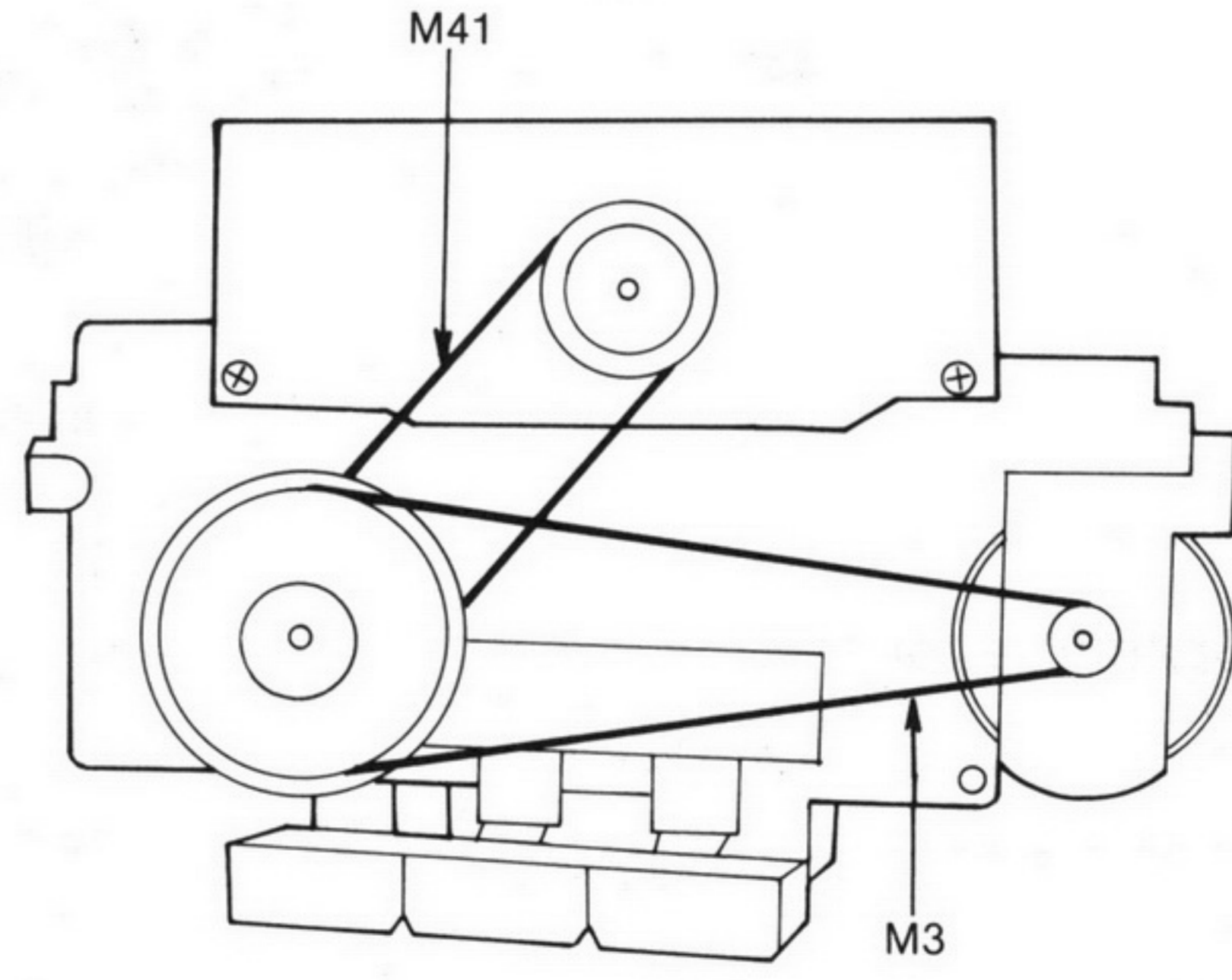
Numbering System of Capacitor

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

Capacitor Type	Voltage		Tolerance
	ECEA Type	Other	
ECEA: Electrolytic	0J : 6.3 V	2H : 500 V DC	C : ±0.25 pF
ECCD: Ceramic	1A : 10 V	1 : 100 V	J : ±5%
ECKD: Ceramic	1C : 16 V	DKC : 400 V AC	K : ±10%
ECQM: Polyester	1E : 25 V		Z : +80%, -20%
	1H : 50 V		P : +100%, -0%
ECQP: Polypropylene	1V : 35 V		
	50 : 50 V		
ECET: Electrolytic			
ECEA□□□N: Non Polar Electrolytic	25 : 25 V		
	16 : 16 V		
QCU□: Ceramic (Chip Type)			
ECUX: Ceramic (Chip Type)			



■ BELT LOCATION



No.	Part No.	Ref. No.	Part No.
<b>CAPACITORS</b>		<b>RESISTORS</b>	
	ECKD1H102ZF	R 1, 2	ERDS2TJ224
	ECEA1HK010	R 3, 4	ERD25FJ222
	ECFDD472MX	R 5	ERD25FJ271
	ECKD1H121KB	R 6	ERD25FJ151
	ECEA1HKS010	R 7, 8	ERDS2TJ222
	ECEA0JKS101	R 9, 10	ERDS2TJ5R6
	ECEA0GKS221	R 11	ERDS2TJ271
	ECEA0JK470	R 12	ERD25FJ271
	ECEA1CK100	R 13	ERD25FJ1R5
	ECEA0GK221	R 14	ERSB15J103
	ECEA1HKR47	R 15	ERD25FJ821
	ECEA0JK101	R 16	ERSB43JR70
	ECEA1HK010		