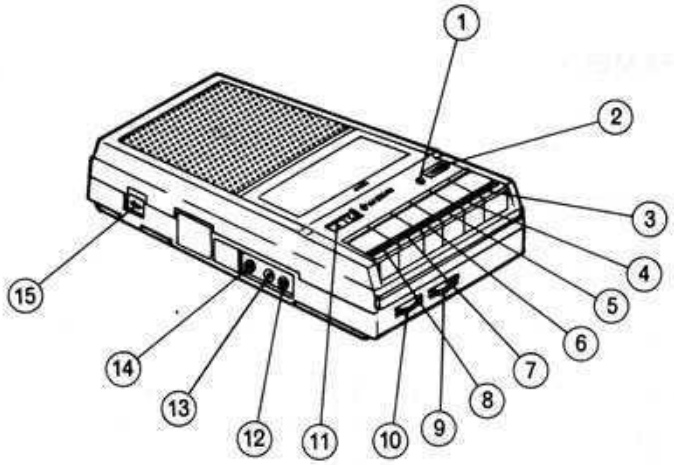
HITACHI
SERVICE MANUAL

TK | **No. 1556E**

TRQ-359(U, C)



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KEY TO ILLUSTRATIONS

① REC/BATT INDICATOR
② BUILT-IN MICROPHONE
③ PAUSE BUTTON
④ STOP/EJECT BUTTON
⑤ FAST FORWARD/CUE BUTTON
⑥ REWIND/REVIEW BUTTON
⑦ PLAYBACK BUTTON
⑧ RECORD BUTTON
⑨ TONE CONTROL
⑩ VOLUME CONTROL
⑪ TAPE COUNTER
⑫ MICROPHONE JACK
⑬ REMOTE CONTROL JACK
⑭ EARPHONE JACK
⑮ AC SOCKET

SPECIFICATIONS

Semiconductors :	6 transistors, 2 diodes, 1 varistor 1 LED
Power Supply :	AC : 120V, 60 Hz DC : 6V ("C" cell×4)
Power Consumption :	6W
Speaker :	7.7cm P.M. , 3.2 ohms
Power Output :	0.5W (T.H.D. 10%)
Dimensions :	4.9(H)×13.6(W)×25.6(D)cm
Weight :	1.4kg (with batteries)
Tape :	Cassette tape
Tape Speed :	4.75cm/sec.
Recording System :	AC bias, 55 kHz
Erasing System :	DC erase
Track System :	Monaural dual track
Input Sensitivity and Impedance :	Mic. : 0.5mV, 1.3 kohms
Output Impedance :	Earphone : 8 ohms
Signal to Noise Ratio :	40 dB
Cross talk :	65 dB
Wow & Flutter :	0.25% WRMS
Motor :	DC motor
Erase Ratio :	50 dB
Distortion :	3%
Fast forward or Rewind time :	120 sec. (C-60)

SPECIFICATIONS AND PARTS ARE SUBJECT TO CHANGE FOR IMPROVEMENT

CASSETTE TAPE RECORDER

May 1981 **TOKAI WORKS**

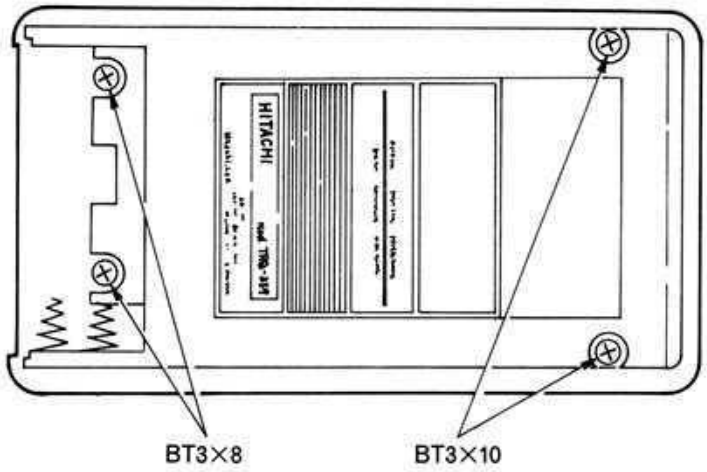
SAFETY PRECAUTION

The following precautions should be observed when servicing.

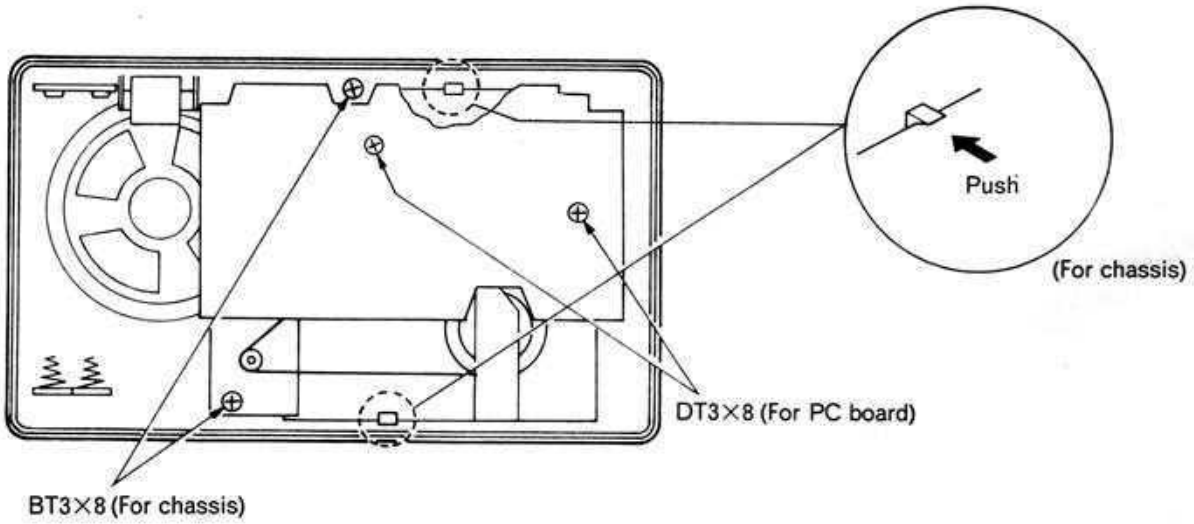
1. Since many parts in the unit have special safetyrelated characteristics, always use genuine Hitachi's replacement parts. Especially critical parts in the power circuit block should not be replaced with other makes.
   Critical parts are marked with ⚠ in the schematic diagram and circuit board diagram.
2. Before returning a repaired unit to the customer, the service technician must thoroughly test the unit to ascertain that it is completely safe to operate without danger of electrical shock.

DISASSEMBLY

1. Removal of rear case



2. Removal of PC board and chassis



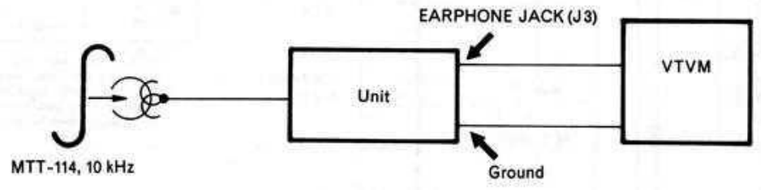
LUBRICATION

Lubricate one or two drops of oil to rotating point or lubricate grease to sliding point. Lubricate the respective parts listed once every 1000 hours or once a year under normal conditions of use. Avoid oiling them excessively, or rotation may become irregular because of oil splashes.

Lubrication		Oil or Grease
Spring resonance prevention		Froil (GB-TS-1)
Rotary section	Metal and metal	Pan motor oil (10W-40)
	Mold and metal	Sonic slider oil (#1600)
Sliding section	Metal and metal	Hitasol (MO-138)
	Mold and mold Mold and metal	White grease (FL-LUBE-A)

ADJUSTMENT

1. **Cleaning**
   Clean the Record/Playback head, erase head, capstan shaft and pressure roller.
2. **Head azimuth adjustment**
   Setting : Playback mode
   Connection :



Adjustment : Playback a test tape (MTT- 114, 10 kHz) and adjust the azimuth adjustment screw for maximum output.

INSPECTION OF MECHANISM

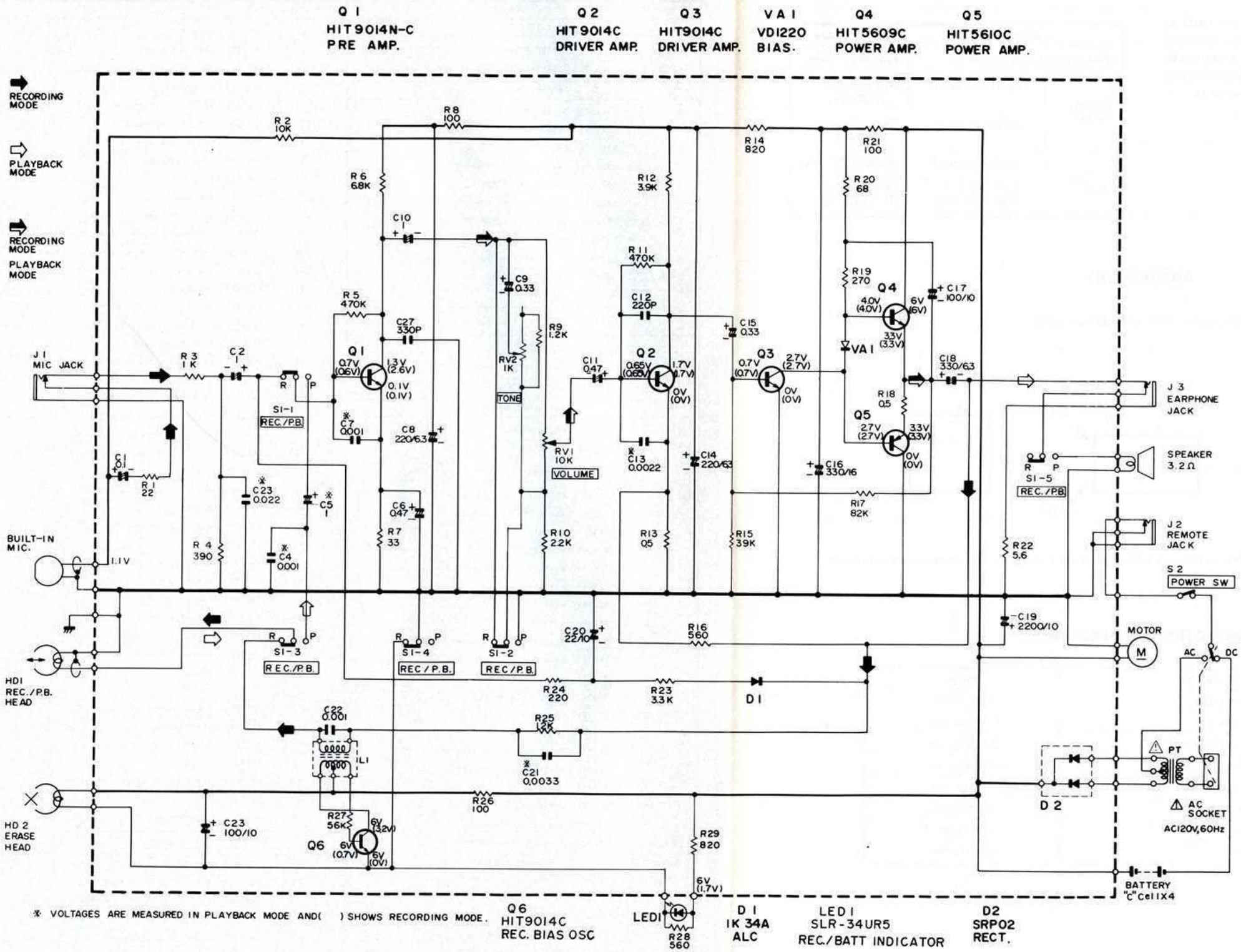
Item	Check Item		Value
1	Pressure of pressure roller		300—500gr
2	Torque	Take-up	40—70gr-cm
3		Fast Forward	65—140gr-cm
4		Rewind	65—140gr-cm
5	Back tension	Supply side	1—4gr-cm
6		Take-up side	1—4gr-cm
7	Auto stop detection force		40—75gr
8	Flywheel thrust gap		0.1—0.3mm

TRQ-359(U,C)

REPLACEMENT PARTS LIST

SYMBOL-NO	P-NO	DESCRIPTION
		RESISTORS
RV1	5006023	VARIABLE RESISTOR 10K OHM (C)
RV2	5006024	VARIABLE RESISTOR 1K OHM(C)
		SEMI-CONDUCTORS
D 1	5331502	DIODE 1K34ALF
D 2	5331453	DIODE SRP02
LED1	5380691	LED SLR34UR
Q 1	5322591	TRANSISTOR HIT9014N-C
Q 2	5322581	TRANSISTOR HIT9014C
Q 3	5322581	TRANSISTOR HIT9014C
Q 4	5322542	TRANSISTOR HIT5609C
Q 5	5322532	TRANSISTOR HIT5610C
Q 6	5322581	TRANSISTOR HIT9014C
VA 1	5340204	VARISTOR VD1220
		COILS
L 1	5260212	OSCILLATOR COIL
		MISCELLANEOUS
J 1-3	5679001	JACK ASSEMBLY (MIC, REMOTE, EARPHONE)
S 1	5623971	SLIDE SWITCH (REC/P.B.)
		FOR ACCESSORIES
	6728973	ERASE PLUG
⚠	5747262	POWER CORD
		FOR CASSETTE DECK ASSEMBLY (A)
1	6535091	CASSETTE HOLDER SPRING
2	7336181	RECORD PREVENTION ARM
3	6541711	SPRING
4	7336341	HEAD PLATE
5	7337151	SENSING PLATE ASSEMBLY
6	6765091	HEAD BASE
7	6520431	HEAD SPRING
8	7787991	WASHER
9	5443311	RECORD PLAYBACK HEAD
10	5445381	ERASE HEAD
11	7788001	WASHER
12	7335921	HEAD PLATE HOLDER
13	7571211	COLLAR
14	6541721	SPRING
15	6383711	PRESSURE ROLLER ASSEMBLY
16	6546751	PRESSURE ROLLER SPRING
17	7598181	ARM SLEEVE
18	7335811	ARM LEVER
19	7336361	REEL REST ASSEMBLY
20	6414501	TAKE UP REEL ASSEMBLY
21	6414331	SUPPLY REEL ASSEMBLY
22	7336311	FT ROLLER ARM ASSEMBLY
23	6430511	RELAY GEAR
24	7787471	WASHER
25	6344411	TAKE UP ROLLER
26	6541701	FT ROLLER ARM SPRING
27	7336201	MAIN PLATE
28	6541691	MAIN PLATE SPRING
29	6520181	BACK TENSION SPRING (SUPPLY)
30	7335791	KICK LEVER
31	6765251	RF CLUTCH ASSEMBLY
32	6757371	FLYWHEEL BEARING
33	6520201	THRUST SPRING
34	7787751	NYLON WASHER
35	6373881	FLYWHEEL
36	7787741	NYLON WASHER
37	6534451	RF CLUTCH ARM SPRING
38	7336231	PUSH BUTTON FRAME ASSEMBLY
39	7340031	PUSH BUTTON LEVER ACTUATOR ASSEMBLY
40	6541661	AUTO LEVER SPRING
41	6541671	SPRING
42	7335961	SUPPORT ACTUATOR PLATE
43	6541681	SPRING
44	7335881	STOP BUTTON LEVER
45	6541631	STOP LEVER SPRING
46	7336331	FF BUTTON LEVER ASSEMBLY
47	6541641	FF BUTTON LEVER SPRING
48	7340081	REWIND LEVER ASSEMBLY
49	6541651	REWIND BUTTON LEVER SPRING
50	7336351	PLAY LEVER ASSEMBLY
51	6541951	PLAY LEVER SPRING
52	7340051	RECORD LEVER ASSEMBLY
53	6541621	SPRING
54	7336281	PAUSE LEVER ASSEMBLY
55	6541621	SPRING
56	6428091	DC MOTOR ASSEMBLY
57	6576331	MOTOR RUBBER
58	7547561	SPECIAL SCREW
59	6357451	FLYWHEEL BELT
60	6757261	PAUSE LEVER
61	6520291	PAUSE LEVER SPRING
62	7571191	COLLAR
63	7571201	COLLAR
64	7787761	NYLON WASHER
65	5603511	LEAF SWITCH
66	7337031	EJECT LEVER ASSEMBLY
67	7547611	COLLAR
68	6541801	EJECT LEVER SPRING
69	5559521	COUNTER
70	6355341	COUNTER BELT
		MISCELLANEOUS
71	6334391	HANDLE
72	6174211	BATTERY LID ASSEMBLY
73	8699410	BT BIND HEAD SCREW-3MMDX10MM (BLACK)
74	8699408	BT BIND HEAD SCREW-3MMDX8MM (BLACK)
75	6105902	FRONT CASE ASSEMBLY
76	5403161	SPEAKER-7.7CM

SCHEMATIC DIAGRAM



Note

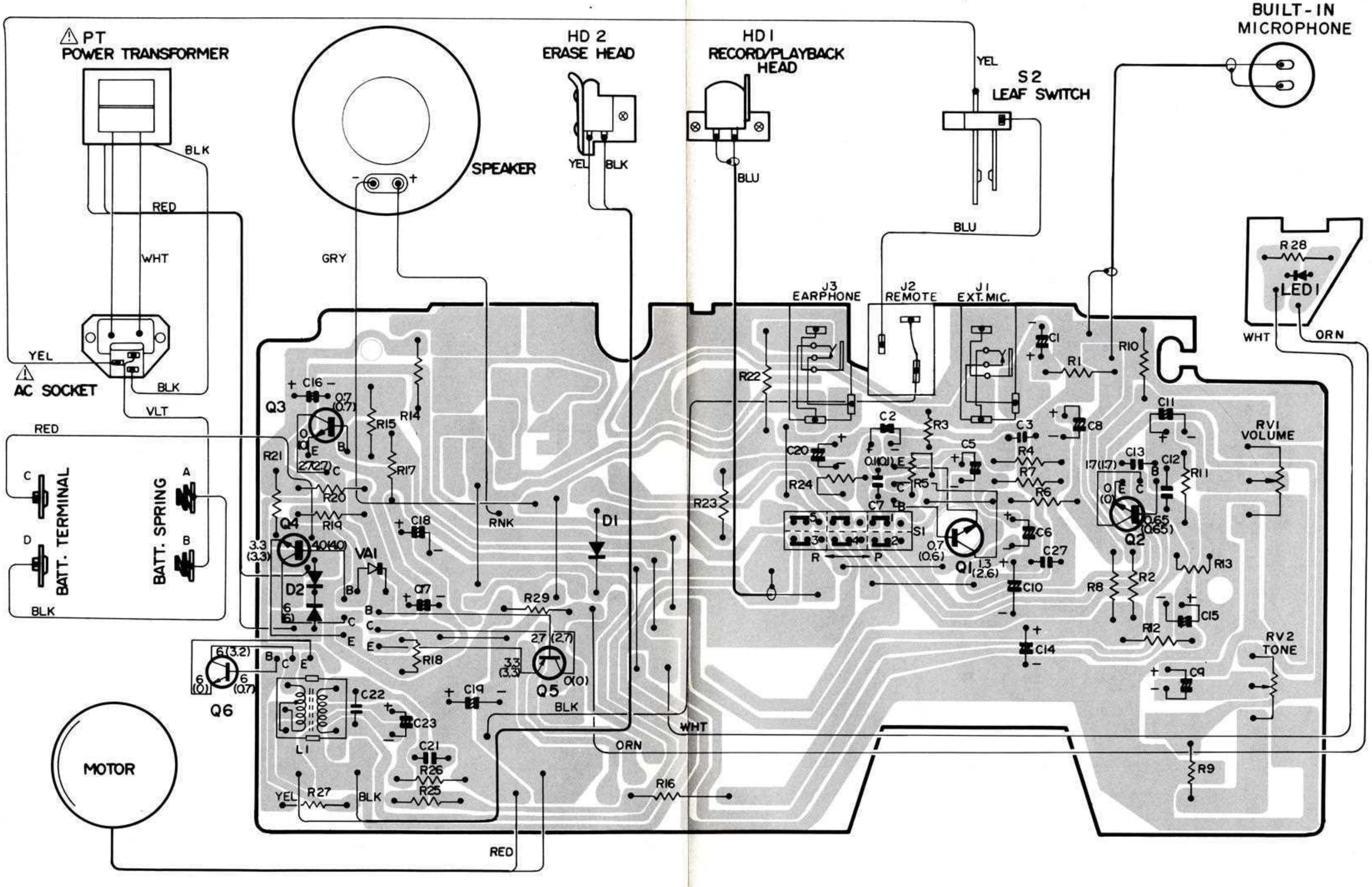
1. Voltage measured at base of chassis with minimum volume control and no signal.
2. Nomenclature of Resistors and Capacitors.

R101 150 RS·1·K	Circuit No.	
	Value	No indicated Ω(Ohm) M : 1000 kΩ
	Tolerance	No indicated ±5% K : ±10% M : ±20%
	Wattage	No indicated ¼W
	Sort	No indicated Carbon film RC : Composition RW : Wire wound RS : Oxide metal film RN : Fixed metal film

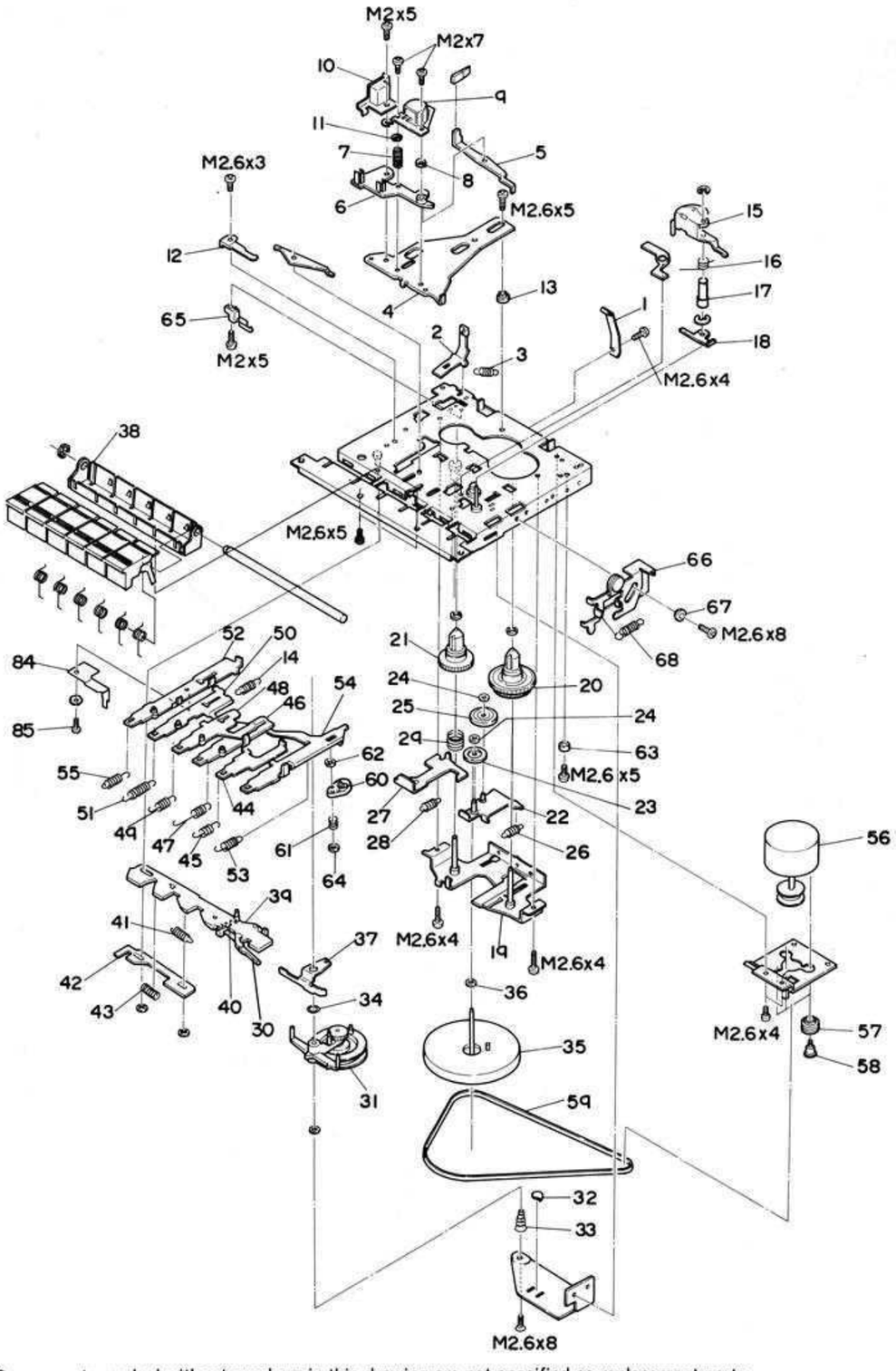
C101 0.001·M	Circuit No.	
	Value	No indicated μF P : PF
	Tolerance	No indicated ±10% J : ± 5% M : ±20% Z : +80%, −20% D : ±0.5pF C : ±0.25pF
	Sort	Ceramic
		Electrolitic
		Mylar
		Polyester
		Styrol
C102 0.1/16	Voltage	No indicated 50WV

3. Be sure to make your orders of resistors and capacitors with value, voltage, tolerance and sort.
4. When replacing capacitors marked with ※, use specified ones stated on parts list since required temperature characteristics.

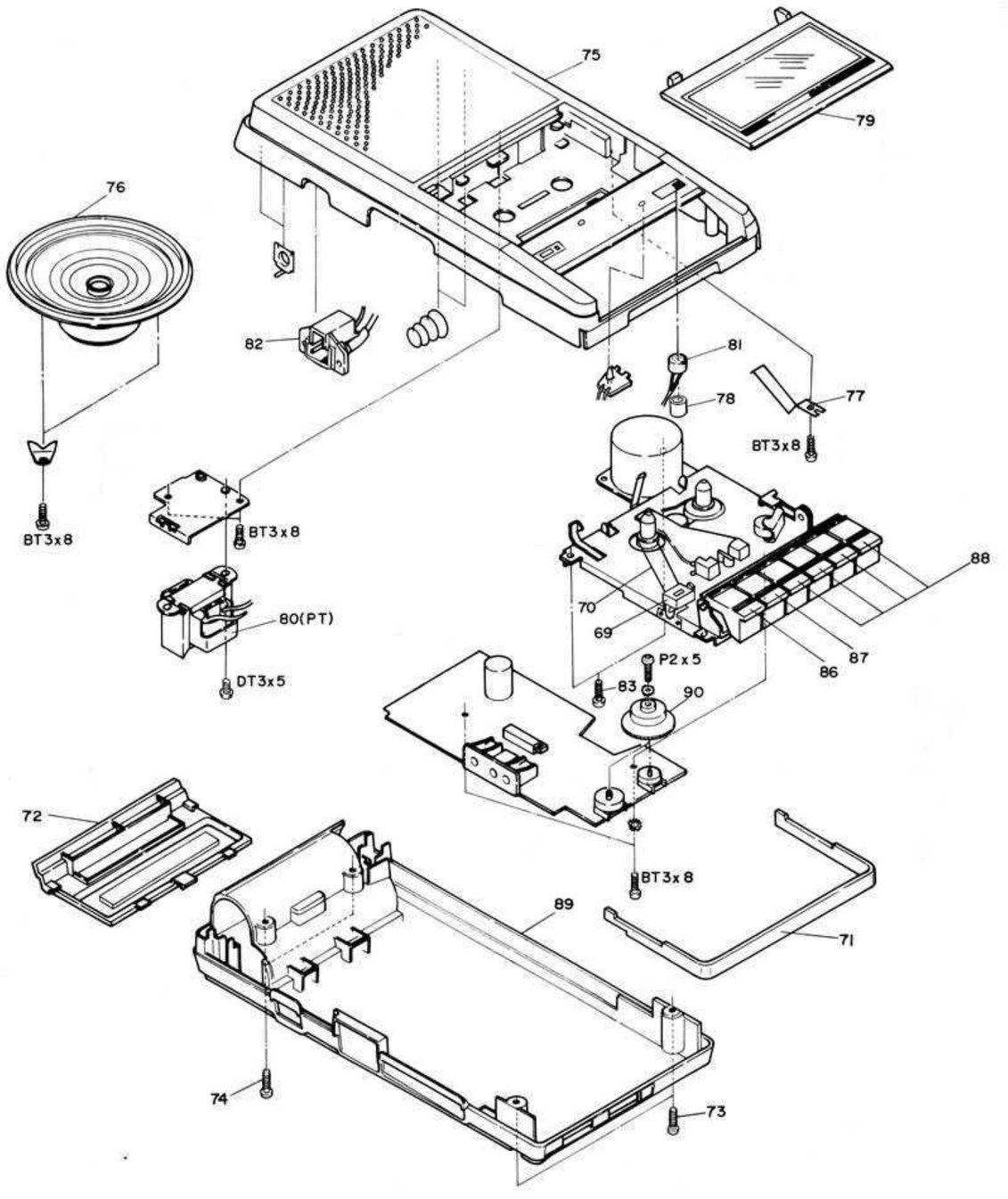
CIRCUIT BOARD DIAGRAM



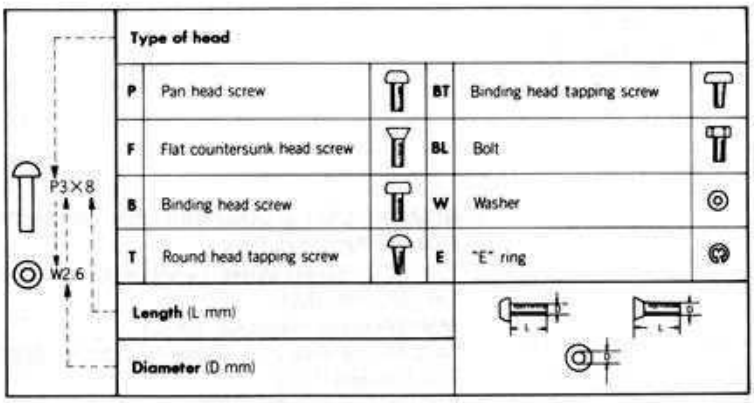
EXPLODED VIEW



Note : Components marked without numbers in this drawing are not specified as replacement parts.



SYMBOL-NO	P-NO	DESCRIPTION
		MISCELLANEOUS
77	6534281	CASSETTE LID SPRING
78	6570221	MICROPHONE HOLDER
79	6093161	CASSETTE LID
⚠ 80 (PT)	5211944	POWER TRANSFORMER
81	5421503	BUILT IN MICROPHONE
⚠ 82	5652002	AC SOCKET
83	8699408	BT WIND HEAD SCREW-3MMDX8MM (BLACK)
84	6534271	RECORD SPRING
85	7781331	TAP TIGHT PAN HEAD SCREW-2.6MMDX4MM
86	6060332	CASSETTE BUTTON (REC)
87	6060335	CASSETTE BUTTON (PLAY)
88	6060331	CASSETTE BUTTON
89	6105951	REAR CASE ASSEMBLY (U)
	6105952	REAR CASE ASSEMBLY (C)
90	6290852	KNOB (TONE, VOLUME)



When ordering hardware excluding stated on these lists, be sure to make your orders with type and size.

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TRQ-359 **TK** **No. 1556E** **TOKAI**

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Printed in Japan (H.M1)