

BM-531

SERVICE MANUAL



*US Model
Canadian Model
AEP Model
UK Model
E Model*

SPECIFICATIONS

Tape	MICROCASSETTE™ (normal position type)
Recording system	4-track 2-channel monaural
Speaker	Approx. 3.6 cm (1 7/16 inches) dia.
Tape speed	2.4 cm/s (15/16 ips), 1.2 cm/s (15/32 ips)
Frequency response	250 – 4,000 Hz (at 2.4 cm position)
Input	Microphone jack (minijack) (PLUG IN POWER) sensitivity 0.2 mV, for low impedance microphone
Output	Earphone jack (minijack) for 8 – 300 ohm earphone
Power output	150 mW (at 10% harmonic distortion)
Battery life (recording)	Sony SUM-3 (NS): Approx. 6 hours Sony AM3 (N): Approx. 17 hours
Power requirements	3V DC, two size AA (R6) batteries DC IN 3V jack accepts: • Sony AC-D2M AC power adaptor (not supplied) for use on 120V AC, 60 Hz • Sony DCC-70 car battery cord (not supplied) for use with 12V car battery
Dimensions	Approx. 67.5 × 124 × 27 mm (w/h/d) (2 3/4 × 5 × 1 1/8 inches) incl. projecting parts and controls
Weight	Approx. 180 g (6.4 oz.) incl. batteries
Accessories supplied	Handstrap (1) Carrying case (1)

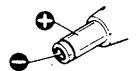
Design and specifications subject to change without notice.

Model Name Using Similar Mechanism	M-550V, M-740, M-750V
Tape Transport Mechanism Type	MB-531-14

FEATURES

- One-touch dictating
- VOR (voice operated recording) system economizes on tapes, batteries and your time.
- A choice of two tape speeds enables up to 2 hours of recording.
- Electronic indexing function assists in locating specific parts of a dictation.
- 3-digit tape counter for indexing the tape contents
- Pause switch instantly halts the tape.
- Quick review and instant edit
- 3-way power source capability
- Automatic shut-off mechanism
- Microphone sensitivity selector

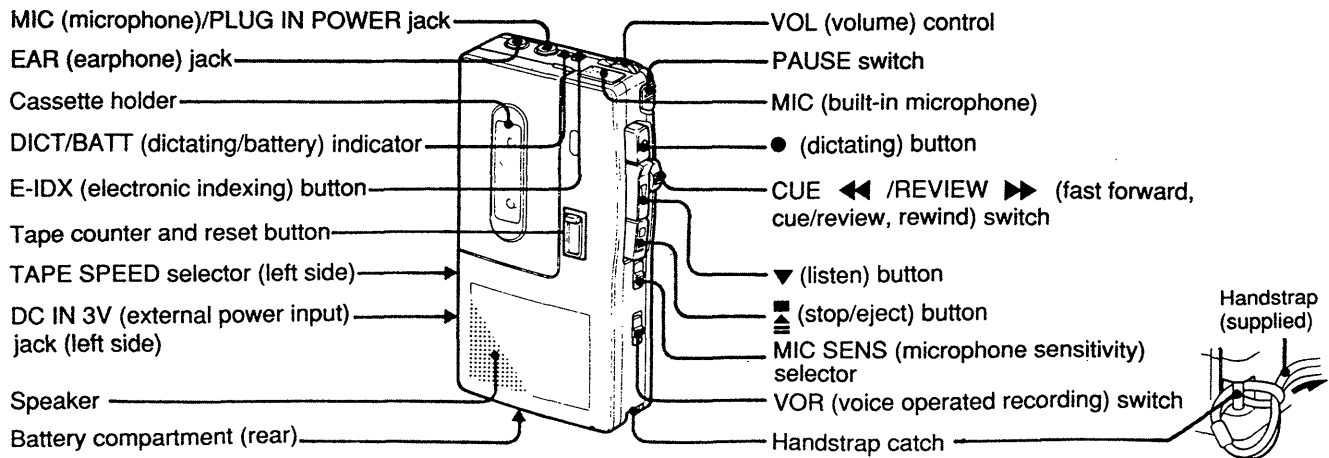
Note: Use only the recommended AC power adaptor or car battery cord manufactured by Sony. Polarity of the plugs of other manufacturers may be different.



Polarity of the BM-531 plug

MICROCASSETTE™ DICTATOR
SONY®

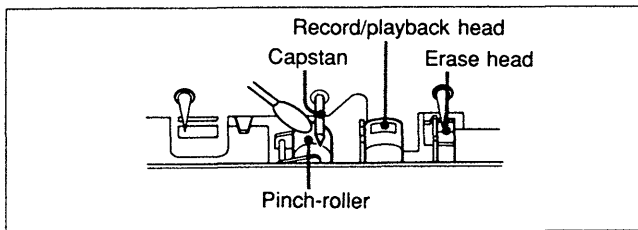
PARTS IDENTIFICATION



MAINTENANCE

Cleaning the Head

Clean the tape head after every 10 hours of use for the proper operation of the unit. Moisten a cotton swab or a soft cloth with denatured alcohol, and wipe the parts shown below.



Cleaning the Casing

Clean the case with a soft cloth slightly moistened with water or a mild detergent solution. Do not use alcohol, benzine or thinner as they may mar the finish.

SERVICING NOTE

Repairing printed resistor

Cut both sides of the resistor and solder the carbon resistor having same value in place of printed one of the conductor side.

1/4W carbon resistor is supplied for the replacing part of the printed resistor.

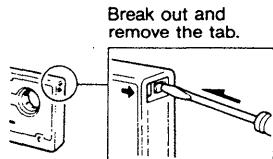
Notes on chip component replacement

- Never reuse a disconnected chip component.
- Notice that the minus side of a tantalum capacitor may be damaged by heat.

NOTE ON THE MICROCASSETTE

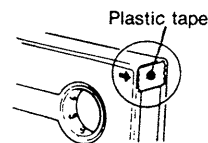
To protect cassettes from accidental erasure

When a recording is made, the previous recording is automatically erased. To prevent erasure, break the cassette tabs.

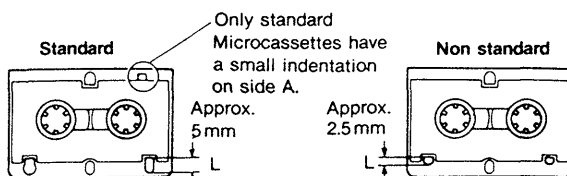


To reuse a cassette

To record on a cassette with removed tabs, cover each slot with a piece of plastic tape.



This unit uses only standard Microcassettes. Non standard cassettes cannot be used because their "L" dimension (see illustration) is different.



To erase the entire tape contents

Use the BE-2 or BE-9H cassette eraser (sold separately).

SECTION 1 ADJUSTMENTS

1-1. MECHANICAL ADJUSTMENT AND MEASUREMENT

PRECAUTION

1. Clean the following parts with a denatured-alcohol-moistened swab:

record/playback head	pinch roller
erase head	rubber belts
capstan	
2. Demagnetize the record/playback head with a head demagnetizer. (Do not bring the head demagnetizer close to the erase head.)
3. Do not use a magnetized screwdriver for the adjustments.
4. The adjustments should be performed with the rated power supply voltage unless otherwise noted.

Power supply voltage: 3 V dc
TAPE SPEED switch: 2.4 cm/s

Torque Measurement

Torque	Meter Reading	Torque Meter
Forward	5 - 13g·cm (0.07 - 0.18oz·inch)	CQ-103M
Fast Forward	5 - 13g·cm (0.07 - 0.18oz·inch)	CQ-201M
Rewind	more than 15g·cm (more than 0.21oz·inch)	CQ-201M

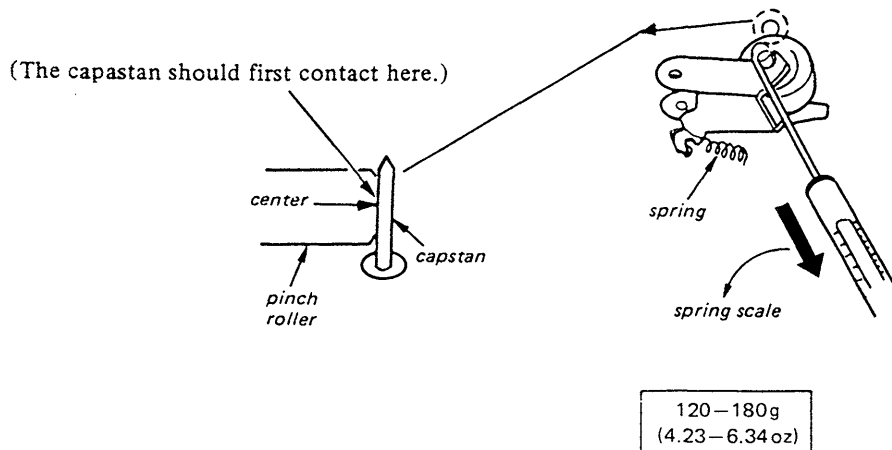
Tape Tension Measurement

Meter	Meter Reading
CQ-403M	more than 40g·cm (more than 0.56oz·inch)

Pinch Roller Pressure Adjustment

— Playback Mode —

Slowly return the pinch roller and read the spring scale just when the pinch roller starts rotating.



1-2. ELECTRICAL ADJUSTMENTS

Standard Input Level

Type	Signal	Used for
WS-24	3kHz, -10dB	Tape Speed Adjustment
S-2-A030	3kHz, -20dB	Head Azimuth Adjustment

Record/playback Head Azimuth Adjustment

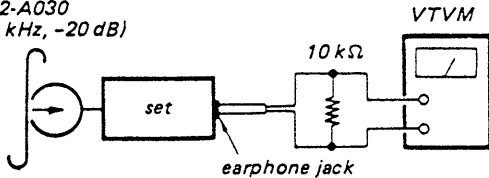
Setting:

VOLUME control: mechanical mid
 TAPE SPEED switch: 2.4 cm/s
 VOR switch: OFF

Procedure:

1. Mode: playback

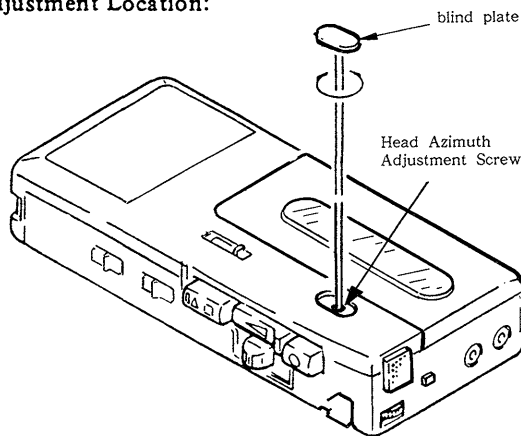
test tape
 S-2-A030
 (3 kHz, -20 dB)



2. Turn the adjustment screw to obtain the maximum reading on VTVM.

Note: Several peaks may appear, but take the maximum.

Adjustment Location:



Tape Speed Adjustment

Setting:

VOLUME control: mechanical mid
 VOR switch: OFF

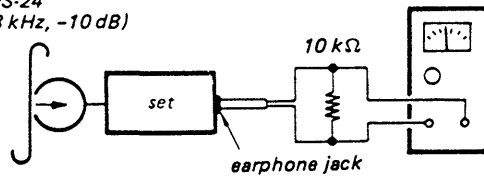
Procedure:

- Perform 2.4 cm/s speed adjustment before 1.2 cm/s speed adjustment.

Mode: playback

speed checker
 LFM-30
 or
 digital frequency
 counter

test tape
 WS-24
 (3 kHz, -10 dB)



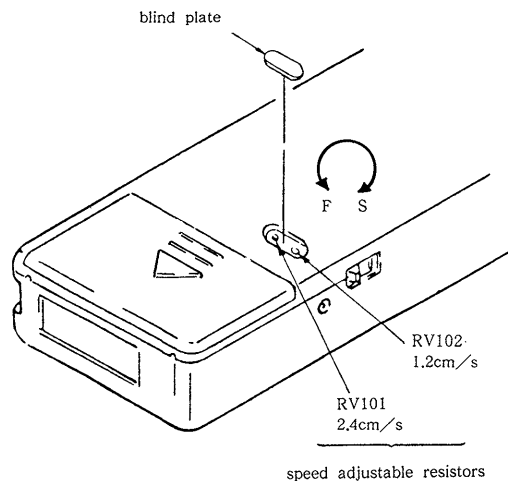
Tape speed	Speed checker	Digital frequency counter
2.4 cm/s	±4%	2,880 - 3,120 Hz
1.2 cm/s	±5%	1,425 - 1,575 Hz

Frequency difference between the beginning and the end of the tape should be within 0.5%.

2.4 cm/s (15 Hz)

1.2 cm/s (7.5 Hz)

Adjustment Location:

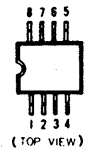


SECTION 2 DIAGRAMS

2-1. PRINTED WIRING BOARD

• SEMICONDUCTOR LEAD LAYOUTS

LA5521M
NJM2073M



NJM2072M



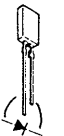
2SA1563
2SB1295-UL6
2SB624-BV5
2SC2712-G
2SD1048-X7



DA204U

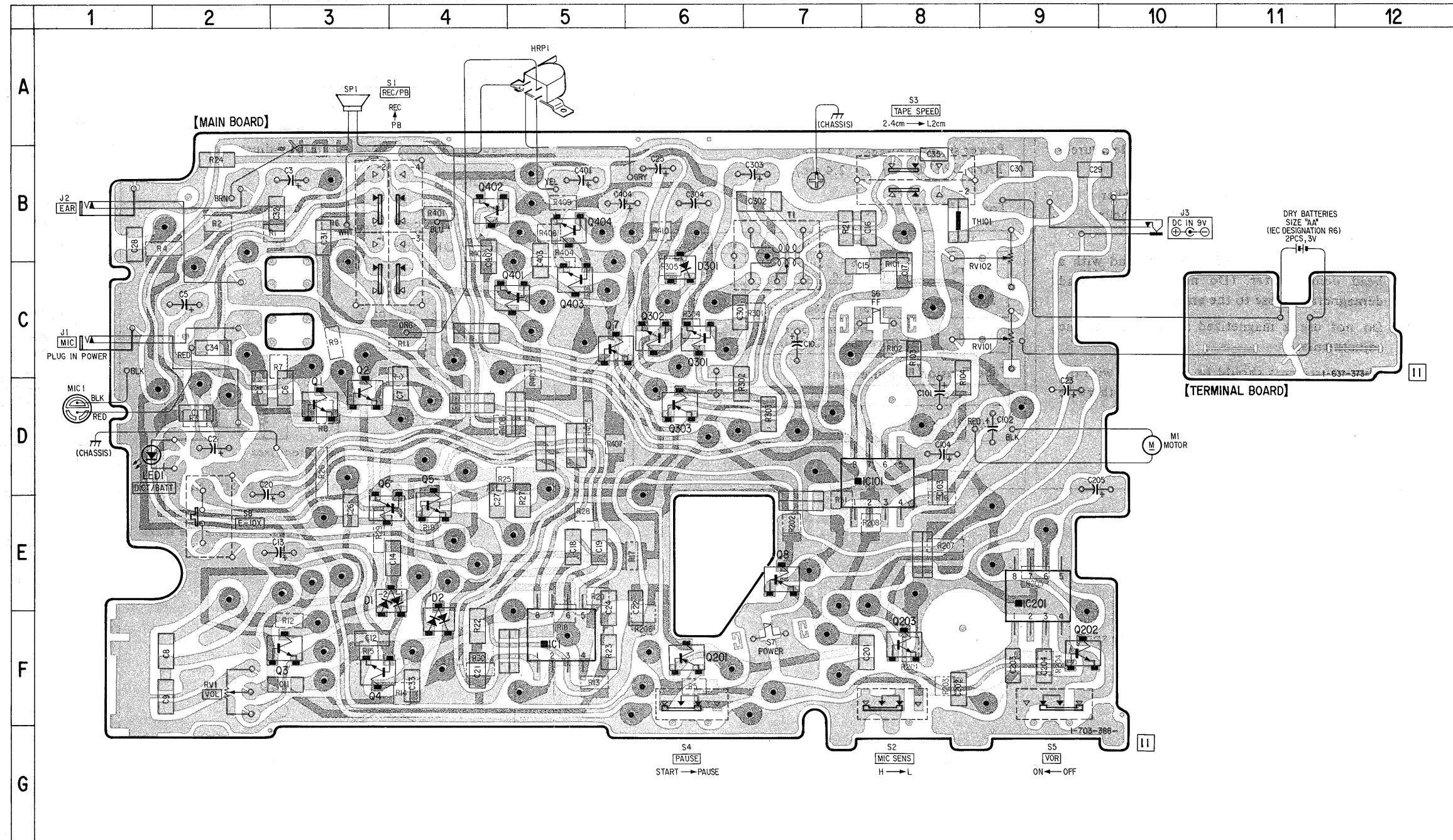


SLP174B



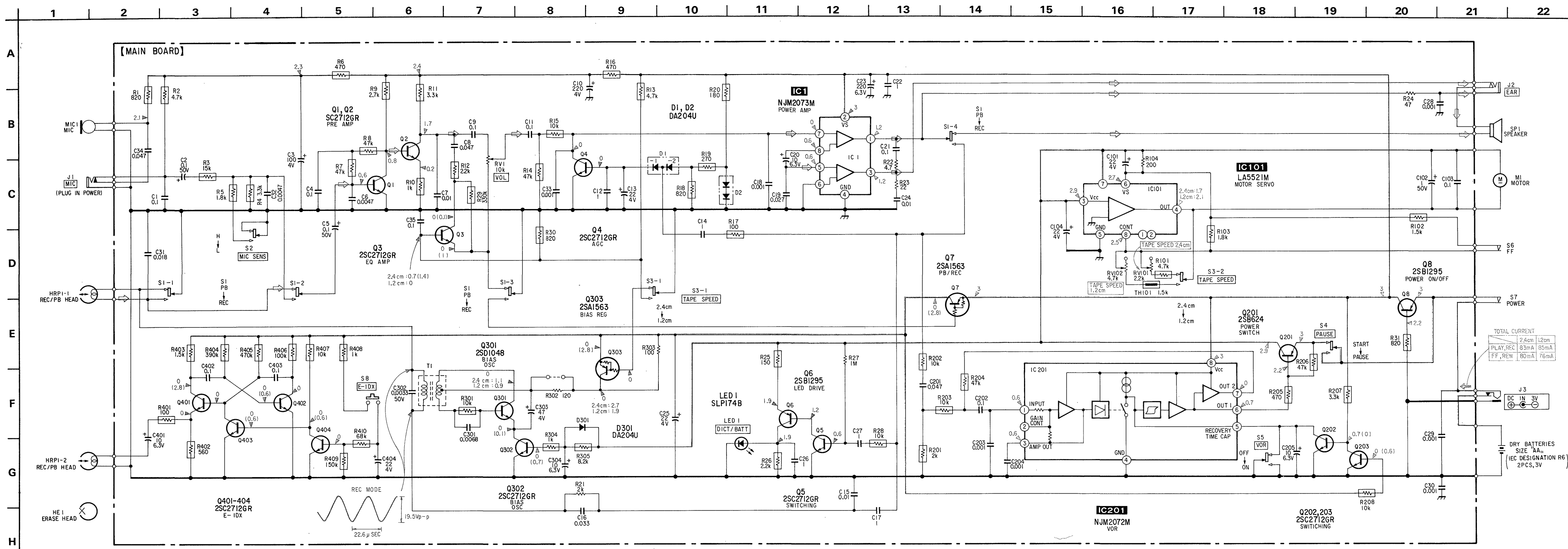
• SEMICONDUCTOR LOCATION

Ref. No.	Location
D1	E-3
D2	F-4
D301	C-6
LED1	D-1
IC1	F-5
IC101	D-8
IC201	E-9
Q1	D-3
Q2	D-3
Q3	F-3
Q4	F-3
Q5	E-4
Q6	E-3
Q7	C-5
Q8	E-7
Q201	F-6
Q202	F-9
Q203	F-8
Q301	C-6
Q302	C-6
Q303	D-6
Q401	C-5
Q402	B-4
Q403	C-5
Q404	B-5



Note :

- : parts extracted from the component side.
- : parts mounted on the conductor side.
- : Through hole.
- ▨ : Pattern on the side which is seen.
- ▩ : Pattern of the rear side.
- : Printed resistor.



Note :

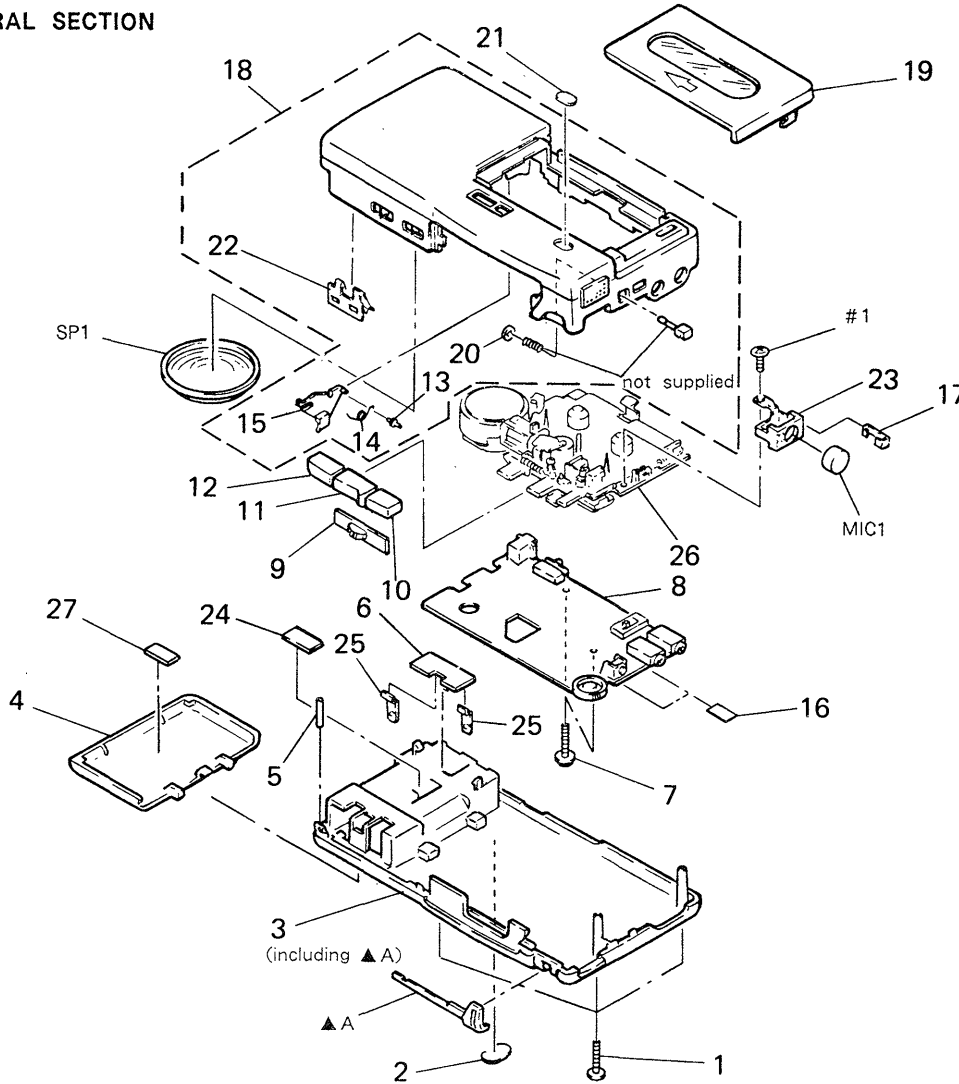
- All capacitors are in μF unless otherwise noted. μF : $\mu \mu F$ 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and $\frac{1}{4}W$ or less unless otherwise specified.
- : printed resistor.
- : B+ Line
- : adjustment for repair.
- Total current is measured with no cassette installed.
- Power voltage is dc 3V and fed with regulated dc power supply from external power voltage jack.
- Voltage and waveforms are dc with respect to ground under no-signal conditions.
- no mark : PLAY
- () : REC
- Voltages are taken with a VOM (Input impedance 10M Ω). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with an oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Signal path.
- : PLAYBACK

SECTION 3 EXPLODED VIEWS

NOTE:

- The mechanical parts with no reference number in the exploded views are not supplied.
- The construction parts of an assembled part are indicated with a collation number in the remark column.
- Items marked "★" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- Due to standardization, parts with part number suffix -XX and -X may be different from the parts specified in the components used on the set.
- Screw (#mark) list is given in the last of this parts list.

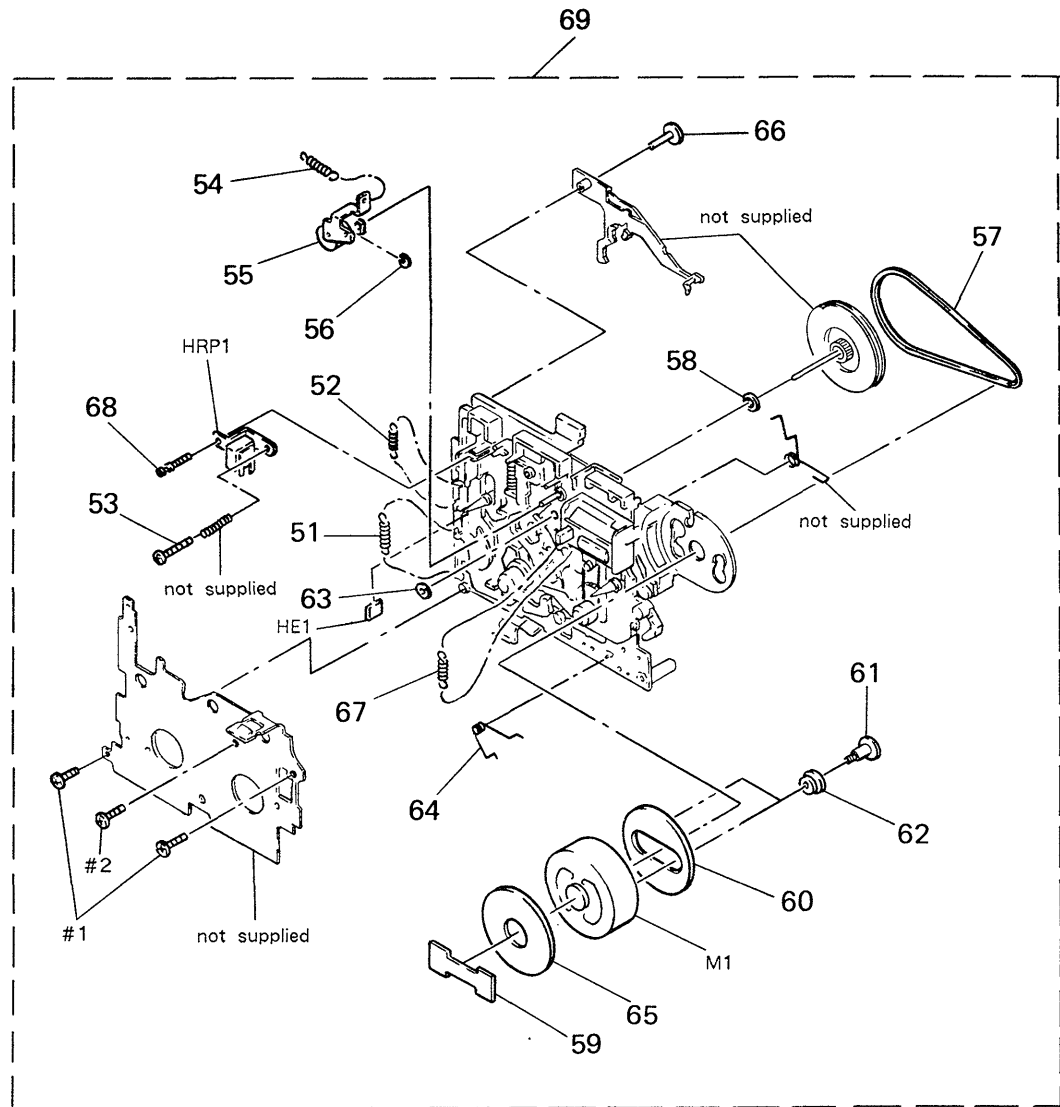
3-1. GENERAL SECTION



No.	Part No.	Description	Remarks
1	3-357-509-01	SCREW (+B) (1.7), TAPPING	
2	3-358-363-01	PLATE, BLIND (TS ADJUSTMENT)	
3	A-3041-437-A	CABINET (REAR) ASSY	
4	A-3041-438-A	LID ASSY, BATTERY CASE	
5	3-576-082-00	PIN, PARALLEL	
6	* 1-637-373-11	PC BOARD, TERMINAL	
7	3-342-156-31	SCREW	
8	* A-3015-945-A	MAIN BOARD, COMPLETE	
9	3-343-960-11	BUTTON (F/R)	
10	3-343-956-11	BUTTON (REC)	
11	3-343-958-11	BUTTON (PLAY)	
12	3-343-957-11	BUTTON (STOP)	
13	3-358-333-01	SHAFT (EJECT), LEVER	
14	3-343-949-01	SPRING, TORSION	
15	3-343-955-01	LEVER (EJECT)	

No.	Part No.	Description	Remarks
16	3-831-441-11	CUSHION (B)	
17	3-366-524-01	PLATE, GROUND, MICROPHONE	
18	A-3041-286-A	CABINET (FRONT) ASSY	13-15, 20, 22
19	A-3041-293-A	LID ASSY, CASSETTE	
20	3-329-134-01	WASHER, COTTER	
21	3-366-527-01	PLATE, BLIND (HEAD AZIMUTH ADJUSTMENT)	
22	3-576-074-00	SPRING	
23	3-363-108-01	HOLDER, MICROPHONE	
24	9-911-844-XX	COVER	
25	3-362-243-01	TERMINAL BOARD	
26	A-3013-497-A	MD ASSY (MB-531-14)	
27	9-911-815-01	CUSHION, DRUM	
MIC1	1-542-136-11	MICROPHONE, ELECTRET CONDENSER	
SP1	1-503-293-00	SPEAKER	

3-2. MECHANISM SECTION (MB-531-14)



No.	Part No.	Description	Remarks	No.	Part No.	Description	Remarks
51	3-342-186-01	SPRING, TENSION		63	3-315-384-41	WASHER, STOPPER	
52	3-342-102-01	SPRING, TENSION		64	3-342-187-01	SPRING	
53	3-318-203-31	SCREW (B1.7X8), TAPPING		65	3-362-322-01	SEAL (MOTOR REAR)	
54	3-342-173-01	SPRING, TENSION		66	3-318-324-01	BUSHING, IDLER LEVER	
55	X-3342-102-1	PINCH LEVER ASSY		67	3-342-101-01	SPRING, TENSION	
56	3-590-768-00	RING (A), E		68	3-342-181-11	SCREW, AZ	
57	3-343-966-01	BELT		69	A-3013-497-A	MD ASSY (MB-531-14)	
58	3-701-436-11	WASHER, 1.6 POLYETHYLENE		HE1	8-825-772-01	ESF194-62G (ERASE HEAD)	
59	3-831-441-11	CUSHION (MOTOR)		HRP1	1-543-725-11	HEAD (RECORD PLAYBACK)	
60	3-362-321-01	SEAL (MOTOR FRONT)		M1	1-541-738-11	MOTOR	
61	3-309-836-01	SHAFT, FITTING, MOTOR					
62	3-570-770-00	CUSHION (A), MOTOR					

SECTION 4 ELECTRICAL PARTS LIST

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- Items marked "★" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- If there are two or more same circuits in a set such as a stereophonic machine, only typical circuit parts may be indicated and capacitors and resistors in other same circuits may be omitted.

CAPACITORS:

MF: μ F, PF: $\mu\mu$ F.

RESISTORS

- All resistors are in ohms.
- F: nonflammable

COILS

- MMH: mH, UH: μ H

SEMICONDUCTORS

In each case, U: μ , for example:

UA...: μ A..., UPA...: μ PA...,
UPC...: μ PC, UPD...: μ PD...

Ref.No.	Part No.	Description
* A-3015-945-A MAIN BOARD, COMPLETE		

< CAPACITOR >		
C1	1-164-004-11	CERAMIC CHIP 0.1 μ F 10% 25V
C2	1-126-297-11	ELECT 0.1 μ F 20% 50V
C3	1-126-277-11	ELECT 100 μ F 20% 4V
C4	1-163-038-00	CERAMIC CHIP 0.1 μ F 25V
C5	1-126-297-11	ELECT 0.1 μ F 20% 50V
C6	1-163-017-00	CERAMIC CHIP 0.0047 μ F 5% 50V
C7	1-164-232-11	CERAMIC CHIP 0.01 μ F 50V
C8	1-163-809-11	CERAMIC CHIP 0.047 μ F 10% 25V
C9	1-163-038-00	CERAMIC CHIP 0.1 μ F 25V
C10	1-126-267-11	ELECT 220 μ F 20% 4V
C11	1-163-038-00	CERAMIC CHIP 0.1 μ F 25V
C12	1-164-234-11	CERAMIC CHIP 1 μ F 10V
C13	1-124-430-00	ELECT 22 μ F 20% 4V
C14	1-164-234-11	CERAMIC CHIP 1 μ F 10V
C15	1-164-232-11	CERAMIC CHIP 0.01 μ F 50V
C16	1-163-989-11	CERAMIC CHIP 0.033 μ F 10% 25V
C17	1-164-234-11	CERAMIC CHIP 1 μ F 10V
C18	1-163-009-11	CERAMIC CHIP 0.001 μ F 10% 50V
C19	1-163-986-00	CERAMIC CHIP 0.027 μ F 10% 25V
C20	1-126-157-11	ELECT 10 μ F 20% 16V
C21	1-163-038-00	CERAMIC CHIP 0.1 μ F 25V
C22	1-164-234-11	CERAMIC CHIP 1 μ F 10V
C23	1-124-995-11	ELECT 220 μ F 20% 6.3V
C24	1-164-232-11	CERAMIC CHIP 0.01 μ F 50V
C25	1-124-430-00	ELECT 22 μ F 20% 4V
C26	1-164-234-11	CERAMIC CHIP 1 μ F 10V
C27	1-164-234-11	CERAMIC CHIP 1 μ F 10V
C28	1-163-009-11	CERAMIC CHIP 0.001 μ F 10% 50V
C29	1-163-009-11	CERAMIC CHIP 0.001 μ F 10% 50V
C30	1-163-009-11	CERAMIC CHIP 0.001 μ F 10% 50V

Ref.No.	Part No.	Description
C31	1-163-024-00	CERAMIC CHIP 0.018 μ F 10% 50V
C32	1-163-017-00	CERAMIC, CHIP 0.0047 μ F 5% 50V
C33	1-163-009-11	CERAMIC, CHIP 0.001 μ F 10% 50V
C34	1-163-809-11	CERAMIC CHIP 0.047 μ F 10% 25V
C35	1-163-038-00	CERAMIC, CHIP 0.1 μ F 25V
C101	1-124-430-00	ELECT 22 μ F 20% 4V
C102	1-126-160-11	ELECT 1 μ F 20% 50V
C102	1-163-038-00	CERAMIC, CHIP 0.1 μ F 25V
C103	1-163-038-00	CERAMIC, CHIP 0.1 μ F 25V
C104	1-124-430-00	ELECT 22 μ F 20% 4V
C201	1-163-809-11	CERAMIC CHIP 0.047 μ F 10% 25V
C202	1-163-038-00	CERAMIC, CHIP 0.1 μ F 25V
C203	1-163-009-11	CERAMIC, CHIP 0.001 μ F 10% 50V
C204	1-163-009-11	CERAMIC, CHI 0.001 μ F 10% 50V
C205	1-124-435-11	ELECT 10 μ F 20% 6.3V
C301	1-163-019-00	CERAMIC, CHIP 0.0068 μ F 10% 50V
C302	1-163-053-00	CERAMIC CHIP 0.0033 μ F 10% 50V
C303	1-124-432-11	ELECT 47 μ F 20% 4V
C304	1-124-435-11	ELECT 10 μ F 20% 6.3V
C401	1-124-435-11	ELECT 10 μ F 20% 6.3V
C402	1-164-004-11	CERAMIC CHIP 0.1 μ F 10% 25V
C403	1-164-004-11	CERAMIC CHIP 0.1 μ F 10% 25V
C404	1-124-430-00	ELECT 22 μ F 20% 4V
< DIODE >		
D1	8-719-941-23	DIODE DA204U
D2	8-719-941-23	DIODE DA204U
D301	8-719-941-23	DIODE DA204U
< IC >		
IC1	8-759-701-02	IC NJM2073M
IC101	8-759-804-43	IC LA5521M
IC201	8-759-701-51	IC NJM2072M
< JACK >		
J1	1-569-215-21	JACK (MIC)
J2	1-569-215-21	JACK (EAR)
J3	1-568-228-11	JACK, EXTERNAL POWER (DC IN 3V)

Ref.No.	Part No.	Description
		<DIODE>
LED1	8-719-936-67	DIODE SLP174B (DICT/BATT)
		<TRANSISTOR>
Q1	8-729-271-22	TRANSISTOR 2SC2712-G
Q2	8-729-271-22	TRANSISTOR 2SC2712-G
Q3	8-729-271-22	TRANSISTOR 2SC2712-G
Q4	8-729-271-22	TRANSISTOR 2SC2712-G
Q5	8-729-271-22	TRANSISTOR 2SC2712-G
Q6	8-729-807-87	TRANSISTOR 2SB1295-UL6
Q7	8-729-805-91	TRANSISTOR 2SA1563
Q8	8-729-807-87	TRANSISTOR 2SB1295-UL6
Q201	8-729-162-45	TRANSISTOR 2SB624-BV5
Q202	8-729-271-22	TRANSISTOR 2SC2712-G
Q203	8-729-271-22	TRANSISTOR 2SC2712-G
Q301	8-729-800-37	TRANSISTOR 2SD1048-X7
Q302	8-729-271-22	TRANSISTOR 2SC2712-G
Q303	8-729-805-91	TRANSISTOR 2SA1563
Q401	8-729-271-22	TRANSISTOR 2SC2712-G
Q402	8-729-271-22	TRANSISTOR 2SC2712-G
Q403	8-729-271-22	TRANSISTOR 2SC2712-G
Q404	8-729-271-22	TRANSISTOR 2SC2712-G
		< RESISTOR >
R1	1-249-416-11	CARBON 820 5% 1/4W
R2	1-249-425-11	CARBON 4.7K 5% 1/4W
R3	1-249-431-11	CARBON 15K 5% 1/4W
R4	1-249-423-11	CARBON 3.3K 5% 1/4W
R5	1-249-420-11	CARBON 1.8K 5% 1/4W
R6	1-249-413-11	CARBON 470 5% 1/4W
R7	1-249-437-11	CARBON 47K 5% 1/4W
R8	1-249-437-11	CARBON 47K 5% 1/4W
R9	1-249-422-11	CARBON 2.7K 5% 1/4W
R10	1-249-417-11	CARBON 1K 5% 1/4W
R11	1-249-423-11	CARBON 3.3K 5% 1/4W
R12	1-249-421-11	CARBON 2.2K 5% 1/4W
R13	1-249-425-11	CARBON 4.7K 5% 1/4W
R14	1-249-437-11	CARBON 47K 5% 1/4W
R15	1-249-429-11	CARBON 10K 5% 1/4W
R16	1-249-413-11	CARBON 470 5% 1/4W
R17	1-249-405-11	CARBON 100 5% 1/4W
R18	1-249-416-11	CARBON 820 5% 1/4W
R19	1-249-410-11	CARBON 270 5% 1/4W
R20	1-249-408-11	CARBON 180 5% 1/4W
R21	1-216-056-00	METAL GLAZE 2K 5% 1/10W
R22	1-216-308-00	METAL, CHIP 4.7 5% 1/10W
R23	1-216-009-00	METAL, CHIP 22 5% 1/10W
R24	1-216-017-00	METAL, CHIP 47 5% 1/10W
R25	1-249-407-11	CARBON 150 5% 1/4W
R26	1-249-421-11	CARBON 2.2K 5% 1/4W

Ref.No.	Part No.	Description
R27	1-216-121-00	METAL, CHIP 1M 5% 1/10W
R28	1-249-429-11	CARBON 10K 5% 1/4W
R29	1-215-481-00	METAL 330K 1% 1/6W
R30	1-249-416-11	CARBON 820 5% 1/4W
R31	1-249-416-11	CARBON 820 5% 1/4W
R101	1-249-425-11	CARBON 4.7K 5% 1/4W
R102	1-249-419-11	CARBON 1.5K 5% 1/4W
R103	1-216-055-00	METAL, CHIP 1.8K 5% 1/10W
R104	1-216-032-00	METAL, CHIP 200 5% 1/10W
R201	1-247-838-00	CARBON 2K 5% 1/4W
R202	1-249-429-11	CARBON 10K 5% 1/4W
R203	1-249-429-11	CARBON 10K 5% 1/4W
R204	1-249-437-11	CARBON 47K 5% 1/4W
R205	1-249-413-11	CARBON 470 5% 1/4W
R206	1-249-437-11	CARBON 47K 5% 1/4W
R207	1-249-423-11	CARBON 3.3K 5% 1/4W
R208	1-249-429-11	CARBON 10K 5% 1/4W
R301	1-249-429-11	CARBON 10K 5% 1/4W
R302	1-216-027-00	METAL, CHIP 120 5% 1/10W
R303	1-216-025-00	METAL, CHIP 100 5% 1/10W
R304	1-249-417-11	CARBON 1K 5% 1/4W
R305	1-249-428-11	CARBON 8.2K 5% 1/4W
R401	1-249-405-11	CARBON 100 5% 1/4W
R402	1-249-414-11	CARBON 560 5% 1/4W
R403	1-249-419-11	CARBON 1.5K 5% 1/4W
R404	1-215-483-00	METAL 390K 1% 1/6W
R405	1-215-485-00	METAL 470K 1% 1/6W
R406	1-249-441-11	CARBON 100K 5% 1/4W
R407	1-249-429-11	CARBON 10K 5% 1/4W
R408	1-249-417-11	CARBON 1K 5% 1/4W
R409	1-215-473-00	METAL 150K 1% 1/6W
R410	1-249-439-11	CARBON 68K 5% 1/4W
		< VARIABLE RESISTOR >
RV1	1-237-731-21	RES. VAR. CARBON 10K (VOL)
RV101	1-228-991-00	RES. ADJ. METAL 2.2K (TAPE SPEED 2.4cm/s)
RV102	1-228-993-00	RES. ADJ. METAL 4.7K (TAPE SPEED 1.2cm/s)
		< SWITCH >
S1	1-572-246-11	SWITCH, SLIDE (PB/REC)
S2	1-571-275-11	SWITCH, SLIDE (MIC SENS)
S3	1-571-478-11	SWITCH, SLIDE (TAPE SPEED)
S4	1-571-275-11	SWITCH, SLIDE (PAUSE)
S5	1-571-275-11	SWITCH, SLIDE (VOR)
S6	1-571-986-11	SWITCH, LEAF (FF)
S7	1-571-621-21	SWITCH, LEAF (POWER)
S8	1-572-087-11	SWITCH, TACT (E-IDX)

<u>Ref.No.</u>	<u>Part No.</u>	<u>Description</u>
		<TRANSFORME>
T1	1-433-251-00	TRANSFORMER, BIAS OSCILLATOR
		< THERMISTOR >
TH101	1-808-956-11	THERMISTOR, POSITIVE

MISCELLANEOUS

HE1	8-825-772-01	ESF194-62G (ERASE HEAD)
HRP1	1-543-725-11	HEAD (RECORD PLAYBACK)
M1	1-541-738-11	MOTOR
MIC1	1-542-136-11	MICROPHONE, ELECTRET CONDEDSER
SP1	1-503-293-00	SPEAKER

ACCESSORY & PACKING MATERIAL

	3-343-905-01	CUSHION, 2 GANG
	3-358-325-01	CASE, CARRYING
*	3-365-733-01	INDIVIDUAL CARTON
	3-752-697-11	MANUAL, INSTRUCTION (Canadian, AEP, UK, E) (ENGLISH/FRENCH)
	3-752-697-21	MANUAL, INSTRUCTION (US) (ENGLISH)
	X-3338-703-1	STRAP ASSY

SCREW

#1	7-627-850-67	SCREW, PRECISION +P 1.4X4
#2	7-627-551-67	SCREW, PRECISION +P 1.4X3.5