

TCM-453V/454VK

SERVICE MANUAL

Ver 1.1 1998. 3



Photo: TCM-454VK

*US Model
Canadian Model
AEP Model
(TCM-453V/454VK)*

*E Model
East European Model
Chinese Model
(TCM-453V)*

Model Name Using Similar Mechanism	NEW
Tape Transport Mechanism Type	MT-453V-118

SPECIFICATIONS

Recording system

2-track 1 channel monaural

Frequency range

250-6,300Hz

Speaker

Approx. 3.6 cm (1⁷/₁₆ in.) dia.

Power output

300mW (at 10 % harmonic distortion)

Input

Microphone input jack (minijack) sensitivity 0.14 mV for 3 kilohms or lower impedance microphone

Output

Earphone jack (minijack) for 8 - 300 ohms earphone

Variable range of the tape speed

from +30% to -15%

Power requirements

- Two size R6 (AA) batteries (not supplied): 3V DC
 - Two NC-AA rechargeable batteries (1.2 V) (supplied to TCM-454VK)
- DC IN 3 V jack accepts:
- Sony AC power adaptor (supplied to TCM-454VK) or AC-E30HG AC power adaptor (not supplied) suitable in the country where the unit is to be used.

Dimensions (w/h/d) (incl. projecting parts and controls)

113 × 91 × 37 mm (4¹/₂ × 3⁵/₈ × 1¹/₂ in.)

Mass (not incl. batteries)

170g (6.0 oz.)

Supplied accessories

- Hand strap (1) (attached to the unit)
- AC power adaptor (1) (TCM-454VK)
- Battery charger adaptor (1) (TCM-454VK)
- Rechargeable batteries (TCM-454VK) (2)
- (Models for U.S.A. and Canada: NC-AA, 1.2V, 600mAh, Ni-Cd)
- (Model for Europe: NC-AA, 1.2V, 700mAh, Ni-Cd)

Design and specifications are subject to change without notice.

CASSETTE-CORDER



SONY®

SECTION 1

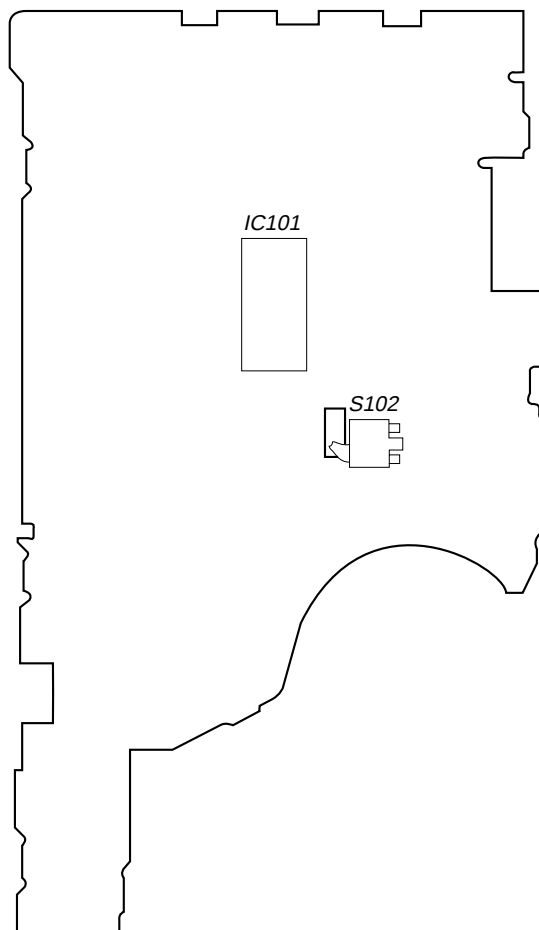
SERVICING NOTES

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In this set, the S102 (power) detects REC/PLAYBACK on. It is mounted on the MAIN board, and therefore the REC/PLAYBACK on cannot be detected with the MAIN board removed. When making an operation check and voltage check of mechanical deck with the MAIN board removed, fix the S102 at turn on.

[MAIN BOARD] (Conductor Side)



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.

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK $\triangle$ OR DOTTED LINE WITH MARK $\triangle$ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

ATTENTION AU COMPOSANT AYANT RAPPORT À LA SÉCURITÉ!

LES COMPOSANTS IDENTIFIÉS PAR UNE MARQUE $\triangle$ SUR LES DIAGRAMMES SCHÉMATIQUES ET LA LISTE DES PIÈCES SONT CRITIQUES POUR LA SÉCURITÉ DE FONCTIONNEMENT. NE REMPLACER CES COMPOSANTS QUE PAR DES PIÈCES SONY DONT LES NUMÉROS SONT DONNÉS DANS CE MANUEL OU DANS LES SUPPLÉMENTS PUBLIÉS PAR SONY.

SECTION 2 GENERAL

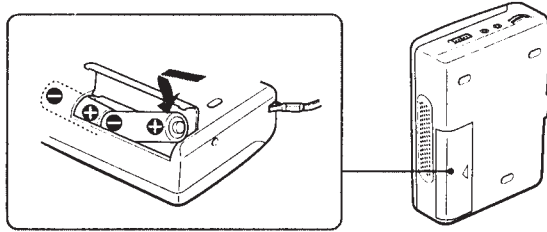
This section is extracted from instruction manual.

Preparing a Power Source

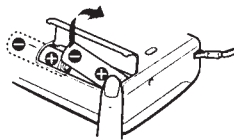
Choose one of the following power sources.

Dry Batteries

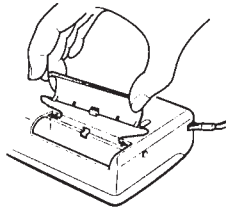
Make sure that nothing is connected to the DC IN 3V jack.



To take out the batteries

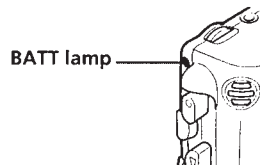


To attach the battery compartment lid if it is accidentally detached

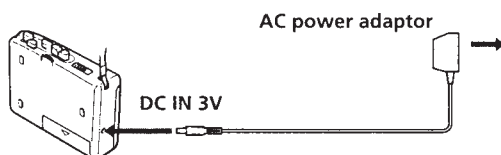


When to replace the batteries

Replace the batteries with new ones or charge the batteries (TCM-454VK only) when the BATT lamp dims.

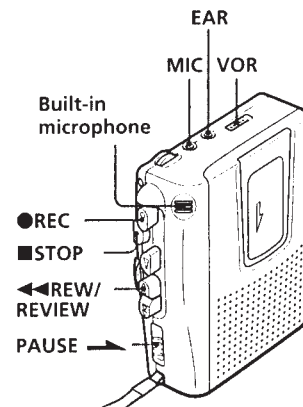
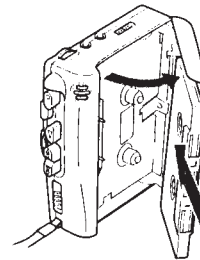


House Current

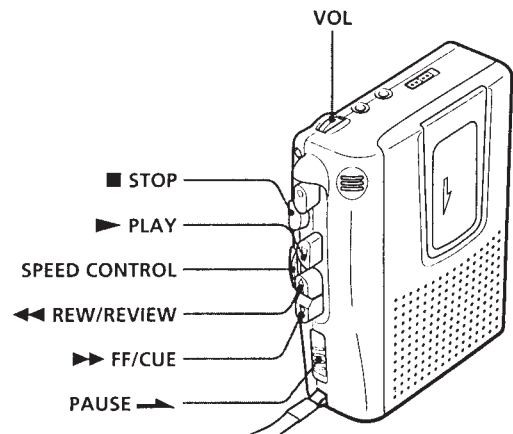


Recording

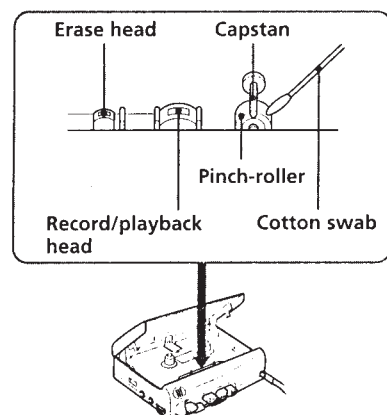
You can record right away with the built-in microphone. Make sure that nothing is connected to the MIC jack.



Playing a Tape



Maintenance



SECTION 3 DISASSEMBLY

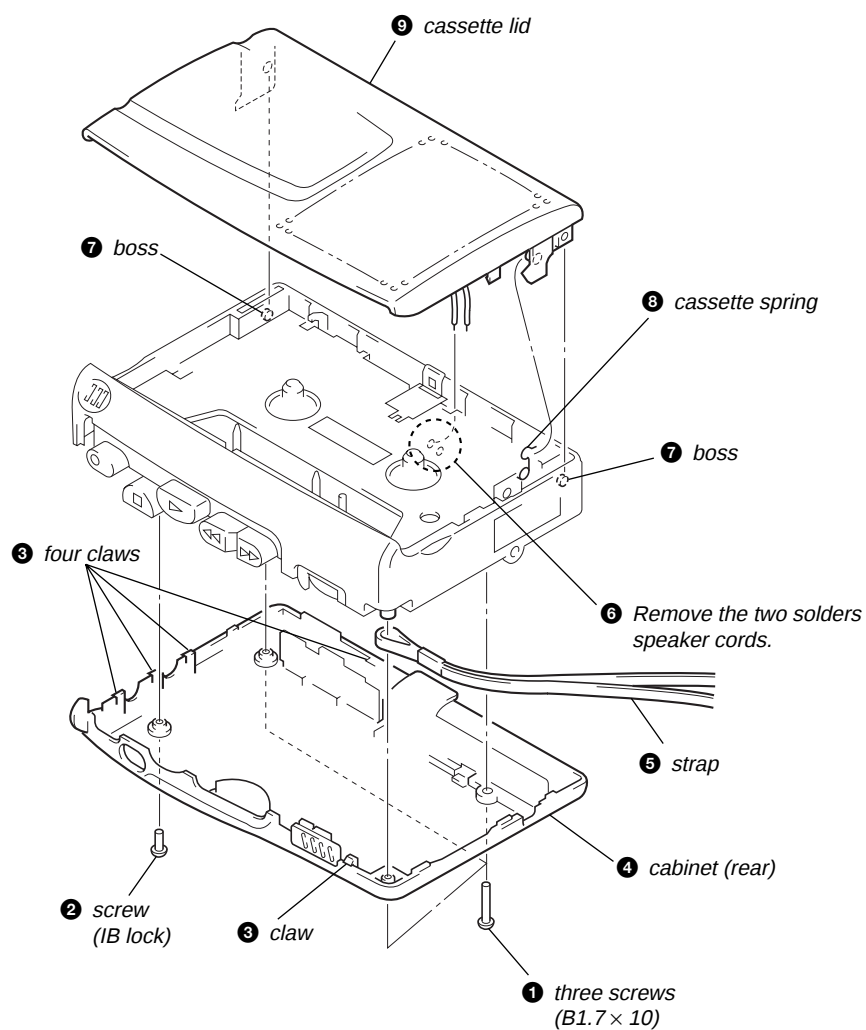
- This set can be disassembled in the order shown below.

SET → CABINET (REAR), CASSETTE LID → MAIN BOARD, MECHANISM DECK (MT-453V-118)

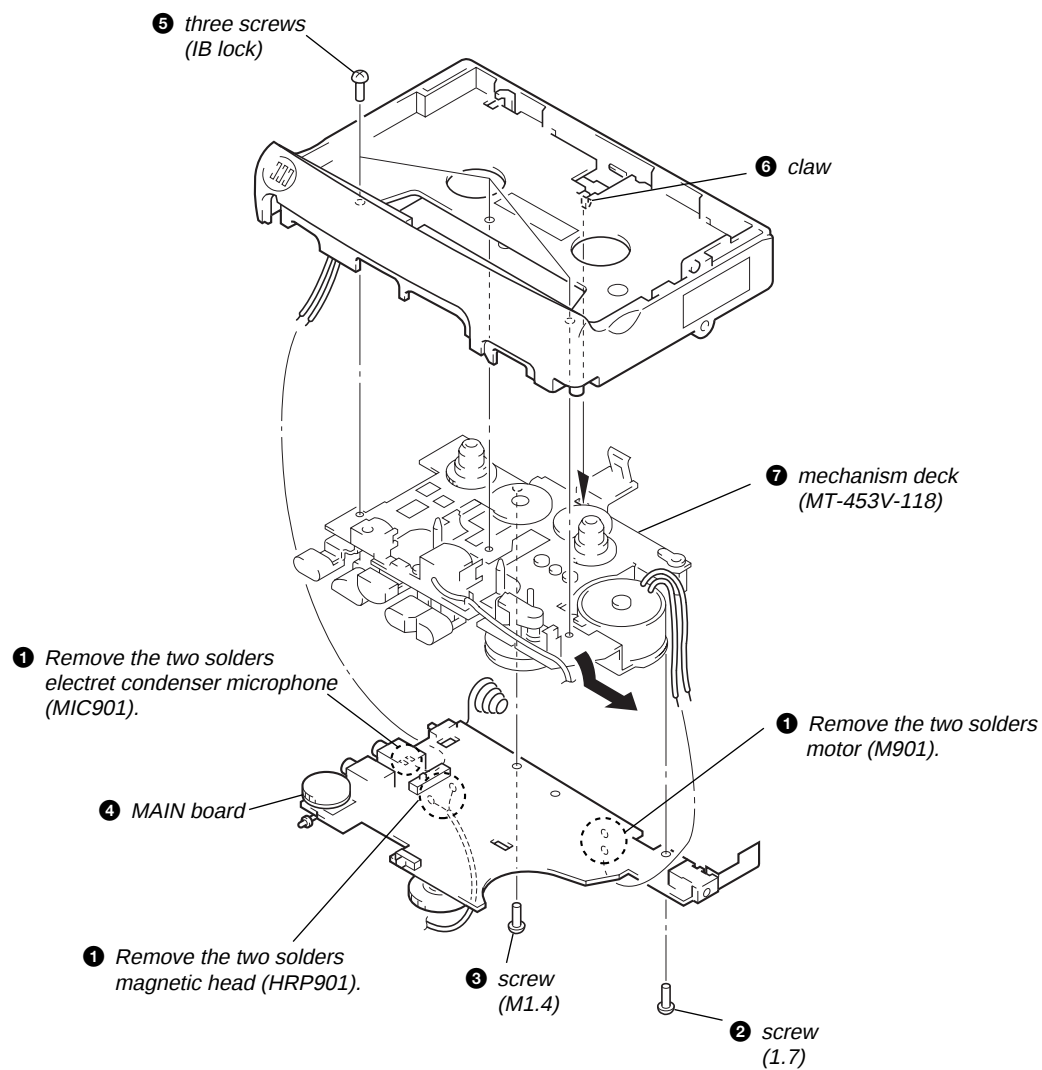
→ BELT

Note: Follow the disassembly procedure in the numerical order given.

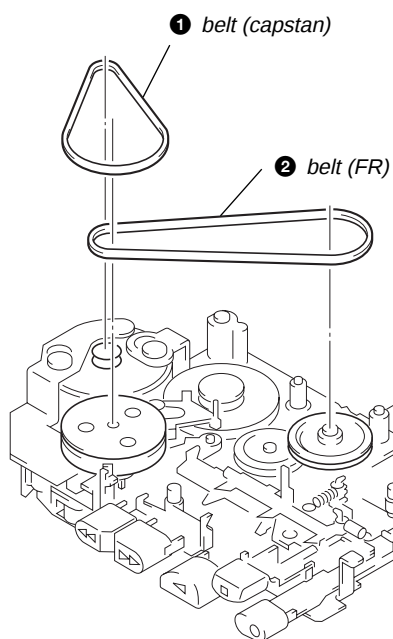
CABINET (REAR), CASSETTE LID



MAIN BOARD, MECHANISM DECK (MT-453V-118)

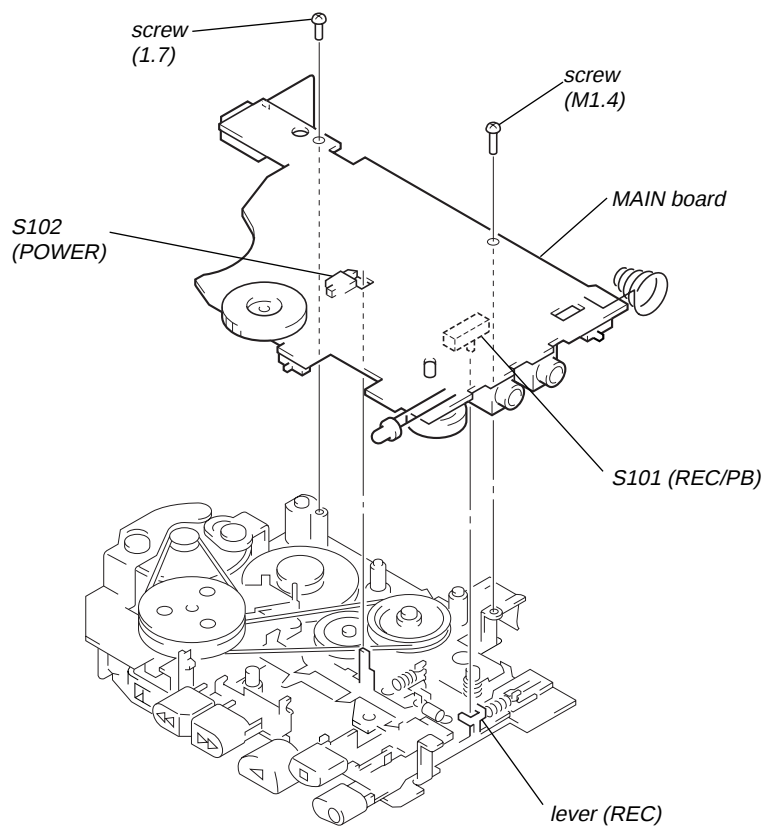


BELT



INSTALLATION MAIN BOARD

On installation MAIN board, adjust to the S101 and the S102.



SECTION 4

MECHANICAL ADJUSTMENTS

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

record/playback head	pinch roller
erase head	rubber belt
capstan	idlers
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. After the adjustments, apply suitable locking compound to the parts adjusted.
5. The adjustments should be performed with the rated power supply voltage (2.5 V) unless otherwise noted.

Torque Measurement

Mode	Torque Meter	Meter Reading
FWD	CQ-102C	more than 20 g•cm (more than 0.28 oz•inch)
Forward Back Tension		0.5 - 3 g•cm (0.007 - 0.04 oz•inch)
FF	CQ-201B	more than 50 g•cm (more than 0.69 oz•inch)
REW		

Tape Tension Measurement

Mode	Tension Meter	Meter Reading
FWD	CQ-403C	more than 50 g (more than 1.76 oz)

SECTION 5 ELECTRICAL ADJUSTMENTS

Precaution

- Supplied voltage: 2.5 V
- Switch and control position
VOR switch (S104): OFF
PAUSE switch (S105): OFF
VOL (RV101): mechanical mid
SPEED CONTROL (RV602): mechanical center

Test Tape

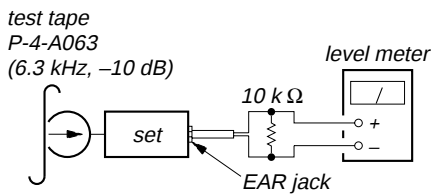
Type	Signal	Used for
P-4-A063	6.3 kHz, -10 dB	head azimuth adjustment
WS-48A	3 kHz, 0 dB	tape speed adjustment

0 dB=0.775 V

Record/Playback Head Azimuth Adjustment

Procedure:

Mode: playback

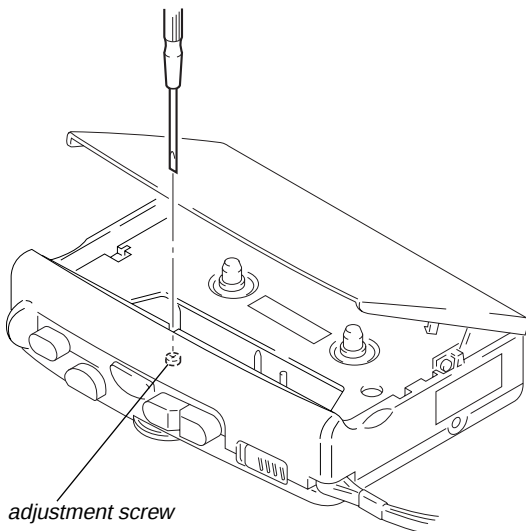


1. Turn the adjustment screw to obtain the maximum reading on level meter.

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

2. After the adjustment, lock the adjustment screw with suitable locking compound.

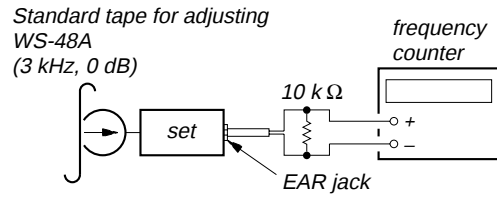
Adjustment Location:



Tape Speed Adjustment

Procedure:

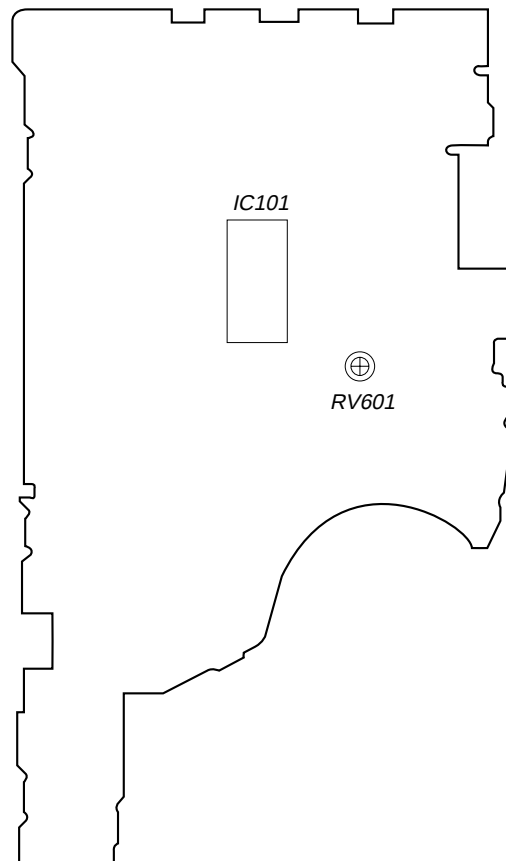
Mode: playback



1. Play back WS-48A (tape end part) and adjust RV601 so that the frequency counter reading becomes $3,000 \pm 15$ Hz.
2. Play back WS-48A tape the beginning and the end part, check that the frequency counter reading is within same standard of step1.

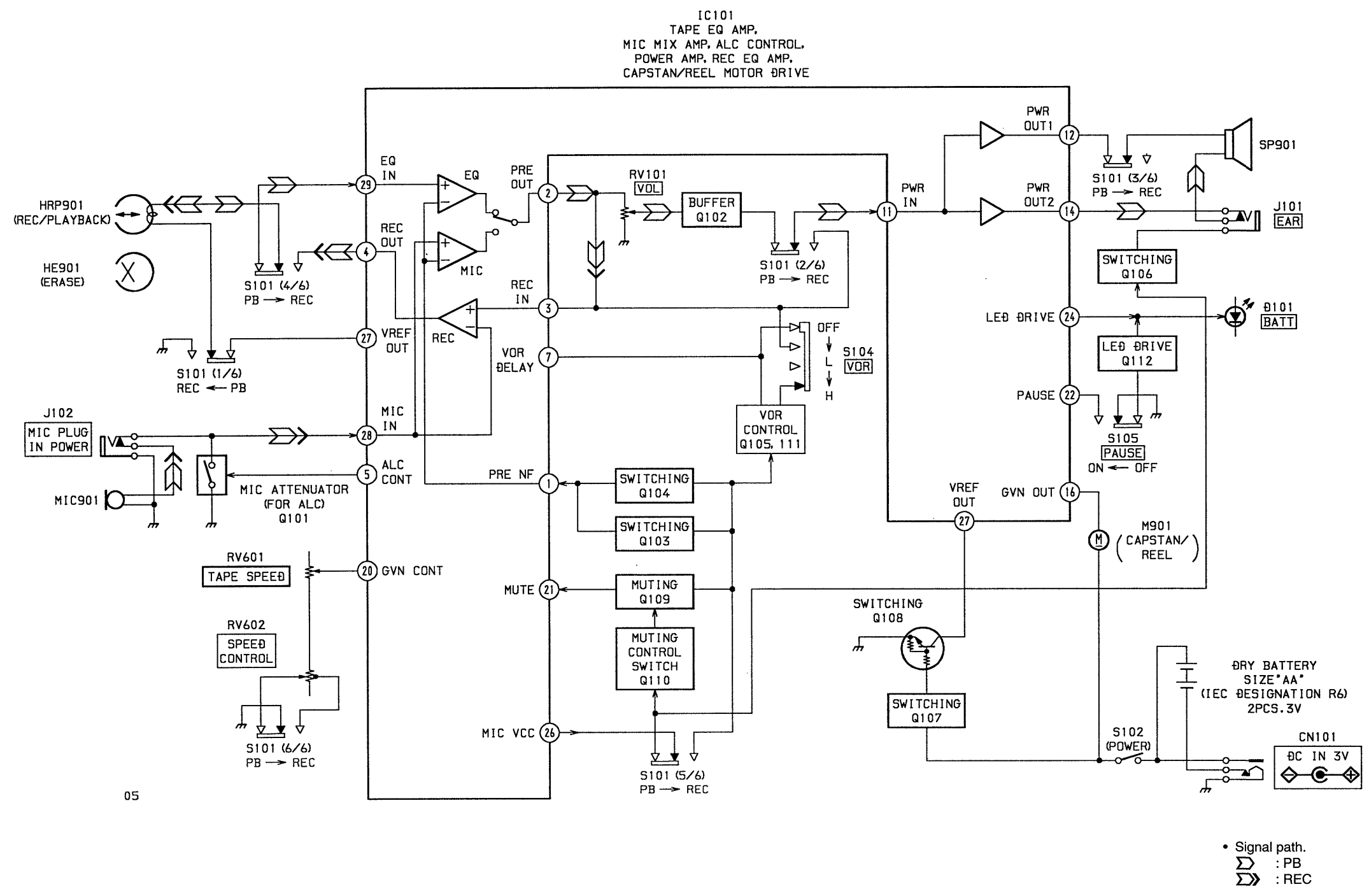
Adjustment Location:

[MAIN BOARD] (Conductor side)



SECTION 6
DIAGRAMS

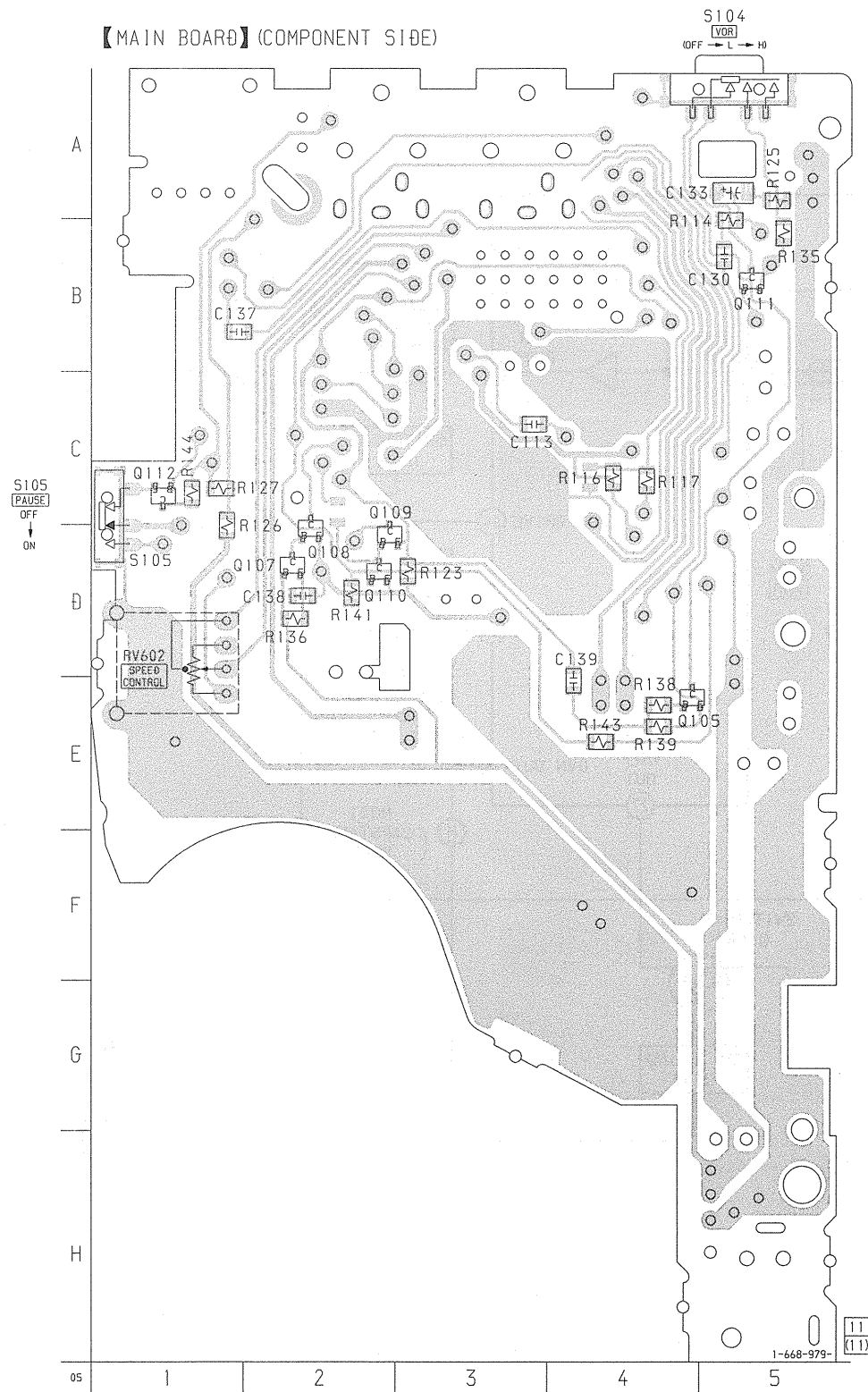
6-1. BLOCK DIAGRAM



6-2. PRINTED WIRING BOARD

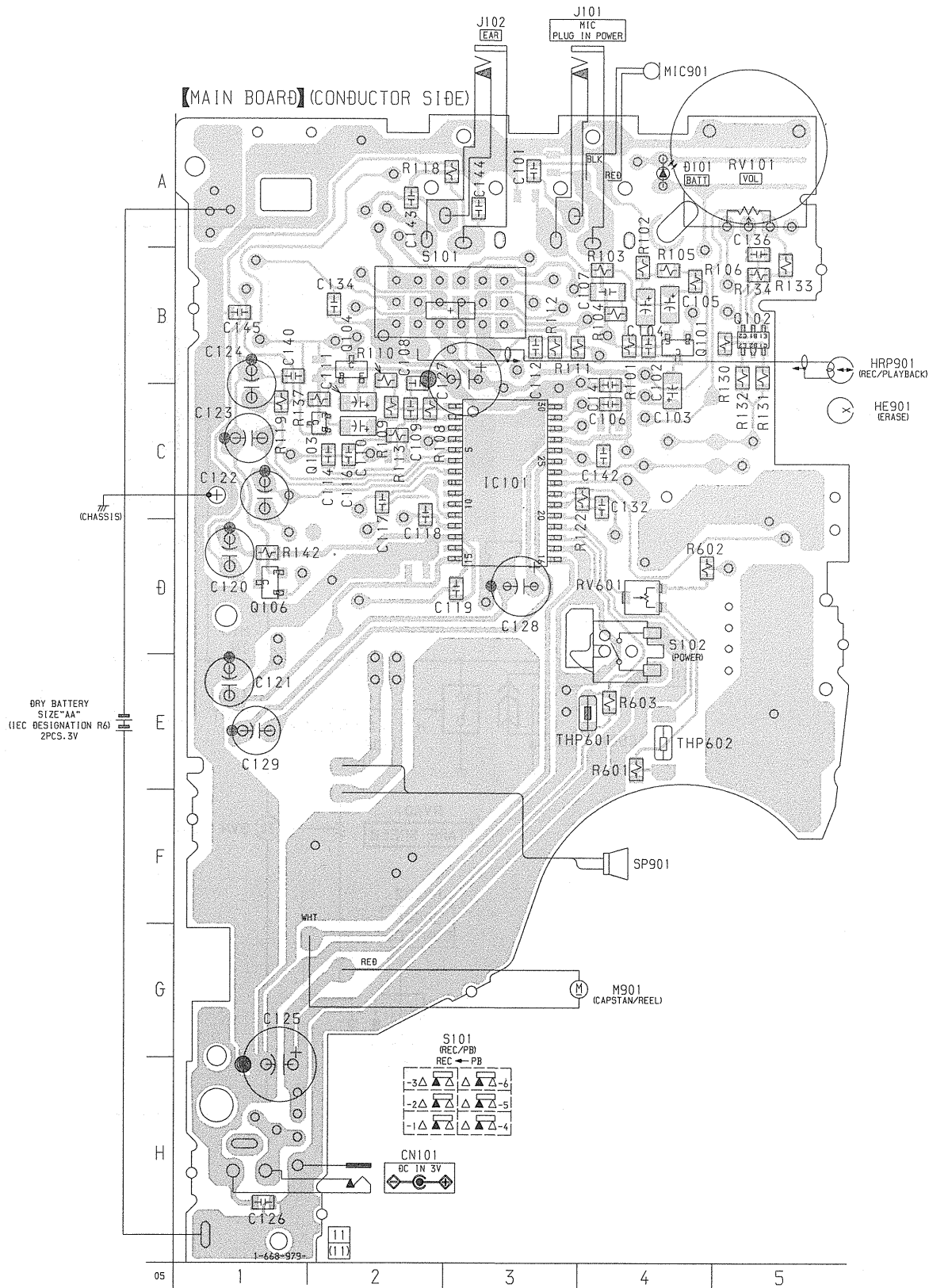
• Semiconductor Location

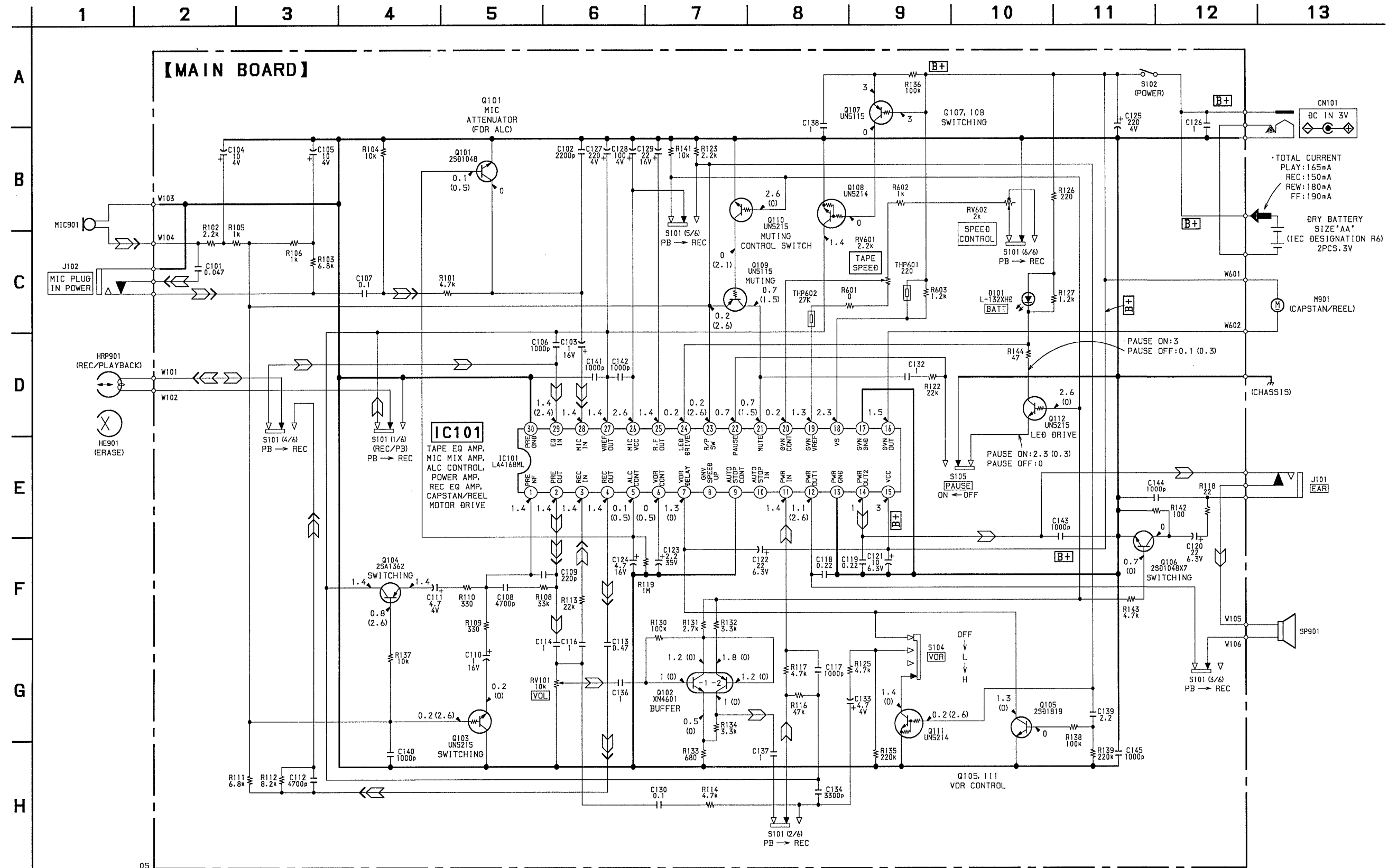
Ref. No.	Location
Q105	E-4
Q107	D-2
Q108	D-2
Q109	D-2
Q110	D-2
Q111	B-5
Q112	C-1



• Semiconductor Location

Ref. No.	Location
D101	A-4
IC101	C-3
Q101	B-4
Q102	B-5
Q103	C-2
Q104	B-2
Q106	D-1



**Note on Schematic Diagram:**

- All capacitors are in μF unless otherwise noted. pF : μpF
- 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and $\frac{1}{4}\text{W}$ or less unless otherwise specified.
- : panel designation.
- B+ : B+ Line.
- : adjustment for repair.
- Power voltage is dc 3 V and fed with regulated dc power supply from battery terminal.
- Voltages are dc with respect to ground under no-signal conditions.

no mark : PB

() : REC

• Voltages are taken with a VOM (Input impedance 10 M Ω). Voltage variations may be noted due to normal production tolerances.

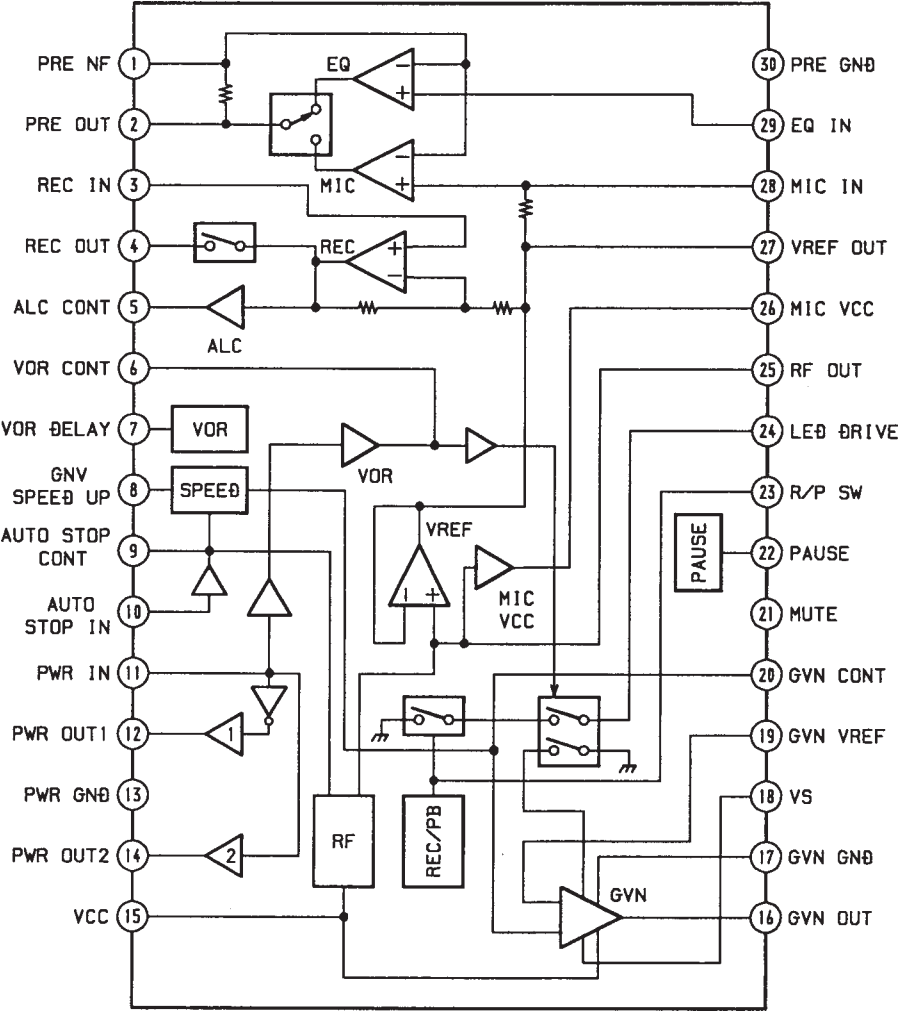
• Signal path.

 : PB : REC

SECTION 7
EXPLODED VIEWS

• IC Block Diagram

IC101 LA4168ML-TE-L

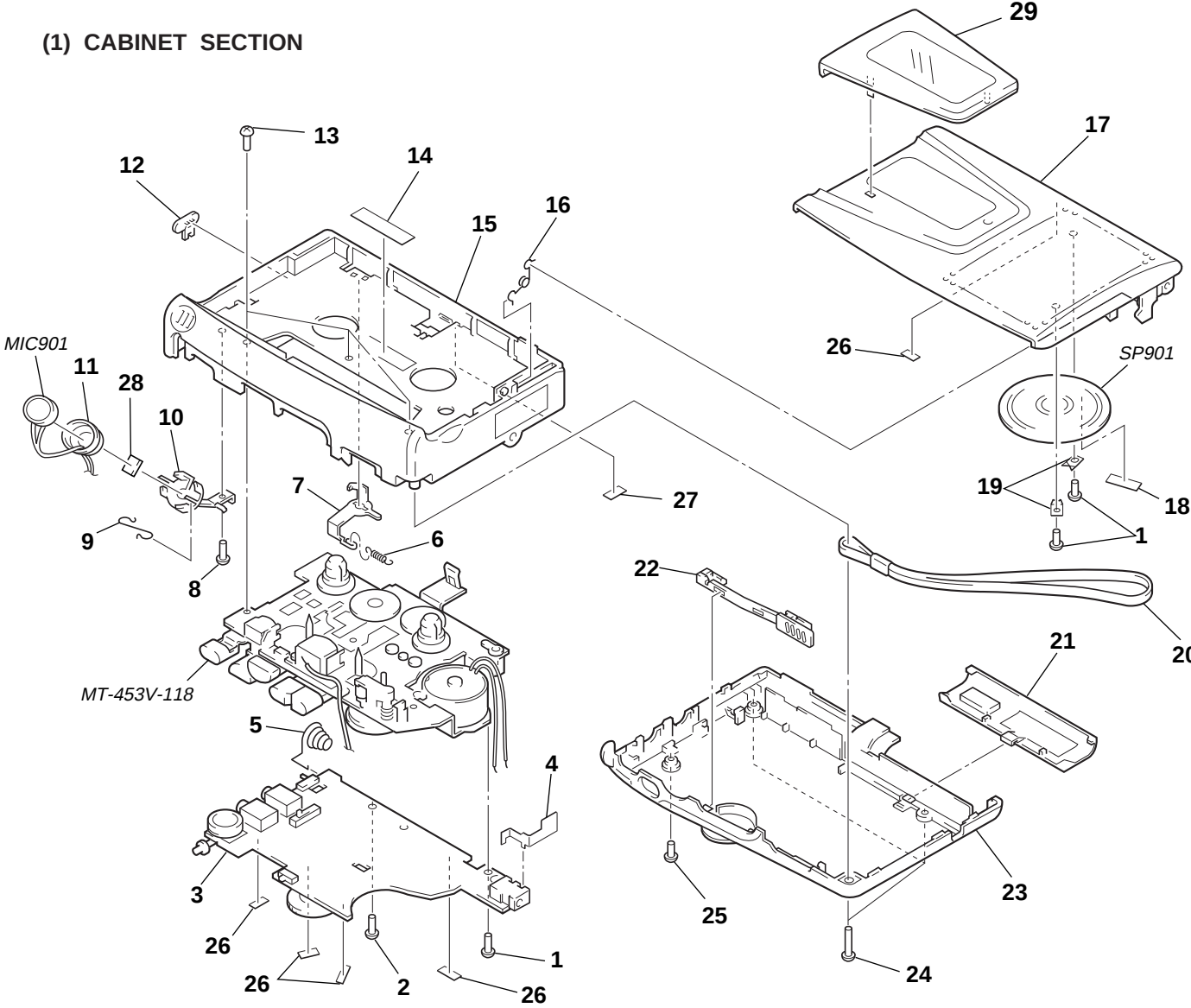


NOTE:

- -XX and -X mean standardized parts, so they may have some difference from the original one.
- Color Indication of Appearance Parts
Example:
KNOB, BALANCE (WHITE) . . . (RED)
Parts Color Cabinet's Color

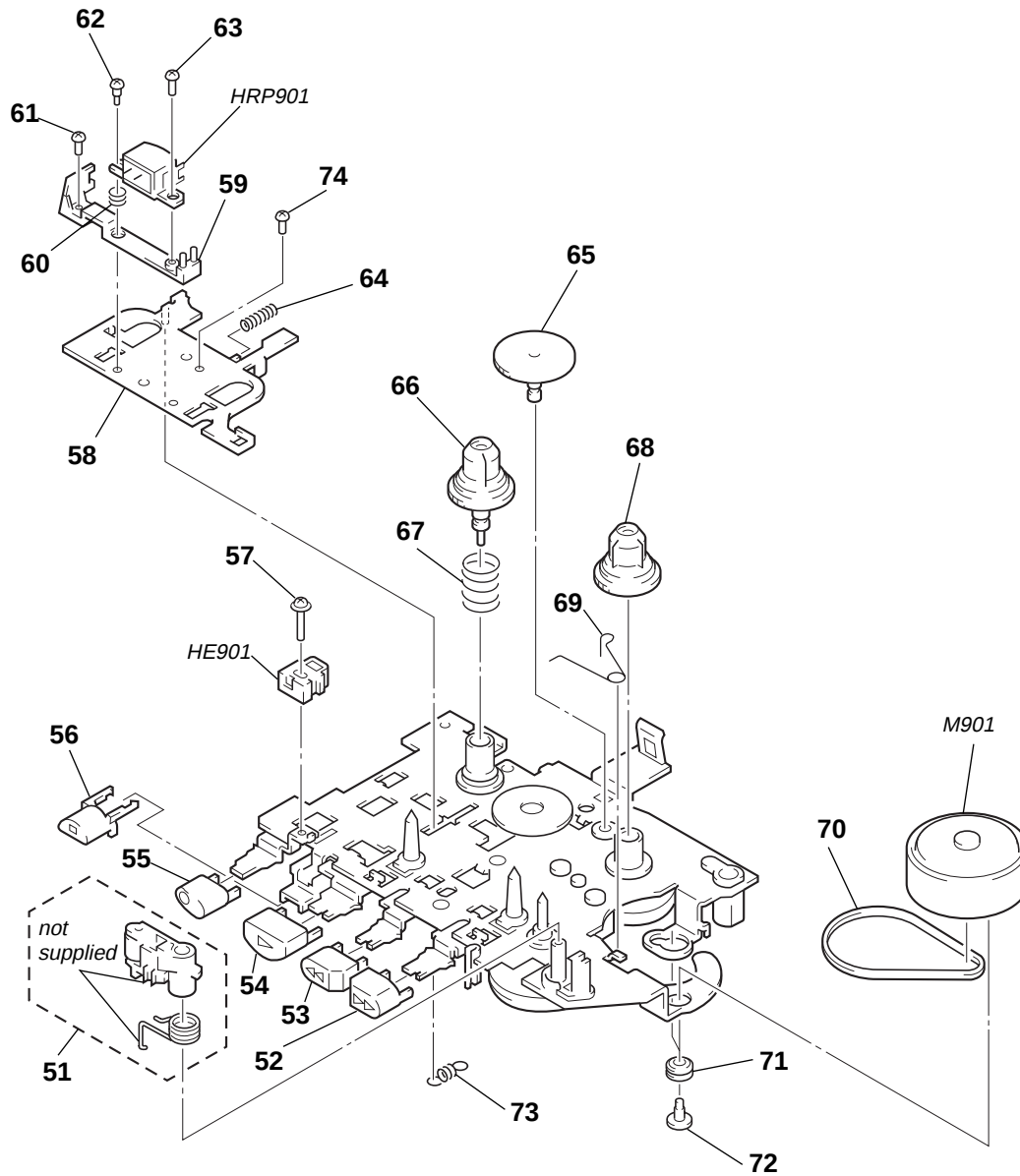
- Items marked “*” are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.
- Accessories and packing materials are given in the last of the electrical parts list.

(1) CABINET SECTION



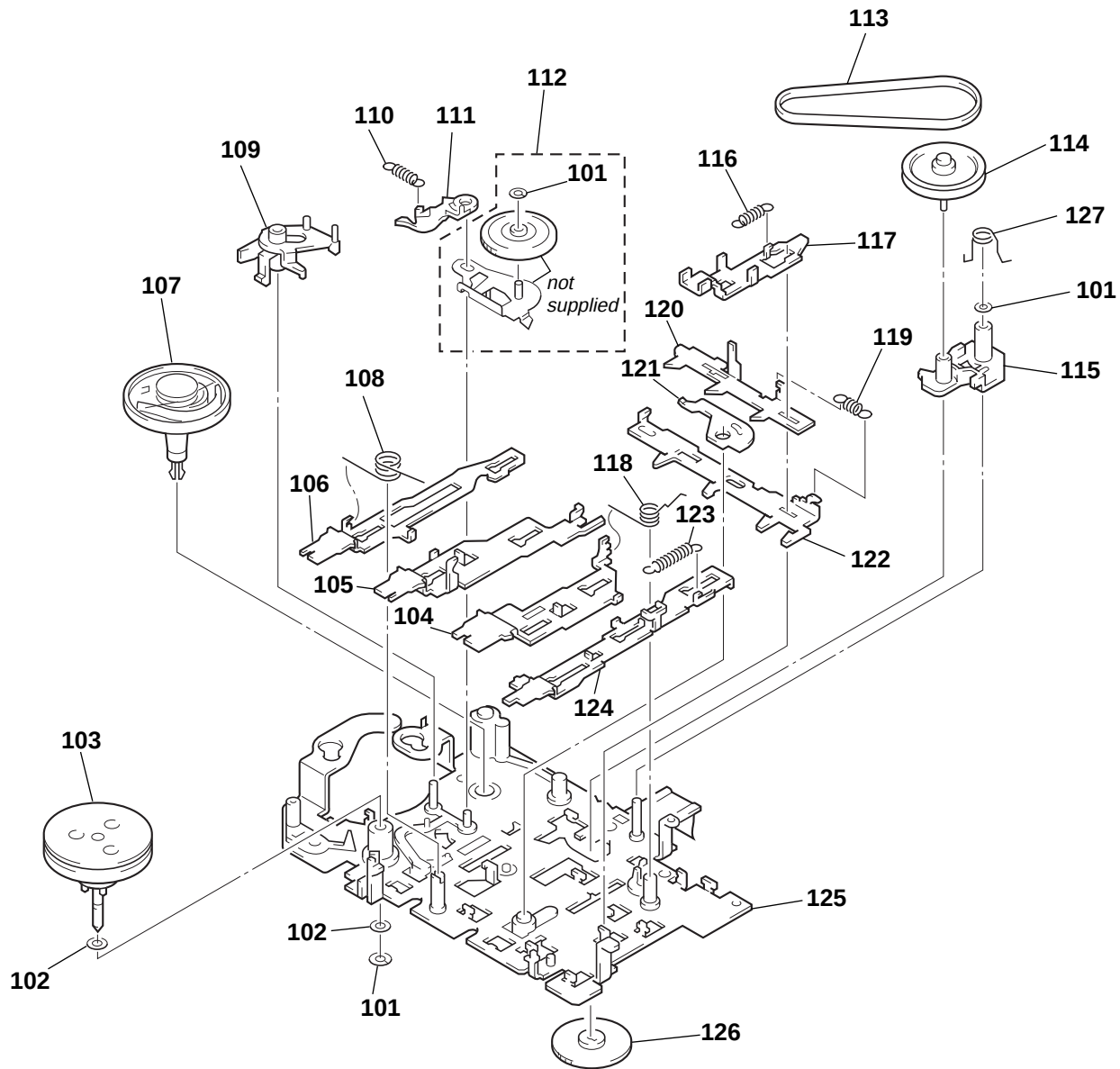
Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
1	3-318-382-31	SCREW (1.7), TAPPING		16	3-924-739-01	SPRING, CASSETTE	
2	3-345-648-51	SCREW (M1.4), TOOTHED LOCK		17	3-018-520-01	LID, CASSETTE	
* 3	A-3021-013-A	MAIN BOARD, COMPLETE		18	4-017-441-01	CUSHION (B)	
4	3-924-741-01	TERMINAL, PLUS		* 19	3-924-757-01	BRACKET (SPEAKER)	
5	3-924-750-01	TERMINAL, MINUS		20	3-924-761-01	STRAP	
6	3-924-744-01	SPRING(CLAW DETECTION),TENSION		21	X-3375-808-1	LID ASSY, BATTERY CASE	
7	3-924-743-01	CLAW, ERASING PROTECTION		22	3-924-747-11	KNOB (PAUSE)	
8	3-334-565-41	SCREW (B1.7), TAPPING		23	3-019-597-01	CABINET (REAR)	
9	3-924-745-01	BAR, GROUND		24	3-334-565-11	SCREW (B1.7X10), TAPPING	
10	3-924-740-01	HOLDER, MICROPHONE		25	3-939-590-44	SCREW (IB LOCK)	
11	3-924-763-01	CUSHION (MICROPHONE)		26	3-831-441-99	SPACER, KNOB	
12	3-924-742-01	KNOB (VOR)		* 27	3-592-351-01	PAPER, VIBRATION PROOF (B)	
13	4-969-980-21	SCREW (IB LOCK)		28	3-831-441-11	CUSHION, CABINET UPPER 10X7X0.5	
14	3-578-101-41	PLATE, ORNAMENTAL		29	3-018-521-01	WINDOW (CASSETTE)	
15	3-019-364-01	CABINET (FRONT) (453V)		MIC901	1-542-136-11	MICROPHONE, ELECTRET CONDEDSER (MIC)	
15	3-019-364-11	CABINET (FRONT) (454VK)		SP901	1-505-838-11	SPEAKER (3.6CM)	

(2) MECHANISM DECK SECTION-1
(MT-453V-118)



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
51	X-3370-386-1	PINCH ROLLER ASSY		65	3-924-637-01	GEAR (FF)	
52	3-925-146-01	BUTTON (FF) (▶▶)		66	3-924-673-01	GEAR (S REEL)	
53	3-925-147-01	BUTTON (REW) (◀◀)		67	3-924-674-01	SPRING (B. T), COMPRESSION	
54	3-925-148-01	BUTTON (PLAY) (▶)		68	3-924-641-01	GEAR (T REEL)	
55	3-925-145-01	BUTTON (REC) (●)		69	3-924-726-01	SPRING (M GROUND), TORSION	
56	3-924-738-01	BUTTON (STOP) (■)		70	3-924-681-01	BELT (CAPSTAN)	
57	3-703-925-21	SCREW (M1.4)		71	3-925-109-01	CUSHION (MOTOR)	
58	3-924-625-01	LEVER (HEAD)		72	3-925-108-01	SCREW (MOTOR)	
59	3-924-645-01	BRACKET (HEAD)		73	3-924-644-01	SPRING (POWER TENSION), TENSION	
60	3-924-685-01	SPRING (AZIMUTH), COMPRESSION		74	3-348-160-11	SCREW (M1.4X1.6), PRECISION PAN	
61	3-704-197-91	SCREW (M1.4X1.8), LOCKING		HE901	1-500-515-11	HEAD, MAGNETIC (ERASE)	
62	3-375-135-01	SCREW (1.4), SPECIAL		HRP901	1-500-073-11	HEAD, MAGNETIC (RECORD/PLAYBACK)	
63	3-376-177-01	SCREW (M1.4X3.8)		M901	1-698-588-11	MOTOR, DC (CAPSTAN/REEL)	
64	3-925-107-01	SPRING (IDLER), COMPRESSION					

(3) MECHANISM DECK SECTION-2
(MT-453V-118)



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
101	3-321-483-11	RING, RETAINING (0.25)		115	3-924-628-01	LEVER (FR)	
102	3-315-495-31	WASHER		116	3-924-633-01	SPRING (STOP), TENSION	
103	X-3370-384-1	FLYWHEEL ASSY		117	3-924-622-01	LEVER (STOP)	
104	3-924-623-01	LEVER (PLAY)		118	3-924-643-01	SPRING (PR), TORSION	
105	3-924-621-01	LEVER (REW)		119	3-924-684-01	SPRING (LOCK PLATE), TENSION	
106	3-924-620-01	LEVER (FF)		120	3-924-619-01	LEVER (SW)	
107	X-3370-388-1	TABLE ASSY, FELT		121	3-924-639-01	LEVER (CR)	
108	3-924-642-01	SPRING (FR), TORSION		122	3-924-618-01	LEVER (LOCK)	
109	3-924-629-01	LEVER (DETECTION)		123	3-925-208-01	SPRING (REC), TENSION	
110	3-925-207-01	SPRING (S. OFF), TENSION		124	3-924-624-01	LEVER (REC)	
111	3-924-630-01	LEVER (S.OFF)		125	X-3370-227-1	CHASSIS ASSY	
112	X-3370-387-1	LEVER ASSY, IDLER		126	3-924-613-01	GEAR (FR)	
113	3-924-682-01	BELT (FR)		127	3-024-378-01	SPRING (FR LEVER), TORSION	
114	X-3370-385-1	PULLEY (FR) ASSY					

SECTION 8 ELECTRICAL PARTS LIST

MAIN

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.
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS
All resistors are in ohms.
METAL: Metal-film resistor.
METAL OXIDE: Metal oxide-film resistor.
F: nonflammable
- Abbreviation
CH: Chinese
CND: Canadian
EE: East European

- Items marked “*” are not stocked since they are seldom required for routine service.
Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS
In each case, u: μ , for example:
uA. . : μ A. . uPA. . : μ PA. .
uPB. . : μ PB. . uPC. . : μ PC. .
uPD. . : μ PD. .
- CAPACITORS
uF: μ F
- COILS
uH: μ H

The components identified by mark Δ or dotted line with mark Δ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une marque Δ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

When indicating parts by reference number, please include the board.

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
*	A-3021-013-A	MAIN BOARD, COMPLETE *****		C140	1-163-009-11	CERAMIC CHIP 0.001uF 10% 50V	
	3-924-741-01	TERMINAL, PLUS		C141	1-163-009-11	CERAMIC CHIP 0.001uF 10% 50V	
		< CAPACITOR >		C142	1-163-009-11	CERAMIC CHIP 0.001uF 10% 50V	
C101	1-163-809-11	CERAMIC CHIP 0.047uF 10% 25V		C143	1-163-009-11	CERAMIC CHIP 0.001uF 10% 50V	
C102	1-164-161-11	CERAMIC CHIP 0.0022uF 10% 100V		C144	1-163-009-11	CERAMIC CHIP 0.001uF 10% 50V	
C103	1-135-091-00	TANTALUM CHIP 1uF 20% 16V		C145	1-163-009-11	CERAMIC CHIP 0.001uF 10% 50V	
C104	1-135-201-11	TANTALUM CHIP 10uF 20% 4V				< JACK >	
C105	1-135-201-11	TANTALUM CHIP 10uF 20% 4V		CN101	1-580-919-11	JACK,DC(POLARITY UNIFIED TYPE) (DC IN 3V)	
C106	1-163-009-11	CERAMIC CHIP 0.001uF 10% 50V				< DIODE >	
C107	1-163-077-00	CERAMIC CHIP 0.1uF 10% 25V		D101	8-719-057-27	DIODE L-132XHD (BATT)	
C108	1-163-017-00	CERAMIC CHIP 0.0047uF 5% 50V				< IC >	
C109	1-163-001-11	CERAMIC CHIP 220PF 10% 50V		IC101	8-759-492-49	IC LA4168ML-TE-L	
C110	1-135-099-11	TANTALUM CHIP 1uF 20% 16V				< JACK >	
C111	1-135-151-21	TANTALUM CHIP 4.7uF 20% 4V		J101	1-766-847-11	JACK (EAR)	
C112	1-163-017-00	CERAMIC CHIP 0.0047uF 5% 50V		J102	1-766-847-11	JACK (MIC PULG IN POWER)	
C113	1-164-005-11	CERAMIC CHIP 0.47uF 25V				< TRANSISTOR >	
C114	1-164-346-11	CERAMIC CHIP 1uF 16V		Q101	8-729-800-37	TRANSISTOR 2SD1048-X7	
C116	1-164-346-11	CERAMIC CHIP 1uF 16V		Q102	8-729-402-84	TRANSISTOR XN4601	
C117	1-163-009-11	CERAMIC CHIP 0.001uF 10% 50V		Q103	8-729-420-50	TRANSISTOR UN5215	
C118	1-164-489-11	CERAMIC CHIP 0.22uF 10% 16V		Q104	8-729-230-72	TRANSISTOR 2SA1362YG	
C119	1-164-489-11	CERAMIC CHIP 0.22uF 10% 16V		Q105	8-729-230-63	TRANSISTOR 2SC4116-YG	
C120	1-126-153-11	ELECT 22uF 20% 6.3V		Q106	8-729-800-37	TRANSISTOR 2SD1048-X7	
C121	1-126-157-11	ELECT 10uF 20% 16V		Q107	8-729-420-53	TRANSISTOR UN5115	
C122	1-126-153-11	ELECT 22uF 20% 6.3V		Q108	8-729-402-93	TRANSISTOR UN5214-TX	
C123	1-124-257-00	ELECT 2.2uF 20% 35V		Q109	8-729-420-53	TRANSISTOR UN5115	
C124	1-126-163-11	ELECT 4.7uF 20% 16V		Q110	8-729-420-50	TRANSISTOR UN5215	
C125	1-124-434-00	ELECT 220uF 20% 4V		Q111	8-729-402-93	TRANSISTOR UN5214-TX	
C126	1-164-346-11	CERAMIC CHIP 1uF 16V		Q112	8-729-420-51	TRANSISTOR UN5215-(TX)	
C127	1-124-434-00	ELECT 220uF 20% 4V				< RESISTOR >	
C128	1-124-433-00	ELECT 100uF 20% 4V		R101	1-216-065-00	RES,CHIP 4.7K 5% 1/10W	
C129	1-126-153-11	ELECT 22uF 20% 16V		R102	1-216-057-00	METAL CHIP 2.2K 5% 1/10W	
C130	1-163-038-00	CERAMIC CHIP 0.1uF 25V		R103	1-216-069-00	METAL CHIP 6.8K 5% 1/10W	
C132	1-164-346-11	CERAMIC CHIP 1uF 16V		R104	1-216-073-00	METAL CHIP 10K 5% 1/10W	
C133	1-135-151-21	TANTALUM CHIP 4.7uF 20% 4V		R105	1-216-049-11	RES,CHIP 1K 5% 1/10W	
C134	1-164-182-11	CERAMIC CHIP 0.0033uF 10% 50V					
C136	1-164-346-11	CERAMIC CHIP 1uF 16V					
C137	1-164-346-11	CERAMIC CHIP 1uF 16V					
C138	1-164-346-11	CERAMIC CHIP 1uF 16V					
C139	1-164-505-11	CERAMIC CHIP 2.2uF 16V					

MAIN

Ref. No.	Part No.	Description	Remark		
R106	1-216-049-11	RES,CHIP	1K	5%	1/10W
R108	1-216-085-00	METAL CHIP	33K	5%	1/10W
R109	1-216-037-11	METAL CHIP	330	5%	1/10W
R110	1-216-037-11	METAL CHIP	330	5%	1/10W
R111	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R112	1-216-071-00	METAL CHIP	8.2K	5%	1/10W
R113	1-216-081-00	METAL CHIP	22K	5%	1/10W
R114	1-216-065-00	RES,CHIP	4.7K	5%	1/10W
R116	1-216-089-00	RES,CHIP	47K	5%	1/10W
R117	1-216-065-00	RES,CHIP	4.7K	5%	1/10W
R118	1-216-009-00	METAL CHIP	22	5%	1/10W
R119	1-216-121-00	RES,CHIP	1M	5%	1/10W
R122	1-216-081-00	METAL CHIP	22K	5%	1/10W
R123	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R125	1-216-065-00	RES,CHIP	4.7K	5%	1/10W
R126	1-216-033-00	METAL CHIP	220	5%	1/10W
R127	1-216-051-11	METAL CHIP	1.2K	5%	1/10W
R130	1-216-097-00	RES,CHIP	100K	5%	1/10W
R131	1-216-059-00	METAL CHIP	2.7K	5%	1/10W
R132	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R133	1-216-045-00	METAL CHIP	680	5%	1/10W
R134	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R135	1-216-105-00	RES,CHIP	220K	5%	1/10W
R136	1-216-097-00	RES,CHIP	100K	5%	1/10W
R137	1-216-073-00	METAL CHIP	10K	5%	1/10W
R138	1-216-097-00	RES,CHIP	100K	5%	1/10W
R139	1-216-105-00	RES,CHIP	220K	5%	1/10W
R141	1-216-073-00	METAL CHIP	10K	5%	1/10W
R142	1-216-025-00	RES,CHIP	100	5%	1/10W
R143	1-216-065-00	RES,CHIP	4.7K	5%	1/10W
R144	1-216-017-11	RES,CHIP	47	5%	1/10W
R601	1-216-295-00	SHORT	0		
R602	1-216-049-11	RES,CHIP	1K	5%	1/10W
R603	1-216-051-11	METAL CHIP	1.2K	5%	1/10W

< VARIABLE RESISTOR >

RV101	1-225-597-11	RES, VAR, CARBON 10K (VOL)
RV601	1-223-584-11	RES, ADJ, CARBON 2.2K
RV602	1-225-598-11	RES, VAR, CARBON 2K (SPEED CONTROL)

< SWITCH >

S101	1-771-321-11	SWITCH, SLIDE (REC/PB)
S102	1-771-092-21	SWITCH, PUSH (1 KEY) (POWER)
S104	1-692-605-31	SWITCH, SLIDE (VOR)
S105	1-572-922-11	SWITCH, SLIDE (PAUSE)

< THERMISTOR(POSITIVE) >

THP601	1-810-007-11	THERMISTOR, POSITIVE
THP602	1-803-117-21	THERMISTOR, POSITIVE

Ref. No.	Part No.	Description	Remark
		MISCELLANEOUS	

HE901	1-500-515-11	HEAD, MAGNETIC (ERASE)	
HRP001	1-500-073-11	HEAD, MAGNETIC (RECORD/PLAYBACK)	
M901	1-698-588-11	MOTOR, DC (CAPSTAN/REEL)	
MIC901	1-542-136-11	MICROPHONE, ELECTRET CONDEDSER (MIC)	
SP901	1-505-838-11	SPEAKER (3.6CM)	

		ACCESSORIES & PACKING MATERIALS	

△	1-475-070-11	ADAPTOR, AC (AC-E351) (454VK: AEP)	
△	1-528-405-31	ADAPTOR, BATTERY CHARGE	
		(454VK: US, CND, AEP)	
△	1-693-073-21	ADAPTOR, AC (AC-E351) (454VK: US, CND)	
	3-862-202-11	MANUAL, INSTRUCTION (ENGLISH)	
		(453V: US, CND, E, CH/454VK: US, CND)	
	3-862-202-21	MANUAL, INSTRUCTION (FRENCH)	
		(453V: CND, AEP, E/454VK: CND, AEP)	
	3-862-202-31	MANUAL, INSTRUCTION (ENGLISH, SPANISH, PORTUGUESE, GERMAN) (453V: AEP, E, EE)	
	3-862-202-41	MANUAL, INSTRUCTION	
		(ITALIAN, DUTCH, SWEDISH, FINNISH)	
		(453V: AEP, E/454VK: AEP)	
	3-862-202-51	MANUAL, INSTRUCTION	
		(SPANISH, PORTUGUESE, KOREAN, CHINESE)	
		(453V: E)	
	3-862-202-61	MANUAL, INSTRUCTION (CHINESE)	
		(453V: CH)	
	3-862-202-71	MANUAL, INSTRUCTION (POLISH, KOREAN, HUNGARIAN, CZECH) (453V: EE)	

The components identified by mark △ or dotted line with mark △ are critical for safety. Replace only with part number specified.

Les composants identifiés par une marque △ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.