

TCS-30D

SERVICE MANUAL

Ver 1.1 2000.11
With SUPPLEMENT-1
(9-927-684-81)



*US Model
Canadian Model
AEP Model
E Model
Chinese Model*

Model Name Using Similar Mechanism	NEW
Tape Transport Mechanism Type	MT-30D-118

SPECIFICATIONS

Specifications

Recording system
4-track 2 channel stereo

Tape speed
4.8 cm/s or 2.4 cm/s

Frequency range
Recording: 250-6,300Hz
Playback: 50-14,000Hz
using normal (TYPE I) cassette
(with REC TIME switch at
"NORMAL")

Speaker
Approx. 3.6 cm ($1\frac{7}{16}$ in.) dia.

Power output
350 mW (at 10 % harmonic
distortion)

Input
Microphone input jack (minijack)
sensitivity 0.3 mV for 3 kilo-ohms
or lower impedance microphone

Output
⌚ (headphones) jack (minijack) for
8-300 ohms headphones

Variable range of the tape speed
From approx. +30% to -15% (with
REC TIME switch at "NORMAL")

Power requirements
3 V DC batteries R6 (AA) × 2/
External DC 3 V power sources

**Dimensions (w/h/d) (incl. projecting
parts and controls)**
Approx. 91 × 112 × 39.2 mm
($3\frac{5}{8} \times 4\frac{1}{2} \times 1\frac{9}{16}$ in.)

Mass
Approx. 170 g (6.0 oz.)

Supplied accessories
Headphones (1)
Stereo microphones (1)

Battery life (Approx. hours) (EIAJ*)

	Sony alkaline LR6 (SG)	Sony R6P (SR)
Playback	9	2
Recording	12	3

* Measured value by the standard of
EIAJ (Electronic Industries
Association of Japan). (Using a Sony
HF series cassette tape)

Note

The battery life may shorten
depending on the operation of the
unit.

Design and specifications are subject
to change without notice.

STEREO CASSETTE-CORDER

SONY®

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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.

SECTION 1 SERVICING NOTES

THE OPERATION CHECK AND THE VOLTAGE CHECK WHEN THE MAIN BOARD REMOVED

This set detects which button of **[REC]**, **[PLAY]**, **[FF]**, or **[REW]** was pressed using the POWER switch (S303).

However, this button operation cannot be detected if the MAIN board is removed because the POWER switch (S303) is mounted on the MAIN board.

Therefore, if the operation check and the voltage check are performed with the MAIN board removed, the POWER switch (S303) must be fixed to ON state.

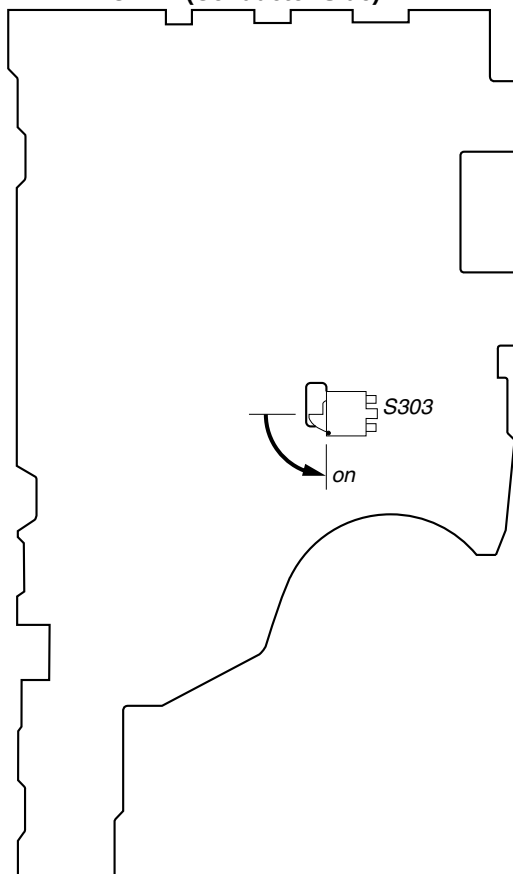
CHANGE THE SPECIFICATION (US Model Only)

For the mounted MAIN board (A-3021-325-A), the TAP101 and 201 patterns are opened.

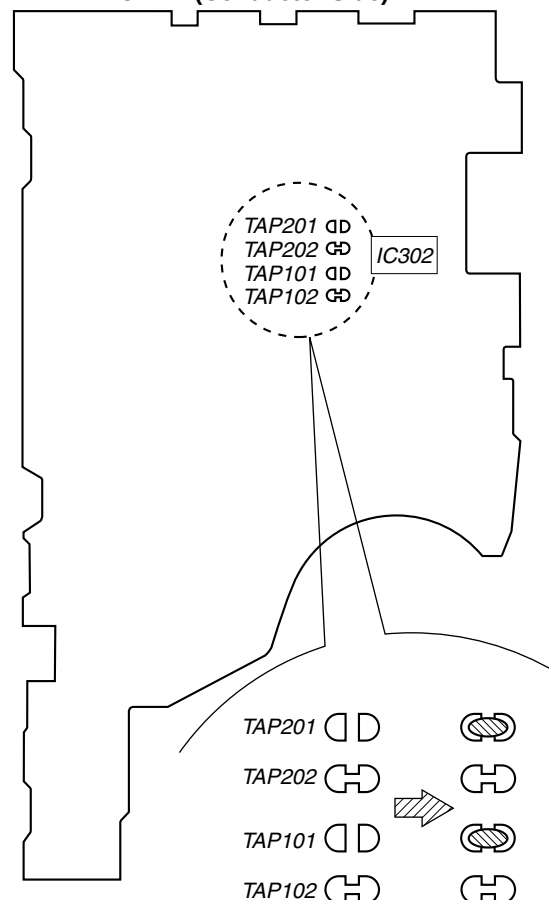
This specification is for the Canadian, AEP, E, and Chinese models.

Accordingly for the US model, short the TAP101 and 201 with a solder to change the specification.

– MAIN BOARD (Conductor Side) –



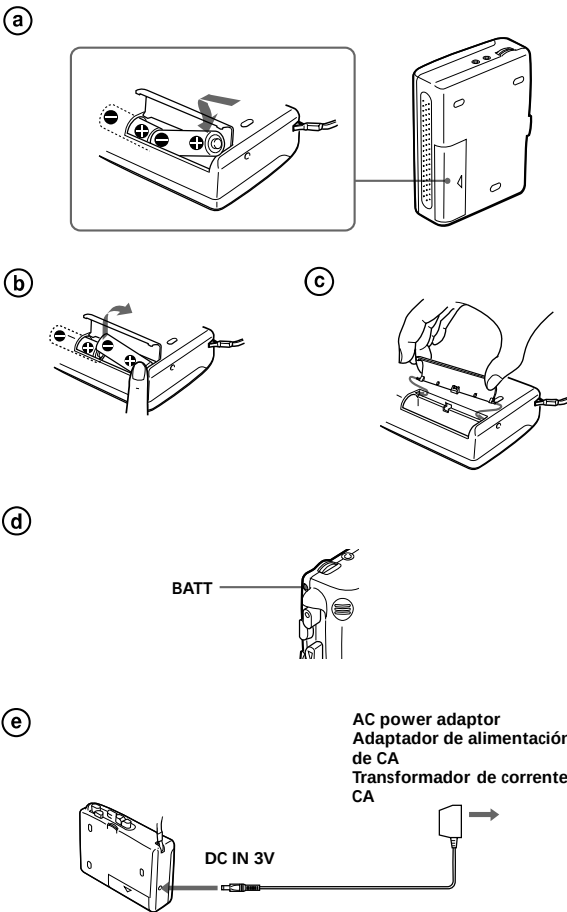
– MAIN BOARD (Conductor Side) –



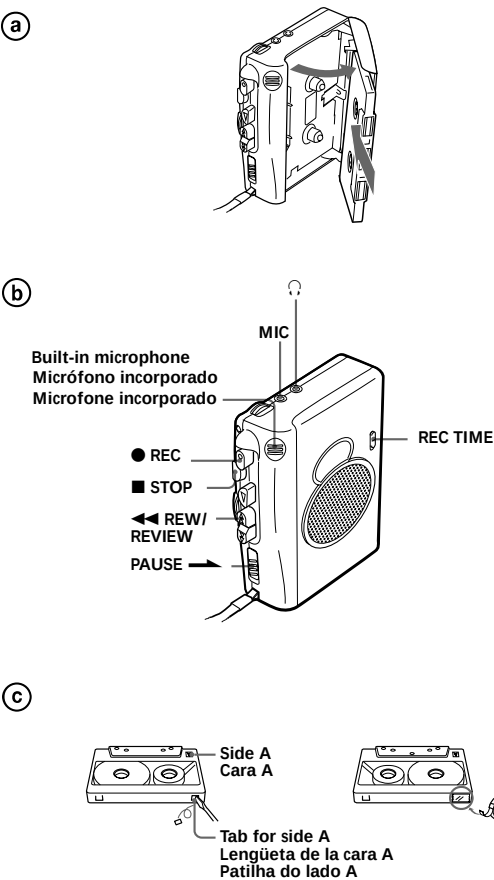
SECTION 2 GENERAL

This section is extracted from instruction manual.

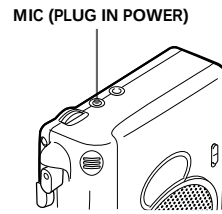
A



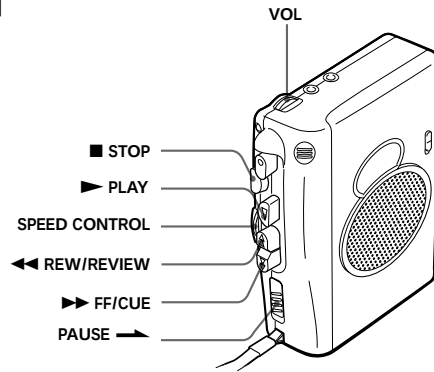
B



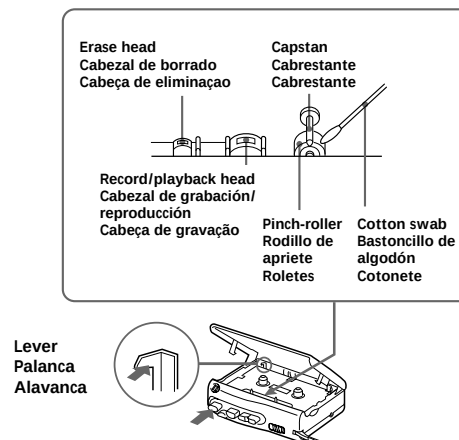
C



D



E



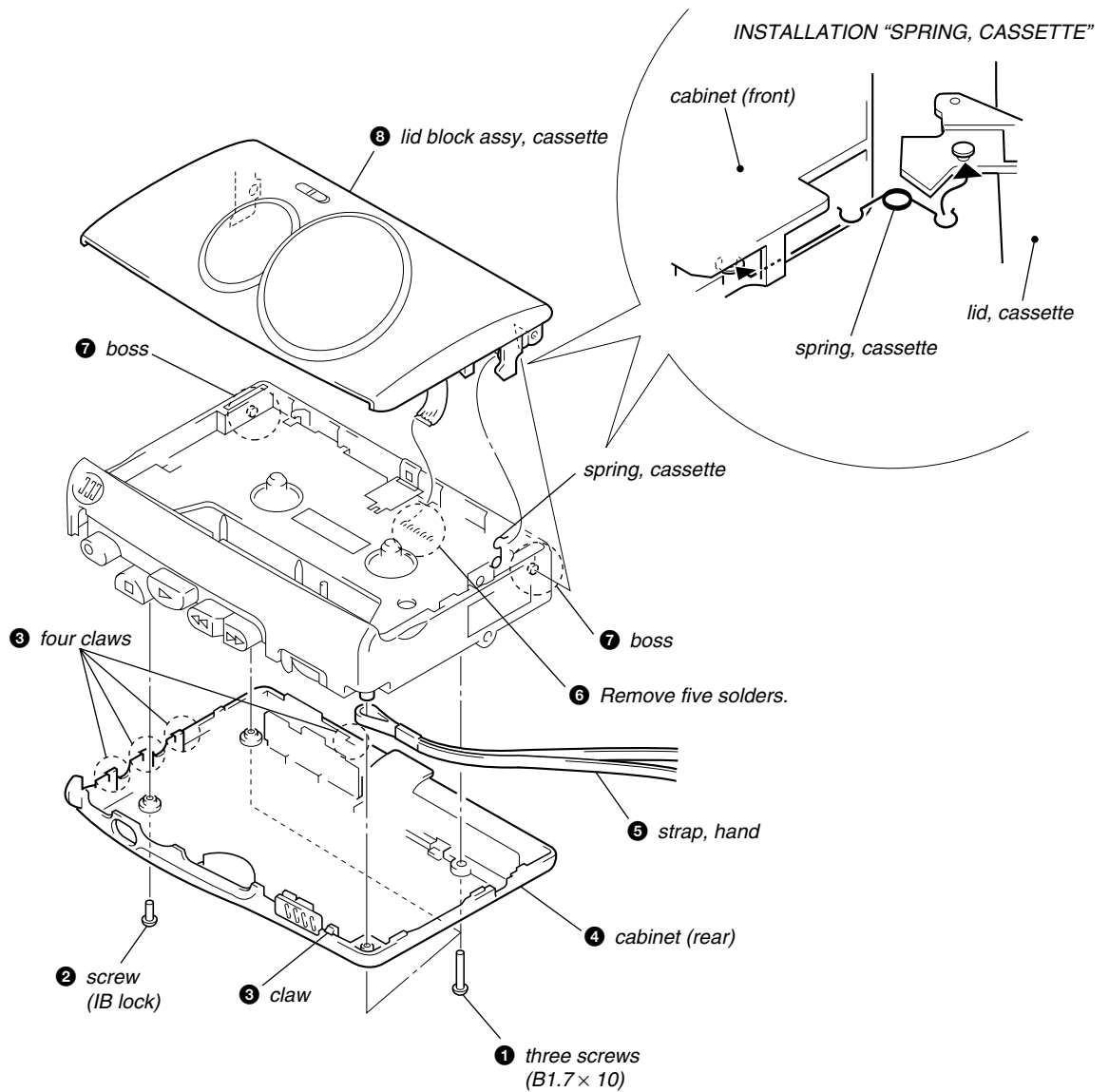
SECTION 3 DISASSEMBLY

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

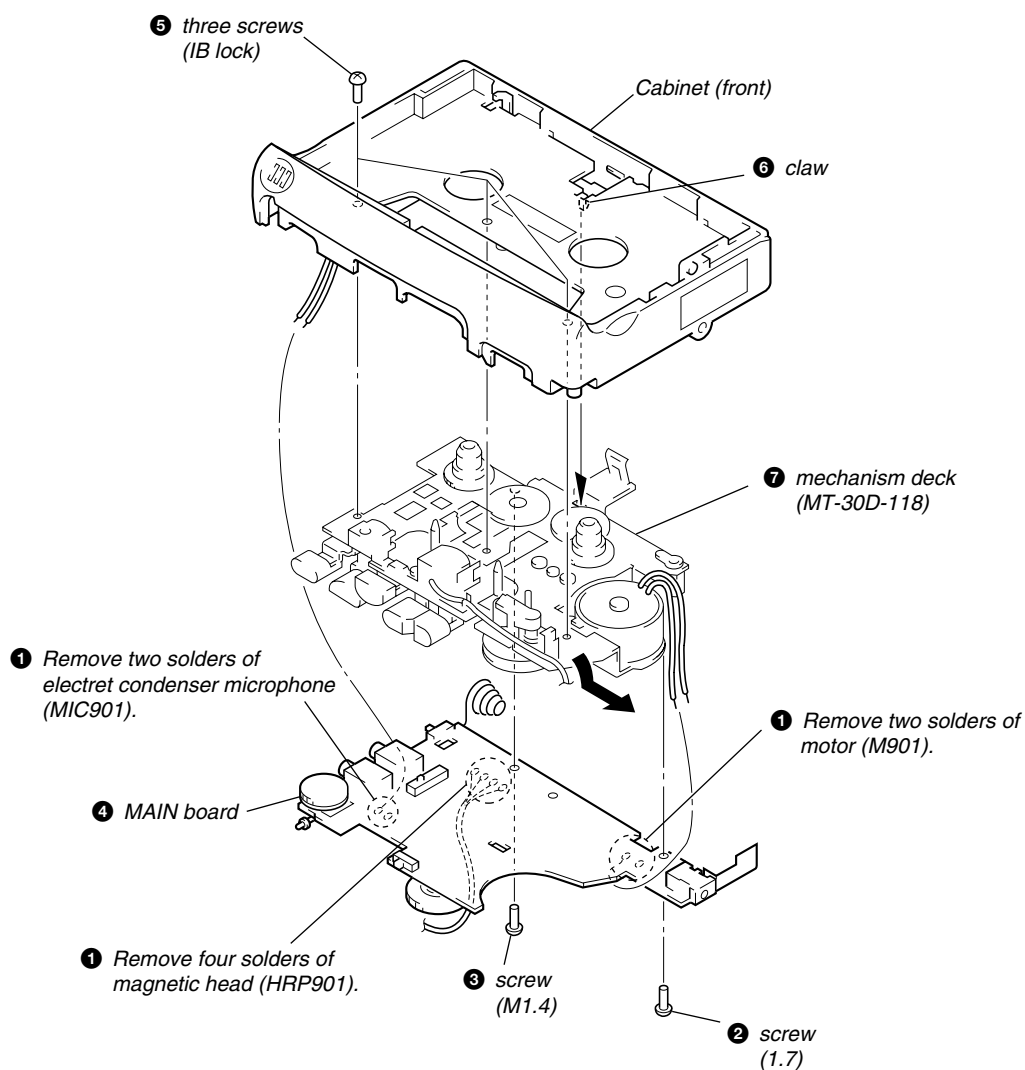
SET → CABINET (REAR),
"LID BLOCK ASSY, CASSETTE" → MAIN BOARD,
MECHANISM DECK (MT-30D-118) → BELT

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

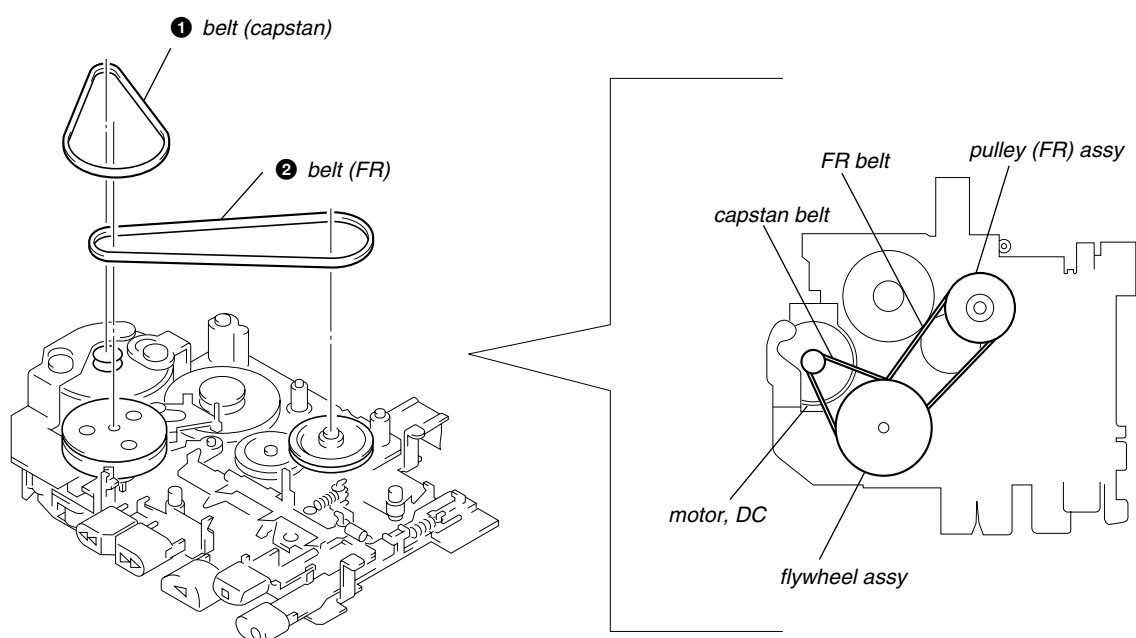
CABINET (REAR), "LID BLOCK ASSY, CASSETTE"



MAIN BOARD, MECHANISM DECK (MT-30D-118)

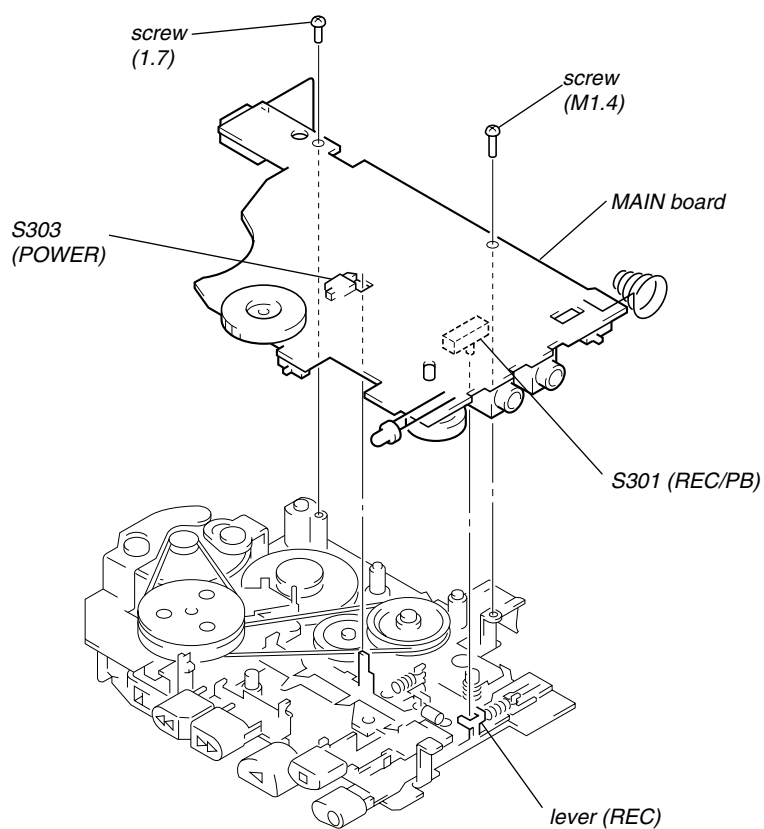


BELT



INSTALLATION MAIN BOARD

NOTE: On installation MAIN board, adjust to the S301 and the S303.



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	2.16 - 4.7 mN•m (22 - 48 g•cm) (0.31 - 0.67 oz•inch)
FWD Back Tension		0.05 - 0.29 mN•m (0.5 - 3 g•cm) (0.007 - 0.04 oz•inch)
FF	CQ-201B	4.90 mN•m (more than 50 g•cm)
REW		(more than 0.69 oz•inch)

Tape Tension Measurement

Mode	Torque Meter	Meter Reading
FWD	CQ-403C	4.90 mN•m (more than 50 g) (more than 1.76 oz)

SECTION 5 ELECTRICAL ADJUSTMENTS

PRECAUTION

1. Specified voltage : 2.5 V (DC)
2. Setting
SPEED CONTROL dial : center click

0 dB=0.775 V

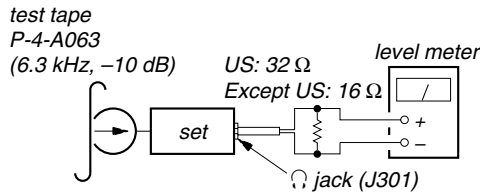
Test Tape

Type	Signal	Used for
P-4-A063	6.3 kHz, -10 dB	Head Azimuth Adjustment
WS-48A	3 kHz, 0 dB	Tape Speed Adjustment

Record/Playback Head Azimuth Adjustment

Setting:

Mode: playback (normal speed)



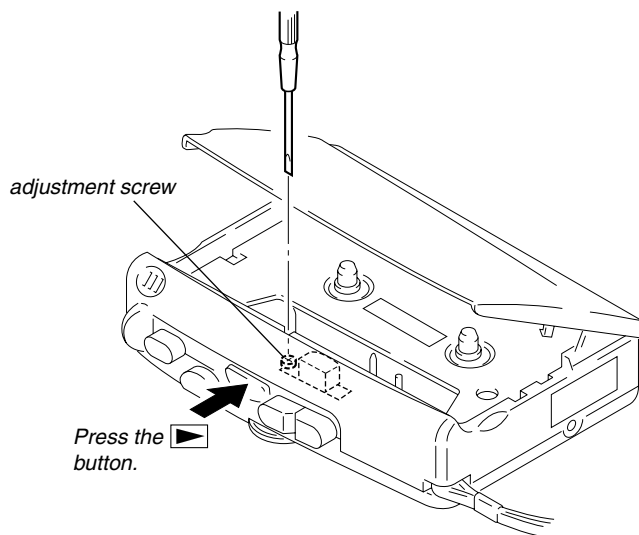
Procedure:

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

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

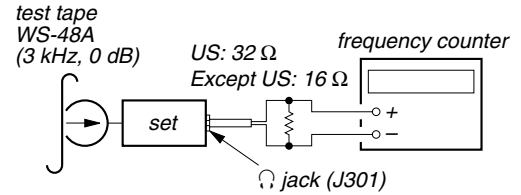
2. After the adjustment, lock the adjustment screw with suitable locking compound.

Adjustment Location:



Tape Speed Adjustment

Setting:



Procedure:

– Normal –

1. Set the [REC TIME] switch (S601) to [NORMAL] position.
2. Playback WS-48A (tape center) in the FWD state.
3. Adjust RV601 so that the frequency counter reading becomes 3,000 Hz.

Specified Value: 2,970 to 3,030 Hz

4. Check that deflection of the frequency counter reading between the beginning and the end of tape is within 1.5% (approx. 45 Hz).

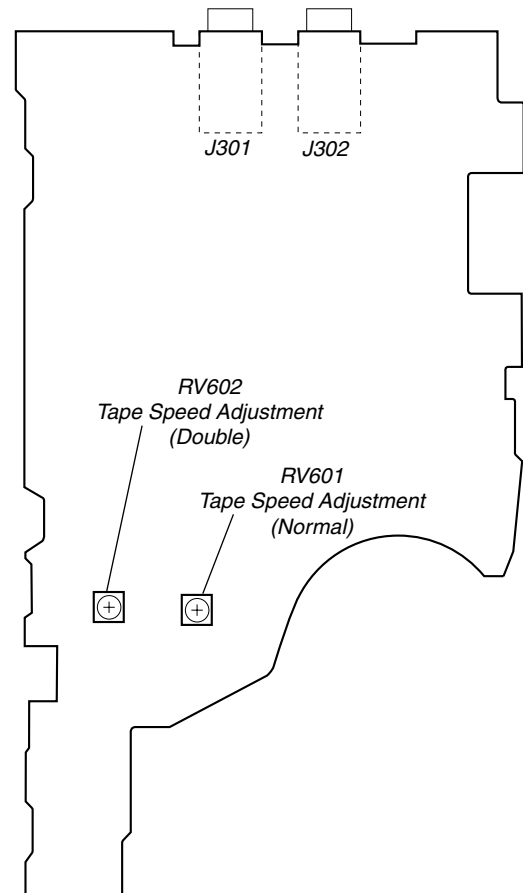
– Double (1/2 SPEED) –

1. Set the [REC TIME] switch (S601) to [DOUBLE] position.
2. Playback WS-48A (tape center) in the FWD state.
3. Adjust RV602 so that the frequency counter reading becomes 1,500 Hz.

Specified Value: 1,485 to 1,515 Hz

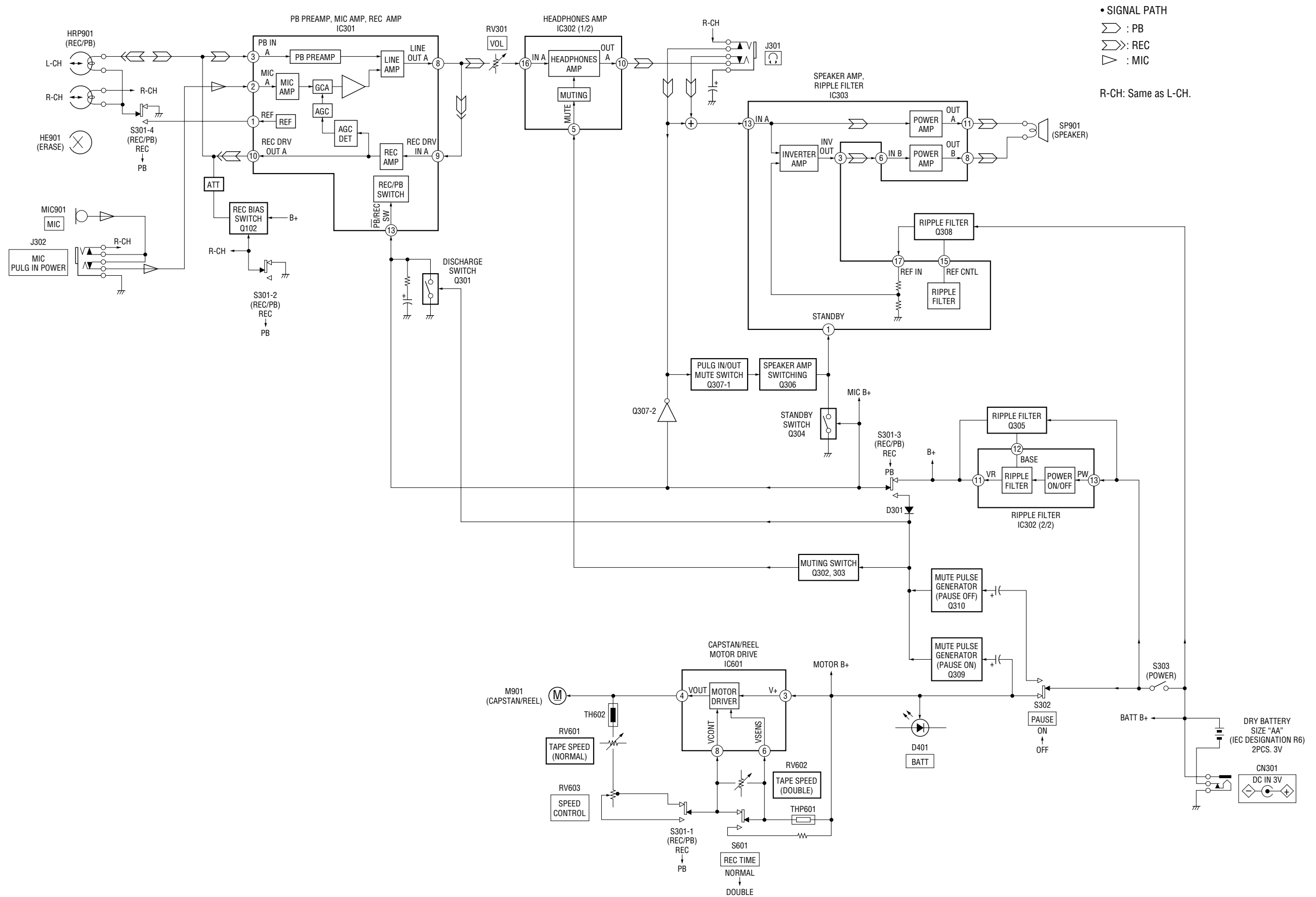
Adjustment Location:

– MAIN BOARD (Conductor Side) –

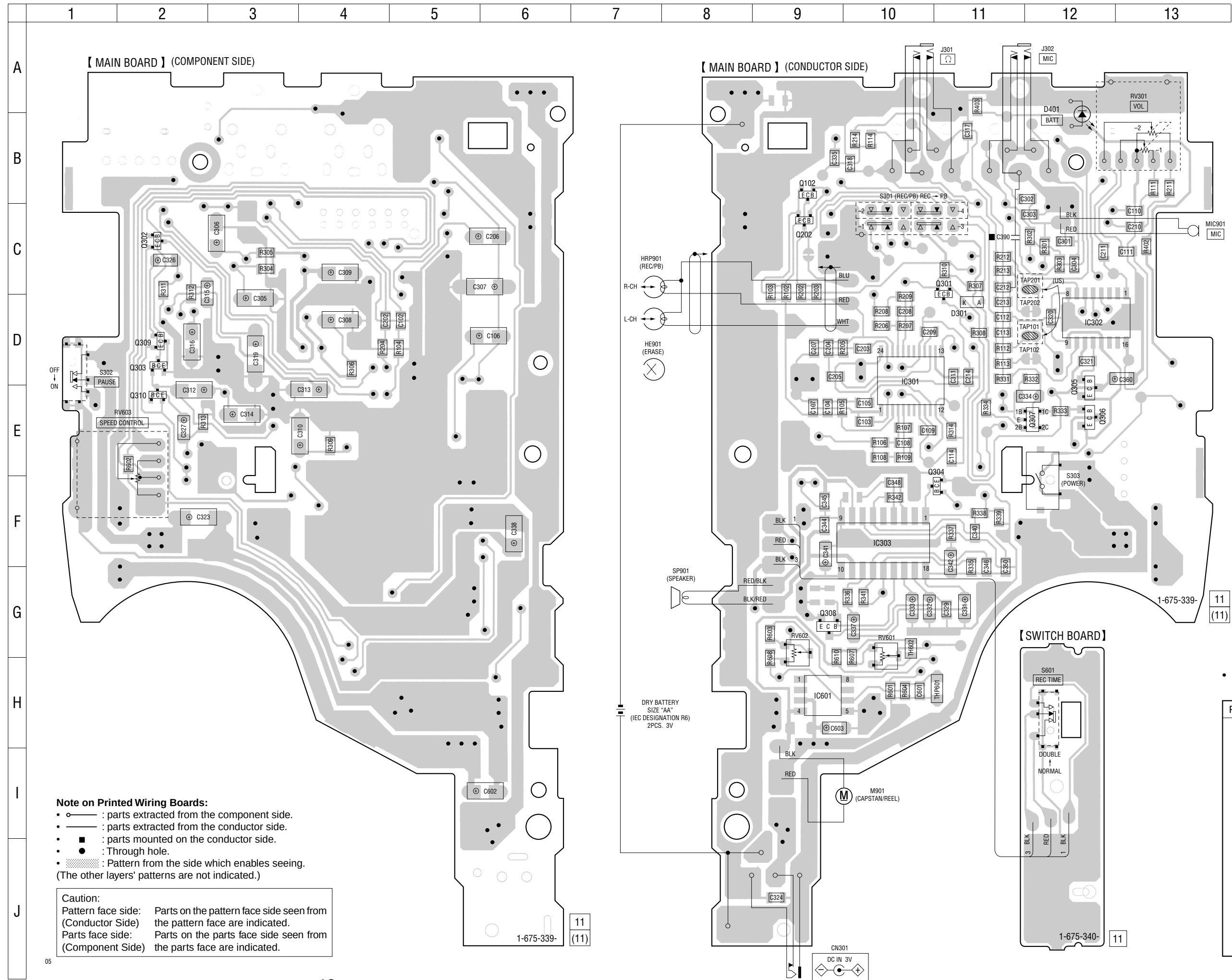


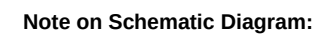
SECTION 6 DIAGRAMS

6-1. BLOCK DIAGRAM



6-2. PRINTED WIRING BOARDS

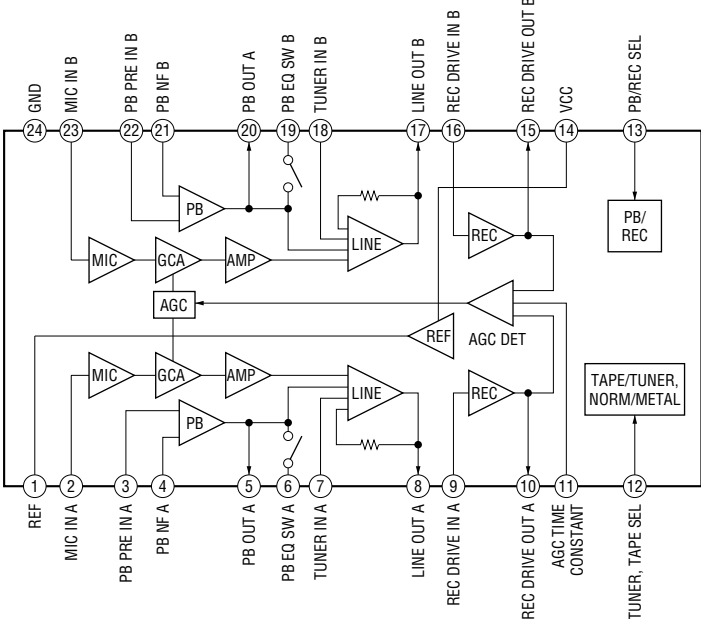




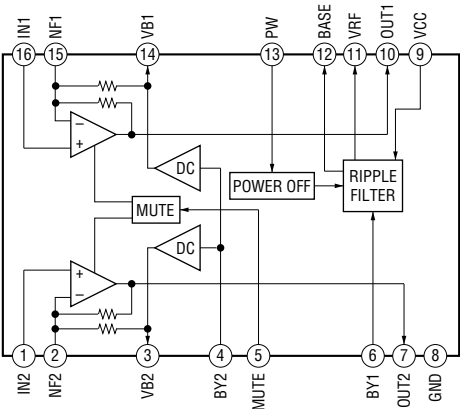
- Voltages are dc with respect to ground under no-signal conditions.
no mark : PB
() : REC
- Voltages are taken with a VOM (Input impedance 10 MΩ).
Voltage variations may be noted due to normal production tolerances.
- Signal path.
 : PB
 : REC
 : MIC

• IC Block Diagrams

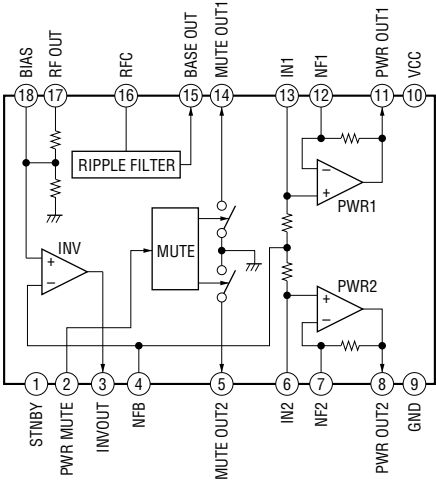
IC301 CXA2500N-T4



IC302 TA7688F-SO



IC303 BA6640F-E2



SECTION 7
EXPLODED VIEWS

NOTE:

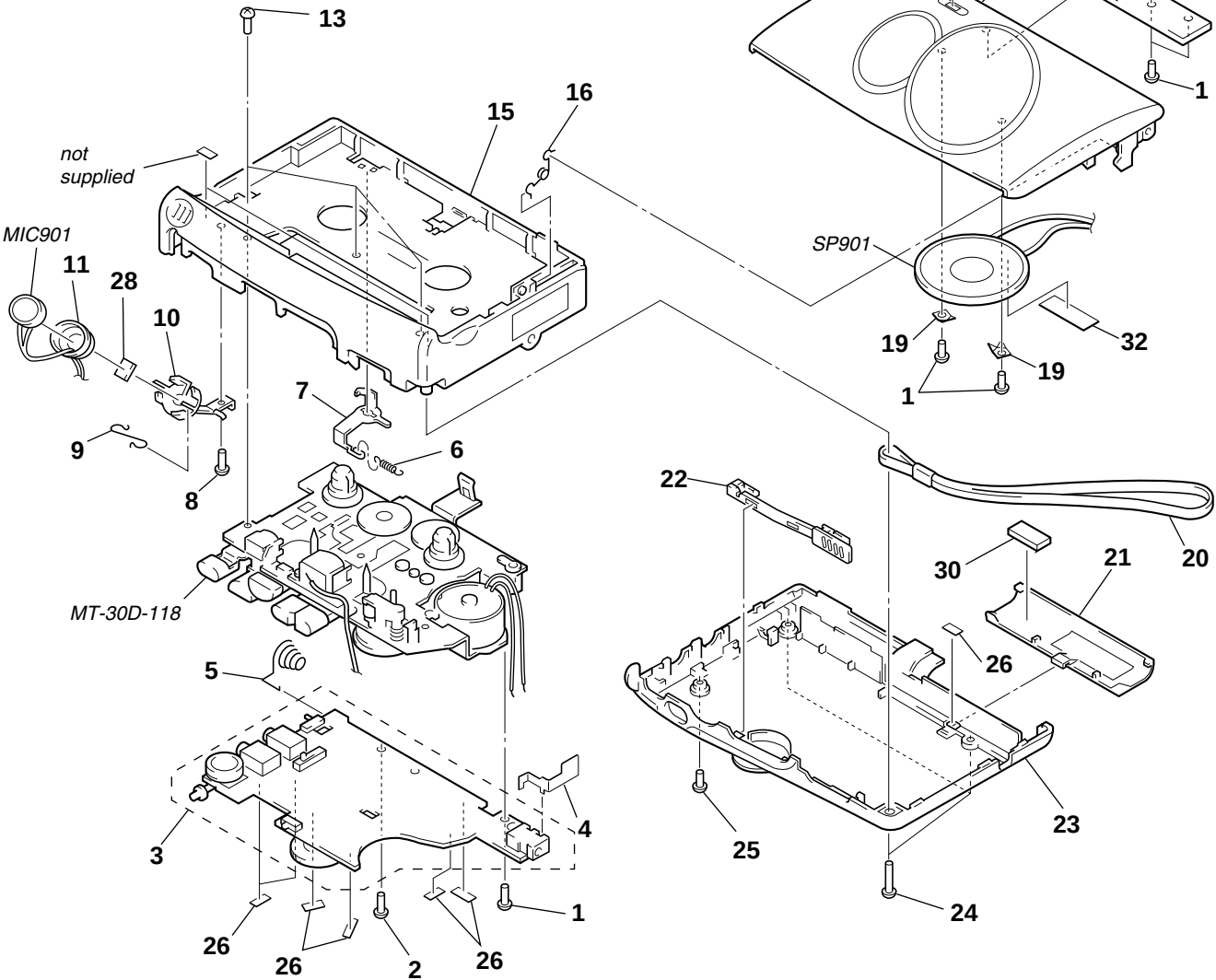
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- Color Indication of Appearance Parts
Example:
KNOB, BALANCE (WHITE) . . . (RED)

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.

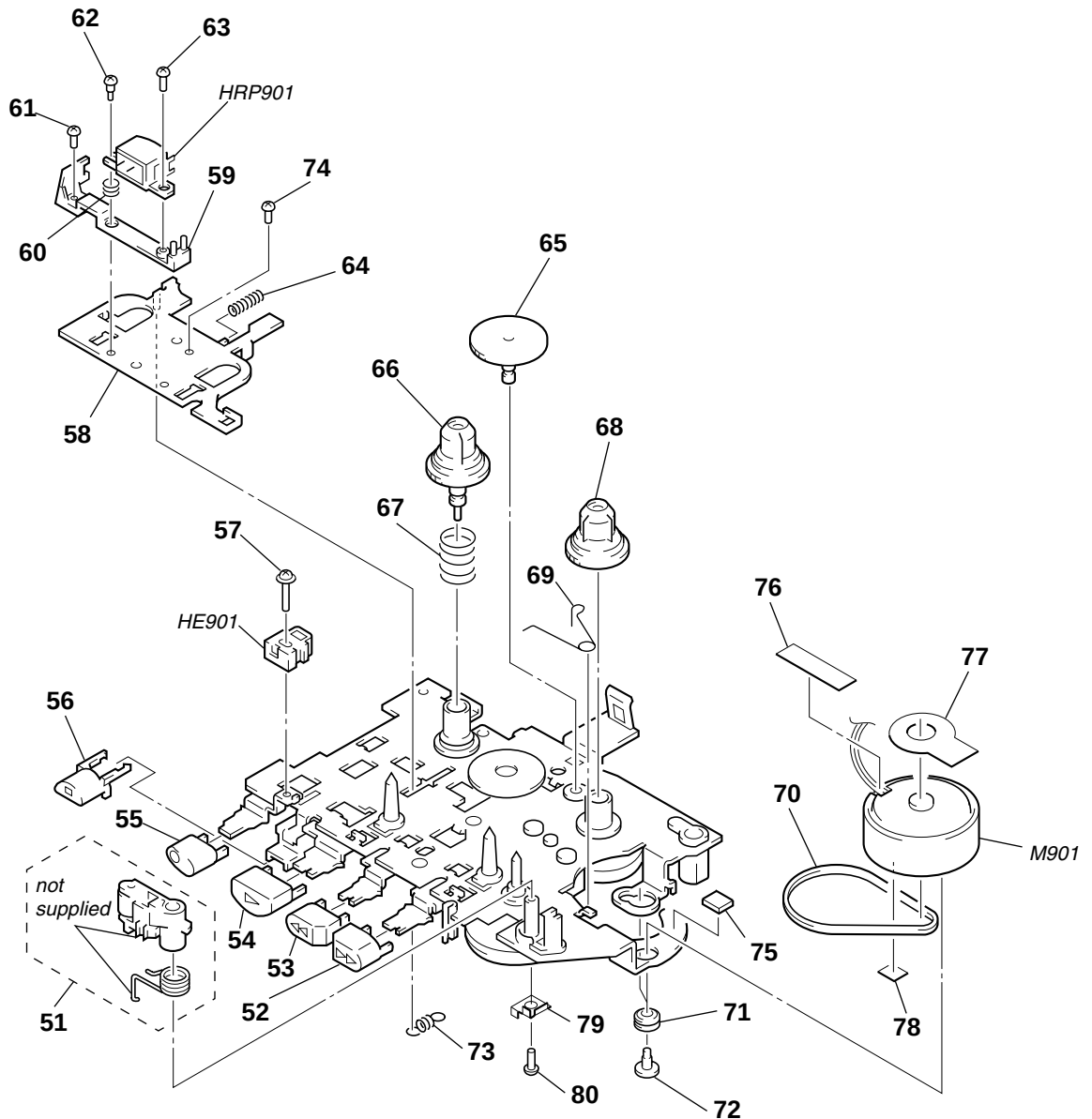
- Abbreviation
1E: No indication of country of origin
CND: Canadian model
CH: chinese model

(1) CABINET SECTION



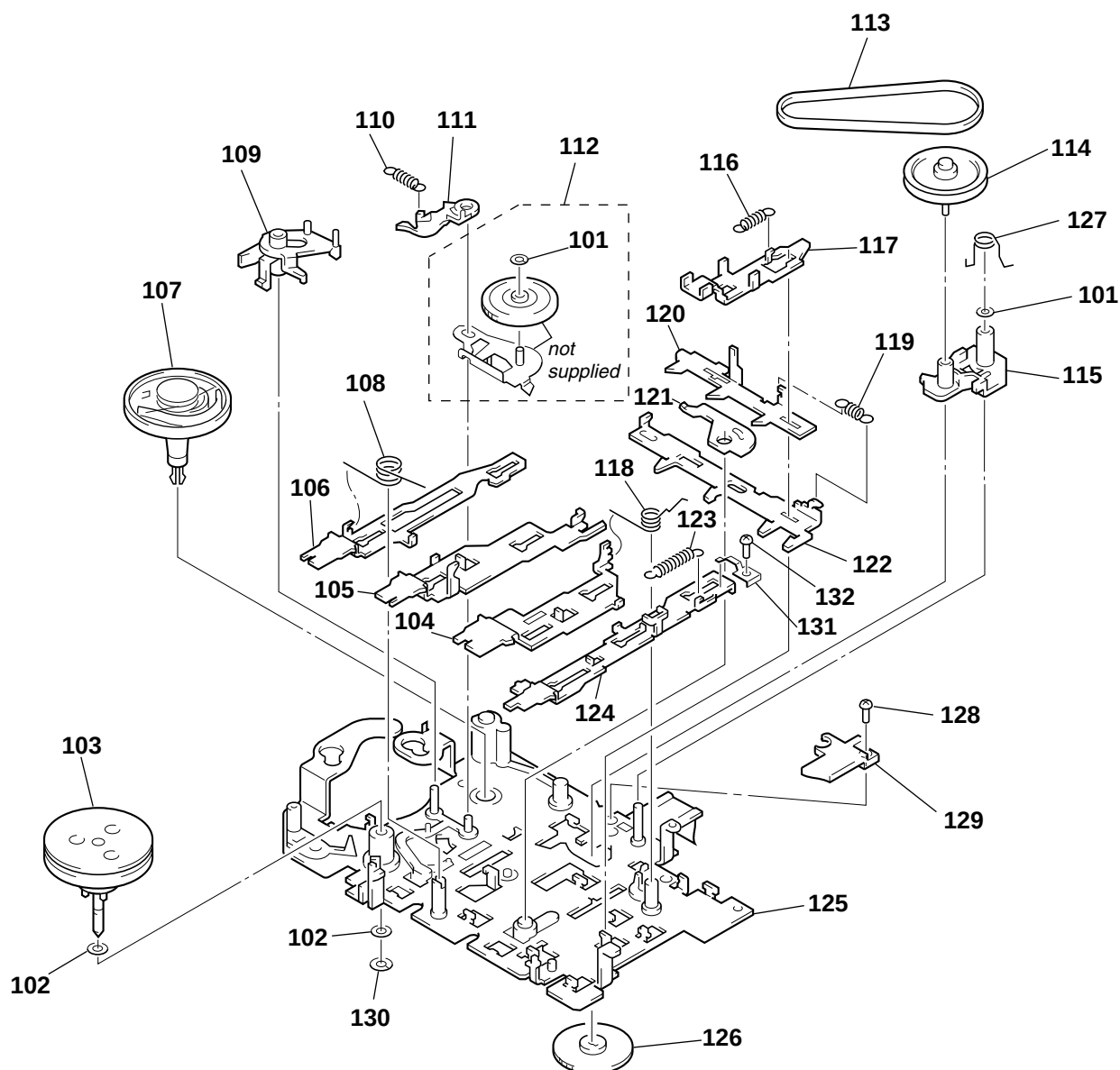
Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
1	3-318-382-31	SCREW (1.7), TAPPING		* 19	3-924-757-01	BRACKET (SPEAKER)	
2	3-345-648-51	SCREW (M1.4), TOOTHED LOCK		20	3-328-319-01	STRAP, HAND	
* 3	A-3021-325-A	MAIN BOARD, COMPLETE		21	3-924-749-21	LID, BATTERY CASE	
4	3-924-741-01	TERMINAL, PLUS		22	3-924-747-21	KNOB (PAUSE)	
5	3-936-973-01	TERMINAL, MINUS		23	3-019-597-21	CABINET (REAR)	
6	3-924-744-01	SPRING(CLAW DETECTION),TENSION		24	3-334-565-11	SCREW (B1.7X10), TAPPING	
7	3-924-743-01	CLAW, ERASING PROTECTION		25	3-366-890-51	SCREW (M1.4X6.0)	
8	3-334-565-41	SCREW (B1.7), TAPPING		26	3-831-441-99	CUSHION	
9	3-924-745-01	BAR, GROUND		28	3-831-441-11	CUSHION, CABINET UPPER 10X7X0.5	
10	3-924-740-01	HOLDER, MICROPHONE		* 29	1-675-340-11	SWITCH BOARD	
11	3-924-763-01	CUSHION (MICROPHONE)		30	3-927-521-01	CUSHION (BATTERY CASE LID)	
13	3-704-197-33	SCREW (1B LOCK)		31	3-042-506-01	KNOB (RECORD TIME)	
15	3-019-364-81	CABINET (FRONT) (US, CND, AEP, E, CH)		32	4-017-441-01	CUSHION (B)	
15	3-019-364-91	CABINET (FRONT) (1E)		MIC901	1-542-136-11	MICROPHONE, ELECTRET CONDENSER	(MIC)
16	3-924-739-01	SPRING, CASSETTE		SP901	1-505-331-11	SPEAKER (3.6cm)	
17	X-3379-233-1	LID (A) ASSY, CASSETTE (EXCEPT AEP)					
17	X-3379-234-1	LID (B) ASSY, CASSETTE (AEP)					

(2) MECHANISM DECK SECTION-1
(MT-30D-118)



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
51	X-3377-250-1	LEVER, (2) ASSY, PINCH		68	3-924-641-01	GEAR (T REEL)	
52	3-925-146-11	BUTTON (FF) (▶▶)		69	3-924-726-01	SPRING (M GROUND), TORSION	
53	3-925-147-01	BUTTON (REW) (◀◀)		70	3-907-943-01	BELT (CAPSTAN)	
54	3-925-148-11	BUTTON (PLAY) (▶)		71	3-925-109-01	CUSHION (MOTOR)	
55	3-925-145-21	BUTTON (REC) (●)		72	3-925-108-01	SCREW (MOTOR)	
56	3-924-738-01	BUTTON (STOP) (■)		73	3-924-644-01	SPRING (POWER TENSION), TENSION	
57	3-703-925-21	SCREW (M1.4)		74	3-348-160-11	SCREW (M1.4X1.6), PRECISION PAN	
58	3-924-625-01	LEVER (HEAD)		75	3-927-754-11	CUSHION (M)	
59	3-924-645-01	BRACKET (HEAD)		76	3-831-441-99	CUSHION	
60	3-924-685-01	SPRING (AZIMUTH), COMPRESSION		77	3-030-766-12	SHEET (MOTOR)	
61	3-704-197-91	SCREW (M1.4X1.8), LOCKING		78	3-561-685-01	SHEET (C), INSULATING	
62	3-375-135-01	SCREW (1.4), SPECIAL		79	3-937-430-01	HOLDER (HEAD LEAD) (2)	
63	3-376-177-01	SCREW (M1.4X3.8)		80	4-908-792-51	SCREW (B2)	
64	3-925-107-01	SPRING (IDLER), COMPRESSION		HE901	1-500-232-11	HEAD, MAGNETIC (ERASE)	
65	3-924-637-01	GEAR (FF)		HRP901	1-543-727-11	HEAD (RECORD/PLAYBACK)	
66	3-924-673-01	GEAR (S REEL)		M901	1-763-453-21	MOTOR, DC (CAPSTAN/REEL) (WITH PULLEY)	
67	3-924-674-01	SPRING (B. T), COMPRESSION					

(3) MECHANISM DECK SECTION-2
(MT-30D-118)



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
101	3-321-483-11	RING, RETAINING (0.25)		117	3-924-622-01	LEVER (STOP)	
102	3-701-437-51	WASHER		118	3-045-541-01	SPRING (PR3), TORSION	
103	X-3376-786-2	WHEEL ASSY, FLY		119	3-924-684-01	SPRING (LOCK PLATE), TENSION	
104	3-924-623-01	LEVER (PLAY)		120	3-924-619-01	LEVER (SW)	
105	3-924-621-01	LEVER (REW)		121	3-924-639-01	LEVER (CR)	
106	3-924-620-01	LEVER (FF)		122	3-924-618-01	LEVER (LOCK)	
107	X-3370-388-1	TABLE ASSY, FELT		123	3-925-208-01	SPRING (REC), TENSION	
108	3-924-642-01	SPRING (FR), TORSION		124	3-924-624-01	LEVER (REC)	
109	3-924-629-01	LEVER (DETECTION)		125	X-3372-155-1	CHASSIS ASSY	
110	3-925-207-01	SPRING (S. OFF), TENSION		126	3-924-613-01	GEAR (FR)	
111	3-924-630-01	LEVER (S.OFF)		127	3-024-378-21	SPRING (FR LEVER), TORSION	
112	X-3370-387-1	LEVER ASSY, IDLER		128	3-939-590-26	SCREW (IB LOCK)	
113	3-924-682-01	BELT (FR)		129	3-029-566-12	STOPPER (FF)	
114	X-3370-385-1	PULLEY (FR) ASSY		130	3-321-483-31	RING, RETAINING	
115	3-924-628-01	LEVER (FR)		131	3-936-999-01	DETENT (REC)	
116	3-924-633-01	SPRING (STOP), TENSION		132	3-704-197-91	SCREW (IB LOCK)	

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
1E : No indication of country of origin
CH : Chinese model
CND : Canadian model

- 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

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
	A-3021-325-A	MAIN BOARD, COMPLETE *****					
		< CAPACITOR >					
C102	1-164-222-11	CERAMIC CHIP 0.22uF	25V	C315	1-135-180-21	TANTALUM CHIP 3.3uF	20% 6.3V
C103	1-163-021-11	CERAMIC CHIP 0.01uF	10% 50V	C316	1-124-778-00	ELECT CHIP 22uF	20% 6.3V
C104	1-163-021-11	CERAMIC CHIP 0.01uF	10% 50V	C317	1-163-009-11	CERAMIC CHIP 0.001uF	10% 50V
C105	1-164-346-11	CERAMIC CHIP 1uF	16V	C318	1-163-009-11	CERAMIC CHIP 0.001uF	10% 50V
C106	1-126-607-11	ELECT CHIP 47uF	20% 4V	C319	1-126-246-11	ELECT CHIP 220uF	20% 4V
C107	1-163-011-11	CERAMIC CHIP 0.0015uF	10% 50V	C320	1-109-982-11	CERAMIC CHIP 1uF	10% 10V
C108	1-163-021-11	CERAMIC CHIP 0.01uF	10% 50V	C321	1-163-021-11	CERAMIC CHIP 0.01uF	10% 50V
C109	1-164-346-11	CERAMIC CHIP 1uF	16V	C323	1-126-246-11	ELECT CHIP 220uF	20% 4V
C110	1-164-346-11	CERAMIC CHIP 1uF	16V	C324	1-163-009-11	CERAMIC CHIP 0.001uF	10% 50V
C111	1-164-346-11	CERAMIC CHIP 1uF	16V	C326	1-135-180-21	TANTALUM CHIP 3.3uF	20% 6.3V
C112	1-107-823-11	CERAMIC CHIP 0.47uF	10% 16V	C327	1-135-180-21	TANTALUM CHIP 3.3uF	20% 6.3V
C113	1-163-009-11	CERAMIC CHIP 0.001uF	10% 50V	C329	1-109-982-11	CERAMIC CHIP 1uF	10% 10V
C114	1-163-021-11	CERAMIC CHIP 0.01uF	10% 50V	C331	1-135-259-11	TANTALUM CHIP 10uF	20% 6.3V
C202	1-164-222-11	CERAMIC CHIP 0.22uF	25V	C332	1-135-259-11	TANTALUM CHIP 10uF	20% 6.3V
C203	1-163-021-11	CERAMIC CHIP 0.01uF	10% 50V	C333	1-135-259-11	TANTALUM CHIP 10uF	20% 6.3V
C204	1-163-021-11	CERAMIC CHIP 0.01uF	10% 50V	C334	1-135-149-21	TANTALUM CHIP 2.2uF	20% 10V
C205	1-164-346-11	CERAMIC CHIP 1uF	16V	C335	1-163-021-11	CERAMIC CHIP 0.01uF	10% 50V
C206	1-126-607-11	ELECT CHIP 47uF	20% 4V	C337	1-135-149-21	TANTALUM CHIP 2.2uF	20% 10V
C207	1-163-011-11	CERAMIC CHIP 0.0015uF	10% 50V	C338	1-126-607-11	ELECT CHIP 47uF	20% 4V
C208	1-163-021-11	CERAMIC CHIP 0.01uF	10% 50V	C340	1-115-340-11	CERAMIC CHIP 0.22uF	10% 25V
C209	1-164-346-11	CERAMIC CHIP 1uF	16V	C341	1-135-259-11	TANTALUM CHIP 10uF	20% 6.3V
C210	1-164-346-11	CERAMIC CHIP 1uF	16V	C342	1-135-149-21	TANTALUM CHIP 2.2uF	20% 10V
C211	1-164-346-11	CERAMIC CHIP 1uF	16V	C344	1-109-982-11	CERAMIC CHIP 1uF	10% 10V
C212	1-107-823-11	CERAMIC CHIP 0.47uF	10% 16V	C345	1-109-982-11	CERAMIC CHIP 1uF	10% 10V
C213	1-163-009-11	CERAMIC CHIP 0.001uF	10% 50V	C346	1-163-017-00	CERAMIC CHIP 0.0047uF	5% 50V
C214	1-163-021-11	CERAMIC CHIP 0.01uF	10% 50V	C348	1-163-251-11	CERAMIC CHIP 100PF	5% 50V
C301	1-115-339-11	CERAMIC CHIP 0.1uF	10% 50V	C350	1-163-017-00	CERAMIC CHIP 0.0047uF	5% 50V
C302	1-115-339-11	CERAMIC CHIP 0.1uF	10% 50V	C360	1-135-259-11	TANTALUM CHIP 10uF	20% 6.3V
C303	1-163-021-11	CERAMIC CHIP 0.01uF	10% 50V	C390	1-162-294-31	CERAMIC 1000PF	10% 50V
C304	1-163-021-11	CERAMIC CHIP 0.01uF	10% 50V	C601	1-127-760-91	CERAMIC CHIP 4.7uF	10% 6.3V
C305	1-126-607-11	ELECT CHIP 47uF	20% 4V	C602	1-124-778-00	ELECT CHIP 22uF	20% 6.3V
C306	1-126-607-11	ELECT CHIP 47uF	20% 4V	C603	1-135-259-11	TANTALUM CHIP 10uF	20% 6.3V
C307	1-126-246-11	ELECT CHIP 220uF	20% 4V			< JACK >	
C308	1-124-778-00	ELECT CHIP 22uF	20% 6.3V	CN301	1-580-919-11	JACK, DC (POLARITY UNIFIED TYPE)	(DC IN 3V)
C309	1-126-607-11	ELECT CHIP 47uF	20% 4V			< DIODE >	
C310	1-124-778-00	ELECT CHIP 22uF	20% 6.3V	D301	8-719-988-61	DIODE 1SS355TE-17	
C311	1-127-760-91	CERAMIC CHIP 4.7uF	10% 6.3V	D401	8-719-057-27	LED L-132XHD (BATT)	
C312	1-126-603-11	ELECT CHIP 4.7uF	20% 35V				
C313	1-124-778-00	ELECT CHIP 22uF	20% 6.3V				
C314	1-124-778-00	ELECT CHIP 22uF	20% 6.3V				

MAIN

SWITCH

Ref. No.	Part No.	Description	Remark		
< IC >					
IC301	8-752-089-40	IC CXA2500N-T4			
IC302	8-759-205-43	IC TA7688F-SO			
IC303	8-759-650-96	IC BA6640F-E2			
IC601	8-759-804-43	IC LA5521M			
< JACK >					
J301	1-766-847-22	JACK (○)			
J302	1-766-847-51	JACK (MIC, PLUG IN POWER)			
< TRANSISTOR >					
Q102	8-729-402-96	TRANSISTOR	UN5114		
Q202	8-729-402-96	TRANSISTOR	UN5114		
Q301	8-729-402-93	TRANSISTOR	UN5214-TX		
Q302	8-729-402-96	TRANSISTOR	UN5114		
Q303	8-729-402-93	TRANSISTOR	UN5214-TX		
Q304	8-729-402-93	TRANSISTOR	UN5214-TX		
Q305	8-729-141-48	TRANSISTOR	2SB624-BV345		
Q306	8-729-216-22	TRANSISTOR	2SA1162-G		
Q307	8-729-402-13	TRANSISTOR	XN1501		
Q308	8-729-141-48	TRANSISTOR	2SB624-BV345		
Q309	8-729-402-96	TRANSISTOR	UN5114		
Q310	8-729-402-96	TRANSISTOR	UN5114		
< RESISTOR >					
R102	1-216-073-00	METAL CHIP	10K	5%	1/10W
R103	1-216-089-00	RES-CHIP	47K	5%	1/10W
R104	1-216-049-11	RES-CHIP	1K	5%	1/10W
R105	1-216-065-00	RES-CHIP	4.7K	5%	1/10W
R106	1-216-033-00	METAL CHIP	220	5%	1/10W
R107	1-216-109-00	METAL CHIP	330K	5%	1/10W
R108	1-216-089-00	RES-CHIP	47K	5%	1/10W
R109	1-216-073-00	METAL CHIP	10K	5%	1/10W
R111	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R112	1-216-298-00	METAL CHIP	2.2	5%	1/10W
R113	1-216-005-00	METAL CHIP	15	5%	1/10W
R114	1-216-105-00	RES-CHIP	220K	5%	1/10W
R202	1-216-073-00	METAL CHIP	10K	5%	1/10W
R203	1-216-089-00	RES-CHIP	47K	5%	1/10W
R204	1-216-049-11	RES-CHIP	1K	5%	1/10W
R205	1-216-065-00	RES-CHIP	4.7K	5%	1/10W
R206	1-216-033-00	METAL CHIP	220	5%	1/10W
R207	1-216-109-00	METAL CHIP	330K	5%	1/10W
R208	1-216-089-00	RES-CHIP	47K	5%	1/10W
R209	1-216-073-00	METAL CHIP	10K	5%	1/10W
R211	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R212	1-216-298-00	METAL CHIP	2.2	5%	1/10W
R213	1-216-005-00	METAL CHIP	15	5%	1/10W
R214	1-216-105-00	RES-CHIP	220K	5%	1/10W
R301	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R302	1-216-053-00	METAL CHIP	1.5K	5%	1/10W
R303	1-216-053-00	METAL CHIP	1.5K	5%	1/10W
R304	1-216-049-11	RES-CHIP	1K	5%	1/10W
R305	1-216-041-00	METAL CHIP	470	5%	1/10W
R306	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R307	1-216-041-00	METAL CHIP	470	5%	1/10W
R308	1-216-073-00	METAL CHIP	10K	5%	1/10W

Ref. No.	Part No.	Description	Remark		
R309	1-216-129-00	METAL CHIP 2.2M	5%	1/10W	
R310	1-216-049-11	RES-CHIP 1K	5%	1/10W	
R311	1-216-089-00	RES-CHIP 47K	5%	1/10W	
R312	1-216-073-00	METAL CHIP 10K	5%	1/10W	
R313	1-216-073-00	METAL CHIP 10K	5%	1/10W	
R314	1-216-057-00	METAL CHIP 2.2K	5%	1/10W	
R331	1-216-085-00	METAL CHIP 33K	5%	1/10W	
R332	1-216-113-00	METAL CHIP 470K	5%	1/10W	
R333	1-216-041-00	METAL CHIP 470	5%	1/10W	
R334	1-216-065-00	RES-CHIP 4.7K	5%	1/10W	
R335	1-216-073-00	METAL CHIP 10K	5%	1/10W	
R336	1-216-057-00	METAL CHIP 2.2K	5%	1/10W	
R337	1-216-057-00	METAL CHIP 2.2K	5%	1/10W	
R338	1-216-105-00	RES-CHIP 220K	5%	1/10W	
R339	1-216-073-00	METAL CHIP 10K	5%	1/10W	
R341	1-216-049-11	RES-CHIP 1K	5%	1/10W	
R342	1-216-049-11	RES-CHIP 1K	5%	1/10W	
R402	1-216-033-00	METAL CHIP 220	5%	1/10W	
R403	1-216-049-11	RES-CHIP 1K	5%	1/10W	
R601	1-216-061-00	METAL CHIP 3.3K	5%	1/10W	
R602	1-216-073-00	METAL CHIP 10K	5%	1/10W	
R603	1-216-061-00	METAL CHIP 3.3K	5%	1/10W	
R604	1-216-053-00	METAL CHIP 1.5K	5%	1/10W	
R607	1-216-061-00	METAL CHIP 3.3K	5%	1/10W	
R608	1-216-061-00	METAL CHIP 3.3K	5%	1/10W	
R610	1-216-073-00	METAL CHIP 10K	5%	1/10W	
< VARIABLE RESISTOR >					
RV301	1-227-166-11	RES, VAR, CARBON 10K/10K (VOL)			
RV601	1-238-663-11	RES, ADJ, CARBON 4.7K			
RV602	1-238-663-11	RES, ADJ, CARBON 4.7K			
RV603	1-223-928-11	RES, VAR, CARBON 10K (SPEED CONTROL)			
< SWITCH >					
S301	1-771-176-11	SWITCH, SLIDE (REC/PB)			
S302	1-572-922-11	SWITCH, SLIDE (PAUSE)			
S303	1-572-688-11	SWITCH, PUSH (1 KEY) (POWER)			
< THERMISTOR >					
TH602	1-808-819-11	THERMISTOR, NTC (2125)			
THP601	1-810-007-11	THERMISTOR, POSITIVE			

*	1-675-340-11	SWITCH BOARD			

< SWITCH >					
S601	1-572-922-11	SWITCH, SLIDE (REC TIME)			

MISCELLANEOUS					

HE901	1-500-232-11	HEAD, MAGNETIC (ERASE)			
HRP901	1-543-727-11	HEAD (RECORD/PLAYBACK)			
M901	1-763-453-21	MOTOR, DC (CAPSTAN/REEL) (WITH PULLEY)			
MIC901	1-542-136-11	MICROPHONE, ELECTRET CONDENSER (MIC)			
SP901	1-505-331-11	SPEAKER (3.6cm)			

<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Remark</u>
		ACCESSORIES & PACKING MATERIALS	

	1-505-521-11	HEADPHONE (MDR-023) (US)	
	1-505-855-11	HEADPHONE (MDR-B114)	
		(CND, AEP, E, 1E, CH)	
	1-542-307-11	MICROPHONE (ECM-J2SL)	
	3-868-228-11	MANUAL, INSTRUCTION (ENGLISH, SPANISH, PORTUGUESE) (US, AEP, E)	
	3-868-228-21	MANUAL, INSTRUCTION (ENGLISH, FRENCH, CHINESE) (CND, CH)	
	3-868-228-31	MANUAL, INSTRUCTION (DUTCH, ITALIAN, RUSSIAN) (AEP)	
	3-868-228-41	MANUAL, INSTRUCTION (HUNGARIAN, POLISH, CZECH) (AEP)	
	3-868-228-51	MANUAL, INSTRUCTION (SLOVAKIAN) (AEP)	
	3-868-228-61	MANUAL, INSTRUCTION (ENGLISH, CHINESE)	
		(1E)	

SONY®

SERVICE MANUAL

2000. 11

*US Model
Canadian Model
AEP Model
E Model
Chinese Model*

SUPPLEMENT-1

File this supplement with the service manual.

Subject:

1. Addition of Taiwan Model
2. Parts Modification

(ENG-00021)

1. Addition of Taiwan Model

Taiwan Model has been added.

This is the same as E model which is not described in this supplement-1.

Refer to TCS-30D original service manual (9-927-684-00) for other information.

• DIFFERENCE PARTS LIST

ACCESSORIES & PACKING MATERIALS

Page	E Model				Taiwan Model			
	Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
23		3-868-228-11	MANUAL, INSTRUCTION (ENGLISH, SPANISH, PORTUGUESE) (US, AEP, E)			3-868-228-61	MANUAL, INSTRUCTION (ENGLISH, CHINESE) (1E, TW)	

• Abbreviation

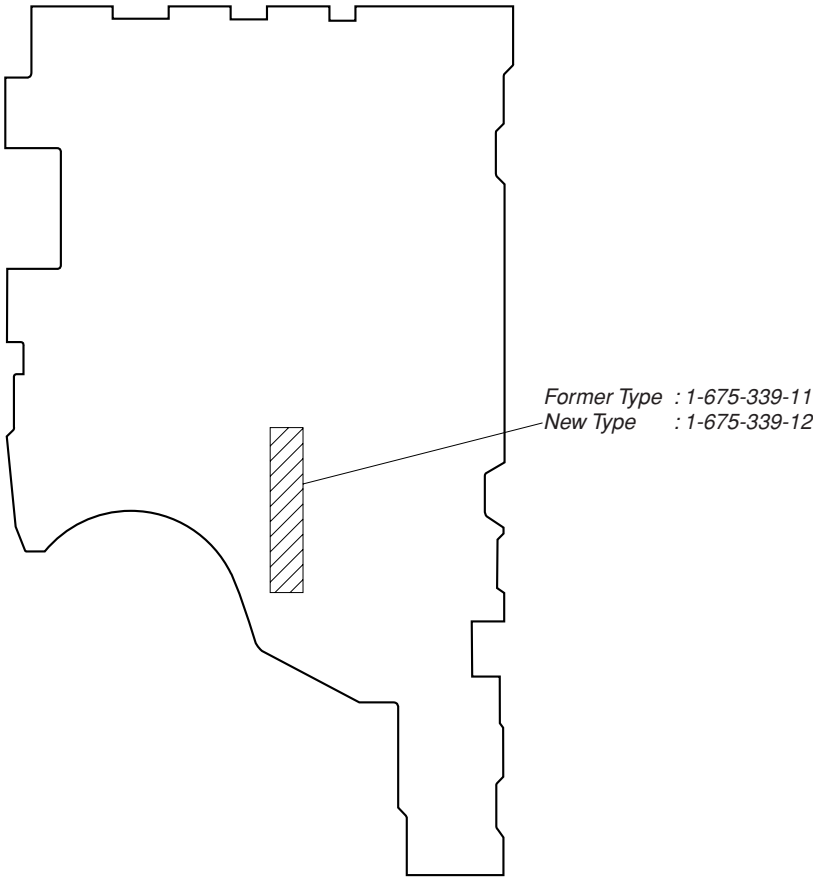
1E : No indication of country of origin

TW : Taiwan model

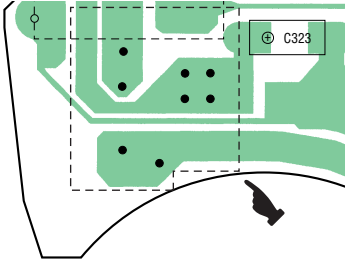
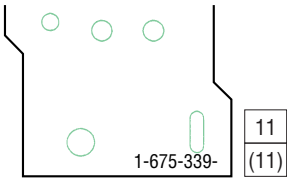
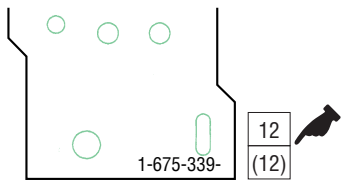
2. Parts Modification

2-1. MAIN Board Modification

- NEW/FORMER TYPE DISCRIMINATION
- MAIN Board (Component Side) –



- PRINTED WIRING BOARD
-  : Indicates modified portion.

Page	Former Type	New Type
13	– MAIN Board (Component Side) – Location: F – G, 1 – 2 	
	Location: J, 5 – 6 	

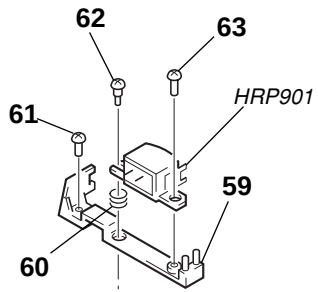
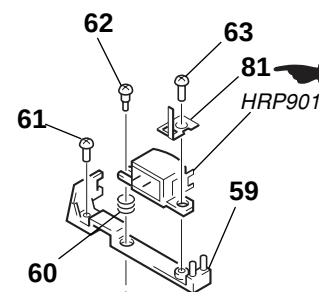
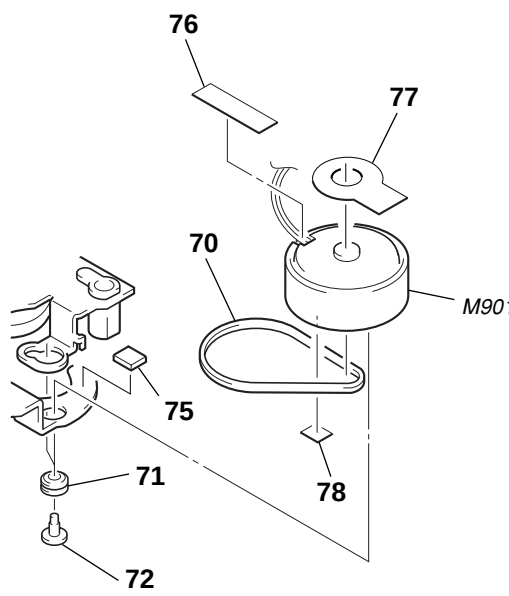
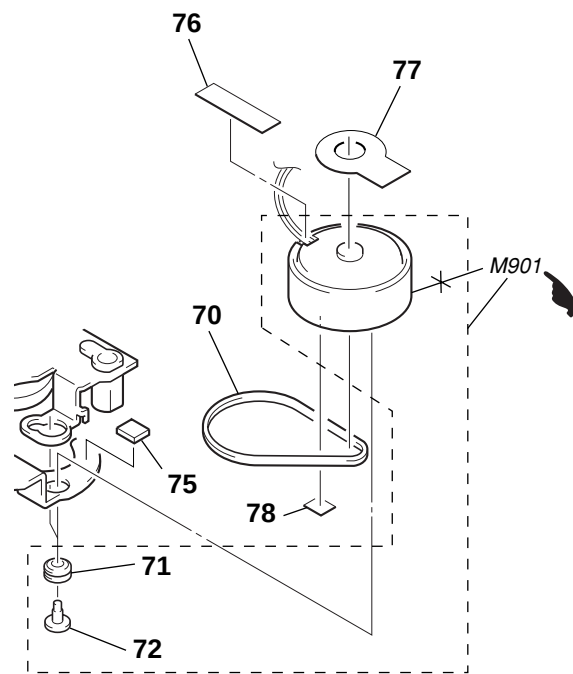
Page	Former Type	New Type			
14	– MAIN Board (Conductor Side) – Location: A – D <table><tr><td>11</td><td>12</td><td>13</td></tr></table>	11	12	13	
	11	12	13		
	Location: F – G, 12 – 13				
<table><tr><td>11</td></tr><tr><td>(11)</td></tr></table>	11	(11)	<table><tr><td>12</td></tr><tr><td>(12)</td></tr></table>	12	(12)
11					
(11)					
12					
(12)					

2-2. Exploded Views
 : Indicates modified portion.

Page	Former Type				New Type			
18	Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
	SP901	1-505-331-11	SPEAKER (3.6cm)		SP901	1-504-688-11	SPEAKER (3.6cm)	

– Continued on next page –

 : Indicates modified portion.

Page	Former Type				New Type			
	Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
19	73	3-924-644-01	SPRING (POWER TENSION), TENSION		73	3-224-846-01	SPRING (2), TENSION	
	HRP901	1-543-727-11	HEAD (RECORD/PLAYBACK)		81	3-937-000-02	HOLDER (HEAD LEAD)	
					HRP901	1-543-424-21	HEAD (RECORD/PLAYBACK)	
								
								
20	118	3-045-541-01	SPRING (PR3), TORSION		118	3-221-229-01	SPRING (PR4), TORSION	

2-3. Electrical Parts List

Page	Former Type				New Type			
	Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
21	C390	1-162-294-31	CERAMIC 1000PF 10% 50V			3-924-741-01	TERMINAL, PLUS	
			*****		C390	1-163-009-11	CERAMIC CHIP 0.001uF 10% 50V	

			MISCELLANEOUS *****				MISCELLANEOUS *****	
	HRP901	1-543-727-11	HEAD (RECORD/PLAYBACK)		HRP901	1-543-424-21	HEAD (RECORD/PLAYBACK)	
	SP901	1-505-331-11	SPEAKER (3.6cm)		SP901	1-504-688-11	SPEAKER (3.6cm)	