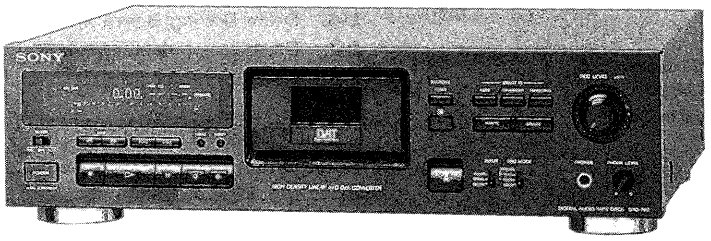
DTC-790

SERVICE MANUAL

US Model
Canadian Model
AEP Model



Model Name Using Similar Mechanism	DTC-690
Tape Transport Mechanism Type	DATM-110

SPECIFICATIONS

System

Tape	Digital audio tape
Recording head	Rotary head
Recording time (when using DT-120)	Standard: 120 minutes Long-play: 240 minutes
Tape speed	Standard: 8.15 mm/s Long-play: 4.075 mm/s
Drum rotation	Standard: 2,000 rpm Long-play: 1,000 rpm
Track pitch	13.6 µm (20.4 µm)
Sampling frequency	48 kHz, 44.1 kHz, 32 kHz
Number of channels	2 channels, stereo
D / A conversion (quantization)	Standard: 16-bit linear Long-play: 12-bit non-linear
Frequency response	Standard: 2-22,000 Hz (±0.5 dB) Long-play: 2-14,500 Hz (±0.5dB)
Signal-to-noise ratio	90 dB or more (Standard and long-play mode)
Dynamic range	90 dB or more (Standard and long-play mode)
Total harmonic distortion	Standard: 0.005% or less (1 kHz) Long-play: 0.008% or less (1 kHz)
Wow and flutter	Below measurable limit (±0.001% W.PEAK)

Input Connectors

Connector	Jack type	Input impedance	Rated input level
ANALOG (LINE)	Phono jacks	47 kilohms	–4 dBs
DIGITAL OPTICAL	Optical connector	—	—
DIGITAL COAXIAL	Phono jack	75 ohms	0.5 Vp-p

Output Connectors

Connector	Jack type	Output impedance	Rated output level	Load impedance
ANALOG (LINE)	Phono jacks	470 ohms	–4 dBs	10 kilohms or more
DIGITAL OPTICAL	Optical connector	—	(wavelength 660nm)	—
HEADPHONES	Stereo phone-plug jack	100 ohms	1.2 mW	32 ohms

— Continued on next page —

使用時は添付資料も参照のこと
Refer to the additional documents.

DIGITAL AUDIO TAPE DECK

SONY®

General section

Power requirements

Where purchased	Power requirements
US, Canadian model	120 V AC, 60 Hz
AEP, German model	220 - 240 V AC, 50/60 Hz

Power consumption	30 W
Dimensions	Approx 430 × 122 × 325 mm (w/h/d) ($17 \times 4^{7}/_{8} \times 12^{7}/_{8}$ inches)
Weight	Approx 5.0 kg (11 lb 0.4 oz)

Remote commander RM-D9 (supplied)

Dimensions	Approx 45 × 185 × 20 mm (w/h/d) ($1^{13}/_{16} \times 7^{3}/_{8} \times {}^{13}/_{16}$ inches)
Weight	Approx 100 g (3.5 oz) incl. batteries

Supplied accessories

- Audio connecting cords (2)
- Remote commander (remote) RM-D9 (1)
- Size-AA (R6) batteries (2)
- Operating instructions (1)
- Warranty card (U.S.A. and Canadian models only) (1)

Design and specifications are subject to change without notice.

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.

TABLE OF CONTENTS

SAFETY-RELATED COMPONENT WARNING !!

COMPONENTS IDENTIFIED BY MARK ⚠ OR DOTTED LINE WITH MARK ⚠ 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!!

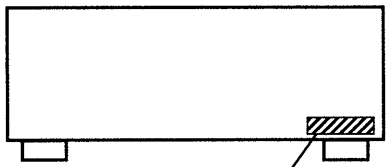
LES COMPOSANTS IDENTIFIÉS PAR UNE MARQUE ⚠ SUR LES DIAGRAMMES SCHÉMATIQUES ET LA LISTE DES PIÈCES SONT CRITIQUES POUR LA SÉCURITÉ DE FONCTIONNEMENT. NE REMPLACER CES COMPOSANTS QUE PAR DES PIÈCES SONY DONT LES NUMÉROS SONT DONNÉS DANS CE MANUEL OU DANS LES SUPPLÉMENTS PUBLIÉS PAR SONY.

PRECAUTIONS FOR INSPECTIONS AND REPAIR WITH POWER OFF

Before beginning repair work after turning OFF the main switch, be sure to first remove CN901 (EH5P), 902 (EH6P) of the main board. When assembling the equipment, be sure to plug this connector last.
Even with the main switch turned off, there still remain electrical charges in part of the power circuit. Therefore, plugging in or removing the connector could cause the power supply terminal to short with an adjacent terminal. This could cause possible component damage.

MODEL IDENTIFICATION

— Back Panel —



3-922-820-1□ (US, Canadian Model)
-2□ (AEP, German Model)

SAFETY CHECK-OUT

After correcting the original service problem, perform the following safety checks before releasing the set to the customer:
Check the antenna terminals, metal trim, "metallized" knobs, screws, and all other exposed metal parts for AC leakage. Check leakage as described below.

LEAKAGE

The AC leakage from any exposed metal part to earth ground and from all exposed metal parts to any exposed metal part having a return to chassis, must not exceed 0.5 mA (500 microampers). Leakage current can be measured by any one of three methods.

1. A commercial leakage tester, such as the Simpson 229 or RCA WT-540A. Follow the manufacturers' instructions to use these instruments.

2. A battery-operated AC milliammeter. The Data Precision 245 digital multimeter is suitable for this job.

3. Measuring the voltage drop across a resistor by means of a VOM or battery-operated AC voltmeter. The "limit" indication is 0.75 V, so analog meters must have an accurate low-voltage scale. The Simpson 250 and Sanwa SH-63Trd are examples of a passive VOM that is suitable. Nearly all battery operated digital multimeters that have a 2V AC range are suitable. (See Fig. A)

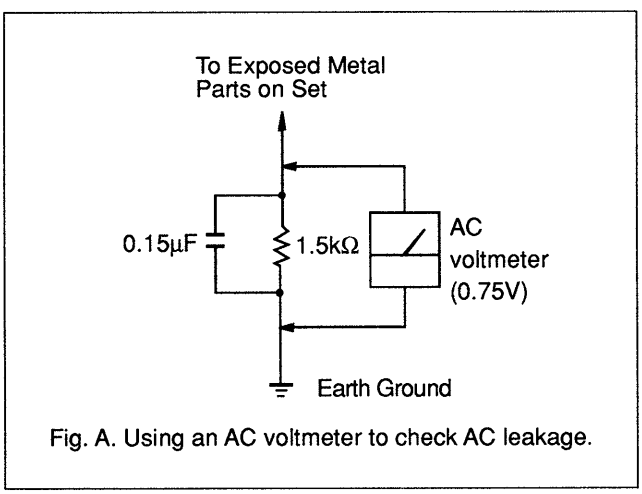
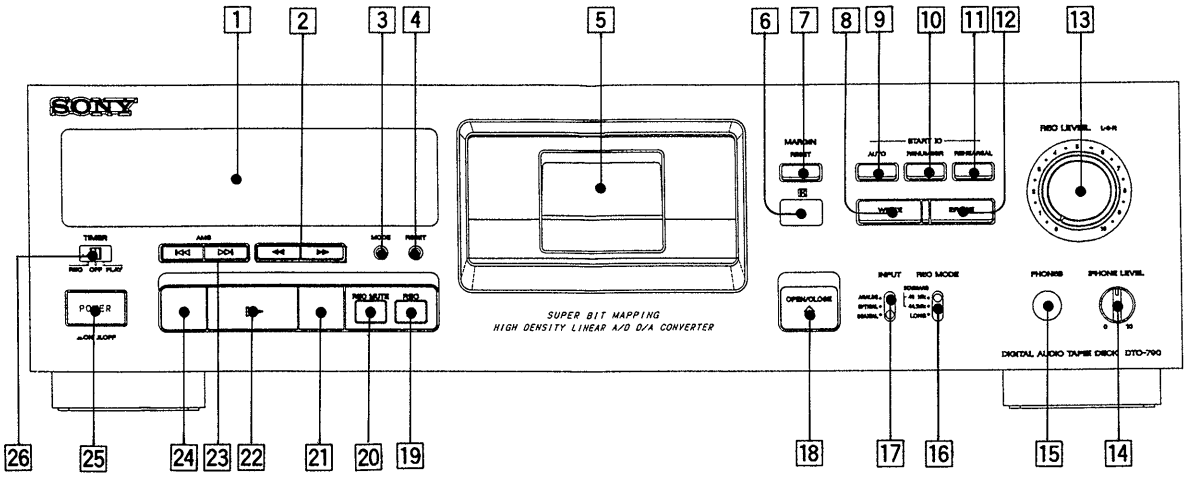
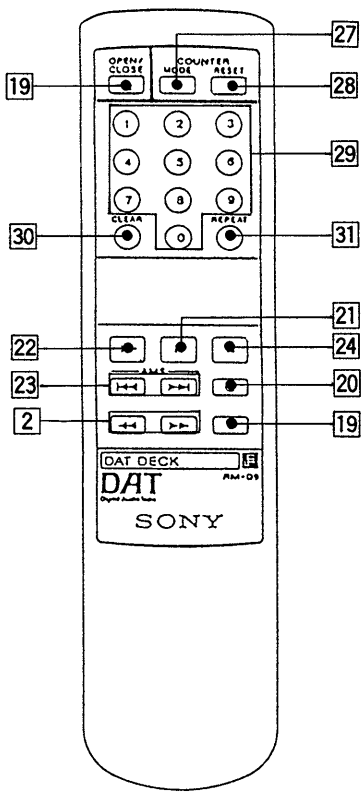


Fig. A. Using an AC voltmeter to check AC leakage.

SECTION 1
GENERAL

FRONT PANEL





1 Display window
2 ◄◄/►► (rewind/fast-forward) buttons
3 MODE (counter mode) button
4 RESET (counter reset) button
5 Cassette holder
6 Remote sensor
7 MARGIN RESET button
8 WRITE button
9 START ID AUTO button
10 START ID RENUMBER button
11 START ID REHEARSAL button
12 ERASE button
13 REC (recording) LEVEL control
14 PHONE LEVEL control
15 PHONES jack
16 REC (recording) MODE switch
17 INPUT switch
18 OPEN/CLOSE button
19 REC ● (recording) button
20 REC (recording) MUTE O button
21 II (pause) button
22 ▷ (play) button
23 ⏮/⏭ (AMS*) buttons
24 ■ (stop) button
25 POWER switch
26 TIMER switch
27 COUNTER MODE button
28 COUNTER RESET button
29 Numeric buttons
30 CLEAR button
31 REPEAT button

* AMS is the abbreviation of Auto Music Sensor.

SECTION 2
DISASSEMBLY

• Remove the parts numbered in the figure (❶, etc.) in numerical order.

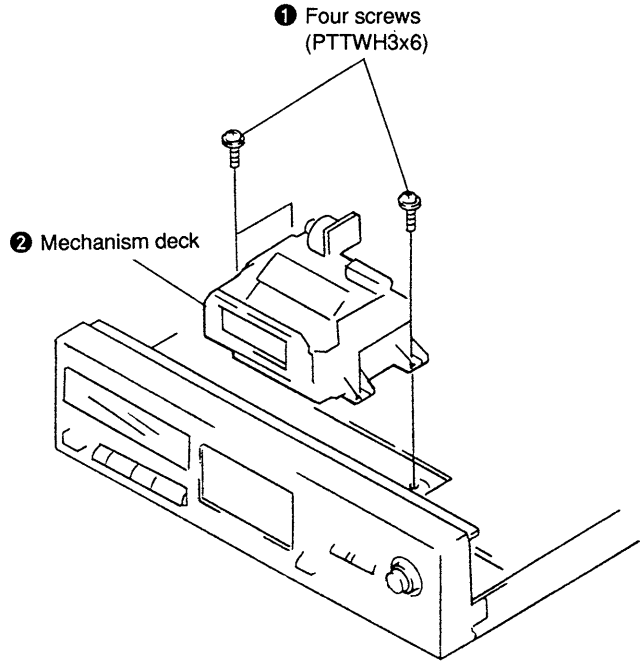
2-1. CASE

Unscrew the four case attachment screws and remove the case.

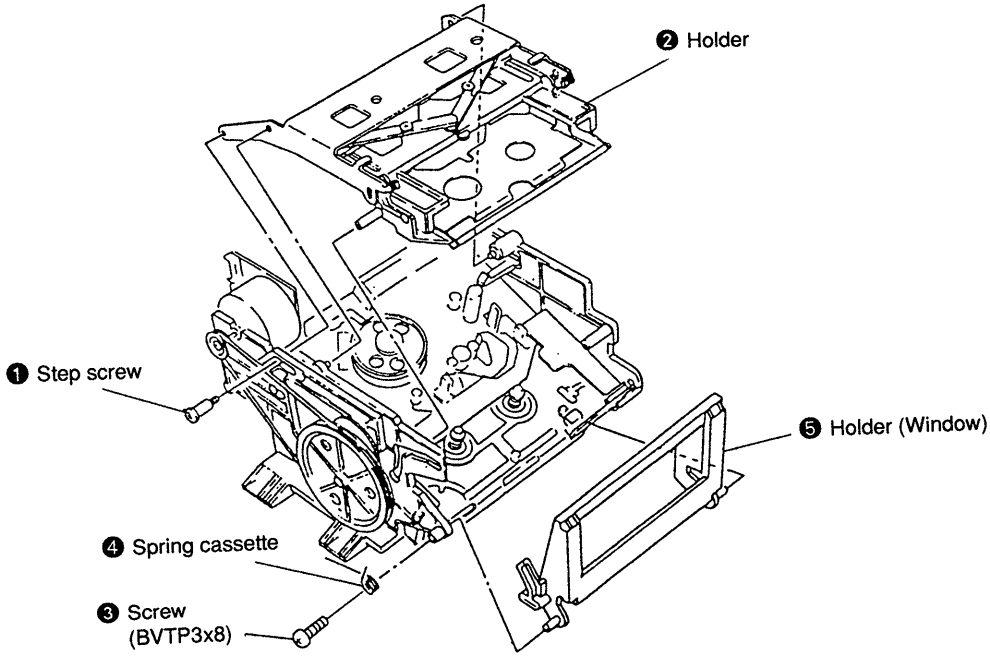
2-2. CASSETTE WINDOW

❶ Press the OPEN/CLOSE switch to effect LOADING OUT STATE (if power is not supplied) rotate the pulley in the left side of the Mechanism Deck counterclockwise.)
❷ Remove the cassette by lifting the window up.

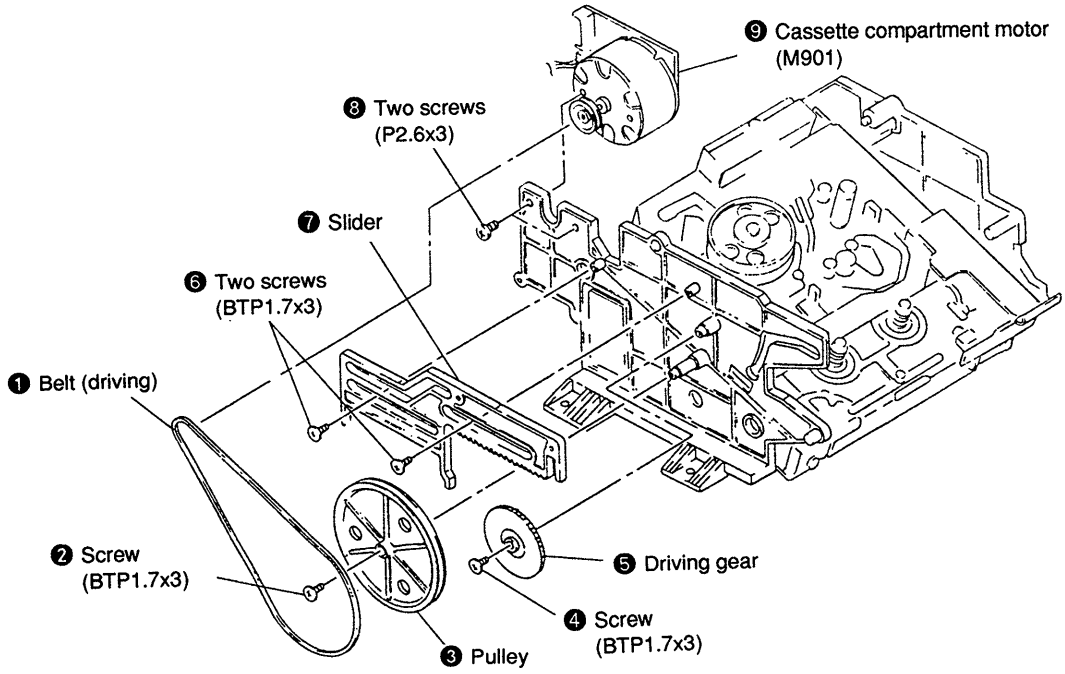
2-3. MECHANISM DECK



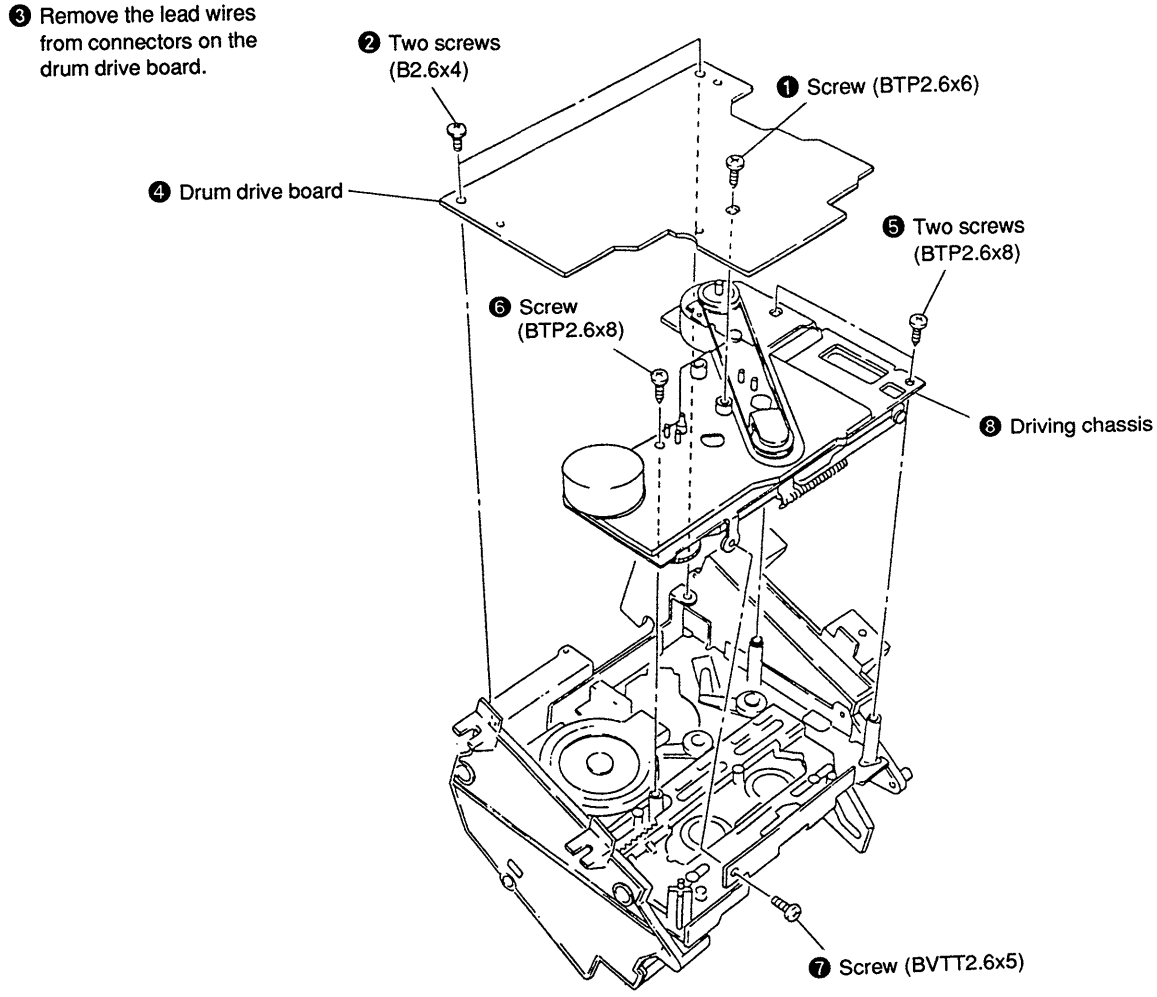
2-4. HOLDER



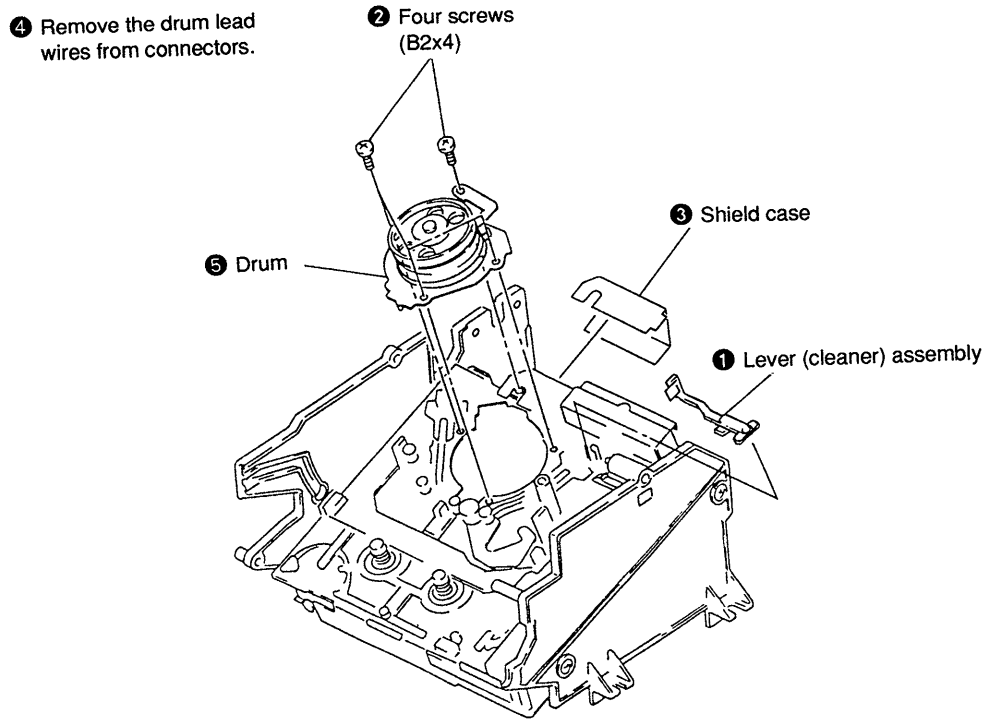
2-5. CASEETTE COMPARTMENT MOTOR (M901), PULLEY, DRIVING GEAR AND SLIDER



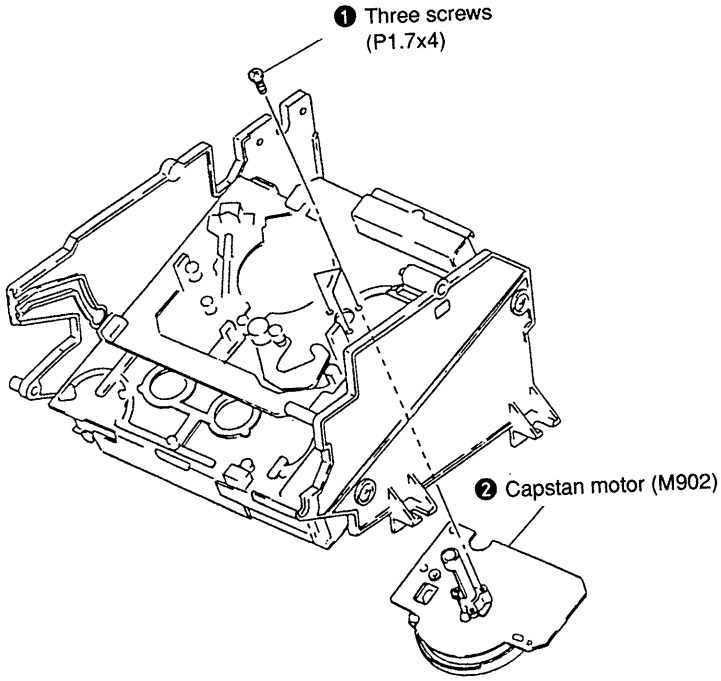
2-6. DRUM DRIVING BOARD AND DRIVING CHASSIS



2-7. DRUM



2-8. CAPSTAN MOTOR (M902)



SECTION 3
ADJUSTMENTS

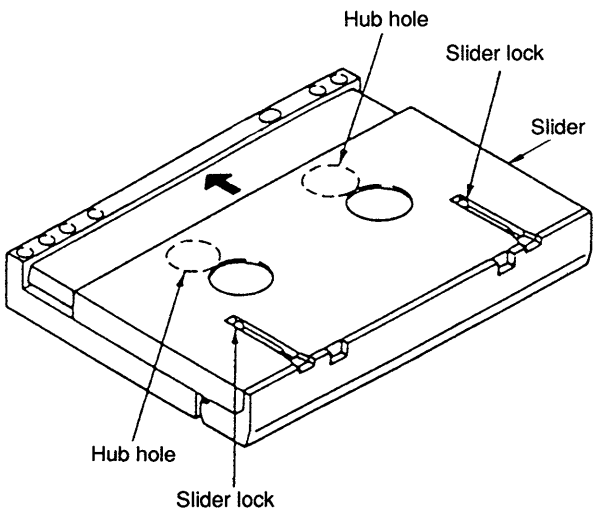
Notes When Making Adjustments

1. Adjustments should be performed in the order listed.
2. Use the following test tapes:
   TY-7111X (8-909-823-00) ..... Level
   TY-7251 (8-909-813-00) ..... Tracking
   TY-7551 (8-909-814-00) ..... Functions
   TY-30B (8-892-358-00) ..... Blank

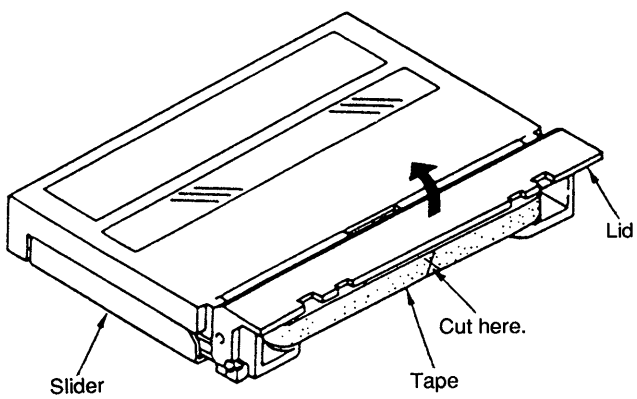
   Use the following torque meter:
   TW-7131 (8-909-708-71) ..... FWD

3. Switches and controls should be set as follows unless otherwise specifed.
   TIMER switch : OFF
   REC MODE switch : LONG
   INPUT switch : COAXIAL
   REC LEVEL control : Min.
   PHONES LEVEL control : Min.

4. Creating an end sensor cassette
   (1) Press the tape slider lock and move the slider in the direction indicated by the arrow.



   (2) Open the lid and cut the tape.



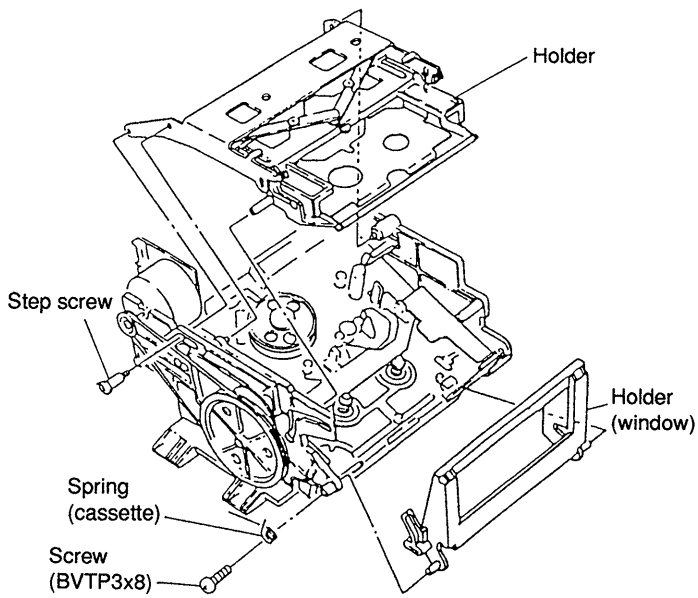
   (3) Turn the hubs until the tape is completely inside the cassette (both T and S sides).
   The end sensor cassette for end sensor adjustment is now ready for use.

5. Cleaning of the Revolving Drum
   (1) Fold a chamois (2-034-697-00) or a knit cloth into 4 or more files, slightly impregnate it with a cleaning liquid (9-919-573-00), and softly touch the drum with it and manually rotate the drum slowly counterclockwise by 2 to 3 turns for cleaning.
   (2) At that time, be careful not to move the chamois vertically to the head tip. Otherwise, the head tip may probably be damaged.

6. Be careful not to move RV1 and RV2 on the RF AMP board in the mechanism assembly.

7. To adjust the tape path and guides, remove the holder assembly as shown in the diagram and use the DAT holder jig (J-8000-002-A). This will make it easier to perform adjustments.

   - First turning the pulley counterclockwise to put it in loading out status will make removal and reattachment of the holder assembly easier.
   - To perform adjustments, turn the pulley clockwise to put it in loading in status, load the cassette tape and set the IN switch to the ON position.



8. Test Mode
   (1) Test mode (main)
   To set the test mode, short-circuit TP (X TEST) and GND of the main board. (At this time, the dB display of the FL display level meter will blink.)

   Perfom the following adjustments in the test mode.
   - FWD torque adjustment
   - FWD back tension check
   - Tape path fine adjustments
   - DPG adjustment
   - AGC voltage check
   - End sensor check

(2) Test mode (display)

Setting :

TIMER switch : Center click
INPUT switch : Center click
REC MODE switch : Center click

1) Disconnect CN901 and CN902 of the main board after turning off the power supply.
2) Short-circuit the testland (TEST) and GND of the display (A) board.
3) To check the FL display, insert CN901 and CN902 and turn on the power.

Each grid of the FL display tube sequentially lights up while all tubes being lighted up finally.

⇩

Level meters go out one after one.

⇩

When all the level meter go off, the NEXT RMC will be displayed.

⇩

When the PLAY(►) key of the DAT remote control is pressed, the display other than the level meter lights up and the NEXT KE 4 will be displayed next.

⇩

Every time the panel switch is operated, one level meter light up.

⇩

When all switches have been operated, all the level meters go off and KEY OK will be displayed.

- To reset the test mode, disconnect the wire shorting TP (X TEST, TEST) and GND. After completion of adjusting, be sure to reset the test mode.

9. Check the following items for correct tape speed, after completion of adjusting.
   (1) Set the REC MODE switch to 48k and check for normal recording and playback. (x1)
   (2) Set the REC MODE switch to LONG and check for normal recording and playback. (x0.5)
   (3) With QUE (►+►►) or REVIEW (►+◄◄), check that qurrr, qurrr sound is heard. (x3, x8)
   (4) Check that correct time is displayed after FF (►►)or REV (◄◄). (x16)
   (5) Check that AMS (▷▷I , I◁◁) is normal.

3-1. ELECTRICAL ADJUSTMENTS

FWD Torque Adjustment

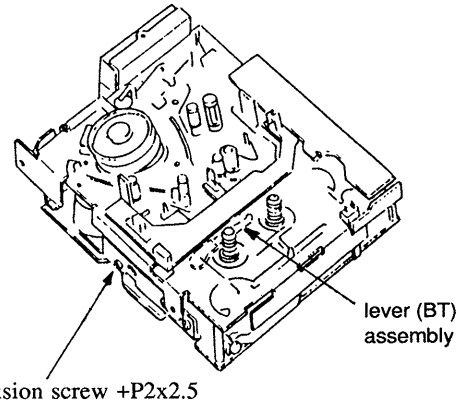
Procedure :

1. Set the test mode (main) and load the FWD torque meter TW-7131 (8-909-708-71).
2. Set the PLAY (►) mode. "TORQUE" will be displayed on the FL tube.
3. Adjust RV451 so that the minimum value of FWD take up torque (take-up side rewinding torque) is between 9 – 10g • cm (0.13 – 0.14 oz • inch).
   Also, make sure that the maximum reading does not exceed 15g • cm (does not exceed 0.21 oz • inch).
4. Confirm that the value indicated by the torque meter is maintained for one full cycle.

FWD Back Tension Check

Procedure :

1. Set the test mode (main), and attach the FWD torque meter TW-7131 (8-909-708-71).
2. Set the PLAY (►) mode. "TORQUE" will be displayed on the FL tube.
3. Check the minimum value of the back tension (S side) to be 4.5 to 7.5g • cm (0.06 - 0.1 oz • inch). And check that the difference between the minimum value and the maximum value is less than 5g • cm. (0.07 oz • inch)
4. If the specified values are not satisfied, replace the lever (BT) assembly (X-3363-024-1).



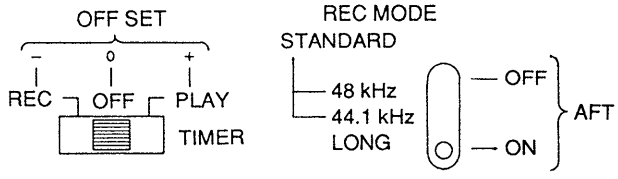
Note : Precision screw +P2x2.5
This screw is used in some units. Do not rotate it.

Tape Path Fine Adjustments (x1.5 FWD Mode)

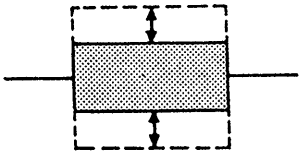
Perform the following adjustment when the drum has been replaced.

Procedure :

1. Connect an oscilloscope CH-1 to TP (PBRF) and CH-2 to TP (SWP) on the main board.
2. Set the test mode (main) and load test tape TY-7251 (8-909-813-00).
3. Press the AMS (▷▷I) key. "DPG" will be displayed on the FL tube.
   Each part of switches on Test Mode.

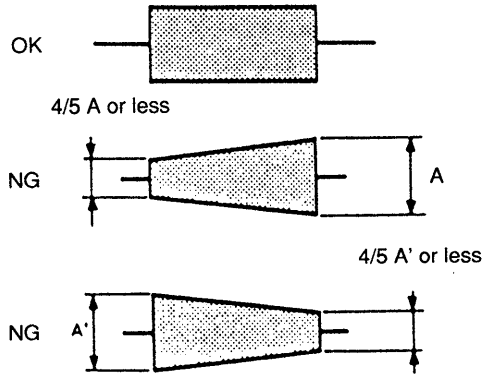


4. With the REC MODE switch set to 48k (ATF: OFF) and the TIMER switch set to PLAY or REC (OFFSET: + or –), fine adjust the S1 and T1 guides so that the oscilloscope RF signal waveform remains the same when high-low is repeated.

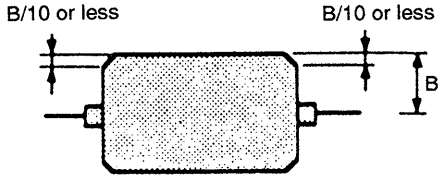


* Finish the adjustment by screwing in.

5. Check the RF signal waevform with the REC MODE switch set to LONG (ATF: ON) and the TIMER switch set to PLAY or REC (OFFSET: + or –).



6. Check the RF signal waveform with the REC MODE switch set to LONG (ATF: ON) and the TIMER switch set to OFF (OFFSET: 0).
   (1) Confirm that the RF signal waveform peak value (B) is 60 mV or more.
   (2) Confirm that the undershoot level of the RF signal waveform's flat portion is within 10%.



7. When the measured values are not within the above tolerance repeat items 3 – 6 above.

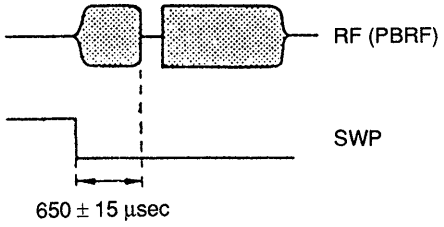
Adjustment Point : mechanism assembly

DPG Adjustment

Perform the following adjustment without fail when the drum has been replaced.

Procedure :

1. Connect oscilloscope CH-1 to TP (PBRF) and CH-2 to TP (SWP) on the main board. (Use CH-2 as the trigger. When the CH-2 signal is inverted, the trailing edge can be used for synchronization.)
2. Set the test mode (main) and load test tape TY-7251 (8-909-822-00).
3. Set the REC MODE switch to 48k (ATF: ON) and the TIMER switch to OFF (OFFSET: 0).
4. Press the AMS (▷▷▯) key. "DPG" will be displayed on the FL tube.
5. Press the ◀◀ and ▶▶ keys as appropriate so that the gap between the oscilloscope SWP and RF signals become 650 ± 15 µsec.
   (Hold the ◀◀ and ▶▶ keys down for more than 1 second to perform rough adjustment. Hold them down for approximately 0.2 seconds for fine adjustment, and the auto adjustment can be performed pressing ▷ key.

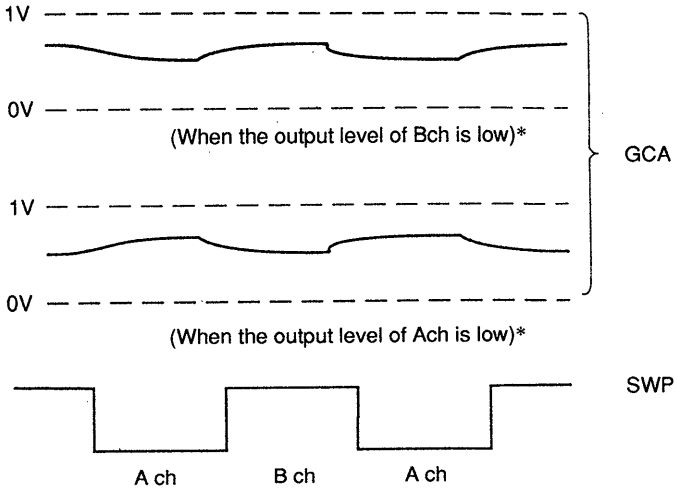


AGC Voltage Check

Perform this adjustment after cleaning the heads with a cleaning cassette.

Procedure :

1. Connect oscilloscope CH-1 to TP (GCA: Gain Control Amp.) and CH-2 to TP (SWP) on the main board. (When the CH-2 signal is inverted, the trailing edge can be used for synchronization.)
2. Set the test mode (main) and load test tape TY-7111X (8-909-823-00).
3. Set the PLAY (▶) mode and check that the GCA waveform on the oscilloscope is as follows.



* Slightly changes depending on the state of the head. NG if the GCA waveform is 1V or more or equal to the GND level.

End Sensor Check

Perform the following adjustment when the holder has been removed or part of the mechanism deck section replaced.

Procedure :

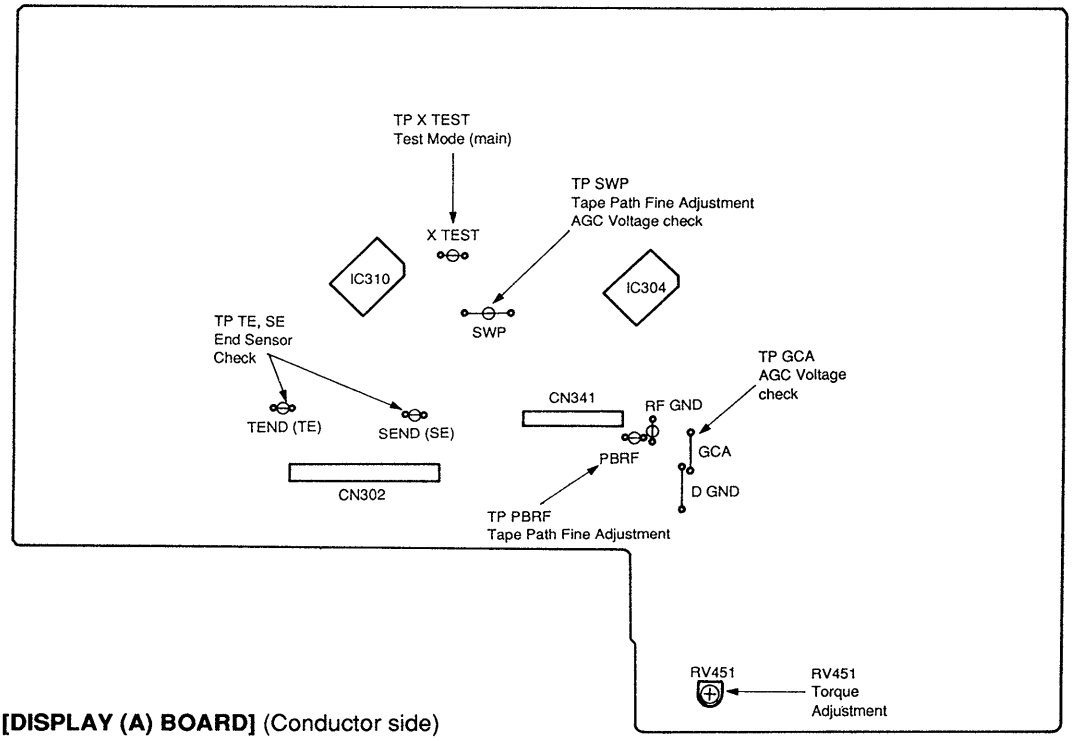
1. Connect an oscilloscope to the test land SE (in the S side) and TE (in the T side) of the main board.
2. Set the test mode (main), mount an end sensor cassette and effect the STOP (■) mode.
3. Check that p-p values of waveform of the oscilloscope satisfy the following.

In the S sdie: 300 mVp-p or more

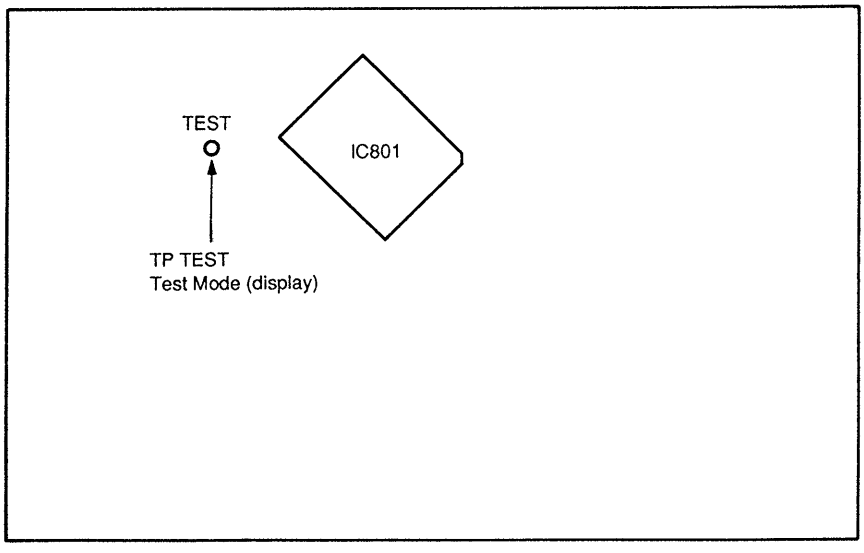
In the T side: 150 mVp-p or more

Adjustment Location :

[MAIN BOARD] (Component side)

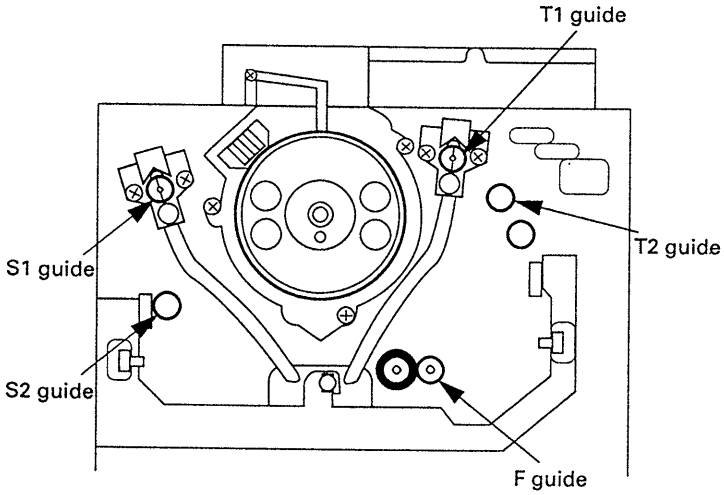


[DISPLAY (A) BOARD] (Conductor side)



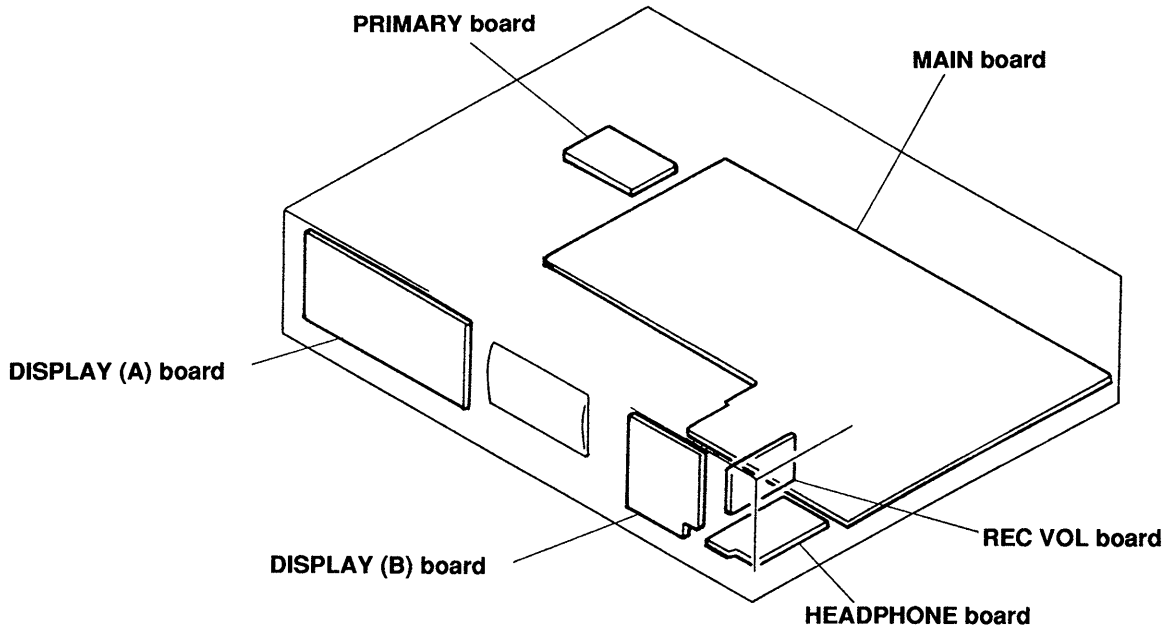
Adjustment Location :

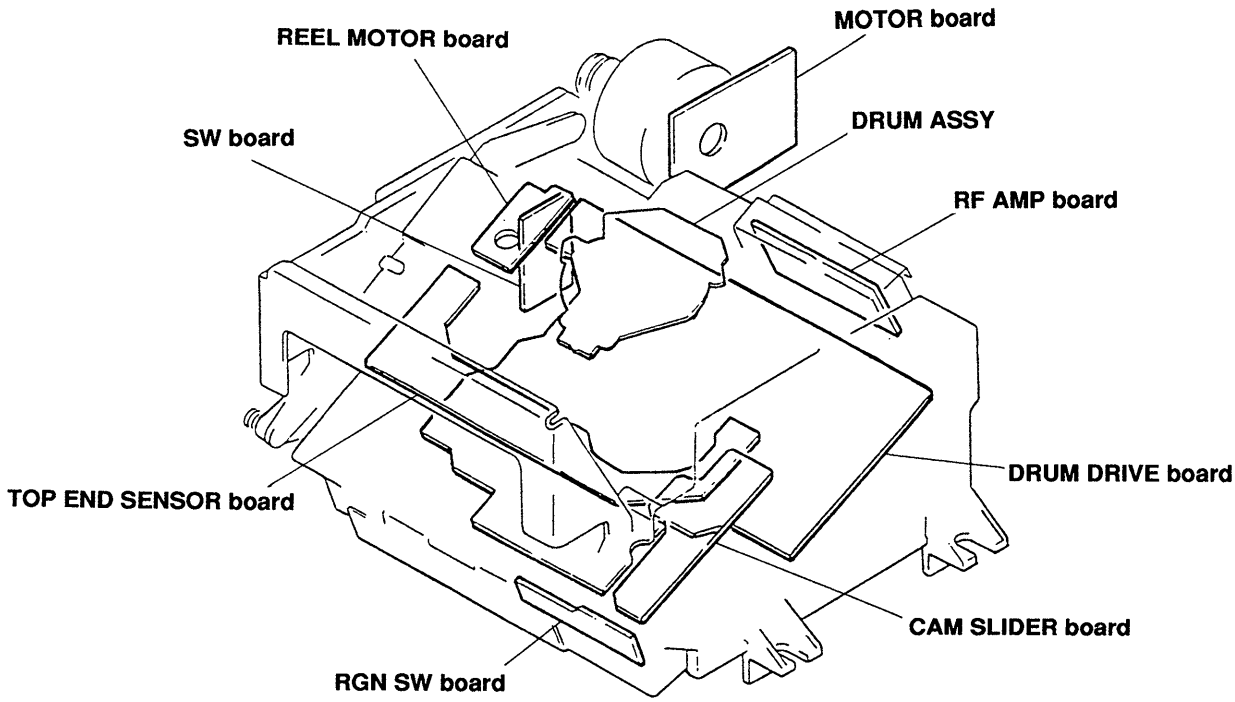
— Mechanism assembly —



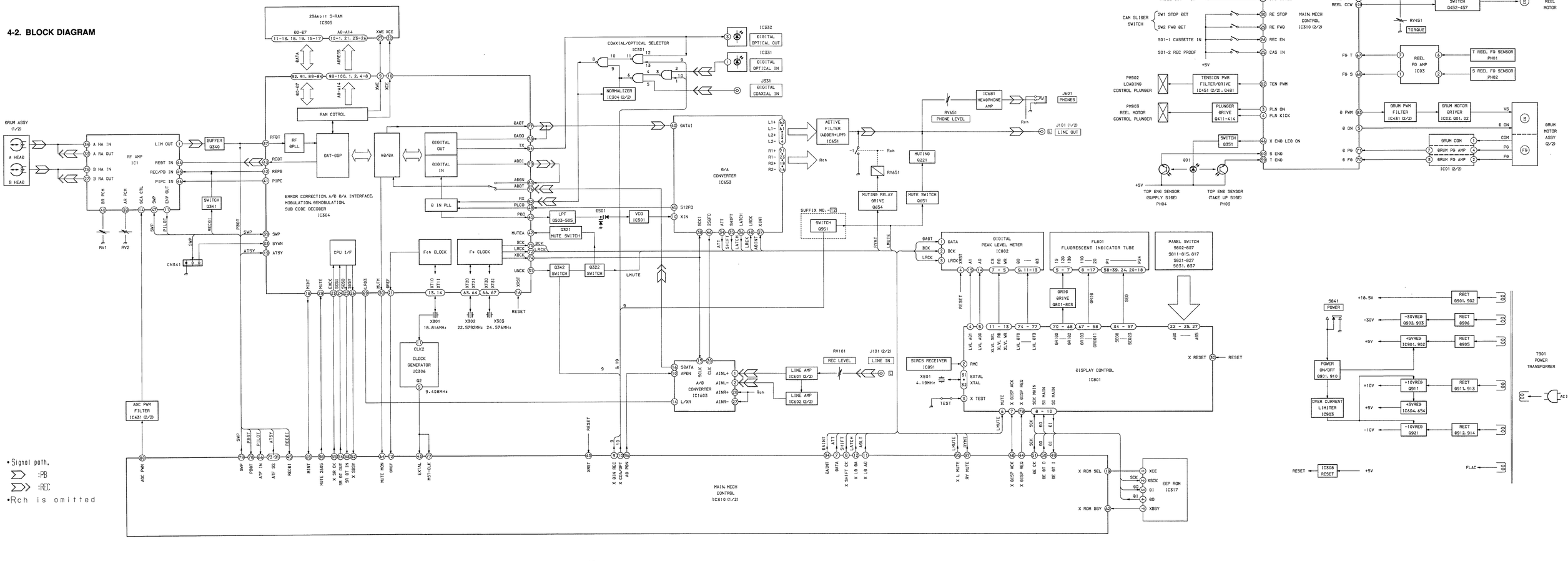
SECTION 4
DIAGRAMS

4-1. CIRCUIT BOARDS LOCATION





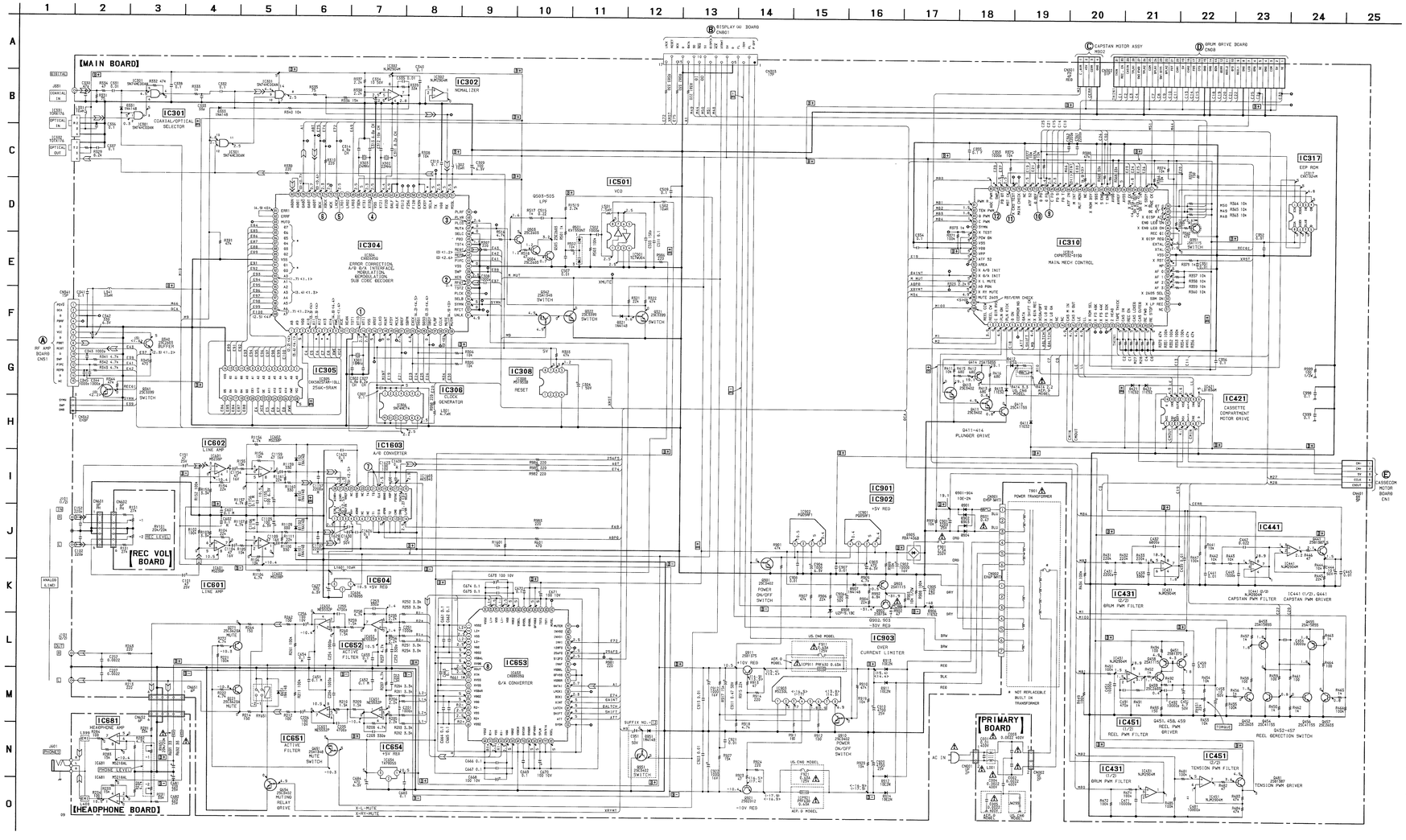
4-2. BLOCK DIAGRAM



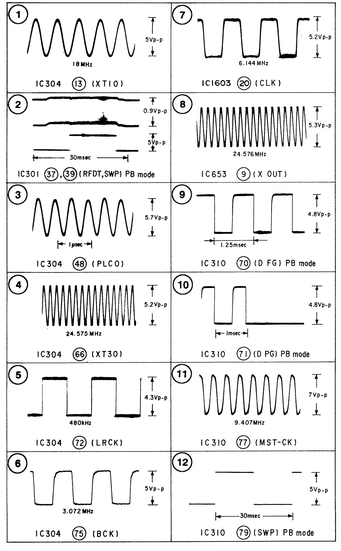
- Signal path,
  - :PB
  - :REC
- Rch is omitted

4-3. SCHEMATIC DIAGRAM — MAIN SECTION —

- See page 33 for IC Block Diagrams.
- See page 35 for IC Pin Functions. (iC304, 310)



• Waveforms



NOTE

- All capacitors are in μF unless otherwise noted. pF: μμF
  50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4W or less unless otherwise specified.
- : fusible resistor.
- : panel designation.

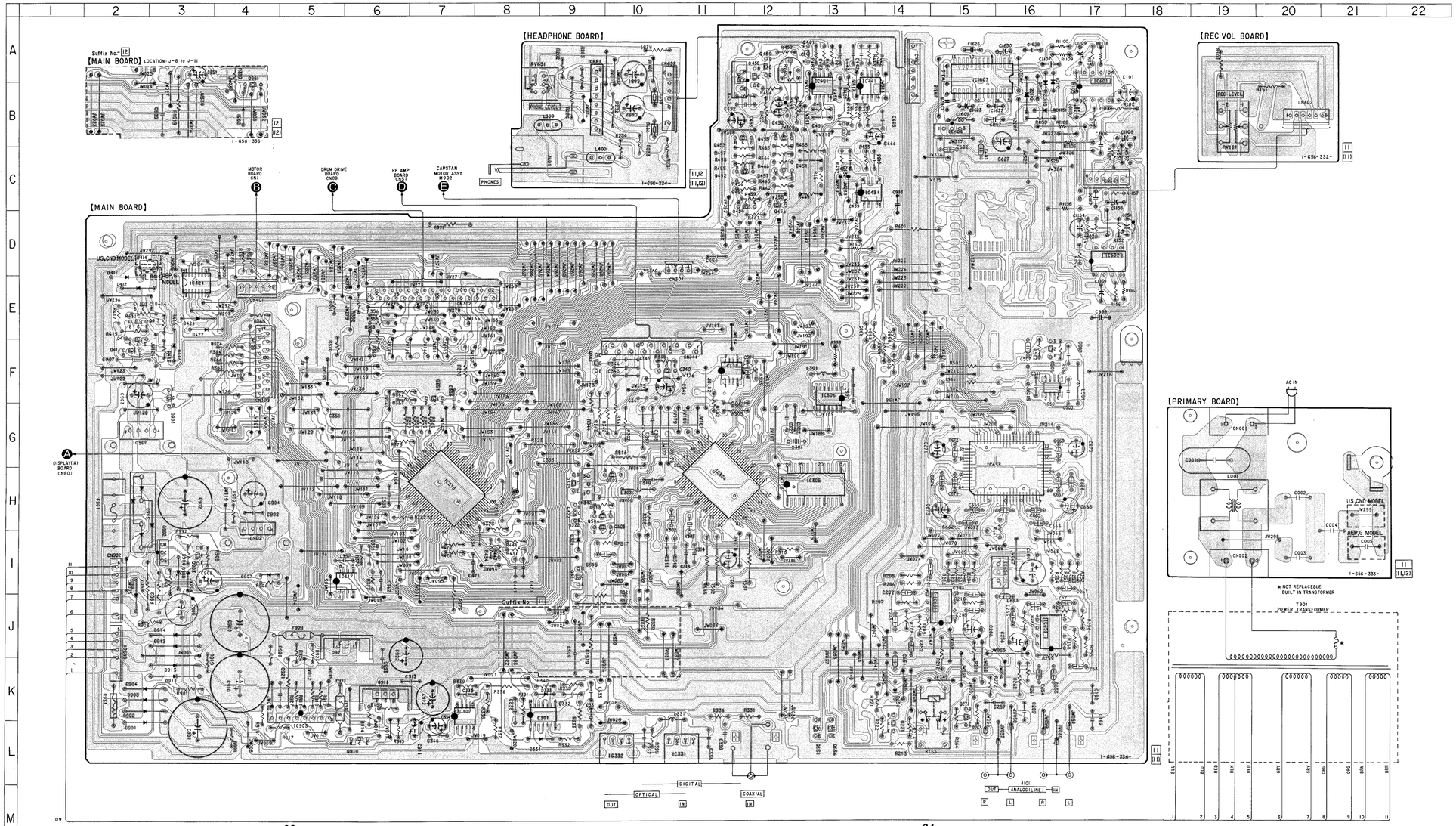
Note: The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

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

- [B+] : B+ Line.
- [B−] : B− Line.
- : adjustment for repair.
- Voltages and waveforms are dc with respect to ground under no-signal conditions.
  no mark: PB / ( ): PB
  < : REC
  x : can not be measured.
- Voltages are taken with a VOM (Input impedance 10MΩ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Abbreviation
  CND: Canadian model.
  G : German model.
- Signal path.
  : PB
  : REC

4-4. PRINTED WIRING BOARD — MAIN SECTION —

• See page 13 for Circuit Boards Location.



• **Semiconductor Location**

Ref. No.	Location	Ref. No.	Location
D321	I-9	IC651	J-15
D331	L-8	IC652	J-16
D333	K-8	IC653	H-16
D411	E-2	IC654	I-16
D412	E-2	IC681	A-9
D413	F-3	IC901	G-2
D421	E-3	IC902	I-4
D422	E-3	IC903	K-5
D501	F-16	IC1603	A-15
D651	K-14		
D901	L-2	Q221	K-14
D902	K-2	Q271	K-15
D903	K-2	Q321	I-10
D904	K-2	Q322	H-9
D905	H-2	Q340	F-10
D906	I-2	Q341	F-9
D907	I-4	Q342	H-9
D908	I-3	Q351	F-7
D911	K-3	Q411	F-2
D912	J-3	Q412	E-2
D913	K-3	Q413	E-2
D914	J-3	Q414	E-2
D951	B-4	Q441	B-13
D1101	A-16	Q451	A-12
D1102	B-16	Q452	C-12
D1151	B-16	Q453	B-12
D1152	B-16	Q454	C-12
		Q455	B-12
IC301	K-8	Q456	C-12
IC302	K-7	Q457	C-12
IC304	H-11	Q458	A-12
IC305	H-13	Q459	A-12
IC306	F-13	Q481	A-13
IC308	F-11	Q503	H-9
IC310	H-7	Q504	H-9
IC317	I-5	Q505	H-10
IC331	L-11	Q651	L-13
IC332	L-10	Q654	L-13
IC421	E-3	Q901	G-3
IC431	C-14	Q902	I-3
IC441	B-14	Q903	I-3
IC451	B-13	Q910	L-6
IC501	F-16	Q911	K-6
IC601	B-17	Q921	J-5
IC602	D-17	Q951	A-4
IC604	B-15		

Note:

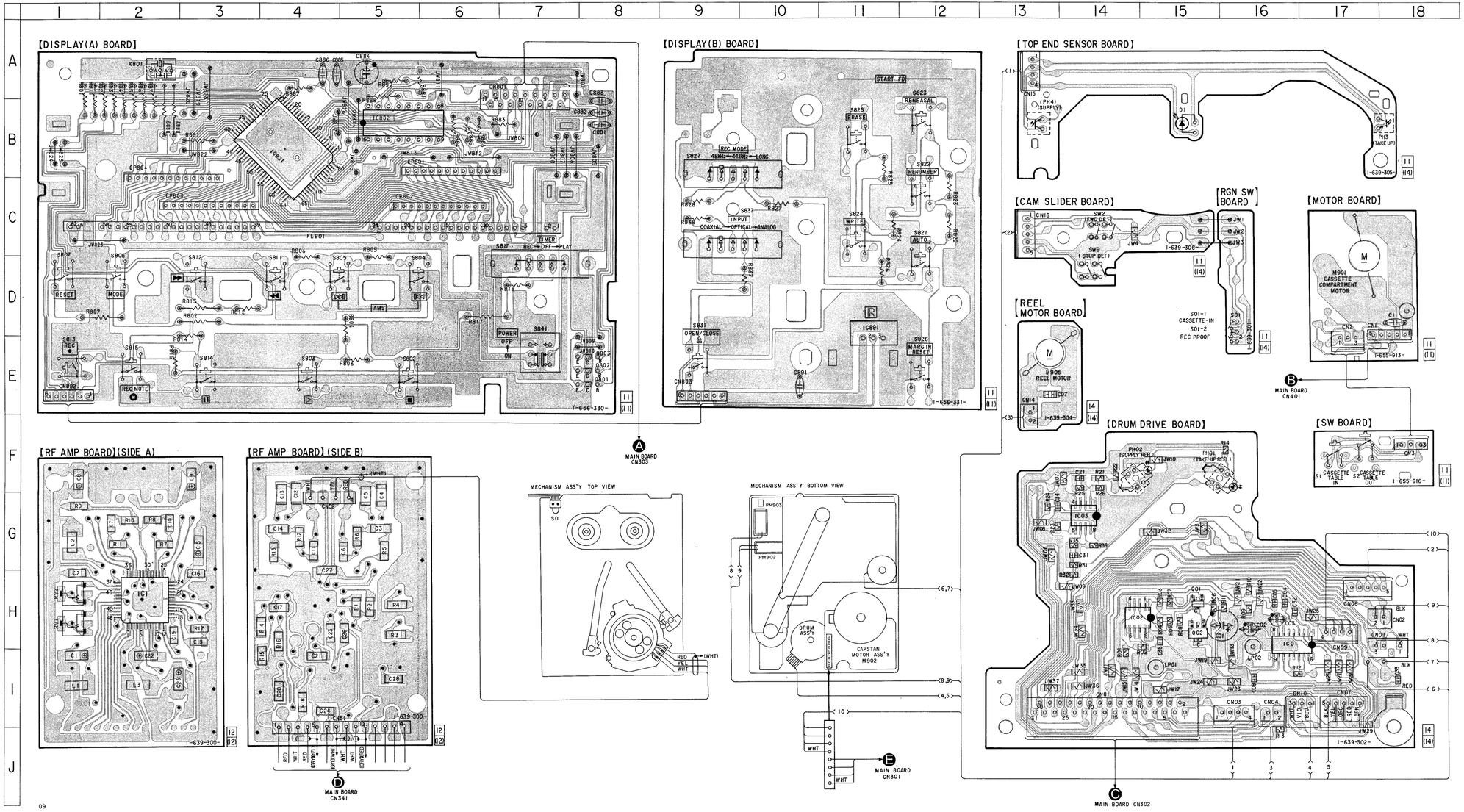
- ⟋ : parts extracted from the component side.
- ▒ : Pattern from the side which enable seeing.
- Abbreviations.
  CND : Canadian model.
  G : German model.

4-5. PRINTED WIRING BOARD — DISPLAY, MD SECTION —

• See page 13 for Circuit Boards Location.

• **Semiconductor Location**

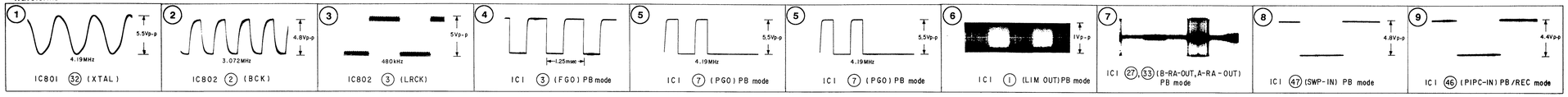
Ref. No.	Location
D1	B-15
IC1	H-2
IC01	H-16
IC02	H-14
IC03	G-14
IC801	B-4
IC802	B-5
IC891	D-11
Q01	H-15
Q02	H-15
Q801	E-8
Q802	E-8
Q803	E-8



Note:

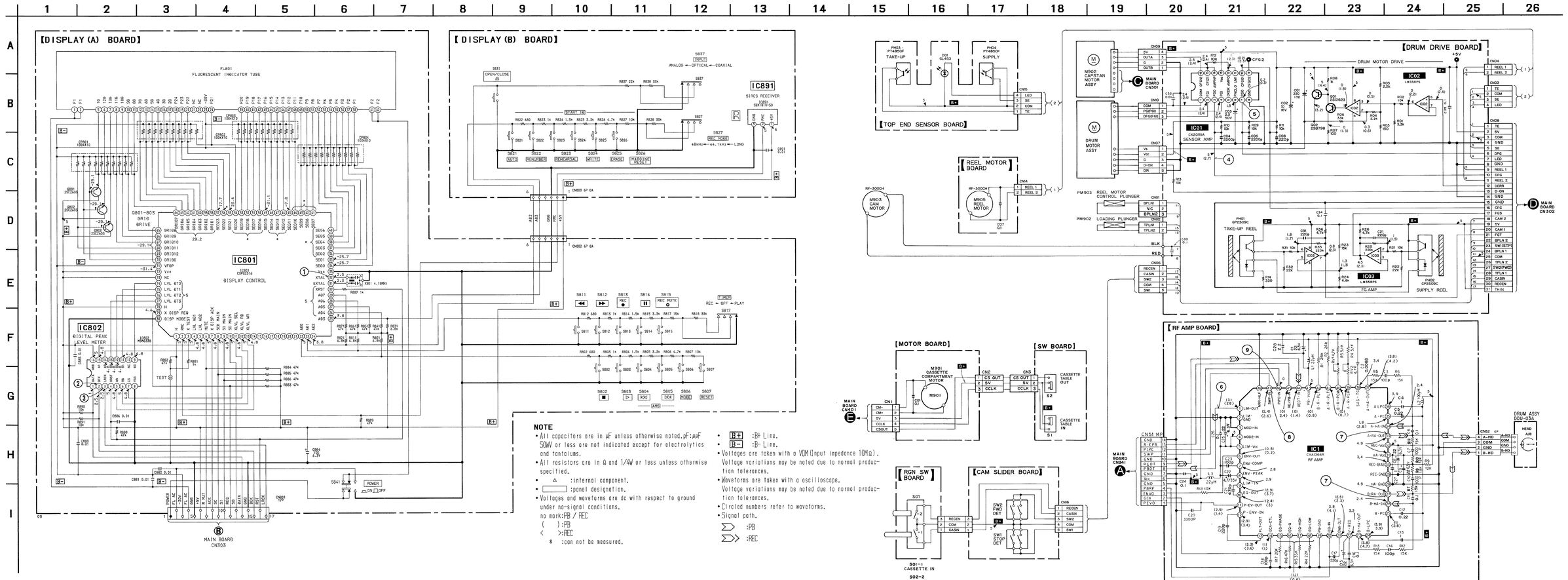
- ○——○ : parts extracted from the component side.
- ● : Through hole.
- △ : internal component.
- ▒▒▒ : Pattern from the side which enable seeing. (The other layer's patterns are not indicated.)

• Waveforms



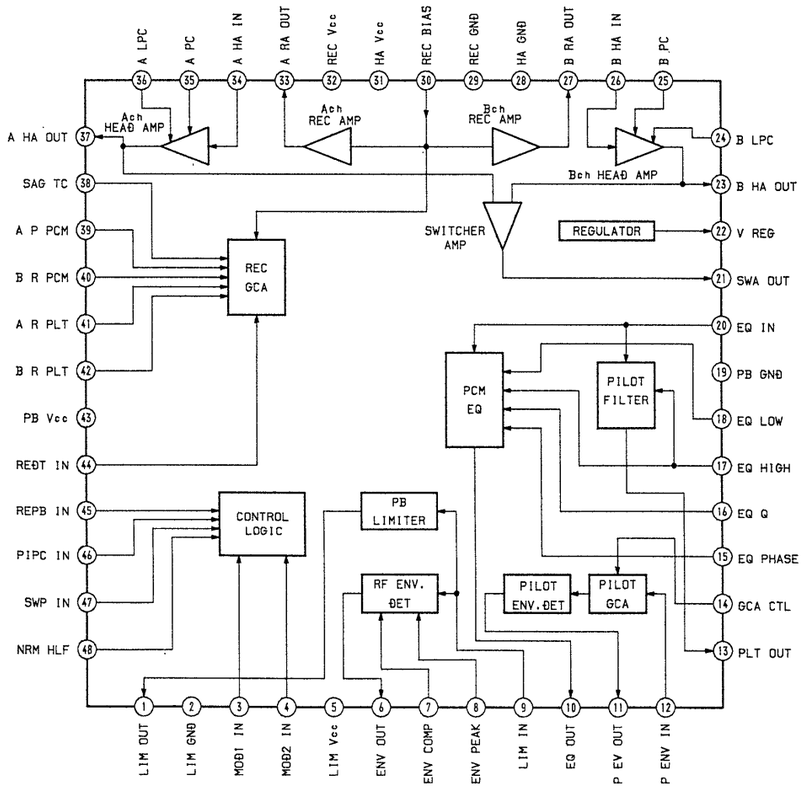
4-6. SCHEMATIC DIAGRAM — DISPLAY, MD SECTION —

• See page 33 for IC Block Diagrams.
• See page 40 for IC Pin Functions. (IC801, 802)

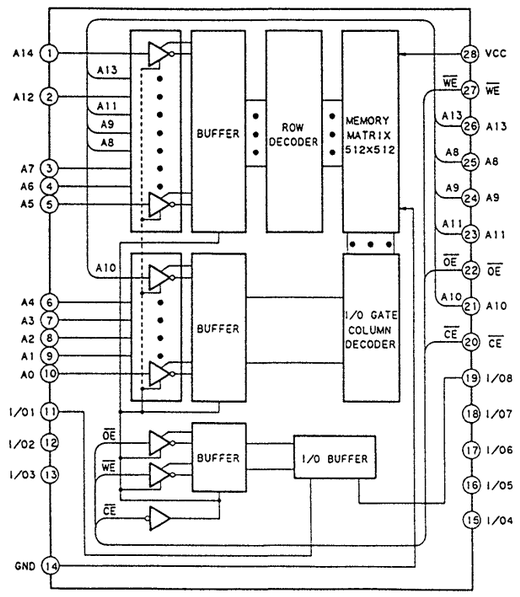


4-7. IC BLOCK DIAGRAMS

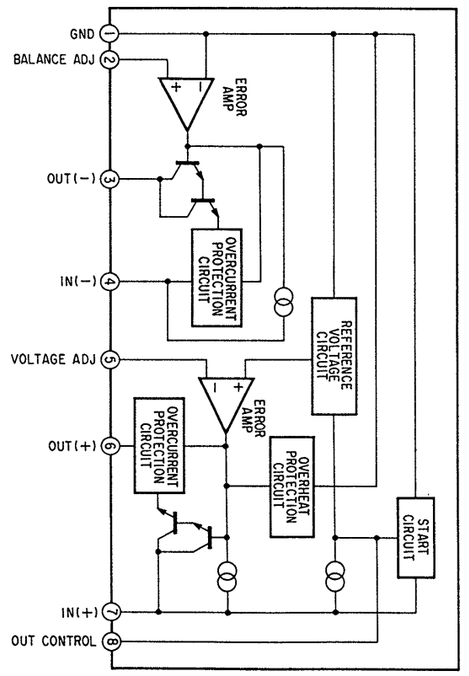
IC1 CXA1364R



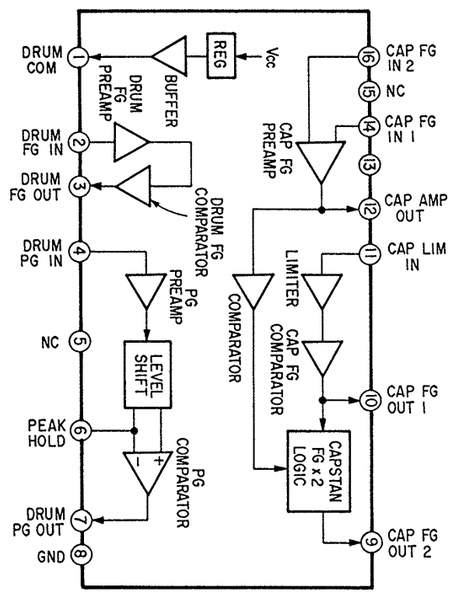
IC305 CXK58257AM



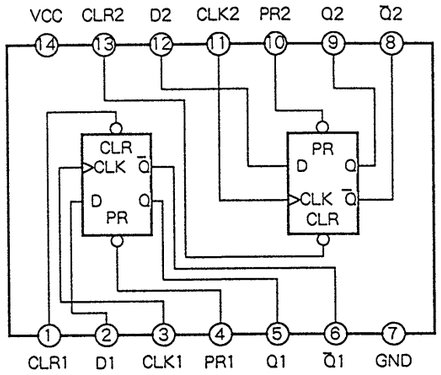
IC903 M5230L



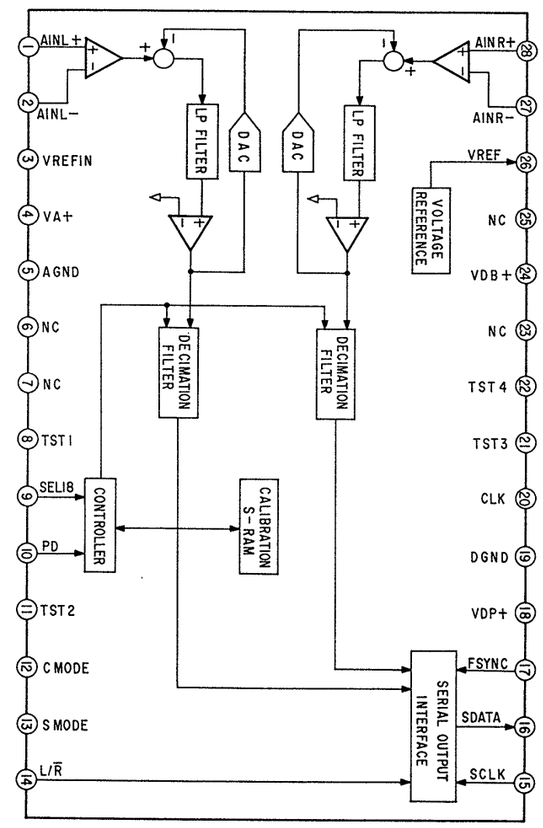
IC01 CX20115A



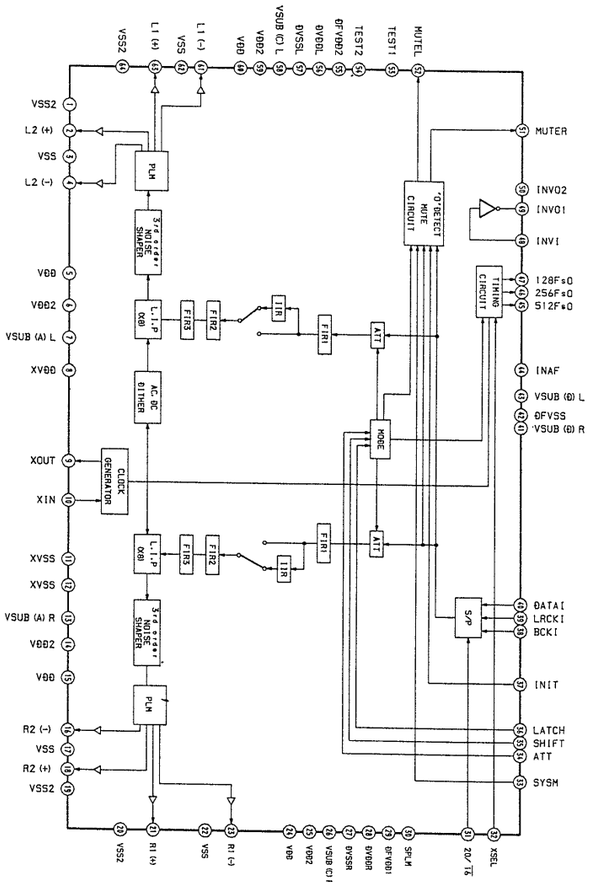
IC306 SN74HC74



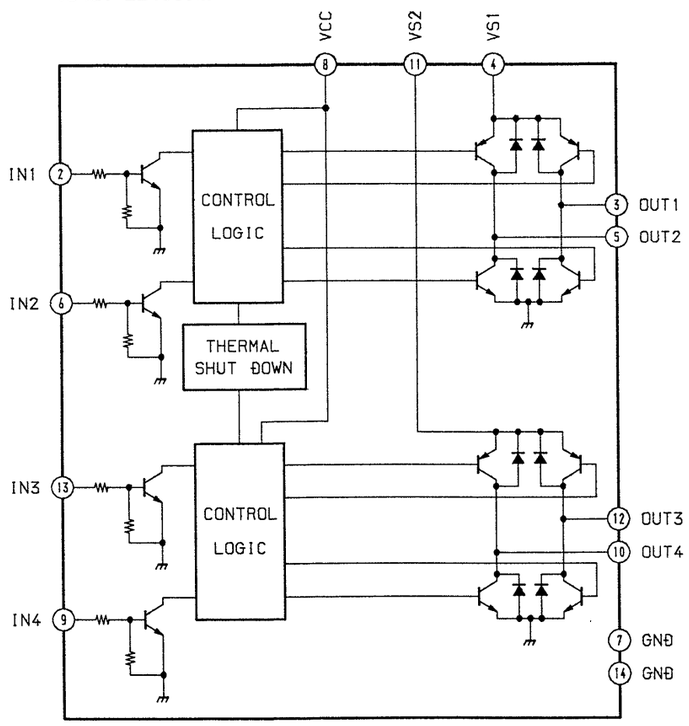
IC1603 AK5304



IC653 CXD8505Q



IC421 LB1836M



4-8. IC PIN FUNCTIONS

- **IC304 CXD2605Q (DSP)**

Pin No.	Pin Name	I/O	Function
1, 2	A8, A9	O	External RAM address output
3	VDD	–	Power supply (+5V)
4 to 8	A10 to A14	O	External RAM address output
9	XWE	O	External RAM write enable signal output
10	XOE	O	External RAM output enable signal output
11	XEAN	O	Not used (open).
12	TST1	I	Test pin. Fixed to "L".
13	XTIO	O	Crystal oscillation circuit 1 output
14	XTII	I	Crystal oscillation circuit 1 input
15	Vss	–	GND
16	XRST	I	Reset input. "L": Reset.
17	CLKO	O	Not used.
18	MINT	O	Control byte (1) bit 1="L": Q code decode (detecting between songs) output, "H": BCK clock output by RX-PLL.
19	ATSY	I	ATF sync signal input
20	MCLK	O	Not used.
21	DREF	O	SBSY period, duty 50 signal output
22	SBPM	O	Not used (open).
23	EXCK	I	Data transfer clock input for MAIN, MECH CONTROL (IC310)
24	SDSI	I	Serial data input from MAIN, MECH CONTROL (IC310)
25	SDSO	O	Serial data output to MAIN, MECH CONTROL (IC310)
26	SBSY	O	Frame sync signal output for transferring data with MAIN, MECH CONTROL (IC310)
27	RFPL	O	Not used (open).
28	CCLK	O	Not used.
29	MUTE	I	Mute input. "H": Mute. Not mute REC monitor sound.
30	MUTM	O	Mute monitor. "H": Indicates muting occurs.
31	UNLK	O	RXPLL lock monitor signal output. "L": Indicates locking occurs.
32	RFCT	I	Playback RF signal control ("L": Valid, "H": Invalid) (connected to GND)
33	SYMN	O	Outputs monitor signal for C1 check results corresponding to RF.
34	SELB	I	Test pin. Fixed to "H".
35	PLCK	O	Not used.
36	TST2	I	Test pin. Fixed to "L".
37	RFDT	I	Playback RF signal input
38	XCS	I	Chip select input for data transfer with microprocessor. "L": Transfer enable. (connected to GND)
39	SWP	I	RF switching pulse. "L": A track, "H": B track.
40	Vss	–	GND
41	PIPC	O	ATF pilot signal/discrimination signal output for record signal. "H": Pilot signal.
42	REPB	O	REC/PB discrimination signal output. "H": REC.
43	REDT	O	Record signal output
44	TST4	I	Test pin. Fixed to "L".
45	PDO	O	RXPLL phase comparator output

Pin No.	Pin Name	I/O	Function
46	SELC	I	Oscillation frequency select signal input (connected to GND)
47	MUTA	I	Mute input. "H": Mute. Also mutes REC monitor sound.
48	PLCO	I	RXPLL external VCO clock input (512 fs as reference)
49	PLVR	O	Not used (open).
50	PLRF	O	Not used.
51	MSSL	I	Master mode/slave mode select. "H": Master.
52	RX	I	Digital interface signal input
53	VDD	–	Power supply (+5V)
54	TX	O	Digital interface signal output
55	SELA	I	Test pin. Fixed to "H".
56	EXSY	I/O	External sync signal input/output
57	EXSN	I/O	
58	F128	I/O	Not used.
59	F256	O	
60	F512	O	
61	ADLF	I	ADTT, ADDI, ADDN serial data LSB/MSB first select input. "H": LSB first. (connected to GND)
62	DALF	I	DADT, DADO serial data LSB/MSB first select input. "H": LSB first. (connected to GND)
63	XT2O	O	Crystal oscillation circuit 2 output
64	XT2I	I	Crystal oscillation circuit 2 input
65	Vss	–	GND
66	XT3O	O	Crystal oscillation circuit 3 output
67	XT3I	I	Crystal oscillation circuit 3 input
68	FSEN	I	F128, BCK, LRCK input/output select input. "H": Output. Fixed to "H".
69	LR03	O	Inverted signal of LRCK 16 BCK delay output.
70	LR02	O	Not used (open).
71	LR01	O	
72	LRCK	I/O	fs/2 fs (at 2 × speed) signal input/output
73	WCK	O	Not used.
74	XBCK	O	Outputs inverted signal of BCK
75	BCK	I/O	64 fs/128 fs (at 2 × speed) signal input/output
76	ADDT	I	A/D serial data input
77	DADT	O	D/A serial data output
78	DADO	I	Audio data input for digital OUT
79	ADDI	O	Digital IN audio data output
80	ADDN	I	Digital IN audio data input
81	ERRI	I	Validity flag data input for digital OUT
82	ERRF	O	DADT data compensation data/discrimination signal output. "H": Compensation data.
83	MNTG	O	Not used.
84	D7	I/O	External RAM data input/output (MSB)
85 to 89	D6 to D2	I/O	External RAM data input/output
90	Vss	–	GND
91	D1	I/O	External RAM data input/output
92	D0	I/O	External RAM data input/output (LSB)
93 to 100	A0 to A7	O	External RAM address output

- **IC310 CXP87532-015Q (MAIN,MECH CONTROL)**

Pin No.	Pin Name	I/O	Function
1	REEL CW	O	Reel motor CW output. "H": FWD direction.
2	C DIR RVS	O	Capstan direction control output. "L": FWD, "H": RVS
3	PLN ON	O	Brake plunger ON control output.
4	PLN KICK	O	Brake plunger kick control output.
5	D ON	O	Drum motor ON control output.
6	EEPROM NG	O	EEPROM condition output to test port. "H": unusual, "L": normality
7	DATA	O	Communication line (Serial data) with Digital filter.
8	X SHIFT CK	O	Communication line (Shift clock) with Digital filter. "L": shifted, "H": taken
9	X DIN REC	O	Digital signal control output. "L": Digital input REC
10	X COA/OPT	O	Digital input switch output. "L": coaxial, "H": optical
11	X LD AD	O	Load to Digital filter for A/D converter.
12	X LD DA	O	Load to Digital filter for D/A converter.
13	X LD DSP	O	Not used (open).
14	X LD GARY	O	
15	CAS M IN	O	Cassette compartment motor rotation direction control output. IN direction.
16	CAS M OUT	O	Cassette compartment motor rotation direction control output. OUT direction.
17	LE	O	Loading motor rotation direction control output. Eject direction.
18	LL	O	Loading motor rotation direction control output. Loading direction.
19	X ROM SEL	O	ROM select output. "L": EEPROM
20	X FS 48K	O	Not used.
21	X FS 44K	O	
22	X FS 32K	O	
23	2 HEAD	I	Head select. Fixed to "H"
24	TAPE TH CK	I	Detect kinds of tapes. "H": normal tape, "L": Thin tape. Fixed to "H"
25	CAS IN	I	Cassette IN switch input.
26	REC EN	I	REC enable switch input.
27	CAS LCK	I	Cassette compartment lock switch input.
28	CAS OUT	I	Cassette compartment out switch input.
29	RE FWD	I	Encoder SW2 input.
30	RE STOP	I	Encoder SW1 input.
31	EMPHASIS	O	Not used (open).
32	X LP REC	O	LP REC control output. "L": LP mode REC.
33	SBM ON	O	Not used (open).
34	X 2605 SEL	O	Chip select output to CXD2605. "L": Active
35 to 38	AF 3 to AF 0	I	AF mode select. Fixed to "H".
39	MP	–	Not used (connected to GND).
40	X RST	I	System reset input. "L": Active

SW1	SW2	Position
L	L	EJECT
H	L	STOP
L	H	FWD
H	H	STOP-FWD

Pin No.	Pin Name	I/O	Function
41	Vss	–	GND
42	XTAL	O	System clock output (open).
43	EXTAL	I	System clock input (9.408MHz).
44	X DISP REQ	O	Communication request output to DISPLAY CONTROL (IC801). "L": Active
45	REC DI	O	Record current control output. "H": Record disable "H": Record enable
46	X END LED ON	O	End sensor ON control output. "L": Active
47	END LED ON	O	Not used (open).
48	X DISP ACK	I	Communication acknowledge input from DISPLAY CONTROL (IC801). "L": Active
49	DE DT I	I	Serial data input from DISPLAY CONTROL (IC801) and EEPROM.
50	DE DT O	O	Serial data output to DISPLAY CONTROL (IC801) and EEPROM.
51	DE CK	O	Serial clock output to DISPLAY CONTROL (IC801) and EEPROM.
52	X SBSY	I	SUB SYNC input from CXD2605 (master).
53	SR DT IN	I	Serial data input from CXD2605.
54	SR DT OUT	O	Serial data output to CXD2605.
55	X SR CK	O	Serial clock output to CXD2605 (for sub code interface).
56	AVss	–	GND for A/D port.
57	AVref	–	Reference voltage for A/D port (+5V).
58	AVdd	–	Power supply for A/D port (+5V).
59	T END	I	T side end sensor input.
60	S END	I	S side end sensor input.
61	X 993	I	Fixed to "L".
62	X ROM BSY	I	Communication direction signal input from EEPROM. "L": Busy
63	——	I	Not used (connected to GND).
64	MUT MON	I	Mute monitor input. "H": Active
65	M INT	I	Q code decode value input. "H": Between songs
66	ATF IN	I	ATF pilot signal input (Analog input).
67	FG T	I	T side reel FG signal input.
68	FG S	I	S side reel FG signal input.
69	C FG	I	Capstan FG signal input.
70	D FG	I	Drum FG signal input.
71	D PG	I	Drum PG signal input.
72	D REF	I	Drum reference signal input.
73	ATF S2	I	DPG auto adjustment FRC signal input.
74	——	I	Not used (connected to GND)
75	MAIN CHECK	O	Main routine passed check output.
76	X CAS TEST	I	Test pin. "L": Test mode with no cassette compartment.
77	MST CK	I	Master clock input (9.408MHz).
78	PB DT	I	ATF SYNC PB data input.
79	SW P	O	Switching pulse output.
80	AGC PWM	O	PWM signal output for AGC.

Pin No.	Pin Name	I/O	Function
81	PWM R	O	PWM signal output for reel motor.
82	TEN PWM	O	PWM signal output for tension regulater plunger.
83	D PWM	O	PWM signal output for drum motor drive.
84	C PWM	O	PWM signal output for capstan motor.
85	SY MN	I	Syndrome monitor for error rate count input.
86	X TEST	I	Test pin. "L": Test mode
87	POW DN	I	Not used (Connected to +5V).
88	Vss	–	GND
89	Vdd	–	Power supply (+5V).
90	Vpp	–	Connected to +5V.
91	ATF S2	O	ATF sampling pulse #2 output.
92	AREA	O	AREA signal output.
93	X A/D INIT	O	Not used (open).
94	X D/A INIT	O	D/A digital filter reset output. "L": Reset
95	X L MUTE	O	Line mute output. "L": Active
96	AD PDN	O	A/D converter control output. "H": Power down, "L": Active
97	X RY MUTE	O	Relay mute signal output. "L": Active
98	MUTE 2605	O	Mute signal to CXD2605. "H": Active
99	RST/ERR CHECK	O	Test pin. Head address passed check. Error rate check. "L": OK, "H": NG > 400
100	REEL CCW	O	Reel motor CCW output. "L": RVS direction

- **IC801 CXP82316-054Q (DISPLAY CONTROL)**

Pin No.	Pin Name	I/O	Function
1	H	I	Not used (connected to +5V).
2	RMC	I	Remote control signal input.
3	X TEST	I	Test pin. "L": Test mode
4	LVL AD1	O	METER IC(IC802) 4-bit address bus.
5	LVL AD0	O	
6	MUTE	I	Level meter mute signal input.
7	X DISP ACK	O	Acknowledge signal output to MAIN, MECH CONTROL (IC310).
8	SCK MAIN	I	Serial clock input from MAIN, MECH CONTROL (IC310).
9	SI MAIN	I	Serial data input from MAIN, MECH CONTROL (IC310).
10	SO MAIN	O	Serial data output to MAIN, MECH CONTROL (IC310).
11	XLVL SEL	O	CS signal output to METER IC (IC802).
12	XLVL RD	O	RD signal output to METER IC (IC802).
13	XLVL WR	O	WR signal output to METER IC (IC802).
14	RMC SEL	I	Not used (open).
15	LED PLAY	O	
16	LED PAUSE	O	
17	LED REC	O	
18 to 21	——	O	
22 to 29	AD0 to AD7	I	Key switch AD0 to AD7 series input.
30	X RESET	I	System reset input. "L": Active
31	EXTAL	I	System clock input. (4.19MHz).
32	XTAL	O	System clock output (4.19MHz).
33	Vss	–	GND
34 to 57	SEG0 to SEG23	O	FL display segment drive output.
58 to 67	GRID1 to GRID10	O	FL display grid drive output.
68	GRID12	O	
69	GRID11	O	
70	GRID0	O	
71	VFDP	I	–30V power supply for driving FL display.
72	Vdd	–	Power supply (+5V).
73	NC	–	Not used (connected to +5V)
74 to 77	LVL DT0 to LVL DT3	I/O	METER IC (IC802) 4-bit data bus.
78	H	I	Not used (connected to +5V)
79	X DISP REQ	I	Communication request signal input from MAIN, MECH CONTROL (IC310).
80	X DISP MODE	I	Not used (connected to GND).

- **IC802 MSM6338RS (METER IC)**

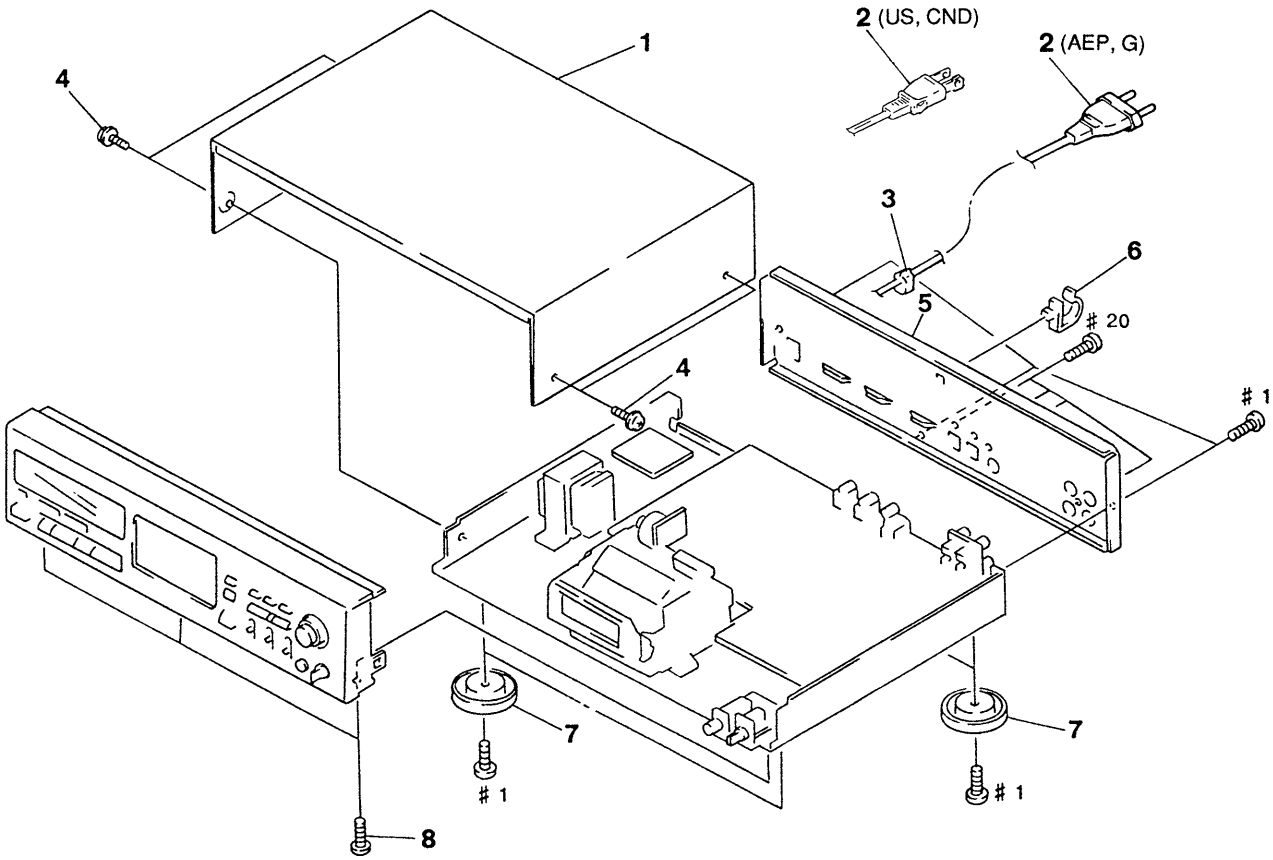
Pin No.	Pin Name	I/O	Function
1	DATA	I	fs serial data input (2's complement)
2	BCK	I	fs serial data fetch clock (bit clock)
3	LRCK	I	fs input Lch/Rch discrimination signal. "H": Rch, "L": Lch.
4	XRST	I	Reset input. "L": Reset.
5	XWR	I	Data write request input (data write at rising edge)
6	XRD	I	Data read request input ("L": Read enable)
7	XCS	I	Chip select input ("L": Select)
8	Vss	–	GND
9	D0	I/O/Z	4-bit data bus (tristate)
10	NC	–	Not used (open).
11	D1	I/O/Z	4-bit data bus (tristate)
12	D2	I/O/Z	
13	D3	I/O/Z	
14	A0	I	Address input. Selects internal register.
15	A1	I	
16	VDD	–	Power supply (+5V).

SECTION 5
EXPLODED VIEWS

NOTE:
- -XX, -X mean standardized parts, so they may have some difference from the original one.
- 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.
- Hardware (# mark) list and accessories and packing materials are given in the last of this parts list.
- Abbreviation
  CND : Canadian model
  G : German model

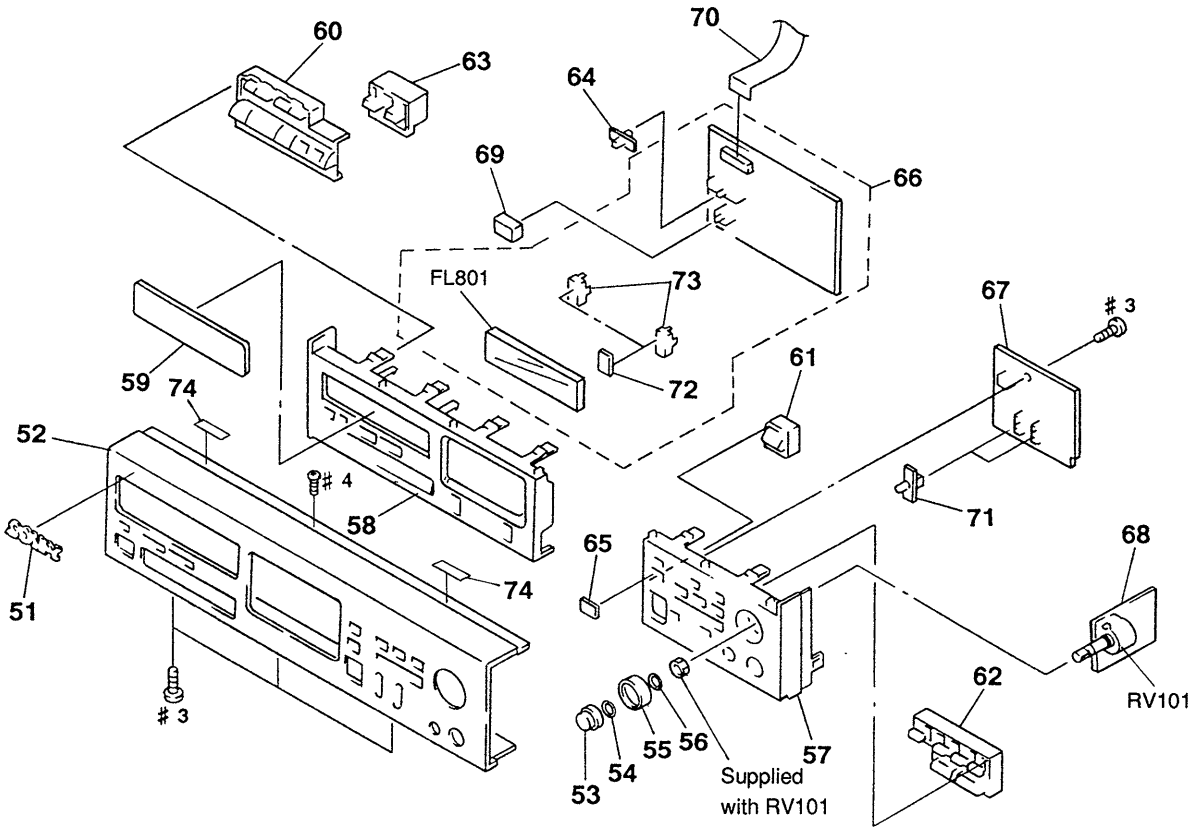
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.
Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une piéce portant le numéro spécifié.

5-1. CASE SECTION



Ref. No.	Part No.	Description	Remark
1	3-350-407-41	CASE	
⚠2	1-575-651-21	CORD, POWER (AEP, G)	
⚠2	1-590-836-11	CORD, POWER (US, CND)	
* 3	3-703-244-00	BUSHING (2104), CORD	
4	3-704-366-01	SCREW (CASE) (M3X8)	
* 5	3-922-820-11	PANEL, BACK (US, CND)	
* 5	3-922-820-21	PANEL, BACK (AEP, G)	
* 6	4-949-235-01	HOOK	
7	4-956-885-11	FOOT (F58175S2W)	
8	3-703-685-21	SCREW (+BV 3X8)	

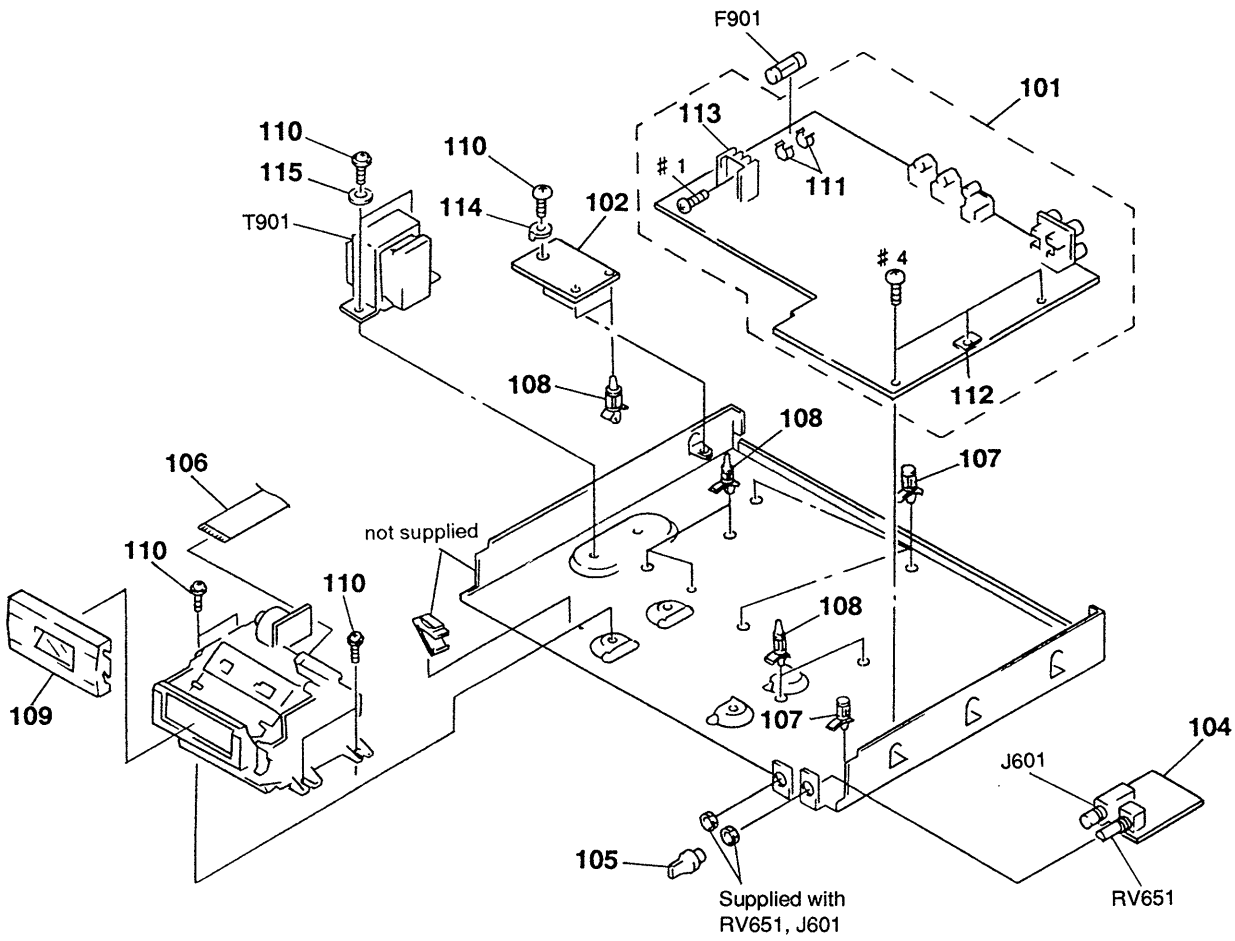
5-2. FRONT PANEL SECTION



Ref. No.	Part No.	Description	Remark
51	4-942-568-01	EMBLEM (NO. 5), SONY	
52	3-922-821-11	PANEL, FRONT (US, CND)	
52	3-922-821-21	PANEL, FRONT (AEP, G)	
53	3-382-635-01	KNOB (REC-R)	
54	3-356-957-01	SPRING	
55	3-382-634-01	KNOB (REC-L)	
56	3-382-627-01	SPRING, RING	
57	3-922-823-02	ESCUTCHEON (R)	
58	3-922-822-02	ESCUTCHEON (L)	
59	3-922-932-01	WINDOW (FL TUBE)	
60	3-922-824-01	BUTTON (1)	
61	3-922-825-01	BUTTON (2)	
62	3-922-826-01	BUTTON (3)	
63	3-922-827-01	BUTTON (4)	

Ref. No.	Part No.	Description	Remark
64	4-922-518-01	KNOB (TIMER)	
65	4-969-185-01	WINDOW (REMOTE CONTROL)	
* 66	A-2007-387-A	DISPLAY (A) BOARD, COMPLETE	
* 67	1-656-331-11	DISPLAY (B) BOARD	
* 68	1-656-332-11	REC VOL BOARD	
69	4-922-921-01	BUTTON (POWER)	
70	1-775-464-11	WIRE (FLAT TYPE) (17 CORE)	
71	3-917-216-11	KNOB (TIMER)	
* 72	4-932-810-11	CUSHION (FL)	
* 73	4-947-170-01	HOLDER	
74	3-831-441-XX	CUSHION, SPEAKER	
FL801	1-517-382-11	INDICATOR TUBE, FLUORESCENT	
RV101	1-241-937-11	RES, VAR, CARBON 20K/20K (REC LEVEL)	

5-3. CHASSIS SECTION

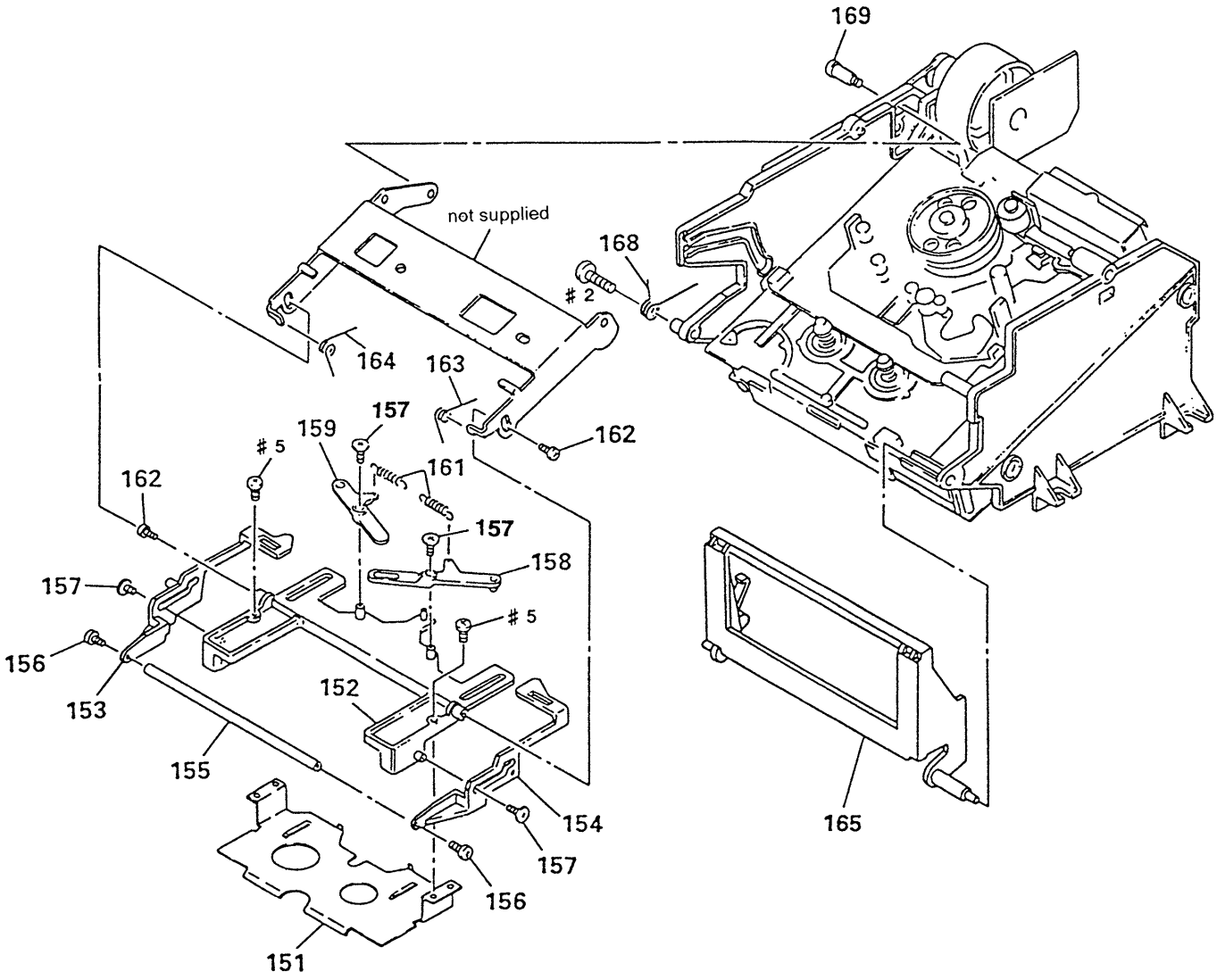


The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

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

Ref. No.	Part No.	Description	Remark
* 101	A-2007-386-A	MAIN BOARD, COMPLETE (US)	
* 101	A-2007-389-A	MAIN BOARD, COMPLETE (CND)	
* 101	A-2007-390-A	MAIN BOARD, COMPLETE (AEP, G)	
* 102	1-656-333-11	PRIMARY BOARD	
* 104	1-656-334-11	HEADPHONE BOARD	
105	X-3362-818-1	KNOB (DIA. 12) ASSY (B), FLAT	
106	1-775-389-11	WIRE (FLAT TYPE) (31 CORE)	
* 107	3-670-570-00	SPACER, SUPPORT	
108	4-924-098-01	HOLDER, PC BOARD	
109	X-3366-266-1	PANEL (CASSETTE) ASSY	
110	4-886-821-11	SCREW, S TIGHT, +PTTWH 3X6	
* 111	1-533-213-31	HOLDER, FUSE	
112	1-537-770-21	TERMINAL BOARD, GROUND	
* 113	4-363-146-71	HEAT SINK, V. OUT	
* 114	3-346-266-12	PLATE, GROUND	
115	3-701-418-00	WASHER, SPECIAL	
⚠F901	1-532-286-00	FUSE (T2.5A 250V) (AEP, G)	
⚠F901	1-576-105-11	FUSE (2.5A 250V) (US, CND)	
J601	1-770-904-11	JACK (LARGE TYPE) (PHONES)	
RV651	1-223-620-11	RES, VAR, CARBON 20K/20K (PHONE LEVEL)	
⚠T901	1-427-889-11	TRANSFORMER, POWER (US, CND)	
⚠T901	1-427-890-11	TRANSFORMER, POWER (AEP, G)	

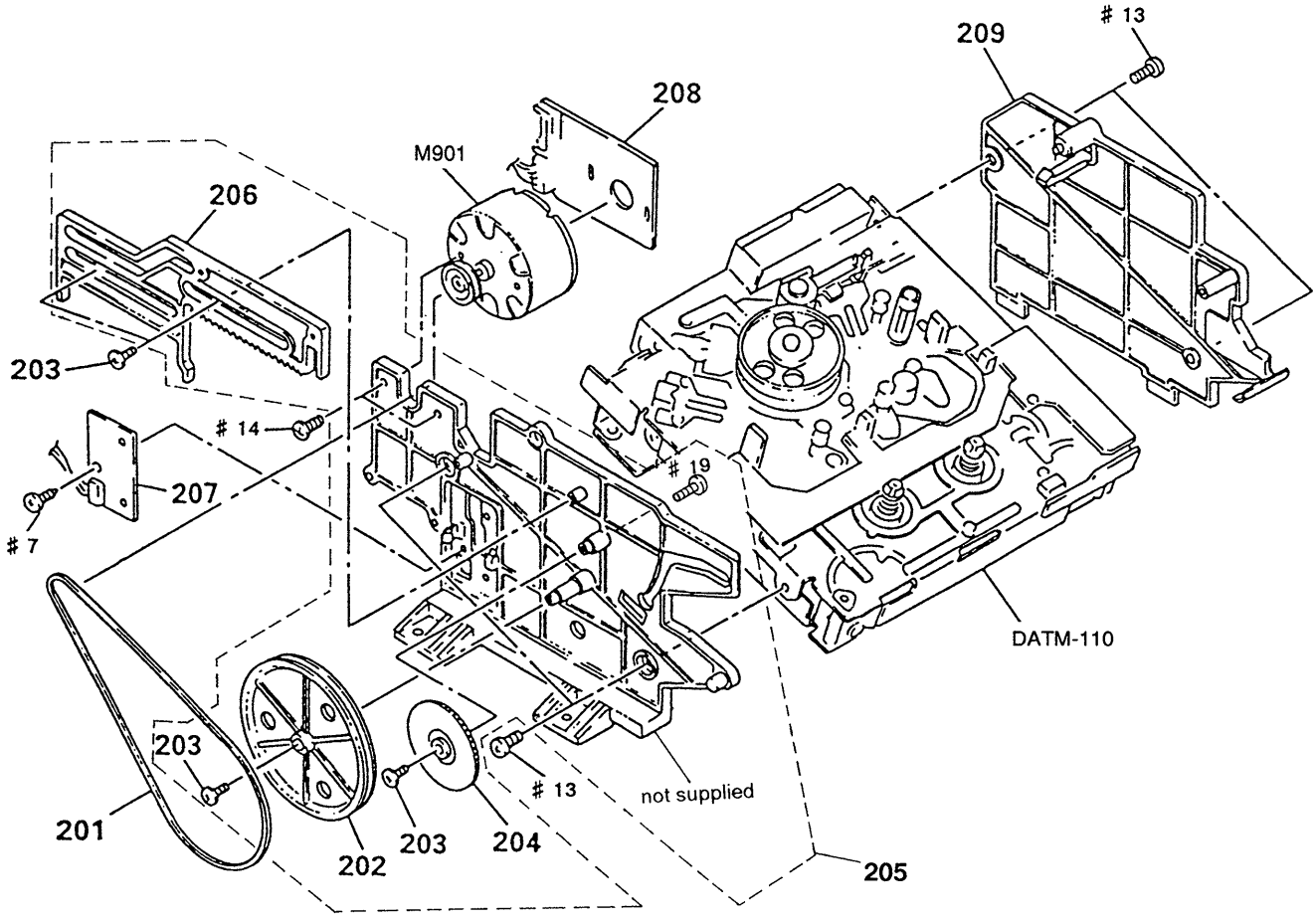
5-4. MECHANISM DECK SECTION-1



Ref. No.	Part No.	Description	Remark
151	3-373-224-01	HOLDER (LOWER)	
152	3-373-237-03	HOLDER (UPPER), CASSETTE	
153	3-373-223-01	SLIDER (L)	
154	3-373-222-01	SLIDER (R)	
* 155	3-373-217-01	SHAFT (JOINT)	
156	3-345-648-61	SCREW (M1.4), TOOTHED LOCK	
157	3-318-201-11	SCREW (B)(1.4X3), TAPPING	
158	3-373-218-01	LEVER (R)	
159	3-373-219-01	LEVER (L)	

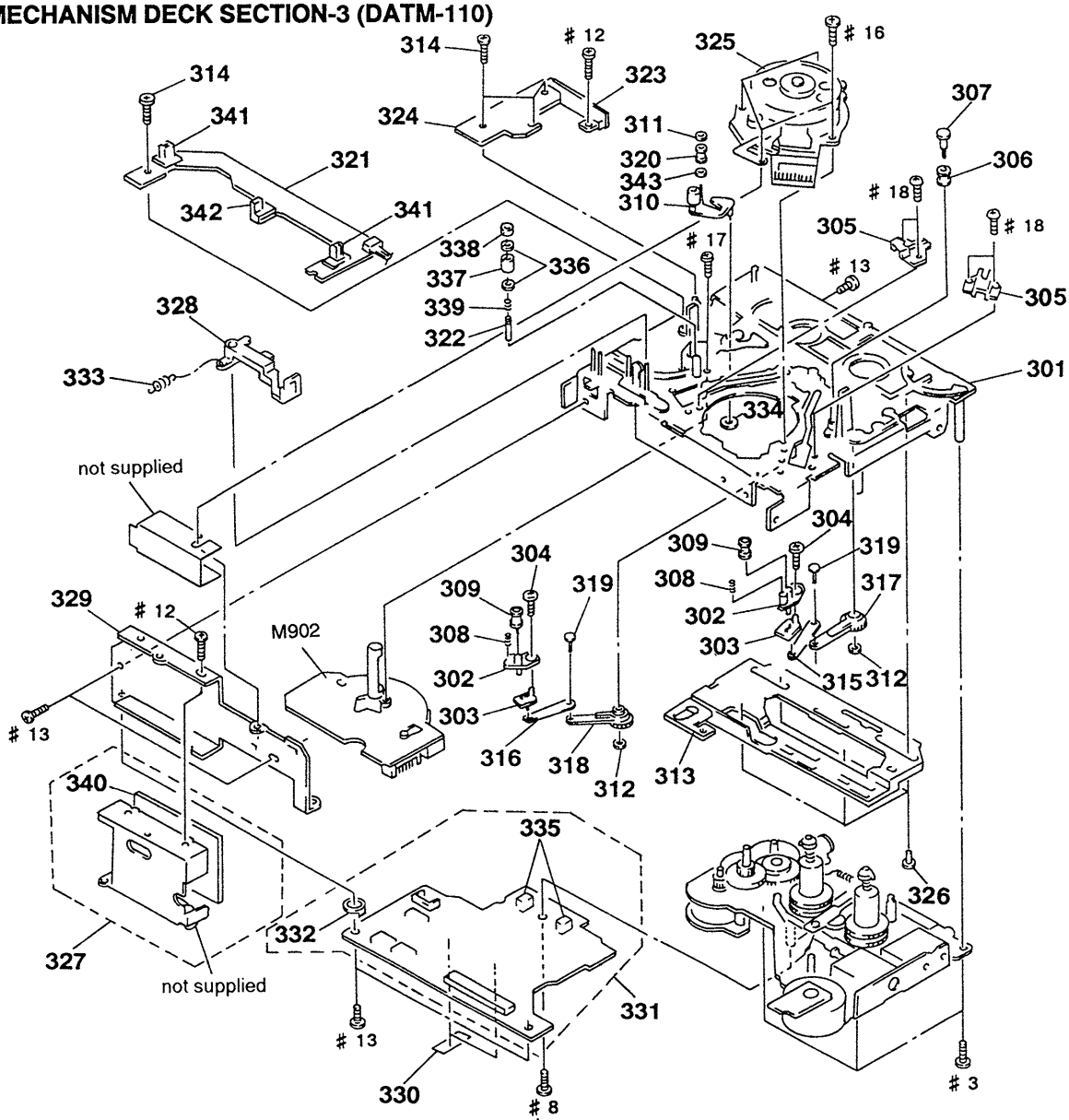
Ref. No.	Part No.	Description	Remark
161	3-632-859-00	SPRING, BRAKE LEVER RETURN	
162	3-318-203-61	SCREW (B1.7X4), TAPPING	
163	3-373-215-01	SPRING (R), TORSION	
164	3-373-216-01	SPRING (L), TORSION	
165	3-382-648-01	HOLDER (WINDOW)	
168	3-373-212-01	SPRING (CASSETTE)	
169	4-931-471-01	SCREW (STEP)	

5-5. MECHANISM DECK SECTION-2



Ref. No.	Part No.	Description	Remark
201	4-931-470-01	BELT (DRIVING)	
202	3-373-214-01	PULLEY	
203	2-623-756-01	SCREW, (B1.7X3), TAPPING	
204	3-373-213-01	GEAR, DRIVING	
205	3-373-234-05	CHASSIS (L)	
206	3-373-221-01	SLIDER (RACK)	
* 207	1-655-916-11	SW BOARD	
* 208	1-655-913-11	MOTOR BOARD	
* 209	3-373-235-01	CHASSIS (R)	
M901	X-3370-655-1	MOTOR ASSY	

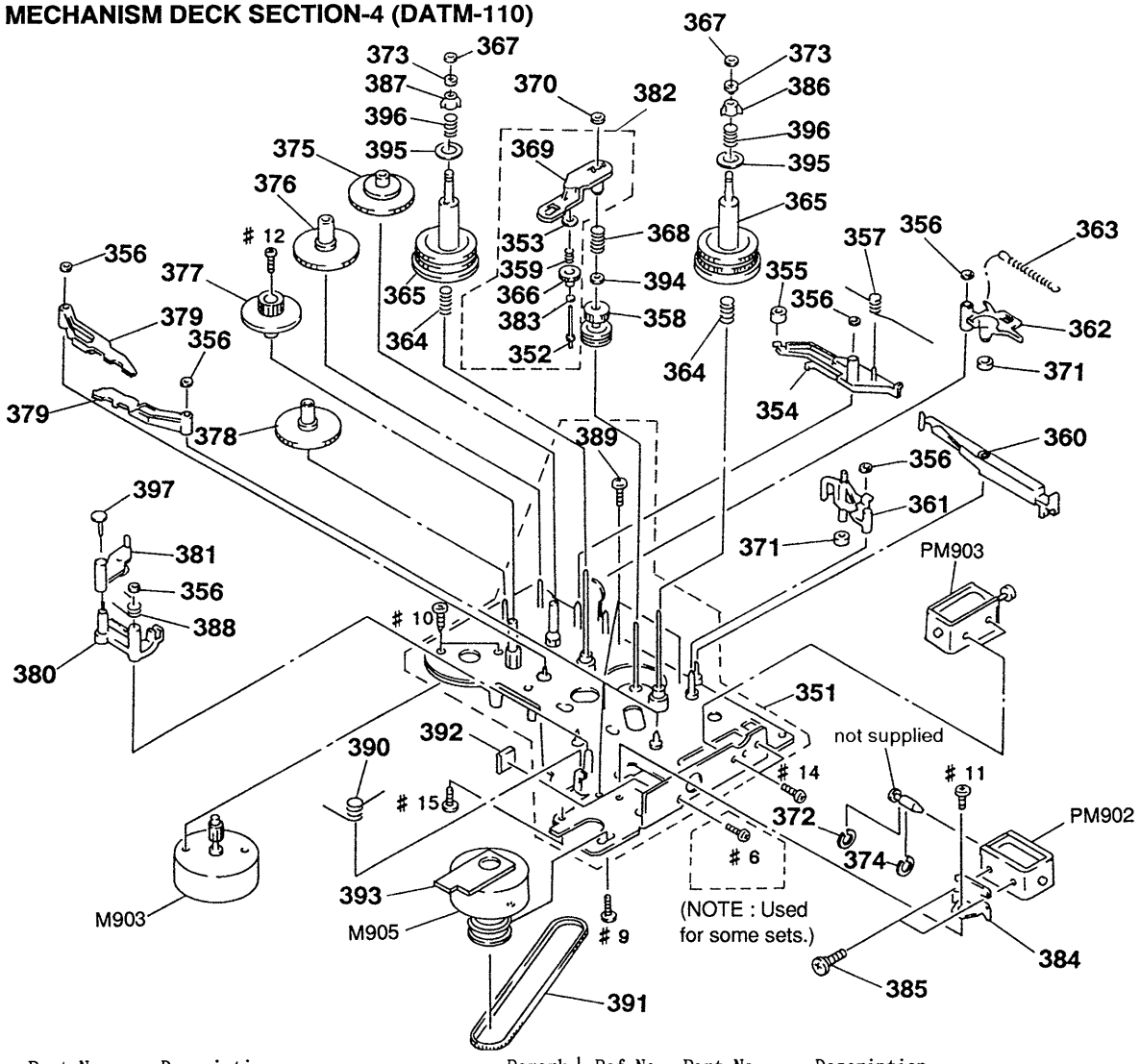
5-6. MECHANISM DECK SECTION-3 (DATM-110)



Ref. No.	Part No.	Description	Remark
* 301	X-3366-740-1	CHASSIS ASSY, MECHANICAL	
* 302	3-368-390-01	BASE (#1 GUIDE)	
303	3-368-409-01	JOINT (#1 GUIDE)	
304	3-368-413-01	SCREW (1.4), +P TAPPING (B)	
* 305	3-368-442-01	CATCHER	
306	3-368-399-01	GUIDE, ROLLER	
307	3-908-644-01	SHAFT (ROLLER GUIDE)	
308	3-368-436-01	SPRING (#1 GUIDE), COMPRESSION	
309	X-3337-643-1	GUIDE (RIC) ASSY, ROLLER	
310	X-3363-025-1	PINCH LEVER ASSY	
311	3-315-384-31	WASHER, STOPPER	
312	3-368-398-01	BUSHING	
* 313	A-2003-708-A	SLIDER ASSY, CAM	
314	3-372-761-01	SCREW (M1.7X4), TAPPING	
315	3-368-427-01	LEVER (LOAD-T)	
316	3-368-426-01	LEVER (LOAD-S)	
317	3-368-444-01	GEAR (LOAD-T)	
318	3-368-443-01	GEAR (LOAD-S)	
319	3-368-415-01	SHAFT (LOAD LEVER JOINT)	
320	3-384-243-01	GUIDE (T3), ROLLER	
* 321	1-639-305-11	TOP END SENSOR BOARD	
322	3-337-674-01	SHAFT, GUIDE	

Ref. No.	Part No.	Description	Remark
* 323	1-639-301-11	RGN SW BOARD	
* 324	1-639-306-11	CAM SLIDER BOARD	
325	8-848-567-11	DRUM ASSY DOU-03A	
326	3-368-414-01	SHAFT (CAM SLIDER GUIDE)	
* 327	A-2001-587-A	RF COMPLETE ASSY	
328	X-3370-965-1	LEVER (CLEANER) ASSY	
* 329	3-368-391-01	BRACKET (RF)	
330	3-831-441-XX	CUSHION, SPEAKER	
* 331	A-2007-419-A	DRUM DRIVE BOARD, COMPLETE	
* 332	4-870-539-00	PLATE, GROUND	
333	3-927-041-01	SPRING, TENSION	
334	3-321-813-01	WASHER, COTTER POLYETHYLENE	
* 335	3-343-491-01	HOLDER (S SENSOR B)	
336	3-337-677-01	FLANGE	
337	3-337-676-01	GUIDE, FIXED	
338	3-337-605-01	NUT, ADJUSTMENT	
339	3-389-294-01	SPRING (T2 300G), COMPRESSION	
* 340	A-2006-455-A	RF AMP BOARD, COMPLETE	
* 341	3-368-457-01	HOLDER (END SENSOR) (RECIEVE)	
* 342	3-368-456-01	HOLDER (END SENSOR) (RIGHT)	
343	3-387-983-01	WASHER, POLYETHYLENE (T3 GUIDE)	
M902	8-835-361-01	MOTOR, DC U-17B (CAPSTAN)	

5-7. MECHANISM DECK SECTION-4 (DATM-110)



Ref. No.	Part No.	Description	Remark
* 351	A-2004-478-A	CHASSIS ASSY, REEL	
352	3-375-210-01	SHAFT (GOOSENECK GEAR)	
353	3-368-422-01	POLY-SLIDER(DIA. 5.5-DIA. 1.5)	
* 354	3-368-455-01	LEVER (GEAR LOCK)	
355	3-368-418-01	TUBE (BREAK)	
356	3-368-398-01	BUSHING	
357	3-368-430-01	SPRING (GEAR LOCK)	
358	X-3363-022-1	GEAR (REEL DRIVE) ASSY	
359	3-923-260-01	SPRING, COMPRESSION	
* 360	3-368-453-01	LEVER (BRAKE SOLENOID)	
* 361	3-368-447-01	LEVER (BRAKE S)	
* 362	3-368-446-01	LEVER (BRAKE T)	
363	3-368-438-01	SPRING (BREAK), TENSION	
364	3-905-586-02	SPRING (FF/REW), COMPRESSION	
365	X-3370-132-1	TABLE (LOWER) ASSY, REEL	
366	3-368-406-01	GEAR (GOOSENECK)	
367	3-578-224-00	WASHER	
368	3-923-261-01	SPRING (FR LEVER), COMPRESSION	
369	3-368-450-01	LEVER (F/R)	
370	3-315-384-31	WASHER, STOPPER	
371	3-377-332-01	TUBE (BREAK2)	
372	3-905-867-01	SPRING (STOPPER)	
373	3-368-400-02	BUSHING (REEL SHAFT)	
374	3-919-599-01	SPACER (P)	
375	3-368-421-01	GEAR (CAM DRIVE C)	
376	3-373-039-01	GEAR (CAM DRIVE B)	

Ref. No.	Part No.	Description	Remark
377	3-368-403-01	GEAR (CAM DRIVE D)	
378	3-368-402-01	GEAR (CAM DRIVE A, B)	
379	X-3363-024-1	LEVER (BT) ASSY	
380	X-3369-126-1	LEVER (BT SOLENOID)	
* 381	3-368-454-01	LEVER (BT SELECTION)	
382	X-3364-581-3	LEVER (F/R) ASSY	
383	3-701-436-01	WASHER, 1.6	
* 384	3-368-416-01	BRACKET (B.T SOLENOID)	
385	3-368-423-01	SCREW (M2.6), STEP	
386	2-623-736-01	CLAW (C)(LEFT), REEL	
387	2-623-752-01	CLAW (C)(RIGHT), REEL	
388	3-383-478-01	SPRING (B.T LEVER RETURN)	
389	2-623-756-01	SCREW, (B1.7X3), TAPPING	
390	3-368-431-01	SPRING (B.T SOLENOID)	
391	3-368-417-01	BELT (170TN10-1.0T), TIMING	
392	3-928-150-01	SPACER (P)	
* 393	1-639-304-14	REEL MOTOR BOARD	
394	3-368-422-11	POLY-SLIDER(DIA. 5.5-DIA. 1.5)	
395	3-492-261-11	SLIDER	
396	3-923-259-01	SPRING(REEL TABLE), COMPRESSION	
397	3-368-415-01	SHAFT (LOAD LEVER JOINT)	
M903	X-3363-109-1	MOTOR (CAM) ASSY	
M905	X-3363-110-2	MOTOR (REEL) ASSY	
PM902	1-454-536-11	SOLENOID, PLUNGER (LOADING)	
PM903	1-454-732-11	SOLENOID, PLUNGER (REEL MOTOR CONTROL)	

CAM SLIDER

DISPLAY (A)

SECTION 6
ELECTRICAL PARTS LIST

NOTE:

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 piéce portant le numéro spécifié.

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

- 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.
- RESISTORS
  All resistors are in ohms
  METAL: Metal-film resistor
  METAL OXIDE: Metal Oxide-film resistor
  F : nonflammable
- SEMICONDUCTORS
  In each case, u: μ , for example:
  uA...: μA..., uPA...: μPA..., uPB...: μPB..., uPC...: μPC..., uPD...: μPD...
- CAPACITORS
  uF : μF
- COILS
  uH : μH
- Abbreviation
  CND : Canadian model
  G : German model

Ref.No.	Part No.	Description			Remark
*	1-639-306-11	CAM SLIDER BOARD			
		**********			
		< SWITCH >			
SW1	1-570-953-11	SWITCH, PUSH (1 KEY) (STOP DET)			
SW2	1-570-953-11	SWITCH, PUSH (1 KEY) (FWD DET)			
**********					
*	A-2007-387-A	DISPLAY (A) BOARD, COMPLETE			
		**********			
*	4-932-810-11	CUSHION (FL)			
*	4-947-170-01	HOLDER			
		< CAPACITOR >			
C881	1-164-096-11	CERAMIC	0.01uF		50V
C882	1-164-096-11	CERAMIC	0.01uF		50V
C883	1-164-096-11	CERAMIC	0.01uF		50V
C884	1-126-177-11	ELECT	100uF	20%	10V
C885	1-164-096-11	CERAMIC	0.01uF		50V
C886	1-164-096-11	CERAMIC	0.01uF		50V
		< CONNECTOR >			
CN801	1-568-860-11	SOCKET, CONNECTOR 17P			
		< COMPOSITION CIRCUIT BLOCK >			
CP801	1-233-276-11	COMPOSITION CIRCUIT BLOCK			
CP802	1-233-276-11	COMPOSITION CIRCUIT BLOCK			
CP803	1-233-276-11	COMPOSITION CIRCUIT BLOCK			
CP804	1-233-276-11	COMPOSITION CIRCUIT BLOCK			
		< FLUORESCENT INDICATOR >			
FL801	1-517-382-11	INDICATOR TUBE, FLUORESCENT			
		< IC >			
IC801	8-752-863-90	IC CXP82316-054Q			
IC802	8-759-995-09	IC MSM6338RS			
		< TRANSISTOR >			
Q801	8-729-620-05	TRANSISTOR 2SC2603-EF			
Q802	8-729-620-05	TRANSISTOR 2SC2603-EF			
Q803	8-729-620-05	TRANSISTOR 2SC2603-EF			
		< RESISTOR >			
R801	1-249-427-11	CARBON	6.8K	5% 1/4W	F
R802	1-249-415-11	CARBON	680	5% 1/4W	F
R803	1-249-417-11	CARBON	1K	5% 1/4W	F
R804	1-249-419-11	CARBON	1.5K	5% 1/4W	F
R805	1-249-423-11	CARBON	3.3K	5% 1/4W	F
R806	1-249-425-11	CARBON	4.7K	5% 1/4W	F
R807	1-249-429-11	CARBON	10K	5% 1/4W	
R811	1-249-427-11	CARBON	6.8K	5% 1/4W	F
R812	1-249-415-11	CARBON	680	5% 1/4W	F
R813	1-249-417-11	CARBON	1K	5% 1/4W	F
R814	1-249-419-11	CARBON	1.5K	5% 1/4W	F
R815	1-249-423-11	CARBON	3.3K	5% 1/4W	F
R817	1-249-431-11	CARBON	15K	5% 1/4W	
R818	1-249-435-11	CARBON	33K	5% 1/4W	
R821	1-249-427-11	CARBON	6.8K	5% 1/4W	F
R831	1-249-427-11	CARBON	6.8K	5% 1/4W	F
R841	1-249-437-11	CARBON	47K	5% 1/4W	
R851	1-249-437-11	CARBON	47K	5% 1/4W	
R861	1-249-437-11	CARBON	47K	5% 1/4W	
R871	1-249-437-11	CARBON	47K	5% 1/4W	
R881	1-249-417-11	CARBON	1K	5% 1/4W	F
R882	1-249-437-11	CARBON	47K	5% 1/4W	
R883	1-249-437-11	CARBON	47K	5% 1/4W	
R884	1-249-437-11	CARBON	47K	5% 1/4W	
R885	1-249-437-11	CARBON	47K	5% 1/4W	
R886	1-249-437-11	CARBON	47K	5% 1/4W	
R887	1-249-417-11	CARBON	1K	5% 1/4W	F
R888	1-249-437-11	CARBON	47K	5% 1/4W	
R889	1-249-437-11	CARBON	47K	5% 1/4W	
R890	1-249-429-11	CARBON	10K	5% 1/4W	
R891	1-249-429-11	CARBON	10K	5% 1/4W	
		< SWITCH >			
S802	1-554-937-11	SWITCH, KEY BOARD (■)			
S803	1-554-937-11	SWITCH, KEY BOARD (▷)			
S804	1-554-937-11	SWITCH, KEY BOARD (⏮◁)			
S805	1-554-937-11	SWITCH, KEY BOARD (▷▷⏭)			
S806	1-554-937-11	SWITCH, KEY BOARD (MODE)			

DISPLAY (A) DISPLAY (B) DRUM DRIVE

Ref.No.	Part No.	Description	Remark
S807	1-554-937-11	SWITCH, KEY BOARD (RESET)	
S811	1-554-937-11	SWITCH, KEY BOARD (◀◀)	
S812	1-554-937-11	SWITCH, KEY BOARD (▶▶)	
S813	1-554-937-11	SWITCH, KEY BOARD (REC ●)	
S814	1-554-937-11	SWITCH, KEY BOARD (▮▮)	
S815	1-554-937-11	SWITCH, KEY BOARD (REC MUTE ⊙)	
S817	1-692-478-11	SWITCH, SLIDE (TIMER)	
S841	1-554-118-00	SWITCH, PUSH (1 KEY)(POWER)	
		< VIBRATOR >	
X801	1-577-359-21	VIBRATOR, CERAMIC (4.19MHz)	
**********			
*	1-656-331-11	DISPLAY (B) BOARD	
		**********	
		< CAPACITOR >	
C891	1-164-096-11	CERAMIC 0.01uF 50V	
		< IC >	
IC891	8-741-810-59	IC ELEMENT,RAY-CATCHER SBX1810-59 (Ⓡ)	
		< RESISTOR >	
R822	1-249-415-11	CARBON 680 5% 1/4W F	
R823	1-249-417-11	CARBON 1K 5% 1/4W F	
R824	1-249-419-11	CARBON 1.5K 5% 1/4W F	
R825	1-249-423-11	CARBON 3.3K 5% 1/4W F	
R826	1-249-425-11	CARBON 4.7K 5% 1/4W F	
R827	1-249-429-11	CARBON 10K 5% 1/4W	
R828	1-249-435-11	CARBON 33K 5% 1/4W	
R837	1-249-433-11	CARBON 22K 5% 1/4W	
R838	1-249-435-11	CARBON 33K 5% 1/4W	
		< SWITCH >	
S821	1-554-937-11	SWITCH, KEY BOARD (AUTO)	
S822	1-554-937-11	SWITCH, KEY BOARD (RENUMBER)	
S823	1-554-937-11	SWITCH, KEY BOARD (REHEARSAL)	
S824	1-554-937-11	SWITCH, KEY BOARD (WRITE)	
S825	1-554-937-11	SWITCH, KEY BOARD (ERASE)	
S826	1-554-937-11	SWITCH, KEY BOARD (MARGINE RESET)	
S827	1-572-268-11	SWITCH, SLIDE (REC MODE)	
S831	1-554-937-11	SWITCH, KEY BOARD (OPEN/CLOSE ⏏)	
S837	1-572-268-11	SWITCH, SLIDE (INPUT)	
**********			

Ref.No.	Part No.	Description	Remark
*	A-2007-419-A	DRUM DRIVE BOARD, COMPLETE	
		**********	
*	3-343-491-01	HOLDER (S SENSOR B)	
*	4-870-539-00	PLATE, GROUND	
		< CAPACITOR >	
C01	1-126-176-11	ELECT 220uF 20% 10V	
C02	1-126-157-11	ELECT 10uF 20% 16V	
C03	1-124-257-00	ELECT 2.2uF 20% 50V	
C04	1-164-161-11	CERAMIC CHIP 0.0022uF 10% 100V	
C05	1-164-161-11	CERAMIC CHIP 0.0022uF 10% 100V	
C08	1-163-001-11	CERAMIC CHIP 220PF 10% 50V	
C21	1-163-001-11	CERAMIC CHIP 220PF 10% 50V	
C31	1-163-001-11	CERAMIC CHIP 220PF 10% 50V	
C32	1-164-232-11	CERAMIC CHIP 0.01uF 50V	
C33	1-163-038-91	CERAMIC CHIP 0.1uF 25V	
C34	1-163-038-91	CERAMIC CHIP 0.1uF 25V	
C35	1-163-038-91	CERAMIC CHIP 0.1uF 25V	
		< CONNECTOR >	
CN01	1-691-459-21	PIN, CONNECTOR (PC BOARD) 3P	
* CN02	1-564-704-11	PIN, CONNECTOR (SMALL TYPE) 2P	
* CN03	1-564-338-00	PIN, CONNECTOR 4P	
* CN04	1-564-336-00	PIN, CONNECTOR 2P	
* CN06	1-564-339-00	PIN, CONNECTOR 5P	
CN07	1-564-721-11	PIN, CONNECTOR (SMALL TYPE) 5P	
* CN08	1-568-873-11	SOCKET, CONNECTOR 31P	
* CN09	1-564-706-11	PIN, CONNECTOR (SMALL TYPE) 4P	
* CN10	1-564-719-11	PIN, CONNECTOR (SMALL TYPE) 3P	
		< IC >	
IC01	8-752-060-73	IC CX20115A	
IC02	8-759-502-80	IC LM358M	
IC03	8-759-502-80	IC LM358M	
		< JUMPER RESISTOR >	
JW04	1-216-296-00	METAL CHIP 0 5% 1/8W	
JW06	1-216-296-00	METAL CHIP 0 5% 1/8W	
JW07	1-216-296-00	METAL CHIP 0 5% 1/8W	
JW08	1-216-296-00	METAL CHIP 0 5% 1/8W	
JW09	1-216-296-00	METAL CHIP 0 5% 1/8W	
JW10	1-216-296-00	METAL CHIP 0 5% 1/8W	
JW11	1-216-296-00	METAL CHIP 0 5% 1/8W	
JW13	1-216-296-00	METAL CHIP 0 5% 1/8W	
JW14	1-216-296-00	METAL CHIP 0 5% 1/8W	
JW15	1-216-296-00	METAL CHIP 0 5% 1/8W	
JW17	1-216-296-00	METAL CHIP 0 5% 1/8W	
JW19	1-216-296-00	METAL CHIP 0 5% 1/8W	
JW21	1-216-296-00	METAL CHIP 0 5% 1/8W	
JW22	1-216-296-00	METAL CHIP 0 5% 1/8W	

Ref.No.	Part No.	Description				Remark
JW23	1-216-296-00	METAL CHIP	0	5%	1/8W	
JW24	1-216-296-00	METAL CHIP	0	5%	1/8W	
JW25	1-216-296-00	METAL CHIP	0	5%	1/8W	
JW26	1-216-296-00	METAL CHIP	0	5%	1/8W	
JW27	1-216-296-00	METAL CHIP	0	5%	1/8W	
JW28	1-216-296-00	METAL CHIP	0	5%	1/8W	
JW29	1-216-296-00	METAL CHIP	0	5%	1/8W	
JW31	1-216-296-00	METAL CHIP	0	5%	1/8W	
JW32	1-216-296-00	METAL CHIP	0	5%	1/8W	
JW33	1-216-296-00	METAL CHIP	0	5%	1/8W	
JW34	1-216-296-00	METAL CHIP	0	5%	1/8W	
JW35	1-216-296-00	METAL CHIP	0	5%	1/8W	
JW36	1-216-296-00	METAL CHIP	0	5%	1/8W	
JW37	1-216-296-00	METAL CHIP	0	5%	1/8W	
		< PHOTO INTERUPTER >				
PH01	8-719-939-23	DIODE GP-2S09-C (TAKE-UP REEL)				
PH02	8-719-939-23	DIODE GP-2S09-C (SUPPLY REEL)				
		< TRANSISTOR >				
Q01	8-729-120-28	TRANSISTOR 2SC1623-L5L6				
Q02	8-729-101-07	TRANSISTOR 2SB798-DL				
		< RESISTOR >				
R01	1-216-061-00	METAL CHIP	3.3K	5%	1/10W	
R02	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R03	1-216-029-00	METAL CHIP	150	5%	1/10W	
R04	1-216-057-00	METAL CHIP	2.2K	5%	1/10W	
R05	1-216-057-00	METAL CHIP	2.2K	5%	1/10W	
R06	1-216-085-00	METAL CHIP	33K	5%	1/10W	
R07	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R08	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R09	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R10	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R11	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R12	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R13	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R14	1-216-037-00	METAL CHIP	330	5%	1/10W	
R21	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R22	1-216-081-00	METAL CHIP	22K	5%	1/10W	
R23	1-216-077-00	METAL CHIP	15K	5%	1/10W	
R24	1-216-069-00	METAL CHIP	6.8K	5%	1/10W	
R25	1-216-105-91	METAL GLAZE	220K	5%	1/10W	
R26	1-216-065-00	METAL CHIP	4.7K	5%	1/10W	
R31	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R32	1-216-081-00	METAL CHIP	22K	5%	1/10W	
R35	1-216-105-91	METAL GLAZE	220K	5%	1/10W	
R36	1-216-065-00	METAL CHIP	4.7K	5%	1/10W	

****

Ref.No.	Part No.	Description				Remark
*	1-656-334-11	HEADPHONE BOARD				
		**********				
		< CAPACITOR >				
C681	1-126-024-11	ELECT	220uF	20%	25V	
C682	1-126-024-11	ELECT	220uF	20%	25V	
		< CONNECTOR >				
CN652	1-564-510-11	PLUG (MICRO CONNECTOR) 6P				
		< IC >				
IC681	8-759-634-50	IC M5218AL				
		< JACK >				
J601	1-770-904-11	JACK (LARGE TYPE) (PHONES)				
		< RESISTOR >				
R231	1-249-435-11	CARBON	33K	5%	1/4W	
R232	1-249-425-11	CARBON	4.7K	5%	1/4W	F
R233	1-249-431-11	CARBON	15K	5%	1/4W	
R234	1-247-807-31	CARBON	100	5%	1/4W	
R281	1-249-435-11	CARBON	33K	5%	1/4W	
R282	1-249-425-11	CARBON	4.7K	5%	1/4W	F
R283	1-249-431-11	CARBON	15K	5%	1/4W	
R284	1-247-807-31	CARBON	100	5%	1/4W	
⚠R691	1-202-857-11	THERMISTOR, POSITIVE	33			
⚠R692	1-202-857-11	THERMISTOR, POSITIVE	33			
		< VARIABLE RESISTOR >				
RV651	1-223-620-11	RES, VAR, CARBON 20K/20K (PHONE LEVEL)				

****

*	A-2007-386-A	MAIN BOARD, COMPLETE (US)				
		**********				
*	A-2007-389-A	MAIN BOARD, COMPLETE (CND)				
		**********				
*	A-2007-390-A	MAIN BOARD, COMPLETE (AEP, G)				
		**********				
*	1-533-213-31	HOLDER, FUSE				
	1-537-770-21	TERMINAL BOARD, GROUND				
*	4-363-146-71	HEAT SINK, V.OUT				
	7-682-548-09	SCREW +B 3X8				
		< CAPACITOR >				
C101	1-124-477-11	ELECT	47uF	20%	25V	
C102	1-162-286-31	CERAMIC	220PF	10%	50V	
C151	1-124-477-11	ELECT	47uF	20%	25V	
C152	1-162-286-31	CERAMIC	220PF	10%	50V	

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 piéce portant le numéro spécifié.

MAIN

Ref.No.	Part No.	Description			Remark
C201	1-130-471-00	MYLAR	0.001uF	5% 50V	
C202	1-110-341-11	MYLAR	330PF	5% 50V	
C203	1-110-341-11	MYLAR	330PF	5% 50V	
C204	1-130-471-00	MYLAR	0.001uF	5% 50V	
C205	1-130-479-00	MYLAR	0.0047uF	5% 50V	
C206	1-124-443-00	ELECT	100uF	20% 10V	
C207	1-162-302-11	CERAMIC	0.0022uF	30% 16V	
C251	1-130-471-00	MYLAR	0.001uF	5% 50V	
C252	1-110-341-11	MYLAR	330PF	5% 50V	
C253	1-110-341-11	MYLAR	330PF	5% 50V	
C254	1-130-471-00	MYLAR	0.001uF	5% 50V	
C255	1-130-479-00	MYLAR	0.0047uF	5% 50V	
C256	1-124-443-00	ELECT	100uF	20% 10V	
C257	1-162-302-11	CERAMIC	0.0022uF	30% 16V	
C302	1-162-197-31	CERAMIC	6.8PF	10% 50V	
C304	1-124-903-11	ELECT	1uF	20% 50V	
C307	1-164-159-11	CERAMIC	0.1uF	50V	
C308	1-162-294-31	CERAMIC	0.001uF	10% 50V	
C309	1-124-443-00	ELECT	100uF	20% 10V	
C310	1-164-159-11	CERAMIC	0.1uF	50V	
C311	1-162-198-31	CERAMIC	8.2PF	10% 50V	
C312	1-162-199-31	CERAMIC	10PF	5% 50V	
C313	1-162-197-31	CERAMIC	6.8PF	10% 50V	
C314	1-162-197-31	CERAMIC	6.8PF	10% 50V	
C327	1-162-198-31	CERAMIC	8.2PF	10% 50V	
C330	1-162-215-31	CERAMIC	47PF	5% 50V	
C331	1-162-306-11	CERAMIC	0.01uF	20% 16V	
C332	1-164-159-11	CERAMIC	0.1uF	50V	
C333	1-162-211-31	CERAMIC	33PF	5% 50V	
C334	1-124-907-11	ELECT	10uF	20% 50V	
C335	1-162-306-11	CERAMIC	0.01uF	20% 16V	
C336	1-164-159-11	CERAMIC	0.1uF	50V	
C337	1-164-159-11	CERAMIC	0.1uF	50V	
C338	1-164-159-11	CERAMIC	0.1uF	50V	
C340	1-164-159-11	CERAMIC	0.1uF	50V	
C341	1-164-159-11	CERAMIC	0.1uF	50V	
C342	1-124-442-00	ELECT	330uF	20% 6.3V	
C343	1-162-294-31	CERAMIC	0.001uF	10% 50V	
C344	1-162-294-31	CERAMIC	0.001uF	10% 50V	
C345	1-162-294-31	CERAMIC	0.001uF	10% 50V	
C351	1-162-306-11	CERAMIC	0.01uF	20% 16V	
C352	1-162-306-11	CERAMIC	0.01uF	20% 16V	
C353	1-162-294-31	CERAMIC	0.001uF	10% 50V	
C354	1-164-159-11	CERAMIC	0.1uF	50V	
C355	1-164-159-11	CERAMIC	0.1uF	50V	
C356	1-164-159-11	CERAMIC	0.1uF	50V	
C361	1-162-302-11	CERAMIC	0.0022uF	30% 16V	
C362	1-162-302-11	CERAMIC	0.0022uF	30% 16V	
C431	1-162-302-11	CERAMIC	0.0022uF	30% 16V	
C432	1-162-305-11	CERAMIC	0.0068uF	30% 16V	

Ref.No.	Part No.	Description			Remark
C433	1-162-288-31	CERAMIC	330PF	10% 50V	
C439	1-162-306-11	CERAMIC	0.01uF	20% 16V	
C441	1-162-306-11	CERAMIC	0.01uF	20% 16V	
C442	1-161-494-00	CERAMIC	0.022uF	25V	
C443	1-162-301-11	CERAMIC	0.0015uF	20% 16V	
C444	1-124-907-11	ELECT	10uF	20% 50V	
C445	1-162-306-11	CERAMIC	0.01uF	20% 16V	
C451	1-162-306-11	CERAMIC	0.01uF	20% 16V	
C452	1-126-963-11	ELECT	4.7uF	20% 50V	
C453	1-124-907-11	ELECT	10uF	20% 50V	
C454	1-162-306-11	CERAMIC	0.01uF	20% 16V	
C459	1-162-306-11	CERAMIC	0.01uF	20% 16V	
C471	1-162-306-11	CERAMIC	0.01uF	20% 16V	
C481	1-162-306-11	CERAMIC	0.01uF	20% 16V	
C491	1-162-290-31	CERAMIC	470PF	10% 50V	
C492	1-162-306-11	CERAMIC	0.01uF	20% 16V	
C502	1-162-294-31	CERAMIC	0.001uF	10% 50V	
C503	1-162-284-31	CERAMIC	150PF	10% 50V	
C507	1-136-153-00	FILM	0.01uF	5% 50V	
C509	1-164-159-11	CERAMIC	0.1uF	50V	
C511	1-164-159-11	CERAMIC	0.1uF	50V	
C515	1-136-169-00	FILM	0.22uF	5% 50V	
C601	1-136-165-00	FILM	0.1uF	5% 50V	
C602	1-136-165-00	FILM	0.1uF	5% 50V	
C627	1-126-941-11	ELECT	470uF	20% 6.3V	
C651	1-136-165-00	FILM	0.1uF	5% 50V	
C652	1-136-165-00	FILM	0.1uF	5% 50V	
C653	1-136-165-00	FILM	0.1uF	5% 50V	
C654	1-136-165-00	FILM	0.1uF	5% 50V	
C661	1-136-165-00	FILM	0.1uF	5% 50V	
C662	1-136-165-00	FILM	0.1uF	5% 50V	
C663	1-136-165-00	FILM	0.1uF	5% 50V	
C664	1-136-165-00	FILM	0.1uF	5% 50V	
C665	1-136-165-00	FILM	0.1uF	5% 50V	
C666	1-136-165-00	FILM	0.1uF	5% 50V	
C667	1-136-165-00	FILM	0.1uF	5% 50V	
C668	1-124-443-00	ELECT	100uF	20% 10V	
C669	1-136-165-00	FILM	0.1uF	5% 50V	
C670	1-124-443-00	ELECT	100uF	20% 10V	
C671	1-124-443-00	ELECT	100uF	20% 10V	
C672	1-136-165-00	FILM	0.1uF	5% 50V	
C673	1-124-443-00	ELECT	100uF	20% 10V	
C674	1-136-165-00	FILM	0.1uF	5% 50V	
C675	1-136-165-00	FILM	0.1uF	5% 50V	
C683	1-136-165-00	FILM	0.1uF	5% 50V	
C684	1-126-941-11	ELECT	470uF	20% 6.3V	
C901	1-124-563-11	ELECT	2200uF	20% 25V	
C902	1-126-939-11	ELECT	10000uF	20% 16V	
C903	1-126-941-11	ELECT	470uF	20% 6.3V	
C904	1-124-471-00	ELECT	1000uF	20% 6.3V	

Ref.No.	Part No.	Description			Remark
C905	1-124-919-11	ELECT	220uF	20% 63V	
C906	1-124-122-11	ELECT	100uF	20% 50V	
C907	1-162-306-11	CERAMIC	0.01uF	20% 16V	
C908	1-162-306-11	CERAMIC	0.01uF	20% 16V	
C910	1-124-564-11	ELECT	4700uF	20% 25V	
C911	1-124-902-00	ELECT	0.47uF	20% 50V	
C912	1-126-942-61	ELECT	1000uF	20% 16V	
C913	1-162-306-11	CERAMIC	0.01uF	20% 16V	
C920	1-124-564-11	ELECT	4700uF	20% 25V	
C921	1-162-306-11	CERAMIC	0.01uF	20% 16V	
C922	1-126-942-61	ELECT	1000uF	20% 16V	
C923	1-162-306-11	CERAMIC	0.01uF	20% 16V	
C951	1-124-903-91	ELECT	1.0uF	20% 50V	(Suffix No. -12)
C998	1-164-159-11	CERAMIC	0.1uF	50V	
C999	1-164-159-11	CERAMIC	0.1uF	50V	
C1104	1-104-664-11	ELECT	47uF	20% 16V	
C1105	1-124-443-00	ELECT	100uF	20% 10V	
C1106	1-136-165-00	FILM	0.1uF	5% 50V	
C1107	1-130-475-00	MYLAR	0.0022uF	5% 50V	
C1109	1-104-664-11	ELECT	47uF	20% 16V	
C1154	1-104-664-11	ELECT	47uF	20% 16V	
C1155	1-124-443-00	ELECT	100uF	20% 10V	
C1156	1-136-165-00	FILM	0.1uF	5% 50V	
C1157	1-130-475-00	MYLAR	0.0022uF	5% 50V	
C1159	1-104-664-11	ELECT	47uF	20% 16V	
C1622	1-136-165-00	FILM	0.1uF	5% 50V	
C1623	1-124-443-00	ELECT	100uF	20% 10V	
C1626	1-136-165-00	FILM	0.1uF	5% 50V	
C1628	1-136-165-00	FILM	0.1uF	5% 50V	
C1629	1-136-165-00	FILM	0.1uF	5% 50V	
C1630	1-124-907-11	ELECT	10uF	20% 50V	
		< CONNECTOR >			
* CN301	1-564-706-11	PIN, CONNECTOR (SMALL TYPE) 4P			
* CN302	1-568-845-11	SOCKET, CONNECTOR 31P			
* CN303	1-568-836-11	SOCKET, CONNECTOR 17P			
CN341	1-770-164-11	PIN, CONNECTOR (PC BOARD) 15P			
CN342	1-564-506-11	PLUG, CONNECTOR 3P			
* CN401	1-564-339-00	PIN, CONNECTOR 5P			
* CN601	1-564-708-11	PIN, CONNECTOR (SMALL TYPE) 6P			
CN651	1-564-510-11	PLUG (MICRO CONNECTOR) 6P			
CN901	1-691-767-11	PLUG (MICRO CONNECTOR) 5P			
CN902	1-691-768-11	PLUG (MICRO CONNECTOR) 6P			
		< DIODE >			
D321	8-719-987-63	DIODE	1N4148M		
D331	8-719-987-63	DIODE	1N4148M		
D333	8-719-987-63	DIODE	1N4148M		
D411	8-719-200-82	DIODE	11ES2		
D412	8-719-200-82	DIODE	11ES2		
D413	8-719-200-82	DIODE	11ES2		
D421	8-719-200-82	DIODE	11ES2		
D422	8-719-200-82	DIODE	11ES2		
D501	8-719-045-72	DIODE	KV1550NT		
D651	8-719-987-63	DIODE	1N4148M		
D901	8-719-200-77	DIODE	10E2N		
D902	8-719-200-77	DIODE	10E2N		
D903	8-719-200-77	DIODE	10E2N		
D904	8-719-200-77	DIODE	10E2N		
D905	8-719-312-47	DIODE	RBA-406B		
D906	8-719-200-82	DIODE	11ES2		
D907	8-719-987-63	DIODE	1N4148M		
D908	8-719-015-13	DIODE	UZP-9.1BC		
D911	8-719-200-77	DIODE	10E2N		
D912	8-719-200-77	DIODE	10E2N		
D913	8-719-200-77	DIODE	10E2N		
D914	8-719-200-77	DIODE	10E2N		
D951	8-719-987-63	DIODE	1N4148M		(Suffix No. -12)
D1101	8-719-987-63	DIODE	1N4148M		
D1102	8-719-987-63	DIODE	1N4148M		
D1151	8-719-987-63	DIODE	1N4148M		
D1152	8-719-987-63	DIODE	1N4148M		
		< FUSE >			
⚠F901	1-532-286-00	FUSE, TIME-LAG (2.5A 250V) (AEP, G)			
⚠F901	1-576-105-11	FUSE (2.5A 250V) (US, CND)			
⚠F911	1-532-774-11	FUSE, MICRO (SECONDARY) (0.63A 125V)			(US, CND)
⚠F921	1-532-774-11	FUSE, MICRO (SECONDARY) (0.63A 125V)			(US, CND)
		< IC >			
IC301	8-759-256-59	IC	HD74HC00FPEL		
IC302	8-759-701-01	IC	NJM2904M		
IC304	8-752-355-55	IC	CXD2605Q		
IC305	8-752-356-96	IC	CXK58257AM-10LL		
IC306	8-759-925-90	IC	SN74HC74ANS		
IC308	8-759-634-43	IC	M51953BFP		
IC310	8-752-851-42	IC	CXP87532-015Q		
IC317	8-759-070-64	IC	CXK1024M-ME		
IC331	8-759-242-84	IC	TORX176 (OPTICAL IN)		
IC332	8-759-242-85	IC	TOTX176 (OPTICAL OUT)		
IC421	8-759-823-94	IC	LB1836M		
IC431	8-759-701-01	IC	NJM2904M		
IC441	8-759-701-01	IC	NJM2904M		
IC451	8-759-701-01	IC	NJM2904M		
IC501	8-759-242-70	IC	TC7WU04F		
IC601	8-759-602-83	IC	M5238P		
IC602	8-759-602-83	IC	M5238P		
IC604	8-759-094-53	IC	TA7805S		
IC651	8-759-900-72	IC	NE5532P		

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 piéce portant le numéro spécifié.

MAIN

Ref.No.	Part No.	Description	Remark
IC652	8-759-900-72	IC NE5532P	
IC653	8-759-287-70	IC CXD8505Q	
IC654	8-759-094-53	IC TA7805S	
IC901	8-759-504-46	IC PQ05RF1	
IC902	8-759-504-46	IC PQ05RF1	
IC903	8-759-602-66	IC M5230L-A	
IC1603	8-759-331-35	IC AK5340-VS	
		< IC LINK >	
⚠ICP911	1-532-837-21	LINK, IC PRF 630 (0.63A)(AEP,G)	
⚠ICP921	1-532-837-21	LINK, IC PRF 630 (0.63A)(AEP,G)	
		< JACK >	
* J101	1-569-443-11	JACK, PIN 4P (ANALOG (LINE))	
J331	1-770-905-11	JACK, PIN 1P (COAXIAL IN)	
		< COIL >	
L301	1-410-324-11	INDUCTOR 4.7uH	
L302	1-410-509-11	INDUCTOR 10uH	
L331	1-410-509-11	INDUCTOR 10uH	
L341	1-410-515-11	INDUCTOR 33uH	
L399	1-236-163-11	ENCAPSULATED COMPONENT	
L400	1-236-163-11	ENCAPSULATED COMPONENT	
L501	1-410-499-41	INDUCTOR 1.5uH	
L502	1-410-509-11	INDUCTOR 10uH	
L1601	1-410-509-11	INDUCTOR 10uH	
		< TRANSISTOR >	
Q221	8-729-141-30	TRANSISTOR 2SC3623A-LK	
Q271	8-729-141-30	TRANSISTOR 2SC3623A-LK	
Q321	8-729-900-89	TRANSISTOR DTC144ES	
Q322	8-729-900-89	TRANSISTOR DTC144ES	
Q340	8-729-620-05	TRANSISTOR 2SC2603-EF	
Q341	8-729-900-89	TRANSISTOR DTC144ES	
Q342	8-729-900-61	TRANSISTOR DTA114ES	
Q351	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q411	8-729-900-80	TRANSISTOR DTC114ES	
Q412	8-729-927-12	TRANSISTOR 2SC4115SQR	
Q413	8-729-900-80	TRANSISTOR DTC114ES	
Q414	8-729-927-11	TRANSISTOR 2SA1585SQR	
Q441	8-729-801-93	TRANSISTOR 2SD1387	
Q451	8-729-141-83	TRANSISTOR 2SB1094-LK	
Q452	8-729-620-05	TRANSISTOR 2SC2603-EF	
Q453	8-729-927-11	TRANSISTOR 2SA1585SQR	
Q454	8-729-927-12	TRANSISTOR 2SC4115SQR	
Q455	8-729-927-11	TRANSISTOR 2SA1585SQR	
Q456	8-729-927-12	TRANSISTOR 2SC4115SQR	
Q457	8-729-620-05	TRANSISTOR 2SC2603-EF	
Q458	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q459	8-729-620-05	TRANSISTOR 2SC2603-EF	
Q481	8-729-801-93	TRANSISTOR 2SD1387	
Q503	8-729-620-05	TRANSISTOR 2SC2603-EF	
Q504	8-729-620-05	TRANSISTOR 2SC2603-EF	
Q505	8-729-620-05	TRANSISTOR 2SC2603-EF	
Q651	8-729-900-61	TRANSISTOR DTA114ES	
Q654	8-729-900-80	TRANSISTOR DTC114ES	
Q901	8-729-900-80	TRANSISTOR DTC114ES	
Q902	8-729-140-97	TRANSISTOR 2SB734-34	
Q903	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q910	8-729-900-80	TRANSISTOR DTC114ES	
Q911	8-729-141-83	TRANSISTOR 2SB1094-LK	
Q921	8-729-209-15	TRANSISTOR 2SD2012	
Q951	8-729-900-80	TRANSISTOR DTC114ES (Suffix No.-12)	
		< RESISTOR >	
R102	1-249-441-11	CARBON 100K 5% 1/4W	
R103	1-249-423-11	CARBON 3.3K 5% 1/4W	F
R104	1-249-433-11	CARBON 22K 5% 1/4W	
R105	1-249-429-11	CARBON 10K 5% 1/4W	
R106	1-249-429-11	CARBON 10K 5% 1/4W	
R152	1-249-441-11	CARBON 100K 5% 1/4W	
R153	1-249-423-11	CARBON 3.3K 5% 1/4W	F
R154	1-249-433-11	CARBON 22K 5% 1/4W	
R155	1-249-429-11	CARBON 10K 5% 1/4W	
R156	1-249-429-11	CARBON 10K 5% 1/4W	
R201	1-249-423-11	CARBON 3.3K 5% 1/4W	F
R202	1-249-423-11	CARBON 3.3K 5% 1/4W	F
R203	1-249-423-11	CARBON 3.3K 5% 1/4W	F
R204	1-249-423-11	CARBON 3.3K 5% 1/4W	F
R205	1-249-421-11	CARBON 2.2K 5% 1/4W	F
R206	1-249-421-11	CARBON 2.2K 5% 1/4W	F
R207	1-249-425-11	CARBON 4.7K 5% 1/4W	F
R208	1-249-425-11	CARBON 4.7K 5% 1/4W	F
R209	1-249-419-11	CARBON 1.5K 5% 1/4W	F
R210	1-249-419-11	CARBON 1.5K 5% 1/4W	F
R211	1-249-441-11	CARBON 100K 5% 1/4W	
R212	1-247-807-31	CARBON 100 5% 1/4W	
R213	1-249-409-11	CARBON 220 5% 1/4W	F
R214	1-249-407-11	CARBON 150 5% 1/4W	F
R221	1-249-441-11	CARBON 100K 5% 1/4W	
R222	1-249-425-11	CARBON 4.7K 5% 1/4W	F
R251	1-249-423-11	CARBON 3.3K 5% 1/4W	F
R252	1-249-423-11	CARBON 3.3K 5% 1/4W	F
R253	1-249-423-11	CARBON 3.3K 5% 1/4W	F
R254	1-249-423-11	CARBON 3.3K 5% 1/4W	F
R255	1-249-421-11	CARBON 2.2K 5% 1/4W	F
R256	1-249-421-11	CARBON 2.2K 5% 1/4W	F
R257	1-249-425-11	CARBON 4.7K 5% 1/4W	F
R258	1-249-425-11	CARBON 4.7K 5% 1/4W	F
R259	1-249-419-11	CARBON 1.5K 5% 1/4W	F

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 piéce portant le numéro spécifié.

Ref.No.	Part No.	Description				Remark
R260	1-249-419-11	CARBON	1.5K	5%	1/4W	F
R261	1-249-441-11	CARBON	100K	5%	1/4W	
R262	1-247-807-31	CARBON	100	5%	1/4W	
R263	1-249-409-11	CARBON	220	5%	1/4W	F
R264	1-249-407-11	CARBON	150	5%	1/4W	F
R272	1-249-425-11	CARBON	4.7K	5%	1/4W	F
R303	1-249-437-11	CARBON	47K	5%	1/4W	
R305	1-249-429-11	CARBON	10K	5%	1/4W	
R306	1-249-429-11	CARBON	10K	5%	1/4W	
R307	1-249-409-11	CARBON	220	5%	1/4W	F
R308	1-249-429-11	CARBON	10K	5%	1/4W	
R310	1-249-409-11	CARBON	220	5%	1/4W	F
R321	1-249-433-11	CARBON	22K	5%	1/4W	
R322	1-249-437-11	CARBON	47K	5%	1/4W	
R323	1-249-421-11	CARBON	2.2K	5%	1/4W	F
R329	1-249-428-11	CARBON	8.2K	5%	1/4W	F
R330	1-249-409-11	CARBON	220	5%	1/4W	F
R331	1-247-804-11	CARBON	75	5%	1/4W	
R332	1-249-437-11	CARBON	47K	5%	1/4W	
R333	1-249-417-11	CARBON	1K	5%	1/4W	F
R334	1-249-401-11	CARBON	47	5%	1/4W	F
R335	1-247-804-11	CARBON	75	5%	1/4W	
R336	1-249-431-11	CARBON	15K	5%	1/4W	
R337	1-249-421-11	CARBON	2.2K	5%	1/4W	F
R338	1-249-421-11	CARBON	2.2K	5%	1/4W	F
R339	1-249-435-11	CARBON	33K	5%	1/4W	
R340	1-249-429-11	CARBON	10K	5%	1/4W	
R341	1-249-425-11	CARBON	4.7K	5%	1/4W	F
R342	1-249-425-11	CARBON	4.7K	5%	1/4W	F
R343	1-249-425-11	CARBON	4.7K	5%	1/4W	F
R344	1-249-437-11	CARBON	47K	5%	1/4W	
R345	1-249-413-11	CARBON	470	5%	1/4W	F
R351	1-249-441-11	CARBON	100K	5%	1/4W	
R352	1-249-441-11	CARBON	100K	5%	1/4W	
R353	1-249-441-11	CARBON	100K	5%	1/4W	
R354	1-249-441-11	CARBON	100K	5%	1/4W	
R355	1-249-437-11	CARBON	47K	5%	1/4W	
R356	1-249-437-11	CARBON	47K	5%	1/4W	
R357	1-249-429-11	CARBON	10K	5%	1/4W	
R358	1-249-429-11	CARBON	10K	5%	1/4W	
R359	1-249-429-11	CARBON	10K	5%	1/4W	
R360	1-249-429-11	CARBON	10K	5%	1/4W	
R361	1-249-429-11	CARBON	10K	5%	1/4W	
R362	1-249-413-11	CARBON	470	5%	1/4W	F
R363	1-249-429-11	CARBON	10K	5%	1/4W	
R364	1-249-429-11	CARBON	10K	5%	1/4W	
R365	1-249-429-11	CARBON	10K	5%	1/4W	
R366	1-249-429-11	CARBON	10K	5%	1/4W	
R368	1-249-435-11	CARBON	33K	5%	1/4W	
R369	1-249-435-11	CARBON	33K	5%	1/4W	

Ref.No.	Part No.	Description				Remark
R370	1-249-437-11	CARBON	47K	5%	1/4W	
R371	1-249-441-11	CARBON	100K	5%	1/4W	
R373	1-249-417-11	CARBON	1K	5%	1/4W	F
R374	1-249-429-11	CARBON	10K	5%	1/4W	
R375	1-249-429-11	CARBON	10K	5%	1/4W	
R376	1-249-429-11	CARBON	10K	5%	1/4W	
R377	1-249-429-11	CARBON	10K	5%	1/4W	
R378	1-249-407-11	CARBON	150	5%	1/4W	F
R379	1-249-417-11	CARBON	1K	5%	1/4W	F
R380	1-249-437-11	CARBON	47K	5%	1/4W	
R381	1-249-409-11	CARBON	220	5%	1/4W	F
R382	1-249-411-11	CARBON	330	5%	1/4W	
R383	1-249-411-11	CARBON	330	5%	1/4W	
R391	1-249-437-11	CARBON	47K	5%	1/4W	
R411	1-249-429-11	CARBON	10K	5%	1/4W	
R412	1-249-415-11	CARBON	680	5%	1/4W	F
R413	1-249-415-11	CARBON	680	5%	1/4W	F
R414	1-249-387-11	CARBON	3.3	5%	1/4W	F (US, CND)
⚠R414	1-217-639-00	RES, FUSE	2.2	5%	1/4W	F (AEP, G)
R415	1-249-415-11	CARBON	680	5%	1/4W	F
R416	1-249-415-11	CARBON	680	5%	1/4W	F
R431	1-247-887-00	CARBON	220K	5%	1/4W	
R432	1-247-887-00	CARBON	220K	5%	1/4W	
R433	1-247-887-00	CARBON	220K	5%	1/4W	
R434	1-249-441-11	CARBON	100K	5%	1/4W	
R441	1-249-429-11	CARBON	10K	5%	1/4W	
R442	1-249-429-11	CARBON	10K	5%	1/4W	
R443	1-249-429-11	CARBON	10K	5%	1/4W	
R444	1-249-429-11	CARBON	10K	5%	1/4W	
R445	1-249-433-11	CARBON	22K	5%	1/4W	
R446	1-249-401-11	CARBON	47	5%	1/4W	F
R447	1-249-441-11	CARBON	100K	5%	1/4W	
R449	1-249-441-11	CARBON	100K	5%	1/4W	
R450	1-249-417-11	CARBON	1K	5%	1/4W	F
R451	1-249-441-11	CARBON	100K	5%	1/4W	
R452	1-249-417-11	CARBON	1K	5%	1/4W	F
R453	1-249-429-11	CARBON	10K	5%	1/4W	
R454	1-249-429-11	CARBON	10K	5%	1/4W	
R455	1-249-441-11	CARBON	100K	5%	1/4W	
R456	1-249-417-11	CARBON	1K	5%	1/4W	F
R457	1-249-417-11	CARBON	1K	5%	1/4W	F
R458	1-247-807-31	CARBON	100	5%	1/4W	
R459	1-247-807-31	CARBON	100	5%	1/4W	
R461	1-247-807-31	CARBON	100	5%	1/4W	
R462	1-249-417-11	CARBON	1K	5%	1/4W	F
R463	1-249-417-11	CARBON	1K	5%	1/4W	F
R464	1-247-807-31	CARBON	100	5%	1/4W	
R465	1-249-417-11	CARBON	1K	5%	1/4W	F
R466	1-249-441-11	CARBON	100K	5%	1/4W	
R471	1-249-441-11	CARBON	100K	5%	1/4W	

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 piéce portant le numéro spécifié.

MAIN MOTOR PRIMARY

Ref.No.	Part No.	Description				Remark
R472	1-249-441-11	CARBON	100K	5%	1/4W	
R481	1-249-441-11	CARBON	100K	5%	1/4W	
R482	1-249-401-11	CARBON	47	5%	1/4W	F
R483	1-249-437-11	CARBON	47K	5%	1/4W	
R484	1-249-437-11	CARBON	47K	5%	1/4W	
R485	1-249-441-11	CARBON	100K	5%	1/4W	
R491	1-249-417-11	CARBON	1K	5%	1/4W	F
R492	1-249-417-11	CARBON	1K	5%	1/4W	F
R493	1-249-407-11	CARBON	150	5%	1/4W	F
R494	1-247-807-31	CARBON	100	5%	1/4W	
R501	1-249-417-11	CARBON	1K	5%	1/4W	F
R502	1-249-429-11	CARBON	10K	5%	1/4W	
R503	1-249-441-11	CARBON	100K	5%	1/4W	
R516	1-249-425-11	CARBON	4.7K	5%	1/4W	F
R517	1-249-417-11	CARBON	1K	5%	1/4W	F
R518	1-249-401-11	CARBON	47	5%	1/4W	F
R601	1-249-413-11	CARBON	470	5%	1/4W	F
R661	1-247-903-00	CARBON	1M	5%	1/4W	
R901	1-249-437-11	CARBON	47K	5%	1/4W	
⚠R902	1-212-873-11	FUSIBLE	47	5%	1/4W	F
R903	1-260-111-11	CARBON	10K	5%	1/2W	
R904	1-249-433-11	CARBON	22K	5%	1/4W	
R905	1-249-425-11	CARBON	4.7K	5%	1/4W	F
R906	1-249-433-11	CARBON	22K	5%	1/4W	
R907	1-249-437-11	CARBON	47K	5%	1/4W	
R908	1-249-441-11	CARBON	100K	5%	1/4W	
R909	1-249-429-11	CARBON	10K	5%	1/4W	
R910	1-249-437-11	CARBON	47K	5%	1/4W	
R911	1-247-807-31	CARBON	100	5%	1/4W	
R912	1-247-807-31	CARBON	100	5%	1/4W	
R913	1-249-401-11	CARBON	47	5%	1/4W	F
R914	1-249-409-11	CARBON	220	5%	1/4W	F
R915	1-249-433-11	CARBON	22K	5%	1/4W	
R917	1-249-431-11	CARBON	15K	5%	1/4W	
R918	1-249-425-11	CARBON	4.7K	5%	1/4W	F
R919	1-249-429-11	CARBON	10K	5%	1/4W	
R920	1-249-429-11	CARBON	10K	5%	1/4W	
R923	1-249-401-11	CARBON	47	5%	1/4W	F
R924	1-249-409-11	CARBON	220	5%	1/4W	F
R927	1-249-431-11	CARBON	15K	5%	1/4W	
⚠R931	1-217-371-00	FUSIBLE	0.47	5%	1/4W	F
R981	1-249-409-11	CARBON	220	5%	1/4W	F
R982	1-249-409-11	CARBON	220	5%	1/4W	F
R983	1-249-409-11	CARBON	220	5%	1/4W	F
R984	1-249-409-11	CARBON	220	5%	1/4W	F
R985	1-249-409-11	CARBON	220	5%	1/4W	F
R986	1-249-409-11	CARBON	220	5%	1/4W	F
R991	1-249-429-11	CARBON	10K	5%	1/4W	
R992	1-249-427-11	CARBON	6.8K	5%	1/4W	F
R998	1-249-409-11	CARBON	220	5%	1/4W	F

Ref.No.	Part No.	Description				Remark
R999	1-247-739-11	CARBON	100	5%	1/2W	F
R1100	1-249-411-11	CARBON	330	5%	1/4W	
R1106	1-249-425-11	CARBON	4.7K	5%	1/4W	F
R1107	1-249-425-11	CARBON	4.7K	5%	1/4W	F
R1109	1-249-411-11	CARBON	330	5%	1/4W	
R1111	1-249-433-11	CARBON	22K	5%	1/4W	
R1156	1-249-425-11	CARBON	4.7K	5%	1/4W	F
R1157	1-249-425-11	CARBON	4.7K	5%	1/4W	F
R1159	1-249-411-11	CARBON	330	5%	1/4W	
R1160	1-249-411-11	CARBON	330	5%	1/4W	
R1161	1-249-433-11	CARBON	22K	5%	1/4W	
R1519	1-249-421-11	CARBON	2.2K	5%	1/4W	F
R1601	1-249-429-11	CARBON	10K	5%	1/4W	
		< VARIABLE RESISTOR >				
RV451	1-241-765-11	RES, ADJ, CARBON 22K				
		< RELAY >				
RY651	1-515-803-11	RELAY				
		< VIBRATOR >				
X301	1-567-816-11	VIBRATOR, CRYSTAL (18MHz)				
X302	1-567-815-11	VIBRATOR, CRYSTAL (22MHz)				
X303	1-567-814-11	VIBRATOR, CRYSTAL (24MHz)				
**********						
*	1-655-913-11	MOTOR BOARD				
		**********				
		< CAPACITOR >				
C01	1-161-772-11	CERAMIC	0.1uF	10%	25V	
		< CONNECTOR >				
* CN1	1-564-498-11	PIN, CONNECTOR 5P				
* CN2	1-564-337-00	PIN, CONNECTOR 3P				
**********						
*	1-656-333-11	PRIMARY BOARD				
		**********				
*	3-346-266-12	PLATE, GROUND				
		< CAPACITOR >				
⚠C001	1-161-744-51	CERAMIC	0.01uF		400V	
⚠C002	1-161-742-00	CERAMIC	0.0022uF	20%	400V	
⚠C003	1-161-742-00	CERAMIC	0.0022uF	20%	400V	
⚠C004	1-161-742-00	CERAMIC	0.0022uF	20%	400V	
⚠C005	1-161-742-00	CERAMIC	0.0022uF	20%	400V (AEP, G)	

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 piéce portant le numéro spécifié.

PRIMARY REC VOL REEL MOTOR RF AMP

Ref.No.	Part No.	Description			Remark
		< CONNECTOR >			
CN001	1-580-230-11	PIN, CONNECTOR (PC BOARD) 2P			
CN002	1-564-321-00	PIN, CONNECTOR 2P			
		< COIL >			
⚠L001	1-424-485-11	FILTER, LINE			
**********					
*	1-656-332-11	REC VOL BOARD			
		**********			
		< CONNECTOR >			
* CN602	1-564-708-11	PIN, CONNECTOR (SMALL TYPE) 6P			
		< RESISTOR >			
R101	1-249-434-11	CARBON	27K	5%	1/4W
R151	1-249-434-11	CARBON	27K	5%	1/4W
		< VARIABLE RESISTOR >			
RV101	1-241-937-11	RES, VAR, CARBON 20K/20K (REC LEVEL)			
**********					
*	1-639-304-14	REEL MOTOR BOARD			
		**********			
		< CAPACITOR >			
C07	1-163-077-91	CERAMIC CHIP	0.1uF		50V
**********					
*	A-2006-455-A	RF AMP BOARD, COMPLETE			
		**********			
		< CAPACITOR >			
C1	1-124-778-00	ELECT CHIP	22uF	20%	6.3V
C2	1-163-019-00	CERAMIC CHIP	0.0068uF	10%	50V
C3	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C4	1-107-682-11	CERAMIC CHIP	1uF	10%	16V
C5	1-164-299-11	CERAMIC CHIP	0.22uF	10%	25V
C6	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C7	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C8	1-124-778-00	ELECT CHIP	22uF	20%	6.3V
C9	1-124-778-00	ELECT CHIP	22uF	20%	6.3V
C10	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C11	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C12	1-164-299-11	CERAMIC CHIP	0.22uF	10%	25V
C13	1-107-682-11	CERAMIC CHIP	1uF	10%	16V
C14	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C15	1-124-778-00	ELECT CHIP	22uF	20%	6.3V
C16	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C17	1-163-001-11	CERAMIC CHIP	220PF	10%	50V
C18	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C19	1-163-001-11	CERAMIC CHIP	220PF	10%	50V
C20	1-164-182-11	CERAMIC CHIP	0.0033uF	10%	50V
C21	1-163-005-11	CERAMIC CHIP	470PF	10%	50V
C22	1-126-603-11	ELECT CHIP	4.7uF	20%	35V
C23	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C24	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C25	1-124-778-00	ELECT CHIP	22uF	20%	6.3V
C26	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C27	1-107-682-11	CERAMIC CHIP	1uF	10%	16V
C28	1-164-505-11	CERAMIC CHIP	2.2uF		16V
		< CONNECTOR >			
* CN51	1-566-207-11	PIN, CONNECTOR (PC BOARD) 14P			
* CN52	1-564-720-11	PIN, CONNECTOR (SMALL TYPE) 4P			
		< IC >			
IC1	8-752-039-01	IC CXA1364R			
		< COIL >			
L1	1-408-781-00	INDUCTOR CHIP	22uH		
L2	1-408-789-21	INDUCTOR CHIP	100uH		
L3	1-408-781-00	INDUCTOR CHIP	22uH		
		< RESISTOR >			
R1	1-216-082-00	METAL GLAZE	24K	5%	1/10W
R2	1-216-082-00	METAL GLAZE	24K	5%	1/10W
R3	1-216-066-00	METAL CHIP	5.1K	5%	1/10W
R4	1-216-066-00	METAL CHIP	5.1K	5%	1/10W
R5	1-216-077-00	METAL CHIP	15K	5%	1/10W
R6	1-216-077-00	METAL CHIP	15K	5%	1/10W
R7	1-216-077-00	METAL CHIP	15K	5%	1/10W
R8	1-216-079-00	METAL CHIP	18K	5%	1/10W
R9	1-216-075-00	METAL CHIP	12K	5%	1/10W
R10	1-216-079-00	METAL CHIP	18K	5%	1/10W
R11	1-216-077-00	METAL CHIP	15K	5%	1/10W
R12	1-216-077-00	METAL CHIP	15K	5%	1/10W
R13	1-216-077-00	METAL CHIP	15K	5%	1/10W
R14	1-216-081-00	METAL CHIP	22K	5%	1/10W
R15	1-216-085-00	METAL CHIP	33K	5%	1/10W
R16	1-216-089-00	METAL CHIP	47K	5%	1/10W
R17	1-216-080-00	METAL CHIP	20K	5%	1/10W
R18	1-216-073-00	METAL CHIP	10K	5%	1/10W
		< VARIABLE RESISTOR >			
RV1	1-238-181-11	RES, ADJ, CERMET 4.7K			
RV2	1-238-181-11	RES, ADJ, CERMET 4.7K			

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 piéce portant le numéro spécifié.

RGN SW | SW | TOP END SENSOR

Ref.No.	Part No.	Description	Remark
		**********	
*	1-639-301-11	RGN SW BOARD	
		**********	
		< SWITCH >	
S01	1-571-878-11	SWITCH, PUSH (2 KEY)	
		(CASSETTE IN, REC PROOF)	
		**********	
*	1-655-916-11	SW BOARD	
		********	
		< SWITCH >	
S1	1-571-958-11	SWITCH, PUSH (1 KEY) (CASSETTE TABLE IN)	
S2	1-571-958-11	SWITCH, PUSH (1 KEY) (CASSETTE TABLE OUT)	
		**********	
*	1-639-305-11	TOP END SENSOR BOARD	
		**********	
*	3-368-456-01	HOLDER (END SENSOR LIGHT)	
*	3-368-457-01	HOLDER (END SENSOR) (RECIEVE)	
		< DIODE >	
D01	8-719-988-42	DIODE GL453S	
		< PHOTO INTERUPTER >	
PH03	8-729-907-25	TRANSISTOR PT4850F (TAKE-UP)	
PH04	8-729-907-25	TRANSISTOR PT4850F (SUPPLY)	
		**********	
		MISCELLANEOUS	
		**********	
⚠2	1-575-651-21	CORD, POWER (AEP, G)	
⚠2	1-590-836-11	CORD, POWER (US, CND)	
70	1-775-464-11	WIRE (FLAT TYPE) (17 CORE)	
106	1-775-389-11	WIRE (FLAT TYPE) (31 CORE)	
* 111	1-533-213-31	HOLDER, FUSE	
112	1-537-770-21	TERMINAL BOARD, GROUND	
325	8-848-567-11	DRUM ASSY DOU-03A	
⚠F901	1-532-286-00	FUSE (T2.5A 250V) (AEP, G)	
⚠F901	1-576-105-11	FUSE (2.5A 250V) (US, CND)	
FL801	1-517-382-11	INDICATOR TUBE, FLUORESCENT	
M901	X-3370-655-1	MOTOR ASSY	
M902	8-835-361-01	MOTOR, DC U-17B (CAPSTAN)	
M903	X-3363-109-1	MOTOR (CAM) ASSY	
M905	X-3363-110-2	MOTOR (REEL) ASSY	
PM902	1-454-536-11	SOLENOID, PLUNGER	
PM903	1-454-732-11	SOLENOID, PLUNGER	
RV101	1-241-937-11	RES, VAR, CARBON 20K/20K (REC LEVEL)	
⚠T901	1-427-889-11	TRANSFORMER, POWER (US, CND)	
⚠T901	1-427-890-11	TRANSFORMER, POWER (AEP, G)	
		**********	
		ACCESSORIES & PACKING MATERIALS	
		**********	
	1-473-088-11	REMOTE COMMANDER (RM-D9)	
	1-558-271-11	CORD, CONNECTION (AUDIO 108cm)	
*	3-384-415-01	CUSHION	
	3-798-560-11	MANUAL, INSTRUCTION	
		(ENGLISH, FRENCH, SPANISH, PORTUGUESE) (AEP, CND)	
	3-798-560-21	MANUAL, INSTRUCTION (ENGLISH) (US)	
	3-798-560-31	MANUAL, INSTRUCTION (GERMAN) (G)	
	3-798-560-41	MANUAL, INSTRUCTION	
		(GERMAN, DUTCH, SWEDISH, ITALIAN) (AEP)	
*	3-926-367-01	INDIVIDUAL CARTON	
	4-962-615-01	COVER, BATTERY (for RM-D9)	
		**********	
		HARDWARE LIST	
		**********	
#1	7-682-548-09	SCREW +BVTT 3X8 (S)	
#2	7-685-645-79	SCREW +BVTP 3X6 TYPE2 IT-3	
#3	7-685-534-19	SCREW +BTP 2.6X8 TYPE2 N-S	
#4	7-685-871-01	SCREW +BVTT 3X6 (S)	
#5	7-621-772-20	SCREW +B 2X5	
#6	7-627-854-07	PRECISION SCREW +P 2X2.5 TYPE3	
#7	7-685-102-19	SCREW +P 2X4 TYPE2 NON-SLIT	
#8	7-685-533-19	SCREW +BTP 2.6X6 TYPE2 N-S	
#9	7-627-450-28	+K 1.7X2	
#10	7-627-852-27	+P 1.7X3	
#11	7-621-772-00	SCREW +B 2X3	
#12	7-621-255-15	SCREW +P 2X3	
#13	7-621-773-86	SCREW +B 2.6X4	
#14	7-627-556-17	SCREW, PRECISION +P 2.6X3 TYPE1	
#15	7-627-552-27	SCREW, PRECISION +P 1.7X2	
#16	7-621-772-18	SCREW +B 2X4	
#17	7-627-552-47	SCREW, PRECISION +P 1.7X4	
#18	7-621-255-20	SCREW +BVTT 2X4 (S)	
#19	7-685-133-19	SCREW +BTP 2.6X6 TYPE2 N-S	
#20	7-685-646-79	SCREW +BVTP 3X8 TYPE2 IT-3	

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 piéce portant le numéro spécifié.

English
95F090469-1
Printed in Japan

Published by Home A&V Products Div.
Quality Engineering Dept.

Sony Corporation
Consumer A&V Products Company
Home A&V Products Div.

9-960-232-11

DTC-790

SONY
SERVICE MANUAL

US Model
Canadian Model
AEP Model

SUPPLEMENT-1

File this supplement with the service manual.

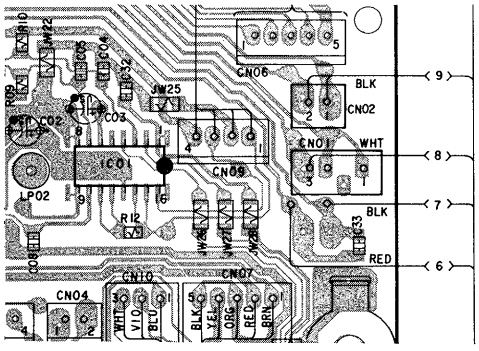
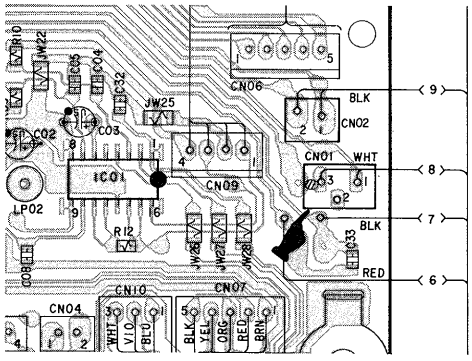
Subject : 1. Correction
2. Parts changed
3. Board change

(ECN-TC500608/TC500800)

1. Correction

☛ : Indicates corrected portion

PRINTED WIRING BOARD

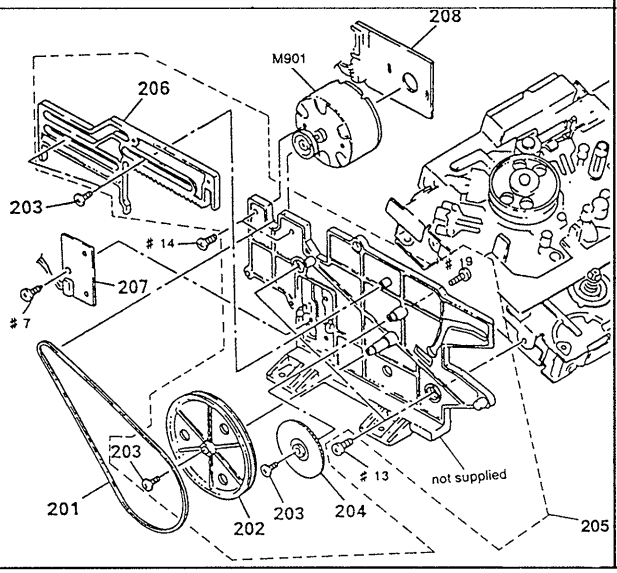
Page	INCORRECT	CORRECT
26	**[DRUM DRIVE BOARD]** Location: I-18 	

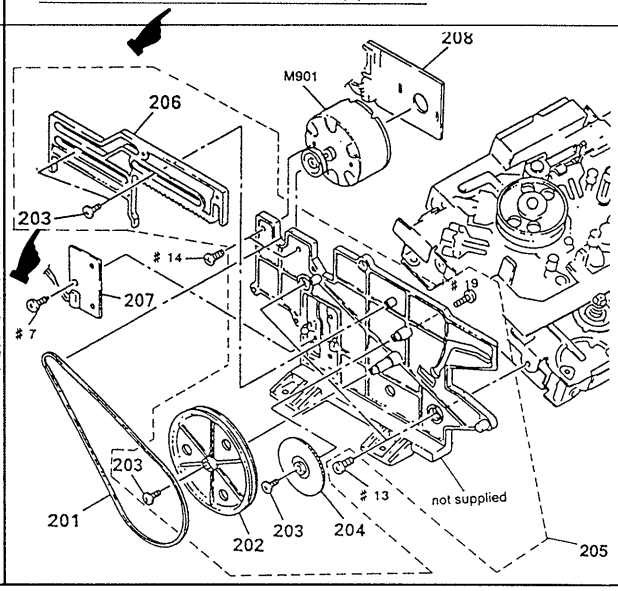
NOTE: ▨ is Soldering bridge

☛: indicates corrected portion

EXPLODED VIEWS

Page	INCORRECT				CORRECT			
	Ref.No	Part No	Description	Remark	Ref.No	Part No	Description	Remark
46	205	3-373-234-05	CHASSIS (L)		205	A-2004-153-E	CHASSIS (L) ASSY	





2. PARTS CHANGED

- Revise your service manual as shown below due to parts supply classification has been changed.

Page	CURRENT				REVISED			
	Ref.No	Part No	Description	Remark	Ref.No	Part No	Description	Remark
47	309	X-3337-643-1	GUIDE (RIC) ASSY, ROLLER		309	X-3371-518-1	ROLLER GUIDE ASSY	

ELECTRICAL PARTS LIST

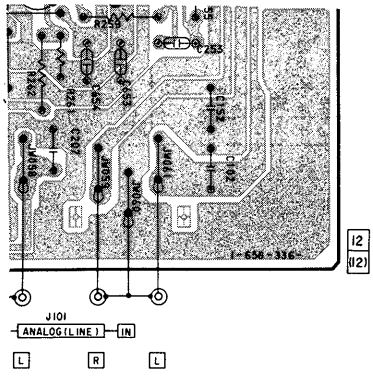
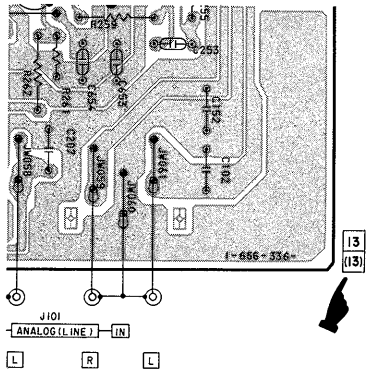
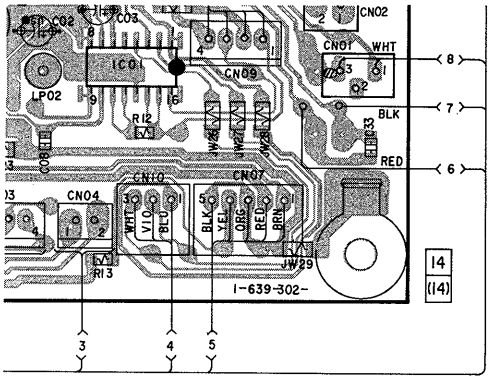
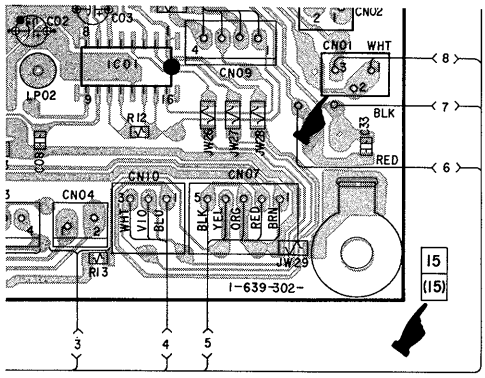
Page	FORMER				NEW			
	Ref.No	Part No	Description	Remark	Ref.No	Part No	Description	Remark
49			** DISPLAY (A) BOARD **				** DISPLAY (A) BOARD **	
	IC801	8-752-863-91	IC CXP82316-054Q		IC801	8-752-869-39	IC CXP87532-061Q	
51			** HEADPHONE BOARD **				** HEADPHONE BOARD **	
	⚠R691	1-202-857-11	THERMISTOR, POSITIVE 33		⚠R691	1-808-374-11	THERMISTOR, POSITIVE 33	
	⚠R692	1-202-857-11	THERMISTOR, POSITIVE 33		⚠R692	1-808-374-11	THERMISTOR, POSITIVE 33	
56			** MAIN BOARD **				** MAIN BOARD **	
	R516	1-249-425-11	CARBON 4.7K 5% 1/4W F		R516	1-249-429-11	CARBON 10K 5% 1/4W F	

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 piéce portant le numéro spécifié.

3. BOARD CHANGE

: Changed portion

PRINTED WIRING BOARD

Page	FORMER	NEW
24	**[MAIN BOARD]** Location: L-17, 18 	
28	**[DRUM DRIVE BOARD]** Location: J-17, 18 	

NOTE: is Soldering bridge

9-960-232-82

Sony Corporation
Consumer A&V Products Company
Home A&V Products Div.

English
95K090467-1
Printed in Japan

Published by Home A&V Products Div.
Quality Engineering Dept.

DTC-790

SONY

SERVICE MANUAL

US Model
Canadian Model
AEP Model

SUPPLEMENT-2

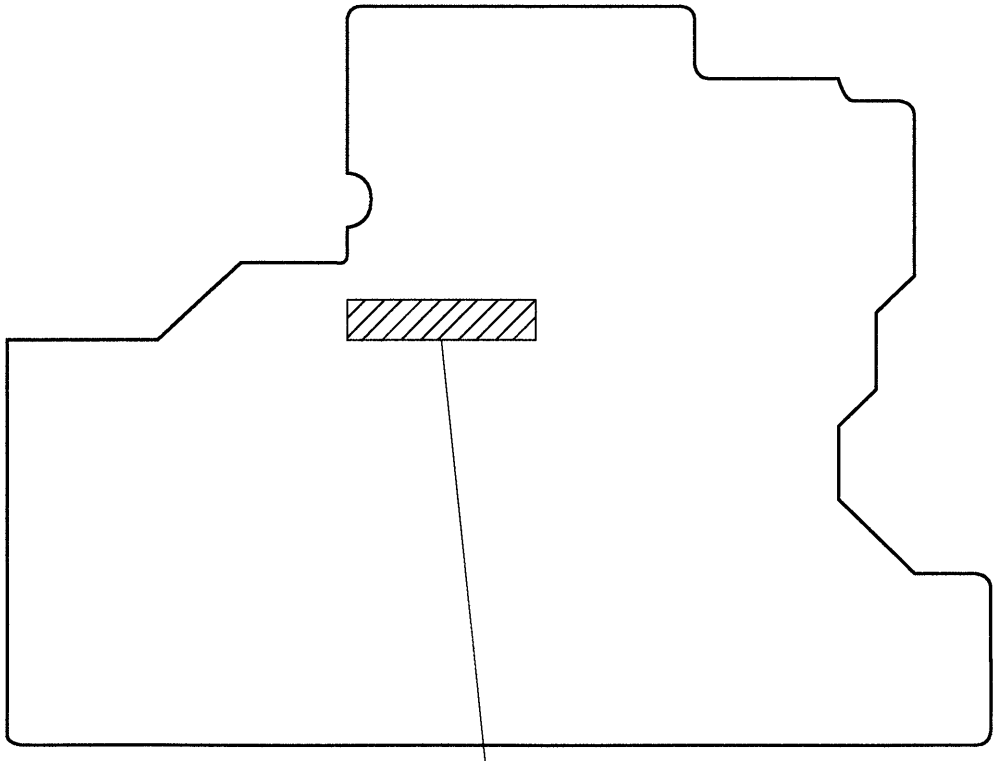
File this supplement with the service manual.

Subject : 1. THIN DETECT BOARD SUPPLEMENT
2. PARTS CHANGED
3. PARTS SUPPLY CLASSIFICATION CHANGED

(SPM-96020)

New type identification :

[DRUM DRIVE BOARD] (PARTS SIDE)



1-639-302-15 : Formar Type
1-639-302-16 : New Type

1. THIN DETECT BOARD SUPPLEMENT

[Modification due to addition of the THIN DETECT board]

As the THIN DETECT board was added during the production. According to this change the suffix number of the drum device board has been changed from 15 to 16. (The pattern has not been changed.)
Depending on whether the THIN DETECT board is present or not, some circuits must be changed. For replacing parts, refer to the table below.

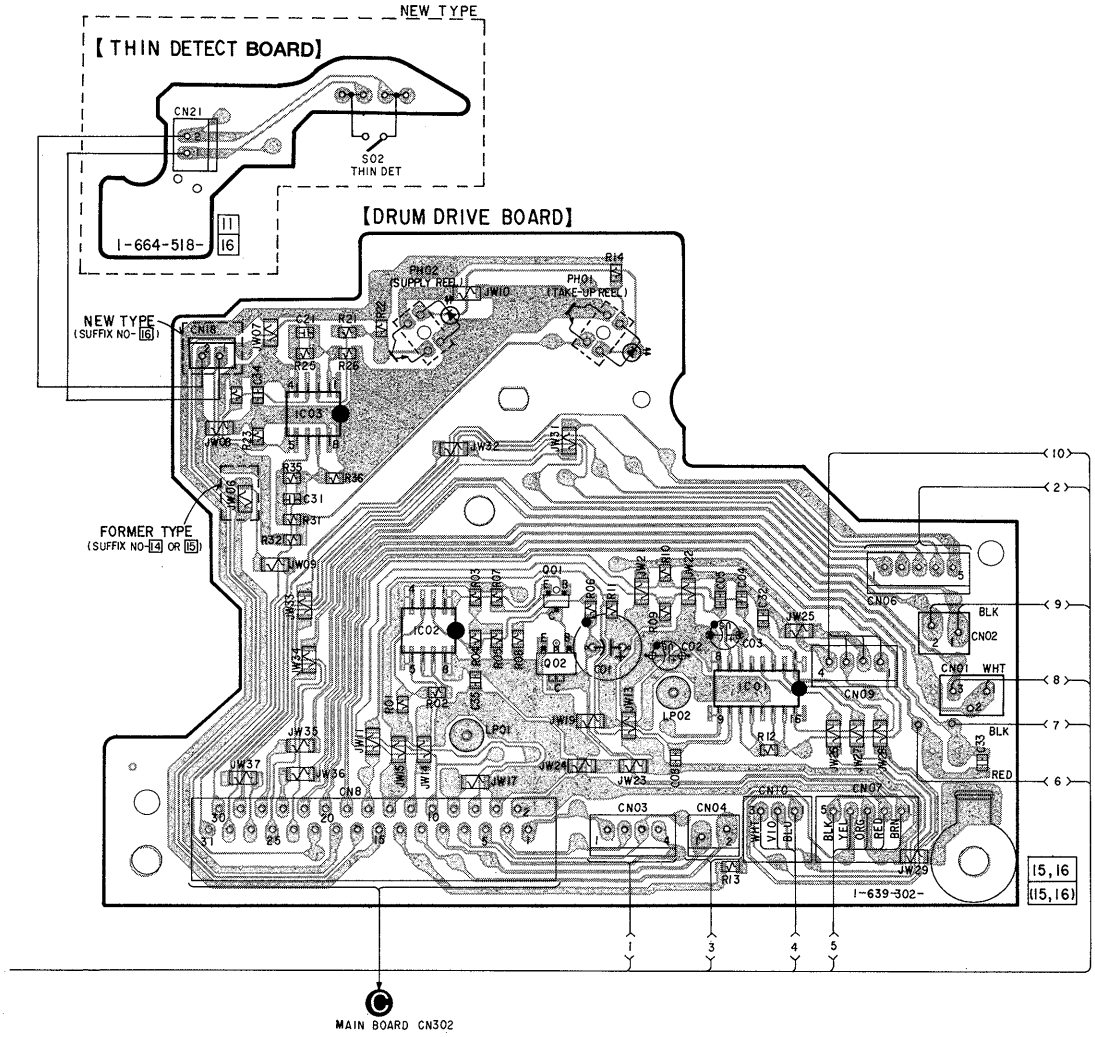
• DIFFERENCE LIST

FORMER TYPE Unit without THIN DETECT board (DRUM DRIVE BOARD SUFFIX No-14, 15)					NEW TYPE Unit with THIN DETECT board (DRUM DRIVE BOARD SUFFIX No-16)			
Ref. No.	Part No.	Description		Remark	Ref. No.	Part No.	Description	Remark
		*** DRUM DRIVE BOARD ***					*** DRUM DRIVE BOARD ***	
		NOT NEED			CN18	1-564-495-11	PIN CONNECTOR, 2P (*NOTE)	
JW06	1-216-296-00	METAL CHIP 0	5%	1/8W (*NOTE)			NOT NEED	
		NOT NEED			*	1-664-518-11	THIN DETECT BOARD **********	
		NOT NEED			CN21	1-564-336-61	PIN CONNECTOR, 2P	
		NOT NEED			S02	1-572-458-11	SWITCH, PUSH (THIN DETECT)	

***Note :** When replacing the drum device board, check whether CN18 and JW06 are present or not.
- If an unit without THIN DETECT board is not equipped with JW06, the unit does not operate correctly.
- JW06 in not needed for an unit with THIN DETECT board. In case the DRUM DRIVE board for replacement has JW06, it should be eliminated.

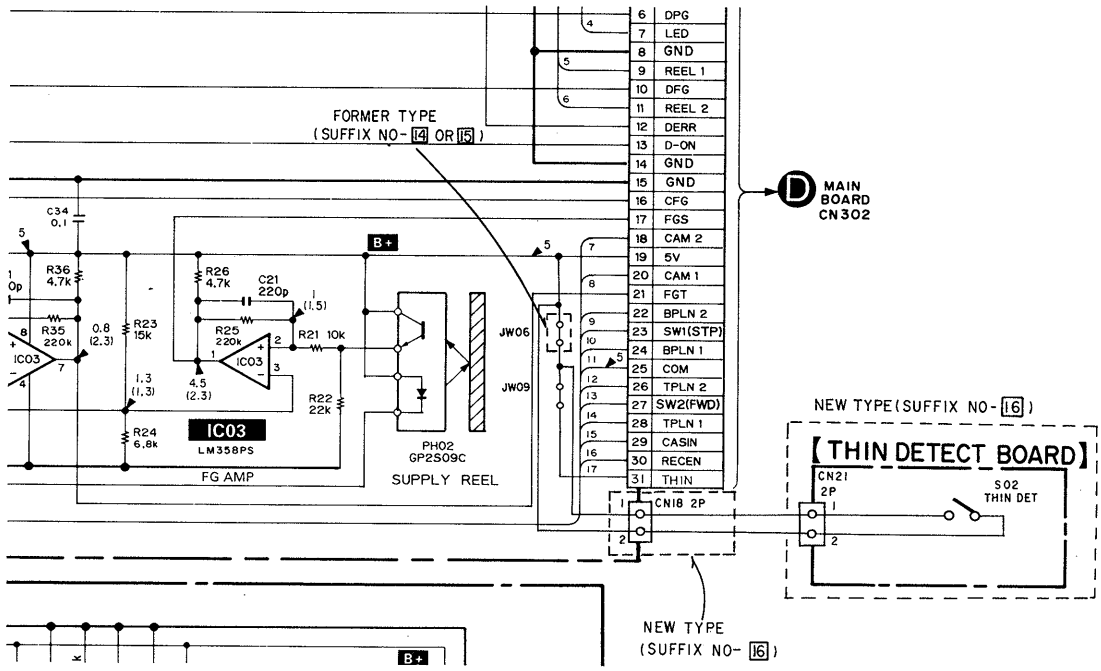
[PRINTED WIRING BOARD]

Location F—J, 13—18



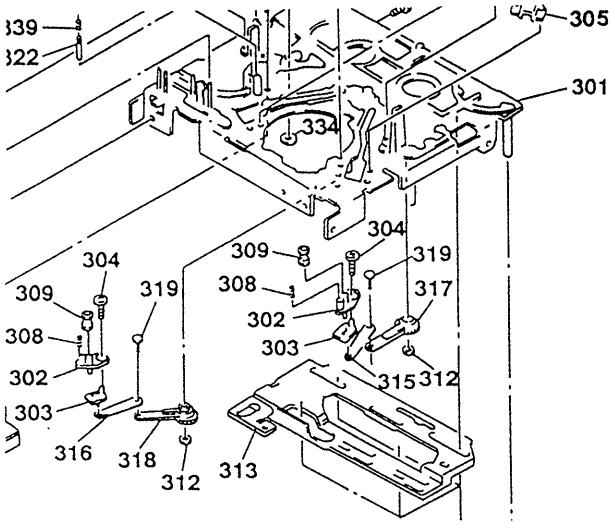
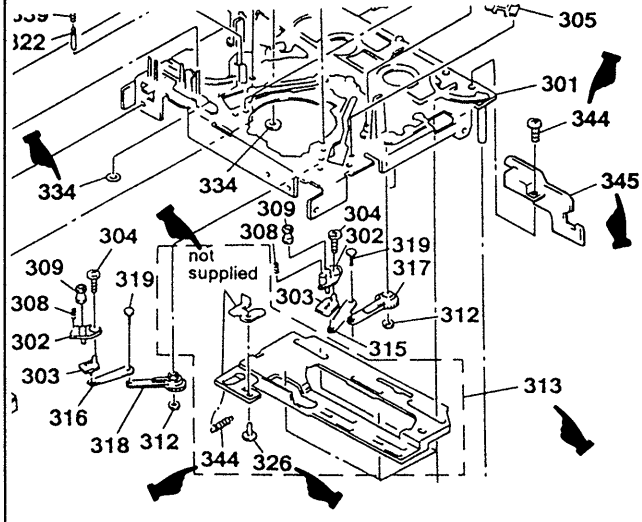
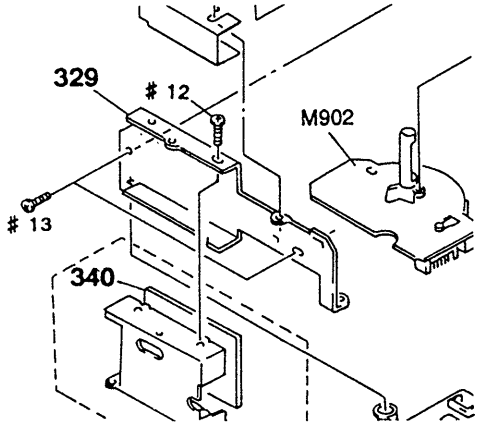
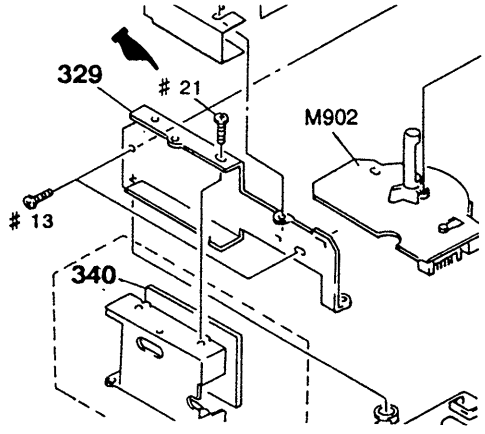
[SCHEMATIC DIAGRAM] 【DRUM DRIVE BOARD】

Location C—F, 22—26



2. PARTS CHANGED

: indicates changed portion.

Page	FORMER	NEW
	Ref. No. Part No. Description Remark	Ref. No. Part No. Description Remark
47	*** EXPLODED VIEWS ***	*** EXPLODED VIEWS ***
	334 3-321-813-01 WASHER, COTTER POLYETHYLENE	334 3-701-436-11 WASHER, STOPPER 344 3-321-041-01 SCREW, TAPPING (M1.7X3.5) * 345 1-664-518-11 THIN DETECT BOARD
		
		
58	*** HARDWARE LIST ***	*** HARDWARE LIST ***
		#21 7-621-772-08 SCREW +B2X3

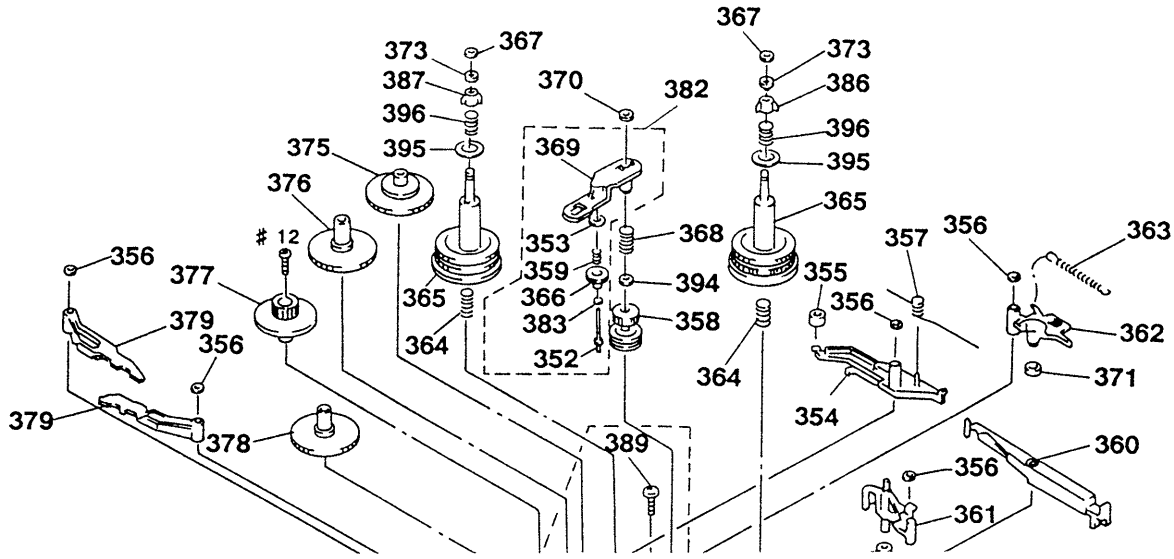
3. PARTS SUPPLY CLASSIFICATION CHANGED

Revise your service manual as shown below due to parts supply classification has beed changed.

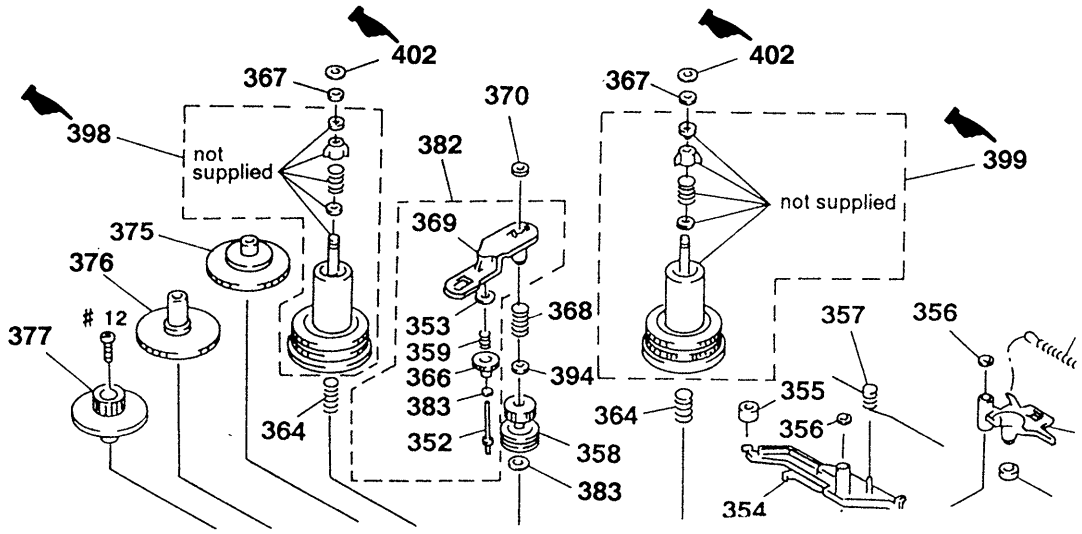
☛ : indicates changed portion.

Page	CURRENT				REVISED			
	Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
48	365	X-3370-132-1	TABLE (LOWER) ASSY, REEL				not supplied	
	373	3-368-400-02	BUSHING (REEL SHAFT)				not supplied	
	386	2-623-736-01	CLAW (C) (LEFT), REEL				not supplied	
	387	2-623-752-01	CLAW (C) (RIGHT), REEL				not supplied	
	392	3-928-150-01	SPACER (P)				not supplied	
	395	3-492-261-11	SLIDER				not supplied	
	396	3-923-259-01	SPRING (REEL TABLE), COMPRESSION				not supplied	
			not used		398	A-2004-476-A	TABLE (T) ASSY, REEL	
					399	A-2004-475-A	TABLE (S) ASSY, REEL	
					402	3-315-384-01	WASHER, STOPPER	

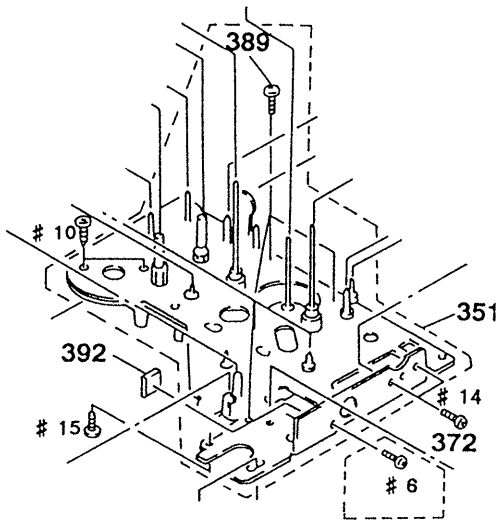
CURRENT

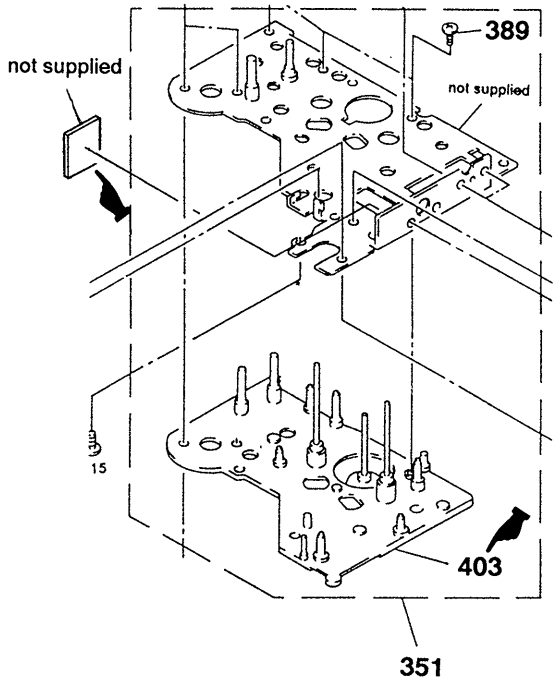


REVISED



Page	CURRENT				REVISED			
	Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
48					403	X-3366-312-1	CHASSIS ASSY, REEL	





		401	3-380-525-01 ARBOR (BT ADJUSTMENT), MAVABLE
		404	3-919-599-01 SPACER (P)