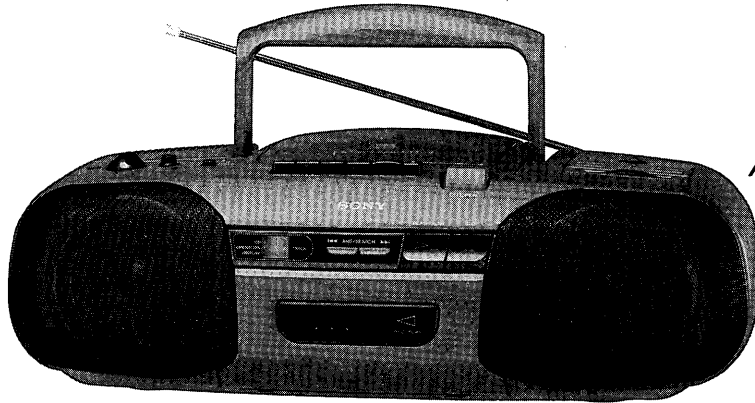


# CFD-9

## SERVICE MANUAL



*US Model*  
*Canadian Model*  
*AEP Model*  
*UK Model*  
*E Model*  
*Australian Model*  
*Tourist Model*  
*PX Model*

Model Name Using Similar Mechanism	CD Section	CFD-8
	Tape Section	CFD-8
Optical Pick-up Type		KSM-213BAN/S-N
Tape Transport Mechanism Type		MF-8/2

### SPECIFICATIONS

#### CD player section

System	Compact disc digital audio system
Laser diode properties	Material: GaAlAs Wave length: 780 nm Emission duration: Continuous Laser output: Less than 44.6 $\mu$ W (This output is the value measured at a distance of about 200 mm from the objective lens surface on the optical pick-up block.)
Spindle speed	200 r/min (rpm) to 500 r/min (rpm) (CLV)
Error correction	Sony Refined Super Strategy Cross Interleave Reed Solomon Code
Number of channels	2
Frequency response	20-20,000 Hz + 1.0/-2.5 dB
Wow and flutter	Below measurable limit

#### Radio section

##### Frequency range

Model	FM	AM
AEP, UK	87.6-107MHz	531-1,602kHz
Italian	87.5-108MHz	526.5-1,606.5kHz
US, Canadian, Taiwan, Central & South America	87.6-108MHz	530-1,710kHz
Saudi Arabia	87.6-107MHz	530-1,605kHz
E, Australian, PX, Hong Kong	87.6-108MHz	530-1,605kHz
East European	65-108MHz	531-1,602kHz
Tourist	76-108MHz	530-1,629kHz

IF	FM: 10.7 MHz AM: 455 kHz
Aerials	FM: Telescopic aerial AM: Built-in ferrite bar aerial

#### Cassette-corder section

Recording system	4-track 2-channel stereo
Frequency response	TYPE I (normal) cassette: 70-10,000 Hz

#### General

Speaker	Full range: 10 cm dia., 3.2 ohms cone type
Outputs	Headphones jack (stereo minijack): For 16-68 ohms impedance headphones
Maximum power	2.3 W + 2.3 W
Power requirements	AEP, East European, Italian model : 220-230V AC, 50Hz UK, Australian model : 240V AC, 50Hz US, Canadian, Central & South America, Taiwan model : 120V AC, 60Hz E, Saudi Arabia, Tourist, PX, Hong Kong model : 110-120V 220-240V AC, 50/60Hz selectable
Power consumption	DC 9 V, 6 R20 (size D) batteries 20W (EXCEPT Taiwan model) 25W (Taiwan model)

- Continued on page 2 -

**CD RADIO CASSETTE-CORDER**  
**SONY®**



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

Battery life

	FM recording	Tape playback	CD playback
Sony SUM-1 (NS)	approx. 13.5 h	approx. 7.5 h	approx. 2.5 h
Sony Alkaline AM1	approx. 19 h	approx. 12 h	approx. 4.5 h

Dimensions Approx. 500 × 156 × 243 mm (w/h/d)  
incl. projecting parts

Mass 4.1 kg (incl. batteries)

Supplied accessory Mains lead (1)

Design and specifications subject to change without notice.

#### Note

This appliance conforms with EEC Directive 87/308/EEC regarding interference suppression.

#### CAUTION

Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

Laser component in this product is capable of emitting radiation exceeding the limit for Class 1.

#### For customers in Europe and Saudi Arabia

CLASS 1 LASER PRODUCT  
LUOKAN 1 LASERLAITE  
KLASS1 LASERAPPARAT

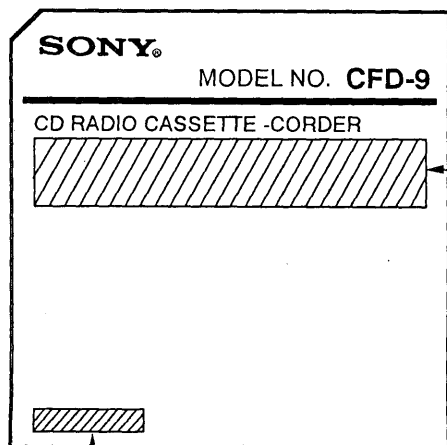
This Compact Disc player is classified as a CLASS 1 LASER product.  
The CLASS 1 LASER PRODUCT label is located on the rear exterior.

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#### MODEL IDENTIFICATION

— Model Number Label —



AC : 220-230V~50Hz 20W  
(AEP, East European, Italian model)  
AC : 240V~50Hz 20W  
(UK, Australian model)  
AC : 120V~60Hz 20W  
(US, Canadian, Central & South America, Taiwan model)  
AC : 110-120V/220-240V~50/60Hz 20W  
(E, Saudi Arabia, Tourist, PX, Hong Kong model)

MADE IN CHINA : Canadian, AEP, UK, E, Australian,  
Hong Kong, Italian, Tourist, PX model  
MADE IN MALAYSIA : US, Canadian, AEP, Saudi Arabia,  
Central & South America, Taiwan model

### Flexible Circuit Board Repairing

- Keep the temperature of the soldering iron around 270°C during repairing.
- Do not touch the soldering iron on the same conductor of the circuit board (within 3 times).
- Be careful not to apply force on the conductor when soldering or unsoldering.

### Notes on chip component replacement

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

### SAFETY-RELATED COMPONENT WARNING!!

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

### ATTENTION AU COMPOSANT AYANT RAPPORT À LA SÉCURITÉ!

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

## SECTION 1 SERVICING NOTES

### NOTES ON HANDLING THE OPTICAL PICK-UP BLOCK OR BASE UNIT

The laser diode in the optical pick-up block may suffer electrostatic breakdown because of the potential difference generated by the charged electrostatic load, etc. on clothing and the human body.

During repair, pay attention to electrostatic breakdown and also use the procedure in the printed matter which is included in the repair parts.

The flexible board is easily damaged and should be handled with care.

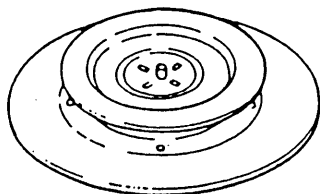
### NOTES ON LASER DIODE EMISSION CHECK

The laser beam on this model is concentrated so as to be focused on the disc reflective surface by the objective lens in the optical pick-up block. Therefore, when checking the laser diode emission, observe more than 25 cm away from the objective lens.

### CHUCK PLATE JIG ON REPAIRING

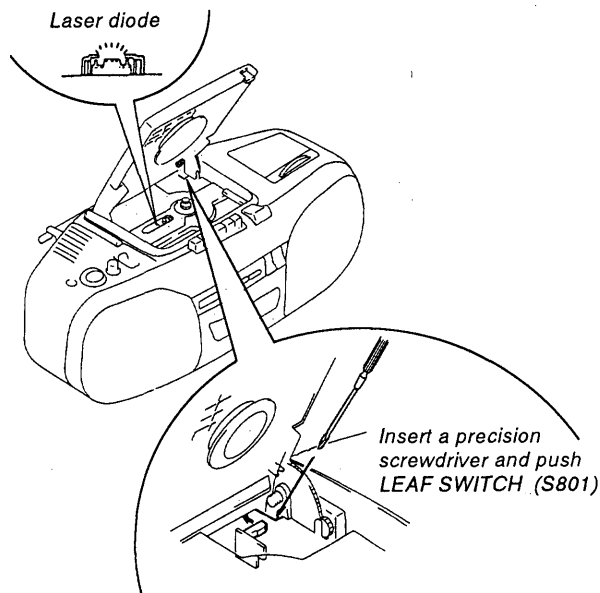
On repairing CD section, playing a disc without the CD lid, use Chuck Plate Jig.

- Code number of Chuck Plate Jig: X-4918-255-1



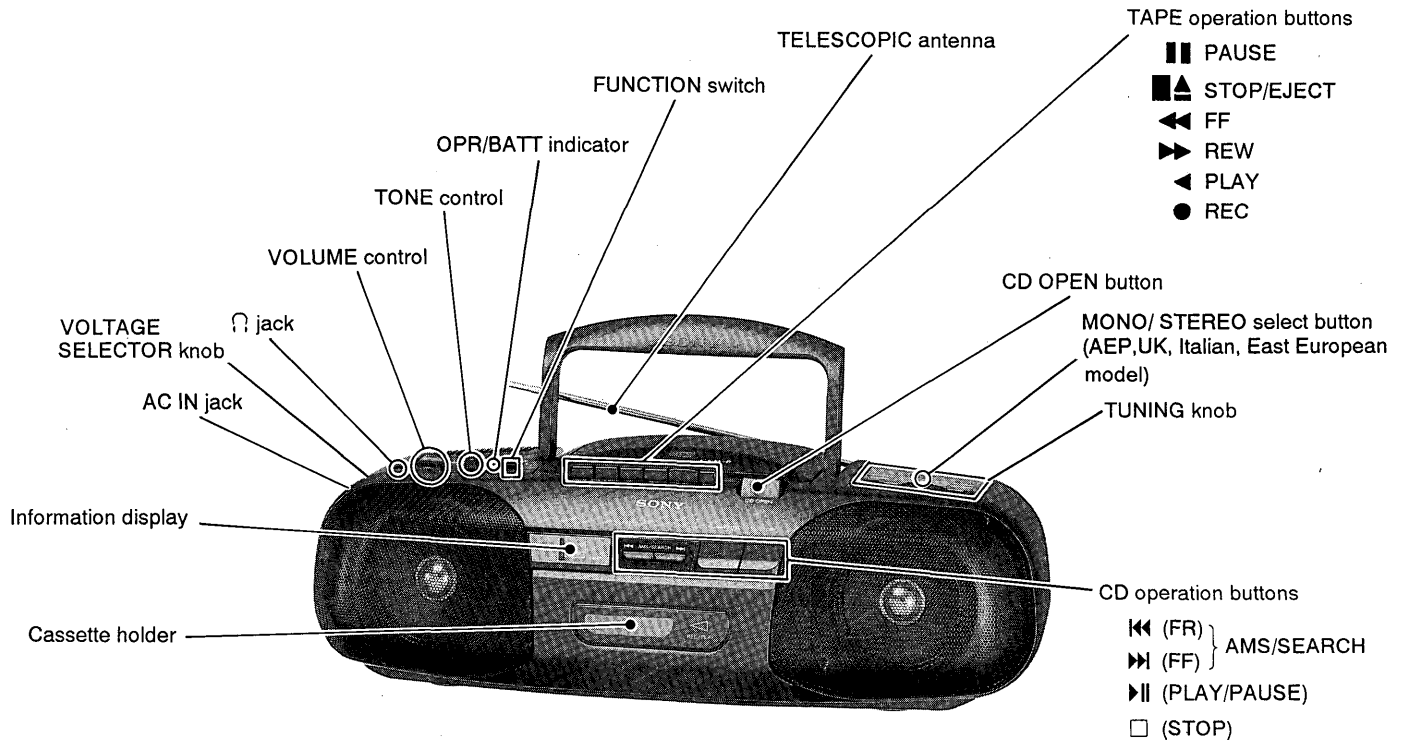
### LASER DIODE AND FOCUS SEARCH OPERATION CHECK

1. Press CD open knob.
  2. Open the lid for CD.
  3. Push on LEAF SWITCH (S801) as following figure.
  4. Confirm the laser diode emission while observing the objecting lens. When there is no emission, Auto Power Control circuit or Optical Pick-up is broken.
- Objective lens moves up and down once for the focus search.



## SECTION 2 GENERAL

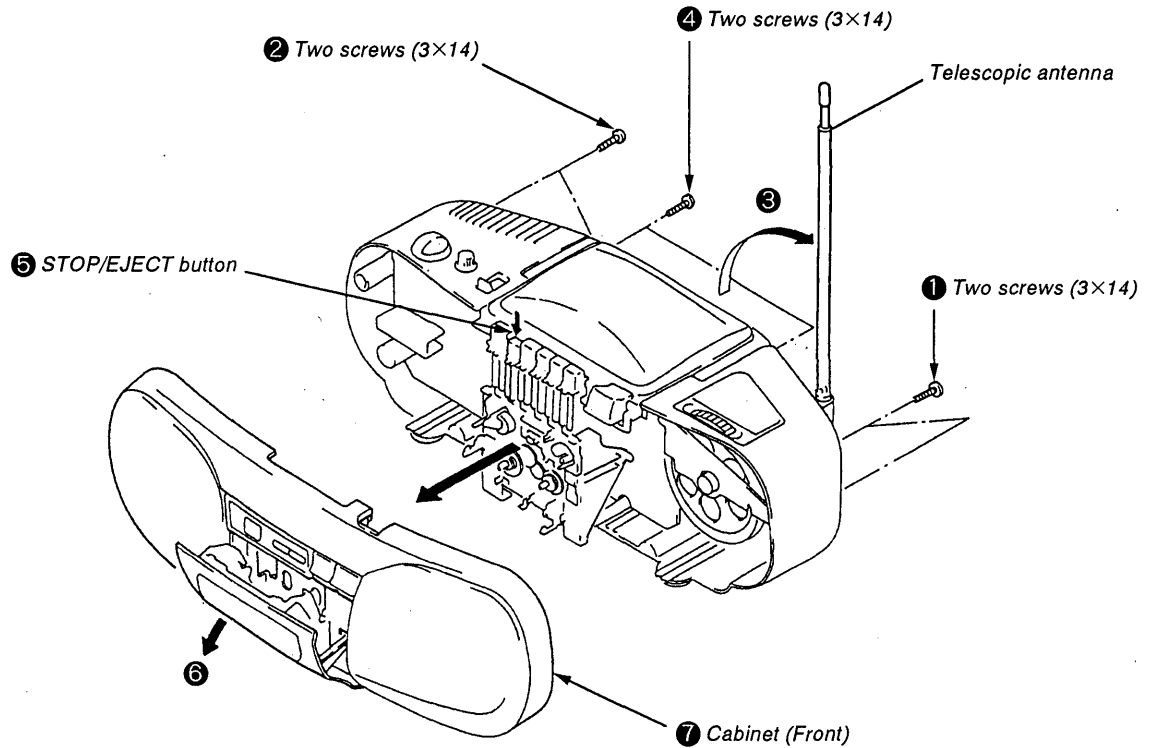
### LOCATION AND FUNCTION OF CONTROLS



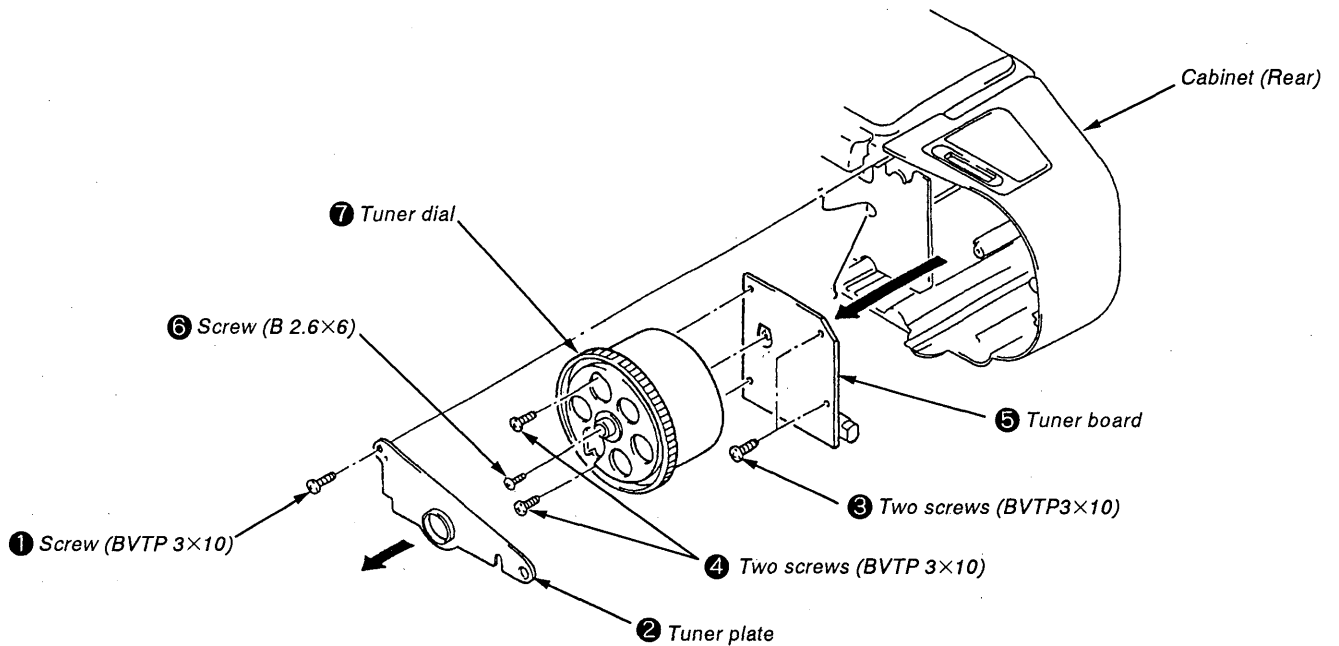
## SECTION 3 DISASSEMBLY

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

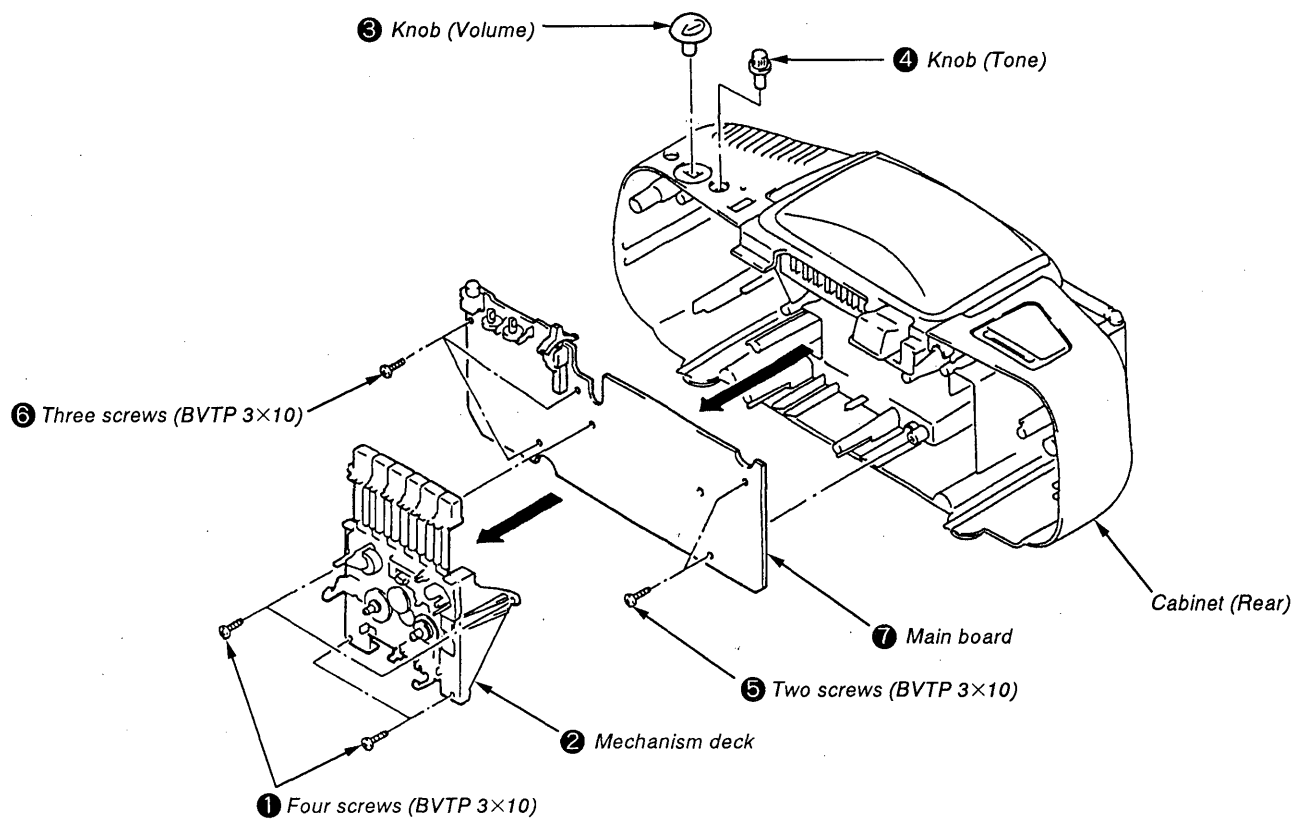
### 3-1. CABINET (FRONT) REMOVAL



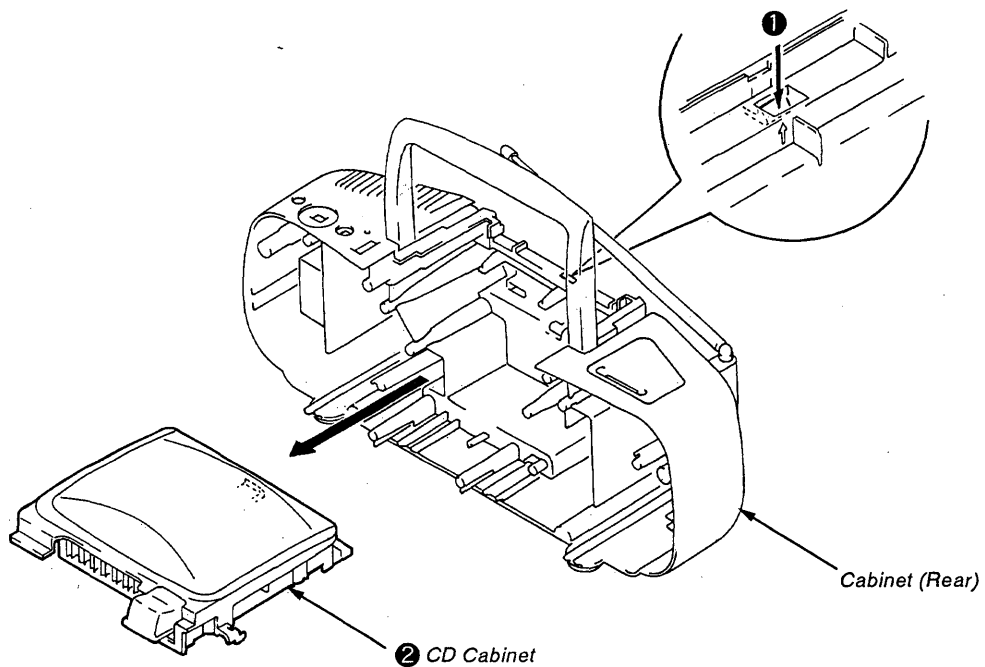
### 3-2. TUNER DIAL, TUNER BOARD REMOVAL



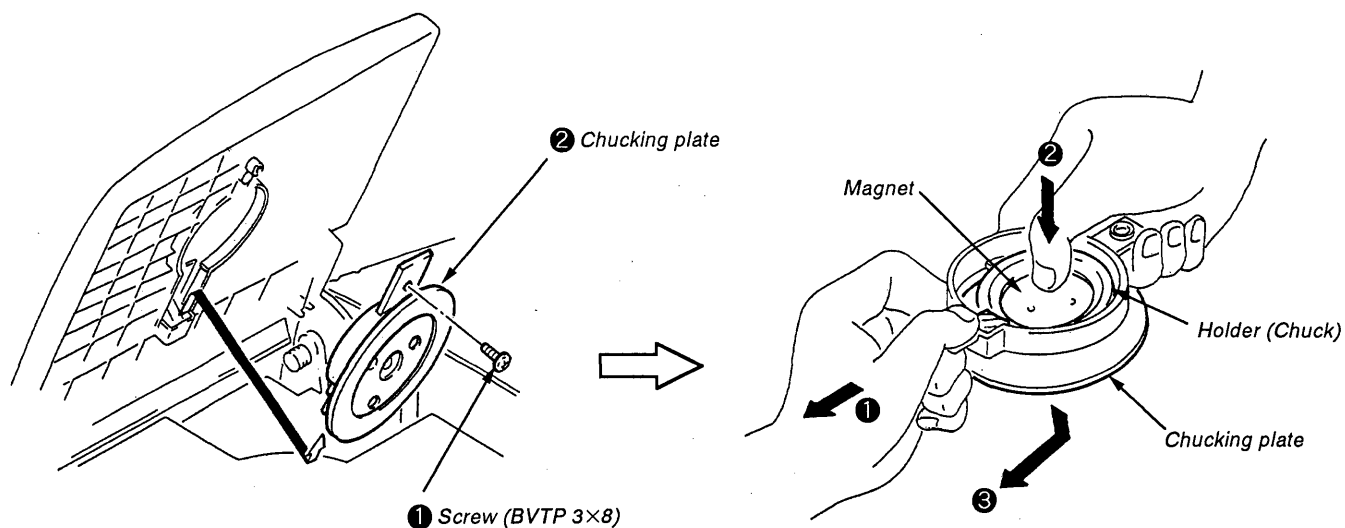
### 3-3. MECHANISM DECK, MAIN BOARD REMOVAL



### 3-4. CD CABINET, CABINET (REAR) REMOVAL



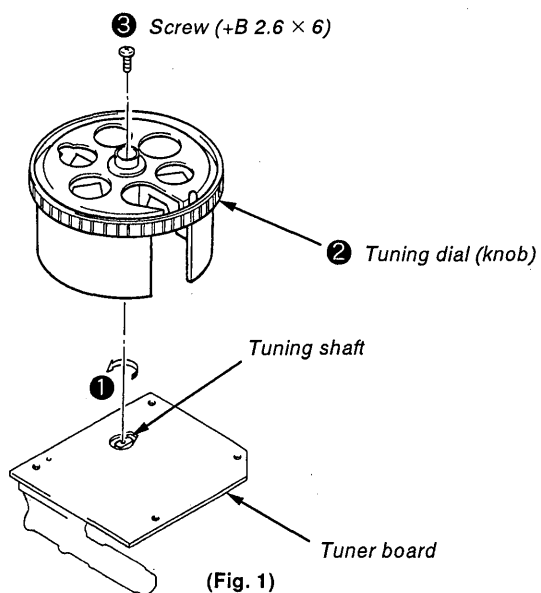
### 3-5. MAGNET, CHUCKING PLATE REMOVAL



## SECTION 4 DIAL POINTER INSTALLATION

**Note :** Follow the installation procedure in the numerical order given.

1. Turn tuning shaft fully to arrow direction.
2. Fit tuning shaft to hole of tuning dial (knob) and then install it. (Fig.1)



## SECTION 5 ADJUSTMENTS

### 5-1. MECHANICAL ADJUSTMENTS

#### PRECAUTION

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

record/playback head	pinch roller
erase head	rubber belts
capstan	idlers
- Demagnetize the record/playback head with a head demagnetizer. (Do not bring the head demagnetizer close to the erase head.)
- Do not use a magnetized screwdriver for the adjustments.
- After the adjustments, apply suitable locking compound to the parts adjusted.
- The adjustments should be performed with the rated power supply voltage unless otherwise noted.

#### Torque Measurement

Torque	Torque Meter	Meter Reading
Forward	CQ-102C	30 – 70g•cm (0.42 – 0.97 oz•inch)
Forward back tension	CQ-102C	1.5 – 5.5g•cm (0.020 – 0.076 oz•inch)
Fast Forward	CQ-201B	more than 60g•cm (more than 0.84 oz•inch)
Rewind	CQ-201B	more than 60g•cm (more than 0.84 oz•inch)

#### Tape Tension Measurement

Torque Meter	Meter Reading
CQ-403A	more than 100g (more than 3.53 oz)

### 5-2. ELECTRICAL ADJUSTMENTS

#### TAPE RECORDER SECTION

##### Standard Output Level

Output terminal	HP OUT
load impedance	32 $\Omega$
output signal level	0.25V ( – 10dB)

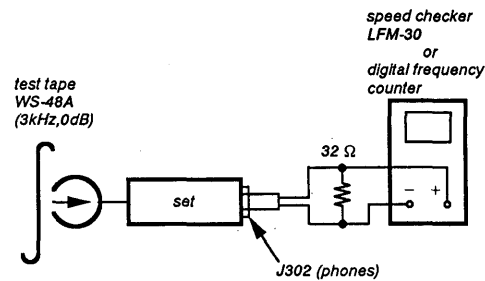
##### Test Tape

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

#### Tape Speed Adjustment

##### Procedure :

Mode : playback

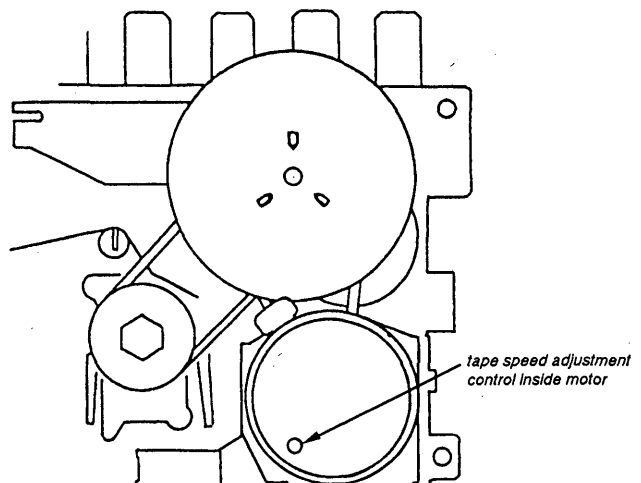


##### Adjustment Value :

Speed checker	Digital frequency counter
– 1 to +1%	2,970 – 3,030 Hz

Frequency difference between the beginning and the end of the tape should be within 1.5%(45Hz) .

##### Adjustment Location :



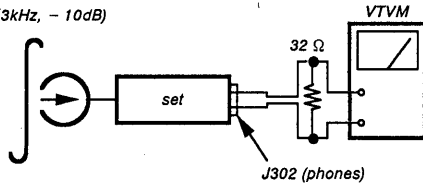


## Record/Playback Head Azimuth Adjustment

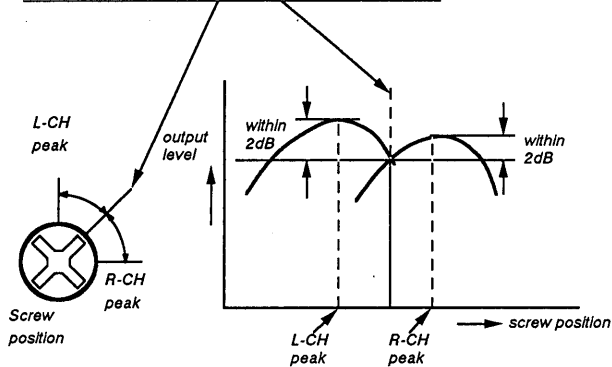
### Procedure :

1. Mode : playback

test tape  
P-4-A063  
(6.3kHz, -10dB)

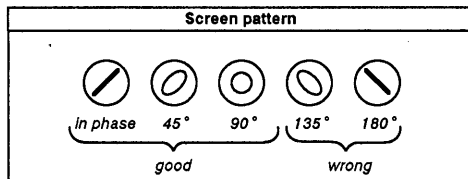
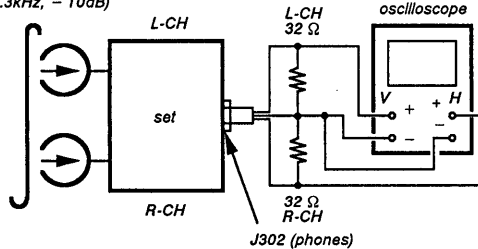


2. Turn the adjustment screw for the maximum output levels. If these levels do not match, turn the adjustment screw until both of output levels match together within 2dB.

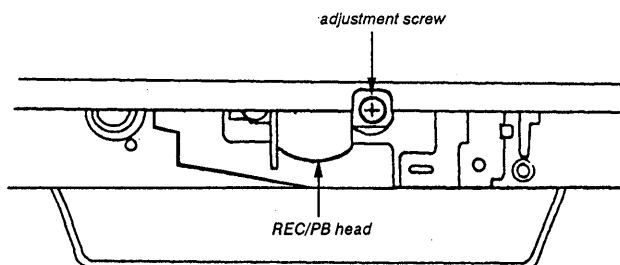


3. Phase Check  
Mode : playback

test tape  
P-4-A063  
(6.3kHz, -10dB)



Adjustment Location : -- record/playback head --

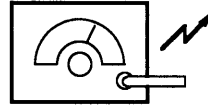


## TUNER SECTION

### AM Section

Function switch : AM  
Volume : MIN

AM RF signal  
generator



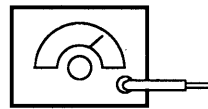
Put the lead-wire  
antenna close to  
the set.

30% amplitude modulation by 400Hz  
signal.  
Output level : as low as possible

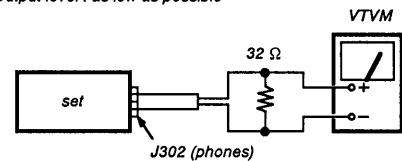
### FM Section

Function switch : FM  
Volume : MIN

FM RF signal  
generator



22.5kHz frequency deviation by  
400Hz signal.  
Output level : as low as possible



- Repeat the procedures in each adjustment several times, and the frequency coverage and tracking adjustments should be finally done by the trimmer capacitors.

no mark : US, Canadian model

(( )) : Italian model

( ) : AEP, UK model

< > : East European model

<< >> : E, Australian, Taiwan, Tourist,

PX, Central & South America, Hong Kong model

[ ] : Saudi Arabia model

### AM IF ALIGNMENT

Adjust for a maximum reading on VTVM.

CFT1	455kHz	((455kHz))	((455kHz))
	< 455kHz >	<< 455kHz >>	[455kHz]

### AM FREQUENCY COVERAGE ADJUSTMENT

Adjust for a maximum reading on VTVM.

L4	520kHz	((520kHz))	((516kHz))
	< 520kHz >	<< 520kHz >>	[520kHz]
CT4	1,780kHz	((1,680kHz))	((1,630kHz))
	< 1,680kHz >	<< 1,680kHz >>	[1,680kHz]

### AM TRACKING ADJUSTMENT

Adjust for a maximum reading on VTVM.

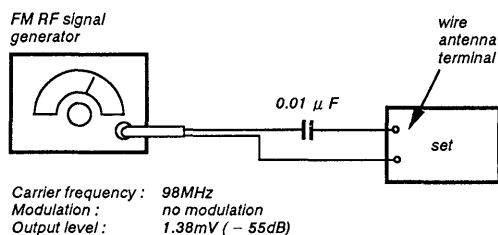
L3	620kHz	((620kHz))	((620kHz))
	< 620kHz >	<< 620kHz >>	[620kHz]
CT3	1,400kHz	((1,400kHz))	((1,400kHz))
	< 1,400kHz >	<< 1,400kHz >>	[1,400kHz]

FM FREQUENCY COVERAGE ADJUSTMENT			
Adjust for a maximum reading on VTVM.			
L2	(87.0MHz)	86.5MHz	((87.35MHz))
	< 64.0MHz >	<< 86.5MHz >>	[87.35MHz]
CT2	(108.3MHz)	109.5MHz	((108.25MHz))
	< 109.5MHz >	<< 109.5MHz >>	[107.8MHz]

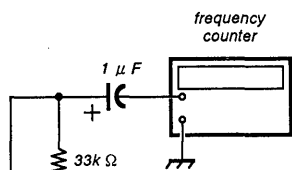
FM TRACKING ADJUSTMENT			
Adjust for a maximum reading on VTVM.			
L1	(87.0MHz)	86.5MHz	((87.35MHz))
	< 64.0MHz >	<< 86.5MHz >>	[87.35MHz]
CT1	(108.3MHz)	109.5MHz	((108.25MHz))
	< 109.5MHz >	<< 109.5MHz >>	[107.8MHz]

## VCO Adjustment

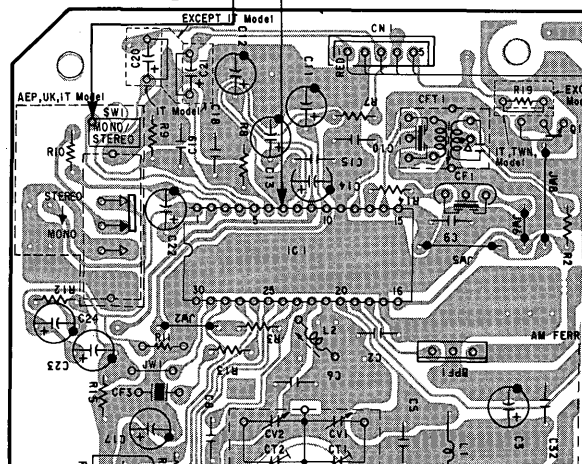
### Procedure :



1. Connect the frequency counter to ④ and ⑦ pins of IC1 as shown the figure below.
2. Turn the set to 98MHz.
3. Adjust RV1 for 76kHz  $\pm$  500Hz reading on frequency counter.



[TUNER BOARD]



## CD SECTION

### Note on Adjustment

1. Perform adjustment in test mode.  
After adjustment, be sure to release test mode.
2. Perform adjustments in the order given.
3. Use the disc (YEDS-18. Part No. 3-702-101-01) only when so indicated.

### Before adjustment

Put the set into test mode and perform the following checks.  
Repair if there are any problems.

#### ● Sled Motor Check

1. press ►► key, then press OFF button.
2. Press ►►, ◀◀ keys and confirm that the Optical pick-up moves smoothly from the innermost to outermost circumference and back smoothly and with no catching or abnormal noises. (Cancellation of BTL mute)

►► : Optical pick-up moves to the outer circumference

◀◀ : Optical pick-up moves to the inner circumference

#### ● Focus Search Check

1. Press ►► key. (Focus search operation is performed continuously.)
2. Look at the Optical pick-up objective lens and confirm that it moves up and down smoothly, with no catching or abnormal noises.
3. Press ◻ button.

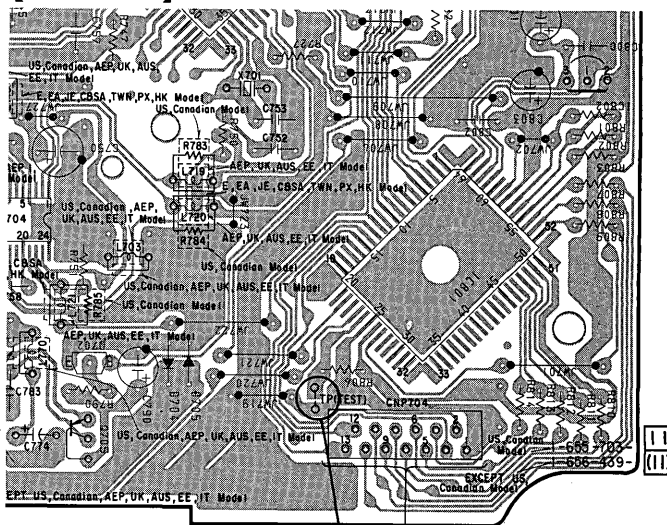
Confirm that focus search operation stops. If it does not, press ◻ button again longer.

**Note :** When the malfunction is occurred by mis-passing other keys, turn off the power and check again from making the test mode.

### How to Put the Set into Test Mode

1. Short-circuit following portion (IC801 ②④ pin) on the MAIN board.
2. Turn the POWER on.
3. Open the short-circuit to release test mode.

[MAIN BOARD]



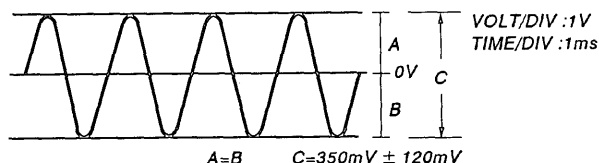
TEST MODE  
Terminal

## E-F Balance Adjustment

This adjustment is to be done when the optical block is replaced.

### Adjustment procedure :

1. Connect oscilloscope to test point TP (VC) and TP (TEO) on main board.
2. Put the set into test mode.
3. Optical pick-up setting to the center by  $\blacktriangleright\blacktriangleleft$  or  $\blacktriangleleft\blacktriangleright$  button pushing.
4. Put disc (YEDS-18) in and press the  $\blacktriangleright\parallel$  button.
5. Adjust RV703 so that the oscilloscope traverse waveform is symmetrical, as shown in the figure below.
6. Release test mode after adjustment is completed.



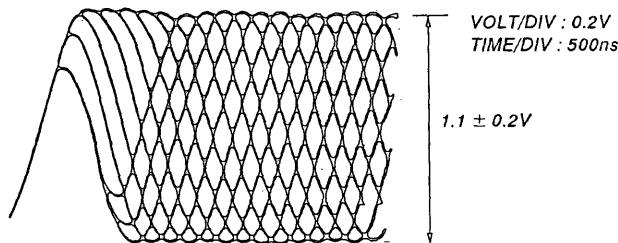
## Focus Bias Adjustment

This adjustment is to be done when the optical block is replaced.

### Adjustment procedure :

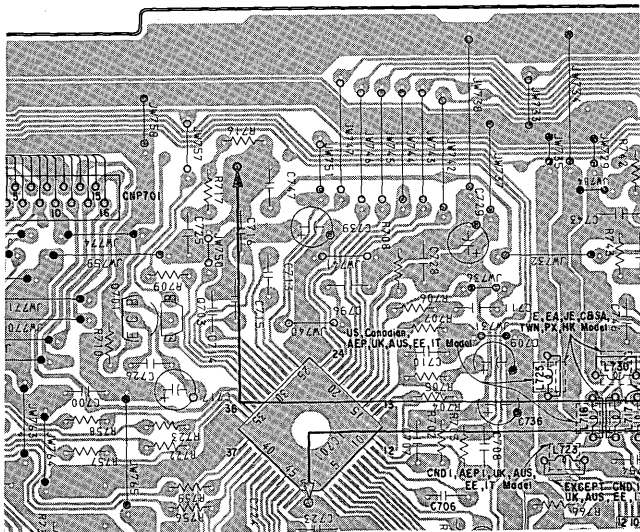
1. Connect oscilloscope to test point TP (VC) and TP (RFO) on main board.
2. Put the set into test mode.
3. Optical pick-up setting to the center by  $\blacktriangleright\blacktriangleleft$  or  $\blacktriangleleft\blacktriangleright$  button pushing.
4. Put disc (YEDS-18) in and press the  $\blacktriangleright\parallel$  button.
5. Press the  $\blacktriangleright\parallel$  button. (Tracking servo ON)
6. Adjust RV701 so that the oscilloscope waveform is as shown in the figure below (eye pattern).  
A good eye pattern means that the diamond shape ( $\diamond$ ) in the center of the waveform can be clearly distinguished.
7. Release test mode after adjustment is completed.

- RF signal reference waveform (eye pattern)



When observing the eye pattern, set the oscilloscope for AC range and raise vertical sensitivity.

### [MAIN BOARD]



## Focus/Tracking Gain Adjustment

A frequency response analyzer is necessary in order to perform this adjustment exactly.

However, this gain has a margin, so even if it is slightly off, there is no problem. Therefore, do not perform this adjustment.

Focus/tracking gain determines the pick-up follow-up (vertical and horizontal) relative to mechanical noise and mechanical shock when the 2-axis device operate.

However, as these reciprocate, the adjustment is at the point where both are satisfied.

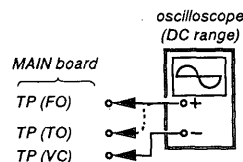
- When gain is raised, the noise when the 2-axis device operates increases.
- When gain is lowered, mechanical shock and skipping occurs more easily.
- When gain adjustment is off, the symptoms below appear.

Symptoms	Gain	Focus	Tracking
● The time until music starts becomes longer for STOP $\rightarrow \blacktriangleright\parallel$ button or automatic selection. ( $\blacktriangleleft\blacktriangleright$ buttons pressed.) (Normally takes about 2 seconds.)		low	low or high
● Music does not start and disc continues to rotate for STOP $\rightarrow \blacktriangleright\parallel$ button or automatic selection. ( $\blacktriangleleft\blacktriangleright$ buttons pressed.)		—	low
● Sound is interrupted during PLAY. Or time counter display stops progressing.		—	low
● More noise during 2-axis device operation.		high	high

The following is a simple adjustment method.

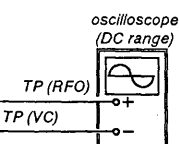
### — Primary Adjustment —

**Note :** Since exact adjustment cannot be performed, remember the positions of the controls before performing the adjustment. If the positions after the primary adjustment are only a little different, return the controls to the original position.

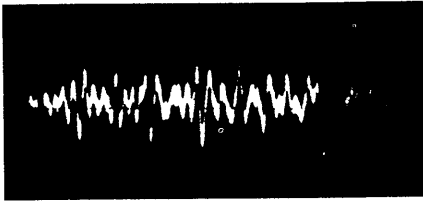


### Procedure :

1. Keep the set horizontal.  
If the set is not horizontal, this adjustment cannot be performed due to the gravity against the 2-axis device.
2. Insert disc (YEDS-18) and press  $\blacktriangleright\parallel$  button.
3. Connect oscilloscope to TP (FO) and TP (VC) on MAIN board.
4. Adjustment RV702 on digital board so that the waveform is as shown in the figure below. (focus gain adjustment)



VOLT/DIV : 100mV  
TIME/DIV : 2mS

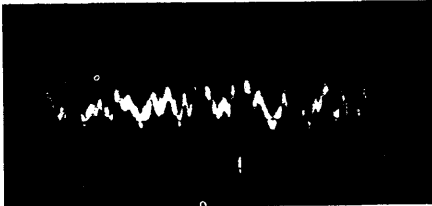


100mV  
0V

- Inccrrent Examples (DC level changes more than on adjusted waveform)

VOLT/DIV : 100mV  
TIME/DIV : 2mS

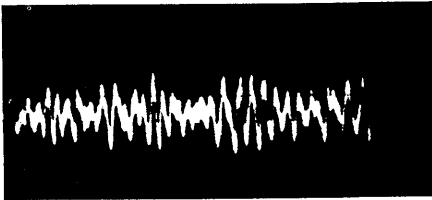
low focus gain



200mV  
0V

VOLT/DIV : 100mV  
TIME/DIV : 2mS

high focus gain



75mV  
0V

5. Connect oscilloscope to TP (TO) and TP (VC) on MAIN board.
6. Adjust RV704 on digital board so that the waveform is as shown in the figure below.

VOLT/DIV : 1V  
TIME/DIV : 2mS



0V

- Incorrect Examples (fundamental wave appears)

low tracking gain

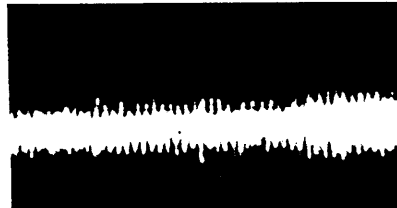
VOLT/DIV : 1V  
TIME/DIV : 2mS



0V

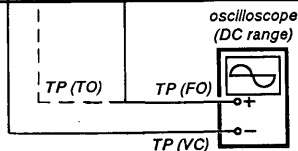
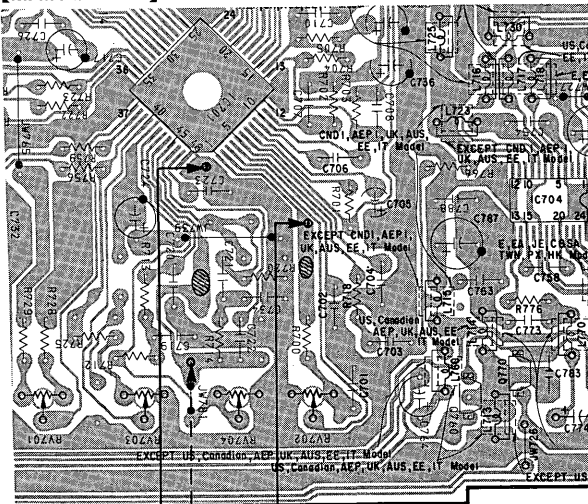
high tracking gain  
(high fundamental wave)  
than for low gain

VOLT/DIV : 1V  
TIME/DIV : 2mS



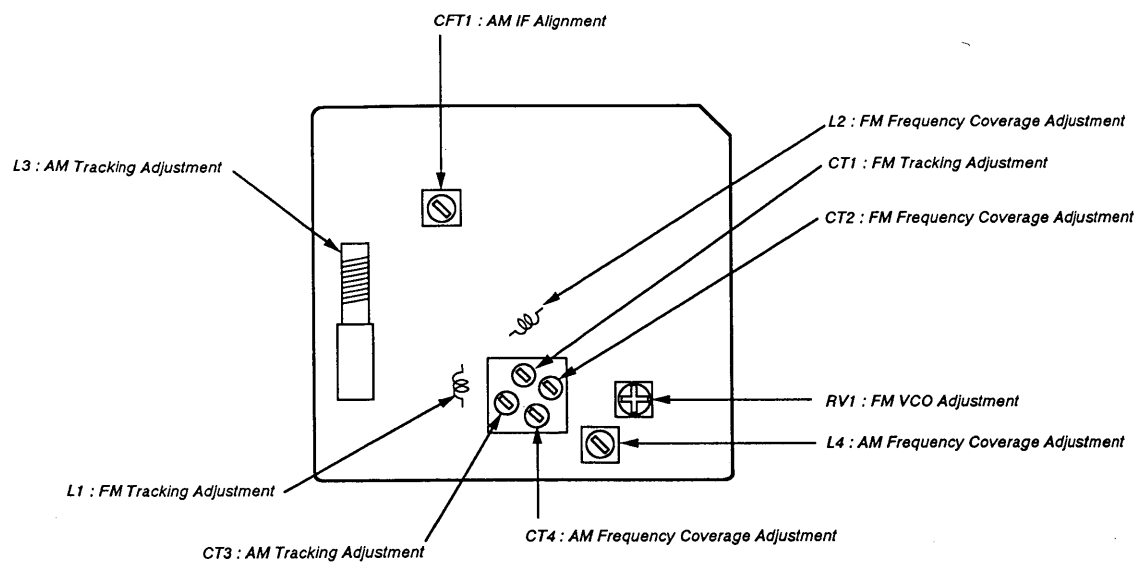
0V

# [MAIN BOARD]



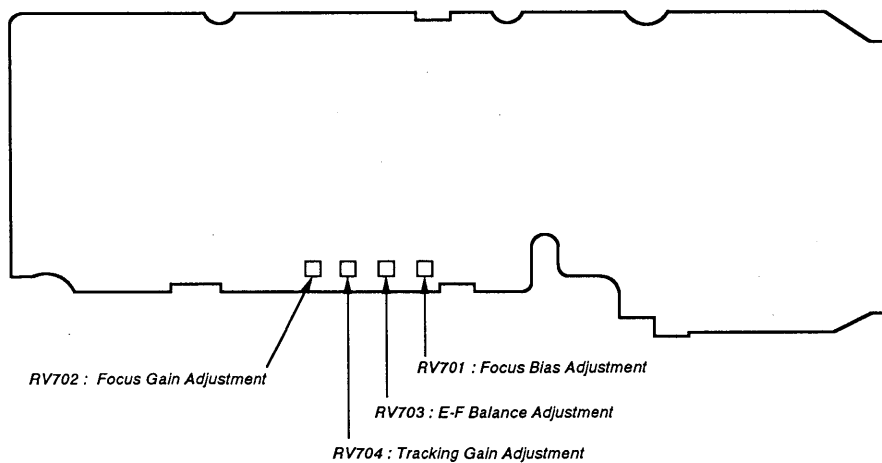
## TUNER SECTION

Adjustment Location : Tuner board (Component side)



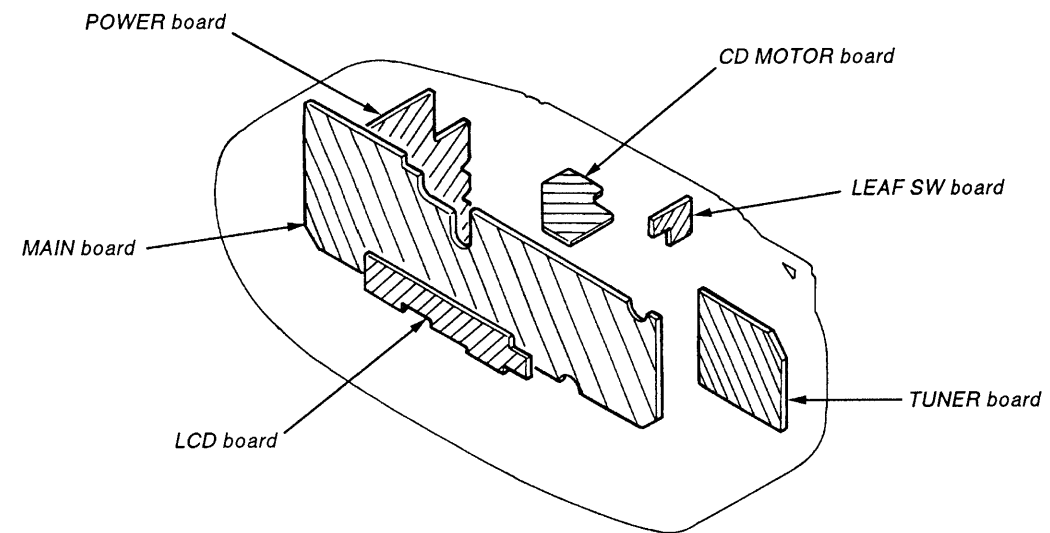
## CD SECTION

Adjustment Location : Main board (Component side)



## SECTION 6 DIAGRAMS

### 6-1. CIRCUIT BOARD LOCATION





6-2. PRINTED WIRING BOARDS

• SEMICONDUCTOR LOCATION

Ref. No.	Location	Ref. No.	Location
D301	C - 14	Q1	D - 28
D302	C - 14	Q101	E - 14
D303	C - 14	Q201	E - 14
D304	E - 16	Q301	C - 15
D305	B - 14	Q302	C - 16
D306	F - 16	Q303	C - 14
D307	B - 14	Q304	C - 15
D308	C - 14	Q305	B - 14
D309	B - 14	Q306	C - 14
D310	F - 16	Q307	C - 17
D311	E - 16	Q308	C - 17
D313	C - 15	Q309	C - 15
D316	C - 15	Q310	C - 15
D704	E - 23	Q311	C - 15
D705	E - 23	Q312	C - 15
IC1	D - 27	Q701	C - 19
IC301	D - 16	Q702	E - 22
IC302	D - 13	Q703	C - 20
IC701	D - 20	Q705	E - 22
IC702	C - 23	Q760	E - 22
IC703	E - 19	Q770	E - 22
IC704	D - 22		
IC801	E - 24		
IC802	D - 25		

EXCPET US, Canadian model

Ref. No.	Location
D901	F - 4
D902	E - 4
D903	E - 4
D904	E - 4

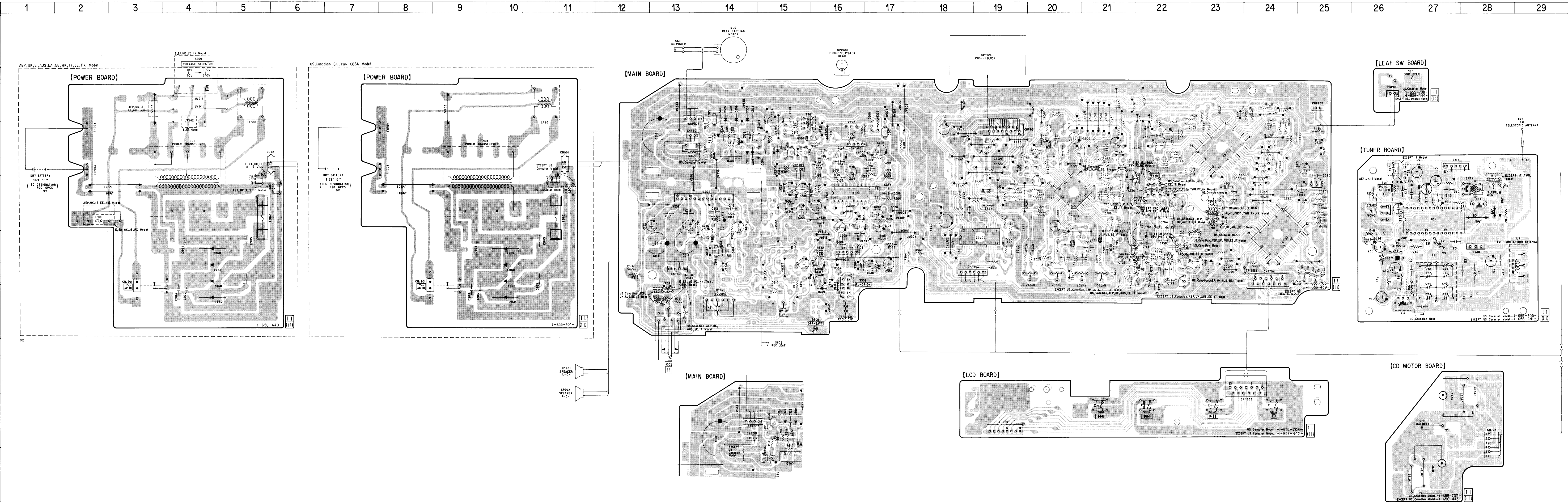
US, Canadian model

Ref. No.	Location
D901	F - 10
D902	E - 10
D903	E - 10
D904	E - 10

Note:

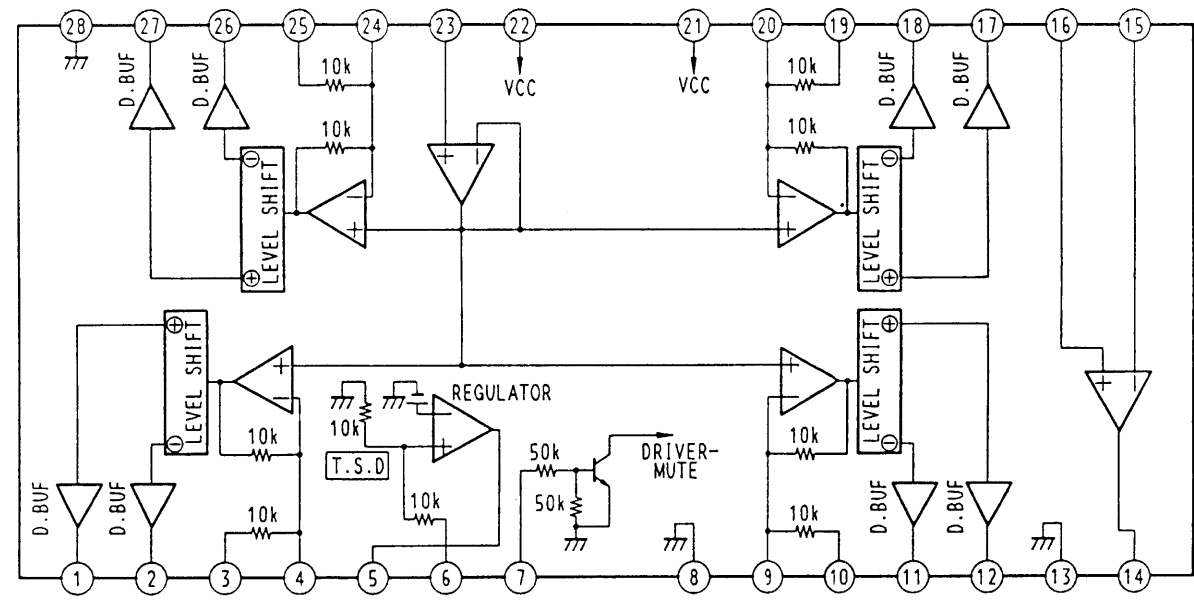
- : parts extracted from the component side.
- : parts mounted on the conductor side.
- ▨ : Pattern on the side which is seen.

- Abbreviations
- IT : Italian
- EE : East European
- EA : Saudi Arabia
- C&S : Central & South America
- TWN : Taiwan
- HK : Hong Kong
- JE : Tourist
- AUS : Australian
- CND : Canadian



• IC BLOCK DIAGRAM

IC703 BA6296FP



Note :

- All capacitors are in  $\mu$  F unless otherwise noted. pF:  $\mu$   $\mu$  F 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in  $\Omega$  and  $\frac{1}{2}W$  or less unless otherwise specified.
- $\Delta$  : internal component.

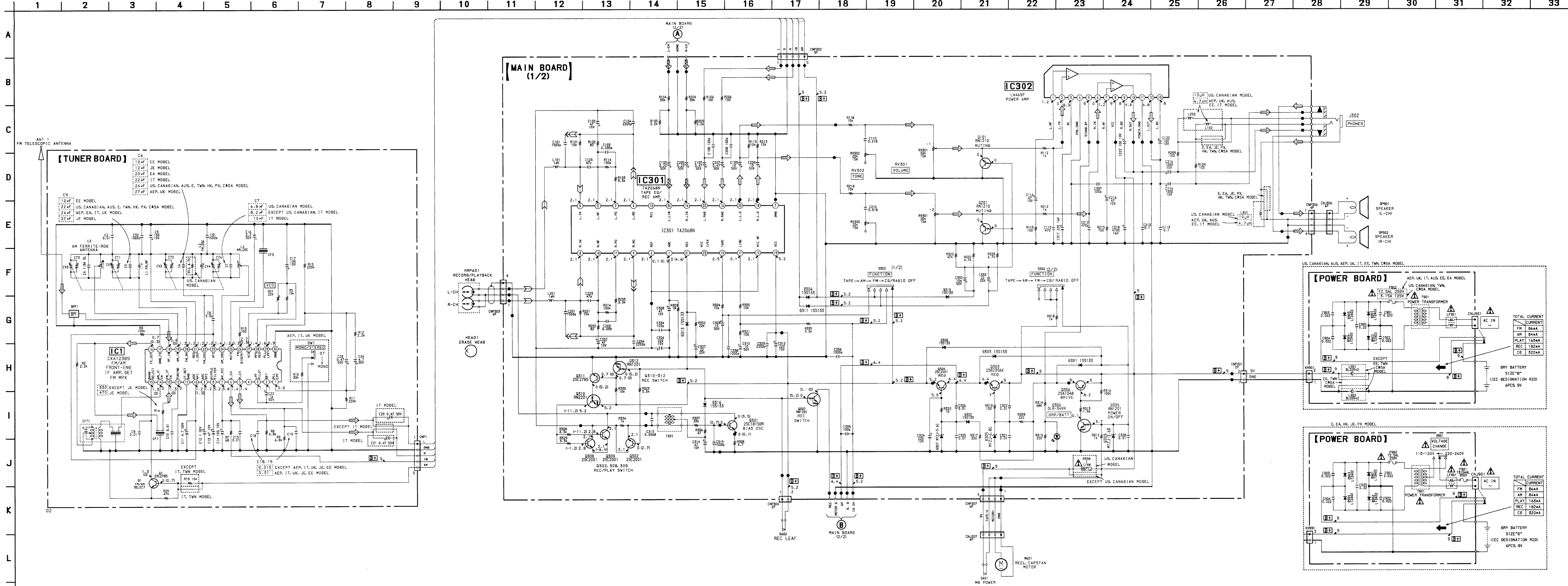
Note : The components identified by mark  $\Delta$  or dotted line with mark  $\Delta$  are critical for safety. Replace only with part number specified.

- $\square$  : B+ Line
- $\square$  : adjustment for repair.
- Voltage and waveforms are dc with respect to ground under no-signal (detuned) conditions.
- no mark : FM (RADIO SECTION)
- ( ) : AM (RADIO SECTION)
- no mark : PLAYBACK (AUDIO SECTION)
- ( ) : REC (AUDIO SECTION)
- no mark : STOP (CD SECTION)
- ( ) : PLAYBACK (CD SECTION)

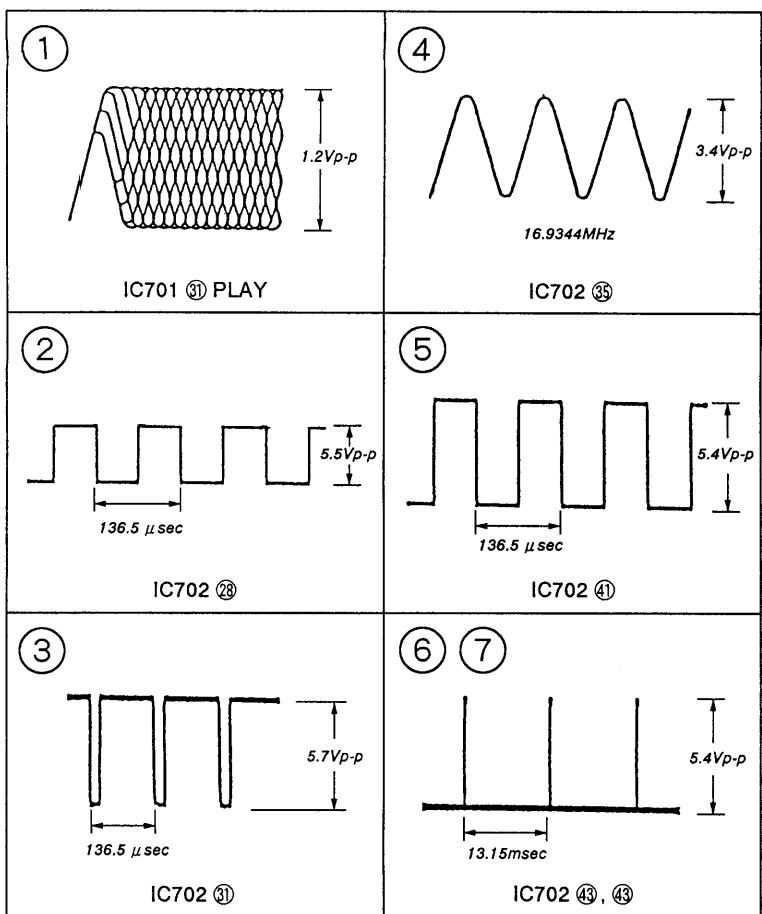
- Voltages are taken with a VOM ( Input impedance 10M  $\Omega$  ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.
  - $\Rightarrow$  : FM  $\Rightarrow$  : PB  $\Rightarrow$  : CD
  - $\Rightarrow$  : REC

- Abbreviations
  - IT : Italian
  - EE : East European
  - EA : Saudi Arabia
  - C&SA : Central & South America
  - TWN : Taiwan
  - HK : Hong Kong
  - JE : Tourist
  - AUS : Australian

6-3. SCHEMATIC DIAGRAM (TUNER/TAPE/POWER SECTION)











**Note :**

- All capacitors are in  $\mu$ F unless otherwise noted, pF:  $\mu$   $\mu$  F  
50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in  $\Omega$  and  $\frac{1}{4}$ W or less unless otherwise specified.

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

-  : B+ Line
  -  : adjustment for repair.
- Voltage and waveforms are dc with respect to ground under no-signal (detuned) conditions.
- no mark : FM (RADIO SECTION)
- ( ) : AM (RADIO SECTION)
- no mark : PLAYBACK (AUDIO SECTION)
- ( ) : REC (AUDIO SECTION)
- no mark : STOP (CD SECTION)
- ( ) : PLAYBACK (CD SECTION)

- Voltages are taken with a VOM ( Input impedance  $10\text{M}\Omega$  ). 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.

- **Signal path.**

-  : CD

- Abbreviations
- |       |                               |
|-------|-------------------------------|
| IT    | : Italian                     |
| EE    | : East European               |
| EA    | : Saudi Arabia                |
| C&SA  | : Central & South America     |
| TWN   | : Taiwan                      |
| HK    | : Hong Kong                   |
| JE    | : Tourist                     |
| AUS   | : Australian                  |
| CND 1 | : Canadian (Made in China)    |
| CND 2 | : Canadian (Made in Malaysia) |

## SECTION 7 EXPLODED VIEWS

### NOTE:

- -XX, -X mean standardized parts, so they may have some difference from the original one.
- The construction parts of an assembled part are indicated with a collation number in the remark column.
- Items marked " \* " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

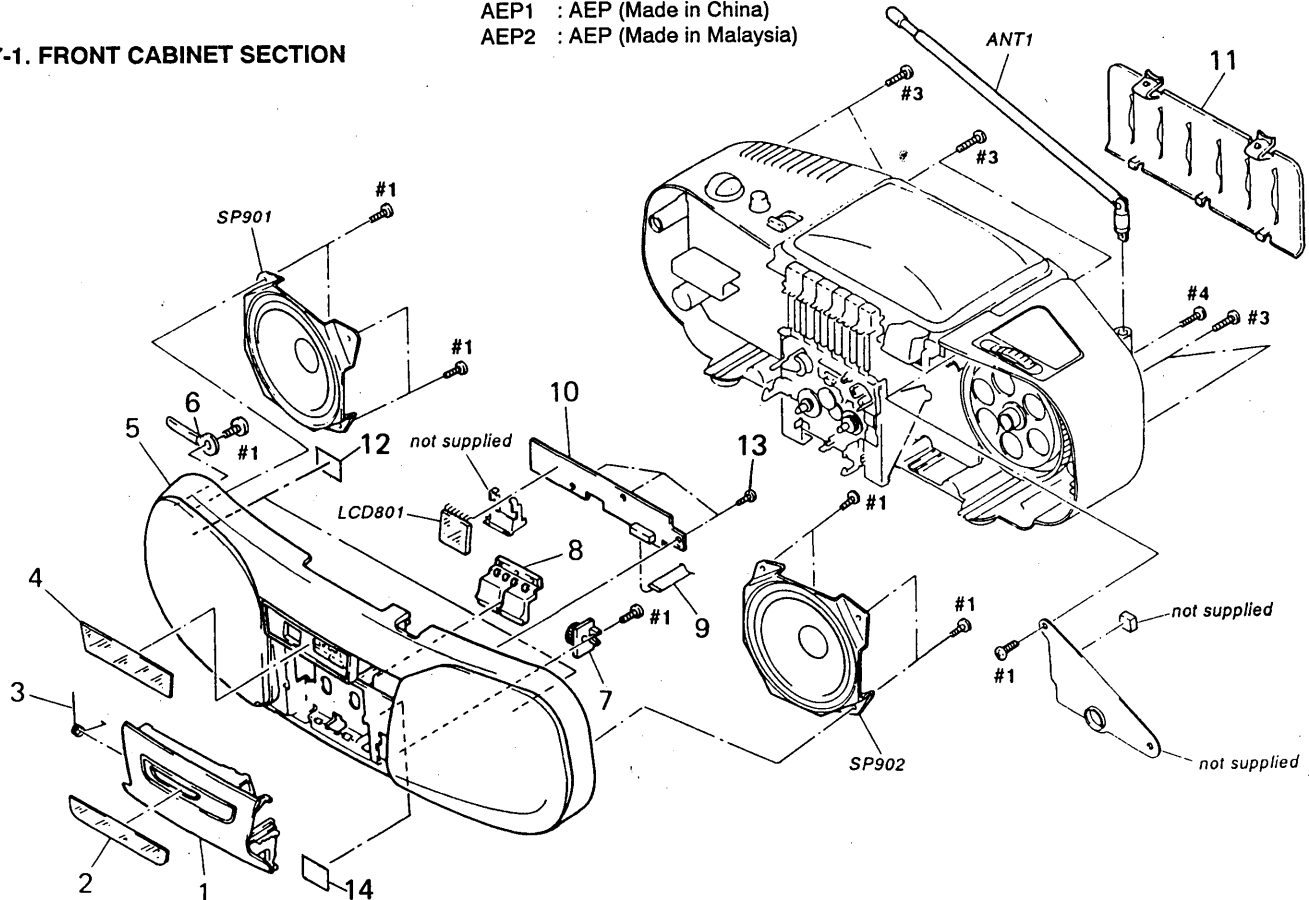
- The mechanical parts with no reference number in the exploded views are not supplied.
- Hardware ( # mark) list and accessories and packing materials are given in the last of this parts list.
- Abbreviation

CND1 : Canadian (Made in China)  
 CND2 : Canadian (Made in Malaysia)  
 IT : Italian EA : Saudi Arabia  
 HK : Hong Kong AUS : Australian  
 JE : Tourist EE : East European  
 TWN : Taiwan C&SA : Central and South America  
 AEP1 : AEP (Made in China)  
 AEP2 : AEP (Made in Malaysia)

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

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

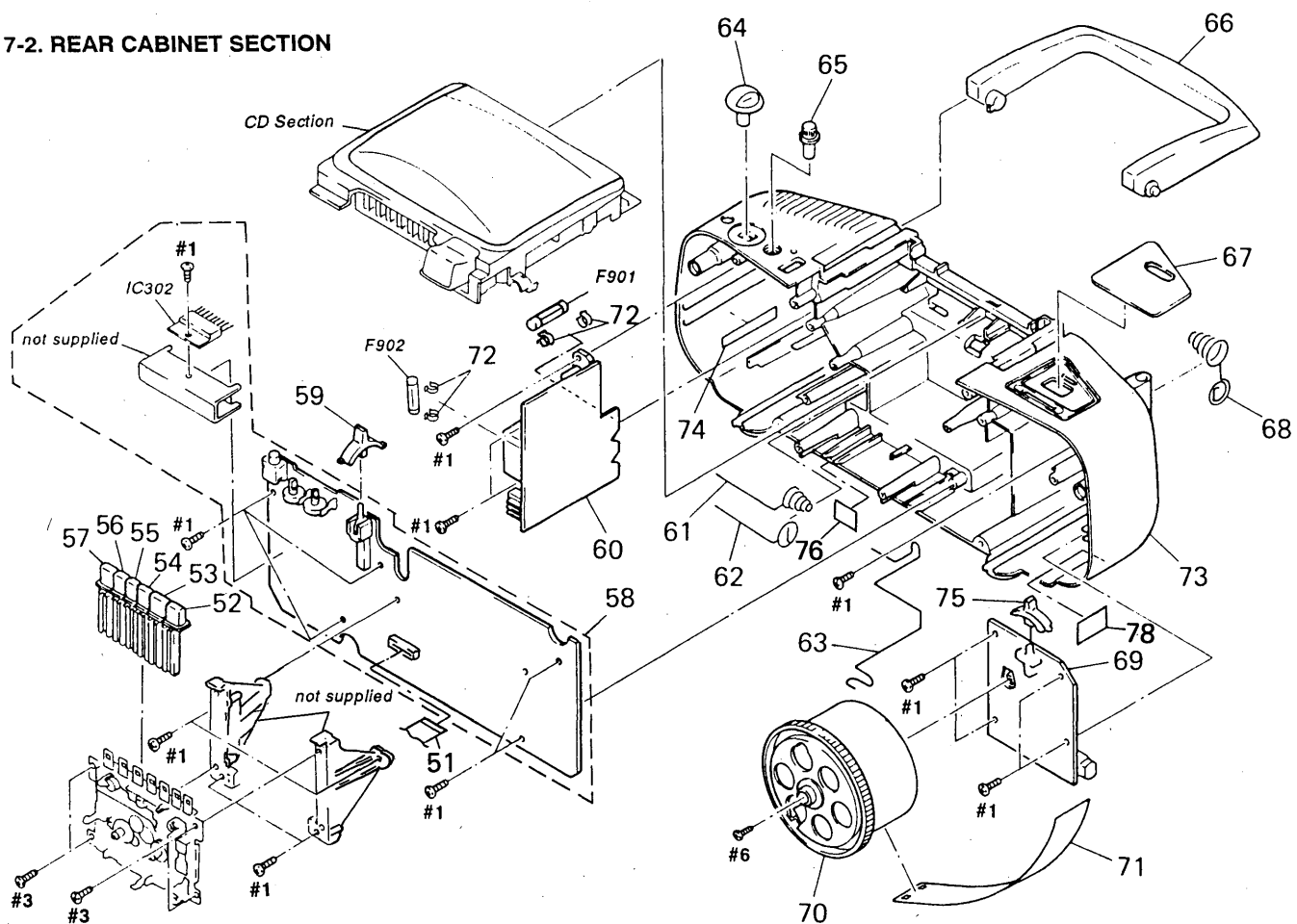
### 7-1. FRONT CABINET SECTION



Ref. No.	Part No.	Description	Remark
1	3-910-121-11	HOLDER, CASSETTE (made in malaysia)	
1	3-923-722-01	HOLDER, CASSETTE (made in china)	
2	3-910-085-01	WINDOW, CASSETTE (made in malaysia)	
2	3-923-741-01	WINDOW, CASSETTE (made in china)	
3	3-910-086-01	SPRING (CASSETTE) (made in malaysia)	
3	3-923-750-01	SPRING (CASSETTE) (made in china)	
4	3-910-099-11	WINDOW, LCD (made in malaysia)	
4	3-923-742-01	WINDOW, LCD (made in china)	
5	X-3370-108-1	CABINET (FRONT) SUB ASSY	(made in malaysia)
5	X-3370-222-1	CABINET (FRONT) SUB ASSY	(made in china)
6	3-703-397-01	STOPPER, WIRING	
7	3-351-377-01	DAMPER	
8	3-910-117-01	BUTTON, CD (made in malaysia)	
8	3-923-730-01	BUTTON, CD (made in china)	
9	1-765-085-11	WIRE, PARALLEL (FFC) (13 CORE)	

Ref. No.	Part No.	Description	Remark
* 10	1-656-824-11	LCD BOARD (AEP2, C&SA, EA, TWN)	
* 10	1-656-442-11	LCD BOARD (AEP1, UK, E, AUS, EE, HK, IT, JE, PX)	
* 10	1-657-308-11	LCD BOARD (CND1)	
* 10	1-655-706-11	LCD BOARD (US, CND2)	
11	3-915-535-21	LID, BATTERY CASE (made in malaysia)	
11	3-926-244-01	LID, BATTERY CASE (made in china)	
* 12	3-376-847-01	CUSHION, SARANET	
13	4-951-620-01	SCREW (2.6×8), +BVTP	
14	3-379-497-01	CUSHION, SARANET	
ANT1	1-501-388-11	ANTENNA, TELESCOPIC	
LCD801	1-810-442-11	DISPLAY PANEL, LIQUID CRYSTAL	
SP901	1-504-548-11	SPEAKER (10CM) (L-CH) (US, CND)	
SP901	1-504-548-21	SPEAKER (10CM) (L-CH) (EXCEPT US, CND)	
SP902	1-504-548-11	SPEAKER (10CM) (R-CH) (US, CND)	
SP902	1-504-548-21	SPEAKER (10CM) (R-CH) (EXCEPT US, CND)	

## 7-2. REAR CABINET SECTION



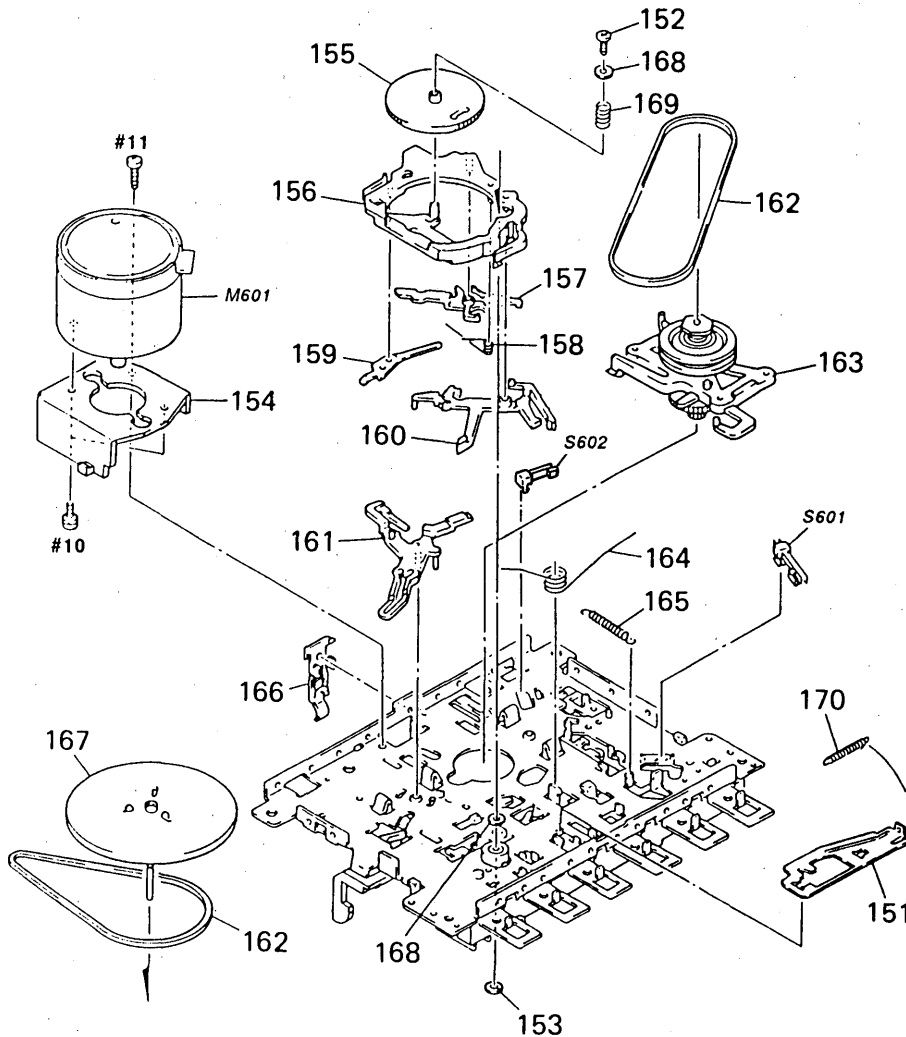
The components identified by mark ▲ or dotted line with mark ▲ are critical for safety. Replace only with part number specified.

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

Ref. No.	Part No.	Description	Remark
51	1-769-789-11	WIRE (FLAT TYPE) (16 CORE)	
52	3-910-103-01	BUTTON (REC), MD (made in malaysia)	
52	3-923-725-01	BUTTON (REC), MD (made in china)	
53	3-910-106-01	BUTTON (PLAY), MD (made in malaysia)	
53	3-923-728-01	BUTTON (PLAY), MD (made in china)	
54	3-910-105-01	BUTTON (REW), MD (made in malaysia)	
54	3-923-727-01	BUTTON (REW), MD (made in china)	
55	3-910-104-01	BUTTON (FF), MD (made in malaysia)	
55	3-923-726-01	BUTTON (FF), MD (made in china)	
56	3-910-107-01	BUTTON (STOP), MD (made in malaysia)	
56	3-923-729-01	BUTTON (STOP), MD (made in china)	
57	3-910-102-01	BUTTON (PAUSE), MD (made in malaysia)	
57	3-923-724-01	BUTTON (PAUSE), MD (made in china)	
58	A-3269-910-A	MAIN BOARD, COMPLETE (US, CND2)	
* 58	A-3305-058-A	MAIN BOARD, COMPLETE (AEP1, UK, AUS, EE, IT)	
* 58	A-3305-077-A	MAIN BOARD, COMPLETE (AEP2)	
* 58	A-3305-154-A	MAIN BOARD, COMPLETE (C&SA, EA, TWN)	
* 58	A-3305-162-A	MAIN BOARD, COMPLETE (CND1)	
* 58	A-3305-182-A	MAIN BOARD, COMPLETE (E, HK, JE, PX)	
59	3-369-039-01	KNOB (FUNCTION) (made in malaysia)	
59	3-923-738-01	KNOB (FUNCTION) (made in china)	
* 60	1-655-704-11	POWER BOARD (US, CND2)	
* 60	1-656-822-11	POWER BOARD (AEP2, C&SA, EA, TWN)	
* 60	1-657-306-11	POWER BOARD (CND1)	
* 60	1-656-440-11	POWER BOARD (AEP1, UK, E, AUS, EE, HK, IT, JE, PX)	
61	3-910-090-01	TERMINAL (-), BATTERY (made in malaysia)	
61	3-923-753-01	TERMINAL (-), BATTERY (made in china)	
62	3-910-087-01	TERMINAL (+), BATTERY (made in malaysia)	
62	3-923-752-01	TERMINAL (+), BATTERY (made in china)	
* 63	3-910-091-01	TERMINAL, ANTENNA (made in malaysia)	
* 63	3-923-754-01	TERMINAL, ANTENNA (made in china)	
64	3-910-115-01	KNOB (VOL) (made in malaysia)	
64	3-923-735-01	KNOB (VOL) (made in china)	
65	3-910-097-01	KNOB (TONE) (made in malaysia)	
65	3-923-737-01	KNOB (TONE) (made in china)	
66	X-3370-107-1	HANDLE ASSY (made in malaysia)	
66	X-3370-223-1	HANDLE ASSY (made in china)	
67	3-910-100-31	WINDOW, TU (US, CND2, C&SA, EA, TWN)	
67	3-910-100-71	WINDOW, TU (AEP2)	
67	3-923-743-01	WINDOW, TU (AEP1, UK, IT)	
67	3-923-946-01	WINDOW, TU (CND1, E, AUS, EE, HK, JE, PX)	

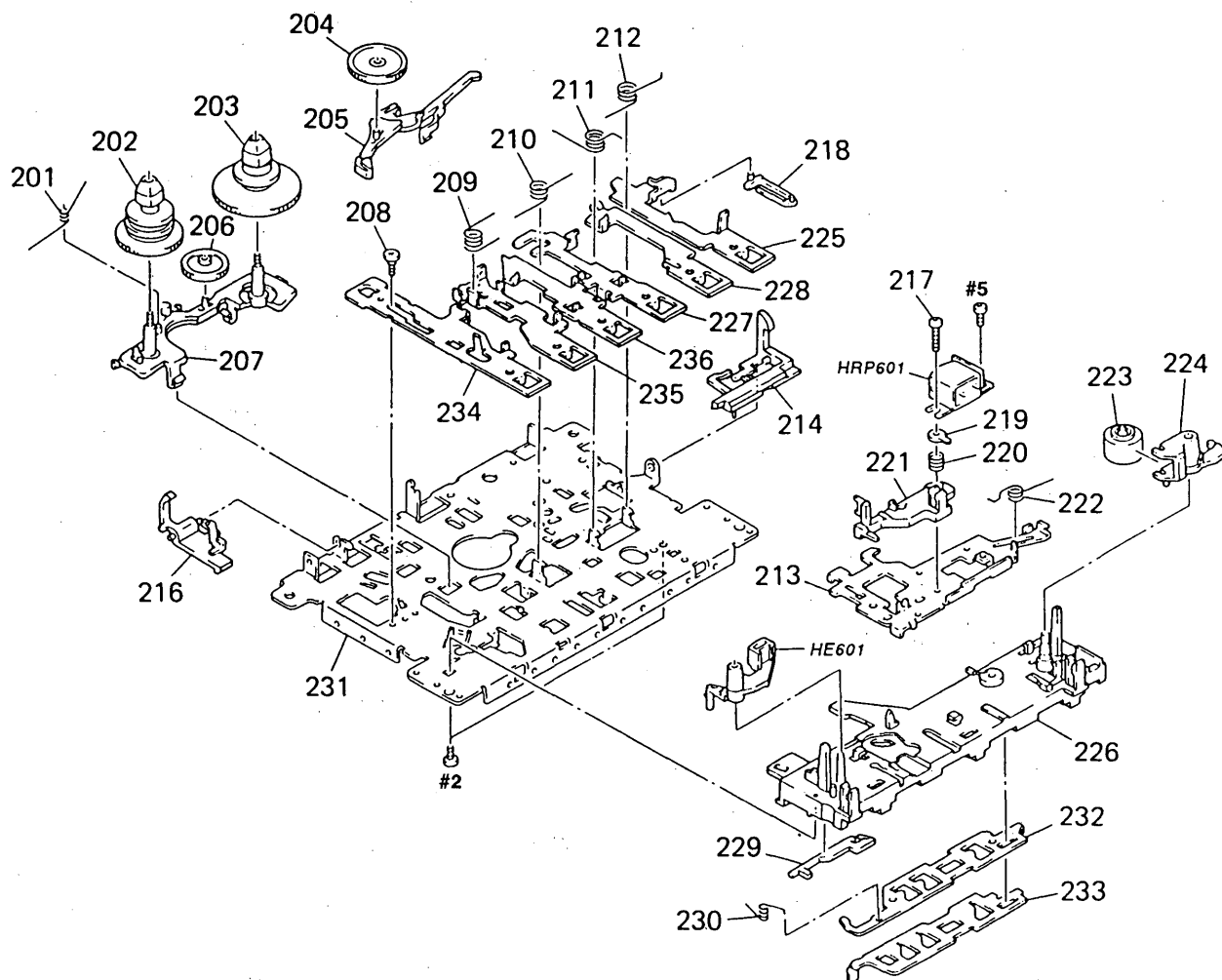
Ref. No.	Part No.	Description	Remark
68	3-386-979-01	SPRING (+, -), BATTERY COIL (made in malaysia)	
68	3-923-751-01	SPRING (+, -), BATTERY COIL (made in china)	
69	A-3269-908-A	TUNER BOARD, COMPLETE (US, CND2)	
* 69	A-3305-057-A	TUNER BOARD, COMPLETE (AEP1, UK)	
* 69	A-3305-078-A	TUNER BOARD, COMPLETE (AEP2)	
* 69	A-3305-155-A	TUNER BOARD, COMPLETE (C&SA, TWN)	
* 69	A-3305-161-A	TUNER BOARD, COMPLETE (CND1)	
* 69	A-3305-178-A	TUNER BOARD, COMPLETE (EA)	
* 69	A-3305-179-A	TUNER BOARD, COMPLETE (EE)	
* 69	A-3305-181-A	TUNER BOARD, COMPLETE (E, AUS, HK, PX)	
* 69	A-3305-183-A	TUNER BOARD, COMPLETE (IT)	
* 69	A-3305-184-A	TUNER BOARD, COMPLETE (JE)	
70	3-910-101-01	DIAL, TU (made in malaysia)	
70	3-923-723-01	DIAL, TU (made in china)	
71	3-923-005-01	SHEET, TU (US, CND2)	
71	3-923-005-11	SHEET, TU (AEP2)	
71	3-923-005-31	SHEET, TU (C&SA, TWN)	
71	3-923-005-41	SHEET, TU (EA)	
71	3-923-744-01	SHEET, TU (AEP1, UK)	
71	3-923-744-11	SHEET, TU (IT)	
71	3-923-744-21	SHEET, TU (EE)	
71	3-923-744-31	SHEET, TU (E, AUS, HK, PX)	
71	3-923-744-51	SHEET, TU (JE)	
71	3-923-744-61	SHEET, TU (CND1)	
72	1-533-217-31	HOLDER, FUSE	
73	3-910-122-81	CABINET (REAR) (US)	
73	3-910-122-91	CABINET (REAR) (CND2, AEP2, C&SA, TWN)	
73	3-923-719-01	CABINET (REAR) (AEP1)	
73	3-923-719-11	CABINET (REAR) (CND1, UK, AUS, EE, IT)	
73	3-923-719-21	CABINET (REAR) (E, HK, JE, PX)	
73	3-924-156-31	CABINET (REAR) (EA)	
74	3-831-441-XX	CUSHION, STOPPER	
75	3-910-114-01	KNOB, MONO/ST (AEP2)	
75	3-923-734-01	BUTTON (MONO-ST) (AEP1, UK, IT)	
* 76	3-378-109-01	CUSHION, SARANET	
* 78	4-941-548-01	LABEL, CLASS (1) (AEP, UK, EA, EE, IT, JE)	
IC302	8-759-820-22	IC LA4597	
△F901	1-532-235-00	FUSE (315mA 250V) (E, EA, HK, JE, PX)	
△F902	1-532-286-00	FUSE (2.5A 250V) (AEP, UK, E, AUS, EA, EE, HK, IT, JE, PX)	
△F902	1-576-107-11	FUSE (3.15A 125V) (US, CND, C&SA, TWN)	

**7-3. MECHANISM DECK SECTION (1)**  
(MF-D8/2)



Ref.No.	Part No.	Description	Remark	Ref.No.	Part No.	Description	Remark
151	3-379-844-01	PLATE, STOP, FR		163	3-362-969-01	IDLER ASSY, PF	
152	3-366-352-01	SCREW		164	3-362-970-01	SPRING	
153	3-362-980-01	WASHER		165	3-362-971-01	SPRING	
* 154	3-362-988-01	HOLDER, MOTOR		166	3-991-189-01	CASSETTE SPRING	
155	X-3363-315-1	GEAR, CAM		167	3-387-698-01	FW ASSY	
156	3-362-973-01	AS (BASE)		168	3-369-961-01	WASHER	
157	3-362-976-01	LEVER, CONTROL		169	3-369-962-01	SPRING, COMPRESSION	
158	3-362-977-01	SPRING		170	3-379-843-01	SPRING	
159	3-362-978-01	SPRING, PLATE		M601	X-3366-491-1	MOTOR ASSY	
160	3-362-975-01	LEVER, SENSOR		S601	1-692-434-11	SWITCH, LEAF (MD POWER)	
161	3-387-697-01	SENSOR		S602	1-692-434-11	SWITCH, LEAF (REC)	
162	3-362-989-01	BELT					

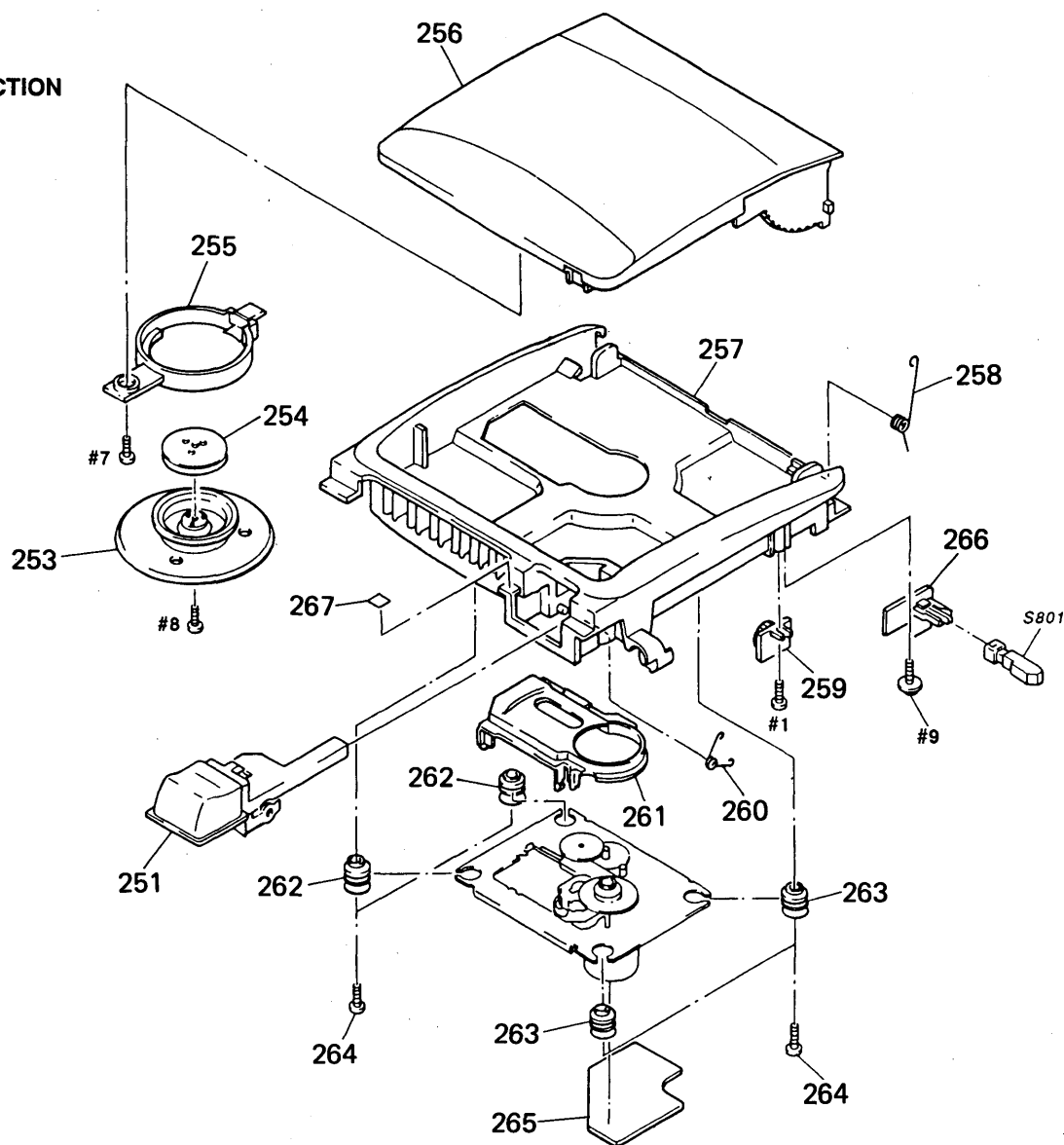
**7-4. MECHANISM DECK SECTION (2)**  
(MF-D8/2)



Ref. No.	Part No.	Description	Remark
201	3-917-805-01	SPRING	
202	X-3363-611-1	REEL, S	
203	3-362-962-01	REEL ASSY, T	
204	3-362-960-01	PULLEY, IDLER	
205	3-362-959-01	ARM, IDLER	
206	3-362-965-01	IDLER, FF	
207	3-362-961-01	SPINDLE (BASE)	
208	3-362-958-01	SCREW	
209	3-362-954-01	SPRING	
210	3-362-955-01	SPRING	
211	3-362-956-01	SPRING	
212	3-362-957-01	SPRING	
* 213	3-362-984-01	HEAD (BASE)	
214	3-362-968-01	LEVER, EJECT	
216	3-362-966-01	INTER LOCK	
217	3-363-229-01	SCREW	
218	3-362-953-01	ARM, PAUSE	
219	3-363-230-01	LUG	
220	3-362-985-01	SPRING	

Ref. No.	Part No.	Description	Remark
221	3-362-986-01	HOLDER, HEAD	
222	3-362-983-01	SPRING	
223	3-362-982-01	PINCH ROLLER	
224	3-362-981-01	PINCH ARM	
* 225	3-362-952-01	LEVER, PAUSE	
226	3-362-942-01	FRAME ASSY	
* 227	3-362-950-01	LEVER, FF	
* 228	3-362-951-01	LEVER, SE	
229	3-362-944-01	STOPPER, REC	
230	3-362-945-01	SPRING	
* 231	3-362-941-01	CHASSIS	
* 232	3-362-943-01	PLATE, FUNCTION	
* 233	3-362-946-01	LEVER, SW	
* 234	3-362-947-01	LEVER, REC	
* 235	3-362-948-01	LEVER, PLAY	
* 236	3-362-949-01	LEVER, REW	
HE601	1-500-031-11	HEAD, MAGNETIC (ERASE)	
HRP601	1-500-168-11	HEAD, MAGNETIC (RECORD/PLAYBACK)	

## 7-5. CD SECTION

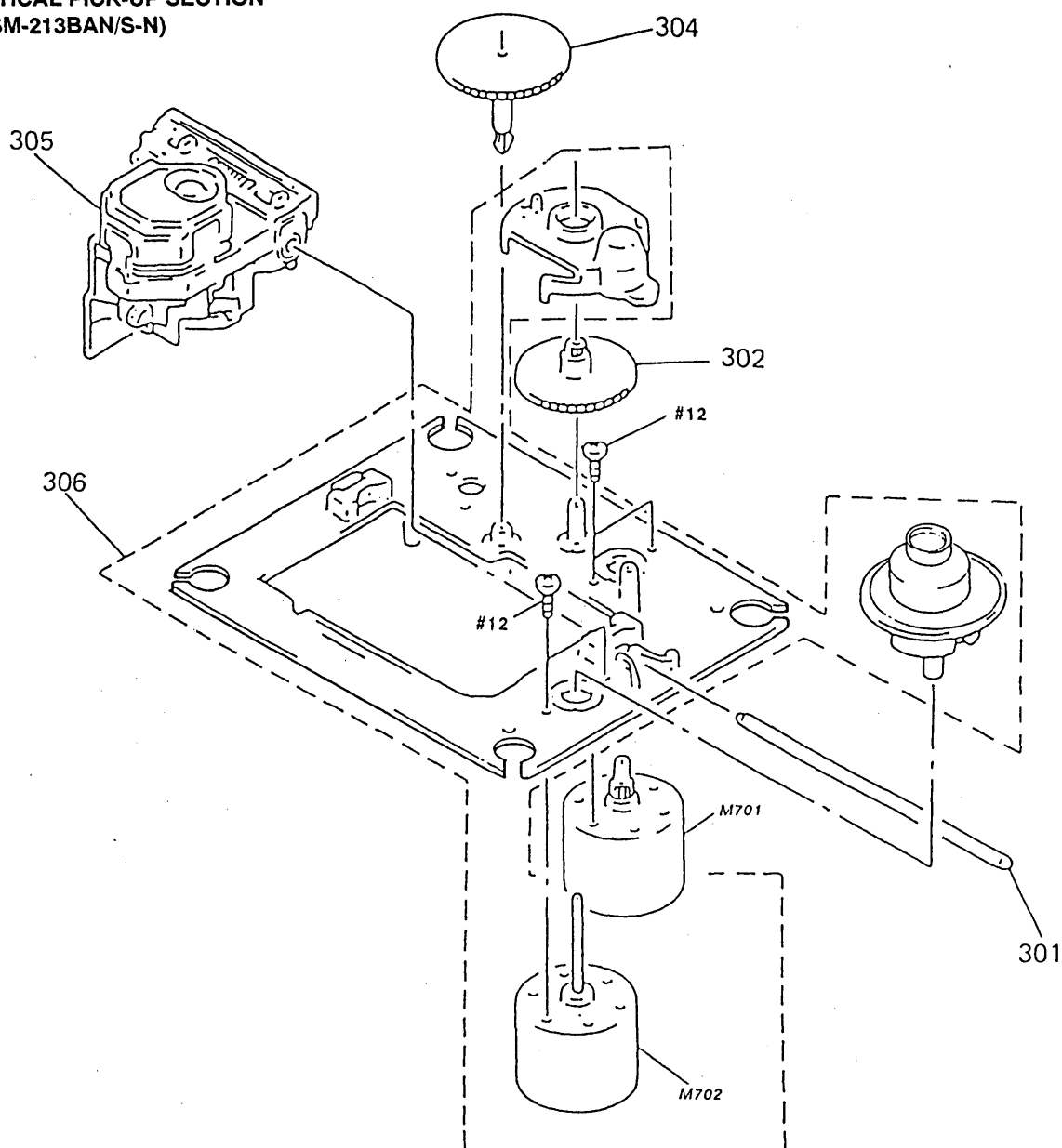


Ref. No.	Part No.	Description	Remark
251	3-910-108-21	BUTTON (CD) (EJECT) (made in malaysia)	
251	3-923-731-01	BUTTON (CD) (EJECT) (made in china)	
253	3-923-497-01	PLATE, CHUCK (made in malaysia)	
253	3-923-498-01	PLATE, CHUCK (made in china)	
254	1-452-732-11	MAGNET	
255	3-910-113-01	HOLDER (CHUCK) (made in malaysia)	
255	3-923-733-01	HOLDER (CHUCK) (made in china)	
256	3-910-123-31	LID, CD (made in malaysia)	
256	3-923-721-01	LID, CD (made in china)	
257	3-910-124-32	CABINET (CD) (made in malaysia)	
257	3-923-720-01	CABINET (CD) (made in china)	
258	3-910-089-01	SPRING, CD UP (made in malaysia)	
258	3-923-756-01	SPRING, CD UP (made in china)	
259	3-351-377-01	DAMPER	
260	3-910-088-01	SPRING, CD EJECT RETURN	(made in malaysia)
260	3-923-755-01	SPRING, CD EJECT RETURN (made in china)	

Ref. No.	Part No.	Description	Remark
261	3-910-116-01	COVER, CD (made in malaysia)	
261	3-923-736-01	COVER, CD (made in china)	
262	3-910-095-11	RUBBER, VIBRATION PROOF	
263	3-910-095-01	RUBBER, VIBRATION PROOF	
264	3-916-006-01	SCREW (2.6×16)	
* 265	1-655-707-11	CD MOTOR BOARD (US, CND2)	
* 265	1-656-443-11	CD MOTOR BOARD	(AEP1, UK, E, AUS, EE, HK, IT, JE, PX)
* 265	1-657-309-11	CD MOTOR BOARD (CND1)	
* 265	1-656-825-11	CD MOTOR BOARD (AEP2, C&SA, EA, TWN)	
* 266	1-657-310-11	LEAF SW BOARD (CND1)	
* 266	1-655-708-11	LEAF SW BOARD (US, CND2)	
* 266	1-656-444-11	LEAF SW BOARD	(AEP1, UK, E, AUS, EE, HK, IT, JE, PX)
* 266	1-656-826-11	LEAF SW BOARD (AEP2, C&SA, EA, TWN)	
267	3-831-441-11	CUSHION	
S801	1-571-936-11	SWITCH, LEAF (DOOR OPEN/CLOSE)	

REVISED

7-6. OPTICAL PICK-UP SECTION  
(KSM-213BAN/S-N)



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

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

Ref. No.	Part No.	Description	Remark
301	2-626-908-01	SHAFT (S), SLED	
302	2-627-003-01	GEAR (B) (RP)	
304	2-626-907-01	GEAR (A) (S)	
$\Delta$ 305	8-848-376-11	DEVICE, OPTICAL KSS-213B/S-RP	

Ref. No.	Part No.	Description	Remark
306	X-2625-770-1	CHASSIS ASSY (MB) (RP), MOTOR (INCLUDING M702) (SPINDLE)	
M701	X-2625-769-1	GEAR ASSY (MB) (RP), MOTOR (SLED)	



# SECTION 8 ELECTRICAL PARTS LIST

## CD MOTOR LCD LEAF SW MAIN

### NOTE :

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX, -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS  
All resistors are in ohms  
METAL : Metal-film resistor  
METAL OXIDE : Metal oxide-film resistor  
F : nonflammable

- Items marked " \* " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

### SEMICONDUCTORS

In each case, u :  $\mu$ , for example :

uA..... :  $\mu$  A....., uPA..... :  $\mu$  PA.....

uPB..... :  $\mu$  PB....., uPC..... :  $\mu$  PC.....

uPD..... :  $\mu$  PD.....

### CAPACITORS

uF :  $\mu$  F

### COILS

uH :  $\mu$  H

### Abbreviation

CND1 : Canadian (Made in China)

CND2 : Canadian (Made in Malaysia)

IT : Italian

HK : Hong Kong

JE : Tourist

TWN : Taiwan

AEP1 : AEP (Made in China)

AEP2 : AEP (Made in Malaysia)

EA : Saudi Arabia

AUS : Australian

EE : East European

C&SA : Central and South America

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

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

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

Ref.No.	Part No.	Description	Remark
*	1-655-707-11	CD MOTOR BOARD (US, CND2)	
*	1-656-443-11	CD MOTOR BOARD (AEP1, UK, E, AUS, EE, HK, IT, JE, PX)	
*	1-657-309-11	CD MOTOR BOARD (CND1)	
*	1-656-825-11	CD MOTOR BOARD (AEP2, C&SA, EA, TWN) *****	
		< CONNECTOR >	
*	CNP707 1-580-167-11	PIN, CONNECTOR (PC BOARD) 6P	
		< SWITCH >	
	S701 1-571-936-11	SWITCH, LEAF (CD DET) *****	
*	1-656-824-11	LCD BOARD (AEP2, C&SA, EA, TWN)	
*	1-656-442-11	LCD BOARD (AEP1, UK, E, AUS, EE, HK, IT, JE, PX)	
*	1-657-308-11	LCD BOARD (CND1)	
*	1-655-706-11	LCD BOARD (US, CND2) *****	
		< CONNECTOR >	
	CNP802 1-565-937-11	SOCKET, CONNECTOR 13P	
		< LIQUID CRYSTAL DISPLAY >	
	LCD801 1-810-442-11	DISPLAY PANEL, LIQUID CRYSTAL	
		< SWITCH >	
	S802 1-571-760-11	SWITCH, KEY BOARD (PLAY/PAUSE)	
	S803 1-571-760-11	SWITCH, KEY BOARD (STOP)	
	S804 1-571-760-11	SWITCH, KEY BOARD (AMS/SEARCH)	
	S805 1-571-760-11	SWITCH, KEY BOARD (AMS/SEARCH) *****	

Ref.No.	Part No.	Description	Remark
*	1-657-310-11	LEAF SW BOARD (CND1)	
*	1-655-708-11	LEAF SW BOARD (US, CND2)	
*	1-656-444-11	LEAF SW BOARD (AEP1, UK, E, AUS, EE, HK, IT, JE, PX)	
*	1-656-826-11	LEAF SW BOARD (AEP2, C&SA, EA, TWN) *****	
		< CONNECTOR >	
*	CNP801 1-580-154-11	PIN, CONNECTOR (PC BOARD) 2P	
		< SWITCH >	
	S801 1-571-936-11	SWITCH, LEAF (DOOR OPEN/CLOSE) *****	
	A-3269-910-A	MAIN BOARD, COMPLETE (US, CND2)	
*	A-3305-162-A	MAIN BOARD, COMPLETE (CND1)	
*	A-3305-058-A	MAIN BOARD, COMPLETE (AEP1, UK, AUS, EE, IT)	
*	A-3305-077-A	MAIN BOARD, COMPLETE (AEP2)	
*	A-3305-182-A	MAIN BOARD, COMPLETE (E, HK, JE, PX)	
*	A-3305-154-A	MAIN BOARD, COMPLETE (C&SA, EA, TWN) *****	
	7-685-647-79	SCREW +BVTP 3×10 TYPE2 N-S	
		< CAPACITOR >	
	C101 1-162-301-11	CERAMIC 0.0015uF 30% 16V	
	C102 1-104-664-11	ELECT 47uF 20% 10V	
	C103 1-161-020-11	CERAMIC 0.039uF 10% 16V	
	C104 1-162-302-11	CERAMIC 0.0022uF 30% 16V	
	C105 1-124-464-11	ELECT 0.22uF 20% 50V	
	C107 1-124-902-00	ELECT 0.47uF 20% 50V	
	C108 1-162-282-31	CERAMIC 100PF 10% 50V	
	C109 1-124-907-11	ELECT 10uF 20% 50V	

Ref. No.	Part No.	Description	Remark			Ref. No.	Part No.	Description	Remark		
C110	1-162-842-11	CERAMIC	0. 018uF	10%	16V	C702	1-130-495-00	MYLAR	0. 1uF	5%	50V
C112	1-162-290-31	CERAMIC	470PF	10%	50V	C703	1-130-495-00	MYLAR	0. 1uF	5%	50V
C113	1-130-495-00	MYLAR	0. 1uF	5%	50V	C704	1-130-495-00	MYLAR	0. 1uF	5%	50V
C114	1-124-473-11	ELECT	1000uF	20%	10V	C705	1-131-375-00	TANTALUM	4. 7uF	10%	10V
C116	1-104-664-11	ELECT	47uF	20%	10V	C706	1-130-489-00	MYLAR	0. 033uF	5%	50V
C122	1-124-443-00	ELECT	100uF	20%	10V	C707	1-130-486-00	MYLAR	0. 018uF	10%	50V
C123	1-162-215-31	CERAMIC	47PF	5%	50V	C708	1-162-199-31	CERAMIC	10PF	5%	50V
C201	1-162-301-11	CERAMIC	0. 0015uF	30%	16V	C709	1-126-962-11	ELECT	3. 3uF	20%	50V
C202	1-104-664-11	ELECT	47uF	20%	10V	C710	1-130-493-00	MYLAR	0. 068uF	5%	50V
C203	1-161-020-11	CERAMIC	0. 039uF	10%	16V	C711	1-162-215-31	CERAMIC	47PF	5%	50V
C204	1-162-302-11	CERAMIC	0. 0022uF	30%	16V	C712	1-162-306-11	CERAMIC	0. 01uF	30%	16V
C205	1-124-464-11	ELECT	0. 22uF	20%	50V	C713	1-130-489-00	MYLAR	0. 033uF	5%	50V
C207	1-124-902-00	ELECT	0. 47uF	20%	50V	C714	1-162-306-11	CERAMIC	0. 01uF	30%	16V
C208	1-162-282-31	CERAMIC	100PF	10%	50V	C715	1-130-489-00	MYLAR	0. 033uF	5%	50V
C209	1-124-907-11	ELECT	10uF	20%	50V	C716	1-130-483-00	MYLAR	0. 01uF	5%	50V
C210	1-162-842-11	CERAMIC	0. 018uF	10%	16V	C717	1-104-664-11	ELECT	47uF	20%	10V
C212	1-162-290-31	CERAMIC	470PF	10%	50V	C718	1-124-907-11	ELECT	10uF	20%	50V
C213	1-130-495-00	MYLAR	0. 1uF	5%	50V	C719	1-162-600-11	CERAMIC	0. 0047uF	30%	16V
C214	1-124-473-11	ELECT	1000uF	20%	10V	C720	1-130-483-00	MYLAR	0. 01uF	5%	50V
C216	1-104-664-11	ELECT	47uF	20%	10V	C721	1-130-491-00	MYLAR	0. 047uF	5%	50V
C222	1-124-443-00	ELECT	100uF	20%	10V	C722	1-161-494-00	CERAMIC	0. 022uF		25V
C223	1-162-215-31	CERAMIC	47PF	5%	50V	C723	1-130-495-00	MYLAR	0. 1uF	5%	50V
C306	1-126-923-11	ELECT	220uF	20%	10V	C724	1-126-923-11	ELECT	220uF	20%	10V
C307	1-126-233-11	ELECT	22uF	20%	50V	C725	1-162-199-31	CERAMIC	10PF	5%	50V
C308	1-104-664-11	ELECT	47uF	20%	10V	C726	1-162-294-31	CERAMIC	0. 001uF	10%	50V
C309	1-124-907-11	ELECT	10uF	20%	50V	C727	1-162-306-11	CERAMIC	0. 01uF	30%	16V
C310	1-124-907-11	ELECT	10uF	20%	50V	C728	1-130-495-00	MYLAR	0. 1uF	5%	50V
C312	1-126-923-11	ELECT	220uF	20%	10V	C729	1-104-664-11	ELECT	47uF	20%	10V
C313	1-130-481-00	MYLAR	0. 0068uF	5%	50V	C730	1-124-472-11	ELECT	470uF	20%	10V
C314	1-104-664-11	ELECT	47uF	20%	10V	C731	1-162-294-31	CERAMIC	0. 001uF	10%	50V
C315	1-162-301-11	CERAMIC	0. 0015uF	30%	16V	C732	1-130-484-00	MYLAR	0. 012uF	5%	50V
C317	1-124-120-11	ELECT	220uF	20%	25V	C734	1-162-305-11	CERAMIC	0. 0068uF	30%	16V
C318	1-126-937-11	ELECT	4700uF	20%	16V	C736	1-124-443-00	ELECT	100uF	20%	10V
C321	1-162-306-11	CERAMIC	0. 01uF	30%	16V	C739	1-124-443-00	ELECT	100uF	20%	10V
C322	1-162-306-11	CERAMIC	0. 01uF	30%	16V	C740	1-130-495-00	MYLAR	0. 1uF	5%	50V
C324	1-126-923-11	ELECT	220uF	20%	10V	C741	1-104-664-11	ELECT	47uF	20%	10V
C325	1-162-306-11	CERAMIC	0. 01uF	30%	16V	C742	1-136-173-00	FILM	0. 47uF	5%	50V
C326	1-162-306-11	CERAMIC	0. 01uF	30%	16V	C743	1-162-290-31	CERAMIC	470PF	10%	50V
C328	1-162-306-11	CERAMIC	0. 01uF	30%	16V	C744	1-162-286-21	CERAMIC	220PF	10%	50V
C329	1-162-302-11	CERAMIC	0. 0022uF	30%	16V	C745	1-136-169-00	FILM	0. 22uF	5%	50V
C332	1-124-907-11	ELECT	10uF	20%	50V	C746	1-162-306-11	CERAMIC	0. 01uF	30%	16V
C333	1-126-233-11	ELECT	22uF	20%	50V	C747	1-130-481-00	MYLAR	0. 0068uF	5%	50V
C334	1-162-282-31	CERAMIC	100PF	10%	50V	C750	1-126-923-11	ELECT	220uF	20%	10V
C336	1-162-294-31	CERAMIC	0. 001uF	10%	50V	C752	1-162-199-31	CERAMIC	10PF	5%	50V
C337	1-162-282-31	CERAMIC	100PF	10%	50V	C753	1-162-199-31	CERAMIC	10PF	5%	50V
C338	1-162-294-31	CERAMIC	0. 001uF	10%	50V	C754	1-130-495-00	MYLAR	0. 1uF	5%	50V
C339	1-162-282-31	CERAMIC	100PF	10%	50V	C755	1-162-294-31	CERAMIC	0. 001uF	10%	50V
C700	1-162-306-11	CERAMIC	0. 01uF	30%	16V	C757	1-130-495-00	MYLAR	0. 1uF	5%	50V
C701	1-162-302-11	CERAMIC	0. 0022uF	30%	16V	C758	1-162-282-31	CERAMIC	100PF	10%	50V

# MAIN

Ref. No.	Part No.	Description	Remark
C763	1-162-600-11	CERAMIC 0.0047uF	30% 16V
C764	1-126-963-11	ELECT 4.7uF	20% 50V
C773	1-162-600-11	CERAMIC 0.0047uF	30% 16V
C774	1-126-963-11	ELECT 4.7uF	20% 50V
C783	1-162-306-11	CERAMIC 0.01uF	30% 16V
C787	1-126-923-11	ELECT 220uF	20% 10V
C788	1-130-495-00	MYLAR 0.1uF	5% 50V
C790	1-124-902-00	ELECT 0.47uF	20% 50V
C792	1-162-282-31	CERAMIC 100PF	10% 50V
C793	1-162-282-31	CERAMIC 100PF	10% 50V
C794	1-162-282-31	CERAMIC 100PF	10% 50V
C796	1-162-306-11	CERAMIC 0.01uF	30% 16V
C800	1-162-306-11	CERAMIC 0.01uF	30% 16V
C801	1-124-902-00	ELECT 0.47uF	20% 50V
C802	1-130-483-00	MYLAR 0.01uF	5% 50V
C803	1-126-233-11	ELECT 22uF	20% 50V

## < CONNECTOR >

* CNP301	1-580-154-11	PIN, CONNECTOR (PC BOARD) 2P
CNP302	1-506-987-11	PIN, CONNECTOR (PC BOARD) 5P
CNP303	1-506-986-11	PIN, CONNECTOR (PC BOARD) 4P
* CNP304	1-580-154-11	PIN, CONNECTOR (PC BOARD) 2P
CNP306	1-506-986-11	PIN, CONNECTOR (PC BOARD) 4P
CNP307	1-506-986-11	PIN, CONNECTOR (PC BOARD) 4P
CNP701	1-770-674-11	CONNECTOR, FFC/FPC
* CNP703	1-580-158-11	PIN, CONNECTOR (PC BOARD) 6P
* CNP704	1-569-930-11	SOCKET, CONNECTOR 13P
CNP704	1-695-336-31	PIN, CONNECTOR (PC BOARD) 13P
* CNP705	1-580-154-11	PIN, CONNECTOR (PC BOARD) 2P

## < DIODE >

D301	8-719-901-33	DIODE 1SS133T-77
D302	8-719-901-33	DIODE 1SS133T-77
D303	8-719-901-33	DIODE 1SS133T-77
D304	8-719-901-33	DIODE 1SS133T-77
D305	8-719-109-98	DIODE RD6.8ES-B3
D305	8-719-109-97	DIODE RD6.8ES-B2
D306	8-719-938-69	LED GL3PR8 (OPR/BATT)
D307	8-719-109-90	DIODE RD5.6ESB3
D307	8-719-109-89	DIODE RD5.6ESB2
D308	8-719-901-33	DIODE 1SS133T-77
D309	8-719-109-69	DIODE RD3.6ES-B2
D310	8-719-901-33	DIODE 1SS133T-77
D311	8-719-901-33	DIODE 1SS133T-77
D313	8-719-901-33	DIODE 1SS133T-77
D316	8-719-901-33	DIODE 1SS133T-77
D704	8-719-901-33	DIODE 1SS133T-77
D705	8-719-901-33	DIODE 1SS133T-77

Ref. No.	Part No.	Description	Remark
< IC >			
IC301	8-759-264-71	IC TA2068N	
IC302	8-759-820-22	IC LA4597	
IC701	8-752-069-56	IC CXA1782BQ	
IC702	8-752-372-94	IC CXD2507AQ	
IC703	8-759-332-98	IC BA6196FP	
IC704	8-759-283-60	IC SM5875AM-ET	
IC801	8-752-854-17	IC CXP5084H-675Q	
IC801	8-752-855-67	IC CXP5084H-675Q	
IC802	8-759-256-72	IC PST994D	
< JACK >			
J302	1-566-891-11	JACK (PHONES)	
< COIL >			
L101	1-414-142-11	INDUCTOR 1uH	
L102	1-410-324-11	INDUCTOR 4.7uH (AEP, UK, AUS, EE, IT)	
L102	1-410-509-11	INDUCTOR 10uH (US, CND)	
L201	1-414-142-11	INDUCTOR 1uH	
L202	1-410-324-11	INDUCTOR 4.7uH (AEP, UK, AUS, EE, IT)	
L202	1-410-509-11	INDUCTOR 10uH (US, CND)	
L301	1-410-324-11	INDUCTOR 4.7uH (AEP, UK, AUS, EE, IT)	
L301	1-410-509-11	INDUCTOR 10uH (US, CND)	
L703	1-410-397-21	FERRITE BEAD INDUCTOR (US, CND, AEP, UK, AUS, EE, IT)	
L713	1-410-397-21	FERRITE BEAD INDUCTOR (US, CND, AEP, UK, AUS, EE, IT)	
L714	1-410-509-11	INDUCTOR 10uH (US, CND, AEP, UK, AUS, EE, IT)	
L715	1-410-397-21	FERRITE BEAD INDUCTOR (CND1, AEP1, UK, AUS, EE, IT)	
L716	1-410-513-11	INDUCTOR 22uH (AEP, UK, AUS, EE, IT)	
L716	1-410-509-11	INDUCTOR 10uH (US, CND)	
L717	1-410-513-11	INDUCTOR 22uH (AEP, UK, AUS, EE, IT)	
L717	1-410-509-11	INDUCTOR 10uH (US, CND)	
L718	1-410-513-11	INDUCTOR 22uH (AEP, UK, AUS, EE, IT)	
L718	1-410-509-11	INDUCTOR 10uH (US, CND)	
L719	1-410-513-11	INDUCTOR 22uH (AEP, UK, AUS, EE, IT)	
L720	1-410-513-11	INDUCTOR 22uH (AEP, UK, AUS, EE, IT)	
L721	1-410-513-11	INDUCTOR 22uH (AEP, UK, AUS, EE, IT)	
L723	1-410-397-21	FERRITE BEAD INDUCTOR (CND1, AEP1, UK, AUS, EE, IT)	
L725	1-410-397-21	FERRITE BEAD INDUCTOR (US, CND, AEP, UK, AUS, EE, IT)	
L730	1-410-509-11	INDUCTOR 10uH (US, CND, AEP, UK, AUS, EE, IT)	
L760	1-410-509-11	INDUCTOR 10uH (US, CND, AEP, UK, AUS, EE, IT)	

Ref. No.	Part No.	Description	Remark
L770	1-410-509-11	INDUCTOR 10uH (US, CND, AEP, UK, AUS, EE, IT)	
< TRANSISTOR >			
Q101	8-729-900-74	TRANSISTOR DTC143TS	
Q201	8-729-900-74	TRANSISTOR DTC143TS	
Q301	8-729-281-53	TRANSISTOR 2SC1815-GR	
Q302	8-729-011-92	TRANSISTOR 2SC2001TP-K1K2	
Q303	8-729-021-82	TRANSISTOR 2SD2396K	
Q304	8-729-011-92	TRANSISTOR 2SC2001TP-K1K2	
Q305	8-729-921-65	TRANSISTOR DTC143ES	
Q306	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q307	8-729-921-65	TRANSISTOR DTC143ES	
Q308	8-729-011-92	TRANSISTOR 2SC2001TP-K1K2	
Q309	8-729-011-92	TRANSISTOR 2SC2001TP-K1K2	
Q310	8-729-029-47	TRANSISTOR DTA143ESA-TP	
Q311	8-729-119-78	TRANSISTOR 2SC403SP-51	
Q312	8-729-921-65	TRANSISTOR DTC143ES	
Q701	8-729-801-84	TRANSISTOR 2SB1013-4	
Q702	8-729-900-85	TRANSISTOR DTC144WS	
Q703	8-729-900-74	TRANSISTOR DTC143TS	
Q705	8-729-902-80	TRANSISTOR DTA114YS	
Q760	8-729-900-74	TRANSISTOR DTC143TS	
Q770	8-729-900-74	TRANSISTOR DTC143TS	
< RESISTOR >			
R101	1-249-431-11	CARBON 15K 5% 1/4W	
R102	1-249-404-00	CARBON 82 5% 1/4W	
R103	1-249-423-11	CARBON 3.3K 5% 1/4W	
R104	1-249-436-11	CARBON 39K 5% 1/4W	
R105	1-249-421-11	CARBON 2.2K 5% 1/4W	
R106	1-247-807-11	CARBON 100 5% 1/4W	
R109	1-247-807-11	CARBON 100 5% 1/4W	
R112	1-249-417-11	CARBON 1K 5% 1/4W	
R113	1-249-429-11	CARBON 10K 5% 1/4W	
R114	1-249-441-11	CARBON 100K 5% 1/4W	
R115	1-247-807-11	CARBON 100 5% 1/4W	
R118	1-249-429-11	CARBON 10K 5% 1/4W	
R201	1-249-431-11	CARBON 15K 5% 1/4W	
R202	1-249-404-00	CARBON 82 5% 1/4W	
R203	1-249-423-11	CARBON 3.3K 5% 1/4W	
R204	1-249-436-11	CARBON 39K 5% 1/4W	
R205	1-249-421-11	CARBON 2.2K 5% 1/4W	
R206	1-247-807-11	CARBON 100 5% 1/4W	
R209	1-247-807-11	CARBON 100 5% 1/4W	
R212	1-249-417-11	CARBON 1K 5% 1/4W	
R213	1-249-429-11	CARBON 10K 5% 1/4W	
R214	1-249-441-11	CARBON 100K 5% 1/4W	
R215	1-247-807-11	CARBON 100 5% 1/4W	

Ref. No.	Part No.	Description	Remark
R218	1-249-429-11	CARBON 10K 5% 1/4W	
R302	1-249-433-11	CARBON 22K 5% 1/4W	
R303	1-247-903-00	CARBON 1M 5% 1/4W	
R304	1-249-429-11	CARBON 10K 5% 1/4W	
R305	1-249-429-11	CARBON 10K 5% 1/4W	
R306	1-249-401-11	CARBON 47 5% 1/4W	
R307	1-249-435-11	CARBON 33K 5% 1/4W	
R308	1-249-389-11	CARBON 4.7 5% 1/4W	
R309	1-247-815-91	CARBON 220 5% 1/4W	
R312	1-249-417-11	CARBON 1K 5% 1/4W	
R313	1-249-419-11	CARBON 1.5K 5% 1/4W	
R314	1-249-415-11	CARBON 680 5% 1/4W	
R315	1-249-409-11	CARBON 220 5% 1/4W	
R316	1-249-441-11	CARBON 100K 5% 1/4W	
R317	1-249-411-11	CARBON 330 5% 1/4W	
R318	1-249-417-11	CARBON 1K 5% 1/4W	
R319	1-247-807-11	CARBON 100 5% 1/4W	
R320	1-249-393-11	CARBON 10 5% 1/4W	
R321	1-247-807-11	CARBON 100 5% 1/4W	
R322	1-249-437-11	CARBON 47K 5% 1/4W	
R323	1-249-423-11	CARBON 3.3K 5% 1/4W	
R328	1-249-423-11	CARBON 3.3K 5% 1/4W	
R329	1-249-423-11	CARBON 3.3K 5% 1/4W	
R330	1-249-429-11	CARBON 10K 5% 1/4W	
R332	1-249-425-11	CARBON 4.7K 5% 1/4W	
R333	1-249-425-11	CARBON 4.7K 5% 1/4W	
R334	1-249-417-11	CARBON 1K 5% 1/4W	
R335	1-249-423-11	CARBON 3.3K 5% 1/4W	
△R338	1-219-149-11	FUSIBLE 1 5% 1/4W F (US, CND)	
R700	1-249-429-11	CARBON 10K 5% 1/4W	
R701	1-249-441-11	CARBON 100K 5% 1/4W	
R702	1-247-896-11	CARBON 510K 5% 1/4W	
R703	1-249-441-11	CARBON 100K 5% 1/4W	
R704	1-249-441-11	CARBON 100K 5% 1/4W	(EXCEPT US, CND2, AEP2)
R704	1-247-883-00	CARBON 150K 5% 1/4W	(US, CND2, AEP2)
R705	1-249-437-11	CARBON 47K 5% 1/4W	
R706	1-247-883-00	CARBON 150K 5% 1/4W	
R707	1-249-432-11	CARBON 18K 5% 1/4W	
R708	1-247-883-00	CARBON 150K 5% 1/4W	
R709	1-247-862-11	CARBON 20K 5% 1/4W	
R710	1-249-393-11	CARBON 10 5% 1/4W	
R712	1-247-887-00	CARBON 220K 5% 1/4W	
R713	1-247-883-00	CARBON 150K 5% 1/4W	
R714	1-247-883-00	CARBON 150K 5% 1/4W	
R716	1-249-430-11	CARBON 12K 5% 1/4W	
R717	1-249-429-11	CARBON 10K 5% 1/4W	
R718	1-247-899-11	CARBON 680K 5% 1/4W	

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# MAIN POWER

Ref.No.	Part No.	Description	Remark
R720	1-247-891-00	CARBON 330K 5% 1/4W	
R722	1-249-439-11	CARBON 68K 5% 1/4W	
R723	1-249-439-11	CARBON 68K 5% 1/4W	
R725	1-249-437-11	CARBON 47K 5% 1/4W	
R727	1-249-417-11	CARBON 1K 5% 1/4W	
R728	1-249-429-11	CARBON 10K 5% 1/4W	
R729	1-249-429-11	CARBON 10K 5% 1/4W	
R730	1-249-435-11	CARBON 33K 5% 1/4W	
R731	1-249-433-11	CARBON 22K 5% 1/4W	
R732	1-249-429-11	CARBON 10K 5% 1/4W	
R733	1-249-435-11	CARBON 33K 5% 1/4W	
R734	1-249-437-11	CARBON 47K 5% 1/4W	
R735	1-247-852-11	CARBON 7.5K 5% 1/4W	
R739	1-249-425-11	CARBON 4.7K 5% 1/4W	
R740	1-249-423-11	CARBON 3.3K 5% 1/4W	
R741	1-249-417-11	CARBON 1K 5% 1/4W	
R742	1-249-429-11	CARBON 10K 5% 1/4W	
R743	1-247-903-00	CARBON 1M 5% 1/4W	
R744	1-247-887-00	CARBON 220K 5% 1/4W	
R745	1-249-429-11	CARBON 10K 5% 1/4W	
R746	1-249-437-11	CARBON 47K 5% 1/4W	
R747	1-249-417-11	CARBON 1K 5% 1/4W	
R748	1-249-429-11	CARBON 10K 5% 1/4W	
R749	1-249-429-11	CARBON 10K 5% 1/4W	
R750	1-249-417-11	CARBON 1K 5% 1/4W	
R751	1-249-429-11	CARBON 10K 5% 1/4W	
R753	1-249-429-11	CARBON 10K 5% 1/4W	
R754	1-249-429-11	CARBON 10K 5% 1/4W	
R756	1-249-440-11	CARBON 82K 5% 1/4W	
R757	1-249-439-11	CARBON 68K 5% 1/4W	
R758	1-249-439-11	CARBON 68K 5% 1/4W	
R759	1-249-440-11	CARBON 82K 5% 1/4W	
R766	1-249-417-11	CARBON 1K 5% 1/4W	
R776	1-249-417-11	CARBON 1K 5% 1/4W	
R780	1-249-417-11	CARBON 1K 5% 1/4W	
R781	1-249-417-11	CARBON 1K 5% 1/4W	
R782	1-249-417-11	CARBON 1K 5% 1/4W	
R783	1-249-417-11	CARBON 1K 5% 1/4W (US, CND)	
R784	1-249-417-11	CARBON 1K 5% 1/4W (US, CND)	
R785	1-249-417-11	CARBON 1K 5% 1/4W (US, CND)	
R790	1-249-433-11	CARBON 22K 5% 1/4W	
R792	1-249-429-11	CARBON 10K 5% 1/4W	
R801	1-249-435-11	CARBON 33K 5% 1/4W	
R802	1-249-435-11	CARBON 33K 5% 1/4W	
R803	1-249-435-11	CARBON 33K 5% 1/4W	
R806	1-249-437-11	CARBON 47K 5% 1/4W	
R807	1-249-429-11	CARBON 10K 5% 1/4W	
R808	1-249-429-11	CARBON 10K 5% 1/4W	
R809	1-249-429-11	CARBON 10K 5% 1/4W	

Ref. No.	Part No.	Description	Remark		
R810	1-249-429-11	CARBON 10K 5% 1/4W			
R811	1-249-429-11	CARBON 10K 5% 1/4W			
R812	1-249-429-11	CARBON 10K 5% 1/4W			
R813	1-249-429-11	CARBON 10K 5% 1/4W			
R814	1-249-429-11	CARBON 10K 5% 1/4W			
R815	1-249-421-11	CARBON 2.2K 5% 1/4W			
< VARIABLE RESISTOR >					
RV301	1-223-403-11	RES, VAR, CARBON 20K/20K (VOLUME)			
RV302	1-241-745-11	RES, VAR, CARBON 20K/20K (TONE)			
RV701	1-238-601-11	RES, ADJ, CARBON 22K (FOCUS GAIN)			
RV702	1-238-601-11	RES, ADJ, CARBON 22K (FOCUS BIAS)			
RV703	1-238-598-11	RES, ADJ, CARBON 2.2K (E-F BALANCE)			
RV704	1-238-601-11	RES, ADJ, CARBON 22K (TRACKING GAIN)			
< SWITCH >					
S302	1-571-345-11	SWITCH, LEVER SLIDE (FUNCTION)			
< TRANSFORMER >					
T301	1-433-268-00	TRANSFORMER, BIAS OSCILLATOR			
< VIBRATOR >					
X701	1-579-345-11	VIBRATOR, CERAMIC (16.9344MHz)			
*****					
*	1-655-704-11	POWER BOARD (US, CND2)			
*	1-656-822-11	POWER BOARD (AEP2, C&SA, EA, TWN)			
*	1-657-306-11	POWER BOARD (CND1)			
*	1-656-440-11	POWER BOARD (AEP1, UK, E, AUS, EE, HK, IT, JE, PX)			
*****					
	1-533-217-31	HOLDER, FUSE			
< CAPACITOR >					
C901	1-101-005-00	CERAMIC 22000PF			50V
C902	1-101-005-00	CERAMIC 22000PF			50V
C903	1-101-005-00	CERAMIC 22000PF			50V
C904	1-101-005-00	CERAMIC 22000PF			50V
C905	1-136-169-00	FILM 0.22uF 5%			50V
< JACK >					
△CJ901	1-526-838-11	INLET, AC 2P (AC IN ~)			
(AEP, UK, E, AUS, EE, HK, IT, JE, PX)					
△CJ901	1-540-009-11	INLET, AC (AC IN ~) (US, CND)			
△CJ901	1-526-818-11	INLET, AC (AC IN ~) (C&SA, TWN)			
< DIODE >					
D901	8-719-031-53	DIODE LT2A02			

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Ref. No.	Part No.	Description	Remark
D901	8-719-046-07	DIODE 2A02M	
D902	8-719-031-53	DIODE LT2A02	
D902	8-719-046-07	DIODE 2A02M	
D903	8-719-031-53	DIODE LT2A02	
D903	8-719-046-07	DIODE 2A02M	
D904	8-719-031-53	DIODE LT2A02	
D904	8-719-046-07	DIODE 2A02M	
< FUSE >			
△F901	1-532-235-00	FUSE (315mA 250V) (E, EA, HK, JE, PX)	
△F902	1-532-286-00	FUSE (2.5A 250V) (AEP, UK, E, AUS, EA, EE, HK, IT, JE, PX)	
△F902	1-576-107-11	FUSE (3.15A 125V) (US, CND, C&SA, TWN)	
< CABLE, HOLDER >			
* KH901	1-573-287-11	HOLDER, CABLE 2P	
< COIL >			
L901	1-410-397-21	FERRITE BEAD INDUCTOR (US, CND, AEP, UK, AUS, EE, IT)	
L902	1-410-397-21	FERRITE BEAD INDUCTOR (US, CND, AEP, UK, AUS, EE, IT)	
< LINE FILTER >			
△LF901	1-424-150-11	TRANSFORMER, LINE FILTER	
< SWITCH >			
△S901	1-572-290-11	SWITCH, POWER (VOLTAGE CHANGE) (E, EA, HK, JE, PX)	
< TRANSFORMER >			
△T901	1-426-633-11	TRANSFORMER, POWER (E, EA, HK, JE, PX)	
△T901	1-426-634-11	TRANSFORMER, POWER (AUS)	
△T901	1-426-632-11	TRANSFORMER, POWER (AEP, UK, EE, IT)	
△T901	1-426-631-11	TRANSFORMER, POWER (US, CND, C&SA, TWN)	
*****			
*	A-3269-908-A	TUNER BOARD, COMPLETE (US, CND2)	
*	A-3305-161-A	TUNER BOARD, COMPLETE (CND1)	
*	A-3305-057-A	TUNER BOARD, COMPLETE (AEP1, UK)	
*	A-3305-078-A	TUNER BOARD, COMPLETE (AEP2)	
*	A-3305-181-A	TUNER BOARD, COMPLETE (E, AUS, HK, PX)	
*	A-3305-155-A	TUNER BOARD, COMPLETE (C&SA, TWN)	
*	A-3305-178-A	TUNER BOARD, COMPLETE (EA)	
*	A-3305-179-A	TUNER BOARD, COMPLETE (EE)	
*	A-3305-183-A	TUNER BOARD, COMPLETE (IT)	
*	A-3305-184-A	TUNER BOARD, COMPLETE (JE)	
*****			

Ref. No.	Part No.	Description	Remark
< FILTER >			
BPF1	1-239-507-11	FILTER, BAND PASS (JE)	
BPF1	1-239-907-21	FILTER, BAND PASS (EE)	
BPF1	1-236-711-21	FILTER, BAND PASS (EXCEPT EE, JE)	
< CAPACITOR >			
C2	1-162-306-11	CERAMIC 0.01uF 30% 16V	
C3	1-162-199-31	CERAMIC 10PF 5% 50V (EA)	
C3	1-124-443-00	ELECT 100uF 20% 10V	
C4	1-162-190-31	CERAMIC 1.8PF 20% 50V	
C5	1-162-209-31	CERAMIC 27PF 5% 50V (JE)	
C5	1-162-199-31	CERAMIC 10PF 5% 50V (EE)	
C5	1-162-208-31	CERAMIC 24PF 5% 50V (AEP, UK, EA, IT)	
C5	1-162-207-31	CERAMIC 22PF 5% 50V (US, CND, E, C&SA, AUS, HK, PX, TWN)	
C6	1-102-949-00	CERAMIC 12PF 5% 50V (JE)	
C6	1-102-959-00	CERAMIC 22PF 5% 50V (IT)	
C6	1-102-947-00	CERAMIC 10PF 5% 50V (EE)	
C6	1-102-958-00	CERAMIC 20PF 5% 50V (EA)	
C6	1-102-961-00	CERAMIC 27PF 5% 50V (AEP, UK)	
C6	1-102-960-00	CERAMIC 24PF 5% 50V (US, CND, E, C&SA, AUS, HK, PX, TWN)	
C7	1-162-199-31	CERAMIC 10PF 5% 50V (IT)	
C7	1-162-198-31	CERAMIC 8.2PF 10% 50V (AEP, UK, E, C&SA, AUS, EA, EE, HK, JE, PX, TWN)	
C7	1-162-197-31	CERAMIC 6.8PF 10% 50V (US, CND)	
C8	1-162-193-31	CERAMIC 3.3PF 10% 50V	
C9	1-162-306-11	CERAMIC 0.01uF 30% 16V	
C10	1-162-306-11	CERAMIC 0.01uF 30% 16V	
C11	1-126-963-11	ELECT 4.7uF 20% 50V	
C12	1-124-903-11	ELECT 1uF 20% 50V	
C13	1-104-664-11	ELECT 47uF 20% 10V	
C14	1-124-443-00	ELECT 100uF 20% 10V	
C15	1-162-306-11	CERAMIC 0.01uF 30% 16V	
C16	1-124-925-11	ELECT 2.2uF 20% 100V	
C17	1-124-443-00	ELECT 100uF 20% 10V	
C18	1-162-839-11	CERAMIC 0.01uF 10% 16V (AEP, UK, EE, IT, JE)	
C18	1-161-053-00	CERAMIC 0.015uF 10% 50V (US, CND, E, C&SA, AUS, EA, HK, PX, TWN)	
C19	1-162-839-11	CERAMIC 0.01uF 10% 16V (AEP, UK, EE, IT, JE)	
C19	1-161-053-00	CERAMIC 0.015uF 10% 50V (US, CND, E, C&SA, AUS, EA, HK, PX, TWN)	
C20	1-124-902-00	ELECT 0.47uF 20% 50V (IT)	
C21	1-124-902-00	ELECT 0.47uF 20% 50V (IT)	
C22	1-124-903-11	ELECT 1uF 20% 50V	

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# TUNER

Ref. No.	Part No.	Description	Remark
C23	1-124-902-00	ELECT 0.47uF 20%	50V
C24	1-126-963-11	ELECT 4.7uF 20%	50V
C31	1-162-294-31	CERAMIC 0.001uF 10%	50V
C32	1-162-294-31	CERAMIC 0.001uF 10%	50V
C33	1-162-191-31	CERAMIC 2.2PF 10%	50V (JE)
C33	1-162-199-31	CERAMIC 10PF 5%	50V (IT)
< FILTER >			
CF1	1-760-237-11	FILTER, CERAMIC	
CF1	1-760-238-11	FILTER, CERAMIC	
CF3	1-760-237-11	FILTER, CERAMIC	
CF3	1-760-238-11	FILTER, CERAMIC	
< COMPOSITION CIRCUIT BLOCK >			
CFT1	1-239-724-11	ENCAPSULATED COMPONENT	
< CONNECTOR >			
CNP1	1-506-987-11	PIN, CONNECTOR (PC BOARD) 5P	
< VARIABLE CAPACITOR >			
CT1-4 } CV1-4 }	1-151-697-11	CAP, VAR (EE, JE)	
CT1-4 } CV1-4 }	1-151-695-11	CAP, VAR (EXCEPT US, CND, EE, JE)	
CT1-4 } CV1-4 }	1-151-696-11	CAP, VAR (US, CND)	
< IC >			
IC1	8-752-050-20	IC CXA1238S	
< COIL >			
L1	1-409-776-11	COIL, AIR-CORE (EE)	
L1	1-406-998-11	COIL, AIR-CORE (EXCEPT EE)	
L2	1-409-999-11	COIL, AIR-CORE (JE)	
L2	1-409-775-11	COIL, AIR-CORE (EE)	
L2	1-406-957-11	COIL (WITH CORE) (EA, IT)	
L2	1-411-387-11	COIL, AIR-CORE (AEP, UK)	
L2	1-422-230-11	COIL, AIR-CORE (US, CND, E, C&SA, AUS, HK, PX, TWN)	
L3	1-402-577-31	ANTENNA, FERRITE-ROD (MW) (EXCEPT US, CND, AEP2)	
L3	1-402-577-11	ANTENNA, FERRITE-ROD (MW) (US, CND, AEP2)	
L4	1-406-464-51	COIL (OSC)	
< TRANSISTOR >			
Q1	8-729-119-78	TRANSISTOR 2SC403SP-51	

Ref. No.	Part No.	Description	Remark
< RESISTOR >			
R2	1-249-421-11	CARBON 2.2K 5%	1/4W
R3	1-249-441-11	CARBON 100K 5%	1/4W
R5	1-249-429-11	CARBON 10K 5%	1/4W
R7	1-249-403-11	CARBON 68 5%	1/4W
R8	1-249-427-11	CARBON 6.8K 5%	1/4W
R9	1-249-427-11	CARBON 6.8K 5%	1/4W
R10	1-249-435-11	CARBON 33K 5%	1/4W (AEP, UK, IT)
R11	1-247-887-00	CARBON 220K 5%	1/4W
R12	1-249-421-11	CARBON 2.2K 5%	1/4W
R13	1-247-807-31	CARBON 100 5%	1/4W
R14	1-249-413-11	CARBON 470 5%	1/4W (JE)
R14	1-249-411-11	CARBON 330 5%	1/4W (EXCEPT JE)
R15	1-247-887-00	CARBON 220K 5%	1/4W
R16	1-249-425-11	CARBON 4.7K 5%	1/4W (US, CND)
R19	1-249-429-11	CARBON 10K 5%	1/4W (EXCEPT IT)
R20	1-249-437-11	CARBON 47K 5%	1/4W
< VARIABLE RESISTOR >			
RV1	1-238-601-11	RES, ADJ, CARBON 22K (VCO)	
< SWITCH >			
SW1	1-692-928-11	SWITCH, SLIDE (MONO/STEREO) (AEP, UK, IT)	
*****			
MISCELLANEOUS			
*****			
9	1-765-085-11	WIRE, PARALLEL (FFC) (13 CORE)	
78	1-769-789-11	WIRE (FLAT TYPE) (16 CORE)	
104	1-452-732-11	MAGNET	
ANT1	1-501-388-11	ANTENNA, TELESCOPIC	
HE601	1-500-031-11	HEAD, MAGNETIC (ERASE)	
HRP601	1-500-168-11	HEAD, MAGNETIC (RECORD/PLAYBACK)	
M601	X-3366-491-1	MOTOR ASSY	
S601	1-692-434-11	SWITCH, LEAF (MD POWER)	
S602	1-692-434-11	SWITCH, LEAF (REC)	
S801	1-571-936-11	SWITCH, LEAF (DOOR OPEN/CLOSE)	
SP901	1-504-548-11	SPEAKER (10CM) (L-CH) (US, CND)	
SP901	1-504-548-21	SPEAKER (10CM) (L-CH) (EXCEPT US, CND)	
SP902	1-504-548-11	SPEAKER (10CM) (R-CH) (US, CND)	
SP902	1-504-548-21	SPEAKER (10CM) (R-CH) (EXCEPT US, CND)	
*****			

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Ref.No.	Part No.	Description	Remark
		ACCESSORIES & PACKING MATERIALS	
		*****	
△	1-551-983-00	CORD, POWER (E:110-120V AC AREA)	
△	1-557-287-11	CORD, POWER (C&SA, TWN)	
△	1-569-007-11	ADAPTER, CONVERSION 2P	
		(E:110-120V AC AREA)	
△	1-569-008-11	ADAPTER, CONVERSION 2P (EA, JE)	
△	1-690-952-21	CORD, POWER (US, CND)	
△	1-696-819-11	CORD, POWER (AUS)	
△	1-696-820-21	CORD, POWER (AEP, E:220-240V AC AREA, EA, EE, HK, IT, JE, PX)	
△	1-751-214-11	CORD, POWER (UK)	
△	1-770-019-11	ADAPTOR, CONVERSION PLUG 3P (HK)	
	3-798-743-11	MANUAL, INSTRUCTION (ENGLISH/FRENCH/ GERMAN/SPANISH) (AEP1, UK, E, JE, PX)	
	3-798-743-21	MANUAL, INSTRUCTION (ENGLISH) (US, CND, AUS, TWN)	
	3-798-743-31	MANUAL, INSTRUCTION (FRENCH) (CND)	
	3-798-743-41	MANUAL, INSTRUCTION (DUTCH/SWEDISH/ ITALIAN/PORTUGUESE) (AEP, IT)	
	3-798-743-51	MANUAL, INSTRUCTION (POLISH/ENGLISH/ GERMAN/RUSSIAN) (EE)	
	3-798-743-61	MANUAL, INSTRUCTION (CZECH/HUNGARIAN) (EE)	
	3-798-743-71	MANUAL, INSTRUCTION (ENGLISH/CHINESE) (HK)	
	3-800-056-11	MANUAL, INSTRUCTION (ENGLISH/FRENCH/ GERMAN/SPANISH) (AEP2, C&SA, EA)	
	3-800-056-51	MANUAL, INSTRUCTION (CHINESE) (TWN)	
*	3-910-853-01	CUSHION (L)	
*	3-910-854-01	CUSHION (R)	
*	3-923-083-01	INDIVIDUAL CARTON (US)	
*	3-923-084-01	INDIVIDUAL CARTON (CND2, TWN)	
*	3-923-819-01	INDIVIDUAL CARTON (AEP1, UK, EE, IT)	
*	3-923-822-01	INDIVIDUAL CARTON (E, HK, JE, PX)	
*	3-924-339-01	INDIVIDUAL CARTON (AEP2)	
*	3-925-436-01	INDIVIDUAL CARTON (CND1, AUS)	
*	3-925-437-01	INDIVIDUAL CARTON (C&SA, EA)	
	8-953-491-93	HEADPHONE MDR-007L/2 SET (US)	

\*\*\*\*\*

Ref.No.	Part No.	Description	Remark
		*****	
		<b>HARDWARE LIST</b>	
		*****	
#1	7-685-647-79	SCREW +BVTP 3×10 TYPE2 N-S	
#2	7-685-104-19	SCREW +P 2×6 TYPE2 NON-SLIT	
#3	7-685-649-79	SCREW +BVTP 3×14 TYPE2 N-S	
#4	7-682-548-04	SCREW +B 3×8	
#5	7-621-255-25	SCREW +PTT 2×4 (S)	
#6	7-621-773-95	SCREW +B 2.6×6	
#7	7-685-646-79	SCREW +BVTP 3×8 TYPE2 N-S	
#8	7-685-533-19	SCREW +BTP 2.6×6 TYPE2 N-S	
#9	7-685-903-31	SCREW +PTPH 3×10 (TYPE2)	
#10	7-628-254-05	SCREW +PS 2.6×5	
#11	7-685-861-01	SCREW +BVTT 2.6×5 (S)	
#12	7-621-255-15	SCREW +P 2×3	

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  
pièce portant le numéro spécifié.



**Sony Corporation**  
**Consumer A&V Products Company**  
**Personal A&V Products Div.**

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9-960-239-11  
(Including 9-960-239-91)

**English**  
95D02114-1  
Printed in Japan  
© 1995.4  
Published by Home A&V Products Div.  
Quality Engineering Dept.

**SONY**

## SERVICE MANUAL

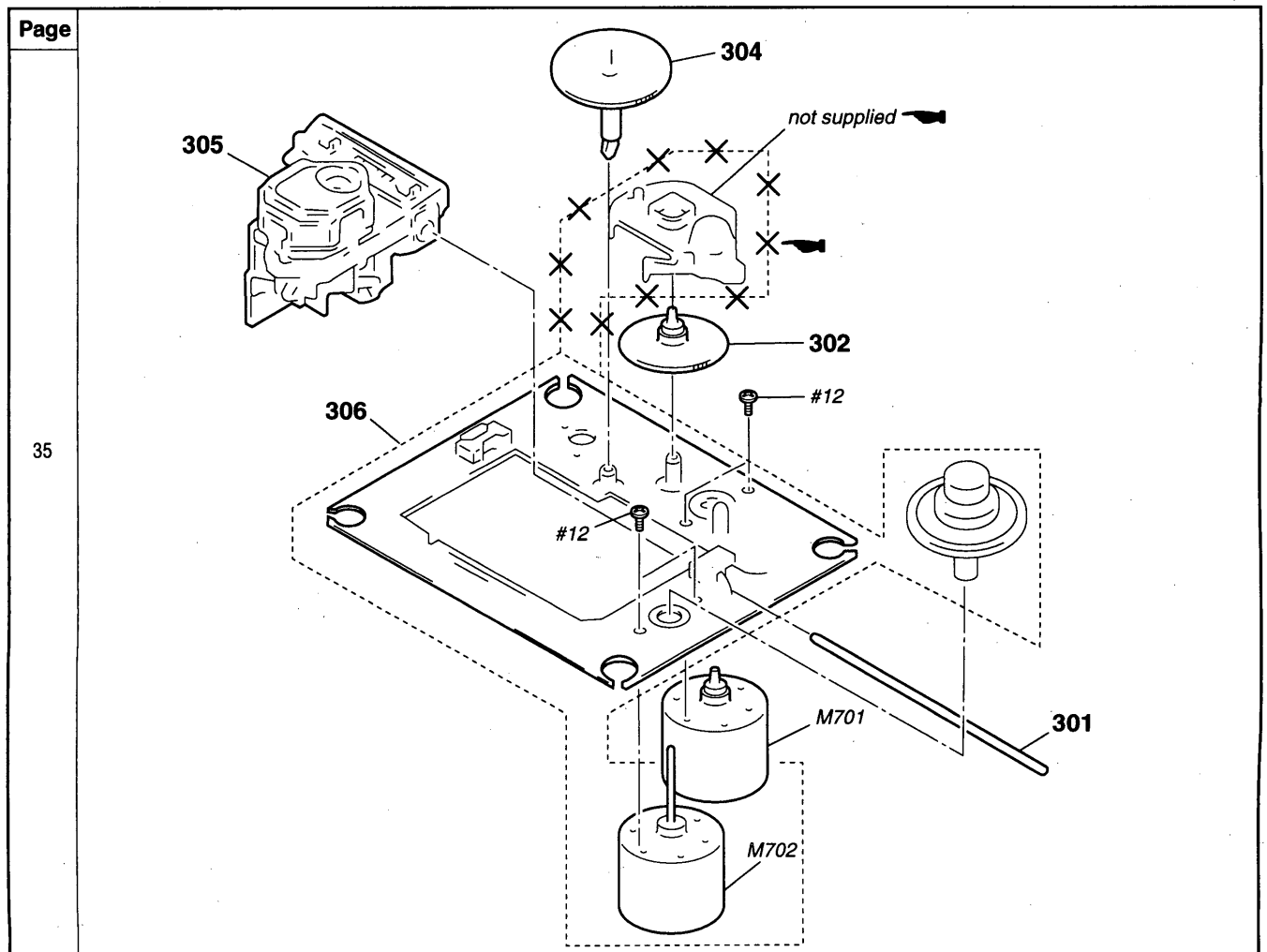
US Model  
Canadian Model  
AEP Model  
UK Model  
E Model  
Australian Model  
Tourist Model  
PX Model

### CORRECTION - 2

Correct your Service Manual as shown below.

#### 7-6. OPTICAL PICK-UP SECTION (KSM-213BAN/S-N)

● : Correct portion



(SPM-97032)