CFD-555L

SERVICE MANUAL

AEP Model
UK Model

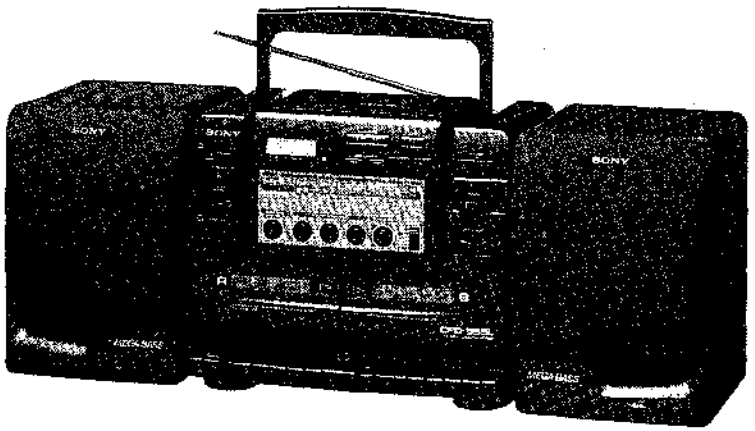


Photo : AEP model

Model Name Using	CD Section	CFD-6
Similar Mechanism	Tape Section	NEW
Optical Pick-UP Type		KSM-213BAN/S-N
Tape Transport Mechanism Type		MF-D555W

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 μW
(This output is the value measured at a distance of about 200 mm from the objective lens surface on the optical pick-up block with 7 mm aperture.)
Spindle speed
200 r/min (rpm) to 500 r/min (rpm) (CLV)
Number of channels
2
Frequency response
20 - 20,000 Hz +1/-2 dB
Wow and flutter
Below measurable limit

Radio section

Frequency range

Model	FM	SW	MW	LW
AEP, UK	87.6 – 108 MHz	5.95 – 18 MHz	531 – 1,602 kHz	153 – 279 kHz
East European	65 – 108 MHz	5.95 – 18 MHz	531 – 1,602 kHz	153 – 279 kHz
Italian	87.5 – 108 MHz	5.95 – 18 MHz	526.5 – 1,606.5 kHz	148.5 – 283.5 kHz

IF FM: 10.7 MHz
MW/LW/SW: 455 kHz

Aerials
FM/SW: Telescopic aerial
MW/LW: Built-in ferrite bar aerial

Cassette-corder section

Recording system
4-track 2 channel stereo
Fast winding time
Approx. 120 s (sec.) with Sony cassette C-60
Frequency response
TYPE I (normal): 80 - 10,000 Hz

General

Speaker
Full range: 10 cm (4 in.) dia.,
3.2 ohms, cone type (2)
Outputs
Headphones jack (stereo minijack)
For 16 - 68 ohms impedance headphones
Speakers terminals
For supplied 3.2 ohms impedance speakers
Maximum power output
2.3 W + 2.3 W

— Continued on page 2 —

CD RADIO CASSETTE-CORDER

SONY

Power requirements
For CD radio cassette-corder :
UK model : 230–240V AC, 50Hz
EXCEPT UK model : 220–230V AC, 50Hz
9 V DC, 6 size R20 (D) batteries

For remote commander:
3 V DC, 2 size R6 (AA) batteries

Power consumption
AC 20 W

Battery life
For CD radio cassette-corder

FM recording
Sony R20P: approx. 13.5 h
Sony alkaline LR20: approx. 19 h
Tape playback
Sony R20P: approx. 7.5 h
Sony alkaline LR20: approx. 12 h
CD playback
Sony R20P: approx. 2.5 h
Sony alkaline LR20: approx. 4.5 h

Dimensions
Approx. 637 × 247 × 206 mm (w/h/d)
(25 ⅛ × 9 ¾ × 8 ⅛ inches) (incl. projecting parts)

Mass
Approx. 6.2 kg (13 lb. 11 oz) (incl. batteries)

Supplied accessories
AC power cord (1)
Remote control (1)

Design and specifications are subject to change without notice.

warning

To prevent fire or shock hazard, do not expose the player to rain or moisture.
To avoid electrical shock, do not open the cabinet. Refer servicing to qualified personnel only.

Information

For customers in Europe

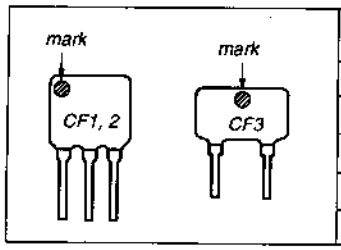
CLASS 1 LASER PRODUCT
LUOKAN 1 LASERLAITE
KLASS 1 LASERAPPARAT

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

TABLE OF CONTENTS

• HOW TO CHANGED THE CERAMIC FILTERS

This model is used three ceramic filters of CF1, CF2 and CF3. You must used same type of color marked ceramic filters in order to meet same specifications.
Therefore, the ceramic filter must changed three pieces together since it's supply three pieces in one package as a spare parts.



Mark	Center frequency
red	10.70MHz
blue	10.67MHz
orange	10.73MHz
black	10.64MHz
white	10.76MHz

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.**

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.

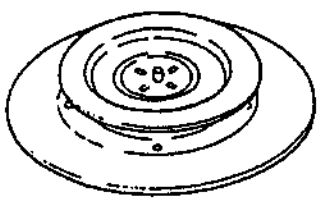
NOTES ON LASER DIODE EMISSION CHECK

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 30 cm away from the objective lens.

CHUCK PLATE JIG ON REPAIRING

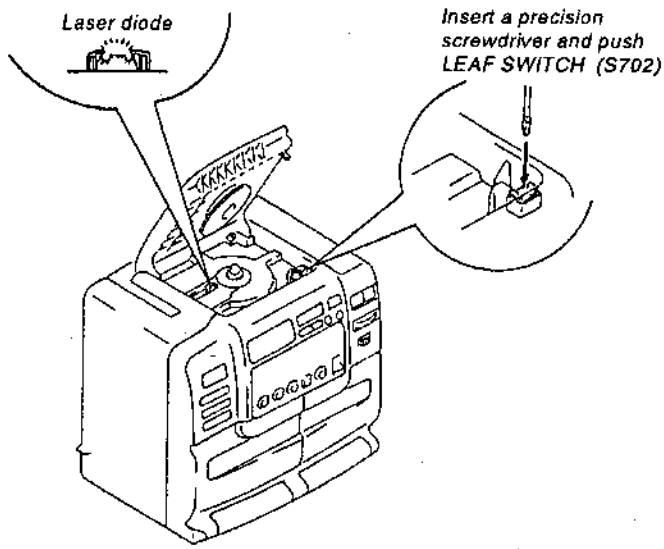
On repairing CD section, playing a disc without the CD lid, use Chuck Plate Jig.

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



LASER DIODE AND FOCUS SEARCH OPERATION CHECK

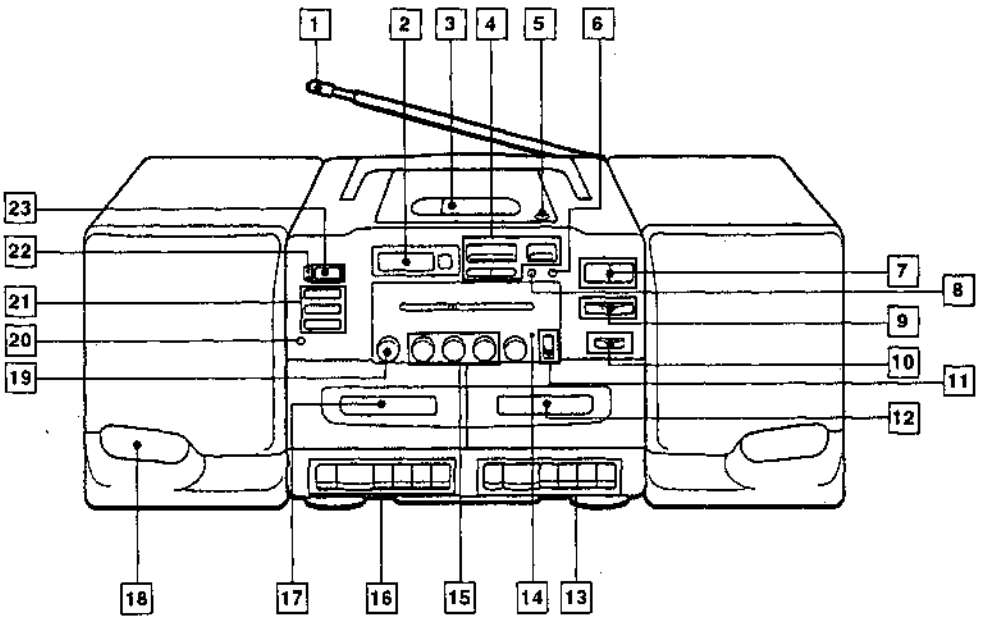
1. Press CD open knob.
2. Open the lid for CD.
3. Push on LEAF SWITCH (S702) as following figure.
4. Confirm the laser diode emission while observing the objecting lens. When there is no emission, Auto Power Control circuit or Optical Pick-up is broken.
   Objective lens moves up and down once for the focus search.



SECTION 2
GENERAL

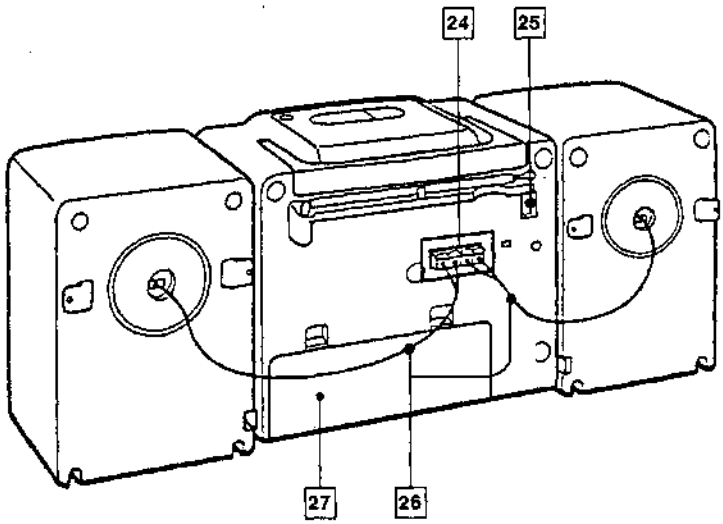
LOCATION AND FUNCTION OF CONTROLS

[Front Panel]



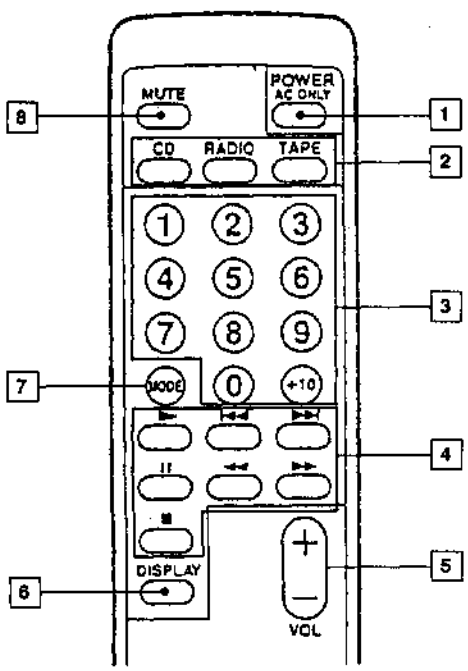
1. Telescopic aerial
2. Display window
3. Disc compartment
4. CD operation buttons
   ▷ II PLAY/PAUSE button
   □ STOP
   ⏮ / ⏭ AMS* /SERCH
5. PUSH OPEN button
6. PLAY MODE button
7. VOLUME buttons
8. DISPLAY/ENTER button
9. TUNING control
10. FINE TUNING control
11. BAND selector
12. Cassette compartment for deck B
13. Tape operation buttons for deck B
14. FM STEREO indicator
15. ROTARY EQUALIZER controls
16. Tape operation buttons for deck A
17. Cassette compartment for deck B
18. Duct
    Reproduces bass sound
19. MEGA BASS control
20. PHONES (headphones) jack (stereo mini-jack)
21. FUNCTION buttons
    CD : for playing or recording a CD
    RADIO : for playing or recording a radio programme
    TAPE : for playing or dubbing a tape
22. OPR/BATT indicator
23. POWER switch

[Rear Panel]



24 SPEAKER OUTPUT terminal
25 FM MODE/ISS (interference suppress switch)
26 SPEAKER wires
27 Battery compartment

[Remote]



1 POWER (AC ONLY) switch
2 FUNCTION buttons
CD : for playing or recording a CD
RADIO : for playing or recording a radio programme
TAPE : for playing or dubbing a tape
3 Number buttons
4 CD operation buttons
► (PLAY)
II (PAUSE)
■ (STOP)
⏮ / ⏭ (AMS)
◀◀ / ▶▶ (Serch)
5 VOL (volume) buttons
6 DISPLAY buttons
7 MODE buttons
8 MUTE button

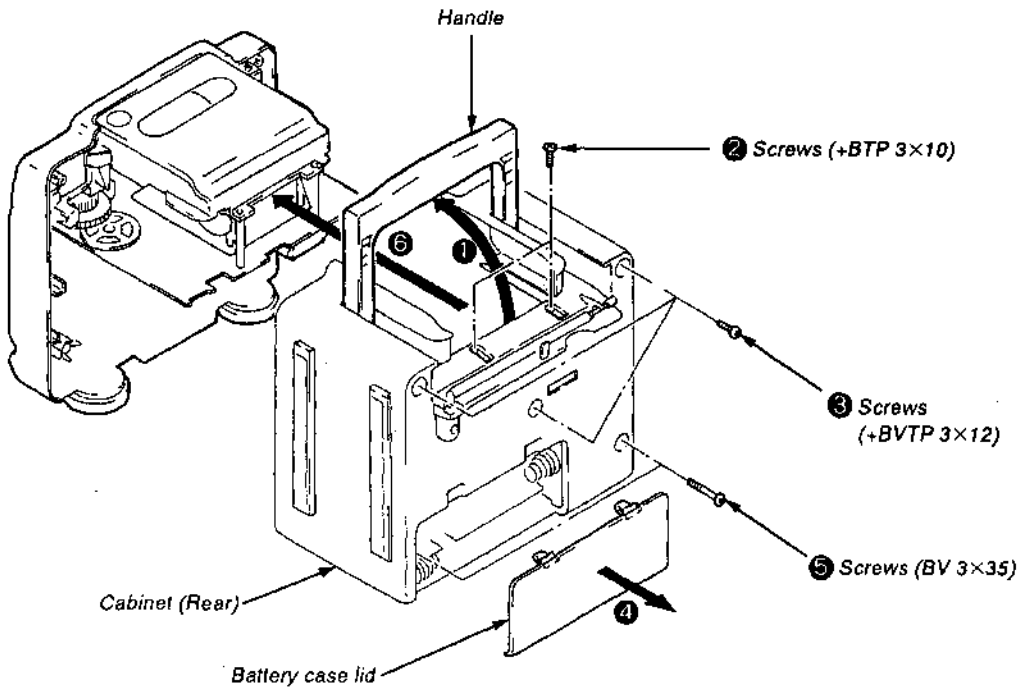
SECTION 3
DISASSEMBLY

● The equipment can be removed using the following procedure.

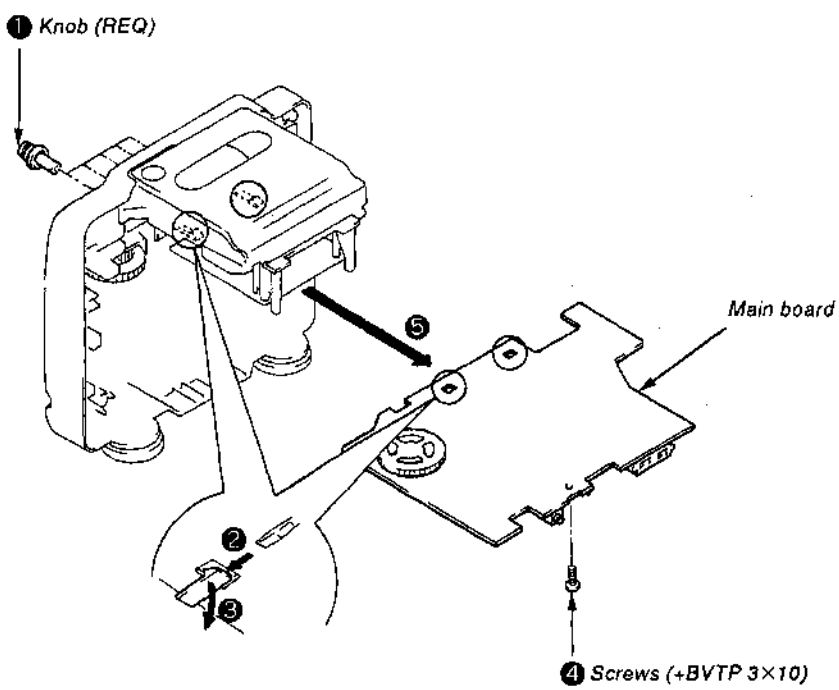
Cabinet (Rear) → Main board
Cabinet (Rear) → CD block → Control board
Cabinet (Rear) → CD block → Optical pick-up block
Cabinet (Rear) → Volume board → CD main board
Cabinet (Rear) → Tuner chassis

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

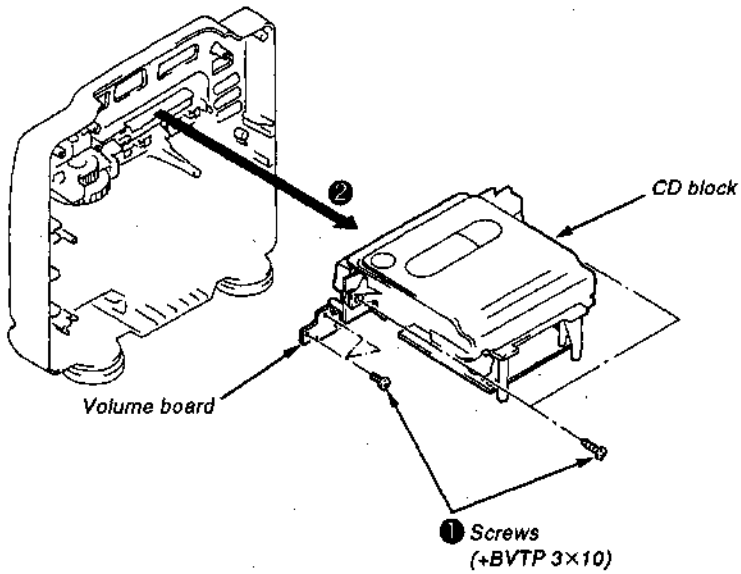
3-1. CABINET (REAR) REMOVAL



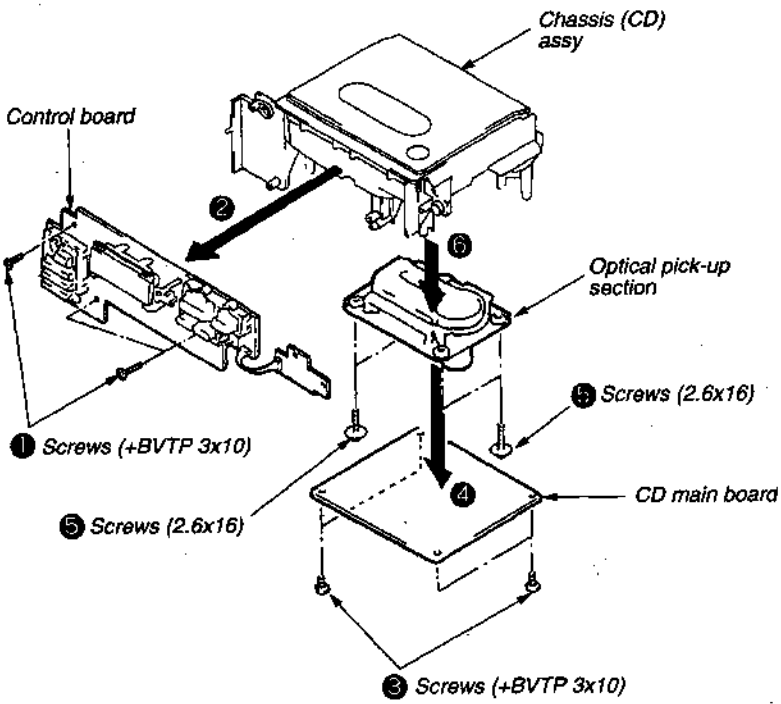
3-2. MAIN BOARD REMOVAL



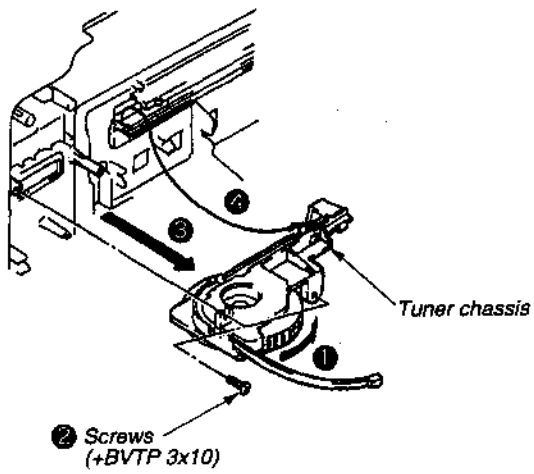
3-3. CD BLOCK, VOLUME BOARD REMOVAL



3-4. CONTROL BOARD, CD MAIN BOARD, OPTICAL PICK-UP REMOVAL



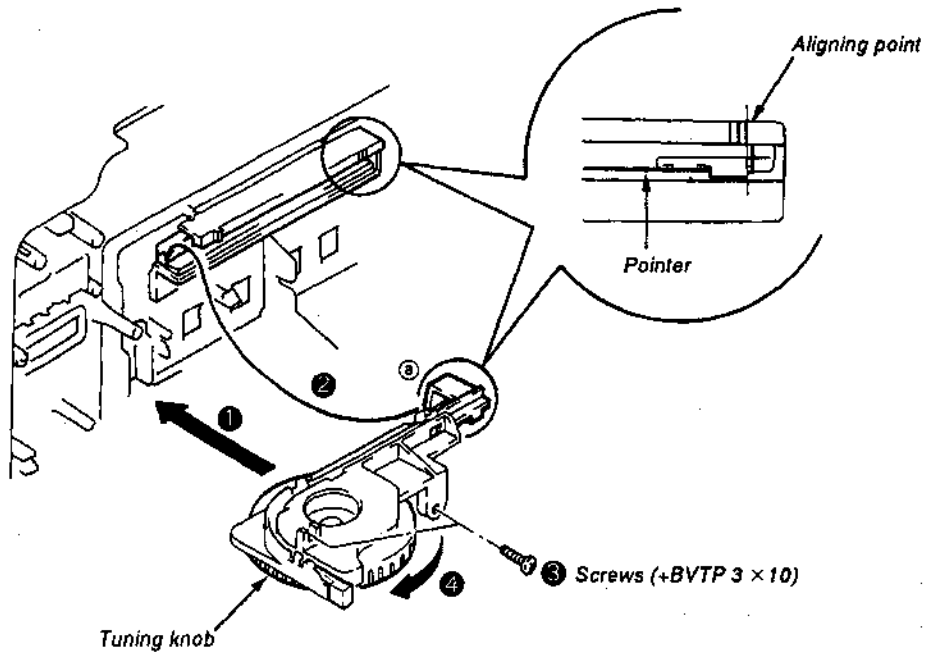
3-5. TUNER CHASSIS REMOVAL



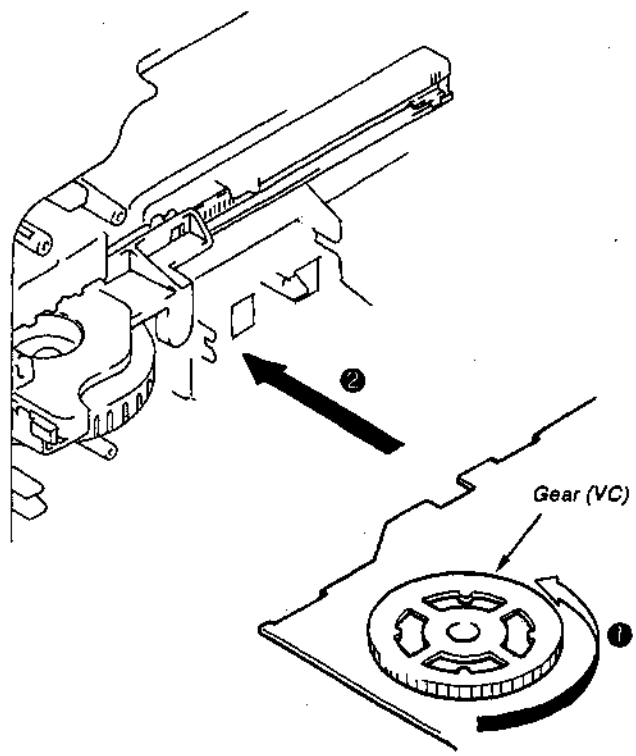
SECTION 4
DIAL POINTER INSTALLATION

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

- Insert part ⓐ of the pointer in the groove, turn the tuning knob in the direction of the arrow and align the pointer with the alignment point.



- Gear (VC) fully to arrow direction.



SECTION 5
ADJUSTMENTS

5-1. MECHANICAL ADJUSTMENTS

PRECAUTION

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

record/playback head	pinch roller
erase head	rubber belts
capstan	idlers

2. Demagnetize the record/playback head with a head demagnetizer. (Do not bring the head demagnetizer close to the erase head.)
3. Do not use a magnetized screwdriver for the adjustments.
4. After the adjustments, apply suitable locking compound to the parts adjusted.
5. The adjustments should be performed with the rated power supply voltage unless otherwise noted.

1. Torque Measurement

Mode	Torque Meter	Meter Reading
Playback	CQ-102C	22.5 – 55 g • cm (0.32 – 0.76 oz• inch)
Back tension	CQ-102C	2 – 5 g • cm (0.03 – 0.06 oz• inch)
Rewind	CQ-201B	60 – 120 g • cm (0.84 – 1.66 oz• inch)
Fast Forward		

2. Tape Tension Measurement

Mode	Tension Meter	Meter Reading
FWD	CQ-403A	more than 150g (5.30 oz)

5-2. ELECTRICAL ADJUSTMENTS

TAPE SECTION

1. The adjustments should be performed in the order given in the service manual. (As a general rule playback circuit adjustment should be completed before performing recording circuit adjustment.)
2. The adjustments should be performed for both L-CH and R-CH unless otherwise indicated.
   - Switch location
     FUNCTION ..... TAPE
     ROTARY EQUALIZER ..... center click
     SURROUND ..... center click
     VOLUME ..... MAX
     MEGA BASS ..... center click

Standard Output Level

	SP OUT	PHONES
load impedance	3.2Ω	32Ω
output level	0.775V (0 dB)	0.25V (– 10 dB)

Test Tape

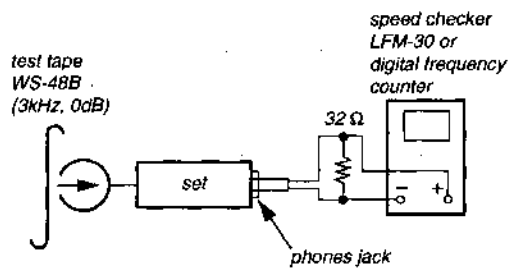
Type	Signal	Used for
WS-48B	3kHz, 0dB	Tape Speed Adjustment

0dB=0.775V

Tape Speed Adjustment

Procedure :

Mode : Playback



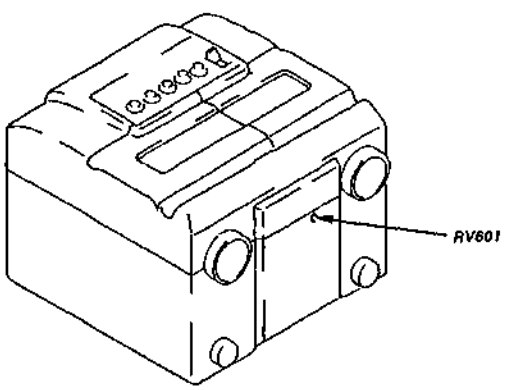
Adjustment Value :

Speed checker	Digital frequency counter
±0.5%	2,985 to 3,015Hz

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

Note : (High speed : non adjustment)

Adjustment Location : TC board



TUNER SECTION

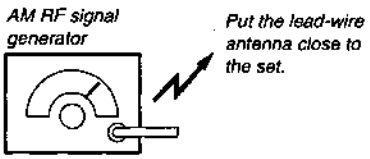
- Switch location

FUNCTION ..... RADIO
VOLUME ..... MAX
SURROUND ..... center click
MEGA BASS ..... center click
ROTARY EQUALIZER ..... center click
FINE TUNING control ..... mechanical center

MW/LW Section

Procedure :

BAND : MW (LW)

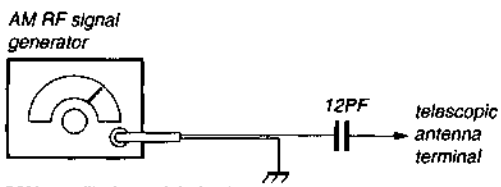


30% amplitude modulation by 400Hz signal.
Output level : as low as possible

SW Section

Procedure :

BAND : SW



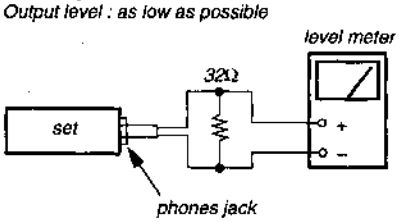
30% amplitude modulation by 400Hz signal.
Output level : as low as possible

FM Section

Procedure :

BAND : FM

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 : AEP, UK model
< > : East European model
<< >> : Italian model

AM IF ALIGNMENT			
Adjust for a maximum reading on level meter.			
T1	455kHz	<455kHz>	<<455kHz>>

MW FREQUENCY COVERAGE ADJUSTMENT			
Adjust for a maximum reading on level meter.			
L8	520kHz	<520kHz>	<<516kHz>>
CT4	1,680kHz	<1,680kHz>	<<1,630kHz>>

MW TRACKING ADJUSTMENT			
Adjust for a maximum reading on level meter.			
L3-1	600kHz	<600kHz>	<<600kHz>>
CT3	1,400kHz	<1,400kHz>	<<1,400kHz>>

LW FREQUENCY COVERAGE ADJUSTMENT			
Adjust for a maximum reading on level meter.			
L4	145kHz	<145kHz>	<<145kHz>>
CT8	300kHz	<300kHz>	<<300kHz>>

LW TRACKING ADJUSTMENT			
Adjust for a maximum reading on level meter.			
L3-2	160kHz	<160kHz>	<<160kHz>>
CT7	260kHz	<260kHz>	<<260kHz>>

SW FREQUENCY COVERAGE ADJUSTMENT			
Adjust for a maximum reading on level meter.			
L6	5.8MHz	<5.8MHz>	<<5.8MHz>>
CT6	18.4MHz	<18.4MHz>	<<18.4MHz>>

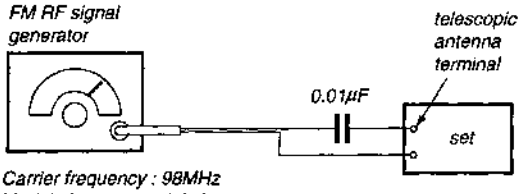
SW TRACKING ADJUSTMENT			
Adjust for a maximum reading on level meter.			
L5	5.8MHz	<5.8MHz>	<<5.8MHz>>
CT5	18.4MHz	<18.4MHz>	<<18.4MHz>>

FM FREQUENCY COVERAGE ADJUSTMENT			
Adjust for a maximum reading on level meter.			
L2	87.0MHz	<64MHz>	<<87.35MHz>>
CT2	108.3MHz	<109.5MHz>	<<108.25MHz>>

FM TRACKING ADJUSTMENT			
Adjust for a maximum reading on level meter.			
L1	87.0MHz	<64MHz>	<<87.35MHz>>
CT1	108.3MHz	<109.5MHz>	<<108.25MHz>>

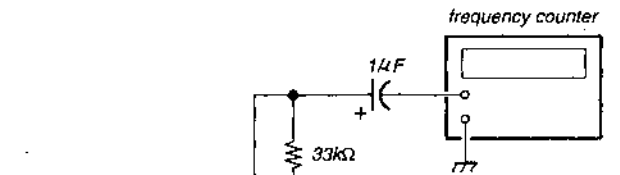
VCO Adjustment

Procedure :

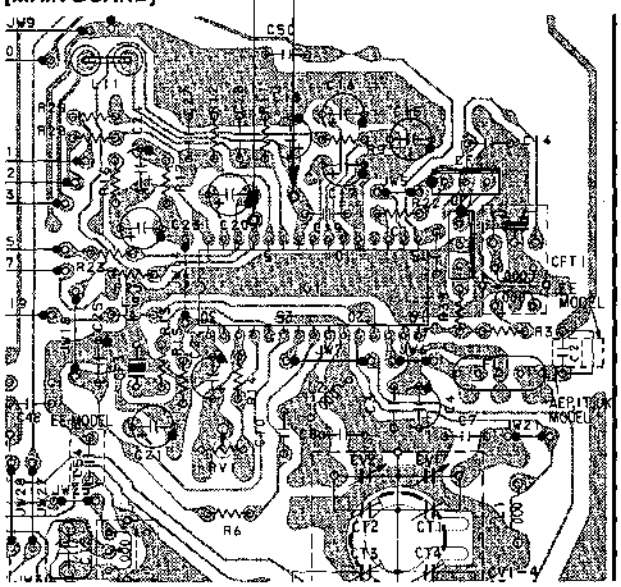


Carrier frequency : 98MHz
Modulation : no modulation
Output level : 0.1V (100dB)

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



[MAIN 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 ▷II key, then press □ button.
2. Press ▶▶I, I◀◀ 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)
   ▶▶I : Optical pick-up moves to the outer circumference
   I◀◀ : Optical pick-up moves to the inner circumference

● Focus Search Check

1. Press ▷II 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.

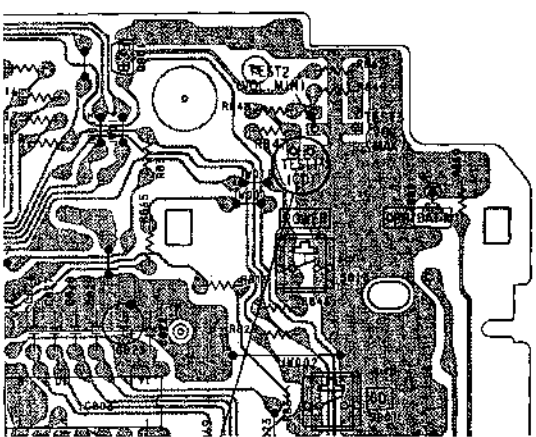
How to put the Set into Test Mode

1. Short-circuit between TP (CD TEST) short on the control board.
2. Turn the POWER on.
3. LCD801 indicator blinks the test mode pattern.

Release the Test Mode

1. Open the short-circuit to release test mode.

[CONTROL BOARD]



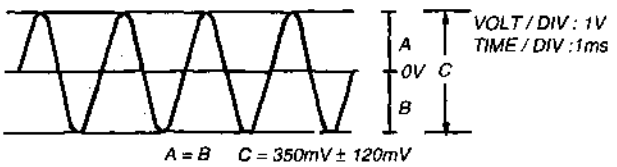
CD TEST MODE
Terminal
Short : Test mode
Open : Normal mode

E-F Balance Adjustment

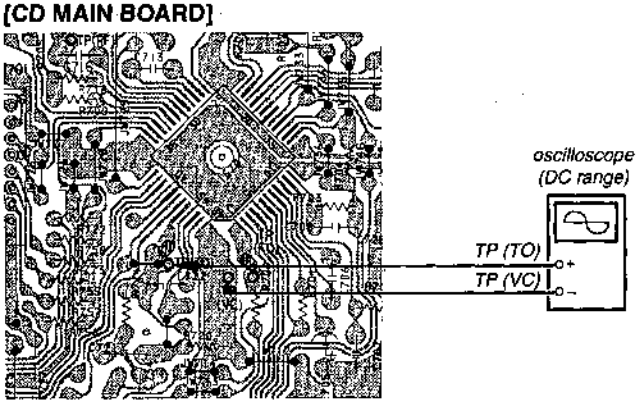
This adjustment is to be done when the optical block is replaced.

Adjustment Procedure :

1. Connect the oscilloscope to test point TP (VC) and TP (TO) on CD MAIN board.
2. Put the set into test mode.
3. Optical pick-up setting to the center by ▶▶| or |◀◀ button pushing.
4. Put disc (YEDS-18) in and press the ▷/II button.
5. Adjust RV703 so that the oscilloscope traveres waveform is symmetrical, as shown in the figure below.
6. Release test mode after adjustment is completed.



[CD MAIN BOARD]



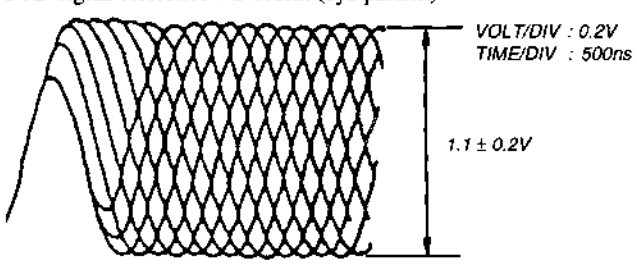
Focus Bias Adjustment

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

Adjustment procedure :

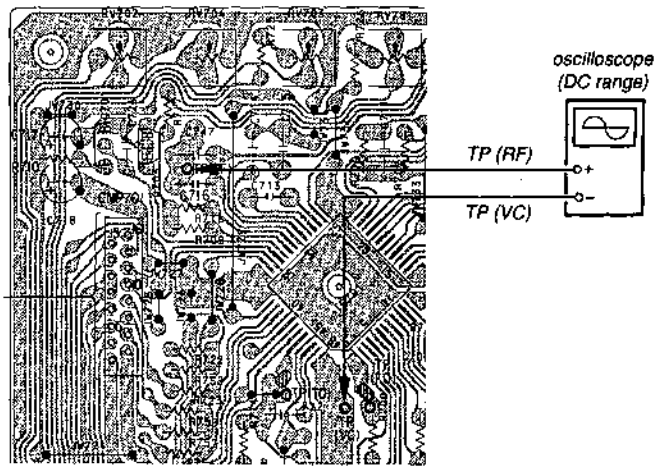
1. Connect oscilloscope to test point TP (VC) and TP (RF) on CD MAIN board.
2. Put the set into test mode.
3. Optical pick-up setting to the center by ▶▶| or |◀◀ button pushing.
4. Put disc (YEDS-18) in and press ▷/II button.
5. Press the DISPALY/ENTER button. (Tracking servo ON)
6. Adjust RV701 so that the oscilloscope waveform is as shown in the figure below (eye pattern).
   A good eye pattern means that the diamond shape (◊) 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.

[CD MAIN BOARD]



Focus/Tracking Gain Adjustment

A frequency responce 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 → ▷/II button or automatic selection. (|◀◀, ▶▶| buttons pressed.) (Normally takes about 2 seconds.)	low	low or high
• Music does not start and disc continues to rotate for STOP →▷/II button or automatic selection. (|◀◀, ▶▶| buttons pressed.)	–	low
• Sound is interrupted during PLAY. Or time counter display stops progressing.	–	low
• More noise during 2-axis device operation.	high	high

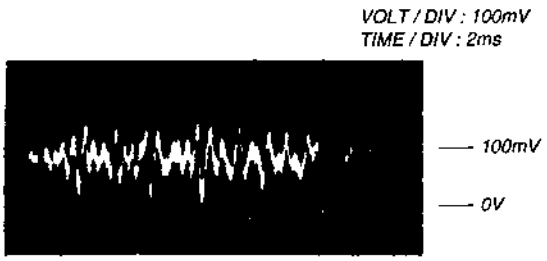
The following is a simple adjustment method.

– Primary Adjustment –

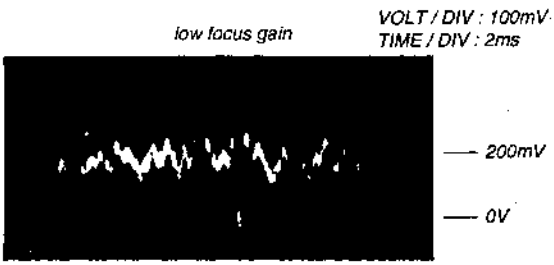
Note : Since exact adjustment cannot be performed, remember the positions of the controls before performing the adjustment. If the positions after the primary adjustment are only a little different, return the controls to the original position.

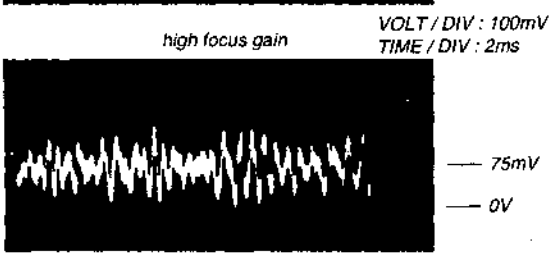
Procedure :

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 ▷II button.
3. Connect oscilloscope to TP(FO) and TP (VC) on CD MAIN board.
4. Adjustment RV702 on CD MAIN so that the waveform is as shown in the figure below. (focus gain adjustment)



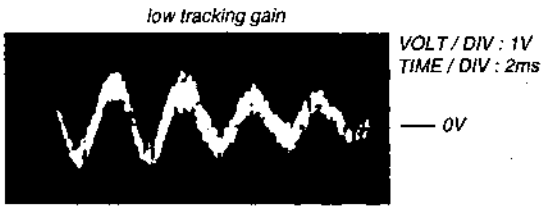
● Incorrect Examples (DC level changes more than on adjusted waveform)

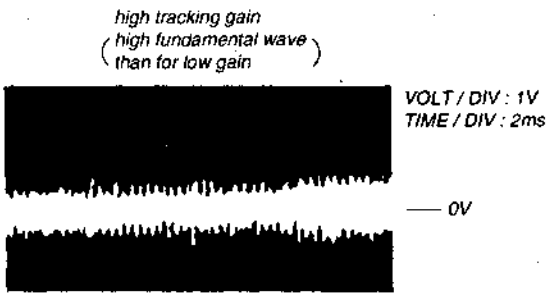




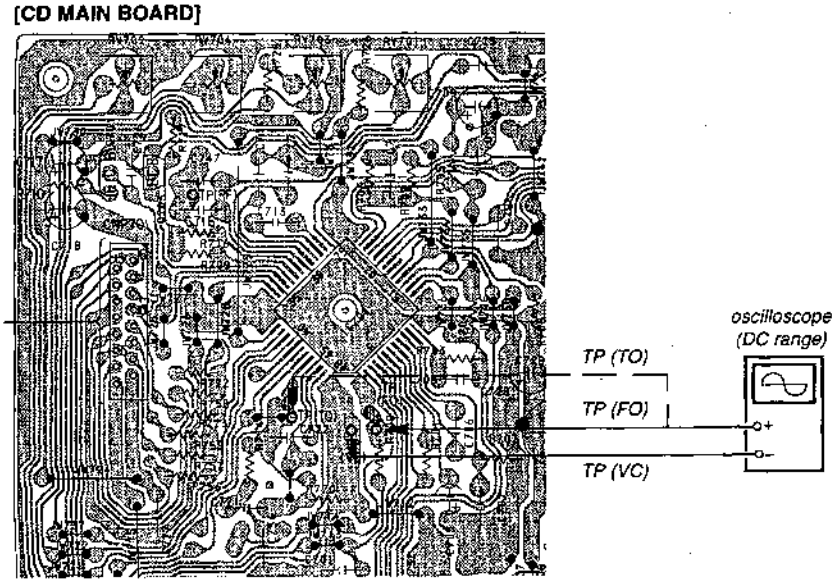
5. Connect oscilloscope to TP(TO) and TP(VC) on CD MAIN board.
6. Adjust RV704 on CD MAIN so that the waveform is as shown in the figure below. (Tracking Gain Adjustment)

● Incorrect Examples (fundamental wave appears)



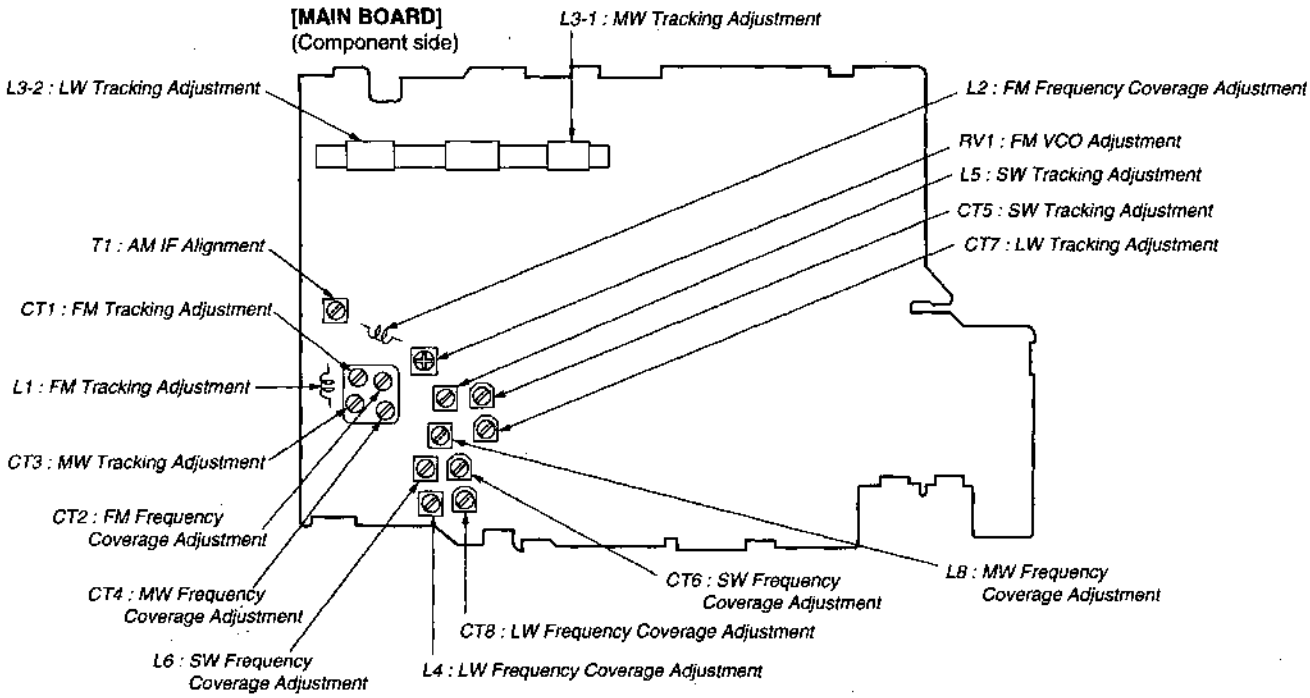


[CD MAIN BOARD]



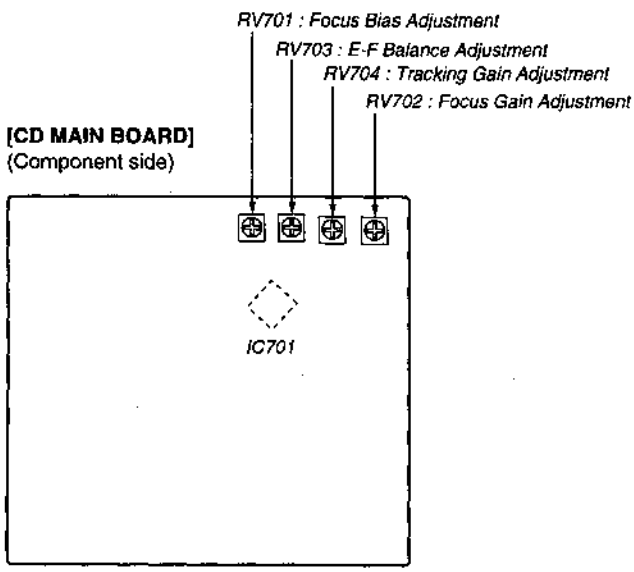
TUNER SECTION

Adjustment Location :



CD SECTION

Adjustment Location :

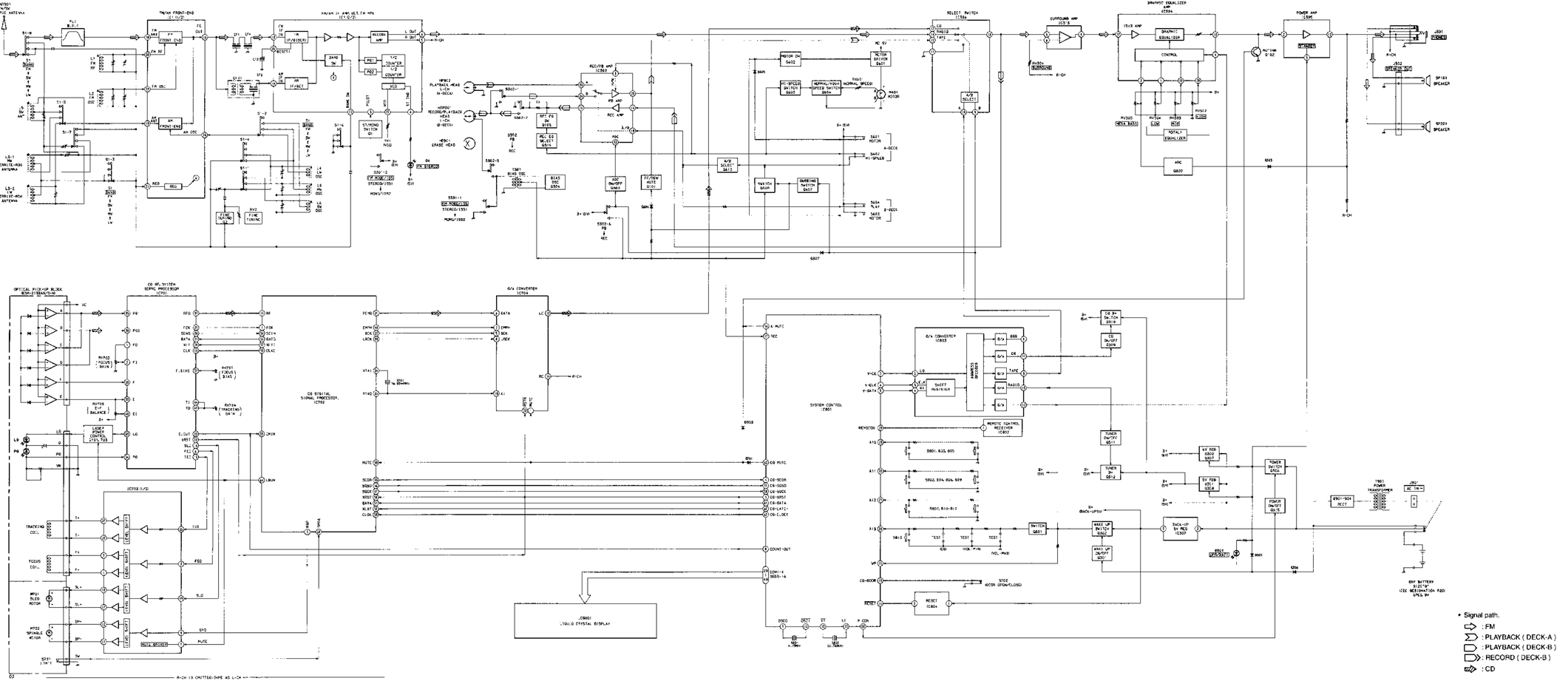


SECTION 6
EXPLANATION OF IC TERMINALS

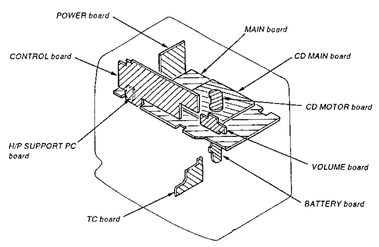
IC801 MSM65352B-015GS-BK

Pin No.	Pin name	I/O	Description
1	CD-SENSE	I	CD SENSE input terminal (GND connected for this unit).
2	CD-SLED	I	CD SLED input terminal (GND connected for this unit).
3	$\overline{\text{CD-XRST}}$	O	CD reset output terminal.
4	CD-SCOR	I	CD SCOR input terminal.
5	V-DATA	O	D/A data output terminal.
6	V-CLK	O	D/A CLK output terminal.
7	V-CE	O	D/A CE output terminal.
8	COUN OUT	O	Power key output terminal.
9	OSC0	O	System clock OSC (4.19MHz).
10	$\overline{\text{OSC1}}$	I	System clock OSC (4.19MHz).
11	D-GND		Digital power supply (GND).
12	$\overline{\text{XT}}$	I	XT side OSC (32.768kHz).
13	XT	O	XT side OSC (32.768kHz).
14	$\overline{\text{RESET}}$	I	System reset terminal.
15	A-GND	–	Analog power supply (GND).
16	WP	I	Wake up signal input terminal.
17	REC	I	Record signal input terminal.
18	CD-DOOR	I	CD door close input.
19	AI4	I	Single/double deck select terminal. Single : H, Double : L
20	AI3	I	TEST1, TEST2, TEST3 terminal.
21	AI2	I	Volume (+), Volume (–), PLAY MODE, DISPLAY/ENTER.
22	AI1	I	⏏, ⏯, ⏮, ⏭
23	AI0	I	CD, RADIO, TAPE.
24	A 5V	–	A/D converter section power supply (+5V).
25	V_{DD} 3	–	LCD Bias.
26	V_{DD} 2	–	LCD Bias.
27	V_{DD} 1	–	LCD Bias.
28	V_{DD} L	–	LCD Bias GND. Not used (Open).
29 – 32	COM 1 – 4	O	LCD Common drive.
33 – 52	SEG0 – 19	O	LCD Segment drive.
53	P-CON	O	System power ON signal output terminal.
54	A-MUTE	O	Audio mute output terminal.
55	GFS	I	CD GFS signal input terminal.
56	———	–	Not used (Open).
57	CD-SQSO	I	CD SUB Q signal input terminal.
58	CD-SQCK	I	CD SUB Q clock input terminal.
59	REMOCON	I	Remote control signal input terminal.
60	CD-LATCH	O	CD LATCH output terminal.
61	CD-DATA	O	CD data output terminal.
62	CD-CLOCK	O	CD clock output terminal.
63	CD-MUTE	O	CD mute output terminal.
64	D 5V	O	Digital power supply (+5V).

7-1. BLOCK DIAGRAM



● CIRCUIT BOARDS LOCATION



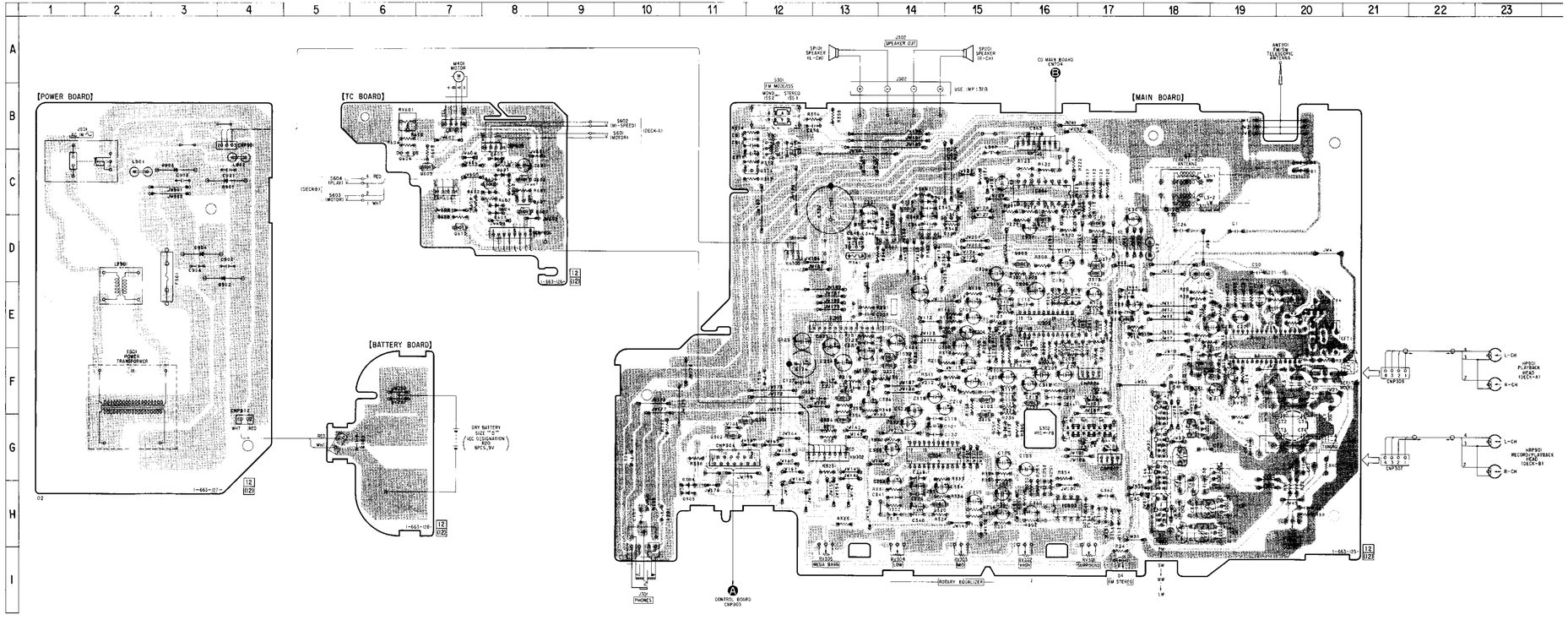
● SEMICONDUCTOR LOCATION

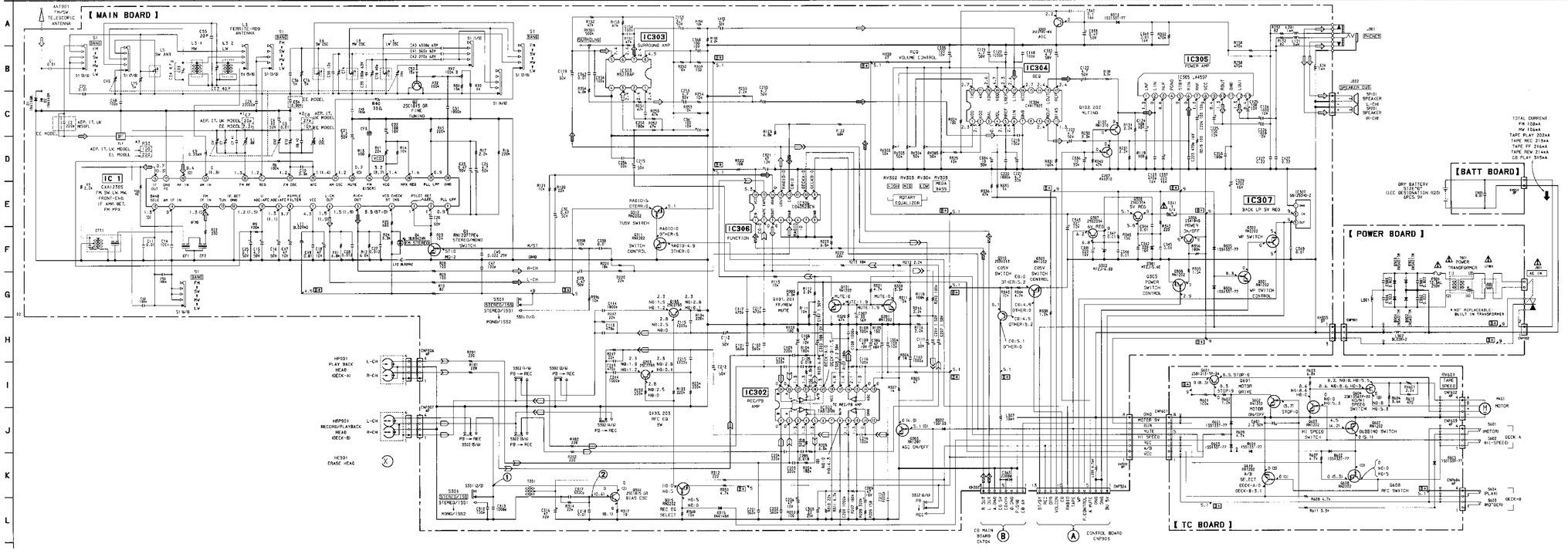
Ref. No.	Location	Ref. No.	Location
D1	C-20	Q201	D-16
D2	C-20	Q202	F-14
D4	I-17	Q203	F-16
D301	C-14	Q301	G-12
D302	D-13	Q302	G-11
D305	H-11	Q303	D-16
D306	H-11	Q304	C-12
D307	D-15	Q305	F-13
D313	H-14	Q306	G-13
D315	G-15	Q307	D-14
D601	C-8	Q308	D-14
D602	C-8	Q309	C-14
D603	C-8	Q310	D-15
D604	C-8	Q311	D-17
D605	C-8	Q312	D-17
D901	C-4	Q315	F-15
D902	D-4	Q320	H-14
D903	C-3	Q601	C-8
D904	D-3	Q602	C-8
		Q603	C-7
IC1	E-19	Q604	C-8
IC302	E-16	Q607	C-8
IC303	H-16	Q608	C-8
IC304	G-14	Q610	D-7
IC305	E-13		
IC306	C-16		
IC307	D-13		
Q1	E-17		
Q2	G-20		
Q10	D-17		
Q102	F-14		
Q103	F-15		

Note:

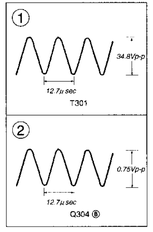
- ○— : parts extracted from the component side.
- ▭ : Pattern on the side which is seen.
- Abbreviation
  EE : East European
  IT : Italian

7-2. PRINTED WIRING BOARDS (MAIN SECTION)





● WAVEFORMS



Note :

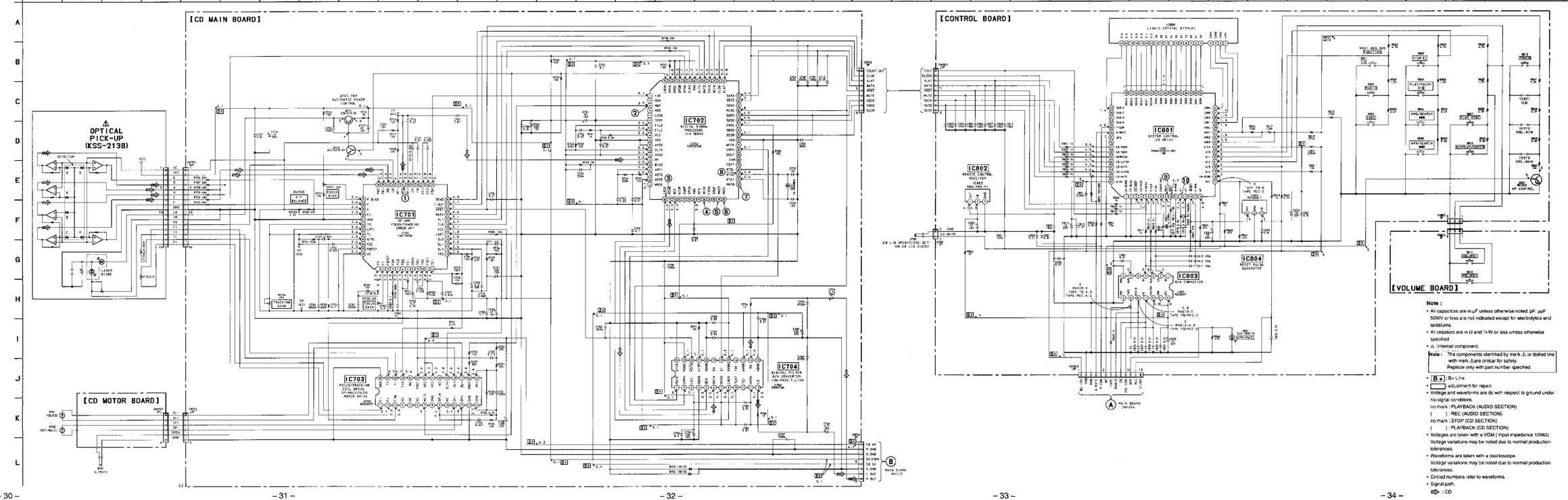
- All capacitors are in μF unless otherwise noted. pF: μμF
  50WV or less are not indicated except for electrolytics and tantaliums.
- All resistors are in Ω and 1/4W or less unless otherwise specified.
- Δ : internal component.
- : fusible resistor.

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

- B+ : 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)
- 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.
- Signal path.
  F : FM
  C : CD
  P : PB (DECK A)
  E : PB (DECK B)
  R : REC (DECK B)
- Abbreviation
  EE : East European
  IT : Italian

7-4. SCHEMATIC DIAGRAM (CD/CONTROL SECTION)

● Refer to page 37 for Waveforms. ● Refer to page 38 for IC Block Diagrams.



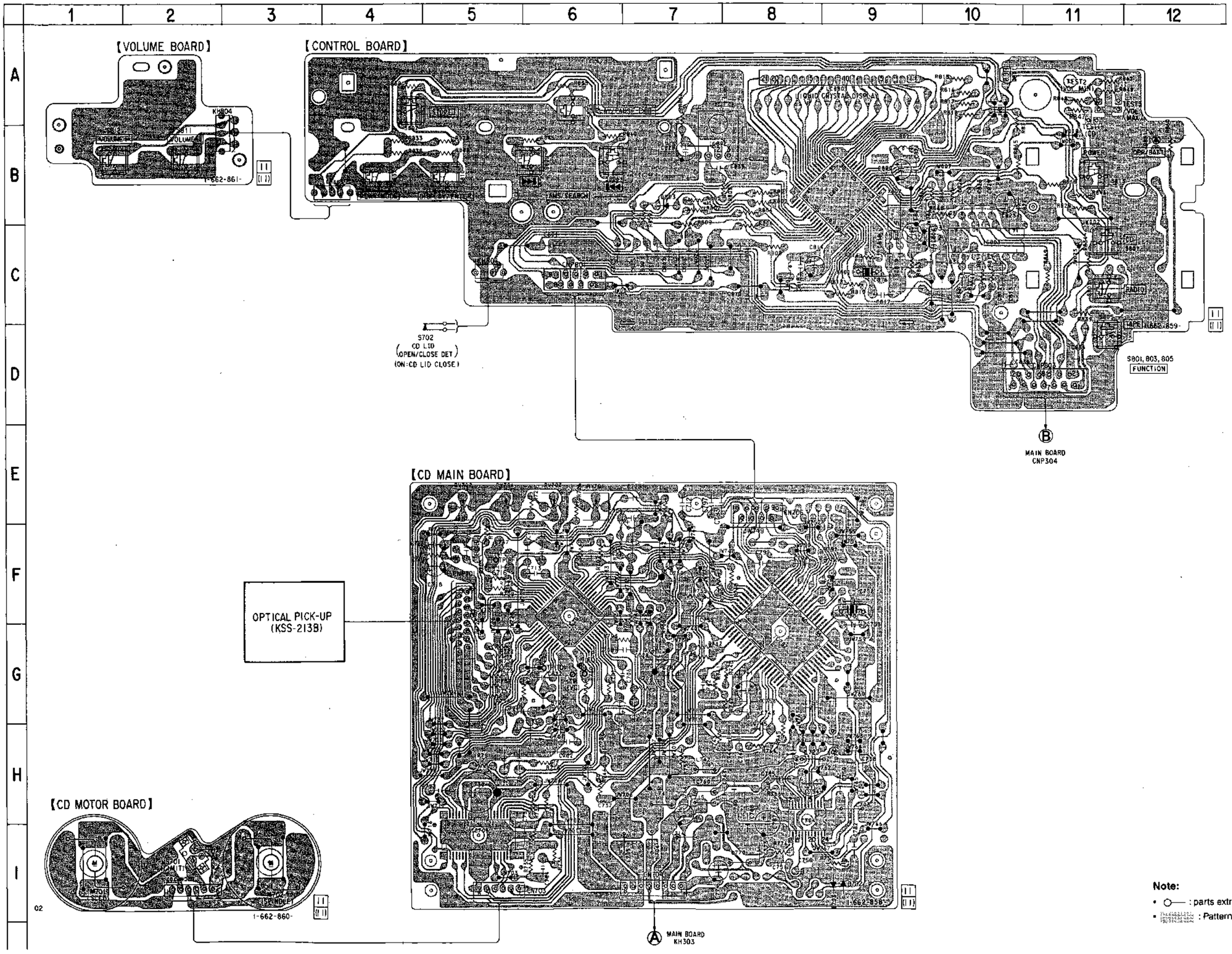
Note :

- 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.
- Δ : Internal component.

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

- [B+] : B+ Line
- [ ] : adjustment for repair.
- Voltage and waveforms are dc with respect to ground under no-signal conditions.
  no mark : PLAYBACK (AUDIO SECTION)
  ( ) : REC (AUDIO SECTION)
  no mark : STOP (CD SECTION)
  ( ) : PLAYBACK (CD SECTION)
- 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.
- Signal path.
  ⇨ : CD

7-5. PRINTED WIRING BOARDS (CD/CONTROL SECTION)



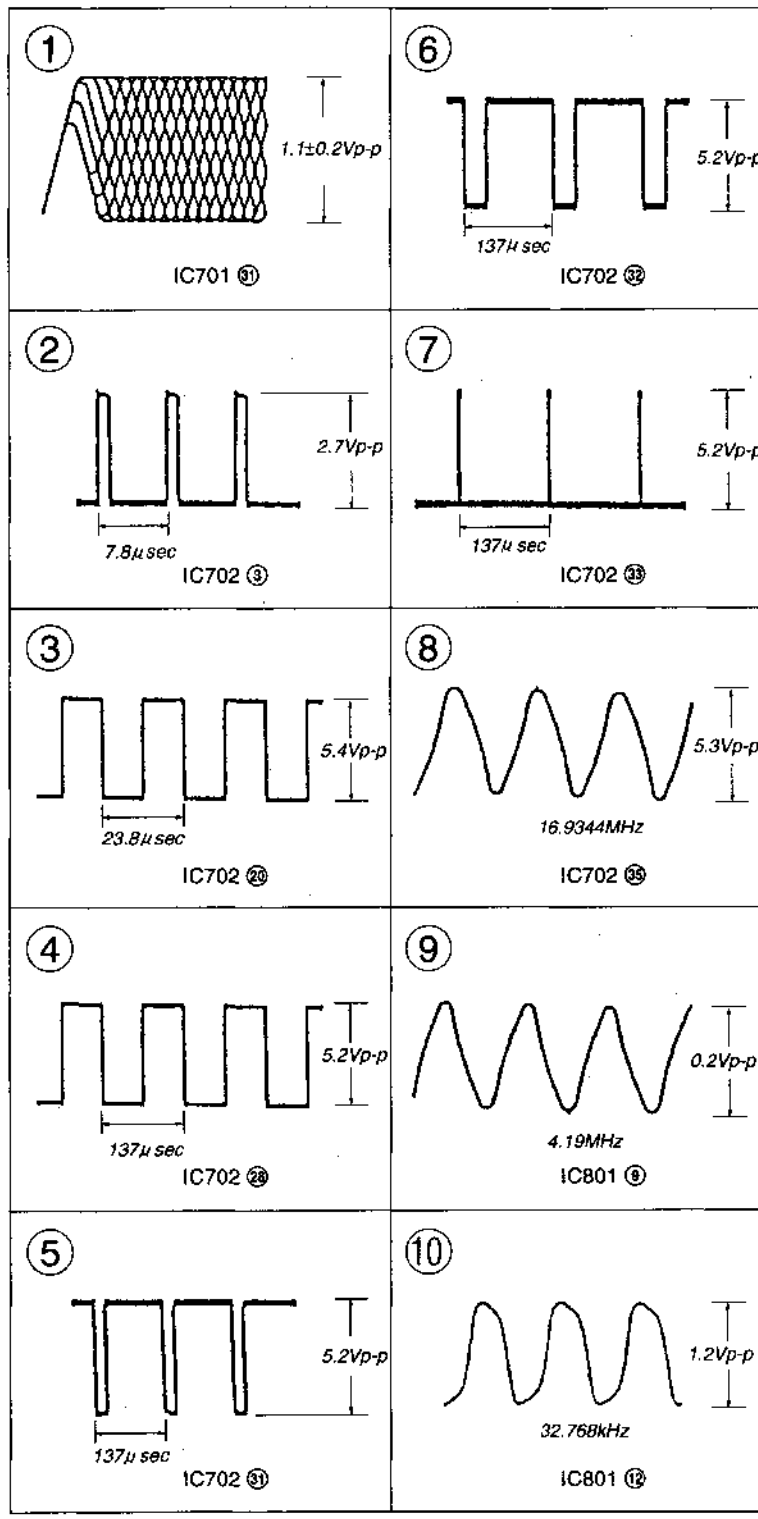
• SEMICONDUCTOR LOCATION

Ref. No.	Location
D702	I-9
D703	I-9
D801	B-12
D803	B-7
IC701	F-6
IC702	G-8
IC703	I-5
IC704	H-8
IC801	B-9
IC802	B-7
IC803	C-10
IC804	C-10
Q701	F-5
Q703	F-5
Q801	A-10

Note:

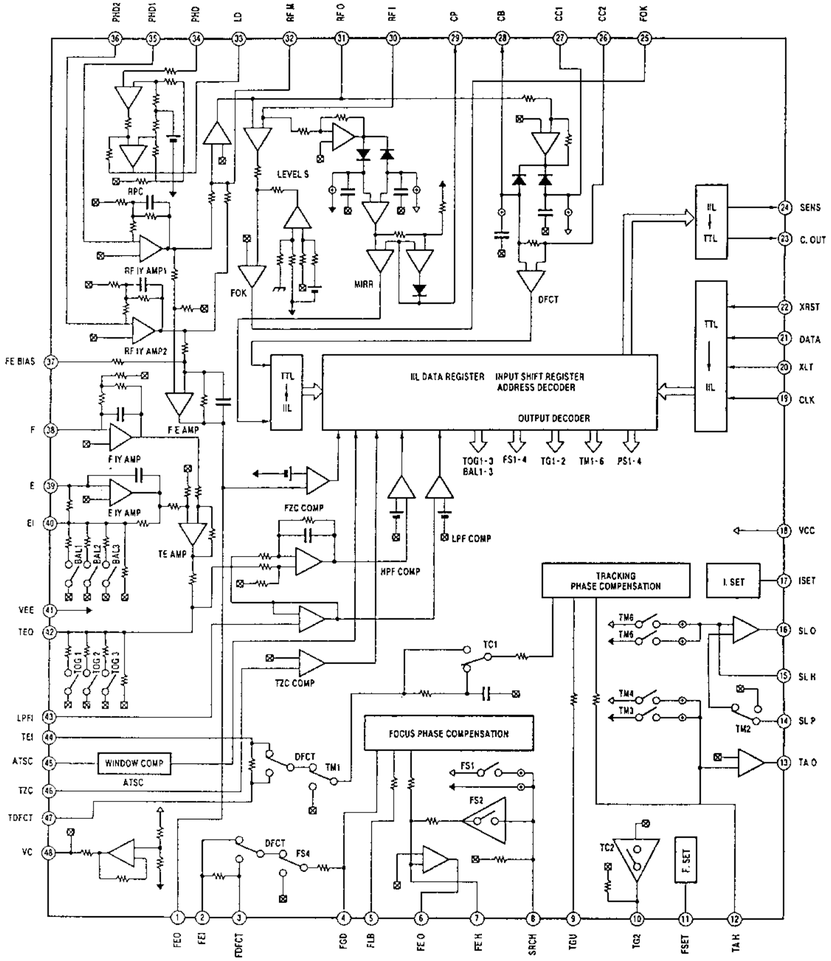
- ○— : parts extracted from the component side.
- ▨ : Pattern on the side which is seen.

● **WAVEFORMS**

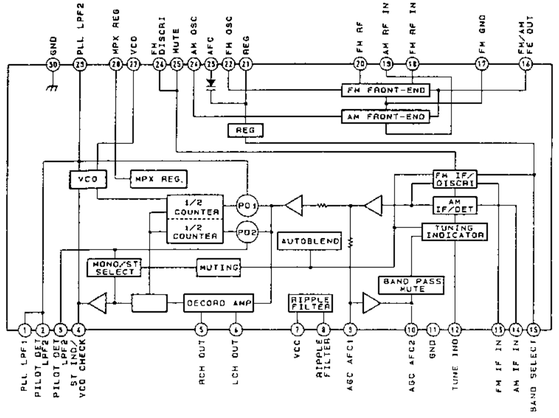

①
1.1±0.2Vp-p
IC701 ㉛
⑥
5.2Vp-p
137μ sec
IC702 ㉜
②
2.7Vp-p
7.8μ sec
IC702 ③
⑦
5.2Vp-p
137μ sec
IC702 ㉝
③
5.4Vp-p
23.8μ sec
IC702 ⑳
⑧
5.3Vp-p
16.9344MHz
IC702 ㉟
④
5.2Vp-p
137μ sec
IC702 ㉘
⑨
0.2Vp-p
4.19MHz
IC801 ⑨
⑤
5.2Vp-p
137μ sec
IC702 ㉛
⑩
1.2Vp-p
32.768kHz
IC801 ⑫

● IC BLOCK DIAGRAMS

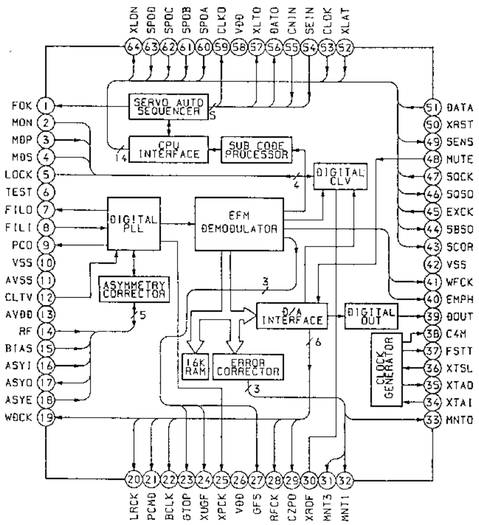
IC701 CXA1782BQ



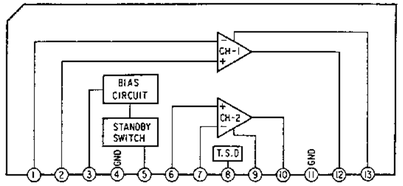
IC1 CXA1238S



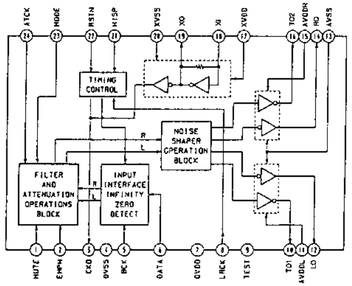
IC702 CXD2507AQ



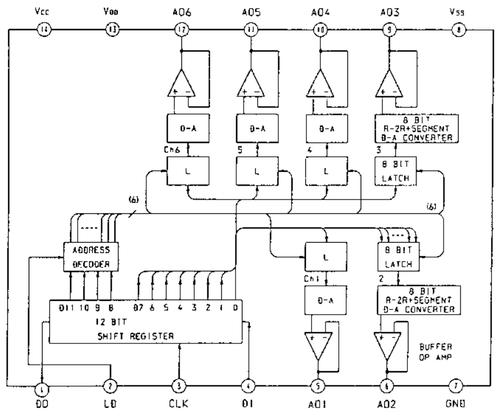
IC305 LA4597



IC704 SM5877AM



IC803 M62354P

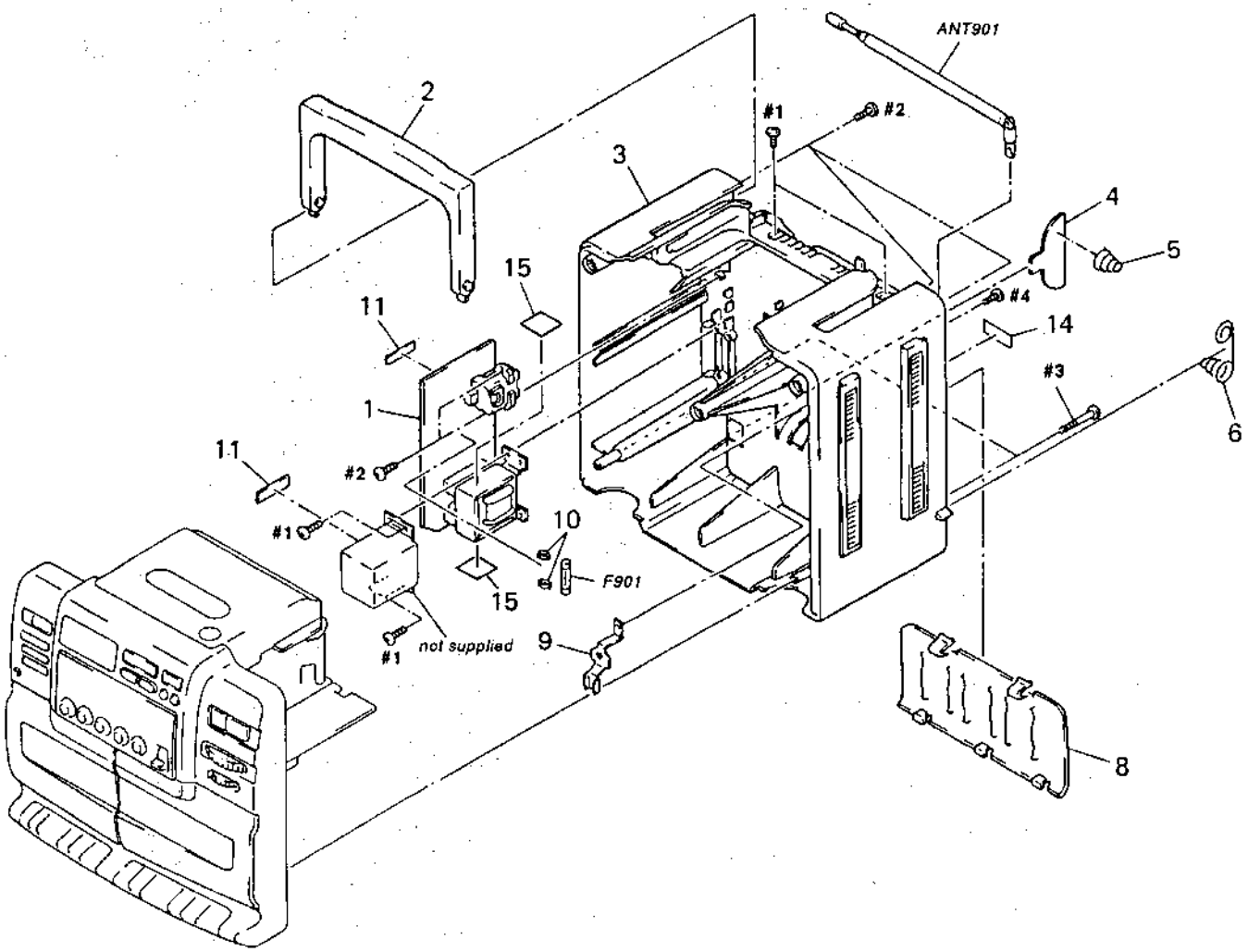


SECTION 8
EXPLODED VIEWS

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
  IT : Italian
  EE : East European

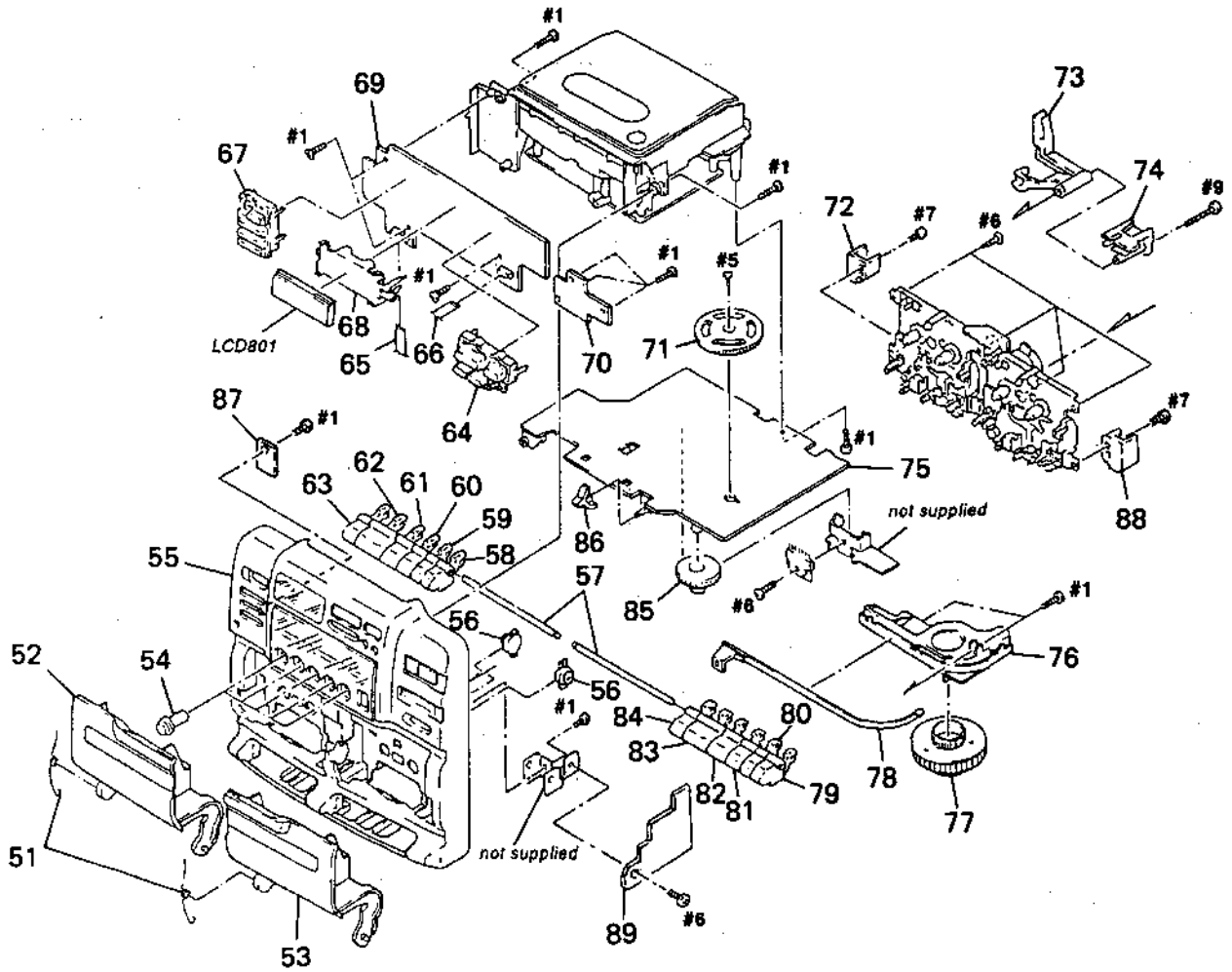
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

8-1. CABINET (REAR) SECTION



Ref. No.	Part No.	Description	Remark
1	1-663-127-11	POWER BOARD	
2	4-982-696-01	HANDLE	
* 3	3-934-479-21	CABINET (REAR)	
* 4	1-663-128-11	BATTERY BOARD	
5	4-981-939-01	SPRING (BATT)	
6	4-981-940-01	TERMINAL (+,-), BATTERY	
8	4-982-685-01	LID, BATTERY CASE	
9	4-981-942-01	TERMINAL (ANT)	
10	1-533-233-11	HOLDER, FUSE	
* 11	3-376-847-01	CUSHION, SARANET	
* 14	4-941-548-01	LABEL, CLASS (1) (AEP)	
* 15	3-561-427-21	CUSHION	
ANT901	1-501-383-21	ANTENNA, TELESCOPIC	
⚠F901	1-532-464-31	FUSE,TIMEMLAG (T2.5AL/250V)	

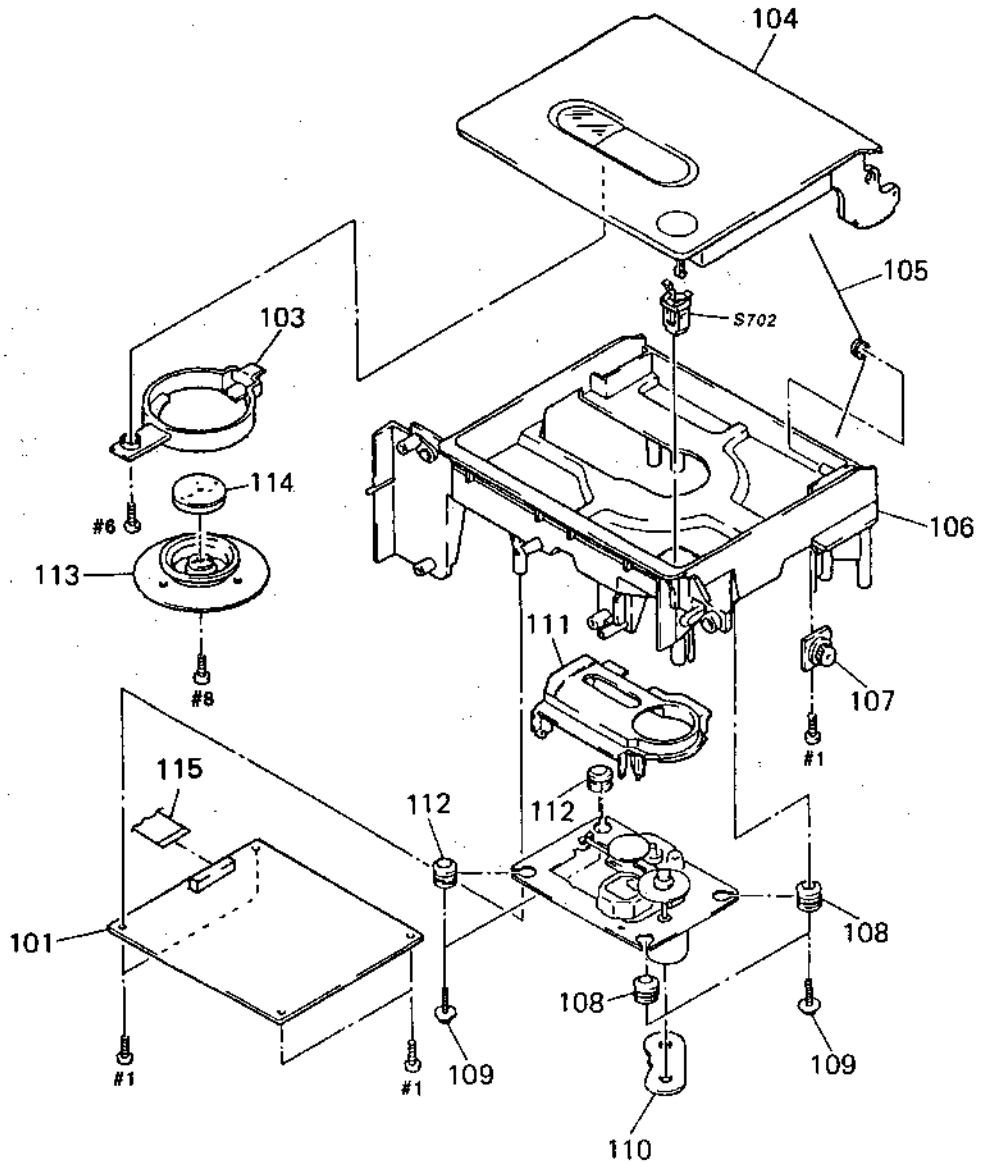
8-2. CABINET (FRONT) SECTION



Ref. No.	Part No.	Description	Remark
51	4-981-821-01	SPRING (CASSETTE)	
52	A-3304-692-A	HOLDER (A) ASSY, CASSETTE	
53	A-3311-011-A	HOLDER (B) ASSY, CASSETTE	
54	4-982-687-01	KNOB (REQ)	
55	A-3304-996-A	CABINET SUB ASSY, FRONT (EE)	
55	A-3311-002-A	CABINET SUB ASSY, FRONT (IT)	
55	A-3311-010-A	CABINET SUB ASSY, FRONT (AEP, UK)	
56	3-343-248-01	DAMPER (P), SMALL	
* 57	4-981-937-01	SHAFT (MD)	
58	3-934-495-01	BUTTON (POUSE-A), MD(DECK-A)	
59	3-934-494-01	BUTTON (S/E-A), MD(DECK-A)	
60	3-934-493-01	BUTTON (FF-A), MD(DECK-A)	
61	3-934-492-01	BUTTON (REW-A), MD(DECK-A)	
62	3-934-491-01	BUTTON (PLAY-A), MD(DECK-A)	
63	3-934-490-01	BUTTON (HI-DUB), MD(DECK-A)	
64	4-982-348-01	BUTTON (CD)	
65	1-765-666-12	WIRE, PARALLEL (FFC) (13 CORE)	
66	1-765-665-11	WIRE, PARALLEL (FFC) (9 CORE)	
67	4-982-347-01	BUTTON (FUNC)	
* 68	3-934-882-01	HOLDER (LCD)	
* 69	A-3306-115-A	CONTROL BOARD, COMPLETE	
* 70	1-662-861-11	VOLUME BOARD	

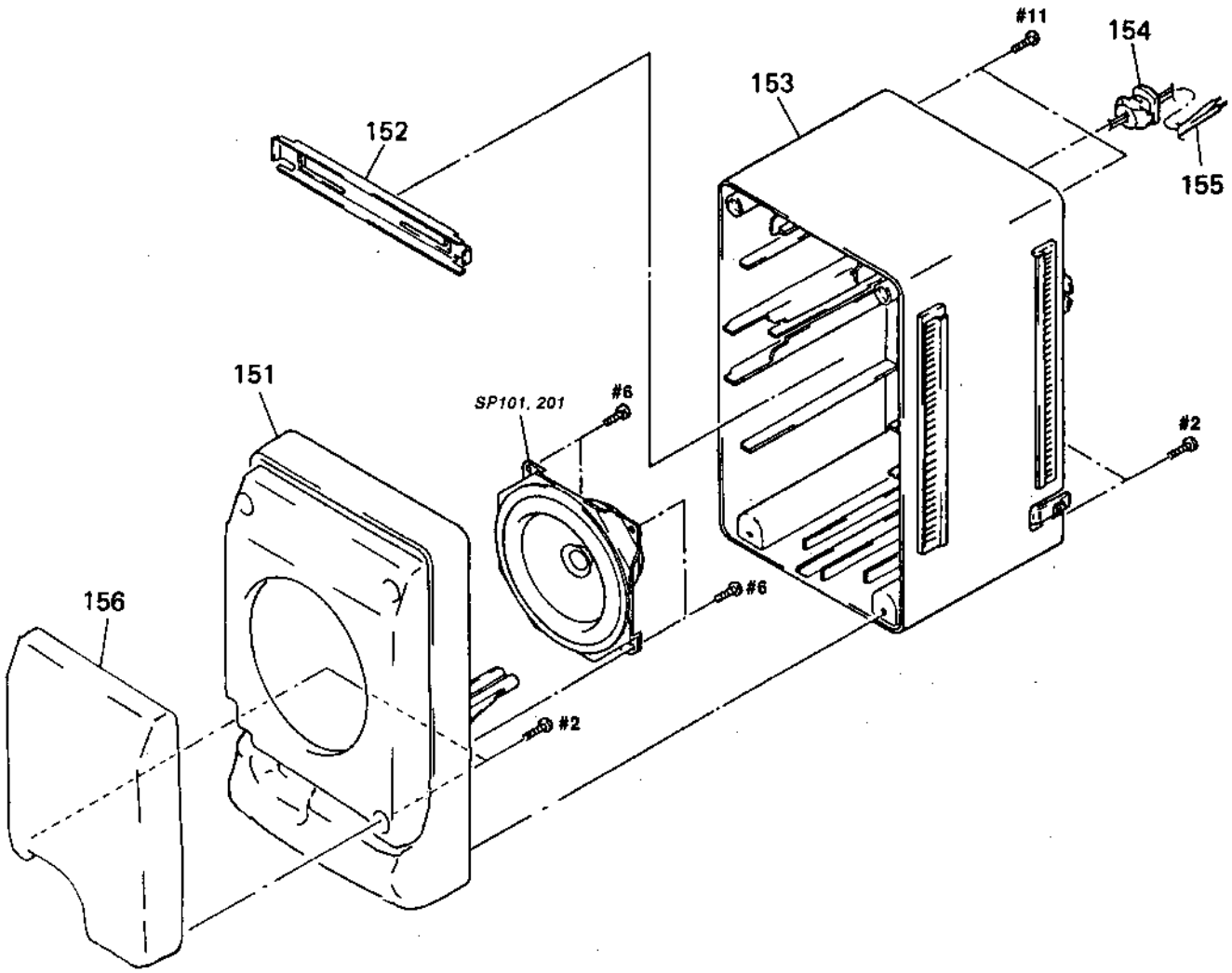
Ref. No.	Part No.	Description	Remark
71	4-982-688-01	GEAR (VC)	
* 72	3-934-503-01	BRACKET (MD-L)	
73	3-934-880-01	LEVER (A) (REC PUSH)	
74	3-934-881-01	LEVER (B) (REC PUSH)	
* 75	A-3306-177-A	MAIN BOARD, COMPLETE (EE)	
* 75	A-3306-180-A	MAIN BOARD, COMPLETE (AEP, UK)	
* 75	A-3306-220-A	MAIN BOARD, COMPLETE (IT)	
* 76	4-982-693-01	CHASSIS (DIAL)	
77	4-982-690-01	KNOB (TUNE)	
78	4-982-494-01	POINTER	
79	3-934-501-01	BUTTON (POUSE-B), MD(DECK-B)	
80	3-934-500-01	BUTTON (S/E-B), MD(DECK-B)	
81	3-934-499-01	BUTTON (FF-B), MD(DECK-B)	
82	3-934-498-01	BUTTON (REW-B), MD(DECK-B)	
83	3-934-497-01	BUTTON (PLAY-B), MD(DECK-B)	
84	3-934-496-01	BUTTON (REC), MD(DECK-B)	
85	4-982-697-01	KNOB (FT)	
86	4-982-689-01	KNOB (BAND)	
* 87	1-662-862-11	H/P SUPPORT PC BOARD	
* 88	3-934-502-01	BRACKET (MD-R)	
* 89	A-3306-181-A	TC BOARD, COMPLETE	
LCD801	1-810-499-11	DISPLAY PANEL, LIQUID CRYSTAL	

8-3. CD SECTION



Ref. No.	Part No.	Description	Remark
* 101	A-3306-113-A	CD MAIN BOARD, COMPLETE	
103	3-923-733-01	HOLDER (CHUCK)	
104	A-3311-014-A	LID SUB ASSY, CD	
105	4-981-941-01	SPRING (CD)	
* 106	4-982-695-01	CHASSIS (CD)	
107	3-922-112-11	DAMPER	
108	3-910-095-11	RUBBER, VIBRATION PROOF	
109	3-916-006-01	SCREW (2.6X16)	
* 110	1-662-860-11	CD MOTOR BOARD	
111	3-923-736-01	COVER, CD	
112	3-910-095-01	RUBBER, VIBRATION PROOF	
113	3-920-158-01	PLATE, CHUCKING	
114	1-452-732-11	MAGNET	
115	1-769-824-11	WIRE (FLAT TYPE) (16 CORE)	
S702	1-692-960-11	SWITCH, PUSH (1 KEY) (OPEN/CLOSE)	

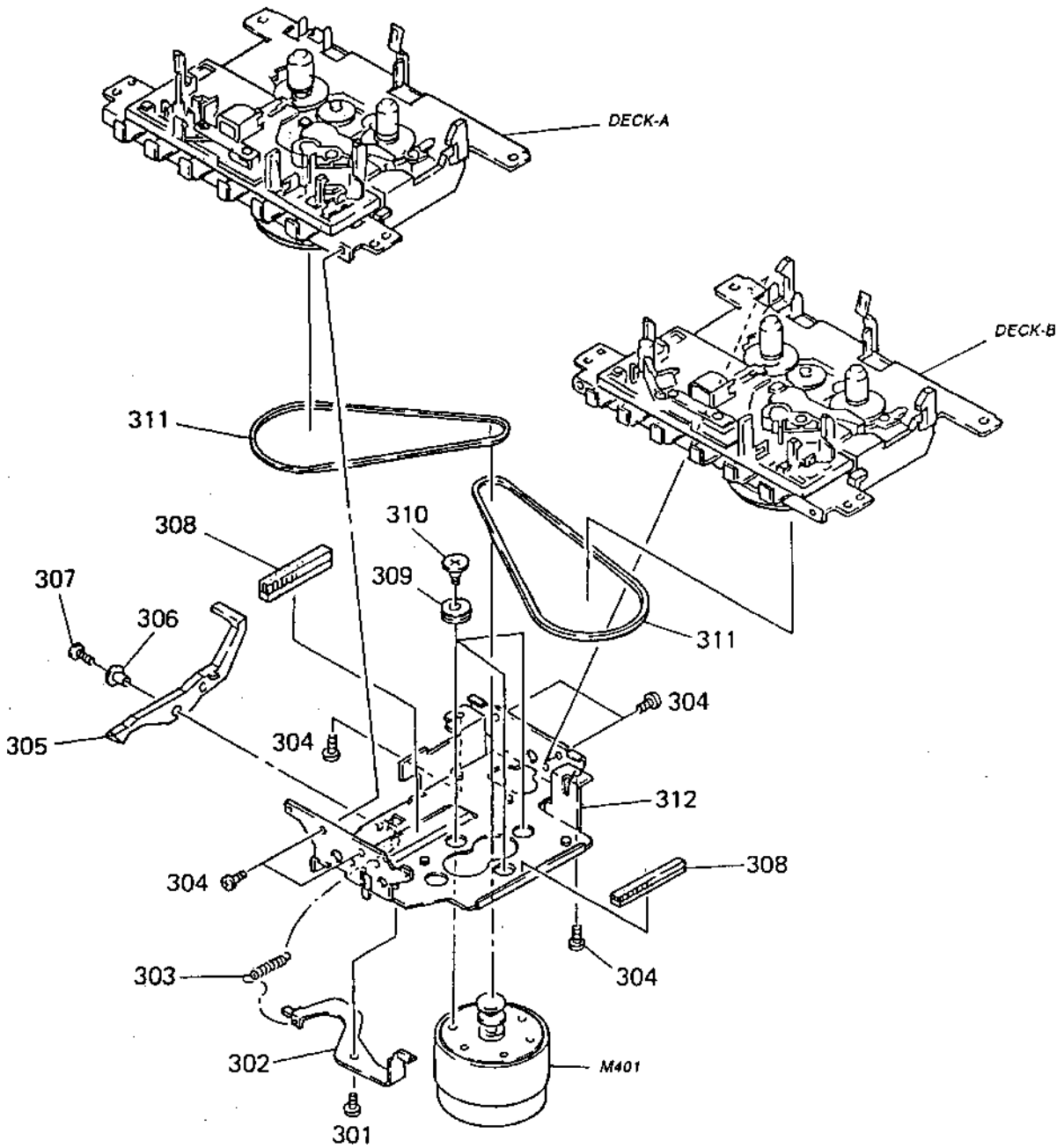
8-4. SPEAKER SECTION



Ref. No.	Part No.	Description	Remark
151	3-934-608-01	CABINET (FRONT), SPEAKER (L-CH)	
151	3-934-609-01	CABINET (FRONT), SPEAKER (R-CH)	
* 152	4-981-934-01	BRACKET (SPEAKER)	
* 153	4-982-492-01	CABINET (REAR), SPEAKER (L-CH)	
* 153	4-982-493-01	CABINET (REAR), SPEAKER (R-CH)	
* 154	4-982-686-01	STOPPER, CORD	

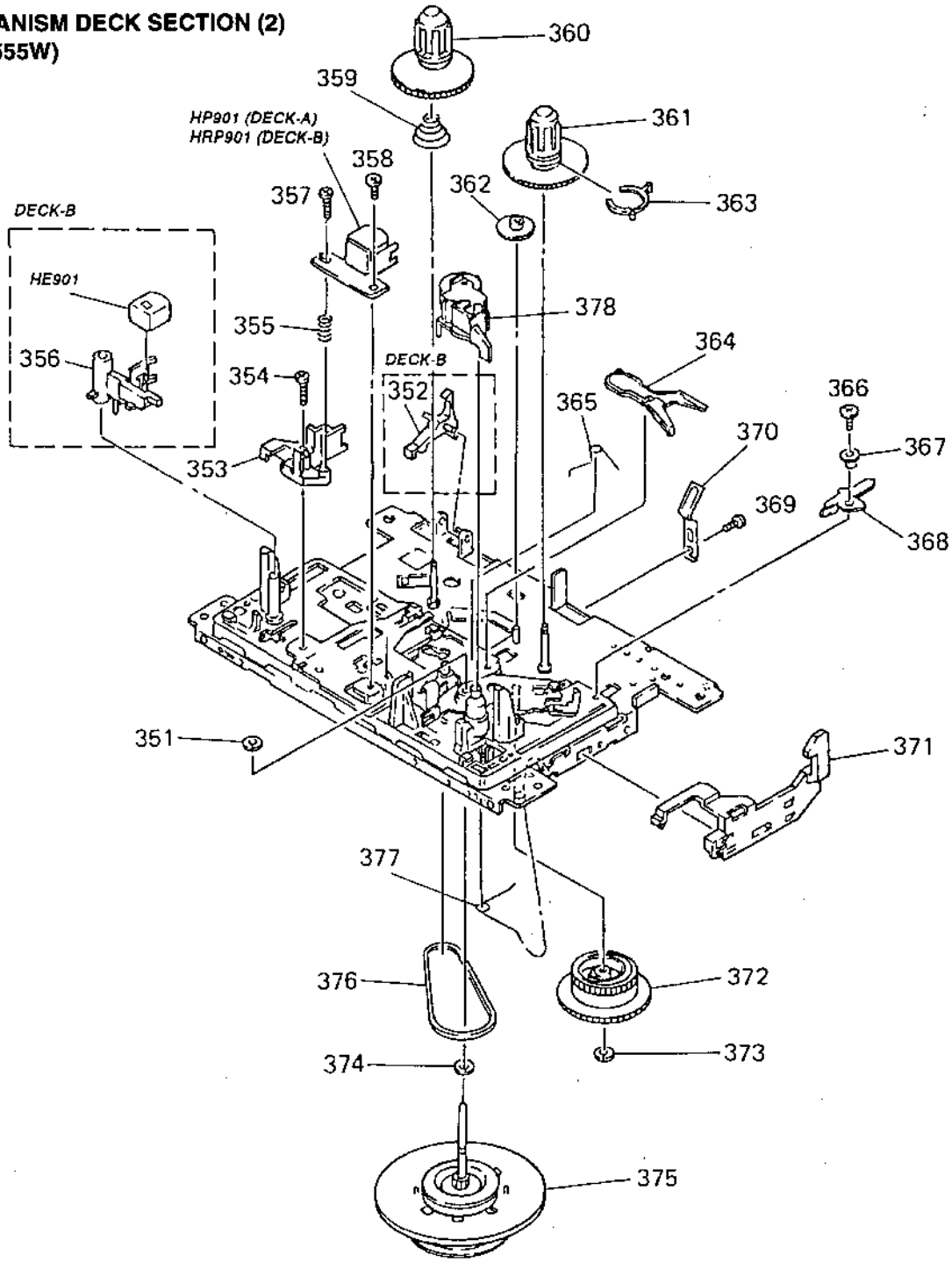
Ref. No.	Part No.	Description	Remark
155	1-690-969-11	CORD, SPEAKER CONNECTION	
156	X-3372-428-1	NET SUB ASSY, SPEAKER (L-CH)	
156	X-3372-429-1	NET SUB ASSY, SPEAKER (R-CH)	
SP101	1-504-269-21	SPEAKER (10cm) (L-CH)	
SP201	1-504-269-21	SPEAKER (10cm) (R-CH)	

8-5. MECHANISM DECK SECTION (1)
(MF-D555W)



Ref. No.	Part No.	Description	Remark
301	3-915-826-01	SCREW (A), PK COLLAR	
* 302	3-915-825-01	LEVER (A), P KICK	
303	3-915-537-01	SPRING, P KICK LEVER	
304	3-915-809-01	SCREW (M2X4), C TIGHT	
305	3-915-824-01	LEVER (B), P KICK	
306	3-915-827-01	COLLAR (B)	
307	3-915-815-01	SCREW (M2X6), C TIGHT	
308	3-915-803-01	MAT, VIBRATION PROOF	
309	3-915-799-01	RUBBER, MOTOR	
310	3-915-800-01	SCREW, MOTOR COLLAR	
311	3-937-800-01	BELT, MAIN	
* 312	3-937-799-01	BRACKET, MOTOR	
M401	X-3369-087-1	MOTOR ASSY	

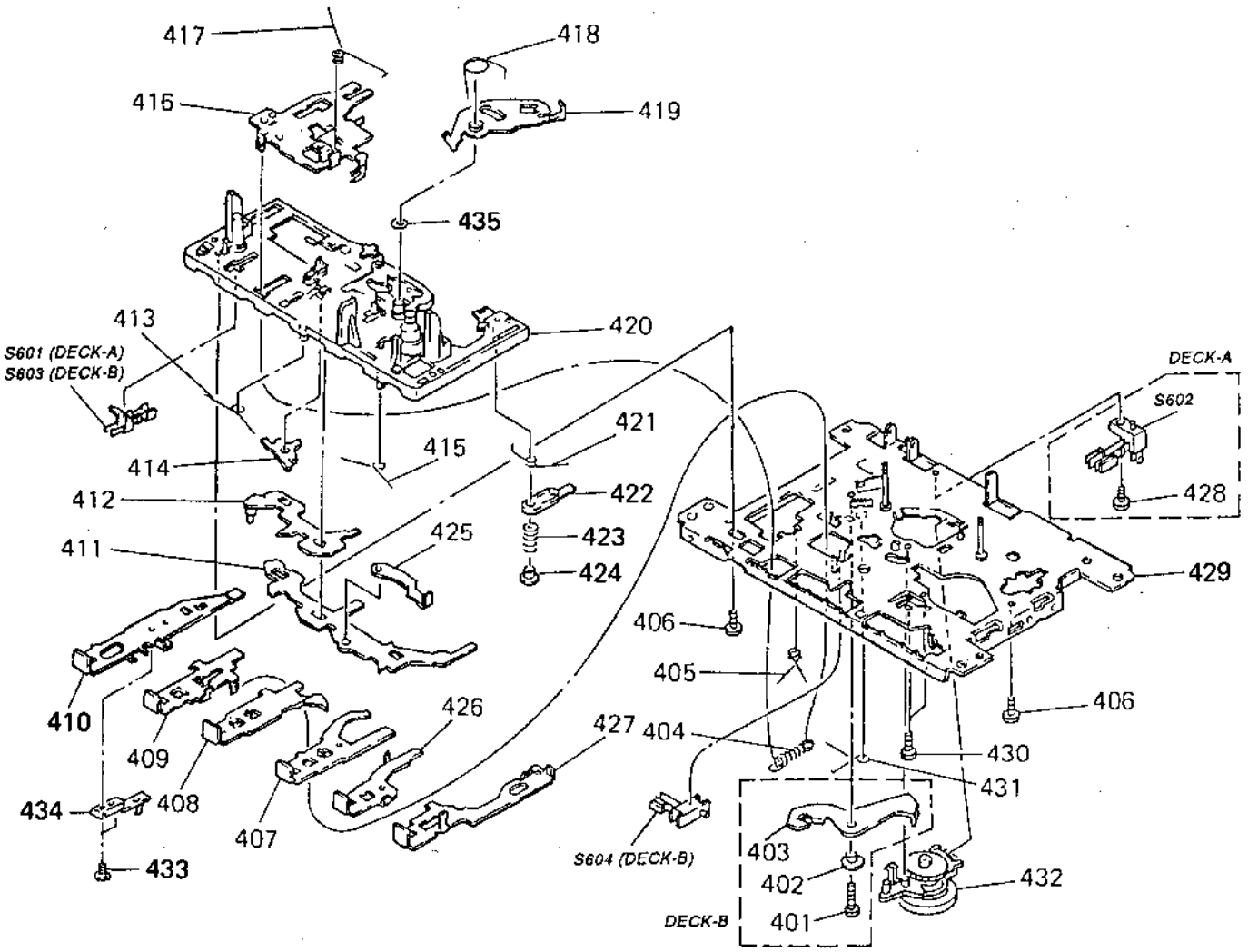
8-6. MECHANISM DECK SECTION (2) (MF-D555W)



Ref. No.	Part No.	Description	Remark
351	3-915-818-01	WASHER, POLY-SLIDER	
352	3-915-806-01	LEVER, REC SAFETY (DECK-B)	
353	3-915-777-01	BASE, HEAD	
354	3-915-812-01	SCREW (M2X6), PAN	
355	3-915-783-01	SPRING, AZIMUTH	
356	3-915-782-01	ARM, MG(DECK-B)	
357	3-915-814-01	SCREW (M2X7), AZIMUTH	
358	3-915-813-01	SCREW (M2X3), + BIND	
359	3-915-794-01	SPRING, BACK TENSION	
360	3-915-795-01	REEL ASSY, SUPPLY	
361	3-915-796-01	REEL ASSY, TAKE-UP	
362	3-915-793-01	GEAR, FF	
363	3-915-797-01	SENSOR	
364	3-915-785-01	LEVER, SENSING	
365	3-915-781-01	SPRING, M CONTROL	
366	3-915-816-01	SCREW (M2X3), PS TIGHT	

Ref. No.	Part No.	Description	Remark
367	3-915-874-01	COLLAR, P ARM	
368	3-915-873-01	ARM, P	
369	3-915-808-01	SCREW (M2X3), C TIGHT	
370	3-915-805-01	PLATE, SPRING, PACK RETAINER	
371	3-915-804-01	LEVER, EJECT SLIDE	
372	3-915-792-01	GEAR, CAM	
373	3-915-817-01	WASHER, POLY-SLIDER	
374	3-933-858-01	P WASHER 2X3.5X0.4	
375	3-915-788-01	FLYWHEEL ASSY (DECK-B)	
375	3-915-789-01	FLYWHEEL ASSY (DECK-A)	
376	3-915-787-01	BELT, RF	
377	3-915-758-01	SPRING, E ACTUATOR	
378	3-915-784-01	ARM ASSY, PINCH ROLLER	
HE901	1-500-139-11	HEAD (ERASE)(DECK-B)	
HP901	1-500-370-11	HEAD (PLAYBACK) (DECK-A)	
HRP901	1-500-138-11	HEAD (RECORD/PLAYBACK) (DECK-B)	

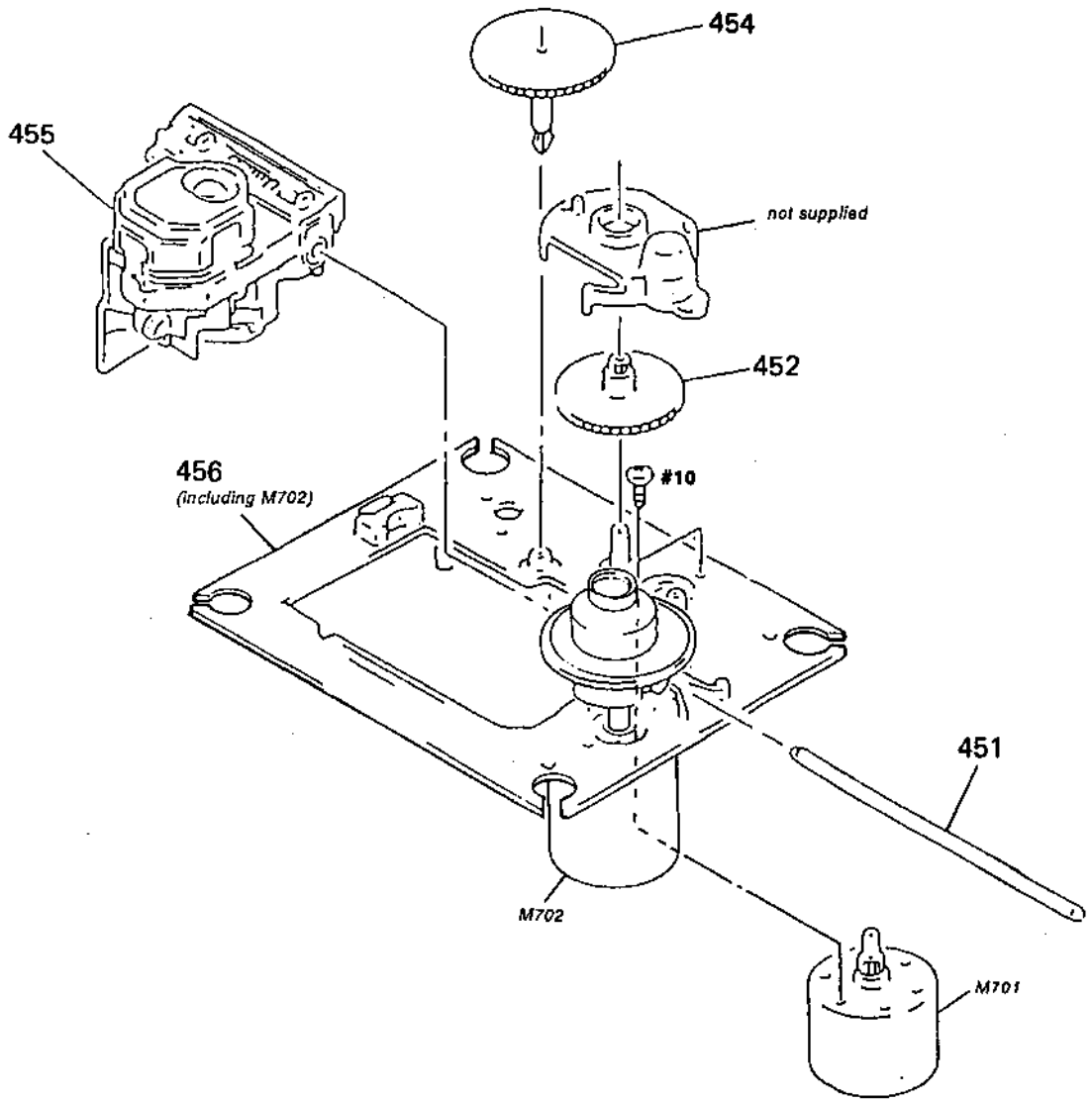
8-7. MECHANISM DECK SECTION (3)
(MF-D555W)



Ref. No.	Part No.	Description	Remark
401	3-915-809-01	SCREW (M2X4), C TIGHT (DECK-B)	
402	3-915-874-01	COLLAR, P ARM (DECK-B)	
* 403	3-915-453-01	ARM, REC (DECK-B)	
404	3-915-775-01	SPRING (S), PLAY BUTTON LEVER	
405	3-915-759-01	SPRING, PS LEVER	
406	3-915-810-01	SCREW (M2X5), P TIGHT BIND	
* 407	3-915-749-01	LEVER, FF BUTTON	
* 408	3-915-745-01	LEVER, REW BUTTON	
* 409	3-915-744-01	LEVER, PLAY BUTTON	
* 410	3-915-743-01	LEVER, REC BUTTON	
* 411	3-915-742-01	PLATE, FUNCTION, PUSH BUTTON	
* 412	3-915-741-01	PLATE, FUNCTION, SWITCH	
413	3-915-756-01	SPRING (A), BUTTON LEVER	
* 414	3-915-772-01	STOPPER, PR	
415	3-915-774-01	SPRING (B), BUTTON LEVER	
416	3-915-776-01	PANEL, HEAD	
417	3-915-780-01	SPRING, PANEL (P)	
418	3-915-790-01	SPRING, GEAR PLATE	
* 419	3-915-791-01	PLATE ASSY, GEAR	
420	3-937-797-01	BASE ASSY	

Ref. No.	Part No.	Description	Remark
421	3-915-752-01	SPRING, P CONTROL	
* 422	3-915-753-01	LEVER (E), PAUSE	
423	3-915-754-01	SPRING, PAUSE LEVER	
424	3-915-755-01	STOPPER, PAUSE	
* 425	3-915-760-01	LEVER, E KICK	
* 426	3-915-750-01	LEVER, STOP BUTTON (DECK-A)	
* 426	3-937-801-01	LEVER, STOP BUTTON (DECK-B)	
* 427	3-915-751-01	LEVER, PAUSE BUTTON	
428	3-915-807-01	SCREW (M2X5), C TIGHT (DECK-A)	
* 429	3-915-757-01	CHASSIS ASSY	
430	3-915-811-01	SCREW (M2X4.5), CAMERA TAPPING	
431	3-915-773-01	SPRING, REC BUTTON LEVER	
432	3-937-798-01	CLUTCH ASSY, RF	
433	3-915-808-01	SCREW (M2X3), C TIGHT	
* 434	3-937-802-01	BRACKET ASSY, REC	
435	3-937-804-01	WASHER (1.7X3.2X0.4), NYLON	
S601	1-762-022-11	SWITCH, LEAF (MOTOR) (DECK-A)	
S602	1-762-024-11	SWITCH, LEAF (HI-SPEED) (DECK-A)	
S603	1-762-023-11	SWITCH, LEAF (MOTOR) (DECK-B)	
S604	1-762-022-11	SWITCH, LEAF (PLAY) (DECK-B)	

8-8. OPTICAL PICK-UP SECTION (KSM-213BAN/S-N)



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

Ref. No.	Part No.	Description	Remark
451	2-626-908-01	SHAFT SLED	
452	2-627-003-01	GEAR(B)(RP)	
454	2-626-907-01	GEAR(A)(S)	
⚠455	8-848-379-31	OPTICAL PICK-UP KSS-213B/S-N	

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

SECTION 9
ELECTRICAL PARTS LIST

BATTERY **CD 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 : μ , for example :
  uA.... : μ A.... , uPA.... : μ PA....
  uPB.... : μ PB.... , uPC.... : μ PC....
  uPD.... : μ PD....
- CAPACITORS
  uF : μ F
- COILS
  uH : μ H
- Abbreviation
  IT : Italian
  EE : East European

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

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

Ref. No.	Part No.	Description			Remark
*	1-663-128-12	BATTERY BOARD			
		**********			
	4-981-939-01	SPRING (BATT)			
		< CAPACITOR >			
C905	1-162-306-11	CERAMIC	0.01uF	20%	16V
**********					
*	A-3306-113-A	CD MAIN BOARD, COMPLETE			
		**********			
		< CAPACITOR >			
C700	1-162-306-11	CERAMIC	0.01uF	30%	16V
C701	1-162-302-11	CERAMIC	0.0022uF	30%	16V
C702	1-136-165-00	FILM	0.1uF	5%	50V
C703	1-136-165-00	FILM	0.1uF	5%	50V
C704	1-136-165-00	FILM	0.1uF	5%	50V
C705	1-131-375-00	TANTALUM	4.7uF	10%	10V
C706	1-130-489-00	MYLAR	0.033uF	5%	50V
C707	1-136-156-00	MYLAR	0.018uF	5%	50V
C708	1-162-199-31	CERAMIC	10PF	5%	50V
C709	1-126-962-11	ELECT	3.3uF	20%	50V
C710	1-130-493-00	MYLAR	0.068uF	5%	50V
C711	1-162-215-31	CERAMIC	47PF	5%	50V
C712	1-162-306-11	CERAMIC	0.01uF	30%	16V
C713	1-130-489-00	MYLAR	0.033uF	5%	50V
C714	1-162-306-11	CERAMIC	0.01uF	30%	16V
C715	1-130-489-00	MYLAR	0.033uF	5%	50V
C716	1-136-169-00	FILM	0.22uF	5%	50V
C717	1-104-666-11	ELECT	47uF	20%	10V
C718	1-124-907-11	ELECT	10uF	20%	50V
C721	1-130-491-00	MYLAR	0.047uF	5%	50V
C722	1-161-494-00	CERAMIC	0.022uF		25V
C723	1-136-165-00	FILM	0.1uF	5%	50V
C725	1-162-199-31	CERAMIC	10PF	5%	50V
C726	1-162-294-31	CERAMIC	0.001uF	10%	50V
C727	1-162-306-11	CERAMIC	0.01uF	30%	16V

Ref. No.	Part No.	Description			Remark
C728	1-164-159-11	CERAMIC	0.1uF		50V
C729	1-124-589-11	ELECT	47uF	20%	16V
C730	1-124-473-11	ELECT	1000uF	20%	10V
C731	1-162-294-31	CERAMIC	0.001uF	10%	50V
C732	1-130-484-00	MYLAR	0.012uF	5%	50V
C734	1-162-305-11	CERAMIC	0.0068uF	30%	16V
C737	1-162-294-31	CERAMIC	0.001uF	10%	50V
C738	1-162-294-31	CERAMIC	0.001uF	10%	50V
C740	1-164-159-11	CERAMIC	0.1uF		50V
C741	1-124-589-11	ELECT	47uF	20%	16V
C742	1-136-173-00	FILM	0.47uF	5%	50V
C743	1-162-290-31	CERAMIC	470PF	10%	50V
C744	1-162-286-31	CERAMIC	220PF	10%	50V
C745	1-136-169-00	FILM	0.22uF	5%	50V
C746	1-162-306-11	CERAMIC	0.01uF	30%	16V
C747	1-130-483-00	MYLAR	0.01uF	5%	50V
C750	1-164-159-11	CERAMIC	0.1uF		50V
C751	1-162-306-11	CERAMIC	0.01uF	30%	16V
C752	1-162-199-31	CERAMIC	10PF	5%	50V
C753	1-162-199-31	CERAMIC	10PF	5%	50V
C754	1-104-666-11	ELECT	220uF	20%	10V
C755	1-164-159-11	CERAMIC	0.1uF		50V
C756	1-162-306-11	CERAMIC	0.01uF	30%	16V
C758	1-162-306-11	CERAMIC	0.01uF	30%	16V
C759	1-162-306-11	CERAMIC	0.01uF	30%	16V
C760	1-126-176-11	ELECT	220uF	20%	10V
C763	1-162-600-11	CERAMIC	0.0047uF	30%	16V
C764	1-126-163-11	ELECT	4.7uF	20%	50V
C773	1-162-600-11	CERAMIC	0.0047uF	30%	16V
C774	1-126-163-11	ELECT	4.7uF	20%	50V
C780	1-162-306-11	CERAMIC	0.01uF	30%	16V
C781	1-126-176-11	ELECT	220uF	20%	10V
C782	1-162-294-31	CERAMIC	0.001uF	10%	50V
C784	1-130-491-00	MYLAR	0.047uF	5%	50V
C785	1-162-306-11	CERAMIC	0.01uF	30%	16V
C787	1-104-666-11	ELECT	220uF	20%	10V
C788	1-162-306-11	CERAMIC	0.01uF	30%	16V

CD MAIN | CD MOTOR | CONTROL

Ref. No.	Part No.	Description			Remark
C792	1-162-291-31	CERAMIC	560PF	10%	50V
C793	1-162-301-11	CERAMIC	0.0015uF	30%	16V
C794	1-162-292-31	CERAMIC	680PF	10%	50V
C796	1-162-306-11	CERAMIC	0.01uF	30%	16V
C797	1-162-294-31	CERAMIC	0.001uF	10%	50V
		< CONNECTOR >			
* CN703	1-691-577-11	PIN, CONNECTOR (PC BOARD) 6P			
* CN704	1-695-110-11	PIN, CONNECTOR (PC BOARD) 8P			
CN706	1-568-852-11	PIN, CONNECTOR (PC BOARD) 9P			
CNP701	1-770-168-11	CONNECTOR, FFC/FPC 16P			
		< DIODE >			
D702	8-719-987-63	DIODE 1N4148M			
D703	8-719-987-63	DIODE 1N4148M			
		< IC >			
IC701	8-752-069-56	IC CXA1782BQ			
IC702	8-752-372-94	IC CXD2507AQ			
IC703	8-759-336-75	IC BA5930FP			
IC704	8-759-426-44	IC SM5877AM			
		< TRANSISTOR >			
Q701	8-729-801-84	TRANSISTOR 2SB1013-4			
Q703	8-729-036-80	TRANSISTOR KRC110M			
		< RESISTOR >			
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	1-247-883-00	CARBON	150K	5%	1/4W
R705	1-249-437-11	CARBON	47K	5%	1/4W
R706	1-247-876-11	CARBON	75K	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
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
R720	1-247-891-00	CARBON	330K	5%	1/4W
R722	1-249-439-11	CARBON	68K	5%	1/4W
R723	1-249-440-11	CARBON	82K	5%	1/4W
R725	1-249-437-11	CARBON	47K	5%	1/4W
R726	1-249-429-11	CARBON	10K	5%	1/4W
R727	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

Ref. No.	Part No.	Description			Remark
R734	1-249-437-11	CARBON	47K	5%	1/4W
R735	1-249-425-11	CARBON	4.7K	5%	1/4W
R736	1-249-429-11	CARBON	10K	5%	1/4W
R740	1-247-843-11	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
R748	1-249-429-11	CARBON	10K	5%	1/4W
R749	1-249-429-11	CARBON	10K	5%	1/4W
R751	1-249-429-11	CARBON	10K	5%	1/4W
R753	1-249-429-11	CARBON	10K	5%	1/4W
R755	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	1-249-439-11	CARBON	68K	5%	1/4W
R766	1-249-417-11	CARBON	1K	5%	1/4W
R776	1-249-417-11	CARBON	1K	5%	1/4W
R791	1-249-425-11	CARBON	4.7K	5%	1/4W
R792	1-249-429-11	CARBON	10K	5%	1/4W
		< VARIABLE RESISTOR >			
RV701	1-230-497-11	RES, ADJ, CARBON 22K (FOCUS BIAS)			
RV702	1-230-497-11	RES, ADJ, CARBON 22K (FOCUS GAIN)			
RV703	1-223-459-11	RES, ADJ, CERMET 2.2K (E-F BALANCE)			
RV704	1-237-288-11	RES, ADJ, CARBON 47K (TRACKING GAIN)			
		< VIBRATOR >			
X701	1-760-793-11	VIBRATOR, CERAMIC (16.9344MHz)			
**********					
*	1-662-860-11	CD MOTOR BOARD			
		**********			
		< SWITCH >			
S701	1-571-936-11	SWITCH, LEAF (LIMIT)			
**********					
*	A-3306-115-A	CONTROL BOARD, COMPLETE			
		**********			
*	3-934-882-01	HOLDER (LCD)			
		< CAPACITOR >			
C801	1-162-282-31	CERAMIC	100PF	10%	50V
C803	1-162-282-31	CERAMIC	100PF	10%	50V
C804	1-162-282-31	CERAMIC	100PF	10%	50V
C805	1-162-282-31	CERAMIC	100PF	10%	50V
C806	1-162-282-31	CERAMIC	100PF	10%	50V
C807	1-162-282-31	CERAMIC	100PF	10%	50V

Ref. No.	Part No.	Description			Remark
C808	1-162-282-31	CERAMIC	100PF	10%	50V
C810	1-162-282-31	CERAMIC	100PF	10%	50V
C811	1-162-282-31	CERAMIC	100PF	10%	50V
C812	1-162-282-31	CERAMIC	100PF	10%	50V
C813	1-162-282-31	CERAMIC	100PF	10%	50V
C814	1-126-787-51	ELECT	10uF	20%	25V
C815	1-162-306-11	CERAMIC	0.01uF	30%	16V
C816	1-102-962-00	CERAMIC	30PF	5%	50V
C817	1-102-962-00	CERAMIC	30PF	5%	50V
C818	1-162-197-31	CERAMIC	6.8PF	10%	50V
C819	1-162-197-31	CERAMIC	6.8PF	10%	50V
C820	1-124-907-11	ELECT	10uF	20%	50V
C821	1-162-306-11	CERAMIC	0.01uF	30%	16V
C822	1-162-306-11	CERAMIC	0.01uF	30%	16V
C823	1-124-907-11	ELECT	10uF	20%	50V
C824	1-124-907-11	ELECT	10uF	20%	50V
C825	1-104-666-11	ELECT	47uF	20%	10V
C826	1-162-306-11	CERAMIC	0.01uF	30%	16V
C827	1-162-306-11	CERAMIC	0.01uF	30%	16V
C828	1-162-306-11	CERAMIC	0.01uF	30%	16V
C829	1-162-306-11	CERAMIC	0.01uF	30%	16V
C830	1-162-306-11	CERAMIC	0.01uF	30%	16V
C831	1-162-306-11	CERAMIC	0.01uF	30%	16V
C832	1-162-306-11	CERAMIC	0.01uF	30%	16V
C833	1-162-306-11	CERAMIC	0.01uF	30%	16V
C834	1-162-306-11	CERAMIC	0.01uF	30%	16V
C835	1-162-282-31	CERAMIC	100PF	10%	50V
C836	1-162-306-11	CERAMIC	0.01uF	30%	16V
		< CONNECTOR >			
CNP801	1-568-828-11	PIN, CONNECTOR (PC BOARD) 9P			
* CNP803	1-695-374-31	PIN, CONNECTOR (PC BOARD) 13P			
		< DIODE >			
D801	8-719-048-46	LED SLZ-190B-10-T1 (OPR/BATT)			
D803	8-719-987-63	DIODE 1N4148M			
		< IC >			
IC801	8-759-350-33	IC MSM65352B-015GS-BK			
IC802	8-741-785-51	IC SBX1785-51			
IC803	8-759-179-74	IC M62354P			
IC804	8-759-165-81	IC PST600D-T			
		< CABLE HOLDER >			
* KH801	1-573-287-11	HOLDER, CABLE 2P			
* KH803	1-565-384-11	HOLDER, CABLE 3P			
		< COIL >			
L801	1-410-525-11	INDUCTOR	220uH		
L802	1-410-525-11	INDUCTOR	220uH		

Ref. No.	Part No.	Description			Remark
		< LIQUID CRYSTAL DISPLAY >			
LCD801	1-810-499-11	DISPLAY PANEL, LIQUID CRYSTAL			
		< TRANSISTOR >			
Q801	8-729-037-29	TRANSISTOR KRA102M			
		< RESISTOR >			
R801	1-249-417-11	CARBON	1K	5%	1/4W
R802	1-249-417-11	CARBON	1K	5%	1/4W
R803	1-249-417-11	CARBON	1K	5%	1/4W
R804	1-249-417-11	CARBON	1K	5%	1/4W
R805	1-249-417-11	CARBON	1K	5%	1/4W
R806	1-249-417-11	CARBON	1K	5%	1/4W
R807	1-249-417-11	CARBON	1K	5%	1/4W
R808	1-249-417-11	CARBON	1K	5%	1/4W
R809	1-249-417-11	CARBON	1K	5%	1/4W
R810	1-249-417-11	CARBON	1K	5%	1/4W
R811	1-249-417-11	CARBON	1K	5%	1/4W
R812	1-249-417-11	CARBON	1K	5%	1/4W
R813	1-249-417-11	CARBON	1K	5%	1/4W
R814	1-249-419-11	CARBON	1.5K	5%	1/4W
R815	1-247-883-00	CARBON	150K	5%	1/4W
R816	1-247-883-00	CARBON	150K	5%	1/4W
R817	1-247-883-00	CARBON	150K	5%	1/4W
R818	1-247-889-00	CARBON	270K	5%	1/4W
R819	1-249-417-11	CARBON	1K	5%	1/4W
R828	1-249-425-11	CARBON	4.7K	5%	1/4W
R829	1-249-425-11	CARBON	4.7K	5%	1/4W
R830	1-249-425-11	CARBON	4.7K	5%	1/4W
R831	1-249-429-11	CARBON	10K	5%	1/4W
R833	1-249-418-11	CARBON	1.2K	5%	1/4W
R834	1-249-418-11	CARBON	1.2K	5%	1/4W
R835	1-249-418-11	CARBON	1.2K	5%	1/4W
R838	1-249-421-11	CARBON	2.2K	5%	1/4W
R839	1-249-421-11	CARBON	2.2K	5%	1/4W
R840	1-249-421-11	CARBON	2.2K	5%	1/4W
R843	1-249-424-11	CARBON	3.9K	5%	1/4W
R845	1-249-424-11	CARBON	3.9K	5%	1/4W
R846	1-249-425-11	CARBON	4.7K	5%	1/4W
R847	1-249-418-11	CARBON	1.2K	5%	1/4W
R848	1-249-421-11	CARBON	2.2K	5%	1/4W
R849	1-249-424-11	CARBON	3.9K	5%	1/4W
R850	1-249-421-11	CARBON	2.2K	5%	1/4W
R851	1-249-429-11	CARBON	10K	5%	1/4W
R860	1-249-413-11	CARBON	470	5%	1/4W
R862	1-249-430-11	CARBON	12K	5%	1/4W
R863	1-249-437-11	CARBON	47K	5%	1/4W
R864	1-249-437-11	CARBON	47K	5%	1/4W
R865	1-249-437-11	CARBON	47K	5%	1/4W
R866	1-249-401-11	CARBON	47	5%	1/4W
R867	1-249-417-11	CARBON	1K	5%	1/4W

CONTROL MAIN

Ref. No.	Part No.	Description			Remark
R868	1-249-437-11	CARBON	47K	5%	1/4W
R869	1-249-417-11	CARBON	1K	5%	1/4W
		< SWITCH >			
S801	1-762-798-11	SWITCH, TACT (CD)			
S802	1-762-798-11	SWITCH, TACT (STOP □)			
S803	1-762-798-11	SWITCH, TACT (RADIO)			
S804	1-762-798-11	SWITCH, TACT (PLAY/PAUSE ▷II)			
S805	1-762-798-11	SWITCH, TACT (TAPE)			
S806	1-762-798-11	SWITCH, TACT (AMS/SERCH I◀◀)			
S807	1-762-798-11	SWITCH, TACT (PLAY MODE)			
S809	1-762-798-11	SWITCH, TACT (AMS/SERCH ▶▶I)			
S810	1-762-798-11	SWITCH, TACT (DISPLAY/ENTER)			
S813	1-762-798-11	SWITCH, TACT (POWER)			
		< VIBRATOR >			
X801	1-767-130-11	VIBRATOR, CERAMIC (4.19MHz)			
X802	1-567-098-61	VIBRATOR, CRYSTAL (32.768kHz)			
**********					
*	A-3306-177-A	MAIN BOARD, COMPLETE (EE)			
*	A-3306-180-A	MAIN BOARD, COMPLETE (AEP, UK)			
*	A-3306-220-A	MAIN BOARD, COMPLETE (IT)			
		**********			
	7-685-646-79	SCREW +BVTP	3X8 TYPE2 N-S		
		< CAPACITOR >			
C1	1-162-306-11	CERAMIC	0.01uF	20%	16V
C2	1-162-286-31	CERAMIC	220PF	10%	50V (AEP, UK, IT)
C3	1-162-306-11	CERAMIC	0.01uF	20%	16V
C4	1-124-907-11	ELECT	10uF	20%	50V
C7	1-162-206-31	CERAMIC	20PF	5%	50V (AEP, UK, IT)
C7	1-162-191-31	CERAMIC	2.2PF	10%	50V (EE)
C8	1-102-961-00	CERAMIC	27PF	5%	50V (AEP, UK, IT)
C8	1-102-947-00	CERAMIC	10PF	5%	50V (EE)
C10	1-162-193-31	CERAMIC	3.3PF	10%	50V
C11	1-162-306-11	CERAMIC	0.01uF	20%	16V
C14	1-162-282-31	CERAMIC	100PF	10%	50V
C15	1-126-963-11	ELECT	4.7uF	20%	50V
C16	1-124-903-11	ELECT	1uF	20%	50V
C17	1-104-666-11	ELECT	47uF	20%	10V
C18	1-104-666-11	ELECT	47uF	20%	10V
C19	1-162-306-11	CERAMIC	0.01uF	20%	16V
C20	1-124-903-11	ELECT	1uF	20%	50V
C21	1-126-961-11	ELECT	2.2uF	20%	50V
C22	1-124-443-00	ELECT	100uF	20%	10V
C23	1-124-902-00	ELECT	0.47uF	20%	50V
C24	1-126-963-11	ELECT	4.7uF	20%	50V
C25	1-126-956-91	ELECT	0.1uF	20%	50V
C26	1-161-494-00	CERAMIC	0.022uF		25V
C27	1-162-840-51	CERAMIC	0.012uF	10%	16V
C28	1-162-840-51	CERAMIC	0.012uF	10%	16V
C29	1-124-902-00	ELECT	0.47uF	20%	50V
C30	1-124-902-00	ELECT	0.47uF	20%	50V
C34	1-162-195-31	CERAMIC	4.7PF	10%	50V
C36	1-102-942-00	CERAMIC	5.0PF	±0.5PF	50V
C38	1-162-199-31	CERAMIC	10PF	5%	50V
C39	1-104-729-11	FILM	180PF	5%	100V
C40	1-136-307-11	FILM	0.0043uF	5%	100V
C41	1-136-356-11	FILM	360PF	5%	100V
C42	1-104-731-11	FILM	270PF	5%	100V
C45	1-162-282-31	CERAMIC	100PF	10%	50V
C46	1-162-282-31	CERAMIC	100PF	10%	50V
C47	1-162-282-31	CERAMIC	100PF	10%	50V
C48	1-162-282-31	CERAMIC	100PF	10%	50V
C49	1-161-494-00	CERAMIC	0.022uF		25V
C50	1-162-282-31	CERAMIC	100PF	10%	50V
C51	1-162-294-31	CERAMIC	0.001uF	10%	50V
C52	1-162-203-31	CERAMIC	15PF	5%	50V
C54	1-162-294-31	CERAMIC	0.001uF	10%	50V (EE)
C55	1-162-206-31	CERAMIC	20PF	5%	50V
C72	1-162-306-11	CERAMIC	0.01uF	20%	16V
C101	1-162-291-31	CERAMIC	560PF	10%	50V
C102	1-162-291-31	CERAMIC	560PF	10%	50V
C103	1-162-286-31	CERAMIC	220PF	10%	50V
C104	1-162-286-31	CERAMIC	220PF	10%	50V
C105	1-136-156-00	MYLAR	0.018uF	5%	50V
C106	1-104-666-11	ELECT	47uF	20%	10V
C107	1-124-903-11	ELECT	1uF	20%	50V
C108	1-162-294-31	CERAMIC	0.001uF	10%	50V
C109	1-104-666-11	ELECT	47uF	20%	10V
C110	1-162-294-31	CERAMIC	0.001uF	10%	50V
C111	1-124-903-11	ELECT	1uF	20%	50V
C112	1-124-903-11	ELECT	1uF	20%	50V
C113	1-162-290-31	CERAMIC	470PF	10%	50V
C114	1-162-294-31	CERAMIC	0.001uF	10%	50V
C115	1-162-294-31	CERAMIC	0.001uF	10%	50V
C116	1-162-282-31	CERAMIC	100PF	10%	50V
C117	1-162-290-31	CERAMIC	470PF	10%	50V
C118	1-162-282-31	CERAMIC	100PF	10%	50V
C119	1-124-903-11	ELECT	1uF	20%	50V
C120	1-162-294-31	CERAMIC	0.001uF	10%	50V
C121	1-126-963-11	ELECT	4.7uF	20%	50V
C122	1-126-963-11	ELECT	4.7uF	20%	50V
C123	1-162-290-31	CERAMIC	470PF	10%	50V
C124	1-124-443-00	ELECT	100uF	20%	10V
C125	1-124-443-00	ELECT	100uF	20%	10V
C126	1-124-473-11	ELECT	1000uF	20%	10V

Ref. No.	Part No.	Description			Remark
C127	1-136-169-00	FILM	0.22uF	5%	50V
C152	1-162-282-31	CERAMIC	100PF	10%	50V
C153	1-126-963-11	ELECT	4.7uF	20%	50V
C155	1-126-963-11	ELECT	4.7uF	20%	50V
C156	1-162-282-31	CERAMIC	100PF	10%	50V
C201	1-162-291-31	CERAMIC	560PF	10%	50V
C202	1-162-291-31	CERAMIC	560PF	10%	50V
C203	1-162-286-31	CERAMIC	220PF	10%	50V
C204	1-162-286-31	CERAMIC	220PF	10%	50V
C205	1-136-156-00	MYLAR	0.018uF	5%	50V
C206	1-104-666-11	ELECT	47uF	20%	10V
C207	1-124-903-11	ELECT	1uF	20%	50V
C208	1-162-294-31	CERAMIC	0.001uF	10%	50V
C209	1-104-666-11	ELECT	47uF	20%	10V
C210	1-162-294-31	CERAMIC	0.001uF	10%	50V
C211	1-124-903-11	ELECT	1uF	20%	50V
C212	1-124-903-11	ELECT	1uF	20%	50V
C213	1-162-290-31	CERAMIC	470PF	10%	50V
C214	1-162-294-31	CERAMIC	0.001uF	10%	50V
C215	1-162-294-31	CERAMIC	0.001uF	10%	50V
C216	1-162-282-31	CERAMIC	100PF	10%	50V
C217	1-162-290-31	CERAMIC	470PF	10%	50V
C218	1-162-282-31	CERAMIC	100PF	10%	50V
C219	1-124-903-11	ELECT	1uF	20%	50V
C220	1-162-294-31	CERAMIC	0.001uF	10%	50V
C221	1-126-963-11	ELECT	4.7uF	20%	50V
C222	1-126-963-11	ELECT	4.7uF	20%	50V
C223	1-162-290-31	CERAMIC	470PF	10%	50V
C224	1-124-443-00	ELECT	100uF	20%	10V
C225	1-124-443-00	ELECT	100uF	20%	10V
C226	1-124-473-11	ELECT	1000uF	20%	10V
C227	1-136-169-00	FILM	0.22uF	5%	50V
C252	1-162-282-31	CERAMIC	100PF	10%	50V
C253	1-126-963-11	ELECT	4.7uF	20%	50V
C255	1-126-963-11	ELECT	4.7uF	20%	50V
C256	1-162-282-31	CERAMIC	100PF	10%	50V
C303	1-124-443-00	ELECT	100uF	20%	10V
C304	1-124-443-00	ELECT	100uF	20%	10V
C305	1-126-961-11	ELECT	2.2uF	20%	50V
C306	1-104-666-11	ELECT	47uF	20%	10V
C307	1-104-663-11	ELECT	33uF	20%	16V
C308	1-126-233-11	ELECT	22uF	20%	50V
C312	1-162-284-31	CERAMIC	150PF	10%	50V
C313	1-130-471-51	MYLAR	0.001uF	5%	50V
C316	1-104-666-11	ELECT	47uF	20%	10V
C317	1-162-303-11	CERAMIC	0.0033uF	30%	16V
C318	1-162-306-11	CERAMIC	0.01uF	20%	16V
C321	1-104-666-11	ELECT	47uF	20%	10V
C332	1-126-963-11	ELECT	4.7uF	20%	50V
C333	1-124-902-00	ELECT	0.47uF	20%	50V
C334	1-124-907-11	ELECT	10uF	20%	50V
C335	1-124-443-00	ELECT	100uF	20%	10V
C336	1-124-907-11	ELECT	10uF	20%	50V
C337	1-124-120-11	ELECT	220uF	20%	25V
C338	1-162-306-11	CERAMIC	0.01uF	20%	16V
C339	1-126-937-11	ELECT	4700uF	20%	16V
C340	1-164-159-11	CERAMIC	0.1uF	50V	
C341	1-162-306-11	CERAMIC	0.01uF	20%	16V
C342	1-104-666-11	ELECT	220uF	20%	10V
C343	1-104-666-11	ELECT	220uF	20%	10V
C344	1-162-306-11	CERAMIC	0.01uF	20%	16V
C345	1-162-306-11	CERAMIC	0.01uF	20%	16V
C346	1-162-306-11	CERAMIC	0.01uF	20%	16V
C347	1-162-306-11	CERAMIC	0.01uF	20%	16V
C349	1-162-306-11	CERAMIC	0.01uF	20%	16V
C353	1-162-282-31	CERAMIC	100PF	10%	50V
C360	1-124-443-00	ELECT	100uF	20%	10V
C361	1-124-443-00	ELECT	100uF	20%	10V
C362	1-162-306-11	CERAMIC	0.01uF	20%	16V
C363	1-162-302-11	CERAMIC	0.0022uF	30%	16V
C391	1-104-666-11	ELECT	220uF	20%	10V

< FILTER >

CF1	1-577-327-81	FILTER, CERAMIC
CF2	1-577-327-81	FILTER, CERAMIC
CF3	1-577-327-81	FILTER, CERAMIC

< COMPOSITION CIRCUIT BLOCK >

CFT1	1-233-774-11	ENCAPSULATED COMPONENT

< CONNECTOR >

*	CNP304	1-695-336-11	PIN, CONNECTOR (PC BOARD) 13P
	CNP306	1-506-986-11	PIN, CONNECTOR (PC BOARD) 4P
	CNP307	1-506-986-11	PIN, CONNECTOR (PC BOARD) 4P

< TRIMMER >

CT1	1-151-637-11	CAP, VARIABLE (AEP, UK, IT)
CT1	1-151-644-11	CAP, VARIABLE (EE)
CT2	1-151-637-11	CAP, VARIABLE (AEP, UK, IT)
CT2	1-151-644-11	CAP, VARIABLE (EE)
CT3	1-151-637-11	CAP, VARIABLE (AEP, UK, IT)
CT3	1-151-644-11	CAP, VARIABLE (EE)
CT4	1-151-637-11	CAP, VARIABLE (AEP, UK, IT)
CT4	1-151-644-11	CAP, VARIABLE (EE)
CT5	1-141-485-11	CAP, ADJ 5PF
CT6	1-141-485-11	CAP, ADJ 5PF
CT7	1-141-439-21	CAP, ADJ
CT8	1-141-439-21	CAP, ADJ

< VARIABLE CAPACITOR >

CV1	1-151-637-11	CAP, VARIABLE (AEP, UK, IT)
CV1	1-151-644-11	CAP, VARIABLE (EE)
CV2	1-151-637-11	CAP, VARIABLE (AEP, UK, IT)
CV2	1-151-644-11	CAP, VARIABLE (EE)

MAIN

Ref. No.	Part No.	Description	Remark
CV3	1-151-637-11	CAP, VARIABLE (AEP, UK, IT)	
CV3	1-151-644-11	CAP, VARIABLE (EE)	
CV4	1-151-637-11	CAP, VARIABLE (AEP, UK, IT)	
CV4	1-151-644-11	CAP, VARIABLE (EE)	
		< DIODE >	
D1	8-719-987-63	DIODE 1N4148M	
D2	8-719-987-63	DIODE 1N4148M	
D4	8-719-058-48	LED SLR-342VRTH7 (FM STEREO)	
D301	8-719-921-48	DIODE MTZJ-T-72-5.6C	
D302	8-719-109-97	DIODE RD6.8ES-B2	
D305	8-719-987-63	DIODE 1N4148M	
D306	8-719-987-63	DIODE 1N4148M	
D307	8-719-987-63	DIODE 1N4148M	
D313	8-719-987-63	DIODE 1N4148M	
D315	8-719-987-63	DIODE 1N4148M	
		< FILTER >	
FL1	1-236-022-11	FILTER, BAND PASS (AEP, UK, IT)	
FL1	1-233-452-11	FILTER, BAND PASS (EE)	
		< IC >	
IC1	8-752-050-20	IC CXA1238S	
IC302	8-759-242-58	IC TA8189N	
IC303	8-759-634-51	IC M5218AP	
IC304	8-752-067-93	IC CXA1792S	
IC305	8-759-820-22	IC LA4597	
IC306	8-759-068-07	IC CD4052BCN	
IC307	8-759-912-55	IC S-81250HG	
		< JACK >	
J301	1-566-891-11	JACK (PHONNES)	
J302	1-537-330-11	TERMINAL BOARD (SPEAKER OUT)	
		< COIL >	
L1	1-406-998-11	COIL, AIR-CORE (AEP, UK, IT)	
L1	1-428-858-11	COIL, AIR-CORE (EE)	
L2	1-411-949-11	COIL, AIR-CORE (AEP, UK, IT)	
L2	1-406-958-11	COIL (WITH CORE) (EE)	
L3	1-501-871-11	ANTENNA, FERRITE-ROD (MW/LW)	
L4	1-406-252-11	COIL (OSC)	
L5	1-402-596-61	COIL (ANT)	
L6	1-406-280-11	COIL (OSC)	
L8	1-406-253-11	COIL (OSC)	
L9	1-414-138-21	INDUCTOR 0.33uH	
L11	1-412-911-11	INDUCTOR, FERRITE BEAD	
L12	1-412-911-11	INDUCTOR, FERRITE BEAD	
L101	1-414-142-11	INDUCTOR 1uH	
L201	1-414-142-11	INDUCTOR 1uH	
L304	1-414-142-11	INDUCTOR 1uH	
L307	1-410-509-11	INDUCTOR 10uH	
L309	1-408-405-00	INDUCTOR 4.7uH	
		< TRANSISTOR >	
Q1	8-729-036-77	TRANSISTOR KRC107M	
Q2	8-729-281-53	TRANSISTOR 2SC1815-GR	
Q101	8-729-036-72	TRANSISTOR KRC102M	
Q102	8-729-036-80	TRANSISTOR KRC110M	
Q103	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q201	8-729-036-72	TRANSISTOR KRC102M	
Q202	8-729-036-80	TRANSISTOR KRC110M	
Q203	8-729-119-78	TRANSISTOR 2SC403SP-51	
Q301	8-729-036-72	TRANSISTOR KRC102M	
Q302	8-729-037-29	TRANSISTOR KRA102M	
Q303	8-729-036-77	TRANSISTOR KRC107M	
Q304	8-729-281-53	TRANSISTOR 2SC1815-GR	
Q305	8-729-036-72	TRANSISTOR KRC102M	
Q306	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q307	8-729-037-08	TRANSISTOR KTD2058Y	
Q308	8-729-037-08	TRANSISTOR KTD2058Y	
Q309	8-729-036-72	TRANSISTOR KRC102M	
Q310	8-729-801-84	TRANSISTOR 2SB1013-4	
Q311	8-729-036-72	TRANSISTOR KRC102M	
Q312	8-729-037-29	TRANSISTOR KRA102M	
Q315	8-729-037-29	TRANSISTOR KRA102M	
Q320	8-729-119-78	TRANSISTOR 2SC2785-HFE	
		< RESISTOR >	
R3	1-249-421-11	CARBON 2.2K 5% 1/4W	
R6	1-249-441-11	CARBON 100K 5% 1/4W	
R9	1-249-441-11	CARBON 100K 5% 1/4W	
R10	1-249-404-00	CARBON 82 5% 1/4W	
R11	1-249-427-11	CARBON 6.8K 5% 1/4W	
R12	1-249-427-11	CARBON 6.8K 5% 1/4W	
R13	1-247-807-31	CARBON 100 5% 1/4W	
R14	1-249-429-11	CARBON 10K 5% 1/4W	
R15	1-247-887-00	CARBON 220K 5% 1/4W	
R16	1-247-887-00	CARBON 220K 5% 1/4W	
R17	1-249-421-11	CARBON 2.2K 5% 1/4W	
R22	1-249-411-11	CARBON 330 5% 1/4W	
R23	1-249-429-11	CARBON 10K 5% 1/4W	
R24	1-247-843-11	CARBON 3.3K 5% 1/4W	
R25	1-249-415-11	CARBON 680 5% 1/4W	
R28	1-247-807-31	CARBON 100 5% 1/4W	
R29	1-247-807-31	CARBON 100 5% 1/4W	
R30	1-249-417-11	CARBON 1K 5% 1/4W	
R31	1-249-431-11	CARBON 15K 5% 1/4W	
R32	1-249-441-11	CARBON 100K 5% 1/4W	
R33	1-247-807-31	CARBON 100 5% 1/4W (AEP, UK, IT)	
R33	1-249-409-11	CARBON 220 5% 1/4W (EE)	
R40	1-249-399-11	CARBON 33 5% 1/4W	

Ref. No.	Part No.	Description			Remark
R101	1-249-409-11	CARBON	220	5%	1/4W
R102	1-249-409-11	CARBON	220	5%	1/4W
R103	1-247-807-31	CARBON	100	5%	1/4W
R104	1-247-885-00	CARBON	180K	5%	1/4W
R105	1-249-427-11	CARBON	6.8K	5%	1/4W
R106	1-249-427-11	CARBON	6.8K	5%	1/4W
R107	1-247-885-00	CARBON	180K	5%	1/4W
R108	1-247-890-11	CARBON	300K	5%	1/4W
R109	1-249-407-11	CARBON	150	5%	1/4W
R110	1-249-441-11	CARBON	100K	5%	1/4W
R111	1-249-429-11	CARBON	10K	5%	1/4W
R112	1-249-421-11	CARBON	2.2K	5%	1/4W
R113	1-249-429-11	CARBON	10K	5%	1/4W
R116	1-249-421-11	CARBON	2.2K	5%	1/4W
R117	1-249-433-11	CARBON	22K	5%	1/4W
R119	1-247-807-31	CARBON	100	5%	1/4W
R120	1-249-433-11	CARBON	22K	5%	1/4W
R121	1-249-429-11	CARBON	10K	5%	1/4W
R122	1-249-439-11	CARBON	68K	5%	1/4W
R123	1-249-427-11	CARBON	6.8K	5%	1/4W
R130	1-247-843-11	CARBON	3.3K	5%	1/4W
R131	1-249-421-11	CARBON	2.2K	5%	1/4W
R132	1-249-404-00	CARBON	82	5%	1/4W
R133	1-247-887-00	CARBON	220K	5%	1/4W
R134	1-247-887-00	CARBON	220K	5%	1/4W
R151	1-249-437-11	CARBON	47K	5%	1/4W
R152	1-249-437-11	CARBON	47K	5%	1/4W
R153	1-249-437-11	CARBON	47K	5%	1/4W
R154	1-249-429-11	CARBON	10K	5%	1/4W
R155	1-249-421-11	CARBON	2.2K	5%	1/4W
R158	1-247-895-00	CARBON	470K	5%	1/4W
R201	1-249-409-11	CARBON	220	5%	1/4W
R202	1-249-409-11	CARBON	220	5%	1/4W
R203	1-247-807-31	CARBON	100	5%	1/4W
R204	1-247-885-00	CARBON	180K	5%	1/4W
R205	1-249-427-11	CARBON	6.8K	5%	1/4W
R206	1-249-427-11	CARBON	6.8K	5%	1/4W
R207	1-247-885-00	CARBON	180K	5%	1/4W
R208	1-247-890-11	CARBON	300K	5%	1/4W
R209	1-249-407-11	CARBON	150	5%	1/4W
R210	1-249-441-11	CARBON	100K	5%	1/4W
R211	1-249-429-11	CARBON	10K	5%	1/4W
R212	1-249-421-11	CARBON	2.2K	5%	1/4W
R213	1-249-429-11	CARBON	10K	5%	1/4W
R216	1-249-421-11	CARBON	2.2K	5%	1/4W
R217	1-249-433-11	CARBON	22K	5%	1/4W
R219	1-247-807-31	CARBON	100	5%	1/4W
R220	1-249-433-11	CARBON	22K	5%	1/4W
R221	1-249-429-11	CARBON	10K	5%	1/4W
R222	1-249-439-11	CARBON	68K	5%	1/4W
R223	1-249-427-11	CARBON	6.8K	5%	1/4W
R230	1-247-843-11	CARBON	3.3K	5%	1/4W

Ref. No.	Part No.	Description			Remark
R231	1-249-421-11	CARBON	2.2K	5%	1/4W
R232	1-249-404-00	CARBON	82	5%	1/4W
R233	1-247-887-00	CARBON	220K	5%	1/4W
R234	1-247-887-00	CARBON	220K	5%	1/4W
R251	1-249-437-11	CARBON	47K	5%	1/4W
R252	1-249-437-11	CARBON	47K	5%	1/4W
R253	1-249-437-11	CARBON	47K	5%	1/4W
R254	1-249-429-11	CARBON	10K	5%	1/4W
R255	1-249-421-11	CARBON	2.2K	5%	1/4W
R258	1-247-895-00	CARBON	470K	5%	1/4W
R303	1-247-843-11	CARBON	3.3K	5%	1/4W
R304	1-247-903-00	CARBON	1M	5%	1/4W
R305	1-249-401-11	CARBON	47	5%	1/4W
R307	1-249-417-11	CARBON	1K	5%	1/4W
R308	1-247-843-11	CARBON	3.3K	5%	1/4W
R310	1-249-433-11	CARBON	22K	5%	1/4W
R311	1-249-425-11	CARBON	4.7K	5%	1/4W
R312	1-249-409-11	CARBON	220	5%	1/4W
R314	1-249-433-11	CARBON	22K	5%	1/4W
R317	1-249-393-11	CARBON	10	5%	1/4W
R320	1-249-437-11	CARBON	47K	5%	1/4W
R321	1-249-425-11	CARBON	4.7K	5%	1/4W
R322	1-247-807-31	CARBON	100	5%	1/4W
R324	1-247-807-31	CARBON	100	5%	1/4W
R325	1-249-429-11	CARBON	10K	5%	1/4W
R330	1-249-401-11	CARBON	47	5%	1/4W
R331	1-247-884-11	CARBON	160K	5%	1/4W
R332	1-247-895-00	CARBON	470K	5%	1/4W
R335	1-249-417-11	CARBON	1K	5%	1/4W
R336	1-249-437-11	CARBON	47K	5%	1/4W
R338	1-249-418-11	CARBON	1.2K	5%	1/4W
R340	1-249-437-11	CARBON	47K	5%	1/4W
⚠R341	1-219-149-11	FUSIBLE	1	5%	1/4W F
R342	1-249-409-11	CARBON	220	5%	1/4W
R343	1-249-429-11	CARBON	10K	5%	1/4W
R344	1-249-425-11	CARBON	4.7K	5%	1/4W
R348	1-249-407-11	CARBON	150	5%	1/4W
R350	1-249-425-11	CARBON	4.7K	5%	1/4W
R351	1-249-407-11	CARBON	150	5%	1/4W
R352	1-249-429-11	CARBON	10K	5%	1/4W
R353	1-249-429-11	CARBON	10K	5%	1/4W
R354	1-249-427-11	CARBON	6.8K	5%	1/4W
R355	1-249-419-11	CARBON	1.5K	5%	1/4W
R356	1-249-441-11	CARBON	100K	5%	1/4W
R360	1-249-429-11	CARBON	10K	5%	1/4W
R396	1-249-429-11	CARBON	10K	5%	1/4W
R398	1-249-429-11	CARBON	10K	5%	1/4W

< VARIABLE RESISTOR >

RV1	1-223-641-11	RES, ADJ, CARBON 22K (VCO)
RV2	1-223-647-11	RES, VAR, CARBON 100K (FINE TUNING)

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

MAIN POWER TC

Ref. No.	Part No.	Description	Remark
RV301	1-225-326-11	RES, VAR, CARBON (SURROUND)	
RV302	1-223-644-11	RES, VAR, CARBON 50K (HIGH)	
RV303	1-223-644-11	RES, VAR, CARBON 50K (MID)	
RV304	1-223-644-11	RES, VAR, CARBON 50K (LOW)	
RV305	1-223-644-11	RES, VAR, CARBON 50K (MEGA BASS)	
		< SWITCH >	
S1	1-571-147-11	SWITCH, LEVER SLIDE (BAND)	
S301	1-571-547-11	SWITCH, SLIDE (FM MODE)	
S302	1-692-964-11	SWITCH, SLIDE (PB/REC)	
		< TRANSFORMER >	
T301	1-433-346-11	TRANSFORMER, BIAS OSCILLATOR	
**********			
*	1-663-127-12	POWER BOARD **********	
	1-533-233-11	HOLDER, FUSE	
*	3-376-847-01	CUSHION, SARANET	
*	3-561-427-21	CUSHION	
		< 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
		< CONNECTOR >	
* CNP901	1-691-574-11	PIN, CONNECTOR (PC BOARD) 3P	
* CNP902	1-691-573-11	PIN, CONNECTOR (PC BOARD) 2P	
		< DIODE >	
D901	8-719-031-53	DIODE LT2A02	
D902	8-719-031-53	DIODE LT2A02	
D903	8-719-031-53	DIODE LT2A02	
D904	8-719-031-53	DIODE LT2A02	
		< FUSE >	
⚠F901	1-532-464-31	FUSE,TIMEMLAG (T2.5AL/250V)	
		< JACK >	
⚠J901	1-526-838-11	INLET, AC 2P (AC IN ~)	
		< COIL >	
L901	1-412-911-11	INDUCTOR, FERRITE BEAD	
L902	1-412-911-11	INDUCTOR, FERRITE BEAD	
		< LINE FILTER >	
⚠LF901	1-424-150-11	TRANSFORMER, LINE FILTER	

Ref. No.	Part No.	Description			Remark
		< TRANSFORMER >			
⚠T901	1-429-811-11	TRANSFORMER, POWER			
**********					
*	A-3306-181-A	TC BOARD, COMPLETE **********			
		< CAPACITOR >			
C601	1-124-257-00	ELECT	2.2uF	20%	50V
		< CONNECTOR >			
* CNP601	1-691-579-11	PIN, CONNECTOR (PC BOARD) 8P			
CNP602	1-506-986-11	PIN, CONNECTOR (PC BOARD) 4P			
CNP603	1-506-986-11	PIN, CONNECTOR (PC BOARD) 4P			
CNP604	1-506-986-11	PIN, CONNECTOR (PC BOARD) 4P			
		< DIODE >			
D601	8-719-987-63	DIODE 1N4148M			
D602	8-719-987-63	DIODE 1N4148M			
D603	8-719-987-63	DIODE 1N4148M			
D604	8-719-987-63	DIODE 1N4148M			
D605	8-719-987-63	DIODE 1N4148M			
		< TRANSISTOR >			
Q601	8-729-801-84	TRANSISTOR 2SB1013-4			
Q602	8-729-206-20	TRANSISTOR RN1202			
Q603	8-729-206-20	TRANSISTOR RN1202			
Q604	8-729-112-30	TRANSISTOR 2SK425-T1X11			
Q607	8-729-904-36	TRANSISTOR DTC114YS			
Q608	8-729-900-80	TRANSISTOR DTC114ES			
Q610	8-729-206-20	TRANSISTOR RN1202			
		< RESISTOR >			
R601	1-249-441-11	CARBON	100K	5%	1/4W
R602	1-249-418-11	CARBON	1.2K	5%	1/4W
R603	1-249-427-11	CARBON	6.8K	5%	1/4W
R604	1-247-844-11	CARBON	3.6K	5%	1/4W
R607	1-249-425-11	CARBON	4.7K	5%	1/4W
R608	1-249-425-11	CARBON	4.7K	5%	1/4W
R609	1-249-425-11	CARBON	4.7K	5%	1/4W
R610	1-249-413-11	CARBON	470	5%	1/4W
R611	1-247-843-11	CARBON	3.3K	5%	1/4W
		< VARIABLE RESISTOR >			
RV601	1-230-495-11	RES, ADJ, CARBON 2.2K (TAPE SPEED)			
**********					

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

Ref. No.	Part No.	Description	Remark
*	1-662-861-11	VOLUME BOARD	
		**********	
		< SWITCH >	
S811	1-762-798-11	SWITCH, TACT (VOLUME-)	
S812	1-762-798-11	SWITCH, TACT (VOLUME+)	
**********			
		MISCELLANEOUS	
		**********	
10	1-533-233-11	HOLDER, FUSE	
65	1-765-666-12	WIRE, PARALLEL (FFC) (13 CORE)	
66	1-765-665-11	WIRE, PARALLEL (FFC) (9 CORE)	
114	1-452-732-11	MAGNET	
115	1-769-824-11	WIRE (FLAT TYPE) (16 CORE)	
155	1-690-969-11	CORD, SPEAKER CONNECTION	
⚠455	8-848-376-11	OPTICAL PICK-UP KSS-213B/S-N	
456	X-2625-770-1	CHASSIS ASSY (MB) (RP), MOTOR (including M702) (SPINDLE)	
ANT901	1-501-383-21	ANTENNA, TELESCOPIC	
⚠F901	1-532-464-31	FUSE,TIMEMLAG (T2.5AL/250V)	
HE901	1-500-139-11	HEAD (ERASE)(DECK-B)	
HP901	1-500-370-11	HEAD (PLAYBACK) (DECK-A)	
HRP901	1-500-138-11	HEAD (RECORD/PLAYBACK) (DECK-B)	
LCD801	1-810-499-11	DISPLAY PANEL, LIQUID CRYSTAL	
M401	X-3369-087-1	MOTOR ASSY	
M701	X-2625-769-1	GEAR ASSY (MB) (RP), MOTOR (SLED)	
S601	1-762-022-11	SWITCH, LEAF (MOTOR) (DECK-A)	
S602	1-762-024-11	SWITCH, LEAF (HI-SPEED) (DECK-A)	
S603	1-762-023-11	SWITCH, LEAF (MOTOR) (DECK-B)	
S604	1-762-022-11	SWITCH, LEAF (PLAY) (DECK-B)	
S702	1-692-960-11	SWITCH, PUSH (1 KEY) (OPEN/CLOSE)	
SP101	1-504-269-21	SPEAKER (10cm) (L-CH)	
SP201	1-504-269-21	SPEAKER (10cm) (R-CH)	
**********			
		ACCESSORIES & PACKING MATERIALS	
		**********	
	1-473-777-11	REMOTE COMMANDER (RMT-C555)	
⚠	1-575-131-11	CORD, POWER SUPPLY (AEP, IT, EE)	
⚠	1-751-214-11	CORD, POWER (UK)	
	3-856-885-31	MANUAL, INSTRUCTION (ENGLISH,GERMAN) (AEP, EE, UK)	
	3-856-885-41	MANUAL, INSTRUCTION (FRENCH,SPANISH) (AEP)	
	3-856-885-51	MANUAL, INSTRUCTION (DUTCH,SWEDISH,PORTUGUESE) (AEP)	
	3-856-885-61	MANUAL, INSTRUCTION (ITALIAN) (IT)	
	3-856-885-71	MANUAL, INSTRUCTION (POLISH,RUSSIAN) (EE)	
*	3-937-841-01	CUSHION (TOP)	
*	3-937-842-01	CUSHION (BOTTOM)	
*	3-937-864-01	INDIVIDUAL CARTON (AEP, IT, EE)	
*	3-009-290-01	INDIVIDUAL CARTON (UK)	
**********			

Ref. No.	Part No.	Description	Remark
		**********	
		HARDWARE LIST	
		**********	
#1	7-685-647-79	SCREW +BVTP 3X10 TYPE2 N-S	
#2	7-685-648-79	SCREW +BVTP 3X12 TYPE2 N-S	
#3	7-685-152-19	+ BV 3X25	
#4	7-682-548-09	SCREW +B 3X8	
#5	7-621-770-87	SCREW +P 2.6X5	
#6	7-685-646-79	SCREW +BVTP 3X8 TYPE2 N-S	
#7	7-685-649-79	SCREW +BVTP 3X14 TYPE2 N-S	
#8	7-685-533-19	SCREW +BTP 2.6X6 TYPE2 N-S	
#9	7-685-155-19	SCREW +P 3X40 TYPE2 NON-SLIT	
#10	7-621-255-15	SCREW +P 2X3 (TYPE2)	
#11	7-685-153-19	SCREW +P 3X30 TYPE2 NON-SLIT	

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9-923-056-12

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