CFD-S33L

SERVICE MANUAL

AEP Model
UK Model

Model Name Using Similar Mechanism	CD Section	NEW
	Tape Section	
Optical Pick-up Type		KSM-213CAM/C1NP
Tape Transport Mechanism Type		MF-V10-117

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

FM	AEP, UK Model	: 87.6 – 107 MHz
	East European Model	: 65 – 74 MHz
		87.5 – 108 MHz
MW		531 – 1,602 kHz
LW		153 – 279 kHz

IF
FM: 10.7 MHz
MW/LW: 450 kHz
Aerials
FM: 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): 70 - 10,000 Hz

General

Speaker
Full range: 10 cm (4 in.) dia.,
2.8 ohms, cone type (2)
Outputs
Headphones jack (stereo minijack)
For 16 - 68 ohms impedance headphones
Maximum power output
2.5 W + 2.5 W
Power requirements
For CD radio cassette-corder
230 V AC, 50 Hz
9 V DC, 6 R20 (size D) batteries

For remote commander
3 V DC, 2 R6 (size 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. 20 h
Tape playback
Sony R20P: approx. 7.5 h
Sony alkaline LR20: approx. 15 h
CD playback
Sony R20P: approx. 2.5 h
Sony alkaline LR20: approx. 7 h

Dimensions
Approx. 425 × 160 × 245 mm (w/h/d)
(16 ¾ × 6 ⅜ × 9 ¾ inches) (incl. projecting parts)
Mass
Approx. 4.0 kg (8 lb. 13 oz) (incl. batteries)
Supplied accessories
AC power cord (1)
Remote control (1)

Design and specifications are subject to change without notice.

CD RADIO CASSETTE -CORDER

MICROFILM

SONY®

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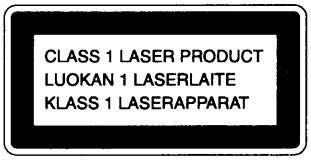
SAFETY-RELATED COMPONENT WARNING!!

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.

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.



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

Notice for customers in the United Kingdom

A moulded plug complying with BS 1363 is fitted to this equipment for your safety and convenience.

Should the fuse in the plug supplied need to be replaced, same rating fuse approved by ASTA or BS1 to BS 1362, (i.e. marked with ⓐ ora ⓑ mark) must be used.

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.

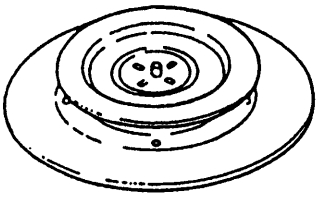
NOTES ON LASER DIODE EMISSION CHECK

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

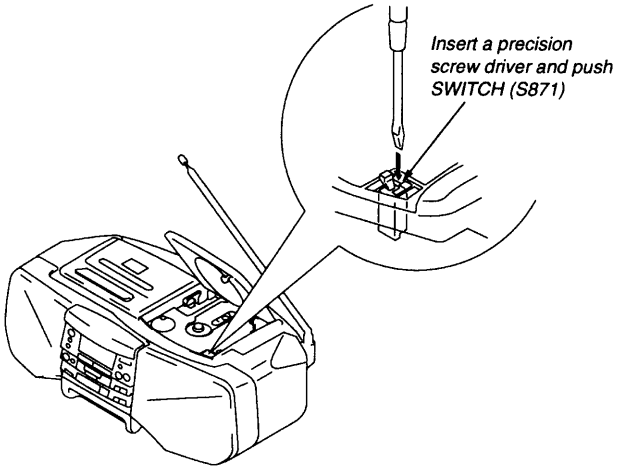
On repairing CD section, playing a disc without the CD lid, use Chuck Plate Jig.

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



LASER DIODE AND FOCUS SEARCH OPERATION CHECK

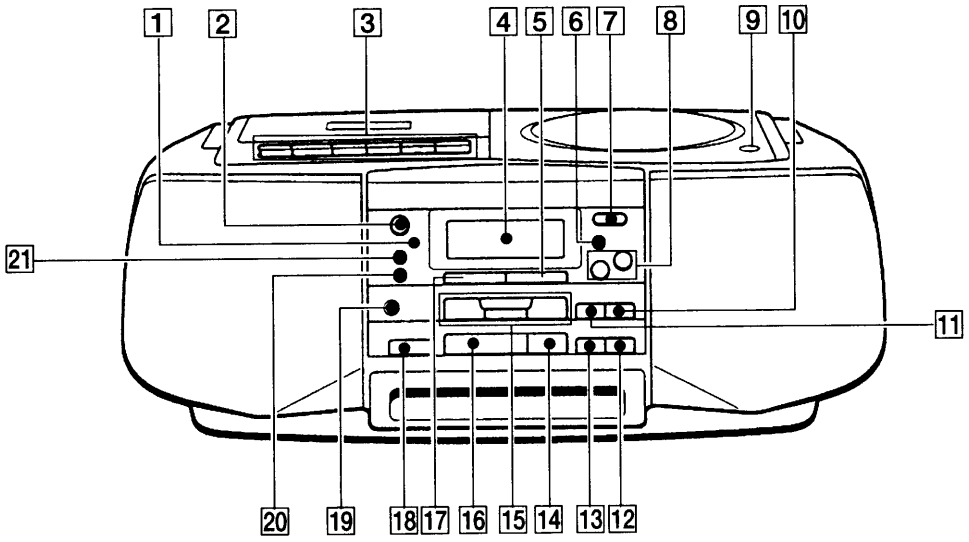
1. Press CD open knob.
2. Open the lid for CD.
3. Push on SWITCH (S871) as following figure.
4. Confirm the laser diode emission while observing the objecting lens. When there is no emission, Auto Power Control circuit or Optical Pick-up is broken.
   Objective lens moves up and down once for the focus search.



SECTION 2
GENERAL

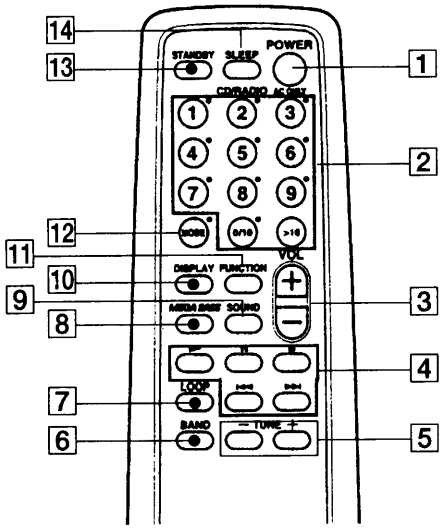
This section is extracted from instruction manual.

LOCATION OF CONTROLS



1 OPR/BATT indicator
2 POWER button
3 Tape operating buttons
4 Information display
5 SLEEP button
6 SOUND button
7 MEGA BASS button
8 VOL +/– buttons
9 OPEN/CLOSE button
10 DISPLAY/ENT/MEM button
11 PLAY MODE/ MONO/ST/ISS button
12 ▷▷I button
13 I◁◁ button
14 □ button
15 BAND RESET +/– buttons
16 ▷II button
17 WAKE UP button
18 FUNCTION button
19 HEADPHONE jack
20 STANDBY button
21 CLOCK button

Remote commander (RMT-CS33AD) (AEP, UK model)
(RMT-CD30) (East European model)



1 POWER (AC ONLY) button
2 Number button
3 VOL +/– buttons
4 CD operation buttons
5 TUNE +/– buttons
6 BAND button
7 LOOP button
8 MEGA BASS button
9 SOUND button
10 DISPLAY button
11 FUNCTION button
12 MODE button
13 STANDBY button
14 SLEEP button

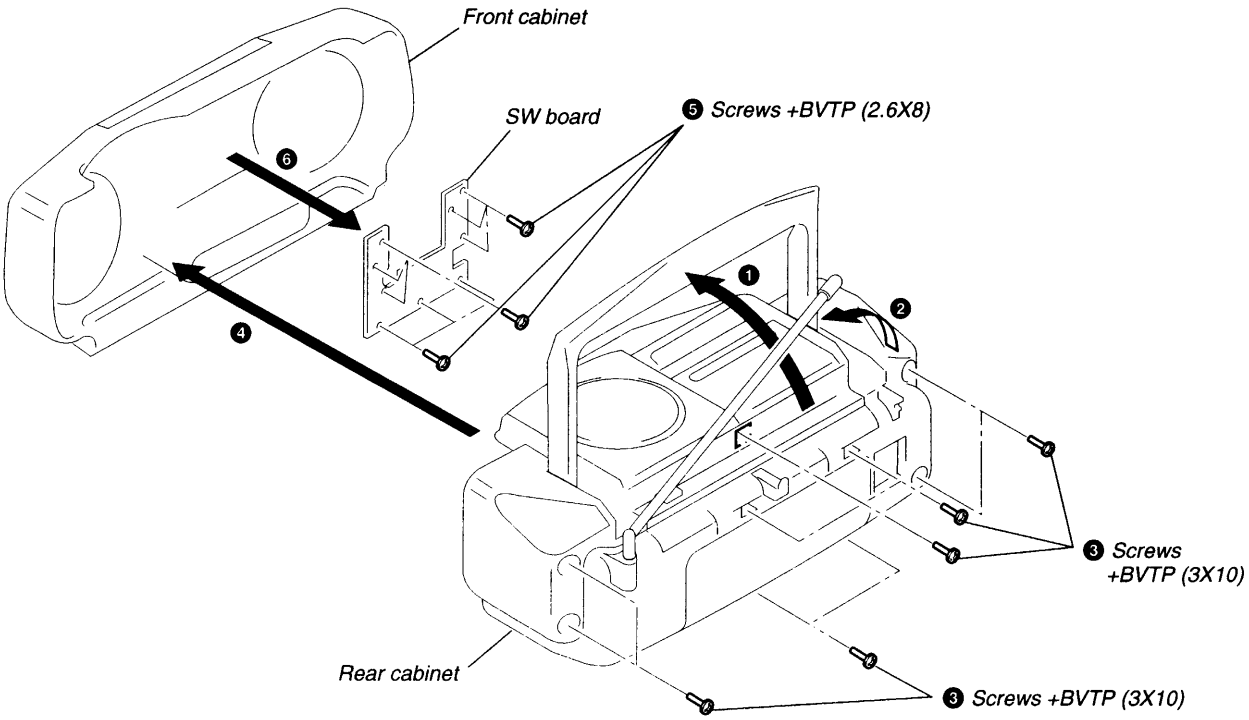
SECTION 3
DISASSEMBLY

● The equipment can be removed using the following procedure.

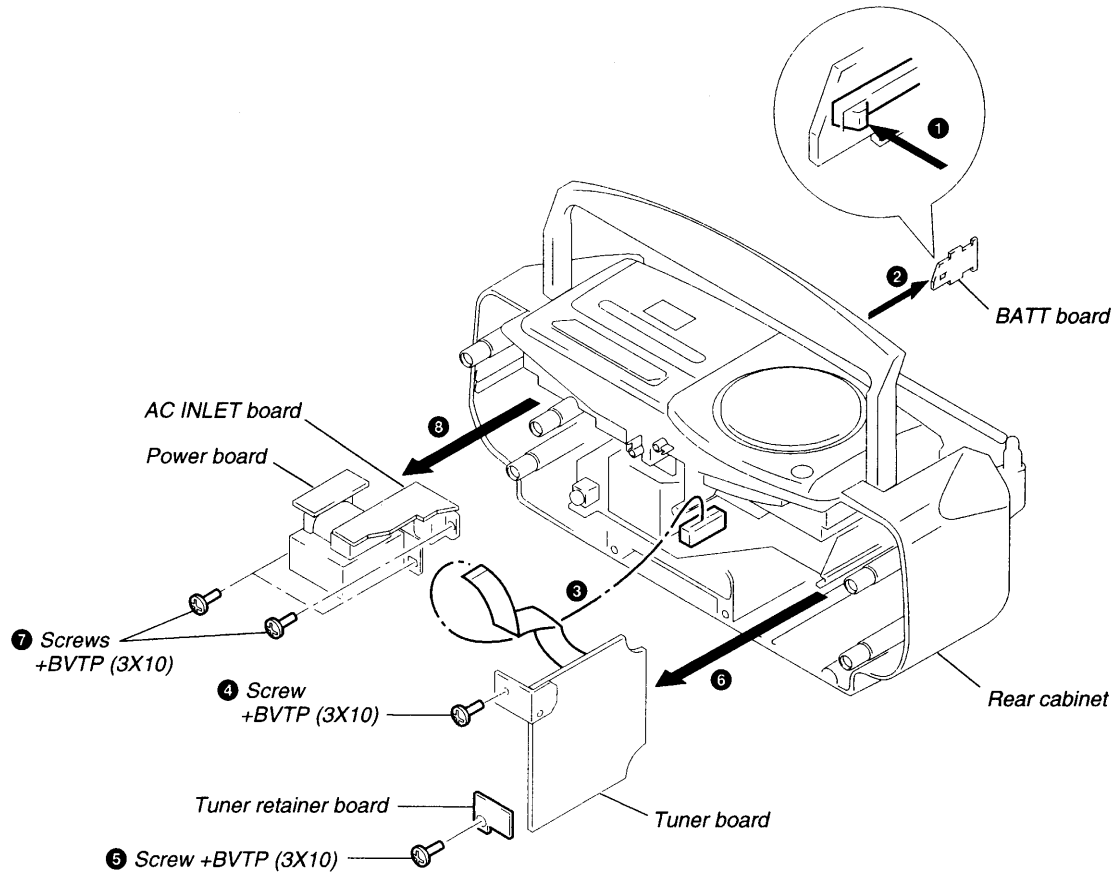
Set → Front cabinet → SW board
Front cabinet → BATT board, Tuner board, AC Inlet board, Power board
Front cabinet → Upper cabinet → Optical pick-up section → Main board
Upper cabinet → Mechanism deck → REC SW board

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

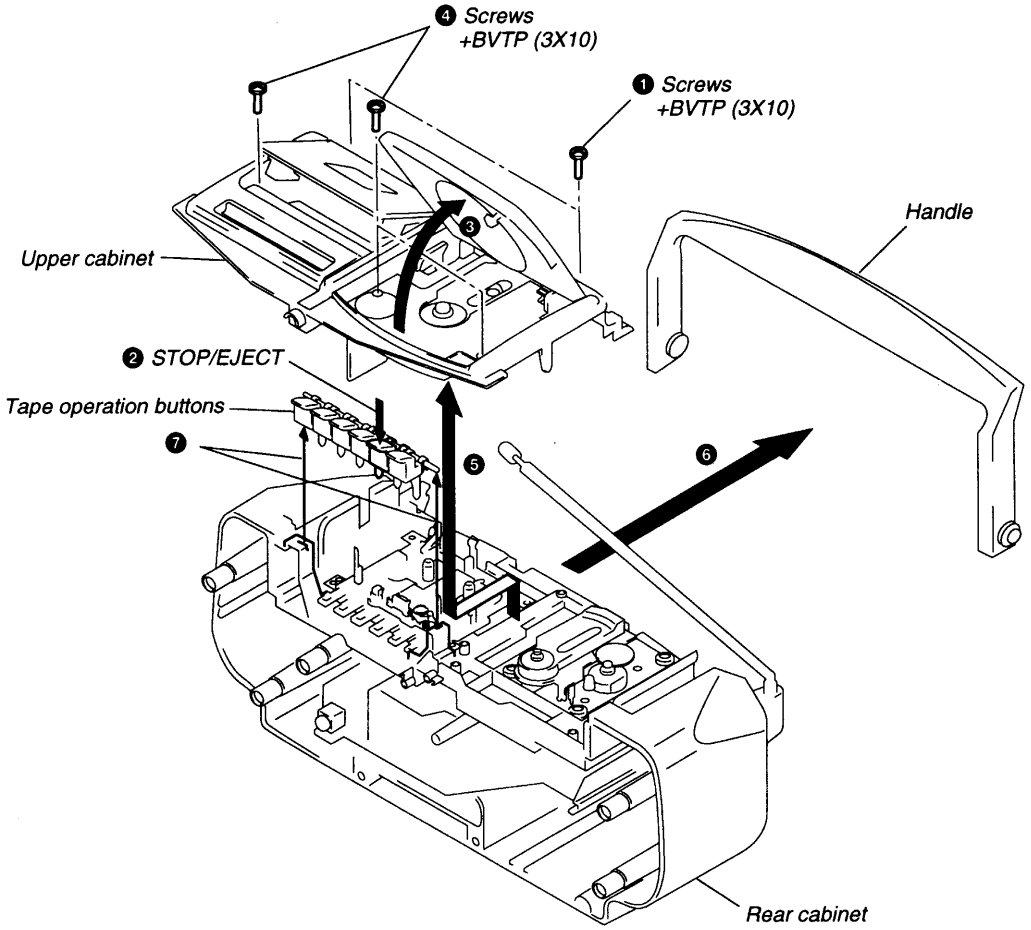
3-1. FRONT CABINET, SW BOARD REMOVAL



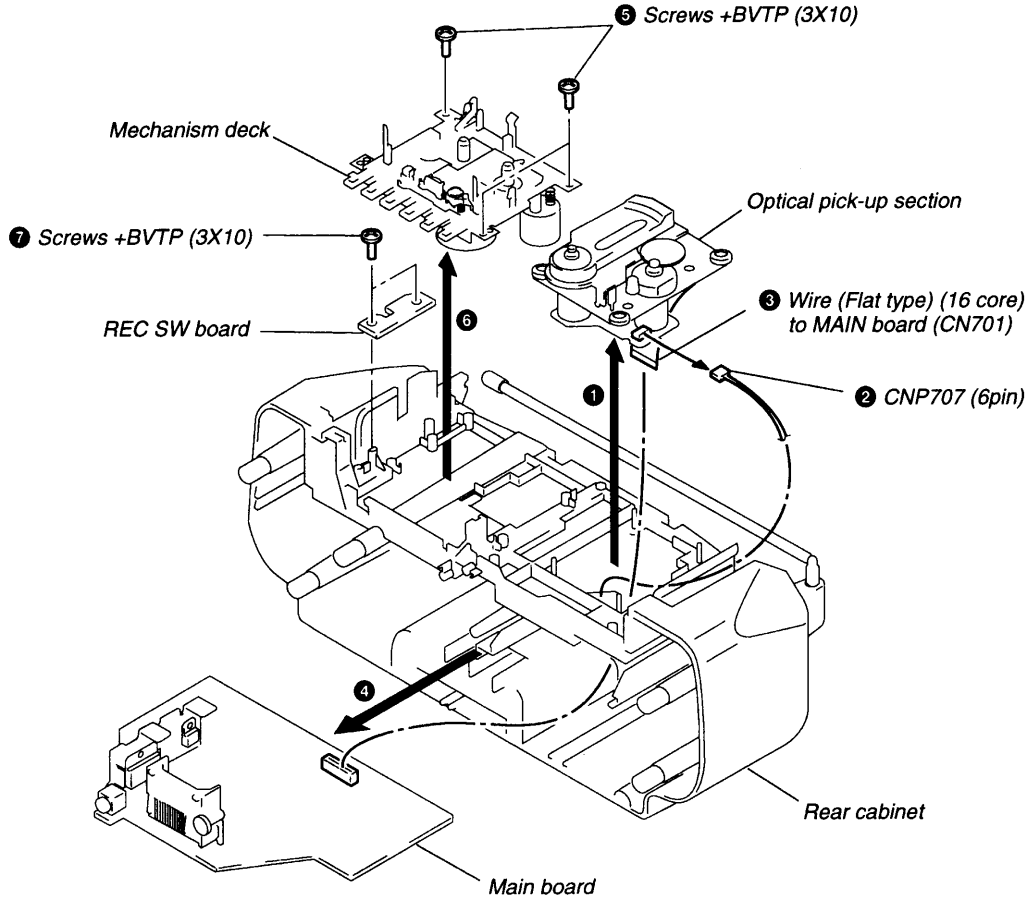
3-2. BATT BOARD, TUNER BOARD, AC INLET BOARD, POWER BOARD REMOVAL



3-3. UPPER CABINET REMOVAL



3-4. OPTICAL PICK-UP SECTION, MECHANISM DECK, MAIN BOARD, REC SW BOARD REMOVAL



SECTION 4
ADJUSTMENTS

4-1. MECHANICAL ADJUSTMENTS

PRECAUTION

1. Clean the following parts with a denatured-alcohol-moistened swab :
   record/playback head, erase head, capstan, pinch roller, rubber belts
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.

Torque Measurement

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

Tape Tension Measurement

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

4-2. ELECTRICAL ADJUSTMENTS

TAPE RECORDER SECTION

Standard Output Level

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

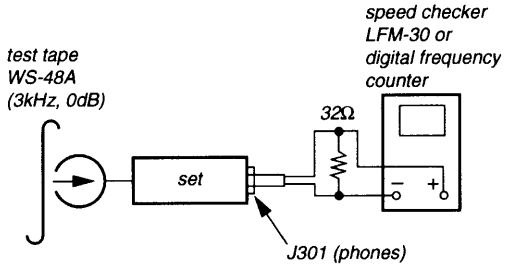
Test Tape

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

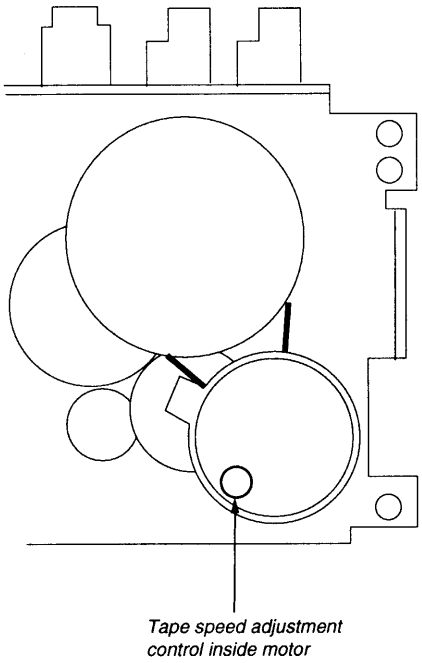


Adjustment Value :

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

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

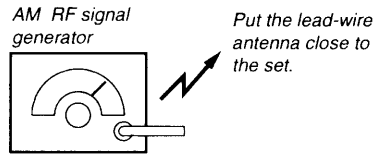
Adjustment Location :



TUNER SECTION

AM Section

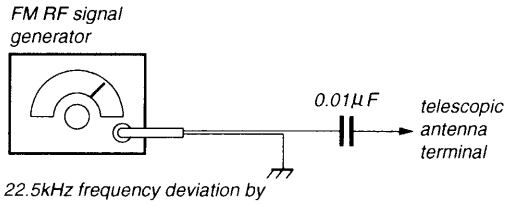
Function switch : MW (LW)
Volume : MIN



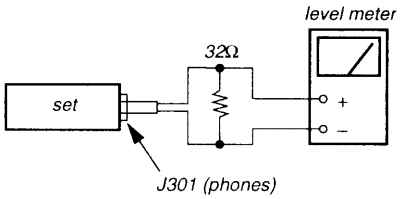
30% amplitude modulation by 400Hz signal.
Output level : as low as possible

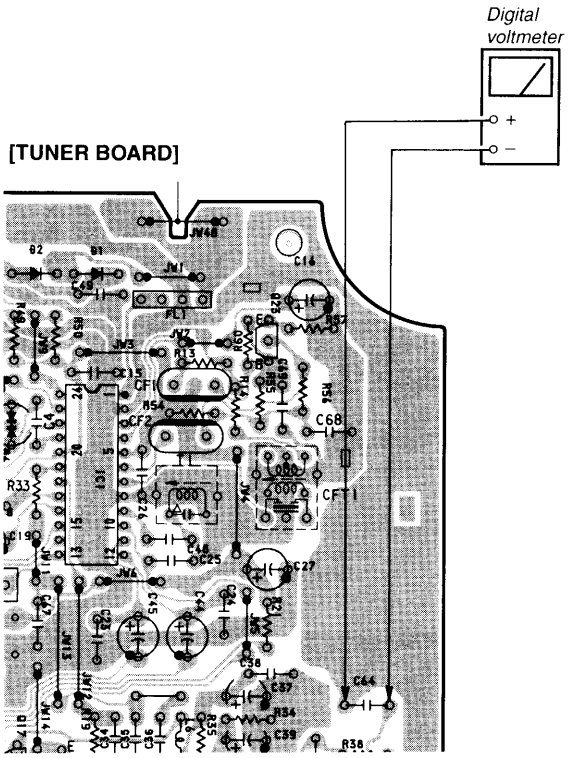
FM Section

Function switch : FM
Volume : MIN



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





Adjustment Location : Tuner board (See page 12)

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

AM IF ALIGNMENT	
Adjust for a maximum reading on level meter.	
CFT1	450kHz

MW FREQUENCY COVERAGE ADJUSTMENT		
Adjust part	Frequency display voltmeter.	reading on digital
L4	531kHz	0.85±0.1V
CT2	1,611kHz	5.4±0.2V

MW TRACKING ADJUSTMENT	
Adjust for a maximum reading on level meter.	
L3 – 1	621kHz
CT4	1,404kHz

LW FREQUENCY COVERAGE ADJUSTMENT		
Adjust part	Frequency display voltmeter.	reading on digital
Confirmation	153kHz	0.5±0.1V
CT3	279kHz	5.3±0.2V

LW TRACKING ADJUSTMENT	
Adjust for a maximum reading on level meter.	
L3 – 2	162kHz
CT5	261kHz

FM IF ALIGNMENT	
Adjust for a maximum reading on level meter.	
T1	10.7MHz

no mark : AEP, UK model
< > : East European model

FM FREQUENCY COVERAGE ADJUSTMENT		
Adjust part	Frequency display voltmeter.	reading on digital
L2	87.5MHz < 65MHz>	1.45±0.2V< 0.75± 0.2 V>
Confirmation	108MHz < 108MHz>	4.0±0.2V<5.5± 0.2V>

FM TRACKING ADJUSTMENT	
Adjust for a maximum reading on level meter.	
L1	87.5MHz < 68MHz>
CT1	108MHz < 102MHz>

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 button, then press OFF button.
2. Press ▶▶I, I◀◀ buttons 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

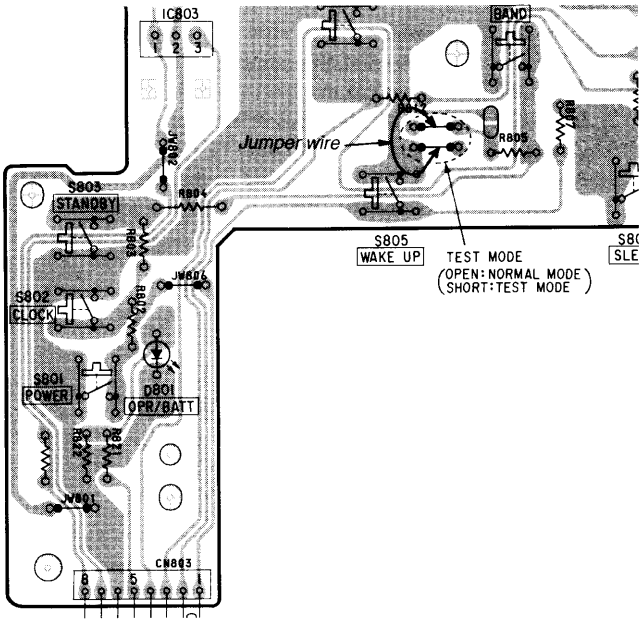
- Focus Search Check

1. Press ▶II button. (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 buttons, turn off the power and check again from making the test mode.

How to put the Set into Test Mode

1. Make sure the POWER switch (S801) is off and then turn on the power. (The LCD801 all light up.)
2. Set Test Mode by momentarily shorting both of the test mode terminals with a jumper. (Shorting the terminals momentarily is sufficient).

[SW BOARD]



How to Release Test Mode

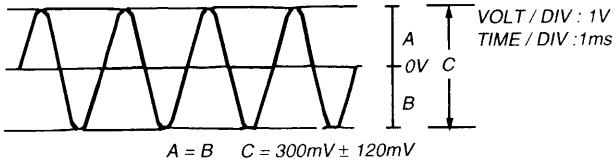
1. Press the FUNCTION switch (S809).
2. Turn the POWER OFF.

E-F Balance Adjustment

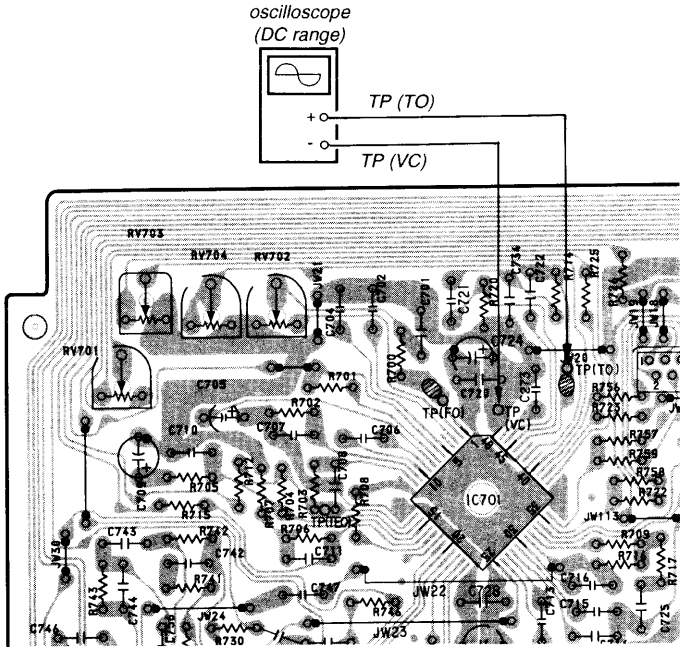
This adjustment is to be done when the optical pick-up block is replaced.

Adjustment Procedure :

1. Connect the oscilloscope to test point TP (VC) and TP (TO) on MAIN board.
2. Put the set into test mode.
3. optical pick-up setting to the center by ▶▶I or I◀◀ button pushing.
4. Insert disc (YEDS-18) and press ▶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.



[MAIN BOARD]



Adjustment Location : Main board (See page 12)

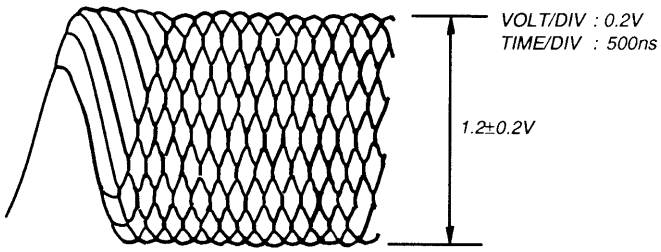
Focus Bias Adjustment

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

Adjustment procedure :

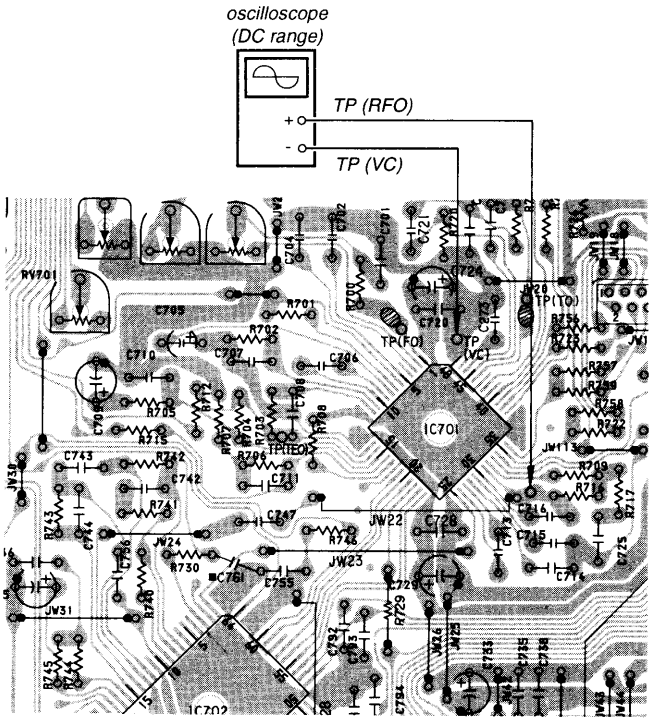
1. Connect the oscilloscope to test point TP (VC) and TP (RFO) on MAIN board.
2. Put the set into test mode.
3. Optical pick-up setting to the center by ▶▶I or I◀◀ button pushing.
4. Insert disc (YEDS-18) and press ▶II button.
5. Press the ▶II button. (Tracking servo ON)
6. Adjust RV701 so that the oscilloscope 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.

[MAIN BOARD]



Adjustment Location : Main board (See page 12)

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. (I◀◀, ▶▶I 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. (I◀◀, ▶▶I 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.

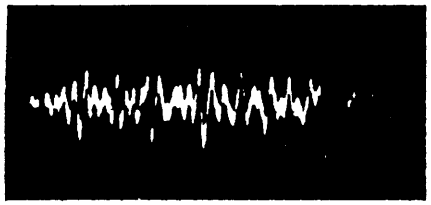
– Primary Adjustment –

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 MAIN board.
4. Adjustment RV702 on MAIN board so that the waveform is as shown in the figure below. (Focus gain adjustment)

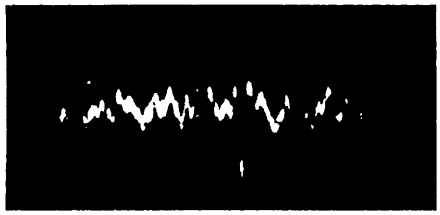
VOLT / DIV : 100mV
TIME / DIV : 2ms



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

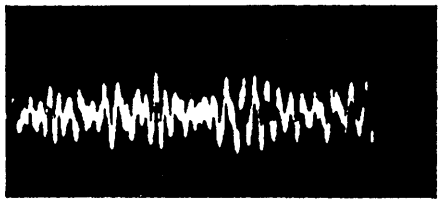
low focus gain

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



high focus gain

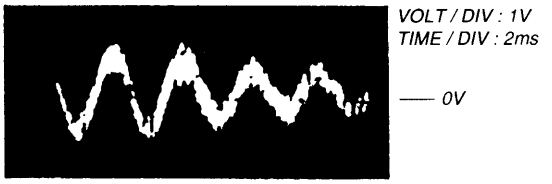
VOLT / DIV : 100mV
TIME / DIV : 2ms



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

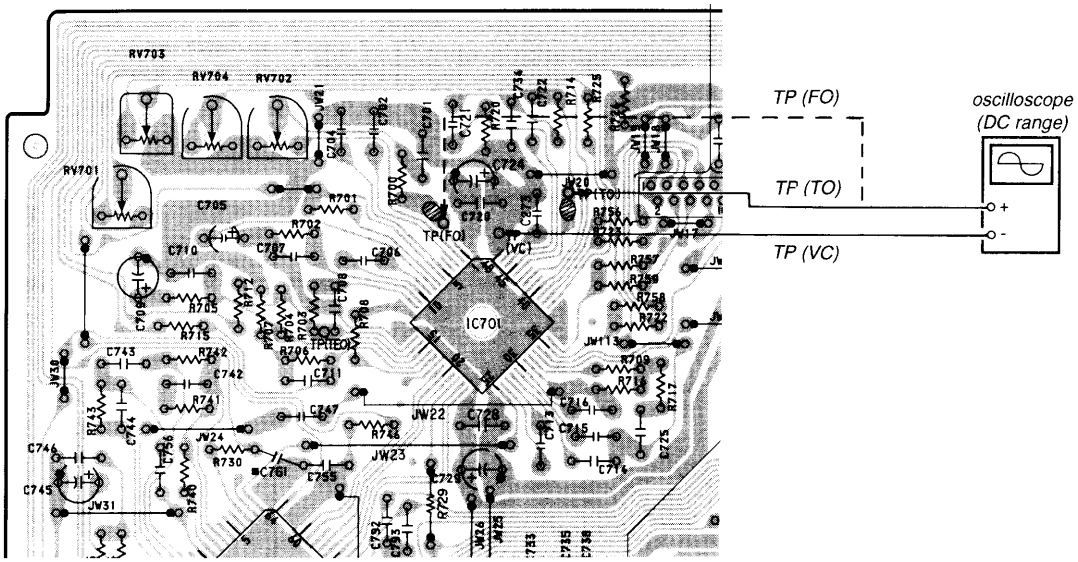
● Incorrect Examples (fundamential wave appears)

low tracking gain



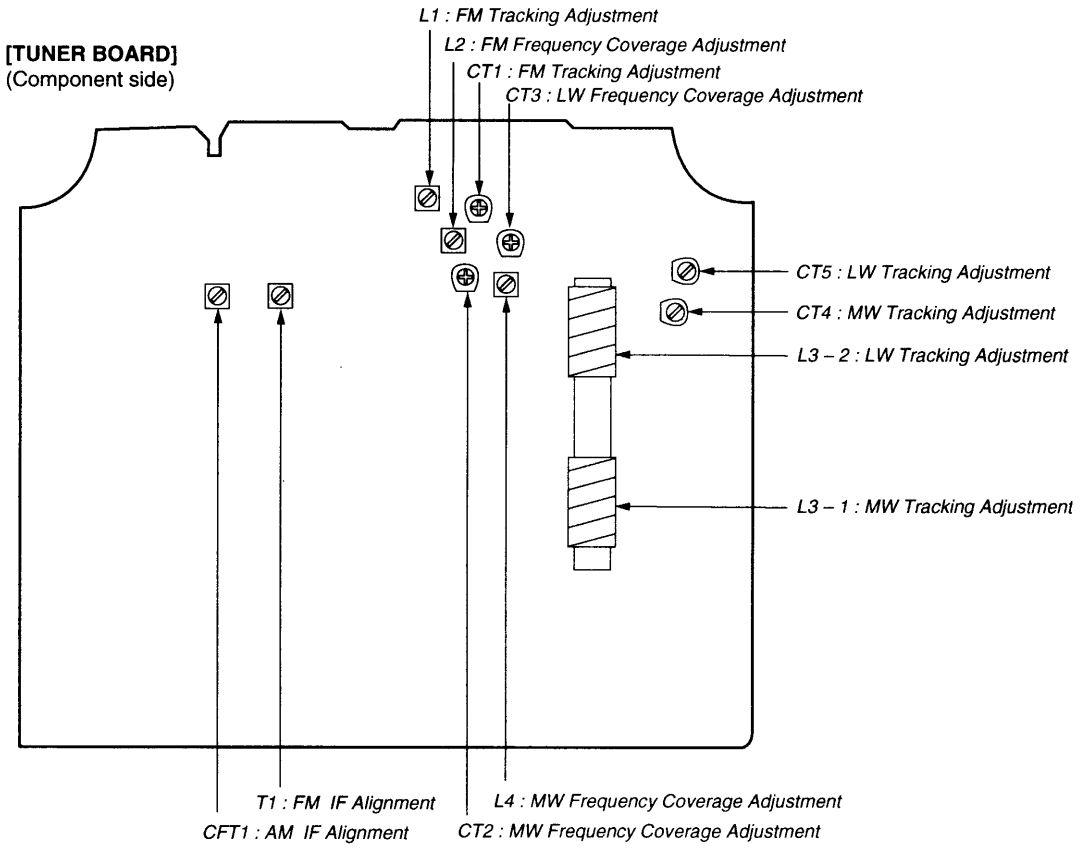
high tracking gain
(high fandametial wave than for low gain)

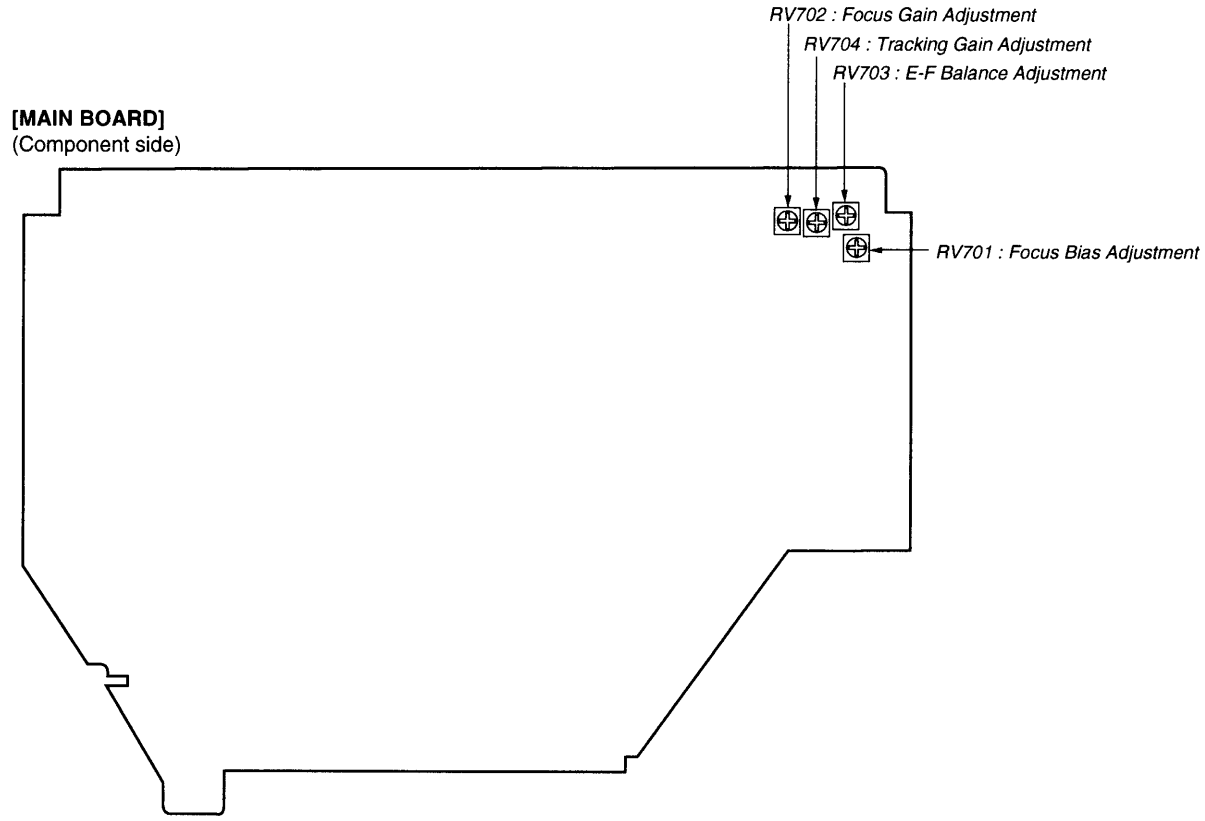
[MAIN BOARD]



Adjustment Location : Main board (See page 12)

Adjustment Location





SECTION 5
EXPLANATION OF IC TERMINALS

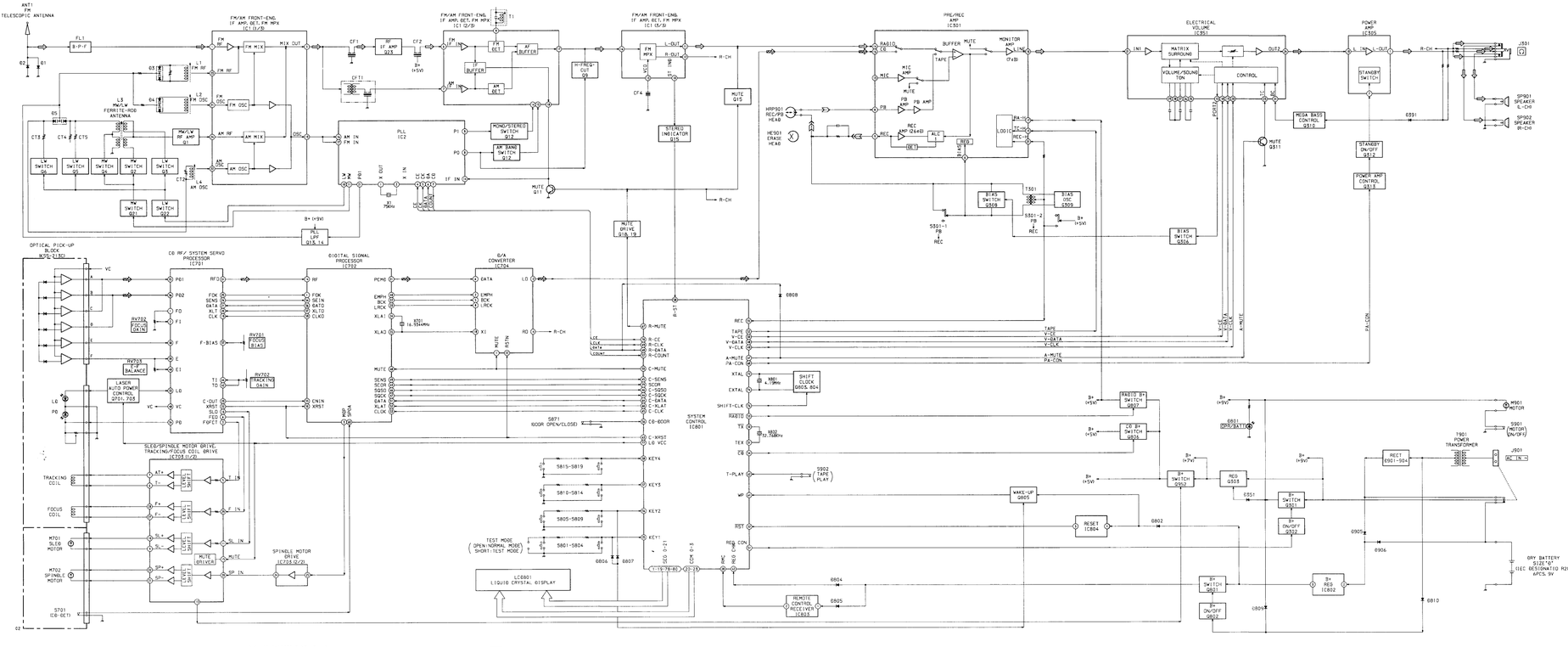
IC801 CXP50716-080Q (AEP, UK), CXP50716-081Q (EE) (SYSTEM CONTROL)

Pin No.	Pin name	I/O	Description
1 – 19	SEG 18 – 0	O	LCD segment output.
20 – 23	COM 3 – 0	O	LCD common output.
24	VLC1	I	LCD drive deviced voltage input.
25	VLC2	I	LCD drive deviced voltage input.
26	VLC3	I	LCD drive deviced voltage input.
27	VL	I	LCD drive deviced voltage input.
28	RMC	I	Remote control signal input.
29	SCOR	I	CD SCOR signal input.
30	$\overline{TX}$	I	Sub clock input (32,768kHz).
31	TEX	O	Sub clock output (32,768kHz).
32	$\overline{RST}$	I	System reset input.
33	NC	–	Not used (Open).
34	V_{DD}	–	Power supply.
35	KEY1	I	Key input.
36	KEY2	I	Key input.
37	KEY3	I	Key input.
38	KEY4	I	Key input.
39	INIT	O	Initial output.
40	Destination	I	Destination select input.
41	9k/10k	I	9k/10k switching detection.
42	REG-CHK	I	Regulator check input.
43	NC	–	Not used (Open).
44	C-SQCK	O	Sub-code Q data reading clock output.
45	C-SENSE	I	Sens input from CD DSP (IC702).
46	C-SQSO	I	Sub-code Q data input.
47	A-MUTE	O	Audio mute output.
48	V-DATA	O	Serial data output to electrical volume (IC351).
49	V-CLK	O	Serial clock output to electrical volume (IC351).
50	V-CE	O	Chip enable output to electrical volume (IC351).
51	REG-CON	O	Regulator ON/OFF control.
52	TAPE	O	Function select signal output. "H" : Tape
53	$\overline{RADIO}$	O	Radio B+ ON/OFF control.
54	$\overline{CD}$	O	CD B+ ON/OFF control.
55	REC	I	REC signal input. "H" : REC, "L" : PB
56	CD-DOOR	I	CD door open/close detect.
57	R-COUNT	I	Radio count data input from PLL (IC3).
58	R-ST	I	Radio stereo signal input from PLL (IC3).
59	C-MUTE	O	CD mute output.
60	PA-CON	O	Power amp (IC305) control output.
61	WP	I	Wake-up signal input terminal.
62	$\overline{T\text{-}PLAY}$	I	Tape play detect.
63	C-XRST	O	Reset output for CD (IC701, IC702, IC704).
64	C-DATA	O	Serial data output for DSP (IC702).
65	C-CLK	O	Serial clock output for DSP (IC702).

Pin No.	Pin name	I/O	Description
66	C-XLAT	O	Serial clock latch output for DSP (IC702).
67	R-MUTE	O	Radio mute signal output.
68	R-DATA	O	Serial data output to PLL (IC3).
69	R-CLK	O	Serial clock output to PLL (IC3).
70	R-CE	O	Chip enable output to PLL (IC3).
71	Vss	–	Ground.
72	XTAL	O	System main clock output (4.19MHz)
73	NC	–	Not used (Open).
74	EXTAL	I	System main clock input (4.19MHz)
75	VREF	–	Not used (Open).
76	SHIFT-CLK	O	Shift clock output.
77	LD ON	O	Laser power ON/OFF control.
78 – 80	SEG21– 19	O	LCD segment output.

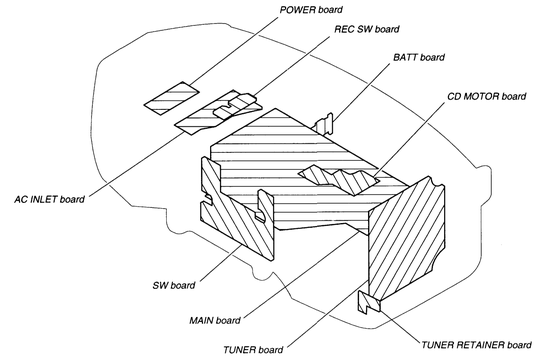
SECTION 6
DIAGRAMS

6-1. BLOCK DIAGRAM



• Signal path.
⇨ : FM
⇨ : PB
⇨ : REC
⇨ : CD

• CIRCUIT BOARDS LOCATION



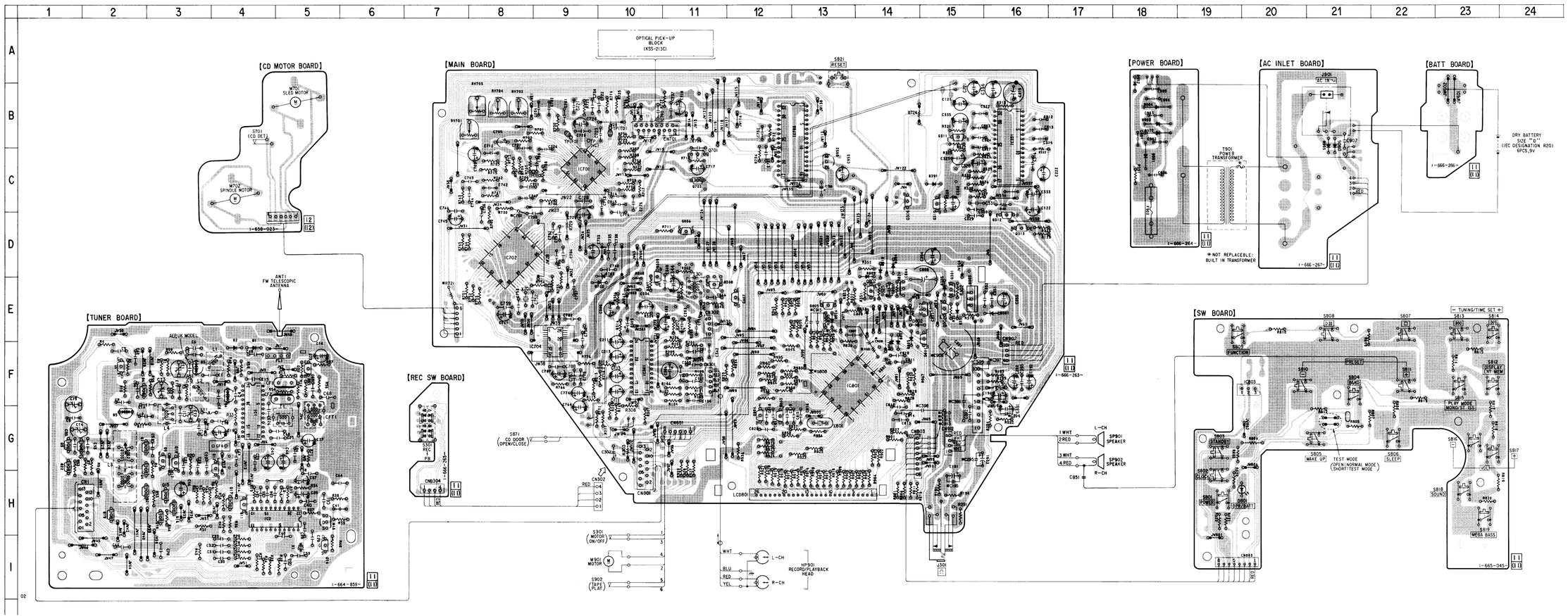
6-2. PRINTED WIRING BOARDS

• SEMICONDUCTOR LOCATION

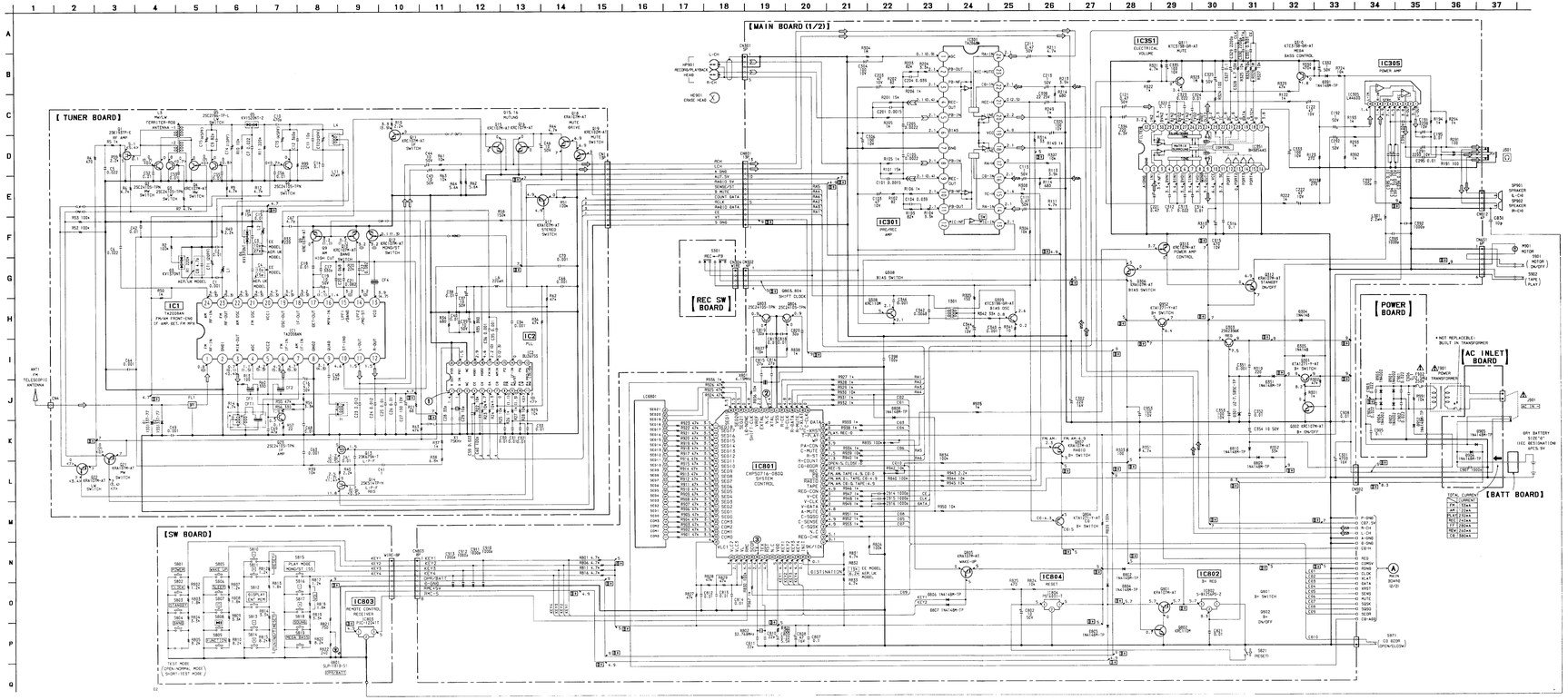
Ref. No.	Location	Ref. No.	Location
D1	F-4	Q1	F-2
D2	F-4	Q2	G-2
D3	F-3	Q3	G-1
D4	F-4	Q4	G-2
D5	G-2	Q5	G-1
D301	E-16	Q6	F-2
D304	D-14	Q9	G-3
D305	E-15	Q10	G-3
D351	E-15	Q11	H-4
D391	C-15	Q12	G-4
D702	D-10	Q13	H-5
D703	E-10	Q14	I-5
D801	H-20	Q15	H-3
D802	E-14	Q16	H-3
D804	E-13	Q17	H-4
D805	F-14	Q18	H-3
D806	F-14	Q19	H-2
D807	E-14	Q21	H-2
D808	F-13	Q22	G-1
D809	D-14	Q23	F-5
D810	D-14	Q301	E-15
D901	C-18	Q302	E-15
D902	B-18	Q303	E-15
D903	B-18	Q306	C-14
D904	B-18	Q308	E-11
D905	B-21	Q309	D-10
D906	B-21	Q310	C-15
D952	B-18	Q311	B-15
		Q312	D-16
		Q313	D-16
IC1	G-4		
IC2	H-4	Q701	C-11
IC301	F-10	Q703	C-11
IC305	F-15	Q801	E-15
IC351	B-16	Q802	E-14
		Q803	G-12
IC701	C-9		
IC702	D-8	Q804	G-12
IC703	B-13	Q805	E-13
IC704	F-9	Q806	D-11
IC801	F-13	Q807	E-12
		Q952	C-13
IC802	E-15		
IC803	F-20		
IC804	E-14		

Note:

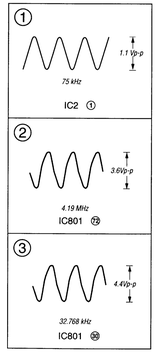
- ●— : parts extracted from the conductor side.
- ■ : parts mounted on the conductor side.
- : Pattern on the side which is seen.
- Abbreviation
  EE : East European



6-3. SCHEMATIC DIAGRAM – MAIN SECTION (1/2) –



● WAVEFORMS



Note :

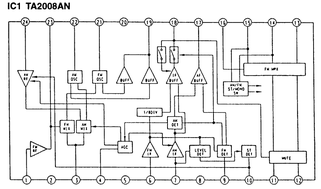
- All capacitors are in µF unless otherwise noted. pF: µµF
  50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4W or less unless otherwise specified.

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

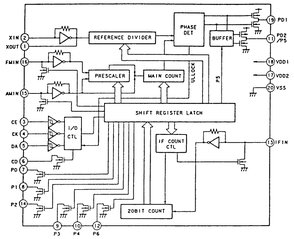
- **B +** B+ Line
- Power voltage is dc 9V and fed with regulated dc power supply from external power voltage jack.
  no mark : FM (Radio Section) PLAY (Tape Section)
  ( ) : AM (Radio Section) REC (Tape Section)
- Voltages are taken with a VOM (Input impedance 10MΩ). Voltage variations may be noted 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.
  ⇨ : FM
  ⇨ : PB
  ⇨ : REC
  ⇨ : CD
- Abbreviation
  EE : East European

● IC BLOCK DIAGRAM – MAIN SECTION (1/2) –

IC1 TA2008AN

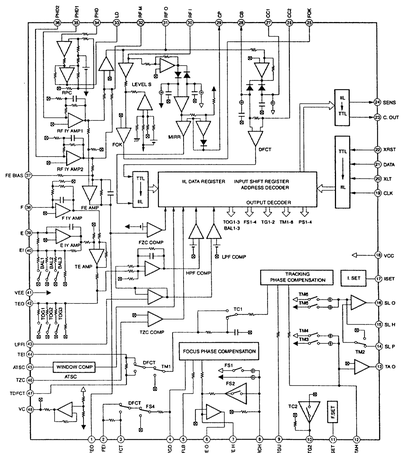


IC2 BU2615S

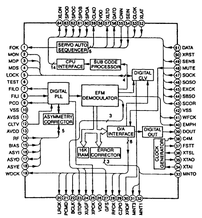


• IC BLOCK DIAGRAMS – MAIN SECTION (2/2) –

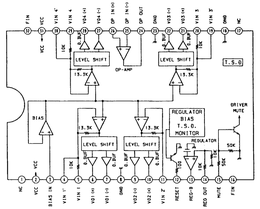
IC701 CXA1782BQ



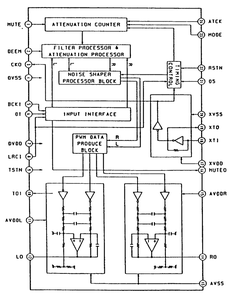
IC702 CXD2507AQ



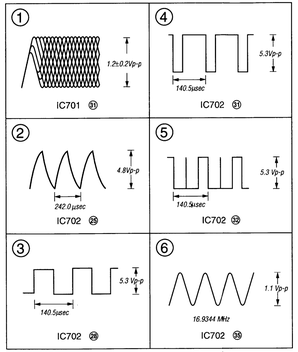
IC703 BA6198S



IC704 SM5877AM



• WAVEFORMS



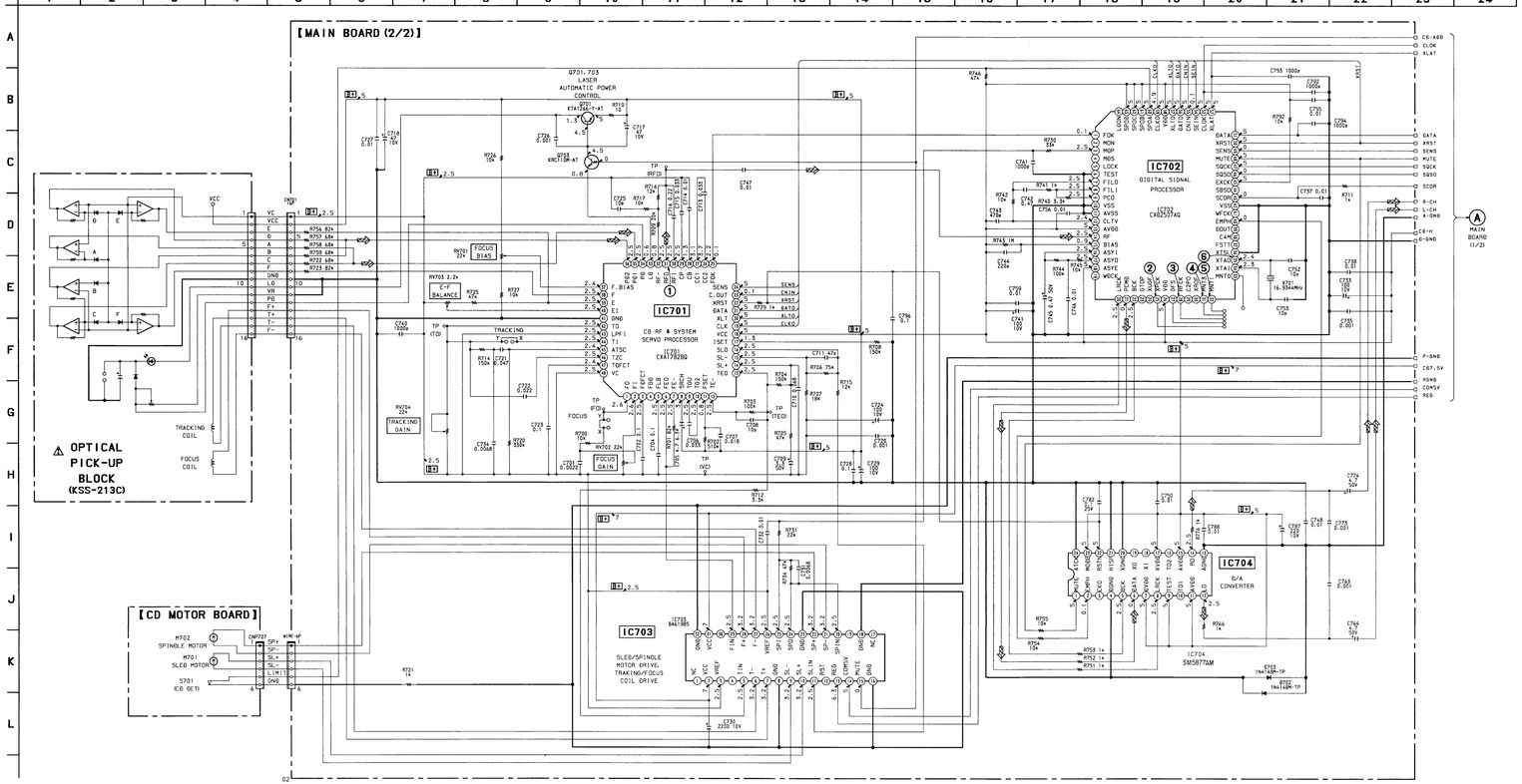
Note :

- All capacitors are in μF unless otherwise noted. pF: μμF
  50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and ¼W 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+ : B+ Line
- [ ] : adjustment for repair.
- Power voltage is dc 9V and fed with regulated dc power supply from external power voltage jack.
- 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
- Abbreviation
  EE : East European

6-4. SCHEMATIC DIAGRAM – MAIN SECTION (2/2) –

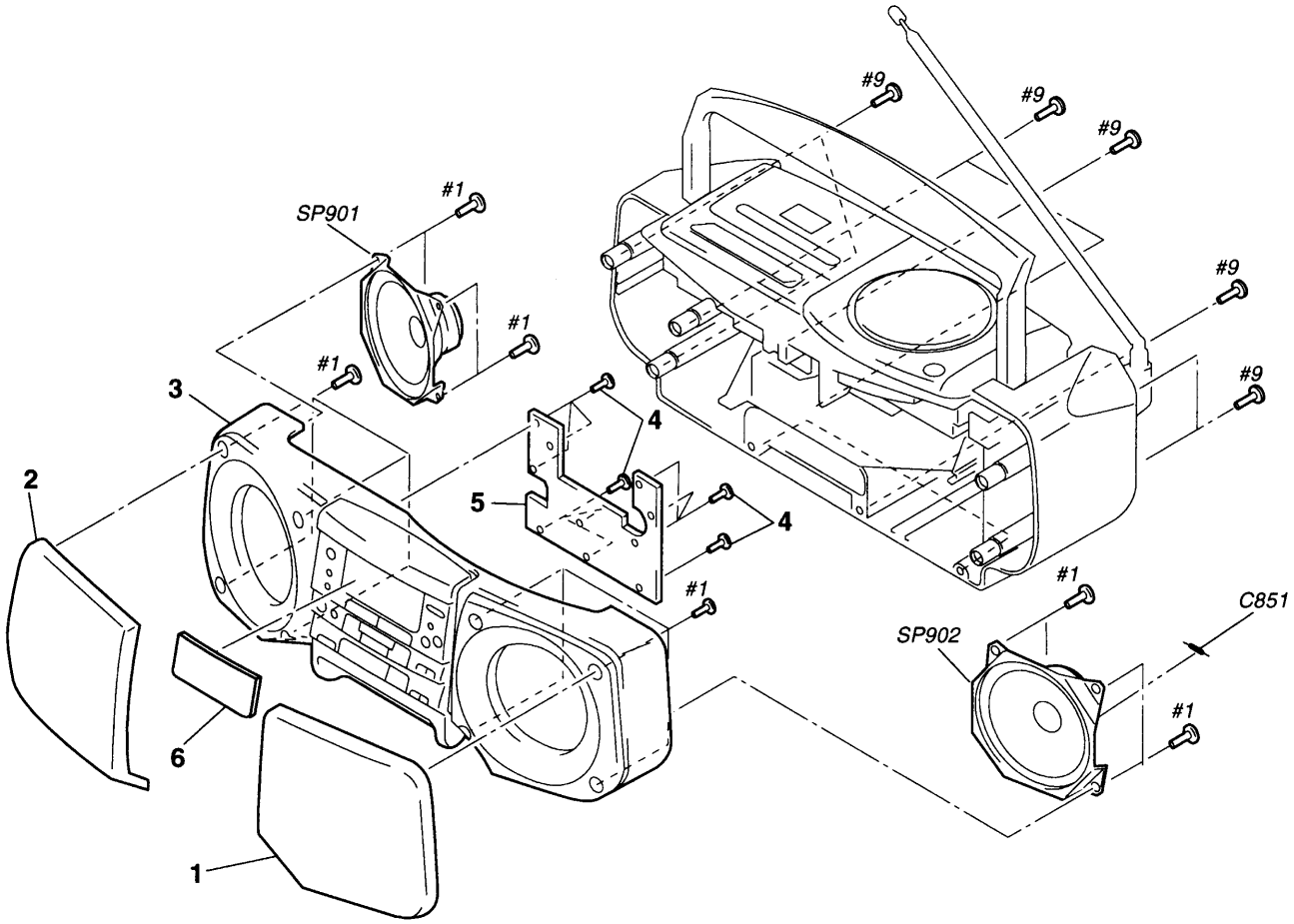


SECTION 7
EXPLODED VIEWS

NOTE :
- -XX, -X mean standardized parts, so they may have some difference from the original one.
- Color indication of Appearance Parts
  Example :
  KNOB, BALANCE (WHITE) ••• (RED)
  ↑ ↑
  Parts color Cabinet's color
- Items marked " * "are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.
- Hardware (# mark) list and accessories and packing materials are given in the last of this parts list.
- Abbreviation
  EE: East European

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

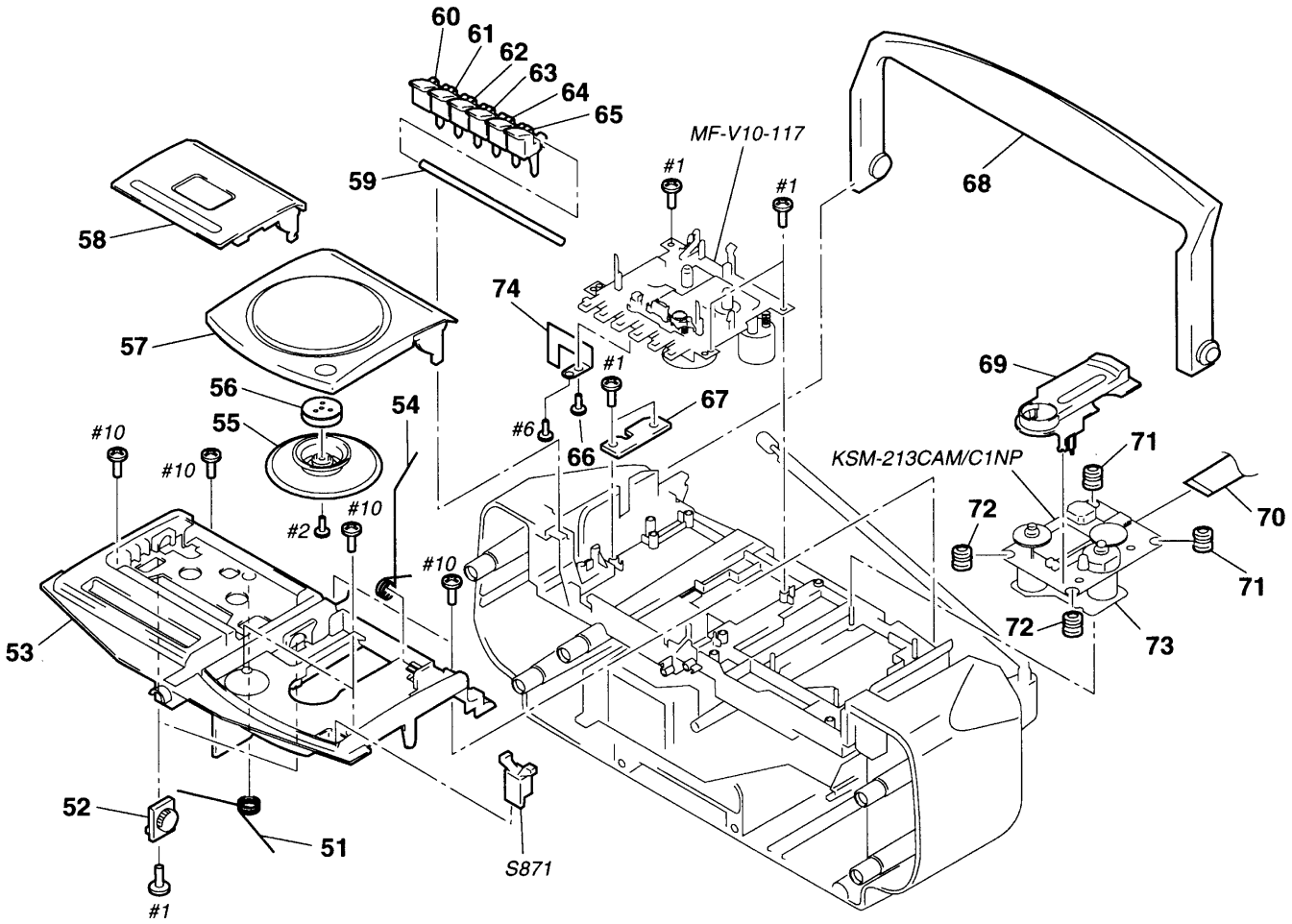
7-1. FRONT CABINET SECTION



Ref. No.	Part No.	Description	Remark
1	X-3373-392-1	NET (R) ASSY	
2	X-3373-391-1	NET (L) ASSY	
3	X-3373-952-1	CABINET(FRONT) ASSY•••(BLACK) (AEP,UK)	
3	X-3373-972-1	CABINET(FRONT) ASSY•••(SILVER) (AEP,UK)	
3	X-3373-953-1	CABINET(FRONT) ASSY (EE)	
4	4-951-620-01	SCREW (2.6X8), +BVTP	

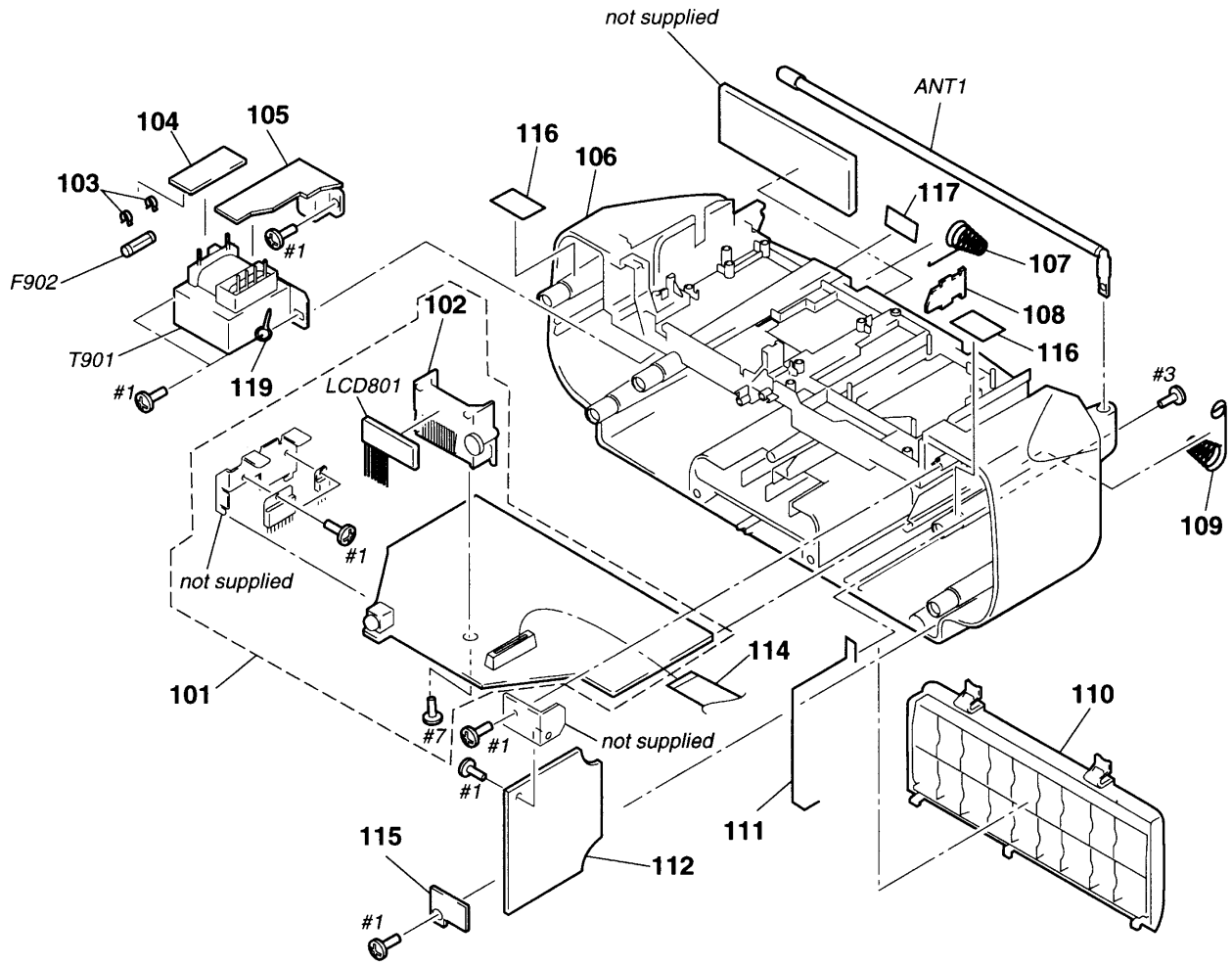
Ref. No.	Part No.	Description		Remark
* 5	1-665-045-11	SW BOARD		
6	3-009-228-01	WINDOW, INDICATION		
C851	1-162-199-31	CERAMIC 10PF	5%	50V
SP901	1-505-531-11	SPEAKER (10cm) (L-CH)		
SP902	1-505-531-11	SPEAKER (10cm) (R-CH)		

7-2. UPPER CABINET SECTION



Ref. No.	Part No.	Description	Remark
51	3-009-208-01	SPRING, CASSETTE UP	
52	3-922-112-11	DAMPER	
53	3-009-186-01	CABINET (UPPER)•••(BLACK)	
53	3-009-186-31	CABINET (UPPER)•••(SILVER)	
54	3-009-209-01	SPRING, CD UP	
55	1-452-899-11	MAGNET	
56	3-923-498-01	PLATE, CHUCK	
57	3-009-187-01	LID, CD•••(BLACK)	
57	3-009-187-31	LID, CD•••(SILVER)	
58	X-3373-389-1	HOLDER SUB ASSY,CASSETTE•••(BLACK)	
58	X-3373-975-1	HOLDER SUB ASSY,CASSETTE•••(SILVER) (AEP,UK)	
* 59	3-009-206-01	SHAFT (MD)	
60	3-009-196-01	BUTTON (REC)•••(BLACK)	
60	3-009-196-21	BUTTON (REC)•••(SILVER) (AEP,UK)	
61	3-009-199-01	BUTTON (PLAY)•••(BLACK)	
61	3-009-199-21	BUTTON (PLAY)•••(SILVER) (AEP,UK)	
62	3-009-198-01	BUTTON (REW)•••(BLACK)	
62	3-009-198-21	BUTTON (REW)•••(SILVER) (AEP,UK)	
63	3-009-197-01	BUTTON (FF)•••(BLACK)	
63	3-009-197-21	BUTTON (FF)•••(SILVER) (AEP,UK)	
64	3-009-200-01	BUTTON (STOP)•••(BLACK)	
64	3-009-200-21	BUTTON (STOP)•••(SILVER) (AEP,UK)	
65	3-009-195-01	BUTTON (PAUSE)•••(BLACK)	
65	3-009-195-21	BUTTON (PAUSE)•••(SILVER) (AEP,UK)	
66	4-951-620-01	SCREW (2.6X8), +BVTP	
* 67	1-666-265-11	REC SW BOARD	
68	3-009-201-01	HANDLE•••(BLACK)	
68	3-009-201-21	HANDLE•••(SILVER) (AEP,UK)	
69	3-923-736-01	COVER, CD	
70	1-777-955-11	WIRE (FLAT TYPE) (16 CORE)	
71	3-910-095-01	RUBBER, VIBRATION PROOF (RED)	
72	3-910-095-11	RUBBER, VIBRATION PROOF (GREEN)	
73	1-639-678-12	CD MOTOR BOARD	
74	3-009-214-01	SPRING, REC	
S871	1-692-960-11	SWITCH, PUSH (1 KEY) (DOOR OPEN CLOSE)	

7-3. REAR CABINET SECTION

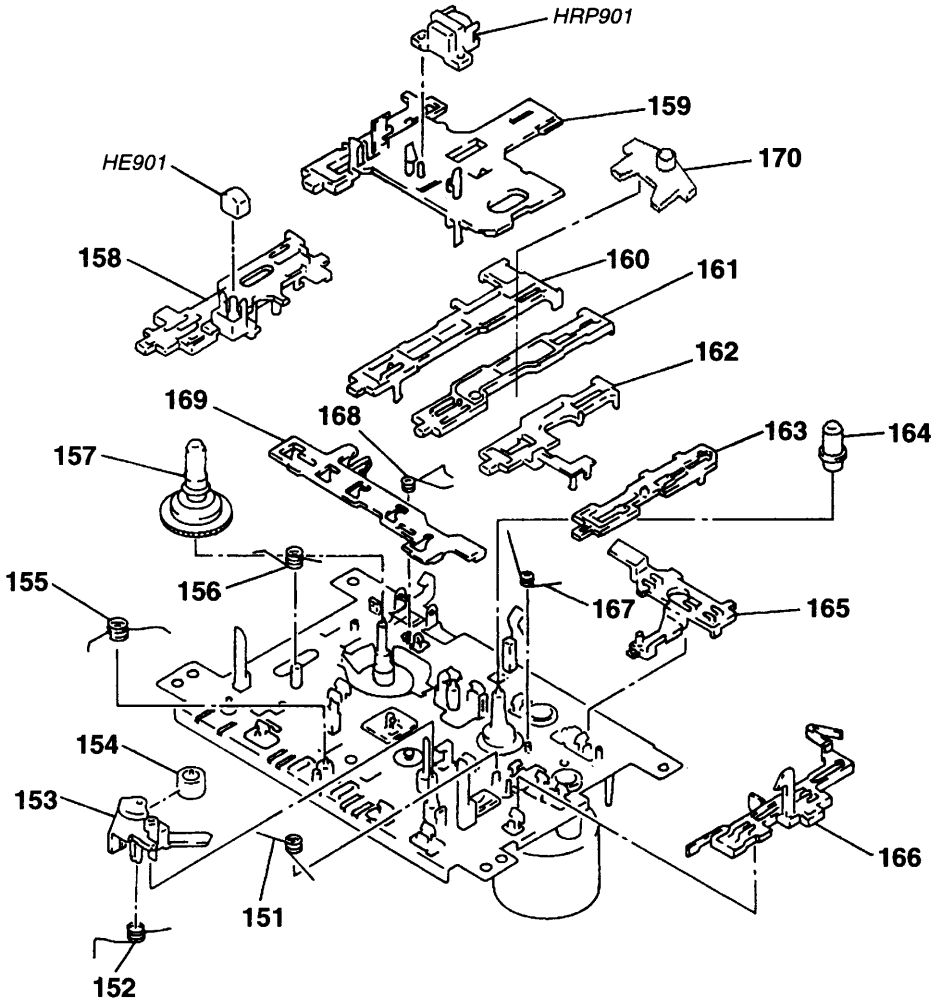


The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Ref. No.	Part No.	Description	Remark
* 101	A-3306-324-A	MAIN BOARD, COMPLETE (AEP,UK)	
* 101	A-3306-659-A	MAIN BOARD, COMPLETE (EE)	
* 102	3-009-219-01	HOLDER, LCD	
103	1-533-233-21	HOLDER, FUSE	
* 104	1-666-264-11	POWER BOARD	
* 105	1-666-267-11	AC INLET BOARD	
106	3-013-719-21	CABINET (REAR) (EE)	
106	3-013-719-41	CABINET (REAR)•••(BLACK) (AEP,UK)	
106	3-013-719-51	CABINET (REAR)•••(SILVER) (AEP,UK)	
107	3-009-211-01	SPRING (–)	
* 108	1-666-266-11	BATT BOARD	
109	3-009-210-01	SPRING (+/–)	
110	3-009-202-01	LID, BATTERY CASE•••(BLACK)	
110	3-009-202-21	LID, BATTERY CASE•••(SILVER)(AEP,UK)	

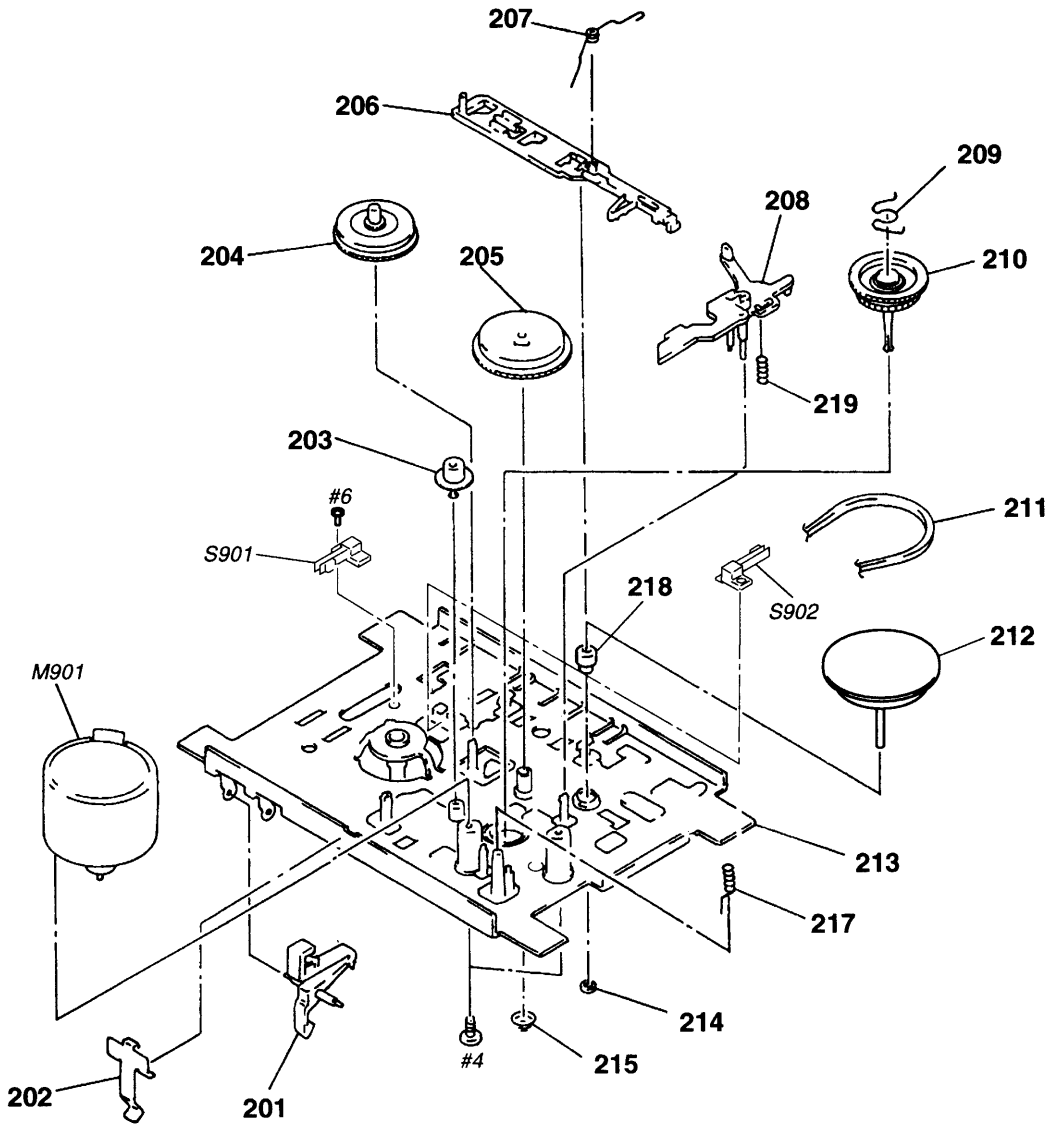
Ref. No.	Part No.	Description	Remark
* 111	3-009-222-01	TERMINAL (SYNTHESIZER), ANTENNA	
* 112	A-3306-516-A	TUNER BOARD, COMPLETE (AEP,UK)	
* 112	A-3306-658-A	TUNER BOARD, COMPLETE (EE)	
114	1-782-112-11	WIRE, PARALLEL (FFC) (13 CORE)	
115	1-666-570-11	TUNER RETAINER BOARD	
116	3-831-441-11	CUSHION (F)	
* 117	3-015-505-01	SEAL(A)•••(BLACK)	
* 117	3-015-505-21	SEAL(A)•••(SILVER) (AEP,UK)	
119	3-703-397-01	STOPPER, WIRING	
ANT1	1-501-918-11	ANTENNA, TELESCOPIC	
⚠F902	1-532-464-31	FUSE (T2.5AL/250V)	
LCD801	1-801-592-11	DISPLAY PANEL, LIQUID CRYSTAL	
⚠T901	1-426-632-11	TRANSFORMER, POWER	

7-4. MECHANISM DECK SECTION (1)
(MF-V10-117)



Ref. No.	Part No.	Description	Remark
151	3-933-010-01	SPRING (S/P), TORSION	
152	3-933-025-01	SPRING (P), TORSION	
153	3-933-026-01	LEVER (P)	
154	3-933-024-01	ROLLER, PINCH	
155	3-933-019-01	SPRING (F/R), TORSION	
156	3-933-028-01	SPRING (FWD), TORSION	
157	3-933-016-01	GEAR (S REEL)	
158	3-008-590-01	SLIDER (REC)	
159	3-008-592-01	BASE (H), HEAD	
* 160	3-008-588-01	SLIDER (REW)	
* 161	3-008-589-01	SLIDER (FF)	
* 162	3-008-587-01	SLIDER (STOP)	
* 163	3-008-591-01	SLIDER (PAUSE)	
164	3-933-004-01	CLAW, REEL	
* 165	3-933-021-01	SLIDER (FRP)	
166	3-933-006-01	SLIDER (EJECT)	
167	3-934-833-01	SPRING (FRP)	
168	3-934-834-01	SPRING (BT)	
169	3-933-007-01	PLATE, LOCK	
* 170	3-012-114-01	LEVER (FR)	
HE901	1-543-876-11	HEAD (ERASE)	
HRP901	1-500-364-11	HEAD,MAGNETIC (RECORD/PLAYBACK)	

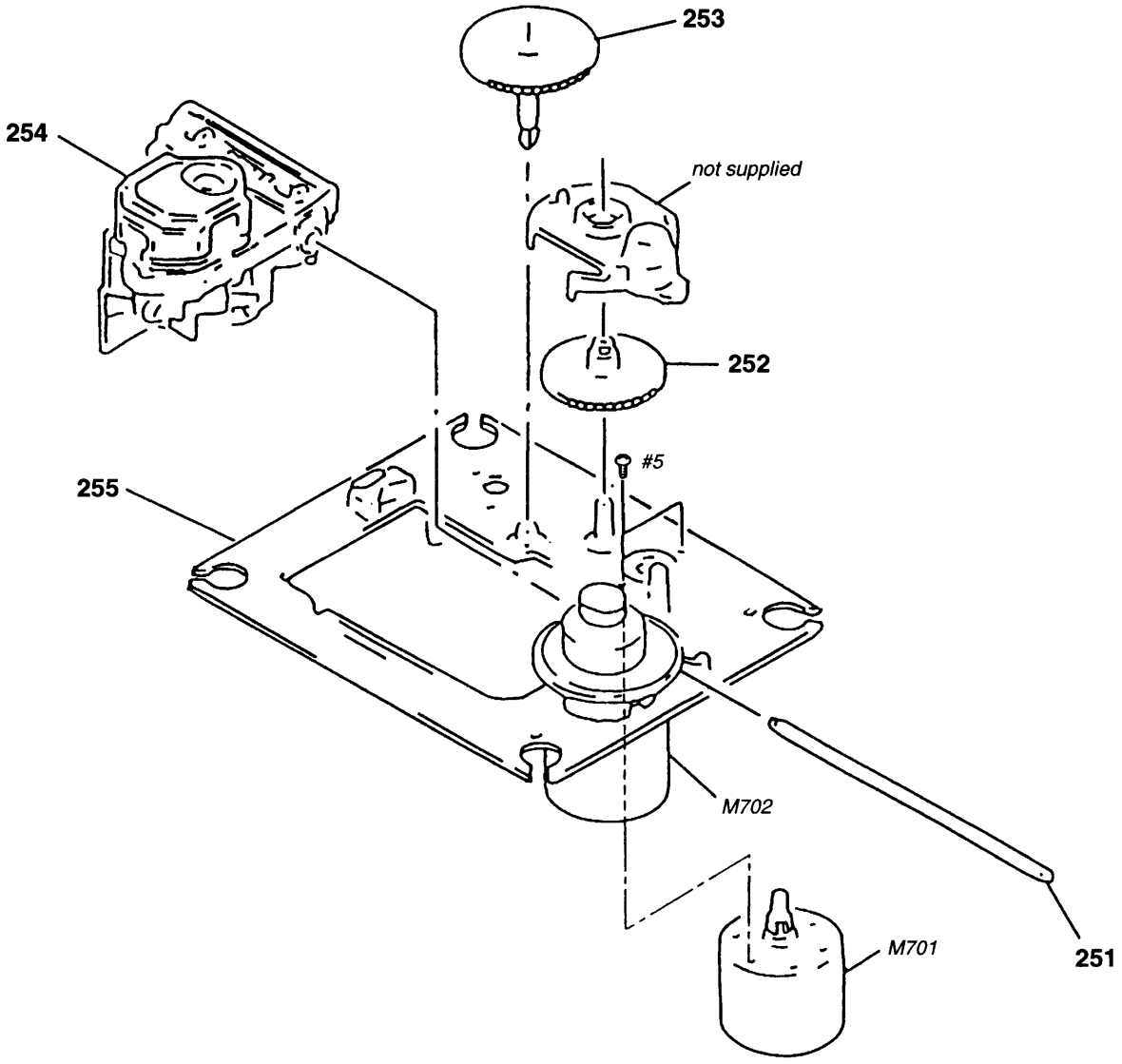
7-5. MECHANISM DECK SECTION (2)
(MF-V10-117)



Ref. No.	Part No.	Description	Remark
201	3-933-029-01	LEVER, ERASING PREVENTION	
202	3-933-182-01	SPRING, CASSETTE	
203	3-932-995-01	GEAR (MID)	
204	X-3371-667-1	CLUTCH ASSY	
205	3-932-997-01	GEAR (CAM)	
* 206	3-932-999-01	SLIDER (SW)	
207	3-932-998-01	SPRING (GROUND), TORSION	
208	3-932-996-01	LEVER (S.OFF)	
209	3-934-835-01	SPRING (S.OFF)	
210	X-3371-666-1	REEL ASSY, T	
211	3-933-020-01	BELT	

Ref. No.	Part No.	Description	Remark
212	X-3372-924-1	FLYWHEEL ASSY	
213	3-932-993-01	CHASSIS, OUTSERT	
214	3-343-358-01	RING, RETAINING	
215	3-933-005-01	SPRING (CAM), COMPRESSION	
217	3-937-760-01	SPRING (GROUND), COMPRESSION	
218	3-934-336-01	BEARING	
219	3-939-383-01	SPRING, COMPRESSION	
M901	A-3304-621-A	MOTOR ASSY	
S901	1-762-679-11	SWITCH, LEAF (MOTOR ON/OFF)	
S902	1-771-059-11	SWITCH, LEAF (TAPE PLAY)	

7-6. OPTICAL PICK-UP SECTION (KSM-213CAM/C1NP)



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
251	2-626-908-01	SHAFT, SLED	
252	2-627-003-02	GEAR (B) (RP)	
253	2-626-907-01	GEAR (A) (S)	
⚠254	8-820-018-02	OPTICAL PICK-UP KSS-213C	
255	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

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
  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
*	1-666-267-11	AC INLET BOARD			
		**********			
		< CAPACITOR >			
C907	1-162-294-31	CERAMIC	0.001uF	10%	50V
		< DIODE >			
D905	8-719-987-63	DIODE 1N4148M			
D906	8-719-987-63	DIODE 1N4148M			
		< JACK >			
⚠J901	1-526-838-11	INLET, AC 2P (AC IN~)			
**********					
*	1-666-266-11	BATT BOARD			
		**********			
**********					
	1-639-678-12	CD MOTOR BOARD			
		**********			
		< CONNECTOR >			
CNP707	1-564-722-11	PIN, CONNECTOR (SMALL TYPE) 6P			
		< SWITCH >			
S701	1-572-085-11	SWITCH, LEAF (CD DET)			
**********					
*	A-3306-324-A	MAIN BOARD, COMPLETE (AEP,UK)			
*	A-3306-659-A	MAIN BOARD, COMPLETE (EE)			
		**********			
*	3-009-219-01	HOLDER, LCD			
	7-621-770-XX	SCREW +P 2.6X8			
	7-685-647-79	SCREW +BVTP	3X10 TYPE2 N-S		
		< CAPACITOR >			
C101	1-162-301-11	CERAMIC	0.0015uF	20%	16V
C103	1-104-664-11	ELECT	47uF	20%	10V
C104	1-161-020-11	CERAMIC	0.039uF	10%	25V
C105	1-162-302-11	CERAMIC	0.0022uF	20%	16V
C111	1-124-902-00	ELECT	0.47uF	20%	50V
C113	1-124-903-11	ELECT	1uF	20%	50V
C121	1-124-902-00	ELECT	0.47uF	20%	50V
C122	1-104-664-11	ELECT	47uF	20%	10V
C191	1-126-927-11	ELECT	2200uF	20%	10V
C192	1-124-903-11	ELECT	1uF	20%	50V

Ref. No.	Part No.	Description			Remark
C194	1-124-904-11	ELECT	2.2uF	20%	50V
C195	1-136-153-00	FILM	0.01uF	5%	50V
C201	1-162-301-11	CERAMIC	0.0015uF	20%	16V
C203	1-104-664-11	ELECT	47uF	20%	10V
C204	1-161-020-11	CERAMIC	0.039uF	10%	25V
C205	1-162-302-11	CERAMIC	0.0022uF	20%	16V
C211	1-124-902-00	ELECT	0.47uF	20%	50V
C213	1-124-903-11	ELECT	1uF	20%	50V
C221	1-124-902-00	ELECT	0.47uF	20%	50V
C222	1-104-664-11	ELECT	47uF	20%	10V
C291	1-126-927-11	ELECT	2200uF	20%	10V
C292	1-124-903-11	ELECT	1uF	20%	50V
C295	1-136-153-00	FILM	0.01uF	5%	50V
C301	1-126-937-11	ELECT	4700uF	20%	16V
C302	1-104-666-11	ELECT	220uF	20%	16V
C304	1-124-443-00	ELECT	100uF	20%	10V
C305	1-124-443-00	ELECT	100uF	20%	10V
C306	1-124-443-00	ELECT	100uF	20%	10V
C308	1-126-233-11	ELECT	22uF	20%	50V
C312	1-136-165-00	FILM	0.1uF	5%	50V
C313	1-136-157-00	FILM	0.022uF	5%	50V
C314	1-136-153-00	FILM	0.01uF	5%	50V
C315	1-124-472-11	ELECT	470uF	20%	10V
C316	1-136-165-00	FILM	0.1uF	5%	50V
C322	1-136-165-00	FILM	0.1uF	5%	50V
C323	1-136-157-00	FILM	0.022uF	5%	50V
C324	1-136-153-00	FILM	0.01uF	5%	50V
C325	1-124-903-11	ELECT	1uF	20%	50V
C327	1-136-165-00	FILM	0.1uF	5%	50V
C328	1-126-963-11	ELECT	4.7uF	20%	50V
C329	1-162-302-11	CERAMIC	0.0022uF	30%	16V
C330	1-162-302-11	CERAMIC	0.0022uF	30%	16V
C331	1-162-294-31	CERAMIC	0.001uF	10%	50V
C332	1-124-903-11	ELECT	1uF	20%	50V
C333	1-124-443-00	ELECT	100uF	20%	10V
C335	1-124-443-00	ELECT	100uF	20%	10V
C336	1-104-666-11	ELECT	220uF	20%	6.3V
C340	1-162-294-31	CERAMIC	0.001uF	10%	50V
C342	1-130-481-00	MYLAR	0.0068uF	5%	50V
C344	1-104-664-11	ELECT	47uF	20%	10V
C346	1-130-471-00	MYLAR	0.001uF	5%	50V
C351	1-162-294-31	CERAMIC	0.001uF	10%	50V
C352	1-136-153-00	FILM	0.01uF	5%	50V
C353	1-124-443-00	ELECT	100uF	20%	10V
C354	1-124-907-11	ELECT	10uF	20%	50V
C391	1-104-666-11	ELECT	220uF	20%	10V

MAIN

Ref. No.	Part No.	Description			Remark
C392	1-162-294-31	CERAMIC	0.001uF	10%	50V
C393	1-162-294-31	CERAMIC	0.001uF	10%	50V
C394	1-162-306-11	CERAMIC	0.01uF	20%	16V
C395	1-162-306-11	CERAMIC	0.01uF	20%	16V
C396	1-162-282-31	CERAMIC	100PF	10%	50V
C397	1-162-282-31	CERAMIC	100PF	10%	50V
C398	1-162-282-31	CERAMIC	100PF	10%	50V
C701	1-162-302-11	CERAMIC	0.0022uF	30%	16V
C702	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	1-130-486-00	MYLAR	0.018uF	10%	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
C713	1-130-489-00	MYLAR	0.033uF	5%	50V
C714	1-162-306-11	CERAMIC	0.01uF	20%	16V
C715	1-130-489-00	MYLAR	0.033uF	5%	50V
C716	1-136-169-00	FILM	0.22uF	5%	50V
C717	1-104-664-11	ELECT	47uF	20%	10V
C718	1-104-664-11	ELECT	47uF	20%	10V
C720	1-162-294-31	CERAMIC	0.001uF	10%	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
C724	1-124-443-00	ELECT	100uF	20%	10V
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	20%	16V
C728	1-136-165-00	FILM	0.1uF	5%	50V
C729	1-124-443-00	ELECT	100uF	20%	10V
C730	1-126-927-11	ELECT	2200uF	20%	10V
C731	1-162-305-11	CERAMIC	0.0068uF	30%	16V
C732	1-162-306-11	CERAMIC	0.01uF	20%	16V
C733	1-124-443-00	ELECT	100uF	20%	10V
C734	1-162-305-11	CERAMIC	0.0068uF	30%	16V
C735	1-162-294-31	CERAMIC	0.001uF	10%	50V
C737	1-162-306-11	CERAMIC	0.01uF	20%	16V
C738	1-162-306-11	CERAMIC	0.01uF	20%	16V
C740	1-162-294-31	CERAMIC	0.001uF	10%	50V
C741	1-124-443-00	ELECT	100uF	20%	10V
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	1-124-902-00	ELECT	0.47uF	20%	50V
C746	1-162-306-11	CERAMIC	0.01uF	20%	16V
C747	1-162-306-11	CERAMIC	0.01uF	20%	16V
C748	1-162-306-11	CERAMIC	0.01uF	20%	16V
C750	1-136-153-00	FILM	0.01uF	5%	50V
C752	1-162-199-31	CERAMIC	10PF	5%	50V
C753	1-162-199-31	CERAMIC	10PF	5%	50V
C755	1-162-306-11	CERAMIC	0.01uF	20%	16V
C756	1-162-306-11	CERAMIC	0.01uF	20%	16V
C759	1-162-306-11	CERAMIC	0.01uF	20%	16V
C761	1-162-294-31	CERAMIC	0.001uF	10%	50V
C763	1-162-294-31	CERAMIC	0.001uF	10%	50V
C764	1-126-963-11	ELECT	4.7uF	20%	50V

Ref. No.	Part No.	Description			Remark
C773	1-162-294-31	CERAMIC	0.001uF	10%	50V
C774	1-126-963-11	ELECT	4.7uF	20%	50V
C782	1-161-772-11	CERAMIC	0.1uF	10%	25V
C787	1-104-666-11	ELECT	220uF	20%	10V
C788	1-162-306-11	CERAMIC	0.01uF	20%	16V
C792	1-162-294-31	CERAMIC	0.001uF	10%	50V
C793	1-162-294-31	CERAMIC	0.001uF	10%	50V
C794	1-162-294-31	CERAMIC	0.001uF	10%	50V
C796	1-161-772-11	CERAMIC	0.1uF	10%	25V
C802	1-124-907-11	ELECT	10uF	20%	50V
C807	1-161-772-11	CERAMIC	0.1uF	10%	25V
C808	1-104-664-11	ELECT	47uF	20%	16V
C809	1-104-905-11	CAPACITOR	0.22F		5.5V
C810	1-102-514-11	CERAMIC	22PF	5%	50V
C811	1-102-514-11	CERAMIC	22PF	5%	50V
C812	1-162-306-11	CERAMIC	0.01uF	20%	16V
C813	1-162-306-11	CERAMIC	0.01uF	20%	16V
C814	1-162-306-11	CERAMIC	0.01uF	20%	16V
C815	1-102-516-11	CERAMIC	27PF	5%	50V
C816	1-102-516-11	CERAMIC	27PF	5%	50V
C817	1-162-306-11	CERAMIC	0.01uF	20%	16V
C818	1-162-306-11	CERAMIC	0.01uF	20%	16V
C819	1-102-962-00	CERAMIC	30PF	5%	50V
C820	1-102-962-00	CERAMIC	30PF	5%	50V
C821	1-162-306-11	CERAMIC	0.01uF	20%	16V
C908	1-136-153-00	FILM	0.01uF	5%	50V
C910	1-162-294-31	CERAMIC	0.001uF	10%	50V
C911	1-162-294-31	CERAMIC	0.001uF	10%	50V
C912	1-162-294-31	CERAMIC	0.001uF	10%	50V
C913	1-162-294-31	CERAMIC	0.001uF	10%	50V
C914	1-162-294-31	CERAMIC	0.001uF	10%	50V
C915	1-162-294-31	CERAMIC	0.001uF	10%	50V
C916	1-162-294-31	CERAMIC	0.001uF	10%	50V
C953	1-124-443-00	ELECT	100uF	20%	10V

< CONNECTOR >

CN301	1-506-987-11	PIN, CONNECTOR (PC BOARD) 5P	
CN302	1-506-986-11	PIN, CONNECTOR (PC BOARD) 4P	
* CN651	1-691-577-11	PIN, CONNECTOR (PC BOARD) 6P	
CN701	1-770-674-11	CONNECTOR, FFC/FPC 16P	
CN801	1-695-336-11	CONNECTOR, FFC/FPC 13P	
* CN803	1-691-579-11	PIN, CONNECTOR (PC BOARD) 8P	
CN902	1-506-986-11	PIN, CONNECTOR (PC BOARD) 4P	
CN912	1-506-986-11	PIN, CONNECTOR (PC BOARD) 4P	

< DIODE >

D301	8-719-010-55	DIODE	UZ-7.5BSC
D304	8-719-987-63	DIODE	1N4148M
D305	8-719-987-63	DIODE	1N4148M
D351	8-719-987-63	DIODE	1N4148M
D391	8-719-987-63	DIODE	1N4148M
D702	8-719-987-63	DIODE	1N4148M
D703	8-719-987-63	DIODE	1N4148M
D802	8-719-987-63	DIODE	1N4148M
D804	8-719-987-63	DIODE	1N4148M
D805	8-719-987-63	DIODE	1N4148M
D806	8-719-987-63	DIODE	1N4148M
D807	8-719-987-63	DIODE	1N4148M
D808	8-719-987-63	DIODE	1N4148M
D809	8-719-987-63	DIODE	1N4148M

Ref. No.	Part No.	Description			Remark
D810	8-719-987-63	DIODE 1N4148M			
		< IC >			
IC301	8-759-264-71	IC TA2068N			
IC305	8-759-452-80	IC LA4600			
IC351	8-759-432-41	IC BH3854AS			
IC701	8-752-069-56	IC CXA1782BQ			
IC702	8-752-372-94	IC CXD2507AQ			
IC703	8-759-453-99	IC BA6198S			
IC704	8-759-426-44	IC SM5877AM			
IC801	8-752-880-32	IC CXP50716-081Q (EE)			
IC801	8-752-884-09	IC CXP50716-080Q (AEP, UK)			
IC802	8-759-449-53	IC S-81256PG-Z			
IC804	8-759-165-86	IC PST600I-T			
		< JACK >			
J301	1-566-891-11	JACK (∩)			
		< COIL >			
L301	1-414-146-31	INDUCTOR	2.2uH		
		< LIQUID CRYSTAL DISPLAY >			
LCD801	1-801-592-11	DISPLAY PANEL, LIQUID CRYSTAL			
		< TRANSISTOR >			
Q301	8-729-037-11	TRANSISTOR	KTA1271-Y-AT		
Q302	8-729-036-77	TRANSISTOR	KRC107M		
Q303	8-729-021-82	TRANSISTOR	2SD2396K		
Q306	8-729-037-34	TRANSISTOR	KRA107M		
Q308	8-729-036-80	TRANSISTOR	KRC110M		
Q309	8-729-036-89	TRANSISTOR	KTC3198GR-AT		
Q310	8-729-036-89	TRANSISTOR	KTC3198GR-AT		
Q311	8-729-036-89	TRANSISTOR	KTC3198GR-AT		
Q312	8-729-037-34	TRANSISTOR	KRA107M		
Q313	8-729-036-77	TRANSISTOR	KRC107M		
Q701	8-729-037-02	TRANSISTOR	KTA1266Y-AT		
Q703	8-729-036-80	TRANSISTOR	KRC110M		
Q801	8-729-037-34	TRANSISTOR	KRA107M		
Q802	8-729-036-80	TRANSISTOR	KRC110M		
Q803	8-729-922-66	TRANSISTOR	2SC2410SN		
Q804	8-729-922-66	TRANSISTOR	2SC2410SN		
Q805	8-729-037-34	TRANSISTOR	KRA107M		
Q806	8-729-037-11	TRANSISTOR	KTA1271-Y-AT		
Q807	8-729-037-34	TRANSISTOR	KRA107M		
Q952	8-729-037-11	TRANSISTOR	KTA1271-Y-AT		
		< RESISTOR >			
R101	1-249-431-11	CARBON	15K	5%	1/4W
R102	1-249-404-00	CARBON	82	5%	1/4W
R103	1-249-440-11	CARBON	82K	5%	1/4W
R104	1-247-843-11	CARBON	3.3K	5%	1/4W
R105	1-249-417-11	CARBON	1K	5%	1/4W
R106	1-249-417-11	CARBON	1K	5%	1/4W
R111	1-249-425-11	CARBON	4.7K	5%	1/4W
R113	1-249-424-11	CARBON	3.9K	5%	1/4W
R114	1-249-415-11	CARBON	680	5%	1/4W
R122	1-249-417-11	CARBON	1K	5%	1/4W
R123	1-249-410-11	CARBON	270	5%	1/4W
R149	1-249-417-11	CARBON	1K	5%	1/4W
R191	1-247-807-31	CARBON	100	5%	1/4W
R193	1-249-417-11	CARBON	1K	5%	1/4W
R194	1-249-417-11	CARBON	1K	5%	1/4W
R201	1-249-431-11	CARBON	15K	5%	1/4W
R202	1-249-404-00	CARBON	82	5%	1/4W
R203	1-249-440-11	CARBON	82K	5%	1/4W
R204	1-247-843-11	CARBON	3.3K	5%	1/4W
R205	1-249-417-11	CARBON	1K	5%	1/4W
R206	1-249-417-11	CARBON	1K	5%	1/4W
R211	1-249-425-11	CARBON	4.7K	5%	1/4W
R213	1-249-424-11	CARBON	3.9K	5%	1/4W
R214	1-249-415-11	CARBON	680	5%	1/4W
R222	1-249-417-11	CARBON	1K	5%	1/4W
R223	1-249-410-11	CARBON	270	5%	1/4W
R249	1-249-417-11	CARBON	1K	5%	1/4W
R291	1-247-807-31	CARBON	100	5%	1/4W
R293	1-249-417-11	CARBON	1K	5%	1/4W
R294	1-249-417-11	CARBON	1K	5%	1/4W
R301	1-249-417-11	CARBON	1K	5%	1/4W
R302	1-249-437-11	CARBON	47K	5%	1/4W
R303	1-247-807-31	CARBON	100	5%	1/4W
R304	1-247-903-00	CARBON	1M	5%	1/4W
R305	1-249-407-11	CARBON	150	5%	1/4W
R306	1-249-429-11	CARBON	10K	5%	1/4W
R307	1-249-429-11	CARBON	10K	5%	1/4W
R308	1-249-417-11	CARBON	1K	5%	1/4W
R310	1-249-409-11	CARBON	220	5%	1/4W
R313	1-249-401-11	CARBON	47	5%	1/4W
R314	1-249-399-11	CARBON	33	5%	1/4W
R321	1-249-425-11	CARBON	4.7K	5%	1/4W
R322	1-249-417-11	CARBON	1K	5%	1/4W
R323	1-247-903-00	CARBON	1M	5%	1/4W
R324	1-247-807-31	CARBON	100	5%	1/4W
R325	1-249-429-11	CARBON	10K	5%	1/4W
R326	1-249-429-11	CARBON	10K	5%	1/4W
R327	1-249-429-11	CARBON	10K	5%	1/4W
R328	1-247-903-00	CARBON	1M	5%	1/4W
R329	1-249-437-11	CARBON	47K	5%	1/4W
R330	1-247-895-00	CARBON	470K	5%	1/4W
R341	1-249-393-11	CARBON	10	5%	1/4W
R342	1-249-435-11	CARBON	33K	5%	1/4W
R351	1-249-425-11	CARBON	4.7K	5%	1/4W
R352	1-249-435-11	CARBON	33K	5%	1/4W
R392	1-249-417-11	CARBON	1K	5%	1/4W
R700	1-249-429-11	CARBON	10K	5%	1/4W
R701	1-249-440-11	CARBON	82K	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
R711	1-249-417-11	CARBON	1K	5%	1/4W
R712	1-247-843-11	CARBON	3.3K	5%	1/4W
R714	1-247-883-00	CARBON	150K	5%	1/4W
R715	1-249-430-11	CARBON	12K	5%	1/4W
R716	1-249-430-11	CARBON	12K	5%	1/4W

MAIN

Ref. No.	Part No.	Description			Remark
R717	1-249-429-11	CARBON	10K	5%	1/4W
R720	1-247-891-00	CARBON	330K	5%	1/4W
R721	1-249-417-11	CARBON	1K	5%	1/4W
R722	1-249-439-11	CARBON	68K	5%	1/4W
R723	1-249-440-11	CARBON	82K	5%	1/4W
R724	1-249-429-11	CARBON	10K	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
R729	1-249-417-11	CARBON	1K	5%	1/4W
R730	1-249-435-11	CARBON	33K	5%	1/4W
R731	1-249-433-11	CARBON	22K	5%	1/4W
R734	1-249-437-11	CARBON	47K	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	1-249-441-11	CARBON	100K	5%	1/4W
R745	1-249-429-11	CARBON	10K	5%	1/4W
R746	1-249-437-11	CARBON	47K	5%	1/4W
R751	1-249-417-11	CARBON	1K	5%	1/4W
R752	1-249-417-11	CARBON	1K	5%	1/4W
R753	1-249-417-11	CARBON	1K	5%	1/4W
R754	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
R792	1-249-429-11	CARBON	10K	5%	1/4W
R801	1-249-425-11	CARBON	4.7K	5%	1/4W
R806	1-249-425-11	CARBON	4.7K	5%	1/4W
R811	1-249-425-11	CARBON	4.7K	5%	1/4W
R816	1-249-425-11	CARBON	4.7K	5%	1/4W
R821	1-247-807-31	CARBON	100	5%	1/4W
R824	1-249-429-11	CARBON	10K	5%	1/4W
R825	1-249-413-11	CARBON	470	5%	1/4W
R826	1-249-441-11	CARBON	100K	5%	1/4W
R827	1-249-437-11	CARBON	47K	5%	1/4W
R828	1-249-437-11	CARBON	47K	5%	1/4W
R829	1-249-437-11	CARBON	47K	5%	1/4W
R830	1-249-441-11	CARBON	100K	5%	1/4W
R831	1-249-425-11	CARBON	4.7K	5%	1/4W
R832	1-249-431-11	CARBON	15K	5%	1/4W (EE)
R832	1-247-850-11	CARBON	6.2K	5%	1/4W (AEP,UK)
R833	1-249-425-11	CARBON	4.7K	5%	1/4W
R834	1-249-441-11	CARBON	100K	5%	1/4W
R835	1-249-441-11	CARBON	100K	5%	1/4W
R836	1-249-429-11	CARBON	10K	5%	1/4W
R837	1-249-429-11	CARBON	10K	5%	1/4W
R838	1-249-417-11	CARBON	1K	5%	1/4W
R839	1-249-441-11	CARBON	100K	5%	1/4W
R840	1-249-441-11	CARBON	100K	5%	1/4W
R901	1-249-437-11	CARBON	47K	5%	1/4W
R902	1-249-437-11	CARBON	47K	5%	1/4W
R903	1-249-437-11	CARBON	47K	5%	1/4W
R904	1-249-437-11	CARBON	47K	5%	1/4W
R905	1-249-437-11	CARBON	47K	5%	1/4W
R906	1-249-437-11	CARBON	47K	5%	1/4W
R907	1-249-437-11	CARBON	47K	5%	1/4W
R908	1-249-437-11	CARBON	47K	5%	1/4W
R909	1-249-437-11	CARBON	47K	5%	1/4W
R910	1-249-437-11	CARBON	47K	5%	1/4W
R911	1-249-437-11	CARBON	47K	5%	1/4W
R912	1-249-437-11	CARBON	47K	5%	1/4W
R913	1-249-437-11	CARBON	47K	5%	1/4W
R914	1-249-437-11	CARBON	47K	5%	1/4W
R915	1-249-437-11	CARBON	47K	5%	1/4W
R916	1-249-437-11	CARBON	47K	5%	1/4W
R917	1-249-437-11	CARBON	47K	5%	1/4W
R918	1-249-437-11	CARBON	47K	5%	1/4W
R919	1-249-437-11	CARBON	47K	5%	1/4W
R920	1-249-437-11	CARBON	47K	5%	1/4W
R921	1-249-437-11	CARBON	47K	5%	1/4W
R922	1-249-437-11	CARBON	47K	5%	1/4W
R923	1-249-437-11	CARBON	47K	5%	1/4W
R924	1-249-437-11	CARBON	47K	5%	1/4W
R925	1-249-437-11	CARBON	47K	5%	1/4W
R926	1-249-437-11	CARBON	47K	5%	1/4W
R927	1-249-417-11	CARBON	1K	5%	1/4W
R928	1-249-417-11	CARBON	1K	5%	1/4W
R929	1-249-417-11	CARBON	1K	5%	1/4W
R930	1-249-429-11	CARBON	10K	5%	1/4W
R931	1-249-417-11	CARBON	1K	5%	1/4W
R932	1-249-417-11	CARBON	1K	5%	1/4W
R933	1-249-417-11	CARBON	1K	5%	1/4W
R934	1-249-417-11	CARBON	1K	5%	1/4W
R935	1-249-417-11	CARBON	1K	5%	1/4W
R936	1-249-417-11	CARBON	1K	5%	1/4W
R938	1-249-417-11	CARBON	1K	5%	1/4W
R939	1-249-429-11	CARBON	10K	5%	1/4W
R940	1-249-417-11	CARBON	1K	5%	1/4W
R942	1-249-429-11	CARBON	10K	5%	1/4W
R943	1-249-421-11	CARBON	2.2K	5%	1/4W
R944	1-249-429-11	CARBON	10K	5%	1/4W
R945	1-249-429-11	CARBON	10K	5%	1/4W
R946	1-249-417-11	CARBON	1K	5%	1/4W
R947	1-249-417-11	CARBON	1K	5%	1/4W
R948	1-249-417-11	CARBON	1K	5%	1/4W
R949	1-249-417-11	CARBON	1K	5%	1/4W
R950	1-249-429-11	CARBON	10K	5%	1/4W
R951	1-249-417-11	CARBON	1K	5%	1/4W
R952	1-249-417-11	CARBON	1K	5%	1/4W
R953	1-249-417-11	CARBON	1K	5%	1/4W
R967	1-249-417-11	CARBON	1K	5%	1/4W

< VARIABLE RESISTOR >

RV701	1-228-995-00	RES, ADJ, METAL 22K (FOCUS BIAS)
RV702	1-228-995-00	RES, ADJ, METAL 22K (FOKUS GAIN)
RV703	1-228-991-00	RES, ADJ, METAL 2.2K (E-F BALANCE)
RV704	1-228-995-00	RES, ADJ, METAL 22K (TRACKING GAIN)

< SWITCH >

S821	1-762-758-11	SWITCH, KEYBOARD (RESET)

Ref. No.	Part No.	Description			Remark
		< TRANSFORMER >			
T301	1-433-268-00	TRANSFORMER, BIAS OSCILLATOR			
		< VIBRATOR >			
X701	1-760-793-11	VIBRATOR, CERAMIC (16.9344MHz)			
X801	1-767-184-11	VIBRATOR, CERAMIC (4.19MHz)			
X802	1-760-105-11	VIBRATOR, CRYSTAL (32.768kHz)			
**********					
*	1-666-264-11	POWER BOARD			
		**********			
	1-533-233-21	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	1-136-165-00	FILM	0.1uF	5%	50V
C906	1-136-165-00	FILM	0.1uF	5%	50V
		< DIODE >			
D901	8-719-063-79	DIODE	1N4002		
D902	8-719-063-79	DIODE	1N4002		
D903	8-719-063-79	DIODE	1N4002		
D904	8-719-063-79	DIODE	1N4002		
D952	8-719-987-63	DIODE	1N4148M		
		< FUSE >			
⚠F902	1-532-464-31	FUSE (T2.5AL/250V)			
		< RESISTOR >			
R991	1-249-429-11	CARBON	10K	5%	1/4W
**********					
*	1-666-265-11	REC SW BOARD			
		**********			
		< SWITCH >			
S301	1-762-565-11	SWITCH, SLIDE (REC/PB)			
**********					
*	1-665-045-11	SW BOARD			
		**********			
		< DIODE >			
D801	8-719-038-29	LED SLP-181B-51 (OPR/BATT)			
		< IC >			
IC803	8-749-012-76	IC PIC-12041T (■)			
		< RESISTOR >			
R802	1-249-418-11	CARBON	1.2K	5%	1/4W
R803	1-249-420-11	CARBON	1.8K	5%	1/4W
R804	1-247-843-11	CARBON	3.3K	5%	1/4W
R805	1-249-428-11	CARBON	8.2K	5%	1/4W
R807	1-249-418-11	CARBON	1.2K	5%	1/4W
R808	1-249-420-11	CARBON	1.8K	5%	1/4W
R809	1-247-843-11	CARBON	3.3K	5%	1/4W
R810	1-249-428-11	CARBON	8.2K	5%	1/4W
R812	1-249-418-11	CARBON	1.2K	5%	1/4W
R813	1-249-420-11	CARBON	1.8K	5%	1/4W
R814	1-247-843-11	CARBON	3.3K	5%	1/4W
R815	1-249-428-11	CARBON	8.2K	5%	1/4W
R817	1-249-418-11	CARBON	1.2K	5%	1/4W
R818	1-249-420-11	CARBON	1.8K	5%	1/4W
R819	1-247-843-11	CARBON	3.3K	5%	1/4W
R820	1-249-428-11	CARBON	8.2K	5%	1/4W
R821	1-247-828-11	CARBON	750	5%	1/4W
R822	1-247-816-11	CARBON	240	5%	1/4W
		< SWITCH >			
S801	1-762-798-11	SWITCH, KEYBOARD (POWER)			
S802	1-762-798-11	SWITCH, KEYBOARD (CLOCK)			
S803	1-762-798-11	SWITCH, KEYBOARD (STANDBY)			
S804	1-762-798-11	SWITCH, KEYBOARD (BAND)			
S805	1-762-798-11	SWITCH, KEYBOARD (WAKE UP)			
S806	1-762-798-11	SWITCH, KEYBOARD (SLEEP)			
S807	1-762-798-11	SWITCH, KEYBOARD (■)			
S808	1-762-798-11	SWITCH, KEYBOARD (▶II)			
S809	1-762-798-11	SWITCH, KEYBOARD (FUNCTION)			
S810	1-762-798-11	SWITCH, KEYBOARD (PRESET –)			
S811	1-762-798-11	SWITCH, KEYBOARD (PRESET +)			
S812	1-762-798-11	SWITCH, KEYBOARD (DISPLAY ENT MEM)			
S813	1-762-798-11	SWITCH, KEYBOARD (I◀◀)			
S814	1-762-798-11	SWITCH, KEYBOARD (▶▶I)			
S815	1-762-798-11	SWITCH, KEYBOARD (PLAY MODE MONO/ST ISS)			
S816	1-762-798-11	SWITCH, KEYBOARD (VOL –)			
S817	1-762-798-11	SWITCH, KEYBOARD (VOL +)			
S818	1-762-798-11	SWITCH, KEYBOARD (SOUND)			
S819	1-762-798-11	SWITCH, KEYBOARD (MEGA BASS)			
**********					
*	A-3306-516-A	TUNER BOARD, COMPLETE (AEP,UK)			
*	A-3306-658-A	TUNER BOARD, COMPLETE (EE)			
		**********			
	1-782-112-11	WIRE, PARALLEL (FFC) (13 CORE)			
	7-685-647-79	SCREW +BVTP 3X10 TYPE2 N-S			
		< CAPACITOR >			
C1	1-162-294-31	CERAMIC	0.001uF	10%	50V
C2	1-162-306-11	CERAMIC	0.01uF	20%	16V
C3	1-162-199-31	CERAMIC	10PF	5%	50V (EE)
C3	1-102-516-11	CERAMIC	27PF	5%	50V (AEP,UK)
C4	1-162-199-31	CERAMIC	10PF	5%	50V (EE)
C4	1-162-203-31	CERAMIC	15PF	5%	50V (AEP,UK)
C5	1-161-494-00	CERAMIC	0.022uF		25V
C6	1-161-494-00	CERAMIC	0.022uF		25V
C7	1-161-055-00	CERAMIC	0.022uF	10%	50V
C8	1-162-195-31	CERAMIC	4.7PF	10%	50V (AEP,UK)

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

TUNER

Ref. No.	Part No.	Description			Remark
C9	1-102-971-00	CERAMIC	82PF	5%	50V
C10	1-102-824-00	CERAMIC	470PF	5%	50V
C11	1-162-199-31	CERAMIC	10PF	5%	50V
C12	1-136-987-11	FILM	360PF	5%	63V
C14	1-164-159-11	CERAMIC	0.1uF		50V
C15	1-162-306-11	CERAMIC	0.01uF	20%	16V
C16	1-126-963-11	ELECT	4.7uF	20%	50V
C17	1-162-288-31	CERAMIC	330PF	10%	50V
C18	1-162-306-11	CERAMIC	0.01uF	20%	16V
C19	1-124-907-11	ELECT	10uF	20%	50V
C20	1-162-849-11	CERAMIC	0.068uF	10%	16V
C21	1-162-850-11	CERAMIC	0.082uF	10%	16V
C22	1-162-850-11	CERAMIC	0.082uF	10%	16V
C23	1-161-052-00	CERAMIC	0.012uF	10%	25V
C24	1-161-052-00	CERAMIC	0.012uF	10%	25V
C25	1-162-306-11	CERAMIC	0.01uF	20%	16V
C26	1-162-306-11	CERAMIC	0.01uF	20%	16V
C27	1-124-443-00	ELECT	100uF	20%	10V
C28	1-102-518-11	CERAMIC	33PF	5%	50V
C29	1-162-199-31	CERAMIC	10PF	5%	50V
C30	1-162-306-11	CERAMIC	0.01uF	20%	16V
C31	1-162-306-11	CERAMIC	0.01uF	20%	16V
C32	1-162-306-11	CERAMIC	0.01uF	20%	16V
C33	1-162-306-11	CERAMIC	0.01uF	20%	16V
C34	1-162-294-31	CERAMIC	0.001uF	10%	50V
C35	1-162-294-31	CERAMIC	0.001uF	10%	50V
C36	1-162-294-31	CERAMIC	0.001uF	10%	50V
C37	1-124-907-11	ELECT	10uF	20%	50V
C38	1-162-306-11	CERAMIC	0.01uF	20%	16V
C39	1-124-907-11	ELECT	10uF	20%	50V
C40	1-162-306-11	CERAMIC	0.01uF	20%	16V
C41	1-136-177-00	FILM	1uF	5%	50V
C42	1-130-483-00	MYLAR	0.01uF	5%	50V
C44	1-124-907-11	ELECT	10uF	20%	50V
C45	1-124-907-11	ELECT	10uF	20%	50V
C46	1-124-907-11	ELECT	10uF	20%	50V
C48	1-162-207-31	CERAMIC	22PF	5%	50V
C49	1-162-294-31	CERAMIC	0.001uF	10%	50V
C52	1-162-306-11	CERAMIC	0.01uF	20%	16V
C53	1-162-306-11	CERAMIC	0.01uF	20%	16V
C55	1-162-306-11	CERAMIC	0.01uF	20%	16V
C56	1-162-306-11	CERAMIC	0.01uF	20%	16V
C59	1-161-494-00	CERAMIC	0.022uF		25V
C60	1-162-282-31	CERAMIC	100PF	10%	50V
C61	1-162-306-11	CERAMIC	0.01uF	20%	16V
C63	1-162-294-31	CERAMIC	0.001uF	10%	50V
C64	1-162-294-31	CERAMIC	0.001uF	10%	50V
C66	1-162-294-31	CERAMIC	0.001uF	10%	50V
C67	1-162-195-31	CERAMIC	4.7PF	10%	50V
C68	1-162-306-11	CERAMIC	0.01uF	20%	16V
C69	1-162-215-31	CERAMIC	47PF	5%	50V
C70	1-162-294-31	CERAMIC	0.001uF	10%	50V
		< FILTER >			
CF1	1-767-441-11	FILTER, CERAMIC			
CF2	1-767-441-11	FILTER, CERAMIC			
CF4	1-767-096-11	VIBRATOR, CERAMIC			

Ref. No.	Part No.	Description	Remark
		< COMPOSITION CIRCUIT BLOCK >	
CFT1	1-233-885-11	ENCAPSULATED COMPONENT	
		< CONNECTOR >	
CN1	1-569-930-11	HOUSING, CONNECTOR 13P	
		< TRIMMER >	
CT1	1-141-227-00	CAP, TRIMMER 20PF	
CT2	1-141-227-00	CAP, TRIMMER 20PF	
CT3	1-141-459-11	CAP, TRIMMER (SEAL TYPE) 45PF	
CT4	1-141-410-11	CAP, ADJ 10PF	
CT5	1-141-459-11	CAP, TRIMMER (SEAL TYPE) 45PF	
		< DIODE >	
D1	8-719-991-33	DIODE 1SS133T-77	
D2	8-719-991-33	DIODE 1SS133T-77	
D3	8-719-050-72	DIODE KV1370NT	
D4	8-719-050-72	DIODE KV1370NT	
D5	8-719-050-69	DIODE KV1520N	
		< FILTER >	
FL1	1-233-452-11	FILTER, BAND PASS (EE)	
FL1	1-236-022-11	FILTER, BAND PASS (AEP,UK)	
		< IC >	
IC1	8-759-386-02	IC TA2008AN	
IC2	8-759-290-61	IC BU2615S	
		< COIL >	
L1	0-435-499-20	COIL, FM RF (EE)	
L1	1-409-905-31	COIL, FM RF (AEP,UK)	
L2	0-435-500-20	COIL, FM OSC (EE)	
L2	1-409-904-31	COIL, FM OSC (AEP,UK)	
L3	1-501-924-11	ANTENNA, MW/LW	
L4	0-432-881-30	COIL, MW/LW OSC	
L6	1-410-336-11	INDUCTOR 220uH	
L11	1-410-517-11	INDUCTOR 47uH	
		< TRANSISTOR >	
Q1	8-729-119-32	TRANSISTOR 2SK193	
Q2	8-729-922-66	TRANSISTOR 2SC2410SN	
Q3	8-729-922-66	TRANSISTOR 2SC2410SN	
Q4	8-729-905-50	TRANSISTOR DTC343TS	
Q5	8-729-178-62	TRANSISTOR 2SC2786-L	
Q6	8-729-922-66	TRANSISTOR 2SC2410SN	
Q9	8-729-036-77	TRANSISTOR KRC107M	
Q10	8-729-036-77	TRANSISTOR KRC107M	
Q11	8-729-036-77	TRANSISTOR KRC107M	
Q12	8-729-036-77	TRANSISTOR KRC107M	
Q13	8-729-012-83	TRANSISTOR 2SK679A	
Q14	8-729-106-07	TRANSISTOR 2SK514-H	
Q15	8-729-036-77	TRANSISTOR KRC107M	
Q16	8-729-036-77	TRANSISTOR KRC107M	
Q17	8-729-037-34	TRANSISTOR KRA107M	
Q18	8-729-037-29	TRANSISTOR KRA102M	
Q19	8-729-036-58	TRANSISTOR KRC102M-AT	
Q21	8-729-037-29	TRANSISTOR KRA102M	
Q22	8-729-037-29	TRANSISTOR KRA102M	
Q23	8-729-922-66	TRANSISTOR 2SC2410SN	

Ref. No.	Part No.	Description				Remark
		< RESISTOR >				
R1	1-247-887-00	CARBON	220K	5%	1/4W	
R2	1-249-441-11	CARBON	100K	5%	1/4W	
R3	1-249-431-11	CARBON	15K	5%	1/4W	
R4	1-249-413-11	CARBON	470	5%	1/4W	
R5	1-249-417-11	CARBON	1K	5%	1/4W	
R6	1-249-425-11	CARBON	4.7K	5%	1/4W	
R7	1-249-425-11	CARBON	4.7K	5%	1/4W	
R9	1-249-425-11	CARBON	4.7K	5%	1/4W	
R10	1-249-429-11	CARBON	10K	5%	1/4W	
R11	1-247-887-00	CARBON	220K	5%	1/4W	
R12	1-249-425-11	CARBON	4.7K	5%	1/4W	
R13	1-247-807-31	CARBON	100	5%	1/4W	
R14	1-249-425-11	CARBON	4.7K	5%	1/4W	
R19	1-249-421-11	CARBON	2.2K	5%	1/4W	
R20	1-249-433-11	CARBON	22K	5%	1/4W	
R21	1-249-403-11	CARBON	68	5%	1/4W	
R22	1-249-429-11	CARBON	10K	5%	1/4W	
R23	1-249-429-11	CARBON	10K	5%	1/4W	
R24	1-249-429-11	CARBON	10K	5%	1/4W	
R25	1-249-429-11	CARBON	10K	5%	1/4W	
R26	1-249-417-11	CARBON	1K	5%	1/4W	
R27	1-249-417-11	CARBON	1K	5%	1/4W	
R28	1-249-429-11	CARBON	10K	5%	1/4W	
R29	1-249-429-11	CARBON	10K	5%	1/4W	
R33	1-249-409-11	CARBON	220	5%	1/4W	
R34	1-249-415-11	CARBON	680	5%	1/4W	
R35	1-249-412-11	CARBON	390	5%	1/4W	
R36	1-249-437-11	CARBON	47K	5%	1/4W	
R37	1-249-417-11	CARBON	1K	5%	1/4W	
R38	1-249-427-11	CARBON	6.8K	5%	1/4W	
R39	1-249-429-11	CARBON	10K	5%	1/4W	
R40	1-249-421-11	CARBON	2.2K	5%	1/4W	
R42	1-249-437-11	CARBON	47K	5%	1/4W	
R43	1-249-437-11	CARBON	47K	5%	1/4W	
R44	1-249-425-11	CARBON	4.7K	5%	1/4W	
R49	1-249-421-11	CARBON	2.2K	5%	1/4W	
R50	1-249-417-11	CARBON	1K	5%	1/4W	
R51	1-249-441-11	CARBON	100K	5%	1/4W	
R52	1-249-441-11	CARBON	100K	5%	1/4W	
R53	1-249-441-11	CARBON	100K	5%	1/4W	
R54	1-247-843-11	CARBON	3.3K	5%	1/4W	
R55	1-249-437-11	CARBON	47K	5%	1/4W	
R56	1-249-411-11	CARBON	330	5%	1/4W	
R57	1-249-397-11	CARBON	22	5%	1/4W	
R58	1-247-883-00	CARBON	150K	5%	1/4W	
R59	1-249-421-11	CARBON	2.2K	5%	1/4W	
R60	1-249-411-11	CARBON	330	5%	1/4W	
R61	1-249-429-11	CARBON	10K	5%	1/4W	
R62	1-249-426-11	CARBON	5.6K	5%	1/4W	
R63	1-249-429-11	CARBON	10K	5%	1/4W	
R64	1-249-426-11	CARBON	5.6K	5%	1/4W	
R99	1-247-887-00	CARBON	220K	5%	1/4W	
		< TRANSFORMER >				
T1	1-409-944-11	COIL (DET)				

Ref. No.	Part No.	Description	Remark
		< VIBRATOR >	
X1	1-760-130-11	VIBRATOR, CRYSTAL (75kHz)	
**********			
	1-666-570-11	TUNER RETAINER BOARD	
		**********	
**********			
		MISCELLANEOUS	
		**********	
55	1-452-899-11	MAGNET	
70	1-777-955-11	WIRE (FLAT TYPE) (16 CORE)	
103	1-533-233-21	HOLDER, FUSE	
114	1-782-112-11	WIRE, PARALLEL (FFC) (13 CORE)	
⚠254	8-820-018-02	OPTICAL PICK-UP KSS-213C	
255	X-2625-770-1	CHASSIS ASSY (MB)(RP), MOTOR (INCLUDING M702) (SPINDLE)	
ANT1	1-501-918-11	ANTENNA, TELESCOPIC	
C851	1-162-199-31	CERAMIC 10PF 5% 50V	
⚠F902	1-532-464-31	FUSE (T2.5AL/250V)	
HE901	1-543-876-11	HEAD (ERASE)	
HRP901	1-500-364-11	HEAD,MAGNETIC(RECORD/PLAYBACK)	
LCD801	1-801-592-11	DISPLAY PANEL, LIQUID CRYSTAL	
M701	X-2625-769-1	GEAR ASSY (MB) (RP), MOTOR (SLED)	
M901	A-3304-621-A	MOTOR ASSY	
S871	1-692-960-11	SWITCH, PUSH (1 KEY) (DOOR OPEN CLOSE)	
S901	1-762-679-11	SWITCH, LEAF (MOTOR ON/OFF)	
S902	1-771-059-11	SWITCH, LEAF (TAPE PLAY)	
SP901	1-505-531-11	SPEAKER (10cm) (L-CH)	
SP902	1-505-531-11	SPEAKER (10cm) (R-CH)	
⚠T901	1-426-632-11	TRANSFORMER, POWER	
**********			
		ACCESSORIES & PACKING MATERIALS	
		**********	
⚠	1-751-214-11	CORD, POWER (UK)	
⚠	1-769-412-11	CORD, POWER (AEP,EE)	
	3-859-119-12	MANUAL, INSTRUCTION (ENGLISH,GERMAN)	
	3-859-119-22	MANUAL, INSTRUCTION (FRENCH,SPANISH) (AEP)	
	3-859-119-32	MANUAL, INSTRUCTION (DUTCH,SWEDISH, PORTUGUESE) (AEP)	
	3-859-119-52	MANUAL, INSTRUCTION (POLISH,RUSSIAN) (EE)	
*	4-941-548-01	LABEL, CLASS (1)	
	4-991-047-XX	COVER,BATTERY (FOR RMT-CD30, RMT-CS33AD)	
	8-917-585-90	REMOTE COMMANDER RMT-CD30 (EE)	
	8-917-603-90	REMOTE COMMANDER RMT-CS33AD (AEP,UK)	
**********			

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
		**********	
		HARDWARE LIST	
		**********	
#1	7-685-647-79	SCREW +BVTP 3X10 TYPE2 N-S	
#2	7-685-533-19	SCREW +BTP 2.6X6 TYPE2 N-S	
#3	7-682-548-04	SCREW +B 3X8	
#4	7-621-770-87	SCREW +B 2.6X5	
#5	7-621-255-15	SCREW +P 2X3	
#6	7-685-783-09	SCREW +PTT 2X6 (S)	
#7	7-621-770-XX	SCREW +P 2.6X8	
#9	7-685-649-14	SCREW +BVTP 3X14 TYPE2 N-S ••• (SILVER)	(AEP,UK)
#9	7-685-649-79	SCREW +BVTP 3X14 TYPE2 N-S••• (BLACK)	
#10	7-685-648-14	SCREW +BVTP 3X12 TYPE2 NS •••(SILVER)	(AEP,UK)
#10	7-685-648-79	SCREW +BVTP 3X12 TYPE2 N-S••• (BLACK)	

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(Shibaura)

CFD-S33L

SONY

AEP Model
UK Model

SERVICE MANUAL

Ver 1.0 1998. 08

SUPPLEMENT - 1

File this Supplement with the Service Manual.

Subject :

- **CHANGE OF BOARDS**
  - **AC INLET BOARD : 1-666-267-11 ➡ 1-666-267-12**
  - **BATT BOARD : 1-666-266-11 ➡ 1-666-266-12**
  - **MAIN BOARD : 1-666-263-11 ➡ 1-666-263-12**
  - **POWER BOARD : 1-666-264-11 ➡ 1-666-264-12**
  - **REC SW BOARD : 1-666-265-11 ➡ 1-666-265-12**
- **CHANGE OF OPTICAL PICK-UP BLOCK**
  - **KSM-213CAM ➡ KSM-213CDM**
- **CHANGE OF EXPLODED VIEWS**

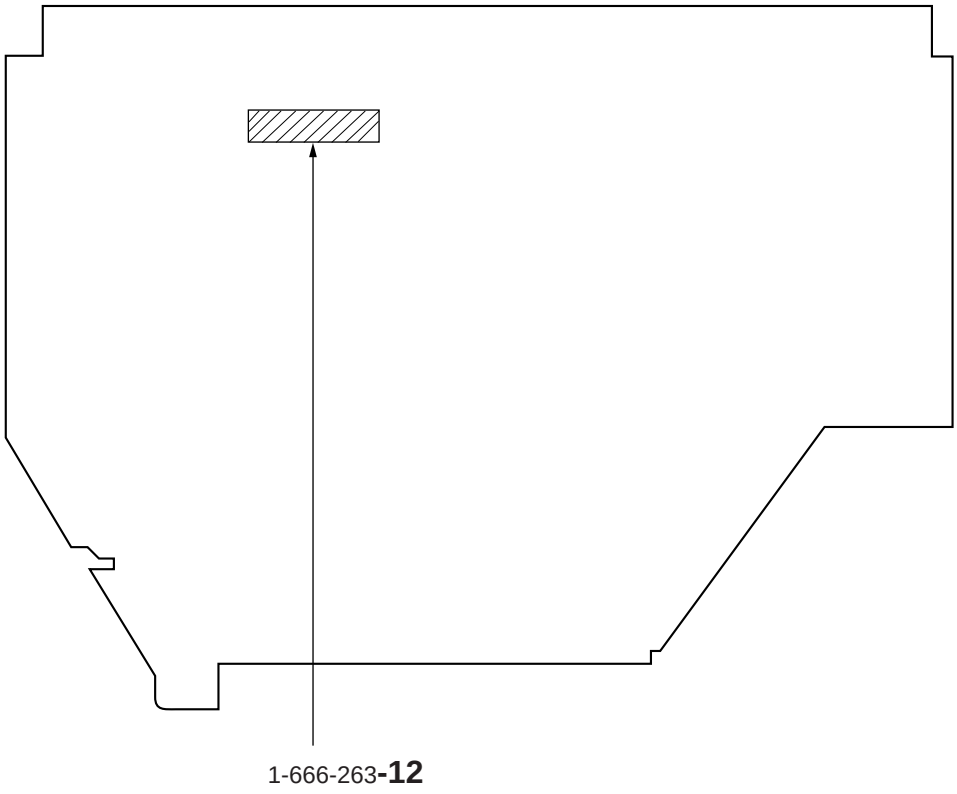
(SPM-97033)

• CHANG OF BOARDS

The main boar d, po wer boar d, BATT boar d, REC SW boar d, and A C inlet boar d ha ve been c hang ed.
Changed printed wiring boards and schematic diagram, and changed parts list are described in this Supplement-1.
Ref er to original ser vice man ual (9-923-173-11) pre viousl y issued f or the other inf ormation.

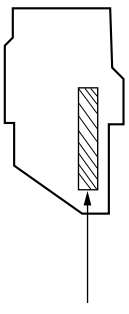
NEW TYPE IDENTIFICATION

[MAIN BOARD] (Component side)



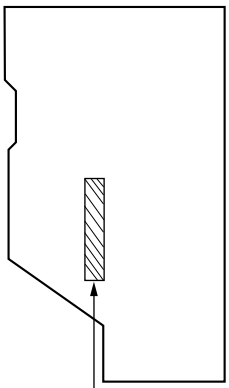
1-666-263-**12**

[BATT BOARD]
(Component side)



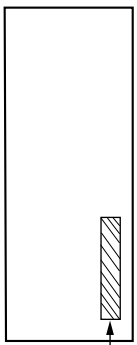
1-666-266-**12**

[AC INLET BOARD]
(Component side)



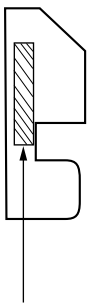
1-666-267-**12**

[POWER BOARD]
(Component side)



1-666-264-**12**

[REC SW BOARD]
(Component side)



1-666-265-**12**

CHANGE OF ELECTRICAL PARTS LIST

MAIN (Service Manual See page 39 to 42)

Ref. No.	Before Change					After Change					Remark
	Part No.	Description				Part No.	Description				
C303		————				1-162-306-11	CERAMIC	0.01uF	20%	16V	Added
C316	1-136-165-00	FILM	0.1uF	5%	50V	1-136-153-00	FILM	0.01uF	5%	50V	Changed
C334		————				1-162-294-31	CERAMIC	0.001uF	10%	50V	Added
C346	1-130-471-00	MYLAR	0.001uF	5%	50V	1-130-475-00	MYLAR	0.0022uF	5%	50V	Changed
C398	1-162-282-31	CERAMIC	100PF	10%	50V	1-162-282-31	CERAMIC	100PF	10%	50V (AEP,UK)	Changed
C716	1-136-169-00	FILM	0.22uF	5%	50V	1-136-153-00	FILM	0.01uF	5%	50V	Changed
C748	1-162-306-11	CERAMIC	0.01uF	20%	16V	1-161-494-00	CERAMIC	0.022uF		25V	Changed
C765		————				1-162-282-31	CERAMIC	100PF	10%	50V	Added
C766		————				1-162-306-11	CERAMIC	0.01uF	20%	16V	Added
C767		————				1-162-306-11	CERAMIC	0.01uF	20%	16V	Added
C788	1-162-306-11	CERAMIC	0.01uF	20%	16V	1-161-494-00	CERAMIC	0.022uF	5%	25V	Changed
C821	1-162-306-11	CERAMIC	0.01uF	20%	16V	1-124-903-11	ELECT	1uF	20%	50V	Changed
D301	8-719-010-55	DIODE UZ-7.5BSC				8-719-110-04	DIODE RD7.5ES-B3				Changed
D310		————				8-719-991-33	DIODE 1SS133T-77				Added
D804	8-719-987-63	DIODE 1N4148M					————				Deleted
D815		————				8-719-991-33	DIODE 1SS133T-77				Added
Q952	8-729-037-11	TRANSISTOR KTA1271Y-AT				8-729-040-76	TRANSISTOR KTA1273-Y-AT				Changed
R125		————				1-249-435-11	CARBON	33K	5%	1/4W	Added
R225		————				1-249-435-11	CARBON	33K	5%	1/4W	Added
R305	1-249-407-11	CARBON	150	5%	1/4W	1-249-406-11	CARBON	120	5%	1/4W	Changed
R760		————				1-249-417-11	CARBON	1K	5%	1/4W	Added
R822		————				1-249-393-11	CARBON	10	5%	1/4W	Added
R890		————				1-249-429-11	CARBON	10K	5%	1/4W	Added
R937		————				1-249-421-11	CARBON	2.2K	5%	1/4W	Added
R954		————				1-249-417-11	CARBON	1K	5%	1/4W	Added
R955		————				1-249-429-11	CARBON	10K	5%	1/4W	Added
R956		————				1-249-417-11	CARBON	1K	5%	1/4W	Added
R957		————				1-249-417-11	CARBON	1K	5%	1/4W	Added
S821	1-762-758-11	SWITCH, KEYBOARD (RESET)				1-762-871-11	SWITCH, KEYBOARD (RESET)				Changed

TUNER (Service Manual See page 43 to 45)

• Abbreviation
EE : East European

Ref. No.	Before Change					After Change					Remark
	Part No.	Description				Part No.	Description				
C4	1-162-199-31 1-162-203-31	CERAMIC CERAMIC	10PF 15PF	5% 5%	50V (EE) 50V (AEP,UK)	1-162-203-31	CERAMIC	15PF	5%	50V	Changed
C8	1-162-195-31	CERAMIC	4.7PF	10%	50V (AEP,UK)	1-162-195-31	CERAMIC	4.7PF	10%	50V	Changed
C23	1-161-052-00	CERAMIC	0.012uF	10%	25V	1-161-053-00	CERAMIC	0.015uF	10%	25V	Changed
C24	1-161-052-00	CERAMIC	0.012uF	10%	25V	1-161-053-00	CERAMIC	0.015uF	10%	25V	Changed
C48	1-162-207-31	CERAMIC	22PF	5%	50V	1-162-201-31	CERAMIC	12PF	5%	50V	Changed
C61	1-162-306-11	CERAMIC	0.01uF	20%	16V	1-162-306-11 1-130-489-00	CERAMIC MYLAR	0.01uF 0.033uF	20% 5%	16V (AEP,UK) 50V (EE)	Changed
C63	1-162-294-31	CERAMIC	0.001uF	10%	50V	1-162-294-31 1-162-300-21	CERAMIC CERAMIC	0.001uF 0.01uF	10% 30%	50V (AEP,UK) 16V (EE)	Changed
C71		————				1-162-282-31	CERAMIC	100PF	10%	50V	Added
C72		————				1-162-282-31	CERAMIC	100PF	10%	50V	Added
C73		————				1-162-294-31	CERAMIC	0.001uF	10%	50V	Added
L1	0-435-499-20	COIL, FM RF (EE)				1-406-995-41	COIL, FM RF (EE)				Changed
L2	0-435-500-20	COIL, FM OSC (EE)				1-406-994-41	COIL, FM OSC (EE)				Changed
L4	0-432-881-30	COIL, MW/LW OSC				1-411-199-31	COIL, MW/LW OSC				Changed
L7		————				1-414-137-21	INDUCTOR, MICRO			0.22uH (EE)	Added
R33	1-249-409-11	CARBON	220	5%	1/4W	1-249-402-11 1-249-409-11	CARBON CARBON	56 220	5% 5%	1/4W (EE) 1/4W (AEP, UK)	Changed
R39	1-249-429-11	CARBON	10K	5%	1/4W	1-249-417-11 1-249-429-11	CARBON CARBON	1K 10K	5% 5%	1/4W (EE) 1/4W (AEP, UK)	Changed
R40	1-249-421-11	CARBON	2.2K	5%	1/4W	1-249-417-11 1-249-421-11	CARBON CARBON	1K 2.2K	5% 5%	1/4W (EE) 1/4W (AEP, UK)	Changed
R62	1-249-426-11	CARBON	5.6K	5%	1/4W	1-247-843-11	CARBON	3.3K	5%	1/4W	Changed
R64	1-249-426-11	CARBON	5.6K	5%	1/4W	1-247-843-11	CARBON	3.3K	5%	1/4W	Changed

● CORRECTION

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

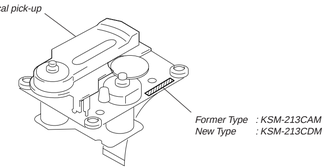
Page	Ref. No.	INCORRECT			CORRECT		
		Part No.	Description	Remark	Part No.	Description	Remark
34,45	55	1-452-899-11	MAGNET		3-923-498-01	PLATE, CHUCK	
	56	3-923-498-01	PLATE, CHUCK		1-452-899-11	MAGNET	
35,45	⚠ T901	1-426-632-11	TRANS FORMER, POWER		1-427-943-11	TRANS FORMER, POWER	
45	⚠	1-751-214-11	CORD, POWER (UK)		1-696-820-21	CORD, POWER (UK)	
	⚠	————			1-770-019-11	ADAPTOR, CONVERSION PLUG (UK)	

● CHANGE OF OPTICAL PICK-UP BLOCK
KSM-213CAM → KSM-213CDM

Since the new chassis assy (MB) (RP), motor (including M702) and chucking plate are not compatible with the former ones, when replacing either of these parts, replace them with the same version.

How to distinguish the sets

You can distinguish the sets by the optical pick-up type name printed on the optical pick-up block.



Page 1

▬: changed portion

Former Type

Model Name Using	CD Section	NEW
Similar Mechanism	Tape Section	
Optical Pick-up Type		KSM-213CAM/C1NP
Tape Transport Mechanism Type		MF-V10-117

New Type

Model Name Using	CD Section	NEW
Similar Mechanism	Tape Section	
Optical Pick-up Type		KSM-213CDM
Tape Transport Mechanism Type		MF-V10-117

DIFFERENCE PARTS LIST

Page	Former Type				New Type			
	Ref. No.	Part No.	Description	Remark	Part No.	Description	Remark
34	55	3-923-498-01	PLATE, CHUCK (FOR KSM-213CAM)		3-019-395-01	PLATE, CHUCKING (FOR KSM-213CDM)	
38	**7-6. OPTICAL PICK-UP SECTION (KSM-213CAM/C1NP)**				**7-6. OPTICAL PICK-UP SECTION (KSM-213CDM)**		
38,45	255	X-2625-770-1	CHASSIS ASSY (MB) (RP), MOTOR (INCLUDING M702) (SPINDLE)		X-2626-202-1	CHASSIS ASSY (MB) (RP), MOTOR (INCLUDING M702) (SPINDLE)	

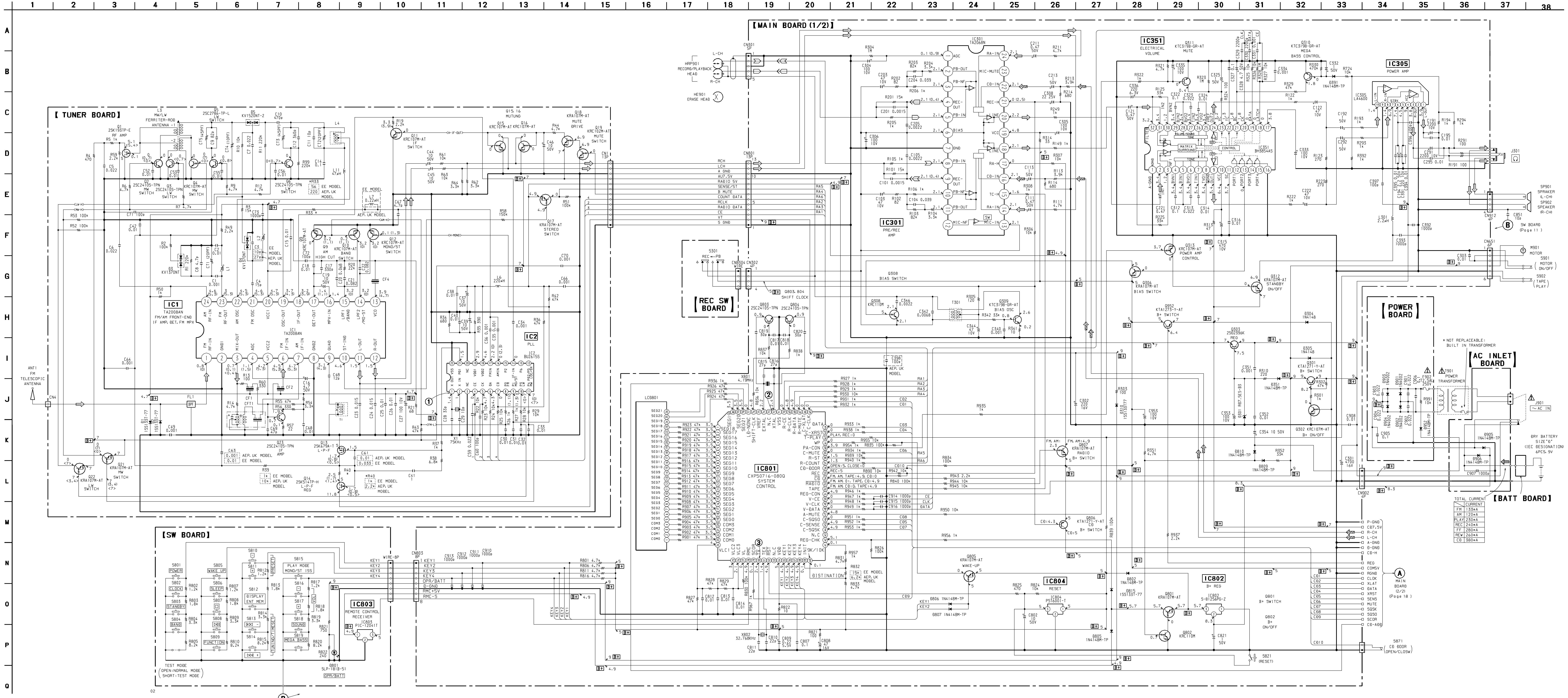
- **Semiconductor Location**

Ref. No.	Location	Ref. No.	Location
D1	F-4	IC804	E-14
D2	F-4		
D3	F-3		
D4	F-4	Q1	F-2
D5	G-2	Q2	G-2
		Q3	G-1
D301	E-16	Q4	G-2
D304	D-14	Q5	G-1
D305	E-15		
D310	G-10	Q6	F-2
D351	E-15	Q9	G-3
		Q10	G-3
D391	C-15	Q11	H-4
D702	D-10	Q12	G-4
D703	E-10		
D801	H-20	Q13	H-5
D802	E-14	Q14	I-5
		Q15	H-3
D805	F-14	Q16	H-3
D806	F-14	Q17	H-4
D807	E-14		
D808	F-13	Q18	H-3
D809	D-14	Q19	H-2
		Q21	H-2
D810	D-14	Q22	G-1
D815	E-14	Q23	F-5
D901	C-18		
D902	B-18	Q301	E-15
D903	B-18	Q302	E-15
		Q303	E-15
D904	B-18	Q306	C-14
D905	B-21	Q308	E-11
D906	B-21		
D952	B-18	Q309	D-10
		Q310	C-15
		Q311	B-15
IC1	G-4	Q312	D-16
IC2	H-4	Q313	D-16
IC301	F-10		
IC305	F-15	Q701	C-11
IC351	B-16	Q703	C-11
		Q801	E-15
IC701	C-9	Q802	E-14
IC702	D-8	Q803	G-12
IC703	B-13		
IC704	F-9	Q804	G-12
IC801	F-13	Q805	E-13
		Q806	D-11
IC802	E-15	Q807	E-12
IC803	F-20	Q952	C-13

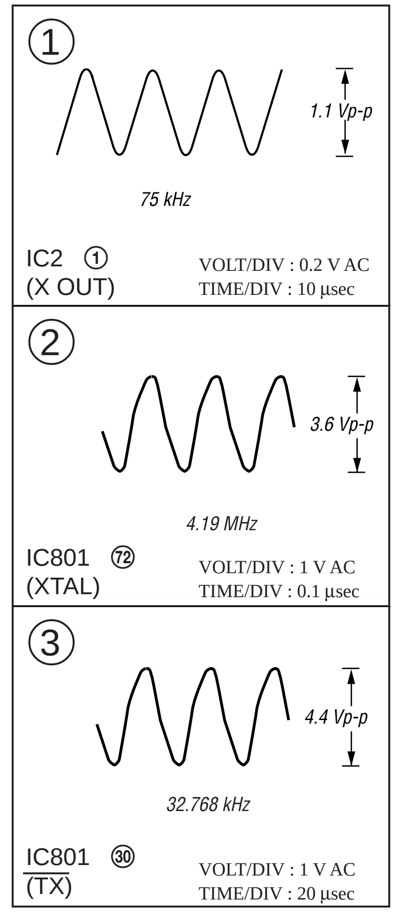
- **PRINTED WIRING BOARDS**

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

- SCHEMATIC DIAGRAM – MAIN SECTION (1/2) –



- Waveforms



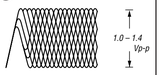
Note:
- All capacitors are in µF unless otherwise noted. pF: µµF 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4 W or less unless otherwise specified.

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

- B+ : B+ Line.
- Power voltage is dc 9 V and fed with regulated dc power supply from external power voltage jack.
- Voltages and waveforms are dc with respect to ground under no-signal (detuned) conditions.
  no mark : FM (Radio Section) PLAY (Tape Section)
  ( ) : AM (Radio Section) REC (Tape Section)
- Voltages and currents are taken with a VOM (Input impedance 10 MΩ).
  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.
  ⇨ : FM
  : PB (L-CH)
  : PB (R-CH)
  : REC (L-CH)
  : REC (R-CH)
- Abbreviation
  EE : East European

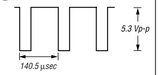
● Waveforms

① (PLAY MODE)



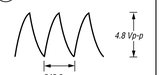
IC701 ㉛ (RFO)
VOLT/DIV : 0.2 V AC
TIME/DIV : 0.5 µsec

④



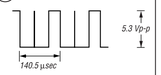
IC702 ㉛ (MNT3)
VOLT/DIV : 1 V AC
TIME/DIV : 50 µsec

②



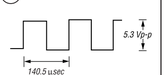
IC702 ㉕ (XPCK)
VOLT/DIV : 1 V AC
TIME/DIV : 0.1 msec

⑤



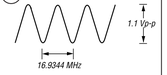
IC702 ㉜ (MNT1)
VOLT/DIV : 1 V AC
TIME/DIV : 50 µsec

③



IC702 ㉘ (RFCK)
VOLT/DIV : 1 V AC
TIME/DIV : 50 µsec

⑥



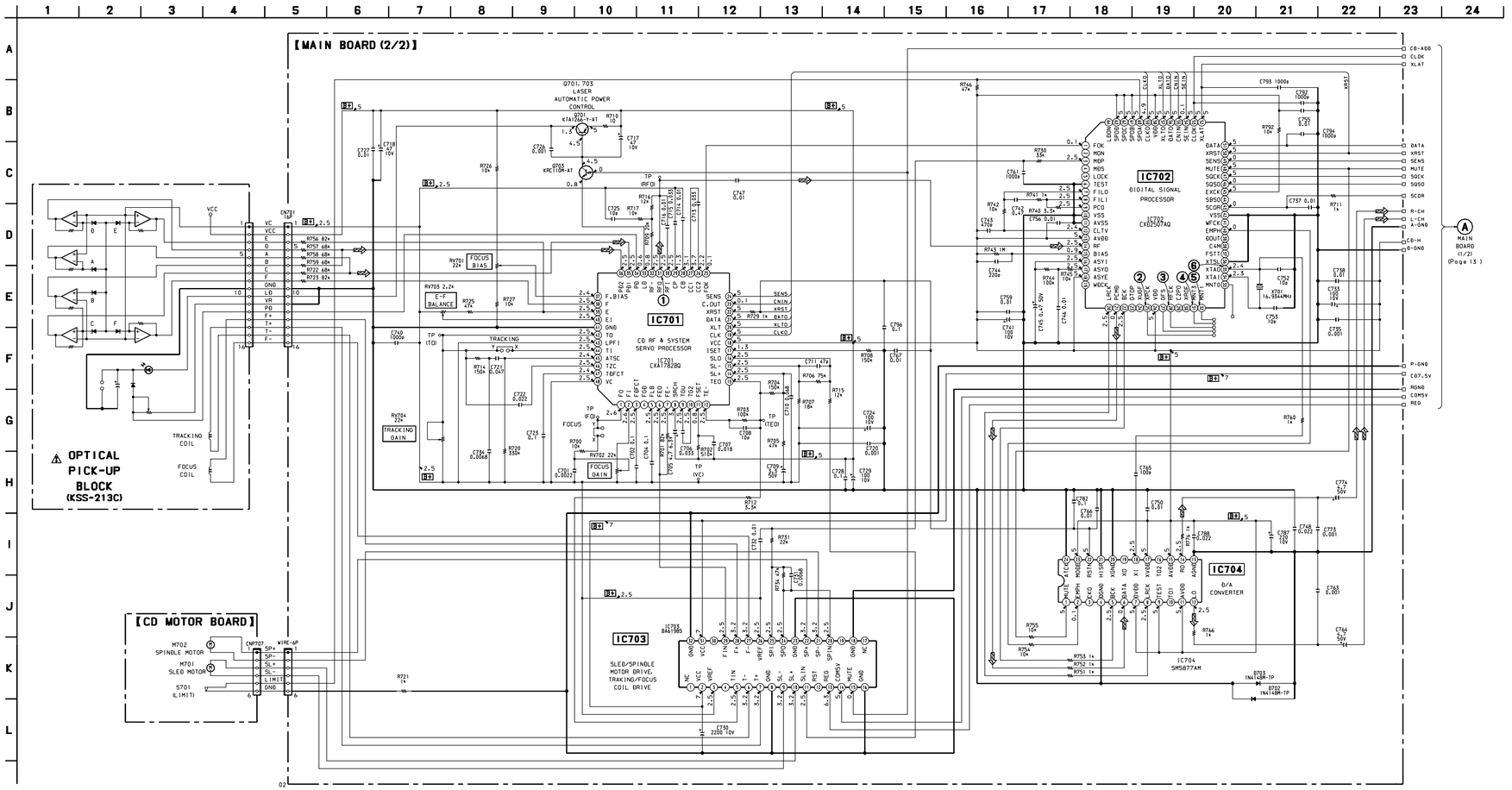
IC702 ㉔ (XTAO)
VOLT/DIV : 0.2 V AC
TIME/DIV : 50 nsec

Note:
- All capacitors are in µF unless otherwise noted. pF: µµF 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and ¼W 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+ : B+ Line.
- : adjustment for repair.
- Power voltage is dc 9 V and fed with regulated dc power supply from external power voltage jack.
- Voltages and waveforms are dc with respect to ground under no-signal (detuned) conditions.
  no mark : CD STOP
- Voltages are taken with a VOM (Input impedance 10 MΩ). 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

● SCHEMATIC DIAGRAM – MAIN SECTION (2/2) –



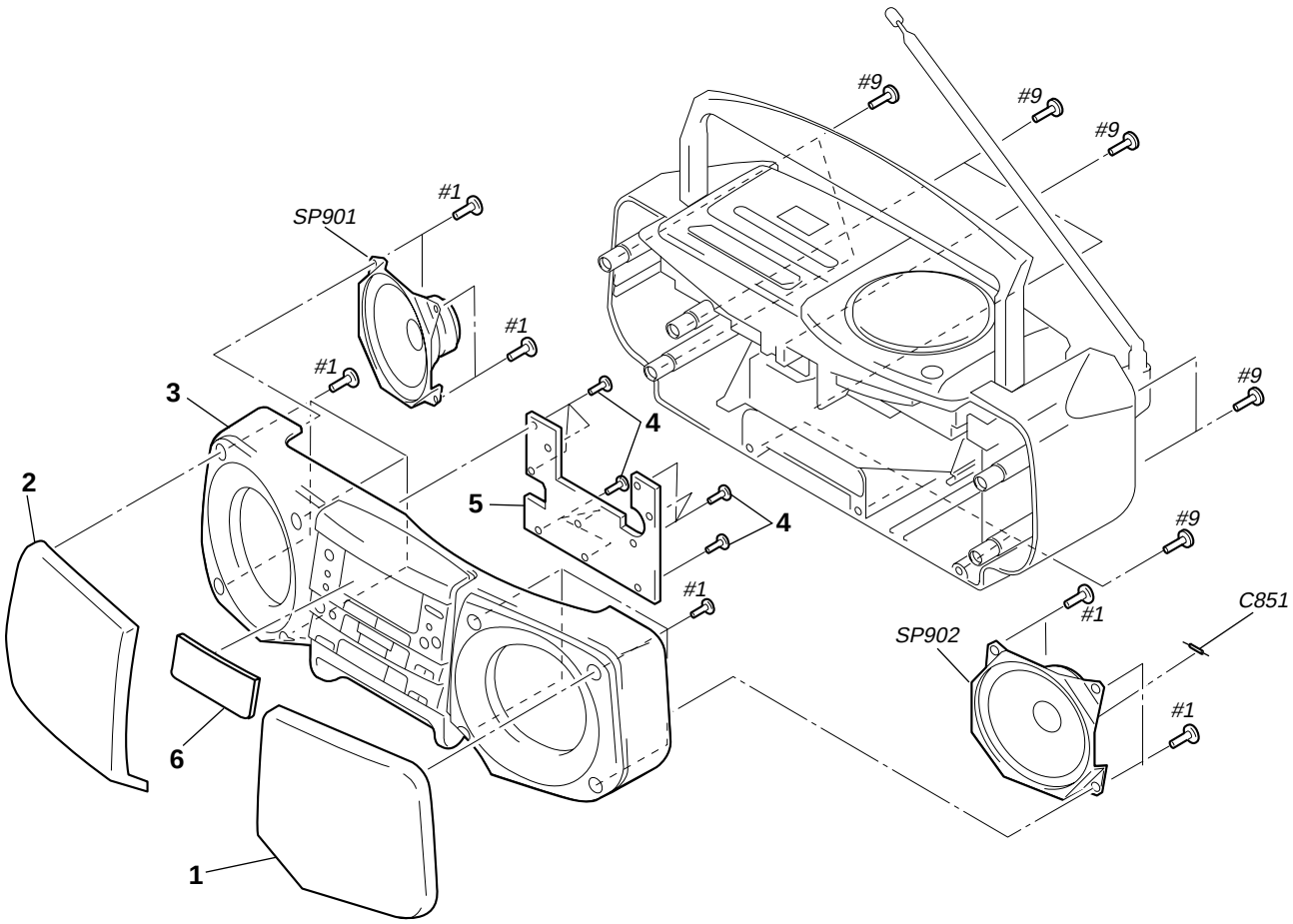
● CHANGE OF EXPLODED VIEWS (Service Manual See page 33 to 38)

NOTE :

- -XX, -X mean standardized parts, so they may have some difference from the original one.
- Color indication of Appearance Parts
  Example :
  KNOB, BALANCE (WHITE) ••• (RED)
  ↑ ↑
  Parts color Cabinet's color
- Items marked " * "are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.
- Accessories and packing materials are given in the last of this parts list.
- Abbreviation
  EE : East European

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

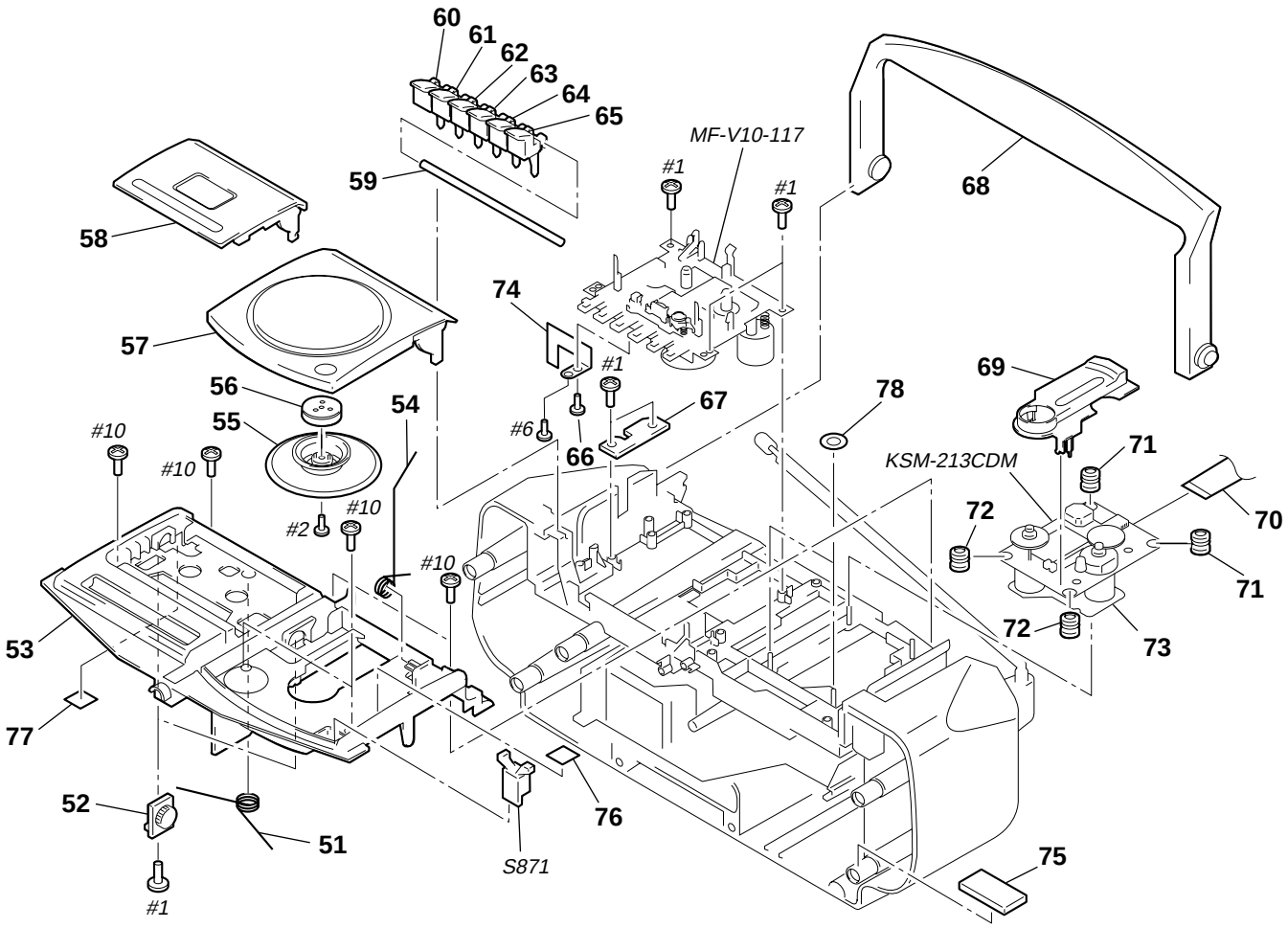
7-1. FRONT CABINET SECTION



Ref. No.	Part No.	Description	Remark
1	X-3373-392-1	NET (R) ASSY	
2	X-3373-391-1	NET (L) ASSY	
3	X-3373-952-1	CABINET(FRONT) ASSY (BLACK) (AEP,UK)	
3	X-3373-972-1	CABINET(FRONT) ASSY (SILVER) (AEP,UK)	
3	X-3373-953-1	CABINET(FRONT) ASSY (EE)	
4	4-951-620-01	SCREW (2.6X8), +BVTP	

Ref. No.	Part No.	Description			Remark
* 5	1-665-045-11	SW BOARD			
6	3-009-228-01	WINDOW, INDICATION			
C851	1-162-199-31	CERAMIC	10PF	5%	50V
SP901	1-505-531-11	SPEAKER (10cm) (L-CH)			
SP902	1-505-531-11	SPEAKER (10cm) (R-CH)			

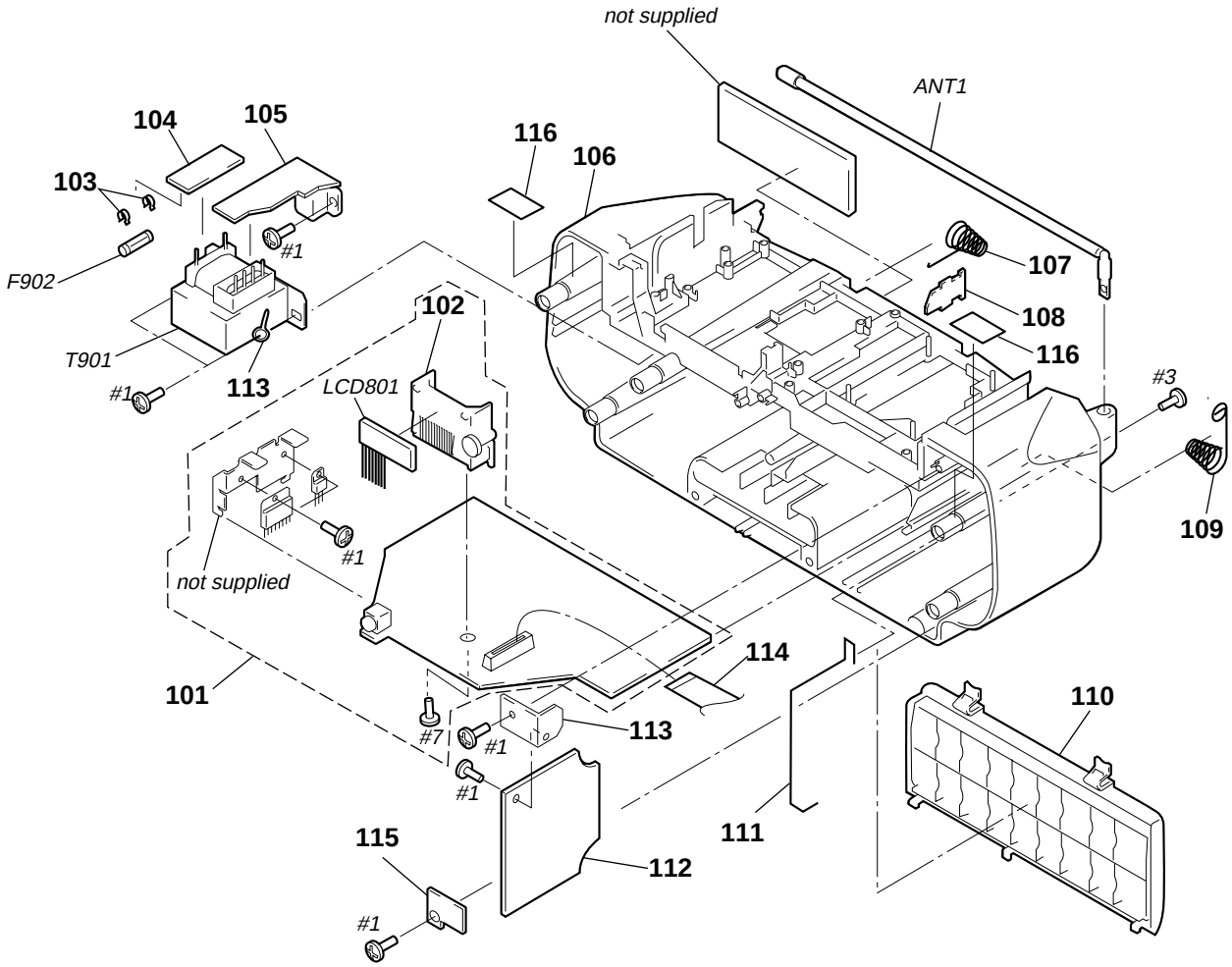
7-2. UPPER CABINET SECTION



Ref. No.	Part No.	Description	Remark
51	3-009-208-01	SPRING, CASSETTE UP	
52	3-922-112-11	DAMPER	
53	3-009-186-01	CABINET (UPPER) (BLACK)	
53	3-009-186-31	CABINET (UPPER) (SILVER)	
54	3-009-209-01	SPRING, CD UP	
55	3-019-395-01	PLATE, CHUCKING (FOR KSM-213CDM) (NEW TYPE)	
55	3-923-498-01	PLATE, CHUCK (FOR KSM-213CAM) (FORMER TYPE)	
56	1-452-899-11	MAGNET	
57	3-009-187-01	LID, CD (BLACK)	
57	3-009-187-31	LID, CD (SILVER)	
58	X-3373-389-1	HOLDER SUB ASSY,CASSETTE (BLACK)	
58	X-3373-975-1	HOLDER SUB ASSY,CASSETTE (SILVER)	
* 59	3-009-206-01	SHAFT (MD)	
60	3-009-196-01	BUTTON (REC) (BLACK)	
60	3-009-196-21	BUTTON (REC) (SILVER) (AEP,UK)	
61	3-009-199-01	BUTTON (PLAY) (BLACK)	
61	3-009-199-21	BUTTON (PLAY) (SILVER) (AEP,UK)	
62	3-009-198-01	BUTTON (REW) (BLACK)	
62	3-009-198-21	BUTTON (REW) (SILVER) (AEP,UK)	
63	3-009-197-01	BUTTON (FF) (BLACK)	

Ref. No.	Part No.	Description	Remark
63	3-009-197-21	BUTTON (FF) (SILVER) (AEP,UK)	
64	3-009-200-01	BUTTON (STOP) (BLACK)	
64	3-009-200-21	BUTTON (STOP) (SILVER) (AEP,UK)	
65	3-009-195-01	BUTTON (PAUSE) (BLACK)	
65	3-009-195-21	BUTTON (PAUSE) (SILVER) (AEP,UK)	
66	4-951-620-01	SCREW (2.6X8), +BVTP	
* 67	1-666-265-11	REC SW BOARD	
68	3-009-201-01	HANDLE (BLACK)	
68	3-009-201-21	HANDLE (SILVER) (AEP,UK)	
69	3-923-736-01	COVER, CD	
70	1-777-955-11	WIRE (FLAT TYPE) (16 CORE)	
71	3-910-095-31	RUBBER, VIBRATION PROOF (RED)	
72	3-910-095-21	RUBBER, VIBRATION PROOF (GREEN)	
73	1-639-678-12	CD MOTOR BOARD	
74	3-009-214-01	SPRING, REC	
75	3-831-441-99	CUSHION, SPEAKER	
76	3-015-646-01	CUSHION (CD)	
77	3-923-151-01	CUSHION, RUBBER	
78	3-018-078-01	SPACER (PICK)	
S871	1-692-960-11	SWITCH, PUSH (1 KEY) (DOOR OPEN CLOSE)	

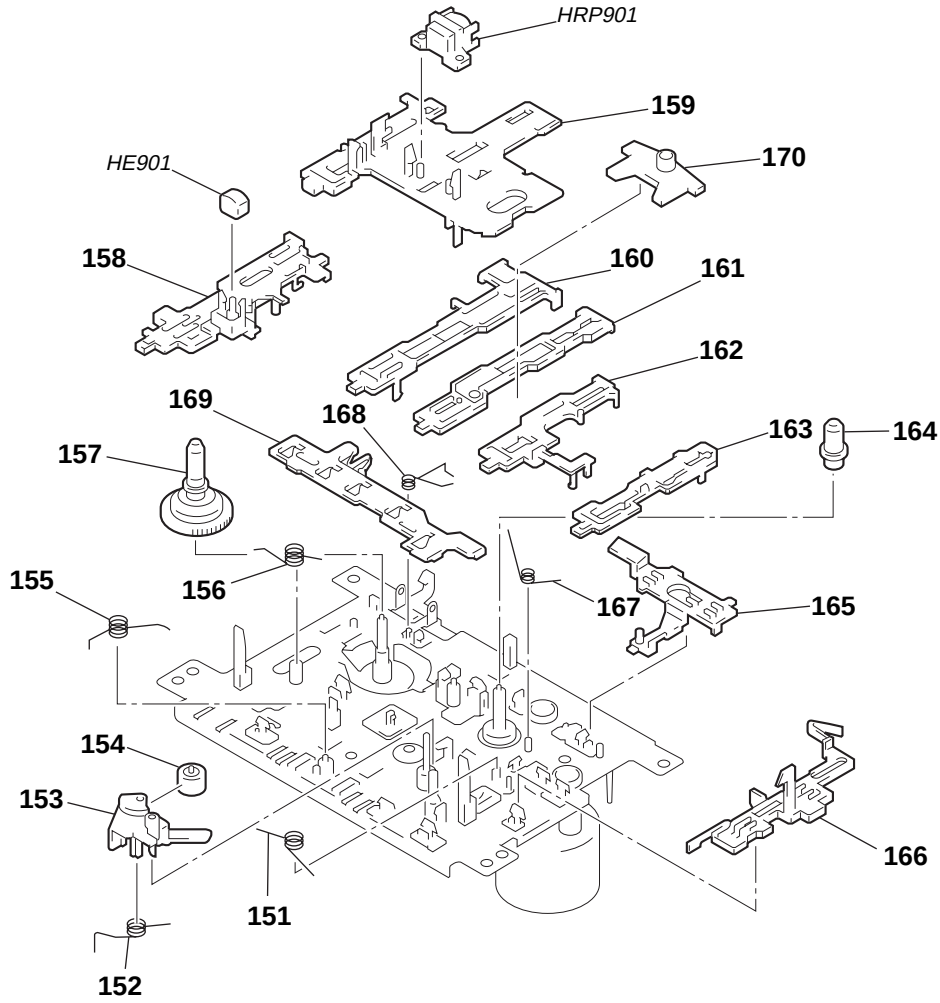
7-3. REAR CABINET SECTION



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
* 101	A-3306-324-A	MAIN BOARD, COMPLETE (AEP,UK)	
* 101	A-3306-659-A	MAIN BOARD, COMPLETE (EE)	
* 102	3-009-219-01	HOLDER, LCD	
103	1-533-233-31	HOLDER, FUSE	
* 104	1-666-264-11	POWER BOARD	
* 105	1-666-267-11	AC INLET BOARD	
106	3-013-719-21	CABINET (REAR) (EE)	
106	3-013-719-41	CABINET (REAR) (BLACK) (AEP,UK)	
106	3-013-719-51	CABINET (REAR) (SILVER) (AEP,UK)	
107	3-009-211-01	SPRING (–)	
* 108	1-666-266-11	BATT BOARD	
109	3-009-210-01	SPRING (+/–)	
110	3-009-202-01	LID, BATTERY CASE (BLACK)	
110	3-009-202-21	LID, BATTERY CASE (SILVER)(AEP,UK)	
* 111	3-009-222-01	TERMINAL (SYNTHESIZER), ANTENNA	
* 112	A-3306-516-A	TUNER BOARD, COMPLETE (AEP,UK)	
* 112	A-3306-658-A	TUNER BOARD, COMPLETE (EE)	
113	3-703-397-01	STOPPER, WIRING	
114	1-782-112-11	WIRE, PARALLEL (FFC) (13 CORE)	
115	1-666-570-11	TUNER RETAINER BOARD	
116	3-831-441-11	CUSHION (F)	
ANT1	1-501-918-11	ANTENNA, TELESCOPIC	
⚠F902	1-532-464-31	FUSE (T2.5AL/250V)	
LCD801	1-801-592-11	DISPLAY PANEL, LIQUID CRYSTAL	
⚠T901	1-427-943-11	TRANSFORMER, POWER	

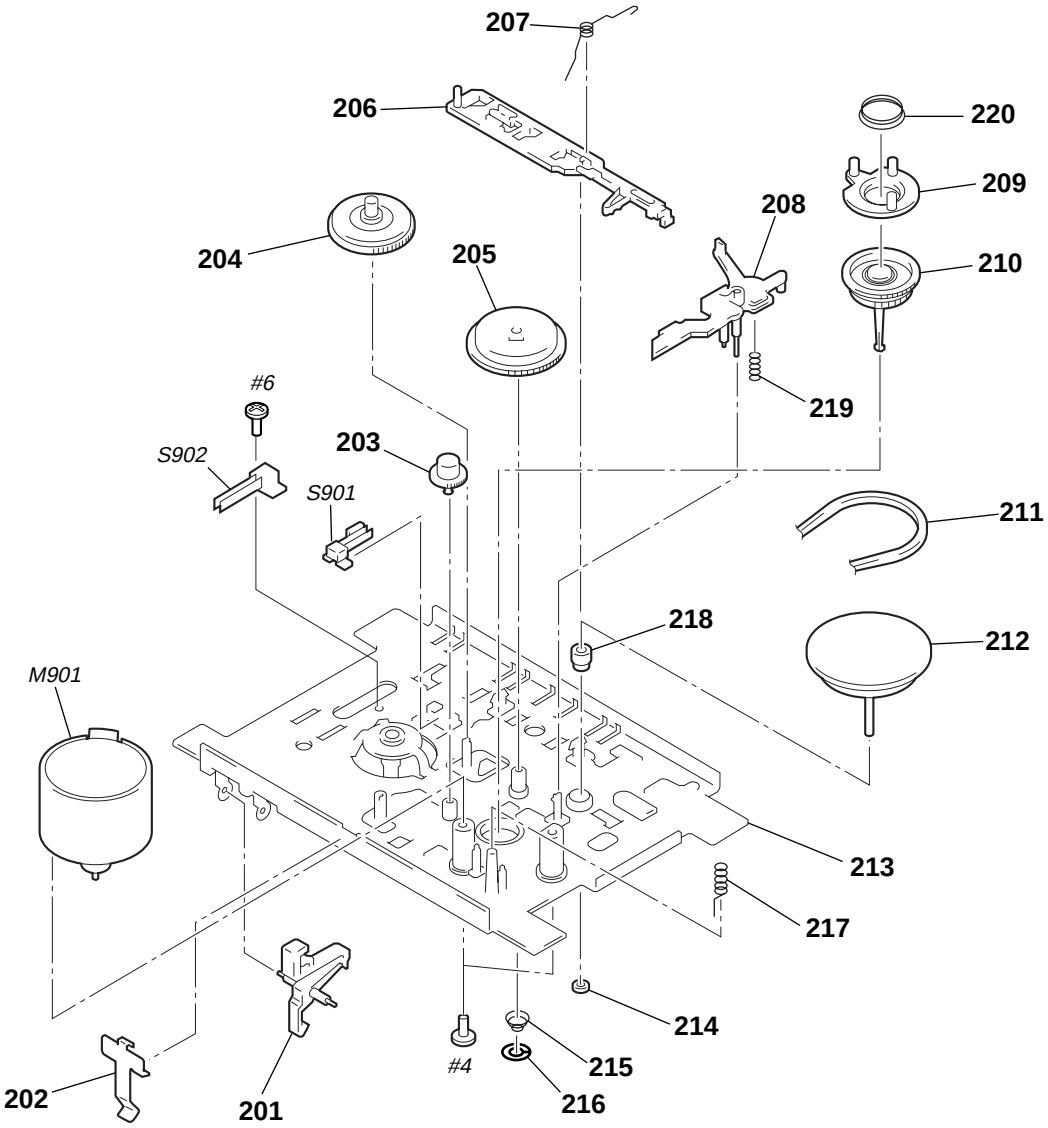
7-4. MECHANISM DECK SECTION (1)
(MF-V10-117)



Ref. No.	Part No.	Description	Remark
151	3-933-010-01	SPRING (S/P), TORSION	
152	3-933-025-01	SPRING (P), TORSION	
153	3-933-026-01	LEVER (P)	
154	3-933-024-01	ROLLER, PINCH	
155	3-933-019-01	SPRING (F/R), TORSION	
156	3-933-028-01	SPRING (FWD), TORSION	
157	3-933-016-01	GEAR (S REEL)	
158	3-008-590-01	SLIDER (REC)	
159	3-008-592-01	BASE (H), HEAD	
* 160	3-008-588-01	SLIDER (REW)	
* 161	3-008-589-13	SLIDER (FF)	

Ref. No.	Part No.	Description	Remark
* 162	3-008-587-01	SLIDER (STOP)	
* 163	3-008-591-01	SLIDER (PAUSE)	
164	3-933-004-01	CLAW, REEL	
* 165	3-933-021-01	SLIDER (FRP)	
* 166	3-933-006-01	SLIDER (EJECT)	
167	3-934-833-01	SPRING (FRP)	
168	3-022-794-02	SPRING (BT)	
169	3-933-007-01	PLATE, LOCK	
* 170	3-012-114-01	LEVER (FR)	
HE901	1-543-876-11	HEAD (ERASE)	
HRP901	1-500-454-11	HEAD,MAGNETIC (RECORD/PLAYBACK)	

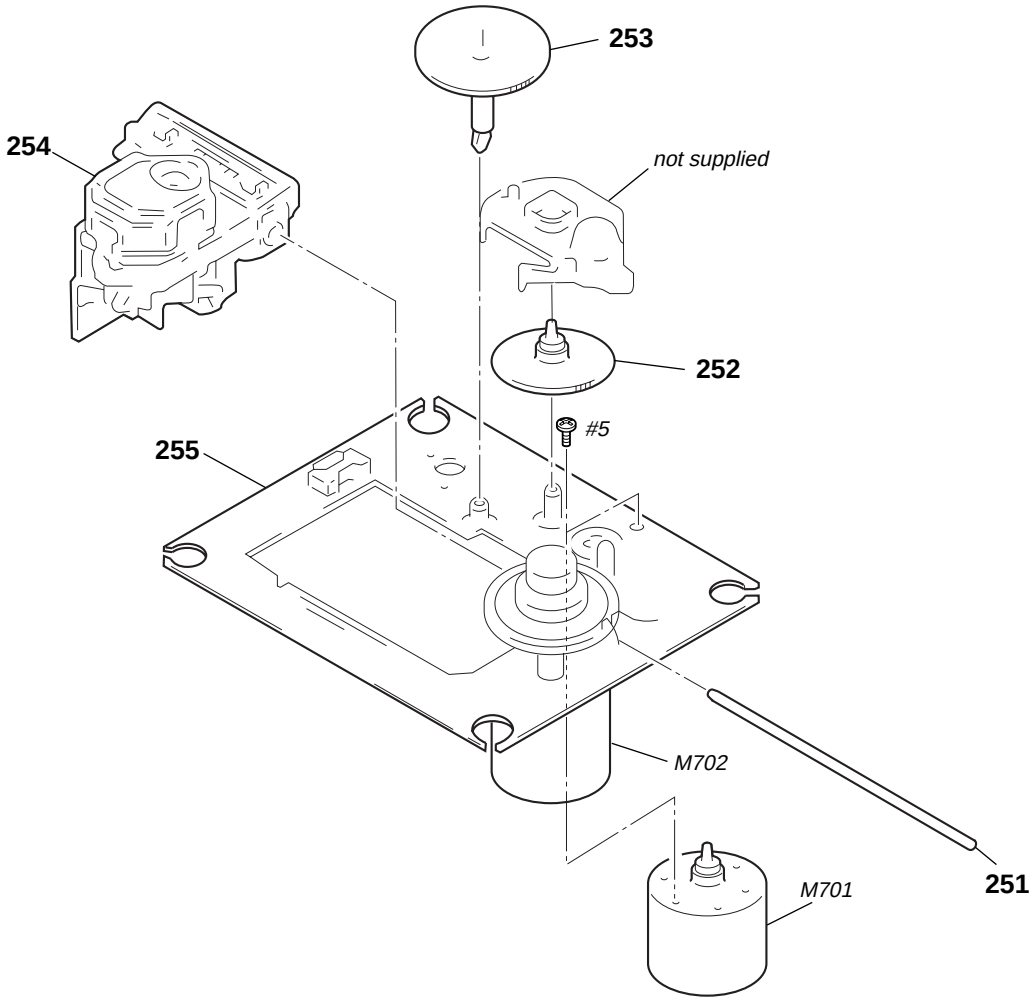
7-5. MECHANISM DECK SECTION (2)
(MF-V10-117)



Ref. No.	Part No.	Description	Remark
201	3-933-029-01	LEVER, ERASING PREVENTION	
202	3-933-182-01	SPRING, CASSETTE	
203	3-932-995-01	GEAR (MID)	
204	X-3371-667-1	CLUTCH ASSY	
205	3-932-997-01	GEAR (CAM)	
* 206	3-932-999-01	SLIDER (SW)	
207	3-932-998-01	SPRING (GROUND), TORSION	
208	3-009-648-01	LEVER (S.OFF)	
209	3-936-438-01	LEVER (K)	
210	X-3373-572-1	REEL ASSY, T	
211	3-933-020-01	BELT	
212	X-3372-924-1	FLYWHEEL ASSY	

Ref. No.	Part No.	Description	Remark
213	3-932-993-01	CHASSIS, OUTSERT	
214	3-343-358-01	RING, RETAINING	
215	3-933-005-01	SPRING (CAM), COMPRESSION	
216	3-016-349-01	WASHER	
217	3-937-760-01	SPRING (GROUND), COMPRESSION	
218	3-934-336-01	BEARING	
219	3-939-383-02	SPRING, COMPRESSION	
220	3-009-650-02	SPRING (K), COMPRESSION	
M901	A-3320-446-A	MOTOR ASSY (INCLUDING MOTOR PULLEY)	
S901	1-762-679-11	SWITCH, LEAF (MOTOR ON/OFF)	
S902	1-771-059-11	SWITCH, LEAF (TAPE PLAY)	

7-6. OPTICAL PICK-UP SECTION (FORMER TYPE : KSM-213CAM) (NEW TYPE : KSM-213CDM)



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
251	2-626-908-01	SHAFT, SLED	
252	2-627-003-02	GEAR (B) (RP)	
253	2-626-907-01	GEAR (A) (S)	
⚠254	8-848-483-05	OPTICAL PICK-UP KSS-213C	
255	X-2625-770-1	CHASSIS ASSY (MB)(RP), MOTOR (INCLUDING M702) (SPINDLE) (FOR KSM-213CAM) (FORMER TYPE)	
255	X-2626-202-1	CHASSIS ASSY (MB)(RP), MOTOR (INCLUDING M702) (SPINDLE) (FOR KSM-213CDM) (NEW TYPE)	
M701	X-2625-769-1	GEAR ASSY (MB) (RP), MOTOR (SLED)	

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(Shibaura)

CFD-S33L

SONY

AEP Model
UK Model

SERVICE MANUAL

CORRECTION-1

Correct your Service Manual as shown below.

● ☛ : indicates corrected portion

page	INCORRECT			CORRECT	
	Ref. No.	Part No.	Description	Part No.	Description
38, 45	⚠254	8-820-018-02	OPTICAL PICK-UP KSS-213C	8-848-483-05 ☛	OPTICAL PICK-UP KSS-213C/Q-RP

9-923-173-91

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Personal A&V Products Company

97G0250-1

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CFD-S33L

SONY

AEP Model
UK Model

SERVICE MANUAL

CORRECTION - 2

File this Correction with the Service Manual.

☛ **: indicates corrected portion**

	INCORRECT			CORRECT	
Page	Ref. No.	Part No.	Description	Part No.	Description
37, 45	M901	A-3304-621-A	MOTOR ASSY	A-3304-619-A ☛	MOTOR ASSY

(SPM97033)

9-923-173-92

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Personal A&V Products Company

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