MDS-302

SONY®
SERVICE MANUAL

US Model
Canadian Model
AEP Model
UK Model

SUPPLEMENT-1

File this supplement with the service manual.

Subject : 1. **TEST MODE**
2. **ELECRICAL ADJUSTMENT**
3. **BLOCK DIAGRAM**
4. **CIRCUIT CHANGE**

There are some mistakes for the panel name of CLOCK SET.

Please correct the followings.

Page	INCORRECT	CORRECT
4	18 CLOCK SET button Press to set the clock.	18 SCROLL button Since the display shows up to 12 characters at a time, press SCROLL again to see the rest of the track title if the title has 13 characters or more. press SCROLL again to pause scrolling and again to continue scrolling.
48	S763 CLOCK SET	S763 SCROLL
52	S763 CLOCK SET	S763 SCROLL
66	S763 SWITCH, TACTILE (CLOCK SET)	S763 SWITCH, TACTILE (SCROLL)

SECTION 1

TEST MODE

1-1. Setting the Test Mode
While pressing the AMS knob, insert the power plug into the power supply inlet, and release the AMS knob.

1-2. Exiting the Test Mode
Disconnect the power plug from the power supply inlet.

1-3. Basic Operations of the Test Mode
All operations are performed using the AMS knob, YES key, and NO key.
The functions of these keys are as follows.

Function	Contents
AMS knob	Changes parameters and modes
YES key	Proceeds onto the next step. Finalizes input.
NO key	Returns to previous step. Stops operations.

1-4. Selecting the Test Mode
Eight test modes are selected by turning the AMS knob.

Display	Contents
TEMP ADJUST	Temperature compensation offset adjustment
LDPWR ADJUST	Laser power adjustment
EFBAL ADJUST	Traverse adjustment
FBIAS ADJUST	Focus bias adjustment
FBIAS CHECK	Focus bias check
CPLAY MODE	Continuous playback mode
CREC MODE	Continuous recording mode
EEP MODE	Non-volatile memory mode *

For detailed description of each adjustment mode, refer to 2. Electrical Adjustments.

If a different adjustment mode has been selected by mistake, press the NO key to exit from it.

* The EEP MODE is not used in servicing. If set accidentally, press the NO key immediately to exit it.

1-4-1. Operating the Continuous Playback Mode
1. Entering the continuous playback mode
   ① Set the disc in the unit (either MO or CD).
   ② Rotate the AMS knob and display "CPLAY MODE".
   ③ Press the YES key to change the display to "CPLAYIN".
   ④ When access completes, the display changes to "CPLAY (▦▦▦)".
   Note : The "▦" displayed are arbitrary numbers.
2. Changing the parts to be played back
   ① Press the YES key during continuous playback to change the display to "CPLY MID", "CPLAY OUT".
      When pressed another time, the parts to be played back can be changed.
   ② When access completes, the display changes to "CPLAY (▦▦▦)".
   Note : The "▦" displayed are arbitrary numbers.
3. Ending the continuous playback mode
   ① Press the NO key. The display will change to "CPLY MODE".
   ② Press the EJECT key and remove the disc.
   Note 1 : The playback start addresses for IN, MID, and OUT are as follows.
      IN   40h cluster
      MID 300h cluster
      OUT 700h cluster

1-4-2. Operating the Continuous Recording Mode

1. Entering the continuous recording mode
   ① Set the MO disc in the unit.
   ② Rotate the AMS knob and display "CREC MODE".
   ③ Press the YES key to change the display to "CREC IN".
   ④ When access completes, the display changes to "CREC (▨▨▨▨)" and **REC** lights up.
   Note : The "▨" displayed are arbitrary numbers.
2. Changing the parts to be recorded
   ① When the YES key is pressed during continuous recording, the display changes to "CREC MID", "CREC OUT" and **REC** goes off.
      When pressed another time, the parts to be recorded can be changed.
   ② When access completes, the display changes to "CREC (▨▨▨▨)" and **REC** lights up.
   Note : The "▨" displayed are arbitrary numbers.
3. Ending the continuous recording mode
   ① Press the NO key. The display changes to "CREC MODE" and **REC** goes off.
   ② Press the EJECT key and remove the disc.
   Note 1 : The recording start addresses for IN, MID, and OUT are as follows.
           IN   40h cluster
           MID 300h cluster
           OUT 700h cluster
   Note 2 : The NO key can be used to stop recording anytime.
   Note 3 : During the test mode, the erasing-protection tab will not be detected. Therefore be careful not to set the continuous recording mode when a disc not to be erased is set in the unit.
   Note 4 : Do not perform continuous recording for long periods of time above 5 minutes.
   Note 5 : During continuous recording, be careful not to apply vibration.

1-4-3. Non-Volatile Memory Mode

This mode reads and writes the contents of the non-volatile memory.
It is not used in servicing. If set accidentally, press the NO key immediately to exit it.

1-5. Functions of Other keys

Function	Contents
▷ 00	Sets continuous playback when pressed in the STOP state. When pressed during continuous playback, the tracking servo turns ON/OFF.
■	Stops continuous playback and continuous recording.
►►	The sled moves to the outer circumference only when this is pressed.
◄◄	The sled moves to the inner circumference only when this is pressed.
●	Turns recording ON/OFF when pressed during continuous playback.
SCROLL	Switches between the pit and groove modes when pressed.
PLAY MODE	Switches the spindle servo mode (CLVS and A).
DISPLAY	Switches the display when pressed.Returns to previous step. Stops operations.

Note : The erasing-protection tab is not detected during the test mode. Recording will start regardless of the position of the erasing-protection tab when the ● (REC) key is pressed.

1-6. Test Mode Displays

Each time the DISPLAY key is pressed, the display changes in the following order.

MODE display→Address display→Error rate display

1. MODE display
   Displays "TEMP ADJUST", "CPLAY MODE", etc.
2. Address display
   Addresses are displayed as follows.
   h = ▨▨▨   s = ▨▨▨ (MO pit and CD)
   h = ▨▨▨   a = ▨▨▨ (MO groove)
   h = : Header address
   s = : SUBQ address
   a = : ADIP address
   ∗ is displayed when the address cannot be read.
3. Error rate display
   Error rates are displayed as follows.
   C1 = ▨▨▨ AD = ▨▨▨
   C1 = : Indicates C1 error
   AD= : Indicates ADER

1-7. Meanings of Other Displays

Display	Contents		
	Light	Off	Blinking
▶	During continuous playback	STOP	
▥	Tracking servo OFF	Tracking servo ON	
REC	Recording mode ON	Recording mode OFF	
CLOCK	CLV LOCK	CLV UNLOCK	
TRACK	Pit	Groove	
DISC	High reflection	Low reflection	
DATE	CLV-S	CLV-A	
A. SPACE	ABCD adjustment completed		
A – B	⎛Focus auto gain successful ⎞ ⎝Tracking auto gain successful⎠		⎛Focus auto gain successful⎞ ⎝Tracking auto gain failed ⎠

1-8. Precautions for Use of Test Mode

① As loading related operations will be performed regardless of the test mode operations being performed, be sure to check that the disc is stopped before setting and removing it.
   Even if the EJECT key is pressed while the disc is rotating during continuous playback, continuous recording, etc., the disc will not stop rotating.
   Therefore, it will be ejected while rotating.
   Always press the NO key first before pressing the EJECT key.
② The erasing-protection tab is not detected in the test mode. Therefore, when modes which output the recording laser power such as continuous recording mode and traverse adjustment mode, etc. are set, the recorded contents will be erased regardless of the position of the tab. When using a disc that is not to be erased in the test mode, be careful not to enter the continuous recording mode and traverse adjustment mode.

SECTION 2.

ELECTRICAL ADJUSTMENTS

2-1. Precautions for Checking Laser Diode Emission

To check the emission of the laser diode during adjustments, never view directly from the top as this may lose your eye-sight.

2-2. Precautions for Use of optical pickup (KMS-210A)

As the laser diode in the optical pickup is easily damaged by static electricity, solder the laser tap of the flexible board when using it. Before disconnecting the connector, desolder first. Before connecting the connector, be careful not to remove the solder. Also take adequate measures to prevent damage by static electricity. Handle the flexible board with care as it breaks easily.

laser tap
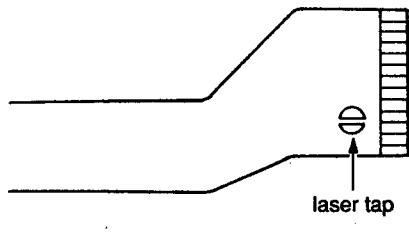
Optical pickup flexible board

2-3. Precautions for Adjustments

1) When replacing the following parts, perform the adjustments and checks with O in the order shown in the following table.

	Optical Pickup	BD Board		
		IC171	D101	IC101, IC121, IC191
1. Temperature compensation offset adjustment	X	O	O	O
2. Laser power adjustment	O	X	X	O
3. Traverse adjustment	O	O	X	O
4. Focus bias adjustment	O	O	X	O
5. Error rate check	O	O	X	O

2) Set the test mode when performing adjustments.
   After completing the adjustments, exit the test mode.
3) Perform the adjustments in the order shown.
4) Use the following tools and measuring devices.
   • CD test disc TDYS-1 (Parts No. 4-963-646-01)
   • Laser power meter LPM-8001 (Parts No. J-2501-046-A)
   • Oscilloscope
   • Digital voltmeter
   • Thermometer
5) When observing several signals on the oscilloscope, etc., make sure that VC and GND do not connect inside the oscilloscope.
   (VC and GND will become short-circuited.)
6) Do not move RV105 of the BD board. When replacing it, adjust to the mechanical center of the semi-fixed resistor.

2-4. Creating MO Continuously Recorded Disc

* This disc is used in focus bias adjustment and error rate check. The following describes how to create a MO continuous recording disc.
1. Insert a MO disc (blank disc) commercially available.
2. Rotate the AMS knob and display "CREC MODE".
3. Press the YES key and display "CREC IN".
4. Press the YES key again to display "CREC MID".
   "CREC (0300)" is displayed for a moment and recording starts.
5. Complete recording within 5 minutes.
6. Press the NO key and stop recording .
7. Press the EJECT key and remove the MO disc.

The above has been how to create a continuous recording data for the focus bias adjustment and error rate check.
Note :
• Be careful not to apply vibration during continuous recording.

2-5. Temperature Compensation Offset Adjustment

Save the temperature data at that time in the non-volatile memory as 25 °C reference data.

Note :
1. Usually, do not perform this adjustment.
2. Perform this adjustment in an ambient temperature of 22 °C to 28 °C. Perform it immediately after the power is turned on when the internal temperature of the unit is the same as the ambient temperature.
3. When D101 has been replaced, perform this adjustment after the temperature of this part has become the ambient temperature.

Adjusting Method :
1. Rotate the AMS knob and display "TEMP ADJUST".
2. Press the YES key and select the "TEMP ADJUST" mode.
3. "TEMP = ▦" and the current temperature data will be displayed.
4. To save the data, press the YES key.
   When not saving the data, press the NO key.
5. When the YES key is pressed, "TEMP = ▦ SAVE" will be displayed for some time, followed by "TEMP ADJUST".
   When the NO key is pressed, "TEMP ADJUST" will be displayed.

Specifications :

The temperature should be within "TEMP = E0" and "TEMP = 1F".

2-6. Laser Power Adjustment

Connection :
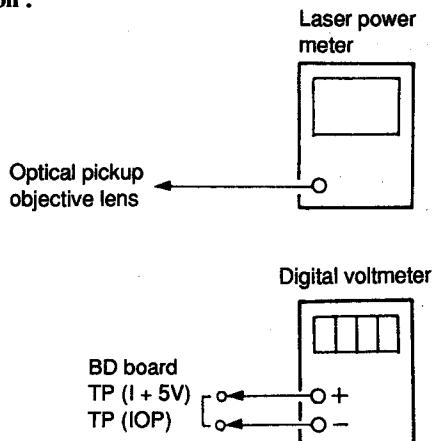
Adjusting Method :
1. Set the laser power meter on the objective lens of the optical pickup. (When it cannot be set properly, press the ◄◄ key or ►► key and move the optical pickup.)
   Connect the digital volt meter to TP (IOP) and TP (I+5V).
2. Rotate the AMS knob and display "LDPWRADJUST".
   (Laser power : For adjustment)
3. Press the YES key twice and display "LD $ 4B = 3.5 mW".
4. Adjust RV102 of the BD board so that the reading of the laser power meter becomes $3.4 ^{+0.1}_{-0}$ mW.
5. Press the YES key and display "LD $ 96 = 7.0 mW".
   (Laser power:MO reading)
6. Check that the laser power meter and digital voltmeter readings satisfy the specified value.

   Specification :
   Laser power meter reading : 7.0 ± 0.3 mW
   Digital voltmeter reading : Optical pickup displayed value ± 10%

   (Optical pickup label)

KMS210A
27X40
B0825

   Iop = 82.5 mA in this case
   Iop (mA) = Digital voltmeter reading (mV)/ 1 (Ω)

7. Press the YES key and display "LD $ 0F = 0.7 mW".
   (Laser power:MO reading)
8. Check that the laser power meter at this time satisfies the specified value.

   Specification :
   Laser power meter reading : 0.70 ± 0.1 mW

9. Press the NO key and display "LDPWR ADJUST", and stop laser emission.
   (The NO key is effective at all times to stop the laser emission.)

2-7. Traverse Adjustment

Connection :

Oscilloscope

BD board
TP (TEO) o◄───────o +
TP (VC) o◄───────o −
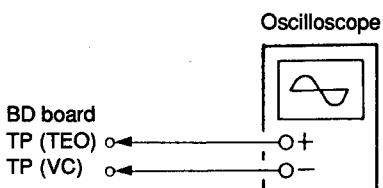
Adjusting method :

1. Connect an oscilloscope to TP (TEO) and TP (VC) of the BD board.
2. Load a MO disc (any available on the market).
3. Press the ◄◄ key or ►► key and move the optical pickup outside the pit.
4. Rotate the AMS knob and display "EFBAL ADJUST".
5. Press the YES key and display "EFBAL MO-W".
   (Laser power WRITE power/Focus servo ON/tracking servo OFF/spindle (S) servo ON)
6. Adjust RV101 of the BD board so that the waveform of the oscilloscope becomes the specified value.
   (MO groove write power traverse adjustment)

(Traverse Waveform)

VC

Specification A = B
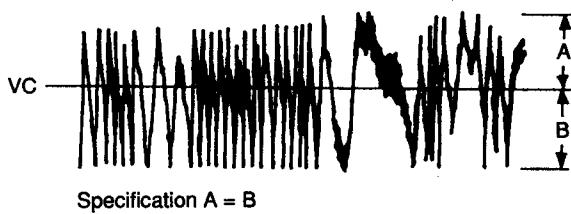
7. Press the YES key and display "EFB = $ ☐ MO-R".
   (Laser power : MO reading)
8. Rotate the AMS knob so that the waveform of the oscilloscope becomes the specified value.
   (When the AMS knob is rotated, the ☐ of "EFB- ☐ " changes and the waveform changes.) In this adjustment, waveform varies at intervals of approx. 3%. Adjust the waveform so that the specified value is satisfied as much as possible.
   (MO groove read power traverse adjustment)

(Traverse Waveform)

VC

Specification A=B

9. Press the YES key, display "EFB = $ ☐ SAVE" for a moment and save the adjustment results in the non-volatile memory.
   Next "EFBAL MO-P" is displayed.
10. Press the YES key and display "EFB = $ ☐ MO-P".
    The optical pickup moves to the pit area automatically and servo is imposed.

11. Rotate the AMS knob until the waveform of the oscilloscope moves closer to the specified value.
    In this adjustment, waveform varies at intervals of approx. 3%. Adjust the waveform so that the specified value is satisfied as much as possible.

(Traverse Waveform)

VC

Specification A=B

12. Press the YES key, display "EFB = ☐ SAVE" for a moment and save the adjustment results in the non-volatile memory.
    Next "EFBAL CD" is displayed. The disc stops rotating automatically.
13. Press the EJECT key and remove the MO disc.
14. Load the test disc TDYS-1.
15. Press the YES key and display "EFB = ☐ CD". Servo is imposed automatically.
16. Rotate the AMS knob so that the waveform of the oscilloscope moves closer to the specified value.
    In this adjustment, waveform varies at intervals of approx. 3%. Adjust the waveform so that the specified value is satisfied as much as possible.

(Traverse Waveform)

VC

Specification A=B

17. Press the YES key, display "EFB = $ ☐ SAVE" for a moment and save the adjustment results in the non-volatile memory.
    Next "EFBAL ADJUST" is displayed.
18. Press the EJECT key and remove the test disc TDYS-1.

Note 1) Data will be erased during MO reading if a recorded disc is used in this adjustment.

Note 2) If the traverse waveform is not clear, connect the oscilloscope as shown in the following figure so that it can be seen more clearly.

Oscilloscope

330k Ω
TP (TEO) o───www──●────────o +
                  ┴ 10pF   ¦
TP (VC) o─────────●─────────o −
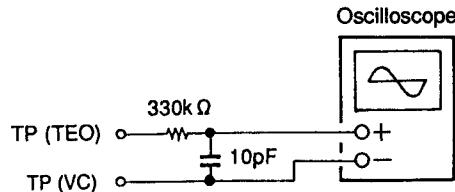
2-8. Focus Bias Adjustment

Adjusting Method :
1. Load a continuously recorded disc (Refer to "2-4. Creating MO Continuously Recorded Disc".).
2. Rotate the AMS knob and display "CPLAY MODE".
3. Press the YES key twice and display "CPLAY MID".
4. Press the NO key when "CPLAY (0300)" is displayed.
5. Rotate the AMS knob and display "FBIAS ADJUST".
6. Press the YES key and display " ▓▓▓/▓ a = ▓".
   The first four digits indicate the C1 error rate, the two digits after [/] indicate ADER, and the 2 digits after [a =] indicate the focus bias value.
7. Rotate the AMS knob in the clockwise direction and find the focus bias value at which the C1 error rate becomes 220.
8. Press the YES key and display " ▓▓▓/▓ b = ▓".
9. Rotate the AMS knob in the counterclockwise direction and find the focus bias value at which the C1 error rate becomes 220.
10. Press the YES key and display " ▓▓▓/▓ c = ▓".
11. Check that the C1 error rate is below 50 and ADER is 00. Then press the YES key.
12. If the "(▓)" in "▓ - ▓ - ▓ (▓)" is above 20, press the YES key.
    If below 20, press the NO key and repeat the adjustment from step 2 again.
13. Press the NO key and press the EJECT key to remove the continuously recorded disc.

Note 1 : The relation between the C1 error and focus bias is as shown in the following figure. Find points a and b in the following figure using the above adjustment. The focal point position C is automatically calculated from points a and b.

Note 2 : As the C1 error rate changes, perform the adjustment using the average vale.
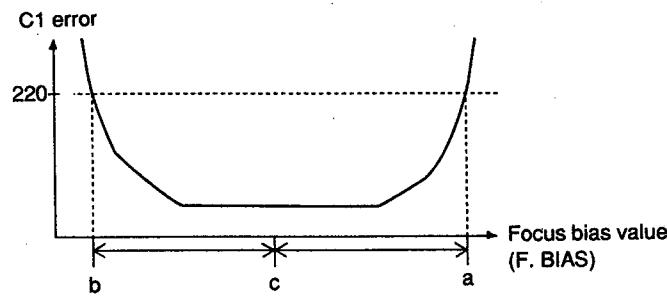
2-9. Error Rate Check
2-9-1. CD Error Rate Check

Checking Method :
1. Load a test disc TDYS-1.
2. Rotate the AMS knob and display "CPLAY MODE".
3. Press the YES key twice and display "CPLAY MID".
4. When "CPLAY (0300)" is displayed, press the DISPLAY key twice and display "C1 = ▓▓▓ AD = ▓".
5. Check that the C1 error rate is below 20.
6. Press the NO key, stop playback, press the EJECT key, and remove the test disc.

2-9-2. MO Error Rate Check

Checking Method :
1. Load a continuously recorded disc (Refer to "2-4. Creating MO Continuously Recorded Disc".).
2. Rotate the AMS knob and display "CPLAY MODE".
3. Press the YES key twice and display "CPLAY MID".
4. When "CPLAY (0300)" is displayed, press the DISPLAY key twice and display "C1 = ▓▓▓ AD = ▓".
5. If the C1 error rate is below 50, check that ADER is 00.
6. Press the NO key, stop playback, press the EJECT key, and remove the continuously recorded disc.

2-10. Focus Bias Check

Change the focus bias and check the focus tolerance amount.

Checking Method :
1. Load a continuously recorded disc (Refer to "2-4. Creating MO Continuously Recorded Disc".).
2. Rotate the AMS knob and display "CPLAY MODE".
3. Press the YES key twice and display "CPLAY MID".
4. Press the NO key when "CPLAY (0300)" is displayed.
5. Rotate the AMS knob and display "FBIAS CHECK".
6. Press the YES key and display " ▓▓▓/▓ c = ▓".
   The first four digits indicate the C1 error rate, the two digits after [/] indicate ADER, and the 2 digits after [c =] indicate the focus bias value.
   Check that the C1 error is below 50 and ADER is 00.
7. Press the YES key and display " ▓▓▓/▓ a = ▓".
   Check that the C1 error is not below 220 and ADER is not above 00 every time.
8. Press the YES key and display " ▓▓▓/▓ b = ▓".
   Check that the C1 error is not below 220 and ADER is not above 00 every time.
9. Press the NO key, next press the EJECT key, and remove the continuously recorded disc.

Note 1 : If the C1 error and ADER are above 00 at points a or b, the focus bias adjustment may not have been carried out properly. Adjust perform the beginning again.

2-11. Adjusting Points and Connecting Points

[BD BOARD] (COMPONENT SIDE)

D101

IC191

[BD BOARD] (CONDUCTOR SIDE)

(IOP)
(I+5V)

RV101 (VC)

IC101

IC171

RV102

(TEO)

IC121
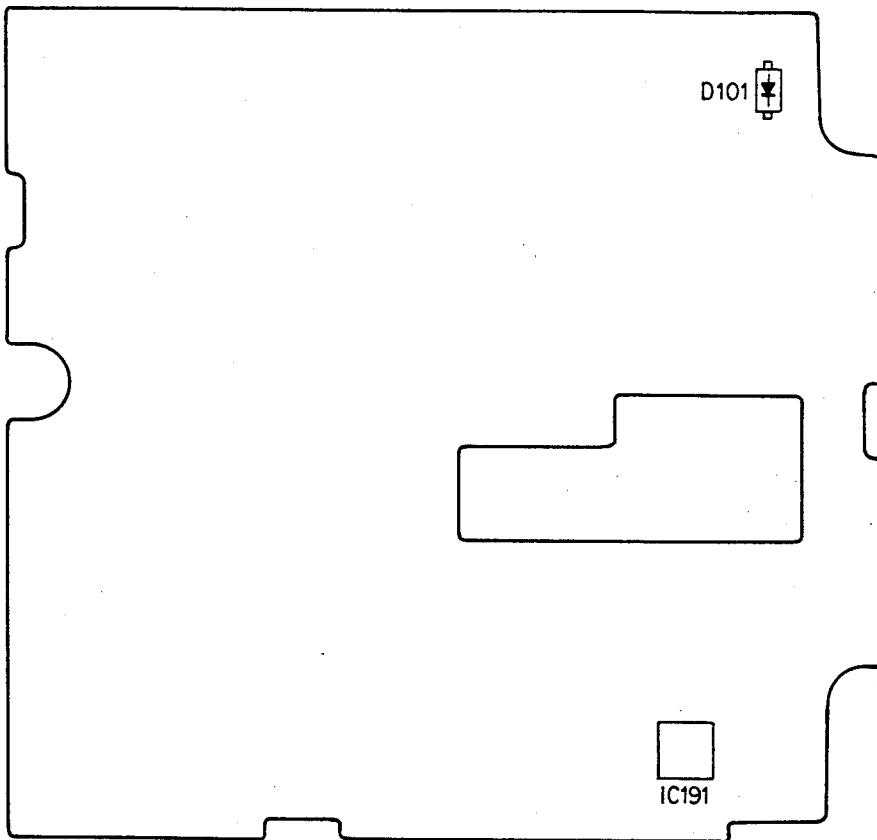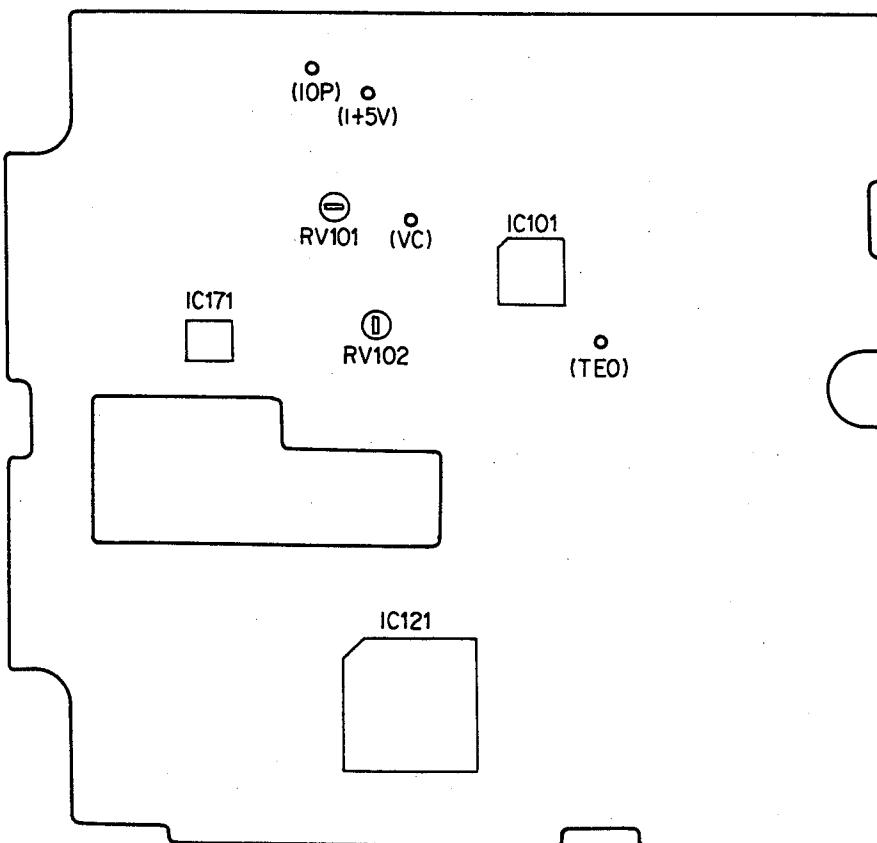
- **Semiconductor Location**

Ref. No.	Location
D201	F-10
D251	D-7
IC201	E-6
IC221	G-12
IC222	G-11
IC241	C-13
IC251	D-8
IC258	D-10
IC261	C-12
IC262	C-6
IC263	B-12
IC281	C-11
IC282	C-7
Q261	D-12
Q321	F-10

Note:
- o——— : parts extracted from the component side.
- ——— : parts extracted from the conductor side.
- ⬙ : Through hole.
- ▓▓ : Pattern from the side which enable seeing.
     (The other layer's patterns are not indicated.)

• **Semiconductor Location**

Ref. No.	Location
D501	H-8
D502	H-7
D503	G-8
D504	G-8
D505	I-9
D506	J-8
D521	H-7
D522	H-7
D523	I-6
D531	I-5
D532	I-5
D533	I-5
D536	I-5
D537	I-5
D551	H-6
D552	H-6
D581	J-4
D582	J-4
D701	B-1
IC501	I-8
IC511	J-7
IC521	J-7
IC531	H-4
IC541	F-6
IC551	H-6
IC561	F-5
IC571	I-2
IC591	F-3
IC621	E-5
IC622	E-4
IC623	E-5
IC701	B-7
IC702	A-4
Q531	I-6
Q532	H-6
Q551	G-7
Q581	I-3
Q583	H-3
Q584	H-3
Q585	H-2
Q586	H-3
Q701	B-2

Note:
* o———— : parts extracted from the component side.
* ■ : parts mounted on the conductor side.
* ▨ : Pattern on the side which seen.

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• IC Block Diagrams

— DISPLAY/POWER SECTION —

IC501 M5293L
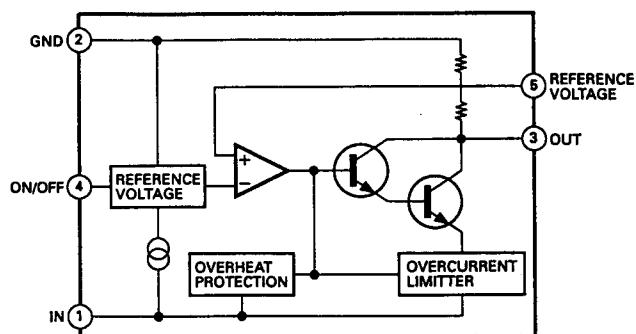
IC511 BA3963
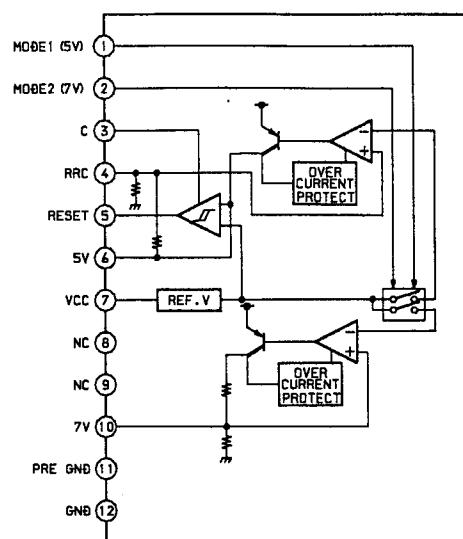
IC561 M5294P
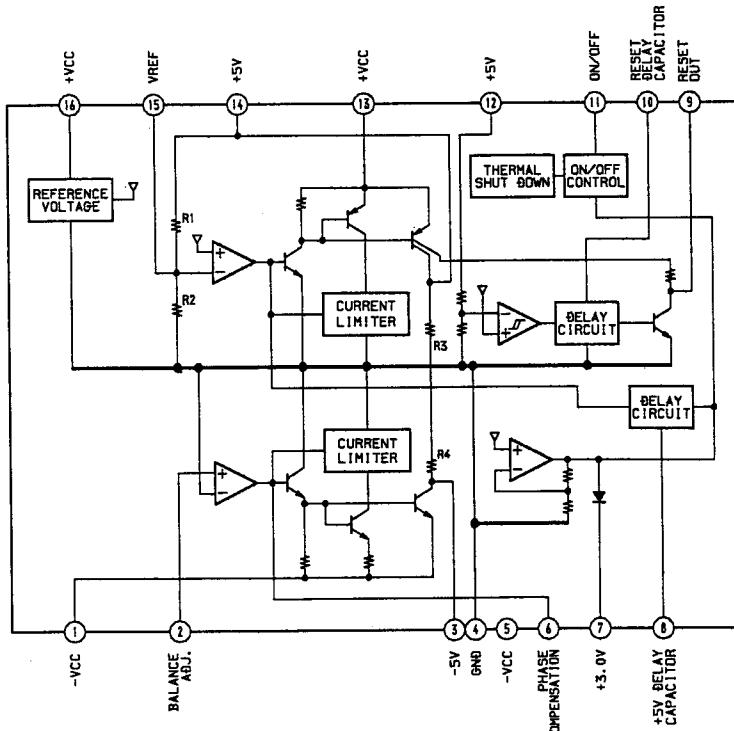
IC531 M62005L
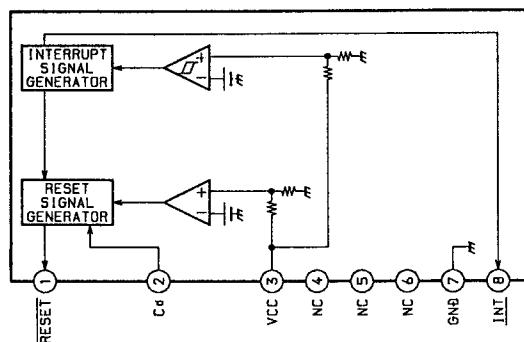
NOTE:
- -XX, -X mean standardized parts, so they may have some difference from the original one.
- Items marked " * " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- Color Indication of Appearance Parts Example:
  KNOB, BALANCE (WHITE) . . . (RED)
          ↑   ↑
     Parts color Cabinet's color

- 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.

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

● CHANGED PARTS

Page	FORMER			NEW		
	Ref. No.	Part No.	Description	Ref. No.	Part No.	Description
57	6	4-922-518-01	KNOB (INPUT)	6	4-922-518-01	KNOB (TIMER)
	19	4-969-236-01	SPRING (LID), TORSION	19	4-973-936-01	SPRING (LID), TORSION
58	⚠ 56	1-696-586-11	CORD, POWER (UK)	⚠ 56	1-696-586-21	CORD, POWER (UK)
	59	A-4673-240-A	DIGITAL BOARD, COMPLETE	59	A-4673-554-A	DIGITAL BOARD, COMPLETE
	⚠ TR641	1-423-576-11	TRANSFORMER, POWER (US, Canadian)	⚠ TR641	1-427-897-11	TRANSFORMER, POWER (US, Canadian)
	⚠ TR641	1-449-922-11	TRANSFORMER, POWER (AEP, UK)	⚠ TR641	1-427-898-11	TRANSFORMER, POWER (AEP, UK)
59	135	3-561-902-01	CLOTH, RETAINING, CASSETTE	135	3-561-902-00	CLOTH, RETAINING, CASSETTE
	137	X-4945-872-2	SLIDER (M) ASSY	137	X-4945-872-1	SLIDER (M) ASSY
	138	4-972-910-02	SCREW (2.6X18), +B	138	4-972-910-01	SCREW (2.6X8), +B
60	⚠157	8-583-009-01	DEVICE, MINI DISK KMS-210A/J-N	⚠157	8-583-009-11	DEVICE, MINI DISK KMS-210A/J-N
70		4-925-389-01	CUSHION		4-973-808-01	CUSHION
57	2	X-4945-243-1	KNOB (AMS) ASSY	2	X-4945-243-1	KNOB (AMS) ASSY
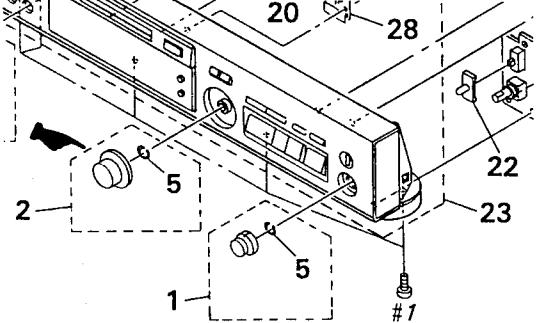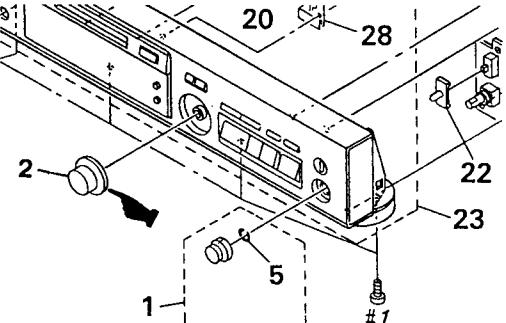
SECTION 6
ELECTRICAL PARTS LIST

NOTE:

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

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

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- RESISTORS
  All resistors are in ohms
  METAL: Metal-film resistor

- SEMICONDUCTORS
  In each case, u: μ , for example:
  uA...: μA..., uPA...: μPA..., uPB...: μPB...,
  uPC...: μPC..., uPD...: μPD...
- CAPACITORS
  uF : μF
- COILS
  uH : μH

Ref. No.	Part No.	Description			Remark
*	A-4673-174-A	BD BOARD, COMPLETE			
		******************			
		< CAPACITOR >			
C101	1-104-913-11	TANTAL. CHIP	10uF	20%	16V
C102	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C103	1-104-913-11	TANTAL. CHIP	10uF	20%	16V
C104	1-104-913-11	TANTAL. CHIP	10uF	20%	16V
C105	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C106	1-163-275-11	CERAMIC CHIP	0.001uF	5%	50V
C107	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C108	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C109	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C111	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C112	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C113	1-107-682-11	CERAMIC CHIP	1uF	10%	16V
C114	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C115	1-107-682-11	CERAMIC CHIP	1uF	10%	16V
C116	1-163-019-00	CERAMIC CHIP	0.0068uF	10%	50V
C117	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C119	1-104-913-11	TANTAL. CHIP	10uF	20%	16V
C121	1-126-395-11	ELECT	22uF	20%	16V
C122	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C123	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C124	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C125	1-104-760-11	CERAMIC CHIP	0.047uF	10%	50V
C126	1-107-682-11	CERAMIC CHIP	1uF	10%	16V
C127	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C128	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C129	1-107-823-11	CERAMIC CHIP	0.47uF	10%	16V
C130	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C131	1-104-760-11	CERAMIC CHIP	0.047uF	10%	50V
C132	1-107-682-11	CERAMIC CHIP	1uF	10%	16V
C133	1-163-017-00	CERAMIC CHIP	0.0047uF	5%	50V
C134	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C135	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C136	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C141	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C142	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C143	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C144	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C151	1-104-913-11	TANTAL. CHIP	10uF	20%	16V
C152	1-163-038-91	CERAMIC CHIP	0.1uF		25V

Ref. No.	Part No.	Description				Remark
C155	1-104-916-11	TANTAL. CHIP	6.8uF	20%		20V
C160	1-104-601-11	ELECT CHIP	10uF	20%		10V
C161	1-104-601-11	ELECT CHIP	10uF	20%		10V
C163	1-164-232-11	CERAMIC CHIP	0.01uF			50V
C164	1-164-232-11	CERAMIC CHIP	0.01uF			50V
C166	1-163-275-11	CERAMIC CHIP	0.001uF	5%		50V
C167	1-163-038-91	CERAMIC CHIP	0.1uF			25V
C168	1-163-038-91	CERAMIC CHIP	0.1uF			25V
C169	1-104-913-11	TANTAL. CHIP	10uF	20%		16V
C170	1-104-913-11	TANTAL. CHIP	10uF	20%		16V
C171	1-163-038-91	CERAMIC CHIP	0.1uF			25V
C175	1-163-038-91	CERAMIC CHIP	0.1uF			25V
C176	1-163-227-11	CERAMIC CHIP	10PF	0.5PF		50V
C177	1-163-227-11	CERAMIC CHIP	10PF	0.5PF		50V
C178	1-163-038-91	CERAMIC CHIP	0.1uF			25V
C181	1-104-913-11	TANTAL. CHIP	10uF	20%		16V
C182	1-163-038-91	CERAMIC CHIP	0.1uF			25V
C183	1-163-038-91	CERAMIC CHIP	0.1uF			25V
C184	1-107-836-11	ELECT CHIP	22uF	20%		8V
C185	1-164-611-11	CERAMIC CHIP	0.001uF	10%		500V
C186	1-163-038-91	CERAMIC CHIP	0.1uF			25V
C191	1-126-395-11	ELECT	22uF	20%		16V
C192	1-163-038-91	CERAMIC CHIP	0.1uF			25V
C193	1-164-346-11	CERAMIC CHIP	1uF			16V
C194	1-126-206-11	ELECT CHIP	100uF	20%		6.3V
		< CONNECTOR >				
CN101	1-766-508-11	CONNECTOR, FFC/FPC (ZIF) 22P				
CN102	1-766-510-21	CONNECTOR, FFC/FPC 30P				
CN103	1-766-509-21	CONNECTOR, FFC/FPC 18P				
CN104	1-766-898-21	HOUSING, CONNECTOR (PC BOARD) 4P				
		< DIODE >				
D101	8-719-988-62	DIODE	1SS355			
D155	8-719-031-17	DIODE	1SS322			
D161	8-719-421-15	DIODE	MA8027-L			
D181	8-719-033-60	DIODE	F1P2STP			
D183	8-719-033-60	DIODE	F1P2STP			
		< IC >				
IC101	8-752-072-68	IC	CXA1981AR			
IC102	8-759-243-19	IC	TC7SU04F			
IC121	8-752-375-06	IC	CXD2535AR			

Ref. No.	Part No.	Description				Remark
IC122	8-759-243-19	IC TC7SU04F				
IC151	8-759-179-60	IC MPC17A38VMEL				
IC171	8-759-504-12	IC X24C01S				
IC172	8-759-149-73	IC uPC842G2				
IC181	8-759-095-65	IC TC74ACT540FS				
IC182	8-759-243-19	IC TC7SU04F				
IC191	8-759-822-99	IC L88MS05T-FA				

< COIL/FERRITE BEAD/RESISTOR >

Ref. No.	Part No.	Description			
L101	1-414-234-11	INDUCTOR, FERRITE BEAD			
L102	1-414-234-11	INDUCTOR, FERRITE BEAD			
L103	1-414-234-11	INDUCTOR, FERRITE BEAD			
L105	1-414-234-11	INDUCTOR, FERRITE BEAD			
L106	1-414-234-11	INDUCTOR, FERRITE BEAD			
L110	1-216-295-00	METAL CHIP	0	5%	1/10W
L121	1-414-234-11	INDUCTOR, FERRITE BEAD			
L122	1-412-039-51	INDUCTOR CHIP	100uH		
L151	1-412-622-51	INDUCTOR	10uH		
L152	1-412-622-51	INDUCTOR	10uH		
L153	1-412-039-51	INDUCTOR CHIP	100uH		
L154	1-412-039-51	INDUCTOR CHIP	100uH		
L155	1-410-980-51	INDUCTOR CHIP	1mH		
L161	1-414-234-11	INDUCTOR, FERRITE BEAD			
L162	1-414-234-11	INDUCTOR, FERRITE BEAD			
L195	1-233-316-21	FILTER, CHIP EMI			

< MOTOR >

Ref. No.	Part No.	Description
M101	A-4660-651-A	MOTOR ASSY (SLED)
M102	A-4660-650-A	CHASSIS ASSY, BU (SPINDLE)

< TRANSISTOR >

Ref. No.	Part No.	Description	
Q101	8-729-905-12	TRANSISTOR	DTA144EU
Q151	8-729-905-18	TRANSISTOR	DTC144EU
Q162	8-729-101-07	TRANSISTOR	2SB798-DL
Q163	8-729-905-12	TRANSISTOR	DTA144EU
Q164	8-729-924-19	TRANSISTOR	DTA123JU
Q181	8-729-018-75	TRANSISTOR	2SJ278MY
Q182	8-729-017-65	TRANSISTOR	2SK1764KY

< RESISTOR >

Ref. No.	Part No.	Description			
R101	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R102	1-216-077-00	METAL CHIP	15K	5%	1/10W
R103	1-208-806-11	METAL CHIP	10K	0.50%	1/10W
R104	1-216-049-91	METAL CHIP	1K	5%	1/10W
R105	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R106	1-216-133-00	METAL CHIP	3.3M	5%	1/10W
R107	1-216-113-00	METAL CHIP	470K	5%	1/10W
R114	1-216-025-00	METAL CHIP	100	5%	1/10W
R116	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R117	1-216-113-00	METAL CHIP	470K	5%	1/10W

Ref. No.	Part No.	Description				Remark
R120	1-216-025-00	METAL CHIP	100	5%	1/10W	
R121	1-216-097-00	METAL CHIP	100K	5%	1/10W	
R122	1-216-295-00	METAL CHIP	0	5%	1/10W	
R123	1-216-037-00	METAL CHIP	330	5%	1/10W	
R124	1-216-025-00	METAL CHIP	100	5%	1/10W	
R125	1-216-025-00	METAL CHIP	100	5%	1/10W	
R128	1-216-053-00	METAL CHIP	1.5K	5%	1/10W	
R129	1-216-037-00	METAL CHIP	330	5%	1/10W	
R130	1-216-041-00	METAL CHIP	470	5%	1/10W	
R131	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R132	1-216-097-00	METAL CHIP	100K	5%	1/10W	
R133	1-216-133-00	METAL CHIP	3.3M	5%	1/10W	
R134	1-216-037-00	METAL CHIP	330	5%	1/10W	
R135	1-216-053-00	METAL CHIP	1.5K	5%	1/10W	
R136	1-216-041-00	METAL CHIP	470	5%	1/10W	
R137	1-216-025-00	METAL CHIP	100	5%	1/10W	
R139	1-216-017-00	METAL CHIP	47	5%	1/10W	
R140	1-216-017-00	METAL CHIP	47	5%	1/10W	
R142	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R143	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R144	1-216-025-00	METAL CHIP	100	5%	1/10W	
R145	1-216-121-00	METAL CHIP	1M	5%	1/10W	
R146	1-216-037-00	METAL CHIP	330	5%	1/10W	
R147	1-216-025-00	METAL CHIP	100	5%	1/10W	
R148	1-216-045-00	METAL CHIP	680	5%	1/10W	
R151	1-216-097-00	METAL CHIP	100K	5%	1/10W	
R152	1-216-295-00	METAL CHIP	0	5%	1/10W	
R153	1-216-295-00	METAL CHIP	0	5%	1/10W	
R154	1-220-259-11	METAL CHIP	150	5%	1/4W	
R155	1-220-259-11	METAL CHIP	150	5%	1/4W	
R161	1-216-057-00	METAL CHIP	2.2K	5%	1/10W	
R162	1-216-057-00	METAL CHIP	2.2K	5%	1/10W	
R163	1-216-057-00	METAL CHIP	2.2K	5%	1/10W	
R164	1-216-045-00	METAL CHIP	680	5%	1/10W	
R165	1-216-097-00	METAL CHIP	100K	5%	1/10W	
R166	1-220-250-11	METAL CHIP	10	5%	1/2W	
R167	1-216-065-00	METAL CHIP	4.7K	5%	1/10W	
R168	1-218-236-91	METAL CHIP	1	10%	1/4W	
R170	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R171	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R172	1-216-065-00	METAL CHIP	4.7K	5%	1/10W	
R174	1-216-065-00	METAL CHIP	4.7K	5%	1/10W	
R176	1-216-065-00	METAL CHIP	4.7K	5%	1/10W	
R178	1-216-065-00	METAL CHIP	4.7K	5%	1/10W	
R181	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R182	1-216-089-00	METAL CHIP	47K	5%	1/10W	
R183	1-216-089-00	METAL CHIP	47K	5%	1/10W	
R184	1-216-296-00	METAL CHIP	0	5%	1/8W	
R186	1-216-296-00	METAL CHIP	0	5%	1/8W	
R195	1-216-295-00	METAL CHIP	0	5%	1/10W	

BD DETECTION SW DIGITAL

Ref. No.	Part No.	Description			Remark
		< VARIABLE RESISTOR >			
RV101	1-241-397-11	RES, ADJ, METAL CHIP 47K			
RV102	1-241-395-11	RES, ADJ, METAL CHIP 10K			
RV105	1-241-395-11	RES, ADJ, METAL CHIP 10K			
		< SWITCH >			
S101	1-572-467-31	SWITCH, PUSH (1 KEY)(LIMIT)			
S102	1-762-148-11	SWITCH, PUSH (2 KEY)(REFLECT/PROTECT)			

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*	1-653-411-11	DETECTION SW BOARD			

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Ref. No.	Part No.	Description			Remark
		< CONNECTOR >			
CN193	1-770-010-21	CONNECTOR, BOARD TO BOARD 4P			
		< SWITCH >			
S191	1-762-149-11	SWITCH, PUSH (1 KEY)(LOAD OUT DET)			
S192	1-762-149-11	SWITCH, PUSH (1 KEY)(LOAD IN DET)			
S193	1-762-149-11	SWITCH, PUSH (1 KEY)(CHUCKING IN DET)			

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*	A-4673-554-A	DIGITAL BOARD, COMPLETE			

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Ref. No.	Part No.	Description			Remark
		< CAPACITOR >			
C201	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C202	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C203	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C205	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C206	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C207	1-126-395-11	ELECT	22uF	20%	16V
C208	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C209	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C210	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C221	1-126-395-11	ELECT	22uF	20%	16V
C222	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C223	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C224	1-126-204-11	ELECT CHIP	47uF	20%	16V
C225	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C226	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C227	1-126-204-11	ELECT CHIP	47uF	20%	16V
C228	1-163-229-11	CERAMIC CHIP	12PF	5%	50V
C229	1-163-229-11	CERAMIC CHIP	12PF	5%	50V
C230	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C231	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C232	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C233	1-126-395-11	ELECT	22uF	20%	16V
C235	1-163-038-91	CERAMIC CHIP	0.1uF		25V

Ref. No.	Part No.	Description			Remark
C236	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C241	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C251	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C252	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C253	1-163-275-11	CERAMIC CHIP	0.001uF	5%	50V
C254	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C255	1-163-113-00	CERAMIC CHIP	68PF	5%	50V
C256	1-163-275-11	CERAMIC CHIP	0.001uF	5%	50V
C257	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C258	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C261	1-126-395-11	ELECT	22uF	20%	16V
C262	1-126-395-11	ELECT	22uF	20%	16V
C263	1-164-695-11	CERAMIC CHIP	0.0022uF	5%	50V
C264	1-164-695-11	CERAMIC CHIP	0.0022uF	5%	50V
C265	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C266	1-126-395-11	ELECT	22uF	20%	16V
C267	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C268	1-126-395-11	ELECT	22uF	20%	16V
C270	1-126-204-11	ELECT CHIP	47uF	20%	16V
C271	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C272	1-163-227-11	CERAMIC CHIP	10PF	0.5PF	50V
C273	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C274	1-126-395-11	ELECT	22uF	20%	16V
C277	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C281	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C282	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C283	1-126-204-11	ELECT CHIP	47uF	20%	16V
C284	1-126-204-11	ELECT CHIP	47uF	20%	16V
C285	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C286	1-126-204-11	ELECT CHIP	47uF	20%	16V
C287	1-163-113-00	CERAMIC CHIP	68PF	5%	50V
C288	1-163-113-00	CERAMIC CHIP	68PF	5%	50V
C289	1-163-239-11	CERAMIC CHIP	33PF	5%	50V
C290	1-163-239-11	CERAMIC CHIP	33PF	5%	50V
C291	1-163-239-11	CERAMIC CHIP	33PF	5%	50V
C292	1-163-239-11	CERAMIC CHIP	33PF	5%	50V
C293	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C294	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C295	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C296	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C297	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C299	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C300	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C301	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C302	1-126-204-11	ELECT CHIP	47uF	20%	16V
C304	1-126-204-11	ELECT CHIP	47uF	20%	16V
C305	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C307	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C309	1-163-227-11	CERAMIC CHIP	10PF	0.5PF	50V
C311	1-126-395-11	ELECT	22uF	20%	16V

Ref. No.	Part No.	Description				Remark
C312	1-126-395-11	ELECT	22uF	20%		16V
C313	1-163-038-91	CERAMIC CHIP	0.1uF			25V
C314	1-163-038-91	CERAMIC CHIP	0.1uF			25V
C315	1-163-038-91	CERAMIC CHIP	0.1uF			25V
C316	1-163-133-00	CERAMIC CHIP	470PF	5%		50V
C317	1-163-133-00	CERAMIC CHIP	470PF	5%		50V
C318	1-163-038-91	CERAMIC CHIP	0.1uF			25V
C319	1-163-227-11	CERAMIC CHIP	10PF	0.5PF		50V
C320	1-163-031-11	CERAMIC CHIP	0.01uF			50V
C321	1-163-227-11	CERAMIC CHIP	10PF	0.5PF		50V
C322	1-163-227-11	CERAMIC CHIP	10PF	0.5PF		50V
C326	1-163-038-91	CERAMIC CHIP	0.1uF			25V
C328	1-163-038-91	CERAMIC CHIP	0.1uF			25V
C330	1-163-038-91	CERAMIC CHIP	0.1uF			25V
C332	1-163-227-11	CERAMIC CHIP	10PF	0.5PF		50V
C334	1-163-017-00	CERAMIC CHIP	0.0047uF	5%		50V
C335	1-163-251-11	CERAMIC CHIP	100PF	5%		50V
C336	1-163-227-11	CERAMIC CHIP	10PF	0.5PF		50V
C337	1-163-227-11	CERAMIC CHIP	10PF	0.5PF		50V
C338	1-163-038-91	CERAMIC CHIP	0.1uF			25V
C527	1-163-038-91	CERAMIC CHIP	0.1uF			25V

< CONNECTOR >

Ref. No.	Part No.	Description	
* CN201	1-766-899-11	CONNECTOR, FFC (ZIF)	22P
CN202	1-766-510-21	CONNECTOR, FFC/FPC	30P
CN221	1-766-509-21	CONNECTOR, FFC/FPC	18P
* CN222	1-770-154-11	PIN, CONNECTOR (PC BOARD)	6P
* CN223	1-766-899-11	CONNECTOR, FFC (ZIF)	22P
* CN251	1-770-154-11	PIN, CONNECTOR (PC BOARD)	6P
* CN281	1-770-153-11	PIN, CONNECTOR (PC BOARD)	8P

< DIODE >

Ref. No.	Part No.	Description	
D201	8-719-016-74	DIODE	1SS352
D251	8-719-974-98	DIODE	HVM17-01

< FERRITE BEAD >

Ref. No.	Part No.	Description
FB201	1-550-907-21	BEAD, FERRITE (CHIP)
FB252	1-550-907-21	BEAD, FERRITE (CHIP)
FB254	1-550-907-21	BEAD, FERRITE (CHIP)
FB256	1-550-907-21	BEAD, FERRITE (CHIP)
FB257	1-550-907-21	BEAD, FERRITE (CHIP)
FB258	1-550-907-21	BEAD, FERRITE (CHIP)
FB340	1-543-948-11	BEAD, FERRITE (CHIP)

< IC >

Ref. No.	Part No.	Description	
IC201	8-759-344-28	IC	M37610MD-052FP
IC221	8-752-371-17	IC	CXD2536R
IC222	8-759-294-78	IC	MSM514400BSJADR1-K
IC241	8-759-040-83	IC	BA6287F
IC251	8-759-158-96	IC	TC9246F
IC258	8-759-242-70	IC	TC7WU04F
IC261	8-759-331-35	IC	AK5340-VS
IC262	8-759-097-92	IC	NJM2100V
IC263	8-759-252-90	IC	TLV2362IPW-ELM1500
IC281	8-752-359-50	IC	CXD2564AM
IC282	8-759-981-48	IC	TL082M

< COIL >

Ref. No.	Part No.	Description	
L221	1-410-389-31	INDUCTOR CHIP	47uH
L241	1-412-622-51	INDUCTOR	10uH
L251	1-412-332-41	INDUCTOR	2.2uH
L258	1-412-336-41	INDUCTOR	4.7uH
L281	1-412-336-41	INDUCTOR	4.7uH
L282	1-412-336-41	INDUCTOR	4.7uH
L285	1-410-387-11	INDUCTOR CHIP	33uH
L287	1-412-336-41	INDUCTOR	4.7uH

< TRANSISTOR >

Ref. No.	Part No.	Description	
Q261	8-729-421-19	TRANSISTOR	UN2213
Q321	8-729-421-19	TRANSISTOR	UN2213

< RESISTOR >

Ref. No.	Part No.	Description				Remark
R201	1-216-097-00	METAL CHIP	100K	5%		1/10W
R202	1-216-097-00	METAL CHIP	100K	5%		1/10W
R203	1-216-025-91	METAL CHIP	100	5%		1/10W
R204	1-216-097-00	METAL CHIP	100K	5%		1/10W
R205	1-216-073-00	METAL CHIP	10K	5%		1/10W
R206	1-216-073-00	METAL CHIP	10K	5%		1/10W
R207	1-216-073-00	METAL CHIP	10K	5%		1/10W
R208	1-216-097-00	METAL CHIP	100K	5%		1/10W
R209	1-216-097-00	METAL CHIP	100K	5%		1/10W
R210	1-216-073-00	METAL CHIP	10K	5%		1/10W
R211	1-216-097-00	METAL CHIP	100K	5%		1/10W
R212	1-216-295-00	METAL CHIP	0	5%		1/10W
R213	1-216-073-00	METAL CHIP	10K	5%		1/10W
R214	1-216-073-00	METAL CHIP	10K	5%		1/10W
R215	1-216-097-00	METAL CHIP	100K	5%		1/10W
R216	1-216-073-00	METAL CHIP	10K	5%		1/10W
R217	1-216-073-00	METAL CHIP	10K	5%		1/10W
R218	1-216-073-00	METAL CHIP	10K	5%		1/10W
R219	1-216-073-00	METAL CHIP	10K	5%		1/10W
R220	1-216-073-00	METAL CHIP	10K	5%		1/10W
R221	1-216-097-00	METAL CHIP	100K	5%		1/10W
R222	1-216-097-00	METAL CHIP	100K	5%		1/10W
R223	1-216-097-00	METAL CHIP	100K	5%		1/10W
R224	1-216-097-00	METAL CHIP	100K	5%		1/10W
R225	1-216-097-00	METAL CHIP	100K	5%		1/10W
R227	1-216-033-00	METAL CHIP	220	5%		1/10W
R228	1-216-033-00	METAL CHIP	220	5%		1/10W
R229	1-216-295-00	METAL CHIP	0	5%		1/10W

Ref. No.	Part No.	Description				Remark	Ref. No.	Part No.	Description				Remark
R230	1-216-033-00	METAL CHIP	220	5%	1/10W		R305	1-216-295-00	METAL CHIP	0	5%	1/10W	
R231	1-216-295-00	METAL CHIP	0	5%	1/10W		R306	1-216-295-00	METAL CHIP	0	5%	1/10W	
R232	1-216-295-00	METAL CHIP	0	5%	1/10W		R307	1-216-097-00	METAL CHIP	100K	5%	1/10W	
R233	1-216-033-00	METAL CHIP	220	5%	1/10W		R308	1-216-097-00	METAL CHIP	100K	5%	1/10W	
R234	1-216-295-00	METAL CHIP	0	5%	1/10W		R309	1-216-097-00	METAL CHIP	100K	5%	1/10W	
R236	1-216-295-00	METAL CHIP	0	5%	1/10W		R310	1-216-097-00	METAL CHIP	100K	5%	1/10W	
R241	1-216-021-00	METAL CHIP	68	5%	1/10W		R311	1-216-295-00	METAL CHIP	0	5%	1/10W	
R242	1-216-021-00	METAL CHIP	68	5%	1/10W		R312	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R251	1-216-049-91	METAL CHIP	1K	5%	1/10W		R313	1-216-097-00	METAL CHIP	100K	5%	1/10W	
R252	1-216-049-91	METAL CHIP	1K	5%	1/10W		R314	1-216-097-00	METAL CHIP	100K	5%	1/10W	
R253	1-216-121-00	METAL CHIP	1M	5%	1/10W		R315	1-216-097-00	METAL CHIP	100K	5%	1/10W	
R256	1-216-037-00	METAL CHIP	330	5%	1/10W		R316	1-216-097-00	METAL CHIP	100K	5%	1/10W	
R257	1-216-077-00	METAL CHIP	15K	5%	1/10W		R317	1-216-097-00	METAL CHIP	100K	5%	1/10W	
R258	1-216-077-00	METAL CHIP	15K	5%	1/10W		R318	1-216-049-91	METAL CHIP	1K	5%	1/10W	
R259	1-216-077-00	METAL CHIP	15K	5%	1/10W		R319	1-216-049-91	METAL CHIP	1K	5%	1/10W	
R260	1-216-077-00	METAL CHIP	15K	5%	1/10W		R320	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R261	1-216-663-11	METAL CHIP	3.3K	0.5%	1/10W		R321	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R262	1-216-663-11	METAL CHIP	3.3K	0.5%	1/10W		R323	1-216-097-00	METAL CHIP	100K	5%	1/10W	
R263	1-216-687-11	METAL CHIP	33K	0.5%	1/10W		R325	1-216-097-00	METAL CHIP	100K	5%	1/10W	
R264	1-216-687-11	METAL CHIP	33K	0.5%	1/10W		R326	1-216-097-00	METAL CHIP	100K	5%	1/10W	
R265	1-216-639-11	METAL CHIP	330	0.5%	1/10W		R327	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R266	1-216-041-00	METAL CHIP	470	5%	1/10W		R328	1-216-097-00	METAL CHIP	100K	5%	1/10W	
R266	1-216-639-11	METAL CHIP	330	0.5%	1/10W		R329	1-216-097-00	METAL CHIP	100K	5%	1/10W	
R267	1-216-639-11	METAL CHIP	330	0.5%	1/10W		R330	1-216-097-00	METAL CHIP	100K	5%	1/10W	
R268	1-216-639-11	METAL CHIP	330	0.5%	1/10W		R331	1-216-097-00	METAL CHIP	100K	5%	1/10W	
R269	1-208-822-11	METAL CHIP	47K	0.50%	1/10W		R332	1-216-097-00	METAL CHIP	100K	5%	1/10W	
R270	1-208-822-11	METAL CHIP	47K	0.50%	1/10W		R333	1-216-097-00	METAL CHIP	100K	5%	1/10W	
R271	1-216-073-00	METAL CHIP	10K	5%	1/10W		R334	1-216-097-00	METAL CHIP	100K	5%	1/10W	
R272	1-216-033-00	METAL CHIP	220	5%	1/10W		R335	1-216-065-00	METAL CHIP	4.7K	5%	1/10W	
R273	1-216-073-00	METAL CHIP	10K	5%	1/10W		R336	1-216-049-91	METAL CHIP	1K	5%	1/10W	
R274	1-216-073-00	METAL CHIP	10K	5%	1/10W		R337	1-216-097-00	METAL CHIP	100K	5%	1/10W	
R275	1-216-073-00	METAL CHIP	10K	5%	1/10W		R338	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R276	1-216-073-00	METAL CHIP	10K	5%	1/10W		R339	1-216-097-00	METAL CHIP	100K	5%	1/10W	
R281	1-216-687-11	METAL CHIP	33K	0.5%	1/10W		R341	1-216-295-00	METAL CHIP	0	5%	1/10W	
R282	1-216-687-11	METAL CHIP	33K	0.5%	1/10W		R342	1-216-295-00	METAL CHIP	0	5%	1/10W	
R283	1-208-814-11	METAL CHIP	22K	0.50%	1/10W		R343	1-216-041-00	METAL CHIP	470	5%	1/10W	
R284	1-208-814-11	METAL CHIP	22K	0.50%	1/10W		R344	1-550-907-21	BEAD, FERRITE (CHIP)				
R285	1-216-687-11	METAL CHIP	33K	0.5%	1/10W		R345	1-216-097-00	METAL CHIP	100K	5%	1/10W	
R286	1-216-687-11	METAL CHIP	33K	0.5%	1/10W		R346	1-216-097-00	METAL CHIP	100K	5%	1/10W	
R287	1-208-814-11	METAL CHIP	22K	0.50%	1/10W		R347	1-216-121-00	METAL CHIP	1M	5%	1/10W	
R288	1-208-814-11	METAL CHIP	22K	0.50%	1/10W		R350	1-216-041-00	METAL CHIP	470	5%	1/10W	
R289	1-216-695-11	METAL CHIP	68K	0.5%	1/10W		R353	1-216-295-00	METAL CHIP	0	5%	1/10W	
R290	1-216-695-11	METAL CHIP	68K	0.5%	1/10W		R359	1-216-295-00	METAL CHIP	0	5%	1/10W	
R291	1-216-695-11	METAL CHIP	68K	0.5%	1/10W		R361	1-216-295-00	METAL CHIP	0	5%	1/10W	
R292	1-216-695-11	METAL CHIP	68K	0.5%	1/10W		R362	1-216-296-00	METAL CHIP	0	5%	1/8W	
R293	1-216-295-00	METAL CHIP	0	5%	1/10W		R381	1-216-295-00	METAL CHIP	0	5%	1/10W	
R294	1-216-041-00	METAL CHIP	470	5%	1/10W		R383	1-216-295-00	METAL CHIP	0	5%	1/10W	
R295	1-216-073-00	METAL CHIP	10K	5%	1/10W		R384	1-216-295-00	METAL CHIP	0	5%	1/10W	
R303	1-216-097-00	METAL CHIP	100K	5%	1/10W		R386	1-216-295-00	METAL CHIP	0	5%	1/10W	
R304	1-216-097-00	METAL CHIP	100K	5%	1/10W								

Ref.No.	Part No.	Description				Remark
		< VIBRATOR >				
X201	1-760-493-11	VIBRATOR, CERAMIC (CHIP TYPE)(8MHz)				
X203	1-760-173-11	VIBRATOR, CRYSTAL (45MHz)				

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Ref.No.	Part No.	Description				Remark
*	A-4673-242-A	DISPLAY BOARD, COMPLETE				

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Ref.No.	Part No.	Description				Remark
	2-389-320-01	CUSHION				
		< CAPACITOR >				
C705	1-162-306-11	CERAMIC	0.01uF	30%	16V	
C706	1-162-294-31	CERAMIC	0.001uF	10%	50V	
C707	1-162-294-31	CERAMIC	0.001uF	10%	50V	
C708	1-164-159-11	CERAMIC	0.1uF		50V	
C709	1-124-234-00	ELECT	22uF	20%	16V	
C710	1-162-282-31	CERAMIC	100PF	10%	50V	
C711	1-164-159-11	CERAMIC	0.1uF		50V	
C713	1-162-302-11	CERAMIC	0.0022uF	30%	16V	
C714	1-162-302-11	CERAMIC	0.0022uF	30%	16V	
C715	1-161-494-00	CERAMIC	0.022uF		25V	
C716	1-161-494-00	CERAMIC	0.022uF		25V	
C717	1-126-163-11	ELECT	4.7uF	20%	50V	
C718	1-164-159-11	CERAMIC	0.1uF		50V	
C719	1-164-159-11	CERAMIC	0.1uF		50V	
C720	1-164-159-11	CERAMIC	0.1uF		50V	
C721	1-162-294-31	CERAMIC	0.001uF	10%	50V	
C791	1-164-159-11	CERAMIC	0.1uF		50V	
		< CONNECTOR >				
CN701	1-770-204-11	CONNECTOR, FFC/FPC 22P				
CN741	1-766-200-11	SOCKET, CONNECTOR PIN 5P				
CN751	1-766-806-11	HOUSING, CONNECTOR 3P				
		< FLUORESCENT INDICATOR >				
FL701	1-517-353-11	INDICATOR TUBE, FLUORESCENT				
		< HOLDER >				
* FLH701	4-956-134-01	HOLDER (FL TUBE)				
		< IC >				
IC701	8-759-297-23	IC M66004M8FP				
IC702	8-741-810-59	IC SBX1810-59 (=)				
		< RESISTOR >				
R705	1-249-435-11	CARBON	33K	5%	1/4W	
R708	1-249-429-11	CARBON	10K	5%	1/4W	
R709	1-249-429-11	CARBON	10K	5%	1/4W	
R721	1-247-807-31	CARBON	100	5%	1/4W	

Ref.No.	Part No.	Description				Remark
R722	1-247-807-31	CARBON	100	5%	1/4W	
R723	1-247-807-31	CARBON	100	5%	1/4W	
R724	1-247-807-31	CARBON	100	5%	1/4W	
R741	1-249-429-11	CARBON	10K	5%	1/4W	
R751	1-249-429-11	CARBON	10K	5%	1/4W	
R752	1-249-421-11	CARBON	2.2K	5%	1/4W	F
R753	1-249-423-11	CARBON	3.3K	5%	1/4W	F
R754	1-249-425-11	CARBON	4.7K	5%	1/4W	F
R755	1-249-429-11	CARBON	10K	5%	1/4W	
R756	1-249-435-11	CARBON	33K	5%	1/4W	
R761	1-249-429-11	CARBON	10K	5%	1/4W	
R762	1-249-421-11	CARBON	2.2K	5%	1/4W	F
R763	1-249-423-11	CARBON	3.3K	5%	1/4W	F
R764	1-249-425-11	CARBON	4.7K	5%	1/4W	F
R771	1-249-429-11	CARBON	10K	5%	1/4W	
R772	1-249-421-11	CARBON	2.2K	5%	1/4W	F
R773	1-249-423-11	CARBON	3.3K	5%	1/4W	F
R774	1-249-425-11	CARBON	4.7K	5%	1/4W	F
R775	1-249-429-11	CARBON	10K	5%	1/4W	
R776	1-249-435-11	CARBON	33K	5%	1/4W	
		< SWITCH >				
S701	1-467-891-11	ENCODER, ROTARY (|◁◁ AMS ▷▷|)				
S751	1-554-303-21	SWITCH, TACTILE (EDIT NO)				
S752	1-554-303-21	SWITCH, TACTILE (YES)				
S753	1-554-303-21	SWITCH, TACTILE (□□)				
S754	1-554-303-21	SWITCH, TACTILE (▷)				
S756	1-554-303-21	SWITCH, TACTILE (DISPLAY)				
S761	1-554-303-21	SWITCH, TACTILE (PLAY MODE)				
S762	1-554-303-21	SWITCH, TACTILE (REPEAT)				
S763	1-554-303-21	SWITCH, TACTILE (SCROLL)				
S771	1-554-303-21	SWITCH, TACTILE (●)				
S772	1-554-303-21	SWITCH, TACTILE (■)				
S774	1-554-303-21	SWITCH, TACTILE (▶▶)				
S775	1-554-303-21	SWITCH, TACTILE (◀◀)				
S776	1-554-303-21	SWITCH, TACTILE (△)				

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Ref.No.	Part No.	Description				Remark
*	1-654-134-11	HP BOARD				

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Ref.No.	Part No.	Description				Remark
		< CAPACITOR >				
C701	1-164-159-11	CERAMIC	0.1uF		50V	
C703	1-162-294-31	CERAMIC	0.001uF	10%	50V	
C704	1-162-294-31	CERAMIC	0.001uF	10%	50V	
		< JACK >				
J701	1-568-519-41	JACK, LARGE TYPE (PHONES)				

Ref. No.	Part No.	Description					Remark
		< COIL >					
L701	1-412-473-21	INDUCTOR	0uH				
L702	1-412-473-21	INDUCTOR	0uH				
L703	1-412-473-21	INDUCTOR	0uH				
		< RESISTOR >					
R713	1-249-393-11	CARBON	10	5%	1/4W	F	
R714	1-249-393-11	CARBON	10	5%	1/4W	F	
		< VARIABLE RESISTOR >					
RV701	1-223-752-11	RES, VAR, CARBON 1K/1K (PHONES LEVEL)					

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*	1-653-412-11	MOTOR BOARD
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		< CONNECTOR >	
* CN191	1-568-944-11	PIN, CONNECTOR 6P	
CN192	1-770-011-41	CONNECTOR, BOARD TO BOARD 4P	

		< MOTOR >
M191	A-4660-646-A	MOTOR ASSY (LOADING)

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	1-654-446-11	OWH FLEXIBLE BOARD
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		< HEAD >
HR901	1-500-175-11	HEAD, OVER LIGHT (RF322-74A)

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*	A-4673-238-A	POWER BOARD, COMPLETE				
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*	1-535-303-00	WIRE, JUMPER				
*	3-309-144-21	HEAT SINK				
*	4-363-146-21	HEAT SINK, V.OUT				
	7-685-646-79	SCREW +BVTP 3X8 TYPE2 IT-3				
	7-682-548-09	SCREW +BVTT 3X8 (S)				

		< CAPACITOR >			
C501	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C502	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C503	1-124-572-11	ELECT	100uF	20%	63V
C504	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C505	1-104-773-11	ELECT	22000uF	20%	16V
C506	1-126-937-11	ELECT	4700uF	20%	16V
C507	1-124-916-11	ELECT	22uF	20%	63V
C508	1-126-950-11	ELECT	330uF	20%	35V

Ref. No.	Part No.	Description			Remark
C511	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C512	1-124-903-11	ELECT	1uF	20%	50V
C513	1-124-994-11	ELECT	100uF	20%	10V
C514	1-104-665-11	ELECT	100uF	20%	16V
C515	1-126-939-11	ELECT	10000uF	20%	16V
C516	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C521	1-124-907-11	ELECT	10uF	20%	50V
C522	1-124-907-11	ELECT	10uF	20%	50V
C523	1-163-033-91	CERAMIC CHIP	0.022uF		50V
C524	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C531	1-124-907-11	ELECT	10uF	20%	50V
C532	1-110-489-11	CAP, DOUBLE LAYER			1.0F
C533	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C534	1-126-963-11	ELECT	4.7uF	20%	50V
C535	1-124-903-11	ELECT	1uF	20%	50V
C541	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C542	1-124-994-11	ELECT	100uF	20%	10V
C551	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C552	1-124-994-11	ELECT	100uF	20%	10V
C561	1-104-665-11	ELECT	100uF	20%	16V
C562	1-104-665-11	ELECT	100uF	20%	16V
C563	1-124-903-11	ELECT	1uF	20%	50V
C564	1-124-903-11	ELECT	1uF	20%	50V
C565	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C566	1-124-903-11	ELECT	1uF	20%	50V
C567	1-124-994-11	ELECT	100uF	20%	10V
C568	1-124-994-11	ELECT	100uF	20%	10V
C571	1-163-017-00	CERAMIC CHIP	0.0047uF	5%	50V
C572	1-163-017-00	CERAMIC CHIP	0.0047uF	5%	50V
C573	1-163-145-00	CERAMIC CHIP	0.0015uF	5%	50V
C574	1-163-145-00	CERAMIC CHIP	0.0015uF	5%	50V
C575	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C576	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C577	1-124-910-11	ELECT	47uF	20%	50V
C578	1-124-910-11	ELECT	47uF	20%	50V
C579	1-163-025-11	CERAMIC CHIP	0.001uF		50V
C580	1-163-025-11	CERAMIC CHIP	0.001uF		50V
C591	1-126-024-11	ELECT	220uF	20%	16V
C592	1-126-024-11	ELECT	220uF	20%	16V
C611	1-163-239-11	CERAMIC CHIP	33PF	5%	50V
C612	1-163-239-11	CERAMIC CHIP	33PF	5%	50V
C613	1-126-233-11	ELECT	22uF	20%	50V
C614	1-126-233-11	ELECT	22uF	20%	50V
C616	1-216-295-00	METAL CHIP	0	5%	1/10W
C617	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C618	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C621	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C622	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C623	1-104-664-11	ELECT	47uF	20%	16V
C624	1-163-031-11	CERAMIC CHIP	0.01uF		50V

Ref. No.	Part No.	Description			Remark
C625	1-163-038-91	CERAMIC CHIP	0.1uF		25V
△C641	1-162-599-12	CERAMIC	0.0047uF	20%	400V
△C642	1-162-599-12	CERAMIC	0.0047uF	20%	400V
△C643	1-162-599-12	CERAMIC	0.0047uF	20%	400V
△C644	1-162-599-12	CERAMIC	0.0047uF	20%	400V
△C645	1-162-599-12	CERAMIC	0.0047uF	20%	400V
C661	1-163-038-91	CERAMIC CHIP	0.1uF		25V

< CONNECTOR >

Ref. No.	Part No.	Description
CN501	1-770-203-11	CONNECTOR, FFC/FPC 22P
CN591	1-506-468-11	PIN, CONNECTOR 3P
＊ CN611	1-564-708-11	PIN, CONNECTOR (SMALL TYPE) 6P
＊ CN641	1-580-230-21	PIN, CONNECTOR (PC BOARD) 2P

< DIODE >

Ref. No.	Part No.	Description	
D501	8-719-210-33	DIODE	EC10DS2
D502	8-719-210-33	DIODE	EC10DS2
D503	8-719-210-33	DIODE	EC10DS2
D504	8-719-210-33	DIODE	EC10DS2
D505	8-719-210-33	DIODE	EC10DS2
D506	8-719-422-43	DIODE	MA8051-H
D521	8-719-210-33	DIODE	EC10DS2
D522	8-719-210-33	DIODE	EC10DS2
D523	8-719-016-74	DIODE	1SS352
D531	8-719-016-74	DIODE	1SS352
D532	8-719-210-39	DIODE	EC10QS-04
D533	8-719-210-39	DIODE	EC10QS-04
D536	8-719-016-74	DIODE	1SS352
D537	8-719-016-74	DIODE	1SS352
D551	8-719-016-74	DIODE	1SS352
D552	8-719-016-74	DIODE	1SS352
D581	8-719-820-05	DIODE	1SS181
D582	8-719-016-74	DIODE	1SS352

< GROUND PLATE >

Ref. No.	Part No.	Description
＊ EB501	4-962-200-01	PLATE (TR), GROUND

< IC >

Ref. No.	Part No.	Description	
IC501	8-759-633-42	IC	M5293L
IC511	8-759-274-37	IC	BA3963
IC521	8-759-233-64	IC	TC74HCU04AF
IC531	8-759-327-15	IC	M62005L
IC541	8-759-504-46	IC	PQ05RF1
IC551	8-759-520-49	IC	PQ30RV21
IC561	8-759-631-40	IC	M5294P
IC571	8-759-700-94	IC	NJM5532M
IC591	8-759-981-86	IC	RC4556MA
IC621	8-749-921-12	IC	GP1F32T (DIGITAL OUT)
IC622	8-749-011-65	IC	GP1F32RX (DIGITAL IN)
IC623	8-759-243-22	IC	TC7SU04F(TE85R)

< JACK >

Ref. No.	Part No.	Description
J581	1-573-520-11	JACK, PIN 4P (LINE IN/OUT)

< FERRITE BEAD >

Ref. No.	Part No.	Description
L511	1-543-963-21	BEAD, FERRITE (CHIP)
L621	1-543-963-21	BEAD, FERRITE (CHIP)

< COIL >

Ref. No.	Part No.	Description	
L622	1-410-389-31	INDUCTOR CHIP	47uH
L623	1-410-389-31	INDUCTOR CHIP	47uH

< RESISTOR >

Ref. No.	Part No.	Description			
L635	1-216-295-00	METAL CHIP	0	5%	1/10W
L636	1-216-295-00	METAL CHIP	0	5%	1/10W

< LINE FILTER >

Ref. No.	Part No.	Description
△LF641	1-424-485-11	FILTER, LINE

< TRANSISTOR >

Ref. No.	Part No.	Description	
Q531	8-729-807-87	TRANSISTOR	2SB1295-UL6
Q532	8-729-421-19	TRANSISTOR	UN2213
Q551	8-729-901-06	TRANSISTOR	DTA144EK
Q581	8-729-901-06	TRANSISTOR	DTA144EK
Q583	8-729-107-46	TRANSISTOR	2SC3624A-L15
Q584	8-729-107-46	TRANSISTOR	2SC3624A-L15
Q585	8-729-107-46	TRANSISTOR	2SC3624A-L15
Q586	8-729-107-46	TRANSISTOR	2SC3624A-L15

< RESISTOR >

Ref. No.	Part No.	Description			
R504	1-216-025-00	METAL CHIP	100	5%	1/10W
R505	1-216-025-00	METAL CHIP	100	5%	1/10W
R506	1-216-089-00	METAL CHIP	47K	5%	1/10W
R521	1-216-025-00	METAL CHIP	100	5%	1/10W
R522	1-216-049-00	METAL CHIP	1K	5%	1/10W
R523	1-216-073-00	METAL CHIP	10K	5%	1/10W
R524	1-216-089-00	METAL CHIP	47K	5%	1/10W
R525	1-216-109-00	METAL CHIP	330K	5%	1/10W
R526	1-216-049-00	METAL CHIP	1K	5%	1/10W
R531	1-216-073-00	METAL CHIP	10K	5%	1/10W
R532	1-216-049-91	METAL CHIP	1K	5%	1/10W
R533	1-216-170-00	METAL CHIP	68	5%	1/8W
R534	1-216-170-00	METAL CHIP	68	5%	1/8W
R535	1-216-295-00	METAL CHIP	0	5%	1/10W
R551	1-208-806-11	METAL CHIP	10K	0.50%	1/10W
R552	1-216-687-11	METAL CHIP	33K	0.5%	1/10W
R553	1-216-073-00	METAL CHIP	10K	5%	1/10W
R554	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R561	1-216-089-00	METAL CHIP	47K	5%	1/10W
R571	1-216-655-11	METAL CHIP	1.5K	0.5%	1/10W

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

POWER | POWER SW | REC

Ref. No.	Part No.	Description				Remark
R572	1-216-655-11	METAL CHIP	1.5K	0.5%	1/10W	
R573	1-216-655-11	METAL CHIP	1.5K	0.5%	1/10W	
R574	1-216-655-11	METAL CHIP	1.5K	0.5%	1/10W	
R575	1-218-760-11	METAL CHIP	220K	0.50%	1/10W	
R576	1-218-760-11	METAL CHIP	220K	0.50%	1/10W	
R577	1-216-639-11	METAL CHIP	330	0.5%	1/10W	
R578	1-216-639-11	METAL CHIP	330	0.5%	1/10W	
R579	1-216-639-11	METAL CHIP	330	0.5%	1/10W	
R580	1-216-639-11	METAL CHIP	330	0.5%	1/10W	
R582	1-216-097-00	METAL CHIP	100K	5%	1/10W	
R583	1-216-065-00	METAL CHIP	4.7K	5%	1/10W	
R584	1-216-065-00	METAL CHIP	4.7K	5%	1/10W	
R585	1-216-639-11	METAL CHIP	330	0.5%	1/10W	
R586	1-216-639-11	METAL CHIP	330	0.5%	1/10W	
R587	1-216-065-00	METAL CHIP	4.7K	5%	1/10W	
R588	1-216-065-00	METAL CHIP	4.7K	5%	1/10W	
R591	1-216-033-00	METAL CHIP	220	5%	1/10W	
R592	1-216-033-00	METAL CHIP	220	5%	1/10W	
R593	1-216-033-00	METAL CHIP	220	5%	1/10W	
R594	1-216-033-00	METAL CHIP	220	5%	1/10W	
R595	1-216-089-00	METAL CHIP	47K	5%	1/10W	
R596	1-216-089-00	METAL CHIP	47K	5%	1/10W	
R597	1-216-077-00	METAL CHIP	15K	5%	1/10W	
R598	1-216-077-00	METAL CHIP	15K	5%	1/10W	
R599	1-216-065-00	METAL CHIP	4.7K	5%	1/10W	
R600	1-216-065-00	METAL CHIP	4.7K	5%	1/10W	
R601	1-216-077-00	METAL CHIP	15K	5%	1/10W	
R602	1-216-077-00	METAL CHIP	15K	5%	1/10W	
R603	1-216-017-00	METAL CHIP	47	5%	1/10W	
R604	1-216-017-00	METAL CHIP	47	5%	1/10W	
R605	1-216-017-00	METAL CHIP	47	5%	1/10W	
R606	1-216-017-00	METAL CHIP	47	5%	1/10W	
R617	1-216-603-11	METAL CHIP	10	0.5%	1/10W	
R618	1-216-603-11	METAL CHIP	10	0.5%	1/10W	
R619	1-208-814-11	METAL CHIP	22K	0.50%	1/10W	
R620	1-208-814-11	METAL CHIP	22K	0.50%	1/10W	
R622	1-216-089-00	METAL CHIP	47K	5%	1/10W	
R623	1-216-113-00	METAL CHIP	470K	5%	1/10W	
R634	1-216-089-00	METAL CHIP	47K	5%	1/10W	

< TRANSFORMER >

⚠TR641 1-427-897-11 TRANSFORMER, POWER

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＊   1-654-135-11 POWER SW BOARD
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< CONNECTOR >

CN742 1-766-203-11 PLUG, CONNECTOR PIN (PC BOARD) 5P

Ref. No.	Part No.	Description				Remark
		< DIODE >				
D701	8-719-313-40	LED	SEL1516W (ON/STANDBY)			
		< TRANSISTOR >				
Q701	8-729-900-61	TRANSISTOR	DTA114ES			
		< RESISTOR >				
R701	1-249-429-11	CARBON	10K	5%	1/4W	
R702	1-249-429-11	CARBON	10K	5%	1/4W	
R711	1-249-411-11	CARBON	330	5%	1/4W	
R712	1-249-415-11	CARBON	680	5%	1/4W	F
		< SWITCH >				
S703	1-762-234-11	SWITCH, SLIDE (TIMER)				
⚠S764	1-554-303-21	SWITCH, TACTILE (POWER)				

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＊   1-654-136-11 REC BOARD
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< CAPACITOR >

C712 1-164-159-11 CERAMIC   0.1uF   50V

< CONNECTOR >

CN752 1-766-805-11 CONNECTOR, BOARD TO BOARD 3P

< RESISTOR >

R706	1-249-417-11	CARBON	1K	5%	1/4W	F
R707	1-249-429-11	CARBON	10K	5%	1/4W	

< VARIABLE RESISTOR >

RV702 1-223-762-11 RES, VAR, CARBON 20K/20K (REC LEVEL)

< SWITCH >

S702 1-572-624-11 SWITCH, SLIDE (INPUT)

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