

CDX-3000/3002

SERVICE MANUAL

AEP Model

UK Model

CDX-3000

German Model

CDX-3002



Photo : CDX-3000

Model Name Using Similar Mechanism	NEW
CD Drive Mechanism Type	MG-333X-121
Optical Pick-Up Name	KSS-520A

SPECIFICATIONS

CD player section

System	Compact disc digital audio system
Signal-to-noise ratio	90 dB
Frequency response	10 – 20,000 Hz
Wow and flutter	Below measurable limit

Tuner section

FM

Tuning range	87.5 – 108.0 MHz
Antenna terminal	External antenna connector
Intermediate frequency	10.7 MHz
Usable sensitivity	8 dBf
Selectivity	75 dB at 400 kHz
Signal-to-noise ratio	65 dB (stereo), 68 dB (mono)

Harmonic distortion at 1 kHz	0.5 % (stereo), 0.3 % (mono)
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Separation	35 dB at 1 kHz
Frequency response	30 – 15,000 Hz
Capture ratio	2 dB

MW/LW

Tuning range	MW: 531 – 1,602 kHz LW: 153 – 281 kHz
Antenna terminal	External antenna connector
Intermediate frequency	10.71 MHz/450 kHz
Sensitivity	MW: 30 µV LW: 50 µV

Power amplifier section

Outputs	Speaker outputs (sure seal connectors)
Speaker impedance	4 – 8 ohms
Maximum power output	20 W × 4 (at 4 ohms)

General

Output lead	Power antenna control lead (CDX-3000/3002) / Power amplifier control lead (CDX-3002)
Tone controls	Bass ±10 dB at 100 Hz Treble ±10 dB at 10 kHz
Power requirements	12 V DC car battery (negative ground)
Dimensions	Approx. 188 × 58 × 180 mm (w/h/d)
Mounting dimension	Approx. 183 × 53 × 158 mm (w/h/d)
Mass	Approx. 1.3 kg
Supplied accessories	Parts for installation and connections (1 set) Front panel case (1)

Design and specifications are subject to change without notice.

FM/MW/LW COMPACT DISC PLAYER
SONY®

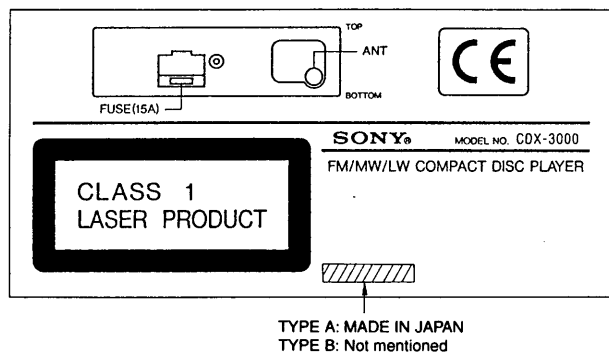


使用時は添付資料も参照のこと
Refer to the additional documents.

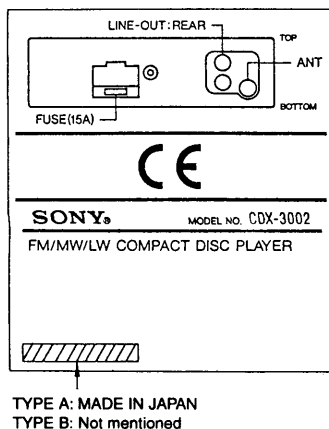
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• TYPE A/TYPE B Discrimination CDX-3000



CDX-3002



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.

Laser Diode Properties

- Material: GaAlAs
- Wavelength: 780 nm
- Emission Duration: continuous
- Laser Output Power: less than 44.6 μ W*

* This output is the value measured at a distance of 200mm from the objective lens surface on the Optical Pick-up Block.

CAUTION

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

Flexible Circuit Board Repairing

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

Notes on chip component replacement

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

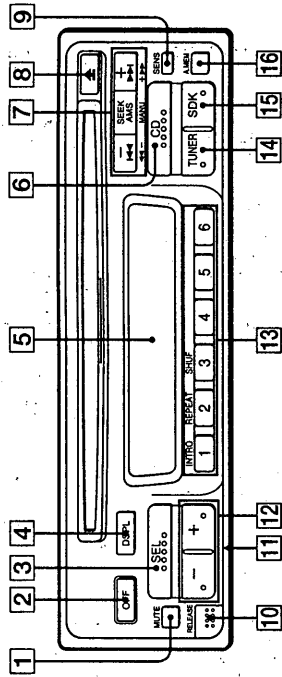
SAFETY-RELATED COMPONENT WARNING!!

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

SECTION 1 GENERAL

This section is extracted from instruction manual.

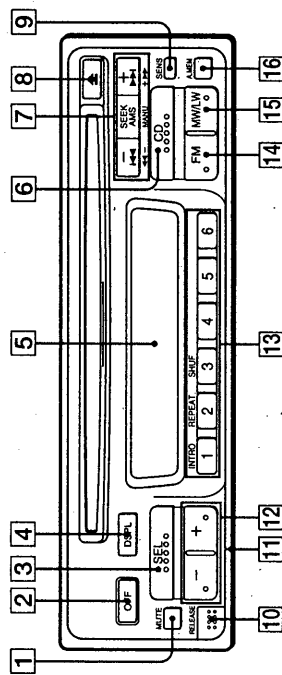
Location of Controls (CDX-3002)



Refer to the pages in ● for details.

- 1 MUTE button ①
- 2 OFF button ②③④⑤
- 3 SEL (control mode select/character set) button ⑥⑦⑧
- 4 DSPL (display mode change/time set) button ⑨⑩
- 5 Display window ⑪
- 6 CD (CD play) button ⑫
- 7 SEEK/AMS/MANU (automatic tuning/Automatic Music Sensor/preset search) button ⑬⑭⑮
- 8 ▲ (eject) button ⑯⑰
- 9 SENS (sensitivity adjust) button ⑱
- 10 RELEASE (front panel release) button ⑲⑳
- 11 Reset button (located on the front side of the unit hidden by the front panel) ㉑
- 12 +/- (volume/bass/treble/balance/fader control) button ㉒①
- 13 During radio reception: Preset number buttons ②
- During CD playback: ① INTRO (intro scan) button ⑥
- ② REPEAT (repeat play) button ⑦
- ③ SHUF (shuffle play) button ⑧
- 14 TUNER (radio on/band select) button ⑬⑭
- 15 SDK (traffic announcement) button ⑮
- 16 A.MEM (Automatic Memory function) button ⑯

Location of Controls (CDX-3000)



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- ③ SHUF (shuffle play) button ⑧
- 14 FM (radio on/band select) button ⑬⑭
- 15 MW/LW (radio on/band select) button ⑮⑯
- 16 A.MEM (Automatic Memory function) button ⑰

Installation

Precautions

- Do not tamper with the four holes on the upper surface of the unit. They are for tuner adjustments to be done only by service technicians.
- Choose the installation location carefully so that the unit will not hamper the driver during driving.
- Avoid installing the unit where it would be subject to high temperatures, such as from direct sunlight or hot air from the heater, or where it would be subject to dust, dirt or excessive vibration.
- Use only the supplied mounting hardware for a safe and secure installation.

Mounting angle adjustment

Adjust the mounting angle to less than 20°.

How to Detach and Attach the Front Panel

Before installing the unit, detach the front panel.

To detach

Before detaching the front panel, be sure to press the OFF button first. Then press the RELEASE button to open up the front panel, and detach the panel by pulling it towards you as illustrated.

To attach

Align the parts ④ and ⑤, and push the front panel until it clicks.

Installation

Précautions

- Ne pas toucher les quatre orifices sur le panneau supérieur de l'appareil. Ils servent aux réglages du tuner qui ne doivent être effectués que par un technicien.
- Choisir soigneusement l'emplacement de l'installation, pour que l'appareil ne gêne pas la conduite.
- Eviter d'installer l'appareil dans un endroit exposé à des températures élevées, comme en plein soleil ou à proximité d'une bouche d'air chaud, ou à de la poussière, saleté ou vibrations violentes.
- Pour garantir un montage sûr, n'utiliser que le matériel fourni.

Réglage de l'angle de montage

Ajuster l'inclinaison à un angle inférieur à 20°.

Retrait et pose de la façade

Avant d'installer l'appareil, déposer la façade.

Retrait

Avant de détacher la façade, appuyez sur la touche OFF. Appuyez ensuite sur la touche RELEASE pour ouvrir la façade. Enlevez-la en la tirant vers vous, comme indiqué sur l'illustration.

Pose

Aligner les points ④ et ⑤, puis pousser l'appareil jusqu'au dé clic.

Installation

Vorsichtsmaßnahmen

- Nehmen Sie an den vier Öffnungen an der Oberseite des Geräts keine Einstellungen vor. Diese Öffnungen dienen dem Tuner-Abgleich; der Abgleich darf nur von einem Fachmann vorgenommen werden.
- Wählen Sie den Einbauport sorgfältig so aus, daß das Gerät die Bedienung des Fahrzeugs nicht behindert.
- Bauen Sie das Gerät so ein, daß es keinen hohen Temperaturen (keinem direkten Sonnenlicht, keiner Warmluft von der Heizung), keinem Staub, keinem Schmutz und keinen starken Vibrationen ausgesetzt ist.
- Für eine sichere Befestigung verwenden Sie stets nur die mitgelieferten Montageeile.

Hinweis zum Montagewinkel

Das Gerät sollte in einem Winkel von weniger als 20° montiert werden.

Abnehmen und Anbringen der Frontplatte

Nehmen Sie die Frontplatte vor dem Einbau des Geräts ab.

Zum Abnehmen

Drücken Sie zuerst die Taste OFF, um das Gerät auszuschalten. Lösen Sie dann die Frontplatte durch Drücken der RELEASE-Taste, und ziehen Sie die Frontplatte, wie in der Abbildung gezeigt, ab.

Zum Anbringen

Richten Sie Teil ④ auf Teil ⑤ aus, und drücken Sie die Frontplatte fest, so daß sie mit einem Klicken einrastet.

Installazione

Precauzioni

- Non toccare i quattro fori sulla superficie superiore dell'apparecchio. Servono per regolazioni del sintonizzatore che devono essere eseguite solo da tecnici per la manutenzione.
- Scegliere con attenzione il luogo di montaggio in modo che l'apparecchio non interferisca con le normali operazioni di guida del conducente.
- Evitare di installare l'apparecchio dove sia soggetto ad alte temperature, come da esposizione alla luce solare diretta o al getto di aria calda dell'impianto di riscaldamento, o dove possa essere soggetto a polvere, sporco e vibrazioni eccessive.
- Usare solo il materiale di montaggio in dotazione per un'installazione stabile e sicura.

Regolazione dell'angolo di montaggio

Regolare l'angolo di montaggio in modo che sia inferiore a 20°.

Come staccare e attaccare il pannello anteriore

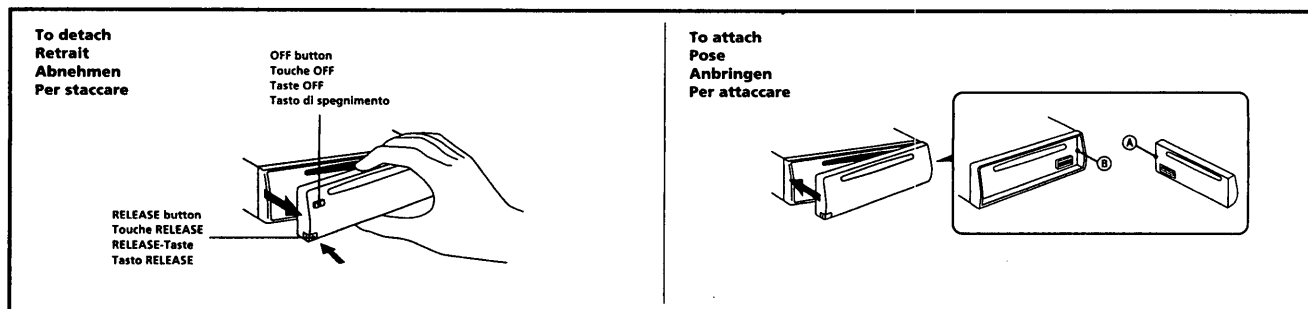
Prima di installare l'apparecchio staccare il pannello anteriore.

Per staccare

Prima di staccare il pannello anteriore, assicurarsi di premere il tasto OFF. Quindi premere il tasto RELEASE per aprire il pannello e staccarlo tirandolo verso di sé come mostrato nell'illustrazione.

Per attaccare

Allineare le parti ④ e ⑤ e spingere il pannello anteriore fino a udire uno scatto.



Mounting Example

Installation in the dashboard

Exemple de montage

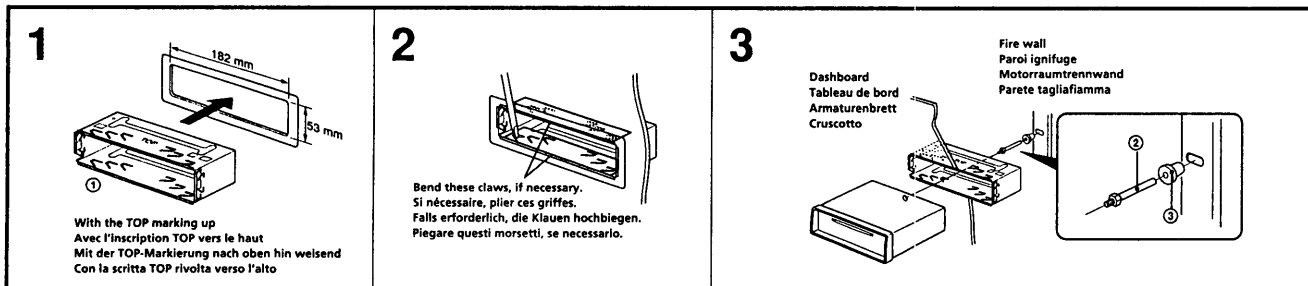
Installation dans le tableau de bord

Einbaubeispiel

Installation im Armaturenbrett

Esempio di montaggio

Installazione nel cruscotto



Connections

Caution

- This unit is designed for negative ground 12 V DC operation only.
- Connect the power connecting cord ① to the unit and speakers before connecting it to the auxiliary power connector.
- Run all ground wires to a common ground point.

If Your Car has An Accessory Position on the Ignition Key Switch — POWER SELECT Switch

To turn the Power Select Function on Press the OFF button while pressing the SEL button.
The Power Select Function ties the clock display power to the accessory position on the ignition key switch.
To avoid battery wear, the clock is not displayed while the unit is initializing.

Reset Button

When the installation and connections are over, be sure to press the reset button with a ballpoint pen etc.

Note on the control leads

The power antenna control lead (blue) supplies +12 V DC when you turn on the tuner.

Memory hold connection

When the yellow power input lead is connected, power will always be supplied to the memory circuit even when the ignition key is turned off.

Notes on speaker connection

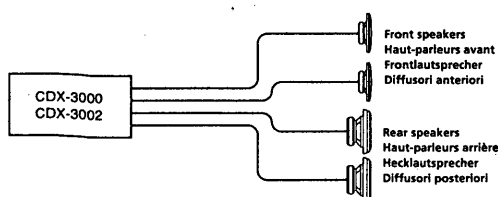
- Before connecting the speakers, turn the unit off.
- Use speakers with an impedance of 4 to 8 ohms, and with adequate power handling capacities. Otherwise, the speakers may be damaged.
- Do not connect the terminals of the speaker system to the car chassis, and do not connect the terminals of the right speaker with those of the left speaker.
- Do not attempt to connect the speakers in parallel.
- Do not connect any active speakers (with built-in amplifiers) to the speaker terminals of the unit. Doing so may damage the active speakers. Therefore, be sure to connect passive speakers to these terminals.

Warning

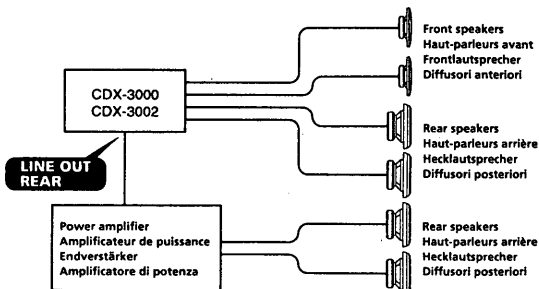
If you have a power antenna without a relay box, connecting this unit with the supplied power connecting cord ① may damage the antenna.

Connection Diagram Schémas de connexion Anschlußdiagramm Schema di collegamento

Example 1/Exemple 1/Beispiel 1/Esempio 1



Example 2/Exemple 2/Beispiel 2/Esempio 2



Connexions

Précautions

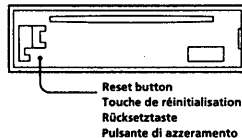
- Cet appareil est conçu pour fonctionner sur courant continu de 12 V avec masse négative.
- Branchez le cordon d'alimentation ① sur l'appareil et les haut-parleurs avant de le brancher sur le connecteur d'alimentation auxiliaire.
- Rassembler tous les fils de terre en un point de masse commun.

Si le contact de votre voiture ne comporte pas de position accessoires — Interrupteur POWER SELECT

Pour activer la fonction de sélection d'alimentation Appuyez sur la touche OFF tout en maintenant la touche SEL enfoncée.
La fonction de sélection d'alimentation relie l'alimentation de l'affichage de l'horloge à la position accessoires de la serrure de contact. Pour éviter l'usure de la batterie, l'horloge n'est pas affichée pendant l'initialisation de l'appareil.

Touche de réinitialisation

Quand l'installation et les connexions sont terminées, appuyer sur la touche de réinitialisation avec un stylo bille ou un objet pointu.



Remarque sur les fils de contrôle

Le fil de contrôle de l'antenne électrique (bleu) fournit du courant continu de +12 V quand le tuner est allumé.

Connexion pour la conservation de la mémoire

Lorsque le fil d'entrée d'alimentation jaune est connecté, le circuit de la mémoire est alimenté en permanence même si la clé de contact est sur la position d'arrêt.

Remarques sur la connexion des haut-parleurs

- Avant de raccorder les haut-parleurs, mettre l'appareil hors tension.
- Utiliser des haut-parleurs ayant une impédance de 4 à 8 ohms et une capacité adéquate sous peine de les endommager.
- Ne pas raccorder les bornes du système de haut-parleurs au chassis de la voiture et ne pas connecter les bornes du haut-parleur droit à celles du haut-parleur gauche.
- Ne pas tenter de raccorder les haut-parleurs en parallèle.
- Ne pas connecter d'enceintes acoustiques actives (avec amplificateurs intégrés) aux bornes d'enceinte de cet appareil, pour éviter d'endommager les enceintes. Veiller à raccorder des enceintes passives.

Avertissement

Si vous disposez d'une antenne électrique sans boîtier de relais, le branchement de cet appareil au moyen du cordon d'alimentation fourni ① risque d'endommager l'antenne.

Anschluß

Vorsicht

- Dieses Gerät ist ausschließlich für eine negativ geerdete 12-V-Autobatterie bestimmt.
- Verbinden Sie das Netzverbindungskabel ① mit dem Gerät und den Lautsprechern, bevor Sie es mit dem Hilfsstromanschluß verbinden.
- Schließen Sie alle Erdungskabel an einen gemeinsamen Massepunkt an.

Wenn das Zündschloß Ihres Autos über eine Zubehörsposition verfügt — POWER SELECT-Schalter

So schalten Sie die Power Select-Funktion ein Drücken Sie OFF, und halten Sie dabei SEL gedrückt.
Die Power Select-Funktion koppelt die Anzeige der Uhrzeit an die Zubehörsposition des Zündschlosses.
Das heißt, um eine übermäßige Belastung der Batterie zu vermeiden, wird die Uhrzeit nicht angezeigt, solange sich das Gerät initialisiert.

Rücksetztaste

Nach der Installation und dem Anschluß muß die Rücksetztaste mit einem Kugelschreiber o.ä. gedrückt werden.

Hinweis zu den Steuerleitungen

Die (blaue) Motorantennen-Steuerleitung liefert eine Gleichspannung von +12 V, wenn der Tuner eingeschaltet.

Zur Stromversorgung des Speichers

Wenn das gelbe Stromversorgungskabel angeschlossen ist, wird der Speicher stets (auch bei ausgeschalteter Zündung) mit Strom versorgt.

Hinweise zum Lautsprecheranschluß

- Schalten Sie das Gerät aus, bevor Sie die Lautsprecher anschließen.
- Verwenden Sie Lautsprecher mit einer Impedanz zwischen 4 und 8 Ohm und ausreichender Belastbarkeit. Ansonsten können die Lautsprecher beschädigt werden.
- Verbinden Sie die Lautsprecheranschlüsse nicht mit dem Wagenchassis, und verbinden Sie auch nicht die Anschlüsse des rechten mit denen des linken Lautspeckers.
- Versuchen Sie nicht, Lautsprecher parallel anzuschließen.
- An die Lautsprecheranschlüsse dieses Geräts dürfen nur Passivlautsprecher angeschlossen werden. Schließen Sie keine Aktivlautsprecher (Lautsprecher mit eingebauten Verstärkern) an, da diese sonst beschädigt werden können.

Warnung

Wenn Sie eine Motorantenne ohne Relaiskästchen verwenden, kann durch Anschließen dieses Geräts mit Hilfe des mitgelieferten Netzverbindungskabels ① die Antenne beschädigt werden.

Collegamenti

Attenzione

- Questo apparecchio è stato progettato per l'uso solo a 12 V CC con massa negativa.
- Collegare il cavo di collegamento dell'alimentazione ① all'apparecchio e agli altoparlanti prima di collegarlo al connettore di alimentazione ausiliare.
- Portare tutti i cavi di massa a un punto di massa comune.

Se la macchina ha una posizione per accessori sulla chiavetta di accensione — Interruttore POWER SELECT

Per attivare la funzione Power Select Premere il tasto OFF premendo contemporaneamente il tasto SEL.
La funzione Power Select associa la visualizzazione dell'ora alla posizione per accessori sulla chiavetta di accensione.
Per evitare di consumare le batterie, l'ora non viene visualizzata durante l'inizializzazione dell'apparecchio.

Pulsante di azzeramento

Dopo avere terminato l'installazione e i collegamenti, assicurarsi di premere il pulsante di azzeramento con la punta di una penna a sfera ecc.

Nota sui cavi di collegamento

Il cavo di controllo dell'antenna automatica (blu) fornisce +12 V CC quando si accende il sintonizzatore.

Collegamento per la conservazione della memoria

Quando il cavo di ingresso alimentazione giallo è collegato, viene sempre fornita alimentazione al circuito di memoria anche quando la chiavetta di accensione è spenta.

Nota sul collegamento dei diffusori

- Prima di collegare i diffusori spegnere l'apparecchio.
- Usare diffusori di impedenza compresa tra 4 e 8 ohm e con capacità di potenza adeguata, altrimenti i diffusori possono essere danneggiati.
- Non collegare i terminali del sistema diffusori al telaio dell'auto e non collegare i terminali del diffusore destro a quelli del diffusore sinistro.
- Non collegare i diffusori in parallelo.
- Non collegare alcun diffusore attivo (con amplificatore incorporato) ai terminali diffusori dell'apparecchio perché questo può danneggiare i diffusori attivi. Assicurarsi di collegare diffusori passivi a questi terminali.

Avvertenza

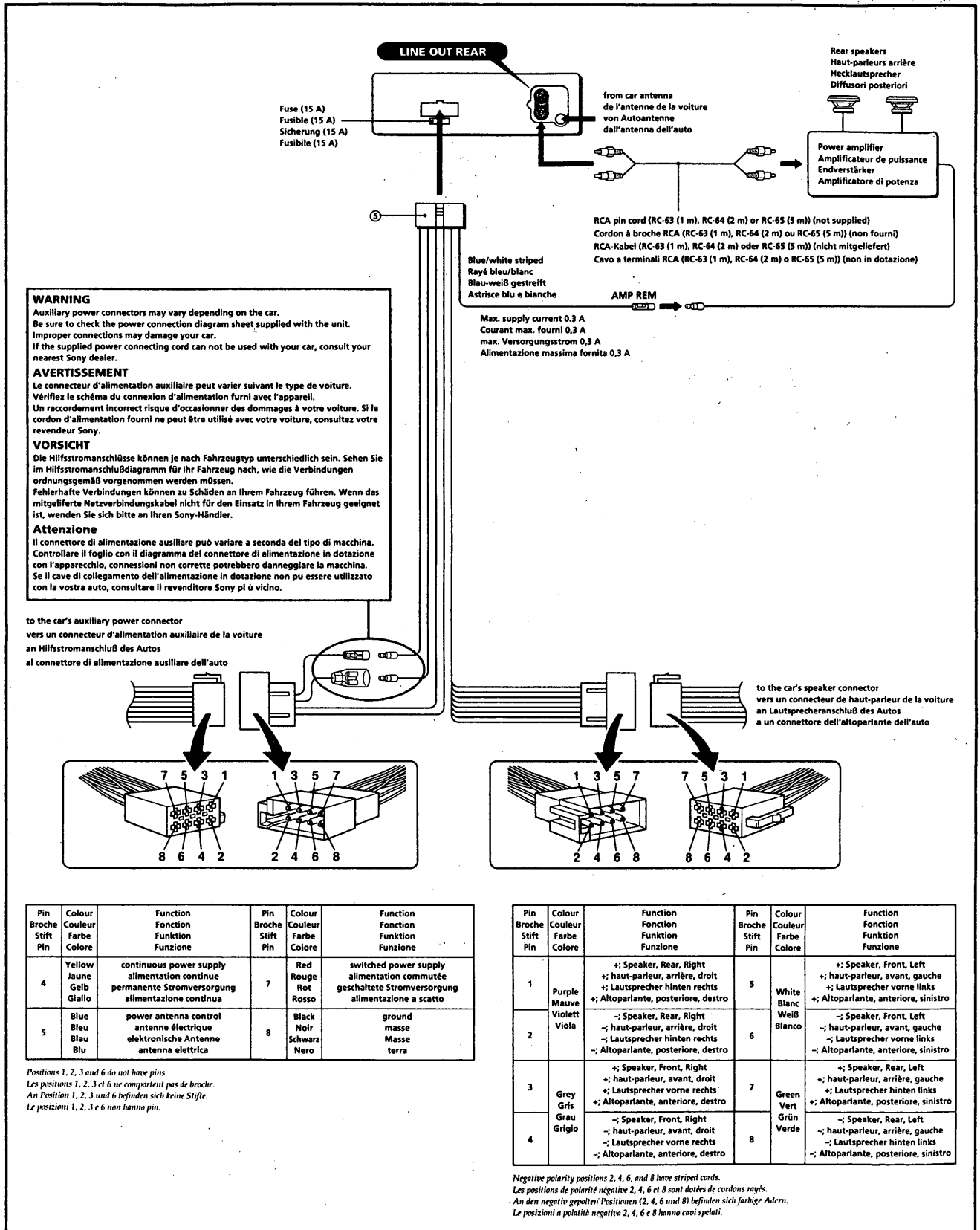
Se l'antenna che collega l'apparecchio al cavo di alimentazione in dotazione ① non ha la scatola di relè l'antenna, si può danneggiare.

Connection Example

Connexions de l'exemple

Anschlußbeispiel

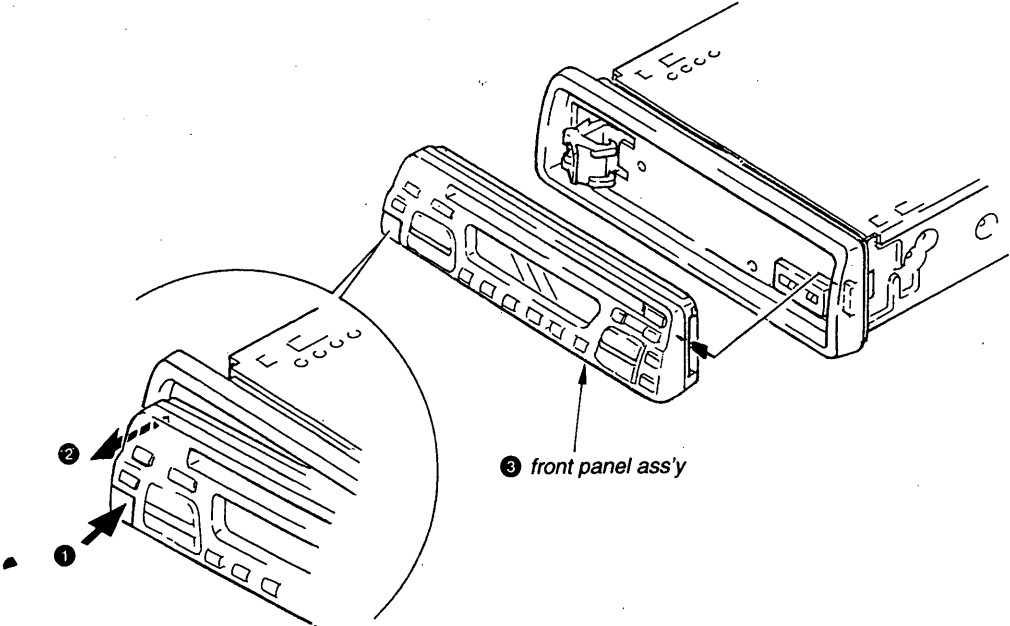
Esempi di Collegamento



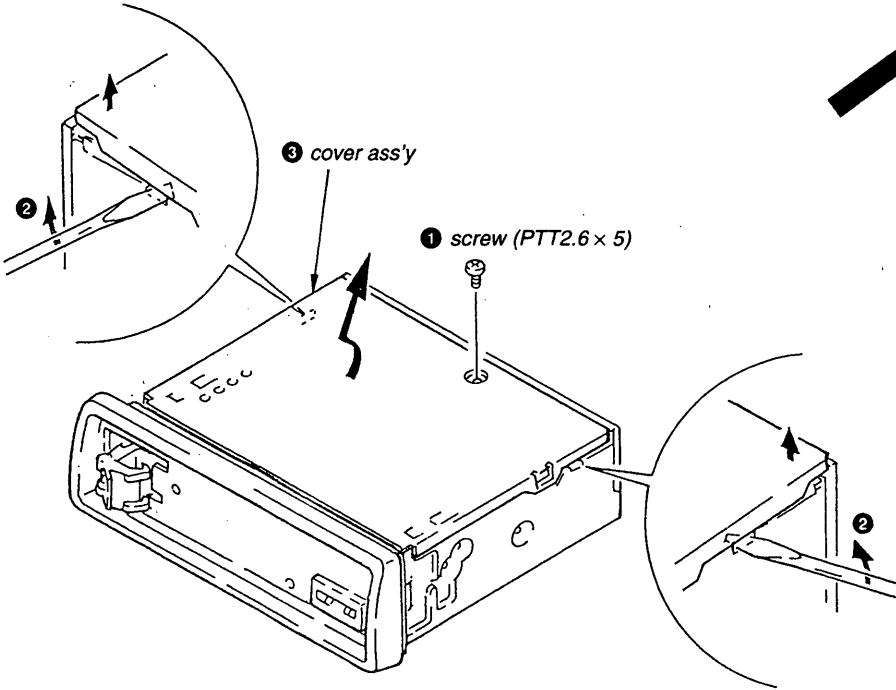
SECTION 2
DISASSEMBLY

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

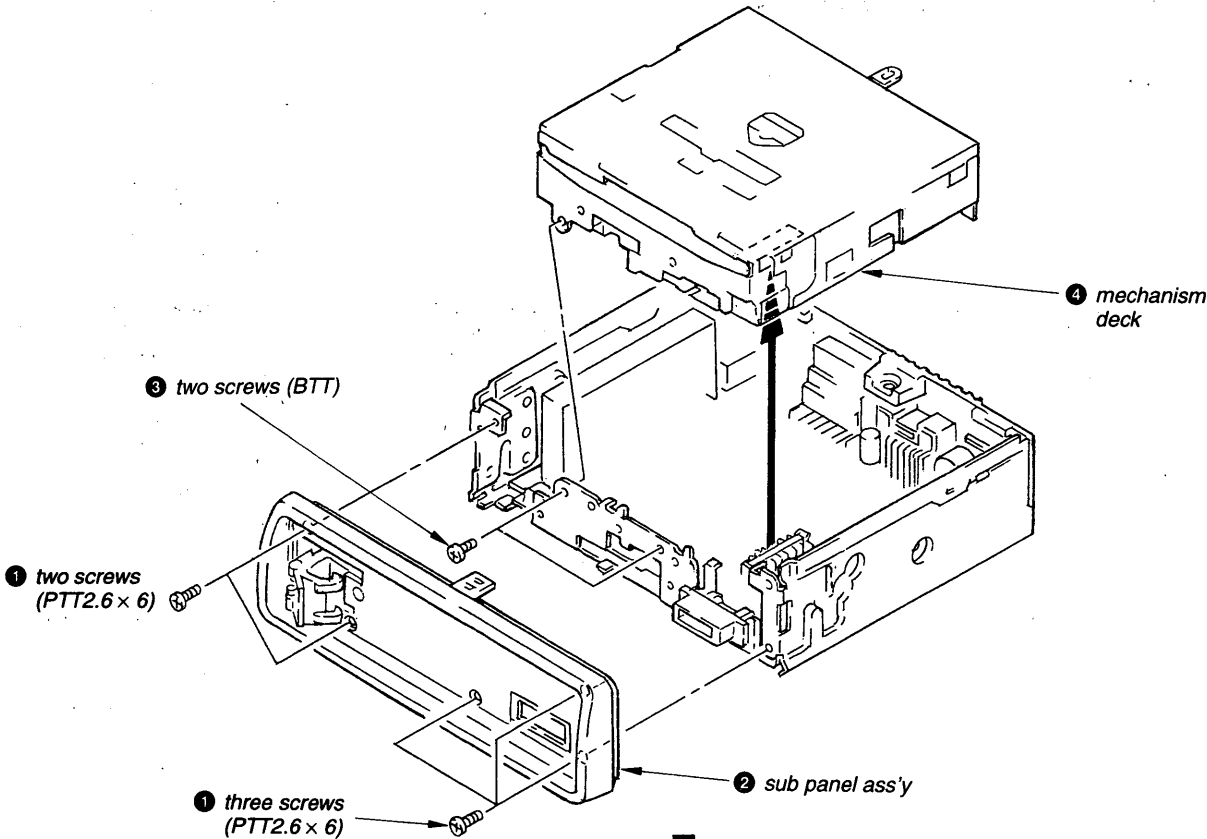
FRONT PANEL ASS'Y



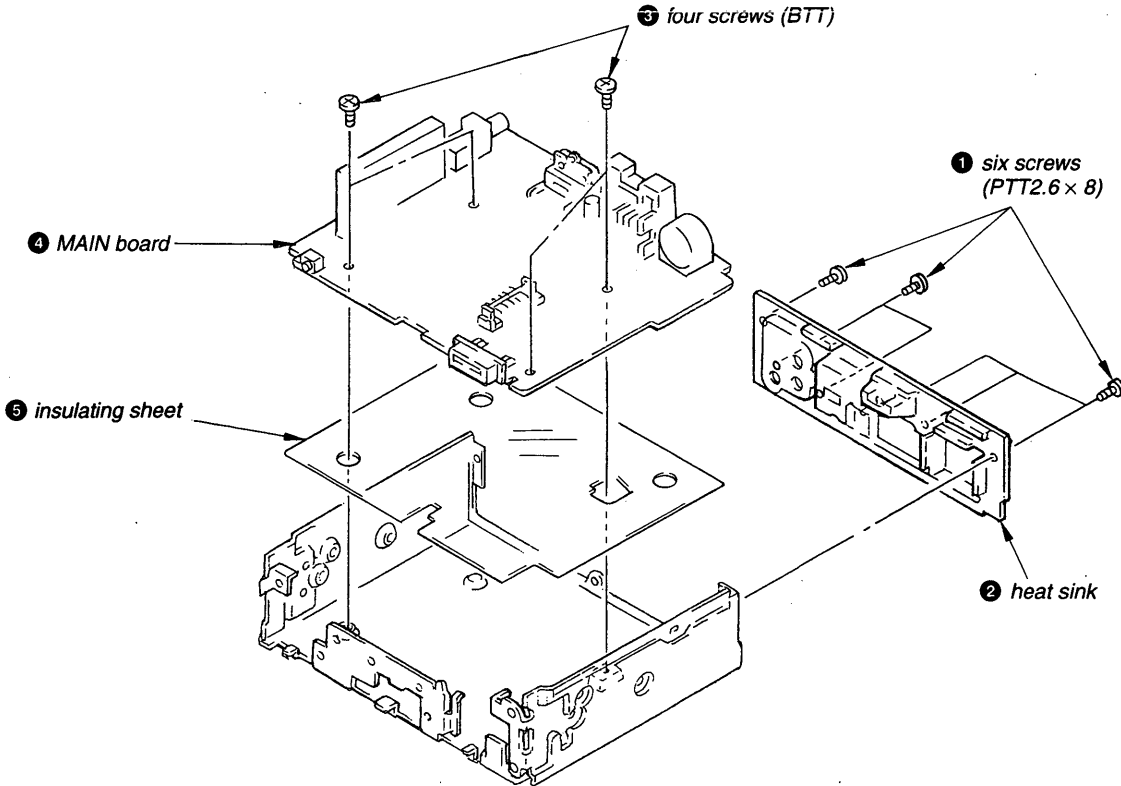
COVER ASS'Y



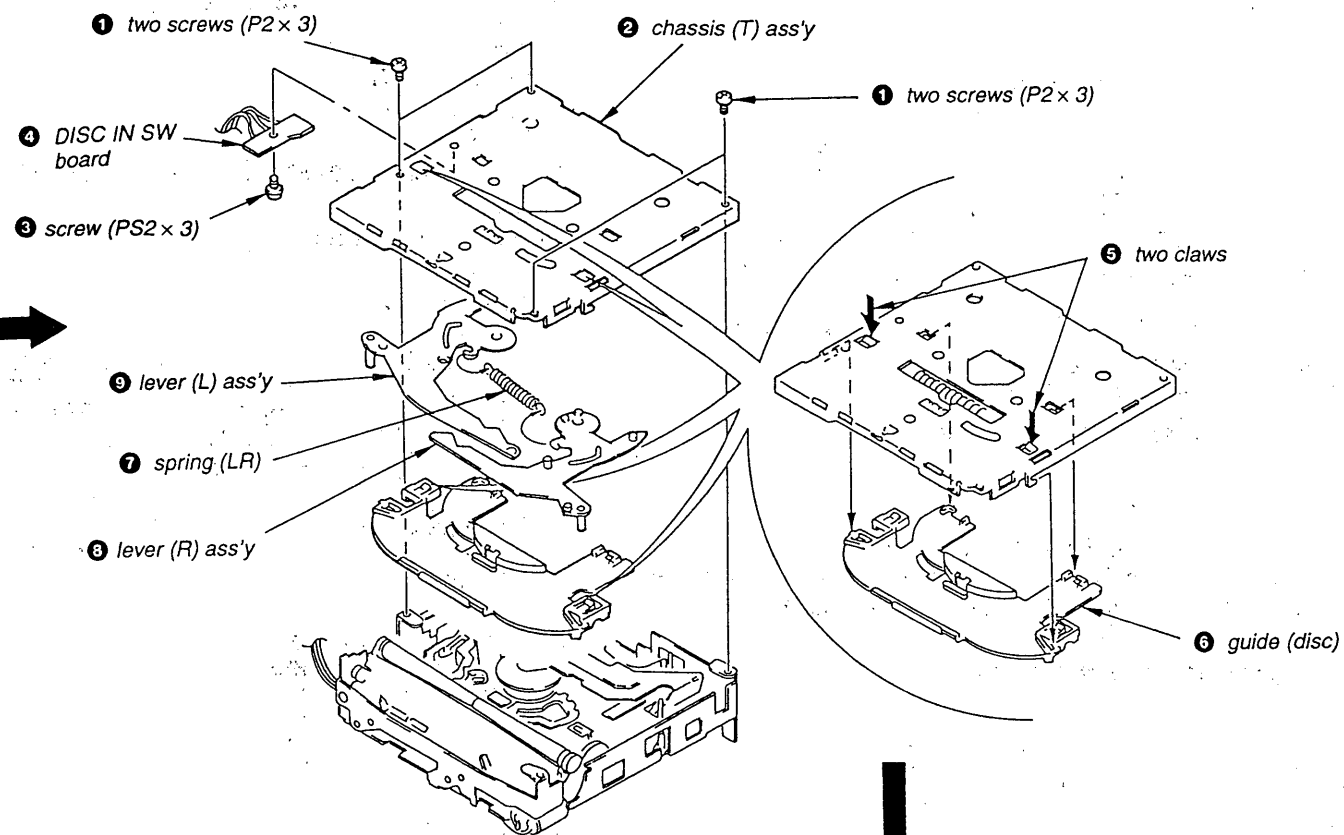
PANEL (SUB) ASS'Y, MECHANISM DECK



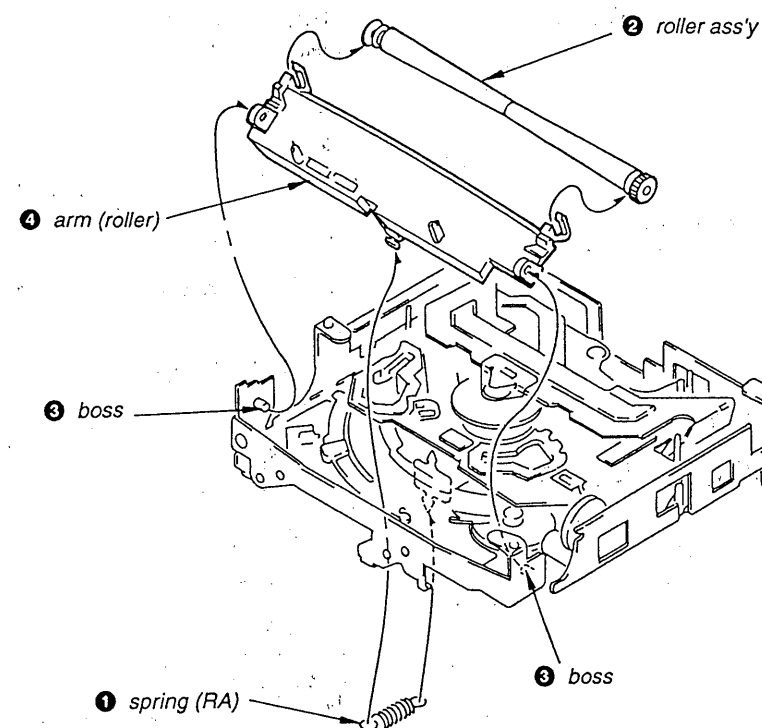
MAIN BOARD



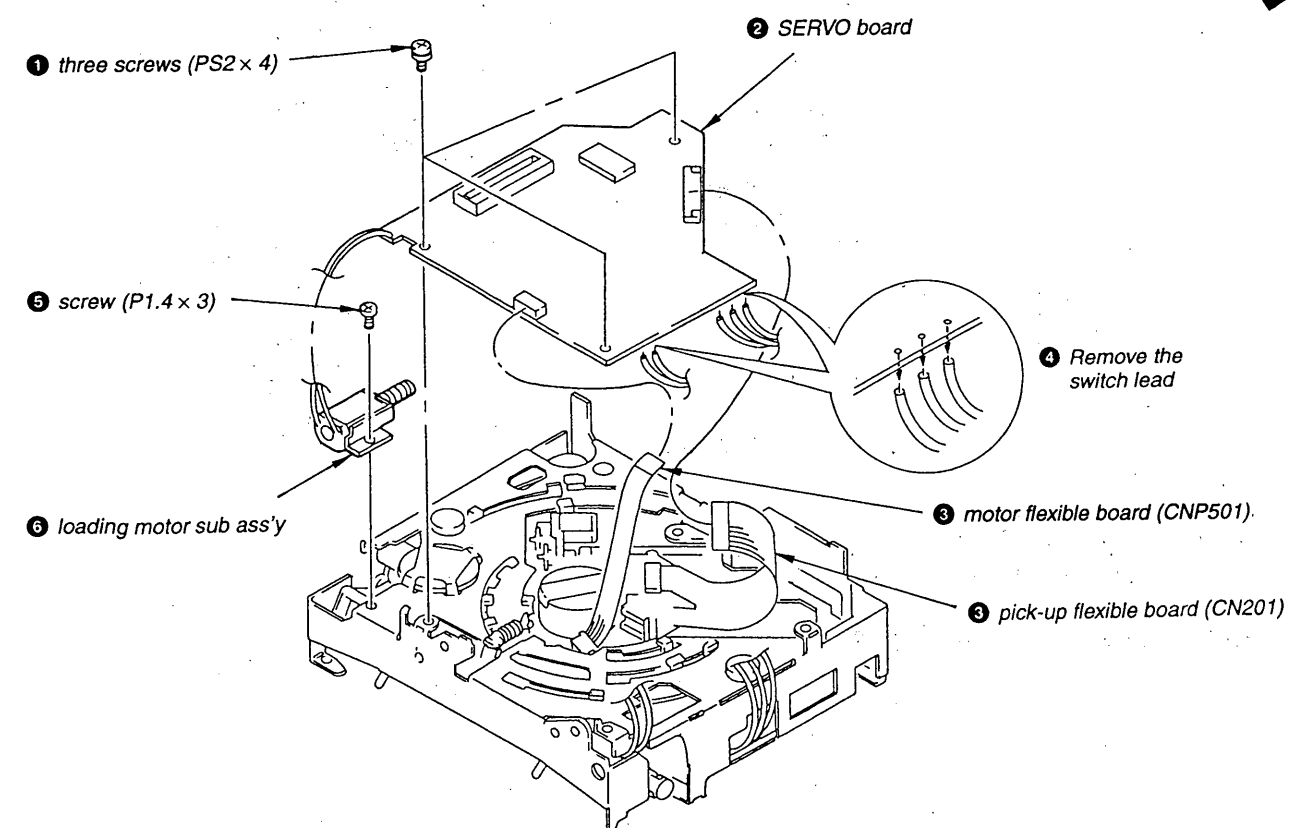
CHASSIS (T) ASS'Y



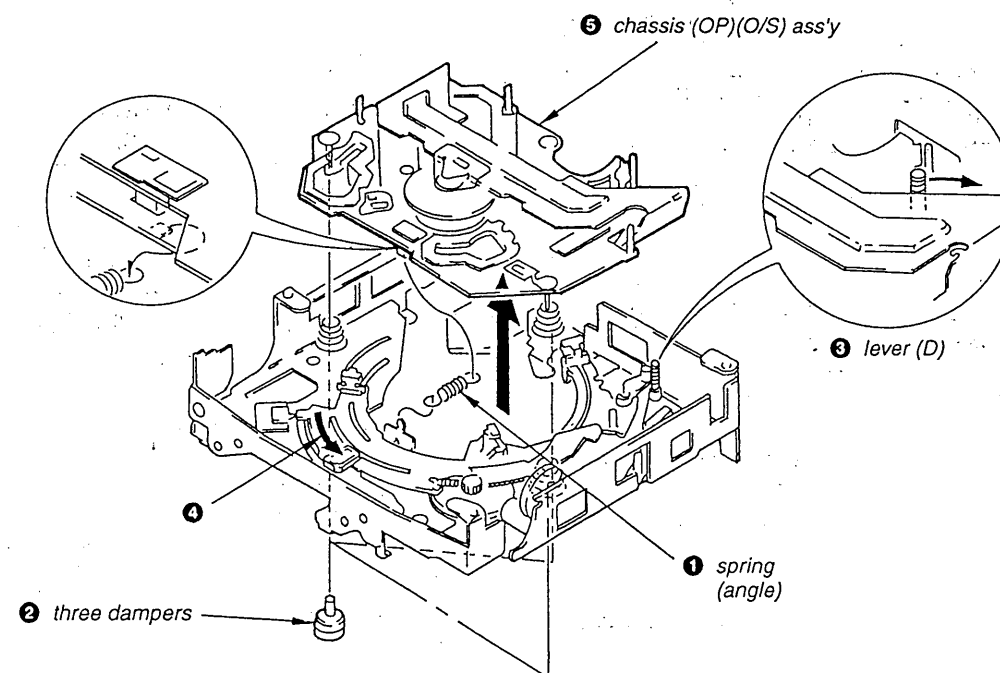
ROLLER ASS'Y, ARM (ROLLER)



SERVO BOARD, LOADING MOTOR



CHASSIS (OP)(O/S) ASS'Y



SECTION 3 TEST MODE

This set have the test mode function. In the test mode, FM Auto Scan/Stop Level and AM (MW) Auto Scan/Stop Level adjustments can be performed easier than it in ordinary procedure.

Set the Test Mode

1. Set the "OFF" mode.
2. Push the preset **[4]** button.
3. Push the preset **[5]** button.
4. Press the preset **[1]** button for two seconds.
5. Then the display indicates all lights, the test mode is set.

Release the Test Mode

1. Push the "OFF" button.

SECTION 4 ELECTRICAL ADJUSTMENTS

TUNER SECTION **0dB=1μV**

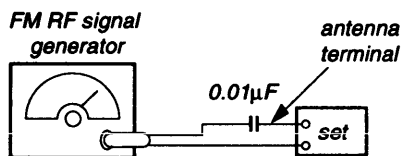
Cautions during repair

When the front end is defective, replace it by a new one because its internal block is difficult to repair.

FM Auto Scan/Stop Level Adjustment

Setting:

FM button (AEP, UK model) : FM
TUNER button (German model) : FM

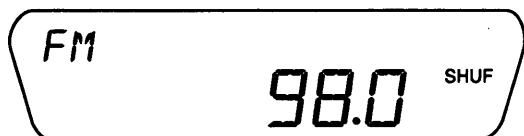


Carrier frequency : 98.0MHz
Output level : 22dB(12.6 μV)
Mode : mono
Modulation : 1kHz, 75kHz deviation

Procedure:

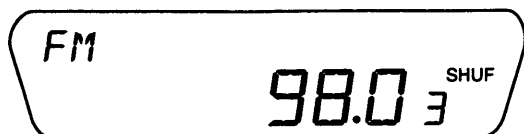
1. Set to the test mode.
2. Push the **[FM]** button (AEP, UK model) or **[TUNER]** button (German model) and set to FM.

Display



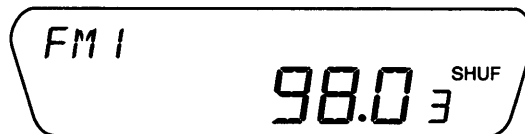
3. Push the preset **[3]** button.

Display



4. Adjust with the volume RV2 on TU1 so that the "FM" indication turns to "FM1" indication on the display window. But, in case of already indicated "FM1", turn the RV2 so that put out light "1" indication and adjustment.

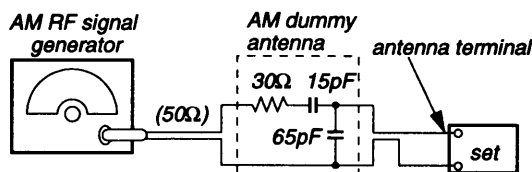
Display



AM (MW) Auto Scan/Stop Level Adjustment

Setting:

MW/LW button (AEP, UK model) : MW
TUNER button (German model) : MW

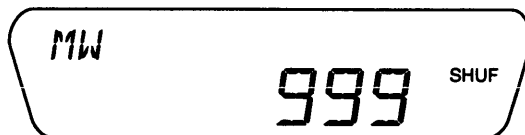


Carrier frequency : 999kHz
30% amplitude modulation by 1kHz signal
Output level : 33dB (44.7 μV)

Procedure:

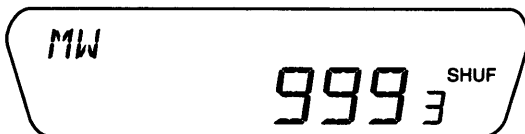
1. Set to the test mode.
2. Push the **[MW/LW]** button (AEP, UK model) or **[TUNER]** button (German model) and set to MW.

Display



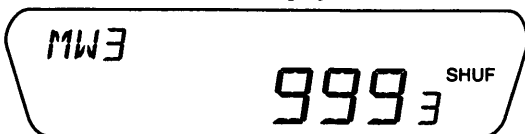
3. Push the preset **[3]** button.

Display



4. Adjust with the volume RV1 on TU1 so that the "MW" indication turns to "MW3" indication on the display win window. But, in case of already indicated "MW3", turn the RV1 so that put out light "3" indication and adjustment.

Display

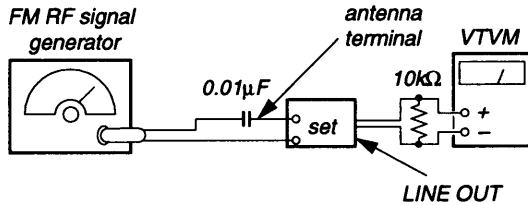


FM Noise Focus Adjustment

Setting:

FM button (AEP, UK model) : FM

TUNER button (German model) : FM



Carrier frequency : 98.0MHz
Output level : 60dB(1mV)
Mode : mono
Modulation : 1kHz, 75kHz deviation

Procedure:

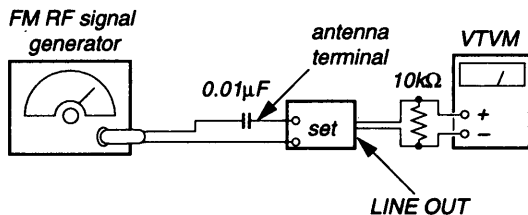
1. Tune the 98.0 MHz .
2. The then output level is supposing that (B) dB.
3. Adjust with the volume RV3 on TU1 so that the output level is (B) -32dB then signal generator input set to -19dB.

FM Stereo Separation Adjustment

Setting:

FM button (AEP, UK model) : FM

TUNER button (German model) : FM



Carrier frequency : 98.0MHz
Output level : 60dB(1mV)
Mode : stereo
Modulation : main: 1kHz, 75kHz deviation (100%)
19kHz pilot: 7.5kHz deviation (10%)

FM stereo signal generator output channel	VTVM connection	VTVM reading (dB)
L-CH	L-CH	Ⓐ
R-CH	L-CH	Ⓑ [Ⓐ] Adjust RV4 on TU1 for minimum reading.
R-CH	R-CH	Ⓒ
L-CH	R-CH	Ⓓ [Ⓒ] Adjust RV4 on TU1 for minimum reading.

Procedure:

L-CH Stereo separation: Ⓐ-Ⓑ

R-CH Stereo separation: Ⓒ-Ⓓ

The separations of both channels should be equal.

Specification: Separation more than 27dB

ARI Level Adjustment (CDX-3002)

Setting:

TUNER button : FM

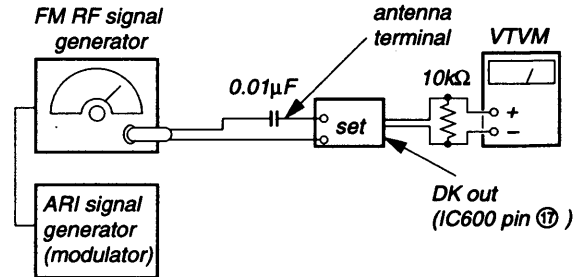
Frequency : 98.0MHz

Procedure:

1. Adjust LV600 and RV600 so that the output become the maximum.

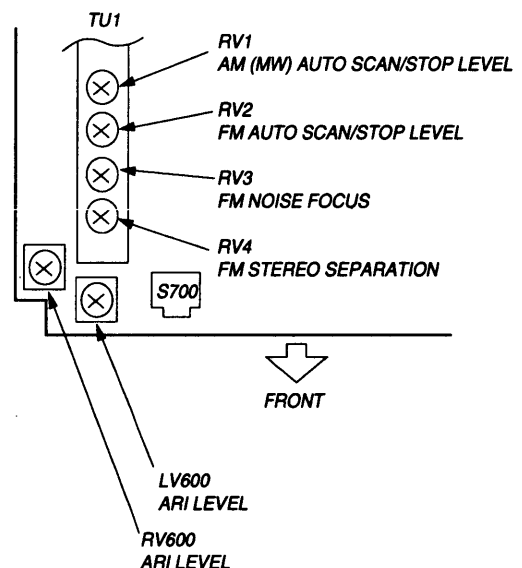
Specification: 1 Vrms or more

Adjustment Location:



Carrier frequency : 98.0MHz
Output level : 60dBµV(1mV)
Modulation : main : 1kHz, 33.75kHz deviation
sub : 1kHz, 33.75kHz deviation
19kHz pilot : 7.5 kHz deviation
SK, BK, DK modulation

[MAIN BOARD] (COMPONENT SIDE)



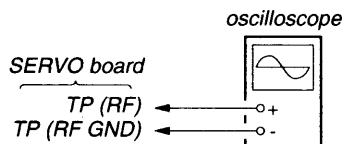
CD SECTION

Note:

1. CD Block basically constructed to operate without adjustment. Therefore, check each item in order given.
2. Use YEDS-18 disc (3-702-101-01) unless otherwise indicated.
3. Use the oscilloscope with more than 10 M Ω impedance.
4. Clean an objective lens by an applicator with neutral detergent when the signal level is low than specified value with the following checks.

Focus Bias Adjustment

Setting: This adjustment is performed with the set placed horizontally.

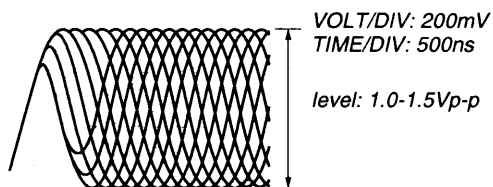


Procedure:

1. Connect an oscilloscope between TP (RF) and TP (RF GND) on the SERVO board.
2. Connect the power supply.
3. Push the RESET button (S700) on the panel (sub).
4. Insert the disc (YEDS-18) and playback.
5. Adjust RV1 so that the oscilloscope waveform is clear and check RF signal level is correct or not.

Note: Clear RF signal waveform means that the sharp "◇" can be clearly distinguished at the center of the waveform.

RF signal waveform



- When observing the eye pattern, set the oscilloscope to AC range and raise the vertical sensitivity so that it may be easily seen.

Focus Gain Adjustment (Coarse adjustment)

This adjustment is not required unless the following parts are replaced:

- Optical block
- RV4

Adjustment:

1. Set RV4 to the standard position. (mechanical center)
2. Check whether operation noise (while noise type) caused by the double-axis device (lens section of the optical block) is abnormally loud.

If the operation noise is too loud, turn RV4 slightly counter-clockwise.

- If the gain is too low:

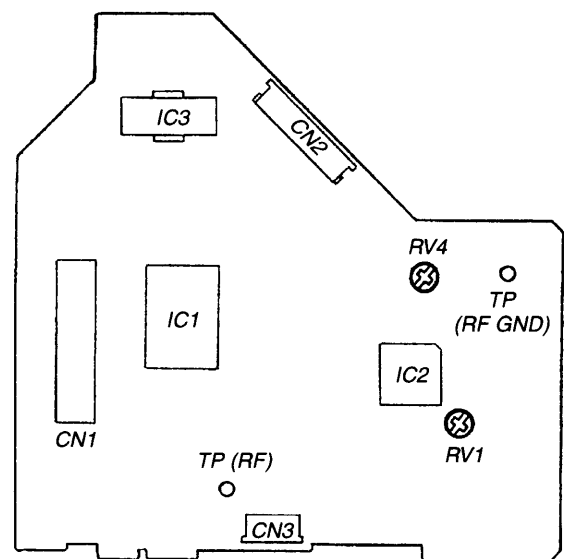
Focus does not function and no music is selected.

- If the gain is too high:

Noise caused by scratches and dust is heard and the operation becomes unstable.

Adjustment Location:

[SERVO BOARD] (CONDUCTOR SIDE)



SECTION 5

DIAGRAMS

5-1. IC PIN FUNCTION DESCRIPTION

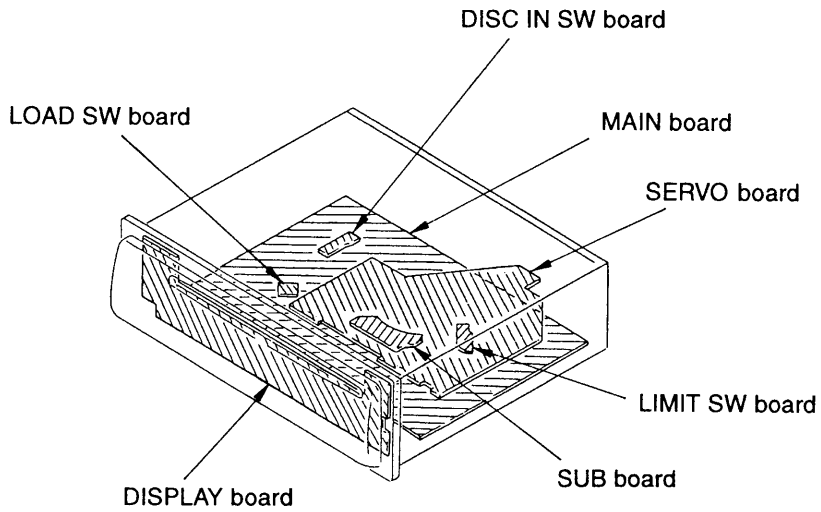
IC700 μ PD17017GF-B09-3B9 (SYSTEM CONTROL) (MAIN BOARD)

Pin No.	Pin Name	I/O	Function
1	CD SO/VOL DATA	O	CD serial data and electronic volume serial data output pin.
2	VOL CLK	O	Electronic volume serial clock output pin.
3	SENSE	I	CD sense signal input pin.
4	ST/MONO	I/O	Forced monaural signal output pin and stereo detection signal input pin.
5	ACC	I	ACC voltage detection pin.
6	FOK	I	Focus OK signal input pin.
7	CD-LAT	O	CD latch signal output pin.
8	SQCKO	O	Sub-code Q data reading clock output pin.
9	CD RST	O	CD reset signal output pin.
10	SQ SI	I	Sub-code Q data input pin.
11	NC	-	Not used.
12	SCOR	I	Sub-code sync detection signal input pin.
13	BU IN	I	BATT voltage detection pin.
14	CDMON	O	Mechanism deck section power supply control pin.
15	ILL ON	O	Illumination power supply control pin.
16	LD ON	O	Laser power on/off control pin.
17	FM/AM	O	FM/AM select pin.
18	SEEKOUT	O	Seek out signal output pin.
19	PW-ON	O	System power supply control pin.
20	LCL/DX	O	Local/DX select pin.
21	BEEP	O	Beep sound output pin.
22	VOL CE	O	Electronic volume serial chip enable output pin.
23	LM EJ	O	Loading motor control pin. (eject direction)
24	LM LOD	O	Loading motor control pin. (loading direction)
25	MUTE	O	Audio muting signal output pin.
26	FM IF	I	FM IF counter signal input pin.
27	AM IF	I	AM IF counter signal input pin.
28	NOSE SW	I	Front panel removal or attaching detection pin.
29	SD/ST	I	Station detection signal input pin during seek operation.
30	VDD1	-	Power supply.
31	VCOL	I	AM OSC signal input pin.
32	VCOH	I	FM OSC signal input pin.
33	GND	-	GND.
34	XOUT	O	System clock. (4.5MHz)
35	XIN	I	System clock. (4.5MHz)
36	EO0	O	Charge-pump output pin.
37	EO1	-	Not used.
38-40	NC	-	Not used.
41	VDD2	-	Power supply.
42	EMPH.O	O	De-emphasis control pin.
43	COM1	O	Not used.
44	COM0	O	Not used.
45	LCDSO	O	LCD serial data output pin.

Pin No.	Pin Name	I/O	Function
46	LCDCKO	O	LCD serial clock output pin.
47	LCDINH	O	LCD control signal output pin. (Not used)
48	LCDCE	O	LCD serial chip enable output pin.
49-64	-	-	Not used.
65	TEST SW	I	TEST mode direct setting pin.
66	-	-	Not used.
67	AREA2 SW	I	Destination setting pin.
68	AREA1 SW	I	Destination setting pin.
69	SK IN	I	SK signal input
70	DK IN	I	DK signal input
71	SELF SW	I	SELF switch input pin.
72	IN SW	I	IN switch input pin.
73	L SW	I	LIMIT switch input pin.
74	D SW	I	Down switch input pin.
75	KEY-RETURN	I	Key return signal input pin.
76	AD2	I	Key input pin. (A/D input)
77	AD1	I	Key input pin. (A/D input)
78	AD0	I	Key input pin. (A/D input)
79	AMP MUTE	O	Power amp muting signal output pin.
80	CD CKO	O	CD serial clock output pin.

5-2. PRINTED WIRING BOARDS – MECHANISM DECK Section –

• Circuit Boards Location

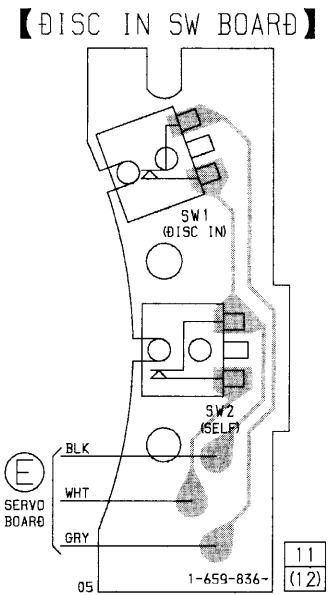
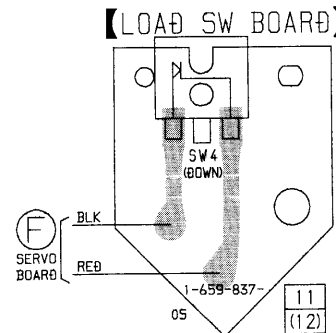
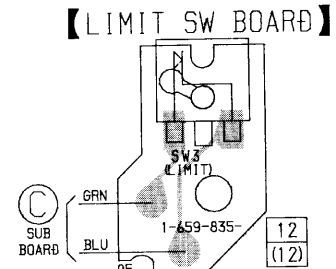
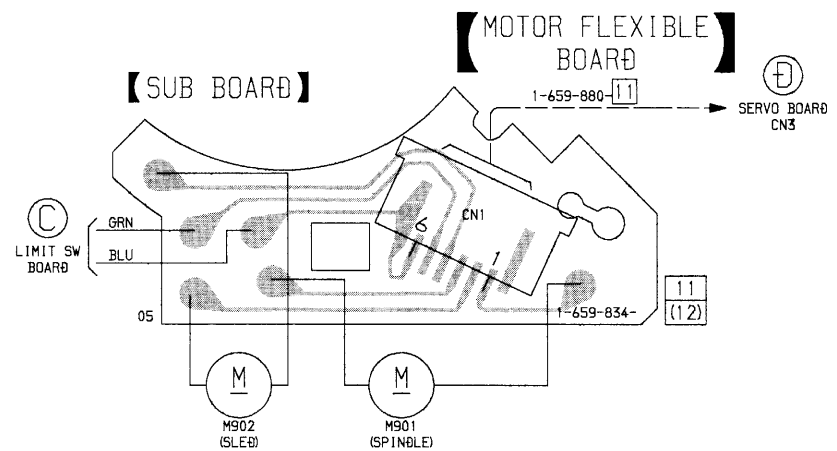
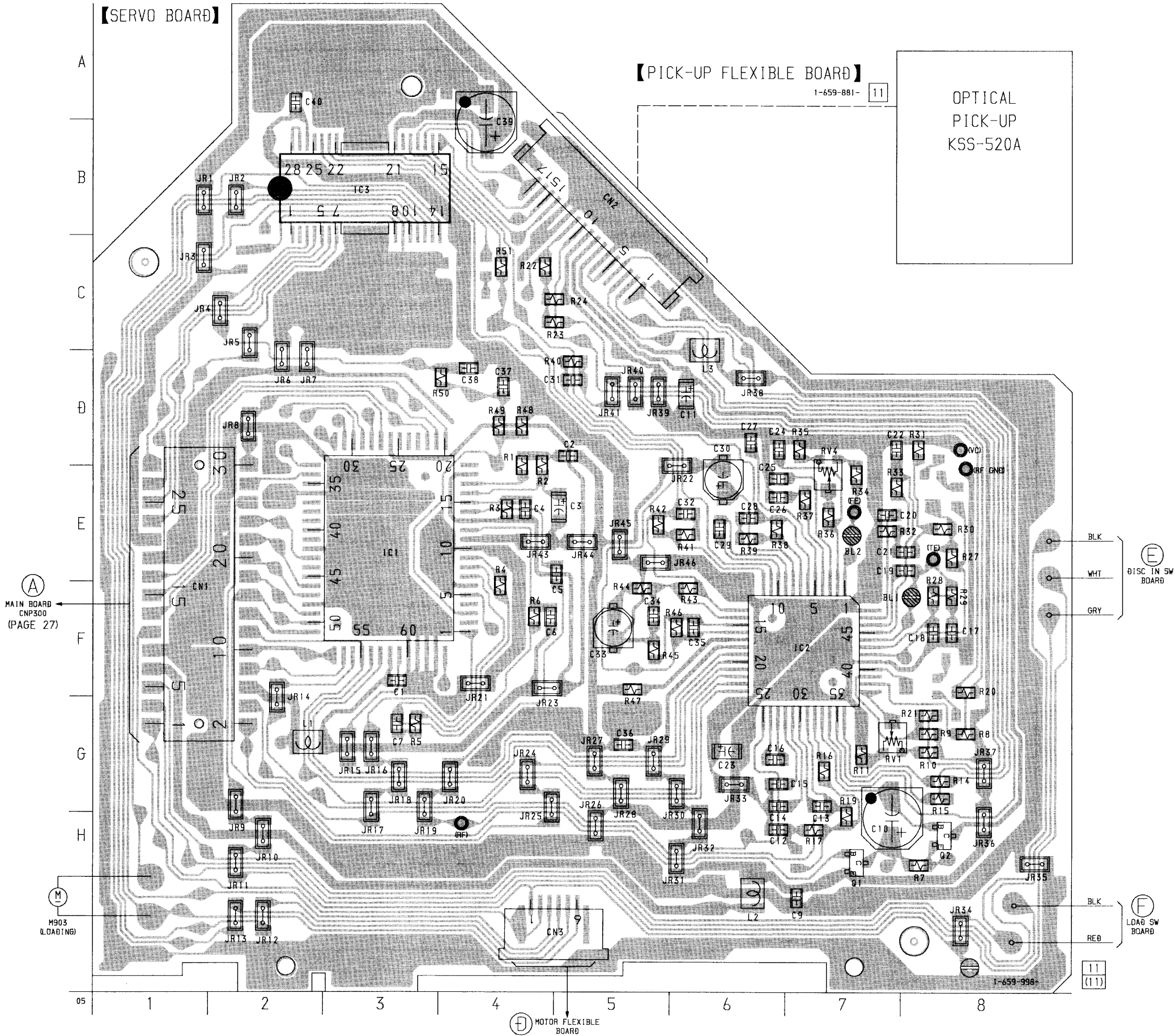


• Semiconductor Location

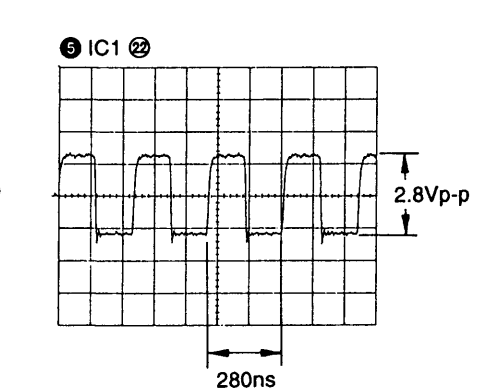
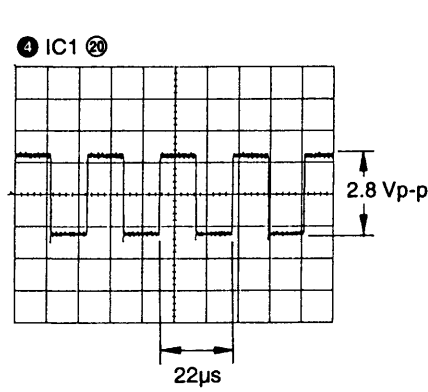
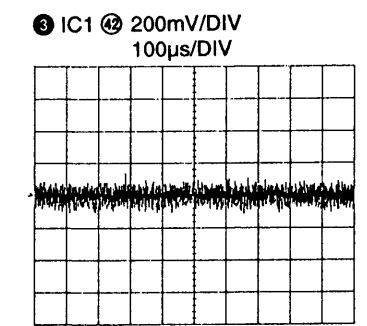
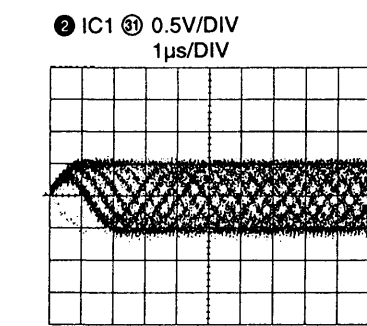
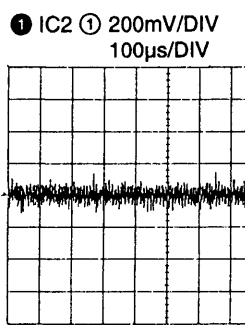
Ref. No.	Location
IC1	E-3
IC2	F-7
IC3	B-3
Q1	H-7
Q2	H-8

Note:

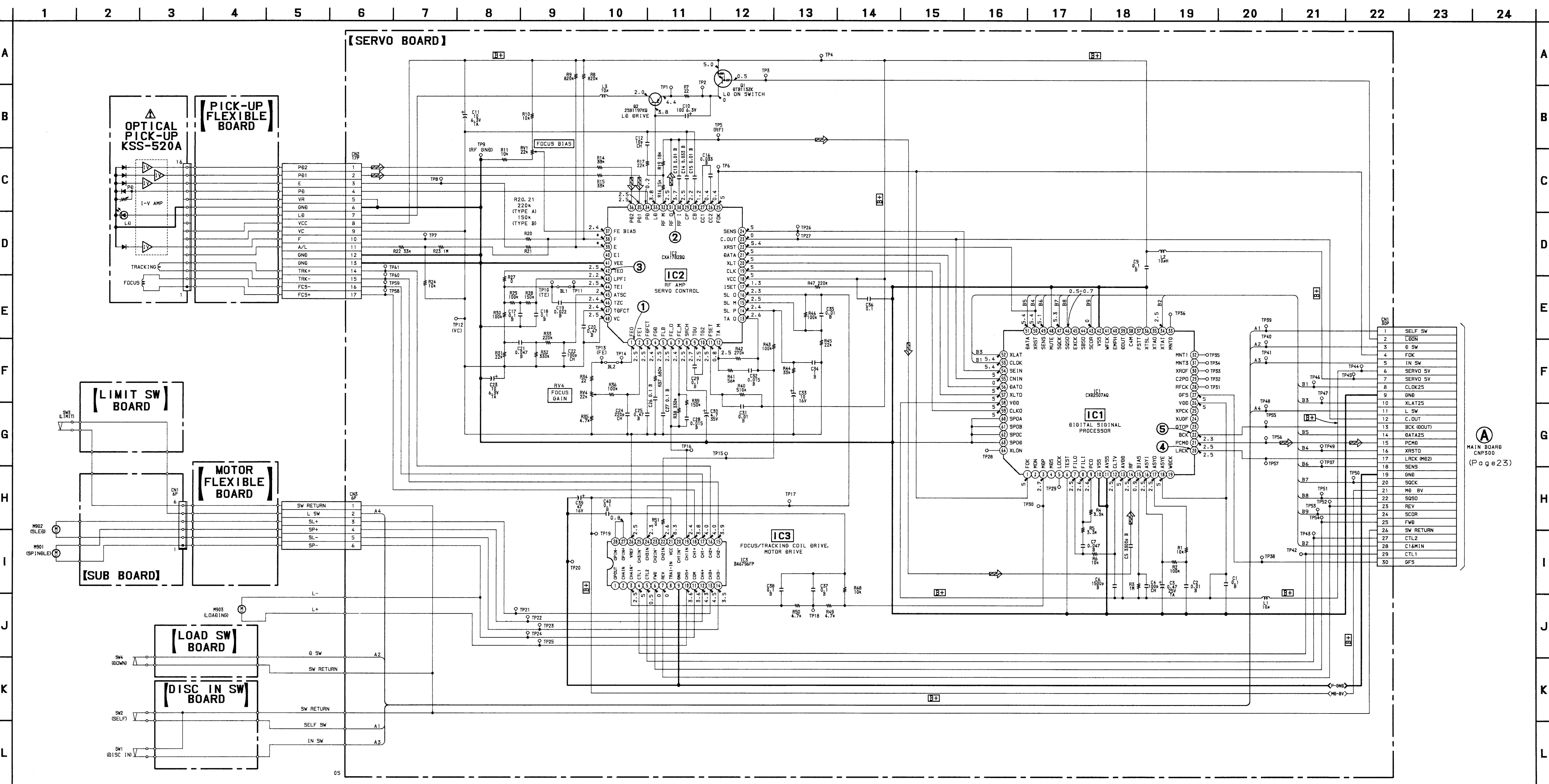
- : parts extracted from the component side.
- : parts extracted from the conductor side.



• Waveforms



5-3. SCHEMATIC DIAGRAM - MECHANISM DECK Section - • See page 33 for IC Block Diagrams.



Note:

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

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

• Δ : B+ Line.

• Δ : adjustment for repair.

• Power voltage is dc 14.4V and fed with regulated dc power supply from ACC and BATT terminals.

• Voltages and waveforms are dc with respect to ground under no-signal conditions.

no mark : CD

* : Impossible to measure

• Voltages are taken with a VOM (10 $\text{M}\Omega/\text{V}$). Voltage variations may be noted due to normal production tolerances.

• Waveforms are taken with an oscilloscope. Voltage variations may be noted due to normal production tolerances.

• Circled numbers refer to waveforms.

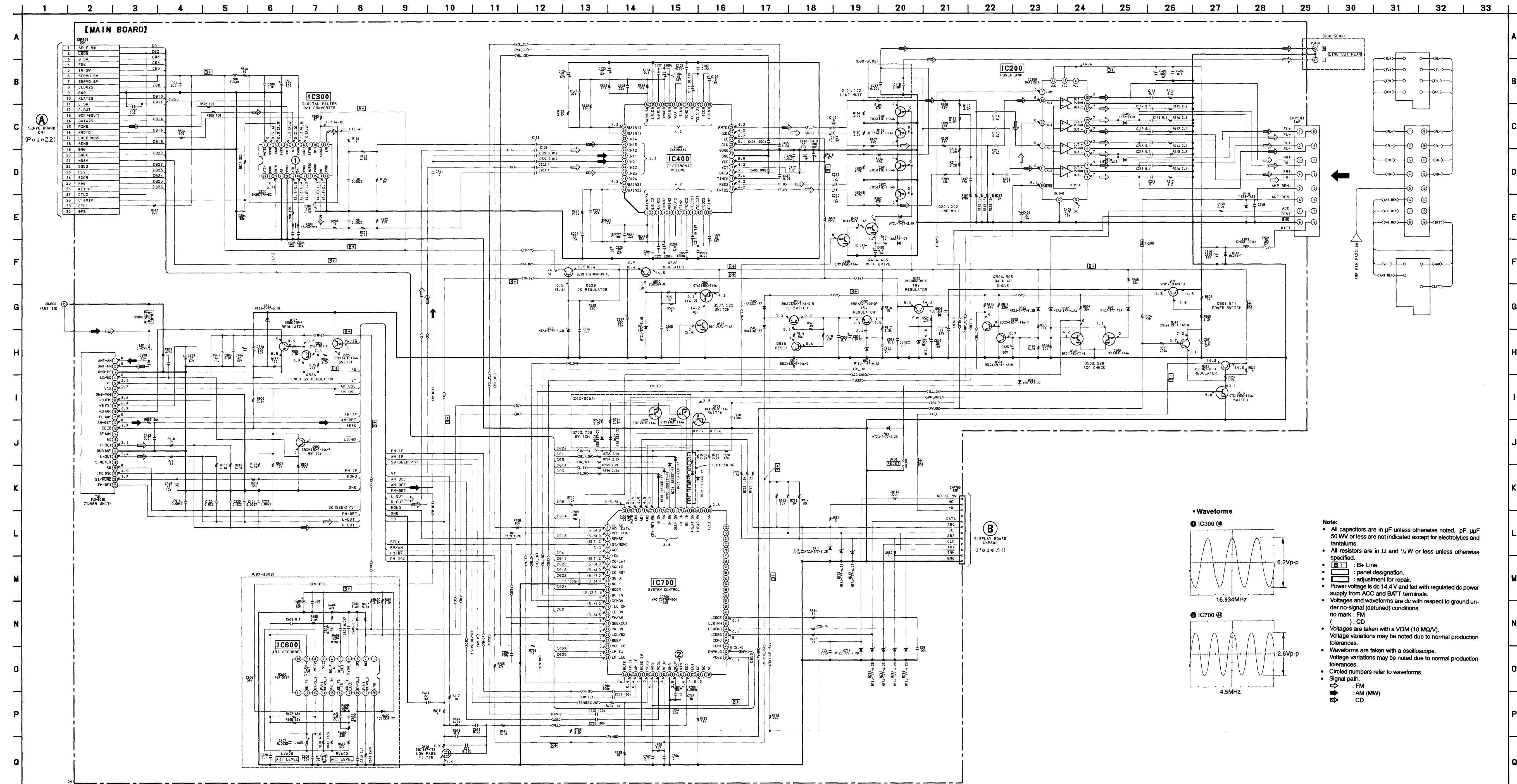
• Signal path.

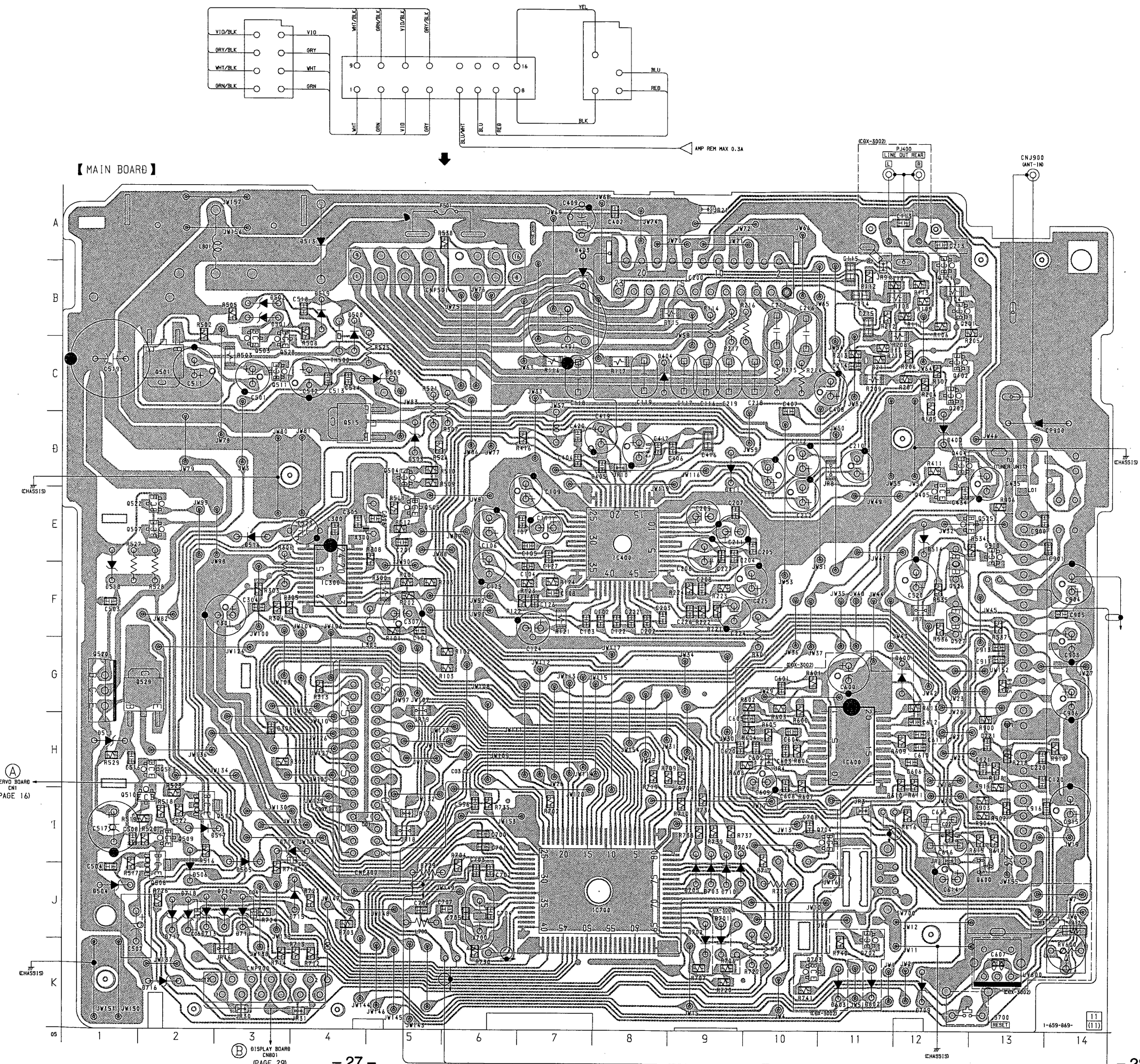
• Abbreviation

TYPE A: Made in Japan

TYPE B: Made in Thailand

5-4. SCHEMATIC DIAGRAM – MAIN Section – • See page 33 for IC Block Diagrams.



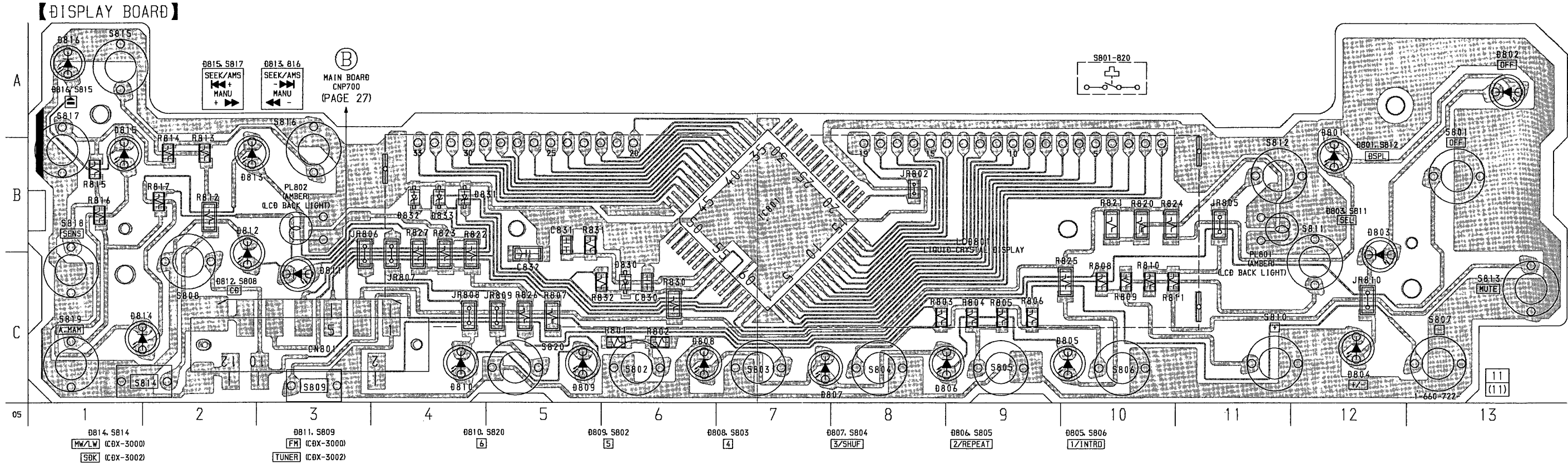


• Semiconductor Location

Ref. No.	Location	Ref. No.	Location
D400	C-12	IC200	B-9
D403	B-17	IC300	F-4
D404	C-8	IC400	E-8
D411	D-9	IC600	H-11
D501	B-3	IC700	J-8
D502	B-3		
D503	D-5	Q101	B-12
D504	J-1	Q102	C-12
D505	I-3	Q201	B-12
D506	J-2	Q202	C-12
D508	C-4	Q404	D-12
D509	C-4	Q405	D-12
D511	H-1	Q501	C-2
D513	A-4	Q503	C-3
D514	E-12	Q504	D-5
D516	E-3	Q505	E-5
D517	I-2	Q507	E-2
D518	F-1	Q508	J-2
D519	B-4	Q509	I-2
D600	G-11	Q510	I-2
D602	K-11	Q511	C-3
D603	K-11	Q512	I-2
D701	J-9	Q513	H-2
D702	J-9	Q515	D-4
D703	J-9	Q520	G-1
D704	J-9	Q522	E-2
D705	J-9	Q525	E-12
D709	K-12	Q526	E-12
D710	J-9	Q527	F-12
D711	J-3	Q528	C-3
D712	J-3	Q529	G-2
D713	J-2	Q600	I-13
D714	I-3	Q702	J-11
D715	J-4	Q703	K-10
D716	K-2	Q704	I-10
D717	J-2	Q900	E-13
D718	J-2		

Note:
• : parts extracted from the component side.
• : parts extracted from the conductor side.

5-6. PRINTED WIRING BOARD – DISPLAY Section – • See page 16 for Circuit Boards Location.



• Semiconductor Location

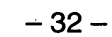
Ref. No.	Location	Ref. No.	Location
D801	B-12	D812	C-2
D802	A-13	D813	B-2
D803	B-12	D814	C-1
D804	C-12	D815	B-1
D805	C-10	D816	A-1
D806	C-9	D830	C-6
D807	C-7	D831	B-4
D808	C-6	D832	B-4
D809	C-5	D833	B-4
D810	C-4		
D811	C-3	IC801	B-7

Note on Printed Wiring Board:

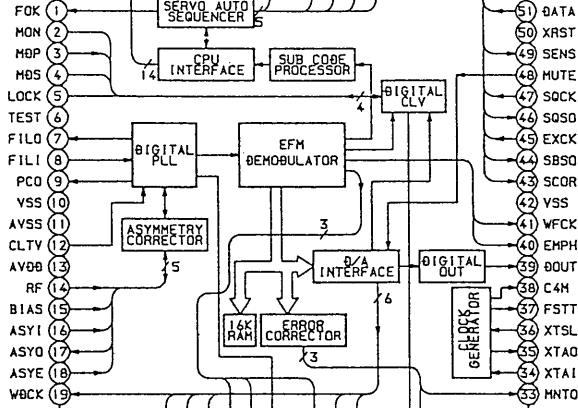
- : parts extracted from the component side.
- : parts extracted from the conductor side.

Note on Schematic Diagram:

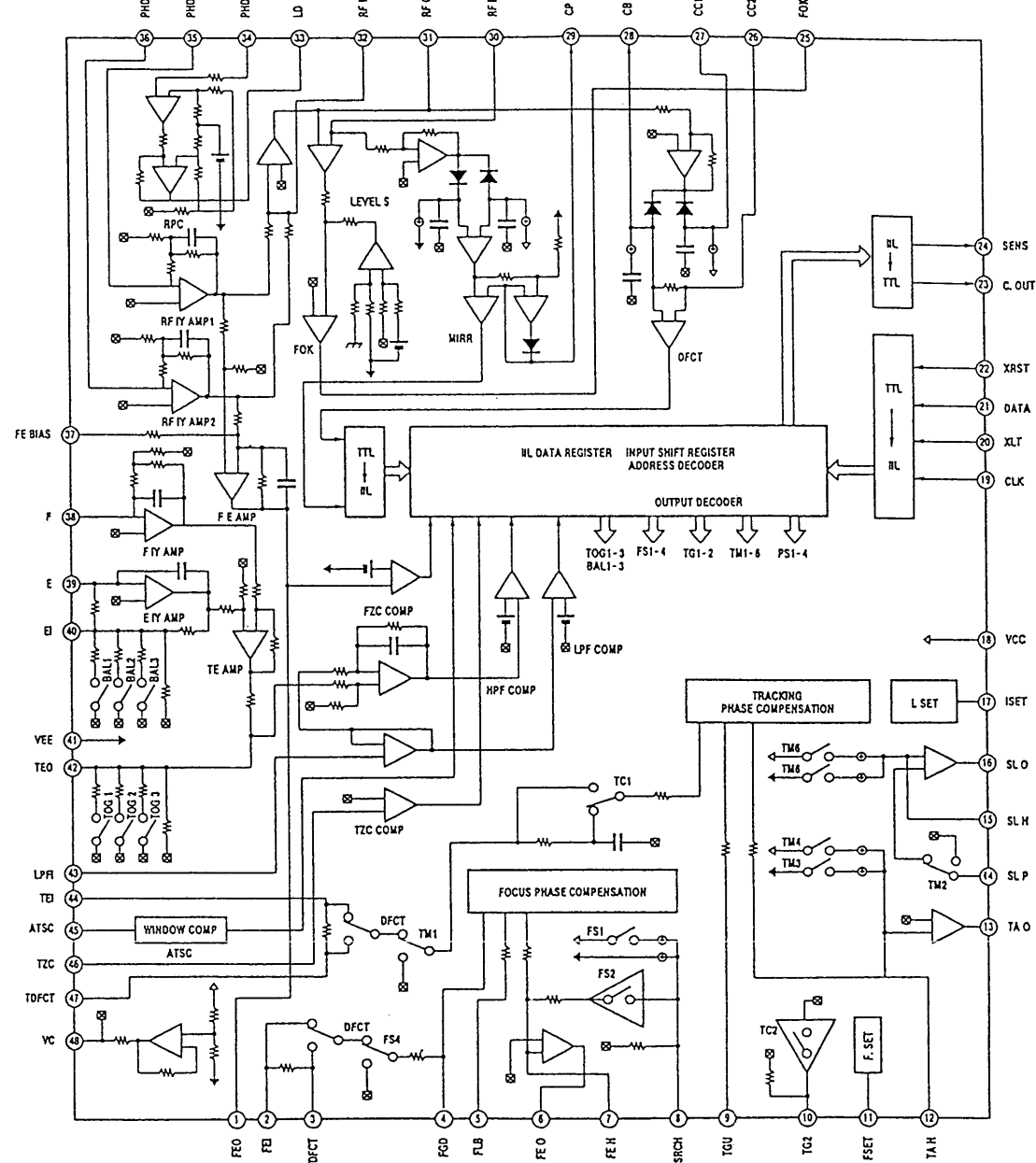
- All capacitors are in μF unless otherwise noted. pF : μpF
50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and $\frac{1}{4}\text{W}$ or less unless otherwise specified.
- B+** : B+ Line.
- : panel designation.
- Power voltage is dc 14.4V and fed with regulated dc power supply from ACC and BATT terminals.
- Voltages and waveforms are dc with respect to ground under no-signal (detuned) conditions.
no mark : FM
- Voltages are taken with a VOM (10 $\text{M}\Omega/\text{V}$).
Voltage variations may be noted due to normal production tolerances.



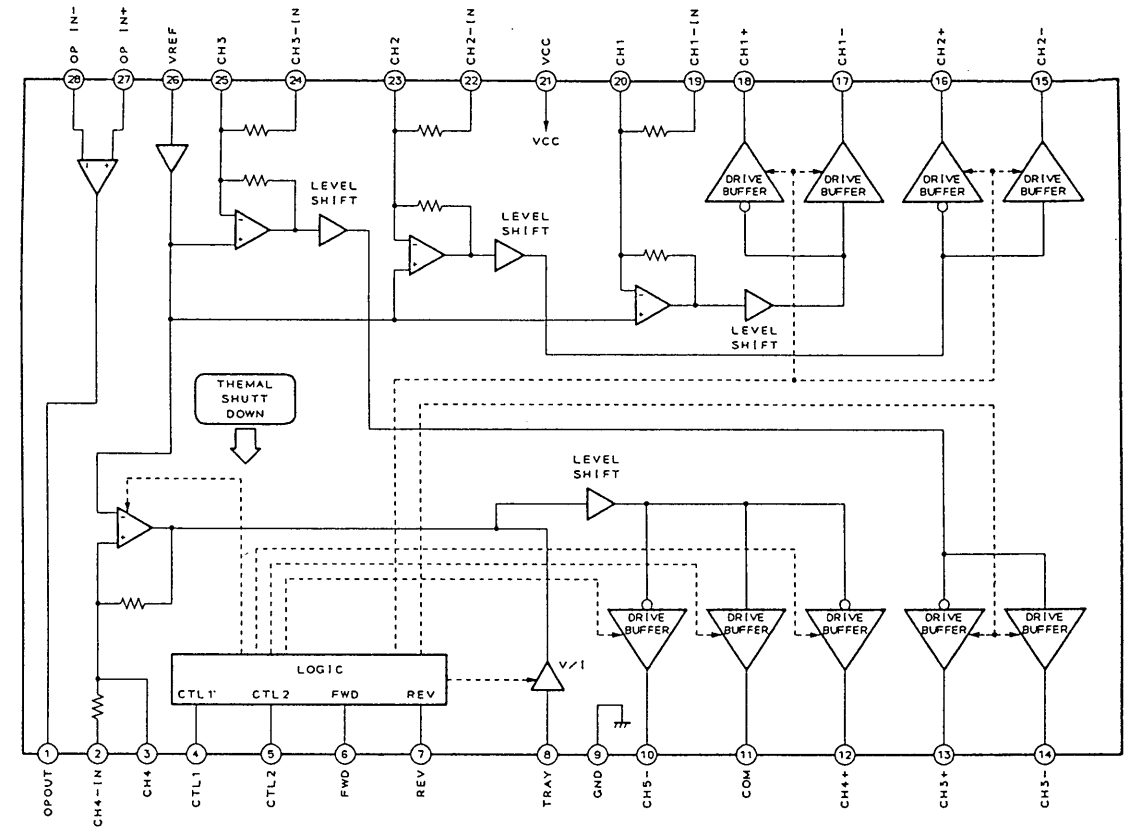
IC1 CXD2507AQ (SERVO BOARD)



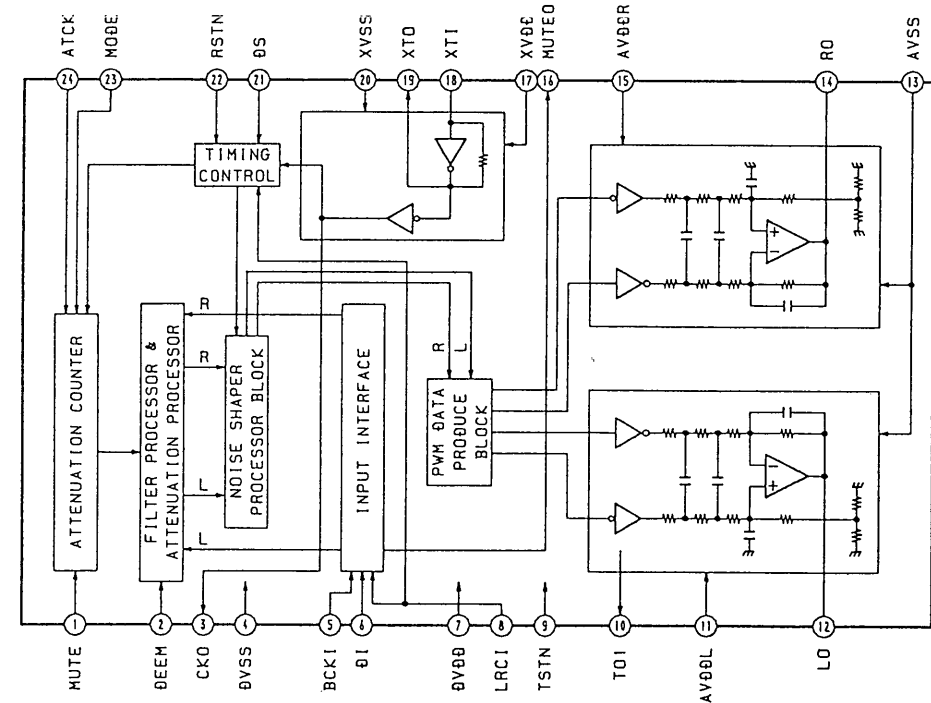
IC2 CXA1782BQ (SERVO BOARD)



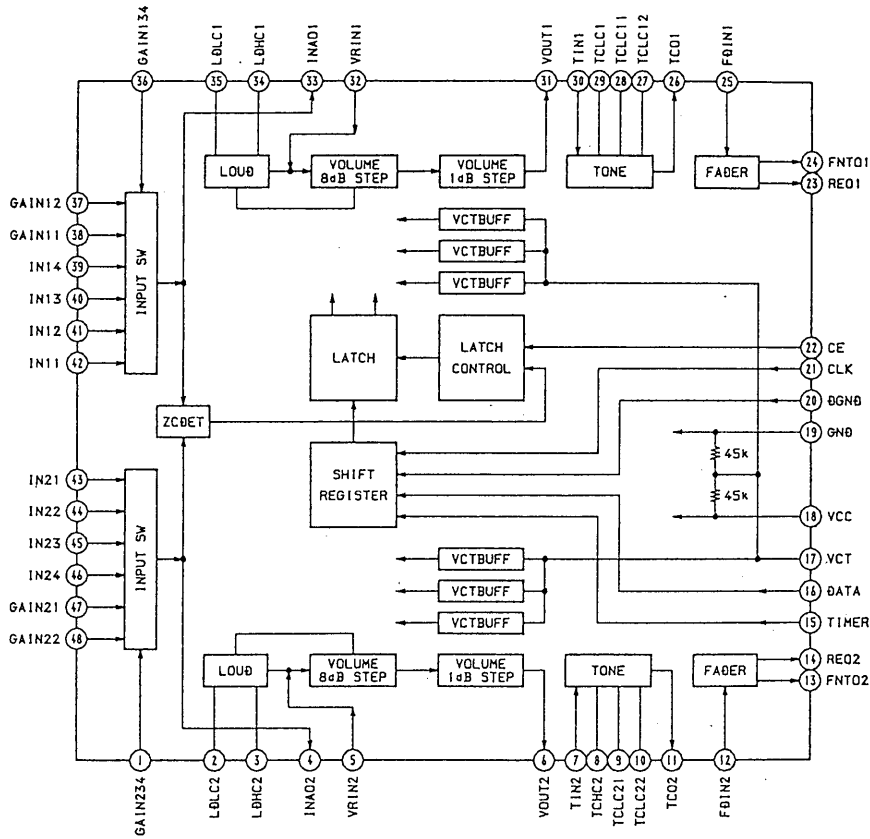
IC3 BA6796FP-T1 (SERVO BOARD)



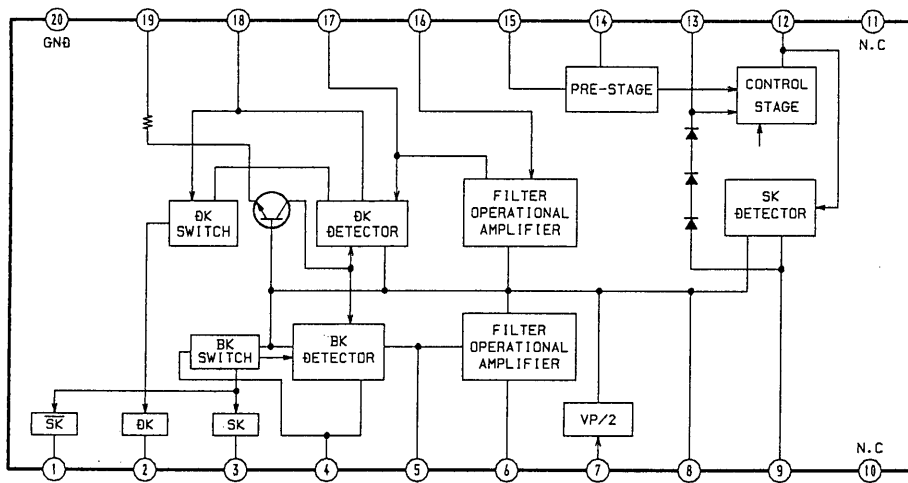
IC300 SM5877AM (MAIN BOARD)



IC400 CXA1946AQ-T6 (MAIN BOARD)



IC600 TDA1579T (MAIN BOARD) (CDX-3002)



SECTION 6

EXPLODED VIEWS

NOTE:

- -XX and -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

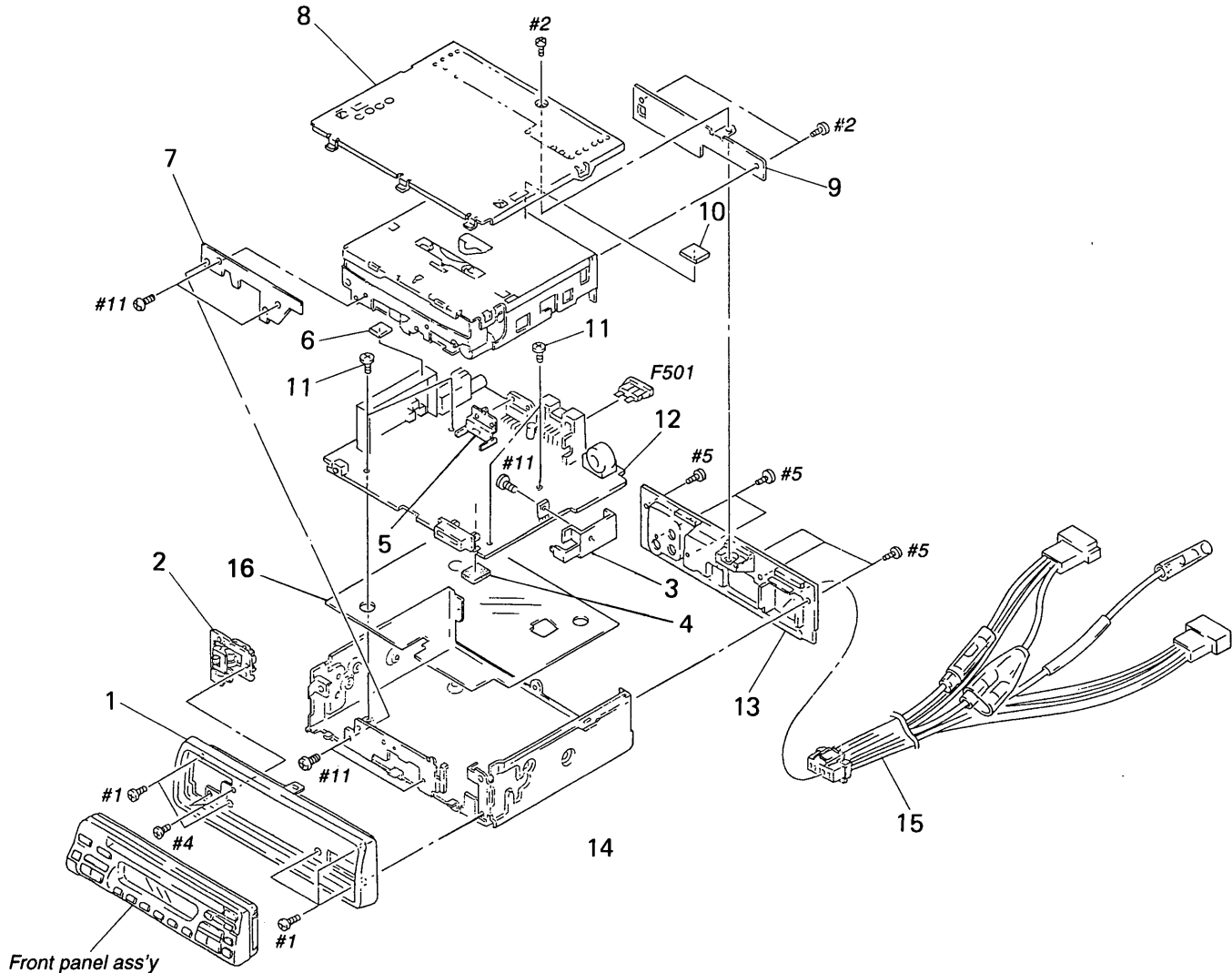
- Abbreviation

TYPE A: Made in Japan TYPE B: Made in Thailand

- 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 the electrical parts list.

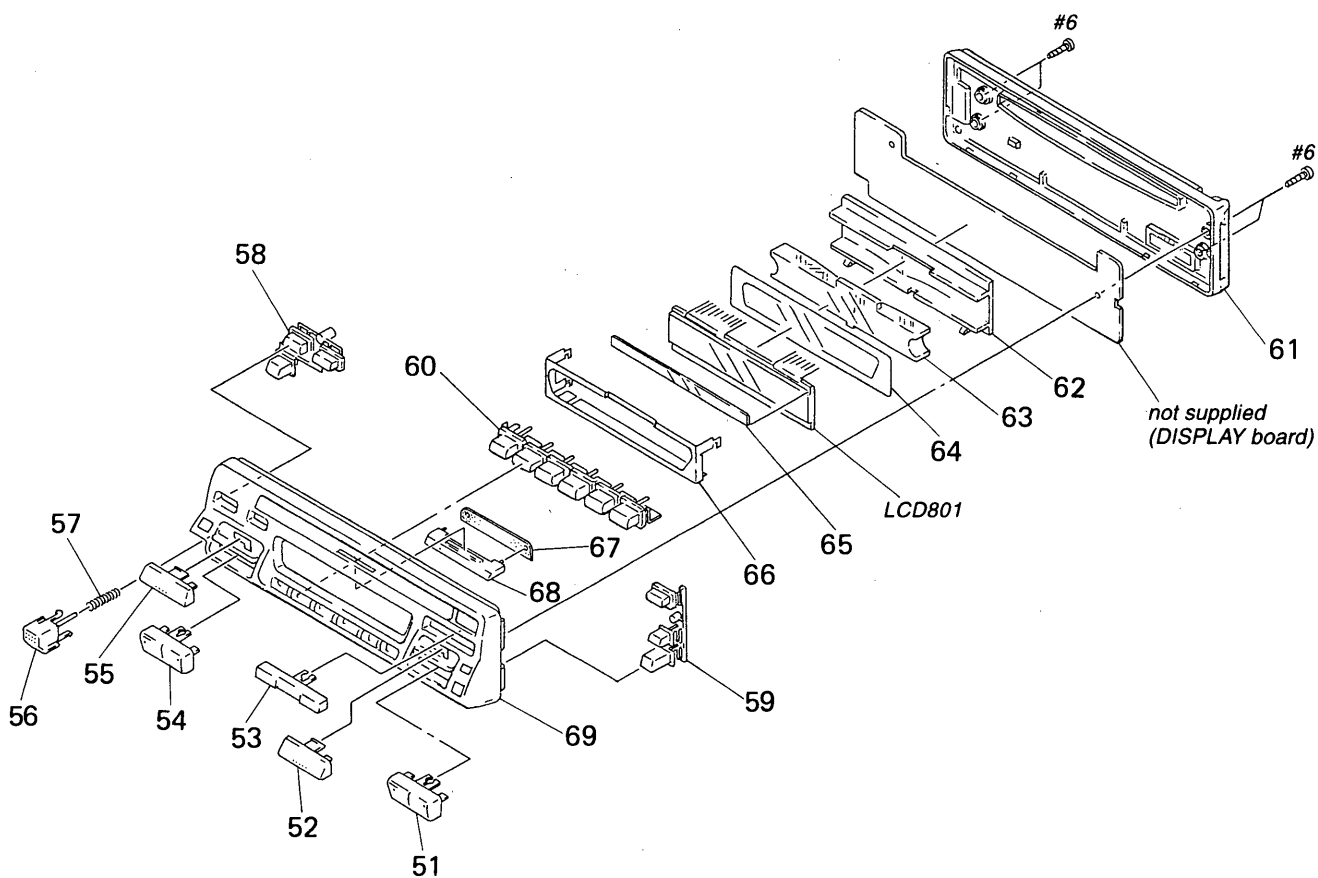
The components identified by mark Δ or dotted line with mark Δ are critical for safety.
Replace only with part number specified.

(1) GENERAL SECTION



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
1	X-3371-528-1	PANEL (1) ASSY, SUB		* 12	A-3294-049-A	MAIN BOARD, COMPLETE (3000:TYPE A)	
2	X-3367-636-1	LOCK ASSY		* 12	A-3294-051-A	MAIN BOARD, COMPLETE (3002:TYPE A)	
3	3-935-855-01	SINK (REG), HEAT		* 12	A-3294-069-A	MAIN BOARD, COMPLETE (3000:TYPE B)	
4	3-342-925-01	CUSHION, RUBBER		* 12	A-3294-071-A	MAIN BOARD, COMPLETE (3002:TYPE B)	
* 5	3-931-260-01	BRACKET (IC)		* 13	3-931-965-01	HEAT SINK (3002)	
6	3-924-145-01	CUSHION (TU), RUBBER		* 13	3-931-965-11	HEAT SINK (3000)	
7	3-935-079-01	BRACKET (MD), FRONT (TYPE A)		* 14	3-932-907-01	CHASSIS (TYPE A)	
7	3-937-006-01	BRACKET (MD), FRONT (TYPE B)		* 14	3-935-047-01	CHASSIS (TYPE B)	
* 8	X-3371-549-1	COVER ASSY (TYPE A)		15	1-776-527-11	CORD (WITH CONNECTOR) (150) (POWER)	
* 8	X-3372-357-1	COVER ASSY (TYPE B)		* 16	3-932-908-01	SHEET, INSULATING	
* 9	3-932-397-01	BRACKET (M/D)		F501	1-532-982-11	FUSE (BLADE TYPE) (AUTO FUSE) (15A)	(TYPE B)
10	2-389-320-01	RUBBER (A)		F501	1-533-331-11	FUSE (BLADE TYPE) (AUTO FUSE) (15A)	(TYPE A)
11	3-915-923-01	SCREW, GROUND POINT					

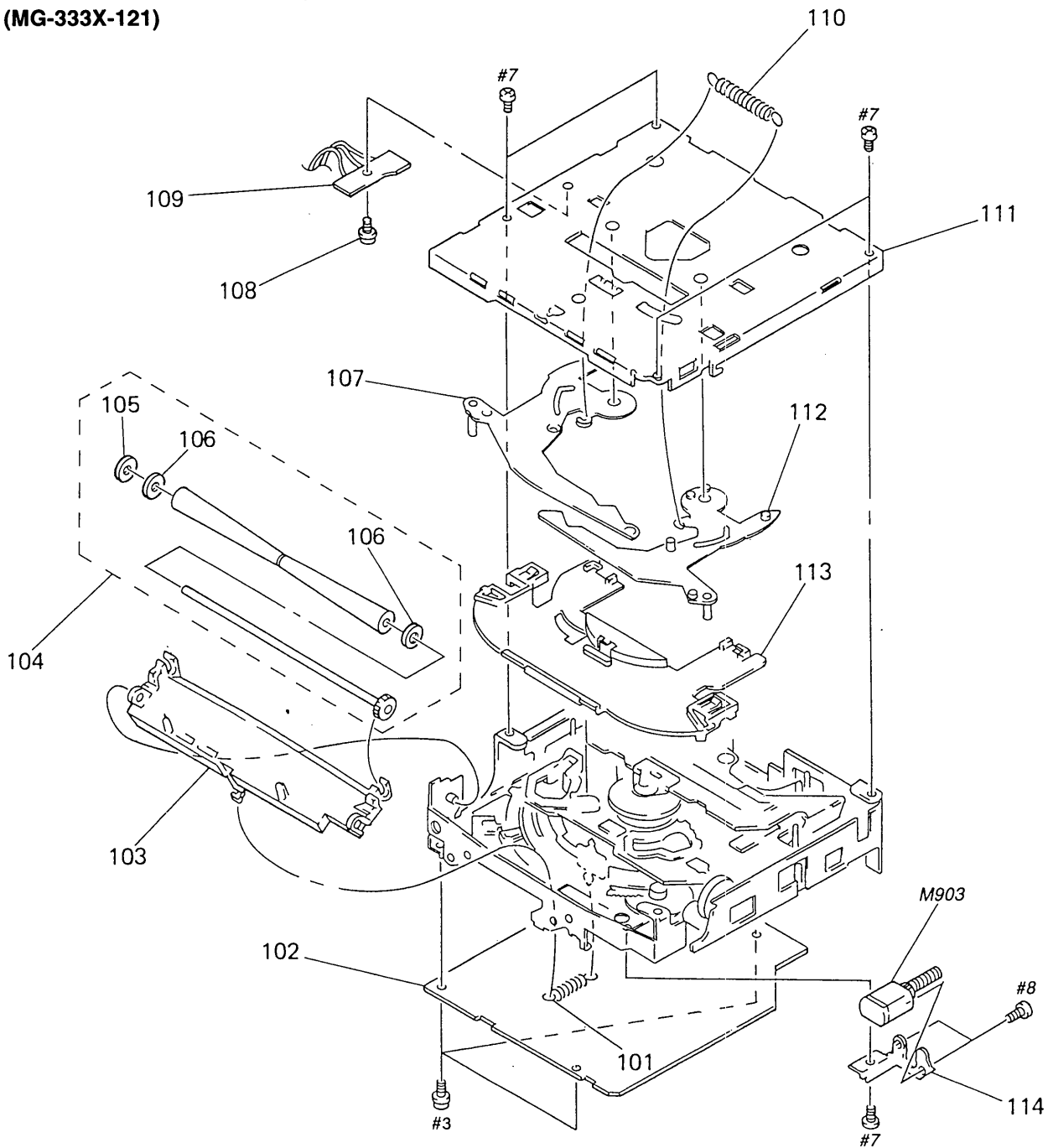
(2) FRONT PANEL SECTION



Ref. No.	Part No.	Description	Remark
51	3-933-712-01	BUTTON (TUNER) (FM. MW/LW) (3000)	
51	3-933-712-11	BUTTON (TUNER) (FM. AM) (3002)	
52	3-933-710-01	BUTTON (CD)	
53	3-933-708-01	BUTTON (AMS) (- < SEEK AMS. + >)	
54	3-933-711-01	BUTTON (+, -)	
55	3-933-709-01	BUTTON (SEL)	
56	3-933-706-01	BUTTON (RELEASE)	
57	3-918-693-01	SPRING (RELEASE) (TYPE A)	
57	3-932-475-01	SPRING (RELEASE) (TYPE B)	
58	3-933-704-01	BUTTON (OFF) (OFF. DSPL. MUTE)	
59	3-933-705-01	BUTTON (EJECT) (▲ SENS. A MEM)	
60	3-933-707-01	BUTTON (6 KEY) (1. 2. 3. 4. 5. 6)	

Ref. No.	Part No.	Description	Remark
61	3-933-714-01	PANEL, BACK	
* 62	3-933-715-01	HOLDER (LCD)	
* 63	3-933-716-01	PLATE (LCD), LIGHT GUIDE	
* 64	3-921-919-01	SHEET (LCD) (TYPE A)	
* 64	3-932-465-01	SHEET (LCD) (TYPE B)	
* 65	3-933-717-01	SHEET (LCD), DIFFUSION	
* 66	3-933-718-01	PLATE (LCD), GROUND	
67	3-909-313-01	SHEET (DOOR F)	
* 68	3-924-233-01	PLATE (CD), LIGHT GUIDE	
69	3-933-713-01	PANEL, FRONT (3000)	
69	3-933-713-11	PANEL, FRONT (3002)	
LCD801	1-801-182-21	DISPLAY PANEL, LIQUID CRYSTAL	

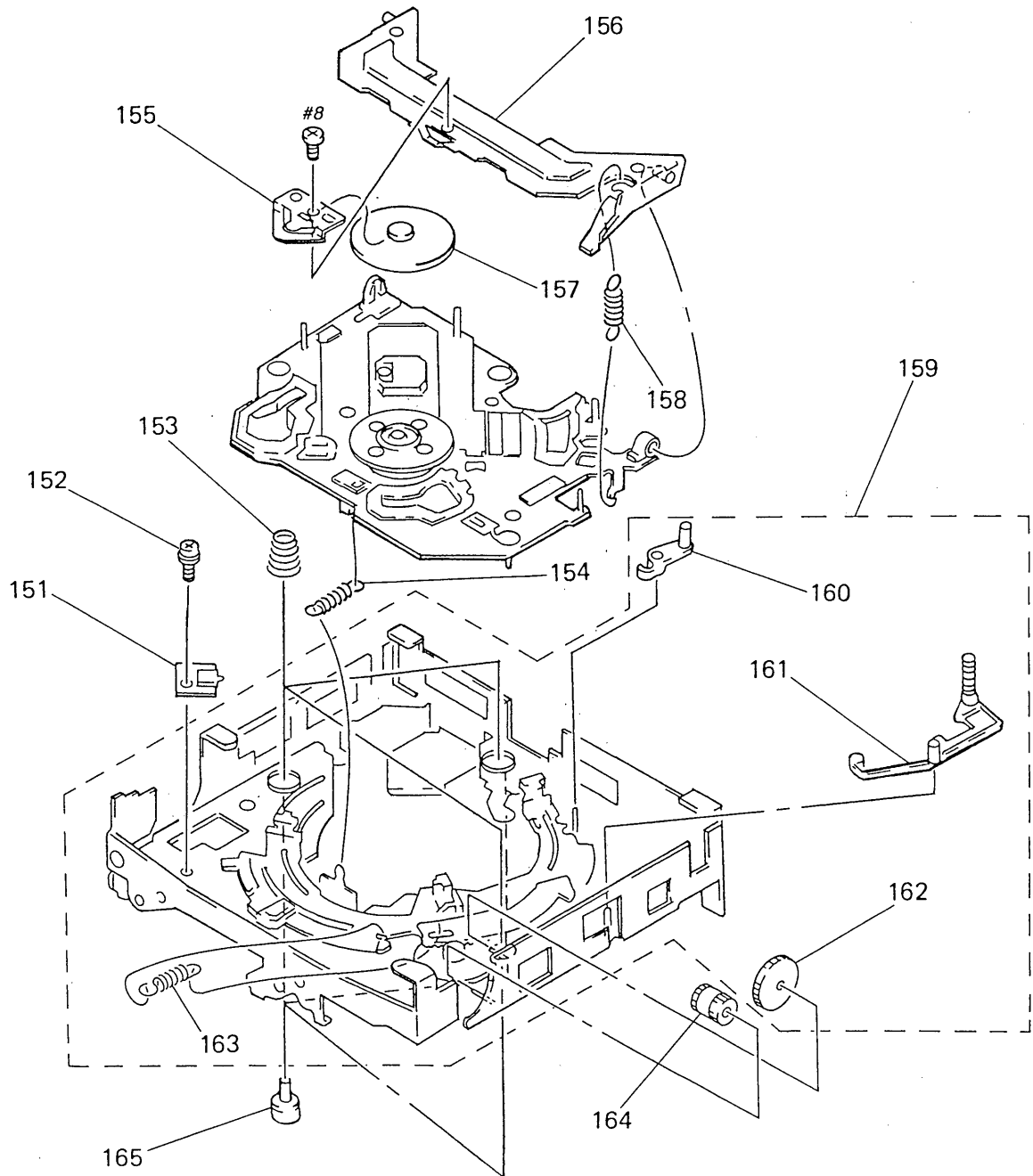
(3) MECHANISM DECK SECTION-1
(MG-333X-121)



Ref. No.	Part No.	Description	Remark
101	3-931-916-01	SPRING (RA), TENSION	
* 102	A-3309-021-A	SERVO BOARD, COMPLETE (TYPE A)	
* 102	A-3309-227-A	SERVO BOARD, COMPLETE (TYPE B)	
103	3-931-902-01	ARM (ROLLER)	
104	A-3291-567-A	ROLLER ASSY (TYPE A)	
104	A-3291-672-A	ROLLER ASSY (TYPE B)	
105	3-701-439-11	WASHER	
* 106	3-322-413-01	SPACER, INSULATING	
* 107	X-3371-501-1	LEVER (L) ASSY	

Ref. No.	Part No.	Description	Remark
108	3-338-737-01	SCREW (2X3), +PS	
* 109	1-659-836-11	DISC IN SW BOARD	
110	3-931-909-02	SPRING (LR), TENSION	
* 111	3-931-903-01	CHASSIS (T)	
* 112	X-3371-502-1	LEVER (R) ASSY	
* 113	3-931-908-01	GUIDE (DISC)	
* 114	3-931-899-01	BRACKET (MOTOR)	
M903	A-3291-576-A	MOTOR SUB ASSY, LO (LOADING) (TYPE A)	
M903	A-3291-676-A	MOTOR SUB ASSY, LO (LOADING) (TYPE B)	

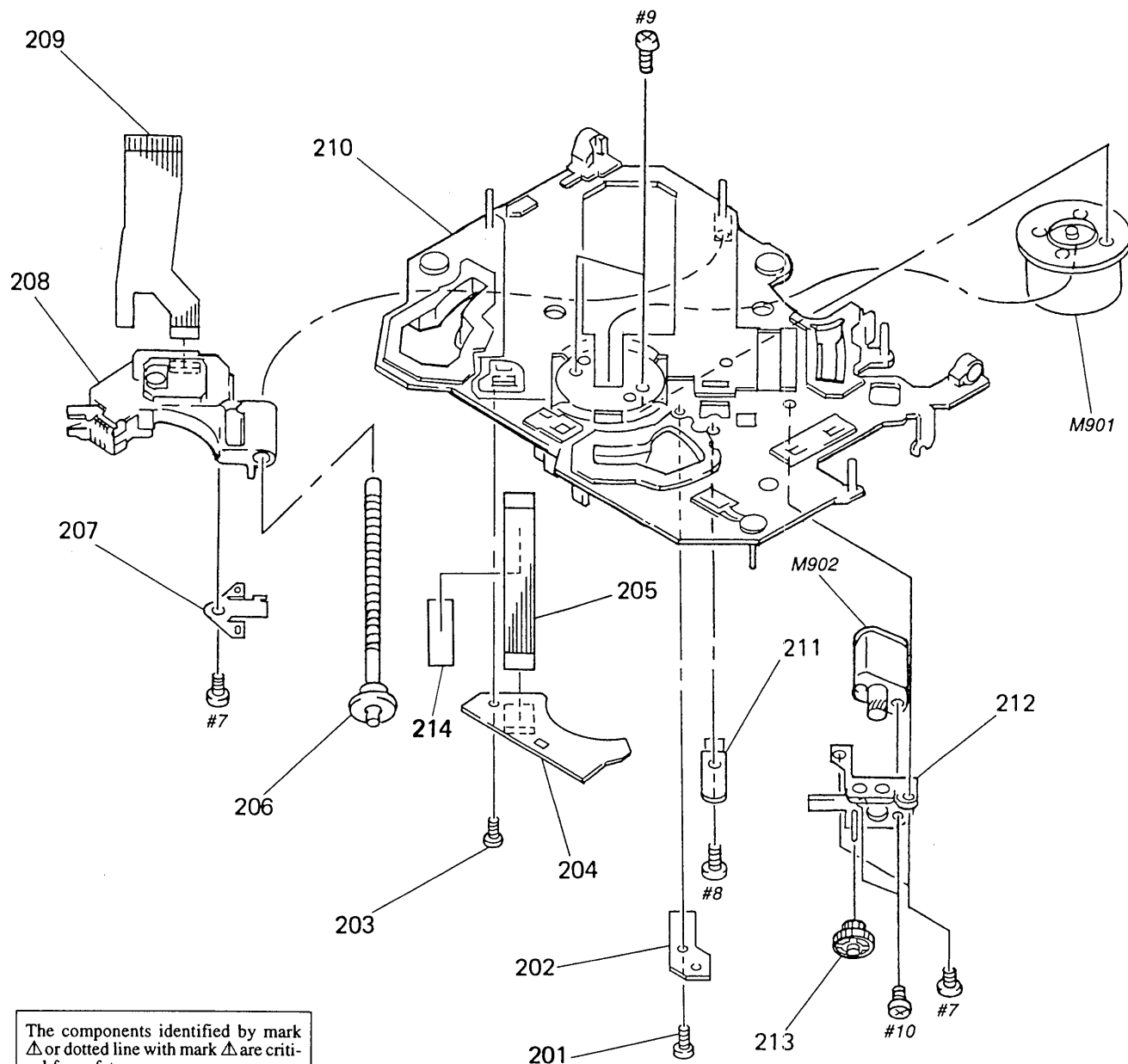
(4) MECHANISM DECK SECTION-2
(MG-333X-121)



Ref. No.	Part No.	Description	Remark
* 151	1-659-837-11	LOAD SW BOARD	
152	3-338-737-01	SCREW (2X3), +PS	
153	3-931-898-01	SPRING (FL), COMPRESSION	
154	3-931-914-01	SPRING (ANGLE), TENSION	
155	3-931-894-01	BRACKET (CP)	
156	3-931-893-01	ARM, CHUCKING	
* 157	3-384-914-01	RETAINER (DISC) (TYPE B)	
* 157	3-384-918-01	RETAINER (DISC) (TYPE A)	
158	3-931-895-01	SPRING (CH), TENSION	

Ref. No.	Part No.	Description	Remark
* 159	A-3291-568-A	CHASSIS (M) COMPLETE ASSY (TYPE A)	
* 159	A-3291-677-A	CHASSIS (M) COMPLETE ASSY (TYPE B)	
160	3-931-881-01	LEVER (LOCK)	
161	3-931-879-02	LEVER (D)	
162	3-931-882-02	GEAR (MDL)	
163	3-931-883-01	SPRING (TR), TENSION	
164	3-934-879-01	WHEEL (U), WORM	
165	3-931-897-01	DAMPER (T)	

(5) MECHANISM DECK SECTION-3
(MG-333X-121)



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

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
201	3-338-737-01	SCREW (2X3), +PS		209	1-659-881-11	PICK-UP FLEXIBLE BOARD	
* 202	1-659-835-12	LIMIT SW BOARD		* 210	X-3371-503-1	CHASSIS (OP) (O/S) ASSY	
203	3-909-607-01	SCREW		211	3-931-829-01	SPRING (SL), PLATE	
* 204	1-659-834-11	SUB BOARD		212	X-3371-504-1	BASE (DRIVING) ASSY	
205	1-659-880-11	MOTOR FLEXIBLE BOARD		213	3-931-832-01	GEAR (SL MIDWAY)	
206	A-3291-571-A	SHAFT (FEED) ASSY (TYPE A)		214	3-831-441-11	CUSHION (B)	
206	A-3291-669-A	SHAFT (FEED) ASSY (TYPE B)		M901	X-3371-664-1	MOTOR ASSY (SPINDLE)	
207	3-931-834-01	SPRING (FEED), PLATE		M902	A-3291-574-A	MOTOR ASSY, SLED (TYPE A)	
Δ 208	8-848-402-02	OPTICAL PICK-UP KSS-520A		M902	A-3291-674-A	MOTOR ASSY, SLED (TYPE B)	

SECTION 7

ELECTRICAL PARTS LIST

DISC IN SW DISPLAY

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 and -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
- Abbreviation
TYPE A: Made in Japan TYPE B: Made in Thailand

- 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

The components identified by mark Δ or dotted line with mark Δ 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	Ref. No.	Part No.	Description	Remark
*	1-659-836-11	DISC IN SW BOARD *****		D811	8-719-052-65	DIODE SLR-342DUA47 (FM) (3000)	
		< SWITCH >		D811	8-719-052-65	DIODE SLR-342DUA47 (TUNER) (3002)	
SW1	1-572-288-11	SWITCH, PUSH (DISC IN)		D812	8-719-052-65	DIODE SLR-342DUA47 (CD)	
SW2	1-572-288-11	SWITCH, PUSH (SELF)		D813	8-719-052-65	DIODE SLR-342DUA47 (- $\llcorner/\llcorner$ -)	
*****		*****		D814	8-719-052-65	DIODE SLR-342DUA47 (MW/LW) (3000)	
		DISPLAY BOARD *****		D814	8-719-052-65	DIODE SLR-342DUA47 (SDK) (3002)	
*	3-921-919-01	SHEET (LCD) (TYPE A)		D815	8-719-052-65	DIODE SLR-342DUA47 ($\gg$ +/- $\gg$)	
*	3-932-465-01	SHEET (LCD) (TYPE B)		D816	8-719-052-65	DIODE SLR-342DUA47 ($\blacktriangle$)	
*	3-933-715-01	HOLDER (LCD)		D830	8-719-422-43	DIODE MA8051-H	
*	3-933-716-01	PLATE (LCD), LIGHT GUIDE		D831	8-719-977-12	DIODE DTZ6.8B	
*	3-933-717-01	SHEET (LCD), DIFFUSION		D832	8-719-977-12	DIODE DTZ6.8B	
*	3-933-718-01	PLATE (LCD), GROUND		D833	8-719-977-12	DIODE DTZ6.8B	
		< CAPACITOR >				< IC >	
C830	1-163-038-00	CERAMIC CHIP 0.1uF	25V	IC801	8-759-369-90	IC LC75822ED	
C831	1-163-137-00	CERAMIC CHIP 680PF	5% 50V			< CHIP CONDUCTOR >	
C832	1-164-337-11	CERAMIC CHIP 2.2uF	16V	JR802	1-216-295-00	CONDUCTOR, CHIP (2012)	
		< CONNECTOR >		JR805	1-216-296-00	CONDUCTOR, CHIP (3216)	
CN801	1-764-423-21	PIN, CONNECTOR 12P		JR806	1-216-296-00	CONDUCTOR, CHIP (3216)	
		< DIODE >		JR807	1-216-296-00	CONDUCTOR, CHIP (3216)	
D801	8-719-052-65	DIODE SLR-342DUA47 (DSPL)		JR808	1-216-296-00	CONDUCTOR, CHIP (3216)	
D802	8-719-052-65	DIODE SLR-342DUA47 (OFF)		JR809	1-216-296-00	CONDUCTOR, CHIP (3216)	
D803	8-719-052-65	DIODE SLR-342DUA47 (SEL)		JR810	1-216-296-00	CONDUCTOR, CHIP (3216)	
D804	8-719-052-65	DIODE SLR-342DUA47 (+/-)				< LIQUID CRYSTAL DISPLAY >	
D805	8-719-052-65	DIODE SLR-342DUA47 (1/INTRO)		LCD801	1-801-182-21	DISPLAY PANEL, LIQUID CRYSTAL	
D806	8-719-052-65	DIODE SLR-342DUA47 (2/REPEAT)				< PILOT LAMP >	
D807	8-719-052-65	DIODE SLR-342DUA47 (3/SHUF)		PL801	1-517-535-11	LAMP, PILOT (AMBER)	
D808	8-719-052-65	DIODE SLR-342DUA47 (4)		PL802	1-517-535-11	LAMP, PILOT (AMBER)	
D809	8-719-052-65	DIODE SLR-342DUA47 (5)				< RESISTOR >	
D810	8-719-052-65	DIODE SLR-342DUA47 (6)		R801	1-216-053-00	METAL CHIP 1.5K 5% 1/10W	
				R802	1-216-057-00	METAL CHIP 2.2K 5% 1/10W	

DISPLAY
LIMIT SW
LOAD SW
MAIN

Ref. No.	Part No.	Description	Remark		
R803	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R804	1-216-067-00	METAL CHIP	5.6K	5%	1/10W
R805	1-216-073-00	METAL CHIP	10K	5%	1/10W
R806	1-216-083-00	METAL CHIP	27K	5%	1/10W
R807	1-216-202-00	METAL GLAZE	1.5K	5%	1/8W
R808	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R809	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R810	1-216-067-00	METAL CHIP	5.6K	5%	1/10W
R811	1-216-073-00	METAL CHIP	10K	5%	1/10W
R812	1-216-202-00	METAL GLAZE	1.5K	5%	1/8W
R813	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R814	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R815	1-216-067-00	METAL CHIP	5.6K	5%	1/10W
R816	1-216-073-00	METAL CHIP	10K	5%	1/10W
R817	1-216-083-00	METAL CHIP	27K	5%	1/10W
R820	1-216-150-00	METAL GLAZE	10	5%	1/8W
R821	1-216-150-00	METAL GLAZE	10	5%	1/8W
R822	1-216-150-00	METAL GLAZE	10	5%	1/8W
R823	1-216-150-00	METAL GLAZE	10	5%	1/8W
R824	1-216-192-00	METAL CHIP	560	5%	1/8W
R825	1-216-192-00	METAL CHIP	560	5%	1/8W
R826	1-216-192-00	METAL CHIP	560	5%	1/8W
R827	1-216-192-00	METAL CHIP	560	5%	1/8W
R830	1-216-198-00	METAL GLAZE	1K	5%	1/8W
R831	1-216-090-00	METAL CHIP	51K	5%	1/10W
R832	1-216-113-00	METAL GLAZE	470K	5%	1/10W

< SWITCH >

S801	1-762-719-21	SWITCH, TACT (OFF)
S802	1-762-719-21	SWITCH, TACT (5)
S803	1-762-719-21	SWITCH, TACT (4)
S804	1-762-719-21	SWITCH, TACT (3/SHUF)
S805	1-762-719-21	SWITCH, TACT (2/REPEAT)
S806	1-762-719-21	SWITCH, TACT (1/INTRO)
S807	1-762-719-21	SWITCH, TACT (-)
S808	1-762-719-21	SWITCH, TACT (CD)
S809	1-572-704-21	SWITCH, KEY BOARD (FM) (3000)
S809	1-572-704-21	SWITCH, KEY BOARD (TUNER) (3002)
S810	1-762-719-21	SWITCH, TACT (+)
S811	1-762-719-21	SWITCH, TACT (SEL)
S812	1-762-719-21	SWITCH, TACT (DSPL)
S813	1-762-719-21	SWITCH, TACT (MUTE)
S814	1-572-704-21	SWITCH, KEY BOARD (MW/LW) (3000)
S814	1-572-704-21	SWITCH, KEY BOARD (SDK) (3002)
S815	1-762-719-21	SWITCH, TACT (▲)
S816	1-762-719-21	SWITCH, TACT (- ◀▶ -)
S817	1-762-719-21	SWITCH, TACT (▶▶ +/+ ▶▶)
S818	1-762-719-21	SWITCH, TACT (SENS)

Ref. No.	Part No.	Description	Remark		
S819	1-762-719-21	SWITCH, TACT (A. MEM)			
S820	1-762-719-21	SWITCH, TACT (6)			

*	1-659-835-12	LIMIT SW BOARD			

< SWITCH >					
SW3	1-572-688-11	SWITCH, PUSH (1 KEY) (LIMIT)			

*	1-659-837-11	LOAD SW BOARD			

< SWITCH >					
SW4	1-572-288-11	SWITCH, PUSH (DOWN)			

*	A-3294-049-A	MAIN BOARD, COMPLETE (3000:TYPE A)			
*	A-3294-051-A	MAIN BOARD, COMPLETE (3002:TYPE A)			
*	A-3294-069-A	MAIN BOARD, COMPLETE (3000:TYPE B)			
*	A-3294-071-A	MAIN BOARD, COMPLETE (3002:TYPE B)			

*	3-931-260-01	BRACKET (IC)			
	3-935-855-01	SINK (REG), HEAT			
< CAPACITOR >					
C01	1-164-232-11	CERAMIC CHIP	0.01uF	10%	100V
C02	1-163-023-00	CERAMIC CHIP	0.015uF	10%	50V
C03	1-162-294-31	CERAMIC CHIP	0.001uF	10%	50V
C04	1-163-121-00	CERAMIC CHIP	150PF	5%	50V
C05	1-163-121-00	CERAMIC CHIP	150PF	5%	50V
C06	1-163-121-00	CERAMIC CHIP	150PF	5%	50V
C101	1-164-695-11	CERAMIC CHIP	0.0022uF	5%	50V
C102	1-164-346-11	CERAMIC CHIP	1uF		16V
C103	1-164-346-11	CERAMIC CHIP	1uF		16V
C104	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C105	1-163-017-00	CERAMIC CHIP	0.0047uF	5%	50V
C106	1-126-157-11	ELECT	10uF	20%	16V
C107	1-164-489-11	CERAMIC CHIP	0.22uF	10%	16V
C108	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
C109	1-126-157-11	ELECT	10uF	20%	16V
C110	1-126-157-11	ELECT	10uF	20%	16V
C111	1-126-157-11	ELECT	10uF	20%	16V
C112	1-126-157-11	ELECT	10uF	20%	16V
C113	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C114	1-162-637-11	CERAMIC CHIP	0.47uF		16V
C115	1-162-637-11	CERAMIC CHIP	0.47uF		16V
C116	1-115-326-00	FILM	0.1uF	5%	50V

Ref. No.	Part No.	Description	Remark
C117	1-115-326-00	FILM	0.1uF 5% 50V
C118	1-115-326-00	FILM	0.1uF 5% 50V
C119	1-115-326-00	FILM	0.1uF 5% 50V
C120	1-163-037-11	CERAMIC CHIP	0.022uF 10% 50V
C121	1-163-014-00	CERAMIC CHIP	0.0027uF 10% 50V
C122	1-163-022-00	CERAMIC CHIP	0.012uF 10% 50V
C124	1-124-234-00	ELECT	22uF 20% 16V
C125	1-124-234-00	ELECT	22uF 20% 16V
C126	1-163-235-11	CERAMIC CHIP	22PF 5% 50V
C127	1-164-161-11	CERAMIC CHIP	0.0022uF 10% 100V
C201	1-164-695-11	CERAMIC CHIP	0.0022uF 5% 50V
C202	1-164-346-11	CERAMIC CHIP	1uF 16V
C203	1-164-346-11	CERAMIC CHIP	1uF 16V
C204	1-164-004-11	CERAMIC CHIP	0.1uF 10% 25V
C205	1-163-017-00	CERAMIC CHIP	0.0047uF 5% 50V
C206	1-126-157-11	ELECT	10uF 20% 16V
C207	1-164-489-11	CERAMIC CHIP	0.22uF 10% 16V
C208	1-163-235-11	CERAMIC CHIP	22PF 5% 50V
C209	1-126-157-11	ELECT	10uF 20% 16V
C210	1-126-157-11	ELECT	10uF 20% 16V
C211	1-126-157-11	ELECT	10uF 20% 16V
C212	1-126-157-11	ELECT	10uF 20% 16V
C213	1-163-009-11	CERAMIC CHIP	0.001uF 10% 50V (3002)
C214	1-164-005-11	CERAMIC CHIP	0.47uF 25V
C215	1-162-637-11	CERAMIC CHIP	0.47uF 16V
C216	1-115-326-00	FILM	0.1uF 5% 50V
C217	1-115-326-00	FILM	0.1uF 5% 50V
C218	1-115-326-00	FILM	0.1uF 5% 50V
C219	1-115-326-00	FILM	0.1uF 5% 50V
C220	1-163-037-11	CERAMIC CHIP	0.022uF 10% 50V
C221	1-163-014-00	CERAMIC CHIP	0.0027uF 10% 50V
C222	1-163-022-00	CERAMIC CHIP	0.012uF 10% 50V
C224	1-124-234-00	ELECT	22uF 20% 16V
C225	1-124-234-00	ELECT	22uF 20% 16V
C226	1-163-235-11	CERAMIC CHIP	22PF 5% 50V
C227	1-164-161-11	CERAMIC CHIP	0.0022uF 10% 100V
C300	1-164-232-11	CERAMIC CHIP	0.01uF 10% 100V
C301	1-124-584-00	ELECT	100uF 20% 10V
C304	1-163-239-11	CERAMIC CHIP	33PF 5% 50V
C305	1-163-235-11	CERAMIC CHIP	22PF 5% 50V
C306	1-163-235-11	CERAMIC CHIP	22PF 5% 50V
C307	1-128-057-11	ELECT	330uF 20% 6.3V
C308	1-163-117-00	CERAMIC CHIP	100PF 5% 50V
C401	1-107-884-11	ELECT	1000uF 20% 16V
C402	1-163-038-00	CERAMIC CHIP	0.1uF 25V
C404	1-163-009-11	CERAMIC CHIP	0.001uF 10% 50V
C405	1-163-117-00	CERAMIC CHIP	100PF 5% 50V
C406	1-163-117-00	CERAMIC CHIP	100PF 5% 50V

Ref. No.	Part No.	Description	Remark
C407	1-163-109-00	CERAMIC CHIP	47PF 5% 50V
C408	1-124-242-00	ELECT	33uF 20% 25V
C409	1-126-163-11	ELECT	4.7uF 20% 50V
C416	1-163-059-00	CERAMIC CHIP	0.01uF 10% 50V
C417	1-164-232-11	CERAMIC CHIP	0.01uF 50V
C418	1-124-229-00	ELECT	33uF 20% 10V
C419	1-124-584-00	ELECT	100uF 20% 10V
C420	1-104-760-11	CERAMIC CHIP	0.047uF 10% 50V
C434	1-164-346-11	CERAMIC CHIP	1uF 16V
C435	1-126-288-11	ELECT	4.7uF 20% 16V
C501	1-126-303-11	ELECT	3.3uF 20% 50V
C503	1-164-004-11	CERAMIC CHIP	0.1uF 10% 25V
C504	1-164-004-11	CERAMIC CHIP	0.1uF 10% 25V
C507	1-125-701-11	CAPACITOR	0.047F
C508	1-163-038-00	CERAMIC CHIP	0.1uF 25V
C511	1-124-234-00	ELECT	22uF 20% 16V
C512	1-124-242-00	ELECT	33uF 20% 25V
C513	1-164-004-11	CERAMIC CHIP	0.1uF 10% 25V
C514	1-164-004-11	CERAMIC CHIP	0.1uF 10% 25V
C516	1-163-038-00	CERAMIC CHIP	0.1uF 25V
C517	1-124-119-00	ELECT	330uF 20% 16V
C518	1-164-004-11	CERAMIC CHIP	0.1uF 10% 25V
C519	1-124-556-11	ELECT	2200uF 20% 16V
C520	1-124-584-00	ELECT	100uF 20% 10V
C523	1-126-160-11	ELECT	1uF 20% 50V
C600	1-124-229-00	ELECT	33uF 20% 10V (3002)
C601	1-164-004-11	CERAMIC CHIP	0.1uF 10% 25V (3002)
C602	1-164-004-11	CERAMIC CHIP	0.1uF 10% 25V (3002)
C603	1-104-760-11	CERAMIC CHIP	0.047uF 10% 50V (3002)
C604	1-104-760-11	CERAMIC CHIP	0.047uF 10% 50V (3002)
C605	1-164-004-11	CERAMIC CHIP	0.1uF 10% 25V (3002)
C606	1-163-245-11	CERAMIC CHIP	56PF 5% 50V (3002)
C607	1-115-419-00	CERAMIC CHIP	0.0033uF 5% 25V (3002)
C608	1-163-251-11	CERAMIC CHIP	100PF 5% 50V (3002)
C609	1-126-288-11	ELECT	4.7uF 20% 16V (3002)
C610	1-164-344-11	CERAMIC CHIP	0.068uF 10% 25V (3002)
C611	1-164-344-11	CERAMIC CHIP	0.068uF 10% 25V (3002)

MAIN

Ref. No.	Part No.	Description	Remark
C612	1-164-004-11	CERAMIC CHIP 0.1uF 10% 25V	(3002)
C613	1-136-169-00	FILM 0.22uF 5% 50V	
C614	1-124-234-00	ELECT 22uF 20% 16V	
C616	1-115-326-00	FILM 0.1uF 5% 50V	
C620	1-164-004-11	CERAMIC CHIP 0.1uF 10% 25V	(3002)
C700	1-163-117-00	CERAMIC CHIP 100PF 5% 50V	
C701	1-163-117-00	CERAMIC CHIP 100PF 5% 50V	
C702	1-163-117-00	CERAMIC CHIP 100PF 5% 50V	
C703	1-163-117-00	CERAMIC CHIP 100PF 5% 50V	
C704	1-163-234-11	CERAMIC CHIP 20PF 5% 50V	
C705	1-163-099-00	CERAMIC CHIP 18PF 5% 50V	
C706	1-163-038-00	CERAMIC CHIP 0.1uF 25V	
C707	1-163-038-00	CERAMIC CHIP 0.1uF 25V	
C708	1-163-117-00	CERAMIC CHIP 100PF 5% 50V	
C900	1-163-235-11	CERAMIC CHIP 22PF 5% 50V	
C901	1-163-005-11	CERAMIC CHIP 470PF 10% 50V	
C903	1-124-234-00	ELECT 22uF 20% 16V	
C904	1-124-589-11	ELECT 47uF 20% 16V	
C905	1-164-232-11	CERAMIC CHIP 0.01uF 10% 50V	
C906	1-124-589-11	ELECT 47uF 20% 16V	
C911	1-216-295-00	CONDUCTOR, CHIP (2012)	
C913	1-164-232-11	CERAMIC CHIP 0.01uF 10% 50V	
C915	1-124-589-11	ELECT 47uF 20% 16V	
C916	1-163-017-00	CERAMIC CHIP 0.0047uF 5% 50V	
C996	1-163-251-11	CERAMIC CHIP 100PF 5% 50V	
C997	1-164-232-11	CERAMIC CHIP 0.01uF 10% 100V	
< JACK >			
CNJ900	1-770-279-12	JACK, ANTENNA (ISO) (ANT IN)	
< CONNECTOR >			
CNP300	1-764-617-12	PIN, CONNECTOR (PC BOARD) 30P	
CNP501	1-774-701-11	PIN, CONNECTOR 16P	
CNP700	1-764-422-11	PLUG, CONNECTOR 12P	
< COMPOSITION CIRCUIT BLOCK >			
CP900	1-519-504-11	GAP, DISCHARGE	
< DIODE >			
D400	8-719-109-71	DIODE RD3. 9ES-B1	
D403	8-719-200-82	DIODE 11ES2	
D404	8-719-200-82	DIODE 11ES2	
D411	8-719-991-33	DIODE 1SS133T-77	
D501	8-719-923-91	DIODE MTZJ-T-77-16A	
D502	8-719-109-97	DIODE RD6. 8ES-B2	

Ref. No.	Part No.	Description	Remark
D503	8-719-109-93	DIODE RD6. 2ESB2	
D504	8-719-109-93	DIODE RD6. 2ESB2	
D505	8-719-986-73	DIODE RB441Q	
D506	8-719-991-33	DIODE 1SS133T-77	
D508	8-719-991-33	DIODE 1SS133T-77	
D509	8-719-110-13	DIODE RD9. 1ESB2	
D511	8-719-109-89	DIODE RD5. 6ESB2	
D513	8-719-038-09	DIODE RL254-H21	
D514	8-719-109-85	DIODE RD5. 1ES-B2	
D516	8-719-991-33	DIODE 1SS133T-77	
D517	8-719-991-33	DIODE 1SS133T-77	
D518	8-719-110-13	DIODE RD9. 1ESB2	
D519	8-719-200-82	DIODE 11ES2	
D600	8-719-991-33	DIODE 1SS133T-77 (3002)	
D602	8-719-991-33	DIODE 1SS133T-77 (3002)	
D603	8-719-991-33	DIODE 1SS133T-77 (3002)	
D701	8-719-991-33	DIODE 1SS133T-77 (3000)	
D702	8-719-991-33	DIODE 1SS133T-77	
D703	8-719-991-33	DIODE 1SS133T-77	
D704	8-719-991-33	DIODE 1SS133T-77	
D705	8-719-991-33	DIODE 1SS133T-77	
D709	8-719-109-93	DIODE RD6. 2ESB2	
D710	8-719-991-33	DIODE 1SS133T-77	
D711	8-719-109-93	DIODE RD6. 2ESB2	
D712	8-719-109-93	DIODE RD6. 2ESB2	
D713	8-719-109-93	DIODE RD6. 2ESB2	
D714	8-719-109-93	DIODE RD6. 2ESB2	
D715	8-719-109-93	DIODE RD6. 2ESB2	
D716	8-719-109-93	DIODE RD6. 2ESB2	
D717	8-719-109-93	DIODE RD6. 2ESB2	
D718	8-719-109-93	DIODE RD6. 2ESB2	
< IC >			
IC200	8-759-421-97	IC HA13151A-A	
IC300	8-759-364-34	IC SM5877AM	
IC400	8-752-075-48	IC CXA1946AQ-T6	
IC600	8-759-998-24	IC TDA1579T (3002)	
IC700	8-759-393-06	IC uPD17017GF-B09-3B9	
< CHIP CONDUCTOR >			
JR1	1-216-295-00	CONDUCTOR, CHIP (2012)	
JR3	1-216-295-00	CONDUCTOR, CHIP (2012) (3002)	
JR4	1-216-295-00	CONDUCTOR, CHIP (2012) (3002)	
JR7	1-216-296-00	CONDUCTOR, CHIP (3216)	
JR8	1-216-296-00	CONDUCTOR, CHIP (3216)	
JR9	1-216-295-00	CONDUCTOR, CHIP (2012)	
JR10	1-216-295-00	CONDUCTOR, CHIP (2012)	
JR16	1-216-296-00	CONDUCTOR, CHIP (3216)	
JR17	1-216-295-00	CONDUCTOR, CHIP (2012)	

Ref. No.	Part No.	Description	Remark
JR18	1-216-296-00	CONDUCTOR, CHIP	(3216)
JR19	1-216-296-00	CONDUCTOR, CHIP	(3216)
JR21	1-216-295-00	CONDUCTOR, CHIP	(2012)
JR30	1-216-295-00	CONDUCTOR, CHIP	(2012)
JR31	1-216-295-00	CONDUCTOR, CHIP	(2012)

< COIL >

JW57	1-410-513-11	INDUCTOR	22uH	
JW147	1-410-513-11	INDUCTOR	22uH	
L01	1-412-935-11	INDUCTOR	0.47uH	
L300	1-410-510-11	INDUCTOR	100uH	
L700	1-249-395-11	CARBON	15 5%	1/4W

L801	1-411-824-11	COIL, CHOKE	
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< VARIABLE COIL >

LV600	1-424-036-11	COIL (FILTER) (TYPE A:3002)	
LV600	1-424-036-21	COIL (FILTER) (TYPE B:3002)	

< JACK >

PJ400	1-764-424-11	JACK, PIN 2P (LINE OUT REAR) (3002)	
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< TRANSISTOR >

Q101	8-729-920-21	TRANSISTOR	DTC314TKH04	
Q102	8-729-920-21	TRANSISTOR	DTC314TKH04	
Q201	8-729-920-21	TRANSISTOR	DTC314TKH04	
Q202	8-729-920-21	TRANSISTOR	DTC314TKH04	
Q404	8-729-901-05	TRANSISTOR	DTA124EK	
Q405	8-729-901-00	TRANSISTOR	DTC124EK	
Q501	8-729-822-84	TRANSISTOR	2SB1202FAST	
Q503	8-729-900-53	TRANSISTOR	DTC114EK	
Q504	8-729-920-74	TRANSISTOR	2SC2412K-QR	
Q505	8-729-920-74	TRANSISTOR	2SC2412K-QR	
Q507	8-729-901-05	TRANSISTOR	DTA124EK	
Q508	8-729-920-85	TRANSISTOR	2SD1664-QR	
Q509	8-729-026-49	TRANSISTOR	2SA1037AK-T146-R	
Q510	8-729-920-74	TRANSISTOR	2SC2412K-QR	
Q511	8-729-920-74	TRANSISTOR	2SC2412K-QR	
Q512	8-729-422-87	TRANSISTOR	2SB1073-R	
Q513	8-729-900-53	TRANSISTOR	DTC114EK	
Q515	8-729-820-68	TRANSISTOR	2SD1802FA-S	
Q520	8-729-019-00	TRANSISTOR	2SD2394-G	
Q522	8-729-901-00	TRANSISTOR	DTC124EK	
Q525	8-729-902-99	TRANSISTOR	DTC114TK	
Q526	8-729-205-02	TRANSISTOR	2SA1150	
Q527	8-729-205-02	TRANSISTOR	2SA1150	
Q528	8-729-900-53	TRANSISTOR	DTC114EK	
Q529	8-729-820-68	TRANSISTOR	2SD1802FA-S	

Ref. No.	Part No.	Description	Remark
Q600	8-729-021-94	TRANSISTOR	2SK1657-T1B
Q702	8-729-901-00	TRANSISTOR	DTC124EK (3002)
Q703	8-729-901-00	TRANSISTOR	DTC124EK (3002)
Q704	8-729-901-05	TRANSISTOR	DTA124EK
Q900	8-729-920-74	TRANSISTOR	2SC2412K-QR

< RESISTOR >

R2	1-216-295-00	CONDUCTOR, CHIP		(2012)
R3	1-216-296-00	CONDUCTOR, CHIP		(3216) (3002)
R101	1-216-049-00	METAL GLAZE	1K 5%	1/10W
R102	1-216-073-00	METAL CHIP	10K 5%	1/10W
R103	1-216-065-00	METAL CHIP	4.7K 5%	1/10W
R104	1-216-214-00	METAL GLAZE	4.7K 5%	1/8W
R105	1-216-065-00	METAL CHIP	4.7K 5%	1/10W
R106	1-216-041-00	METAL CHIP	470 5%	1/10W
R107	1-216-041-00	METAL CHIP	470 5%	1/10W
R108	1-216-224-00	METAL GLAZE	12K 5%	1/8W
R109	1-216-075-00	METAL CHIP	12K 5%	1/10W
R110	1-216-129-00	METAL CHIP	2.2M 5%	1/10W
R111	1-216-129-00	METAL CHIP	2.2M 5%	1/10W
R112	1-216-077-00	METAL CHIP	15K 5%	1/10W
R113	1-216-077-00	METAL CHIP	15K 5%	1/10W
R114	1-249-385-11	CARBON	2.2 5%	1/6W
R115	1-216-134-00	METAL CHIP	2.2 5%	1/10W
R116	1-216-134-00	METAL CHIP	2.2 5%	1/10W
R117	1-216-134-00	METAL CHIP	2.2 5%	1/10W
R118	1-216-069-00	METAL CHIP	6.8K 5%	1/10W
R121	1-216-206-00	METAL GLAZE	2.2K 5%	1/8W
R122	1-216-073-00	METAL CHIP	10K 5%	1/10W
R123	1-216-079-00	METAL CHIP	18K 5%	1/10W
R124	1-216-085-00	METAL CHIP	33K 5%	1/10W
R201	1-216-049-00	METAL GLAZE	1K 5%	1/10W
R202	1-216-073-00	METAL CHIP	10K 5%	1/10W
R203	1-216-065-00	METAL CHIP	4.7K 5%	1/10W
R204	1-216-065-00	METAL CHIP	4.7K 5%	1/10W
R205	1-216-065-00	METAL CHIP	4.7K 5%	1/10W
R206	1-216-041-00	METAL CHIP	470 5%	1/10W
R207	1-216-041-00	METAL CHIP	470 5%	1/10W
R208	1-216-224-00	METAL GLAZE	12K 5%	1/8W
R209	1-216-224-00	METAL GLAZE	12K 5%	1/8W
R210	1-216-129-00	METAL CHIP	2.2M 5%	1/10W
R211	1-216-129-00	METAL CHIP	2.2M 5%	1/10W
R212	1-216-077-00	METAL CHIP	15K 5%	1/10W
R213	1-216-077-00	METAL CHIP	15K 5%	1/10W
R214	1-249-385-11	CARBON	2.2 5%	1/6W
R215	1-249-385-11	CARBON	2.2 5%	1/6W
R216	1-249-385-11	CARBON	2.2 5%	1/6W
R217	1-249-385-11	CARBON	2.2 5%	1/6W
R218	1-216-069-00	METAL CHIP	6.8K 5%	1/10W

MAIN

Ref. No.	Part No.	Description	Remark		
R221	1-216-057-00	METAL CHIP	2. 2K	5%	1/10W
R222	1-216-073-00	METAL CHIP	10K	5%	1/10W
R223	1-216-079-00	METAL CHIP	18K	5%	1/10W
R224	1-216-085-00	METAL CHIP	33K	5%	1/10W
R300	1-216-150-00	METAL GLAZE	10	5%	1/8W
R302	1-216-025-00	METAL GLAZE	100	5%	1/10W
R303	1-216-025-00	METAL GLAZE	100	5%	1/10W
R304	1-216-025-00	METAL GLAZE	100	5%	1/10W
R305	1-216-017-00	METAL GLAZE	47	5%	1/10W
R306	1-249-411-11	CARBON	330	5%	1/4W
R308	1-216-027-00	METAL CHIP	120	5%	1/10W
R313	1-216-033-00	METAL CHIP	220	5%	1/10W
R401	1-247-895-00	CARBON	470K	5%	1/4W
R411	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R416	1-216-089-00	METAL GLAZE	47K	5%	1/10W
R502	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R503	1-216-206-00	METAL GLAZE	2. 2K	5%	1/8W
R505	1-216-073-00	METAL CHIP	10K	5%	1/10W
R507	1-249-435-11	CARBON	33K	5%	1/4W
R508	1-216-080-00	METAL CHIP	20K	5%	1/10W
R509	1-216-079-00	METAL CHIP	18K	5%	1/10W
R510	1-216-067-00	METAL CHIP	5. 6K	5%	1/10W
R511	1-216-105-00	METAL GLAZE	220K	5%	1/10W
R512	1-216-089-00	METAL GLAZE	47K	5%	1/10W
R516	1-216-005-00	METAL CHIP	15	5%	1/10W
R517	1-216-061-00	METAL CHIP	3. 3K	5%	1/10W
R518	1-216-081-00	METAL CHIP	22K	5%	1/10W
R519	1-216-073-00	METAL CHIP	10K	5%	1/10W
R520	1-216-073-00	METAL CHIP	10K	5%	1/10W
R521	1-247-887-00	CARBON	220K	5%	1/4W
R522	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R523	1-216-057-00	METAL CHIP	2. 2K	5%	1/10W
R524	1-216-085-00	METAL CHIP	33K	5%	1/10W
R525	1-249-413-11	CARBON	470	5%	1/4W
R527	1-249-417-11	CARBON	1K	5%	1/4W
R528	1-249-417-11	CARBON	1K	5%	1/4W
R529	1-216-033-00	METAL CHIP	220	5%	1/10W
R534	1-216-057-00	METAL CHIP	2. 2K	5%	1/10W
R535	1-216-081-00	METAL CHIP	22K	5%	1/10W
R536	1-216-069-00	METAL CHIP	6. 8K	5%	1/10W
R537	1-216-027-00	METAL CHIP	120	5%	1/10W
R538	1-216-068-00	METAL CHIP	6. 2K	5%	1/10W
R600	1-216-061-00	METAL CHIP	3. 3K	5%	1/10W (3002)
R601	1-216-061-00	METAL CHIP	3. 3K	5%	1/10W (3002)
R602	1-216-067-00	METAL CHIP	5. 6K	5%	1/10W (3002)
R603	1-216-067-00	METAL CHIP	5. 6K	5%	1/10W (3002)
R604	1-216-089-00	METAL GLAZE	47K	5%	1/10W (3002)
R605	1-216-067-00	METAL CHIP	5. 6K	5%	1/10W (3002)

Ref. No.	Part No.	Description	Remark		
R606	1-208-849-11	METAL GLAZE	620K	5%	1/10W (3002)
R607	1-216-093-00	METAL CHIP	68K	5%	1/10W (3002)
R608	1-216-081-00	METAL GLAZE	22K	5%	1/10W (3002)
R609	1-216-117-00	METAL CHIP	680K	5%	1/10W (3002)
R610	1-216-065-00	METAL CHIP	4. 7K	5%	1/10W (3002)
R611	1-216-097-00	METAL GLAZE	100K	5%	1/10W (3002)
R612	1-216-190-00	METAL GLAZE	470	5%	1/8W (3002)
R613	1-216-105-00	METAL GLAZE	220K	5%	1/10W (3002)
R614	1-216-068-00	METAL CHIP	6. 2K	5%	1/10W
R615	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R616	1-216-063-00	METAL GLAZE	3. 9K	5%	1/10W
R617	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R702	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R703	1-216-061-00	METAL CHIP	3. 3K	5%	1/10W
R704	1-216-073-00	METAL CHIP	10K	5%	1/10W
R706	1-216-057-00	METAL CHIP	2. 2K	5%	1/10W (3000)
R707	1-216-057-00	METAL CHIP	2. 2K	5%	1/10W
R708	1-216-073-00	METAL CHIP	10K	5%	1/10W
R709	1-216-073-00	METAL CHIP	10K	5%	1/10W
R710	1-216-051-00	METAL CHIP	1. 2K	5%	1/10W
R712	1-216-073-00	METAL CHIP	10K	5%	1/10W
R713	1-216-073-00	METAL CHIP	10K	5%	1/10W
R714	1-216-073-00	METAL CHIP	10K	5%	1/10W
R717	1-216-057-00	METAL CHIP	2. 2K	5%	1/10W
R718	1-216-089-00	METAL GLAZE	47K	5%	1/10W
R719	1-216-051-00	METAL CHIP	1. 2K	5%	1/10W
R720	1-216-089-00	METAL GLAZE	47K	5%	1/10W
R721	1-249-419-11	CARBON	1. 5K	5%	1/4W
R722	1-249-419-11	CARBON	1. 5K	5%	1/4W
R723	1-249-419-11	CARBON	1. 5K	5%	1/4W
R724	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R726	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R727	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R729	1-247-903-00	CARBON	1M	5%	1/4W
R730	1-216-075-00	METAL CHIP	12K	5%	1/10W
R735	1-216-089-00	METAL GLAZE	47K	5%	1/10W
R736	1-216-057-00	METAL CHIP	2. 2K	5%	1/10W
R737	1-216-057-00	METAL CHIP	2. 2K	5%	1/10W
R738	1-216-057-00	METAL CHIP	2. 2K	5%	1/10W
R739	1-216-057-00	METAL CHIP	2. 2K	5%	1/10W
R740	1-216-057-00	METAL CHIP	2. 2K	5%	1/10W (3002)
R741	1-216-057-00	METAL CHIP	2. 2K	5%	1/10W (3002)
R900	1-216-057-00	METAL CHIP	2. 2K	5%	1/10W
R902	1-216-073-00	METAL CHIP	10K	5%	1/10W
R903	1-216-065-00	METAL CHIP	4. 7K	5%	1/10W
R904	1-216-037-00	METAL CHIP	330	5%	1/10W
R905	1-216-091-00	METAL CHIP	56K	5%	1/10W
R906	1-216-081-00	METAL CHIP	22K	5%	1/10W
R910	1-216-049-00	METAL GLAZE	1K	5%	1/10W

Ref. No.	Part No.	Description	Remark		
R911	1-216-049-00	METAL GLAZE	1K	5%	1/10W
		< VARIABLE RESISTOR >			
RV600	1-238-595-11	RES, ADJ, CARBON 220 (3002)			
		< SWITCH >			
S700	1-571-532-21	SWITCH, TACTIL (RESET)			
		< THERMISTOR >			
TH500	1-809-148-11	THERMISTOR PTH8L07AR2ROM1B510			
		< TUNER UNIT >			
TU1	A-3282-012-A	TUX-006 (E)			
		< VIBRATOR >			
X300	1-579-345-11	VIBRATOR, CERAMIC (16.934MHz)			
X700	1-760-223-11	VIBRATOR, CRYSTAL (4.5MHz)			

*	A-3309-021-A	SERVO BOARD, COMPLETE (TYPE A)			
*	A-3309-227-A	SERVO BOARD, COMPLETE (TYPE B)			

		< CAPACITOR >			
C1	1-107-823-11	CERAMIC CHIP	0.47uF	10%	16V
C2	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C3	1-135-145-11	TANTALUM CHIP	0.47uF	10%	35V
C4	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C5	1-164-182-11	CERAMIC CHIP	0.0033uF	10%	50V
C6	1-163-011-11	CERAMIC CHIP	0.0015uF	10%	50V
C7	1-163-809-11	CERAMIC CHIP	0.047uF	10%	25V
C9	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C10	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C11	1-135-259-11	TANTAL. CHIP	10uF	20%	6.3V
C12	1-163-227-11	CERAMIC CHIP	10PF	0.5PF	50V
C13	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C14	1-163-989-11	CERAMIC CHIP	0.033uF	10%	25V
C15	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C16	1-163-989-11	CERAMIC CHIP	0.033uF	10%	25V
C17	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C18	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C19	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C20	1-107-823-11	CERAMIC CHIP	0.47uF	10%	16V
C21	1-163-809-11	CERAMIC CHIP	0.047uF	10%	25V
C22	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C23	1-135-259-11	TANTAL. CHIP	10uF	20%	6.3V
C24	1-163-125-00	CERAMIC CHIP	220PF	5%	50V
C25	1-107-823-11	CERAMIC CHIP	0.47uF	10%	16V

Ref. No.	Part No.	Description	Remark		
C26	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C27	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C28	1-163-023-00	CERAMIC CHIP	0.015uF	5%	50V
C29	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C30	1-126-603-11	ELECT CHIP	4.7uF	20%	35V
C31	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C32	1-163-023-00	CERAMIC CHIP	0.015uF	5%	50V
C33	1-124-779-00	ELECT CHIP	10uF	20%	16V
C34	1-109-982-11	CERAMIC CHIP	1uF	10%	10V
C35	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C36	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C37	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C38	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C39	1-126-204-11	ELECT CHIP	47uF	20%	16V
C40	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
		< CONNECTOR >			
CN1	1-764-616-12	HOUSING, CONNECTOR(PC BOARD)30P			
CN2	1-565-728-11	CONNECTOR, FPC 17P			
CN3	1-770-347-21	CONNECTOR, FPC 6P			
		< IC >			
IC1	8-752-372-94	IC CXD2507AQ			
IC2	8-752-069-56	IC CXA1782BQ			
IC3	8-759-354-16	IC BA6796FP-T1			
		< CHIP CONDUCTOR >			
JR1	1-216-296-00	CONDUCTOR, CHIP			(3216)
JR2	1-216-296-00	CONDUCTOR, CHIP			(3216)
JR3	1-216-296-00	CONDUCTOR, CHIP			(3216)
JR4	1-216-296-00	CONDUCTOR, CHIP			(3216)
JR5	1-216-296-00	CONDUCTOR, CHIP			(3216)
JR6	1-216-296-00	CONDUCTOR, CHIP			(3216)
JR7	1-216-296-00	CONDUCTOR, CHIP			(3216)
JR8	1-216-296-00	CONDUCTOR, CHIP			(3216)
JR9	1-216-296-00	CONDUCTOR, CHIP			(3216)
JR10	1-216-296-00	CONDUCTOR, CHIP			(3216)
JR11	1-216-296-00	CONDUCTOR, CHIP			(3216)
JR12	1-216-296-00	CONDUCTOR, CHIP			(3216)
JR13	1-216-296-00	CONDUCTOR, CHIP			(3216)
JR14	1-216-296-00	CONDUCTOR, CHIP			(3216)
JR15	1-216-296-00	CONDUCTOR, CHIP			(3216)
JR16	1-216-296-00	CONDUCTOR, CHIP			(3216)
JR17	1-216-296-00	CONDUCTOR, CHIP			(3216)
JR18	1-216-296-00	CONDUCTOR, CHIP			(3216)
JR19	1-216-296-00	CONDUCTOR, CHIP			(3216)
JR20	1-216-296-00	CONDUCTOR, CHIP			(3216)
JR21	1-216-296-00	CONDUCTOR, CHIP			(3216)

SERVO

Ref. No.	Part No.	Description	Remark
JR22	1-216-296-00	CONDUCTOR, CHIP	(3216)
JR23	1-216-296-00	CONDUCTOR, CHIP	(3216)
JR24	1-216-296-00	CONDUCTOR, CHIP	(3216)
JR25	1-216-296-00	CONDUCTOR, CHIP	(3216)
JR26	1-216-296-00	CONDUCTOR, CHIP	(3216)
JR27	1-216-296-00	CONDUCTOR, CHIP	(3216)
JR28	1-216-296-00	CONDUCTOR, CHIP	(3216)
JR29	1-216-296-00	CONDUCTOR, CHIP	(3216)
JR30	1-216-296-00	CONDUCTOR, CHIP	(3216)
JR31	1-216-296-00	CONDUCTOR, CHIP	(3216)
JR32	1-216-296-00	CONDUCTOR, CHIP	(3216)
JR33	1-216-296-00	CONDUCTOR, CHIP	(3216)
JR34	1-216-296-00	CONDUCTOR, CHIP	(3216)
JR35	1-216-296-00	CONDUCTOR, CHIP	(3216)
JR36	1-216-296-00	CONDUCTOR, CHIP	(3216)
JR37	1-216-296-00	CONDUCTOR, CHIP	(3216)
JR38	1-216-296-00	CONDUCTOR, CHIP	(3216)
JR39	1-216-296-00	CONDUCTOR, CHIP	(3216)
JR40	1-216-296-00	CONDUCTOR, CHIP	(3216)
JR41	1-216-296-00	CONDUCTOR, CHIP	(3216)
JR42	1-216-296-00	CONDUCTOR, CHIP	(3216)
JR43	1-216-296-00	CONDUCTOR, CHIP	(3216)
JR44	1-216-296-00	CONDUCTOR, CHIP	(3216)
JR45	1-216-296-00	CONDUCTOR, CHIP	(3216)
JR46	1-216-296-00	CONDUCTOR, CHIP	(3216)
JR47	1-216-296-00	CONDUCTOR, CHIP	(3216)
JR48	1-216-296-00	CONDUCTOR, CHIP	(3216)
JR49	1-216-296-00	CONDUCTOR, CHIP	(3216)
JR50	1-216-296-00	CONDUCTOR, CHIP	(3216)
< COIL >			
L1	1-412-058-11	INDUCTOR CHIP 10uH	
L2	1-412-058-11	INDUCTOR CHIP 10uH	
L3	1-412-058-11	INDUCTOR CHIP 10uH	
< TRANSISTOR >			
Q1	8-729-904-60	TRANSISTOR DTB113ZK	
Q2	8-729-904-86	TRANSISTOR 2SB1197K-Q	
< RESISTOR >			
R1	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R2	1-216-097-00	METAL GLAZE 100K 5% 1/10W	
R3	1-216-121-00	METAL GLAZE 1M 5% 1/10W	
R4	1-216-061-00	METAL CHIP 3.3K 5% 1/10W	
R5	1-216-061-00	METAL CHIP 3.3K 5% 1/10W	
R6	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R7	1-216-009-00	METAL CHIP 22 5% 1/10W	
R8	1-216-119-00	METAL CHIP 820K 5% 1/10W	
R9	1-216-119-00	METAL CHIP 820K 5% 1/10W	

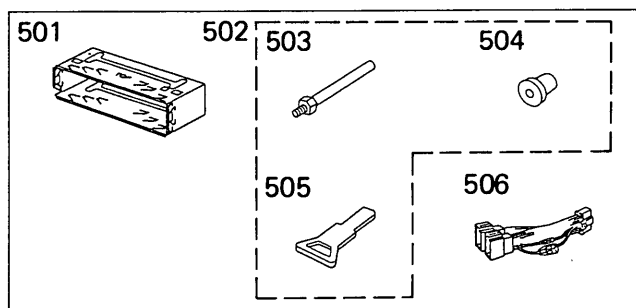
Ref. No.	Part No.	Description	Remark
R10	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R11	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R14	1-216-085-00	METAL CHIP 33K 5% 1/10W	
R15	1-216-085-00	METAL CHIP 33K 5% 1/10W	
R16	1-216-077-00	METAL CHIP 15K 5% 1/10W	
R17	1-216-081-00	METAL CHIP 22K 5% 1/10W	
R19	1-216-079-00	METAL CHIP 18K 5% 1/10W	
R20	1-216-101-00	METAL GLAZE 150K 5% 1/10W	(TYPE B)
R20	1-216-105-00	METAL GLAZE 220K 5% 1/10W	(TYPE A)
R21	1-216-101-00	METAL GLAZE 150K 5% 1/10W	(TYPE B)
R21	1-216-105-00	METAL GLAZE 220K 5% 1/10W	(TYPE A)
R22	1-216-085-00	METAL CHIP 33K 5% 1/10W	
R23	1-216-121-00	METAL GLAZE 1M 5% 1/10W	
R24	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R27	1-216-295-00	CONDUCTOR, CHIP (2012)	
R28	1-216-101-00	METAL CHIP 150K 5% 1/10W	
R29	1-216-097-00	METAL GLAZE 100K 5% 1/10W	
R30	1-216-097-00	METAL GLAZE 100K 5% 1/10W	
R31	1-216-081-00	METAL CHIP 22K 5% 1/10W	
R32	1-216-109-00	METAL CHIP 330K 5% 1/10W	
R33	1-216-105-00	METAL GLAZE 220K 5% 1/10W	
R34	1-216-009-00	METAL CHIP 22 5% 1/10W	
R35	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
R36	1-216-097-00	METAL GLAZE 100K 5% 1/10W	
R37	1-216-117-00	METAL CHIP 680K 5% 1/10W	
R38	1-216-109-00	METAL CHIP 330K 5% 1/10W	
R39	1-216-101-00	METAL CHIP 150K 5% 1/10W	
R40	1-216-114-00	METAL GLAZE 510K 5% 1/10W	
R41	1-216-091-00	METAL CHIP 56K 5% 1/10W	
R42	1-216-107-00	METAL CHIP 270K 5% 1/10W	
R43	1-216-097-00	METAL GLAZE 100K 5% 1/10W	
R44	1-216-085-00	METAL CHIP 33K 5% 1/10W	
R45	1-216-081-00	METAL CHIP 22K 5% 1/10W	
R46	1-216-097-00	METAL GLAZE 100K 5% 1/10W	
R47	1-216-105-00	METAL GLAZE 220K 5% 1/10W	
R48	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R49	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
R50	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
R51	1-216-295-00	CONDUCTOR, CHIP (2012)	
< VARIABLE RESISTOR >			
RV1	1-238-091-11	RES, ADJ, CERMET 22K	
RV4	1-238-091-11	RES, ADJ, CERMET 22K	

Ref. No.	Part No.	Description	Remark
*	1-659-834-11	SUB BOARD *****	
		< CONNECTOR >	
CN1	1-770-347-21	CONNECTOR, FPC 6P *****	
		MISCELLANEOUS *****	
15	1-776-527-11	CORD (WITH CONNECTOR) (ISO) (POWER)	
205	1-659-880-11	MOTOR FLEXIBLE BOARD	
△208	8-848-402-02	OPTICAL PICK-UP KSS-520A	
209	1-659-881-11	PICK-UP FLEXIBLE BOARD	
F501	1-532-982-11	FUSE (BLADE TYPE) (AUTO FUSE) (15A) (TYPE B)	
F501	1-533-331-11	FUSE (BLADE TYPE) (AUTO FUSE) (15A) (TYPE A)	
M901	X-3371-664-1	MOTOR ASSY (SPINDLE)	
M902	A-3291-574-A	MOTOR ASSY, SLED (TYPE A)	
M902	A-3291-674-A	MOTOR ASSY, SLED (TYPE B)	
M903	A-3291-576-A	MOTOR SUB ASSY, LO (LOADING) (TYPE A)	
M903	A-3291-676-A	MOTOR SUB ASSY, LO (LOADING) (TYPE B) *****	
		***** HARDWARE LIST *****	
#1	7-621-773-95	SCREW +PTT 2. 6X6 (S)	
#2	7-685-791-01	SCREW +PTT 2. 6X5 (S) CZn-N	
#3	7-628-253-00	SCREW +PS 2X4	
#4	7-621-772-10	SCREW +B 2X4	
#5	7-621-770-XX	SCREW +PTT 2. 6X8 (S)	
#6	7-685-106-19	SCREW +P 2X10 TYPE 2 NON-SLIT	
#7	7-627-553-37	PRECISION SCREW +P 2X3 TYPE 3	
#8	7-627-553-17	PRECISION SCREW +P 2X2 TYPE 3	
#9	7-627-000-00	SCREW, PRECISION +P 1. 7X2. 2 TYPE 3	
#10	7-627-850-28	SCREW, PRECISION +P 1. 4X3	
#11	7-621-770-67	SCREW +PTT 2. 6X6 (S) *****	
		ACCESSORIES & PACKING MATERIALS *****	
	3-856-316-11	MANUAL, INSTRUCTION (ENGLISH, FRENCH, SPANISH, DUTCH, SWEDISH, PORTUGUESE) (3000)	
	3-856-316-21	MANUAL, INSTRUCTION (DANISH, FINNISH) (3000)	
	3-856-316-31	MANUAL, INSTRUCTION (ENGLISH, FRENCH, GERMAN, ITALIAN) (3002)	

Ref. No.	Part No.	Description	Remark
	3-856-317-11	MANUAL, INSTRUCTION, INSTALL (ENGLISH, FRENCH) (3000)	
	3-856-317-21	MANUAL, INSTRUCTION, INSTALL (SPANISH, DUTCH, SWEDISH, PORTUGUESE) (3000)	
	3-856-317-31	MANUAL, INSTRUCTION, INSTALL (ENGLISH, FRENCH, GERMAN, ITALIAN) (3002)	
	3-856-317-41	MANUAL, INSTRUCTION, INSTALL (DANISH, FINNISH) (3000)	
	X-3369-665-1	CASE ASSY (for FRONT PANEL) *****	

MOUNTING HARDWARE

501	X-3372-174-1	FRAME ASSY
502	X-3370-077-1	SCREW ASSY (AE. KEY), FITTING
503	3-386-828-01	SCREW, FITTING
504	3-349-410-01	BUSHING
505	3-388-078-01	KEY
506	1-776-527-11	CORD (WITH CONNECTOR) (ISO) (POWER)



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

CDX-3000/3002

SONY[®] SERVICE MANUAL

AEP Model

UK Model

CDX-3000

German Model

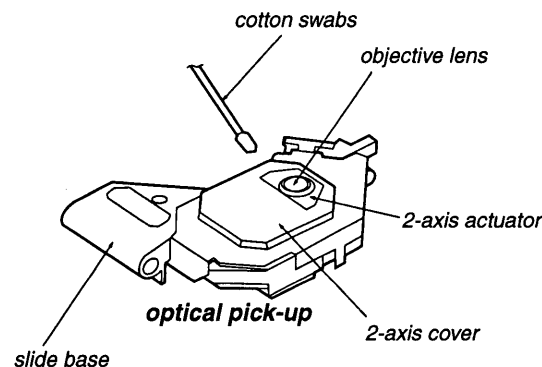
CDX-3002

SUPPLEMENT-1

File this supplement with the service manual.

Subject : Notes on Cleaning The Objective Lens

NOTES ON CLEANING THE OBJECTIVE LENS



Apply CD lens cleaner B-4 (Part No.: J-2501-000-A) to cotton swabs (narrow type) (Part No.: J-2501-023-A) to be lightly wet. Use a force (about 5 g (0.18 oz)) to make the objective lens in contact with the bottom lightly, and clean the lens by spirals as following below. Replace the cotton swab and repeat this cleaning two or three times.



Notes:

Do not force to push the objective lens. Otherwise, the plate spring supporting the objective lens will be bent, causing a deteriorated RF waveform.

Never touch anything other than the objective lens. Otherwise, a significant deterioration occurs in the RF waveform.

CDX-3000/3002

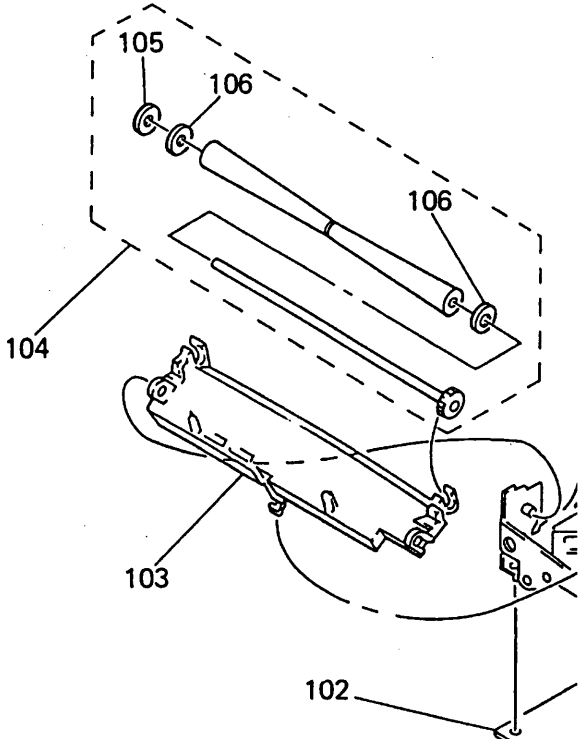
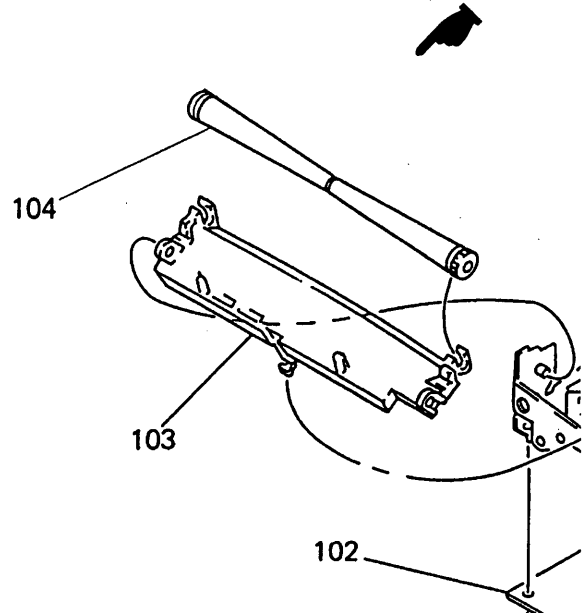
SONY® SERVICE MANUAL

AEP Model
UK Model
CDX-3000
German Model
CDX-3002

CORRECTION-1

Correct your service manual as shown below.

 : indicates corrected portion.

Page	INCORRECT			CORRECT		
38	<u>No.</u>	<u>Part No.</u>	<u>Description</u>	<u>No.</u>	<u>Part No.</u>	<u>Description</u>
	105	3-701-439-11	WASHER			
	*106	3-322-413-01	SPACER, INSULATING			
						

(SPM-96051)