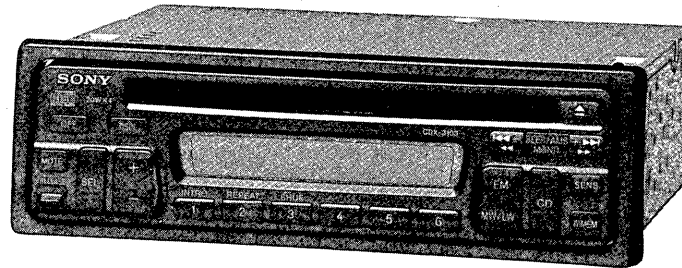


CDX-3103

SERVICE MANUAL

East European Model



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	65.0-74.0 MHz 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)
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 μ V LW: 50 μ V

Power amplifier section

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

General

Output lead	Power antenna control lead/Power amplifier control lead
Tone controls	Bass $\pm$ 10 dB at 100 Hz Treble $\pm$ 10 dB at 10 kHz
Power requirements	12 V DC car battery (negative ground)
Dimensions	Approx. 188 $\times$ 58 $\times$ 180 mm (w/h/d)
Mounting dimension	Approx. 183 $\times$ 53 $\times$ 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®



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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.

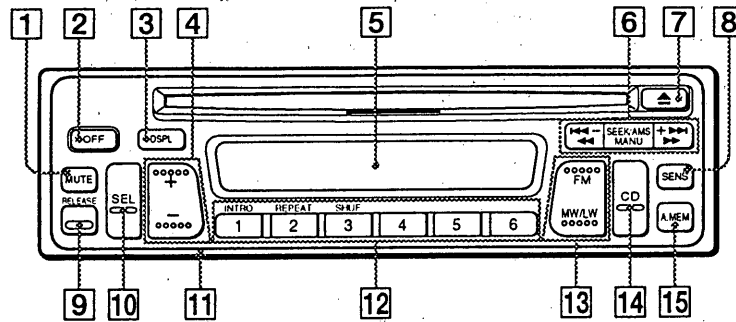
SAFETY-RELATED COMPONENT WARNING!!

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



Refer to the pages in ● for details.

- 1 MUTE button 9
- 2 OFF button 4 5 6 9
- 3 DSPL (display mode change/time set) button 5 6
- 4 +/- (volume/bass/treble/balance/fader control) button 5 9
- 5 Display window
- 6 SEEK/AMS/MANU (automatic tuning/Automatic Music Sensor/preset search) button 6 7 8
- 7 ▲ (eject) button 6 9
- 8 SENS (sensitivity adjust) button 7
- 9 RELEASE (front panel release) button 4 10
- 10 SEL (control mode select/character set) button 5 9
- 11 Reset button (located on the front side of the unit hidden by the front panel) 4

- 12 During radio reception:
Preset number buttons 8
- During CD playback:
 - 1 INTRO (intro scan) button 6
 - 2 REPEAT (repeat play) button 6
 - 3 SHUF (shuffle play) button 7
- 13 FM/MW/LW (radio on/band select) button 6 7
- 14 CD (CD play) button 6
- 15 A.MEM (Automatic Memory function) button 8

Installation

Montaż

Инсталиране

Üzembelyezés

Установка

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°.

Zasady bezpieczeństwa

- Nie należy manipulować w czterech otworach znajdujących się na górnej części obudowy radia. Służą one jedynie do strojenia radia przez fachowców (w punkcie serwisowym).
- Miejsce do wmontowania radia należy wybrać z namysłem. Sprzęt nie może przeszkadzać kierowcy podczas jazdy.
- Nie należy umieszczać sprzętu w miejscach narażonych na działanie wysokich temperatur, jak na przykład w wyniku bezpośredniego nasłonecznienia lub nawiewu gorącego powietrza z ogrzewania samochodu, lub w miejscach silnie zakurzonych, silnie zabrudzonych lub narażonych na silne wstrząsy.
- Dla zapewnienia bezpiecznego i prawidłowego montażu należy korzystać jedynie z załączonych części montażowych.

Wymlerzenie kąta montażowego

Kąt montażowy powinien wynosić mniej niż 20°.

Мерки за безопасност

- Не пипайте вътре в четирите отвора, разположени на горната страна на апарата. Те са за настройка на радиоприемника, която се извършва само от сервизни техници.
- Изберете внимателно мястото за инсталиране, така че апаратът да не пречи на водача по време на шофиране.
- Избягвайте да инсталирате апарата там, където той би могъл да е подложен на високи температури като места с директна слънчева светлина или горещ въздух от парното, или където ще е подложен на прах, замърсяване или силни вибрации.
- Използвайте само доставените детайли за монтаж за сигурно и безопасно инсталиране.

Настройка на ъгъла за монтаж

Нагласете ъгъла на монтаж да бъде по-малък от 20 градуса.

Biztonsági előírások

- Kérjük ne nyújjon bele a készülék tetején található négy lyukba, ezek ugyanis a rádió behangolására szolgálnak, melyet kizárólag a vevőszolgálat műszaki szakemberei végezhetnek.
- Kérjük gondosan válassza ki a készülék helyét, úgy, hogy az ne akadályozza a vezetői vezetés közben.
- Kérjük olyan helyen helyezze el a készüléket, ahol nincs kitéve magas hőmérsékletnek, tehát közvetlen napfénynek vagy a fűtőegységből kiáramló forró levegőnek és ahol nincs kitéve pornak, ill. erős rázkódásnak.
- A biztonságos üzemeltetés érdekében kérjük, hogy csak a készülékkel szállított szerelő-készletet használja.

A beszerelési szög beállítása

A készüléket max. 20°-os döntéssel szerelje be.

Меры предосторожности

- Не манипулируйте с четырьмя отверстиями на верхней поверхности прибора. Они предназначены для подстройки тюнера, которые должны производиться только специалистами.
- Выберите место установки таким образом, чтобы прибор не препятствовал водителю во время управления автомобилем.
- Предотвращайте установку прибора там, где он может быть подвержен высоким температурам, например, от прямого солнечного света или горячего воздуха из печки, или там, где возможны воздействия пыли, влаги или сильной вибрации.
- Для безопасной установки используйте только входящее в комплект монтажное оборудование.

Подстройка угла монтажа

Угол монтажа выберите меньшим, чем 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 by pulling it towards you as illustrated.

To attach

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

Zdejmowanie i zakładanie przedniej ścianki

Przed zamontowaniem sprzętu proszę zdjąć przednią ściankę.

Zdejmowanie

Przed zdjęciem przedniej ścianki należy wpiw nacisnąć przycisk OFF. Następnie proszę nacisnąć przycisk RELEASE w celu odblokowania przedniej ścianki i następnie proszę ją wyciągnąć pociągając do siebie, zgodnie z rysunkiem.

Zakładanie

Proszę dopasować części ④ przedniej ścianki do części ⑤ radia i docisnąć ściankę, aż do zaskoku.

Как да сваляме и да поставяме предното табло

Преди инсталиране на апарата сваляте предното му табло за управление.

Сваляне

Преди да свалите предното табло за управление обезательно натиснете първо бутона OFF. След това натиснете бутона RELEASE, за да освободите предното табло за управление, като го издърпате към Вас, както е показано на фигурата.

Поставяне

Изравнете детайлите ④ и ⑤ и натиснете предното табло за управление до прещракване.

A kezelőlap kivétele és behelyezése

A készülék kbszerelése előtt vegye le róla a kezelőlapot.

A kezelőlap levétele

A kezelőlap levételé előtt feltétlenül nyomja meg az OFF gombot. Ezután oldja ki a kezelőlapot a RELEASE gomb megnyomásával, majd vegye ki maga felé húzva, az ábrának megfelelően.

A kezelőlap visszatétele

Igazítsa össze az ④-val és ⑤-vel jelölt részeket, majd nyomja a kezelőlapot a készülékhez, amíg be nem pattan.

Как снимать и устанавливать переднюю панель

Перед установкой прибора снимите переднюю панель.

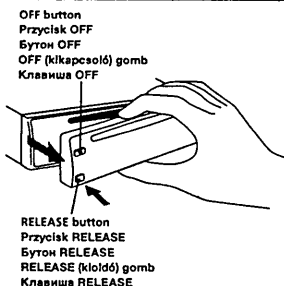
Для снятия

Перед тем, как снять переднюю панель, сначала нажмите клавишу OFF. Затем нажмите клавишу RELEASE, чтобы освободить переднюю панель, и снимите панель, вытягивая ее на себя, как показано на иллюстрации.

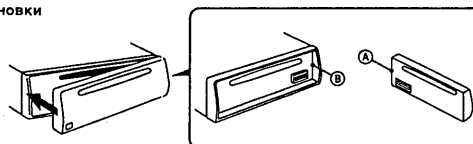
Для установки

Соедините части ④ и ⑤ и нажмите на переднюю панель прибора до щелчка.

To detach
Zdejmowanie
Сваляне
A kezelőlap levétele
Для снятия



To attach
Zakładanie
Поставяне
A kezelőlap visszatétele
Для установки



Mounting Example

Installation in the dashboard

Przykład montażu

####

Пример за монтиране

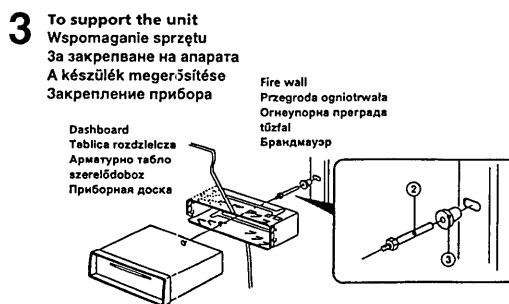
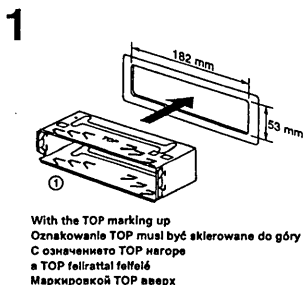
Инсталиране в ерматурното табло

Szerelési példa

A készülék beszerelése szerelődobozal

Пример монтажа

Установка в приборной доске



Connections Wykonanie podłączeń Свързване Csatlakozások Соединения

Caution

- This unit is designed for negative ground 12 V DC operation only.
- Before making connections, disconnect the ground terminal of the car battery to avoid short circuits.
- Connect the yellow and red power input leads only after all other leads have been connected.
- Be sure to connect the red power input lead to the positive 12 V power terminal which is energized when the ignition key is in the accessory position.
- Run all ground wires to a common ground point.

Zasady bezpieczeństwa

- Niniejszy sprzęt jest przeznaczony wyłącznie do pracy przy zasilaniu prądem stałym o 12 V i ujemnym uziemieniu.
- Proszę przed wykonaniem podłączeń odłączyć uziemienie akumulatora, aby zapobiec wystąpieniu zwarcia.
- Żółty i czerwony wejściowy przewód zasilający proszę podłączyć dopiero po podłączeniu wszystkich innych przewodów.
- Czerwony przewód zasilający należy koniecznie podłączyć do końcówki +12 V, która jest zasilana zawsze po przekręceniu kluczyka w stacyjce do położenia, w którym włącza się zasilanie przyrządów.
- Wszystkie przewody uziemiające należy poprowadzić do wspólnego miejsca uziemienia.

Предупреждение

- Този апарат е конструиран за работа само с прав ток 12 V и заземяване на отрицателната клемма.
- Преди да направите свързването откачете заземляващата клемма на акумулатора на автомобила, за да избегнете къси съединения.
- Свържете жълтия и червен захранващ проводници само след като сте свързали всички останали проводници.
- Убедете се, че със сигурност свързвате червения захранващ проводник към положителната клемма с 12 V, към която се подава ток при положение на ключа за запалване за спомагателни уреди.
- Подведете всички заземляващи проводници към обща заземляваща точка.

Figyelem

- Ez a készülék csak 12 V-os negatív földelésű, egyenáramú akkumulátorral üzemeltethető.
- Egy esetleges rövidzárlat elkerülése érdekében vegye le az autó akkumulátorának csatlakozóját a készülék csatlakoztatása előtt.
- A sárga és a piros színű tápvezetékét csak az összes többi vezeték bekötése után csatlakoztassa.
- A piros vezetékét ahhoz a +12V-os csatlakozási ponthoz csatlakoztassa, mely áramot kap, ha az indítókulcs félig van elfordítva.
- Az összes földelővezetékét közös földelőponthoz csatlakoztassa.

Предостережение

- Данный прибор сконструирован только для эксплуатации на минусе с постоянным напряжением 12 В.
- Перед подключением отсоедините заземляющую клемму автомобильного аккумулятора для предотвращения короткого замыкания.
- Желтый и красный сетевые провода подсоединяйте только после того, как все остальные провода подсоединены.
- Красный сетевой провод подключайте к положительной клемме 12 В, которая находится под напряжением, когда ключ зажигания в промежуточной позиции.
- Все заземляющие провода соедините с подходящей точкой на массе.

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.
To turn the accessory position ON or OFF, the clock will be displayed or not. To avoid battery wear, the clock is not displayed when the unit is initialization.

Jeżeli posiadany przez Państwa samochód posiada specjalne położenie po przekręceniu klucza w stacyjce, w którym włącza się zasilanie przyrządów — przełącznik POWER SWITCH

W celu uaktywnienia funkcji Power Select (wybór zasilania) Proszę nacisnąć przycisk OFF trzymając przyciśniętym przycisk SEL.
Przełączenie ustawienia dla uaktywnienia w przypadku specjalnego położenia kluczyka do włączania zasilania przyrządów do pozycji ON lub OFF, powoduje, że wskazania zegara będą albo wyświetlane albo nie będą wyświetlane. Aby zapobiec zbytniemu zużyciu akumulatora, wskazania zegara nie są wyświetlane podczas inicjalizacji sprzętu.

Когато Вашият автомобил няма положение за спомагателни уреди на ключа за запалване — POWER SELECT превключвател

За да задействате функцията POWER SELECT, натиснете бутона OFF като едновременно натискате бутона SEL.
За да включите в положение със спомагателни уреди (ON) или да го изключите (OFF), трябва часовникът да съответно да се показва или да не се показва на екрана. За да се избегне износване на акумулатора, часовникът не се показва при инициализиране на апарата.

Ha autóján készenléti gyújtás pozícióval rendelkezik — POWER SELECT kapcsoló

A tápáram választó funkció bekapcsolása Nyomja meg egyszerre az OFF és a SEL gombot.
Ha ON-ra állítja a funkciót, úgy a készülék mindig kijelzi a pontos időt, ha pedig OFF-ra, úgy csak akkor jelenik meg a pontos időt, ha Ön előzőleg bekapcsolta a készülékét.

Если на Вашем автомобиле есть промежуточная позиция на переключателе зажигания — Переключатель POWER SELECT

Для включения Функции Выбора Питания нажмите клавишу OFF, держа нажатой клавишу SEL. При включении (ON) или выключении (OFF) промежуточной позиции часы будут либо индицироваться, либо нет. Для предотвращения разрядки аккумулятора часы не индицируются, когда прибор в нерабочем состоянии.

Change the position with a jeweler's screwdriver, etc.
Przełączanie przełącznika można dokonać przy pomocy śrubokręta jubilerskiego itp.
Променете положението с помощта на фина отвертка или друг инструмент.
Állítsa be a helyes pozícióra egy mini csavarhúzó, vagy más hasonló eszköz segítségével.
Изменяйте позиция с помощью ювелирной отвертки и т.д.



Reset Button

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

Przycisk Reset

Po zakończeniu montażu i podłączenia radia należy pamiętać o wciśnięciu przy pomocy długopisu itp. przycisku reset (powrót do pierwotnego ustawienia).

Бутон Reset

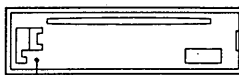
След като завършите инсталирането и свързването, обязательно натиснете бутона за промяна на настройката с върха на химикалка или нещо друго.

Reset gomb

Ha befejezte készüléke beszerelését és csatlakoztatását, feltétlenül nyomja meg a reset gombot egy golyóstollal, vagy más hasonló eszközzel.

Клавиша переустановки

Когда установка и подключения завершены, нажмите клавишу переустановки с помощью шариковой ручки и т.д.



Reset button
Przycisk Reset
Бутон Reset
reset gomb
Клавиша переустановки

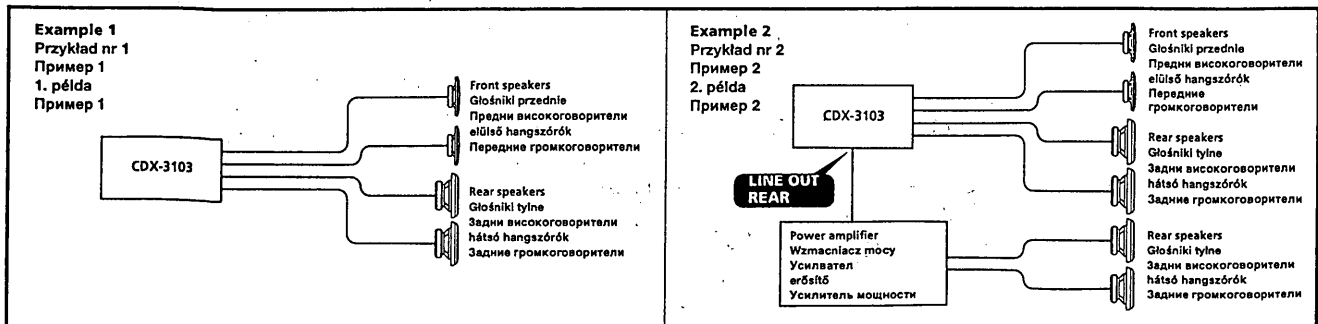
Connection Diagram

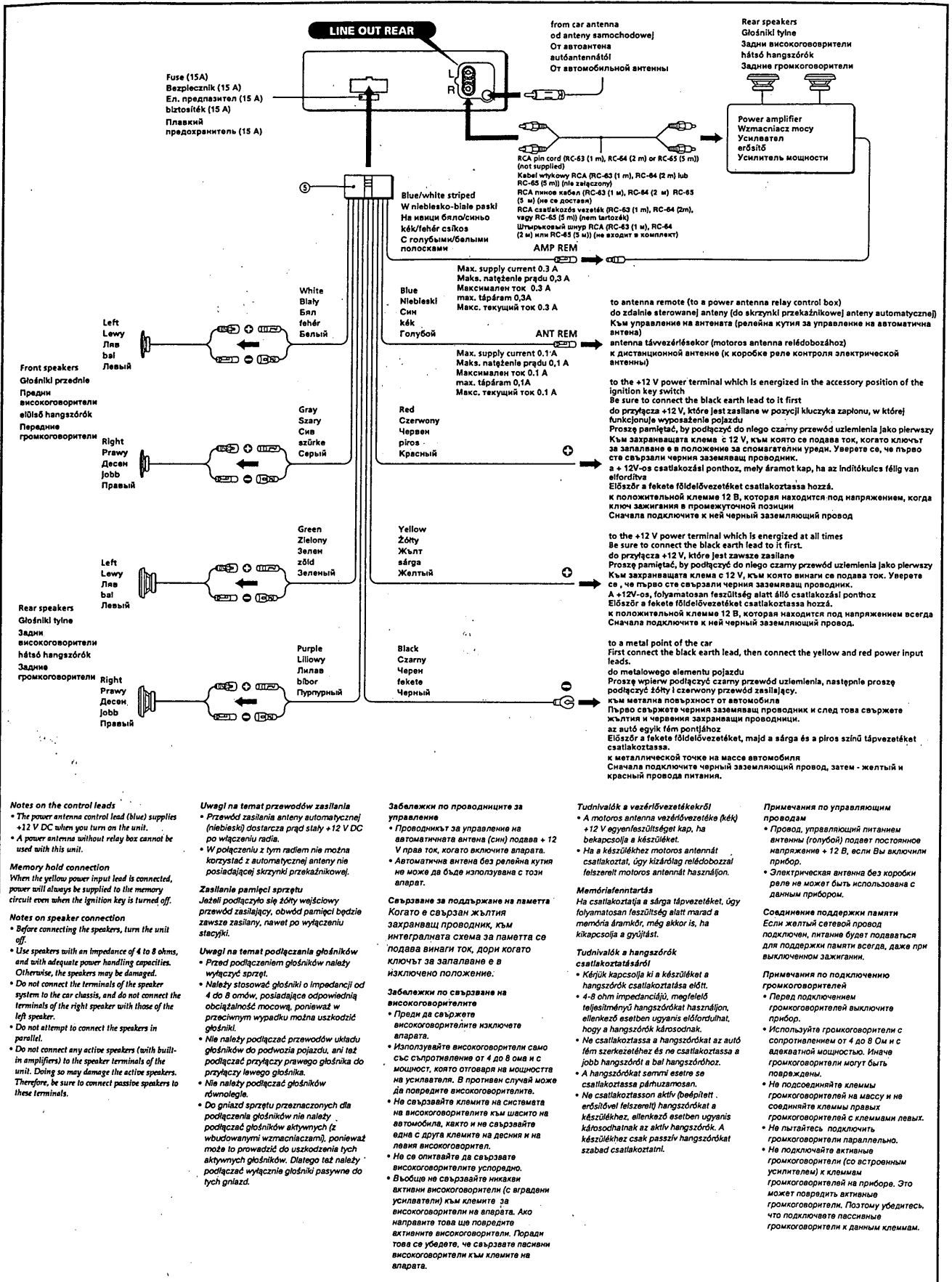
Schemat wykonania podłączeń

Схема на свързване

Csatlakoztatási rajz

Диаграмма соединений

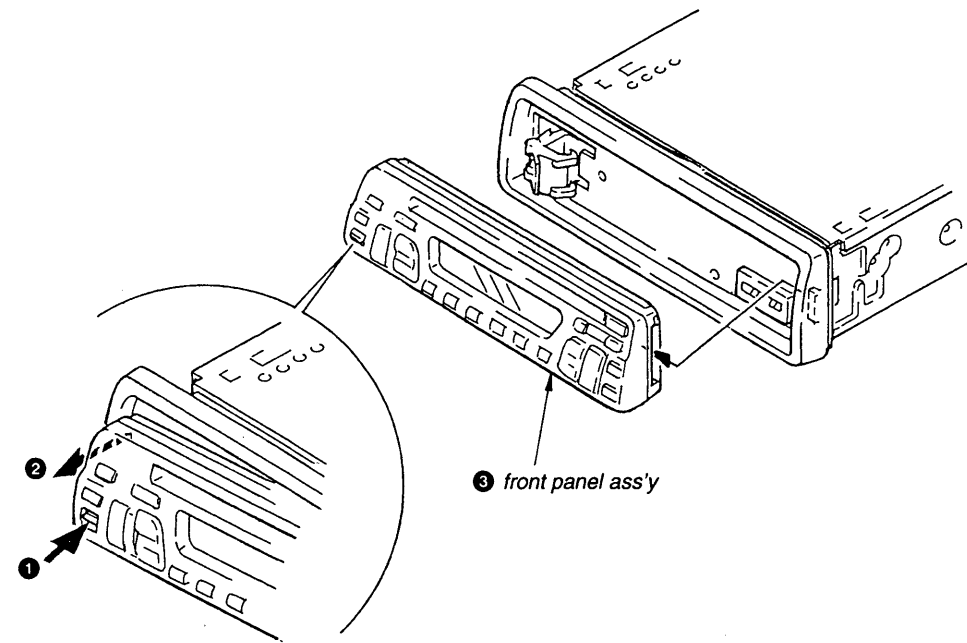




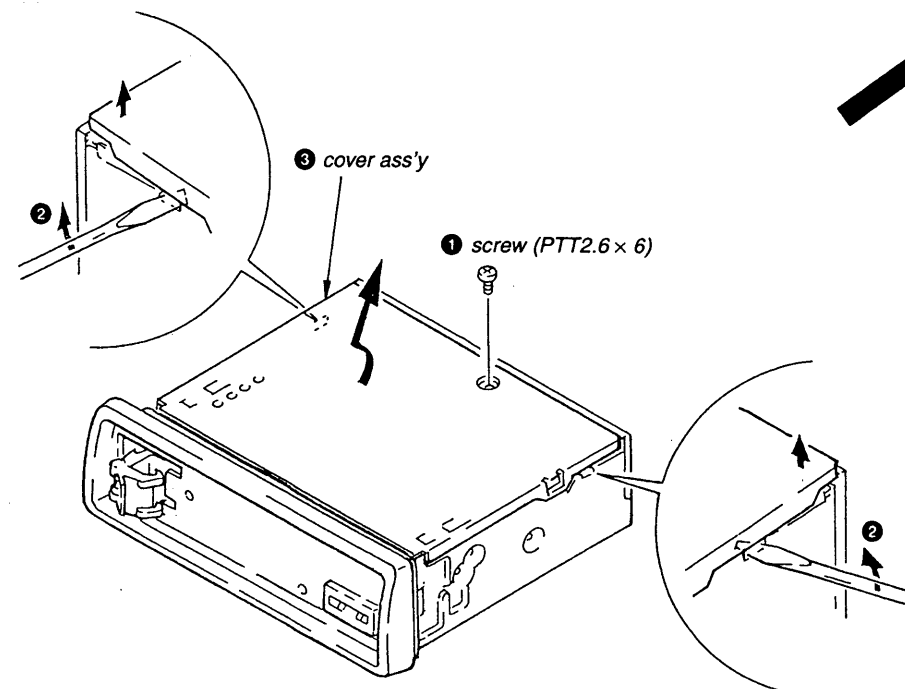
SECTION 2 DISASSEMBLY

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

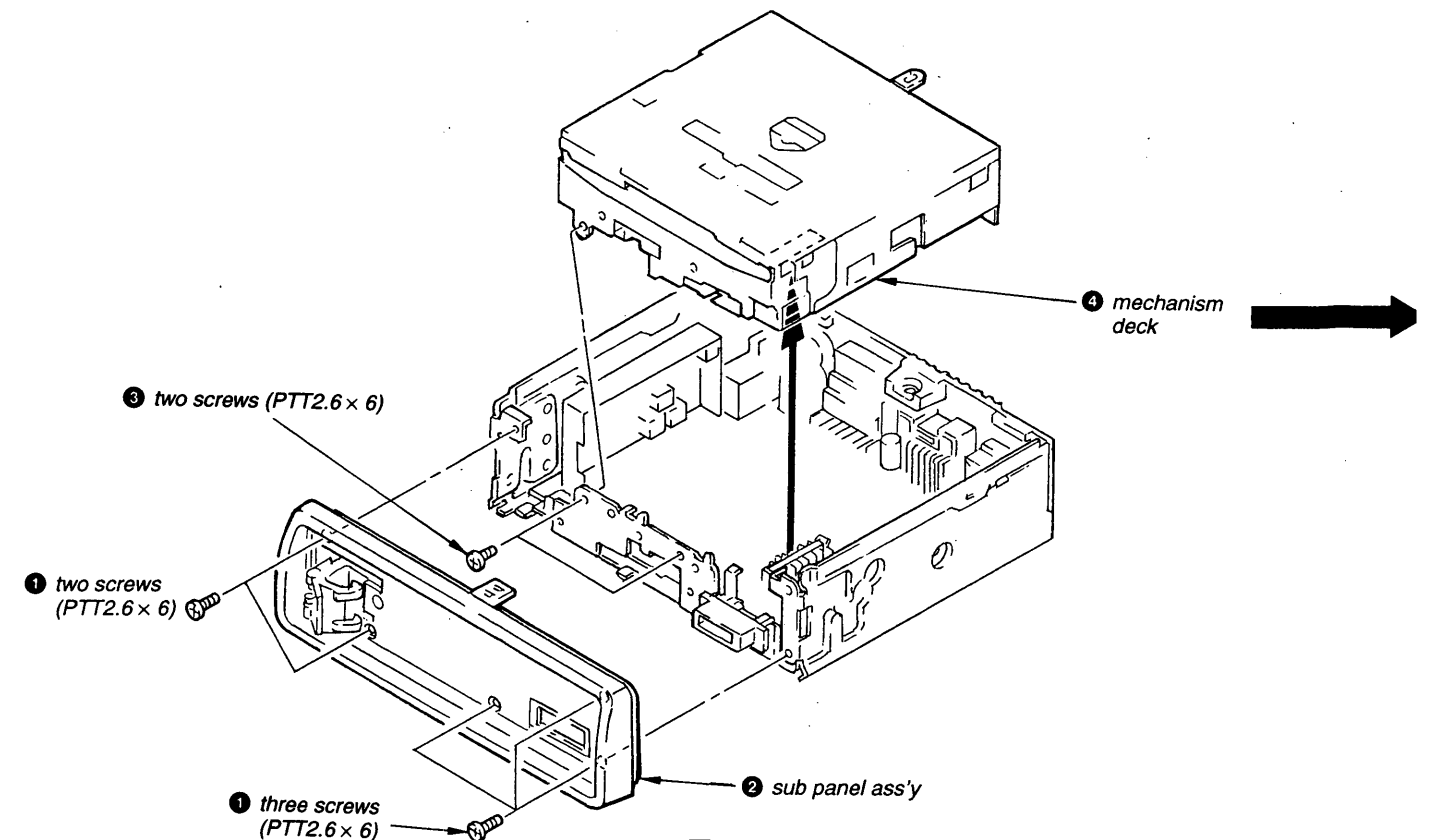
FRONT PANEL ASS'Y



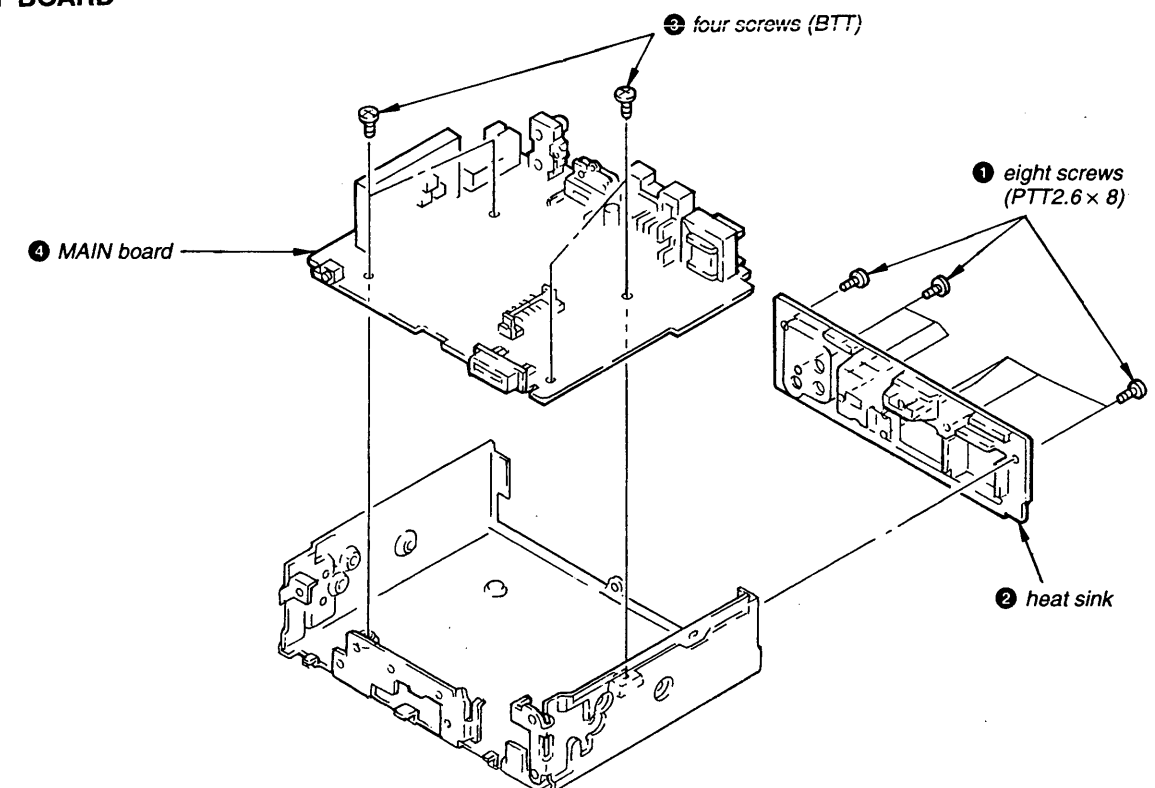
COVER ASS'Y



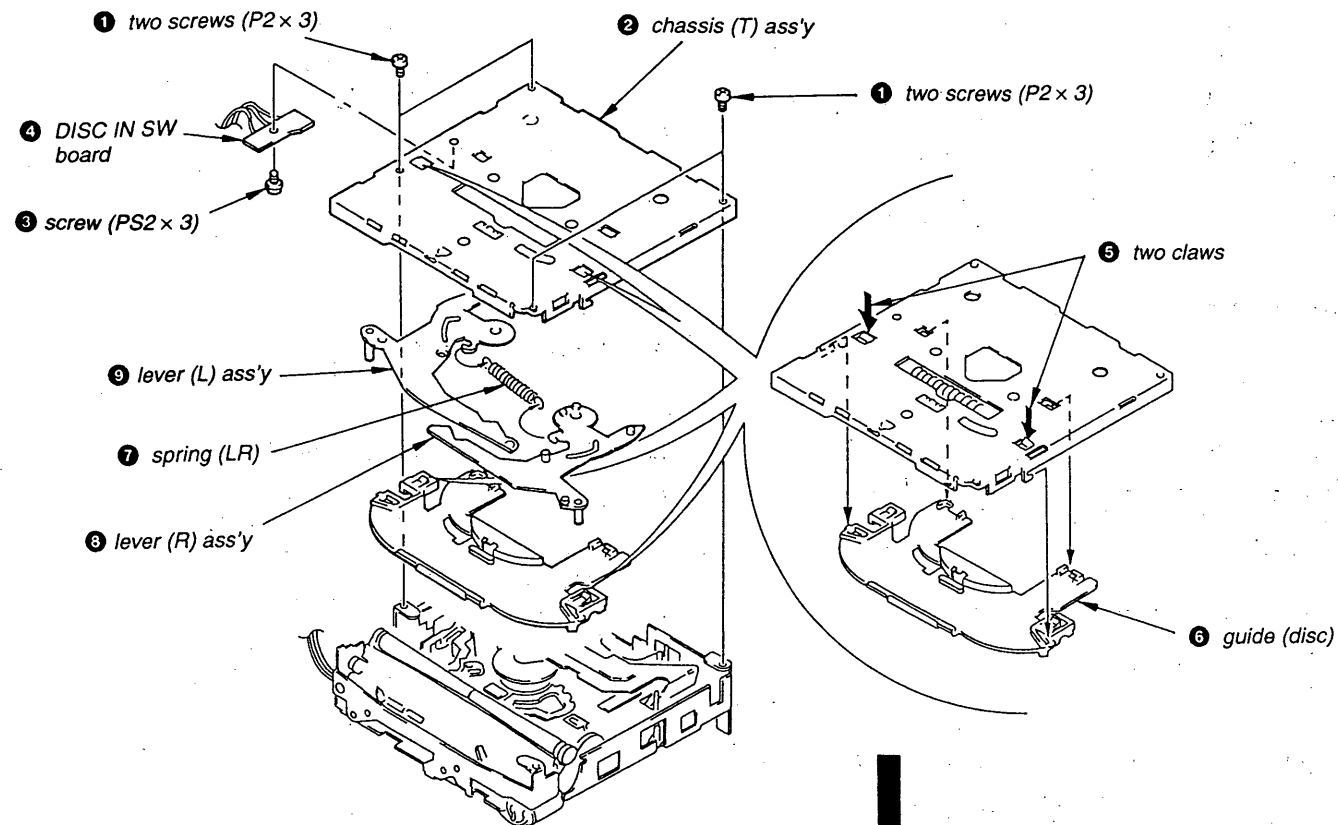
PANEL (SUB) ASS'Y, MECHANISM DECK



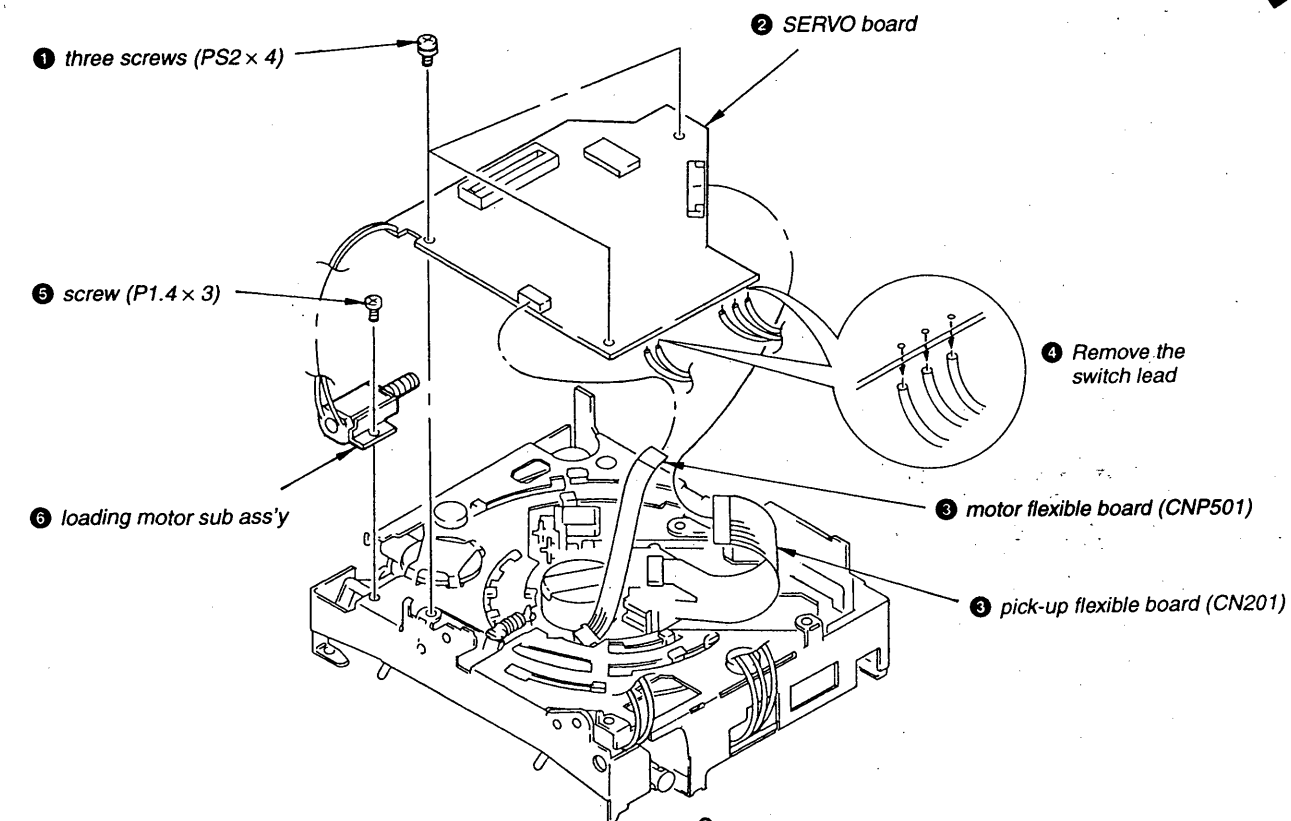
MAIN BOARD



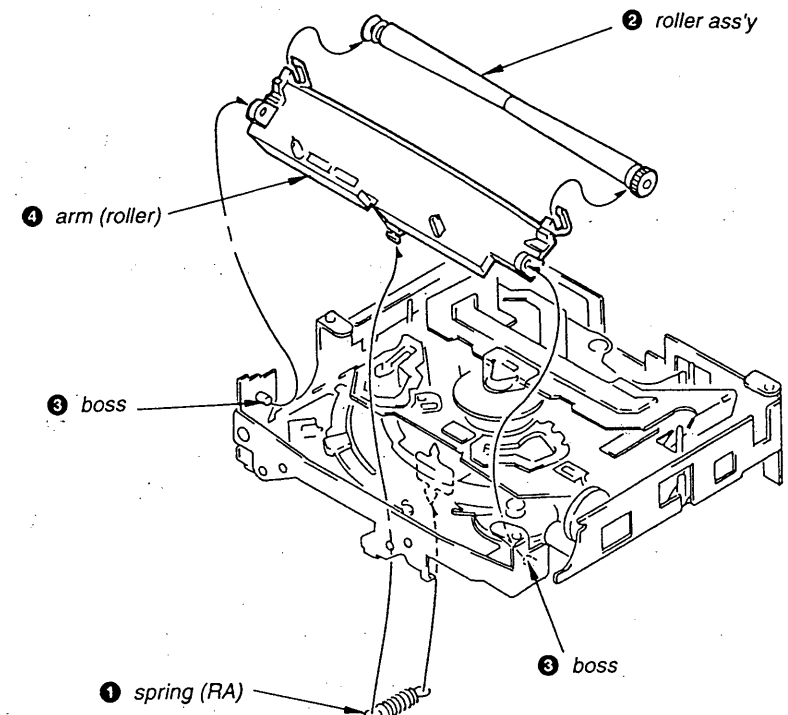
CHASSIS (T) ASS'Y



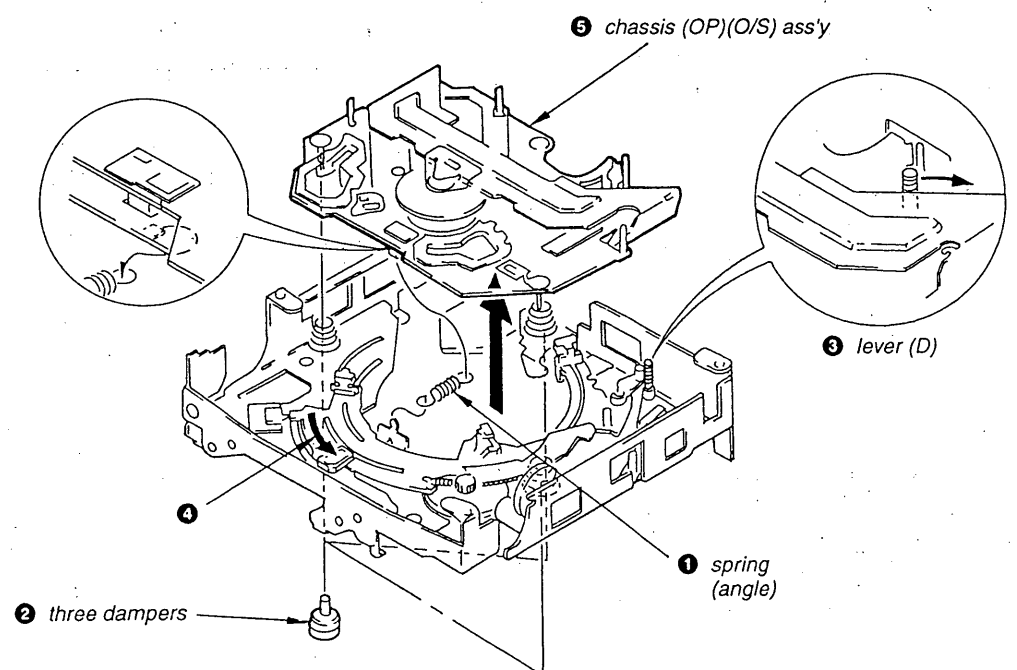
SERVO BOARD, LOADING MOTOR



ROLLER ASS'Y, ARM (ROLLER)



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.

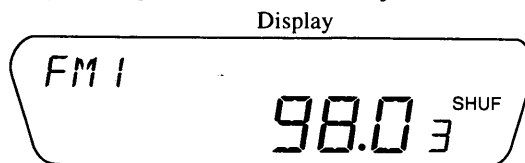
Set the Test Mode

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.

4. Adjust with the volume RV2 on TU101 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.



SECTION 4

ELECTRICAL ADJUSTMENTS

TUNER SECTION

0dB=1μV

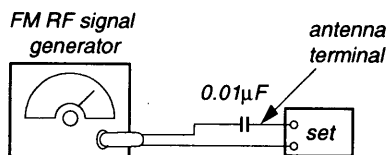
Cautions during repair

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: FM

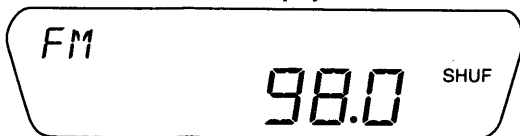


Carrier frequency : 98.0MHz
Output level : 22dB (12.6 μV)
Mode : mono
Modulation : 1kHz, 75kHz deviation

Procedure:

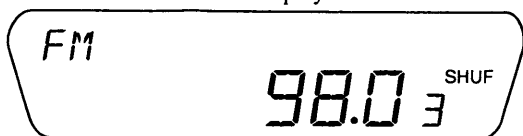
1. Set to the test mode.
2. Push the [FM] button and set to FM.

Display



3. Push the preset [3] button.

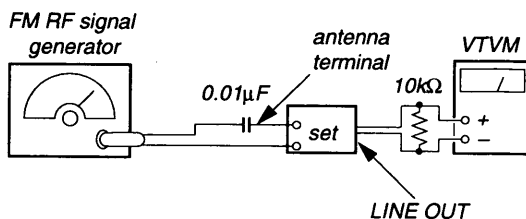
Display



FM Stereo Separation Adjustment

Setting:

FM button: FM



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

Procedure:

FM stereo signal generator output channel	VTVM connection	VTVM reading (dB)
L-CH	L-CH	Ⓐ
R-CH	L-CH	Ⓑ [Ⓐ] Adjust RV4 on TU101 for minimum reading.
R-CH	R-CH	Ⓒ
L-CH	R-CH	Ⓓ [Ⓒ] Adjust RV4 on TU101 for minimum reading.

L-CH Stereo separation: Ⓐ-Ⓑ

R-CH Stereo separation: Ⓒ-Ⓓ

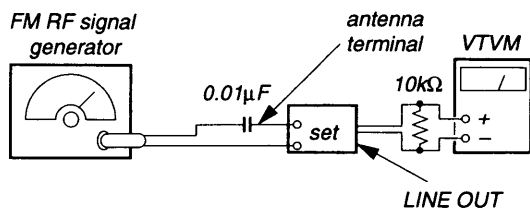
The separations of both channels should be equal.

Specification: Separation more than 27dB

FM Noise Focus Adjustment

Setting:

FM button: FM



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

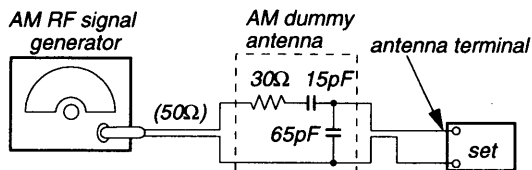
Procedure:

1. Tune the 98.0MHz.
2. The then output level is supposing that (B) dB.
3. Adjust with the volume RV3 on TU101 so that the output level is (B) -30dB then signal generator input set to -19dB.

AM (MW) Auto Scan/Stop Level Adjustment

Setting:

MW/LW button: MW

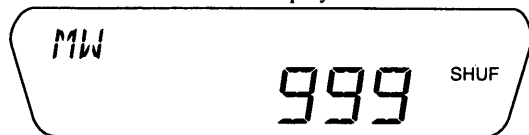


Carrier frequency : 999kHz
30% amplitude
modulation by
1kHz signal
Output level : 35dB (56.2 μV)

Procedure:

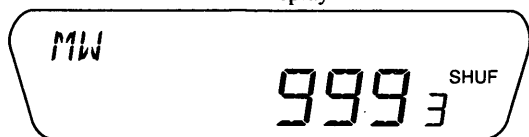
1. Set to the test mode.
2. Push the **[MW/LW]** button and set to MW.

Display



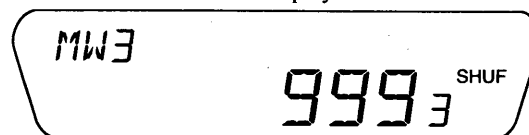
3. Push the preset **[3]** button.

Display



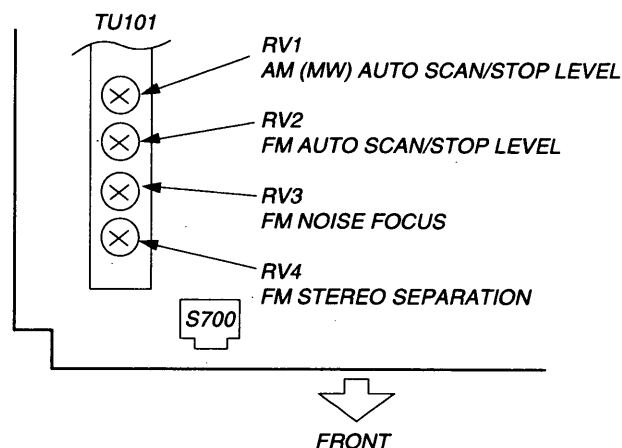
4. Adjust with the volume RV1 on TU101 so that the "MW" indication turns to "MW3" indication on the display win window. But, in case of already indicated "MW3", turn the RV1 so that put out light "3" indication and adjustment.

Display



Adjustment Location:

[MAIN BOARD] (COMPONENT SIDE)



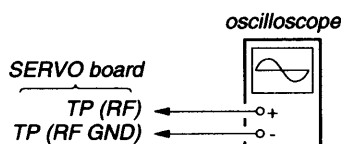
CD SECTION

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.

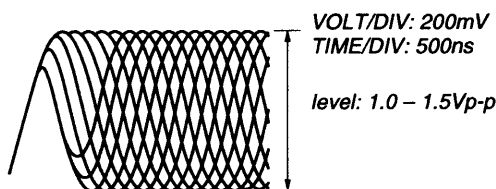


Procedure:

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:

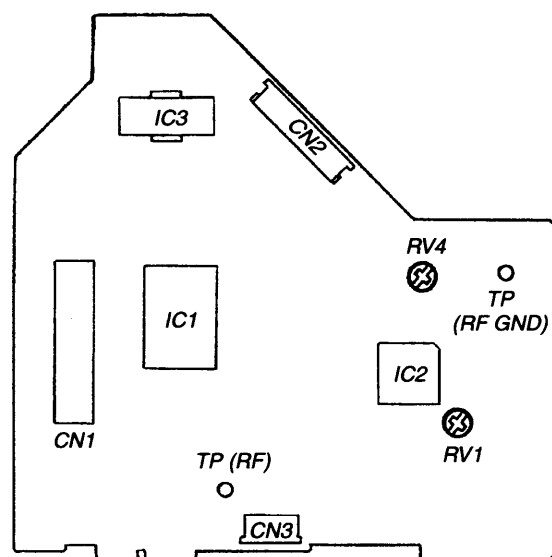
1. Set RV4 to the standard position. (mechanical center)
2. Check whether operation noise (while noise type) caused by the double-axis device (lens section of the optical block) is abnormally loud.

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

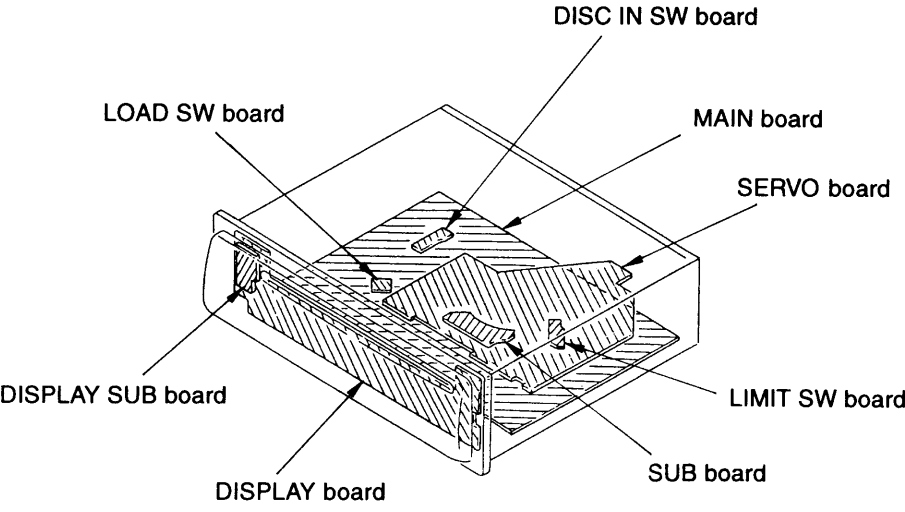
IC700 μ PD17017GF-B21-3B9 (SYSTEM CONTROL)

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	SENS	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	COM2	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.
48	LCDCE	O	LCD serial chip enable output pin.
49-64	-	-	Not used.
65	TEST SW	I	TEST mode direct setting pin.
66	BAND SW	I	Destination of tuner setting input pin. "H": 10k step (Not used)
67	AREA2 SW	I	Destination setting pin. (Not used)
68	AREA1 SW	I	Destination setting pin. (Not used)
69,70	-	-	Not used.
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 –

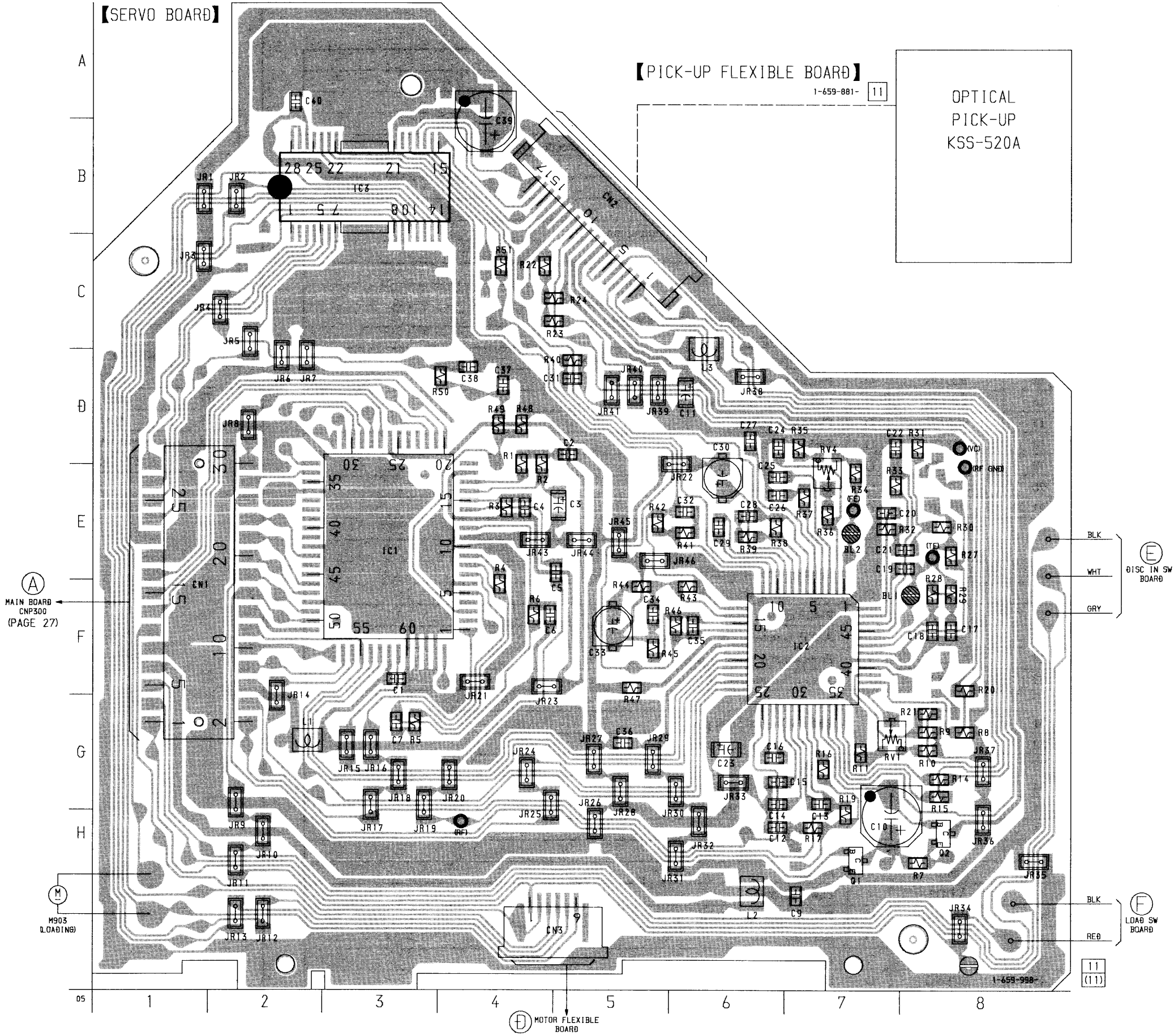
• Circuit Boards Location



• 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.

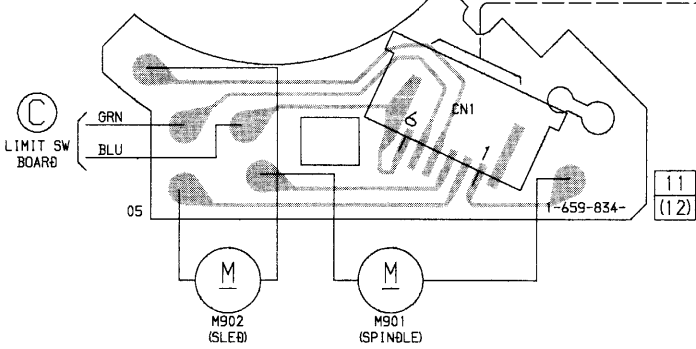


【PICK-UP FLEXIBLE BOARD】

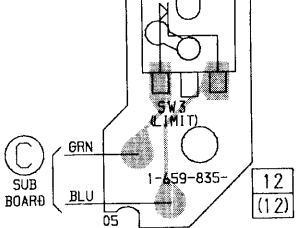
1-659-881-11

OPTICAL
PICK-UP
KSS-520A

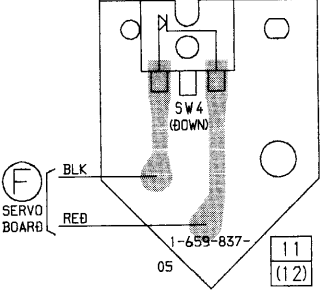
【SUB BOARD】



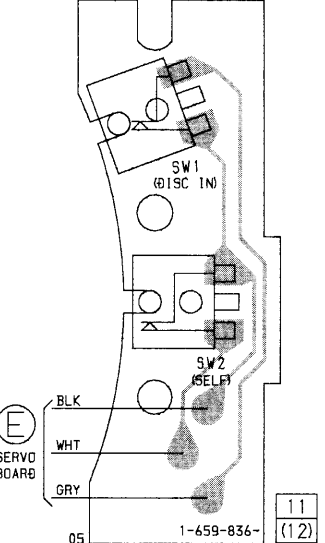
【LIMIT SW BOARD】



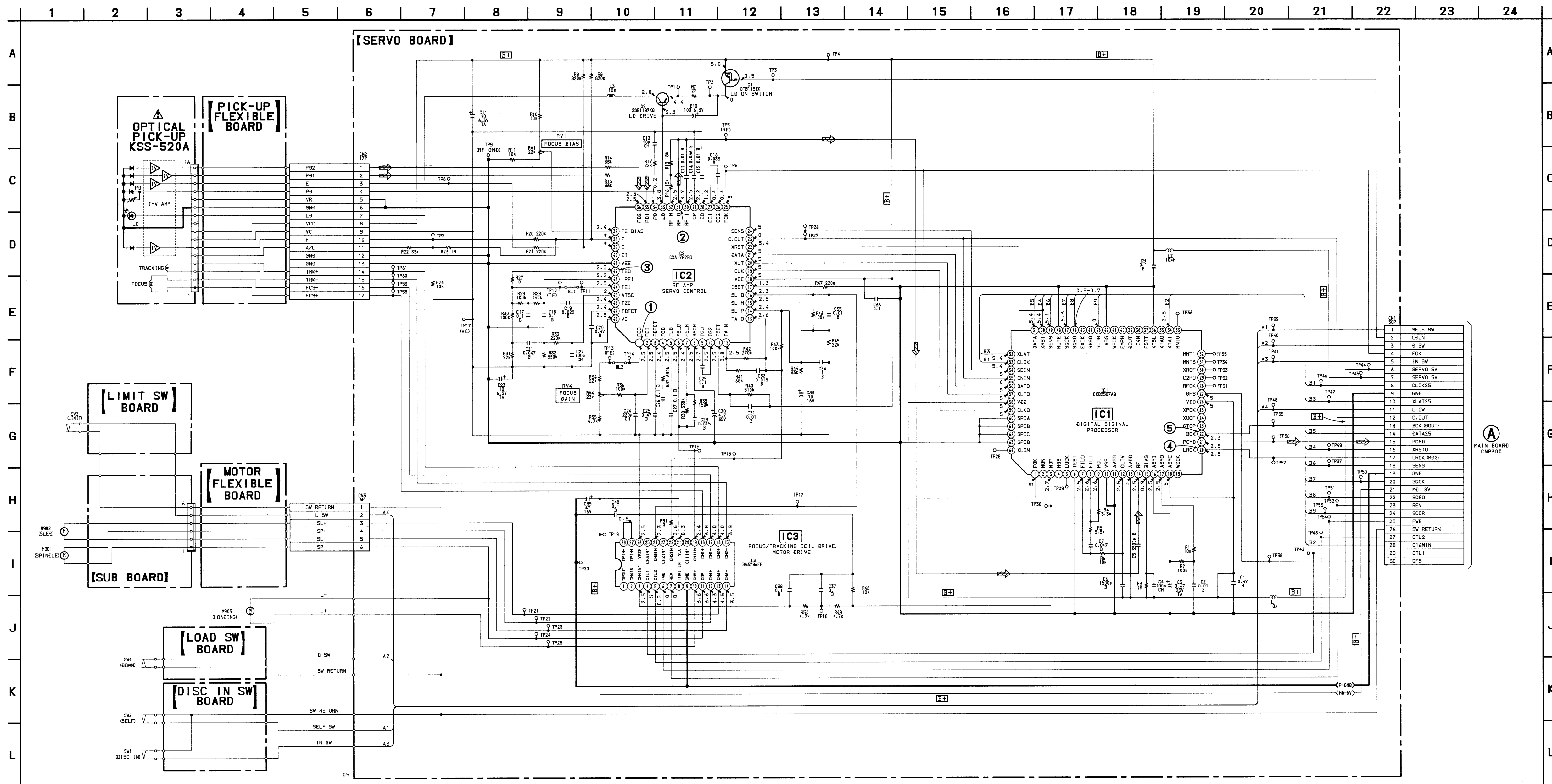
【LOAD SW BOARD】



【DISC IN SW BOARD】



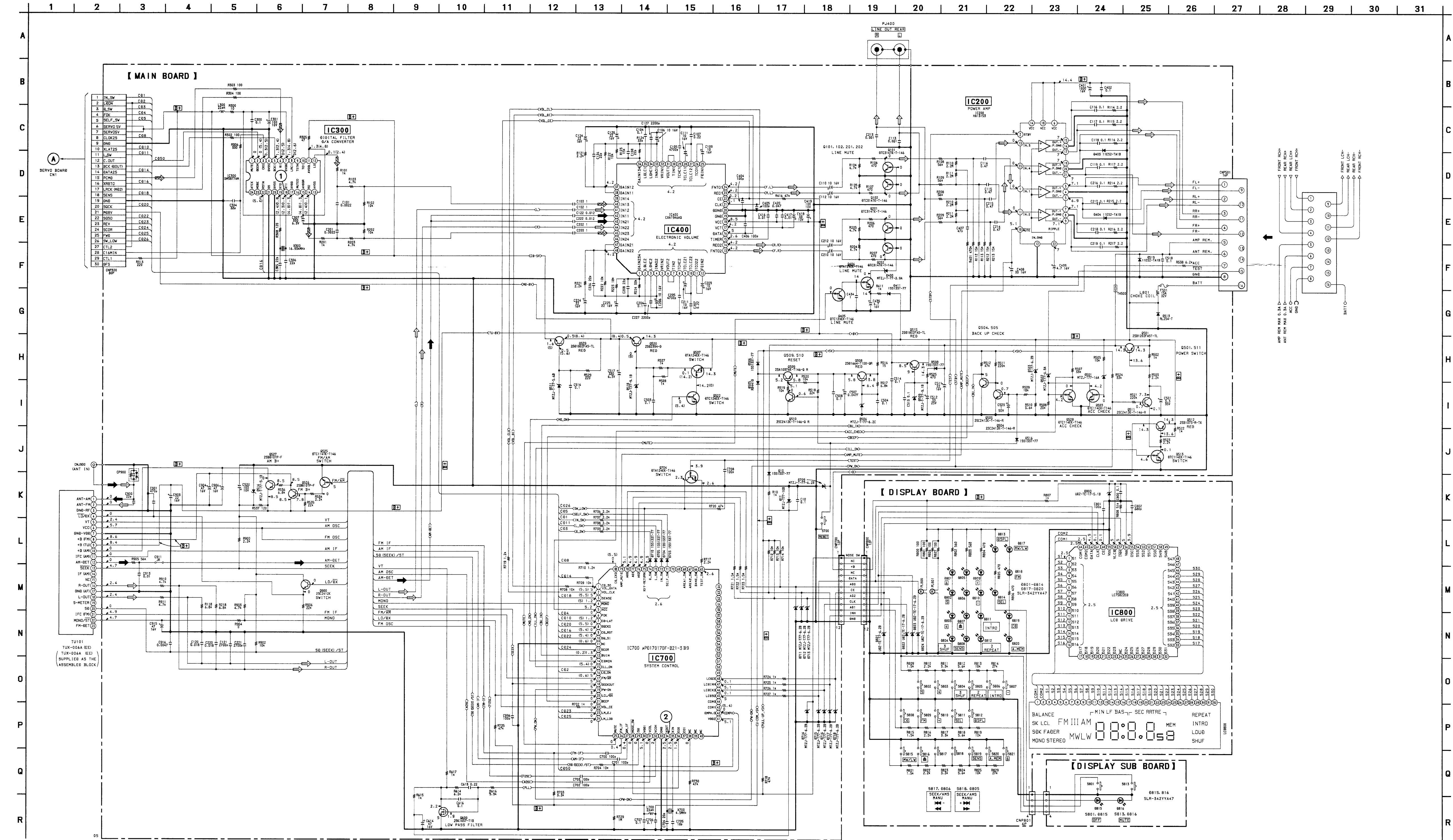
5-3. SCHEMATIC DIAGRAM - MECHANISM DECK Section - • See page 30 for IC Block Diagrams.



- 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.

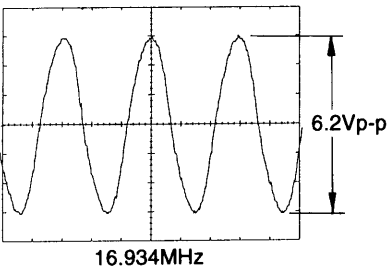
Note: The components identified by mark Δ or dotted line with mark Δ are critical for safety. Replace only with part number specified.

- Δ : B+ Line.
- Δ : adjustment for repair.
- Power voltage is dc 14.4 V 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 M Ω /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.
- Δ : CD

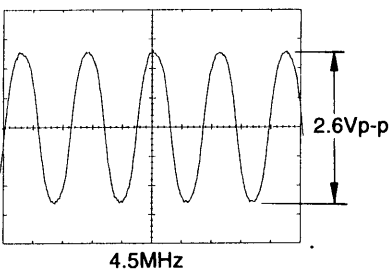


• Waveforms

① IC300

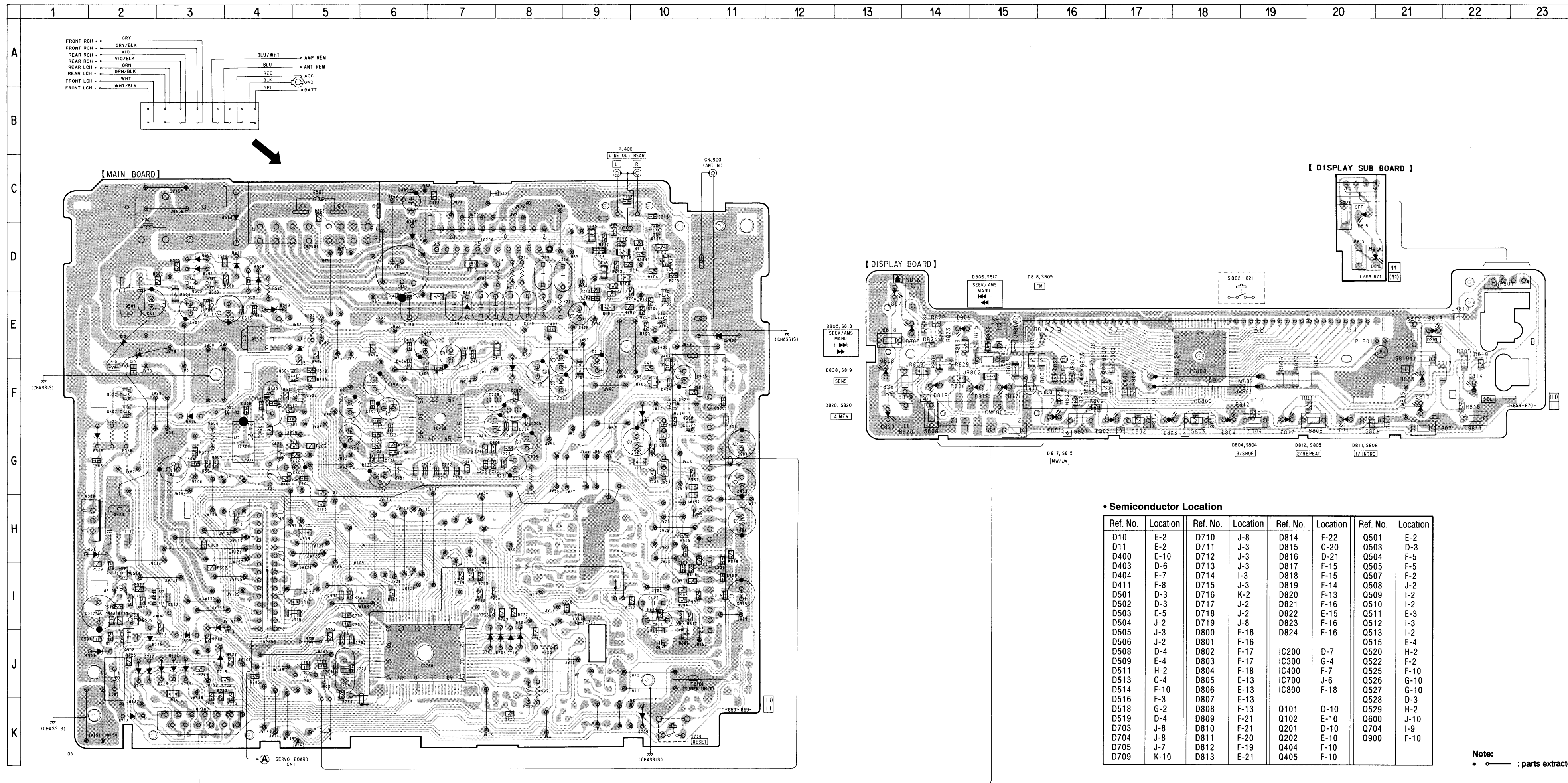


② IC700

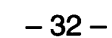


Note:

- 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 14.4 V 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
- () : CD
- 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 a oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Signal path:
 - ◁ : FM
 - ◁ : AM (MW/LW)
 - ◁ : CD



IC1 CXD2507AQ



EXPLODED VIEWS

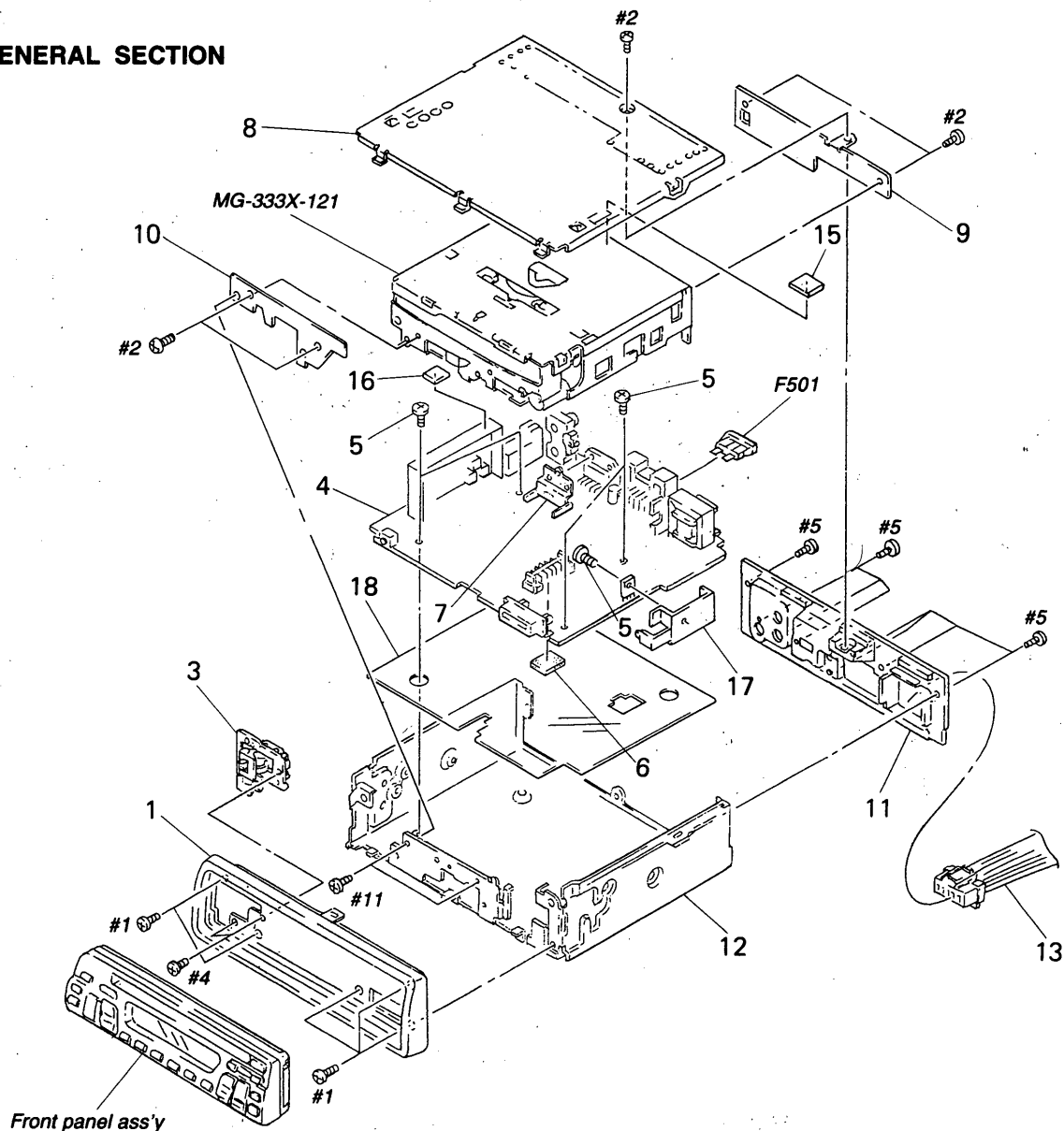
NOTE:

- ↑ ↑
- Parts Color Cabinet's Color**

- **Hardware (#mark) list and accessories and packing materials are given in the last of the electrical parts list.**

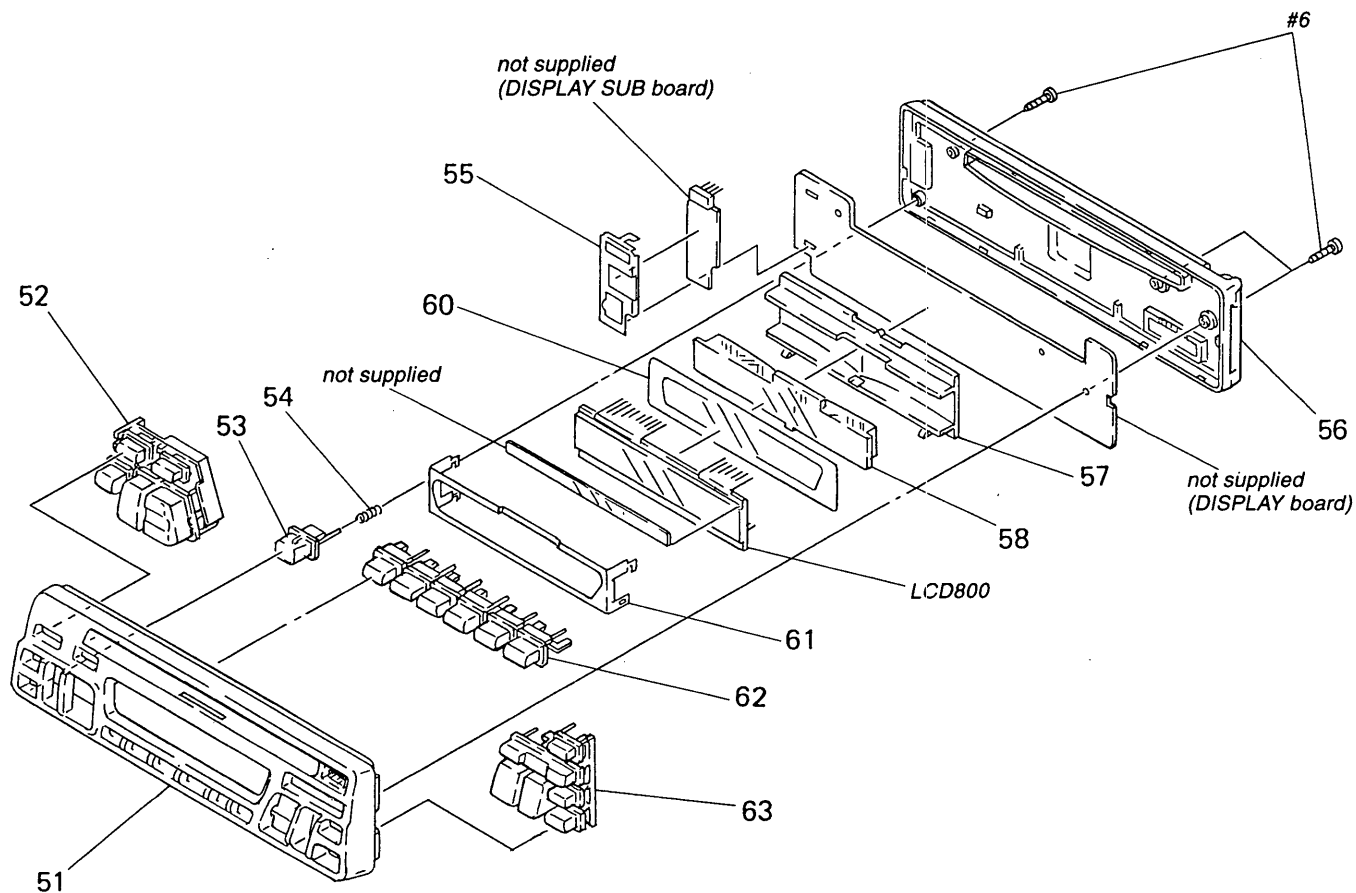
The components identified by mark Δ or dotted line with mark Δ are critical for safety.
Replace only with part number specified.

(1) GENERAL SECTION



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
1	X-3371-528-1	PANEL (1) ASSY, SUB		* 11	3-931-965-01	HEAT SINK	
3	X-3367-636-1	LOCK ASSY		* 12	3-932-907-01	CHASSIS	
* 4	A-3309-310-A	MAIN BOARD, COMPLETE		13	1-776-207-31	CORD (WITH CONNECTOR) (POWER)	
5	3-915-923-01	SCREW, GROUND POINT		* 14	3-932-908-01	SHEET, INSULATING	
6	3-342-925-01	CUSHION, RUBBER		15	2-389-320-01	RUBBER (A)	
* 7	3-931-260-01	BRACKET (IC)		* 16	3-924-145-01	CUSHION (TU), RUBBER	
* 8	X-3371-549-1	COVER ASSY		17	3-935-855-01	SINK (REG), HEAT	
* 9	3-932-397-11	BRACKET (M/D)		* 18	3-932-908-01	SHEET, INSULATING	
10	3-935-079-01	BRACKET (MD), FRONT		F501	1-533-331-11	FUSE (BLADE TYPE) (AUTO FUSE) (15A, 32V)	

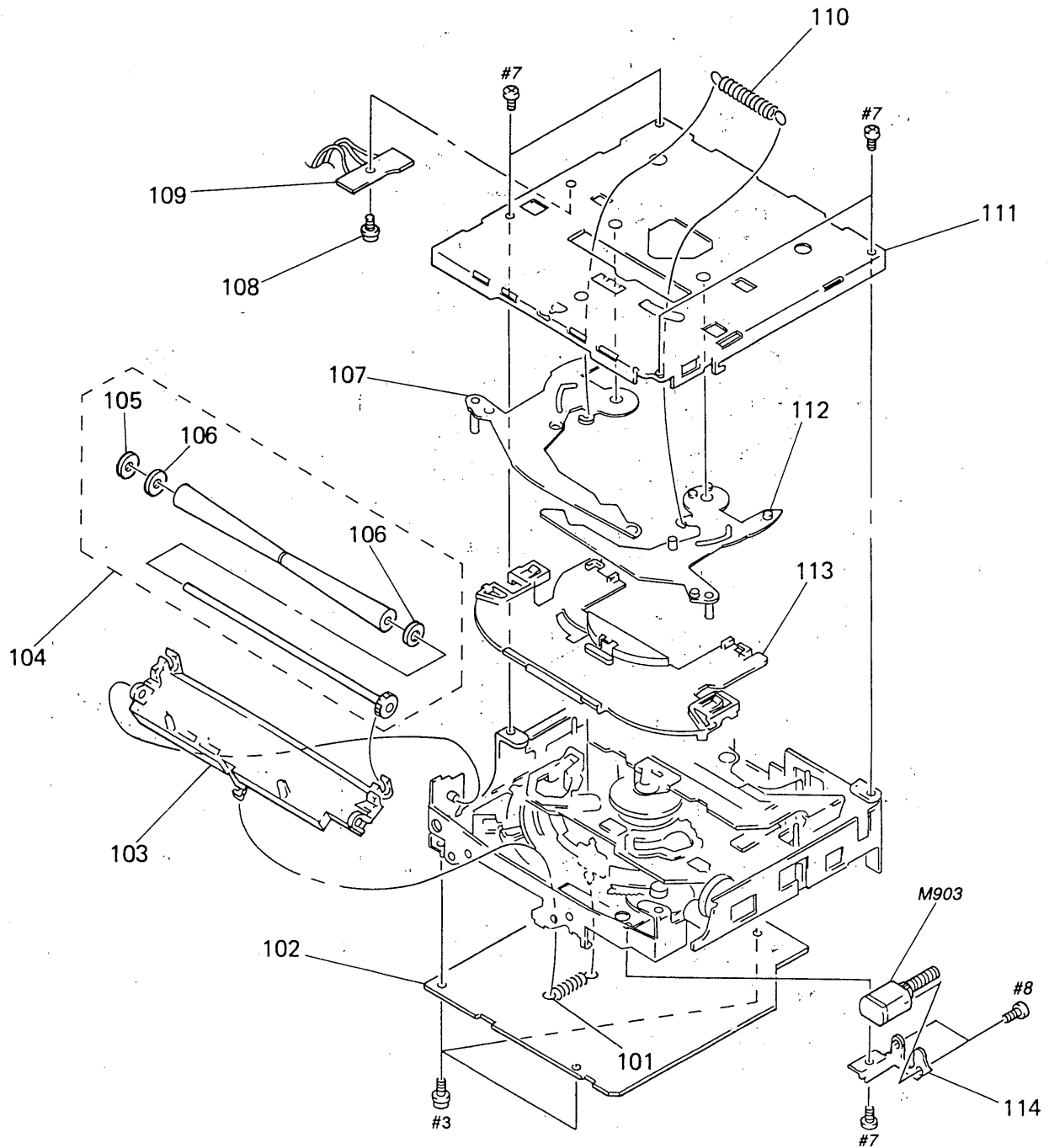
(2) FRONT PANEL SECTION



Ref. No.	Part No.	Description	Remark
51	X-3372-213-1	PANEL SUB ASSY, FRONT	
52	3-932-021-01	BUTTON (OFF) (OFF. DSPL. MUTE. SEL. +. -)	
53	3-931-969-01	BUTTON (RELEASE)	
54	3-914-590-01	SPRING (R2)	
* 55	3-931-978-01	BRACKET (DISPLAY PC BOARD)	
56	3-931-967-01	PANEL, FRONT BACK	
* 57	3-931-972-01	HOLDER (LCD)	

Ref. No.	Part No.	Description	Remark
* 58	3-931-971-01	PLATE (LCD), LIGHT GUIDE	
* 60	3-931-973-01	SHEET (LCD)	
* 61	3-932-018-01	BLACKET (LCD)	
62	3-920-503-02	BUTTON (1. 2. 3. 4. 5. 6)	
63	3-931-961-01	BUTTON (CD EJECT) (▲ ◀ +. SEEK/AMS. - ▶)	
		◀◀ MANU. ▶▶. FM. AM. CD. SENS. A MEM)	
	LCD800 1-801-182-11	DISPLAY PANEL, LIQUID CRYSTAL	

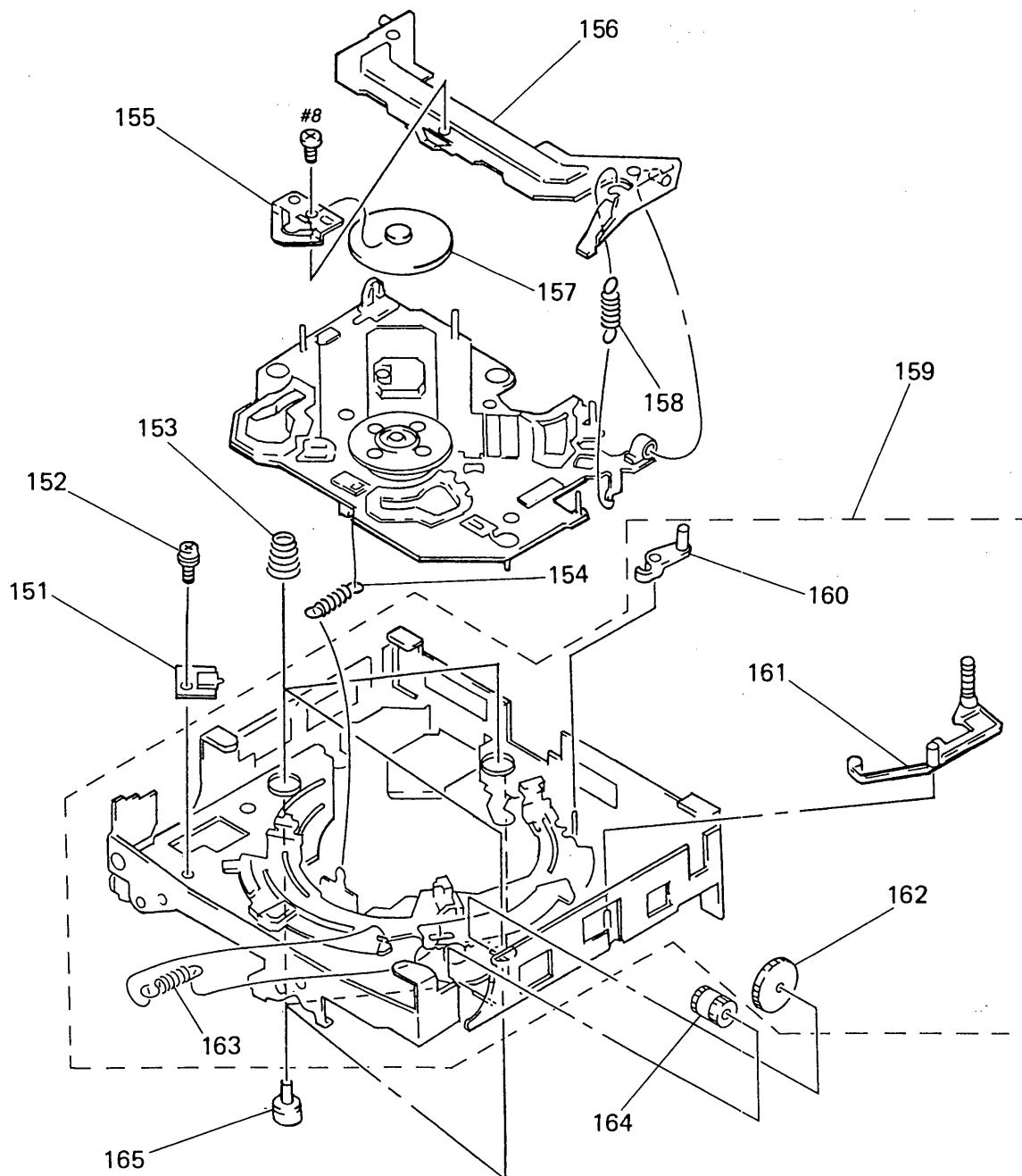
(3) MECHANISM DECK SECTION-1
(MG-333X-121)



Ref. No.	Part No.	Description	Remark
101	3-931-916-01	SPRING (RA), TENSION	
* 102	A-3309-021-A	SERVO BOARD, COMPLETE	
103	3-931-902-01	ARM (ROLLER)	
104	A-3291-567-A	ROLLER ASSY	
105	3-701-439-11	WASHER	
* 106	3-322-413-01	SPACER, INSULATING	
* 107	X-3371-501-1	LEVER (L) ASSY	
108	3-338-737-01	SCREW (2X3), +PS	

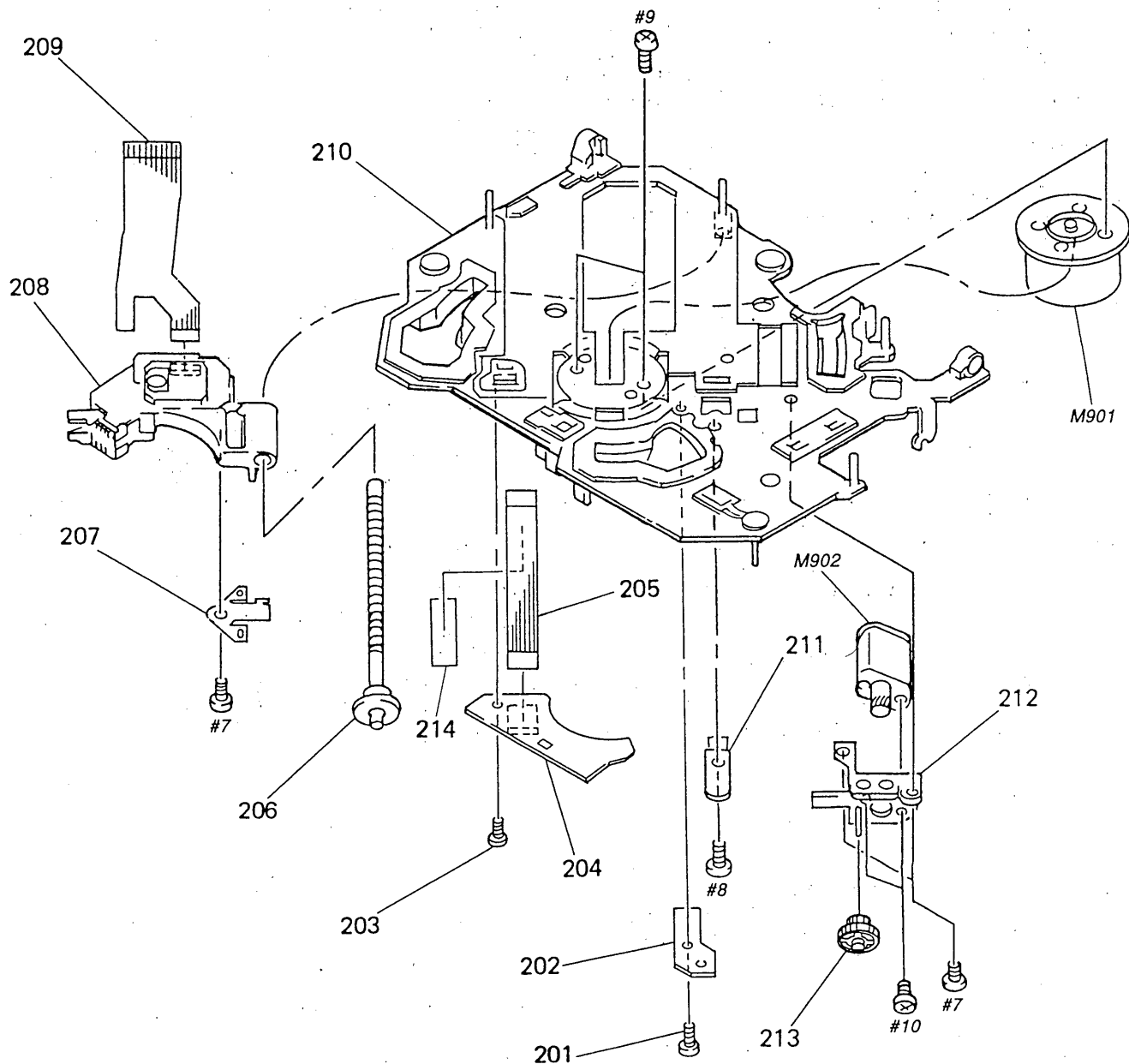
Ref. No.	Part No.	Description	Remark
* 109	1-659-836-11	DISC IN SW BOARD	
110	3-931-909-02	SPRING (LR), TENSION	
* 111	3-931-903-01	CHASSIS (T)	
* 112	X-3371-502-1	LEVER (R) ASSY	
* 113	3-931-908-01	GUIDE (DISC)	
* 114	3-931-899-01	BRACKET (MOTOR)	
M903	A-3291-576-A	MOTOR SUB ASSY, LO (LOADING)	

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



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
* 151	1-659-837-11	LOAD SW BOARD		159	A-3291-568-A	CHASSIS (M) ASSY BOARD, COMPLETE	
152	3-338-737-01	SCREW (2X3), +PS		160	3-931-881-01	LEVER (LOCK)	
153	3-931-898-01	SPRING (FL), COMPRESSION		161	3-931-879-02	LEVER (D)	
154	3-931-914-01	SPRING (ANGLE), TENSION		162	3-931-882-02	GEAR (MDL)	
155	3-931-894-01	BRACKET (CP)		163	3-931-883-01	SPRING (TR), TENSION	
156	3-931-893-01	ARM, CHUCKING		164	3-934-879-01	WHEEL (U), WORM	
* 157	3-384-918-01	RETAINER (DISC)		165	3-931-897-01	DAMPER (T)	
158	3-931-895-01	SPRING (CH), TENSION					

(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
201	3-338-737-01	SCREW (2X3), +PS	
* 202	1-659-835-12	LIMIT SW BOARD	
203	3-909-607-01	SCREW	
* 204	1-659-834-11	SUB BOARD	
205	1-659-880-11	MOTOR FLEXIBLE BOARD	
206	A-3291-571-A	SHAFT (FEED) ASSY	
207	3-931-834-01	SPRING (FEED) , PLATE	
Δ 208	8-848-402-03	OPTICAL PICK-UP KSS-520A/J-N	

Ref. No.	Part No.	Description	Remark
209	1-659-881-11	PICK-UP FLEXIBLE BOARD	
* 210	X-3371-503-1	CHASSIS (OP) (O/S) ASSY	
211	3-931-829-01	SPRING (SL), PLATE	
212	X-3371-504-1	BASE (DRIVING) ASSY	
213	3-931-832-01	GEAR (SL MIDWAY)	
214	3-831-441-11	CUSHION (B)	
M901	X-3371-664-1	MOTOR ASSY (SPINDLE)	
M902	A-3291-574-A	MOTOR ASSY, (SLED)	

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

- 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 ***** < SWITCH >		D809	8-719-059-92	DIODE SLR-342YYA47 (+)	
SW1	1-572-288-11	SWITCH, PUSH (DISC IN)		D810	8-719-059-92	DIODE SLR-342YYA47 (-)	
SW2	1-572-288-11	SWITCH, PUSH (SELF)		D811	8-719-059-92	DIODE SLR-342YYA47 (1/INTRO)	
*****				D812	8-719-059-92	DIODE SLR-342YYA47 (2/REPEAT)	
		DISPLAY BOARD *****		D813	8-719-059-92	DIODE SLR-342YYA47 (DSPL)	
*	3-931-971-01	PLATE (LCD), LIGHT GUIDE		D814	8-719-059-92	DIODE SLR-342YYA47 (SEL)	
*	3-931-972-01	HOLDER (LCD)		D817	8-719-059-92	DIODE SLR-342YYA47 (MW/LW)	
*	3-931-973-01	SHEET (LCD)		D818	8-719-059-92	DIODE SLR-342YYA47 (FM)	
*	3-931-978-01	BRACKET (DISPLAY PC BOARD)		D819	8-719-059-92	DIODE SLR-342YYA47 (CD)	
*	3-932-018-01	BRACKET (LCD)		D820	8-719-059-92	DIODE SLR-342YYA47 (A. MEM)	
*	3-937-072-01	SHEET (A)		D821	8-719-105-99	DIODE RD6. 2M-B1	
		< CAPACITOR >		D822	8-719-105-99	DIODE RD6. 2M-B1	
C800	1-163-038-00	CERAMIC CHIP 0.1uF 25V		D823	8-719-105-99	DIODE RD6. 2M-B1	
C801	1-163-117-00	CERAMIC CHIP 100PF 5% 50V		D824	8-719-105-99	DIODE RD6. 2M-B1	
C802	1-163-137-00	CERAMIC CHIP 680PF 5% 50V				< IC >	
		< CONNECTOR >		IC800	8-759-369-90	IC LC75822ED	
CNP800	1-764-423-11	PIN, CONNECTOR 12P				< CHIP CONDUCTOR >	
CNP801	1-774-798-11	PIN, CONNECTOR (PC BOARD) 4P		JR802	1-216-296-00	CONDUCTOR, CHIP (3216)	
		< DIODE >		JR803	1-216-296-00	CONDUCTOR, CHIP (3216)	
D800	8-719-976-99	DIODE DTZ5. 1B		JR804	1-216-296-00	CONDUCTOR, CHIP (3216)	
D801	8-719-059-92	DIODE SLR-342YYA47 (6)		JR805	1-216-296-00	CONDUCTOR, CHIP (3216)	
D802	8-719-059-92	DIODE SLR-342YYA47 (5)		JR806	1-216-296-00	CONDUCTOR, CHIP (3216)	
D803	8-719-059-92	DIODE SLR-342YYA47 (4)		JR807	1-216-295-00	CONDUCTOR, CHIP (2012)	
D804	8-719-059-92	DIODE SLR-342YYA47 (3/SHUF)		JR808	1-216-295-00	CONDUCTOR, CHIP (2012)	
D805	8-719-059-92	DIODE SLR-342YYA47 (+ $\Rightarrow$ / $\Rightarrow$)		JR809	1-216-296-00	CONDUCTOR, CHIP (3216)	
D806	8-719-059-92	DIODE SLR-342YYA47 ($\Leftarrow$ - / $\Leftarrow$)		JR810	1-216-296-00	CONDUCTOR, CHIP (3216)	
D807	8-719-059-92	DIODE SLR-342YYA47 (Δ)				< LIQUID CRYSTAL DISPLAY >	
D808	8-719-059-92	DIODE SLR-342YYA47 (SENS)		LCD800	1-801-182-11	DISPLAY PANEL, LIQUID CRYSTAL	
						< PILOT LAMP >	
				PL800	1-517-535-11	LAMP, PILOT (AMBER)	
				PL801	1-517-535-11	LAMP, PILOT (AMBER)	

DISPLAY

DISPLAY SUB

LIMIT SW

LOAD SW

MAIN

Ref. No.	Part No.	Description	Remark
< RESISTOR >			
R800	1-216-174-00	METAL GLAZE	100 5% 1/8W
R801	1-216-174-00	METAL GLAZE	100 5% 1/8W
R802	1-216-192-00	METAL CHIP	560 5% 1/8W
R803	1-216-192-00	METAL CHIP	560 5% 1/8W
R804	1-216-190-00	METAL GLAZE	470 5% 1/8W
R805	1-216-190-00	METAL GLAZE	470 5% 1/8W
R806	1-216-190-00	METAL GLAZE	470 5% 1/8W
R807	1-216-198-00	METAL GLAZE	1K 5% 1/8W
R808	1-216-090-00	METAL CHIP	51K 5% 1/10W
R809	1-216-053-00	METAL CHIP	1.5K 5% 1/10W
R810	1-216-057-00	METAL CHIP	2.2K 5% 1/10W
R811	1-216-061-00	METAL CHIP	3.3K 5% 1/10W
R812	1-216-067-00	METAL CHIP	5.6K 5% 1/10W
R813	1-216-073-00	METAL CHIP	10K 5% 1/10W
R814	1-216-083-00	METAL CHIP	27K 5% 1/10W
R815	1-216-053-00	METAL CHIP	1.5K 5% 1/10W
R816	1-216-057-00	METAL CHIP	2.2K 5% 1/10W
R817	1-216-210-00	METAL GLAZE	3.3K 5% 1/8W
R818	1-216-067-00	METAL CHIP	5.6K 5% 1/10W
R819	1-216-073-00	METAL CHIP	10K 5% 1/10W
R821	1-216-053-00	METAL CHIP	1.5K 5% 1/10W
R822	1-216-057-00	METAL CHIP	2.2K 5% 1/10W
R823	1-216-061-00	METAL CHIP	3.3K 5% 1/10W
R824	1-216-067-00	METAL CHIP	5.6K 5% 1/10W
R825	1-216-073-00	METAL CHIP	10K 5% 1/10W
R826	1-216-174-00	METAL GLAZE	100 5% 1/8W
R827	1-216-174-00	METAL GLAZE	100 5% 1/8W
R829	1-216-083-00	METAL CHIP	27K 5% 1/10W
< SWITCH >			
S802	1-572-704-31	SWITCH, KEY BOARD (5)	
S803	1-572-704-31	SWITCH, KEY BOARD (4)	
S804	1-572-704-31	SWITCH, KEY BOARD (3/SHUF)	
S805	1-572-704-31	SWITCH, KEY BOARD (2/REPEAT)	
S806	1-572-704-31	SWITCH, KEY BOARD (1/INTRO)	
S807	1-572-704-31	SWITCH, KEY BOARD (-)	
S808	1-572-704-31	SWITCH, KEY BOARD (CD)	
S809	1-572-704-31	SWITCH, KEY BOARD (FM)	
S810	1-572-704-31	SWITCH, KEY BOARD (+)	
S811	1-572-704-31	SWITCH, KEY BOARD (SEL)	
S812	1-572-704-31	SWITCH, KEY BOARD (DSPL)	
S815	1-572-704-31	SWITCH, KEY BOARD (MW/LW)	
S816	1-572-704-31	SWITCH, KEY BOARD (▲)	
S817	1-572-704-31	SWITCH, KEY BOARD (◀ - / ▶)	
S818	1-572-704-31	SWITCH, KEY BOARD (+ ▶ / ▶)	
S819	1-572-704-31	SWITCH, KEY BOARD (SENS)	

Ref. No.	Part No.	Description	Remark
S820	1-572-704-31	SWITCH, KEY BOARD (A. MEM)	
S821	1-572-704-31	SWITCH, KEY BOARD (6)	

DISPLAY SUB BOARD			

< DIODE >			
D815	8-719-059-92	DIODE SLR-342YYA47 (OFF)	
D816	8-719-059-92	DIODE SLR-342YYA47 (MUTE)	
< SWITCH >			
S801	1-572-704-31	SWITCH, KEY BOARD (OFF)	
S813	1-572-704-31	SWITCH, KEY BOARD (MUTE)	

* 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-3309-310-A MAIN BOARD, COMPLETE			

* 3-931-260-01 BRACKET (IC)			
3-935-855-01 SINK (REG), HEAT			
< CAPACITOR >			
C10	1-164-004-11	CERAMIC CHIP	0.1uF 10% 25V
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

MAIN

Ref. No.	Part No.	Description	Remark
C114	1-162-637-11	CERAMIC CHIP 0.47uF	16V
C115	1-162-637-11	CERAMIC CHIP 0.47uF	16V
C116	1-115-326-91	FILM 0.1uF	5% 50V
C117	1-115-326-91	FILM 0.1uF	5% 50V
C118	1-115-326-91	FILM 0.1uF	5% 50V
C119	1-115-326-91	FILM 0.1uF	5% 50V
C120	1-163-024-00	CERAMIC CHIP 0.018uF	10% 50V
C121	1-163-014-00	CERAMIC CHIP 0.0027uF	10% 50V
C122	1-163-022-00	CERAMIC CHIP 0.012uF	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
C214	1-164-005-11	CERAMIC CHIP 0.47uF	25V
C215	1-162-637-11	CERAMIC CHIP 0.47uF	16V
C216	1-115-326-91	FILM 0.1uF	5% 50V
C217	1-115-326-91	FILM 0.1uF	5% 50V
C218	1-115-326-91	FILM 0.1uF	5% 50V
C219	1-115-326-91	FILM 0.1uF	5% 50V
C220	1-163-024-00	CERAMIC CHIP 0.018uF	10% 50V
C221	1-163-014-00	CERAMIC CHIP 0.0027uF	10% 50V
C222	1-163-022-00	CERAMIC CHIP 0.012uF	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	1-164-004-11	CERAMIC CHIP 0.1uF	10% 25V
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
C401	1-107-884-11	ELECT 1000uF	20% 16V
C402	1-163-038-00	CERAMIC CHIP 0.1uF	25V
C404	1-163-117-00	CERAMIC CHIP 100PF	5% 50V

Ref. No.	Part No.	Description	Remark
C405	1-163-117-00	CERAMIC CHIP 100PF	5% 50V
C406	1-163-117-00	CERAMIC CHIP 100PF	5% 50V
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	1-126-162-11	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	0 0
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
C520	1-124-584-00	ELECT 100uF	20% 10V
C523	1-126-160-11	ELECT 1uF	20% 50V
C613	1-136-169-00	FILM 0.22uF	5% 50V
C614	1-124-589-11	ELECT 47uF	20% 16V
C616	1-115-326-91	FILM 0.1uF	5% 50V
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
C906	1-124-589-11	ELECT 47uF	20% 16V
C911	1-216-295-00	CONDUCTOR, CHIP	(2012)
C913	1-162-232-11	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

Ref. No.	Part No.	Description	Remark
< 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 >			
D10	8-719-991-33	DIODE 1SS133T-77	
D11	8-719-110-17	DIODE RD10ES-B2	
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	
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	
D518	8-719-110-13	DIODE RD9.1ESB2	
D519	8-719-200-82	DIODE 11ES2	
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	

Ref. No.	Part No.	Description	Remark
< IC >			
IC200	8-759-369-42	IC HA13153	
IC300	8-759-364-34	IC SM5877AM	
IC400	8-752-075-48	IC CXA1946AQ-T6	
IC700	8-759-432-71	IC uPD17017GF-B21-3B9	
< CHIP CONDUCTOR >			
JR1	1-216-295-00	CONDUCTOR, CHIP	(2012)
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)
JR18	1-216-296-00	CONDUCTOR, CHIP	(3216)
JR19	1-216-296-00	CONDUCTOR, CHIP	(3216)
JR20	1-216-295-00	CONDUCTOR, CHIP	(2012)
JR21	1-216-295-00	CONDUCTOR, CHIP	(2012)
< COIL >			
L300	1-410-513-11	INDUCTOR 22uH	
L700	1-410-513-11	INDUCTOR 22uH	
L801	1-411-824-11	COIL, CHOKE	
< JACK >			
PJ400	1-764-424-11	JACK, PIN 2P (LINE OUT REAR)	
< 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	

MAIN

Ref. No.	Part No.	Description	Remark
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	
Q600	8-729-021-94	TRANSISTOR 2SK1657-T1B	
Q704	8-729-901-05	TRANSISTOR DTA124EK	
Q900	8-729-920-74	TRANSISTOR 2SC2412K-QR	
< RESISTOR >			
R10	1-216-049-11	METAL CHIP 1K 5% 1/10W	
R101	1-216-049-11	METAL CHIP 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	1-216-091-00	METAL GLAZE 56K 5% 1/10W	
R109	1-216-091-00	METAL GLAZE 56K 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% 1/4W	
R115	1-216-298-00	METAL CHIP 2.2 5% 1/10W	
R116	1-216-134-00	METAL CHIP 2.2 5% 1/8W	
R117	1-216-134-00	METAL CHIP 2.2 5% 1/8W	
R118	1-216-069-11	METAL CHIP 6.8K 5% 1/10W	
R121	1-216-057-00	METAL CHIP 2.2K 5% 1/10W	
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	1-216-049-11	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	1-216-091-00	METAL GLAZE 12K 5% 1/10W	
R209	1-216-091-00	METAL GLAZE 12K 5% 1/10W	
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% 1/4W	

Ref. No.	Part No.	Description	Remark
R215	1-249-385-11	CARBON 2.2 5% 1/4W	
R216	1-249-385-11	CARBON 2.2 5% 1/4W	
R217	1-249-385-11	CARBON 2.2 5% 1/4W	
R218	1-216-069-11	METAL CHIP 6.8K 5% 1/10W	
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	1-216-049-11	METAL GLAZE 1K 5% 1/10W	
R416	1-216-089-00	METAL GLAZE 47K 5% 1/10W	
R502	1-216-049-11	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	1-216-069-11	METAL CHIP 6.8K 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	1-216-049-11	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	
R614	1-216-068-00	METAL CHIP 6.2K 5% 1/10W	
R615	1-216-049-11	METAL GLAZE 1K 5% 1/10W	

Ref. No.	Part No.	Description	Remark
R616	1-216-063-00	METAL GLAZE 3.9K 5%	1/10W
R617	1-216-049-11	METAL GLAZE 1K 5%	1/10W
R702	1-216-049-11	METAL GLAZE 1K 5%	1/10W
R703	1-216-061-00	METAL GLAZE 3.3K 5%	1/10W
R704	1-216-073-00	METAL CHIP 10K 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 GLAZE 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	1-216-049-11	METAL GLAZE 1K 5%	1/10W
R725	1-216-049-11	METAL GLAZE 1K 5%	1/10W
R726	1-216-049-11	METAL GLAZE 1K 5%	1/10W
R727	1-216-049-11	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
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	1-216-295-00	CONDUCTOR, CHIP (2012)	
R905	1-216-091-00	METAL CHIP 56K 5%	1/10W
R906	1-216-081-00	METAL CHIP 22K 5%	1/10W
R910	1-216-065-11	METAL GLAZE 4.7K 5%	1/10W
R911	1-216-065-11	METAL GLAZE 4.7K 5%	1/10W
< SWITCH >			
S700	1-162-431-21	SWITCH, TACTIL (RESET)	
< THERMISTOR >			
TH500	1-809-148-11	THERMISTOR PTH8L07AR2ROM1B510	
< TUNER >			
TU101	A-3282-018-A	TUNER UNIT TUX-006 (EE)	

Ref. No.	Part No.	Description	Remark
< 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	

< 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
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

SERVO

Ref. No.	Part No.	Description	Remark
< 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)
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)

Ref. No.	Part No.	Description	Remark
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	
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	1-216-105-00	METAL GLAZE 220K 5% 1/10W	
R21	1-216-105-00	METAL GLAZE 220K 5% 1/10W	
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	

Ref. No.	Part No.	Description	Remark		
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	1-216-093-00	METAL CHIP	68K	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		

*	1-659-834-11	SUB BOARD			

		< CONNECTOR >			
CN1	1-770-347-21	CONNECTOR, FPC 6P			

		MISCELLANEOUS			

13	1-776-207-31	CORD (WITH CONNECTOR) (POWER)			
205	1-659-880-11	MOTOR FLEXIBLE BOARD			
△208	8-848-402-03	OPTICAL PICK-UP KSS-520A/J-N			
209	1-659-881-11	PICK-UP FLEXIBLE BOARD			
M901	X-3371-664-1	MOTOR ASSY (SPINDLE)			
M902	A-3291-574-A	MOTOR ASSY, SLED			
M903	A-3291-576-A	MOTOR SUB ASSY, LO (LOADING)			

Ref. No.	Part No.	Description	Remark

HARDWARE LIST			

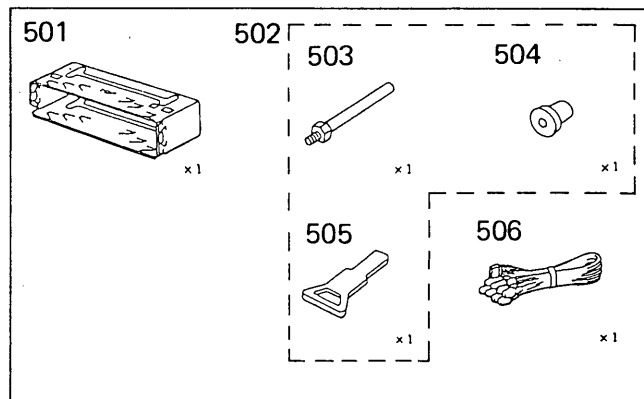
#1	7-621-773-95	SCREW +PTT 2.6X6 (S)	
#2	7-685-791-01	SCREW +PTT 2.6X5	
#3	7-628-253-00	SCREW +PS 2X4	
#4	7-621-772-10	SCREW +B 2X4	
#5	7-621-770-XX	SCREW +PTT 2.6X8 (S)	
#6	7-658-106-01	SCREW +P 2X10 TYPE 4	
#7	7-627-553-37	PRECISION SCREW +P 2X3 TYPE 3	
#8	7-627-553-17	PRECISION SCREW +P 2X2 TYPE 3	
#9	7-627-000-00	SCREW, PRECISION +P 1.7X2.2 TYPE3	
#10	7-627-850-28	SCREW, PRECISION +P 1.4X3	
#11	7-621-770-67	SCREW +PTT 2.6X6 (S)	

ACCESSORIES & PACKING MATERIALS			

3-810-613-11 MANUAL, INSTRUCTION (ENGLISH, POLISH, RUSSIAN, HANGARIAN, BULGARIAN)			
3-810-614-11 MANUAL, INSTRUCTION, INSTALL (ENGLISH, POLISH, RUSSIAN, HANGARIAN, BULGARIAN)			
* X-3371-377-1 CASE ASSY (for FRONT PANEL)			

MOUNTING HARDWARE			

* 501	3-916-161-01	FRAME, FITTING	
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	1-776-207-31	CORD (WITH CONNECTOR) (POWER)	



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

CDX-3103

SONY SERVICE MANUAL

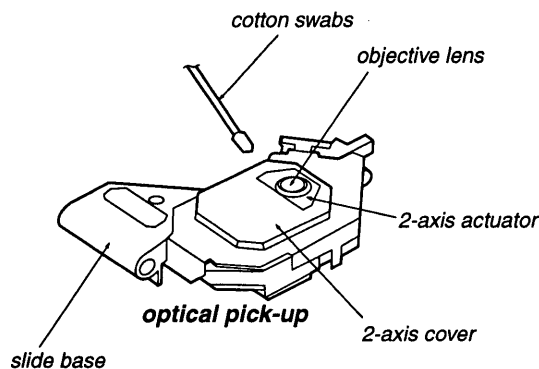
East European Model

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-3103

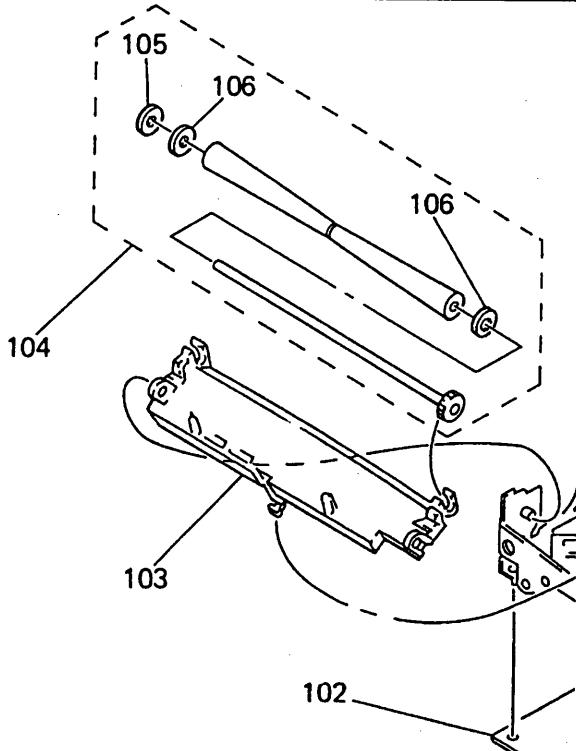
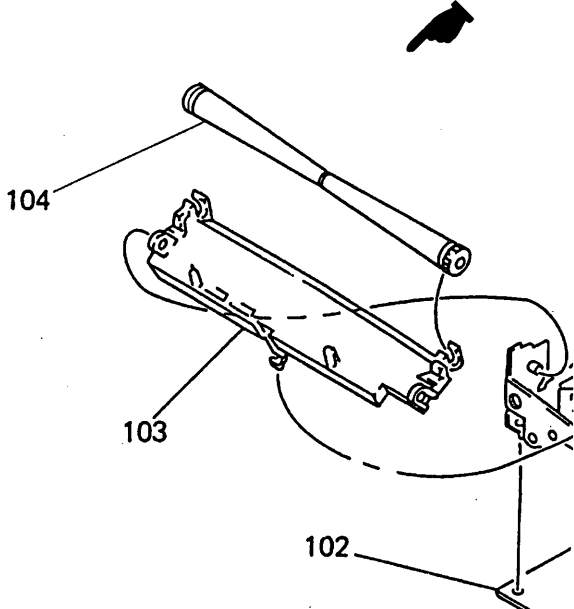
SONY SERVICE MANUAL

East European Model

CORRECTION-1

Correct your service manual as shown below.

 : indicates corrected portion.

Page	INCORRECT			CORRECT		
35	<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)