

CDX-4100RDS/5100RDS

SERVICE MANUAL

AEP Model
UK Model



Photo: CDX-4100RDS

Model Name Using Similar Mechanism	CDX-5070/5072
CD Drive Mechanism Type	MG-305X-130
Optical Pick-Up Name	KSS-410A

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)
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	For the CDX-4100RDS 20 W $\times$ 4 (at 4 ohms) For the CDX-5100RDS 35 W $\times$ 4 (at 4 ohms)

General

Output lead	Power antenna relay control lead Power amplifier control lead
Tone controls	Bass $\pm$ 8 dB at 100 Hz Treble $\pm$ 8 dB at 10 kHz
Power requirements	12 V DC car battery (negative ground)
Dimensions	Approx. 188 $\times$ 58 $\times$ 177 mm (w/h/d)
Mounting dimension	Approx. 178 $\times$ 50 $\times$ 154 mm (w/h/d)
Mass	Approx. 1.5 kg
Supplied accessories	Rotary Commander RM-X2S (for the CDX-5100RDS) Parts for installation and connections (1set) 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

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 200 mm 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.

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.

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.

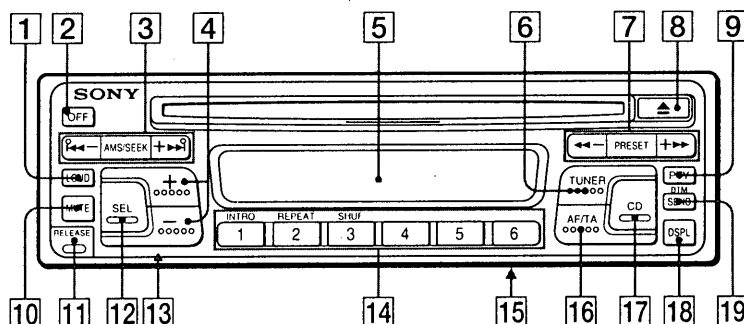
Notes on chip component replacement

- 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 $\triangle$ OR DOTTED LINE WITH MARK $\triangle$ 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.

Location of Controls



Refer to the pages in ● for details.

- 1 LOUD (loudness) button 18
- 2 OFF button 4 6 18
- 3 AMS/SEEK (Automatic Music Sensor/automatic tuning) button 6 7
- 4 (volume/bass/treble/balance/fader control) buttons 5 13
- 5 Display window
- 6 TUNER (radio on/band select) button 6 7 8 9
- 7 PRESET (preset search) button 6 8 9
- 8 ▲ (eject) button 6 18
- 9 PTY (Programme Type) button 12
- 10 MUTE button 18
- 11 RELEASE (front panel release) button 4 14
- 12 SEL (control mode select/character set) button 5 11 12 13
- 13 Reset button (located on the front side of the unit hidden by the front panel) 4
- 14 During radio reception:
Preset number buttons 8 9
- During CD playback:
 - 1 INTRO (intro scan) button 6
 - 2 REPEAT (repeat play) button 7
 - 3 SHUF (shuffle play) button 7
- 15 POWER SELECT switch (located on the bottom of the unit)
See "POWER SELECT Switch" in the Installation/Connections manual.
- 16 AF/TA (alternative frequency/traffic announcement) button 10 11
- 17 CD (CD play) button 6
- 18 DSPL (display mode change/time set) button 5 9
- 19 SENS/BTM (sensitivity adjust/Best Tuning Memory function) button 7 8

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.
- Éviter 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 Einbaort 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.

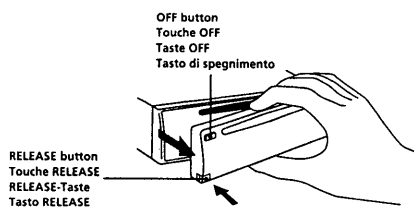
Per staccare

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.

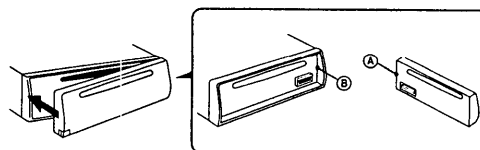
Per attaccare

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

To detach
Retrait
Abnehmen
Per staccare



To attach
Pose
Anbringen
Per attaccare



Mounting Example

Installation in the dashboard

Exemple de montage

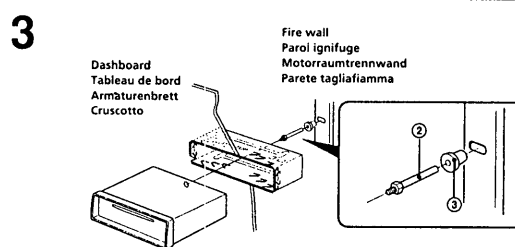
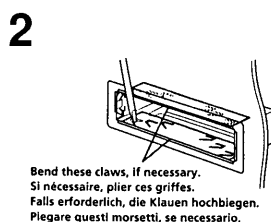
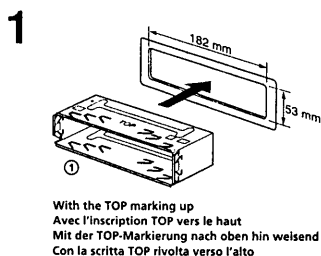
Installation dans le tableau de bord

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 ③ 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 No Accessory Position on the Ignition Key Switch — POWER SELECT Switch

The illumination on the front panel is factory-set to be turned on even when the unit is not being played. However, this setting may cause some car battery wear if your car has no accessory position on the ignition key switch. To avoid this battery wear, set the POWER SELECT switch located on the bottom of the unit to the ① position, then press the reset button. The illumination is reset to stay off while the unit is not being played.

Note

The caution alarm for the front panel is not activated when the POWER SELECT switch is set to the ① position.

Connexions

Précautions

- Cet appareil est conçu pour fonctionner sur courant continu de 12 V avec masse négative.
- Branchez le cordon d'alimentation ③ 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 l'appareil est utilisé dans une voiture dont la clé de contact n'a pas de position accessoires — Interrupteur POWER SELECT

L'éclairage du panneau avant est réglé en usine de manière à s'allumer même quand l'appareil ne fonctionne pas. Cependant, ce réglage risque d'épuiser la batterie si l'appareil est utilisé dans une voiture dont la clé de contact ne possède pas de position accessoires. Pour éviter d'épuiser la batterie, réglez l'interrupteur POWER SELECT sur le socle de l'appareil sur la position ①, puis appuyez sur la touche de réinitialisation. L'éclairage est réglé pour rester éteint quand l'appareil n'est pas utilisé.

Remarque

Quand l'interrupteur POWER SELECT est réglé sur la position ①, l'avertisseur du panneau avant ne fonctionne pas.

Change the position with a jeweler's screwdriver, etc.
Changer la position avec un tournevis de joaillier ou un objet similaire.
Den Schalter mit einem kleinen Schraubenzieher o.ä. umstellen.
Cambiare la posizione con un cacciavite da gioielliere, ecc.

Anschluß

Vorsicht

- Dieses Gerät ist ausschließlich für eine negativ geerdete 12-V-Autobatterie bestimmt.
- Verbinden Sie das Netzverbindungskabel ③ 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 Wagens keine Position I bzw. ACC besitzt — POWER SELECT-Schalter

Das Gerät ist werkseitig so voreingestellt, daß das Bedienfeld auch dann beleuchtet ist, wenn das Gerät nicht betrieben wird. Besitzt das Zündschloß Ihres Fahrzeugs keine Position I bzw. ACC, so ist die Beleuchtung ständig eingeschaltet und entzieht der Batterie Strom. Stellen Sie in einem solchen Fall den POWER SELECT-Schalter an der Unterseite des Geräts auf Position ①, und drücken Sie dann die Rücksetztaste. Bei ausgeschaltetem Gerät ist das Bedienfeld dann nicht mehr beleuchtet.

Hinweis

Der Warnton für die Frontplatte ertönt nicht, wenn der POWER SELECT-Schalter auf Position ① gestellt ist.

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 ③ 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.

Quando si usa l'apparecchio in un'auto priva di posizione accessoria per la chiavetta di accensione

L'illuminazione del pannello anteriore è stata predisposta in fabbrica per l'attivazione anche quando non si usa l'apparecchio. Tuttavia questa regolazione può causare scaricamento della batteria dell'auto se si usa l'apparecchio in un'auto priva di posizione accessoria per la chiavetta di accensione. Per evitare ciò, regolare su ① l'interuttore POWER SELECT situato alla base dell'apparecchio e quindi premere il tasto di azzeramento. L'illuminazione rimane così spenta finché l'apparecchio rimane spento.

Nota

La suoneria di avvertimento per il pannello anteriore non si attiva quando l'interuttore POWER SELECT è in posizione ①.

Reset Button

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

Touche de réinitialisation

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

Rücksetztaste

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

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.



Reset button
Touche de réinitialisation
Rücksetztaste
Pulsante di azzeramento

Note on the control leads

The power antenna control lead (blue) supplies +12 V DC when you turn on the tuner or when you activate the AF (Alternative Frequency) or the TA (Traffic Announcement) function.

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 ③ may damage the antenna.

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 ou quand la fonction AF (Fréquences alternatives) ou TA (Informations routières) est mise en service.

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 châssis 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 ③ risque d'endommager l'antenne.

Hinweis zu den Steuerleitungen

Die (blaue) Motorantennen-Steuerschaltung liefert eine Gleichspannung von +12 V, wenn der Tuner eingeschaltet, die AF-Funktion (Alternative Frequency) oder die TA-Funktion (Traffic Announcement) aktiviert ist.

Zur Stromversorgung des Speichers

Wenn das gelbe Stromversorgungs-kabel 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 Lautsprechers.
- 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 Relaiskasten verwenden, kann durch Anschließen dieses Geräts mit Hilfe des mitgelieferten Netzverbindungskabels ③ die Antenne beschädigt werden.

Nota sui cavi di collegamento

Il cavo di controllo dell'antenna automatica (blu) fornisce +12 V CC quando si accende il sintonizzatore o quando si attiva la funzione AF (frequenze alternative) o la funzione TA (notiziari sul traffico).

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 ③ non ha la scatola di relé l'antenna, si può danneggiare.

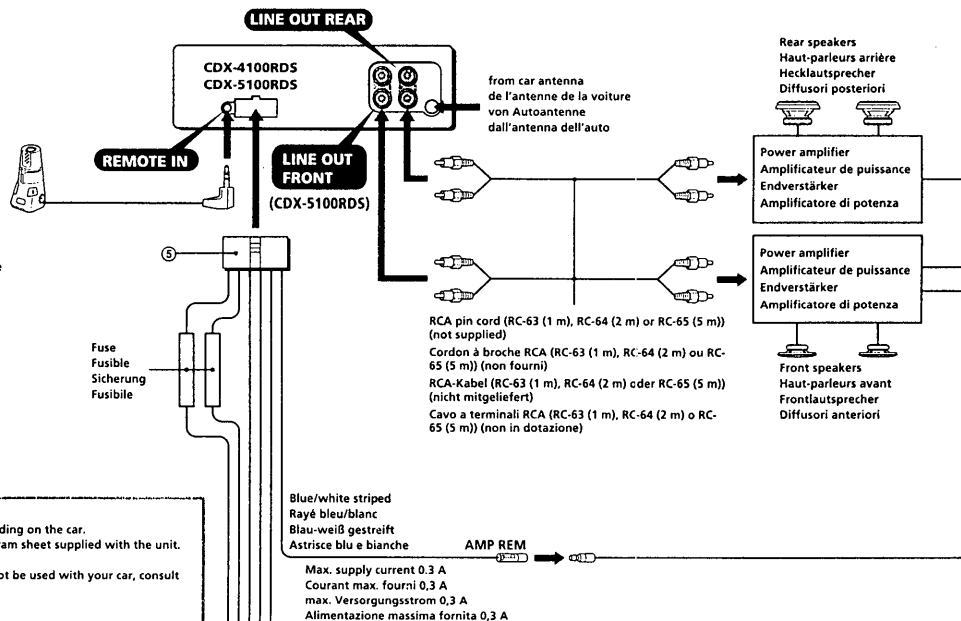
Connections of Example

Connexions de l'exemple

Anschlußbeispiel

Esempi di Collegamento

Rotary commander (RM-X25) (Supplied for the CDX-5100RDS; not supplied for the CDX-4100RDS)
 Satellite de commande (RM-X25) (Fourni avec le CDX-5100RDS; non fourni avec le CDX-4100RDS)
 Drehschalter-Fernbedienung (RM-X25) (mitgeliefert beim CDX-5100RDS; nicht mitgeliefert beim CDX-4100RDS)
 Telecomando a rotazione (RM-X25) (in dotazione con CDX-5100RDS; non in dotazione con CDX-4100RDS)



WARNING

Auxiliary power connectors may vary depending on the car.
 Be sure to check the power connection diagram sheet supplied with the unit.
 Improper connections may damage your car.
 If the supplied power connecting cord can not be used with your car, consult your nearest Sony dealer.

AVERTISSEMENT

Le connecteur d'alimentation auxiliaire peut varier suivant le type de voiture.
 Vérifiez le schéma du connexion d'alimentation fourni avec l'appareil.
 Un raccordement incorrect risque d'occasionner des dommages à votre voiture.
 Si le cordon d'alimentation fourni ne peut être utilisé avec votre voiture, consultez votre revendeur Sony.

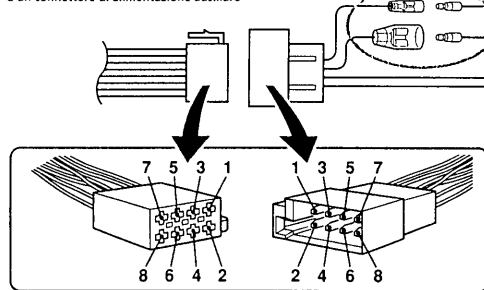
VORSICHT

Die Hilfsstromanschlüsse können je nach Fahrzeugtyp unterschiedlich sein.
 Sehen Sie im Hilfsstromanschlußdiagramm für Ihr Fahrzeug nach, wie die Verbindungen ordnungsgemäß vorgenommen werden müssen.
 Fehlerhafte Verbindungen können zu Schäden an Ihrem Fahrzeug führen.
 Wenn das mitgelieferte Netzverbindungskabel nicht für den Einsatz in Ihrem Fahrzeug geeignet ist, wenden Sie sich bitte an Ihren Sony-Händler.

Attenzione

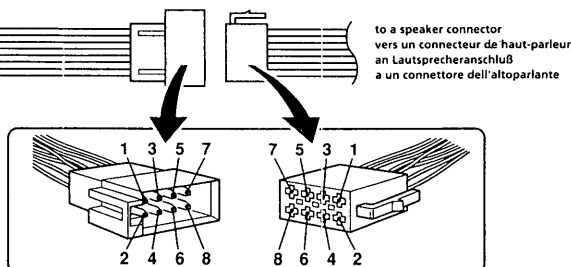
Il connettore di alimentazione ausiliare può variare a seconda del tipo di macchina.
 Controllare il foglio con il diagramma del connettore di alimentazione in dotazione con l'apparecchio, connessioni non corrette potrebbero danneggiare la macchina.
 Se il cavo di collegamento dell'alimentazione in dotazione non può essere utilizzato con la vostra auto, consultare il rivenditore Sony più vicino.

to an auxiliary power connector
vers un connecteur d'alimentation auxiliaire
an Hilfsstromanschluß
a un connettore di alimentazione ausiliare



Pin Broche Stift Pin	Colour Couleur Farbe Colore	Function Fonction Funktion Funzione	Pin Broche Stift Pin	Colour Couleur Farbe Colore	Function Fonction Funktion Funzione
4	Yellow Jaune Gelb Giallo	continuous power supply alimentation continue permanente Stromversorgung alimentazione continua	7	Red Rouge Rot Rosso	switched power supply alimentation commutée geschaltete Stromversorgung alimentazione a scatto
5	Blue Bleu Blau Blu	power antenna control antenne électrique elektronische Antenne antenna elettrica	8	Black Noir Schwarz Nero	ground masse Masse terra

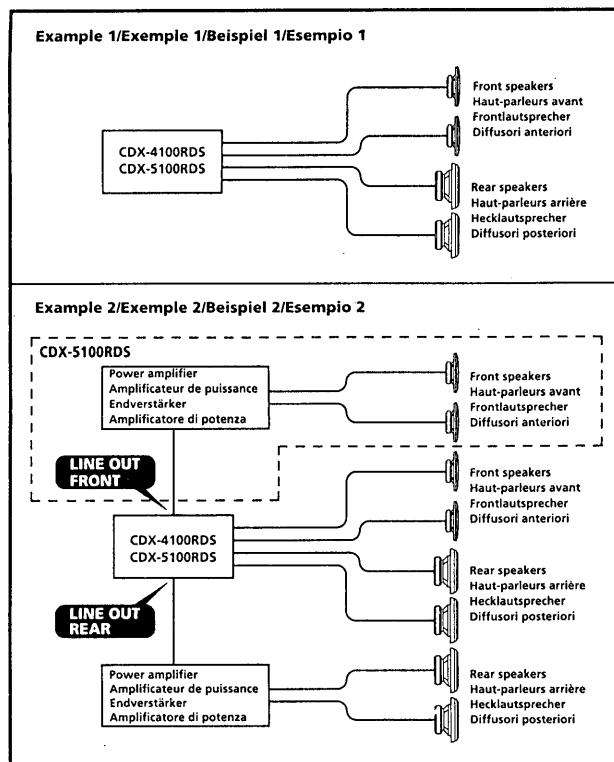
Positions 1, 2, 3 and 6 do not have pins.
 Les positions 1, 2, 3 et 6 ne comportent pas de broche.
 An Position 1, 2, 3 und 6 befinden sich keine Stifte.
 Le posizioni 1, 2, 3 e 6 non hanno pin.



Pin Broche Stift Pin	Colour Couleur Farbe Colore	Function Fonction Funktion Funzione	Pin Broche Stift Pin	Colour Couleur Farbe Colore	Function Fonction Funktion Funzione
1	Purple Mauve Violet Viola	+; Speaker, Rear, Right +; haut-parleur, arrière, droit +; Lautsprecher hinten rechts Altoparlante, posteriore, destro	5	White Blanc Weiß Bianco	+; Speaker, Front, Left +; haut-parleur, avant, gauche +; Lautsprecher vorne links Altoparlante, anteriore, sinistro
2		-; Speaker, Rear, Right -; haut-parleur, arrière, droit -; Lautsprecher hinten rechts Altoparlante, posteriore, destro	6		-; Speaker, Front, Left -; haut-parleur, avant, gauche -; Lautsprecher vorne links Altoparlante, anteriore, sinistro
3	Gray Gris Grau Grigio	+; Speaker, Front, Right +; haut-parleur, avant, droit +; Lautsprecher vorne rechts Altoparlante, anteriore, destro	7	Green Vert Grün Verde	+; Speaker, Rear, Left +; haut-parleur, arrière, gauche +; Lautsprecher hinten links Altoparlante, posteriore, sinistro
4		-; Speaker, Front, Right -; haut-parleur, avant, droit -; Lautsprecher vorne rechts Altoparlante, anteriore, destro	8		-; Speaker, Rear, Left -; haut-parleur, arrière, gauche -; Lautsprecher hinten links Altoparlante, posteriore, sinistro

Negative polarity positions 2, 4, 6 and 8 have striped cords.
 Les positions de polarité négative 2, 4, 6 et 8 sont dotées de cordons rayés.
 An den negativ gepolten Positionen (2, 4, 6 und 8) befinden sich farbige Adern.
 Le posizioni a polarità negativa 2, 4, 6 e 8 hanno cavi spelati.

Connection Diagram
Schémas de connexion
Anschlußdiagramm
Schema di collegamento

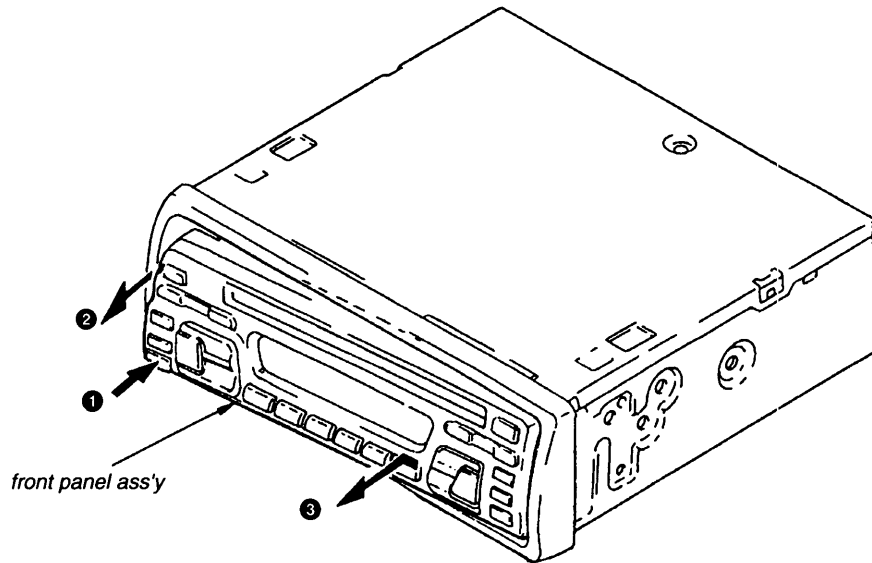


SECTION 2

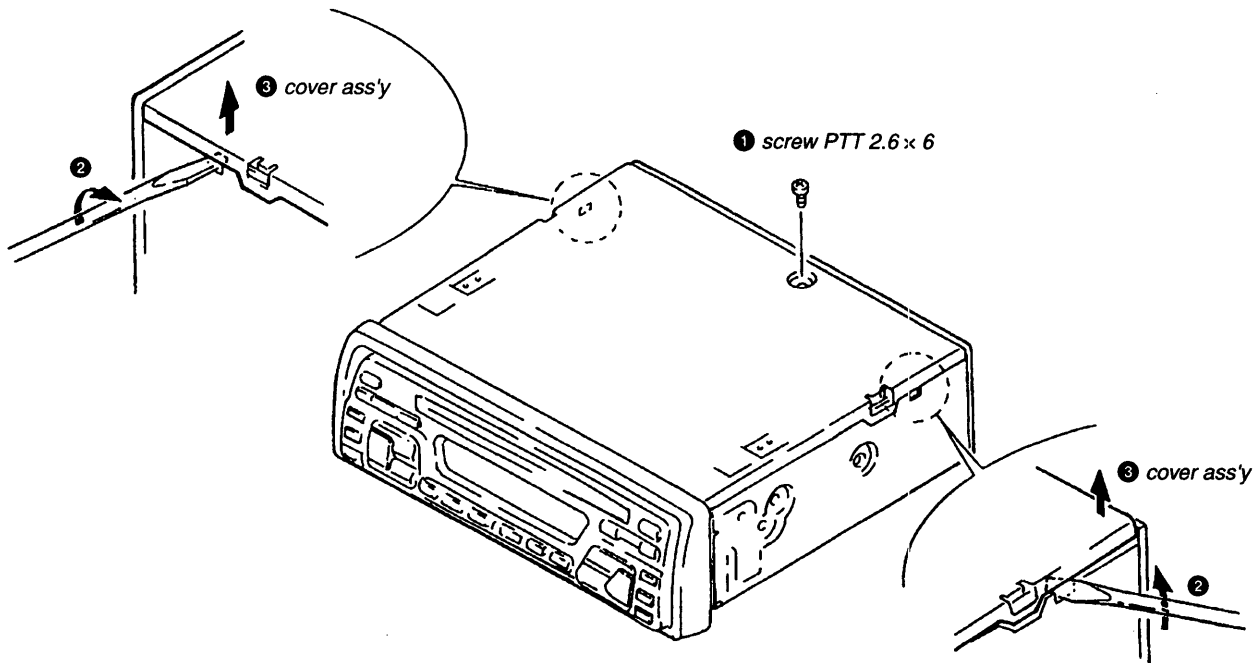
DISASSEMBLY

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

FRONT PANEL ASS'Y



COVER 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

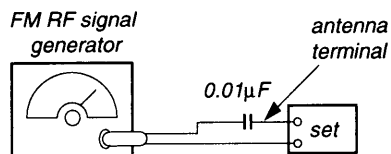
Cautions during repair

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:

TUNER button: FM

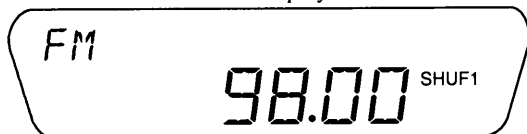


Carrier frequency : 98.0MHz
Output level : 22dB(12.6 μV)
Mode : mono
Modulation : 1kHz, 75kHz deviation

Procedure:

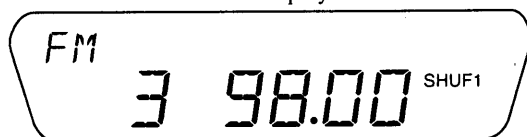
1. Set to the test mode.
2. Push the **[TUNER]** button and set to FM.

Display



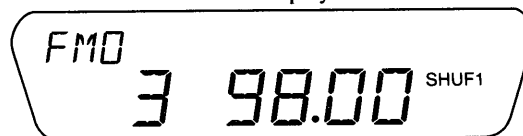
3. Push the preset **[3]** button.

Display



4. Adjust with the volume RV2 on TU1 so that the "FM" indication turns to "FM0" indication on the display window. But, in case of already indicated "FM0", turn the RV2 so that put out light "0" indication and adjustment.

Display

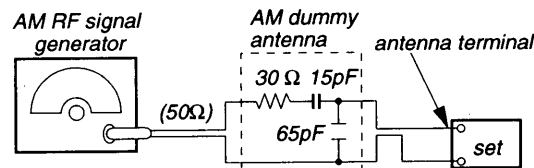


Adjustment Location: See page 10.

AM (MW) Auto Scan/Stop Level Adjustment

Setting:

TUNER button: MW

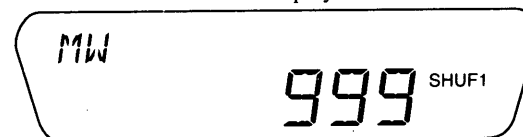


Carrier frequency : 999kHz
30% amplitude modulation by 400Hz signal
Output level : 33dB (44.7 μV)

Procedure:

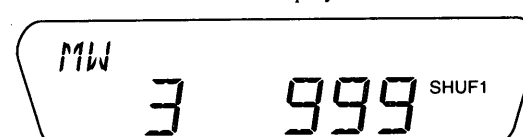
1. Set to the test mode.
2. Push the **[TUNER]** button and set to MW.

Display



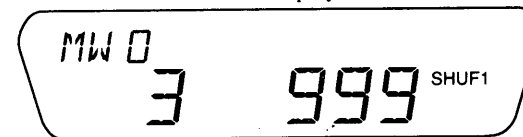
3. Push the preset **[3]** button.

Display



4. Adjust with the volume RV1 on TU1 so that the "MW" indication turns to "MW0" indication on the display window. But, in case of already indicated "MW0", turn the RV1 so that put out light "0" indication and adjustment.

Display

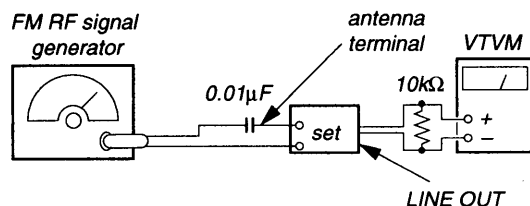


Adjustment Location: See page 10.

FM Noise Focus Adjustment

Setting:

TUNER button: FM



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

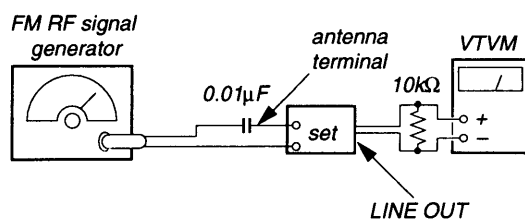
Procedure:

1. Tune the 98.0MHz.
2. The then output level is supposing that (B) dB.
3. Adjust with the volume RV3 on TU1 so that the output level is (B) -30dB then signal generator input set to -20dB.

FM Stereo Separation Adjustment

Setting:

TUNER button: FM



Carrier frequency : 98.0MHz
Output level : 60dB (1mV)
Mode : stereo
Modulation : main: 1kHz, 20kHz deviation (26.6%)
19kHz pilot: 7.5kHz deviation (10%)

Procedure:

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

L-CH Stereo separation: (A)-(B)

R-CH Stereo separation: (C)-(D)

The separations of both channels should be equal.

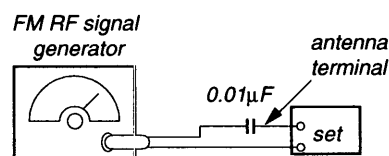
Specification: Separation more than 28dB

RDS S-METER Adjustment

Setting:

TUNER button: FM

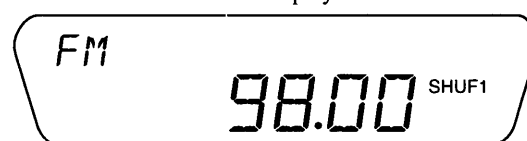
Procedure:



Carrier frequency : 98.0MHz
Output level : 35dB (56.2 µV)
Mode : mono
Modulation : 1kHz, 75kHz deviation

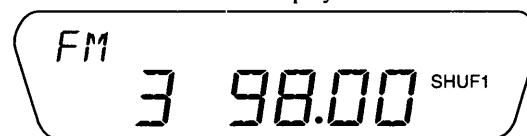
1. Set to the test mode. (See page 9.)
2. Push the **TUNER** button and set to FM.

Display



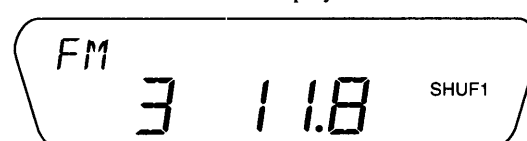
3. Push the preset **[3]** button.

Display



4. Push the **[6]** button.
5. Adjust RV651 so that the display indication is "11.8".

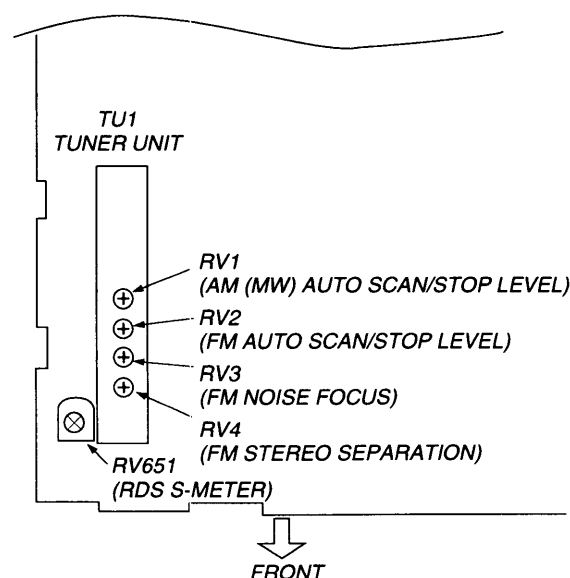
Display



Specification: display indication: 11.6 to 12.0

Adjustment Location:

– MAIN BOARD (COMPONENT SIDE) –



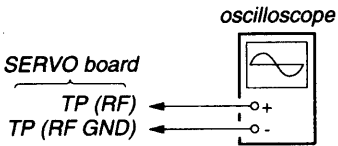
CD SECTION

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 MΩ 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

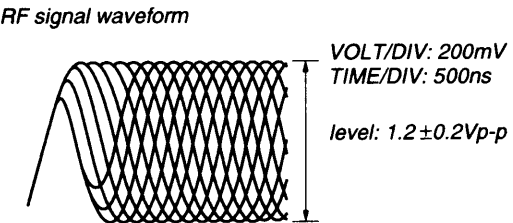
Setting: This adjustment is performed with the set placed horizontally.



Procedure:

- 1. Connect an oscilloscope between TP (RE) and TP (RF GND) on the SERVO board.
- 2. Connect the power supply.
- 3. Push the RESET button (SW901) on the panel (sub).
- 4. Insert the disc (YEDS-18) and playback.
- 5. Adjust RV2 so that the oscilloscope waveform is clear and check RF signal level is correct or not.

Note: Clear RF signal waveform means that the shape “◇” can be clearly distinguished at the center of the waveform.

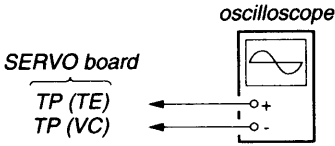


- When observing the eye pattern, set the oscilloscope to AC range and raise the vertical sensitivity so that it may be easily seen.

Adjustment Location: See page 12.

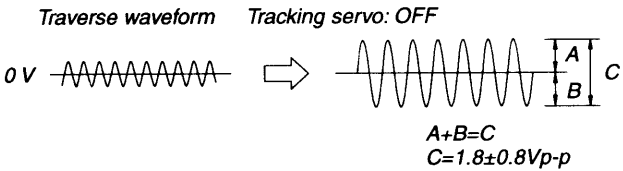
Tracking Balance Adjustment

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



Procedure:

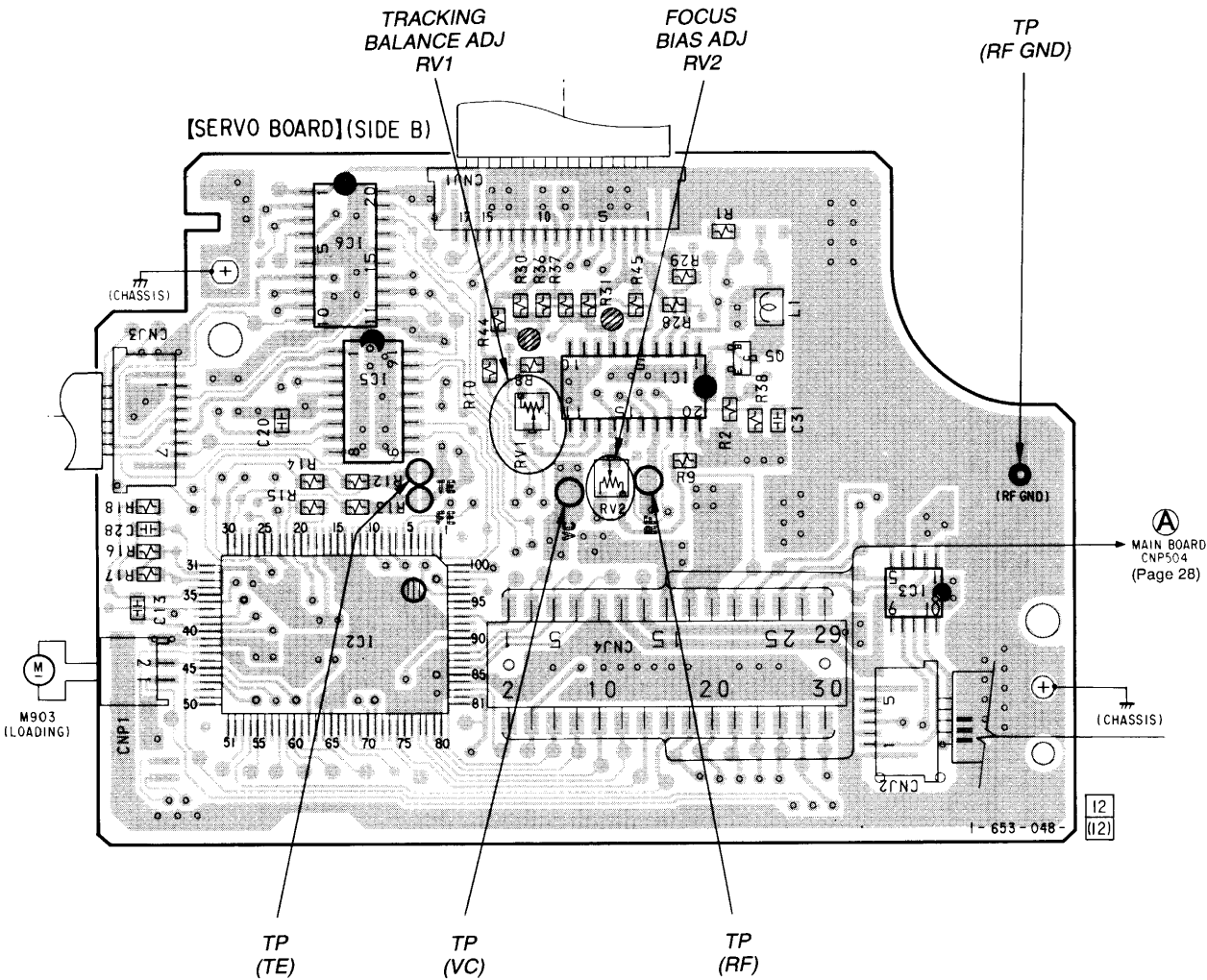
- 1. Connect an oscilloscope between TP (TE) and TP (VC) on the SERVO board.
- 2. Connect the power supply.
- 3. Push the RESET button (SW901) on the panel (sub).
- 4. Insert the disc (YEDS-18). Then, press preset 1 (INTRO) button to turn tracking servo ON/OFF. (This servo is off while the “INTRO” indicator on the display is lit.)
- 5. Adjust RV1 so that the oscilloscope waveform observed when the tracking servo is off will be vertically symmetrical and fall within the level range shown below.



Adjustment Location: See page 12.

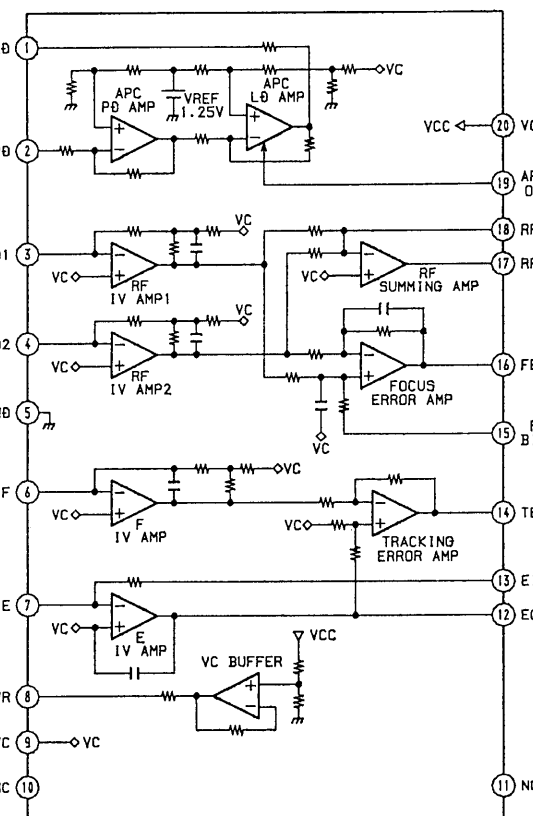
Adjustment Location:

– SERVO BOARD (SIDE B) –

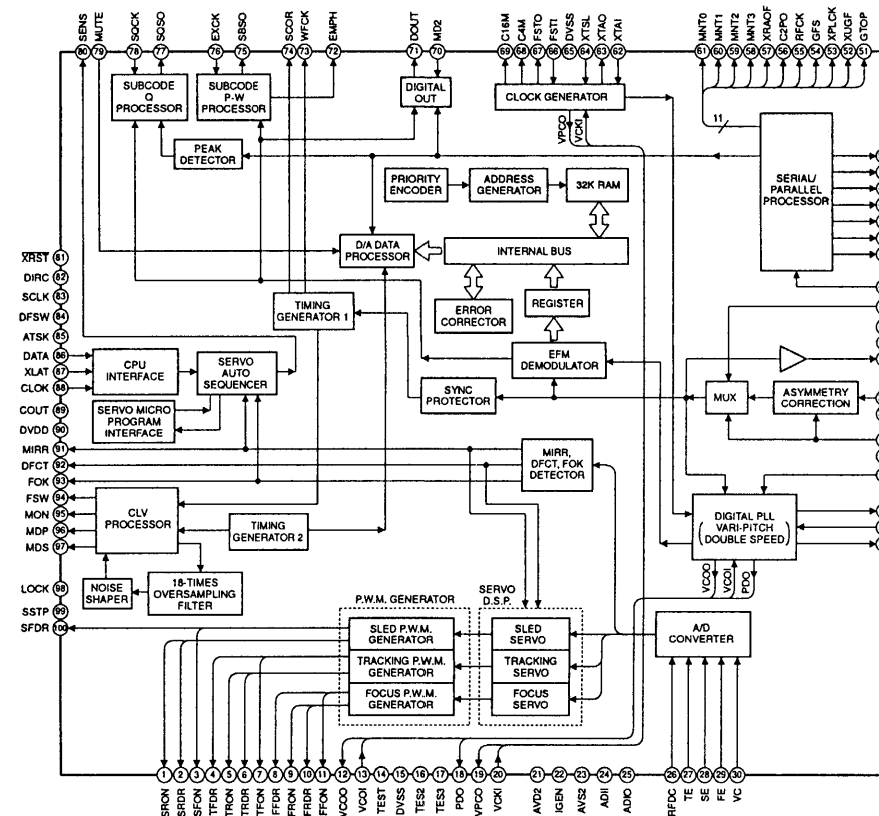


• IC Block Diagrams

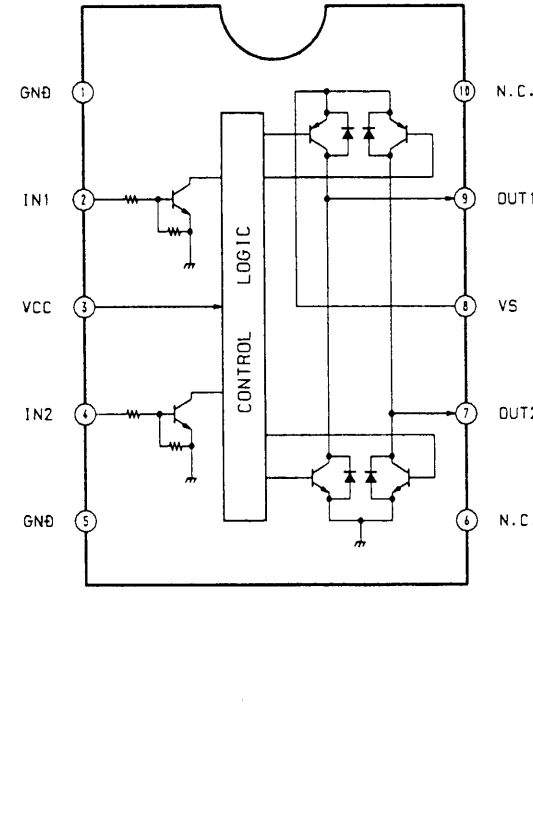
IC1 CXA1791M-T6



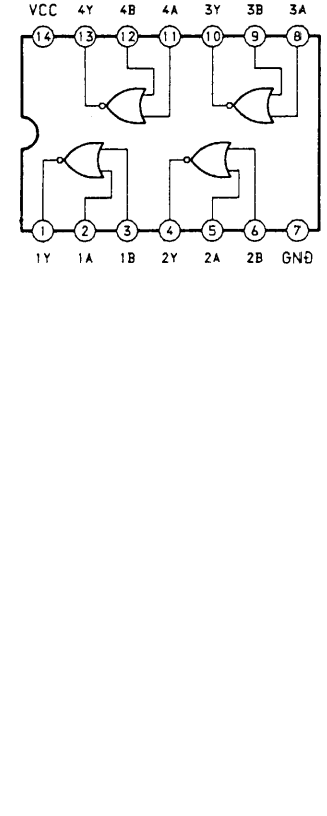
IC2 CXD2515Q



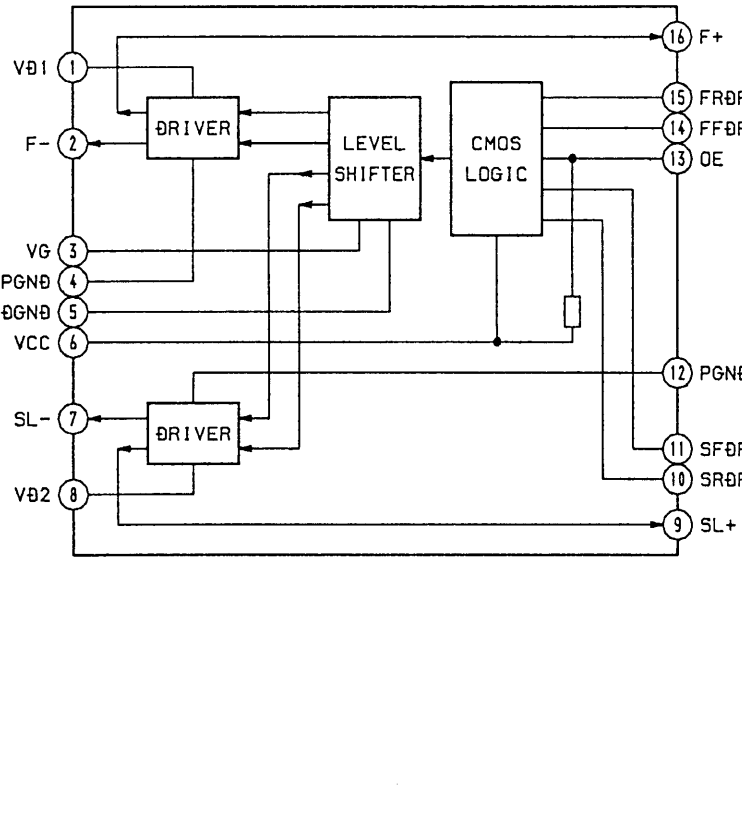
IC3 LB1638M



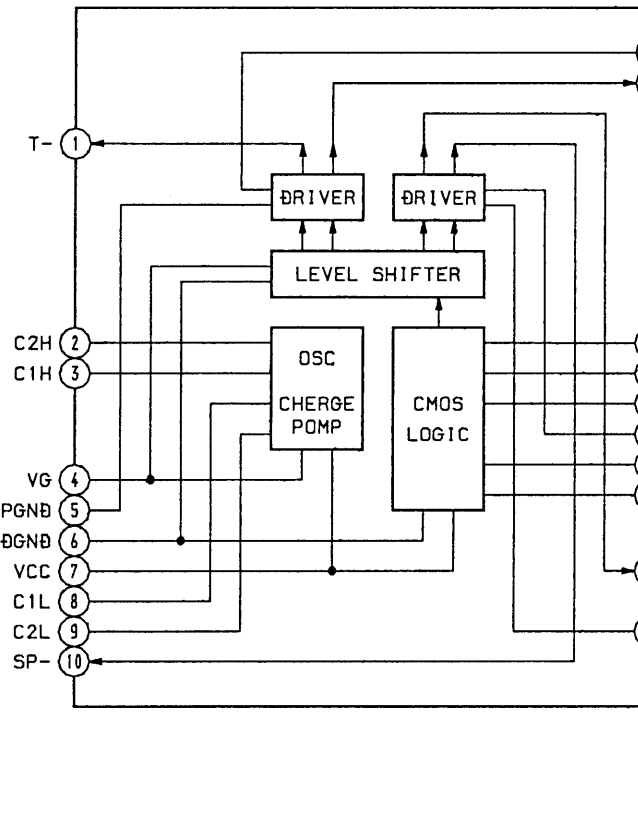
IC4 SN74HC02ANS



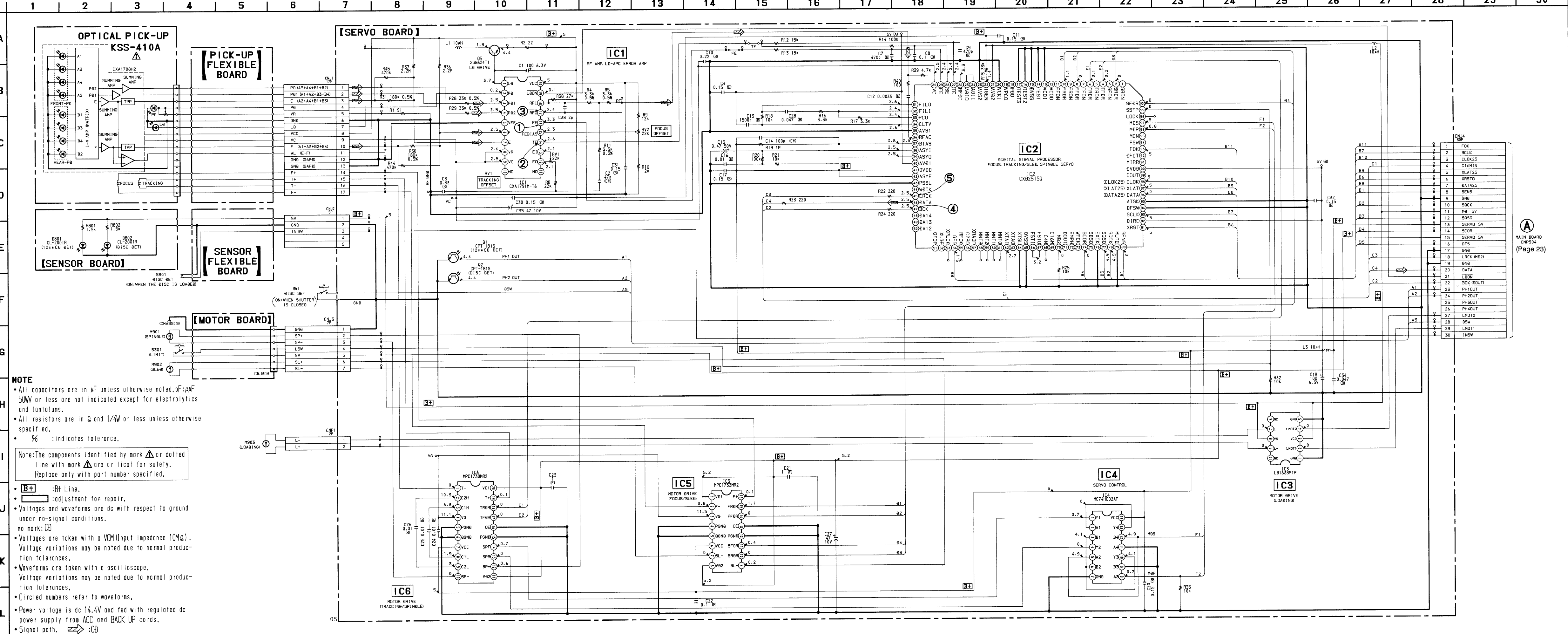
IC5 MPC1732MR2



IC6 MPC1730MR2



5-2. SCHEMATIC DIAGRAM - MECHANISM DECK Section -

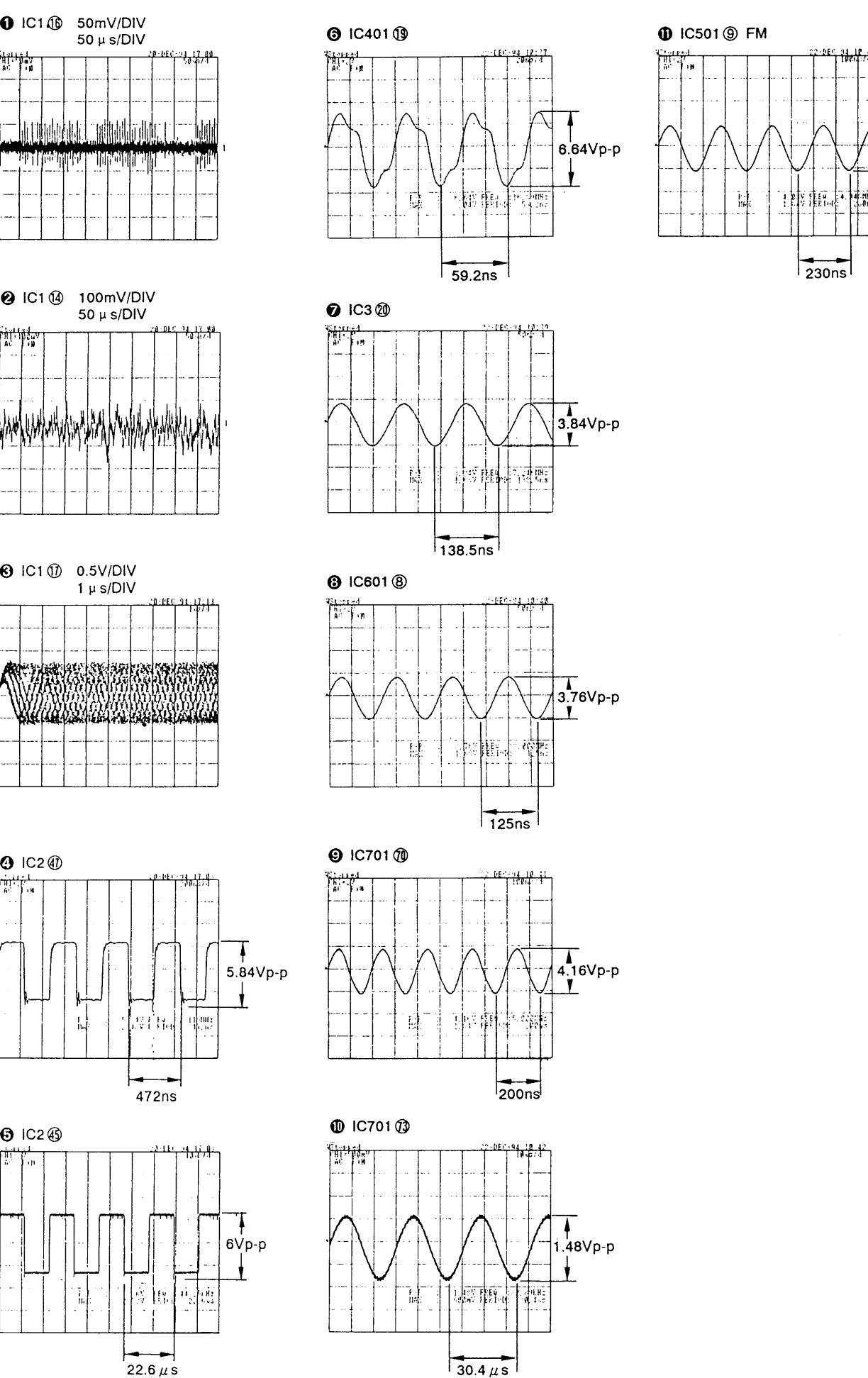


NOTE

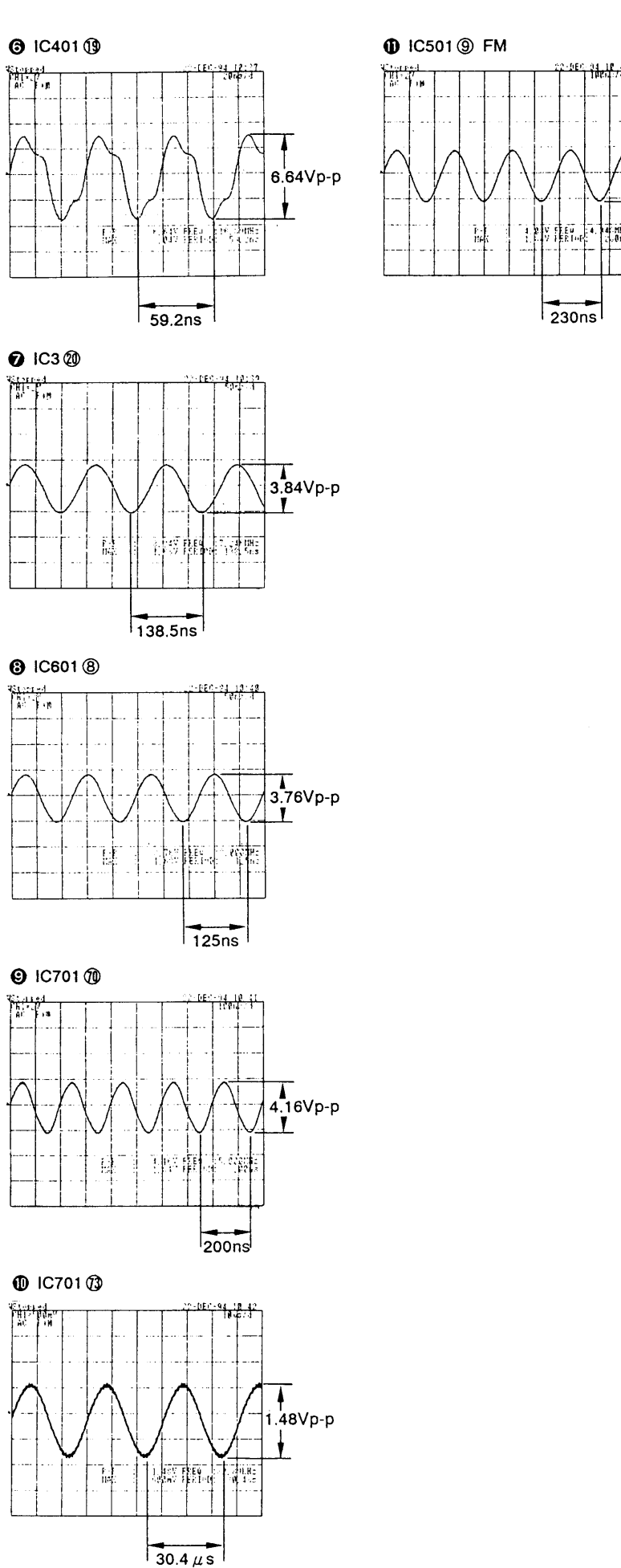
- All capacitors are in μF unless otherwise noted, pF : μF 50M Ω or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and $1/4\text{W}$ or less unless otherwise specified.
- % : indicates tolerance.
- Note: The components identified by mark Δ or dotted line with mark Δ are critical for safety. Replace only with part number specified.
- [B+] : B+ Line.
- [] : adjustment for repair.
- Voltages and waveforms are do with respect to ground under no-signal conditions.
- no mark: CB
- Voltages are taken with a VOM (input impedance 10M Ω). 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.
- Power voltage is dc 14.4V and fed with regulated dc power supply from ACC and BACK UP cords.
- Signal path, $\Rightarrow$: ICB

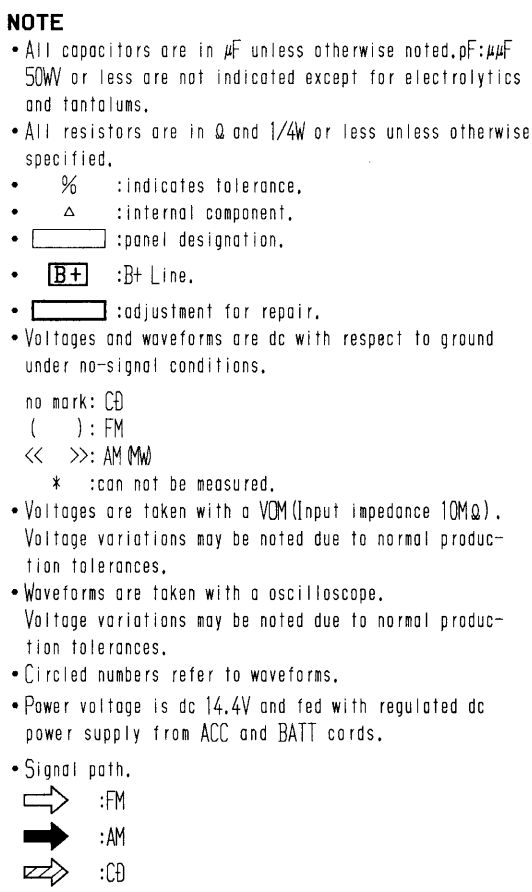
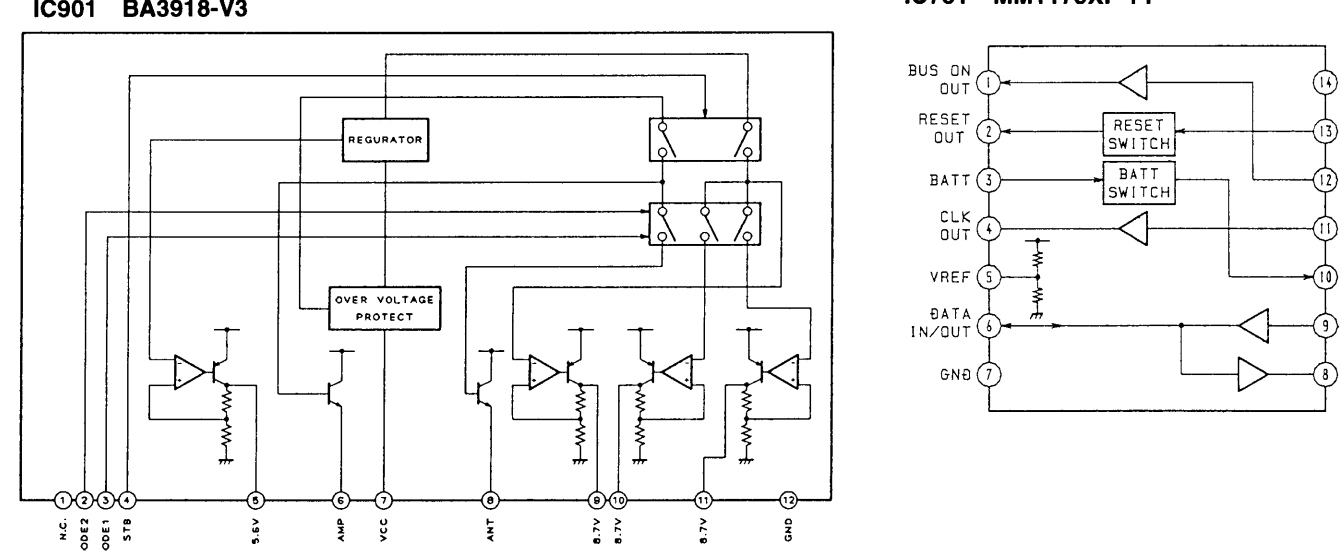
• Waveforms

Servo Board

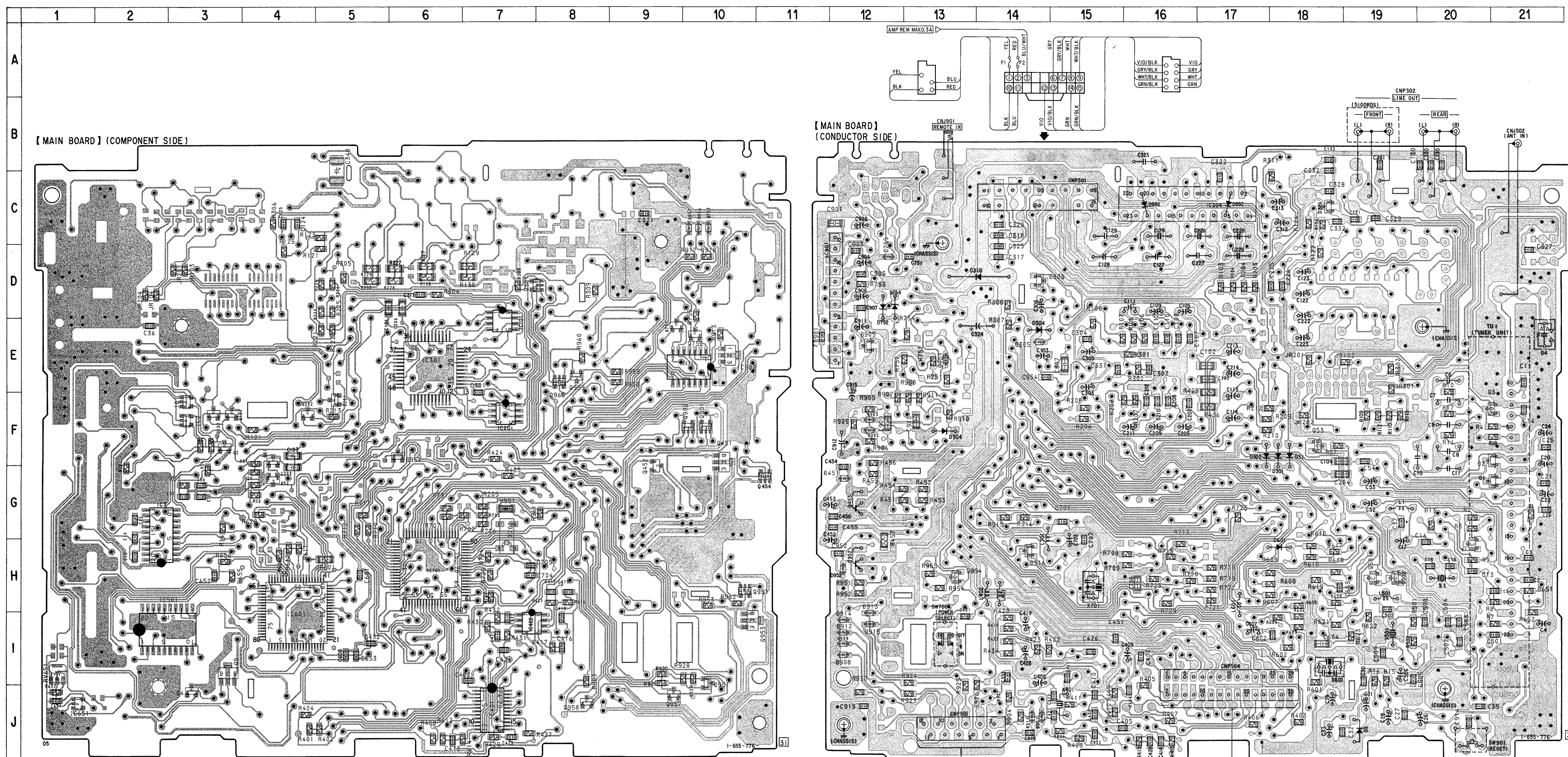


Main Board





5-4. PRINTED WIRING BOARD – MAIN Section –



- **Semiconductor Location**

Ref. No.	Location	Ref. No.	Location
D1	G-20	IC301	E-6
D2	G-20	IC304	C-17
D3	J-19	IC401	J-7
D4	E-21	IC402	I-7
D51	F-18	IC501	I-2
D301	F-18	IC601	I-4
D302	F-17	IC651	J-1
D303	D-15	IC701	H-6
D304	E-14	IC751	E-10
D305	E-14	IC901	C-11
D310	C-13	IC902	E-10
D321	C-18		
D451	G-12	Q1	H-20
D601	H-18	Q2	F-3
D751	E-13	Q3	F-21
D752	D-12	Q4	J-3
D753	C-10	Q5	I-3
D754	D-12	Q51	F-4
D755	D-12	Q52	G-4
D901	J-14	Q53	F-18
D902	F-12	Q101	F-3
D903	F-12	Q102	F-3
D904	F-13	Q201	F-5
D905	E-12	Q202	F-4
D906	C-10	Q301	D-7
D907	C-10	Q451	F-10
D908	I-12	Q452	G-9
D909	I-12	Q453	G-12
D911	J-14	Q454	G-11
D912	I-12	Q501	H-19
D913	H-12	Q502	H-19
D914	I-12	Q751	E-9
D915	I-12	Q752	E-10
D916	H-14	Q901	F-10
D951	J-10	Q902	F-10
D952	H-12	Q951	H-11
D954	F-6	Q952	H-12
D955	F-6	Q953	I-11
		Q954	H-13
IC1	F-3	Q957	J-9
IC2	F-3	Q958	J-8
IC3	G-2	Q959	E-8
IC101	E-7	Q960	E-8
IC201	F-7		

Note:

- — : parts extracted from the component side.
- : Through hole.
- △ : internal component.
- ▨ : Pattern from the side which enables seeing.

(The other layers' patterns are not indicated.)

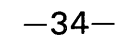
Caution:

Pattern face side: (Conductor Side)	Parts on the pattern face side seen from the pattern face are indicated.
Parts face side: (Component Side)	Parts on the parts face side seen from the parts face are indicated.

- Abbreviation
TYPE A : CDX-4100RDS (AMBER)
TYPE G : CDX-4100RDS (GREEN)

Note:
○ : CDX-5100RDS ONLY

- All capacitors are in μF unless otherwise noted, pF: μF 50W or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4W or less unless otherwise specified.
- % :indicates tolerance.
- :panel designation.
- **B+** :Bt Line.
- Voltages are dc with respect to ground under no-signal conditions.
no mark: FM
- Voltages are taken with a VOM (input impedance 10M Ω).
Voltage variations may be noted due to normal production tolerances.
- Power voltage is dc 14.4V and fed with regulated dc power supply from ACC and BATT cords.
- Abbreviation
TYPE A:CDX-4100RDS (AMBER)
TYPE G:CDX-4100RDS GREEN



5-7. IC PIN FUNCTION DESCRIPTION

• IC601 TUNER CONTROL (MN1883220SZL)

Pin No.	Pin Name	I/O	Function
1	A5	O	S-RAM address control output. Not used.
2	A4	O	
3	A3	O	
4	A2	O	
5	A1	O	
6	A0	O	
7	VDD	—	Power supply pin.
8	X1	—	Connecting pins of the ceramic oscillator. (8 MHz)
9	X2	—	
10	GND	—	GND.
11	XTI	—	Not used.
12	XTO	—	
13	XO	—	Connected to GND.
14	RESET	I	Reset input pin. “L”: Reset
15	RDS-CLK	I	RDS clock input pin.
16	BU-CHECK	I	Back-up voltage detection.
17	BUS-ON-IN	I	Bus interface on/off detection.
18	D7	I/O	S-RAM data bus. Not used.
19	D6	I/O	
20	D5	I/O	
21	D4	I/O	
22	D3	I/O	
23	D2	I/O	
24	D1	I/O	
25	D0	I/O	
26	RE	O	S-RAM read enable output. Not used.
27	WE	O	S-RAM write enable output. Not used.
28	—	—	Not used.
29	—	—	
30	RDS-DATA	I	RDS data input.
31	FM-AMS-IN	I	Not used.
32	AM-ST-IN	I	Not used.
33	—	—	Not used.
34	—	—	
35	—	—	
36	—	—	Connected to GND.
37	—	—	
38	DI	I	PLL data input.
39	DO	O	PLL data output.
40	CLK	O	PLL clock output.

Pin No.	Pin Name	I/O	Function
41	CE	O	PLL chip enable output.
42	RQ	O	Bus request output.
43	LINK-OFF	O	Not used.
44	SCK	I	Bus interface clock input.
45	SI	I	Bus interface data input.
46	SO	O	Bus interface data output.
47	VDD	—	Power supply pin.
48	AVDD	—	Power supply pin. (for A/D conversion ports.)
49	VREF	I	Reference voltage input pin.
50	—	—	Connected to GND.
51	—	—	
52	SRAM-RST	I	Reset signal input.
53	MUTE-SEL	I	Mute selecting signal input.
54	MS-1	I	Mode select input.
55	MS-2	I	
56	AM-S-METER	I	AM signal meter voltage detection input.
57	FM-S-METER	I	FM signal meter voltage detection input.
58	VREF	I	Connected to GND.
59	—	—	Connected to GND.
60	VSS	—	GND.
61	TU-ON	O	Not used.
62	LO/ $\overline{DX}$	O	Not used.
63	SEEK	O	Seek out signal output.
64	AM-ON	O	Not used.
65	FM-ON	O	FM power supply control pin.
66	TUNER-MUTE	O	Tuner muting signal output pin.
67	AF-SEEK	O	AF seek out signal output.
68	SRAM	O	External S-RAM control output. Not used.
69	A15	O	Not used.
70	ST-IN-MONO	I	Stereo detection signal input pin.
71	SD IN	I	Station detection signal input pin.
72	A14	O	Not used.
73	A13	O	
74	CE	O	S-RAM chip enable output. Not used.
75	A11	O	S-RAM address control output. Not used.
76	A10	O	
77	A9	O	
78	A8	O	
79	A7	O	
80	A6	O	

• IC701 SYSTEM CONTROL (μ PD78058GC-069-3B9)

Pin No.	Pin Name	I/O	Function
1	P15	—	Not used.
2	8/12CM	I	Mechanism deck is for 12 cm disc only or not. “L” : 12 cm only “H” : 8/12 cm compatible
3	12/24H	I	12 hours or 24 hours system select for clock display. “L” : 12 hours “H” : 24 hours
4	AVSS	—	Connected to GND.
5	DSPL-ON/OFF	—	Not used.
6	P131	—	Not used.
7	AVREF	I	Reference voltage input pin.
8	SQSI	I	CD Q data input pin.
9	P71	—	Not used.
10	SQCKO	O	Clock output pin for reading the Q data.
11	P20	—	Not used.
12	LCD-SO	O	LCD serial data output.
13	LCD-CKO	O	LCD serial clock output.
14	LCD-CE	O	Pin which outputs chip enable to the LCD driver IC.
15	LCD-INH	O	Pin which outputs inhibit to the LCD driver IC.
16	UNI-SI	I	Serial data input. (SONY BUS)
17	UNI-SO	O	Serial data output. (SONY BUS)
18	UNI-CKI	I	Serial clock input. (SONY BUS)
19	UNI-CKO	O	Serial clock output. (SONY BUS)
20	BUS-ON	O	Bus on control. “L”: SONY BUS communication is active
21	SYS-RST	O	System reset control. “L” is out on reset slave microcomputer for SONY BUS.
22	PW-ON	O	On/off control pin of the system power supply. “H” : on
23	ILL-ON	O	Illumination power supply control output pin. “H” : on
24	CDM-ON	O	Power supply on/off control output pin. (mechanism deck section)
25	CD-ON	O	Power supply on/off control output pin. (CD servo IC)
26	ANT-REM	O	Antenna remote control.
27	DIMMER-ON	—	Not used.
28	COLOR	O	Output pin for switching lighting colors. (amber/green)
29	VOL-SO	O	Electronic volume serial data output.
30	VOL-CKO	O	Electronic volume serial clock output.
31	VOL-CE	O	Chip enable output pin to the electronic volume.
32	10/6KEY	I	Pin which switches the preset key to 10 key or 6 key. “L” : 6 key, “H” : 10 key
33	VSS	—	GND.
34	CAUTION	I	Alarm function is built in or not select. “L” : built in
35	TV-SEL	I	TV control function presence select pin. “L” : having TV “H” : none
36	TEL-MUTE	I	Telephone mute input pin.
37	TEST	I	When connected to “L”, test mode will be set.
38	PW-SEL	I	Power select switch input pin.
39	NOSE-SW	I	Front panel ass'y removal or attaching detection. “L” : attached
40	A-MUTE	O	Audio mute output pin. “H” : mute

Pin No.	Pin Name	I/O	Function
41	AMP-MUTE	O	Mute output pin for power amp IC.
42	AD-ON	O	VREF control pin of A/D conversion pins.
43	LD-ON	O	CD servo system power supply control.
44	EMPH ON	O	Outputs “L” when a disc which has been pre-emphasized is played back.
45	SCLK	O	Serial clock output pin for the CD servo IC.
46	BEEP	O	Alarm drive output pin.
47	CD-LAT	O	Serial data latch output pin for the CD servo IC.
48	CD-SO	O	Serial data output pin for the CD servo IC.
49	CD-CKO	O	Serial clock output pin for the CD servo IC.
50	CD-RST	O	CD servo IC resetting output pin.
51	FOK	I	Focus OK signal input pin from CD servo IC.
52	SENS	I	Sense signal input pin from CD servo IC.
53	GFS	I	Guarded frame sync input pin from CD servo IC.
54	PH4-IN	—	Not used.
55	PH2-IN	I	Mechanism deck sensor (loading/eject) input pin.
56	PH1-IN	I	Mechanism deck sensor (loading/eject) input pin.
57	DSW	I	Mechanism deck sensor input pin. Detects the completion of the disc chucking operation.
58	LM-EJ	O	Loading motor control output pin. (Eject direction)
59	LM-LOD	O	Loading motor control output pin. (Loading direction)
60	RESET	I	Input pin for system reset. “L” : reset
61	SIRCS	I	SIRCS signal input pin.
62	BU-IN	I	Battery line on/off detection.
63	KEY-ACK	I	Key input acknowledgement.
64	IN-SW	I	IN switch on mechanism deck input.
65	SCOR	I	Sub-code sync detection signal input pin.
66	ACC-IN	I	ACC line on/off detection. “L” : ACC on
67	TIMPOL	I	Input port for debug of microcomputer.
68	VDD	I	Power supply input. (5 V)
69	X2	—	The system clock (5 MHz) for system control IC.
70	X1	—	
71	GND	—	GND.
72	XT2	—	Connected to sub-crystal oscillator. (32.768 kHz)
73	XT1	—	
74	AVDD	I	Power supply input. (5 V)
75	AVREF	I	Reference voltage input pin of A/D conversion pins.
76	KEY-INO	I	Key input pin. (A/D input.)
77	KEY-IN1	I	Key input pin. (A/D input)
78	RC-IN1	I	Rotary commander shift key input.
79	RC-IN2	I	Rotary commander shift key input.
80	TEMP	I	Thermistor voltage for temperature detection input.

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)

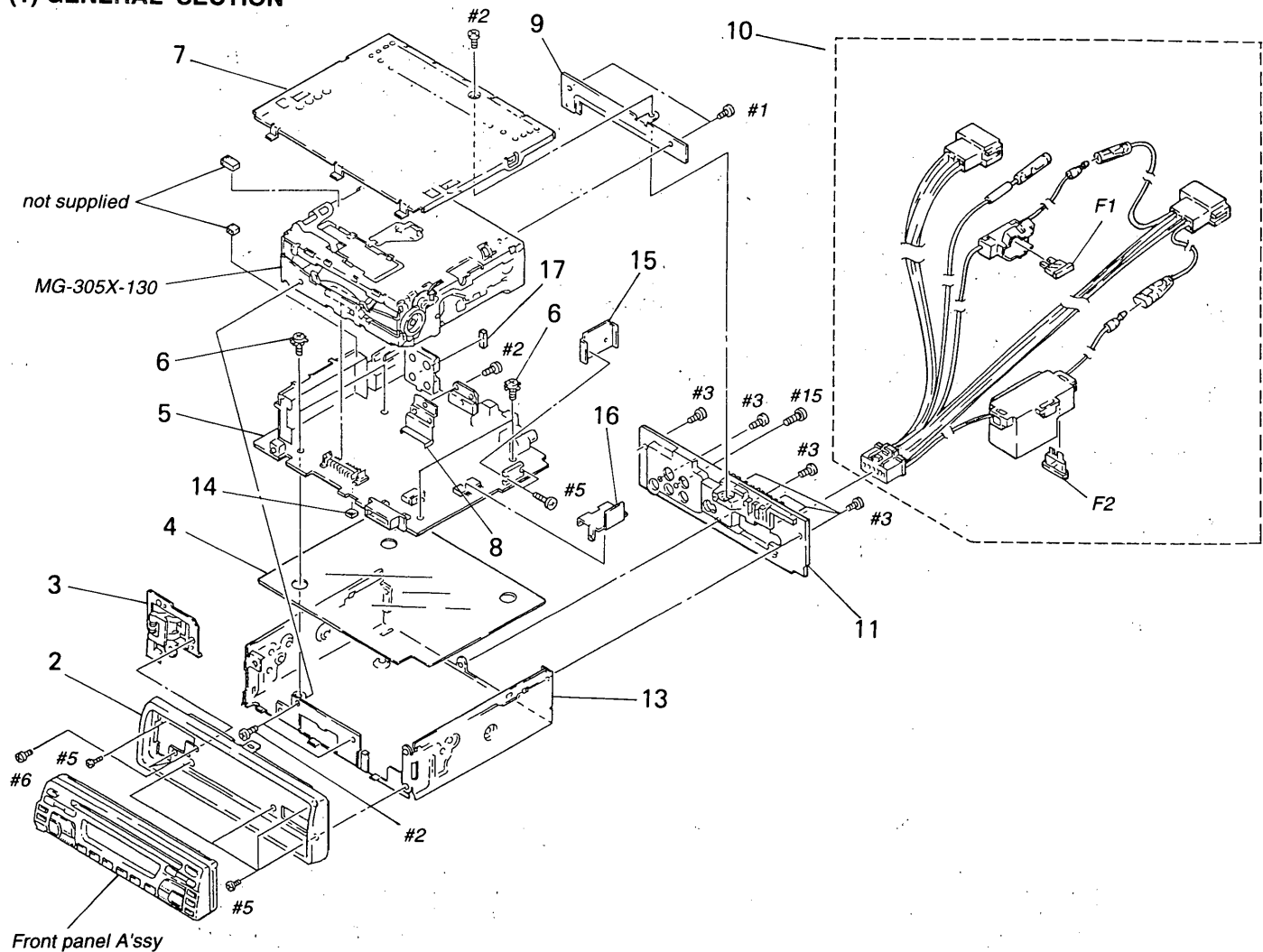
↑ ↑
Parts Color Cabinet's Color

- 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.

- Abbreviation
TYPE A: CDX-4100RDS (AMBER)
TYPE G: CDX-4100RDS (GREEN)

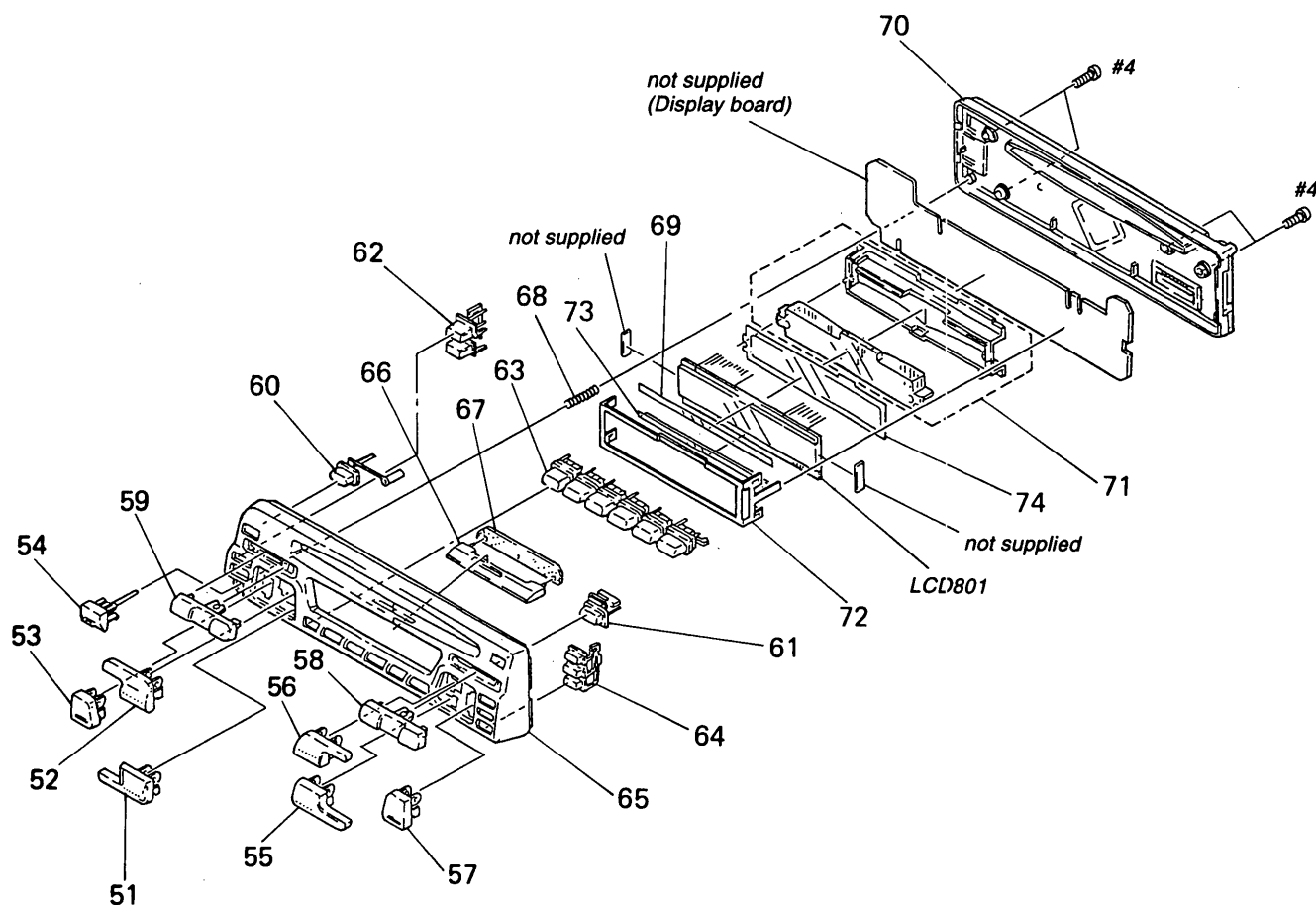
(1) GENERAL SECTION



Ref. No.	Part No.	Description	Remark
2	X-3371-552-1	PANEL (SUB) ASSY	
3	X-3367-636-1	LOCK ASSY	
* 4	3-921-921-01	SHEET, INSULATING	
* 5	A-3222-994-A	MAIN BOARD, COMPLETE (5100RDS:AEP, UK)	
* 5	A-3222-996-A	MAIN BOARD, COMPLETE (5100RDS:German)	
* 5	A-3222-997-A	MAIN BOARD, COMPLETE (4100RDS:AEP, UK)	
* 5	A-3222-999-A	MAIN BOARD, COMPLETE (4100RDS:German)	
6	3-915-923-01	SCREW, GROUND POINT	
* 7	X-3369-912-1	COVER ASSY	
* 8	3-932-468-01	BRACKET (IC)	

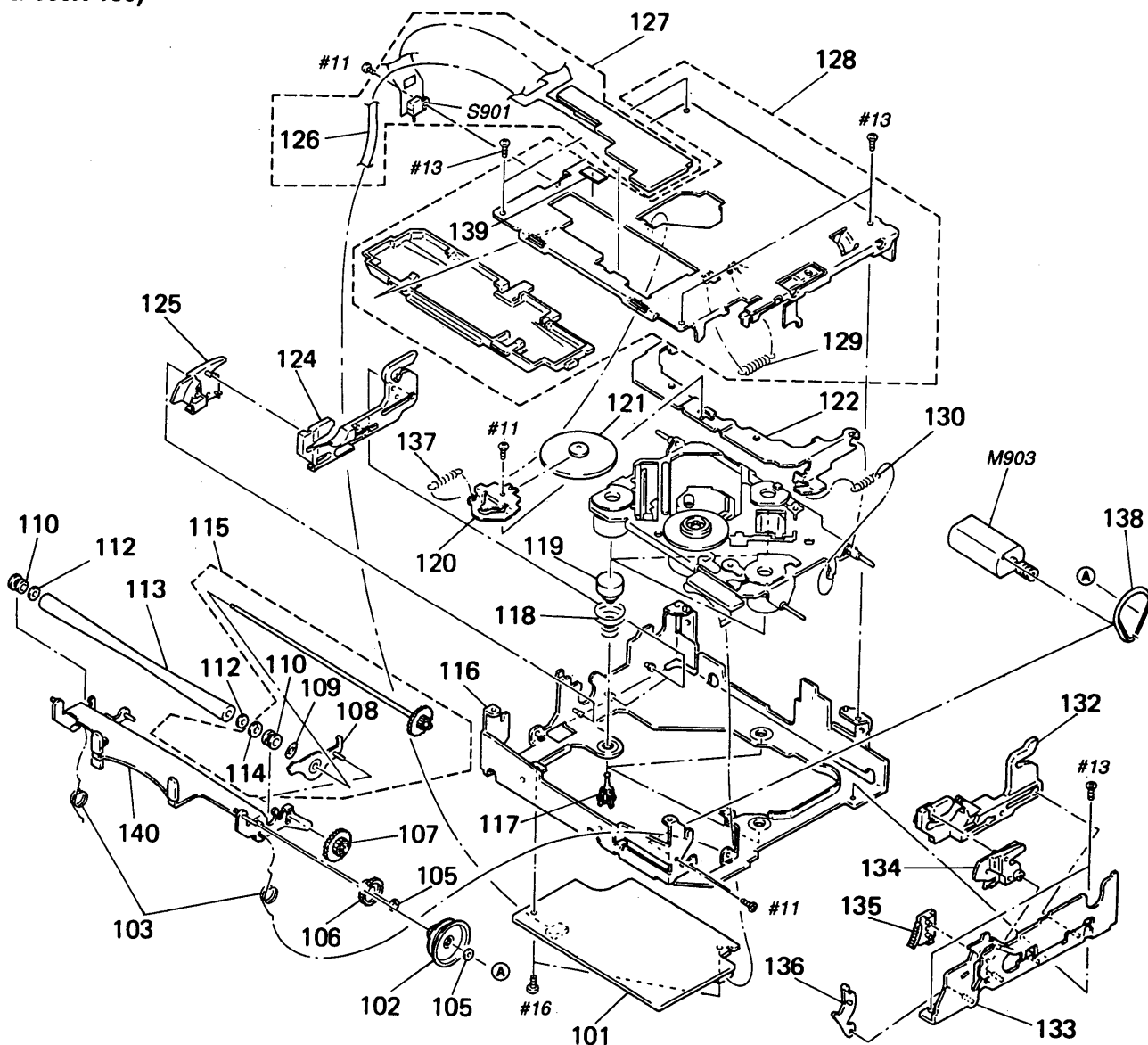
Ref. No.	Part No.	Description	Remark
* 9	3-909-336-01	BRACKET (MD)	
10	1-776-859-11	CORD (WITH CONNECTOR)	
* 11	3-921-923-01	HEAT SINK (4100RDS)	
* 11	3-921-923-11	HEAT SINK (5100RDS)	
* 13	3-921-920-01	CHASSIS (MAIN)	
* 14	3-924-933-01	SPACER (CN)	
15	3-932-472-01	HEAT SINK	
* 16	3-932-471-01	HEAT SINK (T)	
17	3-933-620-01	STOPPER (4100RDS)	
F1	1-533-326-11	FUSE (BLADE TYPE) (AUTO FUSE) (3A)	
F2	1-533-331-11	FUSE (BLADE TYPE) (AUTO FUSE) (15A)	

(2) FRONT PANEL SECTION



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
51	3-921-911-01	BUTTON (-)		64	3-921-898-31	BUTTON (3 GANG) (PTY/SENS/DSPL)	
52	3-921-910-01	BUTTON (+)		65	3-921-918-61	PANEL, FRONT (5100RDS)	
53	3-921-902-01	BUTTON (SEL)		65	3-921-918-71	PANEL, FRONT (4100RDS)	
54	3-921-900-02	BUTTON (RELEASE)		66	3-921-901-03	PLATE (CD), LIGHT GUIDE	
55	3-921-909-31	BUTTON (AM) (AF/TA)		67	3-909-313-01	SHEET (DOOR F)	
56	3-921-915-11	BUTTON (FM) (TUNER)		68	3-932-469-01	SPRING (R2)	
57	3-921-916-01	BUTTON (CD, TAPE) (CD)		* 69	3-932-465-01	SHEET (LCD)	
58	3-921-914-01	BUTTON (PRE) (PRESET)		70	3-921-924-01	PANEL, FRONT BACK	
59	3-921-913-01	BUTTON (AMS) (AMS/SEEK)		* 71	X-3369-913-1	HOLDER (LCD) ASSY	
60	3-921-904-01	BUTTON (OFF)		* 72	3-921-908-01	PLATE (LCD), GROUND	
61	3-921-905-01	BUTTON (EJECT) (▲)		* 73	3-932-464-01	SHEET (LCD D)	
62	3-921-903-01	BUTTON (2 GANG) (LOUD/MUTE)		* 74	3-933-081-01	SHEET (REFLECTOR)	
63	3-921-899-01	BUTTON (6 KEY) (1/2/3/4/5/6)		LCD801	1-810-845-31	DISPLAY PANEL, LIQUID CRYSTAL	

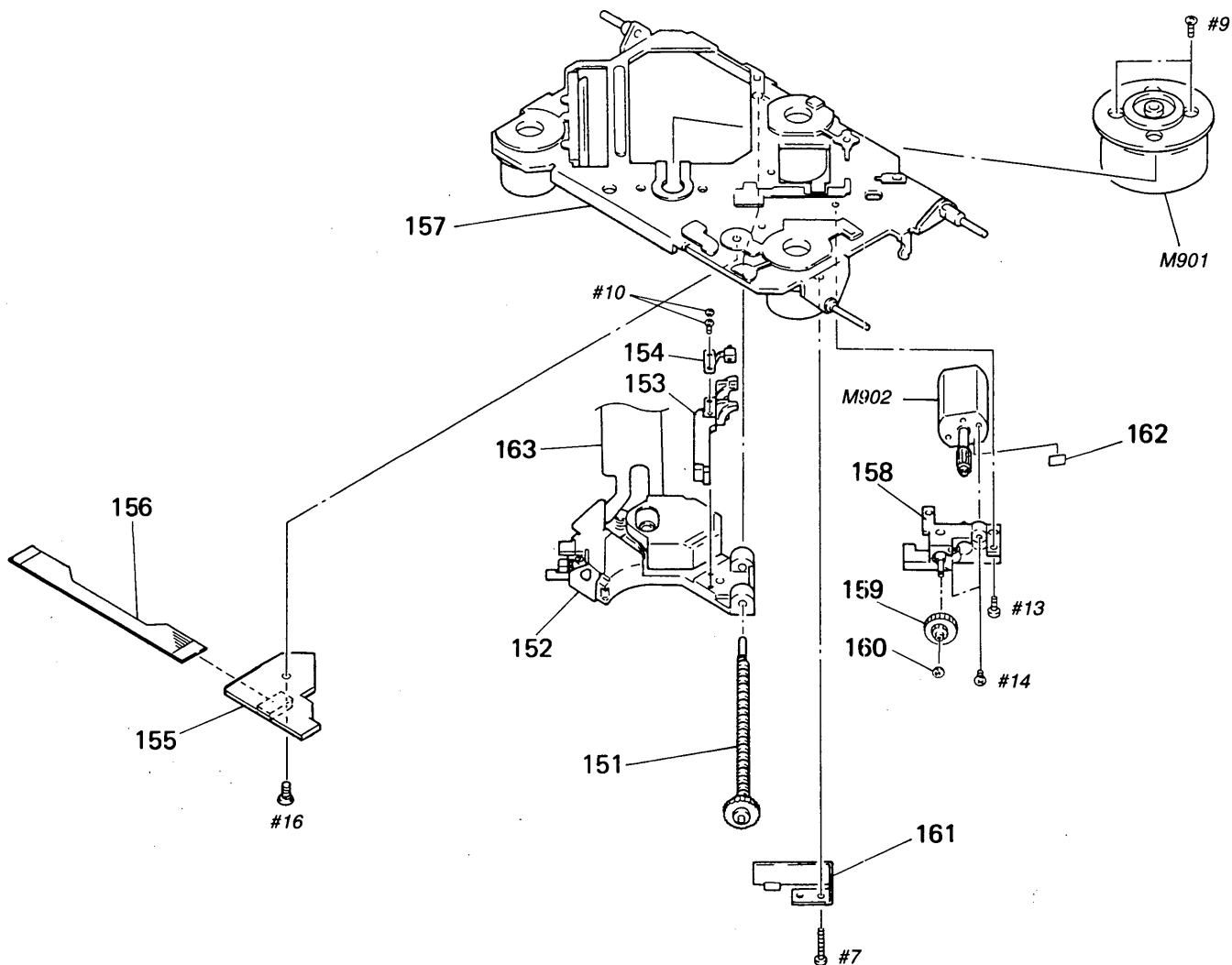
(3) MECHANISM DECK SECTION-1
(MG-305X-130)



Ref. No.	Part No.	Description	Remark
101	A-3298-222-A	SERVO BOARD, COMPLETE	
102	3-384-894-01	GEAR (R1)	
103	3-384-900-01	SPRING (PRESS)	
105	3-578-242-11	WASHER	
106	3-384-895-01	GEAR (R2)	
107	3-384-896-01	GEAR (DOWN)	
108	X-3366-858-3	ARM ASSY, FRICTION	
109	3-384-899-01	SPRING (FRICTION)	
110	3-384-892-02	BEARING (ROLLER)	
112	3-701-438-11	WASHER, 2. 5	
113	3-909-408-01	ROLLER (T)	
114	3-386-150-01	RING (ROLLER), RETAINING	
115	A-3252-591-A	GEAR ASSY, ROLLER	
116	X-3366-852-1	CHASSIS (M) ASSY	
117	3-384-923-01	SHAFT (DAMPER)	
118	3-384-916-01	SPRING (FL)	
119	3-384-914-01	DAMPER	
120	3-384-915-11	BRACKET (CP)	
121	3-384-918-01	RETAINER (DISC)	

Ref. No.	Part No.	Description	Remark
122	3-384-908-11	ARM, CHUCKING	
124	3-384-888-01	SLIDER (L)	
125	3-384-887-01	LEVER (L)	
126	1-650-223-11	SENSOR FLEXIBLE BOARD	
127	A-3222-525-A	SENSOR BOARD, COMPLETE	
128	X-3366-854-1	CHASSIS (T) ASSY	
129	3-384-881-02	SPRING (12)	
130	3-384-917-01	SPRING (CH)	
132	X-3366-102-1	SLIDER (R) ASSY	
133	X-3366-853-1	CHASSIS (R) ASSY	
134	3-384-889-01	LEVER (R)	
135	3-384-897-01	GEAR (RACK)	
136	3-384-891-01	LEVER (ST)	
137	3-388-331-01	SPRING (T)	
138	3-387-776-01	BELT (L)	
* 139	3-704-132-01	LABEL (K), SELF	
140	X-3366-857-1	ARM ASSY, ROLLER	
M903	A-3252-580-A	MOTOR (L) ASSY (LOADING)	
S901	1-692-441-11	SWITCH, MICROPHONE (DISC DET)	

(4) MECHANISM DECK SECTION-2
(MG-305X-130)



Ref. No.	Part No.	Description	Remark
151	A-3252-586-A	SHAFT (SL) ASSY	
△152	8-848-327-11	OPTICAL PICK-UP KSS-410A	
153	3-384-922-01	GEAR (SL FEED)	
154	3-384-920-01	RETAINER (SL FEED)	
* 155	1-650-144-11	MOTOR BOARD	
156	1-646-402-11	MOTOR FLEXIBLE BOARD	
157	X-3370-190-1	CHASSIS (OPT) ASSY (OUTSERT)	
158	X-3366-100-1	BASE (DRIVING) ASSY	

Ref. No.	Part No.	Description	Remark
159	3-384-912-01	GEAR (K2)	
160	3-570-615-00	POLY-WASHER (DIA. 1.2)	
161	3-384-913-11	SPRING (THRUST RETAINER)	
* 162	3-920-313-01	CUSHION (SL)	
163	1-652-794-11	PICK-UP FLEXIBLE BOARD	
M901	X-3367-484-2	MOTOR (SPINDLE) ASSY	
M902	A-3252-585-A	MOTOR (SL) ASSY (SLED)	

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

SECTION 7

ELECTRICAL PARTS LIST

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 : CDX-4100RDS (AMBER) TYPE G : CDX-4100RDS (GREEN)

- 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
		DISPLAY BOARD, COMPLETE *****				< IC >	
		< CAPACITOR >		IC801	8-759-246-16	IC TC9240F	
		< CONNECTOR >				< LIQUID CRYSTAL DISPLAY >	
C801	1-164-222-11	CERAMIC CHIP 0.22uF	25V	LCD801	1-810-845-31	DISPLAY PANEL, LIQUID CRYSTAL	
C802	1-164-232-11	CERAMIC CHIP 0.01uF	50V			< SWITCH >	
C803	1-163-009-11	CERAMIC CHIP 0.001uF	10% 50V	LSW801	1-762-141-12	SWITCH, KEY BOARD (WITH LED) (Δ) (TYPE A)	
		< DIODE >		LSW801	1-762-142-12	SWITCH, KEY BOARD (WITH LED) (Δ) (TYPE G)	
CNP801	1-764-423-11	PIN, CONNECTOR 12P		LSW801	1-762-143-12	SWITCH, KEY BOARD (WITH LED) (Δ) (5100RDS)	
D801	8-719-420-51	DIODE MA729 (5100RDS)		LSW802	1-762-141-12	SWITCH, KEY BOARD (WITH LED) (CD) (TYPE A)	
D802	8-719-056-83	DIODE UDZ-TE-17-6.8B		LSW802	1-762-142-12	SWITCH, KEY BOARD (WITH LED) (CD) (TYPE G)	
D803	8-719-056-83	DIODE UDZ-TE-17-6.8B		LSW802	1-762-143-12	SWITCH, KEY BOARD (WITH LED) (CD) (5100RDS)	
D804	8-719-056-83	DIODE UDZ-TE-17-6.8B		LSW803	1-762-141-12	SWITCH, KEY BOARD (WITH LED) (AF/TA) (TYPE A)	
D805	8-719-056-83	DIODE UDZ-TE-17-6.8B		LSW803	1-762-142-12	SWITCH, KEY BOARD (WITH LED) (AF/TA) (TYPE G)	
D806	8-719-977-03	DIODE DT25.6B		LSW803	1-762-143-12	SWITCH, KEY BOARD (WITH LED) (AF/TA) (5100RDS)	
D818	8-719-053-36	LED LN1471Y-(TRP) (6) (EXCEPT TYPE G)		LSW804	1-762-141-12	SWITCH, KEY BOARD (WITH LED) (TUNER) (TYPE A)	
D818	8-719-053-37	LED LN1371G6-(TRP) (6) (TYPE G)		LSW804	1-762-142-12	SWITCH, KEY BOARD (WITH LED) (TUNER) (TYPE G)	
D819	8-719-053-36	LED LN1471Y-(TRP) (5) (EXCEPT TYPE G)		LSW804	1-762-143-12	SWITCH, KEY BOARD (WITH LED) (TUNER) (5100RDS)	
D819	8-719-053-37	LED LN1371G6-(TRP) (5) (TYPE G)		LSW815	1-762-141-12	SWITCH, KEY BOARD (WITH LED) (DSPL) (TYPE A)	
D820	8-719-053-36	LED LN1471Y-(TRP) (4) (EXCEPT TYPE G)		LSW815	1-762-142-12	SWITCH, KEY BOARD (WITH LED) (DSPL) (TYPE G)	
D820	8-719-053-37	LED LN1371G6-(TRP) (4) (TYPE G)		LSW815	1-762-143-12	SWITCH, KEY BOARD (WITH LED) (DSPL) (5100RDS)	
D821	8-719-053-36	LED LN1471Y-(TRP) (INTRO 1) (EXCEPT TYPE G)		LSW816	1-762-141-12	SWITCH, KEY BOARD (WITH LED) (OFF) (TYPE A)	
D821	8-719-053-37	LED LN1371G6-(TRP) (INTRO 1) (TYPE G)		LSW816	1-762-142-12	SWITCH, KEY BOARD (WITH LED) (OFF) (TYPE G)	
D822	8-719-053-36	LED LN1471Y-(TRP) (REPEAT 2) (EXCEPT TYPE G)		LSW816	1-762-143-12	SWITCH, KEY BOARD (WITH LED) (OFF) (5100RDS)	
D822	8-719-053-37	LED LN1371G6-(TRP) (REPEAT 2) (TYPE G)		LSW817	1-762-141-12	SWITCH, KEY BOARD (WITH LED) (SEL) (TYPE A)	
D823	8-719-053-36	LED LN1471Y-(TRP) (SHUF 3) (EXCEPT TYPE G)		LSW817	1-762-142-12	SWITCH, KEY BOARD (WITH LED) (SEL) (TYPE G)	
D823	8-719-053-37	LED LN1371G6-(TRP) (SHUF 3) (TYPE G)		LSW817	1-762-143-12	SWITCH, KEY BOARD (WITH LED) (SEL) (5100RDS)	
D824	8-719-053-37	LED LN1371G6-(TRP) (6) (5100RDS)		LSW818	1-762-141-12	SWITCH, KEY BOARD (WITH LED) (+) (TYPE A)	
D825	8-719-053-37	LED LN1371G6-(TRP) (5) (5100RDS)		LSW818	1-762-142-12	SWITCH, KEY BOARD (WITH LED) (+) (TYPE G)	
D826	8-719-053-37	LED LN1371G6-(TRP) (4) (5100RDS)		LSW818	1-762-143-12	SWITCH, KEY BOARD (WITH LED) (+) (5100RDS)	
D827	8-719-053-37	LED LN1371G6-(TRP) (INTRO 1) (5100RDS)		LSW819	1-762-141-12	SWITCH, KEY BOARD (WITH LED) (-) (TYPE A)	
D828	8-719-053-37	LED LN1371G6-(TRP) (REPEAT 2) (5100RDS)		LSW819	1-762-142-12	SWITCH, KEY BOARD (WITH LED) (-) (TYPE G)	
D829	8-719-053-37	LED LN1371G6-(TRP) (SHUF 3) (5100RDS)		LSW820	1-762-141-12	SWITCH, KEY BOARD (WITH LED) (PRESET + $\Rightarrow$) (TYPE A)	
				LSW820	1-762-142-12	SWITCH, KEY BOARD (WITH LED) (PRESET + $\Rightarrow$) (TYPE G)	

DISPLAY

Ref. No.	Part No.	Description	Remark
LSW820	1-762-143-12	SWITCH, KEY BOARD (WITH LED) (PRESET + ►►) (5100RDS)	
LSW821	1-762-141-12	SWITCH, KEY BOARD (WITH LED) (PRESET ◀◀ -) (TYPE A)	
LSW821	1-762-142-12	SWITCH, KEY BOARD (WITH LED) (PRESET ◀◀ -) (TYPE G)	
LSW821	1-762-143-12	SWITCH, KEY BOARD (WITH LED) (PRESET ◀◀ -) (5100RDS)	
LSW822	1-762-141-12	SWITCH, KEY BOARD (WITH LED) (MUTE) (TYPE A)	
LSW822	1-762-142-12	SWITCH, KEY BOARD (WITH LED) (MUTE) (TYPE G)	
LSW822	1-762-143-12	SWITCH, KEY BOARD (WITH LED) (MUTE) (5100RDS)	
LSW824	1-762-141-12	SWITCH, KEY BOARD (WITH LED) (AMS/SEEK + ►►) (TYPE A)	
LSW824	1-762-142-12	SWITCH, KEY BOARD (WITH LED) (AMS/SEEK + ►►) (TYPE G)	
LSW824	1-762-143-12	SWITCH, KEY BOARD (WITH LED) (AMS/SEEK + ►►) (5100RDS)	
LSW825	1-762-141-12	SWITCH, KEY BOARD (WITH LED) (AMS/SEEK ◀◀ -) (TYPE A)	
LSW825	1-762-142-12	SWITCH, KEY BOARD (WITH LED) (AMS/SEEK ◀◀ -) (TYPE G)	
LSW825	1-762-143-12	SWITCH, KEY BOARD (WITH LED) (AMS/SEEK ◀◀ -) (5100RDS)	
LSW826	1-762-141-12	SWITCH, KEY BOARD (WITH LED) (LOUD) (TYPE A)	
LSW826	1-762-142-12	SWITCH, KEY BOARD (WITH LED) (LOUD) (TYPE G)	
LSW826	1-762-143-12	SWITCH, KEY BOARD (WITH LED) (LOUD) (5100RDS)	
LSW827	1-762-141-12	SWITCH, KEY BOARD (WITH LED) (BTM SENS) (TYPE A)	
LSW827	1-762-142-12	SWITCH, KEY BOARD (WITH LED) (BTM SENS) (TYPE G)	
LSW827	1-762-143-12	SWITCH, KEY BOARD (WITH LED) (BTM SENS) (5100RDS)	
LSW828	1-762-141-12	SWITCH, KEY BOARD (WITH LED) (PTY) (TYPE A)	
LSW828	1-762-142-12	SWITCH, KEY BOARD (WITH LED) (PTY) (TYPE G)	
LSW828	1-762-143-12	SWITCH, KEY BOARD (WITH LED) (PTY) (5100RDS)	
< PILOT LAMP >			
PL801	1-517-181-41	LAMP, PILOT (GREEN) (5100RDS)	
PL802	1-517-181-41	LAMP, PILOT (GREEN) (5100RDS)	
PL803	1-517-181-41	LAMP, PILOT (GREEN) (TYPE G)	
PL803	1-517-181-51	LAMP, PILOT (AMBER) (EXCEPT TYPE G)	
PL804	1-517-181-41	LAMP, PILOT (TYPE G)	
PL804	1-517-181-51	LAMP, PILOT (AMBER) (EXCEPT TYPE G)	
< TRANSISTOR >			
Q801	8-729-904-78	TRANSISTOR DTD113ZK (5100RDS)	
Q802	8-729-904-66	TRANSISTOR DTD113EK (5100RDS)	
Q803	8-729-904-78	TRANSISTOR DTD113ZK (5100RDS)	
Q804	8-729-904-66	TRANSISTOR DTD113EK (5100RDS)	

Ref. No.	Part No.	Description	Remark
< RESISTOR >			
R801	1-219-286-11	METAL GLAZE 680 2%	1/16W
R802	1-219-286-11	METAL GLAZE 680 2%	1/16W
R803	1-219-286-11	METAL GLAZE 680 2%	1/16W
R808	1-208-695-11	METAL GLAZE 3.3K 2%	1/16W
R809	1-208-699-11	METAL GLAZE 4.7K 2%	1/16W
R810	1-208-703-11	METAL GLAZE 6.8K 2%	1/16W
R811	1-208-707-11	METAL GLAZE 10K 2%	1/16W
R812	1-208-711-11	METAL GLAZE 15K 2%	1/16W
R813	1-208-715-11	METAL GLAZE 22K 2%	1/16W
R814	1-218-977-11	METAL GLAZE 100K 2%	1/16W
R815	1-219-286-11	METAL GLAZE 680 2%	1/16W
R816	1-219-286-11	METAL GLAZE 680 2%	1/16W
R817	1-219-286-11	METAL GLAZE 680 2%	1/16W
R818	1-218-838-11	METAL GLAZE 1K 2%	1/16W
R819	1-208-687-11	METAL GLAZE 1.5K 2%	1/16W
R820	1-208-687-11	METAL GLAZE 1.5K 2%	1/16W
R821	1-218-973-11	METAL GLAZE 47K 2%	1/16W
R822	1-208-691-11	METAL GLAZE 2.2K 2%	1/16W
R823	1-208-695-11	METAL GLAZE 3.3K 2%	1/16W
R824	1-208-717-11	METAL GLAZE 27K 2%	1/16W
R825	1-208-715-11	METAL GLAZE 22K 2%	1/16W
R826	1-218-973-11	METAL GLAZE 47K 2%	1/16W
R827	1-208-695-11	METAL GLAZE 3.3K 2%	1/16W
R828	1-208-702-11	METAL GLAZE 6.2K 2%	1/16W
R829	1-216-025-00	METAL GLAZE 100 5%	1/10W (5100RDS)
R830	1-216-025-00	METAL GLAZE 100 5%	1/10W (TYPE G)
R830	1-216-029-00	METAL CHIP 150 5%	1/10W (EXCEPT TYPE G)
R831	1-216-033-00	METAL CHIP 220 5%	1/10W (5100RDS)
R832	1-216-033-00	METAL CHIP 220 5%	1/10W (TYPE G)
R832	1-216-035-00	METAL CHIP 270 5%	1/10W (EXCEPT TYPE G)
R833	1-216-033-00	METAL CHIP 220 5%	1/10W (5100RDS)
R834	1-216-033-00	METAL CHIP 220 5%	1/10W (TYPE G)
R834	1-216-035-00	METAL CHIP 270 5%	1/10W (EXCEPT TYPE G)
R835	1-216-025-00	METAL GLAZE 100 5%	1/10W (5100RDS)
R836	1-216-025-00	METAL GLAZE 100 5%	1/10W (TYPE G)
R836	1-216-029-00	METAL CHIP 150 5%	1/10W (EXCEPT TYPE G)
R837	1-216-033-00	METAL CHIP 220 5%	1/10W (5100RDS)
R838	1-216-033-00	METAL CHIP 220 5%	1/10W (TYPE G)
R838	1-216-035-00	METAL CHIP 270 5%	1/10W (EXCEPT TYPE G)
R839	1-216-033-00	METAL CHIP 220 5%	1/10W (5100RDS)
R840	1-216-033-00	METAL CHIP 220 5%	1/10W (TYPE G)

Ref. No.	Part No.	Description	Remark		
R840	1-216-035-00	METAL CHIP	270	5%	1/10W (EXCEPT TYPE G)
R841	1-216-033-00	METAL CHIP	220	5%	1/10W (5100RDS)
R842	1-216-033-00	METAL CHIP	220	5%	1/10W (TYPE G)
R842	1-216-035-00	METAL CHIP	270	5%	1/10W (EXCEPT TYPE G)
R843	1-216-049-00	METAL GLAZE	1K	5%	1/10W (5100RDS)
R850	1-208-702-11	METAL GLAZE	6.2K	2%	1/16W
R853	1-216-041-00	METAL CHIP	470	5%	1/10W
R854	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R855	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R856	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R857	1-216-097-00	METAL GLAZE	100K	5%	1/10W
R858	1-216-089-00	METAL GLAZE	47K	5%	1/10W
R859	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R860	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R861	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R882	1-216-295-00	CONDUCTOR, CHIP			(2012) (4100RDS)
R884	1-216-295-00	CONDUCTOR, CHIP			(2012) (4100RDS)
< SWITCH >					
SW809	1-762-357-11	SWITCH (6)			
SW810	1-762-357-11	SWITCH (5)			
SW811	1-762-357-11	SWITCH (4)			
SW812	1-762-357-11	SWITCH (SHUF 3)			
SW813	1-762-357-11	SWITCH (REPEAT 2)			
SW814	1-762-357-11	SWITCH (INTRO 1)			

*	A-3222-994-A	MAIN BOARD, COMPLETE (5100RDS:AEP, UK)			
*	A-3222-996-A	MAIN BOARD, COMPLETE (5100RDS:German)			
*	A-3222-997-A	MAIN BOARD, COMPLETE (4100RDS:AEP, UK)			
*	A-3222-999-A	MAIN BOARD, COMPLETE (4100RDS:German)			

< CAPACITOR >					
C1	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
C2	1-163-024-00	CERAMIC CHIP	0.018uF	10%	50V
C3	1-163-024-00	CERAMIC CHIP	0.018uF	10%	50V
C4	1-124-589-11	ELECT	47uF	20%	16V
C5	1-164-182-11	CERAMIC CHIP	0.0033uF	10%	50V
C6	1-136-159-00	FILM	0.033uF	5%	50V
C7	1-104-679-11	MYLAR	0.0022uF	5%	50V
C8	1-104-683-11	MYLAR	0.0047uF	5%	50V
C9	1-136-227-11	MYLAR	0.001uF	5%	50V
C10	1-136-165-00	FILM	0.1uF	5%	50V
C11	1-136-169-00	FILM	0.22uF	5%	50V
C12	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C13	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C14	1-163-251-11	CERAMIC CHIP	100PF	5%	50V

Ref. No.	Part No.	Description	Remark		
C15	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C16	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C17	1-124-589-11	ELECT	47uF	20%	16V
C18	1-163-104-00	CERAMIC CHIP	30PF	5%	50V
C19	1-163-104-00	CERAMIC CHIP	30PF	5%	50V
C20	1-126-933-11	ELECT	100uF	20%	10V
C21	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C22	1-126-933-11	ELECT	100uF	20%	10V
C23	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C24	1-126-933-11	ELECT	100uF	20%	10V
C25	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C26	1-124-589-11	ELECT	47uF	20%	16V
C27	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C28	1-124-589-11	ELECT	47uF	20%	16V
C29	1-124-589-11	ELECT	47uF	20%	16V
C30	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C31	1-126-157-11	ELECT	10uF	20%	16V
C32	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C33	1-124-584-00	ELECT	100uF	20%	10V
C34	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C35	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C36	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C37	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C51	1-163-986-00	CERAMIC CHIP	0.027uF	10%	25V
C52	1-124-257-00	ELECT	2.2uF	20%	50V
C53	1-124-257-00	ELECT	2.2uF	20%	50V
C54	1-164-489-11	CERAMIC CHIP	0.22uF	10%	16V
C55	1-163-010-11	CERAMIC CHIP	0.0012uF	10%	50V
C56	1-163-010-11	CERAMIC CHIP	0.0012uF	10%	50V
C102	1-164-337-11	CERAMIC CHIP	2.2uF		16V
C103	1-104-329-11	CERAMIC CHIP	0.1uF	10%	50V
C104	1-163-063-00	CERAMIC CHIP	0.022uF	10%	50V
C105	1-126-288-11	ELECT	4.7uF	20%	16V
C106	1-164-337-11	CERAMIC CHIP	2.2uF		16V
C107	1-163-809-11	CERAMIC CHIP	0.047uF	10%	25V
C108	1-163-017-00	CERAMIC CHIP	0.0047uF	5%	50V
C109	1-126-157-11	ELECT	10uF	20%	16V
C110	1-163-017-00	CERAMIC CHIP	0.0047uF	5%	50V
C111	1-126-157-11	ELECT	10uF	20%	16V
C112	1-164-489-11	CERAMIC CHIP	0.22uF	10%	16V
C113	1-126-157-11	ELECT	10uF	20%	16V
C114	1-126-157-11	ELECT	10uF	20%	16V
C122	1-126-301-11	ELECT	1uF	20%	50V
C123	1-126-301-11	ELECT	1uF	20%	50V
C124	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C125	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C126	1-136-165-00	FILM	0.1uF	5%	50V
C127	1-136-165-00	FILM	0.1uF	5%	50V

MAIN

Ref. No.	Part No.	Description	Remark
C128	1-136-165-00	FILM	0. 1uF 5% 50V
C129	1-136-165-00	FILM	0. 1uF 5% 50V
C130	1-163-009-11	CERAMIC CHIP	0. 001uF 10% 50V
C131	1-163-009-11	CERAMIC CHIP	0. 001uF 10% 50V
C132	1-163-009-11	CERAMIC CHIP	0. 001uF 10% 50V
C202	1-164-337-11	CERAMIC CHIP	2. 2uF 16V
C203	1-104-329-11	CERAMIC CHIP	0. 1uF 10% 50V
C204	1-163-063-00	CERAMIC CHIP	0. 022uF 10% 50V
C205	1-126-288-11	ELECT	4. 7uF 20% 16V
C206	1-164-337-11	CERAMIC CHIP	2. 2uF 16V
C207	1-163-809-11	CERAMIC CHIP	0. 047uF 10% 25V
C208	1-163-017-00	CERAMIC CHIP	0. 0047uF 5% 50V
C209	1-126-157-11	ELECT	10uF 20% 16V
C210	1-163-017-00	CERAMIC CHIP	0. 0047uF 5% 50V
C211	1-126-157-11	ELECT	10uF 20% 16V
C212	1-164-489-11	CERAMIC CHIP	0. 22uF 10% 16V
C213	1-126-157-11	ELECT	10uF 20% 16V
C214	1-126-157-11	ELECT	10uF 20% 16V
C222	1-126-301-11	ELECT	1uF 20% 50V
C223	1-126-301-11	ELECT	1uF 20% 50V
C224	1-163-009-11	CERAMIC CHIP	0. 001uF 10% 50V
C225	1-163-009-11	CERAMIC CHIP	0. 001uF 10% 50V
C226	1-136-165-00	FILM	0. 1uF 5% 50V
C227	1-136-165-00	FILM	0. 1uF 5% 50V
C228	1-136-165-00	FILM	0. 1uF 5% 50V
C229	1-136-165-00	FILM	0. 1uF 5% 50V
C230	1-163-009-11	CERAMIC CHIP	0. 001uF 10% 50V
C231	1-163-009-11	CERAMIC CHIP	0. 001uF 10% 50V
C232	1-163-009-11	CERAMIC CHIP	0. 001uF 10% 50V
C301	1-163-009-11	CERAMIC CHIP	0. 001uF 10% 50V
C302	1-163-038-00	CERAMIC CHIP	0. 1uF 25V
C303	1-124-584-00	ELECT	100uF 20% 10V
C304	1-163-038-00	CERAMIC CHIP	0. 1uF 25V
C305	1-124-584-00	ELECT	100uF 20% 10V
C306	1-124-234-00	ELECT	22uF 20% 16V
C307	1-162-638-11	CERAMIC CHIP	1uF 16V
C311	1-163-002-11	CERAMIC CHIP	270PF 10% 50V
C312	1-126-153-11	ELECT	22uF 20% 6. 3V
C313	1-126-157-11	ELECT	10uF 20% 16V
C317	1-164-232-11	CERAMIC CHIP	0. 01uF 50V
C318	1-164-232-11	CERAMIC CHIP	0. 01uF 50V
C320	1-164-232-11	CERAMIC CHIP	0. 01uF 50V
C321	1-164-232-11	CERAMIC CHIP	0. 01uF 50V
C322	1-164-232-11	CERAMIC CHIP	0. 01uF 50V
C323	1-136-169-00	FILM	0. 22uF 5% 50V
C324	1-126-597-11	ELECT	2200uF 20% 16V
C325	1-164-232-11	CERAMIC CHIP	0. 01uF 50V
C327	1-163-038-00	CERAMIC CHIP	0. 1uF 25V

Ref. No.	Part No.	Description	Remark
C328	1-163-038-00	CERAMIC CHIP	0. 1uF 25V
C329	1-163-038-00	CERAMIC CHIP	0. 1uF 25V
C330	1-163-038-00	CERAMIC CHIP	0. 1uF 25V
C331	1-163-038-00	CERAMIC CHIP	0. 1uF 25V
C332	1-163-038-00	CERAMIC CHIP	0. 1uF 25V
C340	1-135-159-21	TANTALUM CHIP	10uF 10% 20V
C401	1-163-243-11	CERAMIC CHIP	47PF 5% 50V
C402	1-163-005-11	CERAMIC CHIP	470PF 10% 50V
C403	1-124-584-00	ELECT	100uF 20% 10V
C404	1-163-038-00	CERAMIC CHIP	0. 1uF 25V
C405	1-163-038-00	CERAMIC CHIP	0. 1uF 25V
C406	1-124-584-00	ELECT	100uF 20% 10V
C408	1-163-038-00	CERAMIC CHIP	0. 1uF 25V
C410	1-163-037-11	CERAMIC CHIP	0. 022uF 10% 25V
C411	1-163-235-11	CERAMIC CHIP	22PF 5% 50V
C412	1-163-235-11	CERAMIC CHIP	22PF 5% 50V
C413	1-163-251-11	CERAMIC CHIP	100PF 5% 50V
C414	1-163-251-11	CERAMIC CHIP	100PF 5% 50V
C415	1-163-251-11	CERAMIC CHIP	100PF 5% 50V
C416	1-163-251-11	CERAMIC CHIP	100PF 5% 50V
C417	1-163-113-00	CERAMIC CHIP	68PF 5% 50V
C418	1-163-251-11	CERAMIC CHIP	100PF 5% 50V
C419	1-126-159-11	ELECT	0. 47uF 20% 50V
C420	1-163-251-11	CERAMIC CHIP	100PF 5% 50V
C421	1-163-251-11	CERAMIC CHIP	100PF 5% 50V
C422	1-163-251-11	CERAMIC CHIP	100PF 5% 50V
C423	1-163-251-11	CERAMIC CHIP	100PF 5% 50V
C424	1-163-251-11	CERAMIC CHIP	100PF 5% 50V
C425	1-163-251-11	CERAMIC CHIP	100PF 5% 50V
C426	1-163-251-11	CERAMIC CHIP	100PF 5% 50V
C427	1-163-113-00	CERAMIC CHIP	68PF 5% 50V
C428	1-126-159-11	ELECT	0. 47uF 20% 50V
C431	1-163-009-11	CERAMIC CHIP	0. 001uF 10% 50V
C432	1-163-005-11	CERAMIC CHIP	470PF 10% 50V
C451	1-163-009-11	CERAMIC CHIP	0. 001uF 10% 50V
C452	1-126-933-11	ELECT	100uF 20% 10V
C453	1-126-933-11	ELECT	100uF 20% 10V
C454	1-164-004-11	CERAMIC CHIP	0. 1uF 10% 25V
C455	1-163-005-11	CERAMIC CHIP	470PF 10% 50V
C456	1-163-005-11	CERAMIC CHIP	470PF 10% 50V
C501	1-163-127-00	CERAMIC CHIP	270PF 5% 50V
C502	1-163-038-00	CERAMIC CHIP	0. 1uF 25V
C503	1-163-251-11	CERAMIC CHIP	100PF 5% 50V
C504	1-163-038-00	CERAMIC CHIP	0. 1uF 25V
C505	1-163-989-11	CERAMIC CHIP	0. 033uF 10% 25V
C506	1-126-157-11	ELECT	10uF 20% 16V
C507	1-164-232-11	CERAMIC CHIP	0. 01uF 50V
C508	1-163-237-11	CERAMIC CHIP	27PF 5% 50V
C509	1-163-237-11	CERAMIC CHIP	27PF 5% 50V

Ref. No.	Part No.	Description	Remark
C601	1-163-038-00	CERAMIC CHIP 0.1uF	25V
C602	1-163-038-00	CERAMIC CHIP 0.1uF	25V
C603	1-163-038-00	CERAMIC CHIP 0.1uF	25V
C604	1-163-063-00	CERAMIC CHIP 0.022uF	10% 50V
C607	1-126-154-11	ELECT 47uF	20% 6.3V
C608	1-163-037-11	CERAMIC CHIP 0.022uF	10% 25V
C651	1-163-038-00	CERAMIC CHIP 0.1uF	25V
C652	1-164-161-11	CERAMIC CHIP 0.0022uF	10% 100V
C653	1-163-009-11	CERAMIC CHIP 0.001uF	10% 50V
C701	1-163-038-00	CERAMIC CHIP 0.1uF	25V
C702	1-163-038-00	CERAMIC CHIP 0.1uF	25V
C703	1-126-154-11	ELECT 47uF	20% 6.3V
C704	1-163-227-11	CERAMIC CHIP 10PF	0.5PF 50V
C705	1-163-231-11	CERAMIC CHIP 15PF	5% 50V
C706	1-163-063-00	CERAMIC CHIP 0.022uF	10% 50V
C751	1-163-038-00	CERAMIC CHIP 0.1uF	25V
C901	1-164-337-11	CERAMIC CHIP 2.2uF	16V
C902	1-126-157-11	ELECT 10uF	20% 16V
C903	1-163-037-11	CERAMIC CHIP 0.022uF	10% 25V
C904	1-127-556-11	ELECT(SOLID) 6.8uF	20% 16V
C905	1-164-232-11	CERAMIC CHIP 0.01uF	50V
C906	1-126-157-11	ELECT 10uF	20% 16V
C907	1-164-222-11	CERAMIC CHIP 0.22uF	25V
C908	1-163-038-00	CERAMIC CHIP 0.1uF	25V
C909	1-162-638-11	CERAMIC CHIP 1uF	16V
C910	1-162-638-11	CERAMIC CHIP 1uF	16V
C911	1-126-301-11	ELECT 1uF	20% 50V
C912	1-125-701-11	CAP, DOUBLE LAYER 0.047F	5.5V
C913	1-124-584-00	ELECT 100uF	20% 10V
C914	1-164-004-11	CERAMIC CHIP 0.1uF	10% 25V
C915	1-163-038-00	CERAMIC CHIP 0.1uF	25V
C951	1-163-037-11	CERAMIC CHIP 0.022uF	10% 25V
C952	1-163-037-11	CERAMIC CHIP 0.022uF	10% 25V
C953	1-124-234-00	ELECT 22uF	20% 16V
C954	1-163-009-11	CERAMIC CHIP 0.001uF	10% 50V

< CONNECTOR/JACK >

CNJ502	1-770-279-11	JACK, ANTENNA (ISO) (ANT IN)
CNJ901	1-566-822-41	JACK (REMOTE IN)
CNP301	1-764-426-11	PLUG, CONNECTOR 15P
CNP302	1-764-424-41	JACK, PIN 2P (LINE OUT) (4100RDS)
CNP302	1-764-697-11	JACK, PIN 4P (LINE OUT) (5100RDS)
CNP504	1-764-617-12	PIN, CONNECTOR (PC BOARD) 30P BOARD
CNP901	1-764-422-11	PLUG, CONNECTOR 12P

< DIODE >

D1	8-719-041-79	DIODE MA721WA-TX
D2	8-719-041-79	DIODE MA721WA-TX

Ref. No.	Part No.	Description	Remark
D3	8-719-109-89	DIODE	RD5. 6ESB2
D4	1-519-504-11	DIODE	GAP, DISCHARGE
D51	8-719-109-89	DIODE	RD5. 6ESB2
D301	8-719-109-71	DIODE	RD3. 9ES-B1
D302	8-719-109-71	DIODE	RD3. 9ES-B1
D303	8-719-914-43	DIODE	DAN202K
D304	8-719-991-33	DIODE	1SS133T-77
D305	8-719-056-83	DIODE	UDZ-TE-17-6. 8B
D310	8-719-049-38	DIODE	1N5404TU
D321	8-719-914-42	DIODE	DA204K-T-146
D451	8-719-158-15	DIODE	RD5. 6S-B
D601	8-719-991-33	DIODE	1SS133T-77
D751	8-719-988-62	DIODE	1SS355
D752	8-719-109-93	DIODE	RD6. 2ESB2
D753	8-719-105-99	DIODE	RD6. 2M-B1
D754	8-719-109-93	DIODE	RD6. 2ESB2
D755	8-719-105-99	DIODE	RD6. 2M-B1
D901	8-719-056-83	DIODE	UDZ-TE-17-6. 8B
D902	8-719-056-83	DIODE	UDZ-TE-17-6. 8B
D903	8-719-978-69	DIODE	DTZ-TT11-16B
D904	8-719-109-97	DIODE	RD6. 8ES-B2
D905	8-719-914-44	DIODE	DAP202K
D906	8-719-056-83	DIODE	UDZ-TE-17-6. 8B
D907	8-719-056-83	DIODE	UDZ-TE-17-6. 8B
D908	8-719-056-83	DIODE	UDZ-TE-17-6. 8B
D909	8-719-056-83	DIODE	UDZ-TE-17-6. 8B
D911	8-719-056-83	DIODE	UDZ-TE-17-6. 8B
D912	8-719-056-83	DIODE	UDZ-TE-17-6. 8B
D913	8-719-056-83	DIODE	UDZ-TE-17-6. 8B
D914	8-719-056-83	DIODE	UDZ-TE-17-6. 8B
D915	8-719-056-83	DIODE	UDZ-TE-17-6. 8B
D916	8-719-914-44	DIODE	DAP202K
D951	8-719-914-44	DIODE	DAP202K
D952	8-719-977-27	DIODE	DTZ10A
D954	8-719-914-43	DIODE	DAN202K
D991	8-719-200-82	DIODE	11ES2
D992	8-719-200-82	DIODE	11ES2

< FERRITE BEAD >

FB901	1-414-135-11	INDUCTOR CHIP OUH
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< IC >

IC1	8-759-062-66	IC TC7S66F
IC2	8-759-062-66	IC TC7S66F
IC3	8-759-823-81	IC LC7216M
IC101	8-759-100-96	IC uPC4558G2
IC201	8-759-100-96	IC uPC4558G2
IC301	8-752-063-44	IC CXA1646Q

MAIN

Ref. No.	Part No.	Description	Remark
IC304	8-759-279-87	IC HA13151A (4100RDS)	
IC304	8-759-369-41	IC HA13155 (5100RDS)	
IC401	8-759-196-56	IC SM5874AM	
IC402	8-759-100-96	IC uPC4558G2	
IC501	8-759-163-63	IC TDA7330BD-013TR	
IC601	8-759-358-65	IC MN1883220SZL	
IC651	8-759-075-66	IC TA75S01F	
IC701	8-759-350-12	IC uPD78058GC-069-3B9	
IC751	8-759-096-16	IC MM1175XF-T1	
IC901	8-759-347-50	IC BA3918-V3	
IC902	8-759-503-60	IC S-80740AN-D4-S	

< JUMPER RESISTOR >

JR101	1-216-295-00	CONDUCTOR, CHIP	(2012)
JR102	1-216-295-00	CONDUCTOR, CHIP	(2012)
JR103	1-216-295-00	CONDUCTOR, CHIP	(2012)
JR104	1-216-295-00	CONDUCTOR, CHIP	(2012)
JR201	1-216-295-00	CONDUCTOR, CHIP	(2012)
JR202	1-216-295-00	CONDUCTOR, CHIP	(2012)
JR203	1-216-295-00	CONDUCTOR, CHIP	(2012)
JR204	1-216-295-00	CONDUCTOR, CHIP	(2012)
JR205	1-216-295-00	CONDUCTOR, CHIP	(2012)
JR301	1-216-295-00	CONDUCTOR, CHIP	(2012)
JR302	1-216-295-00	CONDUCTOR, CHIP	(2012)
JR601	1-216-296-00	CONDUCTOR, CHIP	(3216)

< COIL >

L1	1-410-973-11	INDUCTOR	22uH
L401	1-410-973-11	INDUCTOR	22uH
L402	1-410-973-11	INDUCTOR	22uH
L501	1-410-971-11	INDUCTOR	10uH
L601	1-410-973-11	INDUCTOR	22uH
L701	1-410-973-11	INDUCTOR	22uH

< TRANSISTOR >

Q1	8-729-027-23	TRANSISTOR	DTA114EKA-T146
Q2	8-729-900-53	TRANSISTOR	DTC114EK
Q3	8-729-021-94	TRANSISTOR	2SK1657-T1B
Q4	8-729-120-28	TRANSISTOR	2SC1623-L5L6
Q5	8-729-920-85	TRANSISTOR	2SD1664-QR
Q51	8-729-920-21	TRANSISTOR	DTC314TKH04
Q52	8-729-920-21	TRANSISTOR	DTC314TKH04
Q53	8-729-920-21	TRANSISTOR	DTC314TKH04
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
Q901	8-729-921-25	TRANSISTOR	FMC2

Ref. No.	Part No.	Description	Remark
Q451	8-729-025-88	TRANSISTOR	2SB1386-T100-R
Q452	8-729-027-52	TRANSISTOR	DTC124EKA-T146
Q453	8-729-019-00	TRANSISTOR	2SD2394-G
Q454	8-729-921-25	TRANSISTOR	FMC2
Q501	8-729-027-23	TRANSISTOR	DTA114EKA-T146
Q502	8-729-900-53	TRANSISTOR	DTC114EK
Q751	8-729-120-28	TRANSISTOR	2SC1623-L5L6
Q752	8-729-027-23	TRANSISTOR	DTA114EKA-T146
Q901	8-729-903-10	TRANSISTOR	FMW1
Q902	8-729-920-28	TRANSISTOR	FMG9
Q951	8-729-921-25	TRANSISTOR	FMC2
Q952	8-729-019-00	TRANSISTOR	2SD2394-G

Q953	8-729-903-46	TRANSISTOR	2SB1132-P
Q954	8-729-027-52	TRANSISTOR	DTC124EKA-T146
Q957	8-729-027-23	TRANSISTOR	DTA114EKA-T146
Q958	8-729-027-23	TRANSISTOR	DTA114EKA-T146
Q959	8-729-216-22	TRANSISTOR	2SA1162-G

Q960	8-729-921-25	TRANSISTOR	FMC2
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< RESISTOR >

R1	1-216-073-00	METAL CHIP	10K	5%	1/10W
R2	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R3	1-216-045-00	METAL CHIP	680	5%	1/10W
R4	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R5	1-216-089-00	METAL GLAZE	47K	5%	1/10W
R6	1-216-089-00	METAL GLAZE	47K	5%	1/10W
R7	1-216-037-00	METAL CHIP	330	5%	1/10W
R8	1-216-073-00	METAL CHIP	10K	5%	1/10W
R9	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R10	1-216-075-00	METAL CHIP	12K	5%	1/10W
R11	1-216-073-00	METAL CHIP	10K	5%	1/10W
R12	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R13	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R14	1-216-073-00	METAL CHIP	10K	5%	1/10W
R15	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R16	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R17	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R18	1-216-029-00	METAL CHIP	150	5%	1/10W
R51	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R52	1-216-073-00	METAL CHIP	10K	5%	1/10W
R53	1-216-041-00	METAL CHIP	470	5%	1/10W (German)
R53	1-216-065-00	METAL CHIP	4.7K	5%	1/10W (AEP, UK)
R54	1-216-041-00	METAL CHIP	470	5%	1/10W (German)
R54	1-216-065-00	METAL CHIP	4.7K	5%	1/10W (AEP, UK)
R55	1-216-097-00	METAL GLAZE	100K	5%	1/10W
R56	1-216-097-00	METAL GLAZE	100K	5%	1/10W
R57	1-216-097-00	METAL GLAZE	100K	5%	1/10W
R103	1-216-073-00	METAL CHIP	10K	5%	1/10W

Ref. No.	Part No.	Description	Remark		
R104	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R105	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R106	1-216-075-00	METAL CHIP	12K	5%	1/10W
R107	1-216-075-00	METAL CHIP	12K	5%	1/10W
R108	1-216-059-00	METAL CHIP	6.8K	5%	1/10W
R109	1-216-041-00	METAL CHIP	470	5%	1/10W
R110	1-216-041-00	METAL CHIP	470	5%	1/10W
R112	1-216-081-00	METAL CHIP	22K	5%	1/10W
R113	1-216-081-00	METAL CHIP	22K	5%	1/10W
R121	1-216-067-00	METAL CHIP	5.6K	5%	1/10W
R122	1-216-067-00	METAL CHIP	5.6K	5%	1/10W
R123	1-216-117-00	METAL CHIP	680K	5%	1/10W
R124	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R125	1-216-117-00	METAL CHIP	680K	5%	1/10W
R126	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R127	1-216-134-00	METAL CHIP	2.2	5%	1/8W
R128	1-216-134-00	METAL CHIP	2.2	5%	1/8W
R129	1-216-134-00	METAL CHIP	2.2	5%	1/8W
R130	1-216-134-00	METAL CHIP	2.2	5%	1/8W
R203	1-216-073-00	METAL CHIP	10K	5%	1/10W
R204	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R205	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R206	1-216-075-00	METAL CHIP	12K	5%	1/10W
R207	1-216-075-00	METAL CHIP	12K	5%	1/10W
R208	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R209	1-216-041-00	METAL CHIP	470	5%	1/10W
R210	1-216-041-00	METAL CHIP	470	5%	1/10W
R212	1-216-081-00	METAL CHIP	22K	5%	1/10W
R213	1-216-081-00	METAL CHIP	22K	5%	1/10W
R221	1-216-067-00	METAL CHIP	5.6K	5%	1/10W
R222	1-216-067-00	METAL CHIP	5.6K	5%	1/10W
R223	1-216-117-00	METAL CHIP	680K	5%	1/10W
R224	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R225	1-216-117-00	METAL CHIP	680K	5%	1/10W
R226	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R227	1-216-134-00	METAL CHIP	2.2	5%	1/8W
R228	1-216-134-00	METAL CHIP	2.2	5%	1/8W
R229	1-216-134-00	METAL CHIP	2.2	5%	1/8W
R230	1-216-134-00	METAL CHIP	2.2	5%	1/8W
R301	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R302	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R303	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R304	1-216-111-00	METAL GLAZE	390K	5%	1/10W
R305	1-216-073-00	METAL CHIP	10K	5%	1/10W
R306	1-216-095-00	METAL CHIP	82K	5%	1/10W
R307	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R308	1-216-073-00	METAL CHIP	10K	5%	1/10W
R309	1-216-049-00	METAL GLAZE	1K	5%	1/10W

Ref. No.	Part No.	Description	Remark		
R311	1-216-073-00	METAL CHIP	10K	5%	1/10W
R401	1-216-089-00	METAL GLAZE	47K	5%	1/10W
R402	1-216-105-00	METAL GLAZE	220K	5%	1/10W
R403	1-216-105-00	METAL GLAZE	220K	5%	1/10W
R404	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R405	1-216-037-00	METAL CHIP	330	5%	1/10W
R406	1-216-025-00	METAL GLAZE	100	5%	1/10W
R407	1-216-025-00	METAL GLAZE	100	5%	1/10W
R408	1-216-025-00	METAL GLAZE	100	5%	1/10W
R409	1-216-001-00	METAL CHIP	10	5%	1/10W
R410	1-216-001-00	METAL CHIP	10	5%	1/10W
R411	1-216-033-00	METAL CHIP	220	5%	1/10W
R412	1-216-081-00	METAL CHIP	22K	5%	1/10W
R413	1-216-081-00	METAL CHIP	22K	5%	1/10W
R414	1-216-081-00	METAL CHIP	22K	5%	1/10W
R415	1-216-081-00	METAL CHIP	22K	5%	1/10W
R416	1-216-085-00	METAL CHIP	33K	5%	1/10W
R417	1-216-085-00	METAL CHIP	33K	5%	1/10W
R419	1-216-093-00	METAL CHIP	68K	5%	1/10W
R420	1-216-097-00	METAL GLAZE	100K	5%	1/10W
R421	1-216-093-00	METAL CHIP	68K	5%	1/10W
R422	1-216-073-00	METAL CHIP	10K	5%	1/10W
R423	1-216-073-00	METAL CHIP	10K	5%	1/10W
R424	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R425	1-216-214-00	METAL GLAZE	4.7K	5%	1/8W
R426	1-216-081-00	METAL CHIP	22K	5%	1/10W
R427	1-216-081-00	METAL CHIP	22K	5%	1/10W
R428	1-216-081-00	METAL CHIP	22K	5%	1/10W
R429	1-216-081-00	METAL CHIP	22K	5%	1/10W
R430	1-216-085-00	METAL CHIP	33K	5%	1/10W
R431	1-216-085-00	METAL CHIP	33K	5%	1/10W
R432	1-216-093-00	METAL CHIP	68K	5%	1/10W
R433	1-216-093-00	METAL CHIP	68K	5%	1/10W
R434	1-216-097-00	METAL GLAZE	100K	5%	1/10W
R435	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R436	1-216-214-00	METAL GLAZE	4.7K	5%	1/8W
R451	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R452	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R453	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R454	1-216-073-00	METAL CHIP	10K	5%	1/10W
R455	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R456	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R457	1-216-190-00	METAL GLAZE	470	5%	1/8W
R501	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R502	1-216-129-00	METAL CHIP	2.2M	5%	1/10W
R601	1-216-295-00	CONDUCTOR, CHIP	(2012)		
R602	1-216-097-00	METAL GLAZE	100K	5%	1/10W
R603	1-216-097-00	METAL GLAZE	100K	5%	1/10W
R604	1-216-073-00	METAL CHIP	10K	5%	1/10W

MAIN

Ref. No.	Part No.	Description	Remark
R605	1-216-097-00	METAL GLAZE 100K 5%	1/10W
R606	1-216-089-00	METAL GLAZE 47K 5%	1/10W
R607	1-216-089-00	METAL GLAZE 47K 5%	1/10W
R608	1-216-089-00	METAL GLAZE 47K 5%	1/10W
R609	1-216-089-00	METAL GLAZE 47K 5%	1/10W
R610	1-216-105-00	METAL GLAZE 220K 5%	1/10W
R611	1-216-097-00	METAL GLAZE 100K 5%	1/10W
R612	1-216-097-00	METAL GLAZE 100K 5%	1/10W
R615	1-216-089-00	METAL GLAZE 47K 5%	1/10W
R617	1-216-089-00	METAL GLAZE 47K 5%	1/10W
R618	1-216-089-00	METAL GLAZE 47K 5%	1/10W
R619	1-216-089-00	METAL GLAZE 47K 5%	1/10W
R620	1-216-089-00	METAL GLAZE 47K 5%	1/10W
R621	1-216-089-00	METAL GLAZE 47K 5%	1/10W
R622	1-216-089-00	METAL GLAZE 47K 5%	1/10W
R623	1-216-065-00	METAL CHIP 4.7K 5%	1/10W
R626	1-216-089-00	METAL GLAZE 47K 5%	1/10W
R628	1-216-089-00	METAL GLAZE 47K 5%	1/10W
R651	1-216-097-00	METAL GLAZE 100K 5%	1/10W
R652	1-216-097-00	METAL GLAZE 100K 5%	1/10W
R655	1-216-081-00	METAL CHIP 22K 5%	1/10W
R656	1-216-049-00	METAL GLAZE 1K 5%	1/10W
R657	1-216-295-00	CONDUCTOR, CHIP (2012)	
R702	1-216-295-00	CONDUCTOR, CHIP (2012)	
R703	1-216-105-00	METAL GLAZE 220K 5%	1/10W
R707	1-216-089-00	METAL GLAZE 47K 5%	1/10W
R708	1-216-089-00	METAL GLAZE 47K 5%	1/10W
R709	1-216-089-00	METAL GLAZE 47K 5%	1/10W
R710	1-216-049-00	METAL GLAZE 1K 5%	1/10W
R711	1-216-057-00	METAL CHIP 2.2K 5%	1/10W
R712	1-216-049-00	METAL GLAZE 1K 5%	1/10W
R713	1-216-295-00	CONDUCTOR, CHIP (2012)	
R715	1-216-295-00	CONDUCTOR, CHIP (2012)	
R718	1-216-105-00	METAL GLAZE 220K 5%	1/10W
R719	1-216-097-00	METAL GLAZE 100K 5%	1/10W
R720	1-216-105-00	METAL GLAZE 220K 5%	1/10W
R721	1-216-089-00	METAL GLAZE 47K 5%	1/10W
R722	1-216-097-00	METAL GLAZE 100K 5%	1/10W
R723	1-216-089-00	METAL GLAZE 47K 5%	1/10W
R724	1-216-109-00	METAL CHIP 330K 5%	1/10W
R725	1-216-105-00	METAL GLAZE 220K 5%	1/10W
R726	1-216-105-00	METAL GLAZE 220K 5%	1/10W
R727	1-216-105-00	METAL GLAZE 220K 5%	1/10W
R728	1-216-057-00	METAL CHIP 2.2K 5%	1/10W
R729	1-216-097-00	METAL GLAZE 100K 5%	1/10W
R731	1-216-105-00	METAL GLAZE 220K 5%	1/10W
R751	1-216-089-00	METAL GLAZE 47K 5%	1/10W
R752	1-216-097-00	METAL GLAZE 100K 5%	1/10W
R753	1-216-073-00	METAL CHIP 10K 5%	1/10W

Ref. No.	Part No.	Description	Remark
R754	1-216-025-00	METAL GLAZE 100 5%	1/10W
R755	1-216-025-00	METAL GLAZE 100 5%	1/10W
R757	1-216-017-00	METAL GLAZE 47 5%	1/10W
R903	1-216-105-00	METAL GLAZE 220K 5%	1/10W
R904	1-216-049-00	METAL GLAZE 1K 5%	1/10W
R905	1-216-075-00	METAL CHIP 12K 5%	1/10W
R906	1-216-075-00	METAL CHIP 12K 5%	1/10W
R907	1-216-105-00	METAL GLAZE 220K 5%	1/10W
R908	1-216-089-00	METAL GLAZE 47K 5%	1/10W
R909	1-216-073-00	METAL CHIP 10K 5%	1/10W
R910	1-216-077-00	METAL CHIP 15K 5%	1/10W
R911	1-216-089-00	METAL GLAZE 47K 5%	1/10W
R913	1-216-097-00	METAL GLAZE 100K 5%	1/10W
R915	1-208-462-41	METAL GLAZE 10K 2%	1/10W
R916	1-208-462-41	METAL GLAZE 10K 2%	1/10W
R917	1-216-025-00	METAL GLAZE 100 5%	1/10W
R918	1-216-025-00	METAL GLAZE 100 5%	1/10W
R920	1-216-025-00	METAL GLAZE 100 5%	1/10W
R921	1-216-025-00	METAL GLAZE 100 5%	1/10W
R923	1-216-049-00	METAL GLAZE 1K 5%	1/10W
R924	1-216-049-00	METAL GLAZE 1K 5%	1/10W
R925	1-216-049-00	METAL GLAZE 1K 5%	1/10W
R926	1-216-057-00	METAL CHIP 2.2K 5%	1/10W
R927	1-216-049-00	METAL GLAZE 1K 5%	1/10W
R928	1-208-462-41	METAL GLAZE 10K 2%	1/10W
R929	1-208-462-41	METAL GLAZE 10K 2%	1/10W
R930	1-216-089-00	METAL GLAZE 47K 5%	1/10W
R951	1-216-049-00	METAL GLAZE 1K 5%	1/10W
R952	1-216-049-00	METAL GLAZE 1K 5%	1/10W
R953	1-216-073-00	METAL CHIP 10K 5%	1/10W
R954	1-216-057-00	METAL CHIP 2.2K 5%	1/10W
R955	1-216-057-00	METAL CHIP 2.2K 5%	1/10W
R958	1-216-079-00	METAL CHIP 18K 5%	1/10W
R959	1-216-105-00	METAL GLAZE 220K 5%	1/10W
R960	1-216-073-00	METAL CHIP 10K 5%	1/10W
R961	1-216-077-00	METAL CHIP 15K 5%	1/10W
R962	1-216-033-00	METAL CHIP 220 5%	1/10W
< VARIABLE RESISTOR >			
RV651	1-238-716-11	RES, ADJ, METAL GLAZE 100K	
< SWITCH >			
SW701	1-571-478-11	SWITCH, SLIDE (POWER SELECT)	
SW901	1-692-431-21	SWITCH, TACTILE (RESET)	
< THERMISTOR >			
TH951	1-806-715-11	THERMISTOR	

MAIN

MOTOR

SENSOR

SENSOR FLEXIBLE

SERVO

Ref. No.	Part No.	Description	Remark
< TUNER UNIT >			
TU1	A-3282-012-A	TUNER UNIT TUX-006(E)	
< VIBRATOR >			
X1	1-760-838-21	VIBRATOR, CRYSTAL (7.2MHz)	
X401	1-760-839-21	VIBRATOR, CRYSTAL (16.9344MHz)	
X501	1-760-556-31	VIBRATOR, CRYSTAL (4.332MHz)	
X601	1-579-952-21	VIBRATOR, CERAMIC (8MHz)	
X701	1-760-489-11	VIBRATOR, CERAMIC (5MHz)	
X702	1-579-886-21	VIBRATOR, CRYSTAL (32.768MHz)	

*	1-650-144-11	MOTOR BOARD	

< CONNECTOR >			
* CNJ303	1-750-160-21	CONNECTOR, FPC 7P	
< SWITCH >			
S301	1-572-467-21	SWITCH, PUSH (1 KEY) (LIMIT)	

A-3222-525-A SENSOR BOARD, COMPLETE			

(Including SENSOR FLEXIBLE BOARD)			
< DIODE >			
D801	8-719-045-75	LED CL-2001R-X-TU (12cm CD DET)	
D802	8-719-045-75	LED CL-2001R-X-TU (DISC DET)	
< RESISTOR >			
R801	1-216-053-00	METAL CHIP 1.5K 5% 1/10W	
R802	1-216-053-00	METAL CHIP 1.5K 5% 1/10W	

1-650-223-11 SENSOR FLEXIBLE BOARD			

< SWITCH >			
S901	1-692-441-11	SWITCH, MICROPHONE (DISC DET)	

A-3298-222-A SERVO BOARD, COMPLETE			

< CAPACITOR >			
C1	1-126-206-11	ELECT CHIP 100uF 20% 6.3V	
C2	1-163-243-11	CERAMIC CHIP 47PF 5% 50V	
C3	1-110-501-11	CERAMIC CHIP 0.33uF 10% 16V	

Ref. No.	Part No.	Description	Remark
C4	1-164-492-11	CERAMIC CHIP 0.15uF 10% 16V	
C7	1-163-005-11	CERAMIC CHIP 470PF 10% 50V	
C8	1-164-004-11	CERAMIC CHIP 0.1uF 10% 25V	
C9	1-163-005-11	CERAMIC CHIP 470PF 10% 50V	
C10	1-164-489-11	CERAMIC CHIP 0.22uF 10% 16V	
C11	1-164-492-11	CERAMIC CHIP 0.15uF 10% 16V	
C12	1-164-182-11	CERAMIC CHIP 0.0033uF 10% 50V	
C13	1-163-011-11	CERAMIC CHIP 0.0015uF 10% 50V	
C14	1-163-251-11	CERAMIC CHIP 100PF 5% 50V	
C15	1-126-191-11	ELECT 0.47uF 20% 50V	
C16	1-164-232-11	CERAMIC CHIP 0.01uF 50V	
C17	1-164-492-11	CERAMIC CHIP 0.15uF 10% 16V	
C18	1-126-206-11	ELECT CHIP 100uF 20% 6.3V	
C20	1-164-492-11	CERAMIC CHIP 0.15uF 10% 16V	
C21	1-164-346-11	CERAMIC CHIP 1uF 16V	
C22	1-164-004-11	CERAMIC CHIP 0.1uF 10% 25V	
C23	1-164-346-11	CERAMIC CHIP 1uF 16V	
C24	1-164-232-11	CERAMIC CHIP 0.01uF 50V	
C25	1-164-232-11	CERAMIC CHIP 0.01uF 50V	
C26	1-164-232-11	CERAMIC CHIP 0.01uF 50V	
C27	1-135-166-21	TANTALUM CHIP 47uF 10% 10V	
C28	1-163-809-11	CERAMIC CHIP 0.047uF 10% 25V	
C30	1-164-492-11	CERAMIC CHIP 0.15uF 10% 16V	
C31	1-164-492-11	CERAMIC CHIP 0.15uF 10% 16V	
C32	1-164-492-11	CERAMIC CHIP 0.15uF 10% 16V	
C34	1-163-809-11	CERAMIC CHIP 0.047uF 10% 25V	
C35	1-135-166-21	TANTALUM CHIP 47uF 10% 10V	
C38	1-163-085-00	CERAMIC CHIP 2PF 50V	
< CONNECTOR >			
CNJ1	1-766-491-11	CONNECTOR, FPC 17P	
* CNJ2	1-750-159-21	CONNECTOR, FPC 5P	
* CNJ3	1-750-160-21	CONNECTOR, FPC 7P	
CNJ4	1-764-616-12	HOUSING, CONNECTOR(PC BOARD) 30P	
CNP1	1-580-055-21	PIN, CONNECTOR 2P	
< IC >			
IC1	8-752-069-93	IC CXA1791M-T6	
IC2	8-752-361-94	IC CXD2515Q	
IC3	8-759-823-87	IC LB1638M	
IC4	8-759-925-72	IC SN74HC02ANS	
IC5	8-759-087-55	IC MPC1732MR2	
IC6	8-759-087-53	IC MPC1730MR2	
< 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	

SERVO

Ref. No.	Part No.	Description	Remark
< TRANSISTOR >			
Q1	8-729-024-26	PHOTO TRANSISTOR CPT-181S-C-TU (12cm CD DET)	
Q2	8-729-024-26	PHOTO TRANSISTOR CPT-181S-C-TU (DISC DET)	
Q5	8-729-141-48	TRANSISTOR 2SB624-BV345	
< RESISTOR >			
R1	1-216-024-00	METAL GLAZE 91 5% 1/10W	
R2	1-216-009-00	METAL CHIP 22 5% 1/10W	
R4	1-216-663-11	METAL CHIP 3.3K 0.5% 1/10W	
R5	1-216-663-11	METAL CHIP 3.3K 0.5% 1/10W	
R8	1-216-081-00	METAL CHIP 22K 5% 1/10W	
R9	1-216-075-00	METAL CHIP 12K 5% 1/10W	
R10	1-216-075-00	METAL CHIP 12K 5% 1/10W	
R11	1-216-663-11	METAL CHIP 3.3K 0.5% 1/10W	
R12	1-216-077-00	METAL CHIP 15K 5% 1/10W	
R13	1-216-077-00	METAL CHIP 15K 5% 1/10W	
R14	1-216-097-00	METAL GLAZE 100K 5% 1/10W	
R15	1-216-085-00	METAL CHIP 33K 5% 1/10W	
R16	1-216-061-00	METAL CHIP 3.3K 5% 1/10W	
R17	1-216-061-00	METAL CHIP 3.3K 5% 1/10W	
R18	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R19	1-216-121-00	METAL GLAZE 1M 5% 1/10W	
R20	1-216-097-00	METAL GLAZE 100K 5% 1/10W	
R21	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R22	1-216-033-00	METAL CHIP 220 5% 1/10W	
R23	1-216-033-00	METAL CHIP 220 5% 1/10W	
R24	1-216-033-00	METAL CHIP 220 5% 1/10W	
R25	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R28	1-216-687-11	METAL CHIP 33K 0.5% 1/10W	
R29	1-216-687-11	METAL CHIP 33K 0.5% 1/10W	
R30	1-218-758-11	METAL CHIP 180K 0.50% 1/10W	
R31	1-218-758-11	METAL CHIP 180K 0.50% 1/10W	
R32	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R35	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R36	1-216-129-00	METAL CHIP 2.2M 5% 1/10W	
R37	1-216-129-00	METAL CHIP 2.2M 5% 1/10W	
R38	1-216-083-00	METAL CHIP 27K 5% 1/10W	
R39	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
R40	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R44	1-216-113-00	METAL CHIP 470K 5% 1/10W	
R45	1-216-113-00	METAL CHIP 470K 5% 1/10W	
< VARIABLE RESISTOR >			
RV1	1-238-091-11	RES, ADJ, CERMET 22K	
RV2	1-238-091-11	RES, ADJ, CERMET 22K	
< SWITCH >			
SW1	1-571-754-31	SWITCH, PUSH (1 KEY) (DISC SET)	

Ref. No.	Part No.	Description	Remark
MISCELLANEOUS			

10	1-765-081-11	CORD (WITH CONNECTOR)	
126	1-650-223-11	SENSOR FLEXIBLE BOARD	
△152	8-848-327-11	OPTICAL PICK-UP KSS-410A	
156	1-646-402-11	MOTOR FLEXIBLE BOARD	
163	1-652-794-11	PICK-UP FLEXIBLE BOARD	
F1	1-533-326-11	FUSE (BLADE TYPE) (AUTO FUSE) 3A	
F2	1-533-331-11	FUSE (BLADE TYPE) (AUTO FUSE) 15A	
M901	X-3367-484-2	MOTOR (SPINDLE) ASSY	
M902	A-3252-585-A	MOTOR (SL) ASSY (SLED)	
M903	A-3252-580-A	MOTOR (L) ASSY (LOADING)	
S901	1-692-441-11	SWITCH, MICROPHONE (DISC DET)	

HARDWARE LIST			

#1	7-621-255-25	SCREW +P 2X4	
#2	7-621-770-67	SCREW +PTT 2.6X6 (S)	
#3	7-621-770-XX	SCREW +PTT 2.6X8 (S)	
#4	7-685-106-19	SCREW +P 2X10 TYPE2 NON-SLIT	
#5	7-621-773-95	SCREW +B 2.6X6	
#6	7-621-772-10	SCREW +B 2X4	
#7	7-621-772-60	SCREW +B 2X12	
#9	7-627-552-07	SCREW, PRECISION +P 1.7X2.5	
#10	7-627-852-17	+P 1.7X4	
#11	7-627-553-18	SCREW, PRECISION +P 2X2	
#13	7-627-553-37	SCREW, PRECISION +P 2X3	
#14	7-627-553-67	SCREW, PRECISION +P 2X5	
#15	7-621-775-50	SCREW +PTT 2.6X10 (S)	
#16	7-628-253-20	SCREW +PS 2X6	

ACCESSORIES & PACKING MATERIALS			

1-473-067-31	REMOTE COMMANDER (RM-X2S) (5100RDS)		
3-810-809-11	MANUAL, INSTRUCTION (ENGLISH, FRENCH, GERMAN, ITALIAN)		
3-810-809-21	MANUAL, INSTRUCTION (SPANISH, PORTUGUESE, DUTCH, SWEDISH) (German)		
3-810-809-31	MANUAL, INSTRUCTION (DANISH, FINNISH) (AEP, UK)		
3-810-810-11	MANUAL, INSTRUCTION, INSTALL (ENGLISH, FRENCH, GERMAN, ITALIAN)		
3-810-810-21	MANUAL, INSTRUCTION, INSTALL (SPANISH, PORTUGUESE, DUTCH, SWEDISH) (German)		
3-810-810-31	MANUAL, INSTRUCTION, INSTALL (DANISH, FINNISH) (AEP, UK)		

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

Ref. No.	Part No.	Description	Remark
	3-810-811-11	MANUAL (RM-X2S), INSTRUCTION (ENGLISH, FRENCH, GERMAN, SPANISH, PORTUGUESE, DUTCH, ITALIAN, SWEDISH) (5100RDS)	
	3-810-811-31	MANUAL (RM-X2S), INSTRUCTION (DANISH, FINNISH) (5100RDS:AEP, UK)	
	X-3369-665-1	CASE ASSY (for FRONT PANEL)	
	X-3369-817-1	BRACKET ASSY (5100RDS) (for RM-X2S)	

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 1-776-859-11 CORD (WITH CONNECTOR)

