

CDX-3100

SERVICE MANUAL

AEP Model
UK Model
E 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 (AEP, UK, Italian model)

| | |
|------------------------------|--|
| 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 |

Tuner section (E model)

| | |
|------------------------------|--|
| FM | |
| Tuning range | FM tuning interval: 50 kHz/200 kHz switchable 87.5 – 108.0 MHz (at 50 kHz step) 87.5 – 107.9 MHz (at 200 kHz step) |
| 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 |
| AM | |
| Tuning range | AM tuning interval: 9 kHz/10 kHz switchable 531 – 1,602 kHz (at 9 kHz step) 530 – 1,710 kHz (at 10 kHz step) |
| Antenna terminal | External antenna connector |
| Intermediate frequency | 10.71 MHz/450 kHz |
| Sensitivity | 30 μ V |

Power amplifier section

| | |
|----------------------|---|
| Outputs | Speaker outputs (sure seal connectors) 4 – 8 ohms |
| Speaker impedance | 30 W \times 4 (at 4 ohms) (E model) |
| Maximum power output | 20W \times 4 (at 4 ohms) (AEP, UK, Italian model) |

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/AM (MW/LW) COMPACT DISC PLAYER
SONY[®]



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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.

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.

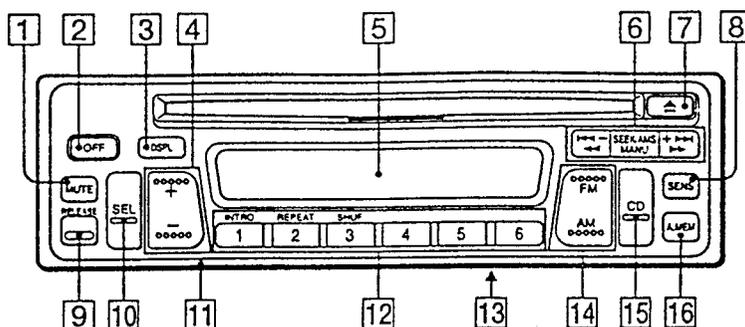
Notes on chip component replacement

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

SECTION 1 GENERAL

This section is extracted from instruction manual.

Location of Controls



Refer to the pages in ● for details.

- 1 MUTE button ●
- 2 OFF button ●●●●
- 3 DSPL (display mode change/time set) button ●●
- 4 +/- (volume/bass/treble/balance/fader control) button ●●
- 5 Display window
- 6 SEEK/AMS/MANU (automatic music sensor/automatic tuning/manual search) button ●●●
- 7 ▲ (eject) button ●●
- 8 SENS (sensitivity adjust) button ●
- 9 RELEASE (front panel release) button ●●
- 10 SEL (control mode select) button ●●
- 11 Reset button (located on the front side of the unit hidden by the front panel) ●
- 12 During radio reception:
Preset number buttons ●
- During CD playback:
1 INTRO (intro scan) button ●
2 REPEAT (repeat play) button ●
3 SHUF (shuffle play) button ●
- 13 Frequency Select switch (located on the bottom of the unit)
See "Frequency Select switch" in the Installation/Connections manual. (E model)
- 14 FM/AM (radio on/band select) button ●● (E model)
FM/MW/LW (radio on/band select) button ●● (AEP, UK, Italian model)
- 15 CD (CD play) button ●
- 16 A.MEM (Automatic Memory function) button ●

When the position of switch 13 have been changed, be sure to press the reset button after connecting power.

Installation

Precautions

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

Mounting angle adjustment

Adjust the mounting angle to less than 20°.

How to Detach and Attach the Front Panel

Before installing the unit, detach the front panel.

To detach

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

To attach

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

Installation

Précautions

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

Réglage de l'angle de montage

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

Retrait et pose de la façade

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

Retrait

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

Pose

Aligner les points ④ et ⑤, puis pousser l'appareil jusqu'au 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 Einbauort 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 Montageteile.

Hinweis zum Montagewinkel

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

Abnehmen und Anbringen der Frontplatte

Nehmen Sie die Frontplatte vor dem Einbau des Geräts ab.

Zum Abnehmen

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

Zum Anbringen

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

Installazione

Precauzioni

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

Regolazione dell'angolo di montaggio

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

Come staccare e attaccare il pannello anteriore

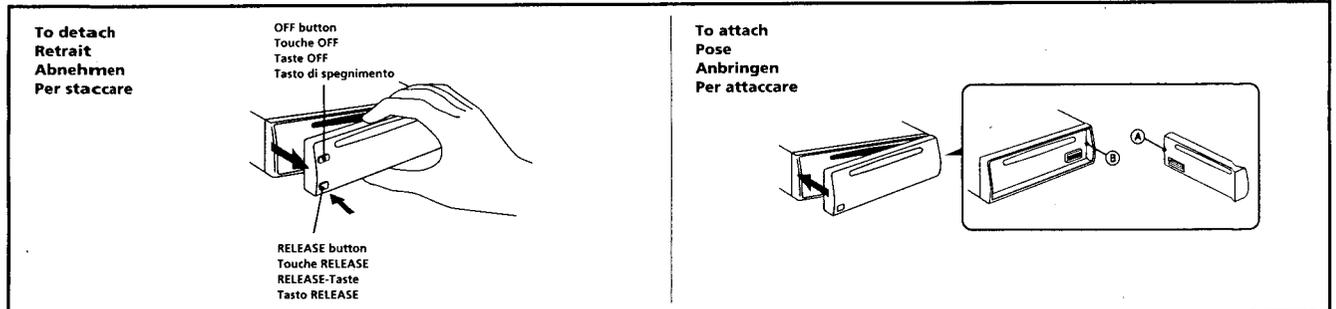
Prima di installare l'apparecchio staccare il pannello anteriore.

Per staccare

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

Per attaccare

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



Mounting Example

Installation in the dashboard

Exemple de montage

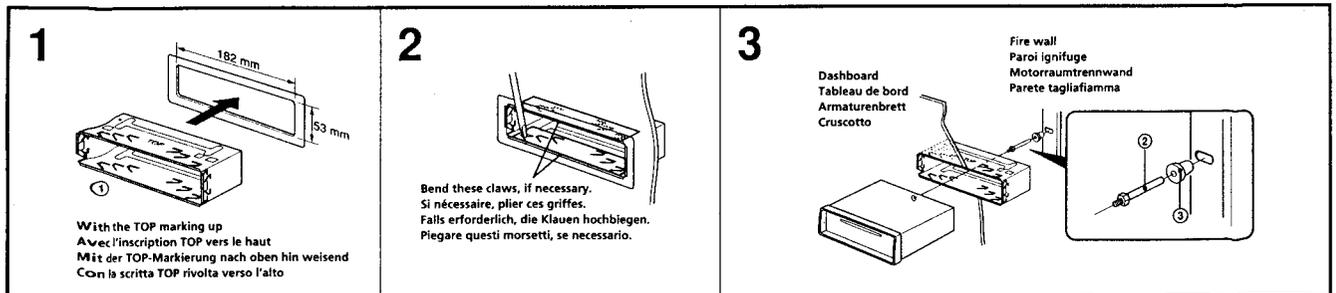
Installation dans le tableau de bord

Einbaubeispiel

Installation im Armaturenbrett

Esempio di montaggio

Installazione nel cruscotto



Connections (AEP, UK, Italian model)

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 An Accessory Position on the Ignition Key Switch — POWER SELECT Switch

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

Reset Button

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

Note on the control leads

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

Memory hold connection

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

Notes on speaker connection

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

Warning

If you have a power antenna without a relay box, connecting this unit with the supplied power connecting cord ③ may damage the antenna.

Connexions

Précautions

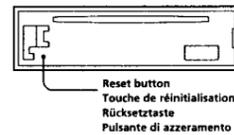
- Cet appareil est conçu pour fonctionner sur courant continu de 12 V avec masse négative.
- Branchez le cordon d'alimentation ③ sur l'appareil et les haut-parleurs avant de le brancher sur le connecteur d'alimentation auxiliaire.
- Rassemblez tous les fils de terre en un point de masse commun.

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

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

Touche de réinitialisation

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



Remarque sur les fils de contrôle

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

Connexion pour la conservation de la mémoire

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

Remarques sur la connexion des haut-parleurs

- Avant de raccorder les haut-parleurs, mettre l'appareil hors tension.
- Utiliser des haut-parleurs ayant une impédance de 4 à 8 ohms et une capacité adéquate sous peine de les endommager.
- Ne pas raccorder les bornes du système de haut-parleurs au 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.

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 Autos über eine Zubehörposition verfügt — POWER SELECT-Schalter

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

Rücksetztaste

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

Hinweis zu den Steuerleitungen

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

Zur Stromversorgung des Speichers

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

Hinweise zum Lautsprecheranschluß

- Schalten Sie das Gerät aus, bevor Sie die Lautsprecher anschließen.
- Verwenden Sie Lautsprecher mit einer Impedanz zwischen 4 und 8 Ohm und ausreichender Belastbarkeit. Ansonsten können die Lautsprecher beschädigt werden.
- Verbinden Sie die Lautsprecheranschlüsse nicht mit dem Wagenschassis, und verbinden Sie auch nicht die Anschlüsse des rechten mit denen des linken Lautspechters.
- Versuchen Sie nicht, Lautsprecher parallel anzuschließen.
- An die Lautsprecheranschlüsse dieses Geräts dürfen nur Passivlautsprecher (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 Hilfs des mitgelieferten Netzverbindungskabels ③ die Antenne beschädigt werden.

Collegamenti

Attenzione

- Questo apparecchio è stato progettato per l'uso solo a 12 V CC con massa negativa.
- Collegare il cavo di collegamento dell'alimentazione 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.

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

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

Pulsante di azzeramento

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

Note sui cavi di collegamento

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

Collegamento per la conservazione della memoria

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

Note 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 relè l'antenna, si può danneggiare.

Connection Example

Connexions de l'exemple

Anschlußbeispiel

Esempi di Collegamento

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 de 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 the car's auxiliary power connector
vers un connecteur d'alimentation auxiliaire de la voiture
an Hilfsstromanschluß des Autos
al connettore di alimentazione ausiliare dell'auto

to the car's speaker connector
vers un connecteur de haut-parleur de la voiture
an Lautsprecheranschluß des Autos
a un connettore dell'altoparlante dell'auto

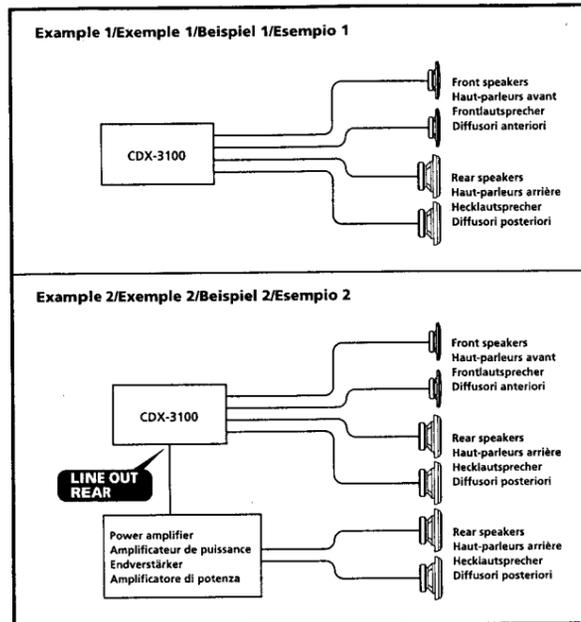
Positions 1, 2, 3 and 6 do not have pins.
Les positions 1, 2, 3 et 6 ne comportent pas de broche.
An Position 1, 2, 3 und 6 befinden sich keine Stifte.
Le posizioni 1, 2, 3 e 6 non hanno pin.

| Pin Broche Stift Pin | Colour Couleur Farbe Colore | Function Fonction Funktion Funzione | Pin Broche Stift Pin | Colour Couleur Farbe Colore | Function Fonction Funktion Funzione |
|-------------------------------|--------------------------------------|--|-------------------------------|--------------------------------------|---|
| 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 |

| 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 | Grey 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 speltati.

Connection Diagram
Schémas de connexion
Anschlußdiagramm
Schema di collegamento



Connections
(E model)

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.

Conexiones

Precauciones

- Esta unidad ha sido diseñada para alimentarse con 12 V CC, negativo a masa, solamente.
- Antes de realizar las conexiones, desconecte el terminal de puesta a masa de la batería del automóvil a fin de evitar cortocircuitos.
- Conecte los cables de entrada de alimentación amarillo y rojo solamente después de haber conectado los demás.
- Cértese de conectar el cable de entrada de alimentación rojo a un terminal de 12 V positivo que se energice al poner la llave de encendido en la posición para accesorios.
- Conecte todos los conductores de puesta a masa a un punto común.

線路之連接

注意

- 本機只可使用負極接地 12V 直流電操作。
- 連接以前，先接取汽車電池的接地端子，以免發生短路。
- 紅色及黃色電源輸入導線必須等所有電線都連接完畢以後才可連接。
- 紅色電源輸入導線請連接到汽車發動機點火線在輔助位置時才通電的正 12V 電源端子。
- 所有地線都必須連接到同一接地點才行。

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

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

Si el automóvil dispone de posición para accesorios en la llave de encendido — Selector POWER SELECT

Para activar la función de selección de alimentación Presione la tecla OFF mientras presiona la tecla SEL. La función de selección de alimentación conecta la alimentación de la indicación del reloj con la posición para accesorios en el interruptor de la llave de encendido. Para evitar el desgaste de la batería, el reloj no aparece durante la inicialización de la unidad.

若要在汽車發動機點火匙開關沒具輔助位置的汽車裡使用時 — POWER SELECT 開關

若要使用電源選擇功能一面按住 SEL 鍵，一面按壓 OFF 鍵。則電源選擇功能便會使時間顯示電源和汽車點火開關的輔助位置連動。為了避免電池消耗，當不使用唱機時，時間便不顯示出來。

Frequency Select Switch

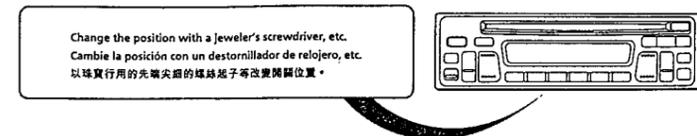
The AM (FM) tuning interval is factory-set to the 9K (50 K) position. If the frequency allocation system of your country is based on 10 kHz (200 kHz) interval, set the switch on the bottom of the unit to the 10 K (200 K) position before making connections.

Selector de frecuencia

El intervalo de sintonía de AM (FM) ha sido ajustado en fábrica a la posición 9 K (50 K). Si el sistema de asignación de frecuencias de su país se basa en el intervalo de 10 kHz (200 kHz), ponga este selector, situado en la base de la unidad, en la posición 10 K (200 K) antes de realizar las conexiones.

頻率選擇開關

本裝置的 AM(FM) 調諧區間在出廠以前被設定在 "9K(50K)" 位置上。若貴地的頻率區間為 "10KHz(200kHz)"，連接以前請先將本機底部的選擇開關設定在 "10K(200K)" 之處。



Reset Button

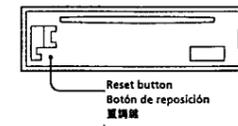
When the installation and connections are over, be sure to press the reset button with a ballpoint pen etc.

Botón de reposición

Cuando finalice la instalación y las conexiones, cerciórese de presionar el botón de reposición con un bolígrafo, etc.

重調鍵

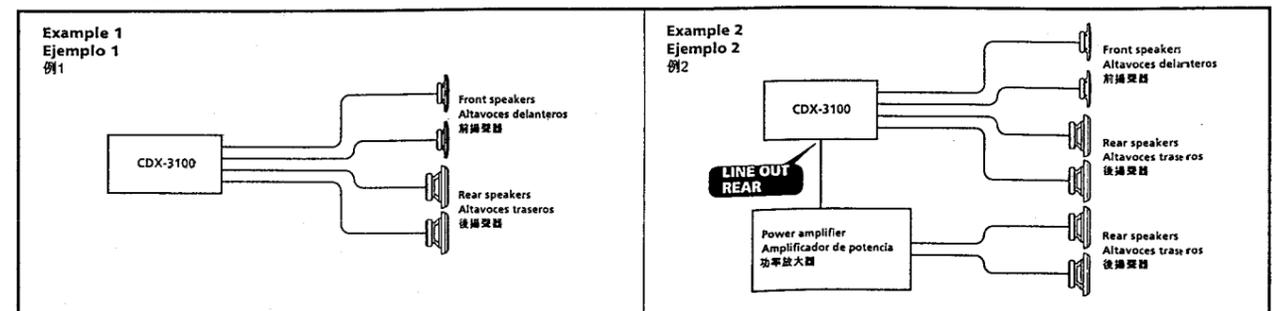
安裝和線路之連接完畢以後，請以原子筆等依壓重調鍵。



Connection Diagram

Diagramas de conexión

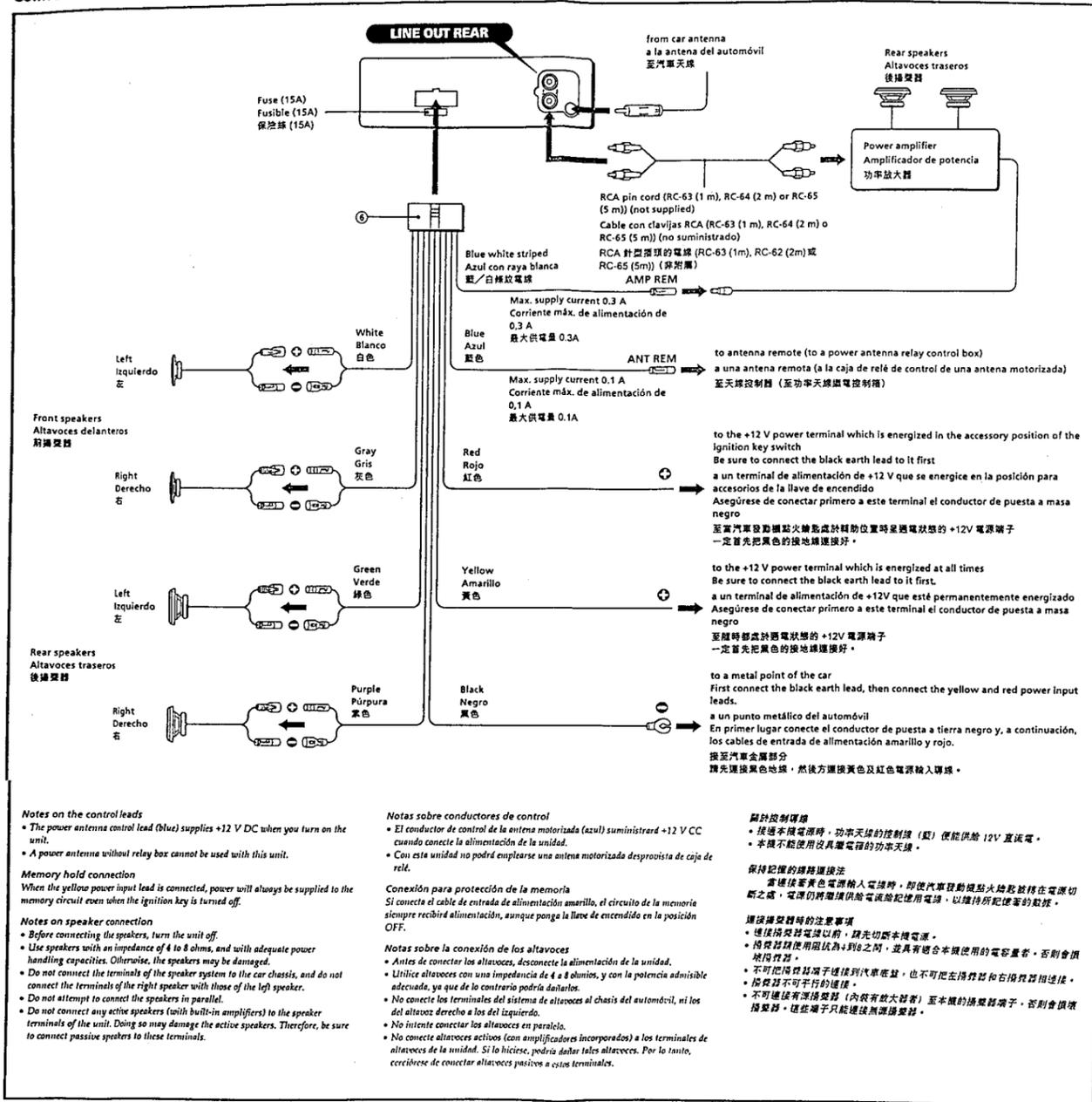
線路連接方塊圖



Connections of Example

Ejemplo de conexiones

線路之連接圖例



Mounting the Unit in a Japanese Car
Montaje de la unidad en un automóvil japonés
要安裝於日本汽車裡時

You may not be able to install this unit in some makes of Japanese cars. In such a case, consult your Sony dealer.
Usted no podrá instalar esta unidad en algunos automóviles japoneses. En tal caso, consulte a su proveedor Sony.
有的汽車不能安裝本機，此時，請向離貴處最近的 Sony 經銷店查詢。

1 Run a blade along the slits on the back of the front trim and cut it off the unit.
Pase una cuchilla a lo largo de las ranuras de la parte posterior del adorno frontal y córtelo.
用刀片沿著前板後部的溝紋切割，取掉外框。

2 TOYOTA

to dashboard/center console
al salpicadero/console central
至儀表板/中央控制箱

① max. size 5 x 8 mm
Tamaño máx.: 5 x 8 mm
最大尺寸 5 x 8 mm

Bracket Soporte 襯墊

NISSAN

to dashboard/center console
al salpicadero/console central
至儀表板/中央控制箱

① max. size 5 x 8 mm
Tamaño máx.: 5 x 8 mm
最大尺寸 5 x 8 mm

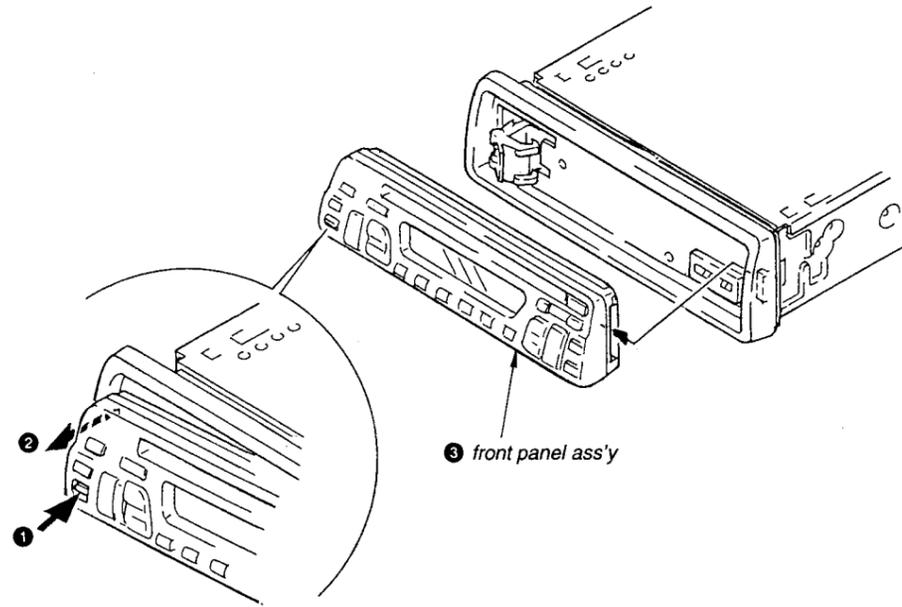
Bracket Soporte 襯墊

Note
To prevent malfunction, install only with the supplied screws ① and use existing parts supplied to your car.
Nota
Para evitar que se produzcan fallos, realice la instalación solamente con los tornillos suministrados ① y utilice los componentes suministrados para el automóvil.
註
為避免發生意外事故，安裝時請只使用附贈螺絲釘 ① 以及您汽車的零件道具。

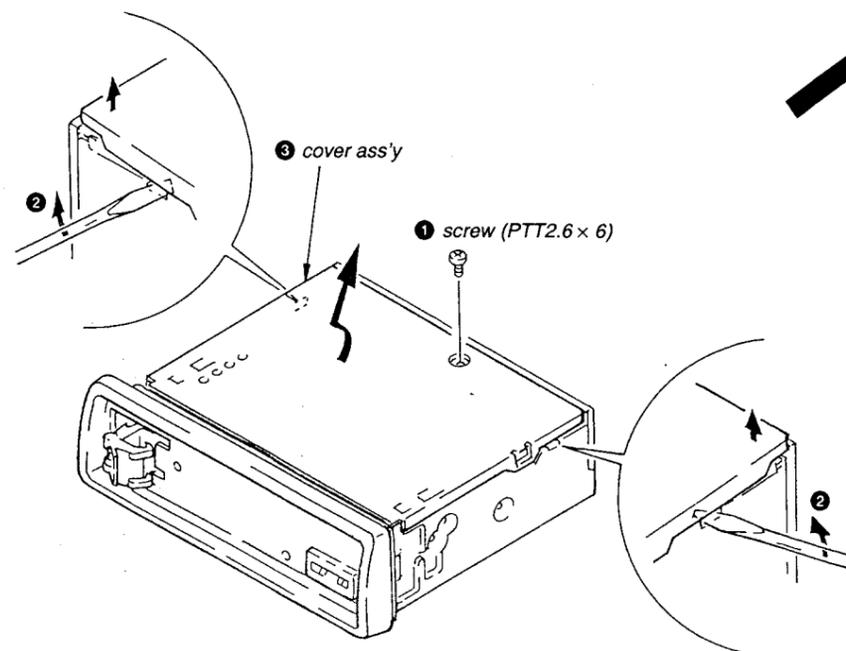
**SECTION 2
DISASSEMBLY**

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

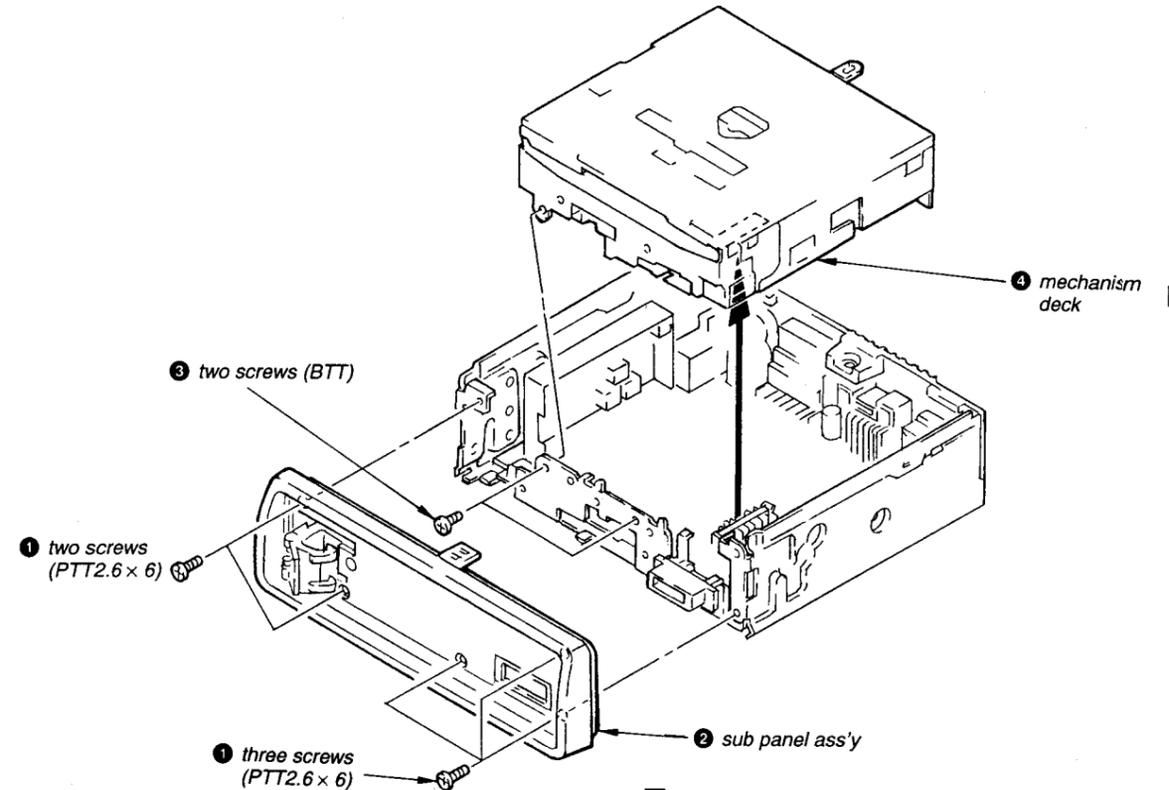
FRONT PANEL ASS'Y



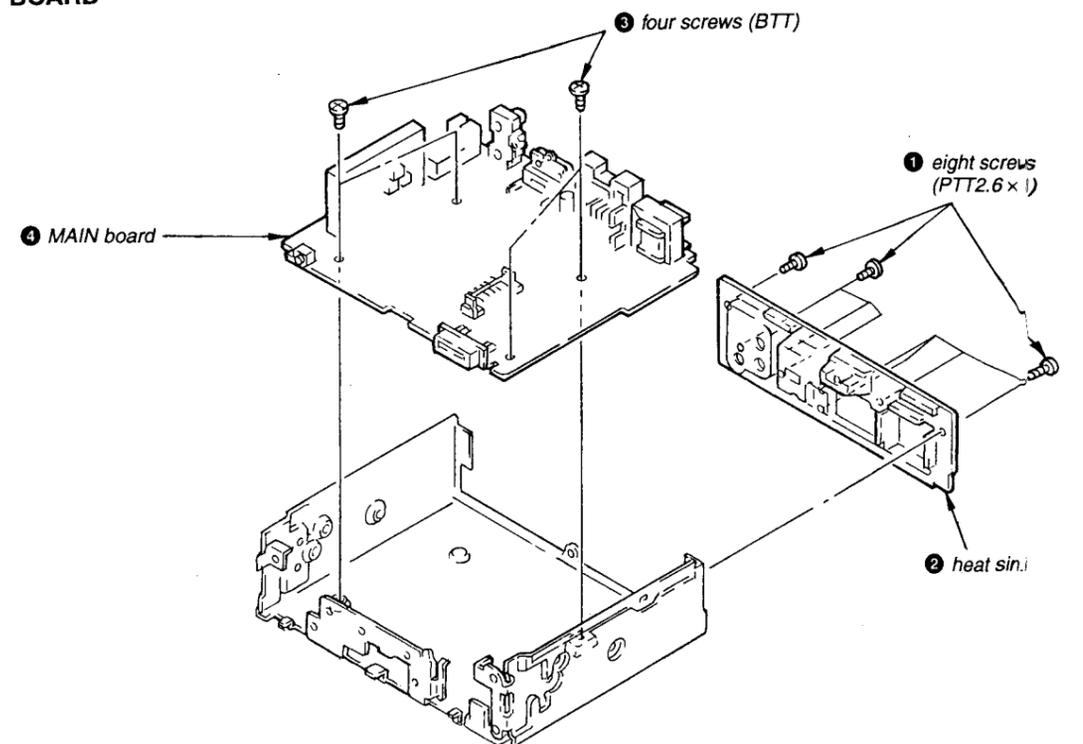
COVER ASS'Y



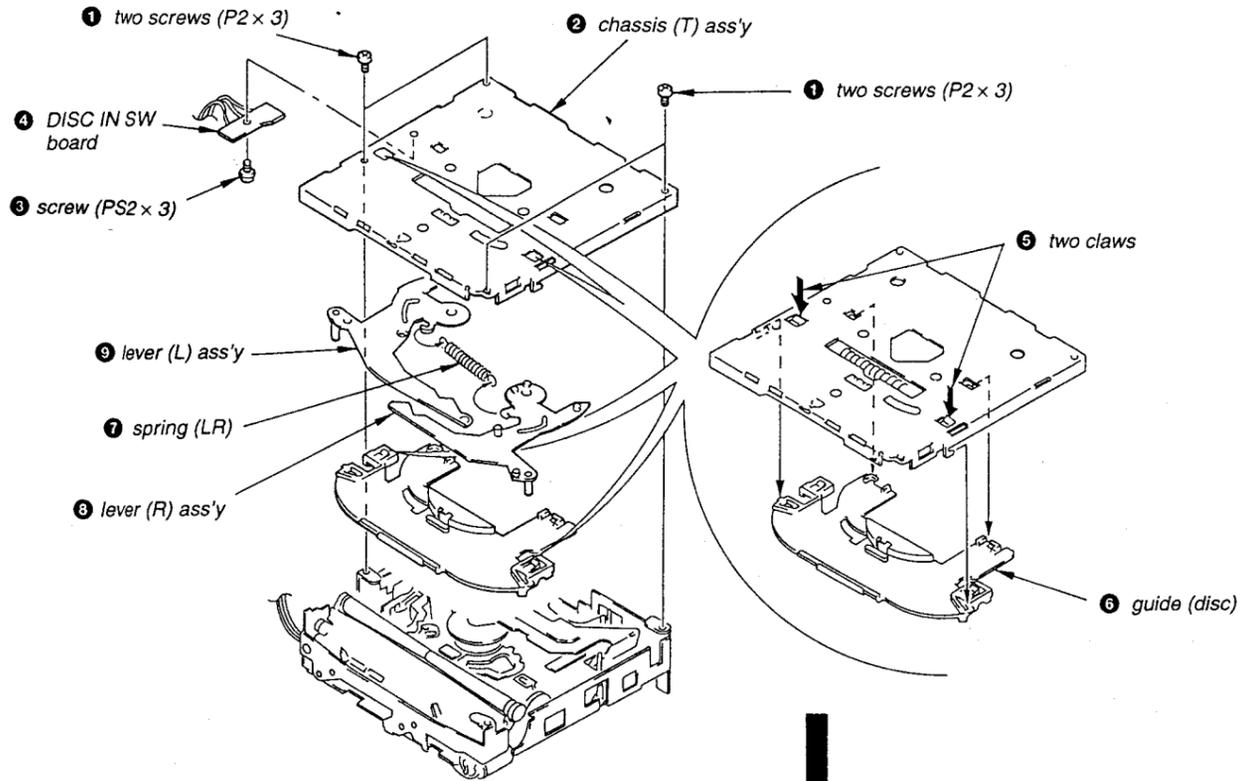
PANEL (SUB) ASS'Y, MECHANISM DECK



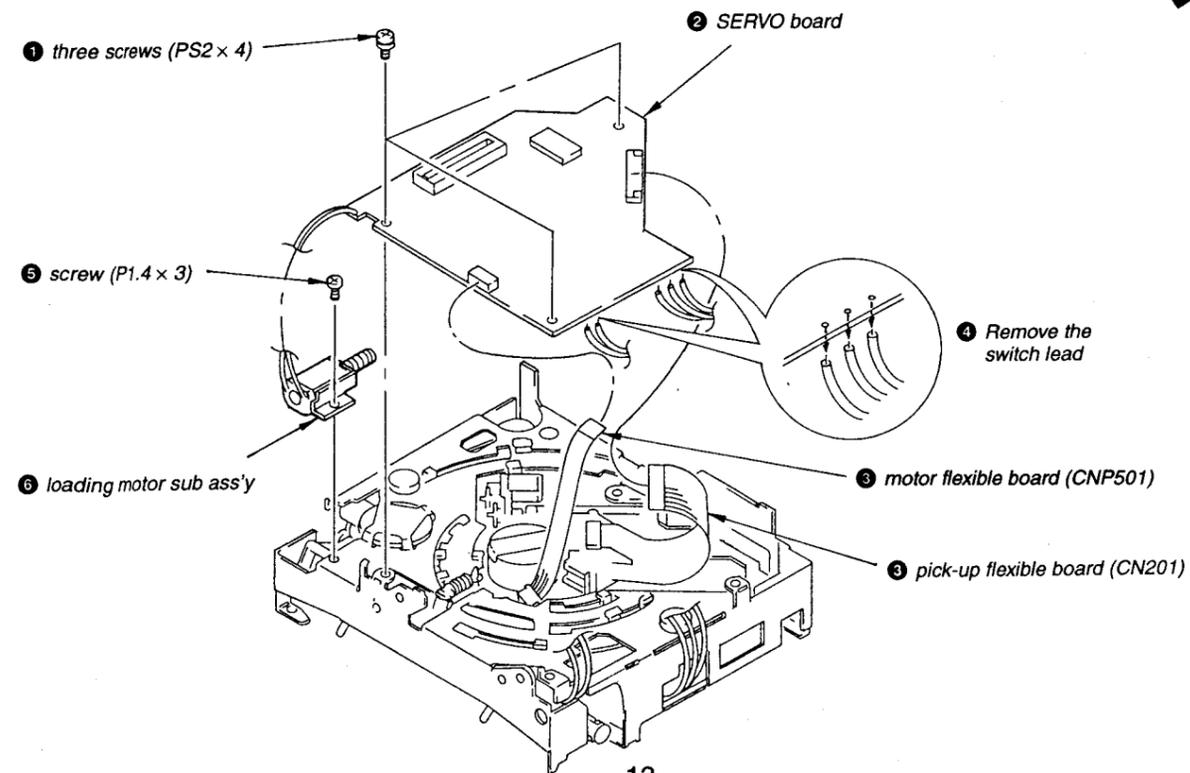
MAIN BOARD



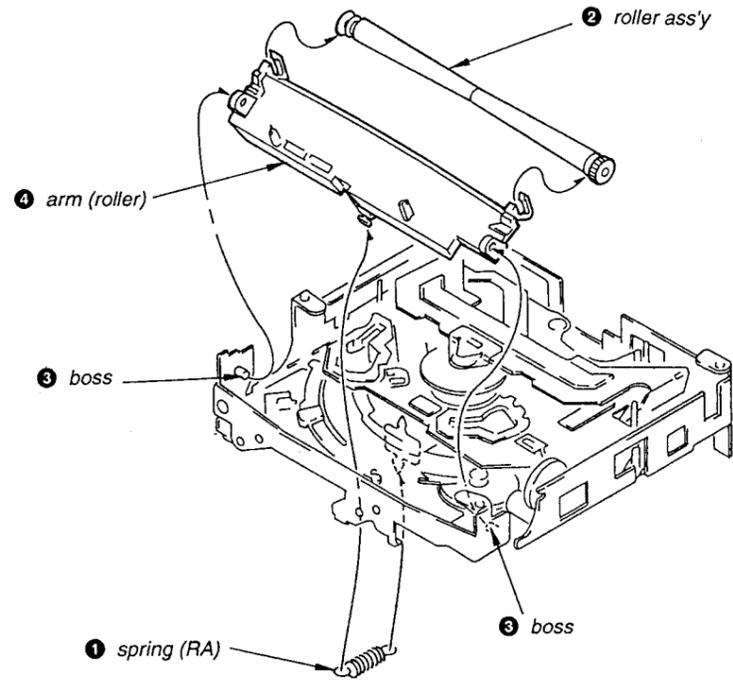
CHASSIS (T) ASS'Y



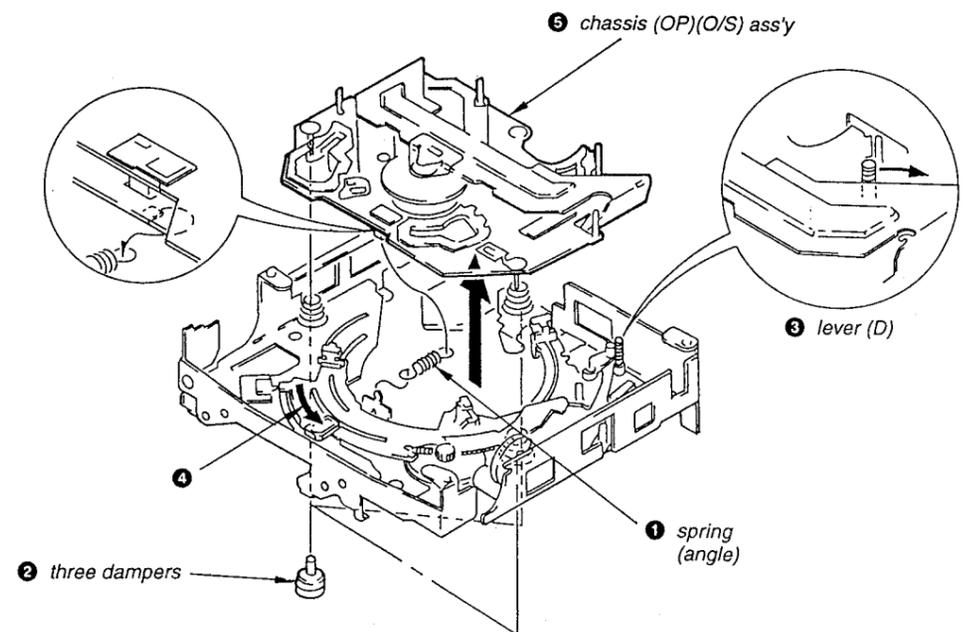
SERVO BOARD, LOADING MOTOR



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.

SECTION 4 ELECTRICAL ADJUSTMENTS

TUNER SECTION 0dB=1μV

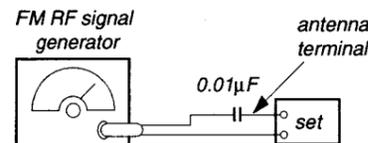
Cautions during repair

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:

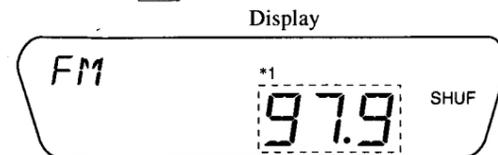
FM button: FM
CHANNEL SPACE switch (E model): 10k



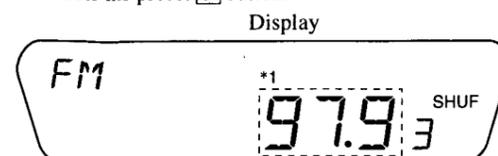
Carrier frequency : 97.9MHz (E model)
98.0MHz (AEP, UK, Italian model)
Output level : 22dB(12.6 μV)
Mode : mono
Modulation : 1kHz, 75kHz deviation

Procedure:

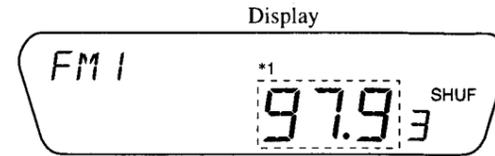
1. Set to the test mode.
2. Push the [FM] button and set to FM.



3. Push the preset [3] button.



4. Adjust with the volume RV3 on TU101 so that the "FM" indication turns to "FM1" indication on the display window. But, in case of already indicated "FM1", turn the RV3 so that put out light "1" indication and adjustment.

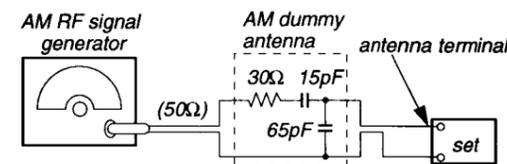


*1: AEP, UK and Italian models are indicates "98.0".

AM (MW) Auto Scan/Stop Level Adjustment

Setting:

AM button (E model): AM
MW/LW button (AEP, UK, Italian model): MW
CHANNEL SPACE switch (E model): 10k

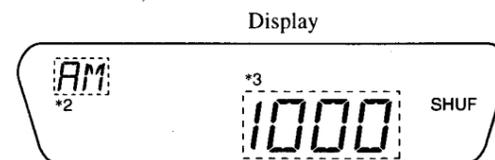


Carrier frequency : 1000kHz (E model)
999kHz (AEP, UK, Italian model)

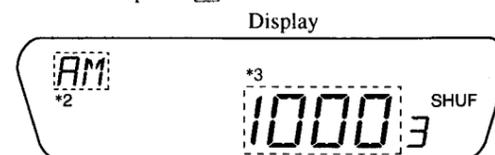
30% amplitude modulation by 1kHz signal
Output level : 35dB (56.2 μV)

Procedure:

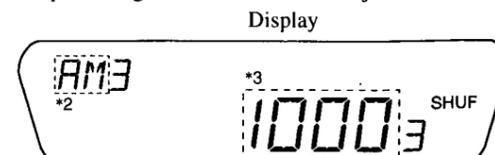
1. Set to the test mode.
2. Push the [AM] button (E model) or [MW/LW] button (AEP, UK Italian model) and set to AM (E model) or MW (AEP, UK, Italian model).



3. Push the preset [3] button.



4. Adjust with the volume RV1 on TU101 so that the "AM" indication turns to "AM3" indication on the display win window. But, in case of already indicated "AM3", turn the RV1 so that put out light "3" indication and adjustment.



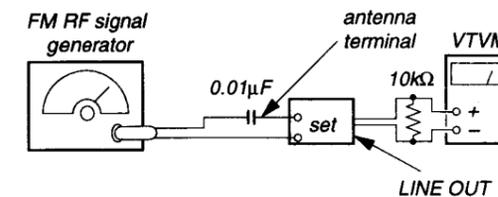
*2: AEP, UK and Italian model are indicates "MW".

*3: AEP, UK and Italian model are indicates "999".

High Cut Control Effect Adjustment

Setting:

FM button: FM
CHANNEL SPACE switch (E model): 10k



Carrier frequency : 97.9MHz (E model)
98.0MHz (AEP, UK, Italian model)
Output level : 60dB(1mV)
Mode : mono
Modulation : 10kHz, 40kHz deviation

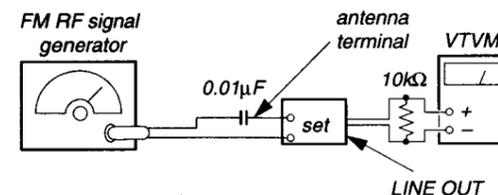
Procedure:

1. Tune the 97.9 MHz (E model) or 98.0MHz (AEP, UK Italian model)
2. The then output level is supposing that (A) dB.
3. Adjust with the volume RV2 on TU101 so that the output level is (A) -5dB then signal generator input set to 20dB.

FM Noise Focus Adjustment

Setting:

FM button: FM
CHANNEL SPACE switch (E model): 10k



Carrier frequency : 97.9MHz (E model)
98.0MHz (AEP, UK, Italian model)
Output level : 60dB(1mV)
Mode : mono
Modulation : 1kHz, 75kHz deviation

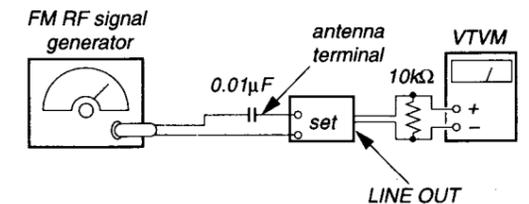
Procedure:

1. Tune the 97.9 MHz (E model) or 98.0MHz (AEP, UK, Italian model).
2. The then output level is supposing that (B) dB.
3. Adjust with the volume RV5 on TU101 so that the output level is (B) -30dB then signal generator input set to -19dB.

FM Stereo Separation Adjustment

Setting:

FM button: FM
CHANNEL SPACE switch (E model): 10k



Carrier frequency : 97.9MHz (E model)
98.0MHz (AEP, UK, Italian model)
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 | (A) |
| R-CH | L-CH | Adjust RV4 on TU101 for minimum reading. |
| R-CH | R-CH | (C) |
| L-CH | R-CH | Adjust RV4 on TU101 for minimum reading. |

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

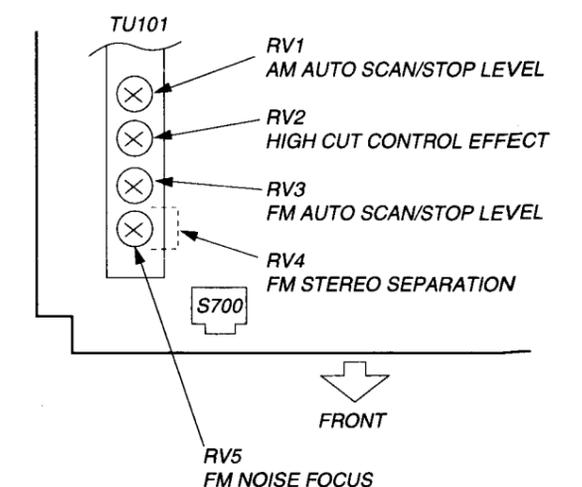
R-CH Stereo separation: (C)-(D)

The separations of both channels should be equal.

Specification: Separation more than 27dB

Adjustment Location:

[MAIN BOARD] (COMPONENT SIDE)



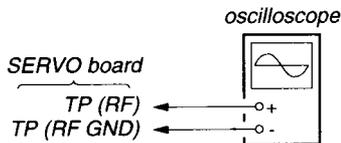
CD SECTION

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.

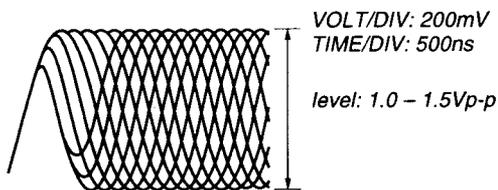


Procedure:

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

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

RF signal waveform



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

Focus Gain Adjustment (Coarse adjustment)

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

- Optical block
- RV4

Adjustment:

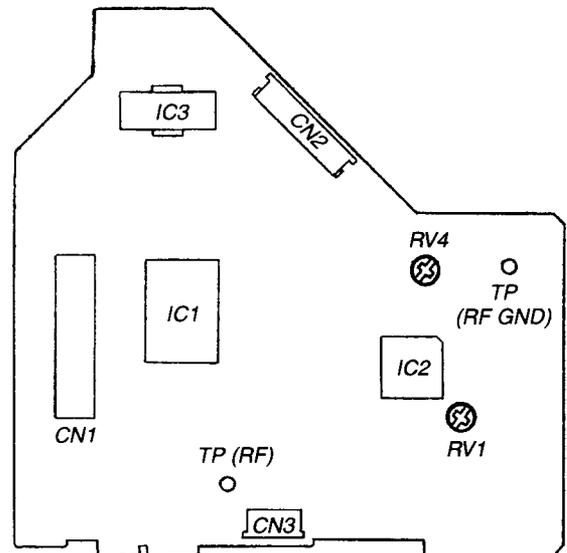
1. Set RV4 to the standard position. (mechanical center)
2. Check whether operation noise (while noise type) caused by the double-axis device (lens section of the optical block) is abnormally loud.

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

- If the gain is too low:
Focus does not function and no music is selected.
- If the gain is too high:
Noise caused by scratches and dust is heard and the operation becomes unstable.

Adjustment Location:

[SERVO BOARD] (CONDUCTOR SIDE)



SECTION 5 DIAGRAMS

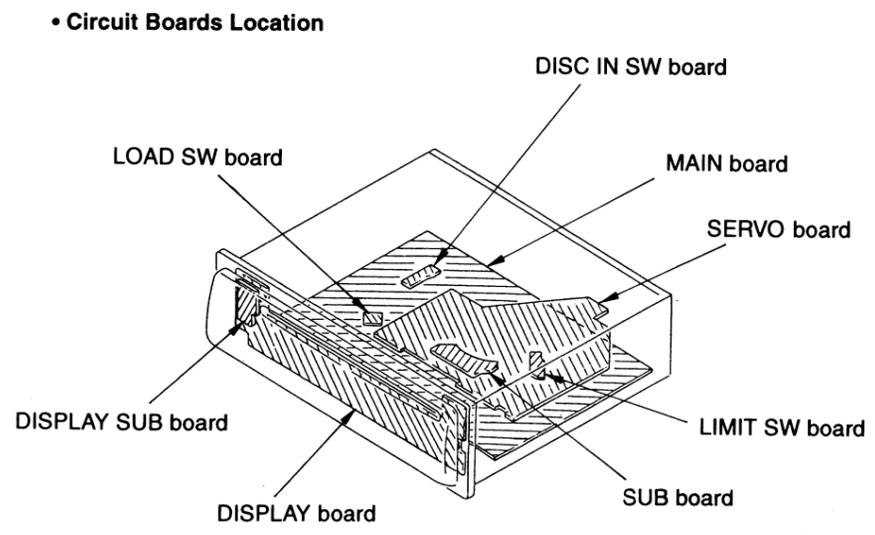
5-1. IC PIN FUNCTION DESCRIPTION

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

| 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 | LCDCO | 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 |
| 67 | AREA2 SW | I | Destination setting pin. |
| 68 | AREA1 SW | I | Destination setting pin. |
| 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 CO | O | CD serial clock output pin. |

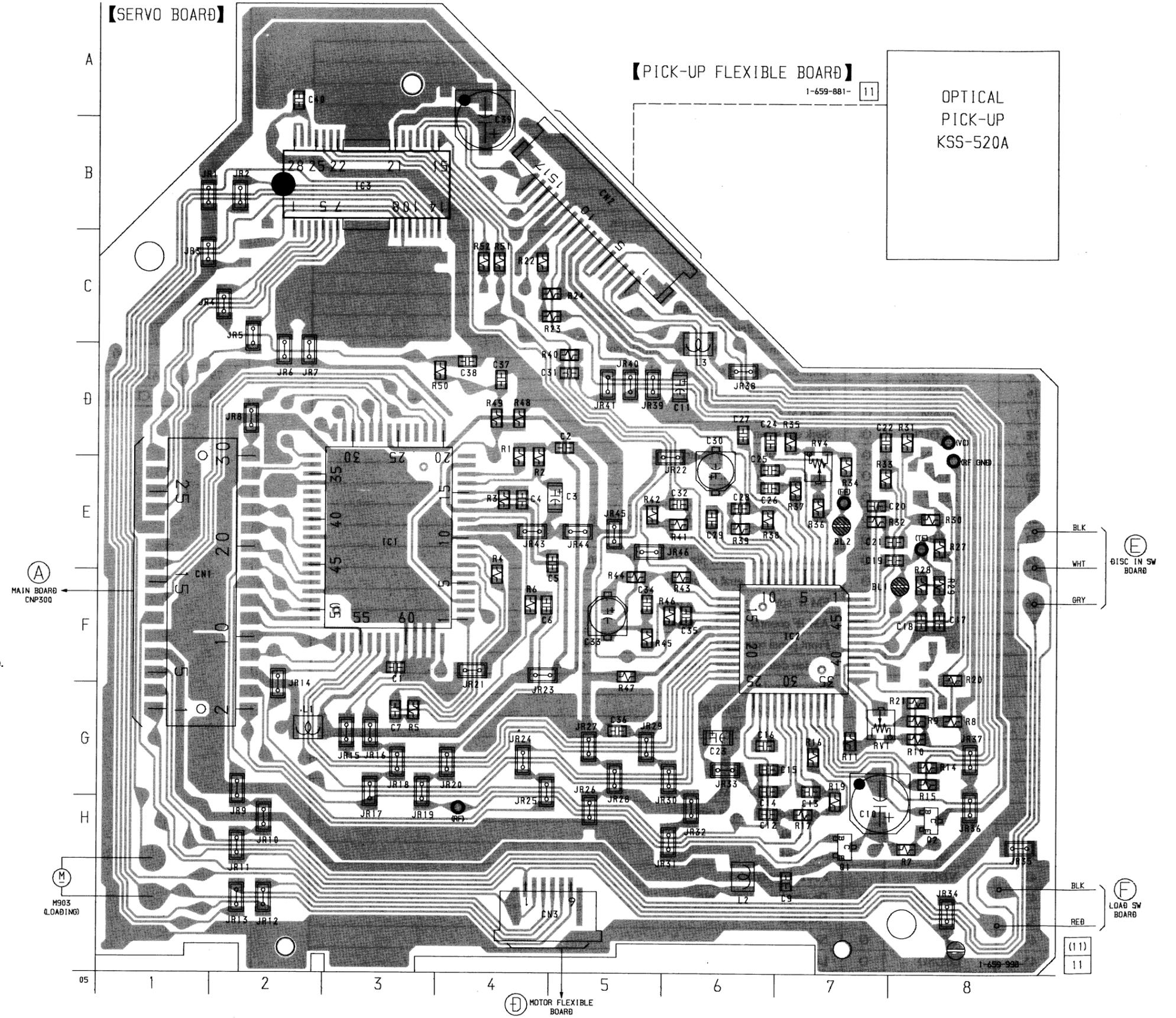
5-2. PRINTED WIRING BOARDS - MECHANISM DECK Section -



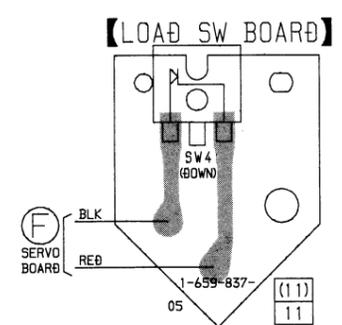
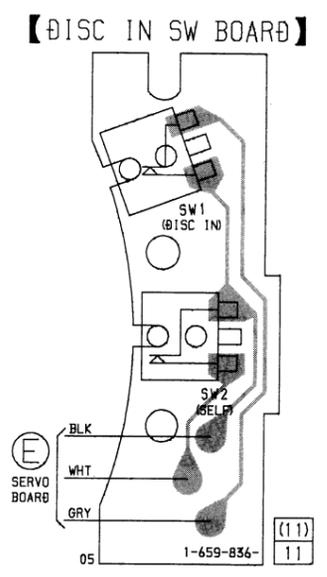
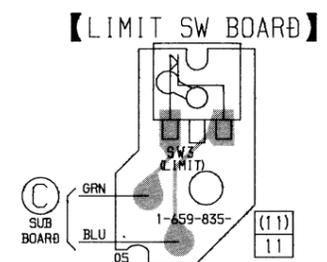
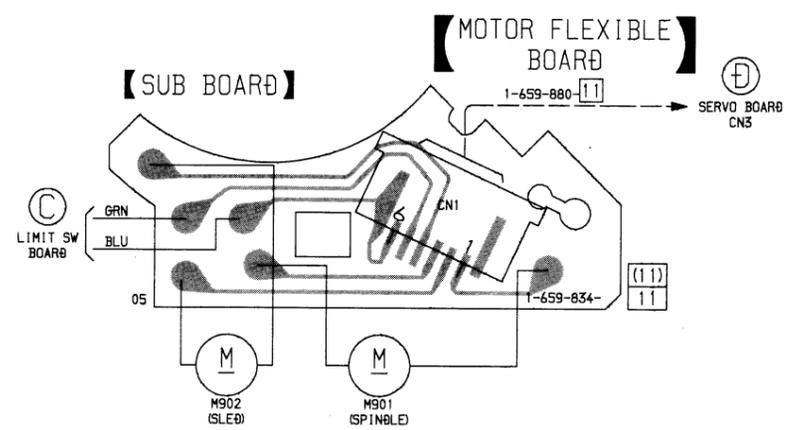
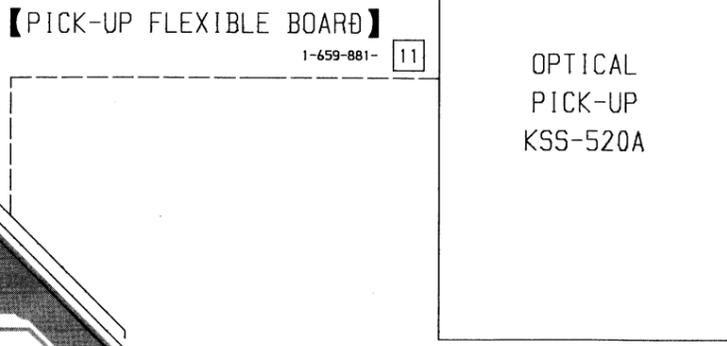
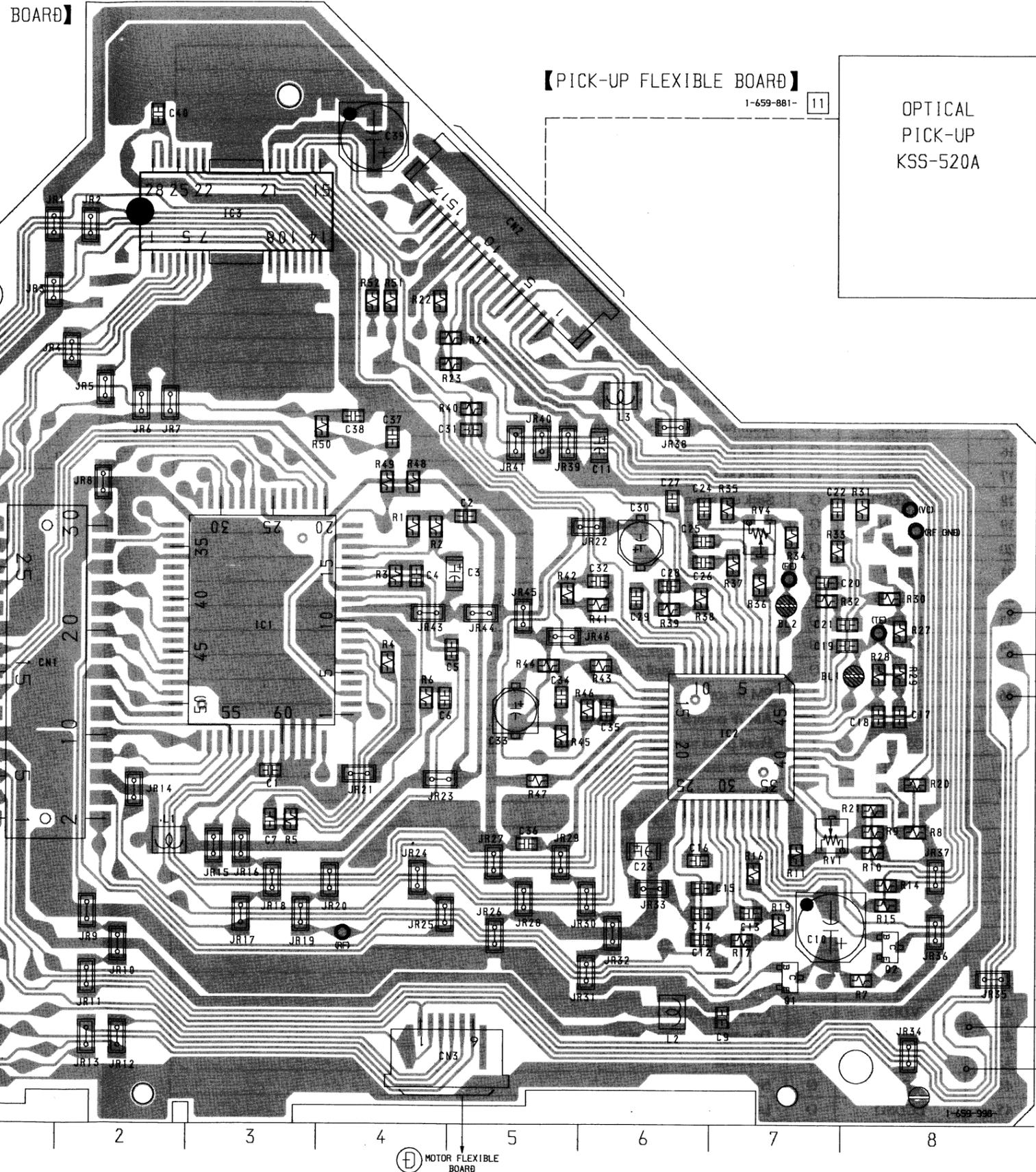
• Semiconductor Location

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

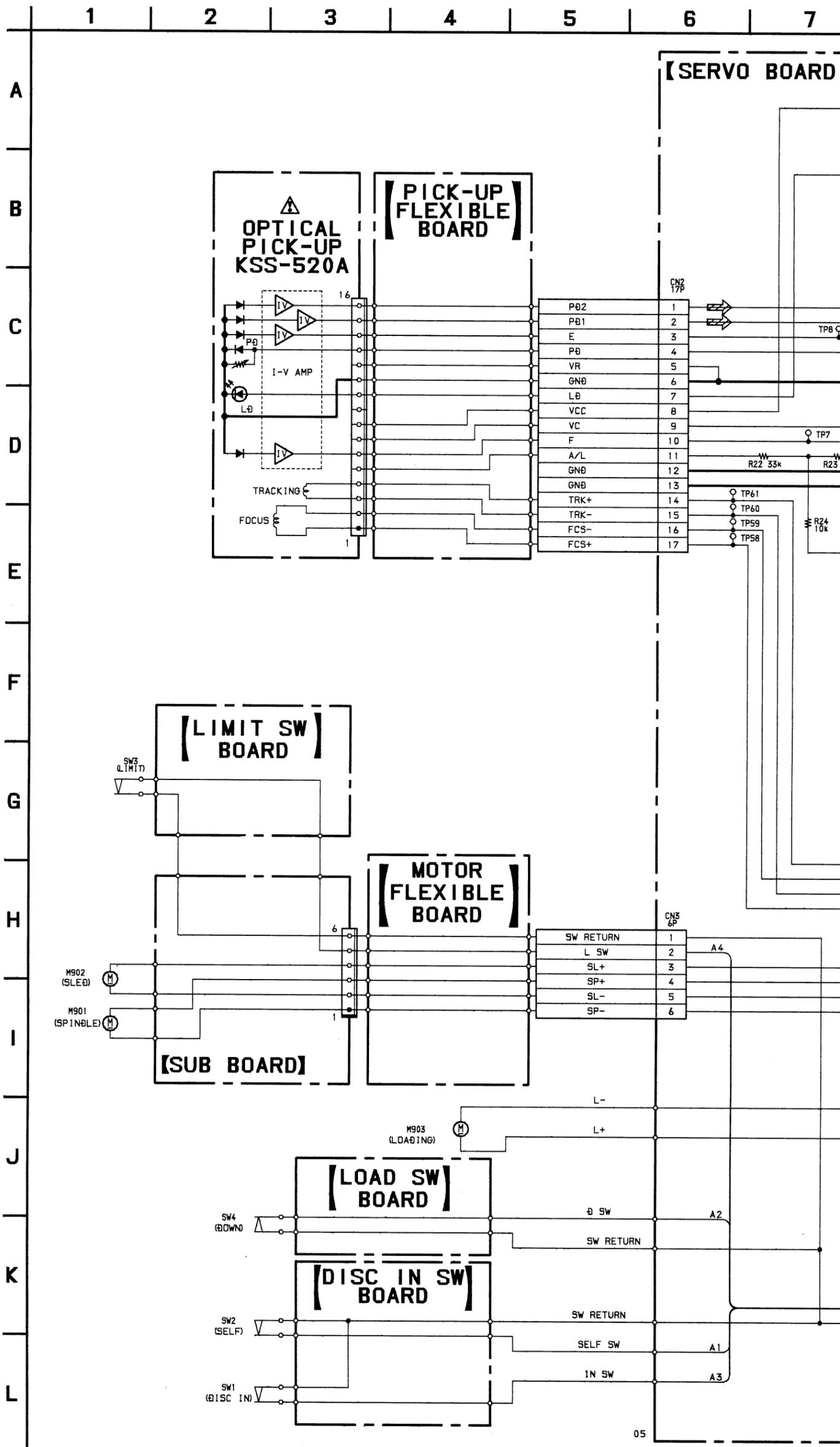
Note:
 • — : parts extracted from the component side.
 • — : parts extracted from the conductor side.



WIRING BOARDS - MECHANISM DECK Section -



5-3. SCHEMATIC DIAGRAM – MECHANISM DECK Section – • See page 34 for IC Block Diagrams.



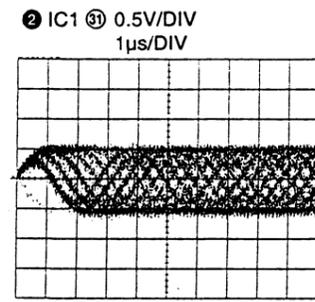
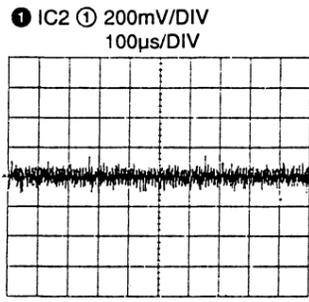
Note:

- 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 $1/4\text{W}$ 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.

- **B+** : B+ Line.
- **□** : adjustment for repair.
- Power voltage is dc 14.4V and fed with regulated dc power supply from ACC and BATT terminals.
- Voltages and waveforms are dc with respect to ground under no-signal conditions. no mark : CD
- * : Impossible to measure
- Voltages are taken with a VOM (10 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.
- \Rightarrow : CD

• Waveforms



ck Diagrams.

6

7

8

9

10

11

12

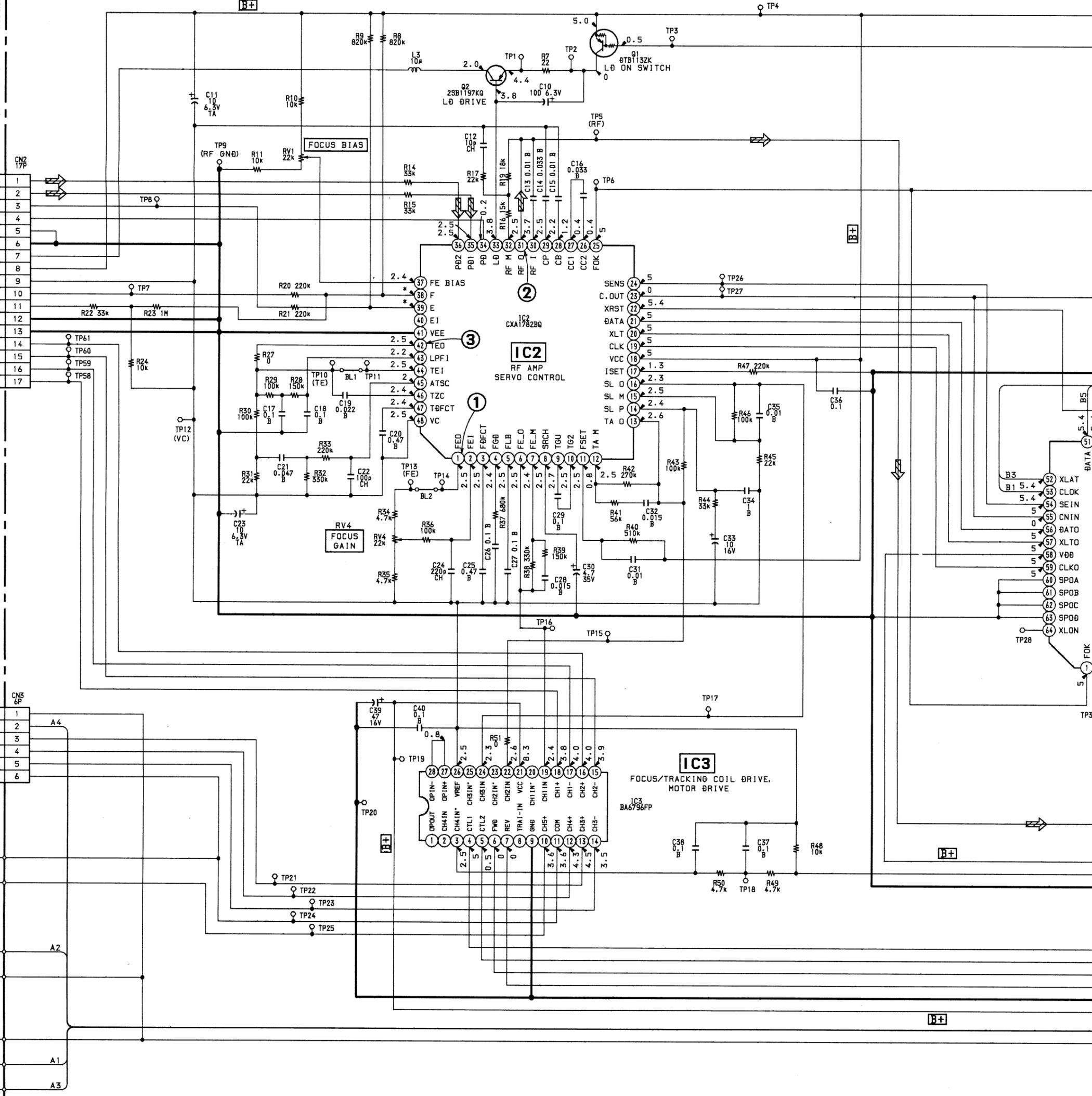
13

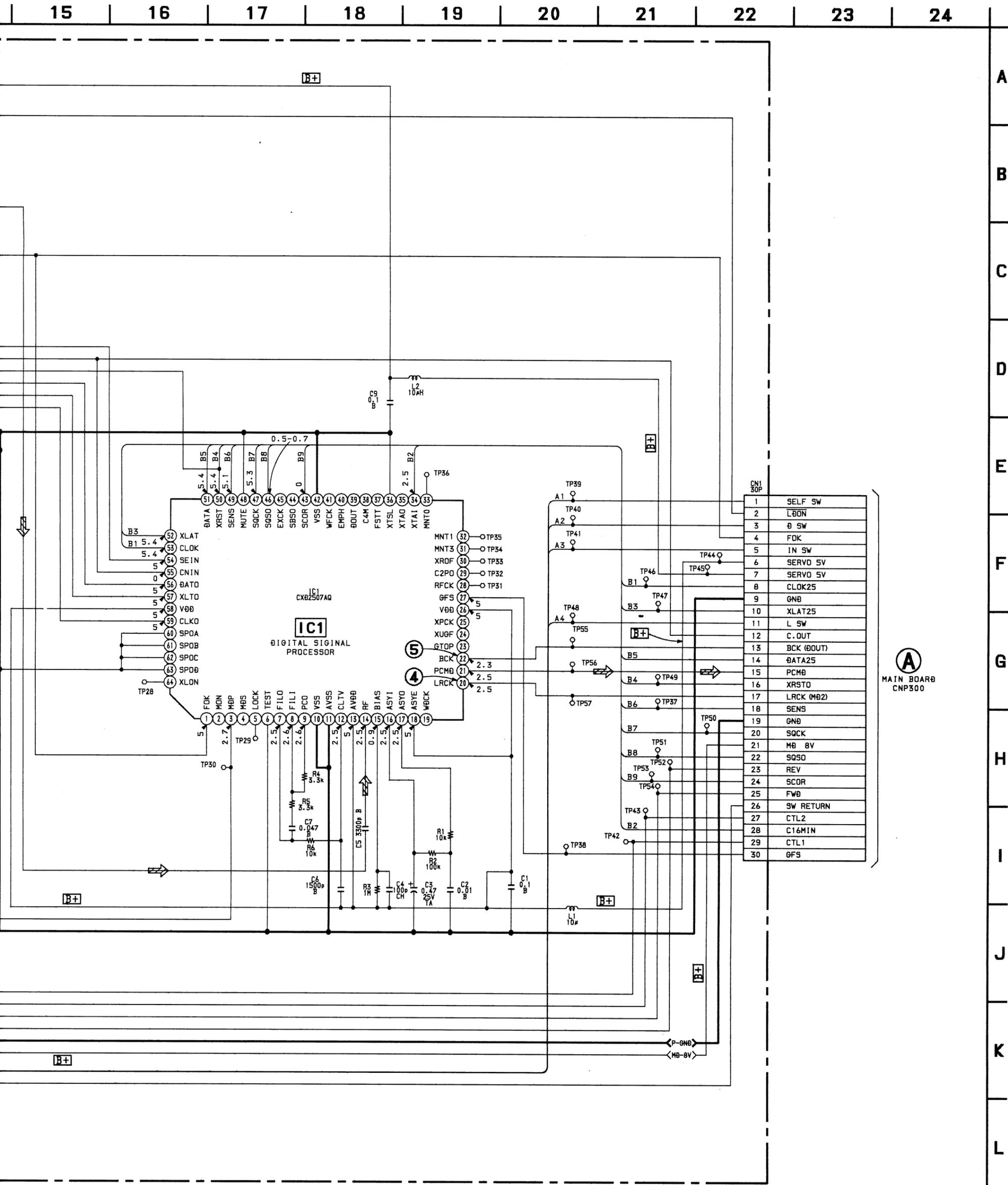
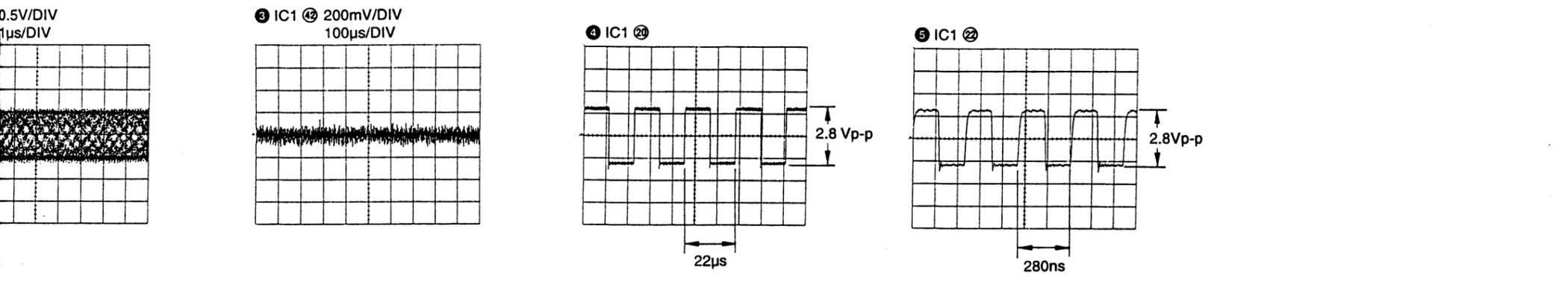
14

15

16

[SERVO BOARD]

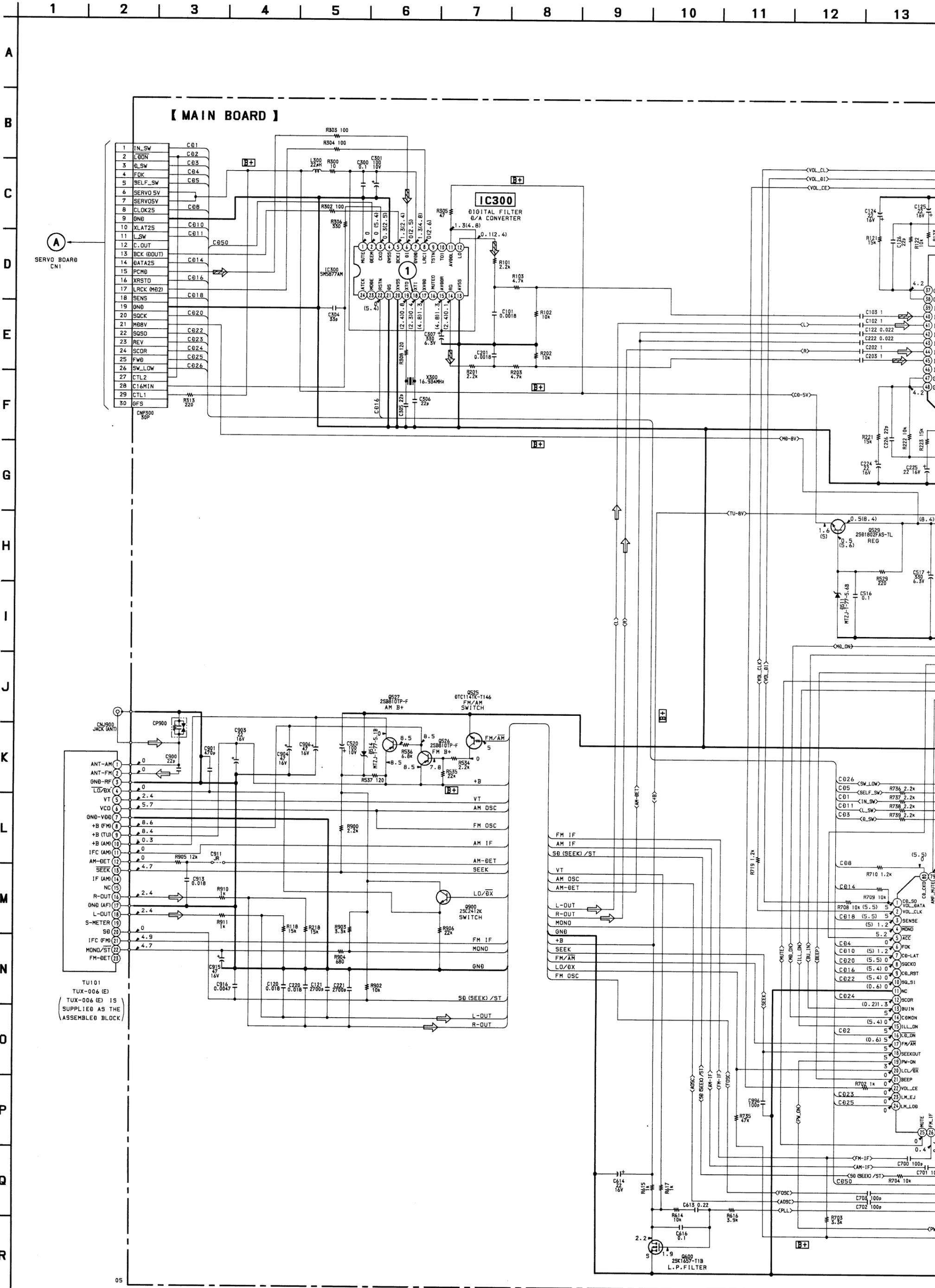


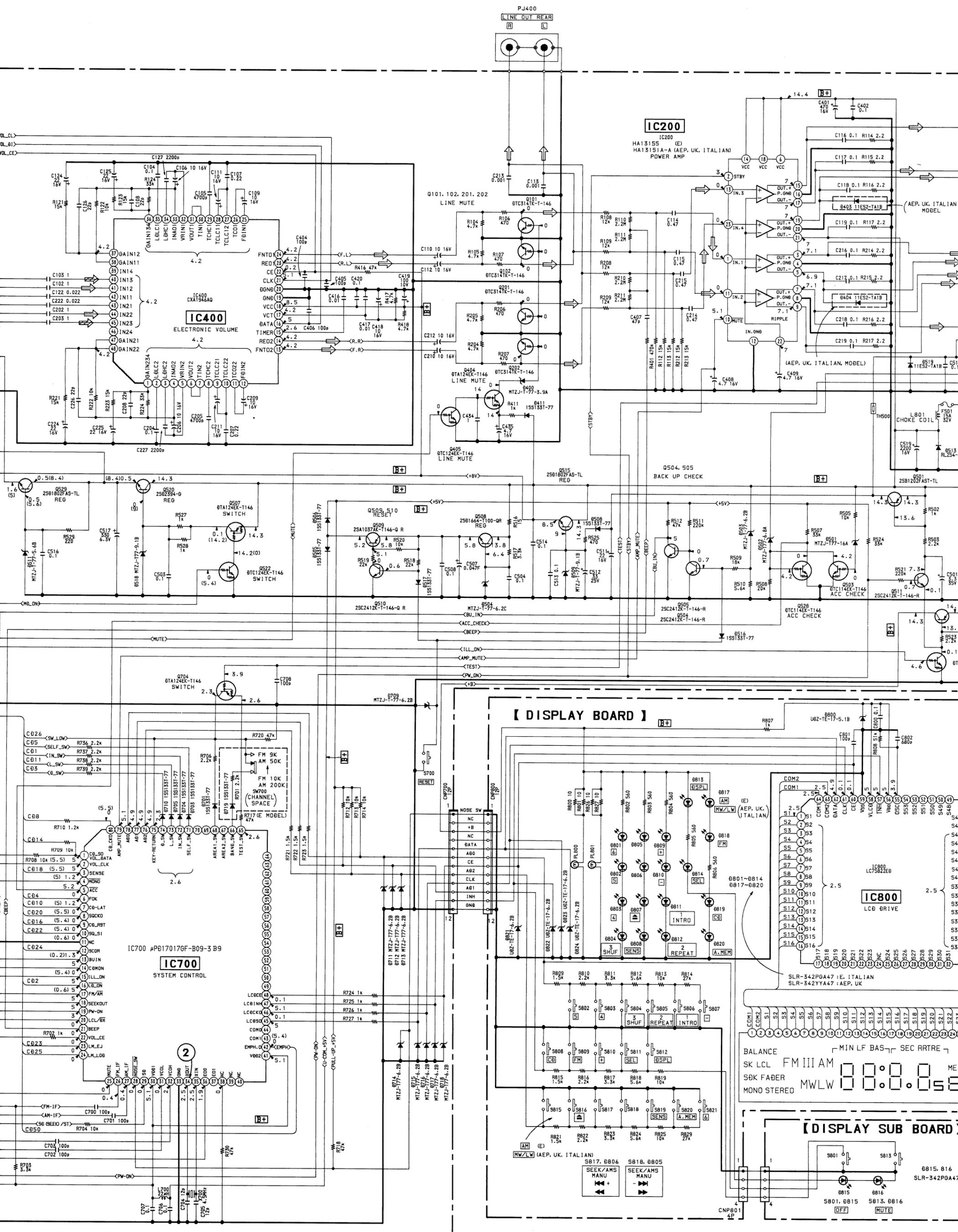


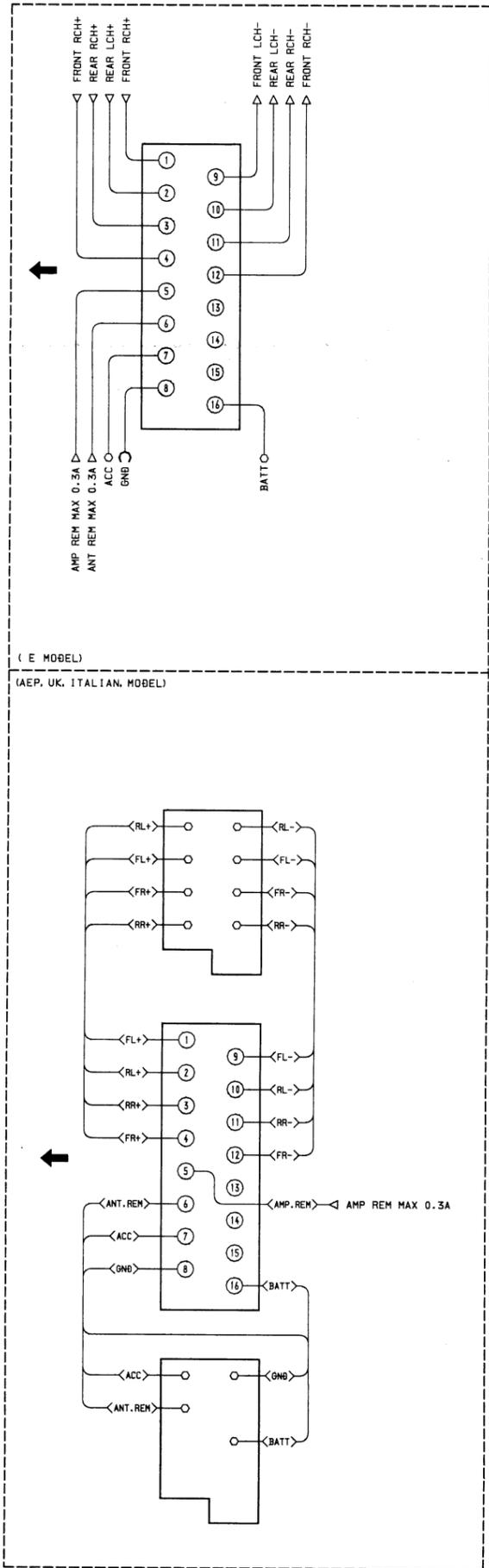
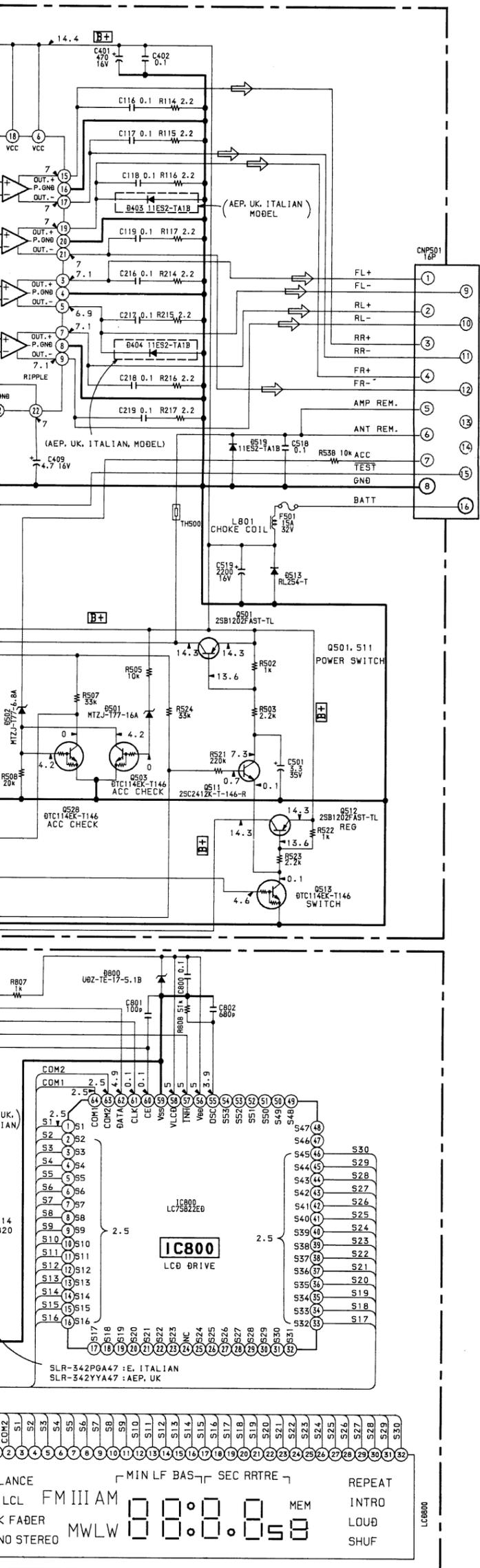
| Pin | Signal |
|-----|------------|
| 1 | SELF SW |
| 2 | LB0N |
| 3 | 0 SW |
| 4 | FDK |
| 5 | IN SW |
| 6 | SERVO 5V |
| 7 | SERVO 5V |
| 8 | CLOCK25 |
| 9 | GND |
| 10 | XLAT25 |
| 11 | L SW |
| 12 | C. OUT |
| 13 | BCK (BOUT) |
| 14 | DATA25 |
| 15 | PCMB |
| 16 | XRST0 |
| 17 | LRCK (H02) |
| 18 | SENS |
| 19 | GND |
| 20 | SQCK |
| 21 | MB 8V |
| 22 | SQSD |
| 23 | REV |
| 24 | SCOR |
| 25 | FWD |
| 26 | SW RETURN |
| 27 | CTL2 |
| 28 | C16MIN |
| 29 | CTL1 |
| 30 | GFS |

A
MAIN BOARD
CNP300

5-4. SCHEMATIC DIAGRAM - MAIN, DISPLAY Section - • See page 36 for IC Block Diagrams.



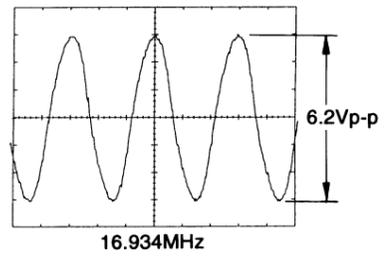




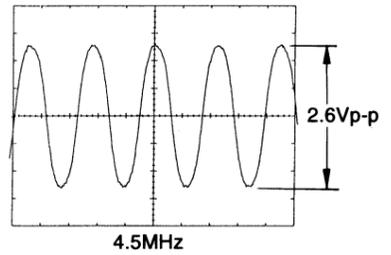
A
B
C
D
E
F
G
H
I
J
K
L
M
N
O
P
Q
R

• Waveforms

① IC300 ⑱

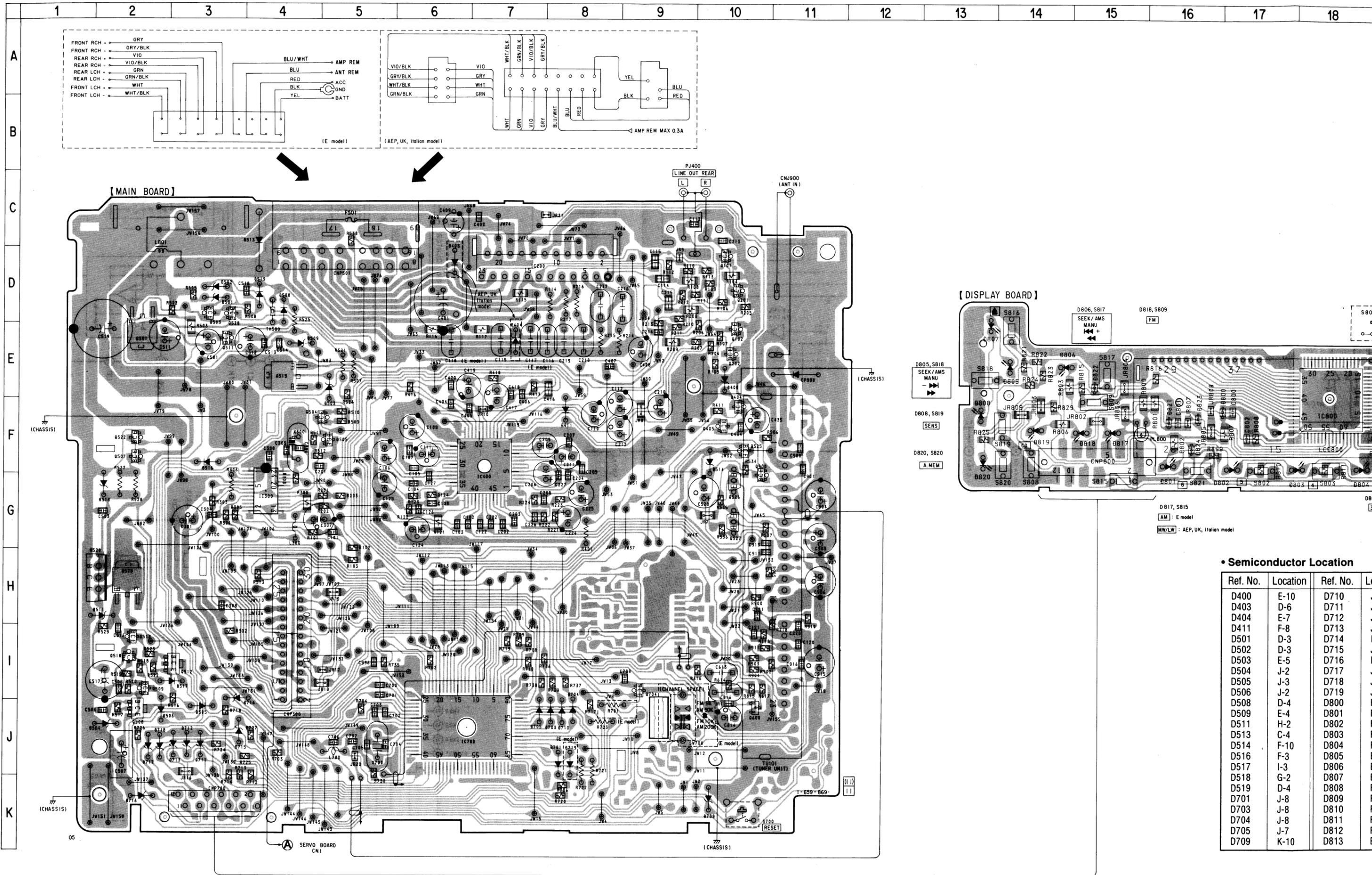


② IC700 ⑳



Note:

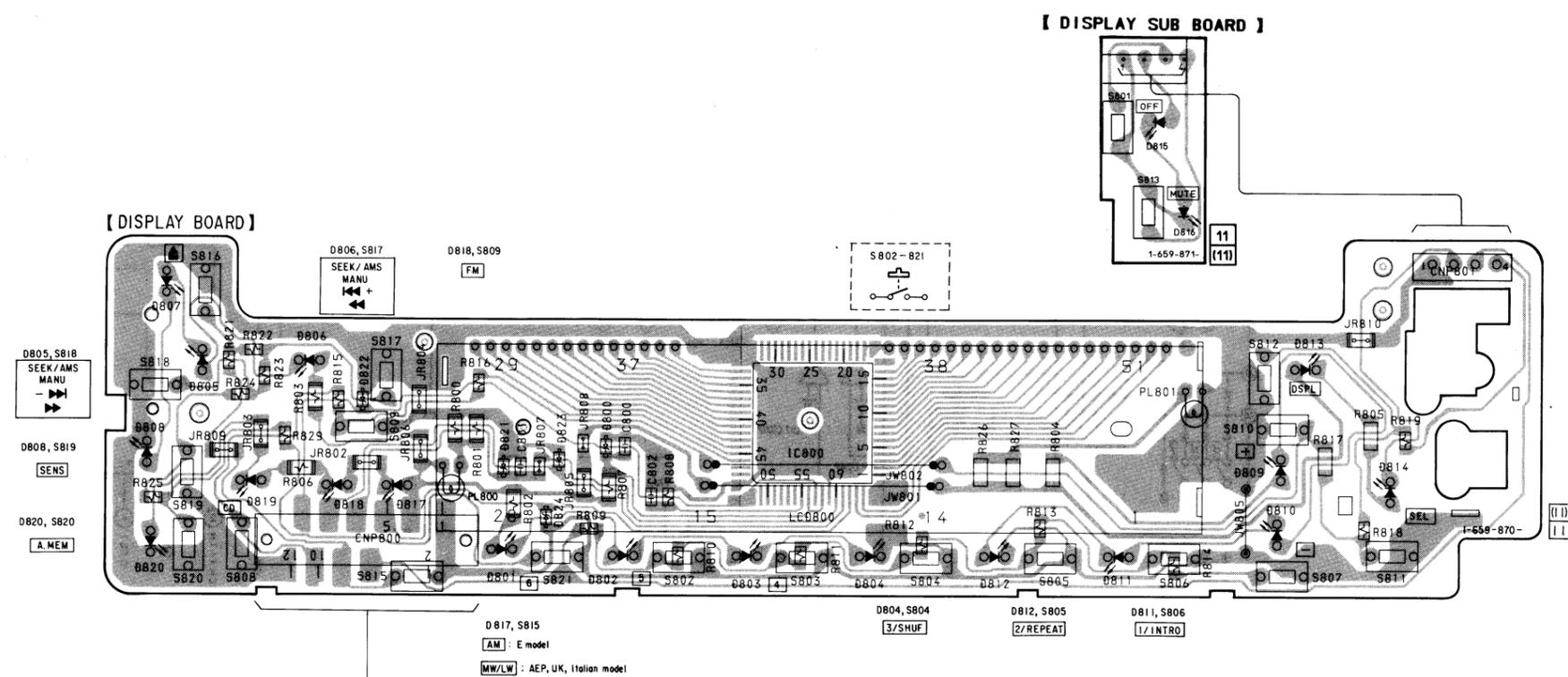
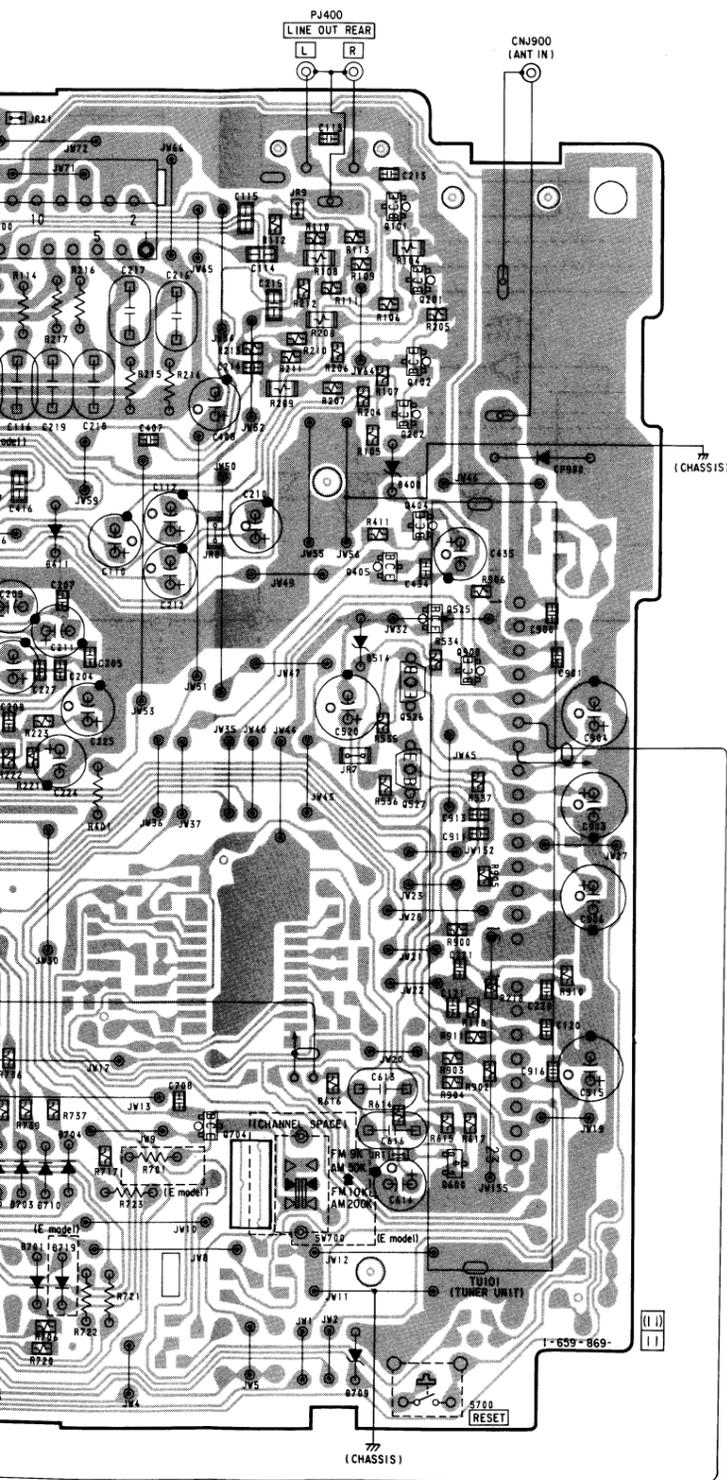
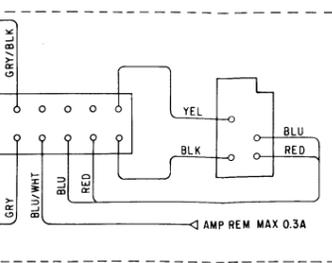
- All capacitors are in μF unless otherwise noted. pF: μpF
- All resistors are in Ω and $1/4\text{W}$ or less unless otherwise specified.
- B+** : B+ Line.
- : panel designation.
- Power voltage is dc 14.4V and fed with regulated dc power supply from ACC and BATT terminals.
- Voltages and waveforms are dc with respect to ground under no-signal (detuned) conditions.
- no mark : FM
- () : CD
- 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.
- \Rightarrow : FM
- \Rightarrow : CD



• Semiconductor Location

| Ref. No. | Location | Ref. No. | Location |
|----------|----------|----------|----------|
| D400 | E-10 | D710 | J |
| D403 | D-6 | D711 | J |
| D404 | E-7 | D712 | J |
| D411 | F-8 | D713 | J |
| D501 | D-3 | D714 | I |
| D502 | D-3 | D715 | J |
| D503 | E-5 | D716 | K |
| D504 | J-2 | D717 | J |
| D505 | J-3 | D718 | J |
| D506 | J-2 | D719 | J |
| D508 | D-4 | D800 | F |
| D509 | E-4 | D801 | F |
| D511 | H-2 | D802 | F |
| D513 | C-4 | D803 | F |
| D514 | F-10 | D804 | F |
| D516 | F-3 | D805 | E |
| D517 | I-3 | D806 | E |
| D518 | G-2 | D807 | E |
| D519 | D-4 | D808 | F |
| D701 | J-8 | D809 | F |
| D703 | J-8 | D810 | F |
| D704 | J-8 | D811 | F |
| D705 | J-7 | D812 | F |
| D709 | K-10 | D813 | E |

| | | | | | | | | | | | | | | | |
|---|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 |
|---|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|



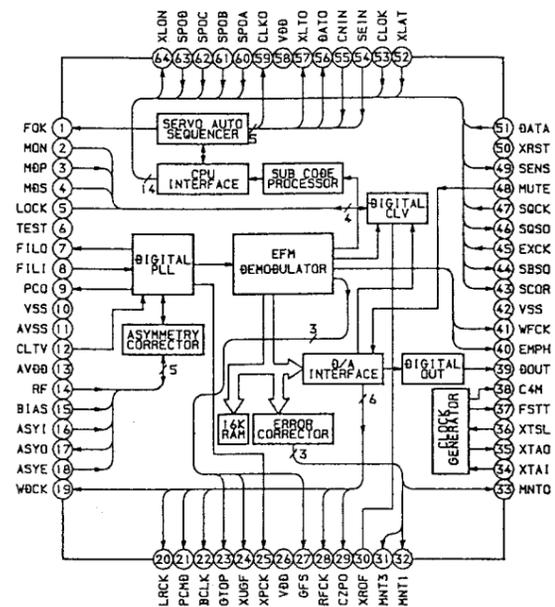
• Semiconductor Location

| Ref. No. | Location | Ref. No. | Location | Ref. No. | Location | Ref. No. | Location |
|----------|----------|----------|----------|----------|----------|----------|----------|
| D400 | E-10 | D710 | J-8 | D814 | F-22 | Q501 | E-2 |
| D403 | D-6 | D711 | J-3 | D815 | C-20 | Q503 | D-3 |
| D404 | E-7 | D712 | J-3 | D816 | D-21 | Q504 | F-5 |
| D411 | F-8 | D713 | J-3 | D817 | F-15 | Q505 | F-5 |
| D501 | D-3 | D714 | I-3 | D818 | F-15 | Q507 | F-2 |
| D502 | D-3 | D715 | J-3 | D819 | F-14 | Q508 | J-2 |
| D503 | E-5 | D716 | K-2 | D820 | F-13 | Q509 | I-2 |
| D504 | J-2 | D717 | J-2 | D821 | F-16 | Q510 | I-2 |
| D505 | J-3 | D718 | J-2 | D822 | E-15 | Q511 | E-3 |
| D506 | J-2 | D719 | J-8 | D823 | F-16 | Q512 | I-3 |
| D508 | D-4 | D800 | F-16 | D824 | F-16 | Q513 | I-2 |
| D509 | E-4 | D801 | F-16 | | | Q515 | E-4 |
| D511 | H-2 | D802 | F-17 | IC200 | D-7 | Q520 | H-2 |
| D513 | C-4 | D803 | F-17 | IC300 | G-4 | Q522 | F-2 |
| D514 | F-10 | D804 | F-18 | IC400 | F-7 | Q525 | F-10 |
| D516 | F-3 | D805 | E-13 | IC700 | J-6 | Q526 | G-10 |
| D517 | I-3 | D806 | E-13 | IC800 | F-18 | Q527 | G-10 |
| D518 | G-2 | D807 | E-13 | | | Q528 | D-3 |
| D519 | D-4 | D808 | F-13 | Q101 | D-10 | Q529 | H-2 |
| D701 | J-8 | D809 | F-21 | Q102 | E-10 | Q600 | J-10 |
| D703 | J-8 | D810 | F-21 | Q201 | D-10 | Q704 | I-9 |
| D704 | J-8 | D811 | F-20 | Q202 | E-10 | Q900 | F-10 |
| D705 | J-7 | D812 | F-19 | Q404 | F-10 | | |
| D709 | K-10 | D813 | E-21 | Q405 | F-10 | | |

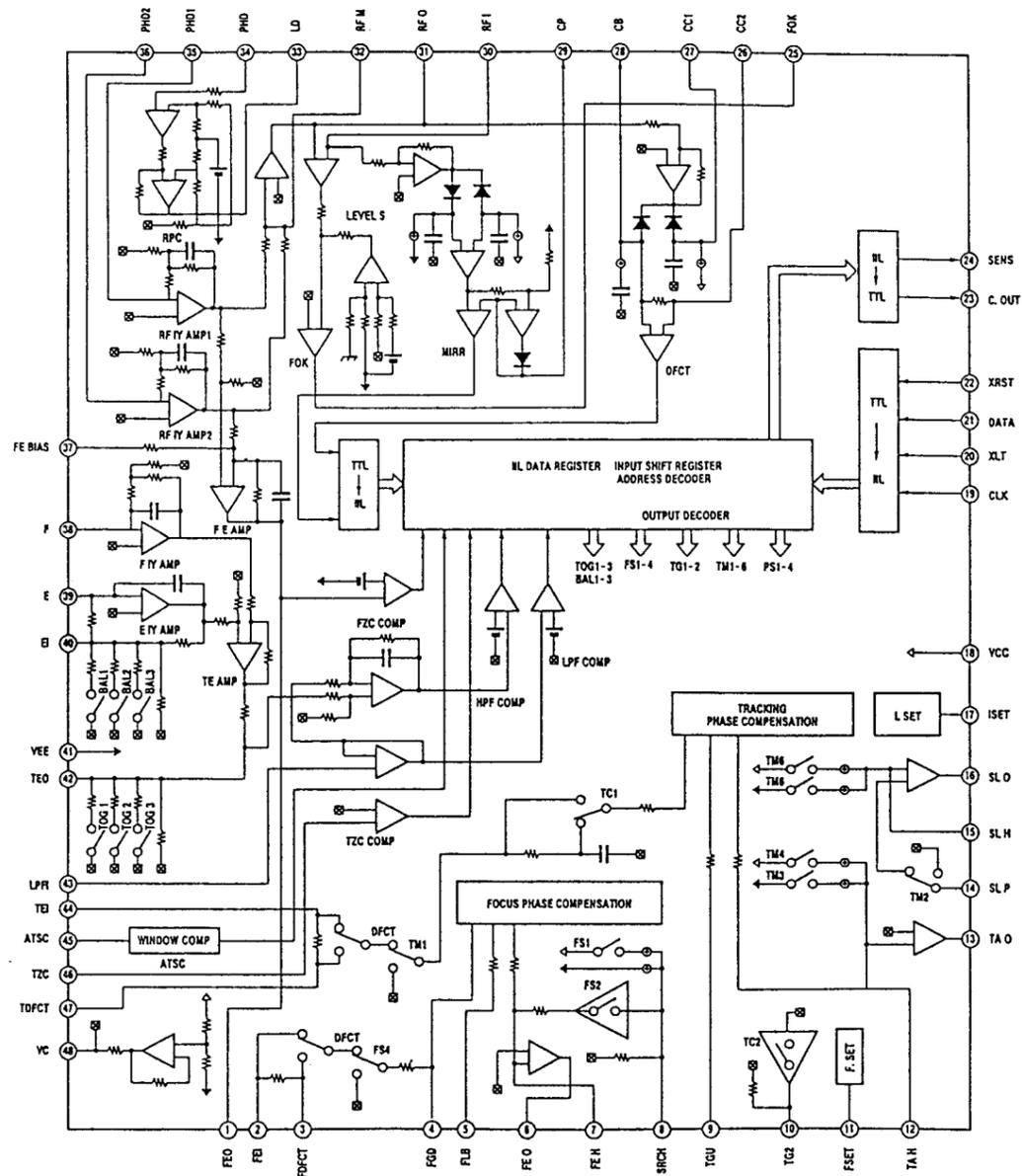
Note:
 • ○ : parts extracted from the component side.

• IC Block Diagrams
 – MECHANISM DECK Section –

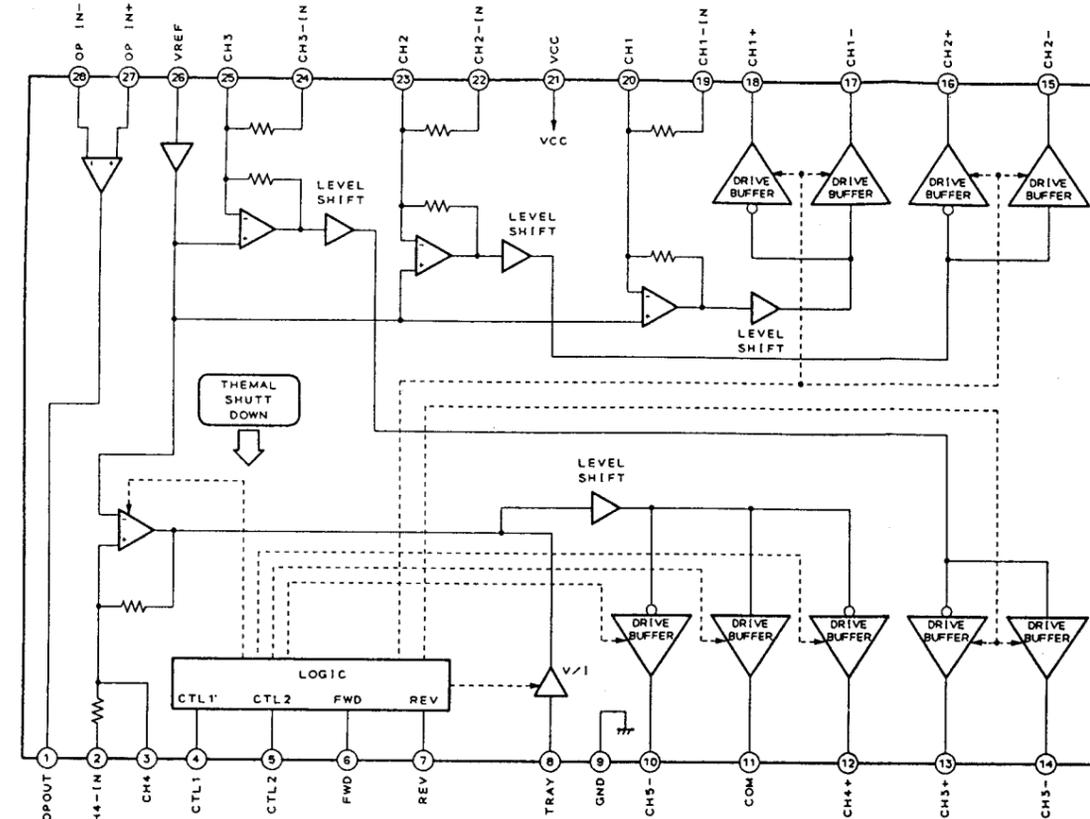
IC1 CXD2507AQ

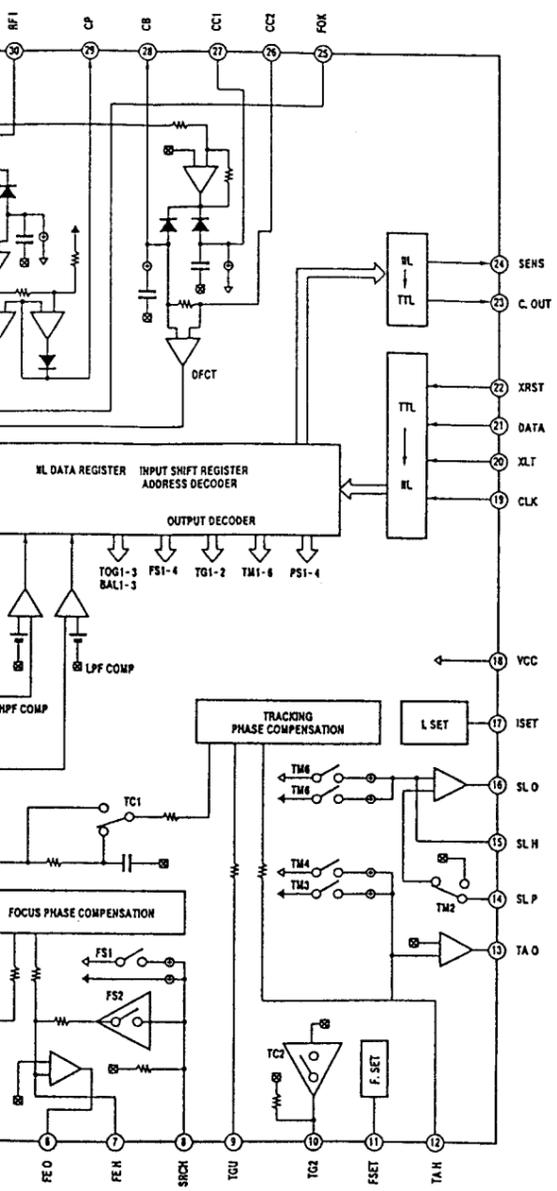


IC2 CXA1782BQ

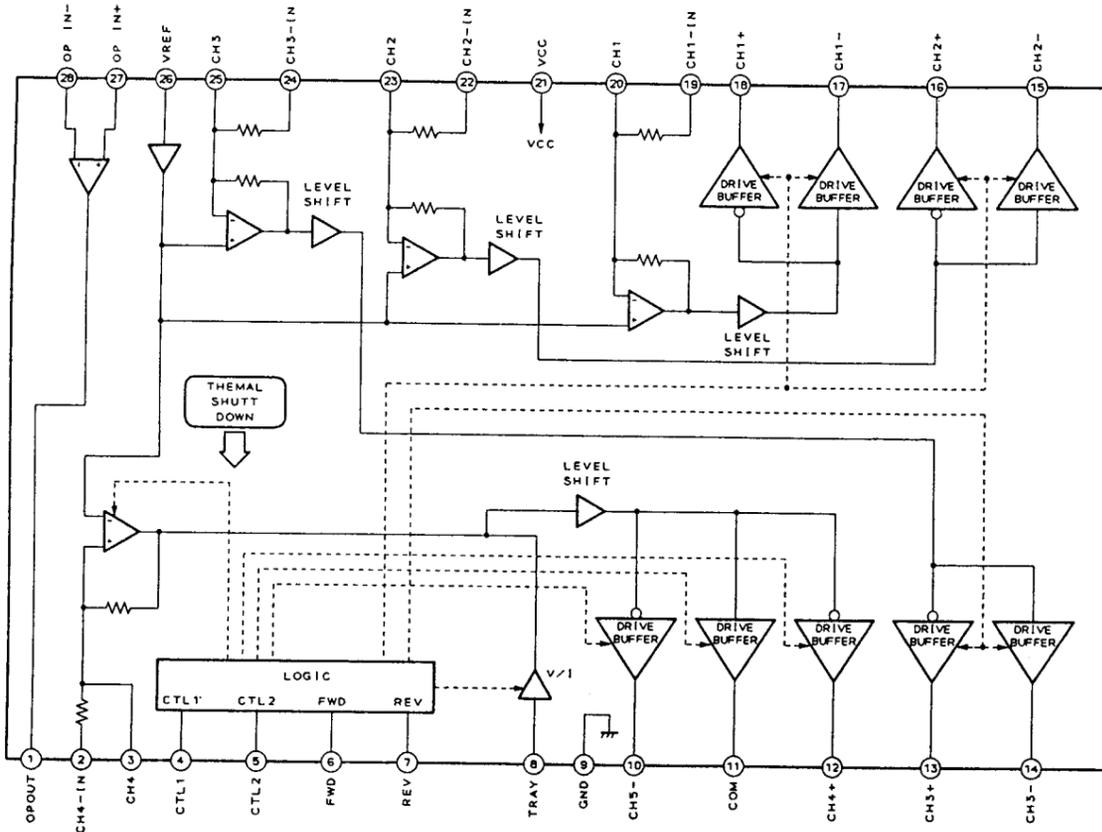


IC3 BA6995FP



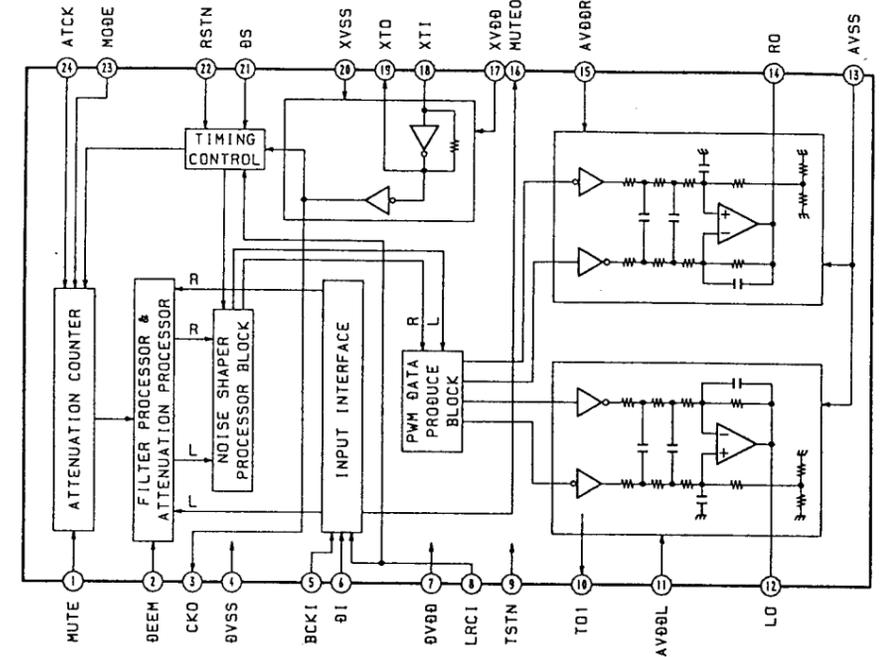


IC3 BA6995FP

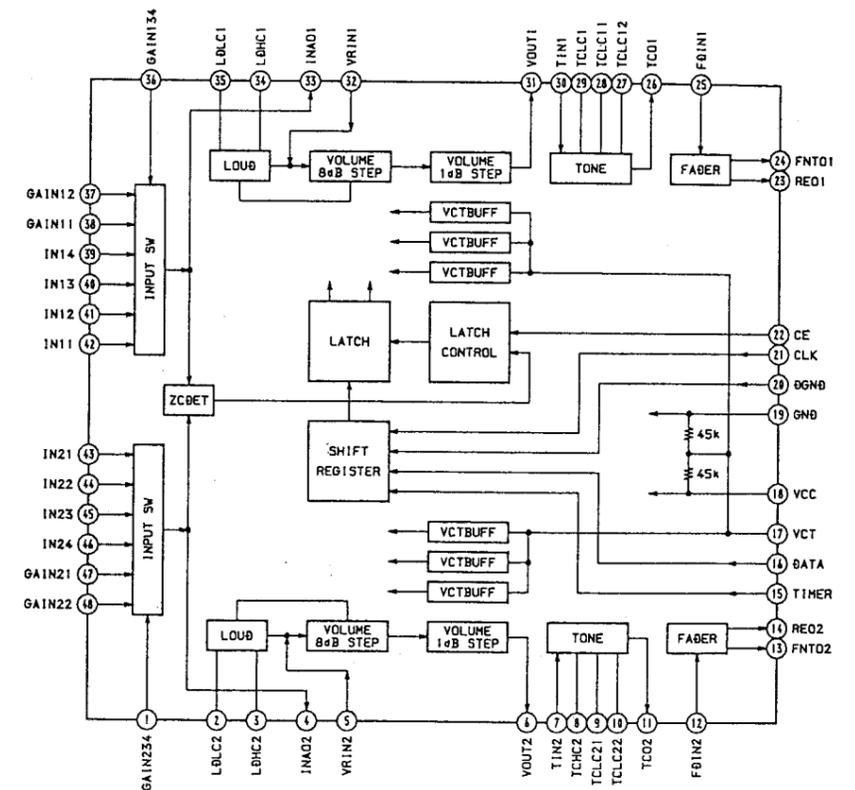


- MAIN, DISPLAY Section -

IC300 SM5877AM



IC400 CXA1946AQ



SECTION 6 EXPLODED VIEWS

NOTE:

- -XX and -X mean standardized parts, so they may have some difference from the original one.

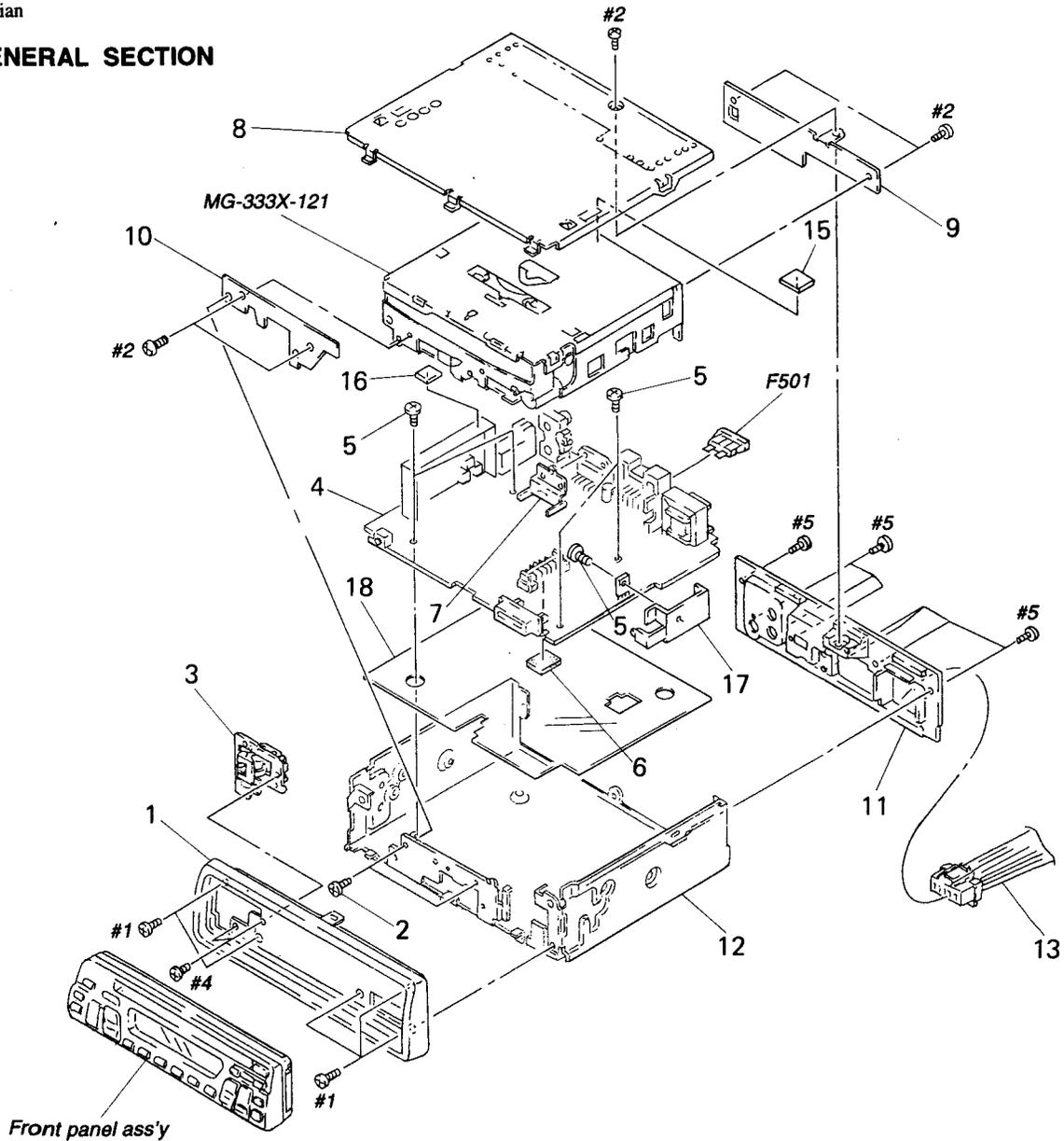
- Color Indication of Appearance Parts Example:

KNOB, BALANCE (WHITE) ... (RED)
 ↑ ↑
 Parts Color Cabinet's Color

- Abbreviation

IT: Italian

(1) GENERAL SECTION

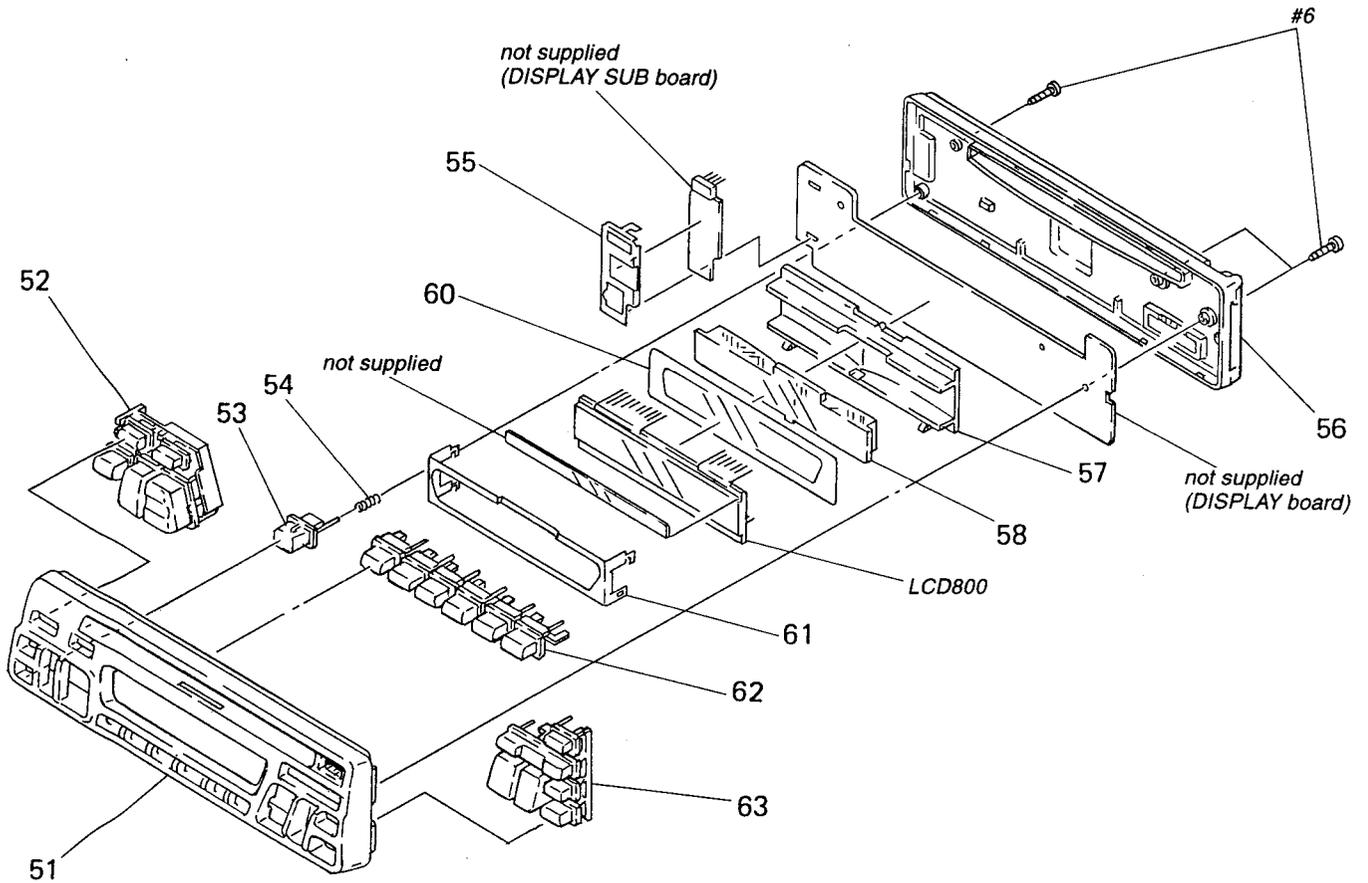


The components identified by mark Δ or dotted line with mark Δ are critical for safety. Replace only with part number specified.

- 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.

| 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 | |
| 2 | 3-922-535-01 | SCREW (+BTT) | | * 12 | 3-931-286-01 | CHASSIS (MAIN) | |
| 3 | X-3367-636-1 | LOCK ASSY | | 13 | 1-776-207-31 | CORD (WITH CONNECTOR) (POWER) (E) | |
| * 4 | A-3294-011-A | MAIN BOARD, COMPLETE | | 13 | 1-776-527-11 | CORD (WITH CONNECTOR) (ISO) (POWER) | (AEPJK, IT) |
| 5 | 3-922-535-11 | SCREW (+BTT) | | * 14 | 3-932-908-01 | SHEET, INSULATING | |
| 6 | 3-342-925-01 | CUSHION, RUBBER | | 15 | 4-871-306-02 | RUBBER (A) | |
| * 7 | 3-931-260-01 | BRACKET (IC) | | 16 | 3-924-145-01 | CUSHION, RUBBER (TU) | |
| * 8 | X-3371-549-1 | COVER ASSY | | 17 | 3-935-855-01 | SINK (REG), HEAT | |
| * 9 | 3-932-397-01 | BRACKET (M/D) | | * 18 | 3-932-908-01 | SHEET, INSULATING | |
| 10 | 3-935-079-01 | BRACKET (MD), FRONT | | F501 | 1-532-982-11 | FUSE (BLADE TYPE) (AUTO FUSE) (15A, 2V) | |

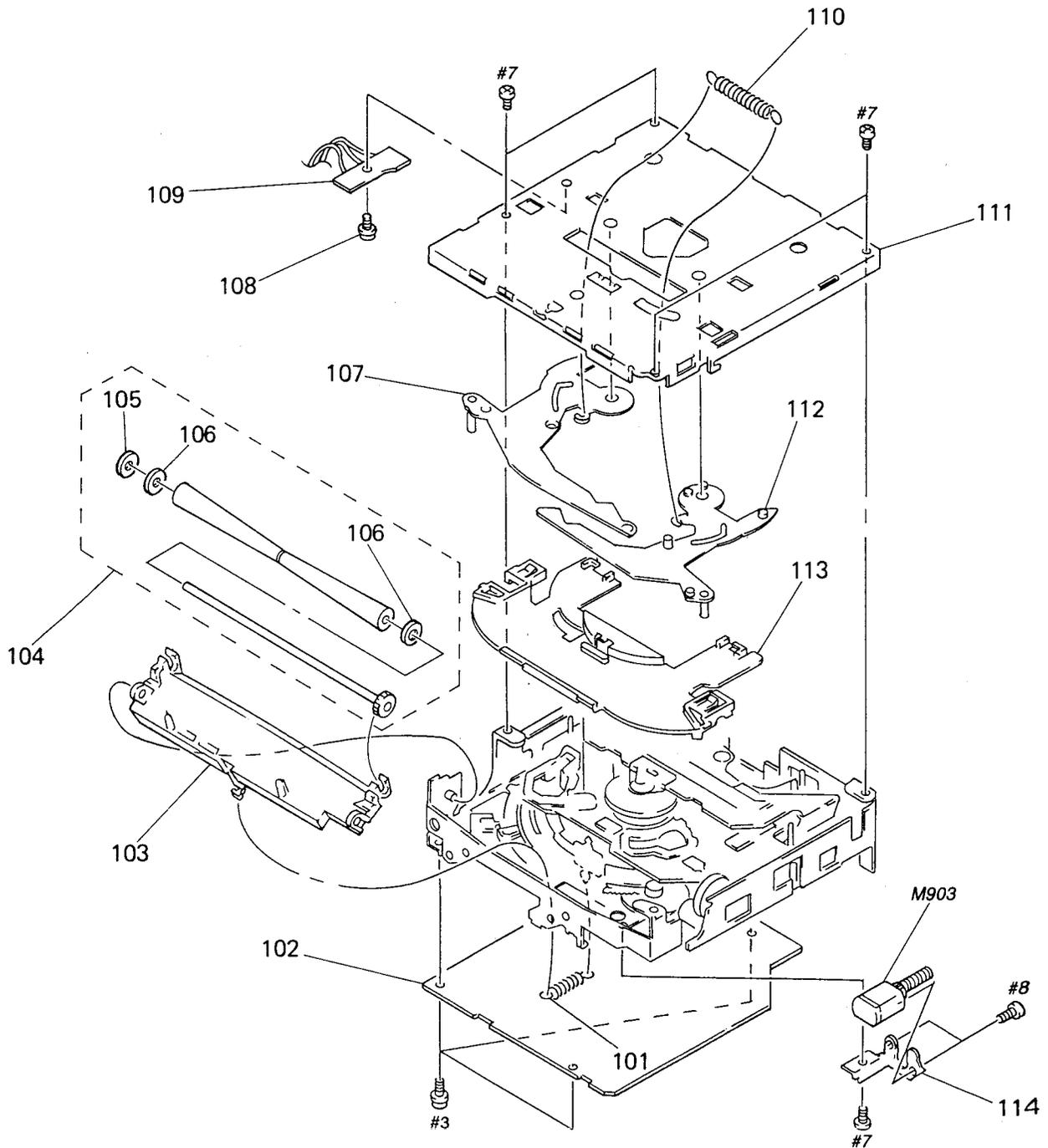
(2) FRONT PANEL SECTION



| Ref. No. | Part No. | Description | Remark |
|----------|--------------|---|--------|
| 51 | X-3371-529-1 | PANEL SUB ASSY, FRONT (E) | |
| 51 | X-3372-123-1 | PANEL SUB ASSY, FRONT (AEP, UK, IT) | |
| 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) | |

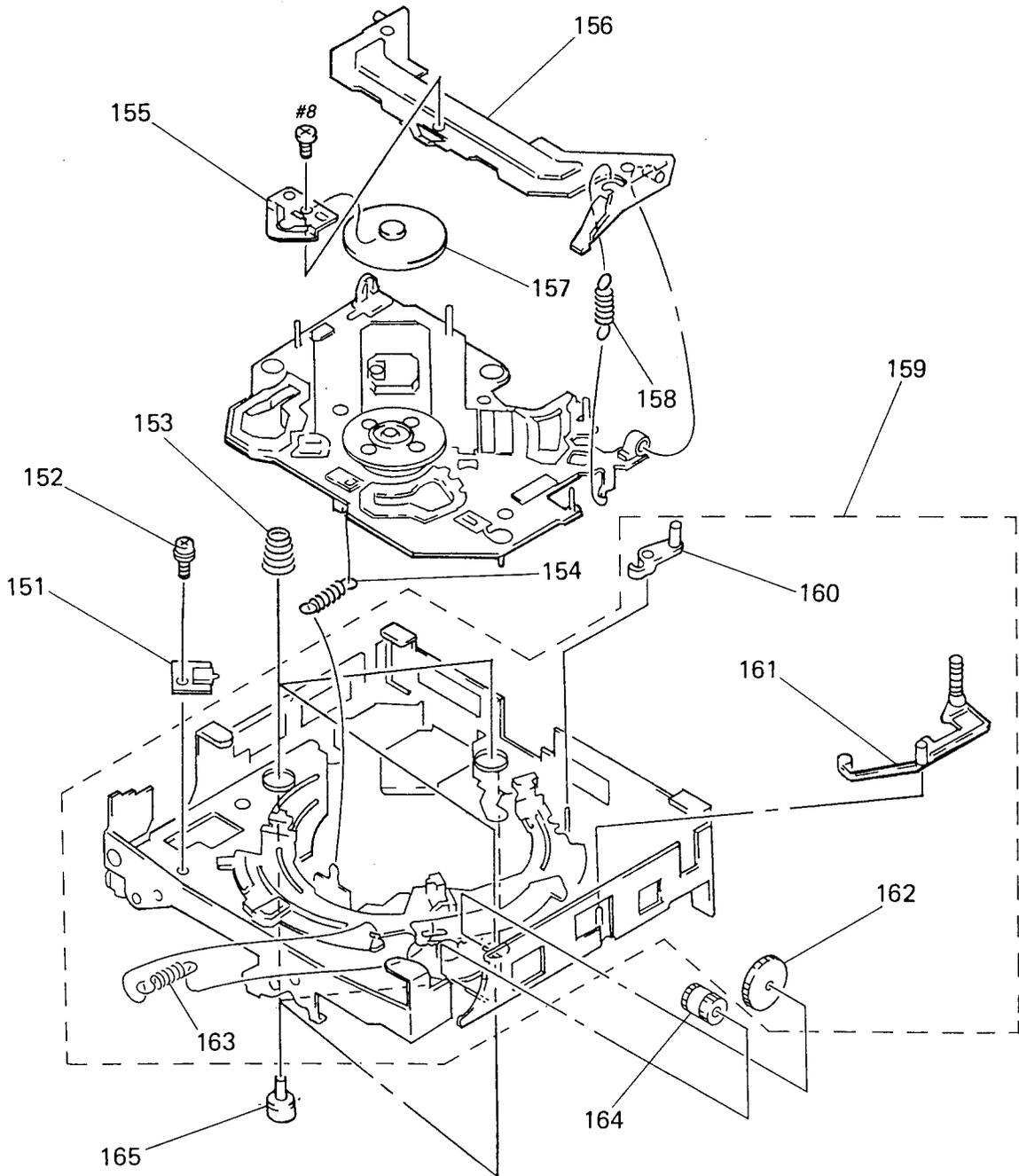
| Ref. No. | Part No. | Description | Remark |
|---|--------------|--|--------|
| * 58 | 3-931-971-01 | PLATE (LCD), LIGHT GUIDE | |
| * 60 | 3-931-973-01 | SHEET (LCD) | |
| * 61 | 3-932-018-01 | BLACKET (LCD) | |
| 62 | 3-920-503-02 | BUTTON (1. 2. 3. 4. 5. 6) | |
| 63 | 3-931-961-01 | BUTTON (CD EJECT) (▲ ◀◀ +. 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)**



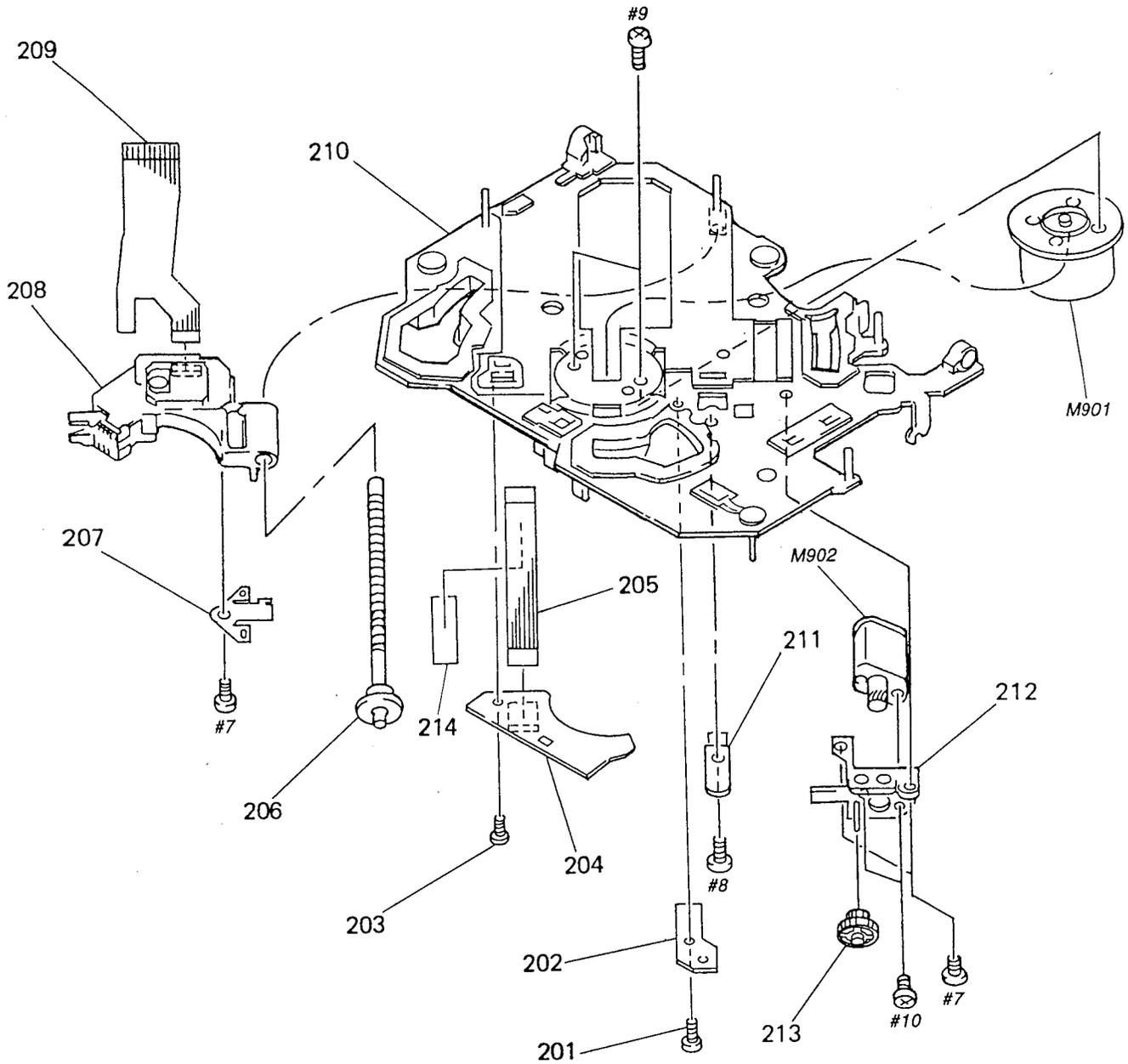
| Ref. No. | Part No. | Description | Remark | Ref. No. | Part No. | Description | Remark |
|----------|--------------|-----------------------|--------|----------|--------------|------------------------------|--------|
| 101 | 3-931-916-01 | SPRING (RA), TENSION | | * 109 | 1-659-836-11 | DISC IN SW BOARD | |
| * 102 | A-3309-021-A | SERVO BOARD, COMPLETE | | 110 | 3-931-909-02 | SPRING (LR), TENSION | |
| 103 | 3-931-902-01 | ARM (ROLLER) | | * 111 | 3-931-903-01 | CHASSIS (T) | |
| 104 | A-3291-567-A | ROLLER ASSY | | * 112 | X-3371-502-1 | LEVER (R) ASSY | |
| 105 | 3-701-439-11 | WASHER | | * 113 | 3-931-908-01 | GUIDE (DISC) | |
| * 106 | 3-322-413-01 | SPACER, INSULATING | | * 114 | 3-931-899-01 | BRACKET (MOTOR) | |
| * 107 | X-3371-501-1 | LEVER (L) ASSY | | M903 | A-3291-576-A | MOTOR SUB ASSY, LO (LOADING) | |
| 108 | 3-338-737-01 | SCREW (2X3), +PS | | | | | |

**(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 | Ref. No. | Part No. | Description | Remark |
|--------------|--------------|------------------------------|--------|----------|--------------|-------------------------|--------|
| 201 | 3-338-737-01 | SCREW (2X3), +PS | | 209 | 1-659-881-11 | PICK-UP FLEXIBLE BOARD | |
| * 202 | 1-659-835-11 | LIMIT SW BOARD | | * 210 | X-3371-503-1 | CHASSIS (OP) (O/S) ASSY | |
| 203 | 3-909-607-01 | SCREW | | 211 | 3-931-829-01 | SPRING (SL), PLATE | |
| * 204 | 1-659-834-11 | SUB BOARD | | 212 | X-3371-504-1 | BASE (DRIVING) ASSY | |
| 205 | 1-659-880-11 | MOTOR FLEXIBLE BOARD | | 213 | 3-931-832-01 | GEAR (SL MIDWAY) | |
| 206 | A-3291-571-A | SHAFT (FEED) ASSY | | 214 | 3-831-441-11 | CUSHION (B) | |
| 207 | 3-931-834-01 | SPRING (FEED), PLATE | | M901 | X-3371-664-1 | MOTOR ASSY (SPINDLE) | |
| Δ 208 | 8-848-402-03 | OPTICAL PICK-UP KSS-520A/J-N | | M902 | A-3291-574-A | MOTOR ASSY, SLED | |

SECTION 7

DISC IN SW

DISPLAY

ELECTRICAL PARTS LIST

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX 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 \triangle or dotted line with mark \triangle 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 ***** | | D806 | 8-719-052-61 | DIODE SLR-342PGA47 ($\lll + / \lll$) (E/Italian) | |
| | | < SWITCH > | | D806 | 8-719-059-92 | DIODE SLR-342YVA47 ($\lll + / \lll$) (AEP/UK) | |
| SW1 | 1-572-288-11 | SWITCH, PUSH (DISC IN) | | D807 | 8-719-052-61 | DIODE SLR-342PGA47 (\triangle) (E/Italian) | |
| SW2 | 1-572-288-11 | SWITCH, PUSH (SELF) | | D807 | 8-719-059-92 | DIODE SLR-342YVA47 (\triangle) (AEP/UK) | |
| ***** | | | | D808 | 8-719-052-61 | DIODE SLR-342PGA47 (SENS) (E/Italian) | |
| | | DISPLAY BOARD ***** | | D808 | 8-719-059-92 | DIODE SLR-342YVA47 (SENS) (AEP/UK) | |
| * | 3-931-971-01 | PLATE (LCD), LIGHT GUIDE | | D809 | 8-719-052-61 | DIODE SLR-342PGA47 (+) (E/Italian) | |
| * | 3-931-972-01 | HOLDER (LCD) | | D809 | 8-719-059-92 | DIODE SLR-342YVA47 (+) (AEP/UK) | |
| * | 3-931-973-01 | SHEET (LCD) | | D810 | 8-719-052-61 | DIODE SLR-342PGA47 (-) (E/Italian) | |
| * | 3-931-978-01 | BRACKET (DISPLAY PC BOARD) | | D810 | 8-719-059-92 | DIODE SLR-342YVA47 (-) (AEP/UK) | |
| * | 3-932-018-01 | BRACKET (LCD) | | D811 | 8-719-052-61 | DIODE SLR-342PGA47 (1/INTRO) (E/Italian) | |
| | | < CAPACITOR > | | D811 | 8-719-059-92 | DIODE SLR-342YVA47 (1/INTRO) (AEP/UK) | |
| C800 | 1-163-038-00 | CERAMIC CHIP 0.1uF | 25V | D812 | 8-719-052-61 | DIODE SLR-342PGA47 (2/REPEAT) (E/Italian) | |
| C801 | 1-163-117-00 | CERAMIC CHIP 100PF | 5% 50V | D812 | 8-719-059-92 | DIODE SLR-342YVA47 (2/REPEAT) (AEP/UK) | |
| C802 | 1-163-137-00 | CERAMIC CHIP 680PF | 5% 50V | D813 | 8-719-052-61 | DIODE SLR-342PGA47 (DSPL) (E/Italian) | |
| | | < CONNECTOR > | | D813 | 8-719-059-92 | DIODE SLR-342YVA47 (DSPL) (AEP/UK) | |
| CNP800 | 1-764-423-11 | PIN, CONNECTOR 12P | | D814 | 8-719-052-61 | DIODE SLR-342PGA47 (SEL) (E/Italian) | |
| CNP801 | 1-774-798-11 | PIN, CONNECTOR (PC BOARD) 4P | | D814 | 8-719-059-92 | DIODE SLR-342YVA47 (SEL) (AEP/UK) | |
| | | < DIODE > | | D817 | 8-719-052-61 | DIODE SLR-342PGA47 (AM) (E) | |
| D800 | 8-719-976-99 | DIODE DTZ5.1B | | D817 | 8-719-052-61 | DIODE SLR-342PGA47 (MW/LW) (Italian) | |
| D801 | 8-719-052-61 | DIODE SLR-342PGA47 (6) (E/Italian) | | D817 | 8-719-059-92 | DIODE SLR-342YVA47 (MW/LW) (AEP/UK) | |
| D801 | 8-719-059-92 | DIODE SLR-342YVA47 (6) (AEP/UK) | | D818 | 8-719-052-61 | DIODE SLR-342PGA47 (FM) (E/Italian) | |
| D802 | 8-719-052-61 | DIODE SLR-342PGA47 (5) (E/Italian) | | D818 | 8-719-059-92 | DIODE SLR-342YVA47 (FM) (AEP/UK) | |
| D802 | 8-719-059-92 | DIODE SLR-342YVA47 (5) (AEP/UK) | | D819 | 8-719-052-61 | DIODE SLR-342PGA47 (CD) (E/Italian) | |
| D803 | 8-719-052-61 | DIODE SLR-342PGA47 (4) (E/Italian) | | D819 | 8-719-059-92 | DIODE SLR-342YVA47 (CD) (AEP/UK) | |
| D803 | 8-719-059-92 | DIODE SLR-342YVA47 (4) (AEP/UK) | | D820 | 8-719-052-61 | DIODE SLR-342PGA47 (A. MEM) (E/Italian) | |
| D804 | 8-719-052-61 | DIODE SLR-342PGA47 (3/SHUF) (E/Italian) | | D820 | 8-719-059-92 | DIODE SLR-342YVA47 (A. MEM) (AEP/UK) | |
| D804 | 8-719-059-92 | DIODE SLR-342YVA47 (3/SHUF) (AEP/UK) | | D821 | 8-719-105-99 | DIODE RD6.2M-B1 | |
| D805 | 8-719-052-61 | DIODE SLR-342PGA47 (- \lll / \lll) (E/Italian) | | D822 | 8-719-105-99 | DIODE RD6.2M-B1 | |
| D805 | 8-719-059-92 | DIODE SLR-342YVA47 (- \lll / \lll) (AEP/UK) | | D823 | 8-719-105-99 | DIODE RD6.2M-B1 | |
| | | < IC > | | D824 | 8-719-105-99 | DIODE RD6.2M-B1 | |
| IC800 | 8-759-369-90 | IC LC75822ED | | | | | |

DISPLAY

DISPLAY SUB

LIMIT SW

LOAD SW

MAIN

| Ref. No. | Part No. | Description | Remark |
|----------------------------|--------------|--------------------------------|---------------|
| < CHIP CONDUCTOR > | | | |
| JR802 | 1-216-296-00 | CONDUCTOR, CHIP | (3216) |
| JR803 | 1-216-296-00 | CONDUCTOR, CHIP | (3216) |
| JR804 | 1-216-296-00 | CONDUCTOR, CHIP | (3216) |
| JR805 | 1-216-296-00 | CONDUCTOR, CHIP | (3216) |
| JR806 | 1-216-295-00 | CONDUCTOR, CHIP | (2012) |
| JR807 | 1-216-295-00 | CONDUCTOR, CHIP | (2012) |
| JR808 | 1-216-295-00 | CONDUCTOR, CHIP | (2012) |
| JR809 | 1-216-296-00 | CONDUCTOR, CHIP | (3216) |
| JR810 | 1-216-296-00 | CONDUCTOR, CHIP | (3216) |
| < LIQUID CRYSTAL DISPLAY > | | | |
| LCD800 | 1-801-182-11 | DISPLAY PANEL, LIQUID CRYSTAL | |
| < PILOT LAMP > | | | |
| PL800 | 1-517-578-11 | LAMP, PILOT(GREEN) (E/Italian) | |
| PL800 | 1-517-535-11 | LAMP, PILOT(AMBER) (AEP/UK) | |
| PL801 | 1-517-578-11 | LAMP, PILOT(GREEN) (E/Italian) | |
| PL801 | 1-517-535-11 | LAMP, PILOT(AMBER) (AEP/UK) | |
| < RESISTOR > | | | |
| R800 | 1-216-150-00 | METAL GLAZE | 10 5% 1/8W |
| R801 | 1-216-150-00 | METAL GLAZE | 10 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 | 1-216-192-00 | METAL CHIP | 560 5% 1/8W |
| R805 | 1-216-192-00 | METAL CHIP | 560 5% 1/8W |
| R806 | 1-216-192-00 | METAL CHIP | 560 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 | 1-216-202-00 | METAL GLAZE | 1.5K 5% 1/8W |
| 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 | 1-216-232-00 | METAL GLAZE | 27K 5% 1/8W |
| R815 | 1-216-053-00 | METAL CHIP | 1.5K 5% 1/10W |
| R816 | 1-216-206-00 | METAL GLAZE | 2.2K 5% 1/8W |
| 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 | 1-216-202-00 | METAL GLAZE | 1.5K 5% 1/8W |
| R822 | 1-216-057-00 | METAL CHIP | 2.2K 5% 1/10W |
| R823 | 1-216-210-00 | METAL GLAZE | 3.3K 5% 1/8W |
| R824 | 1-216-067-00 | METAL CHIP | 5.6K 5% 1/10W |
| R825 | 1-216-073-00 | METAL CHIP | 10K 5% 1/10W |
| R826 | 1-216-150-00 | METAL GLAZE | 10 5% 1/8W |
| R827 | 1-216-150-00 | METAL GLAZE | 10 5% 1/8W |

| Ref. No. | Part No. | Description | Remark |
|-------------------------------|--------------|-------------------------------|------------------|
| R829 | 1-216-232-00 | METAL GLAZE | 27K 5% 1/8W |
| < 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 (AM) (E) | |
| S815 | 1-572-704-31 | SWITCH, KEY BOARD (MW/LW) | (AEP/UK/Italian) |
| 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) | |
| S820 | 1-572-704-31 | SWITCH, KEY BOARD (A. MEM) | |
| S821 | 1-572-704-31 | SWITCH, KEY BOARD (6) | |
| ***** | | | |
| DISPLAY SUB BOARD | | | |
| ***** | | | |
| < DIODE > | | | |
| D815 | 8-719-052-61 | DIODE SLR-342PGA47 (OFF) | |
| D816 | 8-719-052-61 | DIODE SLR-342PGA47 (MUTE) | |
| < SWITCH > | | | |
| S801 | 1-572-704-31 | SWITCH, KEY BOARD (OFF) | |
| S813 | 1-572-704-31 | SWITCH, KEY BOARD (MUTE) | |
| ***** | | | |
| * 1-659-835-11 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) | |
| ***** | | | |

MAIN

| Ref. No. | Part No. | Description | Remark | Ref. No. | Part No. | Description | Remark |
|----------|--------------|---------------------------------------|-------------------|----------|--------------|--------------|-------------------|
| * | A-3309-308-A | MAIN BOARD, COMPLETE (AEP/UK/Italian) | | C215 | 1-162-637-11 | CERAMIC CHIP | 0.47uF 16V |
| * | A-3309-309-A | MAIN BOARD, COMPLETE (E) | | 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 |
| | 3-922-535-11 | SCREW (+BTT) | | C220 | 1-163-024-00 | CERAMIC CHIP | 0.018uF 10% 50V |
| * | 3-931-260-01 | BRACKET (IC) | | C221 | 1-163-014-00 | CERAMIC CHIP | 2700PF 10% 50V |
| | 3-935-855-01 | SINK (REG), HEAT | | C222 | 1-163-033-00 | CERAMIC CHIP | 0.022uF 50V |
| | | < CAPACITOR > | | C224 | 1-124-234-00 | ELECT | 22uF 20% 16V |
| | | | | C225 | 1-124-234-00 | ELECT | 22uF 20% 16V |
| C101 | 1-163-211-00 | CERAMIC CHIP | 0.0018uF 5% 50V | C226 | 1-163-235-11 | CERAMIC CHIP | 22PF 5% 50V |
| C102 | 1-164-346-11 | CERAMIC CHIP | 1uF 16V | C227 | 1-164-161-11 | CERAMIC CHIP | 0.0022uF 10% 100V |
| C103 | 1-164-346-11 | CERAMIC CHIP | 1uF 16V | C300 | 1-164-004-11 | CERAMIC CHIP | 0.1uF 10% 25V |
| C104 | 1-164-004-11 | CERAMIC CHIP | 0.1uF 10% 25V | C301 | 1-124-584-00 | ELECT | 100uF 20% 10V |
| C105 | 1-163-017-00 | CERAMIC CHIP | 0.0047uF 5% 50V | C304 | 1-163-239-11 | CERAMIC CHIP | 33PF 5% 50V |
| C106 | 1-126-157-11 | ELECT | 10uF 20% 16V | C305 | 1-163-235-11 | CERAMIC CHIP | 22PF 5% 50V |
| C107 | 1-164-489-11 | CERAMIC CHIP | 0.22uF 10% 16V | C306 | 1-163-235-11 | CERAMIC CHIP | 22PF 5% 50V |
| C108 | 1-163-235-11 | CERAMIC CHIP | 22PF 5% 50V | C307 | 1-128-057-11 | ELECT | 330uF 20% 6.3V |
| C109 | 1-126-157-11 | ELECT | 10uF 20% 16V | C401 | 1-126-935-11 | ELECT | 470uF 20% 16V |
| C110 | 1-126-157-11 | ELECT | 10uF 20% 16V | C402 | 1-163-038-00 | CERAMIC CHIP | 0.1uF 25V |
| C111 | 1-126-157-11 | ELECT | 10uF 20% 16V | C404 | 1-163-117-00 | CERAMIC CHIP | 100PF 5% 50V |
| C112 | 1-126-157-11 | ELECT | 10uF 20% 16V | C405 | 1-163-117-00 | CERAMIC CHIP | 100PF 5% 50V |
| C113 | 1-163-009-11 | CERAMIC CHIP | 0.001uF 10% 50V | C406 | 1-163-117-00 | CERAMIC CHIP | 100PF 5% 50V |
| C114 | 1-162-637-11 | CERAMIC CHIP | 0.47uF 16V | C407 | 1-163-109-00 | CERAMIC CHIP | 47PF 5% 50V |
| C115 | 1-162-637-11 | CERAMIC CHIP | 0.47uF 16V | C408 | 1-126-288-11 | ELECT | 4.7uF 20% 16V |
| C116 | 1-115-326-91 | FILM | 0.1uF 5% 50V | C409 | 1-126-288-11 | ELECT | 4.7uF 20% 16V |
| C117 | 1-115-326-91 | FILM | 0.1uF 5% 50V | C416 | 1-163-077-00 | CERAMIC CHIP | 0.1uF 10% 25V |
| C118 | 1-115-326-91 | FILM | 0.1uF 5% 50V | C417 | 1-164-232-11 | CERAMIC CHIP | 0.01uF 50V |
| C119 | 1-115-326-91 | FILM | 0.1uF 5% 50V | C418 | 1-126-157-11 | ELECT | 10uF 20% 16V |
| C120 | 1-163-024-00 | CERAMIC CHIP | 0.018uF 10% 50V | C419 | 1-124-584-00 | ELECT | 100uF 20% 10V |
| C121 | 1-163-014-00 | CERAMIC CHIP | 2700PF 10% 50V | C420 | 1-164-004-11 | CERAMIC CHIP | 0.1uF 10% 25V |
| C122 | 1-163-033-00 | CERAMIC CHIP | 0.022uF 50V | C434 | 1-164-346-11 | CERAMIC CHIP | 1uF 16V |
| C124 | 1-124-234-00 | ELECT | 22uF 20% 16V | C435 | 1-126-288-11 | ELECT | 4.7uF 20% 16V |
| C125 | 1-124-234-00 | ELECT | 22uF 20% 16V | C501 | 1-126-162-11 | ELECT | 3.3uF 20% 50V |
| C126 | 1-163-235-11 | CERAMIC CHIP | 22PF 5% 50V | C503 | 1-164-004-11 | CERAMIC CHIP | 0.1uF 10% 25V |
| C127 | 1-164-161-11 | CERAMIC CHIP | 0.0022uF 10% 100V | C504 | 1-164-004-11 | CERAMIC CHIP | 0.1uF 10% 25V |
| C201 | 1-163-211-00 | CERAMIC CHIP | 0.0018uF 5% 50V | C507 | 1-125-701-11 | DOUBLE LAYER | 0.047F 25V |
| C202 | 1-164-346-11 | CERAMIC CHIP | 1uF 16V | C508 | 1-163-038-00 | CERAMIC CHIP | 0.1uF 25V |
| C203 | 1-164-346-11 | CERAMIC CHIP | 1uF 16V | C511 | 1-124-234-00 | ELECT | 22uF 20% 16V |
| C204 | 1-164-004-11 | CERAMIC CHIP | 0.1uF 10% 25V | C512 | 1-124-242-00 | ELECT | 33uF 20% 25V |
| C205 | 1-163-017-00 | CERAMIC CHIP | 0.0047uF 5% 50V | C513 | 1-164-004-11 | CERAMIC CHIP | 0.1uF 10% 25V |
| C206 | 1-126-157-11 | ELECT | 10uF 20% 16V | C514 | 1-164-004-11 | CERAMIC CHIP | 0.1uF 10% 25V |
| C207 | 1-164-489-11 | CERAMIC CHIP | 0.22uF 10% 16V | C516 | 1-163-038-00 | CERAMIC CHIP | 0.1uF 25V |
| C208 | 1-163-235-11 | CERAMIC CHIP | 22PF 5% 50V | C517 | 1-128-057-11 | ELECT | 330uF 20% 6.3V |
| C209 | 1-126-157-11 | ELECT | 10uF 20% 16V | C518 | 1-164-004-11 | CERAMIC CHIP | 0.1uF 10% 25V |
| C210 | 1-126-157-11 | ELECT | 10uF 20% 16V | C519 | 1-124-556-11 | ELECT | 2200uF 20% 16V |
| C211 | 1-126-157-11 | ELECT | 10uF 20% 16V | C520 | 1-124-584-00 | ELECT | 100uF 20% 10V |
| C212 | 1-126-157-11 | ELECT | 10uF 20% 16V | C613 | 1-136-169-00 | FILM | 0.22uF 5% 50V |
| C213 | 1-163-009-11 | CERAMIC CHIP | 0.001uF 10% 50V | C614 | 1-124-234-00 | ELECT | 22uF 20% 16V |
| C214 | 1-164-005-11 | CERAMIC CHIP | 0.47uF 25V | | | | |

| Ref. No. | Part No. | Description | Remark |
|----------|--------------|-----------------------|---------|
| C616 | 1-115-326-91 | FILM 0.1uF | 5% 50V |
| C700 | 1-163-117-00 | CERAMIC CHIP 100PF | 5% 50V |
| C701 | 1-163-181-00 | 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 | 1-163-229-11 | CERAMIC CHIP 12PF | 5% 50V |
| C705 | 1-163-229-11 | CERAMIC CHIP 12PF | 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 | 1-163-024-00 | CERAMIC CHIP 0.018uF | 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 |

< JACK >

| | | |
|--------|--------------|--------------------------------------|
| CNJ900 | 1-764-808-14 | JACK (ANT) (E) |
| CNJ900 | 1-770-279-12 | JACK, ANTENNA (ISO) (AEP/UK/Italian) |

< 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 |

< DISCHARGE GAP >

| | | |
|-------|--------------|----------------|
| CP900 | 1-519-504-11 | GAP, DISCHARGE |
|-------|--------------|----------------|

< DIODE >

| | | |
|------|--------------|------------------------------|
| D400 | 8-719-109-71 | DIODE RD3. 9ESB1 |
| D403 | 8-719-200-82 | DIODE 11ES2 (AEP/UK/Italian) |
| D404 | 8-719-200-82 | DIODE 11ES2 (AEP/UK/Italian) |
| 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. 8ESB2 |
| D503 | 8-719-109-93 | DIODE RD6. 2ESB2 |
| D504 | 8-719-109-93 | DIODE RD6. 2ESB2 |
| D505 | 8-719-991-33 | DIODE 1SS133T-77 |
| 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 | 8-719-989-62 | DIODE RL254 |

| Ref. No. | Part No. | Description | Remark |
|----------|--------------|----------------------|--------|
| D514 | 8-719-109-85 | DIODE RD5. 1ESB2 | |
| D516 | 8-719-991-33 | DIODE 1SS133T-77 | |
| D517 | 8-719-991-33 | DIODE 1SS133T-77 | |
| D518 | 8-719-110-13 | DIODE RD9. 1ESB2 | |
| D519 | 8-719-200-82 | DIODE 11ES2-TA1B | |
| D701 | 8-719-991-33 | DIODE 1SS133T-77 | |
| D703 | 8-719-991-33 | DIODE 1SS133T-77 | |
| D704 | 8-719-991-33 | DIODE 1SS133T-77 | |
| D705 | 8-719-991-33 | DIODE 1SS133T-77 | |
| D709 | 8-719-109-93 | DIODE RD6. 2ESB2 | |
| D710 | 8-719-991-33 | DIODE 1SS133T-77 | |
| D711 | 8-719-109-93 | DIODE RD6. 2ESB2 | |
| D712 | 8-719-109-93 | DIODE RD6. 2ESB2 | |
| D713 | 8-719-109-93 | DIODE RD6. 2ESB2 | |
| D714 | 8-719-109-93 | DIODE RD6. 2ESB2 | |
| D715 | 8-719-109-93 | DIODE RD6. 2ESB2 | |
| D716 | 8-719-109-93 | DIODE RD6. 2ESB2 | |
| D717 | 8-719-109-93 | DIODE RD6. 2ESB2 | |
| D718 | 8-719-109-93 | DIODE RD6. 2ESB2 | |
| D719 | 8-719-991-33 | DIODE 1SS133T-77 (E) | |

< FUSE >

| | | |
|------|--------------|--|
| F501 | 1-533-331-11 | FUSE (BLADE TYPE) (AUTO FUSE) (15A, 32V) |
|------|--------------|--|

< IC >

| | | |
|-------|--------------|--------------------------------|
| IC200 | 8-759-369-41 | IC HA13155 (E) |
| IC200 | 8-759-421-97 | IC HA13151A-A (AEP/UK/Italian) |
| IC300 | 8-759-364-34 | IC SM5877AM |
| IC400 | 8-752-075-48 | IC CXA1946AQ-T6 |
| IC700 | 8-759-393-06 | IC uPD17017GF-B09-3B9 |

< 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 | 1-216-296-00 | CONDUCTOR, CHIP | (3216) |

< COIL >

| | | | |
|------|--------------|-------------|------|
| L300 | 1-410-513-11 | INDUCTOR | 22uH |
| L700 | 1-410-513-11 | INDUCTOR | 22uH |
| L801 | 1-411-823-21 | COIL, CHOKE | |

MAIN

| Ref. No. | Part No. | Description | Remark | Ref. No. | Part No. | Description | Remark |
|----------|--------------|------------------------------|---------------|----------|--------------|-------------|---------------|
| | | < JACK > | | | | | |
| PJ400 | 1-764-424-11 | JACK, PIN 2P (LINE OUT REAR) | | R114 | 1-249-385-11 | CARBON | 2.2 5% 1/4W |
| | | < TRANSISTOR > | | R115 | 1-216-298-00 | METAL CHIP | 2.2 5% 1/10W |
| Q101 | 8-729-920-21 | TRANSISTOR DTC314TKH04 | | R116 | 1-216-134-00 | METAL CHIP | 2.2 5% 1/8W |
| Q102 | 8-729-920-21 | TRANSISTOR DTC314TKH04 | | R117 | 1-216-134-00 | METAL CHIP | 2.2 5% 1/8W |
| Q201 | 8-729-920-21 | TRANSISTOR DTC314TKH04 | | R118 | 1-216-077-00 | METAL CHIP | 15K 5% 1/10W |
| Q202 | 8-729-920-21 | TRANSISTOR DTC314TKH04 | | R121 | 1-216-226-00 | METAL GLAZE | 15K 5% 1/8W |
| Q404 | 8-729-901-05 | TRANSISTOR DTA124EK | | R122 | 1-216-073-00 | METAL CHIP | 10K 5% 1/10W |
| Q405 | 8-729-901-00 | TRANSISTOR DTC124EK | | R123 | 1-216-077-00 | METAL CHIP | 15K 5% 1/10W |
| Q501 | 8-729-822-84 | TRANSISTOR 2SB1202FAST | | R124 | 1-216-085-00 | METAL CHIP | 33K 5% 1/10W |
| Q503 | 8-729-900-53 | TRANSISTOR DTC114EK | | R201 | 1-216-057-00 | METAL CHIP | 2.2K 5% 1/10W |
| Q504 | 8-729-920-74 | TRANSISTOR 2SC2412K-QR | | R202 | 1-216-073-00 | METAL CHIP | 10K 5% 1/10W |
| Q505 | 8-729-920-74 | TRANSISTOR 2SC2412K-QR | | R203 | 1-216-065-00 | METAL CHIP | 4.7K 5% 1/10W |
| Q507 | 8-729-901-05 | TRANSISTOR DTA124EK | | R204 | 1-216-065-00 | METAL CHIP | 4.7K 5% 1/10W |
| Q508 | 8-729-920-85 | TRANSISTOR 2SD1664-QR | | R205 | 1-216-065-00 | METAL CHIP | 4.7K 5% 1/10W |
| Q509 | 8-729-026-49 | TRANSISTOR 2SA1037AK-T146-R | | R206 | 1-216-041-00 | METAL CHIP | 470 5% 1/10W |
| Q510 | 8-729-120-28 | TRANSISTOR 2SC1623-L5L6 | | R207 | 1-216-041-00 | METAL CHIP | 470 5% 1/10W |
| Q511 | 8-729-920-74 | TRANSISTOR 2SC2412K-T-146-R | | R208 | 1-216-224-00 | METAL GLAZE | 12K 5% 1/8W |
| Q512 | 8-729-822-84 | TRANSISTOR 2SB1202FAST | | R209 | 1-216-224-00 | METAL GLAZE | 12K 5% 1/8W |
| Q513 | 8-729-900-53 | TRANSISTOR DTC114EK | | R210 | 1-216-129-00 | METAL CHIP | 2.2M 5% 1/10W |
| Q515 | 8-729-820-68 | TRANSISTOR 2SD1802FA-S | | R211 | 1-216-129-00 | METAL CHIP | 2.2M 5% 1/10W |
| Q520 | 8-729-019-00 | TRANSISTOR 2SD2394-G | | R212 | 1-216-077-00 | METAL CHIP | 15K 5% 1/10W |
| Q522 | 8-729-901-00 | TRANSISTOR DTC124EK | | R213 | 1-216-077-00 | METAL CHIP | 15K 5% 1/10W |
| Q525 | 8-729-902-99 | TRANSISTOR DTC114TK | | R214 | 1-249-385-11 | CARBON | 2.2 5% 1/4W |
| Q526 | 8-729-205-02 | TRANSISTOR 2SA1150-Y | | R215 | 1-249-385-11 | CARBON | 2.2 5% 1/4W |
| Q527 | 8-729-205-02 | TRANSISTOR 2SA1150-Y | | R216 | 1-249-385-11 | CARBON | 2.2 5% 1/4W |
| Q528 | 8-729-900-53 | TRANSISTOR DTC114EK | | R217 | 1-249-385-11 | CARBON | 2.2 5% 1/4W |
| Q529 | 8-729-820-68 | TRANSISTOR 2SD1802FA-S | | R218 | 1-216-077-00 | METAL CHIP | 15K 5% 1/10W |
| Q600 | 8-729-021-94 | TRANSISTOR 2SK1657-T1B | | R221 | 1-249-431-11 | CARBON | 15K 5% 1/4W |
| Q704 | 8-729-901-05 | TRANSISTOR DTA124EK | | R222 | 1-216-073-00 | METAL CHIP | 10K 5% 1/10W |
| Q900 | 8-729-120-28 | TRANSISTOR 2SC1623-L5L6 | | R223 | 1-216-077-00 | METAL CHIP | 15K 5% 1/10W |
| | | < RESISTOR > | | R224 | 1-216-085-00 | METAL CHIP | 33K 5% 1/10W |
| R101 | 1-216-057-00 | METAL CHIP | 2.2K 5% 1/10W | R300 | 1-216-150-00 | METAL GLAZE | 10 5% 1/8W |
| R102 | 1-216-073-00 | METAL CHIP | 10K 5% 1/10W | R302 | 1-216-025-00 | METAL GLAZE | 100 5% 1/10W |
| R103 | 1-216-065-00 | METAL CHIP | 4.7K 5% 1/10W | R303 | 1-216-025-00 | METAL GLAZE | 100 5% 1/10W |
| R104 | 1-216-214-00 | METAL GLAZE | 4.7K 5% 1/8W | R304 | 1-216-025-00 | METAL GLAZE | 100 5% 1/10W |
| R105 | 1-216-214-00 | METAL GLAZE | 4.7K 5% 1/8W | R305 | 1-216-017-00 | METAL GLAZE | 47 5% 1/10W |
| R106 | 1-216-041-00 | METAL CHIP | 470 5% 1/10W | R306 | 1-249-411-11 | CARBON | 330 5% 1/4W |
| R107 | 1-216-041-00 | METAL CHIP | 470 5% 1/10W | R308 | 1-216-027-00 | METAL CHIP | 120 5% 1/10W |
| R108 | 1-216-224-00 | METAL GLAZE | 12K 5% 1/8W | R313 | 1-216-033-00 | METAL CHIP | 220 5% 1/10W |
| R109 | 1-216-075-00 | METAL CHIP | 12K 5% 1/10W | R401 | 1-247-895-00 | CARBON | 470K 5% 1/4W |
| R110 | 1-216-129-00 | METAL CHIP | 2.2M 5% 1/10W | R411 | 1-216-049-11 | METAL GLAZE | 1K 5% 1/10W |
| R111 | 1-216-129-00 | METAL CHIP | 2.2M 5% 1/10W | R416 | 1-216-089-00 | METAL GLAZE | 47K 5% 1/10W |
| R112 | 1-216-077-00 | METAL CHIP | 15K 5% 1/10W | R417 | 1-216-065-00 | METAL CHIP | 4.7K 5% 1/10W |
| R113 | 1-216-077-00 | METAL CHIP | 15K 5% 1/10W | R418 | 1-216-065-00 | METAL CHIP | 4.7K 5% 1/10W |
| | | | | R502 | 1-216-049-11 | METAL GLAZE | 1K 5% 1/10W |
| | | | | R503 | 1-216-057-00 | METAL CHIP | 2.2K 5% 1/10W |
| | | | | R505 | 1-216-073-00 | METAL CHIP | 10K 5% 1/10W |
| | | | | R507 | 1-249-435-11 | CARBON | 33K 5% 1/4W |

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| MAIN | SERVO |
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| Ref. No. | Part No. | Description | Remark |
|----------|--------------|-------------|------------------|
| R508 | 1-216-080-00 | METAL CHIP | 20K 5% 1/10W |
| R509 | 1-216-079-00 | METAL CHIP | 18K 5% 1/10W |
| R510 | 1-216-067-00 | METAL CHIP | 5.6K 5% 1/10W |
| R511 | 1-216-105-00 | METAL GLAZE | 220K 5% 1/10W |
| R512 | 1-216-089-00 | METAL GLAZE | 47K 5% 1/10W |
| R516 | 1-216-005-00 | METAL CHIP | 15 5% 1/10W |
| R517 | 1-216-061-00 | METAL CHIP | 3.3K 5% 1/10W |
| R518 | 1-216-081-00 | METAL CHIP | 22K 5% 1/10W |
| R519 | 1-216-081-00 | METAL CHIP | 22K 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 | 1-216-073-00 | METAL CHIP | 10K 5% 1/10W |
| R614 | 1-216-073-00 | METAL CHIP | 10K 5% 1/10W |
| R615 | 1-216-049-11 | METAL GLAZE | 1K 5% 1/10W |
| R616 | 1-216-063-00 | METAL CHIP | 3.9K 5% 1/10W |
| R617 | 1-216-049-11 | METAL GLAZE | 1K 5% 1/10W |
| R701 | 1-216-057-00 | METAL GLAZE | 2.2K 5% 1/10W(E) |
| 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 |
| R706 | 1-216-057-00 | METAL CHIP | 2.2K 5% 1/10W |
| R708 | 1-216-073-00 | METAL CHIP | 10K 5% 1/10W |
| R709 | 1-216-073-00 | METAL CHIP | 10K 5% 1/10W |
| R710 | 1-216-051-00 | METAL CHIP | 1.2K 5% 1/10W |
| R712 | 1-216-073-00 | METAL CHIP | 10K 5% 1/10W |
| R713 | 1-216-073-00 | METAL CHIP | 10K 5% 1/10W |
| R714 | 1-216-073-00 | METAL CHIP | 10K 5% 1/10W |
| R717 | 1-216-089-00 | METAL GLAZE | 47K 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 |

| Ref. No. | Part No. | Description | Remark |
|----------------|--------------|-----------------------------------|------------------|
| R730 | 1-216-089-00 | METAL GLAZE | 47K 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 | 1-216-061-00 | METAL CHIP | 3.3K 5% 1/10W |
| R904 | 1-163-201-00 | METAL CHIP | 680 5% 1/10W |
| R905 | 1-216-075-00 | METAL CHIP | 12K 5% 1/10W |
| R906 | 1-216-081-00 | METAL CHIP | 22K 5% 1/10W |
| R910 | 1-216-049-11 | METAL GLAZE | 1K 5% 1/10W |
| R911 | 1-216-049-11 | METAL GLAZE | 1K 5% 1/10W |
| < SWITCH > | | | |
| S700 | 1-762-638-11 | SWITCH, TACTILE (RESET) | |
| SW700 | 1-571-478-11 | SWITCH, SLIDE (CHANNEL SPACE) (E) | |
| < THERMISTOR > | | | |
| TH500 | 1-809-148-11 | THERMISTOR PTH8L07AR2ROM1B510 | |
| < TUNER > | | | |
| TU101 | A-3282-012-A | TUNER UNIT TUX-006 | |
| < 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 | 1-164-004-11 | CERAMIC CHIP | 0.1uF 10% 25V |
| 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 |

SERVO

| Ref. No. | Part No. | Description | Remark | Ref. No. | Part No. | Description | Remark |
|--------------------|--------------|---------------------------------|---------|----------------|--------------|------------------------|------------------------|
| C15 | 1-164-232-11 | CERAMIC CHIP | 0.01uF | 50V | JR11 | 1-216-296-00 | CONDUCTOR, CHIP (3216) |
| C16 | 1-163-989-11 | CERAMIC CHIP | 0.033uF | 10% 25V | JR12 | 1-216-296-00 | CONDUCTOR, CHIP (3216) |
| C17 | 1-164-004-11 | CERAMIC CHIP | 0.1uF | 10% 25V | JR13 | 1-216-296-00 | CONDUCTOR, CHIP (3216) |
| C18 | 1-164-004-11 | CERAMIC CHIP | 0.1uF | 10% 25V | JR14 | 1-216-296-00 | CONDUCTOR, CHIP (3216) |
| C19 | 1-163-037-11 | CERAMIC CHIP | 0.022uF | 10% 25V | JR15 | 1-216-296-00 | CONDUCTOR, CHIP (3216) |
| C20 | 1-107-823-11 | CERAMIC CHIP | 0.47uF | 10% 16V | JR16 | 1-216-296-00 | CONDUCTOR, CHIP (3216) |
| C21 | 1-163-809-11 | CERAMIC CHIP | 0.047uF | 10% 25V | JR17 | 1-216-296-00 | CONDUCTOR, CHIP (3216) |
| C22 | 1-163-251-11 | CERAMIC CHIP | 100PF | 5% 50V | JR18 | 1-216-296-00 | CONDUCTOR, CHIP (3216) |
| C23 | 1-135-259-11 | TANTAL. CHIP | 10uF | 20% 6.3V | JR19 | 1-216-296-00 | CONDUCTOR, CHIP (3216) |
| C24 | 1-163-125-00 | CERAMIC CHIP | 220PF | 5% 50V | JR20 | 1-216-296-00 | CONDUCTOR, CHIP (3216) |
| C25 | 1-107-823-11 | CERAMIC CHIP | 0.47uF | 10% 16V | JR21 | 1-216-296-00 | CONDUCTOR, CHIP (3216) |
| C26 | 1-164-004-11 | CERAMIC CHIP | 0.1uF | 10% 25V | JR22 | 1-216-296-00 | CONDUCTOR, CHIP (3216) |
| C27 | 1-164-004-11 | CERAMIC CHIP | 0.1uF | 10% 25V | JR23 | 1-216-296-00 | CONDUCTOR, CHIP (3216) |
| C28 | 1-163-023-00 | CERAMIC CHIP | 0.015uF | 5% 50V | JR24 | 1-216-296-00 | CONDUCTOR, CHIP (3216) |
| C29 | 1-164-004-11 | CERAMIC CHIP | 0.1uF | 10% 25V | JR25 | 1-216-296-00 | CONDUCTOR, CHIP (3216) |
| C30 | 1-126-603-11 | ELECT CHIP | 4.7uF | 20% 35V | JR26 | 1-216-296-00 | CONDUCTOR, CHIP (3216) |
| C31 | 1-164-232-11 | CERAMIC CHIP | 0.01uF | 50V | JR27 | 1-216-296-00 | CONDUCTOR, CHIP (3216) |
| C32 | 1-163-023-00 | CERAMIC CHIP | 0.015uF | 5% 50V | JR28 | 1-216-296-00 | CONDUCTOR, CHIP (3216) |
| C33 | 1-124-779-00 | ELECT CHIP | 10uF | 20% 16V | JR29 | 1-216-296-00 | CONDUCTOR, CHIP (3216) |
| C34 | 1-109-982-11 | CERAMIC CHIP | 1uF | 10% 10V | JR30 | 1-216-296-00 | CONDUCTOR, CHIP (3216) |
| C35 | 1-164-232-11 | CERAMIC CHIP | 0.01uF | 50V | JR31 | 1-216-296-00 | CONDUCTOR, CHIP (3216) |
| C36 | 1-164-004-11 | CERAMIC CHIP | 0.1uF | 10% 25V | JR32 | 1-216-296-00 | CONDUCTOR, CHIP (3216) |
| C37 | 1-164-004-11 | CERAMIC CHIP | 0.1uF | 10% 25V | JR33 | 1-216-296-00 | CONDUCTOR, CHIP (3216) |
| C38 | 1-164-004-11 | CERAMIC CHIP | 0.1uF | 10% 25V | JR34 | 1-216-296-00 | CONDUCTOR, CHIP (3216) |
| C39 | 1-126-204-11 | ELECT CHIP | 47uF | 20% 16V | JR35 | 1-216-296-00 | CONDUCTOR, CHIP (3216) |
| C40 | 1-164-004-11 | CERAMIC CHIP | 0.1uF | 10% 25V | JR36 | 1-216-296-00 | CONDUCTOR, CHIP (3216) |
| < CONNECTOR > | | | | JR37 | 1-216-296-00 | CONDUCTOR, CHIP (3216) | |
| CN1 | 1-764-616-12 | HOUSING, CONNECTOR(PC BOARD)30P | | JR38 | 1-216-296-00 | CONDUCTOR, CHIP (3216) | |
| CN2 | 1-565-728-11 | CONNECTOR, FPC 17P | | JR39 | 1-216-296-00 | CONDUCTOR, CHIP (3216) | |
| CN3 | 1-770-347-21 | CONNECTOR, FPC 6P | | JR40 | 1-216-296-00 | CONDUCTOR, CHIP (3216) | |
| < IC > | | | | JR41 | 1-216-296-00 | CONDUCTOR, CHIP (3216) | |
| IC1 | 8-752-372-94 | IC CXD2507AQ | | JR42 | 1-216-296-00 | CONDUCTOR, CHIP (3216) | |
| IC2 | 8-752-069-56 | IC CXA1782BQ | | JR43 | 1-216-296-00 | CONDUCTOR, CHIP (3216) | |
| IC3 | 8-759-354-16 | IC BA6796FP-T1 | | JR44 | 1-216-296-00 | CONDUCTOR, CHIP (3216) | |
| < CHIP CONDUCTOR > | | | | JR45 | 1-216-296-00 | CONDUCTOR, CHIP (3216) | |
| JR1 | 1-216-296-00 | CONDUCTOR, CHIP | (3216) | JR46 | 1-216-296-00 | CONDUCTOR, CHIP (3216) | |
| JR2 | 1-216-296-00 | CONDUCTOR, CHIP | (3216) | JR47 | 1-216-296-00 | CONDUCTOR, CHIP (3216) | |
| JR3 | 1-216-296-00 | CONDUCTOR, CHIP | (3216) | JR48 | 1-216-296-00 | CONDUCTOR, CHIP (3216) | |
| JR4 | 1-216-296-00 | CONDUCTOR, CHIP | (3216) | JR49 | 1-216-296-00 | CONDUCTOR, CHIP (3216) | |
| JR5 | 1-216-296-00 | CONDUCTOR, CHIP | (3216) | JR50 | 1-216-296-00 | CONDUCTOR, CHIP (3216) | |
| JR6 | 1-216-296-00 | CONDUCTOR, CHIP | (3216) | < COIL > | | | |
| JR7 | 1-216-296-00 | CONDUCTOR, CHIP | (3216) | L1 | 1-412-058-11 | INDUCTOR CHIP 10uH | |
| JR8 | 1-216-296-00 | CONDUCTOR, CHIP | (3216) | L2 | 1-412-058-11 | INDUCTOR CHIP 10uH | |
| JR9 | 1-216-296-00 | CONDUCTOR, CHIP | (3216) | L3 | 1-412-058-11 | INDUCTOR CHIP 10uH | |
| JR10 | 1-216-296-00 | CONDUCTOR, CHIP | (3216) | < TRANSISTOR > | | | |
| | | | | Q1 | 8-729-904-60 | TRANSISTOR DTB1132K | |
| | | | | Q2 | 8-729-904-86 | TRANSISTOR 2SB1197K-Q | |

| Ref. No. | Part No. | Description | Remark |
|--------------|--------------|-----------------|---------------|
| < 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 |
| 1.S | 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 |
| 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 | 1-216-065-00 | METAL CHIP | 4.7K 5% 1/10W |
| R35 | 1-216-065-00 | METAL CHIP | 4.7K 5% 1/10W |
| R36 | 1-216-097-00 | METAL GLAZE | 100K 5% 1/10W |
| R37 | 1-216-117-00 | METAL CHIP | 680K 5% 1/10W |
| R38 | 1-216-109-00 | METAL CHIP | 330K 5% 1/10W |
| R39 | 1-216-101-00 | METAL CHIP | 150K 5% 1/10W |
| R40 | 1-216-114-00 | METAL GLAZE | 510K 5% 1/10W |
| R41 | 1-216-091-00 | METAL CHIP | 56K 5% 1/10W |
| R42 | 1-216-107-00 | METAL CHIP | 270K 5% 1/10W |
| R43 | 1-216-097-00 | METAL GLAZE | 100K 5% 1/10W |
| R44 | 1-216-085-00 | METAL CHIP | 33K 5% 1/10W |
| R45 | 1-216-081-00 | METAL CHIP | 22K 5% 1/10W |
| R46 | 1-216-097-00 | METAL GLAZE | 100K 5% 1/10W |
| R47 | 1-216-105-00 | METAL GLAZE | 220K 5% 1/10W |
| R48 | 1-216-073-00 | METAL CHIP | 10K 5% 1/10W |
| R49 | 1-216-065-00 | METAL CHIP | 4.7K 5% 1/10W |
| R50 | 1-216-065-00 | METAL CHIP | 4.7K 5% 1/10W |
| R51 | 1-216-295-00 | CONDUCTOR, CHIP | (2012) |

| Ref. No. | Part No. | Description | Remark |
|---------------------------------|---|-------------------------------------|--------------------|
| < 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) (E) | |
| 13 | 1-776-527-11 | CORD (WITH CONNECTOR) (ISO) (POWER) | (AEP, UK, Italian) |
| 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) | |
| ***** | | | |
| ***** | | | |
| 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 | |
| ***** | | | |
| ACCESSORIES & PACKING MATERIALS | | | |
| ***** | | | |
| 3-810-605-31 | MANUAL, INSTRUCTION (ENGLISH, SPANISH, CHINESE) (E) | | |
| 3-810-605-41 | MANUAL, INSTRUCTION (ENGLISH, FRENCH, GERMAN, ITALIAN) (AEP, UK, Italian) | | |
| 3-810-605-51 | MANUAL, INSTRUCTION (DUTCH, SWEDISH, PANISH, PORTUGUESE) (AEP, UK, Italian) | | |
| 3-810-605-61 | MANUAL, INSTRUCTION (DANISH, FINNISH) (AEP, UK, Italian) | | |

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

CDX-3100

| Ref. No. | Part No. | Description | Remark |
|----------|----------------|------------------------------|--|
| | 3-810-606-21 | MANUAL, INSTRUCTION, INSTALL | (ENGLISH, SPANISH, CHINESE) (E) |
| | 3-810-606-31 | MANUAL, INSTRUCTION, INSTALL | (ENGLISH, FRENCH, GERMAN, ITALIAN) (AEP, UK, Italian) |
| | 3-810-606-41 | MANUAL, INSTRUCTION, INSTALL | (DUTCH, SWEDISH, SPANISH, PORTUGUESE) (AEP, UK, Italian) |
| | 3-810-606-51 | MANUAL, INSTRUCTION, INSTALL | (DANISH, FINNISH) (AEP, UK, Italian) |
| | * 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 X-3369-934-1 SCREW ASSY (J) (E)

- 506 3-388-078-01 KEY
- 507 1-776-207-31 CORD (WITH CONNECTOR) (POWER) (E)
- 508 1-776-527-11 CORD (WITH CONNECTOR) (ISO) (POWER)
(AEP, UK, Italian)

