MDX-CA580

SERVICE MANUAL

AEP Model
UK Model

Ver 1.1 2001.05

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Model Name Using Similar Mechanism	NEW
Base Mechanism Type	MG-164NA-138
Optical Pick-up Name	KMS-241C

SPECIFICATIONS

MD player section

Signal-to-noise ratio	90 dB
Frequency response	10 – 20,000 Hz
Wow and flutter	Below measurable limit

Tuner section

FM

Tuning range	87.5 – 108.0 MHz
Aerial terminal	External aerial connector
Intermediate frequency	10.7 MHz/450 kHz
Usable sensitivity	8 dBf
Selectivity	75 dB at 400 kHz
Signal-to-noise ratio	66 dB (stereo), 72 dB (mono)
Harmonic distortion at 1 kHz	
	0.6 % (stereo), 0.3 % (mono)
Separation	35 dB at 1 kHz
Frequency response	30 – 15,000 Hz

MW/LW

Tuning range	MW: 531 – 1,602 kHz LW: 153 – 279 kHz
Aerial terminal	External aerial connector
Intermediate frequency	10.7 MHz/450 kHz
Sensitivity	MW: 30 µV LW: 40 µV

Power amplifier section

Outputs	Speaker outputs (sure seal connectors)
Speaker impedance	4 – 8 ohms
Maximum power output	50 W × 4 (at 4 ohms)

General

Outputs	Audio outputs Power aerial relay control lead Power amplifier control lead Telephone ATT control lead
Tone controls	Bass ±9 dB at 100 Hz Treble ±9 dB at 10 kHz
Power requirements	12 V DC car battery (negative ground)
Dimensions	Approx. 178 × 50 × 183 mm (w/h/d)
Mounting dimensions	Approx. 182 × 53 × 162 mm (w/h/d)
Mass	Approx. 1.2 kg
Supplied accessories	Parts for installation and connections (1 set) Front panel case (1)

Design and specifications are subject to change without notice.

FM/MW/LW MINIDISC PLAYER

9-870-228-12
2001E0500-1

Sony Corporation
e Vehicle Company
Shinagawa Tec Service Manual Production Group

SONY®

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NOTES ON HANDLING THE OPTICAL PICK-UP BLOCK OR BASE UNIT

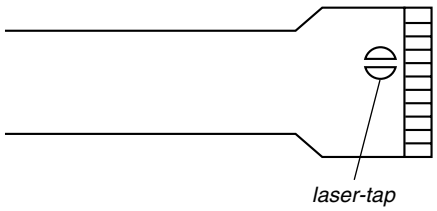
The laser diode in the optical pick-up block may suffer electrostatic break-down because of the potential difference generated by the charged electrostatic load, etc. on clothing and the human body.
During repair, pay attention to electrostatic break-down and also use the procedure in the printed matter which is included in the repair parts.
The flexible board is easily damaged and should be handled with care.

NOTES ON LASER DIODE EMISSION CHECK

Never look into the laser diode emission from right avove when checking it for adustment. It is feared that you will lose your sight.

NOTES ON HANDLING THE OPTICAL PICK-UP BLOCK (KMS-241C).

The laser diode in the optical pick-up block may suffer electrostatic break-down easily. When handling it, perform soldering bridge to the laser-tap on the flexible board. Also perform m easur es against electrostatic break-down sufficiently before the operation. The flexible board is easily damaged and should be handled with care.



OPTICAL PICK-UP FLEXIBLE BOARD

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.

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.

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

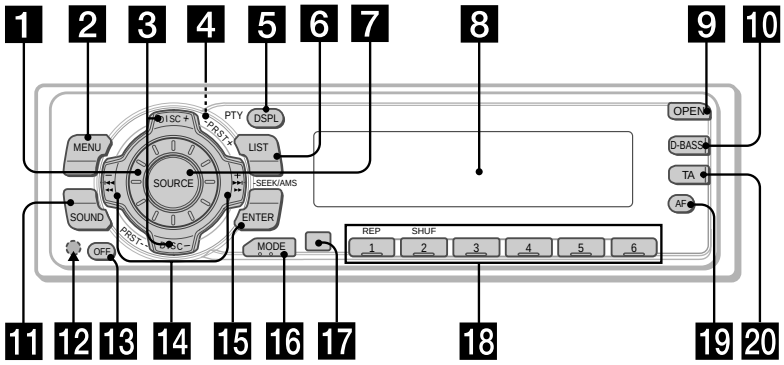
SAFETY-RELATED COMPONENT WARNING!!

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

SECTION 1
GENERAL

This section is extracted from instruction manual.

Location of controls



Refer to the pages listed for details.

1 **Volume control dial 19**

2 **MENU button 8, 10, 12, 13, 14, 15, 16, 18, 19, 21, 24**

3 **DISC/PRST +/– (cursor up/down) buttons 8, 10, 12, 13, 14, 15, 16, 18, 19, 20, 21, 24**

During CD/MD playback:
Disc change 10, 13

During radio reception:
Preset stations select 16

4 **⏏ (eject) button (located on the front side of the unit behind the front panel) 9**

5 **DSPL/PTY (display mode change/ programme type) button 9, 10, 12, 17, 20**

6 **LIST button 12**
List-up **13**

7 **SOURCE (TUNER/CD/MD) button 8, 9, 10, 13, 15, 16, 19**

8 **Display window**

9 **OPEN button 7, 9, 26**

10 **D-BASS button 25**

11 **SOUND button 23**

12 **Reset button (located on the front side of the unit behind the front panel) 7**

13 **OFF button* 7, 8, 9**

14 **SEEK/AMS –/+ (cursor left/right) buttons 8, 10, 12, 14, 16, 18, 19, 21, 23, 24**
Automatic Music Sensor **10, 14**
Manual Search **10**
Seek **15, 16, 18**

15 **ENTER button 8, 10, 12, 13, 14, 15, 16, 18, 19, 20, 21, 24**

16 **MODE button 19**
During CD or MD playback:
CD/MD unit select 9, 13
During radio reception:
BAND select 15, 16

17 **Receptor for the card remote commander**

18 **Number buttons**
During radio reception:
Preset number select 15, 16, 18, 19
During CD/MD playback:
(1) **REP 11**
(2) **SHUF 11**

19 **AF button 17, 18, 19**

20 **TA button 18, 19**

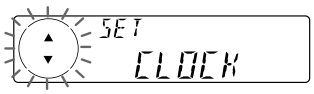
* **Warning when installing in a car without ACC (accessory) position on the ignition key switch**
Be sure to press (OFF) on the unit for two seconds to turn off the clock display after turning off the engine.
When you press (OFF) only momentarily, the clock display does not turn off and this causes battery wear.

Setting the clock

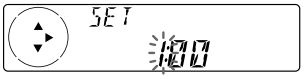
The clock uses a 24-hour digital indication.

Example: To set the clock to 10:08

1 **Press (MENU), then press either side of (DISC/PRST) repeatedly until "CLOCK" appears.**



❶ **Press (ENTER).**



The hour indication flashes.

❷ **Press either side of (DISC/PRST) to set the hour.**

❸ **Press the (+) side of (SEEK/AMS).**

The minute indication flashes.

❹ **Press either side of (DISC/PRST) to set the minute.**

2 **Press (ENTER).**

The clock starts.

After the clock setting is completed, the display returns to normal play mode.

Tip
You can set the clock automatically with the RDS feature (see page 17).

Note
When the D.INFO mode is set to ON, the time is always displayed, provided that the M.DSPL is set to OFF (page 24).

Installation

Precautions

- Choose the installation location carefully so that the unit will not interfere with normal driving operations.
- Avoid installing the unit in areas subject to dust, dirt, excessive vibration, or high temperature, such as in direct sunlight or near heater ducts.
- 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.

A To detach

Before detaching the front panel, be sure to press (OFF). Press (OPEN), then slide the front panel to the right side, and pull out the left side.

B To attach

Place the hole ⓐ in the front panel onto the spindle ⓑ on the unit as illustrated, then push the left side in.

Installation

Vorsichtsmaßnahmen

- Wählen Sie den Einbauort sorgfältig so aus, daß das Gerät beim Fahren nicht hinderlich ist.
- 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.

A Abnehmen

Drücken Sie auf jeden Fall (OFF), bevor Sie die Frontplatte abnehmen. Drücken Sie (OPEN), schieben Sie dann die Frontplatte nach rechts, und ziehen Sie sie an der linken Seite heraus.

B Anbringen

Setzen Sie die Aussparung ⓐ der Frontplatte auf die Spindel ⓑ am Gerät auf, wie in der Abbildung zu sehen, und drücken Sie dann die linke Seite an.

Installation

Précautions

- Choisir soigneusement l'emplacement de l'installation afin que l'appareil ne gêne pas la conduite normale du véhicule.
- 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.

A Pour retirer

Avant de retirer la façade, ne pas oublier d'appuyer d'abord sur (OFF). Appuyer sur (OPEN), puis faire glisser la façade vers la droite et la retirer par la gauche.

B Pour attacher

Fixez la partie ⓐ de la façade sur la partie ⓑ de l'appareil, comme indiqué sur l'illustration, puis appuyez sur le côté gauche jusqu'au déclic.

Installazione

Precauzioni

- Scegliere con attenzione la posizione per l'installazione in modo che l'apparecchio non interferisca con le operazioni di guida del conducente.
- Evitare di installare l'apparecchio dove sia soggetto ad alte temperature, come 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 rimuovere e reinserire il pannello anteriore

Prima di installare l'apparecchio rimuovere il pannello anteriore.

A Per rimuoverlo

Prima di rimuovere il pannello anteriore, assicurarsi di premere (OFF). Premere (OPEN), quindi far scivolare il pannello anteriore verso destra e tirare il lato sinistro verso di sé.

B Per reinserirlo

Applicare la foro ⓐ del pannello anteriore al mandrino ⓑ dell'apparecchio come mostrato nell'illustrazione e premere il lato sinistro fino a sentire uno scatto.

Montage

Voorzorgsmaatregelen

- Kies de installatieplaats zorgvuldig zodat het toestel de bestuurder niet hindert tijdens het rijden.
- Installeer het apparaat niet op plaatsen waar het blootgesteld wordt aan hoge temperaturen, b.v. in direct zonlicht of bij de warme luchtstroom van de autoverwarming, aan sterke trillingen, of waar het in contact komt met veel stof of vuil.
- Gebruik voor het veilig en stevig monteren van het apparaat uitsluitend de bijgeleverde montage-onderdelen.

Maximale montagehoek

Installeer het apparaat nooit onder een hoek van meer dan 20° met het horizontale vlak.

Verwijderen en bevestigen van het afneembare voorpaneel

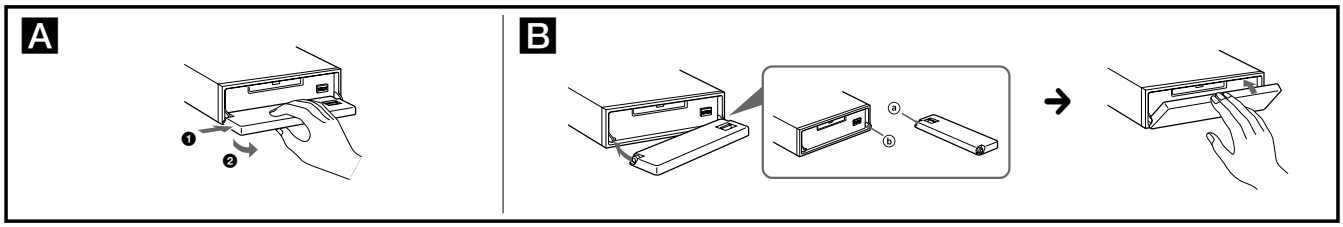
Verwijder, alvorens met het installeren te beginnen, het afneembare voorpaneel.

A Verwijderen

Druk eerst op (OFF) alvorens het voorpaneel los te maken. Druk op (OPEN), schuif het voorpaneel naar rechts en trek het los aan de linkerkant.

B Bevestigen

Breng deel ⓐ van het voorpaneel aan op deel ⓑ van het apparaat zoals afgebeeld en druk op de linkerzijde tot deze vastklikt.



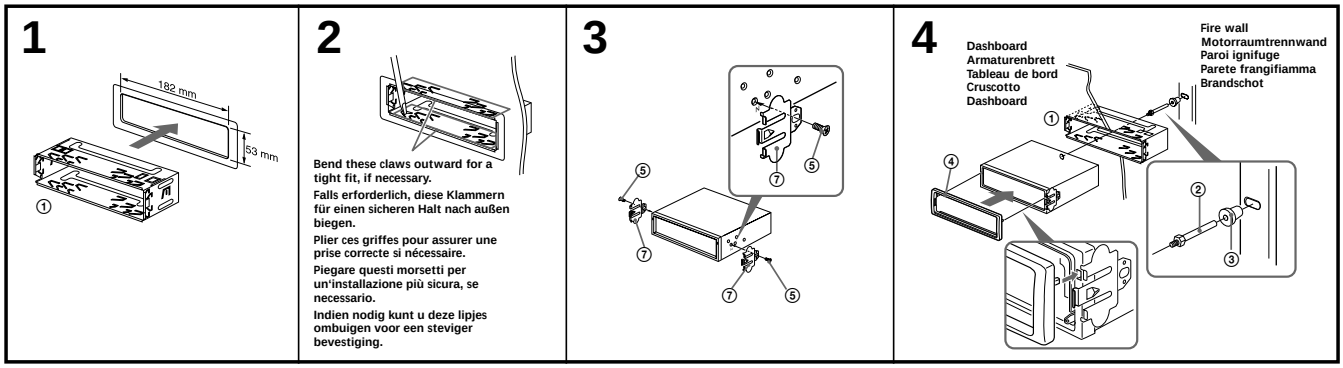
Installation in the dashboard

Installation im Armaturenbrett

Installation dans le tableau de bord

Installazione nel cruscotto

Montage in het dashboard



Reset button

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

Rücksetztaste

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

Touche de réinitialisation

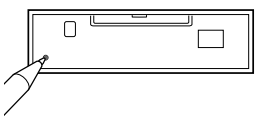
Quand l'installation et les connexions sont terminées, appuyer sur la touche de réinitialisation avec un stylo à bille, etc.

Tasto di azzeramento

Dopo avere terminato l'installazione e i collegamenti, assicurarsi di premere il tasto di azzeramento con la punta di una penna a sfera o un oggetto simile.

Terugsteltoets

Druk, nadat u het apparaat heeft geïnstalleerd en de aansluitingen heeft gemaakt, met een balpen of een ander puntig voorwerp op de terugsteltoets.



Connections

Cautions

- This unit is designed for negative ground 12 V DC operation only.
- Be careful not to pinch any wires between the screw and the body of the car, or this unit, or between any moving parts such as the seat railing, etc.
- Connect the power connecting cord ⑧ to the unit and speakers before connecting it to the auxiliary power connector.
- **Run all ground wires to a common ground point.**
- Connect the yellow cord to a free car circuit rated higher than the unit's fuse rating. If you connect this unit in combination with other stereo components, the car circuit they are connected to must be rated higher than the sum of the individual components' fuse rating. If there are no car circuits rated as high as the unit's fuse rating, connect the unit directly to the battery. If no car circuits are available for connecting this unit, connect the unit to a car circuit rated higher than the unit's fuse rating in such a way that if the unit blows its fuse, no other circuits will be cut off.

Anschluß

Vorsicht

- Dieses Gerät ist ausschließlich für den Betrieb bei 12 V Gleichstrom (negative Erdung) bestimmt.
- Achten Sie darauf, keine Kabel zwischen einer Schraube und der Karosserie oder diesem Gerät oder zwischen beweglichen Teilen wie den Sitzschienen usw. einzuklemmen.
- Verbinden Sie das Stromversorgungskabel ⑧ mit dem Gerät und den Lautsprechern, bevor Sie es mit dem Hilfsstromanschluß verbinden.
- **Schließen Sie alle Erdungskabel an einen gemeinsamen Massepunkt an.**
- Schließen Sie das gelbe Kabel an einen freien Autostromkreis mit höherer Leistung als der der Gerätesicherung an. Wenn Sie dieses Gerät zusammen mit anderen Stereokomponenten anschließen, muß der Autostromkreis, an den die Geräte angeschlossen sind, eine höhere Leistung aufweisen als die Summe der Sicherungen der einzelnen Komponenten. Wenn kein Autostromkreis eine so hohe Leistung aufweist wie die Sicherung des Geräts, schließen Sie das Gerät direkt an die Batterie an. Wenn kein Autostromkreis zum Anschließen dieses Geräts frei ist, schließen Sie das Gerät an einen Autostromkreis mit höherer Leistung als der der Gerätesicherung an, und zwar so, daß keine anderen Stromkreise unterbrochen werden, wenn die Sicherung durchbrennen sollte.

Connexions

Précautions

- Cet appareil est conçu pour fonctionner sur courant continu de 12 V avec masse négative.
- Veiller à ne pas coincer de fils entre une vis et la carrosserie de la voiture ou cet appareil ou encore entre des pièces mobiles comme les glissières des sièges, etc.
- Brancher le cordon d'alimention ⑧ sur l'appareil et les haut-parleurs avant de le brancher sur le connecteur d'alimentation auxiliaire.
- **Rassembler tous les fils de terre en un point de masse commun.**
- Brancher le câble jaune à un circuit libre de la voiture dont la capacité nominale est supérieure à la capacité du fusible de l'appareil. Si vous branchez cet appareil en série avec d'autres composants stéréo, le circuit de la voiture auquel ils sont raccordés doit afficher une capacité nominale supérieure à la somme des capacités individuelles de chaque composant. S'il n'y a pas de circuits de voiture affichant une capacité égale à la capacité du fusible de l'appareil, brancher l'appareil directement à la batterie. Si aucun circuit de voiture n'est disponible pour connecter cet appareil, brancher l'appareil à un circuit de voiture supérieur à la capacité du fusible de l'appareil de telle sorte que si l'appareil grille son fusible, aucun autre circuit ne soit coupé.

Collegamenti

Attenzione

- Questo apparecchio è stato progettato per l'uso solo a 12 V CC con massa negativa.
- Far attenzione che i cavi non rimangano impigliati tra la vite e la carrozzeria della macchina o l'apparecchio o tra le parti mobili della macchina, come le guide di scorrimento del sedile, ecc.
- Collegare il cavo di collegamento dell'alimentazione ⑧ all'apparecchio e ai diffusori prima di collegarlo al connettore di alimentazione ausiliaria.
- **Portare tutti i cavi di massa a un punto di massa comune.**
- Collegare il cavo giallo a un circuito libero della macchina con potenza nominale superiore a quella del fusibile dell'apparecchio. Se si collega questo apparecchio in serie con altri componenti stereo, il circuito della macchina a cui sono collegati deve avere una potenza nominale superiore alla somma della potenza nominale dei fusibili di ogni componente. Se i circuiti della macchina non hanno potenza nominale superiore a quella dei fusibili, collegare l'apparecchio direttamente alla batteria. Se non si hanno a disposizione circuiti della macchina per collegare l'apparecchio, collegare l'apparecchio a un circuito della macchina con potenza nominale superiore a quella del fusibile dell'apparecchio in modo tale che, se il fusibile dell'apparecchio salta, gli altri circuiti non verranno tagliati fuori.

Aansluitingen

Let op!

- Dit apparaat is ontworpen voor gebruik op gelijkstroom van een 12 Volts auto-accu, negatief geaard.
- Zorg ervoor dat er geen snoeren geklemd zitten tussen een schroef en het koetswerk, het toestel of bewegende onderdelen zoals de zetelrail, enz.
- Sluit het netsnoer ⑧ aan op het toestel en de luidsprekers vooraleer u het op de hulpvoedingsaansluiting aansluit.
- **Sluit alle aarddraden op een gemeenschappelijk aardpunt aan.**
- Sluit het gele snoer aan op een vrij autocircuit met een capaciteit die hoger ligt dan die van de toestelzekering. Als u dit toestel in serie schakelt met andere audiocomponenten, moet de capaciteit van het autocircuit waarop ze zijn aangesloten hoger zijn dan de som van de zekeringcapaciteit van elke component afzonderlijk. Als er geen autocircuits een even hoge capaciteit hebben als de toestelzekering, moet het toestel rechtstreeks worden aangesloten op de accu. Als er geen autocircuits beschikbaar zijn om dit toestel aan te sluiten, moet u het toestel aansluiten op een autocircuit met een hogere capaciteit dan die van de toestelzekering. Indien de toestelzekering dan doorbrandt, worden geen andere circuits onderbroken.

Notes of connection example

Notes on the control and power supply leads

- The power aerial control lead (blue) supplies +12 V DC when you turn on the tuner or when you activate the AF (Alternative Frequency), TA (Traffic Announcement) function.
- A power aerial without a relay box cannot be used with this unit.
- When your car has built-in FM/MW/LW aerial in the rear/side glass, it is necessary to connect the power aerial control lead (blue) or the accessory power input lead (red) to the power terminal of the existing aerial booster. For details, consult your dealer.

Warning

If you have a power aerial without a relay box, connecting this unit with the supplied power connecting cord ⑧ may damage the aerial.

Memory hold connection

When the yellow power input lead is connected, power will always be supplied to the memory circuit even when the ignition switch 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 when installing in a car without ACC (accessory) position on the ignition key switch

Be sure to press (OFF) on the unit for two seconds to turn off the clock display after turning off the engine.
When you press (OFF) only momentarily, the clock display does not turn off and this causes battery wear.

Hinweise zum Anschlußbeispiel

Hinweise zu den Steuer- und Stromversorgungsleitungen

- Die Motorantennen-Steuerleitung (blau) liefert + 12 V Gleichstrom, wenn Sie den Tuner einschalten oder die AF-(Alternativfrequenzsuche) oder die TA-Funktion (Verkehrsdurchsagen) aktivieren.
- Es kann nur eine Motorantenne mit Relaiskästchen angeschlossen werden.
- Wenn das Fahrzeug mit einer in der Heck-/Seitenfensterscheibe integrierten UKW-/MW/LW-Antenne ausgestattet ist, müssen Sie die Motorantennen-Steuerleitung (blau) oder die Zubehörstromversorgungsleitung (rot) an den Stromversorgungsanschluß des vorhandenen Antennenverstärkers anschließen. Näheres dazu erfahren Sie bei Ihrem Händler.

Warnung

Wenn Sie eine Motorantenne ohne Relaiskästchen verwenden, kann durch Anschließen dieses Geräts mit dem mitgelieferten Stromversorgungskabel ⑧ die Antenne beschädigt werden.

Stromversorgung des Speichers

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

Hinweise zum Lautsprecheranschluß

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

Warnhinweis zur Installation des Geräts in einem Auto mit Zündschloß ohne Zubehörposition ACC oder I

Drücken Sie am Gerät unbedingt zwei Sekunden lang (OFF), um die Uhrzeitanzeige auszuschalten, nachdem Sie den Motor ausgeschaltet haben.
Wenn Sie (OFF) nur kurz drücken, wird die Uhrzeitanzeige nicht ausgeschaltet, und der Autobatterie wird Strom entzogen.

Remarques sur l'exemple de connexion

Remarques sur les fils de commande et d'alimentation

- Le fil de commande (bleu) de l'antenne électrique assure une alimentation de +12 V CC lorsque vous mettez le syntoniseur sous tension ou lorsque vous activez la fonction AF (fréquence secondaire) ou TA (informations routières).
- Une antenne électrique sans boîtier de relais ne peut pas être utilisée avec cet appareil.
- Si votre voiture est équipée d'une antenne FM/MW/LW intégrée dans la vitre arrière/latérale, il est nécessaire de raccorder le fil de commande de l'antenne électrique (bleu) ou le fil d'entrée d'alimentation des accessoires (rouge) de l'amplificateur d'antenne existant. Pour plus de détails, consultez votre revendeur.

Avertissement

Si vous disposez d'une antenne électrique sans boîtier de relais, le branchement de cet appareil au moyen du cordon d'alimentation fourni ⑧ risque d'endommager l'antenne.

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 en cas d'installation dans une voiture dont le contact ne comporte pas de position ACC (accessoires)

Appuyez sur la touche (OFF) de l'appareil pendant deux secondes pour désactiver l'affichage de l'horloge après avoir coupé le moteur.
Si vous n'appuyez que brièvement sur (OFF), l'affichage de l'horloge ne disparaît pas, ce qui provoque la décharge de la batterie.

Note sui collegamenti

Note sui cavi di controllo e di alimentazione

- Il cavo di controllo dell'antenna elettrica (blu) fornisce corrente continua +12 V quando si accende il sintonizzatore o quando si attiva la funzione AF (frequenza alternativa) o TA (notiziario sul traffico).
- Non è possibile usare un'antenna elettrica senza scatola a relè con questo apparecchio.
- Se l'auto è dotata di un'antenna FM/MW/LW incorporata nel vetro posteriore/laterale, è necessario collegare il cavo di controllo per l'antenna elettrica (blu) o il cavo per l'ingresso dell'alimentazione accessorio (rosso) al terminale di alimentazione del preamplificatore dell'antenna esistente. Per ulteriori informazioni, consultare il proprio rivenditore.

Avvertenza

Quando si collega l'apparecchio con il cavo di alimentazione in dotazione ⑧, si potrebbe danneggiare l'antenna elettrica se questa non ha la scatola di relè.

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 a 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 potrebbero venir 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 dei diffusori dell'apparecchio perché si potrebbero danneggiare i diffusori attivi. Assicurarsi di collegare i diffusori passivi a questi terminali.

Informazioni importanti per quando si effettua l'installazione su un'auto sprovvista della posizione ACC sull'interruttore di accensione

Assicurarsi di premere (OFF) sull'apparecchio per due secondi per spegnere il display dell'orologio dopo che il motore è stato spento.
Se si preme (OFF) solo per un attimo, il display dell'orologio non si spegne causando in questo modo lo scaricamento della batteria.

Opmerkingen bij aansluitingsvoorbeeld

Opmerkingen betreffende de voedingskabels en aansluitsnoeren

- De voedingskabel (blauw) van de elektrisch bediende antenne levert +12V gelijkstroom wanneer u de tuner aanschakelt of de functie AF (Alternative Frequency) of TA (Traffic Announcement) activeert.
- Met dit apparaat is het niet mogelijk een automatische antenne zonder relaishuis te gebruiken.
- Indien uw auto is voorzien van een ingebouwde FM/MW/LW-antenne in de achter-/zijruit, moet de voedingskabel van de elektrisch bediende antenne (blauw) of de hulpvoedingskabel (rood) worden aangesloten op de voedingsaansluiting van de bestaande antenneversterker. Raadpleeg uw dealer voor meer details.

Opgelet

Indien u een elektrische antenne heeft zonder relaiskast, kan het aansluiten van deze eenheid met het bijgeleverde netsnoer ⑧ de antenne beschadigen.

Instandhouden van het geheugen

Zolang de gele stroomdraad is aangesloten, blijft de stroomvoorziening van het geheugen intact, ook wanneer het contact van de auto wordt uitgeschakeld.

Opmerkingen betreffende het aansluiten van de luidsprekers

- Zorg dat het apparaat is uitgeschakeld, alvorens de luidsprekers aan te sluiten.
- Gebruik luidsprekers met een impedantie van 4 tot 8 Ohm en let op dat die het vermogen van de versterker kunnen verwerken. Als dit wordt verzuimd, kunnen de luidsprekers ernstig beschadigd raken.
- Verbind in geen geval de aansluitingen van de luidsprekers met het chassis van de auto en sluit de aansluitingen van de rechter en linker luidspreker niet op elkaar aan.
- Probeer nooit de luidsprekers parallel aan te sluiten.
- Sluit geen actieve luidsprekers (met ingebouwde versterkers) aan op de luidspreker-aansluitingen van dit apparaat. Dit zal leiden tot beschadiging van de actieve luidsprekers. Sluit dus altijd uitsluitend luidsprekers zonder ingebouwde versterker aan.

Opgelet bij het monteren in een auto waarvan het contactslot geen ACC (accessory) stand heeft

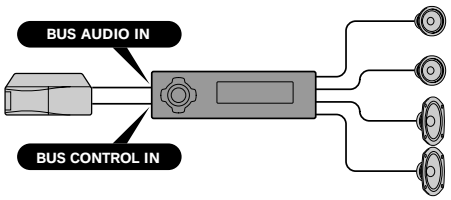
Druk (OFF) op het toestel gedurende twee seconden in om de klokweergave uit te schakelen na het afzetten van de motor.
Indien u slechts even op (OFF) drukt, verdwijnt de tijdindicatie niet waardoor de batterij uitgeput raakt.

Connection diagram / Anschlußdiagramm / Schéma de connexion / Schema di collegamento / Aansluitschema

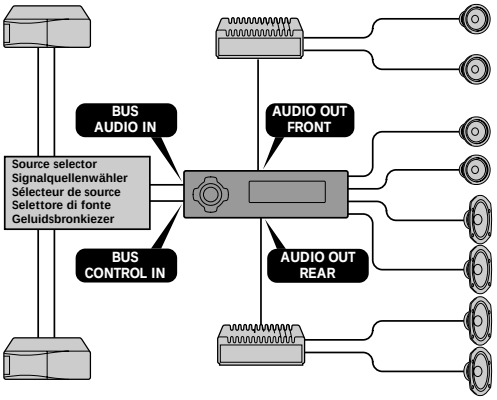
Equipment used in illustrations (not supplied) / In Abbildungen dargestellte Geräte (nicht mitgeliefert) / Appareils utilisés dans les illustrations (non fournis) / Apparecchiatura utilizzata nelle illustrazioni (non in dotazione) / Apparatuur gebruikt voor illustratiedoeleinden (niet meegeleverd)

- **Front speaker / Frontlautsprecher / Haut-parleur avant / Diffusori anteriori / Voorluidspreker**
- **Rear speaker / Hecklautsprecher / Haut-parleur arrière / Diffusori posteriori / Achterluidspreker**
- **Power amplifier / Endverstärker / Amplificateur de puissance / Amplificatore di potenza / Eindversterker**
- **CD/MD changer / CD/MD-Wechsler / Changeur de CD/MD / Cambia CD/MD / CD/MD-wisselaar**

A



B



Notes
- *For connecting two or more CD/MD changers, the source selector XA-C30 (optional) is necessary.*
- *Be sure to connect the ground cord before connecting the amplifier.*
- *If you connect an optional power amplifier and do not use the built-in amplifier, the beep sound will be deactivated.*

Hinweise
- *Zum Anschließen von zwei oder mehr CD/MD-Wechslern wird der gesondert erhältliche Signalquellenwähler XA-C30 benötigt.*
- *Schließen Sie unbedingt zuerst das Massekabel an, bevor Sie den Verstärker anschließen.*
- *Wenn Sie einen gesondert erhältlichen Endverstärker anschließen und den integrierten Verstärker nicht benutzen, wird der Signalton deaktiviert.*

Remarques
- *Dans le cas du raccordement de deux changeurs de CD/MD ou plus, le sélecteur de source XA-C30 (optionnel) est indispensable.*
- *Raccordez d'abord le fil de masse avant de connecter l'amplificateur.*
- *Si vous raccordez un amplificateur de puissance optionnel et que vous n'utilisez pas l'amplificateur intégré, le bip sonore est désactivé.*

Note
- *Per collegare due o più cambia CD/MD, si deve utilizzare il selettore di fonte XA-C30 (opzionale).*
- *Assicurarsi di collegare il cavo di terra, prima di collegare l'apparecchio all'amplificatore.*
- *Se si collega un amplificatore di potenza in dotazione e non si utilizza l'amplificatore incorporato, il segnale acustico verrà disattivato.*

Opmerkingen
- *Om twee of meer CD/MD-wisselaars aan te sluiten, hebt u de geluidsbronkiezer XA-C30 (optioneel) nodig.*
- *Sluit eerst de massakabel aan alvorens de versterker aan te sluiten.*
- *Als u een los verkrijgbare vermogensversterker aansluit en de ingebouwde versterker niet gebruikt, is de pieptoon uitgeschakeld.*

Connection example

*1 **Note for the aerial connecting**
If your car aerial is an ISO (International Organisation for Standardisation) type, use the supplied adaptor ⑥ to connect it. First connect the car aerial to the supplied adaptor, then connect it to the aerial jack of the master unit.
*2 **RCA pin cord (not supplied)***

Anschlußbeispiel

*1 **Hinweis zum Anschließen der Antenne**
Wenn Ihre Fahrzeugantenne der ISO-Norm (ISO = International Organization for Standardization - Internationale Normungsgemeinschaft) entspricht, schließen Sie sie mit Hilfe des mitgelieferten Adapters ⑥ an. Verbinden Sie zuerst die Fahrzeugantenne mit dem mitgelieferten Adapter, und verbinden Sie diesen dann mit der Antennenbuchse des Hauptgeräts.
*2 **Cinchkabel (nicht mitgeliefert)***

Exemple de raccordement

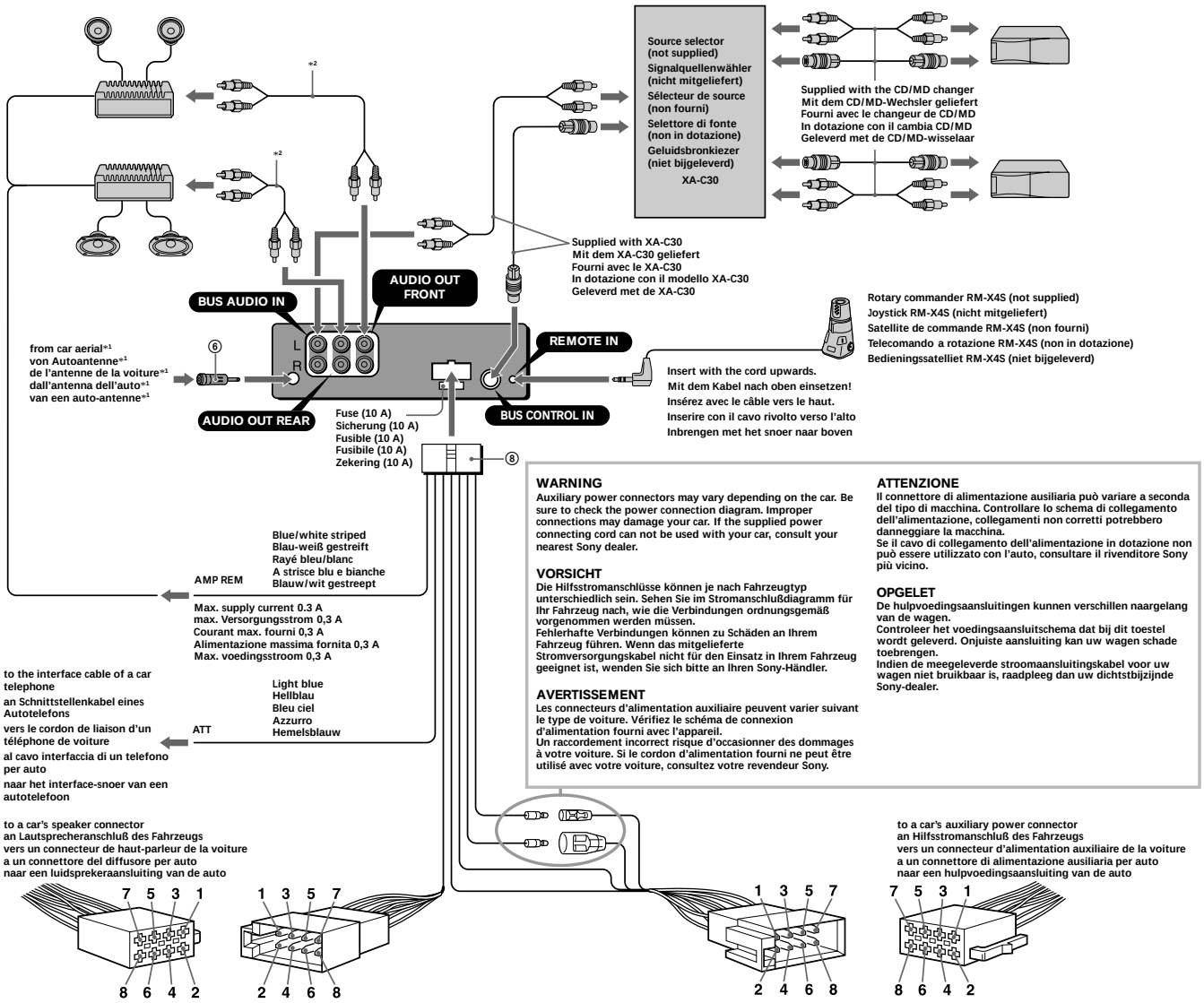
*1 **Remarque sur le raccordement de l'antenne**
Si votre antenne de voiture est de type ISO (organisation internationale de normalisation), utilisez l'adaptateur fourni ⑥ pour la raccorder. Raccordez d'abord l'antenne de voiture à l'adaptateur fourni et, ensuite, à la prise d'antenne de l'appareil principal.
*2 **Cordon à broche RCA (non fourni)***

Esempi di collegamento

*1 **Nota per il collegamento dell'antenna**
Se la vostra antenna della macchina è di tipo ISO (International Organization Standardization), utilizzare l'adattatore ⑥ in dotazione per collegarla. Collegare prima l'antenna della macchina all'adattatore in dotazione, quindi collegarla alla presa dell'antenna dell'apparecchio principale.
*2 **Cavo a piedini RCA (non in dotazione)***

Voorbeeldaansluitingen

*1 **Opmerking bij de antenne-aansluiting**
Indien uw wagen is uitgerust met een antenne van het type ISO (International Organisation for Standardization), moet u die aansluiten met behulp van de meegeleverde adaptor ⑥. Sluit eerst de auto-antenne aan op de meegeleverde adaptor en vervolgens de antennestekker op het hoofdtoestel.
*2 **Tulpstekkersnoer (niet bijgeleverd)***



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

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

AVERTISSEMENT
Les connecteurs d'alimentation auxiliaire peuvent 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.

ATTENZIONE
Il connettore di alimentazione ausiliaria può variare a seconda del tipo di macchina. Controllare lo schema di collegamento dell'alimentazione, collegamenti non corretti potrebbero danneggiare la macchina.
Se il cavo di collegamento dell'alimentazione in dotazione non può essere utilizzato con l'auto, consultare il rivenditore Sony più vicino.

OPGELET
De hulpvoedingsaansluitingen kunnen verschillen naargelang van de wagen.
Controleer het voedingsaansluitschema dat bij dit toestel wordt geleverd. Onjuiste aansluiting kan uw wagen schade toebrengen.
Indien de meegeleverde stroomaansluitingskabel voor uw wagen niet bruikbaar is, raadpleeg dan uw dichtstbijzijnde Sony-dealer.

1	Purple Violett Mauve Viola Paars	+	Speaker, Rear, Right Lautsprecher hinten rechts haut-parleur, arrière, droit Diffusore, posteriore, destro Luidspreker, achter, rechts	5	White Weiß Blanc Bianco Wit	+	Speaker, Front, Left Lautsprecher vorne links haut-parleur, avant, gauche Diffusore, anteriore, sinistro Luidspreker, voor, links
2		–	Speaker, Rear, Right Lautsprecher hinten rechts haut-parleur, arrière, droit Diffusore, posteriore, destro Luidspreker, achter, rechts	6		–	Speaker, Front, Left Lautsprecher vorne links haut-parleur, avant, gauche Diffusore, anteriore, sinistro Luidspreker, voor, links
3	Grey Grau Gris Grigio Grijs	+	Speaker, Front, Right Lautsprecher vorne rechts haut-parleur, avant, droit Diffusore, anteriore, destro Luidspreker, voor, rechts	7	Green Grün Vert Verde Groen	+	Speaker, Rear, Left Lautsprecher hinten links haut-parleur, arrière, gauche Diffusore, posteriore, sinistro Luidspreker, achter, links
4		–	Speaker, Front, Right Lautsprecher vorne rechts haut-parleur, avant, droit Diffusore, anteriore, destro Luidspreker, voor, rechts	8		–	Speaker, Rear, Left Lautsprecher hinten links haut-parleur, arrière, gauche Diffusore, posteriore, sinistro Luidspreker, achter, links

Negative polarity positions 2, 4, 6, and 8 have striped cords.
An den negativ gepolten Positionen (2, 4, 6 und 8) befinden sich gestreifte Adern.
Les positions de polarité négative 2, 4, 6 et 8 sont dotées de cordons rayés.
Le posizioni a polarità negativa 2, 4, 6 e 8 hanno cavi rigati.
De negatieve posities 2, 4, 6 en 8 hebben gestreepte kabels.

4	Yellow Gelb Jaune Giallo Geel	continuous power supply permanente Stromversorgung alimentation continue alimentazione continua continu voeding		7	Red Rot Rouge Rosso Rood	switched power supply geschaltete Stromversorgung alimentation commutée alimentazione commutata geschakelde voeding	
5	Blue Blau Bleu Blu Blauw	power aerial control Motorantenne antenne électrique comando dell'antenna elettrica elektrisch bediende antenne		8	Black Schwarz Noir Nero Zwart	ground Masse masse terra aarding	

Positions 1, 2, 3 and 6 do not have pins.
An Position 1, 2, 3 und 6 befinden sich keine Stifte.
Les positions 1, 2, 3 et 6 ne comportent pas de broches.
Le posizioni 1, 2, 3 e 6 non hanno piedini.
De posities 1, 2, 3 en 6 hebben geen pins.

Power connection diagram

Auxiliary power connector may vary depending on the car. Check your car's auxiliary power connector diagram to make sure the connections match correctly. There are three basic types (illustrated below). You may need to switch the positions of the red and yellow leads in the car stereo's power connecting cord.
After matching the connections and switched power supply leads correctly, connect the unit to the car's power supply.
If you have any questions and problems connecting your unit that are not covered in this manual, please consult the car dealer.

Stromanschlußdiagramm

Der Hilfsstromanschluß kann je nach Fahrzeugtyp unterschiedlich sein. Sehen Sie im Hilfsstromanschlußdiagramm für Ihr Fahrzeug nach, wie die Verbindung ordnungsgemäß vorgenommen werden muß. Es gibt, wie unten abgebildet, drei grundlegende Typen.
Sie müssen möglicherweise die rote und gelbe Leitung des Stromversorgungskabels der Autostereoanlage vertauschen.
Stellen Sie die Anschlüsse her, schließen Sie die geschalteten Stromversorgungsleitungen richtig an, und verbinden Sie dann das Gerät mit der Stromversorgung Ihres Fahrzeugs. Wenn beim Anschließen des Geräts Fragen oder Probleme auftreten, die in dieser Bedienungsanleitung nicht erläutert werden, wenden Sie sich bitte an den Autohändler.

Schéma de connexion d'alimentation

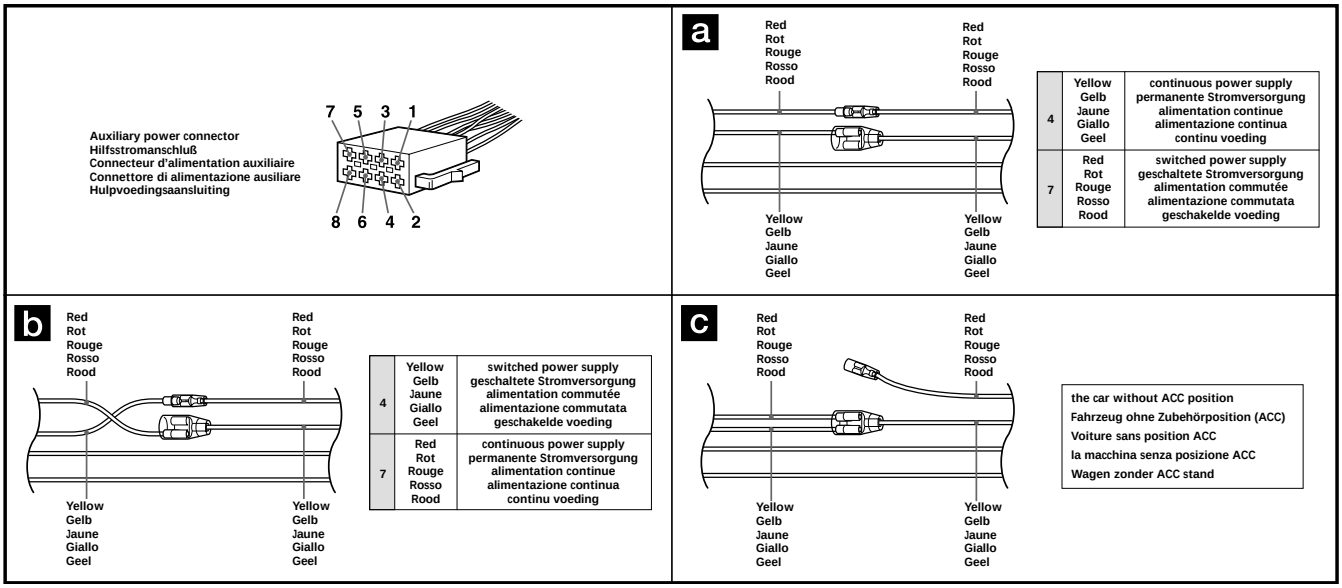
Le connecteur d'alimentation auxiliaire peut varier suivant le type de voiture. Vérifiez le schéma du connecteur d'alimentation auxiliaire de votre voiture pour vous assurer que les connexions correspondent. Il en existe trois types de base (illustrés ci-dessous). Il se peut que vous deviez commuter la position du fil rouge et jaune du cordon d'alimentation de l'autoradio.
Après avoir établi les connexions et commuté correctement les fils d'alimentation, raccordez l'appareil à l'alimentation de la voiture. Si vous avez des questions ou des difficultés à propos de cet appareil qui ne sont pas abordées dans le présent mode d'emploi, consultez votre revendeur automobile.

Diagramma dei collegamenti di alimentazione

Il connettore di alimentazione ausiliaria può variare a seconda della macchina. Controllare il diagramma del connettore di alimentazione ausiliaria della macchina per essere sicuri che le connessioni corrispondano correttamente. Vi sono tre tipi di base (illustrazione sotto). Potrà essere necessario cambiare le posizioni dei conduttori rosso e giallo nel cavo di alimentazione dello stereo della macchina. Dopo aver fatto corrispondere le connessioni e i cavi di alimentazione commutata, collegare l'apparecchio all'alimentazione della macchina. Se si hanno domande o se sorgono problemi che non sono stati trattati nel manuale nel collegare l'apparecchio, contattare l'autoconcessionario.

Voedingsaansluitschema

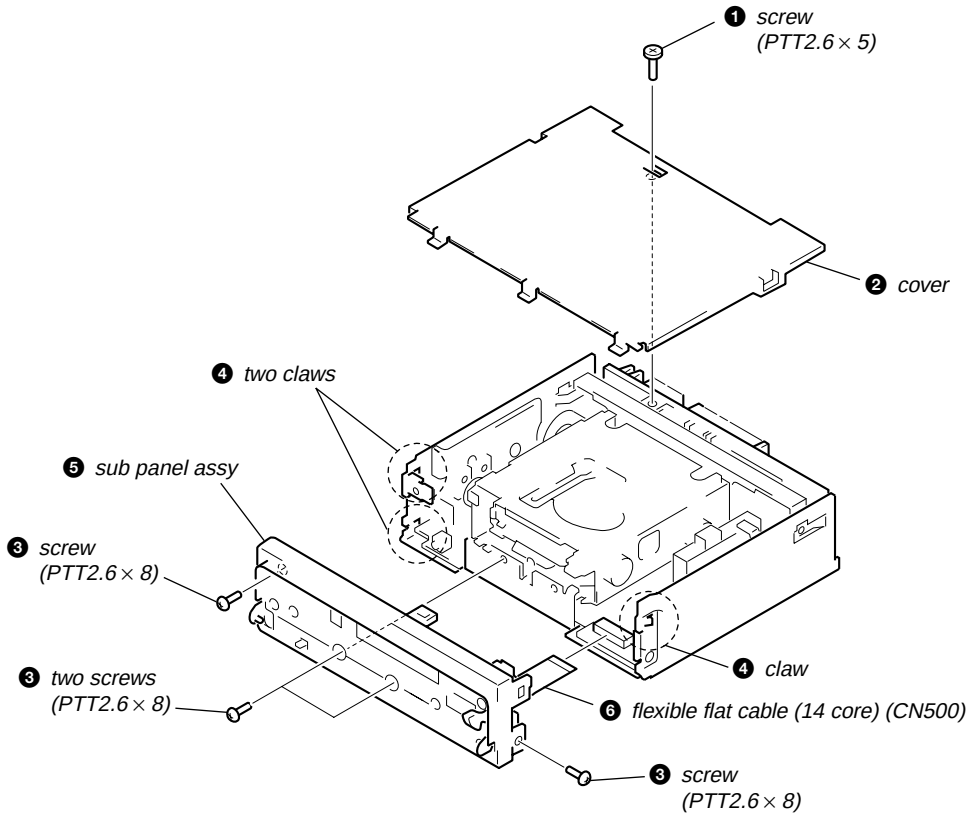
De hulpvoedingsaansluiting kan verschillen naargelang van de wagen. Controleer het voedingsaansluitschema dat bij dit toestel wordt geleverd om te zien of de aansluitingen kloppen. Er zijn drie basistypes (zie illustratie hieronder).
Het is mogelijk dat u de positie van de rode en gele draden in de voedingskabel van de autoradio moet omwisselen.
Als de aansluitingen en geschakelde voedingskabels kloppen, sluit u het toestel aan op de voeding van de wagen. Indien u nog vragen of problemen hebt in verband met het aansluiten van het toestel die niet in deze handleiding vermeld staan, raadpleeg dan de autodealer.



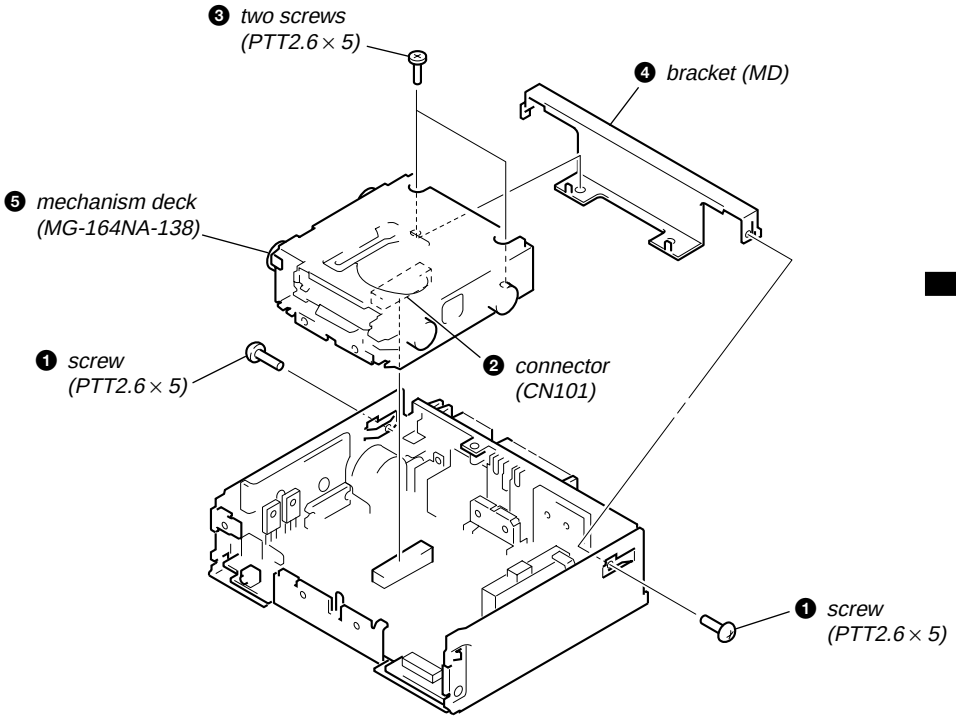
SECTION 2
DISASSEMBLY

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

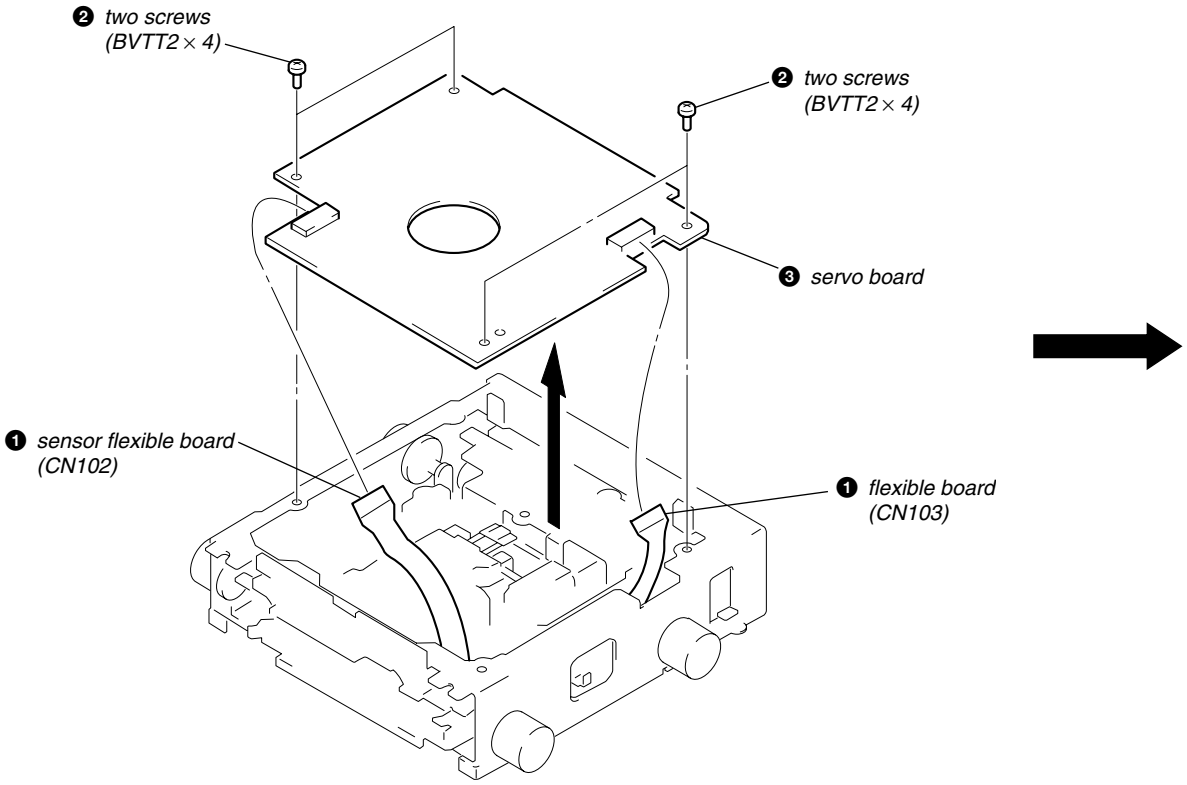
SUB PANEL ASSY



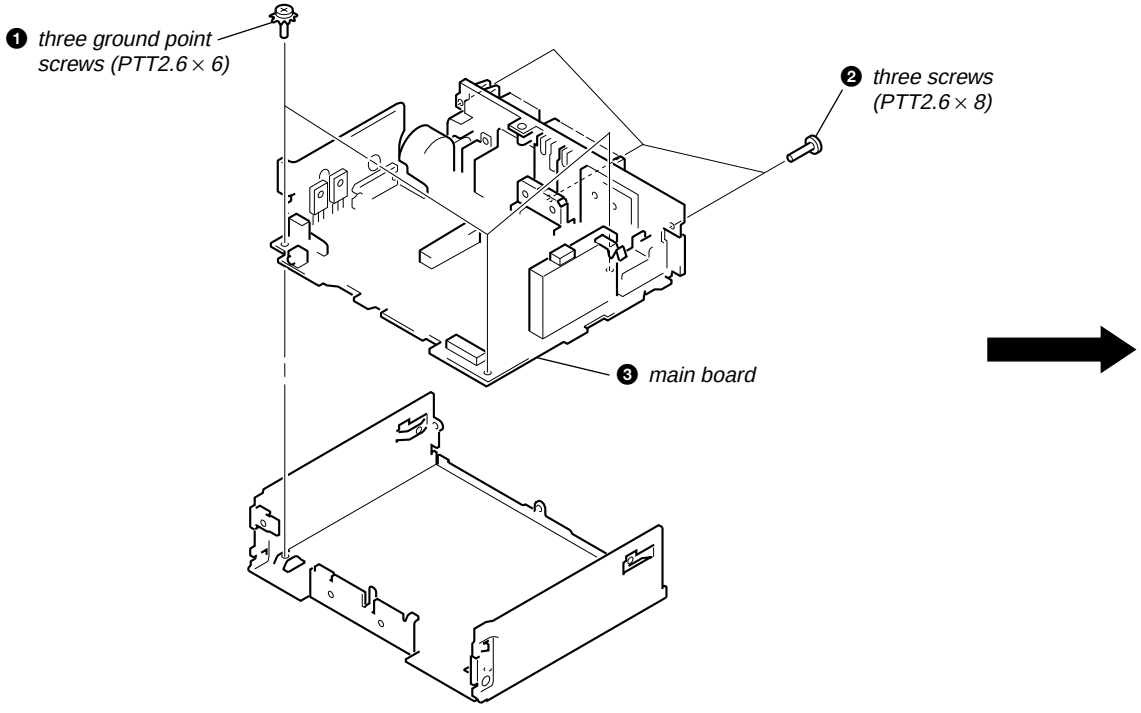
MECHANISM DECK (MG-164NA-138)



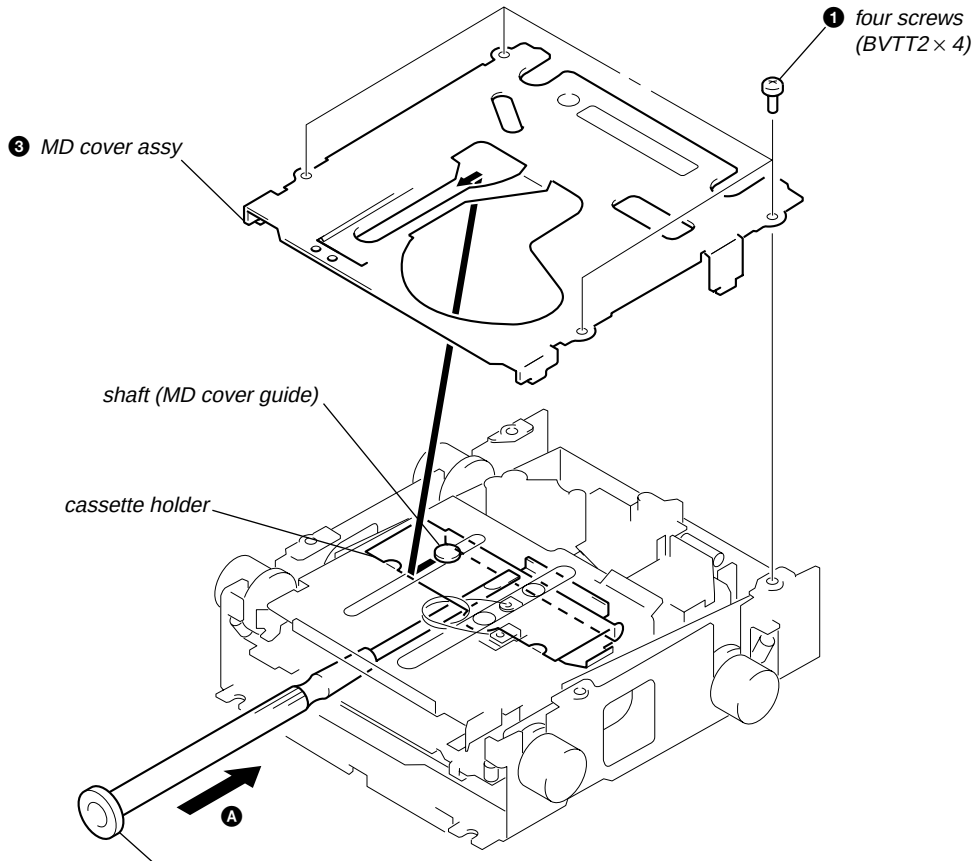
SERVO BOARD



MAIN BOARD



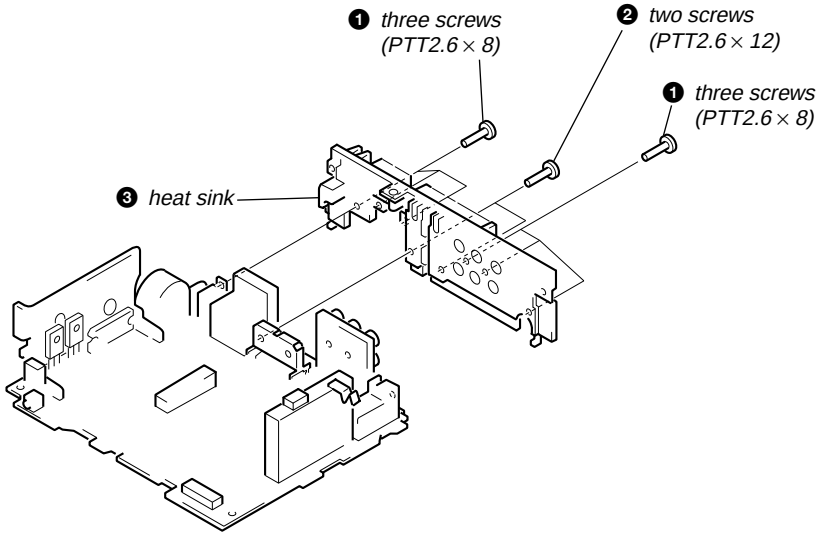
MD COVER ASSY



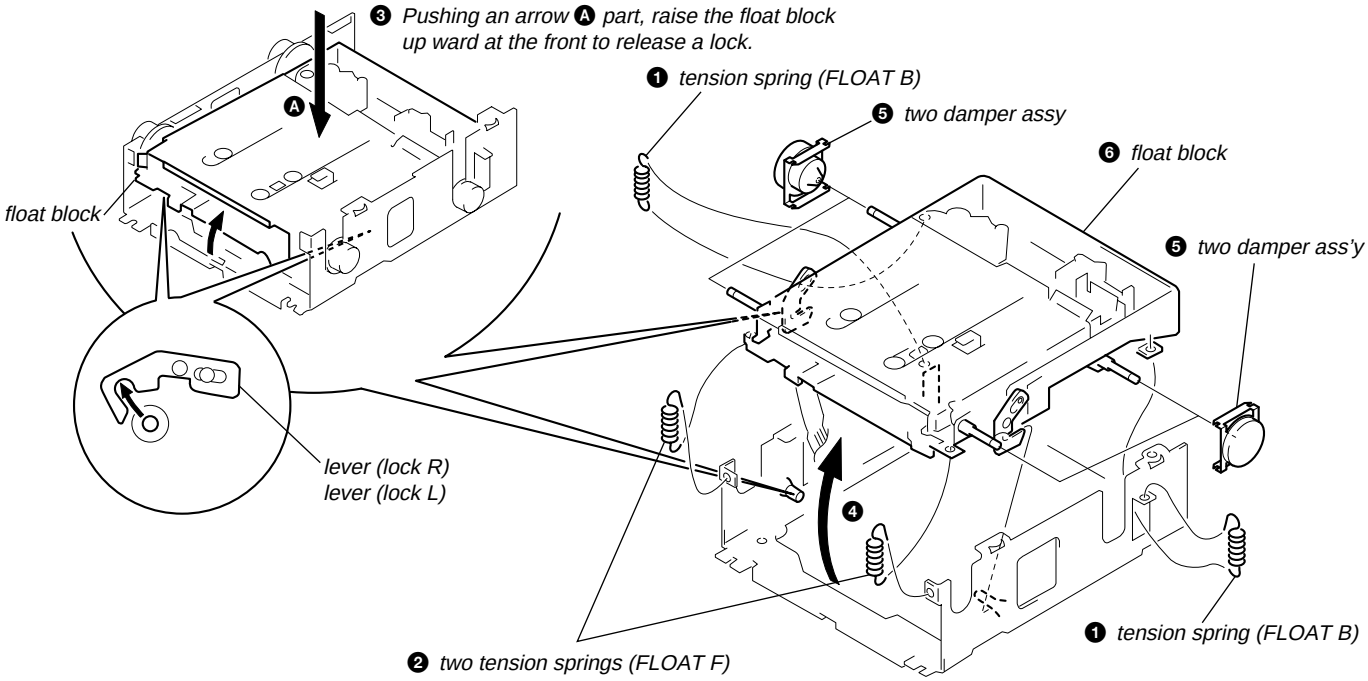
❷ *Pushing the Cassette Holder in the direction of the arrow Ⓐ with a screwdriver, etc., disengage the Shaft (MD Cover Guide) from the slot in the MD Cover Assy.*

Note: Take care not to scratch the optiocal Pick-up when pushing the Cassette Holder with a screwdriver. etc.

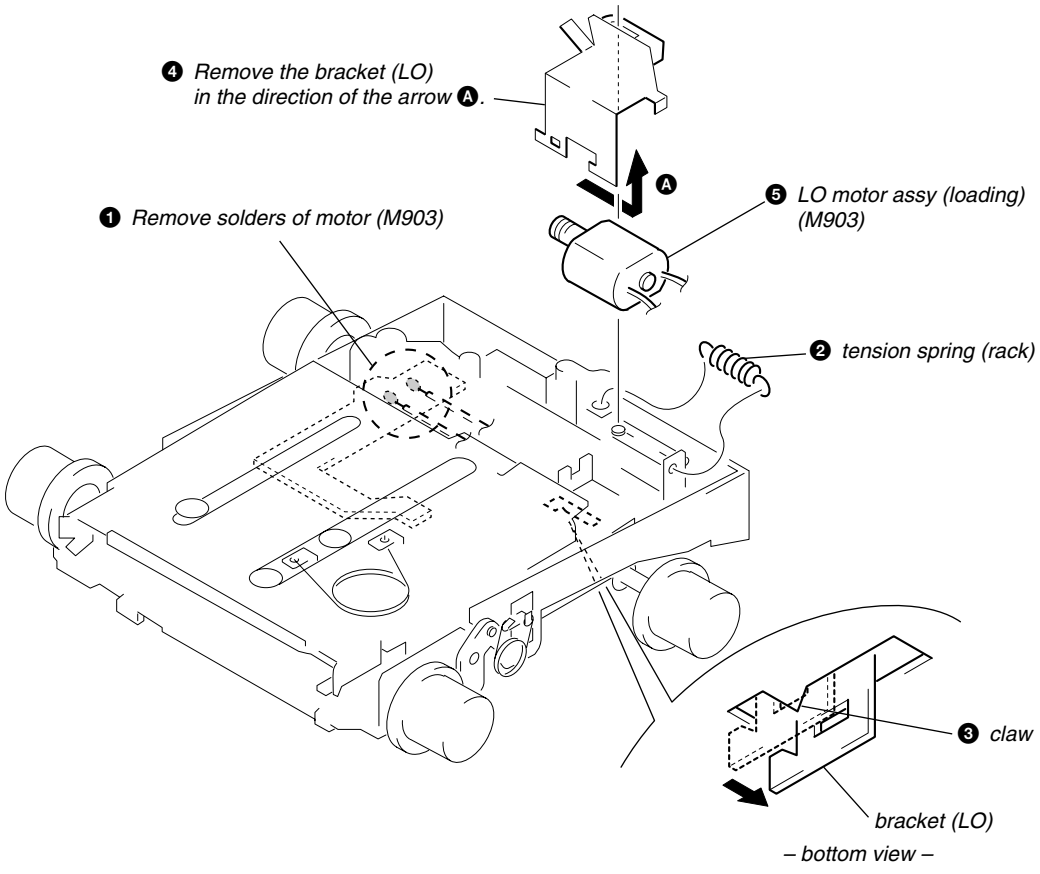
HEAT SINK



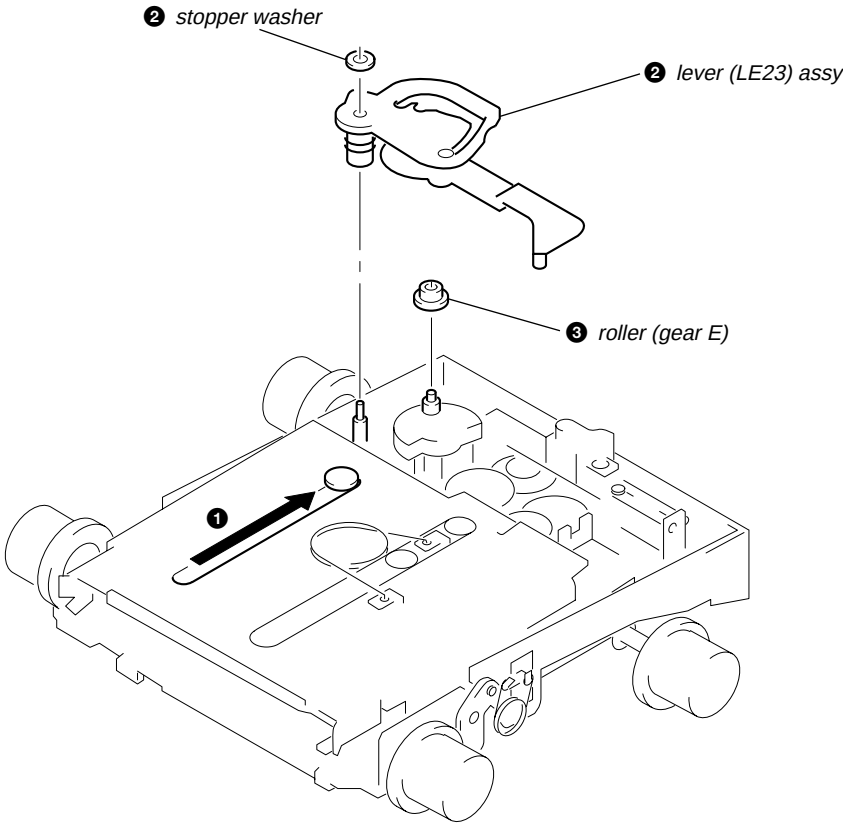
FLOAT BLOCK



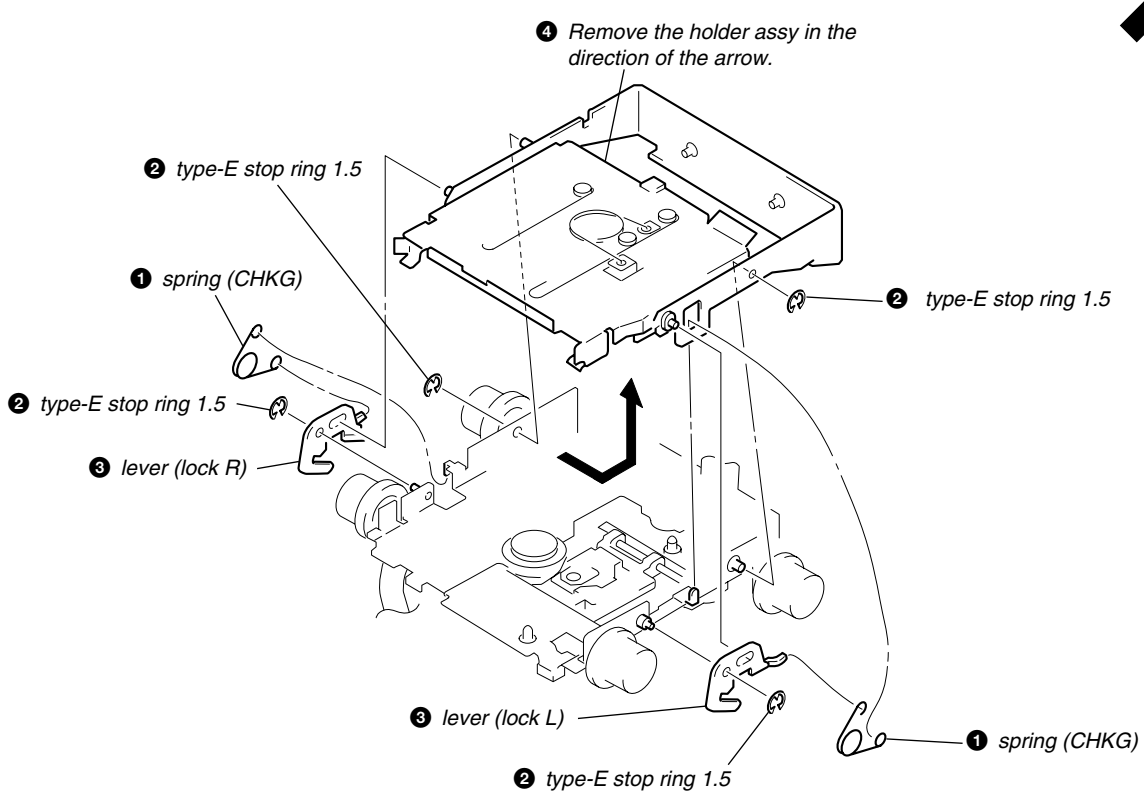
LO MOTOR ASSY (LOADING) (M903)



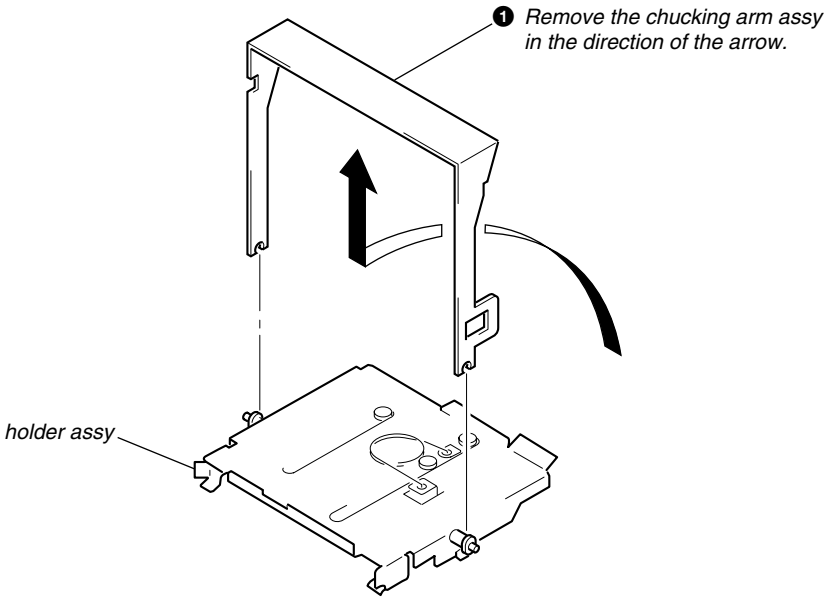
LEVER (LE23) ASSY



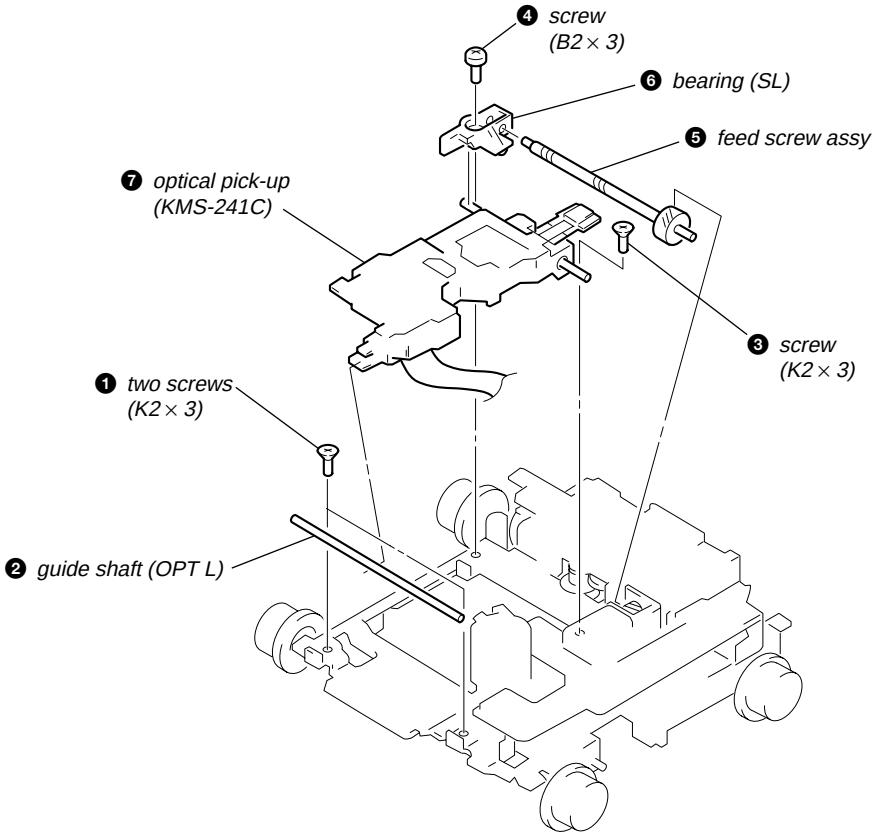
HOLDER ASSY



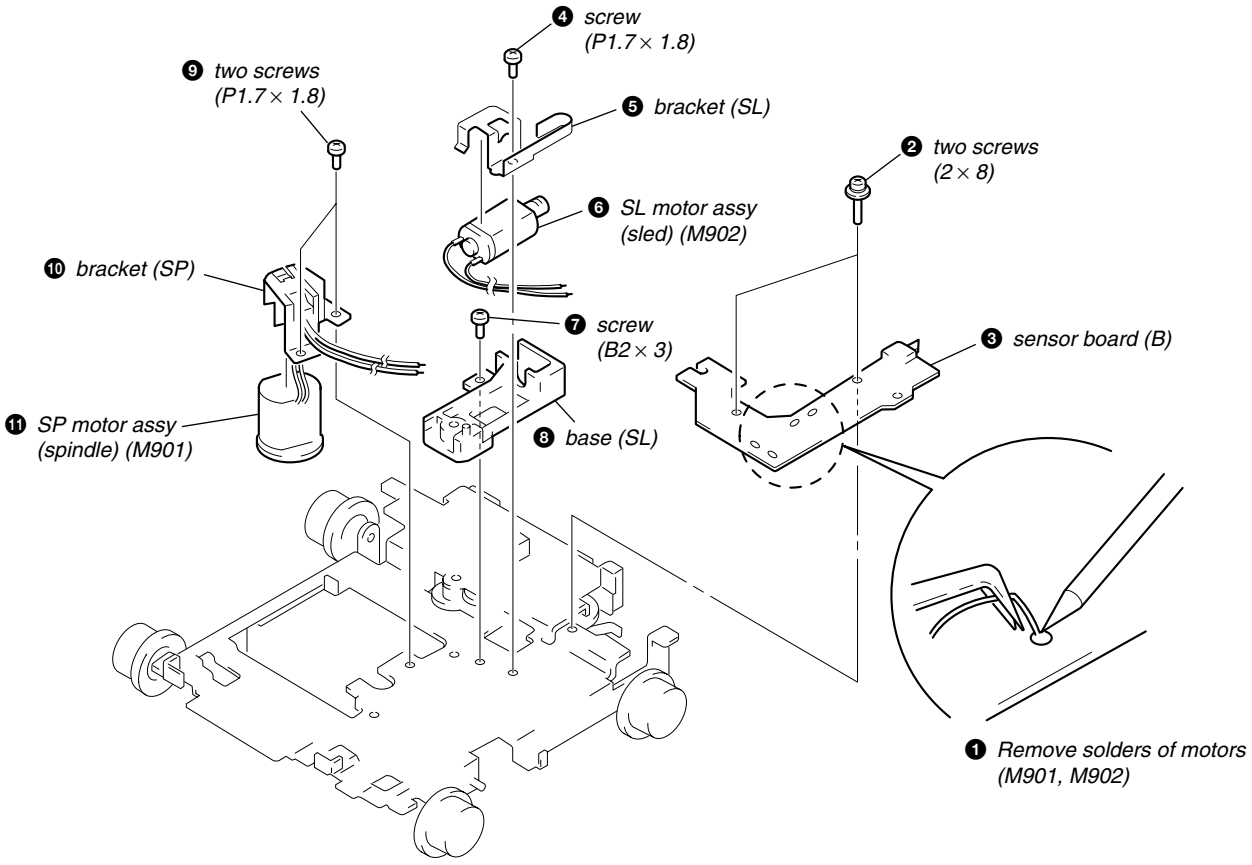
CHUCKING ARM ASSY



OPTICAL PICK-UP (KMS-241C)



SL MOTOR ASSY (SLED) (M902), SP MOTOR ASSY (SPINDLE) (M901)



SECTION 3
ELECTRICAL ADJUSTMENTS

TEST MODE

This set have the test mode function.

<Set the Test Mode>

1. Turn ON the regulated power supply. (The clock is displayed)
   Note: Press the [OFF] button, if the clock is not displayed.
2. Push the preset [4] button.
3. Push the preset [5] button.
4. Press the preset [1] button for more than two seconds.
5. Then the display indicates all lights, the test mode is set.

<Release the Test mode>

1. Push the [OFF] button.

MD SECTION

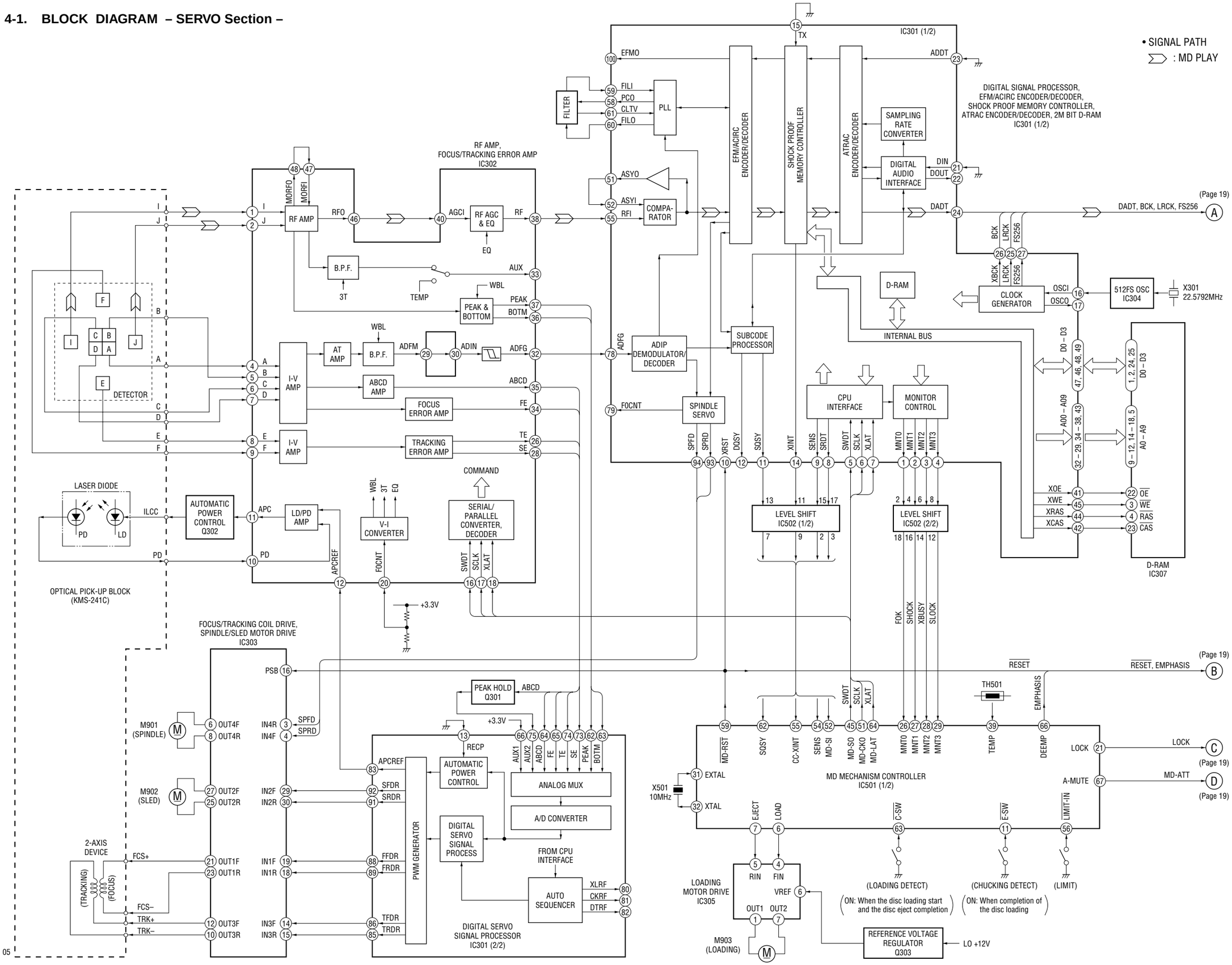
MD section adjustments are done automatically in this set.

TUNER SECTION

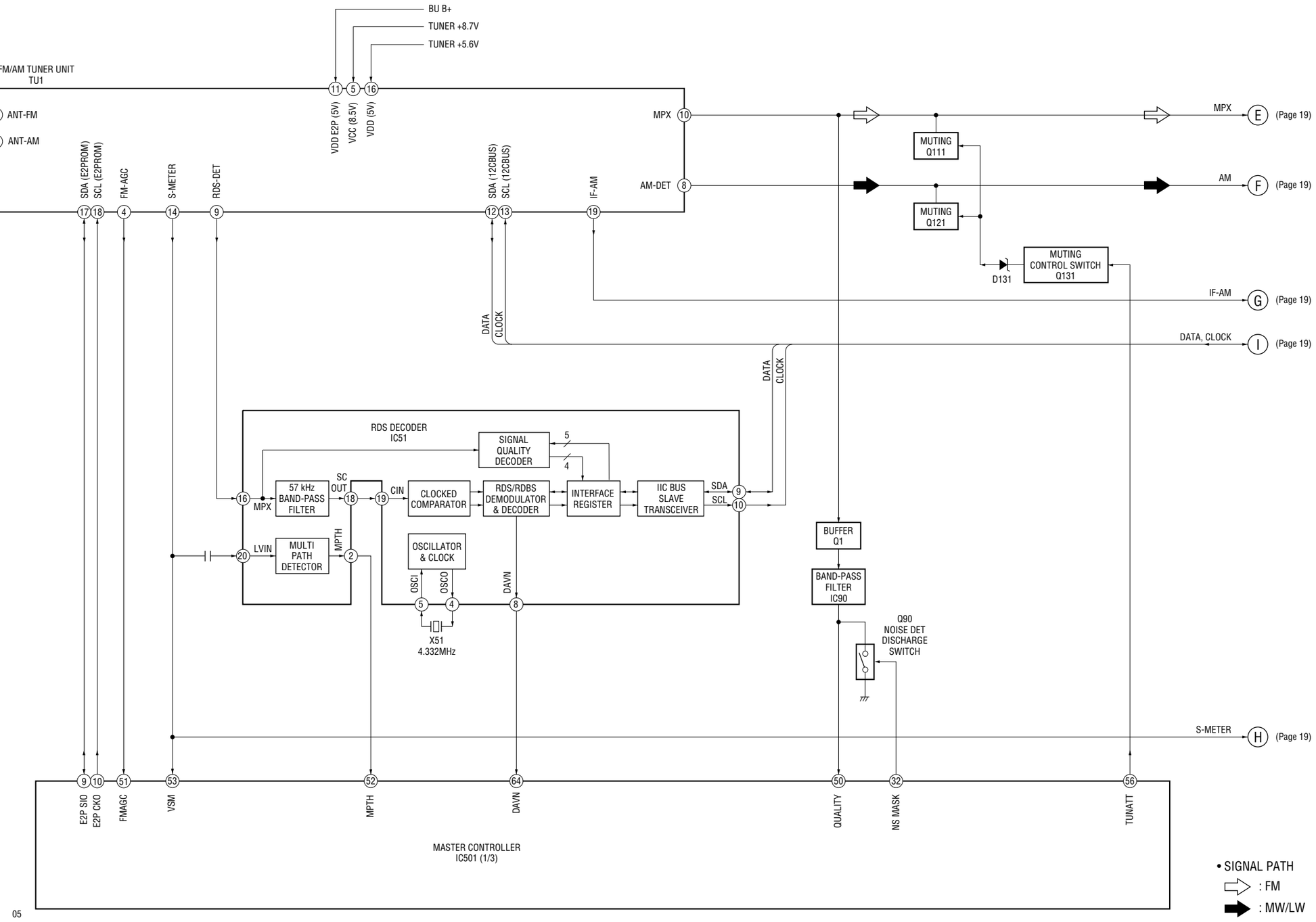
Tuner section adjustments are done automatically in this set.

SECTION 4
DIAGRAMS

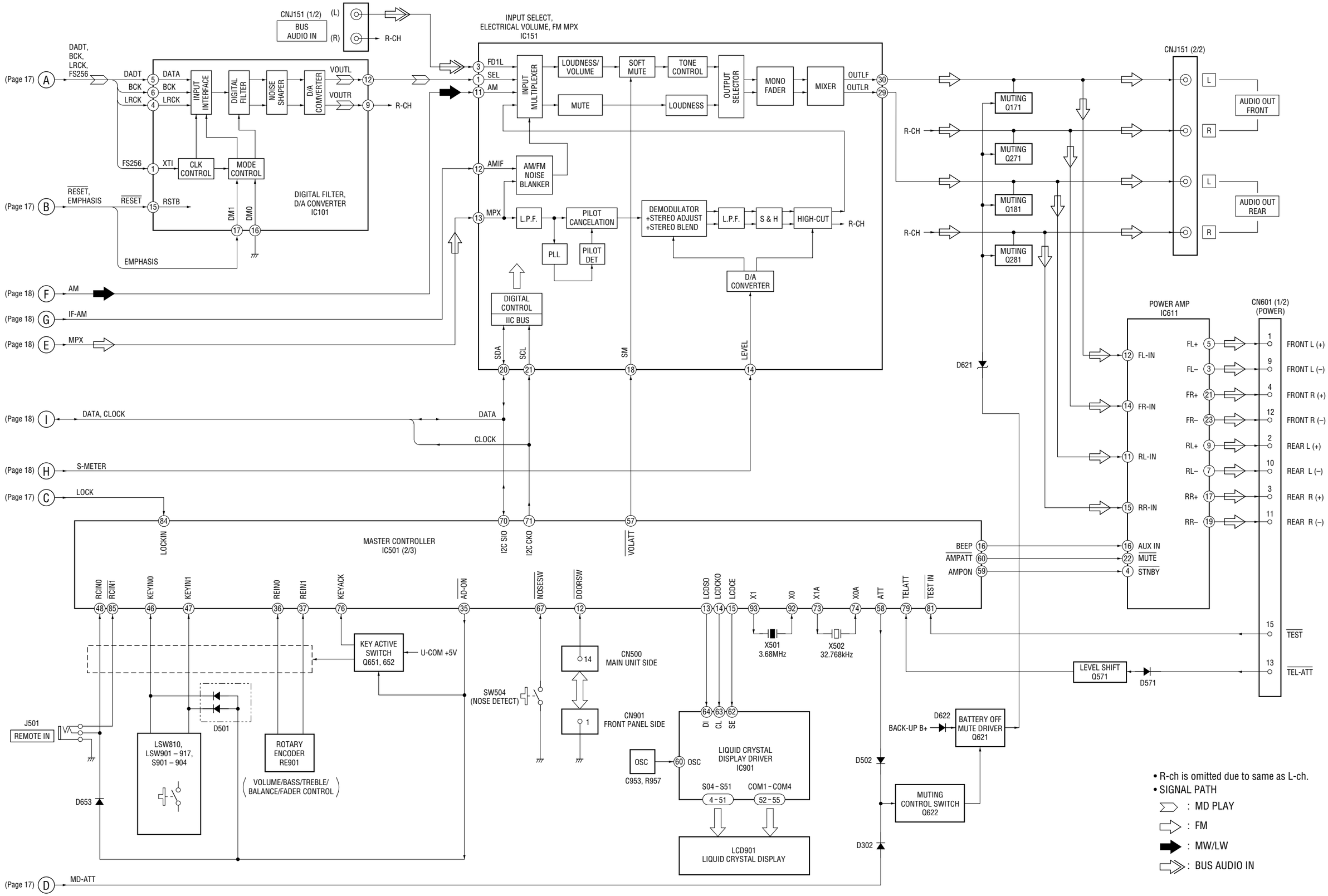
4-1. BLOCK DIAGRAM – SERVO Section –



4-2. BLOCK DIAGRAM – TUNER Section –

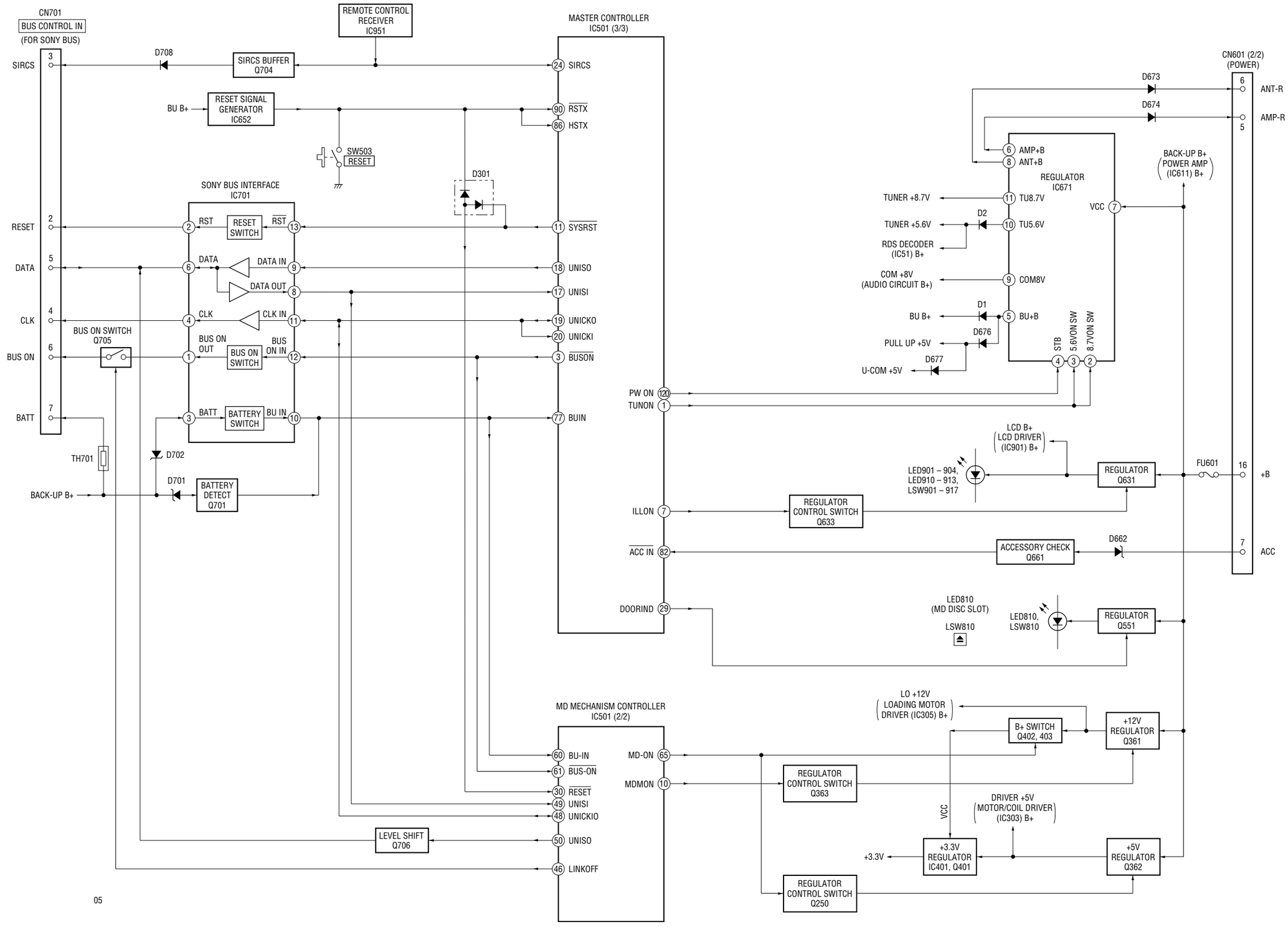


4-3. BLOCK DIAGRAM – MAIN Section –



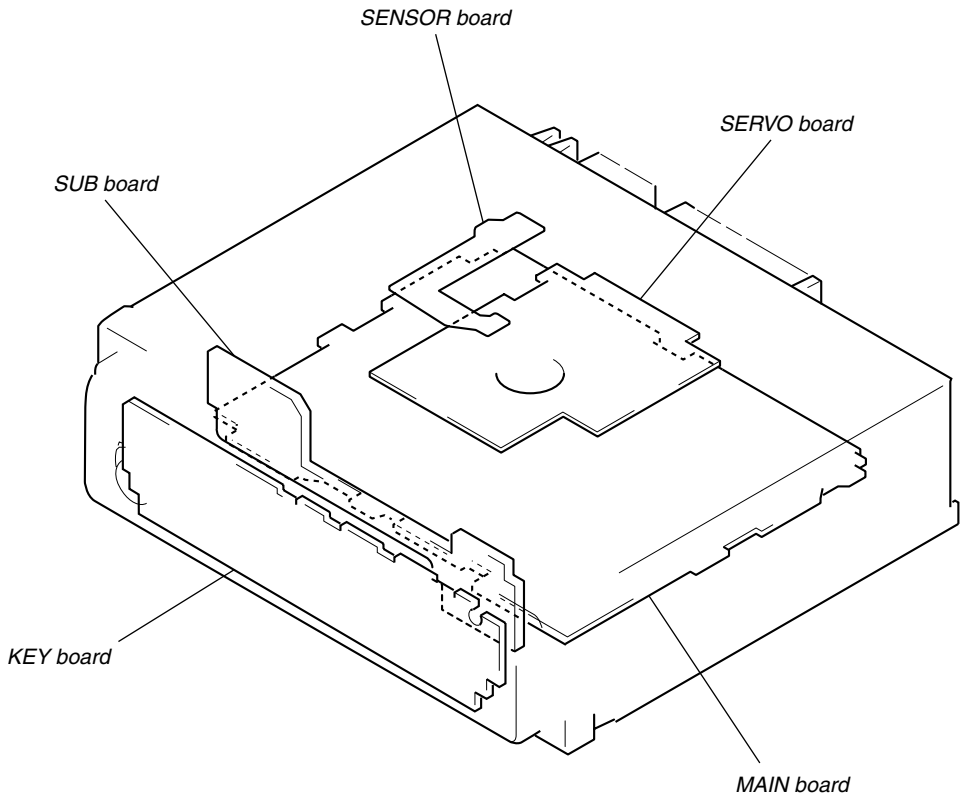
05

4-4. BLOCK DIAGRAM – BUS CONTROL/POWER SUPPLY Section –



05

- **Circuit Boards Location**



4-5. NOTE FOR PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS

Note on Printed Wiring Board:

- ○——— : parts extracted from the component side.
- ——— : parts extracted from the conductor side.
- ● : Through hole.
- △ : internal component.
- ▒▒▒ : Pattern from the side which enables seeing.

(The other layers' patterns are not indicated.)

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

Note on Schematic Diagram:

- All capacitors are in µF unless otherwise noted. pF: µµF 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4 W or less unless otherwise specified.
- △ : internal component.
- ▭ : panel designation.

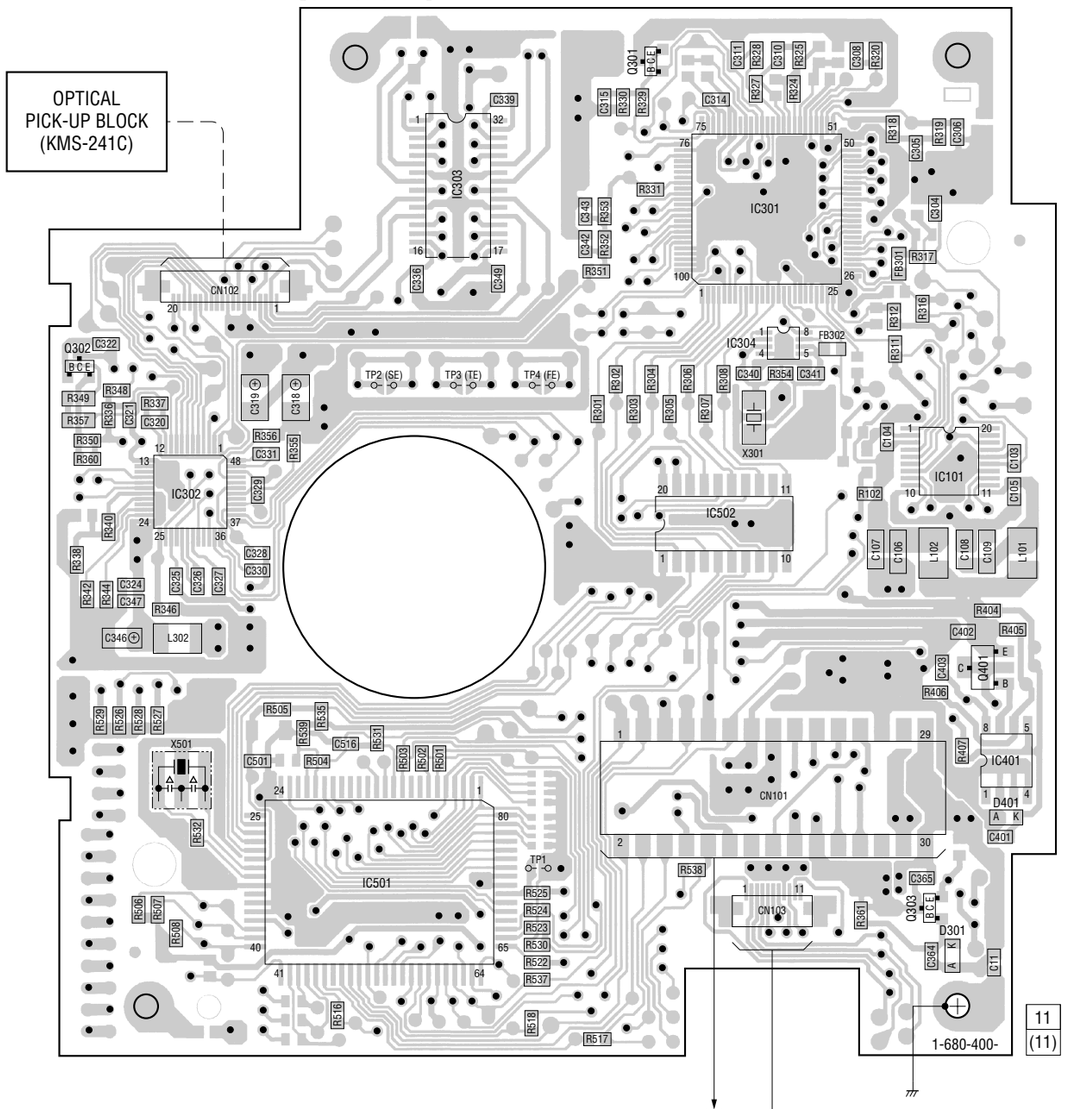
Note: The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

- B + : B+ Line.
- Power voltage is dc 14.4V and fed with regulated dc power supply from ACC and BATT cords.
- Voltages are taken with a VOM (Input impedance 10 MΩ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.
  - : MD PLAY
  - : FM
  - : MW/LW
  - : BUS AUDIO IN

4-6. PRINTED WIRING BOARDS – SERVO Section –

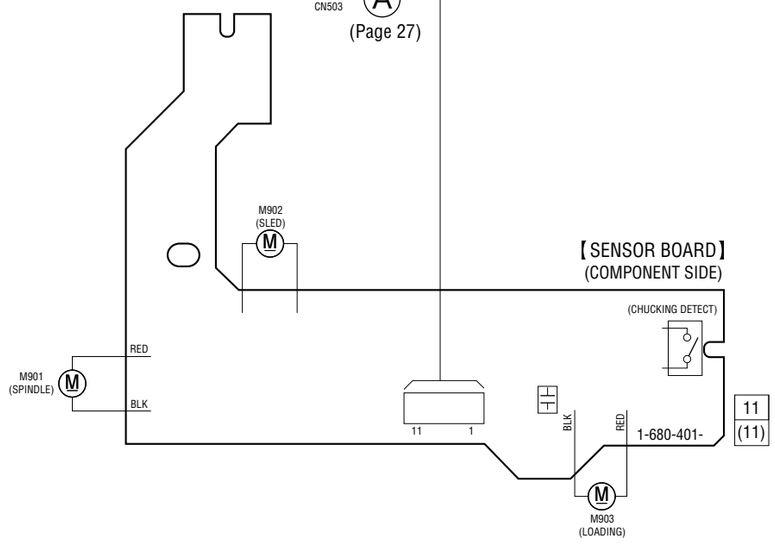
• See page 21 for Circuit Boards Location.

【SERVO BOARD】(COMPONENT SIDE)

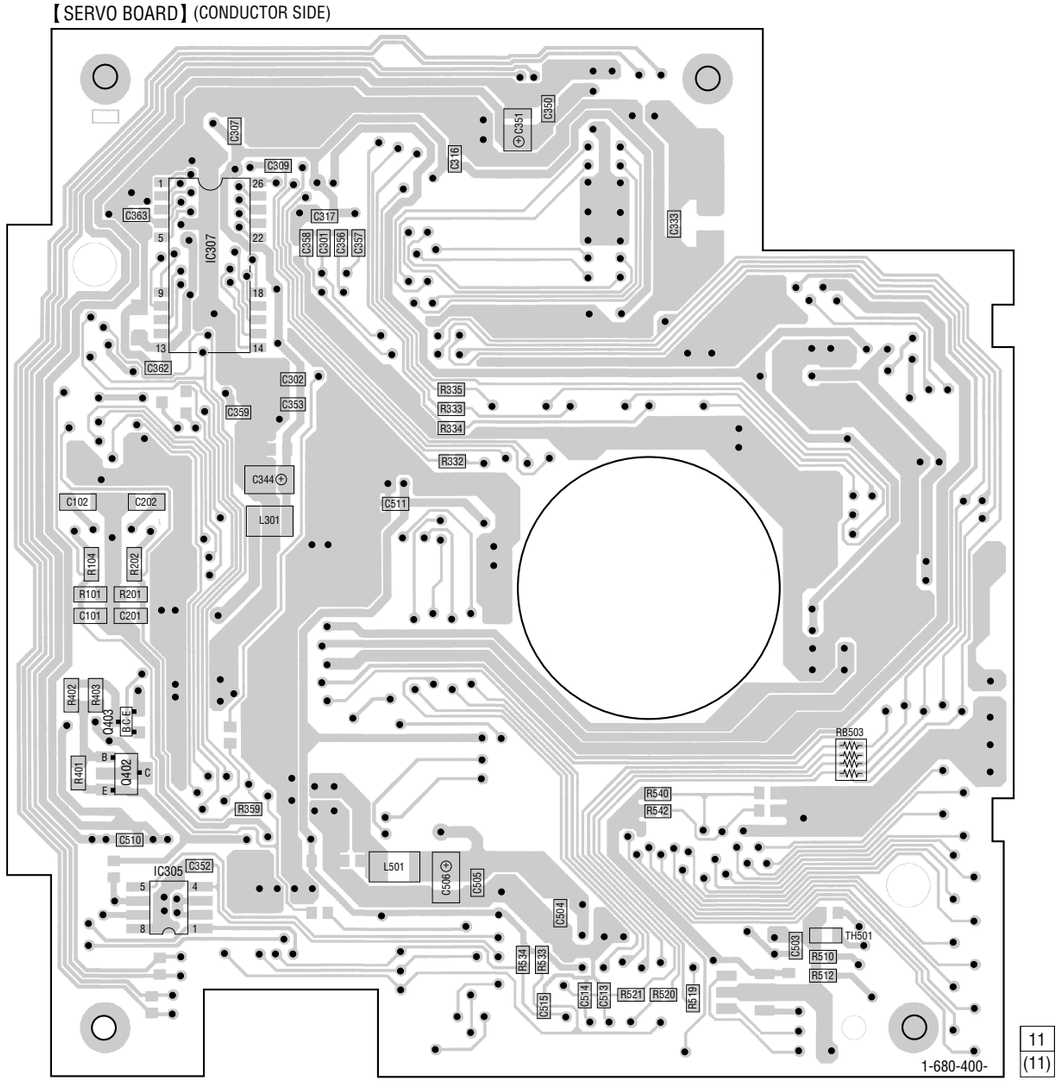


MAIN BOARD CN503 (A) (Page 27)

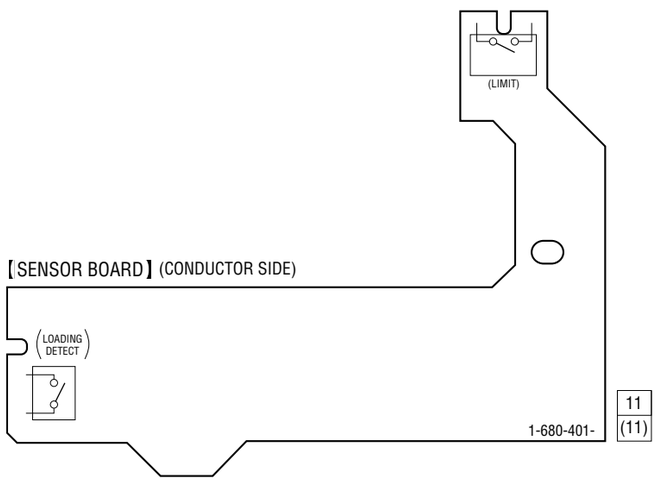
【SENSOR BOARD】(COMPONENT SIDE)



【SERVO BOARD】(CONDUCTOR SIDE)



【SENSOR BOARD】(CONDUCTOR SIDE)

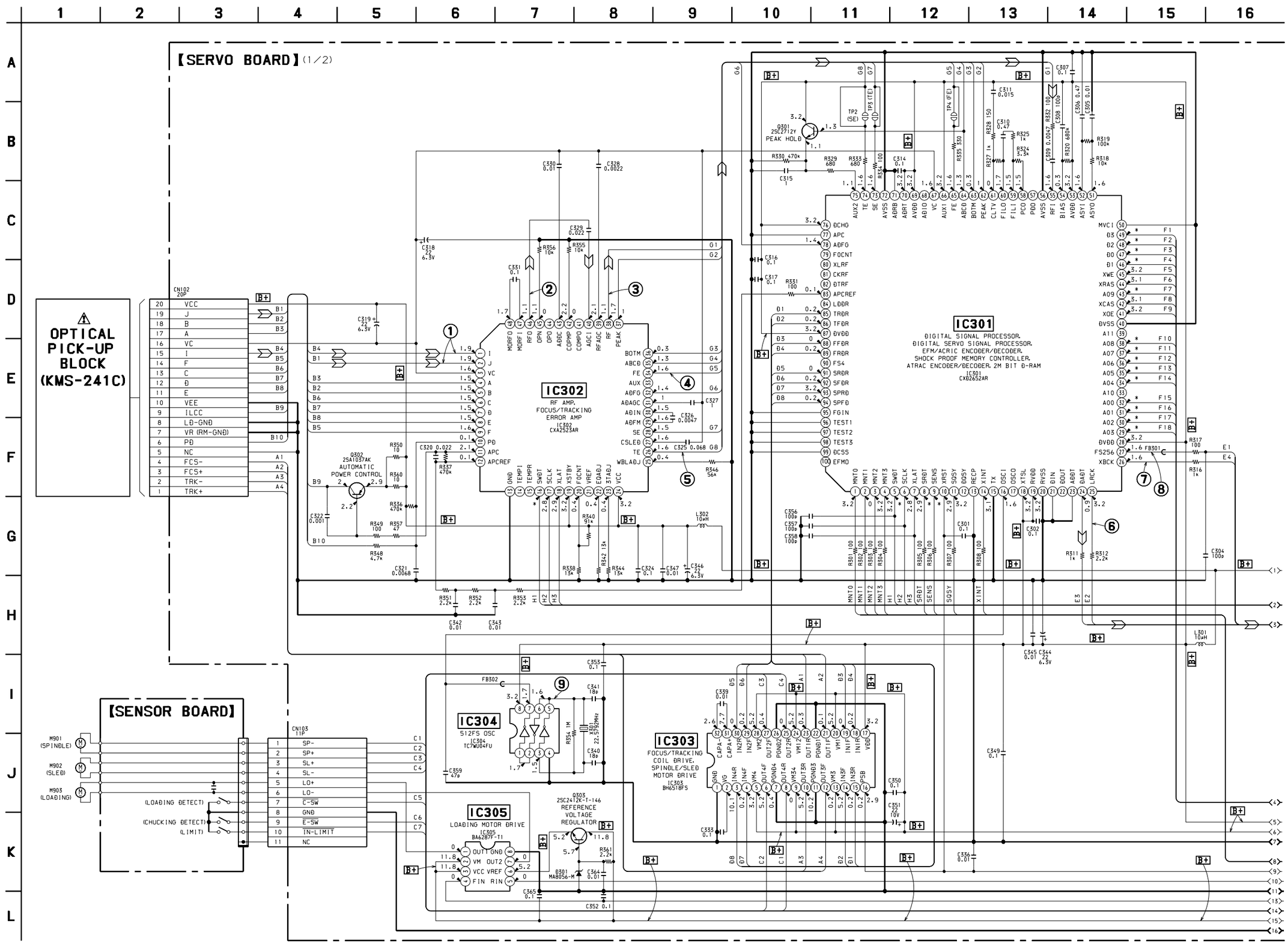


- **Semiconductor Location**

Ref. No.	Location
D301	G-7
D401	F-7
IC101	D-7
IC301	B-6
IC302	D-2
IC303	B-4
IC304	C-6
IC305	G-10
IC307	B-10
IC401	F-7
IC501	G-3
IC502	D-5
Q301	A-5
Q302	C-1
Q303	G-7
Q401	E-7
Q402	F-9
Q403	F-9

4-7. SCHEMATIC DIAGRAM – SERVO Section (1/2) –

• See page 31 for Waveforms. • See page 36 for IC Block Diagrams.

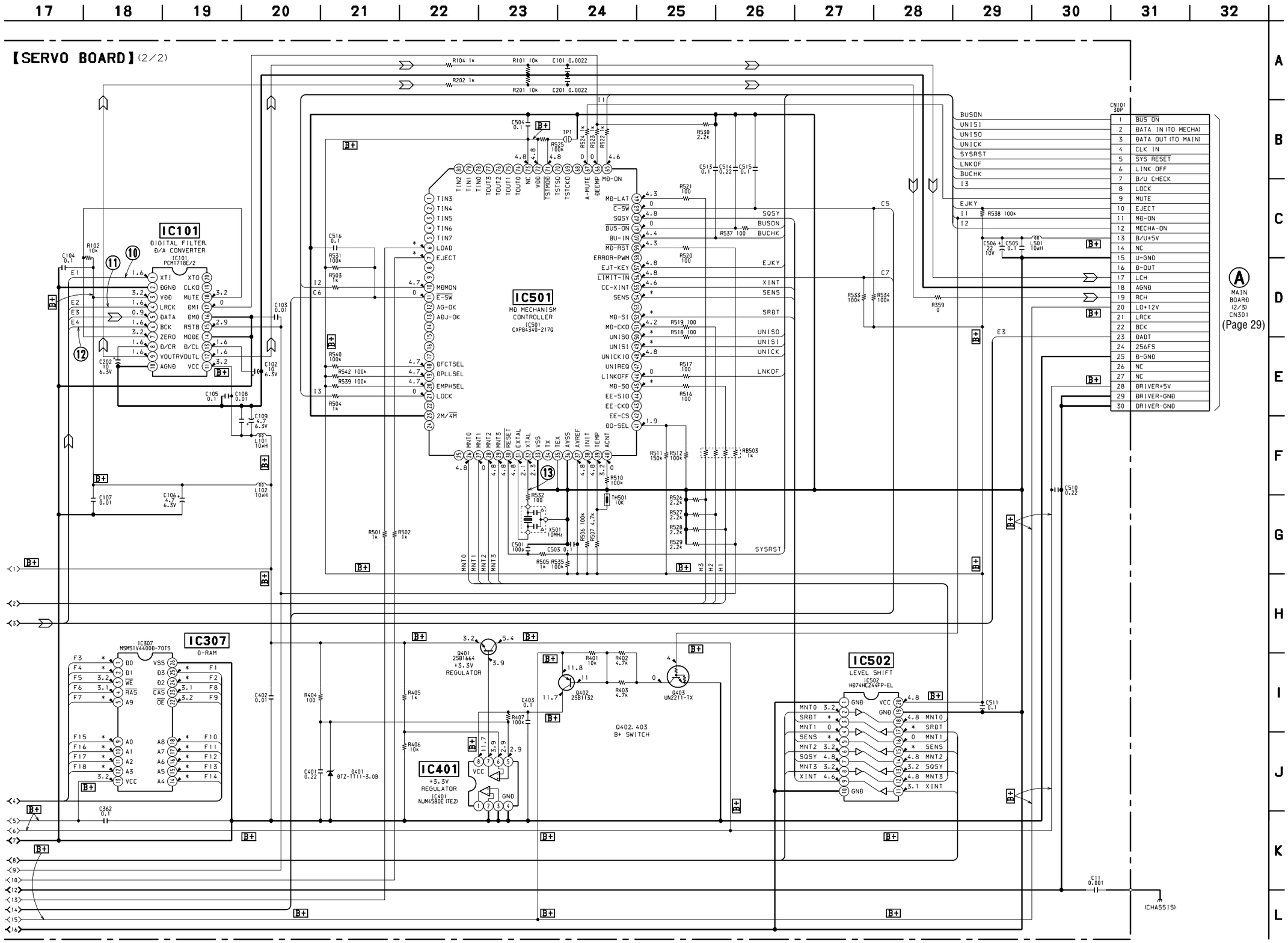


- Voltages and waveforms are dc with respect to ground under no-signal conditions.
  no mark : MD PLAY
  ∗ : Impossible to measure

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

4-8. SCHEMATIC DIAGRAM – SERVO Section (2/2) –

• See page 31 for Waveforms. • See page 36 for IC Block Diagram.



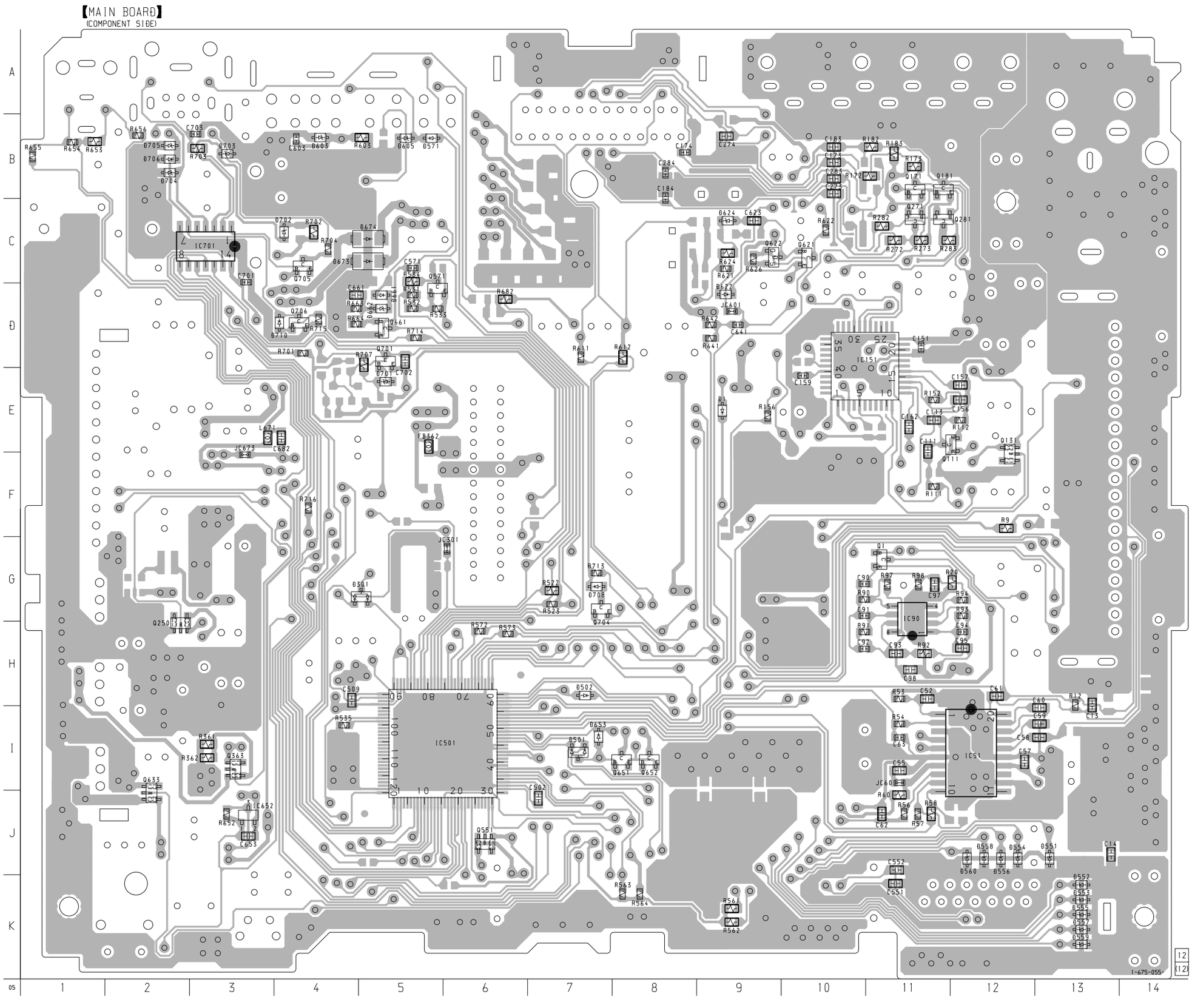
- Voltages and waveforms are dc with respect to ground under no-signal conditions.
  no mark : MD PLAY
  * : Impossible to measure

4-9. PRINTED WIRING BOARD – MAIN Board (Component Side) –

• See page 21 for Circuit Boards Location.

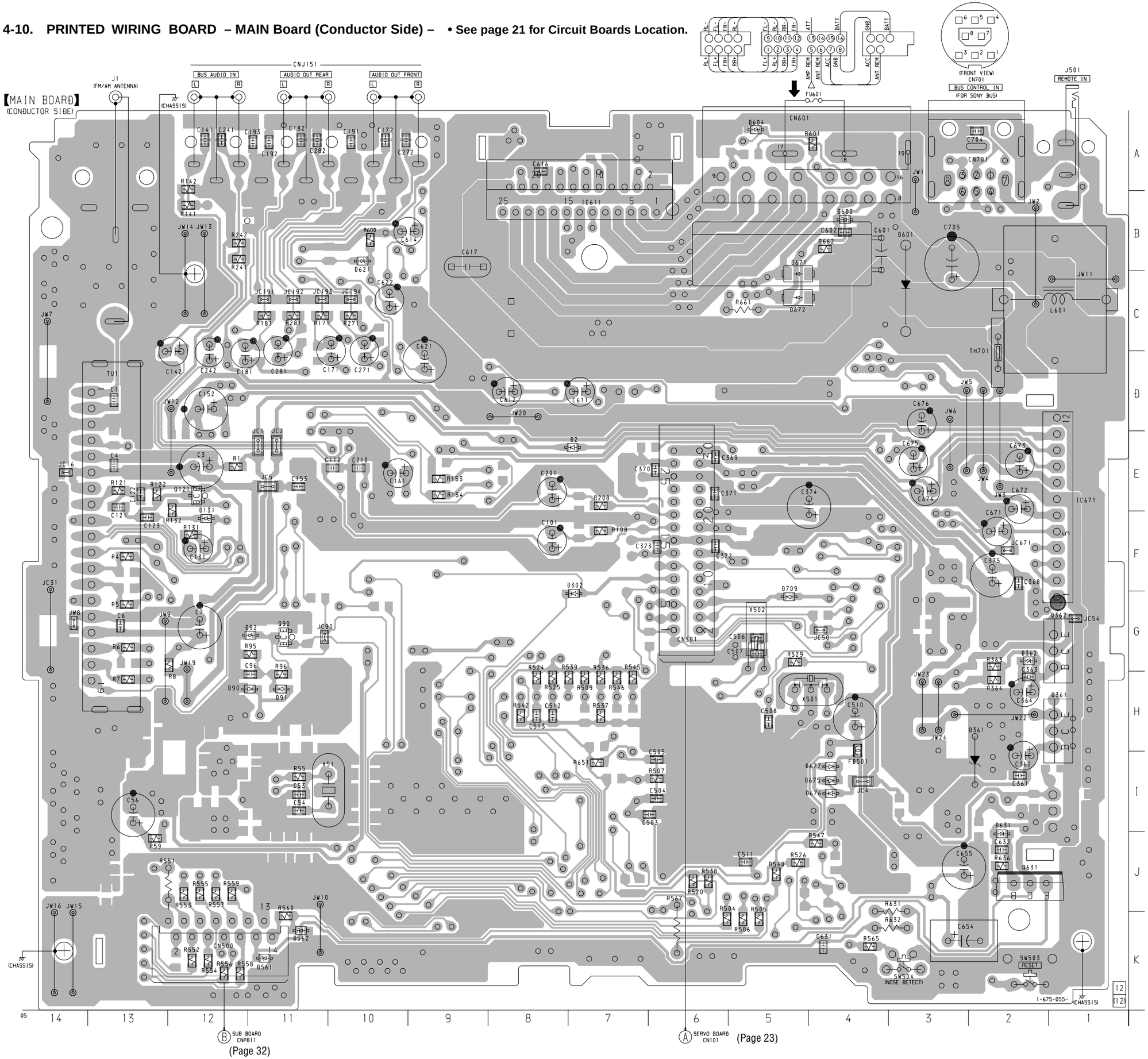
• **Semiconductor Location**

Ref. No.	Location
D1	E-9
D301	G-5
D501	I-7
D502	H-7
D551	J-13
D552	K-13
D553	K-13
D554	J-12
D555	K-13
D556	J-12
D557	K-13
D558	J-12
D559	K-13
D560	J-12
D571	B-5
D603	B-4
D605	B-5
D622	D-9
D624	C-9
D653	I-7
D661	D-5
D662	D-5
D673	C-5
D674	C-5
D701	E-5
D702	C-4
D703	B-3
D704	B-2
D705	B-2
D706	B-2
D708	G-7
D710	D-4
IC51	I-12
IC90	G-11
IC151	D-10
IC501	I-5
IC652	J-3
IC701	C-3
Q1	G-11
Q111	E-12
Q131	F-12
Q171	B-11
Q181	B-11
Q250	H-2
Q271	C-11
Q281	C-11
Q363	I-3
Q551	J-6
Q571	D-5
Q621	C-10
Q622	C-9
Q633	J-2
Q651	I-8
Q652	I-8
Q661	D-5
Q701	D-5
Q704	G-7
Q705	C-4
Q706	D-4



4-10. PRINTED WIRING BOARD – MAIN Board (Conductor Side) –

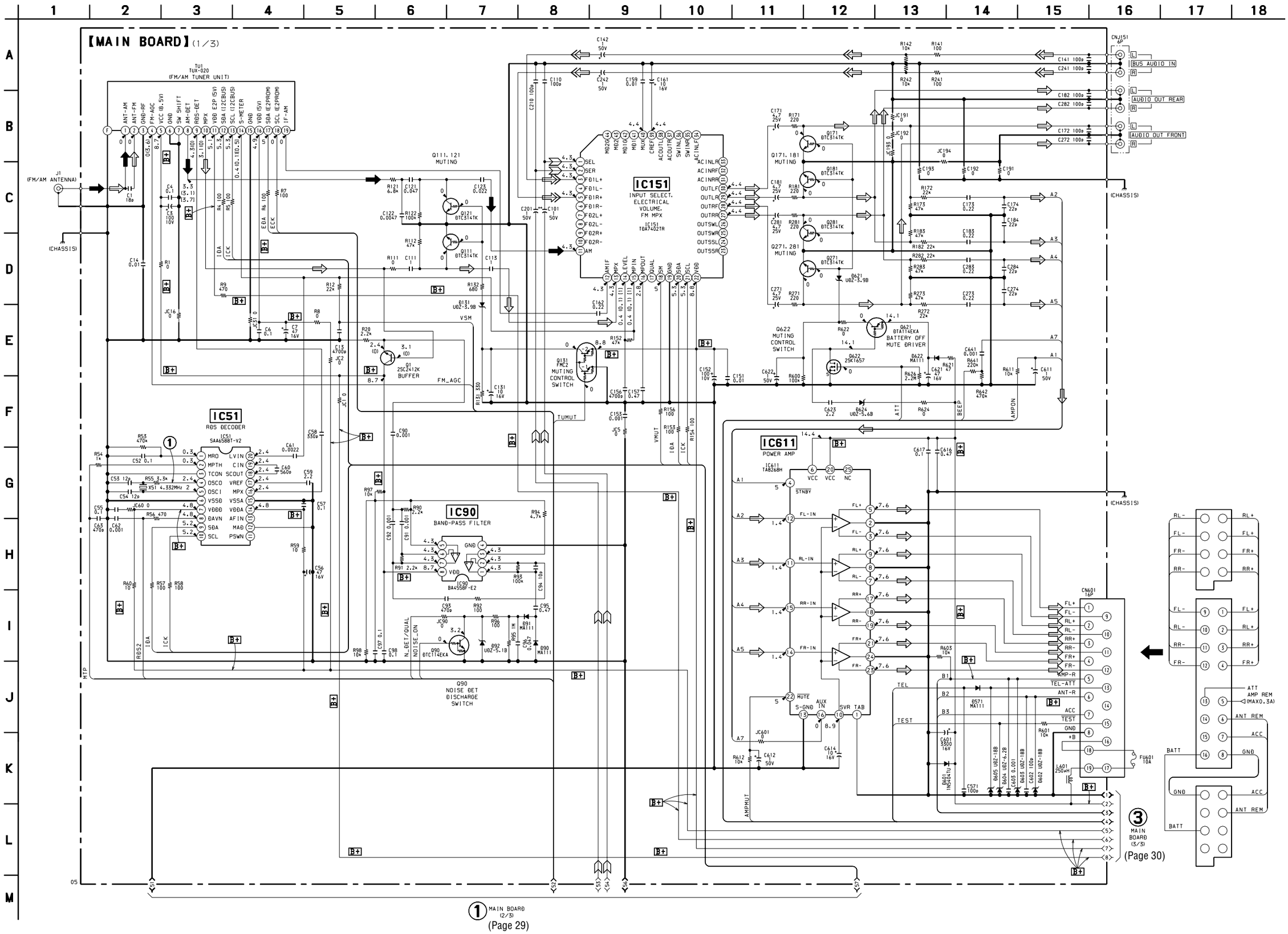
• See page 21 for Circuit Boards Location.



- **Semiconductor Location**

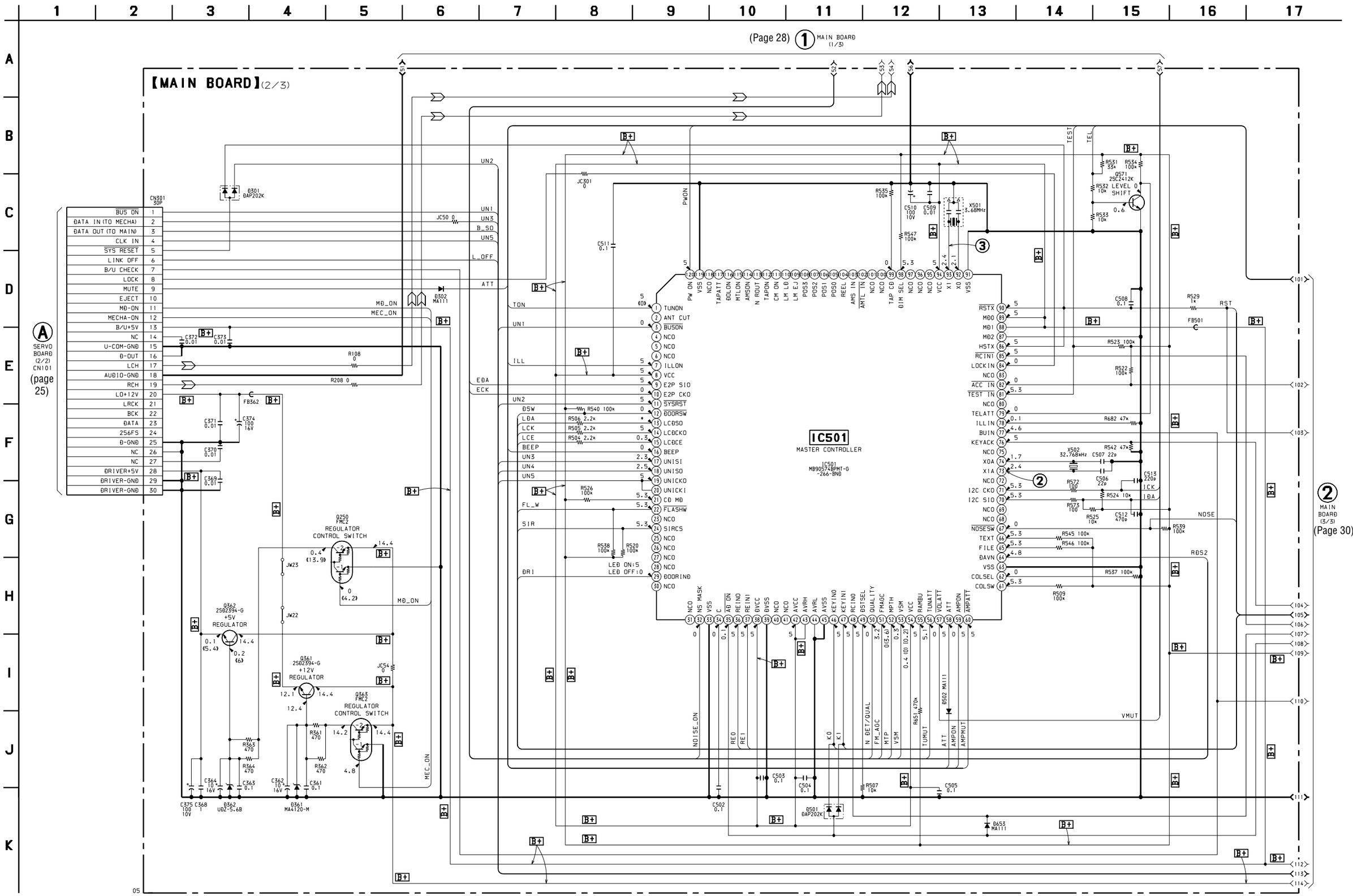
Ref. No.	Location
D2	E-7
D90	H-11
D91	H-11
D92	G-11
D131	F-12
D302	G-7
D361	I-2
D362	G-2
D561	K-11
D562	K-11
D601	C-3
D602	B-4
D604	A-5
D621	B-10
D631	J-2
D671	C-5
D672	C-5
D675	I-4
D676	I-4
D677	I-4
D709	G-5
IC611	A-7
IC671	F-1
Q90	G-11
Q121	E-12
Q361	H-1
Q362	G-1
Q631	J-2

4-11. SCHEMATIC DIAGRAM – MAIN Board (1/3) – • See page 31 for Waveform. • See page 36 for IC Block Diagrams.



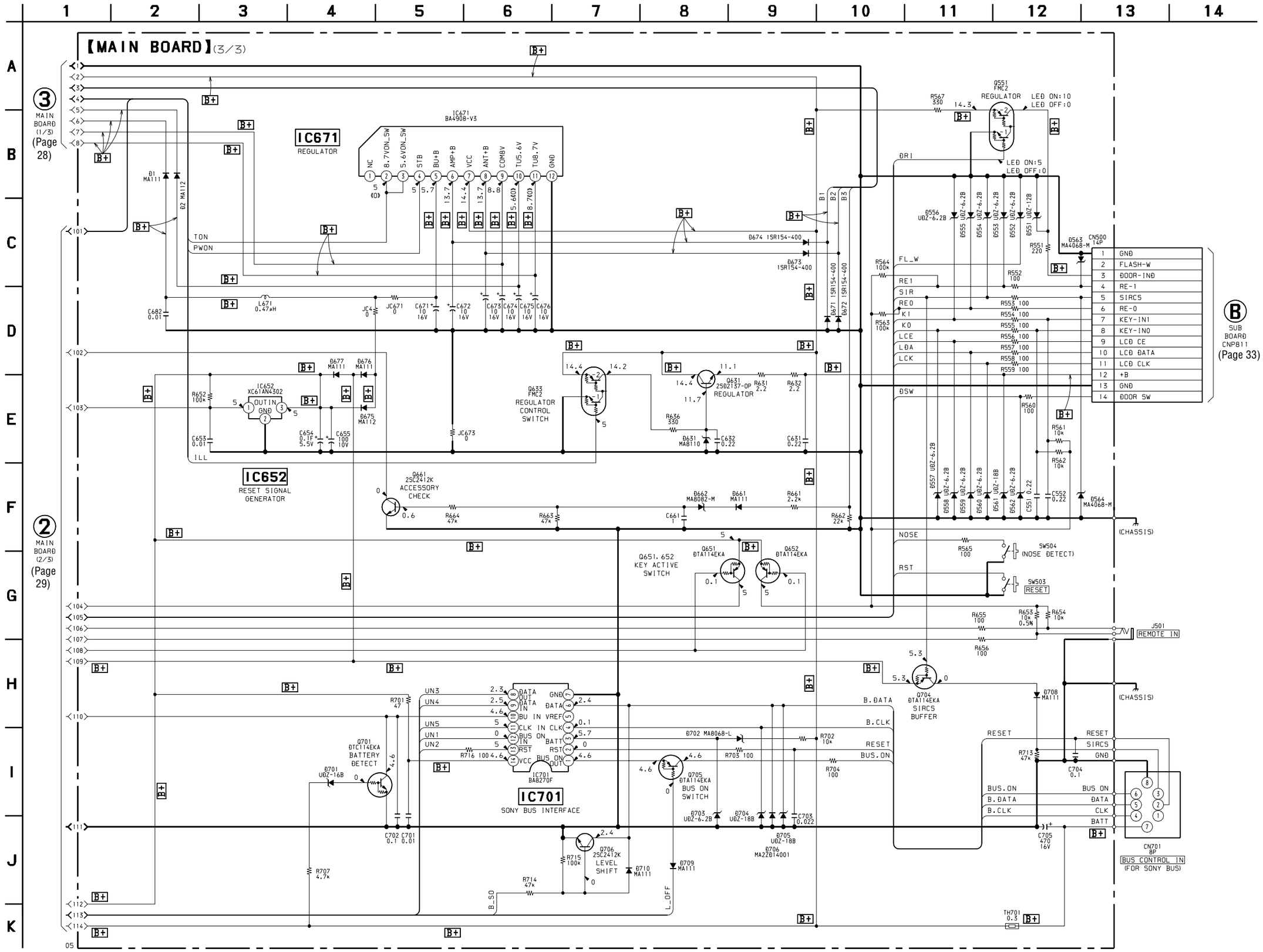
- Voltages and waveforms are dc with respect to ground under no-signal (detuned) conditions.
  no mark : FM
  ( ) : MW
  [ ] : LW

4-12. SCHEMATIC DIAGRAM – MAIN Board (2/3) – • See page 31 for Waveforms.



- Voltages and waveforms are dc with respect to ground under no-signal (detuned) conditions.
  no mark : FM
  ( ) : MW
  [ ] : LW
  ⟨⟨ ⟩⟩ : MD PLAY
  * : Impossible to measure

4-13. SCHEMATIC DIAGRAM – MAIN Board (3/3) – • See page 36 for IC Block Diagrams.

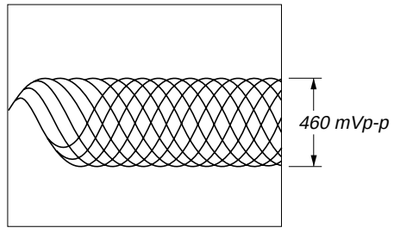


- Voltages are dc with respect to ground under no-signal (detuned) conditions.
  no mark : FM
  ⟨⟨ ⟩⟩ : MD PLAY

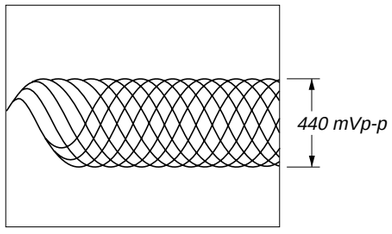
• **Waveforms**

– SERVO Board –

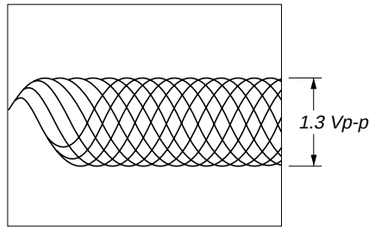
❶ IC302 ①, ② (I, J) (MD Play Mode)



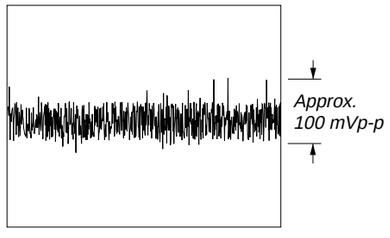
❷ IC302 ㊻ (RFO) (MD Play Mode)



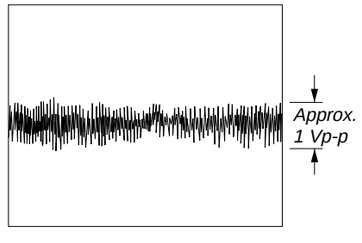
❸ IC302 ㊳ (RF) (MD Play Mode)



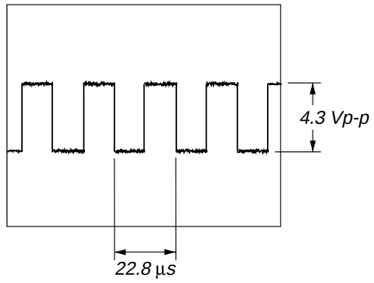
❹ IC302 ㉞ (FE) (MD Play Mode)



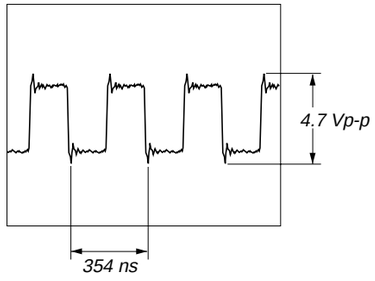
❺ IC302 ㉖ (TE) (MD Play Mode)



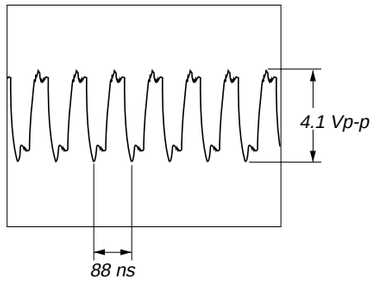
❻ IC301 ㉕ (LRCK) (MD Play Mode)



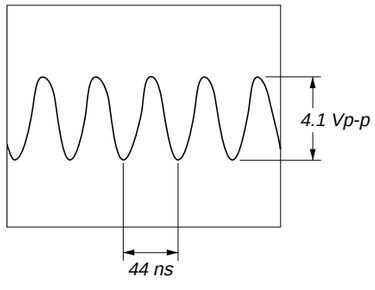
❼ IC301 ㉖ (XBCK) (MD Play Mode)



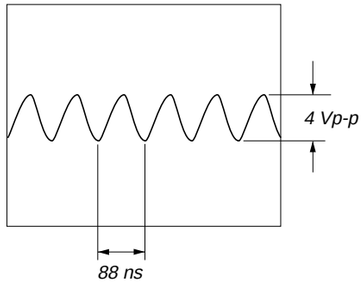
❽ IC301 ㉗ (FS256) (MD Play Mode)



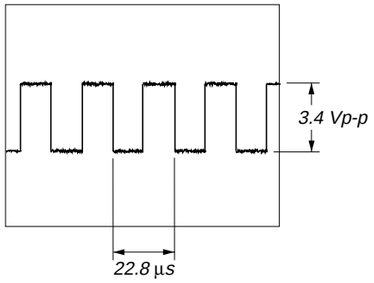
❾ IC304 ⑤ (MD Play Mode)



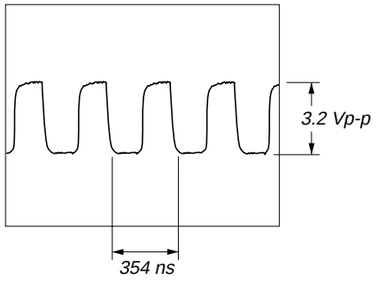
❿ IC101 ① (XTI) (MD Play Mode)



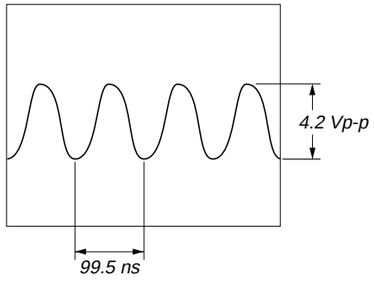
⓫ IC101 ④ (LRCK) (MD Play Mode)



⓬ IC101 ⑥ (BCK) (MD Play Mode)

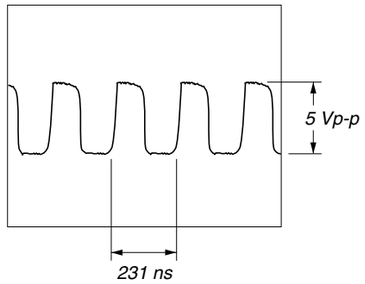


⓭ IC501 ㉜ (XTAL)

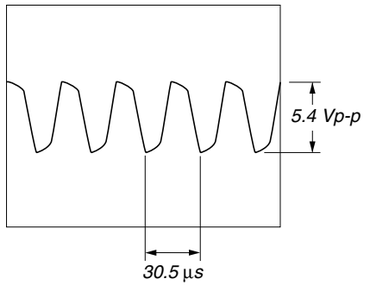


– MAIN Board –

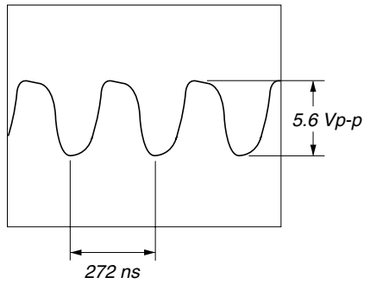
❶ IC51 ④ (OSCD)



❷ IC501 ㉓ (X1A)

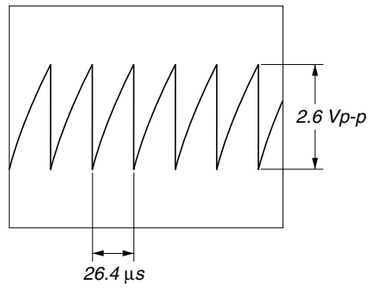


❸ IC501 ㉝ (X1)



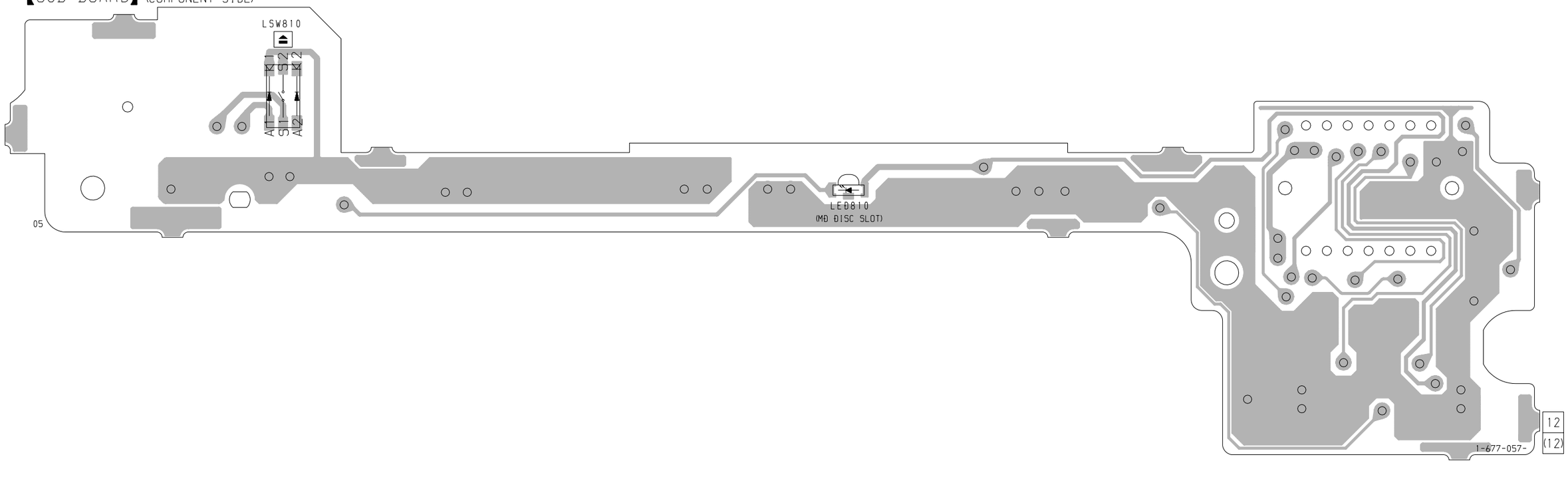
– KEY Board –

❶ IC901 ㊿ (OSC)

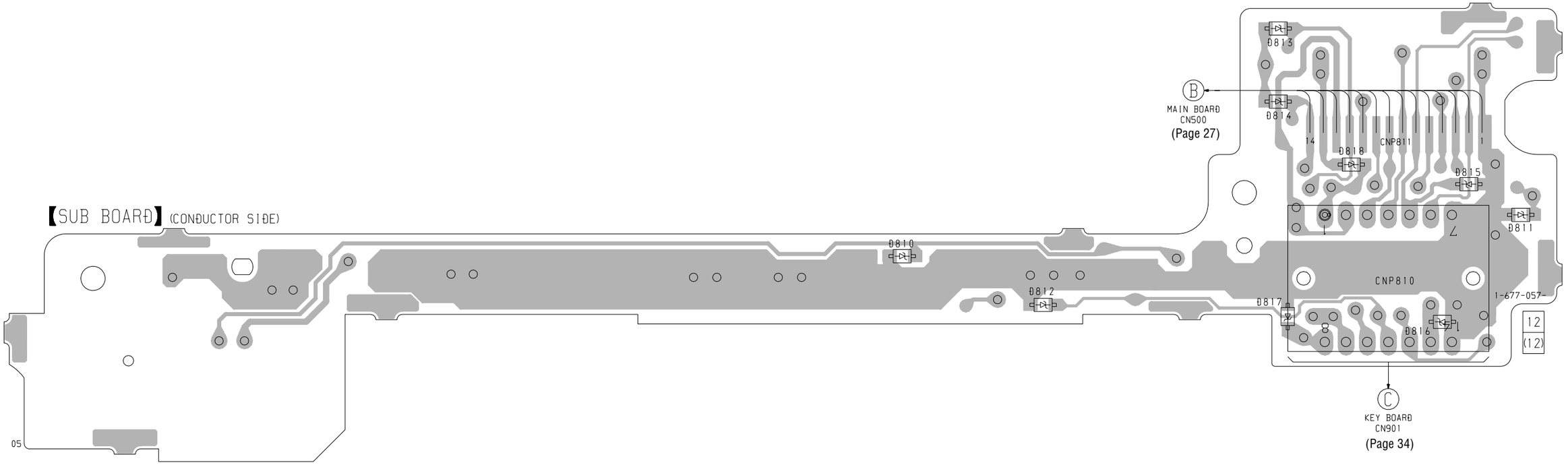


4-14. PRINTED WIRING BOARD – SUB Board – • See page 21 for Circuit Boards Location.

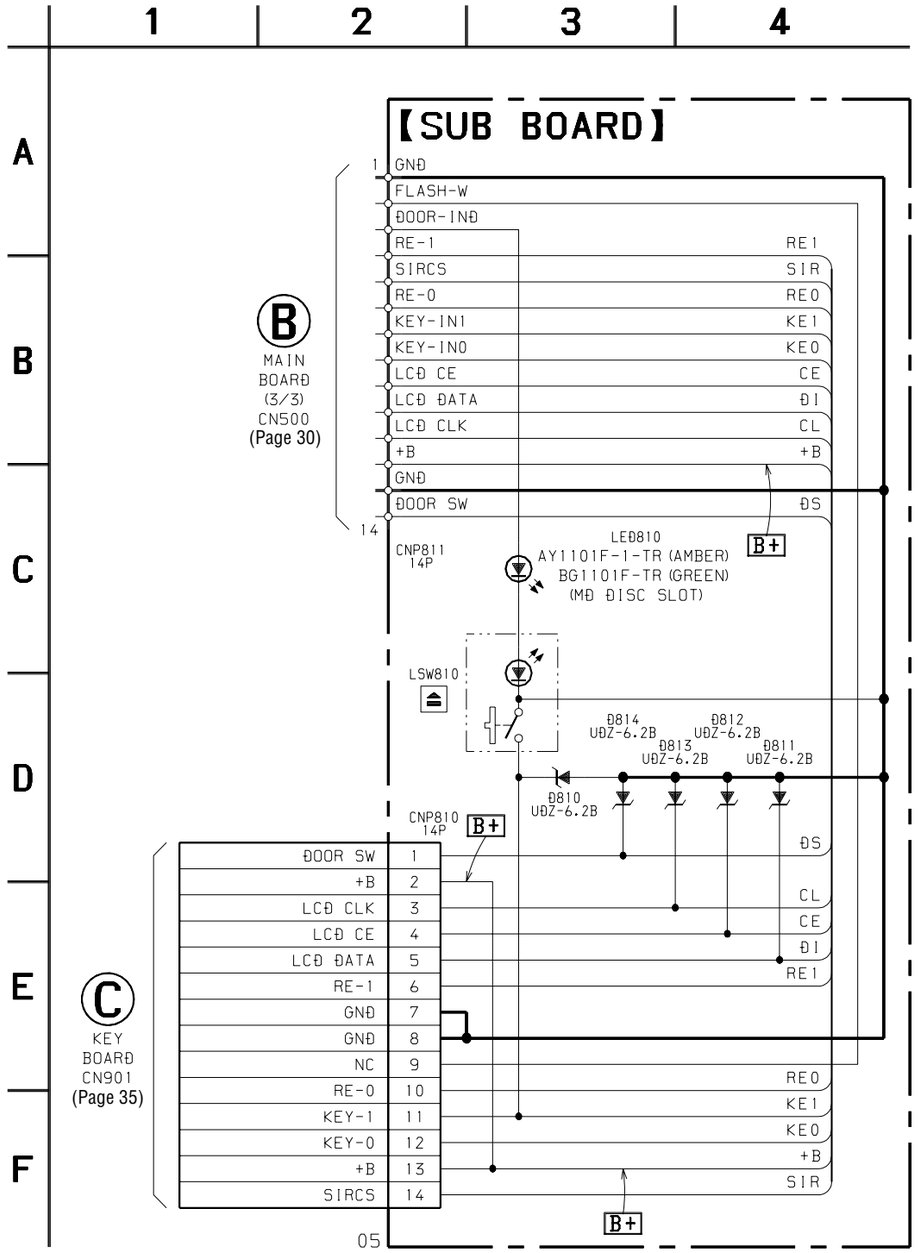
【SUB BOARD】 (COMPONENT SIDE)



【SUB BOARD】 (CONDUCTOR SIDE)



4-15. SCHEMATIC DIAGRAM – SUB Board –

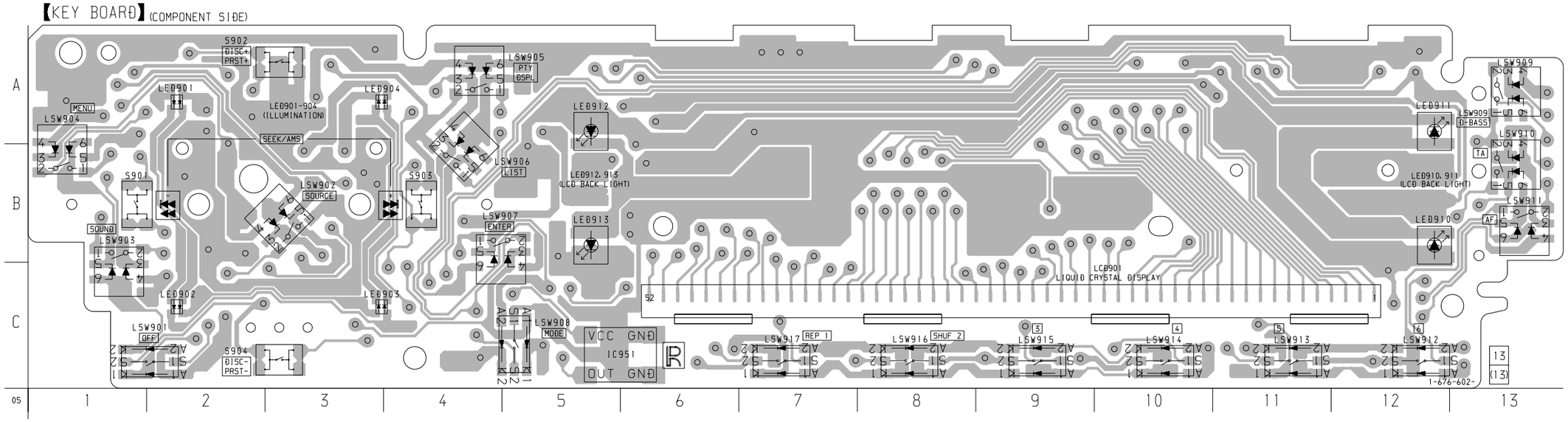


4-16. PRINTED WIRING BOARD – KEY Board – • See page 21 for Circuit Boards Location.

• **Semiconductor Location**

Ref. No.	Location
IC951	C-5
LED901	A-2
LED902	C-2
LED903	C-3
LED904	A-3
LED910	B-12
LED911	A-12
LED912	A-5
LED913	B-5

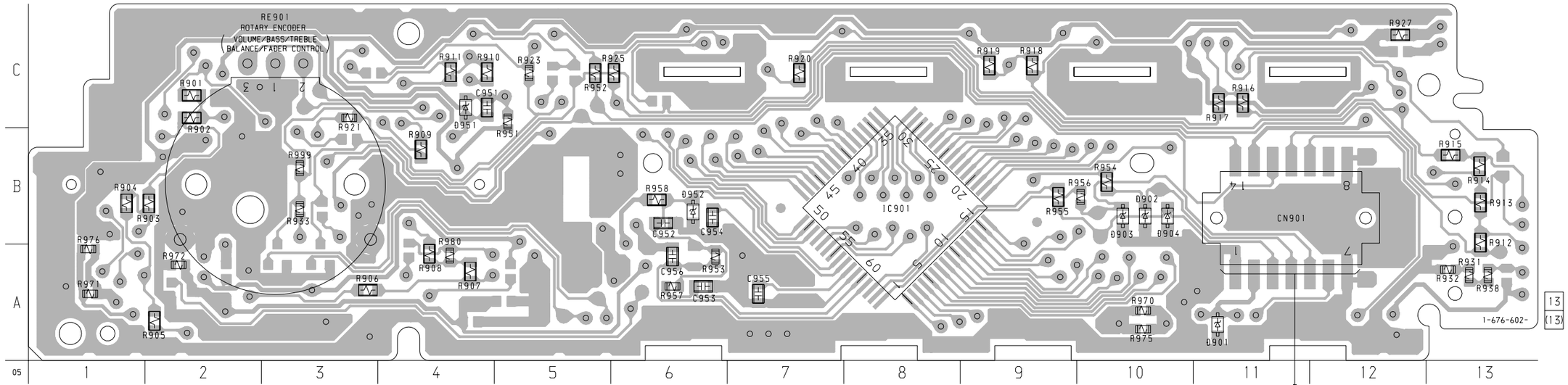
【KEY BOARD】(COMPONENT SIDE)



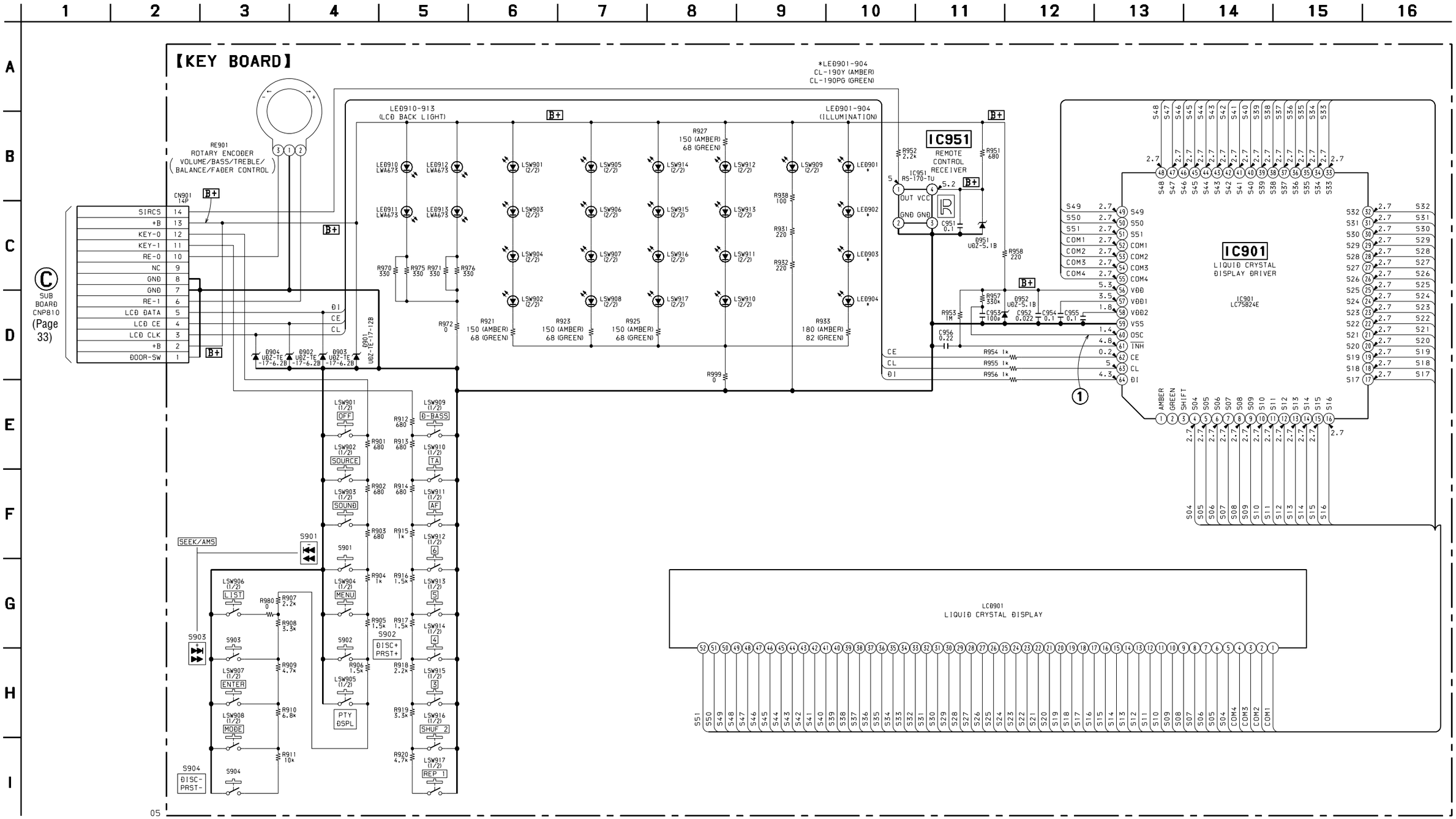
• **Semiconductor Location**

Ref. No.	Location
D901	A-11
D902	B-10
D903	B-10
D904	B-10
D951	C-4
D952	B-6
IC901	B-8

【KEY BOARD】(CONDUCTOR SIDE)



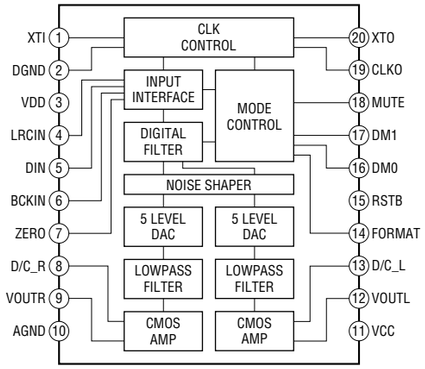
4-17. SCHEMATIC DIAGRAM – KEY Board – • See page 31 for Waveform.



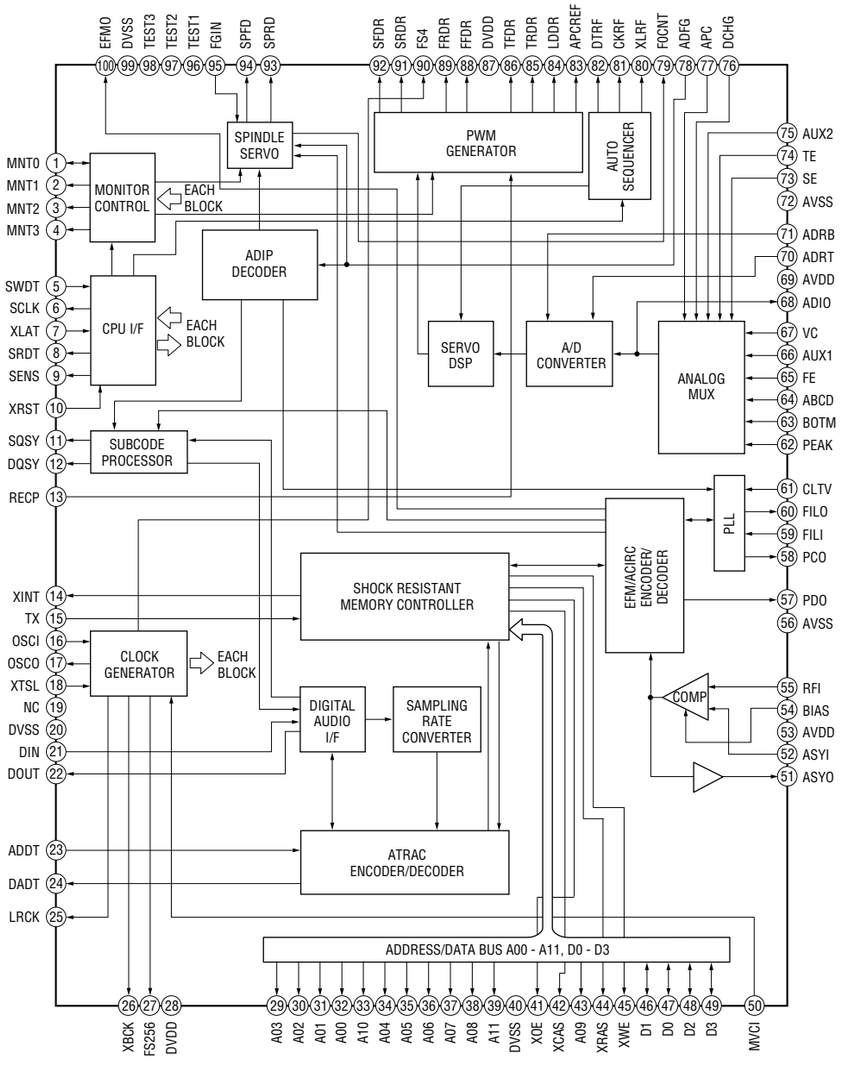
- Voltages and waveforms are dc with respect to ground under no-signal (detuned) conditions.
  no mark : FM

• **IC Block Diagrams**
– SERVO Board –

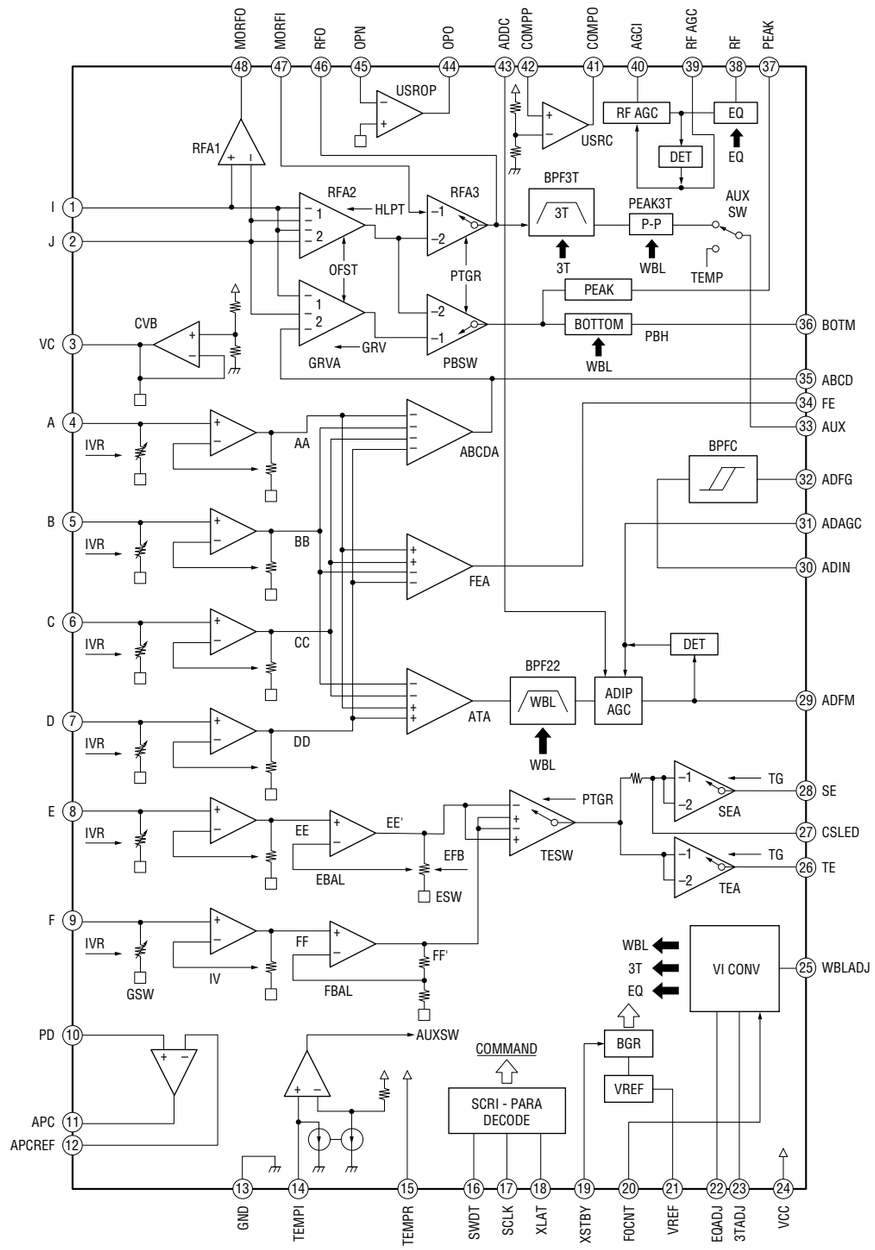
IC101 PCM1718E/2K



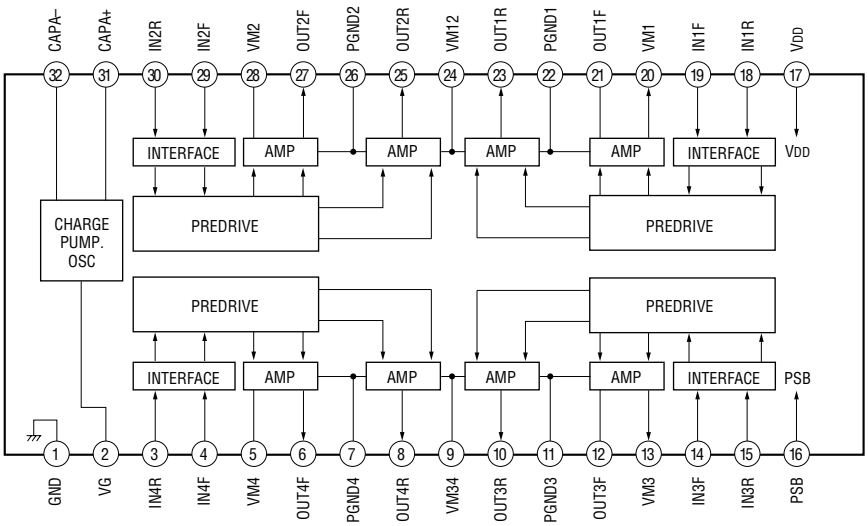
IC301 CXD2652AR



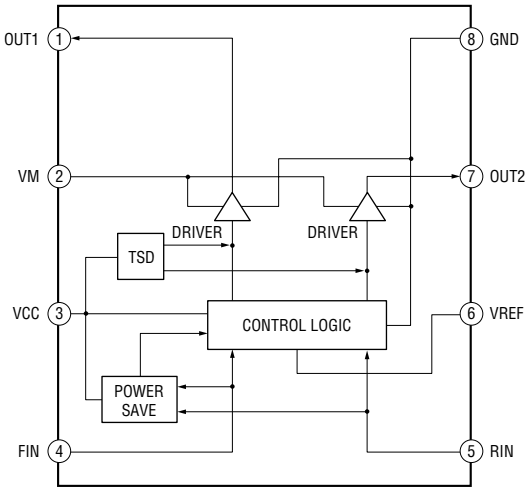
IC302 CXA2523AR



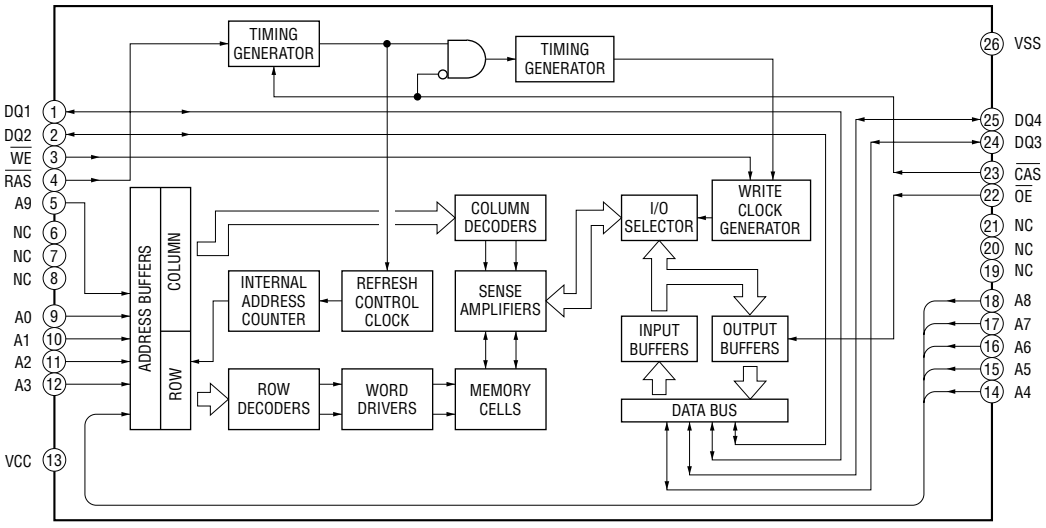
IC303 BH6518FS-E2



IC305 BA6287F

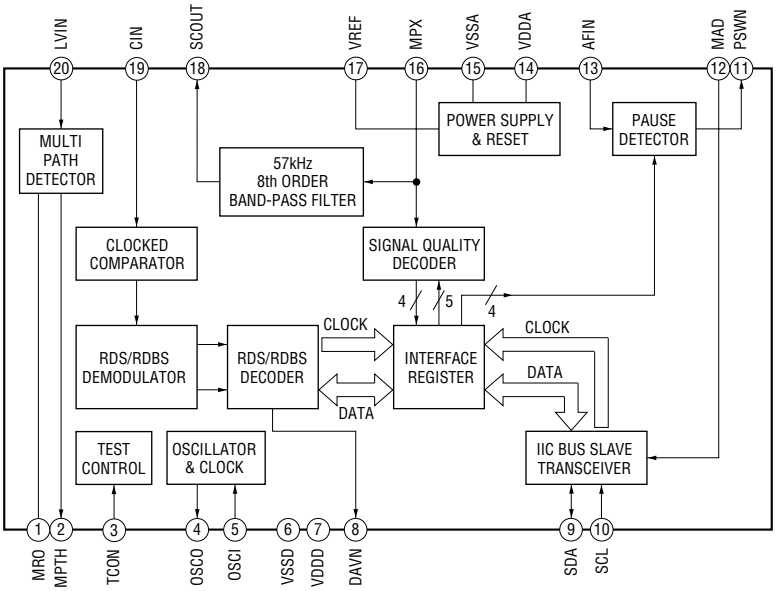


IC307 MSM51V4400D-70TS-K

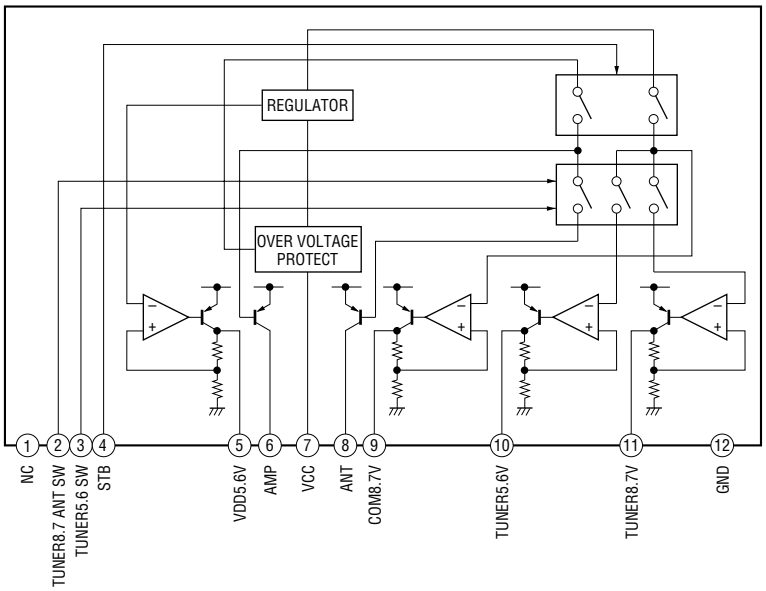


– MAIN Board –

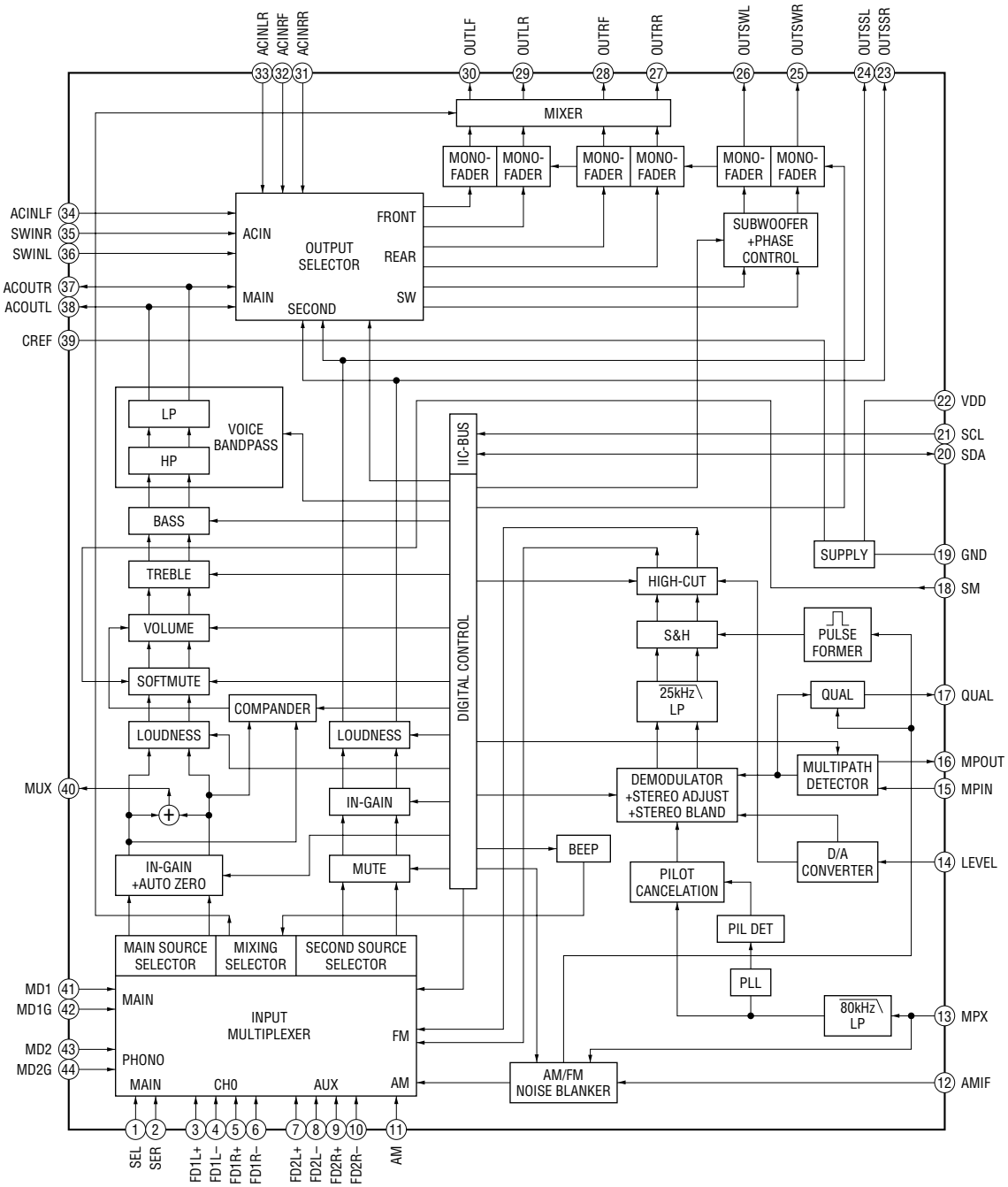
IC51 SAA6588T-118



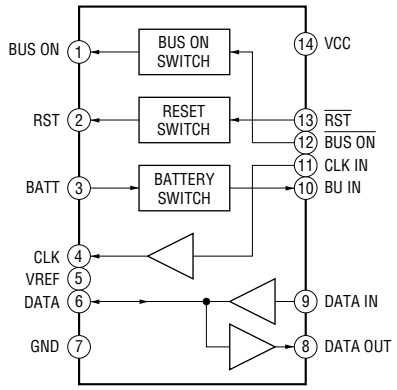
IC671 BA4908-V3



IC151 TDA7402TR



IC701 BA8270F-E2



4-18. IC PIN FUNCTION DESCRIPTION

- **SERVO BOARD IC301 CXD2652AR**
  (DIGITAL SIGNAL PROCESSOR, DIGITAL SERVO PROCESSOR, EFM/ACIRC ENCODER/DECODER, SHOCK PROOF MEMORY CONTROLLER, ATRAC ENCODER/DECODER, 2M BIT D-RAM)

Pin No.	Pin Name	I/O	Description
1	MNT0	O	Focus OK signal output to the MD mechanism controller (IC501) "H" is output when focus is on ("L": NG)
2	MNT1	O	Track jump detection signal output to the MD mechanism controller (IC501)
3	MNT2	O	Busy monitor signal output to the MD mechanism controller (IC501)
4	MNT3	O	Spindle servo lock status monitor signal output to the MD mechanism controller (IC501)
5	SWDT	I	Writing serial data signal input from the MD mechanism controller (IC501)
6	SCLK	I	Serial data transfer clock signal input from the MD mechanism controller (IC501)
7	XLAT	I	Serial data latch pulse signal input from the MD mechanism controller (IC501)
8	SRDT	O (3)	Reading serial data signal output to the MD mechanism controller (IC501)
9	SENS	O (3)	Internal status (SENSE) output to the MD mechanism controller (IC501)
10	XRST	I	Reset signal input from the MD mechanism controller (IC501) "L": reset
11	SQSY	O	Subcode Q sync (SCOR) output to the MD mechanism controller (IC501) "L" is output every 13.3 msec Almost all, "H" is output
12	DQSY	O	Digital In U-bit CD format subcode Q sync (SCOR) output terminal "L" is output every 13.3 msec Almost all, "H" is output Not used (open)
13	RECP	I	Laser power selection signal input terminal "L": playback mode, "H": recording mode (fixed at "L" in this set)
14	XINT	O	Interrupt status output to the MD mechanism controller (IC501)
15	TX	I	Recording data output enable signal input terminal Writing data transmission timing input (Also serves as the magnetic head on/off output) Not used (fixed at "L")
16	OSCI	I	System clock signal (512Fs=22.5792 MHz) input from the oscillator circuit
17	OSCO	O	System clock signal (512Fs=22.5792 MHz) output terminal Not used (open)
18	XTSL	I	Input terminal for the system clock frequency setting "L": 45.1584 MHz, "H": 22.5792 MHz (fixed at "H" in this set)
19	RVDD	—	Power supply terminal (+3.3V) (digital system)
20	RVSS	—	Ground terminal (digital system)
21	DIN	I	Digital audio signal input terminal when recording mode Not used (fixed at "L")
22	DOUT	O	Digital audio signal output terminal when playback mode Not used (open)
23	ADDT	I	Recording data input terminal Not used (fixed at "L")
24	DADT	O	Playback data output to the PCM1718E (IC101)
25	LRCK	O	L/R sampling clock signal (44.1 kHz) output to the PCM1718E (IC101)
26	XBCK	O	Bit clock signal (2.8224 MHz) output to the PCM1718E (IC101)
27	FS256	O	Clock signal (11.2896 MHz) output to the PCM1718E (IC101)
28	DVDD	—	Power supply terminal (+3.3V) (digital system)
29 to 32	A03 to A00	O	Address signal output to the D-RAM (IC307)
33	A10	O	Address signal output to the external D-RAM Not used (open)
34 to 38	A04 to A08	O	Address signal output to the D-RAM (IC307)
39	A11	O	Address signal output to the external D-RAM Not used (open)
40	DVSS	—	Ground terminal (digital system)
41	XOE	O	Output enable signal output to the D-RAM (IC307) "L" active
42	XCAS	O	Column address strobe signal output to the D-RAM (IC307) "L" active
43	A09	O	Address signal output to the D-RAM (IC307)
44	XRAS	O	Row address strobe signal output to the D-RAM (IC307) "L" active
45	XWE	O	Write enable signal output to the D-RAM (IC307) "L" active

Pin No.	Pin Name	I/O	Description
46	D1	I/O	Two-way data bus with the D-RAM (IC307)
47	D0	I/O	
48	D2	I/O	
49	D3	I/O	
50	MVCI	I	Digital in PLL oscillation input from the external VCO Not used (fixed at “L”)
51	ASYO	O	Playback EFM full-swing output
52	ASYI	I (A)	Playback EFM asymmetry comparator voltage input
53	AVDD	—	Power supply terminal (+3.3V) (analog system)
54	BIAS	I (A)	Playback EFM asymmetry circuit constant current input
55	RFI	I (A)	Playback EFM RF signal input from the CXA2523AR (IC302)
56	AVSS	—	Ground terminal (analog system)
57	PDO	O (3)	Phase comparison output for clock playback analog PLL of the playback EFM Not used (open)
58	PCO	O (3)	Phase comparison output for master clock of the recording/playback EFM master PLL
59	FILI	I (A)	Filter input for master clock of the recording/playback master PLL
60	FILO	O (A)	Filter output for master clock of the recording/playback master PLL
61	CLTV	I (A)	Internal VCO control voltage input of the recording/playback master PLL
62	PEAK	I (A)	Light amount signal (RF/ABCD) peak hold input from the CXA2523AR (IC302)
63	BOTM	I (A)	Light amount signal (RF/ABCD) bottom hold input from the CXA2523AR (IC302)
64	ABCD	I (A)	Light amount signal (ABCD) input from the CXA2523AR (IC302)
65	FE	I (A)	Focus error signal input from the CXA2523AR (IC302)
66	AUX1	I (A)	Auxiliary signal (I_3 signal/temperature signal) input terminal Not used (fixed at “H”)
67	VC	I (A)	Middle point voltage (+1.65V) input from the CXA2523AR (IC302)
68	ADIO	O (A)	Monitor output of the A/D converter input signal Not used (open)
69	AVDD	—	Power supply terminal (+3.3V) (analog system)
70	ADRT	I (A)	A/D converter operational range upper limit voltage input terminal (fixed at “H” in this set)
71	ADRB	I (A)	A/D converter operational range lower limit voltage input terminal (fixed at “L” in this set)
72	AVSS	—	Ground terminal (analog system)
73	SE	I (A)	Sled error signal input from the CXA2523AR (IC302)
74	TE	I (A)	Tracking error signal input from the CXA2523AR (IC302)
75	AUX2	I (A)	Auxiliary signal input Light amount signal input from the CXA2523AR (IC302)
76	DCHG	I (A)	Connected to the +3.3V power supply
77	APC	I (A)	Error signal input for the laser automatic power control Not used (fixed at “L”)
78	ADFG	I	ADIP duplex FM signal (22.05 kHz ± 1 kHz) input from the CXA2523AR (IC302)
79	F0CNT	O	Filter f0 control signal output terminal Not used (open)
80	XLRF	O	Serial data latch pulse signal output terminal Not used (open)
81	CKRF	O	Serial data transfer clock signal output terminal Not used (open)
82	DTRF	O	Writing serial data output terminal Not used (open)
83	APCREF	O	Control signal output to the reference voltage generator circuit for the laser automatic power control
84	LDDR	O	PWM signal output for the laser automatic power control Not used (open)
85	TRDR	O	Tracking servo drive PWM signal (–) output to the BH6518FS (IC303)
86	TFDR	O	Tracking servo drive PWM signal (+) output to the BH6518FS (IC303)
87	DVDD	—	Power supply terminal (+3.3V) (digital system)
88	FFDR	O	Focus servo drive PWM signal (+) output to the BH6518FS (IC303)

Pin No.	Pin Name	I/O	Description
89	FRDR	O	Focus servo drive PWM signal (–) output to the BH6518FS (IC303)
90	FS4	O	Clock signal (176.4 kHz) output terminal (X'tal system) Not used (open)
91	SRDR	O	Sled servo drive PWM signal (–) output to the BH6518FS (IC303)
92	SFDR	O	Sled servo drive PWM signal (+) output to the BH6518FS (IC303)
93	SPRD	O	Spindle servo drive PWM signal (–) output to the BH6518FS (IC303)
94	SPFD	O	Spindle servo drive PWM signal (+) output to the BH6518FS (IC303)
95	FGIN	I	Not used (fixed at "L")
96	TEST1	I	Input terminal for the test (fixed at "L")
97	TEST2	I	
98	TEST3	I	
99	DVSS	—	Ground terminal (digital system)
100	EFMO	O	EFM signal output terminal when recording mode Not used (open)

* I (A) for analog input, O (3) for 3-state output, and O (A) for analog output in the column I/O.

• **SERVO BOARD IC302 CXA2523AR (RF AMP, FOCUS/TRACKING ERROR AMP)**

Pin No.	Pin Name	I/O	Description
1	I	I	I-V converted RF signal I input from the optical pick-up block detector
2	J	I	I-V converted RF signal J input from the optical pick-up block detector
3	VC	O	Middle point voltage (+1.65V) generation output terminal
4 to 9	A to F	I	Signal input from the optical pick-up detector
10	PD	I	Light amount monitor input from the optical pick-up block laser diode
11	APC	O	Laser amplifier output terminal to the automatic power control circuit
12	APCREF	I	Reference voltage input terminal for setting laser power
13	GND	—	Ground terminal
14	TEMPI	I	Connected to the temperature sensor Not used (open)
15	TEMPR	O	Output terminal for a temperature sensor reference voltage Not used (open)
16	SWDT	I	Writing serial data input from the MD mechanism controller (IC501)
17	SCLK	I	Serial data transfer clock signal input from the MD mechanism controller (IC501)
18	XLAT	I	Serial data latch pulse signal input from the MD mechanism controller (IC501)
19	XSTBY	I	Standby signal input terminal "L": standby (fixed at "H" in this set)
20	F0CNT	I	Center frequency control voltage input terminal of internal circuit (BPF22, BPF3T, EQ) input terminal
21	VREF	O	Reference voltage output terminal Not used (open)
22	EQADJ	I	Center frequency setting terminal for the internal circuit (EQ)
23	3TADJ	I	Center frequency setting terminal for the internal circuit (BPF3T)
24	VCC	—	Power supply terminal (+3.3V)
25	WBLADJ	I	Center frequency setting terminal for the internal circuit (BPF22)
26	TE	O	Tracking error signal output to the CXD2652AR (IC301)
27	CSLED	I	Connected to the external capacitor for low-pass filter of the sled error signal
28	SE	O	Sled error signal output to the CXD2652AR (IC301)
29	ADFM	O	FM signal output of the ADIP
30	ADIN	I	Receives a ADIP FM signal in AC coupling
31	ADAGC	I	Connected to the external capacitor for ADIP AGC
32	ADFG	O	ADIP duplex signal (22.05 kHz ± 1 kHz) output to the CXD2652AR (IC301)
33	AUX	O	Auxiliary signal (I_3 signal/temperature signal) output terminal Not used (open)
34	FE	O	Focus error signal output to the CXD2652AR (IC301)
35	ABCD	O	Light amount signal (ABCD) output to the CXD2652AR (IC301)
36	BOTM	O	Light amount signal (RF/ABCD) bottom hold output to the CXD2652AR (IC301)
37	PEAK	O	Light amount signal (RF/ABCD) peak hold output to the CXD2652AR (IC301)
38	RF	O	Playback EFM RF signal output to the CXD2652AR (IC301)
39	RFAGC	I	Connected to the external capacitor for RF auto gain control circuit
40	AGCI	I	Receives a RF signal in AC coupling
41	COMPO	O	User comparator output terminal Not used (open)
42	COMPP	I	User comparator input terminal Not used (fixed at "L")
43	ADDC	I	Connected to the external capacitor for cutting the low band of the ADIP amplifier
44	OPO	O	User operational amplifier output terminal Not used (open)
45	OPN	I	User operational amplifier inversion input terminal Not used (fixed at "L")
46	RFO	O	RF signal output
47	MORFI	I	Receives a MO RF signal in AC coupling
48	MORFO	O	MO RF signal output

• **SERVO BOARD IC501 CXP84340-217Q (MD MECHANISM CONTROLLER)**

Pin No.	Pin Name	I/O	Description
1 to 5	TIN3 to TIN7	I/O	Input of the 4×8 matrix test keys (“L” is always output, except in test mode) Not used (open)
6	LOAD	O	Loading motor control signal output to the motor driver (IC305) “H” active *1
7	EJECT	O	Loading motor control signal output to the motor driver (IC305) “H” active *1
8, 9	—	O	Not used (open)
10	MDMON	O	Power supply on/off control signal output of the MD mechanism deck section main power supply and loading motor drive (IC305) power supply “H”: power on
11	$\overline{\text{E-SW}}$	I	Inputs the disc loading completion detect switch detection signal “L”: When completed of the disc loading operation
12	AG-OK	O	Output of aging status in test mode “L”: under aging, “H”: aging completed Not used (open)
13	ADJ-OK	O	Output of status when aging completed in test mode “L”: aging NG, “H”: aging OK Not used (open)
14 to 17	—	O	Not used (open)
18	DFCTSEL	I	Select whether defect function is used for the CXD2652AR (IC301) “L”: used this function , “H”: not used this function (fixed at “H” in this set)
19	DPLLSEL	I	Select whether digital PLL function is used for the CXD2652AR (IC301) “L”: used this function , “H”: not used this function (fixed at “H” in this set)
20	EMPHSEL	I	Select whether emphasis signal output from pin or unilink data “L”: outputs from both pin and unilink data, “H”: output from pin only (fixed at “H” in this set)
21	LOCK	O	Mini-disc lock detection signal output to the master controller (IC501) “H”: lock
22	—	O	Not used (open)
23	2M/$\overline{\text{4M}}$	I	Select whether D-RAM capacitance 2M bit or 4M bit “L”: 4M bit (external D-RAM) , “H”: 2M bit (internal D-RAM of CXD2652AR) (fixed at “L” in this set)
24, 25	—	O	Not used (open)
26	MNT0	I	Focus OK signal input from the CXD2652AR (IC301) “H” is input when focus is on (“L”: NG)
27	MNT1	I	Track jump detection signal input from the CXD2652AR (IC301)
28	MNT2	I	Busy monitor signal input from the CXD2652AR (IC301)
29	MNT3	I	Spindle servo lock status monitor signal input from the CXD2652AR (IC301)
30	$\overline{\text{RESET}}$	I	System reset signal input from the master controller (IC501), reset signal generator (IC652) and reset switch (SW503) “L”: reset For several hundreds msec. after the power supply rises, “L” is input, then it changes to “H”
31	EXTAL	O	Main system clock output terminal (10 MHz)
32	XTAL	I	Main system clock input terminal (10 MHz)
33	VSS	—	Ground terminal
34	TX	O	Sub system clock output terminal (32.768 kHz) Not used (open)
35	TEX	I	Sub system clock input terminal (32.768 kHz) Not used (fixed at “L”)
36	AVSS	—	Ground terminal (for A/D converter)
37	AVREF	I	Reference voltage input terminal (+5V) (for A/D converter)
38	INIT	I	Initial reset signal input terminal (A/D input) (fixed at “H”)
39	TEMP	I	Temperature sensor (TH501) input terminal (A/D input)
40	ACNT	I	Select the number of load/eject aging times (A/D input) 0H – 54H (30 times), 55H – 0A9H (20 times), 0AAH – 0FFH (10 times)
41	DO-SEL	I	Select the digital output bits (A/D input)
42	EE-CS	O	Chip select signal output to the external EEPROM device Not used (open)
43	EE-CKO	O	Serial data transfer clock signal output to the external EEPROM device Not used (open)
44	EE-SIO	I/O	Two way data bus with the external EEPROM device Not used (open)
45	MD-SO	O	Writing serial data signal output to the CXD2652AR (IC301) and CXA2523AR (IC302)

Pin No.	Pin Name	I/O	Description
46	LINKOFF	O	Unilink on/off control signal output for the SONY bus "L": link on, "H": link off
47	UNIREQ	O	Data request signal output terminal (for SONY bus) "H": request on Not used (open)
48	UNICKIO	I/O	Serial clock signal input from the master controller (IC501) or serial clock signal output to the SONY bus interface (IC701) and master controller (IC501) (for SONY bus)
49	UNISI	I	Serial data input from the SONY bus interface (IC701)
50	UNISO	O	Serial data output to the SONY bus interface (IC701)
51	MD-CKO	O	Serial data transfer clock signal output to the CXD2652AR (IC301) and CXA2523AR (IC302)
52	MD-SI	I	Reading serial data signal input from the CXD2652AR (IC301)
53	—	O	Not used (open)
54	SENS	I	Internal status (SENSE) input from the CXD2652AR (IC301)
55	CC-XINT	I	Interrupt status input from the CXD2652AR (IC301)
56	$\overline{\text{LIMIT-IN}}$	I	Detection input from the sled limit-in detect switch The optical pick-up is inner position when "L"
57	EJT-KEY	I	Eject request signal input terminal "L": eject on Not used (fixed at "H")
58	ERROR-PWM	O	PWM error monitor output terminal (C1and ATER is output when test mode) Not used (open)
59	$\overline{\text{MD-RST}}$	O	Reset signal output to the PCM1718E (IC101), CXD2652AR (IC301) and BH6518FS (IC303) "L": reset
60	BU-IN	I	Battery detect signal input from the SONY bus interface (IC701) and battery check circuit "H": battery on
61	$\overline{\text{BUS-ON}}$	I	SONY bus on/off control signal input from the master controller (IC501) "L": bus on
62	SQSY	I	Subcode Q sync (SCOR) input from the CXD2652AR (IC301) "L" is input every 13.3 msec Almost all, "H" is input
63	$\overline{\text{C-SW}}$	I	Inputs the disc loading start or disc eject completion detect switch detection signal "L": When start or eject completed of the disc loading operation
64	MD-LAT	O	Serial data latch pulse signal output to the CXD2652AR (IC301) and CXA2523AR (IC302)
65	MD-ON	O	Power supply on/off control signal output of the MD mechanism deck section main power supply "H": power on
66	DEEMP	O	Emphasis on/off control signal output to the PCM1718E (IC101) "H": emphasis on
67	A-MUTE	O	Audio muting on/off control signal output
68	—	O	Not used (open)
69	TSTCKO	O	Output of clock signal for the test mode display Not used (open)
70	TSTSO	O	Output of data for the test mode display Not used (open)
71	$\overline{\text{TSTMOD}}$	I	Setting terminal for the test mode "L": test mode, "H": normal mode
72	VCC	—	Power supply terminal (+5V)
73	NC	I	Not used (fixed at "H")
74 to 77	TOUT0 to TOUT3	O	Output of the 4×8 matrix test keys Not used (open)
78 to 80	TIN0 to TIN2	I/O	Input of the 4×8 matrix test keys ("L" is always output, except in test mode) Not used (open)

*1 Loading motor (M903) control

Operation / Terminal	IN	OUT	BRAKE	STOP
LOAD (pin ⑥)	"H"	"L"	"H"	"L"
EJECT (pin ⑦)	"L"	"H"	"H"	"L"

• **MAIN BOARD IC501 MB90574BPMT-G-266-BND (MASTER CONTROLLER)**

Pin No.	Pin Name	I/O	Description
1	TUNON	O	Tuner system power supply on/off control signal output to the BA4908 (IC671) "H": tuner power on
2	ANT CUT	O	Tuner system power supply on/off control signal output terminal "H": tuner power on Not used (open)
3	$\overline{\text{BUSON}}$	O	Bus on/off control signal output to the MD mechanism controller (IC501) and SONY bus interface (IC701) "L": bus on
4 to 6	NCO	O	Not used (open)
7	ILLON	O	Power on/off control signal output of the illumination LED and liquid crystal display driver (IC901) "H": power on
8	VCC	—	Power supply terminal (+5V)
9	E2P SIO	I/O	Two-way data E2P bus with the FM/AM tuner unit (TU1)
10	E2P CKO	O	E2P bus clock signal output to the FM/AM tuner unit (TU1)
11	$\overline{\text{SYSRST}}$	O	System reset signal output to the MD mechanism controller (IC501) and SONY bus interface (IC701) "L": reset
12	$\overline{\text{DOORSW}}$	I	Front panel open/close detection signal input "L" is input when the front panel is closed
13	LCDSO	O	Serial data output to the liquid crystal display driver (IC901)
14	LCDCKO	O	Serial data transfer clock signal output to the liquid crystal display driver (IC901)
15	LCDCE	O	Chip enable signal output to the liquid crystal display driver (IC901) "H" active
16	BEEP	O	Beep sound drive signal output to the power amplifier (IC611)
17	UNISI	I	Serial data input from the SONY bus interface (IC701)
18	UNISO	O	Serial data output to the SONY bus interface (IC701)
19	UNICKO	O	Serial clock signal output to the MD mechanism controller (IC501) and SONY bus interface (IC701)
20	UNICKI	I	Serial clock signal input from the MD mechanism controller (IC501) (for SONY bus)
21	CD MD	I	Setting terminal for the internal mechanism CD or MD "L": CD, "H": MD (fixed at "H" in this set)
22	$\overline{\text{FLASHW}}$	I	Internal flash memory data write mode detection signal input terminal "L": data write mode Not used
23	NCO	O	Not used (open)
24	SIRCS	I	Sircs remote control signal input from the remote control receiver (IC951)
25 to 28	NCO	O	Not used (open)
29	DOORIND	O	LED drive signal output of the MD disc slot illumination and ⏏ indicator (LED810, LSW810) "H": LED on "H" is output to turn on LED when front panel is opened
30, 31	NCO	O	Not used (open)
32	NS MASK	O	Discharge control signal output for the noise detection circuit "H": discharge
33	VSS	—	Ground terminal
34	C	—	Connected to coupling capacitor for the power supply
35	$\overline{\text{AD ON}}$	O	A/D converter power control signal output When the KEYACK (pin ⑯) that controls reference voltage power for key A/D conversion input is active, "L" is output from this terminal to enable the input
36, 37	REIN0, REIN1	I	Dial pulse input of the rotary encoder (RE901) (for VOLUME/BASS/TREBLE/BALANCE/FADER control)
38	DVCC	—	Power supply terminal (+5V) (for D/A converter)
39	DVSS	—	Ground terminal (for D/A converter)
40, 41	NCO	O	Not used (open)
42	AVCC	—	Power supply terminal (+5V) (for analog system)
43	AVRH	I	Reference voltage (+5V) input terminal (for A/D converter)

Pin No.	Pin Name	I/O	Description
44	AVRL	I	Reference voltage (0V) input terminal (for A/D converter)
45	AVSS	—	Ground terminal (for analog system)
46	KEYIN0	I	Key input terminal (A/D input) (LSW901 to LSW908, S901 to S904) OFF, SOURCE, SOUND, MENU, PTY DSPL, LIST, ENTER, MODE, SEEK/AMS - ⏮ ◀◀ + ▶▶⏭ ▶▶, DISC/PRST +, PRST/DISC – keys input
47	KEYIN1	I	Key input terminal (A/D input) (LSW810, LSW909 to LSW917) ⏏, D-BASS, TA, AF, 6 to 3 SHUF 2, REP 1 keys input
48	RCIN0	I	Rotary remote commander key input terminal (A/D input)
49	DSTSEL	I	Destination setting terminal (fixed at "L" in this set)
50	QUALITY	I	Noise level detection signal input at SEEK mode (A/D input)
51	FMAGC	I	FM AGC detection signal input from the FM/AM tuner unit (TU1) (A/D input)
52	MPTH	I	Multi-path detection signal input from the RDS decoder (IC51) (A/D input)
53	VSM	I	FM and AM signal meter voltage detection input from the FM/AM tuner unit (TU1) (A/D input)
54	VCC	—	Power supply terminal (+5V)
55	RAMBU	I	Internal RAM reset detection signal input Input terminal to check that RAM data are not destroyed due to low voltage This checking is made within 100 msec after reset Not used (fixed at "H")
56	TUNATT	O	Muting on/off control signal output of the FM/AM tuner signal "H": muting on
57	$\overline{\text{VOLATT}}$	O	Pre amplifier muting on/off control signal output to the electrical volume (IC151) "L": muting on
58	ATT	O	Audio line muting on/off control signal output "H": muting on
59	AMPON	O	Standby on/off control signal output to the power amplifier (IC611) "L": standby mode, "H": ampifier on
60	$\overline{\text{AMPATT}}$	O	Power amplifier muting on/off control signal output to the power amplifier (IC611) "L": muting on
61	COLSW	I	Setting terminal for the illumination color "L": 2 color, "H": 1 color (fixed at "H" in this set)
62	COLSEL	I	Setting terminal for the illumination color "L": amber, "H": green (fixed at "L" in this set)
63	VSS	—	Ground terminal
64	DAVN	I	Data transmit completed detection signal input from the RDS decoder (IC51) "H" active
65	FILE	I	Setting terminal for the custom file "L": unavailable, "H": available (fixed at "H" in this set)
66	TEXT	I	Setting terminal for the CD text "L": unavailable, "H": available (fixed at "H" in this set)
67	$\overline{\text{NOSESW}}$	I	Front panel block remove/attach detection signal input from the nose detection switch (SW504) "L": front panel is attached
68, 69	NCO	O	Not used (open)
70	I2C SIO	I/O	Two-way data I2C bus with the FM/AM tuner unit (TU1), RDS decoder (IC51) and electrical volume (IC151)
71	I2C CKO	O	I2C bus clock signal output to the FM/AM tuner unit (TU1), RDS decoder (IC51) and electrical volume (IC151)
72	NCO	O	Not used (open)
73	X1A	O	Sub system clock output terminal (32.768 kHz)
74	X0A	I	Sub system clock input terminal (32.768 kHz)
75	NCO	O	Not used (open)
76	KEYACK	I	Input of acknowledge signal for the key entry Acknowledge signal is input to accept function and eject keys in the power off status On at input of "H"
77	BUIN	I	Battery detection signal input from the SONY bus interface (IC701) and battery detect circuit "L" is input at low voltage

Pin No.	Pin Name	I/O	Description
78	ILLIN	I	Auto dimmer control illumination line detection signal input terminal "H" is input at dimmer detection Not used (fixed at "L")
79	TELATT	I	Telephone detection signal input terminal At input of "H", the signal is attenuated by –20 dB
80	NCO	O	Not used (open)
81	$\overline{\text{TEST IN}}$	I	Setting terminal for the test mode "L": test mode, Normally: fixed at "H"
82	$\overline{\text{ACC IN}}$	I	Accessory detection signal input "L": accessory on
83	NCO	O	Not used (open)
84	LOCKIN	I	Mini-disc lock detection signal input from the MD mechanism controller (IC501) "H": lock
85	$\overline{\text{RCIN1}}$	I	Rotary remote commander shift key input terminal "L": shift
86	HSTX	I	Hardware standby input terminal "L": hardware standby mode Reset signal input in this set
87	MD2	I	Setting terminal for the CPU operational mode (fixed at "L" in this set)
88, 89	MD1, MD0	I	Setting terminal for the CPU operational mode (fixed at "H" in this set)
90	$\overline{\text{RSTX}}$	I	System reset signal input from the reset signal generator (IC652) and reset switch (SW503) "L": reset "L" is input for several 100 msec after power on, then it changes to "H"
91	VSS	—	Ground terminal
92	X0	I	Main system clock input terminal (3.68 MHz)
93	X1	O	Main system clock output terminal (3.68 MHz)
94	VCC	—	Power supply terminal (+5V)
95 to 97	NCO	O	Not used (open)
98	DIM SEL	I	Setting terminal for the dimmer "L": dimmer in, "H": no dimmer (fixed at "H" in this set)
99	TAP CD	I	Setting terminal for the internal mechanism tape or CD "L": CD, "H": tape (fixed at "L" in this set)
100, 101	NCO	O	Not used (open)
102	$\overline{\text{AMTL IN}}$	I	Auto metal detection signal input terminal "L": auto metal Not used (open)
103	AMS IN	I	Input terminal of whether a music is present or not is detected at auto music sensor "L": music is present, "H": music is not present Not used (open)
104	REEL	I	Rotation detect signal input terminal Not used (open)
105	POS0	I	Tape position (EJECT/FF/REW/REV/ FWD mode) detect input from the tape operation switch on the deck mechanism Not used this function (open) POS0: "L": EJECT mode, "H": others mode POS1: "L": FF and FWD mode, "H": others mode POS2: "L": REW mode, "H": others mode POS3: "L": REV and EJECT mode, "H": others mode
106	POS1	I	
107	POS2	I	
108	POS3	I	
109	LM EJ	O	Loading motor control signal output terminal "H" active (For the eject direction and reverse side operation) Not used (open)
110	LM LD	O	Loading motor control signal output terminal "H" active (For the loading direction and forward side operation) Not used (open)
111	CM ON	O	Capstan/reel motor control signal output terminal "H": motor on Not used (open)
112	TAPON	O	Tape system power supply on/off control signal output terminal "H": tape on Not used (open)
113	N ROUT	O	Forward/reverse direction control signal output terminal "L": forward direction, "H": reverse direction Not used (open)
114	AMSON	O	Tape auto music sensor control signal output terminal "L" is output to lower the gain for audio level at FF/REW mode Not used (open)
115	MTLON	I/O	METAL control in/out terminal At initial mode: auto/manual mode selection input of METAL function (manual at "L" input) At manual mode: METAL on/off control signal output terminal (METAL on at "H" output) Not used this function (open)

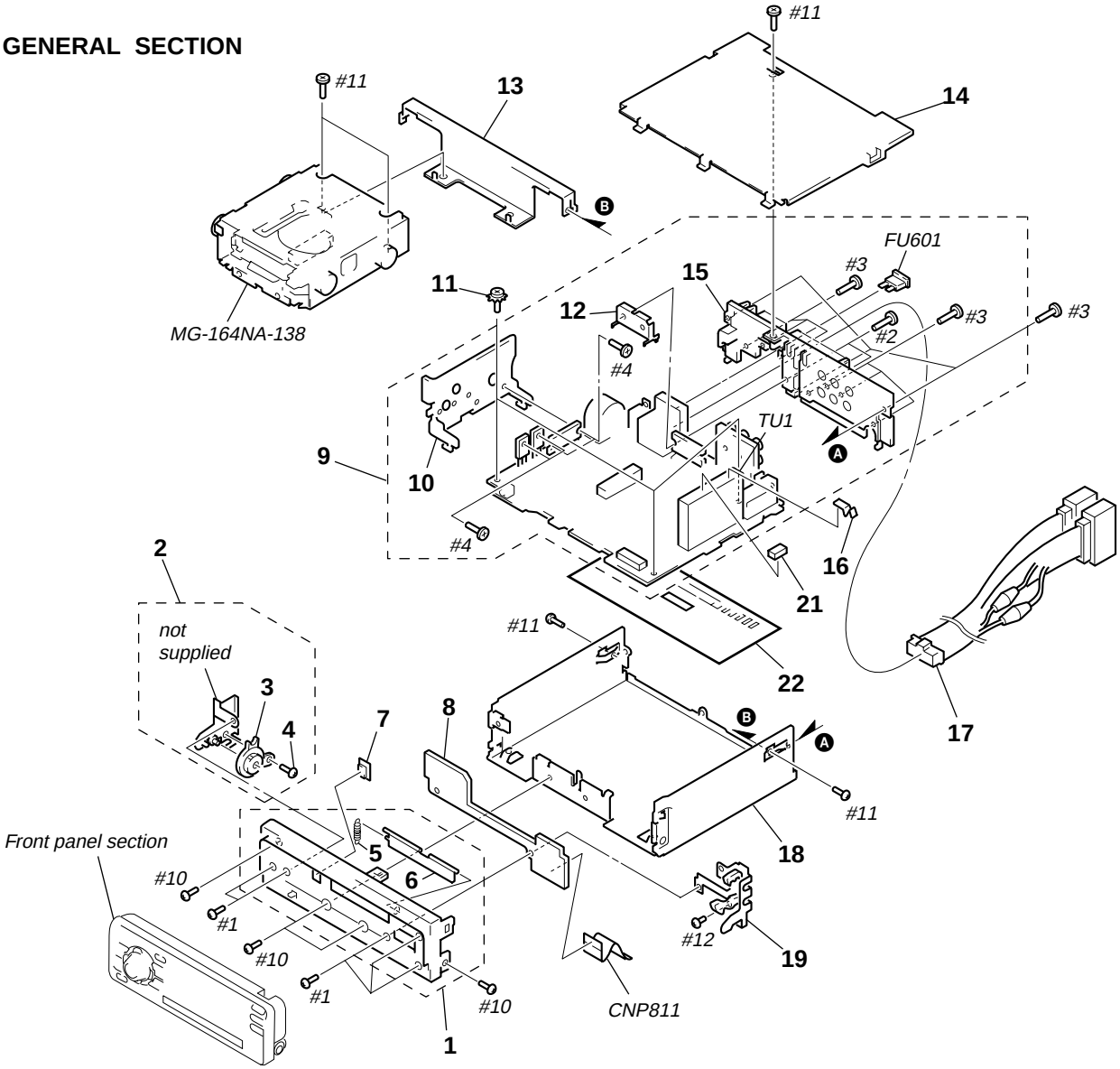
Pin No.	Pin Name	I/O	Description
116	DOLON	I/O	Dolby control in/out terminal At initial mode: valid/invalid selection input of dolby function (valid at “L” input) At normal mode: dolby on/off control signal output terminal (dolby on at “H” output) Not used this function (open)
117	TAPATT	O	Audio signal select control signal output terminal Not used (open)
118	NCO	O	Not used (open)
119	VSS	—	Ground terminal
120	PW ON	O	Main system power supply on/off control signal output to the BA4908 (IC671) “H”: power on

SECTION 5
EXPLODED VIEWS

NOTE:
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- Color Indication of Appearance Parts
  Example:
  KNOB, BALANCE (WHITE) . . . (RED)
  ↑ ↑
  Parts Color Cabinet's Color
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.
- Hardware (# mark) list and accessories and packing materials are given in the last of the electrical parts list.

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

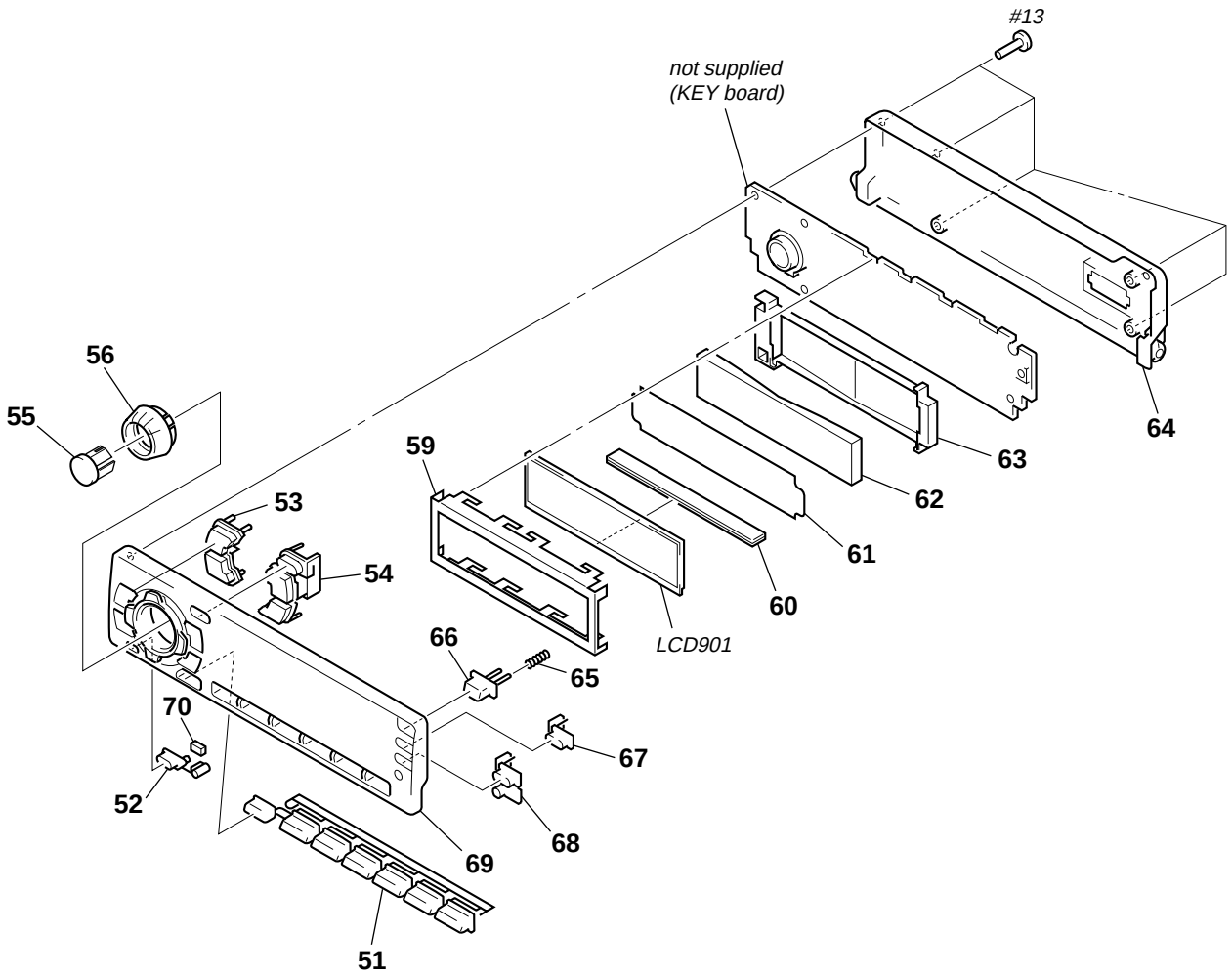
(1) GENERAL SECTION



Ref. No.	Part No.	Description	Remark
1	X-3378-458-1	PANEL ASSY, SUB	
2	X-3376-699-1	GEAR ASSY	
3	3-030-909-01	DAMPER, OIL	
4	3-713-786-51	SCREW +P 2X3	
5	3-034-086-01	SPRING (DOOR)	
6	3-033-750-01	DOOR (MD)	
7	3-040-990-01	BUTTON (EJECT) (⏏)	
* 8	1-677-057-11	SUB BOARD	
* 9	A-3294-833-A	MAIN BOARD, COMPLETE (AMBER)	
* 9	A-3294-943-A	MAIN BOARD, COMPLETE (GREEN)	
* 10	3-041-011-01	HEAT SINK (REG)	
11	3-376-464-11	SCREW (+PTT 2.6X6), GROUND POINT	
* 12	3-040-998-01	BRACKET (IC)	

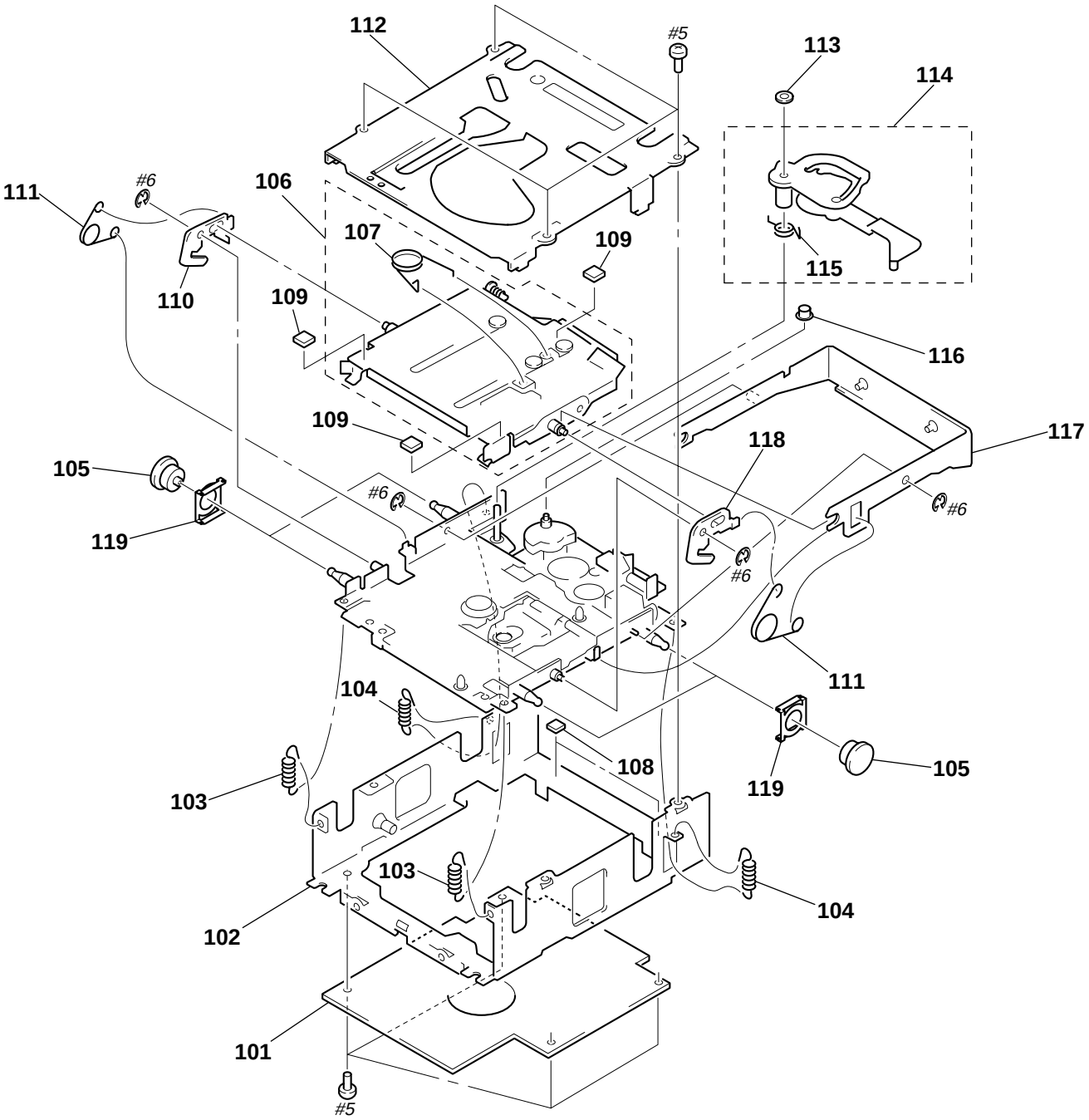
Ref. No.	Part No.	Description	Remark
* 13	3-041-017-01	BRACKET (MD)	
* 14	3-040-995-01	COVER	
* 15	3-040-996-21	HEAT SINK (2P)	
* 16	3-045-878-01	PLATE (TU), GROUND	
17	1-776-527-61	CORD (WITH CONNECTOR) (ISO) (POWER)	
* 18	3-040-994-21	CHASSIS	
19	X-3377-621-1	LOCK ASSY	
* 21	3-045-877-01	CUSHION (TU)	
* 22	3-045-828-01	INSULATED PLATE	
CNP811	1-792-195-11	CABLE, FLEXIBLE FLAT (14CORE)	
FU601	1-532-877-11	FUSE (BLADE TYPE) (AUTO FUSE) (10A)	
TU1	A-3220-812-A	TUNER UNIT (TUX-020)	

(2) FRONT PANEL SECTION



Ref. No.	Part No.	Description	Remark
51	3-041-010-01	BUTTON (1-6/M) (MODE. 1. 2. 3. 4. 5. 6)	
52	3-040-987-01	BUTTON (OFF)	
53	3-040-986-01	BUTTON (MENU/SOUND)	
54	3-041-003-01	BUTTON (LIST/ENTER) (DSPL. LIST. ENTER)	
55	3-040-980-01	BUTTON (SOURCE)	
56	3-040-981-01	KNOB (VOL)	
59	3-040-997-01	PLATE (LCD), GROUND	
60	1-694-660-11	CONDUCTIVE BOARD, CONNECTION	
* 61	3-041-371-11	SHEET (REFLECTOR)	
* 62	3-040-993-01	PLATE (LCD), LIGHT GUIDE	
* 63	3-040-992-01	HOLDER (LCD)	
64	X-3378-398-1	PANEL ASSY, FRONT BACK	
65	3-037-267-01	SPRING (OPEN)	
66	3-221-784-01	BUTTON (OPEN)	
67	3-041-005-11	BUTTON (D) (D-BASS)	
68	3-041-006-01	BUTTON (AF/TA)	
69	X-3380-213-1	SVX PANEL SUB ASSY	
70	3-045-596-01	CUSHION (OFF)	
LCD901	1-803-906-11	DISPLAY PANEL, LIQUID CRYSTAL	

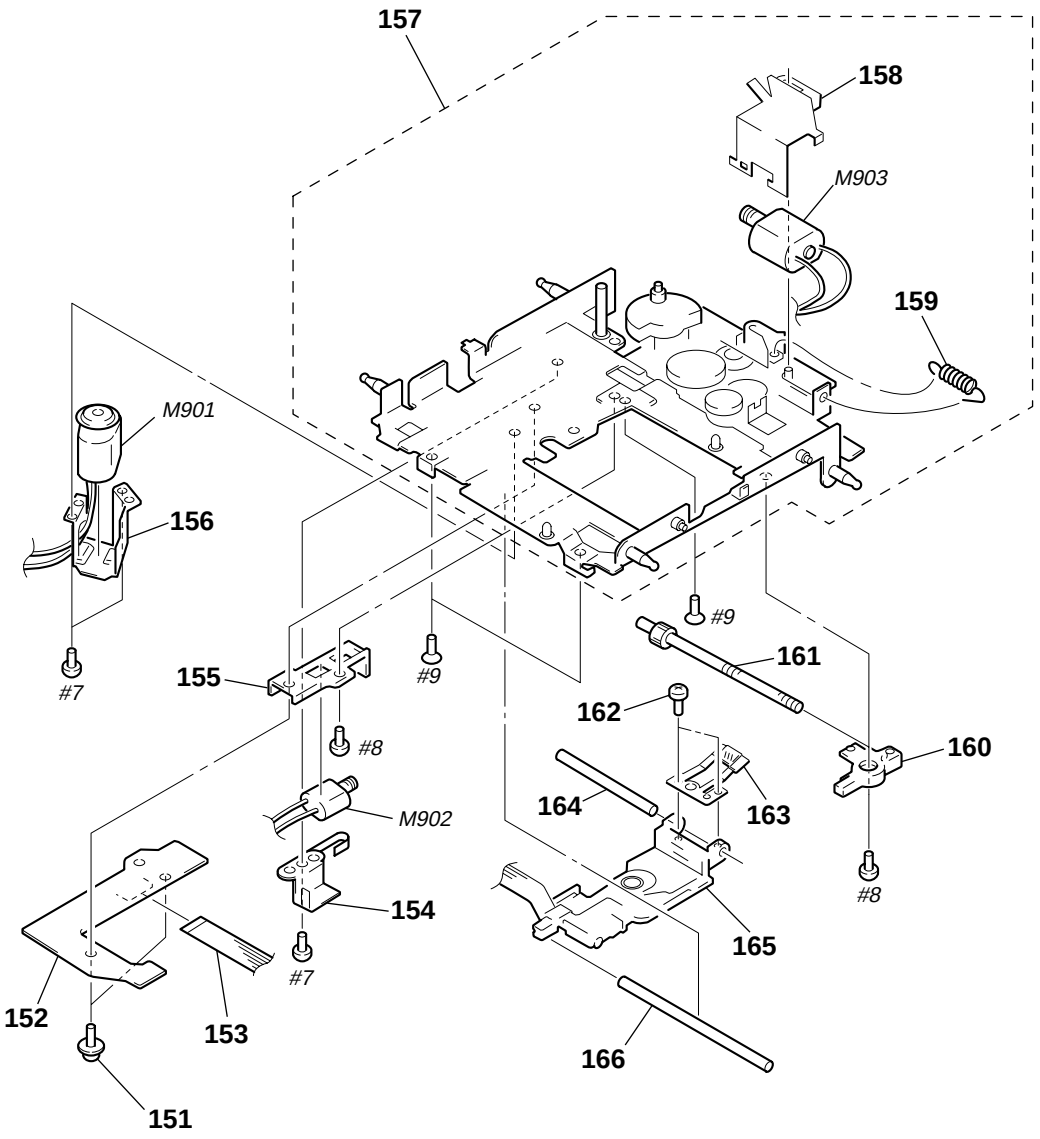
(3) MECHANISM DECK SECTION-1 (MG-164NA-138)



Ref. No.	Part No.	Description	Remark
* 101	A-3326-737-A	SERVO BOARD, COMPLETE	
* 102	X-3379-367-1	CHASSIS ASSY, MD	
103	3-032-714-01	SPRING (FLOAT F), TENSION	
104	3-921-111-01	SPRING (FLOAT B), TENSION	
105	3-931-897-61	DAMPER (T)	
* 106	X-3376-796-1	HOLDER ASSY	
107	3-032-682-01	SPRING (HOLDER)	
* 108	3-034-301-01	CUSHION (EJ2)	
* 109	3-034-302-01	CUSHION (EJ3)	
* 110	3-032-712-01	LEVER (LOCK R)	

Ref. No.	Part No.	Description	Remark
111	3-919-281-01	SPRING (CHUCKING)	
* 112	X-3379-368-1	COVER ASSY, MD	
113	3-035-932-01	WASHER, STOPPER	
* 114	X-3379-362-1	LEVER (LE23) ASSY	
115	3-032-707-01	SPRING (LEVER LE)	
116	3-925-034-01	ROLLER (GEAR E)	
* 117	X-3376-798-1	ARM ASSY, CHUCKING	
* 118	3-032-711-01	LEVER (LOCK L)	
* 119	3-220-096-01	BRACKET (DAMPER)	

(4) MECHANISM DECK SECTION-2 (MG-164NA-138)



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

Ref. No.	Part No.	Description	Remark
151	2-626-617-01	SCREW (2X8)	
152	A-3326-727-A	SENSOR BOARD, COMPLETE	
153	1-757-311-11	CABLE, FLEXIBLE FLAT (11 CORE)	
154	3-919-283-01	BRACKET (SL)	
* 155	3-032-704-01	BASE (SL)	
156	3-919-297-01	BRACKET (SP)	
157	A-3315-218-A	CHASSIS (OP) ASSY	
158	3-032-660-01	BRACKET (LO)	
159	3-032-669-01	SPRING (RACK), TENSION	
* 160	3-032-705-01	BEARING (SL)	

Ref. No.	Part No.	Description	Remark
161	X-3373-213-1	SCREW ASSY, FEED	
162	3-939-590-07	SCREW (IB LOCK)	
163	3-010-091-01	SPRING (SL FEED)	
164	3-919-293-01	SHAFT (OPT S), GUIDE	
⚠165	8-583-065-03	OPTICAL PICK-UP KMS-241C/J1RP	
166	3-920-537-01	SHAFT (OPT L), GUIDE	
M901	A-3301-407-A	MOTOR ASSY, SP (SPINDLE)	
M902	A-3291-190-A	MOTOR ASSY, SL (SLED)	
M903	X-3379-451-1	MOTOR ASSY, LO (LOADING)	

KEY

SECTION 6
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. . : µA. . uPA. . : µPA. .
  uPB. . : µPB. . uPC. . : µPC. .
  uPD. . : µPD. .
- CAPACITORS
  uF: µF
- COILS
  uH: µH

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

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

Ref. No.	Part No.	Description	Remark
		KEY BOARD	
		**********	
	1-694-660-11	CONDUCTIVE BOARD, CONNECTION	
*	3-040-992-01	HOLDER (LCD)	
*	3-040-993-01	PLATE (LCD), LIGHT GUIDE	
*	3-040-997-01	PLATE (LCD), GROUND	
*	3-041-371-11	SHEET (REFLECTOR)	
		< CAPACITOR >	
C951	1-164-004-11	CERAMIC CHIP 0.1uF 10% 25V	
C952	1-163-037-11	CERAMIC CHIP 0.022uF 10% 25V	
C953	1-163-251-11	CERAMIC CHIP 100PF 5% 50V	
C954	1-164-004-11	CERAMIC CHIP 0.1uF 10% 25V	
C955	1-164-004-11	CERAMIC CHIP 0.1uF 10% 25V	
C956	1-164-489-11	CERAMIC CHIP 0.22uF 10% 16V	
		< CONNECTOR >	
CN901	1-794-065-22	PLUG, CONNECTOR 14P	
		< DIODE >	
D901	8-719-158-49	DIODE UDZ-TE-17-12B	
D902	8-719-056-82	DIODE UDZ-TE-17-6.2B	
D903	8-719-056-82	DIODE UDZ-TE-17-6.2B	
D904	8-719-056-82	DIODE UDZ-TE-17-6.2B	
D951	8-719-976-99	DIODE UDZ-TE-17-5.1B	
D952	8-719-976-99	DIODE UDZ-TE-17-5.1B	
		< IC >	
IC901	8-759-366-34	IC LC75824E	
IC951	8-749-012-25	IC RS-170-TU	
		< LIQUID CRYSTAL DISPLAY >	
LCD901	1-803-906-11	DISPLAY PANEL, LIQUID CRYSTAL	
		< LED >	
LED901	8-719-038-03	LED CL-190Y-CD-T (ILLUMINATION)	(AMBER)
LED901	8-719-038-07	LED CL-190PG-CD-T (ILLUMINATION)	(GREEN)
LED902	8-719-038-03	LED CL-190Y-CD-T (ILLUMINATION)	(AMBER)
LED902	8-719-038-07	LED CL-190PG-CD-T (ILLUMINATION)	(GREEN)
LED903	8-719-038-03	LED CL-190Y-CD-T (ILLUMINATION)	(AMBER)
LED903	8-719-038-07	LED CL-190PG-CD-T (ILLUMINATION)	(GREEN)
LED904	8-719-038-03	LED CL-190Y-CD-T (ILLUMINATION)	(AMBER)
LED904	8-719-038-07	LED CL-190PG-CD-T (ILLUMINATION)	(GREEN)
LED910	8-719-078-19	LED LWA673-R1S2*1 (LCD BACK LIGHT)	
LED911	8-719-078-19	LED LWA673-R1S2*1 (LCD BACK LIGHT)	
LED912	8-719-078-19	LED LWA673-R1S2*1 (LCD BACK LIGHT)	
LED913	8-719-078-19	LED LWA673-R1S2*1 (LCD BACK LIGHT)	
		< SWITCH >	
LSW901	1-771-609-11	SWITCH, TACT (WITH LED) (OFF) (GREEN)	
LSW901	1-771-882-11	SWITCH, TACTILE (WITH LED) (OFF) (AMBER)	
LSW902	1-762-617-21	SWITCH, KEY BOARD (WITH LED) (SOURCE)	(AMBER)
LSW902	1-762-619-21	SWITCH, KEY BOARD (WITH LED) (SOURCE)	(GREEN)
LSW903	1-762-617-21	SWITCH, KEY BOARD (WITH LED) (SOUND)	(AMBER)
LSW903	1-762-619-21	SWITCH, KEY BOARD (WITH LED) (SOUND)	(GREEN)
LSW904	1-762-617-21	SWITCH, KEY BOARD (WITH LED) (MENU)	(AMBER)
LSW904	1-762-619-21	SWITCH, KEY BOARD (WITH LED) (MENU)	(GREEN)
LSW905	1-762-617-21	SWITCH, KEY BOARD (WITH LED) (PTY, DSPL)	(AMBER)
LSW905	1-762-619-21	SWITCH, KEY BOARD (WITH LED) (PTY, DSPL)	(GREEN)
LSW906	1-762-617-21	SWITCH, KEY BOARD (WITH LED) (LIST)	(AMBER)
LSW906	1-762-619-21	SWITCH, KEY BOARD (WITH LED) (LIST)	(GREEN)
LSW907	1-762-617-21	SWITCH, KEY BOARD (WITH LED) (ENTER)	(AMBER)
LSW907	1-762-619-21	SWITCH, KEY BOARD (WITH LED) (ENTER)	(GREEN)
LSW908	1-771-609-11	SWITCH, TACT (WITH LED) (MODE) (GREEN)	
LSW908	1-771-882-11	SWITCH, TACTILE (WITH LED) (MODE)	(AMBER)
LSW909	1-762-737-11	SWITCH, KEYBOARD (LED) (D-BASS)	

Ref. No.	Part No.	Description			Remark
LSW910	1-762-617-21	SWITCH, KEY BOARD (WITH LED) (TA)			(AMBER)
LSW910	1-762-619-21	SWITCH, KEY BOARD (WITH LED) (TA)			(GREEN)
LSW911	1-762-617-21	SWITCH, KEY BOARD (WITH LED) (AF)			(AMBER)
LSW911	1-762-619-21	SWITCH, KEY BOARD (WITH LED) (AF)			(GREEN)
LSW912	1-771-609-11	SWITCH, TACT (WITH LED) (6) (GREEN)			
LSW912	1-771-882-11	SWITCH, TACTILE (WITH LED) (6) (AMBER)			
LSW913	1-771-609-11	SWITCH, TACT (WITH LED) (5) (GREEN)			
LSW913	1-771-882-11	SWITCH, TACTILE (WITH LED) (5) (AMBER)			
LSW914	1-771-609-11	SWITCH, TACT (WITH LED) (4) (GREEN)			
LSW914	1-771-882-11	SWITCH, TACTILE (WITH LED) (4) (AMBER)			
LSW915	1-771-609-11	SWITCH, TACT (WITH LED) (3) (GREEN)			
LSW915	1-771-882-11	SWITCH, TACTILE (WITH LED) (3) (AMBER)			
LSW916	1-771-609-11	SWITCH, TACT (WITH LED) (SHUF 2) (GREEN)			
LSW916	1-771-882-11	SWITCH, TACTILE (WITH LED)			(SHUF 2)(AMBER)
LSW917	1-771-609-11	SWITCH, TACT (WITH LED) (REP 1) (GREEN)			
LSW917	1-771-882-11	SWITCH, TACTILE (WITH LED) (REP 1)			(AMBER)
		< RESISTOR >			
R901	1-216-647-11	METAL CHIP	680	0.5%	1/10W
R902	1-216-647-11	METAL CHIP	680	0.5%	1/10W
R903	1-216-647-11	METAL CHIP	680	0.5%	1/10W
R904	1-216-651-11	METAL CHIP	1K	0.5%	1/10W
R905	1-216-655-11	METAL CHIP	1.5K	0.5%	1/10W
R906	1-216-655-11	METAL CHIP	1.5K	0.5%	1/10W
R907	1-216-659-11	METAL CHIP	2.2K	0.5%	1/10W
R908	1-216-663-11	METAL CHIP	3.3K	0.5%	1/10W
R909	1-216-667-11	METAL CHIP	4.7K	0.5%	1/10W
R910	1-216-671-11	METAL CHIP	6.8K	0.5%	1/10W
R911	1-208-806-11	RES-CHIP	10K	2%	1/10W
R912	1-216-647-11	METAL CHIP	680	0.5%	1/10W
R913	1-216-647-11	METAL CHIP	680	0.5%	1/10W
R914	1-216-647-11	METAL CHIP	680	0.5%	1/10W
R915	1-216-651-11	METAL CHIP	1K	0.5%	1/10W
R916	1-216-655-11	METAL CHIP	1.5K	0.5%	1/10W
R917	1-216-655-11	METAL CHIP	1.5K	0.5%	1/10W
R918	1-216-659-11	METAL CHIP	2.2K	0.5%	1/10W
R919	1-216-663-11	METAL CHIP	3.3K	0.5%	1/10W
R920	1-216-667-11	METAL CHIP	4.7K	0.5%	1/10W
R921	1-216-807-11	METAL CHIP	68	5%	1/16W (GREEN)
R921	1-216-811-11	METAL CHIP	150	5%	1/16W (AMBER)
R923	1-216-807-11	METAL CHIP	68	5%	1/16W (GREEN)
R923	1-216-811-11	METAL CHIP	150	5%	1/16W (AMBER)
R925	1-216-021-00	METAL CHIP	68	5%	1/10W (GREEN)
R925	1-216-029-00	METAL CHIP	150	5%	1/10W (AMBER)
R927	1-216-021-00	METAL CHIP	68	5%	1/10W (GREEN)
R927	1-216-029-00	METAL CHIP	150	5%	1/10W (AMBER)

Ref. No.	Part No.	Description			Remark
R931	1-216-813-11	METAL CHIP	220	5%	1/16W
R932	1-216-813-11	METAL CHIP	220	5%	1/16W
R933	1-216-808-11	METAL CHIP	82	5%	1/16W (GREEN)
R933	1-216-812-11	METAL CHIP	180	5%	1/16W (AMBER)
R938	1-216-809-11	METAL CHIP	100	5%	1/16W
R951	1-216-819-11	METAL CHIP	680	5%	1/16W
R952	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R953	1-216-857-11	METAL CHIP	1M	5%	1/16W
R954	1-216-049-11	RES-CHIP	1K	5%	1/10W
R955	1-216-049-11	RES-CHIP	1K	5%	1/10W
R956	1-216-821-11	METAL CHIP	1K	5%	1/16W
R957	1-216-851-11	METAL CHIP	330K	5%	1/16W
R958	1-216-033-00	METAL CHIP	220	5%	1/10W
R970	1-216-815-11	METAL CHIP	330	5%	1/16W
R971	1-216-815-11	METAL CHIP	330	5%	1/16W
R972	1-216-864-91	SHORT	0		
R975	1-216-815-11	METAL CHIP	330	5%	1/16W
R976	1-216-815-11	METAL CHIP	330	5%	1/16W
R980	1-216-864-91	SHORT	0		
R999	1-216-864-91	SHORT	0		
		< ROTARY ENCODER >			
RE901	1-475-014-12	ENCODER, ROTARY (VOLUME/BASS/TREBLE/ BALANCE/FADER CONTROL)			
		< SWITCH >			
S901	1-771-884-11	SWITCH, TACTILE (SEEK/AMS – ⏮ ◀◀)			
S902	1-771-884-11	SWITCH, TACTILE (DISC/PRST +)			
S903	1-771-884-11	SWITCH, TACTILE (SEEK/AMS + ▶▶ ⏭)			
S904	1-771-884-11	SWITCH, TACTILE (DISC/PRST –)			
**********					
*	A-3294-833-A	MAIN BOARD, COMPLETE (AMBER)			
*	A-3294-943-A	MAIN BOARD, COMPLETE (GREEN)			
		**********			
*	3-040-996-21	HEAT SINK (2P)			
*	3-040-998-01	BRACKET (IC)			
*	3-041-011-01	HEAT SINK (REG)			
	7-685-647-79	SCREW +BVTP 3X10 TYPE2 N-S			
	7-685-793-09	SCREW +PTT 2.6X8 (S)			
	7-685-795-09	SCREW +PTT 2.6X12 (S)			
		< CAPACITOR/SHORT >			
C1	1-163-233-11	CERAMIC CHIP	18PF	5%	50V
C3	1-124-584-00	ELECT	100uF	20%	10V
C4	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C6	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C7	1-124-589-11	ELECT	47uF	20%	16V
C13	1-163-017-00	CERAMIC CHIP	0.0047uF	5%	50V
C14	1-163-021-11	CERAMIC CHIP	0.01uF	10%	50V
C52	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C53	1-163-229-11	CERAMIC CHIP	12PF	5%	50V
C54	1-163-229-11	CERAMIC CHIP	12PF	5%	50V
C55	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C56	1-124-589-11	ELECT	47uF	20%	16V
C57	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V

MAIN

Ref. No.	Part No.	Description			Remark
C58	1-163-263-11	CERAMIC CHIP	330PF	5%	50V
C59	1-164-505-11	CERAMIC CHIP	2.2uF		16V
C60	1-163-135-00	CERAMIC CHIP	560PF	5%	50V
C61	1-164-161-11	CERAMIC CHIP	0.0022uF	10%	100V
C62	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C63	1-164-315-11	CERAMIC CHIP	470PF	5%	50V
C90	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C91	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C92	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C93	1-163-133-00	CERAMIC CHIP	470PF	5%	50V
C94	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V
C95	1-107-823-11	CERAMIC CHIP	0.47uF	10%	16V
C96	1-163-809-11	CERAMIC CHIP	0.047uF	10%	25V
C97	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C98	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C101	1-126-160-11	ELECT	1uF	20%	50V
C110	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C111	1-109-982-11	CERAMIC CHIP	1uF	10%	10V
C113	1-109-982-11	CERAMIC CHIP	1uF	10%	10V
C121	1-163-809-11	CERAMIC CHIP	0.047uF	10%	25V
C122	1-163-017-00	CERAMIC CHIP	0.0047uF	5%	50V
C123	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C131	1-124-233-11	ELECT	10uF	20%	16V
C141	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C142	1-126-160-11	ELECT	1uF	20%	50V
C151	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C152	1-124-584-00	ELECT	100uF	20%	10V
C153	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C156	1-163-017-00	CERAMIC CHIP	0.0047uF	5%	50V
C157	1-107-823-11	CERAMIC CHIP	0.47uF	10%	16V
C159	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C161	1-124-233-11	ELECT	10uF	20%	16V
C162	1-164-489-11	CERAMIC CHIP	0.22uF	10%	16V
C171	1-126-163-11	ELECT	4.7uF	20%	50V
C172	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C173	1-164-489-11	CERAMIC CHIP	0.22uF	10%	16V
C174	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C181	1-126-163-11	ELECT	4.7uF	20%	50V
C182	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C183	1-164-489-11	CERAMIC CHIP	0.22uF	10%	16V
C184	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C191	1-216-295-11	SHORT	0		
C192	1-216-295-11	SHORT	0		
C193	1-216-295-11	SHORT	0		
C201	1-126-160-11	ELECT	1uF	20%	50V
C210	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C241	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C242	1-126-160-11	ELECT	1uF	20%	50V
C271	1-126-163-11	ELECT	4.7uF	20%	50V
C272	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C273	1-164-489-11	CERAMIC CHIP	0.22uF	10%	16V
C274	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
C281	1-126-163-11	ELECT	4.7uF	20%	50V
C282	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C283	1-164-489-11	CERAMIC CHIP	0.22uF	10%	16V
C284	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C361	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V

Ref. No.	Part No.	Description			Remark
C362	1-126-157-11	ELECT	10uF	20%	16V
C363	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C364	1-126-157-11	ELECT	10uF	20%	16V
C368	1-109-982-11	CERAMIC CHIP	1uF	10%	10V
C369	1-163-021-11	CERAMIC CHIP	0.01uF	10%	50V
C370	1-163-021-11	CERAMIC CHIP	0.01uF	10%	50V
C371	1-163-021-11	CERAMIC CHIP	0.01uF	10%	50V
C372	1-163-021-11	CERAMIC CHIP	0.01uF	10%	50V
C373	1-163-021-11	CERAMIC CHIP	0.01uF	10%	50V
C374	1-125-972-61	ELECT	100uF	20%	16V
C375	1-124-584-00	ELECT	100uF	20%	10V
C502	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C503	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C504	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C505	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C506	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
C507	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
C508	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C509	1-163-021-11	CERAMIC CHIP	0.01uF	10%	50V
C510	1-124-584-00	ELECT	100uF	20%	10V
C511	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C512	1-163-133-00	CERAMIC CHIP	470PF	5%	50V
C513	1-163-125-00	CERAMIC CHIP	220PF	5%	50V
C551	1-164-222-11	CERAMIC CHIP	0.22uF		25V
C552	1-164-222-11	CERAMIC CHIP	0.22uF		25V
C571	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C601	1-107-885-11	ELECT	3300uF	20%	16V
C602	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C603	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C611	1-126-160-11	ELECT	1uF	20%	50V
C612	1-126-160-11	ELECT	1uF	20%	50V
C614	1-126-157-11	ELECT	10uF	20%	16V
C616	1-107-823-11	CERAMIC CHIP	0.47uF	10%	16V
C617	1-136-165-00	FILM	0.1uF	5%	50V
C621	1-124-589-11	ELECT	47uF	20%	16V
C622	1-126-160-11	ELECT	1uF	20%	50V
C623	1-164-505-11	CERAMIC CHIP	2.2uF		16V
C631	1-164-222-11	CERAMIC CHIP	0.22uF		25V
C632	1-164-222-11	CERAMIC CHIP	0.22uF		25V
C641	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C653	1-163-021-11	CERAMIC CHIP	0.01uF	10%	50V
C654	1-125-710-11	DOUBLE LAYER	0.1F		5.5V
C655	1-124-584-00	ELECT	100uF	20%	10V
C661	1-109-982-11	CERAMIC CHIP	1uF	10%	10V
C671	1-126-157-11	ELECT	10uF	20%	16V
C672	1-126-157-11	ELECT	10uF	20%	16V
C673	1-126-157-11	ELECT	10uF	20%	16V
C674	1-124-233-11	ELECT	10uF	20%	16V
C675	1-124-233-11	ELECT	10uF	20%	16V
C676	1-126-157-11	ELECT	10uF	20%	16V
C682	1-163-021-11	CERAMIC CHIP	0.01uF	10%	50V
C701	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C702	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C703	1-164-227-11	CERAMIC CHIP	0.022uF	10%	25V
C704	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C705	1-126-935-11	ELECT	470uF	20%	16V

Ref. No.	Part No.	Description	Remark
		< CONNECTOR >	
CN301	1-764-617-12	PIN, CONNECTOR (PC BOARD) 30P	
CN500	1-784-456-11	CONNECTOR, FFC/FPC 14P	
CN601	1-774-701-11	PIN, CONNECTOR 16P	
CN701	1-580-907-31	PLUG, CONNECTOR (BUS CONTROL IN)	
		< JACK >	
CNJ151	1-774-700-11	JACK, PIN 6P (BUS AUDIO IN, AUDIO OUT REAR/FRONT)	
		< DIODE >	
D1	8-719-073-01	DIODE MA111-TX	
D2	8-719-067-56	DIODE MA112-TX	
D90	8-719-073-01	DIODE MA111-TX	
D91	8-719-073-01	DIODE MA111-TX	
D92	8-719-976-99	DIODE UDZ-TE-17-5.1B	
D131	8-719-422-12	DIODE MA8039	
D301	8-719-914-44	DIODE DAP202K-T-146	
D302	8-719-073-01	DIODE MA111-TX	
D361	8-719-034-74	DIODE MA4120-M (TA)	
D362	8-719-158-15	DIODE UDZ-TE-17-5.6B	
D501	8-719-914-44	DIODE DAP202K-T-146	
D502	8-719-073-01	DIODE MA111-TX	
D551	8-719-158-49	DIODE UDZ-TE-17-12B	
D552	8-719-056-82	DIODE UDZ-TE-17-6.2B	
D553	8-719-056-82	DIODE UDZ-TE-17-6.2B	
D554	8-719-056-82	DIODE UDZ-TE-17-6.2B	
D555	8-719-056-82	DIODE UDZ-TE-17-6.2B	
D556	8-719-056-82	DIODE UDZ-TE-17-6.2B	
D557	8-719-056-82	DIODE UDZ-TE-17-6.2B	
D558	8-719-056-82	DIODE UDZ-TE-17-6.2B	
D559	8-719-056-82	DIODE UDZ-TE-17-6.2B	
D560	8-719-056-82	DIODE UDZ-TE-17-6.2B	
D561	8-719-056-93	DIODE UDZ-TE-17-18B	
D562	8-719-056-82	DIODE UDZ-TE-17-6.2B	
D571	8-719-073-01	DIODE MA111-TX	
D601	8-719-049-38	DIODE 1N5404TU	
D602	8-719-056-93	DIODE UDZ-TE-17-18B	
D603	8-719-056-93	DIODE UDZ-TE-17-18B	
D604	8-719-056-82	DIODE UDZ-TE-17-6.2B	
D605	8-719-056-93	DIODE UDZ-TE-17-18B	
D621	8-719-422-12	DIODE MA8039	
D622	8-719-073-01	DIODE MA111-TX	
D624	8-719-158-15	DIODE UDZ-TE-17-5.6B	
D631	8-719-423-26	DIODE MA8110-H-TX	
D653	8-719-073-01	DIODE MA111-TX	
D661	8-719-073-01	DIODE MA111-TX	
D662	8-719-420-14	DIODE MA8082-M (TX)	
D671	8-719-053-18	DIODE 1SR154-400TE-25	
D672	8-719-053-18	DIODE 1SR154-400TE-25	
D673	8-719-053-18	DIODE 1SR154-400TE-25	
D674	8-719-053-18	DIODE 1SR154-400TE-25	
D675	8-719-067-56	DIODE MA112-TX	
D676	8-719-073-01	DIODE MA111-TX	
D677	8-719-073-01	DIODE MA111-TX	
D701	8-719-978-69	DIODE UDZ-TE-17-16B	
D702	8-719-017-62	DIODE MA8068-L-TX	
D703	8-719-056-82	DIODE UDZ-TE-17-6.2B	
D704	8-719-056-93	DIODE UDZ-TE-17-18B	
D705	8-719-056-93	DIODE UDZ-TE-17-18B	
D706	8-719-072-70	DIODE MA2ZD14001S0	
D708	8-719-073-01	DIODE MA111-TX	
D709	8-719-073-01	DIODE MA111-TX	
D710	8-719-073-01	DIODE MA111-TX	
		< FERRITE BEAD >	
FB362	1-414-233-22	FERRITE 0uH	
FB501	1-414-233-22	FERRITE 0uH	
		< FUSE >	
FU601	1-532-877-11	FUSE (BLADE TYPE) (AUTO FUSE) (10A)	
		< IC >	
IC51	8-759-492-59	IC SAA6588T-118	
IC90	8-759-909-71	IC BA4558F-E2	
IC151	8-759-653-27	IC TDA7402TR	
IC501	8-759-663-56	IC MB90574BPMT-G-266-BND	
IC611	8-759-690-99	IC TA8268HS	
IC652	8-759-682-69	IC XC61AN4302MR	
IC671	8-759-661-47	IC BA4908-V3	
IC701	8-759-449-89	IC BA8270F-E2	
		< JACK >	
J1	1-764-808-21	JACK (ANT) (FM/AM ANTENNA)	
J501	1-566-822-41	JACK (REMOTE IN)	
		< SHORT >	
JC1	1-216-296-00	SHORT 0	
JC2	1-216-296-00	SHORT 0	
JC4	1-216-296-00	SHORT 0	
JC5	1-216-296-00	SHORT 0	
JC16	1-216-295-11	SHORT 0	
JC31	1-216-295-11	SHORT 0	
JC50	1-216-295-11	SHORT 0	
JC54	1-216-295-11	SHORT 0	
JC60	1-216-864-91	SHORT 0	
JC90	1-216-295-11	SHORT 0	
JC191	1-216-295-11	SHORT 0	
JC192	1-216-295-11	SHORT 0	
JC193	1-216-295-11	SHORT 0	
JC194	1-216-295-11	SHORT 0	
JC301	1-216-864-91	SHORT 0	
JC601	1-216-864-91	SHORT 0	
JC671	1-216-295-11	SHORT 0	
JC673	1-216-864-91	SHORT 0	
		< COIL >	
L601	1-419-476-11	INDUCTOR 250uH	
L671	1-410-989-11	INDUCTOR 0.47uH	
		< TRANSISTOR >	
Q1	8-729-120-28	TRANSISTOR 2SC2412K-T-146-QR	
Q90	8-729-900-53	TRANSISTOR DTC114EKA-T146	
Q111	8-729-920-21	TRANSISTOR DTC314TK-T-146	

MAIN

Ref. No.	Part No.	Description			Remark
Q121	8-729-920-21	TRANSISTOR	DTC314TK-T-146		
Q131	8-729-921-25	TRANSISTOR	FMC2		
Q171	8-729-920-21	TRANSISTOR	DTC314TK-T-146		
Q181	8-729-920-21	TRANSISTOR	DTC314TK-T-146		
Q250	8-729-921-25	TRANSISTOR	FMC2		
Q271	8-729-920-21	TRANSISTOR	DTC314TK-T-146		
Q281	8-729-920-21	TRANSISTOR	DTC314TK-T-146		
Q361	8-729-019-00	TRANSISTOR	2SD2394-G		
Q362	8-729-019-00	TRANSISTOR	2SD2394-G		
Q363	8-729-921-25	TRANSISTOR	FMC2		
Q551	8-729-921-25	TRANSISTOR	FMC2		
Q571	8-729-120-28	TRANSISTOR	2SC2412K-T-146-QR		
Q621	8-729-027-23	TRANSISTOR	DTA114EKA-T146		
Q622	8-729-021-94	FET	2SK1657-T1B		
Q631	8-729-423-99	TRANSISTOR	2SD2137-OP-TA		
Q633	8-729-921-25	TRANSISTOR	FMC2		
Q651	8-729-027-23	TRANSISTOR	DTA114EKA-T146		
Q652	8-729-027-23	TRANSISTOR	DTA114EKA-T146		
Q661	8-729-120-28	TRANSISTOR	2SC2412K-T-146-QR		
Q701	8-729-900-53	TRANSISTOR	DTC114EKA-T146		
Q704	8-729-027-23	TRANSISTOR	DTA114EKA-T146		
Q705	8-729-027-23	TRANSISTOR	DTA114EKA-T146		
Q706	8-729-120-28	TRANSISTOR	2SC2412K-T-146-QR		
		< RESISTOR >			
R1	1-216-295-11	SHORT	0		
R4	1-216-025-11	RES-CHIP	100	5%	1/10W
R5	1-216-025-11	RES-CHIP	100	5%	1/10W
R6	1-216-025-11	RES-CHIP	100	5%	1/10W
R7	1-216-025-11	RES-CHIP	100	5%	1/10W
R8	1-216-295-11	SHORT	0		
R9	1-216-041-00	METAL CHIP	470	5%	1/10W
R12	1-216-837-11	METAL CHIP	22K	5%	1/16W
R20	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R53	1-216-853-11	METAL CHIP	470K	5%	1/16W
R54	1-216-821-11	METAL CHIP	1K	5%	1/16W
R55	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R56	1-216-817-11	METAL CHIP	470	5%	1/16W
R57	1-216-809-11	METAL CHIP	100	5%	1/16W
R58	1-216-025-11	RES-CHIP	100	5%	1/10W
R59	1-216-001-00	METAL CHIP	10	5%	1/10W
R60	1-216-001-00	METAL CHIP	10	5%	1/10W
R90	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R91	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R92	1-216-025-11	RES-CHIP	100	5%	1/10W
R93	1-216-845-11	METAL CHIP	100K	5%	1/16W
R94	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R95	1-216-121-11	RES-CHIP	1M	5%	1/10W
R96	1-216-025-11	RES-CHIP	100	5%	1/10W
R97	1-216-833-11	METAL CHIP	10K	5%	1/16W
R98	1-216-833-11	METAL CHIP	10K	5%	1/16W
R108	1-216-295-11	SHORT	0		
R111	1-216-864-91	SHORT	0		
R112	1-216-841-11	METAL CHIP	47K	5%	1/16W
R121	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R122	1-216-097-11	RES-CHIP	100K	5%	1/10W (AMBER)

Ref. No.	Part No.	Description			Remark
R131	1-216-037-00	METAL CHIP	330	5%	1/10W
R132	1-216-045-00	METAL CHIP	680	5%	1/10W
R141	1-216-025-11	RES-CHIP	100	5%	1/10W
R142	1-216-073-00	METAL CHIP	10K	5%	1/10W
R152	1-216-841-11	METAL CHIP	47K	5%	1/16W
R153	1-216-025-11	RES-CHIP	100	5%	1/10W
R154	1-216-025-11	RES-CHIP	100	5%	1/10W
R156	1-216-809-11	METAL CHIP	100	5%	1/16W
R171	1-216-033-00	METAL CHIP	220	5%	1/10W
R172	1-216-081-00	METAL CHIP	22K	5%	1/10W
R173	1-216-089-11	RES-CHIP	47K	5%	1/10W
R181	1-216-033-00	METAL CHIP	220	5%	1/10W
R182	1-216-081-00	METAL CHIP	22K	5%	1/10W
R183	1-216-089-11	RES-CHIP	47K	5%	1/10W
R208	1-216-295-11	SHORT	0		
R241	1-216-025-11	RES-CHIP	100	5%	1/10W
R242	1-216-073-00	METAL CHIP	10K	5%	1/10W
R271	1-216-033-00	METAL CHIP	220	5%	1/10W
R272	1-216-081-00	METAL CHIP	22K	5%	1/10W
R273	1-216-089-11	RES-CHIP	47K	5%	1/10W
R281	1-216-033-00	METAL CHIP	220	5%	1/10W
R282	1-216-081-00	METAL CHIP	22K	5%	1/10W
R283	1-216-089-11	RES-CHIP	47K	5%	1/10W
R361	1-216-041-00	METAL CHIP	470	5%	1/10W
R362	1-216-041-00	METAL CHIP	470	5%	1/10W
R363	1-216-041-00	METAL CHIP	470	5%	1/10W
R364	1-216-041-00	METAL CHIP	470	5%	1/10W
R504	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R505	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R506	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R507	1-216-073-00	METAL CHIP	10K	5%	1/10W
R509	1-216-097-11	RES-CHIP	100K	5%	1/10W
R520	1-216-097-11	RES-CHIP	100K	5%	1/10W
R522	1-216-097-11	RES-CHIP	100K	5%	1/10W
R523	1-216-845-11	METAL CHIP	100K	5%	1/16W
R524	1-216-073-00	METAL CHIP	10K	5%	1/10W
R525	1-216-073-00	METAL CHIP	10K	5%	1/10W
R526	1-216-097-11	RES-CHIP	100K	5%	1/10W
R529	1-216-049-11	RES-CHIP	1K	5%	1/10W
R531	1-216-839-11	METAL CHIP	33K	5%	1/16W
R532	1-216-833-11	METAL CHIP	10K	5%	1/16W
R533	1-216-833-11	METAL CHIP	10K	5%	1/16W
R534	1-216-097-11	RES-CHIP	100K	5%	1/10W
R535	1-216-845-11	METAL CHIP	100K	5%	1/16W
R536	1-216-097-11	RES-CHIP	100K	5%	1/10W (GREEN)
R537	1-216-097-11	RES-CHIP	100K	5%	1/10W (AMBER)
R538	1-216-097-11	RES-CHIP	100K	5%	1/10W
R539	1-216-097-11	RES-CHIP	100K	5%	1/10W
R540	1-216-097-11	RES-CHIP	100K	5%	1/10W
R542	1-216-089-11	RES-CHIP	47K	5%	1/10W
R545	1-216-097-11	RES-CHIP	100K	5%	1/10W
R546	1-216-097-11	RES-CHIP	100K	5%	1/10W
R547	1-216-097-11	RES-CHIP	100K	5%	1/10W
R551	1-249-409-11	CARBON	220	5%	1/4W
R552	1-216-025-11	RES-CHIP	100	5%	1/10W
R553	1-216-025-11	RES-CHIP	100	5%	1/10W

Ref. No.	Part No.	Description			Remark
R554	1-216-025-11	RES-CHIP	100	5%	1/10W
R555	1-216-025-11	RES-CHIP	100	5%	1/10W
R556	1-216-025-11	RES-CHIP	100	5%	1/10W
R557	1-216-025-11	RES-CHIP	100	5%	1/10W
R558	1-216-025-11	RES-CHIP	100	5%	1/10W
R559	1-216-025-11	RES-CHIP	100	5%	1/10W
R560	1-216-025-11	RES-CHIP	100	5%	1/10W
R561	1-208-806-11	RES-CHIP	10K	0.5%	1/10W
R562	1-208-806-11	RES-CHIP	10K	0.5%	1/10W
R563	1-216-845-11	METAL CHIP	100K	5%	1/16W
R564	1-216-845-11	METAL CHIP	100K	5%	1/16W
R565	1-216-025-11	RES-CHIP	100	5%	1/10W
R567	1-249-411-11	CARBON	330	5%	1/4W
R572	1-216-809-11	METAL CHIP	100	5%	1/16W
R573	1-216-809-11	METAL CHIP	100	5%	1/16W
R600	1-216-097-11	RES-CHIP	100K	5%	1/10W
R601	1-216-073-00	METAL CHIP	10K	5%	1/10W
R603	1-216-073-00	METAL CHIP	10K	5%	1/10W
R611	1-216-833-11	METAL CHIP	10K	5%	1/16W
R612	1-216-073-00	METAL CHIP	10K	5%	1/10W
R621	1-216-805-11	METAL CHIP	47	5%	1/16W
R622	1-216-864-91	SHORT	0		
R624	1-216-295-11	SHORT	0		
R626	1-216-861-11	METAL CHIP	2.2M	5%	1/16W
R631	1-249-385-11	CARBON	2.2	5%	1/6W
R632	1-249-385-11	CARBON	2.2	5%	1/6W
R636	1-216-037-00	METAL CHIP	330	5%	1/10W
R641	1-216-849-11	METAL CHIP	220K	5%	1/16W
R642	1-216-853-11	METAL CHIP	470K	5%	1/16W
R651	1-216-113-00	METAL CHIP	470K	5%	1/10W
R652	1-216-845-11	METAL CHIP	100K	5%	1/16W
R653	1-208-806-11	RES-CHIP	10K	0.5%	1/10W
R654	1-216-833-11	METAL CHIP	10K	5%	1/16W
R655	1-216-809-11	METAL CHIP	100	5%	1/16W
R656	1-216-809-11	METAL CHIP	100	5%	1/16W
R661	1-249-421-11	CARBON	2.2K	5%	1/4W
R662	1-216-081-00	METAL CHIP	22K	5%	1/10W
R663	1-216-841-11	METAL CHIP	47K	5%	1/16W
R664	1-216-841-11	METAL CHIP	47K	5%	1/16W
R682	1-216-089-11	RES-CHIP	47K	5%	1/10W
R701	1-216-805-11	METAL CHIP	47	5%	1/16W
R702	1-216-073-00	METAL CHIP	10K	5%	1/10W
R703	1-216-025-11	RES-CHIP	100	5%	1/10W
R704	1-216-809-11	METAL CHIP	100	5%	1/16W
R707	1-216-065-00	RES-CHIP	4.7K	5%	1/10W
R713	1-216-841-11	METAL CHIP	47K	5%	1/16W
R714	1-216-841-11	METAL CHIP	47K	5%	1/16W
R715	1-216-845-11	METAL CHIP	100K	5%	1/16W
R716	1-216-809-11	METAL CHIP	100	5%	1/16W
		< SWITCH >			
SW503	1-692-431-21	SWITCH, TACTILE (RESET)			
SW504	1-771-540-11	SWITCH, PUSH (1 KEY) (NOSE DETECT)			
		< TUNER UNIT >			
TU1	A-3220-738-A	FM/AM TUNER UNIT (TUX-020)			

Ref. No.	Part No.	Description			Remark
		< THERMISTOR >			
TH701	1-803-350-21	THERMISTOR, POSITIVE			
		< VIBRATOR >			
X51	1-579-242-41	VIBRATOR, CRYSTAL (4.332MHz)			
X501	1-767-833-21	VIBRATOR, CERAMIC (3.68MHz)			
X502	1-567-098-41	VIBRATOR, CRYSTAL (32.768kHz)			
**********					
	A-3326-727-A	SENSOR BOARD, COMPLETE			
		**********			
For the parts on the SENSOR board, replace the entire mounted board.					
**********					
*	A-3326-737-A	SERVO BOARD, COMPLETE			
		**********			
		< CAPACITOR >			
C11	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C101	1-164-161-11	CERAMIC CHIP	0.0022uF	10%	100V
C102	1-135-259-11	TANTALUM CHIP	10uF	20%	6.3V
C103	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C104	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C105	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C106	1-135-259-11	TANTALUM CHIP	10uF	20%	6.3V
C107	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C108	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C109	1-135-259-11	TANTALUM CHIP	10uF	20%	6.3V
C201	1-164-161-11	CERAMIC CHIP	0.0022uF	10%	100V
C202	1-135-259-11	TANTALUM CHIP	10uF	20%	6.3V
C301	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C302	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C304	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C305	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C306	1-117-863-11	CERAMIC CHIP	0.47uF	10%	6.3V
C307	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C308	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C309	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V
C310	1-117-863-11	CERAMIC CHIP	0.47uF	10%	6.3V
C311	1-164-245-11	CERAMIC CHIP	0.015uF	10%	25V
C314	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C315	1-125-837-11	CERAMIC CHIP	1uF	10%	6.3V
C316	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C317	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C318	1-104-852-11	TANTALUM CHIP	22uF	20%	6.3V
C319	1-104-852-11	TANTALUM CHIP	22uF	20%	6.3V
C320	1-164-227-11	CERAMIC CHIP	0.022uF	10%	25V
C321	1-162-969-11	CERAMIC CHIP	0.0068uF	10%	25V
C322	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C324	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C325	1-110-563-11	CERAMIC CHIP	0.068uF	10%	16V
C326	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V
C327	1-125-837-11	CERAMIC CHIP	1uF	10%	6.3V
C328	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V
C329	1-164-227-11	CERAMIC CHIP	0.022uF	10%	25V
C330	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C331	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C333	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V

SERVO

Ref. No.	Part No.	Description			Remark
C336	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C339	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C340	1-162-918-11	CERAMIC CHIP	18PF	5%	50V
C341	1-162-918-11	CERAMIC CHIP	18PF	5%	50V
C342	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C343	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C344	1-104-852-11	TANTALUM CHIP	22uF	20%	6.3V
C345	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C346	1-104-852-11	TANTALUM CHIP	22uF	20%	6.3V
C347	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C349	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C350	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C351	1-104-852-11	TANTALUM CHIP	22uF	20%	10V
C352	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C353	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C356	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C357	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C358	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C359	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C362	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C364	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C365	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C401	1-115-467-11	CERAMIC CHIP	0.22uF	10%	10V
C402	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C403	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C501	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C503	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C504	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C505	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C506	1-104-852-11	TANTALUM CHIP	22uF	20%	10V
C510	1-115-467-11	CERAMIC CHIP	0.22uF	10%	10V
C511	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C513	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C514	1-115-467-11	CERAMIC CHIP	0.22uF	10%	10V
C515	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C516	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
		< CONNECTOR >			
CN101	1-764-616-12	HOUSING, CONNECTOR (PC BOARD) 30P			
CN102	1-573-929-21	CONNECTOR, FFC/FPC (ZIF) 20P			
* CN103	1-573-920-11	CONNECTOR, FFC/FPC (ZIF) 11P			
		< DIODE >			
D301	8-719-977-03	DIODE MA8056-M-TX			
D401	8-719-157-93	DIODE DTZ-TT11-3.0B			
		< FERRITE BEAD >			
FB301	1-414-235-22	FERRITE	0uH		
FB302	1-414-760-21	FERRITE	0uH		
		< IC >			
IC101	8-759-571-84	IC PCM1718E/2K			
IC301	8-752-384-47	IC CXD2652AR			
IC302	8-752-080-95	IC CXA2523AR			
IC303	8-759-685-74	IC BH6518FS-E2			
IC304	8-759-096-87	IC TC7WU04FU (TE12R)			

Ref. No.	Part No.	Description			Remark
IC305	8-759-040-83	IC BA6287F			
IC307	8-759-498-44	IC MSM51V4400D-70TS-K			
IC401	8-759-385-17	IC NJM4580E (TE2)			
IC501	8-752-909-21	IC CXP84340-217Q			
IC502	8-759-321-61	IC HD74HC244FP-EL			
		< COIL >			
L101	1-412-058-11	INDUCTOR CHIP	10uH		
L102	1-412-058-11	INDUCTOR CHIP	10uH		
L301	1-412-058-11	INDUCTOR CHIP	10uH		
L302	1-412-058-11	INDUCTOR CHIP	10uH		
L501	1-412-058-11	INDUCTOR CHIP	10uH		
		< TRANSISTOR >			
Q301	8-729-230-49	TRANSISTOR	2SC2712Y-TE85L		
Q302	8-729-026-49	TRANSISTOR	2SA1037AK-T146-QR		
Q303	8-729-120-28	TRANSISTOR	2SC2412K-T-146-QR		
Q401	8-729-920-85	TRANSISTOR	2SD1664-T101-QR		
Q402	8-729-106-60	TRANSISTOR	2SB1132-T101-QR		
Q403	8-729-421-22	TRANSISTOR	UN2211-TX		
		< RESISTOR >			
R101	1-216-073-00	METAL CHIP	10K	5%	1/10W
R102	1-216-833-11	METAL CHIP	10K	5%	1/16W
R104	1-216-049-11	RES-CHIP	1K	5%	1/10W
R201	1-216-073-00	METAL CHIP	10K	5%	1/10W
R202	1-216-049-11	RES-CHIP	1K	5%	1/10W
R301	1-216-809-11	METAL CHIP	100	5%	1/16W
R302	1-216-809-11	METAL CHIP	100	5%	1/16W
R303	1-216-809-11	METAL CHIP	100	5%	1/16W
R304	1-216-809-11	METAL CHIP	100	5%	1/16W
R305	1-216-809-11	METAL CHIP	100	5%	1/16W
R306	1-216-809-11	METAL CHIP	100	5%	1/16W
R307	1-216-809-11	METAL CHIP	100	5%	1/16W
R308	1-216-809-11	METAL CHIP	100	5%	1/16W
R311	1-216-821-11	METAL CHIP	1K	5%	1/16W
R312	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R316	1-216-821-11	METAL CHIP	1K	5%	1/16W
R317	1-216-809-11	METAL CHIP	100	5%	1/16W
R318	1-216-833-11	METAL CHIP	10K	5%	1/16W
R319	1-216-845-11	METAL CHIP	100K	5%	1/16W
R320	1-216-855-11	METAL CHIP	680K	5%	1/16W
R324	1-216-827-11	METAL CHIP	3.3K	5%	1/16W
R325	1-216-821-11	METAL CHIP	1K	5%	1/16W
R327	1-216-821-11	METAL CHIP	1K	5%	1/16W
R328	1-216-811-11	METAL CHIP	150	5%	1/16W
R329	1-216-819-11	METAL CHIP	680	5%	1/16W
R330	1-216-853-11	METAL CHIP	470K	5%	1/16W
R331	1-216-809-11	METAL CHIP	100	5%	1/16W
R332	1-216-809-11	METAL CHIP	100	5%	1/16W
R333	1-216-819-11	METAL CHIP	680	5%	1/16W
R334	1-216-809-11	METAL CHIP	100	5%	1/16W
R335	1-216-815-11	METAL CHIP	330	5%	1/16W
R336	1-216-853-11	METAL CHIP	470K	5%	1/16W
R337	1-216-853-11	METAL CHIP	470K	5%	1/16W
R338	1-216-994-11	RES-CHIP	13K	5%	1/16W
R340	1-218-739-11	RES-CHIP	91K	5%	1/16W
R342	1-216-994-11	RES-CHIP	13K	5%	1/16W

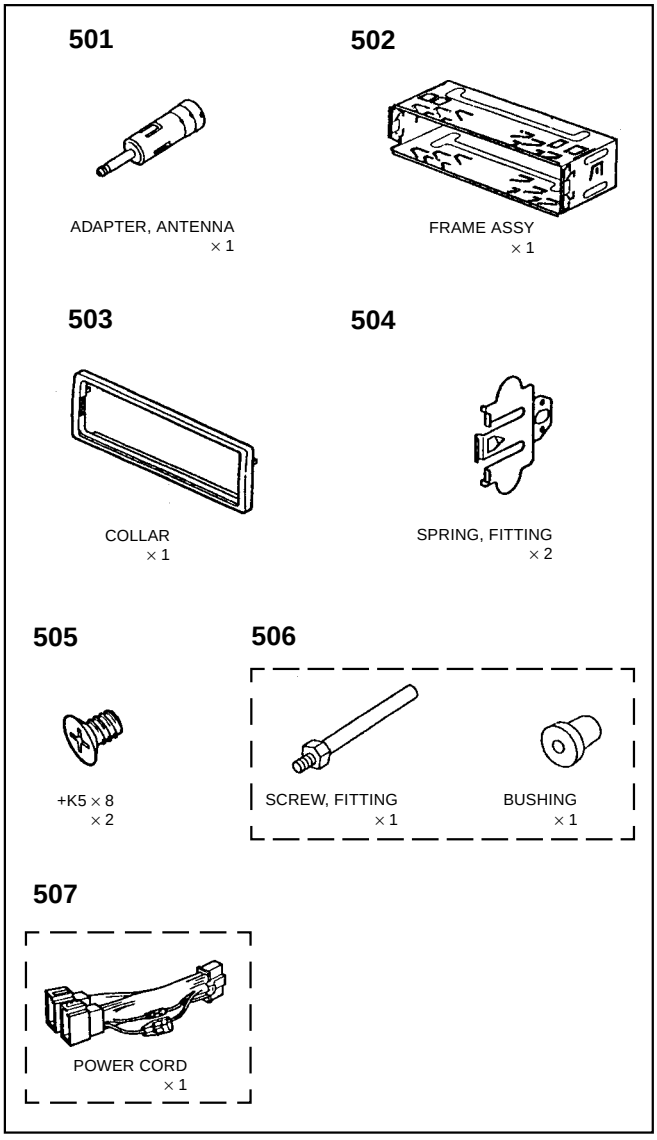
Ref. No.	Part No.	Description			Remark
R344	1-216-994-11	RES-CHIP	13K	5%	1/16W
R346	1-216-842-11	METAL CHIP	56K	5%	1/16W
R348	1-218-863-11	METAL CHIP	4.7K	0.5%	1/16W
R349	1-216-025-11	RES-CHIP	100	5%	1/10W
R350	1-216-797-11	METAL CHIP	10	5%	1/16W
R351	1-218-855-11	METAL CHIP	2.2K	0.5%	1/16W
R352	1-218-855-11	METAL CHIP	2.2K	0.5%	1/16W
R353	1-218-855-11	METAL CHIP	2.2K	0.5%	1/16W
R354	1-216-857-11	METAL CHIP	1M	5%	1/16W
R355	1-216-833-11	METAL CHIP	10K	5%	1/16W
R356	1-216-833-11	METAL CHIP	10K	5%	1/16W
R357	1-216-017-00	RES-CHIP	47	5%	1/10W
R359	1-216-864-91	SHORT	0		
R360	1-216-797-11	METAL CHIP	10	5%	1/16W
R361	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R401	1-216-073-00	METAL CHIP	10K	5%	1/10W
R402	1-216-065-00	RES-CHIP	4.7K	5%	1/10W
R403	1-216-065-00	RES-CHIP	4.7K	5%	1/10W
R404	1-216-809-11	METAL CHIP	100	5%	1/16W
R405	1-218-847-11	METAL CHIP	1K	0.5%	1/16W
R406	1-218-716-11	METAL CHIP	10K	0.5%	1/16W
R407	1-216-845-11	METAL CHIP	100K	5%	1/16W
R501	1-216-821-11	METAL CHIP	1K	5%	1/16W
R502	1-216-821-11	METAL CHIP	1K	5%	1/16W
R503	1-216-821-11	METAL CHIP	1K	5%	1/16W
R504	1-216-821-11	METAL CHIP	1K	5%	1/16W
R505	1-216-821-11	METAL CHIP	1K	5%	1/16W
R506	1-216-845-11	METAL CHIP	100K	5%	1/16W
R507	1-218-863-11	METAL CHIP	4.7K	0.5%	1/16W
R510	1-216-845-11	METAL CHIP	100K	5%	1/16W
R511	1-216-847-11	METAL CHIP	150K	5%	1/16W
R512	1-216-845-11	METAL CHIP	100K	5%	1/16W
R516	1-216-809-11	METAL CHIP	100	5%	1/16W
R517	1-216-809-11	METAL CHIP	100	5%	1/16W
R518	1-216-809-11	METAL CHIP	100	5%	1/16W
R519	1-216-809-11	METAL CHIP	100	5%	1/16W
R520	1-216-809-11	METAL CHIP	100	5%	1/16W
R521	1-216-809-11	METAL CHIP	100	5%	1/16W
R522	1-216-821-11	METAL CHIP	1K	5%	1/16W
R523	1-216-821-11	METAL CHIP	1K	5%	1/16W
R524	1-216-821-11	METAL CHIP	1K	5%	1/16W
R525	1-216-845-11	METAL CHIP	100K	5%	1/16W
R526	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R527	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R528	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R529	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R530	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R531	1-216-845-11	METAL CHIP	100K	5%	1/16W
R532	1-216-809-11	METAL CHIP	100	5%	1/16W
R533	1-216-845-11	METAL CHIP	100K	5%	1/16W
R534	1-216-845-11	METAL CHIP	100K	5%	1/16W
R535	1-216-845-11	METAL CHIP	100K	5%	1/16W
R537	1-216-809-11	METAL CHIP	100	5%	1/16W
R538	1-216-845-11	METAL CHIP	100K	5%	1/16W
R539	1-216-845-11	METAL CHIP	100K	5%	1/16W
R540	1-216-845-11	METAL CHIP	100K	5%	1/16W
R542	1-216-845-11	METAL CHIP	100K	5%	1/16W

Ref. No.	Part No.	Description	Remark
		< COMPOSITION CIRCUIT BLOCK >	
RB503	1-233-412-11	RES, CHIP NETWORK 1K (3216)	
		< THERMISTOR >	
TH501	1-810-421-11	THERMISTOR NTH5G36B103K01TE	
		< VIBRATOR >	
X301	1-767-429-21	VIBRATOR, CRYSTAL (22.5792MHz)	
X501	1-760-365-11	VIBRATOR, CERAMIC (10MHz)	
**********			
*	1-677-057-12	SUB BORAD	
		**********	
		< CONNECTOR >	
CNP810	1-794-064-12	SOCKET, CONNECTOR 14P	
CNP811	1-792-195-11	CABLE, FLEXIBLE FLAT (14 CORE)	
		< DIODE >	
D810	8-719-056-82	DIODE UDZ-TE-17-6.2B	
D811	8-719-056-82	DIODE UDZ-TE-17-6.2B	
D812	8-719-056-82	DIODE UDZ-TE-17-6.2B	
D813	8-719-056-82	DIODE UDZ-TE-17-6.2B	
D814	8-719-056-82	DIODE UDZ-TE-17-6.2B	
D815	8-719-056-82	DIODE UDZ-TE-17-6.2B	
D816	8-719-056-82	DIODE UDZ-TE-17-6.2B	
D817	8-719-056-82	DIODE UDZ-TE-17-6.2B (GREEN)	
D818	8-719-056-82	DIODE UDZ-TE-17-6.2B (AMBER)	
		< LED >	
LED810	8-719-077-78	LED BG1101F-TR (MD DISC SLOT) (GREEN)	
LED810	8-719-080-91	LED AY1101F-1-TR (MD DISC SLOT)	(AMBER)
		< SWITCH >	
LSW810	1-771-609-11	SWITCH, TACT (WITH LED) (⏏) (GREEN)	
LSW810	1-771-882-11	SWITCH, TACTILE (WITH LED) (⏏) (AMBER)	
**********			
		MISCELLANEOUS	
		**********	
17	1-776-527-61	CORD (WITH CONNECTOR) (ISO) (POWER)	
60	1-694-660-11	CONDUCTIVE BOARD, CONNECTION	
153	1-757-311-11	CABLE, FLEXIBLE FLAT (11 CORE)	
⚠165	8-583-065-03	OPTICAL PICK-UP KMS-241C/J1RP	
CNP811	1-792-195-11	CABLE, FLEXIBLE FLAT (14CORE)	
M901	A-3301-407-A	MOTOR ASSY, SP (SPINDLE)	
M902	A-3291-190-A	MOTOR ASSY, SL (SLED)	
M903	X-3379-451-1	MOTOR ASSY, LO (LOADING)	
LCD901	1-803-906-11	DISPLAY PANEL, LIQUID CRYSTAL	
**********			

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

Ref. No.	Part No.	Description	Remark
		**********	
		HARDWARE LIST	
		**********	
#1	7-621-772-20	SCREW +B 2X5	
#2	7-685-795-09	SCREW +PTT 2.6X12 (S)	
#3	7-685-793-09	SCREW +PTT 2.6X8 (S)	
#4	7-685-647-79	SCREW +BVTP 3X10 TYPE2 N-S	
#5	7-685-851-04	SCREW +BVTT 2X4 (S)	
#6	7-624-102-04	STOP RING 1.5, TYPE-E	
#7	7-627-852-37	PRECISION SCREW +P 1.7X1.8 TYPE3	
#8	7-621-772-08	SCREW +B 2X3	
#9	7-621-555-10	SCREW +K 2X3	
#10	7-685-793-09	SCREW +PTT 2.6X8 (S)	
#11	7-685-791-09	SCREW +PTT 2.6X5 (S)	
#12	7-627-553-28	SCREW, PRECISION +P 2X2.5	
#13	7-685-106-19	SCREW +P 2X10 TYPE2 NON-SLIT	
**********			
		ACCESSORIES & PACKING MATERIALS	
		**********	
	3-227-786-11	MANUAL, INSTRUCTION, INSTALL (ENGLISH, GERMAN, FRENCH, ITALIAN, DUTCH)	
	3-227-787-11	MANUAL, INSTRUCTION (ENGLISH, GERMAN, FRENCH, ITALIAN, DUTCH)	
	X-3378-490-1	CASE (PANEL) ASSY (for FRONT PANEL)	
**********			

Ref. No.	Part No.	Description	Remark
		PARTS FOR INSTALLATION AND CONNECTION	
		**********	
501	1-465-459-21	ADAPTER, ANTENNA	
502	X-3373-602-1	FRAME ASSY	
503	3-040-979-01	COLLAR	
504	3-233-644-01	SPRING, FITTING	
505	3-934-325-01	SCREW, +K (5X8) TAPPING	
506	X-3366-405-1	SCREW ASSY (EXP), FITTING	
507	1-776-527-61	CORD (WITH CONNECTOR) (ISO) (POWER)	



MEMO

REVISION HISTORY

Clicking the version allows you to jump to the revised page.
Also, clicking the version at the upper right on the revised page allows you to jump to the next revised page.

Ver.	Date	Description of Revision
1.1	2001.05	Change of Part No. for SPRING, FITTING (ECN-CSA04727)
1.0	2000.12	New