XR-L240

SERVICE MANUAL

AEP Model
UK Model

Ver 1.0 2001.10

Model Name Using Similar Mechanism	NEW
Tape Transport Mechanism Type	MG-36SZ12-32

SPECIFICATIONS

Cassette player section

Tape track	4-track 2-channel stereo
Wow and flutter	0.13 % (WRMS)
Frequency response	30 – 15,000 Hz
Signal-to-noise ratio	55 dB

Tuner section

F M

Tuning range	87.5 – 108.0 MHz
Aerial terminal	External aerial connector
Intermediate frequency	10.7 MHz
Usable sensitivity	11 dBf
Selectivity	75 dB at 400 kHz
Signal-to-noise ratio	62 dB (stereo), 68 dB (mono)
Harmonic distortion at 1 kHz	0.7 % (stereo), 0.5 % (mono)
Separation	33 dB at 1 kHz
Frequency response	30 – 15,000 Hz

M W / L W

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: 50 µV

Power amplifier section

Outputs	Speaker outputs (sure seal connectors)
Speaker impedance	4 – 8 ohms
Maximum power output	45 W × 4 (at 4 ohms)

General

Outputs	Power aerial relay control lead
Tone controls	Bass ±9 dB at 100 Hz Treble ±9 dB at 10 kHz
Power requirements	12 V DC car battery (negative earth)
Dimensions	Approx. 178 × 50 × 178 mm (w/h/d)
Mounting dimensions	Approx. 182 × 53 × 161 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 CASSETTE CAR STEREO

9-873-349-01
2001J0500-1

Sony Corporation
e Vehicle Company
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SONY®

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Flexible Circuit Board Repairing

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

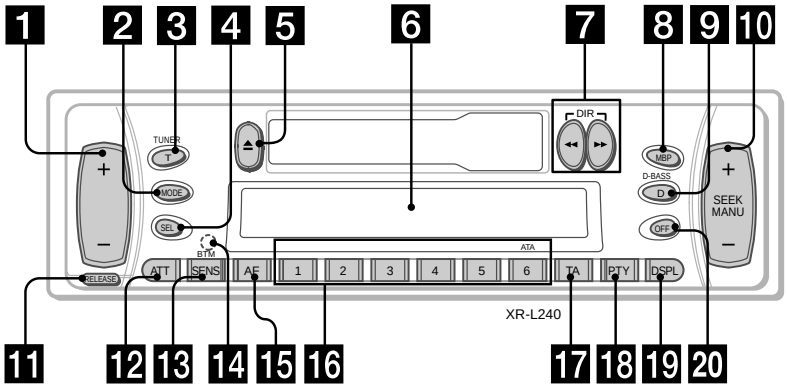
Notes on chip component replacement

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

SECTION 1
GENERAL

This section is extracted from instruction manual.

Location of controls



Refer to the pages listed for details.

1 Volume +/– button 6

2 MODE button

During radio reception:
BAND select 7, 8

3 TUNER button 7, 8

4 SEL (select) button 6, 13, 14, 15

5 ⏏ (eject) button 6, 7, 8

6 Display window

7 ◀◀/▶▶ (fast winding)/DIR (tape transport direction change) buttons 6, 7

8 MBP (My Best sound Position) button 15

9 D-BASS button 15

10 SEEK/MANU +/– button 8, 10, 13

11 RELEASE (front panel release) button 5, 16

12 ATT (attenuate) button 14

13 SENS/BTM button 7, 8, 12

14 RESET button (located on the front side of the unit behind the front panel) 5

15 AF button 9, 10, 12

16 Number buttons 7, 8, 13, 14

During radio reception:
Preset number select 8, 10, 12

During tape playback:
(6) ATA 7

17 TA button 11, 12

18 PTY (programme type) button 13

19 DSPL (display mode change) button 6, 9

20 OFF button* 5

* **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) 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 (DSPL) for two seconds.

The hour indication flashes.

❶ Press either side of the volume button to set the hour.

to go forward

to go back

❷ Press (SEL).

The minute indication flashes.

❸ Press either side of the volume button to set the minute.

to go forward

to go back

2 Press (DSPL).

The clock starts.

After the clock setting is complete, the display returns to normal playback mode.

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 temperatures, 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°.

Installation

Vorsichtsma nahmen

- 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.

Installation

Pr cautions

- 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, à des saletés ou à des vibrations violentes.
- Pour garantir un montage sûr, utiliser le matériel fourni uniquement.

R glage de l'angle de montage

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

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°.

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.

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 (RELEASE), then slide the front panel a little to the left, and pull it off towards you.

B To attach

Attach part Ⓐ of the front panel to part Ⓑ of the unit as illustrated and push the left side into position until it clicks.

Abnehmen und Anbringen der Frontplatte

Nehmen Sie die Frontplatte vor dem Einbau des Geräts ab.

A Abnehmen

Schalten Sie das Gerät vor dem Abnehmen der Frontplatte unbedingt mit (OFF) aus. Drücken Sie (RELEASE), schieben Sie anschließend die Frontplatte ein wenig nach links, und ziehen Sie sie auf sich zu heraus.

B Anbringen

Setzen Sie Teil Ⓐ der Frontplatte wie in der Abbildung dargestellt an Teil Ⓑ des Geräts an, und drücken Sie die linke Seite der Frontplatte an, bis sie mit einem Klicken einrastet.

Retrait et pose de la fa ade

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

A Pour la retirer

Avant de déposer la façade, ne pas oublier d'appuyer sur (OFF). Appuyer ensuite sur (RELEASE), puis faire glisser la façade légèrement vers la gauche et l'enlever en la tirant à soi.

B Pour l'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.

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, premere (OFF). Premere (RELEASE), quindi far scorrere leggermente il pannello anteriore verso sinistra e tirarlo verso di sé.

B Per reinserirlo

Applicare la parte Ⓐ del pannello anteriore alla parte Ⓑ dell'apparecchio come mostrato nell'illustrazione e premere il lato sinistro fino a sentire uno scatto.

Verwijderen en bevestigen van het afneembare voorpaneel

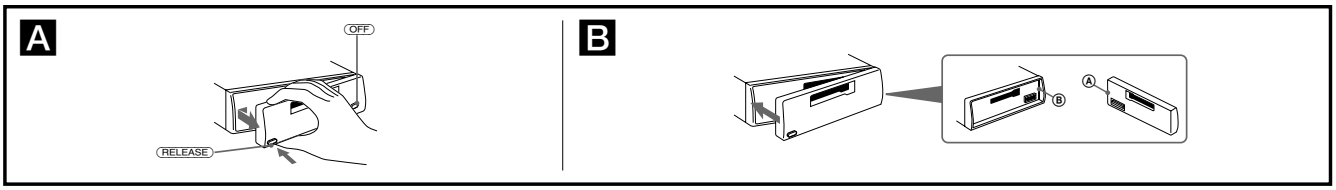
Verwijder, alvorens met het installeren te beginnen, het afneembare voorpaneel.

A Verwijderen

Vergeet niet, voordat u het voorpaneel verwijdert, eerst op (OFF) te drukken. Druk vervolgens op de (RELEASE) toets, schuif het voorpaneel iets naar links en trek het naar u toe.

B Bevestigen

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



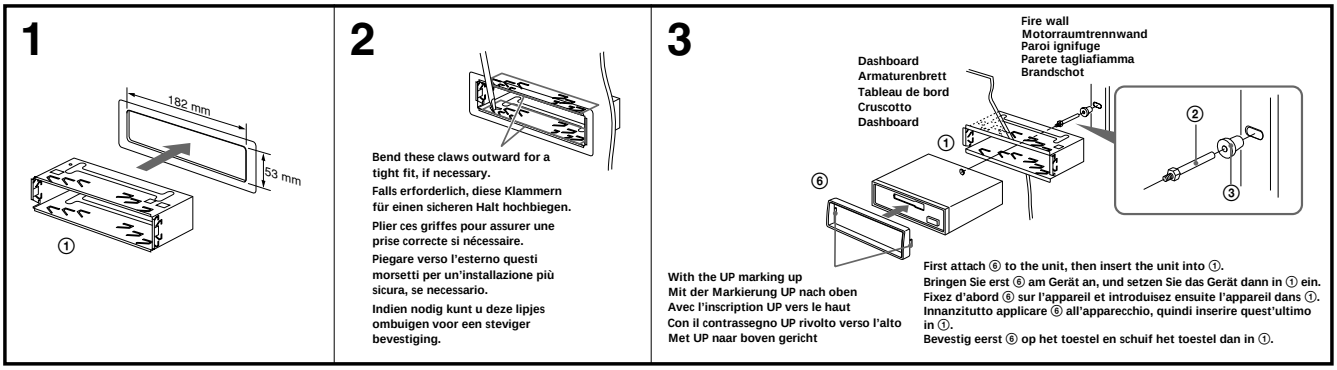
Installation in the dashboard

Installation im Armaturenbrett

Installation dans le tableau de bord

Installazione nel cruscotto

Montage in het dashboard



Reset button

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

R cksetztaste

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

Touche de r initialisation

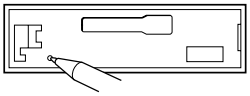
Quand l'installation et les connexions sont terminées, appuyer sur la touche de réinitialisation avec un stylo à bille, etc.

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, ecc.

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 earth 12 V DC operation only.
- Be careful not to pinch any wires between a 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 ⑤ to the unit and speakers before connecting it to the auxiliary power connector.
- **Run all earth wires to a common earth point.**
- Connect the yellow cord to a free car circuit rated higher than the unit's fuse rating. If you connect this unit in series 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.
- Be sure to insulate any loose unconnected wires with electrical tape for safety.
- When installing a car without ACC (accessory) position on the ignition key switch, connect the red power input lead to the +12 V power terminal which is energized at all times with the yellow lead.

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 turned off the engine.
When you press (OFF) momentarily, the clock display does not turn off and this causes battery wear.

Notes of connection diagram

Notes on the control leads
- *The power aerial control lead (blue) supplies +12 V DC when you turn on the unit.*
- *When your car has a 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.*
- *A power aerial without a relay box cannot be used with this unit.*

Warning
If you have a power aerial without a relay box, connecting this unit with the supplied power connecting cord ⑤ 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. Be sure to connect passive speakers to these terminals.*

1* ***Note for the aerial connecting*
If your car aerial is an ISO (International Organization for Standardization) type, use the supplied adapter ⑦ to connect it. First connect the car aerial to the supplied adapter, then connect it to the aerial jack of the master unit.

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 ⑤ erst mit dem Gerät und den Lautsprechern, bevor Sie es an den Hilfsstromanschluß anschließen.
- **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.
- Aus Sicherheitsgründen müssen alle losen, nicht angeschlossenen Drähte mit Isolierband abisoliert werden.
- Bei Installation des Geräts in einem Auto, dessen Zündschloß keine Position ACC oder I aufweist, schließen Sie die rote Stromversorgungsleitung an den +12-V-Stromversorgungsanschluß an, der über die gelbe Leitung immer mit Strom versorgt wird.

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.

Hinweise zum Anschlußdiagramm

Hinweise zu den Steuerleitungen
- *Die Motorantennen-Steuerleitung (blau) liefert +12 V Gleichstrom, wenn Sie das Gerät einschalten.*
- *Wenn das Fahrzeug mit einer in der Heck-/Seitenfensterscheibe integrierten UKW/MW/LW-Antenne ausgestattet ist, muß die Motorantennen-Steuerleitung (blau) oder die Zubehörstromversorgungsleitung (rot) an den Stromversorgungsanschluß des vorhandenen Antennenverstärkers angeschlossen werden. Näheres dazu erfahren Sie bei Ihrem Händler.*
- *Es kann nur eine Motorantenne mit Relaiskästchen angeschlossen werden.*

Warnung
Wenn Sie eine Motorantenne ohne Relaiskästchen verwenden, kann durch Anschließen dieses Geräts mit dem mitgelieferten Netzverbindungskabel ⑤ 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.*

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 ⑦ an. Verbinden Sie zuerst die Fahrzeugantenne mit dem mitgelieferten Adapter, und verbinden Sie diesen dann mit der Antennenbuchse des Hauptgeräts.

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'alimentation ⑤ 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.
- Veillez à isoler tout fil ou câble non connectés avec du chatterton approprié.
- Lors de l'installation dans une voiture dont le contact ne possède pas de position ACC (accessoire), raccordez le fil d'entrée électrique à la borne d'alimentation +12 V alimentée en permanence avec le fil jaune.

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

N'oubliez pas d'appuyer sur le bouton (OFF) de l'appareil pendant deux secondes après avoir coupé le moteur de façon à désactiver l'affichage de l'horloge.
Si vous appuyez brièvement sur (OFF), l'affichage de l'horloge n'est pas désactivé, ce qui provoque une usure de la batterie.

Remarques sur le diagramme de connexion

Remarques sur les fils de contrôle
- *Le fil de commande d'antenne électrique (bleu) fournit une alimentation de + 12 V CC lorsque vous mettez l'appareil sous tension.*
- *Si votre voiture est équipée d'une antenne FM/MW/LW intégrée dans la vitre arrière/latérale, vous devez raccorder le fil de commande d'antenne électrique (bleu) ou le fil d'entrée d'alimentation d'accessoire (rouge) à la borne d'alimentation de l'amplificateur d'antenne existant. Pour plus de détails, consultez votre revendeur.*
- *Une antenne électrique sans boîtier de relais ne peut pas être utilisée avec cet appareil.*

Avertissement
Si vous disposez d'une antenne électrique sans boîtier de relais, le branchement de cet appareil au moyen du cordon d'alimentation fourni ⑤ 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.*

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 ⑦ 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.

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 le viti 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 ⑤ 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 dei fusibili di ogni apparecchio. Se i circuiti della macchina non hanno potenza 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 di modo che, se il fusibile dell'apparecchio salta, gli altri circuiti non verranno tagliati fuori.
- Per sicurezza, assicurarsi di isolare qualsiasi cavo non collegato mediante apposito nastro.
- Se si effettua l'installazione su un'auto priva della posizione ACC (accessoria) sull'interruttore di accensione, collegare il cavo rosso di ingresso dell'alimentazione al terminale di alimentazione +12 V continuamente alimentato a sua volta dal cavo giallo.

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.
Quando si preme (OFF) per un istante, il display dell'orologio non si spegne causando in questo modo lo scaricamento della batteria.

Note sul diagramma di collegamento

Note sui cavi di controllo
- *Il cavo di controllo dell'antenna elettrica (blu) fornisce corrente continua da +12 V quando viene acceso l'apparecchio.*
- *Se l'auto è dotata di un'antenna FM/MW/LW incorporata, situata sul vetro posteriore/laterale, è necessario collegare il cavo di controllo dell'antenna elettrica (blu) o il cavo di ingresso dell'alimentazione accessorio (rosso) al terminale dell'alimentazione del preamplificatore dell'antenna esistente. Per ulteriori informazioni, contattare un rivenditore.*
- *Non è possibile usare un'antenna elettrica senza scatola a relè con questo apparecchio.*

Avvertenza
Quando si collega l'apparecchio con il cavo di alimentazione in dotazione ⑤, si potrebbe danneggiare l'antenna elettrica se questa non ha la scatola a 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 di accensione è spenta.

Note sul collegamento dei diffusori
- *Prima di collegare i diffusori spegnere l'apparecchio.*
- *Usare diffusori con impedenza compresa tra 4 e 8 ohm e con capacità di potenza adeguata, altrimenti i diffusori si potrebbero danneggiare.*
- *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 in quanto si potrebbero danneggiare i diffusori attivi. Assicurarsi di collegare diffusori passivi a questi terminali.*

1* ***Nota per il collegamento dell'antenna*
Se l'antenna della macchina è di tipo ISO (International Organization Standardization), utilizzare l'adattatore ⑦ in dotazione per collegarla. Collegare prima l'antenna della macchina all'adattatore in dotazione, quindi collegarla alla presa dell'antenna dell'apparecchio principale.

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 ⑤ 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.
- Voorzie niet aangesloten draden om veiligheidsredenen altijd van isolatietape.
- Bij montage in een auto zonder ACC (accessory) positie op het contactslot, verbindt u de rode voedingsdraad met de +12 V aansluiting die altijd is bekrachtigd met de gele draad.

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

Let erop dat u gedurende twee seconden (OFF) op het toestel indrukt om de tijdweergave uit te schakelen nadat u de motor heeft afgezet.
Wanneer u slechts even op (OFF) drukt, schakelt de tijdweergave niet uit, waardoor de batterij uitgeput raakt.

Opmerkingen bij het aansluitschema

Opmerking betreffende de aansluitsnoeren
- *De bedieningskabel (blauw) van de elektrische antenne levert 12 V gelijkstroom wanneer u het toestel aanschakelt.*
- *Als uw auto is voorzien van een FM/AM/LG antenne die in de achter-/zijruit is geïntegreerd, moet de elektrische antennebedieningskabel (blauw) of de accessoire-stroomdraad (rood) worden aangesloten op de voedingsingang van de bestaande antenneversterker. Voor meer gedetailleerde informatie dient u contact op te nemen met uw dealer.*
- *Met dit apparaat is het niet mogelijk een automatische antenne zonder relaishuis te gebruiken.*

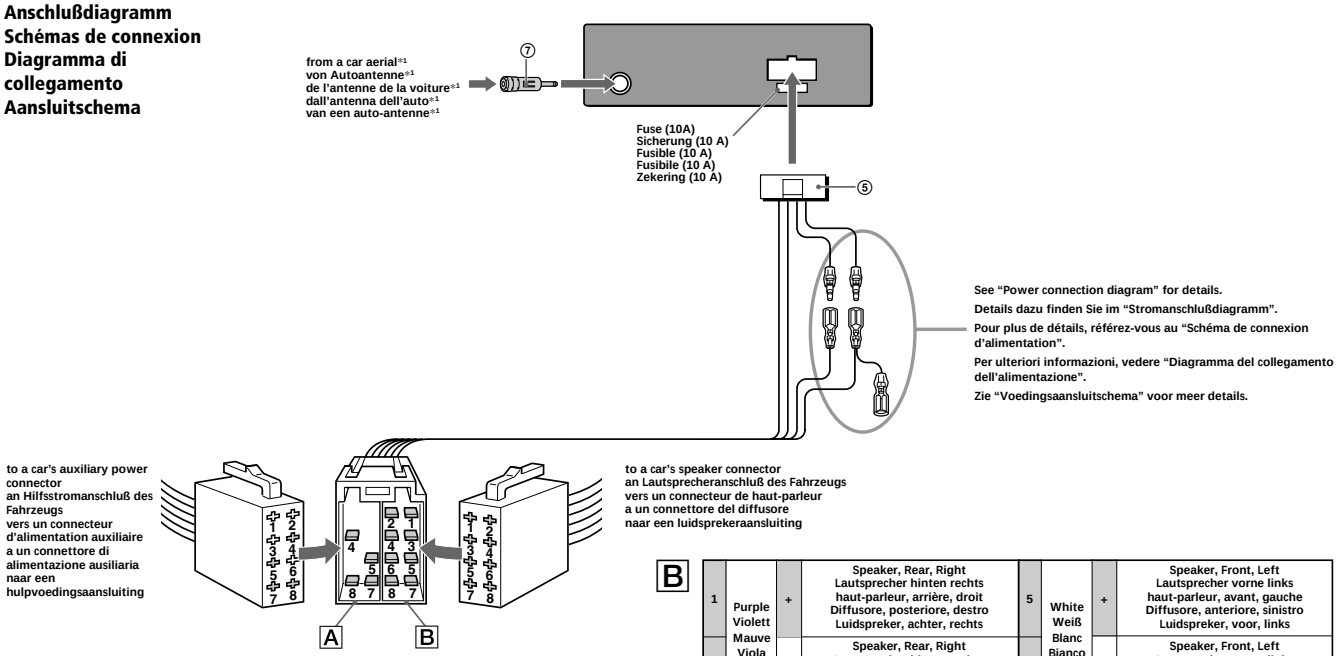
Opgelet
Indien u een elektrische antenne heeft zonder relaiskast, kan het aansluiten van deze eenheid met het bijgeleverde netsnoer ⑤ de antenne beschadigen.

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-aansluiting van dit apparaat. Dit zal leiden tot beschadiging van de actieve luidsprekers. Sluit dus altijd uitsluitend luidsprekers zonder ingebouwde versterker aan.*

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 ⑦. Sluit eerst de auto-antenne aan op de meegeleverde adaptor en vervolgens de antennestekker op het hoofdtoestel.

Connection diagram
Anschlußdiagramm
Schémas de connexion
Diagramma di collegamento
Aansluitschema



A

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 elektronische Antenne antenne électrique comando dell'antenna elettrica automatische antenne	8	Black Schwarz Noir Nero Zwart	earth 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 broche./ Le posizioni 1, 2, 3 e 6 non hanno piedini./ De posities 1, 2, 3 en 6 hebben geen pins.

B

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.

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 unterschiedliche Typen. Sie müssen möglicherweise die Position der roten und gelben Leitung im Stromversorgungskabel der Autoanlage tauschen.
Nehmen Sie die Verbindung der einzelnen Leitungen korrekt vor, 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 intervertir la position des fils jaune et rouge 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.

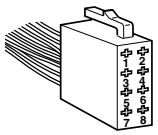
Diagramma del collegamento dell'alimentazione

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 cavi rosso e giallo nel cavo di alimentazione dello stereo della macchina. Dopo aver fatto corrispondere correttamente 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.

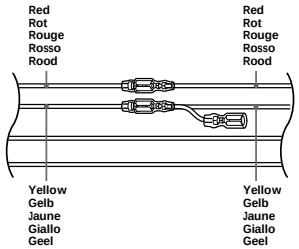
Voedingsaansluitschema

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). U zal eventueel de positie van de rode en gele kabel in de stroomaansluitingskabel van de autoradio moeten verwisselen.
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.

Auxiliary power connector
Hilfsstromanschluß
Connecteur d'alimentation auxiliaire
Connettore di alimentazione ausiliare
Hulpvoedingsaansluiting

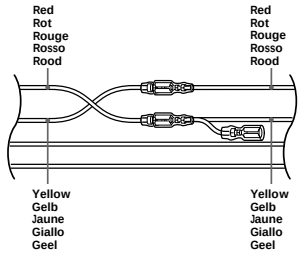


A



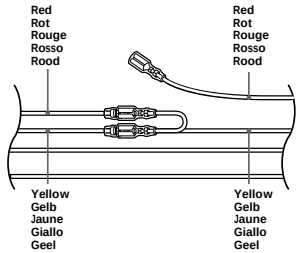
4	Yellow Gelb Jaune Giallo Geel	continuous power supply permanente Stromversorgung alimentation continue alimentazione continua continu voeding
7	Red Rot Rouge Rosso Rood	switched power supply geschaltete Stromversorgung alimentation commutée alimentazione commutata geschakelde voeding

B



4	Yellow Gelb Jaune Giallo Geel	switched power supply geschaltete Stromversorgung alimentation commutée alimentazione commutata geschakelde voeding
7	Red Rot Rouge Rosso Rood	continuous power supply permanente Stromversorgung alimentation continue alimentazione continua continu voeding

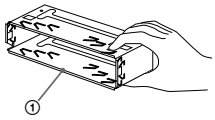
C



the car without ACC position
Fahrzeug ohne Zubehörposition (ACC)
Voiture sans position ACC
Macchina senza posizione ACC
Wagen zonder ACC stand

Cautions

- Cautionary notice for handling the bracket ①.
  Handle the bracket carefully to avoid injuring your fingers.
- Remove the protection collar ⑥ before installing.



Sicherheitshinweise

- Sicherheitshinweis zum Umgang mit der Halterung ①.
  Seien Sie beim Umgang mit der Halterung vorsichtig, damit Sie sich nicht die Hände verletzen.
- Nehmen Sie vor der Installation das Schutzmaterial ⑥ ab.

Avertissements

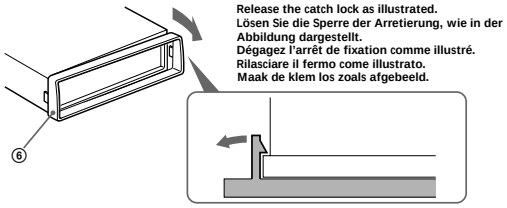
- Remarque importante pour la manipulation du support ①.
  Manipulez précautionneusement le support pour éviter de vous blesser aux doigts.
- Déposez le collier de protection ⑥ avant l'installation.

Attenzione

- Avvertenza sulla manipolazione della staffa ①.
  Maneggiare la staffa con cautela per evitare di ferirsi le mani.
- Rimuovere il collare di protezione ⑥ prima dell'installazione.

Opgelet

- Spring voorzichtig om met de beugel ①.
  Houd de beugel voorzichtig vast zodat u uw vingers niet verwondt.
- Verwijder de beschermrand ⑥ voor het installeren.



SECTION 2
DISASSEMBLY

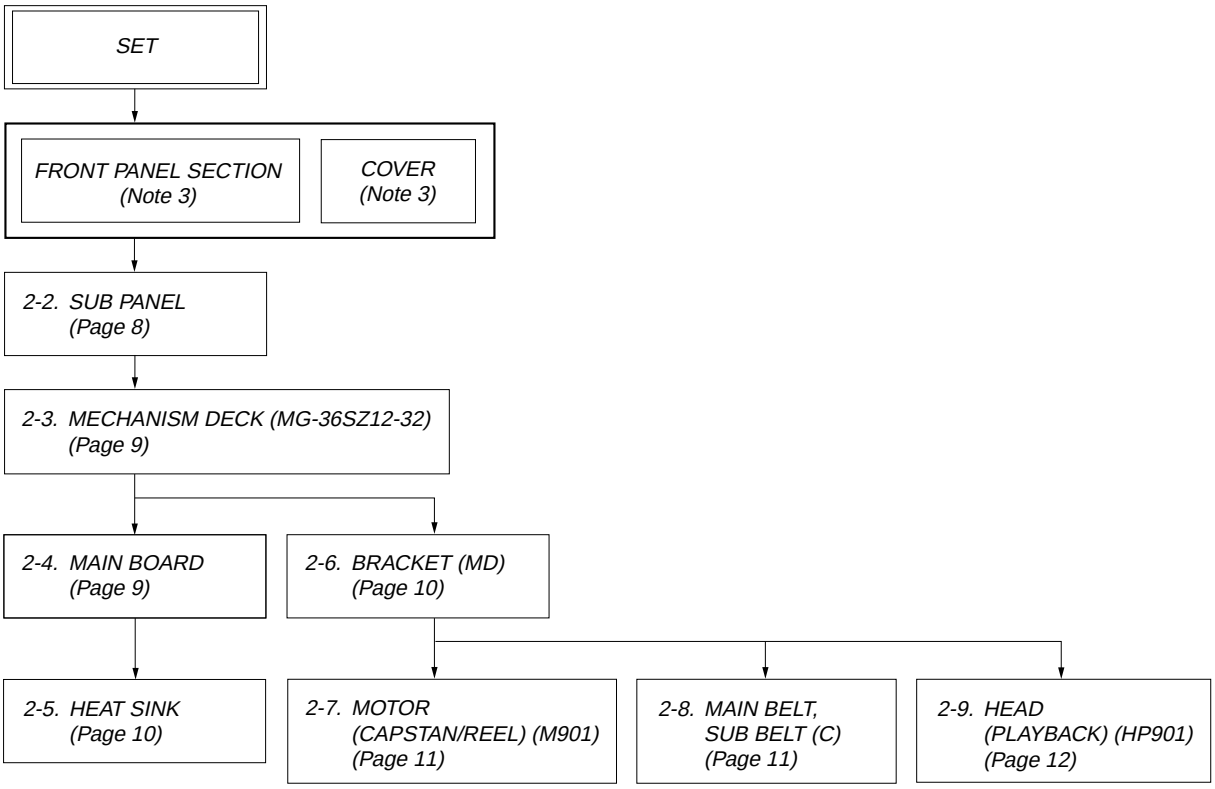
• This set can be disassembled in the order shown below.

2-1. DISASSEMBLY FLOW

Note 1: *The process described in* ▣ *can be performed in any order.*

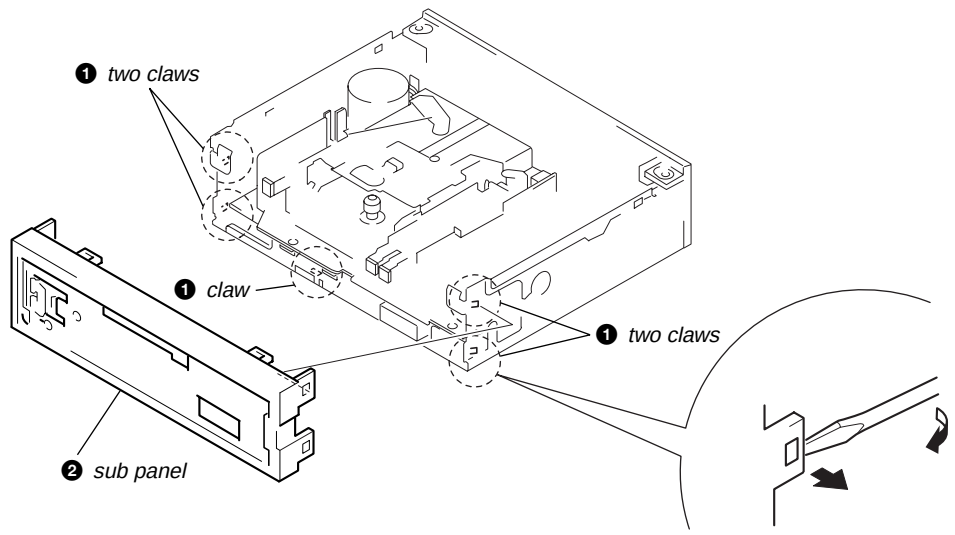
Note 2: *Without completing the process described in* ▣*, the next process can not be performed.*

Note 3: *Illustration of disassembly is omitted.*

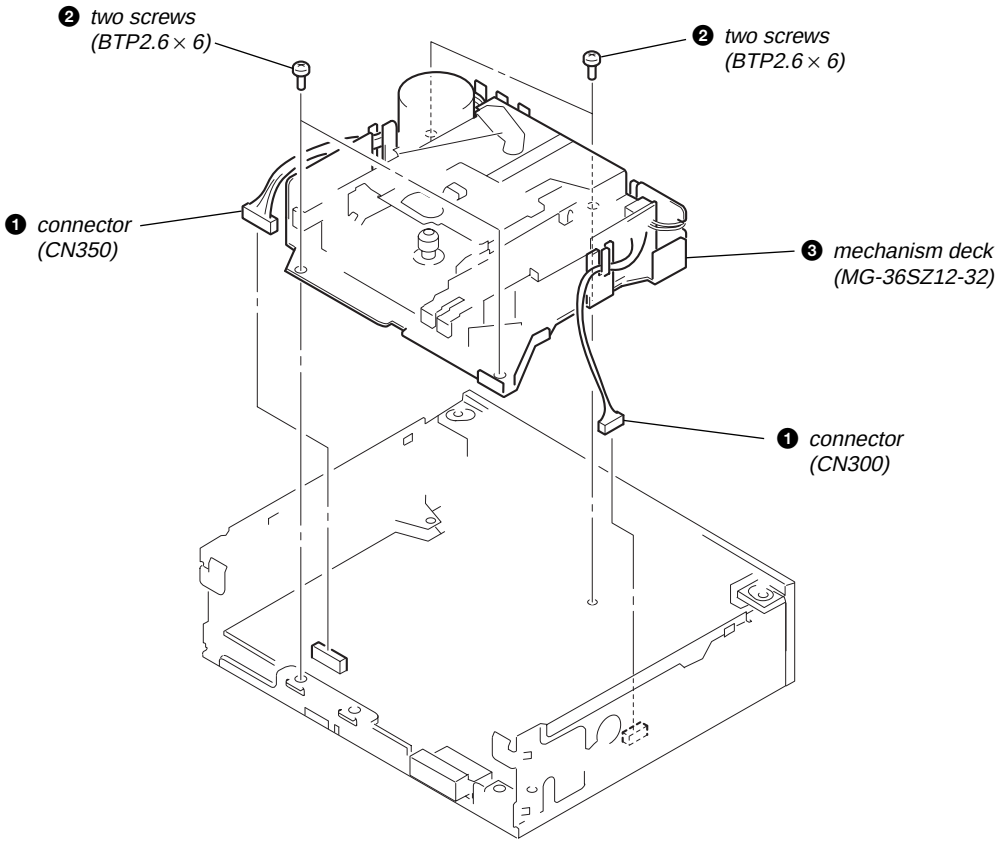


Note: Follow the disassembly procedure in the numerical order given.

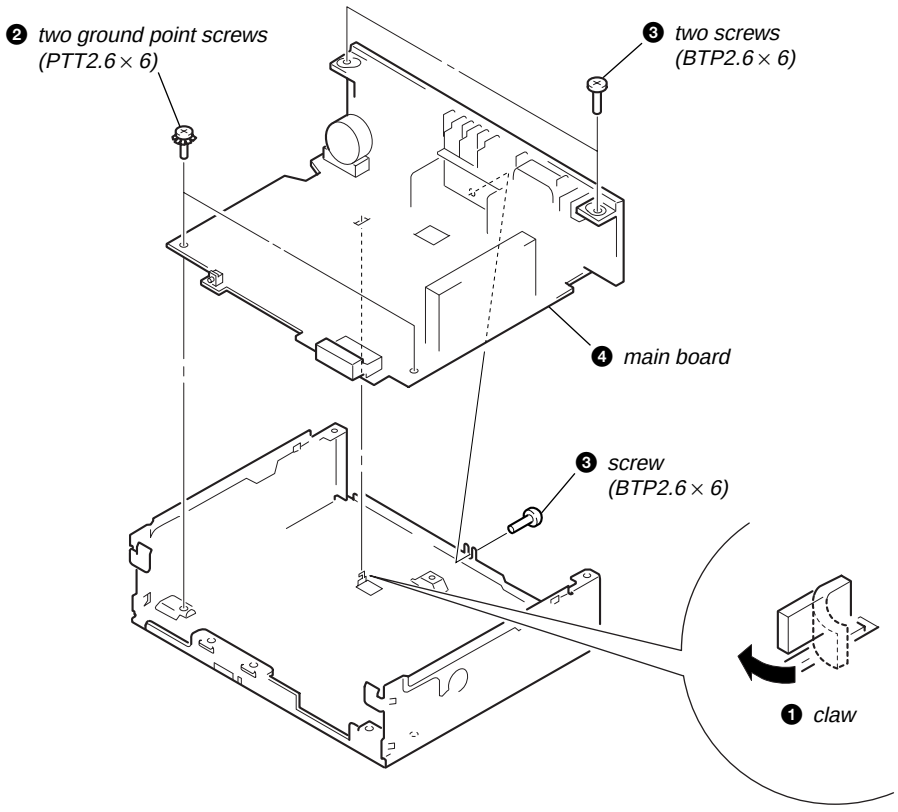
2-2. SUB PANEL



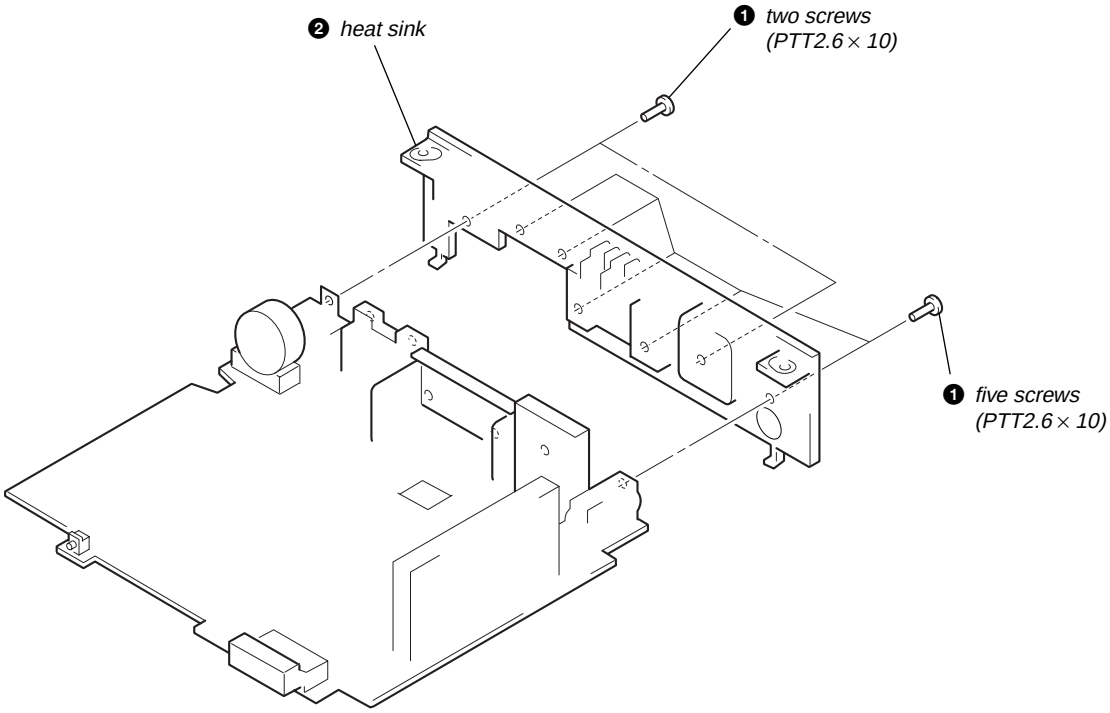
2-3. MECHANISM DECK (MG-36SZ12-32)



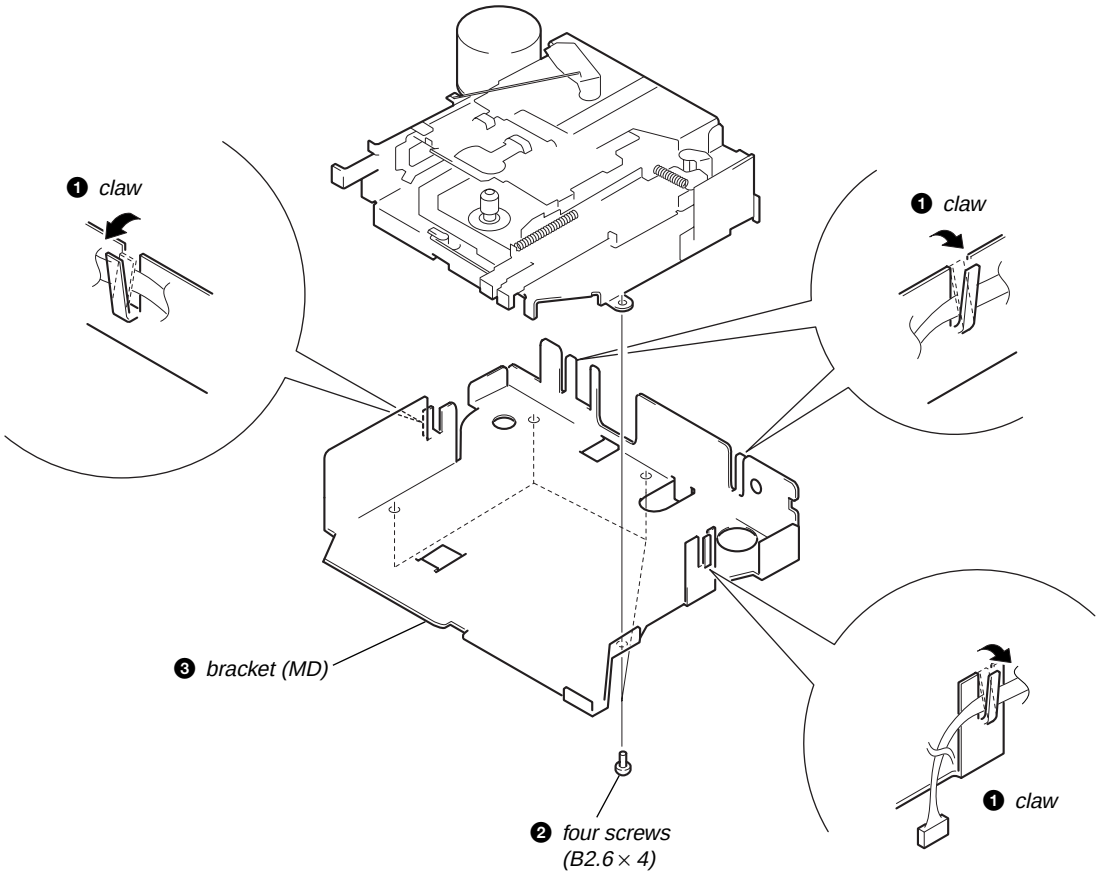
2-4. MAIN BOARD



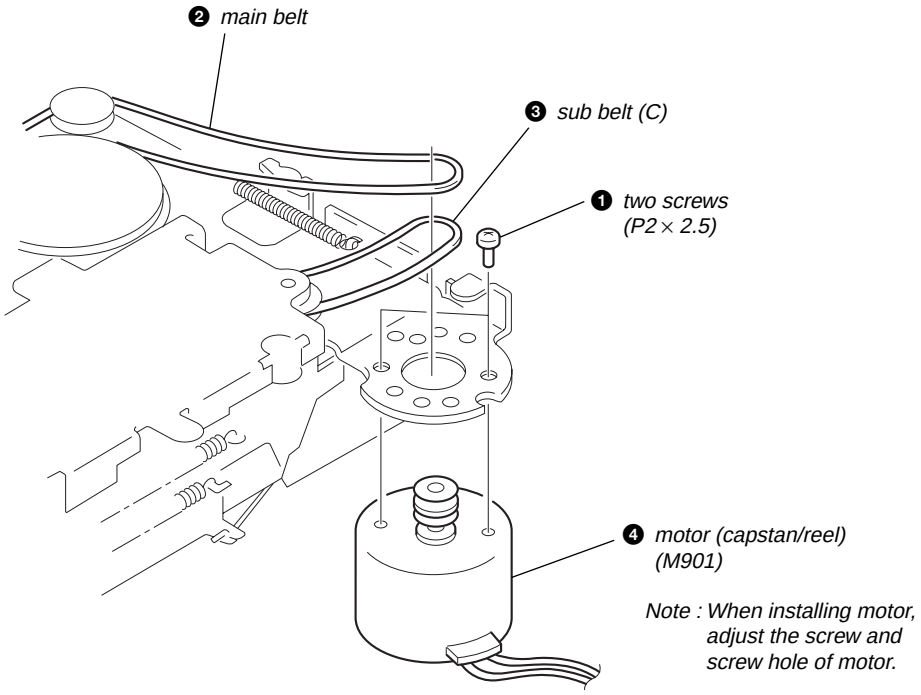
2-5. HEAT SINK



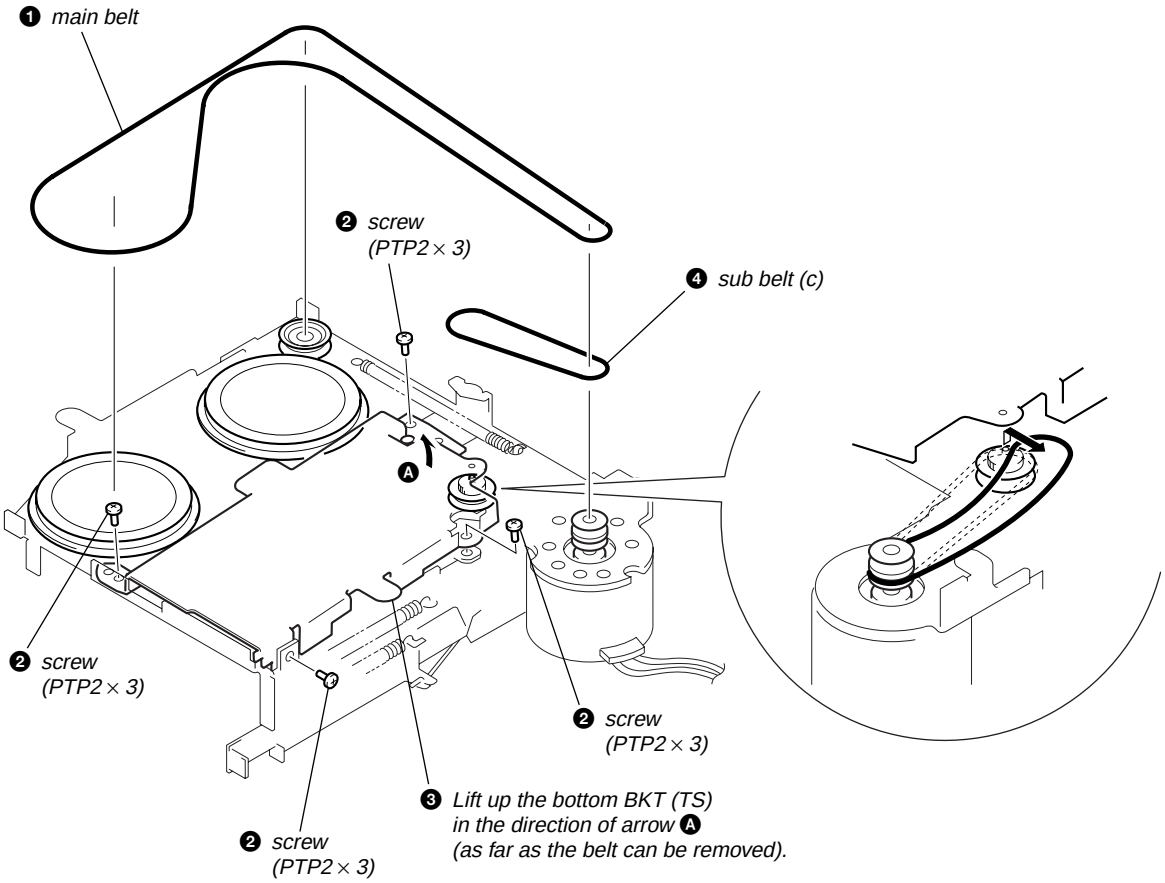
2-6. BRACKET (MD)



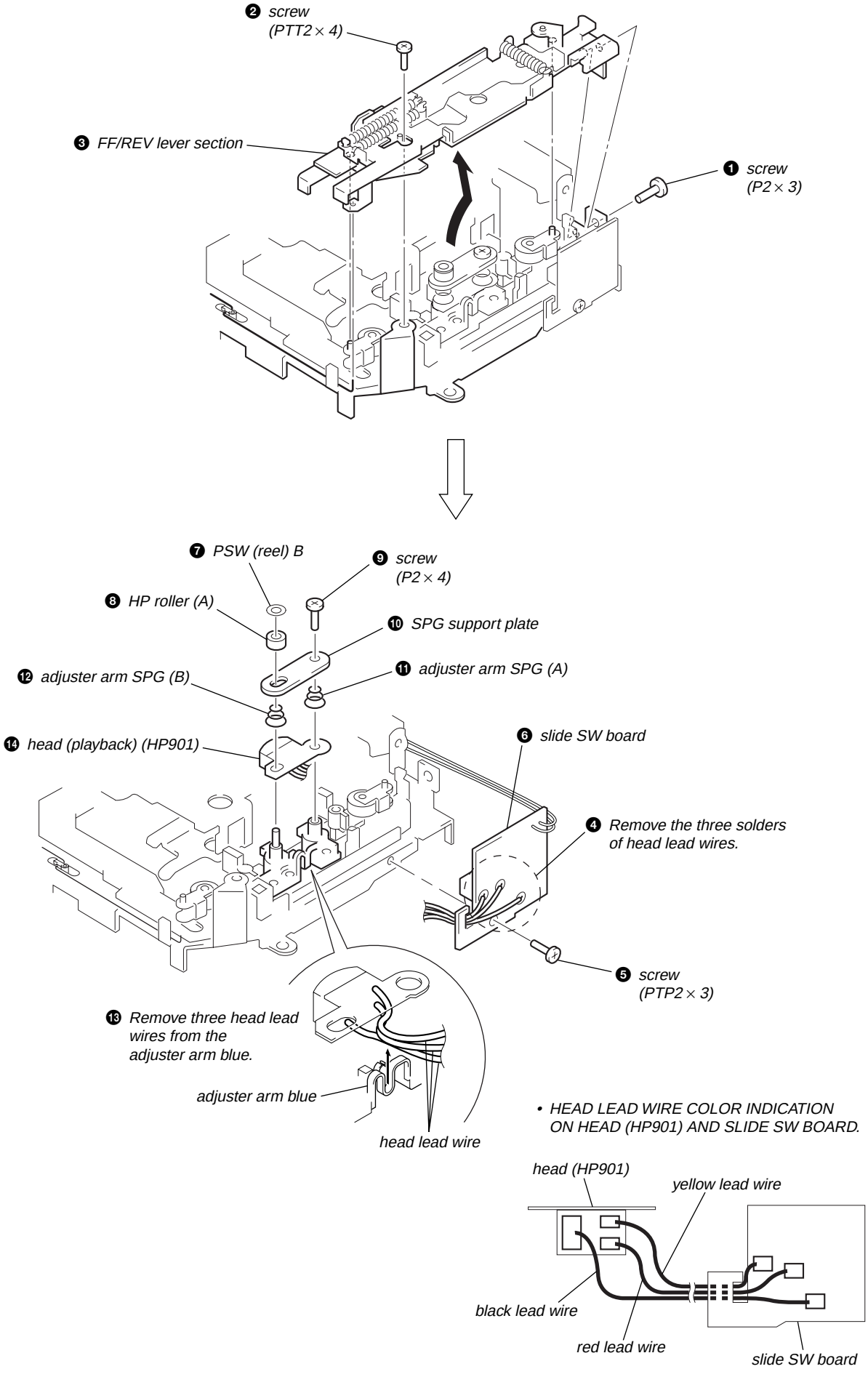
2-7. MOTOR (CAPSTAN/REEL) (M901)



2-8. MAIN BELT, SUB BELT (C)



2-9. HEAD (PLAYBACK) (HP901)



SECTION 3
MECHANICAL ADJUSTMENTS

1. Clean the following parts with a denatured-alcohol-moistened swab:
   playback head pinch roller
   rubber belt capstan
   idler
2. Demagnetize the playback head with a head demagnetizer.
3. Do not use a magnetized screwdriver for the adjustments.
4. The adjustments should be performed with the power supply voltage (14.4 V) unless otherwise noted.

Note: With this set, it is not necessary to apply suitable locking compound to the parts after the azimuth adjustment.

• Torque Measurement

Mode	Torque Meter	Meter Reading
Forward	CQ-102C	2.46 – 5.39 mN•m (25 – 55 g•cm) (0.35 – 0.76 oz•inch)
Forward Back Tension	CQ-102C	0.15 – 0.39 mN•m (1.5 – 4 g•cm) (0.02 – 0.06 oz•inch)
Reverse	CQ-102RC	2.46 – 5.39 mN•m (25 – 55 g•cm) (0.35 – 0.76 oz•inch)
Reverse Back Tension	CQ-102RC	0.15– 0.39 mN•m (1.5 – 4 g•cm) (0.02 – 0.06 oz•inch)
FF, REW	CQ-201B	4.91 – 14.70 mN•m (50 – 150 g•cm) (0.69 – 2.08 oz•inch)

• Tape Tension Measurement

Mode	Tension Meter	Meter Reading
Forward	CQ-403A	more than 5.89 mN•m (more than 60 g) (more than 2.12 oz)
Reverse	CQ-403R	

SECTION 4
ELECTRICAL ADJUSTMENTS

TEST MODE

This set have the test mode function. In the test mode, FM RDS S-Meter, FM Auto Seek/Stop Level and MW Auto Seek/Stop Level adjustments can be performed easier than it in ordinary procedure.

<Set the Test Mode>

1. Turn ON the regulated power supply. (All LEDs on the set lights up, and the clock is displayed.)
   Note: Press the [OFF] button, if the clock is not displayed.
2. Push the [4] button.
3. Push the [5] button.
4. Press the [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.

TAPE DECK SECTION

0 dB= 0.775 V

1. The adjustments should be performed in the order given in this service manual.
2. The adjustments should be performed for both L-CH and R-CH.

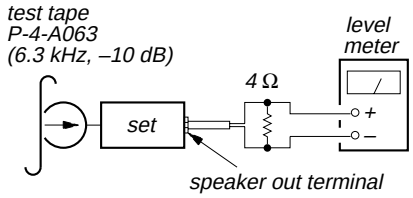
Test Tape

Type	Signal	Used for
P-4-A063	6.3 kHz, –10 dB	head azimuth adjustment
WS-48A	3 kHz, 0 dB	tape speed adjustment

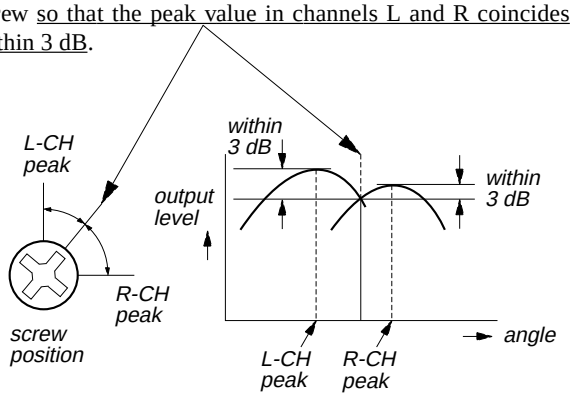
PB Head Azimuth Adjustment

Procedure:

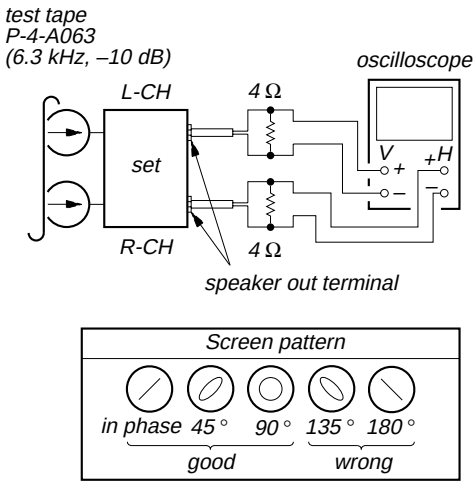
1. Put the set into the FWD PB mode.



2. Turn the screw and check the output peak value. Adjust the screw so that the peak value in channels L and R coincides within 3 dB.

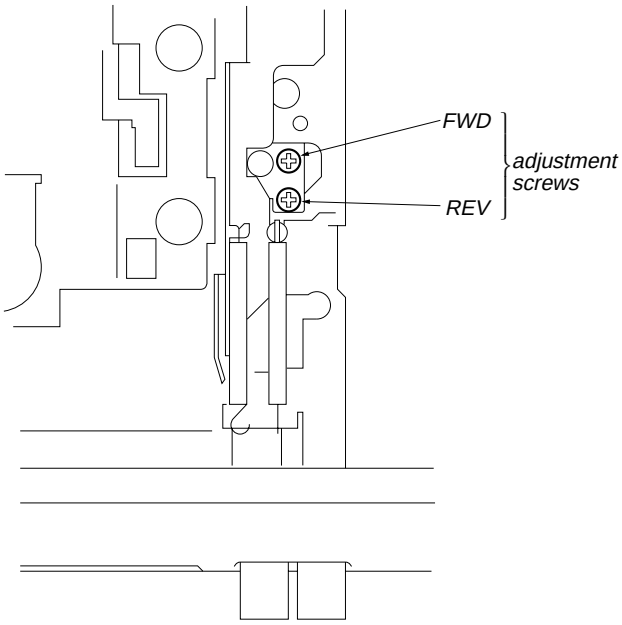


3. Check the phase in the FWD PB mode.



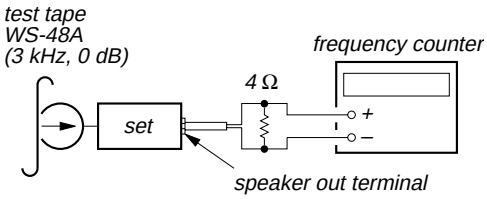
4. Repeat the above adjustment for the REV PB mode.
5. Check that output level difference between FWD PB mode and REV PB mode is within 4 dB.

Adjustment Location: PB head



Tape Speed Adjustment

Setting:



Procedure:

1. Put the set into the FWD PB mode.
2. Adjust adjustment resistor for inside capstan motor so that the reading on the frequency counter becomes in 3,015 Hz.

Specified Value: 2,940 to 3,090 Hz

Adjustment Location: See page 17.

TUNER SECTION

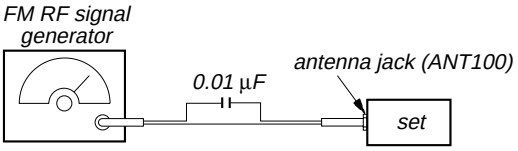
0 dB=1 μV

Cautions during repair
When the tuner unit is defective, replace it by a new one because its internal block is difficult to repair.

Note: Adjust the tuner section in the sequence shown below.
1. FM RDS S-Meter Adjustment
2. FM Auto Seek/Stop Level Adjustment
3. FM Stereo Separation Adjustment
4. MW Auto Seek/Stop Level Adjustment

FM RDS S-Meter Adjustment

Setting:
TUNER button: FM



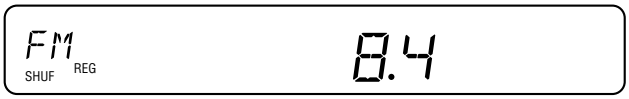
Carrier frequency : 98.00 MHz
Output level : 35 dB (56.2 μV)
Mode : mono
Modulation : no modulation

Procedure:
1. Set to the test mode. (see page 13)
2. Push the TUNER button and set to FM.

Display

3. Push the 6 button.
4. Adjust RV100 on MAIN board so that the display indication is “8.4”.

Display

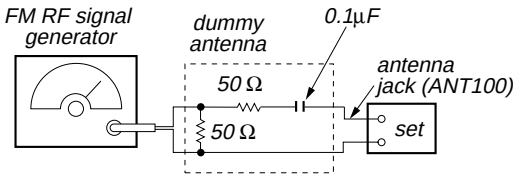


Specified Value: Display indication: 8.2 to 8.6

Adjustment Location: See page 17.

FM Auto Seek/Stop Level Adjustment

Setting:
TUNER button: FM



Carrier frequency : 98.00 MHz
Output level : 22 dB (12.6 μV)
Mode : mono
Modulation : 1 kHz, 22.5 kHz deviation (30%)

Procedure:
1. Set to the test mode. (see page 13)
2. Push the TUNER button and set to FM.

Display

3. Adjust with the volume RV3 on TU100 so that the “FM” indication turns to “FM0” indication on the display window. But, in case of already indicated “FM0”, turn the RV3 so that put out light “0” indication and adjustment.

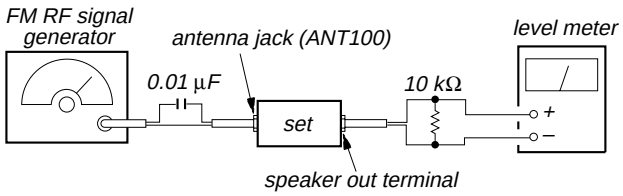
Display

Adjustment Location: See page 17.

FM Stereo Separation Adjustment

Setting:

TUNER button: FM



Carrier frequency : 98.00 MHz
Output level : 70 dB (3.2 mV)
Mode : stereo
Modulation : main: 1 kHz, 20 kHz deviation (26.7%)
sub: 1 kHz, 20 kHz deviation (26.7%)
19 kHz pilot: 7.5 kHz deviation (10%)

Procedure:

FM Stereo signal generator output channel	Level meter connection	Level meter reading (dB)
L-CH	L-CH	Ⓐ
R-CH	L-CH	Ⓑ Adjust RV2 on TU100 for minimum reading.
R-CH	R-CH	Ⓒ
L-CH	R-CH	Ⓓ Adjust RV2 on TU100 for minimum reading.

L-CH Stereo separation: Ⓐ-Ⓑ
R-CH Stereo separation: Ⓒ-Ⓓ
The separations of both channels should be equal.

Specified Value: Separation more than 30 dB

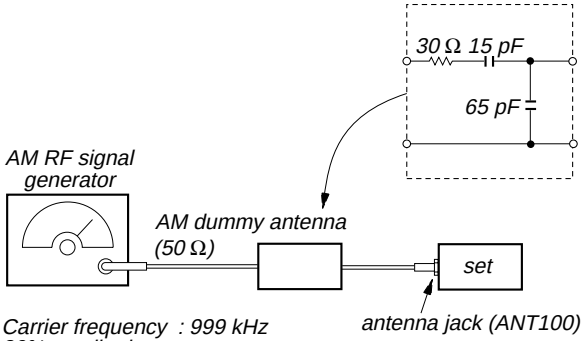
Adjustment Location: See page 17.

MW Auto Seek/Stop Level Adjustmant

Make this adjustment after “FM Auto Seek/Stop Level Adjustment”.

Setting:

TUNER button: MW

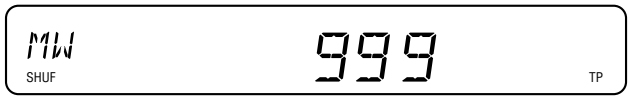


Carrier frequency : 999 kHz
30% amplitude modulation by 1 kHz signal
Output level : 33 dB (44.7 µV)

Procedure:

1. Set to the test mode. (see page 13)
2. Push the TUNER button and set to FM.
3. Push the MODE button and set to MW.

Display



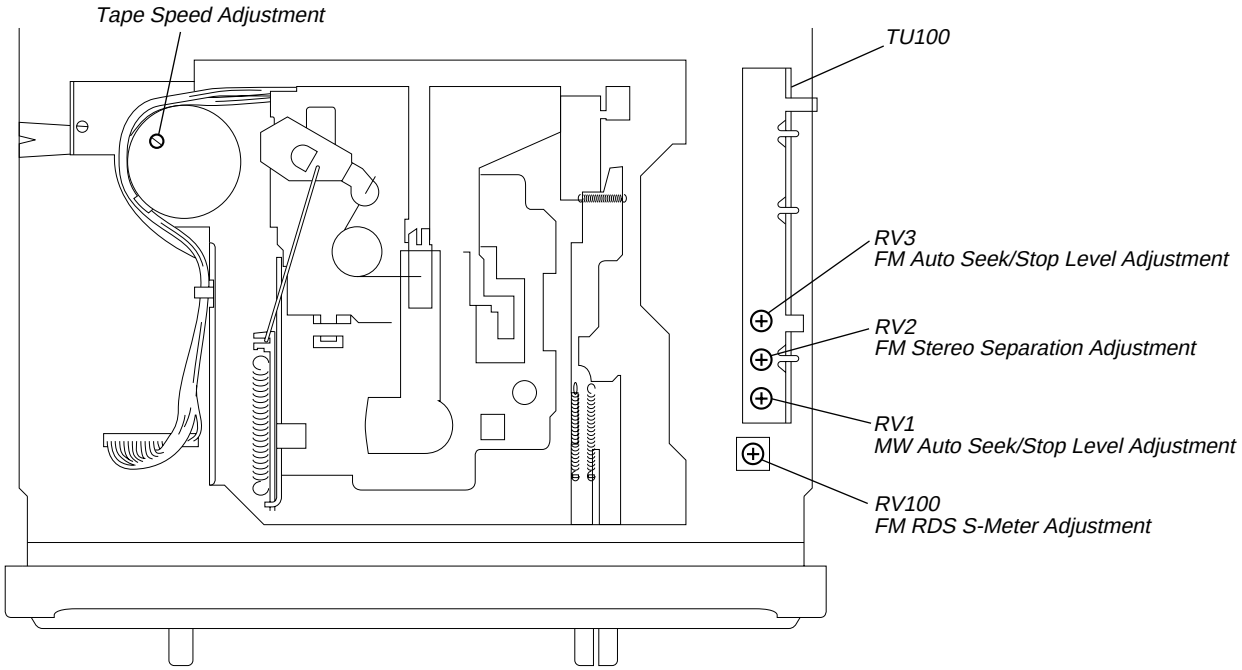
4. Adjust with the volume RV1 on TU100 so that the “MW” indication turns to “MW0” indication on the display window. But, in case of already indicated “MW0”, turn the RV1 so that put out light “0” indication and adjustment.

Display

Adjustment Location: See page 17.

Adjustment Location:

– Set Upper View –



SECTION 5
DIAGRAMS

5-1. 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.
- ▬ : Pattern from the side which enables seeing.
- – – – – : Carbon pattern.

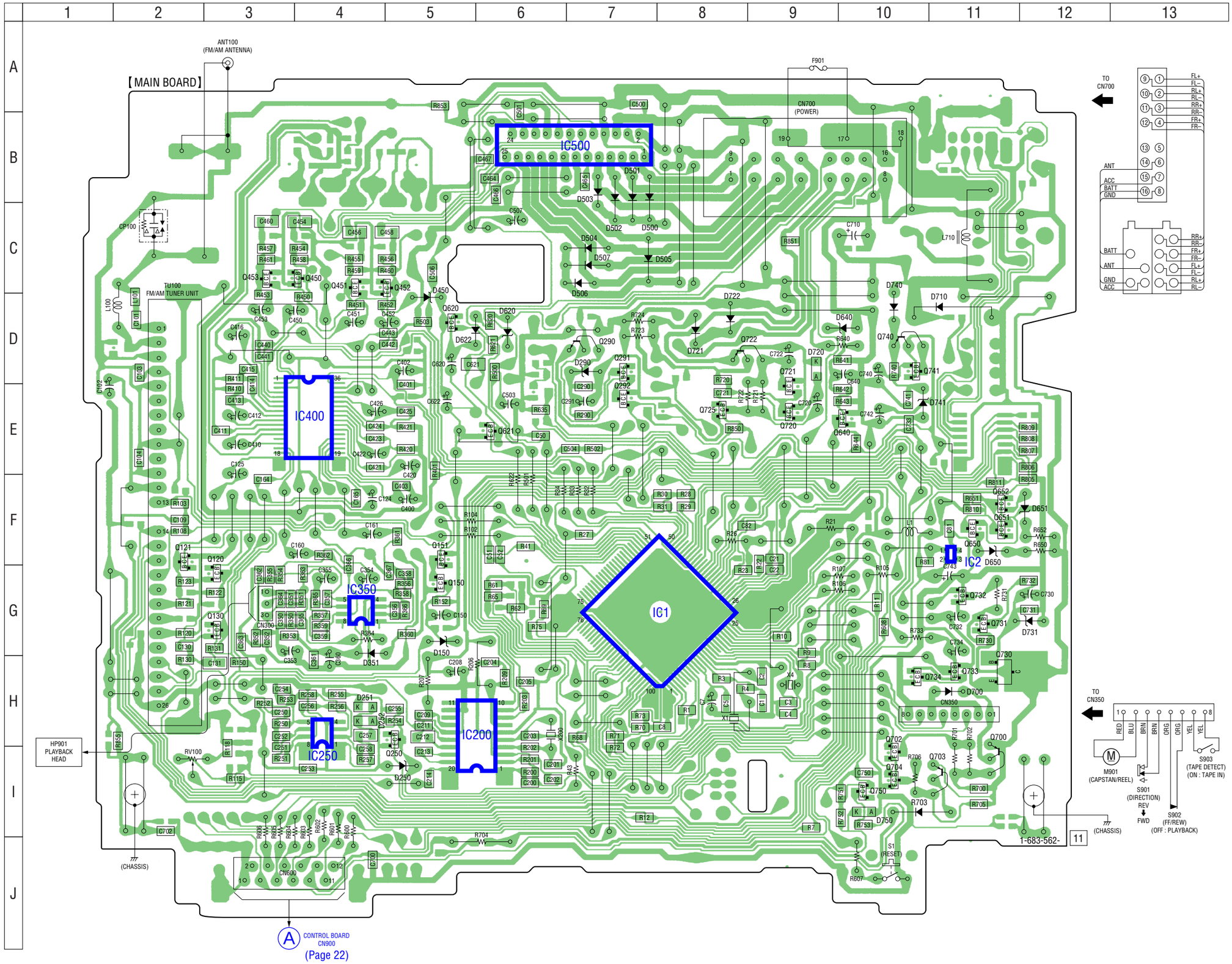
(The other layers' patterns are not indicated.)

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.
- ▭ : panel designation.
- ▬ : B+ Line.
- ▭ : adjustment for repair.
- Power voltage is dc 14.4V and fed with regulated dc power supply from ACC and BATT cords.
- Voltages and waveforms are dc with respect to ground under no-signal (detuned) conditions.
  no mark : FM
  ( ) : MW/LW
  ⟨⟨ ⟩⟩ : TAPE PLAYBACK
- 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.
  ⇨ : FM
  ➡ : MW/LW
  ⇨ : TAPE PLAYBACK
  ⇨ : BUS AUDIO IN
- Abbreviation
  AMBER : Amber illumination type
  GREEN : Green illumination type

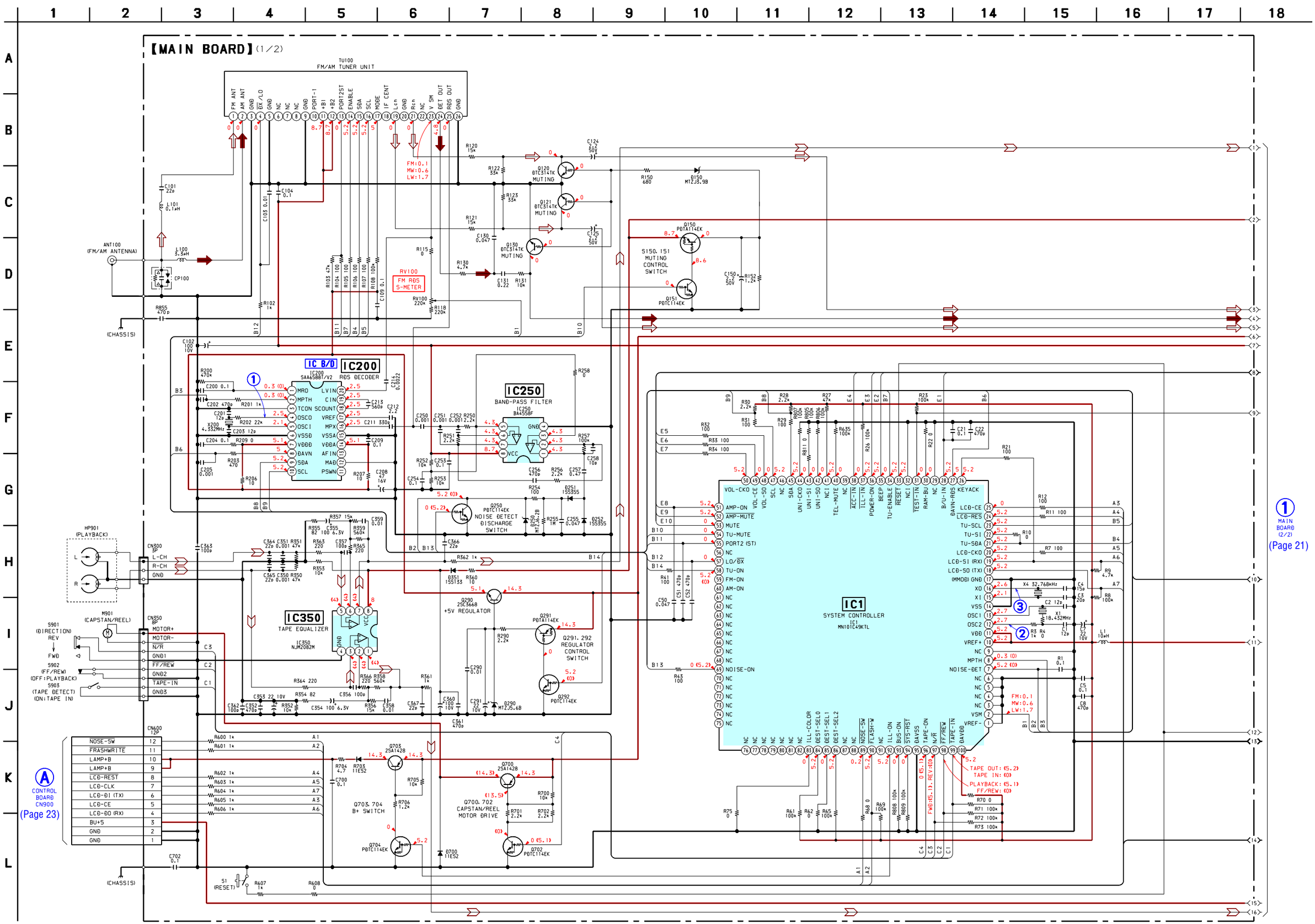
5-2. PRINTED WIRING BOARD – MAIN Board –



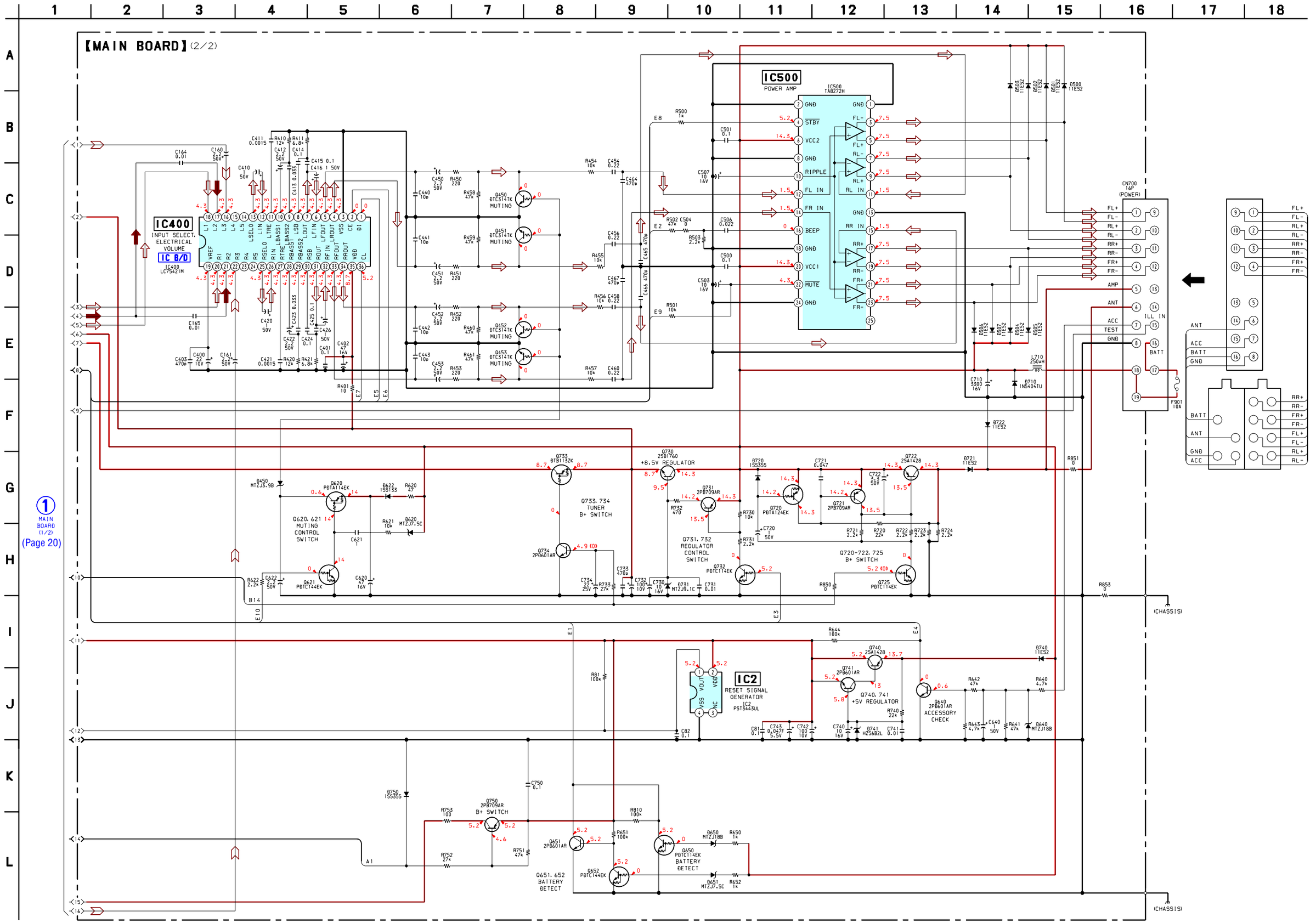
- **Semiconductor Location**

Ref. No.	Location
D150	G-5
D250	I-5
D251	H-4
D252	H-4
D290	D-7
D351	G-4
D450	D-5
D500	B-7
D501	B-7
D502	B-7
D503	B-7
D504	C-7
D505	C-7
D506	C-7
D507	C-7
D620	D-6
D622	D-5
D640	D-10
D650	F-11
D651	F-12
D700	H-11
D710	D-11
D720	D-9
D721	D-8
D722	D-8
D731	G-12
D740	D-10
D741	E-10
D750	I-10
IC1	G-8
IC2	F-11
IC200	H-6
IC250	H-4
IC350	G-4
IC400	E-4
IC500	B-7
Q120	G-3
Q121	F-2
Q130	G-3
Q150	G-5
Q151	F-5
Q250	H-5
Q290	D-7
Q291	D-7
Q292	E-7
Q450	C-4
Q451	C-4
Q452	C-5
Q453	C-3
Q620	D-5
Q621	E-6
Q640	E-10
Q650	F-11
Q651	F-11
Q652	F-11
Q700	I-11
Q702	I-10
Q703	I-11
Q704	I-10
Q720	E-9
Q721	E-9
Q722	D-8
Q725	E-8
Q730	H-11
Q731	G-11
Q732	G-11
Q733	H-11
Q734	H-10
Q740	D-10
Q741	D-10
Q750	I-10
R703	I-10

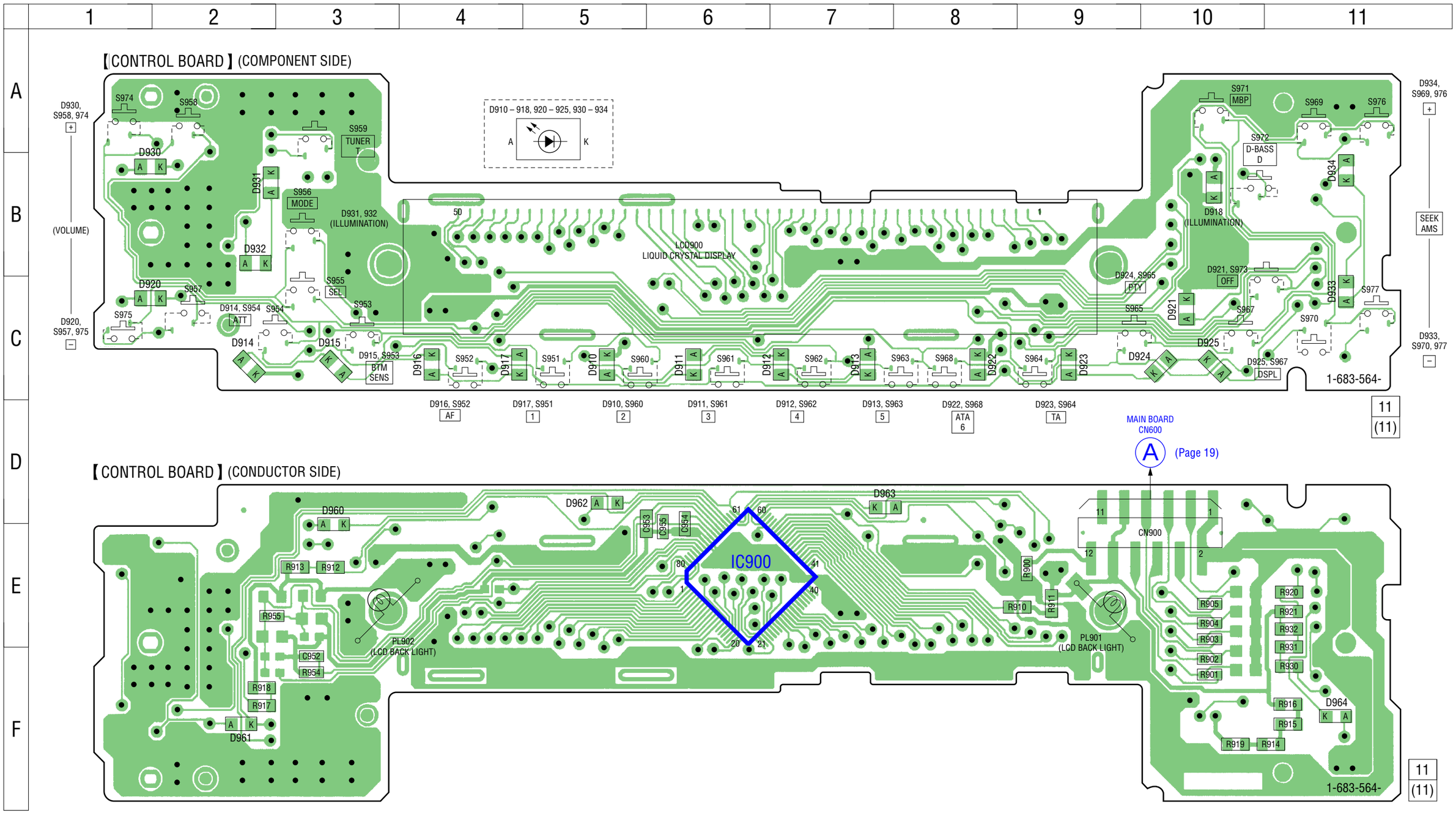
5-3. SCHEMATIC DIAGRAM – MAIN Board (1/2) – • See page 24 for Waveforms. • See page 24 for IC Block Diagram.



5-4. SCHEMATIC DIAGRAM – MAIN Board (2/2) – • See page 24 for IC Block Diagram.



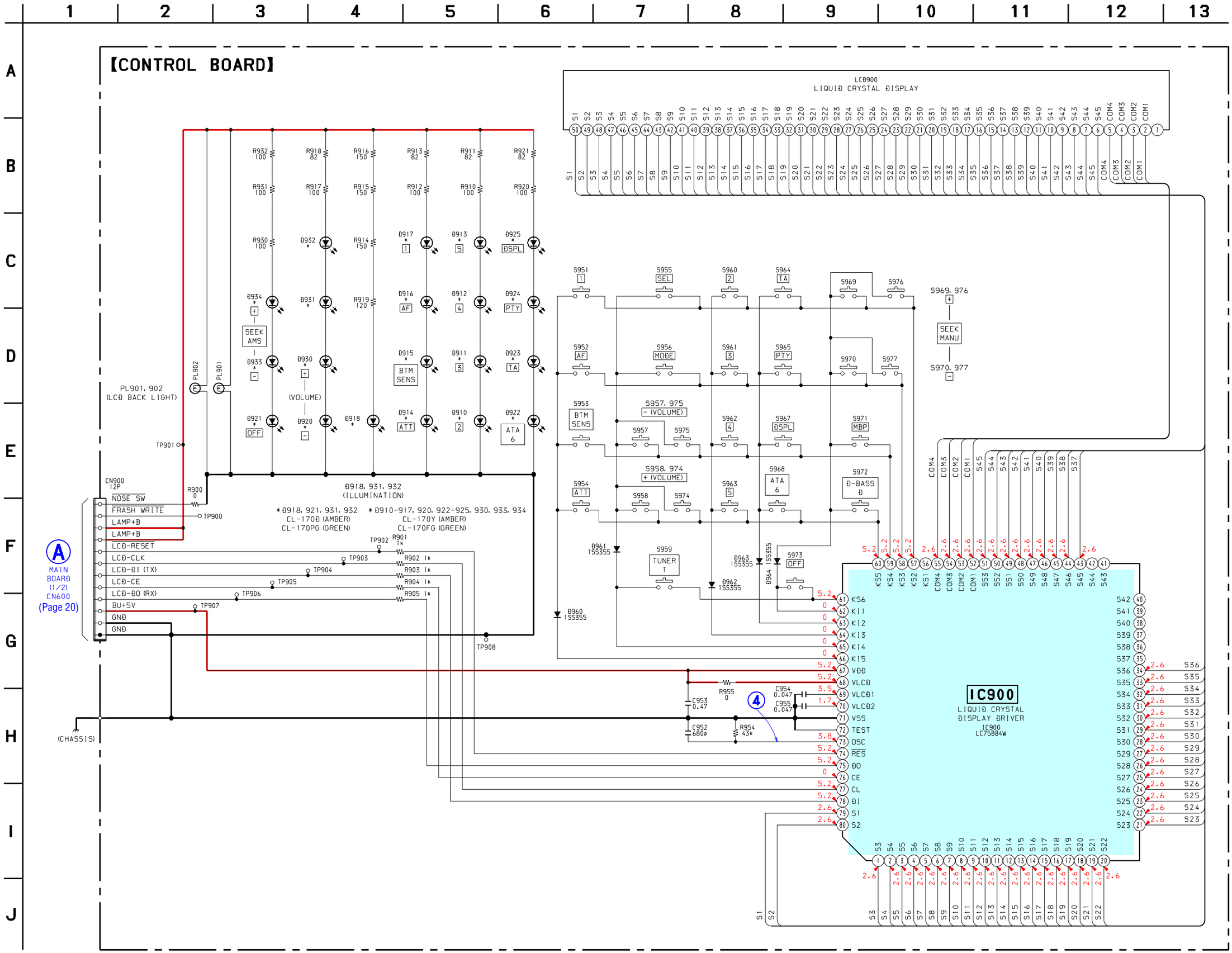
5-5. PRINTED WIRING BOARD – CONTROL Board –



- **Semiconductor Location**

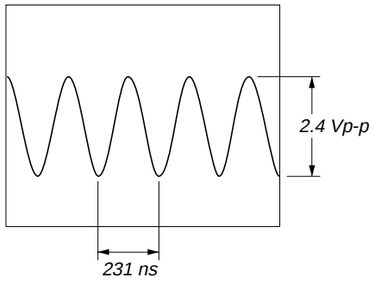
Ref. No.	Location	Ref. No.	Location	Ref. No.	Location
D910	C-5	D920	C-1	D933	C-11
D911	C-6	D921	C-10	D934	B-11
D912	C-7	D922	C-8	D960	D-3
D913	C-7	D923	C-9	D961	F-2
D914	C-2	D924	C-10	D962	D-5
D915	C-3	D925	C-10	D963	D-7
D916	C-4	D930	B-1	D964	F-11
D917	C-4	D931	B-2		
D918	B-10	D932	B-2	IC900	E-6

5-6. SCHEMATIC DIAGRAM – CONTROL Board – • See page 24 for Waveform.

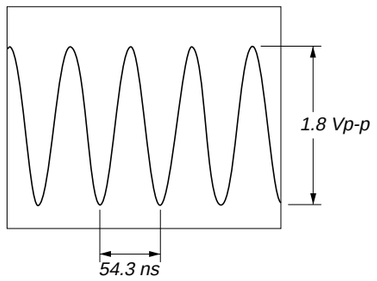


• **Waveforms**
– MAIN Board –

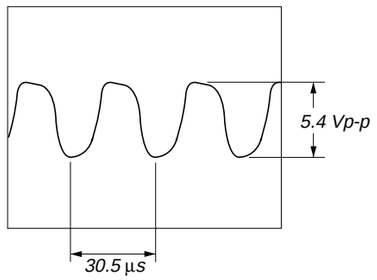
❶ IC200 ④ (OSCO)



❷ IC1 ⑫ (OSC2)

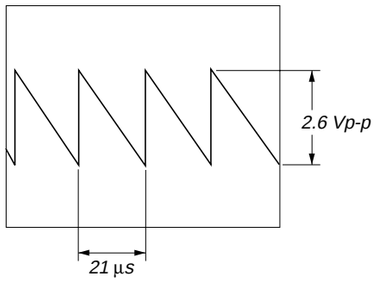


❸ IC1 ⑯ (XO)



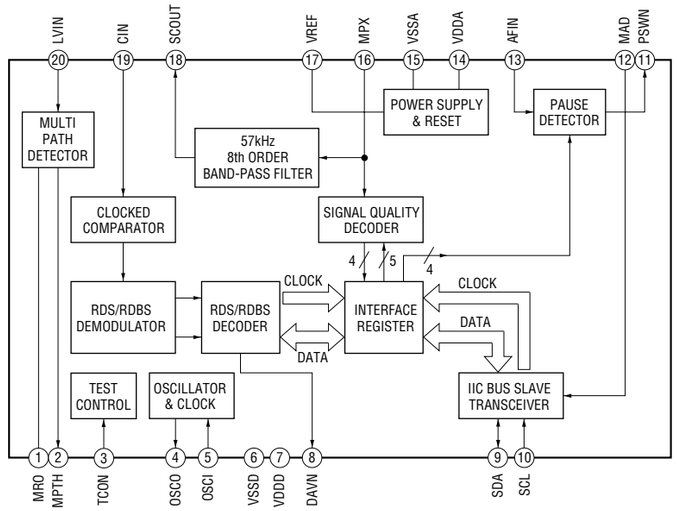
– CONTROL Board –

❹ IC900 ⑬ (OSC)

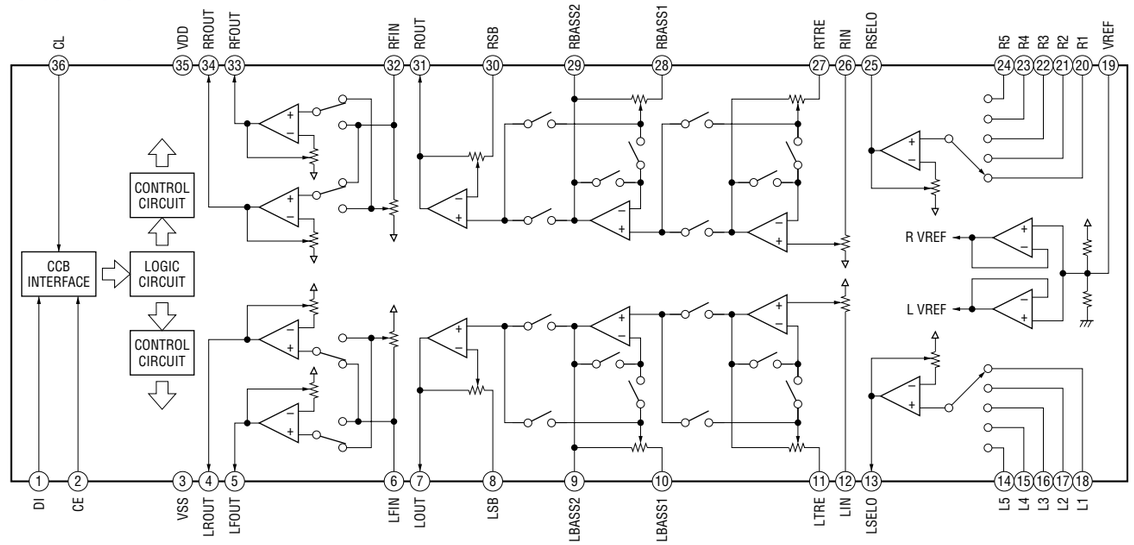


• **IC Block Diagrams**
– MAIN Board –

IC200 SAA6588T-118



IC400 LC75421M-TLM



5-7. IC PIN FUNCTION DESCRIPTION

• MAIN BOARD IC1 MN101C49KTL (SYSTEM CONTROLLER)

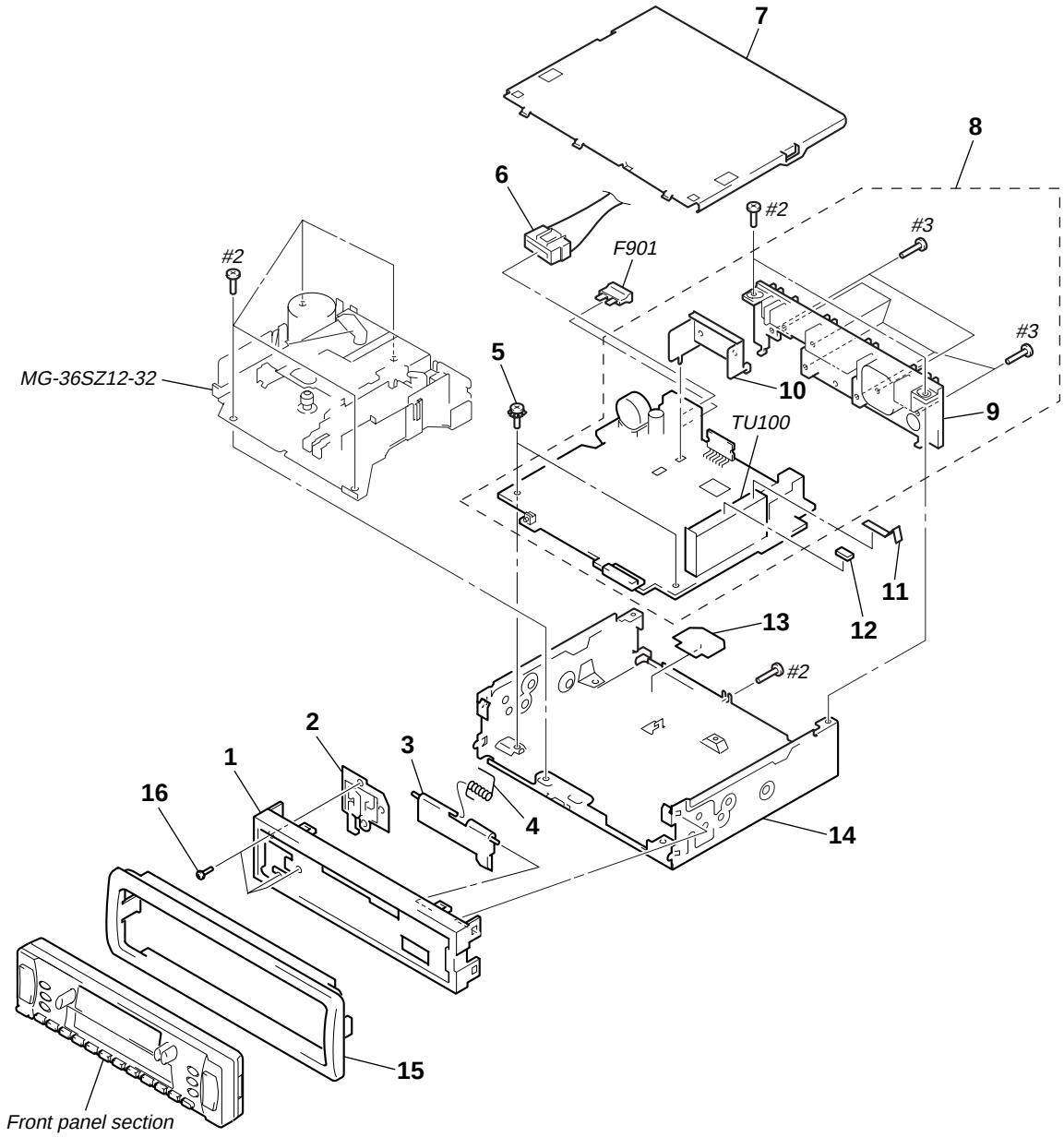
Pin No.	Pin Name	I/O	Description
1	VREF –	—	Reference voltage (0V) terminal (for A/D converter)
2	VSM	I	FM and AM signal meter voltage detection input from the FM/AM tuner unit (A/D input)
3 to 6	NC	—	Not used
7	NOISE-DET	I	Noise level detection signal input at SEEK mode (A/D input)
8	MPTH	I	Multi-path detection signal input from the RDS decoder
9	NC	—	Not used
10	VREF +	—	Reference voltage (+5V) terminal (for A/D converter)
11	VDD	—	Power supply terminal (+5V)
12	OSC2	O	Main system clock output terminal (18.432MHz)
13	OSC1	I	Main system clock input terminal (18.432MHz)
14	VSS	—	Ground terminal
15	XI	I	Sub system clock input terminal (32.768kHz)
16	XO	O	Sub system clock output terminal (32.768kHz)
17	GND (MMOD)	—	Setting terminal for the single chip mode “L”: single chip
18	LCD-SO (TX)	O	LCD serial data output to the liquid crystal display driver
19	LCD-SI (RX)	I	LCD serial data input from the liquid crystal display driver
20	LCD-CKO	O	LCD serial transfer clock signal output to the liquid crystal display driver
21	TU-SDA	O	Serial data output to the FM/AM tuner unit
22	TU-SI	I	Serial data input from the FM/AM tuner unit
23	TU-SCL	O	Serial data transfer clock signal output to the FM/AM tuner unit
24	$\overline{\text{LCD-RES}}$	O	LCD reset signal output to the liquid crystal display driver “L”: reset
25	LCD-CE	O	Chip enable signal output to the liquid crystal display driver “H” active
26	KEYACK	I	Key acknowledge signal detect input from the liquid crystal display driver
27	DAVN-RDS	I	RDS data request signal input from the RDS decoder “H” active
28	B/U-IN	I	Battery detect signal input from the battery detect circuit “L” is input at low voltage
29	NC	—	Not used
30	RAM BU	I	Internal RAM reset detection signal input terminal Input terminal to check that RAM data are not destroyed due to low voltage This checking is made within 100 msec after reset “L”: RAM reset
31	$\overline{\text{TEST-IN}}$	I	Setting terminal for the test mode “L”: test mode Normally: fixed at “H”
32	NCI	I	Not used
33	$\overline{\text{RESET}}$	I	System reset signal input from the reset signal generator or reset switch “L”: reset “L” is input for several 100 msec after power on, then it changes to “H”
34	TU-ENABLE	O	Chip enable signal output to the FM/AM tuner unit “H” active
35	BEEP	O	Beep sound drive signal output to the power amp
36	POWER-ON	O	Main system power supply on/off control signal output terminal “H”: power on
37	$\overline{\text{ILL-IN}}$	I	Not used
38	$\overline{\text{ACC-IN}}$	I	Accessory detect signal input terminal “L”: accessory on
39	NC	—	Not used (open)
40	TEL-MUTE	I	Telephone muting signal input terminal At input of “H”, the signal is attenuated by –20 dB Not used
41	NCI	I	Not used
42	UNI-SO	O	Serial data output to the bus interface Not used
43	UNI-SI	I	Serial data input from the bus interface Not used
44	UNI-CKO	O	Serial data transfer clock signal output to the bus interface Not used
45	SDA	I/O	Two-way data bus with the RDS decoder

Pin No.	Pin Name	I/O	Description
46	NC	—	Not used
47	SCL	O	Bus clock signal output to the RDS decoder
48	VOL-SO	O	Serial data output to the electrical volume
49	VOL-CE	O	Chip enable signal output to the electrical volume "H" active
50	VOL-CKO	O	Serial data transfer clock signal output to the electrical volume
51	AMP-ON	O	Standby on/off control signal output to the power amp "L": standby mode, "H": amp on
52	$\overline{\text{AMP-MUTE}}$	O	Muting on/off control signal output to the power amp "L": muting on
53	MUTE	O	Audio line muting on/off control signal output terminal "H": muting on
54	TU-MUTE	O	Muting on/off control signal output of the FM and AM tuner signal "H": muting on
55	PORT2 (ST)	I	FM stereo broadcasting detection signal input from the FM/AM tuner unit "H": stereo display lighting
56	NC	—	Not used
57	LO/$\overline{\text{DX}}$	O	Local/DX control signal output to the FM/AM tuner unit "L": DX
58	TU-ON	O	Tuner system power supply on/off control signal output terminal "H": tuner power on
59	FM-ON	O	FM system power supply on/off control signal output terminal "L": AM power on, "H": FM power on Not used
60	AM-ON	O	AM system power supply on/off control signal output terminal "L": FM power on, "H": AM power on Not used
61 to 68	NC	—	Not used
69	NOISE-ON	O	Discharge control signal output for the noise detection circuit "H": discharge
70 to 82	NC	—	Not used
83	ILL-COLOR	I	Illumination color select input terminal "L": amber illumination "H": green illumination (fixed at "L")
84	DEST-SEL0	I	Destination setting terminal (fixed at "H")
85	DEST-SEL1	I	Destination setting terminal (fixed at "L")
86	DEST-SEL2	I	Destination setting terminal (fixed at "H")
87, 88	NC	—	Not used
89	$\overline{\text{NOSE-SW}}$	I	Front panel block remove/attach detection signal input terminal "L": front panel is attached
90	$\overline{\text{FLASH-W}}$	I	Internal flash memory data write mode detection signal input terminal "L": data write mode Normally: fixed at "H"
91	NC	—	Not used
92	ILL-ON	O	Power on/off control signal output of the illumination LED and LCD back light "H": power on
93	BU-SON	O	Bus on/off control signal output to the bus interface "L": bus on Not used
94	$\overline{\text{SYS-RST}}$	O	Reset signal output to the bus interface "L": reset Not used
95	DAVSS	—	Ground terminal (for D/A converter)
96	TAPE-ON	O	Capstan/reel motor drive signal output terminal "H": motor on
97	N/$\overline{\text{R}}$	I	Tape direction switch input terminal "L": reverse direction "H": forward direction
98	$\overline{\text{FF/REW}}$	I	FF/REW detection switch input terminal "L": FF/REW mode
99	$\overline{\text{TAPE-IN}}$	I	Tape in detection switch input terminal "L": tape in
100	DAVDD	—	Power supply terminal (+5V) (for D/A converter)

SECTION 6
EXPLODED VIEWS

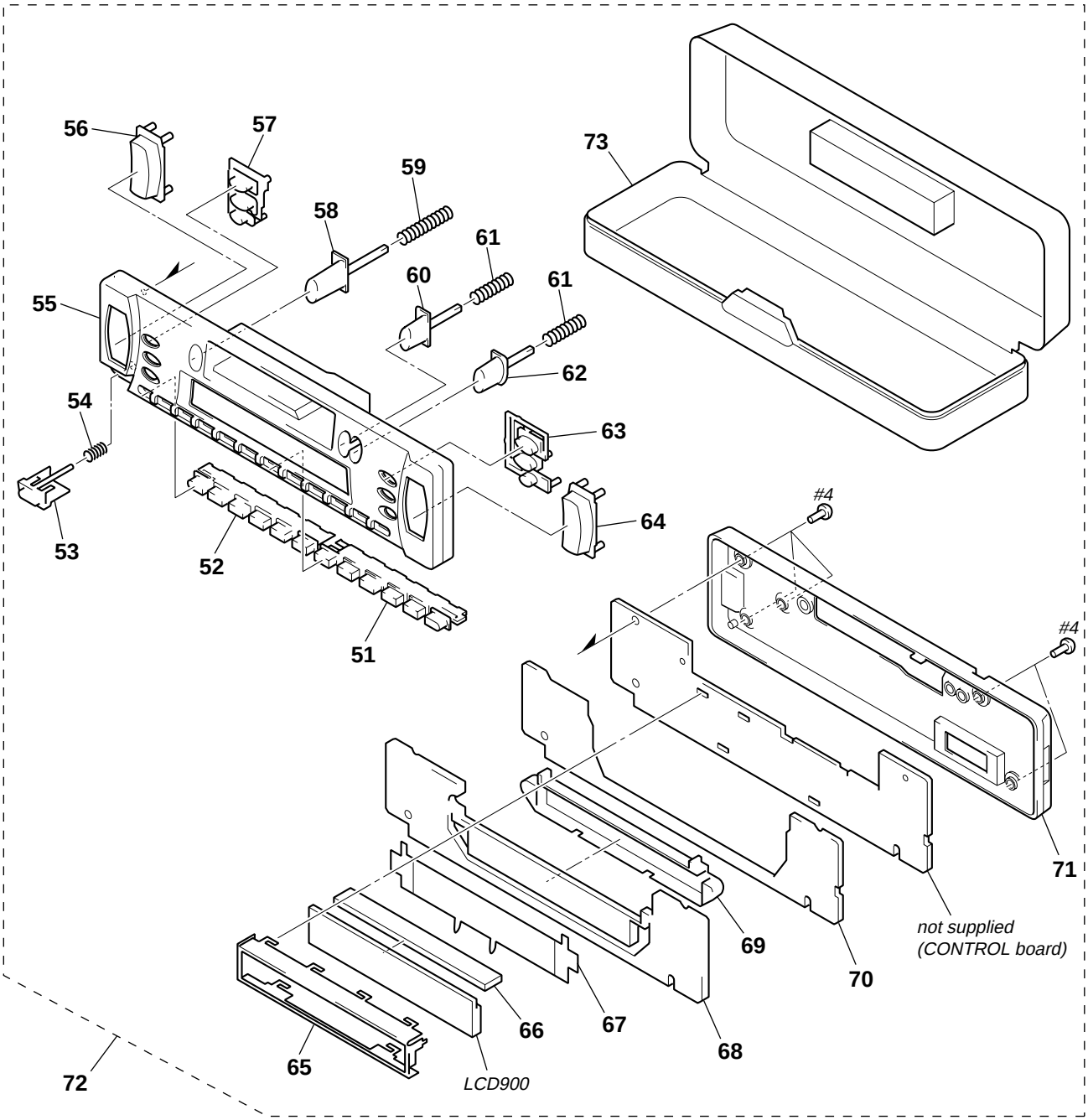
NOTE:
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- Color Indication of Appearance Parts
  Example:
  KNOB, BALANCE (WHITE) . . . (RED)
  ↑ ↑
  Parts Color Cabinet's Color
- Items marked "*" are not stocked since they are seldom required for routine service.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

6-1. GENERAL SECTION



Ref. No.	Part No.	Description	Remark
1	3-224-905-01	PANEL, SUB	
2	X-3370-437-2	LOCK ASSY	
3	3-041-581-01	DOOR, CASSETTE	
4	3-044-125-01	SPRING, TORSION	
5	3-376-464-11	SCREW (+PTT 2.6X6), GROUND POINT	
6	1-757-662-11	CORD (WITH CONNECTOR) (ISO) (POWER)	
* 7	X-3378-167-1	COVER ASSY, TOP	
8	A-3340-270-A	MAIN BOARD, COMPLETE	
9	3-224-921-21	HEAT SINK	
* 10	3-041-578-01	BRACKET (IC)	
11	3-937-650-01	PLATE (C), GROUND	
12	3-046-339-01	CUSHION (U)	
* 13	3-041-576-01	SHEET, INSULATING	
* 14	3-047-715-01	CHASSIS	
15	3-041-599-01	COLLAR	
16	3-042-244-01	SCREW (T)	
F901	1-532-877-11	FUSE (BLADE TYPE) (AUTO FUSE) (10A)	
TU100	1-693-523-11	FM/AM TUNER UNIT	

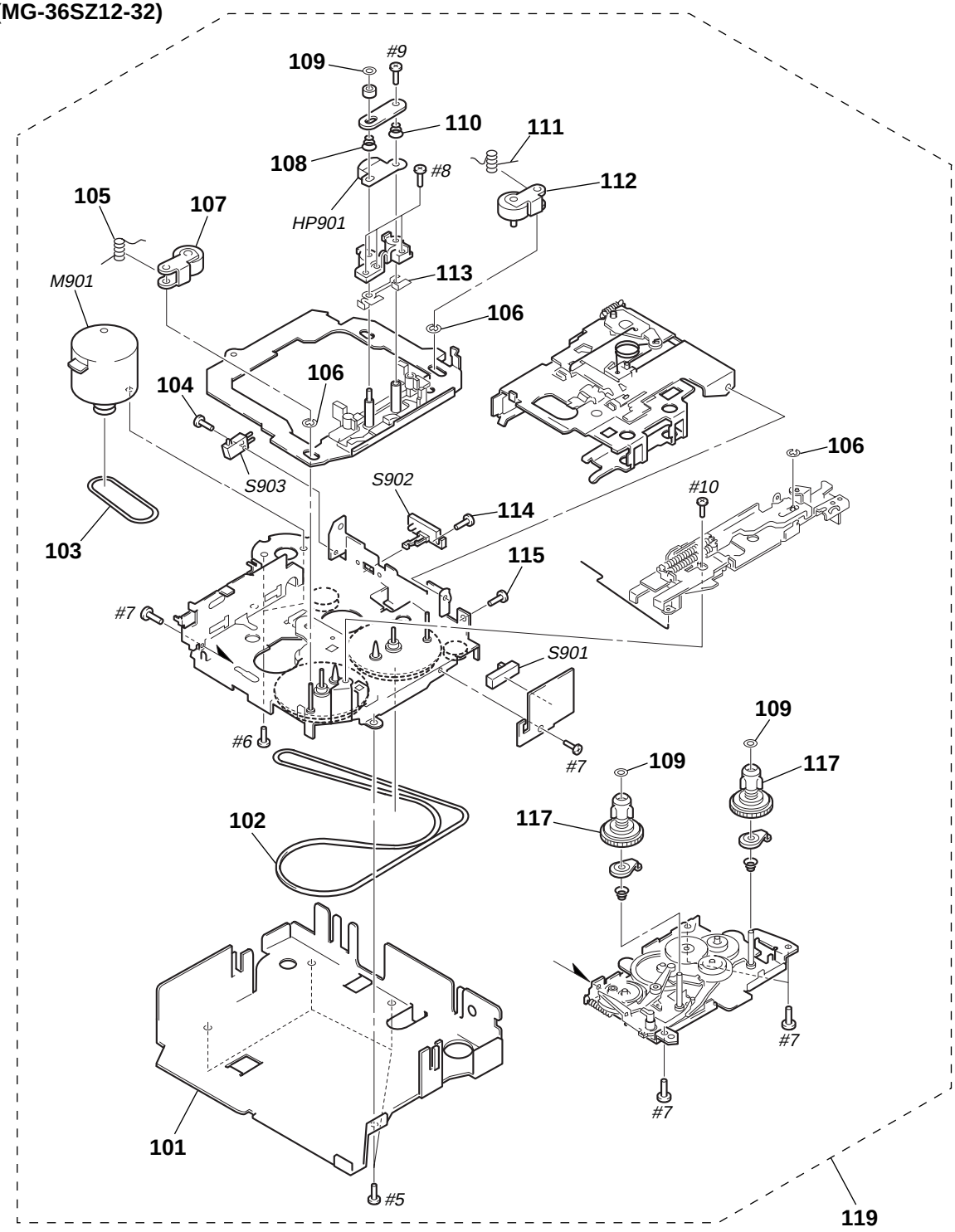
6-2. FRONT PANEL SECTION



Ref. No.	Part No.	Description	Remark
51	3-224-914-01	BUTTON (4-6) (4. 5. 6. TA. PTY. DSPL)	
52	3-224-906-01	BUTTON (1-3) (ATT. SENS. AF. 1. 2. 3)	
53	3-224-913-11	BUTTON (RELEASE)	
54	3-220-522-01	SPRING (RELEASE)	
55	3-236-751-01	PANEL, FRONT	
56	3-236-753-01	BUTTON (+/-)	
57	3-224-908-11	BUTTON (T. MODE. SEL)	
58	3-224-917-11	BUTTON (EJECT) (⏏)	
59	3-029-327-01	SPRING (EJECT)	
60	3-224-916-11	BUTTON (REW) (◀◀)	
61	3-375-372-01	SPRING (F/R)	
62	3-224-915-11	BUTTON (FF) (▶▶)	
63	3-224-907-01	BUTTON (D-BASS) (POS. D-BASS. OFF)	

Ref. No.	Part No.	Description	Remark
64	3-236-752-01	BUTTON (SEEK) (+ SEEK MANU -)	
* 65	3-224-927-01	PLATE (LCD), GROUND	
66	1-694-696-31	CONDUCTIVE BOARD, CONNECTION	
* 67	3-224-926-11	ILLUMINATOR	
* 68	3-236-754-01	PLATE, LIGHT GUIDE	
* 69	3-224-924-01	HOLDER (LCD)	
70	1-786-304-11	SWITCH, SHEET	
71	3-224-904-01	PANEL, FRONT BACK	
* 72	A-3315-467-A	PANEL ASSY, FRONT	
73	X-3378-490-2	CASE (PANEL) ASSY	
LCD900	1-804-512-11	DISPLAY PANEL, LIQUID CRYSTAL (AMBER)	
LCD900	1-804-632-11	DISPLAY PANEL, LIQUID CRYSTAL (GREEN)	

6-3. MECHANISM DECK SECTION (MG-36SZ12-32)



Ref. No.	Part No.	Description	Remark
* 101	3-224-920-01	BRACKET (MD)	
102	3-045-943-01	MAIN BELT	
103	3-045-945-01	SUB BELT (C)	
104	3-045-953-01	+MACHINE SCREW M1.7X6	
105	3-045-940-01	PINCH ARM SPG (R)	
106	3-045-950-01	E-RING (DIA. 2)	
107	3-045-890-01	PINCH ARM (R)	
108	3-045-933-01	ADJUSTER ARM SPG (B)	
109	3-045-949-01	PSW (REEL) B	
110	3-045-932-01	ADJUSTER ARM SPG (A)	
111	3-045-939-01	PINCH ARM SPG (F)	
112	3-045-891-01	PINCH ARM (F)	
113	3-045-906-01	ADJUSTER SHIM (X)	
114	3-045-952-01	+MACHINE SCREW M1.7X4	
115	3-713-786-51	SCREW +P 2X3	
117	3-045-893-01	REEL SPINDLE	
119	A-3220-844-A	MECHANISM DECK ASSY (MG-36SZ12-32)	
HP901	1-500-661-11	HEAD (PLAYBACK)	
M901	1-763-507-11	MOTOR (CAPSTAN/REEL)	
S901	1-771-928-11	SWITCH (SLIDE) (DIRECTION)	
S902	1-771-926-11	SWITCH (LEAF) (FF/REW)	
S903	1-771-927-11	SWITCH (LEAF) (TAPE DETECT)	

SECTION 7
ELECTRICAL PARTS LIST

CONTROL

NOTE:
- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS
  All resistors are in ohms.
  METAL: Metal-film resistor.
  METAL OXIDE: Metal oxide-film resistor.
  F: nonflammable
- Abbreviation
  AMBER : Amber illumination type
  GREEN : Green illumination type
- 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

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

Ref. No.	Part No.	Description	Remark
		CONTROL BOARD	
		**********	
	1-694-696-31	CONDUCTIVE BOARD, CONNECTION	
	1-786-304-11	SWITCH, SHEET	
*	3-224-924-01	HOLDER (LCD)	
*	3-224-926-11	ILLUMINATOR	
*	3-224-927-01	PLATE (LCD), GROUND	
	3-236-754-01	PLATE, LIGHT GUIDE	
		< CAPACITOR >	
C952	1-115-412-11	CERAMIC CHIP 680PF 5% 25V	
C953	1-125-891-11	CERAMIC CHIP 0.47uF 10% 10V	
C954	1-165-176-11	CERAMIC CHIP 0.047uF 10% 16V	
C955	1-165-176-11	CERAMIC CHIP 0.047uF 10% 16V	
		< CONNECTOR >	
CN900	1-794-312-11	PIN, CONNECTOR 12P	
		< DIODE >	
D910	8-719-033-13	LED CL-170Y-CD-T (2) (AMBER)	
D910	8-719-082-98	LED CL-170FG-CD-T (2) (GREEN)	
D911	8-719-033-13	LED CL-170Y-CD-T (3) (AMBER)	
D911	8-719-082-98	LED CL-170FG-CD-T (3) (GREEN)	
D912	8-719-033-13	LED CL-170Y-CD-T (4) (AMBER)	
D912	8-719-082-98	LED CL-170FG-CD-T (4) (GREEN)	
D913	8-719-033-13	LED CL-170Y-CD-T (5) (AMBER)	
D913	8-719-082-98	LED CL-170FG-CD-T (5) (GREEN)	
D914	8-719-033-13	LED CL-170Y-CD-T (ATT) (AMBER)	
D914	8-719-082-98	LED CL-170FG-CD-T (ATT) (GREEN)	
D915	8-719-033-13	LED CL-170Y-CD-T (SENS, BTM) (AMBER)	
D915	8-719-082-98	LED CL-170FG-CD-T (SENS, BTM) (GREEN)	
D916	8-719-033-13	LED CL-170Y-CD-T (AF) (AMBER)	
D916	8-719-082-98	LED CL-170FG-CD-T (AF) (GREEN)	
D917	8-719-033-13	LED CL-170Y-CD-T (1) (AMBER)	
D917	8-719-082-98	LED CL-170FG-CD-T (1) (GREEN)	
D918	8-719-033-14	LED CL-170PG-CD-T (ILLUMINATION) (GREEN)	
D918	8-719-033-86	LED CL-170D-CD-T (ILLUMINATION) (AMBER)	
D920	8-719-033-13	LED CL-170Y-CD-T (- (VOLUME)) (AMBER)	
D920	8-719-082-98	LED CL-170FG-CD-T (- (VOLUME)) (GREEN)	
D921	8-719-033-14	LED CL-170PG-CD-T (OFF) (GREEN)	
D921	8-719-033-86	LED CL-170D-CD-T (OFF) (AMBER)	
D922	8-719-033-13	LED CL-170Y-CD-T (6, ATA) (AMBER)	
D922	8-719-082-98	LED CL-170FG-CD-T (6, ATA) (GREEN)	
D923	8-719-033-13	LED CL-170Y-CD-T (TA) (AMBER)	
D923	8-719-082-98	LED CL-170FG-CD-T (TA) (GREEN)	
D924	8-719-033-13	LED CL-170Y-CD-T (PTY) (AMBER)	
D924	8-719-082-98	LED CL-170FG-CD-T (PTY) (GREEN)	
D925	8-719-033-13	LED CL-170Y-CD-T (DSPL) (AMBER)	
D925	8-719-082-98	LED CL-170FG-CD-T (DSPL) (GREEN)	
D930	8-719-033-13	LED CL-170Y-CD-T (+ (VOLUME)) (AMBER)	
D930	8-719-082-98	LED CL-170FG-CD-T (+ (VOLUME)) (GREEN)	
D931	8-719-033-14	LED CL-170PG-CD-T (ILLUMINATION) (GREEN)	
D931	8-719-033-86	LED CL-170D-CD-T (ILLUMINATION) (AMBER)	
D932	8-719-033-14	LED CL-170PG-CD-T (ILLUMINATION) (GREEN)	
D932	8-719-033-86	LED CL-170D-CD-T (ILLUMINATION) (AMBER)	
D933	8-719-033-13	LED CL-170Y-CD-T (SEEK AMS -) (AMBER)	
D933	8-719-082-98	LED CL-170FG-CD-T (SEEK AMS -) (GREEN)	
D934	8-719-033-13	LED CL-170Y-CD-T (SEEK AMS +) (AMBER)	
D934	8-719-082-98	LED CL-170FG-CD-T (SEEK AMS +) (GREEN)	
D960	8-719-988-61	DIODE 1SS355TE-17	
D961	8-719-988-61	DIODE 1SS355TE-17	
D962	8-719-988-61	DIODE 1SS355TE-17	
D963	8-719-988-61	DIODE 1SS355TE-17	
D964	8-719-988-61	DIODE 1SS355TE-17	
		< IC >	
IC900	8-759-657-06	IC LC75884W	
		< LIQUID CRYSTAL DISPLAY >	
LCD900	1-804-512-11	DISPLAY PANEL, LIQUID CRYSTAL (AMBER)	
LCD900	1-804-632-11	DISPLAY PANEL, LIQUID CRYSTAL (GREEN)	
		< PILOT LAMP >	
PL901	1-518-740-41	LAMP, PILOT (LCD BACK LIGHT) (GREEN)	
PL901	1-518-740-51	LAMP, PILOT (LCD BACK LIGHT) (AMBER)	
PL902	1-518-740-41	LAMP, PILOT (LCD BACK LIGHT) (GREEN)	
PL902	1-518-740-51	LAMP, PILOT (LCD BACK LIGHT) (AMBER)	
		< RESISTOR >	
R900	1-216-295-11	SHORT 0	
R901	1-216-049-11	RES-CHIP 1K 5% 1/10W	

Ref. No.	Part No.	Description			Remark
R902	1-216-049-11	RES-CHIP	1K	5%	1/10W
R903	1-216-049-11	RES-CHIP	1K	5%	1/10W
R904	1-216-049-11	RES-CHIP	1K	5%	1/10W
R905	1-216-049-11	RES-CHIP	1K	5%	1/10W
R910	1-216-174-00	RES-CHIP	100	5%	1/8W
R911	1-216-172-00	METAL CHIP	82	5%	1/8W
R912	1-216-174-00	RES-CHIP	100	5%	1/8W
R913	1-216-172-00	METAL CHIP	82	5%	1/8W
R914	1-216-178-00	RES-CHIP	150	5%	1/8W
R915	1-216-178-00	RES-CHIP	150	5%	1/8W
R916	1-216-178-00	RES-CHIP	150	5%	1/8W
R917	1-216-174-00	RES-CHIP	100	5%	1/8W
R918	1-216-172-00	METAL CHIP	82	5%	1/8W
R919	1-216-176-11	RES-CHIP	120	5%	1/8W
R920	1-216-174-00	RES-CHIP	100	5%	1/8W
R921	1-216-172-00	METAL CHIP	82	5%	1/8W
R930	1-216-174-00	RES-CHIP	100	5%	1/8W
R931	1-216-174-00	RES-CHIP	100	5%	1/8W
R932	1-216-174-00	RES-CHIP	100	5%	1/8W
R954	1-216-088-00	METAL CHIP	43K	5%	1/10W
R955	1-216-295-11	SHORT	0		
**********					
	A-3340-270-A	MAIN BOARD, COMPLETE			
		**********			
*	3-041-578-01	BRACKET (IC)			
	3-224-921-21	HEAT SINK			
	7-685-794-09	SCREW +PTT 2.6X10 (S)			
		< JACK >			
ANT100	1-815-185-12	JACK (ANT) (FM/AM ANTENNA)			
		< CAPACITOR/RESISTOR >			
C1	1-162-916-11	CERAMIC CHIP	12PF	5%	50V
C2	1-162-916-11	CERAMIC CHIP	12PF	5%	50V
C3	1-164-160-11	CERAMIC CHIP	20PF	5%	50V
C4	1-162-917-11	CERAMIC CHIP	15PF	5%	50V
C5	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C7	1-124-234-00	ELECT	22uF	20%	16V
C8	1-164-315-11	CERAMIC CHIP	470PF	5%	50V
C21	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C22	1-164-315-11	CERAMIC CHIP	470PF	5%	50V
C50	1-165-176-11	CERAMIC CHIP	0.047uF	10%	16V
C51	1-164-315-11	CERAMIC CHIP	470PF	5%	50V
C52	1-164-315-11	CERAMIC CHIP	470PF	5%	50V
C81	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C82	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C101	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C102	1-104-665-11	ELECT	100uF	20%	10V
C103	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C104	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C109	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C124	1-124-257-00	ELECT	2.2uF	20%	50V
C125	1-124-257-00	ELECT	2.2uF	20%	50V
C130	1-165-176-11	CERAMIC CHIP	0.047uF	10%	16V
C131	1-164-489-11	CERAMIC CHIP	0.22uF	10%	16V
C150	1-124-257-00	ELECT	2.2uF	20%	50V
C160	1-124-257-00	ELECT	2.2uF	20%	50V
C161	1-124-257-00	ELECT	2.2uF	20%	50V
C164	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C165	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C200	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C201	1-162-916-11	CERAMIC CHIP	12PF	5%	50V
C202	1-164-315-11	CERAMIC CHIP	470PF	5%	50V
C203	1-162-916-11	CERAMIC CHIP	12PF	5%	50V
C204	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C205	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C208	1-124-589-11	ELECT	47uF	20%	16V
C209	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C211	1-162-959-11	CERAMIC CHIP	330PF	5%	50V
C212	1-125-889-11	CERAMIC CHIP	2.2uF	10%	10V
C213	1-164-739-11	CERAMIC CHIP	560PF	5%	50V
C214	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V
C250	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C251	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C252	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C253	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C254	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C255	1-165-176-11	CERAMIC CHIP	0.047uF	10%	16V
C256	1-164-315-11	CERAMIC CHIP	470PF	5%	50V
C257	1-107-823-11	CERAMIC CHIP	0.47uF	10%	16V
C258	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V
C290	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C291	1-124-234-00	ELECT	22uF	20%	16V
C350	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C351	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C352	1-164-315-11	CERAMIC CHIP	470PF	5%	50V
C353	1-124-234-00	ELECT	22uF	20%	16V
C354	1-124-584-00	ELECT	100uF	20%	10V
C355	1-124-584-00	ELECT	100uF	20%	10V
C356	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C357	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C358	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C359	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C360	1-124-584-00	ELECT	100uF	20%	10V
C361	1-164-315-11	CERAMIC CHIP	470PF	5%	50V
C362	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C363	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C364	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C365	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C366	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C367	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C400	1-124-234-00	ELECT	22uF	20%	16V
C401	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C402	1-124-589-11	ELECT	47uF	20%	16V
C403	1-164-315-11	CERAMIC CHIP	470PF	5%	50V
C410	1-104-942-11	ELECT	1uF	20%	50V
C411	1-162-965-11	CERAMIC CHIP	0.0015uF	10%	50V
C412	1-124-257-00	ELECT	2.2uF	20%	50V
C413	1-164-677-11	CERAMIC CHIP	0.033uF	10%	16V
C414	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C415	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C416	1-104-942-11	ELECT	1uF	20%	50V
C420	1-104-942-11	ELECT	1uF	20%	50V
C421	1-162-965-11	CERAMIC CHIP	0.0015uF	10%	50V

MAIN

Ref. No.	Part No.	Description			Remark
C422	1-124-257-00	ELECT	2.2uF	20%	50V
C423	1-164-677-11	CERAMIC CHIP	0.033uF	10%	16V
C424	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C425	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C426	1-104-942-11	ELECT	1uF	20%	50V
C440	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V
C441	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V
C442	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V
C443	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V
C450	1-124-257-00	ELECT	2.2uF	20%	50V
C451	1-124-257-00	ELECT	2.2uF	20%	50V
C452	1-124-257-00	ELECT	2.2uF	20%	50V
C453	1-124-257-00	ELECT	2.2uF	20%	50V
C454	1-164-489-11	CERAMIC CHIP	0.22uF	10%	16V
C456	1-164-489-11	CERAMIC CHIP	0.22uF	10%	16V
C458	1-164-489-11	CERAMIC CHIP	0.22uF	10%	16V
C460	1-164-489-11	CERAMIC CHIP	0.22uF	10%	16V
C464	1-164-315-11	CERAMIC CHIP	470PF	5%	50V
C465	1-164-315-11	CERAMIC CHIP	470PF	5%	50V
C466	1-164-315-11	CERAMIC CHIP	470PF	5%	50V
C467	1-164-315-11	CERAMIC CHIP	470PF	5%	50V
C500	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C501	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C503	1-126-157-11	ELECT	10uF	20%	16V
C504	1-216-295-11	SHORT	0		
C506	1-164-227-11	CERAMIC CHIP	0.022uF	10%	25V
C507	1-126-791-11	ELECT	10uF	20%	16V
C620	1-124-589-11	ELECT	47uF	20%	16V
C621	1-109-982-11	CERAMIC CHIP	1uF	10%	10V
C622	1-124-257-00	ELECT	2.2uF	20%	50V
C640	1-104-942-11	ELECT	1uF	20%	50V
C700	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C702	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C710	1-126-936-11	ELECT	3300uF	20%	16V
C720	1-104-942-11	ELECT	1uF	20%	50V
C721	1-165-176-11	CERAMIC CHIP	0.047uF	10%	16V
C722	1-126-162-11	ELECT	3.3uF	20%	50V
C730	1-126-791-11	ELECT	10uF	20%	16V
C731	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C732	1-104-665-11	ELECT	100uF	20%	10V
C733	1-164-315-11	CERAMIC CHIP	470PF	5%	50V
C734	1-128-551-11	ELECT	22uF	20%	25V
C740	1-126-157-11	ELECT	10uF	20%	16V
C741	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C742	1-124-584-00	ELECT	100uF	20%	10V
C743	1-125-701-11	DOUBLE LAYER	0.047F		5.5V
C750	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
		< CONNECTOR >			
* CN300	1-564-705-11	PIN, CONNECTOR (PC BOARD) 3P			
* CN350	1-573-486-11	PIN, CONNECTOR (PC BOARD) 8P			
CN600	1-794-311-21	PLUG, CONNECTOR 12P			
CN700	1-774-701-11	PIN, CONNECTOR 16P (POWER)			
		< DISCHARGE GAP >			
CP100	1-519-504-11	GAP, DISCHARGE			

Ref. No.	Part No.	Description	Remark
		< DIODE >	
D150	8-719-109-72	DIODE MTZJ-T-77-3.9B	
D250	8-719-109-93	DIODE MTZJ-T-77-6.2B	
D251	8-719-988-61	DIODE 1SS355TE-17	
D252	8-719-988-61	DIODE 1SS355TE-17	
D290	8-719-109-89	DIODE MTZJ-T-77-5.6B	
D351	8-719-988-61	DIODE 1SS355TE-17	
D450	8-719-109-72	DIODE MTZJ-T-77-3.9B	
D500	8-719-200-82	DIODE 11ES2-TA1B	
D501	8-719-200-82	DIODE 11ES2-TA1B	
D502	8-719-200-82	DIODE 11ES2-TA1B	
D503	8-719-200-82	DIODE 11ES2-TA1B	
D504	8-719-200-82	DIODE 11ES2-TA1B	
D505	8-719-200-82	DIODE 11ES2-TA1B	
D506	8-719-200-82	DIODE 11ES2-TA1B	
D507	8-719-200-82	DIODE 11ES2-TA1B	
D620	8-719-110-03	DIODE MTZJ-T-77-7.5C	
D622	8-719-991-33	DIODE 1SS133T-77	
D640	8-719-110-49	DIODE MTZJ-T-77-18B	
D650	8-719-110-49	DIODE MTZJ-T-77-18B	
D651	8-719-110-03	DIODE MTZJ-T-77-7.5C	
D700	8-719-200-82	DIODE 11ES2-TA1B	
D710	8-719-049-38	DIODE 1N5404TU	
D720	8-719-988-61	DIODE 1SS355TE-17	
D721	8-719-200-82	DIODE 11ES2-TA1B	
D722	8-719-200-82	DIODE 11ES2-TA1B	
D731	8-719-110-14	DIODE MTZJ-T-77-9.1C	
D740	8-719-200-82	DIODE 11ES2-TA1B	
D741	8-719-935-40	DIODE HZS6B2LTD	
D750	8-719-988-61	DIODE 1SS355TE-17	
		< IC >	
IC1	8-759-982-77	IC MN101C49KTL	
IC2	6-701-405-01	IC PST3443UL	
IC200	8-759-492-59	IC SAA6588T-118	
IC250	8-759-909-71	IC BA4558F	
IC350	8-759-646-95	IC NJM2082M (TE2)	
IC400	8-759-827-11	IC LC75421M-TLM	
IC500	8-759-827-12	IC TA8272H	
		< COIL >	
L1	1-410-509-11	INDUCTOR 10uH	
L100	1-410-322-11	INDUCTOR 3.3uH	
L101	1-412-967-31	INDUCTOR 0.1uH	
L710	1-419-476-11	CHOKE COIL 250uH	
		< TRANSISTOR >	
Q120	8-729-920-21	TRANSISTOR DTC314TK-T-146	
Q121	8-729-920-21	TRANSISTOR DTC314TK-T-146	
Q130	8-729-920-21	TRANSISTOR DTC314TK-T-146	
Q150	8-729-043-32	TRANSISTOR PDTA114EK-115	
Q151	8-729-043-27	TRANSISTOR PDTC114EK-115	
Q250	8-729-043-27	TRANSISTOR PDTC114EK-115	
Q290	8-729-205-96	TRANSISTOR 2SC3668-OY-TPE2	
Q291	8-729-043-32	TRANSISTOR PDTA114EK-115	
Q292	8-729-043-27	TRANSISTOR PDTC114EK-115	
Q450	8-729-920-21	TRANSISTOR DTC314TK-T-146	

Ref. No.	Part No.	Description		Remark
Q451	8-729-920-21	TRANSISTOR	DTC314TK-T-146	
Q452	8-729-920-21	TRANSISTOR	DTC314TK-T-146	
Q453	8-729-920-21	TRANSISTOR	DTC314TK-T-146	
Q620	8-729-043-32	TRANSISTOR	PDTA114EK-115	
Q621	8-729-043-29	TRANSISTOR	PDTC144EK-115	
Q640	8-729-422-33	TRANSISTOR	2PD601AR-115	
Q650	8-729-043-27	TRANSISTOR	PDTC114EK-115	
Q651	8-729-422-33	TRANSISTOR	2PD601AR-115	
Q652	8-729-043-29	TRANSISTOR	PDTC144EK-115	
Q700	8-729-205-95	TRANSISTOR	2SA1428-OY-TPF2	
Q702	8-729-043-27	TRANSISTOR	PDTC114EK-115	
Q703	8-729-205-95	TRANSISTOR	2SA1428-OY-TPF2	
Q704	8-729-043-27	TRANSISTOR	PDTC114EK-115	
Q720	8-729-043-33	TRANSISTOR	PDTA124EK-115	
Q721	8-729-216-22	TRANSISTOR	2PB709AR-115	
Q722	8-729-205-95	TRANSISTOR	2SA1428-OY-TPF2	
Q725	8-729-043-27	TRANSISTOR	PDTC114EK-115	
Q730	8-729-921-48	TRANSISTOR	2SD1760F5-TRPQR	
Q731	8-729-216-22	TRANSISTOR	2PB709AR-115	
Q732	8-729-043-27	TRANSISTOR	PDTC114EK-115	
Q733	8-729-904-60	TRANSISTOR	DTB113ZK-T-146	
Q734	8-729-422-33	TRANSISTOR	2PD601AR-115	
Q740	8-729-205-95	TRANSISTOR	2SA1428-OY-TPF2	
Q741	8-729-422-33	TRANSISTOR	2PD601AR-115	
Q750	8-729-216-22	TRANSISTOR	2PB709AR-115	

< CAPACITOR/RESISTOR/DIODE >

R1	1-107-826-11	CERAMIC CHIP	0.1UF	10%	16V
R3	1-216-049-11	RES-CHIP	1K	5%	1/10W
R4	1-216-295-11	SHORT	0		
R7	1-216-025-11	RES-CHIP	100	5%	1/10W
R8	1-216-097-11	RES-CHIP	100K	5%	1/10W
R9	1-216-065-00	RES-CHIP	4.7K	5%	1/10W
R10	1-216-295-11	SHORT	0		
R11	1-216-025-11	RES-CHIP	100	5%	1/10W
R12	1-216-025-11	RES-CHIP	100	5%	1/10W
R21	1-247-807-31	CARBON	100	5%	1/4W
R22	1-216-295-11	SHORT	0		
R23	1-216-097-11	RES-CHIP	100K	5%	1/10W
R26	1-249-441-11	CARBON	100K	5%	1/4W
R27	1-216-089-11	RES-CHIP	47K	5%	1/10W
R28	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R29	1-216-025-11	RES-CHIP	100	5%	1/10W
R30	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R31	1-216-025-11	RES-CHIP	100	5%	1/10W
R32	1-247-807-31	CARBON	100	5%	1/4W
R33	1-247-807-31	CARBON	100	5%	1/4W
R34	1-247-807-31	CARBON	100	5%	1/4W
R41	1-216-025-11	RES-CHIP	100	5%	1/10W
R43	1-247-807-31	CARBON	100	5%	1/4W
R61	1-216-097-11	RES-CHIP	100K	5%	1/10W
R62	1-216-295-11	SHORT	0		
R65	1-216-097-11	RES-CHIP	100K	5%	1/10W
R68	1-216-295-11	SHORT	0		
R69	1-216-097-11	RES-CHIP	100K	5%	1/10W
R70	1-216-295-11	SHORT	0		
R71	1-216-097-11	RES-CHIP	100K	5%	1/10W
R72	1-216-097-11	RES-CHIP	100K	5%	1/10W
R73	1-216-097-11	RES-CHIP	100K	5%	1/10W
R75	1-216-295-11	SHORT	0		
R81	1-216-097-11	RES-CHIP	100K	5%	1/10W
R102	1-249-417-11	CARBON	1K	5%	1/4W
R103	1-216-089-11	RES-CHIP	47K	5%	1/10W
R104	1-247-807-31	CARBON	100	5%	1/4W
R105	1-247-807-31	CARBON	100	5%	1/4W
R106	1-247-807-31	CARBON	100	5%	1/4W
R107	1-247-807-31	CARBON	100	5%	1/4W
R108	1-216-097-11	RES-CHIP	100K	5%	1/10W
R115	1-216-295-11	SHORT	0		
R118	1-216-105-00	RES-CHIP	220K	5%	1/10W
R120	1-216-077-00	RES-CHIP	15K	5%	1/10W
R121	1-216-077-00	RES-CHIP	15K	5%	1/10W
R122	1-216-085-00	RES-CHIP	33K	5%	1/10W
R123	1-216-085-00	RES-CHIP	33K	5%	1/10W
R130	1-216-065-00	RES-CHIP	4.7K	5%	1/10W
R131	1-216-073-00	RES-CHIP	10K	5%	1/10W
R150	1-216-045-00	METAL CHIP	680	5%	1/10W
R152	1-216-051-00	METAL CHIP	1.2K	5%	1/10W
R200	1-216-113-00	METAL CHIP	470K	5%	1/10W
R201	1-216-049-11	RES-CHIP	1K	5%	1/10W
R202	1-216-081-00	METAL CHIP	22K	5%	1/10W
R203	1-216-041-00	METAL CHIP	470	5%	1/10W
R206	1-249-393-11	CARBON	10	5%	1/4W
R207	1-249-393-11	CARBON	10	5%	1/4W
R209	1-216-295-11	SHORT	0		
R250	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R251	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R252	1-216-073-00	RES-CHIP	10K	5%	1/10W
R253	1-216-073-00	RES-CHIP	10K	5%	1/10W
R254	1-216-025-11	RES-CHIP	100	5%	1/10W
R255	1-216-121-11	RES-CHIP	1M	5%	1/10W
R256	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R257	1-216-097-11	RES-CHIP	100K	5%	1/10W
R258	1-216-295-11	SHORT	0		
R290	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R350	1-216-089-11	RES-CHIP	47K	5%	1/10W
R351	1-216-089-11	RES-CHIP	47K	5%	1/10W
R352	1-216-073-00	RES-CHIP	10K	5%	1/10W
R353	1-216-073-00	RES-CHIP	10K	5%	1/10W
R354	1-216-023-00	METAL CHIP	82	5%	1/10W
R355	1-216-023-00	METAL CHIP	82	5%	1/10W
R356	1-216-077-00	RES-CHIP	15K	5%	1/10W
R357	1-216-077-00	RES-CHIP	15K	5%	1/10W
R358	1-216-115-00	METAL CHIP	560K	5%	1/10W
R359	1-216-115-00	METAL CHIP	560K	5%	1/10W
R360	1-249-393-11	CARBON	10	5%	1/4W
R361	1-216-049-11	RES-CHIP	1K	5%	1/10W
R362	1-216-049-11	RES-CHIP	1K	5%	1/10W
R363	1-216-033-00	METAL CHIP	220	5%	1/10W
R364	1-249-409-11	CARBON	220	5%	1/4W
R365	1-216-033-00	METAL CHIP	220	5%	1/10W
R366	1-216-033-00	METAL CHIP	220	5%	1/10W
R401	1-216-001-00	METAL CHIP	10	5%	1/10W
R410	1-216-075-00	METAL CHIP	12K	5%	1/10W
R411	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R420	1-216-075-00	METAL CHIP	12K	5%	1/10W

MAIN

Ref. No.	Part No.	Description			Remark
R421	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R450	1-216-033-00	METAL CHIP	220	5%	1/10W
R451	1-216-033-00	METAL CHIP	220	5%	1/10W
R452	1-216-033-00	METAL CHIP	220	5%	1/10W
R453	1-216-033-00	METAL CHIP	220	5%	1/10W
R454	1-216-073-00	RES-CHIP	10K	5%	1/10W
R455	1-216-073-00	RES-CHIP	10K	5%	1/10W
R456	1-216-073-00	RES-CHIP	10K	5%	1/10W
R457	1-216-073-00	RES-CHIP	10K	5%	1/10W
R458	1-216-089-11	RES-CHIP	47K	5%	1/10W
R459	1-216-089-11	RES-CHIP	47K	5%	1/10W
R460	1-216-089-11	RES-CHIP	47K	5%	1/10W
R461	1-216-089-11	RES-CHIP	47K	5%	1/10W
R500	1-216-049-11	RES-CHIP	1K	5%	1/10W
R501	1-249-429-11	CARBON	10K	5%	1/4W
R502	1-216-089-11	RES-CHIP	47K	5%	1/10W
R503	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R600	1-249-417-11	CARBON	1K	5%	1/4W
R601	1-249-417-11	CARBON	1K	5%	1/4W
R602	1-249-417-11	CARBON	1K	5%	1/4W
R603	1-249-417-11	CARBON	1K	5%	1/4W
R604	1-249-417-11	CARBON	1K	5%	1/4W
R605	1-249-417-11	CARBON	1K	5%	1/4W
R606	1-249-417-11	CARBON	1K	5%	1/4W
R607	1-249-417-11	CARBON	1K	5%	1/4W
R608	1-216-295-11	SHORT	0		
R620	1-216-017-00	RES-CHIP	47	5%	1/10W
R621	1-216-073-00	RES-CHIP	10K	5%	1/10W
R622	1-249-421-11	CARBON	2.2K	5%	1/4W
R635	1-216-097-11	RES-CHIP	100K	5%	1/10W
R640	1-249-425-11	CARBON	4.7K	5%	1/4W
R641	1-216-089-11	RES-CHIP	47K	5%	1/10W
R642	1-216-089-11	RES-CHIP	47K	5%	1/10W
R643	1-216-065-00	RES-CHIP	4.7K	5%	1/10W
R644	1-216-097-11	RES-CHIP	100K	5%	1/10W
R650	1-249-417-11	CARBON	1K	5%	1/4W
R651	1-216-097-11	RES-CHIP	100K	5%	1/10W
R652	1-249-417-11	CARBON	1K	5%	1/4W
R700	1-216-073-00	RES-CHIP	10K	5%	1/10W
R701	1-249-421-11	CARBON	2.2K	5%	1/4W
R702	1-249-421-11	CARBON	2.2K	5%	1/4W
R703	8-719-200-82	DIODE 11ES2-TA1B			
R704	1-260-300-11	CARBON	4.7	5%	1/2W
R705	1-216-073-00	RES-CHIP	10K	5%	1/10W
R706	1-249-418-11	CARBON	1.2K	5%	1/4W
R720	1-216-081-00	METAL CHIP	22K	5%	1/10W
R721	1-249-421-11	CARBON	2.2K	5%	1/4W
R722	1-249-421-11	CARBON	2.2K	5%	1/4W
R723	1-249-421-11	CARBON	2.2K	5%	1/4W
R724	1-249-421-11	CARBON	2.2K	5%	1/4W
R730	1-216-073-00	RES-CHIP	10K	5%	1/10W
R731	1-249-421-11	CARBON	2.2K	5%	1/4W
R732	1-216-041-00	METAL CHIP	470	5%	1/10W
R733	1-249-434-11	CARBON	27K	5%	1/4W
R740	1-216-081-00	METAL CHIP	22K	5%	1/10W
R751	1-216-089-11	RES-CHIP	47K	5%	1/10W
R752	1-216-083-00	METAL CHIP	27K	5%	1/10W
R753	1-216-025-11	RES-CHIP	100	5%	1/10W
R805	1-216-097-11	RES-CHIP	100K	5%	1/10W
R806	1-216-097-11	RES-CHIP	100K	5%	1/10W
R807	1-216-097-11	RES-CHIP	100K	5%	1/10W
R808	1-216-097-11	RES-CHIP	100K	5%	1/10W
R809	1-216-097-11	RES-CHIP	100K	5%	1/10W
R810	1-216-097-11	RES-CHIP	100K	5%	1/10W
R811	1-216-295-11	SHORT	0		
R850	1-216-295-11	SHORT	0		
R851	1-216-295-11	SHORT	0		
R853	1-216-295-11	SHORT	0		
R855	1-164-315-11	CERAMIC CHIP	470PF	5%	50V
		< VARIABLE RESISTOR >			
RV100	1-241-768-11	RES, ADJ, CARBON 220K			
		< SWITCH >			
S1	1-786-025-21	SWITCH, TACTILE (RESET)			
		< TUNER >			
TU100	1-693-523-11	FM/AM TUNER UNIT			
		< VIBRATOR >			
X1	1-795-539-11	VIBRATOR, CRYSTAL (18.432MHz)			
X4	1-567-098-41	VIBRATOR, CRYSTAL (32.768kHz)			
X200	1-579-242-11	VIBRATOR, CRYSTAL (4.332MHz)			
**********					
		MISCELLANEOUS			
		**********			
6	1-757-662-11	CORD (WITH CONNECTOR) (ISO) (POWER)			
66	1-694-696-31	CONDUCTIVE BOARD, CONNECTION			
70	1-786-304-11	SWITCH, SHEET			
F901	1-532-877-11	FUSE (BLADE TYPE) (AUTO FUSE) (10A)			
HP901	1-500-661-11	HEAD (PLAYBACK)			
LCD900	1-804-512-11	DISPLAY PANEL, LIQUID CRYSTAL (AMBER)			
LCD900	1-804-632-11	DISPLAY PANEL, LIQUID CRYSTAL (GREEN)			
M901	1-763-507-11	MOTOR (CAPSTAN/REEL)			
S901	1-771-928-11	SWITCH (SLIDE) (DIRECTION)			
S902	1-771-926-11	SWITCH (LEAF) (FF/REW)			
S903	1-771-927-11	SWITCH (LEAF) (TAPE DETECT)			
**********					
		**********			
		HARDWARE LIST			
		**********			
#2	7-685-792-09	SCREW +PTT 2.6X6 (S)			
#3	7-685-794-09	SCREW +PTT 2.6X10 (S)			
#4	7-685-106-19	SCREW +P 2X10 TYPE2 NON-SLIT			
#5	7-621-775-10	SCREW +B 2.6X4			
#6	7-627-553-27	PRECISION SCREW +P 2X2.5 TYPE3			
#7	7-685-101-11	SCREW +PTP 2X3 NON-SLIT			
#8	7-621-255-35	SCREW +P 2X5			
#9	7-621-772-18	SCREW +P 2X4			
#10	7-685-781-09	SCREW +PTT 2X4 (S)			
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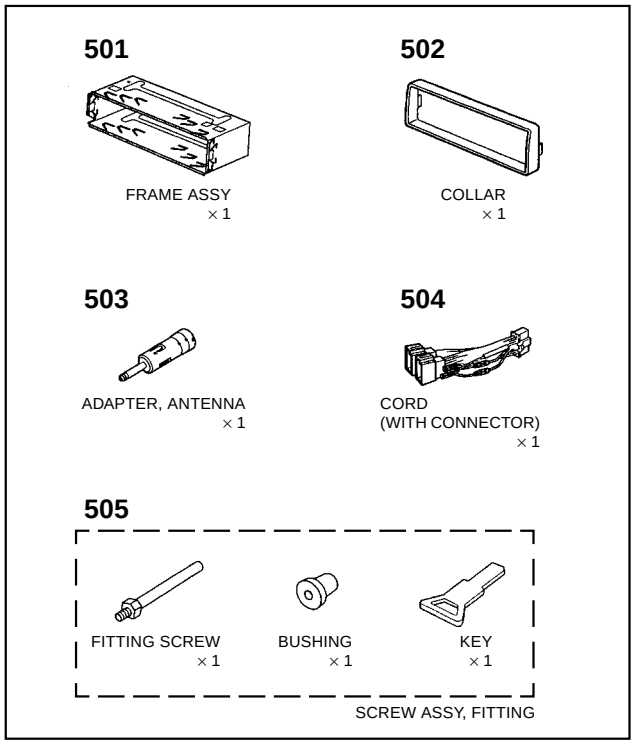
Ref. No.	Part No.	Description	Remark
		ACCESSORIES	
		**********	
	3-236-756-11	MANUAL, INSTRUCTION (ENGLISH, FRENCH, DUTCH, ITALIAN, GERMAN)	
	3-236-757-11	MANUAL, INSRTUCTION, INSTALL (ENGLISH, FRENCH, DUTCH, ITALIAN, GERMAN)	
	X-3378-490-2	CASE (PANEL) ASSY (for FRONT PANEL)	
**********			
		PARTS FOR INSTALLATION AND CONNECTIONS	
		**********	
501	X-3376-298-1	FRAME ASSY, FITTING	
502	3-041-599-01	COLLAR	
503	1-465-459-21	ADAPTER, ANTENNA	
504	1-757-662-11	CORD (WITH CONNECTOR) (ISO) (POWER)	
505	X-3381-068-1	SCREW ASSY, FITTING	



REVISION HISTORY

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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
1.0	2001.10	New