

# XR-CA300/L200

## SERVICE MANUAL

Ver 1.3 2001.05

AEP Model  
UK Model



Photo: XR-CA300

Model Name Using Similar Mechanism	NEW
Tape Transport Mechanism Type	MG-36SZ11-32

### 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

<b>FM</b>	
Tuning range	87.5 – 108.0 MHz
Aerial terminal	External aerial connector
Intermediate frequency	10.7 MHz
Usable sensitivity	9 dBf
Selectivity	75 dB at 400 kHz
Signal-to-noise ratio	65 dB (stereo), 68 dB (mono)
Harmonic distortion at 1 kHz	0.7 % (stereo), 0.4 % (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 $\mu$ V LW: 50 $\mu$ V

#### Power amplifier section

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

#### General

Outputs	Audio output Power aerial relay control lead
Tone controls	Bass $\pm$ 8 dB at 100 Hz Treble $\pm$ 8 dB at 10 kHz
Power requirements	12 V DC car battery (negative earth)
Dimensions	Approx. 188 $\times$ 58 $\times$ 186 mm (w/h/d)
Mounting dimensions	Approx. 182 $\times$ 53 $\times$ 163 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

9-870-233-14  
2001E0500-1  
© 2001.5

**Sony Corporation**  
e Vehicle Company  
Shinagawa Tec Service Manual Production Group

# SONY®

**TABLE OF CONTENTS**

**1. GENERAL**  
 Location of Controls ..... 3  
 Setting the Clock ..... 3  
 Installation ..... 4  
 Connections ..... 5

**2. DISASSEMBLY** ..... 8

**3. MECHANICAL ADJUSTMENTS** ..... 13

**4. ELECTRICAL ADJUSTMENTS** ..... 13  
 Tape Deck Section ..... 14  
 Tuner Section ..... 15

**5. DIAGRAMS**  
 5-1. Note for Printed Wiring Boards and  
 Schematic Diagrams ..... 18  
 5-2. Printed Wiring Board – MAIN Board – ..... 19  
 5-3. Schematic Diagram – MAIN Board (1/2) – ..... 20  
 5-4. Schematic Diagram – MAIN Board (2/2) – ..... 21  
 5-5. Printed Wiring Board – CONTROL Board – ..... 22  
 5-6. Schematic Diagram – CONTROL Board – ..... 23  
 5-7. IC Pin Function Description ..... 25

**6. EXPLODED VIEWS** ..... 27

**7. ELECTRICAL PARTS LIST** ..... 30

**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.

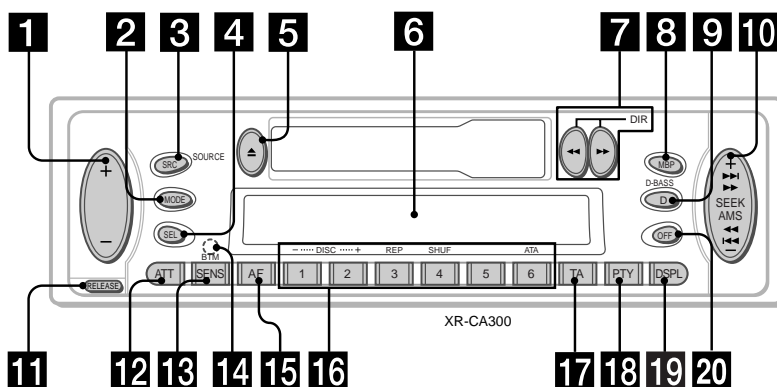
**Notes on chip component replacement**

- 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 7
- 2** MODE button  
During radio reception:  
BAND select 8, 9  
During CD/MD playback\*:  
CD/MD unit select 17
- 3** XR-CA300 SOURCE (TUNER/CD/MD) button 8, 9, 17  
XR-L200 TUNER button 8, 9
- 4** SEL (select) button 7, 14, 15, 16, 17
- 5** ▲ (eject) button 7, 8, 9, 17
- 6** Display window
- 7** ◀▶ (fast winding)/DIR (tape transport direction change) buttons 7, 8
- 8** MBP (My Best sound Position) button 16
- 9** D-BASS button 16
- 10** SEEK/AMS +/- button 9, 11, 14, 18  
Seek 9  
Automatic Music Sensor\* 18  
Manual search\* 18
- 11** RELEASE (front panel release) button 6, 19
- 12** ATT (attenuate) button 15
- 13** SENS/BTM button 8, 9, 13
- 14** RESET button (located on the front side of the unit behind the front panel) 6
- 15** AF button 10, 11, 13
- 16** Number buttons 8, 9, 14, 15, 18  
During radio reception:  
Preset number select 9, 11  
During tape playback:  
⑥ ATA 8  
During CD/MD playback\*:  
① DISC - 18  
② DISC + 18  
③ REP 18  
④ SHUF 18
- 17** TA button 12, 13
- 18** PTY (programme type) button 14
- 19** DSPL (display mode change) button 7, 10, 17
- 20** OFF button\*\* 6

\* XR-CA300 only  
\*\* 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.

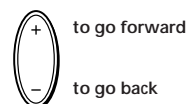
Example: To set the clock to 10:08

- 1** Press (DSPL) for two seconds.



The hour indication flashes.

- 1** Press either side of the volume button to set the hour.



to go forward

to go back

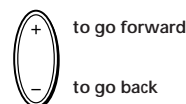


- 2** Press (SEL).



The minute indication flashes.

- 3** 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

### 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 Wärmelung 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

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

### Réglage 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 (A) of the front panel to part (B) 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 (A) der Frontplatte wie in der Abbildung dargestellt an Teil (B) des Geräts an, und drücken Sie die linke Seite der Frontplatte an, bis sie mit einem Klicken einrastet.

## Retrait et pose de la façade

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

### A Pour la retirer

Avant de déposer la façade, ne pas oublier d'appuyer sur (OFF). Appuyez 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 (A) de la façade sur la partie (B) de l'appareil, comme indiqué sur l'illustration, puis appuyez sur le côté gauche jusqu'au dé clic.

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

## Verwijderen en bevestigen van het afneembare voorpaneel

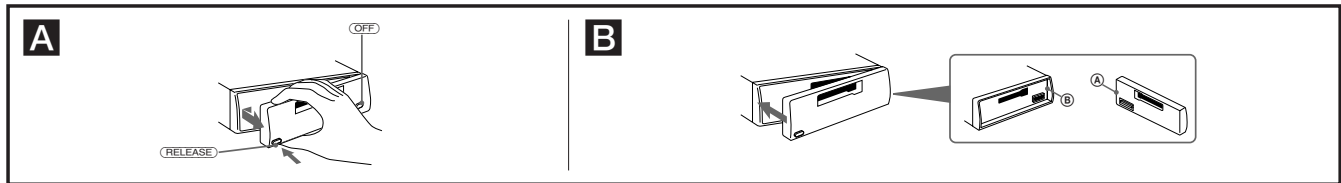
Verwijder, alvorens met het installeren te beginnen, het afneembare voorpaneel.

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



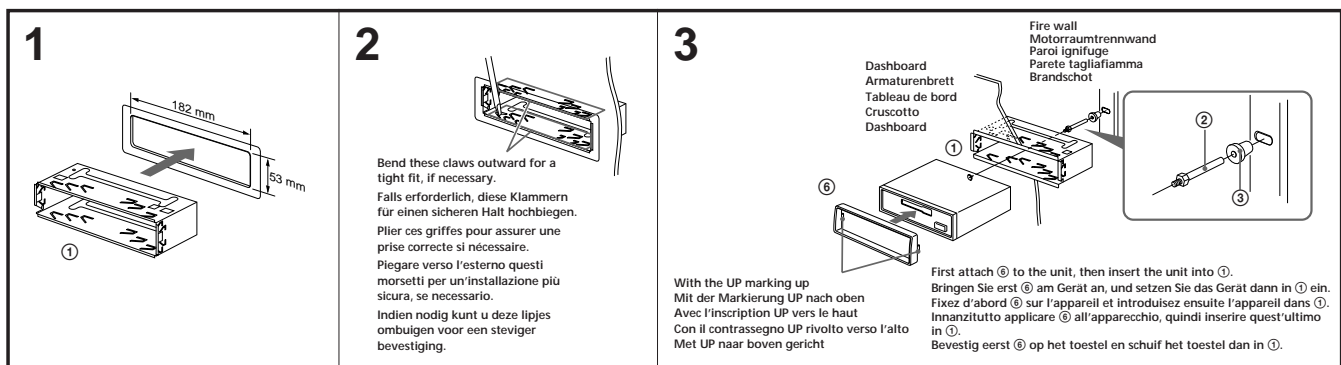
## Installation in the dashboard

## 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.

## Rücksetztaste

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

## Touche de réinitialisation

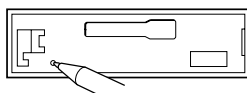
Quand l'installation et les connexions sont terminées, appuyer sur la touche de réinitialisation avec un stylo à bille, etc.

## 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, ecc.

## Terugsettoets

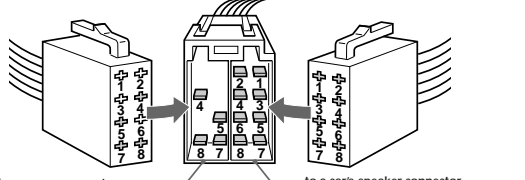
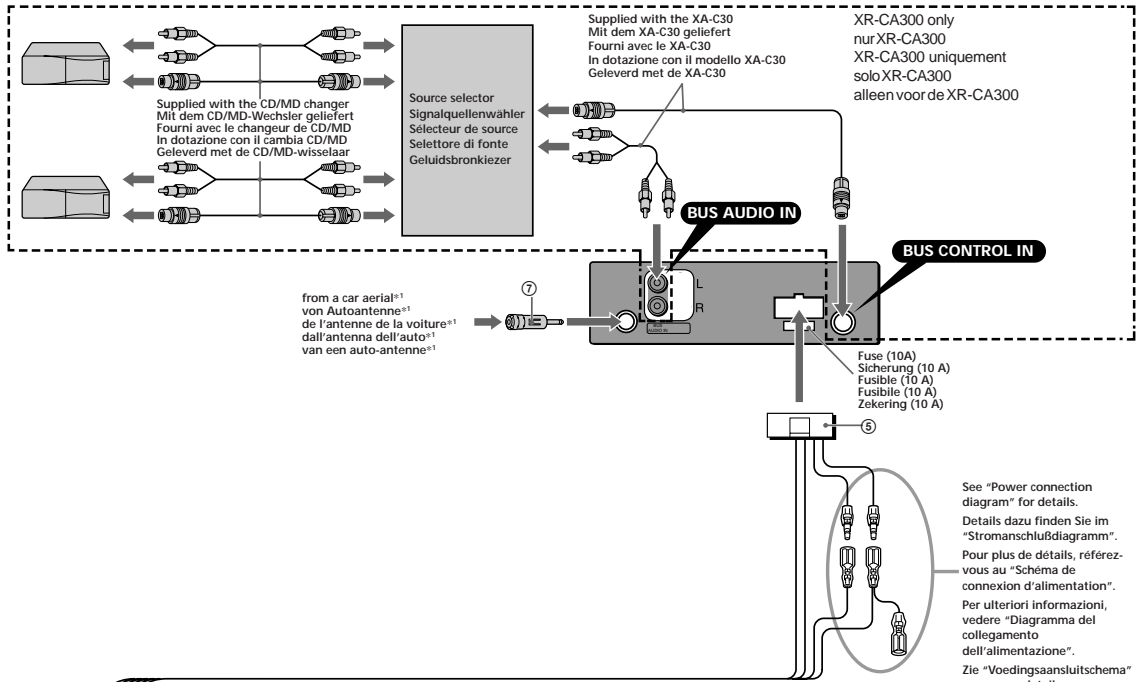
Druk, nadat u het apparaat heeft geïnstalleerd en de aansluitingen heeft gemaakt, met een balpen of een ander puntig voorwerp op de terugsettoets.







Connection diagram  
Anschlußdiagramm  
Schéma de connexion  
Diagramma di collegamento  
Aansluitschema



to a car's auxiliary power connector  
an Hilfsstromanschluß des Fahrzeugs  
vers un connecteur d'alimentation auxiliaire  
a un connettore di alimentazione ausiliaria  
naar een 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
	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 terre aarding

B	1	Purple Violet 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

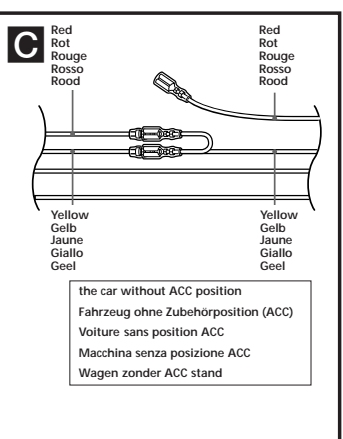
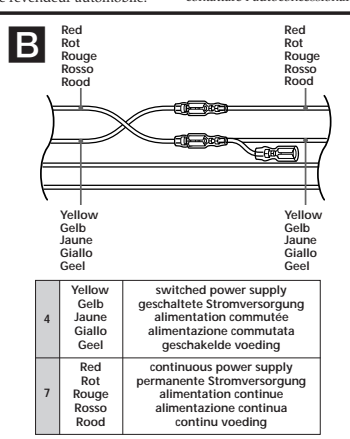
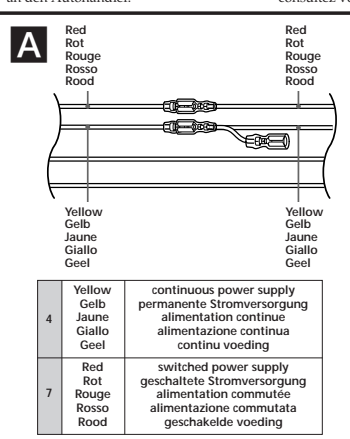
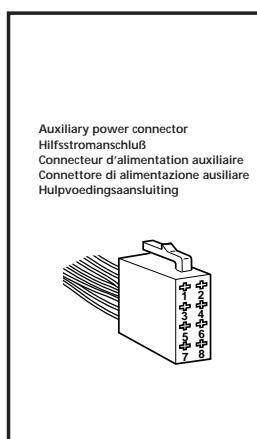
Le connecteur d'alimentation auxiliaire peut varier suivant le type de voiture. Vérifiez le schéma du connecteur d'alimentation auxiliaire de votre voiture pour vous assurer que les connexions correspondent. Il en existe trois types de base (illustrés ci-dessous). Si le peut que vous deviez intervenir 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.

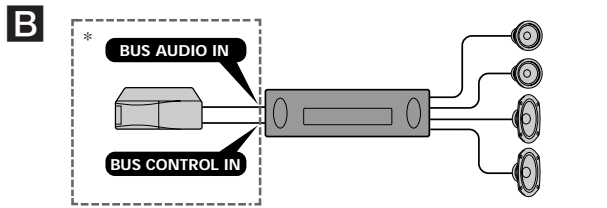
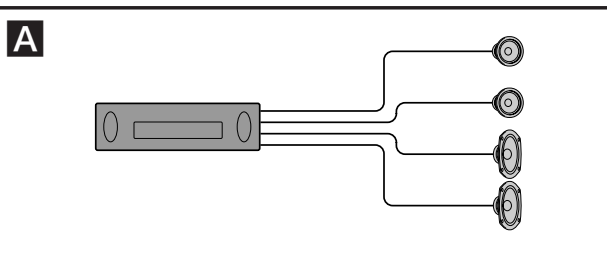


Connection example (XR-CA300 only)  
 Anschlussbeispiel (nur XR-CA300)  
 Exemple de raccordement (XR-CA300 uniquement)  
 Esempio di collegamento (solo XR-CA300)  
 Voorbeeldaansluitingen (alleen voor de XR-CA300)

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<br>Frontlautsprecher<br>Haut-parleur frontal<br>Diffusore anteriore<br>Voorluidspreker  |  | CD/MD changer<br>CD/MD-Wechsler<br>Changeur de CD/MD<br>Cambia CD/MD<br>CD/MD-wisselaar |
|  | Rear speaker<br>Hecklautsprecher<br>Haut-parleur arrière<br>Diffusore posteriore<br>Achterluidspreker |   |   |

For connecting two or more changers, the source selector XA-C30 (optional) is necessary.  
 Zum Anschließen von zwei oder mehr Wechslern wird der gesondert erhältliche Signalquellenwähler XA-C30 benötigt.  
 Dans le cas du raccordement de deux changeurs ou plus, le sélecteur de source XA-C30 (optionnel) est indispensable.  
 Per collegare due o più cambia CD o MD, è necessario utilizzare il selettore di fonte XA-C30 (opzionale).  
 Om twee of meer wisselaars aan te sluiten, hebt u de geluidsbronkiezer XA-C30 (optioneel) nodig.



\* XR-CA300 only  
 nur XR-CA300  
 XR-CA300 uniquement  
 solo XR-CA300  
 alleen voor de XR-CA300

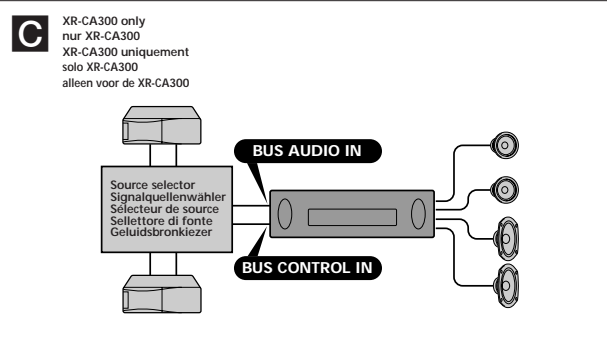
**Notes**  
 • Be sure to connect the earth cord before connecting the amplifier.  
 • If you connect an optional power amplifier and do not use the built-in amplifier, the beep sound will be deactivated.

**Hinweise**  
 • 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**  
 • 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**  
 • 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**  
 • Sluit eerst de massakabel aan vóórens de versterker aan te sluiten.  
 • Als u een los verkrijgbare vermogensversterker aansluit en de ingebouwde versterker niet gebruikt, is de piepton uitgeschakeld.



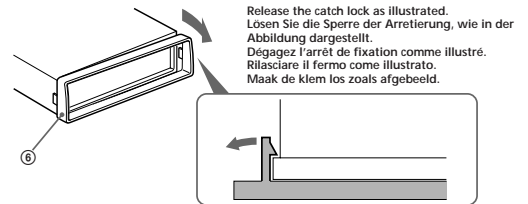
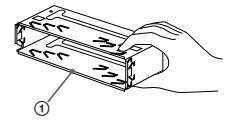
**Cautions**  
 • Cautionary notice for handling the bracket ①.  
 Handle the bracket carefully to avoid injuring your fingers.  
 • Remove the protection collar ⑥ before installing.

**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.

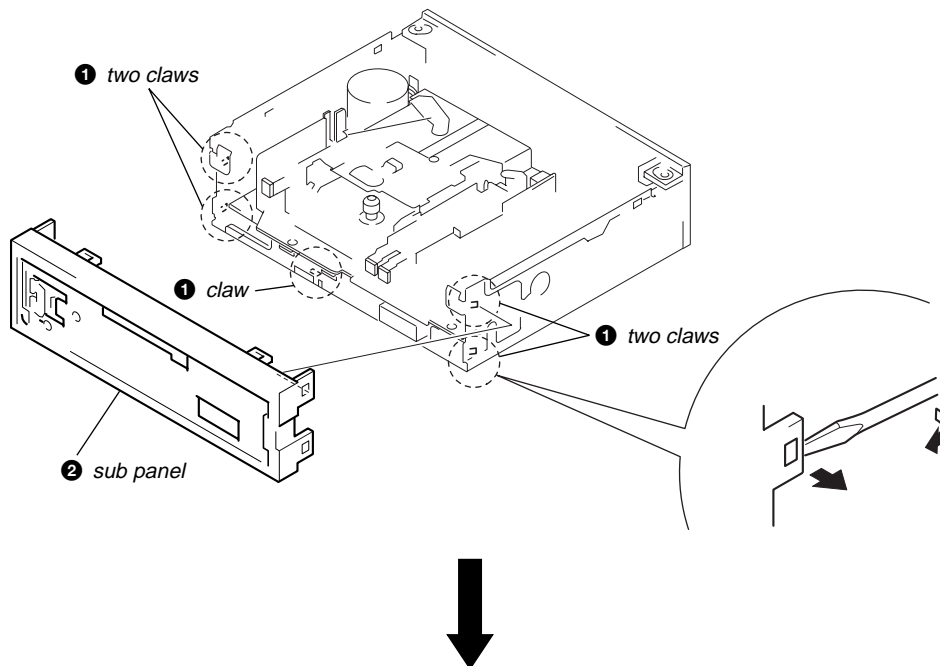
**Opgelet**  
 • Spring voorzichtig om met de beugel ①.  
 Houd de beugel voorzichtig vast zodat u uw vingers niet verwondt.  
 • Verwijder de beschermrand ⑥ voor het installeren.



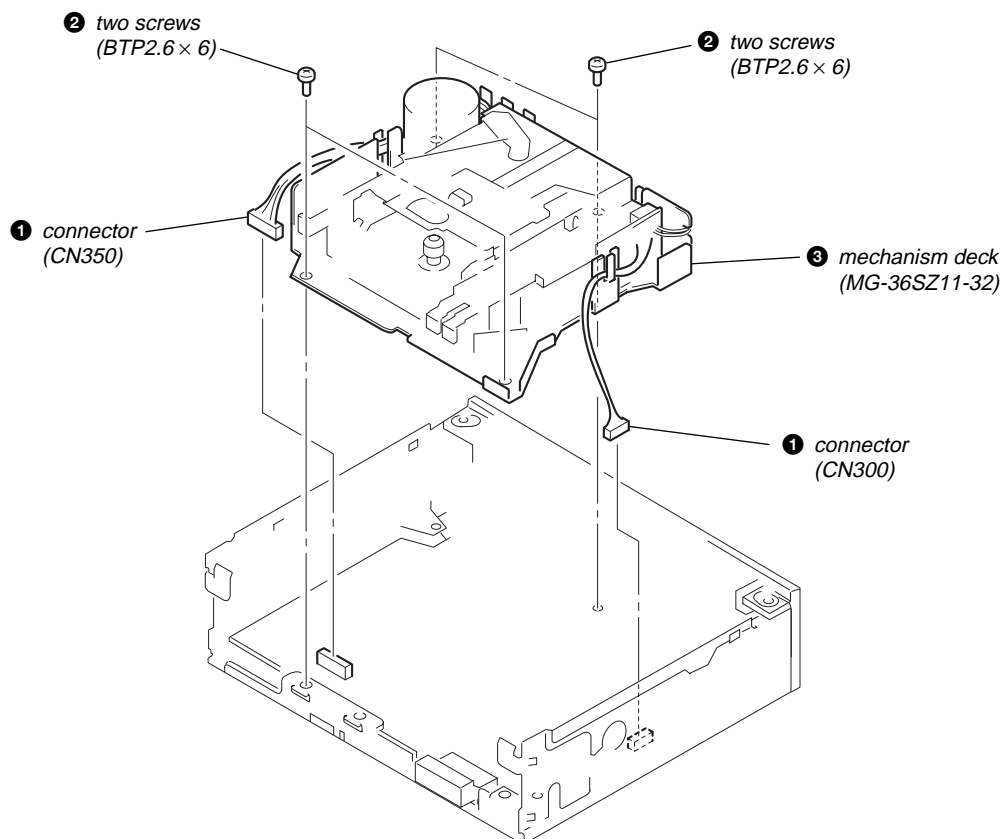
## SECTION 2 DISASSEMBLY

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

### SUB PANEL

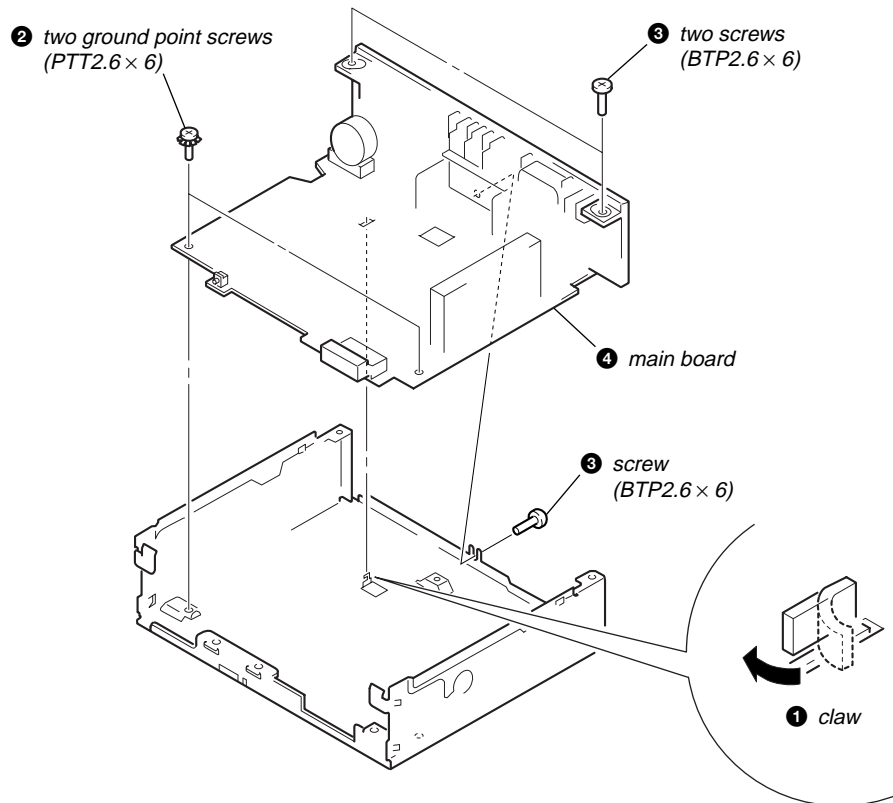


### MECHANISM DECK (MG-36SZ11-32)

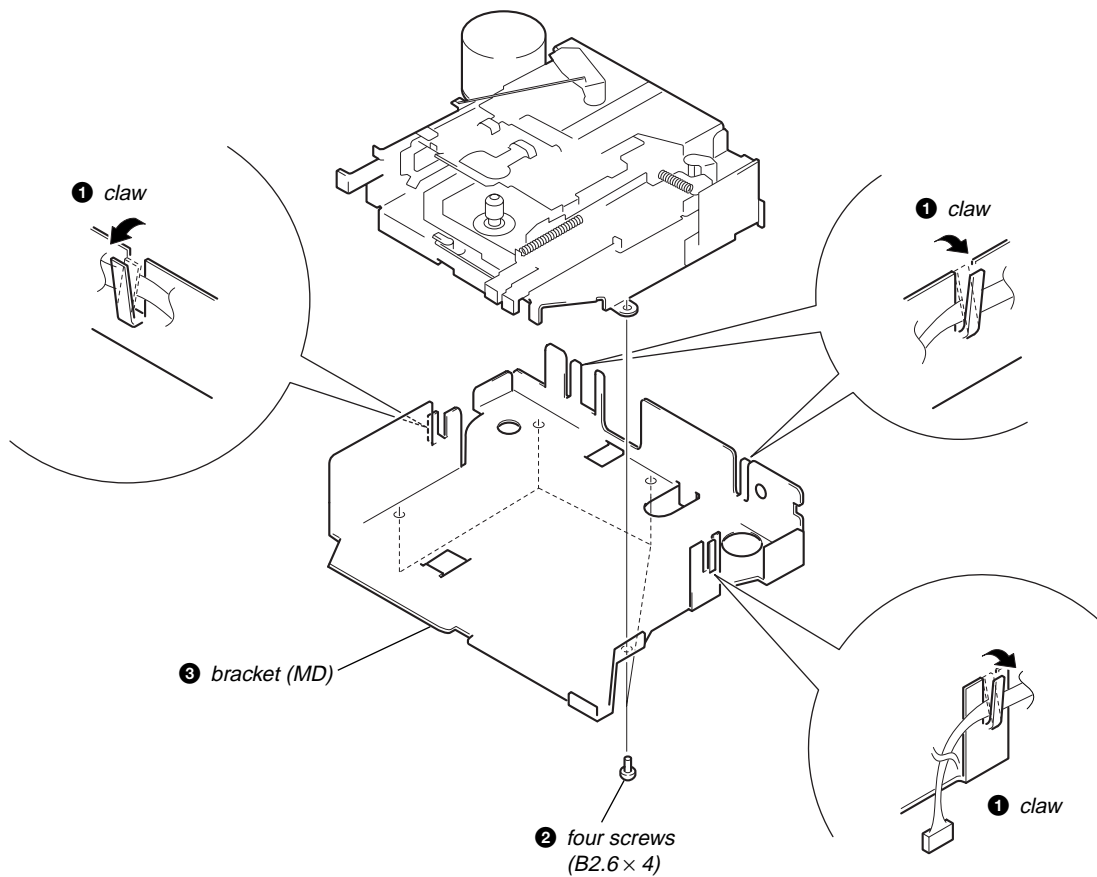




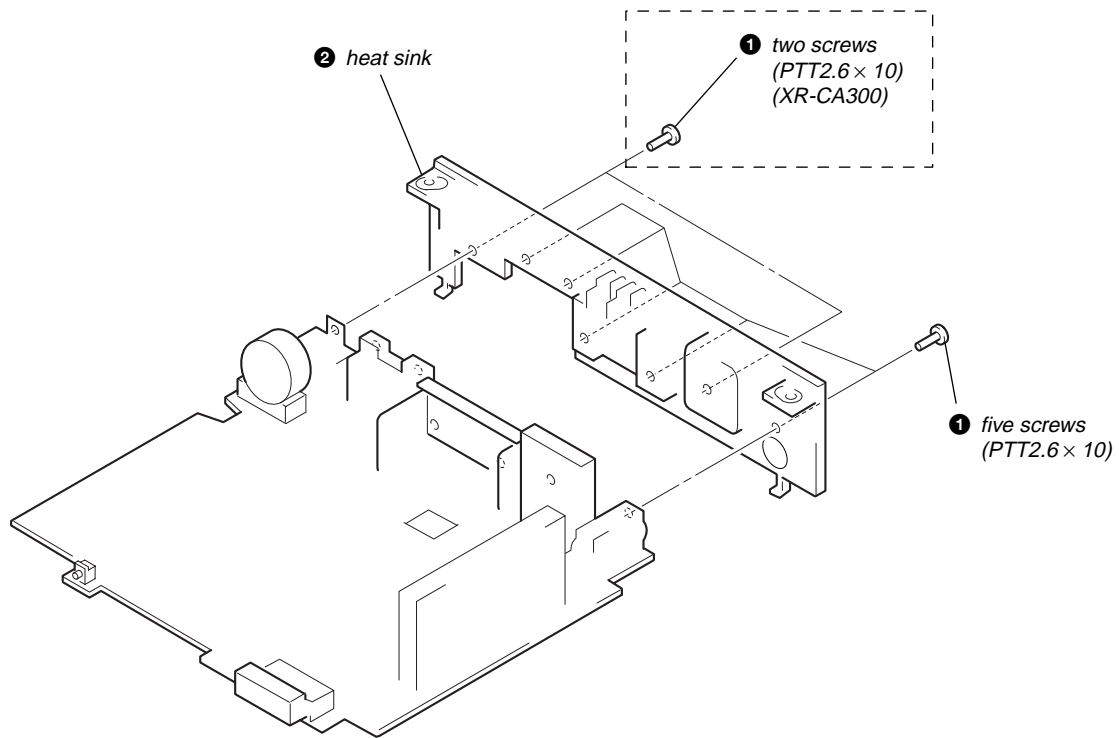
MAIN BOARD



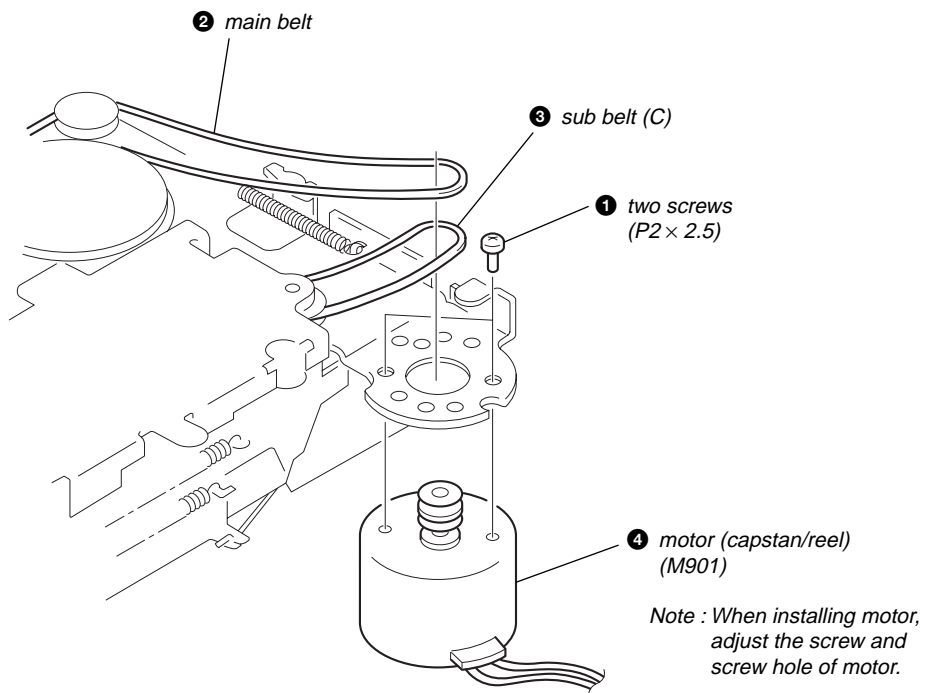
BRACKET (MD)



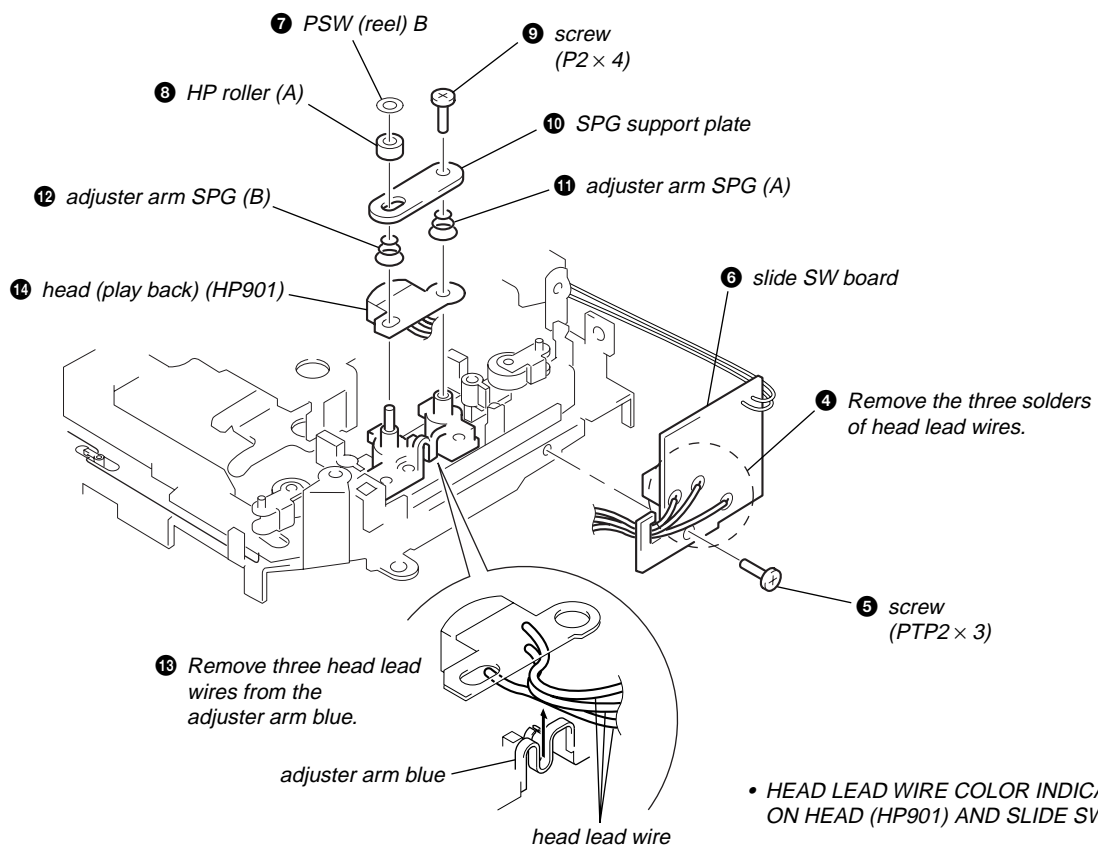
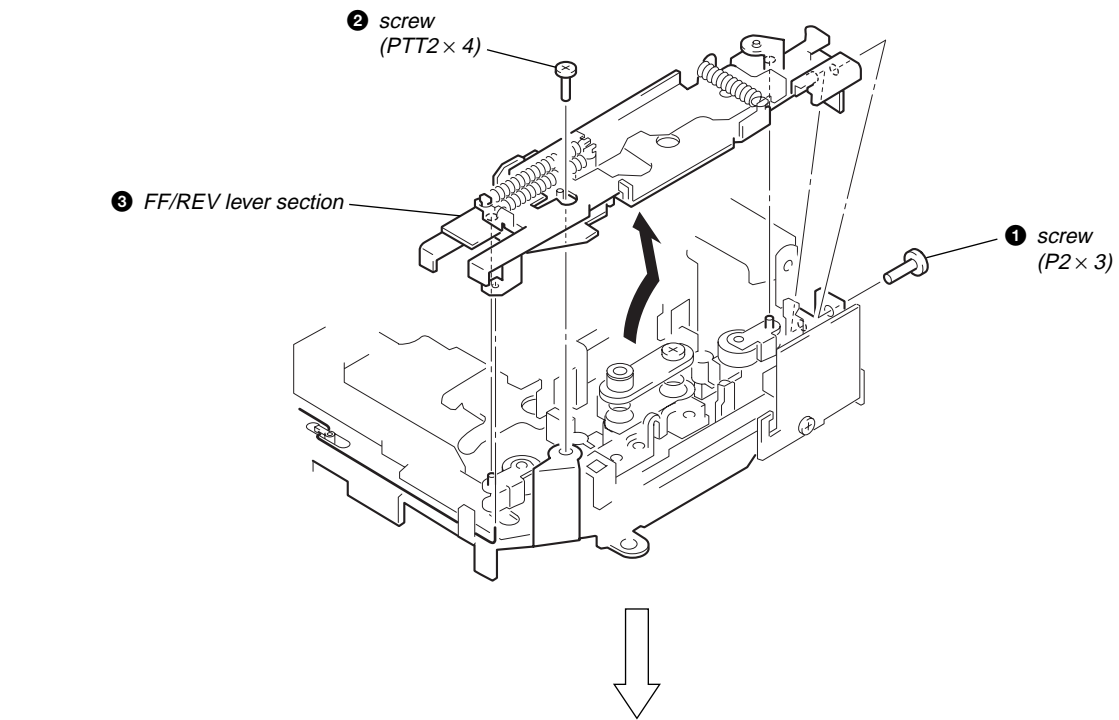
HEAT SINK



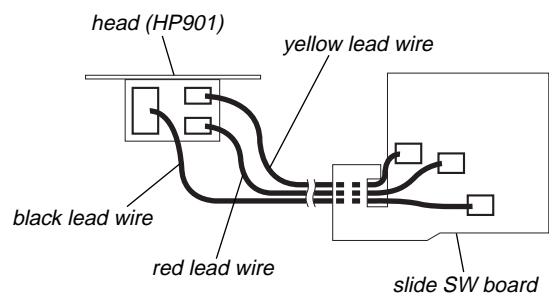
MOTOR (CAPSTAN/REEL) (M901)



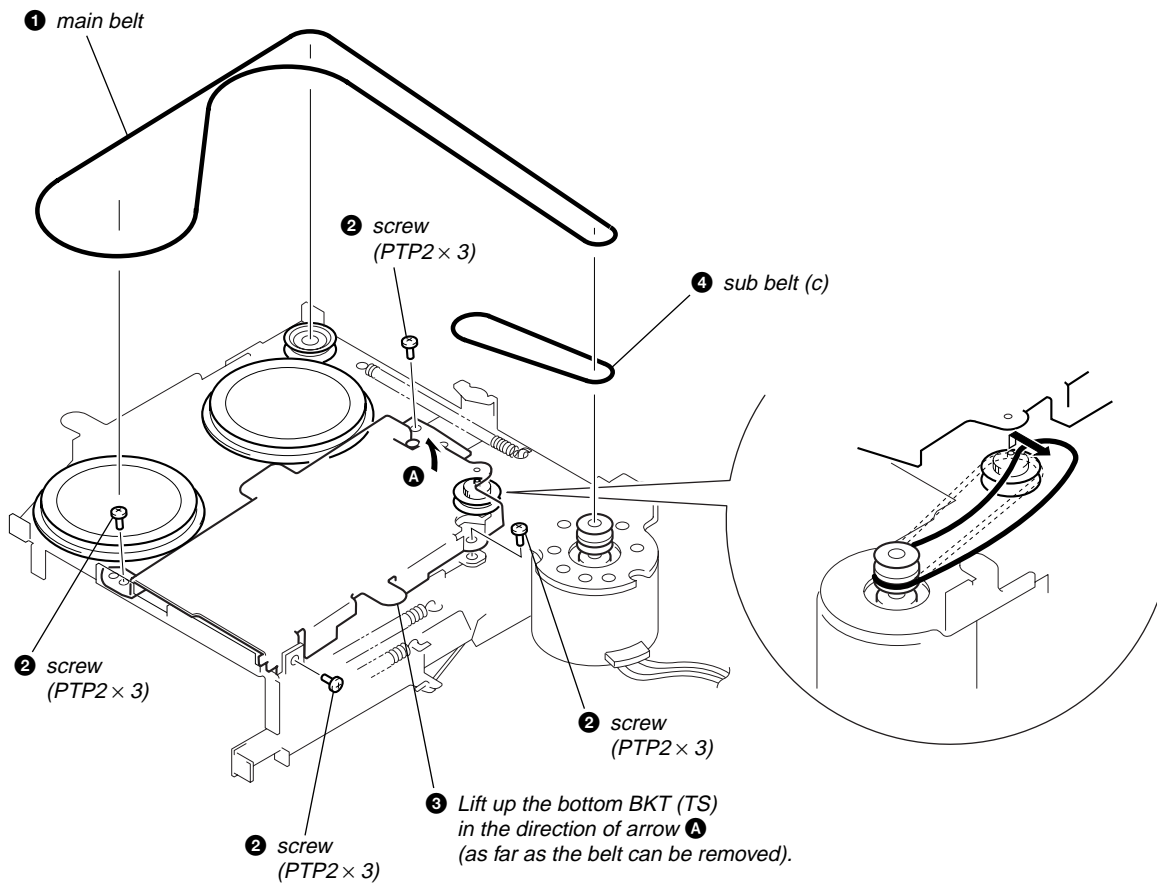
HEAD (PLAY BACK) (HP901)



• HEAD LEAD WIRE COLOR INDICATION ON HEAD (HP901) AND SLIDE SW BOARD.



MAIN BELT, SUB BELT (C)



## SECTION 3 MECHANICAL ADJUSTMENTS

- Clean the following parts with a denatured-alcohol-moistened swab:
 

playback head	pinch roller
rubber belt	capstan
idler	
- Demagnetize the playback head with a head demagnetizer.
- Do not use a magnetized screwdriver for the adjustments.
- 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>

- 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.
- Push the **[4]** button.
- Push the **[5]** button.
- Press the **[1]** button for more than two seconds.
- Then the display indicates all lights, the test mode is set.

<Release the Test mode>

- 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.

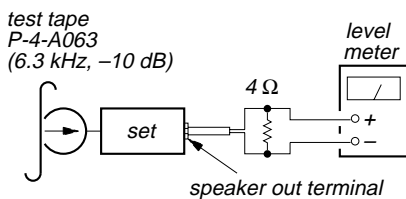
**Test Tape**

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

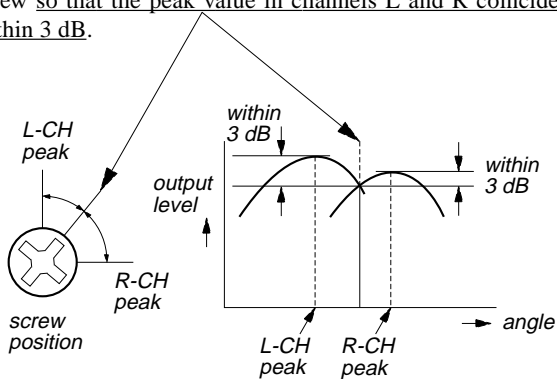
**PB Head Azimuth Adjustment**

**Procedure:**

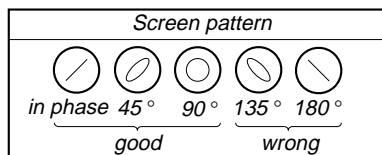
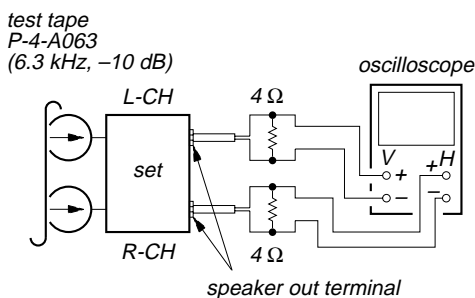
1. Put the set into the FWD PB mode.



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.

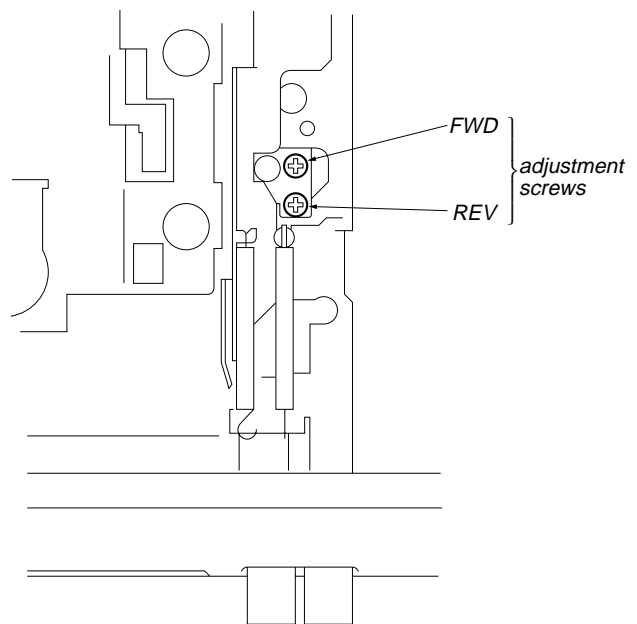


3. Check the phase in the FWD PB mode.



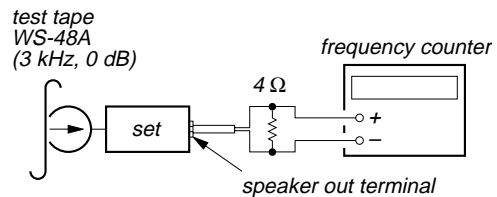
4. Repeat the above adjustment for the REV PB mode.
5. Check that output level difference between FWD PB mode and REV PB mode is within 4 dB.

**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  $\mu$ V

**Cautions during repair**

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

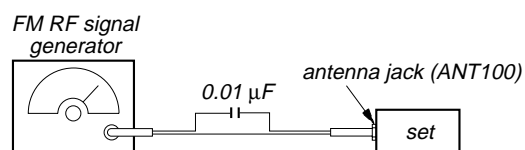
**Note:** Adjust the tuner section in the sequence shown below.

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:**

**SOURCE** (CA300) or **TUNER** (L200) button: FM

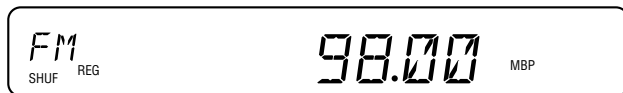


Carrier frequency : 98.00 MHz  
 Output level : 35 dB (56.2  $\mu$ V)  
 Mode : mono  
 Modulation : no modulation

**Procedure:**

1. Set to the test mode. (see page 13)
2. Push the **SOURCE** (CA300) or **TUNER** (L200) 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



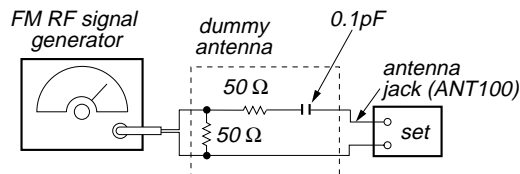
**Specified Value:** Display indication: 8.2 to 8.6

**Adjustment Location:** See page 17.

**FM Auto Seek/Stop Level Adjustment**

**Setting:**

**SOURCE** (CA300) or **TUNER** (L200) button: FM

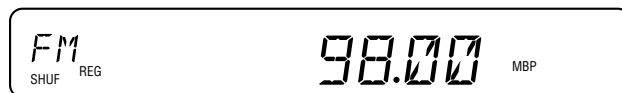


Carrier frequency : 98.00 MHz  
 Output level : 22 dB (12.6  $\mu$ V)  
 Mode : mono  
 Modulation : 1 kHz, 22.5 kHz deviation (30%)

**Procedure:**

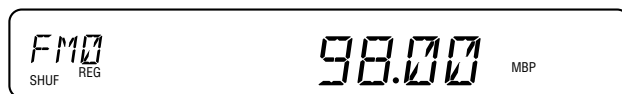
1. Set to the test mode. (see page 13)
2. Push the **SOURCE** (CA300) or **TUNER** (L200) button and set to FM.

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

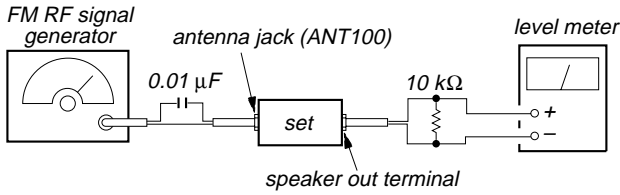


**Adjustment Location:** See page 17.

**FM Stereo Separation Adjustment**

**Setting:**

[SOURCE] (CA300) or [TUNER] (L200) 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

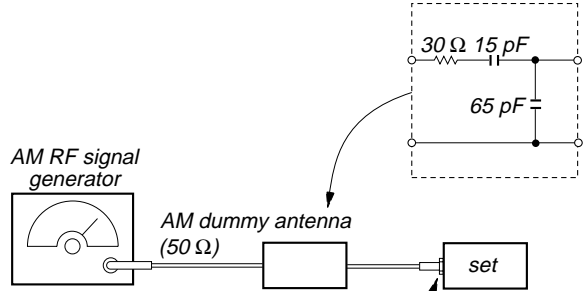
**Adjustment Location:** See page 17.

**MW Auto Seek/Stop Level Adjustmant**

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

**Setting:**

[SOURCE] (CA300) or [TUNER] (L200) button: MW

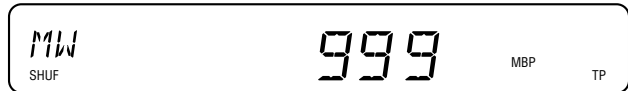


Carrier frequency : 999 kHz  
 30% amplitude modulation by 1 kHz signal  
 Output level : 33 dB (44.7 μV)

**Procedure:**

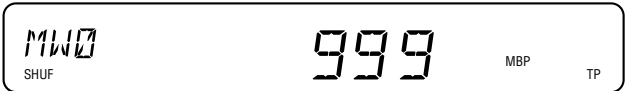
1. Set to the test mode. (see page 13)
2. Push the [SOURCE] (CA300) or [TUNER] (L200) button and set to FM.
3. Push the [MODE] button and set to MW.

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.

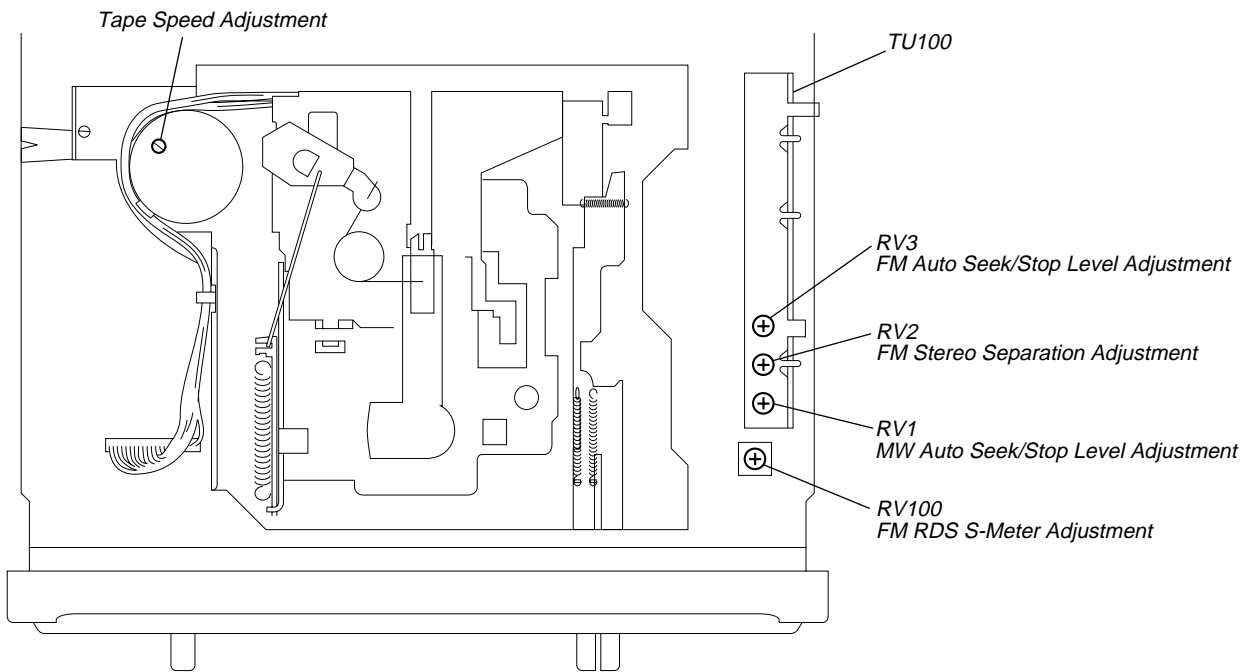
Display



**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:

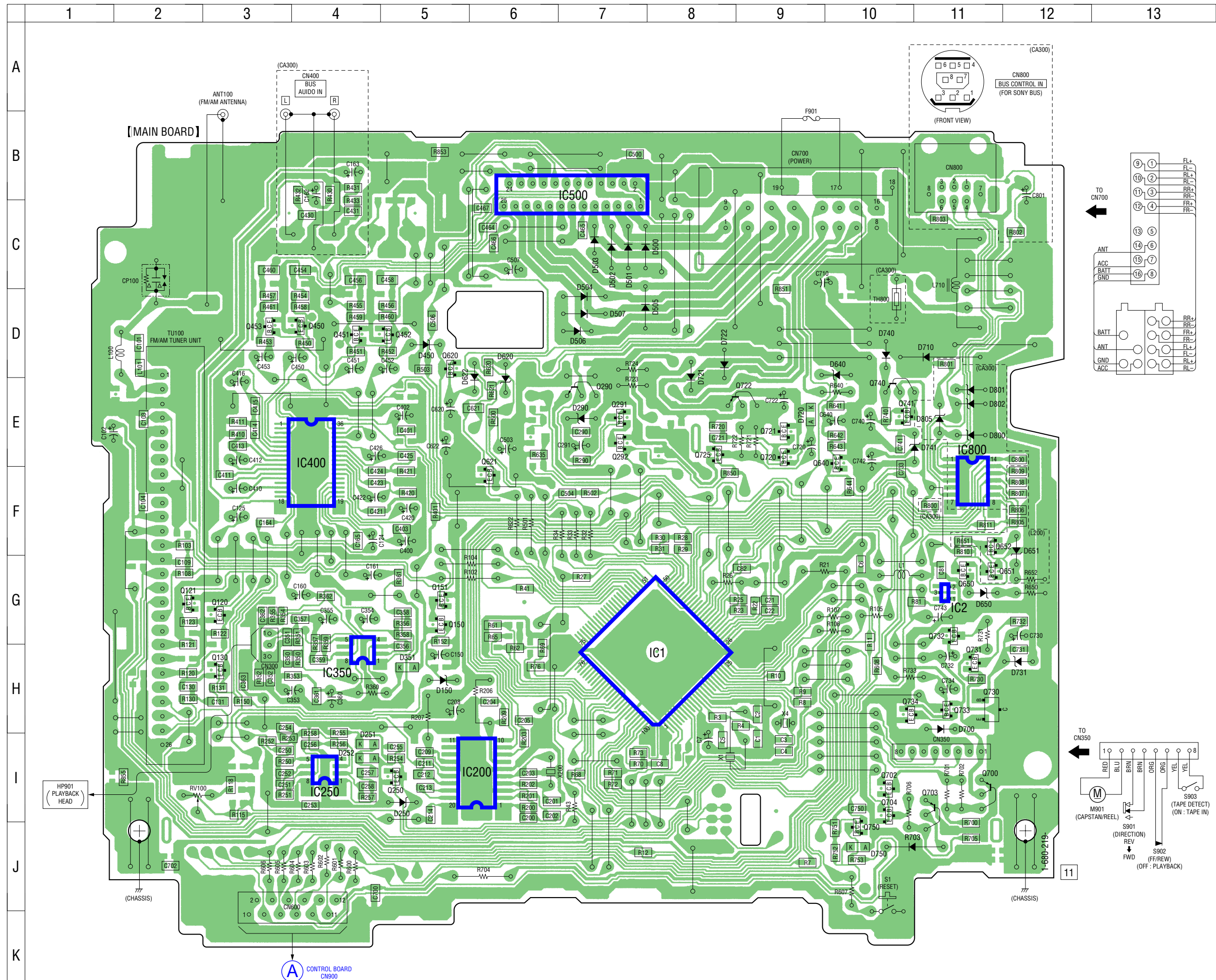
-  : parts extracted from the component side.
-  : parts extracted from the conductor side.
-  : Through hole.
-  : Pattern from the side which enables seeing.
-  : Carbon pattern.

(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.

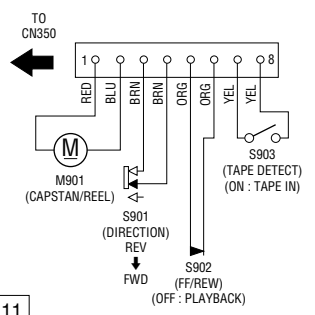
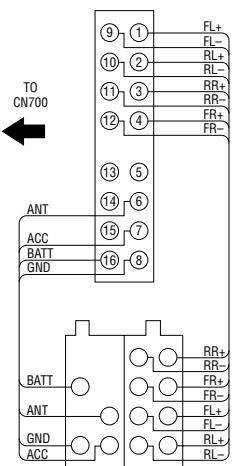
#### Note on Schematic Diagram:

- All capacitors are in  $\mu\text{F}$  unless otherwise noted. pF:  $\mu\mu\text{F}$   
50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in  $\Omega$  and  $1/4\text{ W}$  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 M $\Omega$ ).  
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



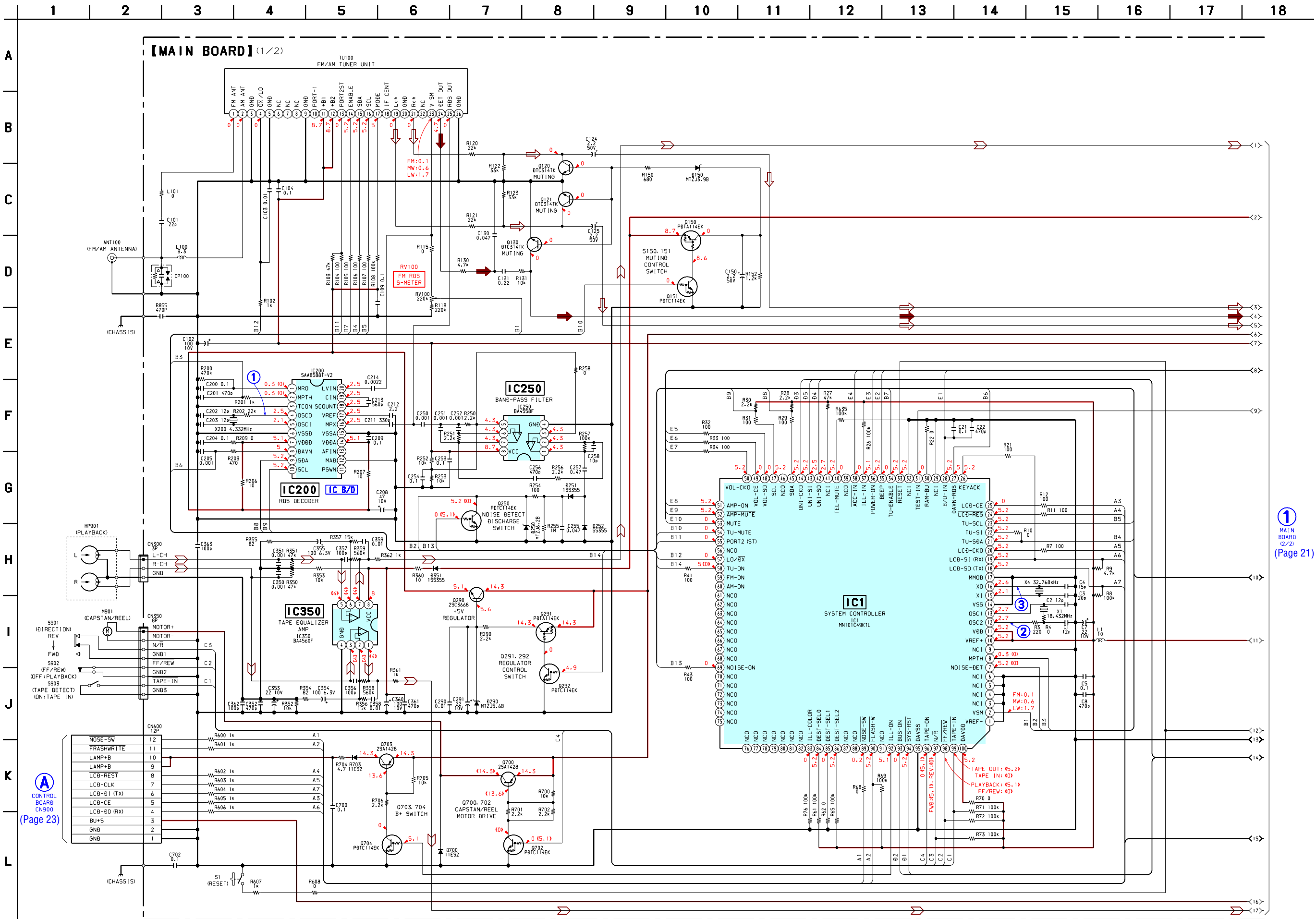
• Semiconductor Location

Ref. No.	Location
D150	H-5
D250	I-5
D251	I-4
D252	I-4
D290	E-7
D351	H-5
D450	D-5
D500	C-7
D501	C-7
D502	C-7
D503	C-7
D504	D-7
D505	D-7
D506	D-7
D507	D-7
D620	E-6
D622	E-6
D640	D-10
D650	G-11
D651	F-12
D700	H-11
D710	D-11
D720	E-9
D721	D-8
D722	D-8
D731	H-12
D740	D-10
D741	E-10
D750	J-10
D800	E-11
D801	E-11
D802	E-11
D805	E-11
IC1	H-8
IC2	G-11
IC200	I-6
IC250	I-4
IC350	H-4
IC400	E-4
IC500	B-7
IC800	F-11
Q120	G-3
Q121	G-2
Q130	H-3
Q150	G-5
Q151	G-5
Q250	I-5
Q290	E-7
Q291	E-7
Q292	E-7
Q450	D-4
Q451	D-4
Q452	D-5
Q453	D-3
Q620	D-5
Q621	F-6
Q640	E-10
Q650	G-11
Q651	G-11
Q652	F-11
Q700	I-11
Q702	I-10
Q703	I-11
Q704	I-10
Q720	E-9
Q721	E-9
Q722	E-9
Q725	E-8
Q730	H-11
Q731	H-11
Q732	G-11
Q733	H-11
Q734	H-10
Q740	E-10
Q741	E-10
Q750	J-10
R703	J-10



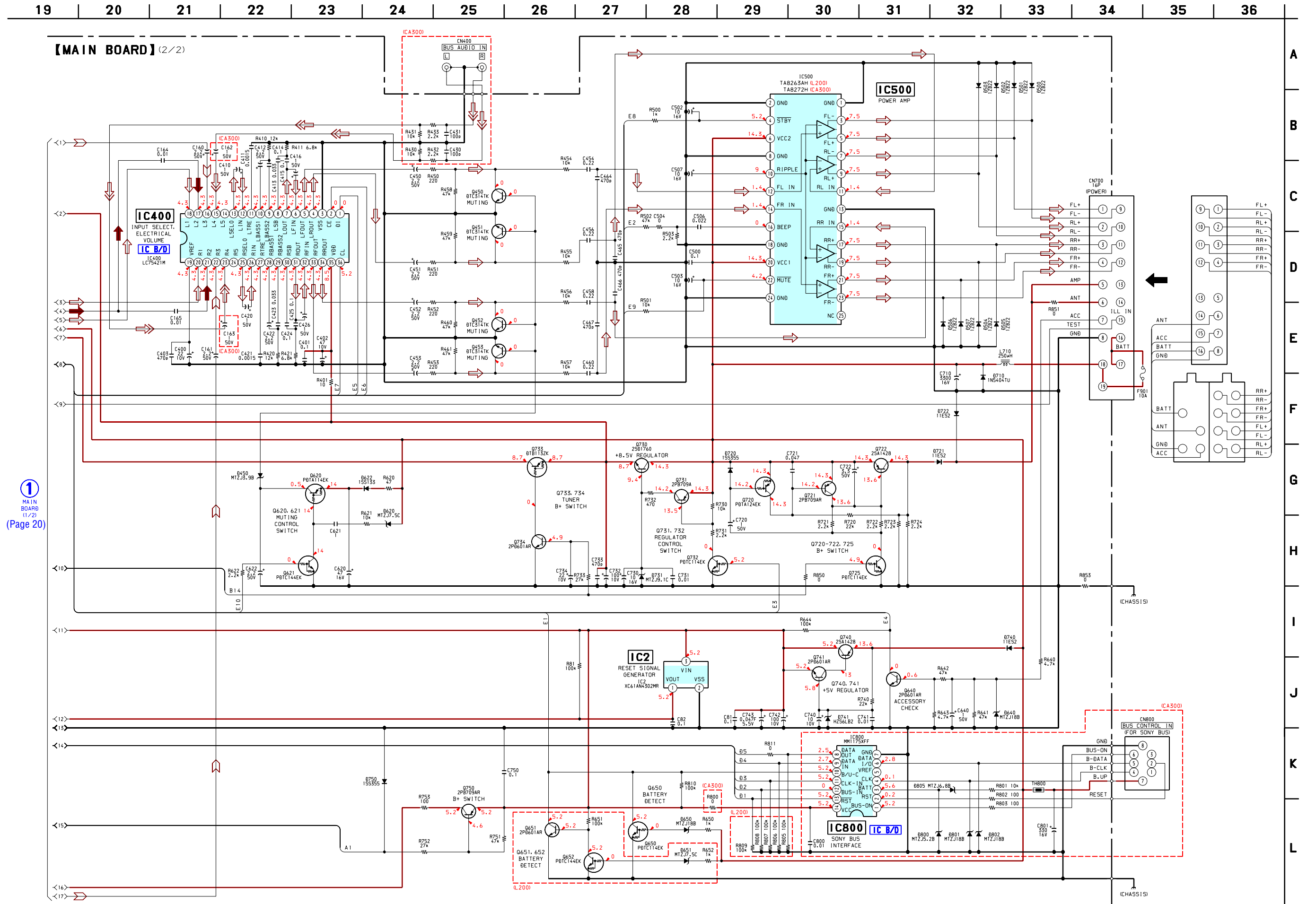
A CONTROL BOARD CN900 (Page 22)

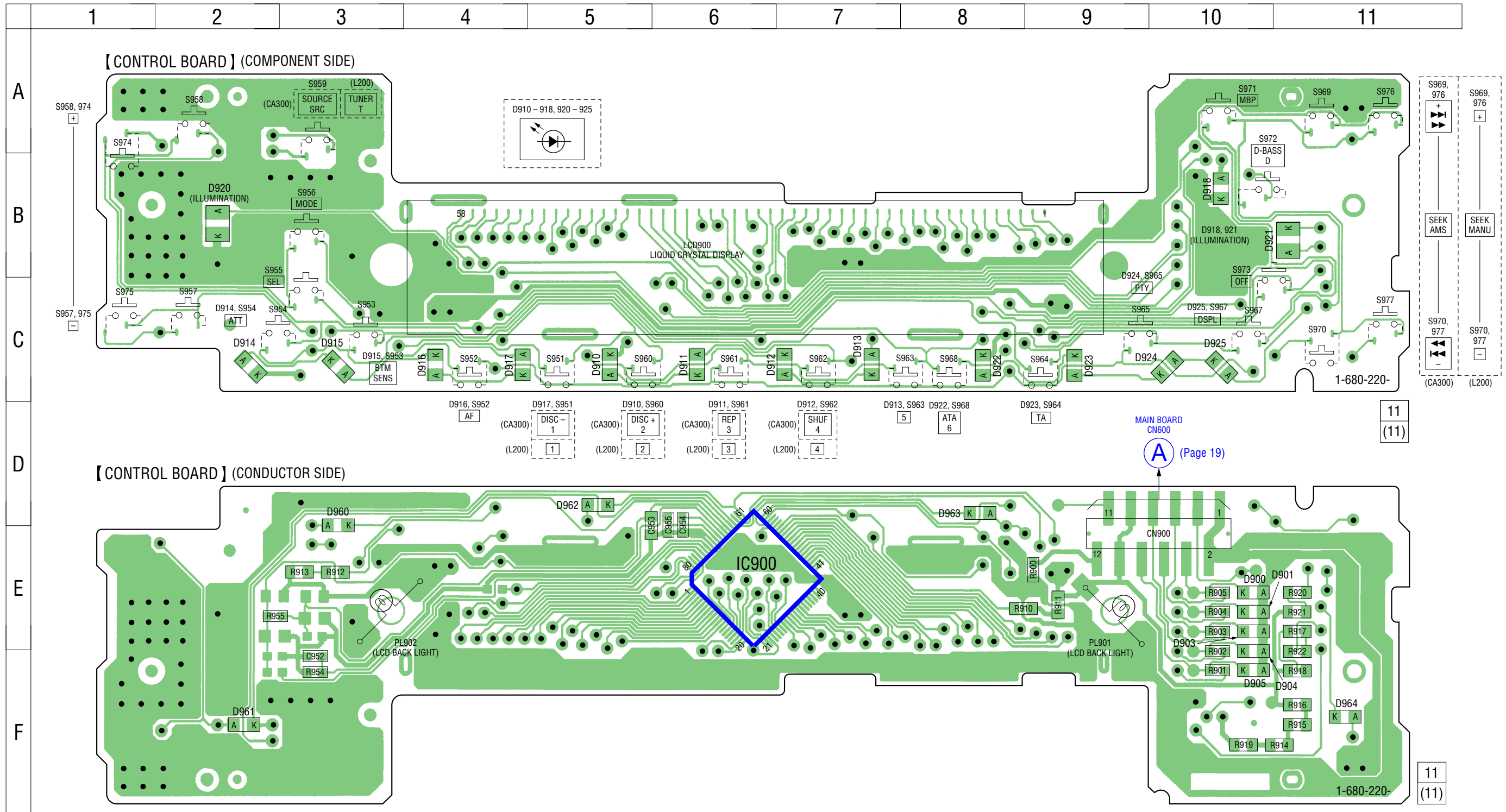
5-3. SCHEMATIC DIAGRAM – MAIN Board (1/2) – • See page 24 for Waveforms. • See page 24 for IC Block Diagram.





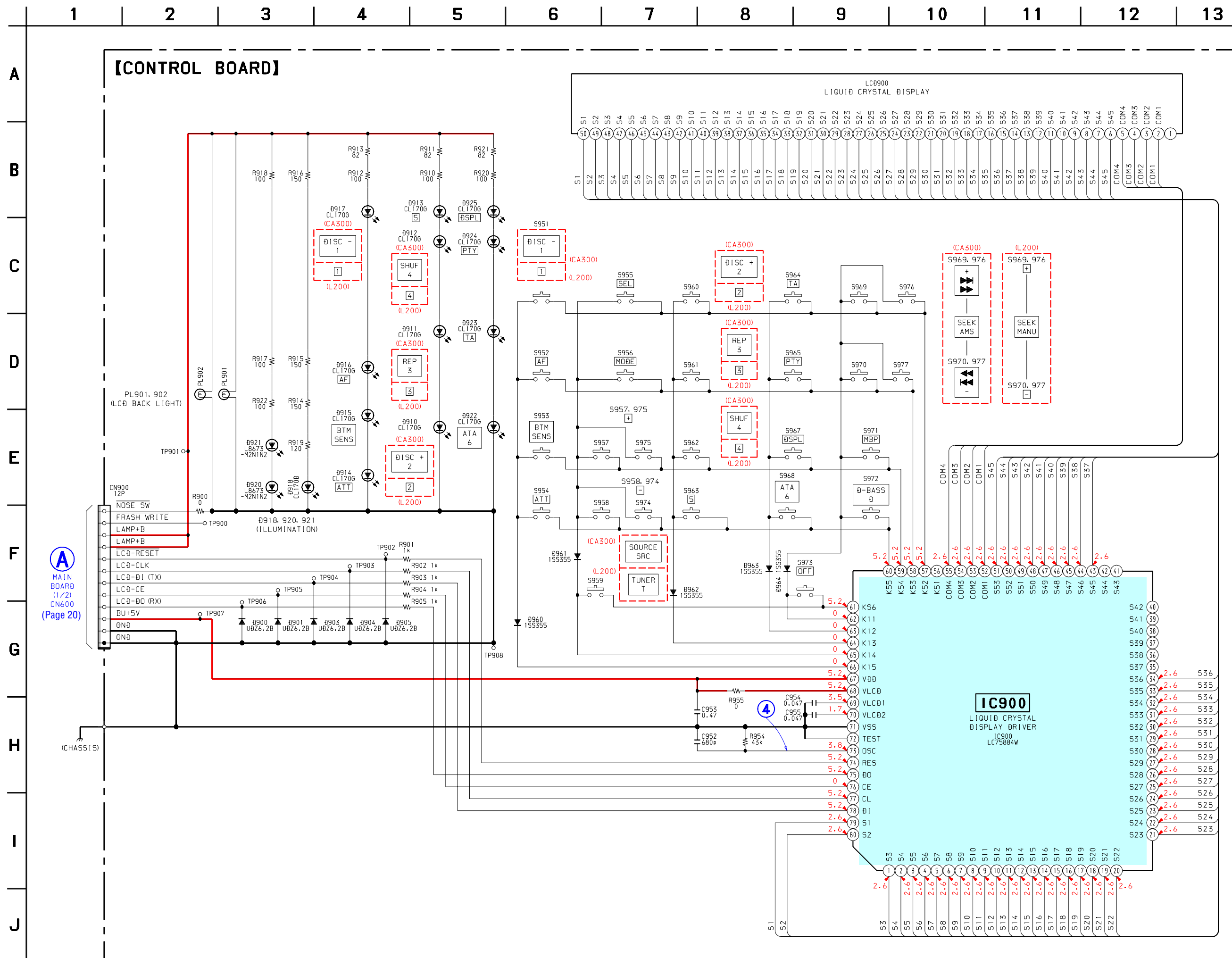
5-4. SCHEMATIC DIAGRAM – MAIN Board (2/2) – • See page 24 for IC Block Diagrams.





• Semiconductor Location

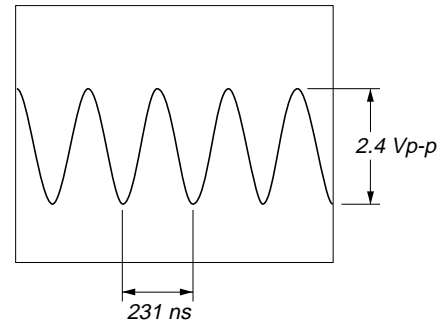
Ref. No.	Location	Ref. No.	Location
D900	E-10	D920	B-2
D901	E-10	D921	B-11
D903	E-10	D922	C-8
D904	F-10	D923	C-9
D905	F-10	D924	C-10
D910	C-5	D925	C-10
D911	C-6	D960	D-3
D912	C-7	D961	F-2
D913	C-7	D962	D-5
D914	C-2	D963	D-8
D915	C-3	D964	F-11
D916	C-4		
D917	C-4	IC900	E-6
D918	B-10		



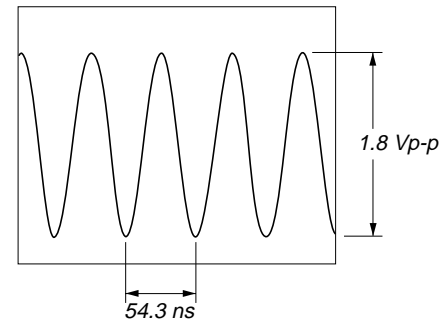
# XR-CA300/L200

## • Waveforms – MAIN Board –

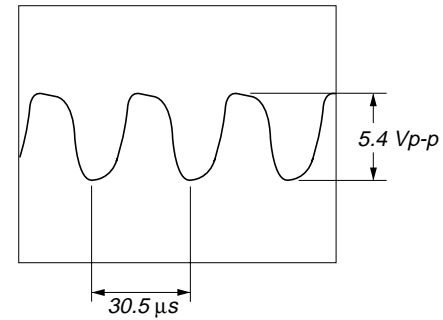
1 IC200 (OSCO)



2 IC1 (OSC2)

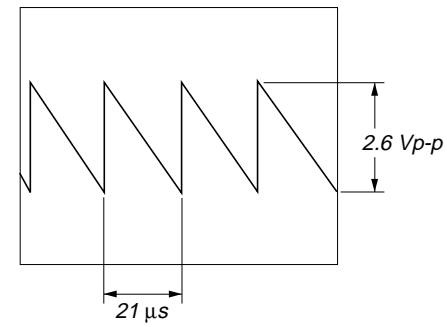


3 IC1 (XO)



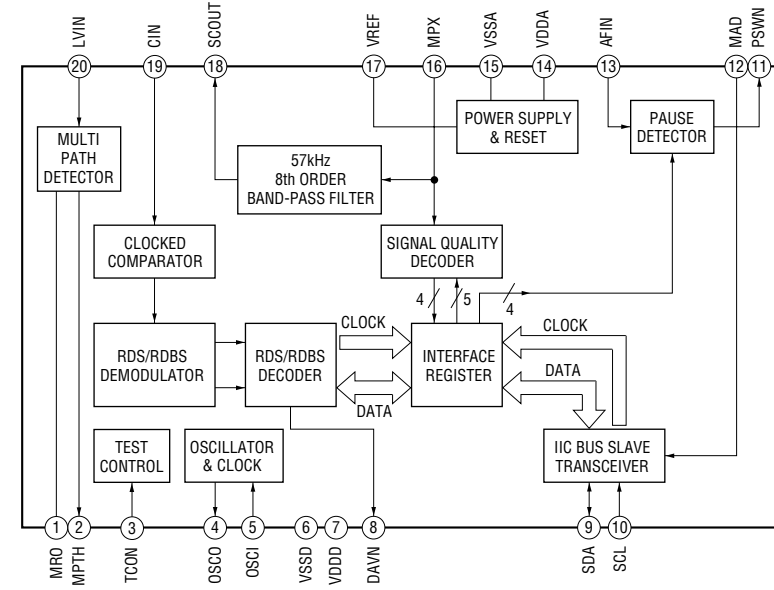
## – CONTROL Board –

4 IC900 (OSC)

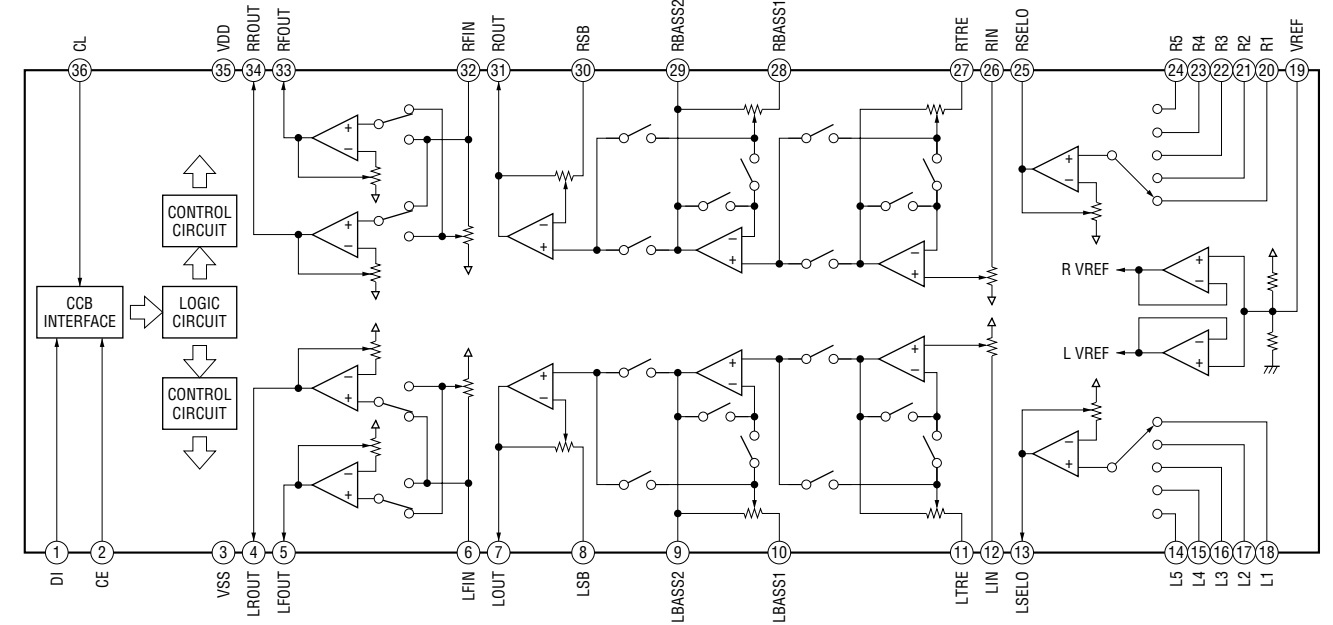


## • IC Block Diagrams – MAIN Board –

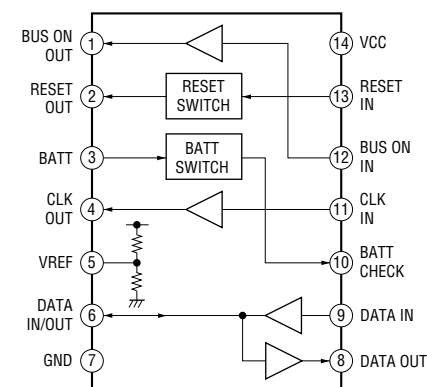
IC200 SAA6588T-118



IC400 LC75421M-TLM



IC800 MM1175XFF (XR-CA300 only)



## 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 (TU100) (A/D input)
3 to 6	NCI	I	Not used (fixed at "L")
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 (IC200)
9	NCI	I	Not used (fixed at "L")
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	MMOD	I	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 (IC900)
19	LCD-SI (RX)	I	LCD serial data input from the liquid crystal display driver (IC900)
20	LCD-CKO	O	LCD serial transfer clock signal output to the liquid crystal display driver (IC900)
21	TU-SDA	O	Serial data output to the FM/AM tuner unit (TU100)
22	TU-SI	I	Serial data input from the FM/AM tuner unit (TU100)
23	TU-SCL	O	Serial data transfer clock signal output to the FM/AM tuner unit (TU100)
24	$\overline{\text{LCD-RES}}$	O	LCD reset signal output to the liquid crystal display driver (IC900) "L": reset
25	LCD-CE	O	Chip enable signal output to the liquid crystal display driver (IC900) "H" active
26	KEYACK	I	Key acknowledge signal detect input from the liquid crystal display driver (IC900)
27	DAVN-RDS	I	RDS data request signal input from the RDS decoder (IC200) "H" active
28	B/U-IN	I	Battery detect signal input from the SONY bus interface (IC800) and battery detect circuit "L" is input at low voltage IC800: Used for the XR-CA300 only
29	NCI	I	Not used (fixed at "L")
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	TEST-IN	I	Setting terminal for the test mode "L": test mode, Normally: fixed at "H"
32	NCI	I	Not used (fixed at "L")
33	$\overline{\text{RESET}}$	I	System reset signal input from the reset signal generator (IC2) and reset switch (S1) "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 (TU100) "H" active
35	BEEP	O	Beep sound drive signal output to the power amp (IC500)
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 (fixed at "H")
38	$\overline{\text{ACC-IN}}$	I	Accessory detect signal input terminal "L": accessory on
39	NCO	O	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 (fixed at "L")
41	NCI	I	Not used (fixed at "H")
42	UNI-SO	O	Serial data output to the SONY bus interface (IC800) Used for the XR-CA300 only
43	UNI-SI	I	Serial data input from the SONY bus interface (IC800) Used for the XR-CA300 only

Pin No.	Pin Name	I/O	Description
44	UNI-CKO	O	Serial data transfer clock signal output to the SONY bus interface (IC800) Used for the XR-CA300 only
45	SDA	I/O	Two-way data bus with the RDS decoder (IC200)
46	NCO	O	Not used (open)
47	SCL	O	Bus clock signal output to the RDS decoder (IC200)
48	VOL-SO	O	Serial data output to the electrical volume (IC400)
49	VOL-CE	O	Chip enable signal output to the electrical volume (IC400)
50	VOL-CKO	O	Serial data transfer clock signal output to the electrical volume (IC400)
51	AMP-ON	O	Standby on/off control signal output to the power amp (IC500) “L”: standby mode, “H”: amp on
52	AMP-MUTE	O	Muting on/off control signal output to the power amp (IC500) “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 (TU100) “H”: stereo display lighting
56	NCO	O	Not used (open)
57	LO/DX	O	Local/DX control signal output to the FM/AM tuner unit (TU100) “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 (open)
60	AM-ON	O	AM system power supply on/off control signal output terminal “L”: FM power on, “H”: AM power on Not used (open)
61 to 68	NCO	O	Not used (open)
69	NOISE-ON	O	Discharge control signal output for the noise detection circuit “H”: discharge
70 to 82	NCO	O	Not used (open)
83	ILL-COLOR	I	Illumination color select input terminal “L”: amber illumination “H”: green illumination (fixed at “L” in this set)
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	NCO	O	Not used (open)
89	NOISE-SW	I	Front panel block remove/attach detection signal input terminal “L”: front panel is attached
90	FLASH-W	I	Internal flash memory data write mode detection signal input terminal “L”: data write mode, Normally: fixed at “H”
91	NCO	O	Not used (open)
92	ILL-ON	O	Power on/off control signal output of the illumination LED and LCD back light (PL901, 902) “H”: power on
93	BU-SON	O	Bus on/off control signal output to the SONY bus interface (IC800) “L”: bus on Used for the XR-CA300 only
94	SYS-RST	O	Reset signal output to the SONY bus interface (IC800) “L”: reset Used for the XR-CA300 only
95	DAVSS	—	Ground terminal (for D/A converter)
96	TAPE-ON	O	Capstan/reel motor (M901) drive signal output terminal “H”: motor on
97	N/R	I	Tape direction switch (S903) input terminal “L”: reverse direction “H”: forward direction
98	FF/REW	I	FF/REW detection switch (S902) input terminal “L”: FF/REW mode
99	TAPE-IN	I	Tape in detection switch (S903) input terminal “L”: tape in
100	DAVDD	—	Power supply terminal (+5V) (for D/A converter)



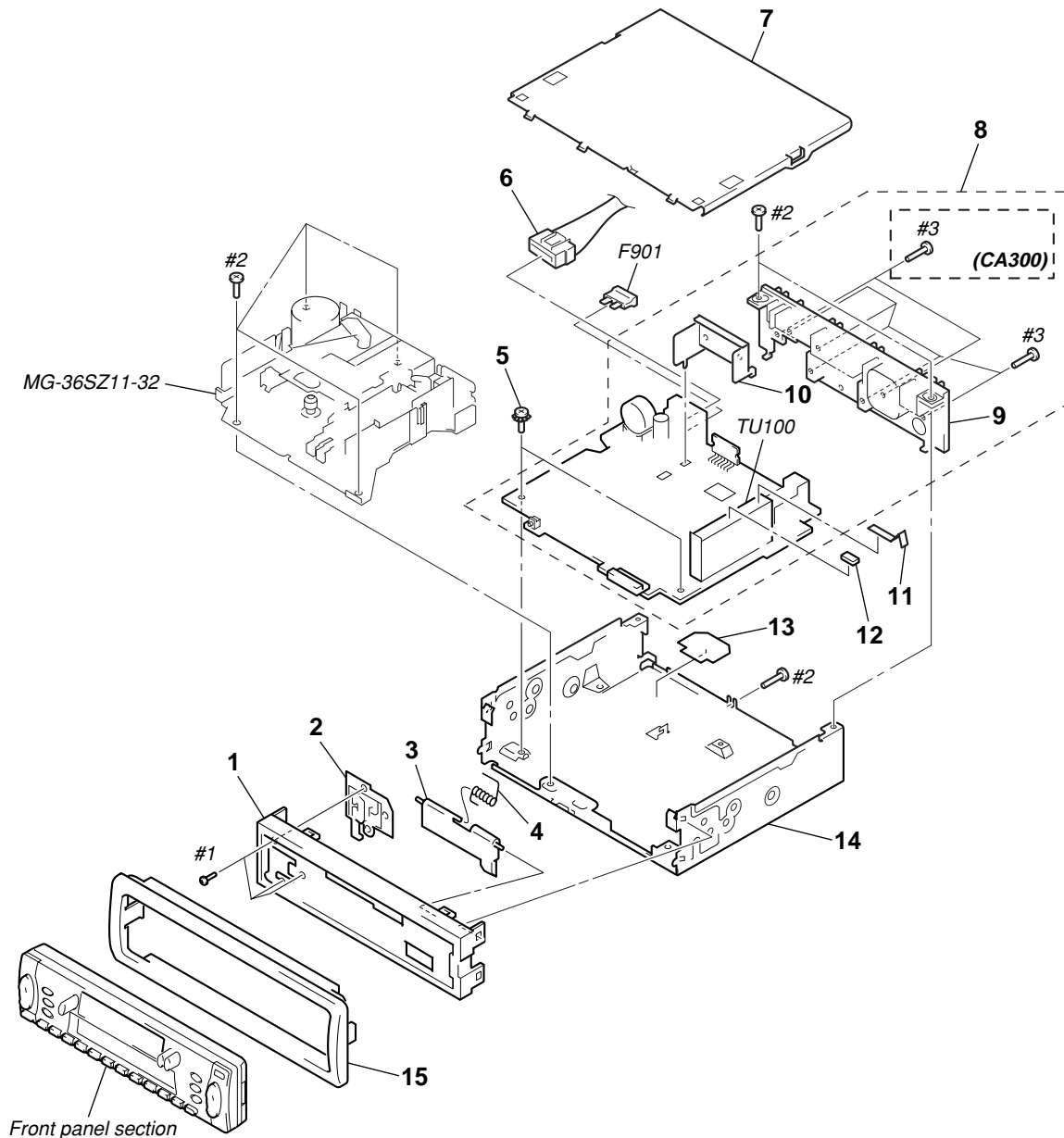
## SECTION 6 EXPLODED VIEWS

**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

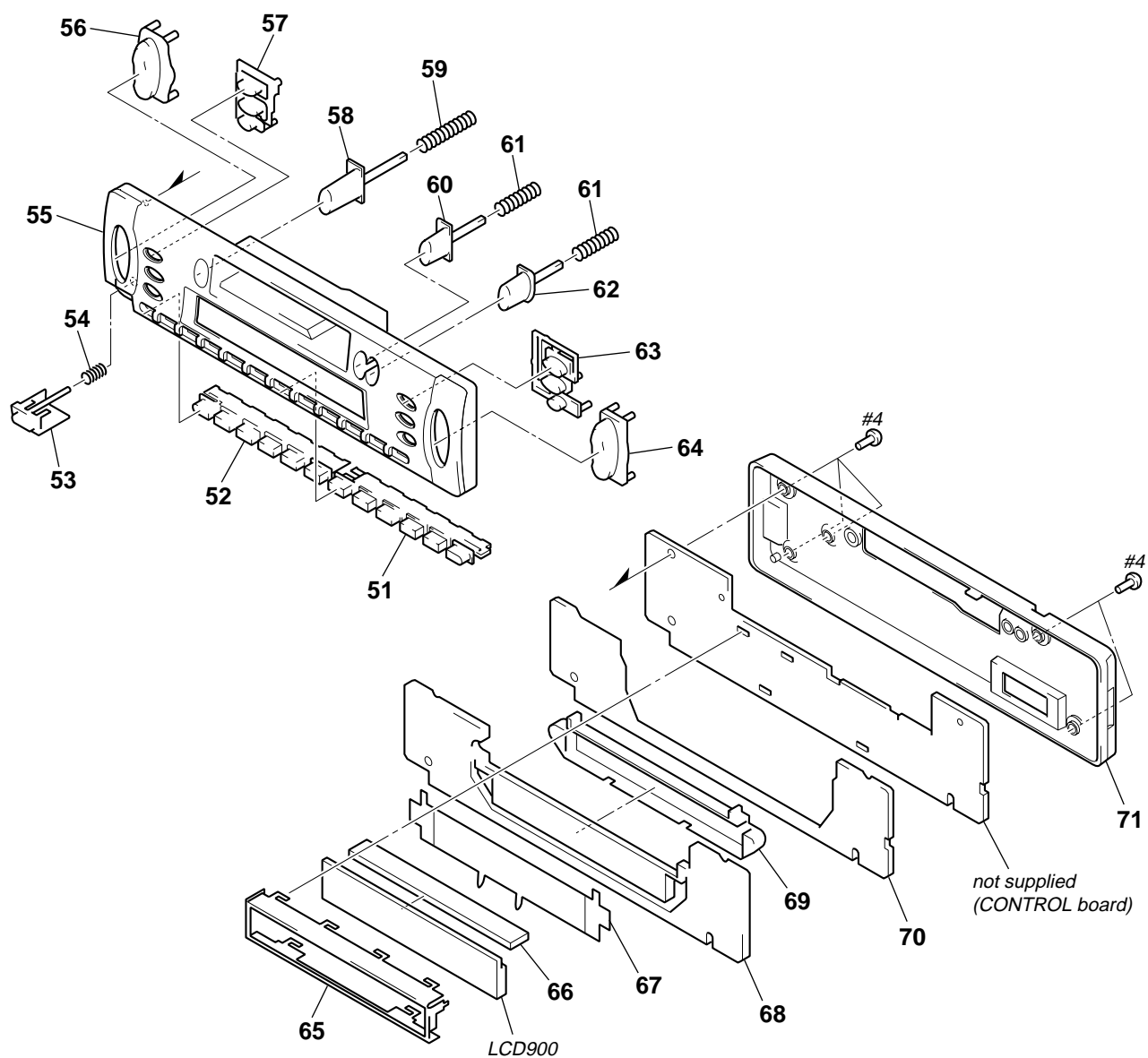
- Items marked "\*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.
- Hardware (# mark) list and Accessories and packing materials are given in the last of the electrical parts list.

**(1) GENERAL SECTION**



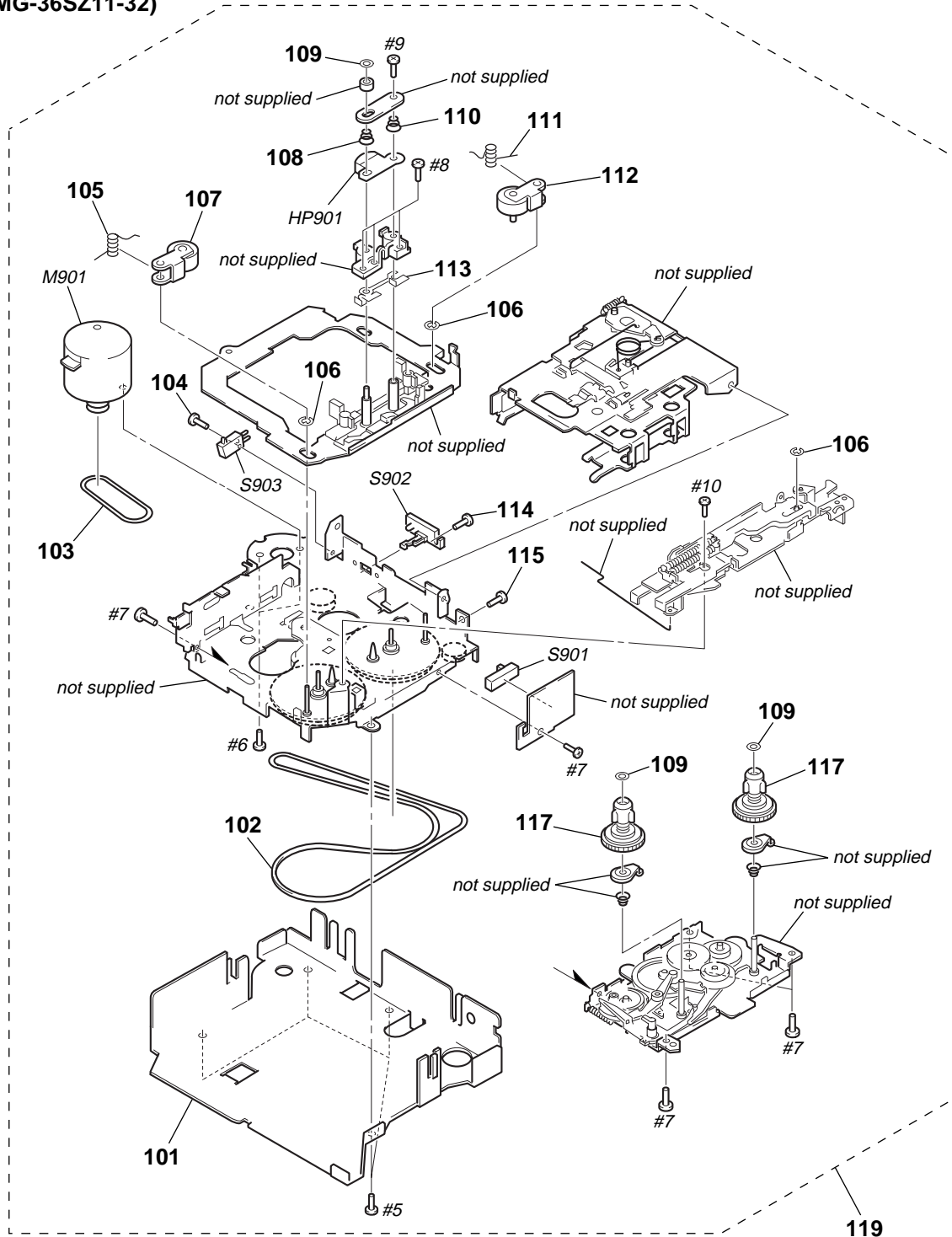
Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
1	3-224-905-01	PANEL, SUB		9	3-224-921-11	HEAT SINK (CA300)	
2	X-3370-437-1	LOCK ASSY		9	3-224-921-21	HEAT SINK (L200)	
3	3-041-581-01	DOOR, CASSETTE (L200)		* 10	3-041-578-01	BRACKET (IC)	
3	3-041-581-11	DOOR, CASSETTE (CA300)		11	3-937-650-01	PLATE (C), GROUND	
4	3-044-125-01	SPRING, TORSION		12	3-046-339-01	CUSHION (U)	
5	3-376-464-11	SCREW (+PTT 2.6X6), GROUND POINT		* 13	3-041-576-01	SHEET, INSULATING	
6	1-757-662-11	CORD (WITH CONNECTOR) (ISO) (POWER)		* 14	3-047-715-01	CHASSIS	
* 7	X-3378-167-1	COVER ASSY, TOP		15	3-041-599-01	COLLAR	
* 8	A-3274-179-A	MAIN BOARD, COMPLETE (L200)		F901	1-532-877-11	FUSE (BLADE TYPE) (AUTO FUSE) (10A)	
* 8	A-3326-857-A	MAIN BOARD, COMPLETE (CA300)		TU100	1-693-523-11	FM/AM TUNER UNIT	

**(2) FRONT PANEL SECTION**



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
51	3-224-914-01	BUTTON (4-6) (4. 5. 6. TA. PTY. DSPL)		62	3-224-915-01	BUTTON (FF) (▶▶)	
52	3-224-906-01	BUTTON (1-3) (ATT. SENS. AF. 1. 2. 3)		63	3-224-907-01	BUTTON (D-BASS) (POS. D-BASS. OFF)	
53	3-224-910-01	BUTTON (RELEASE)		64	3-224-909-01	BUTTON (SEEK) (+ ▶▶▶▶ SEEK AMS ◀◀◀◀ -) (CA300)	
54	3-220-522-01	SPRING (RELEASE)		64	3-224-909-21	BUTTON (SEEK) (+ SEEK MANU -) (L200)	
55	X-3380-126-1	PANEL ASSY (FRONT) (CA300)		* 65	3-224-927-01	PLATE (LCD), GROUND	
55	X-3380-182-1	PANEL ASSY (FRONT) (L200)		66	1-694-696-31	CONDUCTIVE BOARD, CONNECTION	
56	3-224-919-01	BUTTON (+/-)		* 67	3-224-926-01	ILLUMINATOR	
57	3-224-908-01	BUTTON (SRC. MODE. SEL) (CA300)		* 68	3-224-925-01	PLATE, LIGHT GUIDE	
57	3-224-908-11	BUTTON (T. MODE. SEL) (L200)		* 69	3-224-924-01	HOLDER (LCD)	
58	3-224-917-01	BUTTON (EJECT) (▲)		70	1-786-098-11	SWITCH, SHEET	
59	3-029-327-01	SPRING (EJECT)		71	3-224-904-01	PANEL, FRONT BACK	
60	3-224-916-01	BUTTON (REW) (◀◀)		LCD900	1-804-512-11	DISPLAY PANEL, LIQUID CRYSTAL	
61	3-375-372-01	SPRING (F/R)					

(3) MECHANISM DECK SECTION  
(MG-36SZ11-32)



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
* 101	3-224-920-01	BRACKET (MD)		112	3-045-891-01	PINCH ARM (F)	
102	3-045-943-01	MAIN BELT		113	3-045-906-01	ADJUSTER SHIM (X)	
103	3-045-945-01	SUB BELT (C)		114	3-045-952-01	+MACHINE SCREW M1.7X4	
104	3-045-953-01	+MACHINE SCREW M1.7X6		115	3-713-786-51	SCREW +P 2X3	
105	3-045-940-01	PINCH ARM SPG (R)		117	3-045-893-01	REEL SPINDLE	
106	3-045-950-01	E-RING (DIA. 2)		119	A-3220-826-A	MECHANISM DECK ASSY (MG-36SZ11-32)	
107	3-045-890-01	PINCH ARM (R)		HP901	1-500-661-11	HEAD (PLAYBACK)	
108	3-045-933-01	ADJUSTER ARM SPG (B)		M901	1-763-507-11	MOTOR (CAPSTAN/REEL)	
109	3-045-949-01	PSW (REEL) B		S901	1-771-928-11	SWITCH (SLIDE) (DIRECTION)	
110	3-045-932-01	ADJUSTER ARM SPG (A)		S902	1-771-926-11	SWITCH (LEAF) (FF/REW)	
111	3-045-939-01	PINCH ARM SPG (F)		S903	1-771-927-11	SWITCH (LEAF) (TAPE DETECT)	

## SECTION 7 ELECTRICAL PARTS LIST

**CONTROL**

**MAIN**

**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:  $\mu$ , for example:  
uA. . :  $\mu$ A. .      uPA. . :  $\mu$ PA. .  
uPB. . :  $\mu$ PB. .    uPC. . :  $\mu$ PC. .  
uPD. . :  $\mu$ PD. .
- CAPACITORS  
uF:  $\mu$ F
- COILS  
uH:  $\mu$ H

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

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
		CONTROL BOARD *****		D963	8-719-988-61	DIODE 1SS355TE-17	
		1-694-696-31 CONDUCTIVE BOARD, CONNECTION		D964	8-719-988-61	DIODE 1SS355TE-17	
		1-786-098-11 SWITCH, SHEET				< IC >	
*		3-224-924-01 HOLDER (LCD)		IC900	8-759-657-06	IC LC75884W	
*		3-224-925-01 PLATE, LIGHT GUIDE				< LIQUID CRYSTAL DISPLAY >	
*		3-224-926-01 ILLUMINATOR		LCD900	1-804-512-11	DISPLAY PANEL, LIQUID CRYSTAL	
		3-224-927-01 PLATE (LCD), GROUND				< PILOT LAMP >	
		< CAPACITOR >		PL901	1-518-743-41	LAMP, PILOT (LCD BACK LIGHT)	
C952	1-115-412-11	CERAMIC CHIP 680PF 5% 25V		PL902	1-518-743-41	LAMP, PILOT (LCD BACK LIGHT)	
C953	1-125-891-11	CERAMIC CHIP 0.47uF 10% 10V				< RESISTOR >	
C954	1-165-176-11	CERAMIC CHIP 0.047uF 10% 16V		R900	1-216-295-11	SHORT 0	
C955	1-165-176-11	CERAMIC CHIP 0.047uF 10% 16V		R901	1-216-049-11	RES-CHIP 1K 5% 1/10W	
		< CONNECTOR >		R902	1-216-049-11	RES-CHIP 1K 5% 1/10W	
CN900	1-794-312-11	PIN, CONNECTOR 12P		R903	1-216-049-11	RES-CHIP 1K 5% 1/10W	
		< DIODE >		R904	1-216-049-11	RES-CHIP 1K 5% 1/10W	
D900	8-719-056-82	DIODE UDZ-TE-17-6.2B		R905	1-216-049-11	RES-CHIP 1K 5% 1/10W	
D901	8-719-056-82	DIODE UDZ-TE-17-6.2B		R910	1-216-025-11	RES-CHIP 100 5% 1/10W	
D903	8-719-056-82	DIODE UDZ-TE-17-6.2B		R911	1-216-023-00	METAL CHIP 82 5% 1/10W	
D904	8-719-056-82	DIODE UDZ-TE-17-6.2B		R912	1-216-025-11	RES-CHIP 100 5% 1/10W	
D905	8-719-056-82	DIODE UDZ-TE-17-6.2B		R913	1-216-023-00	METAL CHIP 82 5% 1/10W	
D910	8-719-991-27	LED CL-170G-CD-T (CA300: 2, DISC +/L200: 2)		R914	1-216-029-00	METAL CHIP 150 5% 1/10W	
D911	8-719-991-27	LED CL-170G-CD-T (CA300: 3, REP/L200: 3)		R915	1-216-029-00	METAL CHIP 150 5% 1/10W	
D912	8-719-991-27	LED CL-170G-CD-T (CA300: 4, SHUF/L200: 4)		R916	1-216-029-00	METAL CHIP 150 5% 1/10W	
D913	8-719-991-27	LED CL-170G-CD-T (5)		R917	1-216-025-11	RES-CHIP 100 5% 1/10W	
D914	8-719-991-27	LED CL-170G-CD-T (ATT)		R918	1-216-025-11	RES-CHIP 100 5% 1/10W	
D915	8-719-991-27	LED CL-170G-CD-T (SENS, BTM)		R919	1-216-027-00	METAL CHIP 120 5% 1/10W	
D916	8-719-991-27	LED CL-170G-CD-T (AF)		R920	1-216-025-11	RES-CHIP 100 5% 1/10W	
D917	8-719-991-27	LED CL-170G-CD-T (CA300: 1, DISC -/L200: 1)		R921	1-216-023-00	METAL CHIP 82 5% 1/10W	
D918	8-719-033-86	LED CL-170D-CD-T (ILLUMINATION)		R922	1-216-025-11	RES-CHIP 100 5% 1/10W	
D920	8-719-082-69	LED LBT673-M2N1N2 (ILLUMINATION)		R954	1-216-088-00	METAL CHIP 43K 5% 1/10W	
D921	8-719-082-69	LED LBT673-M2N1N2 (ILLUMINATION)		R955	1-216-295-11	SHORT 0	
D922	8-719-991-27	LED CL-170G-CD-T (6, ATA)		*****			
D923	8-719-991-27	LED CL-170G-CD-T (TA)		*	A-3274-179-A	MAIN BOARD, COMPLETE (L200)	
D924	8-719-991-27	LED CL-170G-CD-T (PTY)		*	A-3326-857-A	MAIN BOARD, COMPLETE (CA300)	
D925	8-719-991-27	LED CL-170G-CD-T (DSPL)		*****			
D960	8-719-988-61	DIODE 1SS355TE-17		*	3-041-578-01	BRACKET (IC)	
D961	8-719-988-61	DIODE 1SS355TE-17		*	3-224-921-01	HEAT SINK	
D962	8-719-988-61	DIODE 1SS355TE-17					

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
	7-685-794-09	SCREW +PTT 2.6X10 (S)					
		< JACK >					
ANT100	1-815-185-11	JACK (ANT) (FM/AM ANTENNA)					
		< CAPACITOR/SHORT >					
C1	1-162-916-11	CERAMIC CHIP	12PF 5% 50V	C350	1-162-964-11	CERAMIC CHIP	0.001uF 10% 50V
C2	1-162-916-11	CERAMIC CHIP	12PF 5% 50V	C351	1-162-964-11	CERAMIC CHIP	0.001uF 10% 50V
C3	1-164-160-11	CERAMIC CHIP	20PF 5% 50V	C352	1-164-315-11	CERAMIC CHIP	470PF 5% 50V
C4	1-162-917-11	CERAMIC CHIP	15PF 5% 50V	C353	1-124-234-00	ELECT	22uF 20% 16V
C5	1-107-826-11	CERAMIC CHIP	0.1uF 10% 16V	C354	1-124-584-00	ELECT	100uF 20% 10V
				C355	1-124-584-00	ELECT	100uF 20% 10V
C7	1-124-234-00	ELECT	22uF 20% 16V	C356	1-162-927-11	CERAMIC CHIP	100PF 5% 50V
C8	1-164-315-11	CERAMIC CHIP	470PF 5% 50V	C357	1-162-927-11	CERAMIC CHIP	100PF 5% 50V
C21	1-107-826-11	CERAMIC CHIP	0.1uF 10% 16V	C358	1-162-970-11	CERAMIC CHIP	0.01uF 10% 25V
C22	1-164-315-11	CERAMIC CHIP	470PF 5% 50V	C359	1-162-970-11	CERAMIC CHIP	0.01uF 10% 25V
C81	1-107-826-11	CERAMIC CHIP	0.1uF 10% 16V				
				C360	1-124-584-00	ELECT	100uF 20% 10V
C82	1-107-826-11	CERAMIC CHIP	0.1uF 10% 16V	C361	1-164-315-11	CERAMIC CHIP	470PF 5% 50V
C101	1-162-919-11	CERAMIC CHIP	22PF 5% 50V	C362	1-162-927-11	CERAMIC CHIP	100PF 5% 50V
C102	1-124-584-00	ELECT	100uF 20% 10V	C363	1-162-927-11	CERAMIC CHIP	100PF 5% 50V
C103	1-162-970-11	CERAMIC CHIP	0.01uF 10% 25V	C400	1-124-234-00	ELECT	22uF 20% 16V
C104	1-107-826-11	CERAMIC CHIP	0.1uF 10% 16V				
				C401	1-107-826-11	CERAMIC CHIP	0.1uF 10% 16V
C109	1-107-826-11	CERAMIC CHIP	0.1uF 10% 16V	C402	1-124-589-11	ELECT	47uF 20% 16V
C124	1-124-257-00	ELECT	2.2uF 20% 50V	C403	1-164-315-11	CERAMIC CHIP	470PF 5% 50V
C125	1-124-257-00	ELECT	2.2uF 20% 50V	C410	1-104-942-11	ELECT	1uF 20% 50V
C130	1-165-176-11	CERAMIC CHIP	0.047uF 10% 16V	C411	1-162-965-11	CERAMIC CHIP	0.0015uF 10% 50V
C131	1-164-489-11	CERAMIC CHIP	0.22uF 10% 16V				
				C412	1-124-257-00	ELECT	2.2uF 20% 50V
C150	1-124-257-00	ELECT	2.2uF 20% 50V	C413	1-164-677-11	CERAMIC CHIP	0.033uF 10% 16V
C160	1-124-257-00	ELECT	2.2uF 20% 50V	C414	1-107-826-11	CERAMIC CHIP	0.1uF 10% 16V
C161	1-124-257-00	ELECT	2.2uF 20% 50V	C415	1-107-826-11	CERAMIC CHIP	0.1uF 10% 16V
C162	1-104-942-11	ELECT	1uF 20% 50V	C416	1-104-942-11	ELECT	1uF 20% 50V
C163	1-104-942-11	ELECT	1uF 20% 50V	C420	1-104-942-11	ELECT	1uF 20% 50V
			(CA300)	C421	1-162-965-11	CERAMIC CHIP	0.0015uF 10% 50V
			(CA300)	C422	1-124-257-00	ELECT	2.2uF 20% 50V
C164	1-162-970-11	CERAMIC CHIP	0.01uF 10% 25V	C423	1-164-677-11	CERAMIC CHIP	0.033uF 10% 16V
C165	1-162-970-11	CERAMIC CHIP	0.01uF 10% 25V	C424	1-107-826-11	CERAMIC CHIP	0.1uF 10% 16V
C200	1-107-826-11	CERAMIC CHIP	0.1uF 10% 16V				
C201	1-164-315-11	CERAMIC CHIP	470PF 5% 50V	C425	1-107-826-11	CERAMIC CHIP	0.1uF 10% 16V
C202	1-162-916-11	CERAMIC CHIP	12PF 5% 50V	C426	1-104-942-11	ELECT	1uF 20% 50V
				C430	1-162-927-11	CERAMIC CHIP	100PF 5% 50V
C203	1-162-916-11	CERAMIC CHIP	12PF 5% 50V				(CA300)
C204	1-107-826-11	CERAMIC CHIP	0.1uF 10% 16V	C431	1-162-927-11	CERAMIC CHIP	100PF 5% 50V
C205	1-162-964-11	CERAMIC CHIP	0.001uF 10% 50V				(CA300)
C208	1-124-589-11	ELECT	47uF 20% 16V	C450	1-124-257-00	ELECT	2.2uF 20% 50V
C209	1-107-826-11	CERAMIC CHIP	0.1uF 10% 16V				
				C451	1-124-257-00	ELECT	2.2uF 20% 50V
C211	1-162-959-11	CERAMIC CHIP	330PF 5% 50V	C452	1-124-257-00	ELECT	2.2uF 20% 50V
C212	1-125-889-11	CERAMIC CHIP	2.2uF 10% 10V	C453	1-124-257-00	ELECT	2.2uF 20% 50V
C213	1-164-739-11	CERAMIC CHIP	560PF 5% 50V	C454	1-164-489-11	CERAMIC CHIP	0.22uF 10% 16V
C214	1-162-966-11	CERAMIC CHIP	0.0022uF 10% 50V	C456	1-164-489-11	CERAMIC CHIP	0.22uF 10% 16V
C250	1-162-964-11	CERAMIC CHIP	0.001uF 10% 50V				
				C458	1-164-489-11	CERAMIC CHIP	0.22uF 10% 16V
C251	1-162-964-11	CERAMIC CHIP	0.001uF 10% 50V	C460	1-164-489-11	CERAMIC CHIP	0.22uF 10% 16V
C252	1-162-964-11	CERAMIC CHIP	0.001uF 10% 50V	C464	1-164-315-11	CERAMIC CHIP	470PF 5% 50V
C253	1-107-826-11	CERAMIC CHIP	0.1uF 10% 16V	C465	1-164-315-11	CERAMIC CHIP	470PF 5% 50V
C254	1-107-826-11	CERAMIC CHIP	0.1uF 10% 16V	C466	1-164-315-11	CERAMIC CHIP	470PF 5% 50V
C255	1-165-176-11	CERAMIC CHIP	0.047uF 10% 16V				
				C467	1-164-315-11	CERAMIC CHIP	470PF 5% 50V
C256	1-164-315-11	CERAMIC CHIP	470PF 5% 50V	C500	1-164-156-11	CERAMIC CHIP	0.1uF 25V
C257	1-107-823-11	CERAMIC CHIP	0.47uF 10% 16V	C502	1-126-157-11	ELECT	10uF 20% 16V
C258	1-162-915-11	CERAMIC CHIP	10PF 0.5PF 50V	C503	1-126-157-11	ELECT	10uF 20% 16V
C290	1-162-970-11	CERAMIC CHIP	0.01uF 10% 25V	C504	1-216-864-11	SHORT	0
C291	1-124-234-00	ELECT	22uF 20% 16V				
				C506	1-164-227-11	CERAMIC CHIP	0.022uF 10% 25V
				C507	1-126-157-11	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





Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
Q732	8-729-043-27	TRANSISTOR	PDTC114EK-115				
Q733	8-729-904-60	TRANSISTOR	DTB113ZK-T-146	R201	1-216-821-11	METAL CHIP	1K 5% 1/16W
Q734	8-729-422-33	TRANSISTOR	2PD601AR-115	R202	1-216-837-11	METAL CHIP	22K 5% 1/16W
Q740	8-729-205-95	TRANSISTOR	2SA1428-OY-TPF2	R203	1-216-817-11	METAL CHIP	470 5% 1/16W
Q741	8-729-422-33	TRANSISTOR	2PD601AR-115	R206	1-249-393-11	CARBON	10 5% 1/4W
Q750	8-729-216-22	TRANSISTOR	2PB709AR-115	R207	1-249-393-11	CARBON	10 5% 1/4W
		< RESISTOR/CAPACITOR/DIODE >		R209	1-216-864-11	SHORT	0
R3	1-216-813-11	METAL CHIP	220 5%	R250	1-216-825-11	METAL CHIP	2.2K 5% 1/16W
R4	1-216-864-11	SHORT	0	R251	1-216-825-11	METAL CHIP	2.2K 5% 1/16W
R7	1-216-809-11	METAL CHIP	100 5%	R252	1-216-073-00	METAL CHIP	10K 5% 1/10W
R8	1-216-845-11	METAL CHIP	100K 5%	R253	1-216-073-00	METAL CHIP	10K 5% 1/10W
R9	1-216-065-00	RES-CHIP	4.7K 5%	R254	1-216-809-11	METAL CHIP	100 5% 1/16W
R10	1-216-864-11	SHORT	0	R255	1-216-857-11	METAL CHIP	1M 5% 1/16W
R11	1-216-809-11	METAL CHIP	100 5%	R256	1-216-825-11	METAL CHIP	2.2K 5% 1/16W
R12	1-216-809-11	METAL CHIP	100 5%	R257	1-216-845-11	METAL CHIP	100K 5% 1/16W
R21	1-247-807-31	CARBON	100 5%	R258	1-216-864-11	SHORT	0
R22	1-216-864-11	SHORT	0	R290	1-216-825-11	METAL CHIP	2.2K 5% 1/16W
R26	1-249-441-11	CARBON	100K 5%	R350	1-216-841-11	METAL CHIP	47K 5% 1/16W
R27	1-216-841-11	METAL CHIP	47K 5%	R351	1-216-841-11	METAL CHIP	47K 5% 1/16W
R28	1-216-825-11	METAL CHIP	2.2K 5%	R352	1-216-073-00	METAL CHIP	10K 5% 1/10W
R29	1-216-809-11	METAL CHIP	100 5%	R353	1-216-073-00	METAL CHIP	10K 5% 1/10W
R30	1-216-825-11	METAL CHIP	2.2K 5%	R354	1-216-808-11	METAL CHIP	82 5% 1/16W
R31	1-216-809-11	METAL CHIP	100 5%	R355	1-216-808-11	METAL CHIP	82 5% 1/16W
R32	1-247-807-31	CARBON	100 5%	R356	1-216-835-11	METAL CHIP	15K 5% 1/16W
R33	1-247-807-31	CARBON	100 5%	R357	1-216-835-11	METAL CHIP	15K 5% 1/16W
R34	1-247-807-31	CARBON	100 5%	R358	1-216-854-11	METAL CHIP	560K 5% 1/16W
R41	1-216-809-11	METAL CHIP	100 5%	R359	1-216-854-11	METAL CHIP	560K 5% 1/16W
R43	1-247-807-31	CARBON	100 5%	R360	1-249-393-11	CARBON	10 5% 1/4W
R61	1-216-845-11	METAL CHIP	100K 5%	R361	1-216-821-11	METAL CHIP	1K 5% 1/16W
R62	1-216-864-11	SHORT	0	R362	1-216-821-11	METAL CHIP	1K 5% 1/16W
R65	1-216-845-11	METAL CHIP	100K 5%	R401	1-216-797-11	METAL CHIP	10 5% 1/16W
R68	1-216-864-11	SHORT	0	R410	1-216-834-11	METAL CHIP	12K 5% 1/16W
R69	1-216-845-11	METAL CHIP	100K 5%	R411	1-216-069-00	METAL CHIP	6.8K 5% 1/10W
R70	1-216-864-11	SHORT	0	R420	1-216-834-11	METAL CHIP	12K 5% 1/16W
R71	1-216-845-11	METAL CHIP	100K 5%	R421	1-216-069-00	METAL CHIP	6.8K 5% 1/10W
R72	1-216-845-11	METAL CHIP	100K 5%	R430	1-216-073-00	METAL CHIP	10K 5% 1/10W
R73	1-216-845-11	METAL CHIP	100K 5%	R431	1-216-073-00	METAL CHIP	10K 5% 1/10W
R76	1-216-845-11	METAL CHIP	100K 5%	R432	1-216-825-11	METAL CHIP	2.2K 5% 1/16W
R81	1-216-845-11	METAL CHIP	100K 5%	R433	1-216-825-11	METAL CHIP	2.2K 5% 1/16W
R102	1-249-417-11	CARBON	1K 5%	R450	1-216-813-11	METAL CHIP	220 5% 1/16W
R103	1-216-841-11	METAL CHIP	47K 5%	R451	1-216-813-11	METAL CHIP	220 5% 1/16W
R104	1-247-807-31	CARBON	100 5%	R452	1-216-813-11	METAL CHIP	220 5% 1/16W
R105	1-247-807-31	CARBON	100 5%	R453	1-216-813-11	METAL CHIP	220 5% 1/16W
R106	1-247-807-31	CARBON	100 5%	R454	1-216-073-00	METAL CHIP	10K 5% 1/10W
R107	1-247-807-31	CARBON	100 5%	R455	1-216-073-00	METAL CHIP	10K 5% 1/10W
R108	1-216-845-11	METAL CHIP	100K 5%	R456	1-216-073-00	METAL CHIP	10K 5% 1/10W
R115	1-216-864-11	SHORT	0	R457	1-216-073-00	METAL CHIP	10K 5% 1/10W
R118	1-216-849-11	METAL CHIP	220K 5%	R458	1-216-841-11	METAL CHIP	47K 5% 1/16W
R120	1-216-837-11	METAL CHIP	22K 5%	R459	1-216-841-11	METAL CHIP	47K 5% 1/16W
R121	1-216-837-11	METAL CHIP	22K 5%	R460	1-216-841-11	METAL CHIP	47K 5% 1/16W
R122	1-216-839-11	METAL CHIP	33K 5%	R461	1-216-841-11	METAL CHIP	47K 5% 1/16W
R123	1-216-839-11	METAL CHIP	33K 5%	R500	1-216-821-11	METAL CHIP	1K 5% 1/16W
R130	1-216-065-00	RES-CHIP	4.7K 5%	R501	1-249-429-11	CARBON	10K 5% 1/4W
R131	1-216-073-00	METAL CHIP	10K 5%	R502	1-216-841-11	METAL CHIP	47K 5% 1/16W
R150	1-216-819-11	METAL CHIP	680 5%	R503	1-216-825-11	METAL CHIP	2.2K 5% 1/16W
R152	1-216-822-11	METAL CHIP	1.2K 5%				
R200	1-216-853-11	METAL CHIP	470K 5%				

# XR-CA300/L200

Ver 1.3 2001.05

## MAIN

Ref. No.	Part No.	Description	Remark
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	1-216-864-11	SHORT 0	
R620	1-216-805-11	METAL CHIP 47	5% 1/16W
R621	1-216-073-00	METAL CHIP 10K	5% 1/10W
R622	1-249-421-11	CARBON 2.2K	5% 1/4W
R635	1-216-845-11	METAL CHIP 100K	5% 1/16W
R640	1-249-425-11	CARBON 4.7K	5% 1/4W
R641	1-216-841-11	METAL CHIP 47K	5% 1/16W
R642	1-216-841-11	METAL CHIP 47K	5% 1/16W
R643	1-216-065-00	RES-CHIP 4.7K	5% 1/10W
R644	1-216-845-11	METAL CHIP 100K	5% 1/16W
R650	1-249-417-11	CARBON 1K	5% 1/4W
R651	1-216-097-11	RES-CHIP 100K	5% 1/10W (L200)
R652	1-249-417-11	CARBON 1K	5% 1/4W (L200)
R700	1-216-073-00	METAL 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	1-249-482-11	CARBON 4.7	5% 1/2W
R705	1-216-073-00	METAL CHIP 10K	5% 1/10W
R706	1-249-421-11	CARBON 2.2K	5% 1/4W
R720	1-216-837-11	METAL CHIP 22K	5% 1/16W
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	METAL CHIP 10K	5% 1/10W
R731	1-249-421-11	CARBON 2.2K	5% 1/4W
R732	1-216-817-11	METAL CHIP 470	5% 1/16W
R733	1-249-434-11	CARBON 27K	5% 1/4W
R740	1-216-837-11	METAL CHIP 22K	5% 1/16W
R751	1-216-841-11	METAL CHIP 47K	5% 1/16W
R752	1-216-838-11	METAL CHIP 27K	5% 1/16W
R753	1-216-809-11	METAL CHIP 100	5% 1/16W
R800	1-216-864-11	SHORT 0 (CA300)	
R801	1-216-073-00	METAL CHIP 10K	5% 1/10W (CA300)
R802	1-216-809-11	METAL CHIP 100	5% 1/16W (CA300)
R803	1-216-809-11	METAL CHIP 100	5% 1/16W (CA300)
R805	1-216-845-11	METAL CHIP 100K	5% 1/16W (L200)
R806	1-216-845-11	METAL CHIP 100K	5% 1/16W (L200)
R807	1-216-845-11	METAL CHIP 100K	5% 1/16W (L200)
R808	1-216-845-11	METAL CHIP 100K	5% 1/16W (L200)

Ref. No.	Part No.	Description	Remark
R809	1-216-845-11	METAL CHIP 100K	5% 1/16W (L200)
R810	1-216-845-11	METAL CHIP 100K	5% 1/16W
R811	1-216-864-11	SHORT 0	
R850	1-216-864-11	SHORT 0	
R851	1-216-864-11	SHORT 0	
R853	1-216-864-11	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	1-692-431-21	SWITCH, TACTILE (RESET)	
		< THERMISTOR >	
TH800	1-801-792-21	THERMISTOR, POSITIVE (CA300)	
		< TUNER >	
TU100	1-693-523-11	FM/AM TUNER UNIT	
		< VIBRATOR >	
X1	1-795-134-11	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	1-786-098-11	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	
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			
*****			
#1	7-685-782-09	SCREW +PTT 2X5 (S)	
#2	7-685-533-19	SCREW +BTP 2.6X6 TYPE2 N-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	7-621-255-25	SCREW +P 2X4	
#10	7-685-781-09	SCREW +PTT 2X4 (S)	
*****			

Ref. No.	Part No.	Description	Remark
ACCESSORIES & PACKING MATERIALS			
*****			
	3-225-220-11	MANUAL, INSTRUCTION (ENGLISH, FRENCH, DUTCH, ITALIAN, GERMAN)	
	3-225-220-21	MANUAL, INSTRUCTION (ENGLISH, SPANISH, SWEDISH, PORTUGUESE, GREEK)	
	3-225-220-31	MANUAL, INSTRUCTION (ENGLISH, CZECH, POLISH, TURKISH, RUSSIAN) (L200)	
	3-225-221-11	MANUAL, INSTRUCTION, INSTALL (ENGLISH, FRENCH, DUTCH, ITALIAN, GERMAN)	
	3-225-221-21	MANUAL, INSTRUCTION, INSTALL (ENGLISH, SPANISH, SWEDISH, PORTUGUESE, GREEK)	
	3-225-221-31	MANUAL, INSTRUCTION, INSTALL (ENGLISH, CZECH, POLISH, TURKISH, RUSSIAN) (L200)	
	X-3378-490-1	CASE (PANEL) ASSY (for FRONT PANEL)	

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**PARTS FOR INSTALLATION AND CONNECTIONS**

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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-3370-077-1	SCREW ASSY (AE. KEY), FITTING

