


XR-M510

SERVICE MANUAL

Ver 1.0 2000.12

AEP Model
UK Model
E Model



Dolby noise reduction manufactured under license from Dolby Laboratories.
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Model Name Using Similar Mechanism	WX-C5000/XR-M500R
Tape Transport Mechanism Type	MG-25E-136

SPECIFICATIONS

Cassette player section

Tape track	4-track 2-channel stereo
Wow and flutter	0.08 % (WRMS)
Frequency response	30 – 20,000 Hz
Signal-to-noise ratio	

Cassette type	Dolby B NR	Dolby NR off
TYPE II, IV	67 dB	61 dB
TYPE I	64 dB	58 dB

Tuner section

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

MW/LW

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

Power amplifier section

Outputs	Speaker outputs
Speaker impedance	4 – 8 ohms
Maximum power output	50 W \times 4 (at 4 ohms)

General

Outputs	Audio output (2) Power aerial relay control lead Power amplifier control lead
Inputs	Telephone ATT control lead Illumination control lead
Tone controls	Bass \pm 9 dB at 100 Hz Treble \pm 9 dB at 10 kHz
Power requirements	12 V DC car battery (negative earth)
Dimensions	Approx. 178 \times 50 \times 182 mm (w/h/d)
Mounting dimensions	Approx. 182 \times 53 \times 163 mm (w/h/d)
Mass	Approx. 1.3 kg
Supplied accessories	Card remote commander RM-X96 Parts for installation and connections (1 set)

Design and specifications are subject to change without notice.

FM/MW/LW CASSETTE CAR STEREO

9-870-230-11
2000L0553-1
© 2000.12

Sony Corporation
Audio Entertainment Group
General Engineering Dept.

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.

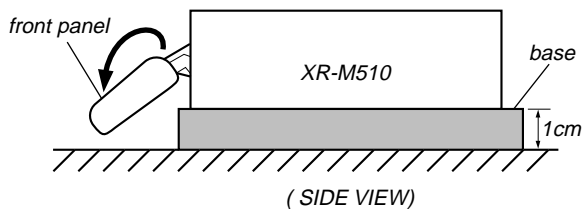
Notes on chip component replacement

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

SECTION 1 SERVICING NOTES

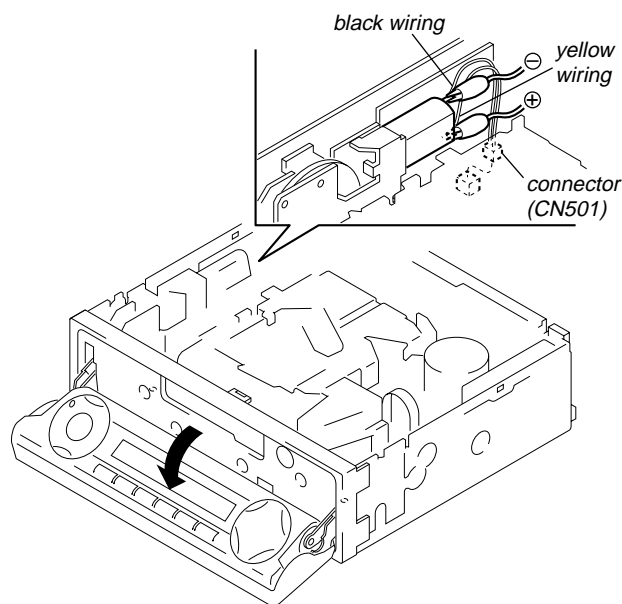
PRECAUTION ON OPEN/CLOSE FRONT PANEL

The front panel opens to the bottom of main unit.
In performing the repair, place the main unit on the base having the height exceeding 1 cm.



Open the front panel by supplying the power through the following steps:

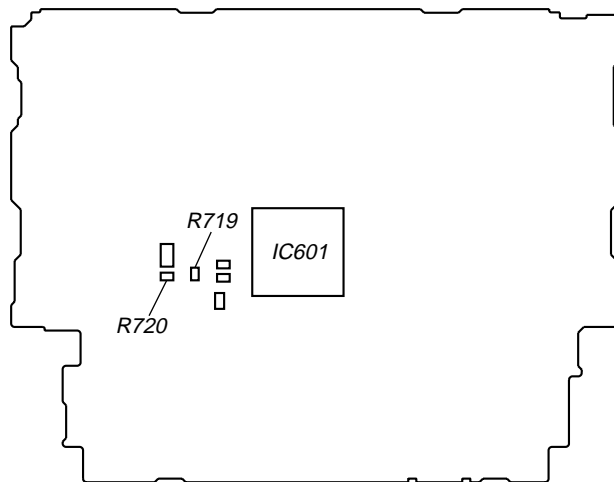
1. Disconnect the motor connector (CN501) from main board.
2. Supply the power to the motor.
Voltage : 9 V
Yellow wiring : MOTOR -
Black wiring : MOTOR +



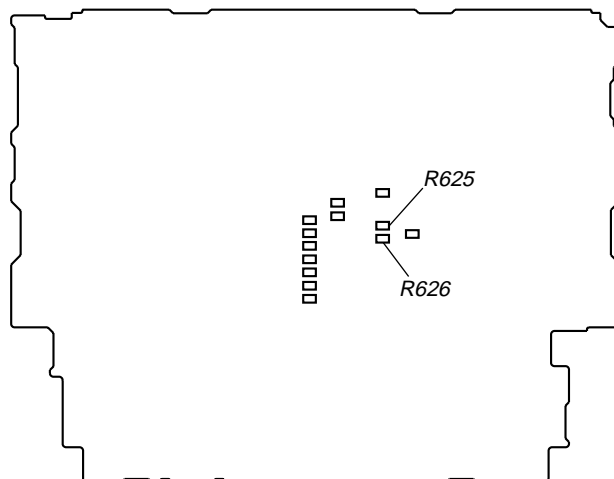
MODEL IDENTIFICATION

There are three types of main board in according of destination.

- MAIN Board (Component Side) -



- MAIN Board (Conductor Side) -

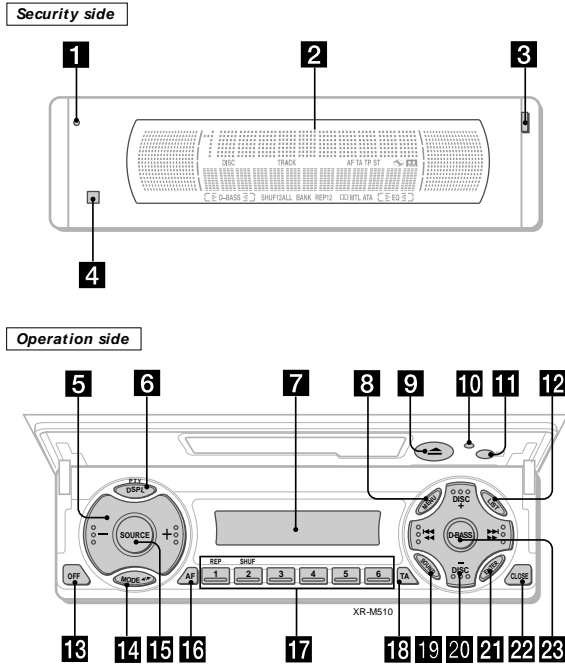


	R625	R626	R719	R720	Indicated language
TYPE A	○	○	×	×	English, Spanish, Swedish, Portuguese
TYPE B	×	×	○	○	French, German, Dutch, Italian
South European	○	×	×	○	English, Czeck, Polish, Turkish

TYPE A, B, or South European model can also be identified from the front panel display language.

For a switching method of display language, see page 5.

Location of controls



The corresponding buttons of the unit control the same functions as those on the card remote commander.

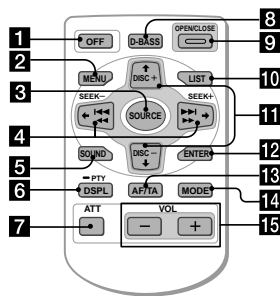
- 1 10 Reset button 8
 - 2 Main display window
 - 3 OPEN button 38
 - 4 11 Receptor for the card remote commander
 - 5 Volume adjust buttons
 - 6 DSPL/PTY (display mode change/ programme type) button
 - 7 Sub display window
 - 8 MENU button
 - 9 ▲ (eject) button 11
 - 10 LIST button
 - 11 OFF button* 9
 - 12 MODE button
 - 13 SOURCE (TUNER/TAPE/CD/MD) button
 - 14 AF button 16, 18
 - 15 Number buttons
- During radio reception:
Preset number select
13, 14, 17, 33, 34
- During tape playback:
① REP 12
- During CD/MD playback:
① REP 28
② SHUF 28

- 16 TA button 16, 17, 18
- 17 SOUND button
- 18 PRST/DISC +/- (cursor up/down) buttons
- 19 SEEK/AMS +/- (cursor left/right) buttons 13
- 20 ENTER button
- 21 CLOSE button
- 22 D-BASS button

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

Location of controls

Card remote commander RM-X96



Refer to the pages listed for details.

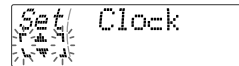
- 1 OFF button 9, 11
 - 2 MENU button 10, 12, 13, 14, 16, 18, 20, 24, 25, 27, 28, 29, 31, 33, 34, 36
 - 3 SOURCE (TUNER/TAPE/CD/MD) button 9, 11, 13, 14, 25, 26, 30, 32, 33
 - 4 ←/→ (SEEK/AMS +/-) buttons 9, 10, 11, 12, 14, 16, 20, 23, 24, 25, 27, 28, 29, 31, 32, 34, 36
Automatic Music Sensor (←/→) 11, 27
Manual search (←/→) 27
Seek 14
 - 5 SOUND button 23
 - 6 DSPL/PTY (display mode change/ programme type) button 19, 26, 27, 29, 36
 - 7 ATT (attenuate) button 23
 - 8 D-BASS button 24
 - 9 OPEN/CLOSE button 11
 - 10 LIST button 29, 30, 35
 - 11 ▲/▼ (DISC/PRST +/-) buttons 9, 10, 12, 13, 14, 16, 18, 19, 20, 24, 25, 27, 28, 29, 30, 31, 32, 33, 34, 36
During radio reception:
Preset stations select 14
During CD/MD playback:
Disc change 27
 - 12 ENTER button 10, 12, 13, 14, 16, 18, 19, 20, 24, 25, 27, 29, 30, 31, 33, 34, 35, 36
 - 13 AF/TA button 16, 17, 18
 - 14 MODE button 11, 12, 13, 14, 26, 30, 32, 33
During tape playback:
Playback direction change 11
During radio reception:
BAND select 13, 14
During CD/MD playback:
CD/MD unit select 26
 - 15 VOL (Volume adjust) buttons
- A unit turned off by pressing (OFF) for two seconds cannot be operated with the card remote commander unless (SOURCE) on the unit is pressed or a cassette is inserted to activate the unit first.

Setting the clock

The clock uses a 24-hour digital indication.

Example: To set the clock to 10:08

- 1 Press (MENU), then ↑ or ↓ repeatedly until "Clock" appears.

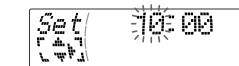


- 1 Press (ENTER).

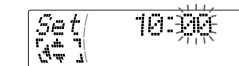


The hour indication flashes.

- 2 Press ↑ or ↓ to set the hour.

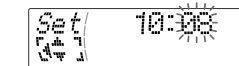


- 3 Press →.

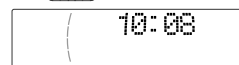


The minute indication flashes.

- 4 Press ↑ or ↓ to set the minute.



- 2 Press (ENTER).



The clock starts.

Tips

- You can use the convenient CT function to set the clock automatically (page 20).
- When the D.info mode is set to "on," the time is always displayed (except for some functions of SA mode) (page 23).

Changing the sound and display settings

The following items can be set:

Set (Setting)

- Clock (page 10).
- CT (Clock Time) (page 20).
- Beep — to turn the beep sound on or off.
- RM (Rotary Commander) — to change the operative direction of the rotary commander.
 - Select "norm" to use the rotary commander as the factory-set position.
 - Select "rev" when you mount the rotary commander on the right side of the steering column.
- English/Spanish/Portuguese/Swedish — to change the display language to English, Spanish, Portuguese or Swedish.

Dis (Display)

- D.Info (Dual Information) — to display the clock and the play mode simultaneously (on), or to display the information alternately (off).
- SA (Spectrum Analyzer) — to change the display pattern of the equalizer display (page 25).
- Dimmer — to change the brightness of the display (When the Illumination terminal connected).
 - Select "on" to dim the display.
 - Select "off" to deactivate Dimmer.
- Contrast — to adjust the contrast if the indications in the display are not recognisable because of the unit's installed position.
- M.Dspl (Motion Display) — to turn the motion display on or off.
- A.Scr1 (Auto Scroll) (page 27).

continue to next page →

1 Press **(MENU)**.

2 Press **↑** or **↓** repeatedly until the desired item appears.

Each time you press **↓**, the item changes as follows:

Example

Clock → CT → Beep → RM → English/Spanish/Portuguese/Swedish → D.Info → SA → Dimmer → Contrast → M.Dspl^{1*} → A.Scr1^{2*}

^{1*} When no CD or MD is playing, this item will not appear.

^{2*} When the radio is off, or when no tape, CD, or MD is playing, this item will not appear.

Note

The displayed item will differ depending on the source.

Tip

You can easily switch among categories ("Set," "Snd" (Sound), "PM" (Play Mode) and "Dis") by pressing **↑** or **↓** for two seconds.

3 Press **→** to select the desired setting (Example: on or off).

4 Press **(ENTER)**.

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

23 24

Installation Instalación Montering Instalação Εγκατάσταση

Precautions

- If you mount other Sony equipment with this unit, it is better to mount this unit in the lower position.
- There must be a distance of at least 15 cm between the cassettes slot of the unit and shift lever to insert cassette easily. Choose the installation location carefully so the unit does not interfere with gear shifting and other driving operations.
- When the front panel is open, a portion of it will extend down from the unit. When you install the unit, make sure that this portion of the front panel is not obstructed in its open position (by the ashtray, for example).
- 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°.

Precauciones

- Si monta otro equipo Sony con esta unidad, es preferible montar esta unidad en la posición más baja.
- Para que sea posible insertar la cinta con facilidad, debe haber una distancia de al menos 15 cm entre la ranura de inserción de cintas de la unidad y la palanca de cambios. Instale la unidad en un lugar que no entorpezca las operaciones de cambio de marchas o de conducción en general.
- Cuando el panel frontal está abierto, una parte de él sobresaldrá de la unidad. Cuando instale la unidad, compruebe que dicha parte del panel frontal no queda obstruida en la posición de apertura (debido al cenicero, por ejemplo).
- Elija cuidadosamente el lugar de montaje de forma que la unidad no interfiera las funciones normales de conducción.
- Evite instalar la unidad donde pueda quedar sometida a altas temperaturas, como a la luz solar directa o al aire de calefacción, o a polvo, suciedad, o vibraciones excesivas.
- Para realizar una instalación segura y firme, utilice solamente la ferretería de montaje suministrada.

Ajuste del ángulo de montaje

Ajuste el ángulo de montaje a menos de 20°.



Säkerhetsföreskrifter

- Om du monterar annan Sony-utrustning till denna enhet är det bäst att montera denna enhet i det undre läget.
- För att du ska kunna sätta i och ta ut bandet måste avståndet vara minst 15 cm mellan kassettfacket på enheten och växelspaken. När du installerar enheten väljer du en plats så att enheten inte är i vägen när du kör.
- När frontpanelen är öppen befinner sig en liten del av den under enhetens bottenplan. Se till att du installerar enheten så att den här delen går fri (från tex. askkoppen) när frontpanelen är öppen.
- Var noga när du väljer var i bilen du monterar bilstereon, så att den inte sitter i vägen när du kör.
- Montera inte bilstereon där den utsätts för värme, t ex solskin eller varmluft, eller där den utsätts för damm, smuts och/eller vibrationer.
- Använd endast de medföljande monteringsstillbehören för att vara säker på att bilstereon monteras på ett säkert och korrekt sätt.

Tillåten monteringsvinkel

Monteringsvinkeln får inte vara större än 20 grader.

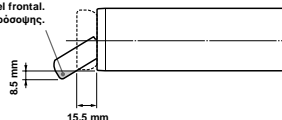
Extended portion of the front panel.
Parte sobresaliente del panel frontal.
Utstickande del av frontpanelen.
Parte extensiva do painel frontal.
Προεξέχον τμήμα της πρόσοψης.

Precauções

- É preferível montar este aparelho na posição mais baixa, se quiser montar simultaneamente outros equipamentos da Sony.
- Para colocar com facilidade a cassette, deve haver uma distância de pelo menos 15 cm entre a ranhura de introdução da cassette e a alavanca das mudanças. Escolha o local de instalação de forma a que o aparelho não interfira com as mudanças de velocidade ou com as outras manobras de condução.
- Quando o painel frontal estiver aberto, pode puxar a parte extensível baixo. Quando instalar a unidade, verifique se essa parte do painel frontal não está presa na posição aberta (pelo cinzeiro, por exemplo).
- Escolha com cuidado um local apropriado para a montagem do aparelho, para que este não interfira com as manobras necessárias à condução do veículo.
- Evite instalar o aparelho onde possa estar sujeito a altas temperaturas, como em locais expostos diretamente à luz do sol, ao ar quente dos aquecimentos, ou sujeitos a pró, sujidade ou vibração excessiva.
- Para efectuar uma instalação segura utilize unicamente o hardware de montagem fornecido.

Ajuste do ângulo de montagem

Ajuste o ângulo de montagem a menos de 20°.



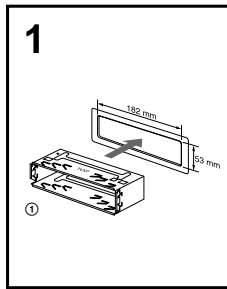
Προφυλάξεις

- Εάν τοποθετήσετε αυτή τη συσκευή μαζί με άλλο εξοπλισμό της Sony, είναι καλύτερα να τοποθετήσετε τη συσκευή στην κάτω θέση.
- Πρέπει να υπάρχει μια απόσταση τουλάχιστον 15 εκ. μεταξύ της υποδοχής κασέτας της συσκευής και του μοχλού ταχυτήτων, ώστε να υπάρχει επαρκής χώρος για την εύκολη εισαγωγή της κασέτας. Επιλέξτε τη θέση εγκατάστασης προσοχή, ώστε η συσκευή να μην εμποδίζει στην αλλαγή ταχυτήτων ή άλλους χειρισμούς οδήγησης.
- Όταν η πρόσοψη είναι ανοικτή, ένα τμήμα της θα προεξέχει από τη συσκευή προς τα κάτω. Όταν εγκαταστήσετε τη συσκευή, βεβαιωθείτε ότι αυτό το τμήμα της πρόσοψης δεν παρεμποδίζεται ενώ βρίσκεται σε ανοικτή θέση (για παράδειγμα από το σιγαστικό).
- Επιλέξτε προσεκτικά τη θέση εγκατάστασης έτσι ώστε η συσκευή να μην παρεμβάλλεται στις συνήθεις κινήσεις οδήγησης.
- Αποφύγετε την εγκατάσταση της συσκευής σε σημεία υποκειμενα σε υψηλές θερμοκρασίες, όπως στον ήλιο ή σε αεραγωγούς του καλοριφέρ, ή σε σημεία υποκειμενα σε σκόνη, βρομιά ή υπερβολικές δονήσεις.
- Για ασφαλή και οίγουρη εγκατάσταση χρησιμοποιείτε μόνο τα παρεχόμενα υλικά τοποθέτησης.

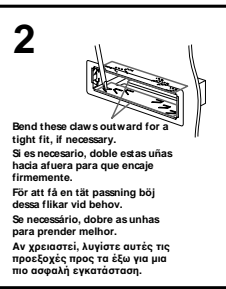
Ρύθμιση γωνίας τοποθέτησης

Ρυθμίστε τη γωνία τοποθέτησης σε λιγότερο από 20°.

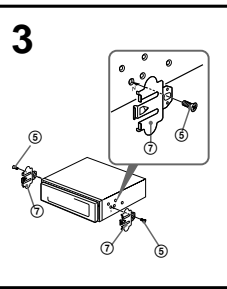
Installation in the dashboard



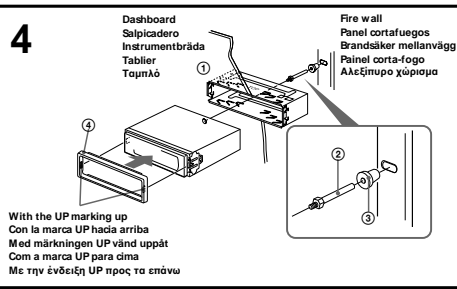
Instalación en el salpicadero



Montera på instrumentbrådan



Instalação no tablier



Note
To prevent malfunction, install only with the supplied screws ⑤.

Nota
Para evitar fallos de funcionamiento, realice la instalación únicamente con los tornillos suministrados ⑤.

Observera
Använd bara de medföljande skruvarna ⑤, så undviker du onödiga fel.

Nota
Para evitar avarias, instale o aparelho apenas com os parafusos fornecidos ⑤.

Σημείωση
Για να μην παρουσιαστούν δυσλειτουργίες, εγκαταστήστε μόνο με τις βίδες ⑤ που χορηγούνται.

Reset button

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

Botão de reinicialização

Quando terminar a instalação e as ligações, não se esqueça de carregar no botão de reinicialização com a ponta de uma caneta, esferográfica, etc.

Botón de restauración

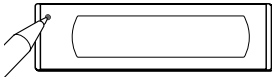
Cuando finalice la instalación y las conexiones, cerciórese de pulsar el botón de restauración con un bolígrafo, etc.

Πλήκτρο Επαναρύθμισης (Reset)

Όταν ολοκληρωθούν η εγκατάσταση και οι συνδέσεις, θυμηθείτε να πιέσετε το πλήκτρο επαναρύθμισης με ένα στυλό.

Nollställningsknappen

Kom ihåg att använda en penna eller något annat spetsigt föremål för att trycka på nollställningsknappen när anslutningen och monteringen är klar.



Caution

Cautionary notice for handling the bracket ①. Handle the bracket carefully to avoid injuring your fingers.

Cuidado

Aviso sobre as precauções a tomar no manuseamento do suporte ①. Pegue no suporte com cuidado para não magoar os dedos.

Precaución

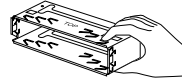
Advertencia sobre la manipulación del soporte ①. Ten mucho cuidado al manipular el soporte para evitar posibles lesiones en los dedos.

Προσοχή

Προειδοποίηση για το χειρισμό του πλαισίου ①. Χειρίζεστε το πλαίσιο προσεκτικά προς αποφυγή τραυματισμού των δαχτύλων σας.

Varning

Att observera angående konsolen ①. Hantera konsolen med största aktsamhet så att du inte skadar fingrarna.



Connections Conexiones Anslutning

Ligações

Συνδέσεις

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 ② 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 combination with other stereo components, the car circuit they are connected to must be rated higher than the sum of the individual components' fuse rating. If there are no car circuits rated as high as the unit's fuse rating, connect the unit directly to the battery. If no car circuits are available for connecting this unit, connect the unit to a car circuit rated higher than the unit's fuse rating in such a way that if the unit blows its fuse, no other circuits will be cut off.

Precauciones

- Esta unidad ha sido diseñada para alimentarse con 12 V CC, negativo a masa, solamente.
- Tenga cuidado de no atrapar ningún cable entre algún tornillo y la carrocería del automóvil o esta unidad o entre las partes móviles, como por ejemplo los raffles del asiento, etc.
- Conecte el cable de conexión de alimentación ② a la unidad y los altavoces antes de conectarlo al conector de alimentación auxiliar.
- Conecte todos los conductores de puesta a masa a un punto común.
- Conecte el cable amarillo a un circuito libre del automóvil de potencia nominal superior a la del fusible de la unidad. Si conecta esta unidad en combinación con otros componentes estéreo, la potencia nominal del circuito del automóvil a los que dichos componentes estén conectados debe ser superior a la suma de la potencia nominal del fusible de los componentes. Si no existen circuitos de automóvil de potencia nominal tan alta como la del fusible de la unidad, conecte ésta directamente a la batería. Si no hay circuitos de automóvil disponibles para conectar esta unidad, conecte la misma a un circuito de automóvil de potencia nominal superior a la del fusible de la unidad de forma que no se desactiven otros circuitos si el fusible de dicha unidad se funde.

Säkerhetsföreskrifter

- Denna bilstereo är endast avsedd för anslutning till ett negativt jordat, 12 V bilbatteri.
- Var noga med att inga kablar kläms mellan någon skruv eller att de blir klämda mellan rörliga delar som t.ex. bilsätet.
- Anslut strömkabeln ② till enheten och högtalarna innan du ansluter den till den yttre strömanslutningen.
- Dra samtliga jordledningar till en och samma jordningspunkt.
- Anslut den gula kabeln till en ledig bilbatters med ett högre amperetal än enhetens. Om du kopplar både denna enhet och andra stereokomponenter till en och samma bilbatter, måste den bilbatters de kopplas till ha en högre amperet än summan av de enskilda delarnas amperestyrka. Om det inte finns några bilbatters med en så hög amperestyrka som enhetens ska du ansluta enheten direkt till batteriet. Om inga bilbatters finns för anslutning till enheten ska du ansluta enheten till en bilbatters med ett högre amperetal än enhetens säkring, så att det är denna som går i stället för bilens.

Cuidado

- Este aparelho foi concebido para funcionar somente com corrente contínua de 12 V com negativo à massa.
- Tenha cuidado para que os fios não fiquem entalados entre os parafusos e a carroçaria do automóvel ou a caixa do aparelho, nem entre as peças móveis, por exemplo, as calhas dos bancos, etc.
- Ligue o cabo de alimentação de corrente ② ao aparelho e aos alifalantes antes de o ligar ao conector de corrente auxiliar.
- Ligue todos os cabos de massa num ponto de massa comum.
- Ligue o cabo amarelo a um circuito eléctrico livre do automóvel, cuja potência nominal seja superior à dos fusíveis do aparelho. Se ligar este aparelho em série com outros componentes estéreo, a potência nominal do circuito eléctrico do automóvel onde os ligar tem de ser superior à soma da potência nominal dos fusíveis de todos os componentes individuais. Se não houver nenhum circuito eléctrico do automóvel com uma potência nominal tão elevada como a dos fusíveis do aparelho, ligue-o directamente à bateria. Se não estiver disponível nenhum circuito eléctrico do automóvel para ligação deste aparelho, ligue-o a um circuito eléctrico do automóvel com uma potência nominal superior à dos fusíveis do aparelho, de tal modo que, se o aparelho reventar os fusíveis respectivos, nenhum outro circuito seja cortado.

Προσοχή

- Αυτή η συσκευή έχει σχεδιαστεί να λειτουργεί μόνο με τροφοδοσία από μπαταρία αυτοκινήτου 12 V DC με αρνητική γείωση.
- Προσέξτε να μην μαγκώσετε κάποιο καλώδιο μεταξύ του σώματος του αυτοκινήτου και κάποιας βίδας ή της συσκευής, ή μεταξύ οποιαδήποτε κινούμενων τμημάτων όπως για παράδειγμα στη ράγα του καθίσματος.
- Συνδέστε το καλώδιο τροφοδοσίας ② στη συσκευή και τα ηχεία πριν το συνδέσετε στην υποδοχή βοηθητικής τροφοδοσίας.
- Συνδέστε όλα τα καλώδια γείωσης σε μια κοινή γη.
- Συνδέστε το κίτρινο καλώδιο σε ένα ελεύθερο κύκλωμα του αυτοκινήτου με ονομαστική τιμή έντασης μεγαλύτερη της αναγραφόμενης στην ασφάλεια της συσκευής. Αν συνδέστε τη συσκευή σε συνδυασμό με άλλες στερεοφωνικές συσκευές ήχου, θα πρέπει η ονομαστική τιμή της έντασης του κυκλώματος του αυτοκινήτου που θα συνδεθεί να είναι μεγαλύτερη από το άθροισμα των εντάσεων των επιμέρους ασφαλειών. Αν δεν υπάρχει κύκλωμα στο αυτοκίνητο με τόσο μεγάλη ονομαστική τιμή έντασης, συνδέστε τη συσκευή απ' ευθείας στην μπαταρία. Αν δεν υπάρχει ελεύθερο διαθέσιμο κύκλωμα για τη σύνδεση της συσκευής, συνδέστε τη συσκευή σε κάποιο κύκλωμα μεγαλύτερης ονομαστικής τιμής έντασης από την αναγραφόμενη στην ασφάλεια της συσκευής, με τέτοιο τρόπο ώστε αν καεί η ασφάλεια της συσκευής να μην αποκοπεί άλλο κύκλωμα.

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 dock display after turned off the engine. When you press **OFF** momentarily, the dock display does not turn off and this causes battery wear.

Advertencia sobre la instalación en un automóvil que no disponga de posición ACC (accesorios) en el interruptor de la llave de encendido

Asegúrese de pulsar **OFF** en la unidad durante dos segundos para desactivar la indicación del reloj una vez apagado el motor. Si pulsa **OFF** momentáneamente, la indicación del reloj no se desactivará y esto causará el desgaste de la batería.

Var försiktig när du gör installationen i en bil där tändningslåset saknar tillbehörsåläge (ACC)

Glöm inte att trycka på **OFF** på enheten under två sekunder för att slänga av klockans teckenfönster efter det att du har stängt av motorn. Om du bara trycker på **OFF** ett kort ögonblick slöcknar inte klockans teckenfönster vilket kan leda till att batteriet laddas ur.

Aviso sobre a instalação num automóvel sem posição ACC (acessórios) na chave de ignição

Verifique se carregou em **OFF** no aparelho durante dois segundos para desactivar o visor do relógio depois de ter desligado o motor. Se carregar ligeiramente em **OFF**, não desactiva o visor do relógio o que provoca o desgaste da bateria.

Προειδοποίηση για την εγκατάσταση σε αυτοκίνητο χωρίς θέση ACC (βοηθητική) στον διακόπτη ανάφλεξης

Βεβαιωθείτε ότι πιέσατε το πλήκτρο **OFF** της συσκευής για δύο δευτερόλεπτα ώστε να απενεργοποιηθεί την ένδειξη του ρολογιού αφού σβήσατε τη μηχανή του αυτοκινήτου. Αν πιέσατε το πλήκτρο **OFF** στιγμιαία μόνο, η ένδειξη του ρολογιού δεν απενεργοποιείται και έτσι προκαλείται φθορά στην μπαταρία του αυτοκινήτου.

Notes of connection example

- Notes on the control leads**
- The power aerial control lead (blue) supplies +12 VDC when you turn on the tuner or when you activate the ATA (Automatic Tuner Activation), AF (Alternative Frequency) or the TA (Traffic Announcement) function.
 - A power aerial without a relay box cannot be used with this 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.

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

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

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

Notas de ejemplo de conexiones

- Notas sobre cables de control**
- El cable de control (azul) de la antena motorizada suministra +12 VCC al activar el sintonizador o la función ATA (Automatic Tuner Activation), AF (frecuencias alternativas) o TA (Anuncios de tráfico).
 - Con esta unidad no podrá utilizarse una antena motorizada sin caja de relés.
 - Si el automóvil dispone de antena de FM/MW/LW incorporada en el cristal trasero/lateral, será necesario conectar el cable de control de antena motorizada (azul) o el cable de entrada de alimentación accesorio (rojo) al terminal de potencia del amplificador de antena existente. Para más información, consulte con el proveedor.

Advertencia
Si dispone de una antena motorizada sin dispositivo de relé, la conexión de esta unidad con el cable de conexión de alimentación ⑧ suministrado puede dañar la antena.

Conexión para protección de la memoria
Si conecta el cable de entrada de alimentación amarillo, el circuito de la memoria recibirá siempre alimentación, incluso aunque ponga la llave de encendido en la posición de apagado.

- Notas sobre la conexión de los altavoces**
- Antes de conectar los altavoces, desconecte la alimentación de la unidad.
 - Utilice altavoces con una impedancia de 4 a 8 ohmios, y con la potencia máxima admisible adecuada, ya que de lo contrario podría dañarlos.
 - No conecte los terminales del sistema de altavoces al chasis del automóvil, ni los del altavoz izquierdo a los del derecho.
 - No intente conectar los altavoces en paralelo.
 - No conecte altavoces activos (con amplificadores incorporados) a los terminales de altavoces de la unidad. Si lo hiciera, podría dañar tales altavoces. Por lo tanto, asegúrese de conectar altavoces pasivos a estos terminales.

Att observera angående anslutningsexemplet

- Att observera angående de olika styrkabarna**
- Motorantennens styrkabel (blå) leder +12 volts likström när kanalväxlaren slås på eller när radiomottagningsautomatiken ATA, mottagnings av alternativ frekvenser AF eller mottagning av trafikmeddelanden TA aktiverats.
 - En motorantenn utan styrreläbox kan inte anslutas till denna bilsterreo.
 - Om bilen har en FM/MW/LW-antenn som är inbyggd i sido- eller bakrutan, måste du ansluta motorantennens styrkabel (blå) eller tillbehörströmkabeln (röd) till strömterminalen på antennförstärkaren. Din återförsäljare kan ge dig mer information.

Varning
Om du har en motorantenn utan reläbox kan antennen skadas om du ansluter enheten med den medföljande strömkabeln ⑧.

Anslutning för minneslöd
När du anslutit den gula, ingående strömkabeln förslöjs minneskretsen med ström hela tiden, även när tändlåset slås ifrån.

- Att observera angående högtalarnas anslutning**
- Så av bilsterreo innan du ansluter högtalarna.
 - Anslut endast högtalare, vars impedans varierar från 4 till 8 ohm och som har tillräcklig effektkapacitet för att skydda högtalarna mot skador.
 - Anslut inte något av högtalartuttagen till bilens chassi. Anslut inte heller uttagen på höger högtalare till uttagen på vänster högtalare.
 - Anslut inte högtalarna parallellt.
 - Anslut inte aktiva högtalare (med inbyggda sluts) till bilsterrens högtalartuttag, eftersom de kan skada de aktiva högtalarna. Var noga med att bara ansluta passiva högtalare till dessa uttag.

Notas sobre o exemplo de ligação

- Notas sobre os fios de controlo**
- O fio de controlo da antena eléctrica (azul) fornece +12 V CC quando ligar o sintonizador ou quando acivar as funções ATA (Ativação automática do sintonizador), AF (frequência alternativa) ou TA (Informações de tráfego).
 - Não pode utilizar uma antena eléctrica sem caixa de relé com este aparelho.
 - Se o seu automóvel tiver uma antena de FM/MW/LW montada no vidro traseiro/lateral, tem de ligar o fio de controlo da antena eléctrica (azul) ou o fio de entrada de alimentação para os acessórios (vermelho) ao terminal de alimentação do intensificador do sinal da antena existente.

Advertência
Se a antena eléctrica não tiver uma caixa de relé o facto de ligar este aparelho com o cabo de alimentação ⑧ fornecido, pode provocar danos na antena.

Ligação para alimentação contínua de memória
Quando o fio amarelo de entrada de alimentação for ligado, os circuitos de memória ficarão com alimentação contínua, mesmo se a chave de ignição estiver desligada.

- Notas sobre a ligação dos altifalantes**
- Antes de ligar os altifalantes, desligue o aparelho.
 - Utilize altifalantes com impedância de 4 a 8 ohm, e com potência máxima admissível adequada. Caso contrário, os altifalantes poderão sofrer avarias.
 - Não ligue os terminais do sistema de altifalantes ao chassi do automóvel, e não ligue os terminais do altifalante esquerdo.
 - Não tente ligar os altifalantes em paralelo.
 - Não ligue nenhum sistema de altifalantes activos (com amplificadores incorporados) aos terminais dos altifalantes do aparelho. Caso o faça, poderá avariar o sistema de altifalantes activos. Portanto, não se esqueça de ligar altifalantes passivos a estes terminais.

Σημειώσεις σχετικά με παραδείγματα σύνδεσης

- Σημειώσεις σχετικά με τα καλώδια ελέγχου**
- Το καλώδιο ελέγχου της ηλεκτρικής κεραιάς (μπλε) τροφοδοτείται με +12 V DC κάθε φορά που ενεργοποιείτε το ραδιόφωνο ή όταν ενεργοποιείτε τις λειτουργίες ATA (Αυτόματη Ενεργοποίηση δέκτη), AF (Εναλλακτική Συχνότητα), TA (Ανακοινώσεις για την Κυκλοφορία).
 - Δεν μπορεί να χρησιμοποιηθεί ηλεκτρική κεραία χωρίς κουτί relé με τη συσκευή αυτή.
 - Αν το αυτοκίνητό σας διαθέτει ενσωματωμένη κεραία FM/MW/LW στο πίσω/πλευρικό γίγυρι, χρειάζεται να συνδέσετε το καλώδιο ελέγχου της ηλεκτρικής κεραιάς (μπλε) ή το καλώδιο βοηθητικής τροφοδοσίας (κόκκινο) στην υποδοχή τροφοδοσίας του ενισχυτή της υπέρυχου κεραιάς. Για περισσότερες λεπτομέρειες, συμβουλευθείτε το κατάστημα πωλητή.

Προειδοποίηση
Αν διαθέτετε ηλεκτρική κεραία χωρίς κουτί relé, η σύνδεση της συσκευής αυτής με το παρεχόμενο καλώδιο τροφοδοσίας ⑧ μπορεί να προκαλέσει ζημιά στην κεραία.

Σύνδεση για τη διατήρηση της μνήμης
Μετά τη σύνδεση του κίτρινου καλωδίου τροφοδοσίας, το κύκλωμα της μνήμης θα τροφοδοτείται συνεχώς ακόμα και όταν γυρίσει το κλειδί ανάφλεξης στη θέση off.

- Σημειώσεις για τη σύνδεση των ηχείων**
- Πριν συνδέσετε τα ηχεία, απενεργοποιήστε τη συσκευή.
 - Χρησιμοποιήστε ηχεία με σύνδεση αντίστασης από 4 ως 8 ohm, και ικανοποιητική ισχύ. Σ' αντίθετη περίπτωση, τα ηχεία μπορεί να καταστραφούν.
 - Μην συνδέετε τους ακροδέκτες του συστήματος των ηχείων στο σασί του αυτοκινήτου, και μην συνδέετε τους ακροδέκτες του δεξιού ηχείου με αυτούς του αριστερού ηχείου.
 - Μην προσπαθήσετε να συνδέσετε τα ηχεία παράλληλα.
 - Μην συνδέσετε ενεργά ηχεία (με ενσωματωμένους ενισχυτές) στις υποδοχές των ηχείων της συσκευής. Αν κάνετε κάτι τέτοιο μπορεί να προκαλέσει ζημιά στα ενεργά ηχεία. Επομένως, βεβαιωθείτε ότι συνδέετε παθητικά ηχεία στις υποδοχές αυτές.

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.

Diagrama de conexión de alimentación

El conector de alimentación auxiliar puede variar en función del automóvil. Compruebe el diagrama del conector de alimentación auxiliar del automóvil para asegurarse de que las conexiones coinciden correctamente. Existen tres tipos básicos, ilustrados a continuación. Es posible que sea necesario cambiar las posiciones de los cables rojo y amarillo del cable de conexión de alimentación del sistema estéreo del automóvil. Después de hacer coincidir correctamente las conexiones y los cables de alimentación conmutada, conecte la unidad al suministro de alimentación del automóvil. Si desea realizar alguna consulta o solucionar algún problema referente a la conexión de la unidad que no aparezcan en este manual, consulte con el concesionario automovilístico.

Strömanslutningsschema

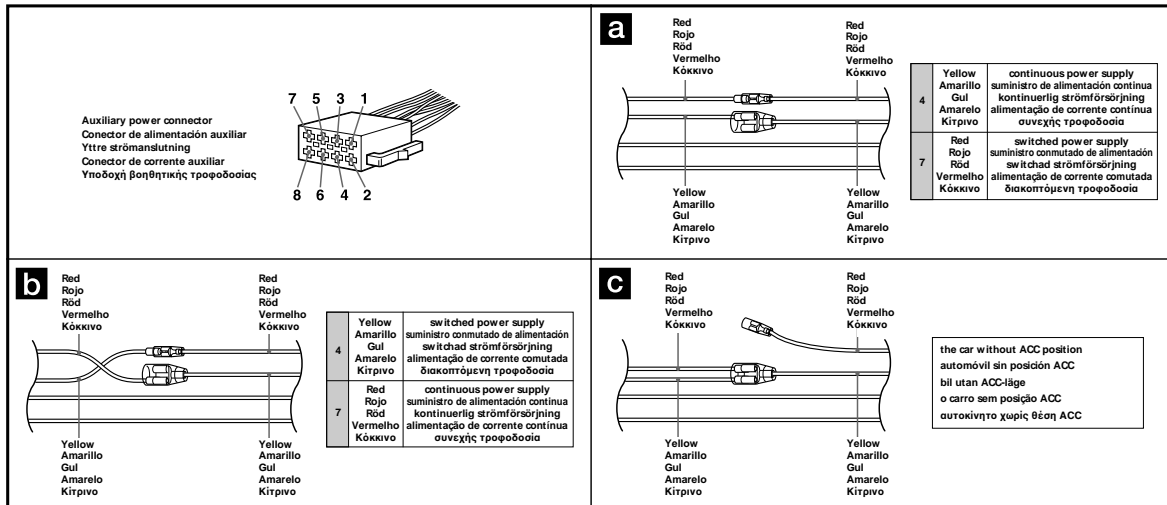
Typen av yttre strömanslutning varierar från bil till bil. Kontrollera schemat till strömanslutningen så att du ansluter på rätt sätt. Det finns tre grundläggande anslutningstyper (visas nedan). Du kan behöva skifta plats på bilsterrens röda och gula strömförslingskablar. Koppla kablarna för kontinuerlig respektive switchad strömförslörning på rätt sätt och anslut sedan enheten till bilens strömanslutning. Om du får problem eller har frågor som inte besvaras i den här bruksanvisningen kan du kontakta bil återförsäljaren.

Diagrama de ligação de corrente

O conector auxiliar de corrente pode variar de carro para carro. Verifique o diagrama do conector auxiliar de corrente para se certificar de que as ligações estão bem feitas. Existem três tipos de conectores (ilustrados abaixo). Depois de fazer a correspondência entre as ligações e os terminais de alimentação de corrente comutada, ligue o aparelho à fonte de alimentação do carro. Se tiver alguma dúvida ou problema relacionado com o aparelho que não esteja incluído neste manual, consulte o concessionário.

Διάγραμμα Σύνδεσης Τροφοδοσίας

Η υποδοχή βοηθητικής τροφοδοσίας μπορεί να διαφέρει ανάλογα με το αυτοκίνητο. Ελέγξτε το διάγραμμα σύνδεσης της υποδοχής βοηθητικής τροφοδοσίας του αυτοκινήτου σας ώστε να βεβαιωθείτε ότι οι συνδέσεις έχουν γίνει σωστά. Υπάρχουν τρεις βασικοί τύποι συνδέσεων (εικονούνται παρακάτω). Μπορεί να χρειαστεί να εναλλάξετε τις θέσεις του κόκκινου και του κίτρινου καλωδίου του αγωγού τροφοδοσίας του στερεοφωνικού συστήματος του αυτοκινήτου σας. Μετά την εκτέλεση των συνδέσεων και τη σωστή σύνδεση των καλωδίων της διακοπόμενης τροφοδοσίας, συνδέστε τη συσκευή στην μπαταρία του αυτοκινήτου. Για οποιαδήποτε ερώτηση ή πρόβλημα στη σύνδεση της συσκευής που δεν καλύπτεται από το παρόν εγχειρίδιο, παρακαλούμε να επικοινωνήσετε με τον αντιπρόσωπο του αυτοκινήτου σας.



Connection diagram

Diagrama de conexiones

Kopplingschema

Diagrama de ligações

Διάγραμμα συνδέσεων

Equipment used in illustrations (not supplied)

- Front speaker
Altavoz delantero
Förre högtalare
Altifalante dianteiro
Εμπρός ηχείο

Equipo utilizado en las ilustraciones (no suministrado)

- Rear speaker
Altavoz trasero
Bakre högtalare
Altifalante traseiro
Πίσω ηχείο

Utrustning som visas i illustrationer (medföljer inte)



- Power amplifier
Amplificador de potencia
Effektförstärkare
Amplificador de potência
Τελεικός ενισχυτής

Equipamento utilizado nas ilustrações (não fornecido)



- CD/MD changer
Cambiador de CD/MD
CD/MD-skivväxlare
Permutador CD/MD
CD/MD changer

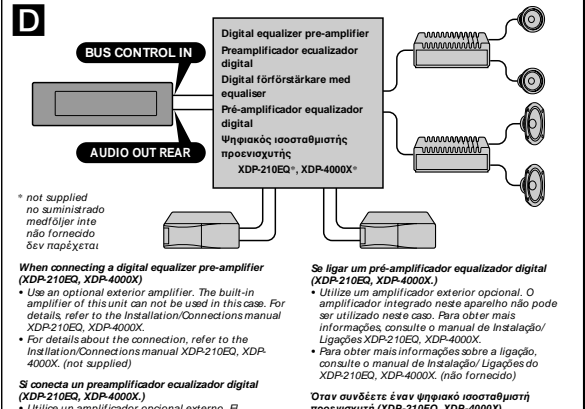
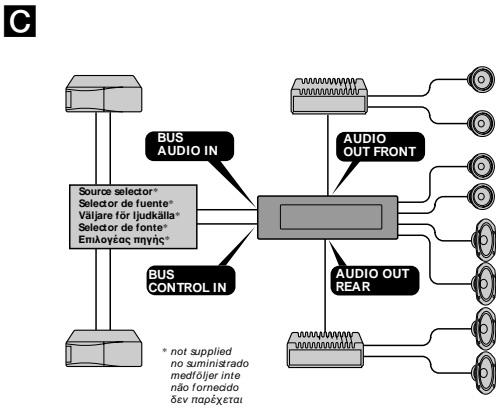
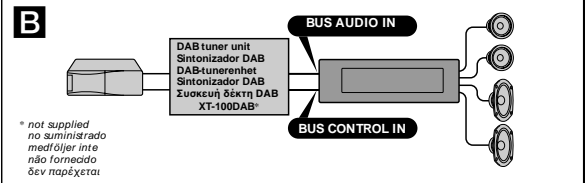
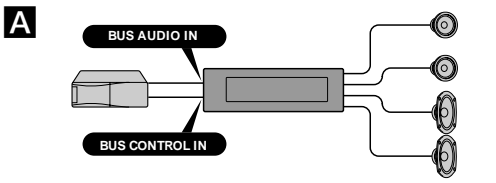
For connecting two or more CD/MD changers, the source selector XA-C30 (optional) is necessary.

Si desea conectar dos o más cambiadores, necesitará el selector de fuente XA-C30 (opcional).

För anslutning av två eller flera växlare krävs väljarna XA-C30 (tillval).

Para ligar um ou mais permutadores, é necessário o selector de fonte XA-C30 (opcional).

Για τη σύνδεση δύο ή περισσότερων CD/MD changers, απαιτείται επιλογέας πηγής XA-C30 (προαιρετικός).



Note
Be sure to connect the earth cord before connecting the amplifier.

Nota
Antes de fazer a ligação ao amplificador tem de ligar primeiro o cabo de ligação à massa.

Nota
Asegúrese de conectar primero el cable de puesta a masa antes de realizar la conexión al amplificador.

Σημείωση
Βεβαιωθείτε ότι συνδέσατε πρώτα ένα καλώδιο γείωσης, πριν συνδέσετε τον ενισχυτή.

Obsvera
Var noga med att i första ansluta jorden, innan du ansluter förstärkaren.

When connecting a digital equalizer pre-amplifier (XDP-210EQ, XDP-4000X)
• Use an optional exterior amplifier. The built-in amplifier of this unit can not be used in this case. For details, refer to the Installation/Connections manual XDP-210EQ, XDP-4000X.
• For details about the connection, refer to the Installation/Connections manual XDP-210EQ, XDP-4000X. (not supplied)

Se ligar um pré-amplificador equalizador digital (XDP-210EQ, XDP-4000X.)
• Utilize um amplificador exterior opcional. O amplificador integrado neste aparelho não pode ser utilizado neste caso. Para obter mais informações, consulte o manual de Instalação/Ligações XDP-210EQ, XDP-4000X.
• Para obter mais informações sobre a ligação, consulte o manual de Instalação/Ligações do XDP-210EQ, XDP-4000X. (não fornecido)

Si conecta un preamplificador equalizador digital (XDP-210EQ, XDP-4000X.)
• Utilice un amplificador opcional externo. El amplificador incorporado de esta unidad no puede utilizarse en este caso. Para más información, consulte el manual de instalación/conexiones de la unidad XDP-210EQ, XDP-4000X.
• Para obtener información detallada sobre la conexión, consulte el manual de instalación/conexiones de la unidad XDP-210EQ, XDP-4000X. (no suministrada)

Όταν συνδέετε έναν ψηφιακό ισοστάθμιστή προενισχυτή (XDP-210EQ, XDP-4000X)
• Χρησιμοποιείτε έναν προαιρετικό εξωτερικό ενισχυτή. Σε αυτή την περίπτωση δεν μπορεί να χρησιμοποιηθεί ο ενσωματωμένος ενισχυτής αυτής της συσκευής. Για περισσότερες λεπτομέρειες, δείτε το εγχειρίδιο εγκατάστασης/Συνδέσεων XDP-210EQ, XDP-4000X.
• Για περισσότερες λεπτομέρειες σχετικά με τη σύνδεση, δείτε το εγχειρίδιο Εγκατάστασης/Συνδέσεων XDP-210EQ, XDP-4000X (δεν παρέχεται)

När du ansluter en digital förstärkare med equaliser (XDP-210EQ, XDP-4000X.)
• Använd en valfri extern förstärkare. Den inbyggda förstärkaren kan inte användas i detta fall. Mer information finns i Monterings/Anslutningshandboken XDP-210EQ, XDP-4000X.
• Mer information om hur du ansluter utrustning finns i Monterings/Anslutningshandboken XDP-210EQ, XDP-4000X. (medföljer inte)

Connection example

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

*2 **RCA pin cord (not supplied)**

Ejemplo de conexiones

*1 **Nota sobre la conexión de la antena**
Si la antena del automóvil es del tipo ISO (International Organization for Standardization), emplee el adaptador suministrado (1) para conectarla. En primer lugar, conecte la antena del automóvil al adaptador suministrado y, a continuación, a la toma de antena de la unidad principal.

*2 **Cable con clavijas RCA (no suministrado)**

Anslutningarna enligt exemplet

*1 **Angående antennanslutning**
Om motorantennen är av ISO-typ (International Organization for Standardization), använder du medföljande adapter (1) för att ansluta den. Anslut först motorantennen till medföljande adapter och därefter till antennuttaget på huvudenheten.

*2 **Kabel med RCA-kontakter (medföljer inte)**

Exemplo de ligações

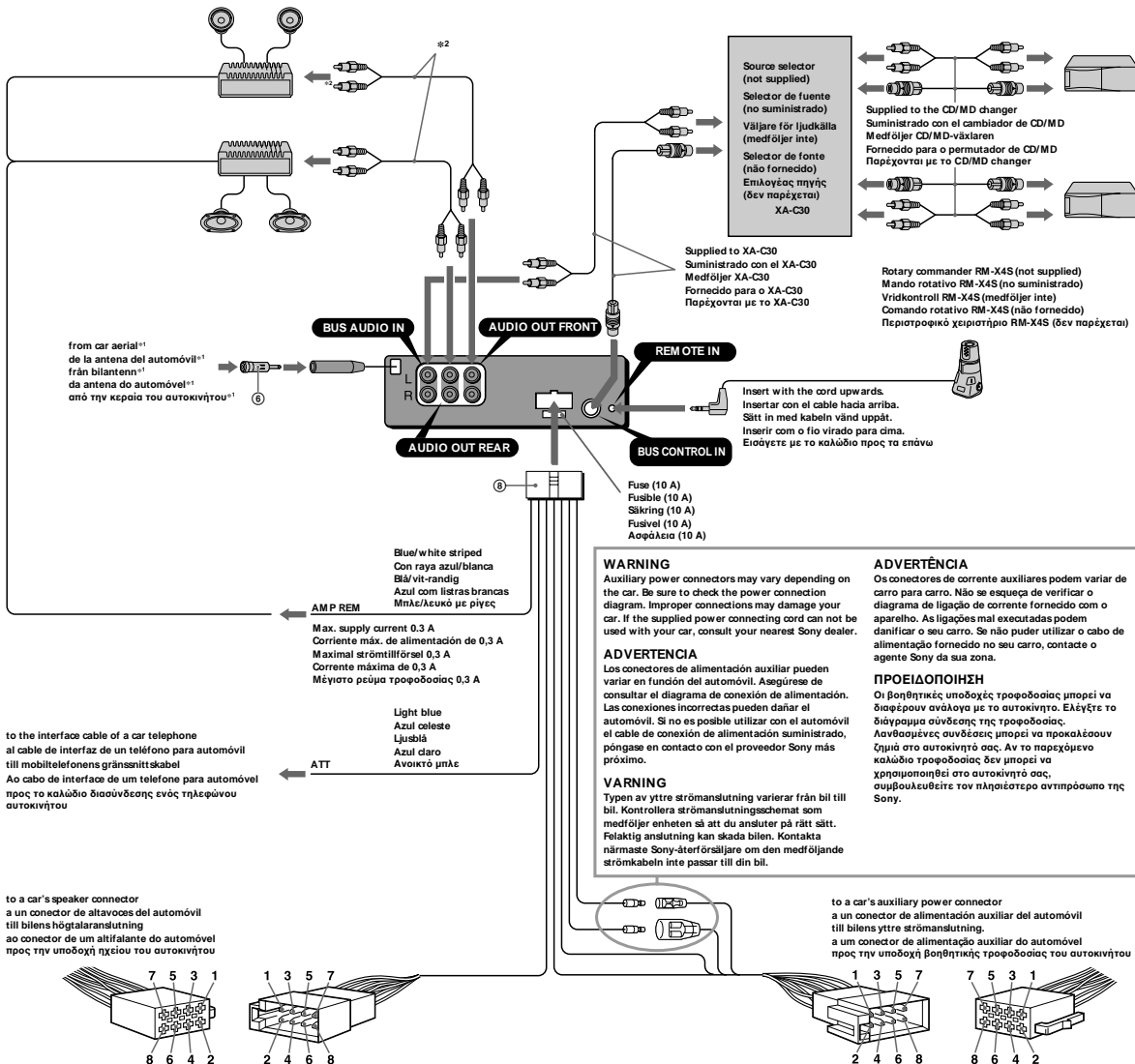
*1 **Nota referente à ligação da antena**
Se a antena do automóvel for uma antena de tipo ISO (International Organization for Standardization), utilize o adaptador fornecido (1) para fazer a ligação respectiva. Ligue primeiro a antena do automóvel ao adaptador fornecido e depois à ficha tipo jack de antena do sistema principal.

*2 **Cabo de terminais RCA (não fornecido)**

Παράδειγμα σύνδεσης

*1 **Σημείωση σχετικά με τη σύνδεση της κεραίας**
Αν η κεραία του αυτοκινήτου σας είναι τύπου ISO (εγκριμένη από το Διεθνή Οργανισμό Τυποποίησης), χρησιμοποιήστε τον παρεχόμενο προσαρμογέα (1) για να τη συνδέσετε. Συνδέστε την κεραία του αυτοκινήτου πρώτα στον παρεχόμενο προσαρμογέα, και στη συνέχεια στην υποδοχή κεραίας της κύριας συσκευής.

*2 **Καλώδιο βύσματος RCA (δεν παρέχεται)**



1	Purple Púrpura Violet Violeta Μοβ	+	Speaker, Rear, Right Altavoz, parte posterior, derecho Högtalare, bakre, höger Altifalante, Parte de trás, Direito Ηχείο, Πίσω, Δεξί	5	White Blanco Vit Branco Λευκό	+	Speaker, Front, Left Altavoz, parte frontal, izquierdo Högtalare, främre, vänster Altifalante, Parte da frente, Esquerdo Ηχείο, Εμπρός, Αριστερό
2		-	Speaker, Rear, Right Altavoz, parte posterior, derecho Högtalare, bakre, höger Altifalante, Parte de trás, Direito Ηχείο, Πίσω, Δεξί	6		-	Speaker, Front, Left Altavoz, parte frontal, izquierdo Högtalare, främre, vänster Altifalante, Parte da frente, Esquerdo Ηχείο, Εμπρός, Αριστερό
3	Grey Gris Grá Cinzento Γκρι	+	Speaker, Front, Right Altavoz, parte frontal, derecho Högtalare, främre, höger Altifalante, Parte da frente, Direito Ηχείο, Εμπρός, Δεξί	7	Green Verde Grön Verde Πράσινο	+	Speaker, Rear, Left Altavoz, parte posterior, izquierdo Högtalare, bakre, vänster Altifalante, Parte de trás, Esquerdo Ηχείο, Πίσω, Αριστερό
4		-	Speaker, Front, Right Altavoz, parte frontal, derecho Högtalare, främre, höger Altifalante, Parte da frente, Direito Ηχείο, Εμπρός, Δεξί	8		-	Speaker, Rear, Left Altavoz, parte posterior, izquierdo Högtalare, bakre, vänster Altifalante, Parte de trás, Esquerdo Ηχείο, Πίσω, Αριστερό

Negative polarity positions 2, 4, 6, and 8 have striped cords.
Las posiciones de polaridad negativa 2, 4, 6 y 8 tienen cables con raya.
De negativa polarisationerna 2, 4, 6 och 8 har randiga kablar.
As posições 2, 4, 6 e 8 (polarização negativa) têm cabos às riscas.
Οι θέσεις αρνητικής πολικότητας 2, 4, 6, και 8 έχουν καλώδια με ρίγες.

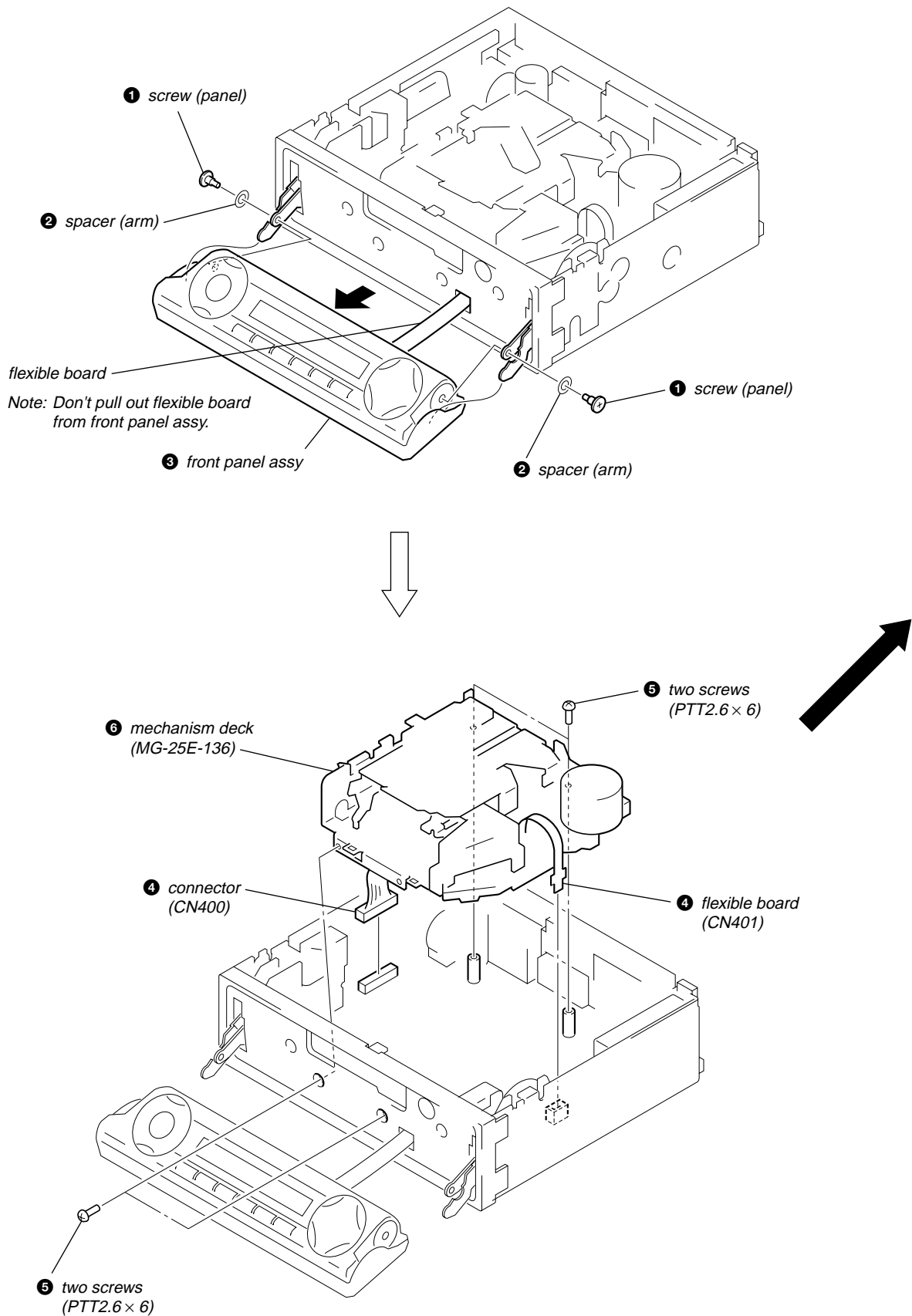
4	Yellow Amarillo Gul Amarelo Κίτρινο	continuous power supply suministro de alimentación continua kontinuerlig ström försörjning alimentação de corrente contínua συνεχής τροφοδοσία	7	Red Rojo Röd Vermelho Κόκκινο	switched power supply suministro conmutado de alimentación switched ström försörjning alimentação de corrente comutada διακοπόμενη τροφοδοσία
5	Blue Azul Blå Azul Μπλε	power aerial control control de antena motorizada styrning av motorantenn antena elétrica έλεγχος ηλεκτρικής κεραίας	8	Black Negro Svart Preto Μαύρο	earth toma de tierra jord Terra γη
6	Orange/ White Naranja/ blanco Orange/vit Cor de laranja/ branco Πορτοκαλί/ Λευκό	switched illumination power supply fuente de alimentación de iluminación conmutada Switchad ström försörjning till belysning fonte de alimentação comutada para iluminação διακοπόμενη τροφοδοσία φωτεινής ένδειξης			Positions 1, 2 and 3 do not have pins. Las posiciones 1, 2 y 3 no disponen de terminales. Positionerna 1, 2 och 3 saknar stift. Asposições 1, 2 e 3 não têm terminais. Οι θέσεις 1, 2 και 3 δεν έχουν pins.

SECTION 3 DISASSEMBLY

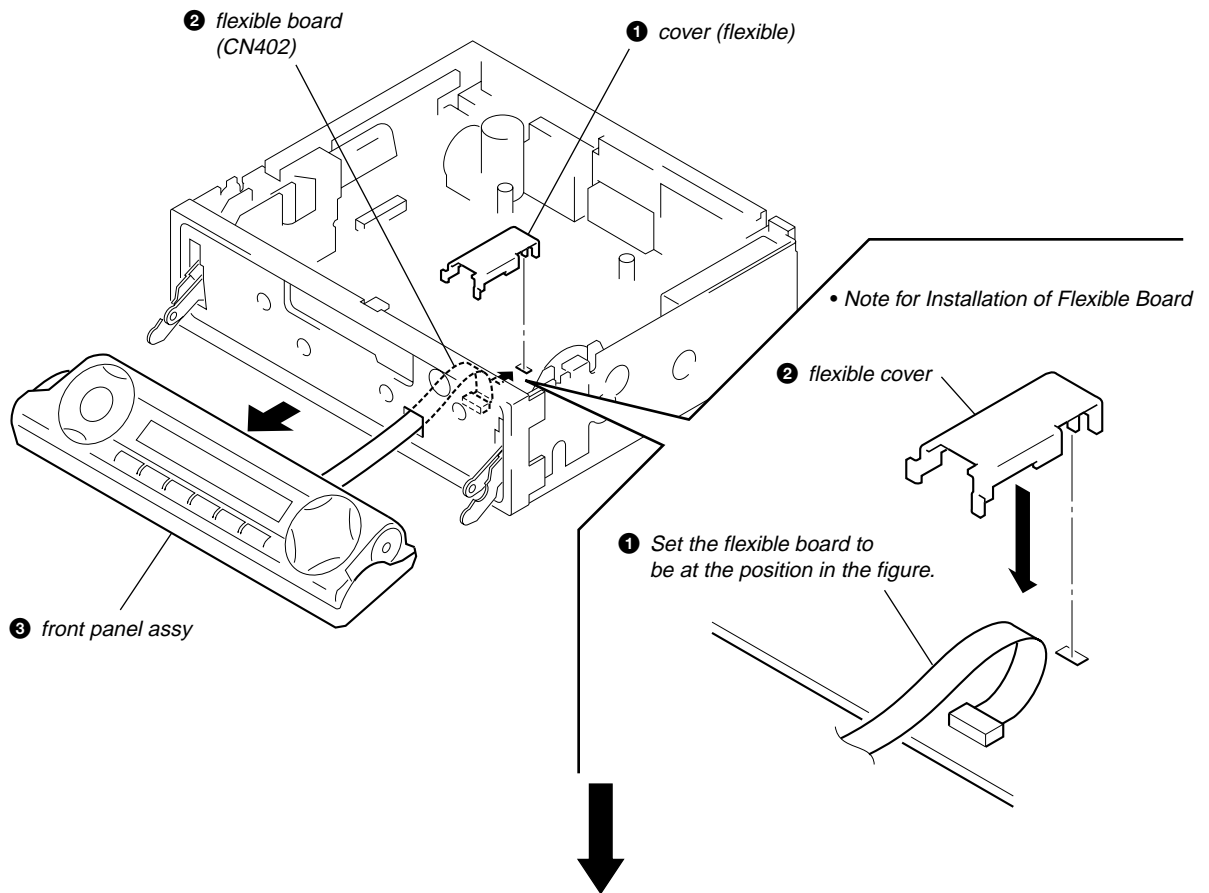
• See page 3 for Servicing Notes.

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

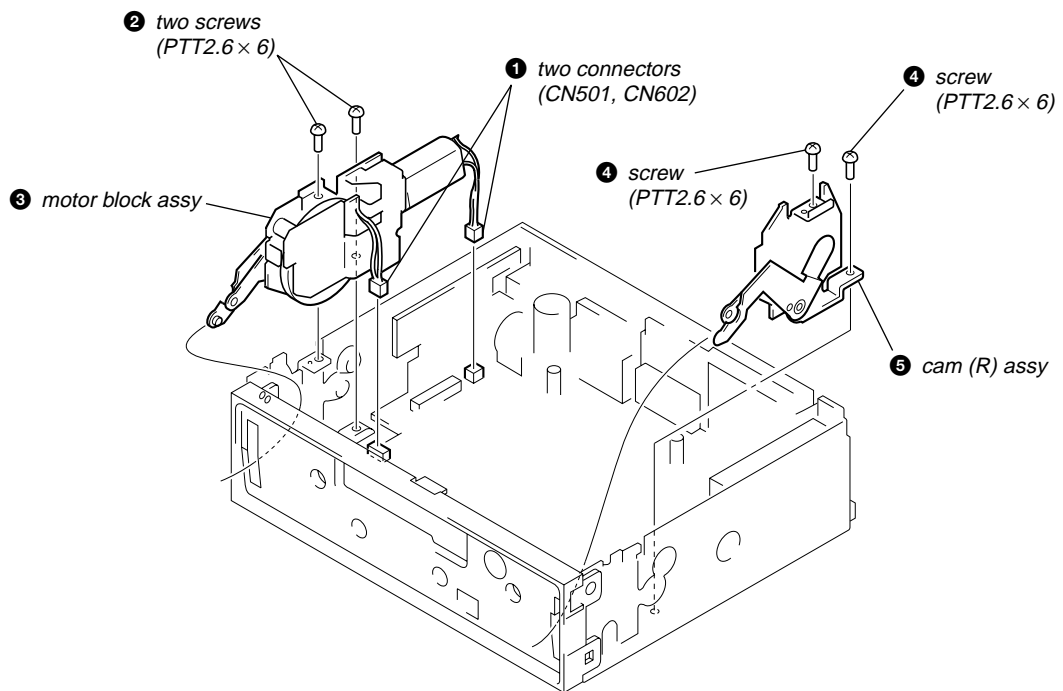
MECHANISM DECK (MG-25E-136)



FRONT PANEL ASSY

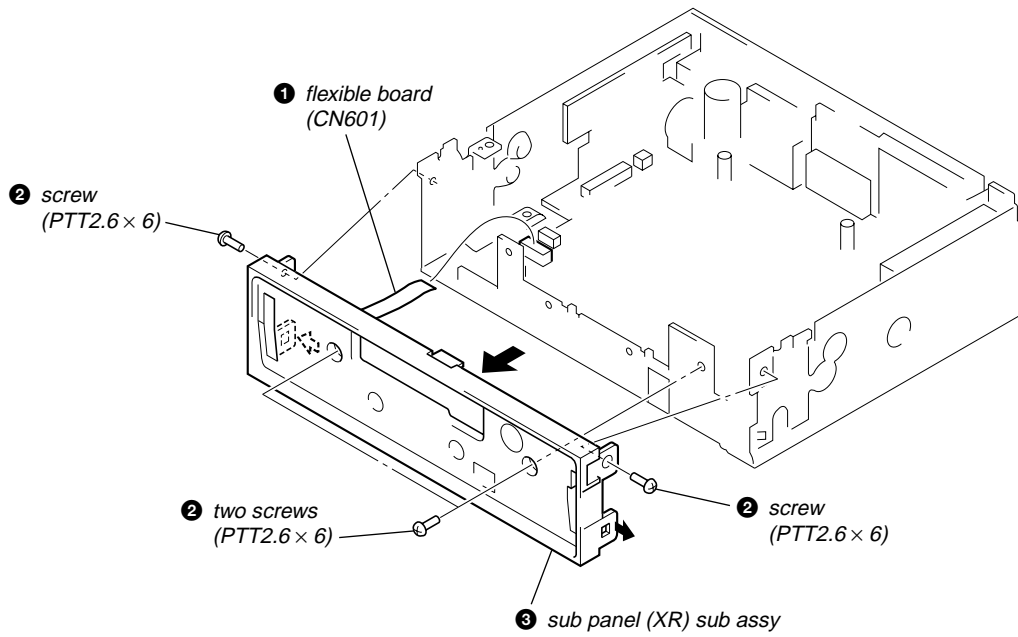


MOTOR BLOCK ASSY, CAM (R) ASSY

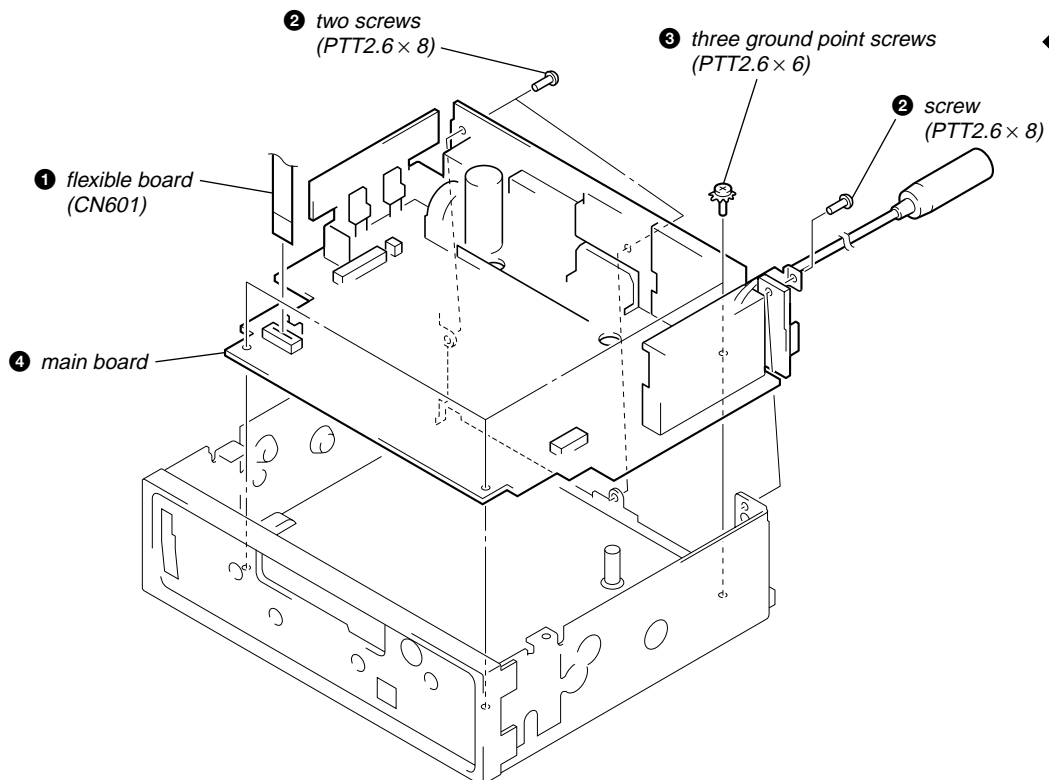


XR-M510

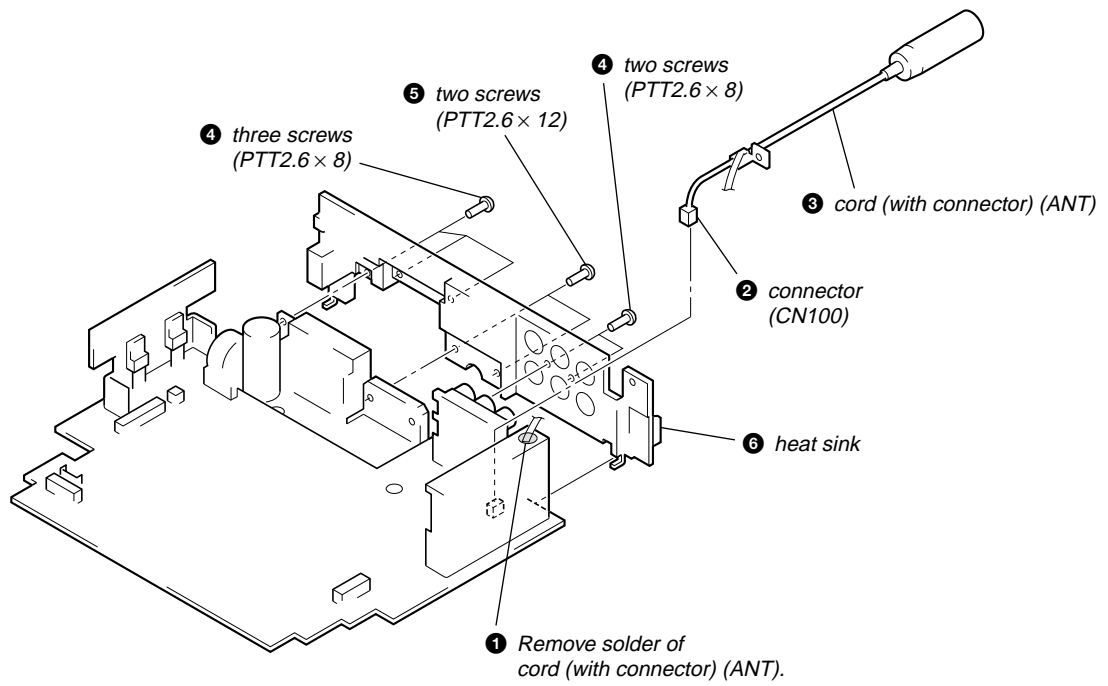
SUB PANEL (XR) SUB ASSY



MAIN BOARD



HEAT SINK

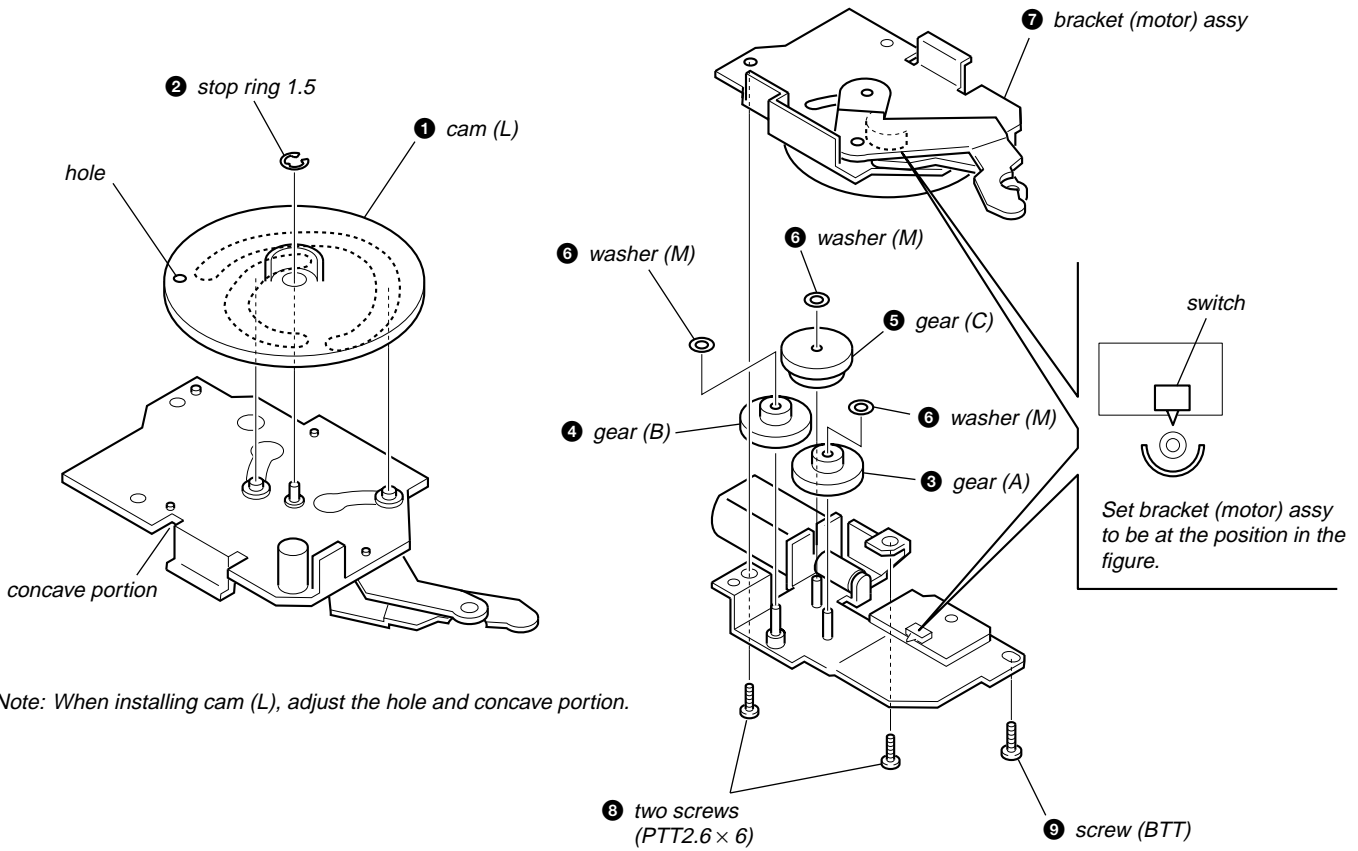


**SECTION 4
ASSEMBLY**

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

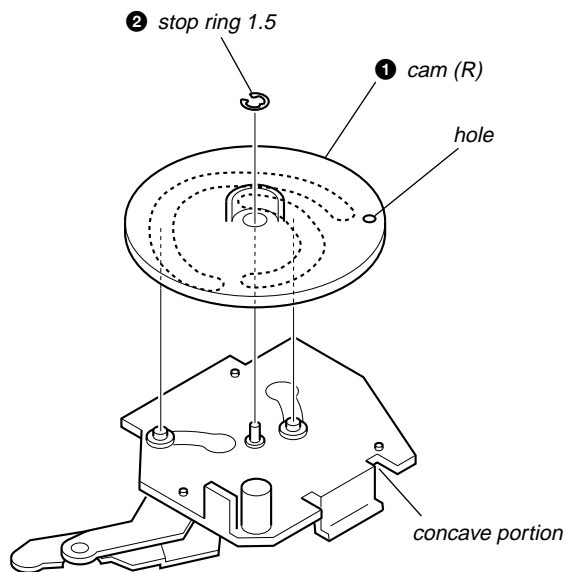
4-1. FRONT PANEL MACHINERY

MOTOR BLOCK ASSY



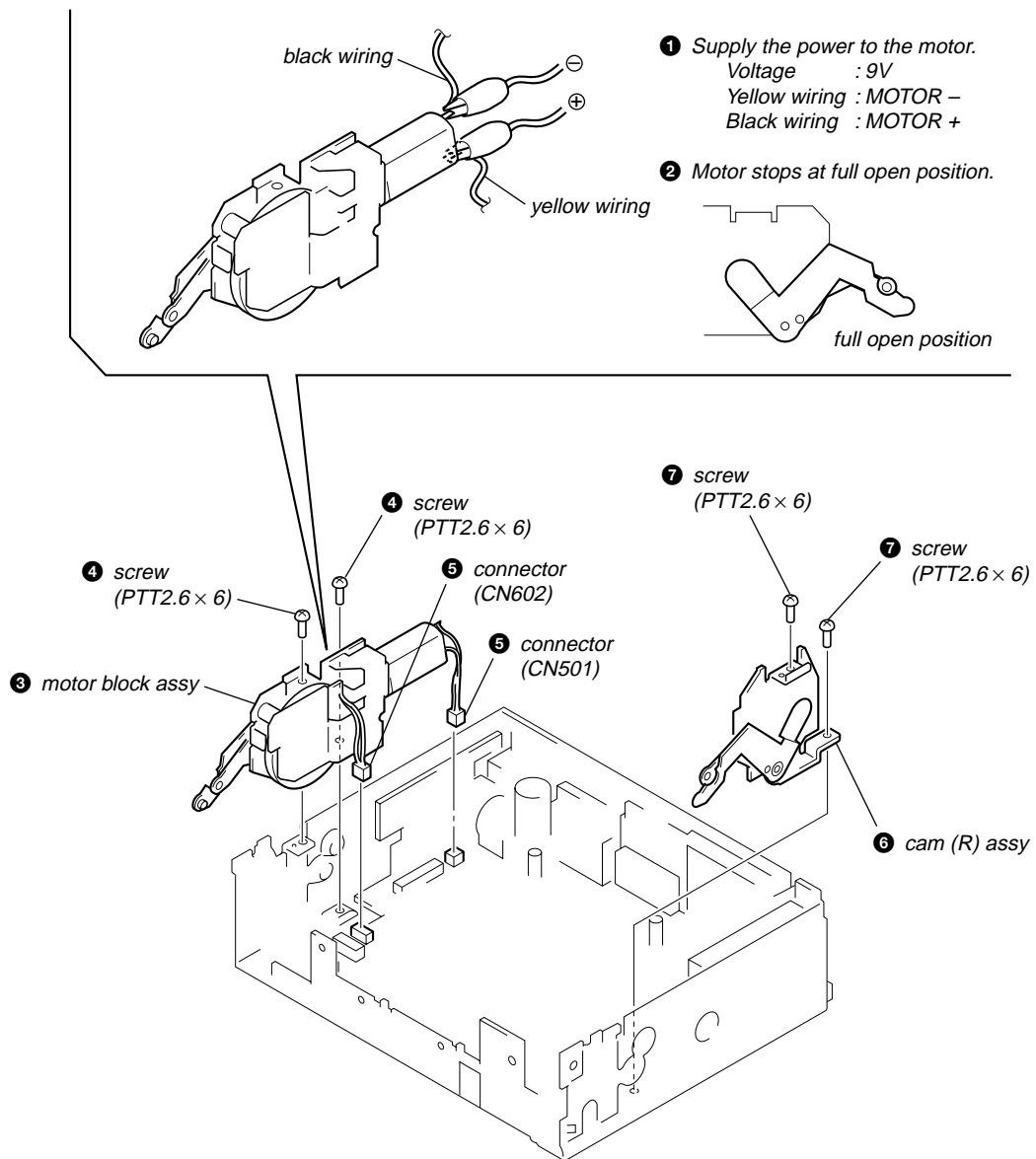
Note: When installing cam (L), adjust the hole and concave portion.

CAM (R) ASSY



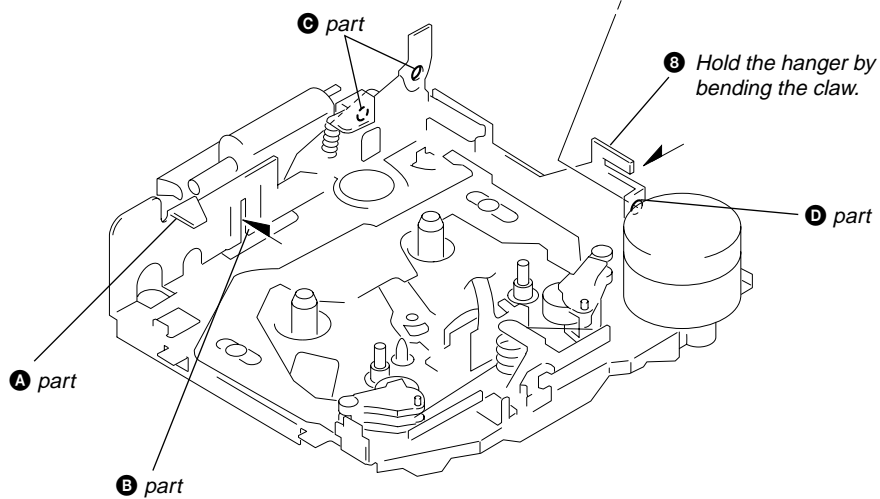
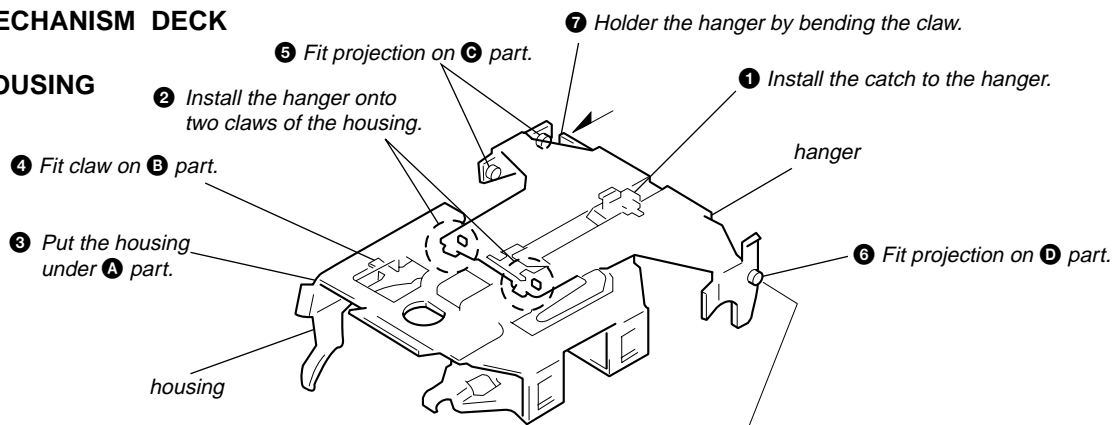
Note: When installing cam (R), adjust the hole and concave portion.

MOTOR BLOCK ASSY, CAM (R) ASSY

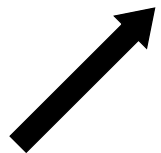
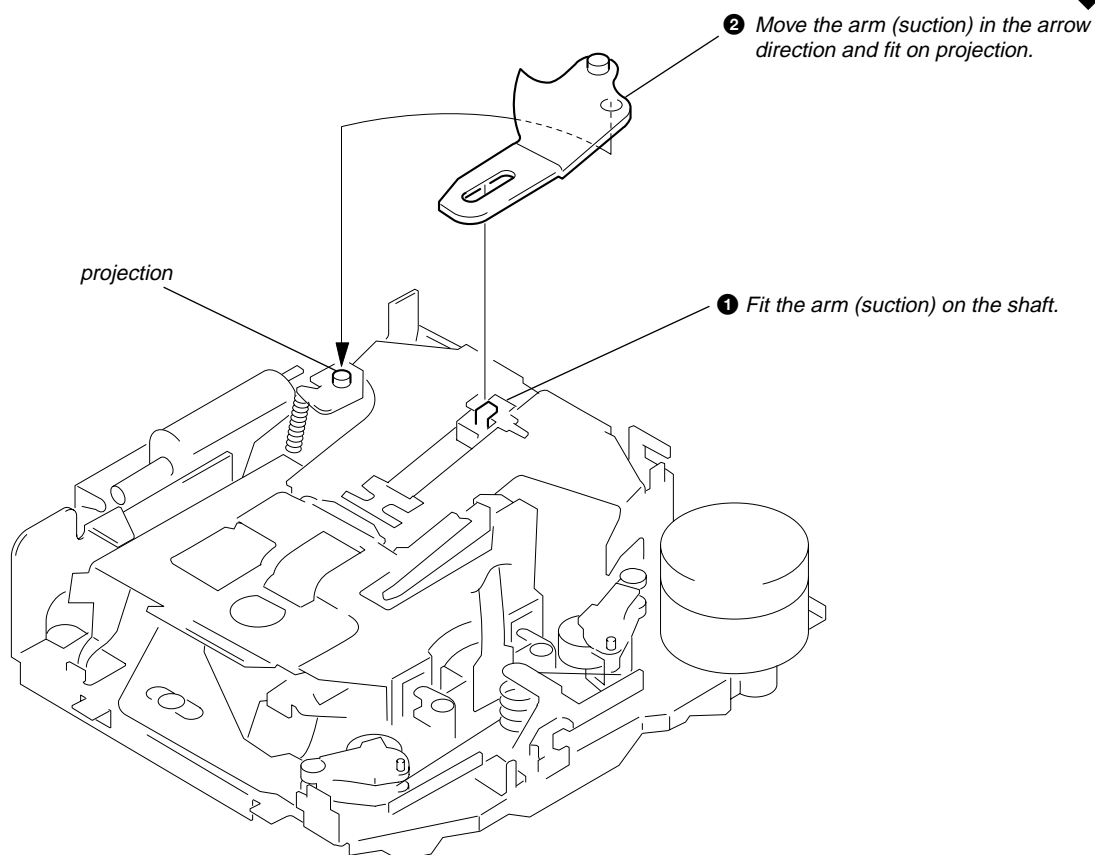


4-2. MECHANISM DECK

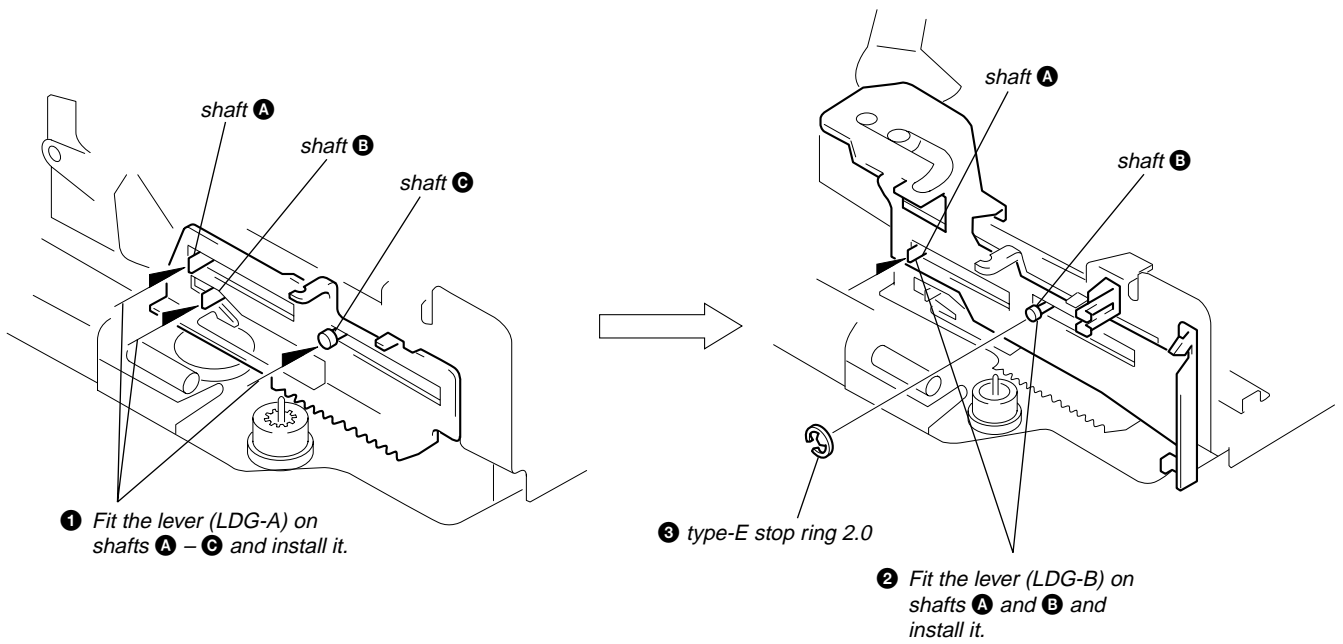
HOUSING



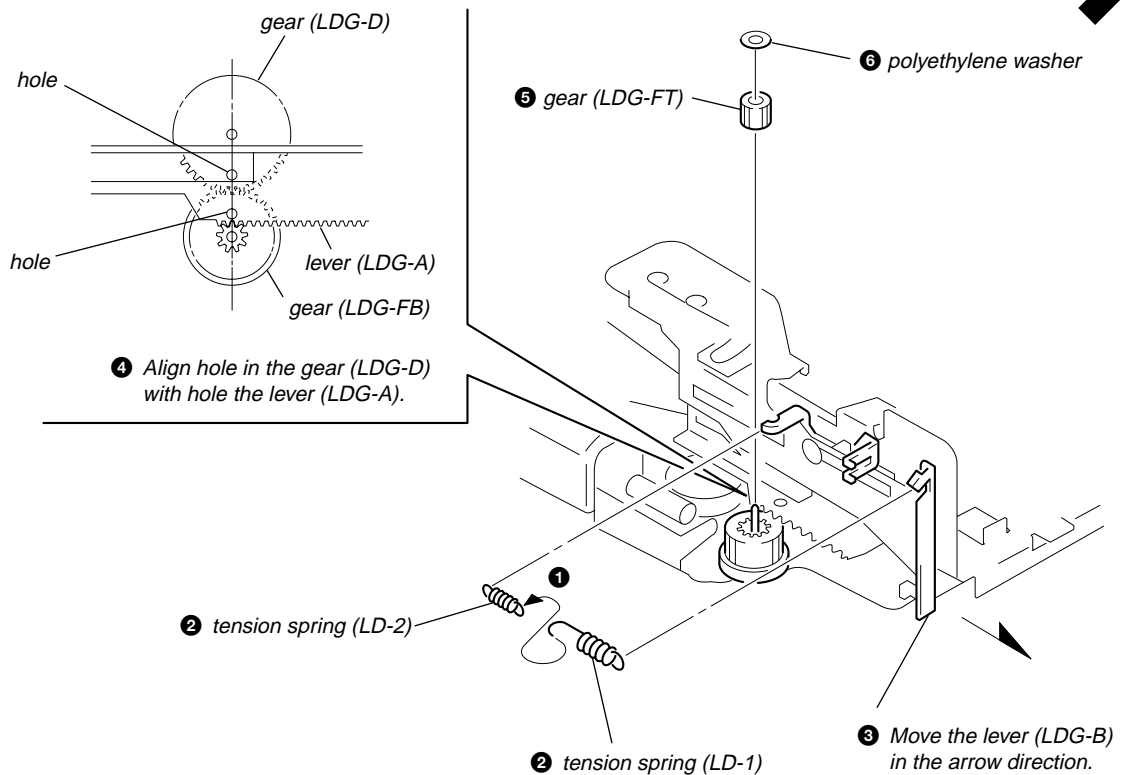
ARM (SUCTION)



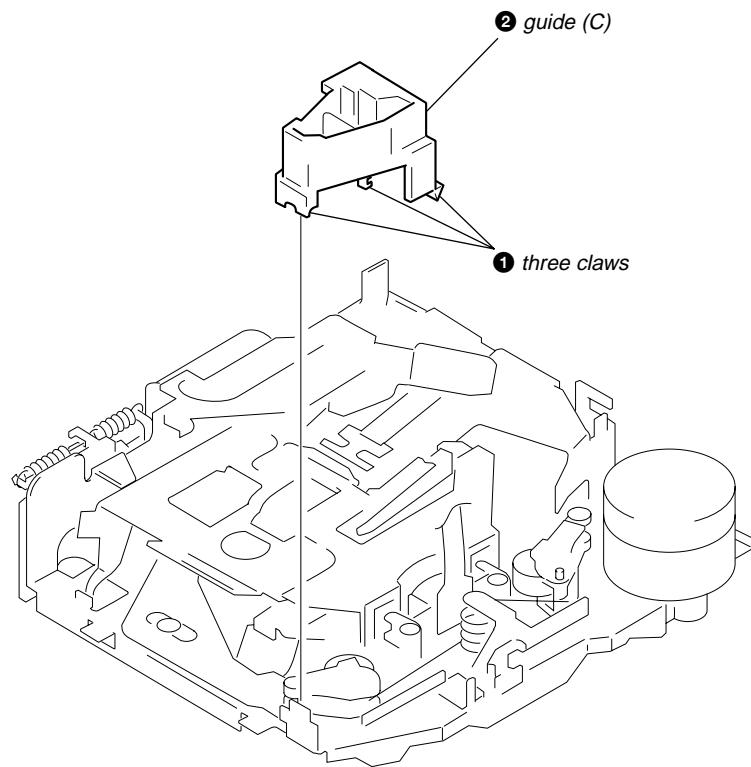
LEVER (LDG-A) / (LDG-B)



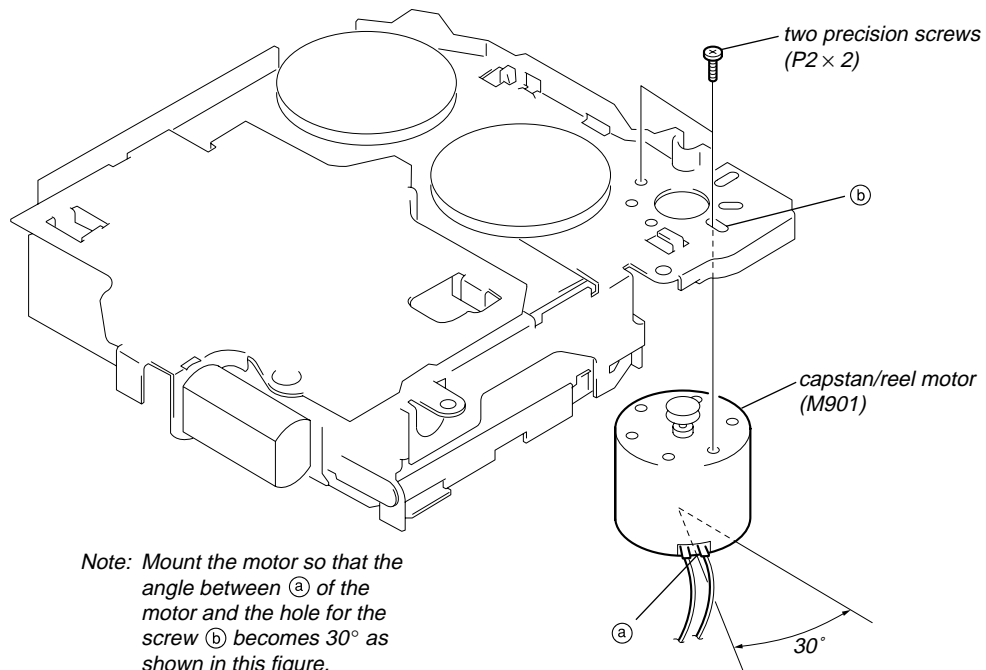
GEAR (LDG-FT)



GUIDE (C)



MOUNTING POSITION OF CAPSTAN/REEL MOTOR (M901)



SECTION 5 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.

•Torque Measurement

Mode	Torque Meter	Meter Reading
Forward	CQ-102C	2.95 – 6.73 mN•m 30 – 65 g•cm (0.42 – 0.90 oz•inch)
Forward Back Tension	CQ-102C	0.05 – 0.44mN•m 0.5 – 4.5 g•cm (0.01 – 0.06 oz•inch)
Reverse	CQ-102RC	2.95 – 6.73 mN•m (25 – 55 g•cm) (0.42 – 0.90 oz•inch)
Reverse Back Tension	CQ-102RC	0.05 – 0.44mN•m 0.5 – 4.5 g•cm (0.01 – 0.06 oz•inch)
FF, REW	CQ-201B	5.89 – 19.61 mN•m 60 – 200 g•cm (0.83 – 2.78 oz•inch)

•Tape Tension Measurement

Mode	Tension Meter	Meter Reading
Forward	CQ-403A	more than 90 g (more than 3.18 oz)
Reverse	CQ-403R	more than 90 g (more than 3.18 oz)

SECTION 6 ELECTRICAL ADJUSTMENTS

TEST MODE

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

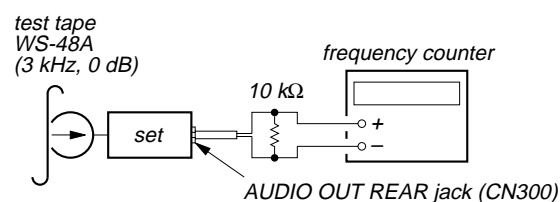
<Release the Test mode>

- Push the **[OFF]** button.

TAPE DECK SECTION

0 dB=0.775 V

Tape Speed Adjustment Setting:



Procedure:

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

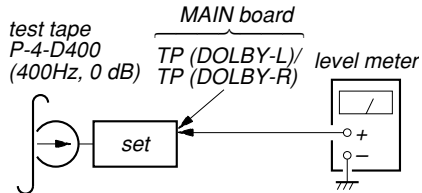
Specified Value: 2,955 to 3,075 Hz

Adjustment Location: See page 20.

Dolby Level Adjustment

Setting:

[SOURCE] button	: ON
Preset [MENU] (PLAY MODE) and [DISC-] buttons	: NR off
[SOUND] (BAS) button	: Center
[SOUND] (TRE) button	: Center
[SOUND] (BAL) button	: Center
[SOUND] (FAD) button	: Center
[+] (VOL) button	: Maximum



Procedure:

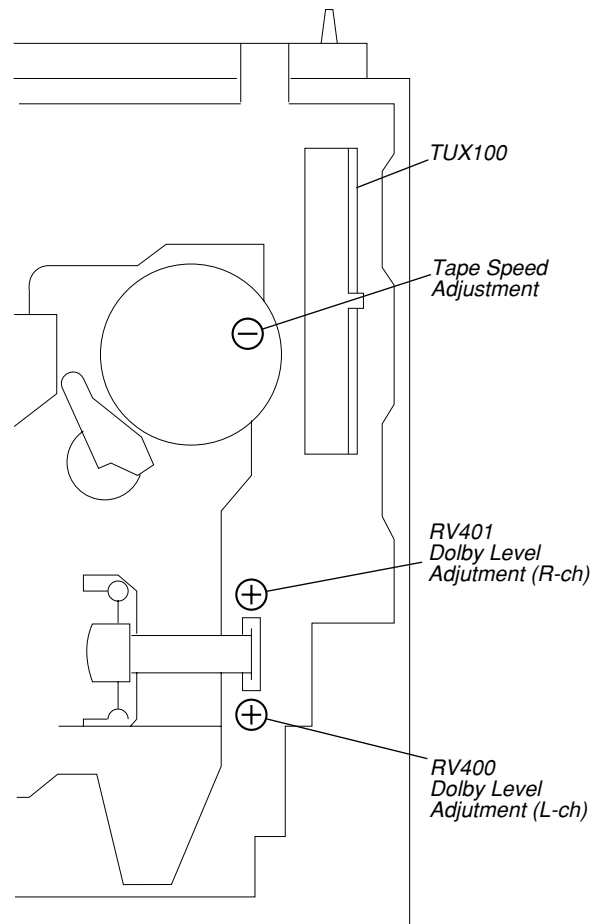
1. Put the set into the FWD PB mode.
2. Adjust RV400 (L-CH) and RV401 (R-CH) so that the level meter reading is -6 ± 0.5 dB (0.37 to 0.41 V).

TUNER SECTION

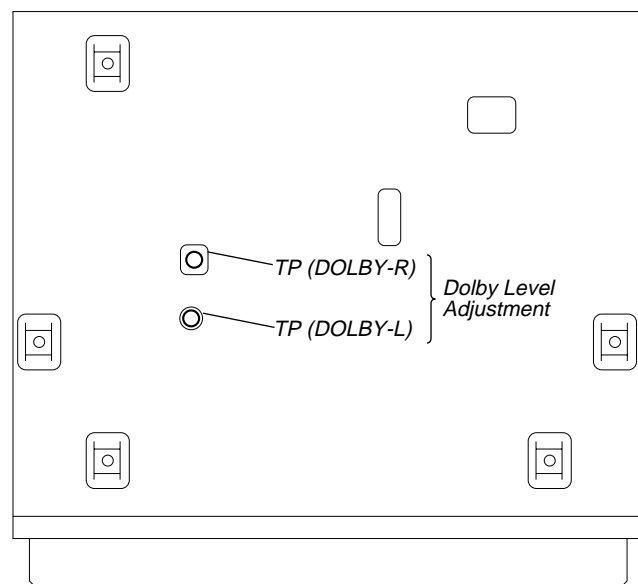
Tuner section adjustments are done automatically in this set.

Adjustment Location:

– SET UPPER VIEW –

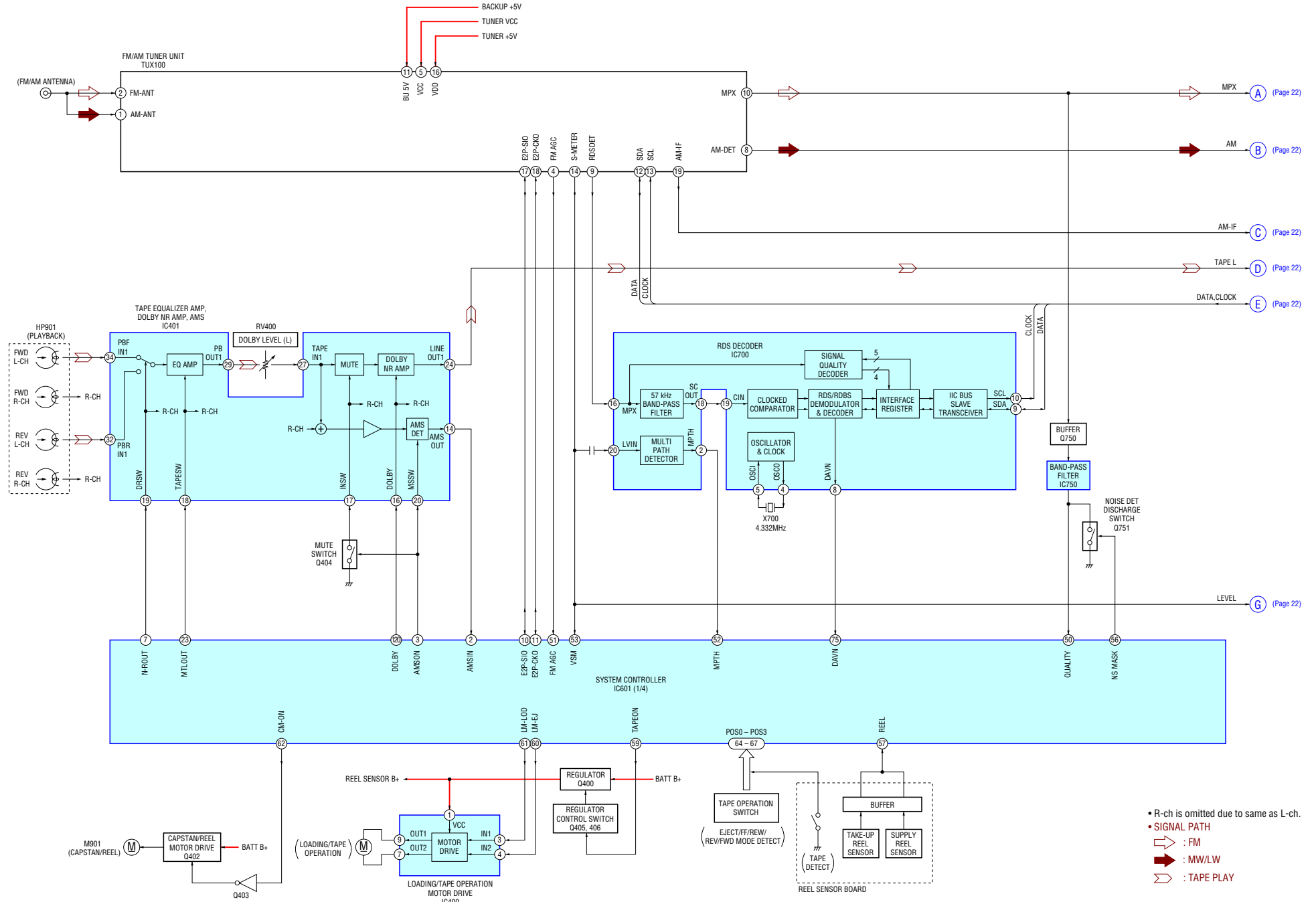


– SET BOTTOM VIEW –

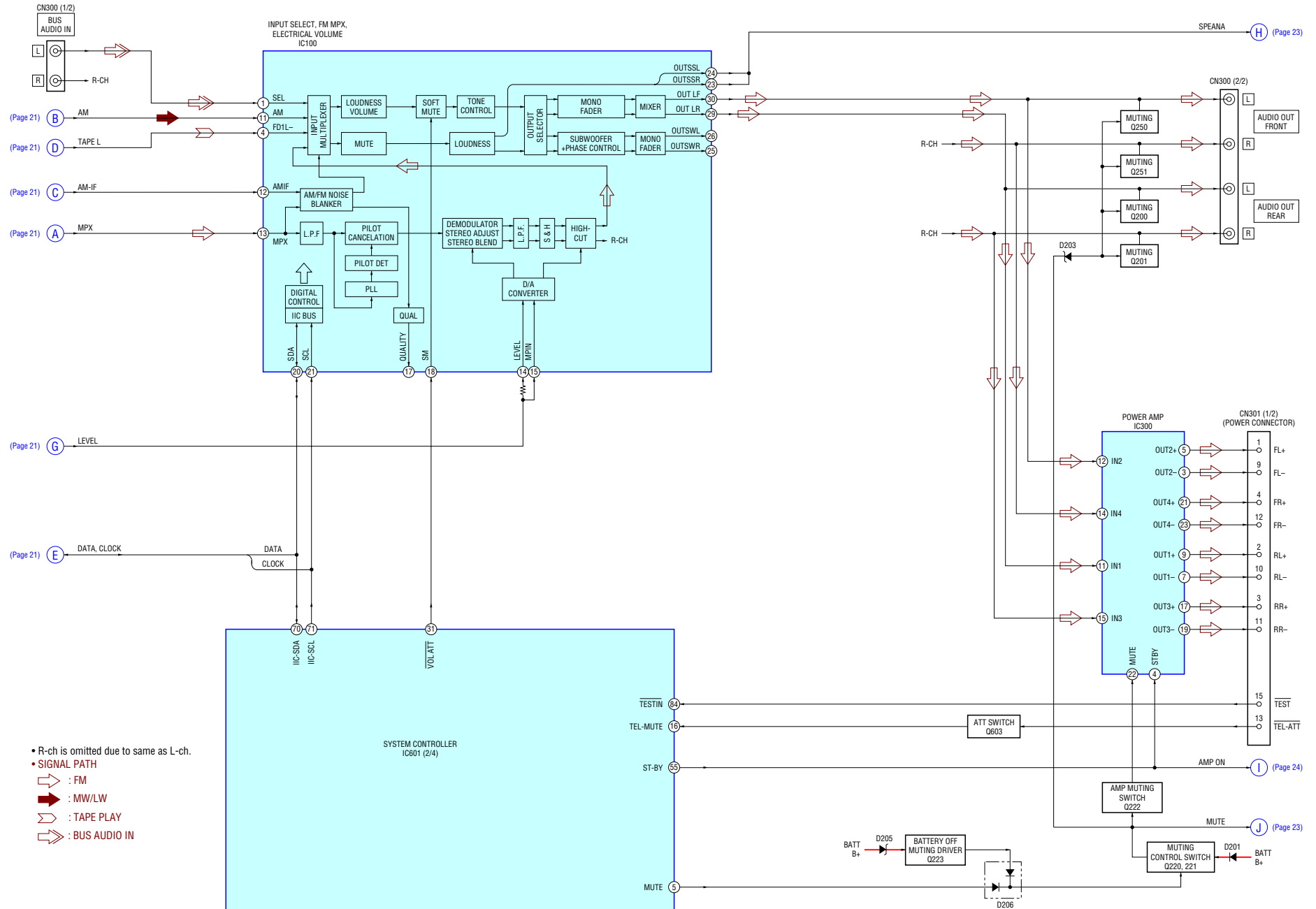


SECTION 7
DIAGRAMS

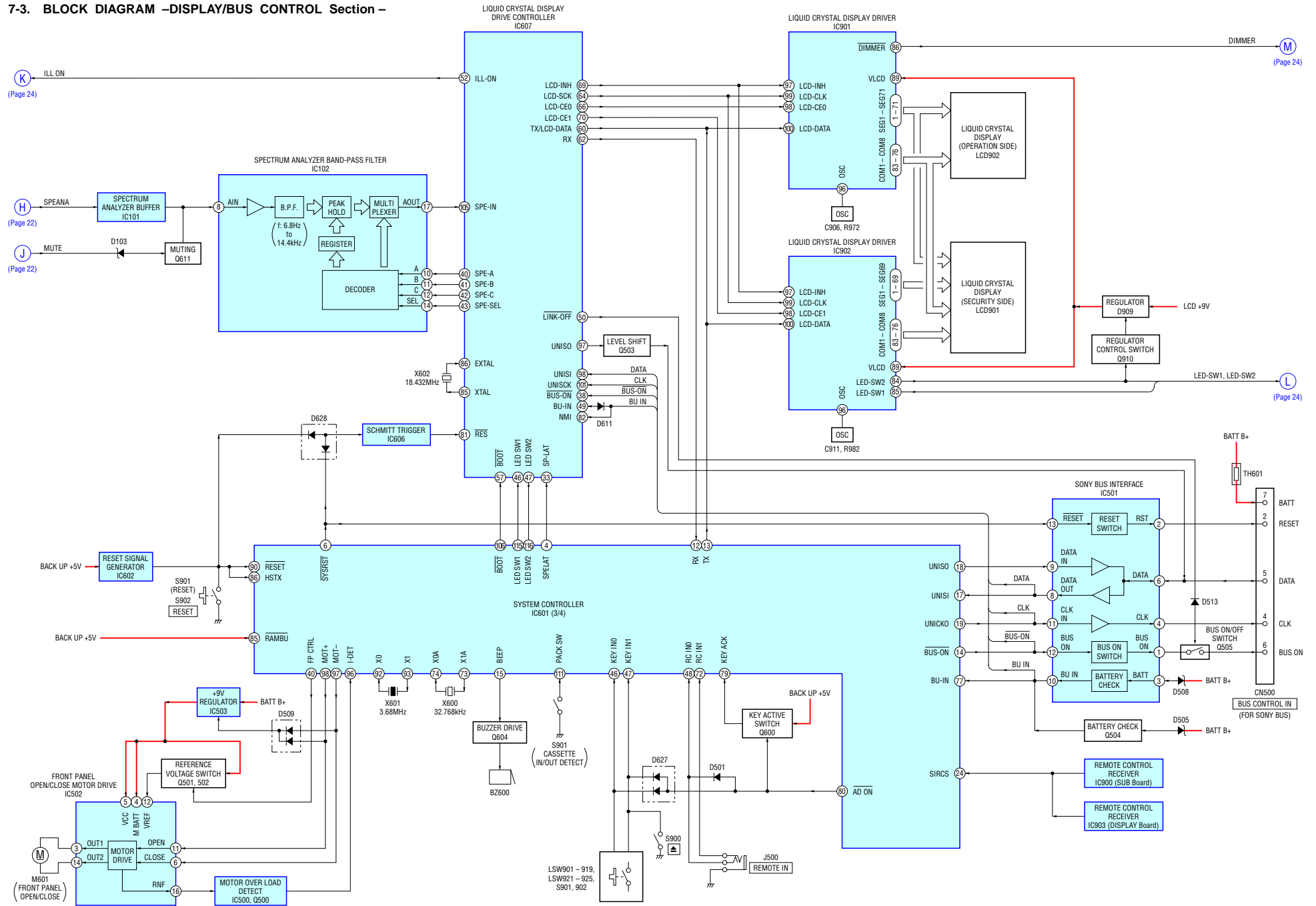
7-1. BLOCK DIAGRAM –TUNER/TAPE Section –



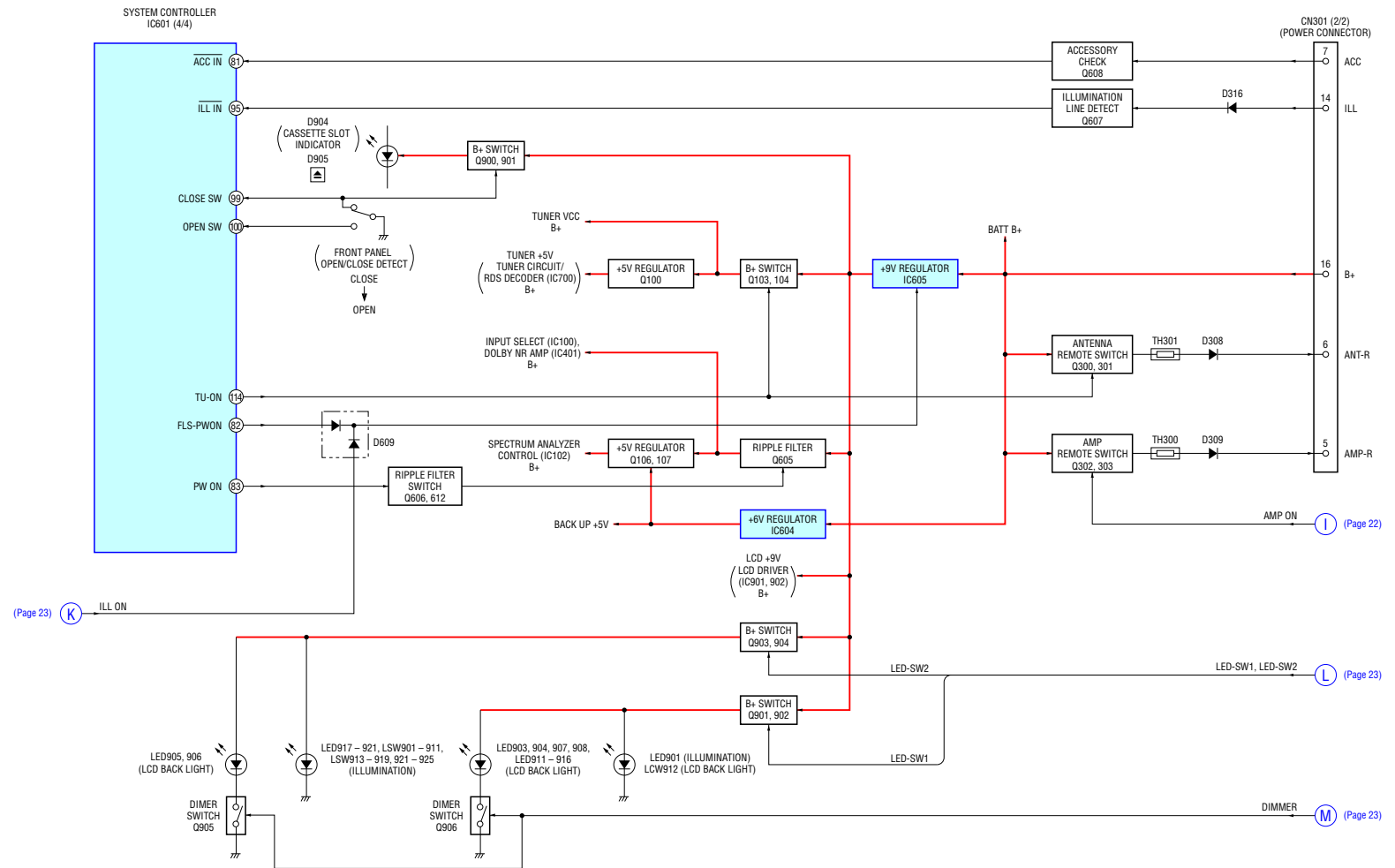
7-2. BLOCK DIAGRAM – MAIN Section –



7-3. BLOCK DIAGRAM -DISPLAY/BUS CONTROL Section -



7-4. BLOCK DIAGRAM - POWER SUPPLY Section -



7-5. NOTE FOR PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS

Note on Printed Wiring Board:

- : parts extracted from the component side.
- : parts extracted from the conductor side.
- : Pattern from the side which enables seeing. (The other layers' patterns are not indicated.)

Caution:

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

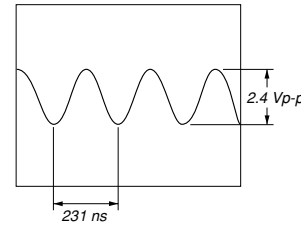
- DISPLAY board is four-layer printed board. However, the patterns of layers 2 and 3 have not been included in this diagrams.
- Abbreviation
 SE : South European model
- Please refer to servicing notes (page 3) for system of TYPE A and B.

Note on Schematic Diagram:

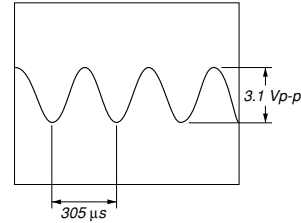
- All capacitors are in μF unless otherwise noted. pF: μF 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and $1/4\text{W}$ or less unless otherwise specified.
- Δ : internal component.
- \square : panel designation.
- --- : B+ Line.
- B+ : B+ Line.
- B+ : 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 Ω). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with an oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.
 \Rightarrow : FM
 \Rightarrow : MW/LW
 \Rightarrow : BUS AUDIO IN
 \Rightarrow : TAPE PLAY
- Abbreviation
 SE : South European model
- Please refer to servicing notes (page 3) for system of TYPE A and B.

• Waveforms
 – MAIN Board –

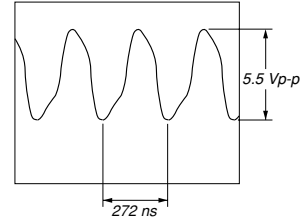
① IC700 ⑤ OSC



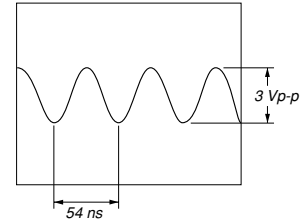
② IC601 ⑦ X1A



③ IC601 ⑧ X1

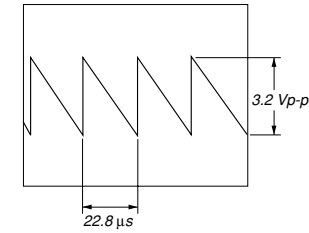


④ IC607 ⑥ EXTAL

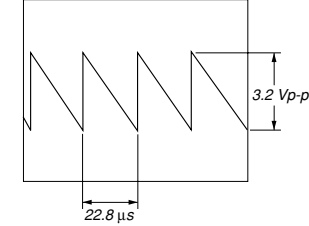


– DISPLAY Board –

⑥ IC901 ⑥ OSC



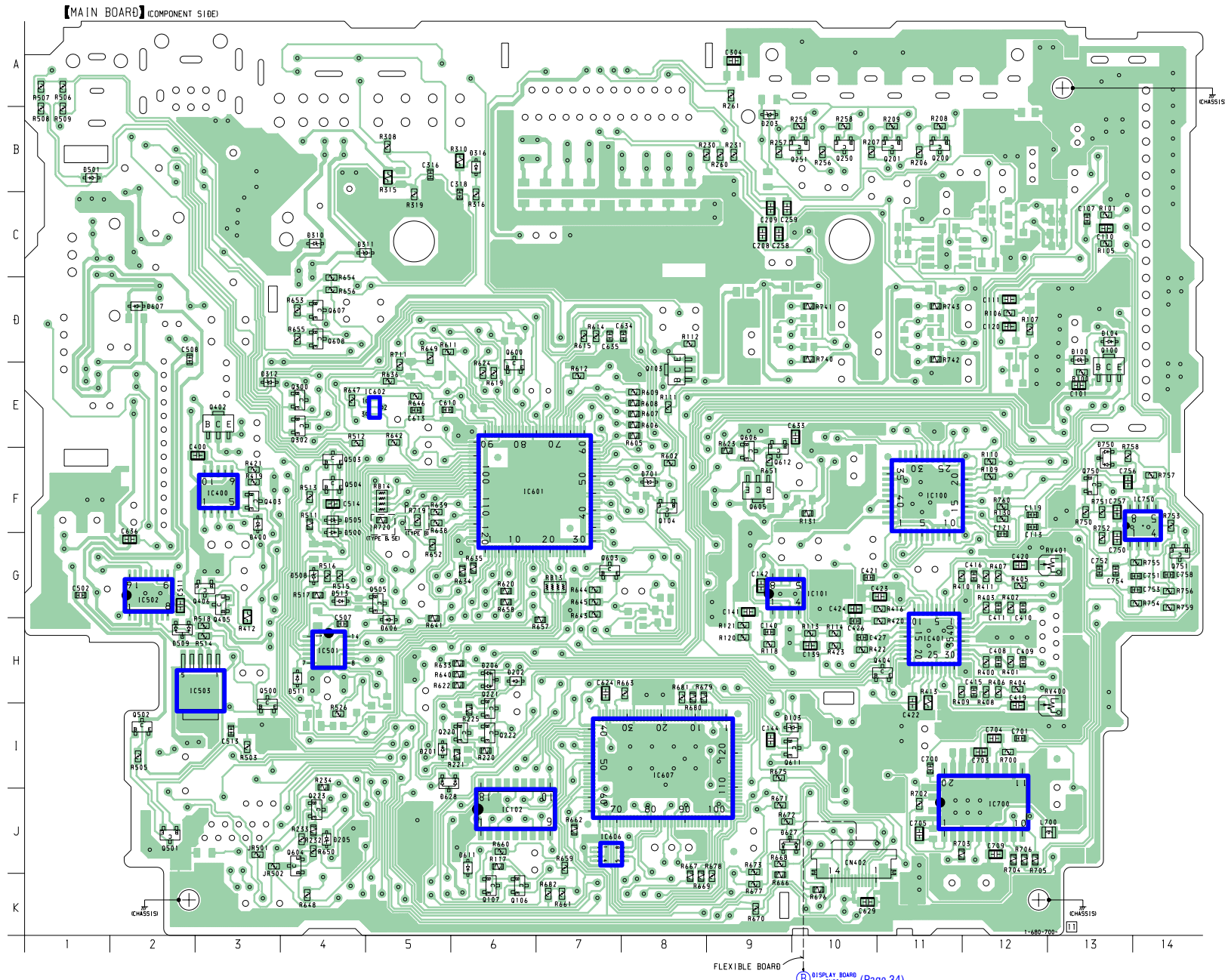
⑦ IC902 ⑥ OSC



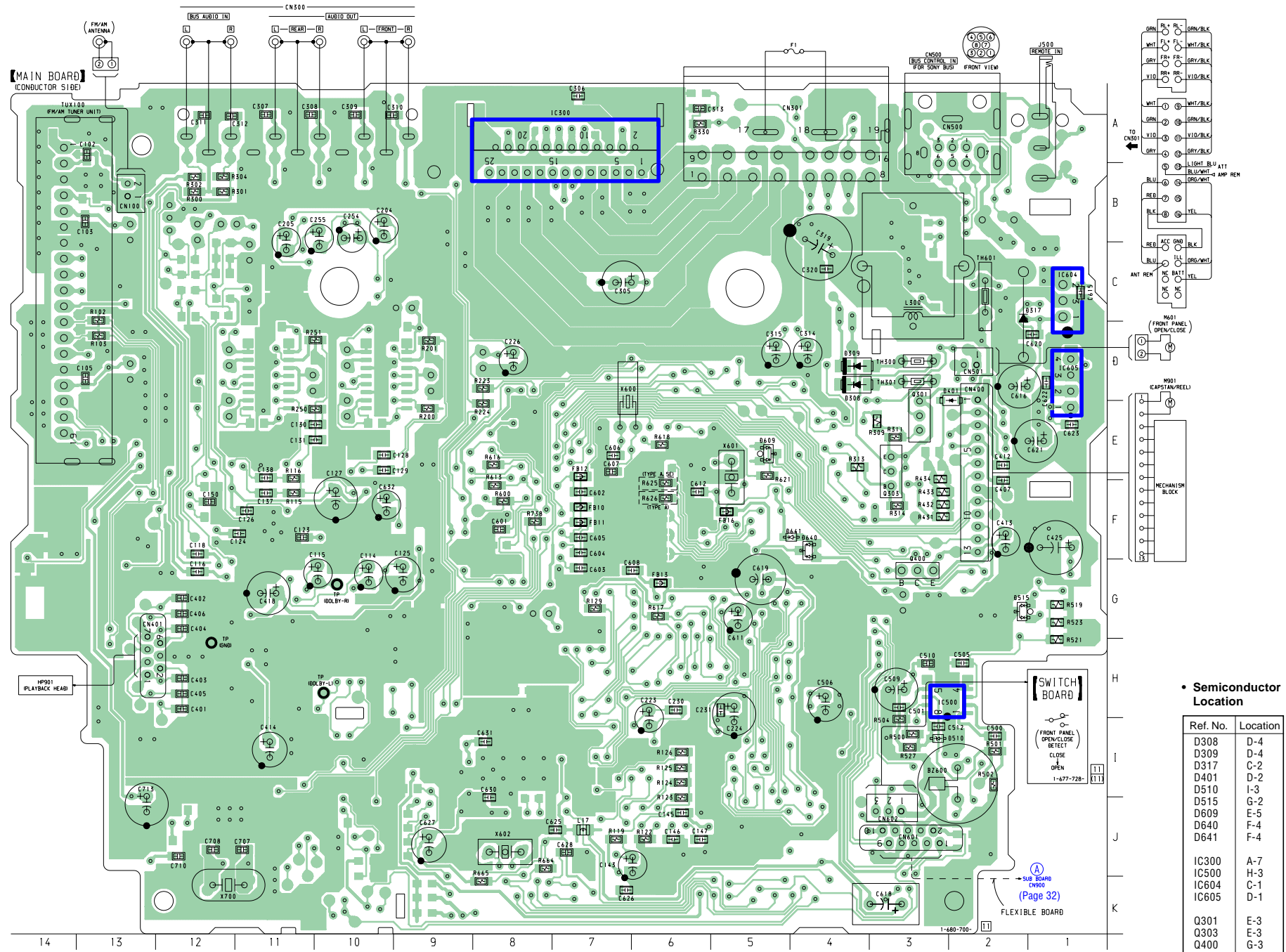
7-6. PRINTED WIRING BOARDS – MAIN Board (Component Side) –

• Semiconductor Location

Ref. No.	Location	Ref. No.	Location
D100	D-13	IC700	J-12
D103	I-9	IC750	F-14
D104	D-13		
D201	I-5	Q100	E-13
D202	H-6	Q103	E-8
D203	B-9	Q104	F-8
D205	J-4	Q106	K-6
D206	H-6	Q107	K-6
D310	C-4	Q200	B-11
D311	C-4	Q201	B-11
D312	E-3	Q220	I-6
D316	B-6	Q221	I-6
D400	F-3	Q222	I-6
D500	F-4	Q223	J-4
D501	B-1	Q250	B-10
D505	F-4	Q251	B-10
D508	G-4	Q300	E-4
D509	H-2	Q302	E-4
D511	H-4	Q402	E-3
D513	G-4	Q403	F-3
D606	H-5	Q404	H-11
D607	D-2	Q405	G-3
D611	J-6	Q406	G-3
D627	J-9	Q500	H-3
D628	I-5	Q501	J-2
D701	F-8	Q502	I-2
D750	F-13	Q503	F-4
		Q504	F-4
IC100	F-11	Q505	G-5
IC101	G-9	Q600	E-6
IC102	J-6	Q603	G-7
IC400	F-3	Q604	J-4
IC401	H-11	Q605	F-9
IC501	H-4	Q606	F-9
IC502	G-2	Q607	D-4
IC503	H-3	Q608	D-4
IC601	F-6	Q611	I-9
IC602	E-5	Q612	F-9
IC606	J-7	Q750	F-13
IC607	I-8	Q751	G-13



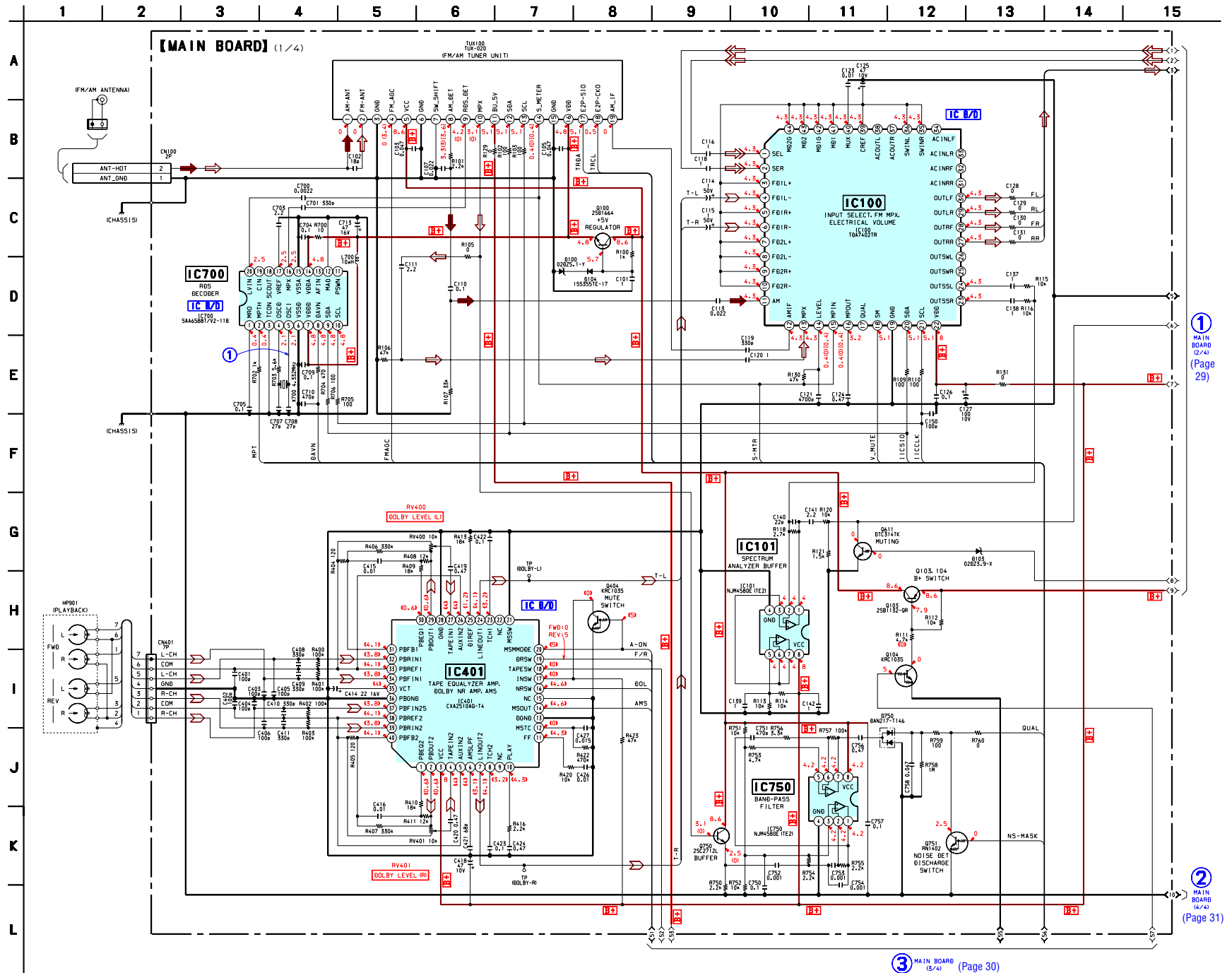
7-7. PRINTED WIRING BOARDS – MAIN Board (Conductor Side) –



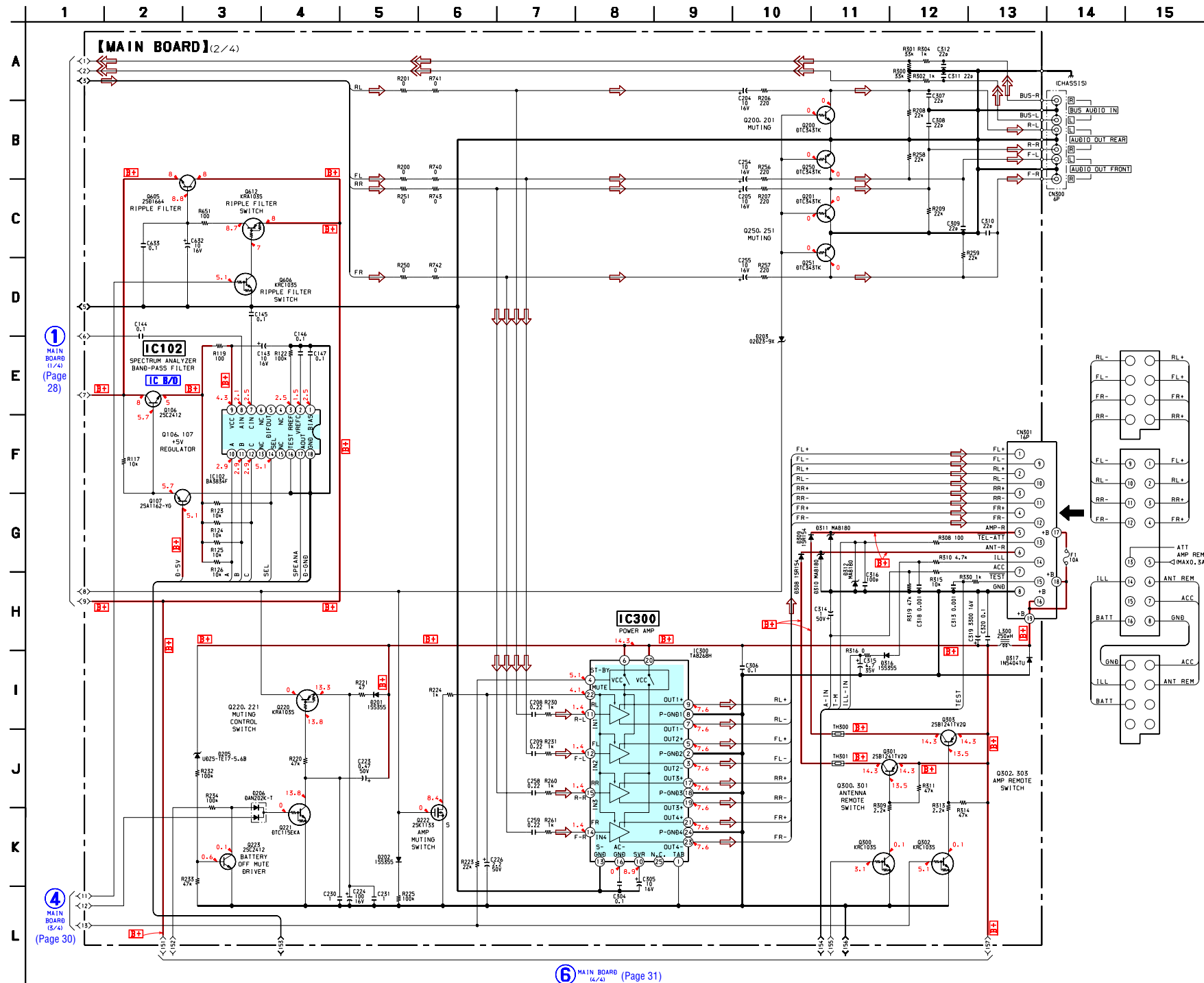
• Semiconductor Location

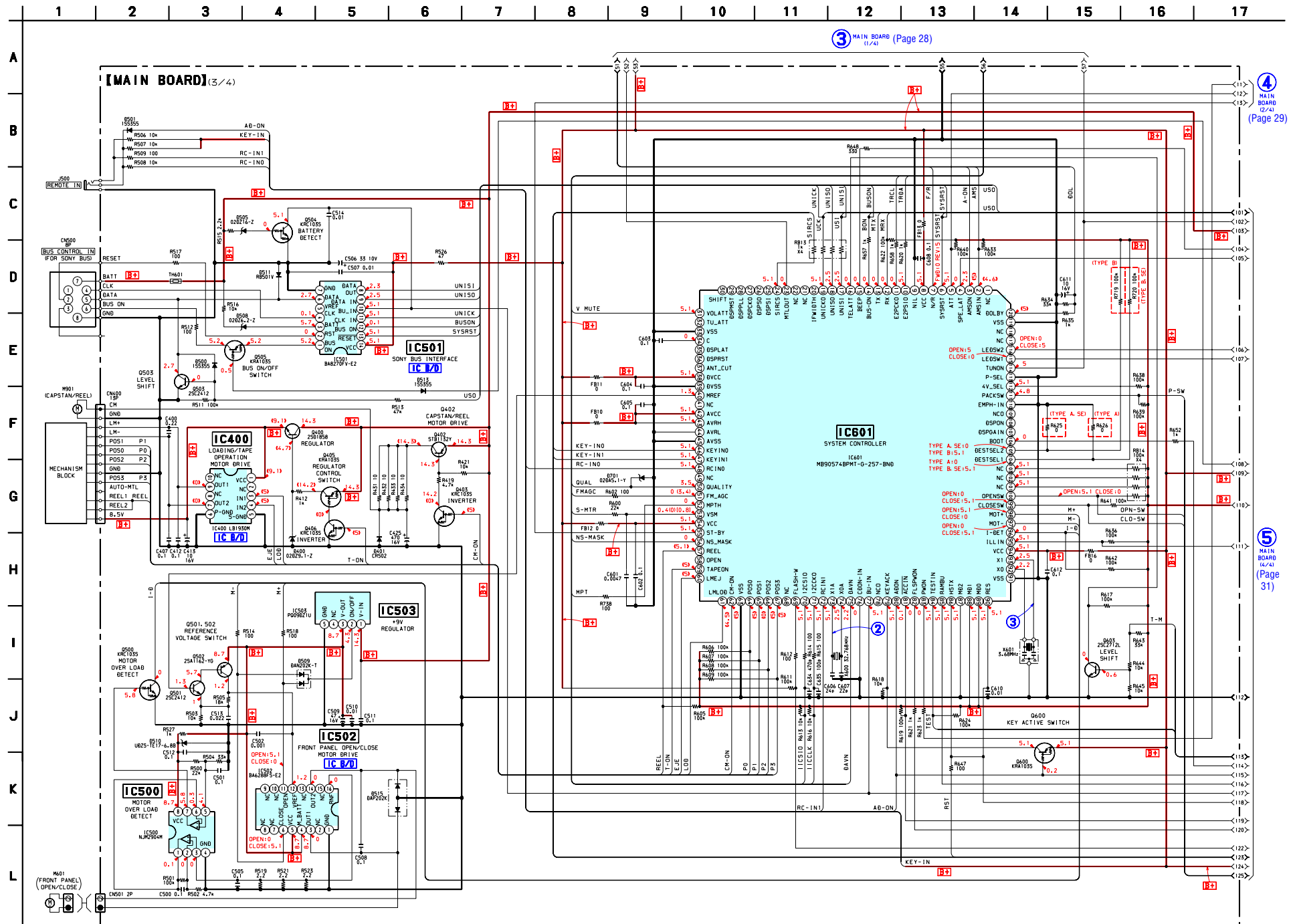
Ref. No.	Location
D308	D-4
D309	D-4
D317	C-2
D401	D-2
D510	I-3
D515	G-2
D609	E-5
D640	F-4
D641	F-4
IC300	A-7
IC500	H-3
IC604	C-1
IC605	D-1
Q301	E-3
Q303	E-3
Q400	G-3

7-8. SCHEMATIC DIAGRAM – MAIN Board (1/4) – • See page 25 for Waveform. • See page 36 for IC Block Diagrams.

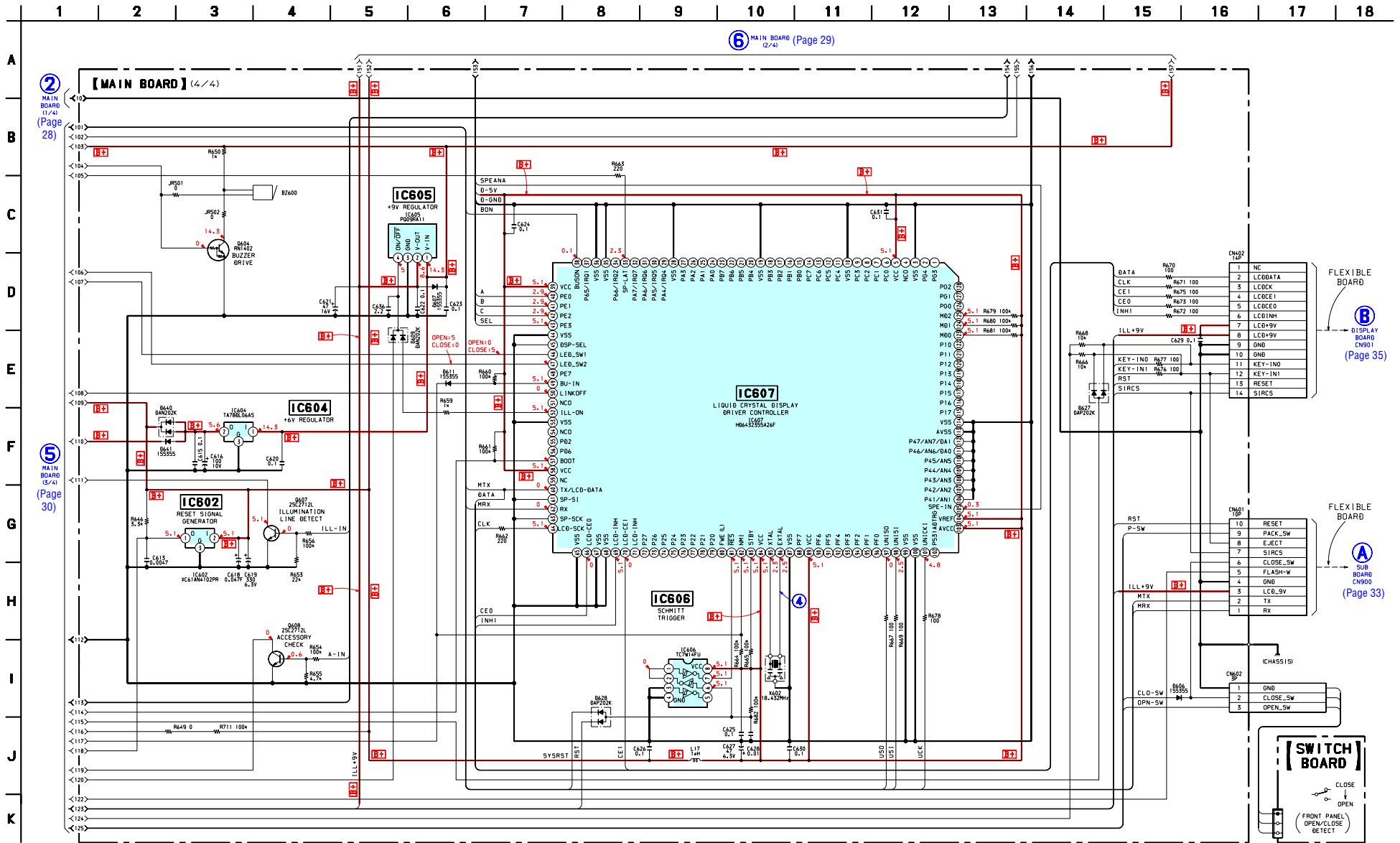


7-9. SCHEMATIC DIAGRAM – MAIN Board (2/4) – • See page 36 for IC Block Diagram.





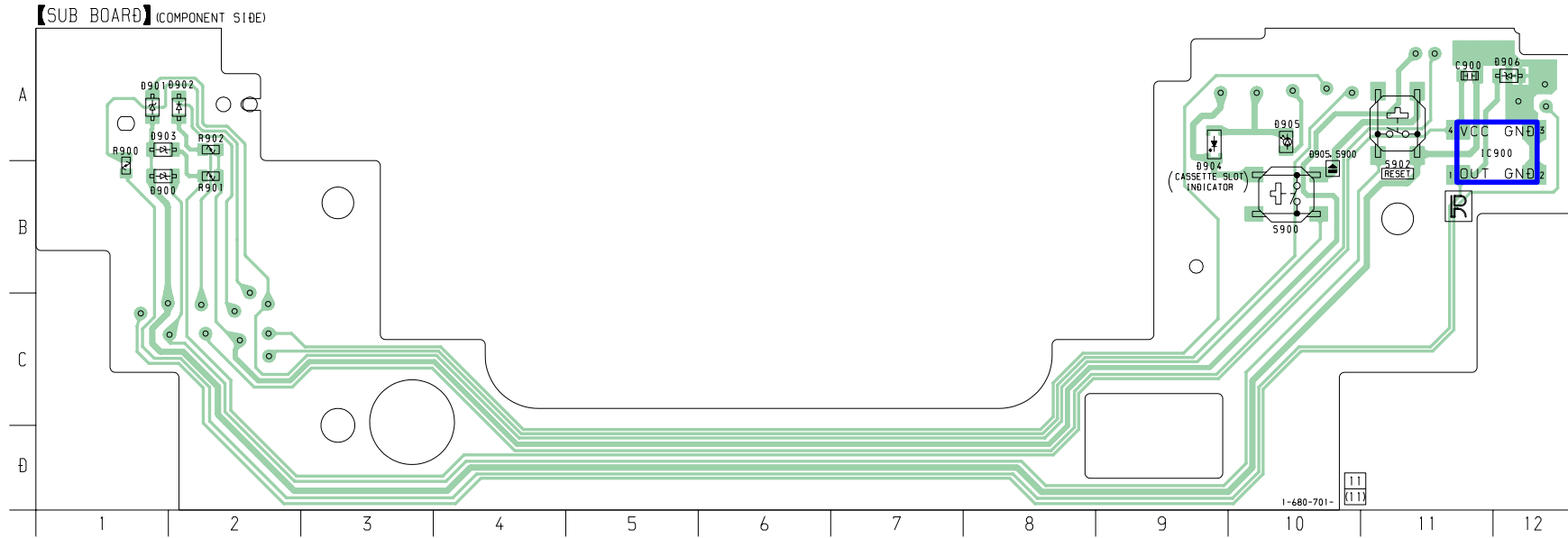
7-11. SCHEMATIC DIAGRAM – MAIN Board (4/4) – • See page 25 for Waveform.



7-12. PRINTED WIRING BOARDS – SUB Board –

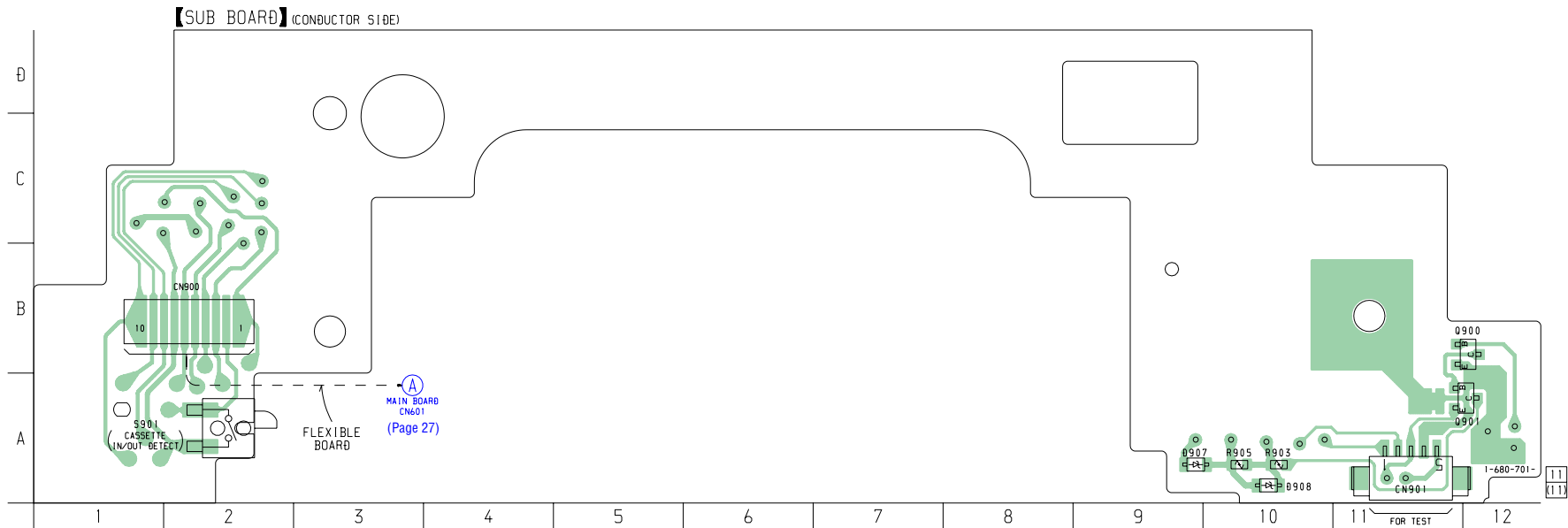
• Semiconductor Location

Ref. No.	Location
D900	B-1
D901	A-1
D902	A-2
D903	A-1
D904	A-9
D905	A-10
D906	A-12
IC900	A-12

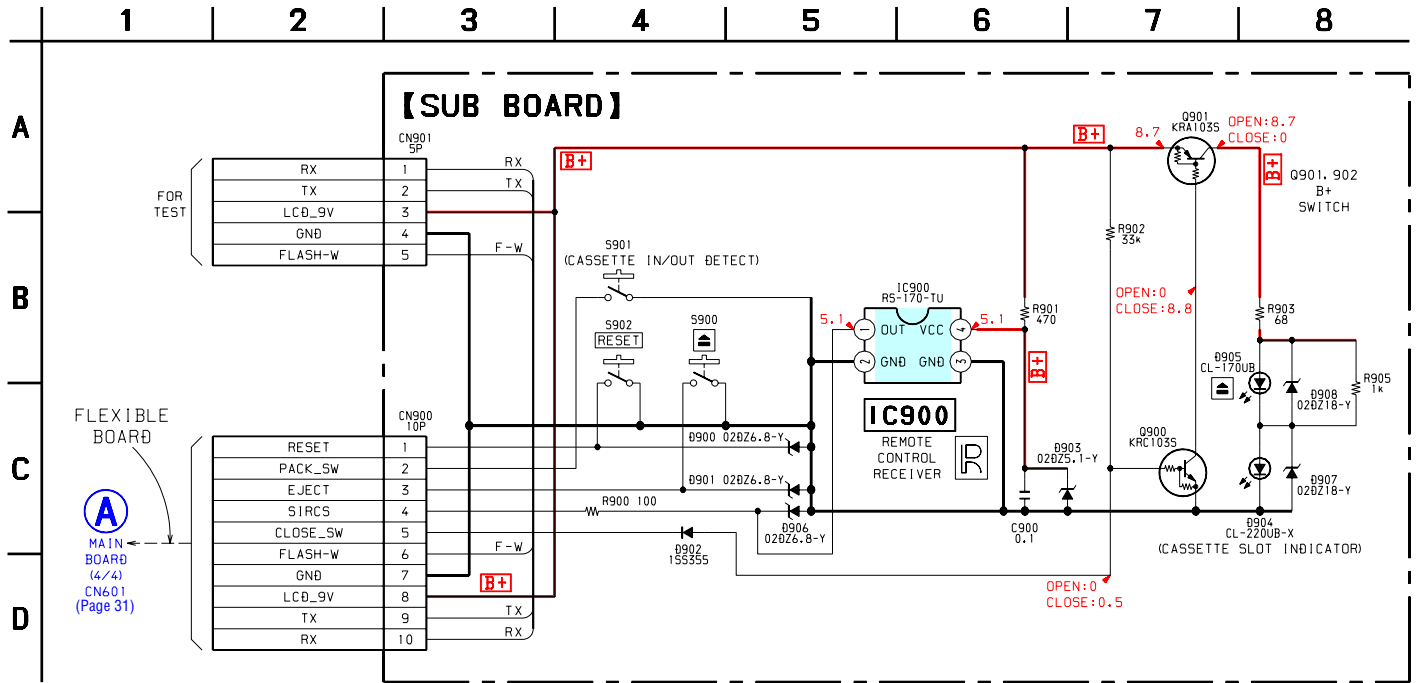


• Semiconductor Location

Ref. No.	Location
D907	A-9
D908	A-10
Q900	B-12
Q901	A-12



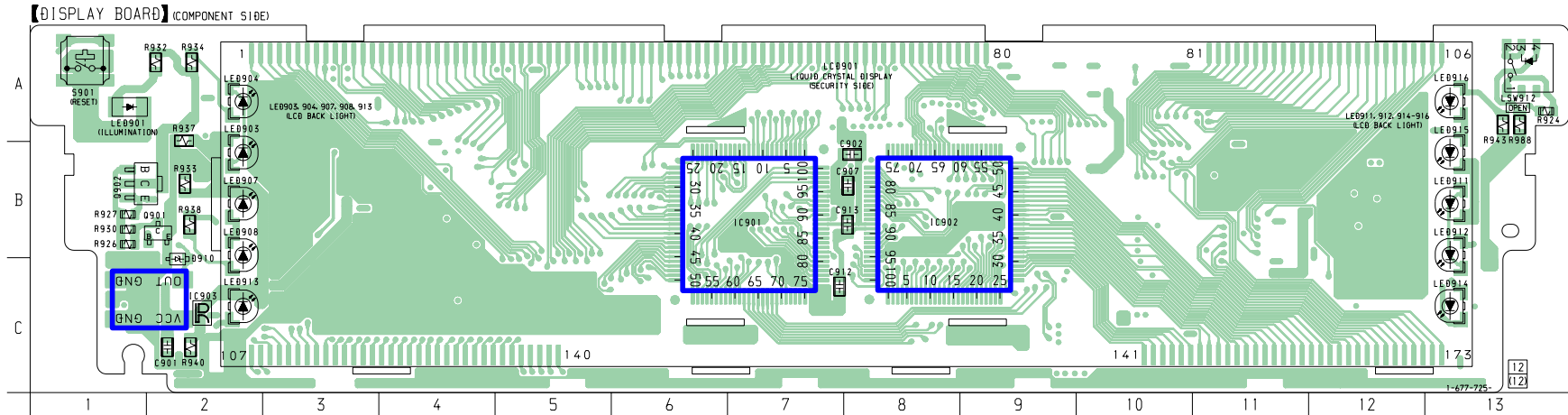
7-13. SCHEMATIC DIAGRAM – SUB Board –



7-14. PRINTED WIRING BOARDS – DISPLAY Board –

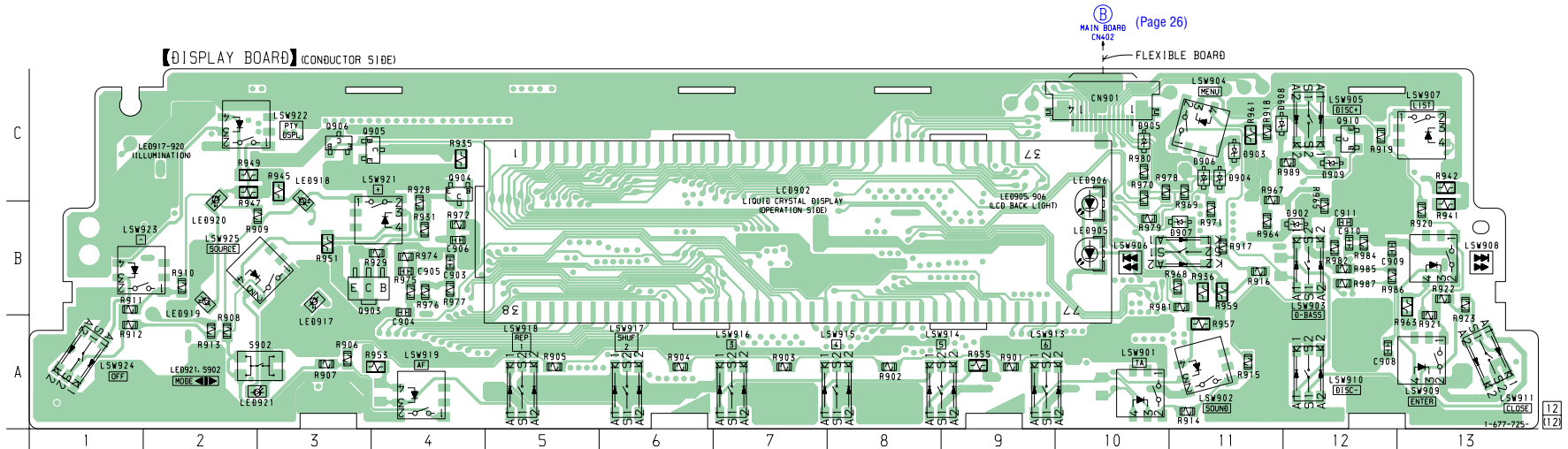
• Semiconductor Location

Ref. No.	Location
D910	C-2
IC901	B-7
IC902	B-8
IC903	C-2
LED901	A-1
LED903	B-2
LED904	A-2
LED907	B-2
LED908	B-2
LED911	B-13
LED912	B-12
LED913	C-2
LED914	C-13
LED915	B-13
LED916	A-13
Q901	B-2
Q902	B-1

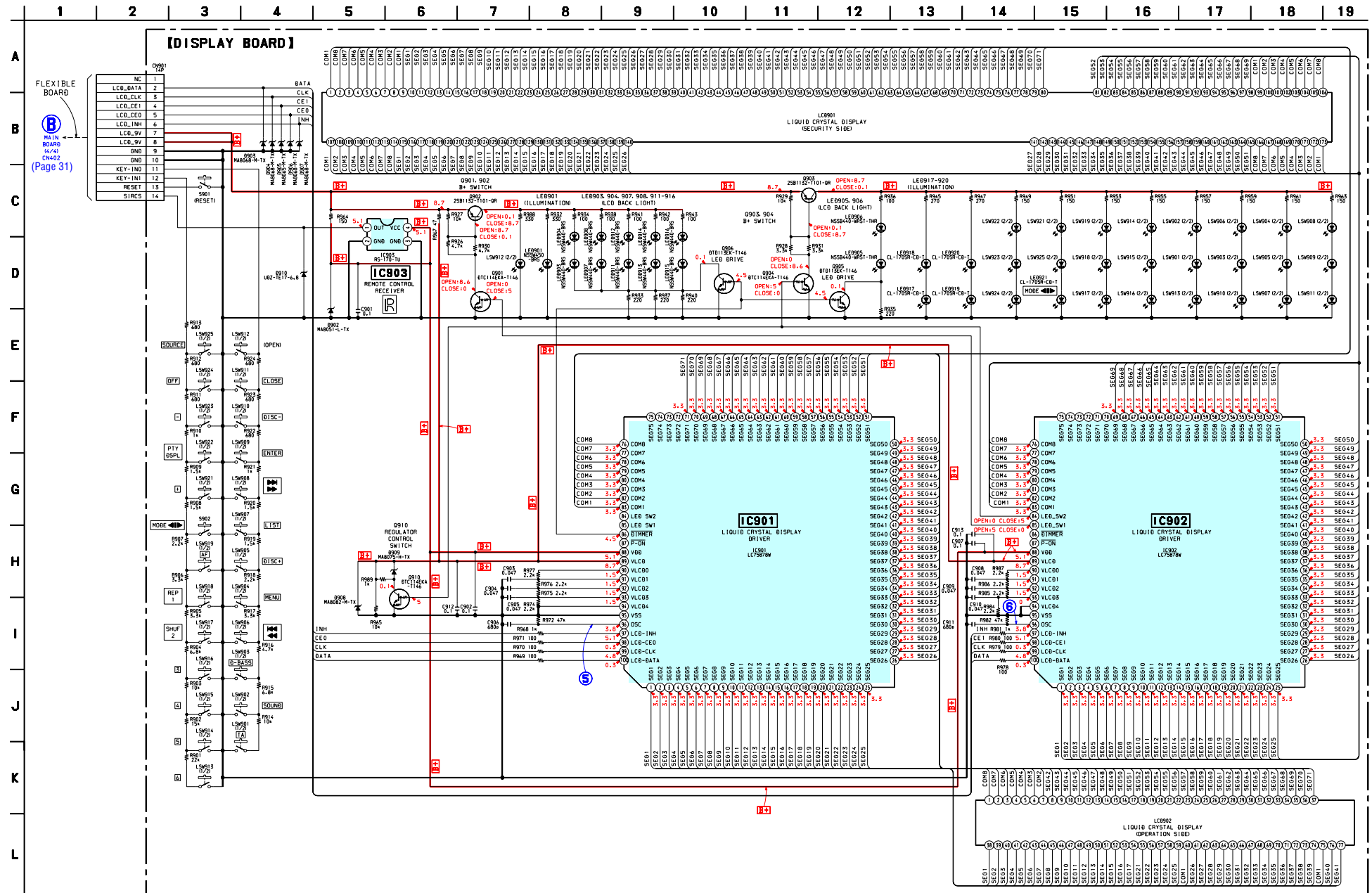


• Semiconductor Location

Ref. No.	Location
D902	B-12
D903	C-11
D904	C-11
D905	C-10
D906	C-11
D907	B-11
D908	C-11
D909	C-12
LED905	B-10
LED906	C-10
LED917	B-3
LED918	C-3
LED919	B-2
LED920	B-2
LED921	A-2
Q903	B-3
Q904	C-4
Q905	C-4
Q906	C-3
Q910	C-12

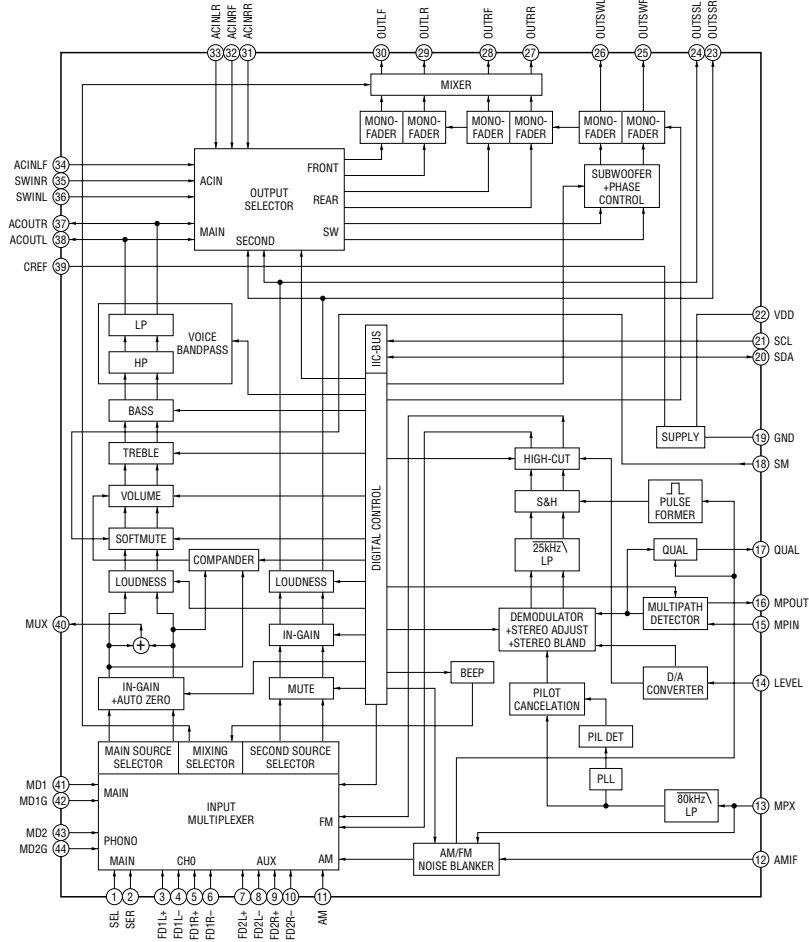


7-15. SCHEMATIC DIAGRAM – DISPLAY Board – • See page 25 for Waveforms.

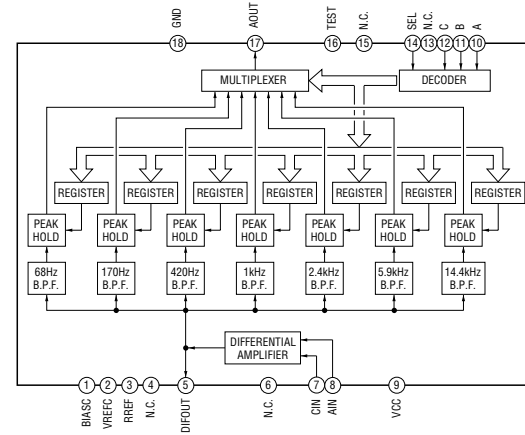


XR-M510

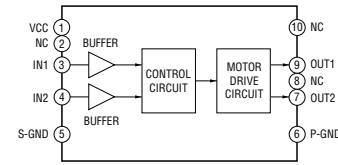
• IC Block Diagrams
- MAIN Board -
IC100 TDA7402TR



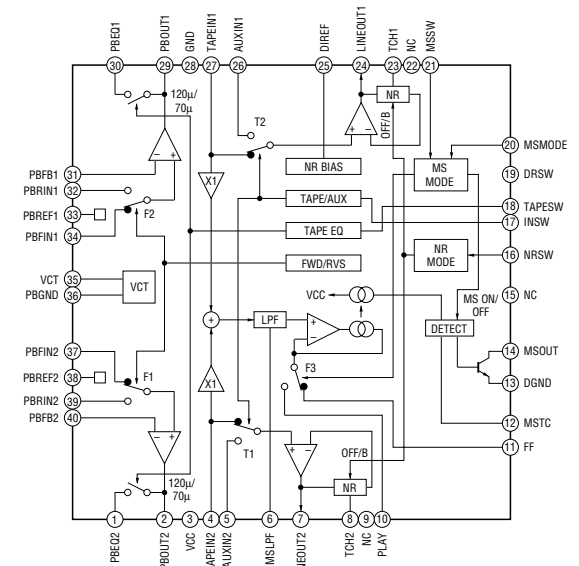
IC102 BA3834F



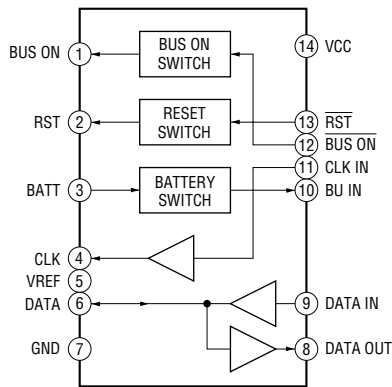
IC400 LB1930M-TLM



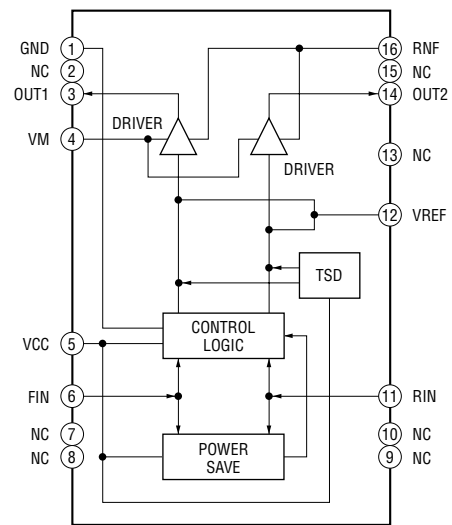
IC401 CXA2510AQ-T4



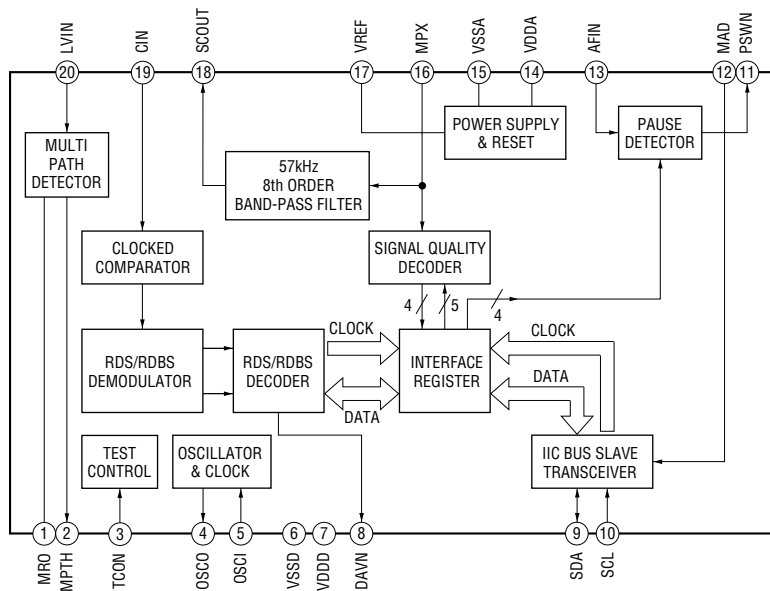
IC501 BA8270FV-E2



IC502 BA6288FS-E2



IC700 SAA6588T-118



7-16. IC PIN FUNCTION DESCRIPTION

• MAIN BOARD IC601 MB90574BPMT-G-257-BND (SYSTEM CONTROLLER)

Pin No.	Pin Name	I/O	Description
1	NC	O	Not used (open)
2	AMSIN	I	Whether a music is present or not from CXA2510AQ (IC401) is detected at auto music sensor “L”: music is present, “H”: music is not present
3	AMSON	O	Tape auto music sensor control signal output to the CXA2510AQ (IC401) “L” is output to lower the gain for audio level at FF/REW mode
4	SP LATCH	O	Serial data latch pulse output for spectrum analyzer section to the liquid crystal display drive controller (IC607)
5	ATT	O	Audio line muting on/off control signal output terminal “H”: muting on
6	SYSRST	O	System reset signal output to the liquid crystal display drive controller (IC607) and SONY bus interface (IC501) “L”: reset
7	N/R	O	Forward/reverse direction control signal output to the CXA2510AQ (IC401) “L”: forward direction, “H”: reverse direction
8	VCC	—	Power supply terminal (+5V)
9	NIL	I	Not used (fixed at “L”)
10	E2PSIO	I/O	Two-way data bus for tuner EEPROM with the FM/AM tuner unit (TUX100)
11	E2PCKO	I/O	Two-way bus clock signal for tuner EEPROM with the FM/AM tuner unit (TUX100)
12	FLS SI	I	Flash memory write data input from the liquid crystal display drive controller (IC607)
13	FLS SO	O	Flash memory write data output to the liquid crystal display drive controller (IC607)
14	BUS-ON	O	Bus on/off control signal output to the liquid crystal display drive controller (IC607) and SONY bus interface (IC501) “L”: bus on
15	BEEP	O	Beep sound drive signal output terminal
16	TELATT	I	Telephone detection signal input terminal At input of “H”, the signal is attenuated by –20 dB
17	UNISI	I	Serial data input from the SONY bus interface (IC501)
18	UNISO	O	Serial data output to the SONY bus interface (IC501)
19	UNICKO	O	Serial clock signal output to the liquid crystal display drive controller (IC607) and SONY bus interface (IC501)
20	IFWIDTH	O	Not used (open)
21, 22	NC	O	Not used (open)
23	MTLOUT	O	METAL on/off control signal output to the CXA2510AQ (IC401) “H”: METAL on
24	SIRCS	I	Sircs remote control signal input from the remote control receiver (IC900, 903)
25	DSPSI	I	Not used (open)
26	DSPSO	O	Not used (open)
27	DSPCKO	O	Not used (open)
28	DSPPLL	O	Not used (open)
29	DSPMST	O	Not used (open)
30	SHIFT	O	Not used (open)
31	VOLATT	O	Pre amplifier muting on/off control signal output to the electrical volume (IC100) “L”: muting on
32	TUATT	O	Muting on/off control signal output of the FM/AM tuner signal “L”: muting on
33	VSS	—	Ground terminal
34	C	—	Connected to coupling capacitor for the power supply
35	DSPLAT	O	Not used (open)
36	DSPRST	O	Not used (open)
37	ANT CUT	O	Tuner system power supply on/off control signal output terminal “H”: tuner power on Not used (open)
38	DVCC	—	Power supply terminal (+5V) (for D/A converter)
39	DVSS	—	Ground terminal (for D/A converter)

Pin No.	Pin Name	I/O	Description
40	MREF	O	Front panel open/close motor (M601) speed control signal output to the BA6288FS (IC502)
41	NC	O	Not used (open)
42	AVCC	—	Power supply terminal (+5V) (for analog system)
43	AVRH	I	Reference voltage (+5V) input terminal (for A/D converter)
44	AVRL	I	Reference voltage (0V) input terminal (for A/D converter) Not used (fixed at “L”)
45	AVSS	—	Ground terminal (for analog system)
46	KEYIN0	I	Key input terminal (A/D input) (LSW901 to LSW912, S900) TA, SOUND, D-BASS, MENU, DISC +, ◀◀ ◀◀, LIST, ▶▶ ▶▶, ENTER, DISC –, CLOSE, OPEN, ▲ keys input
47	KEYIN1	I	Key input terminal (A/D input) (LSW913 to LSW919, LSW921 to LSW925, S902) 6 to 3, SHUF 2, REP 1, AF, +, PTY DSPL, –, OFF, SOURCE, MODE ◀▶ keys input
48	RCIN0	I	Rotary remote commander key input terminal (A/D input)
49	NC	O	Not used (open)
50	QUALITY	I	Noise level detection signal input at SEEK mode (A/D input)
51	FMAGC	I	FM AGC detection signal input from the FM/AM tuner unit (TUX100) (A/D input)
52	MPTH	I	Multi-path detection signal input from the RDS decoder (IC700) (A/D input)
53	VSM	I	FM and AM signal meter voltage detection input from the FM/AM tuner unit (TUX100) (A/D input)
54	VCC	—	Power supply terminal (+5V)
55	ST-BY	O	Standby on/off control signal output terminal “L”: standby mode, “H”: amplifier on
56	NS-MASK	O	Discharge control signal output for the noise detection circuit “H”: discharge
57	REEL	I	Rotation detect signal input from supply reel sensor and take-up reel sensor on the deck mechanism
58	OPEN	I	Not used (open)
59	TAPE ON	O	Tape system power supply on/off control signal output terminal “H”: tape on
60	LMEJ	O	Motor drive signal output to the loading/tape operation motor drive (IC400) “H” active (For the eject direction and reverse side operation) *1
61	LMLOD	O	Motor drive signal output to the loading/tape operation motor drive (IC400) “H” active (For the loading direction and forward side operation) *1
62	CM ON	O	Capstan/reel motor (M901) drive signal output terminal “H”: motor on
63	VSS	—	Ground terminal
64	POS0	I	Tape position (EJECT/FF/REW/REV/FWD mode) detect input from the tape operation switch on the deck mechanism POS0: “L”: EJECT mode, “H”: others mode POS1: “L”: FF and FWD mode, “H”: others mode POS2: “L”: REW mode, “H”: others mode POS3: “L”: REV and EJECT mode, “H”: others mode
65	POS1	I	
66	POS2	I	
67	POS3	I	
68	NC	O	Not used (open)
69	FLASH-W	I	Internal flash memory data write mode detection signal input terminal “L”: data write mode Not used (pull up)
70	I2CSIO	I/O	Two-way data I ² C bus with the FM/AM tuner unit (TUX100), RDS decoder (IC700) and electrical volume (IC100)
71	I2CCKO	O	I ² C bus clock signal output to the FM/AM tuner unit (TUX100), RDS decoder (IC700) and electrical volume (IC100)
72	RCIN1	I	Rotary remote commander shift key input terminal
73	X1A	O	Sub system clock output terminal (32.768 kHz)
74	X0A	I	Sub system clock input terminal (32.768 kHz)
75	DAVN	I	Data transmit completed detection signal input from the RDS decoder (IC700) “H” active
76	CDON-IN	I	CD/MD on/off control signal input terminal (fixed at “L” in this set)

Pin No.	Pin Name	I/O	Description
77	BU-IN	I	Battery detection signal input from the SONY bus interface (IC501) and battery detect circuit “L” is input at low voltage
78	NC	O	Not used (open)
79	KEYACK	I	Input of acknowledge signal for the key entry Acknowledge signal is input to accept function and eject keys in the power off status On at input of “H”
80	AD ON	O	A/D converter power control signal output terminal When the KEYACK (pin 79) that controls reference voltage power for key A/D conversion input is active, “L” is output from this terminal to enable the input
81	$\overline{\text{ACCIN}}$	I	Accessory detection signal input terminal “L”: accessory on
82	FLS PWON	O	Power on/off control signal output of the illumination LED and liquid crystal display driver (IC901, 902) “H”: power on
83	PW-ON	O	Main system power supply on/off control signal output terminal “H”: power on
84	TESTIN	I	Setting terminal for the test mode “L”: test mode, Normally: fixed at “H”
85	RAMBU	I	Internal RAM reset detection signal input from the RN5VD33AA (IC603) Input terminal to check that RAM data are not destroyed due to low voltage This checking is made within 100 msec after reset
86	HSTX	I	Hardware standby input terminal “L”: hardware standby mode Reset signal input in this set
87	MD2	I	Setting terminal for the CPU operational mode (fixed at “L” in this set)
88	MD1	I	Setting terminal for the CPU operational mode (fixed at “H” in this set)
89	MD0	I	Setting terminal for the CPU operational mode (fixed at “H” in this set)
90	RST	I	System reset signal input from the reset signal generator (IC602) and reset switch (S901, 902) “L”: reset “L” is input for several 100 msec after power on, then it changes to “H”
91	VSS	—	Ground terminal
92	X0	I	Main system clock input terminal (3.68 MHz)
93	X1	O	Main system clock output terminal (3.68 MHz)
94	VCC	—	Power supply terminal (+5V)
95	ILLIN	I	Auto dimmer control illumination line detection signal input terminal “L” is input at dimmer detection
96	I-DET	I	Detection signal input from the motor overload detection circuit for the front panel open/close motor (M601) “L” is input when the motor current exceeds the specified value
97	MOT-	O	Front panel open/close motor (M601) drive signal (in panel close direction) output to the BA6288FS (IC502) “H” active *2
98	MOT+	O	Front panel open/close motor (M601) drive signal (in panel open direction) output to the BA6288FS (IC502) “H” active *2
99	CLOSE SW	I	Front panel open/close detect switch input terminal “L” is input when the front panel is closed
100	OPEN SW	I	Front panel open/close detect switch input terminal “L” is input when the front panel is opened
101 to 103	NC	I	Not used (fixed at “H”)
104, 105	DSTSEL1, DSTSEL2	I	Destination setting terminal (A/D input) *3
106	$\overline{\text{BOOT}}$	O	Serial data output to the liquid crystal display drive controller (IC607)
107	DSP GAIN	O	Not used (open)
108	DSP ON	O	Power supply on/off control signal output terminal “H”: DSP on Not used (open)
109	NC	O	Not used (open)
110	EMPH-IN	I	Emphasis control signal input terminal Not used (fixed at “L”)
111	PACK SW	I	Cassette in/out detect switch (S901) “L”: cassette in
112	4V SEL	I	Input terminal of whether line driver is mounted or not is detected “H”: line driver is not mounted
113	P SEL	I	Power select input terminal Not used (fixed at “L”)

Pin No.	Pin Name	I/O	Description
114	TUNON	O	Tuner system power supply on/off control signal output terminal “H”: tuner power on
115, 116	LED SW1, LED SW2	O	Security/operation side select control signal output to the liquid crystal display drive controller (IC607)
117, 118	NC	O	Not used (open)
119	VSS	—	Ground terminal
120	DOLBY	O	Dolby-B on/off select signal output to the CXA2510AQ (IC401) “H”: dolby on

*1 Loading/tape operation motor control

Terminal \ Mode	STOP	LOADING/ FORWARD	EJECT/ REVERSE	BRAKE
LMLOD (pin ⑥1)	“L”	“H”	“L”	“H”
LMEJ (pin ⑥0)	“L”	“L”	“H”	“H”

*2 Front panel open/close motor (M601) control

Terminal \ Mode	STOP	FRONT PANEL OPEN	FRONT PANEL OPEN	BRAKE
MOT- (pin ⑨7)	“L”	“L”	“H”	“H”
MOT+ (pin ⑨8)	“L”	“H”	“L”	“H”

*3 Destination setting

Terminal \ Model	TYPE A *	TYPE B *	South European
DSTSEL1 (pin ⑩4)	“L”	“H”	“H”
DSTSEL2 (pin ⑩5)	“L”	“H”	“L”

* Please refer to servicing notes (page 3) for system of TYPE A and B.

• MAIN BOARD IC607 HD6432355A26F (LIQUID CRYSTAL DISPLAY DRIVE CONTROLLER)

Pin No.	Pin Name	I/O	Description
1, 2	PG3, PG4	O	Not used (open)
3	VSS	—	Ground terminal
4	NC	—	Not used (open)
5	VCC	—	Power supply terminal (+5V)
6 to 9	PC0 to PC3	O	Not used (open)
10	VSS	—	Ground terminal
11 to 14	PC4 to PC7	O	Not used (open)
15 to 18	PB0 to PB3	O	Not used (open)
19	VSS	—	Ground terminal
20 to 23	PB4 to PB7	O	Not used (open)
24 to 27	PA0 to PA3	O	Not used (open)
28	VSS	—	Ground terminal
29 to 32	PA4/IRQ4 to PA7/IRQ7	O	Not used (open)
33	SP-LAT	I	Serial data latch pulse input for spectrum display from the system controller (IC601) “H” active
34	P66/IRQ2	O	Not used (open)
35, 36	VSS	—	Ground terminal
37	P65/IRQ1	O	Not used (open)
38	BUS-ON	I	Bus on/off control signal output from the system controller (IC601) “L”: bus on
39	VCC	—	Power supply terminal (+5V)
40	PE0	O	Output select control signal output to the BA3834F (IC102) *1
41	PE1	O	
42	PE2	O	
43	PE3	O	
44	VSS	—	Ground terminal
45	DSP SEL	I	Spectrum analyzer display data select signal input from the BA3834F (IC102)
46, 47	LED SW1, LED SW2	I	Security/operation side select control signal input from the system controller (IC601) “H” active
48	PE7	O	Not used (open)
49	BU-IN	I	Battery detect signal input from the SONY bus interface (IC501) and battery detect circuit “L” is input at low voltage
50	LINK-OFF	O	Link on/off control signal output for the SONY bus “L”: link on, “H”: link off
51	PD2	O	Not used (open)
52	ILL-ON	O	Power on/off control signal output of the illumination LED “H”: power on

*1 Output select logic table

Terminal \ IC102 (pin ⑰) AOUT	GND	GND	68Hz	170Hz	420Hz	1kHz	2.4kHz	5.9kHz	14.4kHz
PE0 (pin ④①)	×	0	0	0	0	1	1	1	1
PE1 (pin ④②)	×	0	0	1	1	0	0	1	1
PE2 (pin ④③)	×	0	1	0	1	0	1	0	1
PE3 (pin ④④)	0	1	1	1	1	1	1	1	1

“×” is don't care

Pin No.	Pin Name	I/O	Description
53	VSS	—	Ground terminal
54, 55	NC	O	Not used (open)
56	PD6	O	Not used (open)
57	BOOT	I	Serial data input at the flash memory writing mode “L” is input when writing change
58	VCC	—	Power supply terminal (+5V)
59	NC	O	Not used (open)
60	TX/LCD-DATA	O	Display serial data output to the liquid crystal display driver (IC901, 902) Output terminal for UART transfer data when writing into internal flash memory data
61	SP-SI	I	Spectrum analyzer display serial data input terminal Not used (fixed at “L”)
62	RX	I	Input terminal for UART transfer data when writing into internal flash memory data
63	SP-SCK	I	Spectrum analyzer display serial data transfer clock signal input terminal Not used (fixed at “L”)
64	LCD-SCK	O	Display serial data transfer clock signal output to the liquid crystal display driver (IC901, 902)
65	VSS	—	Ground terminal
66	LCDCE0	O	Chip enable signal output to the liquid crystal display driver (IC901) “H” active
67, 68	VSS	—	Ground terminal
69	LCD-INH1	O	Blank indicate control signal output to the liquid crystal display driver (IC901, 902) “L”: no display
70	LCDCE1	O	Chip enable signal output to the liquid crystal display driver (IC902) “H” active
71	LCD-INH2	O	Not used (open)
72 to 78	P27 to P21	O	Not used (open)
79	P20	O	Flash memory data write control signal output terminal “H”: active
80	FWE (L)	I	Flash memory data write enable signal input terminal
81	$\overline{\text{RES}}$	I	System reset signal input from the reset signal generator (IC602) and reset switch (S901, 902) “L” is input for several 100 msec after power on, then it changes to “H”
82	NMI (H)	I	Non maskable interrupt input terminal Connect the backup detect circuit (BU-IN pin ④) in this set
83	STBY (H)	I	Hard ware standby input terminal Not used (pull down)
84	VCC	—	Power supply terminal (+5V)
85	XTAL	O	System clock output terminal (18.432 MHz)
86	EXTAL	I	System clock input terminal (18.432 MHz)
87	VSS	—	Ground terminal
88	PF7	O	Not used (open)
89	VCC	—	Power supply terminal (+5V)
90 to 96	PF6 to PF0	O	Not used (open)
97	UNI-SO	O	Serial data output to the SONY bus interface (IC501)
98	UNI-SI	I	Serial data input from the SONY bus interface (IC501)
99, 100	VSS	—	Ground terminal
101	UNICKI	I	Serial clock signal input from the system controller (IC601)
102	P53/ADTRG	O	Not used (open)
103	AVCC	—	Power supply terminal (+5V) (for A/D converter)
104	VREF	I	Reference voltage (+5V) input terminal (for A/D converter)
105	SPE-IN	I	Peak hold voltage detect signal input from the BA3834F (IC102)
106 to 110	P41/AN1 to P45/AN5	I	Not used (fixed at “L”)
111	P46/AN6/DA0	I	Not used (fixed at “L”)
112	P47/AN7/DA1	I	Not used (fixed at “L”)

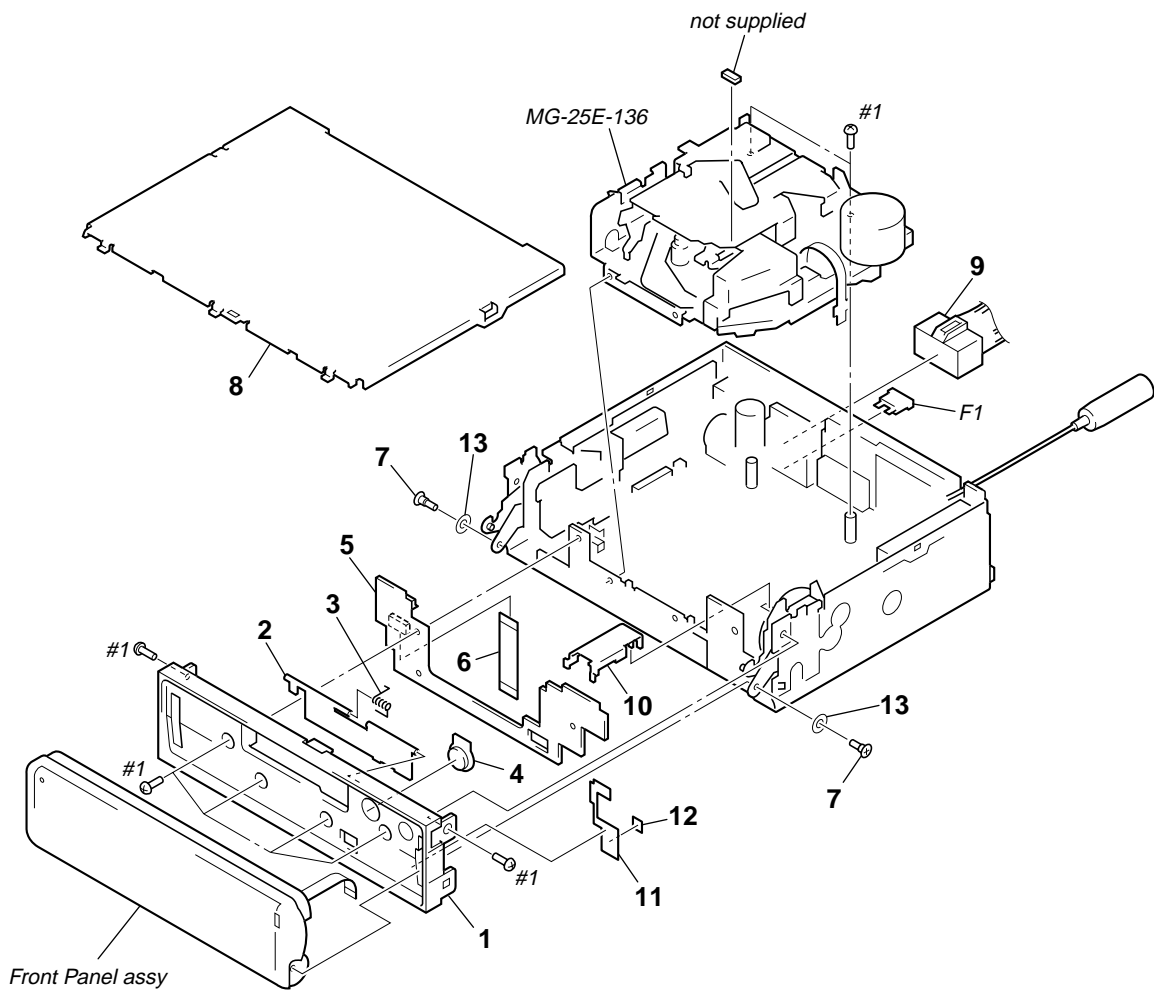
Pin No.	Pin Name	I/O	Description
113	AVSS	—	Ground terminal (for A/D converter)
114	VSS	—	Ground terminal
115 to 122	P17 to P10	O	Not used (open)
123	MD0 (H)	I	Setting terminal for the CPU operational mode (fixed at “H”)
124	MD1 (H)	I	Setting terminal for the CPU operational mode (fixed at “H”)
125	MD2 (H)	I	Setting terminal for the CPU operational mode (fixed at “H”)
126 to 128	PG0 to PG2	O	Not used (open)

SECTION 8 EXPLODED VIEWS

NOTE:

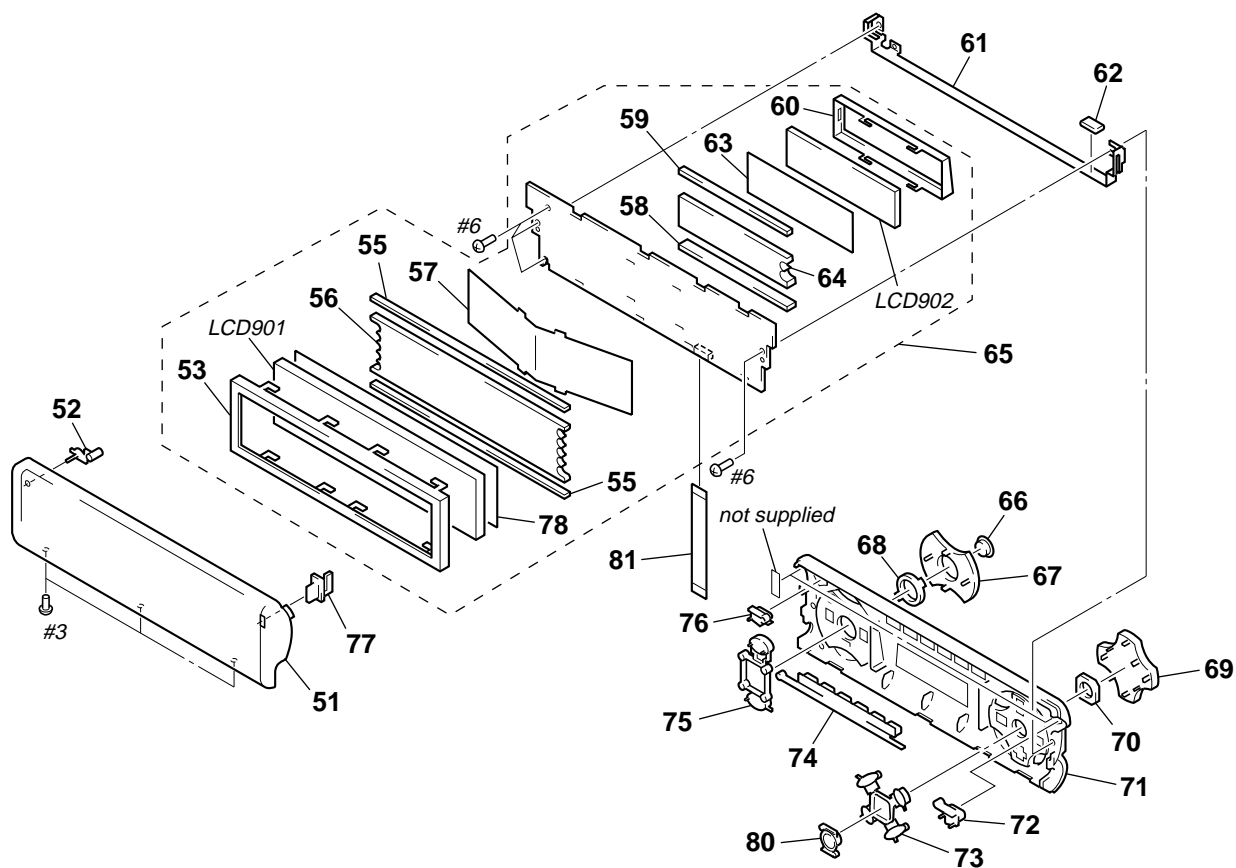
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- Color Indication of Appearance Parts
Example:
KNOB, BALANCE (WHITE) . . . (RED)
 ↑ ↑
 Parts Color Cabinet's Color
- Items marked "*" are not stocked since they are seldom required for routine service. Some 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.
- Please refer to servicing notes (page 3) for system of TYPE A and B.

(1) SUB PANEL SECTION



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
1	X-3380-205-1	PANEL (XR) SUB ASSY, SUB		* 8	3-041-156-11	COVER	
2	3-044-475-11	DOOR, CASSETTE		9	1-776-527-71	CORD (WITH CONNECTOR) (ISO) (POWER)	
3	3-044-482-01	SPRING (CASSETTE DOOR)		* 10	3-045-762-01	COVER (FLEXIBLE)	
4	3-044-478-01	BUTTON (EJECT) (▲)		* 11	3-048-640-01	SHEET (SUB PANEL)	
* 5	1-680-701-11	SUB BOARD		* 12	3-049-388-01	CUSHION (SUB PANEL)	
6	1-783-268-31	CABLE, FLAT		13	3-049-771-01	SPACER (ARM)	
7	3-045-756-01	SCREW (PANEL)		F1	1-532-877-11	FUSE (BLADE TYPE) (AUTO FUSE) (10A)	

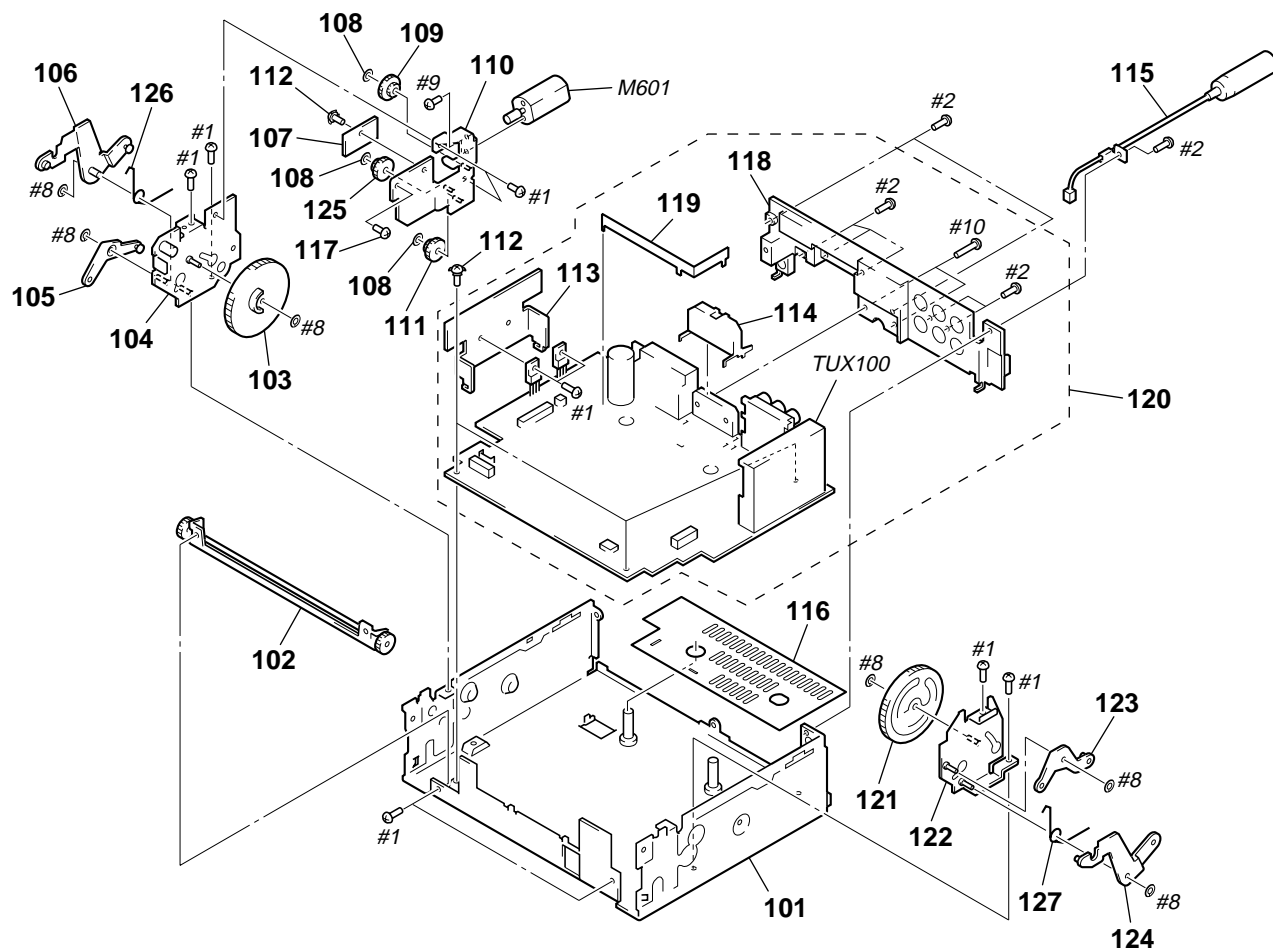
(2) FRONT PANEL SECTION



Ref. No.	Part No.	Description	Remark
51	X-3378-768-1	PANEL (MAIN) ASSY, FRONT	
52	3-045-781-01	BUTTON (RESET MAIN)	
* 53	3-045-702-01	BRACKET (LCD) (MAIN)	
55	1-694-685-11	CONDUCTIVE BOARD, CONNECTION	
* 56	3-045-703-01	PLATE (LCD) (MAIN), LIGHT GUIDE	
* 57	3-045-705-01	SHEET (MAIN), REFLECTION	
58	1-694-686-11	CONDUCTIVE BOARD, CONNECTION	
59	1-694-687-11	CONDUCTIVE BOARD, CONNECTION	
* 60	3-045-706-01	BRACKET (LCD) (SUB)	
* 61	X-3378-710-1	BRACKET (PANEL) ASSY	
* 62	3-049-532-01	CUSHION (PANEL)	
* 63	3-045-708-01	SHEET (SUB), DIFFUSION	
* 64	3-045-707-01	PLATE (SUB) SUB, LIGHT GUIDE	
* 65	A-3283-095-A	DISPLAY BOARD, COMPLETE	
66	3-045-726-01	BUTTON (SOURCE)	
67	3-045-725-01	BUTTON (+ / -)	

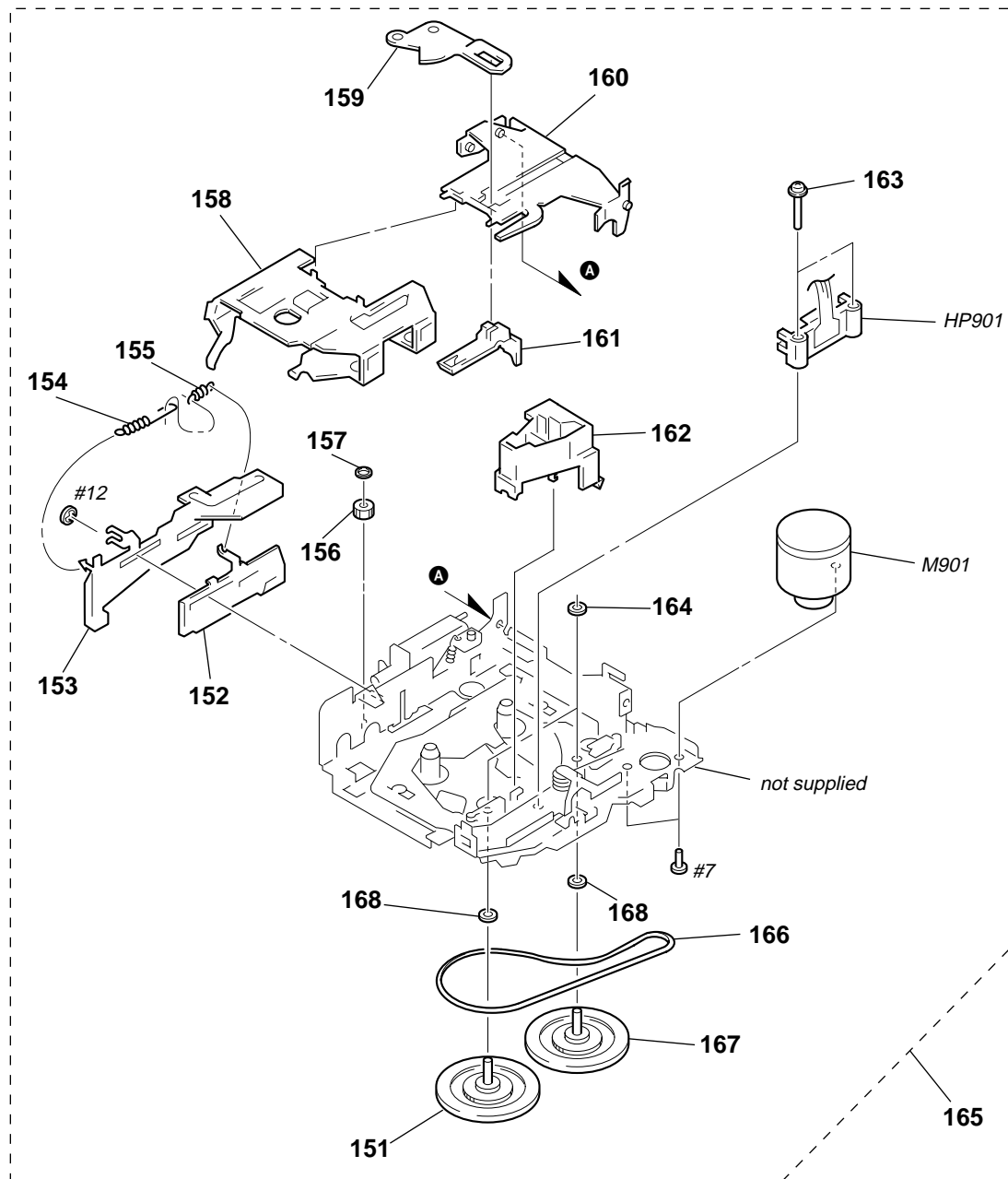
Ref. No.	Part No.	Description	Remark
68	3-045-727-01	PLATE (RING), LIGHT GUIDE	
69	3-045-730-01	BUTTON (SEEK, DSO) (DISC + ►►►► - DISC. ◀◀◀◀)	
70	3-045-734-01	CUSHION (SEEK)	
71	3-044-469-11	PANEL (SUB), FRONT	
72	3-045-733-01	BUTTON (CLOSE)	
73	3-045-731-01	BUTTON (ENTER) (LIST. ENTER. SOUND. MENU)	
74	3-045-724-11	BUTTON (6KEY) (AF. 1. 2. 3. 4. 5. 6. TA)	
75	3-045-728-11	BUTTON (MODE) (DSPL. MODE ◀▶)	
76	3-045-729-01	BUTTON (OFF)	
77	3-045-735-01	BUTTON (OPEN)	
* 78	3-045-704-01	SHEET (MAIN), DIFFUSION	
80	3-045-732-01	BUTTON (D-BASS)	
81	1-677-340-11	FLEXIBLE BOARD	
LCD901	1-804-312-11	DISPLAY PANEL, LIQUID CRYSTAL	
LCD902	1-803-914-11	DISPLAY PANEL, LIQUID CRYSTAL	

(3) MAIN BOARD SECTION



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
* 101	X-3378-559-1	CHASSIS (XR) ASSY		117	3-922-535-11	SCREW (+BTT)	
102	A-3315-066-A	SHAFT ASSY, DRIVE		* 118	3-044-471-11	HEAT SINK	
103	3-045-722-01	CAM (L)		* 119	3-047-525-01	PLATE (BUS BAR), GROUND	
* 104	X-3378-713-1	BRACKET (L) ASSY		* 120	A-3283-093-A	MAIN BOARD, COMPLETE (South European)	
105	X-3378-717-1	ARM (B-L) ASSY		* 120	A-3283-094-A	MAIN BOARD, COMPLETE (TYPE A)	
106	X-3378-715-1	ARM (A-L) ASSY		* 120	A-3283-097-A	MAIN BOARD, COMPLETE (TYPE B)	
107	A-3326-298-A	SWITCH BOARD, COMPLETE		121	3-045-723-01	CAM (R)	
108	3-342-940-01	WASHER (M)		* 122	X-3378-714-1	BRACKET (R) ASSY	
109	3-045-713-01	GEAR (A)		123	X-3378-718-1	ARM (B-R) ASSY	
* 110	X-3378-711-1	BRACKET (MOTOR) ASSY		124	X-3378-716-1	ARM (A-R) ASSY	
111	3-045-715-01	GEAR (C)		125	3-045-714-01	GEAR (B)	
112	3-376-464-11	SCREW (+PTT 2.6X6), GROUND POINT		126	3-048-645-01	SPRING (ARM L)	
* 113	3-045-759-01	HEAT SINK (REG)		127	3-048-644-01	SPRING (ARM R)	
* 114	3-019-565-01	BRACKET (IC)		M601	X-3378-769-1	MOTOR ASSY (FRONT PANEL OPEN/CLOSE)	
115	1-777-246-41	CORD (WITH CONNECTOR) (ANT)		TUX100	A-3220-812-A	FM/AM TUNER UNIT (TUX-020)	
* 116	3-049-689-01	SHEET, INSULATING					

(4) MECHANISM DECK SECTION
(MG-25E-136)



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
151	A-3291-667-A	CLUTCH (FR) ASSY		161	3-933-346-01	CATCHER	
* 152	3-019-130-01	LEVER (LDG-A)		162	3-933-344-01	GUIDE (C)	
* 153	3-019-131-01	LEVER (LDG-B)		163	3-014-798-01	SCREW (HEAD), SPECIAL	
154	3-020-539-01	SPRING (LD-1), TENSION		164	3-364-151-01	WASHER	
155	3-020-540-01	SPRING (LD-2), TENSION		165	A-3220-607-A	MECHANISM DECK ASSY	
156	3-020-542-01	GEAR (LOADING FT)		166	3-017-302-01	BELT (25)	
157	3-341-753-11	WASHER, POLYETHYLENE		167	3-026-636-01	FLYWHEEL (F)	
158	3-020-533-01	HOUSING		168	3-701-437-21	WASHER	
* 159	3-020-532-01	ARM (SUCTION)		HP901	1-500-157-21	HEAD, MAGNETIC (PLAYBACK)	
160	3-020-534-01	HANGER		M901	A-3291-665-A	MOTOR ASSY, MAIN (CAPSTAN/REEL)	

SECTION 9 ELECTRICAL PARTS LIST

DISPLAY

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS
All resistors are in ohms.
METAL: Metal-film resistor.
METAL OXIDE: Metal oxide-film resistor.
F: nonflammable
- Please refer to servicing notes (page 3) for system of TYPE A and B.

- 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, μ : μ , for example:
 - μ A. . . : μ A. . . μ PA. . . : μ PA. . .
 - μ PB. . . : μ PB. . . μ PC. . . : μ PC. . .
 - μ PD. . . : μ PD. . .
- CAPACITORS
 μ F: μ F
- COILS
 μ H: μ H

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

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
*	A-3283-095-A	DISPLAY BOARD, COMPLETE *****				< IC >	
	1-694-685-11	CONDUCTIVE BOARD, CONNECTION		IC901	8-759-653-26	IC LC75878W	
	1-694-686-11	CONDUCTIVE BOARD, CONNECTION		IC902	8-759-653-26	IC LC75878W	
	1-694-687-11	CONDUCTIVE BOARD, CONNECTION		IC903	8-749-012-25	IC RS-170-TU	
*	3-045-702-01	BRACKET (LCD) (MAIN)				< LIQUID CRYSTAL DISPLAY >	
*	3-045-703-02	PLATE (LCD) (MAIN), LIGHT GUIDE		LCD901	1-804-312-11	DISPLAY PANEL, LIQUID CRYSTAL	
				LCD902	1-803-914-11	DISPLAY PANEL, LIQUID CRYSTAL	
*	3-045-704-01	SHEET (MAIN), DIFFUSION				< LED >	
*	3-045-705-03	SHEET (MAIN), REFLECTION		LED901	8-719-079-49	LED NSSW450-BRSTVR (ILLUMINATION)	
*	3-045-706-01	BRACKET (LCD) (SUB)		LED903	8-719-076-58	LED NSSW440-BRS (LCD BACK LIGHT)	
*	3-045-707-01	PLATE (SUB) SUB, LIGHT GUIDE		LED904	8-719-076-58	LED NSSW440-BRS (LCD BACK LIGHT)	
*	3-045-708-01	SHEET (SUB), DIFFUSION		LED905	8-719-079-26	LED NSSB440-WRST-THR	(LCD BACK LIGHT)
		< CAPACITOR >		LED906	8-719-079-26	LED NSSB440-WRST-THR	(LCD BACK LIGHT)
C901	1-164-004-11	CERAMIC CHIP 0.1 μ F	10% 25V				
C902	1-164-004-11	CERAMIC CHIP 0.1 μ F	10% 25V				
C903	1-165-176-11	CERAMIC CHIP 0.047 μ F	10% 16V				
C904	1-165-176-11	CERAMIC CHIP 0.047 μ F	10% 16V				
C905	1-165-176-11	CERAMIC CHIP 0.047 μ F	10% 16V				
C906	1-115-412-11	CERAMIC CHIP 680PF	5% 25V				
C907	1-164-004-11	CERAMIC CHIP 0.1 μ F	10% 25V				
C908	1-165-176-11	CERAMIC CHIP 0.047 μ F	10% 16V				
C909	1-165-176-11	CERAMIC CHIP 0.047 μ F	10% 16V				
C910	1-165-176-11	CERAMIC CHIP 0.047 μ F	10% 16V				
C911	1-115-412-11	CERAMIC CHIP 680PF	5% 25V				
C912	1-164-004-11	CERAMIC CHIP 0.1 μ F	10% 25V				
C913	1-164-004-11	CERAMIC CHIP 0.1 μ F	10% 25V				
		< CONNECTOR >		LED907	8-719-076-58	LED NSSW440-BRS (LCD BACK LIGHT)	
CN901	1-794-184-11	CONNECTOR, FPC (ZIF) 14P		LED908	8-719-076-58	LED NSSW440-BRS (LCD BACK LIGHT)	
		< DIODE >		LED911	8-719-076-58	LED NSSW440-BRS (LCD BACK LIGHT)	
D902	8-719-422-41	DIODE MA8051-L-TX		LED912	8-719-076-58	LED NSSW440-BRS (LCD BACK LIGHT)	
D903	8-719-977-12	DIODE MA8068-M-TX		LED913	8-719-076-58	LED NSSW440-BRS (LCD BACK LIGHT)	
D904	8-719-977-12	DIODE MA8068-M-TX		LED914	8-719-076-58	LED NSSW440-BRS (LCD BACK LIGHT)	
D905	8-719-977-12	DIODE MA8068-M-TX		LED915	8-719-076-58	LED NSSW440-BRS (LCD BACK LIGHT)	
D906	8-719-977-12	DIODE MA8068-M-TX		LED916	8-719-076-58	LED NSSW440-BRS (LCD BACK LIGHT)	
D907	8-719-977-12	DIODE MA8068-M-TX		LED917	8-719-078-39	LED CL-170SR-CD-T (ILLUMINATION)	
D908	8-719-420-14	DIODE MA8082-M (TX)		LED918	8-719-078-39	LED CL-170SR-CD-T (ILLUMINATION)	
D909	8-719-422-80	DIODE MA8075-H-TX		LED919	8-719-078-39	LED CL-170SR-CD-T (ILLUMINATION)	
D910	8-719-978-33	DIODE UDZS-TE17-6.8B		LED920	8-719-078-39	LED CL-170SR-CD-T (ILLUMINATION)	
				LED921	8-719-078-39	LED CL-170SR-CD-T (MODE ◀▶)	
						< SWITCH >	
				LSW901	1-771-476-11	SWITCH, KEY BOARD (WITH LED) (TA)	
				LSW902	1-771-476-11	SWITCH, KEY BOARD (WITH LED) (SOUND)	
				LSW903	1-771-883-11	SWITCH, TACTILE (WITH LED) (D-BASS)	
				LSW904	1-771-476-11	SWITCH, KEY BOARD (WITH LED) (MENU)	
				LSW905	1-771-883-11	SWITCH, TACTILE (WITH LED) (DISC +)	
				LSW906	1-771-883-11	SWITCH, TACTILE (WITH LED) (◀◀ ▶▶)	
				LSW907	1-771-476-11	SWITCH, KEY BOARD (WITH LED) (LIST)	
				LSW908	1-771-476-11	SWITCH, KEY BOARD (WITH LED) (▶▶ ▶▶)	
				LSW909	1-771-476-11	SWITCH, KEY BOARD (WITH LED) (ENTER)	
				LSW910	1-771-883-11	SWITCH, TACTILE (WITH LED) (DISC -)	
				LSW911	1-771-883-11	SWITCH, TACTILE (WITH LED) (CLOSE)	

Ref. No.	Part No.	Description	Remark
LSW912	1-771-476-11	SWITCH, KEY BOARD (WITH LED) (OPEN)	
LSW913	1-771-883-11	SWITCH, TACTILE (WITH LED) (6)	
LSW914	1-771-883-11	SWITCH, TACTILE (WITH LED) (5)	
LSW915	1-771-883-11	SWITCH, TACTILE (WITH LED) (4)	
LSW916	1-771-883-11	SWITCH, TACTILE (WITH LED) (3)	
LSW917	1-771-883-11	SWITCH, TACTILE (WITH LED) (SHUF 2)	
LSW918	1-771-883-11	SWITCH, TACTILE (WITH LED) (REP 1)	
LSW919	1-771-476-11	SWITCH, KEY BOARD (WITH LED) (AF)	
LSW921	1-771-476-11	SWITCH, KEY BOARD (WITH LED) (+)	
LSW922	1-771-476-11	SWITCH, KEY BOARD (WITH LED) (PTY DSPL)	
LSW923	1-771-476-11	SWITCH, KEY BOARD (WITH LED) (-)	
LSW924	1-771-883-11	SWITCH, TACTILE (WITH LED) (OFF)	
LSW925	1-771-476-11	SWITCH, KEY BOARD (WITH LED) (SOURCE)	
< TRANSISTOR >			
Q901	8-729-900-53	TRANSISTOR DTC114EKA-T146	
Q902	8-729-106-60	TRANSISTOR 2SB1132-T101-QR	
Q903	8-729-106-60	TRANSISTOR 2SB1132-T101-QR	
Q904	8-729-900-53	TRANSISTOR DTC114EKA-T146	
Q905	8-729-904-66	TRANSISTOR DTD113EK-T-146	
Q906	8-729-904-66	TRANSISTOR DTD113EK-T-146	
Q910	8-729-900-53	TRANSISTOR DTC114EKA-T146	
< RESISTOR >			
R901	1-218-879-11	RES-CHIP 22K 2% 1/16W	
R902	1-218-875-11	RES-CHIP 15K 2% 1/16W	
R903	1-218-871-11	RES-CHIP 10K 2% 1/16W	
R904	1-218-867-11	RES-CHIP 6.8K 2% 1/16W	
R905	1-218-859-11	RES-CHIP 3.3K 2% 1/16W	
R906	1-218-859-11	RES-CHIP 3.3K 2% 1/16W	
R907	1-218-855-11	RES-CHIP 2.2K 2% 1/16W	
R908	1-218-851-11	RES-CHIP 1.5K 2% 1/16W	
R909	1-218-851-11	RES-CHIP 1.5K 2% 1/16W	
R910	1-218-847-11	RES-CHIP 1K 2% 1/16W	
R911	1-219-286-11	RES-CHIP 680 2% 1/16W	
R912	1-219-286-11	RES-CHIP 680 2% 1/16W	
R913	1-219-286-11	RES-CHIP 680 2% 1/16W	
R914	1-218-871-11	RES-CHIP 10K 2% 1/16W	
R915	1-218-867-11	RES-CHIP 6.8K 2% 1/16W	
R916	1-218-863-11	RES-CHIP 4.7K 2% 1/16W	
R917	1-218-859-11	RES-CHIP 3.3K 2% 1/16W	
R918	1-218-855-11	RES-CHIP 2.2K 2% 1/16W	
R919	1-218-851-11	RES-CHIP 1.5K 2% 1/16W	
R920	1-218-851-11	RES-CHIP 1.5K 2% 1/16W	
R921	1-218-847-11	RES-CHIP 1K 2% 1/16W	
R922	1-219-286-11	RES-CHIP 680 2% 1/16W	
R923	1-219-286-11	RES-CHIP 680 2% 1/16W	
R924	1-219-286-11	RES-CHIP 680 2% 1/16W	
R926	1-216-829-11	METAL CHIP 4.7K 5% 1/16W	
R927	1-216-833-11	METAL CHIP 10K 5% 1/16W	
R928	1-216-827-11	METAL CHIP 3.3K 5% 1/16W	
R929	1-216-833-11	METAL CHIP 10K 5% 1/16W	
R930	1-216-829-11	METAL CHIP 4.7K 5% 1/16W	
R931	1-216-827-11	METAL CHIP 3.3K 5% 1/16W	
R932	1-216-037-00	METAL CHIP 330 5% 1/10W	
R933	1-216-033-00	METAL CHIP 220 5% 1/10W	
R934	1-216-025-11	RES-CHIP 100 5% 1/10W	
R935	1-216-033-00	METAL CHIP 220 5% 1/10W	

Ref. No.	Part No.	Description	Quantity	Remark
R936	1-216-025-11	RES-CHIP	100 5%	1/10W
R937	1-216-033-00	METAL CHIP	220 5%	1/10W
R938	1-216-025-11	RES-CHIP	100 5%	1/10W
R940	1-216-033-00	METAL CHIP	220 5%	1/10W
R941	1-216-025-11	RES-CHIP	100 5%	1/10W
R942	1-216-025-11	RES-CHIP	100 5%	1/10W
R943	1-216-025-11	RES-CHIP	100 5%	1/10W
R945	1-216-035-00	METAL CHIP	270 5%	1/10W
R947	1-216-035-00	METAL CHIP	270 5%	1/10W
R949	1-216-029-00	METAL CHIP	150 5%	1/10W
R951	1-216-029-00	METAL CHIP	150 5%	1/10W
R953	1-216-029-00	METAL CHIP	150 5%	1/10W
R955	1-216-029-00	METAL CHIP	150 5%	1/10W
R957	1-216-029-00	METAL CHIP	150 5%	1/10W
R959	1-216-029-00	METAL CHIP	150 5%	1/10W
R961	1-216-029-00	METAL CHIP	150 5%	1/10W
R963	1-216-029-00	METAL CHIP	150 5%	1/10W
R964	1-216-811-11	METAL CHIP	150 5%	1/16W
R965	1-216-833-11	METAL CHIP	10K 5%	1/16W
R967	1-216-805-11	METAL CHIP	47 5%	1/16W
R968	1-216-821-11	METAL CHIP	1K 5%	1/16W
R969	1-216-809-11	METAL CHIP	100 5%	1/16W
R970	1-216-809-11	METAL CHIP	100 5%	1/16W
R971	1-216-809-11	METAL CHIP	100 5%	1/16W
R972	1-216-841-11	METAL CHIP	47K 5%	1/16W
R974	1-216-825-11	METAL CHIP	2.2K 5%	1/16W
R975	1-216-825-11	METAL CHIP	2.2K 5%	1/16W
R976	1-216-825-11	METAL CHIP	2.2K 5%	1/16W
R977	1-216-825-11	METAL CHIP	2.2K 5%	1/16W
R978	1-216-809-11	METAL CHIP	100 5%	1/16W
R979	1-216-809-11	METAL CHIP	100 5%	1/16W
R980	1-216-809-11	METAL CHIP	100 5%	1/16W
R981	1-216-821-11	METAL CHIP	1K 5%	1/16W
R982	1-216-841-11	METAL CHIP	47K 5%	1/16W
R984	1-216-825-11	METAL CHIP	2.2K 5%	1/16W
R985	1-216-825-11	METAL CHIP	2.2K 5%	1/16W
R986	1-216-825-11	METAL CHIP	2.2K 5%	1/16W
R987	1-216-825-11	METAL CHIP	2.2K 5%	1/16W
R988	1-216-037-00	METAL CHIP	330 5%	1/10W
R989	1-216-821-11	METAL CHIP	1K 5%	1/16W
< SWITCH >				
S901	1-771-027-21	SWITCH, KEYBOARD (WITH LED) (RESET)		
S902	1-771-884-11	SWITCH, TACTILE (WITH LED) (MODE ◀▶)		

*	A-3283-093-A	MAIN BOARD, COMPLETE (South European)		
*	A-3283-094-A	MAIN BOARD, COMPLETE (TYPE A)		
*	A-3283-097-A	MAIN BOARD, COMPLETE (TYPE B)		

*	3-019-565-01	BRACKET (IC)		
*	3-044-471-11	HEAT SINK		
*	3-045-759-01	HEAT SINK (REG)		
*	3-047-525-01	PLATE (BUS BAR), GROUND		
	7-685-792-09	SCREW +PTT 2.6X6 (S)		
	7-685-793-09	SCREW +PTT 2.6X8 (S)		
	7-685-795-09	SCREW +PTT 2.6X12 (S)		

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
		< BUZZER >		C308	1-162-919-11	CERAMIC CHIP 22PF 5%	50V
BZ600	1-504-920-11	BUZZER		C309	1-162-919-11	CERAMIC CHIP 22PF 5%	50V
		< CAPACITOR/SHORT >		C310	1-162-919-11	CERAMIC CHIP 22PF 5%	50V
C101	1-115-156-11	CERAMIC CHIP 1uF	10V	C311	1-162-919-11	CERAMIC CHIP 22PF 5%	50V
C102	1-162-918-11	CERAMIC CHIP 18PF 5%	50V	C312	1-162-919-11	CERAMIC CHIP 22PF 5%	50V
C103	1-165-176-11	CERAMIC CHIP 0.047uF 10%	16V	C313	1-162-964-11	CERAMIC CHIP 0.001uF 10%	50V
C105	1-165-176-11	CERAMIC CHIP 0.047uF 10%	16V	C314	1-126-160-11	ELECT 1uF 20%	50V
C107	1-164-227-11	CERAMIC CHIP 0.022uF 10%	25V	C315	1-126-572-11	ELECT 4.7uF 20%	35V
C110	1-107-826-11	CERAMIC CHIP 0.1uF 10%	16V	C316	1-162-927-11	CERAMIC CHIP 100PF 5%	50V
C111	1-164-505-11	CERAMIC CHIP 2.2uF	16V	C318	1-162-964-11	CERAMIC CHIP 0.001uF 10%	50V
C113	1-164-227-11	CERAMIC CHIP 0.022uF 10%	25V	C319	1-126-936-11	ELECT 330uF 20%	16V
C114	1-104-942-11	ELECT 1uF	20% 50V	C320	1-107-826-11	CERAMIC CHIP 0.1uF 10%	16V
C115	1-104-942-11	ELECT 1uF	20% 50V	C400	1-165-128-11	CERAMIC CHIP 0.22uF	16V
C116	1-115-156-11	CERAMIC CHIP 1uF	10V	C401	1-162-927-11	CERAMIC CHIP 100PF 5%	50V
C118	1-115-156-11	CERAMIC CHIP 1uF	10V	C402	1-162-927-11	CERAMIC CHIP 100PF 5%	50V
C119	1-162-961-11	CERAMIC CHIP 330PF 10%	50V	C403	1-162-927-11	CERAMIC CHIP 100PF 5%	50V
C120	1-115-156-11	CERAMIC CHIP 1uF	10V	C404	1-162-927-11	CERAMIC CHIP 100PF 5%	50V
C121	1-162-968-11	CERAMIC CHIP 0.0047uF 10%	50V	C405	1-162-927-11	CERAMIC CHIP 100PF 5%	50V
C123	1-162-970-11	CERAMIC CHIP 0.01uF 10%	25V	C406	1-162-927-11	CERAMIC CHIP 100PF 5%	50V
C124	1-107-823-11	CERAMIC CHIP 0.47uF 10%	16V	C407	1-164-156-11	CERAMIC CHIP 0.1uF	25V
C125	1-124-589-11	ELECT 47uF 20%	16V	C408	1-162-961-11	CERAMIC CHIP 330PF 10%	50V
C126	1-164-156-11	CERAMIC CHIP 0.1uF	25V	C409	1-162-961-11	CERAMIC CHIP 330PF 10%	50V
C127	1-124-584-00	ELECT 100uF 20%	10V	C410	1-162-961-11	CERAMIC CHIP 330PF 10%	50V
C128	1-216-295-11	SHORT 0		C411	1-162-961-11	CERAMIC CHIP 330PF 10%	50V
C129	1-216-295-11	SHORT 0		C412	1-164-156-11	CERAMIC CHIP 0.1uF	25V
C130	1-216-295-11	SHORT 0		C413	1-126-157-11	ELECT 10uF 20%	16V
C131	1-216-295-11	SHORT 0		C414	1-124-234-00	ELECT 22uF 20%	16V
C137	1-115-156-11	CERAMIC CHIP 1uF	10V	C415	1-162-970-11	CERAMIC CHIP 0.01uF 10%	25V
C138	1-115-156-11	CERAMIC CHIP 1uF	10V	C416	1-162-970-11	CERAMIC CHIP 0.01uF 10%	25V
C139	1-115-156-11	CERAMIC CHIP 1uF	10V	C418	1-124-589-11	ELECT 47uF 20%	16V
C140	1-162-919-11	CERAMIC CHIP 22PF 5%	50V	C419	1-117-823-11	CERAMIC CHIP 0.47uF 10%	16V
C141	1-164-505-11	CERAMIC CHIP 2.2uF	16V	C420	1-117-823-11	CERAMIC CHIP 0.47uF 10%	16V
C142	1-115-156-11	CERAMIC CHIP 1uF	10V	C421	1-162-925-11	CERAMIC CHIP 68PF 5%	50V
C143	1-126-157-11	ELECT 10uF 20%	16V	C422	1-107-826-11	CERAMIC CHIP 0.1uF 10%	16V
C144	1-164-156-11	CERAMIC CHIP 0.1uF	25V	C423	1-107-826-11	CERAMIC CHIP 0.1uF 10%	16V
C145	1-164-156-11	CERAMIC CHIP 0.1uF	25V	C424	1-117-823-11	CERAMIC CHIP 0.47uF 10%	16V
C146	1-164-156-11	CERAMIC CHIP 0.1uF	25V	C425	1-126-935-11	ELECT 470uF 20%	16V
C147	1-164-156-11	CERAMIC CHIP 0.1uF	25V	C426	1-162-970-11	CERAMIC CHIP 0.01uF 10%	25V
C150	1-162-927-11	CERAMIC CHIP 100PF 5%	50V	C427	1-164-245-11	CERAMIC CHIP 0.015uF 10%	25V
C204	1-126-157-11	ELECT 10uF 20%	16V	C500	1-107-826-11	CERAMIC CHIP 0.1uF 10%	16V
C205	1-126-157-11	ELECT 10uF 20%	16V	C501	1-107-826-11	CERAMIC CHIP 0.1uF 10%	16V
C208	1-165-128-11	CERAMIC CHIP 0.22uF	16V	C502	1-162-964-11	CERAMIC CHIP 0.001uF 10%	50V
C209	1-165-128-11	CERAMIC CHIP 0.22uF	16V	C505	1-107-826-11	CERAMIC CHIP 0.1uF 10%	16V
C223	1-126-159-11	ELECT 0.47uF 20%	50V	C506	1-124-229-00	ELECT 33uF 20%	10V
C224	1-125-972-61	ELECT 100uF 20%	16V	C507	1-162-970-11	CERAMIC CHIP 0.01uF 10%	25V
C226	1-124-257-00	ELECT 2.2uF 20%	50V	C508	1-107-826-11	CERAMIC CHIP 0.1uF 10%	16V
C230	1-115-156-11	CERAMIC CHIP 1uF	10V	C509	1-124-589-11	ELECT 47uF 20%	16V
C231	1-115-156-11	CERAMIC CHIP 1uF	10V	C510	1-162-970-11	CERAMIC CHIP 0.01uF 10%	25V
C254	1-126-157-11	ELECT 10uF 20%	16V	C511	1-107-826-11	CERAMIC CHIP 0.1uF 10%	16V
C255	1-126-157-11	ELECT 10uF 20%	16V	C512	1-164-156-11	CERAMIC CHIP 0.1uF	25V
C258	1-165-128-11	CERAMIC CHIP 0.22uF	16V	C513	1-164-227-11	CERAMIC CHIP 0.022uF 10%	25V
C259	1-165-128-11	CERAMIC CHIP 0.22uF	16V	C514	1-162-970-11	CERAMIC CHIP 0.01uF 10%	25V
C304	1-107-826-11	CERAMIC CHIP 0.1uF 10%	16V	C601	1-162-968-11	CERAMIC CHIP 0.0047uF 10%	50V
C305	1-126-157-11	ELECT 10uF 20%	16V	C602	1-164-156-11	CERAMIC CHIP 0.1uF	25V
C306	1-107-826-11	CERAMIC CHIP 0.1uF 10%	16V	C603	1-164-156-11	CERAMIC CHIP 0.1uF	25V
C307	1-162-919-11	CERAMIC CHIP 22PF 5%	50V	C604	1-164-156-11	CERAMIC CHIP 0.1uF	25V
				C605	1-164-156-11	CERAMIC CHIP 0.1uF	25V

MAIN

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
C606	1-163-236-11	CERAMIC CHIP	24PF 5%	50V	CN602	1-506-468-11	PIN, CONNECTOR 3P
C607	1-162-919-11	CERAMIC CHIP	22PF 5%	50V			
C608	1-164-156-11	CERAMIC CHIP	0.1uF	25V		< DIODE >	
C610	1-162-970-11	CERAMIC CHIP	0.01uF 10%	25V			
C611	1-126-157-11	ELECT	10uF 20%	16V	D100	8-719-065-09	DIODE 02DZ5.1-Y (TPH3)
C612	1-164-156-11	CERAMIC CHIP	0.1uF	25V	D103	8-719-065-00	DIODE 02DZ3.9-X (TPH3)
C613	1-162-968-11	CERAMIC CHIP	0.0047uF 10%	50V	D104	8-719-988-61	DIODE 1SS355TE-17
C615	1-107-826-11	CERAMIC CHIP	0.1uF 10%	16V	D201	8-719-988-61	DIODE 1SS355TE-17
C616	1-124-584-00	ELECT	100uF 20%	10V	D202	8-719-988-61	DIODE 1SS355TE-17
C618	1-110-654-11	ELECT (BLOCK)	0.047F		D203	8-719-065-00	DIODE 02DZ3.9-X (TPH3)
C619	1-128-057-11	ELECT	330uF 20%	6.3V	D205	8-719-069-55	DIODE UDZS-TE17-5.6B
C620	1-107-826-11	CERAMIC CHIP	0.1uF 10%	16V	D206	8-719-914-43	DIODE DAN202K-T-146
C621	1-124-589-11	ELECT	47uF 20%	16V	D308	8-719-053-18	DIODE 1SR154-400TE-25
C622	1-164-156-11	CERAMIC CHIP	0.1uF	25V	D309	8-719-053-18	DIODE 1SR154-400TE-25
C623	1-164-156-11	CERAMIC CHIP	0.1uF	25V	D310	8-719-017-94	DIODE MA8180-TX
C624	1-164-156-11	CERAMIC CHIP	0.1uF	25V	D311	8-719-017-94	DIODE MA8180-TX
C625	1-164-156-11	CERAMIC CHIP	0.1uF	25V	D312	8-719-017-94	DIODE MA8180-TX
C626	1-164-156-11	CERAMIC CHIP	0.1uF	25V	D316	8-719-988-61	DIODE 1SS355TE-17
C627	1-124-589-11	ELECT	47uF 20%	16V	D317	8-719-049-38	DIODE 1N5404TU
C628	1-162-970-11	CERAMIC CHIP	0.01uF 10%	25V	D400	8-719-065-28	DIODE 02DZ9.1-Z (TPH3)
C629	1-107-826-11	CERAMIC CHIP	0.1uF 10%	16V	D401	8-719-074-47	DIODE CRS02 (TE85L)
C630	1-164-156-11	CERAMIC CHIP	0.1uF	25V	D500	8-719-988-61	DIODE 1SS355TE-17
C631	1-164-156-11	CERAMIC CHIP	0.1uF	25V	D501	8-719-988-61	DIODE 1SS355TE-17
C632	1-126-157-11	ELECT	10uF 20%	16V	D505	8-719-065-46	DIODE 02DZ16-Z (TPH3)
C633	1-107-826-11	CERAMIC CHIP	0.1uF 10%	16V	D508	8-719-065-16	DIODE 02DZ6.2-Z (TPH3)
C634	1-162-962-11	CERAMIC CHIP	470PF 10%	50V	D509	8-719-914-43	DIODE DAN202K-T-146
C635	1-162-927-11	CERAMIC CHIP	100PF 5%	50V	D510	8-719-065-18	DIODE 02DZ6.8-Y (TPH3)
C636	1-164-505-11	CERAMIC CHIP	2.2uF	16V	D511	8-719-058-24	DIODE RB501V-40TE-17
C700	1-162-966-11	CERAMIC CHIP	0.0022uF 10%	50V	D513	8-719-988-61	DIODE 1SS355TE-17
C701	1-162-961-11	CERAMIC CHIP	330PF 10%	50V	D515	8-719-914-44	DIODE DAP202K-T-146
C703	1-164-505-11	CERAMIC CHIP	2.2uF	16V	D606	8-719-988-61	DIODE 1SS355TE-17
C704	1-164-360-11	CERAMIC CHIP	0.1uF	16V	D607	8-719-988-61	DIODE 1SS355TE-17
C705	1-164-360-11	CERAMIC CHIP	0.1uF	16V	D609	8-719-914-43	DIODE DAN202K-T-146
C707	1-162-920-11	CERAMIC CHIP	27PF 5%	50V	D611	8-719-988-61	DIODE 1SS355TE-17
C708	1-162-920-11	CERAMIC CHIP	27PF 5%	50V	D627	8-719-914-44	DIODE DAP202K-T-146
C709	1-164-360-11	CERAMIC CHIP	0.1uF	16V	D628	8-719-914-44	DIODE DAP202K-T-146
C710	1-162-962-11	CERAMIC CHIP	470PF 10%	50V	D640	8-719-914-43	DIODE DAN202K-T-146
C713	1-124-589-11	ELECT	47uF 20%	16V	D641	8-719-988-61	DIODE 1SS355TE-17
C750	1-164-360-11	CERAMIC CHIP	0.1uF	16V	D701	8-719-065-09	DIODE 02DZ5.1-Y (TPH3)
C751	1-162-962-11	CERAMIC CHIP	470PF 10%	50V	D750	8-719-987-69	DIODE DAN217-T146
C752	1-162-964-11	CERAMIC CHIP	0.001uF 10%	50V		< SHORT >	
C753	1-162-964-11	CERAMIC CHIP	0.001uF 10%	50V	FB10	1-216-864-11	SHORT 0
C754	1-162-964-11	CERAMIC CHIP	0.001uF 10%	50V	FB11	1-216-864-11	SHORT 0
C756	1-164-005-11	CERAMIC CHIP	0.47uF	25V	FB12	1-216-864-11	SHORT 0
C757	1-164-360-11	CERAMIC CHIP	0.1uF	16V	FB13	1-216-864-11	SHORT 0
C758	1-165-176-11	CERAMIC CHIP	0.047uF 10%	16V	FB16	1-216-864-11	SHORT 0
		< CONNECTOR >				< IC >	
* CN100	1-506-984-11	PIN, CONNECTOR (PC BOARD) 2P		IC100	8-759-653-27	IC TDA7402TR	
CN300	1-774-700-11	JACK, PIN 6P (BUS AUDIO IN, AUDIO OUT REAR/FRONT)		IC101	8-759-909-71	IC BA4558F-E2	
CN301	1-774-701-11	PIN, CONNECTOR 16P		IC102	8-759-392-22	IC BA3834F	
* CN400	1-506-995-11	PIN, CONNECTOR (PC BOARD) 13P		IC300	8-759-690-99	IC TA8268HS	
CN401	1-766-260-11	CONNECTOR, FFC/FPC (ZIF) 7P		IC400	8-759-527-33	IC LB1930M-TLM	
CN402	1-794-185-11	CONNECTOR, FPC (ZIF) 14P		IC401	8-752-079-79	IC CXA2510AQ-T4	
CN500	1-580-907-31	PLUG, CONNECTOR (BUS CONTROL IN)		IC500	8-759-701-01	IC NJM2904M (TE2)	
CN501	1-568-951-11	PIN, CONNECTOR 2P		IC501	8-759-593-98	IC BA8270FV-E2	
* CN601	1-764-908-11	CONNECTOR, FFC/FPC (ZIF) 10P		IC502	8-759-580-33	IC BA6288FS-E2	
				IC503	8-759-668-14	IC PQ09DZ1U	

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
IC601	8-759-668-46	IC MB90574BPMT-G-257-BND		Q607	8-729-120-28	TRANSISTOR	2SC2412K-T-146-R
IC602	8-759-828-22	IC XC61CN4102MR		Q608	8-729-120-28	TRANSISTOR	2SC2412K-T-146-R
IC604	8-759-540-27	IC TA78DL06AS		Q611	8-729-920-21	TRANSISTOR	DTC314TK-T-146
IC605	8-759-528-47	IC PQ09RA11		Q612	8-729-038-55	TRANSISTOR	KRA103S
IC606	8-759-277-63	IC TC7W14FU (TE12R)		Q750	8-729-230-49	TRANSISTOR	2SC2712L-TE85L
				Q751	8-729-027-43	TRANSISTOR	RN1402-TE85L
IC607	8-759-684-69	IC HD6432355A26F		< RESISTOR >			
IC700	8-759-492-59	IC SAA6588T-118		R100	1-216-821-11	METAL CHIP	1K 5% 1/16W
IC750	8-759-909-71	IC BA4558F-E2		R101	1-216-825-11	METAL CHIP	2.2K 5% 1/16W
		< JACK >		R102	1-216-809-11	METAL CHIP	100 5% 1/16W
J500	1-764-270-21	JACK, STEREO MINIATURE (DIA.3.5) (REMOTE IN)		R103	1-216-809-11	METAL CHIP	100 5% 1/16W
		< SHORT >		R105	1-216-864-11	SHORT	0
JR501	1-216-864-11	SHORT	0	R106	1-216-841-11	METAL CHIP	47K 5% 1/16W
JR502	1-216-864-11	SHORT	0	R107	1-216-839-11	METAL CHIP	33K 5% 1/16W
		< COIL >		R109	1-216-809-11	METAL CHIP	100 5% 1/16W
L17	1-469-549-21	INDUCTOR	1uH	R110	1-216-809-11	METAL CHIP	100 5% 1/16W
L300	1-419-476-31	CHOKE COIL	250uH	R111	1-216-829-11	METAL CHIP	4.7K 5% 1/16W
L700	1-469-555-21	INDUCTOR	10uH	R112	1-216-833-11	METAL CHIP	10K 5% 1/16W
		< TRANSISTOR >		R113	1-216-833-11	METAL CHIP	10K 5% 1/16W
Q100	8-729-052-35	TRANSISTOR	2SD1664	R114	1-216-833-11	METAL CHIP	10K 5% 1/16W
Q103	8-729-049-43	TRANSISTOR	STB1132Y	R115	1-216-833-11	METAL CHIP	10K 5% 1/16W
Q104	8-729-038-68	TRANSISTOR	KRC103S	R116	1-216-833-11	METAL CHIP	10K 5% 1/16W
Q106	8-729-120-28	TRANSISTOR	2SC2412K-T-146-R	R117	1-216-833-11	METAL CHIP	10K 5% 1/16W
Q107	8-729-216-22	TRANSISTOR	2SA1162-YG-TE85L	R118	1-216-826-11	METAL CHIP	2.7K 5% 1/16W
Q200	8-729-920-31	TRANSISTOR	DTC343TK-T-146	R119	1-216-809-11	METAL CHIP	100 5% 1/16W
Q201	8-729-920-31	TRANSISTOR	DTC343TK-T-146	R120	1-216-833-11	METAL CHIP	10K 5% 1/16W
Q220	8-729-038-55	TRANSISTOR	KRA103S	R121	1-216-823-11	METAL CHIP	1.5K 5% 1/16W
Q221	8-729-028-66	TRANSISTOR	DTC115EKA-T146	R122	1-216-845-11	METAL CHIP	100K 5% 1/16W
Q222	8-729-144-85	FET	2SK1133-T1B	R123	1-216-833-11	METAL CHIP	10K 5% 1/16W
Q223	8-729-120-28	TRANSISTOR	2SC2412K-T-146-R	R124	1-216-833-11	METAL CHIP	10K 5% 1/16W
Q250	8-729-920-31	TRANSISTOR	DTC343TK-T-146	R125	1-216-833-11	METAL CHIP	10K 5% 1/16W
Q251	8-729-920-31	TRANSISTOR	DTC343TK-T-146	R126	1-216-833-11	METAL CHIP	10K 5% 1/16W
Q300	8-729-038-68	TRANSISTOR	KRC103S	R129	1-216-864-11	SHORT	0
Q301	8-729-041-38	TRANSISTOR	2SB1241TV2Q	R130	1-216-841-11	METAL CHIP	47K 5% 1/16W
Q302	8-729-038-68	TRANSISTOR	KRC103S	R131	1-216-864-11	SHORT	0
Q303	8-729-041-38	TRANSISTOR	2SB1241TV2Q	R200	1-216-295-11	SHORT	0
Q400	8-729-931-15	TRANSISTOR	2SD1858-R-TV2	R201	1-216-295-11	SHORT	0
Q402	8-729-049-43	TRANSISTOR	STB1132Y	R206	1-216-813-11	METAL CHIP	220 5% 1/16W
Q403	8-729-038-68	TRANSISTOR	KRC103S	R207	1-216-813-11	METAL CHIP	220 5% 1/16W
Q404	8-729-038-68	TRANSISTOR	KRC103S	R208	1-216-837-11	METAL CHIP	22K 5% 1/16W
Q405	8-729-038-55	TRANSISTOR	KRA103S	R209	1-216-837-11	METAL CHIP	22K 5% 1/16W
Q406	8-729-038-68	TRANSISTOR	KRC103S	R220	1-216-841-11	METAL CHIP	47K 5% 1/16W
Q500	8-729-038-68	TRANSISTOR	KRC103S	R221	1-216-805-11	METAL CHIP	47 5% 1/16W
Q501	8-729-120-28	TRANSISTOR	2SC2412K-T-146-R	R223	1-216-837-11	METAL CHIP	22K 5% 1/16W
Q502	8-729-216-22	TRANSISTOR	2SA1162-YG-TE85L	R224	1-216-821-11	METAL CHIP	1K 5% 1/16W
Q503	8-729-120-28	TRANSISTOR	2SC2412K-T-146-R	R225	1-216-845-11	METAL CHIP	100K 5% 1/16W
Q504	8-729-038-68	TRANSISTOR	KRC103S	R230	1-216-821-11	METAL CHIP	1K 5% 1/16W
Q505	8-729-038-55	TRANSISTOR	KRA103S	R231	1-216-821-11	METAL CHIP	1K 5% 1/16W
Q600	8-729-038-55	TRANSISTOR	KRA103S	R232	1-216-845-11	METAL CHIP	100K 5% 1/16W
Q603	8-729-120-28	TRANSISTOR	2SC2412K-T-146-R	R233	1-216-841-11	METAL CHIP	47K 5% 1/16W
Q604	8-729-038-68	TRANSISTOR	KRC103S	R234	1-216-845-11	METAL CHIP	100K 5% 1/16W
Q605	8-729-920-85	TRANSISTOR	2SD1664-T101-QR	R250	1-216-295-11	SHORT	0
Q606	8-729-038-68	TRANSISTOR	KRC103S	R251	1-216-295-11	SHORT	0
				R256	1-216-813-11	METAL CHIP	220 5% 1/16W
				R257	1-216-813-11	METAL CHIP	220 5% 1/16W
				R258	1-216-837-11	METAL CHIP	22K 5% 1/16W
				R259	1-216-837-11	METAL CHIP	22K 5% 1/16W

MAIN

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
R260	1-216-821-11	METAL CHIP	1K 5%	R518	1-216-809-11	METAL CHIP	100 5%
R261	1-216-821-11	METAL CHIP	1K 5%	R519	1-216-298-00	METAL CHIP	2.2 5%
R300	1-216-839-11	METAL CHIP	33K 5%	R521	1-216-298-00	METAL CHIP	2.2 5%
R301	1-216-839-11	METAL CHIP	33K 5%	R523	1-216-298-00	METAL CHIP	2.2 5%
R302	1-216-821-11	METAL CHIP	1K 5%	R526	1-216-805-11	METAL CHIP	47 5%
R304	1-216-821-11	METAL CHIP	1K 5%	R527	1-216-821-11	METAL CHIP	1K 5%
R308	1-216-809-11	METAL CHIP	100 5%	R600	1-216-837-11	METAL CHIP	22K 5%
R309	1-216-057-00	RES-CHIP	2.2K 5%	R602	1-216-809-11	METAL CHIP	100 5%
R310	1-216-065-00	RES-CHIP	4.7K 5%	R605	1-216-845-11	METAL CHIP	100K 5%
R311	1-216-841-11	METAL CHIP	47K 5%	R606	1-216-845-11	METAL CHIP	100K 5%
R313	1-216-057-00	RES-CHIP	2.2K 5%	R607	1-216-845-11	METAL CHIP	100K 5%
R314	1-216-841-11	METAL CHIP	47K 5%	R608	1-216-845-11	METAL CHIP	100K 5%
R315	1-216-073-00	RES-CHIP	10K 5%	R609	1-216-845-11	METAL CHIP	100K 5%
R316	1-216-864-11	SHORT	0	R611	1-216-845-11	METAL CHIP	100K 5%
R319	1-216-841-11	METAL CHIP	47K 5%	R612	1-216-809-11	METAL CHIP	100 5%
R330	1-216-821-11	METAL CHIP	1K 5%	R613	1-216-833-11	METAL CHIP	10K 5%
R400	1-216-845-11	METAL CHIP	100K 5%	R614	1-216-809-11	METAL CHIP	100 5%
R401	1-216-845-11	METAL CHIP	100K 5%	R615	1-216-809-11	METAL CHIP	100 5%
R402	1-216-845-11	METAL CHIP	100K 5%	R616	1-216-833-11	METAL CHIP	10K 5%
R403	1-216-845-11	METAL CHIP	100K 5%	R617	1-216-845-11	METAL CHIP	100K 5%
R404	1-216-810-11	METAL CHIP	120 5%	R618	1-216-833-11	METAL CHIP	10K 5%
R405	1-216-810-11	METAL CHIP	120 5%	R619	1-216-845-11	METAL CHIP	100K 5%
R406	1-216-851-11	METAL CHIP	330K 5%	R620	1-216-821-11	METAL CHIP	1K 5%
R407	1-216-851-11	METAL CHIP	330K 5%	R621	1-216-821-11	METAL CHIP	1K 5%
R408	1-216-834-11	METAL CHIP	12K 5%	R622	1-216-845-11	METAL CHIP	100K 5%
R409	1-216-836-11	METAL CHIP	18K 5%	R623	1-216-821-11	METAL CHIP	1K 5%
R410	1-216-836-11	METAL CHIP	18K 5%	R624	1-216-845-11	METAL CHIP	100K 5%
R411	1-216-834-11	METAL CHIP	12K 5%	R625	1-216-864-11	SHORT	0 (TYPE A, South European)
R412	1-216-049-11	RES-CHIP	1K 5%	R626	1-216-864-11	SHORT	0 (TYPE A)
R413	1-216-681-11	METAL CHIP	18K 0.5%	R633	1-216-845-11	METAL CHIP	100K 5%
R416	1-216-825-11	METAL CHIP	2.2K 5%	R634	1-216-839-11	METAL CHIP	33K 5%
R419	1-216-829-11	METAL CHIP	4.7K 5%	R635	1-216-821-11	METAL CHIP	1K 5%
R420	1-216-833-11	METAL CHIP	10K 5%	R636	1-216-845-11	METAL CHIP	100K 5%
R421	1-216-833-11	METAL CHIP	10K 5%	R638	1-216-845-11	METAL CHIP	100K 5%
R422	1-216-853-11	METAL CHIP	470K 5%	R639	1-216-845-11	METAL CHIP	100K 5%
R423	1-216-841-11	METAL CHIP	47K 5%	R640	1-216-845-11	METAL CHIP	100K 5%
R431	1-216-001-00	METAL CHIP	10 5%	R641	1-216-845-11	METAL CHIP	100K 5%
R432	1-216-001-00	METAL CHIP	10 5%	R642	1-216-845-11	METAL CHIP	100K 5%
R433	1-216-001-00	METAL CHIP	10 5%	R643	1-216-839-11	METAL CHIP	33K 5%
R434	1-216-001-00	METAL CHIP	10 5%	R644	1-216-833-11	METAL CHIP	10K 5%
R500	1-216-837-11	METAL CHIP	22K 5%	R645	1-216-833-11	METAL CHIP	10K 5%
R501	1-216-845-11	METAL CHIP	100K 5%	R646	1-216-827-11	METAL CHIP	3.3K 5%
R502	1-216-829-11	METAL CHIP	4.7K 5%	R647	1-216-809-11	METAL CHIP	100 5%
R503	1-216-833-11	METAL CHIP	10K 5%	R648	1-216-815-11	METAL CHIP	330 5%
R504	1-216-839-11	METAL CHIP	33K 5%	R649	1-216-864-11	SHORT	0
R505	1-216-836-11	METAL CHIP	18K 5%	R650	1-216-821-11	METAL CHIP	1K 5%
R506	1-216-833-11	METAL CHIP	10K 5%	R651	1-216-809-11	METAL CHIP	100 5%
R507	1-218-716-11	METAL CHIP	10K 0.5%	R652	1-216-821-11	METAL CHIP	1K 5%
R508	1-216-833-11	METAL CHIP	10K 5%	R653	1-216-837-11	METAL CHIP	22K 5%
R509	1-216-809-11	METAL CHIP	100 5%	R654	1-216-845-11	METAL CHIP	100K 5%
R511	1-216-845-11	METAL CHIP	100K 5%	R655	1-216-829-11	METAL CHIP	4.7K 5%
R512	1-216-809-11	METAL CHIP	100 5%	R656	1-216-845-11	METAL CHIP	100K 5%
R513	1-216-841-11	METAL CHIP	47K 5%	R657	1-216-821-11	METAL CHIP	1K 5%
R514	1-216-809-11	METAL CHIP	100 5%	R658	1-216-821-11	METAL CHIP	1K 5%
R515	1-216-825-11	METAL CHIP	2.2K 5%	R659	1-216-821-11	METAL CHIP	1K 5%
R516	1-216-833-11	METAL CHIP	10K 5%	R660	1-216-845-11	METAL CHIP	100K 5%
R517	1-216-809-11	METAL CHIP	100 5%	R661	1-216-845-11	METAL CHIP	100K 5%
				R662	1-216-813-11	METAL CHIP	220 5%

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
R663	1-216-813-11	METAL CHIP	220 5% 1/16W	TH301	1-810-940-11	THERMISTOR, POSITIVE	
R664	1-216-845-11	METAL CHIP	100K 5% 1/16W	TH601	1-801-792-21	THERMISTOR, POSITIVE	
R665	1-216-845-11	METAL CHIP	100K 5% 1/16W			< TUNER UNIT >	
R666	1-218-716-11	METAL CHIP	10K 0.5% 1/16W	TUX100	A-3220-738-A	FM/AM TUNER UNIT (TUX-020)	
R667	1-216-809-11	METAL CHIP	100 5% 1/16W			< VIBRATOR >	
R668	1-218-716-11	METAL CHIP	10K 0.5% 1/16W	X600	1-567-098-41	VIBRATOR, CRYSTAL (32.768kHz)	
R669	1-216-809-11	METAL CHIP	100 5% 1/16W	X601	1-767-833-21	VIBRATOR, CERAMIC (3.68MHz)	
R670	1-216-809-11	METAL CHIP	100 5% 1/16W	X602	1-781-822-21	VIBRATOR, CERAMIC (18.432MHz)	
R671	1-216-809-11	METAL CHIP	100 5% 1/16W	X700	1-760-556-31	VIBRATOR, CRYSTAL (4.332MHz)	
R672	1-216-809-11	METAL CHIP	100 5% 1/16W			*****	
R673	1-216-809-11	METAL CHIP	100 5% 1/16W	*	1-680-701-11	SUB BOARD	
R675	1-216-809-11	METAL CHIP	100 5% 1/16W			*****	
R676	1-216-809-11	METAL CHIP	100 5% 1/16W		1-783-268-31	CABLE, FLAT	
R677	1-216-809-11	METAL CHIP	100 5% 1/16W			< CAPACITOR >	
R678	1-216-809-11	METAL CHIP	100 5% 1/16W	C900	1-107-826-11	CERAMIC CHIP 0.1uF 10% 16V	
R679	1-216-845-11	METAL CHIP	100K 5% 1/16W			< CONNECTOR >	
R680	1-216-845-11	METAL CHIP	100K 5% 1/16W	CN900	1-770-977-11	CONNECTOR, FPC 10P	
R681	1-216-845-11	METAL CHIP	100K 5% 1/16W			< DIODE >	
R682	1-216-845-11	METAL CHIP	100K 5% 1/16W	D900	8-719-065-18	DIODE 02DZ6.8-Y (TPH3)	
R700	1-216-797-11	METAL CHIP	10 5% 1/16W	D901	8-719-065-18	DIODE 02DZ6.8-Y (TPH3)	
R702	1-216-821-11	METAL CHIP	1K 5% 1/16W	D902	8-719-988-61	DIODE 1SS355TE-17	
R703	1-216-830-11	METAL CHIP	5.6K 5% 1/16W	D903	8-719-065-09	DIODE 02DZ5.1-Y (TPH3)	
R704	1-216-817-11	METAL CHIP	470 5% 1/16W	D904	8-719-079-10	LED CL-220UB-X-TS	(CASSETTE SLOT INDICATOR)
R705	1-216-809-11	METAL CHIP	100 5% 1/16W				
R706	1-216-809-11	METAL CHIP	100 5% 1/16W	D905	8-719-072-57	LED CL-170UB-X-T (▲)	
R711	1-216-845-11	METAL CHIP	100K 5% 1/16W	D906	8-719-065-18	DIODE 02DZ6.8-Y (TPH3)	
R719	1-216-845-11	METAL CHIP	100K 5% 1/16W	D907	8-719-065-48	DIODE 02DZ18-Y (TPH3)	
			(TYPE B)	D908	8-719-065-48	DIODE 02DZ18-Y (TPH3)	
R720	1-216-845-11	METAL CHIP	100K 5% 1/16W			< IC >	
			(TYPE B, South European)	IC900	8-749-012-25	IC RS-170-TU	
R738	1-216-809-11	METAL CHIP	100 5% 1/16W			< TRANSISTOR >	
R740	1-216-864-11	SHORT	0	Q900	8-729-038-68	TRANSISTOR KRC103S	
R741	1-216-864-11	SHORT	0	Q901	8-729-038-55	TRANSISTOR KRA103S	
R742	1-216-864-11	SHORT	0			< RESISTOR >	
R743	1-216-864-11	SHORT	0	R900	1-216-809-11	METAL CHIP 100 5% 1/16W	
R750	1-216-825-11	METAL CHIP	2.2K 5% 1/16W	R901	1-216-817-11	METAL CHIP 470 5% 1/16W	
R751	1-216-833-11	METAL CHIP	10K 5% 1/16W	R902	1-216-839-11	METAL CHIP 33K 5% 1/16W	
R752	1-216-833-11	METAL CHIP	10K 5% 1/16W	R903	1-216-807-11	METAL CHIP 68 5% 1/16W	
R753	1-216-829-11	METAL CHIP	4.7K 5% 1/16W	R905	1-216-821-11	METAL CHIP 1K 5% 1/16W	
R754	1-216-825-11	METAL CHIP	2.2K 5% 1/16W			< SWITCH >	
R755	1-216-825-11	METAL CHIP	2.2K 5% 1/16W	S900	1-692-135-21	SWITCH, KEY BOARD (▲)	
R756	1-216-827-11	METAL CHIP	3.3K 5% 1/16W	S901	1-762-947-12	SWITCH, PUSH (1 KEY)	(CASSETTE IN/OUT DETECT)
R757	1-216-845-11	METAL CHIP	100K 5% 1/16W	S902	1-692-135-21	SWITCH, KEY BOARD (RESET)	
R758	1-216-857-11	METAL CHIP	1M 5% 1/16W			*****	
R759	1-216-809-11	METAL CHIP	100 5% 1/16W				
R760	1-216-864-11	SHORT	0				
			< COMPOSITION CIRCUIT BLOCK >				
RB13	1-233-412-11	RES, CHIP NETWORK 1K (3216)					
RB14	1-233-810-21	RES, NETWORK 100K (3216)					
			< VARIABLE RESISTOR >				
RV400	1-238-090-11	RES, ADJ, CERMET 10K					
RV401	1-238-090-11	RES, ADJ, CERMET 10K					
			< THERMISTOR >				
TH300	1-810-940-11	THERMISTOR, POSITIVE					

XR-M510

SWITCH

Ref. No.	Part No.	Description	Remark
	A-3326-298-A	SWITCH BOARD, COMPLETE *****	

For the parts on the SWITCH board, replace the entire mounted board.

MISCELLANEOUS *****

6	1-783-268-31	CABLE, FLAT
9	1-776-527-71	CORD (WITH CONNECTOR) (ISO) (POWER)
81	1-677-340-11	FLEXIBLE BOARD
115	1-777-246-41	CORD (WITH CONNECTOR) (ANT)
F1	1-532-877-11	FUSE (BLADE TYPE) (AUTO FUSE) (10A)

HP901	1-500-157-21	HEAD, MAGNETIC (PLAYBACK)
M601	X-3378-769-1	MOTOR ASSY (FRONT PANEL OPEN/CLOSE)
M901	A-3291-665-A	MOTOR ASSY, MAIN (CAPSTAN/REEL)

***** HARDWARE LIST *****

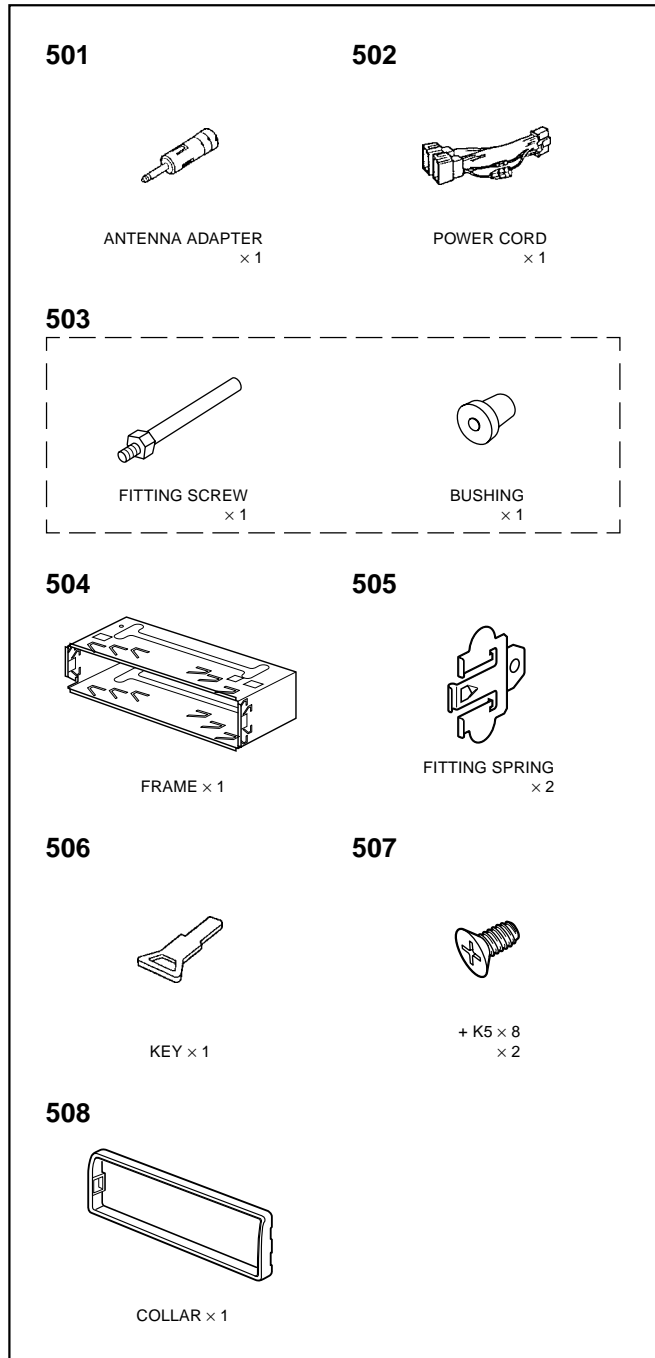
#1	7-685-792-09	SCREW +PTT 2.6X6 (S)
#2	7-685-793-09	SCREW +PTT 2.6X8 (S)
#3	7-621-772-00	SCREW +B 2X3
#6	7-685-101-11	SCREW +P 2X3 NON-SLIT TYPE 2
#7	7-627-553-17	PRECISION SCREW +P 2X2 TYPE 3
#8	7-624-102-04	STOP RING 1.5, TYPE-E
#9	7-627-553-28	SCREW, PRECISION +P 2X2.5
#10	7-685-795-09	SCREW +PTT 2.6X12 (S)
#12	7-624-104-04	STOP RING 2.0, TYPE-E

ACCESSORIES & PACKING MATERIALS *****

1-418-812-71	WIRELESS COMMANDER (RM-X96)
3-044-623-01	LID, BATTERY CASE (for RM-X96)
3-227-560-11	MANUAL, INSTRUCTION (ENGLISH, SPANISH, SWEDISH, PORTUGUESE, GREEK)
3-227-560-21	MANUAL, INSTRUCTION (FRENCH, GERMAN, DUTCH, ITALIAN)
3-227-560-31	MANUAL, INSTRUCTION (ENGLISH, CZECH, POLISH, TURKISH, RUSSIAN)
3-227-561-11	MANUAL, INSTRUCTION, INSTALL (ENGLISH, SPANISH, SWEDISH, PORTUGUESE, GREEK)
3-227-561-21	MANUAL, INSTRUCTION, INSTALL (FRENCH, GERMAN, DUTCH, ITALIAN)
3-227-561-31	MANUAL, INSTRUCTION, INSTALL (ENGLISH, CZECH, POLISH, TURKISH, RUSSIAN)

PARTS FOR INSTALLATION AND CONNECTIONS *****

501	1-465-459-21	ADAPTER, ANTENNA
502	1-776-527-71	CORD (WITH CONNECTOR) (ISO) (POWER)
503	X-3366-405-1	SCREW ASSY (EXP), FITTING
504	3-014-370-21	FRAME, FITTING
505	3-030-929-01	SPRING, FITTING
506	3-048-118-01	KEY
507	3-934-325-01	SCREW (+K 5X8 TP)
508	X-3378-770-1	COLLAR ASSY



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