

# CDX-GT22W/GT120/GT220

## SERVICE MANUAL

Ver. 1.0 2007. 07

US Model  
CDX-GT22W/GT120/GT220  
Canadian Model  
CDX-GT22W



(Photo: CDX-GT22W)

- The tuner and CD sections have no adjustments.

### AUDIO POWER SPECIFICATIONS

POWER OUTPUT AND TOTAL HARMONIC DISTORTION  
23.2 watts per channel minimum continuous average power into  
4 ohms, 4 channels driven from 20 Hz to 20 kHz with no more  
than 5% total harmonic distortion.

Model Name Using Similar Mechanism	NEW
CD Drive Mechanism Type	MG-101TC-188//Q
Optical Pick-up Name	DAX-25A

### SPECIFICATIONS

#### CD player section

Signal-to-noise ratio 120 dB  
Frequency response 10 – 20,000 Hz  
Wow and flutter Below measurable limit

#### Tuner section

##### FM

Tuning range 87.5 – 107.9 MHz  
Antenna terminal External antenna connector  
Intermediate frequency 10.7 MHz/450 kHz  
Usable sensitivity 9 dBf  
Selectivity 75 dB at 400 kHz  
Signal-to-noise ratio 67 dB (stereo), 69 dB (mono)  
Harmonic distortion at 1 kHz  
0.5% (stereo), 0.3% (mono)  
Separation 35 dB at 1 kHz  
Frequency response 30 – 15,000 Hz

##### AM

Tuning range 530 – 1,710 kHz  
Antenna (aerial) terminal  
External antenna (aerial) connector  
Intermediate frequency 10.7 MHz/450 kHz  
Sensitivity 30  $\mu$ V

#### Power amplifier section

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

#### General

Output Audio outputs terminal Sub/Rear switchable  
Power antenna (aerial) relay control terminal  
Power amplifier control terminal  
Inputs Antenna (aerial) input terminal  
AUX input jack (stereo mini jack)  
Tone controls Low:  $\pm$ 10 dB at 60 Hz (XPLOD)  
Mid:  $\pm$ 10 dB at 1 kHz (XPLOD)  
High:  $\pm$ 10 dB at 10 kHz (XPLOD)  
Loudness +4 dB at 100 Hz  
+2 dB at 10 kHz

– Continued on next page –

## FM/AM COMPACT DISC PLAYER

9-887-788-01  
2007G04-1  
© 2007. 07

Sony Corporation  
eVehicle Division  
Published by Sony Techno Create Corporation

# SONY®

# CDX-GT22W/GT120/GT220

Power requirements	12 V DC car battery (negative ground)
Dimensions	Approx. 178 × 50 × 179 mm (7 1/8 × 2 × 7 1/8 in.) (w/h/d)
Mounting dimensions	Approx. 182 × 53 × 162 mm (7 1/4 × 2 1/8 × 6 1/2 in.) (w/h/d)
Mass	Approx. 1.2 kg (2 lb. 11 oz.)
Supplied accessories	Parts for installation and connections (1 set)

*Design and specifications are subject to change without notice.*

## SERVICE NOTES

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

The laser diode in the optical pick-up block may suffer electrostatic breakdown because of the potential difference generated by the charged electrostatic load, etc. on clothing and the human body. During repair, pay attention to electrostatic breakdown and also use the procedure in the printed matter which is included in the repair parts.

The flexible board is easily damaged and should be handled with care.

### NOTES ON LASER DIODE EMISSION CHECK

The laser beam on this model is concentrated so as to be focused on the disc reflective surface by the objective lens in the optical pick-up block. Therefore, when checking the laser diode emission, observe from more than 30 cm away from the objective lens.

### 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.

### TEST DISCS

Please use the following test discs for the check on the CD section.

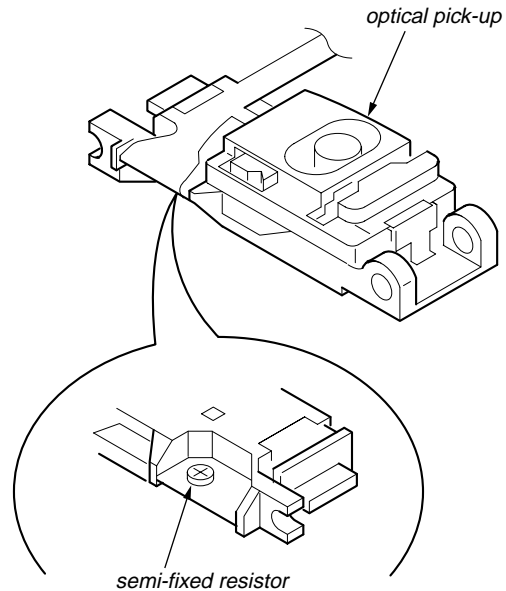
YDES-18 (Part No. 3-702-101-01)  
PATD-012 (Part No. 4-225-203-01)

### CAUTION

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

If the optical pick-up block is defective, please replace the whole optical pick-up block.

Never turn the semi-fixed resistor located at the side of optical pick-up block.



### SAFETY-RELATED COMPONENT WARNING!!



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

### ATTENTION AU COMPOSANT AYANT RAPPORT À LA SÉCURITÉ!!

LES COMPOSANTS IDENTIFIÉS PAR UNE MARQUE  $\triangle$  SUR LES DIAGRAMMES SCHÉMATIQUES ET LA LISTE DES PIÈCES SONT CRITIQUES POUR LA SÉCURITÉ DE FONCTIONNEMENT. NE REMPLACER CES COMPOSANTS QUE PAR DES PIÈCES SONY DONT LES NUMÉROS SONT DONNÉS DANS CE MANUEL OU DANS LES SUPPLÉMENTS PUBLIÉS PAR SONY.

● **CD Playback**

You can play CD-DA (also containing CD TEXT) and CD-R/CD-RW (MP3/WMA files).

Type of discs	Label on the disc
CD-DA	
MP3* WMA*	

\* CDX-GT22W/GT220 only

● **UNLEADED SOLDER**

Boards requiring use of unleaded solder are printed with the lead-free mark (LF) indicating the solder contains no lead. (Caution: Some printed circuit boards may not come printed with the lead free mark due to their particular size.)

 : **LEAD FREE MARK**

Unleaded solder has the following characteristics.

- Unleaded solder melts at a temperature about 40°C higher than ordinary solder.  
Ordinary soldering irons can be used but the iron tip has to be applied to the solder joint for a slightly longer time.  
Soldering irons using a temperature regulator should be set to about 350°C.  
Caution: The printed pattern (copper foil) may peel away if the heated tip is applied for too long, so be careful!
- Strong viscosity  
Unleaded solder is more viscous (sticky, less prone to flow) than ordinary solder so use caution not to let solder bridges occur such as on IC pins, etc.
- Usable with ordinary solder  
It is best to use only unleaded solder but unleaded solder may also be added to ordinary solder.

**TABLE OF CONTENTS**

**1. SERVICE NOTE** ..... 4

**2. GENERAL**  
Location of Controls ..... 5  
Connections ..... 5

**3. DISASSEMBLY**  
3-1. Sub Panel Assy ..... 8  
3-2. CD Mechanism Block ..... 8  
3-3. Main Board ..... 9  
3-4. Servo Board ..... 9  
3-5. Chassis (T) Sub Assy ..... 10  
3-6. Roller Arm Assy ..... 10  
3-7. Chassis (OP) Assy ..... 11  
3-8. Chucking Arm Sub Assy ..... 11  
3-9. Sled Motor Assy ..... 12  
3-10. Optical Pick-up Section ..... 13  
3-11. Optical Pick-up ..... 13

**4. DIAGNOSIS FUNCTION** ..... 14

**5. DIAGRAMS**  
5-1. Block Diagram –Main Section– ..... 17  
5-2. Block Diagram –Display Section– ..... 18  
5-3. Printed Wiring Board –Main Section– ..... 19  
5-4. Schematic Diagram –Main Section (1/4)– ..... 20  
5-5. Schematic Diagram –Main Section (2/4)– ..... 21  
5-6. Schematic Diagram –Main Section (3/4)– ..... 22  
5-7. Schematic Diagram –Main Section (4/4)– ..... 23  
5-8. Printed Wiring Board –Key Section– ..... 24  
5-9. Schematic Diagram –Key Section– ..... 25

**6. EXPLODED VIEWS**  
6-1. Main Section ..... 29  
6-2. Front Panel Section ..... 30  
6-3. CD Mechanism Section (MG-101TC-188//C) ..... 31

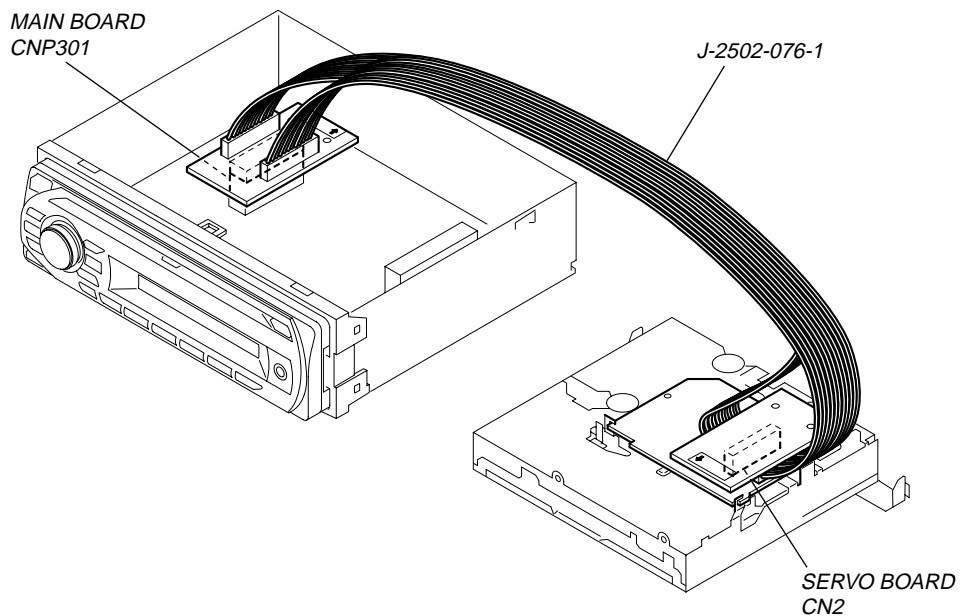
**7. ELECTRICAL PARTS LIST** ..... 32

## SECTION 1 SERVICE NOTE

### EXTENSION CABLE AND SERVICE POSITION

When repairing or servicing this set, connect the jig (extension cable) as shown below.

- Connect the MAIN board (CNP301) and the SERVO board (CN2) with the extension cable (Part No. J-2502-076-1).



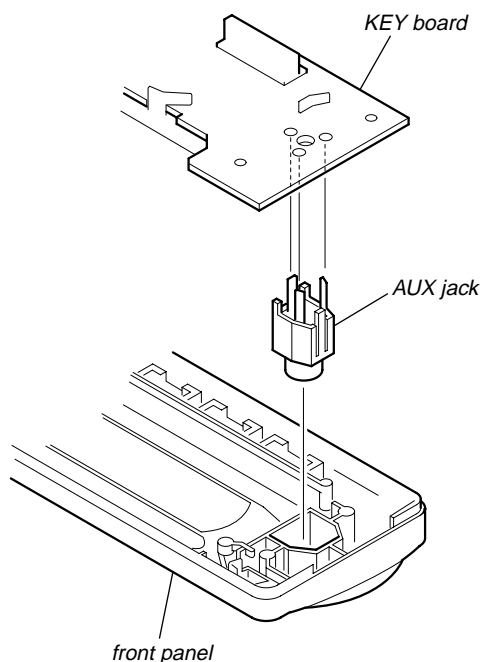
### NOTE FOR REPLACEMENT OF THE SERVO BOARD

When repairing, the complete SERVO board (A-1201-631-A) should be replaced since any parts in the SERVO board cannot be repaired.

### NOTE FOR REPLACEMENT OF THE AUX JACK (J901)

To replace the AUX jack requires alignment.

1. Insert the AUX jack into the KEY board.
2. Place the KEY board on the front panel.
3. Solder the three terminals of the jack.



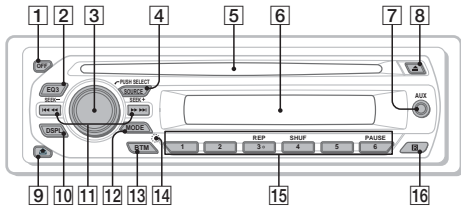
# SECTION 2 GENERAL

This section is extracted from instruction manual.

## • LOCATION OF CONTROL

### Location of controls and basic operations

#### Main unit



This section contains instructions on the location of controls and basic operations. For details, see the respective pages. For optional device (CD/MD changer, etc.) operation, see "Using optional equipment" on page 10. The corresponding buttons on the card remote commander control the same functions as those on the unit.

- 1 OFF button**  
To power off; stop the source.
- 2 EQ3 (equalizer) button** page 9  
To select an equalizer type (XPLD, VOCAL, EDGE, CRUISE, SPACE, GRAVITY, CUSTOM or OFF).
- 3 Volume control dial/select button** page 9  
To adjust volume (rotate); select setup items (press and rotate).
- 4 SOURCE button**  
To power on; change the source\* (Radio/CD/AUX).
- 5 Disc slot**  
Insert the disc (label side up), playback starts.
- 6 Display window**
- 7 AUX input jack** page 10  
To connect a portable audio device.
- 8 (eject) button**  
To eject the disc.
- 9 (front panel release) button** page 5

- 10 DSPL (display)/SCRL (scroll) button (CDX-GT320/GT32W/GT220/GT22W)** page 8  
To change display items (press); scroll the display item (press and hold).  
**DSPL (display) button (CDX-GT120/GT12W)** page 8  
To change display items.
- 11 SEEK -/+ buttons**  
**CD:**  
To skip tracks (press); skip tracks continuously (press, then press again within about 1 second and hold); reverse/fast-forward a track (press and hold).  
**Radio:**  
To tune in stations automatically (press); find a station manually (press and hold).
- 12 MODE button** page 8  
To select the radio band (FM/AM)\*.
- 13 BTM/CAT button (CDX-GT320/GT32W)** page 8  
To start the BTM function (press and hold).  
**BTM button (CDX-GT220/GT22W/GT120/GT12W)** page 8  
To start the BTM function (press and hold).
- 14 RESET button** (located behind the front panel) (CDX-GT320/GT32W only) page 5
- 15 Number buttons**  
**CD:**  
①/②: **ALBM -/+** (during MP3/WMA playback) (CDX-GT320/GT32W/GT220/GT22W)  
To skip albums (press); skip albums continuously (press and hold).  
③: **REP** page 8  
④: **SHUF** page 8  
⑤: **PAUSE**  
To pause playback of a CD on this unit. To cancel, press again.  
**Radio:**  
To receive stored stations (press); store stations (press and hold).
- 16 Receptor for the card remote commander (CDX-GT320/GT32W/GT220/GT22W only)**

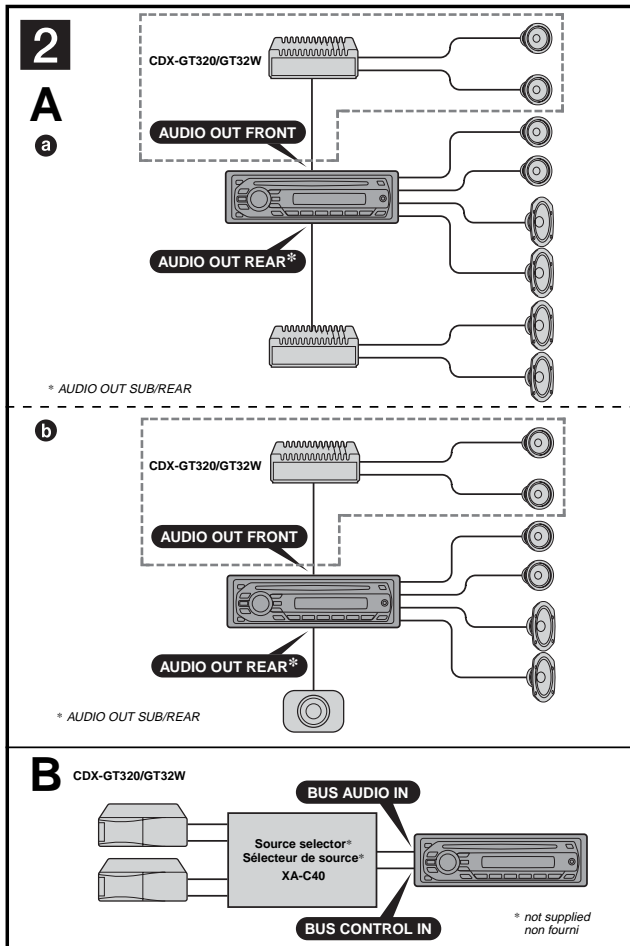
The following buttons on the card remote commander have also different buttons/functions from the unit. Remove the insulation film before use (page 5) (CDX-GT320/GT32W only).

- 17 (I◀) (▶)I buttons**  
To control CD/radio, the same as (SEEK -/+ on the unit. Setup, sound setting, etc., can be operated by ◀▶.
- 18 DSPL (display) button**  
To change display items.
- 19 VOL (volume) +/- button**  
To adjust volume.
- 20 ATT (attenuate) button**  
To attenuate the sound. To cancel, press again.
- 21 SEL (select) button**  
The same as the select button on the unit.
- 22 (+) (-) buttons**  
To control CD, the same as ①/② (ALBM -/+) on the unit. Setup, sound setting, etc., can be operated by ↑↓.
- 23 SCRL (scroll) button**  
To scroll the display item.
- 24 Number buttons**  
To receive stored stations (press); store stations (press and hold).

\* In the case of a CD/MD changer or SAT tuner being connected, when (SOURCE) is pressed, the connected device ("MD" "XM" or "SR") will appear in the display, depending on which device is connected. Furthermore, if (MODE) is pressed, you can switch the changer, or SAT tuner band (CDX-GT320/GT32W only).

Note  
If the unit is turned off and the display disappears, it cannot be operated with the card remote commander unless (SOURCE) on the unit is pressed, or a disc is inserted to activate the unit first.

## • CONNECTIONS



### Connection example 2

#### Notes (2-A)

- Be sure to connect the ground (earth) lead before connecting the amplifier.
- The alarm will only sound if the built-in amplifier is used.

#### Tips (2-B)

- When connecting only a single CD/MD changer or other optional device, connect directly to this unit.
- For connecting two or more CD/MD changers or other optional devices, the source selector XA-C40 (not supplied) is necessary.

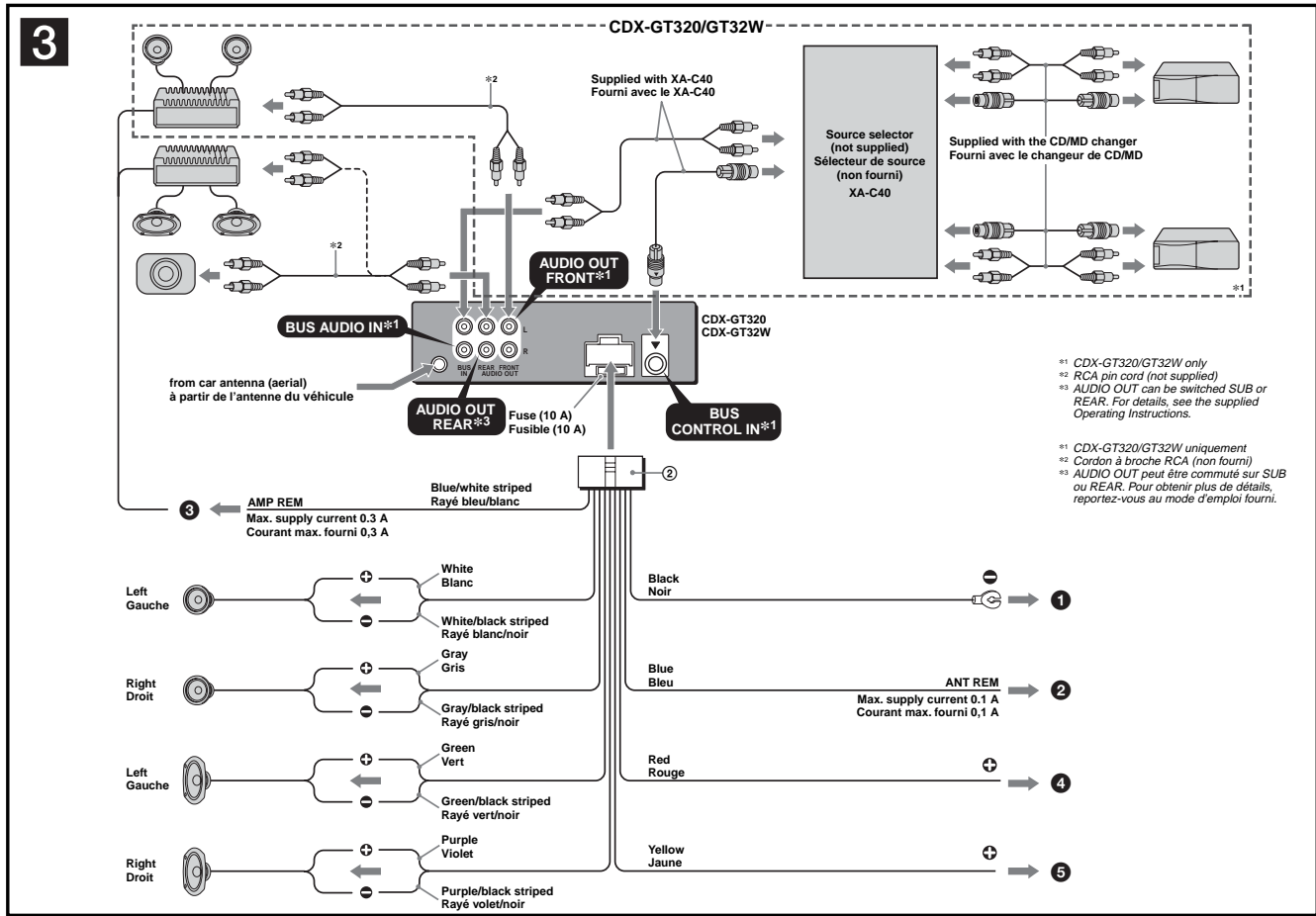
### Exemple de raccordement 2

#### Remarques (2-A)

- Raccordez d'abord le câble de mise à la masse avant de raccorder l'amplificateur.
- L'alarme est émise uniquement lorsque l'amplificateur intégré est utilisé.

#### Conseils (2-B)

- En cas de raccordement d'un seul changeur de CD/MD uniquement ou d'autres appareils en option, raccordez-le/les directement à cet appareil.
- Le sélecteur de source XA-C40 (non fourni) est nécessaire pour raccorder deux changeurs de CD/MD ou plus ou d'autres appareils en option.



## Connection diagram 3

- To a metal surface of the car**  
First connect the black ground (earth) lead, then connect the yellow and red power supply leads.
- To the power antenna (aerial) control lead or power supply lead of antenna (aerial) booster**  
**Notes**
  - It is not necessary to connect this lead if there is no power antenna (aerial) or antenna (aerial) booster, or with a manually-operated telescopic antenna (aerial).
  - When your car has a built-in FM/AM antenna (aerial) in the rear/side glass, see "Notes on the control and power supply leads."
- To AMP REMOTE IN of an optional power amplifier**  
This connection is only for amplifiers. Connecting any other system may damage the unit.
- To the +12 V power terminal which is energized in the accessory position of the ignition switch**  
**Notes**
  - If there is no accessory position, connect to the +12 V power (battery) terminal which is energized at all times. Be sure to connect the black ground (earth) lead to a metal surface of the car first.
  - When your car has a built-in FM/AM antenna (aerial) in the rear/side glass, see "Notes on the control and power supply leads."
- To the +12 V power terminal which is energized at all times**  
Be sure to connect the black ground (earth) lead to a metal surface of the car first.

### Notes on the control and power supply leads

- The power antenna (aerial) control lead (blue) supplies +12 V DC when you turn on the tuner.
- When your car has built-in FM/AM antenna (aerial) in the rear/side glass, connect the power antenna (aerial) control lead (blue) or the accessory power supply lead (red) to the power terminal of the existing antenna (aerial) booster. For details, consult your dealer.
- A power antenna (aerial) without a relay box cannot be used with this unit.

### Memory hold connection

When the yellow power supply 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 to avoid its damage.
- Do not connect the speaker terminals to the car chassis, or connect the terminals of the right speakers with those of the left speaker.
- Do not connect the ground (earth) lead of this unit to the negative (-) terminal of the speaker.
- Do not attempt to connect the speakers in parallel.
- Connect only passive speakers. Connecting active speakers (with built-in amplifiers) to the speaker terminals may damage the unit.
- To avoid a malfunction, do not use the built-in speaker leads installed in your car if the unit shares a common negative (-) lead for the right and left speakers.
- Do not connect the unit's speaker leads to each other.

### Note on connection

If speaker and amplifier are not connected correctly, "FAILURE" appears in the display. In this case, make sure the speaker and amplifier are connected correctly.

## Schéma de raccordement 3

- À un point métallique de la voiture**  
Branchez d'abord le câble de mise à la masse noir et, ensuite, les câbles d'alimentation jaune et rouge.
- Au câble de commande d'antenne électrique ou au câble d'alimentation de l'amplificateur d'antenne**  
**Remarques**
  - Il n'est pas nécessaire de raccorder ce câble s'il n'y a pas d'antenne électrique ni d'amplificateur d'antenne, ou avec une antenne télescopique manuelle.
  - Si votre voiture est équipée d'une antenne FM/AM intégrée dans la vitre arrière/latérale, voir « Remarques sur les câbles de commande et d'alimentation ».
- Au niveau de AMP REMOTE IN de l'amplificateur de puissance en option**  
Ce raccordement s'applique uniquement aux amplificateurs. Le branchement de tout autre système risque d'endommager l'appareil.
- À la borne +12 V qui est alimentée quand la clé de contact est sur la position accessoires**  
**Remarques**
  - S'il n'y a pas de position accessoires, raccordez la borne d'alimentation (batterie) +12 V qui est alimentée en permanence.
  - Raccordez d'abord le câble de mise à la masse noir à un point métallique du véhicule.
  - Si votre voiture est équipée d'une antenne FM/AM intégrée dans la vitre arrière/latérale, voir « Remarques sur les câbles de commande et d'alimentation ».
- À la borne +12 V qui est alimentée en permanence**  
Raccordez d'abord le câble de mise à la masse noir à un point métallique du véhicule.

### Remarques sur les câbles de commande et d'alimentation

- Le câble de commande d'antenne électrique (bleu) fournit une alimentation de +12 V CC lorsque vous mettez la radio sous tension.
- Lorsque votre voiture est équipée d'une antenne FM/AM intégrée dans la vitre arrière/latérale, raccordez le câble de commande d'antenne (bleu) ou le câble d'alimentation des accessoires (rouge) à la borne d'alimentation de l'amplificateur d'antenne existant. Pour plus de détails, consultez votre détaillant.
- Une antenne électrique sans boîtier de relais ne peut pas être utilisée avec cet appareil.

### Raccordement pour la conservation de la mémoire

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

### Remarques sur le raccordement des haut-parleurs

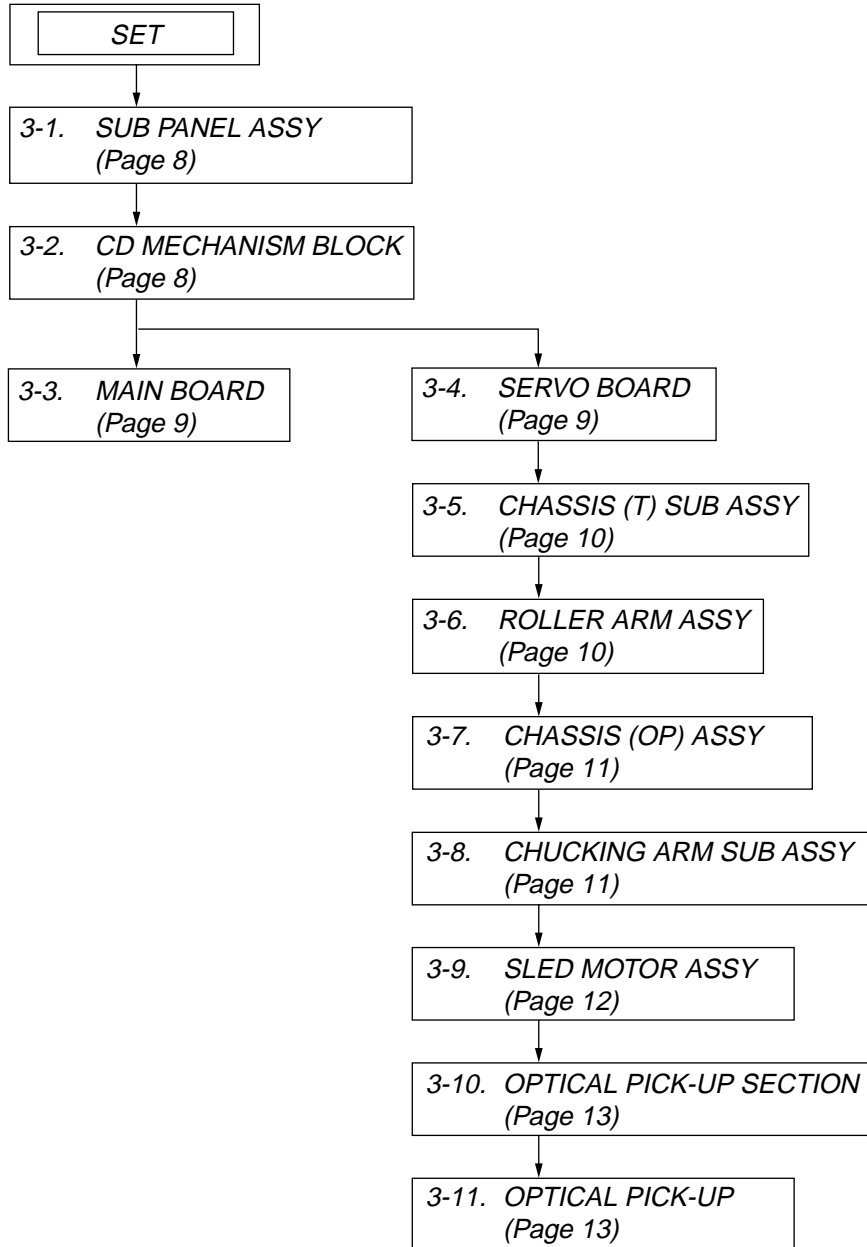
- Avant de raccorder les haut-parleurs, mettez l'appareil hors tension.
- Utilisez des haut-parleurs ayant une impédance de 4 à 8 ohms avec une capacité électrique adéquate pour éviter de les endommager.
- Ne raccordez pas les bornes du système de haut-parleurs au châssis de la voiture et ne raccordez pas les bornes du haut-parleur droit à celles du haut-parleur gauche.
- Ne raccordez pas le câble de mise à la masse de cet appareil à la borne négative (-) du haut-parleur.
- N'essayez pas de raccorder les haut-parleurs en parallèle.
- Raccordez uniquement des haut-parleurs passifs. Le raccordement de haut-parleurs actifs (avec amplificateurs intégrés) aux bornes des haut-parleurs peut endommager l'appareil.
- Pour éviter tout problème de fonctionnement, n'utilisez pas les câbles des haut-parleurs intégrés installés dans votre voiture si l'appareil possède un câble négatif commun (-) pour les haut-parleurs droit et gauche.
- Ne raccordez pas entre eux les cordons des haut-parleurs de l'appareil.

### Remarque sur le raccordement

Si les haut-parleurs ne sont pas raccordés correctement, le message « FAILURE » s'affiche. Dans ce cas, assurez-vous que les haut-parleurs sont bien raccordés.

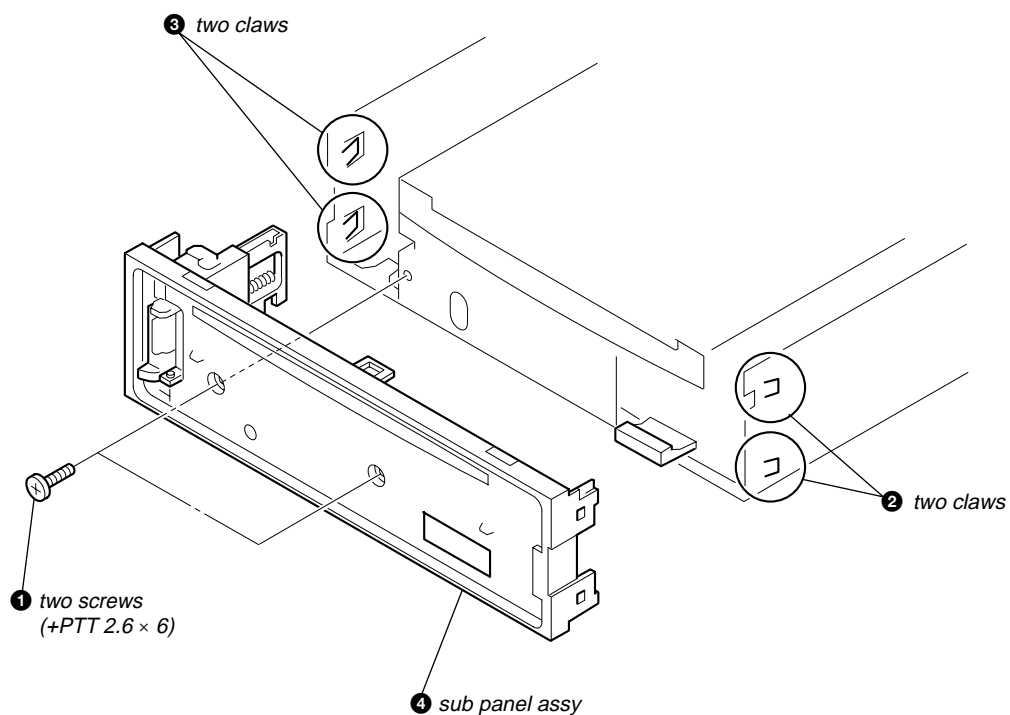
## SECTION 3 DISASSEMBLY

**Note:** This set can be disassemble according to the following sequence.

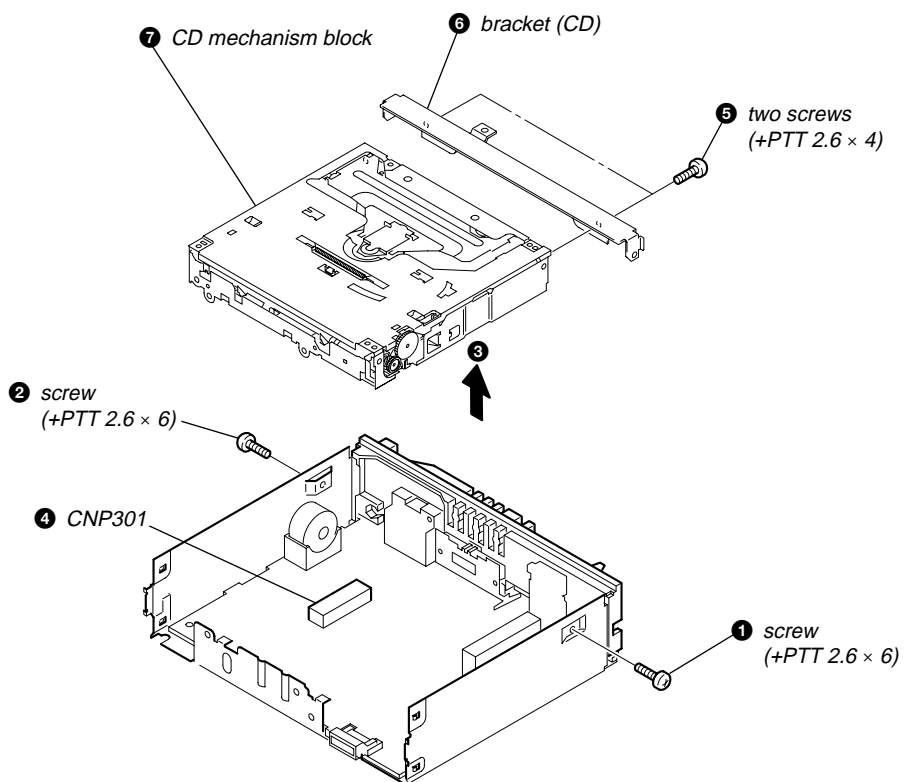


**Note:** Follow the disassembly procedure in the numerical order given.

## 3-1. SUB PANEL ASSY

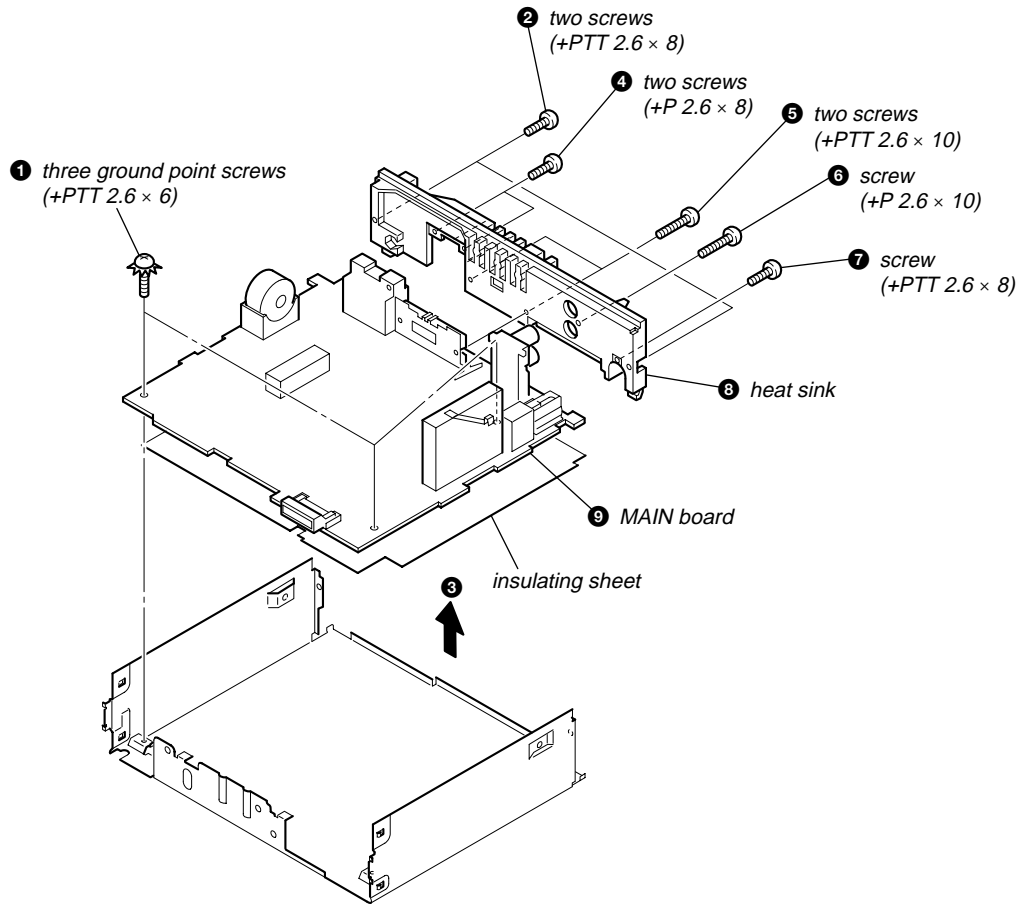


## 3-2. CD MECHANISM BLOCK

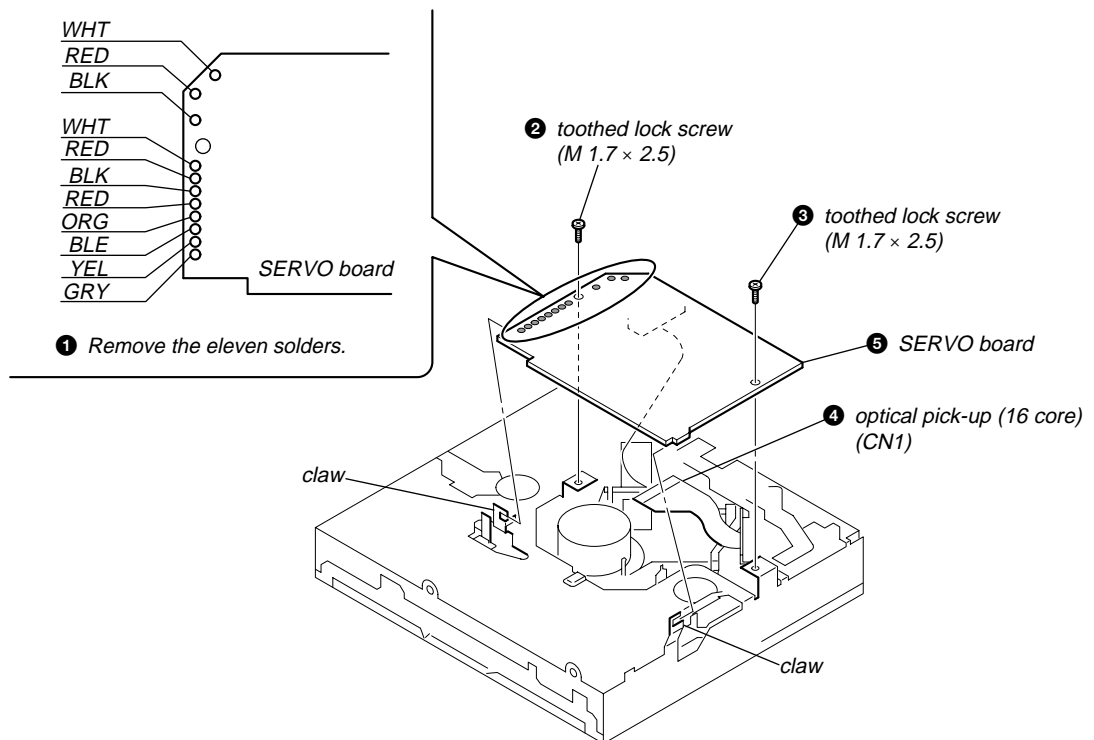




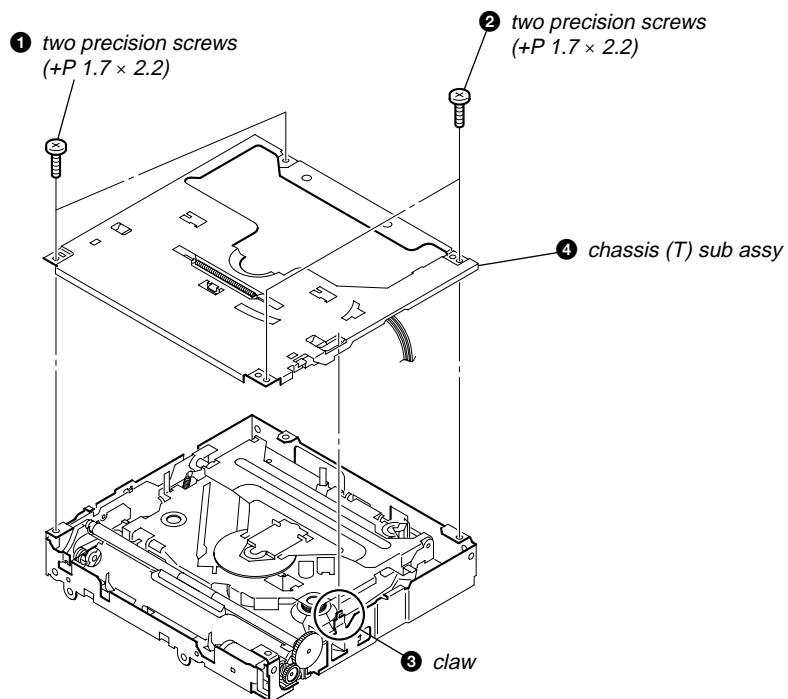
3-3. MAIN BOARD



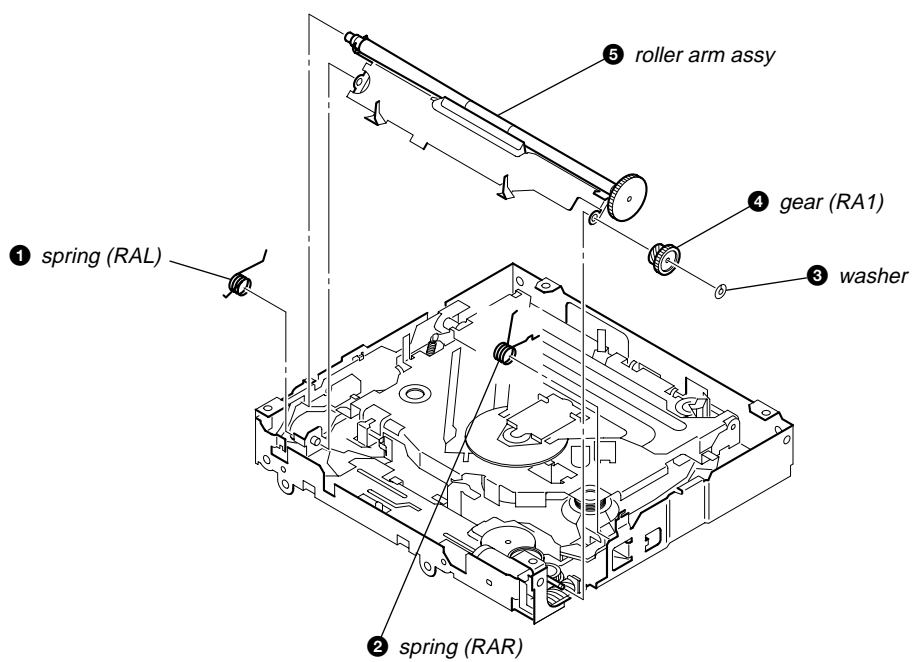
3-4. SERVO BOARD



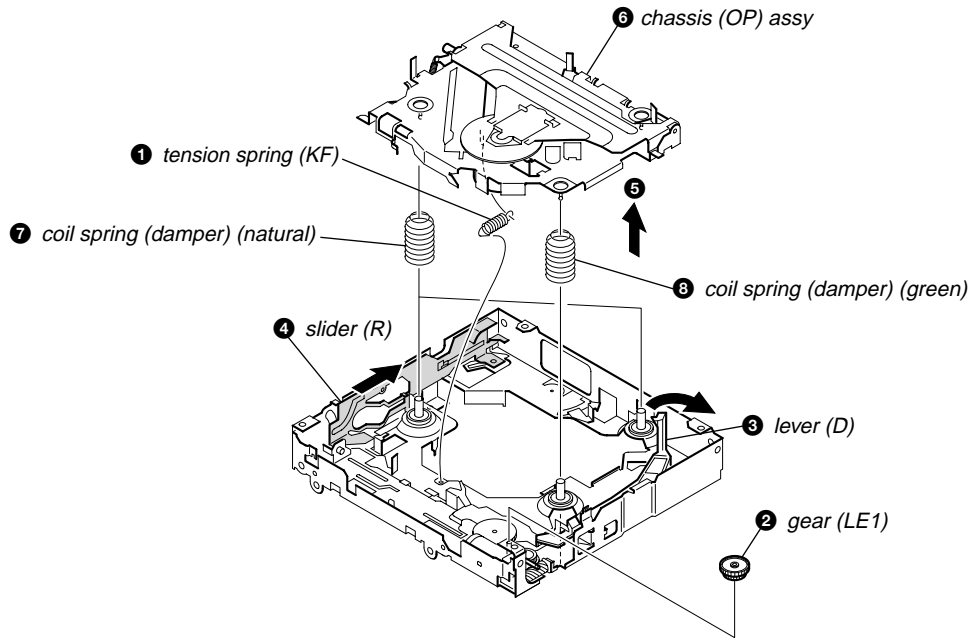
3-5. CHASSIS (T) SUB ASSY



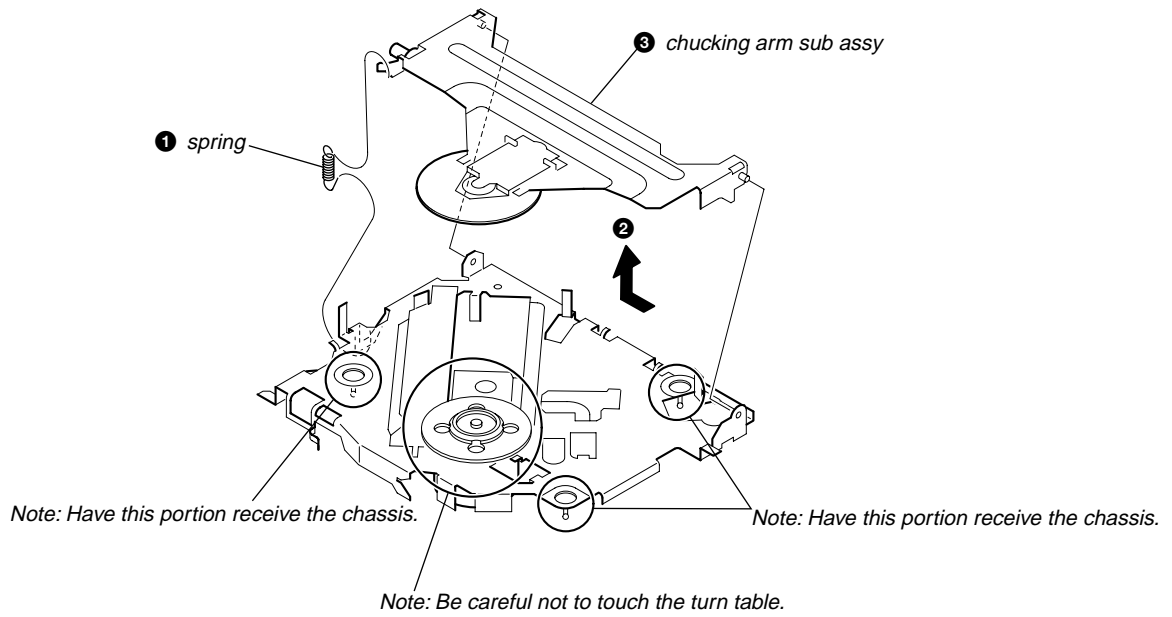
3-6. ROLLER ARM ASSY



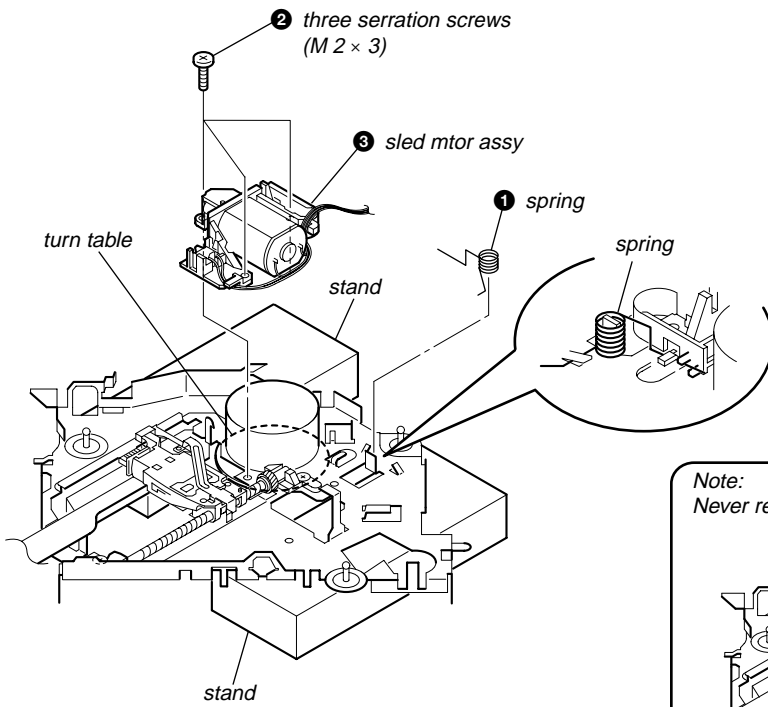
3-7. CHASSIS (OP) ASSY



3-8. CHUCKING ARM SUB ASSY

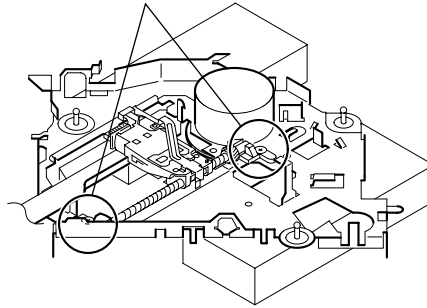


3-9. SLED MOTOR ASSY

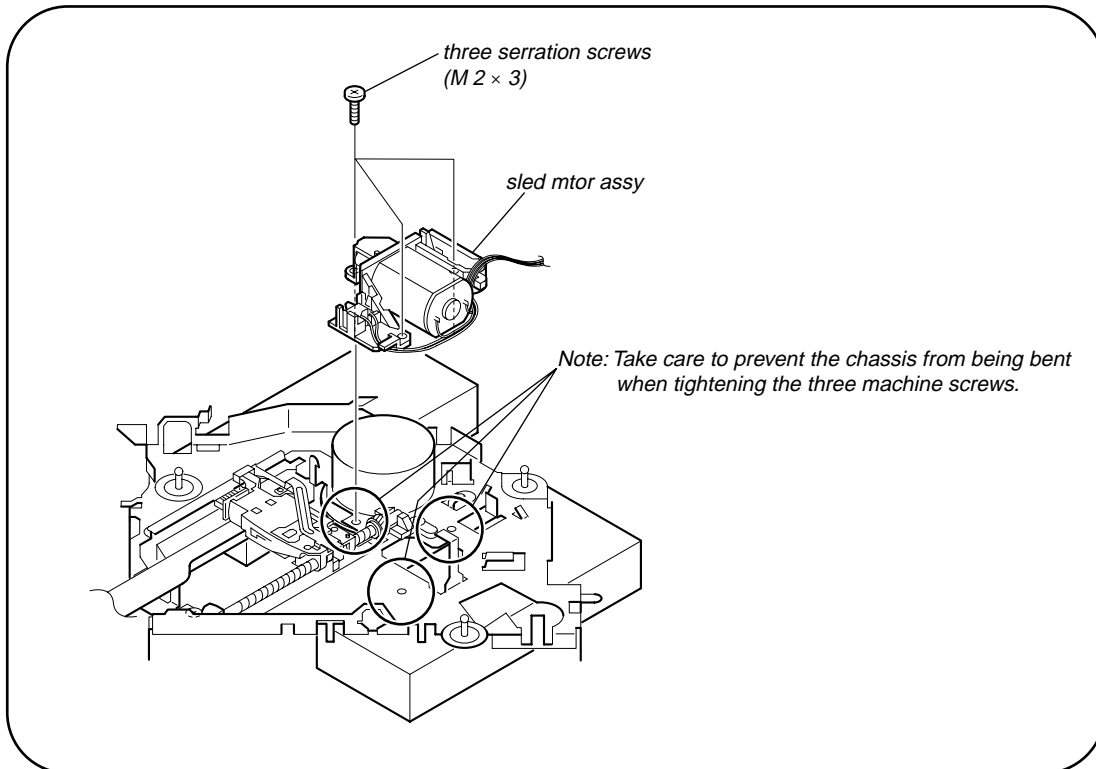


Note: Place the stand with care not to touch the turn table.

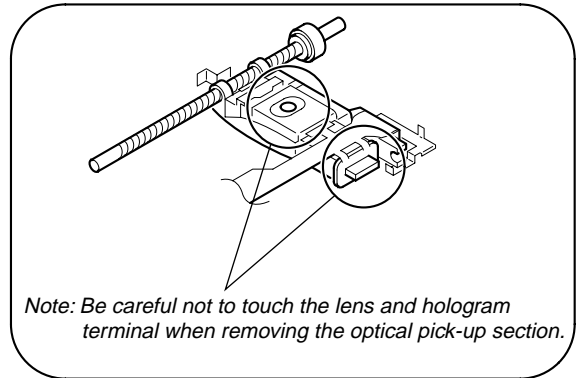
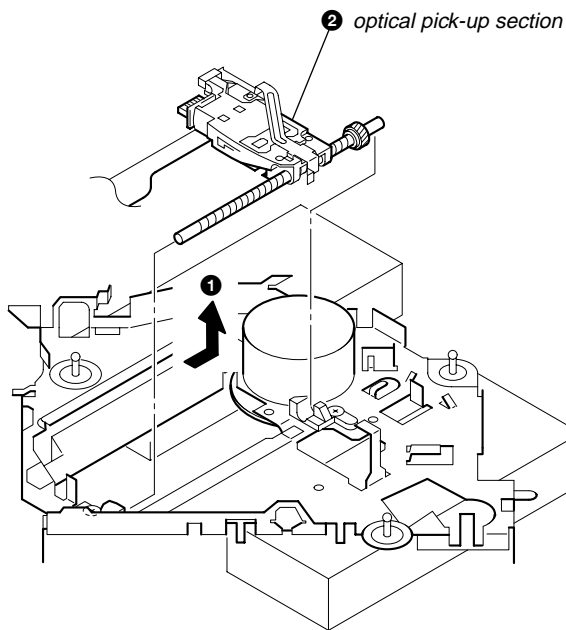
Note:  
Never remove these parts since they were adjusted.



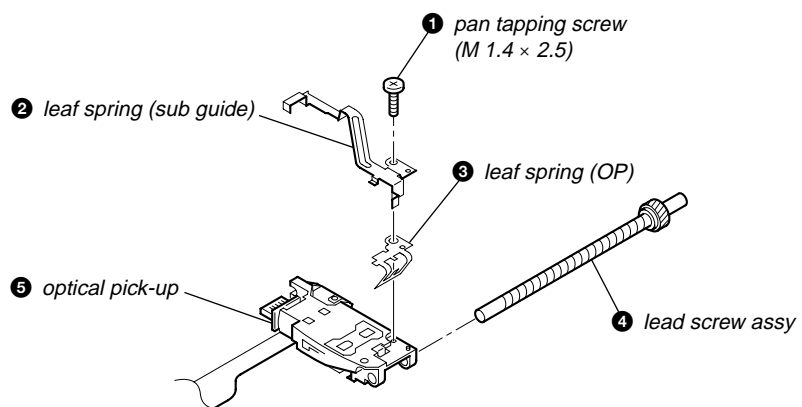
Note for Assembly



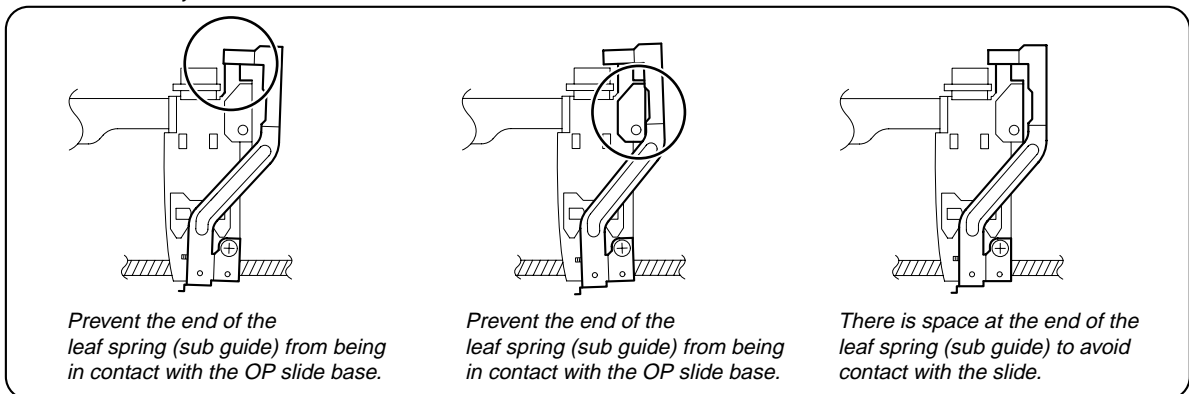
3-10. OPTICAL PICK-UP SECTION



3-11. OPTICAL PICK-UP



Notes for Assembly



## SECTION 4 DIAGNOSIS FUNCTION

### Description of the Diagnostics function:

#### 1. Setting the Diag display mode

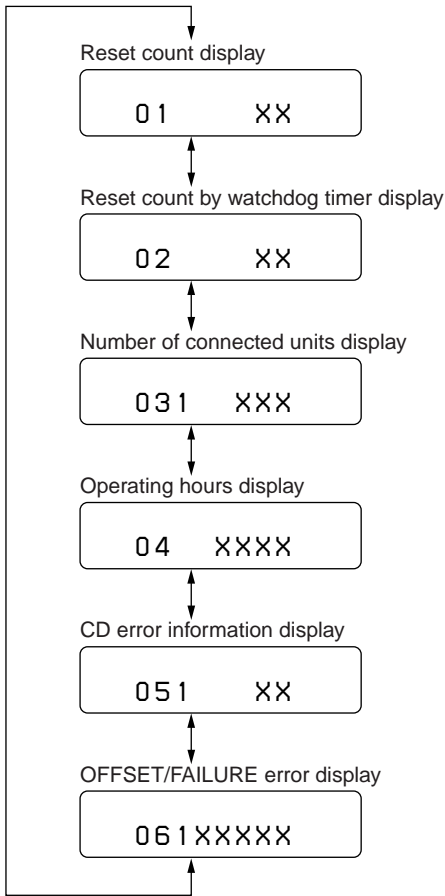
With the power off, press the [4] button, [5] button, and [4] button on the set body or the remote control (for more than 2 seconds) in turn.

#### 2. Canceling the Diag display mode

During the Diag function mode, press the [OFF] button.

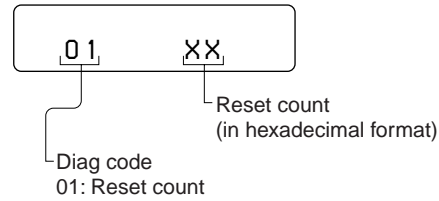
#### 3. Initial display in the Diag display mode.

Just when the Diag mode is entered, "reset count" is displayed. The display mode is switched by each rotation of [▶▶▶▶/SEEK +] or [◀◀◀◀/SEEK -] keys.

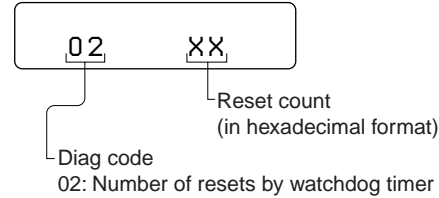


### 4. Contents of each display mode

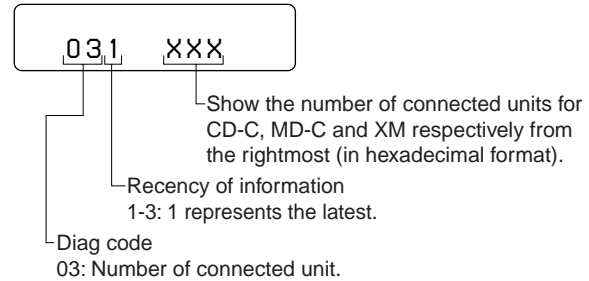
#### 4-1. Reset count display mode



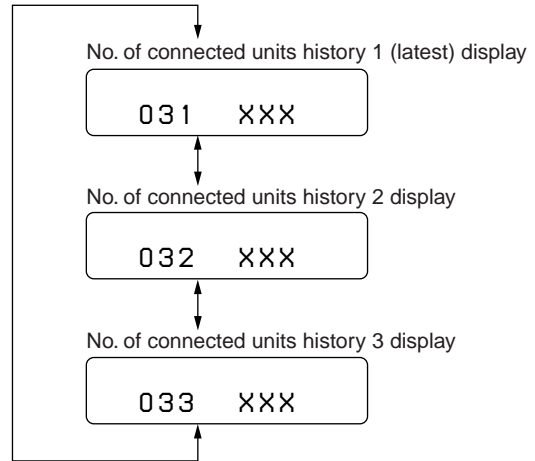
#### 4-2. Reset count by watchdog timer display mode



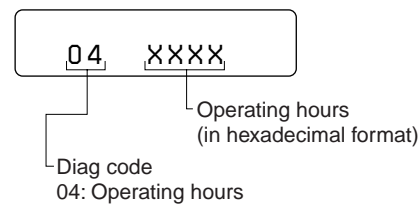
#### 4-3. Number of connected units display mode



The display mode is switched by each rotation of [2] or [1] keys during the number of connected units display mode.

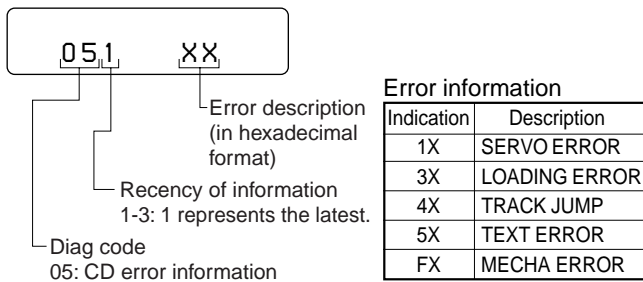


#### 4-4. Operating hours display mode

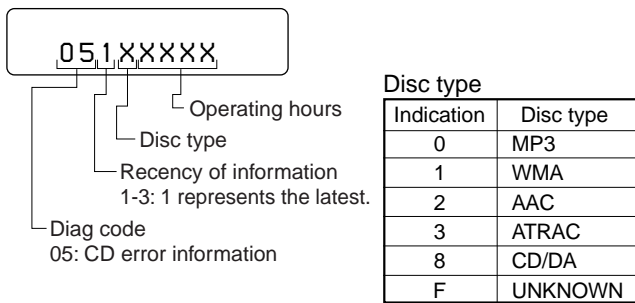


**4-5. CD error information display mode**

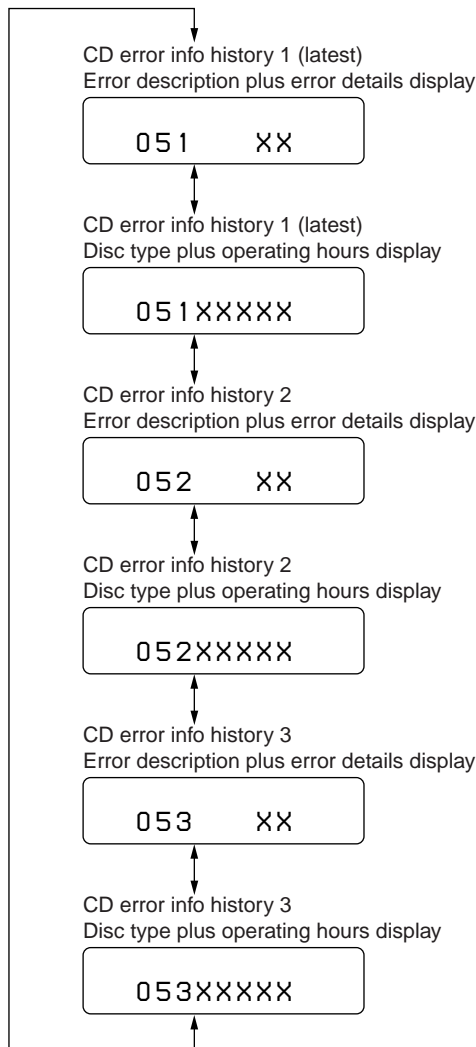
**4-5-1. Error description**



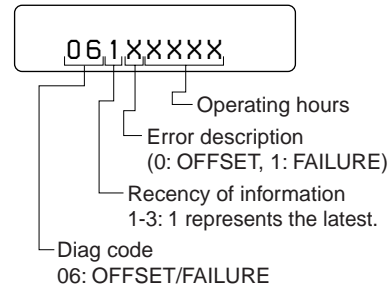
**4-5-2. Disc type and operating hours**



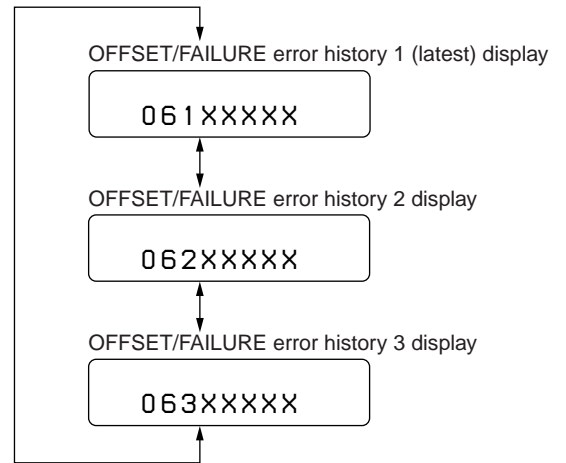
The display mode is switched by each rotation of [2] or [1] keys during the CD error information display mode.



**4-6. OFFSET/FAILURE error display mode**



The display mode is switched by each rotation of [2] or [1] keys during the OFFSET/FAILURE error display mode.

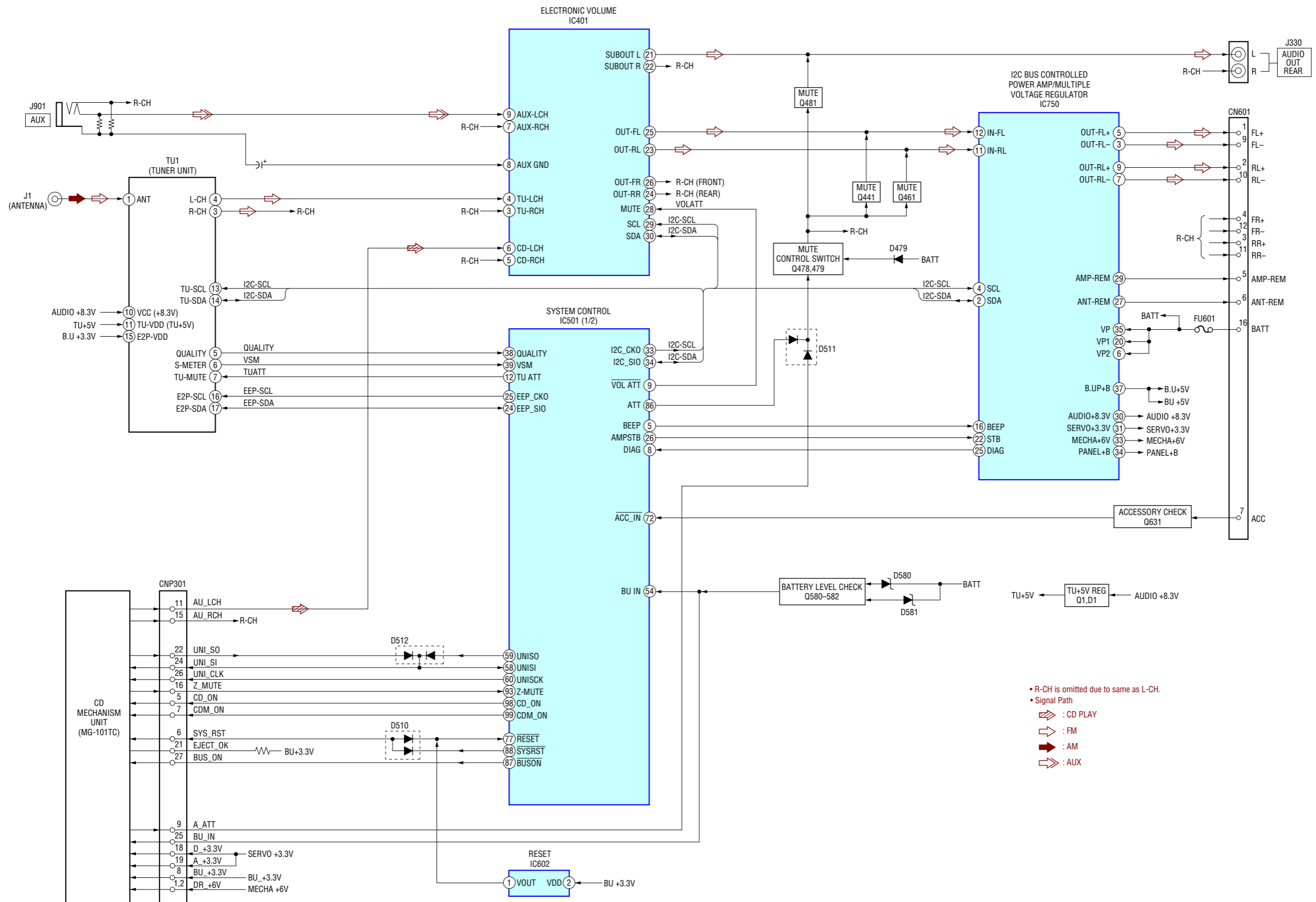


MEMO

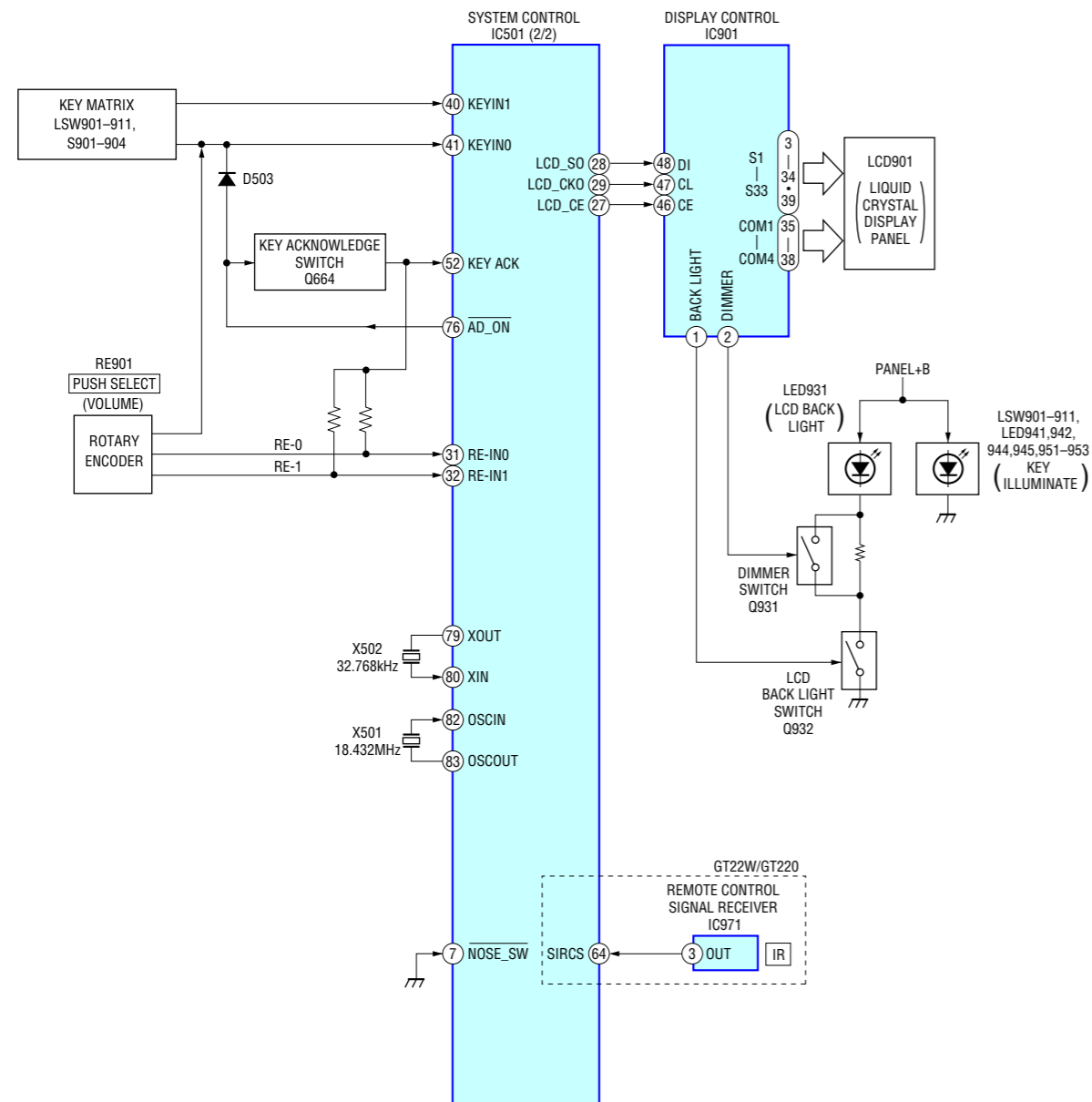


SECTION 5  
DIAGRAMS

5-1. BLOCK DIAGRAM — MAIN SECTION —



5-2. BLOCK DIAGRAM — DISPLAY SECTION —



• NOTE FOR PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS

**THIS NOTE IS COMMON FOR PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS.**  
(In addition to this, the necessary note is printed in each block.)

**For schematic diagrams.**

**Note:**

- All capacitors are in  $\mu\text{F}$  unless otherwise noted. (p: pF) 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in  $\Omega$  and  $1/4\text{ W}$  or less unless otherwise specified.
- $\Delta$  : internal component.
- $\square$  : panel designation.

**Note:**

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

**Note:**

Les composants identifiés par une marque  $\Delta$  sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

- $\text{---}$  : B+ Line.
- $\text{---}$  : B- Line.
- $\square$  : adjustment for repair.
- Voltages and waveforms are dc with respect to ground under no-signal (detuned) conditions.
  - no mark : FM
  - ( ) : AM
  - < > : CD PLAY
  - \* : impossible to measure
- Voltages are taken with a VOM (Input impedance 10 M $\Omega$ ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with an oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.
  - $\Rightarrow$  : CD PLAY
  - $\Rightarrow$  : FM
  - $\Rightarrow$  : AM
  - $\Rightarrow$  : AUX

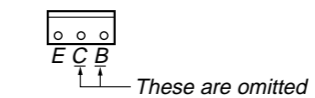
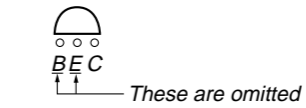
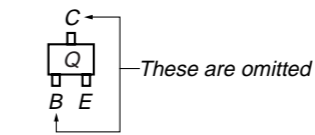
**For printed wiring boards.**

**Note:**

- $\circ$  : parts extracted from the component side.
- $\text{---}$  : parts extracted from the conductor side.
- $\circ$  : Through hole.
- $\square$  : Pattern from the side which enables seeing. (The other layers' patterns are not indicated.)

**Caution:**

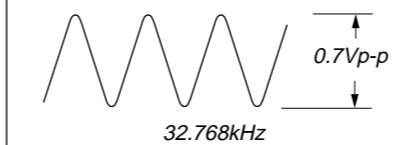
Pattern face side: Parts on the pattern face side seen from the (Side B) pattern face are indicated.  
Parts face side: Parts on the parts face side seen from the (Side A) parts face are indicated.



• Waveforms

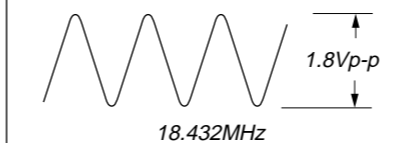
— MAIN Board —

① IC501 ⑦⑨ (XOUT)



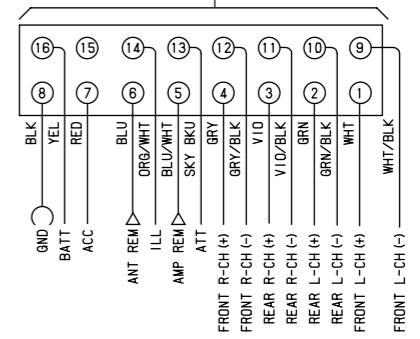
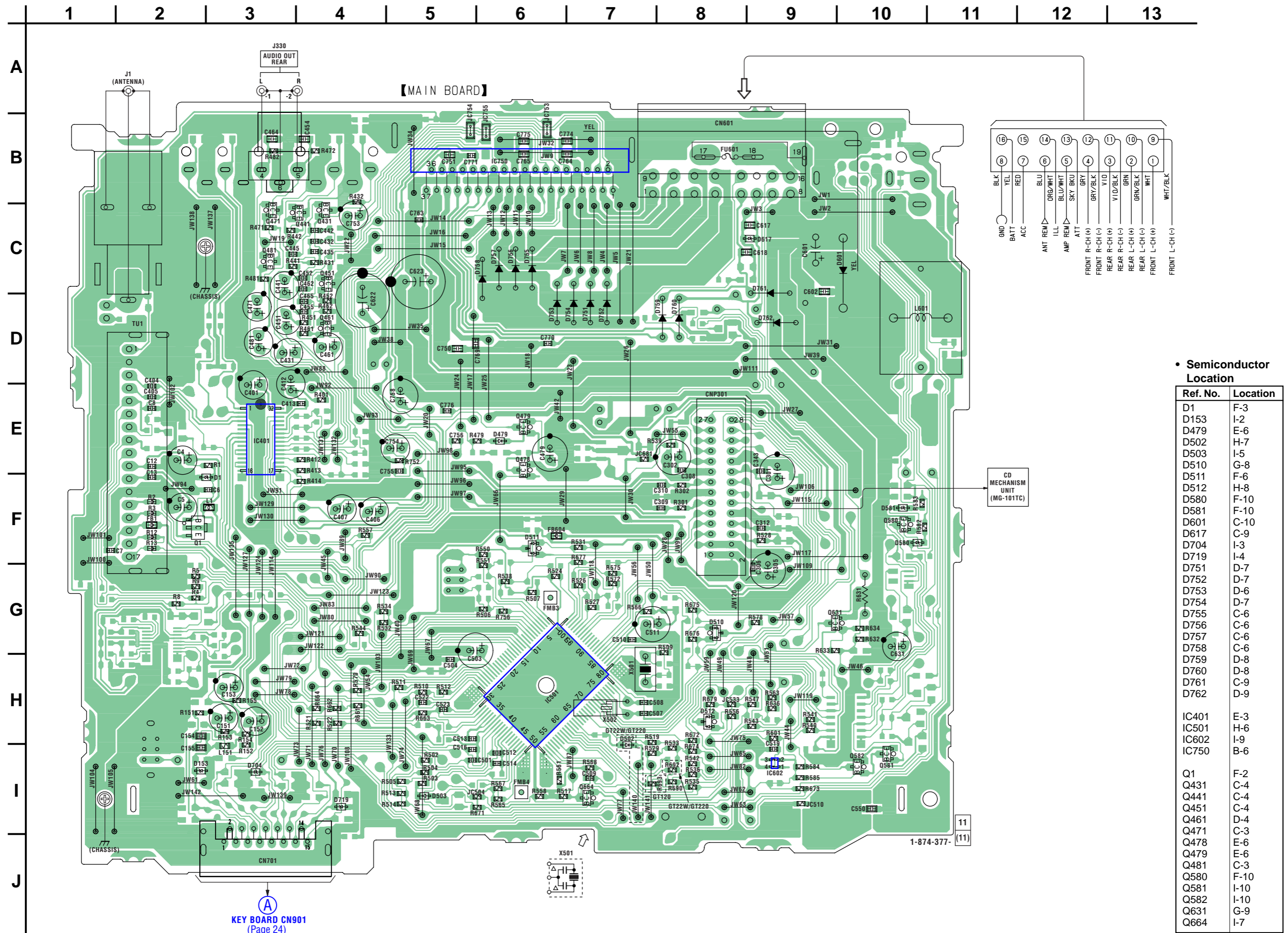
0.5 V/DIV, 20  $\mu\text{sec}$ /DIV

② IC501 ⑧③ (OSCOU)



0.5 V/DIV, 20 nsec/DIV

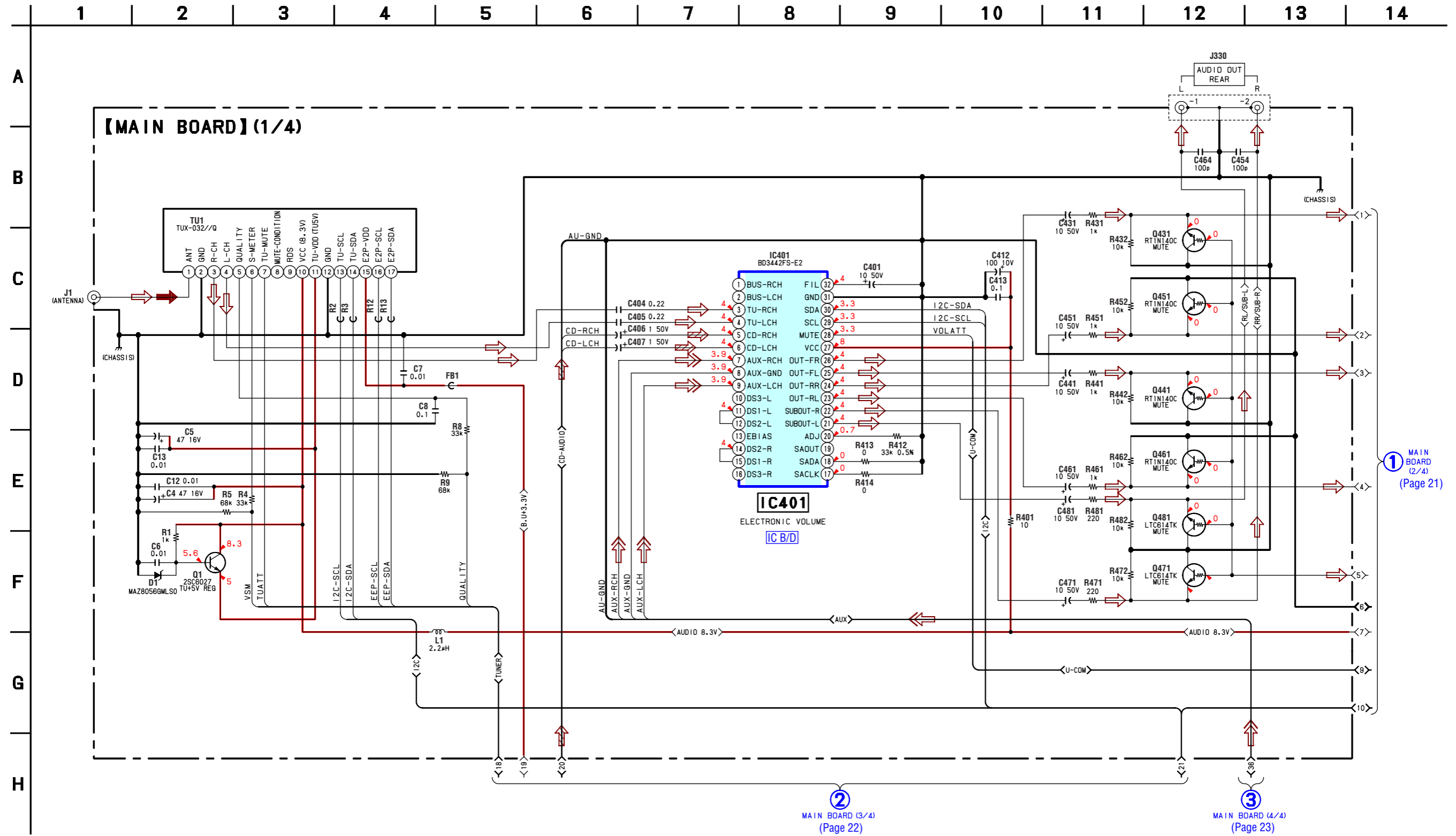
5-3. PRINTED WIRING BOARD — MAIN SECTION —  : Uses unleaded solder.



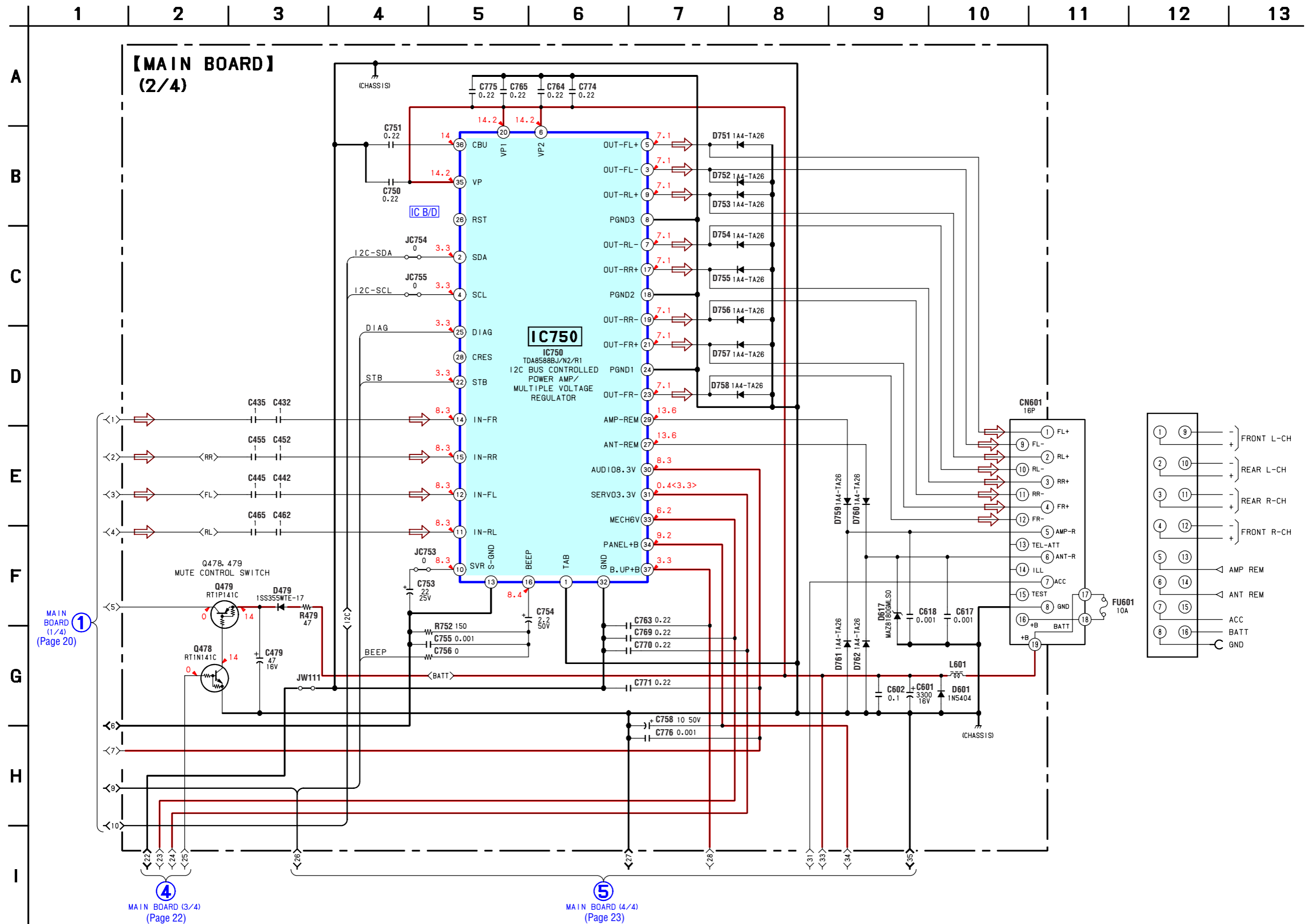
• Semiconductor Location

Ref. No.	Location
D1	F-3
D153	I-2
D479	E-6
D502	H-7
D503	I-5
D510	G-8
D511	F-6
D512	H-8
D580	F-10
D581	F-10
D601	C-10
D617	C-9
D704	I-3
D719	I-4
D751	D-7
D752	D-7
D753	D-6
D754	D-7
D755	C-6
D756	C-6
D757	C-6
D758	C-6
D760	D-8
D761	C-9
D762	D-9
IC401	E-3
IC501	H-6
IC602	I-9
IC750	B-6
Q1	F-2
Q431	C-4
Q441	C-4
Q451	C-4
Q461	D-4
Q471	C-3
Q478	E-6
Q479	E-6
Q481	C-3
Q580	F-10
Q581	I-10
Q631	G-9
Q664	I-7

5-4. SCHEMATIC DIAGRAM — MAIN SECTION (1/4) — • Refer to page 26 for IC Block Diagrams.

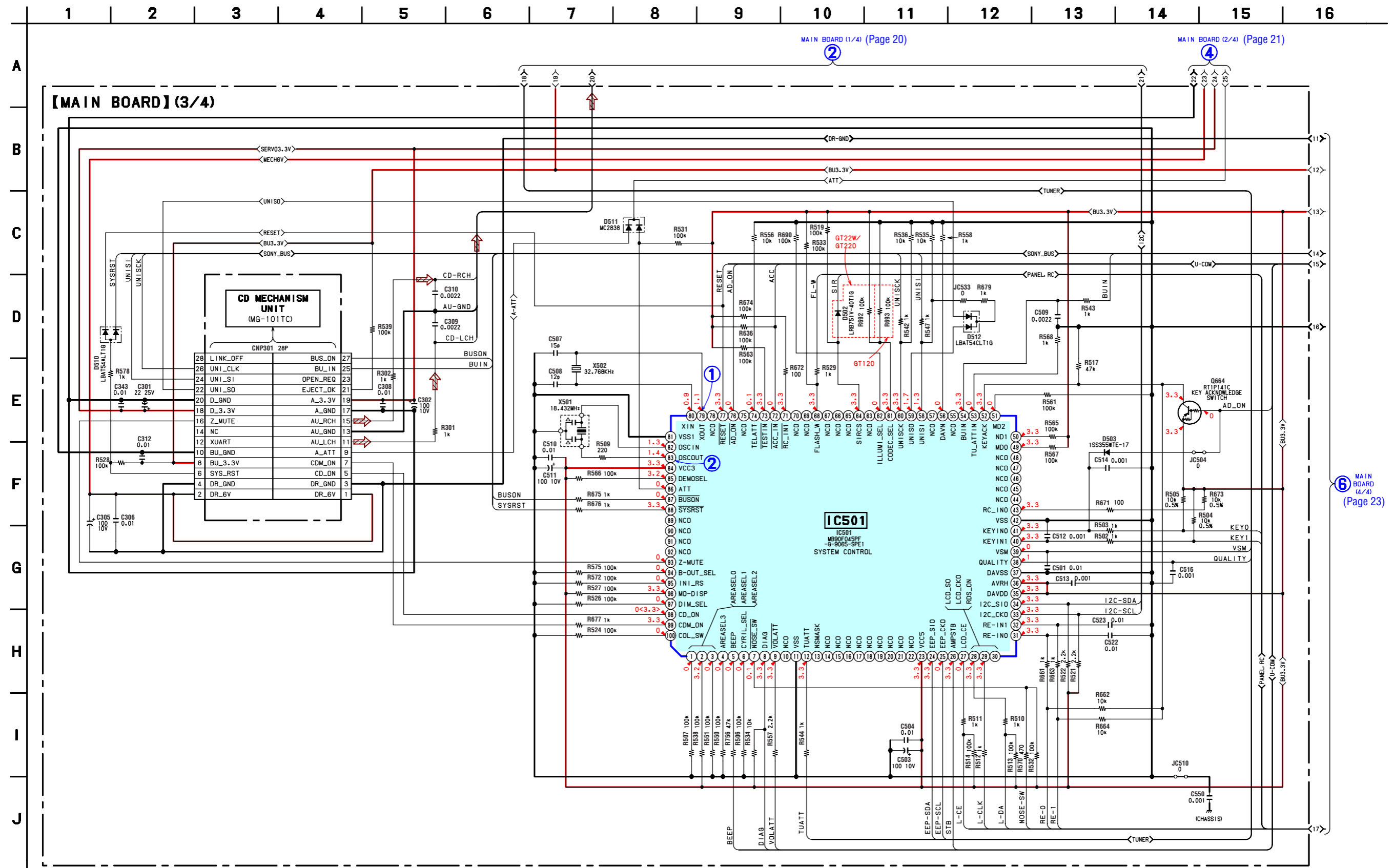


5-5. SCHEMATIC DIAGRAM — MAIN SECTION (2/4) — • Refer to page 26 for IC Block Diagrams.



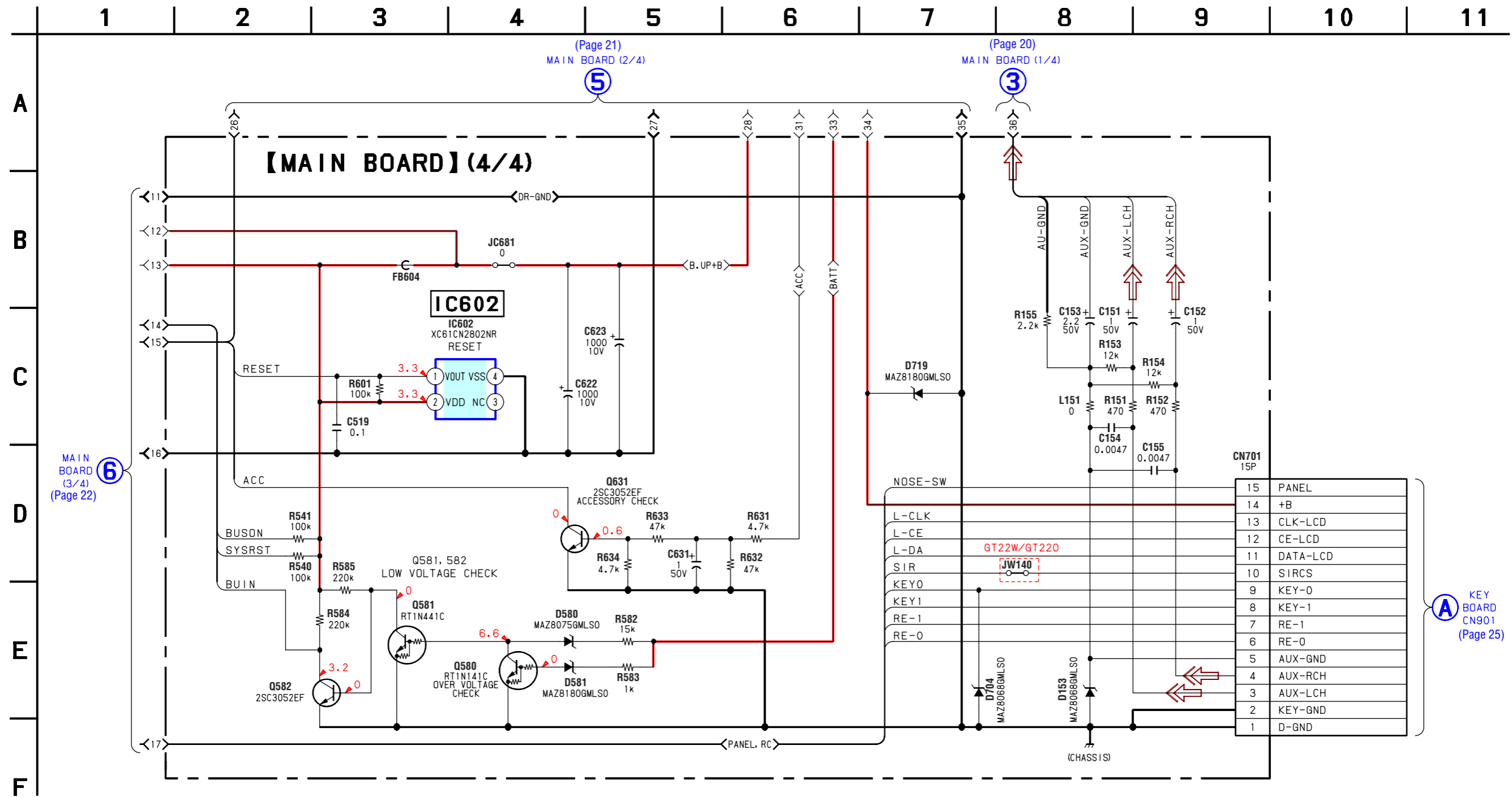
5-6. SCHEMATIC DIAGRAM — MAIN SECTION (3/4) —

- Refer to page 18 for Waveforms.
- Refer to page 27 for IC Pin Description of IC501.

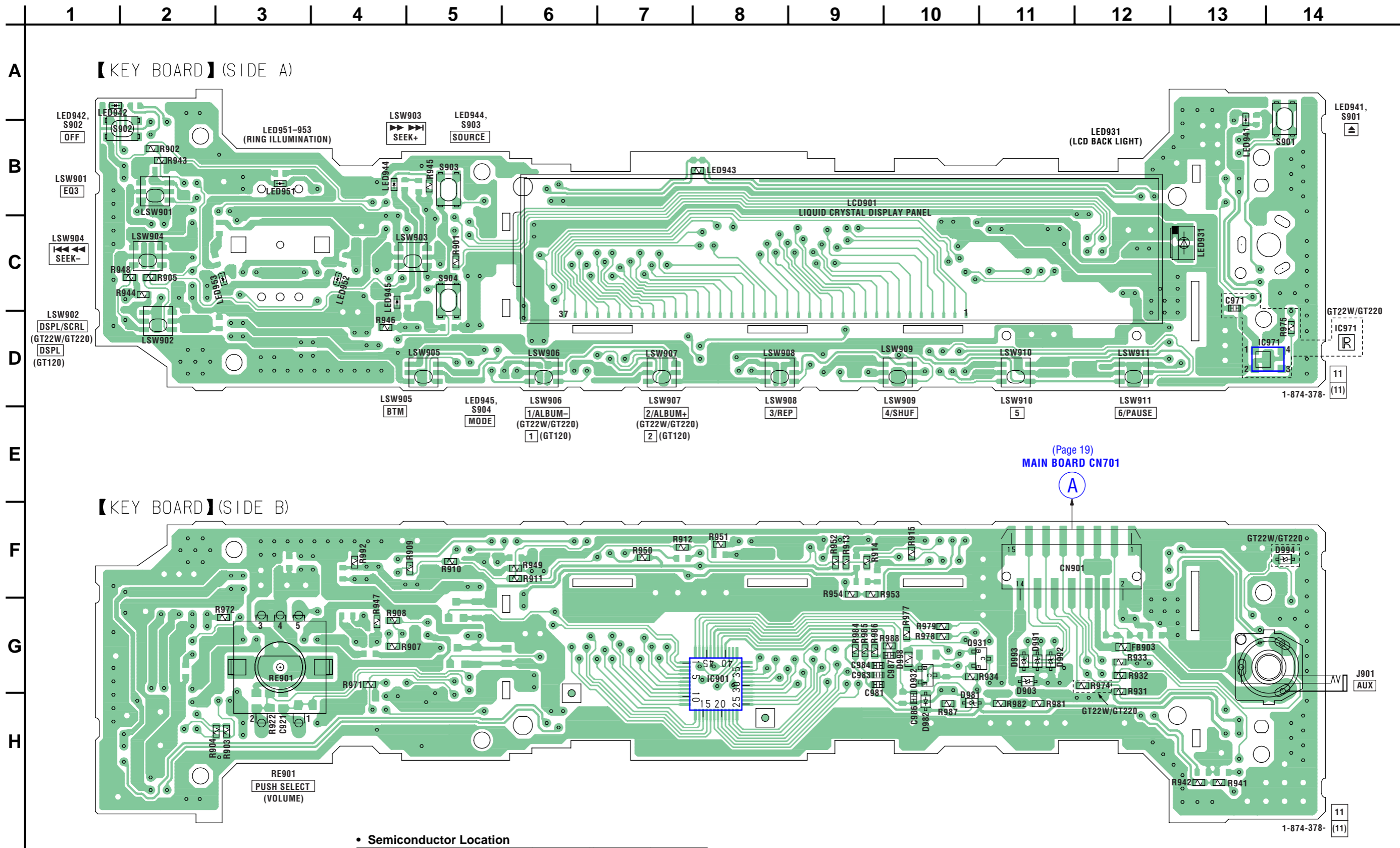


6 MAIN BOARD (14/4) (Page 23)

5-7. SCHEMATIC DIAGRAM — MAIN SECTION (4/4) —



5-8. PRINTED WIRING BOARD — KEY SECTION —  : Uses unleaded solder.

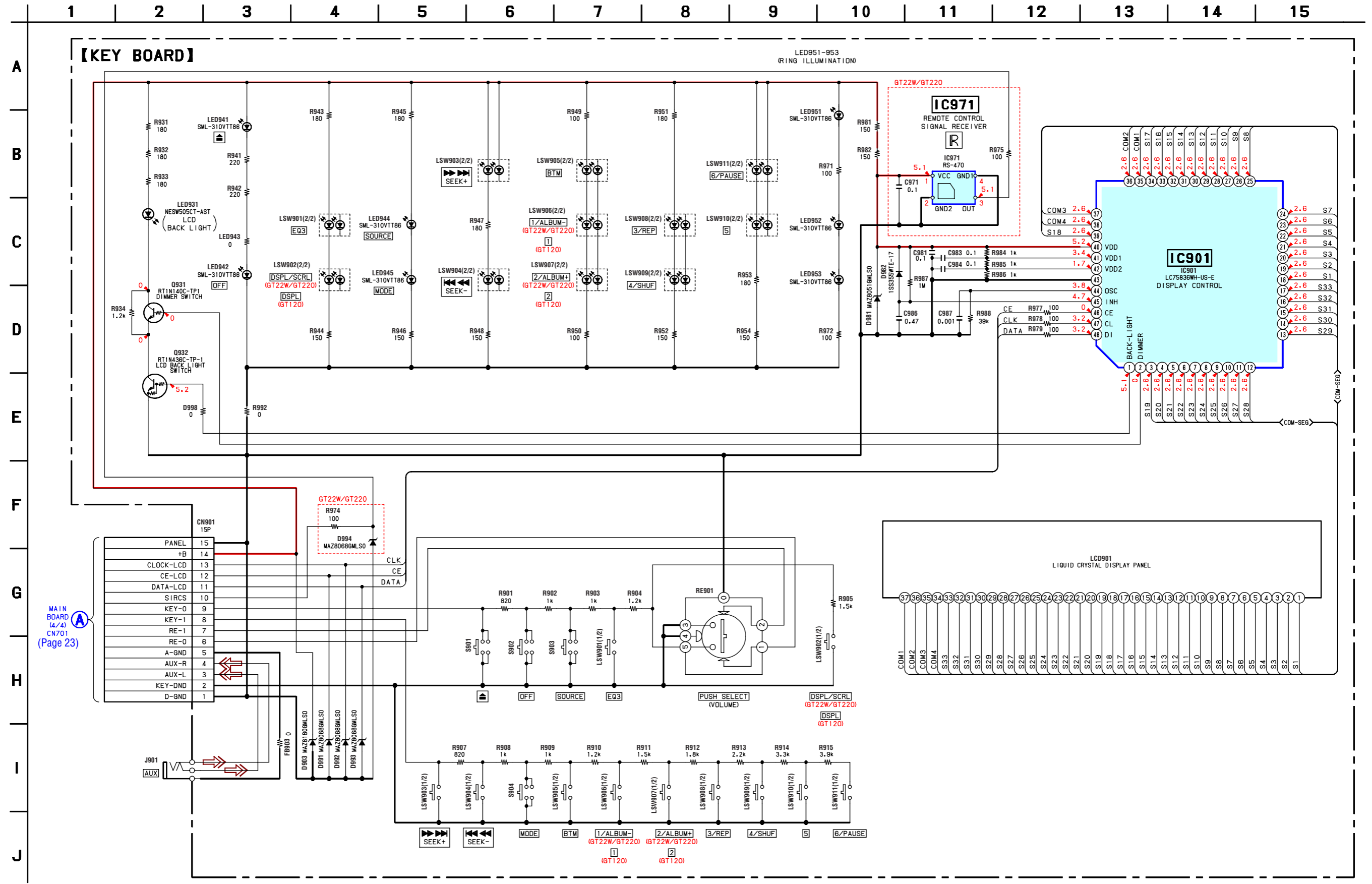


• Semiconductor Location

Ref. No.	Location	Ref. No.	Location	Ref. No.	Location
D903	G-11	IC901	G-8	LED945	C-4
D981	H-10	IC971	D-14	LED951	B-3
D982	H-10			LED952	C-4
D991	G-11	LED931	C-13	LED953	C-3
D992	G-11	LED941	B-13		
D993	G-11	LED942	A-1	Q931	G-10
D994	F-14	LED944	B-4	Q932	G-10

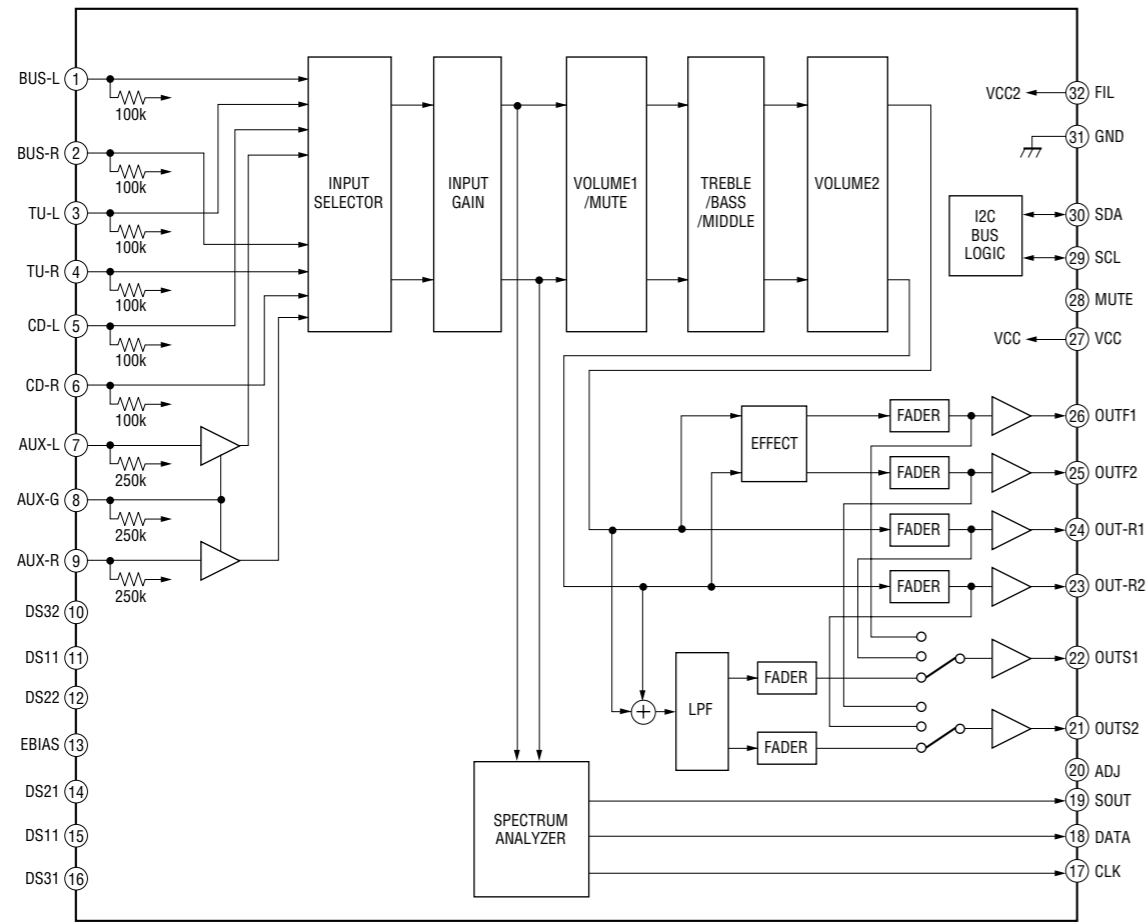


5-9. SCHEMATIC DIAGRAM — KEY SECTION —

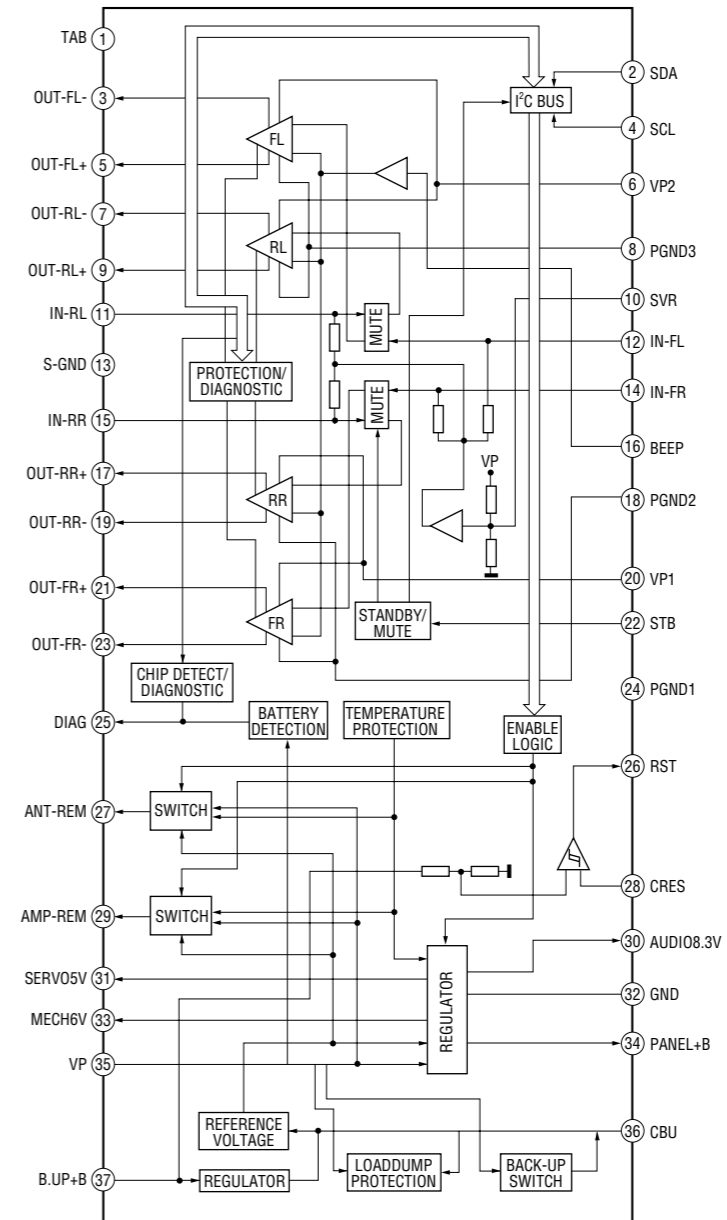


• IC Block Diagrams

IC401 BD3442FS-E2 (MAIN Board (1/4))



IC750 TDA8588BJ/N2/R1 (MAIN Board (2/4))



• IC PIN DESCRIPTIONS

• IC501 MB90F045PF-G-9065-SPE1 (SYSTEM CONTROL) (MAIN BOARD (3/4))

Pin No.	Pin Name	I/O	Pin Description
1	AREASEL0	I	Destination function setting pin 0
2	AREASEL1	I	Destination function setting pin 1
3	AREASEL2	I	Destination function setting pin 2
4	AREASEL3	I	Destination function setting pin 3
5	BEEP	O	BEEP signal output to power amplifier
6	CYRIL_SEL	I	Cyril correspondence discrimination signal input "L": No correspondence
7	NOSE_SW	I	Front panel attachment detect signal input "L": Panel on, "H": Panel off
8	DIAG	I	Status signal input from power amplifier
9	VOLATT	O	Electronic volume attenuate control signal output
10	NCO	O	Not used. (Open)
11	VSS	—	Ground pin
12	TUATT	O	Tuner mute control signal output
13	NSMASK	O	Noise mask signal output Not used in this set. (Open)
14 to 22	NCO	O	Not used. (Open)
23	VCC5	—	Power supply pin (+3.3V)
24	EEP_SIO	I/O	EEPROM bus serial data signal input/output
25	EEP_CKO	O	EEPROM bus serial clock signal output
26	AMPSTB	O	Stand-by signal output to power regulation
27	LCD_CE	O	Chip enable signal output to LCD driver
28	LCD_SO	O	Serial data signal output to LCD driver
29	LCD_CKO	O	Serial clock signal output to LCD driver
30	RDS ON	O	RDS (radio data system) ON signal output Not used in this set. (Open)
31	RE-IN0	I	Rotary encoder signal input 0
32	RE-IN1	I	Rotary encoder signal input 1
33	I2C_CKO	O	I2C bus serial clock signal output
34	I2C_SIO	I/O	I2C bus serial data signal input/output
35	DAVDD	—	A/D converter power supply pin (+3.3V)
36	AVRH	—	A/D converter external reference power supply pin (+3.3V)
37	DAVSS	—	A/D converter Ground pin
38	QUALITY	I	Noise detect signal input
39	VSM	I	S-meter voltage detect signal input
40	KEYIN1	I	Key signal input 1
41	KEYIN0	I	Key signal input 0
42	VSS	—	Ground pin
43	RC_IN0	I	Rotary commander key signal input Not used in this set. (Pull up)
44 to 48	NCO	O	Not used. (Open)
49	MD0	I	Operation mode setting pin 0 (Pull up)
50	MD1	I	Operation mode setting pin 1 (Pull up)
51	MD2	I	Operation mode setting pin 2 (Pull down)
52	KEYACK	I	Key acknowledgment detect signal input
53	TU_ATTIN	I	Tuner mute zero cross detect signal input Not used in this set. (Pull down)
54	BUIN	I	Back-up power supply detect signal input
55	NCO	O	Not used. (Open)
56	DAVN	I	RDS data block synchronized detect signal input Not used in this set. (Pull down)
57	NCO	O	Not used. (Open)
58	UNISI	I	S-BUS data signal input
59	UNISO	O	S-BUS data signal output
60	UNISCK	O	S-BUS clock signal output

# CDX-GT22W/GT120/GT220

Pin No.	Pin Name	I/O	Pin Description
61	CODEC_SEL	I	MP3 select signal input "H": MP3, "L": Non-MP3
62	ILLUMI_SEL	I	Illumination voltage setting signal input "H": 10.4 V, "L": 9.0 V
63	NCO	O	Not used. (Open)
64	SIRCS	I	Remote control signal input
65 to 67	NCO	O	Not used. (Open)
68	FLASH_W	I	Memory mode select signal input Not used in this set. (Pull up) Normally "H" input: Single chip mode, after reset "L": Flash write mode
69, 70	NCO	O	Not used. (Open)
71	RC_IN1	I	Rotary commander shift key signal input Not used in this set. (Pull up)
72	ACC_IN	I	Accessory power supply detect signal input
73	TESTIN	I	Test mode detect signal input Not used in this set. (Pull up)
74	TELATT	I	Telephone attenuate detect signal input Not used in this set. (Pull down)
75	NCO	O	Not used. (Open)
76	AD_ON	O	A/D converter power supply control signal output
77	RESET	I	System reset signal input
78	NCO	O	Not used. (Open)
79	XOUT	O	Low speed operation clock signal output (32.768 kHz)
80	XIN	I	Low speed operation clock signal input (32.768 kHz)
81	VSS1	—	Ground pin
82	OSCIN	I	High speed operation clock signal input (18.432 MHz)
83	OSCOU	O	High speed operation clock signal output (18.432 MHz)
84	VCC3	—	Power supply pin (+3.3 V)
85	DEMOSEL	I	DEMO select signal input "H": DEMO on, "L": DEMO off
86	ATT	O	Audio mute control signal output
87	BUSON	O	BUS ON signal output
88	SYRST	O	System reset signal output
89 to 92	NCO	O	Not used. (Open)
93	Z-MUTE	I	CD zero cross mute detect signal input
94	B OUT SEL	I	Black out with/without discrimination select signal input "H": Black out
95	INI RS	I	REAR/SUB INITIAL setting signal input "H": REAR INITIAL, "L": SUB INITIAL
96	MO-DISP	I	Motion display signal input "H": Motion display on, "L": Motion display off
97	DIM_SEL	I	Dimmer select signal input "H": Dimmer, "L": No dimmer Not used in this set. (Pull down)
98	CD_ON	I	CD mechanism servo power supply control request signal input
99	CDM_ON	I	CD mechanism deck power supply control request signal input
100	COL_SW	I	Illumination color select signal input Not used in this set. (Pull down) "H": Two colors selection/initial slave, amber, "L": Color/slave, amber

## SECTION 6 EXPLODED VIEWS

**NOTE:**

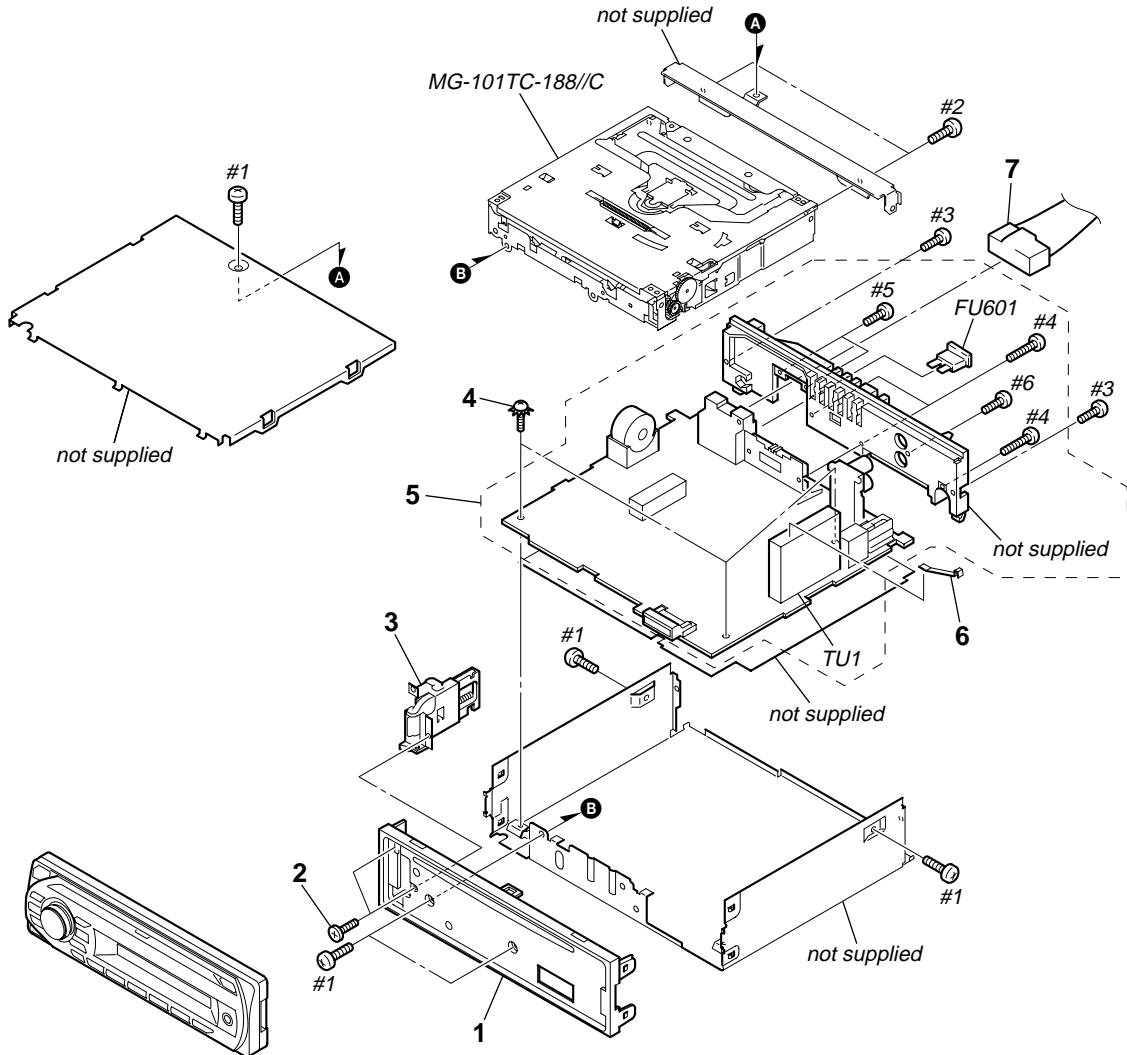
- The mechanical parts with no reference number in the exploded views are not supplied.
- Items marked “\*” are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- Abbreviation  
CND : Canadian model

- -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
- Accessories are given in the last of this parts list.

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

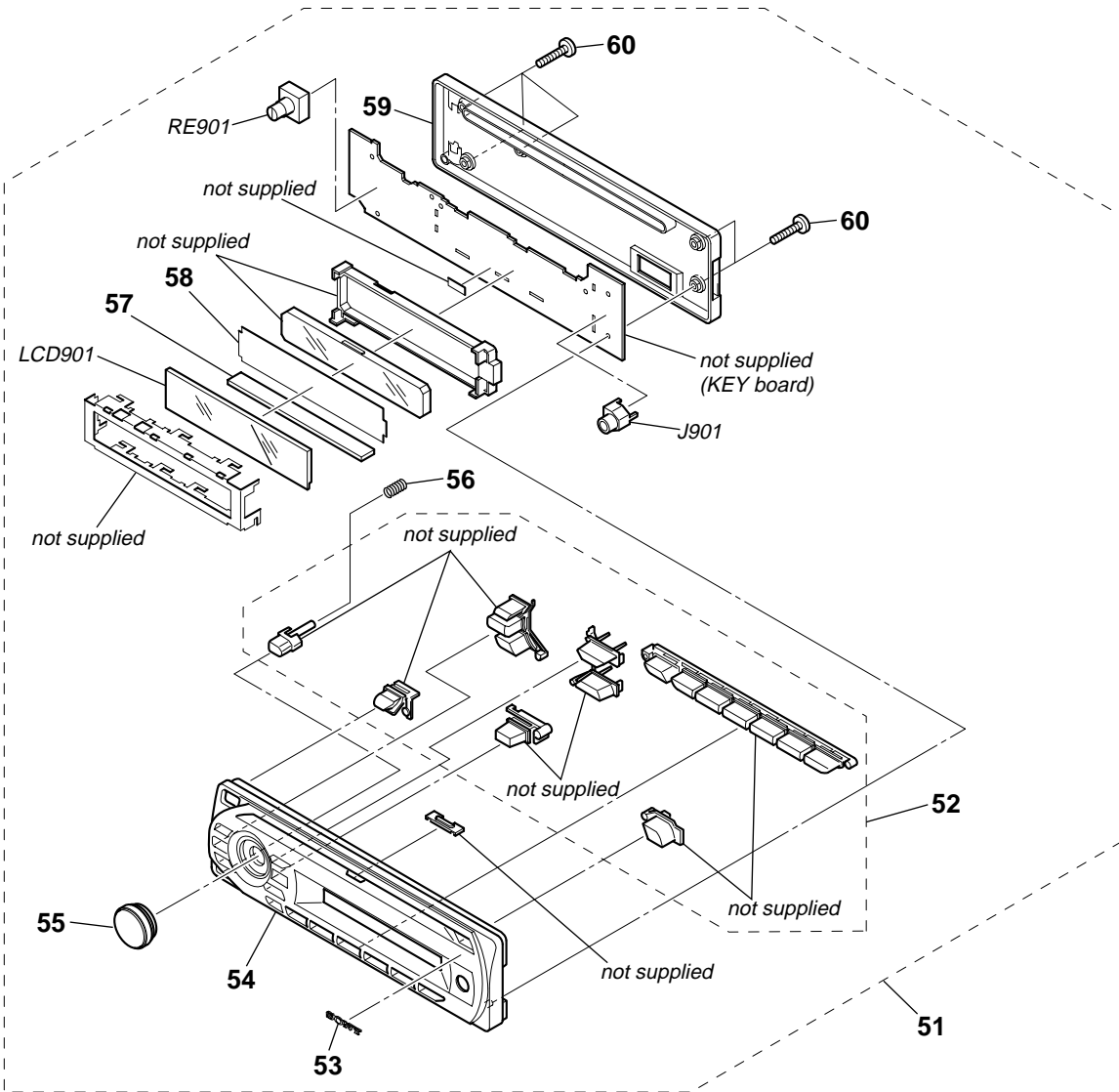
Les composants identifiés par une marque  $\triangle$  sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

**6-1. MAIN SECTION**



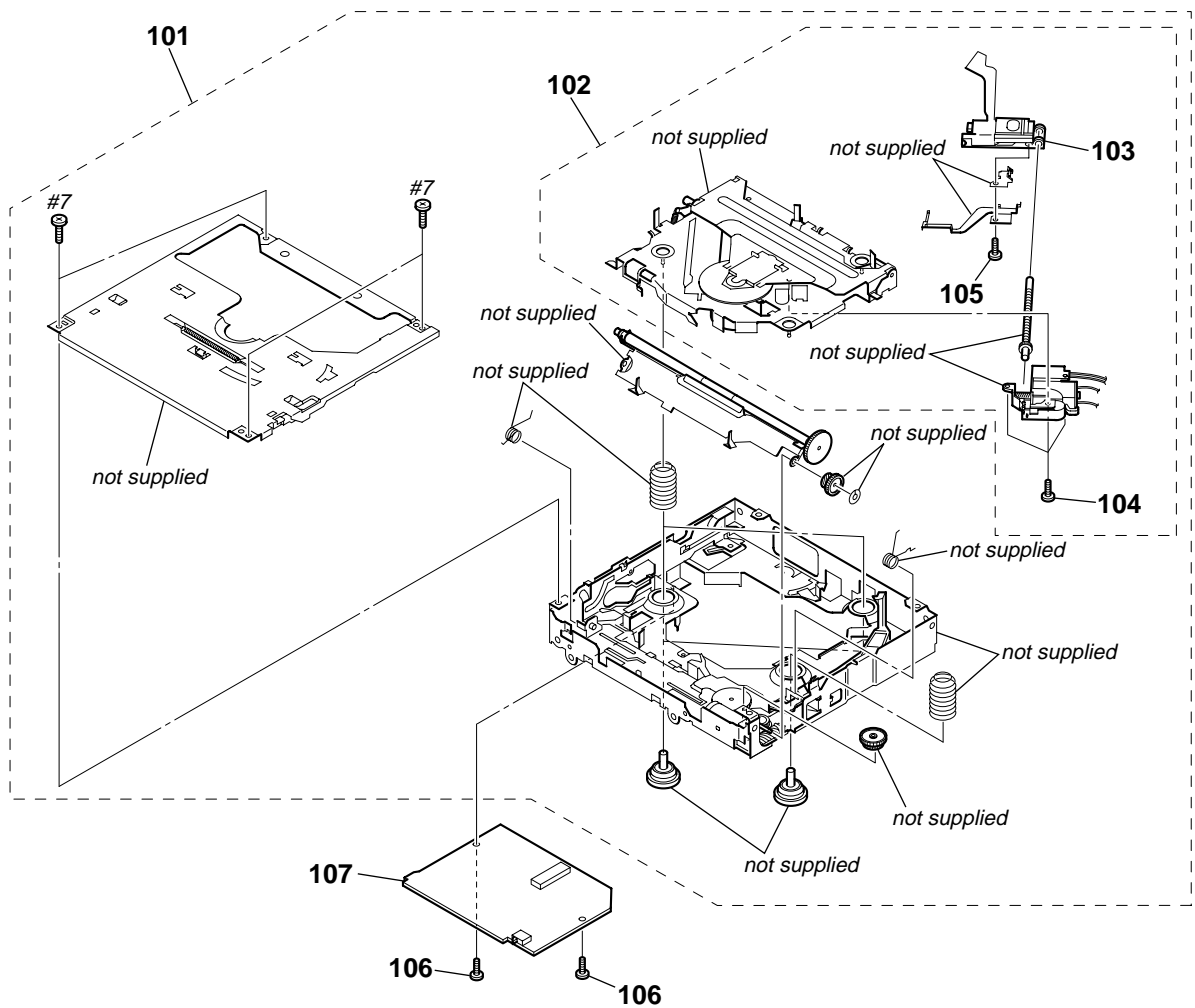
Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
1	X-2178-981-1	PANEL ASSY, SUB		FU601	1-532-877-11	FUSE (BLADE TYPE) (AUTO FUSE) 10A	
2	2-583-939-01	SCREW (+B 2X4)		TU1	A-3220-961-B	TUNER UNIT (TUX-032)	
3	X-2179-691-1	LOCK ASSY		#1	7-685-792-09	SCREW +PTT 2.6X6 (S)	
4	2-348-996-01	SCREW (+PTT 2.6X6), GROUND POINT		#2	7-685-790-01	SCREW +PTT 2.6X4 (S)	
5	A-1286-340-A	MAIN BOARD, COMPLETE (GT22W/GT220)		#3	7-685-793-09	SCREW +PTT 2.6X8 (S)	
5	A-1317-388-A	MAIN BOARD, COMPLETE (GT120)		#4	7-685-794-09	SCREW +PTT 2.6X10 (S)	
6	2-345-298-01	PLATE (TU), GROUND		#5	7-685-134-19	SCREW +P 2.6X8 TYPE2 NON-SLIT	
7	1-833-974-31	CONNECTION CORD FOR AUTOMOBILE (POWER)		#6	7-621-284-40	SCREW +P 2.6X10	

6-2. FRONT PANEL SECTION



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
51	A-1286-018-A	PANEL COMPLETE ASSY, FRONT (GT22W)		55	X-2186-575-1	KNOB (VOL) (SV) ASSY (GT22W/GT220)	
51	A-1286-348-A	PANEL COMPLETE ASSY, FRONT (GT220)		56	2-349-626-01	SPRING (RELEASE)	
51	A-1317-411-A	PANEL COMPLETE ASSY, FRONT (GT120)		57	1-780-533-11	CONDUCTIVE BOARD, CONNECTION	
52	X-2178-983-1	BUTTON ASSY (S)		58	3-214-226-11	ILLUMINATOR (LCD)	
53	3-251-320-01	EMBLEM (NO. 2.5), SONY		59	3-214-215-01	PANEL, BACK	
54	A-1286-073-A	PANEL SUB ASSY, FRONT (GT22W)		60	3-250-543-91	SCREW (+B P-TITE M2)	
54	A-1286-350-A	PANEL SUB ASSY, FRONT (GT220)		J901	1-820-624-11	SMALL TYPE JACK (VERTICAL) (AUX)	
54	A-1317-413-A	PANEL SUB ASSY, FRONT (GT120)		LCD901	1-802-510-11	DISPLAY PANEL, LIQUID CRYSTAL	
55	X-2178-982-1	KNOB (VOL) (SV) ASSY (GT120)		RE901	1-479-902-21	ENCODER, ROTARY (PUSH SELECT/VOLUME)	

6-3. CD MECHANISM SECTION  
(MG-101TC-188//C)



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
101	A-1283-704-A	MECHANICAL BLOCK ASSY (08)		105	3-348-998-31	SCREW (M1.4X2.5), TAPPING, PAN	
102	A-1283-705-A	DAXEV08//C		106	3-352-758-31	SCREW (M1.7X2.5), TOOTHED LOCK	
△ 103	X-2149-672-1	SERVICE ASSY, OP (DAX-25A)		107	A-1201-631-A	SERVO BOARD, COMPLETE	
104	2-626-869-21	SCREW (M2X3), SERRATION		#7	7-627-000-00	SCREW, PRECISION +P 1.7X2.2 TYPE 3	

SECTION 7  
ELECTRICAL PARTS LIST

KEY

NOTE:

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

- Items marked “\*” are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS  
In each case, u :  $\mu$ , for example:  
uA.. :  $\mu$ A.. uPA.. :  $\mu$ PA..  
uPB.. :  $\mu$ PB.. uPC.. :  $\mu$ PC.. uPD.. :  $\mu$ PD..
- CAPACITORS  
uF :  $\mu$ F
- COILS  
uH :  $\mu$ H

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

Les composants identifiés par une marque  $\Delta$  sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

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

Ref. No.	Part No.	Description	Remark
		KEY BOARD *****	
	1-780-533-11	CONDUCTIVE BOARD, CONNECTION	
	3-214-226-11	ILLUMINATOR (LCD)	
		< CAPACITOR >	
C971	1-107-826-11	CERAMIC CHIP 0.1uF	10% 16V (GT22W/GT220)
C981	1-107-826-11	CERAMIC CHIP 0.1uF	10% 16V
C983	1-107-826-11	CERAMIC CHIP 0.1uF	10% 16V
C984	1-107-826-11	CERAMIC CHIP 0.1uF	10% 16V
C986	1-125-891-11	CERAMIC CHIP 0.47uF	10% 10V
C987	1-162-964-11	CERAMIC CHIP 0.001uF	10% 50V
		< CONNECTOR >	
CN901	1-819-758-12	PLUG, CONNECTOR 15P	
		< DIODE >	
D903	6-501-782-01	DIODE MAZ8180GMLS0	
D981	6-501-730-01	DIODE MAZ8051GMLS0	
D982	8-719-988-61	DIODE 1SS355TE-17	
D991	6-501-743-01	DIODE MAZ8068GMLS0	
D992	6-501-743-01	DIODE MAZ8068GMLS0	
D993	6-501-743-01	DIODE MAZ8068GMLS0	
D994	6-501-743-01	DIODE MAZ8068GMLS0 (GT22W/GT220)	
D998	1-216-295-11	SHORT CHIP 0	
		< JUMPER RESISTOR >	
FB903	1-216-295-11	SHORT CHIP 0	
		< IC >	
IC901	6-710-047-01	IC LC75836WH-US-E	
IC971	6-600-629-01	IC RS-470 (IR) (GT22W/GT220)	
		< JACK >	
J901	1-820-624-11	SMALL TYPE JACK (VERTICAL) (AUX)	
		< LIQUID CRYSTAL DISPLAY >	
LCD901	1-802-510-11	DISPLAY PANEL, LIQUID CRYSTAL	
		< DIODE >	
LED931	6-501-339-01	LED NESW505CT-AST (LCD BACK LIGHT)	

Ref. No.	Part No.	Description	Remark
LED941	8-719-053-09	LED SML-310VTT86 ( $\Delta$ )	
LED942	8-719-053-09	LED SML-310VTT86 (OFF)	
LED943	1-216-864-11	SHORT CHIP 0	
LED944	8-719-053-09	LED SML-310VTT86 (SOURCE)	
LED945	8-719-053-09	LED SML-310VTT86 (MODE)	
LED951	8-719-053-09	LED SML-310VTT86 (RING ILLUMINATION)	
LED952	8-719-053-09	LED SML-310VTT86 (RING ILLUMINATION)	
LED953	8-719-053-09	LED SML-310VTT86 (RING ILLUMINATION)	
		< SWITCH >	
LSW901	1-786-805-12	SWITCH, TACTILE (WITH LED) (EQ3)	
LSW902	1-786-805-12	SWITCH, TACTILE (WITH LED) (DSPL/SCRL) (GT22W/GT220)	
LSW902	1-786-805-12	SWITCH, TACTILE (WITH LED) (DSPL)	(GT120)
LSW903	1-786-805-12	SWITCH, TACTILE (WITH LED)	(▶▶▶▶ SEEK+)
LSW904	1-786-805-12	SWITCH, TACTILE (WITH LED)	(◀◀◀◀ SEEK-)
LSW905	1-786-805-12	SWITCH, TACTILE (WITH LED) (BTM)	
LSW906	1-786-805-12	SWITCH, TACTILE (WITH LED) (1/ALBUM -)	(GT22W/GT220)
LSW906	1-786-805-12	SWITCH, TACTILE (WITH LED) (1) (GT120)	
LSW907	1-786-805-12	SWITCH, TACTILE (WITH LED) (2/ALBUM +)	(GT22W/GT220)
LSW907	1-786-805-12	SWITCH, TACTILE (WITH LED) (2) (GT120)	
LSW908	1-786-805-12	SWITCH, TACTILE (WITH LED) (3/REP)	
LSW909	1-786-805-12	SWITCH, TACTILE (WITH LED) (4/SHUF)	
LSW910	1-786-805-12	SWITCH, TACTILE (WITH LED) (5)	
LSW911	1-786-805-12	SWITCH, TACTILE (WITH LED) (6/PAUSE)	
		< TRANSISTOR >	
Q931	8-729-027-44	TRANSISTOR DTC114TKA-T146	
Q932	6-551-444-01	TRANSISTOR RT1N436C-TP-1	
		< RESISTOR >	
R901	1-216-820-11	METAL CHIP 820	5% 1/10W
R902	1-216-821-11	METAL CHIP 1K	5% 1/10W
R903	1-216-821-11	METAL CHIP 1K	5% 1/10W
R904	1-216-822-11	METAL CHIP 1.2K	5% 1/10W
R905	1-216-823-11	METAL CHIP 1.5K	5% 1/10W
R907	1-216-820-11	METAL CHIP 820	5% 1/10W
R908	1-216-821-11	METAL CHIP 1K	5% 1/10W
R909	1-216-821-11	METAL CHIP 1K	5% 1/10W
R910	1-216-822-11	METAL CHIP 1.2K	5% 1/10W
R911	1-216-823-11	METAL CHIP 1.5K	5% 1/10W



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
R912	1-216-824-11	METAL CHIP	1.8K 5% 1/10W		A-1286-340-A	MAIN BOARD, COMPLETE (GT22W/GT220)	
R913	1-216-825-11	METAL CHIP	2.2K 5% 1/10W		A-1317-388-A	MAIN BOARD, COMPLETE (GT120)	
R914	1-216-827-11	METAL CHIP	3.3K 5% 1/10W			*****	
R915	1-216-828-11	METAL CHIP	3.9K 5% 1/10W				
R931	1-216-812-11	METAL CHIP	180 5% 1/10W		7-621-284-40	SCREW +P 2.6X10	
					7-685-134-19	SCREW +P 2.6X8 TYPE2 NON-SLIT	
R932	1-216-812-11	METAL CHIP	180 5% 1/10W		7-685-794-09	SCREW +PTT 2.6X10 (S)	
R933	1-216-812-11	METAL CHIP	180 5% 1/10W			< CAPACITOR >	
R934	1-216-822-11	METAL CHIP	1.2K 5% 1/10W				
R941	1-216-813-11	METAL CHIP	220 5% 1/10W		C4	1-126-947-11 ELECT 47uF 20% 35V	
R942	1-216-813-11	METAL CHIP	220 5% 1/10W		C5	1-126-947-11 ELECT 47uF 20% 35V	
R943	1-216-812-11	METAL CHIP	180 5% 1/10W		C6	1-162-970-11 CERAMIC CHIP 0.01uF 10% 25V	
R944	1-216-811-11	METAL CHIP	150 5% 1/10W		C7	1-162-970-11 CERAMIC CHIP 0.01uF 10% 25V	
R945	1-216-812-11	METAL CHIP	180 5% 1/10W		C8	1-107-826-11 CERAMIC CHIP 0.1uF 10% 16V	
R946	1-216-811-11	METAL CHIP	150 5% 1/10W				
R947	1-216-812-11	METAL CHIP	180 5% 1/10W		C12	1-162-970-11 CERAMIC CHIP 0.01uF 10% 25V	
R948	1-216-811-11	METAL CHIP	150 5% 1/10W		C13	1-162-970-11 CERAMIC CHIP 0.01uF 10% 25V	
R949	1-216-809-11	METAL CHIP	100 5% 1/10W		C151	1-126-960-11 ELECT 1uF 20% 50V	
R950	1-216-809-11	METAL CHIP	100 5% 1/10W		C152	1-126-960-11 ELECT 1uF 20% 50V	
R951	1-216-812-11	METAL CHIP	180 5% 1/10W		C153	1-126-961-11 ELECT 2.2uF 20% 50V	
R952	1-216-811-11	METAL CHIP	150 5% 1/10W				
R953	1-216-812-11	METAL CHIP	180 5% 1/10W		C154	1-163-017-00 CERAMIC CHIP 0.0047uF 10% 50V	
R954	1-216-811-11	METAL CHIP	150 5% 1/10W		C155	1-163-017-00 CERAMIC CHIP 0.0047uF 10% 50V	
R971	1-216-809-11	METAL CHIP	100 5% 1/10W		C301	1-124-248-00 ELECT 22uF 20% 25V	
R972	1-216-809-11	METAL CHIP	100 5% 1/10W		C302	1-124-584-00 ELECT 100uF 20% 10V	
R974	1-216-809-11	METAL CHIP	100 5% 1/10W (GT22W/GT220)		C305	1-124-584-00 ELECT 100uF 20% 10V	
R975	1-216-809-11	METAL CHIP	100 5% 1/10W (GT22W/GT220)				
R977	1-216-809-11	METAL CHIP	100 5% 1/10W		C306	1-162-970-11 CERAMIC CHIP 0.01uF 10% 25V	
R978	1-216-809-11	METAL CHIP	100 5% 1/10W		C308	1-162-970-11 CERAMIC CHIP 0.01uF 10% 25V	
R979	1-216-809-11	METAL CHIP	100 5% 1/10W		C309	1-162-966-11 CERAMIC CHIP 0.0022uF 10% 50V	
R981	1-216-811-11	METAL CHIP	150 5% 1/10W		C310	1-162-966-11 CERAMIC CHIP 0.0022uF 10% 50V	
R982	1-216-811-11	METAL CHIP	150 5% 1/10W		C312	1-162-970-11 CERAMIC CHIP 0.01uF 10% 25V	
R984	1-216-821-11	METAL CHIP	1K 5% 1/10W				
R985	1-216-821-11	METAL CHIP	1K 5% 1/10W		C343	1-162-970-11 CERAMIC CHIP 0.01uF 10% 25V	
R986	1-216-821-11	METAL CHIP	1K 5% 1/10W		C401	1-126-964-11 ELECT 10uF 20% 50V	
R987	1-216-857-11	METAL CHIP	1M 5% 1/10W		C404	1-127-715-11 CERAMIC CHIP 0.22uF 10% 16V	
R988	1-216-840-11	METAL CHIP	39K 5% 1/10W		C405	1-127-715-11 CERAMIC CHIP 0.22uF 10% 16V	
R992	1-216-864-11	SHORT CHIP	0		C406	1-126-160-11 ELECT 1uF 20% 50V	
		< ROTARY ENCODER >					
RE901	1-479-902-21	ENCODER, ROTARY (PUSH SELECT/VOLUME)			C407	1-126-160-11 ELECT 1uF 20% 50V	
		< SWITCH >			C412	1-104-665-11 ELECT 100uF 20% 25V	
S901	1-786-653-11	SWITCH, TACTILE (▲)			C413	1-107-826-11 CERAMIC CHIP 0.1uF 10% 16V	
S902	1-786-653-11	SWITCH, TACTILE (OFF)			C431	1-126-964-11 ELECT 10uF 20% 50V	
S903	1-786-653-11	SWITCH, TACTILE (SOURCE)			C432	1-165-908-11 CERAMIC CHIP 1uF 10% 10V	
S904	1-786-653-11	SWITCH, TACTILE (MODE)					
*****							
					C435	1-165-908-11 CERAMIC CHIP 1uF 10% 10V	
					C441	1-126-964-11 ELECT 10uF 20% 50V	
					C442	1-165-908-11 CERAMIC CHIP 1uF 10% 10V	
					C445	1-165-908-11 CERAMIC CHIP 1uF 10% 10V	
					C451	1-126-964-11 ELECT 10uF 20% 50V	
					C452	1-165-908-11 CERAMIC CHIP 1uF 10% 10V	
					C454	1-163-251-11 CERAMIC CHIP 100PF 5% 50V	
					C455	1-165-908-11 CERAMIC CHIP 1uF 10% 10V	
					C461	1-126-964-11 ELECT 10uF 20% 50V	
					C462	1-165-908-11 CERAMIC CHIP 1uF 10% 10V	
					C464	1-163-251-11 CERAMIC CHIP 100PF 5% 50V	
					C465	1-165-908-11 CERAMIC CHIP 1uF 10% 10V	
					C471	1-126-964-11 ELECT 10uF 20% 50V	
					C479	1-124-589-11 ELECT 47uF 20% 16V	
					C481	1-126-964-11 ELECT 10uF 20% 50V	
					C501	1-162-970-11 CERAMIC CHIP 0.01uF 10% 25V	
					C503	1-124-584-00 ELECT 100uF 20% 10V	
					C504	1-162-970-11 CERAMIC CHIP 0.01uF 10% 25V	
					C507	1-162-917-11 CERAMIC CHIP 15PF 5% 50V	
					C508	1-162-916-11 CERAMIC CHIP 12PF 5% 50V	

# CDX-GT22W/GT120/GT220

## MAIN

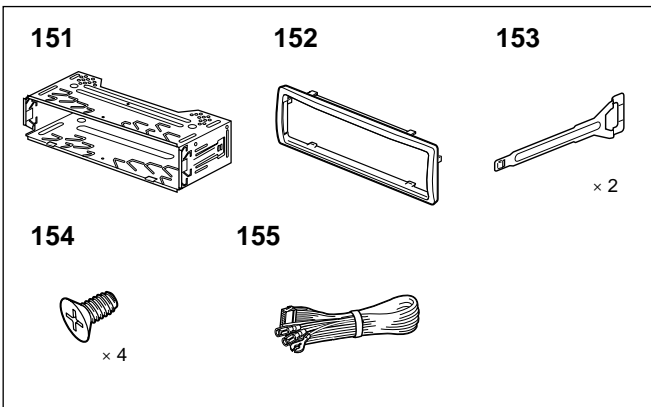
Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
C509	1-162-966-11	CERAMIC CHIP	0.0022uF 10% 50V	D754	6-501-362-01	DIODE 1A4-TA26	
C510	1-162-970-11	CERAMIC CHIP	0.01uF 10% 25V	D755	6-501-362-01	DIODE 1A4-TA26	
C511	1-124-584-00	ELECT	100uF 20% 10V	D756	6-501-362-01	DIODE 1A4-TA26	
C512	1-162-964-11	CERAMIC CHIP	0.001uF 10% 50V	D757	6-501-362-01	DIODE 1A4-TA26	
C513	1-162-964-11	CERAMIC CHIP	0.001uF 10% 50V	D758	6-501-362-01	DIODE 1A4-TA26	
C514	1-162-964-11	CERAMIC CHIP	0.001uF 10% 50V	D759	6-501-362-01	DIODE 1A4-TA26	
C516	1-162-964-11	CERAMIC CHIP	0.001uF 10% 50V	D760	6-501-362-01	DIODE 1A4-TA26	
C519	1-107-826-11	CERAMIC CHIP	0.1uF 10% 16V	D761	6-501-362-01	DIODE 1A4-TA26	
C522	1-162-970-11	CERAMIC CHIP	0.01uF 10% 25V	D762	6-501-362-01	DIODE 1A4-TA26	
C523	1-162-970-11	CERAMIC CHIP	0.01uF 10% 25V			< FERRITE BEAD >	
C550	1-162-964-11	CERAMIC CHIP	0.001uF 10% 50V	FB1	1-500-245-11	INDUCTOR, FERRITE BEAD	
C601	1-112-302-11	ELECT	3300uF 20% 16V	FB604	1-500-245-11	INDUCTOR, FERRITE BEAD	
C602	1-165-319-11	CERAMIC CHIP	0.1uF 50V			< FUSE >	
C617	1-163-009-11	CERAMIC CHIP	0.001uF 10% 50V	FU601	1-532-877-11	FUSE (BLADE TYPE) (AUTO FUSE) 10A	
C618	1-163-009-11	CERAMIC CHIP	0.001uF 10% 50V			< IC >	
C622	1-126-926-11	ELECT	1000uF 20% 10V	IC401	6-710-065-01	IC BD3442FS-E2	
C623	1-126-926-11	ELECT	1000uF 20% 10V	IC501	6-807-750-01	IC MB90F045PF-G-9065-SPE1	
C631	1-126-160-11	ELECT	1uF 20% 50V	IC602	6-709-458-01	IC XC61CN2802NR	
C750	1-115-340-11	CERAMIC CHIP	0.22uF 10% 25V	IC750	6-705-360-02	IC TDA8588BJ/N2/R1	
C751	1-115-340-11	CERAMIC CHIP	0.22uF 10% 25V			< JACK >	
C753	1-128-551-11	ELECT	22uF 20% 63V	J1	1-815-185-13	JACK (ANTENNA)	
C754	1-124-257-00	ELECT	2.2uF 20% 50V	J330	1-774-698-11	JACK, PIN 2P (AUDIO OUT REAR)	
C755	1-162-964-11	CERAMIC CHIP	0.001uF 10% 50V			< JUMPER RESISTOR >	
C756	1-216-864-11	SHORT CHIP	0	JC504	1-216-864-11	SHORT CHIP 0	
C758	1-124-261-00	ELECT	10uF 20% 50V	JC510	1-216-864-11	SHORT CHIP 0	
C763	1-127-715-11	CERAMIC CHIP	0.22uF 10% 16V	JC533	1-216-864-11	SHORT CHIP 0	
C764	1-115-340-11	CERAMIC CHIP	0.22uF 10% 25V	JC681	1-216-864-11	SHORT CHIP 0	
C765	1-115-340-11	CERAMIC CHIP	0.22uF 10% 25V	JC753	1-216-296-11	SHORT CHIP 0	
C769	1-127-715-11	CERAMIC CHIP	0.22uF 10% 16V	JC754	1-216-296-11	SHORT CHIP 0	
C770	1-127-715-11	CERAMIC CHIP	0.22uF 10% 16V	JC755	1-216-296-11	SHORT CHIP 0	
C771	1-127-715-11	CERAMIC CHIP	0.22uF 10% 16V			< COIL >	
C774	1-115-340-11	CERAMIC CHIP	0.22uF 10% 25V	L1	1-469-844-11	INDUCTOR 2.2uH	
C775	1-115-340-11	CERAMIC CHIP	0.22uF 10% 25V	L151	1-216-295-11	SHORT CHIP 0	
C776	1-162-964-11	CERAMIC CHIP	0.001uF 10% 50V	L601	1-456-617-11	COIL, CHOKE	
		< CONNECTOR >				< TRANSISTOR >	
CN601	1-774-701-21	PIN, CONNECTOR 16P		Q1	6-551-431-01	TRANSISTOR 2SC6027T100-QR	
CN701	1-819-773-13	SOCKET, CONNECTOR 15P		Q431	8-729-027-44	TRANSISTOR DTC114TKA-T146	
CNP301	1-820-611-11	CONNECTOR, BOARD TO BOARD 28P		Q441	8-729-027-44	TRANSISTOR DTC114TKA-T146	
		< DIODE >		Q451	8-729-027-44	TRANSISTOR DTC114TKA-T146	
D1	6-501-734-01	DIODE MAZ8056GMLS0		Q461	8-729-027-44	TRANSISTOR DTC114TKA-T146	
D153	6-501-743-01	DIODE MAZ8068GMLS0		Q471	6-551-856-01	TRANSISTOR LTC614TKFP8T146	
D479	6-501-193-01	DIODE 1SS355WTE-17		Q478	8-729-027-43	TRANSISTOR DTC114EKA-T146	
D502	6-502-131-01	DIODE LRB751V-40T1G (GT22W/GT220)		Q479	8-729-027-23	TRANSISTOR DTA114EKA-T146	
D503	6-501-193-01	DIODE 1SS355WTE-17		Q481	6-551-856-01	TRANSISTOR LTC614TKFP8T146	
D510	6-501-656-01	DIODE LBAT54ALT1G		Q580	8-729-027-43	TRANSISTOR DTC114EKA-T146	
D511	6-500-335-01	DIODE MC2838-T112-1		Q581	8-729-038-28	TRANSISTOR RT1N441C-TP-1	
D512	6-501-654-01	DIODE LBAT54CLT1G		Q582	8-729-620-07	TRANSISTOR 2SC3052EF-T1-LEF	
D580	6-501-747-01	DIODE MAZ8075GMLS0		Q631	8-729-620-07	TRANSISTOR 2SC3052EF-T1-LEF	
D581	6-501-782-01	DIODE MAZ8180GMLS0		Q664	8-729-027-23	TRANSISTOR DTA114EKA-T146	
D601	6-501-571-01	DIODE 1N5404-C311-3					
D617	6-501-782-01	DIODE MAZ8180GMLS0					
D704	6-501-743-01	DIODE MAZ8068GMLS0					
D719	6-501-782-01	DIODE MAZ8180GMLS0					
D751	6-501-362-01	DIODE 1A4-TA26					
D752	6-501-362-01	DIODE 1A4-TA26					
D753	6-501-362-01	DIODE 1A4-TA26					

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
		< RESISTOR >					
R1	1-216-821-11	METAL CHIP 1K	5% 1/10W	R533	1-216-845-11	METAL CHIP 100K	5% 1/10W
R2	1-414-595-11	INDUCTOR, FERRITE BEAD		R534	1-216-833-11	METAL CHIP 10K	5% 1/10W
R3	1-414-595-11	INDUCTOR, FERRITE BEAD		R535	1-216-833-11	METAL CHIP 10K	5% 1/10W
R4	1-216-839-11	METAL CHIP 33K	5% 1/10W	R536	1-216-833-11	METAL CHIP 10K	5% 1/10W
R5	1-216-843-11	METAL CHIP 68K	5% 1/10W	R538	1-216-845-11	METAL CHIP 100K	5% 1/10W
R8	1-216-839-11	METAL CHIP 33K	5% 1/10W	R539	1-216-845-11	METAL CHIP 100K	5% 1/10W
R9	1-216-843-11	METAL CHIP 68K	5% 1/10W	R540	1-216-845-11	METAL CHIP 100K	5% 1/10W
R12	1-414-595-11	INDUCTOR, FERRITE BEAD		R541	1-216-845-11	METAL CHIP 100K	5% 1/10W
R13	1-414-595-11	INDUCTOR, FERRITE BEAD		R542	1-216-821-11	METAL CHIP 1K	5% 1/10W
R151	1-216-817-11	METAL CHIP 470	5% 1/10W	R543	1-216-821-11	METAL CHIP 1K	5% 1/10W
R152	1-216-817-11	METAL CHIP 470	5% 1/10W	R544	1-216-821-11	METAL CHIP 1K	5% 1/10W
R153	1-216-834-11	METAL CHIP 12K	5% 1/10W	R547	1-216-821-11	METAL CHIP 1K	5% 1/10W
R154	1-216-834-11	METAL CHIP 12K	5% 1/10W	R550	1-216-845-11	METAL CHIP 100K	5% 1/10W
R155	1-216-825-11	METAL CHIP 2.2K	5% 1/10W	R551	1-216-845-11	METAL CHIP 100K	5% 1/10W
R301	1-216-821-11	METAL CHIP 1K	5% 1/10W	R556	1-216-833-11	METAL CHIP 10K	5% 1/10W
R302	1-216-821-11	METAL CHIP 1K	5% 1/10W	R557	1-216-825-11	METAL CHIP 2.2K	5% 1/10W
R401	1-216-797-11	METAL CHIP 10	5% 1/10W	R558	1-216-821-11	METAL CHIP 1K	5% 1/10W
R412	1-218-883-11	METAL CHIP 33K	0.5% 1/10W	R561	1-216-845-11	METAL CHIP 100K	5% 1/10W
R413	1-216-864-11	SHORT CHIP 0		R563	1-216-845-11	METAL CHIP 100K	5% 1/10W
R414	1-216-864-11	SHORT CHIP 0		R565	1-216-845-11	METAL CHIP 100K	5% 1/10W
R431	1-216-821-11	METAL CHIP 1K	5% 1/10W	R566	1-216-845-11	METAL CHIP 100K	5% 1/10W
R432	1-216-833-11	METAL CHIP 10K	5% 1/10W	R567	1-216-845-11	METAL CHIP 100K	5% 1/10W
R441	1-216-821-11	METAL CHIP 1K	5% 1/10W	R568	1-216-821-11	METAL CHIP 1K	5% 1/10W
R442	1-216-833-11	METAL CHIP 10K	5% 1/10W	R570	1-216-817-11	METAL CHIP 470	5% 1/10W
R451	1-216-821-11	METAL CHIP 1K	5% 1/10W	R572	1-216-845-11	METAL CHIP 100K	5% 1/10W
R452	1-216-833-11	METAL CHIP 10K	5% 1/10W	R575	1-216-845-11	METAL CHIP 100K	5% 1/10W
R461	1-216-821-11	METAL CHIP 1K	5% 1/10W	R578	1-216-821-11	METAL CHIP 1K	5% 1/10W
R462	1-216-833-11	METAL CHIP 10K	5% 1/10W	R582	1-216-821-11	METAL CHIP 1K	5% 1/10W
R471	1-216-813-11	METAL CHIP 220	5% 1/10W	R583	1-216-821-11	METAL CHIP 1K	5% 1/10W
R472	1-216-833-11	METAL CHIP 10K	5% 1/10W	R584	1-216-849-11	METAL CHIP 220K	5% 1/10W
R479	1-216-805-11	METAL CHIP 47	5% 1/10W	R585	1-216-849-11	METAL CHIP 220K	5% 1/10W
R481	1-216-813-11	METAL CHIP 220	5% 1/10W	R601	1-216-845-11	METAL CHIP 100K	5% 1/10W
R482	1-216-833-11	METAL CHIP 10K	5% 1/10W	R631	1-249-425-11	CARBON 4.7K	5% 1/4W
R502	1-216-821-11	METAL CHIP 1K	5% 1/10W	R632	1-216-841-11	METAL CHIP 47K	5% 1/10W
R503	1-216-821-11	METAL CHIP 1K	5% 1/10W	R633	1-216-841-11	METAL CHIP 47K	5% 1/10W
R504	1-218-871-11	METAL CHIP 10K	0.5% 1/10W	R634	1-216-829-11	METAL CHIP 4.7K	5% 1/10W
R505	1-218-871-11	METAL CHIP 10K	0.5% 1/10W	R636	1-216-845-11	METAL CHIP 100K	5% 1/10W
R506	1-216-845-11	METAL CHIP 100K	5% 1/10W	R661	1-216-821-11	METAL CHIP 1K	5% 1/10W
R507	1-216-845-11	METAL CHIP 100K	5% 1/10W	R662	1-216-833-11	METAL CHIP 10K	5% 1/10W
R509	1-216-813-11	METAL CHIP 220	5% 1/10W	R663	1-216-821-11	METAL CHIP 1K	5% 1/10W
R510	1-216-821-11	METAL CHIP 1K	5% 1/10W	R664	1-216-833-11	METAL CHIP 10K	5% 1/10W
R511	1-216-821-11	METAL CHIP 1K	5% 1/10W	R671	1-216-809-11	METAL CHIP 100	5% 1/10W
R512	1-216-821-11	METAL CHIP 1K	5% 1/10W	R672	1-216-809-11	METAL CHIP 100	5% 1/10W
R513	1-216-845-11	METAL CHIP 100K	5% 1/10W	R673	1-218-871-11	METAL CHIP 10K	0.5% 1/10W
R514	1-216-845-11	METAL CHIP 100K	5% 1/10W	R674	1-216-845-11	METAL CHIP 100K	5% 1/10W
R517	1-216-841-11	METAL CHIP 47K	5% 1/10W	R675	1-216-821-11	METAL CHIP 1K	5% 1/10W
R519	1-216-845-11	METAL CHIP 100K	5% 1/10W	R676	1-216-821-11	METAL CHIP 1K	5% 1/10W
R521	1-216-825-11	METAL CHIP 2.2K	5% 1/10W	R677	1-216-821-11	METAL CHIP 1K	5% 1/10W
R522	1-216-825-11	METAL CHIP 2.2K	5% 1/10W	R679	1-216-821-11	METAL CHIP 1K	5% 1/10W
R524	1-216-845-11	METAL CHIP 100K	5% 1/10W	R690	1-216-845-11	METAL CHIP 100K	5% 1/10W
R526	1-216-845-11	METAL CHIP 100K	5% 1/10W	R692	1-216-845-11	METAL CHIP 100K	5% 1/10W
R527	1-216-845-11	METAL CHIP 100K	5% 1/10W			(GT22W/GT220)	
R528	1-216-845-11	METAL CHIP 100K	5% 1/10W	R693	1-216-845-11	METAL CHIP 100K	5% 1/10W
R529	1-216-821-11	METAL CHIP 1K	5% 1/10W			(GT120)	
R531	1-216-845-11	METAL CHIP 100K	5% 1/10W	R752	1-216-811-11	METAL CHIP 150	5% 1/10W
R532	1-216-845-11	METAL CHIP 100K	5% 1/10W	R756	1-216-841-11	METAL CHIP 47K	5% 1/10W

# CDX-GT22W/GT120/GT220

**MAIN** **SERVO**

Ref. No.	Part No.	Description	Remark
		< TUNER UNIT >	
TU1	A-3220-961-B	TUNER UNIT (TUX-032)	
		< VIBRATOR >	
X501	1-813-524-21	VIBRATOR, CERAMIC (18.432MHz)	
X502	1-767-317-11	VIBRATOR, CRYSTAL (32.768kHz)	
*****			
	A-1201-631-A	SERVO BOARD, COMPLETE	
*****			
*****			
MISCELLANEOUS			
*****			
7	1-833-974-31	CONNECTION CORD FOR AUTOMOBILE	(POWER)
△ 103	X-2149-672-1	SERVICE ASSY, OP (DAX-25A)	
*****			
ACCESSORIES			
*****			
	3-215-427-11	MANUAL, INSTRUCTION (ENGLISH,FRENCH)	(GT22W:CND/GT120/GT220)
	3-215-427-51	MANUAL, INSTRUCTION (ENGLISH,SPANISH)	(GT22W:US)
	3-215-428-11	MANUAL, INSTRUCTION, INSTALL (ENGLISH, FRENCH)	(GT22W:CND/GT120/GT220)
	3-215-428-51	MANUAL, INSTRUCTION, INSTALL (ENGLISH, SPANISH)	(GT22W:US)
*****			
PARTS FOR INSTALLATION AND CONNECTIONS			
*****			
151	X-2179-430-1	FRAME ASSY, FITTING	
152	2-686-802-01	COLLAR	
153	3-246-011-01	KEY (FRAME)	
154	3-259-776-01	SCREW (+K 5X8 TP)	
155	1-833-974-31	CONNECTION CORD FOR AUTOMOBILE	(POWER)



MEMO

