

ZS-M35

SERVICE MANUAL

Ver 1.2 2001.07

US Model
Canadian Model
Taiwan Model



U.S. and foreign patents licensed from Dolby Laboratories Licensing Corporation.

AUDIO POWER SPECIFICATIONS (US model)

POWER OUTPUT AND TOTAL HARMONIC DISTORTION
With 4-ohm loads, both channels driven from 150 - 10,000 Hz; rated 4 W per channel - minimum RMS power, with no more than 10% total harmonic distortion in AC operation.

CD Section	Model Name Using Similar Mechanism	PMC-20
	CD Mechanism Type	KSM-213CDM
	Optical Pick-up Name	KSS-213C
MD Section	Model Name Using Similar Mechanism	PMC-MD55
	MD Mechanism Type	MDM-5GA
	Base Unit Name	MBU-5A
	Optical Pick-up Name	KMS-260B

SPECIFICATIONS

CD player section

System
Compact disc digital audio system
Laser diode properties
Material: GaAlAs
Wave length: 785 nm
Emission duration: Continuous
Laser output: Less than 44.6 μ W
(This output is the value measured at a distance of about 200 mm from the objective lens surface on the optical pick-up block with 7 mm aperture.)
Spindle speed
200 r/min (rpm) to 500 r/min (rpm) (CLV)
Number of programme positions
2
Frequency response
20 - 20,000 Hz +1/-2 dB
Wow and flutter
Below measurable limit

Radio section

Frequency range
FM: 87.5 - 108 MHz
AM: 530 - 1,710 kHz
Antennas
FM: Telescopic antenna
AM: AM loop antenna

MD player section

System
Minidisc digital audio system
Disc
MiniDisc
Laser diode properties
Material: GaAlAs
Wave length: 785 nm
Emission duration: Continuous
Laser output: Less than 44.6 μ W
(This output is the value measured at a distance of about 200 mm from the objective lens surface on the optical pick-up block with 7 mm aperture.)
Recording/playback time
Stereo recording:
Maximum 80 minutes (with MDW-80)
Monaural recording:
Maximum 160 minutes (with MDW-80)
Revolutions
400 rpm to 900 rpm (CLV)
Error correction
Advanced Cross Interleave Reed Solomon Code (ACIRC)
Sampling frequency
44.1 kHz

- Continued on next page -

PERSONAL MINIDISC SYSTEM

9-927-183-33
2001G0400-1
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Sony Corporation
Personal Audio Company
Shinagawa Tec Service Manual Production Group

SONY®

Coding
Adaptive TRansform Acoustic Coding (ATRAC)

Modulation system
EFM (Eight-to-Fourteen Modulation)

Number of programme positions
2 stereo programme positions

Frequency response
20 - 20,000 Hz +1/-2 dB

Signal-to-noise ratio
Over 80 dB (during playback)

Wow and flutter
Below measurable limit

General

Speaker
Full-range: 8 cm (3 in.) dia., 4 ohms, cone type (2)

Inputs
LINE IN (stereo minijack): Sensitivity 436 mV/
870 mV

Outputs
Headphones jack (stereo minijack) (1):
For 32 ohms impedance headphones

Power output (excluding US model)
5 W + 5 W (at 4 ohms, 10 % harmonic distortion
in AC operation)

Power requirements
For personal minidisc system:
120 V AC, 60 Hz
For back-up memory:
4.5 V DC, 3 size AA (R6) batteries
For remote control:
3 V DC, 2 size AA (R6) batteries

Power consumption
24 W

Dimensions (incl. projecting parts)
Approx. 498.5 × 173.5 × 227 mm (w/h/d)
(17 3/4 × 6 1/2 × 9 1/2 inches)

Mass
Approx. 5.2 kg (13 lb. 4 oz)

Supplied accessories
AC power cord (1)
Remote control (RMT-CM35A) (1)
AM loop antenna (1)

Design and specifications are subject to change
without notice.

SAFETY CHECK-OUT

After correcting the original service problem, perform the following safety check before releasing the set to the customer:
Check the antenna terminals, metal trim, "metallized" knobs, screws, and all other exposed metal parts for AC leakage. Check leakage as described below.

LEAKAGE TEST

The AC leakage from any exposed metal part to earth ground and from all exposed metal parts to any exposed metal part having a return to chassis, must not exceed 0.5 mA (500 microamperes). Leakage current can be measured by any one of three methods.

1. A commercial leakage tester, such as the Simpson 229 or RCA WT-540A. Follow the manufacturers' instructions to use these instruments.
2. A battery-operated AC milliammeter. The Data Precision 245 digital multimeter is suitable for this job.
3. Measuring the voltage drop across a resistor by means of a VOM or battery-operated AC voltmeter. The "limit" indication is 0.75 V, so analog meters must have an accurate low-voltage scale. The Simpson 250 and Sanwa SH-63Trd are examples of a passive VOM that is suitable. Nearly all battery operated digital multimeters that have a 2V AC range are suitable. (See Fig. A)

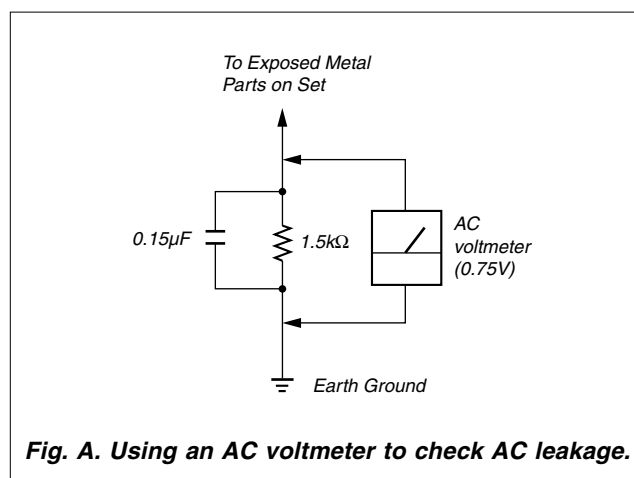


Fig. A. Using an AC voltmeter to check AC leakage.

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.

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SECTION 1

SERVICING NOTES



This Compact Disc player is classified as a CLASS 1 LASER product. The CLASS 1 LASER PRODUCT label is located on the bottom exterior.

CAUTION

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

1-1. NOTES ON HANDLING THE OPTICAL PICK-UP BLOCK OR BASE UNIT

The laser diode in the optical pick-up block may suffer electrostatic break-down because of the potential difference generated by the charged electrostatic load, etc. on clothing and the human body.

During repair, pay attention to electrostatic break-down and also use the procedure in the printed matter which is included in the repair parts.

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

1-2. 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.

1-3. 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.

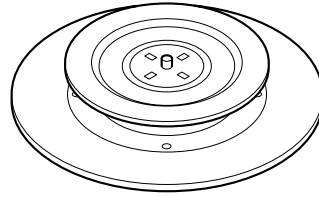
1-4. FLEXIBLE CIRCUIT BOARD REPAIRING

- 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.

1-5. CHUCK PLATE JIG ON REPAIRING

On repairing CD section, playing a disc without the CD lid, use Chuck Plate Jig.

- Code number of Chuck Plate Jig: X-4918-255-1



1-6. DEMONSTRATION

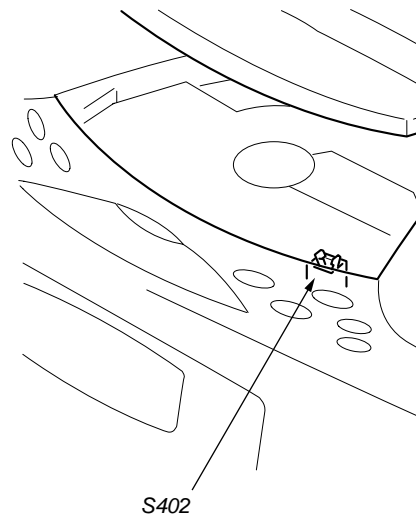
This set enters the demonstration mode about 10 seconds after the power cord is connected. The demonstration displays such as “DEMONSTRATION MODE” and “CREATE YOUR ORIGINAL MD” then appears.

When no operation is entered for one minute after the **POWER** button is turned on, the demonstration mode is also entered.

To release the demonstration mode, set the timer in this set or press and hold down the **NO/CANCEL** button for about 2 seconds.

1-7. CHECKING THE LASER DIODE AND FOCUS SEARCH OPERATION

1. Turn on the POWER and open the CD cover.
2. As shown below, push S402 (CD DOOR) with a screwdriver or other tool.
3. Press the CD button.
4. Check the objective lens to make sure that the laser diode is emitting light. If not so, the auto power control circuit or optical pickup would be damaged. Verify that the objective lens moves vertically three times for focus search.



1-8. JIG FOR CHECKING BD BOARD WAVEFORM

The special jig (J-2501-149-A) is useful for checking the waveform of the BD board. The names of terminals and the checking items to be performed are shown as follows.

GND : Ground

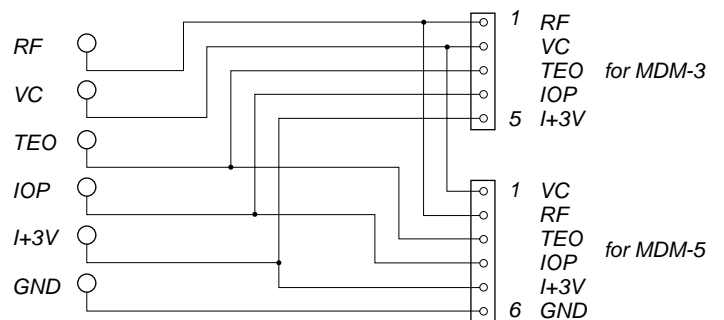
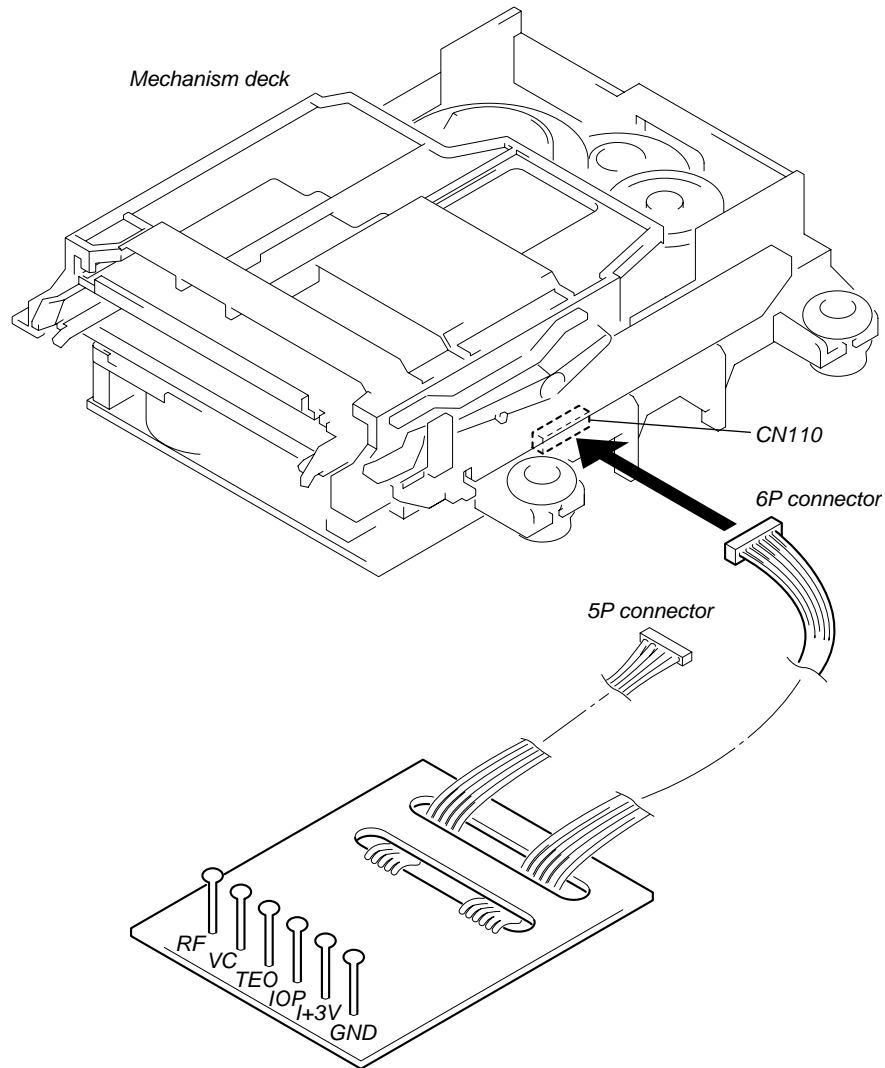
I+3V : For measuring IOP (Check the deterioration of the optical pick-up laser)

IOP : For measuring IOP (Check the deterioration of the optical pick-up laser)

TEO : TRK error signal (Traverse adjustment)

VC : Reference level for checking the signal

RF : RF signal (Check jitter)



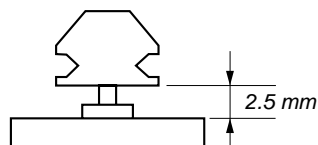
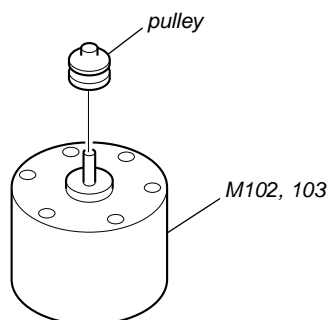
1-9. CHECKS PRIOR TO PARTS REPLACEMENT AND ADJUSTMENTS (FOR MD SECTION)

Before performing repairs, perform the following checks to determine the faulty locations up to a certain extent. Details of the procedures are described in "5 Electrical Adjustments".

	Criteria for Determination (Unsatisfactory if specified value is not satisfied)	Measure if unsatisfactory:
Laser power check (6-1 : See page 26)	<ul style="list-style-type: none"> 0.9 mW power Specified value : 0.84 to 0.92 mW 7.0 mW power Specified value : 6.8 to 7.2 mW 	<ul style="list-style-type: none"> Clean the optical pick-up Adjust again Replace the optical pick-up
	<ul style="list-style-type: none"> lop (at 7mW) Labeled on the optical pickup Iop value \pm 10mA 	<ul style="list-style-type: none"> Replace the optical pick-up
Focus bias check (6-2 : See page 26)	<ul style="list-style-type: none"> Error rate check Specified value : For points a, b, and c C1 error : About 200 ADER : Below 2 	<ul style="list-style-type: none"> Replace the optical pick-up
C PLAY check (6-3 : See page 26)	<ul style="list-style-type: none"> Error rate check Specified value: <ol style="list-style-type: none"> When using test disc (MDW-74/AU-1) C1 error : Below 80 ADER : Below 2 When using check disc (TDYS-1) C1 error : Below 50 	<ul style="list-style-type: none"> Replace the optical pick-up
Self-recording/playback check (6-4 : See page 26)	<ul style="list-style-type: none"> CPLAY error rate check Specified value: C1 error : Below 80 ADER : Below 2 	If always unsatisfactory: <ul style="list-style-type: none"> Replace the overwrite head Check for disconnection of the circuits around the overwrite head
		If occasionally unsatisfactory: <ul style="list-style-type: none"> Check if the overwrite head is distorted Check the mechanism around the sled

Note:
The criteria for determination above is intended merely to determine if satisfactory or not, and does not serve as the specified value for adjustments.
When performing adjustments, use the specified values for adjustments.

1-10. CHANGE OF PULLEY



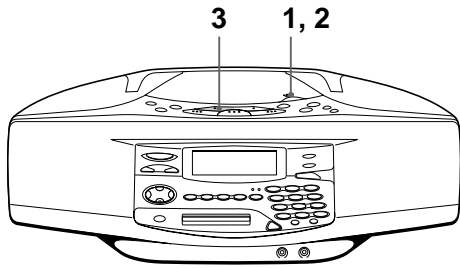
Install the pulley to the motor.

SECTION 2 GENERAL

This section is extracted from instruction manual.

Basic Operations

Playing a CD



For hookup instructions, see pages 57 - 59.

- 1** Press **▲ PUSH OPEN/CLOSE** down to open the CD compartment and place the CD on the CD compartment.

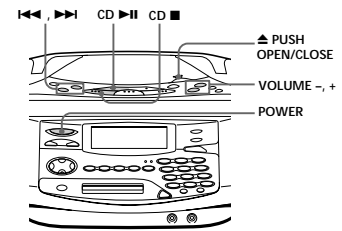
With the label side up
- 2** Close the lid of the CD compartment.
- 3** Press **CD ►►** (CD ►► on the remote).
The player turns on (direct power-on) and the player plays all the tracks once.

Display

Track number Playing time

4 Basic Operations

Use these buttons for additional operations

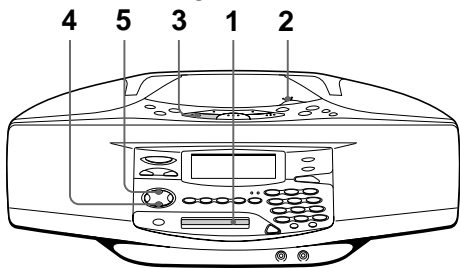


To	Press
adjust the volume	VOLUME +, - (VOL +, - on the remote)
stop playback	CD ■
pause playback	CD ►► (CD ■ on the remote) Press the button again to resume play after pause.
go to the next track	►►
go back to the previous track	◄◄
remove the CD	▲ PUSH OPEN/CLOSE
turn on/off the player	POWER

Tip
Next time you want to listen to a CD, just press **CD ►►**. The player turns on automatically and starts playing the CD.

Basic Operations

Recording a whole CD (Synchronized recording)



For hookup instructions, see pages 57 - 59.

- 1** Insert a recordable MD (direct power-on).

With the label side up
Insert in the direction of the arrow

Display

After "TOC Reading" is displayed, the disc name will be displayed if it is labeled.
- 2** Press **▲ PUSH OPEN/CLOSE** and place the CD on the CD compartment.
Press **▲ PUSH OPEN/CLOSE** again to close the CD compartment.

With the label side up
- 3** Press **CD ■**.

Display

Track number Remaining recording time

6 Basic Operations

- 4** To record at high speed, press **HIGH SPEED**.
The indicator lights up.
To record at normal speed, skip this step.
- 5** Press **SYNCHRO REC CD ►► MD**.
The player starts recording automatically.
If the MD has any previous recording, recording will be made from the last recorded position.

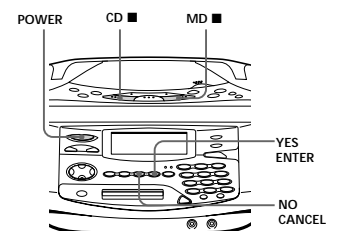
Display

Track number of MD Remaining recording time of MD

Notes

- **[TOC EDIT]** After you stop recording, do not disconnect the AC power cord or move the player while "TOC EDIT" is flashing in the display. If you do so, recording may not be done properly.
- When you record a whole CD, you cannot pause recording.
- **Tips**
 - Adjusting the volume or the audio emphasis (page 49) will not affect the recording level. Keep the volume at a moderate level so as to prevent the sound from skipping.
 - To record over the previous recording, see page 33.
 - Once the clock is set, the recording date and time are stamped automatically (page 50).
 - You can label an MD or a track during recording (page 44).

Use these buttons for additional operations



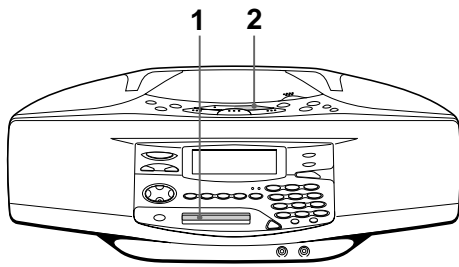
To	Press
stop recording	MD ■ or CD ■
turn on/off the player	POWER

If "CD>MD OK?" alternates with time display
There is not enough space on the MD to record the whole CD.
If it is all right to record as much as possible and cancel recording of some tracks, press **YES • ENTER**. To stop recording, press **NO • CANCEL**.
If any other messages are displayed, see page 72.

Basic Operations

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Playing an MD



For hookup instructions, see pages 57 - 59.

1 Insert the MD (direct power-on). Display

With the label side up
Insert in the direction of the arrow

After "TOC Reading" is displayed, the disc name will be displayed if it is labeled.

Display: 011 SELECT

2 Press MD (MD on the remote). The player plays all the tracks once.

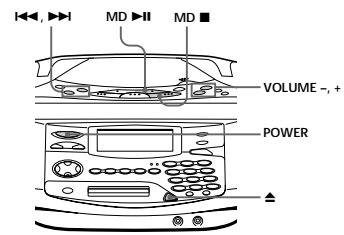
Track name is displayed if it is labeled.

Display: 011 Love So

Track number: 011 | Playing time: 00:01

Tip
Next time you want to listen to a MD, just press MD. The player turns on automatically and starts playing the MD.

Use these buttons for additional operations



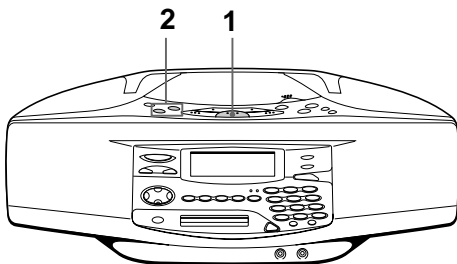
To	Press
adjust the volume	VOLUME +, - (VOL +, - on the remote)
stop playback	MD
pause playback	MD (MD on the remote) Press the button again to resume play after pause.
go to the next track	▶▶
go back to the previous track	◀◀
remove the MD	▲
turn on/off the player	POWER

Basic Operations

8 Basic Operations

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Listening to the radio



For hookup instructions, see pages 57 - 59.

1 Press RADIO BAND until the band you want appears in the display (direct power-on).

Display: FM 87.6

"FM" or "AM" appears

2 Hold down TUNE + or TUNE - until the frequency digits begin to change in the display. The player automatically scans the radio frequencies and stops when it finds a clear station. If you can't tune in a station, press TUNE + or TUNE - repeatedly to change the frequency step by step.

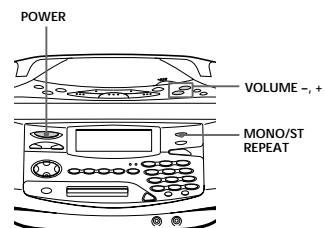
Indicates an FM stereo broadcast

Display: FM 89.2

Tips

- If the FM broadcast is noisy, press MONO/ST-REPEAT (MODE on the remote) until "Mono" appears in the display and radio will play in monaural.
- Next time you want to listen to the radio, just press RADIO BAND. The player turns on automatically and starts playing the previous station.

Use these buttons for additional operations



To	Press
adjust the volume	VOLUME +, - (VOL +, - on the remote)
turn on/off the radio	POWER

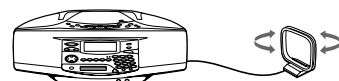
To improve broadcast reception FM:

Reorient the antenna for FM.



AM:

Keep the AM loop antenna as far as possible from the player and reorient it.



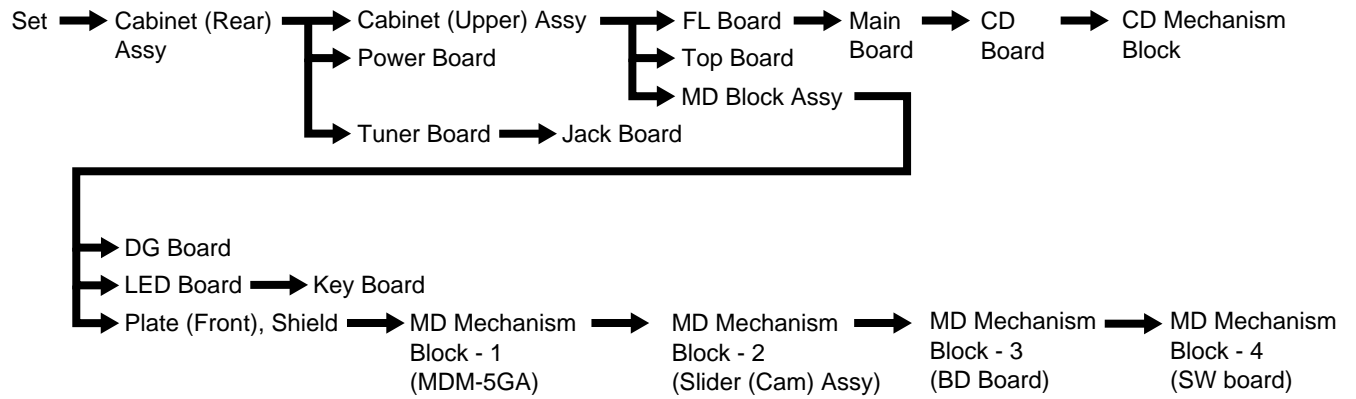
Basic Operations

10 Basic Operations

Basic Operations 11

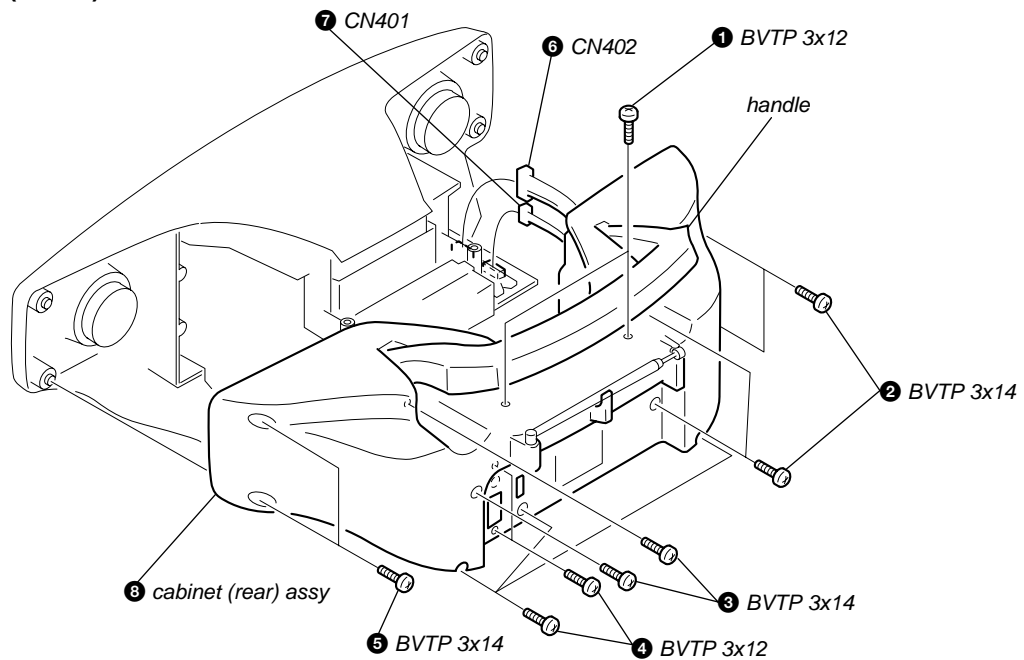
SECTION 3 DISASSEMBLY

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

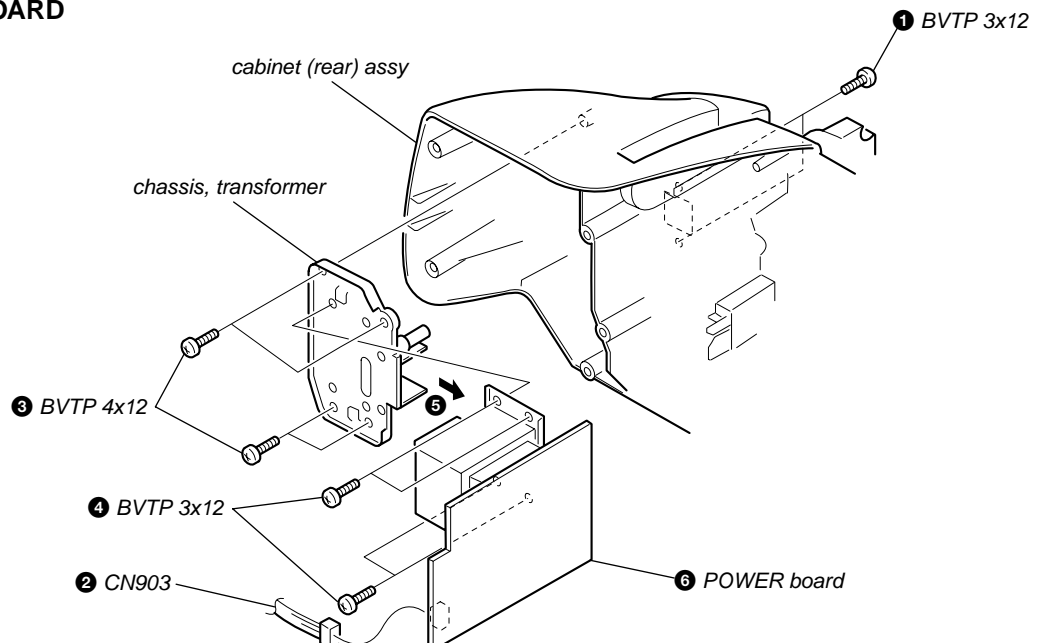


Note : Follow the disassembly procedure in the numerical order given.

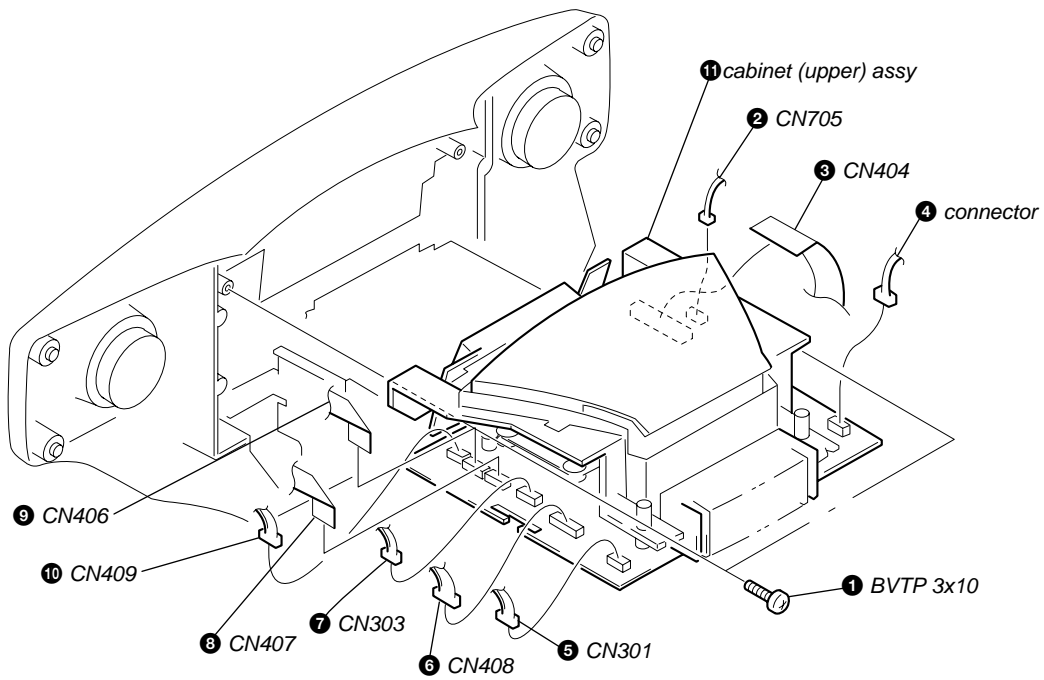
3-1. CABINET (REAR) ASSY



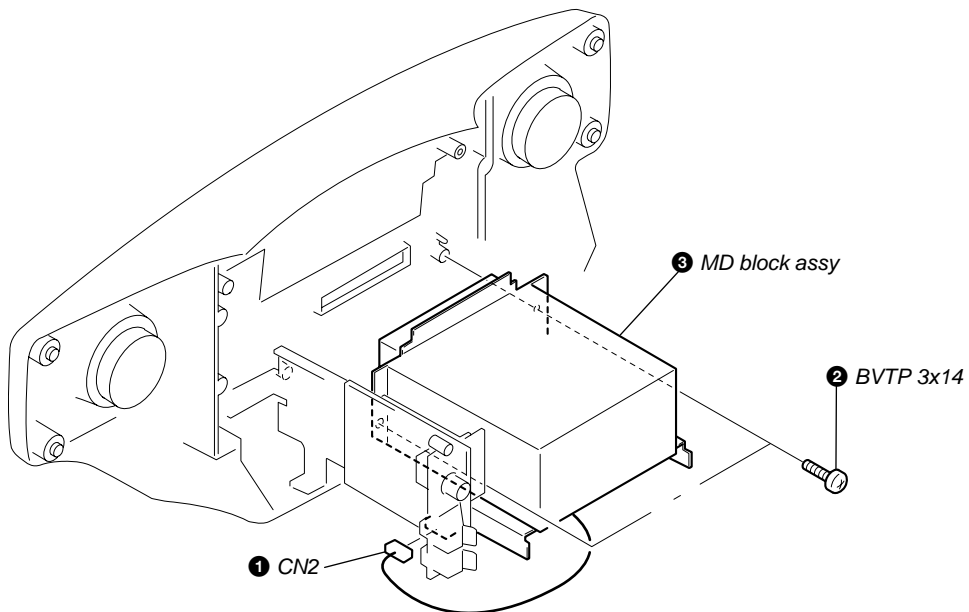
3-2. POWER BOARD



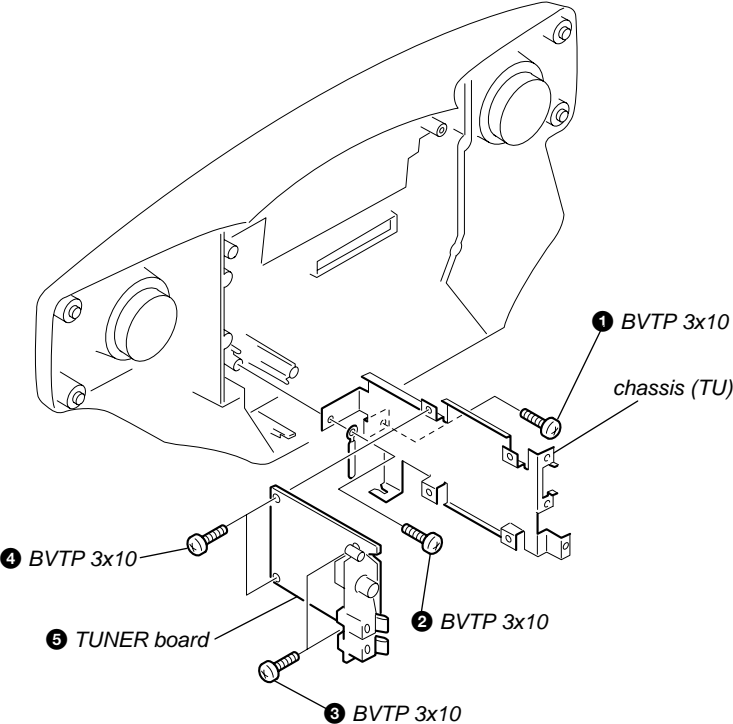
3-3. CABINET (UPPER) ASSY



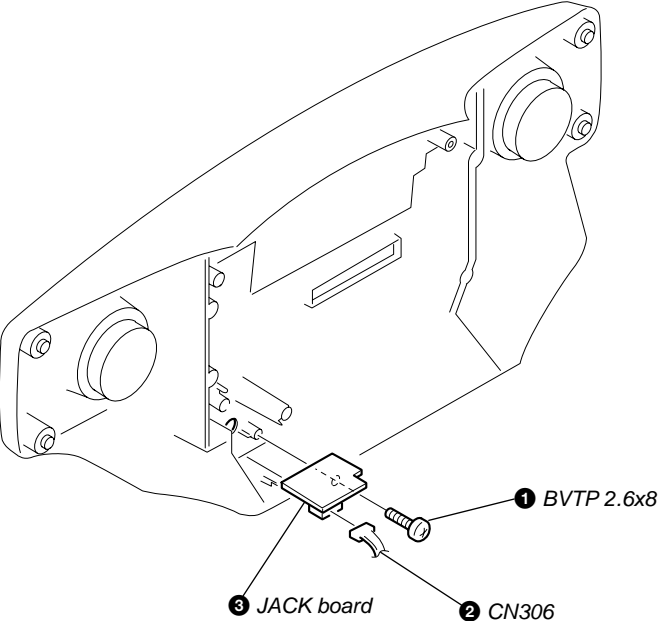
3-4. MD BLOCK ASSY



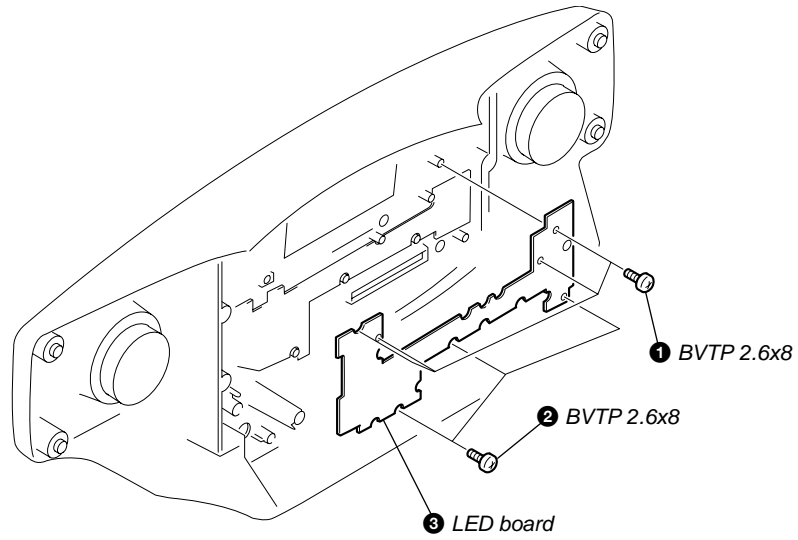
3-5. TUNER BOARD



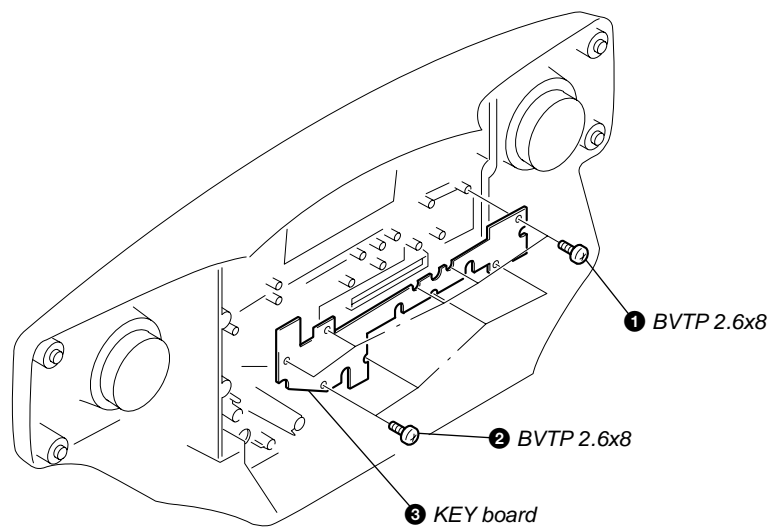
3-6. JACK BOARD



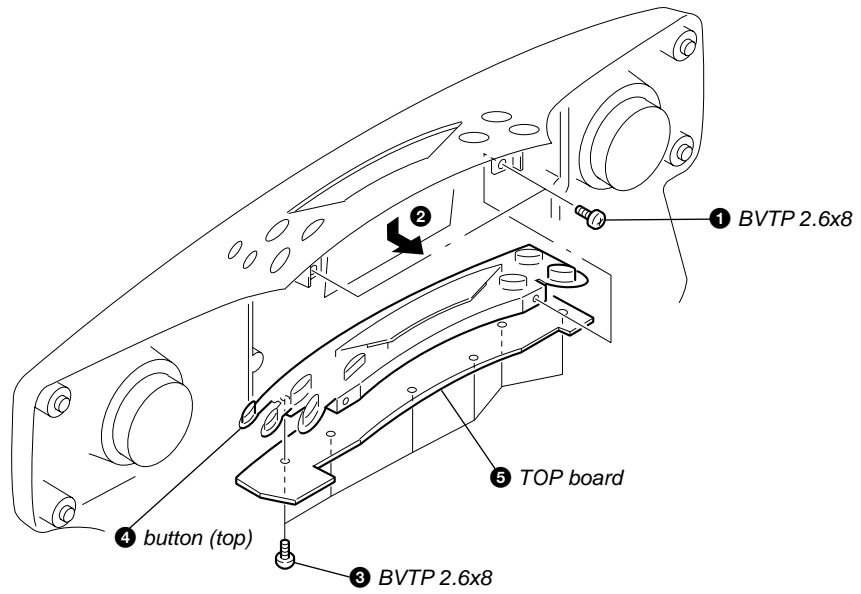
3-7. LED BOARD



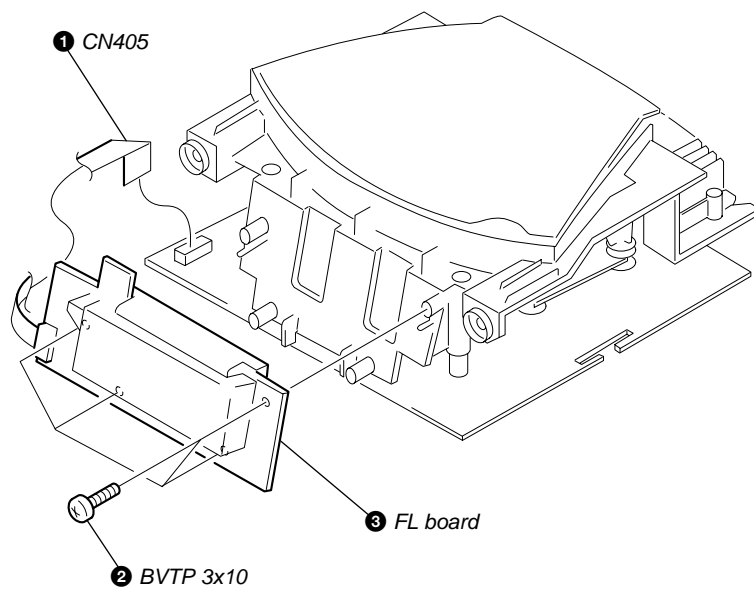
3-8. KEY BOARD



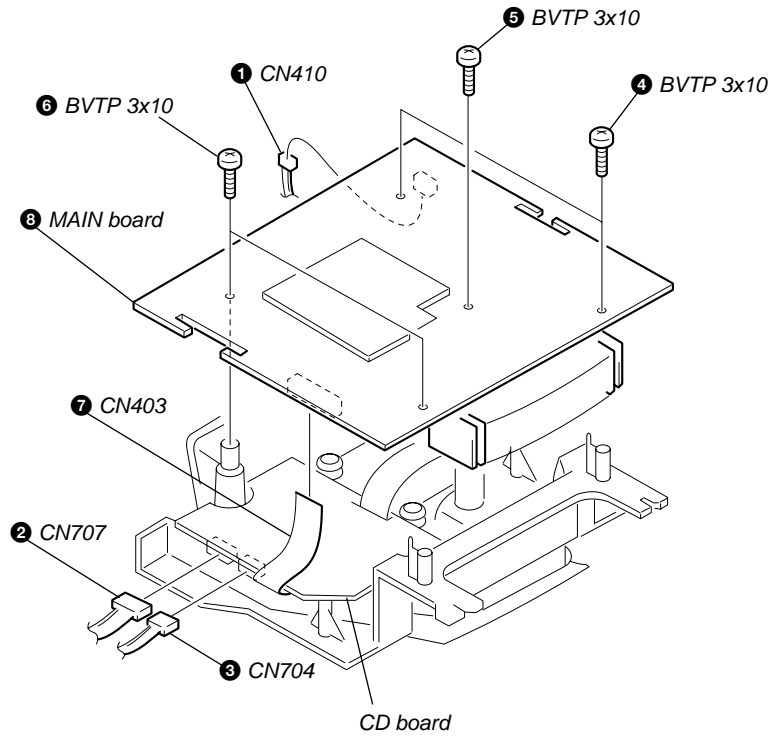
3-9. TOP BOARD



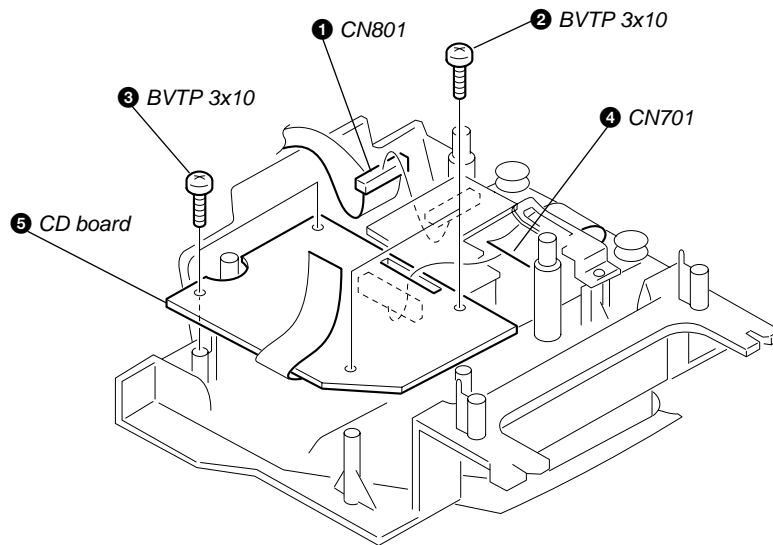
3-10. FL BOARD



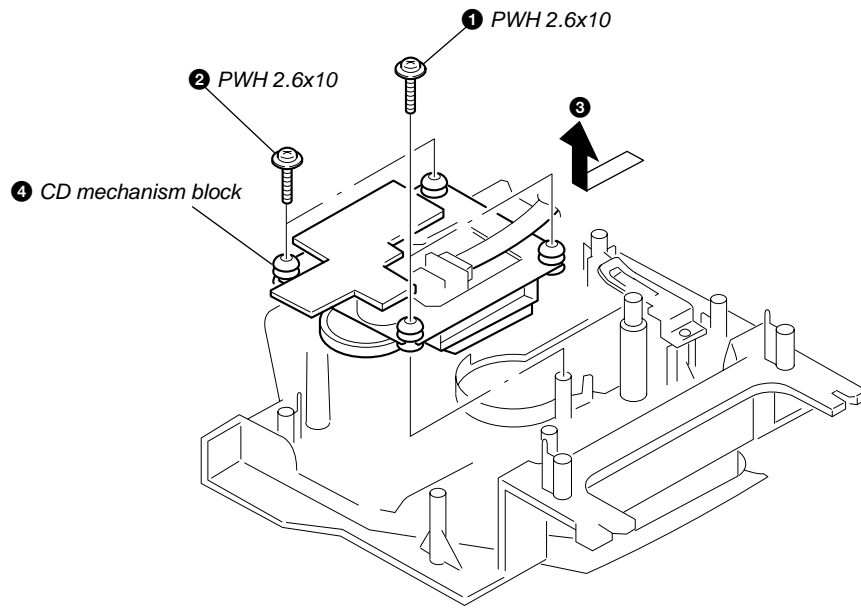
3-11. MAIN BOARD



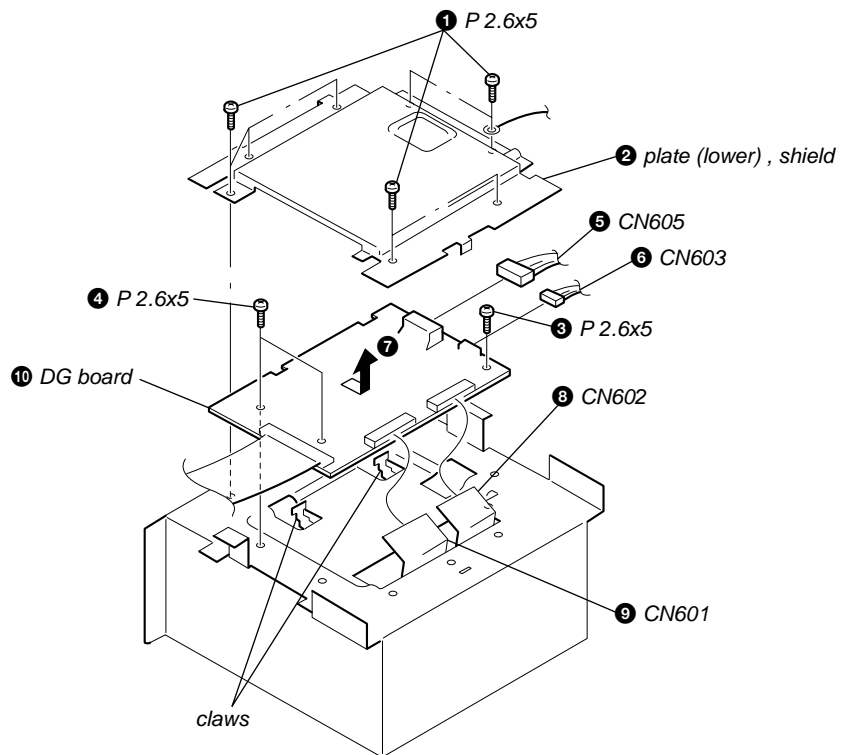
3-12. CD BOARD



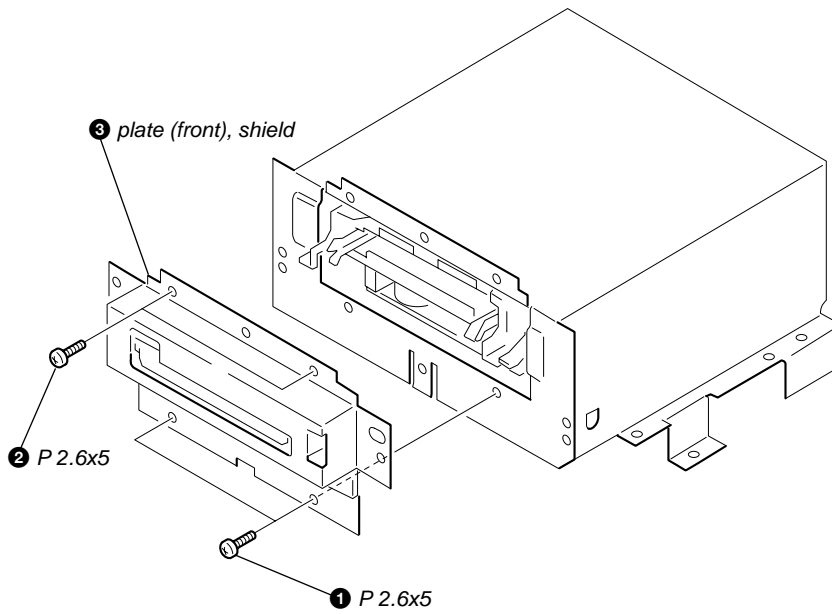
3-13. CD MECHANISM BLOCK



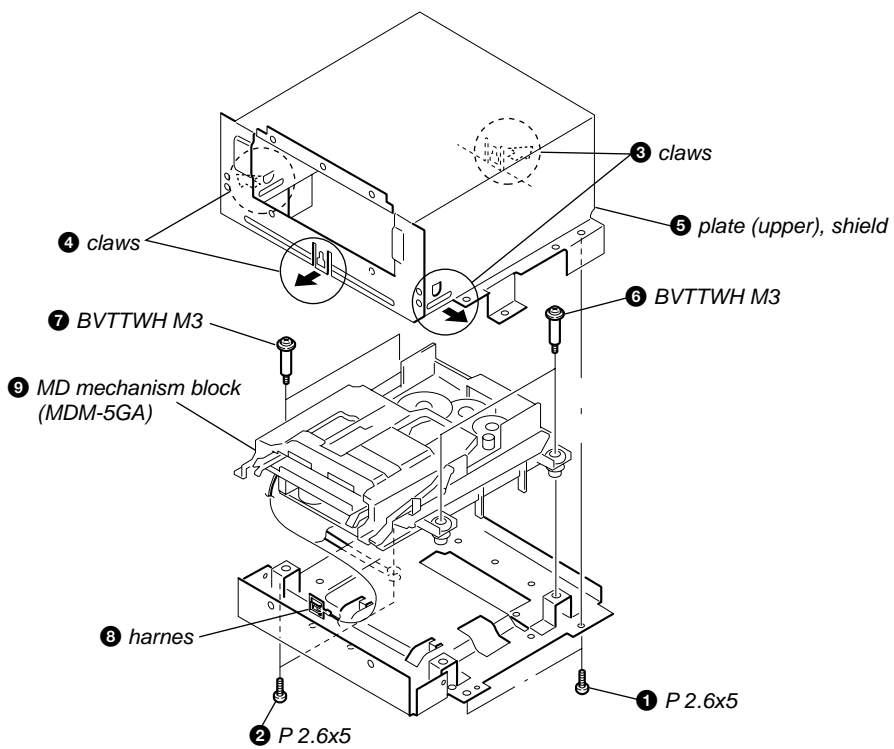
3-14. DG BOARD



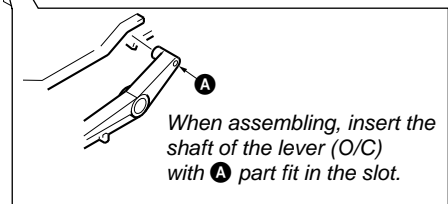
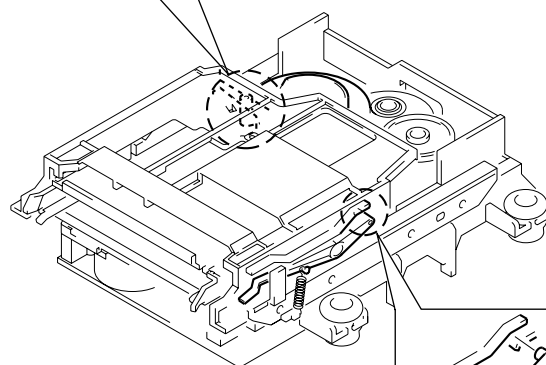
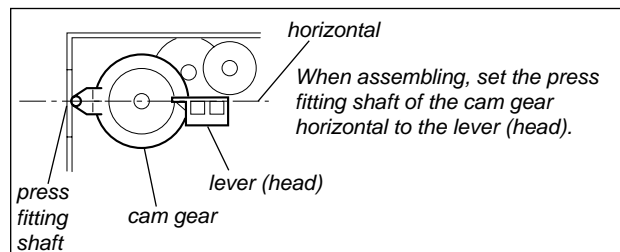
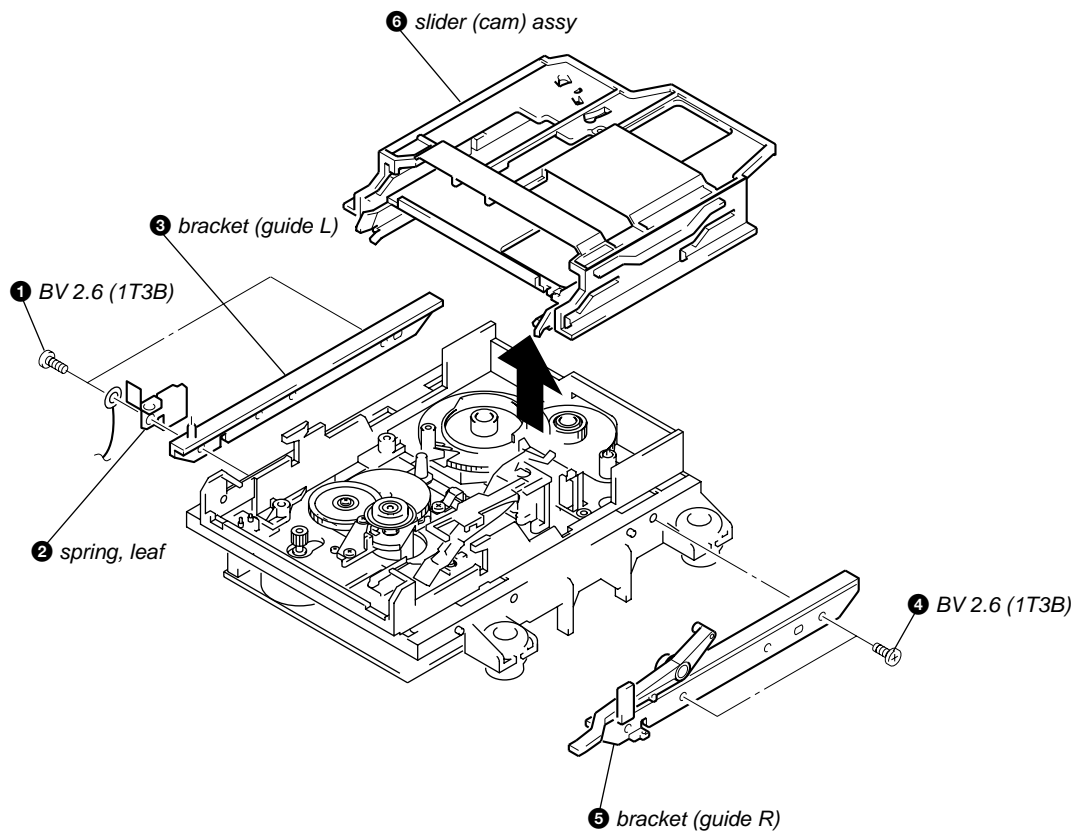
3-15. PLATE (FRONT), SHIELD



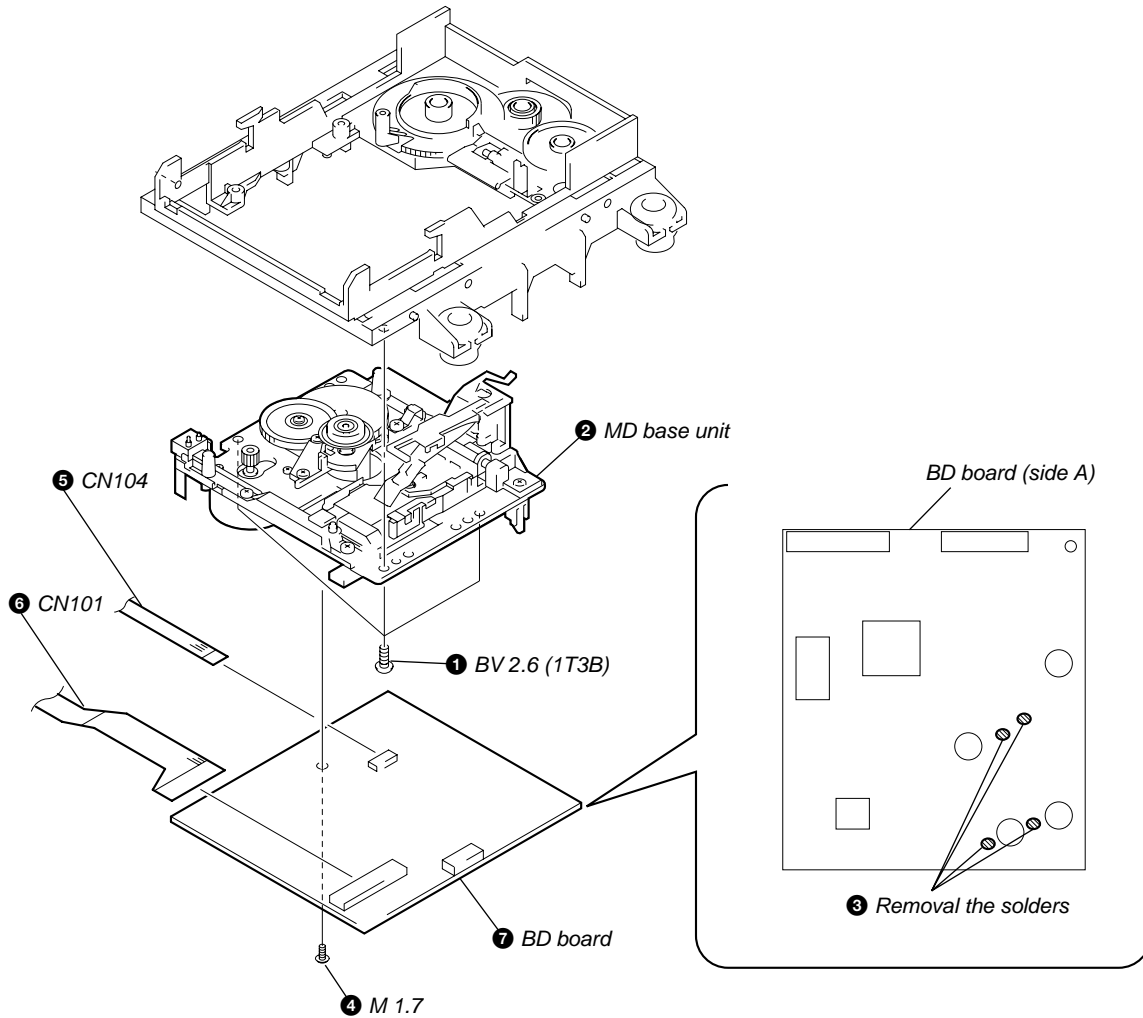
3-16. MD MECHANISM BLOCK-1 (MDM-5GA)



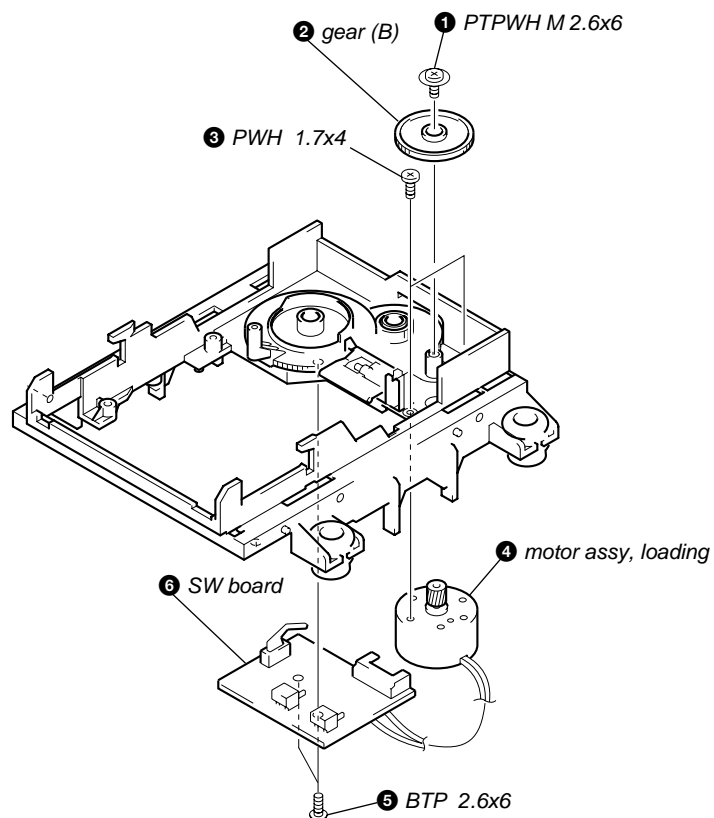
3-17. MD MECHANISM BLOCK-2 (SLIDER (CAM) ASSY)



3-18. MD MECHANISM BLOCK-3 (BD BOARD)



3-19. MD MECHANISM BLOCK-4 (SW BOARD)






SECTION 4 TEST MODE


Refer to “5. ELECTRICAL ADJUSTMENT” for the test mode of CD section.

4-1. MD SECTION




1. PRECAUTIONS FOR USE OF TEST MODE

- As loading related operations will be performed regardless of the test mode operations being performed, be sure to check that the disc is stopped before setting and removing it.
Even if the  (MD) button is pressed while the disc is rotating during continuous playback, continuous recording, etc., the disc will not stop rotating.
Therefore, it will be ejected while rotating.
Be sure to press the  (MD) button after pressing the  button and the rotation of disc is stopped.


1-1. Recording laser emission mode and operating buttons

- Continuous recording mode (CREC MODE)
- Laser power check mode (LDPWR CHECK)
- Laser power adjustment mode (LDPWR ADJUST)
- When pressing the  button.

2. SETTING THE TEST MODE



- Set to standby state.
- Press the buttons  and  and  (TUNE -) at the same time and then release them soon (within 100m sec). The TEST MODE is entered.

3. RELEASING THE TEST MODE






Hold down the  button and remove the power cord to reset the set.

4. BASIC OPERATIONS OF THE TEST MODE



All operations are performed with the following buttons:  (MD),  (MD), , and .
The functions of these buttons are as follows.

Function name	Function
 (MD)	Proceeds the parameter/mode change.
 (MD)	Returns to the parameter/mode change.
RADIO/BAND	Goes ahead. Determines the setting/selection.
REC/REC MODE	Suspends.

5. SELECTING THE TEST MODE

There are 9 types of test modes as shown below. The groups can be switched by press the  (MD) or  (MD) button. After selecting the group to be used, press the  button. After setting a certain group, press the  (MD) or  (MD) button between these modes.

Display	Contents
TEMP ADJUST	Temperature compensation offset adjustment
LDPWR ADJUST	Laser power adjustment
LDPWR CHECK	Laser power check
EFBAL ADJUST	EF balance adjustment
FBIAS ADJUST	Focus bias adjustment
FBIAS CHECK	Focus bias check
CPLAY MODE	Continuous playback mode
CREC MODE	Continuous recording mode
EEP MODE	Non-volatile memory control

- For details of each adjustment mode, refer to “5. Electrical Adjustments”.
- If a different mode has been selected by mistake, press the  button to release that mode.
- EEP MODE is not used for servicing and therefore are not described in detail. If these modes are set accidentally, press the  button to release the mode immediately. Be especially careful this mode will overwrite the non-volatile memory and reset it, and as a result, the unit will not operate normally.

5-1. Operating the Continuous Playback Mode

1. Entering the continuous playback mode

- (1) Set the disc in the unit. (Whichever recordable discs or discs for playback only are available)
- (2) Press the **▶||** (MD) or **■** (MD) button to display “CPLAY MODE”.
- (3) Press the **RADIO/BAND** button to change the display to “CPLAY MID”.
- (4) When access completes, the display changes to “C1 = 0000 AD = 00”.

Note: The numbers “0” displayed show you error rates and ADER.

2. Changing the parts to be played back

- (1) Press the **RADIO/BAND** button during continuous playback to change the display as below.

“CPLAY MID” → “CPLAY OUT” → “CPLAY IN”

When pressed another time, the parts to be played back can be moved.

- (2) When access completes, the display changes to “C1 = 0000 AD = 00”.

Note: The numbers “0” displayed show you error rates and ADER.

3. Ending the continuous playback mode

- (1) Press the **REC/REC MODE** button. The display will change to “CPLAY MODE”.
- (2) Press the **▲** (MD) button and take out the disc.

Note: The playback start addresses for IN, MID, and OUT are as follows.

IN : 40h cluster
MID : 300h cluster
OUT : 700h cluster

5-2. Operating the Continuous Recording Mode (Use only when performing self-recording/palyback check)

1. Entering the continuous recording mode

- (1) Set a recordable disc in the unit.
- (2) Press the **▶||** (MD) or **■** (MD) button to display “CREC MODE”.
- (3) Press the **RADIO/BAND** button to change the display to “CREC MID”.
- (4) When access completes, the display changes to “CREC (0000)” and “**REC**” lights up.

Note: The numbers “0” displayed shows you the recording position addresses.

2. Changing the parts to be recorded

- (1) When the **RADIO/BAND** button is pressed during continuous recording, the display changes as below.

“CREC MID” → “CREC OUT” → “CREC IN”

When pressed another time, the parts to be recorded can be changed. “**REC**” goes off.

- (2) When access completes, the display changes to “CREC (0000)” and “**REC**” lights up.

Note: The numbers “0” displayed shows you the recording position addresses.

3. Ending the continuous recording mode

- (1) Press the **REC/REC MODE** button. The display changes to “CREC MODE” and “**REC**” goes off.
- (2) Press the **▲** (MD) button and take out the disc.

Note 1: The recording start addresses for IN, MID, and OUT are as follows.

IN : 40h cluster
MID : 300h cluster
OUT : 700h cluster

Note 2: The **REC/REC MODE** button can be used to stop recording anytime.

Note 3: Do not perform continuous recording for long periods of time above 5 minutes.

Note 4: During continuous recording, be careful not to apply vibration.

5-3. Non-Volatile Memory Mode (EEP MODE)

This mode reads and writes the contents of the non-volatile memory.

It is not used in servicing. If the unit entered this mode accidentally, press the **REC/REC MODE** button immediately to release it.

6. FUNCTIONS OF OTHER BUTTONS

Function	Contents
▶ (MD) and EDIT	Sets continuous playback when pressed in the STOP state. When pressed during continuous playback, the tracking servo turns ON/OFF.
■ (MD) and EDIT	Stops continuous playback and continuous recording.
▶▶	The sled moves to the outer circumference only when this is pressed.
◀◀	The sled moves to the inner circumference only when this is pressed.
REC/REC MODE and EDIT	When pressed during continuous playback, REC ON/OFF.
■ (CD) and EDIT	Switches between the pit and groove modes when pressed.
RADIO/BAND and EDIT	When pressed during continuous playback, switches the spindle servo mode (CLV-S ↔ CLV-A).
LINE/LINE LEVEL	Switches the displayed contents each time the button is pressed
▲ (MD)	Ejects the disc
POWER	Releases the test mode

7. TEST MODE DISPLAYS

Each time the LINE/LINE LEVEL button is pressed, the display changes in the following order.

1. Mode display

Displays “TEMP ADJUST”, “CPLAYMODE”, etc.

2. Error rate display

Displays the error rate in the following way.

C1 = □□□□ AD = □□

C1 = Indicates the C1 error.

AD = Indicates ADER.

3. Address display

The address is displayed as follows. (MO: recordable disc, CD: playback only disc)

Press the ■ (CD) and EDIT buttons at the same time to switches between the groove display and pit display.

h = □□□□ s = □□□□ (MO pit and CD)

h = □□□□ a = □□□□ (MO groove)

h = Indicates the header address.

s = Indicates the SUBQ address.

a = Indicates the ADIP address.

Note: “-” is displayed when servo is not imposed.

4. Auto gain display (Not used in servicing)

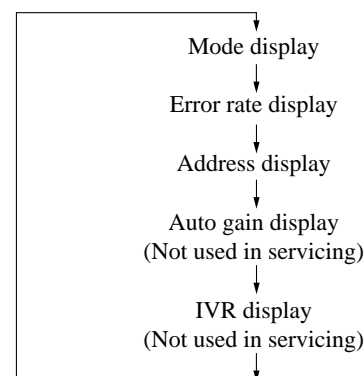
The auto gain is displayed as follows.

AG F = □□ T = □□

5. IVR display (Not used in servicing)

The IVR is displayed as follows.

[□□][□□][□□]



MEANINGS OF OTHER DISPLAYS

Display	Contents	
	When Lit	When Off
SHUF	During continuous playback (CLV: ON)	STOP (CLV: OFF)
PGM	Tracking servo OFF	Tracking servo ON
REC	Recording mode ON	Recording mode OFF
TOC EDIT	ABCD adjustment completed	
TRACK	Pit	Groove
TIMER	CLV-S	CLV-A

SECTION 5 ELECTRICAL ADJUSTMENTS

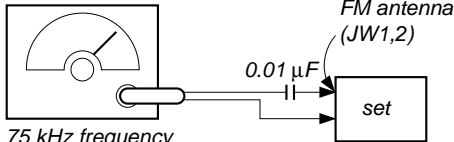
5-1. TUNER SECTION 0 dB = 1 μ V

• FM Section

Setting:

BAND button: FM

FM RF signal generator



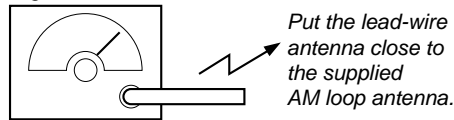
75 kHz frequency deviation by 1 kHz signal
output level : as low as possible

• AM Section

Setting:

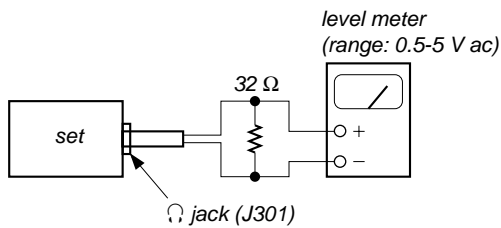
BAND button: AM

AM RF signal generator

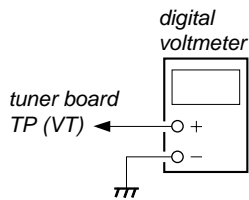


30% amplitude modulation by 400 Hz signal
output level : as low as possible

• Connecting Level Meter (FM and AM)



• Connecting Digital Voltmeter (FM and AM)



- Repeat the procedures in each adjustment several times, and the frequency coverage and tracking adjustments should be finally done by the trimmer capacitors.

FM FREQUENCY COVERAGE ADJUSTMENT

Frequency Display	87.5 MHz	108 MHz
Reading on Digital voltmeter	1.3 $\begin{matrix} +0.4 \\ -0.2 \end{matrix}$ V	3.0 $\begin{matrix} +0.3 \\ -0.5 \end{matrix}$ V
Adjustment Part	<confirmation>	L2

FM TRACKING ADJUSTMENT

Adjust for a maximum reading on level meter.

L1	CT1
87.5 MHz	108 MHz

AM FREQUENCY COVERAGE ADJUSTMENT

Frequency Display	530 kHz	1,710 kHz
Reading on Digital voltmeter	0.8 \pm 0.2 V	5.5 \pm 0.3 V
Adjustment Part	<confirmation>	L4

AM TRACKING ADJUSTMENT

Adjust for a maximum reading on level meter.

L3	CT2
620 kHz	1,400 kHz

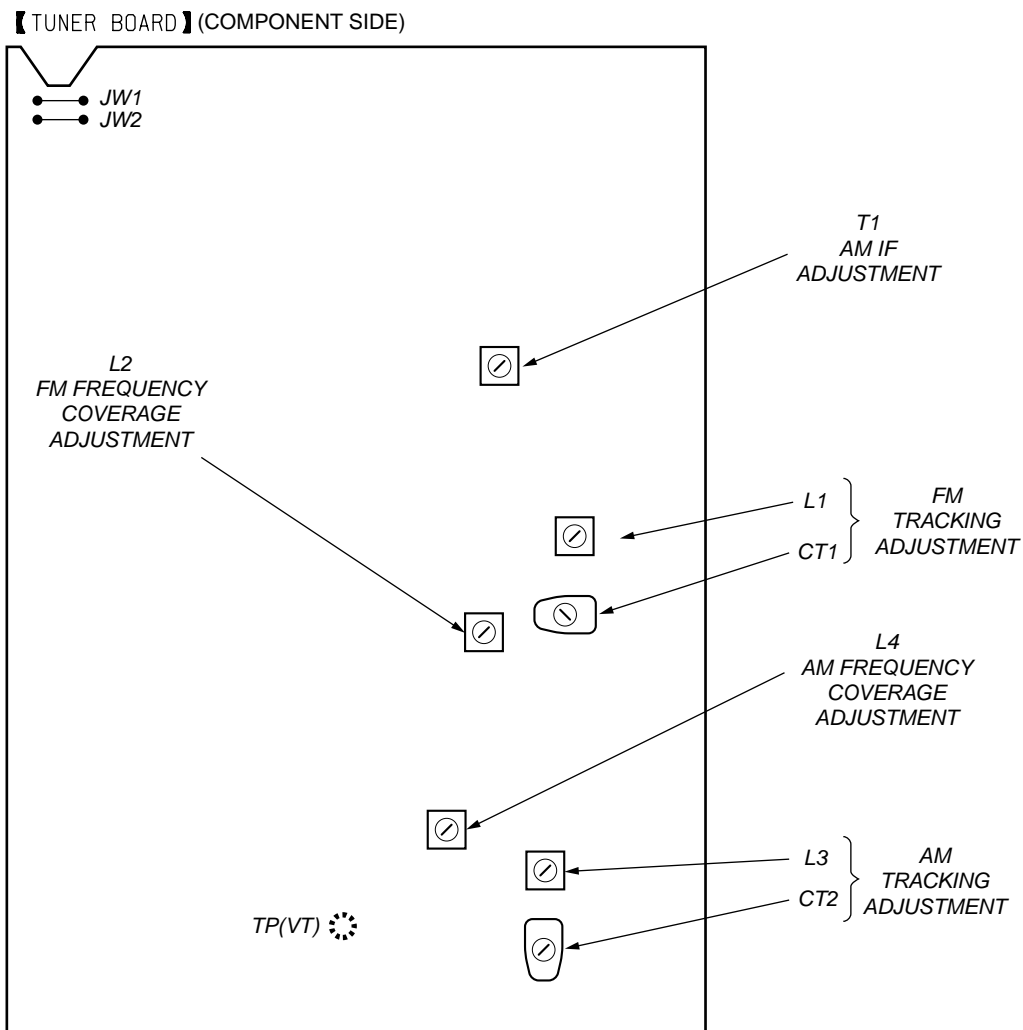
AM IF ADJUSTMENT

Adjust for a maximum reading on level meter.

T1
450 kHz

Adjustment Location: TUNER board (See page 23.)

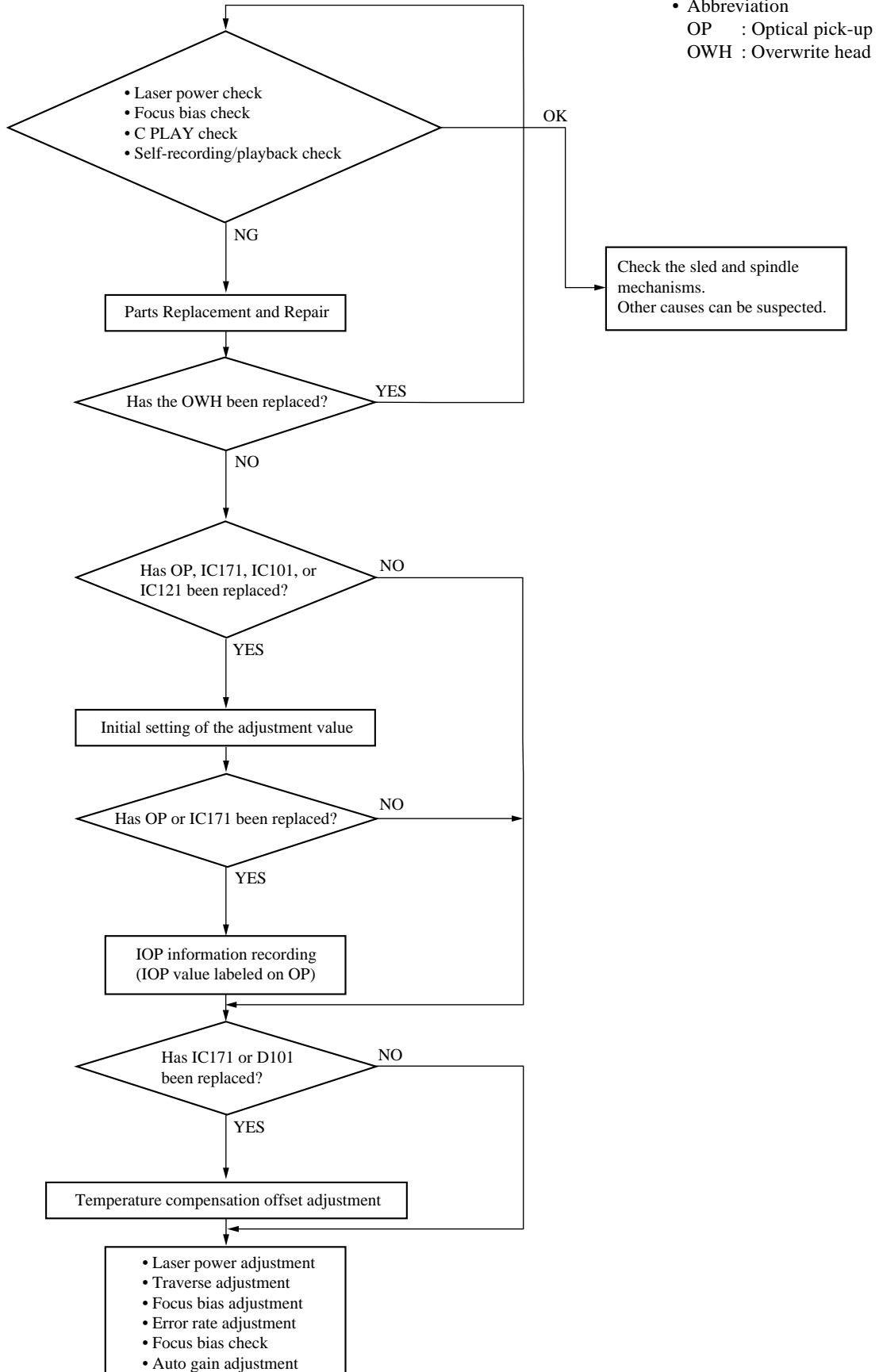
Adjustment Location:



5-2. MD SECTION

1. PARTS REPLACEMENT AND ADJUSTMENT

- Check and adjust the mechanism deck as follows.
The procedure changes according to the part replaced.

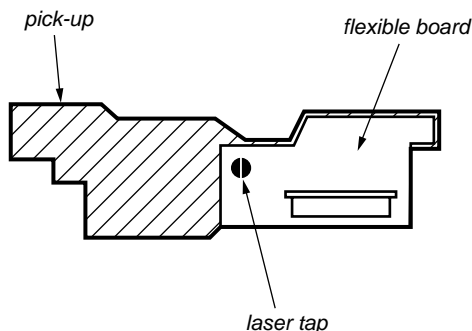


2. PRECAUTIONS FOR CHECKING LASER DIODE EMISSION

To check the emission of the laser diode during adjustments, never view directly from the top as this may lose your eye-sight.

3. PRECAUTIONS FOR USE OF OPTICAL PICK-UP (KMS-260B)

As the laser diode in the optical pick-up is easily damaged by static electricity, solder the laser tap of the flexible board when using it. Before disconnecting the connector, desolder first. Before connecting the connector, be careful not to remove the solder. Also take adequate measures to prevent damage by static electricity. Handle the flexible board with care as it breaks easily.



Optical pick-up flexible board

4. PRECAUTIONS FOR ADJUSTMENTS

- When replacing the following parts, perform the adjustments and checks with ○ in the order shown in the following table.

	Optical Pick-up	BD Board			
		IC171	D101	IC101, IC121	IC192
1. Temperature compensation offset adjustment	×	○	○	×	×
2. Laser power adjustment	○	○	×	○	○
3. EF balance adjustment	○	○	×	○	×
4. Focus bias adjustment	○	○	×	○	×
5. Error rate check	○	○	×	○	×

- Set the test mode when performing adjustments. After completing the adjustments, release the test mode. Perform the adjustments and checks in “group S” of the test mode.
- Perform the adjustments to be needed in the order shown.

- Use the following tools and measuring device.
 - Check Disc (MD) TDYS-1 (Part No. 4-963-646-01)
 - Test Disc (MDW-74/AU-1) (Part No. 8-892-341-41)
 - Laser power meter LPM-8001 (Part No. J-2501-046-A) or MD Laser power meter 8010S (Part No. J-2501-145-A)
 - Oscilloscope (Measure after performing CAL of prove)
 - Digital voltmeter
 - Thermometer
 - Jig for checking BD board waveform (Part No. : J-2501-149-A)
- When observing several signals on the oscilloscope, etc., make sure that VC and ground do not connect inside the oscilloscope. (VC and ground will become short-circuited)
- Using the above jig enables the waveform to be checked without the need to solder. (Refer to Servicing Notes on page 5)
- As the disc used will affect the adjustment results, make sure that not dusts nor fingerprints are attached to it.

Laser Power Meter

When performing laser power checks and adjustment (electrical adjustment), use of the new MD laser power meter 8010S (Part No. J-2501-145-A) instead of the conventional laser power meter is convenient.

It sharply reduces the time and trouble to set the laser power meter sensor onto the objective lens of optical pick-up.

5. CREATING CONTINUOUSLY-RECORDED DISC

* This disc is used in focus bias adjustment and error rate check. The following describes how to create a continuous recording disc.

- Insert a disc (blank disc) commercially available.
- Press the (MD) or (MD) button to display “CREC MODE”.
- Press the button again to display “CREC MID”. Display “CREC (0300)” and start to recording.
- Complete recording within 5 minutes.
- Press the button and stop recording.
- Press the (MD) button and remove the disc.

The above has been how to create a continuous recorded data for the focus bias adjustment/check and MO error rate check.

Note:

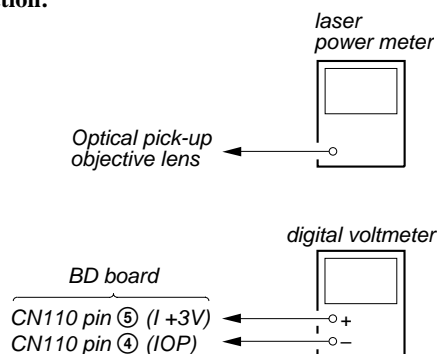
- Be careful not to apply vibration during continuous recording.

6. CHECK PRIOR TO REPAIRS

These checks are performed before replacing parts according to “approximate specifications” to determine the faulty locations. For details, refer to “Checks Prior to Parts Replacement and Adjustments” (See page 6).

6-1. Laser Power Check

Connection:



Checking Procedure:

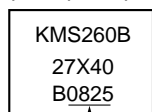
1. Set the laser power meter on the objective lens of the optical pick-up. (When it cannot be set properly, press the button or button to move the optical pick-up) Connect the digital voltmeter to CN110 pin ⑤ (I+3 V) and CN110 pin ④ (IOP) on the BD board.
2. Press the (MD) or (MD) button to display “LDPWR CHECK”.
3. Press the button once to display “LD 0.9 mW \$ ”. Check that the reading of the laser power meter become 0.84 to 0.92 mW.
4. Press the button once more to display “LD 7.0 mW \$ ”. Check that the reading the laser power meter and digital voltmeter satisfy the specified value.

Specified Value:

Laser power meter reading : 7.0 ± 0.2 mW

Digital voltmeter reading : Value on the optical pick-up label
 $\pm 10\%$

(Optical pick-up label)



$IOP=82.5$ mA in this case

IOP (mA) = Digital voltmeter reading (mV)/1 (Ω)

5. Press the button to display “LDPWR CHECK” and stop the laser emission.
 (The button is effective at all times to stop the laser emission)

Note 1: After step 4, each time the button is pressed, the display will be switched “LD 0.7 mW \$ ”, “LD 6.2 mW \$ ”, and “LD WP ホセイ \$ ”. Nothing needs to be performed here. (ホセイ = correction)

6-2. Focus Bias Check

Change the focus bias and check the focus tolerance amount.

Checking Procedure:

1. Load the test disc (MDW-74/AU-1).
2. Press the (MD) or (MD) button to display “CPLAY MODE”.
3. Press the button twice to display “CPLAY MID”.
4. Press the button when “C1 = AD = ” is displayed.
5. Turn the JOG dial to display “FBIAS CHECK”.
6. Press the button to display “/ c = ”. The first four digits indicate the C1 error rate, the two digits after [/] indicate ADER, and the 2 digits after [c =] indicate the focus bias value.
 Check that the C1 error is below 50 and ADER is below 2.
7. Press the button to display “/ b = ”. Check that the C1 error is about 200 and ADER is below 2.
8. Press the button to display “/ a = ”. Check that the C1 error is about 200 and ADER is below 2.
9. Press the button, then press the (MD) button and take out the test disc.

6-3. C PLAY Check

MO Error Rate Check

Checking Procedure:

1. Load the test disc (MDW-74/AU-1).
2. Press the (MD) or (MD) button to display “CPLAY MODE”.
3. Press the button to display “CPLAY MID”.
4. The display changes to “C1 = AD = ”.
5. If the C1 error rate is below 80, check that ADER is below 2.
6. Press the button to stop playback, then press the (MD) button and take out the test disc.

CD Error Rate Check

Checking Procedure:

1. Load the check disc (MD) TDYS-1.
2. Press the (MD) or (MD) button to display “CPLAY MODE”.
3. Press the button twice to display “CPLAY MID”.
4. The display changes to “C1 = AD = ”.
5. Check that the C1 error rate is below 50.
6. Press the button to stop playback, then press the (MD) button and take out the check disc.

6-4. Self-Recording/playback Check

Prepare a continuous recording disc using the unit to be repaired and check the error rate.

Checking Procedure:

1. Load a recordable disc (blank disc).
2. Press the (MD) or (MD) button to display “CREC MODE”.
3. Press the button to display “CREC MID”.
4. When recording starts, lights up “” and display “CREC @@@@” (@@@@ is the address).
5. About 1 minute later, press the button to stop continuous recording.
6. Turn the JOG dial to display “CPLAY MODE”.
7. Press the button to display “CPLAY MID”.
8. “C1 = AD = ” will be displayed.
9. Check that the C1 error becomes below 80 and the ADER below 2.
10. Press the button to stop play back, then press the (MD) button and take out the disc.

Note: After the TEST MODE is entered, insert the disc.

7. TEMPERATURE COMPENSATION OFFSET ADJUSTMENT

Save the temperature data at that time in the non-volatile memory as 25 °C reference data.

Note:

1. Usually, do not perform this adjustment.
2. Perform this adjustment in an ambient temperature of 22 °C to 28 °C. Perform it immediately after the power is turned on when the internal temperature of the unit is the same as the ambient temperature of 22 °C to 28 °C.
3. When D101 has been replaced, perform this adjustment after the temperature of this part has become the ambient temperature.

Adjusting Procedure:

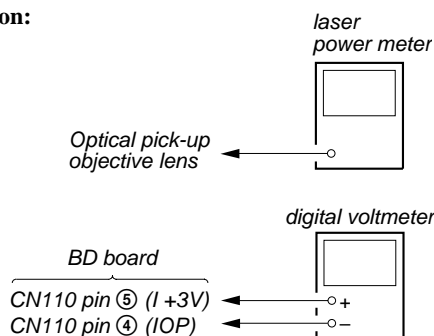
1. Press the (MD) or (MD) button to display “TEMP ADJUST”.
2. Press the button to select the “TEMP ADJUST” mode.
3. “TEMP = ” and the current temperature data will be displayed.
4. To save the data, press the button. When not saving the data, press the button.
5. When the button is pressed, “TEMP = SAVE” will be displayed and turned back to “TEMP ADJUST” display then. When the button is pressed, “TEMP ADJUST” will be displayed immediately.

Specified Value:

The “TEMP = ” should be within “E0 - EF”, “F0 - FF”, “00 - 0F”, “10 - 1F” and “20 - 2F”.

8. LASER POWER ADJUSTMENT

Connection:



Adjusting Procedure:

1. Set the laser power meter on the objective lens of the optical pick-up. (When it cannot be set properly, press the button or button to move the optical pick-up)
Connect the digital voltmeter to CN110 pin ⑤ (I+3 V) and CN110 pin ④ (IOP) on the BD board.
2. Press the (MD) or (MD) button to display “LDPWR ADJUST”.
(Laser power: For adjustment)
3. Press the button once to display “LD 0.9 mW \$ ”.
4. Press the (MD) or (MD) button so that the reading of the laser power meter becomes 0.85 to 0.91 mW. Press the button after setting the range knob of the laser power meter, and save the adjustment results. (“LD SAVE \$ ” will be displayed for a moment)
5. Then “LD 7.0 mW \$ ” will be displayed.
6. Press the (MD) or (MD) button and adjust so that the reading on the laser power meter is 6.9 to 7.1 mV. Press the button to save the setting.

Note: Do not perform the emission with 7.0 mW more than 15 seconds continuously.

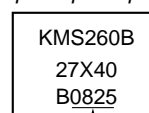
7. Then, press the (MD) or (MD) to display “LDPWR CHECK”.
8. Press the button once to display “LD 0.9mW \$ ”. Check that the reading of the laser power meter become 0.85 to 0.91 mW.
9. Press the button once more to display “LD 7.0 mW \$ ”. Check that the reading the laser power meter and digital voltmeter satisfy the specified value.
Note down the digital voltmeter reading value.

Specified Value:

Laser power meter reading : 7.0 ± 0.2 mW

Digital voltmeter reading : Value on the optical pick-up label
 $\pm 10\%$

(Optical pick-up label)



IOP=82.5 mA in this case

$IOP (mA) = \text{Digital voltmeter reading (mV)} / 1 (\Omega)$

10. Press the button to display “LDPWR CHECK” and stop the laser emission.

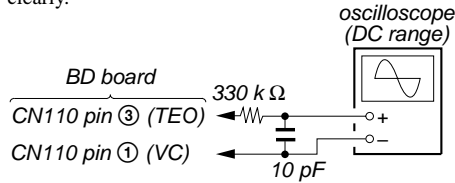
(The button is effective at all times to stop the laser emission)

Note 1: After step 9, each time the button is pressed, the display will be switched “LD 0.7 mW \$ ”, “LD 6.2 mW \$ ”, and “LD WP ホセイ \$ ”. Nothing needs to be performed here.
(ホセイ = correction)

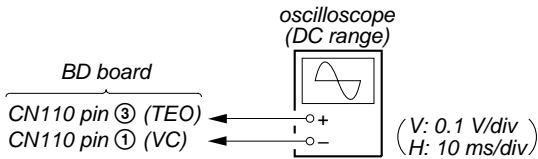
9. EF BALANCE ADJUSTMENT

Note 1: Data will be erased during MO reading if a recorded disc is used in this adjustment.

Note 2: If the traverse waveform is not clear, connect the oscilloscope as shown in the following figure so that it can be seen more clearly.



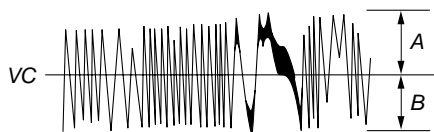
Connection:



Adjusting Procedure:

1. Connect an oscilloscope to CN110 pin ③ (TEO) and CN110 pin ① (VC) on the BD board.
2. Load a disc (any available on the market). (Refer to Note 1)
3. Press the button to move the optical pick-up outside the pit.
4. Press the (MD) or (MD) button to display "EFBAL ADJUST".
5. Press the button to display "EFB = MO-R". (Laser power READ power/Focus servo ON/tracking servo OFF/spindle (S) servo ON)
6. Press the (MD) or (MD) button so that the waveform of the oscilloscope becomes the specified value. (When the (MD) or (MD) button is pressed, the of "EFB = MO-R" changes and the waveform changes.) In this adjustment, waveform varies at intervals of approx. 2%. Adjust the waveform so that the specified value is satisfied as much as possible. (Read power traverse adjustment)

Traverse Waveform

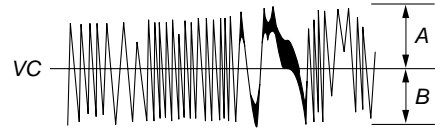


Specification A = B

7. Press the button and save the result of adjustment to the non-volatile memory. ("EFB = SAVE" will be displayed for a moment. Then "EFB = MO-W" will be displayed)

8. Press the (MD) or (MD) button so that the waveform of the oscilloscope becomes the specified value. (When the JOG dial is turned, the of "EFB = MO-R" changes and the waveform changes.) In this adjustment, waveform varies at intervals of approx. 2%. Adjust the waveform so that the specified value is satisfied as much as possible. (Write power traverse adjustment)

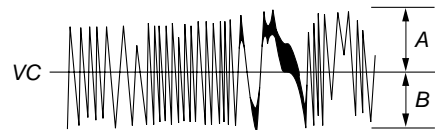
Traverse Waveform



Specification A = B

9. Press the button, and save the adjustment results in the non-volatile memory. ("EFB = MO-P" will be displayed for a moment)
10. "EFB = MO-P" will be displayed. The optical pick-up moves to the pit area automatically and servo is imposed.
11. Press the (MD) or (MD) button until the waveform of the oscilloscope moves closer to the specified value. In this adjustment, waveform varies at intervals of approx. 2%. Adjust the waveform so that the specified value is satisfied as much as possible.

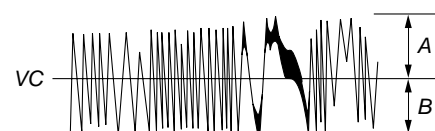
Traverse Waveform



Specification A = B

12. Press the button, and save the adjustment results in the non-volatile memory. ("EFB = SABE" will be displayed for a moment) Next "EFBAL ADJUST" is displayed. The disc stops rotating automatically.
13. Press the (MD) button and take out the disc.
14. Load the check disc (MD) TDYS-1.
15. Press the button to display "EFB = CD". Servo is imposed automatically.
16. Turn the JOG dial so that the waveform of the oscilloscope moves closer to the specified value. In this adjustment, waveform varies at intervals of approx. 2%. Adjust the waveform so that the specified value is satisfied as much as possible.

Traverse Waveform



Specification A = B

17. Press the **[RADIO/BAND]** button, display “EFB = **0000** SAVE” for a moment and save the adjustment results in the non-volatile memory. Next “EFBAL ADJUST” will be displayed.
18. Press the **[▲]** (MD) button and take out the disc.

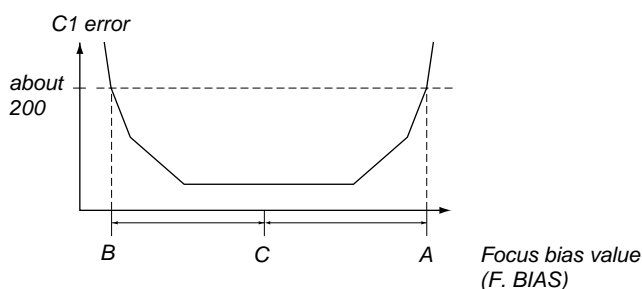
10. FOCUS BIAS ADJUSTMENT

Adjusting Procedure:

1. Load the continuously-recorded disc. (Refer to “5. CREATING CONTINUOUSLY-RECORDED DISC”)
2. Press the **[▶||]** (MD) or **[■]** (MD) button to display “CPLAY MODE”.
3. Press the **[RADIO/BAND]** button to display “CPLAY MID”.
4. Press the **[REC/REC MODE]** button when “C1 **0000** = AD = **00**” is displayed.
5. Press the **[▶||]** (MD) or **[■]** (MD) button to display “FBIAS ADJUST”.
6. Press the **[RADIO/BAND]** button to display “**0000/00** a = **00**”. The first four digits indicate the C1 error rate, the two digits after [/] indicate ADER, and the 2 digits after [a =] indicate the focus bias value.
7. Turn the JOG dial clockwise and find the focus bias value at which the C1 error rate becomes about 200 (Refer to Note 2).
8. Press the **[RADIO/BAND]** button to display “**0000/00** b = **00**”.
9. Press the **[▶||]** (MD) or **[■]** (MD) button counterclockwise and find the focus bias value at which the C1 error rate becomes about 200.
10. Press the **[RADIO/BAND]** button to display “**0000/00** c = **00**”.
11. Check that the C1 error rate is below 50 and ADER is 00. Then press the **[RADIO/BAND]** button.
12. If the “(00)” in “**00** - **00** - **00** (00)” is above 20, press the **[RADIO/BAND]** button. If below 20, press the **[REC/REC MODE]** button and repeat the adjustment from step 2.
13. Press the **[▲]** (MD) button and take out the disc.

Note 1: The relation between the C1 error and focus bias is as shown in the following figure. Find points A and B in the following figure using the above adjustment. The focal point position C is automatically calculated from points A and B.

Note 2: As the C1 error rate changes, perform the adjustment using the average value.



11. ERROR RATE CHECK

11-1. CD Error Rate Check

Checking Procedure:

1. Load the check disc (MD) TDYS-1.
2. Press the **[▶||]** (MD) or **[■]** (MD) button and display “CPLAY MODE”.
3. Press the **[RADIO/BAND]** button twice and display “CPLAY MID”.
4. The display changes to “C1 **0000** = AD = **00**”.
5. Check that the C1 error rate is below 20.
6. Press the **[REC/REC MODE]** button to stop playback, then press the **[▲]** (MD) button and take out the check disc.

11-2. MO Error Rate Check

Checking Procedure:

1. Load the continuously-recorded disc. (Refer to “5. CREATING CONTINUOUSLY-RECORDED DISC”)
2. Press the **[▶||]** (MD) or **[■]** (MD) button to display “CPLAY MODE”.
3. Press the **[RADIO/BAND]** button to display “CPLAY MID”.
4. The display changes to “C1 **0000** = AD = **00**”.
5. If the C1 error rate is below 50, check that ADER is 00.
6. Press the **[REC/REC MODE]** button to stop playback, then press the **[▲]** (MD) button and take out the test disc.

12. FOCUS BIAS CHECK

Change the focus bias and check the focus tolerance amount.

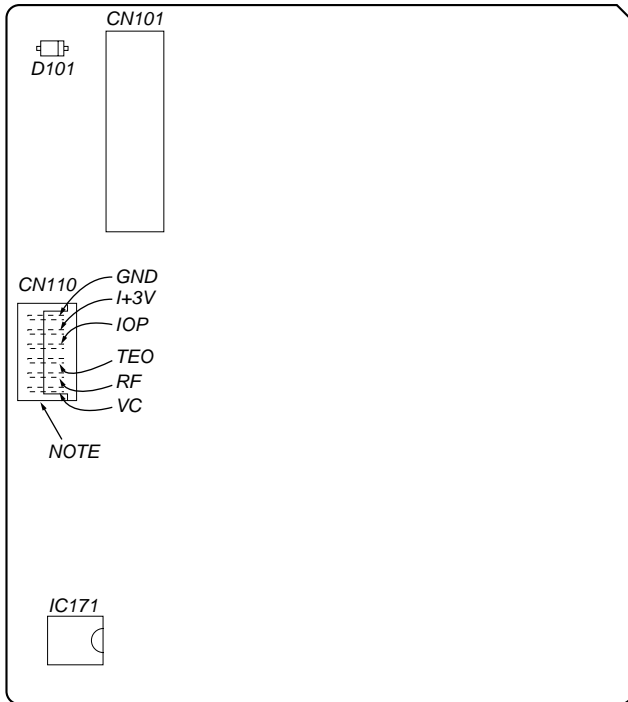
Checking Procedure:

1. Load the continuously-recorded disc. (Refer to “5. CREATING CONTINUOUSLY-RECORDED DISC”)
2. Press the **[▶||]** (MD) or **[■]** (MD) button to display “CPLAY MODE”.
3. Press the **[RADIO/BAND]** button twice to display “CPLAY MID”.
4. Press the **[REC/REC MODE]** button when “C1 **0000** = AD = **00**” is displayed.
5. Press the **[▶||]** (MD) or **[■]** (MD) button to display “FBIAS CHECK”.
6. Press the **[RADIO/BAND]** button to display “**0000/00** c = **00**”. The first four digits indicate the C1 error rate, the two digits after [/] indicate ADER, and the 2 digits after [c =] indicate the focus bias value. Check that the C1 error is below 50 and ADER is below 2.
7. Press the **[RADIO/BAND]** button and display “**0000/00** b = **00**”. Check that the C1 error is about 200 and ADER is below 2.
8. Press the **[RADIO/BAND]** button and display “**0000/00** a = **00**”. Check that the C1 error is about 200 and ADER is below 2.
9. Press the **[REC/REC MODE]** button, then press the **[▲]** (MD) button and take out the disc.

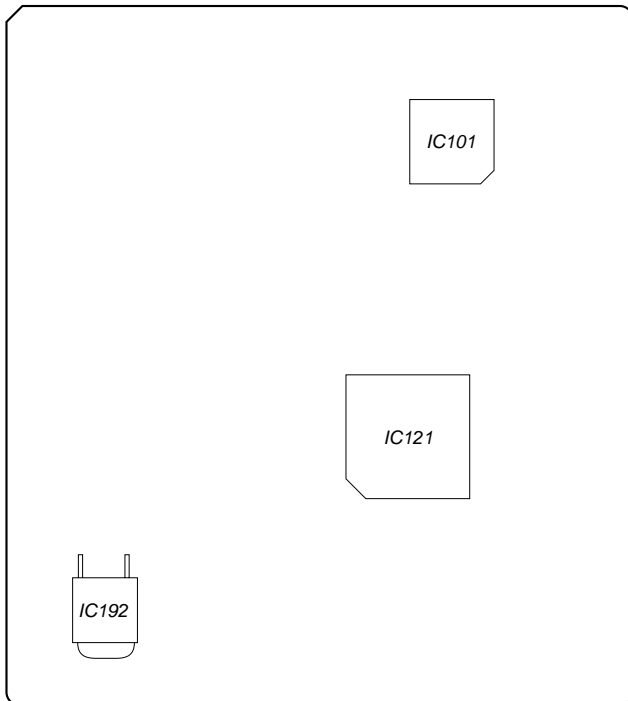
Note 1: If the C1 error and ADER are above other than the specified value at points A (step 8. in the above) or B (step 7. in the above), the focus bias adjustment may not have been carried out properly. Adjust perform the beginning again.

Adjustment Location:

– BD BOARD (COMPONENT SIDE) –



– BD BOARD (CONDUCTOR SIDE) –



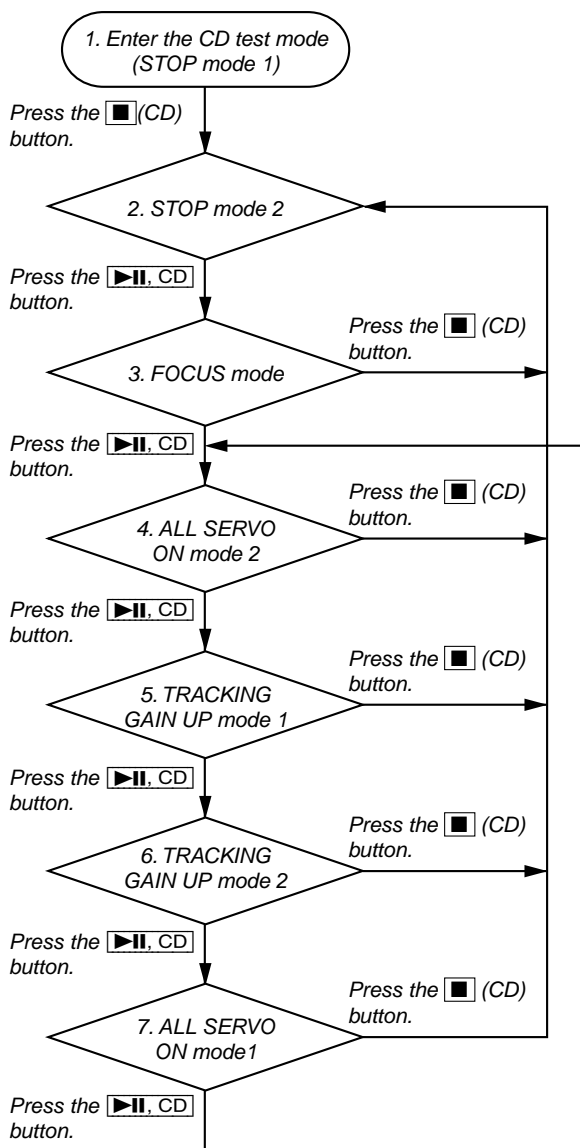
Note: It is useful to use the jig for checking the waveform. (Refer to Servicing Notes on page 5)

5-3. CD SECTION

Set the CD test mode when performing confirmations.
After completing the confirmation, release the CD test mode.

In the CD test mode, the set works as following sequence.

CD test mode sequence:



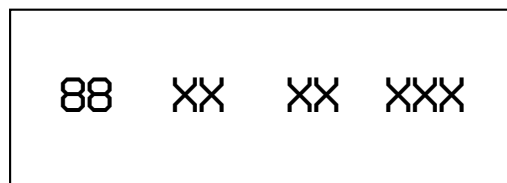
Note 1: ALL SERVO ON mode 1 and TRACKING GAIN UP mode 1:
LPC ON (lights up "ALL" indication)
ALL SERVO ON mode 2 and TRACKING GAIN UP mode 2:
LPC OFF (Does not lights up "ALL" indication)
*) LPC: Laser power control

Note 2: TRACKING GAIN UP mode 1, 2 is not used in servicing.

1. Entering the CD Test Mode

1. Press the [POWER] button to turn the power ON.
2. Open the disc lid, and put a disc.
3. Close the disc lid.
4. Press the [POWER] button to standby state.
5. Press the button [EDIT], [SOUND] and [▶▶] (CD) simultaneously.
6. After display "CD" for a few seconds, enter the CD test mode (STOP mode 1), and display as below.

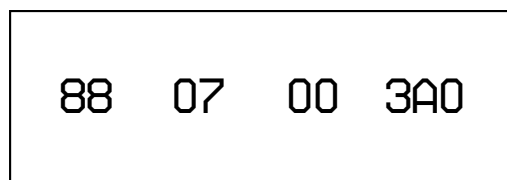
Display



2. STOP Mode 2

1. Press the [■] (CD) button to enter the STOP mode 2, and display as below.

Display

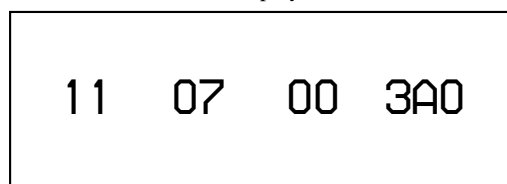


2. Press the [▶▶] and [◀◀] button to move the optical pick-up to position of the track where signal is recorded.

3. FOCUS Mode (Traverse Confirmation)

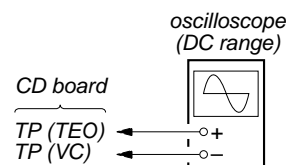
1. Press the [▶▶] button to enter the FOCUS mode and display as below. (Focus servo ON. CLV-S, tacking and sled servo OFF)

Display



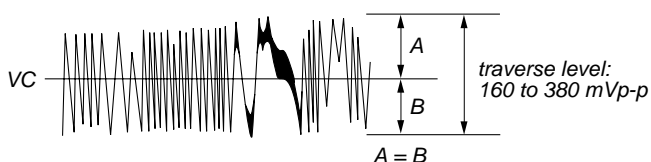
2. Connect an oscilloscope to TP (TEO) and TP (VC) on the CD board.

Connection:



3. Confirm that the traverse level of waveform satisfy specified value as follows.

Traverse Waveform




Specified Value:

traverse level: 160 to 380 mVp-p

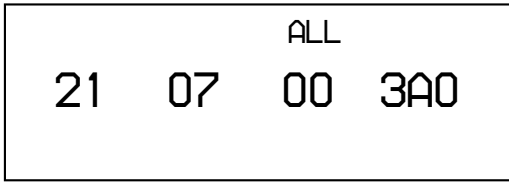
Connecting Location: CD board (See page 32)

4. ALL SERVO ON Mode 1

(RF Level and Jitter Confirmation 1)

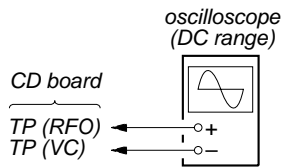
1. Press the  button four times to enter the ALL SERVO ON mode 1 (start playback the disc) and display as below. (All servo ON. LPC ON)

Display



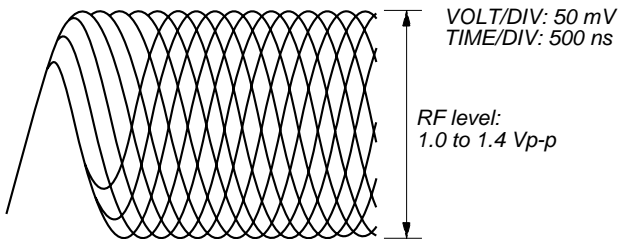
2. Connect an oscilloscope to TP (RFO) and TP (VC) on the CD board.

Connection:



3. Confirm that the RF level and jitter of waveform satisfy specified values as follows.

RF signal Waveform




Specified Values:

RF level : 1.0 to 1.4 Vp-p
jitter : less than 9 nsec

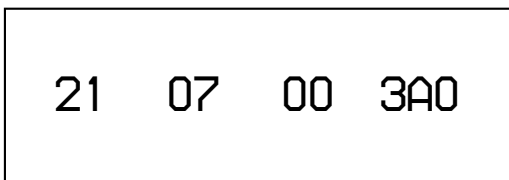
Connecting Location: CD board

5. ALL SERVO ON Mode 2

(RF Level and Jitter Confirmation 2)

1. Press the  button to enter the LPC OFF mode and display as below. (All servo ON. LPC OFF)

Display





2. Confirm that the RF level and jitter of waveform satisfy specified values as follows.

Specified Values:

RF level : 0.8 to 1.4 Vp-p
jitter : less than 9 nsec

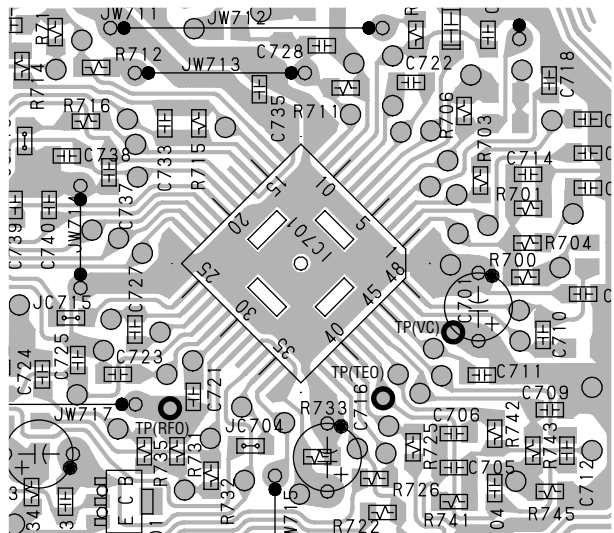
If the RF level and jitter are out of specified values, measure again after clean the object lens by an applicator with lens cleaning liquid.

6. Releasing the CD Test Mode

1. Press the  (CD) button to stop rotate the disc.
2. Press the  button to release the CD test mode and turn to standby state.

Connecting Location:

CD BOARD (CONDUCTOR SIDE)



SECTION 6 DIAGRAMS

6-1. IC PIN FUNCTION DESCRIPTIONS

• BD BOARD IC101 CXA2523AR (RF AMP, FOCUS/TRACKING ERROR AMP)

Pin No.	Pin Name	I/O	Pin Description
1	I	I	I-V converted RF signal I input from the optical pick-up block detector
2	J	I	I-V converted RF signal J input from the optical pick-up block detector
3	VC	O	Middle point voltage (+ 1.65 V) generation output terminal
4 – 9	A – F	I	Signal input from the optical pick-up detector
10	PD	I	Light amount monitor input from the optical pick-up block laser diode
11	APC	O	Laser amplifier output terminal to the automatic power control circuit
12	APCREF	I	Reference voltage input terminal for setting laser power
13	GND	—	Ground terminal
14	TEMPI	I	Connected to the temperature sensor
15	TEMPR	O	Output terminal for a temperature sensor reference voltage
16	SWDT	I	Writing serial data input from the CXD2654R (IC121)
17	SCLK	I	Serial data transfer clock signal input from the CXD2654R (IC121)
18	XLAT	I	Serial data latch pulse signal input from the CXD2654R (IC121)
19	XSTBY	I	Standby signal input terminal “L”: standby (fixed at “H” in this set)
20	F0CNT	I	Center frequency control voltage input terminal of internal circuit (BPF22, BPF3T, EQ) input from the CXD2654R (IC121)
21	VREF	O	Reference voltage output terminal Not used (open)
22	EQADJ	I	Center frequency setting terminal for the internal circuit (EQ)
23	3TADJ	I	Center frequency setting terminal for the internal circuit (BPF3T)
24	VCC	—	Power supply terminal (+3.3V)
25	WBLADJ	I	Center frequency setting terminal for the internal circuit (BPF22)
26	TE	O	Tracking error signal output to the CXD2654R (IC121)
27	CSLED	I	Connected to the external capacitor for low-pass filter of the sled error signal
28	SE	O	Sled error signal output to the CXD2654R (IC121)
29	ADFM	O	FM signal output of the ADIP
30	ADIN	I	Receives a ADIP FM signal in AC coupling
31	ADAGC	I	Connected to the external capacitor for ADIP AGC
32	ADFG	O	ADIP duplex signal (22.05 kHz \pm 1 kHz) output to the CXD2654R (IC121)
33	AUX	O	Auxiliary signal (I3 signal/temperature signal) output to the CXD2654R (IC121)
34	FE	O	Focus error signal output to the CXD2654R (IC121)
35	ABCD	O	Light amount signal (ABCD) output to the CXD2654R (IC121)
36	BOTM	O	Light amount signal (RF/ABCD) bottom hold output to the CXD264R (IC121)
37	PEAK	O	Light amount signal (RF/ABCD) peak hold output to the CXD2654R (IC121)
38	RF	O	Playback EFM RF signal output to the CXD2654R (IC121)
39	RFAGC	I	Connected to the external capacitor for RF auto gain control circuit
40	AGCI	I	Receives a RF signal in AC coupling
41	COMPO	O	User comparator output terminal Not used (open)
42	COMPP	I	User comparator input terminal Not used (fixed at “L”)
43	ADDC	I	Connected to the external capacitor for cutting the low band of the ADIP amplifier
44	OPO	O	User operational amplifier output terminal Not used (open)
45	OPN	I	User operational amplifier inversion input terminal Not used (fixed at “L”)
46	RFO	O	RF signal output terminal
47	MORFI	I	Receives a MO RF signal in AC coupling
48	MORFO	O	MO RF signal output terminal

• **BD BOARD IC121 CXD2654R**

(DIGITAL SIGNAL PROCESSOR, DIGITAL SERVO SIGNAL PROCESSOR, EFM/ACIRC ENCODER/DECODER, SHOCK PROOF MEMORY CONTROLLER, ATRAC ENCODER/DECODER)

Pin No.	Pin Name	I/O	Pin Description
1	MNT0 (FOK)	O	Focus OK signal output to the MD mechanism controller (IC601) “H” is output when focus is on (“L”: NG)
2	MNT1 (SHOCK)	O	Track jump detection signal output to the MD mechanism controller (IC601)
3	MNT2 (XBUSY)	O	Busy monitor signal output to the MD mechanism controller (IC601)
4	MNT3 (SLOCK)	O	Spindle servo lock status monitor signal output to the MD mechanism controller (IC601)
5	SWDT	I	Writing serial data signal input from the MD mechanism controller (IC601)
6	SCLK	I (S)	Serial data transfer clock signal input from the MD mechanism controller (IC601)
7	XLAT	I (S)	Serial data latch pulse signal input from the MD mechanism controller (IC601)
8	SRDT	O (3)	Reading serial data signal output to the MD mechanism controller (IC601)
9	SENS	O (3)	Internal status (SENSE) output to the MD mechanism controller (IC601)
10	$\overline{\text{XRST}}$	I (S)	Reset signal input from the MD mechanism controller (IC601) “L”: reset
11	SQSY	O	Subcode Q sync (SCOR) output to the MD mechanism controller (IC601) “L” is output every 13.3 msec Almost all, “H” is output
12	DQSY	O	Digital In U-bit CD format subcode Q sync (SCOR) output to the MD mechanism controller (IC601) “L” is output every 13.3 msec Almost all, “H” is output
13	RECP	I	Laser power selection signal input from the MD mechanism controller (IC601) “L”: playback mode, “H”: recording mode
14	XINT	O	Interrupt status output to the MD mechanism controller (IC601)
15	TX	I	Recording data output enable signal input from the MD mechanism controller (IC601) Writing data transmission timing input (Also serves as the magnetic head on/off output)
16	OSCI	I	System clock signal (512 Fs = 22.5792 MHz) input terminal
17	OSCO	O	System clock signal (512 Fs = 22.5792 MHz) output terminal Not used (open)
18	XTSL	I	Input terminal for the system clock frequency setting “L”: 45.1584 MHz, “H”: 22.5792 MHz (fixed at “H” in this set)
19	DIN0	I	Digital audio signal input terminal when recording mode (for digital optical input) Not used
20	DIN1	I	Digital audio signal input terminal when recording mode (for digital optical input)
21	DOUT	O	Digital audio signal output terminal when playback mode (for digital optical output) Not used
22	DATAI	I	Serial data input terminal Not used (fixed at “L”)
23	LRCKI	I	L/R sampling clock signal (44.1 kHz) input terminal Not used (fixed at “L”)
24	XBCKI	I	Bit clock signal (2.8224 MHz) input terminal Not used (fixed at “L”)
25	ADDT	I	Recording data input from the A/D, D/A converter (IC603)
26	DADT	O	Playback data output to the A/D, D/A converter (IC603)
27	LRCK	O	L/R sampling clock signal (44.1 kHz) output to the A/D, D/A converter (IC603)
28	XBCK	O	Bit clock signal (2.8224 MHz) output to the A/D, D/A converter (IC603)
29	FS256	O	Clock signal (11.2896 MHz) output terminal Not used (open)
30	DVDD	—	Power supply terminal (+3.3 V) (digital system)
31 – 34	A03 – A00	O	Address signal output to the D-RAM (IC124)
35	A10	O	Address signal output to the external D-RAM Not used (open)
36 – 40	A04 – A08	O	Address signal output to the D-RAM (IC124)
41	A11	O	Address signal output to the external D-RAM Not used (open)
42	DVSS	—	Ground terminal (digital system)
43	$\overline{\text{XOE}}$	O	Output enable signal output to the D-RAM (IC124) “L” active
44	$\overline{\text{XCAS}}$	O	Column address strobe signal output to the D-RAM (IC124) “L” active
45	A09	O	Address signal output to the D-RAM (IC124)

Pin No.	Pin Name	I/O	Pin Description
46	$\overline{\text{X}}\text{RAS}$	O	Row address strobe signal output to the D-RAM (IC124) "L" active
47	$\overline{\text{X}}\text{WE}$	O	Write enable signal output to the D-RAM (IC124) "L" active
48	D1	I/O	Two-way data bus with the D-RAM (IC124)
49	D0	I/O	
50	D2	I/O	
51	D3	I/O	
52	MVCI	I (S)	Digital in PLL oscillation input from the external VCO Not used (fixed at "L")
53	ASYO	O	Playback EFM full-swing output terminal
54	ASYI	I (A)	Playback EFM asymmetry comparator voltage input terminal
55	AVDD	—	Power supply terminal (+3.3 V) (analog system)
56	BIAS	I (A)	Playback EFM asymmetry circuit constant current input terminal
57	RFI	I (A)	Playback EFM RF signal input from the CXA2523AR (IC101)
58	AVSS	—	Ground terminal (analog system)
59	PCO	O (3)	Phase comparison output for master clock of the recording/playback EFM master PLL
60	FILI	I (A)	Filter input for master clock of the recording/playback master PLL
61	FILO	O (A)	Filter output for master clock of the recording/playback master PLL
62	CLTV	I (A)	Internal VCO control voltage input of the recording/playback master PLL
63	PEAK	I (A)	Light amount signal (RF/ABCD) peak hold input from the CXA2523AR (IC101)
64	BOTM	I (A)	Light amount signal (RF/ABCD) bottom hold input from the CXA2523AR (IC101)
65	ABCD	I (A)	Light amount signal (ABCD) input form the CXA2523AR (IC101)
66	FE	I (A)	Focus error signal input from the CXA2523AR (IC101)
67	AUX1	I (A)	Auxiliary signal (I3 signal/temperature signal) input from the CXA2523AR (IC101)
68	VC	I (A)	Middle point voltage (+1.65 V) input from the CXA2523AR (IC101)
69	ADIO	O (A)	Monitor output of the A/D converter input signal Not used (open)
70	AVDD	—	Power supply terminal (+3.3 V) (analog system)
71	ADRT	I (A)	A/D converter operational range upper limit voltage input terminal (fixed at "H" in this set)
72	ADRB	I (A)	A/D converter operational range lower limit voltage input terminal (fixed at "L" in this set)
73	AVSS	—	Ground terminal (analog system)
74	SE	I (A)	Sled error signal input from the CXA2523AR (IC101)
75	TE	I (A)	Tracking error signal input from the CXA2523AR (IC101)
76	DCHG	I (A)	Connected to the +3.3 V power supply
77	APC	I (A)	Error signal input for the laser automatic power control Not used (fixed at "H")
78	ADFG	I (S)	ADIP duplex FM signal (22.05 kHz \pm 1 kHz) input from the CXA2523AR (IC101)
79	F0CNT	O	Filter f0 control signal output to the CXA2523AR (IC101)
80	XLRF	O	Serial data latch pulse signal output to the CXA2523AR (IC101)
81	CKRF	O	Serial data transfer clock signal output to the CXA2523AR (IC101)
82	DTRF	O	Writing serial data output to the CXA2523AR (IC101)
83	APCREF	O	Control signal output to the reference voltage generator circuit for the laser automatic power control
84	LDDR	O	PWM signal output for the laser automatic power control Not used (open)
85	TRDR	O	Tracking servo drive PWM signal (-) output to the BH6511FS (IC152)
86	TFDR	O	Tracking servo drive PWM signal (+) output to the BH6511FS (IC152)
87	DVDD	—	Power supply terminal (+3.3 V) (digital system)
88	FFDR	O	Focus servo drive PWM signal (+) output to the BH6511FS (IC152)
89	FRDR	O	Focus servo drive PWM signal (-) output to the BH6511FS (IC152)
90	FS4	O	Clock signal (176.4 kHz) output terminal (X'tal system) Not used (open)

Pin No.	Pin Name	I/O	Pin Description
91	SRDR	O	Sled servo drive PWM signal (-) output to the BH6511FS (IC152)
92	SFDR	O	Sled servo drive PWM signal (+) output to the BH6511FS (IC152)
93	SPRD	O	Spindle servo drive PWM signal (-) output to the BH6511FS (IC152)
94	SPFD	O	Spindle servo drive PWM signal (+) output to the BH6511FS (IC152)
95	FGIN	I (S)	Input terminal for the test (fixed at "L")
96	TEST1	I	
97	TEST2	I	
98	TEST3	I	
99	DVSS	—	Ground terminal (digital system)
100	EFMO	O	EFM signal output terminal when recording mode

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

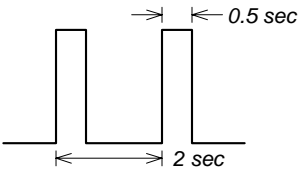
• MAIN BOARD IC401 CXP740096-044Q (SYSTEM CONTROL)

Pin No.	Pin Name	I/O	Pin Description
1	NC	—	Not used
2	MEGA BASS	O	MEGA BASS on/off control signal output “L”: MEGA BASS on
3	LINE-LEVEL	O	Line in level control signal output “L”: normal, “H”: high
4	AU-CS	O	Chip select signal output to the electrical volume (IC301)
5	AU-DATA	O	Serial data output to the electrical volume (IC301)
6	AU-CLK	O	Serial data transfer clock signal output to the electrical volume (IC301)
7	RDS-DATA	I	RDS serial data input from the RDS decoder (Not used)
8	NC	—	Not used
9	RDS-CLK	I	RDS serial data transfer clock signal input from the RDS decoder (Not used)
10	TU-MUTE	O	Muting on/off control signal output for the tuner signal “H”: muting on
11	TU-CE	O	PLL serial chip enable signal output to the tuner PLL IC (IC2)
12	TU-DATA	O	PLL serial data output to the tuner PLL IC (IC2)
13	TU-CLK	O	PLL serial data transfer clock signal output to the tuner PLL IC (IC2)
14	TU-COUNT	I	PLL serial data input from the tuner PLL IC (IC2)
15	CD-DOOR	I	Detection signal input from the CD lid open/close detect switch (S402)
16	NC	—	Not used
17 – 21	KEY S4 – S0	I	Key input terminal
22	LED-CHARA-KAN	O	LED (LED board D609) on/off drive signal output
23	LED-123	O	LED (LED board D610-613) on/off drive signal output
24	LED-456	O	LED (LED board D607,615-617) on/off drive signal output
25	LED-789	O	LED (LED board D618-621) on/off drive signal output
26	LED-0	O	LED (LED board D622-625) on/off drive signal output
27	LED-CHARA-ABC	O	LED (LED board D608) on/off drive signal output
28	NC	—	Not used
29	LED-CLOCK	O	LED (LED board D602-614) on/off drive signal output
30	LED-HISPEED	O	LED (LED board D601) on/off drive signal output
31	RA-POWER	O	RA7V power supply on/off control signal output
32	NC	—	Not used
33	FL-CTR	O	FL-BU3.3V power supply on/off control signal output
34	PA-STANDBY	O	Power amplifier on/off control signal output “H”: power off “H”: standby, “L”: power on
35	LINE-MUTE	O	LINE input muting on/off control signal output
36	KEY-C2	O	Not used
37	KEY-C1	O	Not used
38	FL-DIM	O	Control signal output for the brightness of fluorescent tube display
39	TU-SFT	O	Frequency shift of the main system clock control terminal
40	RST	I	System reset signal input from the reset signal generator (IC403) “L”: reset
41	VSS	—	Ground terminal
42	XTAL	I	Main system clock input terminal (8 MHz)
43	EXTAL	O	Main system clock input terminal (8 MHz)
44	FL-RST	O	Reset signal output to the fluorescent tube display drive IC (IC601)
45	FL-CS	O	Chip enable signal output to the fluorescent tube display drive IC (IC601)
46	FL-DATA	O	Serial data output to the fluorescent tube display drive IC (IC601)
47	FL-CLK	O	Serial data transfer clock signal output to the fluorescent tube display drive IC (IC601)
48	SELECT-GND	I/O	Destination setting terminal Fixed at “H” in this set
49	SELECT	I	Destination setting terminal
50	NC	—	Not used

Pin No.	Pin Name	I/O	Pin Description
51	KEY-C4A	I	Key input terminal
52	AVSS	—	Ground terminal (for A/D converter)
53	AVREF	—	Reference voltage (+3.3V) input terminal (for A/D converter)
54	AVDD	—	Power supply terminal (+3.3V) (for A/D converter)
55 – 58	KEY C3A – C0A	I	Key input terminal
59	3.3V-SHORT	I	AU 7.5V short test pin
60 – 62	KEY AD2 – AD0	I	Key input terminal (A/D input) (TOP board)
63	MD-PDOWN	O	Power down signal output to the MD mechanism controller (IC601) “L”: remove the AC power cord
64	MD-SRTS	O	System controller busy status monitor output to the MD mechanism controller (IC601)
65	MD-SCTS	I	MD mechanism controller busy status monitor input from the MD mechanism controller (IC601)
66	MD-RST	O	Power supply on/off control signal output for the MD mechanism controller (IC601) “H”: power on
67	MD-H	O	MD play control signal output to the A/D, D/A converter (IC603) “L”: MD playback mode
68	REC-H	O	MD REC control signal output to the A/D, D/A converter (IC603) “L”: MD recording mode
69	MD-SRXD	O	UART communication data input from the MD mechanism controller (IC601)
70	MD-STXD	I	UART communication data output to the MD mechanism controller (IC601)
71, 72	NC	—	Not used
73	CD-12/8	O	Servo setting when CD operates faster.
74	CD-HISPEED	O	CD higher speed setting
75	CD-POWER	O	CD servo system power supply on/off control signal output “H”: power on
76	CD-MUTE	O	Muting on/off control signal output for the CD playback signal “H”: muting on
77	NC	—	Not used
78	CD-CSOR	I	Subcode sync (S0+S1) detection signal input from the CD DSP IC (IC702)
79	CD-SQSO	I	Subcode Q data input from the CD DSP IC (IC702)
80	CD-XRST	O	Reset signal output to the CD RF AMP (IC701), CD DSP IC (IC702)
81	CD-SQCK	O	Subcode Q data reading clock signal output to the CD DSP IC (IC702)
82	CD-SENSE1	I	Internal status (SENSE) input from the CD DSP IC (IC702)
83	CD-DATA	O	Serial data output to the CD DSP IC (IC702)
84	CD-XLAT	O	Serial data latch pulse signal output to the CD DSP IC (IC702)
85	RMC	I	Sircs remote control signal input from the remote control receiver (IC602)
86	TEX	O	Sub system clock output terminal (32.768 kHz)
87	TX	I	Sub system clock input terminal (32.768 kHz)
88	VSS	—	Ground terminal
89	VDD	—	Power supply terminal (+3.3V)
90	NC	—	Not used
91	CD-CLK	O	Serial data transfer clock signal output to the CD DSP IC (IC702)
92	CD-SENSE2	I	Internal status (SENSE) input from the CD DSP IC (IC702)
93	CD-FOK	I	Focus OK signal input terminal (Not used (open))
94	STBY-CTR	O	Power saving mode selection “H”: normal, “L”: Power saving mode
95	ACCHK	I	AC power supply detection signal input “L”: AC in
96	NC	—	Not used
97	PCON	O	Power on/off control signal output “L”: standby mode, “H”: power on
98	AMUTE	O	Audio muting on/off control signal output “L”: muting on
99	TU-LED	I	Input the signal for band tuning check from the tuner IC.
100	NC	—	Not used

• DG BOARD IC601 RU8X13MF-0102 (MD MECHANISM CONTROLLER)

Pin No.	Pin Name	I/O	Pin Description
1, 2	DAOUT0, DAOUT1	O	Not used (open)
3 – 5	KEY0 – KEY2	I	Key input terminal (A/D input) Not used (fixed at “H”)
6	CHACK-IN	I	Detection input from the disc chucking-in detect switch “L”: chucking Not used (fixed at “H”)
7	PACK-IN	I	Detection input from the loading-in detect switch “L” at a load-out position, others: “H” Not used (fixed at “H”)
8	PACK-OUT	I	Detection input from the loading-out detect switch (S602) “L” at a load-out position, others: “H”
9, 10	NC	—	Not used (fixed at “L”)
11	AVSS	—	Ground terminal
12	XINT	I	Interrupt status input from the CXD2654R (IC121)
13	PDOWN	I	Power down detection signal input terminal “L”: power down, normally: “H”
14	NC	—	Not used (fixed at “L”)
15	SQSY	I	Subcode Q sync (SCOR) input from the CXD2654R (IC121) “L” is input every 13.3 msec Almost all, “H” is input
16	DQSY	I	Digital In U-bit CD format subcode Q sync (SCOR) input from the CXD2654R (IC121) “L” is input every 13.3 msec Almost all, “H” is input
17 – 19	NC	—	Not used (fixed at “L”)
20	SYS-RST	I	System reset signal input from the reset switch (Q604) “L”: reset For several hundreds msec. after the power supply rises, “L” is input, then it changes to “H”
21	TEST	I	Setting terminal for the test mode Not used (fixed at “L”)
22	+3.3V	—	Power supply terminal (+3.3V)
23	VBAT	I	Power supply for the internal real time clock and RAM
24	XOUT-T	O	Sub system clock output terminal (32.768 kHz)
25	XIN-T	I	Sub system clock input terminal (32.768 kHz)
26	GND	—	Ground terminal
27	XOUT	O	Main system clock output terminal (12 MHz)
28	XIN	I	Main system clock input terminal (12 MHz)
29	EXMEM	I	Setting terminal external ROM mode or internal ROM mode “L”: internal ROM mode (fixed at “L”)
30	S1	—	Not used (open)
31	NC	—	Not used (fixed at “L”)
32	SENS	I	Internal status (SENSE) input from the CXD2654R (IC121)
33	SHOCK	I	Track jump detection signal input from the CXD2654R (IC121)
34, 35	NC	—	Not used (fixed at “L”)
36	STB	O	Relay drive signal output for the power on/off “L”: standby mode, “H”: relay on
37	REC P	I	Detection input from the recording position detect switch (S601) “L” active
38	PB P	I	Detection input from the playback position detect switch (S604) “L” active
39	LD-LOW	O	Loading motor drive voltage control signal output for the loading motor driver (IC602) “H” active
40	NC	—	Not used (open)
41	MNT2 (XBUSY)	I	Busy status signal input from the CXD2654R (IC121)
42	MNT3 (SLOCK)	I	Spindle servo lock status monitor signal input from the CXD2654R (IC121)
43	LED0	O	LED drive signal output terminal “L”: LED on Not used (open)
44, 45	NC	—	Not used (fixed at “L”)
46	RST-LOW	—	Not used (open)
47	GND	—	Ground terminal

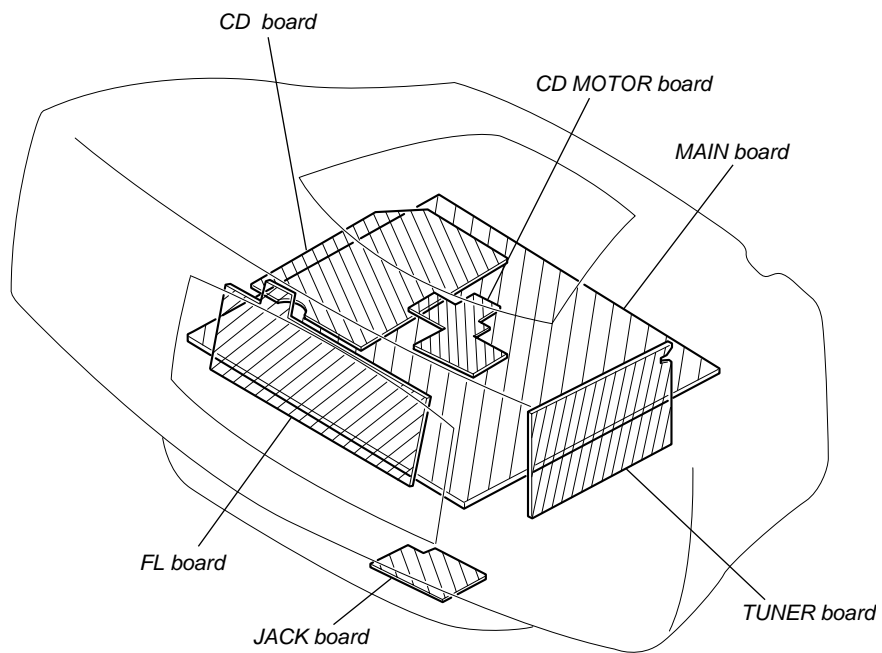
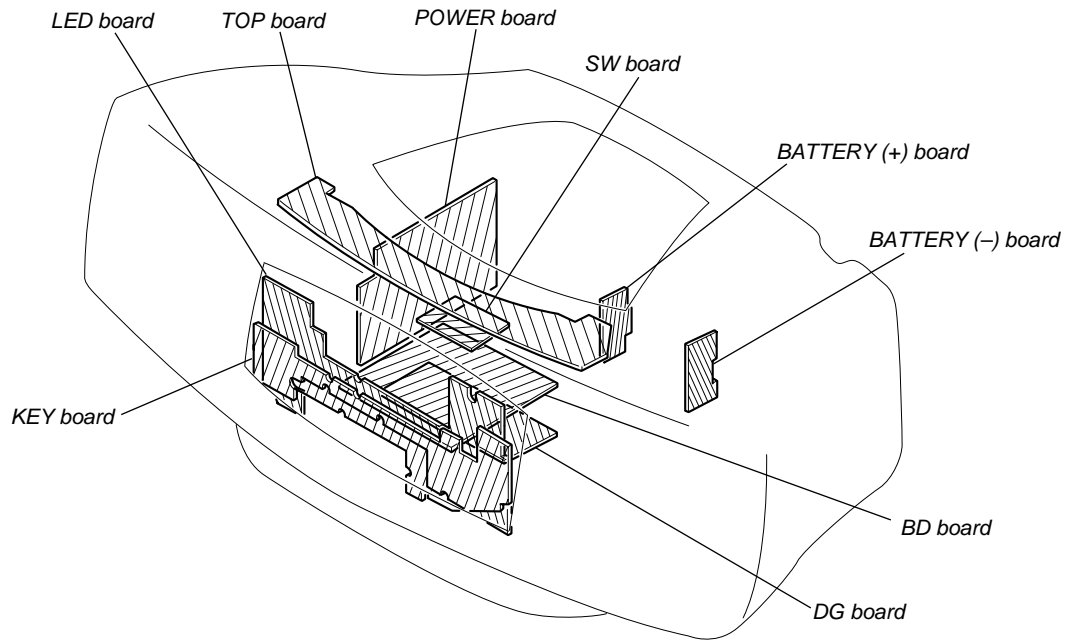
Pin No.	Pin Name	I/O	Pin Description
48	+3.3V	—	Power supply terminal (+3.3V)
49	SNG/CHG	—	Not used (fixed at “L”)
50, 51	JOG1, JOG0	I	JOG dial pulse input Not used (fixed at “L”)
52	SDA	I/O	Two-way data bus with the EEPROM (IC171)
53	SCL	O	Clock signal output to the EEPROM (IC171)
54	2M/4M	I	Select whether D-RAM capacitance 2M bit or 4M bit “L”: 4M bit (external D-RAM), “H”: 2M bit (internal D-RAM of IC121 CXD2654R) (fixed at “H” in this set)
55, 56	NC	—	Not used (fixed at “L”)
57	RXD (UART)	I	UART communication data input from the system controller (IC401)
58	TXD (UART)	O	UART communication data output to the system controller (IC401)
59	RTS	I	RTS (Request To Send) input from the system controller (IC401)
60	CTS	O	CTS (Clear To Send) output to the system controller (IC401)
61, 62	AUBIT0, AUBIT1	—	Not used (fixed at “L”)
63, 64	CLKSET0, CLKSET1	I	Clock destination setting terminal (fixed at “L”)
65	GND	—	Ground terminal
66	+3.3V	—	Power supply terminal (+3.3V)
67	SCLK	O	Serial clock signal output to the CXD2654R (IC121)
68	SWDT	O	Writing data output to the CXD2654R (IC121)
69	SRDT	I	Reading data input from the CXD2654R (IC121)
70	EMP	O	Emphasis control signal output to the A/D, D/A converter (IC603) when recording mode
71	SCK1	O	Display serial clock signal output terminal Not used (open)
72	SOUT1	O	Display serial data output terminal Not used (open)
73	SIN1	O	Chip select signal output for the display Not used (open)
74	CSB	I	Not used (fixed at “H”)
75	LDON	O	Laser diode on/off control signal output to the automatic power control circuit “H”: laser on
76	PIT/GRV	O	Pit/groove detection signal output terminal “H”: is output for the playback only disc or TOC area Not used (open)
77	FOK	I	Focus OK signal input from the CXD2654R (IC121) “H” is input when focus is on (“L”: NG)
78	NC	—	Not used (open)
79	LOCK	O	Lock signal output terminal Not used (open)
80	WRPWR	O	Laser power select signal output to the CXD2654R (IC121) and HF module switch circuit “L”: playback mode, “H”: recording mode
81	$\overline{\text{DIG-RST}}$	O	Reset signal output to the CXD2654R (IC121) and BH6511FS (IC152) “L”: reset
82	NC	—	Not used (open)
83	$\overline{\text{DA-RST}}$	O	Reset signal output to the A/D, D/A converter (IC603) “L”: reset
84	DSEL-A	—	Not used (open)
85	DSEL-B	—	Not used (open)
86	MOD	O	Laser modulation select signal output to the HF module switch circuit Stop: “L”, Playback power: “H”, Recording power: 

Pin No.	Pin Name	I/O	Pin Description
87	REC/PB	O	Not used (open)
88	NC	—	Not used (open)
89	SCTX	O	Recording data output enable signal output to the CXD2654R (IC121) and overwrite head driver (IC181) Writing data transmission timing output (Also serves as the magnetic head on/off output)
90	XLATCH	O	Serial data latch pulses signal output to the CXD2654R (IC121)
91, 92	NC	—	Not used (open)
93	AMUTE	O	Muting control signal output terminal Not used (open)
94	LDOUT	O	Motor control signal output to the loading motor driver (IC602) “L” active *1
95	LDIN	O	Motor control signal output to the loading motor driver (IC602) “L” active *1
96	LIMIT-IN	I	Detection input from the sled limit-in detect switch (S101) The optical pick-up is inner position when “L”
97	PROTECT	I	Rec-proof claw detect input from the protect detect switch (S102-2) “H”: write protect
98	REFLECT	I	Detection input from the disc reflection rate detect switch (S102-1) “L”: high reflection rate disc, “H”: low reflection rate disc
99	GND	—	Ground terminal
100	+3.3V	—	Power supply terminal (+3.3V)

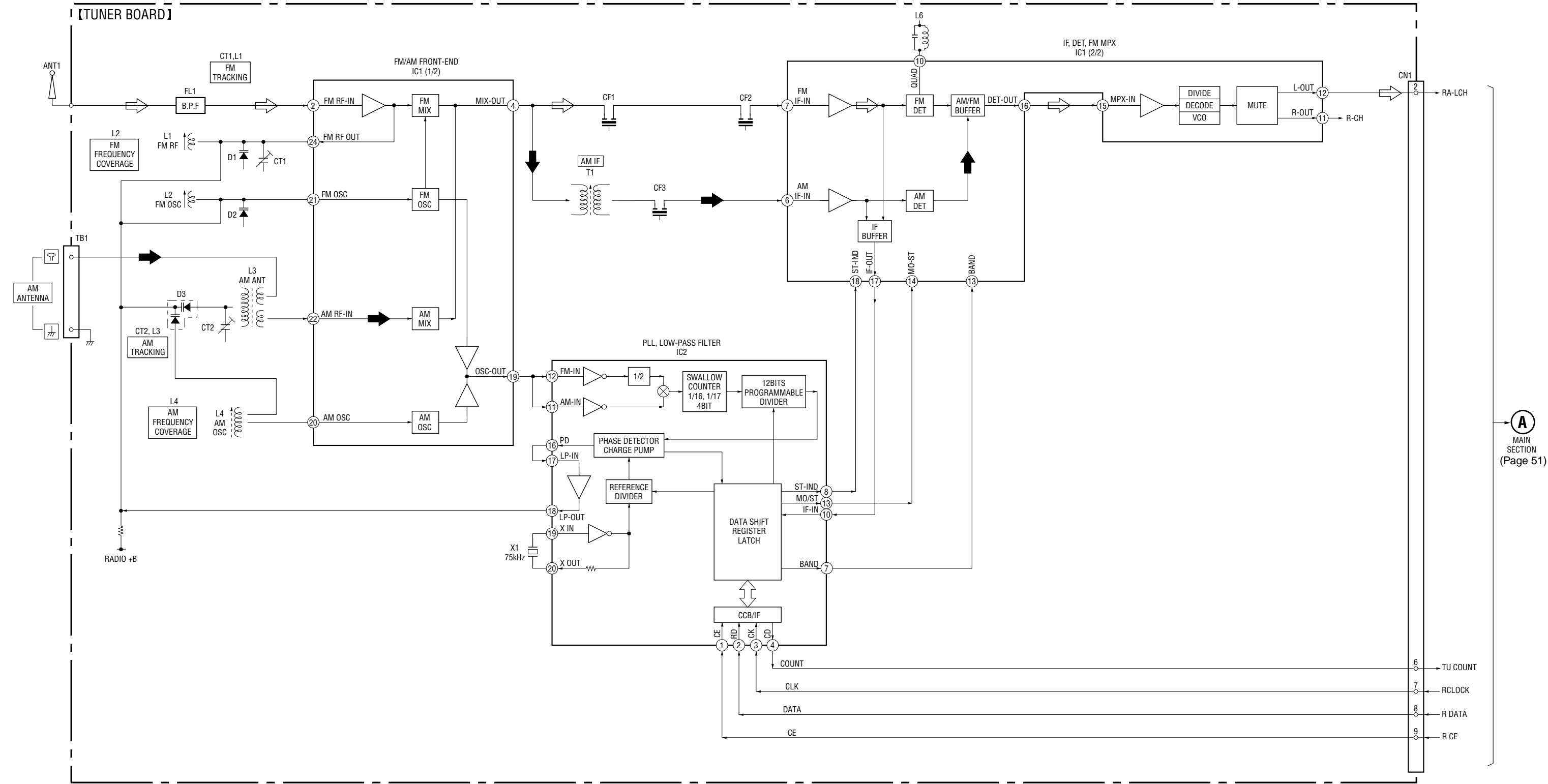
*1 Loading motor (M103) control

Terminal	Mode			
	LOADING	EJECT	BRAKE	RUN IDLE
LDIN (pin ⑨)	“L”	“H”	“L”	“H”
LDOUT (pin ⑩)	“H”	“L”	“L”	“H”

6-2. CIRCUIT BOARDS LOCATION



6-3. BLOCK DIAGRAM — TUNER SECTION —

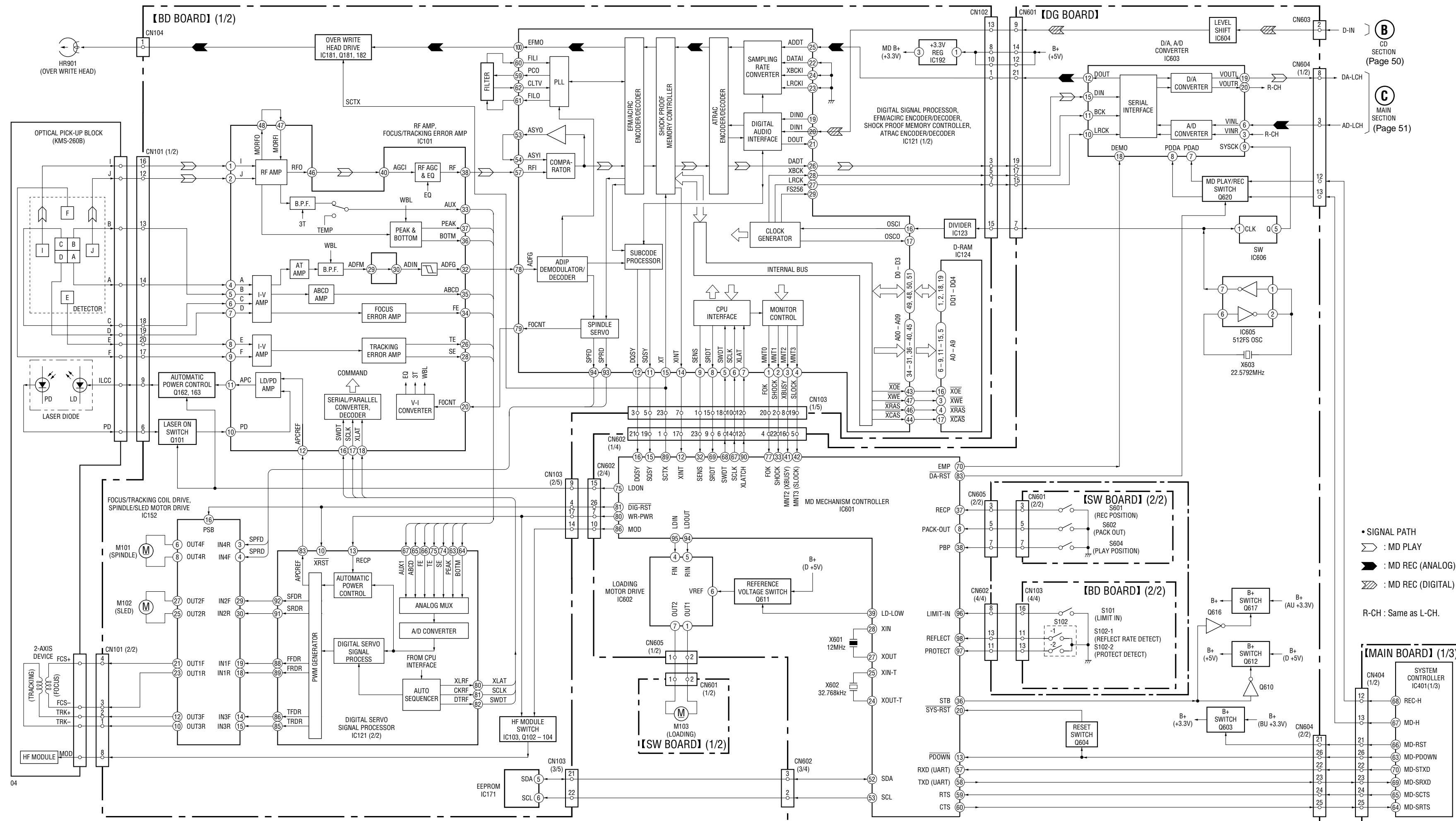


• SIGNAL PATH
 ⇨ : FM
 ⇨ : AM
 R-CH : Same as L-CH.

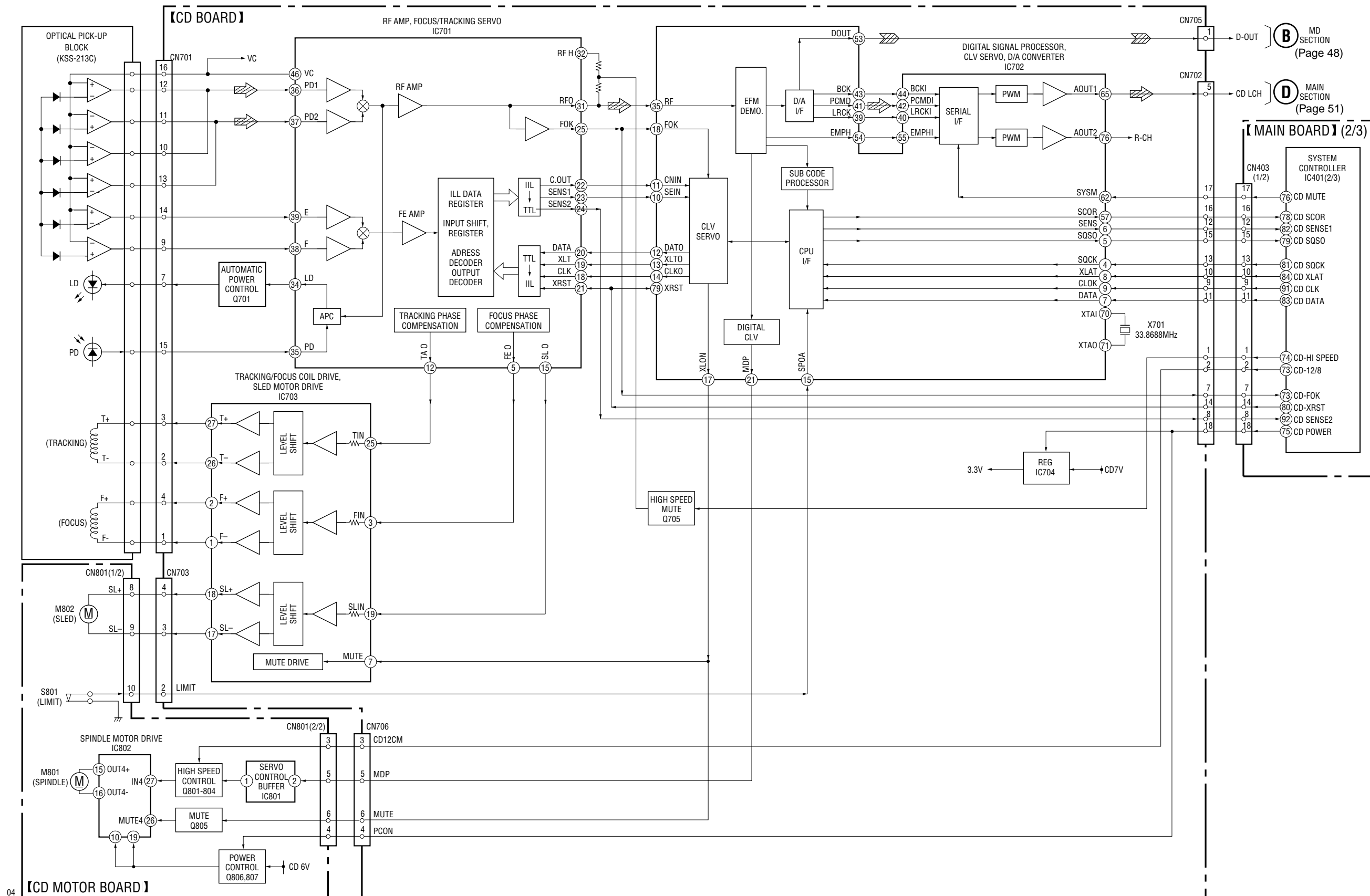
A
 MAIN SECTION
 (Page 51)

04

6-4. BLOCK DIAGRAM — MD SECTION —

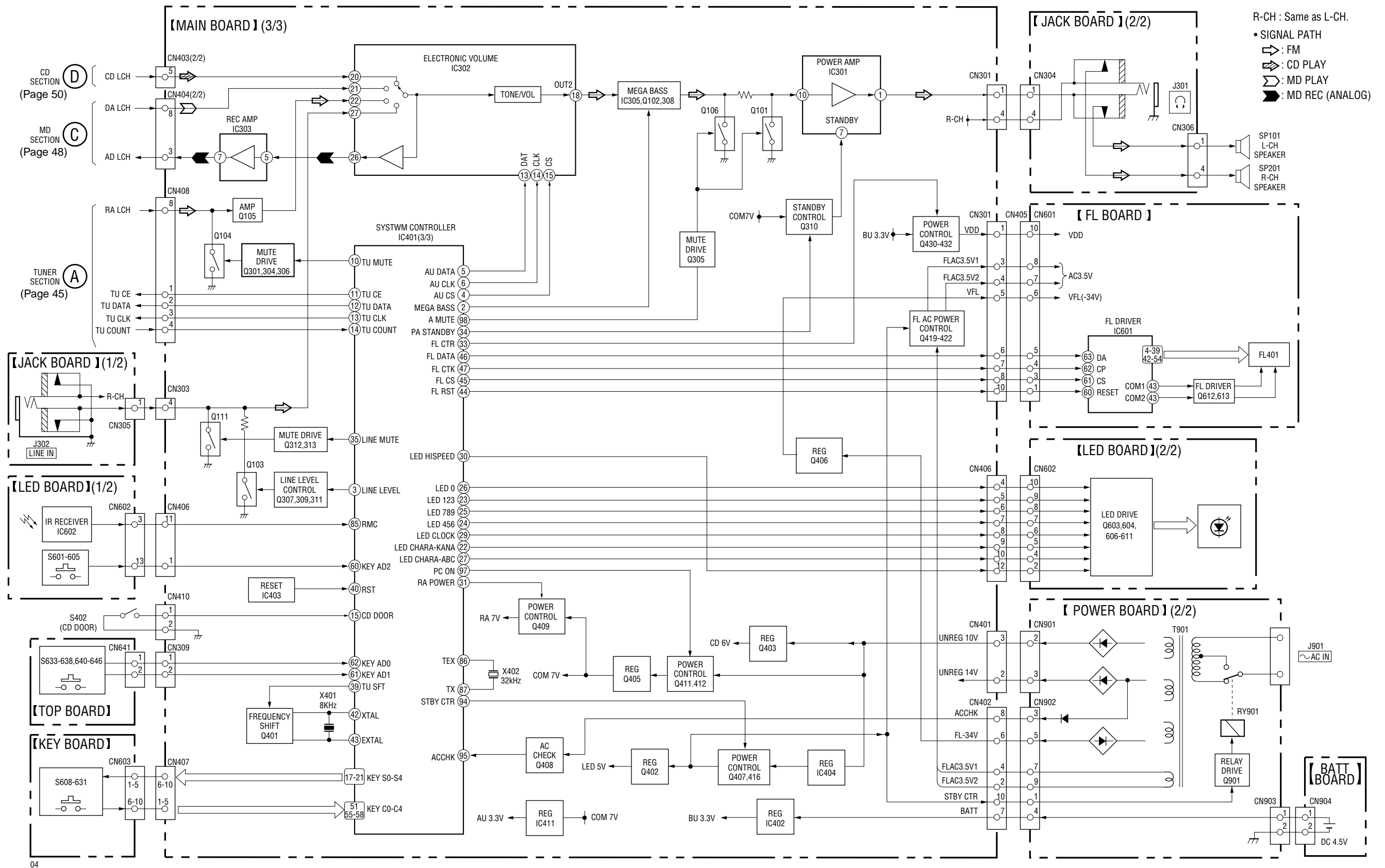


6-5. BLOCK DIAGRAM — CD SECTION —

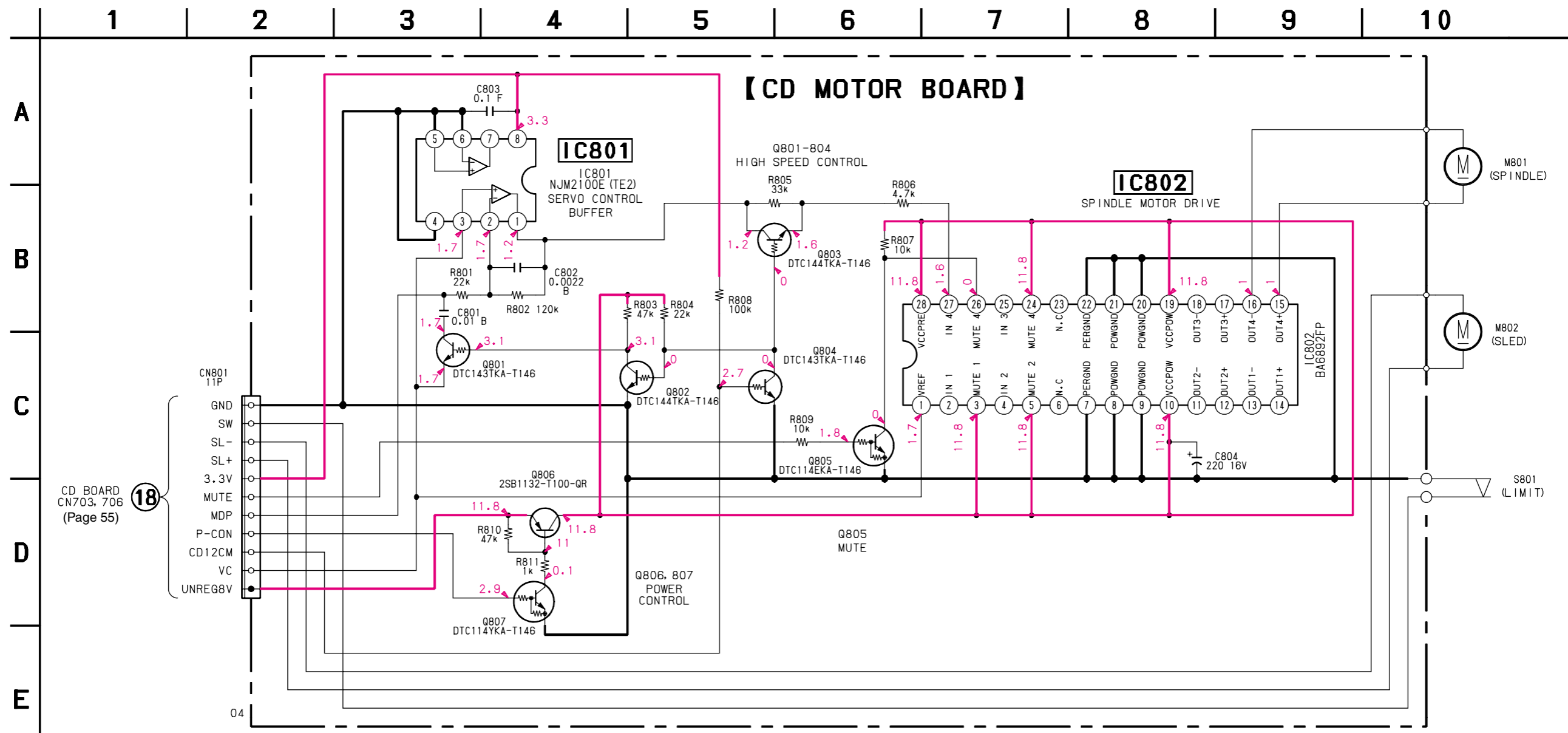


R-CH : Same as L-CH.
 • SIGNAL PATH
 : CD PLAY
 : MD REC (DIGITAL)

6-6. BLOCK DIAGRAM — AUDIO SECTION —



6-7. SCHEMATIC DIAGRAM — CD SECTION (1/2) — • Refer to page 95 for IC Block Diagrams.



CD BOARD
CN703, 706
(Page 55)

18

- Common Note on Printed Wiring Boards:**
- : parts extracted from the component side.
 - : parts extracted from the conductor side.
 - - - : carbon pattern.
 - : parts mounted on the conductor side.
 - : Through hole.
 - ▨ : Pattern from the side which enables seeing.

- Common Note on Schematic Diagram:**
- All capacitors are in μF unless otherwise noted. pF: μpF
 - 50 W 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.
 - : panel designation.

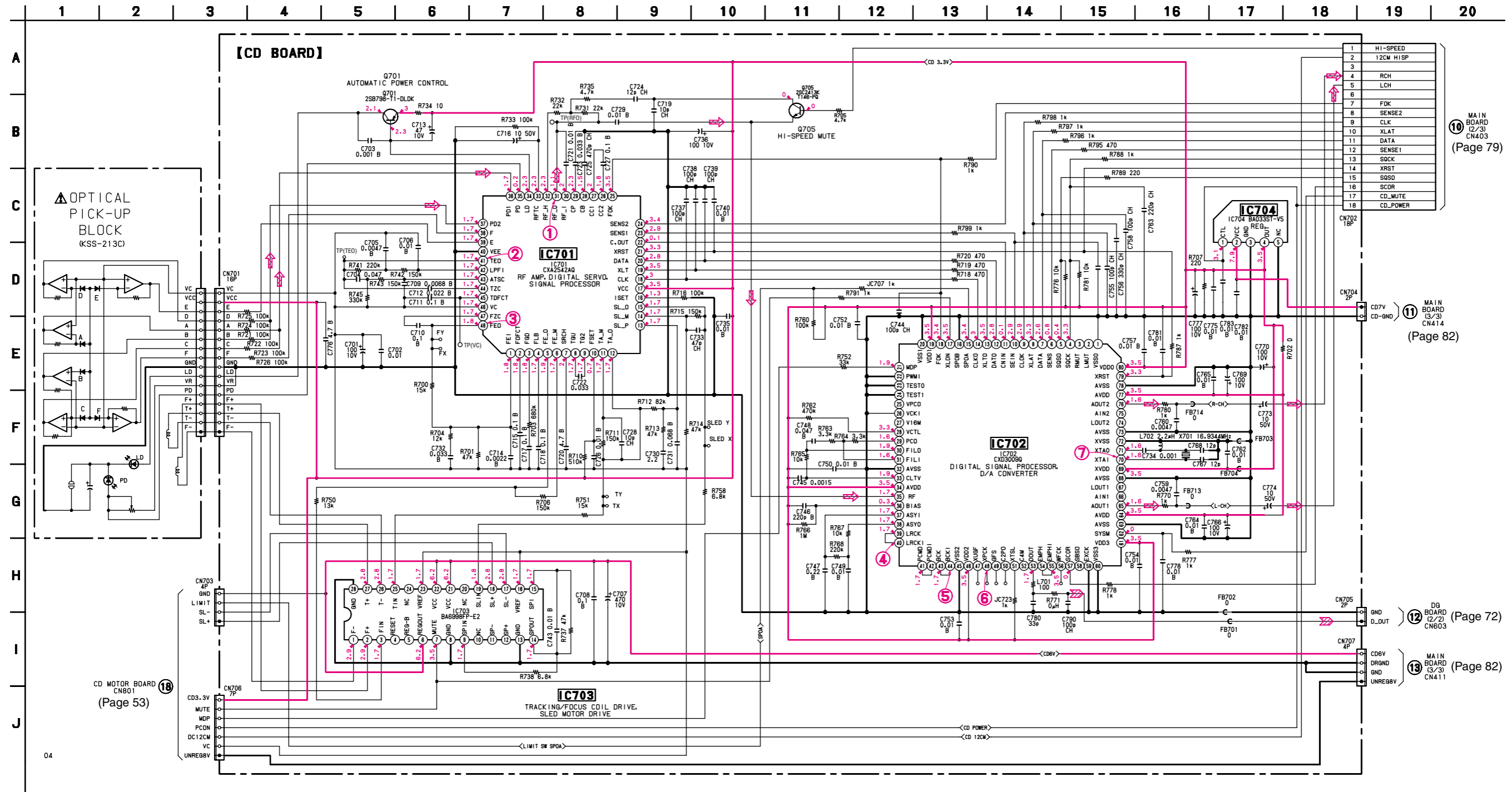
Note:
The components identified by mark Δ or dotted line with mark Δ are critical for safety. Replace only with part number specified.

Note:
Les composants identifiés par une marque Δ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

- : B+ Line.
- - - : B- Line.
- : adjustment for repair.

- Voltage and waveforms are dc with respect to ground under no-signal (detuned) conditions.
- * : Impossible to measure
- Voltagés are taken with a VOM (Input impedance 10 M Ω). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.
- ◀ : FM
- ▶ : AM
- ◀▶ : MD PB
- ◀▶ : MD REC (DIGITAL)
- ◀▶ : MD REC (ANALOG)
- ◀▶ : CD

6-8. SCHEMATIC DIAGRAM — CD SECTION (2/2) — • Refer to page 96 for IC Block Diagrams.
• Refer to page 54 for Note.



1	HI-SPEED
2	12CM HISP
3	
4	RCH
5	LCH
6	
7	FOK
8	SENSE2
9	CLK
10	XLAT
11	DATA
12	SENSE1
13	SRCK
14	XRST
15	SSCK
16	SCOR
17	CD_MUTE
18	CD_POWER

⑩ MAIN BOARD (2/3) CN403 (Page 79)

⑪ MAIN BOARD (3/3) CN414 (Page 82)

⑫ DG BOARD (2/3) CN603 (Page 72)

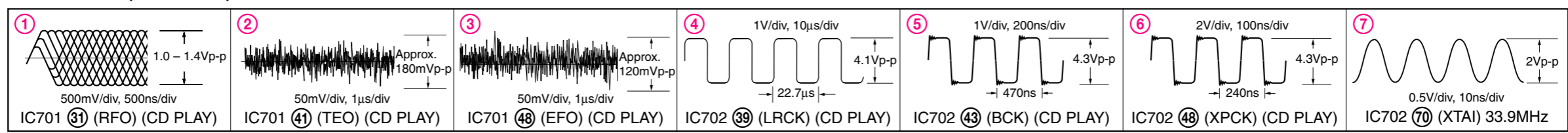
⑬ MAIN BOARD (3/3) CN411 (Page 82)

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

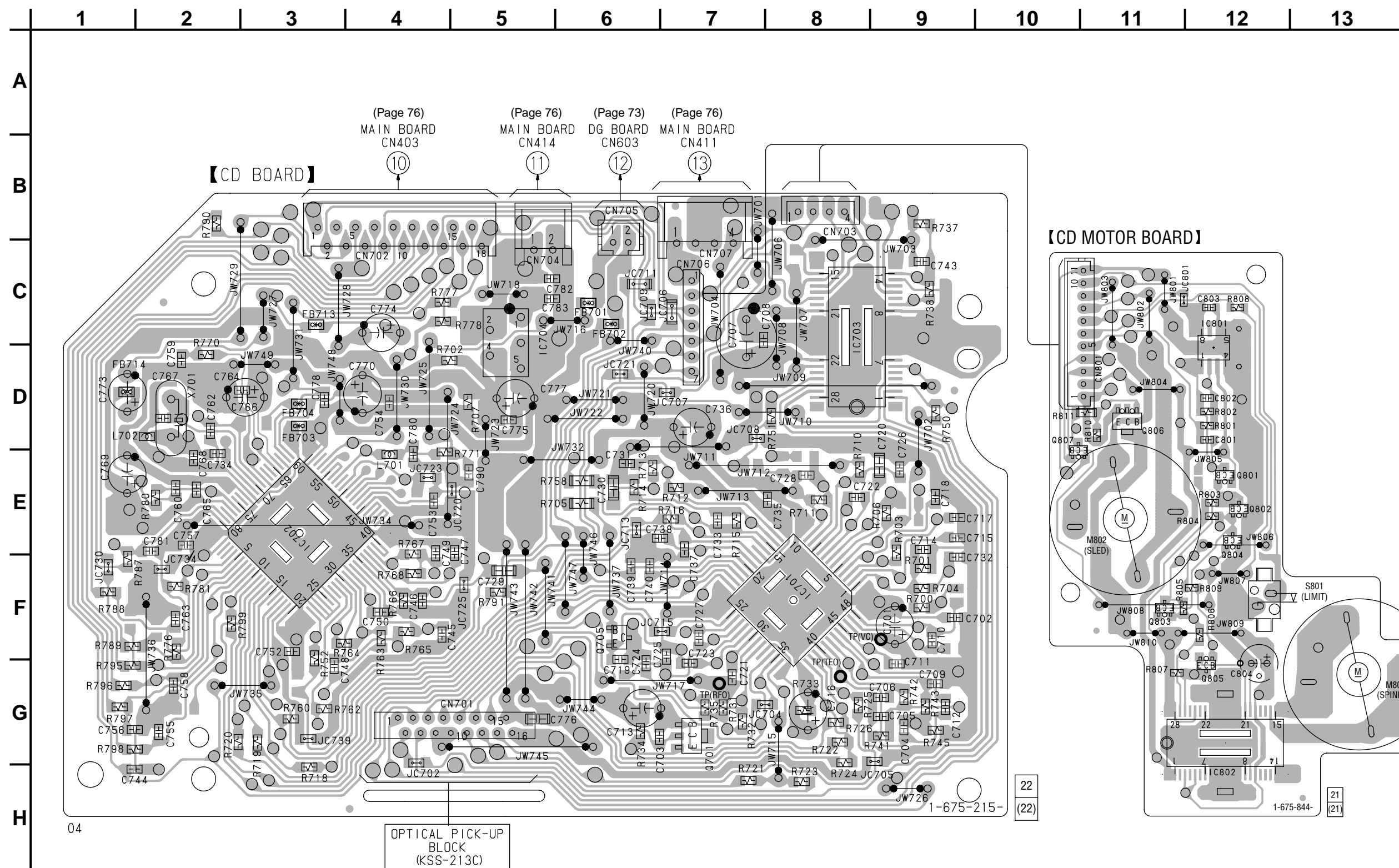
Note:
Les composants identifiés par une marque Δ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

• Voltage is dc with respect to ground under no-signal (detuned) condition.
no mark : CD STOP

• Waveforms (CD BOARD)



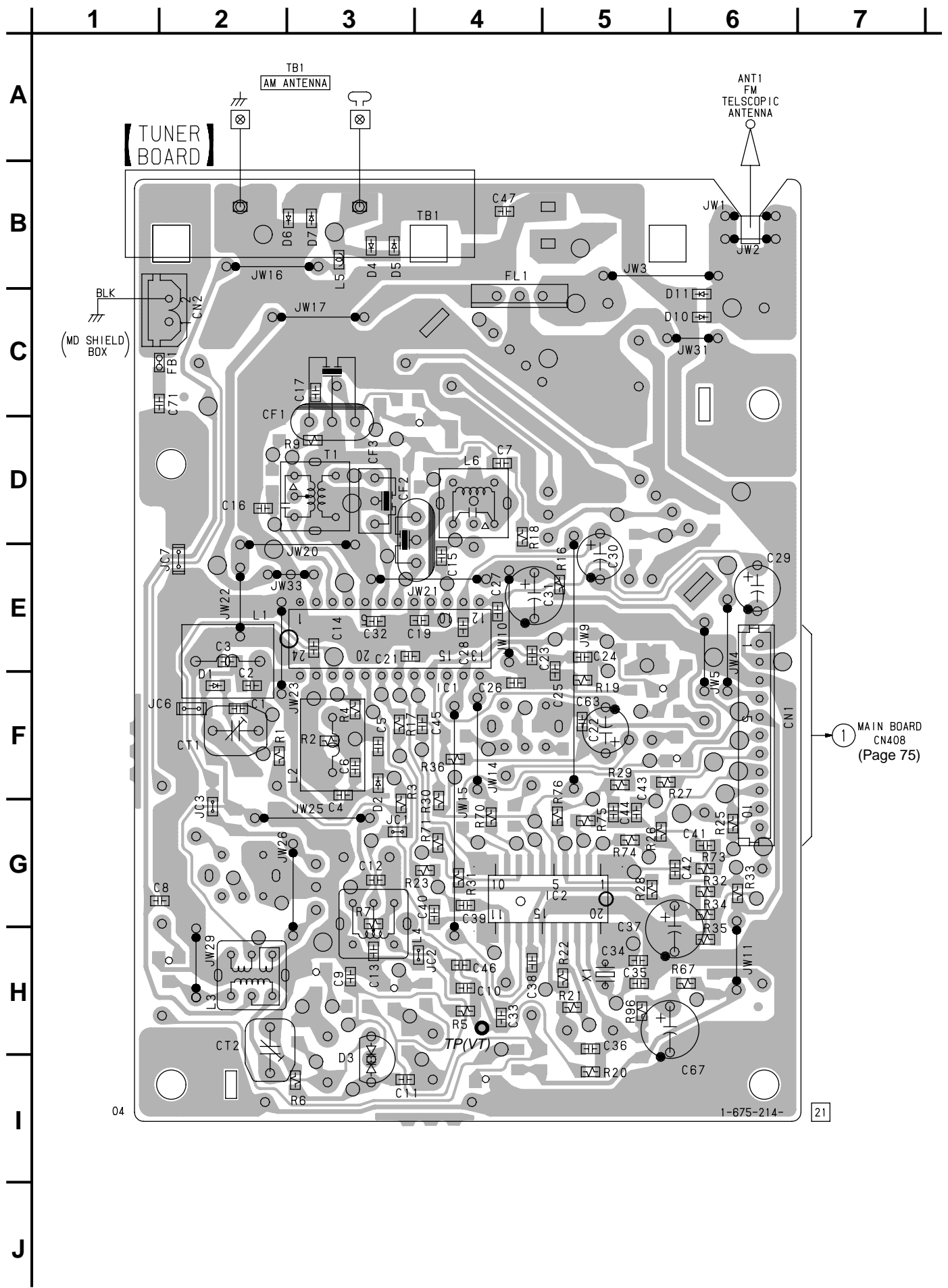
6-9. PRINTED WIRING BOARDS — CD SECTION — • Refer to page 53 for Note.



• Semiconductor Location

Ref. No.	Location	Ref. No.	Location
IC701	F-8	Q705	F-6
IC702	E-3	Q801	E-12
IC703	C-8	Q802	E-12
IC704	C-5	Q803	F-11
IC801	C-12	Q804	F-12
IC802	G-12	Q805	G-12
		Q806	D-11
Q701	G-7	Q807	E-11

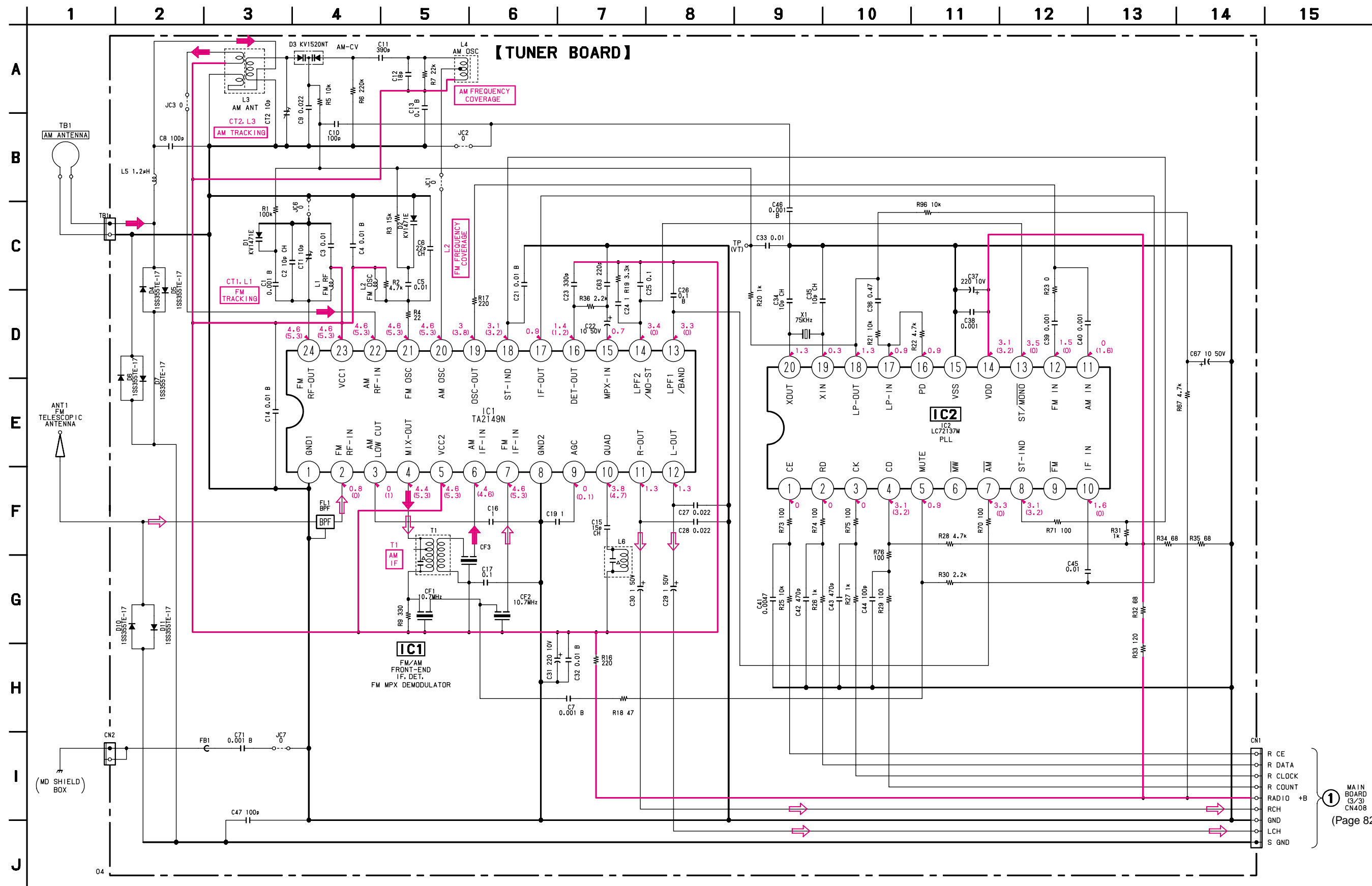
6-10. PRINTED WIRING BOARDS — TUNER SECTION — • Refer to page 53 for Note.



• Semiconductor Location

Ref. No.	Location
D1	F-2
D2	F-2
D3	I-3
D4	B-3
D5	B-3
D6	B-2
D7	B-3
D10	C-6
D11	C-6
IC1	E-3
IC2	G-5

6-11. SCHEMATIC DIAGRAMS — TUNER SECTION — • Refer to page 95 for IC Block Diagrams.
 • Refer to page 54 for Note.

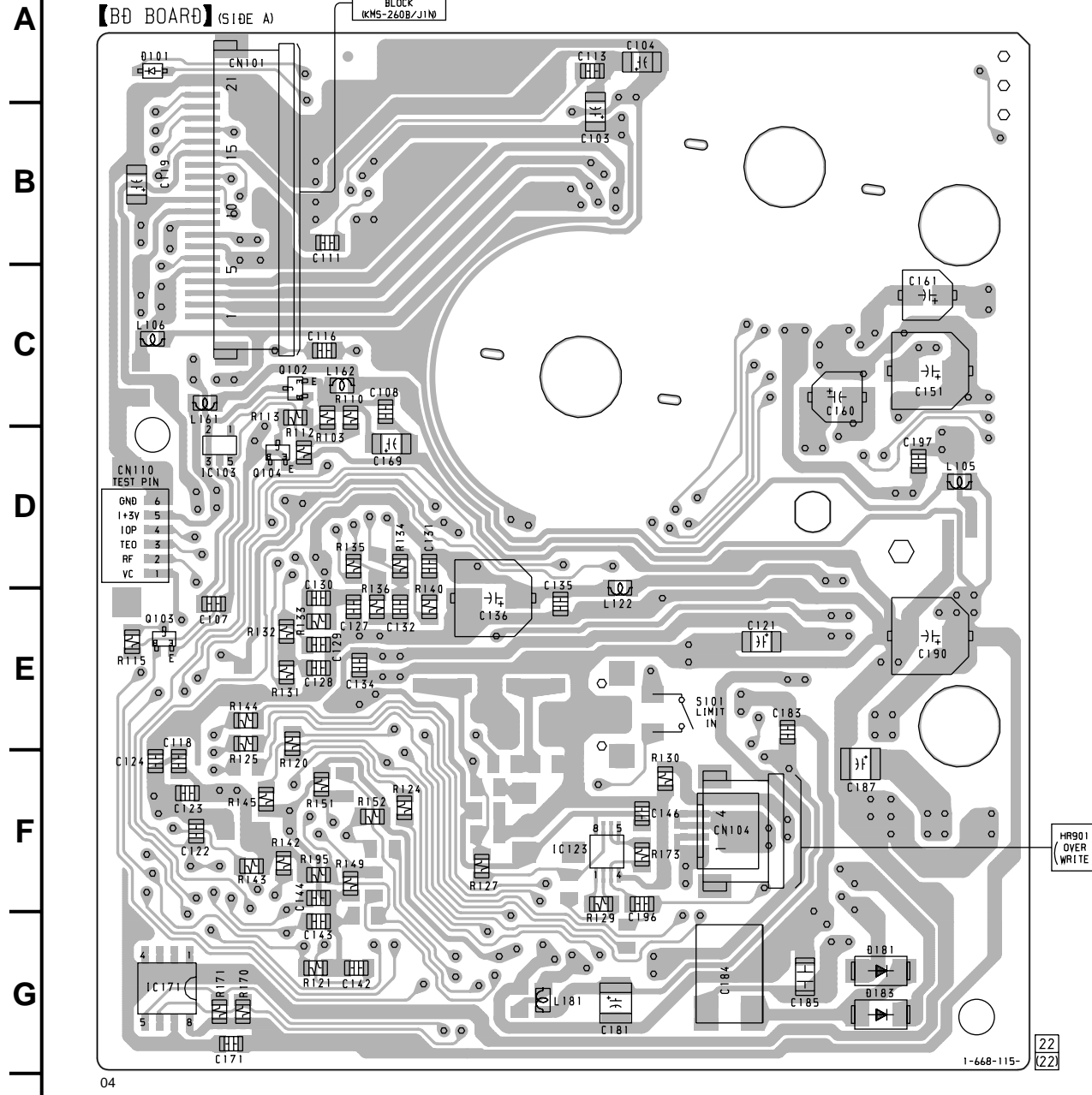


• Voltage is dc with respect to ground under no-signal (detuned) condition.
 no mark : FM
 () : AM

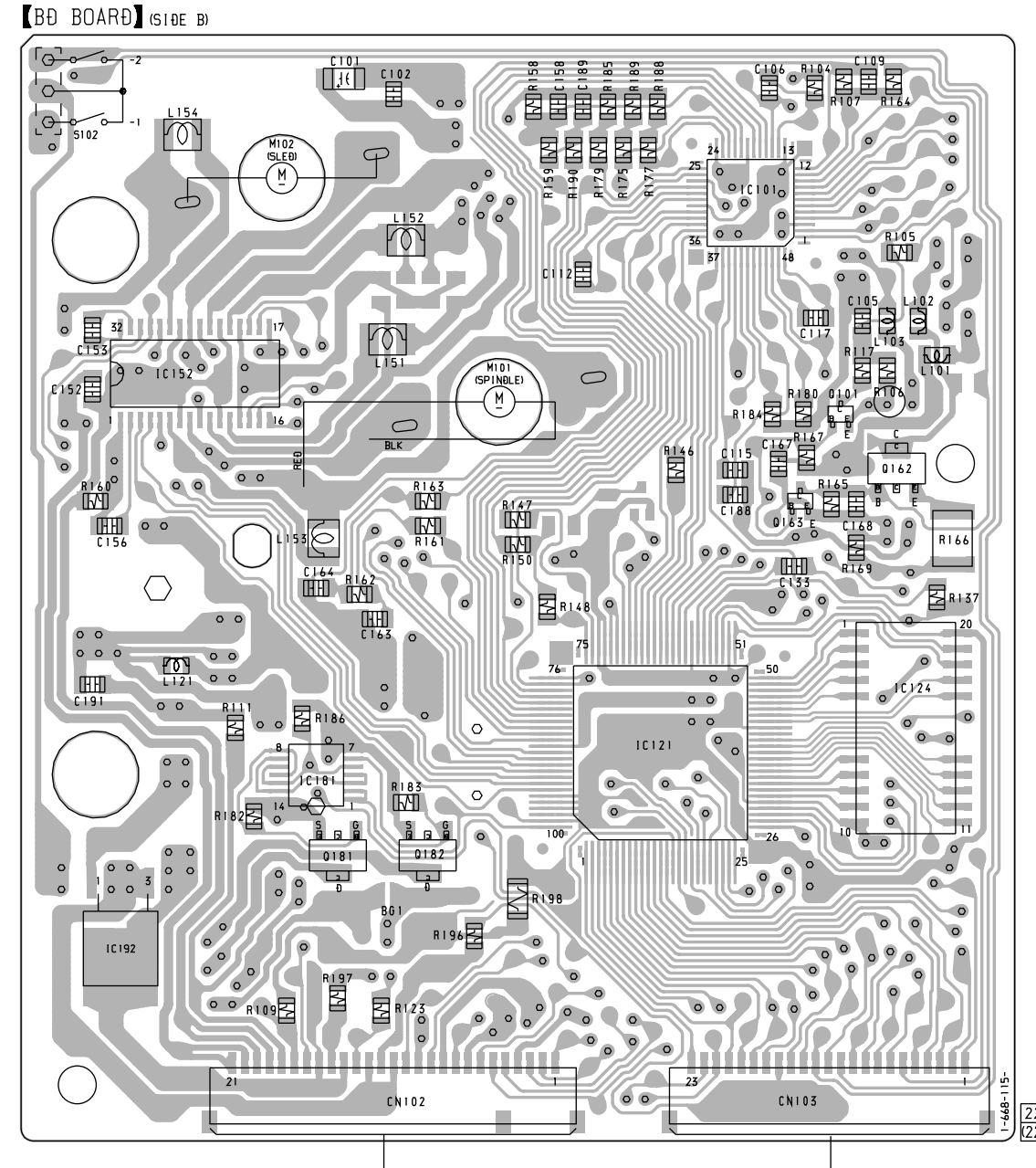
1 MAIN BOARD (3/3) CN408 (Page 82)

6-12. PRINTED WIRING BOARDS — BD SECTION — • Refer to page 53 for Note.

1 2 3 4 5 6 7 8 9 10 11 12 13

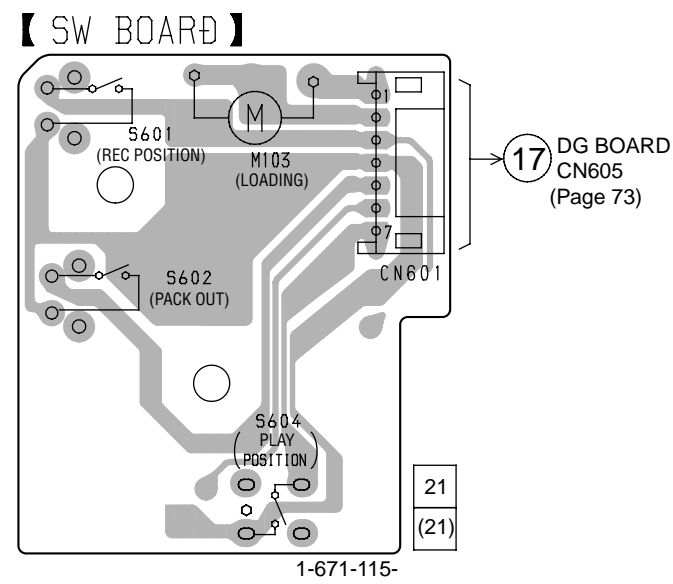


S102-2 (PROJECT DETECT)
 S102-1 (REFLECT RATE DETECT)



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 DG BOARD
 CN601
 (Page 73)

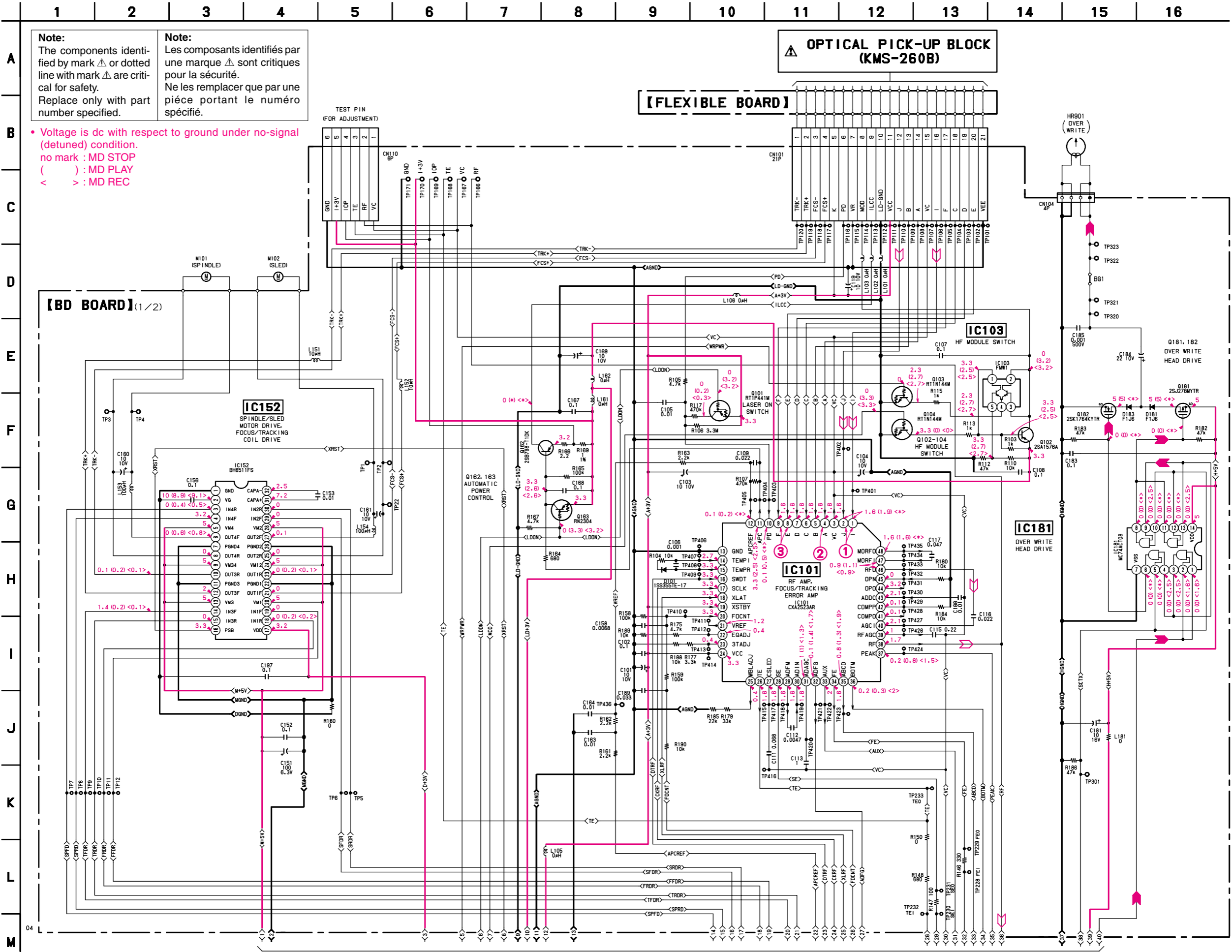
16
 DG BOARD
 CN602
 (Page 73)



• Semiconductor Location

Ref. No.	Location	Ref. No.	Location
D101	A-1	IC181	F-10
D181	G-6	IC192	F-9
D183	G-6	Q101	C-13
IC101	B-12	Q102	C-2
IC103	D-2	Q103	E-1
IC121	E-12	Q104	D-2
IC123	F-4	Q162	C-13
IC124	E-13	Q163	D-13
IC152	C-9	Q181	F-10
IC171	G-1	Q182	F-11

6-13. SCHEMATIC DIAGRAM — BD SECTION (1/2) — • Refer to page 98 for IC Block Diagrams. • Refer to page 54 for Note.



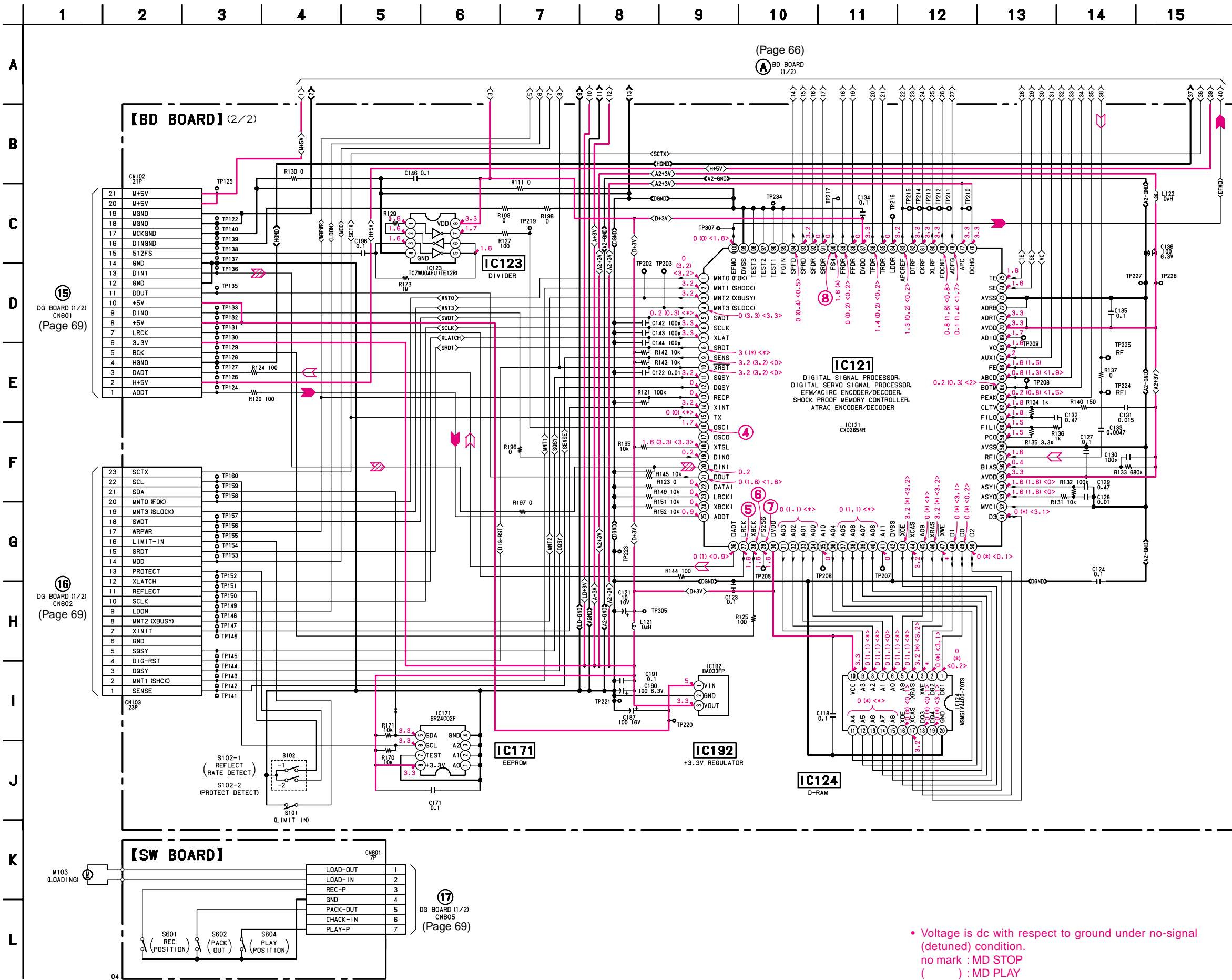
Note:
The components identified by mark Δ or dotted line with mark Δ are critical for safety. Replace only with part number specified.

Note:
Les composants identifiés par une marque Δ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

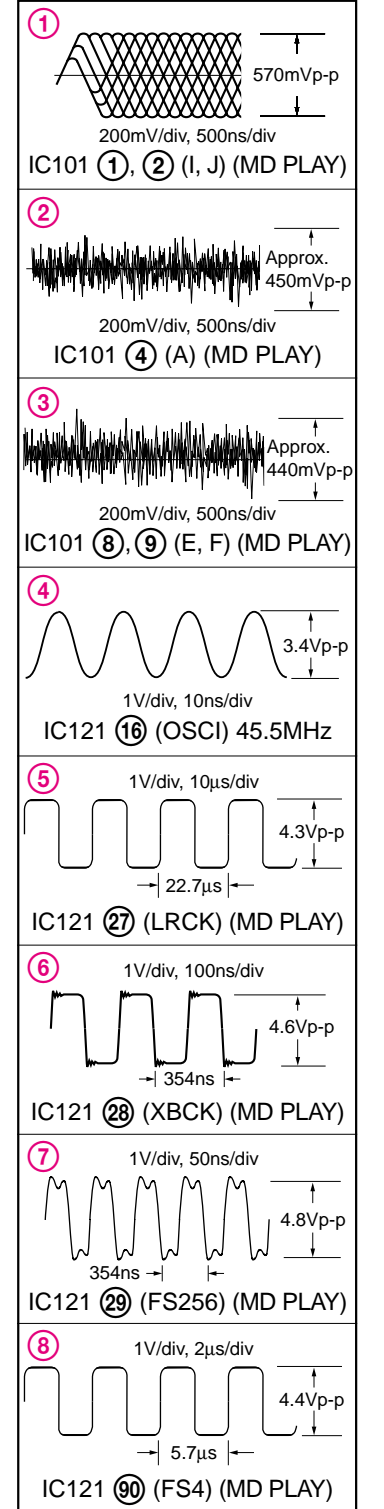
• Voltage is dc with respect to ground under no-signal (detuned) condition.
() : MD STOP
() : MD PLAY
< > : MD REC

(A) BD BOARD (2/2) (Page 68)

6-14. SCHEMATIC DIAGRAMS — BD SECTION (2/2) — • Refer to page 98 for IC Block Diagrams.
• Refer to page 54 for Note.



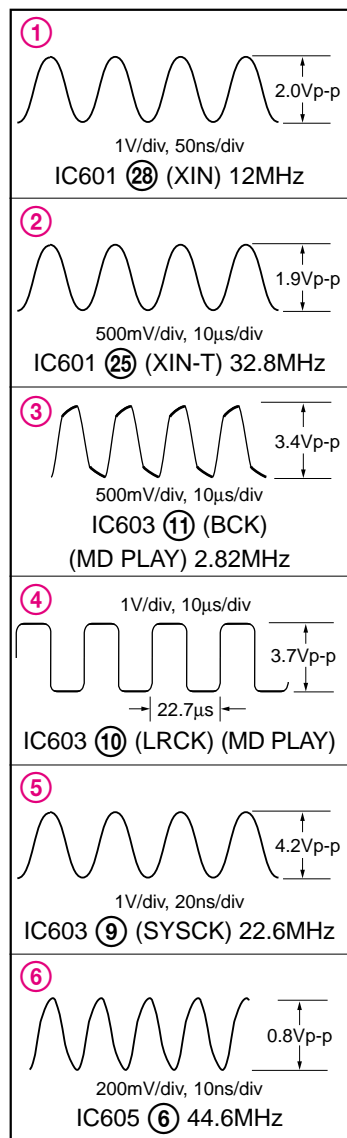
• Waveforms (BD BOARD)



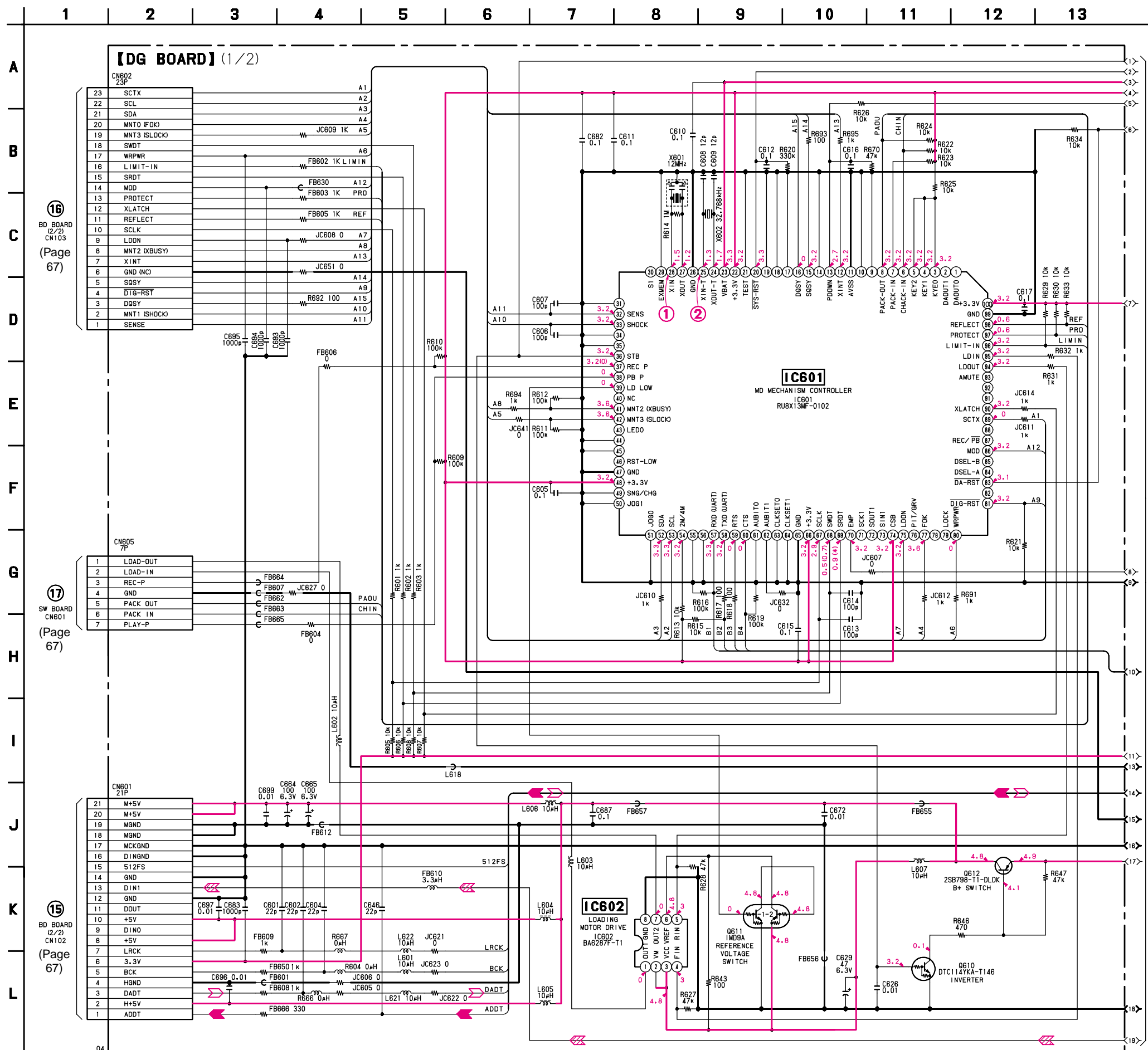
• Voltage is dc with respect to ground under no-signal (detuned) condition.
no mark : MD STOP
() : MD PLAY
< > : MD REC

6-15. SCHEMATIC DIAGRAM — DG SECTION (1/2) — • Refer to page 99 for IC Block Diagrams.
• Refer to page 54 for Note.

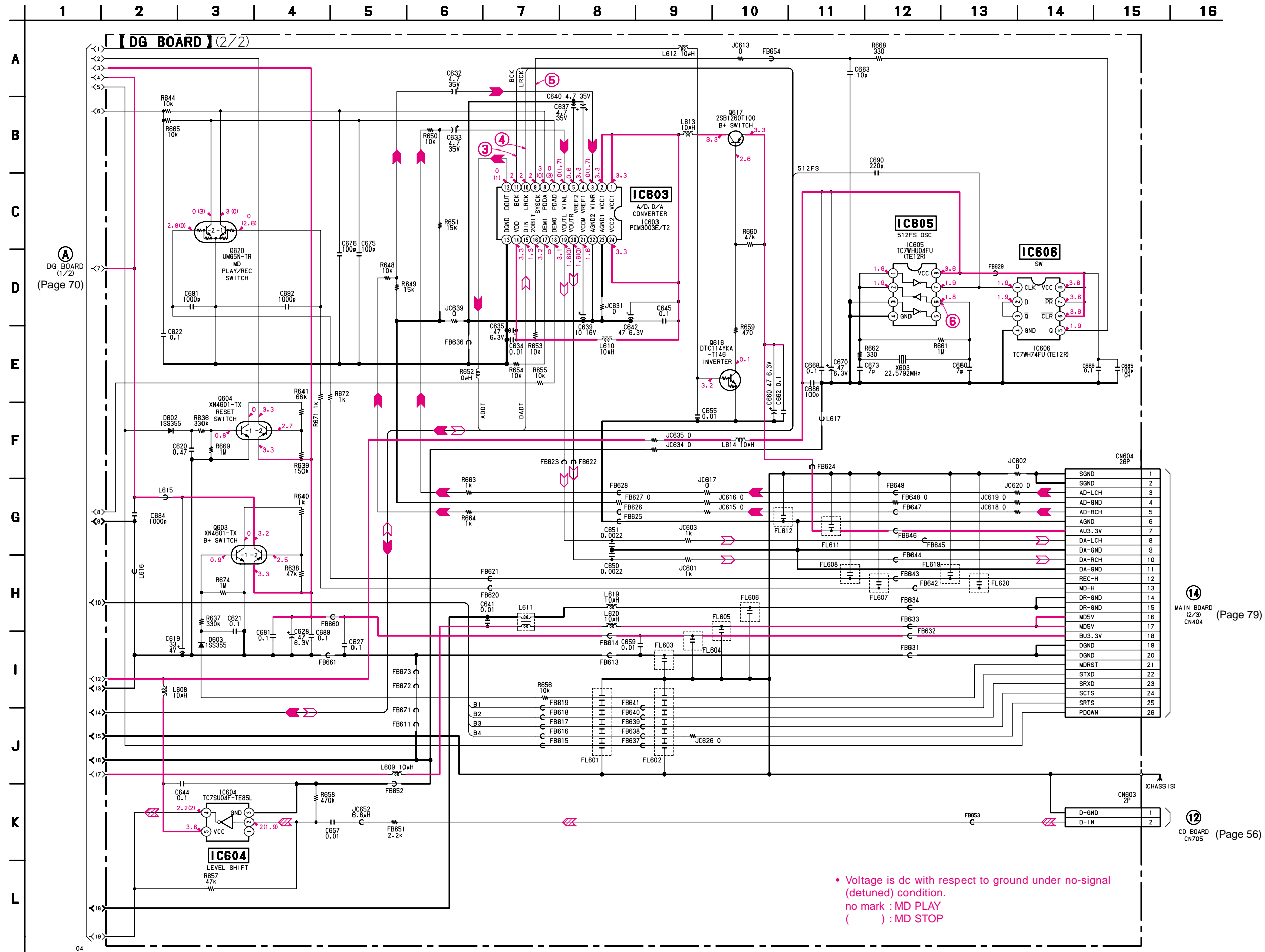
• Waveforms (DG BOARD)



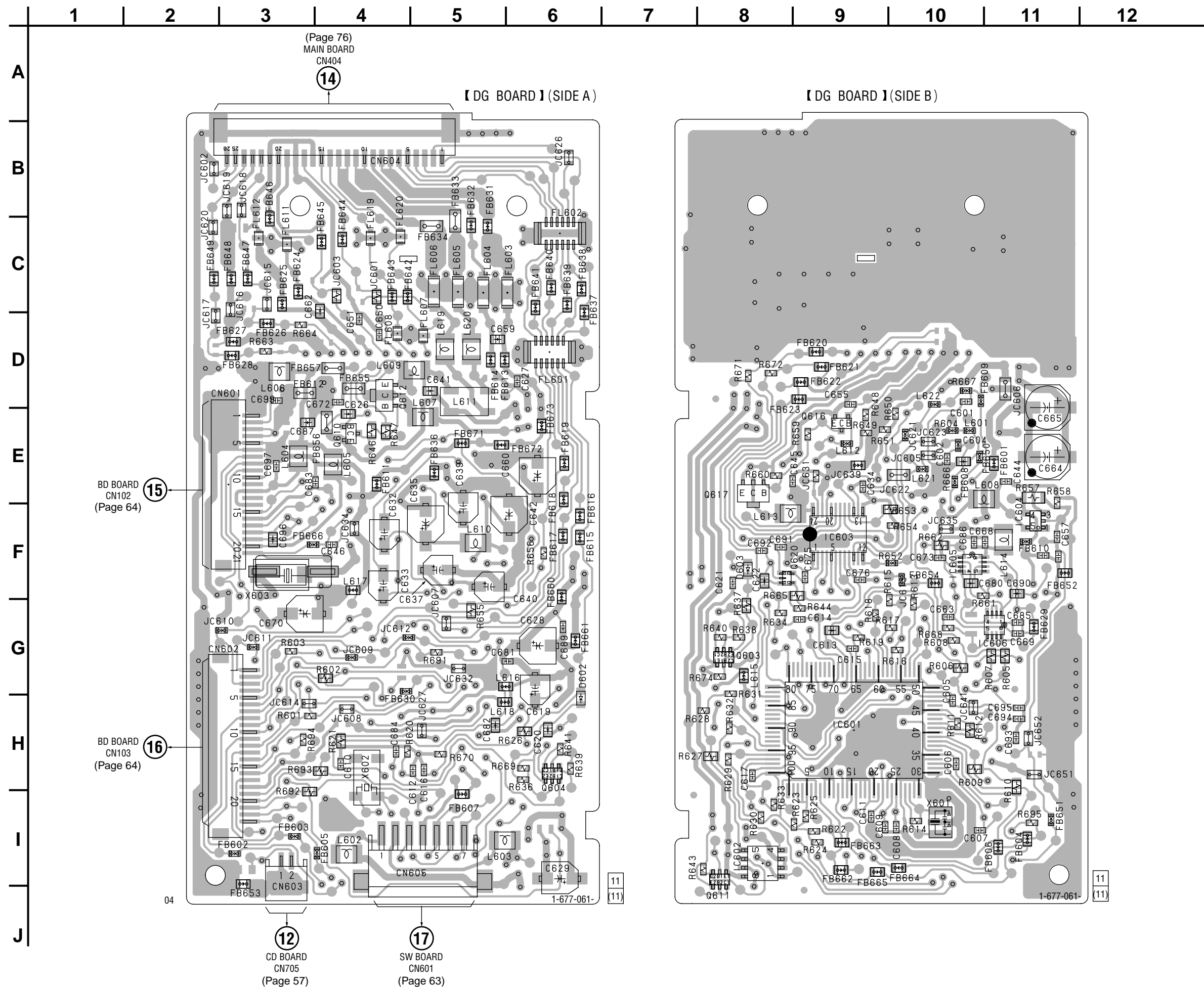
• Voltage is dc with respect to ground under no-signal (detuned) condition.
no mark : MD PLAY
(): MD STOP



6-16. SCHEMATIC DIAGRAM — DG SECTION (2/2) — • Refer to page 100 for IC Block Diagrams.
• Refer to page 54 for Note.



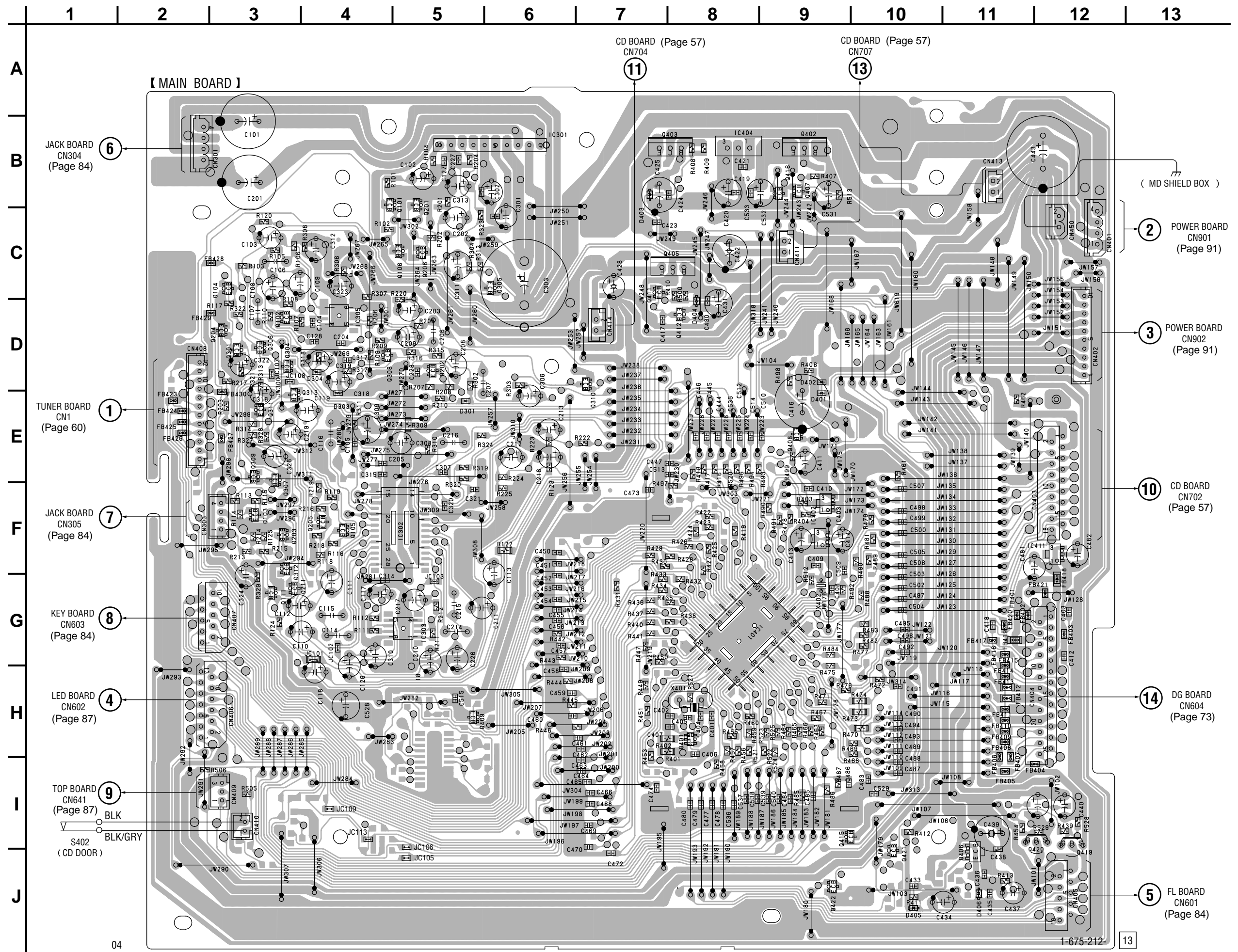
6-17. PRINTED WIRING BOARD — DG SECTION — • Refer to page 53 for Note.



• Semiconductor Location

Ref. No.	Location
D602	G-6
D603	F-8
IC601	H-9
IC602	I-8
IC603	F-9
IC604	F-11
IC605	F-10
IC606	G-11
Q603	G-8
Q604	H-6
Q610	E-4
Q611	I-8
Q612	D-4
Q616	E-9
Q617	E-8
Q620	F-8

6-18. PRINTED WIRING BOARD — MAIN SECTION — • Refer to page 53 for Note.

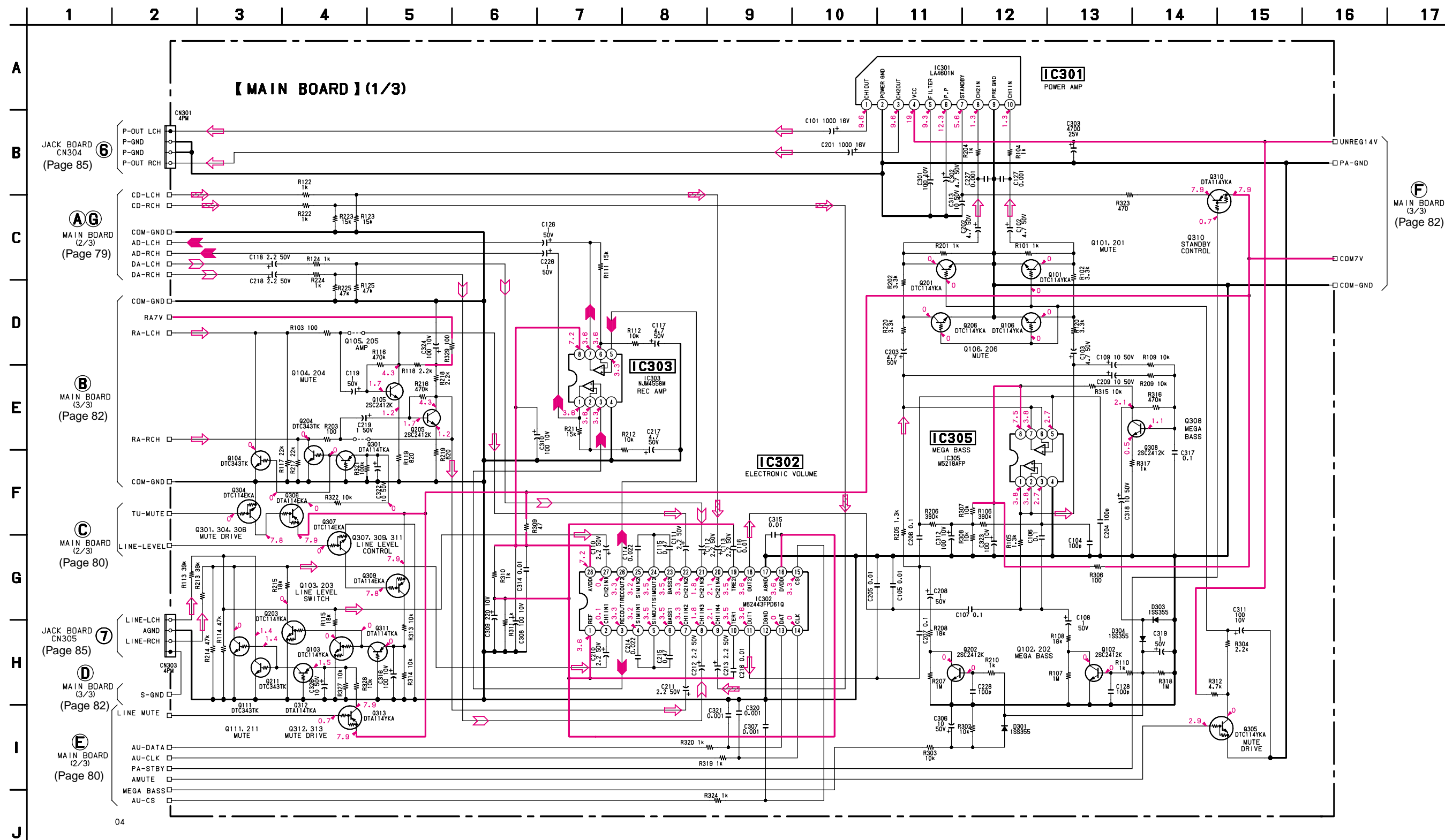


04

1-675-212

13

6-19. SCHEMATIC DIAGRAM — MAIN SECTION (1/3) — • Refer to page 100 for IC Block Diagrams.
• Refer to page 54 for Note.

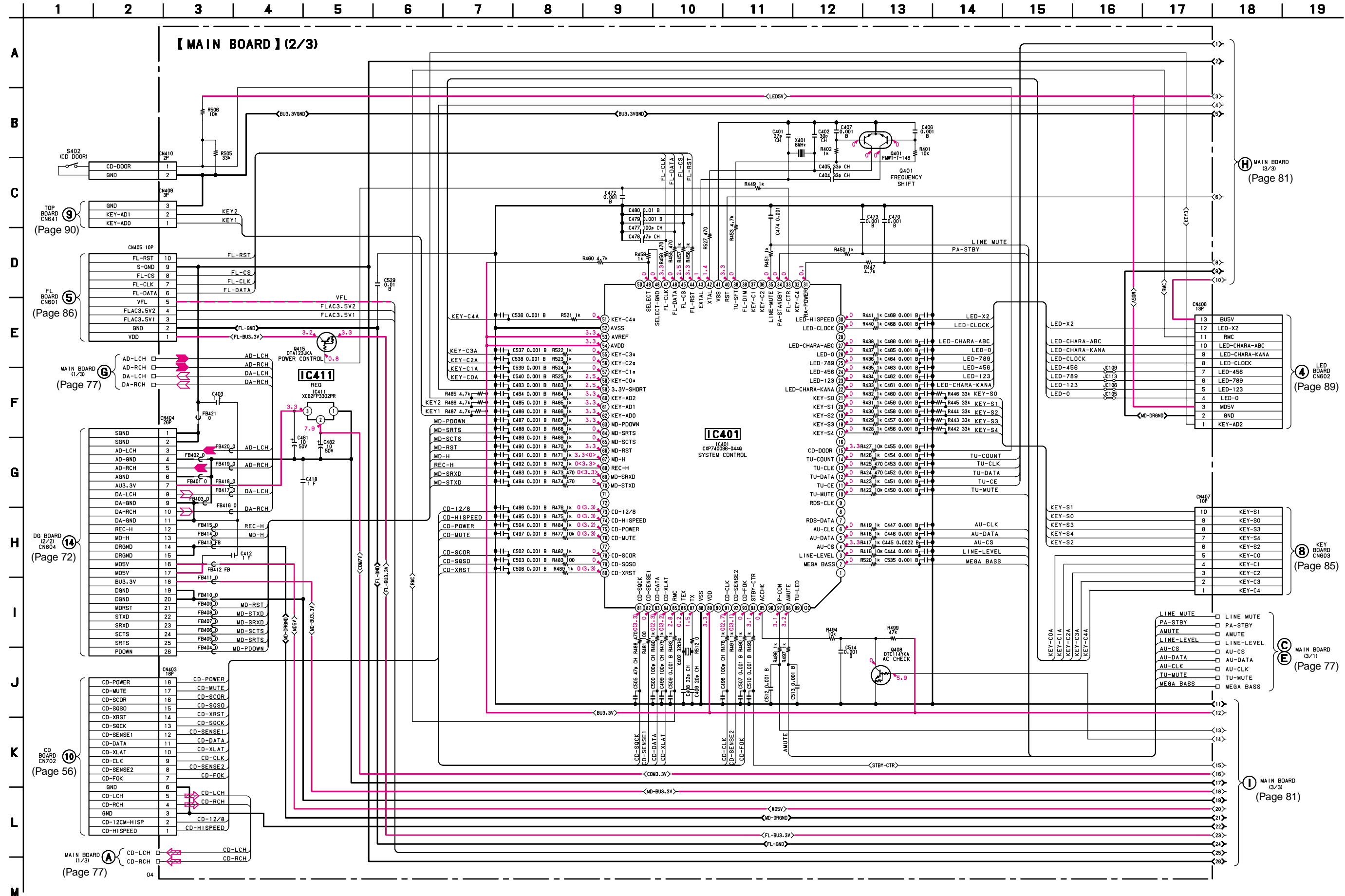


• Semiconductor Location

Ref. No.	Location	Ref. No.	Location	Ref. No.	Location	Ref. No.	Location	Ref. No.	Location	Ref. No.	Location
D301	D-5	IC302	F-5	Q103	F-3	Q211	G-3	Q313	D-3	Q415	I-9
D303	D-4	IC303	G-5	Q104	C-3	Q301	D-3	Q401	H-8	Q416	B-9
D304	D-4	IC305	D-4	Q105	F-4	Q304	D-3	Q402	B-9	Q419	I-12
D401	D-9	IC401	G-8	Q106	C-5	Q305	C-6	Q403	B-8	Q420	I-11
D402	D-9	IC402	F-9	Q111	G-3	Q306	D-3	Q405	C-8	Q421	I-10
D403	B-7	IC403	F-9	Q201	B-5	Q307	E-3	Q406	I-11	Q422	J-9
D404	C-8	IC404	B-8	Q202	D-5	Q308	D-4	Q407	B-9		
D405	J-10	IC411	F-12	Q203	F-3	Q309	E-3	Q408	E-9		
D406	J-11			Q204	D-3	Q310	D-7	Q409	H-5		
				Q205	F-4	Q311	E-3	Q411	C-7		
				Q206	C-5	Q312	F-3	Q412	C-8		
IC301	B-6	Q101	B-5								
		Q102	D-3								

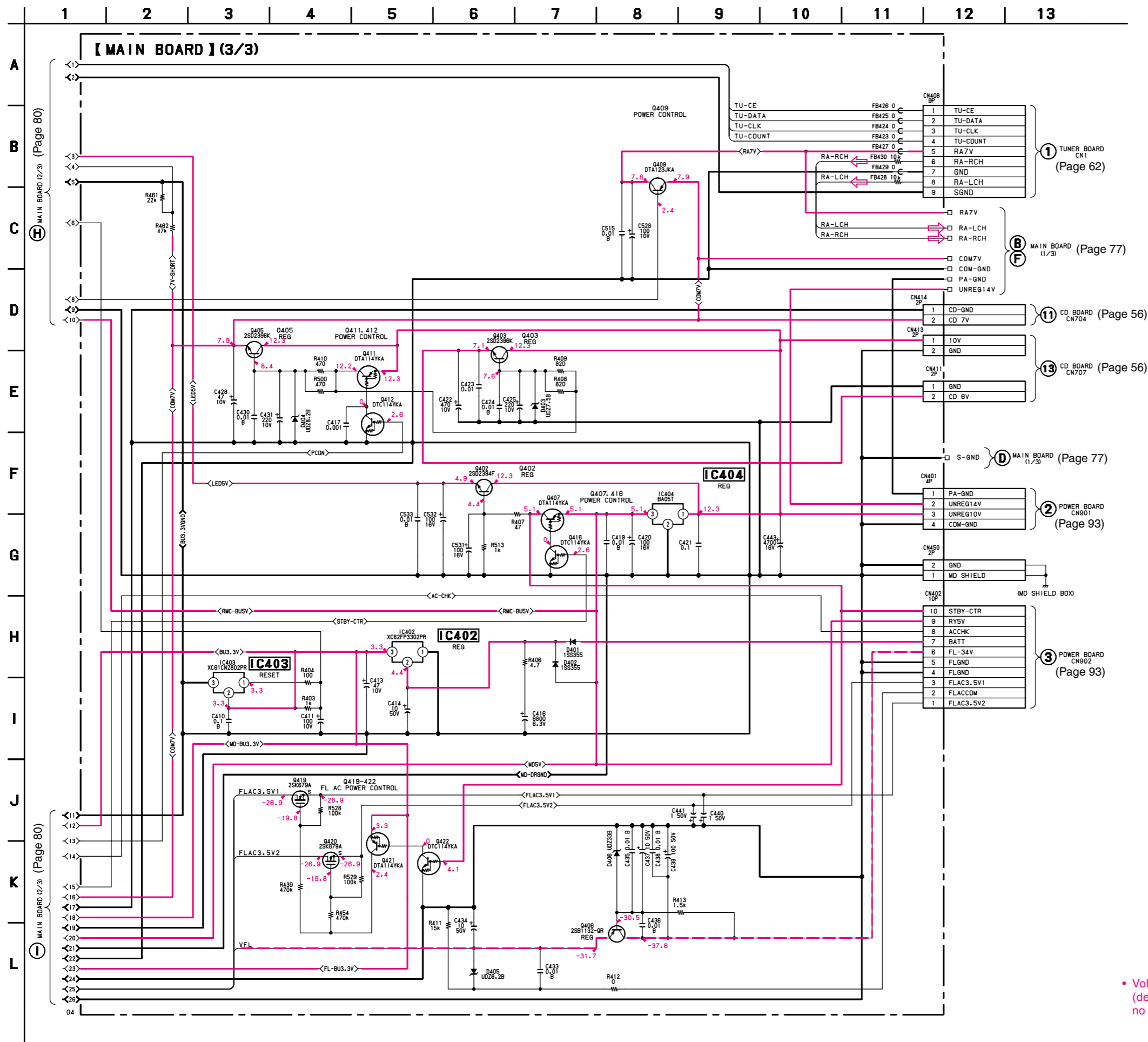
• Voltage is dc with respect to ground under no-signal (detuned) condition.
no mark : FM

6-20. SCHEMATIC DIAGRAM — MAIN SECTION (2/3) — • Refer to page 100 for IC Block Diagrams.
• Refer to page 54 for Note.



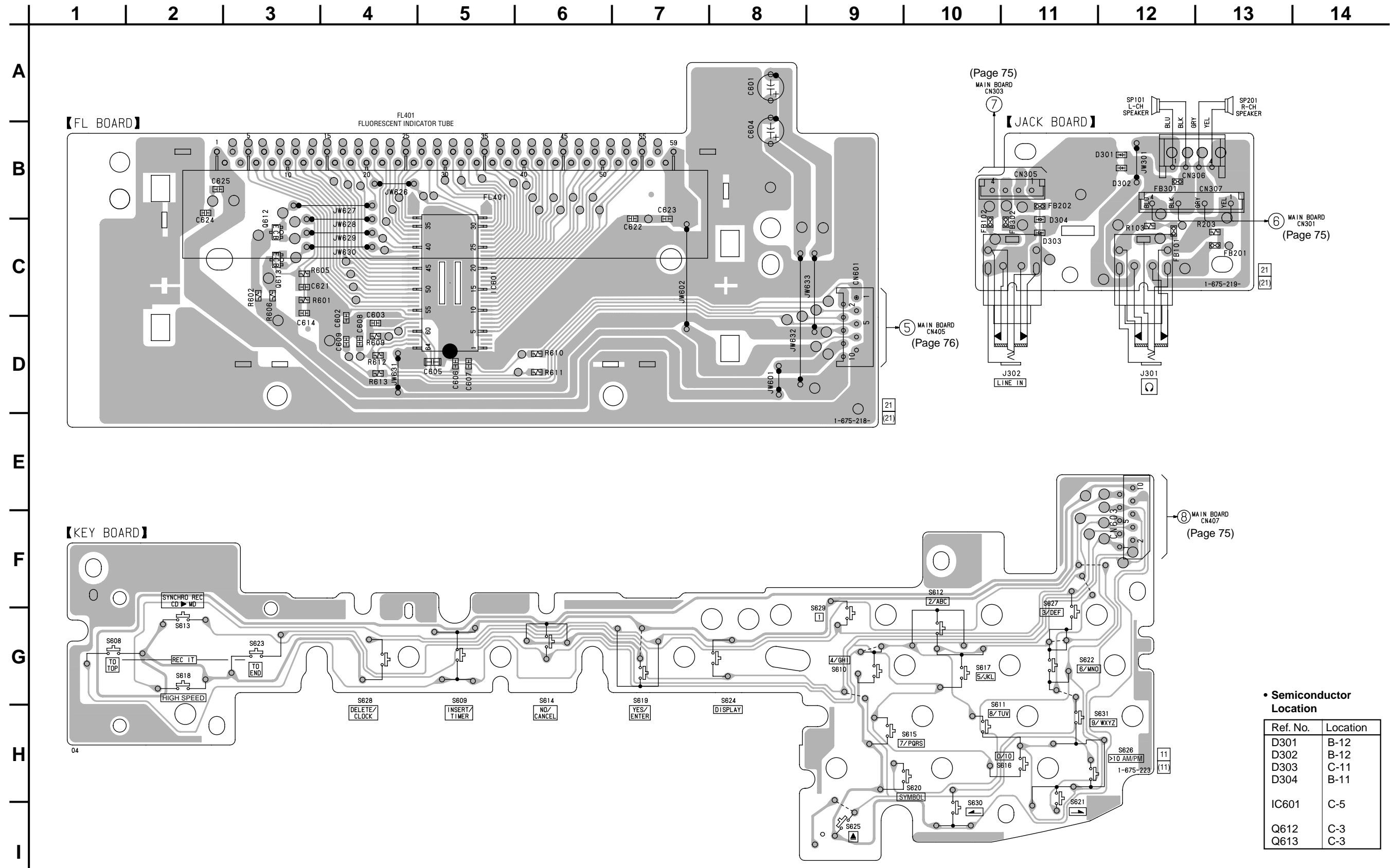
• Voltage is dc with respect to ground under no-signal (detuned) condition.
no mark : FM
() : MD STOP
< > : CD STOP

6-21. SCHEMATIC DIAGRAM — MAIN SECTION (3/3) — • Refer to page 54 for Note.



• Voltage is dc with respect to ground under no-signal (detuned) condition.
no mark : FM

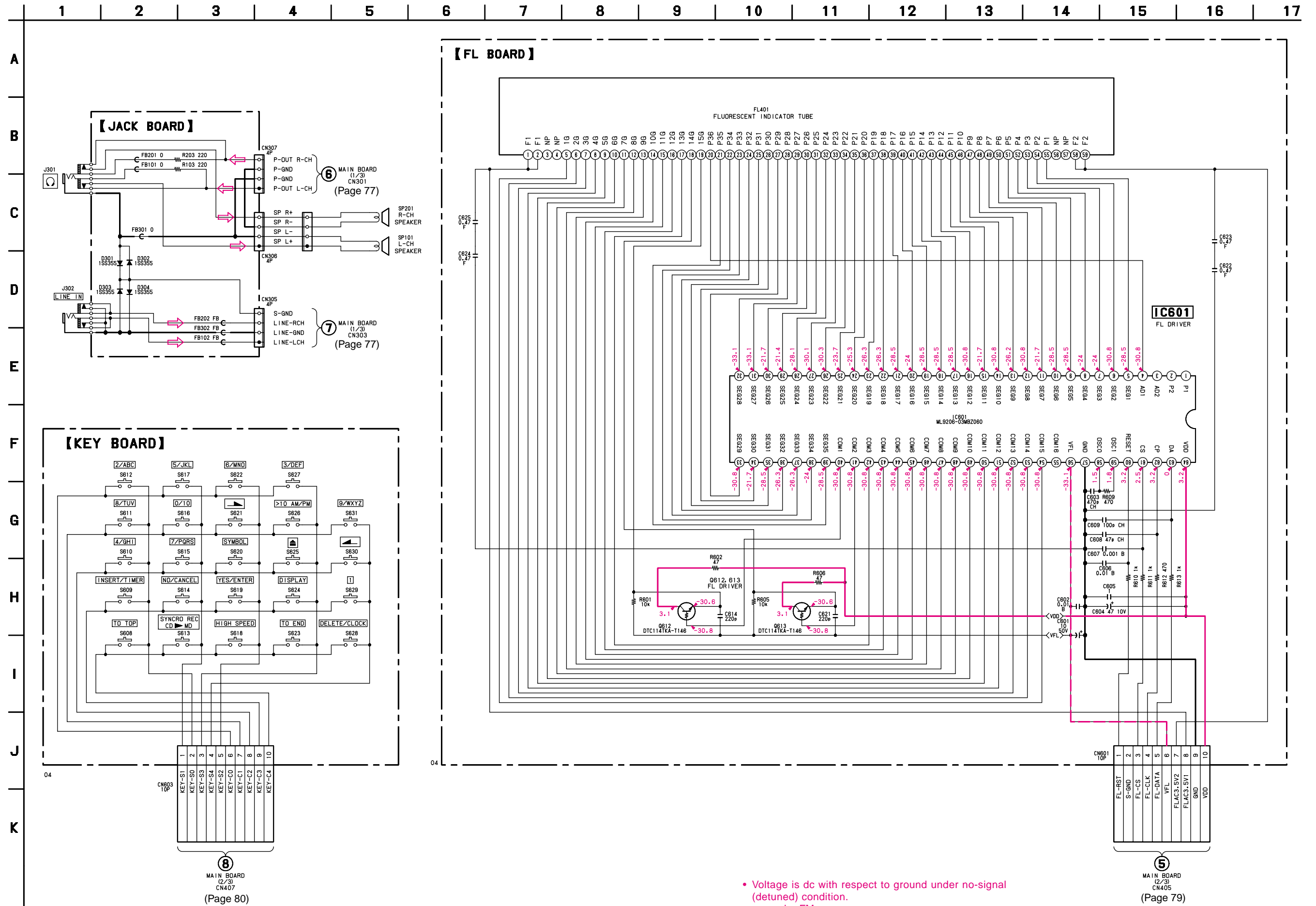
6-22. PRINTED WIRING BOARDS — PANEL SECTION — • Refer to page 53 for Note.



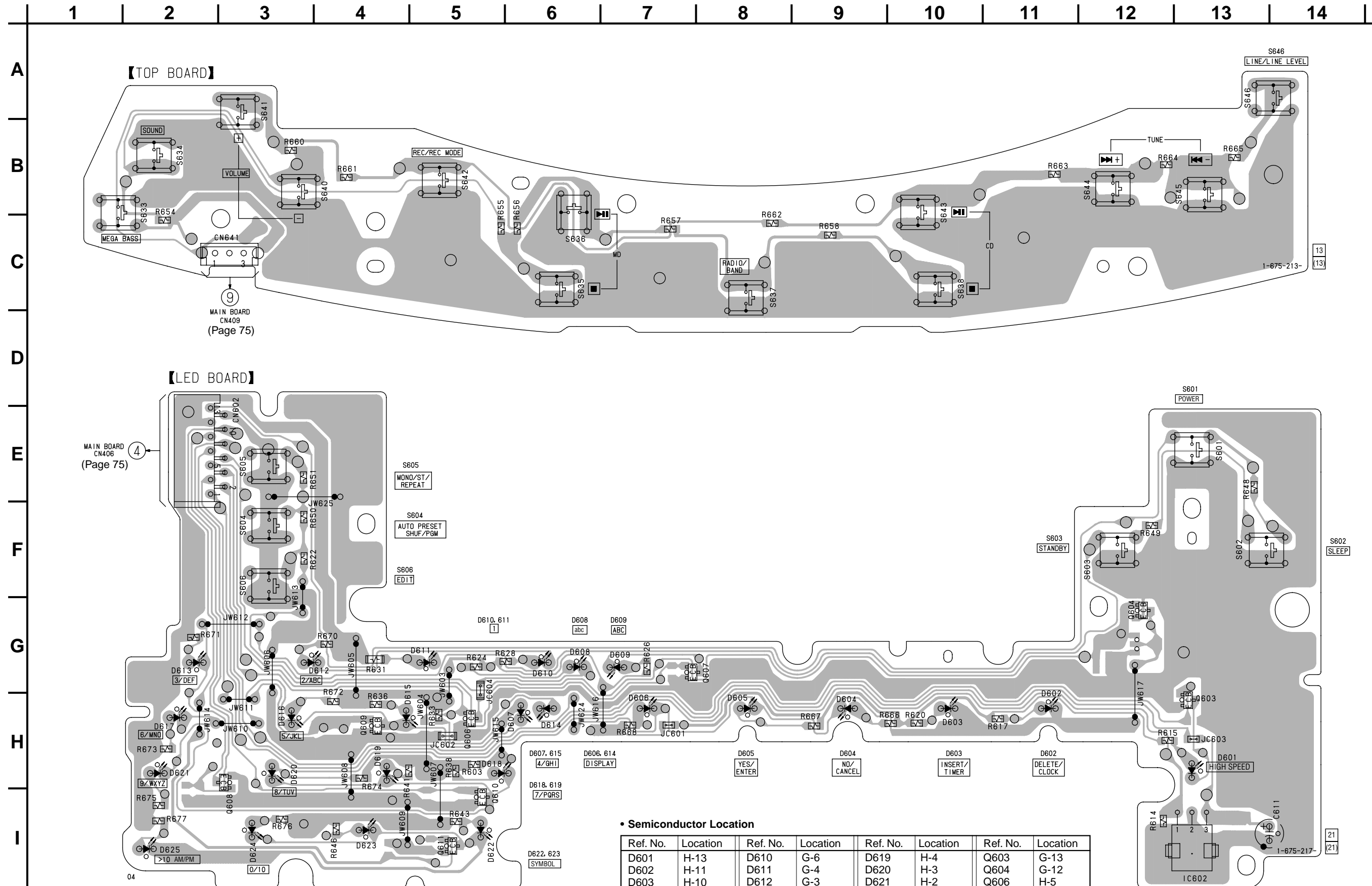
• Semiconductor Location

Ref. No.	Location
D301	B-12
D302	B-12
D303	C-11
D304	B-11
IC601	C-5
Q612	C-3
Q613	C-3

6-23. SCHEMATIC DIAGRAMS — PANEL SECTION — • Refer to page 99 for IC Block Diagrams.
• Refer to page 54 for Note.



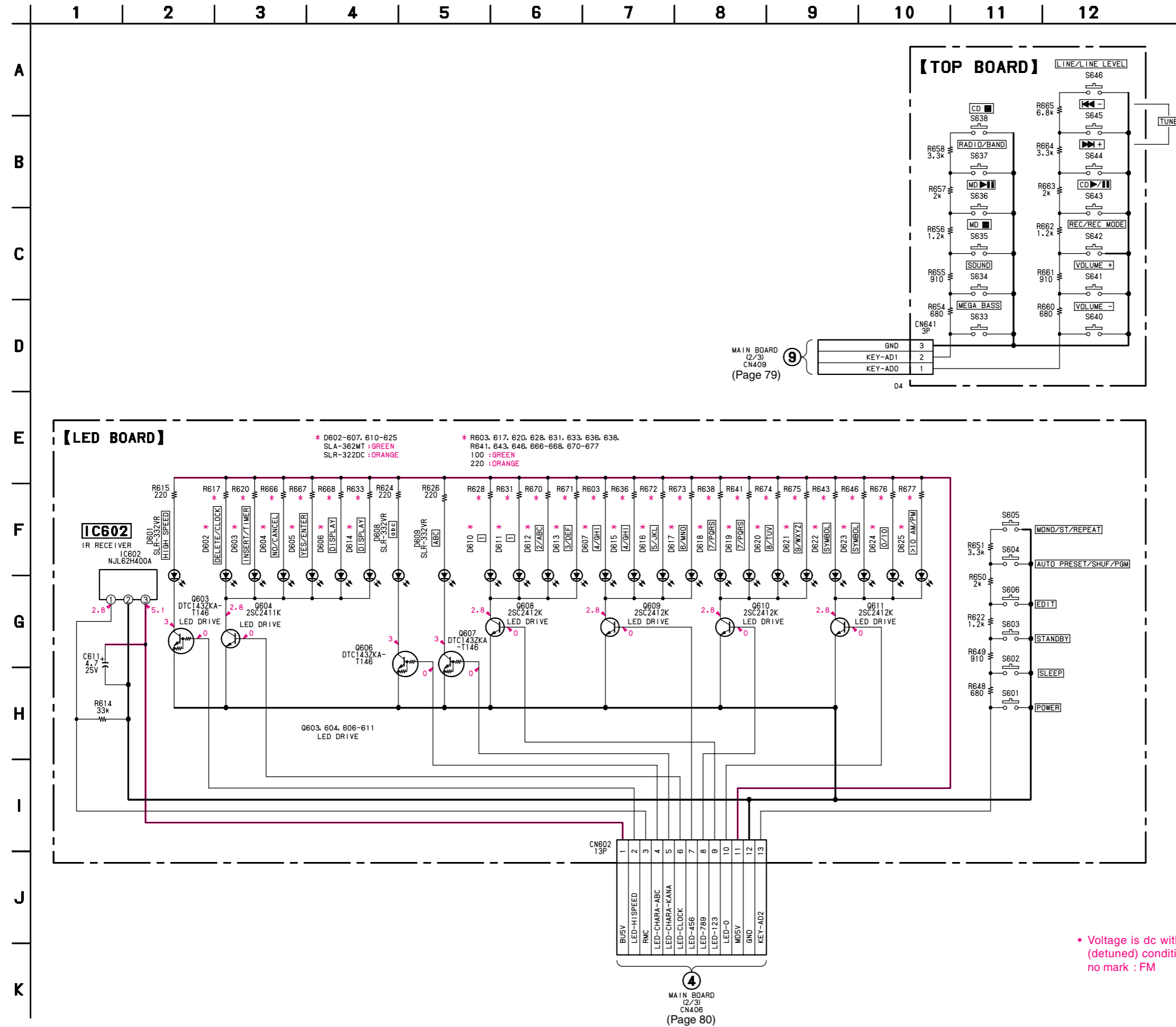
6-24. PRINTED WIRING BOARDS — SWITCH SECTION — • Refer to page 53 for Note.



• Semiconductor Location

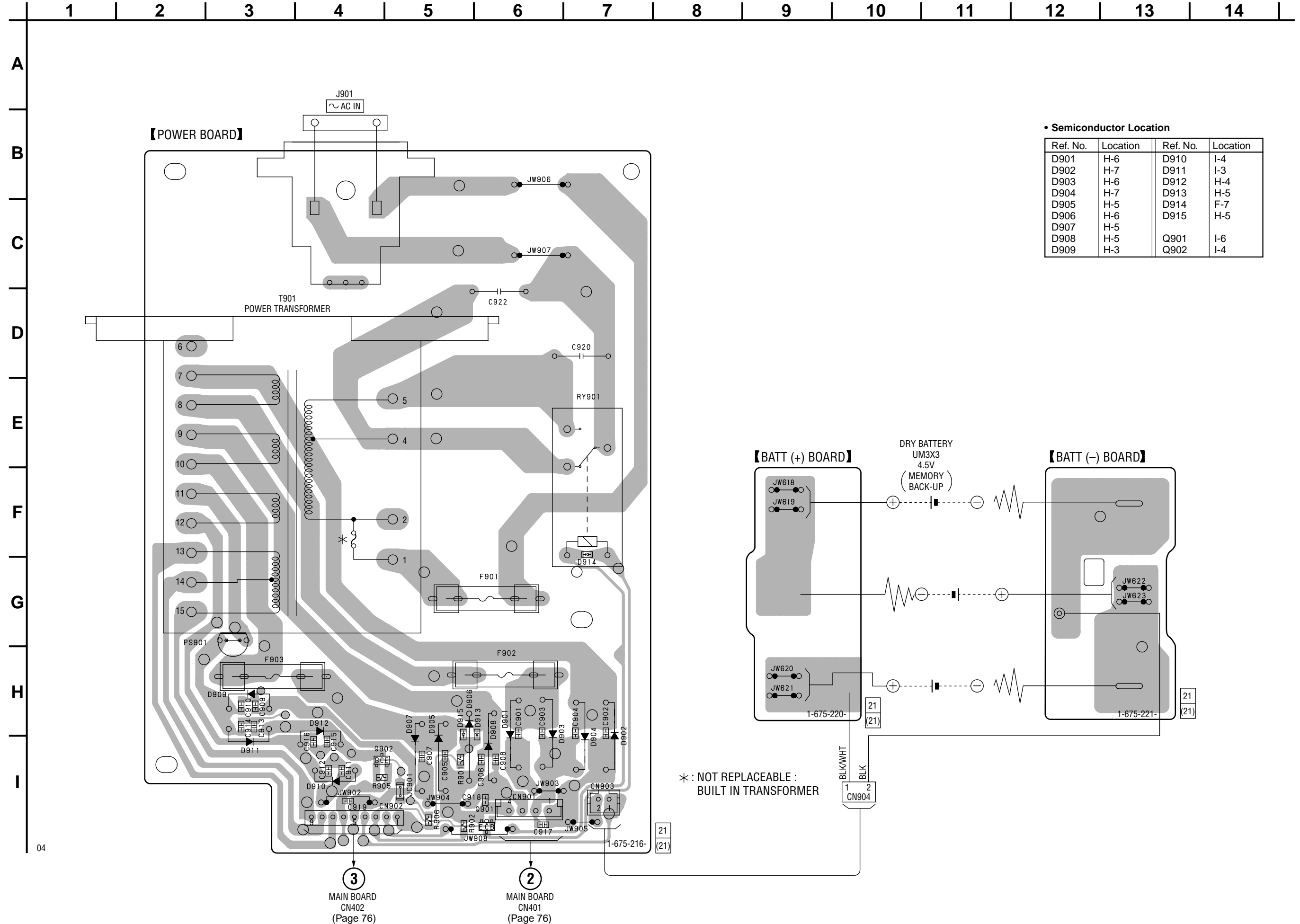
Ref. No.	Location	Ref. No.	Location	Ref. No.	Location	Ref. No.	Location
D601	H-13	D610	G-6	D619	H-4	Q603	G-13
D602	H-11	D611	G-4	D620	H-3	Q604	G-12
D603	H-10	D612	G-3	D621	H-2	Q606	H-5
D604	H-9	D613	G-2	D622	I-5	Q607	G-7
D605	H-8	D614	H-6	D623	I-4	Q608	H-3
D606	H-7	D615	H-4	D624	I-3	Q609	H-4
D607	H-5	D616	H-3	D625	I-2	Q610	H-5
D608	G-6	D617	H-2			Q611	I-5
D609	G-7	D618	H-5	IC602	I-13		

6-25. SCHEMATIC DIAGRAMS — SWITCH SECTION — • Refer to page 54 for Note.



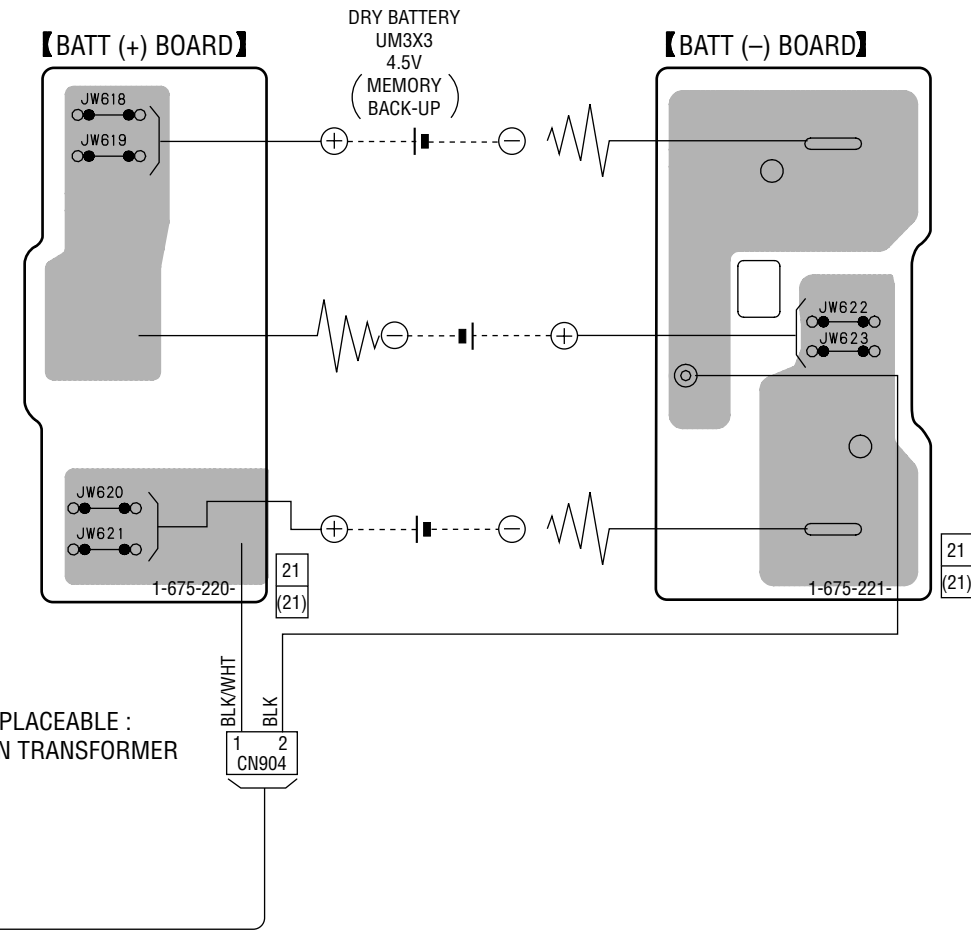
• Voltage is dc with respect to ground under no-signal (detuned) condition.
no mark : FM

6-26. PRINTED WIRING BOARDS — POWER SUPPLY SECTION — • Refer to page 53 for Note.

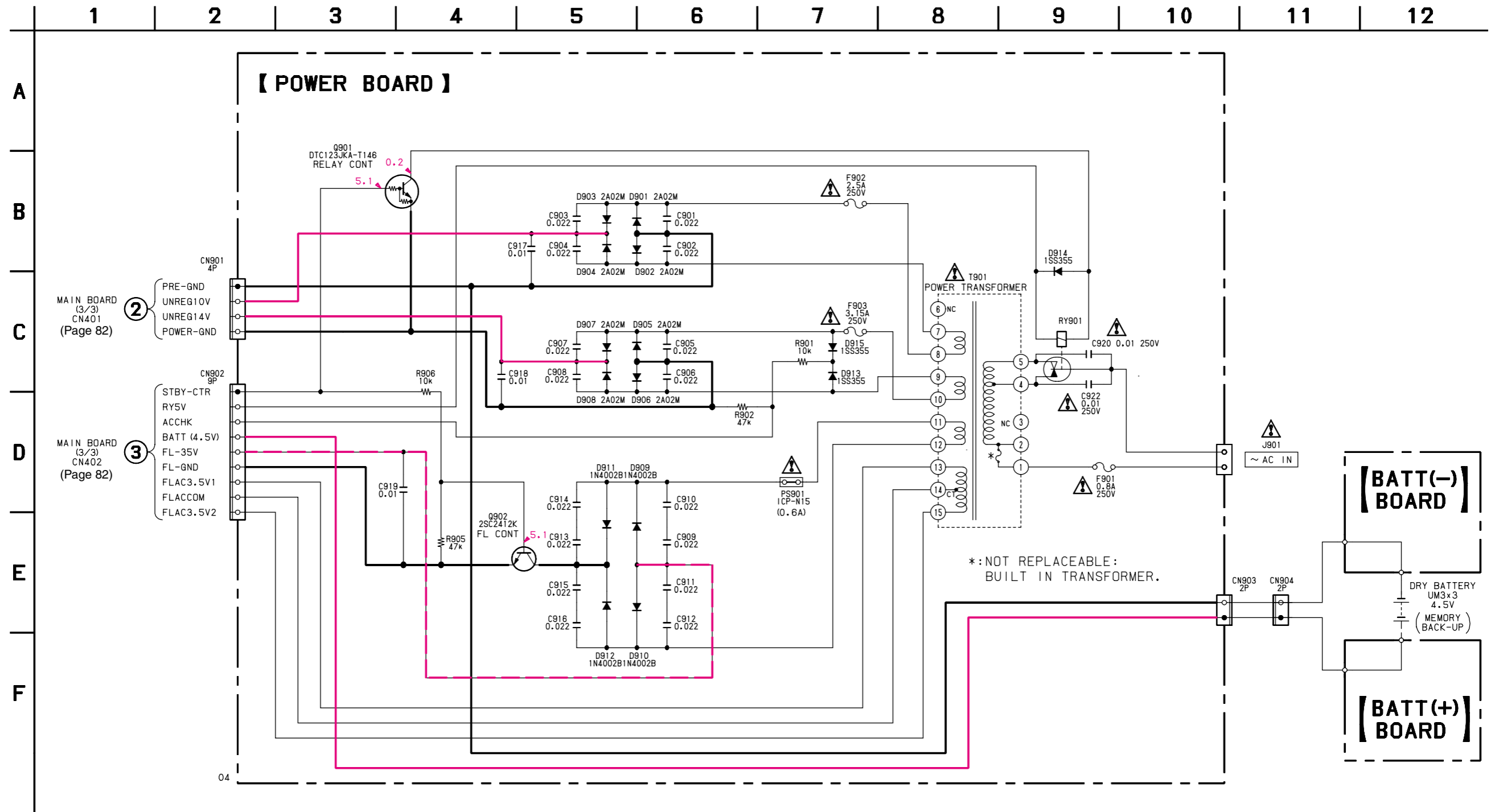


• Semiconductor Location

Ref. No.	Location	Ref. No.	Location
D901	H-6	D910	I-4
D902	H-7	D911	I-3
D903	H-6	D912	H-4
D904	H-7	D913	H-5
D905	H-5	D914	F-7
D906	H-6	D915	H-5
D907	H-5	Q901	I-6
D908	H-5	Q902	I-4
D909	H-3		



6-27. SCHEMATIC DIAGRAMS — POWER SUPPLY SECTION — • Refer to page 54 for Note.

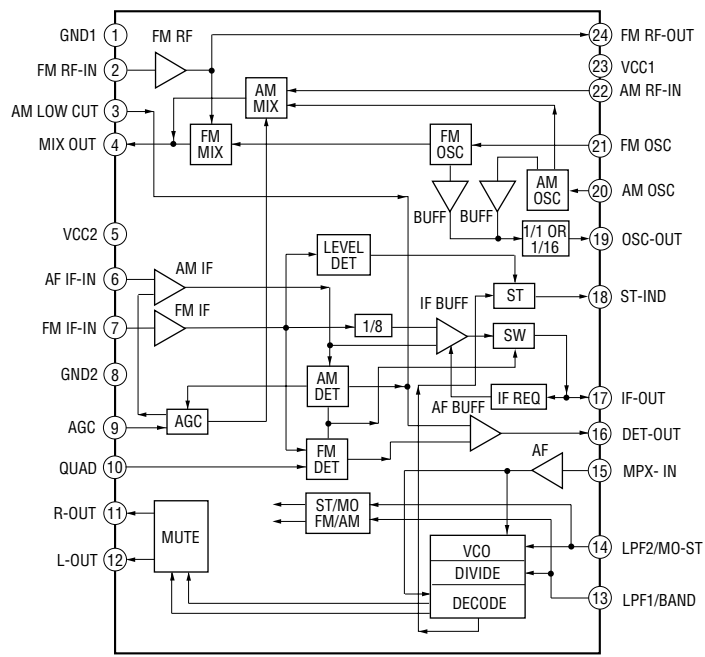


<p>Note: The components identified by mark \triangle or dotted line with mark \triangle are critical for safety. Replace only with part number specified.</p>	<p>Note: Les composants identifiés par une marque \triangle sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.</p>
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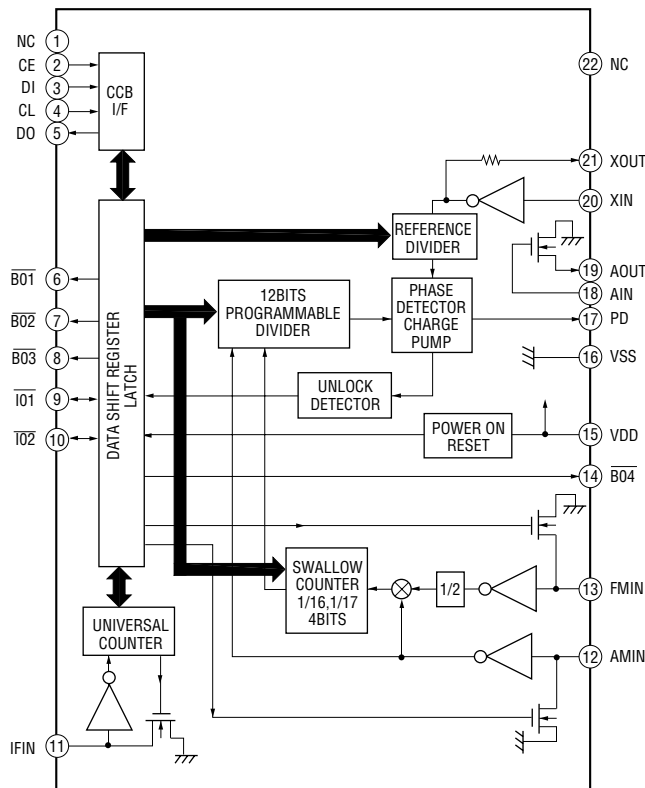
• Voltage is dc with respect to ground under no-signal (detuned) condition.
no mark : FM

6-28. IC BLOCK DIAGRAMS

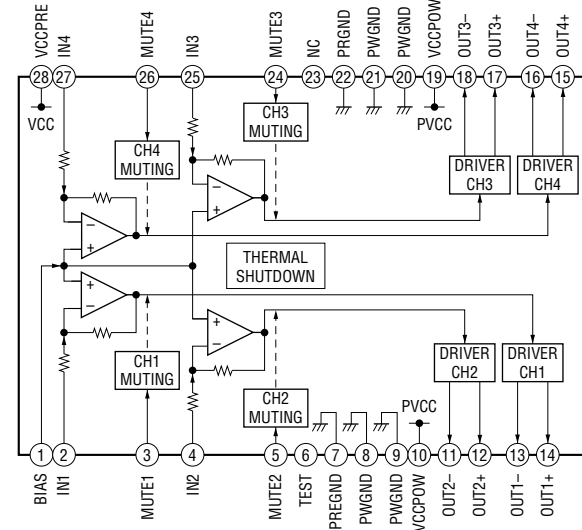
IC1 TA2149N



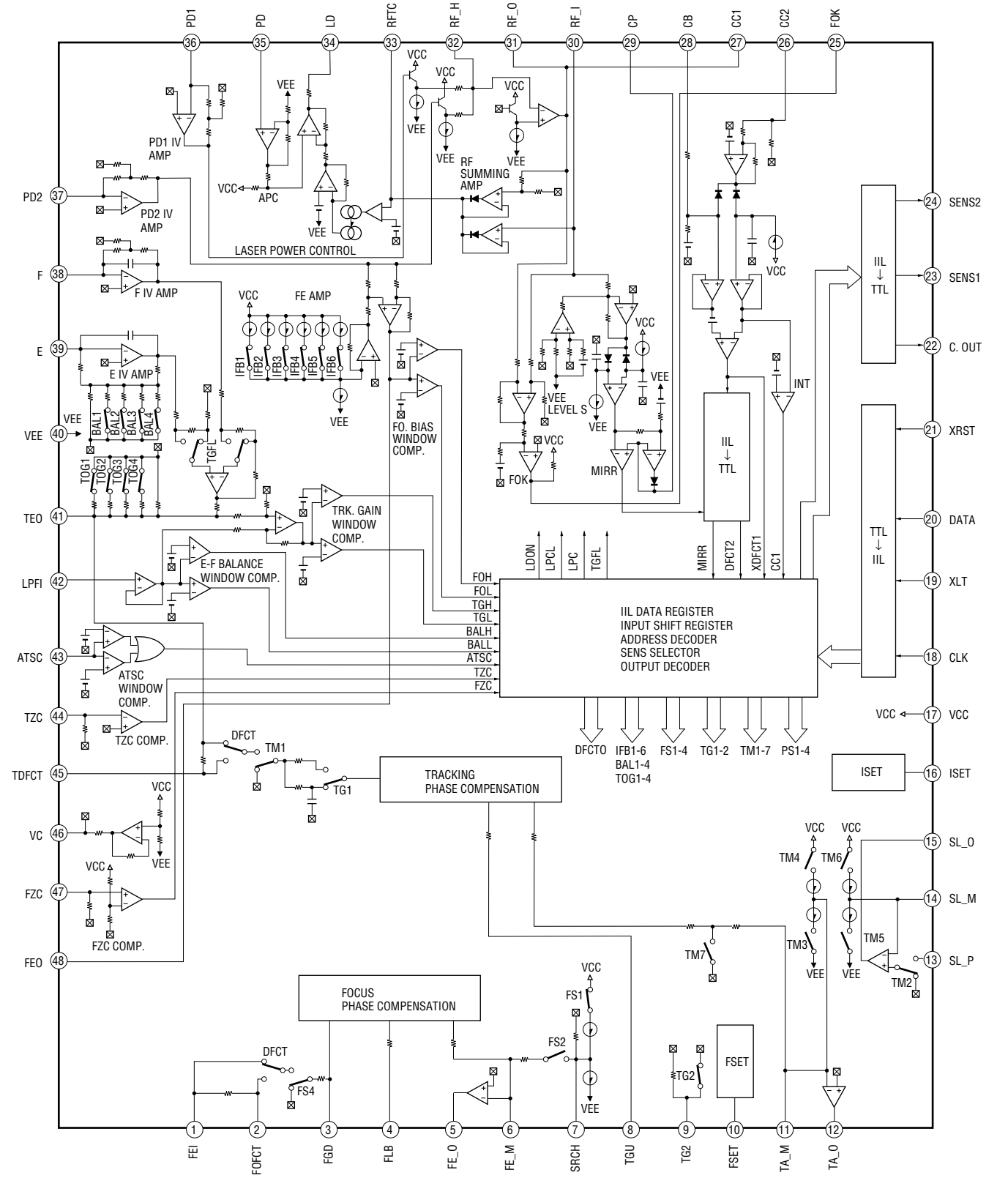
IC2 LC72137M-TLM



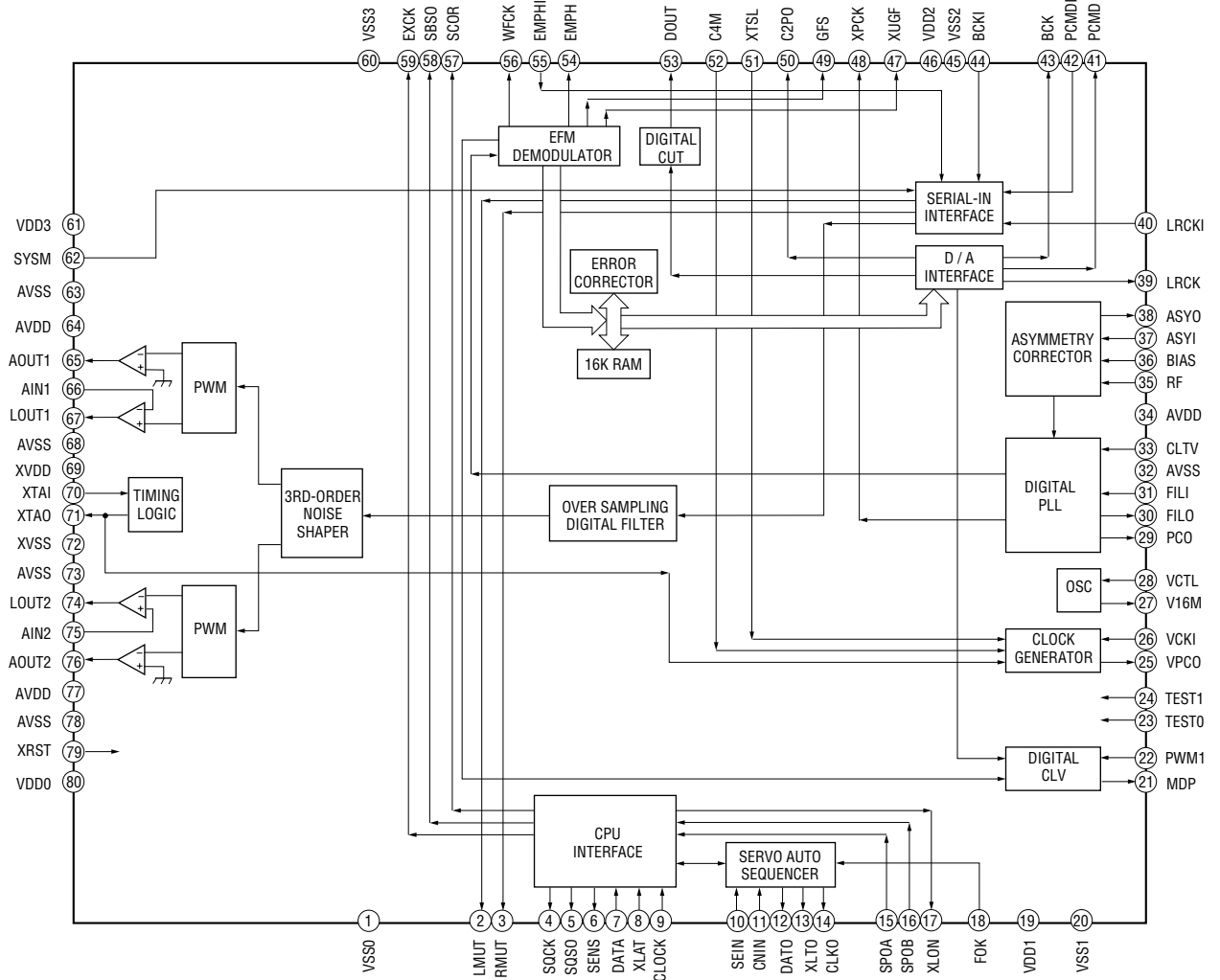
IC802 BA6892FP-E2



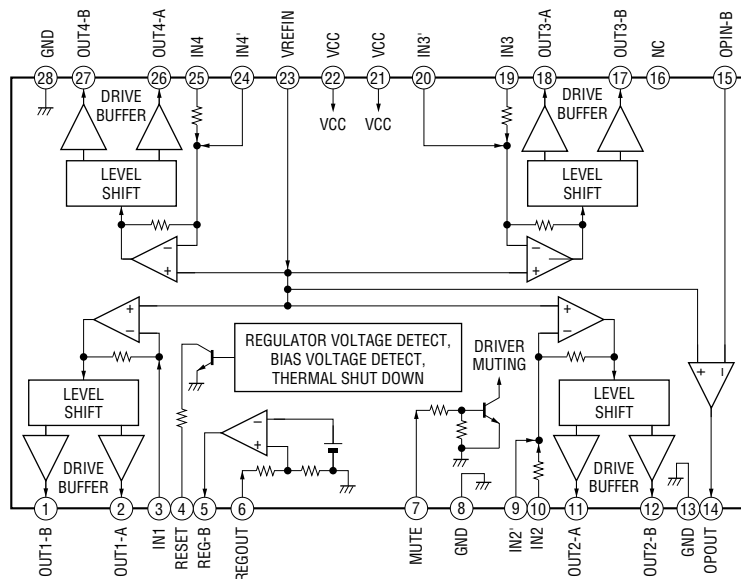
IC701 CXA2542AQ



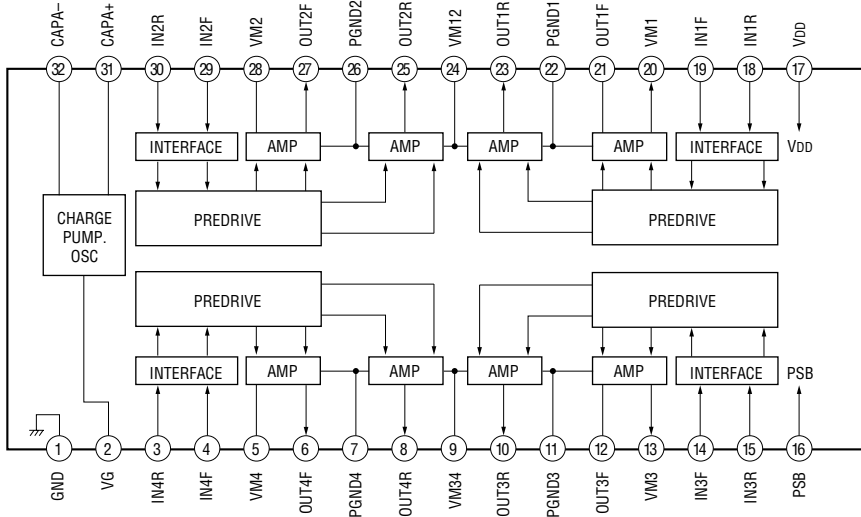
IC702 CXD3009Q



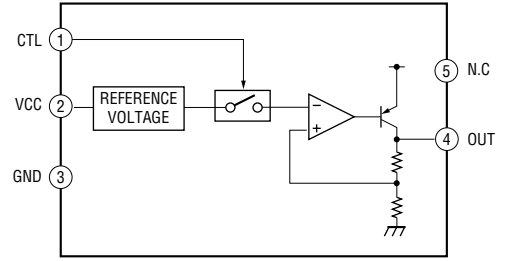
IC703 BA6998FP



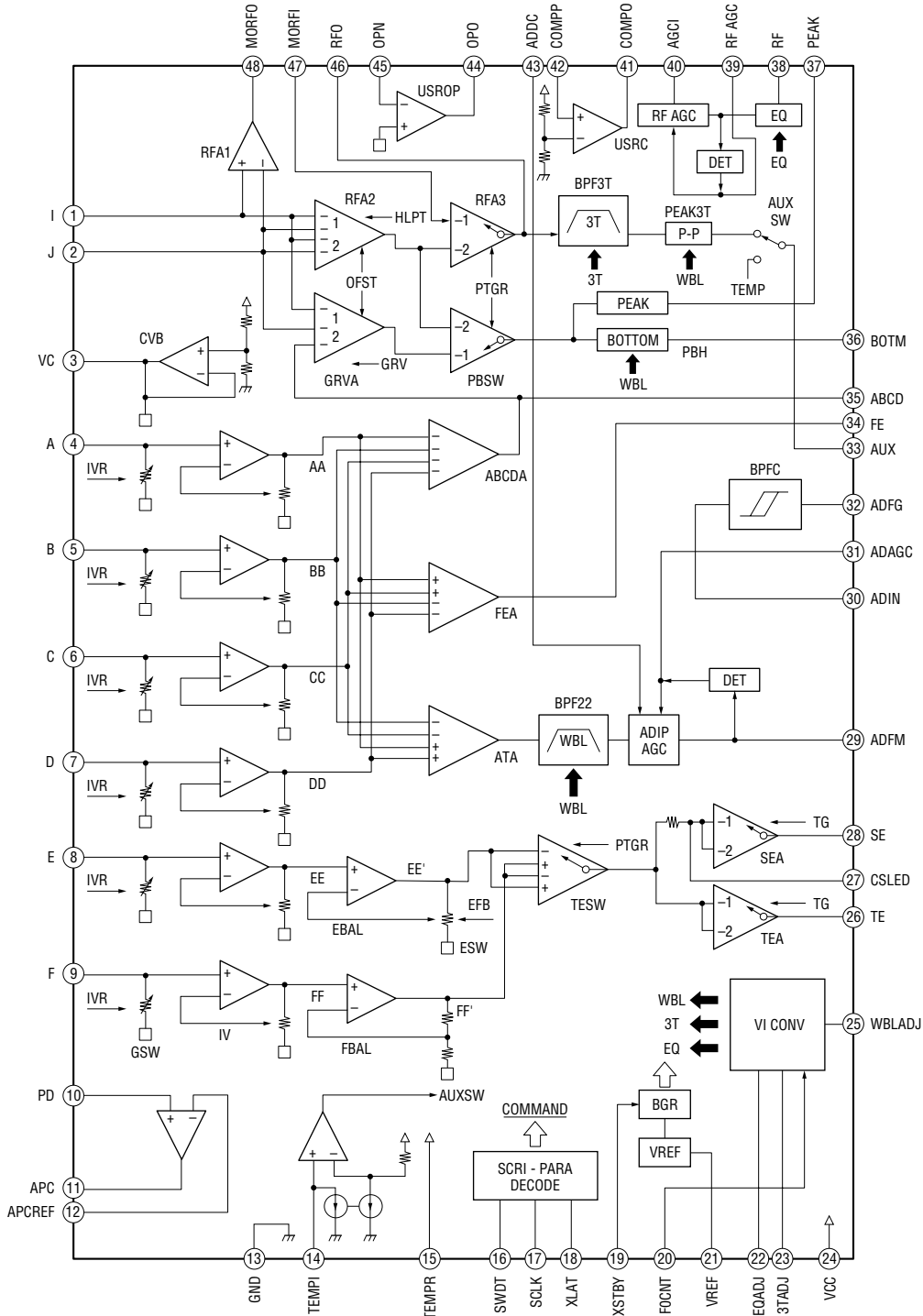
IC152 BH6511FS



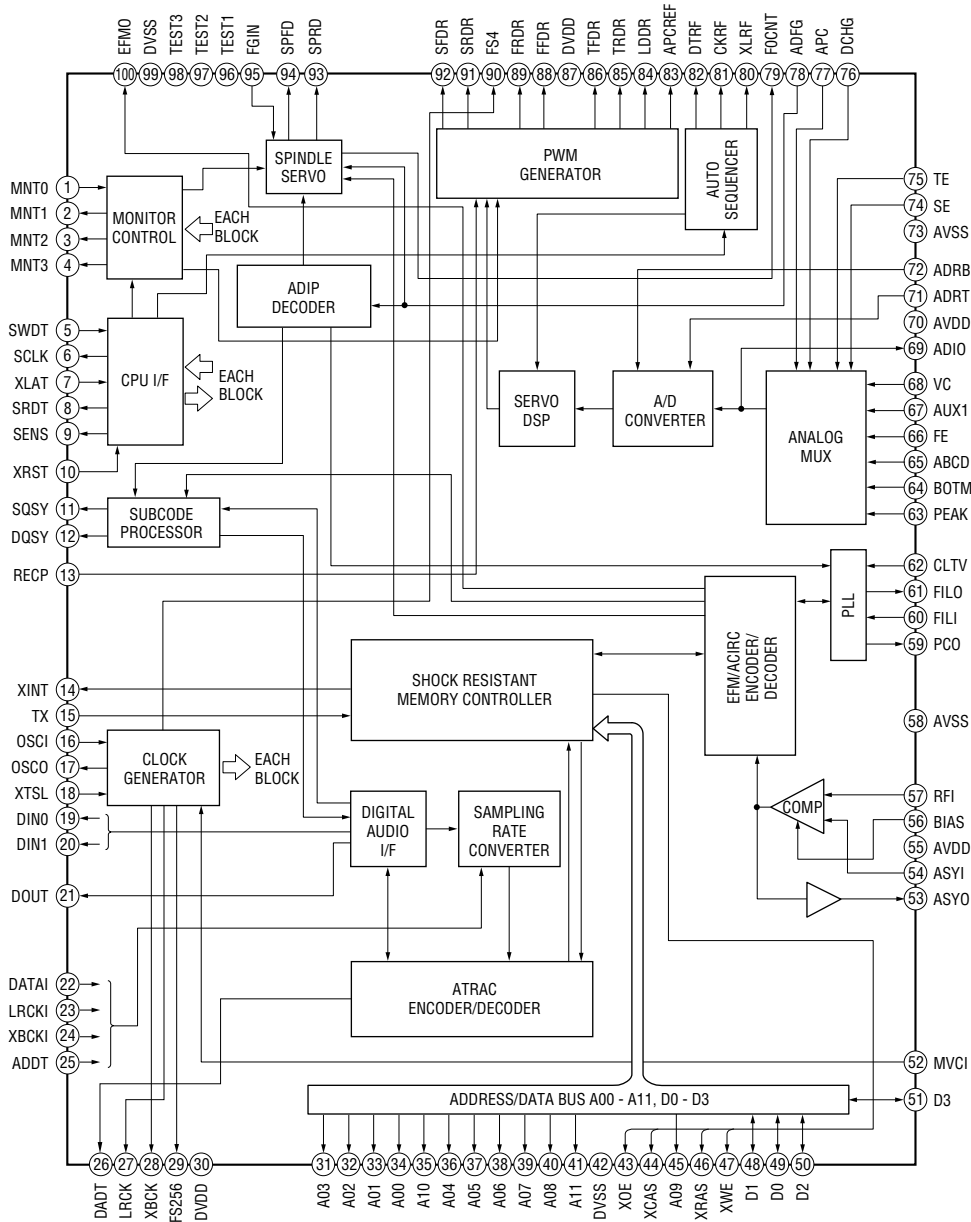
IC192 BA033FP-E2



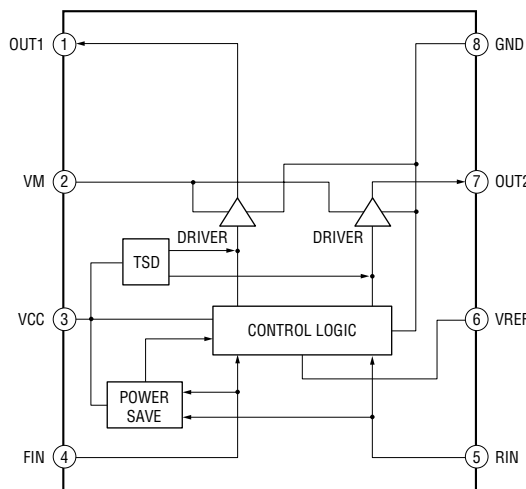
IC101 CXA2523AR



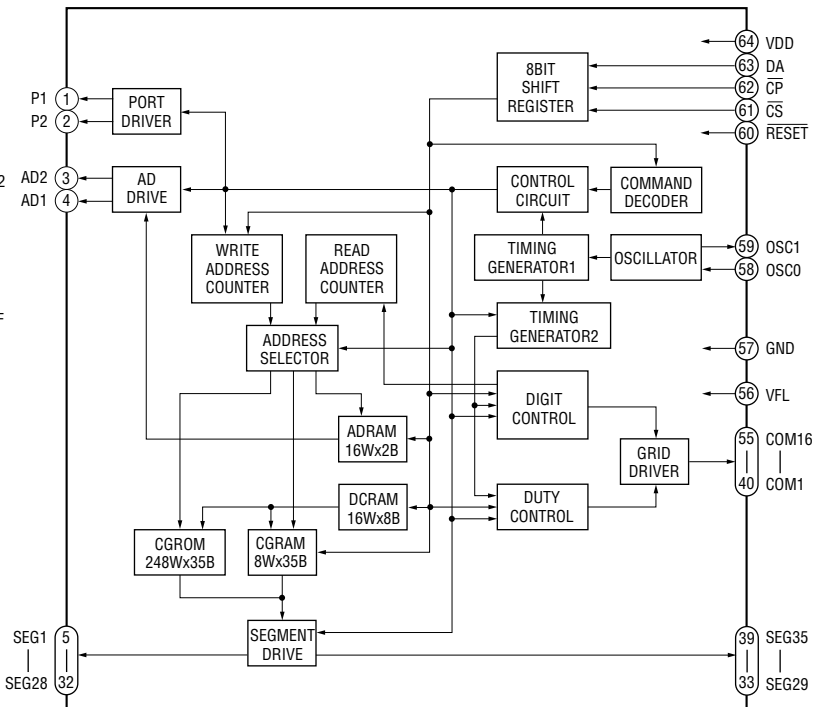
IC121 CXD2654R



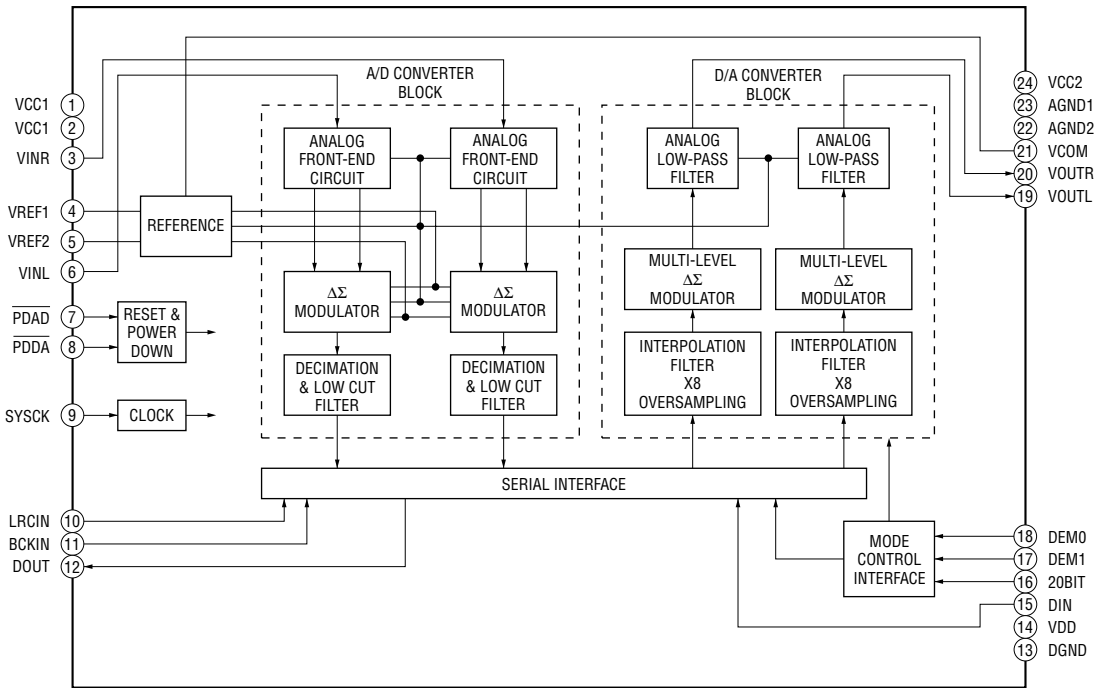
IC602 BA6287F



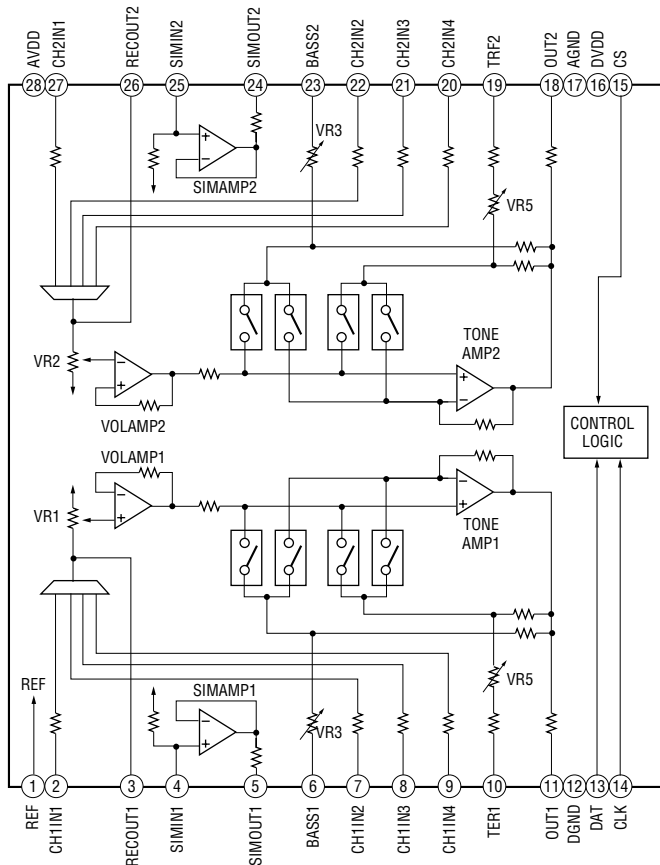
IC601 ML9206-03MBZ060 (FL BOARD)



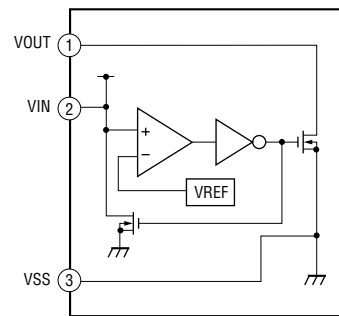
IC603 PCM3003E/T2



IC302 M62443FPD61Q



IC411 XC62FP3302PR



SECTION 7 EXPLODED VIEWS

NOTE:

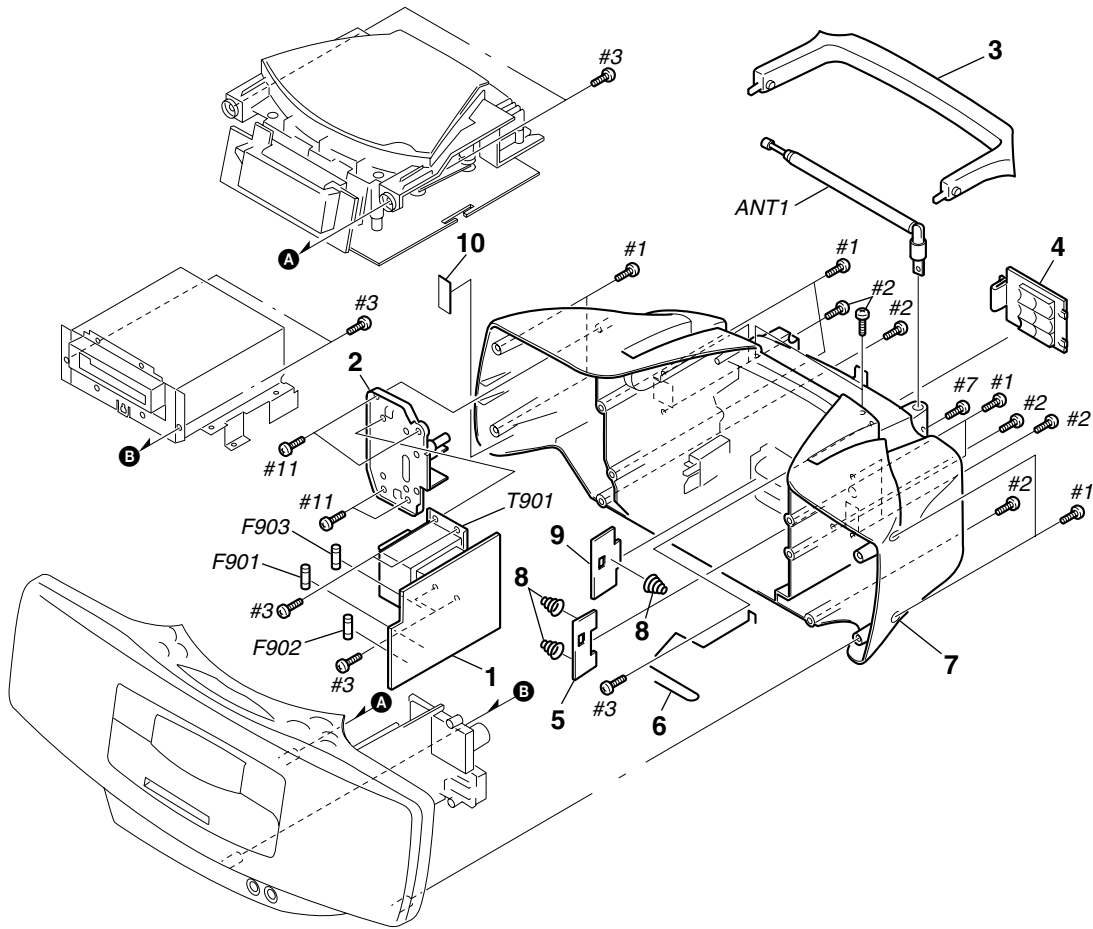
- The mechanical parts with no reference number in the exploded views are not supplied.
- Items marked “*” are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

- -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 and packing materials are given in the last of this parts list.

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

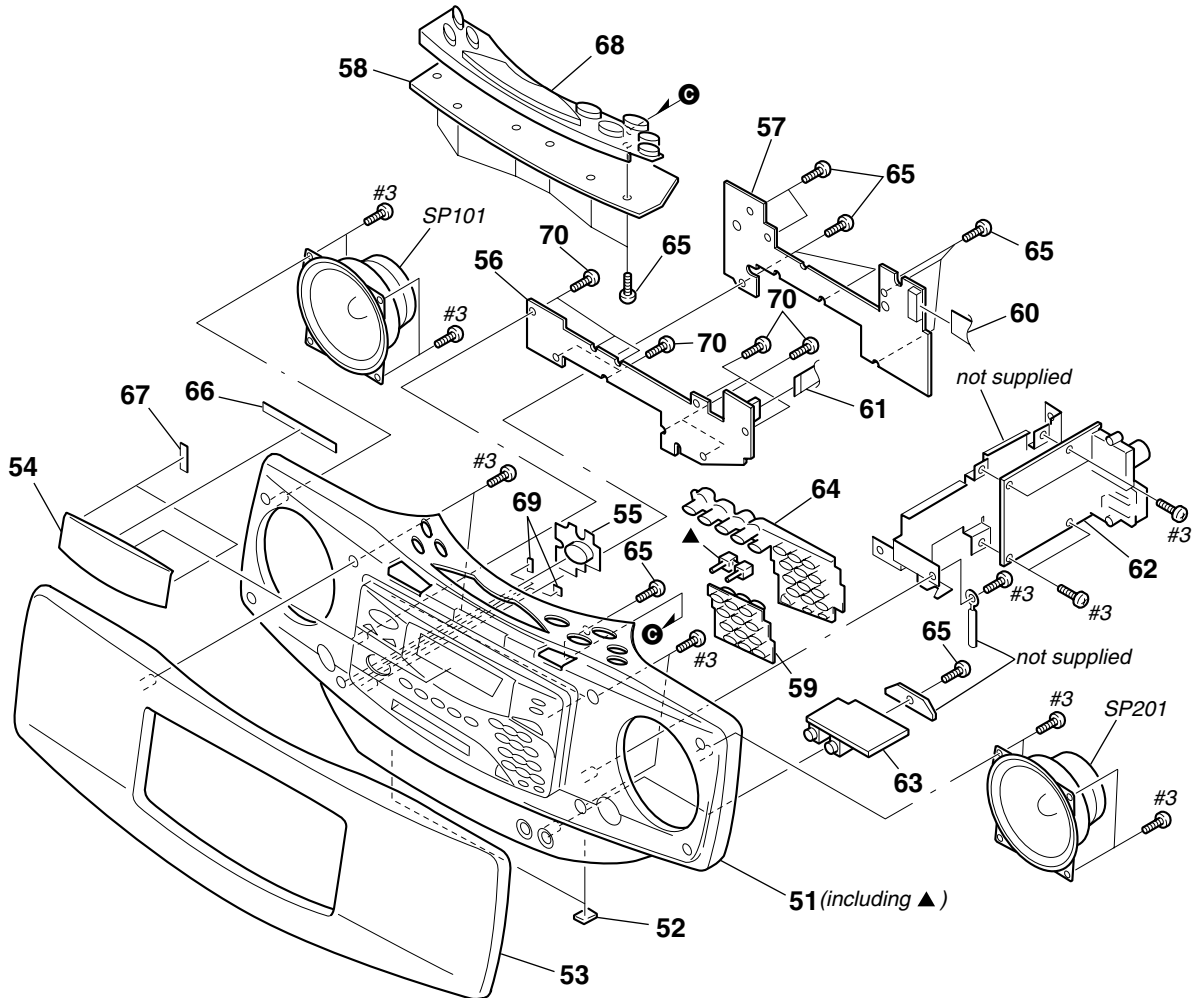
Les composants identifiés par une marque Δ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

7-1. CABINET (REAR) SECTION



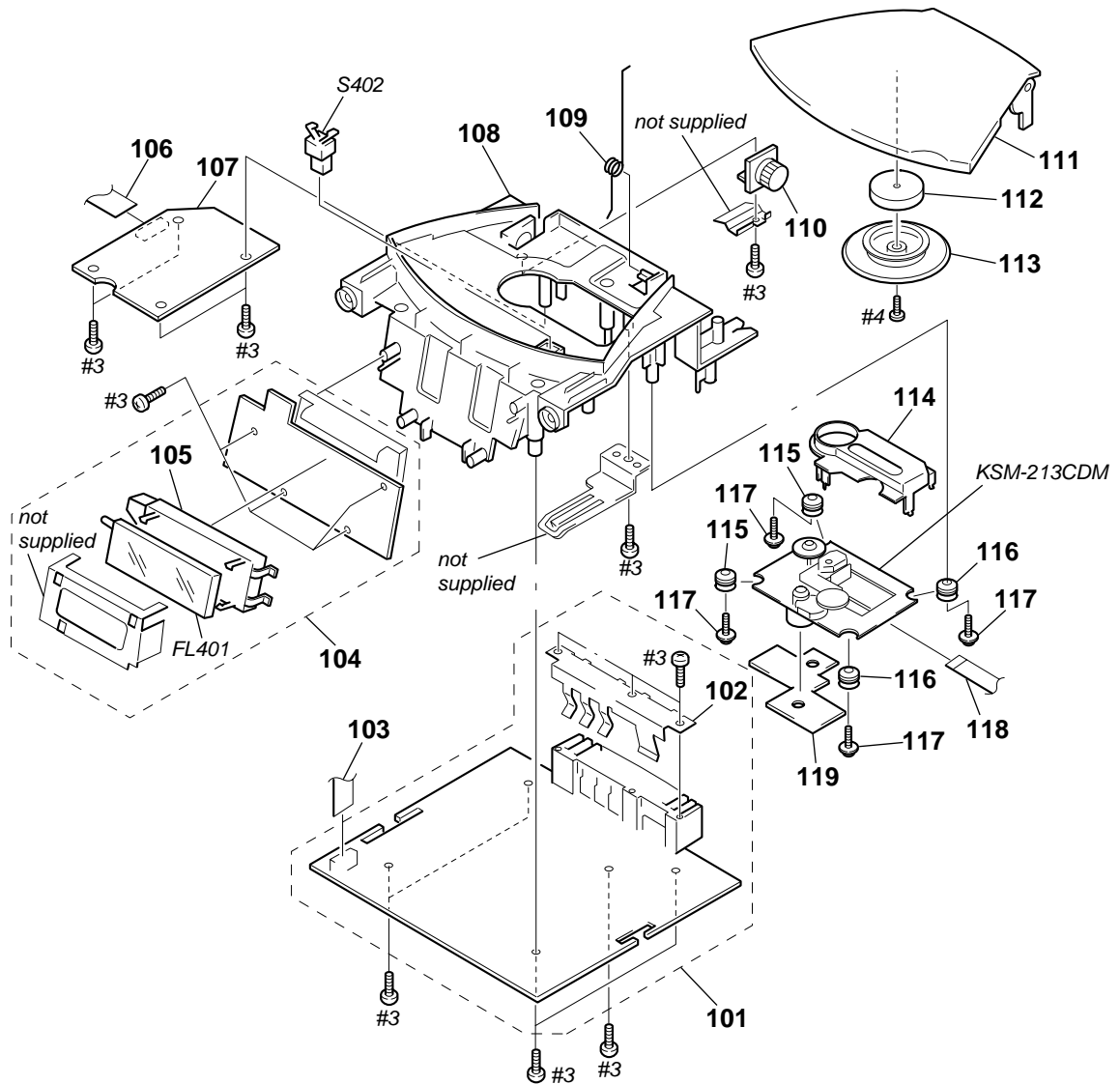
Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
* 1	A-3322-637-A	POWER BOARD, COMPLETE		7	3-224-133-31	CABINET (REAR) (BLUE)	
* 2	3-039-987-01	CHASSIS, TRANSFORMER		7	3-224-133-41	CABINET (REAR) (ORANGE)	
3	3-039-974-21	HANDLE (BLUE)		8	3-039-967-01	TERMINAL (BATT -), BATTERY	
3	3-039-974-31	HANDLE (ORANGE)		* 9	1-675-220-11	BATT (+) BOARD	
3	3-039-974-41	HANDLE (BLACK)		* 10	3-703-044-26	LABEL, CAUTION	
4	3-039-976-21	LID, BATTERY CASE (BLUE)		ANT1	1-501-452-11	ANTENNA, TELESCOPIC	
4	3-039-976-31	LID, BATTERY CASE (ORANGE)		Δ F901	1-576-099-11	FUSE (0.8A/250V)	
4	3-039-976-51	LID, BATTERY CASE (BLACK)		Δ F902	1-576-105-11	FUSE (2.5A/250V)	
* 5	1-675-221-11	BATT (-) BOARD		Δ F903	1-576-107-11	FUSE (3.15A/250V)	
6	3-039-958-01	TERMINAL, ANT		Δ T901	1-435-320-11	TRANSFORMER, POWER	
7	3-039-971-51	CABINET (REAR) (BLACK)					

7-2. CABINET (FRONT) SECTION



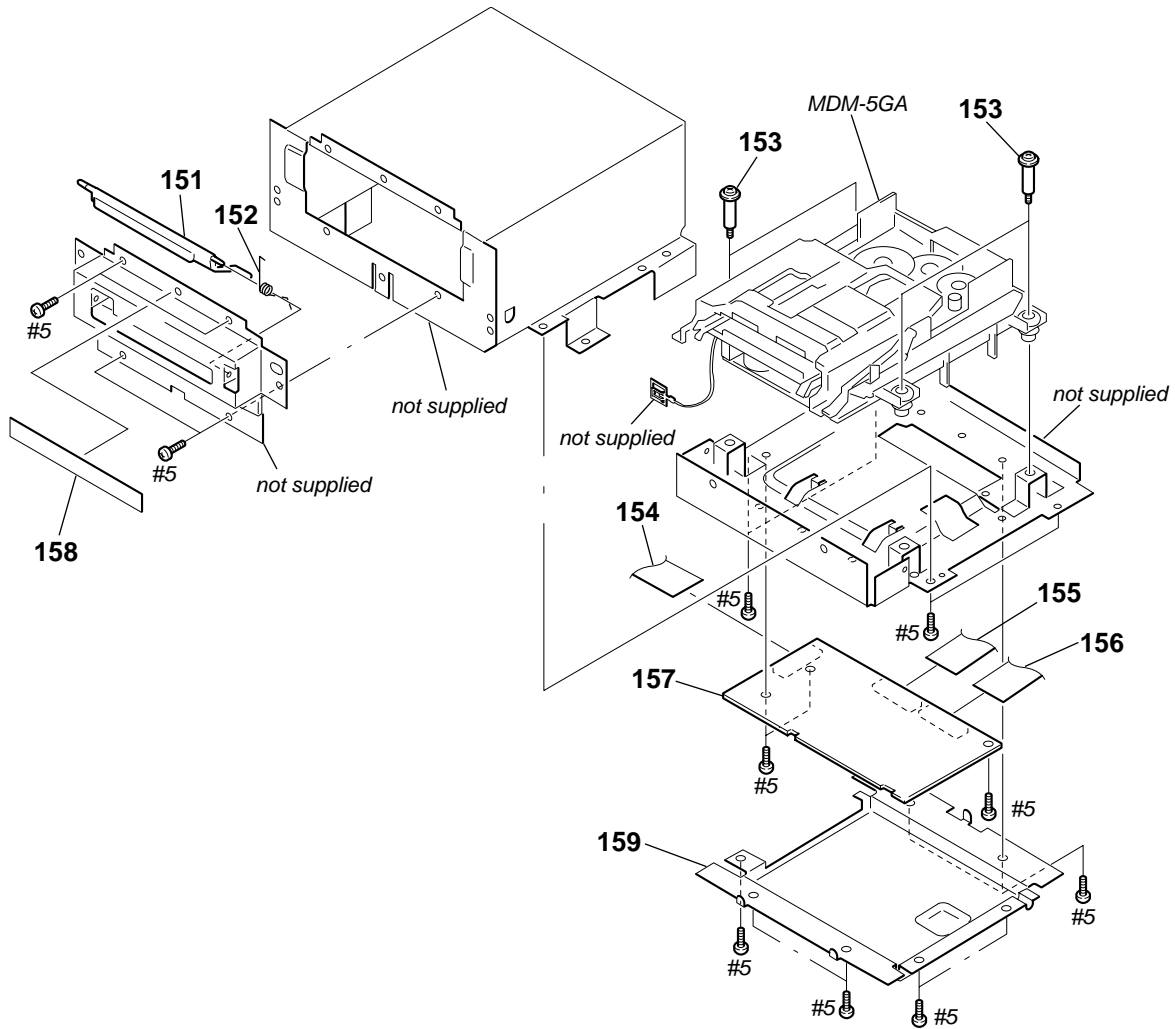
Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
51	X-3378-657-1	CABINET FRONT (SUB) ASSY		61	1-791-522-11	WIRE, PARALLEL (FFC) (10 CORE)	
52	3-040-916-01	FOOT (F), RUBBER		* 62	A-3322-634-A	TUNER BOARD, COMPLETE	
53	X-3377-977-1	CHASSIS ASSY, NET (BLACK)		* 63	1-675-219-11	JACK BOARD	
53	X-3378-003-1	CHASSIS ASSY, NET (BLUE)		64	3-039-979-01	BUTTON (10 KEY)	
53	X-3378-052-1	CHASSIS ASSY, NET (ORANGE)		65	4-951-620-01	SCREW (2.6X8), +BVTP	
54	3-039-977-02	WINDOW (FL)		66	3-041-800-01	SHEET (A), ADHESIVE	
55	3-040-704-01	BUTTON (REC) (4P)		67	3-041-801-01	SHEET (B), ADHESIVE	
* 56	1-675-223-11	KEY BOARD		68	X-3378-404-1	BUTTON (TOP) ASSY	
* 57	A-3062-399-A	LED BOARD, COMPLETE (ORANGE)		69	3-047-735-01	CUSHION (REC), RUBBER	
* 57	A-3322-633-A	LED BOARD, COMPLETE (GREEN)		70	4-951-620-11	SCREW (2.6X10), +BVTP	
* 58	1-675-213-11	TOP BOARD		SP101	1-529-463-11	SPEAKER (8cm)	
59	3-039-954-01	PLATE (10 KEY), LIGHT GUIDE		SP201	1-529-463-11	SPEAKER (8cm)	
60	1-791-523-11	WIRE, PARALLEL (FFC) (13 CORE)					

7-3. CABINET (UPPER) SECTION



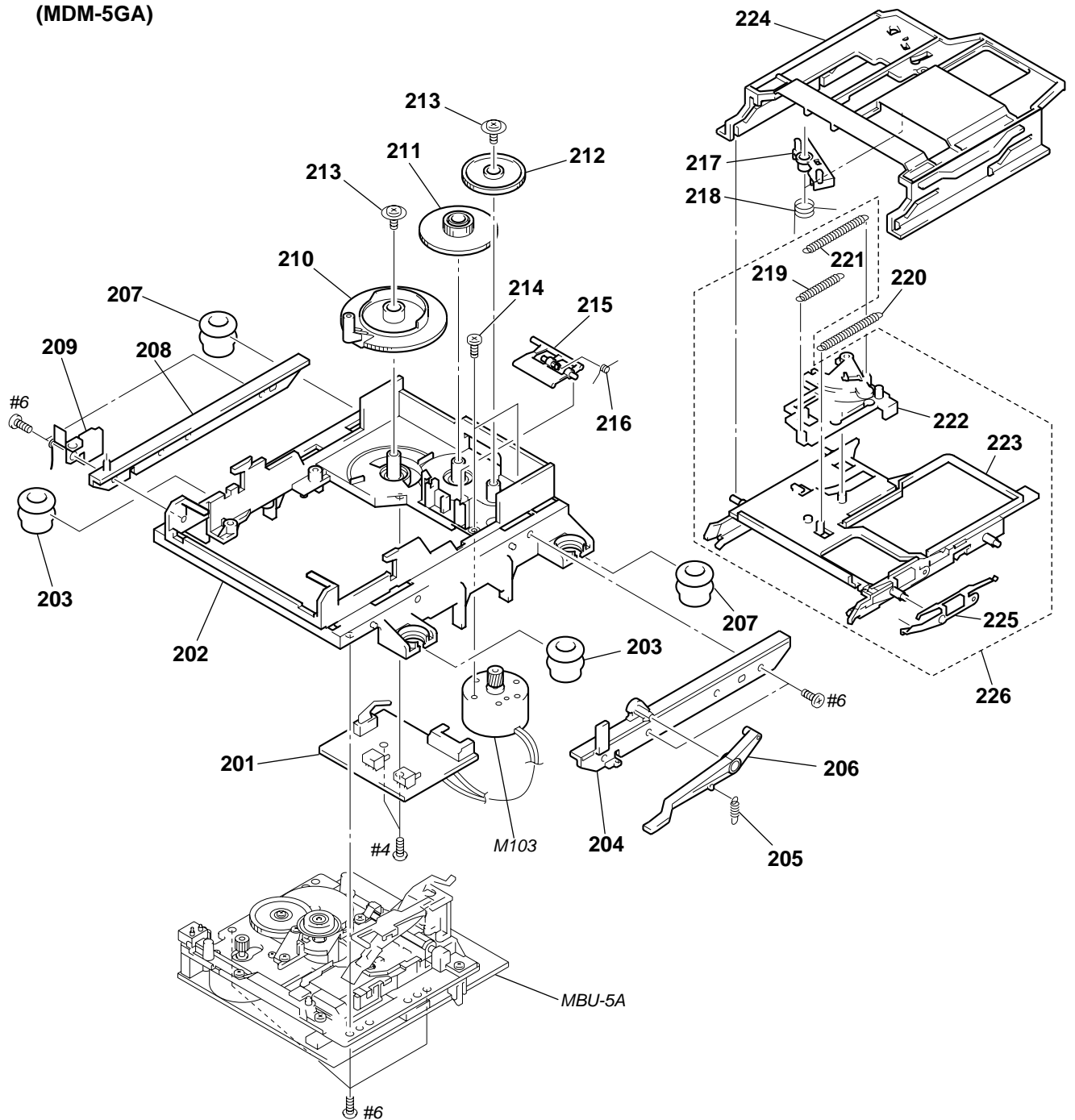
Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
* 101	A-3322-636-A	MAIN BOARD, COMPLETE		112	1-452-899-11	MAGNET	
102	3-039-961-01	SPRING (IC)		113	3-036-467-01	PLATE, CHUCKING	
103	1-791-521-11	WIRE, PARALLEL (FFC) (10 CORE)		114	3-923-736-01	COVER, CD	
* 104	A-3322-656-A	FL BOARD, COMPLETE		115	3-931-379-31	RUBBER, VIBRATION PROOF	
105	3-039-978-01	HOLDER (FL)		116	3-931-379-21	RUBBER, VIBRATION PROOF	
106	1-791-520-11	WIRE, PARALLEL (FFC) (18 CORE)		117	3-921-725-01	SCREW (2.6X10), +PWH	
* 107	A-3322-529-A	CD BOARD, COMPLETE		118	1-791-518-11	WIRE, PARALLEL (FFC) (16 CORE)	
108	3-039-972-01	CABINET (UPPER)		* 119	A-3322-635-A	CD MOTOR BOARD, COMPLETE	
109	3-039-957-01	SPRING (CD UP)		FL401	1-517-916-11	INDICATOR TUBE, FLUORESCENT	
110	3-922-112-31	DAMPER		S402	1-692-960-11	SWITCH, PUSH (1 KEY) (CD DOOR)	
111	3-039-975-01	LID, CD					

7-4. MD BLOCK SECTION



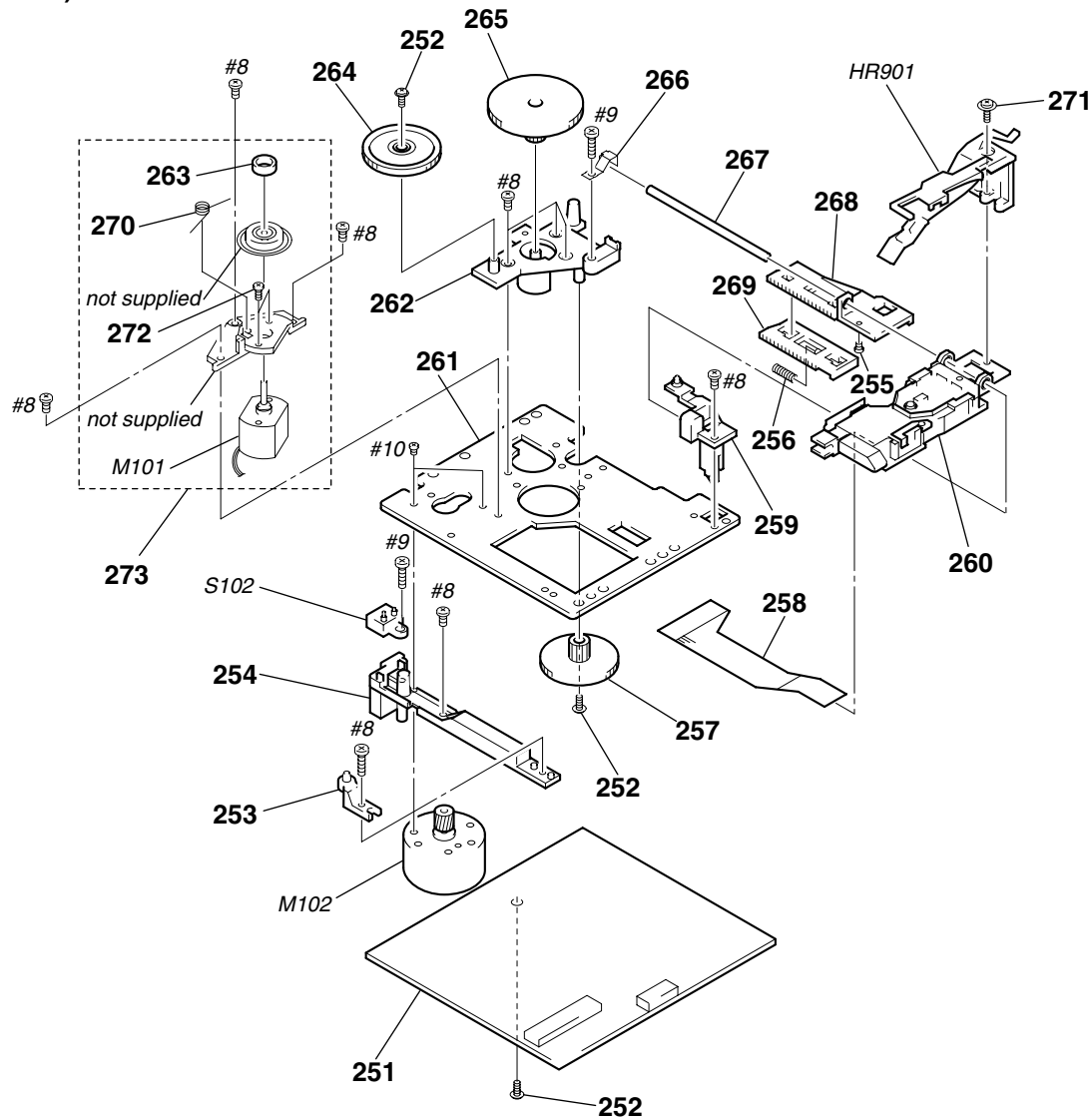
<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Remark</u>	<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Remark</u>
151	3-036-318-11	CARTRIDGE, LID		156	1-791-532-21	WIRE, PARALLEL (FFC) (23 CORE)	
152	3-036-311-01	SPRING (MD LID)		157	A-3322-531-A	DG BOARD, COMPLETE	
153	3-042-390-01	SCREW (+BVTTWH M3), STEP		158	3-041-799-01	SHEET, INSULATING	
154	1-791-519-11	WIRE, PARALLEL (FFC) (26 CORE)		159	X-3378-454-1	PLATE (LOWER) ASSY, SHIELD	
155	1-791-531-21	WIRE, PARALLEL (FFC) (21 CORE)					

**7-5. MD MECHANISM SECTION
(MDM-5GA)**



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
* 201	1-671-115-21	SW BOARD		215	4-996-227-11	LEVER (HEAD)	
* 202	4-996-217-01	CHASSIS		216	4-996-229-01	SPRING (HEAD LEVER), TORSION	
203	4-996-223-11	INSULATOR (F)		217	4-996-212-01	LEVER (LIMITER)	
* 204	4-996-218-01	BRACKET (GUIDE R)		218	4-996-213-01	SPRING (LIMITER), TORSION	
205	4-996-277-01	SPRING (O/C), TENSION		219	4-996-214-01	SPRING (SLIDER), TENSION	
206	4-996-226-01	LEVER (O/C)		220	4-996-216-01	SPRING (HOLDER), TENSION	
207	4-999-347-01	INSULATOR (R)		221	4-996-215-11	SPRING (LOCK LEVER), TENSION	
* 208	4-996-225-01	BRACKET (GUIDE L)		222	X-4949-668-3	SLIDER ASSY	
209	4-988-466-11	SPRING (ELECTROSTATIC), LEAF		223	X-4949-667-4	HOLDER ASSY	
210	4-996-219-01	GEAR (CAM GEAR)		* 224	4-996-211-11	SLIDER (CAM)	
211	4-996-220-01	GEAR (A)		225	4-998-763-03	SPRING (SHUTTER), LEAF	
212	4-996-221-01	GEAR (B)		226	A-4680-200-G	HOLDER COMPLETE ASSY	
213	4-933-134-01	SCREW (+PTPWH M2.6X6)		M103	X-4949-264-1	MOTOR ASSY, LOADING (LOADING)	
214	4-996-224-01	SCREW (1.7X3), +PWH					

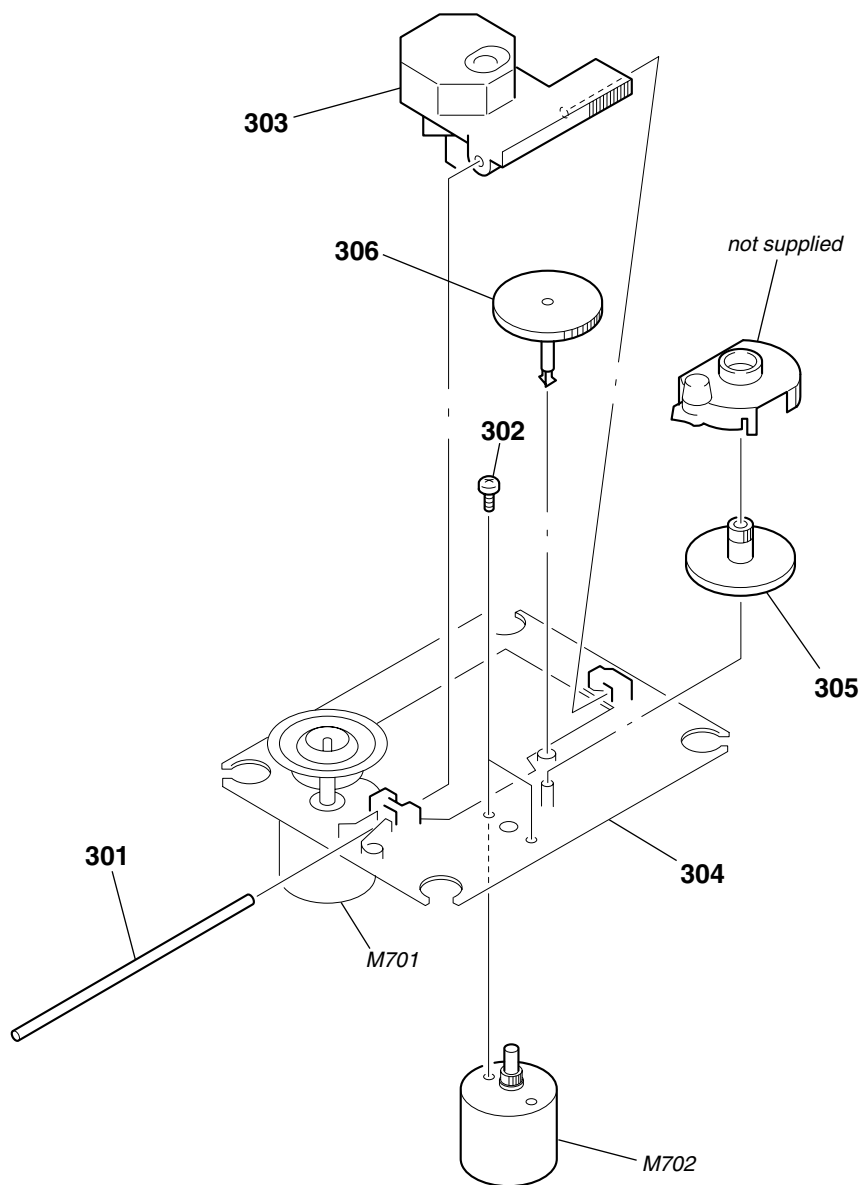
**7-6. MD BASE UNIT SECTION
(MBU-5A)**



<p>The components identified by mark \triangle or dotted line with mark \triangle are critical for safety. Replace only with part number specified.</p>	<p>Les composants identifiés par une marque \triangle sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.</p>
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Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
251	A-4699-893-A	BD BOARD, COMPLETE		265	4-996-261-01	GEAR (SL-B)	
252	3-372-761-01	SCREW (M1.7), TAPPING		266	4-996-264-01	SPRING (SHAFT), LEAF	
* 253	4-996-267-01	BASE (BU-D)		267	4-996-265-01	SHAFT, MAIN	
* 254	4-996-255-01	BASE (BU-C)		268	4-996-256-11	SL (BASE)	
255	4-900-590-01	SCREW, PRECISION SMALL		269	4-996-257-01	RACK (SL)	
256	4-996-258-01	SPRING, COMPRESSION		270	4-996-263-01	SPRING (CLV), TORSION	
257	4-996-262-01	GEAR (SL-C)		271	4-988-560-01	SCREW (+P 1.7X6)	
* 258	1-667-954-11	FLEXIBLE BOARD		272	4-211-036-01	SCREW (1.7X2.5), +PWH	
* 259	4-210-664-11	BASE (BU-A)		273	A-4672-475-A	MOTOR ASSY, SPINDLE (SPINDLE) (INCLUDING M101)	
\triangle 260	A-4672-541-A	PICK-UP, OPTICAL KMS-260B		HR901	1-500-502-11	HEAD, OVER WRITE	
* 261	4-996-252-01	CHASSIS, BU		M102	A-4672-474-A	MOTOR ASSY, SLED (SLED)	
* 262	4-996-254-01	BASE (BU-B)		S102	1-762-148-21	SWITCH, PUSH (2 KEY) (REFLECT RATE DETECT, PROTECT DETECT)	
263	4-967-688-11	MAGNET, ABSORPTION					
264	4-996-260-01	GEAR (SL-A)					

**7-7. OPTICAL PICK-UP SECTION
(KSM-213CDM)**



<p>The components identified by mark Δ or dotted line with mark Δ are critical for safety. Replace only with part number specified.</p>	<p>Les composants identifiés par une marque Δ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.</p>
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Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
301	2-626-908-01	SHAFT, SLED		305	2-627-003-02	GEAR (B) (RP)	
302	3-713-786-51	SCREW +P 2X3		306	2-626-907-01	GEAR (A)	
Δ 303	8-848-483-05	PICK-UP, OPTICAL KSS-213C		M702	X-2625-769-1	GEAR ASSY, MOTOR (MB) (RP) (SLED)	
304	X-2626-202-1	CHASSIS ASSY, MOTOR (MB) (SPINDLE) (INCLUDING M701)					

BATT (+)**BATT (-)****BD****SECTION 8
ELECTRICAL PARTS LIST****NOTE:**

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

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

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

Les composants identifiés par une marque Δ 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	Ref. No.	Part No.	Description	Remark
*	1-675-220-11	BATT (+) BOARD *****		C136	1-126-206-11	ELECT CHIP 100uF 20%	6.3V
	3-039-967-01	TERMINAL (BATT -), BATTERY *****		C142	1-163-251-11	CERAMIC CHIP 100PF 5%	50V
				C143	1-163-251-11	CERAMIC CHIP 100PF 5%	50V
				C144	1-163-251-11	CERAMIC CHIP 100PF 5%	50V
				C146	1-163-038-00	CERAMIC CHIP 0.1uF	25V
*	1-675-221-11	BATT (-) BOARD *****		C151	1-126-206-11	ELECT CHIP 100uF 20%	6.3V
	3-039-967-01	TERMINAL (BATT -), BATTERY *****		C152	1-163-038-00	CERAMIC CHIP 0.1uF	25V
				C153	1-163-021-11	CERAMIC CHIP 0.01uF 10%	50V
				C156	1-163-038-00	CERAMIC CHIP 0.1uF	25V
				C158	1-163-019-00	CERAMIC CHIP 0.0068uF 10%	50V
	A-4699-893-A	BD BOARD, COMPLETE *****		C160	1-104-601-11	ELECT CHIP 10uF 20%	10V
		< CAPACITOR >		C161	1-104-601-11	ELECT CHIP 10uF 20%	10V
C101	1-125-822-11	TANTALUM 10uF 20%	10V	C163	1-163-021-11	CERAMIC CHIP 0.01uF 10%	50V
C102	1-163-038-00	CERAMIC CHIP 0.1uF	25V	C164	1-163-021-11	CERAMIC CHIP 0.01uF 10%	50V
C103	1-125-822-11	TANTALUM 10uF 20%	10V	C167	1-163-038-00	CERAMIC CHIP 0.1uF	25V
C104	1-125-822-11	TANTALUM 10uF 20%	10V	C168	1-163-038-00	CERAMIC CHIP 0.1uF	25V
C105	1-163-021-11	CERAMIC CHIP 0.01uF 10%	50V	C169	1-125-822-11	TANTALUM 10uF 20%	10V
C106	1-163-275-11	CERAMIC CHIP 0.001uF 5%	50V	C171	1-163-038-00	CERAMIC CHIP 0.1uF	25V
C107	1-163-038-00	CERAMIC CHIP 0.1uF	25V	C181	1-104-913-11	TANTAL. CHIP 10uF 20%	16V
C108	1-163-038-00	CERAMIC CHIP 0.1uF	25V	C183	1-163-038-00	CERAMIC CHIP 0.1uF	25V
C109	1-163-037-11	CERAMIC CHIP 0.022uF 10%	25V	C184	1-117-970-11	ELECT CHIP 22uF 20%	10V
C111	1-164-344-11	CERAMIC CHIP 0.068uF 10%	25V	C185	1-164-611-11	CERAMIC CHIP 0.001uF 10%	500V
C112	1-163-017-00	CERAMIC CHIP 0.0047uF 5%	50V	C187	1-104-913-11	TANTAL. CHIP 10uF 20%	16V
C113	1-109-982-11	CERAMIC CHIP 1uF 10%	10V	C188	1-163-021-11	CERAMIC CHIP 0.01uF 10%	50V
C115	1-164-489-11	CERAMIC CHIP 0.22uF 10%	16V	C189	1-163-989-11	CERAMIC CHIP 0.033uF 10%	25V
C116	1-163-037-11	CERAMIC CHIP 0.022uF 10%	25V	C190	1-126-206-11	ELECT CHIP 100uF 20%	6.3V
C117	1-163-809-11	CERAMIC CHIP 0.047uF 10%	25V	C191	1-163-038-00	CERAMIC CHIP 0.1uF	25V
C118	1-163-038-00	CERAMIC CHIP 0.1uF	25V	C196	1-163-038-00	CERAMIC CHIP 0.1uF	25V
C119	1-125-822-11	TANTALUM 10uF 20%	10V	C197	1-163-038-00	CERAMIC CHIP 0.1uF	25V
C121	1-125-822-11	TANTALUM 10uF 20%	10V			< CONNECTOR >	
C122	1-163-021-11	CERAMIC CHIP 0.01uF 10%	50V	CN101	1-569-479-51	CONNECTOR, FPC 21P	
C123	1-163-038-00	CERAMIC CHIP 0.1uF	25V	CN102	1-784-833-21	CONNECTOR, FFC (LIF(NON-ZIF)) 21P	
C124	1-163-038-00	CERAMIC CHIP 0.1uF	25V	CN103	1-784-834-21	CONNECTOR, FFC (LIF(NON-ZIF)) 23P	
C127	1-163-038-00	CERAMIC CHIP 0.1uF	25V	CN104	1-770-687-11	CONNECTOR, FFC/FPC 4P	
C128	1-163-021-11	CERAMIC CHIP 0.01uF 10%	50V	CN110	1-695-440-21	PIN, CONNECTOR (PC BOARD) 6P	
C129	1-107-823-11	CERAMIC CHIP 0.47uF 10%	16V			< DIODE >	
C130	1-163-251-11	CERAMIC CHIP 100PF 5%	50V	D101	8-719-988-61	DIODE 1SS355TE-17	
C131	1-163-023-00	CERAMIC CHIP 0.015uF 5%	50V	D181	8-719-046-86	DIODE F1J6TP	
C132	1-107-823-11	CERAMIC CHIP 0.47uF 10%	16V	D183	8-719-046-86	DIODE F1J6TP	
C133	1-163-017-00	CERAMIC CHIP 0.0047uF 5%	50V			< IC >	
C134	1-163-038-00	CERAMIC CHIP 0.1uF	25V	IC101	8-752-080-95	IC CXA2523AR	
C135	1-163-038-00	CERAMIC CHIP 0.1uF	25V	IC103	8-729-903-10	TRANSISTOR FMW1	

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
IC121	8-752-389-44	IC CXD2654R		R129	1-216-295-00	SHORT	0
IC123	8-759-096-87	IC TC7WU04FU(TE12R)		R130	1-216-295-00	SHORT	0
IC124	8-759-590-00	IC MN41V4400TT-08LT1		R131	1-216-073-00	METAL CHIP	10K 5% 1/10W
IC152	8-759-430-25	IC BH6511FS		R132	1-216-097-11	RES-CHIP	100K 5% 1/10W
IC171	8-759-487-04	IC S-24C02AFJA-TB-01		R133	1-216-117-00	METAL CHIP	680K 5% 1/10W
IC181	8-759-481-17	IC MC74ACT08DTR2		R134	1-216-049-11	RES-CHIP	1K 5% 1/10W
IC192	8-759-460-72	IC BA033FP-E2		R135	1-216-061-00	METAL CHIP	3.3K 5% 1/10W
		< COIL >		R136	1-216-049-11	RES-CHIP	1K 5% 1/10W
L101	1-414-813-11	FERRITE BEAD INDUCTOR		R137	1-216-295-00	SHORT	0
L102	1-414-813-11	FERRITE BEAD INDUCTOR		R140	1-216-029-00	METAL CHIP	150 5% 1/10W
L103	1-414-813-11	FERRITE BEAD INDUCTOR		R142	1-216-073-00	METAL CHIP	10K 5% 1/10W
L105	1-414-813-11	FERRITE BEAD INDUCTOR		R143	1-216-073-00	METAL CHIP	10K 5% 1/10W
L106	1-414-813-11	FERRITE BEAD INDUCTOR		R144	1-216-025-11	RES-CHIP	100 5% 1/10W
L121	1-414-813-11	FERRITE BEAD INDUCTOR		R145	1-216-073-00	METAL CHIP	10K 5% 1/10W
L122	1-414-813-11	FERRITE BEAD INDUCTOR		R146	1-216-037-00	METAL CHIP	330 5% 1/10W
L151	1-412-029-11	INDUCTOR CHIP 10uH		R147	1-216-025-11	RES-CHIP	100 5% 1/10W
L152	1-412-029-11	INDUCTOR CHIP 10uH		R148	1-216-045-00	METAL CHIP	680 5% 1/10W
L153	1-412-032-11	INDUCTOR CHIP 100uH		R149	1-216-073-00	METAL CHIP	10K 5% 1/10W
L154	1-412-032-11	INDUCTOR CHIP 100uH		R150	1-216-295-00	SHORT	0
L161	1-414-813-11	FERRITE BEAD INDUCTOR		R151	1-216-073-00	METAL CHIP	10K 5% 1/10W
L162	1-414-813-11	FERRITE BEAD INDUCTOR		R152	1-216-073-00	METAL CHIP	10K 5% 1/10W
L181	1-216-295-00	SHORT	0	R158	1-216-097-11	RES-CHIP	100K 5% 1/10W
		< TRANSISTOR >		R159	1-216-097-11	RES-CHIP	100K 5% 1/10W
Q101	8-729-403-35	TRANSISTOR UN5113		R160	1-216-295-00	SHORT	0
Q102	8-729-026-53	TRANSISTOR 2SA1576A-T106-QR		R161	1-216-057-00	METAL CHIP	2.2K 5% 1/10W
Q103	8-729-402-93	TRANSISTOR UN5214-TX		R162	1-216-057-00	METAL CHIP	2.2K 5% 1/10W
Q104	8-729-402-93	TRANSISTOR UN5214-TX		R163	1-216-057-00	METAL CHIP	2.2K 5% 1/10W
Q162	8-729-101-07	TRANSISTOR 2SB798-DL		R164	1-216-045-00	METAL CHIP	680 5% 1/10W
Q163	8-729-403-35	TRANSISTOR UN5113		R165	1-216-097-11	RES-CHIP	100K 5% 1/10W
Q181	8-729-018-75	FET 2SJ278MY		R166	1-216-298-00	METAL CHIP	2.2 5% 1/10W
Q182	8-729-017-65	FET 2SK1764KY		R167	1-216-065-11	RES-CHIP	4.7K 5% 1/10W
		< RESISTOR >		R169	1-219-724-11	METAL CHIP	1 1% 1/4W
R103	1-216-049-11	RES-CHIP	1K 5% 1/10W	R170	1-216-073-00	METAL CHIP	10K 5% 1/10W
R104	1-216-073-00	METAL CHIP	10K 5% 1/10W	R171	1-216-073-00	METAL CHIP	10K 5% 1/10W
R105	1-216-065-11	RES-CHIP	4.7K 5% 1/10W	R173	1-216-121-11	RES-CHIP	1M 5% 1/10W
R106	1-216-133-00	METAL CHIP	3.3M 5% 1/10W	R175	1-216-065-11	RES-CHIP	4.7K 5% 1/10W
R107	1-216-113-00	METAL CHIP	470K 5% 1/10W	R177	1-216-061-00	METAL CHIP	3.3K 5% 1/10W
R109	1-216-295-00	SHORT	0	R179	1-216-085-00	METAL CHIP	33K 5% 1/10W
R110	1-216-073-00	METAL CHIP	10K 5% 1/10W	R180	1-216-073-00	METAL CHIP	10K 5% 1/10W
R111	1-216-295-00	SHORT	0	R182	1-216-089-11	RES-CHIP	47K 5% 1/10W
R112	1-216-089-11	RES-CHIP	47K 5% 1/10W	R183	1-216-089-11	RES-CHIP	47K 5% 1/10W
R113	1-216-049-11	RES-CHIP	1K 5% 1/10W	R184	1-216-073-00	METAL CHIP	10K 5% 1/10W
R115	1-216-049-11	RES-CHIP	1K 5% 1/10W	R185	1-216-081-00	METAL CHIP	22K 5% 1/10W
R117	1-216-113-00	METAL CHIP	470K 5% 1/10W	R186	1-216-089-11	RES-CHIP	47K 5% 1/10W
R120	1-216-025-11	RES-CHIP	100 5% 1/10W	R188	1-216-073-00	METAL CHIP	10K 5% 1/10W
R121	1-216-097-11	RES-CHIP	100K 5% 1/10W	R189	1-216-073-00	METAL CHIP	10K 5% 1/10W
R123	1-216-295-00	SHORT	0	R190	1-216-073-00	METAL CHIP	10K 5% 1/10W
R124	1-216-025-11	RES-CHIP	100 5% 1/10W	R195	1-216-073-00	METAL CHIP	10K 5% 1/10W
R125	1-216-025-11	RES-CHIP	100 5% 1/10W	R196	1-216-295-00	SHORT	0
R127	1-216-025-11	RES-CHIP	100 5% 1/10W	R197	1-216-295-00	SHORT	0
				R198	1-216-296-00	SHORT	0

Ref. No.	Part No.	Description	Remark
		< SWITCH >	
S101	1-762-596-21	SWITCH, PUSH (1 KEY) (LIMIT IN)	
S102	1-762-148-21	SWITCH, PUSH (2 KEY) (REFLECT RATE DETECT, PROTECT DETECT)	

*	A-3322-529-A	CD BOARD, COMPLETE *****	
		< CAPACITOR >	
C701	1-104-665-11	ELECT 100uF 20%	10V
C702	1-163-021-11	CERAMIC CHIP 0.01uF 10%	50V
C703	1-163-009-11	CERAMIC CHIP 0.001uF 10%	50V
C704	1-163-809-11	CERAMIC CHIP 0.047uF 10%	25V
C705	1-163-017-00	CERAMIC CHIP 0.0047uF 5%	50V
C706	1-163-021-11	CERAMIC CHIP 0.01uF 10%	50V
C707	1-126-925-11	ELECT 470uF 20%	10V
C708	1-107-725-11	CERAMIC CHIP 0.1uF 10%	16V
C709	1-163-019-00	CERAMIC CHIP 0.0068uF 10%	50V
C710	1-107-725-11	CERAMIC CHIP 0.1uF 10%	16V
C711	1-107-725-11	CERAMIC CHIP 0.1uF 10%	16V
C712	1-163-037-11	CERAMIC CHIP 0.022uF 10%	25V
C713	1-104-664-11	ELECT 47uF 20%	10V
C714	1-164-161-11	CERAMIC CHIP 0.0022uF 10%	100V
C715	1-107-725-11	CERAMIC CHIP 0.1uF 10%	16V
C716	1-126-964-11	ELECT 10uF 20%	50V
C717	1-107-725-11	CERAMIC CHIP 0.1uF 10%	16V
C718	1-107-725-11	CERAMIC CHIP 0.1uF 10%	16V
C719	1-163-227-11	CERAMIC CHIP 10PF 0.5PF	50V
C720	1-115-566-11	CERAMIC CHIP 4.7uF 10%	10V
C721	1-163-021-11	CERAMIC CHIP 0.01uF 10%	50V
C722	1-163-989-11	CERAMIC CHIP 0.033uF 10%	25V
C723	1-163-989-11	CERAMIC CHIP 0.033uF 10%	25V
C724	1-163-229-11	CERAMIC CHIP 12PF 5%	50V
C725	1-163-133-00	CERAMIC CHIP 470PF 5%	50V
C726	1-163-021-11	CERAMIC CHIP 0.01uF 10%	50V
C727	1-107-725-11	CERAMIC CHIP 0.1uF 10%	16V
C728	1-163-227-11	CERAMIC CHIP 10PF 0.5PF	50V
C729	1-163-059-11	CERAMIC CHIP 0.01uF 10%	50V
C730	1-125-838-11	CERAMIC CHIP 2.2uF 10%	6.3V
C731	1-164-344-11	CERAMIC CHIP 0.068uF 10%	25V
C732	1-163-989-11	CERAMIC CHIP 0.033uF 10%	25V
C733	1-163-243-11	CERAMIC CHIP 47PF 5%	50V
C734	1-163-009-11	CERAMIC CHIP 0.001uF 10%	50V
C735	1-163-021-11	CERAMIC CHIP 0.01uF 10%	50V
C736	1-104-665-11	ELECT 100uF 20%	10V
C737	1-163-251-11	CERAMIC CHIP 100PF 5%	50V
C738	1-163-251-11	CERAMIC CHIP 100PF 5%	50V
C739	1-163-251-11	CERAMIC CHIP 100PF 5%	50V
C740	1-163-021-11	CERAMIC CHIP 0.01uF 10%	50V
C743	1-163-021-11	CERAMIC CHIP 0.01uF 10%	50V
C744	1-163-251-11	CERAMIC CHIP 100PF 5%	50V
C745	1-163-011-11	CERAMIC CHIP 0.0015uF 10%	50V

Ref. No.	Part No.	Description	Remark
C746	1-163-001-11	CERAMIC CHIP 220PF 10%	50V
C747	1-164-489-11	CERAMIC CHIP 0.22uF 10%	16V
C748	1-163-809-11	CERAMIC CHIP 0.047uF 10%	25V
C749	1-163-021-11	CERAMIC CHIP 0.01uF 10%	50V
C750	1-163-021-11	CERAMIC CHIP 0.01uF 10%	50V
C752	1-163-021-11	CERAMIC CHIP 0.01uF 10%	50V
C753	1-163-021-11	CERAMIC CHIP 0.01uF 10%	50V
C754	1-163-021-11	CERAMIC CHIP 0.01uF 10%	50V
C755	1-163-251-11	CERAMIC CHIP 100PF 5%	50V
C756	1-163-263-11	CERAMIC CHIP 330PF 5%	50V
C757	1-163-021-11	CERAMIC CHIP 0.01uF 10%	50V
C758	1-163-251-11	CERAMIC CHIP 100PF 5%	50V
C759	1-163-017-00	CERAMIC CHIP 0.0047uF 5%	50V
C760	1-163-017-00	CERAMIC CHIP 0.0047uF 5%	50V
C762	1-163-021-11	CERAMIC CHIP 0.01uF 10%	50V
C763	1-163-259-11	CERAMIC CHIP 220PF 5%	50V
C764	1-163-021-11	CERAMIC CHIP 0.01uF 10%	50V
C765	1-163-021-11	CERAMIC CHIP 0.01uF 10%	50V
C766	1-104-665-11	ELECT 100uF 20%	10V
C767	1-163-229-11	CERAMIC CHIP 12PF 5%	50V
C768	1-163-229-11	CERAMIC CHIP 12PF 5%	50V
C769	1-104-665-11	ELECT 100uF 20%	10V
C770	1-104-665-11	ELECT 100uF 20%	10V
C773	1-126-964-11	ELECT 10uF 20%	50V
C774	1-126-964-11	ELECT 10uF 20%	50V
C775	1-163-021-11	CERAMIC CHIP 0.01uF 10%	50V
C776	1-115-566-11	CERAMIC CHIP 4.7uF 10%	10V
C777	1-104-665-11	ELECT 100uF 20%	10V
C778	1-163-021-11	CERAMIC CHIP 0.01uF 10%	50V
C780	1-163-239-11	CERAMIC CHIP 33PF 5%	50V
C781	1-163-021-11	CERAMIC CHIP 0.01uF 10%	50V
C782	1-163-021-11	CERAMIC CHIP 0.01uF 10%	50V
C783	1-163-021-11	CERAMIC CHIP 0.01uF 10%	50V
C790	1-163-251-11	CERAMIC CHIP 100PF 5%	50V
< CONNECTOR >			
	CN701	1-770-646-11	CONNECTOR, FFC/FPC 16P
*	CN702	1-691-077-21	HOUSING, CONNECTOR 18P
	CN704	1-569-614-11	PLUG, CONNECTOR 2P
*	CN705	1-785-654-11	PIN, CONNECTOR (PC BOARD) 2P
*	CN707	1-573-455-11	PLUG, CONNECTOR 4P
< FERRITE BEAD >			
	FB701	1-216-295-00	SHORT 0
	FB702	1-216-295-00	SHORT 0
	FB703	1-469-180-22	FERRITE BEAD INDUCTOR
	FB704	1-469-180-22	FERRITE BEAD INDUCTOR
	FB713	1-216-295-00	SHORT 0
	FB714	1-216-295-00	SHORT 0
< IC >			
	IC701	8-752-083-24	IC CXA2542AQ
	IC702	8-752-387-78	IC CXD3009Q

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
IC703	8-759-591-62	IC BA6998FP		R724	1-216-097-11	RES-CHIP 100K 5%	1/10W
IC704	8-759-652-44	IC BA033ST-V5		R725	1-216-097-11	RES-CHIP 100K 5%	1/10W
		< JUMPER RESISTOR >		R726	1-216-097-11	RES-CHIP 100K 5%	1/10W
JC702	1-216-295-00	SHORT 0		R731	1-216-081-00	METAL CHIP 22K 5%	1/10W
JC704	1-216-295-00	SHORT 0		R732	1-216-081-00	METAL CHIP 22K 5%	1/10W
JC705	1-216-295-00	SHORT 0		R733	1-216-097-11	RES-CHIP 100K 5%	1/10W
JC706	1-216-296-00	SHORT 0		R734	1-216-001-00	METAL CHIP 10 5%	1/10W
JC707	1-216-049-11	RES-CHIP 1K 5%	1/10W	R735	1-216-065-11	RES-CHIP 4.7K 5%	1/10W
JC708	1-216-295-00	SHORT 0		R737	1-216-089-11	RES-CHIP 47K 5%	1/10W
JC709	1-216-295-00	SHORT 0		R738	1-216-069-00	METAL CHIP 6.8K 5%	1/10W
JC711	1-216-296-00	SHORT 0		R741	1-216-105-11	RES-CHIP 220K 5%	1/10W
JC713	1-216-295-00	SHORT 0		R742	1-216-101-00	METAL CHIP 150K 5%	1/10W
JC715	1-216-295-00	SHORT 0		R743	1-216-101-00	METAL CHIP 150K 5%	1/10W
JC720	1-216-295-00	SHORT 0		R745	1-216-109-00	METAL CHIP 330K 5%	1/10W
JC721	1-216-295-00	SHORT 0		R750	1-216-076-00	METAL CHIP 13K 5%	1/10W
JC723	1-216-049-11	RES-CHIP 1K 5%	1/10W	R751	1-216-077-11	RES-CHIP 15K 5%	1/10W
JC725	1-216-295-00	SHORT 0		R752	1-216-085-00	METAL CHIP 33K 5%	1/10W
JC730	1-216-295-00	SHORT 0		R758	1-216-218-00	RES-CHIP 6.8K 5%	1/8W
JC734	1-216-295-00	SHORT 0		R760	1-216-097-11	RES-CHIP 100K 5%	1/10W
JC739	1-216-295-00	SHORT 0		R762	1-216-113-00	METAL CHIP 470K 5%	1/10W
		< COIL >		R763	1-216-061-00	METAL CHIP 3.3K 5%	1/10W
L701	1-216-025-11	RES-CHIP 100 5%	1/10W	R764	1-216-061-00	METAL CHIP 3.3K 5%	1/10W
L702	1-410-997-22	INDUCTOR CHIP 2.2uH		R765	1-216-073-00	METAL CHIP 10K 5%	1/10W
		< TRANSISTOR >		R766	1-216-121-11	RES-CHIP 1M 5%	1/10W
Q701	8-729-101-07	TRANSISTOR 2SB798-DL		R767	1-216-073-00	METAL CHIP 10K 5%	1/10W
Q705	8-729-931-02	TRANSISTOR 2SC2413KQ		R768	1-216-105-11	RES-CHIP 220K 5%	1/10W
		< RESISTOR >		R770	1-216-049-11	RES-CHIP 1K 5%	1/10W
R700	1-216-077-11	RES-CHIP 15K 5%	1/10W	R771	1-216-025-11	RES-CHIP 100 5%	1/10W
R701	1-216-089-11	RES-CHIP 47K 5%	1/10W	R776	1-216-073-00	METAL CHIP 10K 5%	1/10W
R702	1-216-295-00	SHORT 0		R777	1-216-049-11	RES-CHIP 1K 5%	1/10W
R703	1-216-117-00	METAL CHIP 680K 5%	1/10W	R778	1-216-049-11	RES-CHIP 1K 5%	1/10W
R704	1-216-075-00	METAL CHIP 12K 5%	1/10W	R780	1-216-049-11	RES-CHIP 1K 5%	1/10W
R705	1-216-214-00	RES-CHIP 4.7K 5%	1/8W	R781	1-216-073-00	METAL CHIP 10K 5%	1/10W
R706	1-216-101-00	METAL CHIP 150K 5%	1/10W	R787	1-216-049-11	RES-CHIP 1K 5%	1/10W
R707	1-216-033-00	METAL CHIP 220 5%	1/10W	R788	1-216-049-11	RES-CHIP 1K 5%	1/10W
R710	1-216-114-00	RES-CHIP 510K 5%	1/10W	R789	1-216-033-00	METAL CHIP 220 5%	1/10W
R711	1-216-101-00	METAL CHIP 150K 5%	1/10W	R790	1-216-049-11	RES-CHIP 1K 5%	1/10W
R712	1-216-095-00	METAL CHIP 82K 5%	1/10W	R791	1-216-049-11	RES-CHIP 1K 5%	1/10W
R713	1-216-089-11	RES-CHIP 47K 5%	1/10W	R795	1-216-041-00	METAL CHIP 470 5%	1/10W
R714	1-216-089-11	RES-CHIP 47K 5%	1/10W	R796	1-216-049-11	RES-CHIP 1K 5%	1/10W
R715	1-216-101-00	METAL CHIP 150K 5%	1/10W	R797	1-216-049-11	RES-CHIP 1K 5%	1/10W
R716	1-216-097-11	RES-CHIP 100K 5%	1/10W	R798	1-216-049-11	RES-CHIP 1K 5%	1/10W
R718	1-216-041-00	METAL CHIP 470 5%	1/10W	R799	1-216-049-11	RES-CHIP 1K 5%	1/10W
R719	1-216-041-00	METAL CHIP 470 5%	1/10W			< VIBRATOR >	
R720	1-216-041-00	METAL CHIP 470 5%	1/10W	X701	1-781-462-41	VIBRATOR, CRYSTAL (16.9344MHz)	
R721	1-216-097-11	RES-CHIP 100K 5%	1/10W	*****			
R722	1-216-097-11	RES-CHIP 100K 5%	1/10W	*	A-3322-635-A	CD MOTOR BOARD, COMPLETE	

						< CAPACITOR >	
R723	1-216-097-11	RES-CHIP 100K 5%	1/10W	C801	1-163-021-11	CERAMIC CHIP 0.01uF 10%	50V

CD MOTOR

DG

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
C802	1-164-161-11	CERAMIC CHIP	0.0022uF 10% 100V	C610	1-164-156-11	CERAMIC CHIP	0.1uF 25V
C803	1-163-038-00	CERAMIC CHIP	0.1uF 25V	C611	1-164-156-11	CERAMIC CHIP	0.1uF 25V
C804	1-126-934-11	ELECT	220uF 20% 16V	C612	1-164-156-11	CERAMIC CHIP	0.1uF 25V
		< CONNECTOR >		C613	1-163-251-11	CERAMIC CHIP	100PF 5% 50V
* CN801	1-785-677-11	PIN, CONNECTOR (PC BOARD) 11P		C614	1-162-927-11	CERAMIC CHIP	100PF 5% 50V
		< IC >		C615	1-164-156-11	CERAMIC CHIP	0.1uF 25V
IC801	8-759-344-00	IC NJM2100E(TE2)		C616	1-164-156-11	CERAMIC CHIP	0.1uF 25V
IC802	8-759-591-65	IC BA6892FP-E2		C617	1-164-156-11	CERAMIC CHIP	0.1uF 25V
		< JUMPER RESISTOR >		C619	1-126-207-11	ELECT CHIP	33uF 20% 4V
JC801	1-216-295-00	SHORT	0	C620	1-107-823-11	CERAMIC CHIP	0.47uF 10% 16V
		< TRANSISTOR >		C621	1-107-826-11	CERAMIC CHIP	0.1uF 10% 16V
Q801	8-729-027-56	TRANSISTOR	DTC143TKA-T146	C622	1-107-725-11	CERAMIC CHIP	0.1uF 10% 16V
Q802	8-729-027-60	TRANSISTOR	DTC144TKA-T146	C626	1-163-021-11	CERAMIC CHIP	0.01uF 10% 50V
Q803	8-729-027-60	TRANSISTOR	DTC144TKA-T146	C627	1-164-156-11	CERAMIC CHIP	0.1uF 25V
Q804	8-729-027-56	TRANSISTOR	DTC143TKA-T146	C628	1-126-205-11	ELECT CHIP	47uF 20% 6.3V
Q805	8-729-900-53	TRANSISTOR	DTC114EK	C629	1-126-205-11	ELECT CHIP	47uF 20% 6.3V
Q806	8-729-903-46	TRANSISTOR	2SB1132-P	C632	1-126-603-11	ELECT CHIP	4.7uF 20% 35V
Q807	8-729-027-46	TRANSISTOR	DTC114YKA-T146	C633	1-126-603-11	ELECT CHIP	4.7uF 20% 35V
		< RESISTOR >		C634	1-162-970-11	CERAMIC CHIP	0.01uF 10% 25V
R801	1-216-081-00	METAL CHIP	22K 5% 1/10W	C635	1-126-205-11	ELECT CHIP	47uF 20% 6.3V
R802	1-216-099-00	METAL CHIP	120K 5% 1/10W	C637	1-126-603-11	ELECT CHIP	4.7uF 20% 35V
R803	1-216-089-11	RES-CHIP	47K 5% 1/10W	C639	1-124-779-00	ELECT CHIP	10uF 20% 16V
R804	1-216-081-00	METAL CHIP	22K 5% 1/10W	C640	1-126-603-11	ELECT CHIP	4.7uF 20% 35V
R805	1-216-085-00	METAL CHIP	33K 5% 1/10W	C641	1-163-021-11	CERAMIC CHIP	0.01uF 10% 50V
R806	1-216-065-11	RES-CHIP	4.7K 5% 1/10W	C642	1-126-205-11	ELECT CHIP	47uF 20% 6.3V
R807	1-216-073-00	METAL CHIP	10K 5% 1/10W	C644	1-164-156-11	CERAMIC CHIP	0.1uF 25V
R808	1-216-097-11	RES-CHIP	100K 5% 1/10W	C645	1-164-156-11	CERAMIC CHIP	0.1uF 25V
R809	1-216-073-00	METAL CHIP	10K 5% 1/10W	C646	1-162-919-11	CERAMIC CHIP	22PF 5% 50V
R810	1-216-089-11	RES-CHIP	47K 5% 1/10W	C650	1-162-966-11	CERAMIC CHIP	0.0022uF 10% 50V
R811	1-216-198-11	RES-CHIP	1K 5% 1/8W	C651	1-162-966-11	CERAMIC CHIP	0.0022uF 10% 50V
		< SWITCH >		C655	1-162-970-11	CERAMIC CHIP	0.01uF 10% 25V
S801	1-762-812-11	SWITCH, LEAF (LIMIT)		C657	1-162-970-11	CERAMIC CHIP	0.01uF 10% 25V

* A-3322-531-A	DG BOARD, COMPLETE						
		< CAPACITOR >					
C601	1-162-919-11	CERAMIC CHIP	22PF 5% 50V	C670	1-126-205-11	ELECT CHIP	47uF 20% 6.3V
C602	1-162-919-11	CERAMIC CHIP	22PF 5% 50V	C672	1-162-970-11	CERAMIC CHIP	0.01uF 10% 25V
C604	1-163-235-11	CERAMIC CHIP	22PF 5% 50V	C673	1-162-912-11	CERAMIC CHIP	7PF 0.5PF 50V
C605	1-164-156-11	CERAMIC CHIP	0.1uF 25V	C675	1-162-927-11	CERAMIC CHIP	100PF 5% 50V
C606	1-162-927-11	CERAMIC CHIP	100PF 5% 50V	C676	1-162-927-11	CERAMIC CHIP	100PF 5% 50V
C607	1-162-927-11	CERAMIC CHIP	100PF 5% 50V	C680	1-163-224-11	CERAMIC CHIP	7PF 0.25PF 50V
C608	1-162-916-11	CERAMIC CHIP	12PF 5% 50V	C681	1-164-156-11	CERAMIC CHIP	0.1uF 25V
C609	1-162-916-11	CERAMIC CHIP	12PF 5% 50V	C682	1-163-038-00	CERAMIC CHIP	0.1uF 25V
				C683	1-162-964-11	CERAMIC CHIP	0.001uF 10% 50V
				C684	1-162-964-11	CERAMIC CHIP	0.001uF 10% 50V
				C685	1-162-927-11	CERAMIC CHIP	100PF 5% 50V
				C686	1-162-927-11	CERAMIC CHIP	100PF 5% 50V
				C687	1-163-038-00	CERAMIC CHIP	0.1uF 25V

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
C689	1-164-156-11	CERAMIC CHIP 0.1uF	25V	FB631	1-500-445-21	FERRITE, EMI (SMD)	
C690	1-163-259-11	CERAMIC CHIP 220PF	5% 50V	FB632	1-500-445-21	FERRITE, EMI (SMD)	
C691	1-162-964-11	CERAMIC CHIP 0.001uF	10% 50V	FB633	1-469-185-11	FERRITE BEAD INDUCTOR	
C692	1-162-964-11	CERAMIC CHIP 0.001uF	10% 50V	FB634	1-469-185-11	FERRITE BEAD INDUCTOR	
C693	1-162-964-11	CERAMIC CHIP 0.001uF	10% 50V	FB636	1-500-445-21	FERRITE, EMI (SMD)	
C694	1-162-964-11	CERAMIC CHIP 0.001uF	10% 50V	FB637	1-500-445-21	FERRITE, EMI (SMD)	
C695	1-162-964-11	CERAMIC CHIP 0.001uF	10% 50V	FB638	1-500-445-21	FERRITE, EMI (SMD)	
C696	1-163-021-11	CERAMIC CHIP 0.01uF	10% 50V	FB639	1-500-445-21	FERRITE, EMI (SMD)	
C697	1-162-970-11	CERAMIC CHIP 0.01uF	10% 25V	FB640	1-500-445-21	FERRITE, EMI (SMD)	
C699	1-162-970-11	CERAMIC CHIP 0.01uF	10% 25V	FB641	1-500-445-21	FERRITE, EMI (SMD)	
< CONNECTOR >				FB642	1-500-445-21	FERRITE, EMI (SMD)	
* CN601	1-793-115-21	CONNECTOR, FFC/FPC 21P		FB643	1-500-445-21	FERRITE, EMI (SMD)	
* CN602	1-793-116-21	CONNECTOR, FFC/FPC 23P		FB644	1-500-445-21	FERRITE, EMI (SMD)	
* CN603	1-580-055-21	PIN, CONNECTOR (SMD) 2P		FB645	1-500-445-21	FERRITE, EMI (SMD)	
* CN604	1-785-370-21	CONNECTOR, FFC/FPC 26P		FB646	1-500-445-21	FERRITE, EMI (SMD)	
CN605	1-784-687-41	PIN, CONNECTOR (PC BOARD) 7P		FB647	1-500-445-21	FERRITE, EMI (SMD)	
< DIODE >				FB648	1-216-295-00	SHORT 0	
D602	8-719-988-61	DIODE 1SS355TE-17		FB649	1-500-445-21	FERRITE, EMI (SMD)	
D603	8-719-988-61	DIODE 1SS355TE-17		FB650	1-216-821-11	METAL CHIP 1K	5% 1/16W
< FERRITE BEAD >				FB651	1-216-825-11	METAL CHIP 2.2K	5% 1/16W
FB601	1-500-445-21	FERRITE, EMI (SMD)		FB652	1-216-295-00	SHORT 0	
FB602	1-216-821-11	METAL CHIP 1K	5% 1/16W	FB653	1-216-295-00	SHORT 0	
FB603	1-216-821-11	METAL CHIP 1K	5% 1/16W	FB654	1-500-445-21	FERRITE, EMI (SMD)	
FB604	1-216-295-00	SHORT 0		FB655	1-469-185-11	FERRITE BEAD INDUCTOR	
FB605	1-216-821-11	METAL CHIP 1K	5% 1/16W	FB656	1-469-185-11	FERRITE BEAD INDUCTOR	
FB606	1-216-295-00	SHORT 0		FB657	1-469-185-11	FERRITE BEAD INDUCTOR	
FB607	1-500-445-21	FERRITE, EMI (SMD)		FB660	1-500-445-21	FERRITE, EMI (SMD)	
FB608	1-216-821-11	METAL CHIP 1K	5% 1/16W	FB661	1-500-445-21	FERRITE, EMI (SMD)	
FB609	1-216-821-11	METAL CHIP 1K	5% 1/16W	FB662	1-500-445-21	FERRITE, EMI (SMD)	
FB610	1-412-985-11	INDUCTOR 3.3uH		FB663	1-500-445-21	FERRITE, EMI (SMD)	
FB611	1-500-445-21	FERRITE, EMI (SMD)		FB664	1-500-445-21	FERRITE, EMI (SMD)	
FB612	1-469-185-11	FERRITE BEAD INDUCTOR		FB665	1-500-445-21	FERRITE, EMI (SMD)	
FB613	1-500-445-21	FERRITE, EMI (SMD)		FB666	1-216-815-11	METAL CHIP 330	5% 1/16W
FB614	1-500-445-21	FERRITE, EMI (SMD)		FB671	1-500-445-21	FERRITE, EMI (SMD)	
FB615	1-500-445-21	FERRITE, EMI (SMD)		FB672	1-500-445-21	FERRITE, EMI (SMD)	
FB616	1-500-445-21	FERRITE, EMI (SMD)		FB673	1-500-445-21	FERRITE, EMI (SMD)	
FB617	1-500-445-21	FERRITE, EMI (SMD)		< FILTER >			
FB618	1-500-445-21	FERRITE, EMI (SMD)		FL601	1-239-901-21	FILTER, CHIP EMI	
FB619	1-500-445-21	FERRITE, EMI (SMD)		FL602	1-239-901-21	FILTER, CHIP EMI	
FB620	1-500-445-21	FERRITE, EMI (SMD)		FL603	1-239-899-21	FILTER, CHIP EMI	
FB621	1-500-445-21	FERRITE, EMI (SMD)		FL604	1-239-899-21	FILTER, CHIP EMI	
FB622	1-500-445-21	FERRITE, EMI (SMD)		FL605	1-239-899-21	FILTER, CHIP EMI	
FB623	1-500-445-21	FERRITE, EMI (SMD)		FL606	1-239-899-21	FILTER, CHIP EMI	
FB624	1-500-445-21	FERRITE, EMI (SMD)		* FL607	1-125-971-21	FILTER, 3 TERMINAL NOISE	
FB625	1-500-445-21	FERRITE, EMI (SMD)		* FL608	1-125-971-21	FILTER, 3 TERMINAL NOISE	
FB626	1-500-445-21	FERRITE, EMI (SMD)		* FL611	1-125-971-21	FILTER, 3 TERMINAL NOISE	
FB627	1-216-295-00	SHORT 0		* FL612	1-125-971-21	FILTER, 3 TERMINAL NOISE	
FB628	1-500-445-21	FERRITE, EMI (SMD)		* FL619	1-125-971-21	FILTER, 3 TERMINAL NOISE	
FB629	1-500-445-21	FERRITE, EMI (SMD)		* FL620	1-125-971-21	FILTER, 3 TERMINAL NOISE	
FB630	1-469-125-21	FERRITE, EMI (SMD)					

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
< IC >							
IC601	8-759-670-32	IC RU8X13MF-0102		L610	1-414-398-11	INDUCTOR 10uH	
IC602	8-759-040-83	IC BA6287F		L611	1-416-107-21	COIL, COMMON MODE CHOKE	
IC603	8-759-561-36	IC PCM3003E/T2		L612	1-414-521-21	INDUCTOR CHIP 10uH	
IC604	8-759-243-19	IC TC7SU04F		L613	1-414-398-11	INDUCTOR 10uH	
IC605	8-759-591-61	IC TC7WHU04FU		L614	1-414-398-11	INDUCTOR 10uH	
IC606	8-759-447-77	IC TC7WH74FU(TR12R)		L615	1-500-445-21	FERRITE, EMI (SMD)	
< JUMPER RESISTOR >				L616	1-500-445-21	FERRITE, EMI (SMD)	
JC601	1-216-049-11	RES-CHIP 1K	5% 1/10W	L617	1-414-766-22	INDUCTOR, FERRITE BEAD	
JC602	1-216-295-00	SHORT 0		L618	1-500-445-21	FERRITE, EMI (SMD)	
JC603	1-216-049-11	RES-CHIP 1K	5% 1/10W	L619	1-414-398-11	INDUCTOR 10uH	
JC605	1-216-295-00	SHORT 0		L620	1-414-398-11	INDUCTOR 10uH	
JC606	1-216-296-00	SHORT 0		L621	1-414-521-21	INDUCTOR CHIP 10uH	
JC607	1-216-295-00	SHORT 0		L622	1-414-521-21	INDUCTOR CHIP 10uH	
JC608	1-216-295-00	SHORT 0		< TRANSISTOR >			
JC609	1-216-821-11	METAL CHIP 1K	5% 1/16W	Q603	8-729-402-84	TRANSISTOR XN4601	
JC610	1-216-821-11	METAL CHIP 1K	5% 1/16W	Q604	8-729-402-84	TRANSISTOR XN4601	
JC611	1-216-821-11	METAL CHIP 1K	5% 1/16W	Q610	8-729-027-46	TRANSISTOR DTC114YKA-T146	
JC612	1-216-821-11	METAL CHIP 1K	5% 1/16W	Q611	8-729-031-43	TRANSISTOR IMD9A-T108	
JC613	1-216-864-11	METAL CHIP 0	5% 1/16W	Q612	8-729-101-07	TRANSISTOR 2SB798-DL	
JC614	1-216-049-11	RES-CHIP 1K	5% 1/10W	Q616	8-729-027-46	TRANSISTOR DTC114YKA-T146	
JC615	1-216-295-00	SHORT 0		Q617	8-729-019-72	TRANSISTOR 2SB1260	
JC616	1-216-295-00	SHORT 0		Q620	8-729-046-16	TRANSISTOR UMG5NTR	
JC617	1-216-295-00	SHORT 0		< RESISTOR >			
JC618	1-216-295-00	SHORT 0		R601	1-216-821-11	METAL CHIP 1K	5% 1/16W
JC619	1-500-445-21	FERRITE, EMI (SMD)		R602	1-216-049-11	RES-CHIP 1K	5% 1/10W
JC620	1-216-295-00	SHORT 0		R603	1-216-821-11	METAL CHIP 1K	5% 1/16W
JC621	1-216-864-11	METAL CHIP 0	5% 1/16W	R604	1-500-329-21	FERRITE BEAD INDUCTOR	
JC622	1-216-296-00	SHORT 0		R605	1-216-073-00	METAL CHIP 10K	5% 1/10W
JC623	1-216-295-00	SHORT 0		R606	1-216-073-00	METAL CHIP 10K	5% 1/10W
JC626	1-216-295-00	SHORT 0		R607	1-216-073-00	METAL CHIP 10K	5% 1/10W
JC627	1-216-295-00	SHORT 0		R608	1-216-833-11	RES-CHIP 10K	5% 1/16W
JC631	1-216-864-11	METAL CHIP 0	5% 1/16W	R609	1-216-097-11	RES-CHIP 100K	5% 1/10W
JC632	1-216-295-00	SHORT 0		R610	1-216-097-11	RES-CHIP 100K	5% 1/10W
JC633	1-216-295-00	SHORT 0		R611	1-216-845-11	METAL CHIP 100K	5% 1/16W
JC634	1-216-295-00	SHORT 0		R612	1-216-097-11	RES-CHIP 100K	5% 1/10W
JC635	1-216-295-00	SHORT 0		R613	1-216-833-11	RES-CHIP 10K	5% 1/16W
JC639	1-500-445-21	FERRITE, EMI (SMD)		R614	1-216-857-11	METAL CHIP 1M	5% 1/16W
JC641	1-216-295-00	SHORT 0		R615	1-216-833-11	RES-CHIP 10K	5% 1/16W
JC651	1-216-295-00	SHORT 0		R616	1-216-845-11	METAL CHIP 100K	5% 1/16W
JC652	1-412-989-11	INDUCTOR 6.8uH		R617	1-216-809-11	METAL CHIP 100	5% 1/16W
< COIL >				R618	1-216-809-11	METAL CHIP 100	5% 1/16W
L601	1-414-521-21	INDUCTOR CHIP 10uH		R619	1-216-845-11	METAL CHIP 100K	5% 1/16W
L602	1-414-398-11	INDUCTOR 10uH		R620	1-216-851-11	METAL CHIP 330K	5% 1/16W
L603	1-414-398-11	INDUCTOR 10uH		R621	1-216-073-00	METAL CHIP 10K	5% 1/10W
L604	1-414-398-11	INDUCTOR 10uH		R622	1-216-833-11	RES-CHIP 10K	5% 1/16W
L605	1-414-398-11	INDUCTOR 10uH		R623	1-216-833-11	RES-CHIP 10K	5% 1/16W
L606	1-414-398-11	INDUCTOR 10uH		R624	1-216-833-11	RES-CHIP 10K	5% 1/16W
L607	1-414-398-11	INDUCTOR 10uH		R625	1-216-833-11	RES-CHIP 10K	5% 1/16W
L608	1-414-398-11	INDUCTOR 10uH		R626	1-216-073-00	METAL CHIP 10K	5% 1/10W
L609	1-414-398-11	INDUCTOR 10uH		R627	1-216-089-11	RES-CHIP 47K	5% 1/10W
				R628	1-216-841-11	METAL CHIP 47K	5% 1/16W

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
R629	1-216-833-11	RES-CHIP	10K 5% 1/16W	*	A-3322-656-A	FL BOARD, COMPLETE *****	
R630	1-216-833-11	RES-CHIP	10K 5% 1/16W				
R631	1-216-821-11	METAL CHIP	1K 5% 1/16W				
R632	1-216-821-11	METAL CHIP	1K 5% 1/16W		3-039-978-01	HOLDER (FL)	
R633	1-216-833-11	RES-CHIP	10K 5% 1/16W		3-042-764-01	SHEET (FL), ADHESIVE	
					3-846-312-01	SPACER	
R634	1-216-833-11	RES-CHIP	10K 5% 1/16W			< CAPACITOR >	
R636	1-216-851-11	METAL CHIP	330K 5% 1/16W	C601	1-126-964-11	ELECT 10uF 20% 50V	
R637	1-216-109-00	METAL CHIP	330K 5% 1/10W	C602	1-163-021-11	CERAMIC CHIP 0.01uF 10% 50V	
R638	1-216-841-11	METAL CHIP	47K 5% 1/16W	C603	1-163-133-00	CERAMIC CHIP 470PF 5% 50V	
R639	1-216-847-11	METAL CHIP	150K 5% 1/16W	C604	1-104-664-11	ELECT 47uF 20% 10V	
R640	1-216-821-11	METAL CHIP	1K 5% 1/16W	C605	1-107-682-11	CERAMIC CHIP 1uF 10% 16V	
R641	1-216-843-11	METAL CHIP	68K 5% 1/16W				
R643	1-216-809-11	METAL CHIP	100 5% 1/16W	C606	1-163-021-11	CERAMIC CHIP 0.01uF 10% 50V	
R644	1-216-833-11	RES-CHIP	10K 5% 1/16W	C607	1-163-009-11	CERAMIC CHIP 0.001uF 10% 50V	
R646	1-216-041-00	METAL CHIP	470 5% 1/10W	C608	1-163-243-11	CERAMIC CHIP 47PF 5% 50V	
R647	1-216-089-11	RES-CHIP	47K 5% 1/10W	C609	1-163-251-11	CERAMIC CHIP 100PF 5% 50V	
R648	1-216-833-11	RES-CHIP	10K 5% 1/16W	C614	1-163-259-11	CERAMIC CHIP 220PF 5% 50V	
R649	1-216-835-11	METAL CHIP	15K 5% 1/16W				
R650	1-216-833-11	RES-CHIP	10K 5% 1/16W	C621	1-163-259-11	CERAMIC CHIP 220PF 5% 50V	
R651	1-216-835-11	METAL CHIP	15K 5% 1/16W	C622	1-164-005-11	CERAMIC CHIP 0.47uF 25V	
				C623	1-164-005-11	CERAMIC CHIP 0.47uF 25V	
R652	1-500-329-21	FERRITE BEAD INDUCTOR		C624	1-164-005-11	CERAMIC CHIP 0.47uF 25V	
R653	1-216-073-00	METAL CHIP	10K 5% 1/10W	C625	1-164-005-11	CERAMIC CHIP 0.47uF 25V	
R654	1-216-833-11	RES-CHIP	10K 5% 1/16W			< CONNECTOR >	
R655	1-216-073-00	METAL CHIP	10K 5% 1/10W	CN601	1-695-371-31	CONNECTOR, FFC/FPC 10P	
R656	1-216-833-11	RES-CHIP	10K 5% 1/16W			< FLOURESCENT INDICATOR >	
R657	1-216-238-11	RES-CHIP	47K 5% 1/8W				
R658	1-216-853-11	METAL CHIP	470K 5% 1/16W	FL401	1-517-916-11	INDICATOR TUBE, FLUORESCENT	
R659	1-216-817-11	METAL CHIP	470 5% 1/16W			< IC >	
R660	1-216-841-11	METAL CHIP	47K 5% 1/16W	IC601	8-759-663-70	IC ML9206-03MBZ060	
R661	1-216-857-11	METAL CHIP	1M 5% 1/16W			< TRANSISTOR >	
R662	1-216-037-00	METAL CHIP	330 5% 1/10W	Q612	8-729-027-44	TRANSISTOR DTC114TKA-T146	
R663	1-216-821-11	METAL CHIP	1K 5% 1/16W	Q613	8-729-027-44	TRANSISTOR DTC114TKA-T146	
R664	1-216-821-11	METAL CHIP	1K 5% 1/16W			< RESISTOR >	
R665	1-216-073-00	METAL CHIP	10K 5% 1/10W	R601	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R666	1-500-329-21	FERRITE BEAD INDUCTOR		R602	1-216-017-11	RES-CHIP 47 5% 1/10W	
R667	1-500-329-21	FERRITE BEAD INDUCTOR		R605	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R668	1-216-815-11	METAL CHIP	330 5% 1/16W	R606	1-216-017-11	RES-CHIP 47 5% 1/10W	
R669	1-216-857-11	METAL CHIP	1M 5% 1/16W	R609	1-216-041-00	METAL CHIP 470 5% 1/10W	
R670	1-216-841-11	METAL CHIP	47K 5% 1/16W				
R671	1-216-821-11	METAL CHIP	1K 5% 1/16W	R610	1-216-049-11	RES-CHIP 1K 5% 1/10W	
R672	1-216-821-11	METAL CHIP	1K 5% 1/16W	R611	1-216-049-11	RES-CHIP 1K 5% 1/10W	
R674	1-216-857-11	METAL CHIP	1M 5% 1/16W	R612	1-216-041-00	METAL CHIP 470 5% 1/10W	
R691	1-216-821-11	METAL CHIP	1K 5% 1/16W	R613	1-216-049-11	RES-CHIP 1K 5% 1/10W	
R692	1-216-025-11	RES-CHIP	100 5% 1/10W	*****			
R693	1-216-025-11	RES-CHIP	100 5% 1/10W				
R694	1-216-821-11	METAL CHIP	1K 5% 1/16W				
R695	1-216-821-11	METAL CHIP	1K 5% 1/16W				
						< VIBRATOR >	
X601	1-767-179-21	VIBRATOR, CERAMIC (12MHz)					
X602	1-781-183-11	VIBRATOR, CRYSTAL (32.768kHz)					
X603	1-760-173-11	VIBRATOR, CRYSTAL (22.5792MHz)					

JACK **KEY** **LED**

Ref. No.	Part No.	Description	Remark
*	1-675-219-11	JACK BOARD *****	
		< CONNECTOR >	
* CN306	1-573-455-11	PLUG, CONNECTOR 4P	
		< DIODE >	
D301	8-719-988-61	DIODE 1SS355TE-17	
D302	8-719-988-61	DIODE 1SS355TE-17	
D303	8-719-988-61	DIODE 1SS355TE-17	
D304	8-719-988-61	DIODE 1SS355TE-17	
		< FERRITE BEAD >	
FB101	1-216-295-00	SHORT 0	
FB102	1-469-152-11	FERRITE, EMI (SMD)	
FB201	1-216-295-00	SHORT 0	
FB202	1-469-152-11	FERRITE, EMI (SMD)	
FB301	1-216-295-00	SHORT 0	
FB302	1-469-152-11	FERRITE, EMI (SMD)	
		< JACK >	
J301	1-779-050-11	JACK (⊘)	
J302	1-779-050-11	JACK (LINE IN)	
		< RESISTOR >	
R103	1-216-033-00	METAL CHIP 220 5% 1/10W	
R203	1-216-033-00	METAL CHIP 220 5% 1/10W	

*	1-675-223-11	KEY BOARD *****	
		< CONNECTOR >	
* CN603	1-695-333-41	PIN, CONNECTOR (PC BOARD) 10P	

*	A-3062-399-A	LED BOARD, COMPLETE (ORANGE)	
*	A-3322-633-A	LED BOARD, COMPLETE (GREEN) *****	
		< CAPACITOR >	
C611	1-126-794-11	ELECT 4.7uF 20% 25V	
		< CONNECTOR >	
* CN602	1-695-374-31	PIN, CONNECTOR (PC BOARD) 13P	
		< DIODE >	
D601	8-719-077-79	LED SLR-332VRT32 (HIGH SPEED)	
D602	8-719-078-08	LED SLA-362MT-T31XFG (DELETE/CLOCK) (GREEN)	
D602	8-719-078-09	LED SLR-332DC-T32MN (DELETE/CLOCK) (ORANGE)	

Ref. No.	Part No.	Description	Remark
D603	8-719-078-08	LED SLA-362MT-T31XFG (INSERT/TIMER) (GREEN)	
D603	8-719-078-09	LED SLR-332DC-T32MN (INSERT/TIMER) (ORANGE)	
D604	8-719-078-08	LED SLA-362MT-T31XFG (NO/CANCEL) (GREEN)	
D604	8-719-078-09	LED SLR-332DC-T32MN (NO/CANCEL) (ORANGE)	
D605	8-719-078-08	LED SLA-362MT-T31XFG (YES/ENTER) (GREEN)	
D605	8-719-078-09	LED SLR-332DC-T32MN (YES/ENTER) (ORANGE)	
D606	8-719-078-08	LED SLA-362MT-T31XFG (DISPLAY) (GREEN)	
D606	8-719-078-09	LED SLR-332DC-T32MN (DISPLAY) (ORANGE)	
D607	8-719-078-08	LED SLA-362MT-T31XFG (4/GHI) (GREEN)	
D607	8-719-078-09	LED SLR-332DC-T32MN (4/GHI) (ORANGE)	
D608	8-719-077-79	LED SLR-332VRT32 (abc)	
D609	8-719-077-79	LED SLR-332VRT32 (ABC)	
D610	8-719-078-08	LED SLA-362MT-T31XFG (1) (GREEN)	
D610	8-719-078-09	LED SLR-332DC-T32MN (1) (ORANGE)	
D611	8-719-078-08	LED SLA-362MT-T31XFG (1) (GREEN)	
D611	8-719-078-09	LED SLR-332DC-T32MN (1) (ORANGE)	
D612	8-719-078-08	LED SLA-362MT-T31XFG (2/ABC) (GREEN)	
D612	8-719-078-09	LED SLR-332DC-T32MN (2/ABC) (ORANGE)	
D613	8-719-078-08	LED SLA-362MT-T31XFG (3/DEF) (GREEN)	
D613	8-719-078-09	LED SLR-332DC-T32MN (3/DEF) (ORANGE)	
D614	8-719-078-08	LED SLA-362MT-T31XFG (DISPLAY) (GREEN)	
D614	8-719-078-09	LED SLR-332DC-T32MN (DISPLAY) (ORANGE)	
D615	8-719-078-08	LED SLA-362MT-T31XFG (4/GHI) (GREEN)	
D615	8-719-078-09	LED SLR-332DC-T32MN (4/GHI) (ORANGE)	
D616	8-719-078-08	LED SLA-362MT-T31XFG (5/JKL) (GREEN)	
D616	8-719-078-09	LED SLR-332DC-T32MN (5/JKL) (ORANGE)	
D617	8-719-078-08	LED SLA-362MT-T31XFG (6/MNO) (GREEN)	
D617	8-719-078-09	LED SLR-332DC-T32MN (6/MNO) (ORANGE)	
D618	8-719-078-08	LED SLA-362MT-T31XFG (7/PQRS) (GREEN)	
D618	8-719-078-09	LED SLR-332DC-T32MN (7/PQRS) (ORANGE)	
D619	8-719-078-08	LED SLA-362MT-T31XFG (7/PQRS) (GREEN)	
D619	8-719-078-09	LED SLR-332DC-T32MN (7/PQRS) (ORANGE)	
D620	8-719-078-08	LED SLA-362MT-T31XFG (8/TUV) (GREEN)	
D620	8-719-078-09	LED SLR-332DC-T32MN (8/TUV) (ORANGE)	
D621	8-719-078-08	LED SLA-362MT-T31XFG (9/WXYZ) (GREEN)	
D621	8-719-078-09	LED SLR-332DC-T32MN (9/WXYZ) (ORANGE)	
D622	8-719-078-08	LED SLA-362MT-T31XFG (SYMBOL) (GREEN)	
D622	8-719-078-09	LED SLR-332DC-T32MN (SYMBOL) (ORANGE)	
D623	8-719-078-08	LED SLA-362MT-T31XFG (SYMBOL) (GREEN)	
D623	8-719-078-09	LED SLR-332DC-T32MN (SYMBOL) (ORANGE)	
D624	8-719-078-08	LED SLA-362MT-T31XFG (0/10) (GREEN)	
D624	8-719-078-09	LED SLR-332DC-T32MN (0/10) (ORANGE)	
D625	8-719-078-08	LED SLA-362MT-T31XFG (>10 AM/PM) (GREEN)	
D625	8-719-078-09	LED SLR-332DC-T32MN (>10 AM/PM) (ORANGE)	

NOTE: There are two different colors of LEDs on the LED board.
 In service, check the color of the set before replacing parts.
 Color of the set Color of LEDs
 BLACK GREEN
 WHITE GREEN
 BLUE GREEN
 ORANGE ORANGE

LED

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
		< IC >		R638	1-216-033-00	METAL CHIP	220 5% 1/10W (ORANGE)
IC602	8-749-016-97	IC NJL62H400A		R641	1-216-025-11	RES-CHIP	100 5% 1/10W (GREEN)
		< JUMPER RESISTOR >		R641	1-216-033-00	METAL CHIP	220 5% 1/10W (ORANGE)
JC601	1-216-295-00	SHORT 0		R643	1-216-025-11	RES-CHIP	100 5% 1/10W (GREEN)
JC602	1-216-296-00	SHORT 0		R643	1-216-033-00	METAL CHIP	220 5% 1/10W (ORANGE)
JC603	1-216-295-00	SHORT 0					
JC604	1-216-295-00	SHORT 0		R646	1-216-025-11	RES-CHIP	100 5% 1/10W (GREEN)
		< TRANSISTOR >		R646	1-216-033-00	METAL CHIP	220 5% 1/10W (ORANGE)
Q603	8-729-027-58	TRANSISTOR DTC143ZKA-T146		R648	1-216-045-00	METAL CHIP	680 5% 1/10W
Q604	8-729-901-88	TRANSISTOR 2SC2411K-CR		R649	1-216-048-00	METAL CHIP	910 5% 1/10W
Q606	8-729-027-58	TRANSISTOR DTC143ZKA-T146		R650	1-216-056-00	RES-CHIP	2K 5% 1/10W
Q607	8-729-027-58	TRANSISTOR DTC143ZKA-T146					
Q608	8-729-120-28	TRANSISTOR 2SC1623-L5L6		R651	1-216-061-00	METAL CHIP	3.3K 5% 1/10W
Q609	8-729-120-28	TRANSISTOR 2SC1623-L5L6		R666	1-216-025-11	RES-CHIP	100 5% 1/10W (GREEN)
Q610	8-729-120-28	TRANSISTOR 2SC1623-L5L6		R666	1-216-033-00	METAL CHIP	220 5% 1/10W (ORANGE)
Q611	8-729-120-28	TRANSISTOR 2SC1623-L5L6		R667	1-216-025-11	RES-CHIP	100 5% 1/10W (GREEN)
		< RESISTOR >		R667	1-216-033-00	METAL CHIP	220 5% 1/10W (ORANGE)
R603	1-216-025-11	RES-CHIP 100 5%	1/10W (GREEN)				
R603	1-216-033-00	METAL CHIP 220 5%	1/10W (ORANGE)	R668	1-216-025-11	RES-CHIP	100 5% 1/10W (GREEN)
R614	1-216-085-00	METAL CHIP 33K 5%	1/10W	R668	1-216-033-00	METAL CHIP	220 5% 1/10W (ORANGE)
R615	1-216-033-00	METAL CHIP 220 5%	1/10W				
R617	1-216-025-11	RES-CHIP 100 5%	1/10W (GREEN)	R670	1-216-025-11	RES-CHIP	100 5% 1/10W (GREEN)
R617	1-216-033-00	METAL CHIP 220 5%	1/10W (ORANGE)	R670	1-216-033-00	METAL CHIP	220 5% 1/10W (ORANGE)
R620	1-216-025-11	RES-CHIP 100 5%	1/10W (GREEN)	R671	1-216-025-11	RES-CHIP	100 5% 1/10W (GREEN)
R620	1-216-033-00	METAL CHIP 220 5%	1/10W (ORANGE)				
R622	1-216-051-00	METAL CHIP 1.2K 5%	1/10W	R671	1-216-033-00	METAL CHIP	220 5% 1/10W (ORANGE)
R624	1-216-033-00	METAL CHIP 220 5%	1/10W	R672	1-216-025-11	RES-CHIP	100 5% 1/10W (GREEN)
R626	1-216-033-00	METAL CHIP 220 5%	1/10W	R672	1-216-033-00	METAL CHIP	220 5% 1/10W (ORANGE)
R628	1-216-025-11	RES-CHIP 100 5%	1/10W (GREEN)	R673	1-216-025-11	RES-CHIP	100 5% 1/10W (GREEN)
R628	1-216-033-00	METAL CHIP 220 5%	1/10W (ORANGE)	R673	1-216-033-00	METAL CHIP	220 5% 1/10W (ORANGE)
R631	1-216-074-00	RES-CHIP 100 5%	1/8W (GREEN)				
R631	1-216-082-00	RES-CHIP 220 5%	1/8W (ORANGE)	R674	1-216-025-11	RES-CHIP	100 5% 1/10W (GREEN)
R633	1-216-025-11	RES-CHIP 100 5%	1/10W (GREEN)	R674	1-216-033-00	METAL CHIP	220 5% 1/10W (ORANGE)
R633	1-216-033-00	METAL CHIP 220 5%	1/10W (ORANGE)	R675	1-216-025-11	RES-CHIP	100 5% 1/10W (GREEN)
R636	1-216-025-11	RES-CHIP 100 5%	1/10W (GREEN)	R675	1-216-033-00	METAL CHIP	220 5% 1/10W (ORANGE)
R636	1-216-033-00	METAL CHIP 220 5%	1/10W (ORANGE)	R676	1-216-025-11	RES-CHIP	100 5% 1/10W (GREEN)
R638	1-216-025-11	RES-CHIP 100 5%	1/10W (GREEN)				

NOTE: There are two different colors of LEDs on the LED board.
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 Color of the set Color of LEDs
 BLACK GREEN
 WHITE GREEN
 BLUE GREEN
 ORANGE ORANGE

LED

MAIN

Ref. No.	Part No.	Description	Remark
R676	1-216-033-00	METAL CHIP	220 5% 1/10W (ORANGE)
R677	1-216-025-11	RES-CHIP	100 5% 1/10W (GREEN)
R677	1-216-033-00	METAL CHIP	220 5% 1/10W (ORANGE)
< SWITCH >			
S601	1-692-014-11	SWITCH, KEY BOARD (POWER) (GREEN)	
S601	1-762-798-11	SWITCH, KEY BOARD (POWER) (ORANGE)	
S602	1-692-014-11	SWITCH, KEY BOARD (SLEEP) (GREEN)	
S602	1-762-798-11	SWITCH, KEY BOARD (SLEEP) (ORANGE)	
S603	1-692-014-11	SWITCH, KEY BOARD (STANDBY) (GREEN)	
S603	1-762-798-11	SWITCH, KEY BOARD (STANDBY) (ORANGE)	
S604	1-692-014-11	SWITCH, KEY BOARD (MONO/ST/REPEAT) (GREEN)	
S604	1-762-798-11	SWITCH, KEY BOARD (MONO/ST/REPEAT) (ORANGE)	
S605	1-692-014-11	SWITCH, KEY BOARD (AUTO PRESET, SHUF/PGM) (GREEN)	
S605	1-762-798-11	SWITCH, KEY BOARD (AUTO PRESET, SHUF/PGM) (ORANGE)	
S606	1-692-014-11	SWITCH, KEY BOARD (EDIT) (GREEN)	
S606	1-762-798-11	SWITCH, KEY BOARD (EDIT) (ORANGE)	

*	A-3322-636-A	MAIN BOARD, COMPLETE	*****
	3-039-961-01	SPRING (IC)	
	3-831-441-99	CUSHION (A)	
	7-685-647-79	SCREW +BVTP 3X10 TYPE2 N-S	
< CAPACITOR >			
C101	1-126-767-11	ELECT	1000uF 20% 16V
C102	1-126-963-11	ELECT	4.7uF 20% 50V
C103	1-126-963-11	ELECT	4.7uF 20% 50V
C104	1-163-251-11	CERAMIC CHIP	100PF 5% 50V
C105	1-163-021-11	CERAMIC CHIP	0.01uF 10% 50V
C106	1-136-165-00	MYLAR	0.1uF 5% 50V
C107	1-136-165-00	MYLAR	0.1uF 5% 50V
C108	1-126-960-11	ELECT	1uF 20% 50V
C109	1-126-964-11	ELECT	10uF 20% 50V
C110	1-126-961-11	ELECT	2.2uF 20% 50V
C111	1-126-961-11	ELECT	2.2uF 20% 50V
C112	1-126-961-11	ELECT	2.2uF 20% 50V
C113	1-126-961-11	ELECT	2.2uF 20% 50V
C114	1-136-157-00	MYLAR	0.022uF 5% 50V
C115	1-136-173-00	MYLAR	0.47uF 5% 50V
C116	1-136-153-00	FILM	0.01uF 5% 50V
C117	1-126-963-11	ELECT	4.7uF 20% 50V
C118	1-126-961-11	ELECT	2.2uF 20% 50V
C119	1-126-960-11	ELECT	1uF 20% 50V
C126	1-126-960-11	ELECT	1uF 20% 50V
C127	1-163-009-11	CERAMIC CHIP	0.001uF 10% 50V

Ref. No.	Part No.	Description	Remark
C128	1-163-251-11	CERAMIC CHIP	100PF 5% 50V
C201	1-126-767-11	ELECT	1000uF 20% 16V
C202	1-126-963-11	ELECT	4.7uF 20% 50V
C203	1-126-963-11	ELECT	4.7uF 20% 50V
C204	1-163-251-11	CERAMIC CHIP	100PF 5% 50V
C205	1-163-021-11	CERAMIC CHIP	0.01uF 10% 50V
C206	1-136-165-00	MYLAR	0.1uF 5% 50V
C207	1-136-165-00	MYLAR	0.1uF 5% 50V
C208	1-126-960-11	ELECT	1uF 20% 50V
C209	1-126-964-11	ELECT	10uF 20% 50V
C210	1-126-961-11	ELECT	2.2uF 20% 50V
C211	1-126-961-11	ELECT	2.2uF 20% 50V
C212	1-126-961-11	ELECT	2.2uF 20% 50V
C213	1-126-961-11	ELECT	2.2uF 20% 50V
C214	1-136-157-00	MYLAR	0.022uF 5% 50V
C215	1-136-173-00	MYLAR	0.47uF 5% 50V
C216	1-136-153-00	FILM	0.01uF 5% 50V
C217	1-126-963-11	ELECT	4.7uF 20% 50V
C218	1-126-961-11	ELECT	2.2uF 20% 50V
C219	1-126-960-11	ELECT	1uF 20% 50V
C226	1-126-960-11	ELECT	1uF 20% 50V
C227	1-163-009-11	CERAMIC CHIP	0.001uF 10% 50V
C228	1-163-251-11	CERAMIC CHIP	100PF 5% 50V
C301	1-104-665-11	ELECT	100uF 20% 10V
C302	1-126-963-11	ELECT	4.7uF 20% 50V
C303	1-115-877-11	ELECT(BLOCK)	4700uF 20% 25V
C306	1-126-964-11	ELECT	10uF 20% 50V
C307	1-163-009-11	CERAMIC CHIP	0.001uF 10% 50V
C308	1-104-665-11	ELECT	100uF 20% 10V
C309	1-126-934-11	ELECT	220uF 20% 10V
C310	1-104-665-11	ELECT	100uF 20% 10V
C311	1-104-665-11	ELECT	100uF 20% 10V
C312	1-104-665-11	ELECT	100uF 20% 10V
C313	1-126-964-11	ELECT	10uF 20% 50V
C314	1-163-021-11	CERAMIC CHIP	0.01uF 10% 50V
C315	1-163-021-11	CERAMIC CHIP	0.01uF 10% 50V
C316	1-104-665-11	ELECT	100uF 20% 10V
C317	1-107-725-11	CERAMIC CHIP	0.1uF 10% 16V
C318	1-126-964-11	ELECT	10uF 20% 50V
C319	1-126-960-11	ELECT	1uF 20% 50V
C320	1-163-009-11	CERAMIC CHIP	0.001uF 10% 50V
C321	1-163-009-11	CERAMIC CHIP	0.001uF 10% 50V
C322	1-126-964-11	ELECT	10uF 20% 50V
C323	1-104-665-11	ELECT	100uF 20% 10V
C324	1-104-665-11	ELECT	100uF 20% 10V
C326	1-126-964-11	ELECT	10uF 20% 50V
C401	1-163-237-11	CERAMIC CHIP	27PF 5% 50V
C402	1-163-104-00	CERAMIC CHIP	30PF 5% 50V
C403	1-164-346-11	CERAMIC CHIP	1uF 16V
C404	1-163-239-11	CERAMIC CHIP	33PF 5% 50V
C405	1-163-239-11	CERAMIC CHIP	33PF 5% 50V
C406	1-163-009-11	CERAMIC CHIP	0.001uF 10% 50V
C407	1-163-009-11	CERAMIC CHIP	0.001uF 10% 50V

NOTE: There are two different colors of LEDs on the LED board.
 In service, check the color of the set before replacing parts.
 Color of the set Color of LEDs
 BLACK GREEN
 WHITE GREEN
 BLUE GREEN
 ORANGE ORANGE

Ref. No.	Part No.	Description			Remark	Ref. No.	Part No.	Description			Remark
C408	1-163-235-11	CERAMIC CHIP	22PF	5%	50V	C470	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C409	1-163-234-11	CERAMIC CHIP	20PF	5%	50V	C472	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C410	1-107-725-11	CERAMIC CHIP	0.1uF	10%	16V	C473	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C411	1-104-665-11	ELECT	100uF	20%	10V	C474	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C412	1-164-346-11	CERAMIC CHIP	1uF		16V	C477	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C413	1-104-664-11	ELECT	47uF	20%	10V	C478	1-163-243-11	CERAMIC CHIP	47PF	5%	50V
C414	1-126-964-11	ELECT	10uF	20%	50V	C479	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C416	1-126-919-11	ELECT	6800uF	20%	6.3V	C480	1-163-021-11	CERAMIC CHIP	0.01uF	10%	50V
C417	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V	C481	1-126-964-11	ELECT	10uF	20%	50V
C418	1-164-346-11	CERAMIC CHIP	1uF		16V	C482	1-126-964-11	ELECT	10uF	20%	50V
C419	1-163-021-11	CERAMIC CHIP	0.01uF	10%	50V	C483	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C420	1-126-933-11	ELECT	100uF	20%	16V	C484	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C421	1-107-725-11	CERAMIC CHIP	0.1uF	10%	16V	C485	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C422	1-126-925-11	ELECT	470uF	20%	10V	C486	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C423	1-163-021-11	CERAMIC CHIP	0.01uF	10%	50V	C487	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C424	1-163-021-11	CERAMIC CHIP	0.01uF	10%	50V	C488	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C425	1-126-934-11	ELECT	220uF	20%	10V	C489	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C428	1-104-664-11	ELECT	47uF	20%	10V	C490	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C430	1-163-021-11	CERAMIC CHIP	0.01uF	10%	50V	C491	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C431	1-126-934-11	ELECT	220uF	20%	10V	C492	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C433	1-163-021-11	CERAMIC CHIP	0.01uF	10%	50V	C493	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C434	1-126-964-11	ELECT	10uF	20%	50V	C494	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C435	1-163-021-11	CERAMIC CHIP	0.01uF	10%	50V	C495	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C436	1-163-021-11	CERAMIC CHIP	0.01uF	10%	50V	C496	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C437	1-126-964-11	ELECT	10uF	20%	50V	C497	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C438	1-163-021-11	CERAMIC CHIP	0.01uF	10%	50V	C498	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C439	1-126-968-11	ELECT	100uF	20%	50V	C499	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C440	1-126-960-11	ELECT	1uF	20%	50V	C500	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C441	1-126-960-11	ELECT	1uF	20%	50V	C502	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C443	1-126-937-11	ELECT	4700uF	20%	16V	C503	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C444	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V	C504	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C445	1-164-161-11	CERAMIC CHIP	0.0022uF	10%	100V	C505	1-163-243-11	CERAMIC CHIP	47PF	5%	50V
C446	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V	C506	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C447	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V	C507	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C450	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V	C509	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C451	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V	C510	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C452	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V	C512	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C453	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V	C513	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C454	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V	C514	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C455	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V	C515	1-163-021-11	CERAMIC CHIP	0.01uF	10%	50V
C456	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V	C528	1-104-665-11	ELECT	100uF	20%	10V
C457	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V	C529	1-163-021-11	CERAMIC CHIP	0.01uF	10%	50V
C458	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V	C531	1-126-933-11	ELECT	100uF	20%	16V
C459	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V	C532	1-126-933-11	ELECT	100uF	20%	16V
C460	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V	C533	1-163-021-11	CERAMIC CHIP	0.01uF	10%	50V
C461	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V	C535	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C462	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V	C536	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C463	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V	C537	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C464	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V	C538	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C465	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V	C539	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C466	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V	C540	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C468	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V						
C469	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V						

MAIN

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
< CONNECTOR >							
* CN301	1-564-778-11	PLUG, CONNECTOR (2.5mm) 4P		FB427	1-216-295-00	SHORT	0
* CN303	1-785-656-11	PIN, CONNECTOR (PC BOARD) 4P		FB428	1-216-073-00	METAL CHIP	10K 5% 1/10W
* CN401	1-564-778-11	PLUG, CONNECTOR (2.5mm) 4P		FB429	1-216-295-00	SHORT	0
* CN402	1-785-662-11	PIN, CONNECTOR (PC BOARD) 10P		FB430	1-216-073-00	METAL CHIP	10K 5% 1/10W
* CN403	1-568-468-11	PIN, CONNECTOR (PC BOARD) 18P		< IC >			
CN404	1-568-931-11	PIN, CONNECTOR (PC BOARD) 26P		IC301	8-759-543-56	IC LA4601N	
* CN405	1-695-333-41	PIN, CONNECTOR (PC BOARD) 10P		IC302	8-759-652-74	IC M62443FPD61Q	
CN406	1-695-336-31	PIN, CONNECTOR (PC BOARD) 13P		IC303	8-759-100-96	IC uPC4558G2	
* CN407	1-695-333-41	PIN, CONNECTOR (PC BOARD) 10P		IC305	8-759-636-55	IC M5218AFP	
* CN408	1-785-661-11	PIN, CONNECTOR (PC BOARD) 9P		IC401	8-752-915-75	IC CXP740096-044Q	
* CN409	1-785-655-11	PIN, CONNECTOR (PC BOARD) 3P		IC402	8-759-486-73	IC XC62FP3302PR	
* CN410	1-785-654-11	PIN, CONNECTOR (PC BOARD) 2P		IC403	8-759-649-23	IC XC61CN2802PR	
CN450	1-566-690-11	PLUG, CONNECTOR (2.5mm) 2P		IC404	8-759-450-47	IC BA05T	
				IC411	8-759-486-73	IC XC62FP3302PR	
< DIODE >				< JUMPER RESISTOR >			
D301	8-719-988-61	DIODE 1SS355TE-17		JC101	1-216-296-00	SHORT	0
D303	8-719-988-61	DIODE 1SS355TE-17		JC102	1-216-295-00	SHORT	0
D304	8-719-988-61	DIODE 1SS355TE-17		JC103	1-216-295-00	SHORT	0
D401	8-719-988-61	DIODE 1SS355TE-17		JC104	1-216-296-00	SHORT	0
D402	8-719-988-61	DIODE 1SS355TE-17		JC105	1-216-295-00	SHORT	0
D403	8-719-056-84	DIODE UDZ-TE-17-7.5B		JC106	1-216-295-00	SHORT	0
D404	8-719-056-85	DIODE UDZ-TE-17-8.2B		JC107	1-216-295-00	SHORT	0
D405	8-719-056-82	DIODE UDZ-TE-17-6.2B		JC108	1-216-295-00	SHORT	0
D406	8-719-977-81	DIODE DTZ33B		JC109	1-216-295-00	SHORT	0
				JC113	1-216-295-00	SHORT	0
< FERRITE BEAD >				< TRANSISTOR >			
FB401	1-216-295-00	SHORT	0	Q101	8-729-027-46	TRANSISTOR DTC114YKA-T146	
FB402	1-216-295-00	SHORT	0	Q102	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
FB403	1-216-295-00	SHORT	0	Q103	8-729-027-46	TRANSISTOR DTC114YKA-T146	
FB404	1-216-295-00	SHORT	0	Q104	8-729-920-31	TRANSISTOR DTC343TK	
FB405	1-216-295-00	SHORT	0	Q105	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
FB406	1-216-295-00	SHORT	0	Q106	8-729-027-46	TRANSISTOR DTC114YKA-T146	
FB407	1-216-295-00	SHORT	0	Q111	8-729-920-31	TRANSISTOR DTC343TK	
FB408	1-216-295-00	SHORT	0	Q201	8-729-027-46	TRANSISTOR DTC114YKA-T146	
FB409	1-216-295-00	SHORT	0	Q202	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
FB410	1-216-295-00	SHORT	0	Q203	8-729-027-46	TRANSISTOR DTC114YKA-T146	
FB411	1-216-295-00	SHORT	0	Q204	8-729-920-31	TRANSISTOR DTC343TK	
FB412	1-469-185-11	FERRITE BEAD INDUCTOR		Q205	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
FB413	1-469-185-11	FERRITE BEAD INDUCTOR		Q206	8-729-027-46	TRANSISTOR DTC114YKA-T146	
FB414	1-216-295-00	SHORT	0	Q211	8-729-920-31	TRANSISTOR DTC343TK	
FB415	1-216-295-00	SHORT	0	Q301	8-729-027-24	TRANSISTOR DTA114TKA-T146	
FB416	1-216-295-00	SHORT	0	Q304	8-729-900-53	TRANSISTOR DTC114EK	
FB417	1-216-295-00	SHORT	0	Q305	8-729-027-46	TRANSISTOR DTC114YKA-T146	
FB418	1-216-296-00	SHORT	0	Q306	8-729-027-23	TRANSISTOR DTA114EKA-T146	
FB419	1-216-296-00	SHORT	0	Q307	8-729-900-53	TRANSISTOR DTC114EK	
FB420	1-216-295-00	SHORT	0	Q308	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
FB421	1-216-295-00	SHORT	0	Q309	8-729-027-23	TRANSISTOR DTA114EKA-T146	
FB423	1-216-295-00	SHORT	0	Q310	8-729-027-26	TRANSISTOR DTA114YKA-T146	
FB424	1-216-295-00	SHORT	0	Q311	8-729-027-24	TRANSISTOR DTA114TKA-T146	
FB425	1-216-295-00	SHORT	0	Q312	8-729-027-24	TRANSISTOR DTA114TKA-T146	
FB426	1-216-295-00	SHORT	0	Q313	8-729-027-26	TRANSISTOR DTA114YKA-T146	

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
Q401	8-729-903-10	TRANSISTOR FMW1		R212	1-216-073-00	METAL CHIP 10K 5%	1/10W
Q402	8-729-018-99	TRANSISTOR 2SD2394-F		R213	1-216-689-11	METAL CHIP 39K 0.5%	1/10W
Q403	8-729-021-82	TRANSISTOR 2SD2396K		R214	1-216-089-11	RES-CHIP 47K 5%	1/10W
Q405	8-729-021-82	TRANSISTOR 2SD2396K		R215	1-216-079-00	METAL CHIP 18K 5%	1/10W
Q406	8-729-903-46	TRANSISTOR 2SB1132-P		R216	1-216-113-00	METAL CHIP 470K 5%	1/10W
Q407	8-729-027-26	TRANSISTOR DTA114YKA-T146		R217	1-216-081-00	METAL CHIP 22K 5%	1/10W
Q408	8-729-027-46	TRANSISTOR DTC114YKA-T146		R218	1-216-057-00	METAL CHIP 2.2K 5%	1/10W
Q409	8-729-027-29	TRANSISTOR DTA123JKA-T146		R219	1-216-047-11	RES-CHIP 820 5%	1/10W
Q411	8-729-027-26	TRANSISTOR DTA114YKA-T146		R220	1-216-061-00	METAL CHIP 3.3K 5%	1/10W
Q412	8-729-027-46	TRANSISTOR DTC114YKA-T146		R222	1-216-049-11	RES-CHIP 1K 5%	1/10W
Q415	8-729-027-29	TRANSISTOR DTA123JKA-T146		R223	1-216-077-11	RES-CHIP 15K 5%	1/10W
Q416	8-729-027-46	TRANSISTOR DTC114YKA-T146		R224	1-216-049-11	RES-CHIP 1K 5%	1/10W
Q419	8-729-012-83	TRANSISTOR 2SK679A		R225	1-216-089-11	RES-CHIP 47K 5%	1/10W
Q420	8-729-012-83	TRANSISTOR 2SK679A		R302	1-216-073-00	METAL CHIP 10K 5%	1/10W
Q421	8-729-027-26	TRANSISTOR DTA114YKA-T146		R303	1-216-073-00	METAL CHIP 10K 5%	1/10W
Q422	8-729-027-46	TRANSISTOR DTC114YKA-T146		R304	1-216-057-00	METAL CHIP 2.2K 5%	1/10W
		< RESISTOR >		R306	1-216-025-11	RES-CHIP 100 5%	1/10W
R101	1-216-049-11	RES-CHIP 1K 5%	1/10W	R307	1-216-073-00	METAL CHIP 10K 5%	1/10W
R102	1-216-061-00	METAL CHIP 3.3K 5%	1/10W	R308	1-216-073-00	METAL CHIP 10K 5%	1/10W
R103	1-216-025-11	RES-CHIP 100 5%	1/10W	R309	1-216-166-00	RES-CHIP 47 5%	1/8W
R104	1-216-049-11	RES-CHIP 1K 5%	1/10W	R310	1-216-049-11	RES-CHIP 1K 5%	1/10W
R105	1-216-052-00	METAL CHIP 1.3K 5%	1/10W	R311	1-216-049-11	RES-CHIP 1K 5%	1/10W
R106	1-216-111-00	METAL CHIP 390K 5%	1/10W	R312	1-216-065-11	RES-CHIP 4.7K 5%	1/10W
R107	1-216-121-11	RES-CHIP 1M 5%	1/10W	R313	1-216-073-00	METAL CHIP 10K 5%	1/10W
R108	1-216-079-00	METAL CHIP 18K 5%	1/10W	R314	1-216-073-00	METAL CHIP 10K 5%	1/10W
R109	1-216-073-00	METAL CHIP 10K 5%	1/10W	R315	1-216-073-00	METAL CHIP 10K 5%	1/10W
R110	1-216-049-11	RES-CHIP 1K 5%	1/10W	R316	1-216-113-00	METAL CHIP 470K 5%	1/10W
R111	1-216-077-11	RES-CHIP 15K 5%	1/10W	R317	1-216-049-11	RES-CHIP 1K 5%	1/10W
R112	1-216-073-00	METAL CHIP 10K 5%	1/10W	R318	1-216-121-11	RES-CHIP 1M 5%	1/10W
R113	1-216-689-11	METAL CHIP 39K 0.5%	1/10W	R319	1-216-049-11	RES-CHIP 1K 5%	1/10W
R114	1-216-089-11	RES-CHIP 47K 5%	1/10W	R320	1-216-049-11	RES-CHIP 1K 5%	1/10W
R115	1-216-079-00	METAL CHIP 18K 5%	1/10W	R321	1-216-097-11	RES-CHIP 100K 5%	1/10W
R116	1-216-113-00	METAL CHIP 470K 5%	1/10W	R322	1-216-073-00	METAL CHIP 10K 5%	1/10W
R117	1-216-081-00	METAL CHIP 22K 5%	1/10W	R323	1-216-041-00	METAL CHIP 470 5%	1/10W
R118	1-216-057-00	METAL CHIP 2.2K 5%	1/10W	R324	1-216-049-11	RES-CHIP 1K 5%	1/10W
R119	1-216-047-11	RES-CHIP 820 5%	1/10W	R327	1-216-073-00	METAL CHIP 10K 5%	1/10W
R120	1-216-061-00	METAL CHIP 3.3K 5%	1/10W	R328	1-216-073-00	METAL CHIP 10K 5%	1/10W
R122	1-216-198-11	RES-CHIP 1K 5%	1/8W	R329	1-216-025-11	RES-CHIP 100 5%	1/10W
R123	1-216-077-11	RES-CHIP 15K 5%	1/10W	R401	1-216-222-00	RES-CHIP 10K 5%	1/8W
R124	1-216-049-11	RES-CHIP 1K 5%	1/10W	R402	1-216-198-11	RES-CHIP 1K 5%	1/8W
R125	1-216-089-11	RES-CHIP 47K 5%	1/10W	R403	1-216-049-11	RES-CHIP 1K 5%	1/10W
R201	1-216-049-11	RES-CHIP 1K 5%	1/10W	R404	1-216-025-11	RES-CHIP 100 5%	1/10W
R202	1-216-061-00	METAL CHIP 3.3K 5%	1/10W	R406	1-216-308-00	METAL CHIP 4.7 5%	1/10W
R203	1-216-025-11	RES-CHIP 100 5%	1/10W	R407	1-216-017-11	RES-CHIP 47 5%	1/10W
R204	1-216-049-11	RES-CHIP 1K 5%	1/10W	R408	1-216-047-11	RES-CHIP 820 5%	1/10W
R205	1-216-052-00	METAL CHIP 1.3K 5%	1/10W	R409	1-216-047-11	RES-CHIP 820 5%	1/10W
R206	1-216-111-00	METAL CHIP 390K 5%	1/10W	R410	1-216-041-00	METAL CHIP 470 5%	1/10W
R207	1-216-121-11	RES-CHIP 1M 5%	1/10W	R411	1-216-077-11	RES-CHIP 15K 5%	1/10W
R208	1-216-079-00	METAL CHIP 18K 5%	1/10W	R412	1-216-295-00	SHORT 0	
R209	1-216-073-00	METAL CHIP 10K 5%	1/10W	R413	1-216-053-00	METAL CHIP 1.5K 5%	1/10W
R210	1-216-049-11	RES-CHIP 1K 5%	1/10W	R416	1-216-073-00	METAL CHIP 10K 5%	1/10W
R211	1-216-077-11	RES-CHIP 15K 5%	1/10W	R417	1-216-049-11	RES-CHIP 1K 5%	1/10W
				R418	1-216-049-11	RES-CHIP 1K 5%	1/10W

MAIN

POWER

Ref. No.	Part No.	Description	Value	Tolerance	Power	Remark
R419	1-216-049-11	RES-CHIP	1K	5%	1/10W	
R422	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R423	1-216-049-11	RES-CHIP	1K	5%	1/10W	
R424	1-216-041-00	METAL CHIP	470	5%	1/10W	
R425	1-216-041-00	METAL CHIP	470	5%	1/10W	
R426	1-216-049-11	RES-CHIP	1K	5%	1/10W	
R427	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R428	1-216-049-11	RES-CHIP	1K	5%	1/10W	
R429	1-216-049-11	RES-CHIP	1K	5%	1/10W	
R430	1-216-049-11	RES-CHIP	1K	5%	1/10W	
R431	1-216-049-11	RES-CHIP	1K	5%	1/10W	
R432	1-216-049-11	RES-CHIP	1K	5%	1/10W	
R433	1-216-049-11	RES-CHIP	1K	5%	1/10W	
R434	1-216-049-11	RES-CHIP	1K	5%	1/10W	
R435	1-216-049-11	RES-CHIP	1K	5%	1/10W	
R436	1-216-049-11	RES-CHIP	1K	5%	1/10W	
R437	1-216-049-11	RES-CHIP	1K	5%	1/10W	
R438	1-216-049-11	RES-CHIP	1K	5%	1/10W	
R439	1-216-113-00	METAL CHIP	470K	5%	1/10W	
R440	1-216-049-11	RES-CHIP	1K	5%	1/10W	
R441	1-216-049-11	RES-CHIP	1K	5%	1/10W	
R442	1-216-085-00	METAL CHIP	33K	5%	1/10W	
R443	1-216-085-00	METAL CHIP	33K	5%	1/10W	
R444	1-216-085-00	METAL CHIP	33K	5%	1/10W	
R445	1-216-085-00	METAL CHIP	33K	5%	1/10W	
R446	1-216-085-00	METAL CHIP	33K	5%	1/10W	
R447	1-216-065-11	RES-CHIP	4.7K	5%	1/10W	
R449	1-216-049-11	RES-CHIP	1K	5%	1/10W	
R450	1-216-049-11	RES-CHIP	1K	5%	1/10W	
R451	1-216-049-11	RES-CHIP	1K	5%	1/10W	
R453	1-216-065-11	RES-CHIP	4.7K	5%	1/10W	
R454	1-216-113-00	METAL CHIP	470K	5%	1/10W	
R455	1-216-041-00	METAL CHIP	470	5%	1/10W	
R456	1-216-041-00	METAL CHIP	470	5%	1/10W	
R457	1-216-049-11	RES-CHIP	1K	5%	1/10W	
R458	1-216-049-11	RES-CHIP	1K	5%	1/10W	
R459	1-216-049-11	RES-CHIP	1K	5%	1/10W	
R460	1-216-065-11	METAL CHIP	22K	5%	1/10W	
R461	1-216-081-00	METAL CHIP	22K	5%	1/10W	
R462	1-216-089-00	RES-CHIP	47K	5%	1/10W	
R463	1-216-049-11	RES-CHIP	1K	5%	1/10W	
R464	1-216-049-11	RES-CHIP	1K	5%	1/10W	
R465	1-216-049-11	RES-CHIP	1K	5%	1/10W	
R466	1-216-049-11	RES-CHIP	1K	5%	1/10W	
R467	1-216-049-11	RES-CHIP	1K	5%	1/10W	
R468	1-216-049-11	RES-CHIP	1K	5%	1/10W	
R469	1-216-049-11	RES-CHIP	1K	5%	1/10W	
R470	1-216-198-11	RES-CHIP	1K	5%	1/8W	
R471	1-216-049-11	RES-CHIP	1K	5%	1/10W	
R472	1-216-049-11	RES-CHIP	1K	5%	1/10W	
R473	1-216-190-00	RES-CHIP	470	5%	1/8W	
R474	1-216-190-00	RES-CHIP	470	5%	1/8W	
R475	1-216-049-11	RES-CHIP	1K	5%	1/10W	

Ref. No.	Part No.	Description	Value	Tolerance	Power	Remark
R476	1-216-049-11	RES-CHIP	1K	5%	1/10W	
R477	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R478	1-216-049-11	RES-CHIP	1K	5%	1/10W	
R479	1-216-049-11	RES-CHIP	1K	5%	1/10W	
R480	1-216-049-11	RES-CHIP	1K	5%	1/10W	
R481	1-216-025-11	RES-CHIP	100	5%	1/10W	
R482	1-216-049-11	RES-CHIP	1K	5%	1/10W	
R483	1-216-025-11	RES-CHIP	100	5%	1/10W	
R484	1-216-049-11	RES-CHIP	1K	5%	1/10W	
R485	1-216-065-11	RES-CHIP	4.7K	5%	1/10W	
R486	1-216-065-11	RES-CHIP	4.7K	5%	1/10W	
R487	1-216-065-11	RES-CHIP	4.7K	5%	1/10W	
R488	1-216-041-00	METAL CHIP	470	5%	1/10W	
R489	1-216-049-11	RES-CHIP	1K	5%	1/10W	
R490	1-216-049-11	RES-CHIP	1K	5%	1/10W	
R491	1-216-049-11	RES-CHIP	1K	5%	1/10W	
R492	1-216-049-11	RES-CHIP	1K	5%	1/10W	
R493	1-216-049-11	RES-CHIP	1K	5%	1/10W	
R494	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R496	1-216-049-11	RES-CHIP	1K	5%	1/10W	
R497	1-216-049-11	RES-CHIP	1K	5%	1/10W	
R499	1-216-089-11	RES-CHIP	47K	5%	1/10W	
R500	1-216-041-00	METAL CHIP	470	5%	1/10W	
R505	1-216-085-00	METAL CHIP	33K	5%	1/10W	
R506	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R512	1-216-295-00	SHORT	0			
R513	1-216-049-11	RES-CHIP	1K	5%	1/10W	
R520	1-216-049-11	RES-CHIP	1K	5%	1/10W	
R521	1-216-049-11	RES-CHIP	1K	5%	1/10W	
R522	1-216-049-11	RES-CHIP	1K	5%	1/10W	
R523	1-216-049-11	RES-CHIP	1K	5%	1/10W	
R524	1-216-049-11	RES-CHIP	1K	5%	1/10W	
R525	1-216-049-11	RES-CHIP	1K	5%	1/10W	
R527	1-216-041-00	METAL CHIP	470	5%	1/10W	
R528	1-216-097-11	RES-CHIP	100K	5%	1/10W	
R529	1-216-097-11	RES-CHIP	100K	5%	1/10W	
< VIBRATOR >						
X401	1-781-598-11	VIBRATOR, CERAMIC (8MHz)				
X402	1-767-697-11	VIBRATOR, CRYSTAL (32kHz)				

*	A-3322-637-A	POWER BOARD, COMPLETE				

	1-533-233-31	HOLDER, FUSE				
< CAPACITOR >						
C901	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V	
C902	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V	
C903	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V	
C904	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V	
C905	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V	

Ref. No.	Part No.	Description	Remark
C906	1-163-037-11	CERAMIC CHIP 0.022uF 10%	25V
C907	1-163-037-11	CERAMIC CHIP 0.022uF 10%	25V
C908	1-163-037-11	CERAMIC CHIP 0.022uF 10%	25V
C909	1-163-037-11	CERAMIC CHIP 0.022uF 10%	25V
C910	1-163-037-11	CERAMIC CHIP 0.022uF 10%	25V
C911	1-163-037-11	CERAMIC CHIP 0.022uF 10%	25V
C912	1-163-037-11	CERAMIC CHIP 0.022uF 10%	25V
C913	1-163-037-11	CERAMIC CHIP 0.022uF 10%	25V
C914	1-163-037-11	CERAMIC CHIP 0.022uF 10%	25V
C915	1-163-037-11	CERAMIC CHIP 0.022uF 10%	25V
C916	1-163-037-11	CERAMIC CHIP 0.022uF 10%	25V
C917	1-163-021-11	CERAMIC CHIP 0.01uF 10%	50V
C918	1-163-021-11	CERAMIC CHIP 0.01uF 10%	50V
C919	1-163-021-11	CERAMIC CHIP 0.01uF 10%	50V
△ C920	1-113-925-11	CERAMIC 0.01uF 20%	250V
△ C922	1-113-925-11	CERAMIC 0.01uF 20%	250V
< CONNECTOR >			
* CN903	1-785-654-11	PIN, CONNECTOR (PC BOARD) 2P	
< DIODE >			
D901	8-719-046-07	DIODE 2A02M	
D902	8-719-046-07	DIODE 2A02M	
D903	8-719-046-07	DIODE 2A02M	
D904	8-719-046-07	DIODE 2A02M	
D905	8-719-046-07	DIODE 2A02M	
D906	8-719-046-07	DIODE 2A02M	
D907	8-719-046-07	DIODE 2A02M	
D908	8-719-046-07	DIODE 2A02M	
D909	8-719-063-79	DIODE 1N4002B	
D910	8-719-063-79	DIODE 1N4002B	
D911	8-719-063-79	DIODE 1N4002B	
D912	8-719-063-79	DIODE 1N4002B	
D913	8-719-988-61	DIODE 1SS355TE-17	
D914	8-719-988-61	DIODE 1SS355TE-17	
D915	8-719-988-61	DIODE 1SS355TE-17	
< FUSE >			
△ F901	1-576-099-11	FUSE (0.8A/250V)	
△ F902	1-576-105-11	FUSE (2.5A/250V)	
△ F903	1-576-107-11	FUSE (3.15A/250V)	
< AC INLET >			
△ J901	1-540-009-11	INLET, AC (～ AC IN)	
< JUMPER RESISTOR >			
JC901	1-216-296-00	SHORT 0	
< IC LINK >			
△ PS901	1-532-679-00	LINK, IC ICP-N15 (0.6A)	

Ref. No.	Part No.	Description	Remark
< TRANSISTOR >			
Q901	8-729-027-50	TRANSISTOR DTC123JKA-T146	
Q902	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
< RESISTOR >			
R901	1-216-073-00	METAL CHIP 10K 5%	1/10W
R902	1-216-089-11	RES-CHIP 47K 5%	1/10W
R905	1-216-089-11	RES-CHIP 47K 5%	1/10W
R906	1-216-073-00	METAL CHIP 10K 5%	1/10W
< RELAY >			
RY901	1-755-363-11	RELAY	
< TRANSFORMER >			
△ T901	1-435-320-11	TRANSFORMER, POWER	

*	1-671-115-21	SW BOARD	*****
< CONNECTOR >			
* CN601	1-506-486-11	PIN, CONNECTOR 7P	
< SWITCH >			
S601	1-572-126-21	SWITCH, PUSH (1 KEY) (REG POSITION)	
S602	1-572-126-21	SWITCH, PUSH (1 KEY) (PACK OUT)	
S604	1-771-264-11	SWITCH, PUSH (DETECTION) (1 KEY)	(PLAY POSITION)

*	1-675-213-11	TOP BOARD	*****
3-363-898-01		CUSHION	
3-831-441-11		CUSHION (B)	
< RESISTOR >			
R654	1-216-045-00	METAL CHIP 680 5%	1/10W
R655	1-216-048-00	METAL CHIP 910 5%	1/10W
R656	1-216-051-00	METAL CHIP 1.2K 5%	1/10W
R657	1-216-056-00	RES-CHIP 2K 5%	1/10W
R658	1-216-061-00	METAL CHIP 3.3K 5%	1/10W
R660	1-216-045-00	METAL CHIP 680 5%	1/10W
R661	1-216-048-00	METAL CHIP 910 5%	1/10W
R662	1-216-051-00	METAL CHIP 1.2K 5%	1/10W
R663	1-216-056-00	RES-CHIP 2K 5%	1/10W
R664	1-216-061-00	METAL CHIP 3.3K 5%	1/10W
R665	1-216-069-00	METAL CHIP 6.8K 5%	1/10W
< SWITCH >			
S633	1-762-798-11	SWITCH, KEY BOARD (MEGA BASS)	
S634	1-762-798-11	SWITCH, KEY BOARD (SOUND)	
S635	1-762-798-11	SWITCH, KEY BOARD (MD ■)	

The components identified by mark △ or dotted line with mark △ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque △ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.
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TOP **TUNER**

Ref. No.	Part No.	Description	Remark
S636	1-762-798-11	SWITCH, KEY BOARD (MD ►►)	
S637	1-762-798-11	SWITCH, KEY BOARD (RADIO/BAND)	
S638	1-762-798-11	SWITCH, KEY BOARD (CD ■)	
S640	1-762-798-11	SWITCH, KEY BOARD (VOLUME -)	
S641	1-762-798-11	SWITCH, KEY BOARD (VOLUME +)	
S642	1-762-798-11	SWITCH, KEY BOARD (REC/REC MODE)	
S643	1-762-798-11	SWITCH, KEY BOARD (CD ►►)	
S644	1-762-798-11	SWITCH, KEY BOARD (TUNE ►►+)	
S645	1-762-798-11	SWITCH, KEY BOARD (TUNE ◀◀-)	
S646	1-762-798-11	SWITCH, KEY BOARD (LINE/LINE LEVEL)	

*	A-3322-634-A	TUNER BOARD, COMPLETE	*****
< CAPACITOR >			
C1	1-163-009-11	CERAMIC CHIP 0.001uF	10% 50V
C2	1-163-227-11	CERAMIC CHIP 10PF	0.5PF 50V
C3	1-163-021-11	CERAMIC CHIP 0.01uF	10% 50V
C4	1-163-021-11	CERAMIC CHIP 0.01uF	10% 50V
C5	1-163-021-11	CERAMIC CHIP 0.01uF	10% 50V
C6	1-163-235-11	CERAMIC CHIP 22PF	5% 50V
C7	1-163-009-11	CERAMIC CHIP 0.001uF	10% 50V
C8	1-163-251-11	CERAMIC CHIP 100PF	5% 50V
C9	1-163-037-11	CERAMIC CHIP 0.022uF	10% 25V
C10	1-163-251-11	CERAMIC CHIP 100PF	5% 50V
C11	1-163-131-00	CERAMIC CHIP 390PF	5% 50V
C12	1-163-233-11	CERAMIC CHIP 18PF	5% 50V
C13	1-164-004-11	CERAMIC CHIP 0.1uF	10% 25V
C14	1-163-021-11	CERAMIC CHIP 0.01uF	10% 50V
C15	1-163-231-11	CERAMIC CHIP 15PF	5% 50V
C16	1-164-346-11	CERAMIC CHIP 1uF	16V
C17	1-164-004-11	CERAMIC CHIP 0.1uF	10% 25V
C19	1-164-346-11	CERAMIC CHIP 1uF	16V
C21	1-163-021-11	CERAMIC CHIP 0.01uF	10% 50V
C22	1-126-964-11	ELECT 10uF	20% 50V
C23	1-163-263-11	CERAMIC CHIP 330PF	5% 50V
C24	1-164-346-11	CERAMIC CHIP 1uF	16V
C25	1-164-004-11	CERAMIC CHIP 0.1uF	10% 25V
C26	1-164-004-11	CERAMIC CHIP 0.1uF	10% 25V
C27	1-163-037-11	CERAMIC CHIP 0.022uF	10% 25V
C28	1-163-037-11	CERAMIC CHIP 0.022uF	10% 25V
C29	1-126-960-11	ELECT 1uF	20% 50V
C30	1-126-960-11	ELECT 1uF	20% 50V
C31	1-126-934-11	ELECT 220uF	20% 10V
C32	1-163-021-11	CERAMIC CHIP 0.01uF	10% 50V
C33	1-163-021-11	CERAMIC CHIP 0.01uF	10% 50V
C34	1-163-227-11	CERAMIC CHIP 10PF	0.5PF 50V
C35	1-163-227-11	CERAMIC CHIP 10PF	0.5PF 50V
C36	1-164-005-11	CERAMIC CHIP 0.47uF	25V
C37	1-126-934-11	ELECT 220uF	20% 10V
C38	1-163-009-11	CERAMIC CHIP 0.001uF	10% 50V
C39	1-163-009-11	CERAMIC CHIP 0.001uF	10% 50V
C40	1-163-009-11	CERAMIC CHIP 0.001uF	10% 50V

Ref. No.	Part No.	Description	Remark
C41	1-163-017-00	CERAMIC CHIP 0.0047uF	5% 50V
C42	1-163-133-00	CERAMIC CHIP 470PF	5% 50V
C43	1-163-133-00	CERAMIC CHIP 470PF	5% 50V
C44	1-163-251-11	CERAMIC CHIP 100PF	5% 50V
C45	1-163-021-11	CERAMIC CHIP 0.01uF	10% 50V
C46	1-163-009-11	CERAMIC CHIP 0.001uF	10% 50V
C47	1-163-251-11	CERAMIC CHIP 100PF	5% 50V
C63	1-163-001-11	CERAMIC CHIP 220PF	10% 50V
C67	1-126-964-11	ELECT 10uF	20% 50V
C71	1-163-009-11	CERAMIC CHIP 0.001uF	10% 50V
< FILTER >			
CF1	1-567-390-11	FILTER, CERAMIC (10.7MHz)	
CF2	1-567-390-11	FILTER, CERAMIC (10.7MHz)	
CF3	1-781-344-12	FILTER, AM CERAMIC	
< CONNECTOR >			
CN2	1-566-690-11	PLUG, CONNECTOR (2.5mm) 2P	
< TRIMMER >			
CT1	1-141-601-11	CAP, ADJ 10PF	
CT2	1-141-601-11	CAP, ADJ 10PF	
< DIODE >			
D1	8-719-076-71	DIODE KV1471ETR	
D2	8-719-076-71	DIODE KV1471ETR	
D3	8-719-050-69	DIODE KV1520N	
D4	8-719-988-61	DIODE 1SS355TE-17	
D5	8-719-988-61	DIODE 1SS355TE-17	
D6	8-719-988-61	DIODE 1SS355TE-17	
D7	8-719-988-61	DIODE 1SS355TE-17	
D10	8-719-988-61	DIODE 1SS355TE-17	
D11	8-719-988-61	DIODE 1SS355TE-17	
< FERRITE BEAD >			
FB1	1-500-445-21	FERRITE, EMI (SMD)	
< BPF >			
FL1	1-236-711-21	FILTER, BAND PASS	
< IC >			
IC1	8-759-662-67	IC TA2149N	
IC2	8-759-483-40	IC LC72137M-TLM	
< JUMPER RESISTOR >			
JC1	1-216-295-00	SHORT 0	
JC2	1-216-295-00	SHORT 0	
JC3	1-216-295-00	SHORT 0	
JC6	1-216-296-00	SHORT 0	
JC7	1-216-296-00	SHORT 0	

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
		< COIL >				< VIBRATOR >	
L1	1-419-517-11	COIL, AIR-CORE		X1	1-781-592-11	VIBRATOR, CRYSTAL (75kHz)	
L2	1-419-518-11	COIL, AIR-CORE		*****			
L3	1-416-991-11	COIL, AM ANT				MISCELLANEOUS	
L4	1-411-959-11	COIL, AM OSC				*****	
L5	1-410-994-22	INDUCTOR CHIP 1.2uH					
L6	1-419-465-11	COIL (DET)		60	1-791-523-11	WIRE, PARALLEL (FFC) (13 CORE)	
		< RESISTOR >		61	1-791-522-11	WIRE, PARALLEL (FFC) (10 CORE)	
R1	1-216-097-11	RES-CHIP 100K 5%	1/10W	103	1-791-521-11	WIRE, PARALLEL (FFC) (10 CORE)	
R2	1-216-065-11	RES-CHIP 4.7K 5%	1/10W	106	1-791-520-11	WIRE, PARALLEL (FFC) (18 CORE)	
R3	1-216-077-11	RES-CHIP 15K 5%	1/10W	118	1-791-518-11	WIRE, PARALLEL (FFC) (16 CORE)	
R4	1-216-009-11	RES-CHIP 22 5%	1/10W	154	1-791-519-11	WIRE, PARALLEL (FFC) (26 CORE)	
R5	1-216-073-00	METAL CHIP 10K 5%	1/10W	155	1-791-531-21	WIRE, PARALLEL (FFC) (21 CORE)	
R6	1-216-105-11	RES-CHIP 220K 5%	1/10W	156	1-791-532-21	WIRE, PARALLEL (FFC) (23 CORE)	
R7	1-216-081-00	METAL CHIP 22K 5%	1/10W	* 258	1-667-954-11	FLEXIBLE BOARD	
R9	1-216-037-00	METAL CHIP 330 5%	1/10W	△ 260	A-4672-541-A	PICK-UP, OPTICAL KMS-260B	
R16	1-216-033-00	METAL CHIP 220 5%	1/10W	273	A-4672-475-A	MOTOR ASSY, SPINDLE (SPINDLE)	(INCLUDING M101)
R17	1-216-033-00	METAL CHIP 220 5%	1/10W	△ 303	8-848-483-05	PICK-UP, OPTICAL KSS-213C (CD)	
R18	1-216-017-11	RES-CHIP 47 5%	1/10W	304	X-2626-202-1	CHASSIS ASSY, MOTOR (MB) (SPINDLE)	(INCLUDING M701)
R19	1-216-061-00	METAL CHIP 3.3K 5%	1/10W	ANT1	1-501-452-11	ANTENNA, TELESCOPIC	
R20	1-216-049-11	RES-CHIP 1K 5%	1/10W	△ F901	1-576-099-11	FUSE (0.8A/250V)	
R21	1-216-073-00	METAL CHIP 10K 5%	1/10W	△ F902	1-576-105-11	FUSE (2.5A/250V)	
R22	1-216-065-11	RES-CHIP 4.7K 5%	1/10W	△ F903	1-576-107-11	FUSE (3.15A/250V)	
R23	1-216-295-00	SHORT 0		HR901	1-500-502-11	HEAD, OVER WRITE	
R25	1-216-073-00	METAL CHIP 10K 5%	1/10W	M102	A-4672-474-A	MOTOR ASSY, SLED (SLED) (MD)	
R26	1-216-049-11	RES-CHIP 1K 5%	1/10W	M103	X-4949-264-1	MOTOR ASSY, LOADING (LOADING)	
R27	1-216-049-11	RES-CHIP 1K 5%	1/10W	M702	X-2625-769-1	GEAR ASSY, MOTOR (MB) (RP) (SLED)	
R28	1-216-065-11	RES-CHIP 4.7K 5%	1/10W	S102	1-762-148-21	SWITCH, PUSH (2 KEY) (REFLECT RATE)	DETECT, PROTECT DETECT)
R29	1-216-025-11	RES-CHIP 100 5%	1/10W	S402	1-692-960-11	SWITCH, PUSH (1 KEY) (CD DOOR)	
R30	1-216-057-00	METAL CHIP 2.2K 5%	1/10W	SP101	1-529-463-11	SPEAKER (8cm)	
R31	1-216-049-11	RES-CHIP 1K 5%	1/10W	SP201	1-529-463-11	SPEAKER (8cm)	
R32	1-216-021-00	METAL CHIP 68 5%	1/10W	△ T901	1-435-320-11	TRANSFORMER, POWER	
R33	1-216-027-00	METAL CHIP 120 5%	1/10W	*****			
R34	1-216-021-00	METAL CHIP 68 5%	1/10W			ACCESSORIES & PACKING MATERIALS	
R35	1-216-021-00	METAL CHIP 68 5%	1/10W			*****	
R36	1-216-057-00	METAL CHIP 2.2K 5%	1/10W			1-754-102-21	ANTENNA, LOOP (AM)
R67	1-216-065-11	RES-CHIP 4.7K 5%	1/10W	△	1-783-878-11	CORD, POWER (7A/125V)	
R70	1-216-025-11	RES-CHIP 100 5%	1/10W		3-027-153-11	LID, BATTERY CASE (for RMT-CM35A)	
R71	1-216-025-11	RES-CHIP 100 5%	1/10W		3-231-405-11	MANUAL, INSTRUCTION (FRENCH) (CANADIAN)	
R73	1-216-025-11	RES-CHIP 100 5%	1/10W		3-867-609-11	MANUAL, INSTRUCTION (ENGLISH) (US)	
R74	1-216-025-11	RES-CHIP 100 5%	1/10W		3-867-609-91	MANUAL, INSTRUCTION	(TRADITIONAL CHINESE) (TAIWAN)
R75	1-216-025-11	RES-CHIP 100 5%	1/10W		A-3258-025-A	REMOTE CONTROLLER (RMT-CM35A)	
R76	1-216-025-11	RES-CHIP 100 5%	1/10W	*****			
R96	1-216-073-00	METAL CHIP 10K 5%	1/10W				
		< TRANSFORMER >					
T1	1-433-741-11	TRANSFORMER, IF					
		< TERMINAL >					
TB1	1-694-156-11	TERMINAL BOARD (AM ANTENNA)					

The components identified by mark △ or dotted line with mark △ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque △ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.
--	--

<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Remark</u>
		***** HARDWARE LIST *****	
#1	7-685-649-79	SCREW +BVTP 3X14 TYPE2 N-S	
#2	7-685-648-79	SCREW +BVTP 3X12 TYPE2 N-S	
#3	7-685-647-79	SCREW +BVTP 3X10 TYPE2 N-S	
#4	7-685-533-19	SCREW +BTP 2.6X6 TYPE2 N-S	
#5	7-621-770-87	SCREW +P 2.6X5	
#6	7-685-133-19	SCREW (DIA. 2.6) (IT3B)	
#7	7-682-549-04	SCREW +B 3X10	
#8	7-621-772-20	SCREW +B 2X5	
#9	7-621-772-40	SCREW +B 2X8	
#10	7-627-852-08	SCREW, PRECISION +P 1.7X2.5	
#11	7-685-661-79	SCREW +BVTP 4X12 TYPE2 N-S	

ZS-M35

SONY®

SERVICE MANUAL

Ver 1.2 2001.07

US Model
Canadian Model
Taiwan Model

SUPPLEMENT-1

File this supplement with the service manual.

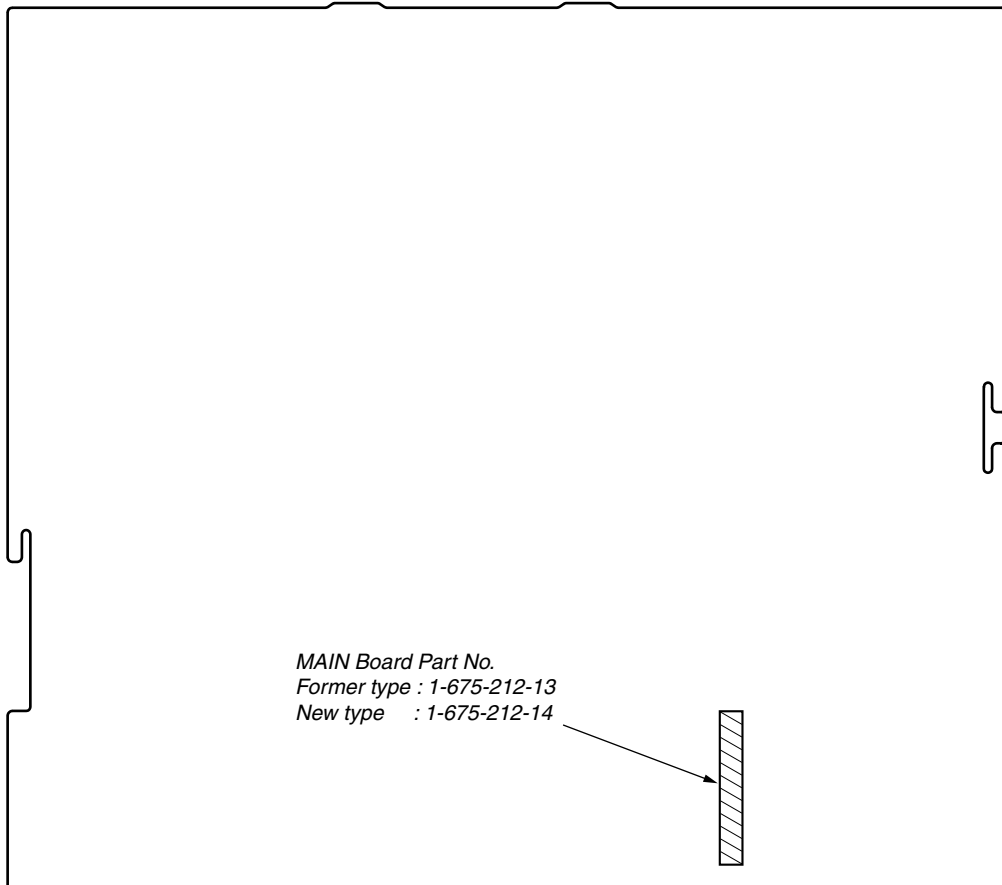
Subject : Change of PC Boards

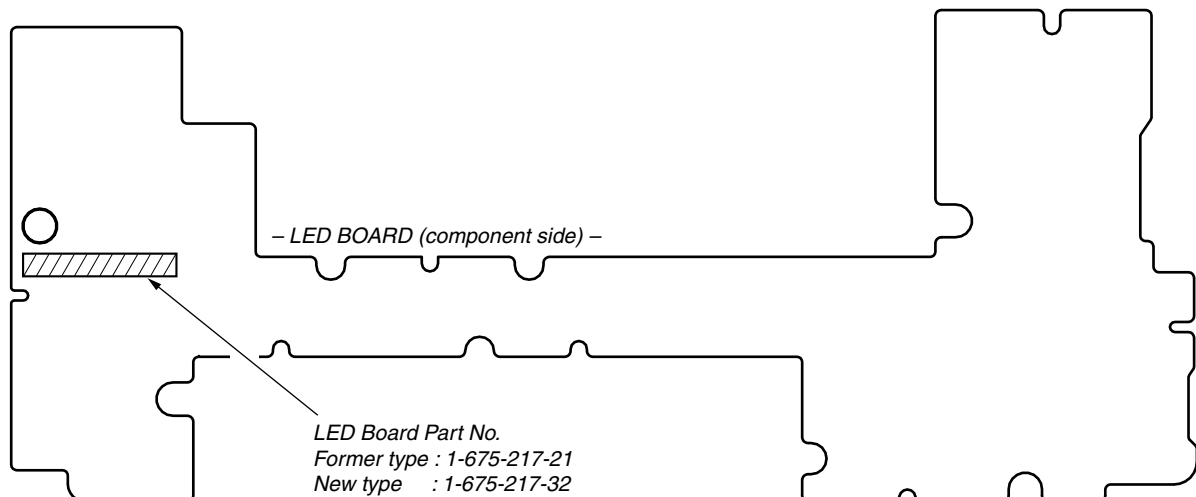
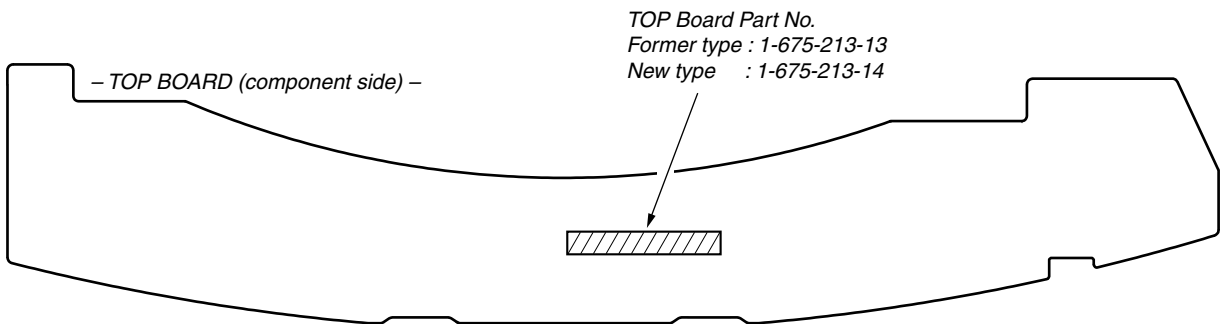
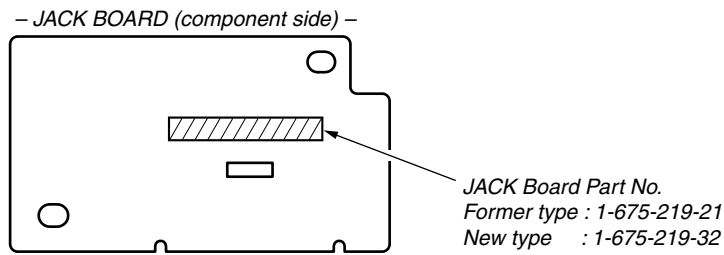
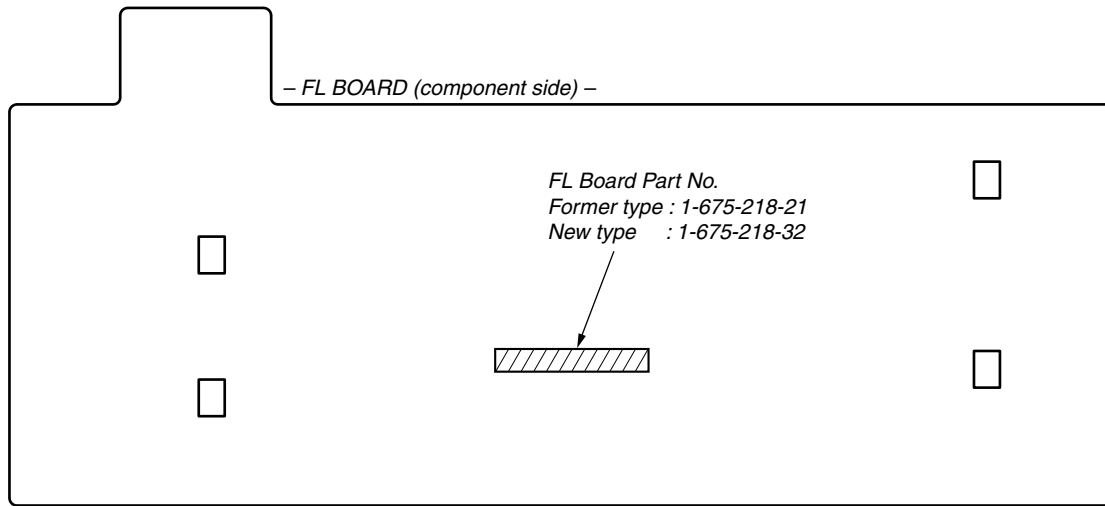
(ECN-RCA01727, RCA01728)

Printed wiring board and schematic diagram of new type, and changed parts list are described in this Supplement-1.

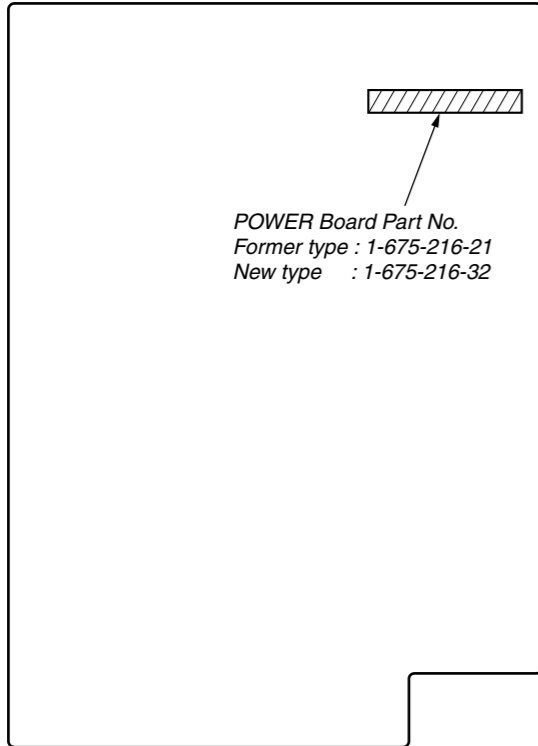
When performing service and inspection, check the suffix of the part number of the MAIN, FL, JACK, TOP, LED, POWER, BATT (+) and BATT (-) boards.

– MAIN BOARD (component side) –

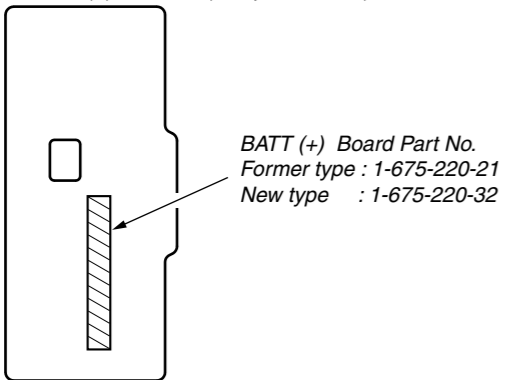




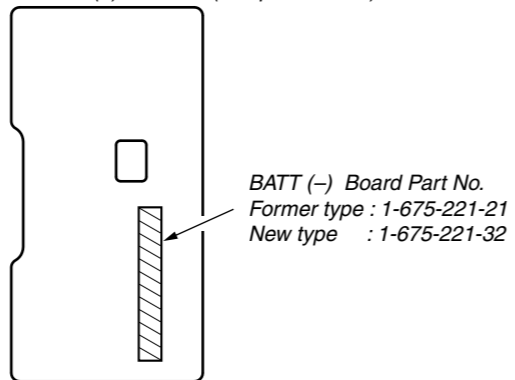
– POWER BOARD (component side) –



– BATT (+) BOARD (component side) –



– BATT (-) BOARD (component side) –



1. Common Note on Schematic Diagram and Printed Wiring Boards

Common Note on Schematic Diagram:

- All capacitors are in μF unless otherwise noted. pF: $\mu\mu\text{F}$ 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.

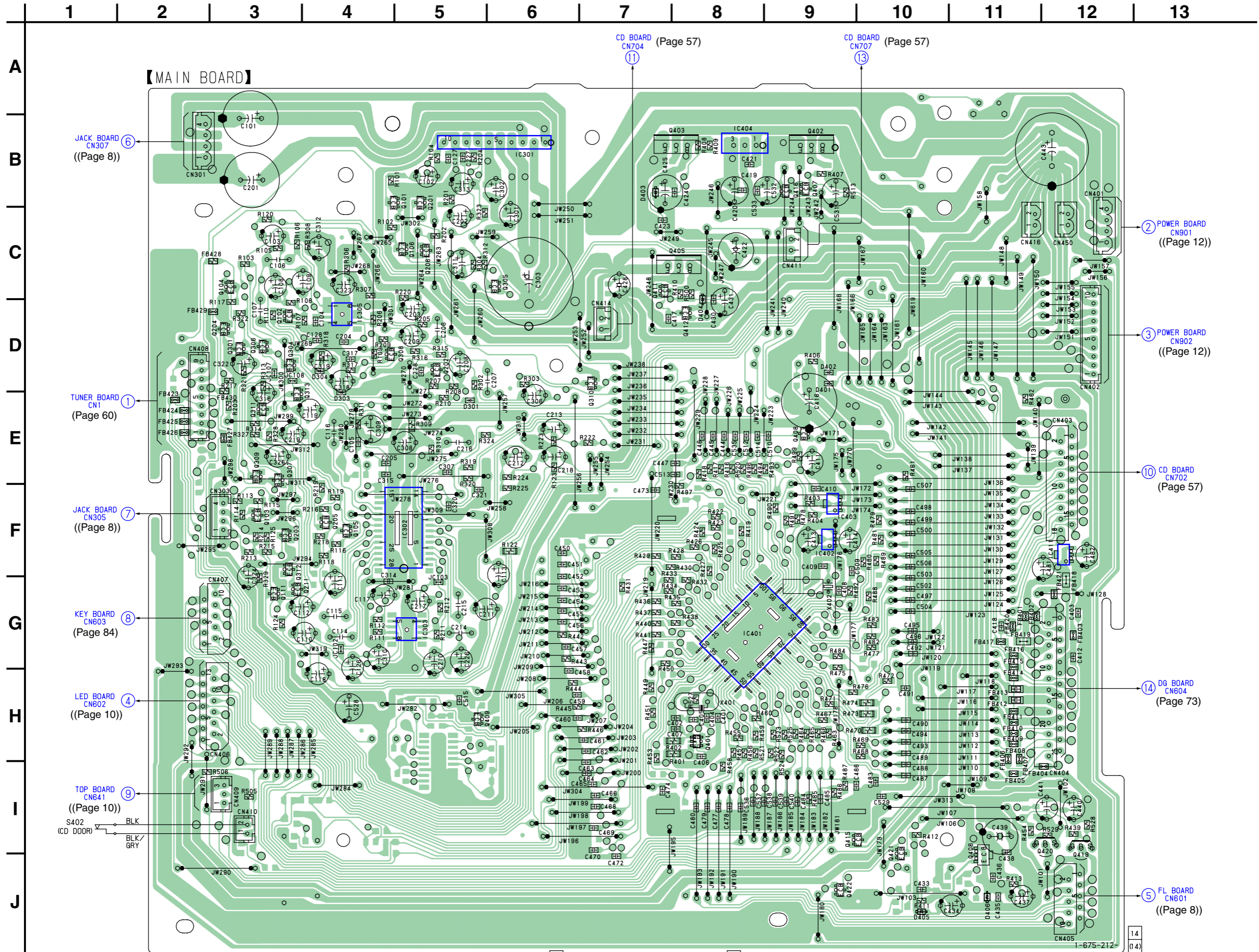
Note:	Note:
The components identified by mark Δ or dotted line with mark Δ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque Δ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

Common Note on Printed Wiring Boards:

- \circ : parts extracted from the component side.
- --- : parts extracted from the conductor side.
- \blacksquare : parts mounted on the conductor side.
- \circ : Through hole.
- Pattern : Pattern from the side which enables seeing.

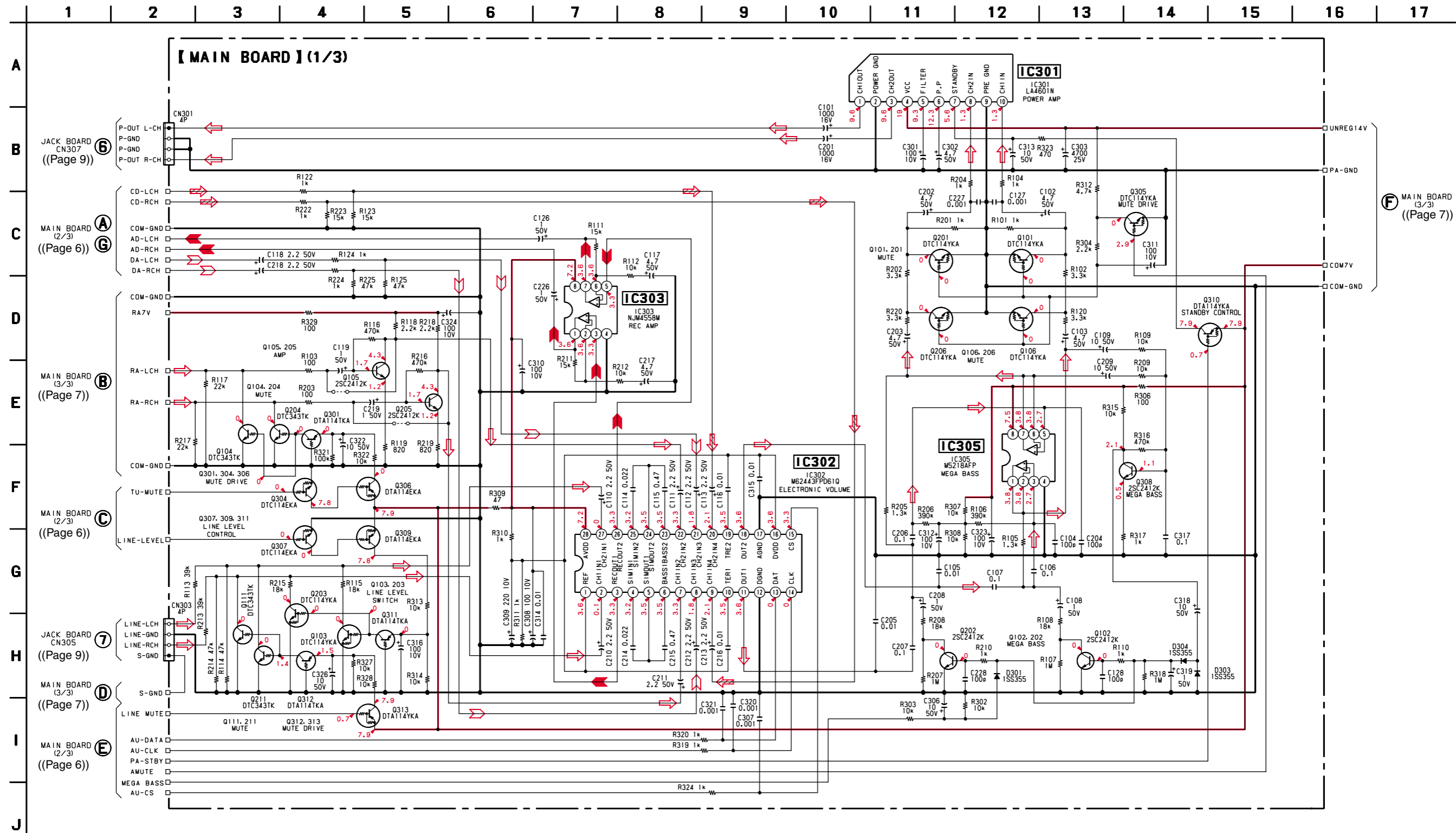
- --- : B+ Line.
- --- : B- Line.
- \square : adjustment for repair.
- Voltage and waveforms are dc with respect to ground under no-signal (detuned) conditions.
 - * : Impossible to measure
- Voltages are taken with a VOM (Input impedance 10 M Ω). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.
 - \Rightarrow : FM
 - \Rightarrow : AM
 - Σ : MD PB
 - Σ : MD REC (DIGITAL)
 - Σ : MD REC (ANALOG)
 - Σ : CD
- () : Page of service manual
- (()) : Page of service manual supplement-1

2. PRINTED WIRING BOARD — MAIN SECTION — • Refer to page 3 for Note.



• () : Page of service manual
 (()) : Page of service manual supplement-1

3. SCHEMATIC DIAGRAM — MAIN SECTION (1/3) — • Refer to page 3 for Note.

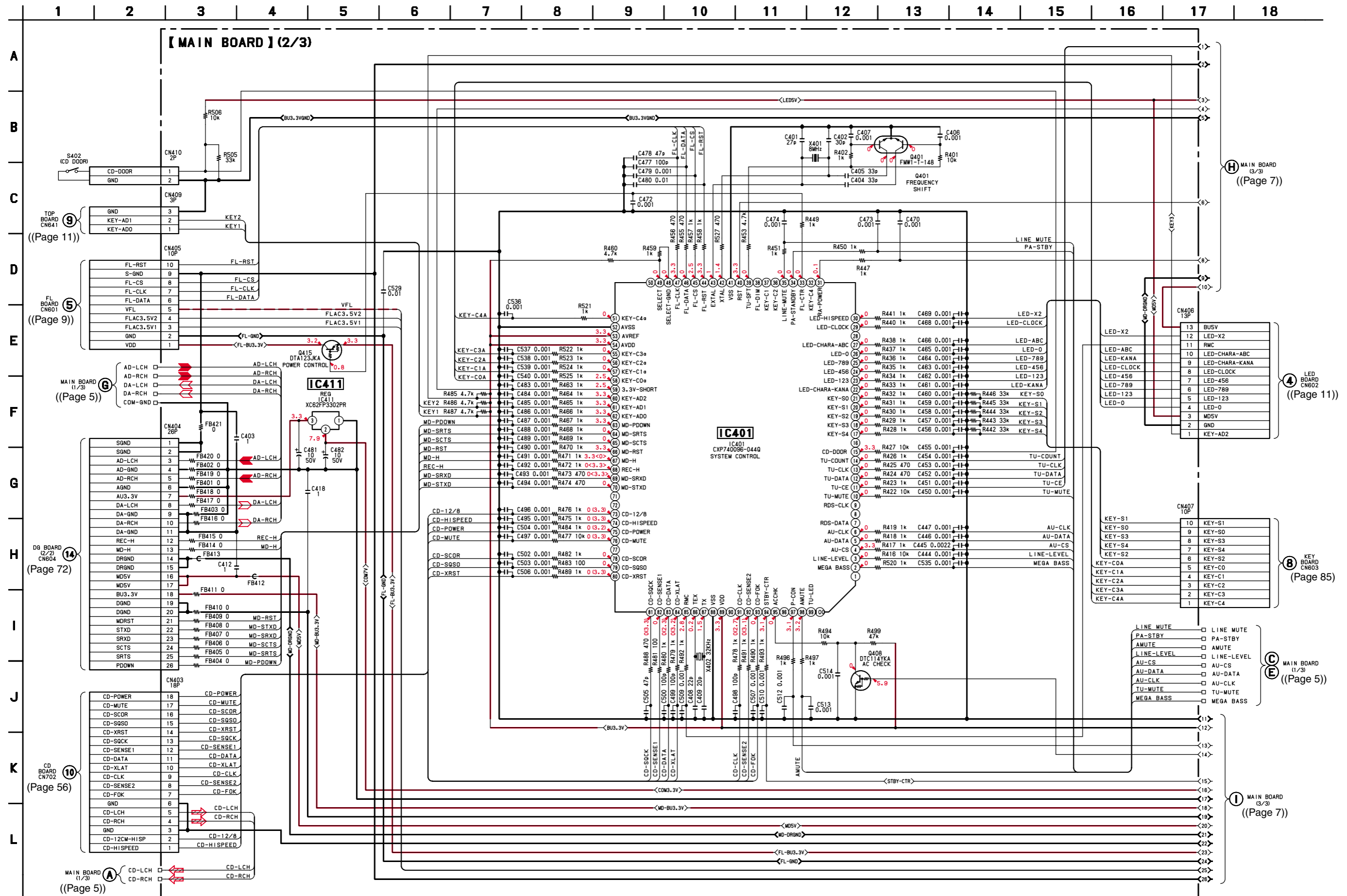


• Semiconductor Location

Ref. No.	Location	Ref. No.	Location	Ref. No.	Location	Ref. No.	Location	Ref. No.	Location	Ref. No.	Location
D301	E-5	IC302	F-5	Q103	F-3	Q211	G-3	Q313	E-4	Q415	I-10
D303	E-4	IC303	F-5	Q104	C-3	Q301	D-3	Q401	H-8	Q416	B-9
D304	D-4	IC305	D-4	Q105	F-4	Q304	D-3	Q402	B-9	Q419	J-12
D401	D-9	IC401	G-8	Q106	C-5	Q305	C-6	Q403	B-8	Q420	J-12
D402	D-9	IC402	F-9	Q111	G-3	Q306	D-3	Q405	C-8	Q421	J-10
D403	B-7	IC403	F-9	Q201	B-5	Q307	E-3	Q406	J-11	Q422	J-9
D404	D-8	IC404	B-8	Q202	D-5	Q308	D-5	Q407	B-9		
D405	J-10	IC411	F-12	Q203	F-3	Q309	E-3	Q408	E-9		
D406	J-11			Q204	D-3	Q310	E-7	Q409	H-6		
		Q101	B-5	Q205	F-4	Q311	E-3	Q411	C-8		
		Q102	D-3	Q206	C-5	Q312	F-4	Q412	D-8		
IC301	B-6										

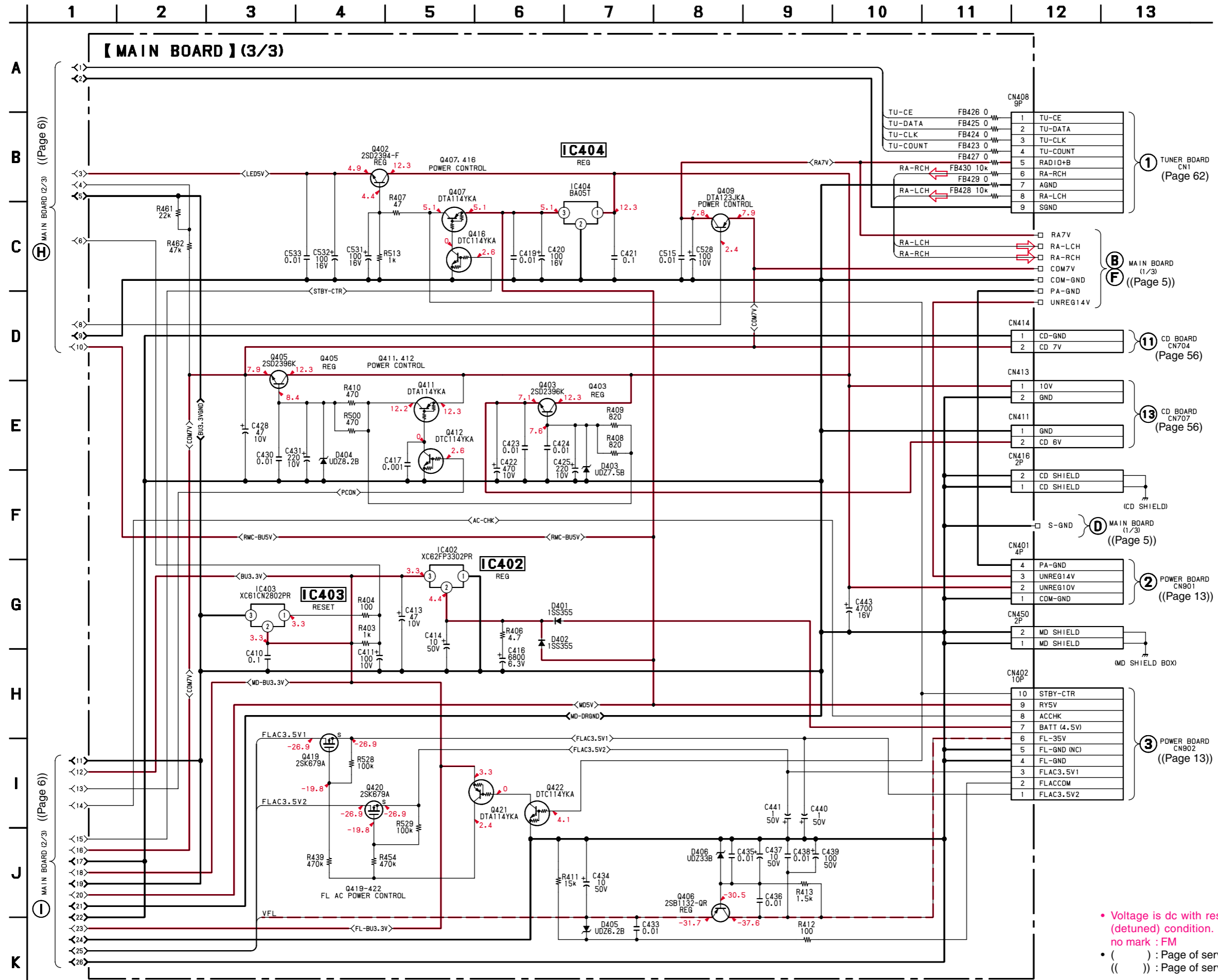
• Voltage is dc with respect to ground under no-signal (detuned) condition.
 no mark : FM
 • (()) : Page of service manual supplement-1

4. SCHEMATIC DIAGRAM — MAIN SECTION (2/3) — • Refer to page 3 for Note.

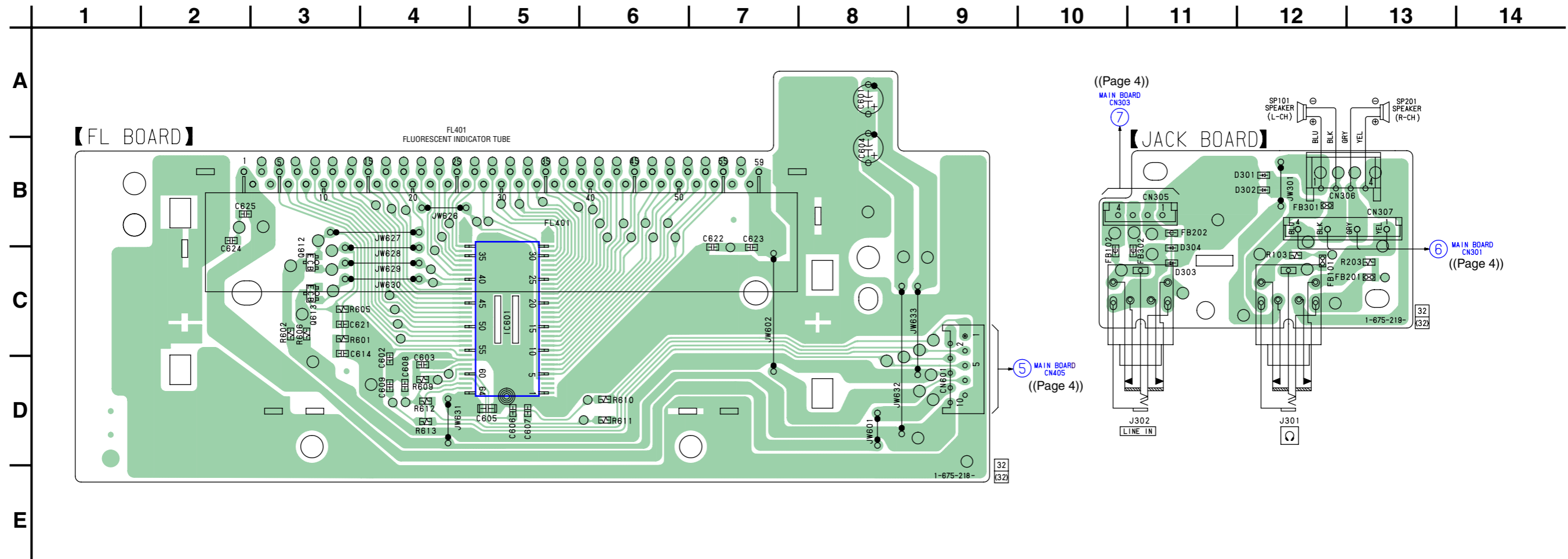


• Voltage is dc with respect to ground under no-signal (detuned) condition.
 () : Page of service manual
 (()) : Page of service manual supplement-1
 () : MD STOP
 < > : CD STOP

5. SCHEMATIC DIAGRAM — MAIN SECTION (3/3) — • Refer to page 3 for Note.



6. PRINTED WIRING BOARDS — PANEL SECTION — • Refer to page 3 for Note.

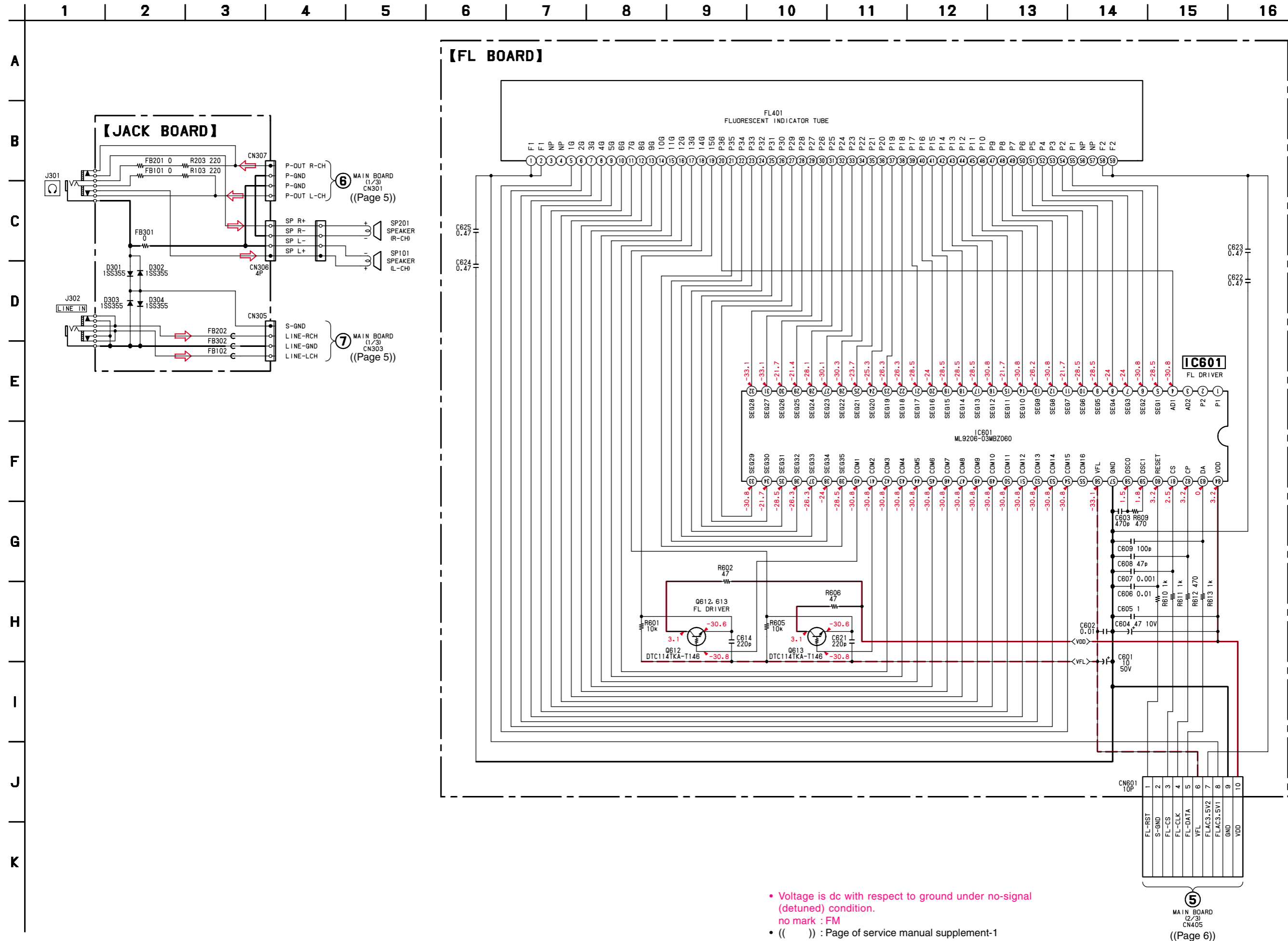


• (()) : Page of service manual supplement-1

• Semiconductor Location

Ref. No.	Location
D301	B-12
D302	B-12
D303	C-11
D304	C-11
IC601	C-5
Q612	C-3
Q613	C-3

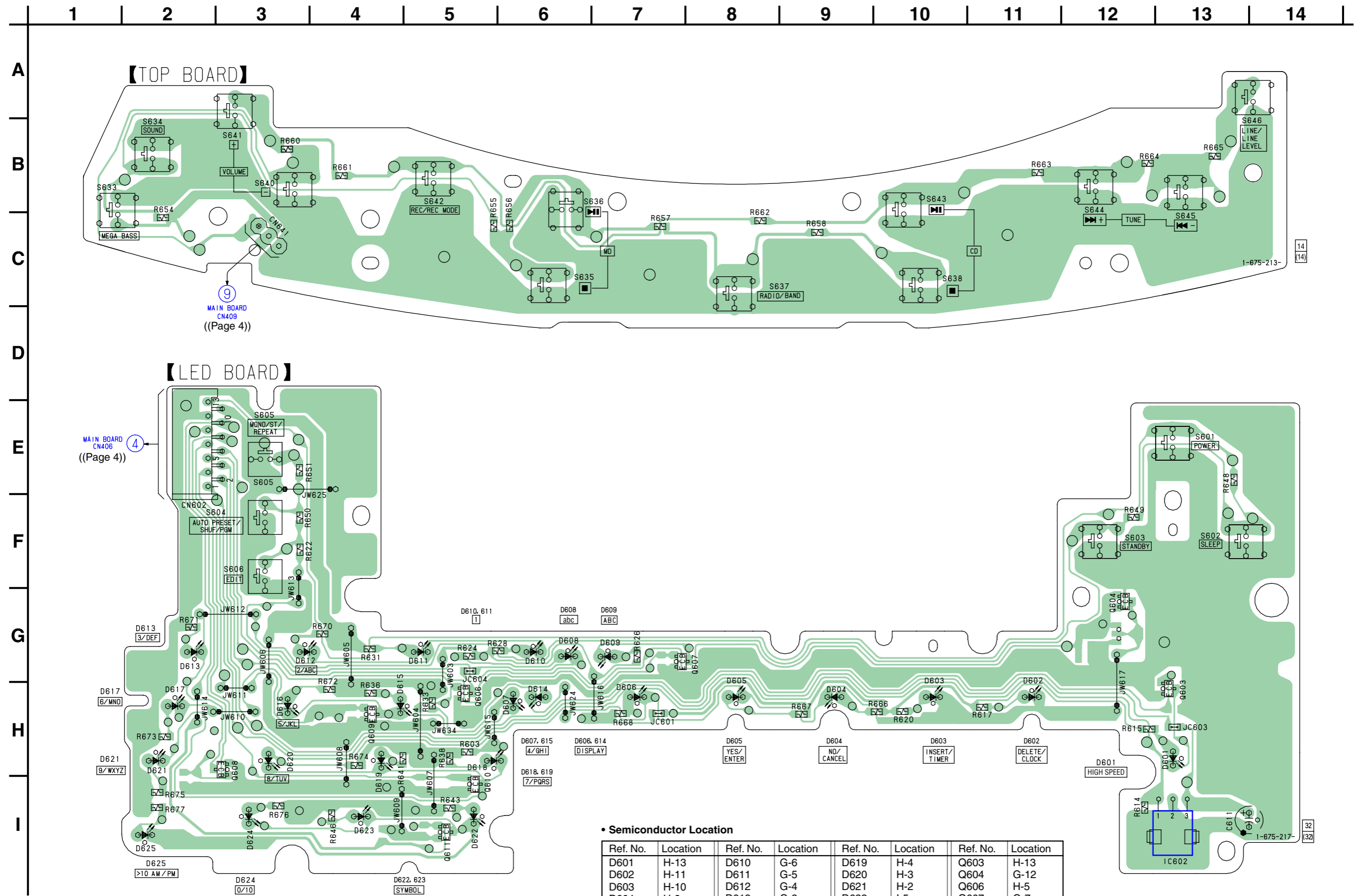
7. SCHEMATIC DIAGRAMS — PANEL SECTION — • Refer to page 3 for Note.



- Voltage is dc with respect to ground under no-signal (detuned) condition.
- no mark : FM
- (()) : Page of service manual supplement-1

⑤
MAIN BOARD
(2/3)
CN405
((Page 6))

8. PRINTED WIRING BOARDS — SWITCH SECTION — • Refer to page 3 for Note.

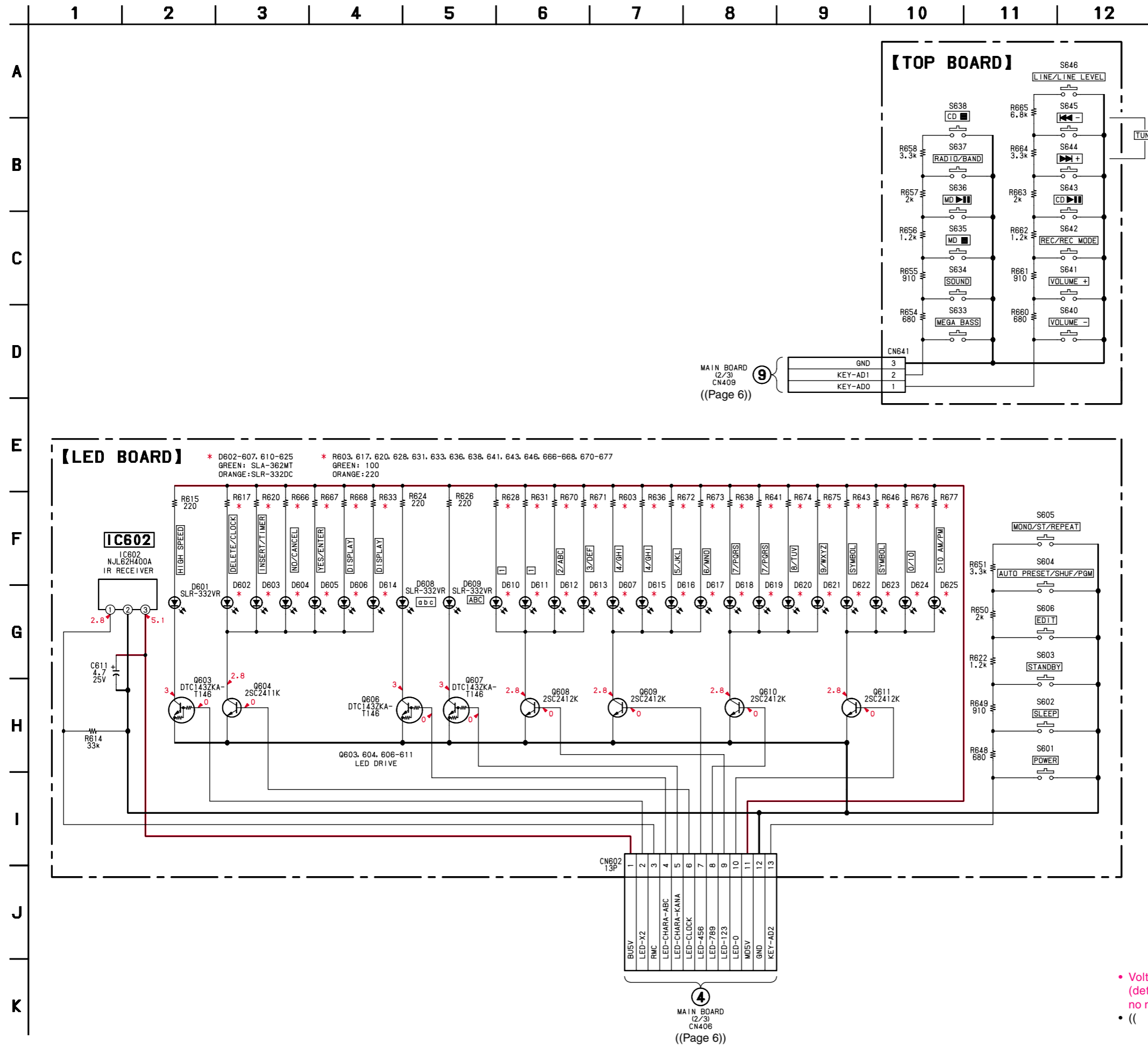


• (()) : Page of service manual supplement-1

• Semiconductor Location

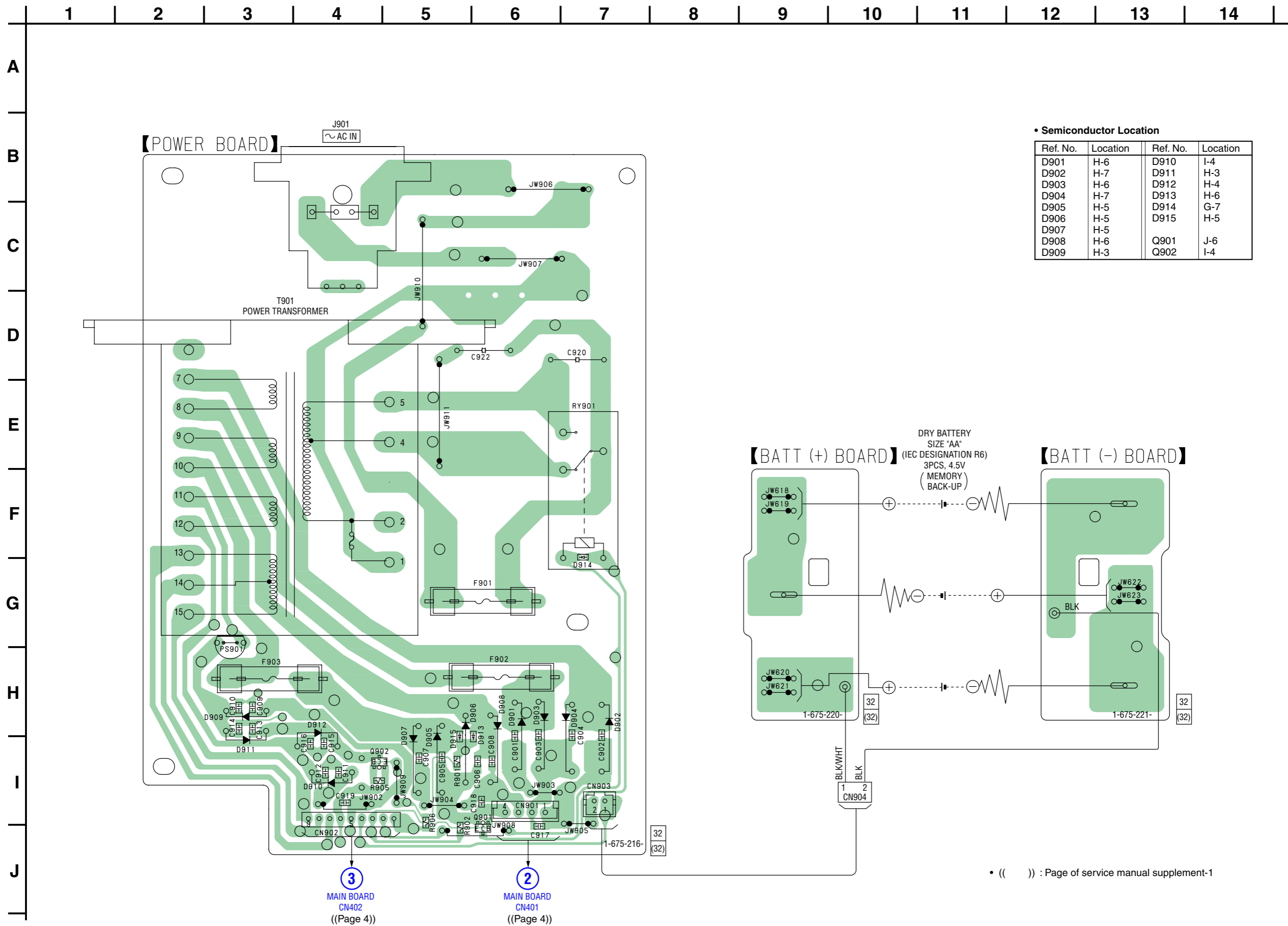
Ref. No.	Location	Ref. No.	Location	Ref. No.	Location	Ref. No.	Location
D601	H-13	D610	G-6	D619	H-4	Q603	H-13
D602	H-11	D611	G-5	D620	H-3	Q604	G-12
D603	H-10	D612	G-4	D621	H-2	Q606	H-5
D604	H-9	D613	G-2	D622	I-5	Q607	G-7
D605	H-8	D614	H-6	D623	I-4	Q608	H-3
D606	H-7	D615	H-5	D624	I-3	Q609	H-4
D607	H-6	D616	H-3	D625	I-2	Q610	I-5
D608	G-6	D617	H-2			Q611	I-5
D609	G-7	D618	H-5	IC602	I-13		

9. SCHEMATIC DIAGRAMS — SWITCH SECTION — • Refer to page 3 for Note.



• Voltage is dc with respect to ground under no-signal (detuned) condition.
 no mark : FM
 • (()) : Page of service manual supplement-1

10. PRINTED WIRING BOARDS — POWER SUPPLY SECTION — • Refer to page 3 for Note.

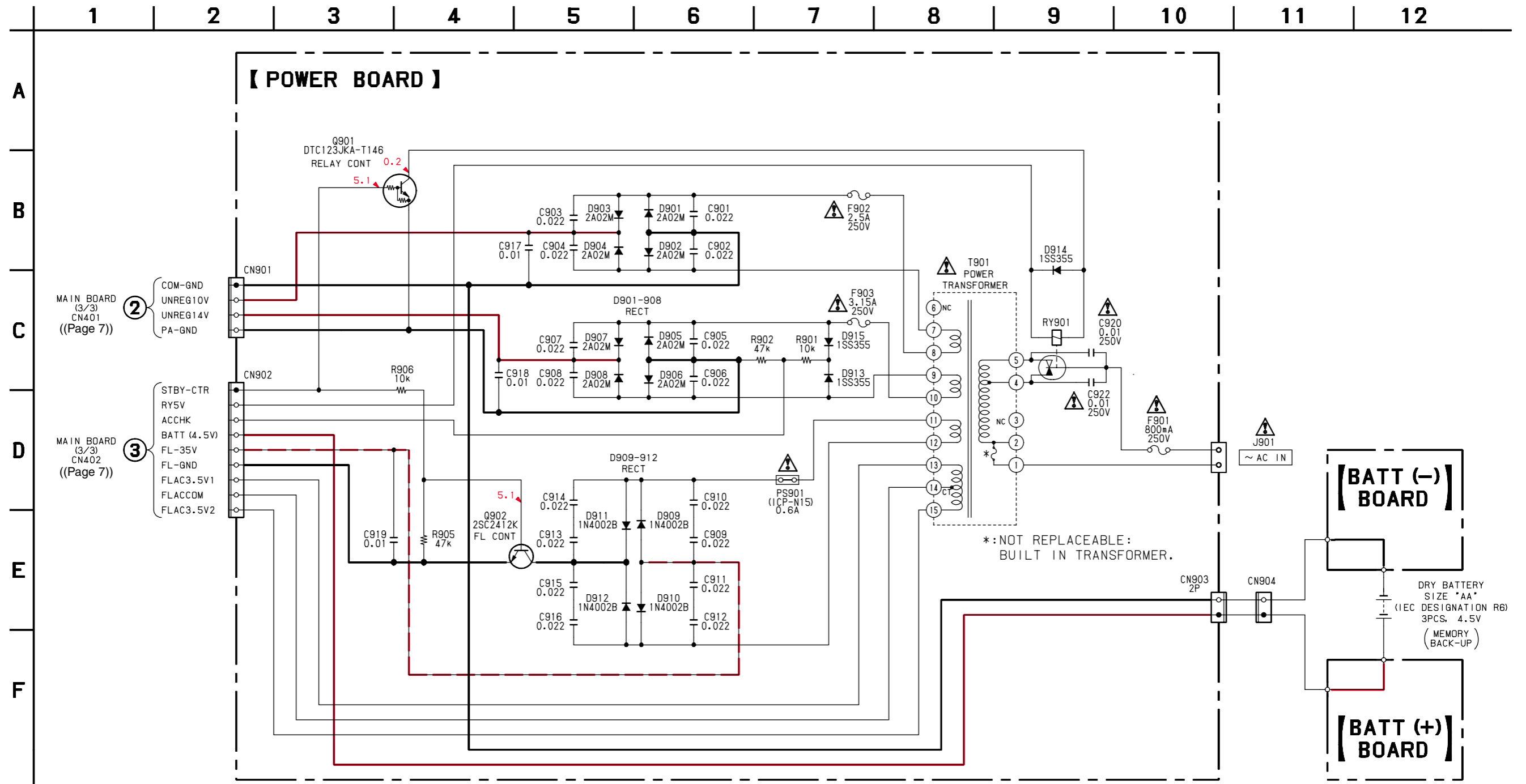


• Semiconductor Location

Ref. No.	Location	Ref. No.	Location
D901	H-6	D910	I-4
D902	H-7	D911	H-3
D903	H-6	D912	H-4
D904	H-7	D913	H-6
D905	H-5	D914	G-7
D906	H-5	D915	H-5
D907	H-5		
D908	H-6	Q901	J-6
D909	H-3	Q902	I-4

• (()) : Page of service manual supplement-1

11. SCHEMATIC DIAGRAMS — POWER SUPPLY SECTION — • Refer to page 3 for Note.



<p>Note: The components identified by mark \triangle or dotted line with mark \triangle are critical for safety. Replace only with part number specified.</p>	<p>Note: Les composants identifiés par une marque \triangle sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.</p>
--	---

- Voltage is dc with respect to ground under no-signal (detuned) condition. no mark : FM
- (()) : Page of service manual supplement-1

BATT (+) **BATT (-)** **FL** **JACK** **LED**

12. ELECTRICAL PARTS LIST

NOTE:

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

- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS
In each case, u : µ, for example:
uA.. : µA.. uPA.. : µPA..
uPB.. : µPB.. uPC.. : µPC.. uPD.. : µPD..
- CAPACITORS
uF : µF
- COILS
uH : µH

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

Les composants identifiés par une marque Δ 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	Ref. No.	Part No.	Description	Remark
*	1-675-220-32	BATT (+) BOARD *****				< TRANSISTOR >	
	3-039-967-01	TERMINAL (-), BATTERY *****		Q612	8-729-027-44	TRANSISTOR DTC114TKA-T146	
				Q613	8-729-027-44	TRANSISTOR DTC114TKA-T146	
						< RESISTOR >	
*	1-675-221-32	BATT (-) BOARD *****		R601	1-216-073-00	RES-CHIP 10K 5% 1/10W	
	3-039-967-01	TERMINAL (-), BATTERY *****		R602	1-216-017-11	RES-CHIP 47 5% 1/10W	
				R605	1-216-073-00	RES-CHIP 10K 5% 1/10W	
				R606	1-216-017-11	RES-CHIP 47 5% 1/10W	
				R609	1-216-041-00	METAL CHIP 470 5% 1/10W	
*	A-3322-656-A	FL BOARD, COMPLETE *****		R610	1-216-049-11	RES-CHIP 1K 5% 1/10W	
	3-039-978-01	HOLDER (FL)		R611	1-216-049-11	RES-CHIP 1K 5% 1/10W	
	3-042-764-01	SHEET (FL), ADHESIVE		R612	1-216-041-00	METAL CHIP 470 5% 1/10W	
	3-846-312-01	SPACER		R613	1-216-049-11	RES-CHIP 1K 5% 1/10W	
		< CAPACITOR >				*****	
C601	1-126-964-11	ELECT 10uF 20% 50V				< CONNECTOR >	
C602	1-163-021-11	CERAMIC CHIP 0.01uF 10% 50V					
C603	1-163-133-00	CERAMIC CHIP 470PF 5% 50V		* CN306	1-573-455-11	PLUG, CONNECTOR 4P	
C604	1-126-947-11	ELECT 47uF 20% 10V				< DIODE >	
C605	1-107-682-11	CERAMIC CHIP 1uF 10% 16V		D301	8-719-988-61	DIODE 1SS355TE-17	
C606	1-163-021-11	CERAMIC CHIP 0.01uF 10% 50V		D302	8-719-988-61	DIODE 1SS355TE-17	
C607	1-163-009-11	CERAMIC CHIP 0.001uF 10% 50V		D303	8-719-988-61	DIODE 1SS355TE-17	
C608	1-163-243-11	CERAMIC CHIP 47PF 5% 50V		D304	8-719-988-61	DIODE 1SS355TE-17	
C609	1-163-251-11	CERAMIC CHIP 100PF 5% 50V				< FERRITE BEAD >	
C614	1-163-259-11	CERAMIC CHIP 220PF 5% 50V		FB101	1-216-295-11	SHORT 0	
C621	1-163-259-11	CERAMIC CHIP 220PF 5% 50V		FB102	1-469-152-11	FERRITE, EMI (SMD)	
C622	1-164-005-11	CERAMIC CHIP 0.47uF 25V		FB201	1-216-295-11	SHORT 0	
C623	1-164-005-11	CERAMIC CHIP 0.47uF 25V		FB202	1-469-152-11	FERRITE, EMI (SMD)	
C624	1-164-005-11	CERAMIC CHIP 0.47uF 25V		FB301	1-216-295-11	SHORT 0	
C625	1-164-005-11	CERAMIC CHIP 0.47uF 25V		FB302	1-469-152-11	FERRITE, EMI (SMD)	
		< CONNECTOR >				< JACK >	
CN601	1-695-371-31	CONNECTOR, FFC/FPC 10P		J301	1-566-891-11	JACK (⌡)	
		< FLUORESCENT INDICATOR >		J302	1-566-891-11	JACK (LINE IN)	
FL401	1-517-916-12	INDICATOR TUBE, FLUORESCENT				< RESISTOR >	
		< IC >		R103	1-216-033-00	METAL CHIP 220 5% 1/10W	
IC601	8-759-663-70	IC ML9206-03MBZ060		R203	1-216-033-00	METAL CHIP 220 5% 1/10W	

Ref. No.	Part No.	Description	Remark
*	A-3062-399-A	LED BOARD, COMPLETE (ORANGE)	
*	A-3322-633-A	LED BOARD, COMPLETE (GREEN) *****	
		< CAPACITOR >	
C611	1-126-794-11	ELECT 4.7uF 20% 25V	
		< CONNECTOR >	
* CN602	1-695-374-31	PIN, CONNECTOR (PC BOARD) 13P	
		< DIODE >	
D601	8-719-077-79	LED SLR-332VRT32 (HIGH SPEED)	
D602	8-719-078-08	LED SLA-362MT-T31XFG (DELETE/CLOCK) (GREEN)	
D602	8-719-078-09	LED SLR-332DC-T32MN (DELETE/CLOCK) (ORANGE)	
D603	8-719-078-08	LED SLA-362MT-T31XFG (INSERT/TIMER) (GREEN)	
D603	8-719-078-09	LED SLR-332DC-T32MN (INSERT/TIMER) (ORANGE)	
D604	8-719-078-08	LED SLA-362MT-T31XFG (NO/CANCEL) (GREEN)	
D604	8-719-078-09	LED SLR-332DC-T32MN (NO/CANCEL) (ORANGE)	
D605	8-719-078-08	LED SLA-362MT-T31XFG (YES/ENTER) (GREEN)	
D605	8-719-078-09	LED SLR-332DC-T32MN (YES/ENTER) (ORANGE)	
D606	8-719-078-08	LED SLA-362MT-T31XFG (DISPLAY) (GREEN)	
D606	8-719-078-09	LED SLR-332DC-T32MN (DISPLAY) (ORANGE)	
D607	8-719-078-08	LED SLA-362MT-T31XFG (4/GHI) (GREEN)	
D607	8-719-078-09	LED SLR-332DC-T32MN (4/GHI) (ORANGE)	
D608	8-719-077-79	LED SLR-332VRT32 (abc)	
D609	8-719-077-79	LED SLR-332VRT32 (ABC)	
D610	8-719-078-08	LED SLA-362MT-T31XFG (1) (GREEN)	
D610	8-719-078-09	LED SLR-332DC-T32MN (1) (ORANGE)	
D611	8-719-078-08	LED SLA-362MT-T31XFG (1) (GREEN)	
D611	8-719-078-09	LED SLR-332DC-T32MN (1) (ORANGE)	
D612	8-719-078-08	LED SLA-362MT-T31XFG (2/ABC) (GREEN)	
D612	8-719-078-09	LED SLR-332DC-T32MN (2/ABC) (ORANGE)	
D613	8-719-078-08	LED SLA-362MT-T31XFG (3/DEF) (GREEN)	
D613	8-719-078-09	LED SLR-332DC-T32MN (3/DEF) (ORANGE)	
D614	8-719-078-08	LED SLA-362MT-T31XFG (DISPLAY) (GREEN)	
D614	8-719-078-09	LED SLR-332DC-T32MN (DISPLAY) (ORANGE)	
D615	8-719-078-08	LED SLA-362MT-T31XFG (4/GHI) (GREEN)	
D615	8-719-078-09	LED SLR-332DC-T32MN (4/GHI) (ORANGE)	
D616	8-719-078-08	LED SLA-362MT-T31XFG (5/JKL) (GREEN)	
D616	8-719-078-09	LED SLR-332DC-T32MN (5/JKL) (ORANGE)	
D617	8-719-078-08	LED SLA-362MT-T31XFG (6/MNO) (GREEN)	
D617	8-719-078-09	LED SLR-332DC-T32MN (6/MNO) (ORANGE)	
D618	8-719-078-08	LED SLA-362MT-T31XFG (7/PQRS) (GREEN)	
D618	8-719-078-09	LED SLR-332DC-T32MN (7/PQRS) (ORANGE)	
D619	8-719-078-08	LED SLA-362MT-T31XFG (7/PQRS) (GREEN)	
D619	8-719-078-09	LED SLR-332DC-T32MN (7/PQRS) (ORANGE)	

Ref. No.	Part No.	Description	Remark
D620	8-719-078-08	LED SLA-362MT-T31XFG (8/TUV) (GREEN)	
D620	8-719-078-09	LED SLR-332DC-T32MN (8/TUV) (ORANGE)	
D621	8-719-078-08	LED SLA-362MT-T31XFG (9/WXYZ) (GREEN)	
D621	8-719-078-09	LED SLR-332DC-T32MN (9/WXYZ) (ORANGE)	
D622	8-719-078-08	LED SLA-362MT-T31XFG (SYMBOL) (GREEN)	
D622	8-719-078-09	LED SLR-332DC-T32MN (SYMBOL) (ORANGE)	
D623	8-719-078-08	LED SLA-362MT-T31XFG (SYMBOL) (GREEN)	
D623	8-719-078-09	LED SLR-332DC-T32MN (SYMBOL) (ORANGE)	
D624	8-719-078-08	LED SLA-362MT-T31XFG (0/10) (GREEN)	
D624	8-719-078-09	LED SLR-332DC-T32MN (0/10) (ORANGE)	
D625	8-719-078-08	LED SLA-362MT-T31XFG (>10 AM/PM) (GREEN)	
D625	8-719-078-09	LED SLR-332DC-T32MN (>10 AM/PM) (ORANGE)	
		< IC >	
IC602	8-749-016-97	IC NJL62H400A	
		< JUMPER RESISTOR >	
JC601	1-216-295-11	SHORT 0	
JC603	1-216-295-11	SHORT 0	
JC604	1-216-295-11	SHORT 0	
		< TRANSISTOR >	
Q603	8-729-027-58	TRANSISTOR DTC143ZKA-T146	
Q604	8-729-901-88	TRANSISTOR 2SC2411K-CR	
Q606	8-729-027-58	TRANSISTOR DTC143ZKA-T146	
Q607	8-729-027-58	TRANSISTOR DTC143ZKA-T146	
Q608	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q609	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q610	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q611	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
		< RESISTOR >	
R603	1-216-025-11	RES-CHIP 100 5% 1/10W (GREEN)	
R603	1-216-033-00	METAL CHIP 220 5% 1/10W (ORANGE)	
R614	1-216-085-91	RES-CHIP 33K 5% 1/10W	
R615	1-216-033-00	METAL CHIP 220 5% 1/10W	
R617	1-216-025-11	RES-CHIP 100 5% 1/10W (GREEN)	
R617	1-216-033-00	METAL CHIP 220 5% 1/10W (ORANGE)	
R620	1-216-025-11	RES-CHIP 100 5% 1/10W (GREEN)	
R620	1-216-033-00	METAL CHIP 220 5% 1/10W (ORANGE)	
R622	1-216-051-00	METAL CHIP 1.2K 5% 1/10W	
R624	1-216-033-00	METAL CHIP 220 5% 1/10W	
R626	1-216-033-00	METAL CHIP 220 5% 1/10W	
R628	1-216-025-11	RES-CHIP 100 5% 1/10W (GREEN)	

NOTE: There are two different colors of LEDs on the LED board. In service, check the color of the set before replacing parts.
Color of the set Color of LEDs
BLACK GREEN
WHITE GREEN
BLUE GREEN
ORANGE ORANGE

LED MAIN

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
R628	1-216-033-00	METAL CHIP	220 5% 1/10W (ORANGE)	R672	1-216-033-00	METAL CHIP	220 5% 1/10W (ORANGE)
R631	1-216-174-00	RES-CHIP	100 5% 1/8W (GREEN)	R673	1-216-025-11	RES-CHIP	100 5% 1/10W (GREEN)
R631	1-216-182-00	RES-CHIP	220 5% 1/8W (ORANGE)	R673	1-216-033-00	METAL CHIP	220 5% 1/10W (ORANGE)
R633	1-216-025-11	RES-CHIP	100 5% 1/10W (GREEN)	R674	1-216-025-11	RES-CHIP	100 5% 1/10W (GREEN)
R633	1-216-033-00	METAL CHIP	220 5% 1/10W (ORANGE)	R674	1-216-033-00	METAL CHIP	220 5% 1/10W (ORANGE)
R636	1-216-025-11	RES-CHIP	100 5% 1/10W (GREEN)	R675	1-216-025-11	RES-CHIP	100 5% 1/10W (GREEN)
R636	1-216-033-00	METAL CHIP	220 5% 1/10W (ORANGE)	R675	1-216-033-00	METAL CHIP	220 5% 1/10W (ORANGE)
R638	1-216-025-11	RES-CHIP	100 5% 1/10W (GREEN)	R676	1-216-025-11	RES-CHIP	100 5% 1/10W (GREEN)
R638	1-216-033-00	METAL CHIP	220 5% 1/10W (ORANGE)	R676	1-216-033-00	METAL CHIP	220 5% 1/10W (ORANGE)
R641	1-216-025-11	RES-CHIP	100 5% 1/10W (GREEN)	R677	1-216-025-11	RES-CHIP	100 5% 1/10W (GREEN)
R641	1-216-033-00	METAL CHIP	220 5% 1/10W (ORANGE)	R677	1-216-033-00	METAL CHIP	220 5% 1/10W (ORANGE)
R643	1-216-025-11	RES-CHIP	100 5% 1/10W (GREEN)			< SWITCH >	
R643	1-216-033-00	METAL CHIP	220 5% 1/10W (ORANGE)	S601	1-554-937-11	SWITCH, KEYBOARD (POWER) (ORANGE)	
R646	1-216-025-11	RES-CHIP	100 5% 1/10W (GREEN)	S601	1-692-014-11	SWITCH, KEYBOARD (POWER) (GREEN)	
R646	1-216-033-00	METAL CHIP	220 5% 1/10W (ORANGE)	S602	1-554-937-11	SWITCH, KEYBOARD (SLEEP) (ORANGE)	
R648	1-216-045-00	METAL CHIP	680 5% 1/10W	S602	1-692-014-11	SWITCH, KEYBOARD (SLEEP) (GREEN)	
R649	1-216-048-00	METAL CHIP	910 5% 1/10W	S603	1-554-937-11	SWITCH, KEYBOARD (STANDBY) (ORANGE)	
R650	1-216-056-00	RES-CHIP	2K 5% 1/10W	S603	1-692-014-11	SWITCH, KEYBOARD (STANDBY) (GREEN)	
R651	1-216-061-91	RES-CHIP	3.3K 5% 1/10W	S604	1-554-937-11	SWITCH, KEYBOARD (AUTO PRESET/SHUF/PGM) (ORANGE)	
R666	1-216-025-11	RES-CHIP	100 5% 1/10W (GREEN)	S604	1-692-014-11	SWITCH, KEYBOARD (AUTO PRESET/SHUF/PGM) (GREEN)	
R666	1-216-033-00	METAL CHIP	220 5% 1/10W (ORANGE)	S605	1-554-937-11	SWITCH, KEYBOARD (MONO/ST/REPEAT) (ORANGE)	
R667	1-216-025-11	RES-CHIP	100 5% 1/10W (GREEN)	S605	1-692-014-11	SWITCH, KEYBOARD (MONO/ST/REPEAT) (GREEN)	
R667	1-216-033-00	METAL CHIP	220 5% 1/10W (ORANGE)	S606	1-554-937-11	SWITCH, KEYBOARD (EDIT) (ORANGE)	
R668	1-216-025-11	RES-CHIP	100 5% 1/10W (GREEN)	S606	1-692-014-11	SWITCH, KEYBOARD (EDIT) (GREEN)	
R668	1-216-033-00	METAL CHIP	220 5% 1/10W (ORANGE)			*****	
R670	1-216-025-11	RES-CHIP	100 5% 1/10W (GREEN)	*	A-3322-636-A	MAIN BOARD, COMPLETE	
R670	1-216-033-00	METAL CHIP	220 5% 1/10W (ORANGE)			*****	
R671	1-216-025-11	RES-CHIP	100 5% 1/10W (GREEN)			3-039-961-01 SPRING (IC)	
R671	1-216-033-00	METAL CHIP	220 5% 1/10W (ORANGE)			3-831-441-99 CUSHION (A)	
R672	1-216-025-11	RES-CHIP	100 5% 1/10W (GREEN)			7-685-647-79 SCREW +BVTP 3X10 TYPE2 N-S	
						< CAPACITOR >	
				C101	1-126-767-11	ELECT	1000uF 20% 16V
				C102	1-126-963-11	ELECT	4.7uF 20% 50V
				C103	1-126-963-11	ELECT	4.7uF 20% 50V
				C104	1-163-251-11	CERAMIC CHIP	100PF 5% 50V
				C105	1-163-021-11	CERAMIC CHIP	0.01uF 10% 50V
				C106	1-136-165-00	MYLAR	0.1uF 5% 50V

NOTE: There are two different colors of LEDs on the LED board.
 In service, check the color of the set before replacing parts.
 Color of the set Color of LEDs
 BLACK GREEN
 WHITE GREEN
 BLUE GREEN
 ORANGE ORANGE

ZS-M35

MAIN

Ref. No.	Part No.	Description			Remark	Ref. No.	Part No.	Description			Remark
C107	1-136-165-00	MYLAR	0.1uF	5%	50V	C318	1-126-964-11	ELECT	10uF	20%	50V
C108	1-126-960-11	ELECT	1uF	20%	50V	C319	1-126-960-11	ELECT	1uF	20%	50V
C109	1-126-964-11	ELECT	10uF	20%	50V	C320	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C110	1-126-961-11	ELECT	2.2uF	20%	50V	C321	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C111	1-126-961-11	ELECT	2.2uF	20%	50V	C322	1-126-964-11	ELECT	10uF	20%	50V
C112	1-126-961-11	ELECT	2.2uF	20%	50V	C323	1-104-665-11	ELECT	100uF	20%	10V
C113	1-126-961-11	ELECT	2.2uF	20%	50V	C324	1-104-665-11	ELECT	100uF	20%	10V
C114	1-136-157-00	MYLAR	0.022uF	5%	50V	C326	1-126-964-11	ELECT	10uF	20%	50V
C115	1-136-173-00	MYLAR	0.47uF	5%	50V	C401	1-163-237-11	CERAMIC CHIP	27PF	5%	50V
C116	1-136-153-00	FILM	0.01uF	5%	50V	C402	1-163-104-00	CERAMIC CHIP	30PF	5%	50V
C117	1-126-963-11	ELECT	4.7uF	20%	50V	C403	1-164-346-11	CERAMIC CHIP	1uF		16V
C118	1-126-961-11	ELECT	2.2uF	20%	50V	C404	1-163-239-11	CERAMIC CHIP	33PF	5%	50V
C119	1-126-960-11	ELECT	1uF	20%	50V	C405	1-163-239-11	CERAMIC CHIP	33PF	5%	50V
C126	1-126-960-11	ELECT	1uF	20%	50V	C406	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C127	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V	C407	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C128	1-163-251-11	CERAMIC CHIP	100PF	5%	50V	C408	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
C201	1-126-767-11	ELECT	1000uF	20%	16V	C409	1-163-234-11	CERAMIC CHIP	20PF	5%	50V
C202	1-126-963-11	ELECT	4.7uF	20%	50V	C410	1-107-725-11	CERAMIC CHIP	0.1uF	10%	16V
C203	1-126-963-11	ELECT	4.7uF	20%	50V	C411	1-104-665-11	ELECT	100uF	20%	10V
C204	1-163-251-11	CERAMIC CHIP	100PF	5%	50V	C412	1-164-346-11	CERAMIC CHIP	1uF		16V
C205	1-163-021-11	CERAMIC CHIP	0.01uF	10%	50V	C413	1-126-947-11	ELECT	47uF	20%	10V
C206	1-136-165-00	MYLAR	0.1uF	5%	50V	C414	1-126-964-11	ELECT	10uF	20%	50V
C207	1-136-165-00	MYLAR	0.1uF	5%	50V	C416	1-126-919-11	ELECT	6800uF	20%	6.3V
C208	1-126-960-11	ELECT	1uF	20%	50V	C417	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C209	1-126-964-11	ELECT	10uF	20%	50V	C418	1-164-346-11	CERAMIC CHIP	1uF		16V
C210	1-126-961-11	ELECT	2.2uF	20%	50V	C419	1-163-021-11	CERAMIC CHIP	0.01uF	10%	50V
C211	1-126-961-11	ELECT	2.2uF	20%	50V	C420	1-126-933-11	ELECT	100uF	20%	16V
C212	1-126-961-11	ELECT	2.2uF	20%	50V	C421	1-107-725-11	CERAMIC CHIP	0.1uF	10%	16V
C213	1-126-961-11	ELECT	2.2uF	20%	50V	C422	1-126-935-11	ELECT	470uF	20%	10V
C214	1-136-157-00	MYLAR	0.022uF	5%	50V	C423	1-163-021-11	CERAMIC CHIP	0.01uF	10%	50V
C215	1-136-173-00	MYLAR	0.47uF	5%	50V	C424	1-163-021-11	CERAMIC CHIP	0.01uF	10%	50V
C216	1-136-153-00	FILM	0.01uF	5%	50V	C425	1-126-934-11	ELECT	220uF	20%	10V
C217	1-126-963-11	ELECT	4.7uF	20%	50V	C428	1-126-947-11	ELECT	47uF	20%	10V
C218	1-126-961-11	ELECT	2.2uF	20%	50V	C430	1-163-021-11	CERAMIC CHIP	0.01uF	10%	50V
C219	1-126-960-11	ELECT	1uF	20%	50V	C431	1-126-934-11	ELECT	220uF	20%	10V
C226	1-126-960-11	ELECT	1uF	20%	50V	C433	1-163-021-11	CERAMIC CHIP	0.01uF	10%	50V
C227	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V	C434	1-126-964-11	ELECT	10uF	20%	50V
C228	1-163-251-11	CERAMIC CHIP	100PF	5%	50V	C435	1-163-021-11	CERAMIC CHIP	0.01uF	10%	50V
C301	1-104-665-11	ELECT	100uF	20%	10V	C436	1-163-021-11	CERAMIC CHIP	0.01uF	10%	50V
C302	1-126-963-11	ELECT	4.7uF	20%	50V	C437	1-126-964-11	ELECT	10uF	20%	50V
C303	1-115-877-11	DOUBLE LAYERS	4700uF	20%	25V	C438	1-163-021-11	CERAMIC CHIP	0.01uF	10%	50V
C306	1-126-964-11	ELECT	10uF	20%	50V	C439	1-126-968-11	ELECT	100uF	20%	50V
C307	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V	C440	1-126-960-11	ELECT	1uF	20%	50V
C308	1-104-665-11	ELECT	100uF	20%	10V	C441	1-126-960-11	ELECT	1uF	20%	50V
C309	1-126-934-11	ELECT	220uF	20%	10V	C443	1-126-937-11	ELECT	4700uF	20%	16V
C310	1-104-665-11	ELECT	100uF	20%	10V	C444	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C311	1-104-665-11	ELECT	100uF	20%	10V	C445	1-164-161-11	CERAMIC CHIP	0.0022uF	10%	100V
C312	1-104-665-11	ELECT	100uF	20%	10V	C446	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C313	1-126-964-11	ELECT	10uF	20%	50V	C447	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C314	1-163-021-11	CERAMIC CHIP	0.01uF	10%	50V	C450	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C315	1-163-021-11	CERAMIC CHIP	0.01uF	10%	50V	C451	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C316	1-104-665-11	ELECT	100uF	20%	10V	C452	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C317	1-107-725-11	CERAMIC CHIP	0.1uF	10%	16V	C453	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V

Ref. No.	Part No.	Description			Remark	Ref. No.	Part No.	Description			Remark
C454	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V	C514	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C455	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V	C515	1-163-021-11	CERAMIC CHIP	0.01uF	10%	50V
C456	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V	C528	1-104-665-11	ELECT	100uF	20%	10V
C457	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V	C529	1-163-021-11	CERAMIC CHIP	0.01uF	10%	50V
C458	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V	C531	1-126-933-11	ELECT	100uF	20%	16V
C459	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V	C532	1-126-933-11	ELECT	100uF	20%	16V
C460	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V	C533	1-163-021-11	CERAMIC CHIP	0.01uF	10%	50V
C461	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V	C535	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C462	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V	C536	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C463	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V	C537	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C464	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V	C538	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C465	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V	C539	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C466	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V	C540	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C468	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V	< CONNECTOR >					
C469	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V	* CN301	1-564-778-11	PLUG, CONNECTOR (2.5mm) 4P			
C470	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V	* CN303	1-785-656-11	PIN, CONNECTOR (PC BOARD) 4P			
C472	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V	* CN401	1-564-778-11	PLUG, CONNECTOR (2.5mm) 4P			
C473	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V	* CN402	1-785-662-11	PIN, CONNECTOR (PC BOARD) 10P			
C474	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V	* CN403	1-568-468-11	PIN, CONNECTOR (PC BOARD) 18P			
C477	1-163-251-11	CERAMIC CHIP	100PF	5%	50V	CN404	1-568-931-11	PIN, CONNECTOR (PC BOARD) 26P			
C478	1-163-243-11	CERAMIC CHIP	47PF	5%	50V	* CN405	1-695-333-41	PIN, CONNECTOR (PC BOARD) 10P			
C479	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V	CN406	1-695-336-31	PIN, CONNECTOR (PC BOARD) 13P			
C480	1-163-021-11	CERAMIC CHIP	0.01uF	10%	50V	* CN407	1-695-333-41	PIN, CONNECTOR (PC BOARD) 10P			
C481	1-126-964-11	ELECT	10uF	20%	50V	* CN408	1-785-661-11	PIN, CONNECTOR (PC BOARD) 9P			
C482	1-126-964-11	ELECT	10uF	20%	50V	* CN409	1-785-655-11	PIN, CONNECTOR (PC BOARD) 3P			
C483	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V	* CN410	1-785-654-11	PIN, CONNECTOR (PC BOARD) 2P			
C484	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V	* CN416	1-566-690-11	PLUG, CONNECTOR (2.5mm) 2P			
C485	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V	CN450	1-566-690-11	PLUG, CONNECTOR (2.5mm) 2P			
C486	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V	< DIODE >					
C487	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V	D301	8-719-988-61	DIODE 1SS355TE-17			
C488	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V	D303	8-719-988-61	DIODE 1SS355TE-17			
C489	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V	D304	8-719-988-61	DIODE 1SS355TE-17			
C490	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V	D401	8-719-988-61	DIODE 1SS355TE-17			
C491	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V	D402	8-719-988-61	DIODE 1SS355TE-17			
C492	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V	D403	8-719-056-84	DIODE UDZ-TE-17-7.5B			
C493	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V	D404	8-719-056-85	DIODE UDZ-TE-17-8.2B			
C494	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V	D405	8-719-056-82	DIODE UDZ-TE-17-6.2B			
C495	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V	D406	8-719-977-81	DIODE DTZ33B			
C496	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V	< FERRITE BEAD >					
C497	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V	FB401	1-216-295-11	SHORT	0		
C498	1-163-251-11	CERAMIC CHIP	100PF	5%	50V	FB402	1-216-295-11	SHORT	0		
C499	1-163-251-11	CERAMIC CHIP	100PF	5%	50V	FB403	1-216-295-11	SHORT	0		
C500	1-163-251-11	CERAMIC CHIP	100PF	5%	50V	FB404	1-216-295-11	SHORT	0		
C502	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V	FB405	1-216-295-11	SHORT	0		
C503	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V	FB406	1-216-295-11	SHORT	0		
C504	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V	FB407	1-216-295-11	SHORT	0		
C505	1-163-243-11	CERAMIC CHIP	47PF	5%	50V	FB408	1-216-295-11	SHORT	0		
C506	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V	FB409	1-216-295-11	SHORT	0		
C507	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V	FB410	1-216-295-11	SHORT	0		
C509	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V	FB411	1-216-295-11	SHORT	0		
C510	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V						
C512	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V						
C513	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V						

MAIN

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
FB412	1-469-185-11	FERRITE BEAD INDUCTOR		Q305	8-729-027-46	TRANSISTOR DTC114YKA-T146	
FB413	1-469-185-11	FERRITE BEAD INDUCTOR		Q306	8-729-027-23	TRANSISTOR DTA114EKA-T146	
FB414	1-216-295-11	SHORT 0		Q307	8-729-900-53	TRANSISTOR DTC114EK	
FB415	1-216-295-11	SHORT 0		Q308	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
FB416	1-216-295-11	SHORT 0		Q309	8-729-027-23	TRANSISTOR DTA114EKA-T146	
FB417	1-216-295-11	SHORT 0		Q310	8-729-027-26	TRANSISTOR DTA114YKA-T146	
FB418	1-216-296-11	SHORT 0		Q311	8-729-027-24	TRANSISTOR DTA114TKA-T146	
FB419	1-216-296-11	SHORT 0		Q312	8-729-027-24	TRANSISTOR DTA114TKA-T146	
FB420	1-216-295-11	SHORT 0		Q313	8-729-027-26	TRANSISTOR DTA114YKA-T146	
FB421	1-216-295-11	SHORT 0		Q401	8-729-903-10	TRANSISTOR FMW1	
FB423	1-216-295-11	SHORT 0		Q402	8-729-018-99	TRANSISTOR 2SD2394-F	
FB424	1-216-295-11	SHORT 0		Q403	8-729-021-82	TRANSISTOR 2SD2396K	
FB425	1-216-295-11	SHORT 0		Q405	8-729-021-82	TRANSISTOR 2SD2396K	
FB426	1-216-295-11	SHORT 0		Q406	8-729-903-46	TRANSISTOR 2SB1132-P	
FB427	1-216-295-11	SHORT 0		Q407	8-729-027-26	TRANSISTOR DTA114YKA-T146	
FB428	1-216-073-00	RES-CHIP 10K 5%	1/10W	Q408	8-729-027-46	TRANSISTOR DTC114YKA-T146	
FB429	1-216-295-11	SHORT 0		Q409	8-729-027-29	TRANSISTOR DTA123JKA-T146	
FB430	1-216-073-00	RES-CHIP 10K 5%	1/10W	Q411	8-729-027-26	TRANSISTOR DTA114YKA-T146	
		< IC >		Q412	8-729-027-46	TRANSISTOR DTC114YKA-T146	
IC301	8-759-543-56	IC LA4601N		Q415	8-729-027-29	TRANSISTOR DTA123JKA-T146	
IC302	8-759-652-74	IC M62443FPD61Q		Q416	8-729-027-46	TRANSISTOR DTC114YKA-T146	
IC303	8-759-100-96	IC NJM4558M-TE2		Q419	8-729-012-83	FET 2SK679A	
IC305	8-759-636-55	IC M5218AFP-T1		Q420	8-729-012-83	FET 2SK679A	
IC401	8-752-915-75	IC CXP740096-044Q		Q421	8-729-027-26	TRANSISTOR DTA114YKA-T146	
IC402	8-759-486-73	IC XC62FP3302PR		Q422	8-729-027-46	TRANSISTOR DTC114YKA-T146	
IC403	8-759-649-23	IC XC61CN2802PR				< RESISTOR >	
IC404	8-759-450-47	IC BA05T		R101	1-216-049-11	RES-CHIP 1K 5%	1/10W
IC411	8-759-486-73	IC XC62FP3302PR		R102	1-216-061-00	RES-CHIP 3.3K 5%	1/10W
		< JUMPER RESISTOR >		R103	1-216-025-11	RES-CHIP 100 5%	1/10W
JC102	1-216-295-11	SHORT 0		R104	1-216-049-11	RES-CHIP 1K 5%	1/10W
JC103	1-216-295-11	SHORT 0		R105	1-216-052-00	METAL CHIP 1.3K 5%	1/10W
JC107	1-216-295-11	SHORT 0		R106	1-216-111-00	METAL CHIP 390K 5%	1/10W
JC108	1-216-295-11	SHORT 0		R107	1-216-121-11	RES-CHIP 1M 5%	1/10W
		< TRANSISTOR >		R108	1-216-079-00	METAL CHIP 18K 5%	1/10W
Q101	8-729-027-46	TRANSISTOR DTC114YKA-T146		R109	1-216-073-00	RES-CHIP 10K 5%	1/10W
Q102	8-729-120-28	TRANSISTOR 2SC1623-L5L6		R110	1-216-049-11	RES-CHIP 1K 5%	1/10W
Q103	8-729-027-46	TRANSISTOR DTC114YKA-T146		R111	1-216-077-11	RES-CHIP 15K 5%	1/10W
Q104	8-729-920-31	TRANSISTOR DTC343TK		R112	1-216-073-00	RES-CHIP 10K 5%	1/10W
Q105	8-729-120-28	TRANSISTOR 2SC1623-L5L6		R113	1-216-689-11	METAL CHIP 39K 0.5%	1/10W
Q106	8-729-027-46	TRANSISTOR DTC114YKA-T146		R114	1-216-089-11	RES-CHIP 47K 5%	1/10W
Q111	8-729-920-31	TRANSISTOR DTC343TK		R115	1-216-079-00	METAL CHIP 18K 5%	1/10W
Q201	8-729-027-46	TRANSISTOR DTC114YKA-T146		R116	1-216-113-00	METAL CHIP 470K 5%	1/10W
Q202	8-729-120-28	TRANSISTOR 2SC1623-L5L6		R117	1-216-081-00	METAL CHIP 22K 5%	1/10W
Q203	8-729-027-46	TRANSISTOR DTC114YKA-T146		R118	1-216-057-00	METAL CHIP 2.2K 5%	1/10W
Q204	8-729-920-31	TRANSISTOR DTC343TK		R119	1-216-047-11	RES-CHIP 820 5%	1/10W
Q205	8-729-120-28	TRANSISTOR 2SC1623-L5L6		R120	1-216-061-00	RES-CHIP 3.3K 5%	1/10W
Q206	8-729-027-46	TRANSISTOR DTC114YKA-T146		R122	1-216-198-11	RES-CHIP 1K 5%	1/8W
Q211	8-729-920-31	TRANSISTOR DTC343TK		R123	1-216-077-11	RES-CHIP 15K 5%	1/10W
Q301	8-729-027-24	TRANSISTOR DTA114TKA-T146		R124	1-216-049-11	RES-CHIP 1K 5%	1/10W
Q304	8-729-900-53	TRANSISTOR DTC114EK		R125	1-216-089-11	RES-CHIP 47K 5%	1/10W
				R201	1-216-049-11	RES-CHIP 1K 5%	1/10W
				R202	1-216-061-00	RES-CHIP 3.3K 5%	1/10W

Ref. No.	Part No.	Description			Remark	Ref. No.	Part No.	Description			Remark
R203	1-216-025-11	RES-CHIP	100	5%	1/10W	R408	1-216-047-11	RES-CHIP	820	5%	1/10W
R204	1-216-049-11	RES-CHIP	1K	5%	1/10W	R409	1-216-047-11	RES-CHIP	820	5%	1/10W
R205	1-216-052-00	METAL CHIP	1.3K	5%	1/10W	R410	1-216-041-00	METAL CHIP	470	5%	1/10W
R206	1-216-111-00	METAL CHIP	390K	5%	1/10W	R411	1-216-077-11	RES-CHIP	15K	5%	1/10W
R207	1-216-121-11	RES-CHIP	1M	5%	1/10W	R412	1-216-025-11	RES-CHIP	100	5%	1/10W
R208	1-216-079-00	METAL CHIP	18K	5%	1/10W	R413	1-216-053-00	METAL CHIP	1.5K	5%	1/10W
R209	1-216-073-00	RES-CHIP	10K	5%	1/10W	R416	1-216-073-00	RES-CHIP	10K	5%	1/10W
R210	1-216-049-11	RES-CHIP	1K	5%	1/10W	R417	1-216-049-11	RES-CHIP	1K	5%	1/10W
R211	1-216-077-11	RES-CHIP	15K	5%	1/10W	R418	1-216-049-11	RES-CHIP	1K	5%	1/10W
R212	1-216-073-00	RES-CHIP	10K	5%	1/10W	R419	1-216-049-11	RES-CHIP	1K	5%	1/10W
R213	1-216-689-11	METAL CHIP	39K	0.5%	1/10W	R422	1-216-073-00	RES-CHIP	10K	5%	1/10W
R214	1-216-089-11	RES-CHIP	47K	5%	1/10W	R423	1-216-049-11	RES-CHIP	1K	5%	1/10W
R215	1-216-079-00	METAL CHIP	18K	5%	1/10W	R424	1-216-041-00	METAL CHIP	470	5%	1/10W
R216	1-216-113-00	METAL CHIP	470K	5%	1/10W	R425	1-216-041-00	METAL CHIP	470	5%	1/10W
R217	1-216-081-00	METAL CHIP	22K	5%	1/10W	R426	1-216-049-11	RES-CHIP	1K	5%	1/10W
R218	1-216-057-00	METAL CHIP	2.2K	5%	1/10W	R427	1-216-073-00	RES-CHIP	10K	5%	1/10W
R219	1-216-047-11	RES-CHIP	820	5%	1/10W	R428	1-216-049-11	RES-CHIP	1K	5%	1/10W
R220	1-216-061-00	RES-CHIP	3.3K	5%	1/10W	R429	1-216-049-11	RES-CHIP	1K	5%	1/10W
R222	1-216-049-11	RES-CHIP	1K	5%	1/10W	R430	1-216-049-11	RES-CHIP	1K	5%	1/10W
R223	1-216-077-11	RES-CHIP	15K	5%	1/10W	R431	1-216-049-11	RES-CHIP	1K	5%	1/10W
R224	1-216-049-11	RES-CHIP	1K	5%	1/10W	R432	1-216-049-11	RES-CHIP	1K	5%	1/10W
R225	1-216-089-11	RES-CHIP	47K	5%	1/10W	R433	1-216-049-11	RES-CHIP	1K	5%	1/10W
R302	1-216-073-00	RES-CHIP	10K	5%	1/10W	R434	1-216-049-11	RES-CHIP	1K	5%	1/10W
R303	1-216-073-00	RES-CHIP	10K	5%	1/10W	R435	1-216-049-11	RES-CHIP	1K	5%	1/10W
R304	1-216-057-00	METAL CHIP	2.2K	5%	1/10W	R436	1-216-049-11	RES-CHIP	1K	5%	1/10W
R306	1-216-025-11	RES-CHIP	100	5%	1/10W	R437	1-216-049-11	RES-CHIP	1K	5%	1/10W
R307	1-216-073-00	RES-CHIP	10K	5%	1/10W	R438	1-216-049-11	RES-CHIP	1K	5%	1/10W
R308	1-216-073-00	RES-CHIP	10K	5%	1/10W	R439	1-216-113-00	METAL CHIP	470K	5%	1/10W
R309	1-216-166-00	RES-CHIP	47	5%	1/8W	R440	1-216-049-11	RES-CHIP	1K	5%	1/10W
R310	1-216-049-11	RES-CHIP	1K	5%	1/10W	R441	1-216-049-11	RES-CHIP	1K	5%	1/10W
R311	1-216-049-11	RES-CHIP	1K	5%	1/10W	R442	1-216-085-00	RES-CHIP	33K	5%	1/10W
R312	1-216-065-11	RES-CHIP	4.7K	5%	1/10W	R443	1-216-085-00	RES-CHIP	33K	5%	1/10W
R313	1-216-073-00	RES-CHIP	10K	5%	1/10W	R444	1-216-085-00	RES-CHIP	33K	5%	1/10W
R314	1-216-073-00	RES-CHIP	10K	5%	1/10W	R445	1-216-085-00	RES-CHIP	33K	5%	1/10W
R315	1-216-073-00	RES-CHIP	10K	5%	1/10W	R446	1-216-085-00	RES-CHIP	33K	5%	1/10W
R316	1-216-113-00	METAL CHIP	470K	5%	1/10W	R447	1-216-049-11	RES-CHIP	1K	5%	1/10W
R317	1-216-049-11	RES-CHIP	1K	5%	1/10W	R449	1-216-049-11	RES-CHIP	1K	5%	1/10W
R318	1-216-121-11	RES-CHIP	1M	5%	1/10W	R450	1-216-049-11	RES-CHIP	1K	5%	1/10W
R319	1-216-049-11	RES-CHIP	1K	5%	1/10W	R451	1-216-049-11	RES-CHIP	1K	5%	1/10W
R320	1-216-049-11	RES-CHIP	1K	5%	1/10W	R453	1-216-065-11	RES-CHIP	4.7K	5%	1/10W
R321	1-216-097-11	RES-CHIP	100K	5%	1/10W	R454	1-216-113-00	METAL CHIP	470K	5%	1/10W
R322	1-216-073-00	RES-CHIP	10K	5%	1/10W	R455	1-216-041-00	METAL CHIP	470	5%	1/10W
R323	1-216-041-00	METAL CHIP	470	5%	1/10W	R456	1-216-041-00	METAL CHIP	470	5%	1/10W
R324	1-216-049-11	RES-CHIP	1K	5%	1/10W	R457	1-216-049-11	RES-CHIP	1K	5%	1/10W
R327	1-216-073-00	RES-CHIP	10K	5%	1/10W	R458	1-216-049-11	RES-CHIP	1K	5%	1/10W
R328	1-216-073-00	RES-CHIP	10K	5%	1/10W	R459	1-216-049-11	RES-CHIP	1K	5%	1/10W
R329	1-216-025-11	RES-CHIP	100	5%	1/10W	R460	1-216-065-11	RES-CHIP	4.7K	5%	1/10W
R401	1-216-222-00	RES-CHIP	10K	5%	1/8W	R461	1-216-081-00	METAL CHIP	22K	5%	1/10W
R402	1-216-198-11	RES-CHIP	1K	5%	1/8W	R462	1-216-089-11	RES-CHIP	47K	5%	1/10W
R403	1-216-049-11	RES-CHIP	1K	5%	1/10W	R463	1-216-049-11	RES-CHIP	1K	5%	1/10W
R404	1-216-025-11	RES-CHIP	100	5%	1/10W	R464	1-216-049-11	RES-CHIP	1K	5%	1/10W
R406	1-216-308-00	METAL CHIP	4.7	5%	1/10W	R465	1-216-049-11	RES-CHIP	1K	5%	1/10W
R407	1-216-017-11	RES-CHIP	47	5%	1/10W	R466	1-216-049-11	RES-CHIP	1K	5%	1/10W

ZS-M35

MAIN

POWER

Ref. No.	Part No.	Description	Remark
R467	1-216-049-11	RES-CHIP	1K 5% 1/10W
R468	1-216-049-11	RES-CHIP	1K 5% 1/10W
R469	1-216-049-11	RES-CHIP	1K 5% 1/10W
R470	1-216-198-11	RES-CHIP	1K 5% 1/8W
R471	1-216-049-11	RES-CHIP	1K 5% 1/10W
R472	1-216-049-11	RES-CHIP	1K 5% 1/10W
R473	1-216-190-00	RES-CHIP	470 5% 1/8W
R474	1-216-190-00	RES-CHIP	470 5% 1/8W
R475	1-216-049-11	RES-CHIP	1K 5% 1/10W
R476	1-216-049-11	RES-CHIP	1K 5% 1/10W
R477	1-216-073-00	RES-CHIP	10K 5% 1/10W
R478	1-216-049-11	RES-CHIP	1K 5% 1/10W
R479	1-216-049-11	RES-CHIP	1K 5% 1/10W
R480	1-216-049-11	RES-CHIP	1K 5% 1/10W
R481	1-216-025-11	RES-CHIP	100 5% 1/10W
R482	1-216-049-11	RES-CHIP	1K 5% 1/10W
R483	1-216-025-11	RES-CHIP	100 5% 1/10W
R484	1-216-049-11	RES-CHIP	1K 5% 1/10W
R485	1-216-065-11	RES-CHIP	4.7K 5% 1/10W
R486	1-216-065-11	RES-CHIP	4.7K 5% 1/10W
R487	1-216-065-11	RES-CHIP	4.7K 5% 1/10W
R488	1-216-041-00	METAL CHIP	470 5% 1/10W
R489	1-216-049-11	RES-CHIP	1K 5% 1/10W
R490	1-216-049-11	RES-CHIP	1K 5% 1/10W
R491	1-216-049-11	RES-CHIP	1K 5% 1/10W
R492	1-216-049-11	RES-CHIP	1K 5% 1/10W
R493	1-216-049-11	RES-CHIP	1K 5% 1/10W
R494	1-216-073-00	RES-CHIP	10K 5% 1/10W
R496	1-216-049-11	RES-CHIP	1K 5% 1/10W
R497	1-216-049-11	RES-CHIP	1K 5% 1/10W
R499	1-216-089-11	RES-CHIP	47K 5% 1/10W
R500	1-216-041-00	METAL CHIP	470 5% 1/10W
R505	1-216-085-00	RES-CHIP	33K 5% 1/10W
R506	1-216-073-00	RES-CHIP	10K 5% 1/10W
R513	1-216-049-11	RES-CHIP	1K 5% 1/10W
R520	1-216-049-11	RES-CHIP	1K 5% 1/10W
R521	1-216-049-11	RES-CHIP	1K 5% 1/10W
R522	1-216-049-11	RES-CHIP	1K 5% 1/10W
R523	1-216-049-11	RES-CHIP	1K 5% 1/10W
R524	1-216-049-11	RES-CHIP	1K 5% 1/10W
R525	1-216-049-11	RES-CHIP	1K 5% 1/10W
R527	1-216-041-00	METAL CHIP	470 5% 1/10W
R528	1-216-097-11	RES-CHIP	100K 5% 1/10W
R529	1-216-097-11	RES-CHIP	100K 5% 1/10W

< VIBRATOR >

X401 1-781-598-21 VIBRATOR, CERAMIC (8MHz)
 X402 1-767-697-11 VIBRATOR, CRYSTAL (32kHz)

Ref. No.	Part No.	Description	Remark
*	A-3322-637-A	POWER BOARD, COMPLETE	*****
	1-533-233-31	HOLDER, FUSE	
		< CAPACITOR >	
C901	1-163-037-11	CERAMIC CHIP 0.022uF	10% 25V
C902	1-163-037-11	CERAMIC CHIP 0.022uF	10% 25V
C903	1-163-037-11	CERAMIC CHIP 0.022uF	10% 25V
C904	1-163-037-11	CERAMIC CHIP 0.022uF	10% 25V
C905	1-163-037-11	CERAMIC CHIP 0.022uF	10% 25V
C906	1-163-037-11	CERAMIC CHIP 0.022uF	10% 25V
C907	1-163-037-11	CERAMIC CHIP 0.022uF	10% 25V
C908	1-163-037-11	CERAMIC CHIP 0.022uF	10% 25V
C909	1-163-037-11	CERAMIC CHIP 0.022uF	10% 25V
C910	1-163-037-11	CERAMIC CHIP 0.022uF	10% 25V
C911	1-163-037-11	CERAMIC CHIP 0.022uF	10% 25V
C912	1-163-037-11	CERAMIC CHIP 0.022uF	10% 25V
C913	1-163-037-11	CERAMIC CHIP 0.022uF	10% 25V
C914	1-163-037-11	CERAMIC CHIP 0.022uF	10% 25V
C915	1-163-037-11	CERAMIC CHIP 0.022uF	10% 25V
C916	1-163-037-11	CERAMIC CHIP 0.022uF	10% 25V
C917	1-163-021-11	CERAMIC CHIP 0.01uF	10% 50V
C918	1-163-021-11	CERAMIC CHIP 0.01uF	10% 50V
C919	1-163-021-11	CERAMIC CHIP 0.01uF	10% 50V
△C920	1-113-925-11	CERAMIC 0.01uF	20% 250V
△C922	1-113-925-11	CERAMIC 0.01uF	20% 250V
		< CONNECTOR >	
* CN903	1-785-654-11	PIN, CONNECTOR (PC BOARD) 2P	
		< DIODE >	
D901	8-719-046-07	DIODE 2A02M	
D902	8-719-046-07	DIODE 2A02M	
D903	8-719-046-07	DIODE 2A02M	
D904	8-719-046-07	DIODE 2A02M	
D905	8-719-046-07	DIODE 2A02M	
D906	8-719-046-07	DIODE 2A02M	
D907	8-719-046-07	DIODE 2A02M	
D908	8-719-046-07	DIODE 2A02M	
D909	8-719-063-79	DIODE 1N4002B	
D910	8-719-063-79	DIODE 1N4002B	
D911	8-719-063-79	DIODE 1N4002B	
D912	8-719-063-79	DIODE 1N4002B	
D913	8-719-988-61	DIODE 1SS355TE-17	
D914	8-719-988-61	DIODE 1SS355TE-17	
D915	8-719-988-61	DIODE 1SS355TE-17	
		< FUSE >	
△F901	1-576-099-11	FUSE (800mA/250V)	
△F902	1-576-105-11	FUSE (2.5A/250V)	
△F903	1-576-107-11	FUSE (3.15A/250V)	

The components identified by mark △ or dotted line with mark △ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque △ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.
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Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
		< AC INLET >		S643	1-692-014-11	SWITCH, KEYBOARD (CD ► ■)	
△ J901	1-540-009-11	INLET, AC (～ AC IN)		S644	1-692-014-11	SWITCH, KEYBOARD (TUNE ►► +)	
		< IC LINK >		S645	1-692-014-11	SWITCH, KEYBOARD (TUNE ◀◀ -)	
△ PS901	1-532-679-00	LINK, IC (ICP-N15) 0.6A		S646	1-692-014-11	SWITCH, KEYBOARD (LINE/LINE LEVEL)	
		< TRANSISTOR >					
Q901	8-729-027-50	TRANSISTOR DTC123JKA-T146					
Q902	8-729-120-28	TRANSISTOR 2SC1623-L5L6					
		< RESISTOR >					
R901	1-216-073-00	RES-CHIP 10K 5% 1/10W					
R902	1-216-089-11	RES-CHIP 47K 5% 1/10W					
R905	1-216-089-11	RES-CHIP 47K 5% 1/10W					
R906	1-216-073-00	RES-CHIP 10K 5% 1/10W					
		< RELAY >					
RY901	1-755-363-11	RELAY					
		< TRANSFORMER >					
△ T901	1-435-320-11	TRANSFORMER, POWER					

*	1-675-213-14	TOP BOARD					

	3-363-898-01	CUSHION					
	3-831-441-11	CUSHION (B)					
		< RESISTOR >					
R654	1-216-045-00	METAL CHIP 680 5% 1/10W					
R655	1-216-048-00	METAL CHIP 910 5% 1/10W					
R656	1-216-051-00	METAL CHIP 1.2K 5% 1/10W					
R657	1-216-056-00	RES-CHIP 2K 5% 1/10W					
R658	1-216-061-00	RES-CHIP 3.3K 5% 1/10W					
R660	1-216-045-00	METAL CHIP 680 5% 1/10W					
R661	1-216-048-00	METAL CHIP 910 5% 1/10W					
R662	1-216-051-00	METAL CHIP 1.2K 5% 1/10W					
R663	1-216-056-00	RES-CHIP 2K 5% 1/10W					
R664	1-216-061-00	RES-CHIP 3.3K 5% 1/10W					
R665	1-216-069-00	METAL CHIP 6.8K 5% 1/10W					
		< SWITCH >					
S633	1-692-014-11	SWITCH, KEYBOARD (MEGA BASS)					
S634	1-692-014-11	SWITCH, KEYBOARD (SOUND)					
S635	1-692-014-11	SWITCH, KEYBOARD (MD ■)					
S636	1-692-014-11	SWITCH, KEYBOARD (MD ► ■)					
S637	1-692-014-11	SWITCH, KEYBOARD (RADIO/BAND)					
S638	1-692-014-11	SWITCH, KEYBOARD (CD ■)					
S640	1-692-014-11	SWITCH, KEYBOARD (VOLUME -)					
S641	1-692-014-11	SWITCH, KEYBOARD (VOLUME +)					
S642	1-692-014-11	SWITCH, KEYBOARD (REC/REC MODE)					

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