

HCD-GX255/RG170/RG470

SERVICE MANUAL

Ver. 1.2 2005.09

Canadian Model
HCD-GX255

AEP Model

E Model

HCD-RG170/RG470

Australian Model
HCD-RG170



Photo: HCD-GX255

- HCD-GX255 is the amplifier, CD player, tape deck and tuner section in MHC-GX255.
- HCD-RG170 is the amplifier, CD player, tape deck and tuner section in MHC-RG170.
- HCD-RG470 is the amplifier, CD player, tape deck and tuner section in MHC-RG470.

CD Section	Model Name Using Similar Mechanism	NEW
	CD Mechanism Type	CDM74KFS-F1BD81C (Except Mexican model) or CDM74KFS-K6BD83S (Canadian, AEP, East European, Russian, E2, E51 models)/ CDM74KFS-F1BD84 (Mexican model)
	Base Unit Name	BU-F1BD81C (Except Mexican model) or BU-K6BD83S-WOD (Canadian, AEP, East European, Russian, E2, E51 models)/ BU-F1BD84 (Mexican model)
	Optical Pick-up Block Name	KSM-215DCP or KSM-213DCP
TAPE Section	Model Name Using Similar Mechanism	HCD-GX355/RG270
	Tape Transport Mechanism Type	CWM43FF13

- Abbreviation
E2 : 120V AC area in E model
E51 : Chilean and Peruvian models

SPECIFICATIONS

Amplifier section

Canadian model:

HCD-GX255

Continuous RMS power output (reference):

65 + 65 watts (6 ohms at
1 kHz, 10% THD)

Total harmonic distortion less than 0.07% (6 ohms at
1 kHz, 40 W)

European and Russian models:

HCD-RG470

DIN power output (rated): 110 + 110 watts (6 ohms at
1 kHz, DIN)

Continuous RMS power output (reference):
140 + 140 watts (6 ohms at
1 kHz, 10% THD)

Music power output (reference):
280 + 280 watts (6 ohms at
1 kHz, 10% THD)

HCD-RG170

DIN power output (rated): 20 + 20 watts (6 ohms at
1 kHz, DIN)

Continuous RMS power output (reference):
25 + 25 watts (6 ohms at
1 kHz, 10% THD)

Music power output (reference):

50 + 50 watts (6 ohms at
1 kHz, 10% THD)

Other models:

HCD-RG470

The following measured at AC 120, 127, 220, 240 V
50/60 Hz

DIN power output (rated): 130 + 130 watts (6 ohms at
1 kHz, DIN)

Continuous RMS power output (reference):
160 + 160 watts (6 ohms at
1 kHz, 10% THD)

HCD-RG170

The following measured at AC 120, 127, 220, 240 V
50/60 Hz

DIN power output (rated): 50 + 50 watts (6 ohms at
1 kHz, DIN)

Continuous RMS power output (reference):
65 + 65 watts (6 ohms at
1 kHz, 10% THD)

Inputs

AUDIO IN (stereo mini jack):

voltage 250 mV,
impedance 47 kilohms

MIC (phone jack) (Latin American model only):
sensitivity 1 mV,
impedance 10 kilohms

Outputs

PHONES (stereo mini jack):

accepts headphones of
8 ohms or more

VIDEO OUT (phono jack) (Mexican model only):
max. output level 1Vp-p,
unbalanced, Sync
negative, load impedance
75 ohms

SPEAKER:

accepts impedance of 6 to
16 ohms

– Continued on next page –

COMPACT DISC DECK RECEIVER

HCD-GX255/RG170/RG470

CD player section	
System	Compact disc and digital audio system
Laser Diode Properties	Emission duration: continuous Laser Output*: Less than 44.6μW
* This output is the value measurement at a distance of 200mm from the objective lens surface on the Optical Pick-up Block with 7mm aperture.	
Frequency response	2 Hz – 20 kHz (±0.5 dB)
Signal-to-noise ratio	More than 90 dB
Dynamic range	More than 90 dB

Tape deck section	
Recording system	4-track 2-channel, stereo
Frequency response	50 – 13,000 Hz (±3 dB), using Sony TYPE I cassettes

Tuner section	
FM stereo, FM/AM superheterodyne tuner	
FM tuner section	
Tuning range	
North American model:	87.5 – 108.0 MHz (100 kHz step)
Other models:	87.5 – 108.0 MHz (50 kHz step)
Antenna	
Antenna terminals	FM lead antenna 75 ohms unbalanced
Intermediate frequency	10.7 MHz
AM tuner section	
Tuning range	
Pan-American models:	530 – 1,710 kHz (with the tuning interval set at 10 kHz) 531 – 1,710 kHz (with the tuning interval set at 9 kHz)
European, Russian and Saudi Arabian models:	531 – 1,602 kHz (with the tuning interval set at 9 kHz)
Other models:	530 – 1,710 kHz (with the tuning interval set at 10 kHz) 531 – 1,602 kHz (with the tuning interval set at 9 kHz)
Antenna	
Intermediate frequency	AM loop antenna 450 kHz

General	
Power requirements	
North American model:	120 V AC, 60 Hz
European and Russian models:	230 V AC, 50/60 Hz
Australian model:	230 – 240V AC, 50/60 Hz
Argentine model:	220 V AC, 50/60 Hz
Mexican model:	127 V AC, 60 Hz
Saudi Arabian model:	120 – 127, 220 or 230 – 240V AC, 50/60 Hz
Adjustable with voltage selector	
Other models:	
120 V, 220 V or 230 – 240V AC, 50/60 Hz	
Adjustable with voltage selector	
Power consumption	
Canadian model:	
HCD-GX255:	110 watts
European and Russian models:	
HCD-RG470:	240 watts
0.25 watts (at the Power Saving Mode)	
HCD-RG170:	70 watts
0.25 watts (at the Power Saving Mode)	
Other models:	
HCD-RG470:	170 watts
HCD-RG170:	125 watts
Dimensions (w/h/d) (excl. speakers)	
Approx. 280 × 325 × 430 mm	
Mass (excl. speakers)	
Canadian model:	
HCD-GX255:	Approx. 8.5 kg
European and Russian models:	
HCD-RG470:	Approx. 10.0 kg
HCD-RG170:	Approx. 7.2 kg
Other models:	
HCD-RG470:	Approx. 10.4 kg
HCD-RG170:	Approx. 8.5 kg
Design and specifications are subject to change without notice.	

Notes on chip component replacement

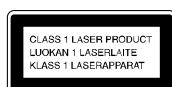
- Never reuse a disconnected chip component.
- Notice that the minus side of a tantalum capacitor may be damaged by heat.

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.

CAUTION

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



This appliance is classified as a CLASS 1 LASER product. This marking is located on the rear exterior.

DANGER

INVISIBLE LASER RADIATION WHEN OPEN AND INTERLOCK DEFEATED. AVOID DIRECT EXPOSURE TO BEAM.

DANGER

RADIATION DE LASER INVISIBLE LORS D'OUVERTURE. AVEC L'ENCLenchement DE SECURITE ANNULÉ. EVITER L'EXPOSITION DIRECTE AU RAYON.

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 COM- POSANTS QUE PAR DES PIÈCES SONY DONT LES NUMÉROS SONT DONNÉS DANS CE MANUEL OU DANS LES SUPPLÉMENTS PUBLIÉS PAR SONY.

UNLEADED SOLDER

Boards requiring use of unleaded solder are printed with the lead-free mark (LF) indicating the solder contains no lead.

(Caution: Some printed circuit boards may not come printed with the lead free mark due to their particular size)

**LEAD FREE MARK**

Unleaded solder has the following characteristics.

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

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SECTION 1 SERVICING NOTES

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.

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.

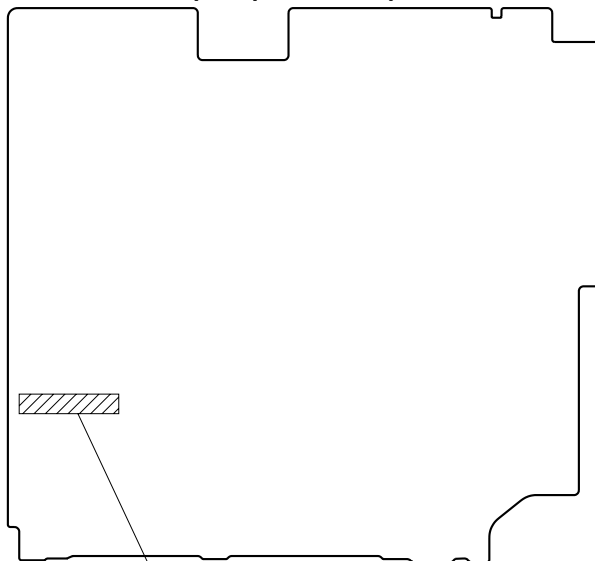
LASER DIODE AND FOCUS SEARCH OPERATION CHECK

Carry out the "S curve check" in "CD section adjustment" and check that the S curve waveforms is output three times.

DISCRIMINATION OF THE MAIN BOARD

There are two types of suffix-11 and suffix-12 of the MAIN boards used in set as follows.

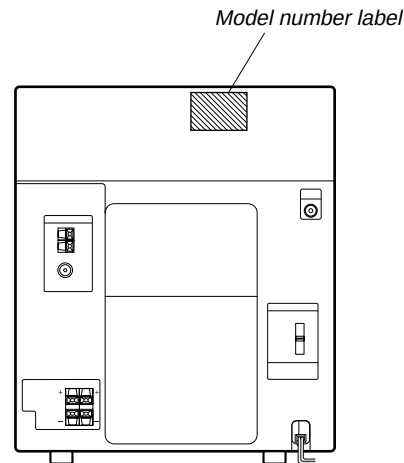
– MAIN BOARD (Component Side) –



Part Number
AEP, EE, RU models : 1-865-919-12 only
Other models : 1-865-919-11 or 1-865-919-12

• MODEL IDENTIFICATION

– Back Panel –



Label indication	Model
2-560-990-01	GX255
2-560-991-01	RG170: AEP, EE, RU
2-560-993-01	RG470: E2, E3
2-560-994-01	RG170: EA
2-560-996-01	RG170: AUS
2-560-997-01	RG170: E51
2-560-998-01	RG170: AR
2-580-000-01	RG470: AEP, EE, RU
2-580-001-01	RG470: E2
2-580-002-01	RG470: E51
2-580-003-01	RG470: MX
2-580-004-01	RG470: AR

• Abbreviation

AR : Argentina model
AUS : Australian model
CND : Canadian model
E2 : 120V AC Area in E model
E3 : 240V AC Area in E model
E51 : Chilean and Peruvian models
EA : Saudi Arabia model
EE : East European model
MX : Mexican model
RU : Russian model

• Location of Controls

Main unit

ALPHABETICAL ORDER

A – O

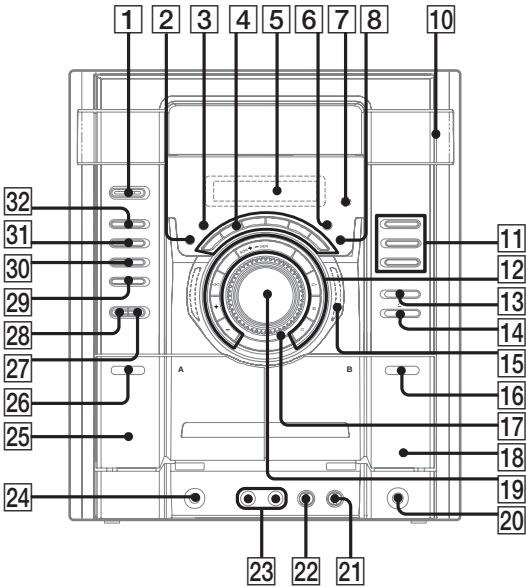
- ALBUM +/- 12
- AUDIO IN 29
- AUDIO IN jack 24
- CD 32
- CD SYNC 27
- Deck A 25
- Deck B 18
- DISC 1 – 3 11
- DISC SKIP/EX-CHANGE 13
- Disc tray 10
- DISPLAY 3
- Display window 5
- ECHO LEVEL¹⁾ 21
- EFFECT ON/OFF 4
- ENTER 4
- EQ BAND 12
- GROOVE 4
- ILLUMINATION 2
- MIC jack²⁾ 23
- MIC LEVEL²⁾ 22
- MULTIPL EX¹⁾ 6
- Operation Dial
 - (– EQ +/- 11<<< >>> 11/
 - TUNING +) 17

P – Z

- P FILE 4
- PHONES jack 20
- PLAY MODE 8
- Power illuminator 15
- PRESET EQ 4
- REC PAUSE/START 29
- Remote sensor 7
- SURROUND 4
- TAPE A/B 30
- TUNER/BAND 31
- TUNING MODE 8
- VOLUME control 19

BUTTON DESCRIPTIONS

- I/⏻ (power) 1
- ⏸ (pause) 12
- (stop) 12
- ⏭ (fast forward) 12
- ▶ (play) 12
- ⏮ (rewind) 12
- ⏏ (eject) 14
- PUSH ⏏ (deck B) (eject) 16
- ▲ PUSH (deck A) (eject) 26
- ¹⁾ Mexican model only
- ²⁾ Latin American model only
(Mexican model comes with
2 microphone jacks)



Remote control

ALPHABETICAL ORDER

A - E

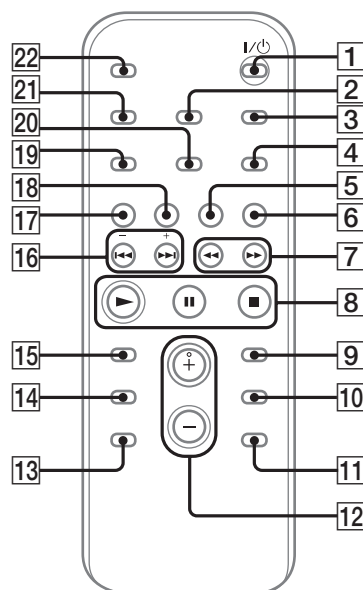
ALBUM + **11**
 ALBUM - **13**
 CD **18**
 CLEAR **15**
 CLOCK/TIMER SELECT **2**
 CLOCK/TIMER SET **3**
 DISC SKIP **10**
 DISPLAY **21**
 ENTER **9**
 EQ **14**

F - Z

FM MODE **4**
 FUNCTION **6**
 PLAY MODE **20**
 REPEAT **4**
 SLEEP **22**
 TAPE **17**
 TUNER BAND **5**
 TUNER MEMORY **19**
 TUNING MODE **20**
 VOLUME +/- **12**

BUTTON DESCRIPT

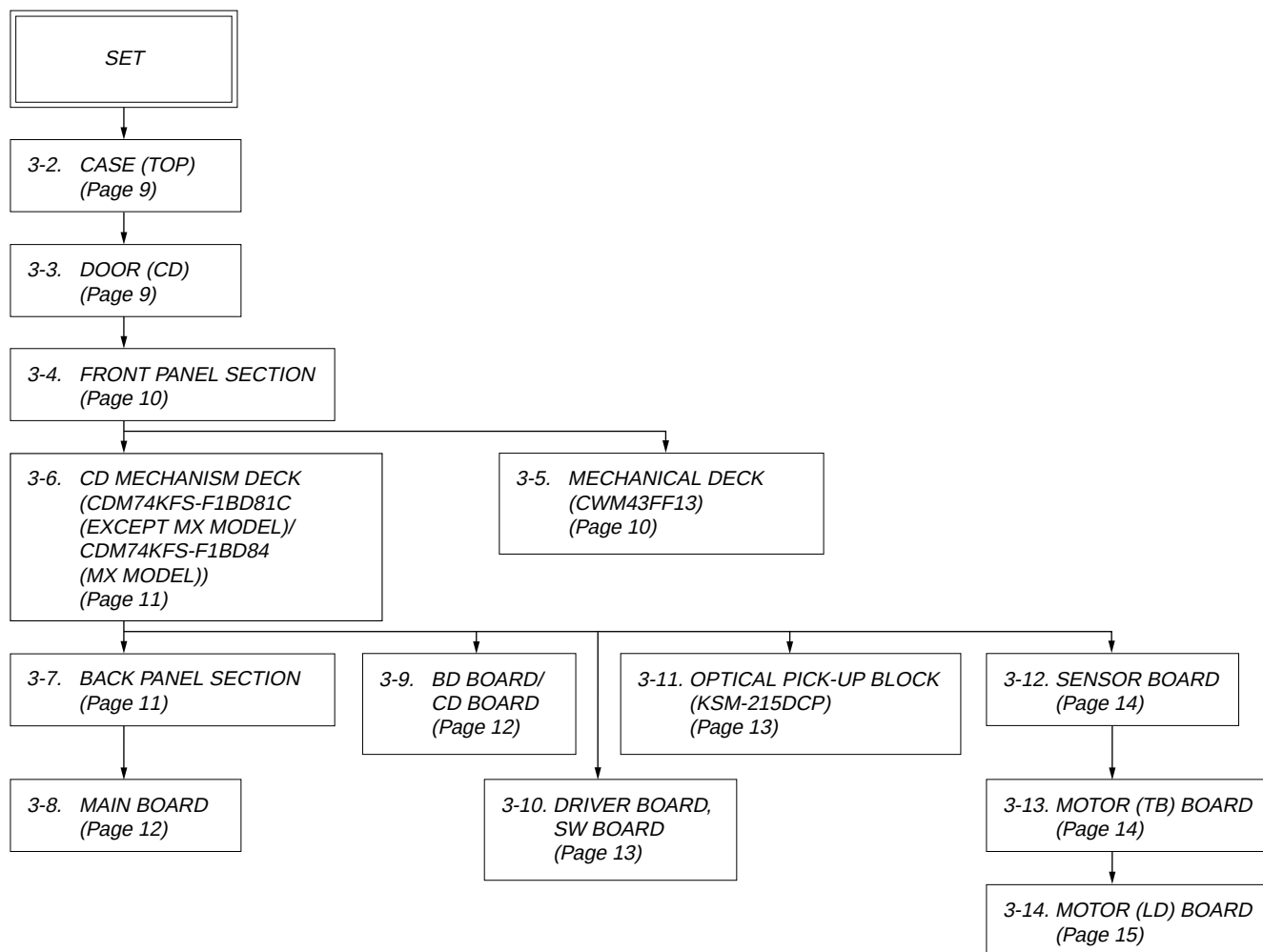
I/⏻ (power) **1**
 ◀◀/▶▶ (rewind/fast forward) **7**
 ▶ (play) **8**
 || (pause) **8**
 ■ (stop) **8**
 +/- (tuning) **16**
 ◀◀/▶▶ (go back/go forward) **16**



SECTION 3 DISASSEMBLY

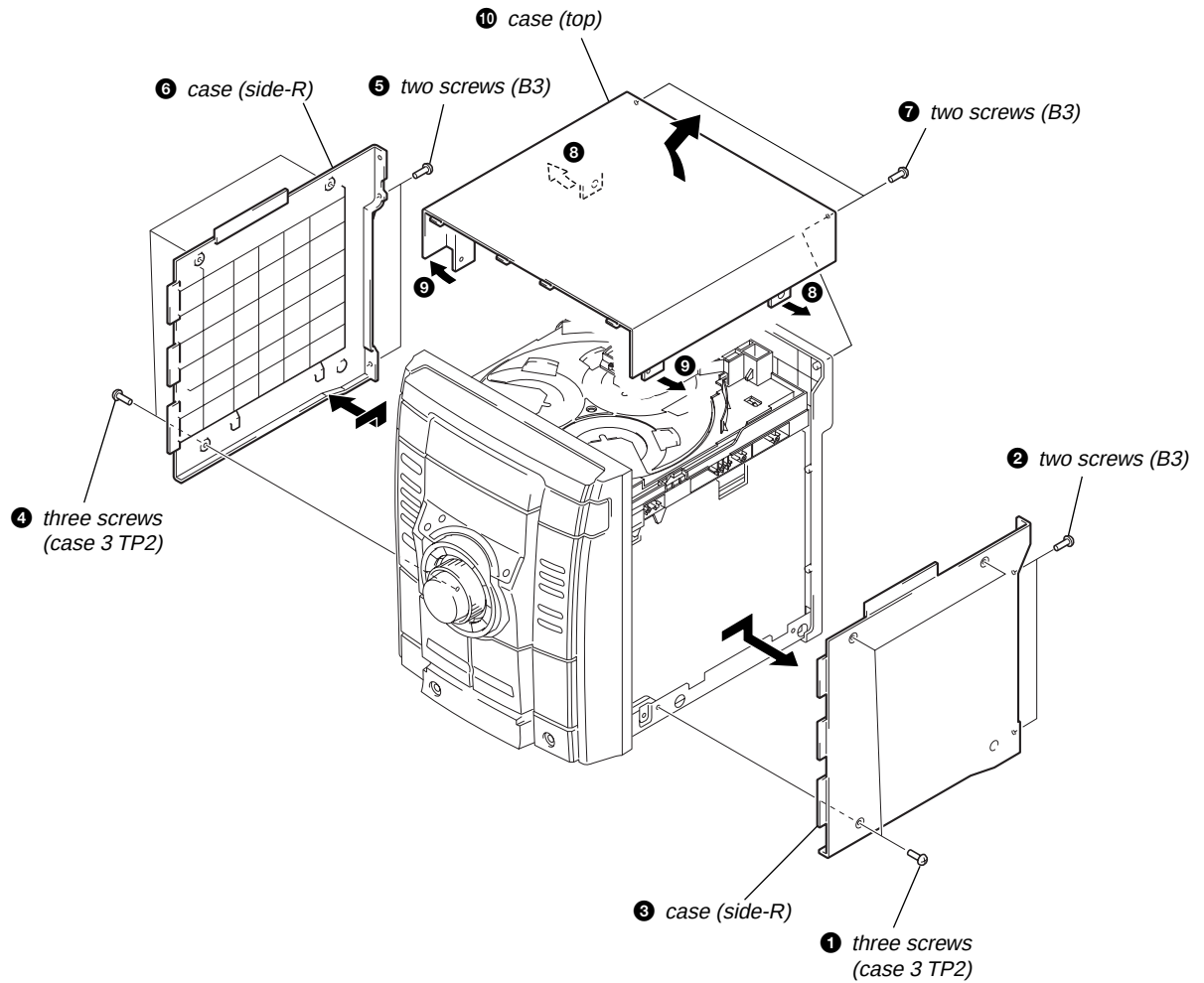
- This set can be disassembled in the order shown below.

3-1. DISASSEMBLY FLOW

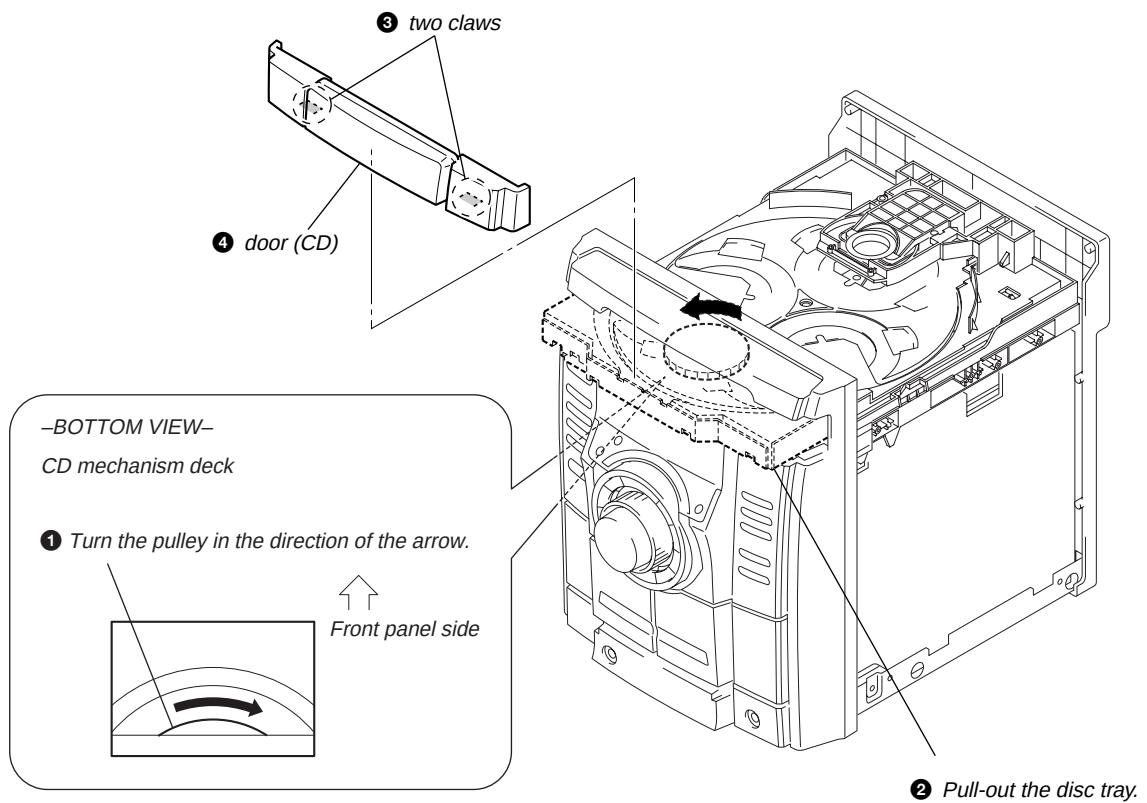


Note: Follow the disassembly procedure in the numerical order given.

3-2. CASE (TOP)

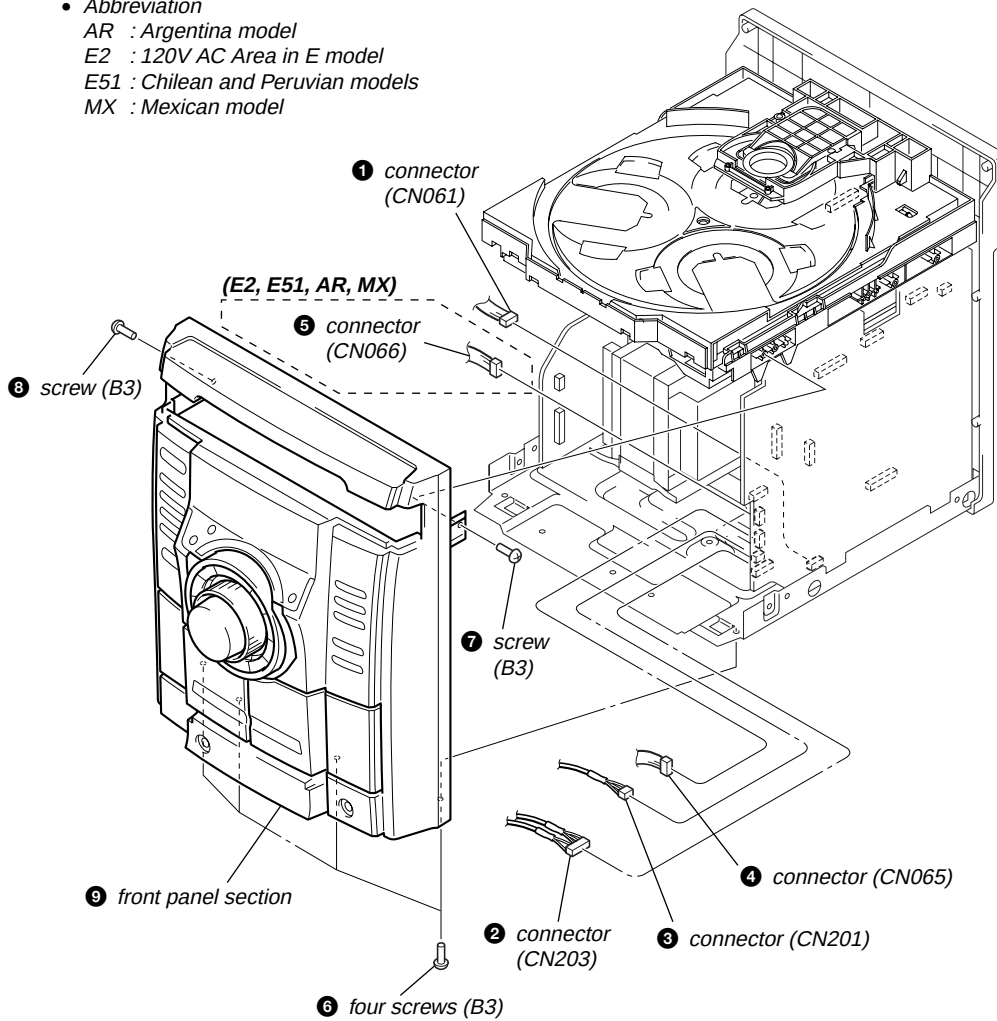


3-3. DOOR (CD)



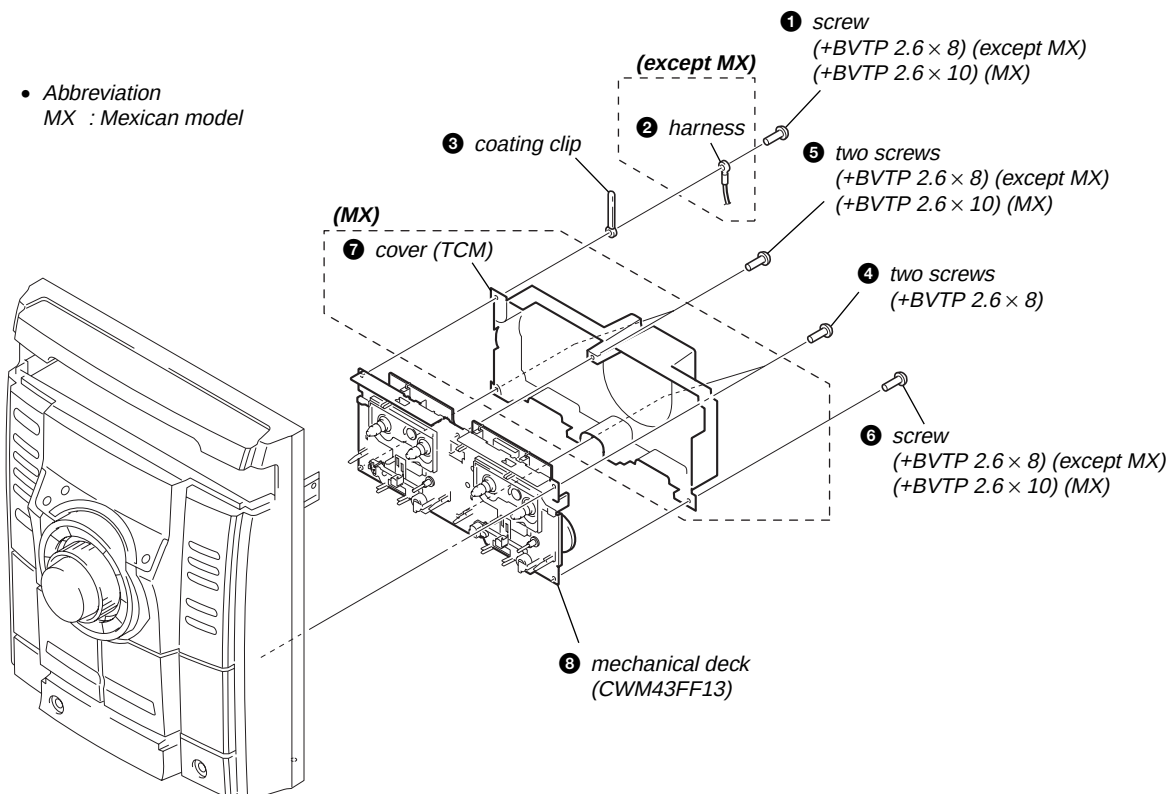
3-4. FRONT PANEL SECTION

- Abbreviation
AR : Argentina model
E2 : 120V AC Area in E model
E51 : Chilean and Peruvian models
MX : Mexican model



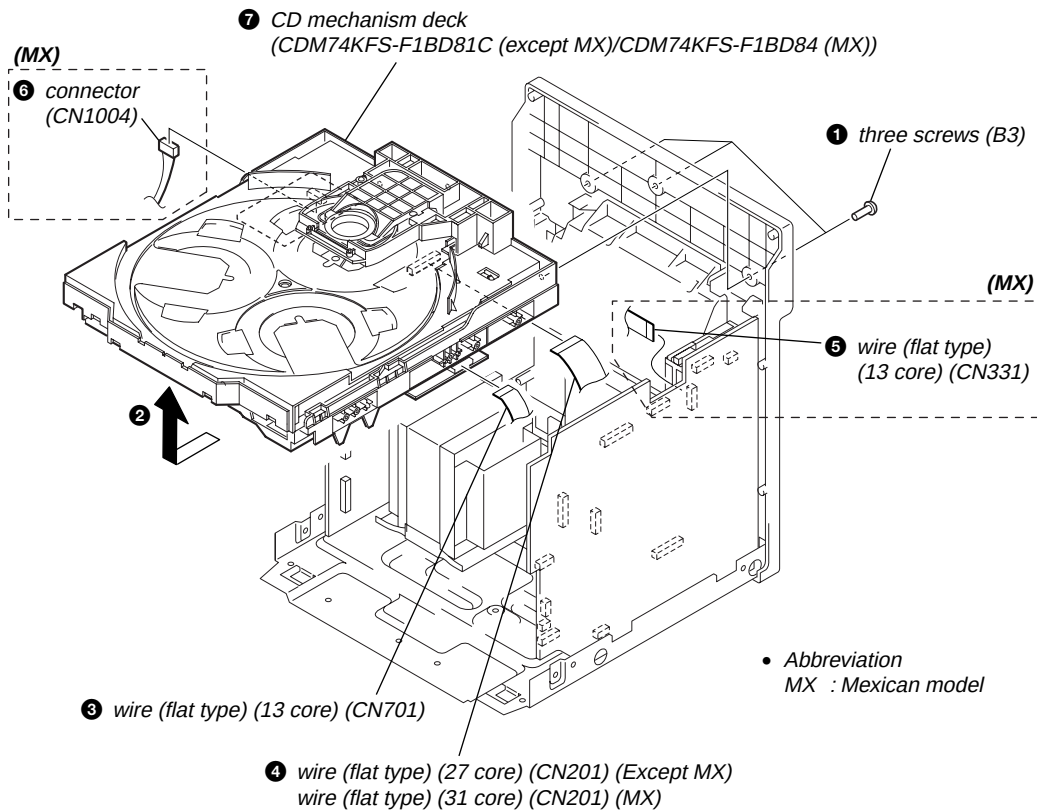
3-5. MECHANICAL DECK (CWM43FF13)

- Abbreviation
MX : Mexican model

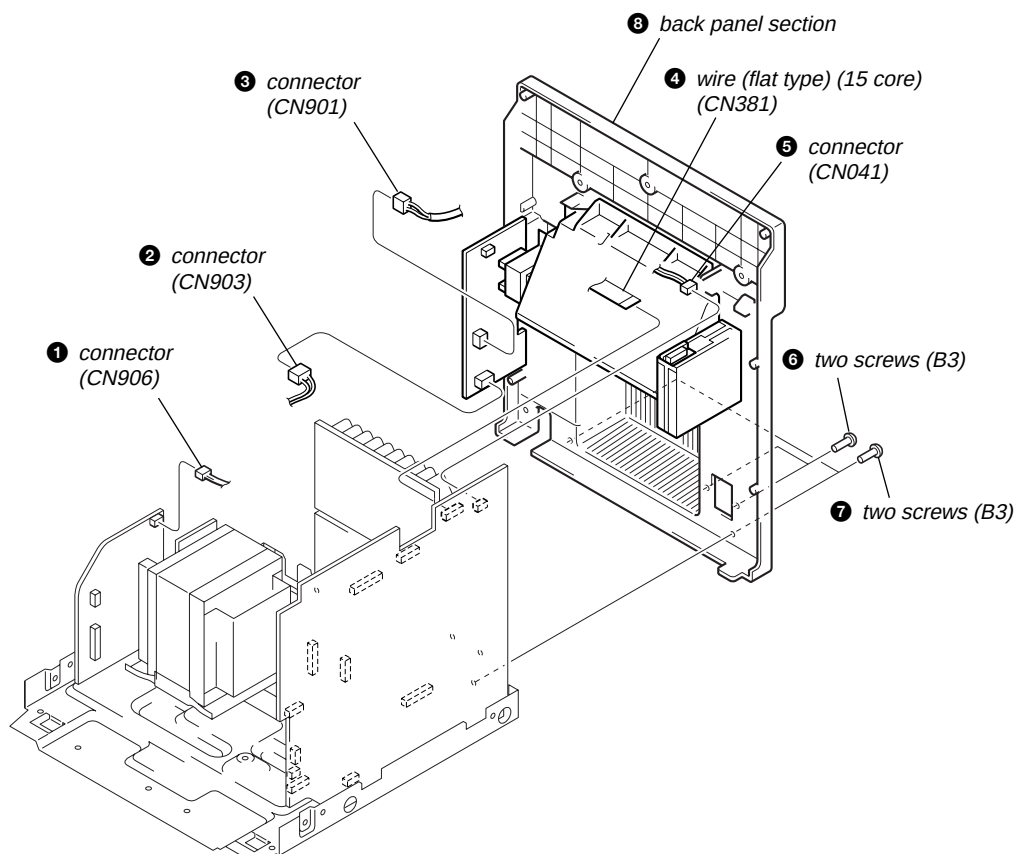


3-6. CD MECHANISM DECK

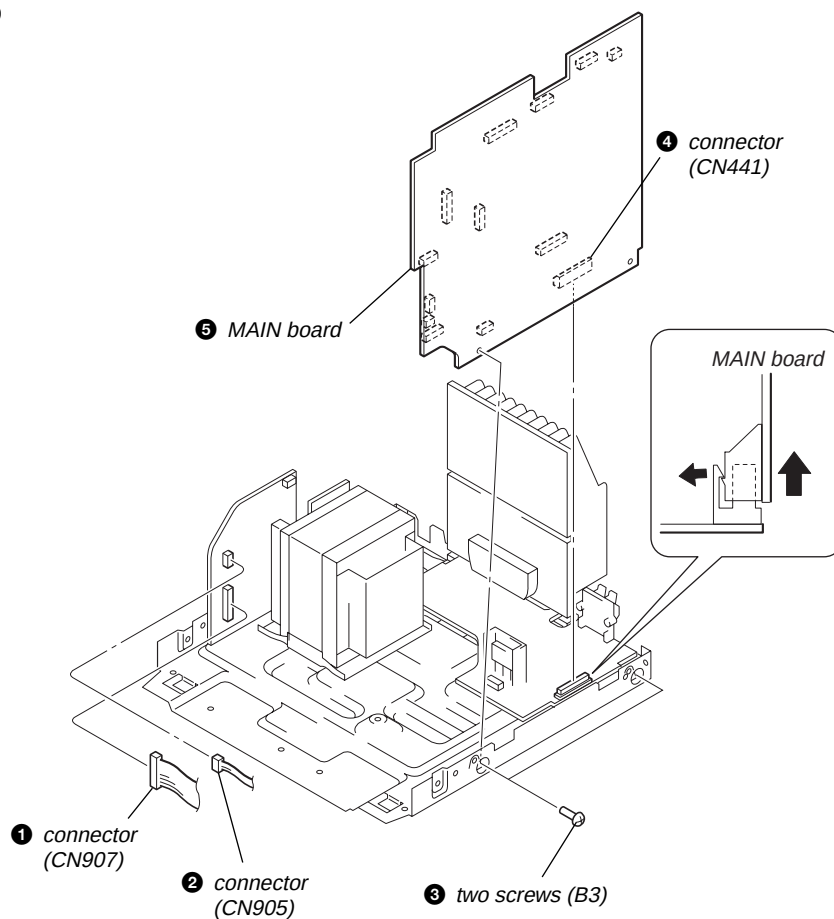
(CDM74KFS-F1BD81C (EXCEPT MX MODEL)/CDM74KFS-F1BD84 (MX MODEL))



3-7. BACK PANEL SECTION

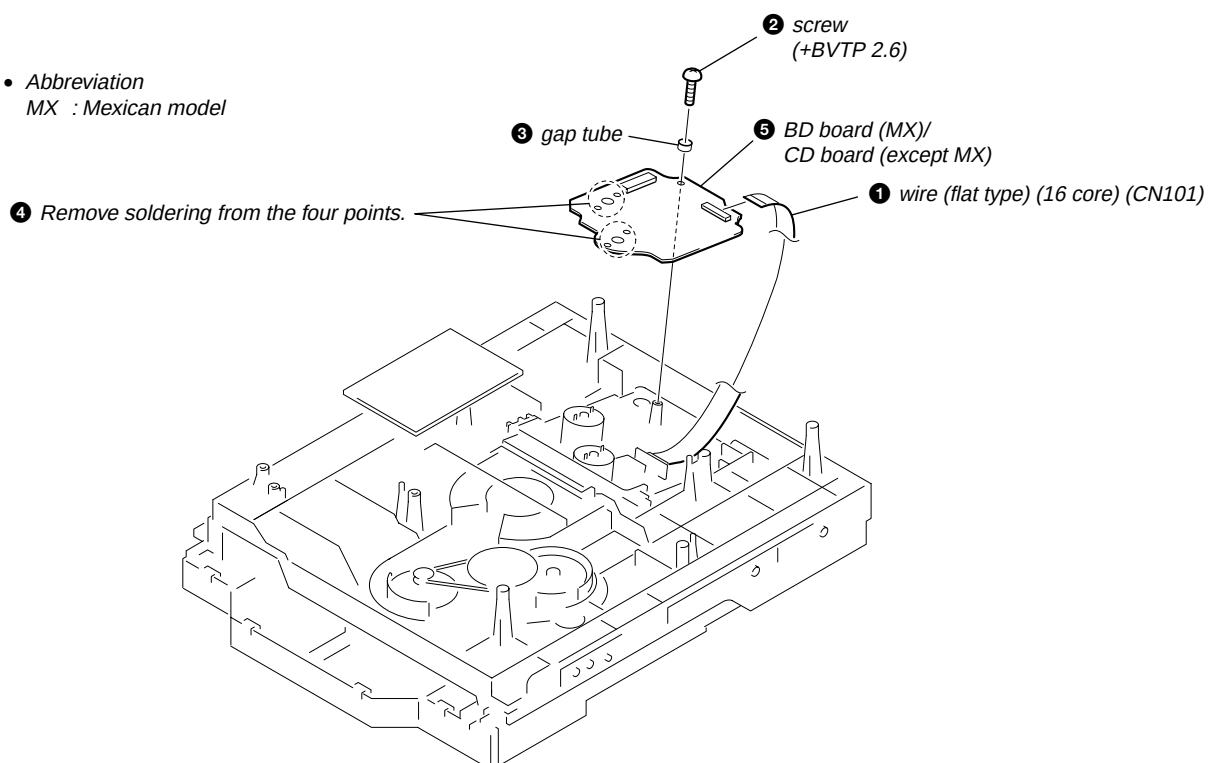


3-8. MAIN BOARD

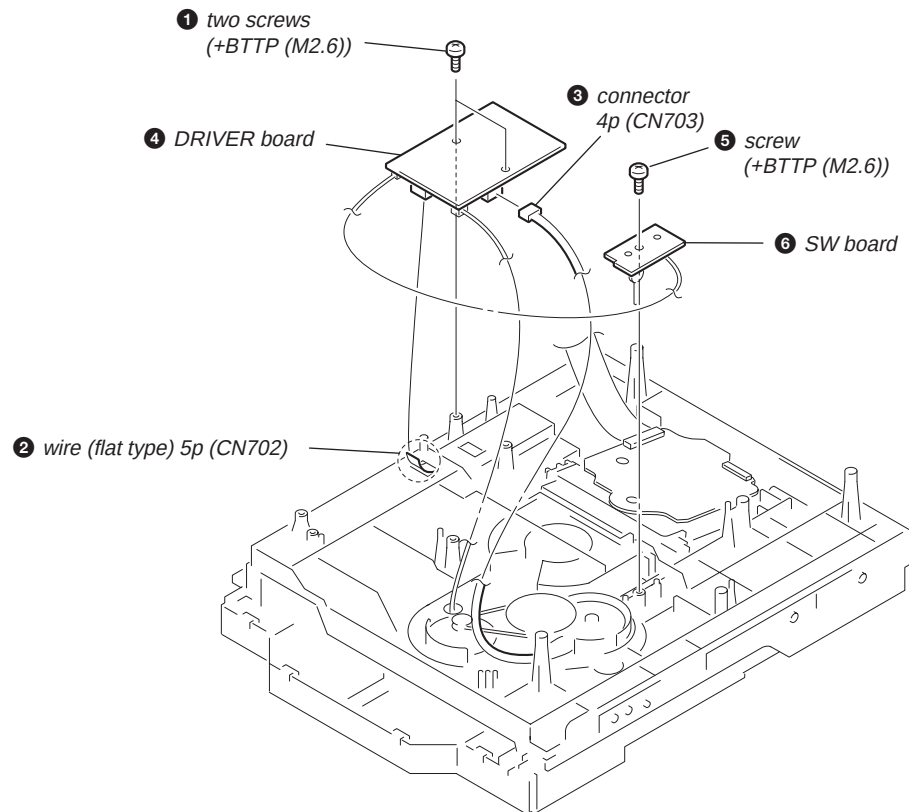


3-9. BD BOARD/CD BOARD

- Abbreviation
MX : Mexican model

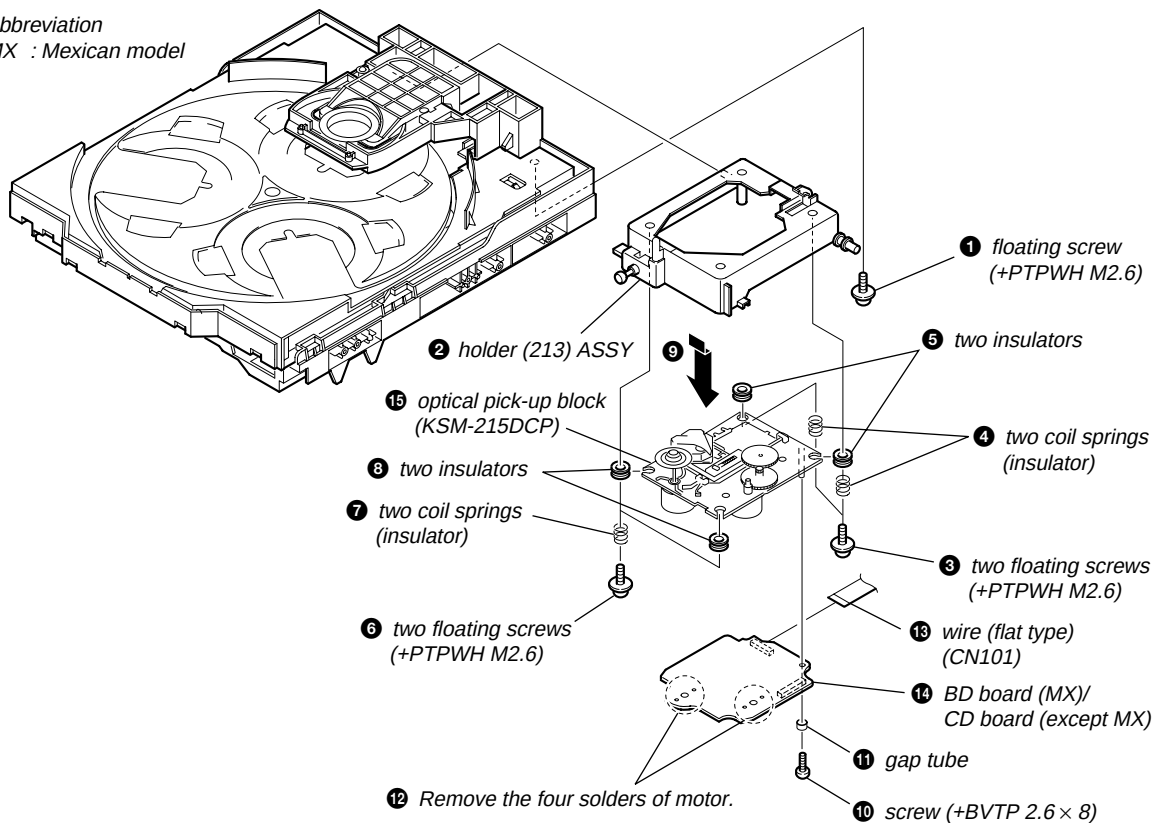


3-10. DRIVER BOARD, SW BOARD

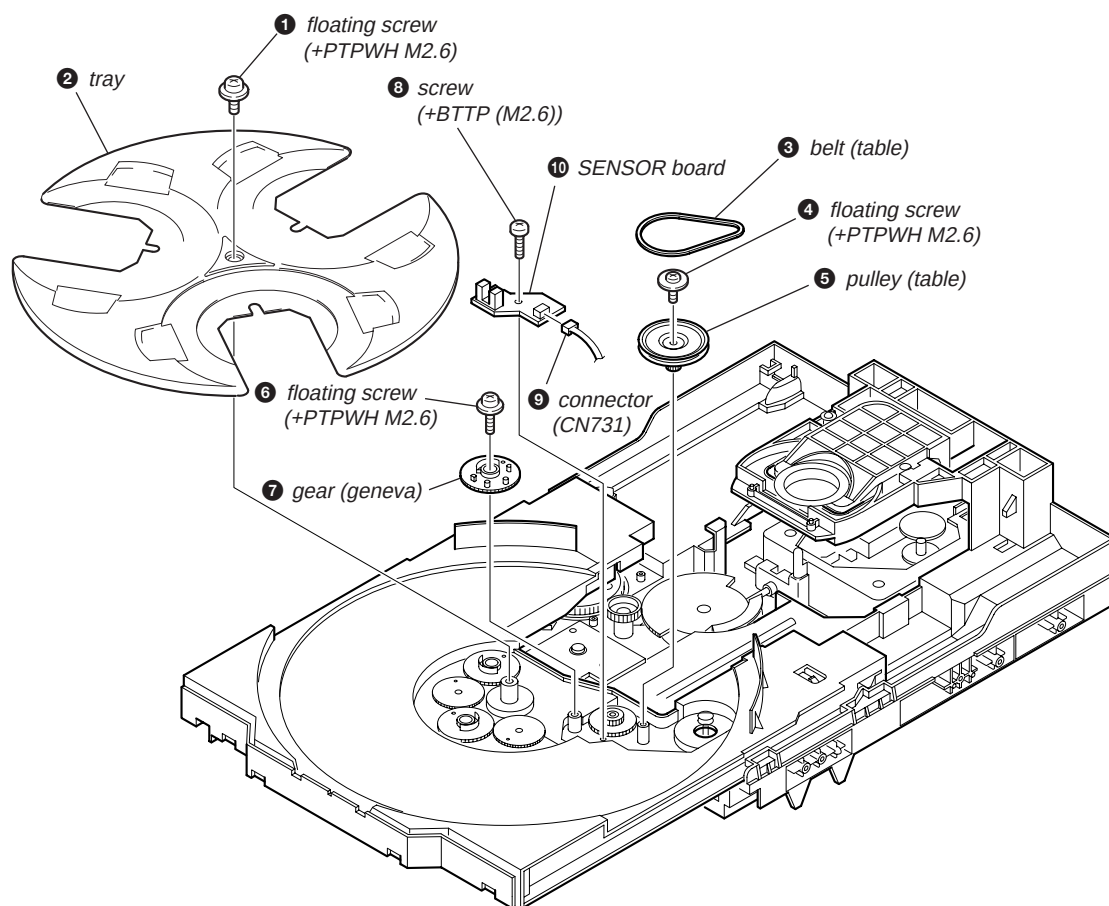


3-11. OPTICAL PICK-UP BLOCK (KSM-215DCP)

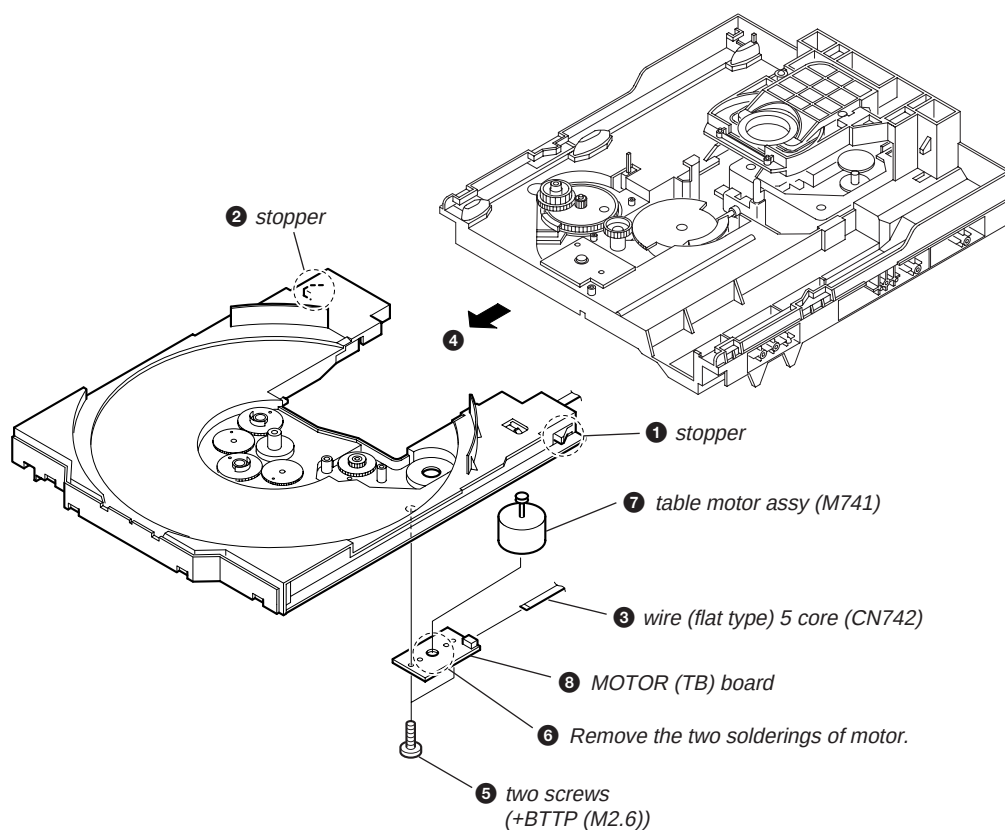
- Abbreviation
MX : Mexican model

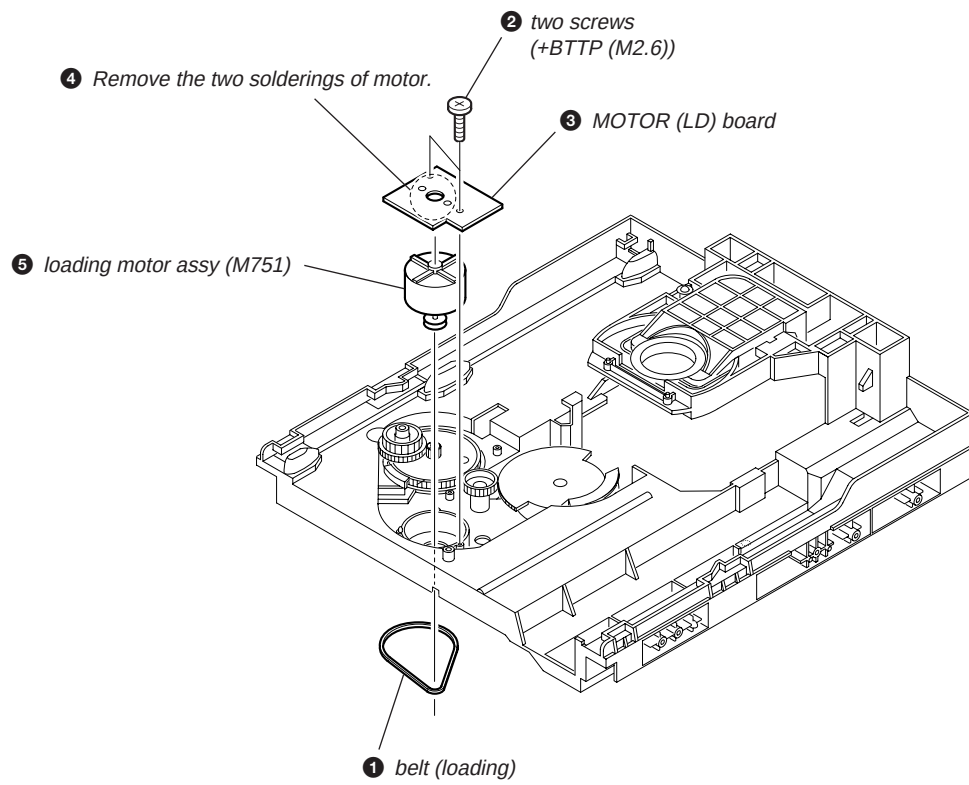


3-12. SENSOR BOARD



3-13. MOTOR (TB) BOARD



3-14. MOTOR (LD) BOARD

SECTION 4

TEST MODE

MC COLD RESET

The cold reset clears all data including preset data stored in the RAM to initial conditions. Execute this mode when returning the set to the customer.

Procedure:

1. Press three buttons of **[■]**, **[ILLUMINATION]** and **[DISC 1]** simultaneously.
2. The message "COLD RESET" is displayed on the fluorescent indicator tube momentarily, then becomes standby states.

AM TUNING INTERVAL CHANGE-OVER

(Except AEP, East European, Russian model)

A step of AM tuning interval can be changed over between 9 kHz and 10 kHz.

Procedure:

1. Press the **[I/⏻]** button to turn the power on.
2. Press the **[TUNER/BAND]** button to select "AM".
3. Press the **[I/⏻]** button to turn the power off.
4. Press two buttons of **[PLAY MODE/TUNING MODE]** and **[I/⏻]** simultaneously.
5. The message "AM 9K STEP" or "AM 10K STEP" is displayed on the fluorescent indicator tube, and thus the channel step is changed over.

CD SHIP (LOCK) MODE

This mode moves the optical pick-up to the position durable to vibration. Use this mode when returning the set to the customer after repair.

Procedure:

1. Press the **[I/⏻]** button to turn the power on.
2. Press the **[CD]** button to select "CD".
3. Press two buttons of **[CD]** and **[POWER]** simultaneously.
4. The message "LOCK" is displayed on the fluorescent indicator tube, and the CD ship mode is set.

CD SHIP (LOCK) MODE & COLD RESET

This mode is used to perform CD chip (lock) mode and cold reset simultaneously.

Procedure:

1. Press the **[I/⏻]** button to turn the power on.
2. Press the **[CD]** button to select "CD".
3. Press three buttons of **[■]**, **[CD]** and **[DISPLAY]** simultaneously.
4. The message "COLD RESET" is displayed on the fluorescent indicator tube momentarily, then becomes standby states.

CD TRAY LOCK MODE

This mode is used to unable to take sample disc out of tray in the shop.

Procedure:

1. Press the **[I/⏻]** button to turn the power on.
2. Press the **[CD]** button to select "CD".
3. Load a disc and press two buttons of **[■]** and **[▲]** for 5 seconds.
4. The message "LOCKED" is displayed on the fluorescent indicator tube and the CD tray is locked. (Even if pressing the **[▲]** button, the message "LOCKED" is displayed on the fluorescent indicator tube and the CD tray is locked)
5. To release this mode, press two buttons of **[■]** and **[▲]** for 5 seconds.
6. The message "UNLOCKED" is displayed on the fluorescent indicator tube and the CD tray is unlocked.

AMP TEST MODE

This mode is used to display the parameter of amplifier IC and display the VACS status.

Procedure:

1. Press the **[I/⏻]** button to turn the power on.
2. Press three buttons of **[■]**, **[ILLUMINATION]** and **[PRESET EQ]** simultaneously.
3. When the AMP test mode is activated, the message "AMP TEST IN" is displayed on the fluorescent indicator tube momentarily, then amplifier adjustment mode is displayed on the fluorescent indicator tube.
4. Press the **[DISPLAY]** button to changed over between VACS status display mode and the amplifier IC parameter display mode.
5. In this mode, press the **[GROOVE]** button to changed over DBFB on/off, and "DBFB ON" or "DBFB OFF" is displayed on the fluorescent indicator tube.
6. In this mode, press the **[SURROUND]** button to changed over surround on/off, and "SURROUND ON" or "SURROUND OFF" is displayed on the fluorescent indicator tube.
7. In this mode, press the **[EQ BAND]** button to enter the equalizer adjustment mode.
In the equalizer adjustment mode, press the **[EQ BAND]** button to change over the adjustment band as LOW/MID/HIGH. And turn the **[◀◀ EQ ▶▶]** knob to adjust the equalizer level of each bands.
8. To release the amplifier IC parameter display mode or equalizer adjustment mode, press the **[I/⏻]** button to the power off.

AGING MODE

This mode can be used for operation check of CD section and tape deck section.

CD section and tape deck section work in parallel.

If an error occurred:

The aging operation stops only an error occurred sections and display then status.

If no error occurs:

The aging operation continues repeatedly.

Procedure:

1. Press the **[I/O]** button to turn the power on.
2. Press the **[CD]** button to select "CD".
3. Load three discs and insert two tape to the deck A and B.
4. Press three buttons of **[■]**, **[ILLUMINATION]** and **[DISC SKIP/EX-CHANGE]** simultaneously.
5. Aging operations of CD and tape are started at the same time.
6. To release this mode, press the **[I/O]** button to turn the power off or press the function buttons to change the function.

1. Display at the Aging Mode

Display operating state of CD section and tape deck section alternately.

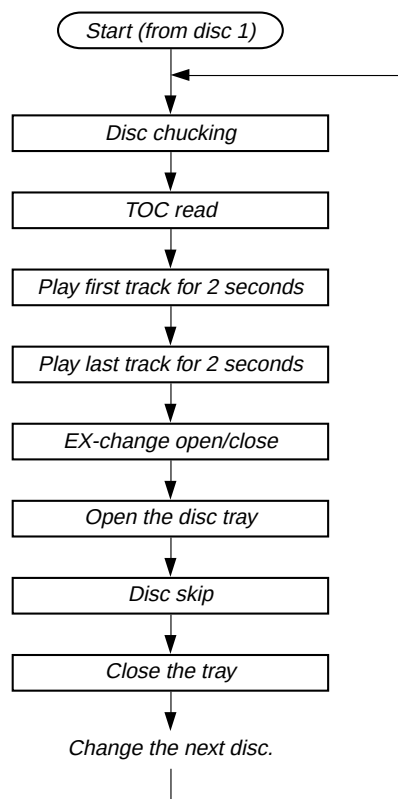
If an error occurred, stop display which that section.

2. CD Section

The sequence during the aging mode is following as below.

Display at the aging mode is the same as the normal operation.

Aging mode sequence (CD section) :

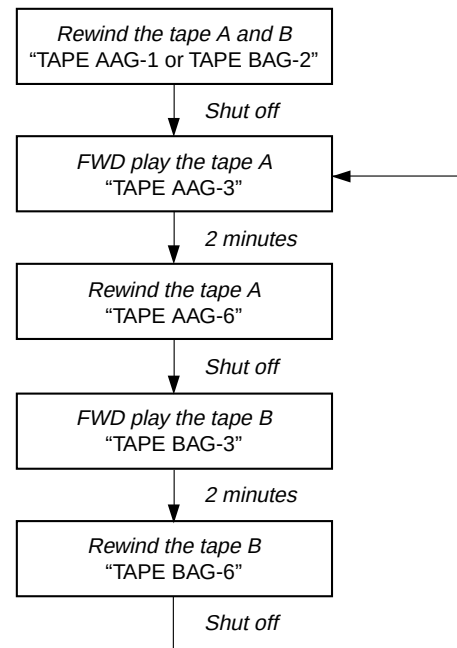


3. Tape Deck Section

The sequence during the aging mode is following as below.

If an error occurred, stop display that step.

Aging mode sequence (tape deck section) :



Note: "TAPE *AG-*" is display of each step.

PANEL TEST MODE

This mode is used to check the fluorescent indicator tube, LEDs and buttons.

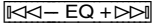
Procedure:

1. Press the **[I/O]** button to turn the power on.
2. Press three buttons of **[■]**, **[ILLUMINATION]** and **[GROOVE]** simultaneously.
3. Fluorescent indicator tube and LEDs are all turned on.
4. Press two buttons of **[ALBUM -]** and **[ENTER]** simultaneously, mode is changed over.
5. In the key check mode, press each key, the defined key number of every each key list is displayed on the fluorescent indicator tube.
6. In the key count check mode, "KEYCNT 0" is displayed on the fluorescent indicator tube. Each time a key is pressed, "K" value increases. However, once a key is pressed, it is no longer taken into account.
7. In the headphone input check mode, connect the headphone, the message "H_P ON" is displayed on the fluorescent indicator tube, and disconnect the headphone, the message "H_P OFF" is displayed on the fluorescent indicator tube.
8. In the volume check mode, "VOLUME FLAT" is displayed on the fluorescent indicator tube. Turn the **[MASTER VOLUME]** knob clockwise, the message "VOLUME UP" is displayed on the fluorescent indicator tube momentarily and turn the **[MASTER VOLUME]** knob counterclockwise, the message "VOLUME DOWN" is displayed on the fluorescent indicator tube momentarily.

MC TEST MODE

This mode is used to check operations of microprocessor.

Procedure:

1. Press the  button to turn the power on.
2. Press three buttons of , **ILLUMINATION** and **DISC 3** simultaneously.
3. When the MC test mode is activated, VACS level is displayed on the fluorescent indicator tube momentarily.
4. Turn the  knob clockwise, the message "ALL EQ MAX" is displayed on the fluorescent indicator tube momentarily and turn the  knob counter-clockwise, the message "ALL EQ MIN" is displayed on the fluorescent indicator tube momentarily.
5. Press the **PRESET EQ** button, the message "ALL EQ FLAT" is displayed on the fluorescent indicator tube momentarily.
6. Turn the **MASTER VOLUME** knob clockwise, the message "VOLUME MAX" is displayed on the fluorescent indicator tube momentarily and turn the **MASTER VOLUME** knob counterclockwise, the message "VOLUME MIN" is displayed on the fluorescent indicator tube momentarily.
7. Press the **GROOVE** button to changed over VACS on/off.
8. When the **CD SYNC** key is pressed with the test tape (AMS-100, AMS-110A) in the deck, number of space between tunes is counted, then if AMS-110A is set, "OK" is displayed on the fluorescent indicator tube and if AMS-100 is set, "NG" is displayed on the fluorescent indicator tube.
9. Press the  button to release from this mode, then cold reset is performed.

VERSION DISPLAY MODE

This mode is used to check the model, destination and software version.

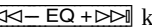
Procedure:

1. Press the  button to turn the power on.
2. Press three buttons of , **ILLUMINATION** and **DISC 2** simultaneously.
3. When this mode is activated, model and destination is displayed on the fluorescent indicator tube.
4. Press the **DISPLAY** button to changed over between software version and year, month, day of the software creation display mode and model and destination display mode.
5. To release this mode, press three buttons of , **ILLUMINATION** and **DISC 2** simultaneously.

CD ERROR CODE DISPLAY MODE

This mode can be used for error code display of CD section.

Procedure:

1. Press the  button to turn the power on.
2. Press the **CD** key to select "CD".
3. Press three buttons of , **CD** and **DISC 1** simultaneously.
4. When this mode is activated, mechanism deck error code is displayed on the fluorescent indicator tube.
5. Press the **GROOVE** button to changed over between optical pick-up error code display mode and mechanism deck error code mode.
6. Turn the  knob to change over display of error history.
7. To release this mode, press the  button to turn the power off.

1. Mechanism Deck Error Code Mode

When this mode is entered, mechanism deck error code is displayed with the 10-character format on the fluorescent indicator tube.

The first digit from the left indicates:

The first digit from the left indicates which mode the error history is. In the mechanism deck error code mode, "M" is displayed on the fluorescent indicator tube.

The second digit from the left indicates:

(Error history number display)

The second digit from the left indicates which order the error history is. "1" indicates the latest error history, and each time the number increases by one, the error history goes back to one-previous error.

The third and 4th digit from the left indicates:

(Error status display)

The third and 4th digit from the left indicates which error status is indicated.

Display	Status
0 0	No error
0 8	Table operation time-out (Table does not move to the target position within the specified time)
1 6	In the chucking down operation, the operation was retried by the maximum number of times but the operation could not be completed
1 7	In the chucking up and down operation, the reverse recovery processing was attempted but it could not be recovered
1 8	In the chucking up operation, the operation was retried by the maximum number of times but the operation could not be completed
2 0	Loading operation time-out (Table does not move to the target position within the specified time)
2 2	As the chuck was in the ex-open status at the initialization, the closing was attempted but could not be completed

The 5th and 6th digit from the left indicates:

(Present status display)

The 5th and 6th digit from the left indicates which operating status when an error occurred is indicated.

Display	Status
0 1	Open completion status
0 2	From open status, the movement to chucking down position is under way
0 3	From chucking down position, the open operation is under way
0 4	Chucking down completion status
1 0	The chucking down operation is under way
1 1	The chucking up operation is under way
1 2	Close completion status
1 3	From close status, the ex-open operation is under way
1 4	From ex-open status, the close operation is under way
1 8	Ex-pen completion status

The 7th and 8th digit from the left indicates:**(Motor status display)**

The 7th and 8th digit from the left indicates which motor output status when an error occurred is indicated.

Display	Status
× 0	No table motor output
× 1	Table motor forward output
× 2	Table motor backward output
× 3	Table motor break output
0 ×	No loading motor output
1 ×	Loading motor forward output
2 ×	Loading motor backward output
3 ×	Loading motor break output

The 9th and 10 th digit from the left indicates:**(Tray status display)**

The 9th and 10th digit from the left indicates which target processing when an error occurred is indicated.

Display	Status
0 1	Open operation
1 2	Close operation
1 8	Ex-open operation

2. Optical Pick-up Error Code Mode

When this mode is entered, optical pick-up error code is displayed with the 8-character format on the fluorescent indicator tube.

The first digit from the left indicates:

The first digit from the left indicates which mode the error history is. In the optical pick-up error code mode, “D” is displayed on the fluorescent indicator tube.

The second digit from the left indicates:**(Error history No. display)**

The second digit from the left indicates which order the error history is. “1” indicates the latest error history, and each time the number increases by one, the error history goes back to one-previous error.

The third and 4th digit from the left indicates:**(Error status display)**

The third and 4th digit from the left indicates which error status is indicated.

Display	Status
0 1	Not focused (TOC read without a disc)
0 2	GFS NG (TOC read with a disc chucked)
0 3	Start operation time-over
0 4	Defocused continuously (Defocused during TOC reading)
0 5	Q code not entered for specified time
0 6	Tracking not turned ON
0 7	Blank disc (Blank disc TOC read)

The 5th and 6th digit from the left indicates:**(Error step display)**

The 5th and 6th digit from the left indicates which processing when a trouble occurred

Display	Contents
0 1	Power OFF in progress
0 2	Initialize in progress
0 3	Oscillation stopping
0 4	From oscillation stop, oscillation starting
0 5	Stopping
0 6	Stop operation is under way
0 7	Start operation in progress
0 8	TOC read in progress
0 9	Search operation is under way
0 A	Playback operation is under way
0 B	Pause operation is under way
0 C	Playback manual search operation is under way
0 D	Pause manual search operation is under way
0 E	—

The 7th and 8th digit from the left indicates:

The 7th and 8th digit from the left indicates which operation in progress when a trouble occurred. (Step of each processing of the 5th and 6th digits is indicated)

5 REPEAT LIMIT CANCEL MODE

Number of repeat for CD playback is 5 times when the repeat mode is “REPEAT”. This mode is used to enables CD to repeat playback for limitless times.

Procedure:

1. Press the  button to turn the power on.
2. Press the  button to select “CD”.
3. Press three buttons of ,  and  simultaneously.
4. The message “LIMIT OFF” is displayed on the fluorescent indicator tube momentarily, CD repeat 5 limit is cancelled.

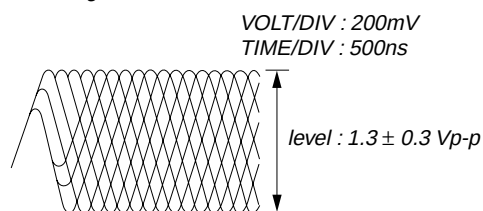
SECTION 5 ELECTRICAL ADJUSTMENTS

CD SECTION

Note:

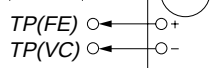
1. CD Block is basically designed to operate without adjustment. Therefore, check each item in order given.
2. Use YEDS-18 (3-702-101-01) unless otherwise indicated.
3. Use an oscilloscope with more than 10MΩ impedance.
4. Clean the object lens by an applicator with neutral detergent when the signal level is low than specified value with the following checks.
 - Abbreviation
MX: Mexican model

RF signal waveform



S-CURVE CHECK

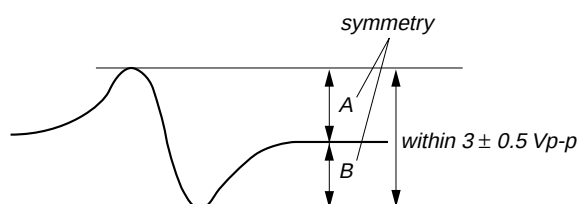
CD board (except MX) oscilloscope
BD board (MX)



Procedure:

1. Connect an oscilloscope to TP (FE) and TP (VC) on the CD board (except MX) or BD board (MX).
2. Press the button to turn the power on.
3. Load the disc (YEDS-18) and actuate the focus search. (In consequence of open and close the disc tray, actuate the focus search)
4. Confirm that the oscilloscope waveform (S-curve) is symmetrical between A and B. And confirm peak to peak level within 3 ± 0.5 Vp-p.

S-curve waveform

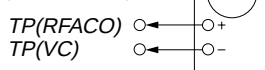


- Note:**
- Try to measure several times to make sure than the ratio of A : B or B : A is more than 10 : 7.
 - Take sweep time as long as possible and light up the brightness to obtain best waveform.

Connecting Location: CD board (except MX)
BD board (MX)

RFAC LEVEL CHECK

CD board (except MX) oscilloscope
BD board (MX)



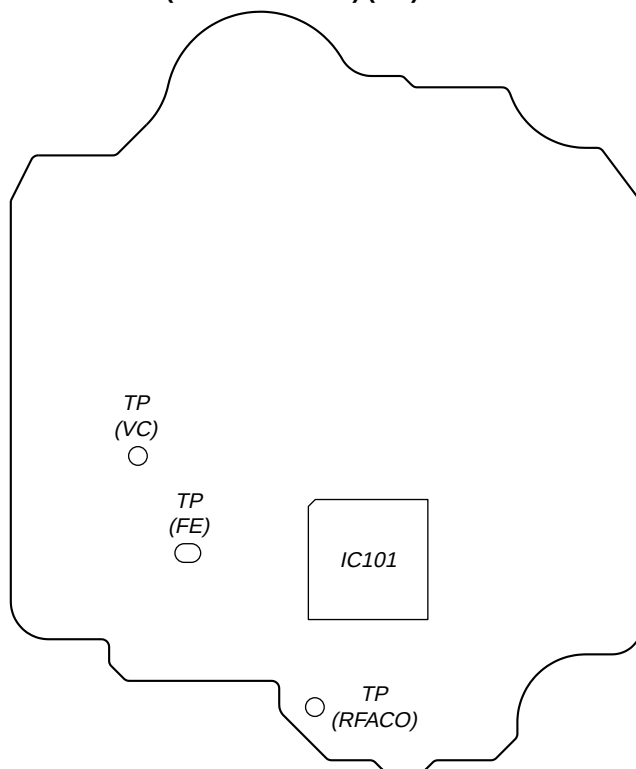
Procedure:

1. Connect an oscilloscope to TP (RFACO) and TP (VC) on the CD board (except MX) or BD board (MX).
2. Press the button to turn the power on.
3. Load the disc (YEDS-18) and playback.
4. Confirm that oscilloscope waveform is clear and check if RFAC signal level is correct or not.

Note: Clear RFAC signal waveform means that the shape “◇” can be clearly distinguished at the center of the waveform.

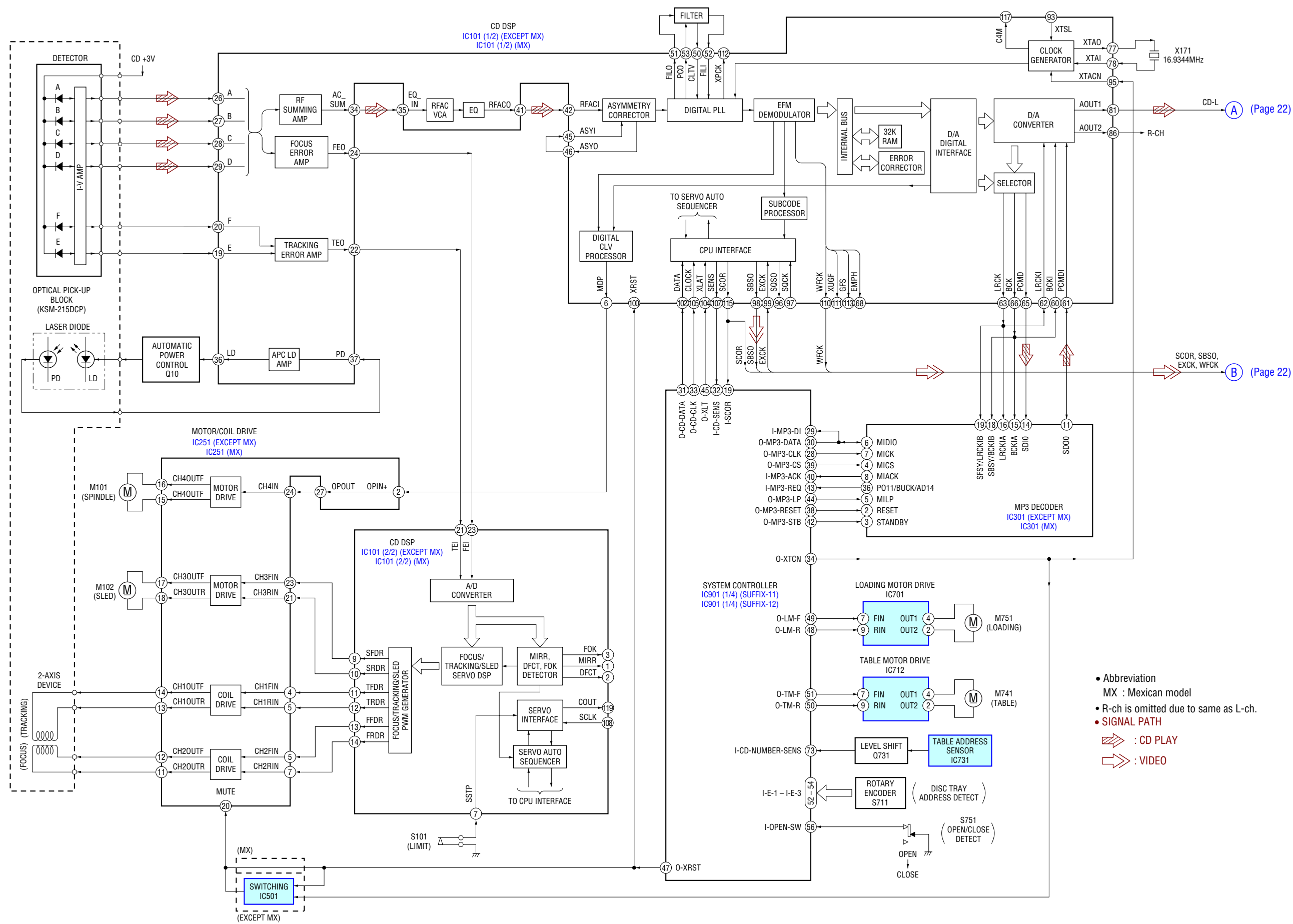
Connecting Location: CD board (except MX)
BD board (MX)

– CD BOARD (Conductor Side) (except MX) –
– BD BOARD (Conductor Side) (MX) –

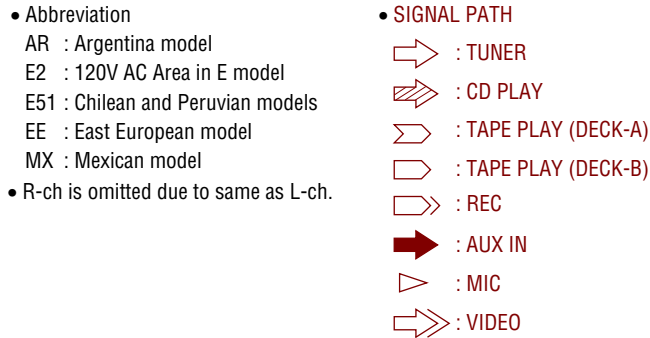


SECTION 6
DIAGRAMS

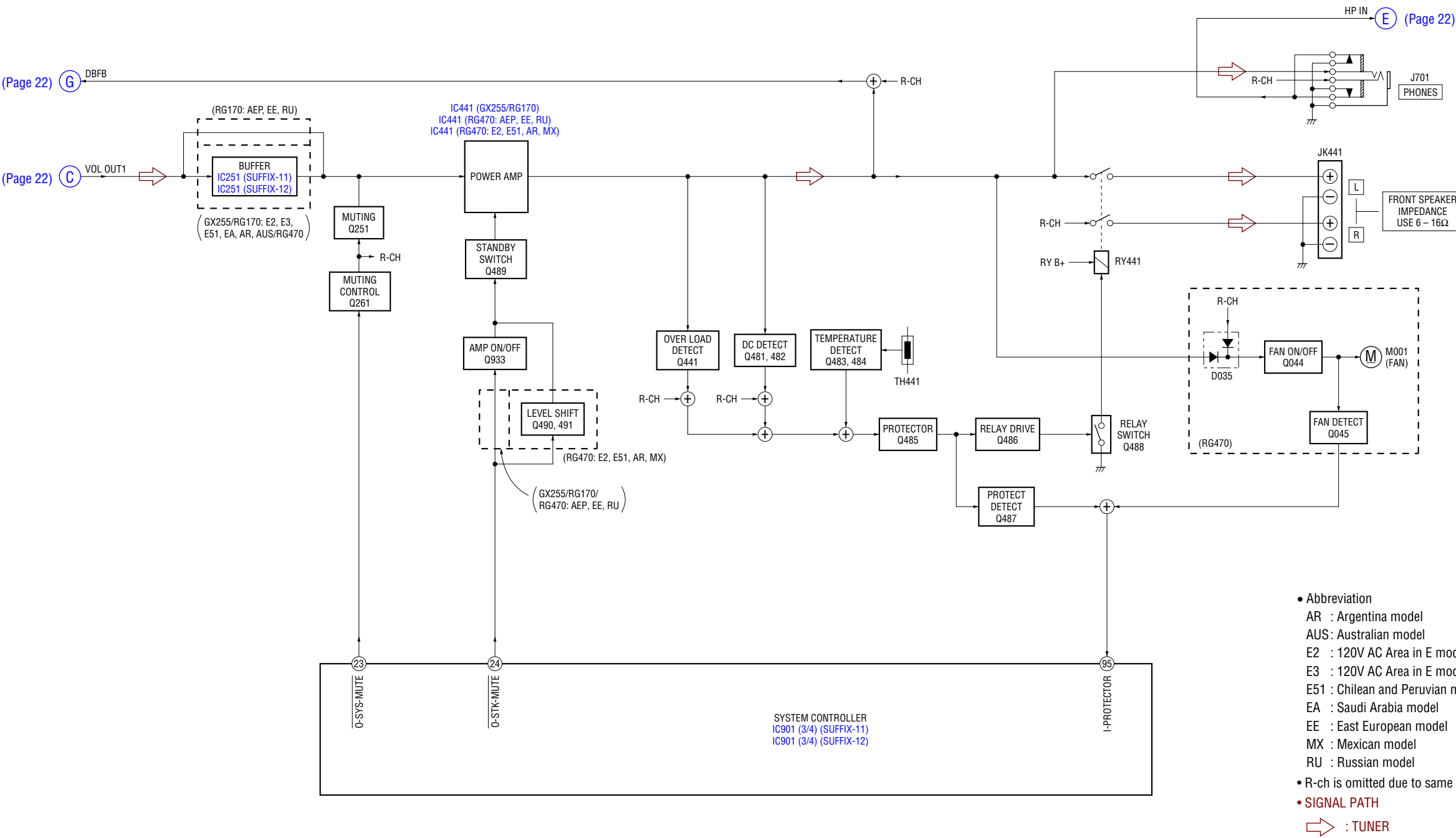
6-1. BLOCK DIAGRAM – CD SERVO Section –



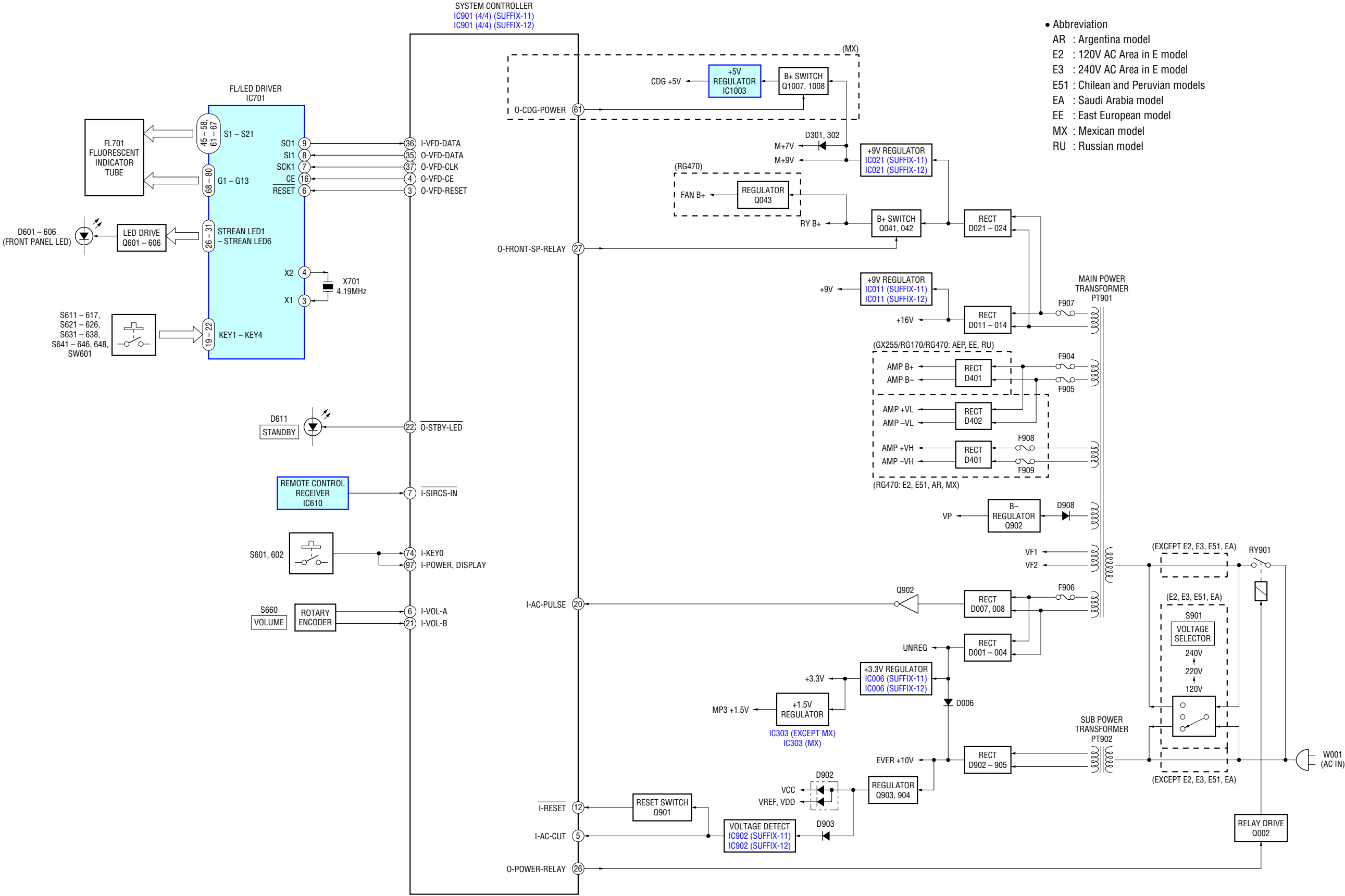
22 22



6-3. BLOCK DIAGRAM – AMP Section –



6-4. BLOCK DIAGRAM – PANEL, POWER SUPPLY Section –



• Note For Printed Wiring Boards and Schematic Diagrams

Note on Printed Wiring Board:

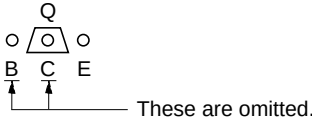
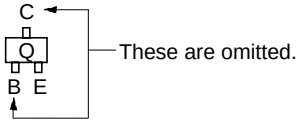
- : parts extracted from the component side.
- : parts extracted from the conductor side.
- △ : internal component.
- : Pattern from the side which enables seeing.

(The other layers' patterns are not indicated.)

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

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

• Indication of transistor



Note on Schematic Diagram:

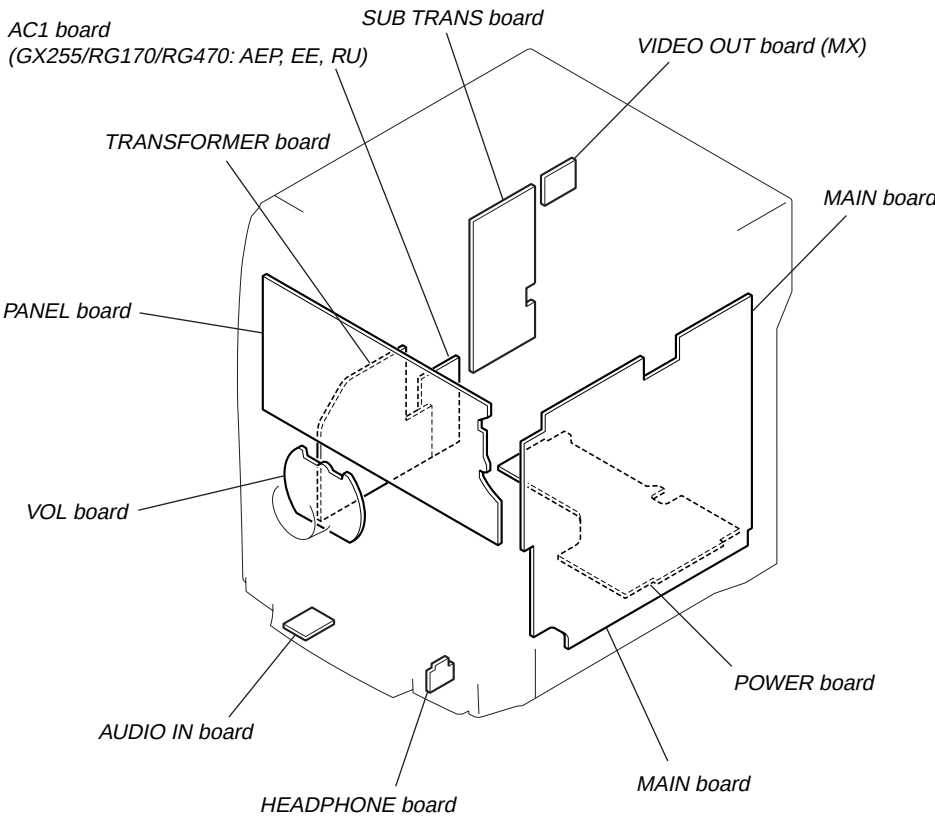
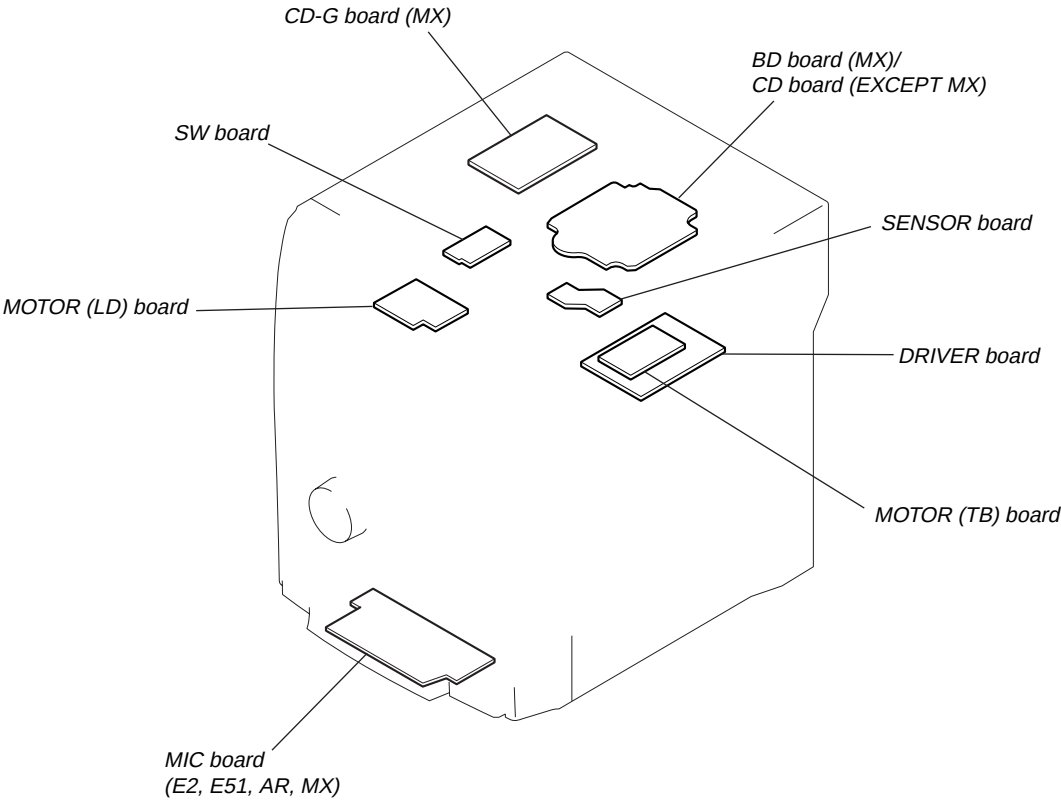
- All capacitors are in μF unless otherwise noted. (p: pF) 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and $\frac{1}{4}\text{W}$ or less unless otherwise specified.
- △ : internal component.
- ⎓ : nonflammable resistor.
- ⎓ : fusible resistor.
- : panel designation.

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

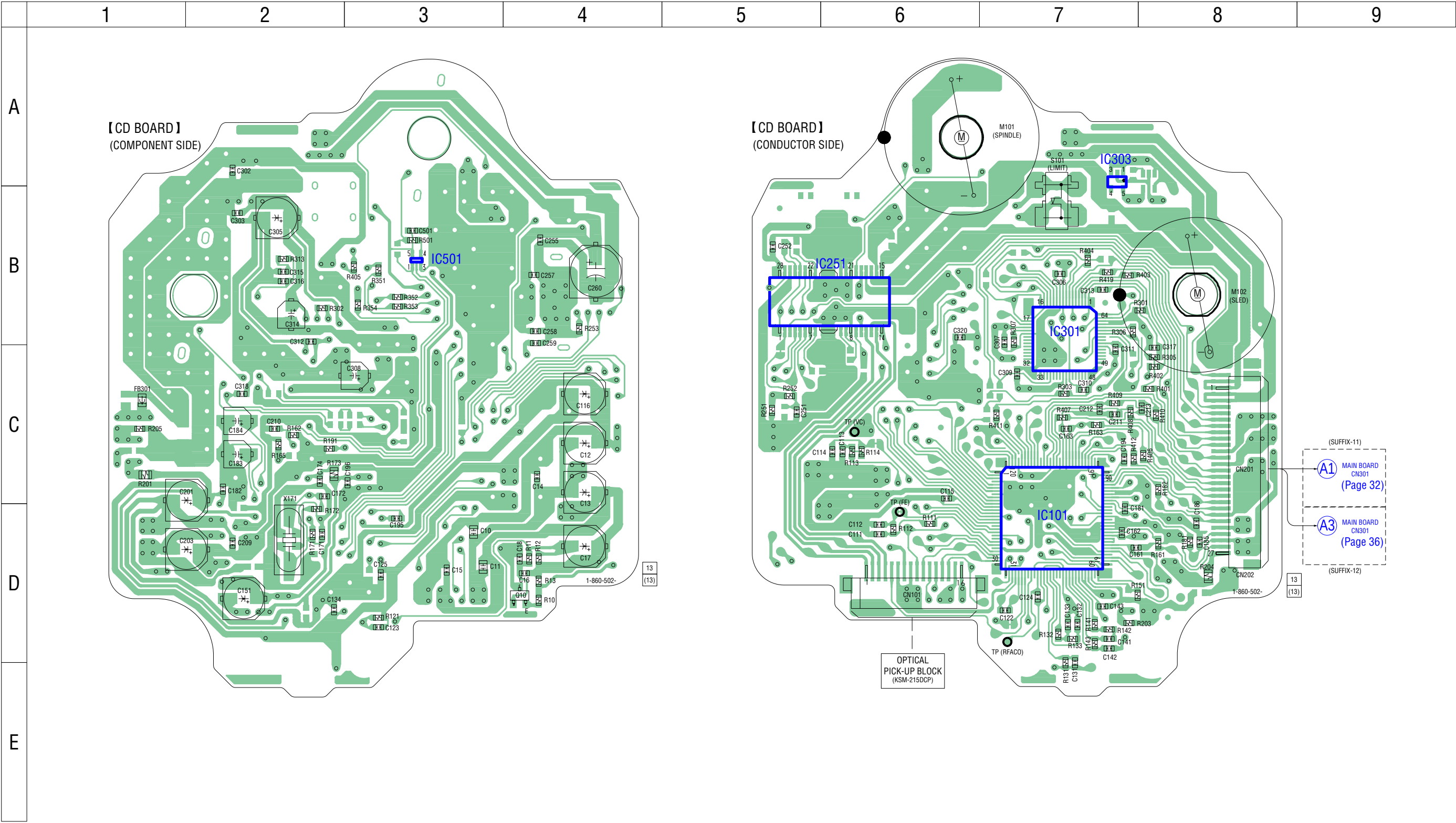
Note:
Les composants identifiés par une marque △ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

- : B+ Line.
- : B- Line.
- Voltages and waveforms are dc with respect to ground under no-signal conditions.
 - CD/BD Section —
no mark : CD PLAY
 - CD-G Section —
no mark : CD-G PLAY
 - Other Sections —
no mark : FM
 - () : CD PLAY
 - << >> : TAPE PLAY
 - [] : TAPE REC
 - * : 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.
 - ➡ : TUNER (FM/AM)
 - ➡ : TAPE PLAY (DECK A)
 - ➡ : TAPE PLAY (DECK B)
 - ➡ : REC
 - ➡ : CD PLAY
 - ➡ : AUX IN
 - ➡ : MIC
 - ➡ : VIDEO
- Abbreviation
 - AR : Argentina model
 - AUS : Australian model
 - CND : Canadian model
 - E2 : 120 V AC Area in E model
 - E3 : 240 V AC Area in E model
 - E51 : Chilean and Peruvian models
 - EA : Saudi Arabia model
 - EE : East European model
 - MX : Mexican model
 - RU : Russian model

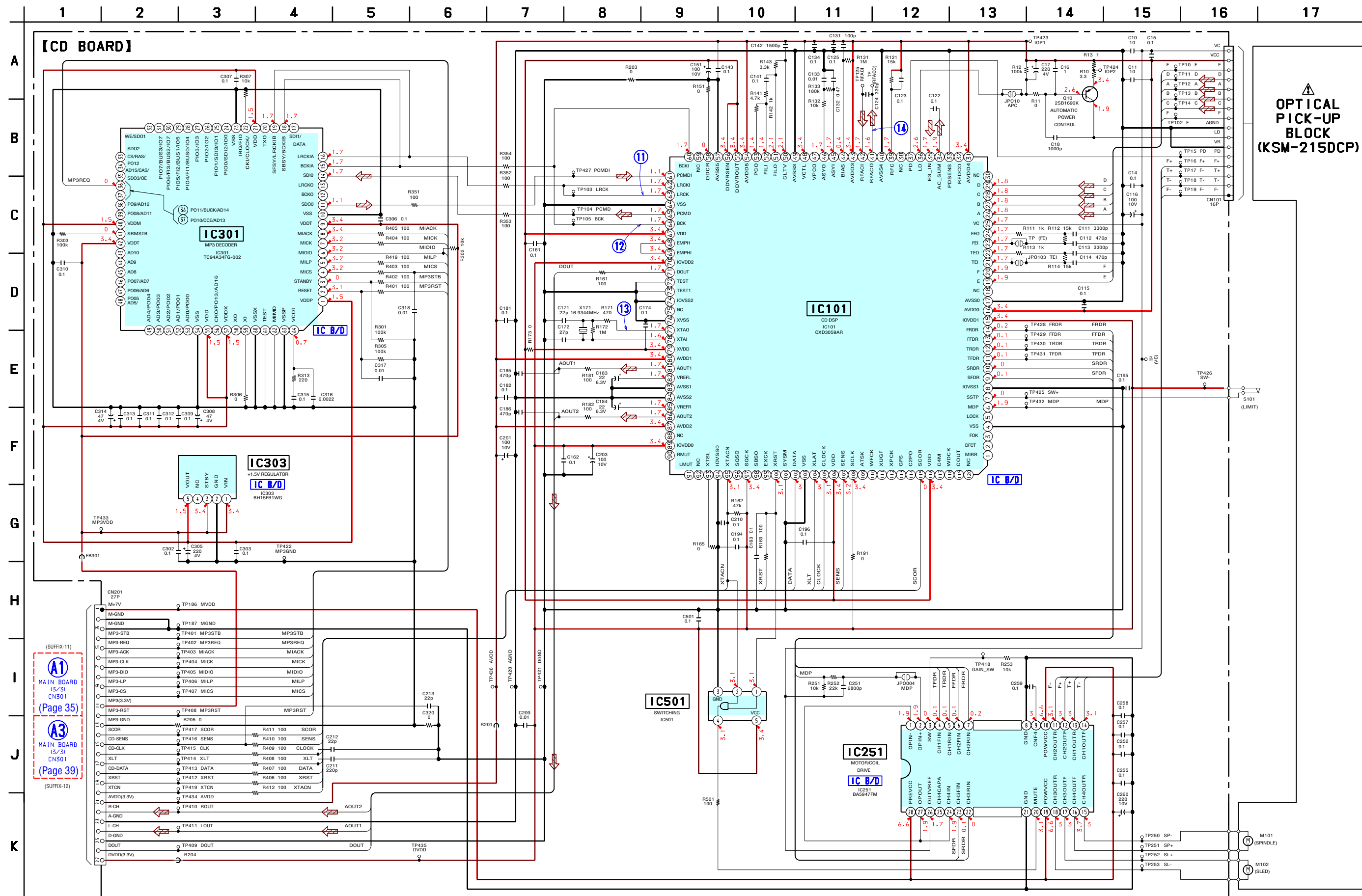
• Circuit Boards Location



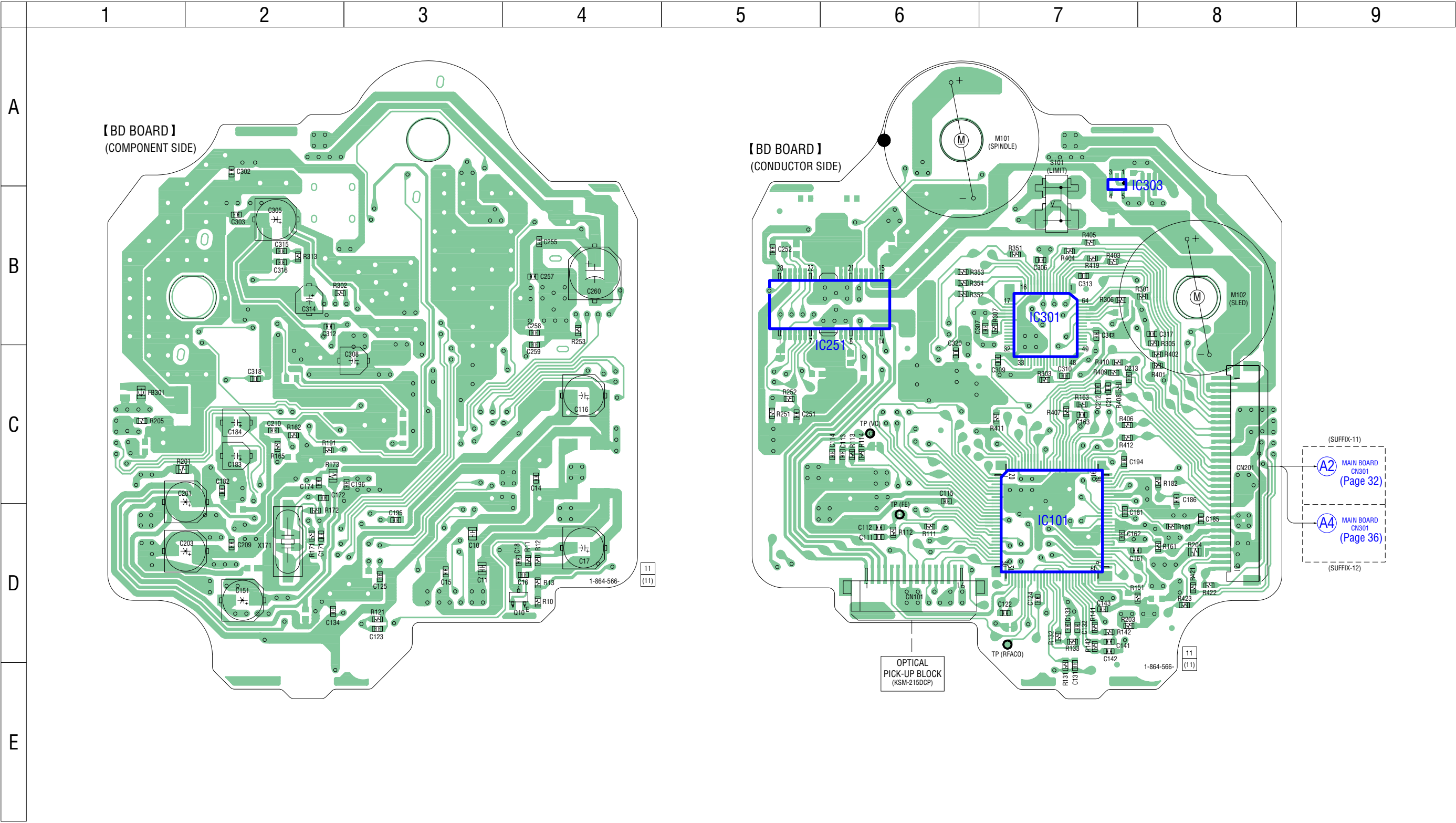
6-5. PRINTED WIRING BOARD – CD Board – (Except MX model) • See page 25 for Circuit Boards Location. : Uses unleaded solder.



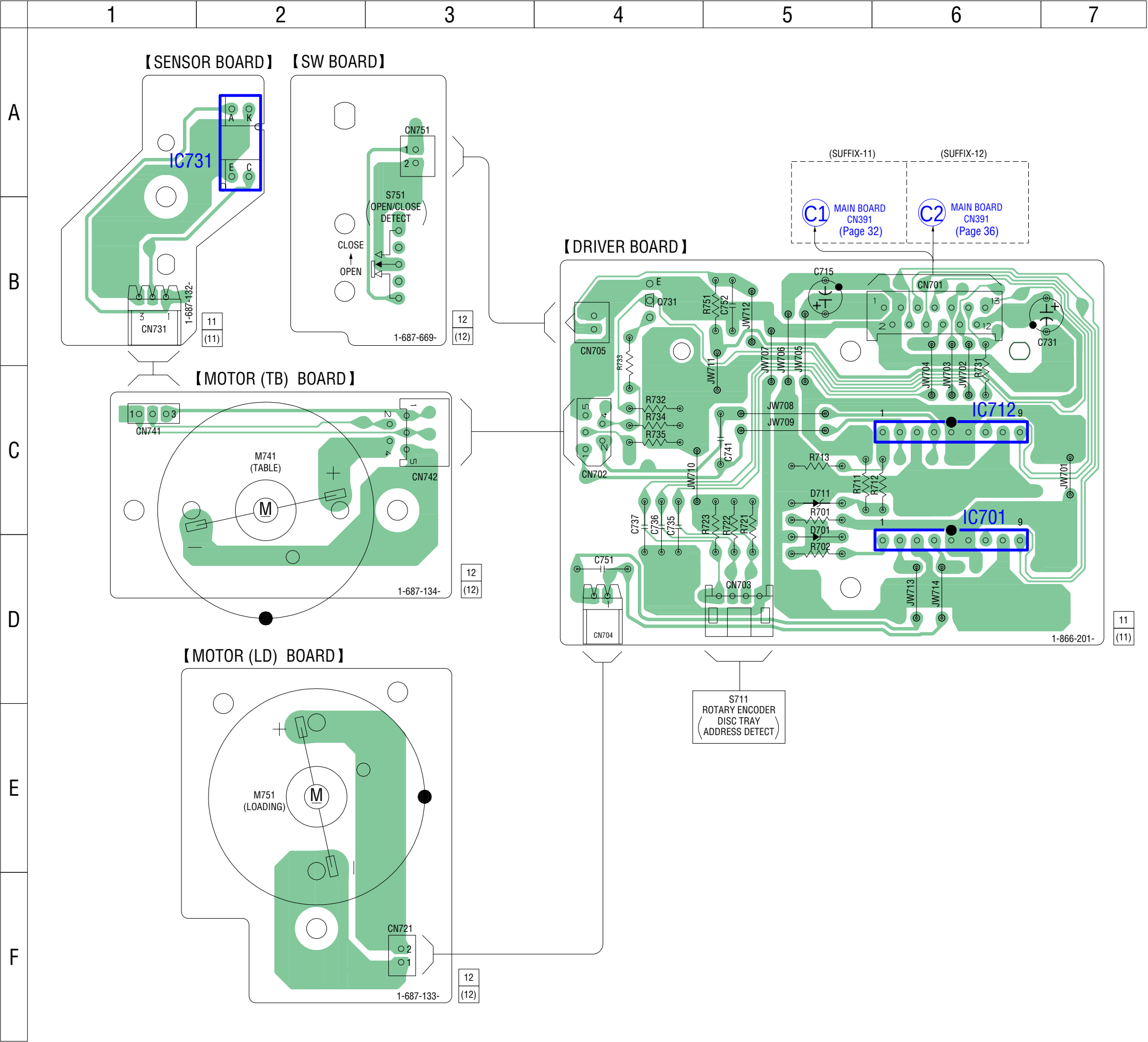
6-6. SCHEMATIC DIAGRAM – CD Board – (Except MX model) • See page 60 for Waveforms. • See page 61 for IC Block Diagrams.



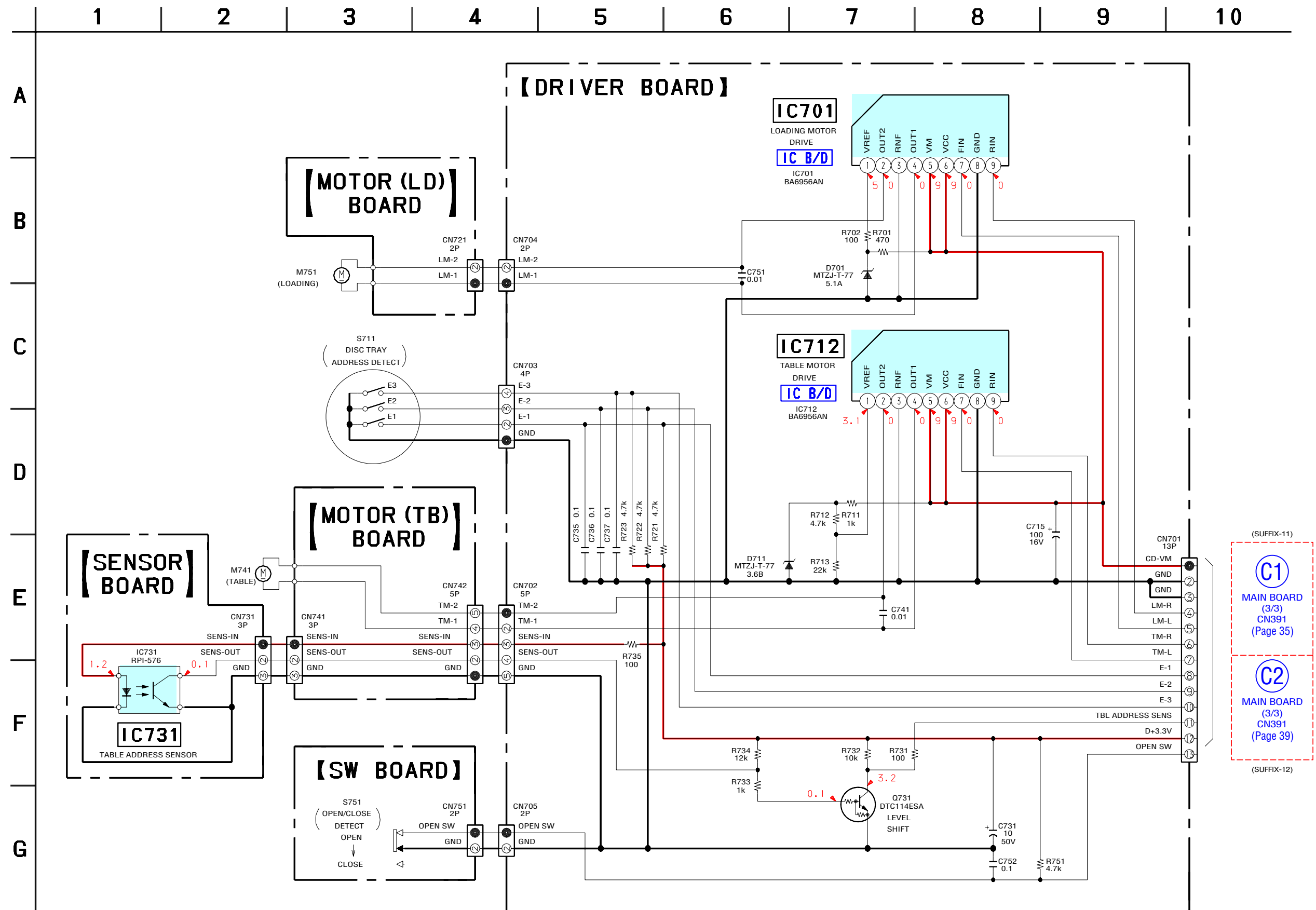
6-7. PRINTED WIRING BOARD – BD Board – (MX model only) • See page 25 for Circuit Boards Location. : Uses unleaded solder.



6-9. PRINTED WIRING BOARDS – CHANGER Section – • See page 25 for Circuit Boards Location. : Uses unleaded solder.

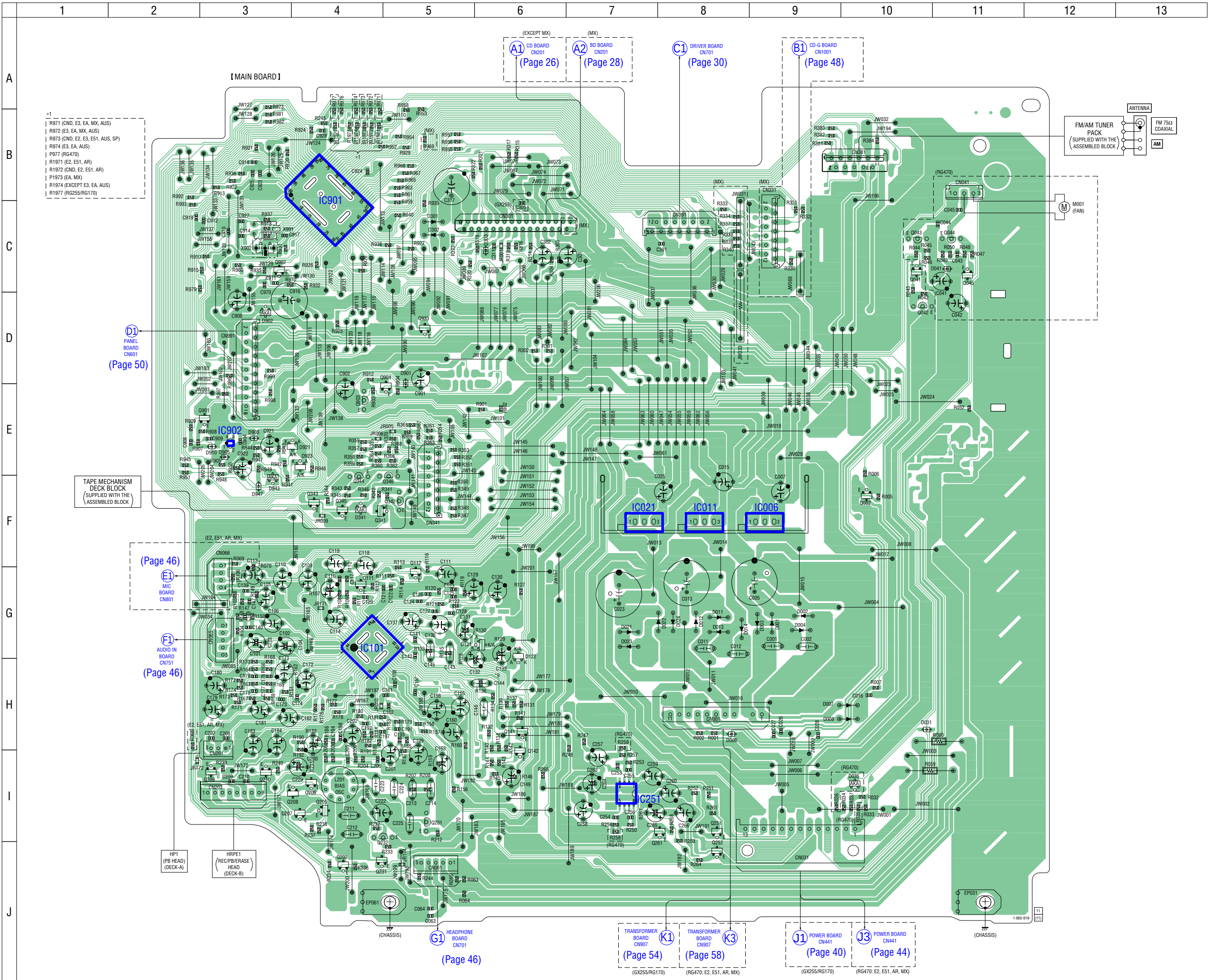


6-10. SCHEMATIC DIAGRAM – CHANGER Section – • See page 61 for IC Block Diagrams.

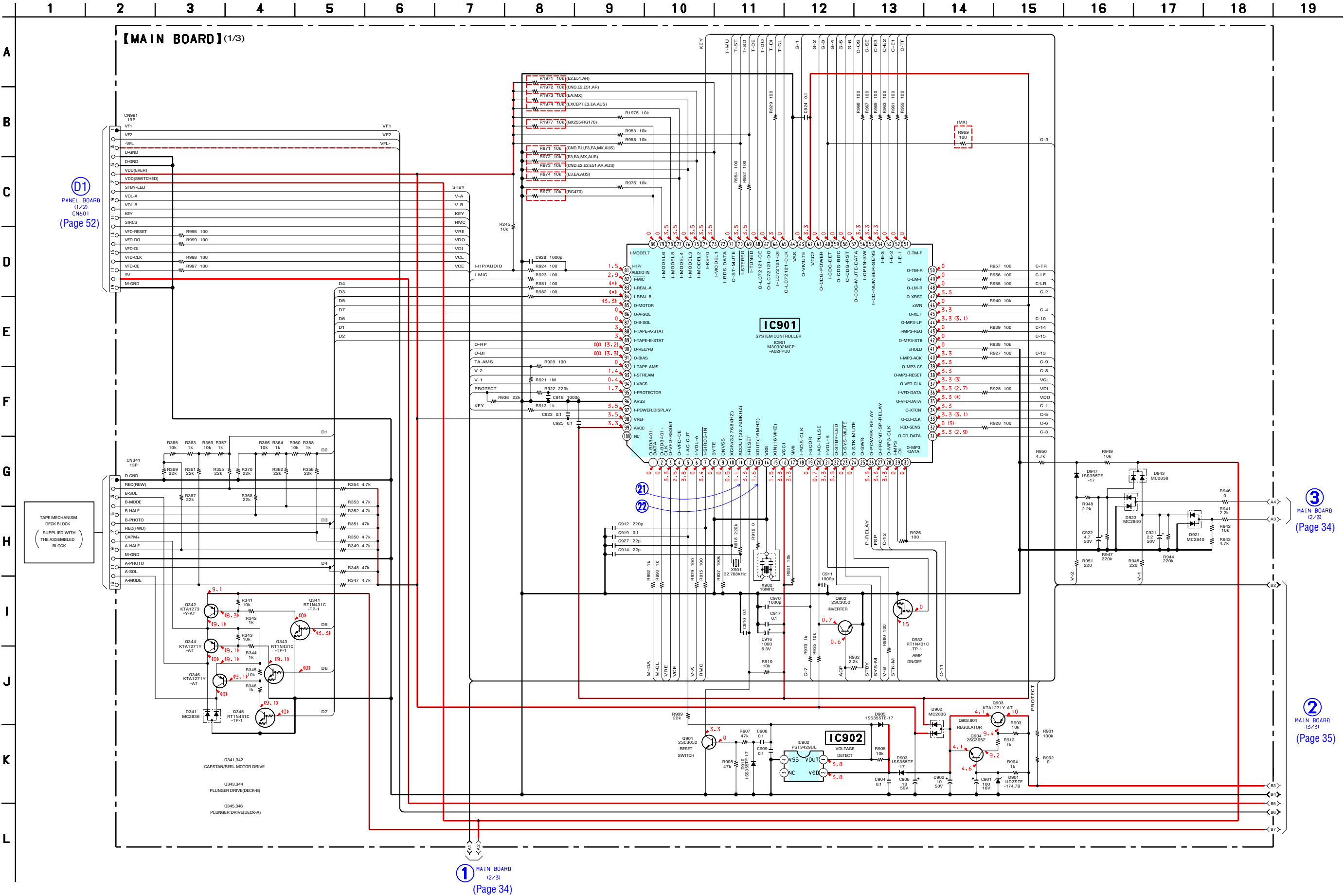


• Semiconductor Location

Ref. No.	Location
D001	G-9
D002	G-9
D003	G-9
D004	G-9
D006	H-8
D007	H-10
D008	H-10
D011	G-8
D012	G-8
D013	G-8
D014	G-8
D021	G-7
D022	G-8
D023	G-7
D024	G-8
D031	H-10
D035	I-10
D041	C-11
D042	C-10
D121	G-6
D122	G-6
D301	C-5
D302	C-5
D303	C-6
D341	F-4
D901	D-5
D902	D-3
D903	E-3
D905	E-3
D910	E-3
D921	E-4
D923	E-4
D943	F-3
D947	F-3
IC006	F-9
IC011	F-8
IC021	F-7
IC101	G-4
IC251	I-7
IC901	B-4
IC902	E-3
Q002	F-10
Q041	C-10
Q042	D-10
Q043	C-10
Q044	C-11
Q045	C-11
Q111	G-4
Q112	G-5
Q141	H-6
Q142	I-6
Q201	I-5
Q203	J-4
Q205	I-4
Q206	I-4
Q207	I-4
Q208	I-4
Q209	I-3
Q210	I-3
Q231	J-4
Q232	I-4
Q251	I-8
Q252	J-8
Q261	I-8
Q341	F-4
Q342	F-5
Q343	F-4
Q344	F-4
Q345	F-4
Q346	F-5
Q901	E-3
Q902	C-3
Q903	E-4
Q904	E-5
Q933	D-5

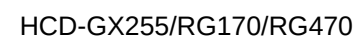


6-12. SCHEMATIC DIAGRAM – MAIN Board (1/3) – (Suffix-11) • See page 60 for Waveforms. • See page 71 for IC Pin Function Description.



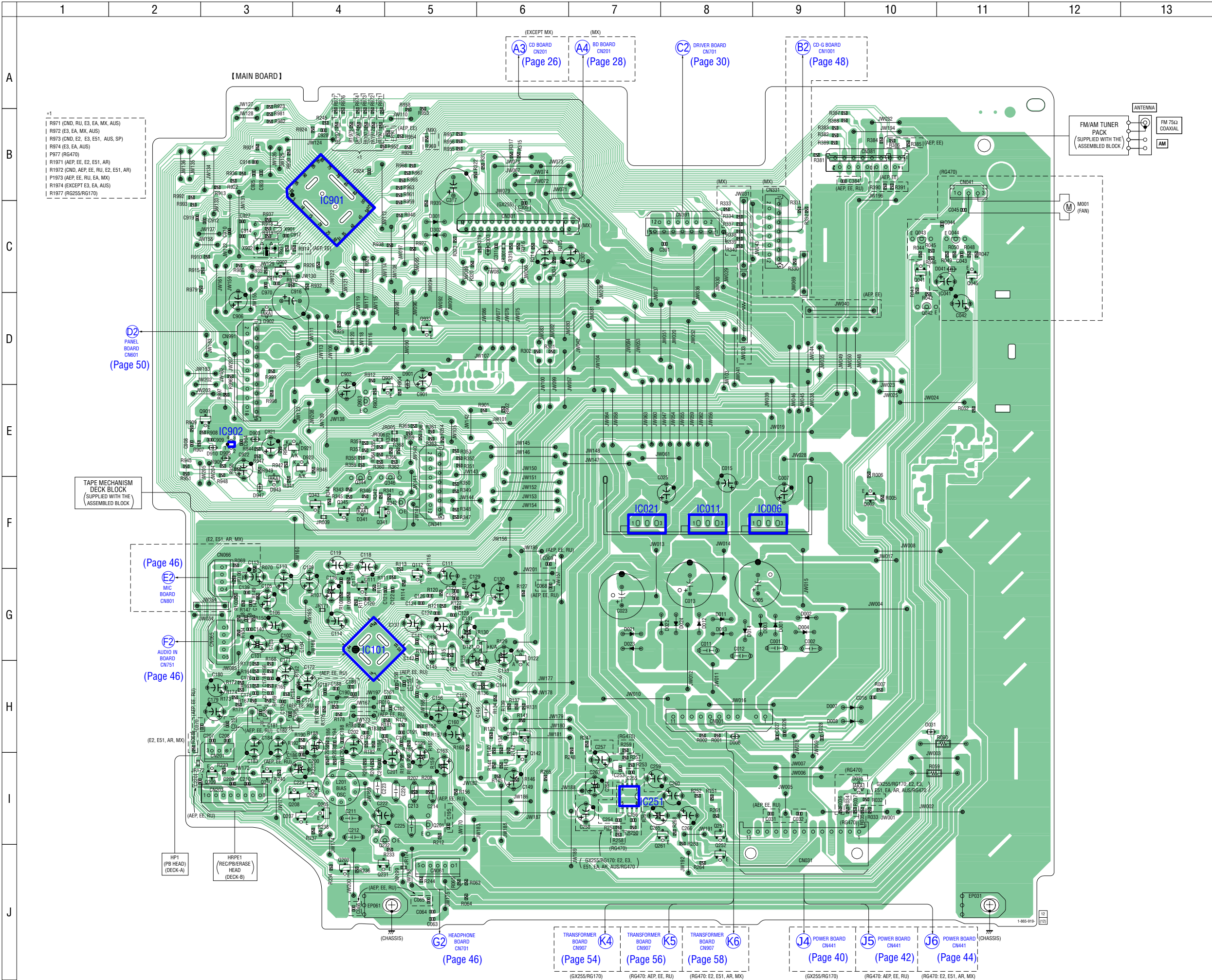
34 34



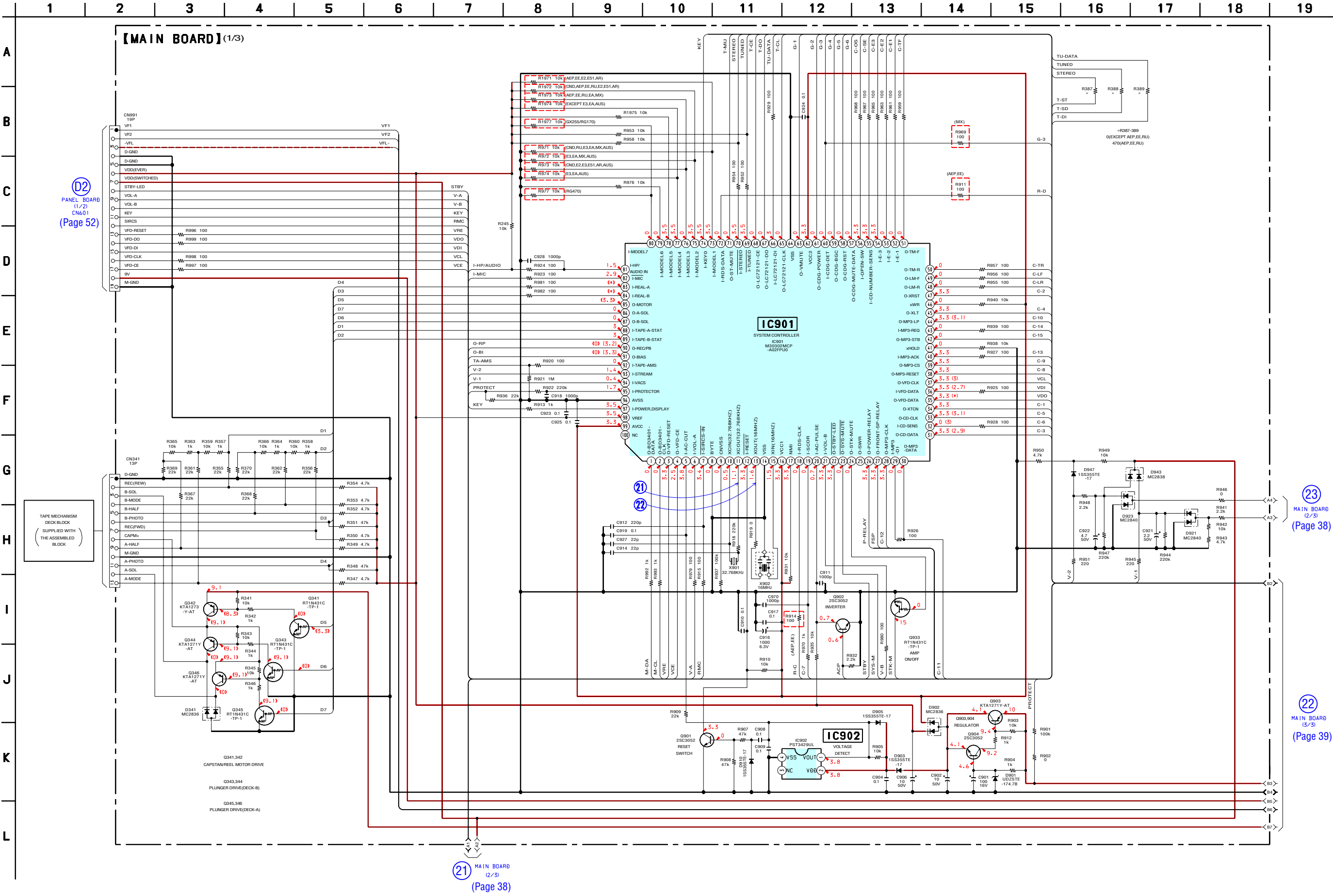


• Semiconductor Location

Ref. No.	Location
D001	G-9
D002	G-9
D003	G-9
D004	G-9
D006	H-8
D007	H-10
D008	H-10
D011	G-8
D012	G-8
D013	G-8
D014	G-8
D021	G-7
D022	G-8
D023	G-7
D024	G-8
D031	H-10
D035	I-10
D041	C-11
D042	C-10
D121	G-6
D122	G-6
D301	C-5
D302	C-5
D303	C-6
D341	F-4
D901	D-5
D902	D-3
D903	E-3
D905	E-3
D910	E-3
D921	E-4
D923	E-4
D943	F-3
D947	F-3
IC006	F-9
IC011	F-8
IC021	F-7
IC101	G-4
IC251	I-7
IC901	B-4
IC902	E-3
Q002	F-10
Q041	C-10
Q042	D-10
Q043	C-10
Q044	C-11
Q045	C-11
Q111	G-4
Q112	G-5
Q141	H-6
Q142	I-6
Q201	I-5
Q203	J-4
Q205	I-4
Q206	I-4
Q207	I-4
Q208	I-4
Q209	I-3
Q210	I-3
Q231	J-4
Q232	I-4
Q251	I-8
Q252	J-8
Q261	I-8
Q341	F-4
Q342	F-5
Q343	F-4
Q344	F-4
Q345	F-4
Q346	F-5
Q901	E-3
Q902	C-3
Q903	E-4
Q904	E-5
Q933	D-5



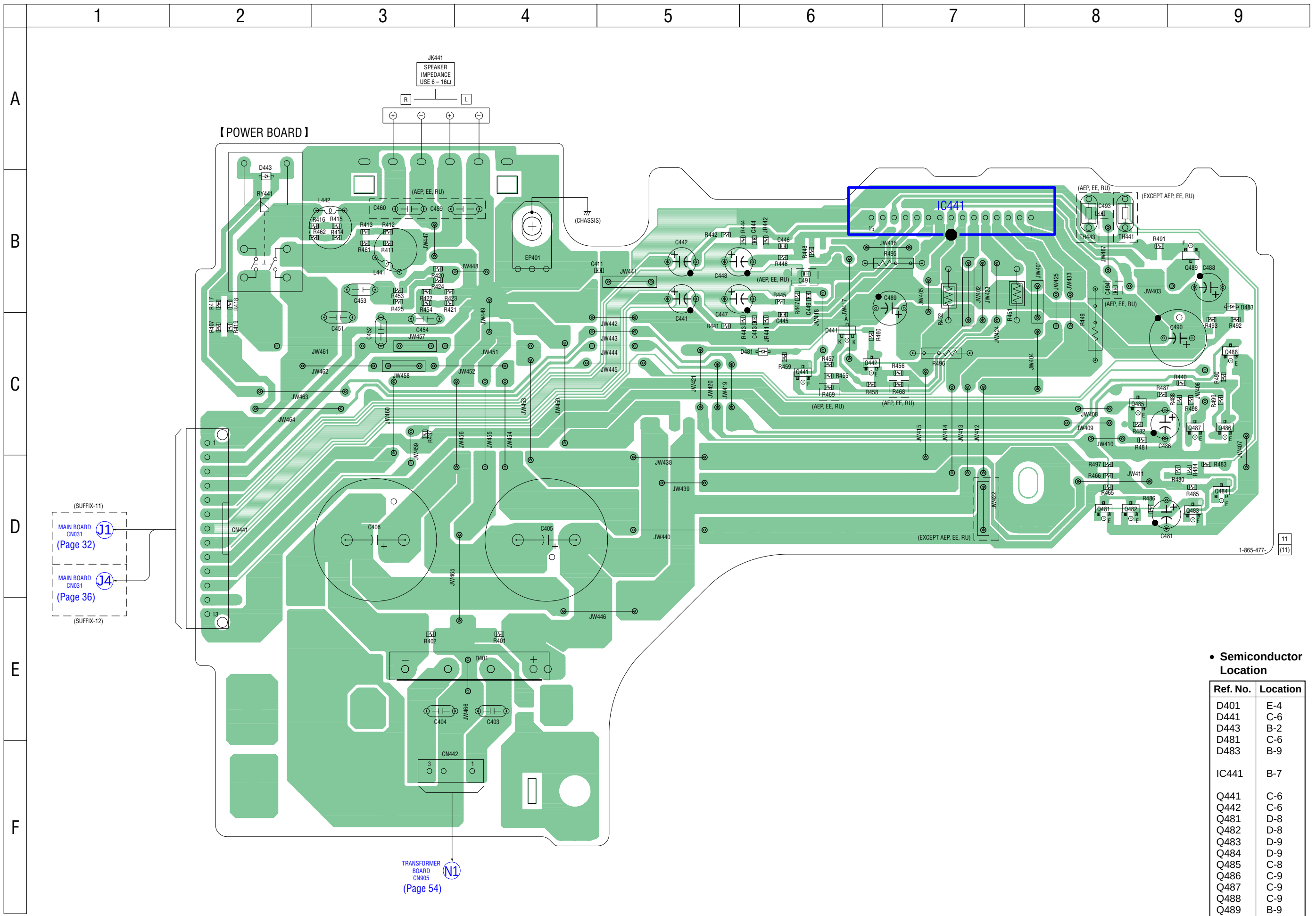
6-16. SCHEMATIC DIAGRAM – MAIN Board (1/3) – (Suffix-12) • See page 60 for Waveforms. • See page 71 for IC Pin Function Description.



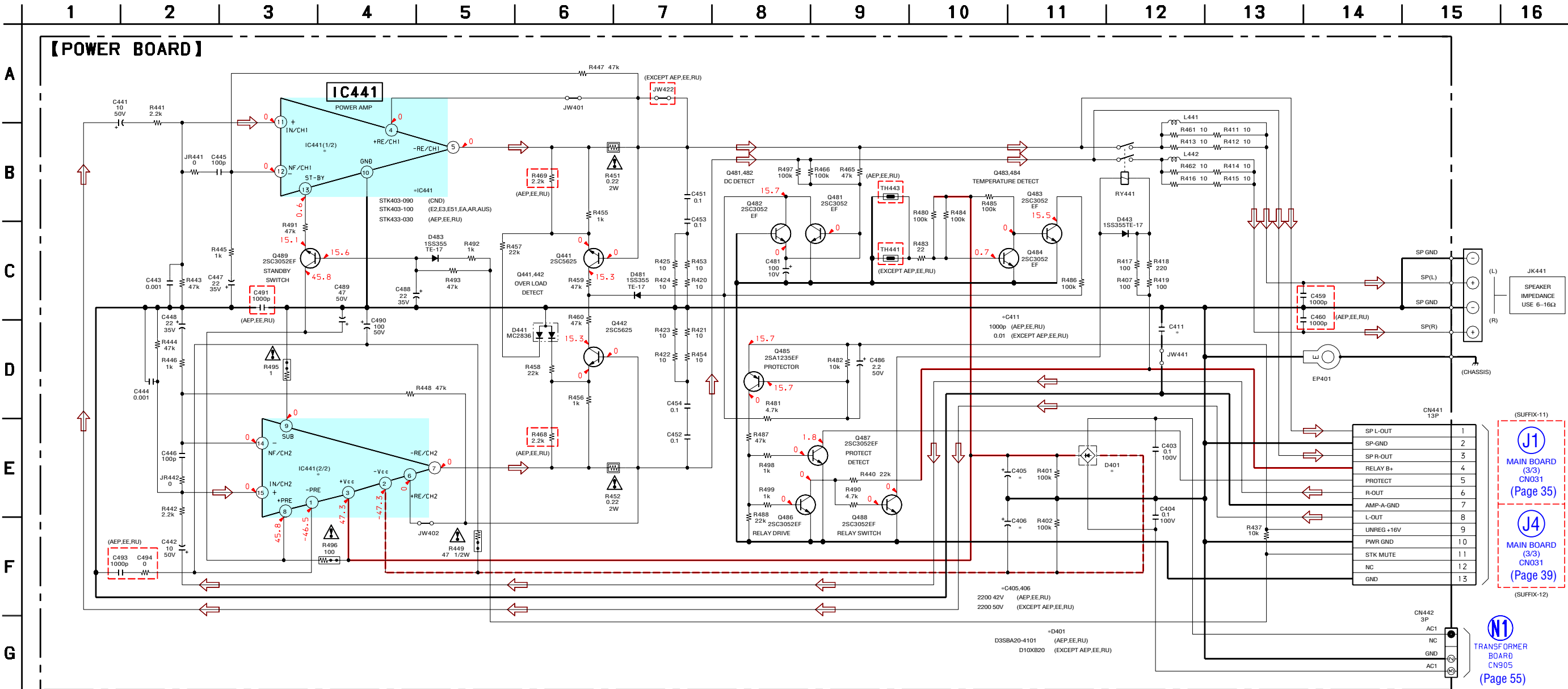
38 38



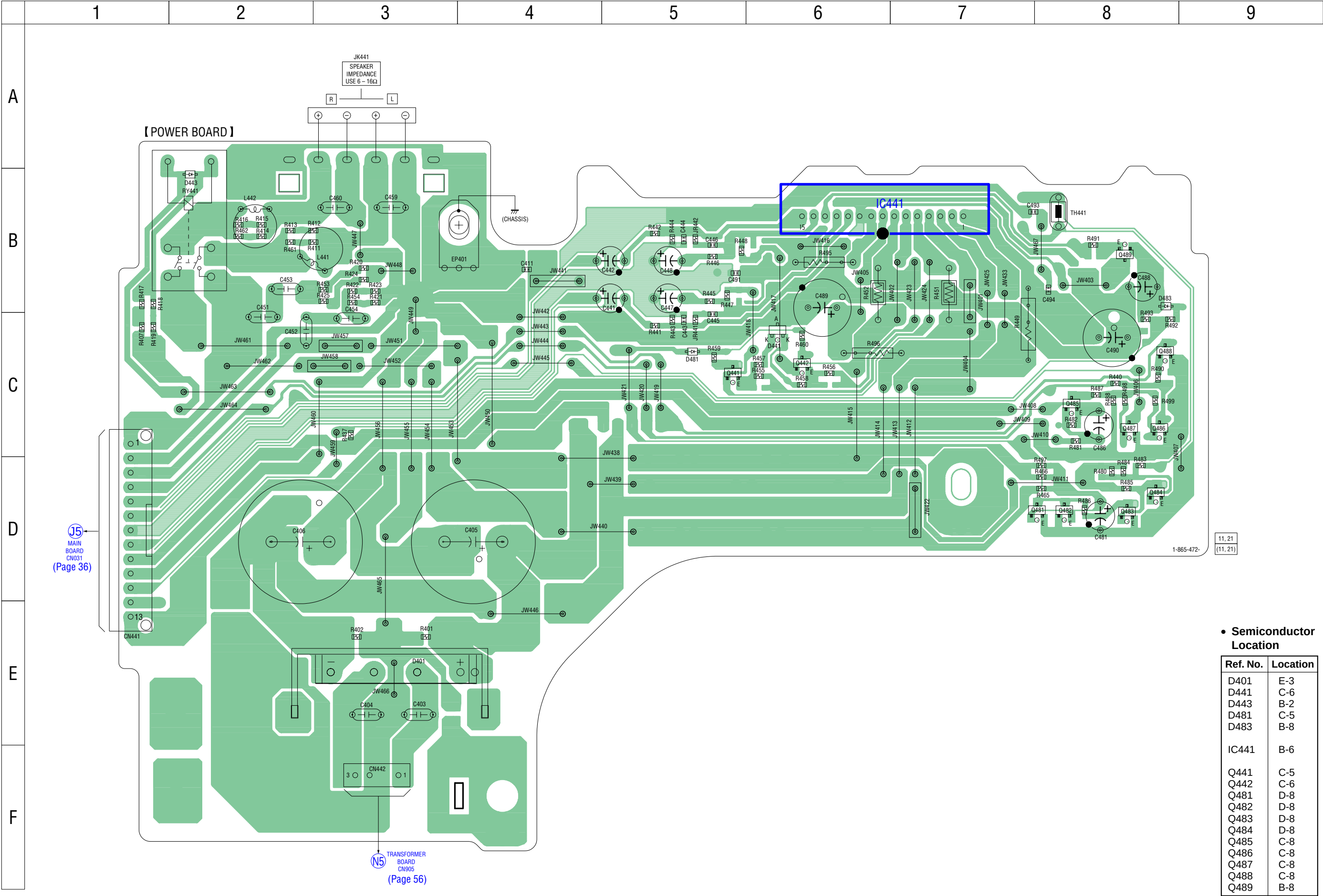




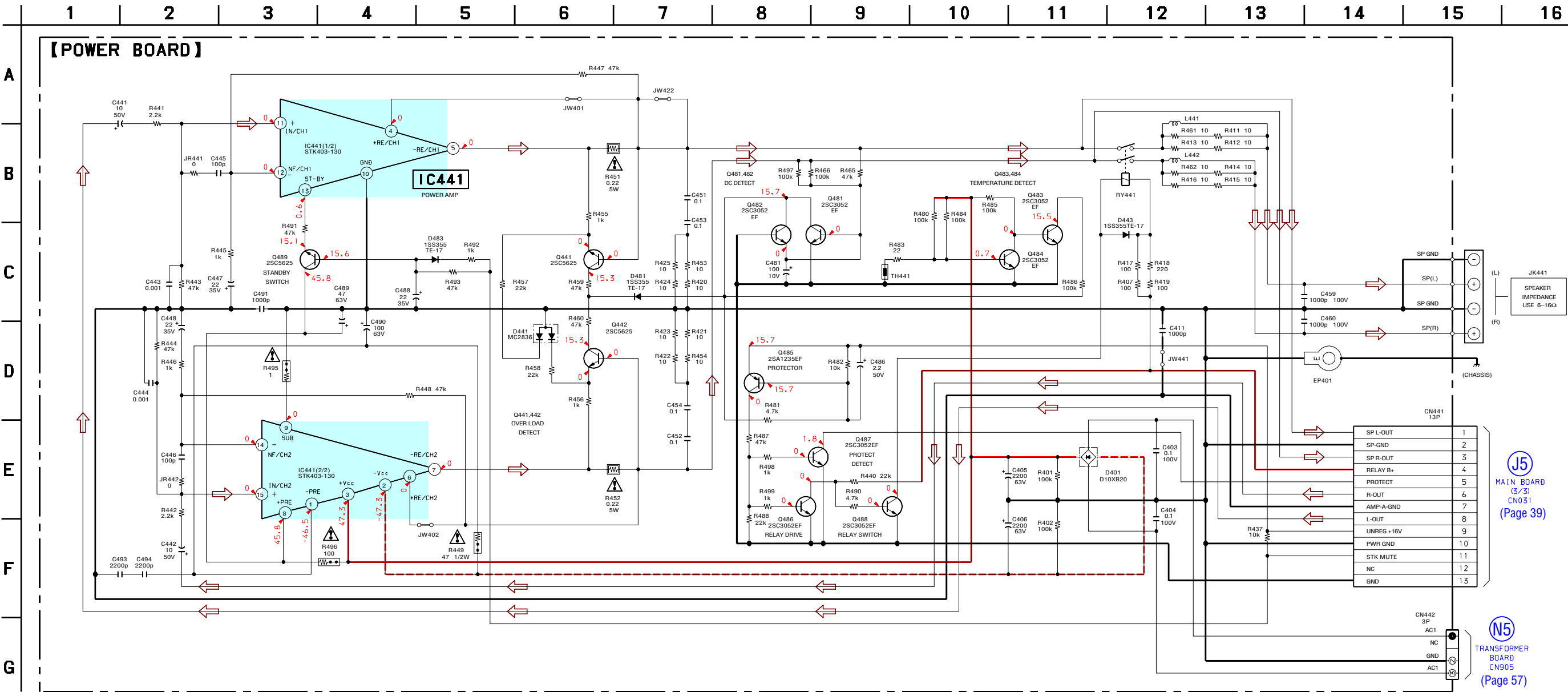
6-20. SCHEMATIC DIAGRAM – POWER Board – (GX255/RG170)



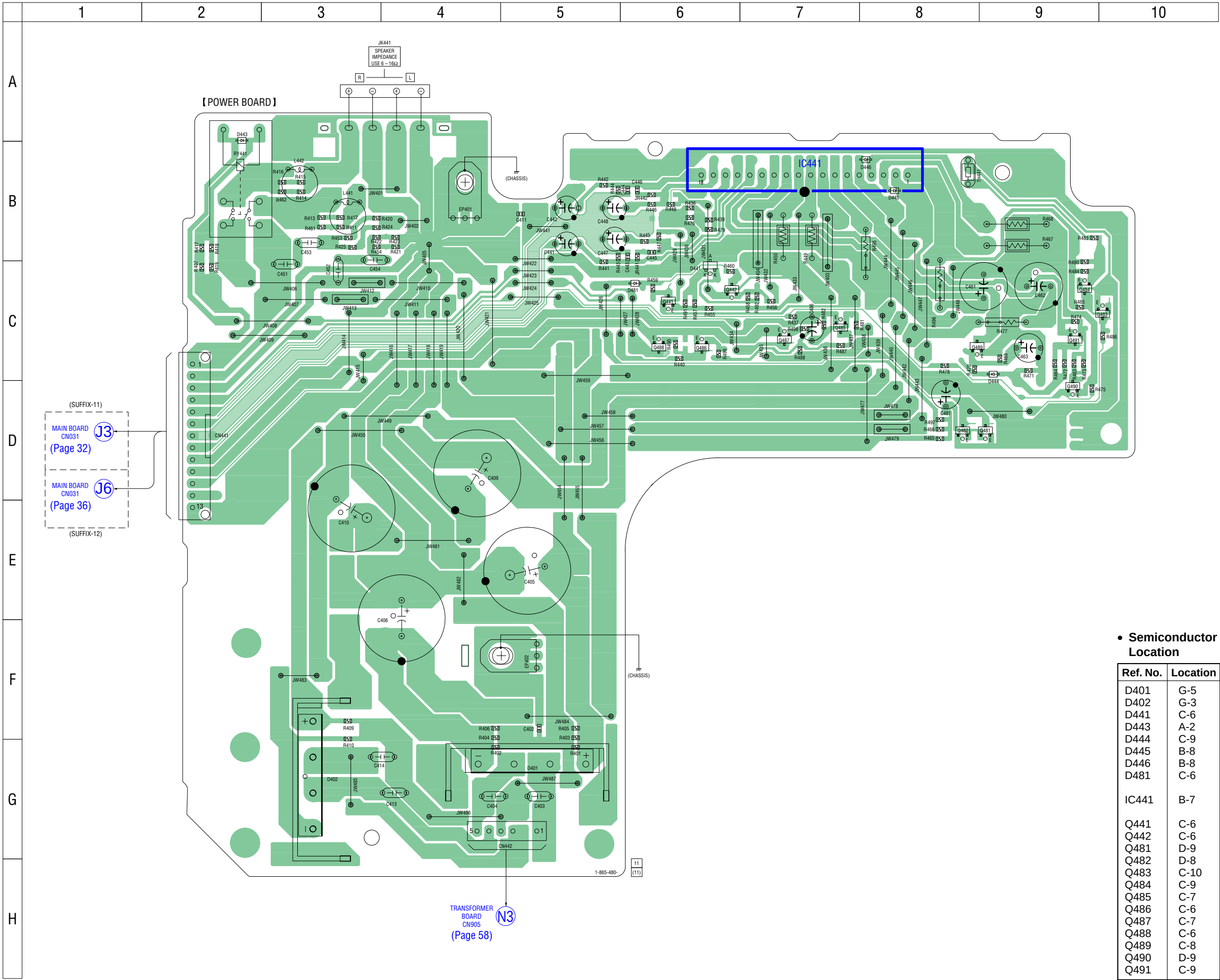
6-21. PRINTED WIRING BOARD – POWER Board – (RG470: AEP, EE, RU) • See page 25 for Circuit Boards Location.  : Uses unleaded solder.



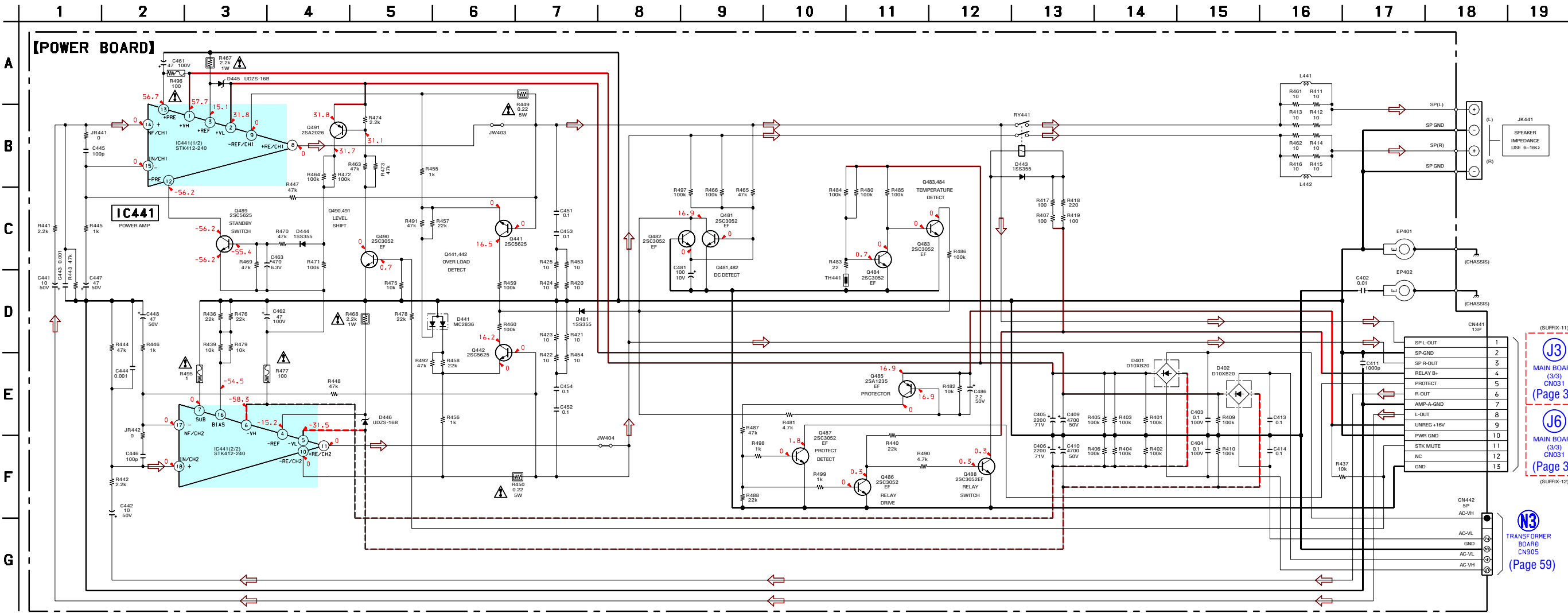
6-22. SCHEMATIC DIAGRAM – POWER Board – (RG470: AEP, EE, RU)



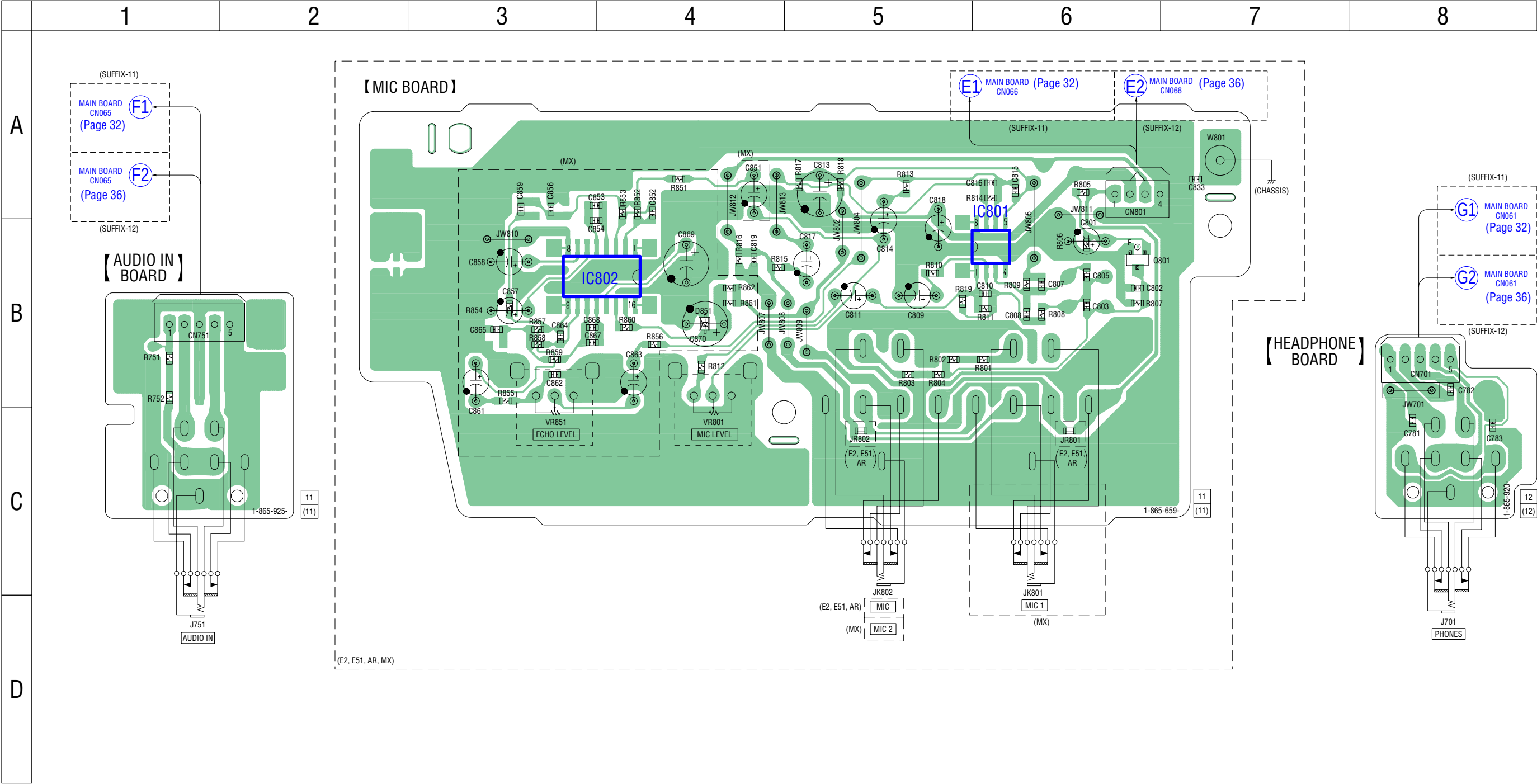
6-23. PRINTED WIRING BOARD – POWER Board – (RG470: E2, E51, AR, MX) • See page 25 for Circuit Boards Location.  : Uses unleaded solder.



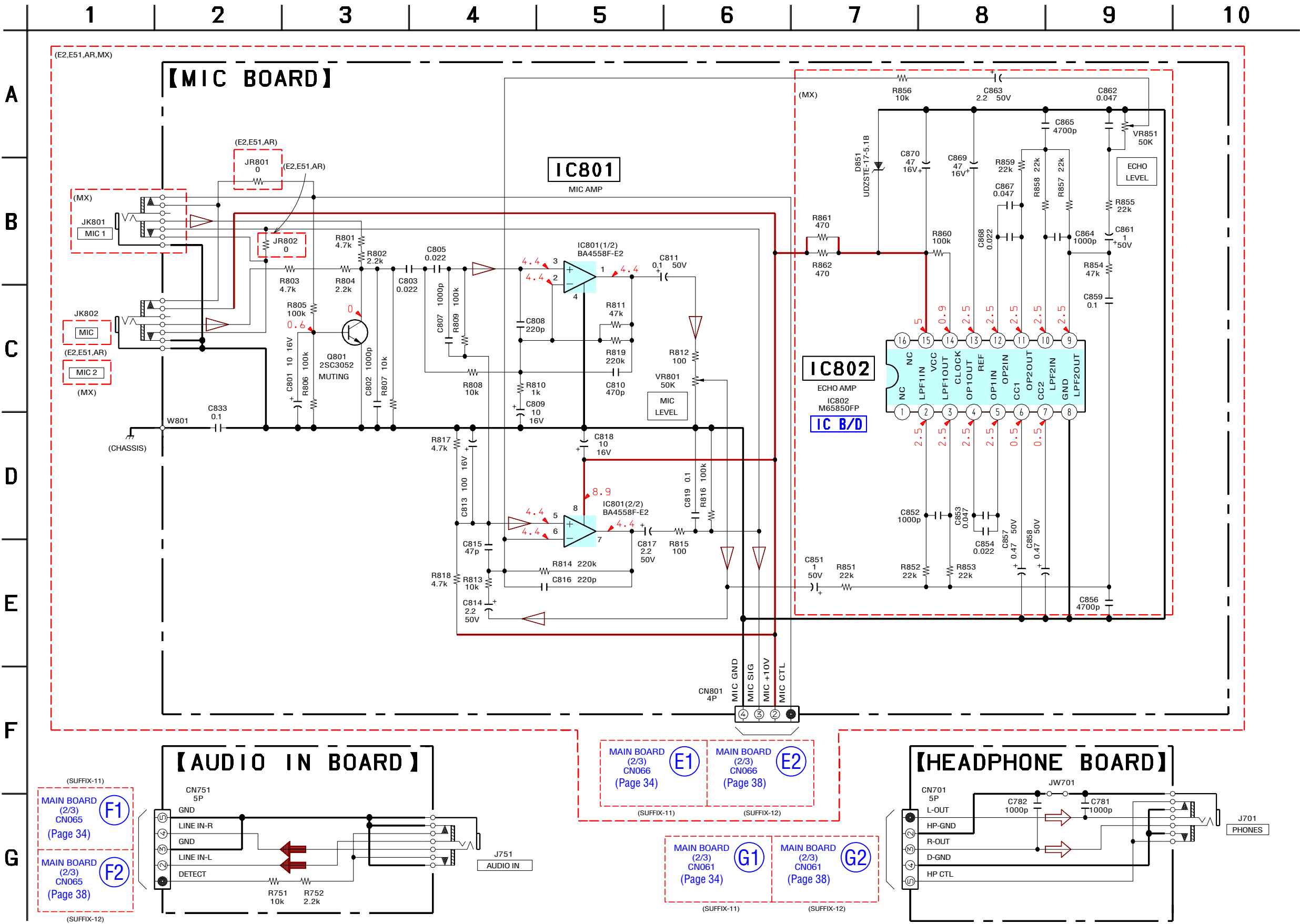
6-24. SCHEMATIC DIAGRAM – POWER Board – (RG470: E2, E51, AR, MX)

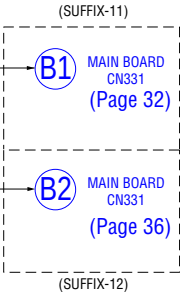


6-25. PRINTED WIRING BOARDS – AUDIO IN, MIC, HEADPHONE Boards – • See page 25 for Circuit Boards Location.  : Uses unleaded solder.



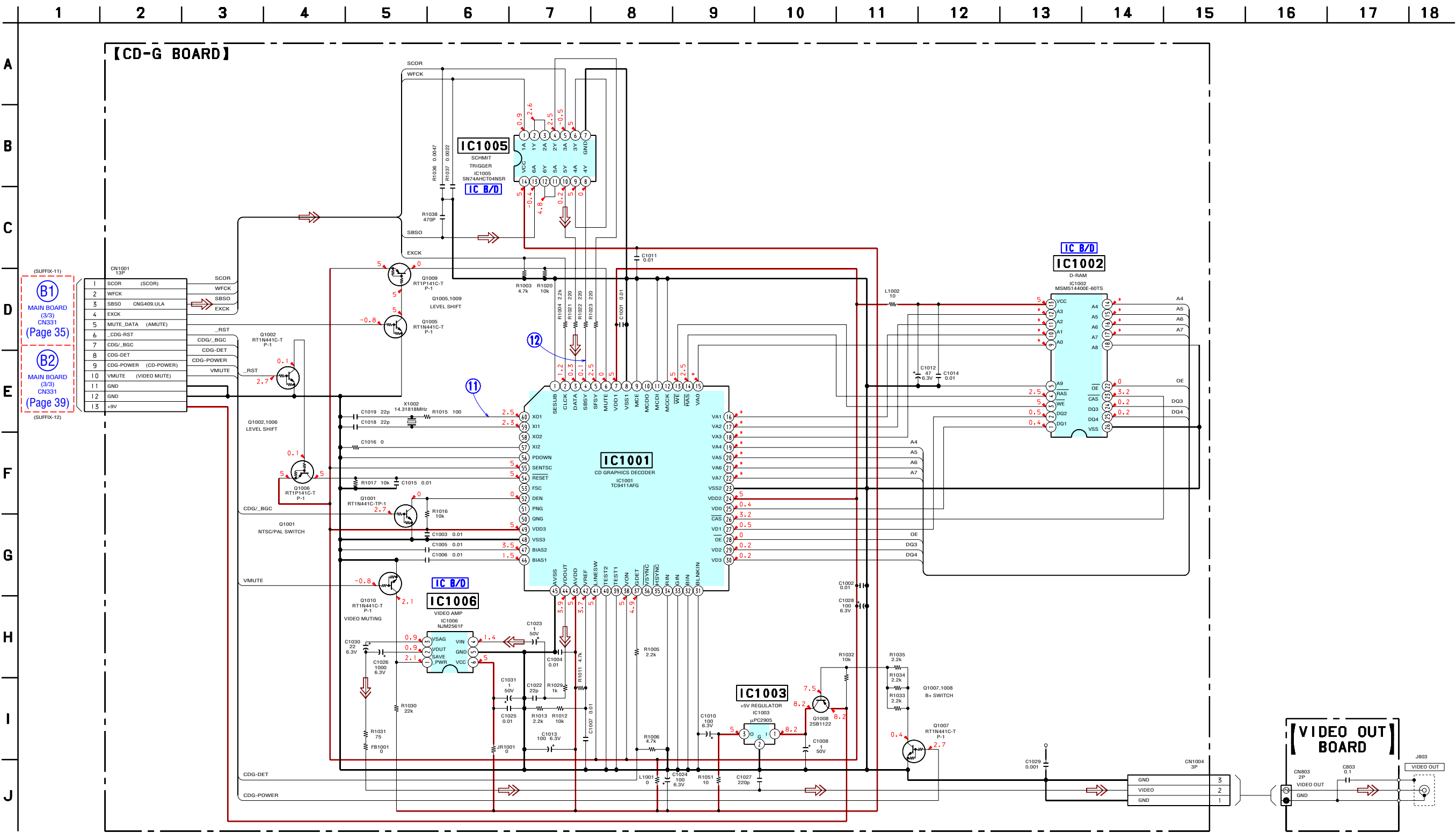
6-26. SCHEMATIC DIAGRAM – AUDIO IN, MIC, HEADPHONE Boards – • See page 61 for IC Block Diagrams.



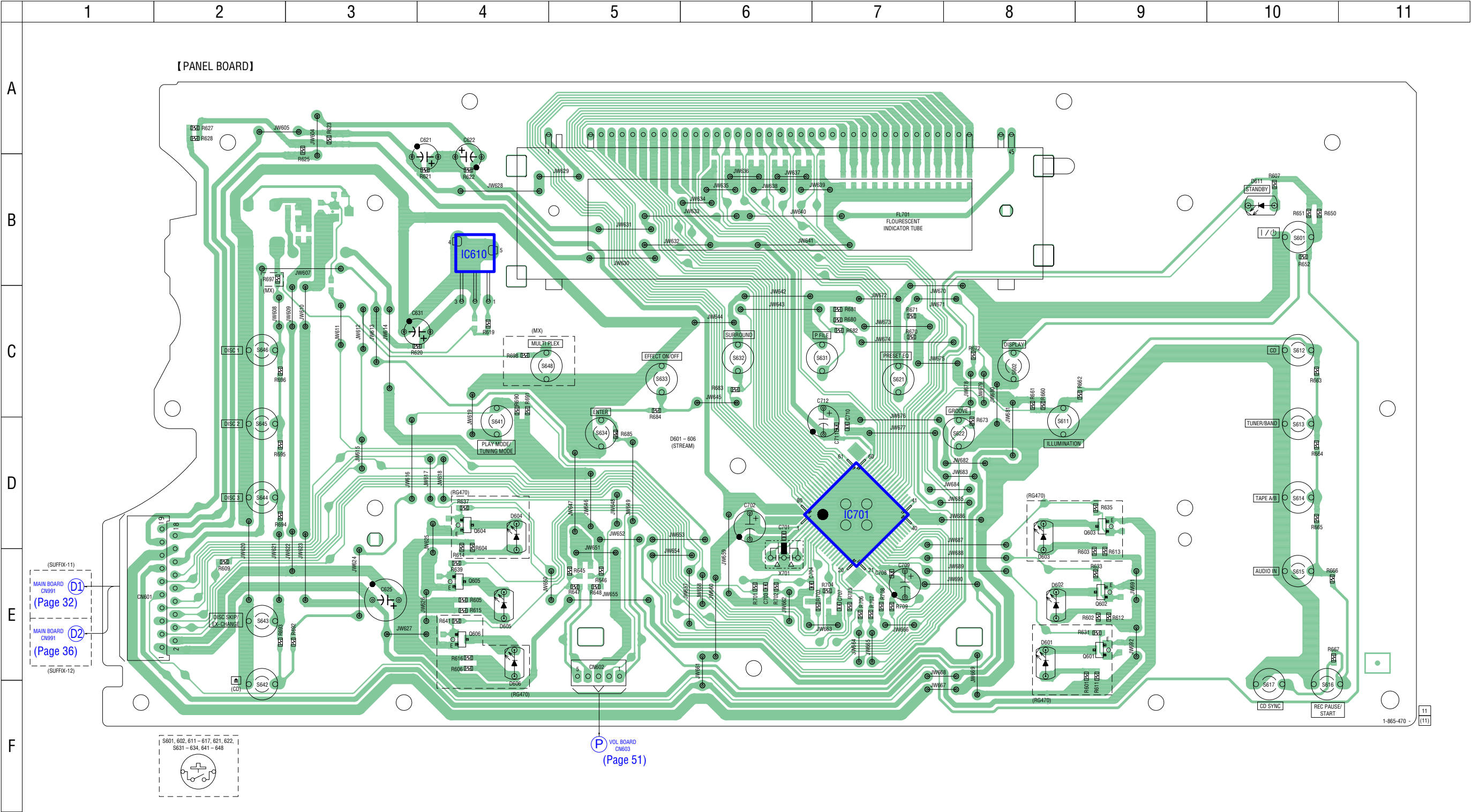


Ref. No.	Location
IC1001	C-4
IC1002	C-6
IC1003	D-3
IC1005	B-3
IC1006	A-4
Q1001	C-6
Q1002	C-7
Q1005	B-7
Q1006	C-7
Q1007	C-3
Q1008	D-3
Q1009	B-7
Q1010	A-6

6-28. SCHEMATIC DIAGRAM – CD-G Section – (MX model only) • See page 60 for Waveforms. • See page 61 for IC Block Diagrams. • See page 71 for IC Pin Function Description.



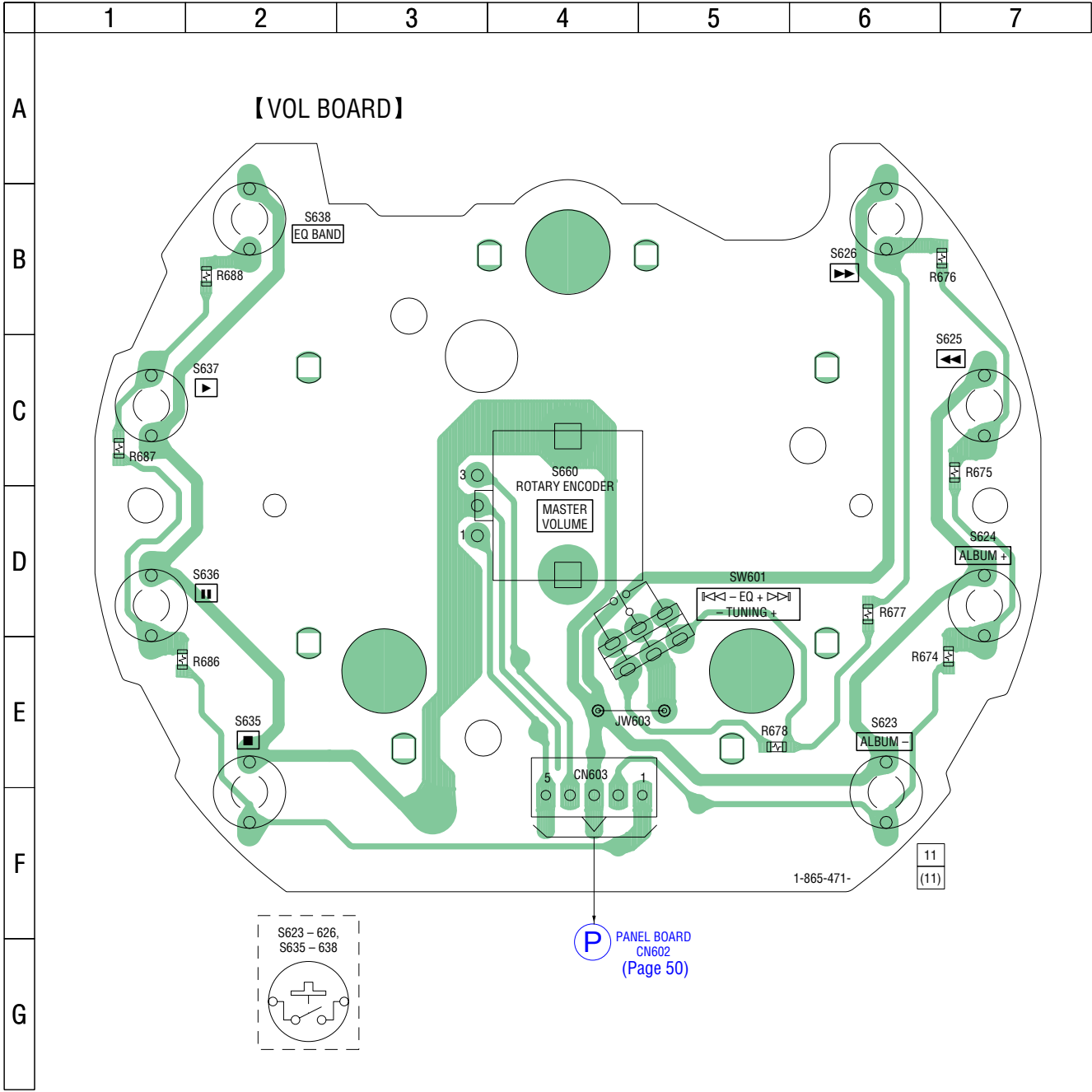
6-29. PRINTED WIRING BOARD – PANEL Section (1/2) – • See page 25 for Circuit Boards Location.  : Uses unleaded solder.



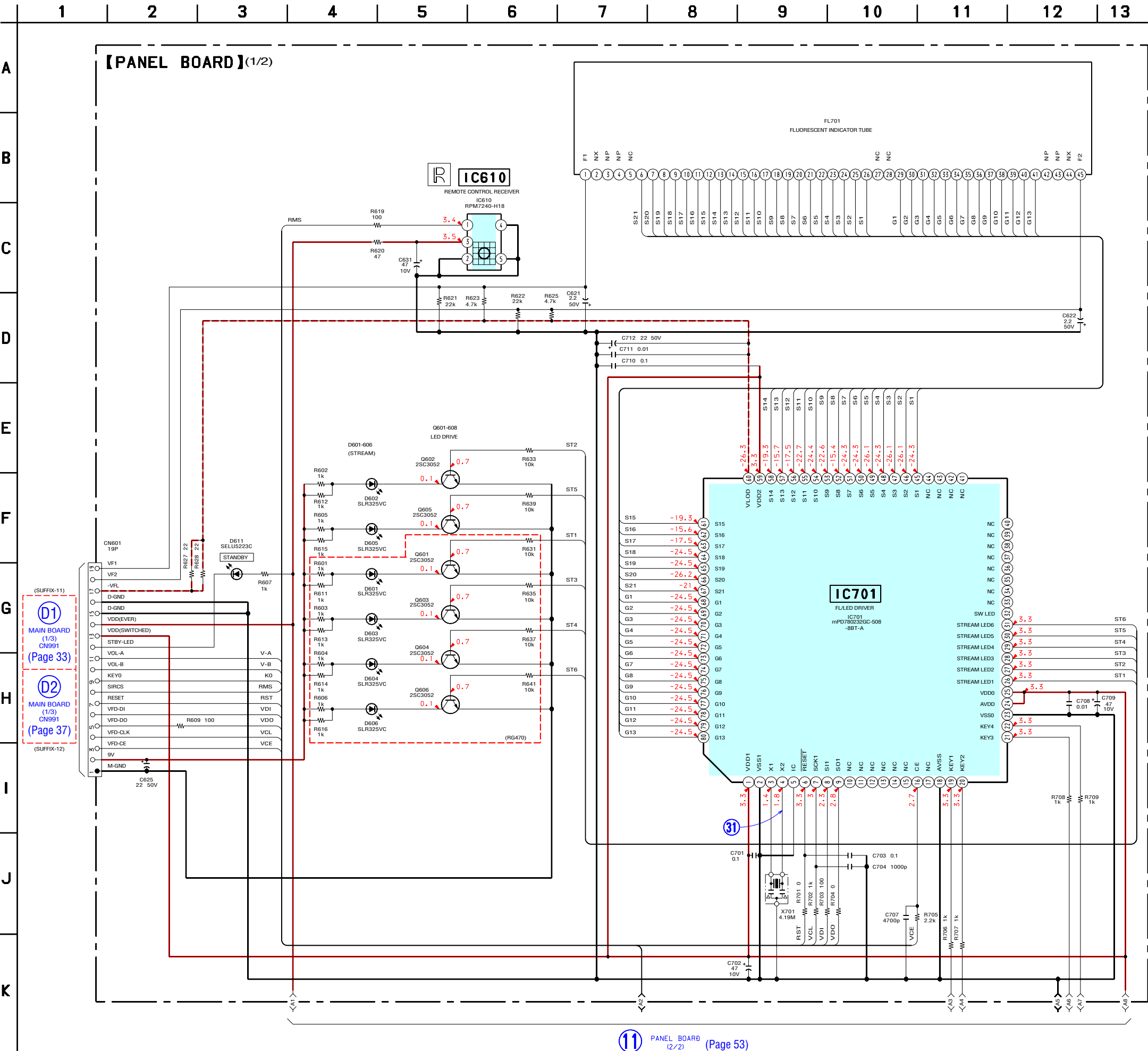
• Semiconductor Location

Ref. No.	Location	Ref. No.	Location
D601	E-8	IC701	D-7
D602	E-8		
D603	D-8	Q601	E-9
D604	D-4	Q602	E-9
D605	E-4	Q603	D-9
D606	E-4	Q604	D-4
D611	B-10	Q605	E-4
		Q606	E-4
IC610	B-4		

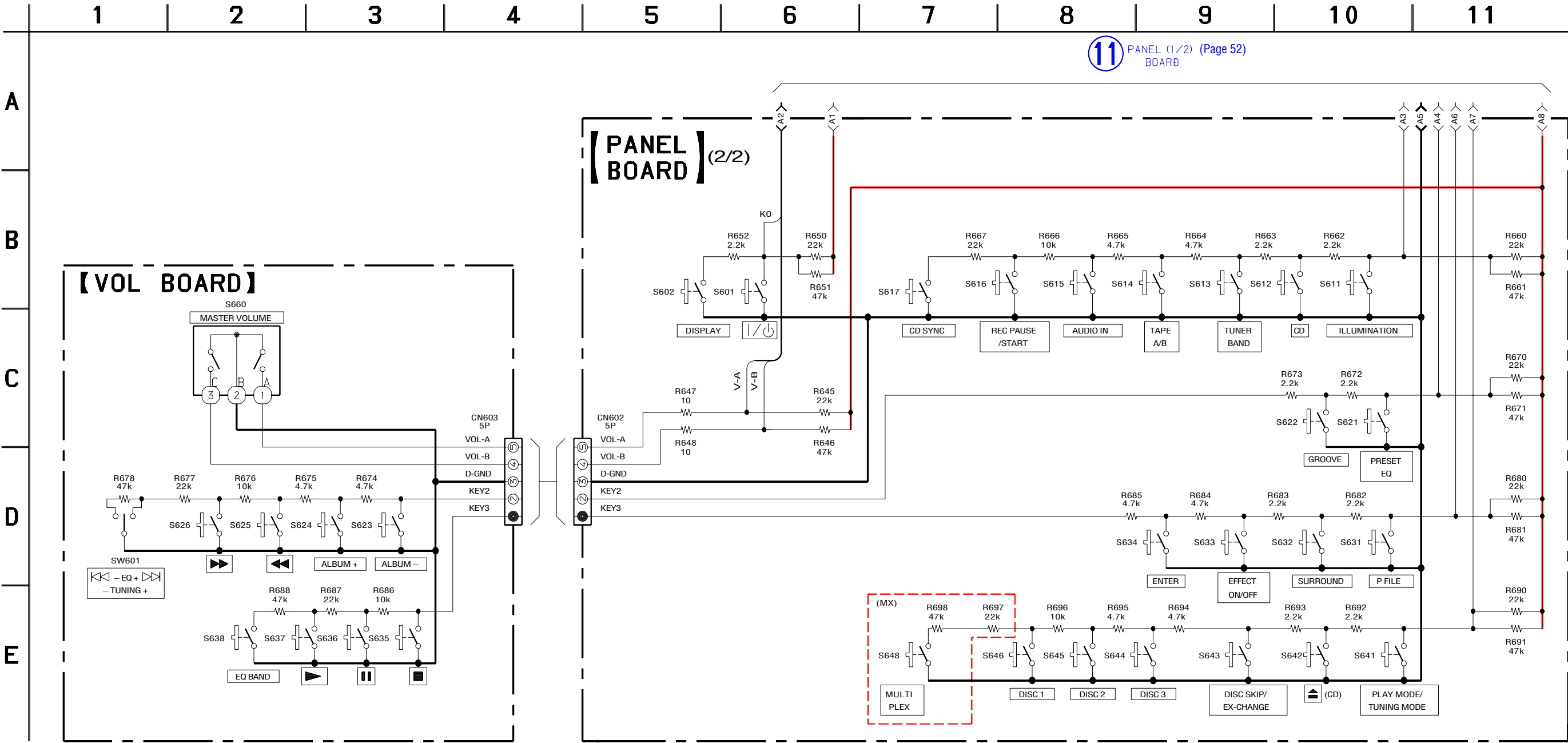
6-30. PRINTED WIRING BOARD – PANEL Section (2/2) – • See page 25 for Circuit Boards Location.  : Uses unleaded solder.



6-31. SCHEMATIC DIAGRAM – PANEL Section (1/2) – • See page 60 for Waveform. • See page 71 for IC Pin Function Description.



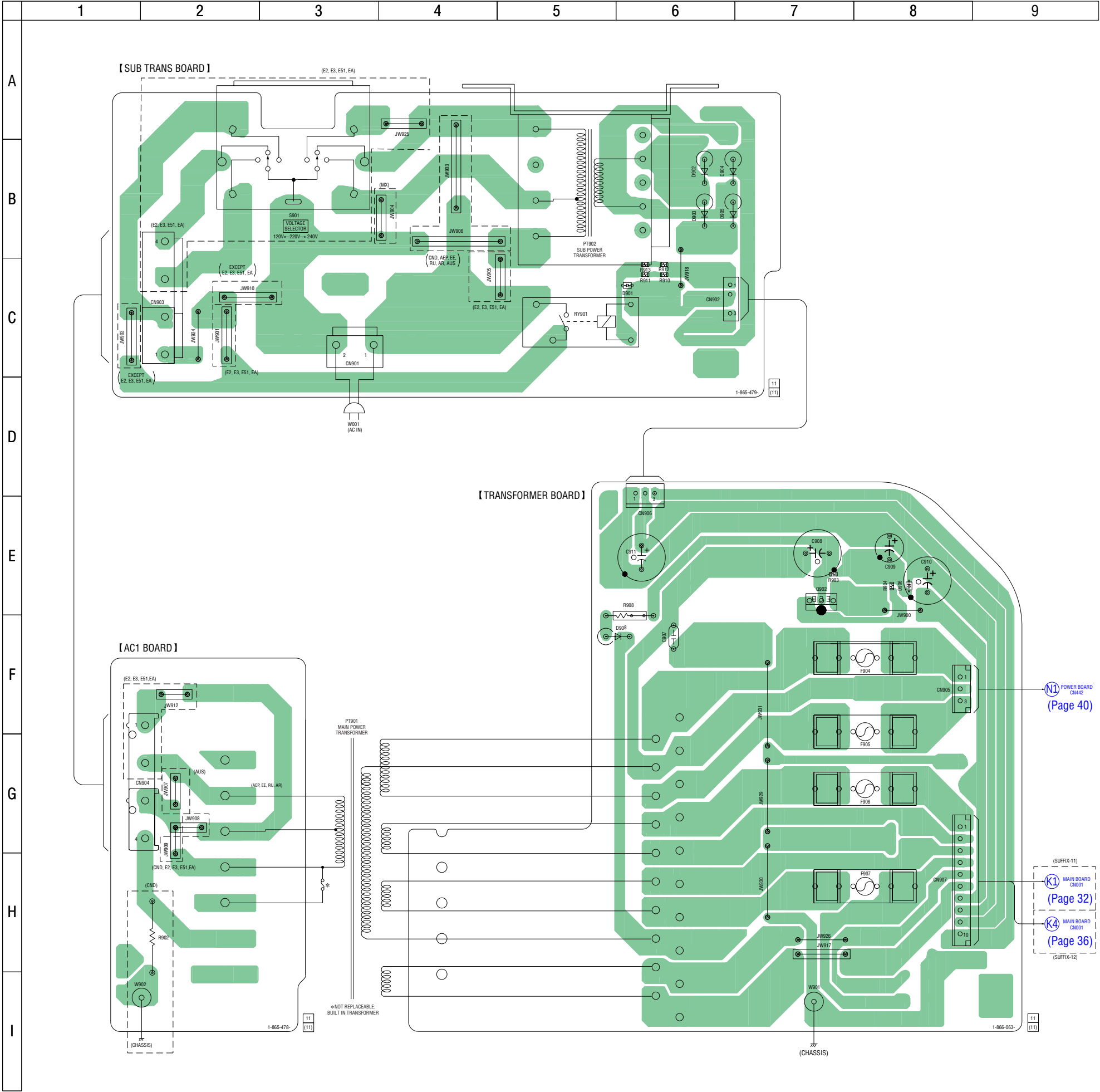
6-32. SCHEMATIC DIAGRAM – PANEL Section (2/2) –



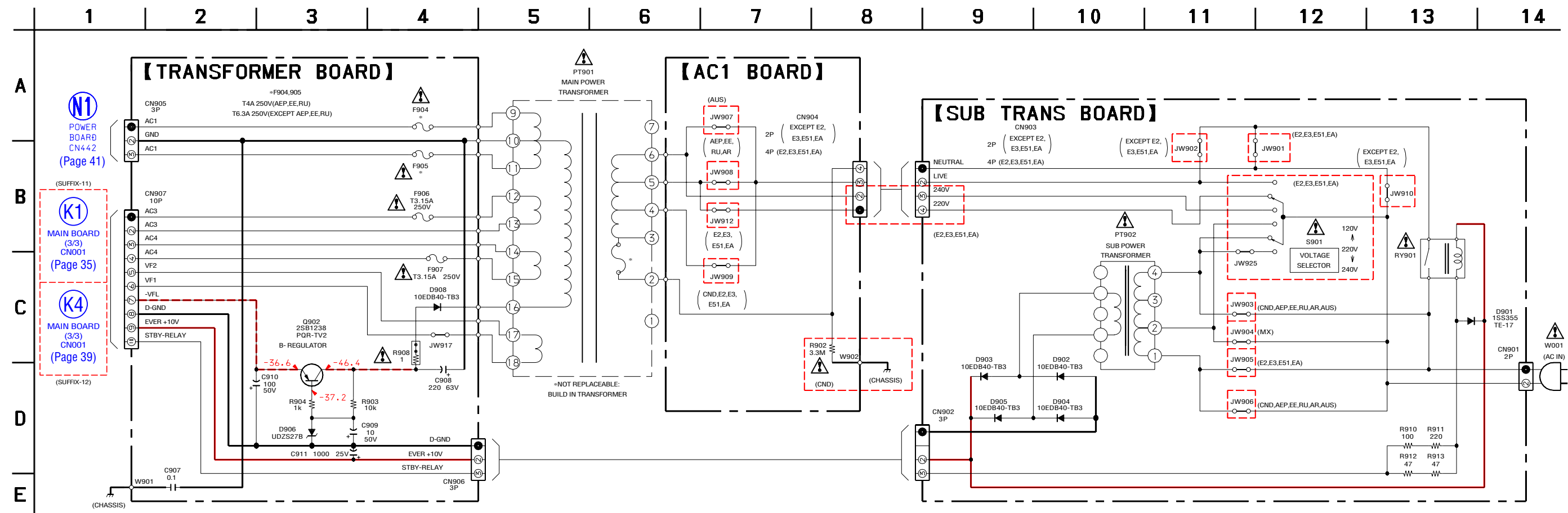
6-33. PRINTED WIRING BOARDS – TRANS Section – (GX255/RG170) • See page 25 for Circuit Boards Location. : Uses unleaded solder.

• Semiconductor Location

Ref. No.	Location
D901	C-6
D902	B-6
D903	B-6
D904	B-6
D905	B-6
D906	E-8
D908	F-6
Q902	E-7



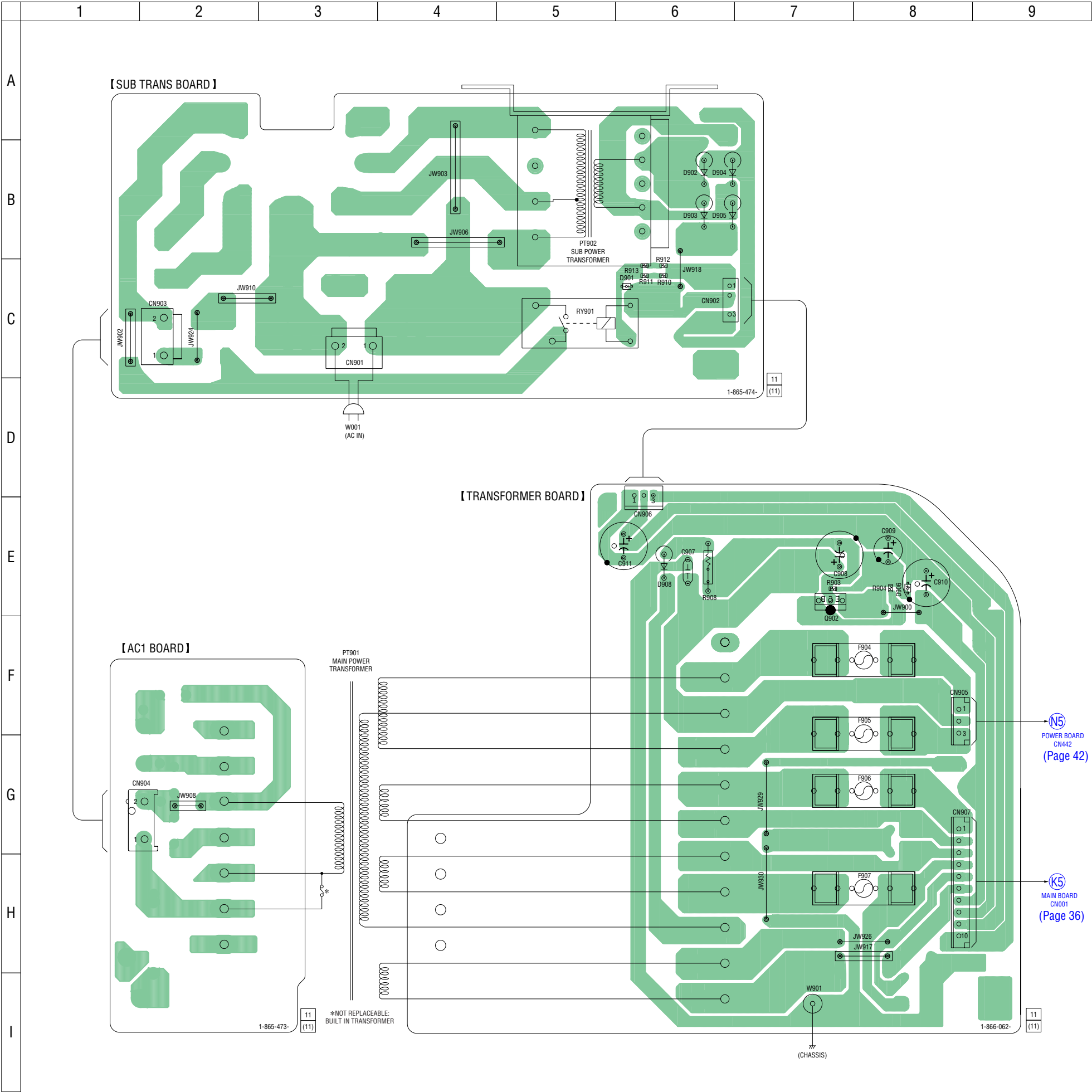
6-34. SCHEMATIC DIAGRAM – TRANS Section – (GX255/RG170)



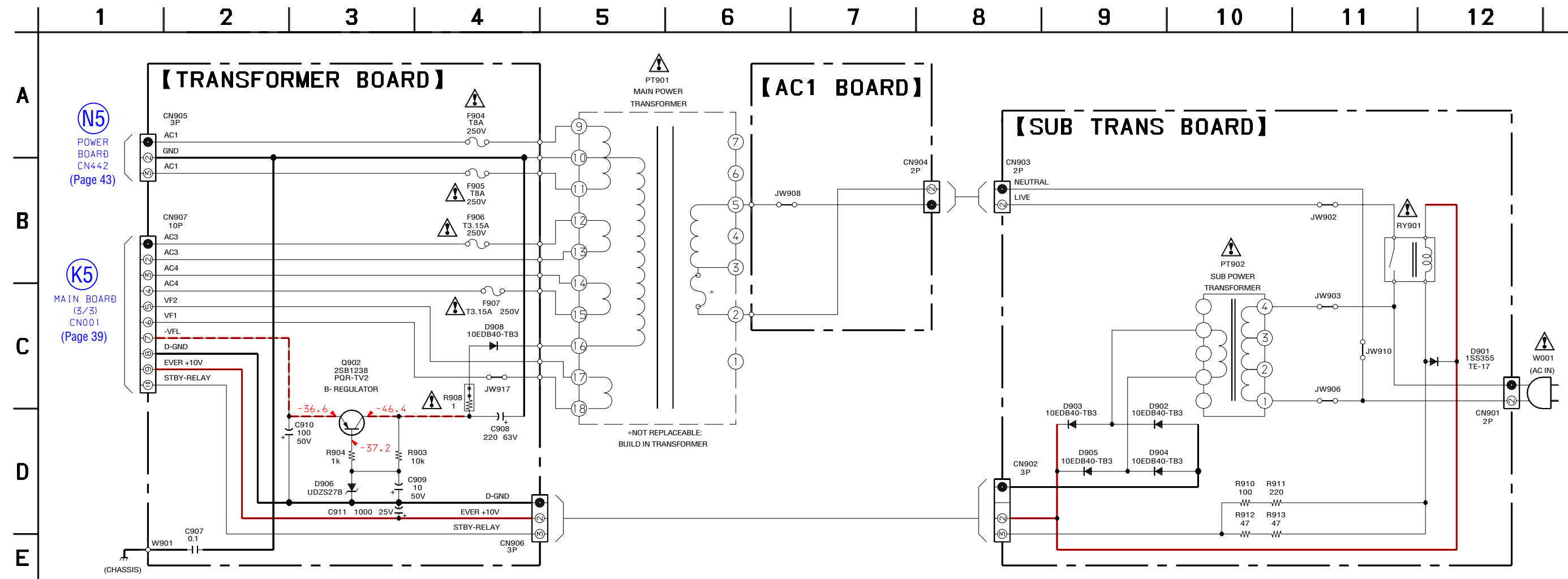
6-35. PRINTED WIRING BOARDS – TRANS Section – (RG470: AEP, EE, RU) • See page 25 for Circuit Boards Location. : Uses unleaded solder.

• Semiconductor Location

Ref. No.	Location
D901	C-6
D902	B-6
D903	B-6
D904	B-6
D905	B-6
D906	E-8
D908	E-6
Q902	E-7



6-36. SCHEMATIC DIAGRAM – TRANS Section – (RG470: AEP, EE, RU)

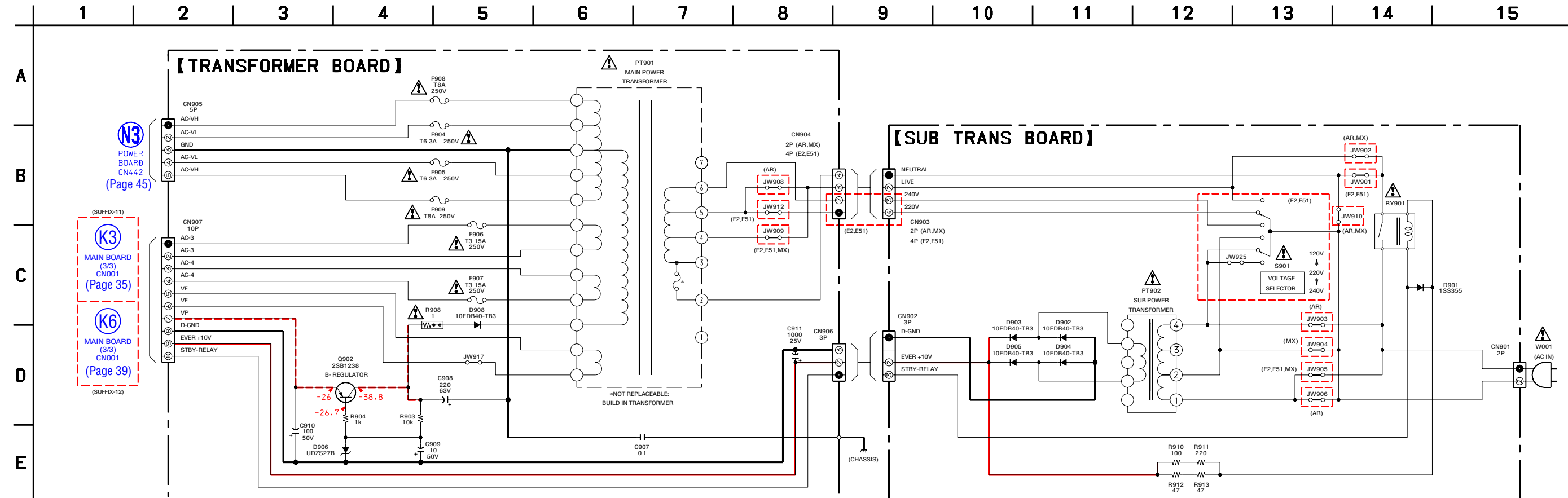


58 58

58 58

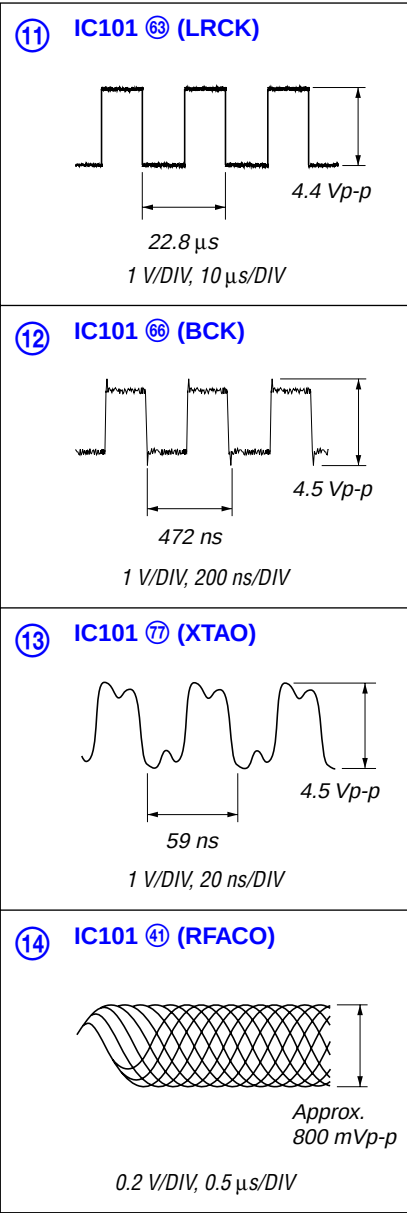


6-38. SCHEMATIC DIAGRAM – TRANS Section – (RG470: E2, E51, AR, MX)

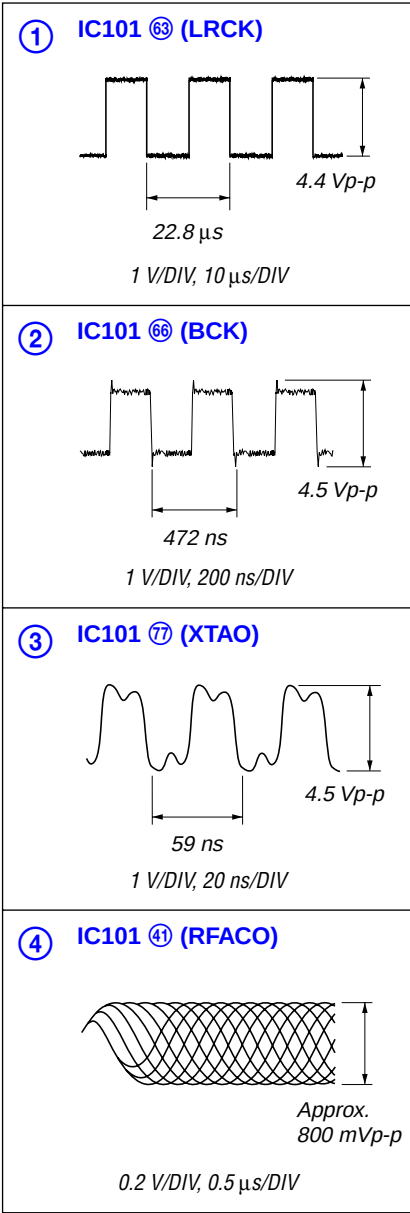


• Waveforms

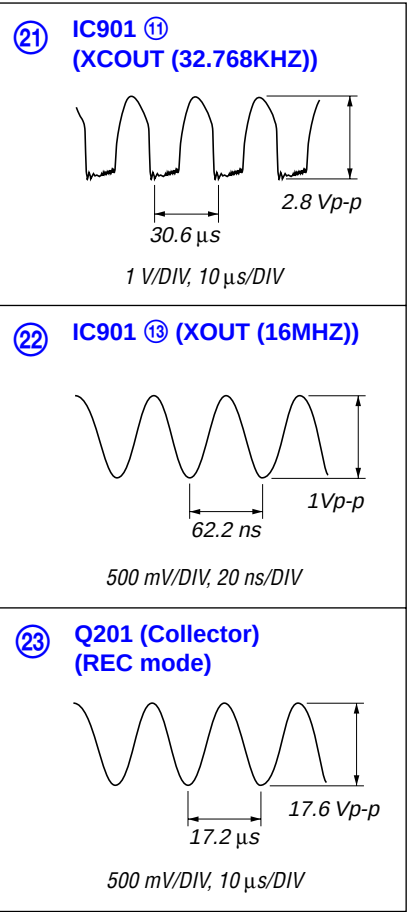
– CD Board – (Except MX model)



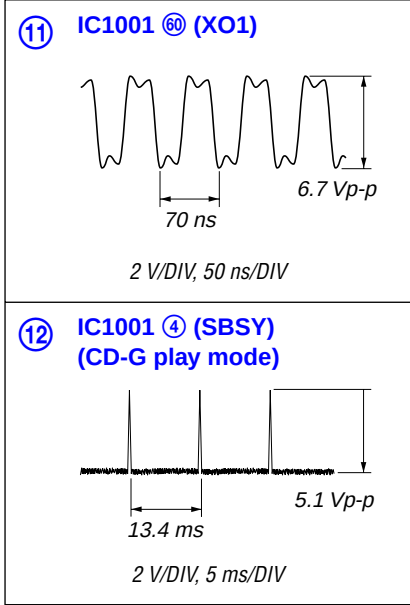
– BD Board – (MX model only)



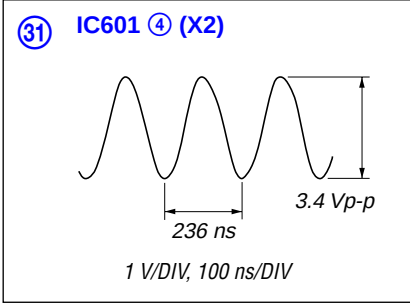
– MAIN Board –



– CD-G Board –



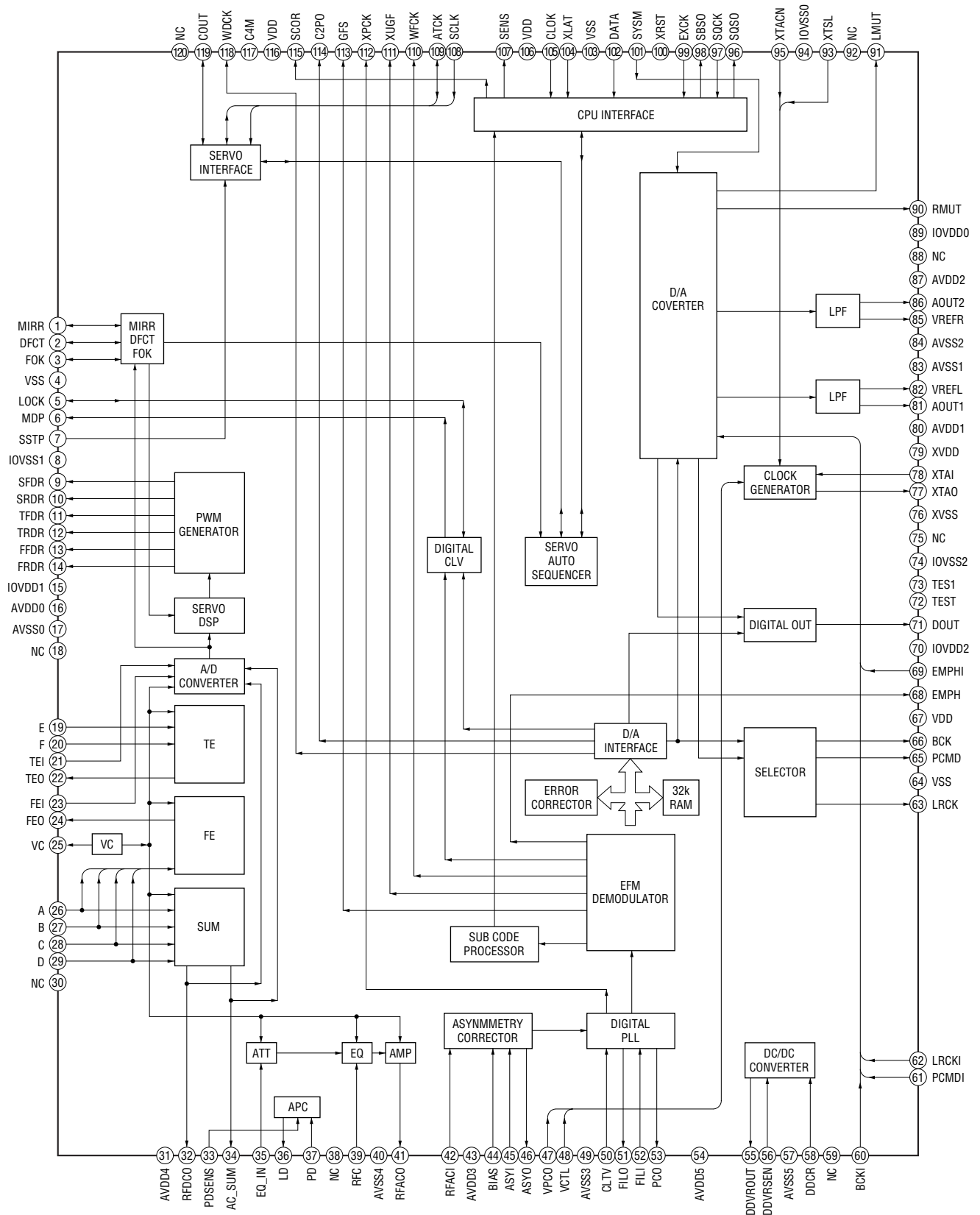
– PANEL Board –



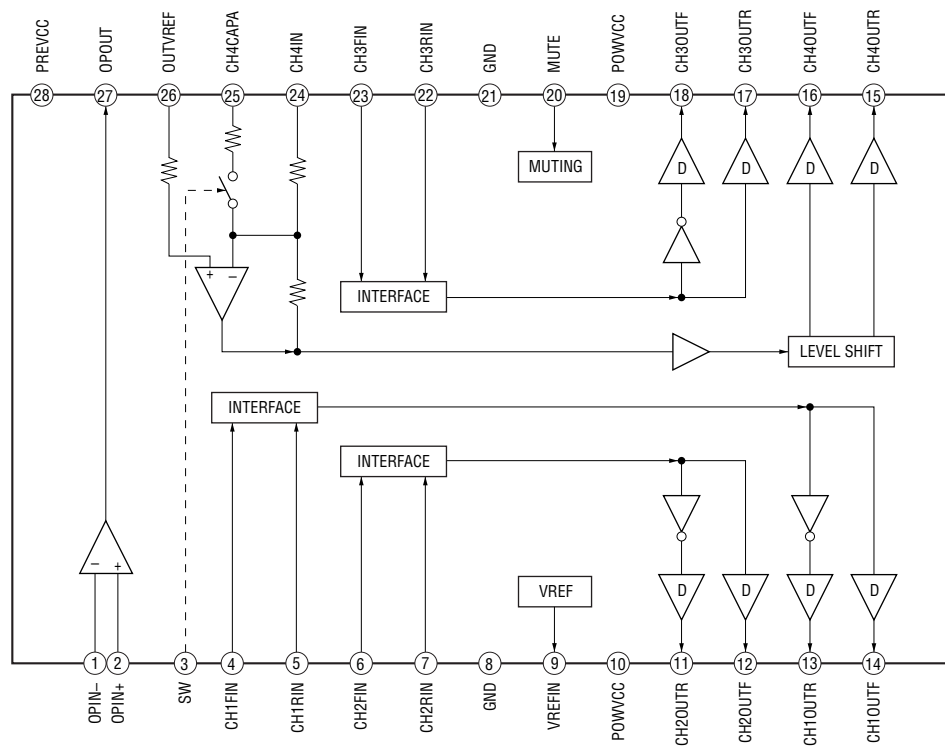
• IC Block Diagrams

– CD Board –

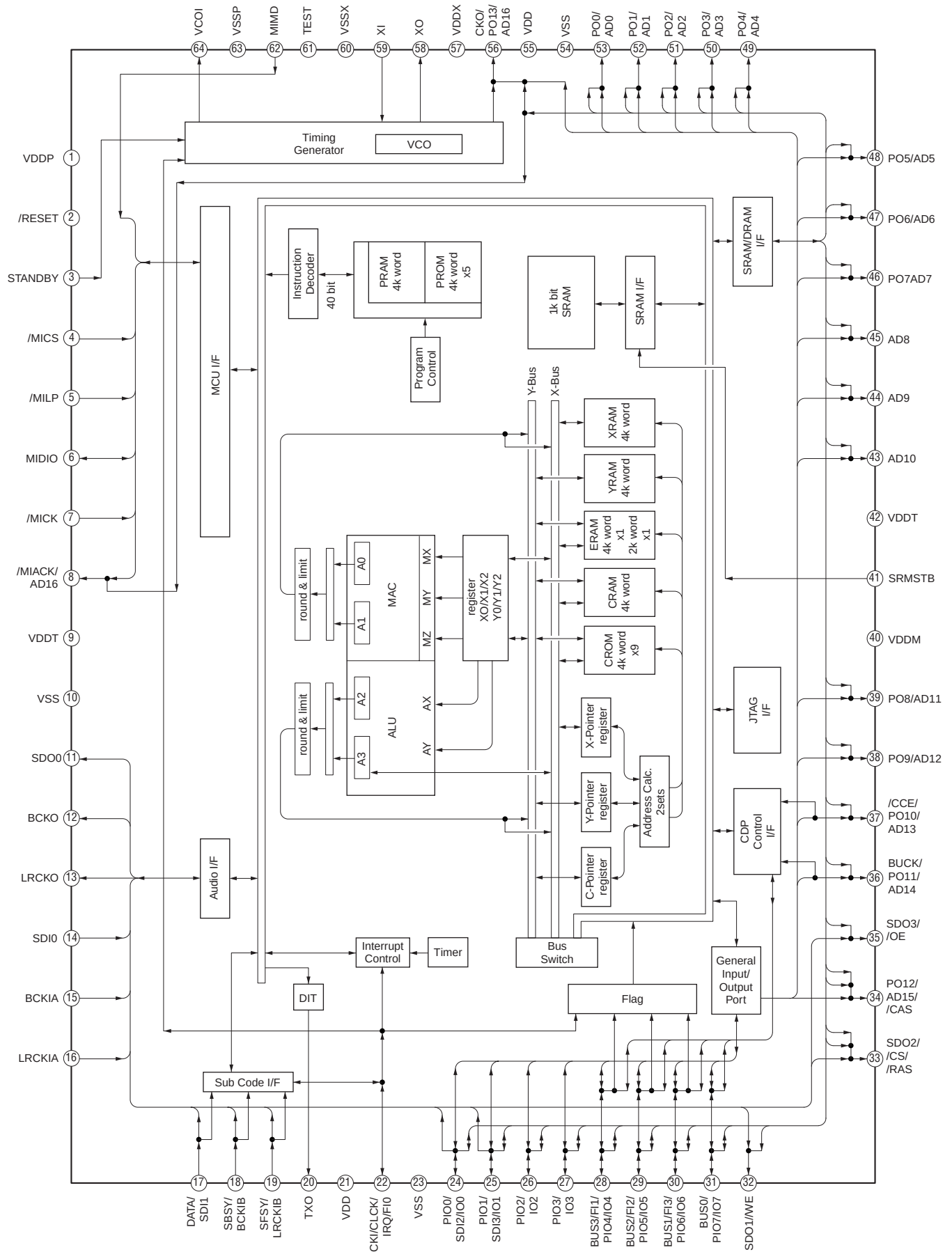
IC101 CXD3059AR



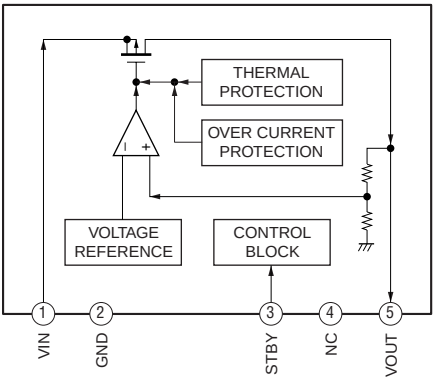
IC251 BA5947FM-E2



IC301 TC94A34FG-002

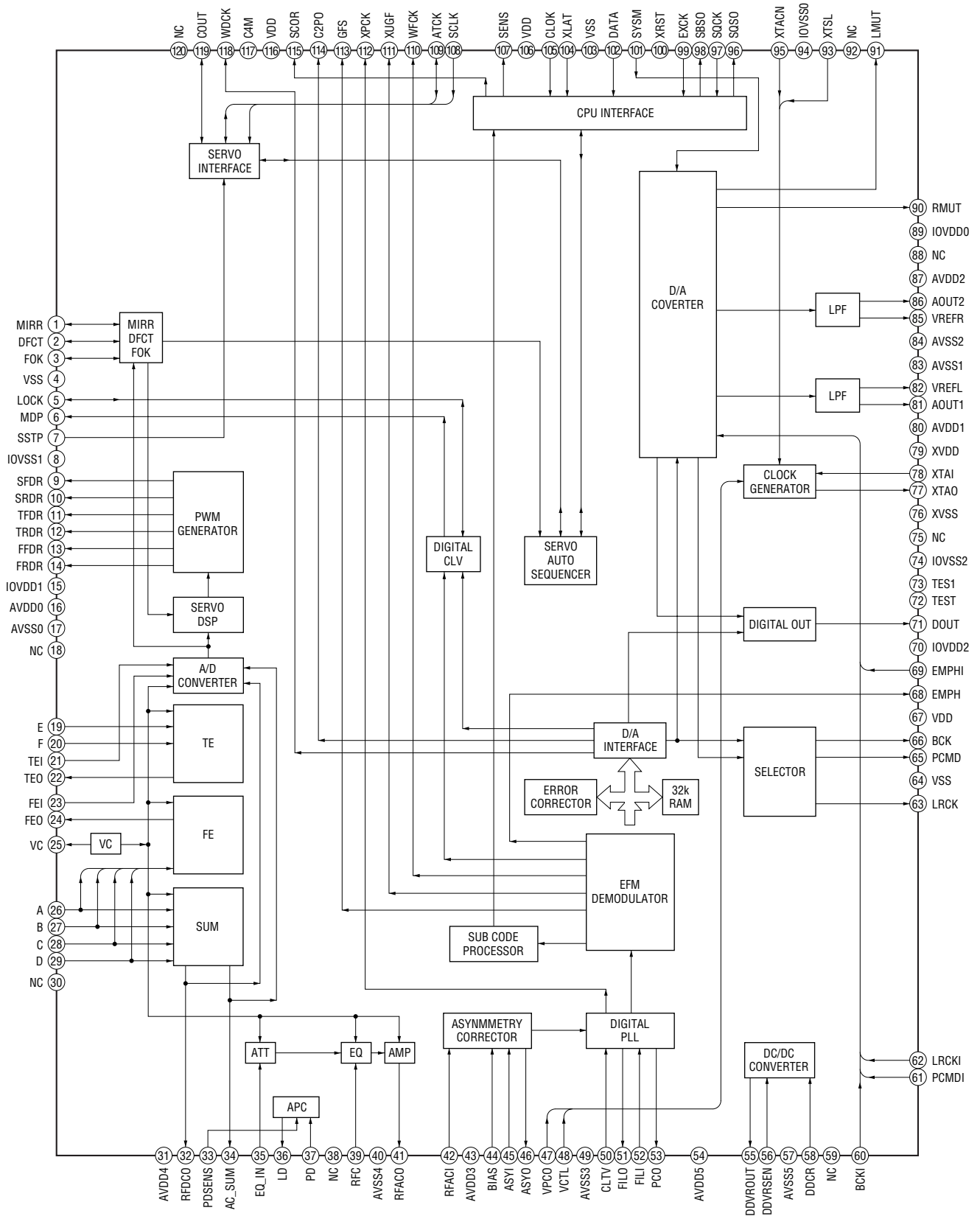


IC303 BH15FB1WG

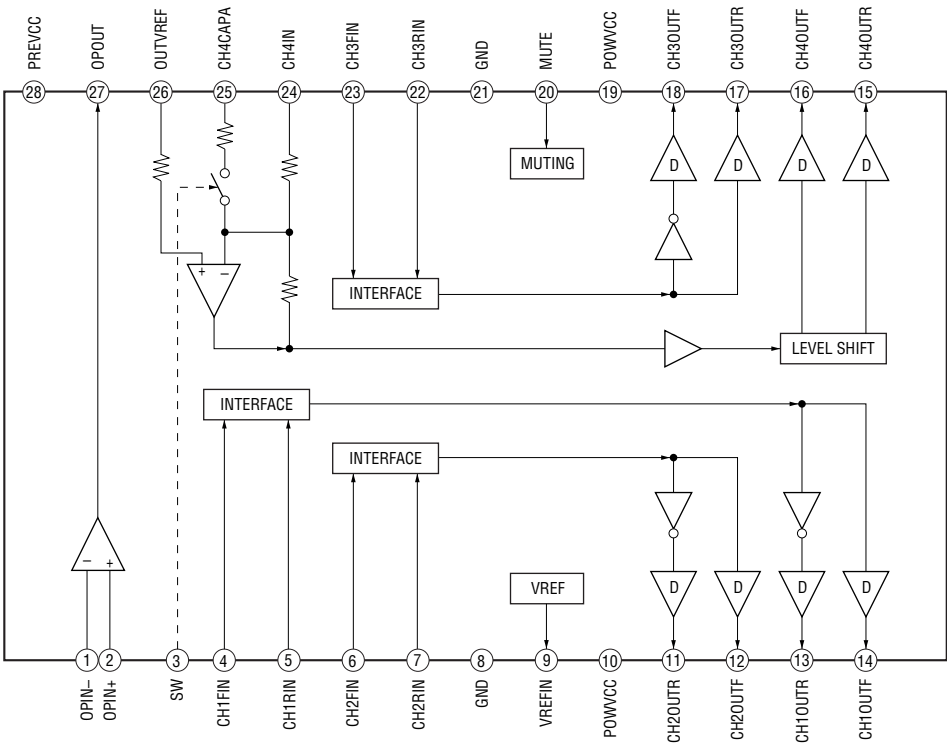


- BD Board -

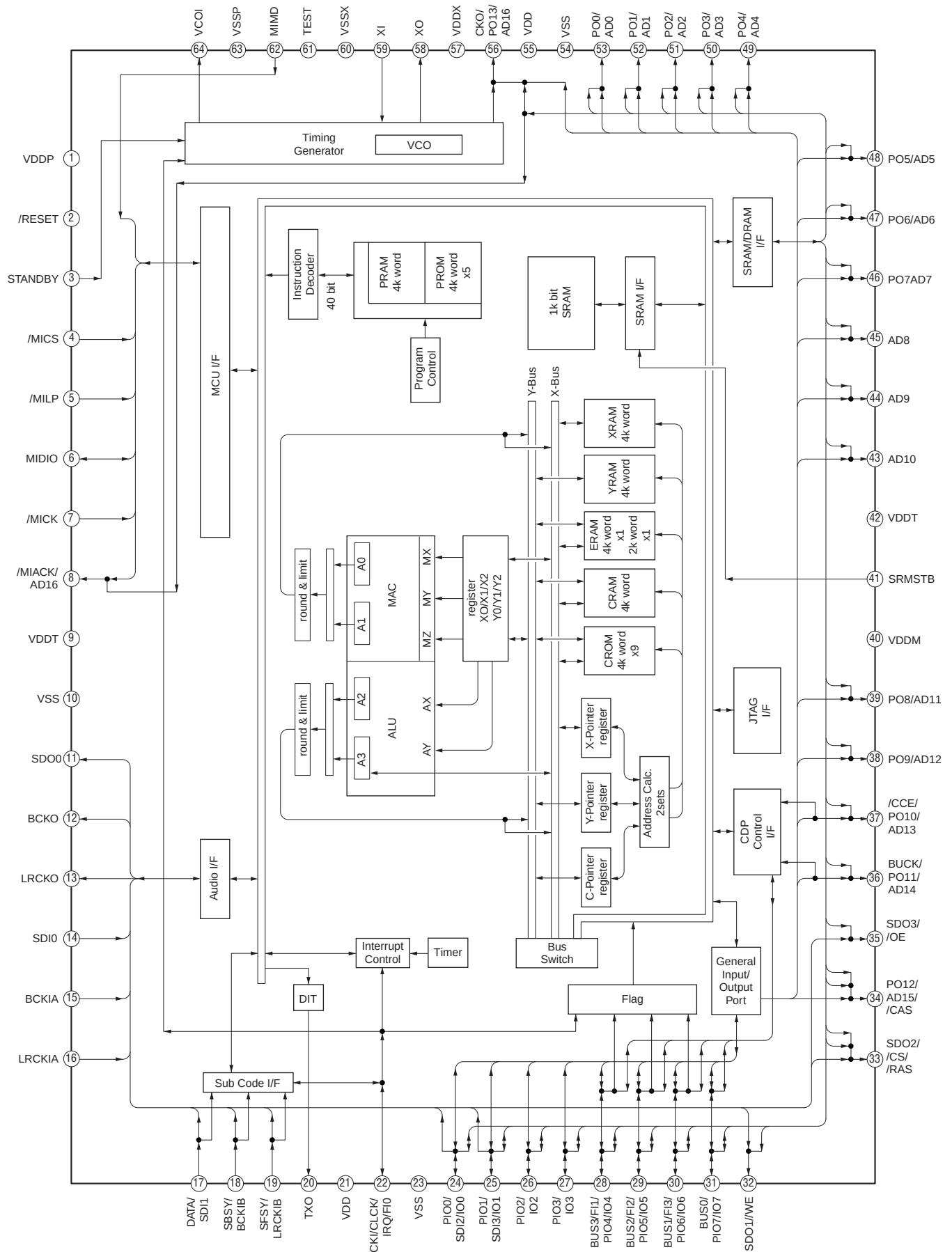
IC101 CXD3059AR



IC251 BA5947FM-E2

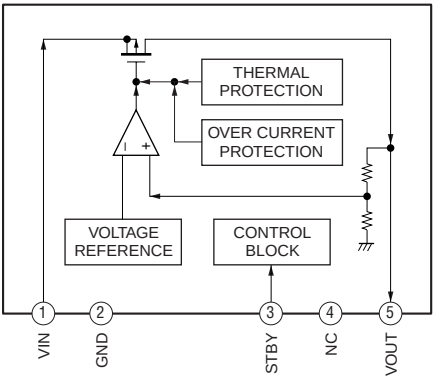


IC301 TC94A34FG-002

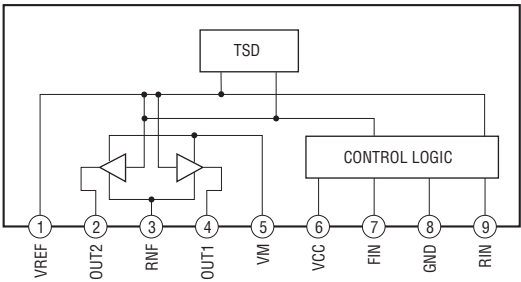


- DRIVER Board -

IC303 BH15FB1WG

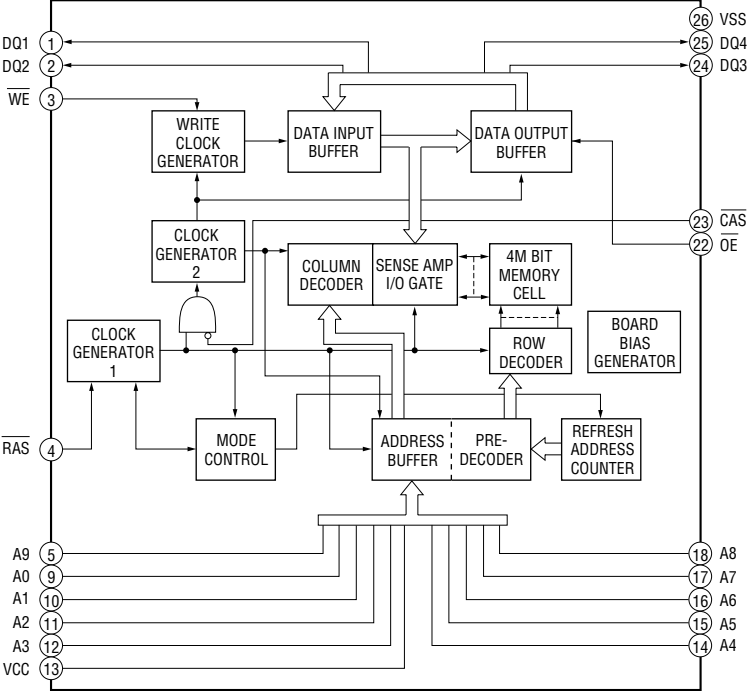


IC701, 712 BA6956AN

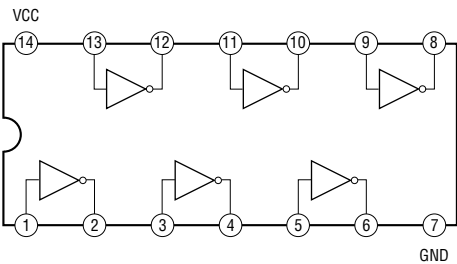


- CD-G Board -

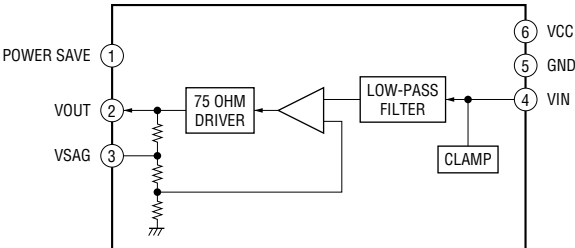
IC1002 MSM514400E-60TS-K



IC1005 SN74AHCT04NSR

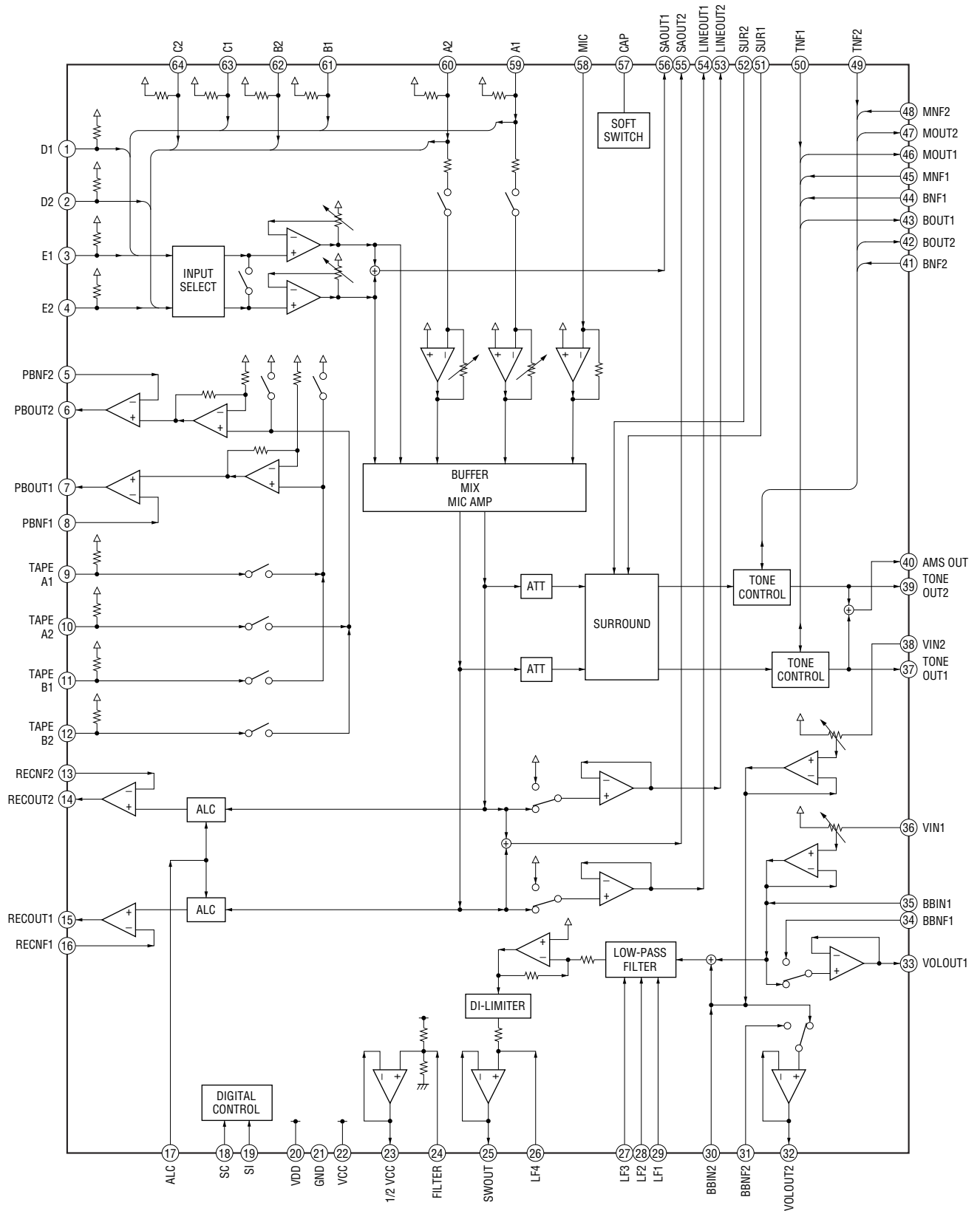


IC1006 NJM2561F1-TE2



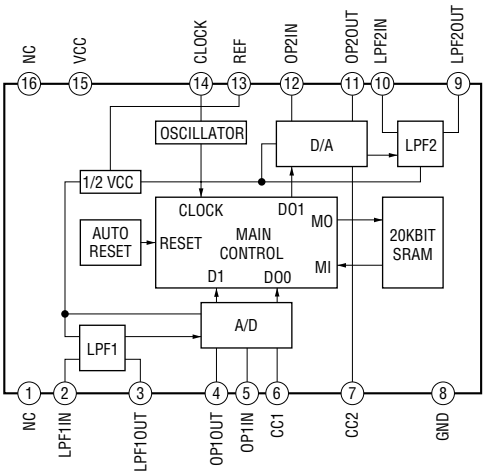
- MAIN Board -

IC101 BD3401KS2



- MIC Board -

IC802 M65850FP-E1



• IC Pin Function Description

MAIN BOARD IC901 M30302MCP-A02FPU0 (SYSTEM CONTROLLER)

Pin No.	Pin Name	I/O	Description
1	O-BD3401-DATA	O	Serial data output to the electrical volume
2	O-BD3401-CLK	O	Serial data transfer clock signal output to the electrical volume
3	O-VFD-RESET	O	System reset signal output to the FL/LED driver
4	O-VFD-CE	O	Chip enable signal output to the FL/LED driver
5	I-AC-CUT	I	AC power detection signal input terminal
6	I-VOL-A	I	Jog dial pulse input terminal
7	I-SIRCS-IN	I	SIRCS signal input terminal
8	BYTE	I	Mode setting terminal Normally not used
9	CNVSS	I	Mode setting terminal Normally not used
10	XCIN (32.768KHZ)	I	Sub system clock input terminal (32.768 kHz)
11	XCOUT (32.768KHZ)	O	Sub system clock output terminal (32.768 kHz)
12	I-RESET	I	System reset signal input from the reset signal generator "L": reset For several hundreds msec. after the power supply rises, "L" is input, then it changes to "H"
13	XOUT (16MHZ)	O	Main system clock output terminal (16 MHz)
14	VSS	-	Ground terminal
15	XIN (16MHZ)	I	Main system clock input terminal (16 MHz)
16	VCC1	-	Power supply terminal (+3.3V)
17	NMI	I	Non-maskable interrupt signal input terminal
18	I-RDS-CLK	I	RDS data transfer clock signal input terminal (AEP, East European models)
19	I-SCOR	I	Subcode Q sync (SCOR) input from the CD DSP
20	I-AC-PULSE	I	AC main power detection signal input terminal
21	I-VOL-B	I	Jog dial pulse input terminal
22	O-STBY-LED	O	LED drive signal output terminal
23	O-SYS-MUTE	O	Muting on/off control signal output terminal
24	O-STK-MUTE	O	Standby signal output to the power amplifier (for front speaker output)
25	O-SWR	O	Relay drive signal output for surround output Not used
26	O-POWER-RELAY	O	Relay drive signal output for main power
27	O-FRONT-SP-RELAY	O	Power on/off control signal output for the fan motor and amplifier section
28	O-MP3-CLK	O	Serial data transfer clock signal output to the MP3 decoder
29	I-MP3-DI	I	Serial data input from the MP3 decoder
30	O-MP3-DATA	O	Serial data output to the MP3 decoder
31	O-CD-DATA	O	Serial data output to the CD DSP
32	I-CD-SENS	I	Internal status (SENSE) input from the CD DSP
33	O-CD-CLK	O	Serial data transfer clock signal output to the CD DSP
34	O-XTCN	O	Oscillator control signal output to the CD DSP
35	O-VFD-DATA	O	Serial data output to the FL/LED driver
36	I-VFD-DATA	I	Serial data input from the FL/LED driver
37	O-VFD-CLK	O	Serial data transfer clock signal output to the FL/LED driver
38	O-MP3-RESET	O	System reset signal output to the MP3 decoder
39	O-MP3-CS	O	Chip select signal output to the MP3 decoder
40	I-MP3-ACK	I	Acknowledge signal input from the MP3 decoder
41	xHOLD	I/O	Not used

Pin No.	Pin Name	I/O	Description
42	O-MP3-STB	O	Standby signal output to the MP3 decoder
43	I-MP3-REQ	I	Data send request signal input from the MP3 decoder
44	O-MP3-LP	O	Latch pulse signal output to the MP3 decoder
45	O-XLT	O	Latch pulse signal output to the CD DSP
46	xWR	I/O	Not used
47	O-XRST	O	System reset signal output to the CD DSP and motor/coil driver
48, 49	O-LM-R, O-LM-F	O	Loading motor control signal output terminal
50, 51	O-TM-R, O-TM-F	O	Table motor control signal output terminal
52 to 54	I-E-1 to I-E-3	I	Disc tray address sensor (rotary encoder) input terminal
55	I-CD NUMBER SENS	I	Table address sensor input terminal
56	I-OPEN-SW	I	Disc tray open/close detection switch input terminal
57	O-CDG-MUTE- DATA	O	Muting control signal output to the CD graphics decoder (Mexican model)
58	O-CDG-RST	O	System reset signal output to the CD graphics decoder (Mexican model)
59	O-CDG-BGC	O	NTSC/PAL switching control signal output terminal (Mexican model)
60	I-CDG-DET	I	CD-G detection signal input terminal (Mexican model)
61	O-CDG-POWER	O	Power on/off control signal output for CD-G section (Mexican model)
62	VCC2	-	Power supply terminal (+3.3V)
63	O-VMUTE	O	Video muting on/off control signal output terminal (Mexican model)
64	VSS	-	Ground terminal
65	O-LC72121-CLK	O	Serial data transfer clock signal output to the FM/AM tuner pack
66	I-LC72121-DI	I	Serial data input from the FM/AM tuner pack
67	O-LC72121-DO	O	Serial data output to the FM/AM tuner pack
68	O-LC72121-CE	O	Chip enable signal output to the FM/AM tuner pack
69	I-TUNED	I	Tuning detection signal input from the FM/AM tuner pack
70	I-STEREO	I	FM stereo detection signal input from the FM/AM tuner pack
71	O-ST-MUTE	O	Muting on/off control signal output to the FM/AM tuner pack
72	I-RDS-DATA	I	RDS data input from the terminal (AEP, East European models)
73	I-MODEL1	I	Setting terminal for the destination and model type
74	I-KEY0	I	Front panel key input terminal (A/D input)
75 to 80	I-MODEL2 to I-MODEL7	I	Setting terminal for the destination and model type
81	I-HP/AUDIO IN	I	Headphone plug and audio in plug insert detection signal input
82	I-MIC	I	MIC plug insert detection signal input terminal (120 V AC area in E, Chilean, Peruvian, Argentina, Mexican models)
83	I-REAL-A	I	Deck-A tape reel rotating detection signal input terminal
84	I-REAL-B	I	Deck-B tape reel rotating detection signal input terminal
85	O-MOTOR	O	Capstan/reel motor drive signal output terminal
86	O-A-SOL	O	Deck-A plunger drive signal output terminal
87	O-B-SOL	O	Deck-B plunger drive signal output terminal
88	I-TAPE-A-STAT	I	Deck-A cassette detection signal, deck-A mode detection signal and recording (reverse direction) detection signal input terminal (A/D input)
89	I-TAPE-B-STAT	I	Deck-B cassette detection signal, deck-B mode detection signal and recording (forward direction) detection signal input terminal (A/D input)
90	O-REC/PB	O	REC/PB switching control signal output terminal

Pin No.	Pin Name	I/O	Description
91	O-BIAS	O	REC bias on/off control signal output terminal
92	I-TAPE-AMS	I	Auto music sensor detection signal input from the electrical volume "L": music is present, "H": music is not present
93	I-STREAM	I	Audio signal input for stream LED (A/D input)
94	I-VACS	I	VACS signal input terminal (A/D input)
95	I-PROTECTOR	I	Protector operating detection signal input terminal
96	AVSS	-	Ground terminal
97	I-POWER, DISPLAY	I	Front panel key input terminal (A/D input)
98	VREF	I	Reference voltage input terminal
99	AVCC	-	Power supply terminal (+3.3V)
100	NC	O	Not used

CD-G BOARD IC1001 TC9411AFG (BS, K) (CD GRAPHICS DECODER)

Pin No.	Pin Name	I/O	Description
1	SESUB	I	Not used
2	CLKK	O	Serial data transfer clock signal output to the CD DSP
3	DATA	I	Serial data input from the CD DSP
4	SBSY	I	Subcode Q sync (SCOR) input from the CD DSP
5	SFSY	I	WFCK signal input from the CD DSP
6	MUTE	I	Muting control signal input from the system controller
7	VDD1	-	Power supply terminal (+5V)
8	VSS1	-	Ground terminal
9	MCE	I	Chip enable signal input terminal Not used
10	MCDO	O	Serial data output terminal Not used
11	MCDI	I	Serial data input terminal Not used
12	MCCK	I	Serial data transfer clock signal input terminal Not used
13	$\overline{\text{WE}}$	O	Write enable signal output to the D-RAM
14	$\overline{\text{RAS}}$	O	Row address strobe signal output to the D-RAM
15 to 22	VA0 to VA7	O	Address signal output to the D-RAM
23	VSS2	-	Ground terminal
24	VDD2	-	Power supply terminal (+5V)
25	VD0	I/O	Two-way data bus with the D-RAM
26	$\overline{\text{CAS}}$	O	Column address strobe signal output to the D-RAM
27	VD1	I/O	Two-way data bus with the D-RAM
28	$\overline{\text{OE}}$	O	Data read strobe signal output to the D-RAM
29, 30	VD2, VD3	I/O	Two-way data bus with the D-RAM
31	BLANKIN	I	Blank signal input terminal Not used
32	BIN	I	RGB (B) signal input terminal Not used
33	GIN	I	RGB (G) signal input terminal Not used
34	RIN	I	RGB (R) signal input terminal Not used
35	$\overline{\text{HSYNC}}$	O	Horizontal synchronize signal output terminal Not used
36	$\overline{\text{VSYNC}}$	O	Vertical synchronize signal output terminal Not used
37	CDET	O	CD-G detection signal output terminal
38	VON	I	Video on control signal input terminal Not used
39, 40	TEST1, TEST2	I	Test mode setting terminal
41	LINESW	I	Line switch input terminal Not used
42	VREF	I	Reference voltage input terminal
43	AVDD	-	Power supply terminal (+5V)
44	VDOUT	O	Video signal output terminal
45	AVSS	-	Ground terminal
46, 47	BIAS1, BIAS2	I	For bias setting terminal
48	VSS3	-	Ground terminal
49	VDD3	-	Power supply terminal (+5V)
50	QNG	O	Not used
51	PNG	O	Not used
52	DEN	I	NTSC/PAL switching control signal input terminal
53	FSC	O	Not used
54	$\overline{\text{RESET}}$	I	System reset signal input from the system controller
55	SENTSC	I	Mode setting terminal
56	PDOWN	I	Mode setting terminal

Pin No.	Pin Name	I/O	Description
57	XI2	I	System clock input terminal (17.734475 MHz) (for PAL) Not used
58	XO2	O	System clock output terminal (17.734475 MHz) (for PAL) Not used
59	XI1	I	System clock input terminal (14.31818 MHz) (for NTSC)
60	XO1	O	System clock output terminal (14.31818 MHz) (for NTSC)

PANEL BOARD IC701 μ PD780232GC-508-8BT-A (FL/LED DRIVER)

Pin No.	Pin Name	I/O	Description
1	VDD1	-	Power supply terminal (+3.3V)
2	VSS1	-	Ground terminal
3	X1	I	System clock input terminal (4.19 MHz)
4	X2	O	System clock output terminal (4.19 MHz)
5	IC	I	Not used
6	RESET	I	System reset signal input from the system controller "L": reset
7	SCK1	I	Serial data transfer clock signal input from the system controller
8	SI1	O	Serial data output to the system controller
9	SO1	I	Serial data input from the system controller
10 to 15	NC	I	Not used
16	CE	I	Chip select signal input from the system controller
17	NC	I	Not used
18	AVSS	-	Ground terminal
19 to 22	KEY1 to KEY4	I	Front panel key input terminal (A/D input)
23	VSS0	-	Ground terminal
24	AVDD	-	Power supply terminal (+5V)
25	VDD0	-	Power supply terminal (+5V)
26 to 31	STREAM LED1 to STREAM LED6	O	LED drive signal output terminal
32	SW LED	O	LED drive signal output terminal Not used
33 to 44	NC	I	Not used
45 to 58	S1 to S14	O	Segment drive signal output to the fluorescent indicator tube
59	VDD2	-	Power supply terminal (+5V)
60	VLOD	-	Power supply terminal (for fluorescent indicator tube drive)
61 to 67	S15 to S21	O	Segment drive signal output to the fluorescent indicator tube
68 to 80	G1 to G13	O	Grid drive signal output to the fluorescent indicator tube

SECTION 7

EXPLODED VIEWS

NOTE:

- XX and -X mean standardized parts, so they may have some difference from the original one.

- Color Indication of Appearance Parts

Example:

KNOB, BALANCE (WHITE) . . . (RED)

↑ ↑
Parts Color Cabinet's Color

- Abbreviation

AR : Argentina model

AUS : Australian model

CND: Canadian model

E2 : 120V AC Area in E model

E3 : 240V AC Area in E model

E51 : Chilean and Peruvian models

EA : Saudi Arabia model

EE : East European model

MX : Mexican model

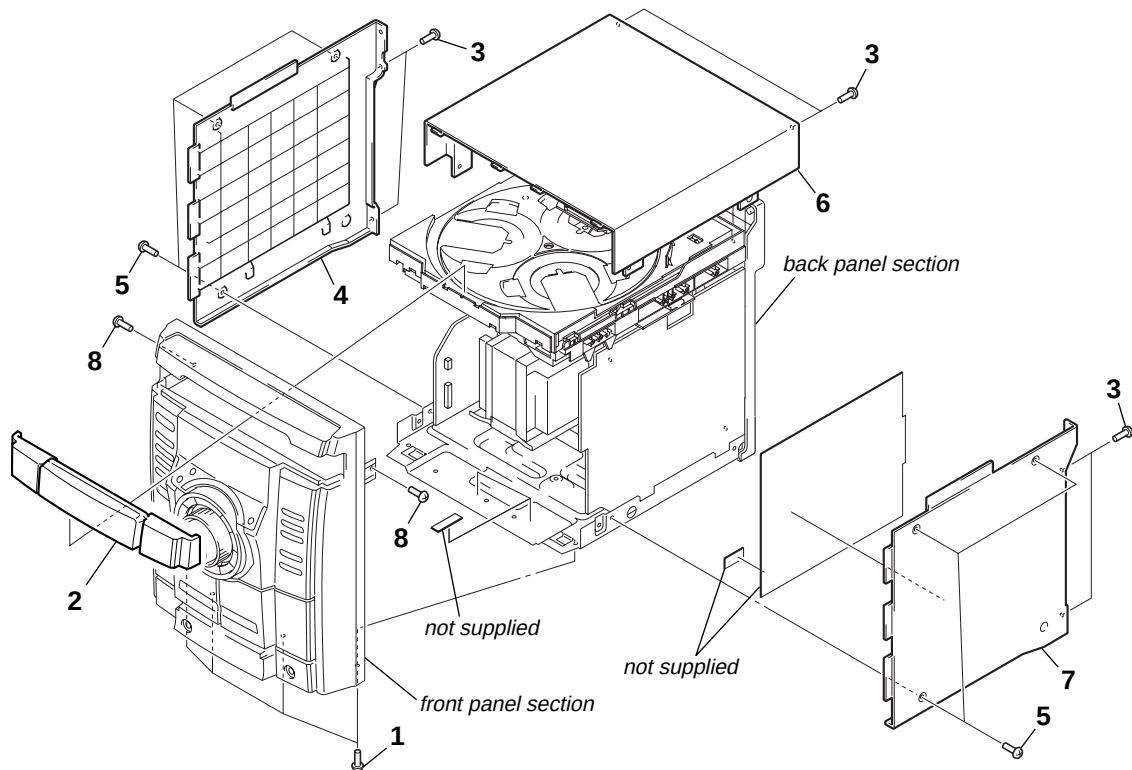
RU : Russian model

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

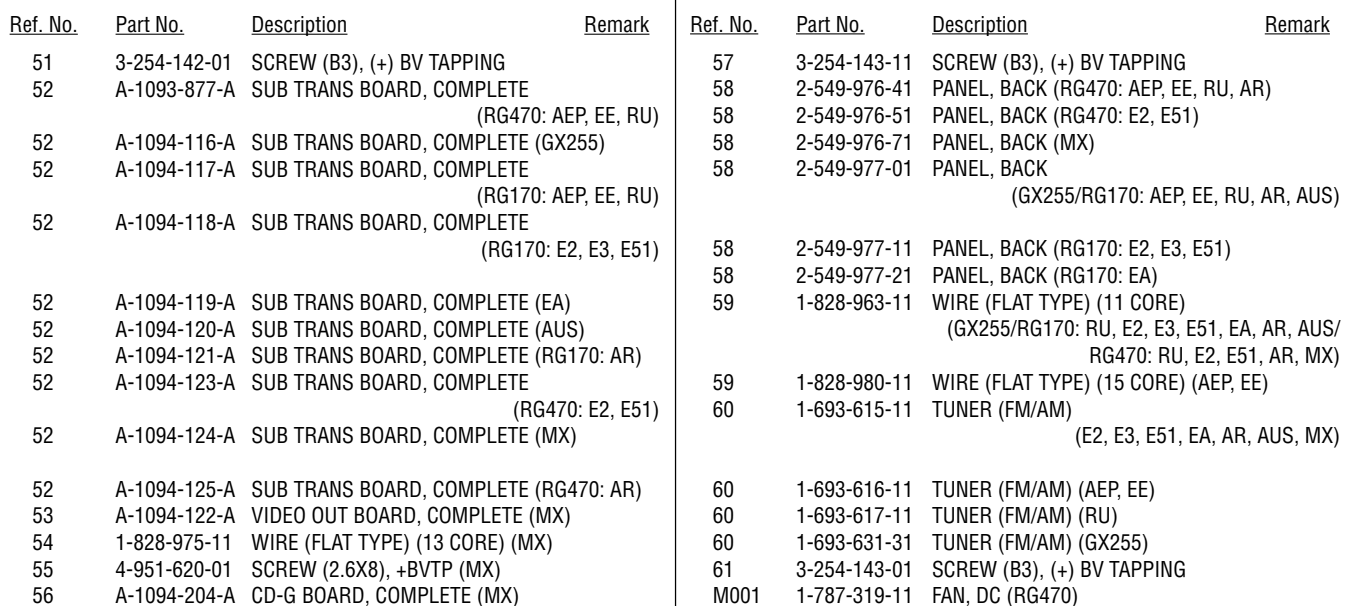
Les composants identifiés par une marque Δ sont critiques pour la sécurité.

Ne les remplacer que par une pièce portant le numéro spécifié.

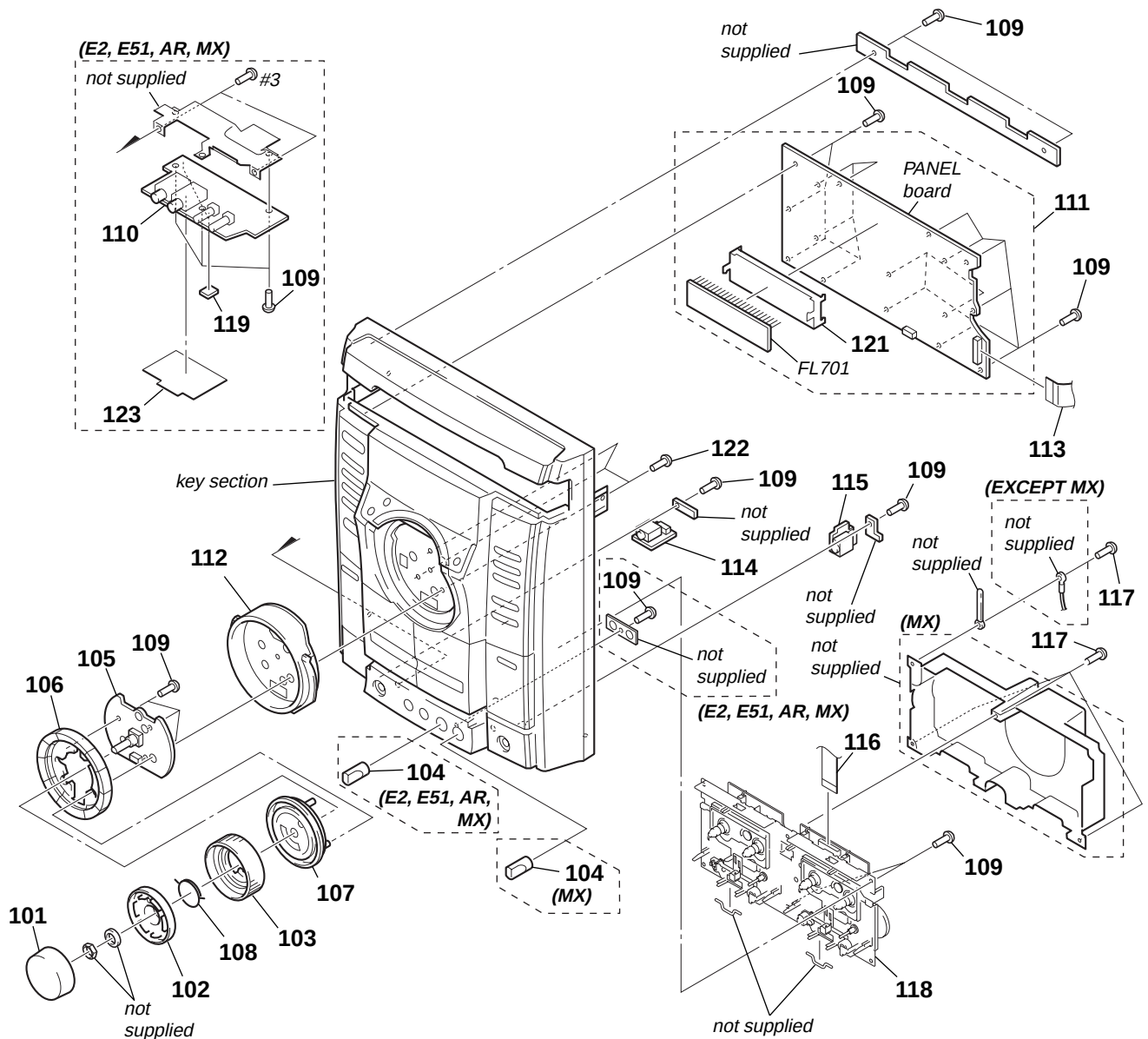
7-1. OVERALL SECTION



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
1	3-252-829-01	SCREW (B3), (+) BV TAPPING		3	3-254-143-11	SCREW (B3), (+) BV TAPPING	
2	2-348-866-62	DOOR (CD) (GX255)		4	2-599-855-11	CASE (SIDE-L)	
2	2-348-866-72	DOOR (CD) (RG170: AEP, EE, RU, E3, EA, AUS)		5	3-363-099-32	SCREW (CASE 3 TP2)	
2	2-348-866-82	DOOR (CD) (RG170: E2, E51, AR)		6	2-599-854-11	CASE (TOP)	
2	2-348-866-92	DOOR (CD) (RG470: AEP, EE, RU)		7	2-599-856-11	CASE (SIDE-R)	
2	2-580-021-02	DOOR (CD) (RG470: E2, E51, AR, MX)		8	3-254-143-01	SCREW (B3), (+) BV TAPPING	

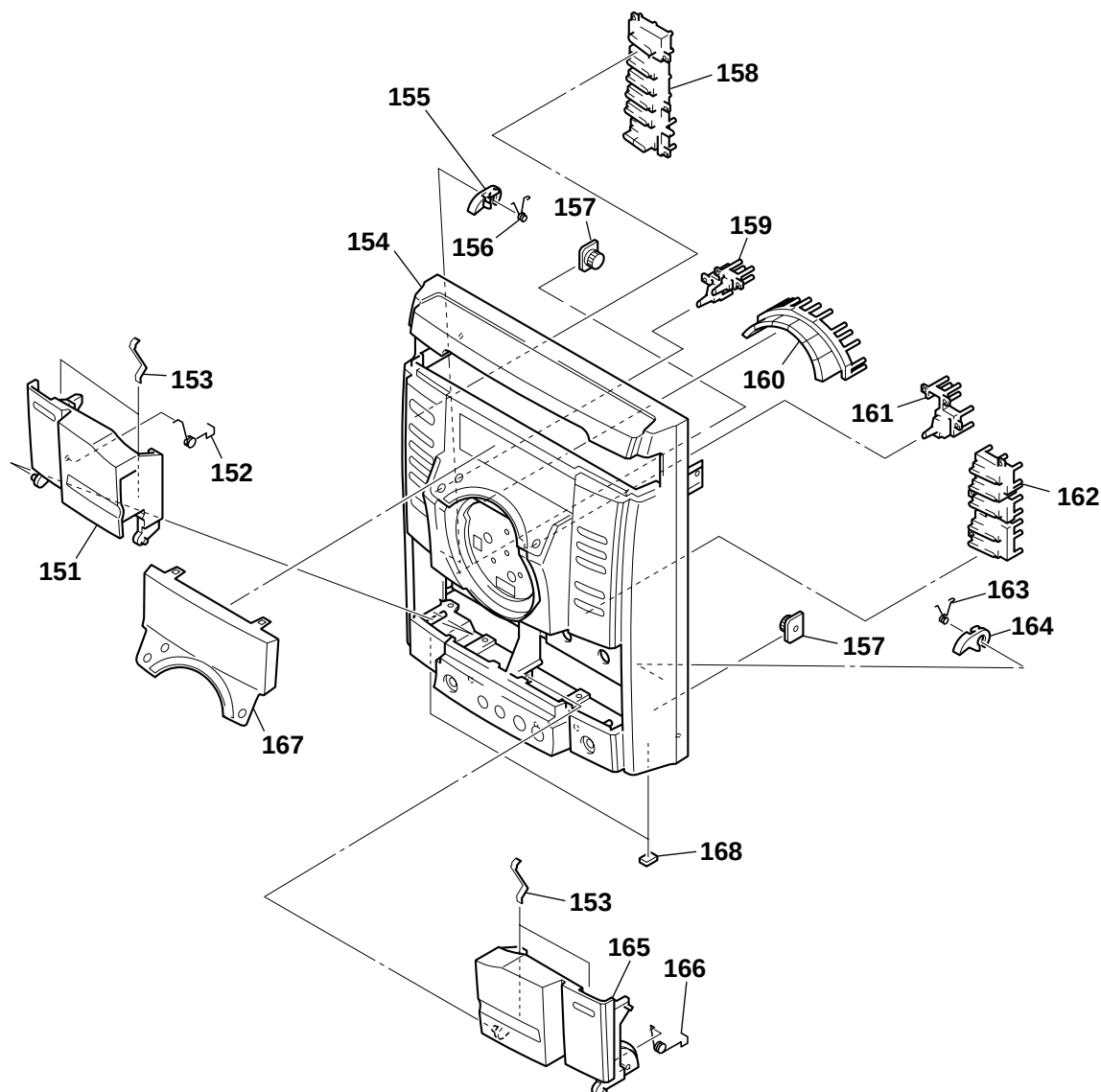


7-3. FRONT PANEL SECTION



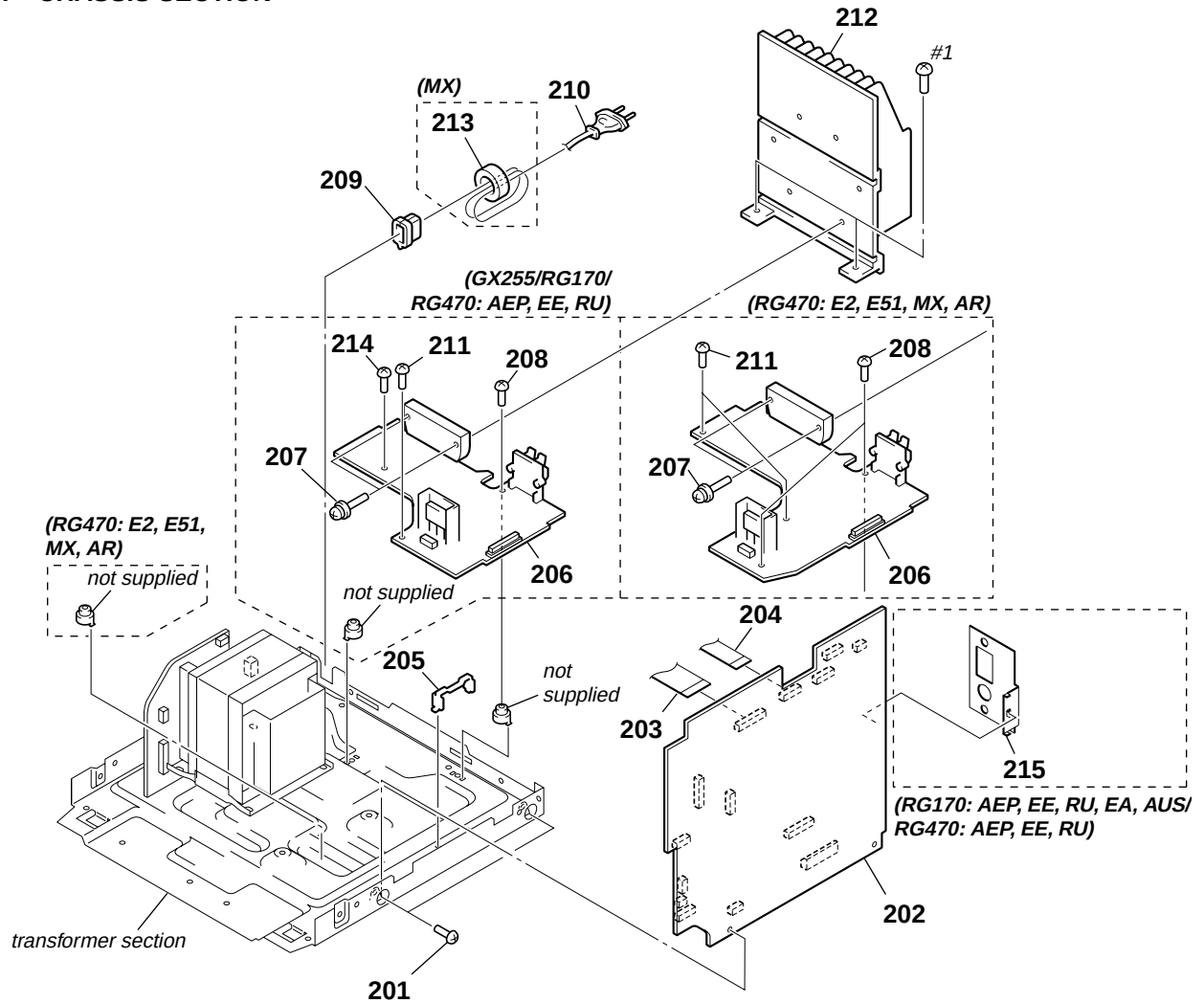
Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
101	4-252-214-01	KNOB, VOLUME		112	X-2067-233-1	WINDOW (CENTER) ASSY (RG470)	
102	2-348-884-01	RING (JOG)		112	X-2067-234-1	WINDOW (CENTER) ASSY (GX255/RG170)	
103	2-348-875-11	KNOB (JOG)		113	1-829-003-11	WIRE (FLAT TYPE) (19 CORE)	
104	2-638-220-01	KNOB (MIC) (E2, E51, AR, MX)		114	A-1094-031-A	AUDIO IN BOARD, COMPLETE	
105	A-1093-878-A	VOL BOARD, COMPLETE		115	A-1094-407-A	HEADPHONE BOARD, COMPLETE	
106	2-348-870-02	KEY (PLAY) (ALBUM -, ALBUM +, <<, >>, <<< - EQ + >>> - TUNING +, EQ BAND, >, <<, >>)		116	1-828-973-11	WIRE (FLAT TYPE) (13 CORE)	
107	2-348-874-01	COVER (CENTER)		117	4-951-620-01	SCREW (2.6X8), +BVTP (EXCEPT MX)	
108	4-252-223-01	SPRING, KNOB		117	4-951-620-11	SCREW (2.6X10), +BVTP (MX)	
109	4-951-620-01	SCREW (2.6X8), +BVTP		118	1-796-485-51	DECK, MECHANICAL (CWM43FF13)	
110	A-1094-199-A	MIC BOARD, COMPLETE (E2, E51, AR)		119	4-233-372-02	FOOT (FELT) (E2, E51, AR, MX)	
110	A-1094-200-A	MIC BOARD, COMPLETE (MX)		121	2-348-856-01	FL GUIDE	
111	A-1093-854-A	PANEL BOARD, COMPLETE (GX255/RG170)		122	3-254-142-01	SCREW (B3), (+) BV TAPPING	
111	A-1093-856-A	PANEL BOARD, COMPLETE (RG470: AEP, EE, RU, E2, E51, AR)		123	2-632-080-01	SHEET (MIC), SHIELD (E2, E51, AR, MX)	
111	A-1093-857-A	PANEL BOARD, COMPLETE (MX)		FL701	1-518-976-31	INDICATOR TUBE, FLUORESCENT	
				#3	7-685-134-19	SCREW +P 2.6X8 TYPE2 NON-SLIT	

7-4. KEY SECTION



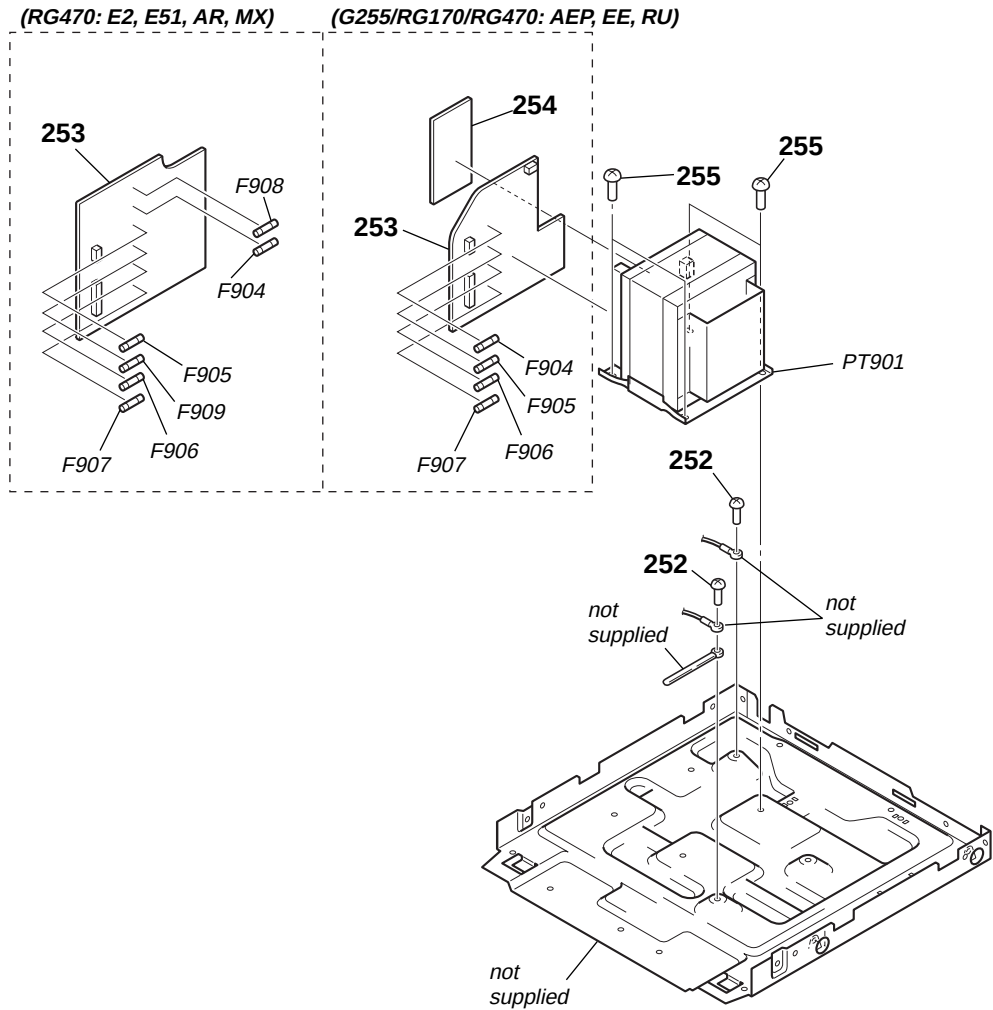
Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
151	2-348-864-03	DOOR (A), CASSETTE		162	2-348-871-12	KEY (CD)	
152	2-549-974-01	SPRING (C-DOOR-L)		163	4-231-841-01	SPRING (HEART CAM-B)	
153	4-238-631-11	TAPE SPRING		164	4-231-825-01	CAM (B), HEART	
154	X-2067-227-1	PANEL (S) ASSY, FRONT (GX255/RG170: AEP, EE, RU, E3, EA, AUS/RG470: AEP, EE, UK)		165	2-348-865-03	DOOR (B), CASSETTE	
154	X-2067-228-1	PANEL (S) ASSY, FRONT (E51, AR, E2)		165	2-348-865-13	DOOR (B), CASSETTE (E2, E51, AR, MX)	
154	X-2067-229-1	PANEL (S) ASSY, FRONT (MX)		166	2-549-975-01	SPRING (C-DOOR-R)	
155	4-231-824-01	CAM (A), HEART		167	2-348-859-01	WINDOW (DISPLAY-B) (MX)	
156	4-231-836-01	SPRING (HEART CAM-A)		167	2-348-862-01	WINDOW (DISPLAY-A)	
157	4-224-104-41	DAMPER				(GX255/RG170: RU, E2, E3, E51, EA, AR, AUS/RG470: E2, E51, RU)	
158	X-2067-231-1	KEY (POWER) ASSY		167	2-348-862-11	WINDOW (DISPLAY-A)	
159	2-348-868-02	KEY (DISPLAY)				(RG170: AEP, EE/RG470: AEP, EE)	
160	2-348-872-02	KEY (EQ)		168	4-225-252-01	CUSHION (FOOT)	
161	2-348-869-02	KEY (MODE) (MX)					
161	2-348-869-12	KEY (MODE) (EXCEPT MX)					

7-5. CHASSIS SECTION



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
201	3-254-142-01	SCREW (B3), (+) BV TAPPING		206	A-1094-146-A	POWER BOARD, COMPLETE (RG470: E2, E51, AR, MX)	
202	A-1093-944-A	MAIN BOARD, COMPLETE (GX255)		207	3-905-609-41	SCREW (TRANSISTOR)	
202	A-1093-945-A	MAIN BOARD, COMPLETE (RG170: AEP, EE)		208	3-254-145-01	SCREW (B3), (+) BV TAPPING	
202	A-1093-946-A	MAIN BOARD, COMPLETE (RG170: RU)		209	3-703-244-00	BUSHING (2104), CORD (EXCEPT E2, E3, MX)	
202	A-1093-947-A	MAIN BOARD, COMPLETE (E3, AUS)		* 209	3-703-571-12	BUSHING (S) (4516), CORD (E2, E3, MX)	
202	A-1093-948-A	MAIN BOARD, COMPLETE (EA)		△ 210	1-769-744-81	CORD, POWER (EA)	
202	A-1093-949-A	MAIN BOARD, COMPLETE (RG170: E2, E51, AR)		△ 210	1-775-790-71	CORD, POWER (AUS)	
202	A-1093-951-A	MAIN BOARD, COMPLETE (RG470: AEP, EE)		△ 210	1-827-226-31	CORD, POWER (E2, E3, MX)	
202	A-1093-953-A	MAIN BOARD, COMPLETE (RG470: E2, E51, AR)		△ 210	1-829-387-11	CORD, POWER (AR)	
202	A-1093-954-A	MAIN BOARD, COMPLETE (MX)		△ 210	1-830-188-11	CORD, POWER (AEP, EE, RU, E51)	
202	A-1123-427-A	MAIN BOARD, COMPLETE (RG470: RU)		△ 210	1-830-190-11	CORD, POWER (GX255)	
203	1-775-251-11	WIRE (FLAT TYPE) (27 CORE) (EXCEPT MX)		211	3-077-331-01	+BV3 (3-CR)	
203	1-775-285-11	WIRE (FLAT TYPE) (31 CORE) (MX)		212	2-549-972-01	HEAT SINK (H) (GX255/RG470: AEP, EE, RU)	
204	1-828-970-11	WIRE (FLAT TYPE) (13 CORE)		212	2-549-972-11	HEAT SINK (H) (RG170: AEP, EE, RU)	
205	4-988-533-01	HOLDER, PWB		212	4-252-219-31	HEAT SINK (RG170: E2, E3, E51, EA, AR, AUS)	
206	A-1094-141-A	POWER BOARD, COMPLETE (GX255)		212	4-252-219-51	HEAT SINK (RG470: E2, E51, AR, MX)	
206	A-1094-142-A	POWER BOARD, COMPLETE (RG170: AEP, EE, RU)		213	1-500-868-11	CORE, FERRITE (MX)	
206	A-1094-143-A	POWER BOARD, COMPLETE (RG170: E2, E3, E51, EA, AR, AUS)		214	3-254-146-01	SCREW (B3), (+) BV TAPPING	
206	A-1094-145-A	POWER BOARD, COMPLETE (RG470: AEP, EE, RU)		215	2-549-969-01	PLATE (TU), SHIELD (RG170: AEP, EE, RU, EA, AUS/RG470: AEP, EE, RU)	
				#1	7-685-881-09	SCREW +BVTT 4X8 (S)	

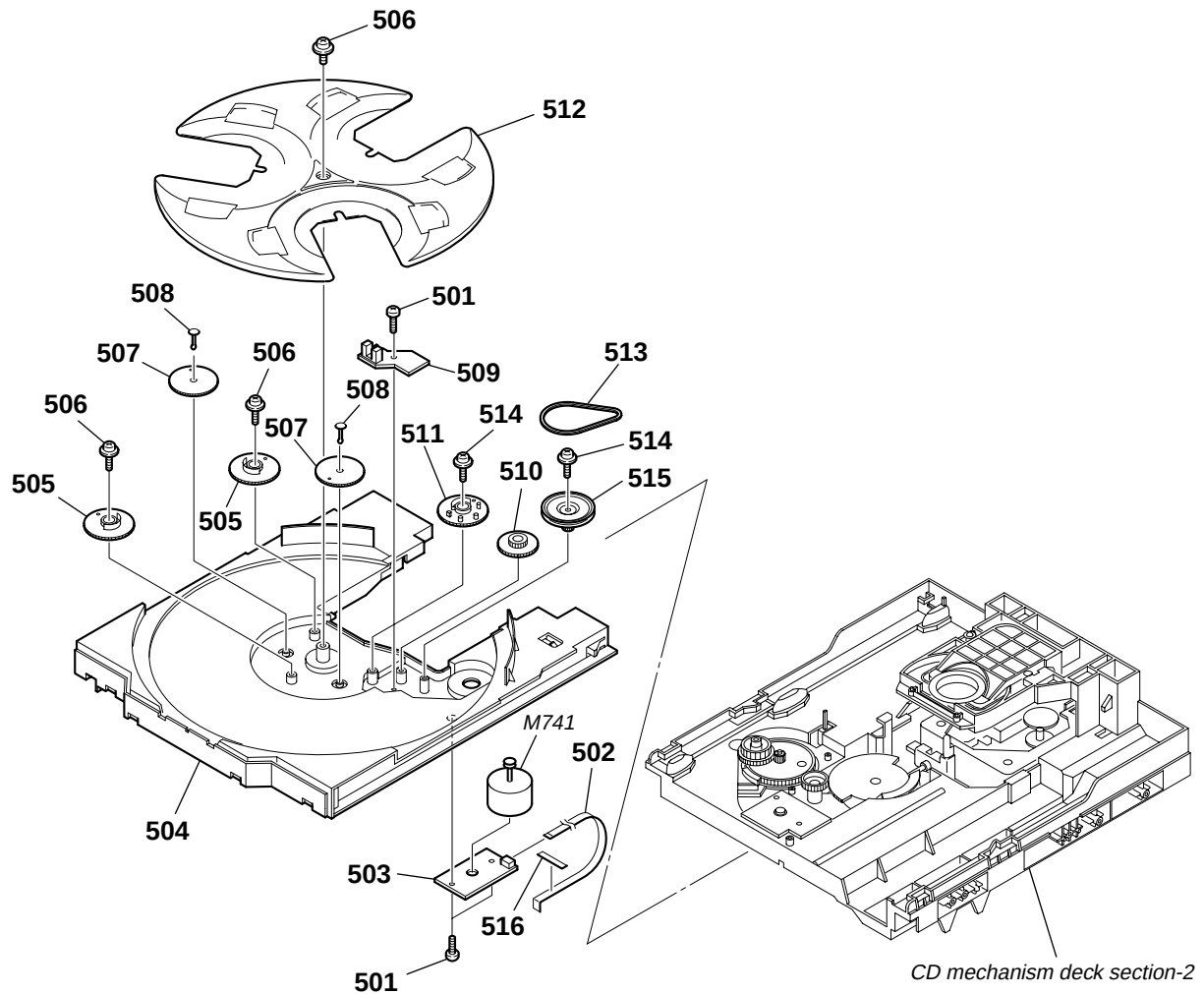
7-6. TRANSFORMER SECTION



Ref. No.	Part No.	Description	Remark
252	3-077-331-01	+BV3 (3-CR)	
253	A-1094-082-A	TRANSFORMER BOARD, COMPLETE (GX255)	
253	A-1094-083-A	TRANSFORMER BOARD, COMPLETE (RG170: AEP, EE, RU)	
253	A-1094-084-A	TRANSFORMER BOARD, COMPLETE (RG170: E2, E3, E51)	
253	A-1094-085-A	TRANSFORMER BOARD, COMPLETE (EA)	
253	A-1094-086-A	TRANSFORMER BOARD, COMPLETE (AUS)	
253	A-1094-087-A	TRANSFORMER BOARD, COMPLETE (RG170: AR)	
253	A-1094-089-A	TRANSFORMER BOARD, COMPLETE (RG470: AEP, EE, RU)	
253	A-1094-090-A	TRANSFORMER BOARD, COMPLETE (RG470: E2, E51)	
253	A-1094-091-A	TRANSFORMER BOARD, COMPLETE (MX)	
253	A-1094-092-A	TRANSFORMER BOARD, COMPLETE (RG470: AR)	
254	A-1102-779-A	AC1 BOARD, COMPLETE (GX255)	
254	A-1102-780-A	AC1 BOARD, COMPLETE (RG170: AEP, EE, RU)	
254	A-1102-781-A	AC1 BOARD, COMPLETE (RG170: E2, E3, E51)	
254	A-1102-782-A	AC1 BOARD, COMPLETE (EA)	
254	A-1102-783-A	AC1 BOARD, COMPLETE (AUS)	
254	A-1102-784-A	AC1 BOARD, COMPLETE (RG170: AR)	
254	A-1102-786-A	AC1 BOARD, COMPLETE (RG470: AEP, EE, RU)	
255	4-900-386-01	SCREW	

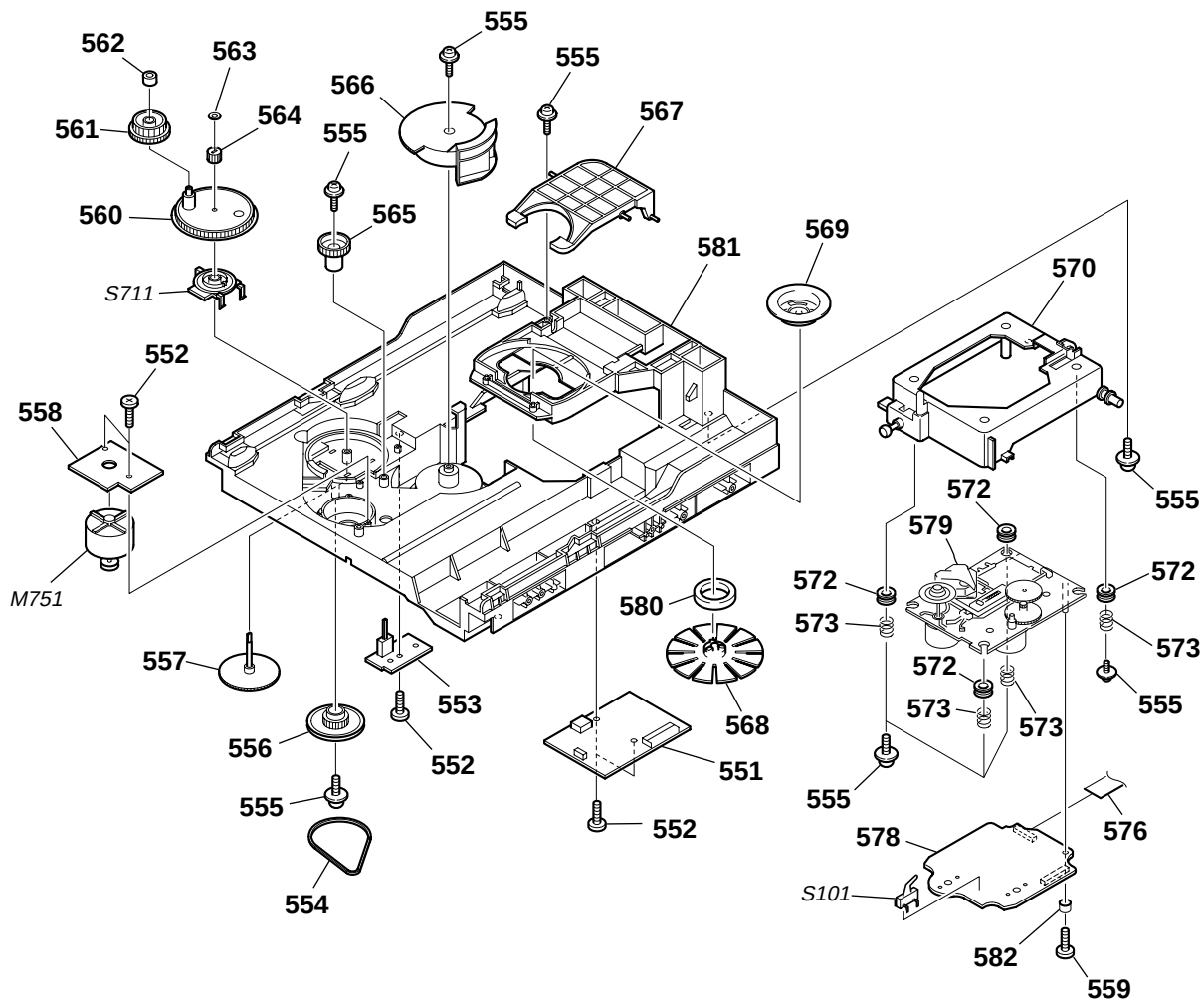
Ref. No.	Part No.	Description	Remark
△ F904	1-533-471-12	FUSE, GLASS TUBE (DIA. 5) (T4A/250V)	(RG170: AEP, EE, RU)
△ F904	1-533-473-12	FUSE, GLASS TUBE (DIA. 5) (T6.3A/250V)	(EXCEPT AEP, EE, RU)
△ F904	1-576-655-12	FUSE, GLASS TUBE (DIA. 5) (T8A/250V)	(RG470: AEP, EE, RU)
△ F905	1-533-471-12	FUSE, GLASS TUBE (DIA. 5) (T4A/250V)	(RG170: AEP, EE, RU)
△ F905	1-533-473-12	FUSE, GLASS TUBE (DIA. 5) (T6.3A/250V)	(EXCEPT AEP, EE, RU)
△ F905	1-576-655-12	FUSE, GLASS TUBE (DIA. 5) (T8A/250V)	(RG470: AEP, EE, RU)
△ F906	1-533-470-12	FUSE, GLASS TUBE (DIA. 5) (T3.15A/250V)	
△ F907	1-533-470-12	FUSE, GLASS TUBE (DIA. 5) (T3.15A/250V)	
△ F908	1-576-655-12	FUSE, GLASS TUBE (DIA. 5) (T8A/250V)	(RG470: E2, E51, AR, MX)
△ F909	1-576-655-12	FUSE, GLASS TUBE (DIA. 5) (T8A/250V)	(RG470: E2, E51, AR, MX)
△ PT901	1-443-602-11	TRANSFORMER, POWER (GX255)	
△ PT901	1-443-604-11	TRANSFORMER, POWER (RG170: AEP, EE, RU)	
△ PT901	1-443-606-11	TRANSFORMER, POWER (RG470: AEP, EE, RU)	
△ PT901	1-443-607-11	TRANSFORMER, POWER (RG170: E2, E3, E51, AR, AUS)	
△ PT901	1-443-609-11	TRANSFORMER, POWER (RG470: E2, E51, AR)	
△ PT901	1-443-611-11	TRANSFORMER, POWER (MX)	
△ PT901	1-443-612-11	TRANSFORMER, POWER (EA)	

7-7. CD MECHANISM DECK SECTION-1
(CDM74KFS-F1BD81C (EXCEPT MX MODEL)/
CDM74KFS-F1BD84 (MX MODEL))



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
501	4-218-253-62	SCREW (M2.6), +BTTP		510	4-243-820-01	GEAR (TABLE)	
502	1-776-182-11	WIRE (FLAT TYPE) (5 CORE)		511	4-243-819-01	GEAR (GENEVA)	
503	1-687-134-12	MOTOR (TB) BOARD		512	4-243-816-11	TRAY	
504	4-243-815-11	TABLE (LOADING)		513	4-243-823-11	BELT (TABLE)	
505	4-245-571-02	GEAR (STOPPER)		514	4-985-672-01	SCREW (+PTPWH M2.6), FLOATING	
506	4-218-252-61	SCREW (+PTPWH M2.6), FLOATING		515	4-243-821-01	PULLEY (TABLE)	
507	4-245-570-01	GEAR (JOINT)		516	3-231-598-01	SHEET (BA)	
508	4-245-572-01	BUSHING (GEAR)		M741	A-1108-965-A	MOTOR ASSY, TABLE	
509	1-687-132-12	SENSOR BOARD					

7-8. CD MECHANISM DECK SECTION-2 (CDM74KFS-F1BD81C (EXCEPT MX MODEL)/ CDM74KFS-F1BD84 (MX MODEL))



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
551	A-1103-756-A	DRIVER BOARD, COMPLETE		568	X-2102-809-1	PULLEY (KH) ASSY	
552	4-218-253-52	SCREW (M2.6), +BTTP		569	4-231-189-01	PULLEY (B), CHUCKING	
553	1-687-669-12	SW BOARD		570	X-2055-190-1	HOLDER (213) ASSY	
554	4-244-034-11	BELT (LOADING)		572	4-227-549-11	INSULATOR	
555	4-985-672-01	SCREW (+PTPWH M2.6), FLOATING		573	4-227-045-31	SPRING (INSULATOR), COIL	
556	4-225-844-01	GEAR (LOADING A)		576	1-827-992-11	WIRE (FLAT TYPE) (16 CORE)	
557	4-224-613-11	GEAR (SHAFT)		578	A-1095-982-A	BD BOARD, COMPLETE (MX)	
558	1-687-133-12	MOTOR (LD) BOARD		578	A-1091-086-A	CD BOARD, COMPLETE (EXCEPT MX)	
559	3-087-053-01	+BVTP2.6 (3CR)		△ 579	8-820-244-01	OPTICAL PICK-UP BLOCK KSM-215DCP/C2NP	
560	4-244-108-01	GEAR, SWING		580	1-471-035-21	MAGNET ASSY	
561	4-224-609-01	GEAR (LOADING C)		581	4-243-817-22	CHASSIS	
562	4-224-608-01	COLLAR, SWING		582	3-307-259-31	TUBE, GAP	
563	3-016-533-11	WASHER (FR), STOPPER		M751	A-1108-966-A	MOTOR ASSY, LOADING	
564	4-224-611-01	GEAR (LOADING B)		S711	1-477-680-12	ENCODER, ROTARY (DISC TRAY ADDRESS DETECT)	
565	4-224-606-01	GEAR (RV)		S101	1-771-853-11	SWITCH, DETECTION (LIMIT)	
566	4-243-818-01	GEAR (U/D)					
567	4-243-822-02	LEVER (LIFTER)					

SECTION 8 ELECTRICAL PARTS LIST

AC1

AUDIO IN

BD

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- XX and -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS**
All resistors are in ohms.
METAL: Metal-film resistor.
METAL OXIDE: Metal oxide-film resistor.
F: nonflammable
- Abbreviation**
AR : Argentina model E3 : 240V AC Area in E model EE : East European model
AUS : Australian model E51 : Chilean and Peruvian models MX : Mexican model
CND : Canadian model EA : Saudi Arabia model RU : Russian model
E2 : 120V AC Area in E model
- Items marked “*” are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS**
In each case, u: 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
	A-1102-779-A	AC1 BOARD, COMPLETE (GX255)		C123	1-107-826-11	CERAMIC CHIP 0.1uF 10%	16V
	A-1102-780-A	AC1 BOARD, COMPLETE (RG170: AEP, EE, RU)		C124	1-162-959-11	CERAMIC CHIP 330PF 5%	50V
	A-1102-781-A	AC1 BOARD, COMPLETE (RG170: E2, E3, E51)		C125	1-164-360-11	CERAMIC CHIP 0.1uF	16V
	A-1102-782-A	AC1 BOARD, COMPLETE (EA)		C131	1-162-927-11	CERAMIC CHIP 100PF 5%	50V
	A-1102-783-A	AC1 BOARD, COMPLETE (AUS)		C132	1-117-863-11	CERAMIC CHIP 0.47uF 10%	6.3V
	A-1102-784-A	AC1 BOARD, COMPLETE (RG170: AR)		C133	1-162-970-11	CERAMIC CHIP 0.01uF 10%	25V
	A-1102-786-A	AC1 BOARD, COMPLETE (RG470: AEP, EE, RU)					
		*****		C134	1-164-360-11	CERAMIC CHIP 0.1uF	16V
		< RESISTOR >		C141	1-107-826-11	CERAMIC CHIP 0.1uF 10%	16V
Δ R902	1-202-723-00	SOLID 2.2M 20% 1/2W (CND)		C142	1-162-965-11	CERAMIC CHIP 0.0015uF 10%	50V
		*****		C143	1-164-360-11	CERAMIC CHIP 0.1uF	16V
	A-1094-031-A	AUDIO IN BOARD, COMPLETE		C151	1-128-995-21	ELECT CHIP 100uF 20%	10V

		< JACK >		C161	1-164-360-11	CERAMIC CHIP 0.1uF	16V
J751	1-785-448-21	JACK (AUDIO IN)		C162	1-164-360-11	CERAMIC CHIP 0.1uF	16V
		< RESISTOR >		C163	1-164-360-11	CERAMIC CHIP 0.1uF	16V
R751	1-216-833-11	METAL CHIP 10K 5% 1/10W		C171	1-162-919-11	CERAMIC CHIP 22PF 5%	50V
R752	1-216-825-11	METAL CHIP 2.2K 5% 1/10W		C172	1-162-920-11	CERAMIC CHIP 27PF 5%	50V

	A-1095-982-A	BD BOARD, COMPLETE (MX)		C174	1-164-360-11	CERAMIC CHIP 0.1uF	16V
		*****		C181	1-164-360-11	CERAMIC CHIP 0.1uF	16V
		< CAPACITOR >		C182	1-164-360-11	CERAMIC CHIP 0.1uF	16V
C10	1-165-989-11	CERAMIC CHIP 10uF 10%	6.3V	C183	1-124-778-00	ELECT CHIP 22uF 20%	6.3V
C11	1-165-989-11	CERAMIC CHIP 10uF 10%	6.3V	C184	1-124-778-00	ELECT CHIP 22uF 20%	6.3V
C14	1-164-360-11	CERAMIC CHIP 0.1uF	16V				
C15	1-164-360-11	CERAMIC CHIP 0.1uF	16V	C185	1-162-962-11	CERAMIC CHIP 470PF 10%	50V
C16	1-115-156-11	CERAMIC CHIP 1uF	10V	C186	1-162-962-11	CERAMIC CHIP 470PF 10%	50V
				C194	1-164-360-11	CERAMIC CHIP 0.1uF	16V
C17	1-126-246-11	ELECT CHIP 220uF 20%	4V	C195	1-164-360-11	CERAMIC CHIP 0.1uF	16V
C18	1-162-964-11	CERAMIC CHIP 0.001uF 10%	50V	C196	1-164-360-11	CERAMIC CHIP 0.1uF	16V
C111	1-162-967-11	CERAMIC CHIP 0.0033uF 10%	50V				
C112	1-162-962-11	CERAMIC CHIP 470PF 10%	50V	C201	1-128-995-21	ELECT CHIP 100uF 20%	10V
C113	1-162-967-11	CERAMIC CHIP 0.0033uF 10%	50V	C203	1-128-995-21	ELECT CHIP 100uF 20%	10V
				C209	1-162-970-11	CERAMIC CHIP 0.01uF 10%	25V
C114	1-162-962-11	CERAMIC CHIP 470PF 10%	50V	C210	1-107-826-11	CERAMIC CHIP 0.1uF 10%	16V
C115	1-164-360-11	CERAMIC CHIP 0.1uF	16V	C211	1-164-230-11	CERAMIC CHIP 220PF 5%	50V
C116	1-128-995-21	ELECT CHIP 100uF 20%	10V				
C122	1-107-826-11	CERAMIC CHIP 0.1uF 10%	16V	C212	1-162-919-11	CERAMIC CHIP 22PF 5%	50V
				C213	1-162-919-11	CERAMIC CHIP 22PF 5%	50V
				C251	1-162-969-11	CERAMIC CHIP 0.0068uF 10%	25V
				C252	1-164-360-11	CERAMIC CHIP 0.1uF	16V
				C255	1-164-360-11	CERAMIC CHIP 0.1uF	16V
				C257	1-164-360-11	CERAMIC CHIP 0.1uF	16V
				C258	1-164-360-11	CERAMIC CHIP 0.1uF	16V
				C259	1-164-360-11	CERAMIC CHIP 0.1uF	16V
				C260	1-128-394-11	ELECT CHIP 220uF 20%	10V
				C302	1-164-360-11	CERAMIC CHIP 0.1uF	16V

HCD-GX255/RG170/RG470

BD CD

Ref. No.	Part No.	Description	Remark
C303	1-164-360-11	CERAMIC CHIP 0.1uF	16V
C305	1-126-246-11	ELECT CHIP 220uF	20% 4V
C306	1-164-360-11	CERAMIC CHIP 0.1uF	16V
C307	1-164-360-11	CERAMIC CHIP 0.1uF	16V
C308	1-126-208-21	ELECT CHIP 47uF	20% 4V
C309	1-164-360-11	CERAMIC CHIP 0.1uF	16V
C310	1-164-360-11	CERAMIC CHIP 0.1uF	16V
C311	1-164-360-11	CERAMIC CHIP 0.1uF	16V
C312	1-164-360-11	CERAMIC CHIP 0.1uF	16V
C313	1-164-360-11	CERAMIC CHIP 0.1uF	16V
C314	1-126-208-21	ELECT CHIP 47uF	20% 4V
C315	1-107-826-11	CERAMIC CHIP 0.1uF	10% 16V
C316	1-162-966-11	CERAMIC CHIP 0.0022uF	10% 50V
C317	1-162-970-11	CERAMIC CHIP 0.01uF	10% 25V
C318	1-162-970-11	CERAMIC CHIP 0.01uF	10% 25V
C320	1-162-964-11	CERAMIC CHIP 0.001uF	10% 50V
< CONNECTOR >			
CN101	1-770-425-11	CONNECTOR, FFC/FPC 16P	
CN201	1-784-879-21	CONNECTOR, FFC (LIF (NON-ZIF)) 31P	
< FERRITE BEAD >			
FB301	1-500-445-21	FERRITE, EMI (SMD) (2012)	
< IC >			
IC101	8-752-425-12	IC CXD3059AR	
IC251	6-705-808-01	IC BA5947FM-E2	
IC301	6-705-365-01	IC TC94A34FG-002	
IC303	6-705-807-01	IC BH15FB1WG	
< TRANSISTOR >			
Q10	6-550-363-01	TRANSISTOR 2SB1690KT146	
< RESISTOR/FERRITE BEAD >			
R10	1-216-791-11	METAL CHIP 3.3	5% 1/10W
R11	1-216-864-11	SHORT CHIP 0	
R12	1-216-845-11	METAL CHIP 100K	5% 1/10W
R13	1-218-446-11	METAL CHIP 1	5% 1/10W
R111	1-216-821-11	METAL CHIP 1K	5% 1/10W
R112	1-216-835-11	METAL CHIP 15K	5% 1/10W
R113	1-216-821-11	METAL CHIP 1K	5% 1/10W
R114	1-216-835-11	METAL CHIP 15K	5% 1/10W
R121	1-216-835-11	METAL CHIP 15K	5% 1/10W
R131	1-216-857-11	METAL CHIP 1M	5% 1/10W
R132	1-216-833-11	METAL CHIP 10K	5% 1/10W
R133	1-216-848-11	METAL CHIP 180K	5% 1/10W
R141	1-216-829-11	METAL CHIP 4.7K	5% 1/10W
R142	1-216-821-11	METAL CHIP 1K	5% 1/10W
R143	1-216-827-11	METAL CHIP 3.3K	5% 1/10W
R151	1-216-864-11	SHORT CHIP 0	
R161	1-216-809-11	METAL CHIP 100	5% 1/10W
R162	1-216-841-11	METAL CHIP 47K	5% 1/10W
R163	1-216-809-11	METAL CHIP 100	5% 1/10W
R165	1-216-864-11	SHORT CHIP 0	
R171	1-216-817-11	METAL CHIP 470	5% 1/10W
R172	1-216-857-11	METAL CHIP 1M	5% 1/10W
R173	1-216-295-00	SHORT CHIP 0	

Ref. No.	Part No.	Description	Remark
R181	1-216-809-11	METAL CHIP 100	5% 1/10W
R182	1-216-809-11	METAL CHIP 100	5% 1/10W
R191	1-216-864-11	SHORT CHIP 0	
R201	1-500-445-21	FERRITE, EMI (SMD) (2012)	
R203	1-216-864-11	SHORT CHIP 0	
R204	1-216-864-11	SHORT CHIP 0	
R205	1-216-864-11	SHORT CHIP 0	
R251	1-216-833-11	METAL CHIP 10K	5% 1/10W
R252	1-216-837-11	METAL CHIP 22K	5% 1/10W
R253	1-216-833-11	METAL CHIP 10K	5% 1/10W
R301	1-216-845-11	METAL CHIP 100K	5% 1/10W
R302	1-216-833-11	METAL CHIP 10K	5% 1/10W
R303	1-216-845-11	METAL CHIP 100K	5% 1/10W
R305	1-216-845-11	METAL CHIP 100K	5% 1/10W
R306	1-216-864-11	SHORT CHIP 0	
R307	1-216-833-11	METAL CHIP 10K	5% 1/10W
R313	1-216-813-11	METAL CHIP 220	5% 1/10W
R351	1-216-809-11	METAL CHIP 100	5% 1/10W
R352	1-216-809-11	METAL CHIP 100	5% 1/10W
R353	1-216-809-11	METAL CHIP 100	5% 1/10W
R354	1-216-809-11	METAL CHIP 100	5% 1/10W
R401	1-216-809-11	METAL CHIP 100	5% 1/10W
R402	1-216-809-11	METAL CHIP 100	5% 1/10W
R403	1-216-809-11	METAL CHIP 100	5% 1/10W
R404	1-216-809-11	METAL CHIP 100	5% 1/10W
R405	1-216-809-11	METAL CHIP 100	5% 1/10W
R406	1-216-809-11	METAL CHIP 100	5% 1/10W
R407	1-216-809-11	METAL CHIP 100	5% 1/10W
R408	1-216-809-11	METAL CHIP 100	5% 1/10W
R409	1-216-809-11	METAL CHIP 100	5% 1/10W
R410	1-216-809-11	METAL CHIP 100	5% 1/10W
R411	1-216-809-11	METAL CHIP 100	5% 1/10W
R412	1-216-809-11	METAL CHIP 100	5% 1/10W
R419	1-216-809-11	METAL CHIP 100	5% 1/10W
R421	1-216-809-11	METAL CHIP 100	5% 1/10W
R422	1-216-809-11	METAL CHIP 100	5% 1/10W
R423	1-216-809-11	METAL CHIP 100	5% 1/10W
< VIBRATOR >			
X171	1-767-408-21	VIBRATOR, CRYSTAL (16.9344MHz)	

A-1091-086-A	CD BOARD, COMPLETE (EXCEPT MX)		

< CAPACITOR >			
C10	1-165-989-11	CERAMIC CHIP 10uF	10% 6.3V
C11	1-165-989-11	CERAMIC CHIP 10uF	10% 6.3V
C14	1-164-360-11	CERAMIC CHIP 0.1uF	16V
C15	1-164-360-11	CERAMIC CHIP 0.1uF	16V
C16	1-115-156-11	CERAMIC CHIP 1uF	10V
C17	1-126-246-11	ELECT CHIP 220uF	20% 4V
C18	1-162-964-11	CERAMIC CHIP 0.001uF	10% 50V
C111	1-162-967-11	CERAMIC CHIP 0.0033uF	10% 50V
C112	1-164-315-11	CERAMIC CHIP 470PF	5% 50V
C113	1-162-967-11	CERAMIC CHIP 0.0033uF	10% 50V
C114	1-164-315-11	CERAMIC CHIP 470PF	5% 50V
C115	1-164-360-11	CERAMIC CHIP 0.1uF	16V

Ref. No.	Part No.	Description				Remark	Ref. No.	Part No.	Description				Remark
C116	1-128-995-21	ELECT CHIP	100uF	20%	10V		C320	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V	
C122	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V								
C123	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V								
									< CONNECTOR >				
C124	1-162-959-11	CERAMIC CHIP	330PF	5%	50V		CN101	1-770-425-11	CONNECTOR, FFC/FPC 16P				
C125	1-164-360-11	CERAMIC CHIP	0.1uF		16V					CN201	1-818-350-11	CONNECTOR (FFC) 27P	
C131	1-162-927-11	CERAMIC CHIP	100PF	5%	50V								
C132	1-117-863-11	CERAMIC CHIP	0.47uF	10%	6.3V								
C133	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V				< FERRITE BEAD >				
C134	1-164-360-11	CERAMIC CHIP	0.1uF		16V		FB301	1-500-445-21	FERRITE, EMI (SMD) (2012)				
C141	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V								
C142	1-162-965-11	CERAMIC CHIP	0.0015uF	10%	50V								
C143	1-164-360-11	CERAMIC CHIP	0.1uF		16V				< IC >				
C151	1-128-995-21	ELECT CHIP	100uF	20%	10V		IC101	8-752-425-12	IC	CXD3059AR			
							IC251	6-705-808-01	IC	BA5947FM-E2			
C161	1-164-360-11	CERAMIC CHIP	0.1uF		16V		IC301	6-705-365-01	IC	TC94A34FG-002			
C162	1-164-360-11	CERAMIC CHIP	0.1uF		16V		IC303	6-705-807-01	IC	BH15FB1WG			
C163	1-164-360-11	CERAMIC CHIP	0.1uF		16V		IC501	8-759-058-62	IC	TC7S08FU (TE85R)			
C171	1-162-919-11	CERAMIC CHIP	22PF	5%	50V								
C172	1-162-920-11	CERAMIC CHIP	27PF	5%	50V				< TRANSISTOR >				
C174	1-164-360-11	CERAMIC CHIP	0.1uF		16V		Q10	6-551-120-01	TRANSISTOR	2SA2119K			
C181	1-164-360-11	CERAMIC CHIP	0.1uF		16V								
C182	1-164-360-11	CERAMIC CHIP	0.1uF		16V								
C183	1-124-778-00	ELECT CHIP	22uF	20%	6.3V				< RESISTOR/FERRITE BEAD >				
C184	1-124-778-00	ELECT CHIP	22uF	20%	6.3V								
							R10	1-216-791-11	METAL CHIP	3.3	5%	1/10W	
							R11	1-216-864-11	SHORT CHIP	0			
C185	1-164-315-11	CERAMIC CHIP	470PF	5%	50V		R12	1-216-845-11	METAL CHIP	100K	5%	1/10W	
C186	1-164-315-11	CERAMIC CHIP	470PF	5%	50V		R13	1-218-446-11	METAL CHIP	1	5%	1/10W	
C194	1-164-360-11	CERAMIC CHIP	0.1uF		16V		R111	1-216-821-11	METAL CHIP	1K	5%	1/10W	
C195	1-164-360-11	CERAMIC CHIP	0.1uF		16V								
C196	1-164-360-11	CERAMIC CHIP	0.1uF		16V		R112	1-216-835-11	METAL CHIP	15K	5%	1/10W	
							R113	1-216-821-11	METAL CHIP	1K	5%	1/10W	
C201	1-128-995-21	ELECT CHIP	100uF	20%	10V		R114	1-216-835-11	METAL CHIP	15K	5%	1/10W	
C203	1-128-995-21	ELECT CHIP	100uF	20%	10V		R121	1-216-835-11	METAL CHIP	15K	5%	1/10W	
C209	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V		R131	1-216-857-11	METAL CHIP	1M	5%	1/10W	
C210	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V								
C211	1-164-230-11	CERAMIC CHIP	220PF	5%	50V		R132	1-216-833-11	METAL CHIP	10K	5%	1/10W	
							R133	1-216-848-11	METAL CHIP	180K	5%	1/10W	
C212	1-162-919-11	CERAMIC CHIP	22PF	5%	50V		R141	1-216-829-11	METAL CHIP	4.7K	5%	1/10W	
C213	1-162-919-11	CERAMIC CHIP	22PF	5%	50V		R142	1-216-821-11	METAL CHIP	1K	5%	1/10W	
C251	1-162-969-11	CERAMIC CHIP	0.0068uF	10%	25V		R143	1-216-827-11	METAL CHIP	3.3K	5%	1/10W	
C252	1-164-360-11	CERAMIC CHIP	0.1uF		16V								
C255	1-164-360-11	CERAMIC CHIP	0.1uF		16V		R151	1-216-864-11	SHORT CHIP	0			
							R161	1-216-809-11	METAL CHIP	100	5%	1/10W	
C257	1-164-360-11	CERAMIC CHIP	0.1uF		16V		R162	1-216-841-11	METAL CHIP	47K	5%	1/10W	
C258	1-164-360-11	CERAMIC CHIP	0.1uF		16V		R163	1-216-809-11	METAL CHIP	100	5%	1/10W	
C259	1-164-360-11	CERAMIC CHIP	0.1uF		16V		R165	1-216-864-11	SHORT CHIP	0			
C260	1-128-394-11	ELECT CHIP	220uF	20%	10V								
C302	1-164-360-11	CERAMIC CHIP	0.1uF		16V		R171	1-216-817-11	METAL CHIP	470	5%	1/10W	
							R172	1-216-857-11	METAL CHIP	1M	5%	1/10W	
C303	1-164-360-11	CERAMIC CHIP	0.1uF		16V		R173	1-216-295-00	SHORT CHIP	0			
C305	1-126-246-11	ELECT CHIP	220uF	20%	4V		R181	1-216-809-11	METAL CHIP	100	5%	1/10W	
C306	1-164-360-11	CERAMIC CHIP	0.1uF		16V		R182	1-216-809-11	METAL CHIP	100	5%	1/10W	
C307	1-164-360-11	CERAMIC CHIP	0.1uF		16V								
C308	1-126-208-21	ELECT CHIP	47uF	20%	4V		R191	1-216-864-11	SHORT CHIP	0			
							R201	1-500-445-21	FERRITE, EMI (SMD) (2012)				
C309	1-164-360-11	CERAMIC CHIP	0.1uF		16V		R203	1-216-864-11	SHORT CHIP	0			
C310	1-164-360-11	CERAMIC CHIP	0.1uF		16V		R204	1-216-864-11	SHORT CHIP	0			
C311	1-164-360-11	CERAMIC CHIP	0.1uF		16V		R205	1-216-864-11	SHORT CHIP	0			
C312	1-164-360-11	CERAMIC CHIP	0.1uF		16V								
C313	1-164-360-11	CERAMIC CHIP	0.1uF		16V		R251	1-216-833-11	METAL CHIP	10K	5%	1/10W	
							R252	1-216-837-11	METAL CHIP	22K	5%	1/10W	
C314	1-126-208-21	ELECT CHIP	47uF	20%	4V		R253	1-216-833-11	METAL CHIP	10K	5%	1/10W	
C315	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V		R301	1-216-845-11	METAL CHIP	100K	5%	1/10W	
C316	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V		R302	1-216-833-11	METAL CHIP	10K	5%	1/10W	
C317	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V								
C318	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V		R303	1-216-845-11	METAL CHIP	100K	5%	1/10W	

HCD-GX255/RG170/RG470

CD CD-G

Ref. No.	Part No.	Description	Remark		
R305	1-216-845-11	METAL CHIP	100K	5%	1/10W
R306	1-216-864-11	SHORT CHIP	0		
R307	1-216-833-11	METAL CHIP	10K	5%	1/10W
R313	1-216-813-11	METAL CHIP	220	5%	1/10W
R351	1-216-809-11	METAL CHIP	100	5%	1/10W
R352	1-216-809-11	METAL CHIP	100	5%	1/10W
R353	1-216-809-11	METAL CHIP	100	5%	1/10W
R354	1-216-809-11	METAL CHIP	100	5%	1/10W
R401	1-216-809-11	METAL CHIP	100	5%	1/10W
R402	1-216-809-11	METAL CHIP	100	5%	1/10W
R403	1-216-809-11	METAL CHIP	100	5%	1/10W
R404	1-216-809-11	METAL CHIP	100	5%	1/10W
R405	1-216-809-11	METAL CHIP	100	5%	1/10W
R406	1-216-809-11	METAL CHIP	100	5%	1/10W
R407	1-216-809-11	METAL CHIP	100	5%	1/10W
R408	1-216-809-11	METAL CHIP	100	5%	1/10W
R409	1-216-809-11	METAL CHIP	100	5%	1/10W
R410	1-216-809-11	METAL CHIP	100	5%	1/10W
R411	1-216-809-11	METAL CHIP	100	5%	1/10W
R412	1-216-809-11	METAL CHIP	100	5%	1/10W
R419	1-216-809-11	METAL CHIP	100	5%	1/10W
R501	1-216-809-11	METAL CHIP	100	5%	1/10W
< VIBRATOR >					
X171	1-767-408-21	VIBRATOR, CRYSTAL (16.9344MHz)			

A-1094-204-A		CD-G BOARD, COMPLETE (MX)			

< CAPACITOR/JUMPER RESISTOR >					
C1001	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C1002	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C1003	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C1004	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C1005	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C1006	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C1007	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C1008	1-126-193-11	ELECT CHIP	1uF	20%	50V
C1010	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C1011	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C1012	1-126-205-11	ELECT CHIP	47uF	20%	6.3V
C1013	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C1014	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C1015	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C1016	1-216-864-11	SHORT CHIP	0		
C1018	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C1019	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C1022	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C1023	1-126-193-11	ELECT CHIP	1uF	20%	50V
C1024	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C1025	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C1026	1-110-530-11	ELECT CHIP	1000uF	20%	6.3V
C1027	1-162-957-11	CERAMIC CHIP	220PF	5%	50V
C1028	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C1029	1-164-357-11	CERAMIC CHIP	0.001uF	5%	50V
C1030	1-124-778-00	ELECT CHIP	22uF	20%	6.3V
C1031	1-126-193-11	ELECT CHIP	1uF	20%	50V

Ref. No.	Part No.	Description	Remark		
< CONNECTOR >					
CN1001	1-779-416-11	CONNECTOR, FFC (LIF (NON-ZIF)) 13P			
< JUMPER RESISTOR >					
FB1001	1-216-864-11	SHORT CHIP	0		
< IC >					
IC1001	6-707-420-01	IC TC9411AFG (BS, K)			
IC1002	6-704-474-01	IC MSM514400E-60TS-K			
IC1003	8-759-473-95	IC uPC2905T-E1			
IC1005	8-759-584-98	IC SN74AHCT04NSR			
IC1006	6-706-369-01	IC NJM2561F1-TE2			
< JUMPER RESISTOR >					
JR1001	1-216-864-11	SHORT CHIP	0		
< RESISTOR >					
L1001	1-216-864-11	SHORT CHIP	0		
L1002	1-216-797-11	METAL CHIP	10	5%	1/10W
< TRANSISTOR >					
Q1001	8-729-027-59	TRANSISTOR	DTC144EKA-T146		
Q1002	8-729-027-59	TRANSISTOR	DTC144EKA-T146		
Q1005	8-729-027-59	TRANSISTOR	DTC144EKA-T146		
Q1006	8-729-027-23	TRANSISTOR	DTA114EKA-T146		
Q1007	8-729-027-59	TRANSISTOR	DTC144EKA-T146		
Q1008	8-729-804-41	TRANSISTOR	2SB1122-S		
Q1009	8-729-027-23	TRANSISTOR	DTA114EKA-T146		
Q1010	8-729-027-59	TRANSISTOR	DTC144EKA-T146		
< RESISTOR/CAPACITOR >					
R1003	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R1004	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R1005	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R1006	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R1011	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R1012	1-216-833-11	METAL CHIP	10K	5%	1/10W
R1013	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R1015	1-216-809-11	METAL CHIP	100	5%	1/10W
R1016	1-216-833-11	METAL CHIP	10K	5%	1/10W
R1017	1-216-833-11	METAL CHIP	10K	5%	1/10W
R1020	1-216-833-11	METAL CHIP	10K	5%	1/10W
R1021	1-216-813-11	METAL CHIP	220	5%	1/10W
R1022	1-216-813-11	METAL CHIP	220	5%	1/10W
R1023	1-216-813-11	METAL CHIP	220	5%	1/10W
R1029	1-216-821-11	METAL CHIP	1K	5%	1/10W
R1030	1-216-837-11	METAL CHIP	22K	5%	1/10W
R1031	1-218-285-11	METAL CHIP	75	5%	1/10W
R1032	1-216-833-11	METAL CHIP	10K	5%	1/10W
R1033	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R1034	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R1035	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R1036	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V
R1037	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V
R1038	1-162-962-11	CERAMIC CHIP	470PF	10%	50V
R1051	1-216-797-11	METAL CHIP	10	5%	1/10W

CD-G

DRIVER

HEADPHONE

MAIN

Ref. No.	Part No.	Description	Remark
< VIBRATOR >			
X1002	1-813-555-11	VIBRATOR, CRYSTAL (14.31818MHz)	

	A-1103-756-A	DRIVER BOARD, COMPLETE	

< CAPACITOR >			
C715	1-126-933-11	ELECT	100uF 20% 16V
C731	1-126-964-11	ELECT	10uF 20% 50V
C735	1-164-159-21	CERAMIC	0.1uF 50V
C736	1-164-159-21	CERAMIC	0.1uF 50V
C737	1-164-159-21	CERAMIC	0.1uF 50V
C741	1-162-306-11	CERAMIC	0.01uF 20% 16V
C751	1-162-306-11	CERAMIC	0.01uF 20% 16V
C752	1-164-159-21	CERAMIC	0.1uF 50V
< CONNECTOR >			
CN701	1-784-735-11	CONNECTOR, FFC 13P	
CN702	1-784-766-11	CONNECTOR, FFC 5P	
* CN703	1-564-720-11	PIN, CONNECTOR (SMALL TYPE) 4P	
CN704	1-785-328-11	PIN, CONNECTOR (LIGHT ANGRE) 2P	
< DIODE >			
D701	8-719-921-42	DIODE MTZJ-5.1A	
D711	8-719-109-69	DIODE RD3.6ESB2	
< IC >			
IC701	8-759-598-69	IC BA6956AN	
IC712	8-759-598-69	IC BA6956AN	
< TRANSISTOR >			
Q731	8-729-029-66	TRANSISTOR DTC114ESA	
< RESISTOR >			
R701	1-249-413-11	CARBON	470 5% 1/4W
R702	1-247-807-31	CARBON	100 5% 1/4W
R711	1-249-417-11	CARBON	1K 5% 1/4W
R712	1-249-425-11	CARBON	4.7K 5% 1/4W
R713	1-249-433-11	CARBON	22K 5% 1/4W
R721	1-249-425-11	CARBON	4.7K 5% 1/4W
R722	1-249-425-11	CARBON	4.7K 5% 1/4W
R723	1-249-425-11	CARBON	4.7K 5% 1/4W
R731	1-247-807-31	CARBON	100 5% 1/4W
R732	1-249-429-11	CARBON	10K 5% 1/4W
R733	1-249-417-11	CARBON	1K 5% 1/4W
R734	1-249-430-11	CARBON	12K 5% 1/4W
R735	1-247-807-31	CARBON	100 5% 1/4W
R751	1-249-425-11	CARBON	4.7K 5% 1/4W

	A-1094-407-A	HEADPHONE BOARD, COMPLETE	

< CAPACITOR >			
C781	1-162-964-11	CERAMIC CHIP	0.001uF 10% 50V
C782	1-162-964-11	CERAMIC CHIP	0.001uF 10% 50V

Ref. No.	Part No.	Description	Remark
< JACK >			
J701	1-785-448-21	JACK (PHONES)	

A-1093-944-A	MAIN BOARD, COMPLETE (GX255)		
A-1093-945-A	MAIN BOARD, COMPLETE (RG170: AEP, EE)		
A-1093-946-A	MAIN BOARD, COMPLETE (RG170: RU)		
A-1093-947-A	MAIN BOARD, COMPLETE (E3, AUS)		
A-1093-948-A	MAIN BOARD, COMPLETE (EA)		
A-1093-949-A	MAIN BOARD, COMPLETE		
	(RG170: E2, E51, AR)		
A-1093-951-A	MAIN BOARD, COMPLETE (RG470: AEP, EE)		
A-1093-953-A	MAIN BOARD, COMPLETE		
	(RG470: E2, E51, AR)		
A-1093-954-A	MAIN BOARD, COMPLETE (MX)		
A-1123-427-A	MAIN BOARD, COMPLETE (RG470: RU)		

7-685-872-09	SCREW +BVTT 3X8 (S)		
< CAPACITOR >			
C001	1-136-165-00	FILM	0.1uF 5% 50V
C002	1-136-165-00	FILM	0.1uF 5% 50V
C005	1-126-768-11	ELECT	2200uF 20% 16V
C007	1-126-965-11	ELECT	22uF 20% 50V
C011	1-136-165-00	FILM	0.1uF 5% 50V
C012	1-136-165-00	FILM	0.1uF 5% 50V
C013	1-126-943-11	ELECT	2200uF 20% 25V
C015	1-126-933-11	ELECT	100uF 20% 16V
C016	1-162-964-11	CERAMIC CHIP	0.001uF 10% 50V
C023	1-126-943-11	ELECT	2200uF 20% 25V
C025	1-126-933-11	ELECT	100uF 20% 16V
C026	1-162-974-11	CERAMIC CHIP	0.01uF 50V
C027	1-162-974-11	CERAMIC CHIP	0.01uF 50V
C028	1-162-974-11	CERAMIC CHIP	0.01uF 50V
C031	1-162-964-11	CERAMIC CHIP	0.001uF 10% 50V
	(AEP, EE, RU)		
C032	1-162-964-11	CERAMIC CHIP	0.001uF 10% 50V
	(AEP, EE, RU)		
C041	1-126-947-11	ELECT	47uF 20% 35V
	(RG470)		
C042	1-126-963-11	ELECT	4.7uF 20% 50V
	(RG470)		
C043	1-164-156-11	CERAMIC CHIP	0.1uF 25V
	(RG470)		
C044	1-162-964-11	CERAMIC CHIP	0.001uF 10% 50V
	(RG470)		
C045	1-164-156-11	CERAMIC CHIP	0.1uF 25V
	(RG470)		
C063	1-164-156-11	CERAMIC CHIP	0.1uF 25V
C064	1-162-964-11	CERAMIC CHIP	0.001uF 10% 50V
C065	1-162-964-11	CERAMIC CHIP	0.001uF 10% 50V
	(AEP, EE, RU)		
C066	1-162-964-11	CERAMIC CHIP	0.001uF 10% 50V
	(AEP, EE, RU)		
C068	1-162-964-11	CERAMIC CHIP	0.001uF 10% 50V
	(AEP, EE, RU)		
C069	1-162-964-11	CERAMIC CHIP	0.001uF 10% 50V
	(AEP, EE, RU)		
C070	1-162-964-11	CERAMIC CHIP	0.001uF 10% 50V
	(AEP, EE, RU)		

HCD-GX255/RG170/RG470

MAIN

Ref. No.	Part No.	Description	Remark		
C101	1-126-960-11	ELECT	1uF	20%	50V
C102	1-126-960-11	ELECT	1uF	20%	50V
C103	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C104	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C105	1-126-960-11	ELECT	1uF	20%	50V
C106	1-126-960-11	ELECT	1uF	20%	50V
C109	1-126-960-11	ELECT	1uF	20%	50V
C110	1-126-960-11	ELECT	1uF	20%	50V
C111	1-126-965-11	ELECT	22uF	20%	50V
C113	1-126-960-11	ELECT	1uF	20%	50V
C114	1-126-960-11	ELECT	1uF	20%	50V
C116	1-126-960-11	ELECT	1uF	20%	50V
C117	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C118	1-126-961-11	ELECT	2.2uF	20%	50V
C119	1-126-961-11	ELECT	2.2uF	20%	50V
C120	1-125-891-11	CERAMIC CHIP	0.47uF	10%	10V
C121	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V
C122	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V
C123	1-107-726-91	CERAMIC CHIP	0.01uF	10%	16V
C124	1-107-726-91	CERAMIC CHIP	0.01uF	10%	16V
C125	1-107-726-91	CERAMIC CHIP	0.01uF	10%	16V
C126	1-107-726-91	CERAMIC CHIP	0.01uF	10%	16V
C127	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C128	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C129	1-126-964-11	ELECT	10uF	20%	50V
C130	1-126-964-11	ELECT	10uF	20%	50V
C131	1-126-960-11	ELECT	1uF	20%	50V
C132	1-126-959-11	ELECT	0.47uF	20%	50V
C133	1-126-957-11	ELECT	0.22uF	20%	50V
C136	1-126-964-11	ELECT	10uF	20%	50V
C137	1-126-964-11	ELECT	10uF	20%	50V
C139	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C140	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C141	1-162-949-11	CERAMIC CHIP	47PF	5%	50V
C142	1-162-949-11	CERAMIC CHIP	47PF	5%	50V
C143	1-136-165-00	FILM	0.1uF	5%	50V
C144	1-136-165-00	FILM	0.1uF	5%	50V
C145	1-136-165-00	FILM	0.1uF	5%	50V
C146	1-136-165-00	FILM	0.1uF	5%	50V
C147	1-164-362-11	CERAMIC CHIP	470PF	5%	50V
C148	1-164-362-11	CERAMIC CHIP	470PF	5%	50V
C149	1-126-947-11	ELECT	47uF	20%	35V
C155	1-126-947-11	ELECT	47uF	20%	35V
C156	1-126-933-11	ELECT	100uF	20%	16V
C158	1-115-467-11	CERAMIC CHIP	0.22uF	10%	10V
C159	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C160	1-126-933-11	ELECT	100uF	20%	16V
C161	1-162-953-11	CERAMIC CHIP	100PF	5%	50V
C162	1-162-953-11	CERAMIC CHIP	100PF	5%	50V
C163	1-126-965-11	ELECT	22uF	20%	50V
C171	1-126-956-11	ELECT	0.1uF	20%	50V
C172	1-126-956-11	ELECT	0.1uF	20%	50V
C173	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V
C174	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V
C175	1-107-726-91	CERAMIC CHIP	0.01uF	10%	16V
C176	1-107-726-91	CERAMIC CHIP	0.01uF	10%	16V

Ref. No.	Part No.	Description	Remark		
C177	1-162-960-11	CERAMIC CHIP	220PF	10%	50V
C178	1-162-960-11	CERAMIC CHIP	220PF	10%	50V
C179	1-126-964-11	ELECT	10uF	20%	50V
C180	1-126-964-11	ELECT	10uF	20%	50V
C181	1-126-960-11	ELECT	1uF	20%	50V
C182	1-126-960-11	ELECT	1uF	20%	50V
C183	1-126-960-11	ELECT	1uF	20%	50V
C184	1-126-960-11	ELECT	1uF	20%	50V
C185	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C186	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C187	1-164-362-11	CERAMIC CHIP	470PF	5%	50V
C188	1-164-362-11	CERAMIC CHIP	470PF	5%	50V
C189	1-164-362-11	CERAMIC CHIP	470PF	5%	50V
C190	1-164-362-11	CERAMIC CHIP	470PF	5%	50V
C191	1-107-726-91	CERAMIC CHIP	0.01uF	10%	16V
C192	1-107-726-91	CERAMIC CHIP	0.01uF	10%	16V
C193	1-162-960-11	CERAMIC CHIP	220PF	10%	50V
C194	1-162-960-11	CERAMIC CHIP	220PF	10%	50V
C195	1-162-953-11	CERAMIC CHIP	100PF	5%	50V
C196	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C197	1-162-960-11	CERAMIC CHIP	220PF	10%	50V
C198	1-162-960-11	CERAMIC CHIP	220PF	10%	50V
C199	1-126-964-11	ELECT	10uF	20%	50V
C200	1-126-964-11	ELECT	10uF	20%	50V
C201	1-126-961-11	ELECT	2.2uF	20%	50V
C202	1-126-961-11	ELECT	2.2uF	20%	50V
C205	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C206	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C207	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C208	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C209	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C210	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C211	1-131-679-31	FILM	0.01uF	5%	50V
C212	1-130-479-00	MYLAR	0.0047uF	5%	50V
C213	1-131-679-31	FILM	0.01uF	5%	50V
C214	1-130-479-00	MYLAR	0.0047uF	5%	50V
C215	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C220	1-162-945-11	CERAMIC CHIP	22PF	5%	50V
C222	1-126-947-11	ELECT	47uF	20%	35V
C223	1-131-679-31	FILM	0.01uF	5%	50V
C224	1-130-479-00	MYLAR	0.0047uF	5%	50V
C225	1-130-479-00	MYLAR	0.0047uF	5%	50V
C229	1-126-963-11	ELECT	4.7uF	20%	50V
C253	1-162-949-11	CERAMIC CHIP	47PF	5%	50V
C253	1-216-864-11	SHORT CHIP	0 (RG170: AEP, EE, RU)		
C254	1-162-949-11	CERAMIC CHIP	47PF	5%	50V
C254	1-216-864-11	SHORT CHIP	0 (RG170: AEP, EE, RU)		

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
C255	1-162-945-11	CERAMIC CHIP 22PF 5% 50V (GX255/RG170: E2, E3, E51, EA, AR, AUS/RG470)		CN331	1-784-774-11	CONNECTOR, FFC 13P (MX)	
C256	1-162-945-11	CERAMIC CHIP 22PF 5% 50V (GX255/RG170: E2, E3, E51, EA, AR, AUS/RG470)		CN341	1-784-774-11	CONNECTOR, FFC 13P	
C257	1-126-947-11	ELECT 47uF 20% 35V (GX255/RG170: E2, E3, E51, EA, AR, AUS/RG470)		CN381	1-568-830-11	CONNECTOR, FFC 11P (EXCEPT AEP, EE)	
C258	1-126-947-11	ELECT 47uF 20% 35V (GX255/RG170: E2, E3, E51, EA, AR, AUS/RG470)		CN381	1-784-776-11	CONNECTOR, FFC 15P (AEP, EE)	
				CN391	1-784-774-11	CONNECTOR, FFC 13P	
				CN991	1-784-780-11	CONNECTOR, FFC 19P	
						< DIODE >	
C259	1-126-964-11	ELECT 10uF 20% 50V		D001	6-500-522-21	DIODE 10EDB40-TB3	
C260	1-126-964-11	ELECT 10uF 20% 50V		D002	6-500-522-21	DIODE 10EDB40-TB3	
C263	1-126-947-11	ELECT 47uF 20% 35V (GX255/RG170: E2, E3, E51, EA, AR, AUS/RG470)		D003	6-500-522-21	DIODE 10EDB40-TB3	
C264	1-162-964-11	CERAMIC CHIP 0.001uF 10% 50V (GX255/RG170: E2, E3, E51, EA, AR, AUS/RG470)		D004	6-500-522-21	DIODE 10EDB40-TB3	
C265	1-126-963-11	ELECT 4.7uF 20% 50V		D006	8-719-988-61	DIODE 1SS355TE-17	
C266	1-126-963-11	ELECT 4.7uF 20% 50V		D007	6-500-522-21	DIODE 10EDB40-TB3	
C301	1-126-964-11	ELECT 10uF 20% 50V		D008	6-500-522-21	DIODE 10EDB40-TB3	
C302	1-126-964-11	ELECT 10uF 20% 50V		D011	6-500-522-21	DIODE 10EDB40-TB3	
C305	1-162-964-11	CERAMIC CHIP 0.001uF 10% 50V (GX255)		D012	6-500-522-21	DIODE 10EDB40-TB3	
C311	1-164-156-11	CERAMIC CHIP 0.1uF 25V		D013	6-500-522-21	DIODE 10EDB40-TB3	
C317	1-126-926-11	ELECT 1000uF 20% 10V		D014	6-500-522-21	DIODE 10EDB40-TB3	
C384	1-162-953-11	CERAMIC CHIP 100PF 5% 50V (AEP, EE, RU)		D021	6-500-522-21	DIODE 10EDB40-TB3	
C391	1-164-156-11	CERAMIC CHIP 0.1uF 25V		D022	6-500-522-21	DIODE 10EDB40-TB3	
C901	1-126-933-11	ELECT 100uF 20% 16V		D023	6-500-522-21	DIODE 10EDB40-TB3	
C902	1-126-964-11	ELECT 10uF 20% 50V		D024	6-500-522-21	DIODE 10EDB40-TB3	
C904	1-164-156-11	CERAMIC CHIP 0.1uF 25V		D031	8-719-988-61	DIODE 1SS355TE-17	
C906	1-126-964-11	ELECT 10uF 20% 50V		D035	8-719-000-08	DIODE MC2838 (RG470)	
C908	1-164-156-11	CERAMIC CHIP 0.1uF 25V		D041	8-719-083-63	DIODE UDZSTE-1713B (RG470)	
C909	1-164-156-11	CERAMIC CHIP 0.1uF 25V		D121	6-500-848-01	DIODE MC2840-T112-1	
C910	1-164-156-11	CERAMIC CHIP 0.1uF 25V		D122	6-500-848-01	DIODE MC2840-T112-1	
C911	1-162-964-11	CERAMIC CHIP 0.001uF 10% 50V		D301	6-500-522-21	DIODE 10EDB40-TB3	
C912	1-162-960-11	CERAMIC CHIP 220PF 10% 50V		D302	6-500-522-21	DIODE 10EDB40-TB3	
C914	1-162-919-11	CERAMIC CHIP 22PF 5% 50V		D303	8-719-083-60	DIODE UDZSTE-174.7B	
C916	1-126-916-11	ELECT 1000uF 20% 6.3V		D341	8-719-000-07	DIODE MC2836	
C917	1-164-156-11	CERAMIC CHIP 0.1uF 25V		D901	8-719-083-60	DIODE UDZSTE-174.7B	
C918	1-162-964-11	CERAMIC CHIP 0.001uF 10% 50V		D902	8-719-000-07	DIODE MC2836	
C919	1-164-156-11	CERAMIC CHIP 0.1uF 25V		D903	8-719-988-61	DIODE 1SS355TE-17	
C921	1-126-961-11	ELECT 2.2uF 20% 50V		D905	8-719-988-61	DIODE 1SS355TE-17	
C922	1-126-963-11	ELECT 4.7uF 20% 50V		D910	8-719-988-61	DIODE 1SS355TE-17	
C923	1-164-156-11	CERAMIC CHIP 0.1uF 25V		D921	6-500-848-01	DIODE MC2840-T112-1	
C924	1-164-156-11	CERAMIC CHIP 0.1uF 25V		D923	6-500-848-01	DIODE MC2840-T112-1	
C925	1-164-156-11	CERAMIC CHIP 0.1uF 25V		D943	8-719-000-08	DIODE MC2838	
C927	1-162-919-11	CERAMIC CHIP 22PF 5% 50V		D947	8-719-988-61	DIODE 1SS355TE-17	
C928	1-162-964-11	CERAMIC CHIP 0.001uF 10% 50V				< EARTH TERMINAL >	
C970	1-162-964-11	CERAMIC CHIP 0.001uF 10% 50V		EP031	1-537-770-21	TERMINAL BOARD, GROUND	
				EP061	1-537-770-21	TERMINAL BOARD, GROUND	
		< CONNECTOR >				< IC >	
CN031	1-778-982-21	CONNECTOR, BOARD TO BOARD 13P		IC006	6-702-771-01	IC TA78033LS	
CN041	1-564-506-11	PLUG, CONNECTOR 3P (RG470)		IC011	8-759-701-59	IC NJM78M09FA	
CN061	1-564-707-11	PIN, CONNECTOR (SMALL TYPE) 5P		IC021	8-759-701-59	IC NJM78M09FA	
CN065	1-564-707-11	PIN, CONNECTOR (SMALL TYPE) 5P		IC101	6-705-852-01	IC BD3401KS2	
* CN066	1-564-706-11	PIN, CONNECTOR (SMALL TYPE) 4P (E2, E51, AR, MX)		IC251	8-759-909-71	IC BA4558F (GX255/RG170: E2, E3, E51, EA, AR, AUS/RG470)	
* CN201	1-564-705-11	PIN, CONNECTOR (SMALL TYPE) 3P		IC901	6-805-528-01	IC M30302MCP-A02FPU0	
* CN203	1-564-710-11	PIN, CONNECTOR (SMALL TYPE) 8P		IC902	8-759-713-61	IC PST3429UL	
CN301	1-779-295-11	CONNECTOR, FFC (LIF (NON-ZIF)) 27P (EXCEPT MX)					
CN301	1-779-299-11	CONNECTOR, FFC (LIF (NON-ZIF)) 31P (MX)					

HCD-GX255/RG170/RG470

MAIN

Ref. No.	Part No.	Description	Remark		
< JUMPER RESISTOR >					
JR001	1-216-864-11	SHORT CHIP	0		
JR005	1-216-864-11	SHORT CHIP	0		
JR006	1-216-864-11	SHORT CHIP	0		
JR009	1-216-864-11	SHORT CHIP	0		
JR010	1-216-864-11	SHORT CHIP	0		
JR171	1-216-864-11	SHORT CHIP	0		
JR172	1-216-864-11	SHORT CHIP	0		
JR174	1-216-864-11	SHORT CHIP	0		
< RESISTOR >					
JW033	1-249-401-11	CARBON	47	5%	1/4W (MX)
< COIL >					
L201	1-424-849-11	COIL, OSCILLATION (BIAS)			
< TRANSISTOR >					
Q002	8-729-120-28	TRANSISTOR	2SC1623-L5L6		
Q041	6-551-276-01	TRANSISTOR	RT1N431C-TP-1		
Q042	8-729-037-13	TRANSISTOR	KTA1271Y		
Q043	8-729-142-46	TRANSISTOR	2SC2001-LK (RG470)		
Q044	8-729-142-46	TRANSISTOR	2SC2001-LK (RG470)		
Q045	8-729-120-28	TRANSISTOR	2SC1623-L5L6 (RG470)		
Q111	8-729-120-28	TRANSISTOR	2SC1623-L5L6		
Q112	8-729-120-28	TRANSISTOR	2SC1623-L5L6		
Q141	8-729-120-28	TRANSISTOR	2SC1623-L5L6		
Q142	8-729-120-28	TRANSISTOR	2SC1623-L5L6		
Q201	8-729-142-46	TRANSISTOR	2SC2001-LK		
Q203	8-729-600-22	TRANSISTOR	2SA1235-F		
Q205	8-729-120-28	TRANSISTOR	2SC1623-L5L6		
Q206	8-729-120-28	TRANSISTOR	2SC1623-L5L6		
Q207	8-729-120-28	TRANSISTOR	2SC1623-L5L6		
Q208	8-729-120-28	TRANSISTOR	2SC1623-L5L6		
Q209	8-729-120-28	TRANSISTOR	2SC1623-L5L6		
Q210	8-729-120-28	TRANSISTOR	2SC1623-L5L6		
Q231	6-551-276-01	TRANSISTOR	RT1N431C-TP-1		
Q232	8-729-037-13	TRANSISTOR	KTA1271Y		
Q251	8-729-120-28	TRANSISTOR	2SC1623-L5L6		
Q252	8-729-120-28	TRANSISTOR	2SC1623-L5L6		
Q261	8-729-027-23	TRANSISTOR	DTA114EKA-T146		
Q341	6-551-276-01	TRANSISTOR	RT1N431C-TP-1		
Q342	8-729-040-76	TRANSISTOR	KTA1273-Y-AT		
Q343	6-551-276-01	TRANSISTOR	RT1N431C-TP-1		
Q344	8-729-037-13	TRANSISTOR	KTA1271Y		
Q345	6-551-276-01	TRANSISTOR	RT1N431C-TP-1		
Q346	8-729-037-13	TRANSISTOR	KTA1271Y		
Q901	8-729-120-28	TRANSISTOR	2SC1623-L5L6		
Q902	8-729-120-28	TRANSISTOR	2SC1623-L5L6		
Q903	8-729-037-13	TRANSISTOR	KTA1271Y		
Q904	8-729-120-28	TRANSISTOR	2SC1623-L5L6		
Q933	6-551-276-01	TRANSISTOR	RT1N431C-TP-1		
< RESISTOR >					
R001	1-216-801-11	METAL CHIP	22	5%	1/10W
R002	1-216-864-11	SHORT CHIP	0		
R005	1-216-829-11	METAL CHIP	4.7K	5%	1/10W

Ref. No.	Part No.	Description	Remark		
R006	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R007	1-216-833-11	METAL CHIP	10K	5%	1/10W
R032	1-216-821-11	METAL CHIP	1K	5%	1/10W (GX255/RG170: E2, E3, E51, EA, AR, AUS/RG470)
R033	1-216-837-11	METAL CHIP	22K	5%	1/10W
R034	1-216-837-11	METAL CHIP	22K	5%	1/10W
R035	1-216-829-11	METAL CHIP	4.7K	5%	1/10W (RG470)
R036	1-216-829-11	METAL CHIP	4.7K	5%	1/10W (RG470)
R037	1-216-829-11	METAL CHIP	4.7K	5%	1/10W (GX255/RG170: E2, E3, E51, EA, AR, AUS/RG470)
R042	1-216-833-11	METAL CHIP	10K	5%	1/10W
R043	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R044	1-216-864-11	SHORT CHIP	0 (RG470)		
R045	1-216-821-11	METAL CHIP	1K	5%	1/10W (RG470)
R046	1-216-821-11	METAL CHIP	1K	5%	1/10W (RG470)
R047	1-216-829-11	METAL CHIP	4.7K	5%	1/10W (RG470)
R048	1-216-841-11	METAL CHIP	47K	5%	1/10W (RG470)
R049	1-216-789-11	METAL CHIP	2.2	5%	1/10W (RG470)
R050	1-216-841-11	METAL CHIP	47K	5%	1/10W (RG470)
R052	1-216-853-11	METAL CHIP	470K	5%	1/10W
△R059	1-215-867-00	METAL OXIDE	470	5%	1W F (RG170: AEP, EE, RU)
△R059	1-215-890-11	METAL OXIDE	470	5%	2W F (GX255/RG170: E2, E3, E51, EA, AR, AUS)
△R059	1-215-892-11	METAL OXIDE	1K	5%	2W F (RG470)
△R060	1-215-867-00	METAL OXIDE	470	5%	1W F (RG170: AEP, EE, RU)
△R060	1-215-890-11	METAL OXIDE	470	5%	2W F (GX255/RG170: E2, E3, E51, EA, AR, AUS)
△R060	1-215-892-11	METAL OXIDE	1K	5%	2W F (RG470)
R063	1-216-805-11	METAL CHIP	47	5%	1/10W (GX255/RG170)
R063	1-216-809-11	METAL CHIP	100	5%	1/10W (RG470)
R064	1-216-805-11	METAL CHIP	47	5%	1/10W (GX255/RG170)
R064	1-216-809-11	METAL CHIP	100	5%	1/10W (RG470)
R068	1-216-797-11	METAL CHIP	10	5%	1/10W (E2, E51, AR, MX)
R069	1-216-837-11	METAL CHIP	22K	5%	1/10W (E2, E51, AR, MX)
R070	1-216-833-11	METAL CHIP	10K	5%	1/10W
R103	1-216-821-11	METAL CHIP	1K	5%	1/10W
R104	1-216-821-11	METAL CHIP	1K	5%	1/10W
R106	1-216-821-11	METAL CHIP	1K	5%	1/10W (E2, E51, AR, MX)
R107	1-216-821-11	METAL CHIP	1K	5%	1/10W
R108	1-216-837-11	METAL CHIP	22K	5%	1/10W
R109	1-216-829-11	METAL CHIP	4.7K	5%	1/10W

Ref. No.	Part No.	Description	Remark			Ref. No.	Part No.	Description	Remark		
R110	1-216-841-11	METAL CHIP	47K	5%	1/10W	R175	1-216-821-11	METAL CHIP	1K	5%	1/10W
R111	1-216-845-11	METAL CHIP	100K	5%	1/10W	R176	1-216-821-11	METAL CHIP	1K	5%	1/10W
R112	1-216-817-11	METAL CHIP	470	5%	1/10W	R177	1-216-821-11	METAL CHIP	1K	5%	1/10W
R113	1-216-829-11	METAL CHIP	4.7K	5%	1/10W	R178	1-216-821-11	METAL CHIP	1K	5%	1/10W
R114	1-216-825-11	METAL CHIP	2.2K	5%	1/10W	R179	1-216-853-11	METAL CHIP	470K	5%	1/10W
R116	1-216-809-11	METAL CHIP	100	5%	1/10W	R180	1-216-853-11	METAL CHIP	470K	5%	1/10W
R117	1-216-833-11	METAL CHIP	10K	5%	1/10W	R181	1-216-845-11	METAL CHIP	100K	5%	1/10W
R119	1-216-829-11	METAL CHIP	4.7K	5%	1/10W	R182	1-216-845-11	METAL CHIP	100K	5%	1/10W
R120	1-216-829-11	METAL CHIP	4.7K	5%	1/10W	R183	1-216-849-11	METAL CHIP	220K	5%	1/10W
R121	1-216-829-11	METAL CHIP	4.7K	5%	1/10W	R184	1-216-849-11	METAL CHIP	220K	5%	1/10W
R122	1-216-829-11	METAL CHIP	4.7K	5%	1/10W	R185	1-216-841-11	METAL CHIP	47K	5%	1/10W
R128	1-216-833-11	METAL CHIP	10K	5%	1/10W	R186	1-216-841-11	METAL CHIP	47K	5%	1/10W
R129	1-216-845-11	METAL CHIP	100K	5%	1/10W	R187	1-216-845-11	METAL CHIP	100K	5%	1/10W
R130	1-216-864-11	SHORT CHIP	0			R188	1-216-845-11	METAL CHIP	100K	5%	1/10W
R131	1-216-849-11	METAL CHIP	220K	5%	1/10W	R189	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R132	1-216-849-11	METAL CHIP	220K	5%	1/10W	R190	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R133	1-216-825-11	METAL CHIP	2.2K	5%	1/10W	R191	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R134	1-216-825-11	METAL CHIP	2.2K	5%	1/10W	R192	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R135	1-216-821-11	METAL CHIP	1K	5%	1/10W (RG470)	R203	1-216-841-11	METAL CHIP	47K	5%	1/10W
R135	1-216-864-11	SHORT CHIP	0 (GX255/RG170)			R204	1-216-841-11	METAL CHIP	47K	5%	1/10W
R136	1-216-821-11	METAL CHIP	1K	5%	1/10W (RG470)	R205	1-216-833-11	METAL CHIP	10K	5%	1/10W
R136	1-216-864-11	SHORT CHIP	0 (GX255/RG170)			R206	1-216-833-11	METAL CHIP	10K	5%	1/10W
R137	1-216-841-11	METAL CHIP	47K	5%	1/10W	R207	1-216-837-11	METAL CHIP	22K	5%	1/10W
R138	1-216-841-11	METAL CHIP	47K	5%	1/10W	R208	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R139	1-216-837-11	METAL CHIP	22K	5%	1/10W	R212	1-216-797-11	METAL CHIP	10	5%	1/10W
R140	1-216-837-11	METAL CHIP	22K	5%	1/10W	R232	1-216-833-11	METAL CHIP	10K	5%	1/10W
R141	1-216-849-11	METAL CHIP	220K	5%	1/10W	R233	1-216-833-11	METAL CHIP	10K	5%	1/10W
R142	1-216-849-11	METAL CHIP	220K	5%	1/10W	R234	1-216-833-11	METAL CHIP	10K	5%	1/10W
R143	1-216-841-11	METAL CHIP	47K	5%	1/10W	R235	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R144	1-216-841-11	METAL CHIP	47K	5%	1/10W	R236	1-216-833-11	METAL CHIP	10K	5%	1/10W
R145	1-216-841-11	METAL CHIP	47K	5%	1/10W	R237	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R146	1-216-857-11	METAL CHIP	1M	5%	1/10W	R238	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R147	1-216-845-11	METAL CHIP	100K	5%	1/10W	R239	1-216-821-11	METAL CHIP	1K	5%	1/10W
R148	1-216-845-11	METAL CHIP	100K	5%	1/10W	R240	1-216-821-11	METAL CHIP	1K	5%	1/10W
R149	1-216-841-11	METAL CHIP	47K	5%	1/10W	R244	1-216-837-11	METAL CHIP	22K	5%	1/10W
R150	1-216-841-11	METAL CHIP	47K	5%	1/10W	R245	1-216-833-11	METAL CHIP	10K	5%	1/10W
R156	1-216-809-11	METAL CHIP	100	5%	1/10W	R247	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R157	1-216-809-11	METAL CHIP	100	5%	1/10W	R248	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R158	1-216-809-11	METAL CHIP	100	5%	1/10W	R250	1-216-833-11	METAL CHIP	10K	5%	1/10W
R159	1-216-857-11	METAL CHIP	1M	5%	1/10W	(GX255/RG170: E2, E3, E51, EA, AR, AUS/RG470)					
R160	1-216-797-11	METAL CHIP	10	5%	1/10W	R250	1-216-864-11	SHORT CHIP	0 (RG170: AEP, EE, RU)		
R161	1-216-825-11	METAL CHIP	2.2K	5%	1/10W	R251	1-216-817-11	METAL CHIP	470	5%	1/10W (RG470: E2, E51, AR, MX)
R162	1-216-825-11	METAL CHIP	2.2K	5%	1/10W	R251	1-216-821-11	METAL CHIP	1K	5%	1/10W (GX255/RG170: E2, E3, E51, EA, AR, AUS/RG470: AEP, EE, RU)
R163	1-216-833-11	METAL CHIP	10K	5%	1/10W	R251	1-216-864-11	SHORT CHIP	0 (RG170: AEP, EE, RU)		
R164	1-216-833-11	METAL CHIP	10K	5%	1/10W	R252	1-216-817-11	METAL CHIP	470	5%	1/10W (RG470: E2, E51, AR, MX)
R165	1-216-829-11	METAL CHIP	4.7K	5%	1/10W	R252	1-216-821-11	METAL CHIP	1K	5%	1/10W (GX255/RG170: E2, E3, E51, EA, AR, AUS/RG470: AEP, EE, RU)
R166	1-216-829-11	METAL CHIP	4.7K	5%	1/10W	R252	1-216-864-11	SHORT CHIP	0 (RG170: AEP, EE, RU)		
R167	1-216-849-11	METAL CHIP	220K	5%	1/10W	R253	1-216-833-11	METAL CHIP	10K	5%	1/10W (GX255/RG170: E2, E3, E51, EA, AR, AUS/RG470)
R168	1-216-849-11	METAL CHIP	220K	5%	1/10W	R253	1-216-864-11	SHORT CHIP	0 (RG170: AEP, EE, RU)		
R169	1-216-845-11	METAL CHIP	100K	5%	1/10W	R254	1-216-833-11	METAL CHIP	10K	5%	1/10W (RG470)
R170	1-216-845-11	METAL CHIP	100K	5%	1/10W						
R171	1-216-817-11	METAL CHIP	470	5%	1/10W						
R172	1-216-817-11	METAL CHIP	470	5%	1/10W						
R173	1-216-825-11	METAL CHIP	2.2K	5%	1/10W						
R174	1-216-825-11	METAL CHIP	2.2K	5%	1/10W						

HCD-GX255/RG170/RG470

MAIN

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
R254	1-216-837-11	METAL CHIP 22K 5% 1/10W (GX255/RG170: E2, E3, E51, EA, AR, AUS)		R350	1-216-829-11	METAL CHIP 4.7K 5% 1/10W	
R257	1-216-833-11	METAL CHIP 10K 5% 1/10W (RG470)		R351	1-216-841-11	METAL CHIP 47K 5% 1/10W	
R257	1-216-837-11	METAL CHIP 22K 5% 1/10W (GX255/RG170: E2, E3, E51, EA, AR, AUS)		R352	1-216-829-11	METAL CHIP 4.7K 5% 1/10W	
R258	1-216-837-11	METAL CHIP 22K 5% 1/10W (RG470)		R353	1-216-829-11	METAL CHIP 4.7K 5% 1/10W	
R259	1-216-837-11	METAL CHIP 22K 5% 1/10W (RG470)		R354	1-216-829-11	METAL CHIP 4.7K 5% 1/10W	
R261	1-216-833-11	METAL CHIP 10K 5% 1/10W		R355	1-216-837-11	METAL CHIP 22K 5% 1/10W	
R262	1-216-833-11	METAL CHIP 10K 5% 1/10W		R356	1-216-837-11	METAL CHIP 22K 5% 1/10W	
R263	1-216-825-11	METAL CHIP 2.2K 5% 1/10W		R357	1-216-821-11	METAL CHIP 1K 5% 1/10W	
R264	1-216-825-11	METAL CHIP 2.2K 5% 1/10W		R358	1-216-821-11	METAL CHIP 1K 5% 1/10W	
R265	1-216-809-11	METAL CHIP 100 5% 1/10W (GX255/RG170: E2, E3, E51, EA, AR, AUS/RG470)		R359	1-216-833-11	METAL CHIP 10K 5% 1/10W	
R267	1-216-841-11	METAL CHIP 47K 5% 1/10W		R360	1-216-833-11	METAL CHIP 10K 5% 1/10W	
R268	1-216-829-11	METAL CHIP 4.7K 5% 1/10W		R361	1-216-837-11	METAL CHIP 22K 5% 1/10W	
R301	1-216-821-11	METAL CHIP 1K 5% 1/10W		R362	1-216-837-11	METAL CHIP 22K 5% 1/10W	
R302	1-216-821-11	METAL CHIP 1K 5% 1/10W		R363	1-216-821-11	METAL CHIP 1K 5% 1/10W	
R303	1-216-833-11	METAL CHIP 10K 5% 1/10W		R364	1-216-821-11	METAL CHIP 1K 5% 1/10W	
R304	1-216-833-11	METAL CHIP 10K 5% 1/10W		R365	1-216-833-11	METAL CHIP 10K 5% 1/10W	
R314	1-216-809-11	METAL CHIP 100 5% 1/10W		R366	1-216-833-11	METAL CHIP 10K 5% 1/10W	
R315	1-216-809-11	METAL CHIP 100 5% 1/10W		R367	1-216-837-11	METAL CHIP 22K 5% 1/10W	
R316	1-216-809-11	METAL CHIP 100 5% 1/10W		R368	1-216-837-11	METAL CHIP 22K 5% 1/10W	
R317	1-216-817-11	METAL CHIP 470 5% 1/10W		R369	1-216-837-11	METAL CHIP 22K 5% 1/10W	
R318	1-216-809-11	METAL CHIP 100 5% 1/10W		R370	1-216-837-11	METAL CHIP 22K 5% 1/10W	
R319	1-216-809-11	METAL CHIP 100 5% 1/10W		R381	1-216-809-11	METAL CHIP 100 5% 1/10W (EXCEPT AEP, EE, RU)	
R320	1-216-809-11	METAL CHIP 100 5% 1/10W		R381	1-216-817-11	METAL CHIP 470 5% 1/10W (AEP, EE, RU)	
R321	1-216-809-11	METAL CHIP 100 5% 1/10W		R382	1-216-809-11	METAL CHIP 100 5% 1/10W (EXCEPT AEP, EE, RU)	
R322	1-216-817-11	METAL CHIP 470 5% 1/10W		R382	1-216-817-11	METAL CHIP 470 5% 1/10W (AEP, EE, RU)	
R323	1-216-809-11	METAL CHIP 100 5% 1/10W		R383	1-216-809-11	METAL CHIP 100 5% 1/10W (EXCEPT AEP, EE, RU)	
R330	1-216-821-11	METAL CHIP 1K 5% 1/10W (MX)		R383	1-216-817-11	METAL CHIP 470 5% 1/10W (AEP, EE, RU)	
R331	1-216-809-11	METAL CHIP 100 5% 1/10W (MX)		R384	1-216-809-11	METAL CHIP 100 5% 1/10W (EXCEPT AEP, EE, RU)	
R332	1-216-809-11	METAL CHIP 100 5% 1/10W (MX)		R384	1-216-817-11	METAL CHIP 470 5% 1/10W (AEP, EE, RU)	
R333	1-216-809-11	METAL CHIP 100 5% 1/10W (MX)		R385	1-216-817-11	METAL CHIP 470 5% 1/10W (AEP, EE, RU)	
R334	1-216-809-11	METAL CHIP 100 5% 1/10W (MX)		R386	1-216-817-11	METAL CHIP 470 5% 1/10W (AEP, EE, RU)	
R337	1-216-809-11	METAL CHIP 100 5% 1/10W (MX)		R387	1-216-817-11	METAL CHIP 470 5% 1/10W (AEP, EE, RU)	
R338	1-216-809-11	METAL CHIP 100 5% 1/10W (MX)		R387	1-216-864-11	SHORT CHIP 0 (EXCEPT AEP, EE, RU)	
R339	1-216-821-11	METAL CHIP 1K 5% 1/10W (MX)		R388	1-216-817-11	METAL CHIP 470 5% 1/10W (AEP, EE, RU)	
R340	1-216-821-11	METAL CHIP 1K 5% 1/10W (MX)		R388	1-216-864-11	SHORT CHIP 0 (EXCEPT AEP, EE, RU)	
R341	1-216-833-11	METAL CHIP 10K 5% 1/10W		R389	1-216-817-11	METAL CHIP 470 5% 1/10W (AEP, EE, RU)	
R342	1-216-821-11	METAL CHIP 1K 5% 1/10W		R389	1-216-864-11	SHORT CHIP 0 (EXCEPT AEP, EE, RU)	
R343	1-216-833-11	METAL CHIP 10K 5% 1/10W		R390	1-216-809-11	METAL CHIP 100 5% 1/10W (AEP, EE, RU)	
R344	1-216-821-11	METAL CHIP 1K 5% 1/10W		R390	1-216-864-11	SHORT CHIP 0 (EXCEPT AEP, EE, RU)	
R345	1-216-833-11	METAL CHIP 10K 5% 1/10W		R391	1-216-809-11	METAL CHIP 100 5% 1/10W (AEP, EE, RU)	
R346	1-216-821-11	METAL CHIP 1K 5% 1/10W		R391	1-216-864-11	SHORT CHIP 0 (EXCEPT AEP, EE, RU)	
R347	1-216-829-11	METAL CHIP 4.7K 5% 1/10W		R901	1-216-845-11	METAL CHIP 100K 5% 1/10W	
R348	1-216-841-11	METAL CHIP 47K 5% 1/10W		R902	1-216-864-11	SHORT CHIP 0	
R349	1-216-829-11	METAL CHIP 4.7K 5% 1/10W		R903	1-216-833-11	METAL CHIP 10K 5% 1/10W	
				R904	1-216-821-11	METAL CHIP 1K 5% 1/10W	

Ref. No.	Part No.	Description			Remark	Ref. No.	Part No.	Description			Remark
R905	1-216-833-11	METAL CHIP	10K	5%	1/10W	R970	1-216-821-11	METAL CHIP	1K	5%	1/10W
R907	1-216-841-11	METAL CHIP	47K	5%	1/10W	R971	1-216-833-11	METAL CHIP	10K	5%	1/10W (CND, RU, E3, EA, MX, AUS)
R908	1-216-841-11	METAL CHIP	47K	5%	1/10W	R972	1-216-833-11	METAL CHIP	10K	5%	1/10W (E3, EA, MX, AUS)
R909	1-216-837-11	METAL CHIP	22K	5%	1/10W					5%	1/10W
R910	1-216-833-11	METAL CHIP	10K	5%	1/10W					(CND, E2, E3, E51, AR, AUS)	
R911	1-216-809-11	METAL CHIP	100	5%	1/10W (AEP, EE)	R973	1-216-833-11	METAL CHIP	10K	5%	1/10W (CND, E2, E3, E51, AR, AUS)
R912	1-216-821-11	METAL CHIP	1K	5%	1/10W	R974	1-216-833-11	METAL CHIP	10K	5%	1/10W (E3, EA, AUS)
R913	1-216-821-11	METAL CHIP	1K	5%	1/10W	R976	1-216-833-11	METAL CHIP	10K	5%	1/10W
R914	1-216-809-11	METAL CHIP	100	5%	1/10W (AEP, EE)	R977	1-216-833-11	METAL CHIP	10K	5%	1/10W (RG470)
R915	1-216-809-11	METAL CHIP	100	5%	1/10W	R979	1-216-809-11	METAL CHIP	100	5%	1/10W
R918	1-216-849-11	METAL CHIP	220K	5%	1/10W	R980	1-216-809-11	METAL CHIP	100	5%	1/10W
R919	1-216-864-11	SHORT CHIP	0			R981	1-216-809-11	METAL CHIP	100	5%	1/10W
R920	1-216-809-11	METAL CHIP	100	5%	1/10W	R982	1-216-809-11	METAL CHIP	100	5%	1/10W
R921	1-216-857-11	METAL CHIP	1M	5%	1/10W	R992	1-216-821-11	METAL CHIP	1K	5%	1/10W
R922	1-216-849-11	METAL CHIP	220K	5%	1/10W	R993	1-216-821-11	METAL CHIP	1K	5%	1/10W
R923	1-216-809-11	METAL CHIP	100	5%	1/10W	R996	1-216-809-11	METAL CHIP	100	5%	1/10W
R924	1-216-809-11	METAL CHIP	100	5%	1/10W	R997	1-216-809-11	METAL CHIP	100	5%	1/10W
R925	1-216-809-11	METAL CHIP	100	5%	1/10W	R998	1-216-809-11	METAL CHIP	100	5%	1/10W
R926	1-216-809-11	METAL CHIP	100	5%	1/10W	R999	1-216-809-11	METAL CHIP	100	5%	1/10W
R927	1-216-809-11	METAL CHIP	100	5%	1/10W	R1971	1-216-833-11	METAL CHIP	10K	5%	1/10W (AEP, EE, E2, E51, AR)
R928	1-216-809-11	METAL CHIP	100	5%	1/10W	R1972	1-216-833-11	METAL CHIP	10K	5%	1/10W (CND, AEP, EE, RU, E2, E51, AR)
R929	1-216-809-11	METAL CHIP	100	5%	1/10W	R1973	1-216-833-11	METAL CHIP	10K	5%	1/10W (AEP, EE, RU, EA, MX)
R931	1-216-833-11	METAL CHIP	10K	5%	1/10W	R1974	1-216-833-11	METAL CHIP	10K	5%	1/10W (EXCEPT E3, EA, AUS)
R932	1-216-825-11	METAL CHIP	2.2K	5%	1/10W	R1975	1-216-833-11	METAL CHIP	10K	5%	1/10W
R935	1-216-833-11	METAL CHIP	10K	5%	1/10W	R1977	1-216-833-11	METAL CHIP	10K	5%	1/10W (GX255/RG170)
R936	1-216-837-11	METAL CHIP	22K	5%	1/10W	< VIBRATOR >					
R937	1-216-845-11	METAL CHIP	100K	5%	1/10W	X901	1-760-252-12	VIBRATOR, CRYSTAL (32.768kHz)			
R938	1-216-833-11	METAL CHIP	10K	5%	1/10W	X902	1-795-482-11	VIBRATOR, CERAMIC (16MHz)			
R939	1-216-809-11	METAL CHIP	100	5%	1/10W	*****					
R940	1-216-833-11	METAL CHIP	10K	5%	1/10W	A-1094-199-A MIC BOARD, COMPLETE (E2, E51, AR)					
R941	1-216-825-11	METAL CHIP	2.2K	5%	1/10W	A-1094-200-A MIC BOARD, COMPLETE (MX)					
R942	1-216-833-11	METAL CHIP	10K	5%	1/10W	*****					
R943	1-216-829-11	METAL CHIP	4.7K	5%	1/10W	< CAPACITOR >					
R944	1-216-849-11	METAL CHIP	220K	5%	1/10W	C801	1-126-157-11	ELECT	10uF	20%	16V (E2, E51, AR, MX)
R945	1-216-813-11	METAL CHIP	220	5%	1/10W	C802	1-115-416-11	CERAMIC CHIP	0.001uF	5%	25V (E2, E51, AR, MX)
R946	1-216-864-11	SHORT CHIP	0			C803	1-136-157-00	FILM	0.022uF	5%	50V (E2, E51, AR, MX)
R947	1-216-849-11	METAL CHIP	220K	5%	1/10W	C805	1-136-157-00	FILM	0.022uF	5%	50V (E2, E51, AR, MX)
R948	1-216-825-11	METAL CHIP	2.2K	5%	1/10W	C807	1-115-416-11	CERAMIC CHIP	0.001uF	5%	25V (E2, E51, AR, MX)
R949	1-216-833-11	METAL CHIP	10K	5%	1/10W	C808	1-164-816-11	CERAMIC CHIP	220PF	2%	50V (E2, E51, AR, MX)
R950	1-216-829-11	METAL CHIP	4.7K	5%	1/10W	C809	1-126-157-11	ELECT	10uF	20%	16V (E2, E51, AR, MX)
R951	1-216-813-11	METAL CHIP	220	5%	1/10W	C810	1-164-315-11	CERAMIC CHIP	470PF	5%	50V (E2, E51, AR, MX)
R952	1-216-809-11	METAL CHIP	100	5%	1/10W						
R953	1-216-833-11	METAL CHIP	10K	5%	1/10W						
R954	1-216-809-11	METAL CHIP	100	5%	1/10W						
R955	1-216-809-11	METAL CHIP	100	5%	1/10W						
R956	1-216-809-11	METAL CHIP	100	5%	1/10W						
R957	1-216-809-11	METAL CHIP	100	5%	1/10W						
R958	1-216-833-11	METAL CHIP	10K	5%	1/10W						
R959	1-216-809-11	METAL CHIP	100	5%	1/10W						
R961	1-216-809-11	METAL CHIP	100	5%	1/10W						
R963	1-216-809-11	METAL CHIP	100	5%	1/10W						
R965	1-216-809-11	METAL CHIP	100	5%	1/10W						
R967	1-216-809-11	METAL CHIP	100	5%	1/10W						
R968	1-216-809-11	METAL CHIP	100	5%	1/10W						
R969	1-216-809-11	METAL CHIP	100	5%	1/10W (MX)						

HCD-GX255/RG170/RG470

MIC

Ref. No.	Part No.	Description	Remark			Ref. No.	Part No.	Description	Remark		
C811	1-124-463-00	ELECT	0.1uF	20%	50V (E2, E51, AR, MX)			< JACK >			
C813	1-119-774-11	ELECT	100uF	20%	16V (E2, E51, AR, MX)	JK801	1-770-226-11	JACK (LARGE TYPE) (MIC 1) (MX)			
						JK802	1-770-226-11	JACK (LARGE TYPE) (MIC 2) (MX)			
						JK802	1-770-226-11	JACK (LARGE TYPE) (MIC) (E2, E51, AR)			
C814	1-124-257-00	ELECT	2.2uF	20%	50V (E2, E51, AR, MX)			< JUMPER RESISTOR >			
C815	1-162-923-11	CERAMIC CHIP	47PF	5%	50V (E2, E51, AR, MX)	JR801	1-216-864-11	SHORT CHIP	0	(E2, E51, AR)	
C816	1-164-816-11	CERAMIC CHIP	220PF	2%	50V (E2, E51, AR, MX)	JR802	1-216-864-11	SHORT CHIP	0	(E2, E51, AR)	
C817	1-124-257-00	ELECT	2.2uF	20%	50V (E2, E51, AR, MX)			< TRANSISTOR >			
C818	1-126-157-11	ELECT	10uF	20%	16V (E2, E51, AR, MX)	Q801	8-729-120-28	TRANSISTOR	2SC1623-L5L6		(E2, E51, AR, MX)
C819	1-164-156-11	CERAMIC CHIP	0.1uF		25V (E2, E51, AR, MX)			< RESISTOR >			
C833	1-164-156-11	CERAMIC CHIP	0.1uF		25V (E2, E51, AR, MX)	R801	1-216-829-11	METAL CHIP	4.7K	5%	1/10W (E2, E51, AR, MX)
C851	1-126-160-11	ELECT	1uF	20%	50V (MX)	R802	1-216-825-11	METAL CHIP	2.2K	5%	1/10W (E2, E51, AR, MX)
C852	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V (MX)	R803	1-216-829-11	METAL CHIP	4.7K	5%	1/10W (E2, E51, AR, MX)
C853	1-165-176-11	CERAMIC CHIP	0.047uF	10%	16V (MX)	R804	1-216-825-11	METAL CHIP	2.2K	5%	1/10W (E2, E51, AR, MX)
C854	1-164-227-11	CERAMIC CHIP	0.022uF	10%	25V (MX)	R805	1-216-845-11	METAL CHIP	100K	5%	1/10W (E2, E51, AR, MX)
C856	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V (MX)	R806	1-216-845-11	METAL CHIP	100K	5%	1/10W (E2, E51, AR, MX)
C857	1-124-465-00	ELECT	0.47uF	20%	50V (MX)	R807	1-216-833-11	METAL CHIP	10K	5%	1/10W (E2, E51, AR, MX)
C858	1-124-465-00	ELECT	0.47uF	20%	50V (MX)	R808	1-216-833-11	METAL CHIP	10K	5%	1/10W (E2, E51, AR, MX)
C859	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V (MX)	R809	1-216-845-11	METAL CHIP	100K	5%	1/10W (E2, E51, AR, MX)
C861	1-126-160-11	ELECT	1uF	20%	50V (MX)	R810	1-216-821-11	METAL CHIP	1K	5%	1/10W (E2, E51, AR, MX)
C862	1-165-176-11	CERAMIC CHIP	0.047uF	10%	16V (MX)	R811	1-216-841-11	METAL CHIP	47K	5%	1/10W (E2, E51, AR, MX)
C863	1-124-257-00	ELECT	2.2uF	20%	50V (MX)	R812	1-216-809-11	METAL CHIP	100	5%	1/10W (E2, E51, AR, MX)
C864	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V (MX)	R813	1-216-833-11	METAL CHIP	10K	5%	1/10W (E2, E51, AR, MX)
C865	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V (MX)	R814	1-216-849-11	METAL CHIP	220K	5%	1/10W (E2, E51, AR, MX)
C867	1-165-176-11	CERAMIC CHIP	0.047uF	10%	16V (MX)	R815	1-216-809-11	METAL CHIP	100	5%	1/10W (E2, E51, AR, MX)
C868	1-164-227-11	CERAMIC CHIP	0.022uF	10%	25V (MX)	R816	1-216-845-11	METAL CHIP	100K	5%	1/10W (E2, E51, AR, MX)
C869	1-124-589-11	ELECT	47uF	20%	16V (MX)	R817	1-216-829-11	METAL CHIP	4.7K	5%	1/10W (E2, E51, AR, MX)
C870	1-124-589-11	ELECT	47uF	20%	16V (MX)	R818	1-216-829-11	METAL CHIP	4.7K	5%	1/10W (E2, E51, AR, MX)
		< DIODE >				R819	1-216-849-11	METAL CHIP	220K	5%	1/10W (E2, E51, AR, MX)
D851	8-719-069-54	DIODE	UDZSTE-175.1B (MX)			R851	1-216-837-11	METAL CHIP	22K	5%	1/10W (MX)
		< IC >				R852	1-216-837-11	METAL CHIP	22K	5%	1/10W (MX)
IC801	8-759-909-71	IC	BA4558F (E2, E51, AR, MX)			R853	1-216-837-11	METAL CHIP	22K	5%	1/10W (MX)
IC802	8-759-496-41	IC	M65850FP-E1 (MX)			R854	1-216-841-11	METAL CHIP	47K	5%	1/10W (MX)

MIC

MOTOR (LD)

MOTOR (TB)

PANEL

Ref. No.	Part No.	Description	Remark			Ref. No.	Part No.	Description	Remark			
R855	1-216-837-11	METAL CHIP	22K	5%	1/10W (MX)			< CONNECTOR >				
R856	1-216-833-11	METAL CHIP	10K	5%	1/10W (MX)	CN601	1-784-741-11	CONNECTOR, FFC 19P				
						CN602	1-564-721-11	PIN, CONNECTOR (SMALL TYPE) 5P				
R857	1-216-837-11	METAL CHIP	22K	5%	1/10W (MX)			< DIODE >				
R858	1-216-837-11	METAL CHIP	22K	5%	1/10W (MX)	D601	8-719-063-93	LED SLR325VC-N-T32 (STREAM) (RG470)				
R859	1-216-837-11	METAL CHIP	22K	5%	1/10W (MX)	D602	8-719-063-93	LED SLR325VC-N-T32 (STREAM)				
R860	1-216-845-11	METAL CHIP	100K	5%	1/10W (MX)	D603	8-719-063-93	LED SLR325VC-N-T32 (STREAM) (RG470)				
R861	1-216-817-11	METAL CHIP	470	5%	1/10W (MX)	D604	8-719-063-93	LED SLR325VC-N-T32 (STREAM) (RG470)				
						D605	8-719-063-93	LED SLR325VC-N-T32 (STREAM)				
R862	1-216-817-11	METAL CHIP	470	5%	1/10W (MX)	D606	8-719-063-93	LED SLR325VC-N-T32 (STREAM) (RG470)				
						D611	6-500-809-01	LED SELU5223C-STP15 (STANDBY)				
								< FLUORESCENT INDICATOR TUBE >				
		< VARIABLE RESISTOR >				FL701	1-518-976-21	INDICATOR TUBE, FLUORESCENT				
								< IC >				
VR801	1-223-983-11	RES, VAR, CARBON	50K (MIC LEVEL) (E2, E51, AR, MX)			IC610	6-600-446-01	IC RPM7240-H18				
VR851	1-223-983-11	RES, VAR, CARBON	50K (ECHO LEVEL) (MX)			IC701	6-708-011-01	IC uPD780232GC-508-8BT-A				
*****								< TRANSISTOR >				
	1-687-133-12	MOTOR (LD) BOARD				Q601	8-729-120-28	TRANSISTOR	2SC1623-L5L6 (RG470)			
		*****				Q602	8-729-120-28	TRANSISTOR	2SC1623-L5L6			
*****							Q603	8-729-120-28	TRANSISTOR	2SC1623-L5L6 (RG470)		
						Q604	8-729-120-28	TRANSISTOR	2SC1623-L5L6 (RG470)			
						Q605	8-729-120-28	TRANSISTOR	2SC1623-L5L6			
	1-687-134-12	MOTOR (TB) BOARD				Q606	8-729-120-28	TRANSISTOR	2SC1623-L5L6 (RG470)			

		< CONNECTOR >						< RESISTOR >				
CN742	1-784-727-11	CONNECTOR, FFC 5P				R601	1-216-821-11	METAL CHIP	1K	5%	1/10W (RG470)	
*****						R602	1-216-821-11	METAL CHIP	1K	5%	1/10W	
	A-1093-854-A	PANEL BOARD, COMPLETE (GX255/RG170)				R603	1-216-821-11	METAL CHIP	1K	5%	1/10W (RG470)	
	A-1093-856-A	PANEL BOARD, COMPLETE (RG470: AEP, EE, RU, E2, E51, AR)				R604	1-216-821-11	METAL CHIP	1K	5%	1/10W (RG470)	
	A-1093-857-A	PANEL BOARD, COMPLETE (MX)				R605	1-216-821-11	METAL CHIP	1K	5%	1/10W	
		*****				R606	1-216-821-11	METAL CHIP	1K	5%	1/10W (RG470)	
	2-348-856-01	FL GUIDE				R607	1-216-821-11	METAL CHIP	1K	5%	1/10W	
		< CAPACITOR >				R609	1-216-809-11	METAL CHIP	100	5%	1/10W	
C621	1-124-257-00	ELECT	2.2uF	20%	50V	R611	1-216-821-11	METAL CHIP	1K	5%	1/10W (RG470)	
C622	1-124-257-00	ELECT	2.2uF	20%	50V							
C625	1-128-131-11	ELECT	22uF	20%	50V	R612	1-216-821-11	METAL CHIP	1K	5%	1/10W	
C631	1-124-589-11	ELECT	47uF	20%	16V							
C701	1-164-156-11	CERAMIC CHIP	0.1uF		25V	R613	1-216-821-11	METAL CHIP	1K	5%	1/10W (RG470)	
C702	1-124-589-11	ELECT	47uF	20%	16V	R614	1-216-821-11	METAL CHIP	1K	5%	1/10W (RG470)	
C703	1-164-156-11	CERAMIC CHIP	0.1uF		25V							
C704	1-164-357-11	CERAMIC CHIP	0.001uF	5%	50V	R615	1-216-821-11	METAL CHIP	1K	5%	1/10W	
C707	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V	R616	1-216-821-11	METAL CHIP	1K	5%	1/10W (RG470)	
C708	1-162-974-11	CERAMIC CHIP	0.01uF		50V							
C709	1-124-589-11	ELECT	47uF	20%	16V	R619	1-216-809-11	METAL CHIP	100	5%	1/10W	
C710	1-164-156-11	CERAMIC CHIP	0.1uF		25V	R620	1-216-805-11	METAL CHIP	47	5%	1/10W	
C711	1-162-974-11	CERAMIC CHIP	0.01uF		50V	R621	1-216-837-11	METAL CHIP	22K	5%	1/10W	
C712	1-128-131-11	ELECT	22uF	20%	50V	R622	1-216-837-11	METAL CHIP	22K	5%	1/10W	
						R623	1-216-829-11	METAL CHIP	4.7K	5%	1/10W	
						R625	1-216-829-11	METAL CHIP	4.7K	5%	1/10W	

HCD-GX255/RG170/RG470

PANEL **POWER**

Ref. No.	Part No.	Description	Remark
R627	1-216-801-11	METAL CHIP	22 5% 1/10W
R628	1-216-801-11	METAL CHIP	22 5% 1/10W
R631	1-216-833-11	METAL CHIP	10K 5% 1/10W (RG470)
R633	1-216-833-11	METAL CHIP	10K 5% 1/10W
R635	1-216-833-11	METAL CHIP	10K 5% 1/10W (RG470)
R637	1-216-833-11	METAL CHIP	10K 5% 1/10W (RG470)
R639	1-216-833-11	METAL CHIP	10K 5% 1/10W
R641	1-216-833-11	METAL CHIP	10K 5% 1/10W (RG470)
R645	1-216-837-11	METAL CHIP	22K 5% 1/10W
R646	1-216-841-11	METAL CHIP	47K 5% 1/10W
R647	1-216-797-11	METAL CHIP	10 5% 1/10W
R648	1-216-797-11	METAL CHIP	10 5% 1/10W
R650	1-216-837-11	METAL CHIP	22K 5% 1/10W
R651	1-216-841-11	METAL CHIP	47K 5% 1/10W
R652	1-216-825-11	METAL CHIP	2.2K 5% 1/10W
R660	1-216-837-11	METAL CHIP	22K 5% 1/10W
R661	1-216-841-11	METAL CHIP	47K 5% 1/10W
R662	1-216-825-11	METAL CHIP	2.2K 5% 1/10W
R663	1-216-825-11	METAL CHIP	2.2K 5% 1/10W
R664	1-216-829-11	METAL CHIP	4.7K 5% 1/10W
R665	1-216-829-11	METAL CHIP	4.7K 5% 1/10W
R666	1-216-833-11	METAL CHIP	10K 5% 1/10W
R667	1-216-837-11	METAL CHIP	22K 5% 1/10W
R670	1-216-837-11	METAL CHIP	22K 5% 1/10W
R671	1-216-841-11	METAL CHIP	47K 5% 1/10W
R672	1-216-825-11	METAL CHIP	2.2K 5% 1/10W
R673	1-216-825-11	METAL CHIP	2.2K 5% 1/10W
R680	1-216-837-11	METAL CHIP	22K 5% 1/10W
R681	1-216-841-11	METAL CHIP	47K 5% 1/10W
R682	1-216-825-11	METAL CHIP	2.2K 5% 1/10W
R683	1-216-825-11	METAL CHIP	2.2K 5% 1/10W
R684	1-216-829-11	METAL CHIP	4.7K 5% 1/10W
R685	1-216-829-11	METAL CHIP	4.7K 5% 1/10W
R690	1-216-837-11	METAL CHIP	22K 5% 1/10W
R691	1-216-841-11	METAL CHIP	47K 5% 1/10W
R692	1-216-825-11	METAL CHIP	2.2K 5% 1/10W
R693	1-216-825-11	METAL CHIP	2.2K 5% 1/10W
R694	1-216-829-11	METAL CHIP	4.7K 5% 1/10W
R695	1-216-829-11	METAL CHIP	4.7K 5% 1/10W
R696	1-216-833-11	METAL CHIP	10K 5% 1/10W
R697	1-216-837-11	METAL CHIP	22K 5% 1/10W (MX)
R698	1-216-841-11	METAL CHIP	47K 5% 1/10W (MX)
R701	1-216-864-11	SHORT CHIP	0
R702	1-216-821-11	METAL CHIP	1K 5% 1/10W
R703	1-216-809-11	METAL CHIP	100 5% 1/10W
R704	1-216-864-11	SHORT CHIP	0
R705	1-216-825-11	METAL CHIP	2.2K 5% 1/10W
R706	1-216-821-11	METAL CHIP	1K 5% 1/10W
R707	1-216-821-11	METAL CHIP	1K 5% 1/10W
R708	1-216-821-11	METAL CHIP	1K 5% 1/10W
R709	1-216-821-11	METAL CHIP	1K 5% 1/10W

Ref. No.	Part No.	Description	Remark
		< SWITCH >	
S601	1-762-875-21	SWITCH, KEYBOARD (I/⏻)	
S602	1-762-875-21	SWITCH, KEYBOARD (DISPLAY)	
S611	1-762-875-21	SWITCH, KEYBOARD (ILLUMINATION)	
S612	1-762-875-21	SWITCH, KEYBOARD (CD)	
S613	1-762-875-21	SWITCH, KEYBOARD (TUNER BAND)	
S614	1-762-875-21	SWITCH, KEYBOARD (TAPE A/B)	
S615	1-762-875-21	SWITCH, KEYBOARD (AUDIO IN)	
S616	1-762-875-21	SWITCH, KEYBOARD (REC PAUSE/START)	
S617	1-762-875-21	SWITCH, KEYBOARD (CD SYNC)	
S621	1-762-875-21	SWITCH, KEYBOARD (PRESET EQ)	
S622	1-762-875-21	SWITCH, KEYBOARD (GROOVE)	
S631	1-762-875-21	SWITCH, KEYBOARD (P FILE)	
S632	1-762-875-21	SWITCH, KEYBOARD (SURROUND)	
S633	1-762-875-21	SWITCH, KEYBOARD (EFFECT ON/OFF)	
S634	1-762-875-21	SWITCH, KEYBOARD (ENTER)	
S641	1-762-875-21	SWITCH, KEYBOARD (PLAY MODE/TUNING MODE)	
S642	1-762-875-21	SWITCH, KEYBOARD (▲ (CD))	
S643	1-762-875-21	SWITCH, KEYBOARD (DISC SKIP/EX-CHANGE)	
S644	1-762-875-21	SWITCH, KEYBOARD (DISC 3)	
S645	1-762-875-21	SWITCH, KEYBOARD (DISC 2)	
S646	1-762-875-21	SWITCH, KEYBOARD (DISC 1)	
S648	1-762-875-21	SWITCH, KEYBOARD (MULTI PLEX) (MX)	
		< VIBRATOR >	
X701	1-795-054-21	VIBRATOR, CERAMIC (4.19MHz)	

A-1094-141-A		POWER BOARD, COMPLETE (GX255)	
A-1094-142-A		POWER BOARD, COMPLETE (RG170: AEP, EE, RU)	
A-1094-143-A		POWER BOARD, COMPLETE (RG170: E2, E3, E51, EA, AR, AUS)	
A-1094-145-A		POWER BOARD, COMPLETE (RG470: AEP, EE, RU)	
A-1094-146-A		POWER BOARD, COMPLETE (RG470: E2, E51, AR, MX)	

7-685-872-09		SCREW +BVTT 3X8 (S)	
		< CAPACITOR/JUMPER RESISTOR >	
C402	1-107-726-91	CERAMIC CHIP 0.01uF 10% 16V (RG470: E2, E51, AR, MX)	
C403	1-137-749-11	MYLAR 0.1uF 100V	
C404	1-137-749-11	MYLAR 0.1uF 100V	
C405	1-135-832-11	ELECT 2200uF 20% 50V (GX255)	
C405	1-135-928-21	ELECT 2200uF 20% 63V (RG470: AEP, EE, RU)	
C405	1-137-839-11	ELECT 2200uF 20% 50V (RG170: E2, E3, E51, EA, AR, AUS)	
C405	1-137-841-11	ELECT 2200uF 20% 71V (RG470: E2, E51, AR, MX)	
C405	1-137-844-11	ELECT 2200uF 20% 42V (RG170: AEP, EE, RU)	
C406	1-135-832-11	ELECT 2200uF 20% 50V (GX255)	
C406	1-135-928-21	ELECT 2200uF 20% 63V (RG470: AEP, EE, RU)	

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
C406	1-137-839-11	ELECT	2200uF 20% 50V (RG170: E2, E3, E51, EA, AR, AUS)	C481	1-104-665-11	ELECT 100uF 20% 25V	
C406	1-137-841-11	ELECT	2200uF 20% 71V (RG470: E2, E51, AR, MX)	C486	1-126-961-11	ELECT 2.2uF 20% 50V	
C406	1-137-844-11	ELECT	2200uF 20% 42V (RG170: AEP, EE, RU)	C488	1-126-965-11	ELECT 22uF 20% 50V (GX255/RG170/RG470: AEP, EE, RU)	
C409	1-112-035-11	ELECT	4700uF 20% 50V (RG470: E2, E51, AR, MX)	C489	1-126-967-11	ELECT 47uF 20% 50V (GX255/RG170)	
C410	1-112-035-11	ELECT	4700uF 20% 50V (RG470: E2, E51, AR, MX)	C489	1-128-552-51	ELECT 47uF 20% 63V (RG470: AEP, EE, RU)	
C411	1-162-964-11	CERAMIC CHIP	0.001uF 10% 50V (RG170: AEP, EE, RU/RG470)	C490	1-126-968-11	ELECT 100uF 20% 50V (GX255/RG170)	
C411	1-162-970-11	CERAMIC CHIP	0.01uF 10% 25V (GX255/RG170: E2, E3, E51, EA, AR, AUS)	C490	1-128-576-11	ELECT 100uF 20% 63V (RG470: AEP, EE, RU)	
C413	1-130-495-00	MYLAR	0.1uF 5% 50V (RG470: E2, E51, AR, MX)	C491	1-162-964-11	CERAMIC CHIP 0.001uF 10% 50V (AEP, EE, RU)	
C414	1-130-495-00	MYLAR	0.1uF 5% 50V (RG470: E2, E51, AR, MX)	C493	1-162-964-11	CERAMIC CHIP 0.001uF 10% 50V (RG170: AEP, EE, RU)	
C441	1-126-964-11	ELECT	10uF 20% 50V	C493	1-162-966-11	CERAMIC CHIP 0.0022uF 10% 50V (RG470: AEP, EE, RU)	
C442	1-126-964-11	ELECT	10uF 20% 50V	C494	1-162-966-11	CERAMIC CHIP 0.0022uF 10% 50V (RG470: AEP, EE, RU)	
C443	1-162-964-11	CERAMIC CHIP	0.001uF 10% 50V	C494	1-216-864-11	SHORT CHIP 0 (RG170: AEP, EE, RU)	
C444	1-162-964-11	CERAMIC CHIP	0.001uF 10% 50V			< CONNECTOR >	
C445	1-162-927-11	CERAMIC CHIP	100PF 5% 50V	CN441	1-778-981-21	CONNECTOR, BOARD TO BOARD 13P	
C446	1-162-927-11	CERAMIC CHIP	100PF 5% 50V			< DIODE >	
C447	1-126-965-11	ELECT	22uF 20% 50V (GX255/RG170/RG470: AEP, EE, RU)	D401	6-500-360-01	DIODE D10XB20 (GX255/RG170: E2, E3, E51, EA, AR, AUS/RG470)	
C447	1-126-967-11	ELECT	47uF 20% 50V (RG470: E2, E51, AR, MX)	D401	8-719-028-23	DIODE D3SBA20-4101 (RG170: AEP, EE, RU)	
C448	1-126-965-11	ELECT	22uF 20% 50V (GX255/RG170/RG470: AEP, EE, RU)	D402	6-500-360-01	DIODE D10XB20 (RG470: E2, E51, AR, MX)	
C448	1-126-967-11	ELECT	47uF 20% 50V (RG470: E2, E51, AR, MX)	D441	8-719-000-07	DIODE MC2836	
C451	1-136-165-00	FILM	0.1uF 5% 50V (GX255/RG170/RG470: AEP, EE, RU)	D443	8-719-988-61	DIODE 1SS355TE-17	
C451	1-130-495-00	MYLAR	0.1uF 5% 50V (RG470: E2, E51, AR, MX)	D444	8-719-988-61	DIODE 1SS355TE-17 (RG470: E2, E51, AR, MX)	
C452	1-136-165-00	FILM	0.1uF 5% 50V (GX255/RG170/RG470: AEP, EE, RU)	D445	8-719-083-52	DIODE UDZSTE-1716B (RG470: E2, E51, AR, MX)	
C452	1-130-495-00	MYLAR	0.1uF 5% 50V (RG470: E2, E51, AR, MX)	D446	8-719-083-52	DIODE UDZSTE-1716B (RG470: E2, E51, AR, MX)	
C453	1-136-165-00	FILM	0.1uF 5% 50V (GX255/RG170/RG470: AEP, EE, RU)	D481	8-719-988-61	DIODE 1SS355TE-17	
C453	1-130-495-00	MYLAR	0.1uF 5% 50V (RG470: E2, E51, AR, MX)	D483	8-719-988-61	DIODE 1SS355TE-17 (GX255/RG170/RG470: AEP, EE, RU)	
C454	1-136-165-00	FILM	0.1uF 5% 50V (GX255/RG170/RG470: AEP, EE, RU)			< EARTH TERMINAL >	
C454	1-130-495-00	MYLAR	0.1uF 5% 50V (RG470: E2, E51, AR, MX)	* EP401	1-537-738-21	TERMINAL, EARTH	
C459	1-102-074-00	CERAMIC	0.001uF 10% 50V (RG170: AEP, EE, RU)	* EP402	1-537-738-21	TERMINAL, EARTH (RG470: E2, E51, AR, MX)	
C459	1-104-987-11	MYLAR	0.001uF 5% 200V (RG470: AEP, EE, RU)			< IC >	
C460	1-102-074-00	CERAMIC	0.001uF 10% 50V (RG170: AEP, EE, RU)	IC441	6-600-169-01	IC STK412-240 (RG470: E2, E51, AR, MX)	
C460	1-104-987-11	MYLAR	0.001uF 5% 200V (RG470: AEP, EE, RU)	IC441	6-600-221-01	IC STK403-130 (RG470: AEP, EE, RU)	
C461	1-128-562-11	ELECT	47uF 20% 100V (RG470: E2, E51, AR, MX)	IC441	6-704-107-01	IC STK403-100 (RG170: E2, E3, E51, EA, AR, AUS)	
C462	1-128-562-11	ELECT	47uF 20% 100V (RG470: E2, E51, AR, MX)	IC441	6-705-845-01	IC STK403-090 (GX255)	
C463	1-104-655-91	ELECT	470uF 20% 6.3V (RG470: E2, E51, AR, MX)	IC441	6-705-854-01	IC STK433-030 (RG170: AEP, EE, RU)	
						< JACK >	
				JK441	1-694-884-11	TERMINAL BOARD (4P) (SPEAKER, IMPEDANCE USE 6-16Ω)	

HCD-GX255/RG170/RG470

POWER

Ref. No.	Part No.	Description	Remark
< JUMPER RESISTOR >			
JR441	1-216-864-11	SHORT CHIP 0	
JR442	1-216-864-11	SHORT CHIP 0	
< COIL >			
L441	1-422-009-13	COIL, AIR-CORE	
L442	1-422-009-13	COIL, AIR-CORE	
< TRANSISTOR >			
Q441	6-551-268-01	TRANSISTOR 2SC5625	
Q442	6-551-268-01	TRANSISTOR 2SC5625	
Q481	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q482	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q483	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q484	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q485	8-729-600-22	TRANSISTOR 2SA1235-F	
Q486	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q487	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q488	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q489	6-551-268-01	TRANSISTOR 2SC5625 (RG470)	
Q489	8-729-120-28	TRANSISTOR 2SC1623-L5L6 (GX255/RG170)	
Q490	8-729-120-28	TRANSISTOR 2SC1623-L5L6 (RG470: E2, E51, AR, MX)	
Q491	6-551-270-01	TRANSISTOR 2SA2026 (RG470: E2, E51, AR, MX)	
< RESISTOR >			
R401	1-216-845-11	METAL CHIP 100K 5% 1/10W	
R402	1-216-845-11	METAL CHIP 100K 5% 1/10W	
R403	1-216-845-11	METAL CHIP 100K 5% 1/10W (RG470: E2, E51, AR, MX)	
R404	1-216-845-11	METAL CHIP 100K 5% 1/10W (RG470: E2, E51, AR, MX)	
R405	1-216-845-11	METAL CHIP 100K 5% 1/10W (RG470: E2, E51, AR, MX)	
R406	1-216-845-11	METAL CHIP 100K 5% 1/10W (RG470: E2, E51, AR, MX)	
R407	1-216-809-11	METAL CHIP 100 5% 1/10W	
R409	1-216-845-11	METAL CHIP 100K 5% 1/10W (RG470: E2, E51, AR, MX)	
R410	1-216-845-11	METAL CHIP 100K 5% 1/10W (RG470: E2, E51, AR, MX)	
R411	1-216-797-11	METAL CHIP 10 5% 1/10W	
R412	1-216-797-11	METAL CHIP 10 5% 1/10W	
R413	1-216-797-11	METAL CHIP 10 5% 1/10W	
R414	1-216-797-11	METAL CHIP 10 5% 1/10W	
R415	1-216-797-11	METAL CHIP 10 5% 1/10W	
R416	1-216-797-11	METAL CHIP 10 5% 1/10W	
R417	1-216-809-11	METAL CHIP 100 5% 1/10W	
R418	1-216-813-11	METAL CHIP 220 5% 1/10W	
R419	1-216-809-11	METAL CHIP 100 5% 1/10W	
R420	1-216-797-11	METAL CHIP 10 5% 1/10W	
R421	1-216-797-11	METAL CHIP 10 5% 1/10W	
R422	1-216-797-11	METAL CHIP 10 5% 1/10W	
R423	1-216-797-11	METAL CHIP 10 5% 1/10W	
R424	1-216-797-11	METAL CHIP 10 5% 1/10W	
R425	1-216-797-11	METAL CHIP 10 5% 1/10W	
R436	1-216-837-11	METAL CHIP 22K 5% 1/10W	

Ref. No.	Part No.	Description	Remark
(RG470: E2, E51, AR, MX)			
R437	1-216-833-11	METAL CHIP 10K 5% 1/10W	
R439	1-216-833-11	METAL CHIP 10K 5% 1/10W (RG470: E2, E51, AR, MX)	
R440	1-216-837-11	METAL CHIP 22K 5% 1/10W	
R441	1-216-825-11	METAL CHIP 2.2K 5% 1/10W	
R442	1-216-825-11	METAL CHIP 2.2K 5% 1/10W	
R443	1-216-841-11	METAL CHIP 47K 5% 1/10W	
R444	1-216-841-11	METAL CHIP 47K 5% 1/10W	
R445	1-216-821-11	METAL CHIP 1K 5% 1/10W	
R446	1-216-821-11	METAL CHIP 1K 5% 1/10W	
R447	1-216-841-11	METAL CHIP 47K 5% 1/10W	
R448	1-216-841-11	METAL CHIP 47K 5% 1/10W	
R449	1-212-974-00	FUSIBLE 47 5% 1/2W (GX255/RG170/RG470: AEP, EE, RU)	
△R449	1-217-156-00	METAL 0.22 10% 5W F (RG470: E2, E51, AR, MX)	
△R450	1-217-156-00	METAL 0.22 10% 5W F (RG470: E2, E51, AR, MX)	
△R451	1-217-151-00	METAL 0.22 10% 2W F (GX255/RG170)	
△R451	1-217-156-00	METAL 0.22 10% 5W F (RG470: AEP, EE, RU)	
△R452	1-217-151-00	METAL 0.22 10% 2W F (GX255/RG170)	
△R452	1-217-156-00	METAL 0.22 10% 5W F (RG470: AEP, EE, RU)	
R453	1-216-797-11	METAL CHIP 10 5% 1/10W	
R454	1-216-797-11	METAL CHIP 10 5% 1/10W	
R455	1-216-821-11	METAL CHIP 1K 5% 1/10W	
R456	1-216-821-11	METAL CHIP 1K 5% 1/10W	
R457	1-216-837-11	METAL CHIP 22K 5% 1/10W	
R458	1-216-837-11	METAL CHIP 22K 5% 1/10W	
R459	1-216-841-11	METAL CHIP 47K 5% 1/10W (GX255/RG170/RG470: AEP, EE, RU)	
R459	1-216-845-11	METAL CHIP 100K 5% 1/10W (RG470: E2, E51, AR, MX)	
R460	1-216-841-11	METAL CHIP 47K 5% 1/10W (GX255/RG170/RG470: AEP, EE, RU)	
R460	1-216-845-11	METAL CHIP 100K 5% 1/10W (RG470: E2, E51, AR, MX)	
R461	1-216-797-11	METAL CHIP 10 5% 1/10W	
R462	1-216-797-11	METAL CHIP 10 5% 1/10W	
R463	1-216-841-11	METAL CHIP 47K 5% 1/10W (RG470: E2, E51, AR, MX)	
R464	1-216-845-11	METAL CHIP 100K 5% 1/10W (RG470: E2, E51, AR, MX)	
R465	1-216-841-11	METAL CHIP 47K 5% 1/10W	
R466	1-216-845-11	METAL CHIP 100K 5% 1/10W	
△R467	1-215-871-11	METAL OXIDE 2.2K 5% 1W F (RG470: E2, E51, AR, MX)	
△R468	1-215-871-11	METAL OXIDE 2.2K 5% 1W F (RG470: E2, E51, AR, MX)	
R468	1-216-825-11	METAL CHIP 2.2K 5% 1/10W (RG170: AEP, EE, RU)	
R469	1-216-825-11	METAL CHIP 2.2K 5% 1/10W (RG170: AEP, EE, RU)	
R469	1-216-841-11	METAL CHIP 47K 5% 1/10W (RG470: E2, E51, AR, MX)	
R470	1-216-841-11	METAL CHIP 47K 5% 1/10W (RG470: E2, E51, AR, MX)	

POWER

SENSOR

SUB TRANS

SW

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
R471	1-216-845-11	METAL CHIP	100K 5% 1/10W (RG470: E2, E51, AR, MX)	A-1093-877-A	SUB TRANS BOARD, COMPLETE		
R472	1-216-845-11	METAL CHIP	100K 5% 1/10W (RG470: E2, E51, AR, MX)	A-1094-116-A	SUB TRANS BOARD, COMPLETE (GX255)		
R473	1-216-841-11	METAL CHIP	47K 5% 1/10W (RG470: E2, E51, AR, MX)	A-1094-117-A	SUB TRANS BOARD, COMPLETE		
R474	1-216-825-11	METAL CHIP	2.2K 5% 1/10W (RG470: E2, E51, AR, MX)	A-1094-118-A	SUB TRANS BOARD, COMPLETE		
R475	1-216-833-11	METAL CHIP	10K 5% 1/10W (RG470: E2, E51, AR, MX)	A-1094-119-A	SUB TRANS BOARD, COMPLETE (EA)		
R476	1-216-837-11	METAL CHIP	22K 5% 1/10W (RG470: E2, E51, AR, MX)	A-1094-120-A	SUB TRANS BOARD, COMPLETE (AUS)		
△R477	1-212-881-11	FUSIBLE	100 5% 1/4W F (RG470: E2, E51, AR, MX)	A-1094-121-A	SUB TRANS BOARD, COMPLETE (RG170: AR)		
R478	1-216-837-11	METAL CHIP	22K 5% 1/10W (RG470: E2, E51, AR, MX)	A-1094-123-A	SUB TRANS BOARD, COMPLETE		
R479	1-216-833-11	METAL CHIP	10K 5% 1/10W (RG470: E2, E51, AR, MX)	A-1094-124-A	SUB TRANS BOARD, COMPLETE (MX)		
R480	1-216-845-11	METAL CHIP	100K 5% 1/10W	A-1094-125-A	SUB TRANS BOARD, COMPLETE (RG470: AR)		
R481	1-216-829-11	METAL CHIP	4.7K 5% 1/10W		*****		
R482	1-216-833-11	METAL CHIP	10K 5% 1/10W		< CONNECTOR >		
R483	1-216-801-11	METAL CHIP	22 5% 1/10W	CN901	1-564-321-00	PIN, CONNECTOR (3.96mm PITCH) 2P	
R484	1-216-845-11	METAL CHIP	100K 5% 1/10W	CN903	1-564-321-00	PIN, CONNECTOR (3.96mm PITCH) 2P	
R485	1-216-845-11	METAL CHIP	100K 5% 1/10W		(GX255/RG170: AEP, EE, RU, AR, AUS/RG470: AEP, EE, RU, MX)		
R486	1-216-845-11	METAL CHIP	100K 5% 1/10W	CN903	1-568-106-11	PIN, CONNECTOR (3.96mm PITCH) 4P	
R487	1-216-841-11	METAL CHIP	47K 5% 1/10W		(RG170: E2, E3, E51, EA/RG470: E2, E51, AR)		
R488	1-216-837-11	METAL CHIP	22K 5% 1/10W		< DIODE >		
R490	1-216-829-11	METAL CHIP	4.7K 5% 1/10W	D901	8-719-988-61	DIODE 1SS355TE-17	
R491	1-216-841-11	METAL CHIP	47K 5% 1/10W	D902	6-500-522-21	DIODE 10EDB40-TB3	
R492	1-216-821-11	METAL CHIP	1K 5% 1/10W (GX255/RG170/RG470: AEP, EE, RU)	D903	6-500-522-21	DIODE 10EDB40-TB3	
R492	1-216-841-11	METAL CHIP	47K 5% 1/10W (RG470: E2, E51, AR, MX)	D904	6-500-522-21	DIODE 10EDB40-TB3	
R493	1-216-841-11	METAL CHIP	47K 5% 1/10W (GX255/RG170/RG470: AEP, EE, RU)	D905	6-500-522-21	DIODE 10EDB40-TB3	
△R495	1-202-972-61	FUSIBLE	1 5% 1/4W F		< TRANSFORMER >		
△R496	1-212-881-11	FUSIBLE	100 5% 1/4W F	△PT902	1-443-614-11	TRANSFORMER, POWER (GX255)	
R497	1-216-845-11	METAL CHIP	100K 5% 1/10W	△PT902	1-443-615-11	TRANSFORMER, POWER (AEP, EE, RU)	
R498	1-216-821-11	METAL CHIP	1K 5% 1/10W	△PT902	1-443-616-11	TRANSFORMER, POWER	
R499	1-216-821-11	METAL CHIP	1K 5% 1/10W		(E2, E3, E51, EA, AR, AUS)		
		< RELAY >		△PT902	1-443-617-11	TRANSFORMER, POWER (MX)	
RY441	1-755-372-11	RELAY (RG470: E2, E51, AR, MX)			< RESISTOR >		
RY441	1-755-373-11	RELAY (GX255/RG170/RG470: AEP, EE, RU)		R910	1-216-809-11	METAL CHIP 100 5% 1/10W	
		< THERMISTOR >		R911	1-216-813-11	METAL CHIP 220 5% 1/10W	
TH441	1-807-796-11	THERMISTOR		R912	1-216-805-11	METAL CHIP 47 5% 1/10W	
		(GX255/RG170: E2, E3, E51, EA, AR, AUS/RG470)		R913	1-216-805-11	METAL CHIP 47 5% 1/10W	
TH443	1-807-796-11	THERMISTOR (RG170: AEP, EE, RU)			< RELAY >		
		*****		△RY901	1-755-276-11	RELAY, POWER	
	1-687-132-12	SENSOR BOARD			< SWITCH >		
		*****		△S901	1-786-055-21	SELECTOR, VOLTAGE (VOLTAGE SELECTOR)	
		< CONNECTOR >			(E2, E3, E51, EA)		
CN731	1-785-329-21	PIN, CONNECTOR (LIGHT ANGLE) 3P			*****		
		< IC >			1-687-669-12	SW BOARD	

					< SWITCH >		
IC731	6-600-022-01	IC RPI-576		S751	1-786-514-11	SWITCH, LEVER (SLIDE)	
		*****				(OPEN/CLOSE DETECT)	
		*****			*****		

HCD-GX255/RG170/RG470

TRANSFORMER VIDEO OUT VOL

Ref. No.	Part No.	Description	Remark
	A-1094-082-A	TRANSFORMER BOARD, COMPLETE (GX255)	
	A-1094-083-A	TRANSFORMER BOARD, COMPLETE (RG170: AEP, EE, RU)	
	A-1094-084-A	TRANSFORMER BOARD, COMPLETE (RG170: E2, E3, E51)	
	A-1094-085-A	TRANSFORMER BOARD, COMPLETE (EA)	
	A-1094-086-A	TRANSFORMER BOARD, COMPLETE (AUS)	
	A-1094-087-A	TRANSFORMER BOARD, COMPLETE (RG170: AR)	
	A-1094-089-A	TRANSFORMER BOARD, COMPLETE (RG470: AEP, EE, RU)	
	A-1094-090-A	TRANSFORMER BOARD, COMPLETE (RG470: E2, E51)	
	A-1094-091-A	TRANSFORMER BOARD, COMPLETE (MX)	
	A-1094-092-A	TRANSFORMER BOARD, COMPLETE (RG470: AR)	

	1-533-233-11	FUSE HOLDER	
< CAPACITOR >			
C907	1-136-165-00	FILM 0.1uF 5% 50V	(GX255/RG170/RG470: AEP, EE, RU)
C907	1-130-495-00	MYLAR 0.1uF 5% 50V	(RG470: E2, E51, AR, MX)
C908	1-128-553-11	ELECT 220uF 20% 63V	
C909	1-126-964-11	ELECT 10uF 20% 50V	
C910	1-126-968-11	ELECT 100uF 20% 50V	
C911	1-126-942-61	ELECT 1000uF 20% 25V	
< CONNECTOR >			
CN905	1-564-506-11	PLUG, CONNECTOR 3P	(GX255/RG170/RG470: AEP, EE, RU)
* CN905	1-564-508-11	PLUG, CONNECTOR 5P	(RG470: E2, E51, AR, MX)
* CN906	1-564-705-11	PIN, CONNECTOR (SMALL TYPE) 3P	
* CN907	1-764-333-11	PLUG, CONNECTOR 10P	
< DIODE >			
D906	8-719-083-70	DIODE UDZSTE-1727B	
D908	6-500-522-21	DIODE 10EDB40-TB3	
< TRANSISTOR >			
Q902	8-729-048-66	TRANSISTOR 2SB1238-PQR-TV2	
< RESISTOR >			
R903	1-216-833-11	METAL CHIP 10K 5% 1/10W	
R904	1-216-821-11	METAL CHIP 1K 5% 1/10W	
△R908	1-202-972-61	FUSIBLE 1 5% 1/4W F	

	A-1094-122-A	VIDEO OUT BOARD, COMPLETE (MX)	

< CAPACITOR >			
C803	1-100-566-91	CERAMIC CHIP 0.1uF 10% 25V	
< JACK >			
J803	1-774-227-11	JACK, PIN 1P (VIDEO OUT)	

Ref. No.	Part No.	Description	Remark
	A-1093-878-A	VOL BOARD, COMPLETE	

< RESISTOR >			
R674	1-216-829-11	METAL CHIP 4.7K 5% 1/10W	
R675	1-216-829-11	METAL CHIP 4.7K 5% 1/10W	
R676	1-216-833-11	METAL CHIP 10K 5% 1/10W	
R677	1-216-837-11	METAL CHIP 22K 5% 1/10W	
R678	1-216-841-11	METAL CHIP 47K 5% 1/10W	
R686	1-216-833-11	METAL CHIP 10K 5% 1/10W	
R687	1-216-837-11	METAL CHIP 22K 5% 1/10W	
R688	1-216-841-11	METAL CHIP 47K 5% 1/10W	
< SWITCH >			
S623	1-762-875-21	SWITCH, KEYBOARD (ALBUM -)	
S624	1-762-875-21	SWITCH, KEYBOARD (ALBUM +)	
S625	1-762-875-21	SWITCH, KEYBOARD (◀◀)	
S626	1-762-875-21	SWITCH, KEYBOARD (▶▶)	
S635	1-762-875-21	SWITCH, KEYBOARD (■)	
S636	1-762-875-21	SWITCH, KEYBOARD (▨)	
S637	1-762-875-21	SWITCH, KEYBOARD (▶)	
S638	1-762-875-21	SWITCH, KEYBOARD (EQ BAND)	
S660	1-478-473-11	ENCODER, ROTARY (MASTER VOLUME)	
SW601	1-786-289-31	SWITCH, DETECTION (⏮◀ - EQ + ▶▷⏭, - TUNING +)	

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
		MISCELLANEOUS *****		S101	1-771-853-11	SWITCH, DETECTION (LIMIT)	

54	1-828-975-11	WIRE (FLAT TYPE) (13 CORE) (MX)				ACCESSORIES	
59	1-828-963-11	WIRE (FLAT TYPE) (11 CORE) (GX255/RG170: RU, E2, E3, E51, EA, AR, AUS/ RG470: RU, E2, E51, AR, MX)				*****	
59	1-828-980-11	WIRE (FLAT TYPE) (15 CORE) (AEP, EE)		△	1-770-019-61	ADAPTOR, CONVERSION PLUG (EA)	
60	1-693-615-11	TUNER (FM/AM) (E2, E3, E51, EA, AR, AUS, MX)		△	1-573-856-12	ADAPTOR, CONVERSION 2P (E3)	
60	1-693-616-11	TUNER (FM/AM) (AEP, EE)		△	1-569-008-21	ADAPTOR, CONVERSION 2P (E51)	
60	1-693-617-11	TUNER (FM/AM) (RU)					
60	1-693-631-31	TUNER (FM/AM) (GX255)					
113	1-829-003-11	WIRE (FLAT TYPE) (19 CORE)					
116	1-828-973-11	WIRE (FLAT TYPE) (13 CORE)					
118	1-796-485-51	DECK, MECHANICAL (CWM43FF13)					
203	1-775-251-11	WIRE (FLAT TYPE) (27 CORE) (EXCEPT MX)					
203	1-775-285-11	WIRE (FLAT TYPE) (31 CORE) (MX)					
204	1-828-970-11	WIRE (FLAT TYPE) (13 CORE)					
△ 210	1-769-744-81	CORD, POWER (EA)					
△ 210	1-775-790-71	CORD, POWER (AUS)					
△ 210	1-827-226-31	CORD, POWER (E2, E3, MX)					
△ 210	1-829-387-11	CORD, POWER (AR)					
△ 210	1-830-188-11	CORD, POWER (AEP, EE, RU, E51)					
△ 210	1-830-190-11	CORD, POWER (GX255)					
213	1-500-868-11	CORE, FERRITE (MX)					
502	1-776-182-11	WIRE (FLAT TYPE) (5 CORE)					
576	1-827-992-11	WIRE (FLAT TYPE) (16 CORE)					
△ 579	8-820-244-01	OPTICAL PICK-UP BLOCK KSM-215DCP/C2NP					
580	1-471-035-21	MAGNET ASSY					
△ F904	1-533-471-12	FUSE, GLASS TUBE (DIA. 5) (T4A/250V) (RG170: AEP, EE, RU)					
△ F904	1-533-473-12	FUSE, GLASS TUBE (DIA. 5) (T6.3A/250V) (EXCEPT AEP, EE, RU)					
△ F904	1-576-655-12	FUSE, GLASS TUBE (DIA. 5) (T8A/250V) (RG470: AEP, EE, RU)					
△ F905	1-533-471-12	FUSE, GLASS TUBE (DIA. 5) (T4A/250V) (RG170: AEP, EE, RU)					
△ F905	1-533-473-12	FUSE, GLASS TUBE (DIA. 5) (T6.3A/250V) (EXCEPT AEP, EE, RU)					
△ F905	1-576-655-12	FUSE, GLASS TUBE (DIA. 5) (T8A/250V) (RG470: AEP, EE, RU)					
△ F906	1-533-470-12	FUSE, GLASS TUBE (DIA. 5) (T3.15A/250V)					
△ F907	1-533-470-12	FUSE, GLASS TUBE (DIA. 5) (T3.15A/250V)					
△ F908	1-576-655-12	FUSE, GLASS TUBE (DIA. 5) (T8A/250V) (RG470: E2, E51, AR, MX)					
△ F909	1-576-655-12	FUSE, GLASS TUBE (DIA. 5) (T8A/250V) (RG470: E2, E51, AR, MX)					
M001	1-787-319-11	FAN, DC (RG470)					
M741	A-1108-965-A	MOTOR ASSY, TABLE					
M751	A-1108-966-A	MOTOR ASSY, LOADING					
△ PT901	1-443-602-11	TRANSFORMER, POWER (GX255)					
△ PT901	1-443-604-11	TRANSFORMER, POWER (RG170: AEP, EE, RU)					
△ PT901	1-443-606-11	TRANSFORMER, POWER (RG470: AEP, EE, RU)					
△ PT901	1-443-607-11	TRANSFORMER, POWER (RG170: E2, E3, E51, AR, AUS)					
△ PT901	1-443-609-11	TRANSFORMER, POWER (RG470: E2, E51, AR)					
△ PT901	1-443-611-11	TRANSFORMER, POWER (MX)					
△ PT901	1-443-612-11	TRANSFORMER, POWER (EA)					
S711	1-477-680-12	ENCODER, ROTARY (DISC TRAY ADDRESS-DETECT)					

MEMO

HCD-GX255/RG170/RG470

SONY®

SERVICE MANUAL

Ver. 1.2 2005.09

Canadian Model
HCD-GX255

AEP Model

E Model

HCD-RG170/RG470

Australian Model
HCD-RG170

SUPPLEMENT-1

Subject: • Change of CD Mechanism Block (CDM74KFS-K6BD83S)
• Change of MAIN board
• Change of HEADPHONE board

Changing Destination

HCD-GX255 : CND model
HCD-RG170/RG470: AEP, EE, RU, E2, E51 models
• Abbreviation
CND : Canadian model
E2 : 120V AC area in E model
E51 : Chilean and Peruvian models
EE : East European model
RU : Russian model

In this set, CD mechanism block, MAIN board and HEADPHONE board have been changed in the midway of production simultaneously. CD mechanism block, MAIN board and HEADPHONE board of new type are described in this supplement-1.
Refer to original service manual for other information.
Also, repair after confirming the type by discrimination without fail, because there is no interchangeability between new type and former type.

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(CDM74KFS-K6BD83S) 24

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1. NEW/FORMER TYPE DISCRIMINATION

New/former type can be distinguished in the version display mode of the test mode.

Procedure:

1. Press the  button to turn the power on.
2. Press three buttons of , ILLUMINATION and DISC 2 simultaneously.
3. When this mode is activated, model and destination is displayed on the fluorescent indicator tube.
4. Press the DISPLAY button to display software version and year, month, day of the software creation display mode.
Former type : G01.08A:050225
New type : G02.03A:050707
5. To release this mode, press three buttons of , ILLUMINATION and DISC 2 simultaneously.

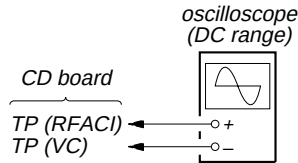
2. ELECTRICAL ADJUSTMENT

CD SECTION

Note:

1. CD Block is basically constructed to operate without adjustment.
2. Use YEDS-18 disc (3-702-101-01) unless otherwise indicated.
3. Use an oscilloscope with more than 10 M Ω impedance.
4. Clean the object lens by an applicator with neutral detergent when the signal level is low than specified value with the following checks.
5. Check the focus bias check when optical pick-up block is replaced.

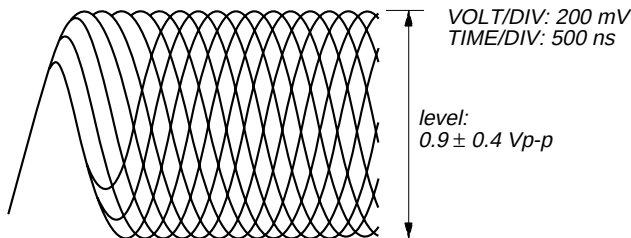
FOCUS BIAS CHECK



Procedure :

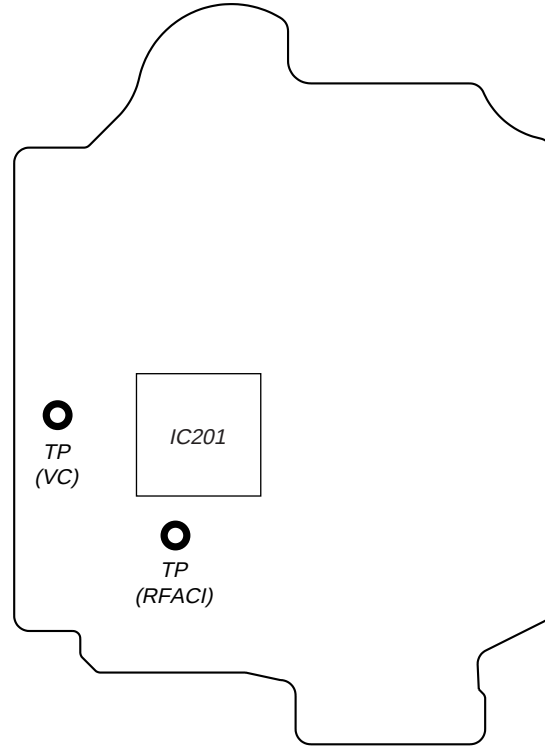
1. Connect oscilloscope to TP (RFACI) and TP (VC) on the CD board.
2. Press the button to turn the power ON, and press the button to open the CD disc table.
3. Set disc (YEDS-18) on the tray and press the button to playback.
4. Confirm that oscilloscope waveform is as shown in the figure below. (eye pattern)

A good eye pattern means that the diamond shape (◇) in the center of the waveform can be clearly distinguished.



Checking Location:

– CD Board (Conductor Side) –



3. DIAGRAMS

• Note For Printed Wiring Boards and Schematic Diagrams

Note on Printed Wiring Board:

- — : parts extracted from the component side.
- : parts extracted from the conductor side.
- △ : internal component.
- : Pattern from the side which enables seeing.

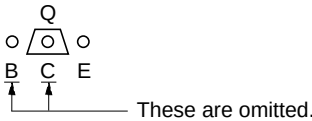
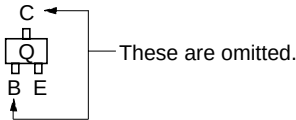
(The other layers' patterns are not indicated.)

Caution:

Pattern face side: Parts on the pattern face side seen from the pattern face are indicated.

Parts face side: Parts on the parts face side seen from the parts face are indicated.

• Indication of transistor



Note on Schematic Diagram:

- All capacitors are in μF unless otherwise noted. (p: pF) 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and $\frac{1}{4} \text{ W}$ or less unless otherwise specified.
- △ : internal component.
- ⎓ : nonflammable resistor.
- ⎓ : fusible resistor.
- : panel designation.

Note:

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

Note:

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

- : B+ Line.
- : B- Line.
- Voltages and waveforms are dc with respect to ground under no-signal conditions.
- CD Board –
no mark : CD PLAY
- MAIN Board –
no mark : FM
() : CD PLAY
<< >> : TAPE PLAY
[] : REC
* : 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.
 - ⇨ : TUNER (FM/AM)
 - ⇨ : TAPE PLAY (DECK-A)
 - ⇨ : TAPE PLAY (DECK-B)
 - ⇨ : REC
 - ⇨ : CD PLAY
 - ⇨ : AUX IN
 - ⇨ : MIC
- Abbreviation
 - CND : Canadian model
 - E2 : 120 V AC area in E model
 - E51 : Chilean and Peruvian models
 - EE : East European model
 - RU : Russian model

• Waveforms

– CD Board –

① IC201 ① (LRCK), ② (LRCKI) (CD play mode)

22.8 μs 3.3 Vp-p

1 V/DIV, 10 μs /DIV

② IC201 ⑤ (BCK), ⑥ (BCKI) (CD play mode)

472 ns 3.3 Vp-p

1 V/DIV, 200 ns/DIV

③ IC201 ⑦ (RFAO) (CD play mode)

0.5 to 1.3 Vp-p

200 mV/DIV, 500 ns/DIV

④ IC201 ⑩ (XTAO) (CD play mode)

59.4 ns 2.3 Vp-p

1 V/DIV, 20 ns/DIV

– MAIN Board –

⑪ IC901 ⑪ (XCOUT (32.768KHZ))

30.6 μs 2.8 Vp-p

1 V/DIV, 10 μs /DIV

⑫ IC901 ⑬ (XOUT (16MHZ))

62.2 ns 1 Vp-p

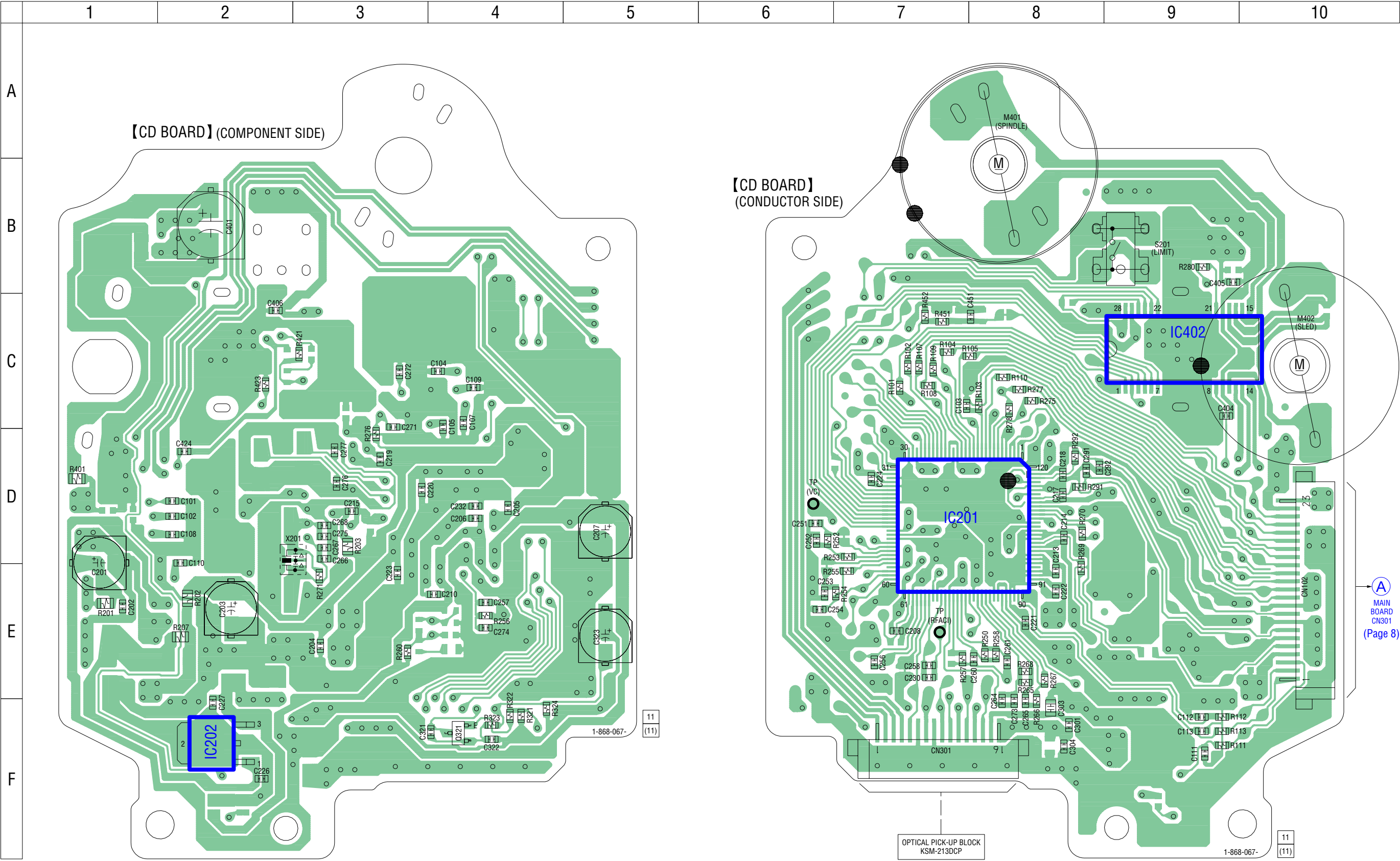
500 mV/DIV, 20 ns/DIV

⑬ Q201 (Collector) (REC mode)

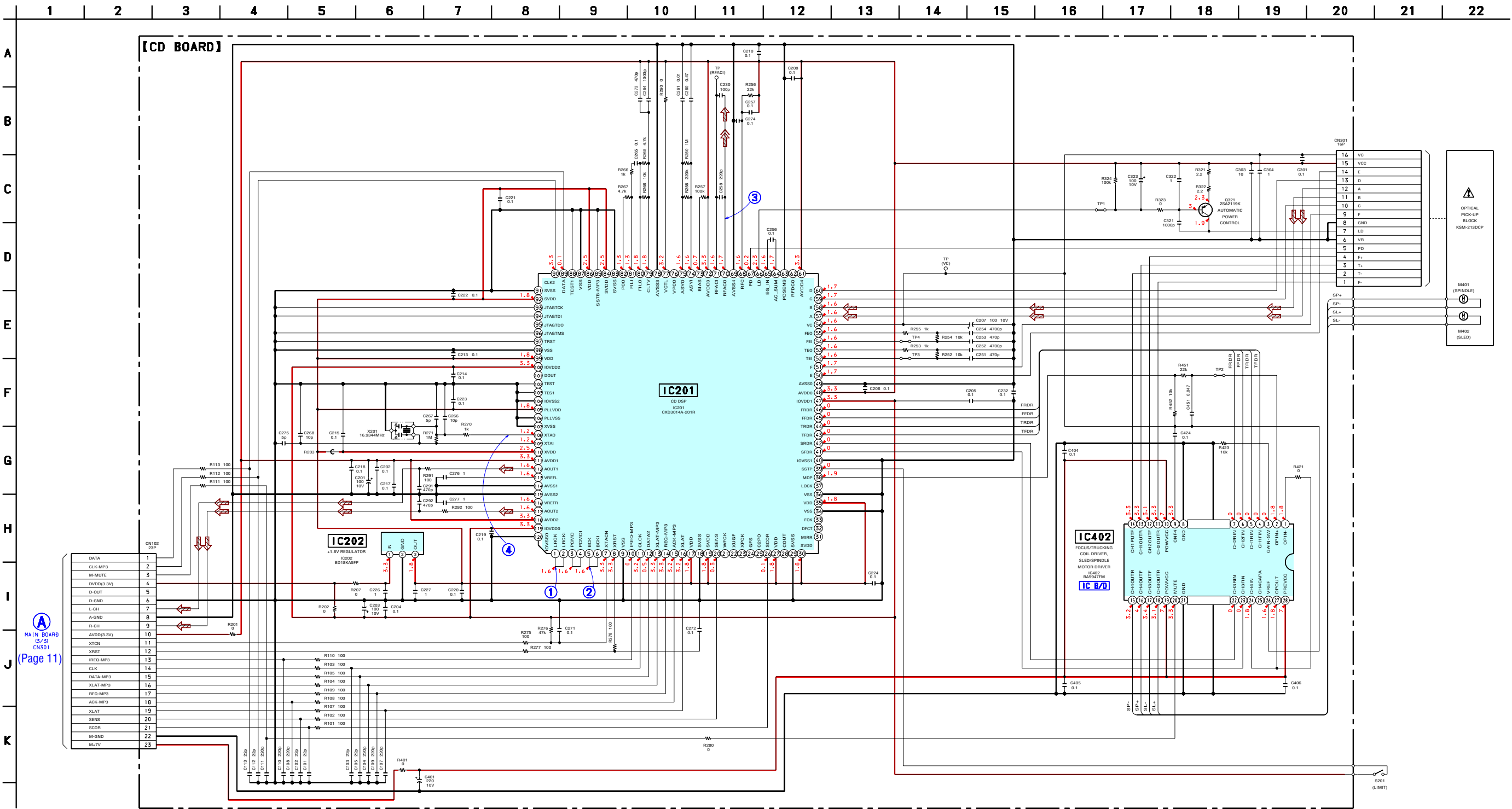
17.2 μs 17.6 Vp-p

500 mV/DIV, 10 μs /DIV

3-1. PRINTED WIRING BOARD – CD Board (Component Side) – : Uses unleaded solder.



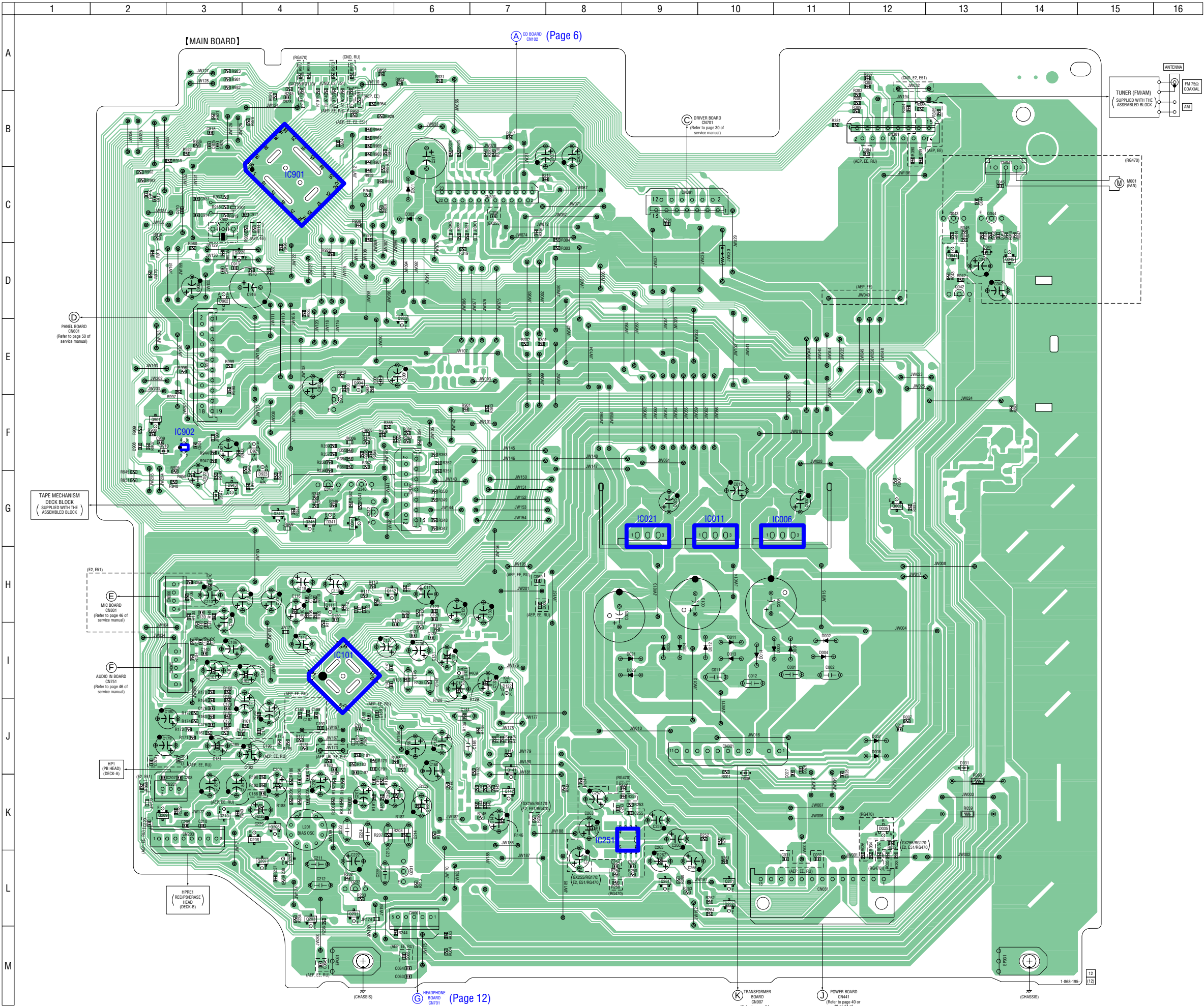
3-2. SCHEMATIC DIAGRAM – CD Board – • See page 5 for Waveforms. • See page 13 for IC Block Diagrams. • See page 15 for IC Pin Function Description.



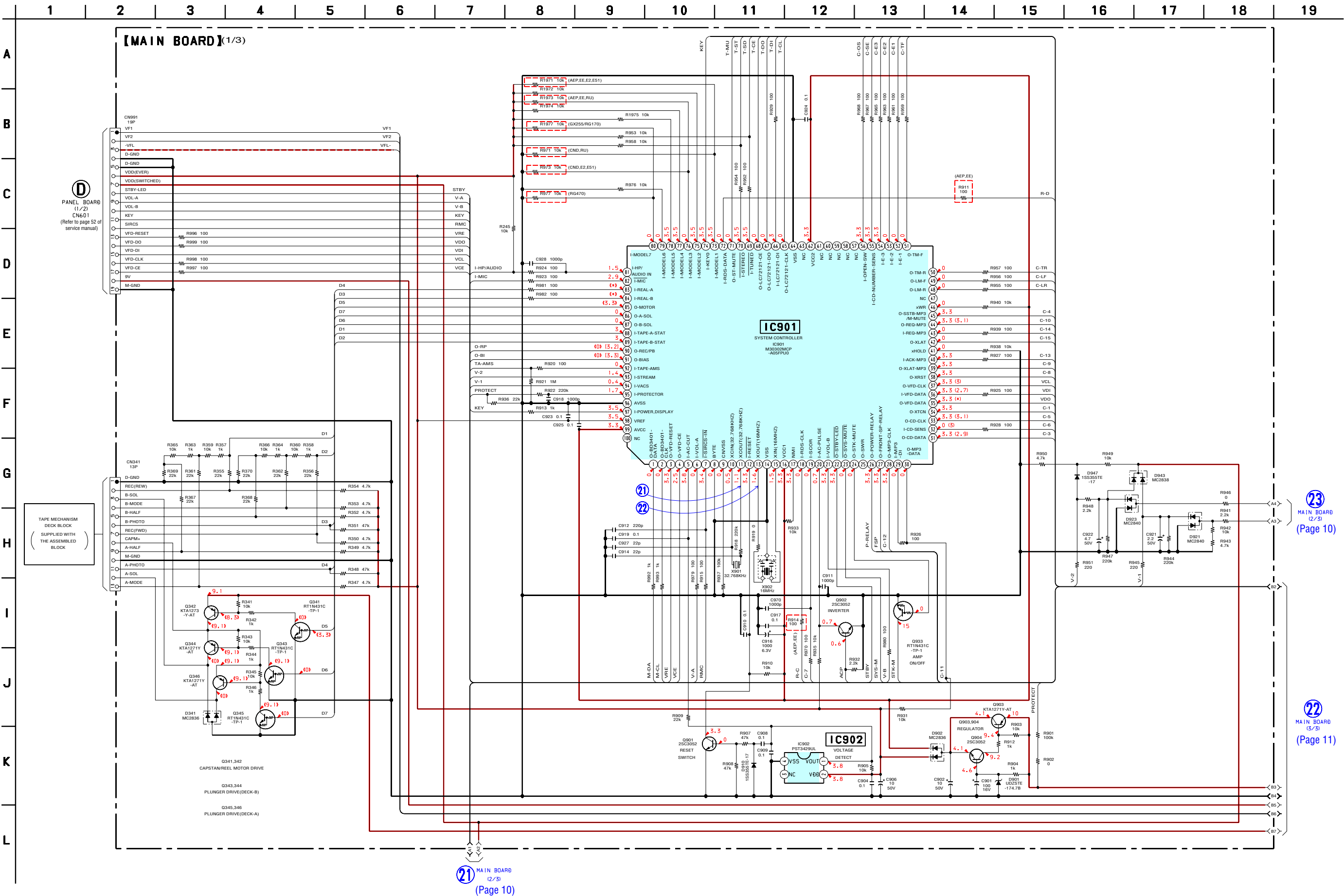
3-3. PRINTED WIRING BOARD – MAIN Board – : Uses unleaded solder.

• Semiconductor Location

Ref. No.	Location
D001	I-11
D002	I-11
D003	I-11
D004	I-11
D006	J-10
D007	J-12
D008	J-12
D011	I-10
D012	I-10
D013	I-10
D014	I-10
D021	I-9
D022	I-9
D023	I-9
D024	I-9
D031	J-13
D035	K-12
D041	D-13
D121	I-6
D122	I-7
D301	C-6
D302	C-6
D341	G-5
D901	E-5
D902	D-3
D910	F-2
D921	F-4
D923	G-4
D943	G-3
D947	G-3
IC006	G-11
IC011	G-10
IC021	G-9
IC101	I-5
IC251	K-9
IC901	C-4
IC902	F-3
Q002	G-12
Q041	D-13
Q042	D-13
Q043	C-13
Q044	C-13
Q045	D-14
Q111	H-5
Q112	H-5
Q141	J-7
Q142	K-7
Q201	L-6
Q203	L-4
Q205	L-4
Q206	K-4
Q207	L-4
Q208	K-4
Q209	K-2
Q210	K-3
Q231	L-5
Q232	L-5
Q251	L-10
Q252	L-10
Q261	L-9
Q341	G-5
Q342	G-5
Q343	G-4
Q344	G-5
Q345	G-4
Q346	G-5
Q901	F-2
Q902	D-3
Q903	F-5
Q904	E-5
Q933	E-6



3-4. SCHEMATIC DIAGRAM – MAIN Board (1/3) – • See page 5 for Waveforms. • See page 15 for IC Pin Function Description.



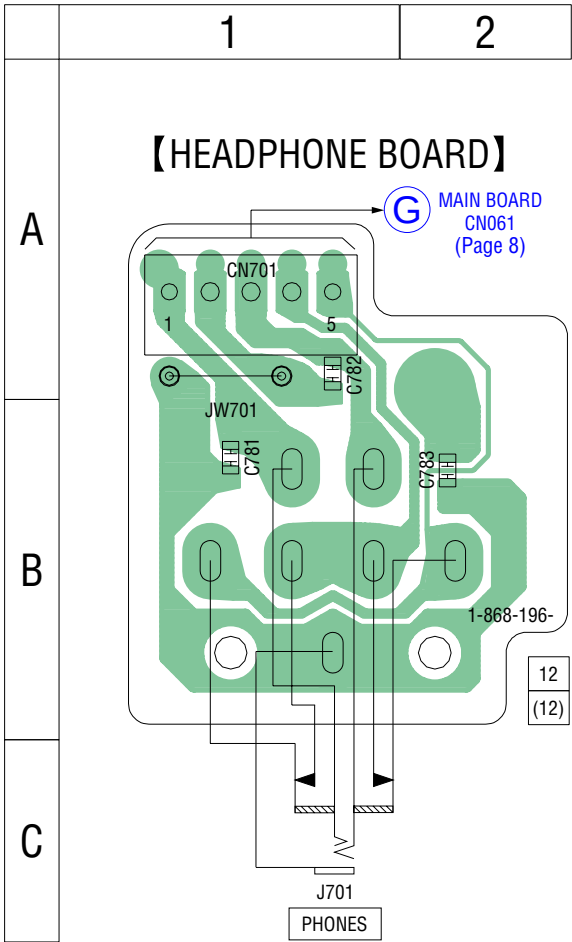
• See page 5 for Waveforms. • See page 13 for IC Block Diagrams.



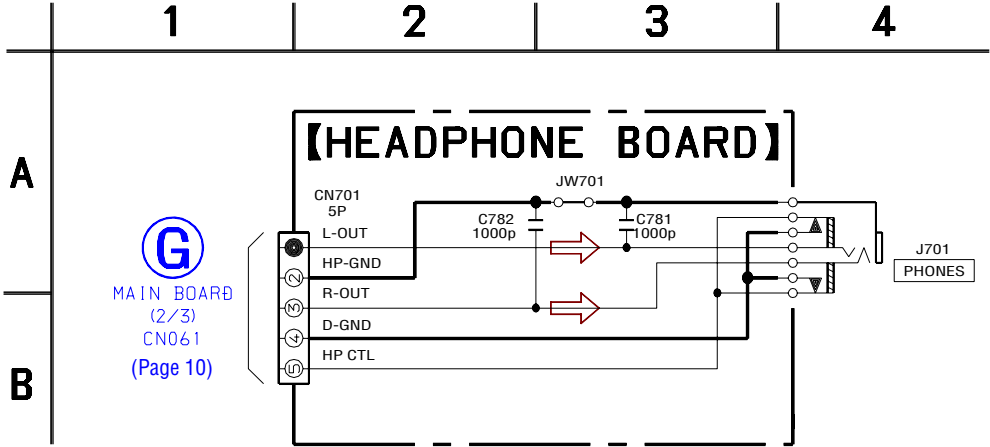


3-7. PRINTED WIRING BOARD – HEADPHONE Board –

 : Uses unleaded solder.

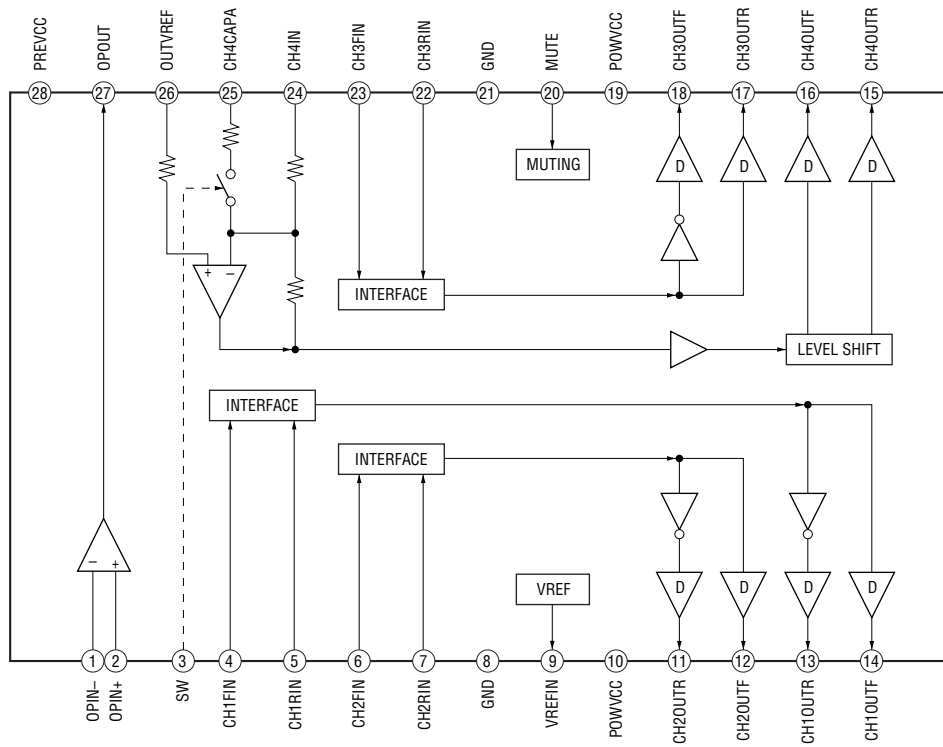


3-8. SCHEMATIC DIAGRAM – HEADPHONE Board –



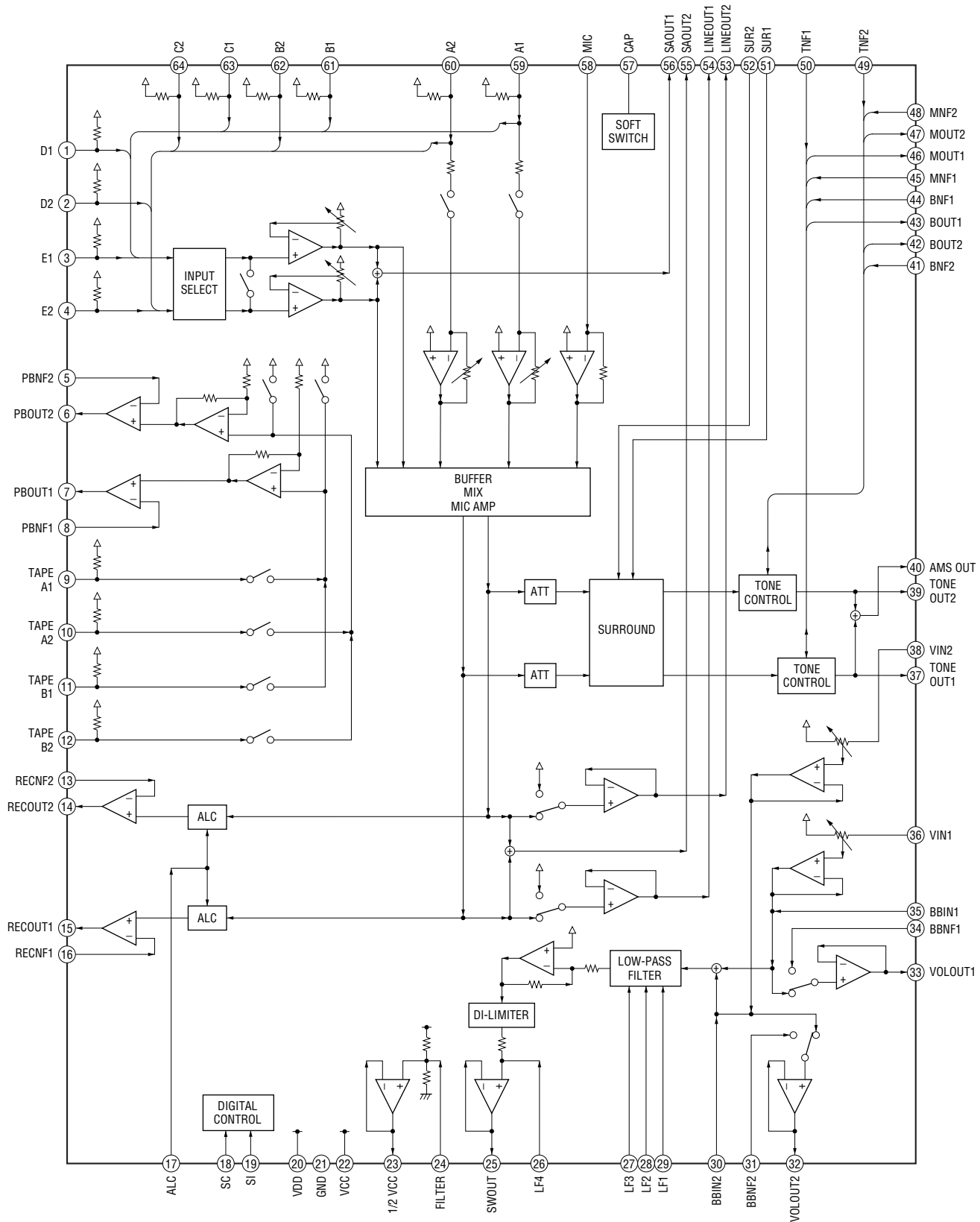
- IC Block Diagram
- CD Board –

IC402 BA5947FM-E2



– MAIN Board –

IC101 BD3401KS2



• IC Pin Function Description

CD BOARD IC201 CXD3014A-201R (CD DSP)

Pin No.	Pin Name	I/O	Description
1	LRCK	O	L/R sampling clock signal output terminal
2	LRCKI	I	L/R sampling clock signal input terminal
3	PCMD	O	Serial data output terminal
4	PCMDI	I	Serial data input terminal
5	BCK	O	Bit clock signal output terminal
6	BCKI	I	Bit clock signal input terminal
7	XTACN	I	Oscillation circuit on/off switch control signal input from the system controller "L": oscillation stop, "H": self-oscillation
8	XRST	I	System reset signal input from the system controller "L": reset
9	VSS	-	Ground terminal
10	IREQ-MP3	O	MP3 data request signal output to the system controller
11	CLOK	I	CD serial data transfer clock signal input from the system controller
12	DATA2	I	MP3 serial data input from the system controller
13	XLAT-MP3	I	MP3 serial data latch pulse signal input from the system controller
14	REQ-MP3	I	MP3 data request signal input from the system controller
15	ACK-MP3	O	MP3 acknowledge signal output to the system controller
16	XLAT	I	CD serial data latch pulse signal input from the system controller
17	VDD	-	Power supply terminal (+1.8V)
18	SVSS	-	Ground terminal
19	SVDD	-	Power supply terminal (+1.8V)
20	SENS	O	Internal status (SENSE) signal output to the system controller
21	WFCK	-	Not used
22	XUGF	-	Not used
23	XPCK	-	Not used
24	GFS	-	Not used
25	C2PO	-	Not used
26	SCOR	O	Subcode sync (S0+S1) detection signal output to the system controller
27	VDD	-	Power supply terminal (+1.8V)
28	COUT	-	Not used
29	SVSS	-	Ground terminal
30	SVDD	-	Power supply terminal (+1.8V)
31	MIRR	-	Not used
32	DFCT	-	Not used
33	FOK	-	Not used
34	VSS	-	Ground terminal
35	VDD	-	Power supply terminal (+1.8V)
36	VSS	-	Ground terminal
37	MIRR	-	Not used
38	MDP	O	Spindle motor servo control signal output terminal
39	SSTP	I	Disc inner position detection signal input terminal
40	IOVSS1	-	Ground terminal
41	SFDR	O	Sled servo drive signal (+) output to the coil/motor driver
42	SRDR	O	Sled servo drive signal (-) output to the coil/motor driver
43	TFDR	O	Tracking servo drive signal (+) output to the coil/motor driver
44	TRDR	O	Tracking servo drive signal (-) output to the coil/motor driver

Pin No.	Pin Name	I/O	Description
45	FFDR	O	Focus servo drive signal (+) output to the coil/motor driver
46	FRDR	O	Focus servo drive signal (-) output to the coil/motor driver
47	IOVDD1	-	Power supply terminal (+3.3V)
48	AVDD0	-	Power supply terminal (+3.3V)
49	AVSS0	-	Ground terminal
50	E	I	E signal input from the optical pick-up block
51	F	I	F signal input from the optical pick-up block
52	TEI	I	Tracking error signal input terminal
53	TEO	O	Tracking error signal output terminal
54	FEI	I	Focus error signal input terminal
55	FEO	O	Focus error signal output terminal
56	VC	O	Middle point voltage output terminal
57	A	I	A signal input from the optical pick-up block
58	B	I	B signal input from the optical pick-up block
59	C	I	C signal input from the optical pick-up block
60	D	I	D signal input from the optical pick-up block
61	AVDD4	-	Power supply terminal (+3.3V)
62	RFDCO	O	Not used
63	PDSSENS	I	Not used
64	AC_SUM	O	RFAC summing amplifier signal output terminal
65	EQ_IN	I	RF equalizer circuit input terminal
66	LD	O	Laser diode on/off control signal output to the automatic power control circuit "L": laser off, "H": laser on
67	PD	I	Light amount monitor input from the optical pick-up block laser diode
68	RFC	I	Equalizer cut off frequency adjustment terminal
69	AVSS4	-	Ground terminal
70	RFACO	O	EFM signal output terminal
71	RFACI	I	EFM signal input terminal
72	AVDD3	-	Power supply terminal (+3.3V)
73	BIAS	I	Asymmetry circuit constant current input terminal
74	ASYI	I	Playback EFM asymmetry comparator voltage input terminal
75	ASYO	O	Playback EFM full-swing output terminal
76	VPCO	O	Charge pump output terminal for broad-band EFM PLL
77	VCTL	I	VCO2 control voltage input terminal for broad-band EFM PLL
78	AVSS3	-	Ground terminal
79	CLTV	I	VCO1 control voltage input terminal for multiplier
80	FILO	O	Filter output terminal for master PLL
81	FILI	I	Filter input terminal for master PLL
82	PCO	O	Charge pump output terminal for master PLL
83	SVSS	-	Ground terminal
84	SVDD	-	Power supply terminal (+1.8V)
85	SSTB-MP3	I	MP3 standby on/off control signal input terminal "L": standby Not used
86	VDD	-	Power supply terminal (+1.8V)
87	VSS	-	Ground terminal
88	TEST1	I	Test terminal Normally: fixed at "L"
89	DATA	I	CD serial data input from the system controller

Pin No.	Pin Name	I/O	Description
90	CLK2	I	MP3 serial data transfer clock signal input from the system controller
91	SVSS	-	Ground terminal
92	SVDD	-	Power supply terminal (+2.5V)
93	JTAGTCK	-	Not used
94	JTAGTDI	-	Not used
95	JTAGTDO	-	Not used
96	JTAGTMS	-	Not used
97	TRST	-	Not used
98	VSS	-	Ground terminal
99	VDD	-	Power supply terminal (+1.8V)
100	IOVDD2	-	Power supply terminal (+3.3V)
101	DOUT	O	Digital audio signal output terminal Not used
102	TEST	I	Test terminal Normally: fixed at "L"
103	TES1	I	Test terminal Normally: fixed at "L"
104	IOVSS2	-	Ground terminal
105	PLL VDD	-	Power supply terminal (+1.8V)
106	PLL VSS	-	Ground terminal
107	XVSS	-	Ground terminal
108	XTAO	O	System clock output terminal (16.9344 MHz)
109	XTAI	I	System clock input terminal (16.9344 MHz)
110	XVDD	-	Power supply terminal (+1.8V)
111	AVDD1	-	Power supply terminal (+3.3V)
112	AOUT1	O	L-ch analog audio signal output terminal
113	VREFL	O	L-ch reference voltage output terminal
114	AVSS1	-	Ground terminal
115	AVSS2	-	Ground terminal
116	VREFR	O	R-ch reference voltage output terminal
117	AOUT2	O	R-ch analog audio signal output terminal
118	AVDD1	-	Power supply terminal (+3.3V)
119	IOVDD0	-	Power supply terminal (+3.3V)
120	IOVSS0	-	Ground terminal

HCD-GX255/RG170/RG470

MAIN BOARD M30302MCP-A05FPU0 (SYSTEM CONTROLLER)

Pin No.	Pin Name	I/O	Description
1	O-BD3401-DATA	O	Serial data output to the electrical volume
2	O-BD3401-CLK	O	Serial data transfer clock signal output to the electrical volume
3	O-VFD-RESET	O	System reset signal output to the FL/LED driver
4	O-VFD-CE	O	Chip enable signal output to the FL/LED driver
5	I-AC-CUT	I	AC power detection signal input terminal
6	I-VOL-A	I	Jog dial pulse input terminal
7	I-SIRCS-IN	I	SIRCS signal input terminal
8	BYTE	I	Mode setting terminal Normally not used
9	CNVSS	I	Mode setting terminal Normally not used
10	XCIN (32.768KHZ)	I	Sub system clock input terminal (32.768 kHz)
11	XCOUT (32.768KHZ)	O	Sub system clock output terminal (32.768 kHz)
12	I-RESET	I	System reset signal input from the reset signal generator "L": reset For several hundreds msec. after the power supply rises, "L" is input, then it changes to "H"
13	XOUT (16MHZ)	O	Main system clock output terminal (16 MHz)
14	VSS	-	Ground terminal
15	XIN (16MHZ)	I	Main system clock input terminal (16 MHz)
16	VCC1	-	Power supply terminal (+3.3V)
17	NMI	I	Non-maskable interrupt signal input terminal
18	I-RDS-CLK	I	RDS data transfer clock signal input terminal (AEP and East European models)
19	I-SCOR	I	Subcode sync (S0+S1) detection signal input from the CD DSP
20	I-AC-PULSE	I	AC main power detection signal input terminal
21	I-VOL-B	I	Jog dial pulse input terminal
22	O-STBY-LED	O	LED drive signal output terminal
23	O-SYS-MUTE	O	Muting on/off control signal output terminal
24	O-STK-MUTE	O	Standby signal output to the power amplifier (for front speaker output)
25	O-SWR	O	Relay drive signal output for surround output Not used
26	O-POWER-RELAY	O	Relay drive signal output for main power
27	O-FRONT-SP-RELAY	O	Power on/off control signal output for the fan motor and amplifier section
28	O-MP3-CLK	O	MP3 serial data transfer clock signal output to the CD DSP
29	I-MP3-DI	I	MP3 serial data input terminal
30	O-MP3-DATA	O	MP3 serial data output to the CD DSP
31	O-CD-DATA	O	CD serial data output to the CD DSP
32	I-CD-SENS	I	Internal status (SENSE) signal input from the CD DSP
33	O-CD-CLK	O	CD serial data transfer clock signal output to the CD DSP
34	O-XTCN	O	Oscillator control signal output to the CD DSP
35	O-VFD-DATA	O	Serial data output to the FL/LED driver
36	I-VFD-DATA	I	Serial data input from the FL/LED driver
37	O-VFD-CLK	O	Serial data transfer clock signal output to the FL/LED driver
38	O-XRST	O	System reset signal output to the CD DSP "L": reset
39	O-XLAT-MP3	O	MP3 serial data latch pulse signal output to the CD DSP
40	I-ACK-MP3	I	MP3 acknowledge signal input from the CD DSP
41	xHOLD	I/O	Not used

Pin No.	Pin Name	I/O	Description
42	O-XLAT	O	CD serial data latch pulse signal output to the CD DSP
43	I-REQ-MP3	I	MP3 data request signal input from the CD DSP
44	O-REQ-MP3	O	MP3 data request signal output to the CD DSP
45	O-SSTB-MP3 /M-MUTE	O	Muting on/off control signal output to the motor/coil driver "L": muting on
46	xWR	I/O	Not used
47	NC	I/O	Not used
48, 49	O-LM-R, O-LM-F	O	Loading motor control signal output terminal
50, 51	O-TM-R, O-TM-F	O	Table motor control signal output terminal
52 to 54	I-E-1 to I-E-3	I	Disc tray address sensor (rotary encoder) input terminal
55	I-CD NUMBER SENS	I	Table address sensor input terminal
56	I-OPEN-SW	I	Disc tray open/close detection switch input terminal
57 to 61	NC	I/O	Not used
62	VCC2	-	Power supply terminal (+3.3V)
63	NC	I/O	Not used
64	VSS	-	Ground terminal
65	O-LC72121-CLK	O	Serial data transfer clock signal output to the tuner (FM/AM)
66	I-LC72121-DI	I	Serial data input from the tuner (FM/AM)
67	O-LC72121-DO	O	Serial data output to the tuner (FM/AM)
68	O-LC72121-CE	O	Chip enable signal output to the tuner (FM/AM)
69	I-TUNED	I	Tuning detection signal input from the tuner (FM/AM)
70	I-STEREO	I	FM stereo detection signal input from the tuner (FM/AM)
71	O-ST-MUTE	O	Muting on/off control signal output to the tuner (FM/AM)
72	I-RDS-DATA	I	RDS data input from the terminal (AEP and East European models)
73	I-MODEL1	I	Setting terminal for the destination and model type
74	I-KEY0	I	Front panel key input terminal (A/D input)
75 to 80	I-MODEL2 to I-MODEL7	I	Setting terminal for the destination and model type
81	I-HP/AUDIO IN	I	Headphone plug and audio in plug insert detection signal input
82	I-MIC	I	MIC plug insert detection signal input terminal (120 V AC area in E, Chilean and Peruvian models)
83	I-REAL-A	I	Deck-A tape reel rotating detection signal input terminal
84	I-REAL-B	I	Deck-B tape reel rotating detection signal input terminal
85	O-MOTOR	O	Capstan/reel motor drive signal output terminal
86	O-A-SOL	O	Deck-A plunger drive signal output terminal
87	O-B-SOL	O	Deck-B plunger drive signal output terminal
88	I-TAPE-A-STAT	I	Deck-A cassette detection signal, deck-A mode detection signal and recording (reverse direction) detection signal input terminal (A/D input)
89	I-TAPE-B-STAT	I	Deck-B cassette detection signal, deck-B mode detection signal and recording (forward direction) detection signal input terminal (A/D input)
90	O-REC/PB	O	REC/PB switching control signal output terminal
91	O-BIAS	O	REC bias on/off control signal output terminal
92	I-TAPE-AMS	I	Auto music sensor detection signal input from the electrical volume "L": music is present, "H": music is not present
93	I-STREAM	I	Audio signal input for stream LED (A/D input)
94	I-VACS	I	VACS signal input terminal (A/D input)

HCD-GX255/RG170/RG470

Pin No.	Pin Name	I/O	Description
95	I-PROTECTOR	I	Protector operating detection signal input terminal
96	AVSS	-	Ground terminal
97	I-POWER, DISPLAY	I	Front panel key input terminal (A/D input)
98	VREF	I	Reference voltage input terminal
99	AVCC	-	Power supply terminal (+3.3V)
100	NC	O	Not used

4. EXPLODED VIEWS

NOTE:

- -XX and -X mean standardized parts, so they may have some difference from the original one.
- Color Indication of Appearance Parts
Example:
KNOB, BALANCE (WHITE) . . . (RED)

↑
↑

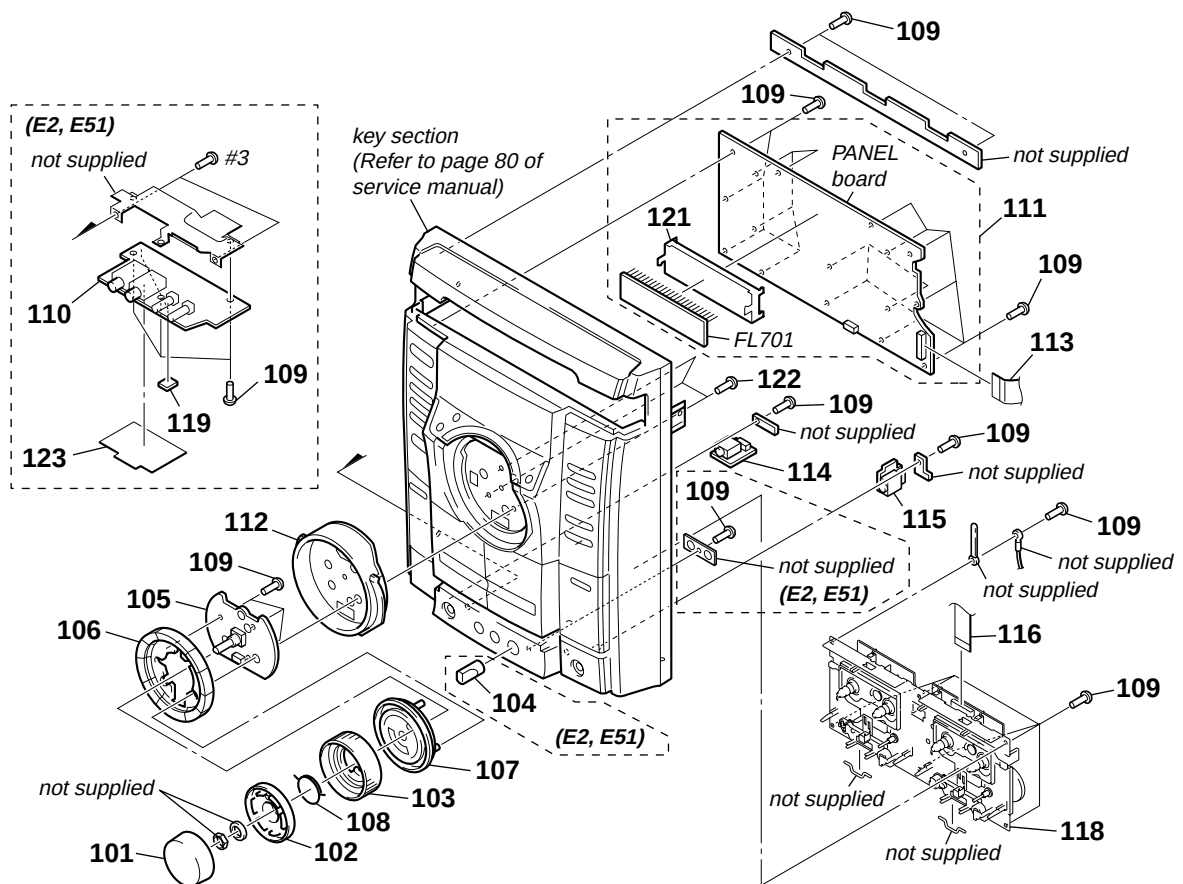
Parts Color Cabinet's Color
- Abbreviation
E2 : 120V AC Area in E model
E51 : Chilean and Peruvian models
EE : East European model
RU : Russian model

- Items marked “*” are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.
- Accessories are given in the last of the electrical parts list.
- Changed sections only are described in this supplement-1.
Refer to original service manual for other information.

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

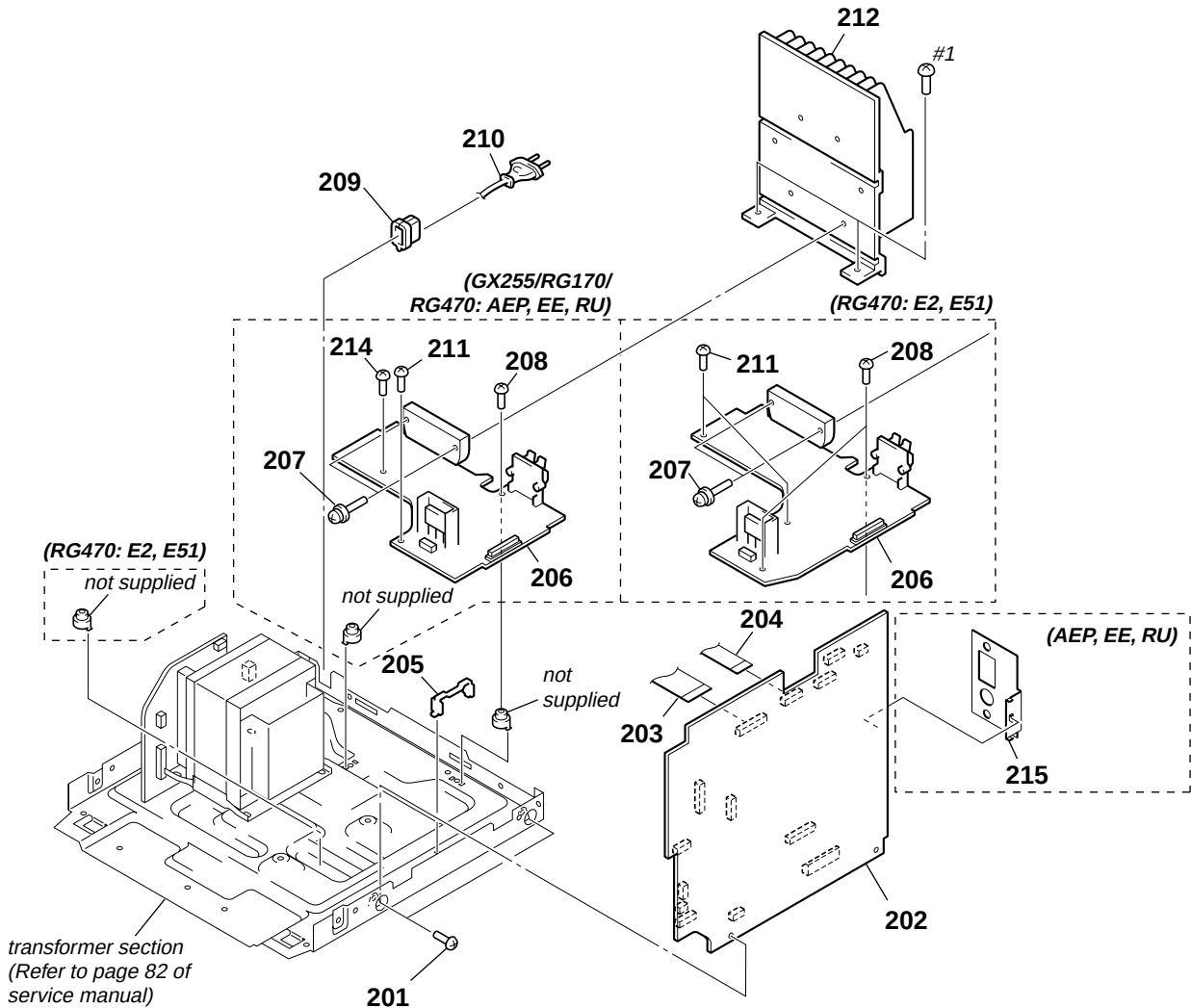
Les composants identifiés par une marque Δ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

4-1. FRONT PANEL SECTION



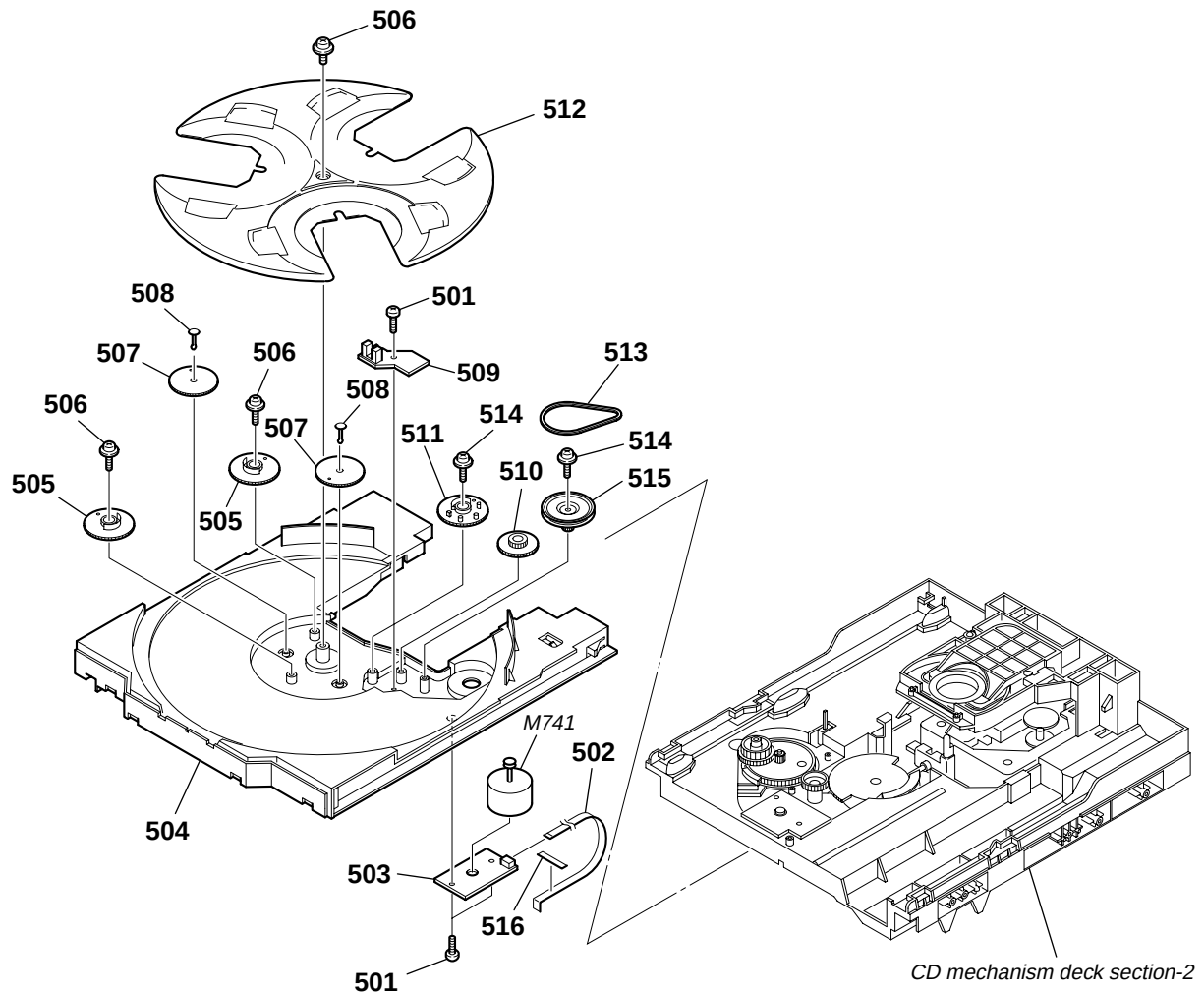
Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
101	4-252-214-01	KNOB, VOLUME		112	X-2067-233-1	WINDOW (CENTER) ASSY (RG470)	
102	2-348-884-01	RING (JOG)		112	X-2067-234-1	WINDOW (CENTER) ASSY (GX255/RG170)	
103	2-348-875-11	KNOB (JOG)		113	1-829-003-11	WIRE (FLAT TYPE) (19 CORE)	
104	2-638-220-01	KNOB (MIC) (E2, E51)		114	A-1094-031-A	AUDIO IN BOARD, COMPLETE	
105	A-1093-878-A	VOL BOARD, COMPLETE		115	A-1138-328-A	HEADPHONE BOARD, COMPLETE	
106	2-348-870-02	KEY (PLAY) (ALBUM -, ALBUM +, $\ll$, $\gg$, $\ll$ - EQ + $\gg$ - TUNING +, EQ BAND, $\blacktriangleright$, $\blacksquare$)		116	1-828-973-11	WIRE (FLAT TYPE) (13 CORE)	
107	2-348-874-01	COVER (CENTER)		118	1-796-485-51	DECK, MECHANICAL (CWM43FF13)	
108	4-252-223-01	SPRING, KNOB		119	4-233-372-02	FOOT (FELT) (E2, E51)	
109	4-951-620-01	SCREW (2.6X8), +BVTP		121	2-348-856-01	FL GUIDE	
110	A-1094-199-A	MIC BOARD, COMPLETE (E2, E51)		122	3-254-142-01	SCREW (B3), (+) BV TAPPING	
111	A-1093-854-A	PANEL BOARD, COMPLETE (GX255/RG170)		123	2-632-080-01	SHEET (MIC), SHIELD (E2, E51)	
111	A-1093-856-A	PANEL BOARD, COMPLETE (RG470)		FL701	1-518-976-31	INDICATOR TUBE, FLUORESCENT	
				#3	7-685-134-19	SCREW +P 2.6X8 TYPE2 NON-SLIT	

4-2. CHASSIS SECTION



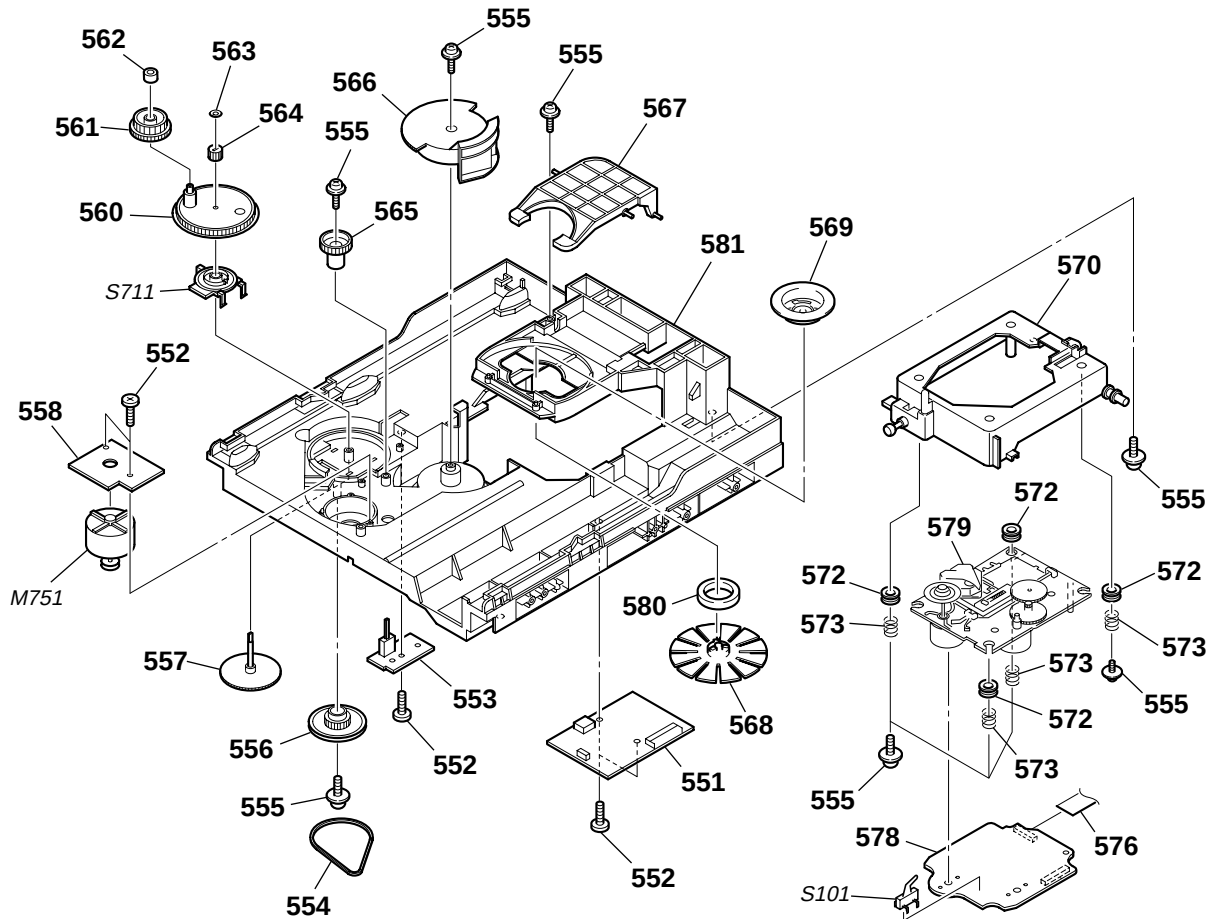
Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
201	3-254-142-01	SCREW (B3), (+) BV TAPPING		206	A-1094-146-A	POWER BOARD, COMPLETE (RG470: E2, E51)	
202	A-1138-298-A	MAIN BOARD, COMPLETE (GX255)		207	3-905-609-41	SCREW (TRANSISTOR)	
202	A-1138-299-A	MAIN BOARD, COMPLETE (RG170: AEP, EE)		208	3-254-145-01	SCREW (B3), (+) BV TAPPING	
202	A-1138-300-A	MAIN BOARD, COMPLETE (RG170: RU)		209	3-703-244-00	BUSHING (2104), CORD (EXCEPT E2)	
202	A-1138-301-A	MAIN BOARD, COMPLETE (RG170: E2, E51)		* 209	3-703-571-12	BUSHING (S) (4516), CORD (E2)	
202	A-1138-302-A	MAIN BOARD, COMPLETE (RG470: AEP, EE)		△ 210	1-827-226-31	CORD, POWER (E2)	
202	A-1138-303-A	MAIN BOARD, COMPLETE (RG470: RU)		△ 210	1-830-188-11	CORD, POWER (AEP, EE, RU, E51)	
202	A-1138-304-A	MAIN BOARD, COMPLETE (RG470: E2, E51)		△ 210	1-830-190-11	CORD, POWER (GX255)	
203	1-775-217-11	WIRE (FLAT TYPE) (23 CORE)		211	3-077-331-01	+BV3 (3-CR)	
204	1-828-970-11	WIRE (FLAT TYPE) (13 CORE)		212	2-549-972-01	HEAT SINK (H) (GX255/RG470: AEP, EE, RU)	
205	4-988-533-01	HOLDER, PWB		212	2-549-972-11	HEAT SINK (H) (RG170: AEP, EE, RU)	
206	A-1094-141-A	POWER BOARD, COMPLETE (GX255)		212	4-252-219-31	HEAT SINK (RG170: E2, E51)	
206	A-1094-142-A	POWER BOARD, COMPLETE (RG170: AEP, EE, RU)		212	4-252-219-51	HEAT SINK (RG470: E2, E51)	
206	A-1094-143-A	POWER BOARD, COMPLETE (RG170: E2, E51)		214	3-254-146-01	SCREW (B3), (+) BV TAPPING	
206	A-1094-145-A	POWER BOARD, COMPLETE (RG470: AEP, EE, RU)		215	2-549-969-01	PLATE (TU), SHIELD (AEP, EE, RU)	
				#1	7-685-881-09	SCREW +BVTT 4X8 (S)	

4-3. CD MECHANISM DECK SECTION-1 (CDM74KFS-K6BD83S)



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
501	4-218-253-62	SCREW (M2.6), +BTTP		510	4-243-820-01	GEAR (TABLE)	
502	1-776-182-11	WIRE (FLAT TYPE) (5 CORE)		511	4-243-819-01	GEAR (GENEVA)	
503	1-687-134-12	MOTOR (TB) BOARD		512	4-243-816-11	TRAY	
504	4-243-815-11	TABLE (LOADING)		513	4-243-823-11	BELT (TABLE)	
505	4-245-571-02	GEAR (STOPPER)		514	4-985-672-01	SCREW (+PTPWH M2.6), FLOATING	
506	4-218-252-61	SCREW (+PTPWH M2.6), FLOATING		515	4-243-821-01	PULLEY (TABLE)	
507	4-245-570-01	GEAR (JOINT)		516	3-231-598-01	SHEET (BA)	
508	4-245-572-01	BUSHING (GEAR)		M741	A-1108-965-A	MOTOR ASSY, TABLE	
509	1-687-132-12	SENSOR BOARD					

4-4. CD MECHANISM DECK SECTION-2 (CDM74KFS-K6BD83S)



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
551	A-1103-756-A	DRIVER BOARD, COMPLETE		567	4-243-822-02	LEVER (LIFTER)	
552	4-218-253-52	SCREW (M2.6), +BTTP		568	X-2102-809-1	PULLEY (KH) ASSY	
553	1-687-669-12	SW BOARD		569	4-231-189-01	PULLEY (B), CHUCKING	
554	4-244-034-11	BELT (LOADING)		570	X-2055-190-1	HOLDER (213) ASSY	
555	4-985-672-01	SCREW (+PTPWH M2.6), FLOATING		572	4-227-549-11	INSULATOR	
556	4-225-844-01	GEAR (LOADING A)		573	4-227-045-31	SPRING (INSULATOR), COIL	
557	4-224-613-11	GEAR (SHAFT)		576	1-827-992-11	WIRE (FLAT TYPE) (16 CORE)	
558	1-687-133-12	MOTOR (LD) BOARD		578	A-1134-279-A	CD BOARD, COMPLETE	
560	4-244-108-01	GEAR, SWING		△ 579	A-4735-357-A	OPTICAL PICK-UP BLOCK (KSM-213D)	
561	4-224-609-01	GEAR (LOADING C)		580	1-471-035-21	MAGNET ASSY	
562	4-224-608-01	COLLAR, SWING		581	4-243-817-22	CHASSIS	
563	3-016-533-11	WASHER (FR), STOPPER		M751	A-1108-966-A	MOTOR ASSY, LOADING	
564	4-224-611-01	GEAR (LOADING B)		S711	1-477-680-12	ENCODER, ROTARY (DISC TRAY ADDRESS DETECT)	
565	4-224-606-01	GEAR (RV)		S101	1-771-853-11	SWITCH, DETECTION (LIMIT)	
566	4-243-818-01	GEAR (U/D)					

5. 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
- Abbreviation
E2 : 120V AC Area in E model EE : East European model
E51 : Chilean and Peruvian models RU : Russian model
- Items marked “*” are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS**
In each case, u: 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
	A-1134-279-A	CD BOARD, COMPLETE *****					
		< CAPACITOR >					
C101	1-162-919-11	CERAMIC CHIP 22PF	5% 50V	C256	1-107-826-11	CERAMIC CHIP 0.1uF	10% 16V
C102	1-162-919-11	CERAMIC CHIP 22PF	5% 50V	C257	1-107-826-11	CERAMIC CHIP 0.1uF	10% 16V
C103	1-162-919-11	CERAMIC CHIP 22PF	5% 50V	C258	1-164-230-11	CERAMIC CHIP 220PF	5% 50V
C104	1-164-230-11	CERAMIC CHIP 220PF	5% 50V	C260	1-117-863-11	CERAMIC CHIP 0.47uF	10% 6.3V
C105	1-162-919-11	CERAMIC CHIP 22PF	5% 50V	C261	1-162-970-11	CERAMIC CHIP 0.01uF	10% 25V
C107	1-164-230-11	CERAMIC CHIP 220PF	5% 50V	C264	1-162-964-11	CERAMIC CHIP 0.001uF	10% 50V
C108	1-164-230-11	CERAMIC CHIP 220PF	5% 50V	C265	1-107-826-11	CERAMIC CHIP 0.1uF	10% 16V
C109	1-164-230-11	CERAMIC CHIP 220PF	5% 50V	C266	1-162-915-11	CERAMIC CHIP 10PF	0.5PF 50V
C110	1-164-230-11	CERAMIC CHIP 220PF	5% 50V	C267	1-162-910-11	CERAMIC CHIP 5PF	0.25PF 50V
C111	1-164-230-11	CERAMIC CHIP 220PF	5% 50V	C268	1-162-915-11	CERAMIC CHIP 10PF	0.5PF 50V
C112	1-162-919-11	CERAMIC CHIP 22PF	5% 50V	C271	1-107-826-11	CERAMIC CHIP 0.1uF	10% 16V
C113	1-162-919-11	CERAMIC CHIP 22PF	5% 50V	C272	1-164-360-11	CERAMIC CHIP 0.1uF	16V
C201	1-128-995-21	ELECT CHIP 100uF	20% 10V	C273	1-164-315-11	CERAMIC CHIP 470PF	5% 50V
C202	1-164-360-11	CERAMIC CHIP 0.1uF	16V	C274	1-107-826-11	CERAMIC CHIP 0.1uF	10% 16V
C203	1-128-995-21	ELECT CHIP 100uF	20% 10V	C275	1-162-910-11	CERAMIC CHIP 5PF	0.25PF 50V
C204	1-164-360-11	CERAMIC CHIP 0.1uF	16V	C276	1-165-908-11	CERAMIC CHIP 1uF	10% 10V
C205	1-164-360-11	CERAMIC CHIP 0.1uF	16V	C277	1-165-908-11	CERAMIC CHIP 1uF	10% 10V
C206	1-164-360-11	CERAMIC CHIP 0.1uF	16V	C291	1-164-315-11	CERAMIC CHIP 470PF	5% 50V
C207	1-128-995-21	ELECT CHIP 100uF	20% 10V	C292	1-164-315-11	CERAMIC CHIP 470PF	5% 50V
C208	1-164-360-11	CERAMIC CHIP 0.1uF	16V	C301	1-164-360-11	CERAMIC CHIP 0.1uF	16V
C210	1-164-360-11	CERAMIC CHIP 0.1uF	16V	C303	1-137-710-11	CERAMIC CHIP 10uF	20% 6.3V
C213	1-164-360-11	CERAMIC CHIP 0.1uF	16V	C304	1-165-908-11	CERAMIC CHIP 1uF	10% 10V
C214	1-164-360-11	CERAMIC CHIP 0.1uF	16V	C321	1-162-964-11	CERAMIC CHIP 0.001uF	10% 50V
C215	1-164-360-11	CERAMIC CHIP 0.1uF	16V	C322	1-165-908-11	CERAMIC CHIP 1uF	10% 10V
C217	1-164-360-11	CERAMIC CHIP 0.1uF	16V	C323	1-128-995-21	ELECT CHIP 100uF	20% 10V
C218	1-164-360-11	CERAMIC CHIP 0.1uF	16V	C401	1-128-394-11	ELECT CHIP 220uF	20% 10V
C219	1-164-360-11	CERAMIC CHIP 0.1uF	16V	C404	1-164-360-11	CERAMIC CHIP 0.1uF	16V
C220	1-164-360-11	CERAMIC CHIP 0.1uF	16V	C405	1-164-360-11	CERAMIC CHIP 0.1uF	16V
C221	1-164-360-11	CERAMIC CHIP 0.1uF	16V	C406	1-164-360-11	CERAMIC CHIP 0.1uF	16V
C222	1-164-360-11	CERAMIC CHIP 0.1uF	16V	C424	1-164-360-11	CERAMIC CHIP 0.1uF	16V
C223	1-164-360-11	CERAMIC CHIP 0.1uF	16V	C451	1-165-176-11	CERAMIC CHIP 0.047uF	10% 16V
C224	1-164-360-11	CERAMIC CHIP 0.1uF	16V			< CONNECTOR >	
C226	1-165-908-11	CERAMIC CHIP 1uF	10% 10V	CN102	1-770-706-11	CONNECTOR, FFC/FPC 23P	
C227	1-165-908-11	CERAMIC CHIP 1uF	10% 10V	CN301	1-770-425-11	CONNECTOR, FFC/FPC 16P	
C230	1-162-927-11	CERAMIC CHIP 100PF	5% 50V			< IC >	
C232	1-164-360-11	CERAMIC CHIP 0.1uF	16V	IC201	8-753-246-30	IC CXD3014A-201R	
C251	1-164-315-11	CERAMIC CHIP 470PF	5% 50V	IC202	6-708-736-01	IC BD18KA5FP-E2	
C252	1-162-968-11	CERAMIC CHIP 0.0047uF	10% 50V	IC402	6-705-808-01	IC BA5947FM-E2	
C253	1-164-315-11	CERAMIC CHIP 470PF	5% 50V				
C254	1-162-968-11	CERAMIC CHIP 0.0047uF	10% 50V				

HCD-GX255/RG170/RG470

CD HEADPHONE MAIN

Ref. No.	Part No.	Description	Remark		
< TRANSISTOR >					
Q321	6-551-120-01	TRANSISTOR	2SA2119K		
< RESISTOR/FERRITE BEAD >					
R101	1-216-809-11	METAL CHIP	100	5%	1/10W
R102	1-216-809-11	METAL CHIP	100	5%	1/10W
R103	1-216-809-11	METAL CHIP	100	5%	1/10W
R104	1-216-809-11	METAL CHIP	100	5%	1/10W
R105	1-216-809-11	METAL CHIP	100	5%	1/10W
R107	1-216-809-11	METAL CHIP	100	5%	1/10W
R108	1-216-809-11	METAL CHIP	100	5%	1/10W
R109	1-216-809-11	METAL CHIP	100	5%	1/10W
R110	1-216-809-11	METAL CHIP	100	5%	1/10W
R111	1-216-809-11	METAL CHIP	100	5%	1/10W
R112	1-216-809-11	METAL CHIP	100	5%	1/10W
R113	1-216-809-11	METAL CHIP	100	5%	1/10W
R201	1-216-295-00	SHORT CHIP	0		
R202	1-216-295-00	SHORT CHIP	0		
R203	1-500-445-21	FERRITE, EMI (SMD) (2012)			
R207	1-216-295-00	SHORT CHIP	0		
R250	1-216-857-11	METAL CHIP	1M	5%	1/10W
R252	1-216-833-11	METAL CHIP	10K	5%	1/10W
R253	1-216-821-11	METAL CHIP	1K	5%	1/10W
R254	1-216-833-11	METAL CHIP	10K	5%	1/10W
R255	1-216-821-11	METAL CHIP	1K	5%	1/10W
R256	1-216-837-11	METAL CHIP	22K	5%	1/10W
R257	1-216-845-11	METAL CHIP	100K	5%	1/10W
R258	1-216-849-11	METAL CHIP	220K	5%	1/10W
R260	1-216-864-11	SHORT CHIP	0		
R265	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R266	1-216-821-11	METAL CHIP	1K	5%	1/10W
R267	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R268	1-216-833-11	METAL CHIP	10K	5%	1/10W
R270	1-216-821-11	METAL CHIP	1K	5%	1/10W
R271	1-216-857-11	METAL CHIP	1M	5%	1/10W
R275	1-216-809-11	METAL CHIP	100	5%	1/10W
R276	1-216-841-11	METAL CHIP	47K	5%	1/10W
R277	1-216-809-11	METAL CHIP	100	5%	1/10W
R278	1-216-809-11	METAL CHIP	100	5%	1/10W
R280	1-216-864-11	SHORT CHIP	0		
R291	1-216-809-11	METAL CHIP	100	5%	1/10W
R292	1-216-809-11	METAL CHIP	100	5%	1/10W
R321	1-216-789-11	METAL CHIP	2.2	5%	1/10W
R322	1-216-789-11	METAL CHIP	2.2	5%	1/10W
R323	1-216-864-11	SHORT CHIP	0		
R324	1-216-845-11	METAL CHIP	100K	5%	1/10W
R401	1-216-295-00	SHORT CHIP	0		
R421	1-216-864-11	SHORT CHIP	0		
R423	1-216-833-11	METAL CHIP	10K	5%	1/10W
R451	1-216-837-11	METAL CHIP	22K	5%	1/10W
R452	1-216-833-11	METAL CHIP	10K	5%	1/10W
< VIBRATOR >					
X201	1-795-101-21	VIBRATOR, CERAMIC (16.9344MHz)			

Ref. No.	Part No.	Description	Remark			
	A-1138-328-A	HEADPHONE BOARD, COMPLETE				

< CAPACITOR >						
C781	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V	
C782	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V	
< JACK >						
J701	1-785-448-21	JACK (PHONES)				

	A-1138-298-A	MAIN BOARD, COMPLETE (GX255)				
	A-1138-299-A	MAIN BOARD, COMPLETE (RG170: AEP, EE)				
	A-1138-300-A	MAIN BOARD, COMPLETE (RG170: RU)				
	A-1138-301-A	MAIN BOARD, COMPLETE (RG170: E2, E51)				
	A-1138-302-A	MAIN BOARD, COMPLETE (RG470: AEP, EE)				
	A-1138-303-A	MAIN BOARD, COMPLETE (RG470: RU)				
	A-1138-304-A	MAIN BOARD, COMPLETE (RG470: E2, E51)				

	7-685-872-09	SCREW +BVTT 3X8 (S)				
< CAPACITOR >						
C001	1-136-497-11	FILM	0.1uF	5%	50V	
C002	1-136-497-11	FILM	0.1uF	5%	50V	
C005	1-126-768-11	ELECT	2200uF	20%	16V	
C007	1-126-965-11	ELECT	22uF	20%	50V	
C011	1-136-497-11	FILM	0.1uF	5%	50V	
C012	1-136-497-11	FILM	0.1uF	5%	50V	
C013	1-126-943-11	ELECT	2200uF	20%	25V	
C015	1-126-933-11	ELECT	100uF	20%	16V	
C016	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V	
C023	1-126-943-11	ELECT	2200uF	20%	25V	
C025	1-126-933-11	ELECT	100uF	20%	16V	
C026	1-162-974-11	CERAMIC CHIP	0.01uF		50V	
C027	1-162-974-11	CERAMIC CHIP	0.01uF		50V	
C028	1-162-974-11	CERAMIC CHIP	0.01uF		50V	
C031	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V	
(AEP, EE, RU)						
C032	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V	
(AEP, EE, RU)						
C041	1-126-947-11	ELECT	47uF	20%	35V	
(RG470)						
C042	1-126-963-11	ELECT	4.7uF	20%	50V	
(RG470)						
C043	1-164-156-11	CERAMIC CHIP	0.1uF		25V	
(RG470)						
C044	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V	
(RG470)						
C045	1-164-156-11	CERAMIC CHIP	0.1uF		25V	
(RG470)						
C063	1-164-156-11	CERAMIC CHIP	0.1uF		25V	
C064	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V	
C065	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V	
(AEP, EE, RU)						
C066	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V	
(AEP, EE, RU)						
C068	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V	
(AEP, EE, RU)						

Ref. No.	Part No.	Description	Remark			Ref. No.	Part No.	Description	Remark		
C069	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V	C173	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V
					(AEP, EE, RU)	C174	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V
C070	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V	C175	1-107-726-91	CERAMIC CHIP	0.01uF	10%	16V
					(AEP, EE, RU)	C176	1-107-726-91	CERAMIC CHIP	0.01uF	10%	16V
C101	1-126-960-11	ELECT	1uF	20%	50V	C177	1-162-960-11	CERAMIC CHIP	220PF	10%	50V
C102	1-126-960-11	ELECT	1uF	20%	50V						
C103	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V	C178	1-162-960-11	CERAMIC CHIP	220PF	10%	50V
C104	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V	C179	1-126-964-11	ELECT	10uF	20%	50V
C105	1-126-960-11	ELECT	1uF	20%	50V	C180	1-126-964-11	ELECT	10uF	20%	50V
C106	1-126-960-11	ELECT	1uF	20%	50V	C181	1-126-960-11	ELECT	1uF	20%	50V
C109	1-126-960-11	ELECT	1uF	20%	50V	C182	1-126-960-11	ELECT	1uF	20%	50V
C110	1-126-960-11	ELECT	1uF	20%	50V						
C111	1-126-965-11	ELECT	22uF	20%	50V	C183	1-126-960-11	ELECT	1uF	20%	50V
C113	1-126-960-11	ELECT	1uF	20%	50V	C184	1-126-960-11	ELECT	1uF	20%	50V
					(E2, E51)	C185	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V
C114	1-126-960-11	ELECT	1uF	20%	50V						(AEP, EE, RU)
C116	1-126-960-11	ELECT	1uF	20%	50V	C186	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
											(AEP, EE, RU)
C117	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V	C187	1-164-362-11	CERAMIC CHIP	470PF	5%	50V
C118	1-126-961-11	ELECT	2.2uF	20%	50V						(AEP, EE, RU)
C119	1-126-961-11	ELECT	2.2uF	20%	50V	C188	1-164-362-11	CERAMIC CHIP	470PF	5%	50V
C120	1-125-891-11	CERAMIC CHIP	0.47uF	10%	10V						(AEP, EE, RU)
C121	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V	C189	1-164-362-11	CERAMIC CHIP	470PF	5%	50V
											(AEP, EE, RU)
C122	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V	C190	1-164-362-11	CERAMIC CHIP	470PF	5%	50V
C123	1-107-726-91	CERAMIC CHIP	0.01uF	10%	16V						(AEP, EE, RU)
C124	1-107-726-91	CERAMIC CHIP	0.01uF	10%	16V	C191	1-107-726-91	CERAMIC CHIP	0.01uF	10%	16V
C125	1-107-726-91	CERAMIC CHIP	0.01uF	10%	16V	C192	1-107-726-91	CERAMIC CHIP	0.01uF	10%	16V
C126	1-107-726-91	CERAMIC CHIP	0.01uF	10%	16V						
C127	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V	C193	1-162-960-11	CERAMIC CHIP	220PF	10%	50V
C128	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V	C194	1-162-960-11	CERAMIC CHIP	220PF	10%	50V
C129	1-126-964-11	ELECT	10uF	20%	50V	C196	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V
C130	1-126-964-11	ELECT	10uF	20%	50V						(AEP, EE, RU)
C131	1-126-956-11	ELECT	0.1uF	20%	50V	C197	1-162-960-11	CERAMIC CHIP	220PF	10%	50V
						C198	1-162-960-11	CERAMIC CHIP	220PF	10%	50V
C132	1-126-959-11	ELECT	0.47uF	20%	50V						
C133	1-126-959-11	ELECT	0.47uF	20%	50V	C199	1-126-964-11	ELECT	10uF	20%	50V
C136	1-126-964-11	ELECT	10uF	20%	50V	C200	1-126-964-11	ELECT	10uF	20%	50V
C137	1-126-964-11	ELECT	10uF	20%	50V	C201	1-126-961-11	ELECT	2.2uF	20%	50V
C139	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V	C202	1-126-961-11	ELECT	2.2uF	20%	50V
						C205	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C140	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V						
C141	1-162-949-11	CERAMIC CHIP	47PF	5%	50V	C206	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C142	1-162-949-11	CERAMIC CHIP	47PF	5%	50V	C207	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C143	1-136-497-11	FILM	0.1uF	5%	50V	C208	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C144	1-136-497-11	FILM	0.1uF	5%	50V	C209	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
						C210	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C145	1-136-497-11	FILM	0.1uF	5%	50V						
C146	1-136-497-11	FILM	0.1uF	5%	50V	C211	1-136-153-00	FILM	0.01uF	5%	50V
C147	1-164-362-11	CERAMIC CHIP	470PF	5%	50V	C212	1-130-479-00	MYLAR	0.0047uF	5%	50V
C148	1-164-362-11	CERAMIC CHIP	470PF	5%	50V	C213	1-136-153-00	FILM	0.01uF	5%	50V
C149	1-126-947-11	ELECT	47uF	20%	35V	C214	1-130-479-00	MYLAR	0.0047uF	5%	50V
						C215	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V
C155	1-126-947-11	ELECT	47uF	20%	35V						(AEP, EE, RU)
C156	1-126-933-11	ELECT	100uF	20%	16V						
C158	1-115-467-11	CERAMIC CHIP	0.22uF	10%	10V	C220	1-162-945-11	CERAMIC CHIP	22PF	5%	50V
C159	1-162-974-11	CERAMIC CHIP	0.01uF		50V						(AEP, EE, RU)
					(AEP, EE, RU)	C222	1-126-947-11	ELECT	47uF	20%	35V
C160	1-126-933-11	ELECT	100uF	20%	16V	C223	1-136-153-00	FILM	0.01uF	5%	50V
						C224	1-130-479-00	MYLAR	0.0047uF	5%	50V
C161	1-162-953-11	CERAMIC CHIP	100PF	5%	50V	C225	1-130-479-00	MYLAR	0.0047uF	5%	50V
C162	1-162-953-11	CERAMIC CHIP	100PF	5%	50V						
C163	1-126-965-11	ELECT	22uF	20%	50V	C229	1-126-963-11	ELECT	4.7uF	20%	50V
C171	1-126-956-11	ELECT	0.1uF	20%	50V	C253	1-162-949-11	CERAMIC CHIP	47PF	5%	50V
C172	1-126-956-11	ELECT	0.1uF	20%	50V						(GX255/RG170: E2, E51/RG470)
						C253	1-216-864-11	SHORT CHIP	0	(RG170: AEP, EE, RU)	
						C254	1-162-949-11	CERAMIC CHIP	47PF	5%	50V
											(GX255/RG170: E2, E51/RG470)

HCD-GX255/RG170/RG470

MAIN

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
C254	1-216-864-11	SHORT CHIP	0 (RG170: AEP, EE, RU)	CN381	1-784-776-11	CONNECTOR, FFC 15P (AEP, EE)	
C255	1-162-945-11	CERAMIC CHIP	22PF 5% 50V (GX255/RG170: E2, E51/RG470)	CN391	1-784-774-11	CONNECTOR, FFC 13P	
C256	1-162-945-11	CERAMIC CHIP	22PF 5% 50V (GX255/RG170: E2, E51/RG470)	CN991	1-784-780-11	CONNECTOR, FFC 19P	
C257	1-126-947-11	ELECT	47uF 20% 35V (GX255/RG170: E2, E51/RG470)	< DIODE >			
C258	1-126-947-11	ELECT	47uF 20% 35V (GX255/RG170: E2, E51/RG470)	D001	6-500-522-21	DIODE 10EDB40-TB3	
C259	1-126-964-11	ELECT	10uF 20% 50V	D002	6-500-522-21	DIODE 10EDB40-TB3	
C260	1-126-964-11	ELECT	10uF 20% 50V	D003	6-500-522-21	DIODE 10EDB40-TB3	
C263	1-126-947-11	ELECT	47uF 20% 35V (GX255/RG170: E2, E51/RG470)	D004	6-500-522-21	DIODE 10EDB40-TB3	
C264	1-162-964-11	CERAMIC CHIP	0.001uF 10% 50V (GX255/RG170: E2, E51/RG470)	D006	8-719-988-61	DIODE 1SS355TE-17	
C265	1-126-963-11	ELECT	4.7uF 20% 50V	D007	6-500-522-21	DIODE 10EDB40-TB3	
C266	1-126-963-11	ELECT	4.7uF 20% 50V	D008	6-500-522-21	DIODE 10EDB40-TB3	
C301	1-126-964-11	ELECT	10uF 20% 50V	D011	6-500-522-21	DIODE 10EDB40-TB3	
C302	1-126-964-11	ELECT	10uF 20% 50V	D012	6-500-522-21	DIODE 10EDB40-TB3	
C305	1-162-964-11	CERAMIC CHIP	0.001uF 10% 50V (GX255)	D013	6-500-522-21	DIODE 10EDB40-TB3	
C317	1-126-926-11	ELECT	1000uF 20% 10V	D014	6-500-522-21	DIODE 10EDB40-TB3	
C384	1-162-953-11	CERAMIC CHIP	100PF 5% 50V (AEP, EE, RU)	D021	6-500-522-21	DIODE 10EDB40-TB3	
C391	1-164-156-11	CERAMIC CHIP	0.1uF 25V	D022	6-500-522-21	DIODE 10EDB40-TB3	
C901	1-126-933-11	ELECT	100uF 20% 16V	D023	6-500-522-21	DIODE 10EDB40-TB3	
C902	1-126-964-11	ELECT	10uF 20% 50V	D024	6-500-522-21	DIODE 10EDB40-TB3	
C904	1-164-156-11	CERAMIC CHIP	0.1uF 25V	D031	8-719-988-61	DIODE 1SS355TE-17	
C906	1-126-964-11	ELECT	10uF 20% 50V	D035	8-719-000-08	DIODE MC2838 (RG470)	
C908	1-164-156-11	CERAMIC CHIP	0.1uF 25V	D041	8-719-083-63	DIODE UDZSTE-1713B (RG470)	
C909	1-164-156-11	CERAMIC CHIP	0.1uF 25V	D121	6-500-848-01	DIODE MC2840-T112-1	
C910	1-164-156-11	CERAMIC CHIP	0.1uF 25V	D122	6-500-848-01	DIODE MC2840-T112-1	
C911	1-162-964-11	CERAMIC CHIP	0.001uF 10% 50V	D301	6-500-522-21	DIODE 10EDB40-TB3	
C912	1-162-960-11	CERAMIC CHIP	220PF 10% 50V	D302	6-500-522-21	DIODE 10EDB40-TB3	
C914	1-162-919-11	CERAMIC CHIP	22PF 5% 50V	D341	8-719-000-07	DIODE MC2836	
C916	1-126-916-11	ELECT	1000uF 20% 6.3V	D901	8-719-083-60	DIODE UDZSTE-174.7B	
C917	1-164-156-11	CERAMIC CHIP	0.1uF 25V	D902	8-719-000-07	DIODE MC2836	
C918	1-162-964-11	CERAMIC CHIP	0.001uF 10% 50V	D910	8-719-988-61	DIODE 1SS355TE-17	
C919	1-164-156-11	CERAMIC CHIP	0.1uF 25V	D921	6-500-848-01	DIODE MC2840-T112-1	
C921	1-126-961-11	ELECT	2.2uF 20% 50V	D923	6-500-848-01	DIODE MC2840-T112-1	
C922	1-126-963-11	ELECT	4.7uF 20% 50V	D943	8-719-000-08	DIODE MC2838	
C923	1-164-156-11	CERAMIC CHIP	0.1uF 25V	D947	8-719-988-61	DIODE 1SS355TE-17	
C924	1-164-156-11	CERAMIC CHIP	0.1uF 25V	< IC >			
C925	1-164-156-11	CERAMIC CHIP	0.1uF 25V	IC006	6-702-771-01	IC TA78033LS	
C927	1-162-919-11	CERAMIC CHIP	22PF 5% 50V	IC011	8-759-701-59	IC NJM78M09FA	
C928	1-162-964-11	CERAMIC CHIP	0.001uF 10% 50V	IC021	8-759-701-59	IC NJM78M09FA	
C970	1-162-964-11	CERAMIC CHIP	0.001uF 10% 50V	IC101	6-705-852-01	IC BD3401KS2	
< CONNECTOR >				IC251	8-759-909-71	IC BA4558F (GX255/RG170: E2, E51/RG470)	
CN031	1-778-982-21	CONNECTOR, BOARD TO BOARD 13P		IC901	6-805-825-01	IC M30302MCP-A05FPU0	
CN041	1-564-506-11	PLUG, CONNECTOR 3P (RG470)		IC902	8-759-713-61	IC PST3429UL	
CN061	1-564-707-11	PIN, CONNECTOR (SMALL TYPE) 5P		< JUMPER RESISTOR >			
CN065	1-564-707-11	PIN, CONNECTOR (SMALL TYPE) 5P		JR001	1-216-864-11	SHORT CHIP	0
CN066	1-564-706-11	PIN, CONNECTOR (SMALL TYPE) 4P (E2, E51)		JR002	1-216-864-11	SHORT CHIP	0
CN201	1-564-705-11	PIN, CONNECTOR (SMALL TYPE) 3P		JR005	1-216-864-11	SHORT CHIP	0
* CN203	1-564-710-11	PIN, CONNECTOR (SMALL TYPE) 8P		JR006	1-216-864-11	SHORT CHIP	0
CN301	1-779-291-11	CONNECTOR, FFC (LIF (NON-ZIF)) 23P		JR009	1-216-864-11	SHORT CHIP	0
CN341	1-784-774-11	CONNECTOR, FFC 13P		JR010	1-216-864-11	SHORT CHIP	0
CN381	1-568-830-11	CONNECTOR, FFC 11P (EXCEPT AEP, EE)		JR171	1-216-864-11	SHORT CHIP	0
				JR172	1-216-864-11	SHORT CHIP	0
				JR174	1-216-864-11	SHORT CHIP	0
				JR901	1-216-864-11	SHORT CHIP	0

Ref. No.	Part No.	Description	Remark			Ref. No.	Part No.	Description	Remark								
< RESISTOR >						R042	1-216-833-11	METAL CHIP	10K	5%	1/10W						
△JW030	1-202-972-61	FUSIBLE	1	5%	1/4W F	R043	1-216-825-11	METAL CHIP	2.2K	5%	1/10W						
						R044	1-216-864-11	SHORT CHIP	0 (RG470)								
						R045	1-216-821-11	METAL CHIP	1K	5%	1/10W (RG470)						
						< COIL >						R046	1-216-821-11	METAL CHIP	1K	5%	1/10W (RG470)
L201	1-424-849-11	COIL, OSCILLATION (BIAS)															
< TRANSISTOR >						R047	1-216-829-11	METAL CHIP	4.7K	5%	1/10W (RG470)						
Q002	8-729-120-28	TRANSISTOR	2SC1623-L5L6			R048	1-216-841-11	METAL CHIP	47K	5%	1/10W (RG470)						
Q041	6-551-276-01	TRANSISTOR	RT1N431C-TP-1			R049	1-216-789-11	METAL CHIP	2.2	5%	1/10W (RG470)						
Q042	8-729-037-13	TRANSISTOR	KTA1271Y														
Q043	8-729-142-46	TRANSISTOR	2SC2001-LK (RG470)														
Q044	8-729-142-46	TRANSISTOR	2SC2001-LK (RG470)			R050	1-216-841-11	METAL CHIP	47K	5%	1/10W (RG470)						
Q045	8-729-120-28	TRANSISTOR	2SC1623-L5L6 (RG470)			R052	1-216-853-11	METAL CHIP	470K	5%	1/10W						
Q111	8-729-120-28	TRANSISTOR	2SC1623-L5L6			△R059	1-215-867-00	METAL OXIDE	470	5%	1W F (RG170: AEP, EE, RU)						
Q112	8-729-120-28	TRANSISTOR	2SC1623-L5L6														
Q141	8-729-120-28	TRANSISTOR	2SC1623-L5L6														
Q142	8-729-120-28	TRANSISTOR	2SC1623-L5L6			△R059	1-215-890-11	METAL OXIDE	470	5%	2W F (GX255/RG170: E2, E51)						
Q201	8-729-142-46	TRANSISTOR	2SC2001-LK			△R059	1-215-892-11	METAL OXIDE	1K	5%	2W F (RG470)						
Q203	8-729-600-22	TRANSISTOR	2SA1235-F			△R060	1-215-867-00	METAL OXIDE	470	5%	1W F (RG170: AEP, EE, RU)						
Q205	8-729-120-28	TRANSISTOR	2SC1623-L5L6														
Q206	8-729-120-28	TRANSISTOR	2SC1623-L5L6														
Q207	8-729-120-28	TRANSISTOR	2SC1623-L5L6			△R060	1-215-890-11	METAL OXIDE	470	5%	2W F (GX255/RG170: E2, E51)						
Q208	8-729-120-28	TRANSISTOR	2SC1623-L5L6			△R060	1-215-892-11	METAL OXIDE	1K	5%	2W F (RG470)						
Q209	8-729-120-28	TRANSISTOR	2SC1623-L5L6														
Q210	8-729-120-28	TRANSISTOR	2SC1623-L5L6														
Q231	6-551-276-01	TRANSISTOR	RT1N431C-TP-1			R063	1-216-805-11	METAL CHIP	47	5%	1/10W (GX255/RG170)						
Q232	8-729-037-13	TRANSISTOR	KTA1271Y			R063	1-216-809-11	METAL CHIP	100	5%	1/10W (RG470)						
Q251	8-729-120-28	TRANSISTOR	2SC1623-L5L6			R064	1-216-805-11	METAL CHIP	47	5%	1/10W (GX255/RG170)						
Q252	8-729-120-28	TRANSISTOR	2SC1623-L5L6														
Q261	8-729-027-23	TRANSISTOR	DTA114EKA-T146														
Q341	6-551-276-01	TRANSISTOR	RT1N431C-TP-1			R064	1-216-809-11	METAL CHIP	100	5%	1/10W (RG470)						
Q342	8-729-040-76	TRANSISTOR	KTA1273-Y-AT														
Q343	6-551-276-01	TRANSISTOR	RT1N431C-TP-1														
Q344	8-729-037-13	TRANSISTOR	KTA1271Y			R068	1-216-797-11	METAL CHIP	10	5%	1/10W (E2, E51)						
Q345	6-551-276-01	TRANSISTOR	RT1N431C-TP-1			R069	1-216-837-11	METAL CHIP	22K	5%	1/10W (E2, E51)						
Q346	8-729-037-13	TRANSISTOR	KTA1271Y														
Q901	8-729-120-28	TRANSISTOR	2SC1623-L5L6														
Q902	8-729-120-28	TRANSISTOR	2SC1623-L5L6			R070	1-216-833-11	METAL CHIP	10K	5%	1/10W						
Q903	8-729-037-13	TRANSISTOR	KTA1271Y			R103	1-216-821-11	METAL CHIP	1K	5%	1/10W						
Q904	8-729-120-28	TRANSISTOR	2SC1623-L5L6			R104	1-216-821-11	METAL CHIP	1K	5%	1/10W						
Q933	6-551-276-01	TRANSISTOR	RT1N431C-TP-1			R106	1-216-821-11	METAL CHIP	1K	5%	1/10W (E2, E51)						
< RESISTOR >												R107	1-216-821-11	METAL CHIP	1K	5%	1/10W
												R108	1-216-837-11	METAL CHIP	22K	5%	1/10W
R001	1-216-801-11	METAL CHIP	22	5%	1/10W	R109	1-216-829-11	METAL CHIP	4.7K	5%	1/10W						
R005	1-216-829-11	METAL CHIP	4.7K	5%	1/10W	R110	1-216-841-11	METAL CHIP	47K	5%	1/10W						
R006	1-216-829-11	METAL CHIP	4.7K	5%	1/10W	R111	1-216-845-11	METAL CHIP	100K	5%	1/10W						
R007	1-216-833-11	METAL CHIP	10K	5%	1/10W												
R032	1-216-821-11	METAL CHIP	1K	5%	1/10W (GX255/RG170: E2, E51/RG470)												
R033	1-216-837-11	METAL CHIP	22K	5%	1/10W												
R034	1-216-837-11	METAL CHIP	22K	5%	1/10W												
R035	1-216-829-11	METAL CHIP	4.7K	5%	1/10W (RG470)												
R036	1-216-829-11	METAL CHIP	4.7K	5%	1/10W (RG470)	R112	1-216-817-11	METAL CHIP	470	5%	1/10W						
R037	1-216-829-11	METAL CHIP	4.7K	5%	1/10W (GX255/RG170: E2, E51/RG470)	R113	1-216-829-11	METAL CHIP	4.7K	5%	1/10W						
						R114	1-216-825-11	METAL CHIP	2.2K	5%	1/10W						
						R116	1-216-809-11	METAL CHIP	100	5%	1/10W						
						R117	1-216-833-11	METAL CHIP	10K	5%	1/10W						
						R119	1-216-829-11	METAL CHIP	4.7K	5%	1/10W						
						R120	1-216-829-11	METAL CHIP	4.7K	5%	1/10W						
						R121	1-216-829-11	METAL CHIP	4.7K	5%	1/10W						
						R122	1-216-829-11	METAL CHIP	4.7K	5%	1/10W						
						R128	1-216-833-11	METAL CHIP	10K	5%	1/10W						
						R129	1-216-845-11	METAL CHIP	100K	5%	1/10W						

HCD-GX255/RG170/RG470

MAIN

Ref. No.	Part No.	Description	Remark			Ref. No.	Part No.	Description	Remark		
R130	1-216-864-11	SHORT CHIP	0			R189	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R131	1-216-849-11	METAL CHIP	220K	5%	1/10W	R190	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R132	1-216-849-11	METAL CHIP	220K	5%	1/10W						
R133	1-216-825-11	METAL CHIP	2.2K	5%	1/10W	R191	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R134	1-216-825-11	METAL CHIP	2.2K	5%	1/10W	R192	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R135	1-216-821-11	METAL CHIP	1K	5%	1/10W	R203	1-216-841-11	METAL CHIP	47K	5%	1/10W
					(RG470)	R204	1-216-841-11	METAL CHIP	47K	5%	1/10W
R135	1-216-864-11	SHORT CHIP	0 (GX255/RG170)			R205	1-216-833-11	METAL CHIP	10K	5%	1/10W
R136	1-216-821-11	METAL CHIP	1K	5%	1/10W						
					(RG470)	R206	1-216-833-11	METAL CHIP	10K	5%	1/10W
R136	1-216-864-11	SHORT CHIP	0 (GX255/RG170)			R207	1-216-837-11	METAL CHIP	22K	5%	1/10W
R137	1-216-841-11	METAL CHIP	47K	5%	1/10W	R208	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R138	1-216-841-11	METAL CHIP	47K	5%	1/10W	R212	1-216-797-11	METAL CHIP	10	5%	1/10W
R139	1-216-837-11	METAL CHIP	22K	5%	1/10W	R232	1-216-833-11	METAL CHIP	10K	5%	1/10W
R140	1-216-837-11	METAL CHIP	22K	5%	1/10W						
R141	1-216-849-11	METAL CHIP	220K	5%	1/10W	R233	1-216-833-11	METAL CHIP	10K	5%	1/10W
R142	1-216-849-11	METAL CHIP	220K	5%	1/10W	R234	1-216-833-11	METAL CHIP	10K	5%	1/10W
R143	1-216-841-11	METAL CHIP	47K	5%	1/10W	R235	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R144	1-216-841-11	METAL CHIP	47K	5%	1/10W	R236	1-216-833-11	METAL CHIP	10K	5%	1/10W
R145	1-216-841-11	METAL CHIP	47K	5%	1/10W	R237	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R146	1-216-857-11	METAL CHIP	1M	5%	1/10W						
R147	1-216-845-11	METAL CHIP	100K	5%	1/10W	R238	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R148	1-216-845-11	METAL CHIP	100K	5%	1/10W	R239	1-216-821-11	METAL CHIP	1K	5%	1/10W
R149	1-216-841-11	METAL CHIP	47K	5%	1/10W	R240	1-216-821-11	METAL CHIP	1K	5%	1/10W
R150	1-216-841-11	METAL CHIP	47K	5%	1/10W	R244	1-216-837-11	METAL CHIP	22K	5%	1/10W
						R245	1-216-833-11	METAL CHIP	10K	5%	1/10W
R156	1-216-809-11	METAL CHIP	100	5%	1/10W						
R157	1-216-809-11	METAL CHIP	100	5%	1/10W	R247	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R158	1-216-809-11	METAL CHIP	100	5%	1/10W	R248	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R159	1-216-857-11	METAL CHIP	1M	5%	1/10W	R250	1-216-833-11	METAL CHIP	10K	5%	1/10W
R160	1-216-797-11	METAL CHIP	10	5%	1/10W						
											(GX255/RG170: E2, E51/RG470)
R161	1-216-825-11	METAL CHIP	2.2K	5%	1/10W	R250	1-216-864-11	SHORT CHIP	0 (RG170: AEP, EE, RU)		
R162	1-216-825-11	METAL CHIP	2.2K	5%	1/10W	R251	1-216-817-11	METAL CHIP	470	5%	1/10W
R163	1-216-833-11	METAL CHIP	10K	5%	1/10W						(RG470: E2, E51)
R164	1-216-833-11	METAL CHIP	10K	5%	1/10W						
R165	1-216-829-11	METAL CHIP	4.7K	5%	1/10W	R251	1-216-821-11	METAL CHIP	1K	5%	1/10W
											(GX255/RG170: E2, E51/RG470: AEP, EE, RU)
R166	1-216-829-11	METAL CHIP	4.7K	5%	1/10W	R251	1-216-864-11	SHORT CHIP	0 (RG170: AEP, EE, RU)		
R167	1-216-849-11	METAL CHIP	220K	5%	1/10W	R252	1-216-817-11	METAL CHIP	470	5%	1/10W
R168	1-216-849-11	METAL CHIP	220K	5%	1/10W						(RG470: E2, E51)
R169	1-216-845-11	METAL CHIP	100K	5%	1/10W	R252	1-216-821-11	METAL CHIP	1K	5%	1/10W
R170	1-216-845-11	METAL CHIP	100K	5%	1/10W						(GX255/RG170: E2, E51/RG470: AEP, EE, RU)
						R252	1-216-864-11	SHORT CHIP	0 (RG170: AEP, EE, RU)		
R171	1-216-817-11	METAL CHIP	470	5%	1/10W						
R172	1-216-817-11	METAL CHIP	470	5%	1/10W	R253	1-216-833-11	METAL CHIP	10K	5%	1/10W
R173	1-216-825-11	METAL CHIP	2.2K	5%	1/10W						(GX255/RG170: E2, E51/RG470)
R174	1-216-825-11	METAL CHIP	2.2K	5%	1/10W	R253	1-216-864-11	SHORT CHIP	0 (RG170: AEP, EE, RU)		
R175	1-216-821-11	METAL CHIP	1K	5%	1/10W	R254	1-216-833-11	METAL CHIP	10K	5%	1/10W
											(RG470)
R176	1-216-821-11	METAL CHIP	1K	5%	1/10W	R254	1-216-837-11	METAL CHIP	22K	5%	1/10W
R177	1-216-821-11	METAL CHIP	1K	5%	1/10W						(GX255/RG170: E2, E51)
R178	1-216-821-11	METAL CHIP	1K	5%	1/10W	R257	1-216-833-11	METAL CHIP	10K	5%	1/10W
R179	1-216-853-11	METAL CHIP	470K	5%	1/10W						(RG470)
R180	1-216-853-11	METAL CHIP	470K	5%	1/10W						
						R257	1-216-837-11	METAL CHIP	22K	5%	1/10W
R181	1-216-845-11	METAL CHIP	100K	5%	1/10W						(GX255/RG170: E2, E51)
R182	1-216-845-11	METAL CHIP	100K	5%	1/10W	R258	1-216-837-11	METAL CHIP	22K	5%	1/10W
R183	1-216-849-11	METAL CHIP	220K	5%	1/10W						(RG470)
R184	1-216-849-11	METAL CHIP	220K	5%	1/10W	R259	1-216-837-11	METAL CHIP	22K	5%	1/10W
R185	1-216-841-11	METAL CHIP	47K	5%	1/10W						(RG470)
						R261	1-216-833-11	METAL CHIP	10K	5%	1/10W
R186	1-216-841-11	METAL CHIP	47K	5%	1/10W	R262	1-216-833-11	METAL CHIP	10K	5%	1/10W
R187	1-216-845-11	METAL CHIP	100K	5%	1/10W						
R188	1-216-845-11	METAL CHIP	100K	5%	1/10W	R263	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
						R264	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
						R265	1-216-809-11	METAL CHIP	100	5%	1/10W
											(GX255/RG170: E2, E51/RG470)
						R267	1-216-841-11	METAL CHIP	47K	5%	1/10W

Ref. No.	Part No.	Description	Remark			Ref. No.	Part No.	Description	Remark		
R268	1-216-829-11	METAL CHIP	4.7K	5%	1/10W	R384	1-216-809-11	METAL CHIP	100	5%	1/10W (CND, E2, E51)
R301	1-216-821-11	METAL CHIP	1K	5%	1/10W	R384	1-216-817-11	METAL CHIP	470	5%	1/10W (AEP, EE, RU)
R302	1-216-821-11	METAL CHIP	1K	5%	1/10W	R385	1-216-817-11	METAL CHIP	470	5%	1/10W (AEP, EE)
R303	1-216-833-11	METAL CHIP	10K	5%	1/10W	R386	1-216-817-11	METAL CHIP	470	5%	1/10W (AEP, EE)
R304	1-216-833-11	METAL CHIP	10K	5%	1/10W	R387	1-216-817-11	METAL CHIP	470	5%	1/10W (AEP, EE, RU)
R315	1-216-809-11	METAL CHIP	100	5%	1/10W	R387	1-216-864-11	SHORT CHIP	0 (CND, E2, E51)		
R316	1-216-809-11	METAL CHIP	100	5%	1/10W	R388	1-216-817-11	METAL CHIP	470	5%	1/10W (AEP, EE, RU)
R317	1-216-809-11	METAL CHIP	100	5%	1/10W	R388	1-216-864-11	SHORT CHIP	0 (CND, E2, E51)		
R318	1-216-809-11	METAL CHIP	100	5%	1/10W	R389	1-216-817-11	METAL CHIP	470	5%	1/10W (AEP, EE, RU)
R319	1-216-809-11	METAL CHIP	100	5%	1/10W	R389	1-216-864-11	SHORT CHIP	0 (CND, E2, E51)		
R320	1-216-809-11	METAL CHIP	100	5%	1/10W	R390	1-216-809-11	METAL CHIP	100	5%	1/10W (AEP, EE)
R321	1-216-809-11	METAL CHIP	100	5%	1/10W	R391	1-216-809-11	METAL CHIP	100	5%	1/10W (AEP, EE)
R322	1-216-809-11	METAL CHIP	100	5%	1/10W	R901	1-216-845-11	METAL CHIP	100K	5%	1/10W
R323	1-216-809-11	METAL CHIP	100	5%	1/10W	R902	1-216-864-11	SHORT CHIP	0		
R324	1-216-809-11	METAL CHIP	100	5%	1/10W	R903	1-216-833-11	METAL CHIP	10K	5%	1/10W
R341	1-216-833-11	METAL CHIP	10K	5%	1/10W	R904	1-216-821-11	METAL CHIP	1K	5%	1/10W
R342	1-216-821-11	METAL CHIP	1K	5%	1/10W	R905	1-216-833-11	METAL CHIP	10K	5%	1/10W
R343	1-216-833-11	METAL CHIP	10K	5%	1/10W	R907	1-216-841-11	METAL CHIP	47K	5%	1/10W
R344	1-216-821-11	METAL CHIP	1K	5%	1/10W	R908	1-216-841-11	METAL CHIP	47K	5%	1/10W
R345	1-216-833-11	METAL CHIP	10K	5%	1/10W	R909	1-216-837-11	METAL CHIP	22K	5%	1/10W
R346	1-216-821-11	METAL CHIP	1K	5%	1/10W	R910	1-216-833-11	METAL CHIP	10K	5%	1/10W
R347	1-216-829-11	METAL CHIP	4.7K	5%	1/10W	R911	1-216-809-11	METAL CHIP	100	5%	1/10W (AEP, EE)
R348	1-216-841-11	METAL CHIP	47K	5%	1/10W	R912	1-216-821-11	METAL CHIP	1K	5%	1/10W
R349	1-216-829-11	METAL CHIP	4.7K	5%	1/10W	R913	1-216-821-11	METAL CHIP	1K	5%	1/10W
R350	1-216-829-11	METAL CHIP	4.7K	5%	1/10W	R914	1-216-809-11	METAL CHIP	100	5%	1/10W (AEP, EE)
R351	1-216-841-11	METAL CHIP	47K	5%	1/10W	R915	1-216-809-11	METAL CHIP	100	5%	1/10W
R352	1-216-829-11	METAL CHIP	4.7K	5%	1/10W	R918	1-216-849-11	METAL CHIP	220K	5%	1/10W
R353	1-216-829-11	METAL CHIP	4.7K	5%	1/10W	R919	1-216-864-11	SHORT CHIP	0		
R354	1-216-829-11	METAL CHIP	4.7K	5%	1/10W	R920	1-216-809-11	METAL CHIP	100	5%	1/10W
R355	1-216-837-11	METAL CHIP	22K	5%	1/10W	R921	1-216-857-11	METAL CHIP	1M	5%	1/10W
R356	1-216-837-11	METAL CHIP	22K	5%	1/10W	R922	1-216-849-11	METAL CHIP	220K	5%	1/10W
R357	1-216-821-11	METAL CHIP	1K	5%	1/10W	R923	1-216-809-11	METAL CHIP	100	5%	1/10W
R358	1-216-821-11	METAL CHIP	1K	5%	1/10W	R924	1-216-809-11	METAL CHIP	100	5%	1/10W
R359	1-216-833-11	METAL CHIP	10K	5%	1/10W	R925	1-216-809-11	METAL CHIP	100	5%	1/10W
R360	1-216-833-11	METAL CHIP	10K	5%	1/10W	R926	1-216-809-11	METAL CHIP	100	5%	1/10W
R361	1-216-837-11	METAL CHIP	22K	5%	1/10W	R927	1-216-809-11	METAL CHIP	100	5%	1/10W
R362	1-216-837-11	METAL CHIP	22K	5%	1/10W	R928	1-216-809-11	METAL CHIP	100	5%	1/10W
R363	1-216-821-11	METAL CHIP	1K	5%	1/10W	R929	1-216-809-11	METAL CHIP	100	5%	1/10W
R364	1-216-821-11	METAL CHIP	1K	5%	1/10W	R931	1-216-833-11	METAL CHIP	10K	5%	1/10W
R365	1-216-833-11	METAL CHIP	10K	5%	1/10W	R932	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R366	1-216-833-11	METAL CHIP	10K	5%	1/10W	R933	1-216-833-11	METAL CHIP	10K	5%	1/10W
R367	1-216-837-11	METAL CHIP	22K	5%	1/10W	R935	1-216-833-11	METAL CHIP	10K	5%	1/10W
R368	1-216-837-11	METAL CHIP	22K	5%	1/10W	R936	1-216-837-11	METAL CHIP	22K	5%	1/10W
R369	1-216-837-11	METAL CHIP	22K	5%	1/10W	R937	1-216-845-11	METAL CHIP	100K	5%	1/10W
R370	1-216-837-11	METAL CHIP	22K	5%	1/10W	R938	1-216-833-11	METAL CHIP	10K	5%	1/10W
R381	1-216-809-11	METAL CHIP	100	5%	1/10W (CND, E2, E51)	R939	1-216-809-11	METAL CHIP	100	5%	1/10W
R381	1-216-817-11	METAL CHIP	470	5%	1/10W (AEP, EE, RU)	R940	1-216-833-11	METAL CHIP	10K	5%	1/10W
R382	1-216-809-11	METAL CHIP	100	5%	1/10W (CND, E2, E51)	R941	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R382	1-216-817-11	METAL CHIP	470	5%	1/10W (AEP, EE, RU)	R942	1-216-833-11	METAL CHIP	10K	5%	1/10W
R383	1-216-809-11	METAL CHIP	100	5%	1/10W (CND, E2, E51)						
R383	1-216-817-11	METAL CHIP	470	5%	1/10W (AEP, EE, RU)						

HCD-GX255/RG170/RG470

MAIN

Ref. No.	Part No.	Description	Remark		
R943	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R944	1-216-849-11	METAL CHIP	220K	5%	1/10W
R945	1-216-813-11	METAL CHIP	220	5%	1/10W
R946	1-216-864-11	SHORT CHIP	0		
R947	1-216-849-11	METAL CHIP	220K	5%	1/10W
R948	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R949	1-216-833-11	METAL CHIP	10K	5%	1/10W
R950	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R951	1-216-813-11	METAL CHIP	220	5%	1/10W
R952	1-216-809-11	METAL CHIP	100	5%	1/10W
R953	1-216-833-11	METAL CHIP	10K	5%	1/10W
R954	1-216-809-11	METAL CHIP	100	5%	1/10W
R955	1-216-809-11	METAL CHIP	100	5%	1/10W
R956	1-216-809-11	METAL CHIP	100	5%	1/10W
R957	1-216-809-11	METAL CHIP	100	5%	1/10W
R958	1-216-833-11	METAL CHIP	10K	5%	1/10W
R959	1-216-809-11	METAL CHIP	100	5%	1/10W
R961	1-216-809-11	METAL CHIP	100	5%	1/10W
R963	1-216-809-11	METAL CHIP	100	5%	1/10W
R965	1-216-809-11	METAL CHIP	100	5%	1/10W
R967	1-216-809-11	METAL CHIP	100	5%	1/10W
R968	1-216-809-11	METAL CHIP	100	5%	1/10W
R970	1-216-809-11	METAL CHIP	100	5%	1/10W
R971	1-216-833-11	METAL CHIP	10K	5%	1/10W (CND, RU)
R973	1-216-833-11	METAL CHIP	10K	5%	1/10W (CND, E2, E51)
R976	1-216-833-11	METAL CHIP	10K	5%	1/10W
R977	1-216-833-11	METAL CHIP	10K	5%	1/10W (RG470)
R979	1-216-809-11	METAL CHIP	100	5%	1/10W
R980	1-216-809-11	METAL CHIP	100	5%	1/10W
R981	1-216-809-11	METAL CHIP	100	5%	1/10W
R982	1-216-809-11	METAL CHIP	100	5%	1/10W
R992	1-216-821-11	METAL CHIP	1K	5%	1/10W
R993	1-216-821-11	METAL CHIP	1K	5%	1/10W
R996	1-216-809-11	METAL CHIP	100	5%	1/10W
R997	1-216-809-11	METAL CHIP	100	5%	1/10W
R998	1-216-809-11	METAL CHIP	100	5%	1/10W
R999	1-216-809-11	METAL CHIP	100	5%	1/10W
R1971	1-216-833-11	METAL CHIP	10K	5%	1/10W (AEP, EE, E2, E51)
R1972	1-216-833-11	METAL CHIP	10K	5%	1/10W
R1973	1-216-833-11	METAL CHIP	10K	5%	1/10W (AEP, EE, RU)
R1974	1-216-833-11	METAL CHIP	10K	5%	1/10W
R1975	1-216-833-11	METAL CHIP	10K	5%	1/10W
R1977	1-216-833-11	METAL CHIP	10K	5%	1/10W (GX255/RG170)
< VIBRATOR >					
X901	1-760-252-12	VIBRATOR, CRYSTAL (32.768kHz)			
X902	1-795-482-11	VIBRATOR, CERAMIC (16MHz)			

Ref. No.	Part No.	Description	Remark
		MISCELLANEOUS *****	
113	1-829-003-11	WIRE (FLAT TYPE) (19 CORE)	
116	1-828-973-11	WIRE (FLAT TYPE) (13 CORE)	
118	1-796-485-51	DECK, MECHANICAL (CWM43FF13)	
203	1-775-217-11	WIRE (FLAT TYPE) (23 CORE)	
204	1-828-970-11	WIRE (FLAT TYPE) (13 CORE)	
△ 210	1-827-226-31	CORD, POWER (E2)	
△ 210	1-830-188-11	CORD, POWER (AEP, EE, RU, E51)	
△ 210	1-830-190-11	CORD, POWER (GX255)	
502	1-776-182-11	WIRE (FLAT TYPE) (5 CORE)	
576	1-827-992-11	WIRE (FLAT TYPE) (16 CORE)	
△ 579	A-4735-357-A	OPTICAL PICK-UP BLOCK (KSM-213D)	
580	1-471-035-21	MAGNET ASSY	
M001	1-787-319-11	FAN, DC (RG470)	
M741	A-1108-965-A	MOTOR ASSY, TABLE	
M751	A-1108-966-A	MOTOR ASSY, LOADING	
S711	1-477-680-12	ENCODER, ROTARY (DISC TRAY ADDRESS-DETECT)	
S101	1-771-853-11	SWITCH, DETECTION (LIMIT)	

		ACCESSORIES *****	
△	1-569-008-21	ADAPTOR, CONVERSION 2P (E51)	

MEMO

REVISION HISTORY

Clicking the version allows you to jump to the revised page.

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