

MZ-NH1

SERVICE MANUAL

Ver 1.1 2004.09

US Model
AEP Model
UK Model
E Model
Australian Model
Chinese Model
Tourist Model



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Model Name Using Similar Mechanism	NEW
MD Mechanism Type	MT-MZNH1-181
Optical Pick-up Name	ABX-U

SPECIFICATIONS

Audio playing system

MiniDisc digital audio system

Laser diode properties

Material: GaAlAs

Wavelength: $\lambda = 790 \text{ nm}$

Emission duration: continuous

Laser output: less than $44.6 \mu\text{W}$

(This output is the value measured at a distance of 200 mm from the lens surface on the optical pick-up block with 7 mm aperture.)

Recording and playback time (Refer to page 94 for details)

When using HMD1G (1GB disc):

Maximum 34 hours in Hi-LP stereo

When using MDW-80 in Hi-MD mode:

Maximum 10 hours and 10 min. in Hi-LP stereo

When using MDW-80 in MD mode:

Maximum 160 min. in monaural

Maximum 320 min. in LP4 stereo

Revolutions

350 rpm to 3,600 rpm (CLV)

Error correction

Hi-MD:

LDC (Long Distance Code)/BIS (Burst Indicator Subcode)

MD:

ACIRC (Advanced Cross Interleave Reed Solomon Code)

Sampling frequency

44.1 kHz

Sampling rate converter

Input: 32 kHz/44.1 kHz/48 kHz

Coding

Hi-MD:

Linear PCM (44.1 kHz/16 bit) — PCM
ATRAC3plus (Adaptive Transform
Acoustic Coding 3 plus)

MD:

ATRAC

ATRAC3 — LP2/LP4

Modulation system

Hi-MD:

1-7RLL (Run Length Limited)/PRML
(Partial Response Maximum Likelihood)

MD:

EFM (Eight to Fourteen Modulation)

Frequency response

20 to 20,000 Hz $\pm 3 \text{ dB}$

Inputs¹⁾

MIC: stereo mini-jack

(minimum input level 0.13 mV)

Line in:

stereo mini-jack for analog input

(minimum input level 49 mV)

optical (digital) mini-jack for optical
(digital) input

Outputs

LINE OUT²⁾: stereo mini-jack (dedicated
emote control jack)/194 mV (10 k Ω)

Maximum output (DC)²⁾

Headphones:

5 mW + 5 mW (16 Ω)

Power requirements

Sony AC Power Adaptor connected at the DC
IN 6V jack:

120 V AC, 60 Hz (Models for USA, Canada,

Mexico, and Taiwan)

240 V AC, 50 Hz (Model for Australia)

230 V AC, 50 Hz (Models for U.K. and

Hong Kong)

220 V AC, 50 Hz (Model for China)

100 - 240 V AC, 50/60 Hz (Other models)

The recorder:

Lithium-ion rechargeable battery
LIP-4WM, 3.7 V, 370 mAh, Li-ion

Battery charging stand:

AC power adaptor DC 6V

Operating temperature

+5°C (+41°F) to +35°C (+95°F)

Battery life ⁴⁾

Hi-MD mode (When using a 1GB Hi-MD disc)

(Unit: approx.hours)(JEITA³⁾)

When	Linear PCM	Hi-SP	Hi-LP
Recording continuously	6	8.5	9.5
Playing continuously	10	15.5	18

Hi-MD mode (When using a 60/74/80-minute standard disc)

(Unit: approx.hours)(JEITA³⁾)

When	Linear PCM	Hi-SP	Hi-LP
Recording continuously	5	8	9
Playing continuously	8	14.5	17.5

— Continued on next page —

PORTABLE MINIDISC RECORDER

9-879-075-02
2004I05-1
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Sony Corporation
Personal Audio Company
Published by Sony Engineering Corporation

SONY®

MZ-NH1

MD mode

(Unit: approx.hours)(JEITA)

When	SP Stereo	LP2 Stereo	LP4 Stereo
Recording continuously	8	10	10.5
Playing continuously	14.5	17	18.5

On power sources

Use house current or rechargeable battery.
For use in your house: For the supplied battery charging stand, use the AC power adaptor supplied with this recorder. Do not use any other AC power adaptor since it may cause the recorder to malfunction.

Polarity of the plug




Dimensions

Approx. 81.7 × 76.1 × 14.8 mm (w/h/d)
(3¹/₄ × 3 × 1⁹/₃₂ in.) (excluding projecting parts and controls)

Mass

Approx. 97 g (3.4 oz) (the recorder only)
Approx. 107 g (3.8 oz) (including the rechargeable battery)

- ¹⁾The LINE IN (OPT) jack is used to connect either a digital (optical) cable or a line (analog) cable.
- ²⁾The /LINE OUT jack connects either headphones/earphones or a line cable.
- ³⁾Measured in accordance with the JEITA (Japan Electronics and Information Technology Industries Association) standard.
- ⁴⁾When using a 100% fully charged lithium-ion rechargeable battery

Design and specifications are subject to change without notice.

Your dealer may not handle some of the above listed accessories. Please ask the dealer for detailed information about the accessories in your country.

When using optional headphones, use only headphones/earphones with stereo mini plugs. You cannot use headphones/earphones with micro plugs.

TABLE OF CONTENTS

1. SERVICING NOTES	4
2. GENERAL	5
3. DISASSEMBLY	
3-1. Disassembly Flow	7
3-2. Bottom Panel Sub Assy	7
3-3. MAIN Board	8
3-4. Upper Panel Sub Assy	8
3-5. Control Ornament Block	9
3-6. Mechanism Deck Assy (MT-MZNH1-181)	9
3-7. Gear (SA), Gear (SB)	10
3-8. Op Service Assy	10
3-9. DC SSM18D/C-NP Motor (Spindle) (M701), DC SSM21A/C-NP Motor (Sled) (M702), DC Motor Unit (Over Write Head Up/Down) (M703) ...	11
3-10. Holder Assy	11
4. TEST MODE	12
5. ELECTRICAL ADJUSTMENT	16
6. DIAGRAMS	
6-1. Block Diagram –MD SERVO Section –	21
6-2. Block Diagram –AUDIO Section –	22
6-3. Block Diagram –POWER SUPPLY Section –	23
6-4. Schematic Diagram –MAIN Section (1/9) –	25
6-5. Schematic Diagram –MAIN Section (2/9) –	26
6-6. Schematic Diagram –MAIN Section (3/9) –	27
6-7. Schematic Diagram –MAIN Section (4/9) –	28
6-8. Schematic Diagram –MAIN Section (5/9) –	29
6-9. Schematic Diagram –MAIN Section (6/9) –	30
6-10. Schematic Diagram –MAIN Section (7/9) –	31
6-11. Schematic Diagram –MAIN Section (8/9) –	32
6-12. Schematic Diagram –MAIN Section (9/9) –	33
6-13. Printed Wiring Board –MAIN Section (1/2) –	34
6-14. Printed Wiring Board –MAIN Section (2/2) –	35
7. EXPLODED VIEWS	
7-1. PANEL SECTION	49
7-2. MAIN SECTION	50
7-3. MECHANISM DECK SECTION	51
8. ELECTRICAL PARTS LIST	52

CAUTION

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

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.

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.

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.

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)

LF: 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.

Installing

Providing the required system environment

System requirements

The following system environment is required in order to use the SonicStage/MD Simple Burner software for the MD Walkman.

Computer	IBM PC/AT or Compatible CPU: Pentium II 400 MHz or higher (Pentium III 450 MHz or higher is recommended.) Hard disk drive space: 200 MB or more (1.5 GB or more is recommended) (The amount space will vary according to Windows version and the number of music files stored on the hard disk.) RAM: 64 MB or more (128 MB or more is recommended)
Others	CD drive (capable of digital playback by WDM) Sound Board USB port (supports USB (previously USB 1.1))
Operating System	Factory installed: Windows XP Media Center Edition 2004/Windows XP Media Center Edition/Windows XP Professional/Windows XP Home Edition/ Windows 2000 Professional/Windows Millennium Edition/Windows 98 Second Edition
Display	High Color (16bit) or higher, 800 × 600 dots or better (1024 × 768 dots or better is recommended)
Others	Internet access: for Web registration, EMD services and CDDB Windows Media Player (version 7.0 or higher) installed for playing WMA files

This software is not supported by the following environments:

- OSs other than the indicated above
- Personally constructed PCs or operating systems
- An environment that is an upgrade of the original manufacturer-installed operating system
- Multi-boot environment
- Multi-monitor environment
- Macintosh

Notes

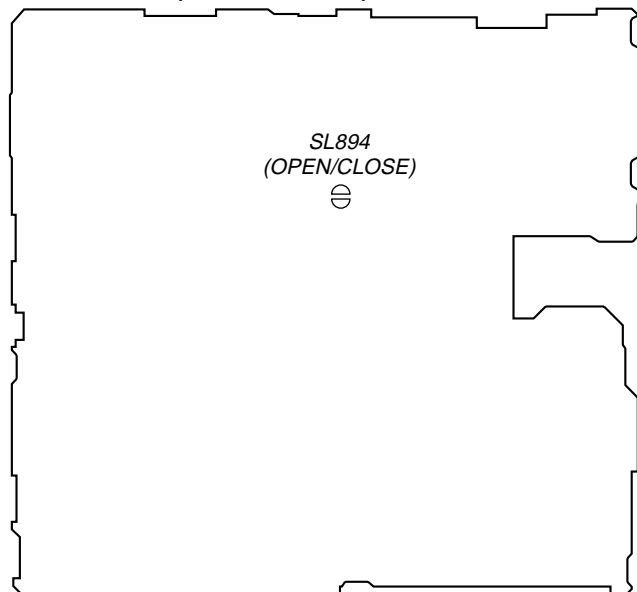
We do not ensure trouble-free operation on all computers that satisfy the system requirements. The NTFS format of Windows XP/Windows 2000 Professional can be used only with the standard (factory) settings.
We do not ensure trouble-free operation of the system suspend, sleep, or hibernation function on all computers.
For Windows 2000 Professional users, install Service Pack 3 or later version before using the software.

OPERATION CHECK WHEN THE MAIN BOARD IS REMOVED

In making an operation check with the MAIN Board removed from the set, short the SL894 (OPEN/CLOSE) of the MAIN Board with the solder before starting the operation check.

Note: Be sure to remove the solder used for shortcircuit after the repair is completed.

– MAIN Board (Conductor Side) –

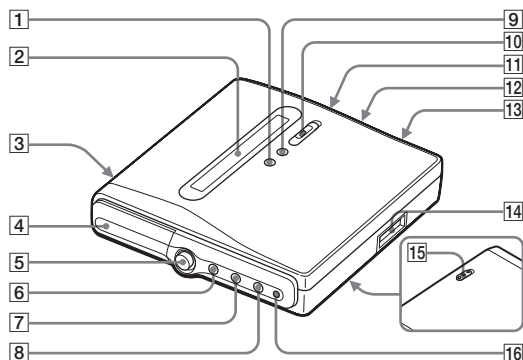


**SECTION 2
GENERAL**

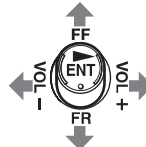
This section is extracted from instruction manual.

Looking at controls

The recorder



- 1 ■ (stop) • CANCEL button
- 2 Display window
- 3 OPEN switch
- 4 Battery compartment
- 5 5-way control key

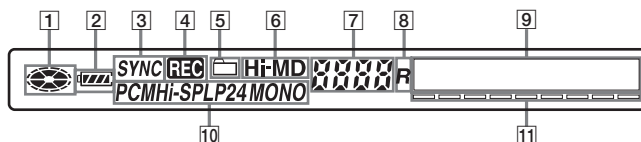


- 6 MENU button
- 7 GROUP button
- 8 T MARK button
- 9 || (pause) button
- 10 ●REC (record) switch/lamp
- 11 LINE IN (OPT) jack
- 12 MIC (PLUG IN POWER) jack
There is a tactile dot beside the MIC (PLUG IN POWER) jack.
- 13 ⌂ (headphones/earphones)/LINE OUT jack
- 14 USB connecting jack
- 15 HOLD switch (at the rear)
Slide the switch in the direction of the arrow to disable the buttons on the recorder. To prevent the buttons from being accidentally operated when you carry the recorder, use this function.
- 16 CHG (Charge) lamp

Operation	Function
Press ►ENT ¹⁾	play, enter
Press towards FR	find the beginning of the previous track, rewind
Press towards FF	find the beginning of the next track, fast forward
Press towards VOL + ¹⁾ or VOL -.	volume

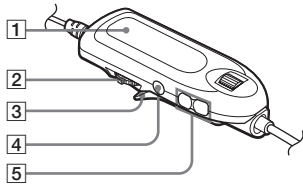
¹⁾There are tactile dots beside the ► ENT and VOL + buttons.

The display window of the recorder



- 1 Disc indication
Shows that the disc is rotating for recording or playing.
- 2 Battery indication
Shows the approximate remaining battery power. If the rechargeable battery is weak, the indication becomes empty and starts flashing.
- 3 SYNC (synchro-recording) indication
- 4 REC indication
Lights up during recording or file transfers from the computer. When flashing, the recorder is in record standby mode.
- 5 Group indication
- 6 Hi-MD/MD indication
“Hi-MD” lights up when the operation mode of the recorder is in Hi-MD mode and “MD” lights up when the operation mode is in MD mode.
- 7 Track number display
- 8 “R” (Remain) indication
Lights up when remaining recordable time is displayed.
- 9 Character information display
Displays the menu items, date, error messages, etc.
- 10 Track mode (PCM, Hi-SP, Hi-LP, SP, LP2, LP4, MONO) indication
- 11 Level meter

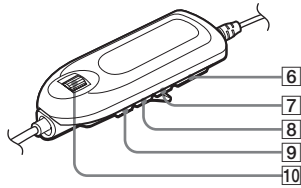
The headphones/earphones with a remote control



- 1 Display window
- 2 Jog lever (▶||•ENTER, ◀◀, ▶▶)

Operation	Function
Press ▶ •ENTER	play, pause, enter
Slide towards ◀◀	cue to the beginning of the previous track, rewind
Slide towards ▶▶	cue to the beginning of the next track, fast forward

- 3 Clip
- 4 ■ (stop) • CANCEL button
- 5 VOL +, - buttons

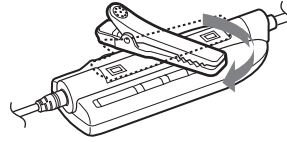


- 6 HOLD switch
Slide the switch in the direction of the arrow (a yellow mark appears) to disable the buttons on the remote control. To prevent the buttons from being accidentally operated when you carry the recorder, use this function.
- 7 •DISPLAY, ●BACKLIGHT button*
- 8 •P-MODE, ●REPEAT button*
- 9 •SOUND, ●SOUND SET button*
- 10 Jog dial (•NAVI/●MENU/ENTER)*

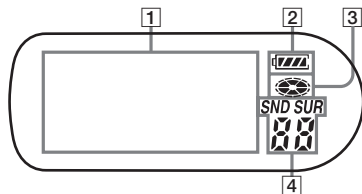
* • indicates a function that requires a slight press of the button. ● indicates a function that requires pressing the button for 2 seconds or more.

Using the clip for the remote control

It may be hard for you to read the indications in the display if the remote control is attached upside down with the clip in its current position. In this case, turn the clip in the opposite direction until it attaches firmly, as shown below.



The display window of the remote control




- 1 Character information display
- 2 Battery level indication
- 3 Disc indication
- 4 SND (sound), SUR (surround) indications

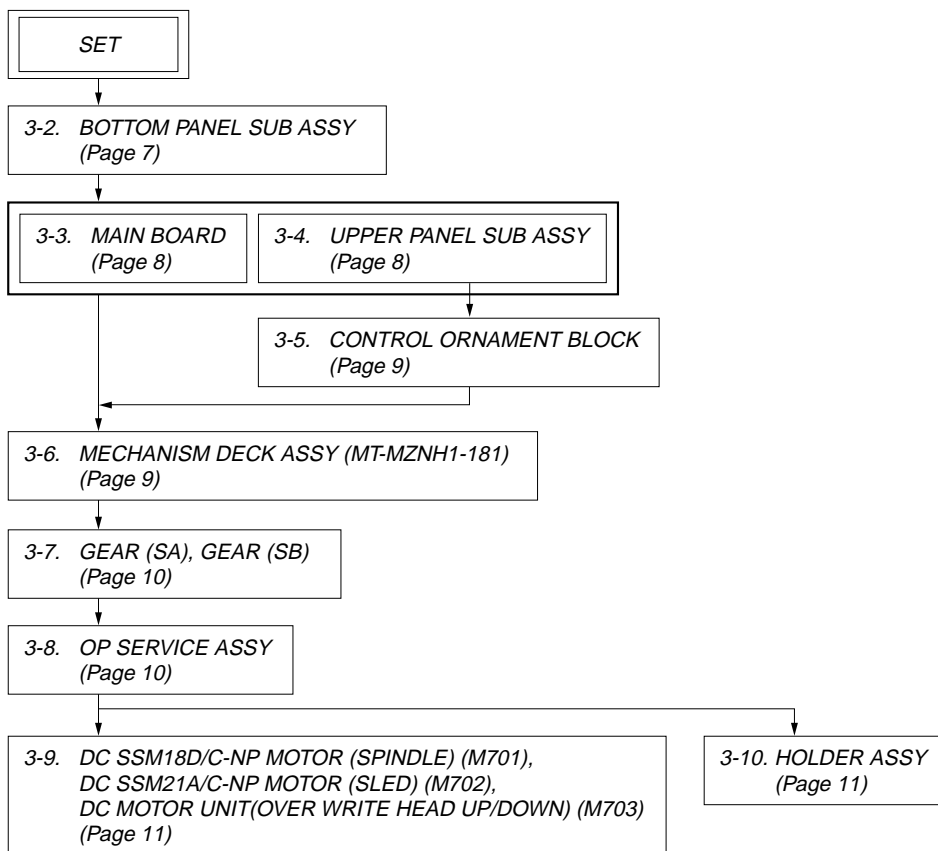
SECTION 3 DISASSEMBLY

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

3-1. DISASSEMBLY FLOW

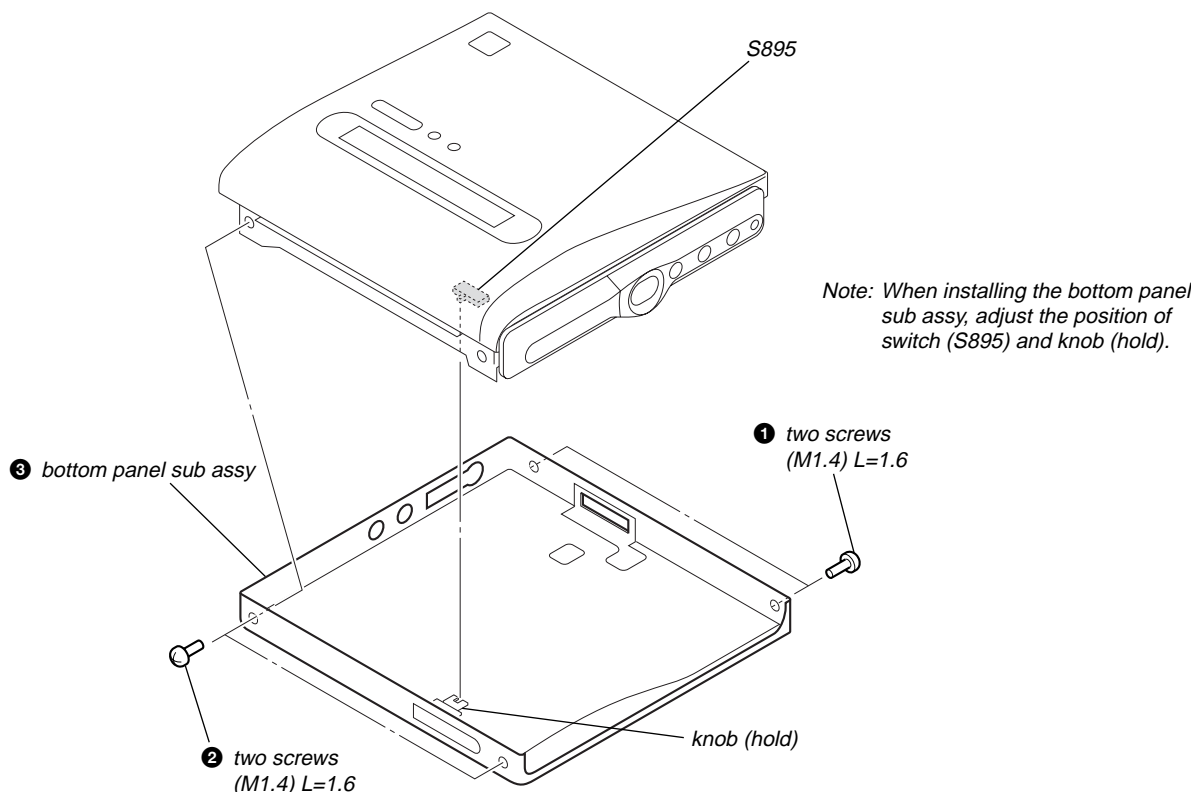
Note 1: The process described in  can be performed in any order.

Note 2: Without completing the process described in , the next process can not be performed.

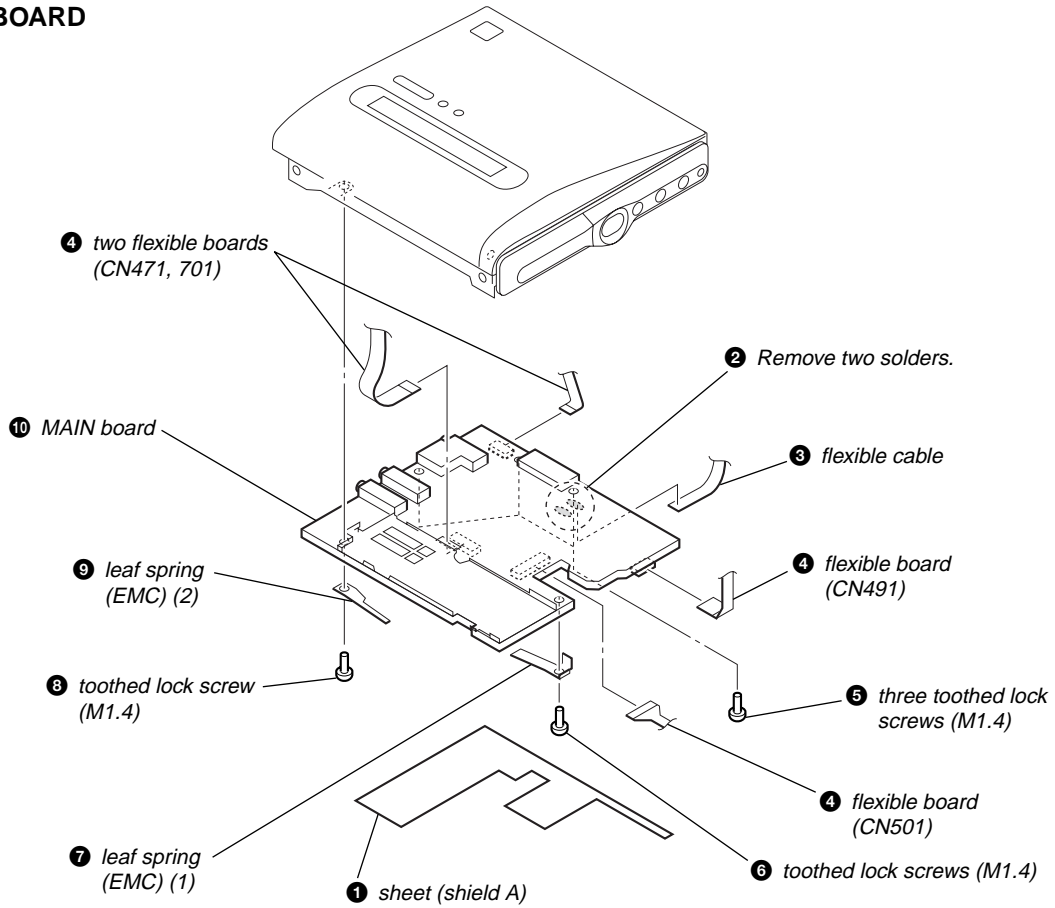


Note: Follow the disassembly procedure in the numerical order given.

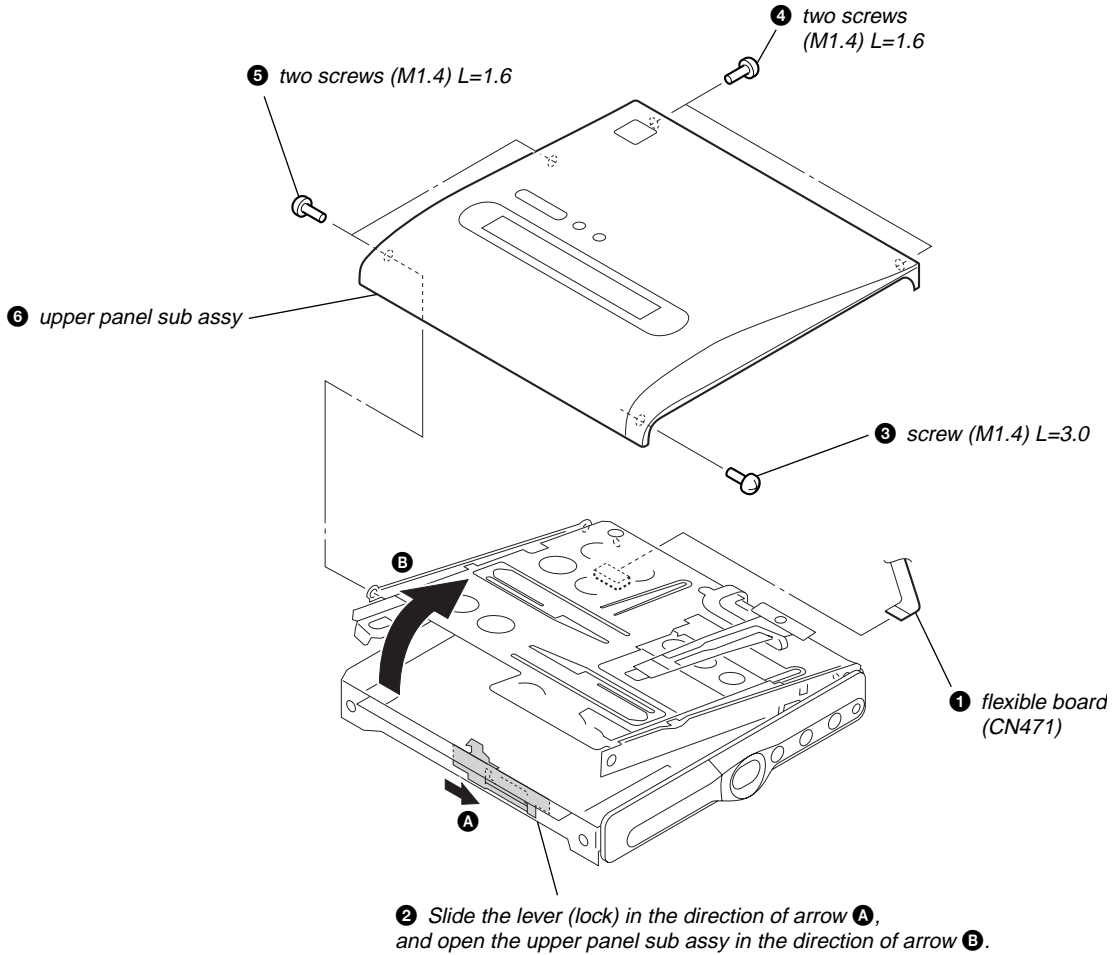
3-2. BOTTOM PANEL SUB ASSY



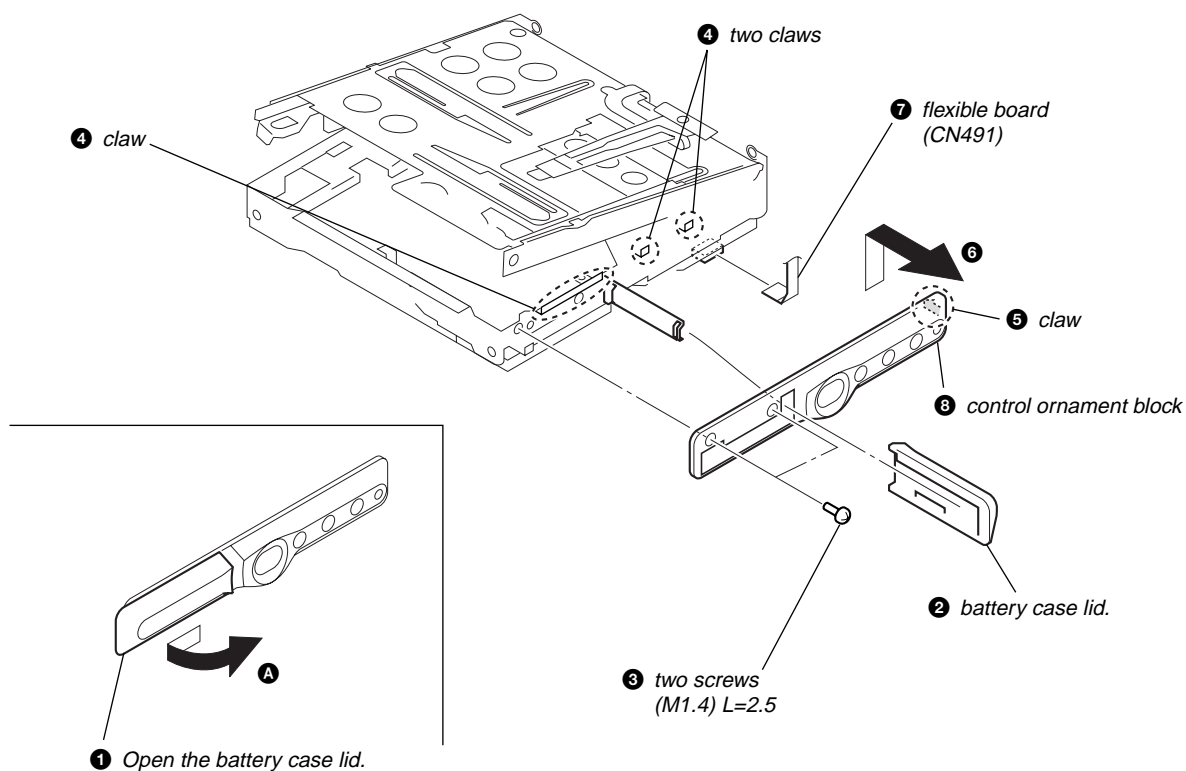
3-3. MAIN BOARD



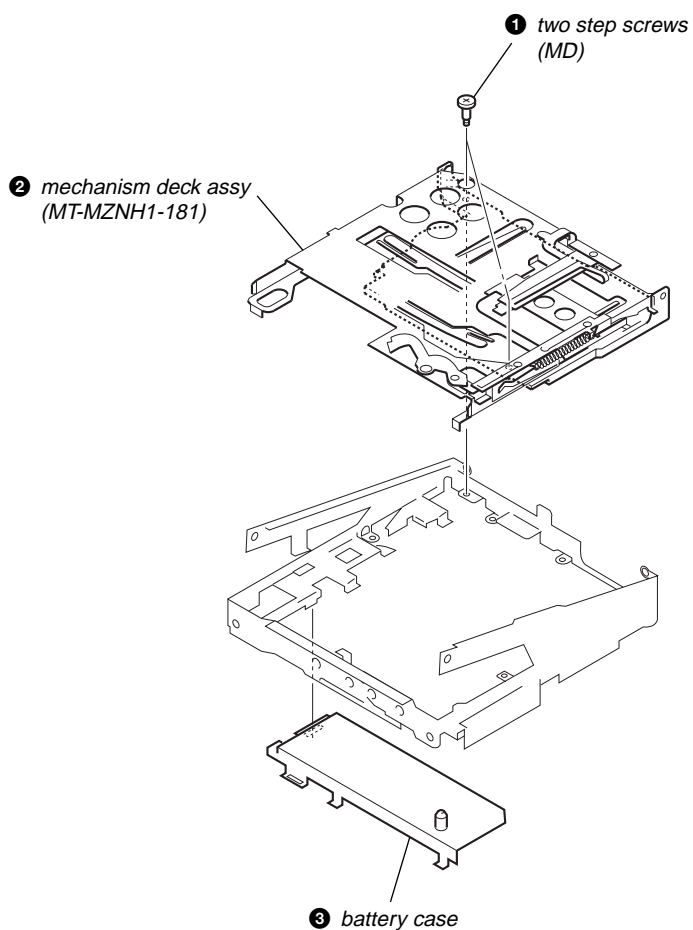
3-4. UPPER PANEL SUB ASSY



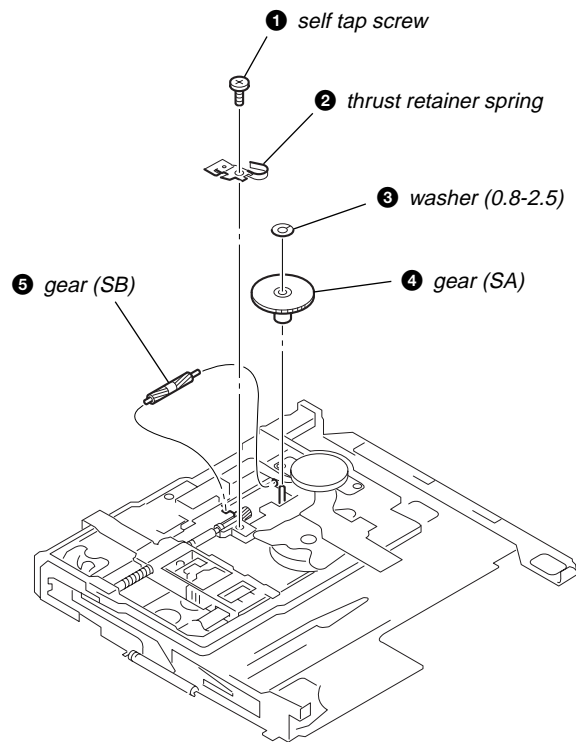
3-5. CONTROL ORNAMENT BLOCK



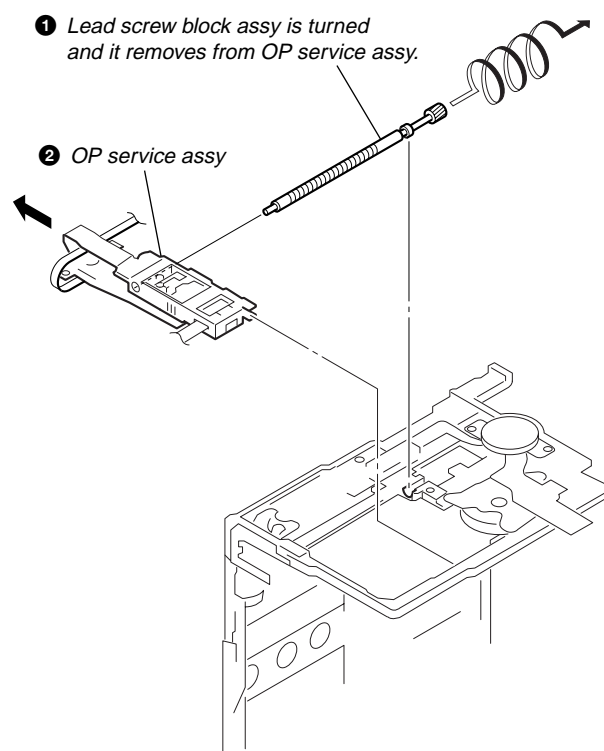
3-6. MECHANISM DECK ASSY (MT-MZNH1-181)



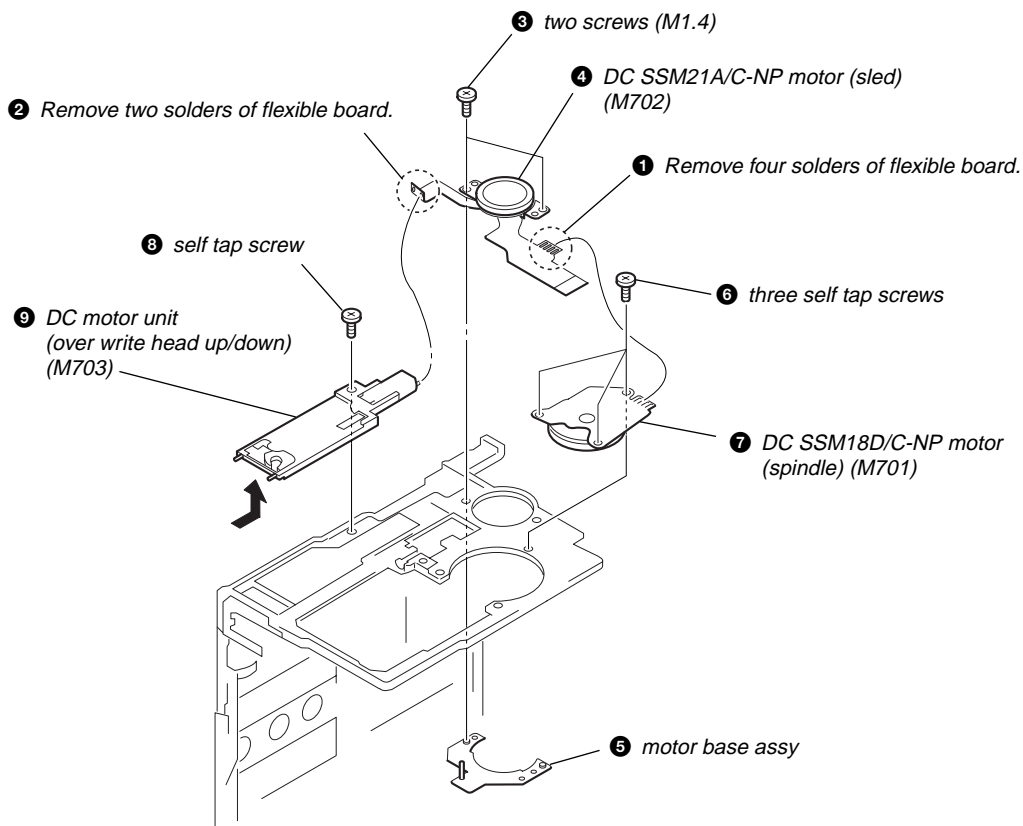
3-7. GEAR (BSA), GEAR (SB)



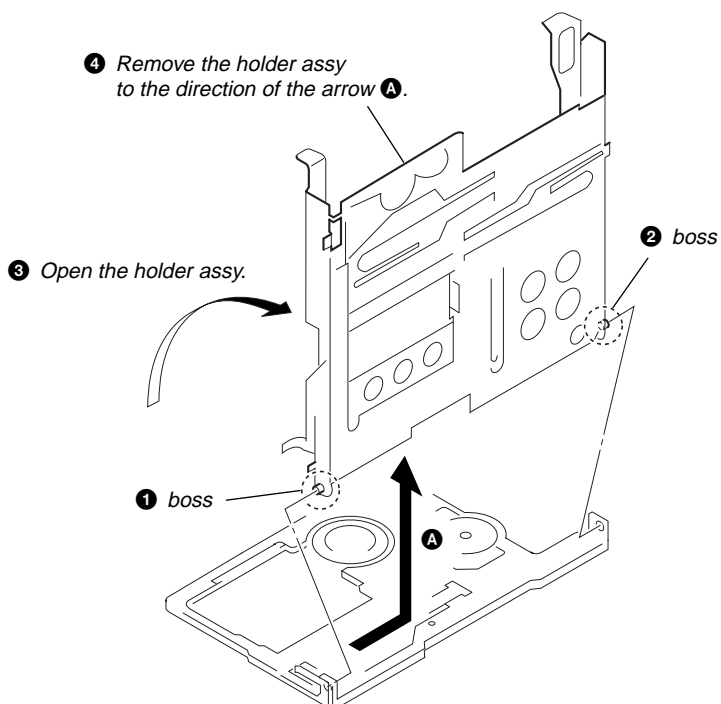
3-8. OP SERVICE ASSY



3-9. DC SSM18D/C-NP MOTOR (SPINDLE) (M701), DC SSM21A/C-NP MOTOR (SLED) (M702), DC MOTOR UNIT (OVER WRITE HEAD UP/DOWN) (M703)



3-10. HOLDER ASSY



SECTION 4 TEST MODE

OUTLINE

A key having no particular description in the text, indicates a set key.

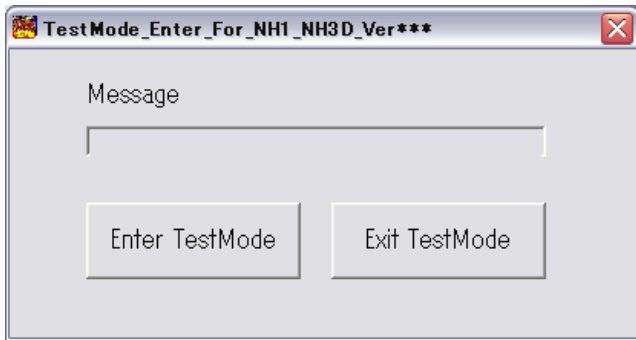
1. ENTERING THE TEST MODE

Preparation:

Copy the “TestMode_Enter_For_NH1_NH3D_Ver***.exe” folder of the PC application of the latest version to your PC in advance. (operating system: Windows 2000, Windows XP)
Also, when using this application, the SonicStage Ver. 2.0 or 2.1 is necessary, and install it in your PC in advance.

Procedure:

1. If a Simple Burner has run on the PC, finish it (including the one that is resident in the task tray).
2. Start the “TestMode_Enter_For_NH1_NH3D_Ver***.exe”.
3. Insert the fully charged lithium-ion battery (LIP-4WM).
4. Open and close the top panel of the main unit to wait until the system reading finished.
5. Connect the main unit and PC by USB cable.
6. Check by device manager screen from property of “My computer” that the set is recognised to your PC normally.
7. Click the **Enter TestMode** button on the screen of application
8. Disconnect the USB cable, when “OK” message is displayed on the application screen.
9. Remove the lithium-ion battery.



Screen of the PC application “TestMode_Enter_For_NH1_NH3D_Ver***.exe” (“***” is version number)

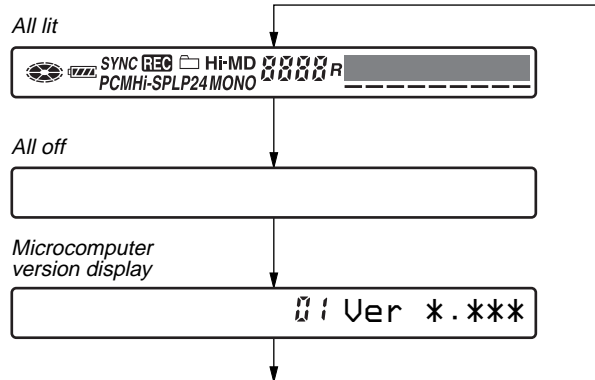
Note: Once the test mode is activated with this application, the test mode is then activated forcibly by only turning on the power. After the repair completed, be sure to release the test mode by using this application once more.

2. OPERATION IN SETTING THE TEST MODE

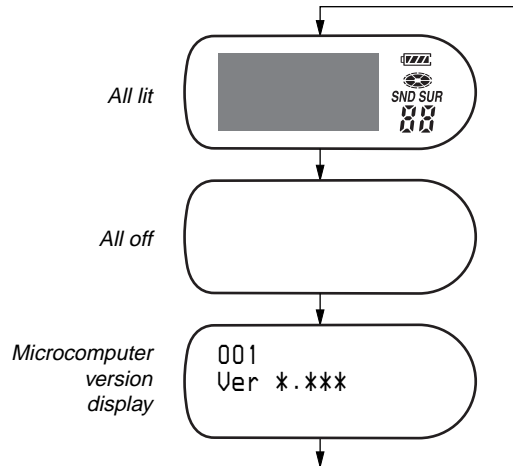
- When the test mode becomes active, first the Display Check mode is selected.
- Other mode can be selected from the Display Check mode.
- When the test mode is set, the LCD repeats the following display.
- When the **[]** key is pressed and hold down, the display at that time is held so that display can be checked.

Display check mode:

- *Display of the main unit*



- *Display of the remote commander*



3. RELEASING THE TEST MODE

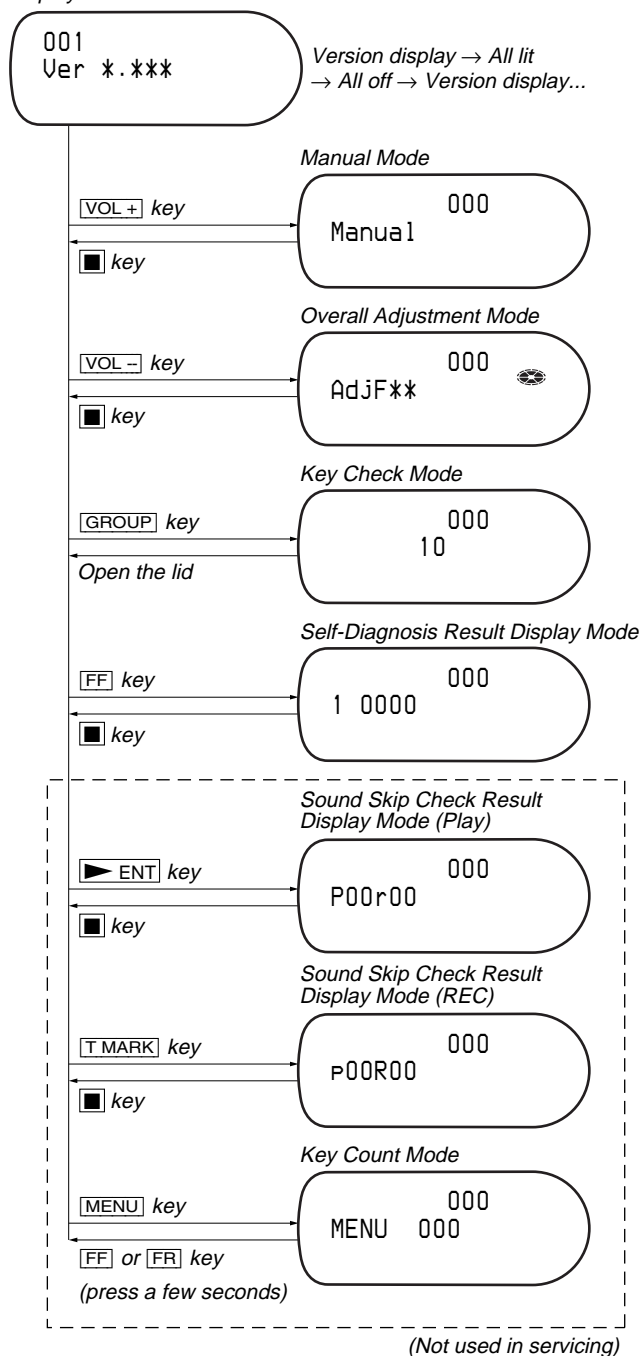
Procedure:

1. If a Simple Burner has run on the PC, finish it (including the one that is resident in the task tray).
2. Start the “TestMode_Enter_For_NH1_NH3D_Ver***.exe”.
3. Insert the fully charged lithium-ion battery (LIP-4WM).
4. Open and close the top panel of the main unit to wait until the system reading finished.
5. Connect the main unit and PC by USB cable.
6. Check by device manager screen that the set is recognised to your PC normally.
7. Click the **Exit TestMode** button on the screen of application
8. Disconnect the USB cable, when “OK” message is displayed on the application screen.
9. Remove the lithium-ion battery.

4. CONFIGURATION OF THE TEST MODE

Flow of the test mode:

Display Check Mode



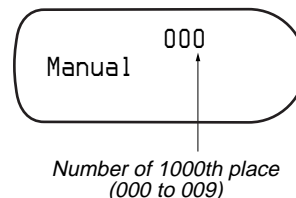
5. MANUAL MODE

This is mode to adjust or check the operation of the set by function.

Operation of The Manual Mode

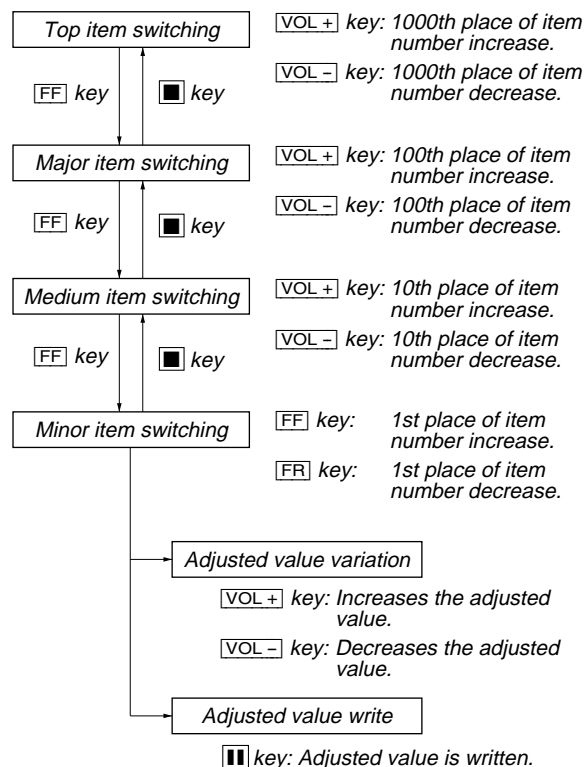
1. Enter the test mode (Display Check mode).
2. Press the [VOL+] key to activate the Manual mode where the LCD displays as shown below.

Display of the remote commander



3. During each test, the optical pick-up moves outward or inward while the [FF] or [FR] key is pressed for several seconds respectively.
4. Each test item is assigned with a four-digit item number; 1000th place is a top item, 100th place is a major item, 10th place is a medium item, and unit place is a minor item. The values adjusted in the test mode are written to the non-volatile memory (for the items where adjustment was made).
5. To quit the Manual mode, press the [] key and return to the Display Check mode.

Flow of manual mode operation:

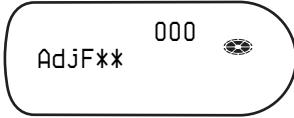


6. OVERALL ADJUSTMENT MODE

6-1. Operation of The Overall Adjustment Mode

1. Enter the test mode (Display Check mode).
2. Press the [VOL-] key to activate the Overall Adjustment mode where the LCD displays as shown below.

Display of the remote commander



Disc mark:

Lit the inner segments: Completed the power supply adjustment.

Lit the outer segments: Completed the check of charge function.

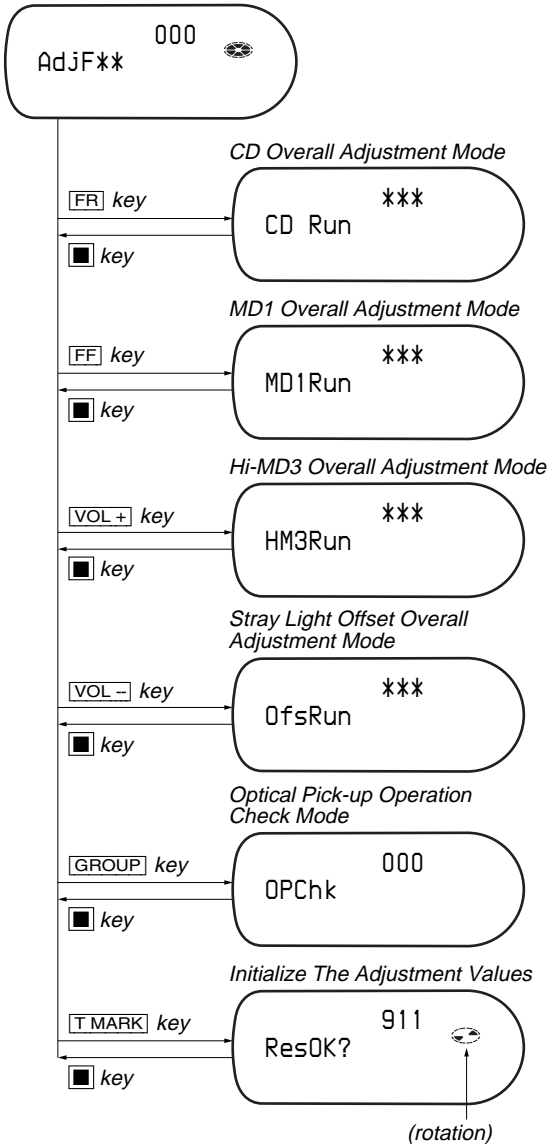
“**”:

If “DF” or “FF” is displayed, it mean that completed the servo overall adjustment.

3. To quit the Overall Adjustment mode, press the [■] key and return to the Display Check mode.

Flow of overall adjustment mode:

Overall Adjustment Mode



6-2. Error Message in The Overall Adjustment Mode

In the Overall Adjustment mode, if an error occurred, it displays as following table.

Display	Description
Close!	Dose not close the lid
DfDis!	Unsuitableness disc was inserted
NoChg!	Does not finish the check of charge function yet
NoTmp!	Does not setting the temperature correction value
NotCD!	Does not complete the CD Overall adjustment beforethe MD1 Overall adjustment
NotM1!	Does not complete the MD1 Overall adjustment before the Hi-MD3 Overall adjustment
NotH3!	Does not complete the Hi-MD3 Overall adjustment before the Stray Light Offset Overall adjustment
****NG	Error of item number “****”

7. SELF-DIAGNOSIS RESULT DISPLAY MODE

This set uses the self-diagnostic function system in which if an error occurred during the recording or playing, the mechanism control block and the power supply control block in the microcomputer detect it and record its cause as history in the nonvolatile memory. By checking this history in the test mode, you can analyze a fault and determine its location.

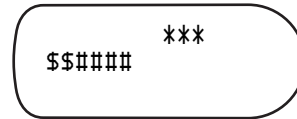
Total recording time is recorded as a guideline of how long the optical pick-up has been used, and by comparing it with the total recording time at the time when an error occurred in the self-diagnosis result display mode, you can determine when the error occurred.

Clear the total recording time, if the optical pick-up was replaced.

7-1. Operation of The Self-Diagnosis Result Display Mode

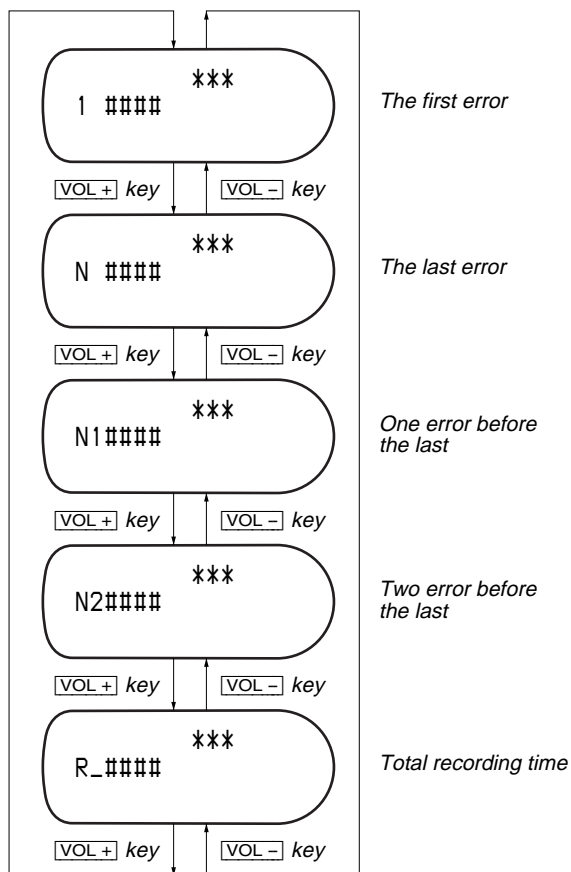
1. Enter the test mode (Display Check mode).
2. Press the [FF] key to activate the Self-Diagnosis Result Display mode where the LCD displays as shown below.

Display of the remote commander



3. To quit the Self-Diagnosis Result Display mode, press the [■] key and return to the Display Check mode.

Flow of Self-diagnosis Result Display mode operation:



7-2. Error Code of The Self-Diagnosis Result Display Mode

Error code	Description
00	No error
01	Attempt to access an abnormal address
02	High temperature detected
03	Focus error (no change)
04	Abnormal rotation of disc
05	Fault of disc discriminate
06	Error of access loop (no change)
07	Error of access loop (with change)
08	Could not read address
09	Focus error (with change)
12	Could not read data with SYNC
13	TOC address data error
32	Focus error, ABCD offset error
33	Tracking error, offset error
34	Tracking error, X1 tracking error, offset error

7-3. Clear The Total Recording Time

After replacing the optical pick-up, clear the total recording time.

1. Enter the test mode (Display Check mode).
2. Press the [FF] key to activate the Self-Diagnosis Result Display mode.
3. Press the [VOL-] key once to display the total recording time indication.
4. Press the [II] key and display “ClrOK?”.
5. Press the [II] key again to display “RecT 0” and clear the total recording time.

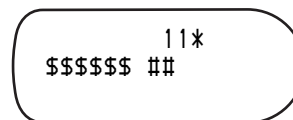
8. KEY CHECK MODE

This mode is used for key check.

Operation of The Key Check Mode

1. Enter the test mode (Display Check mode).
2. Press the [GROUP] key to activate the Key Check mode where the LCD displays as shown below.

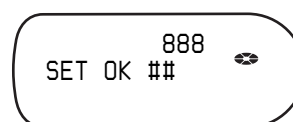
Display of the remote commander



- “*” : Remote commander (0: with, 4: without)
- “\$\$\$\$\$\$” : Pressed key name.
When remote commander key is pressed, display becomes as “r\$\$\$\$\$”.
- When the jog dial is turned, it displays “JOG+ X” or “JOG-X” (“X” is number of 1 to 3). If the jog dial is turned four click, it displays “JOG+OK” or “JOG-OK”.
- “###” : Key voltage of remote commander. (Hexadecimal number)

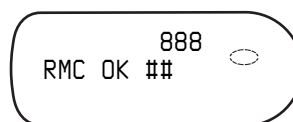
3. When all keys check is OK on the main unit, it displays as follows.

Display of the remote commander



When all keys check is OK on the remote commander, it displays as follows.

Display of the remote commander



*) Turn the jog dial four click upside and downside to jog test is OK.

4. When all keys check are OK both the main unit and the remote commander, it display backs to the Display Check mode automatically.
5. To quit the Key Check mode, open the lid and return to the Display check mode.

SECTION 5 ELECTRICAL ADJUSTMENTS

1. PRECAUTIONS FOR ADJUSTMENT

1. Adjustment must be done in the test mode only. After adjusting, release the test mode. A key having no particular description in the text, indicates a set key.
2. Use the following tools and measuring instruments.
 - Digital voltmeter
 - Regulated dc power supply (two sets)
 - Thermometer (using the “Setting The Temperature Correction Value”)
 - Laser power meter
 - CD adjustment disc TDYS-1 (Part No. : 4-963-646-01)
 - MD1/HiMD1 hybrid adjustment disc MDW-74/GA1 (Part No. : 4-229-747-01)
 - Hi-MD3 adjustment disc HMD1GSDJ (Part No. : 7-819-098-37) *1
 - Remote commander in accessories (with LCD)
 - Battery charging stand and AC adapter in accessories
 - Lithium-ion battery (LIP-4WM) in accessories (full charged)
 - PC application software for test mode
“TestMode_Enter_For_NH1_NH3D_Ver***.exe” *2
 - USB cable

*1) Hi-MD3 adjustment disc (HMD1GSDJ) is consumable. Therefore if it is used 400 times, exchange it for a new.

*2) Use the newest version every time.
Copy the whole folder of this program to your PC.
Operating system: Windows 2000, Windows XP
When using this application, the SonicStage Ver. 2.0 or 2.1 is necessary, and install it in your PC in advance.

3. Unless specified otherwise, use the AC adaptor and battery charging stand in accessories.

2. ADJUSTMENT SEQUENCE

Adjustment must be done with the following order.

Adjustment order:

1. Entering the test mode
2. Initialize the adjustment value
3. Setting the temperature correction value
4. Power supply voltage adjustment
5. Charge function check
6. Laser power check
7. Setting the adjustment values
8. Servo Overall adjustment
9. Resume clear
10. Releasing the test mode

3. ADJUSTMENT OF THE EACH ITEM

3-1. Entering The Test Mode

Refer to the “SECTION 4. TEST MODE”.

3-2. Initialize The Adjustment Value

Procedure:

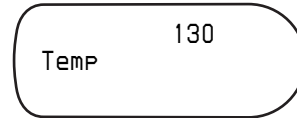
1. In the test mode (Display Check mode), press the [VOL-] key to enter the Overall adjustment mode.
2. Press the [T MARK] key and display “911 ResOK?”.
3. Press the [F] key to display “911 Reset!” and initialize the adjustment values.
4. Press the [] key and back to Display Check mode.

3-3. Setting The Temperature Correction Value

Procedure:

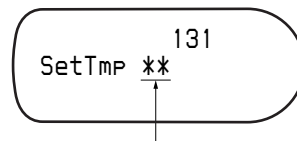
1. In the test mode (Display Check mode), press the [VOL+] key to enter the Manual mode.
2. Press the [FF] key twice, and press the [VOL+] key twice to display as follows.

Display of the remote commander



3. Press the [FF] key once to select the item number 0131 and display as follows.

Display of the remote commander



adjustment value (hexadecimal)

4. Measure the ambient temperature.
5. Adjust with [VOL+]/[VOL-] keys so that the adjusted value (hexadecimal value) becomes the ambient temperature. (example: 25 °C = 19h)
6. Press the [F] key to write the adjusted value.
7. Press the [] key four times and back to the Display Check mode.

3-4. Power Supply Voltage Adjustment

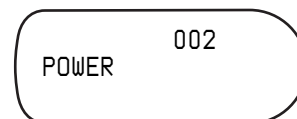
Adjustment must be done with the following order.

3-4-1. Setting

Procedure:

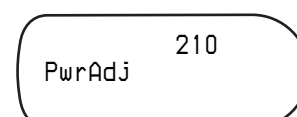
1. Apply the voltage of 3.7 V to the battery terminals, and enter the test mode (Display Check mode).
2. Press the [VOL+] key to enter the Manual mode.
3. Press the [VOL+] key twice to display as follows.

Display of the remote commander



4. Press the [FF] key once, press the [VOL+] key once, and press the [FF] key once again to display as follows.

Display of the remote commander

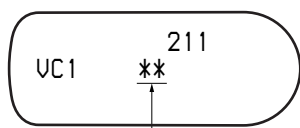


5. Repeat the next procedures (3-4-2. PwrAdj Adjustments), and adjust all contents of “table 3-4-1. PwrAdj Specifications”.

3-4-2. PwrAdj adjustments

Repeat the following procedures and adjust all contents of “table 3-4-1. PwrAdj Specifications”.

Example Display (Item No. 2211)



adjustment value (hexadecimal)

Procedure:

1. Connect the digital voltmeter to measuring point (refer to the following table) and ground (CL433).
2. Press the **[FF]** key to change the item number.
3. Adjust with **[VOL+]**/**[VOL-]** keys so that the value of digital voltmeter becomes specification value.
4. Press the **[II]** key to write the adjusted value.
5. Press the **[FF]** key to select the next item.
6. Repeat adjustment from step 1 until item number 2233.

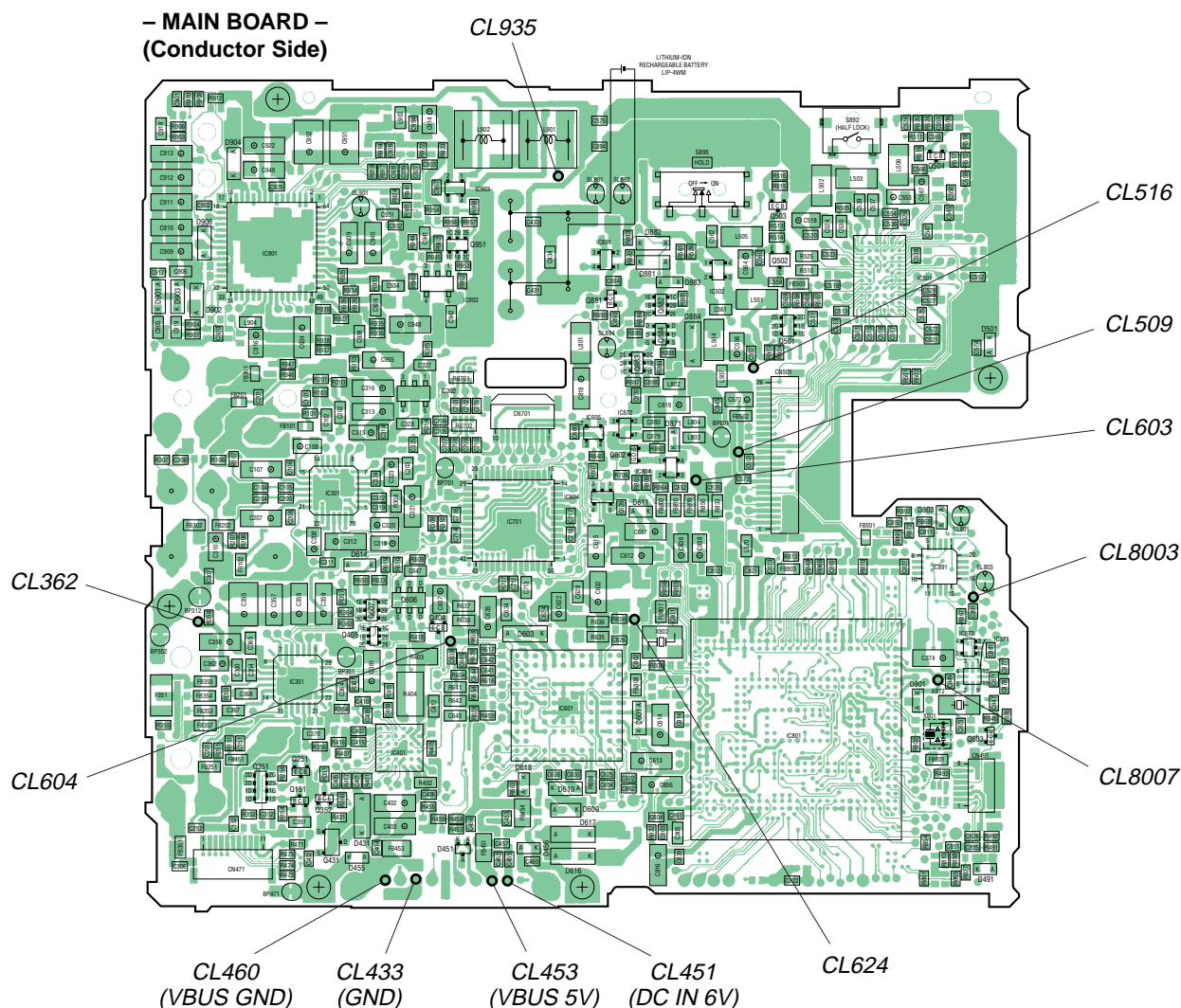
ItemNo.	Display	Specification value	Measuring point
2211	211 VC1 **	2.05V ±0.02V	CL8003
2212	212 VC1H N **	2.25V ±0.01V	CL8003
2213	213 VC2 **	1.20V ±0.01V	CL603
2214	214 DDC3 L **	2.60V ±0.015V	CL604
2215	215 DDC3 H **	3.10V ±0.015V	CL604
2216	216 REG1 L **	2.32V ±0.02V	CL362
2217	217 REG1 H **	3.02V ±0.02V	CL362
2218	218 REG2 1 **	2.27V ±0.02V	CL509
2219	219 REG2 2 **	2.47V ±0.02V	CL509
2221	221 REG2 3 **	2.72V ±0.02V	CL509
2222	222 REG2 4 **	2.97V ±0.02V	CL509
2223	223 REG3 **	2.52V ±0.02V	CL516
2224	224 VREC 1 **	0.89V ±0.02V	CL624
2225	225 VREC 2 **	1.08V ±0.02V	CL624
2226	226 VREC 3 **	1.52V ±0.02V	CL624
2227	227 VREC 4 **	2.27V ±0.02V	CL624
2228	228 VREC 5 **	2.97V ±0.02V	CL624
2229	229 VREC 6 **	0.94V ±0.02V	CL624
2231	231 VREC 7 **	1.28V ±0.02V	CL624
2232	232 VREC 8 **	2.57V ±0.02V	CL624
2233	233 VREC 9 **	2.57V ±0.02V	CL624

Note1: “**” is adjustment value (hexadecimal number).

Note2: Ground point of all measuring points is CL433.

Table 3-4-1. PwrAdj Specifications

Adjustment Location:

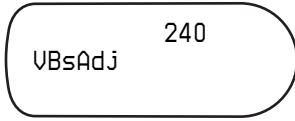


3-4-3. VBsAdj adjustments

Procedure:

1. In the “3-4-2. PwrAdj Adjustments” completed status, press the [FF] key to display as follows.

Display of the remote commander



2. Apply the voltage of 5 V to the CL453 (VBUS 5V) and CL460 (VBUS GND).
3. Press the [FF] key to change the item number to 2241.
4. Adjust with [VOL+]/[VOL-] keys so that the value of digital voltmeter becomes specification value. (refer to “table 3-4-2. VBsAdj Specifications”)
5. Press the [II] key to write the adjusted value.
6. Press the [FF] key to select the next item, and repeat adjustments to item number 2243 at the same manner as step 3 to step 5.

Item No.	Display	Specification value	Measuring point
2241	241 REG4 **	1.13 V ± 0.01 V	CL603
2242	242 REG5 **	2.05 V + 0.02 V	CL8003
2243	243 REG6 **	3.30 V ± 0.01 V	CL8007

Note1: “**” is adjustment value (hexadecimal number).

Note2: Ground point of all adjustment points is CL433.

Note3: Refer to page 17 for adjustment location.

Table 3-4-2. VBsAdj Specifications

7. Press the [FF] key to select the item number 2244, and turn off the power supply of battery terminal.
8. Adjust with [VOL+]/[VOL-] keys so that the voltage of between CL935 and CL433 (GND) becomes 4.10 V (– 0.02 V).
9. Press the [II] key to write the adjusted value.
10. Apply the voltage of 3.7 V to the battery terminal again.
11. Press the [■] key to display “240 VBsAdj” (Item number: 2240).
12. Turn off the voltage of 5 V to the CL453 (VBUS 5V) and CL460 (VBUS GND).
13. Press the [■] key three times and back to the Display Check mode.

3-5. Charge Function Check

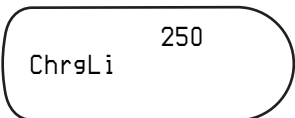
Note1: When perform this check, don’t apply a voltage to battery terminals.

Note2: Be sure to disconnect the AC adapter when connecting the resistors. Doing so with the power supply connected causes a trouble.

Procedure:

1. Connect the 10 ohms resistor (more than 3 watts) to battery terminals.
2. Connect the AC adapter to the battery charging stand in accessories and set the main unit.
3. Enter the test mode (Display Check mode).
4. Press the [VOL+] key once to enter the Manual mode.
5. Press the [VOL+] key twice, press the [FF] key once, press the [VOL+] key once, press the [FF] key once, press the [VOL+] key twice to display as follows.

Display of the remote commander



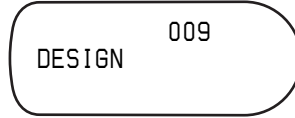
6. And [FF] key once again to select the item number 2251 and display “251 ChgChk **” on the LCD of remote commander.
7. Press the [II] key confirm that “ChgCOK” is displayed.
8. Press the [■] key four times and back to the Display Check mode.
9. Cut the power supply and remove the resistor that connected to the battery terminals.

3-6. Laser Power Check

Procedure:

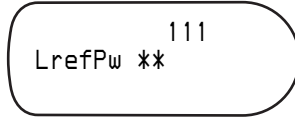
1. In the test mode (Display Check mode), press the [VOL+] key to enter the Manual mode.
2. Open the lid and press the [FR] key continuously until the optical pick-up moves to the most inward track.
3. Set the laser power meter so that the laser beam from the optical pick-up aims at the objective lens of laser power meter at right angle.
4. Press the [VOL-] key once to display as follows.

Display of the remote commander



5. Press the [FF] key three times to select the item number 9111 and display as follows.

Display of the remote commander



6. Confirm that the value of laser power meter is 0.67 mW ± 21%.
7. Press the [FF] key to select the item number 9112.
8. Confirm that the value of laser power meter is 0.76 mW ± 18%.
9. Press the [FF] key to select the item number 9113.
10. Confirm that the value of laser power meter is 6.25 mW ± 12%.
11. Press the [■] key four times and back to the Display Check mode.

3-7. Setting The Adjustment Values

3-7-1. Hi-MD3 setting

Preparation:

1. Perform calculation every item based on the data given by the Hi-MD3 adjustment disc by referring to the following table. (Round off the value in decimal place)
2. Convert the calculated value into hexadecimal number.

Note: The Hi-MD3 adjustment parameters vary depending on the disc, and therefore use the parameters of the disc used when performing the adjustment.

Item No.	Calculating formula (*3)
0211	Pr_nominal / 0.05
(*1)	Por / 0.05
0212	Kr × (-100)
0213	Pw_nominal / 0.05
(*2)	Ppw / 0.05
0214	Kw × (-100)
0215	Prmin / 0.05
0216	Pwmin / 0.05

- *1) If the "Pr_nominal" value is indicated, use the "Pr_nominal" value and not used "Por" value.
- *2) If the "Pw_nominal" value is indicated, use the "Pw_nominal" value and not used "Ppw" value.
- *3) Round off after the decimal point.

Table 3-7-1. Hi-MD3 adjustment parameter

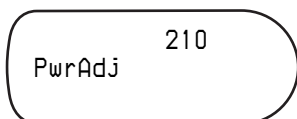
Example of Calculation:

Item No.	Parameter		Result	
			Decimal	Hexadecimal
0211	Pr_nominal	2.50 mW	50	32h
0212	Kr	-0.3 %/°C	30	1Eh
0213	Pw_nominal	7.35 mW	147	93h
0214	Kw	-0.4 %/°C	40	28h
0215	Prmin	1.9 mW	38	26h
0216	Pwmin	5.8 mW	116	74h

Procedure:

1. In the test mode (Display Check mode), press the [VOL+] key to enter the Manual mode.
2. Press the [FF] key once, press the [VOL+] key once, and press the [FF] key once again to display as follows.

Display of the remote commander

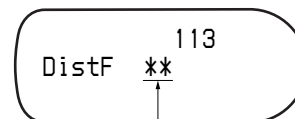


3. Press the [FF] key once to select the item number 0211.
4. Adjust with [VOL+]/[VOL-] keys so that the adjustment value of LCD becomes calculated value.
5. Press the [II] key to write the adjusted value.
6. Press the [FF] key to next item.
7. Repeat adjustment from step 4 until item number 0216.

3-7-2. Other setting

1. In the test mode (Display Check mode), press the [VOL+] key to enter the Manual mode.
2. Press the [FF] key five time to select the item number 0113 and display as follows.

Display of the remote commander



adjustment value (hexadecimal)

3. Press the [VOL+]/[VOL-] key and set the according value to each model type and destination referring to the following table.
4. Press the [II] key to write the adjusted value.

Destination	Setting value
US, Australian	01
AEP, UK	81
E18, Hong Kong, Taiwan, Korean, Chinese, Tourist	05

• Abbreviation

E18: 100V - 240V AC area in E model

Table 3-7-2. Mode Type and Destination Setting

3-8. Servo Overall Adjustment

Note1: Be sure to adjustment so that the set is horizontal and the LCD is upside. Unless performed in that state, it is not adjusted correctly.

Note2: If NG is displayed in the middle of this adjustments, perform "3-2. Initialize The Adjustment Value" and "3-7. Setting The Adjustment Values" again, then retry this adjustments from step 1.

Procedure:

1. Insert the full charged lithium-ion battery (LIP-4WM) and enter the test mode (Display Check mode).
2. Press the [VOL-] key to enter the Overall Adjustment mode.
3. Insert the CD adjustment disc (TDYS-1).
4. Put the main unit horizontal so that the LCD becomes upside, and press the [FR] key.
5. Wait until "CD OK" is displayed on the LCD.
6. Insert the MD1/HiMD1 hybrid adjustment disc (MDW-74/GA1).
7. Put the main unit horizontal so that the LCD becomes upside, and press the [FF] key.
8. Wait until "MD1 OK" is displayed on the LCD.
9. Insert the Hi-MD3 adjustment disc (HMD1GSDJ).
10. Put the main unit horizontal so that the LCD becomes upside, and press the [VOL+] key.
11. Wait until "HMD OK" is displayed on the LCD.
12. Eject the disc.
13. Put the main unit horizontal so that the LCD becomes upside, and press the [VOL-] key.
14. Wait until "OfstOK" is displayed on the LCD.
15. Press the [II] key and back to the Display Check mode.

3-9. Resume Clear

Procedure:

1. In the test mode (Display Check mode), press the [VOL+] key to enter the Manual mode.
2. Press the [VOL+] key once, press the [FF] key once, press the [VOL-] key once, press the [FF] key once, and press the [VOL+] key twice, press the [FF] key three times to select the item number 1933.
3. Press the [II] key to resume clear.
4. Press the [■] key four times and back to the Display Check mode. And remove the lithium-ion battery.

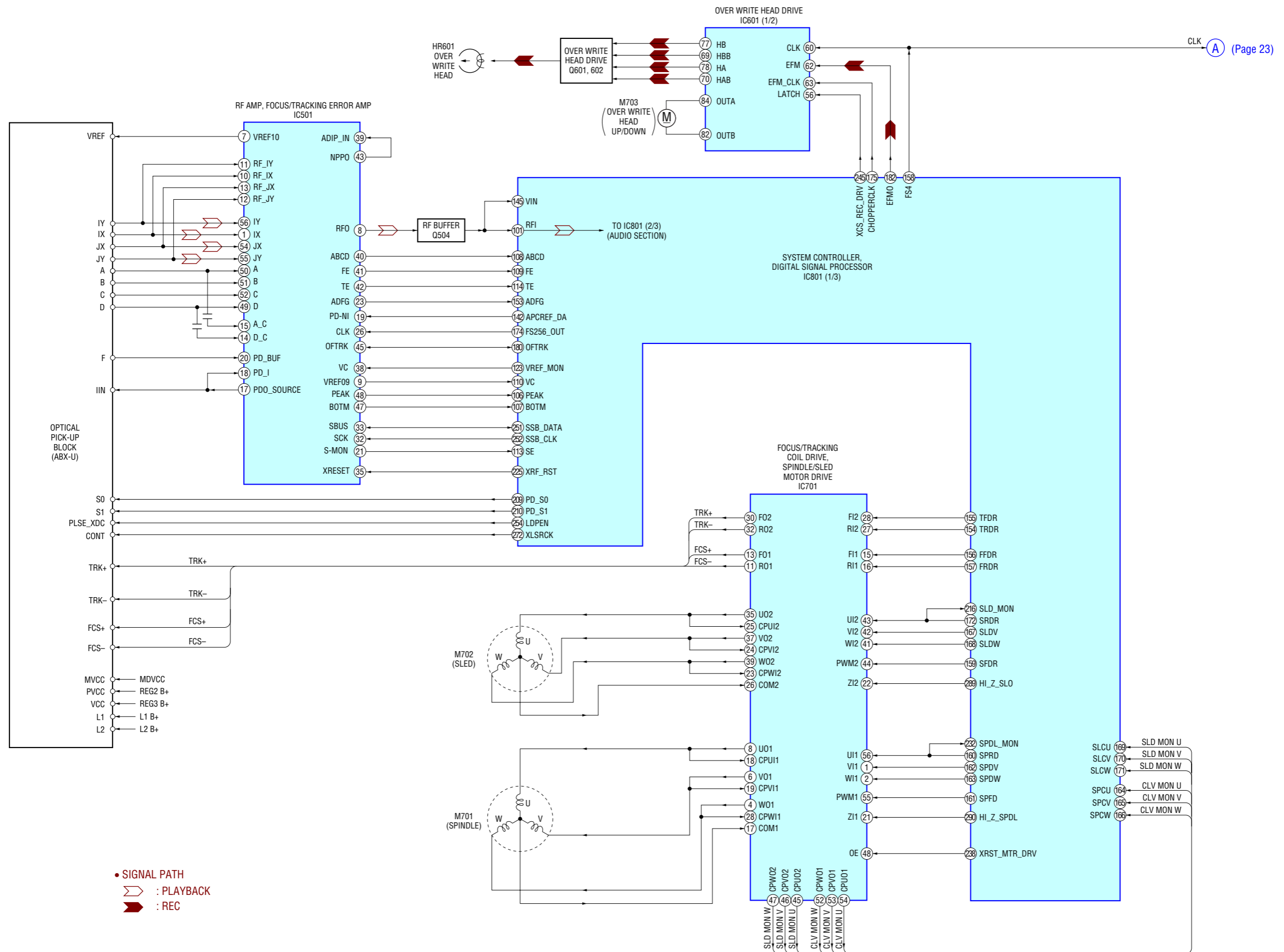
3-10. Releasing The Test Mode

Refer to the “SECTION 4. TEST MODE”.

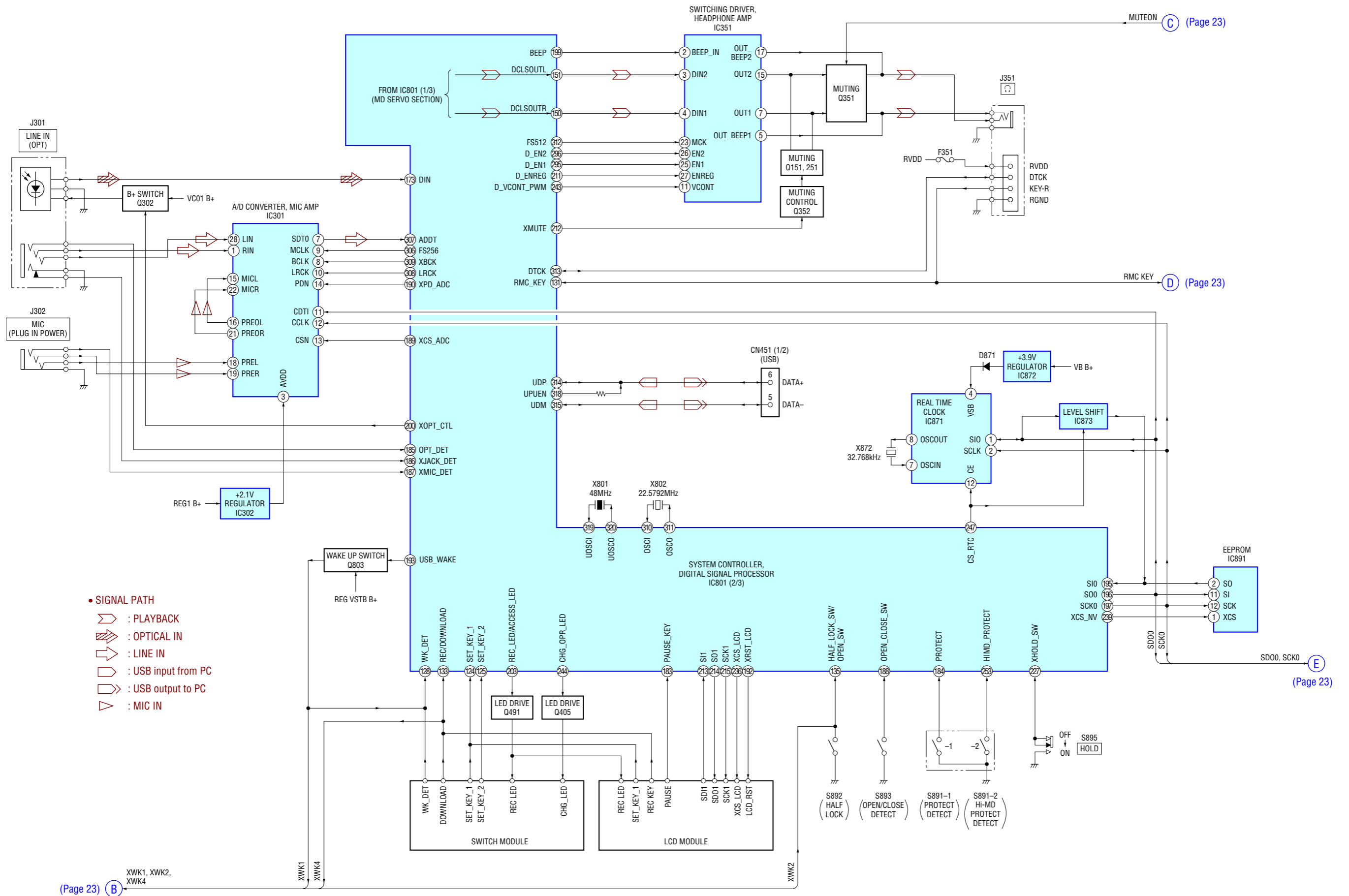
Note: Once the test mode is activated with this application, the test mode is then activated forcibly by only turning on the power.
After the repair completed, be sure to release the test mode by using this application once more.

SECTION 6 DIAGRAMS

6-1. BLOCK DIAGRAM – MD SERVO Section –

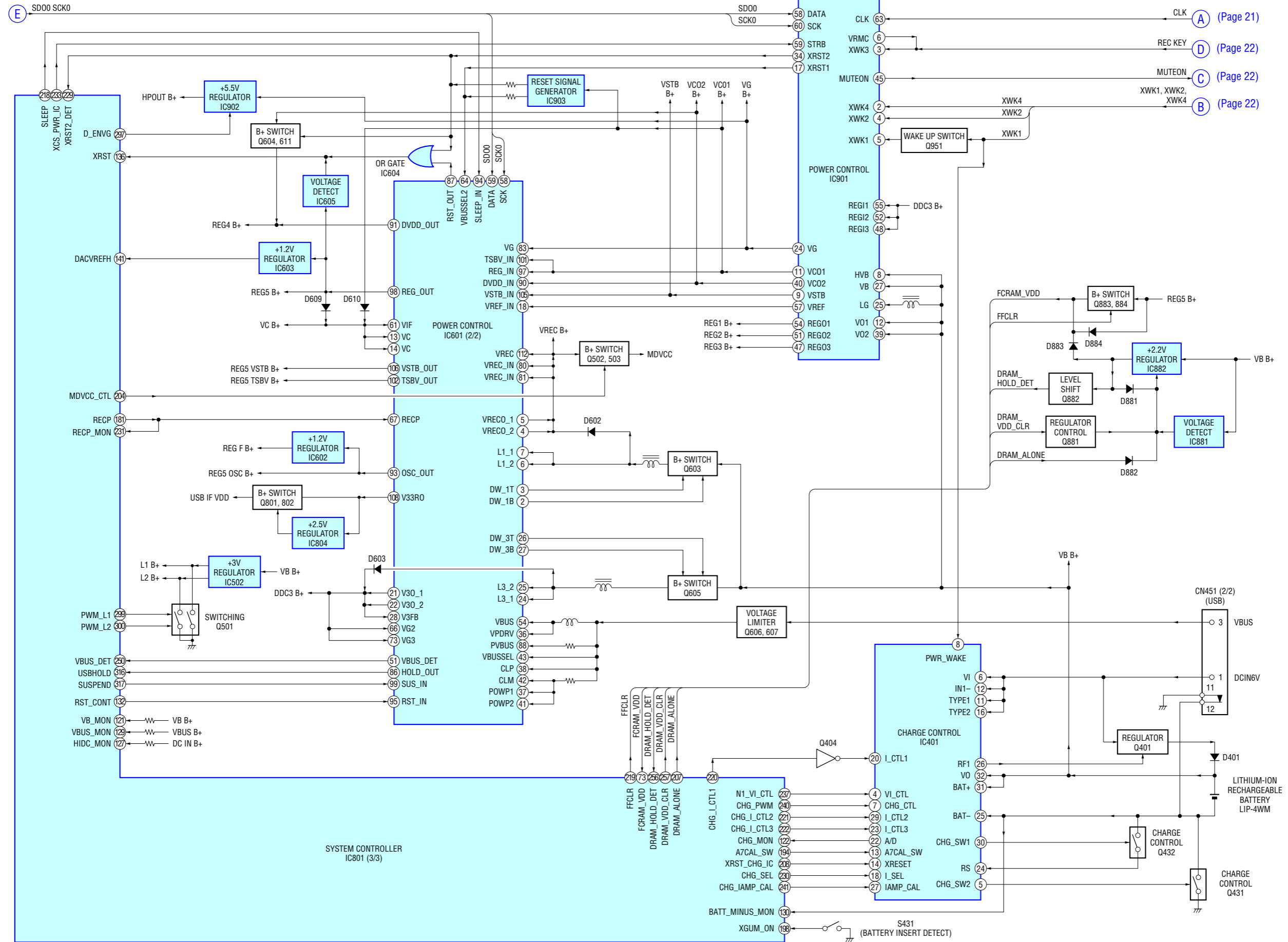


6-2. BLOCK DIAGRAM – AUDIO Section –



4-3. BLOCK DIAGRAM – POWER SUPPLY Section –

(Page 22)



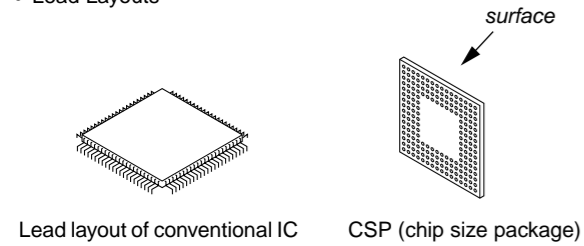
• Note For Printed Wiring Boards and Schematic Diagrams

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

- Main board is multi-layer printed board. However, the patterns of intermediate-layer have not been included in this diagrams.
- Lead Layouts



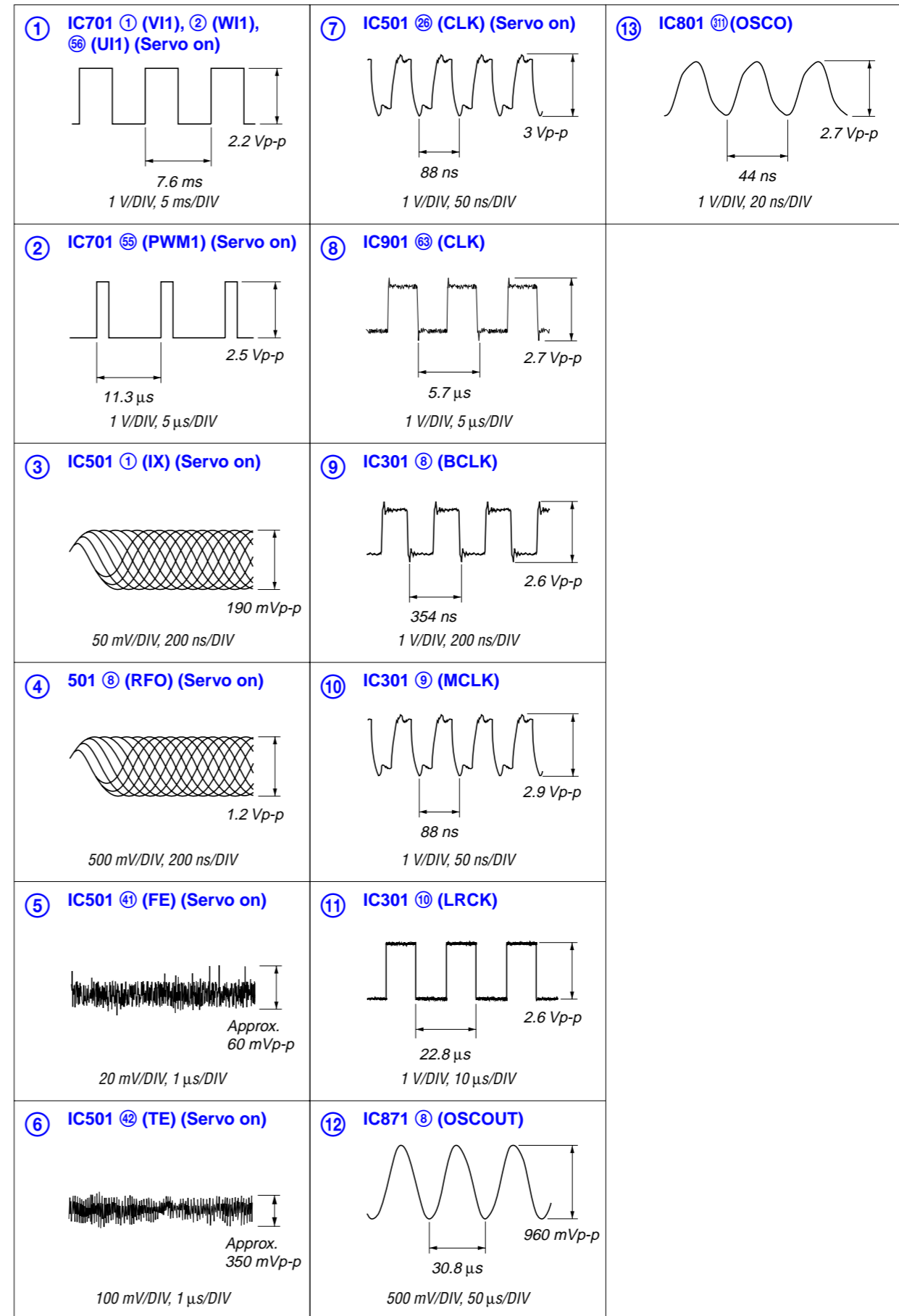
Note on Schematic Diagram:

- 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 $1/4\text{ W}$ or less unless otherwise specified.
- △ : internal component.
- : panel designation.

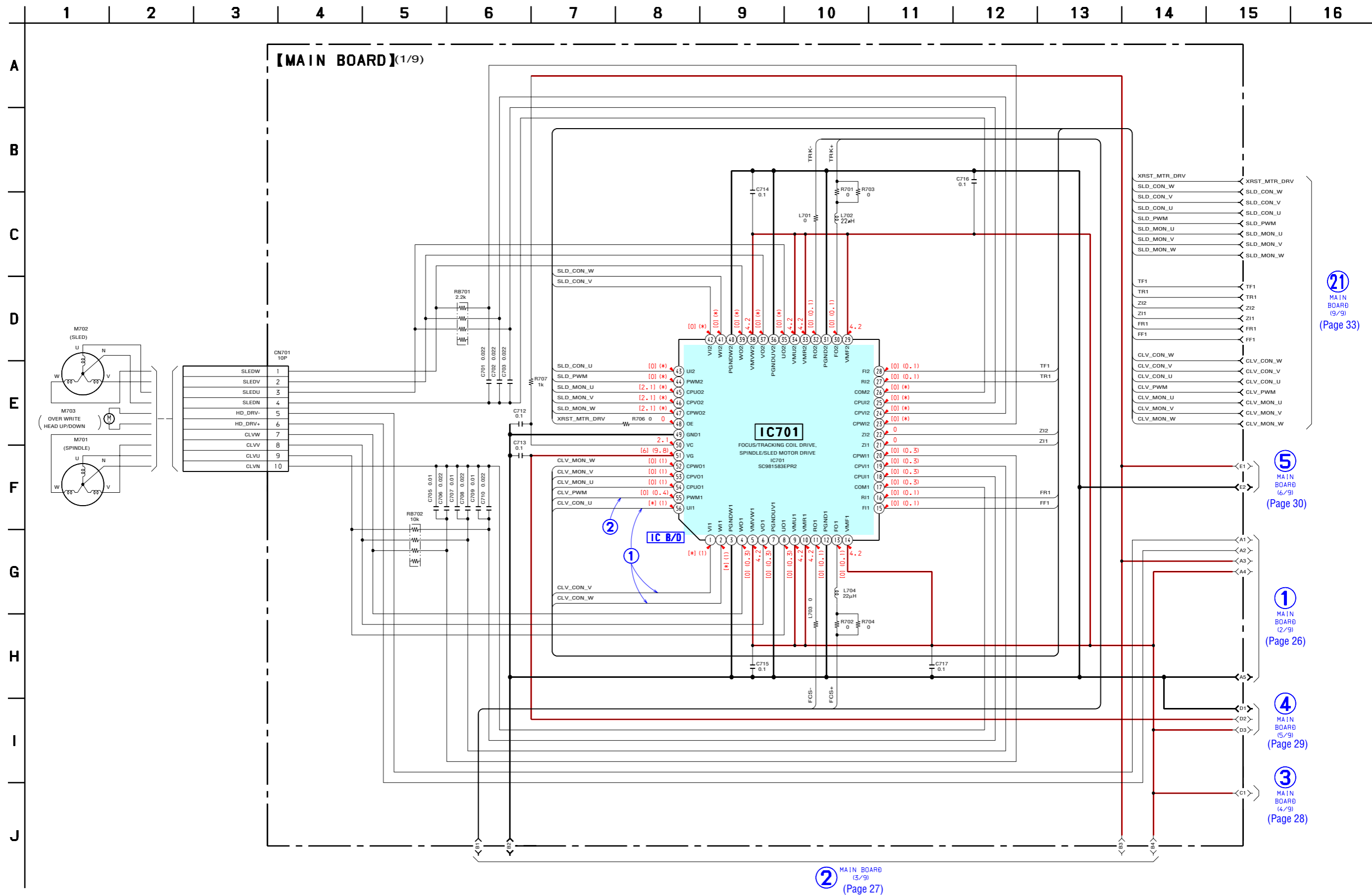
Note: The components identified by mark △ or dotted line with mark △ are critical for safety. Replace only with part number specified.

- : B+ Line.
- Total current is measured with MD installed.
- Power voltage is dc 6 V and fed with regulated dc power supply from CL451 (DC IN 6V) and CL460 (VBUS GND).
- Voltages and waveforms are dc with respect to ground under no-signal conditions.
- no mark : PLAYBACK
- () : PLAYBACK (servo on)
- [] : PLAYBACK (servo stop)
- * : 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 an oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.
- ▷ : PLAYBACK
- ▶ : REC
- ◀ : OPTICAL IN
- ◁ : LINE IN
- ◁ : USB input from PC
- ▷ : USB output to PC
- ▷ : MIC IN
- Abbreviation
- E18 : 100V - 240V AC area in E model
- JE : Tourist model

• Waveforms



6-4. SCHEMATIC DIAGRAM – MAIN Section (1/9) – • See page 36 for IC Block Diagram. • See page 24 for Waveforms.



21 MAIN BOARD (9/9) (Page 33)

5 MAIN BOARD (6/9) (Page 30)

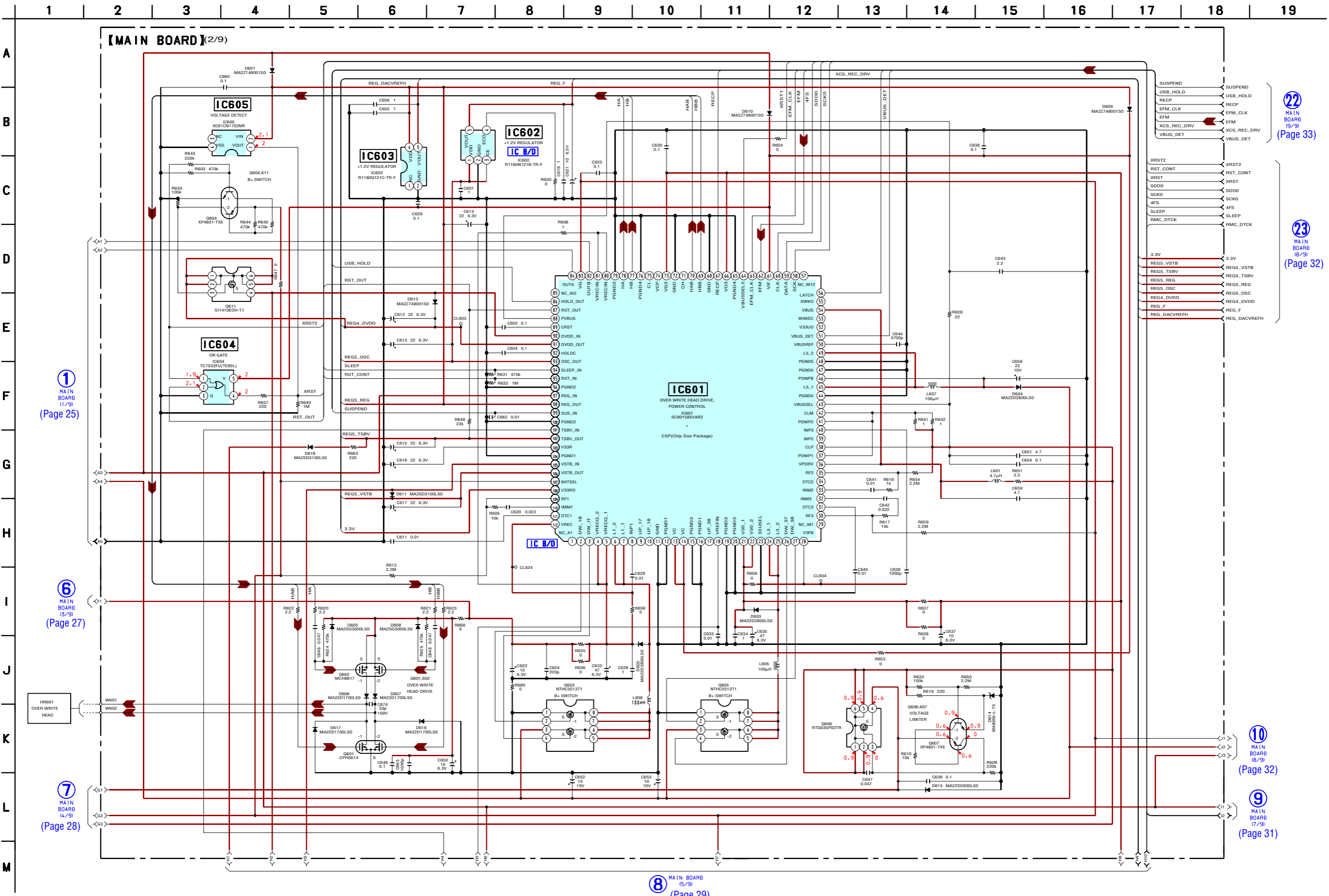
1 MAIN BOARD (2/9) (Page 26)

4 MAIN BOARD (5/9) (Page 29)

3 MAIN BOARD (4/9) (Page 28)

2 MAIN BOARD (3/9) (Page 27)

6-5. SCHEMATIC DIAGRAM – MAIN Section (2/9) – See page 36 for IC Block Diagrams.



1 MAIN BOARD (1/9) (Page 25)

6 MAIN BOARD (5/9) (Page 27)

7 MAIN BOARD (4/9) (Page 28)

8 MAIN BOARD (5/9) (Page 29)

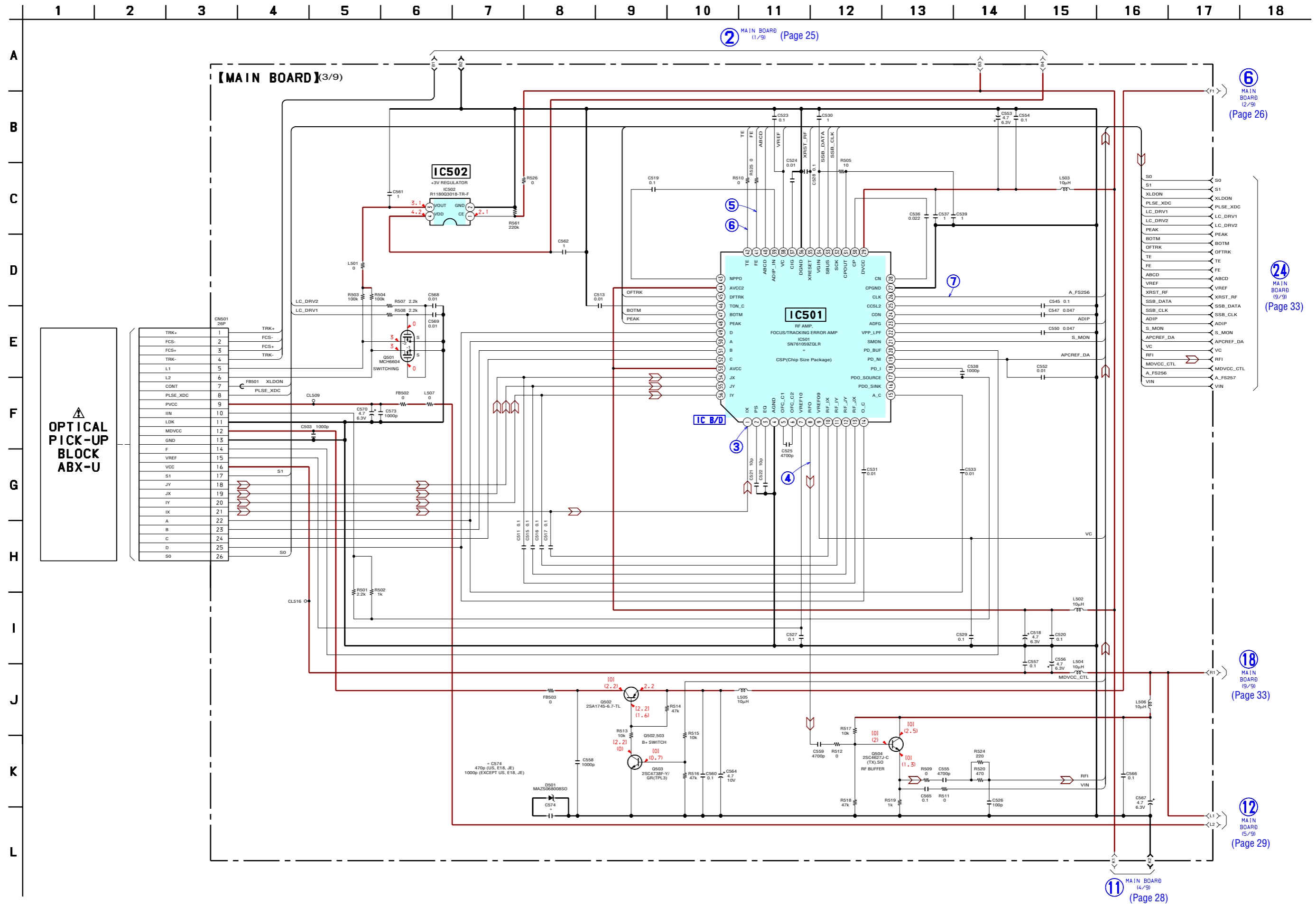
22 MAIN BOARD (9/9) (Page 33)

23 MAIN BOARD (8/9) (Page 32)

10 MAIN BOARD (8/9) (Page 32)

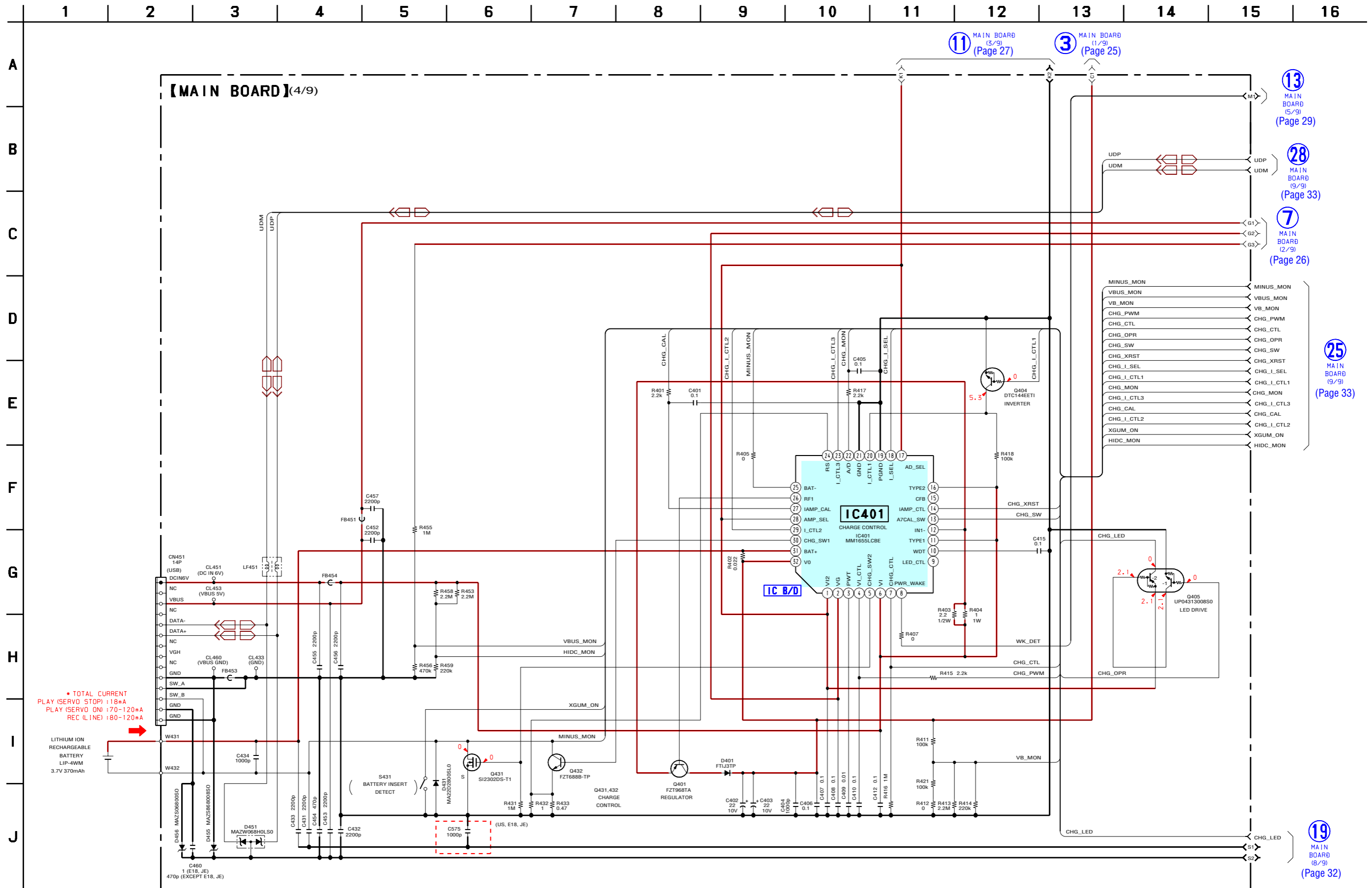
9 MAIN BOARD (7/9) (Page 31)

6-6. SCHEMATIC DIAGRAM – MAIN Section (3/9) – • See page 36 for IC Block Diagram. • See page 24 for Waveforms.

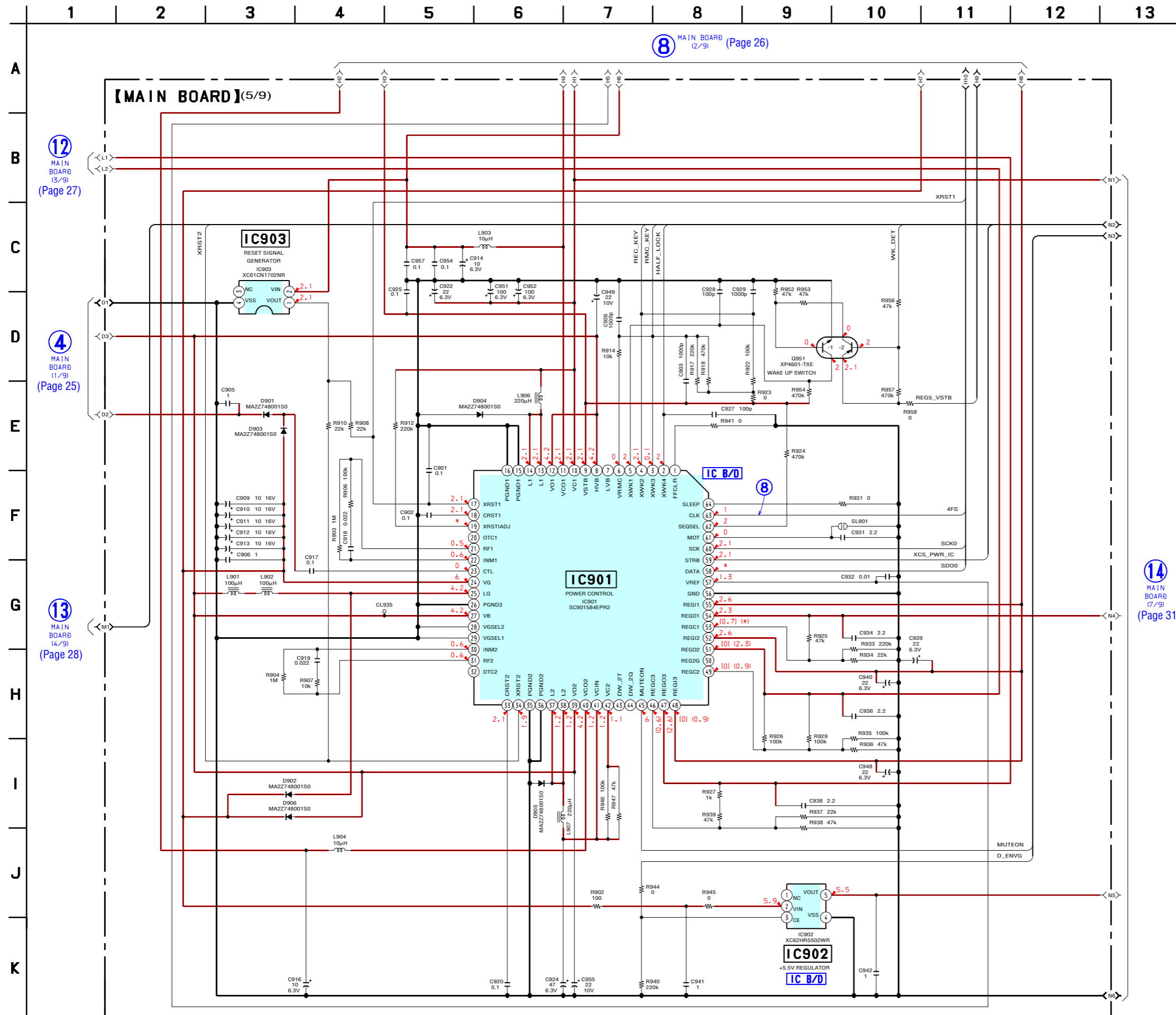


The components identified by mark Δ or dotted line with mark Δ are critical for safety. Replace only with part number specified.

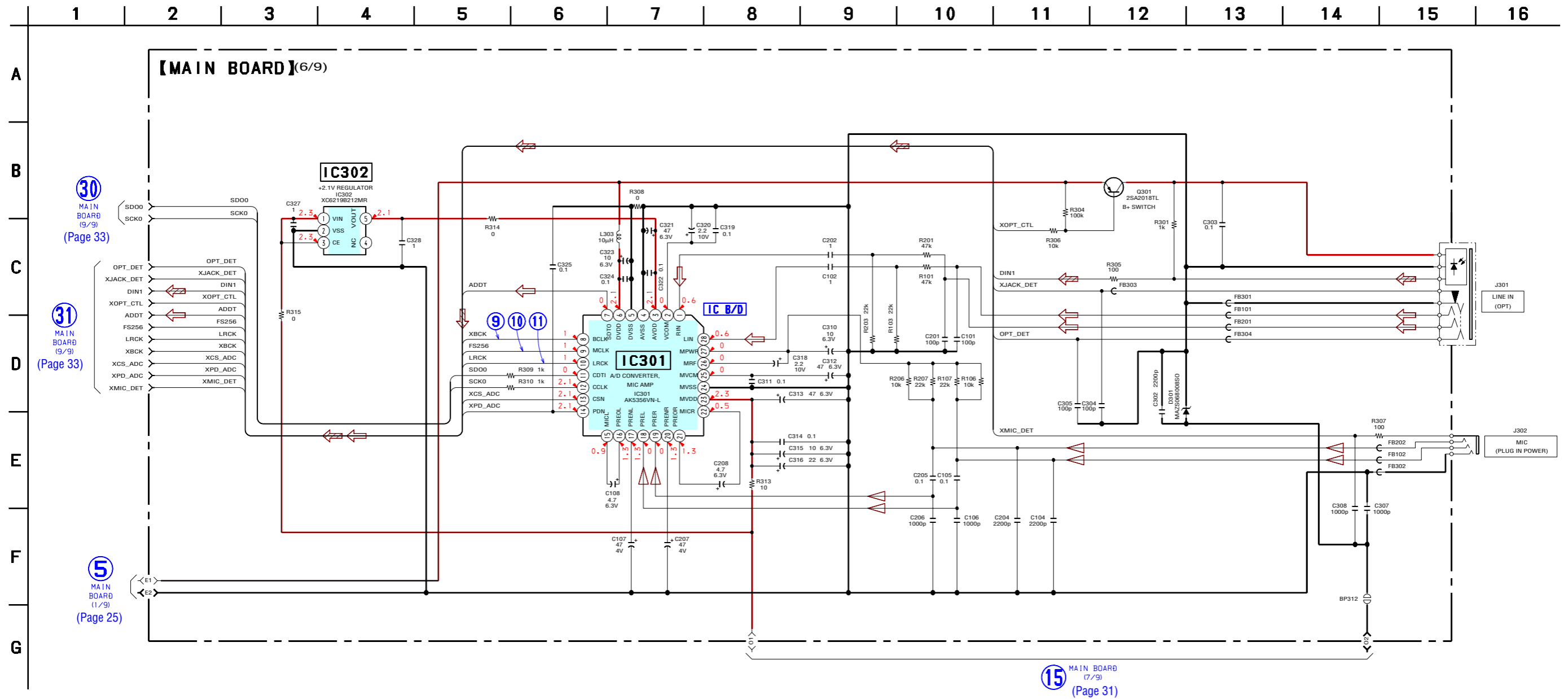
6-7. SCHEMATIC DIAGRAM – MAIN Section (4/9) – See page 36 for IC Block Diagram.



6-8. SCHEMATIC DIAGRAM – MAIN Section (5/9) – • See page 36 for IC Block Diagrams. • See page 24 for Waveform.



6-9. SCHEMATIC DIAGRAM – MAIN Section (6/9) – • See page 36 for IC Block Diagrams. • See page 24 for Waveforms.



A
B
C
D
E
F
G

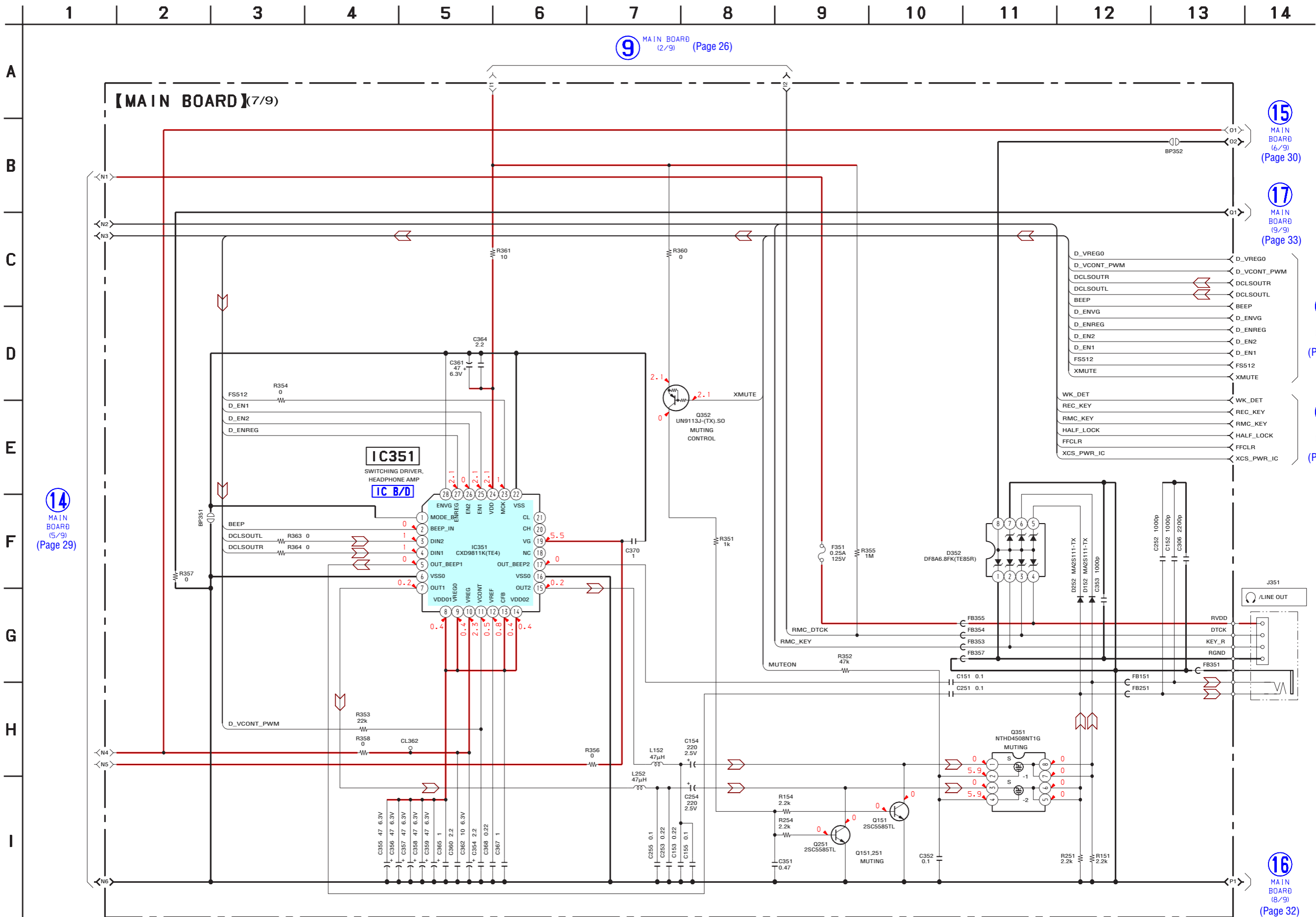
30
MAIN BOARD (9/9)
(Page 33)

31
MAIN BOARD (9/9)
(Page 33)

5
MAIN BOARD (1/9)
(Page 25)

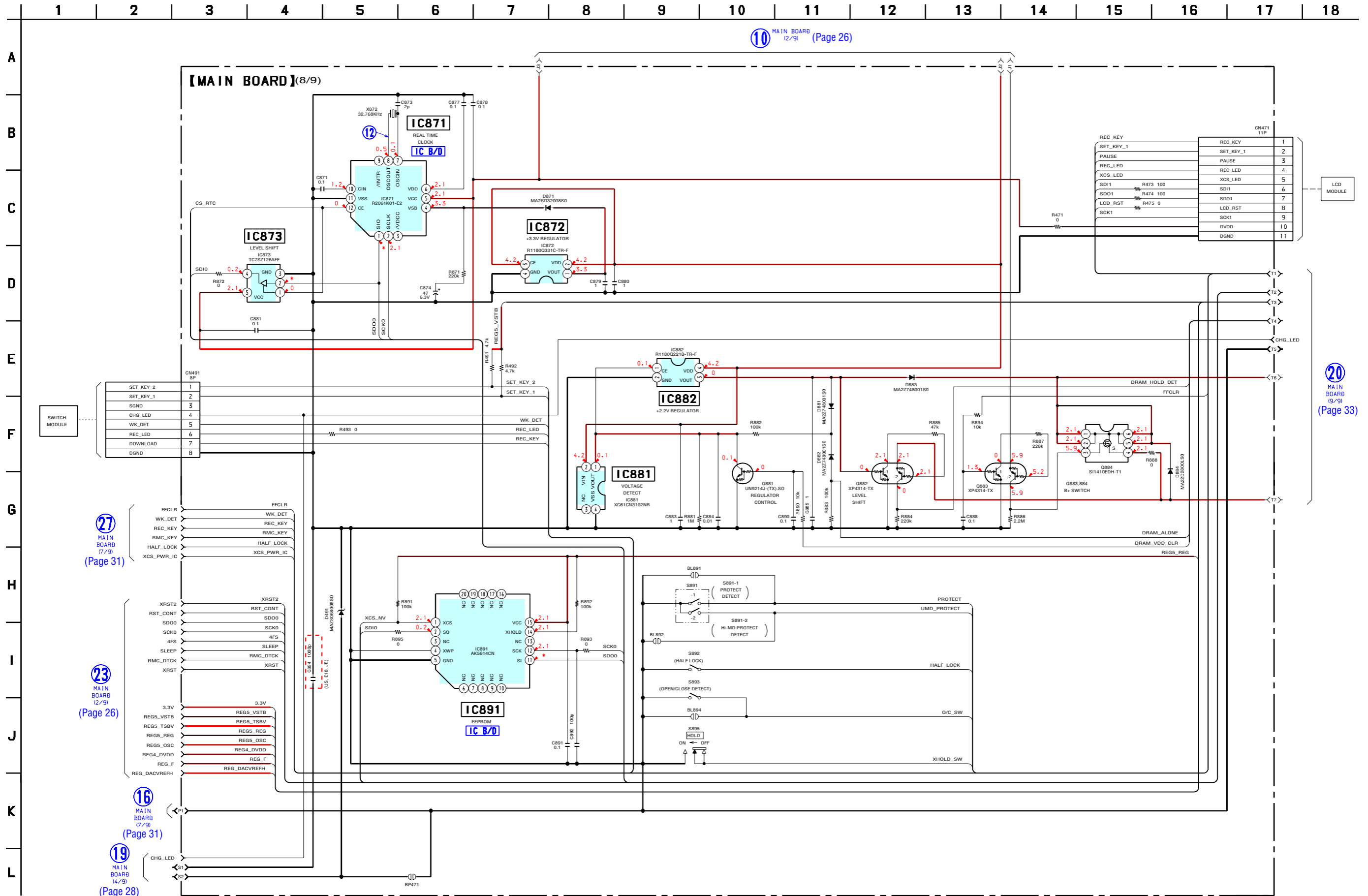
15
MAIN BOARD (7/9)
(Page 31)

6-10. SCHEMATIC DIAGRAM – MAIN Section (7/9) – • See page 36 for IC Block Diagram.

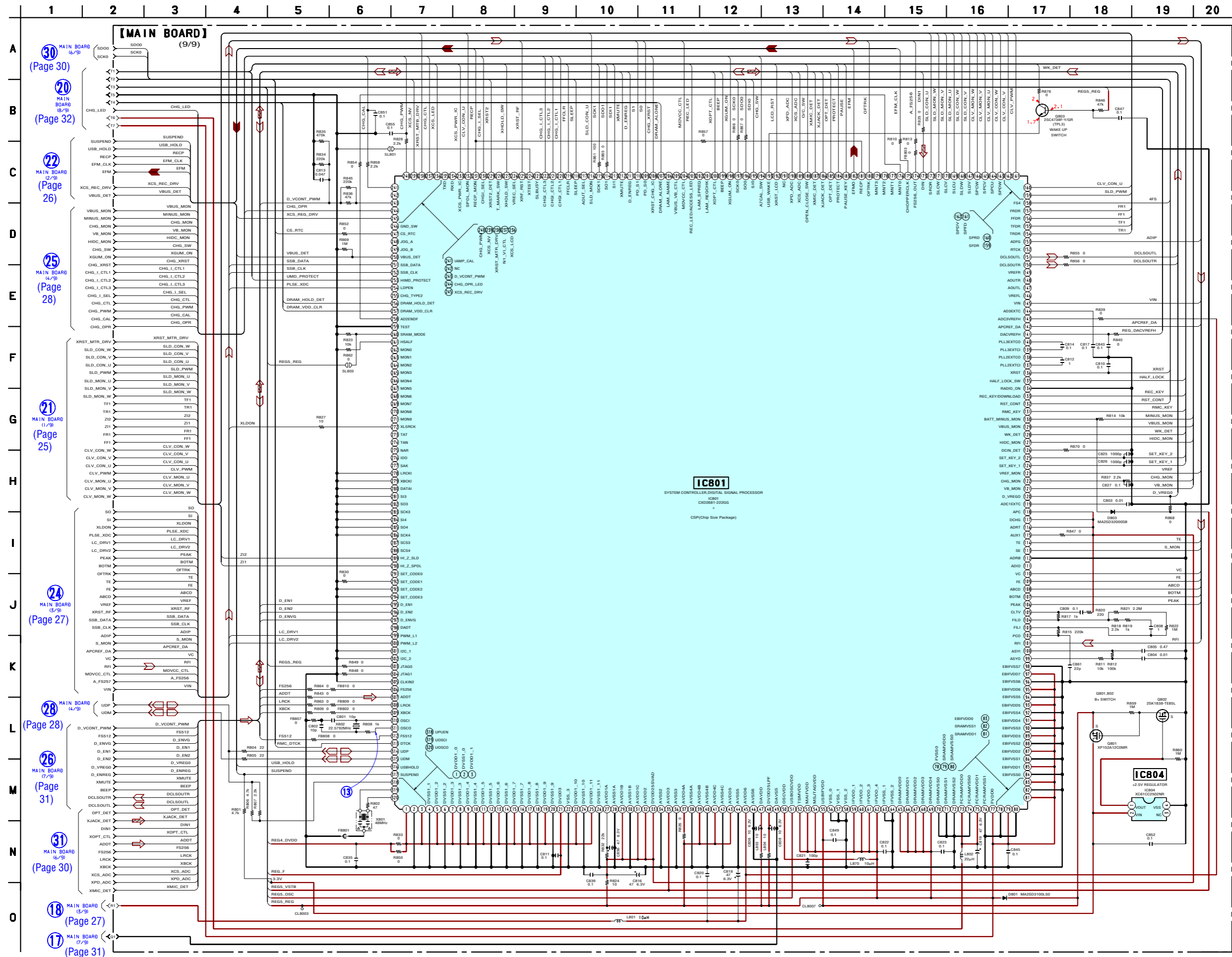


14 MAIN BOARD (5/9) (Page 29)

6-11. SCHEMATIC DIAGRAM – MAIN Section (8/9) – • See page 36 for IC Block Diagrams. • See page 24 for Waveform.

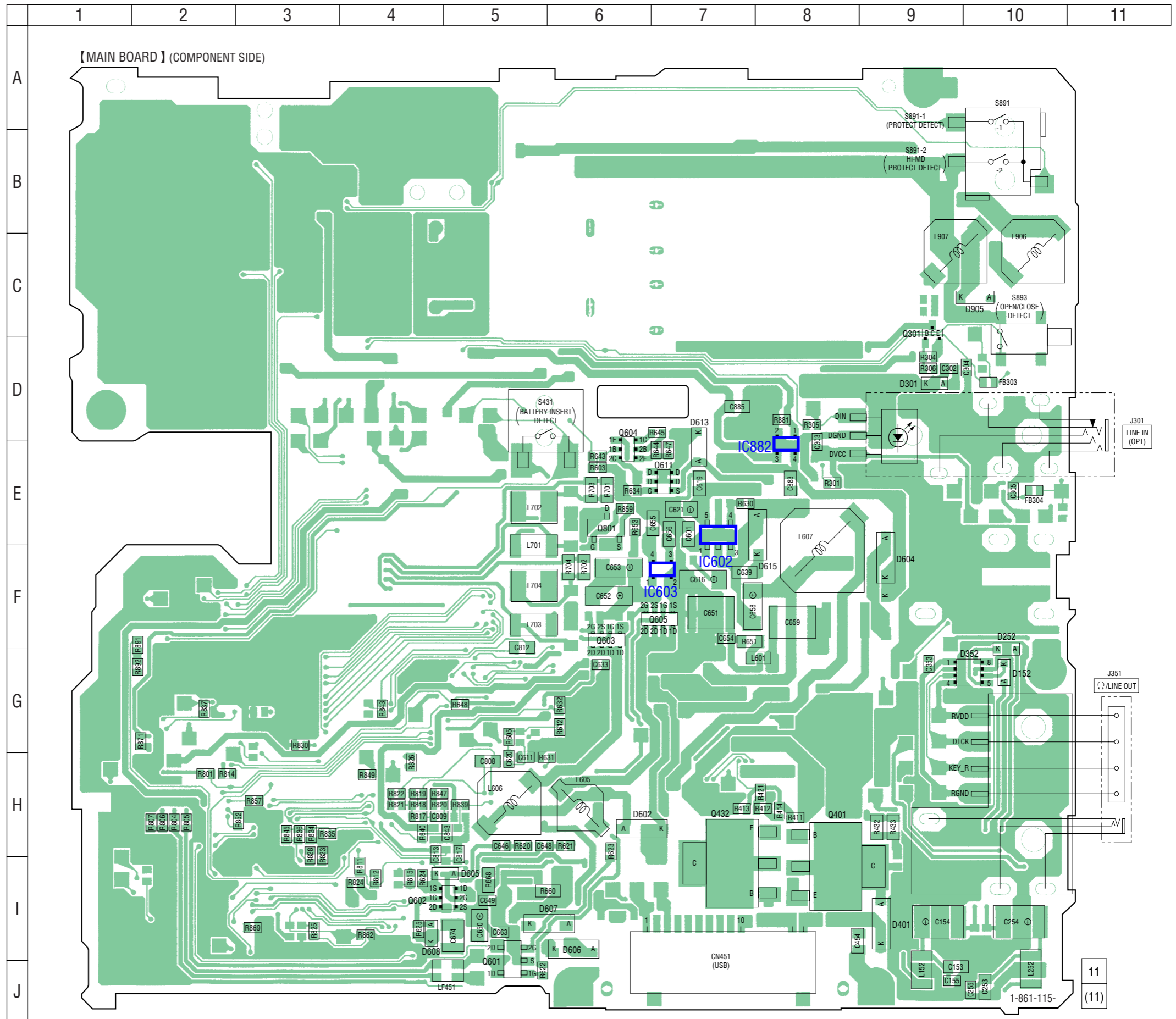


6-12. SCHEMATIC DIAGRAM – MAIN Section (9/9) – • See page 24 for Waveform. • See page 42 for IC Pin Function Description.

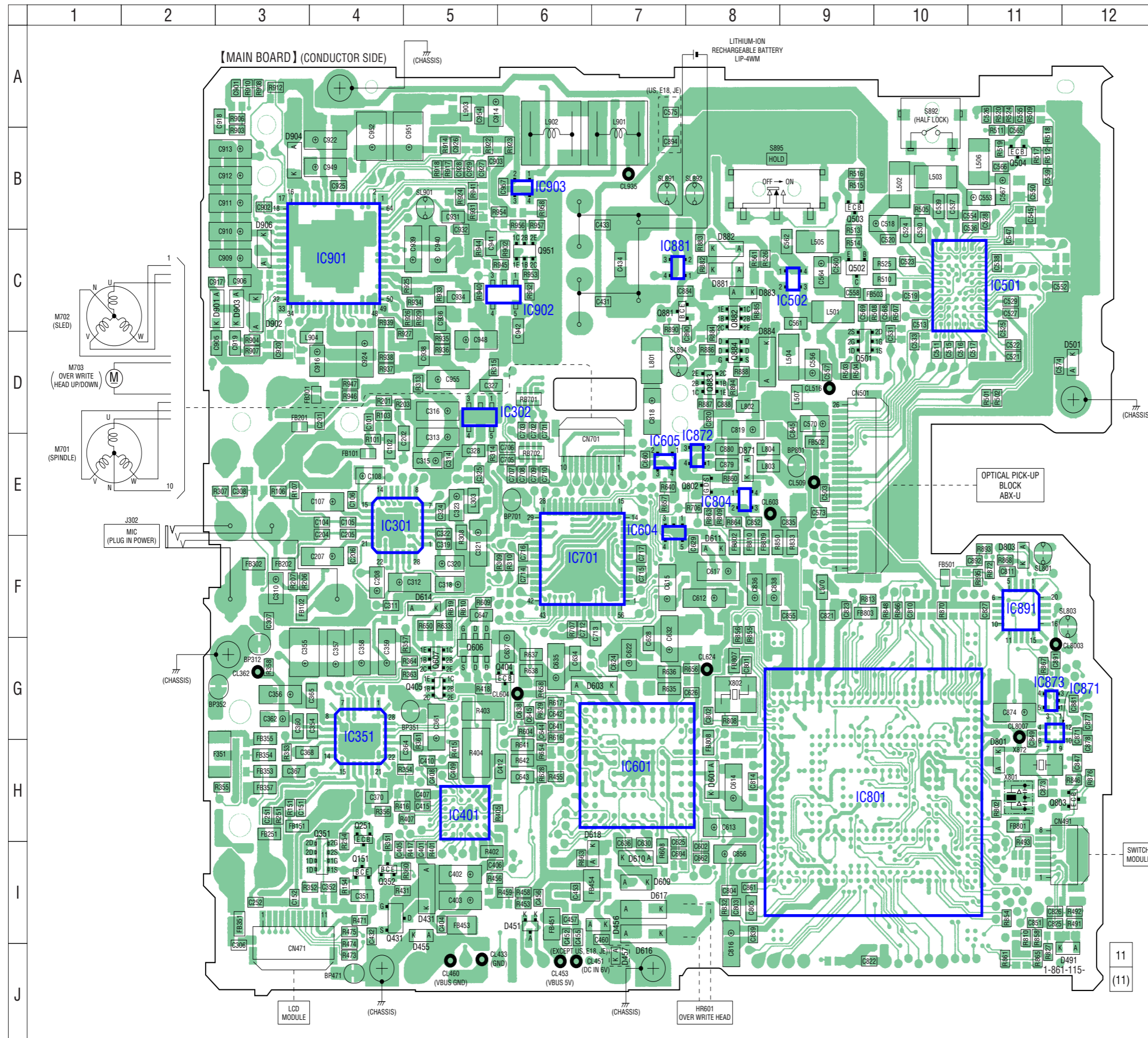


• Semiconductor Location

Ref. No.	Location
D152	G-10
D252	F-10
D301	D-9
D352	G-10
D401	I-9
D602	H-6
D604	F-9
D605	I-5
D606	I-6
D607	I-5
D608	I-4
D613	D-7
D615	F-8
D905	C-10
IC602	E-7
IC603	F-7
IC882	E-8
Q301	C-9
Q401	H-8
Q432	H-7
Q601	J-5
Q602	I-5
Q603	F-6
Q604	D-6
Q605	F-7
Q611	E-7
Q801	E-6



6-14. PRINTED WIRING BOARD – MAIN Section (2/2) –  : Uses unleaded solder.

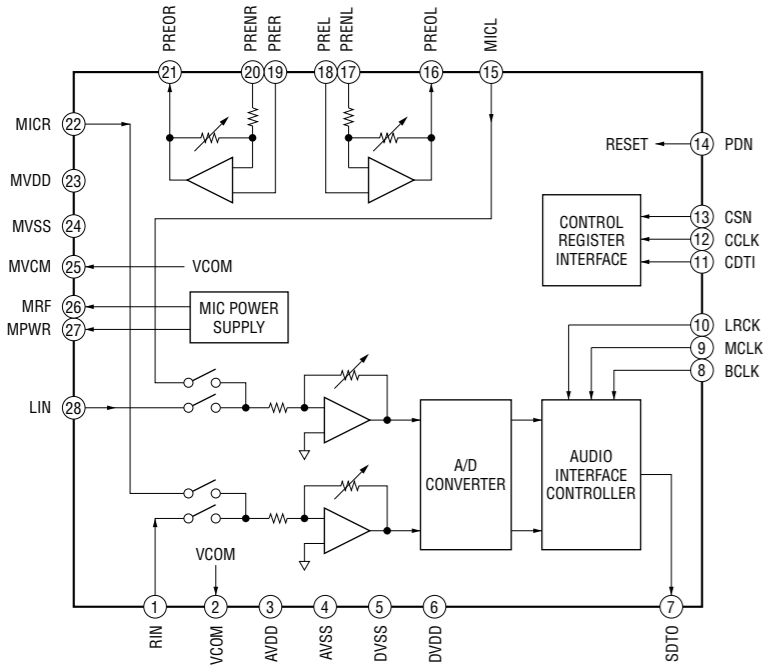


• Semiconductor Location

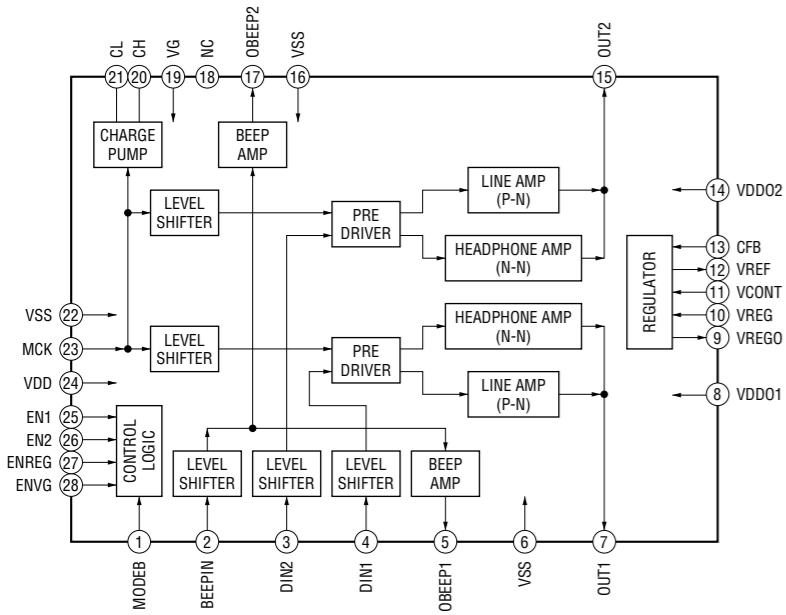
Ref. No.	Location
D431	I-5
D451	I-6
D455	I-5
D456	I-7
D457	J-7
D491	J-12
D501	D-12
D601	H-8
D603	G-7
D609	I-7
D610	I-7
D611	F-8
D614	F-5
D616	I-7
D617	I-7
D618	I-7
D801	H-11
D803	F-11
D871	E-8
D881	C-8
D882	C-8
D883	C-8
D884	D-8
D901	C-3
D902	C-3
D903	C-3
D904	B-3
D906	C-3
IC301	E-4
IC302	D-5
IC351	G-4
IC401	H-5
IC501	C-11
IC502	C-9
IC601	H-7
IC604	E-7
IC605	E-7
IC701	F-6
IC801	H-9
IC804	E-8
IC871	G-11
IC872	E-8
IC873	G-11
IC881	C-7
IC891	F-11
IC901	C-4
IC902	C-6
IC903	B-6
Q151	I-4
Q251	H-4
Q351	I-4
Q352	I-4
Q404	G-6
Q405	G-5
Q431	I-4
Q501	D-9
Q502	C-9
Q503	B-9
Q504	B-11
Q606	G-5
Q607	G-5
Q802	E-8
Q803	H-12
Q881	C-7
Q882	C-8
Q883	D-8
Q884	D-8
Q951	C-6

• IC Block Diagrams

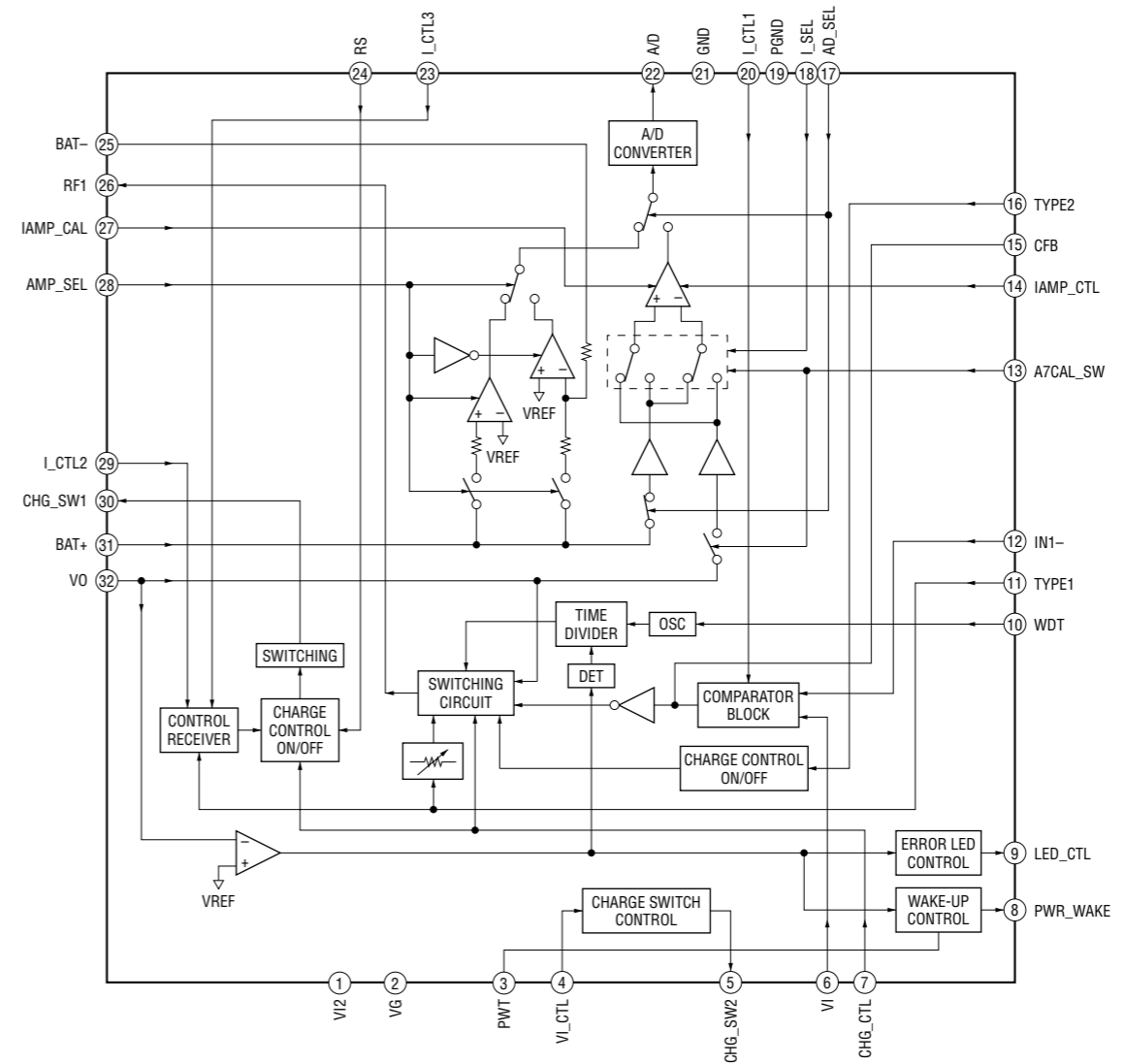
IC301 AK5356VN-L



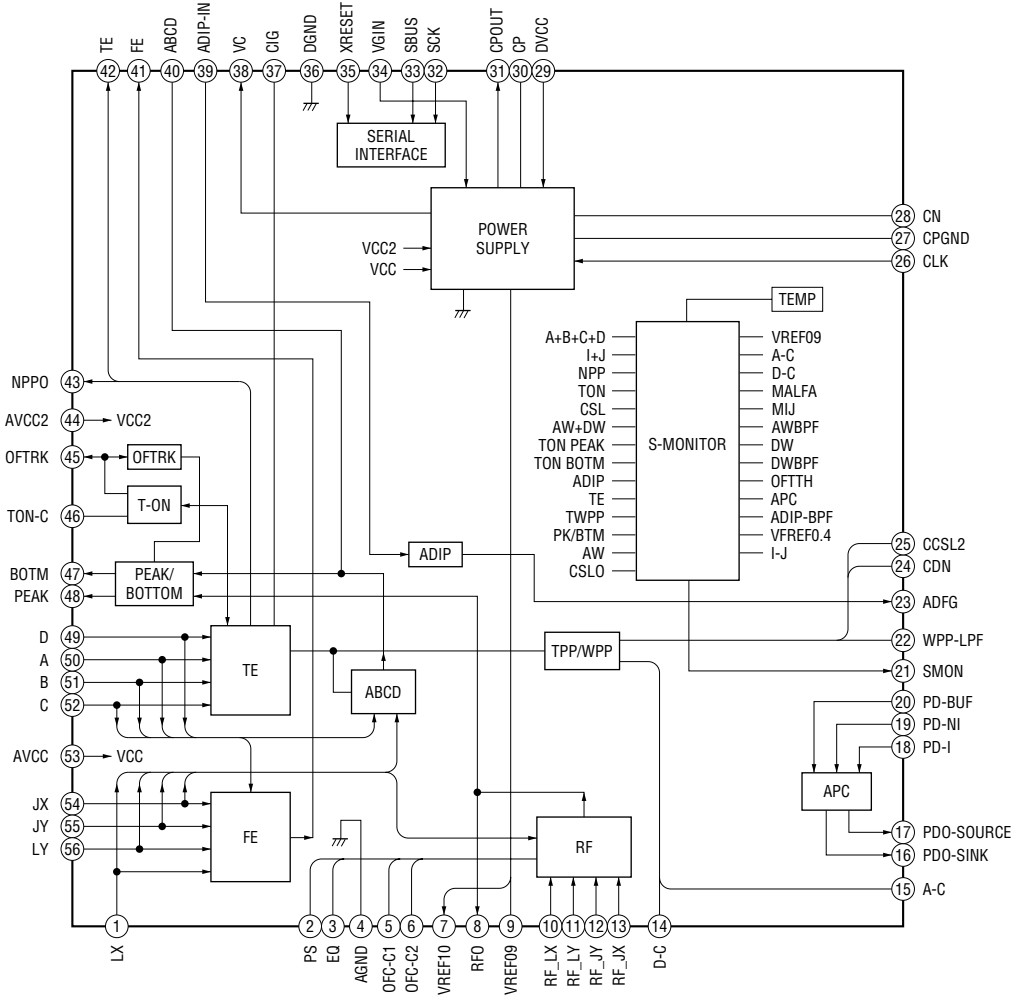
C351 CXD9811K



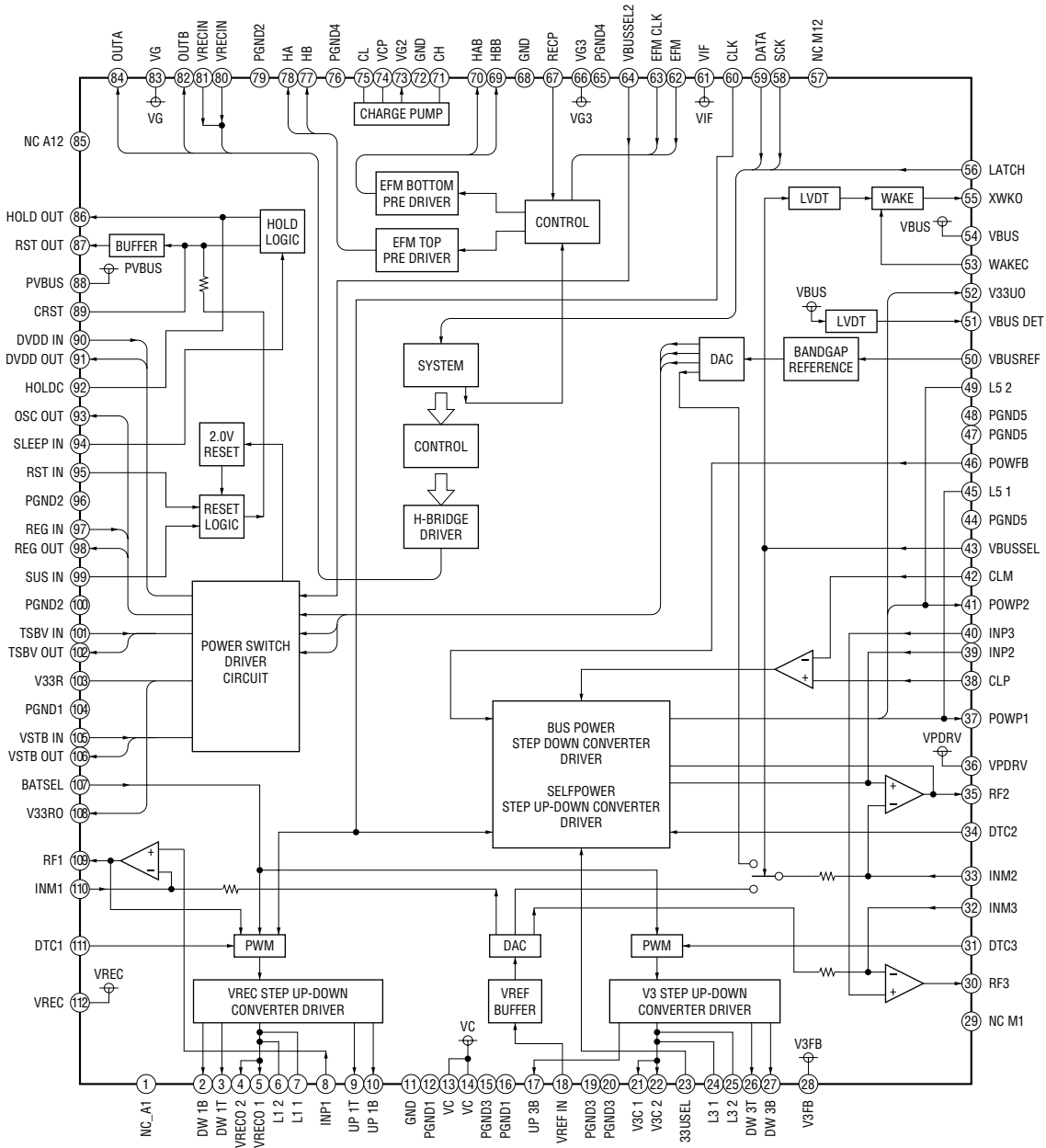
IC401 MM1655LCBE



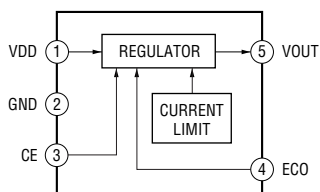
IC501 SN761059ZQLR



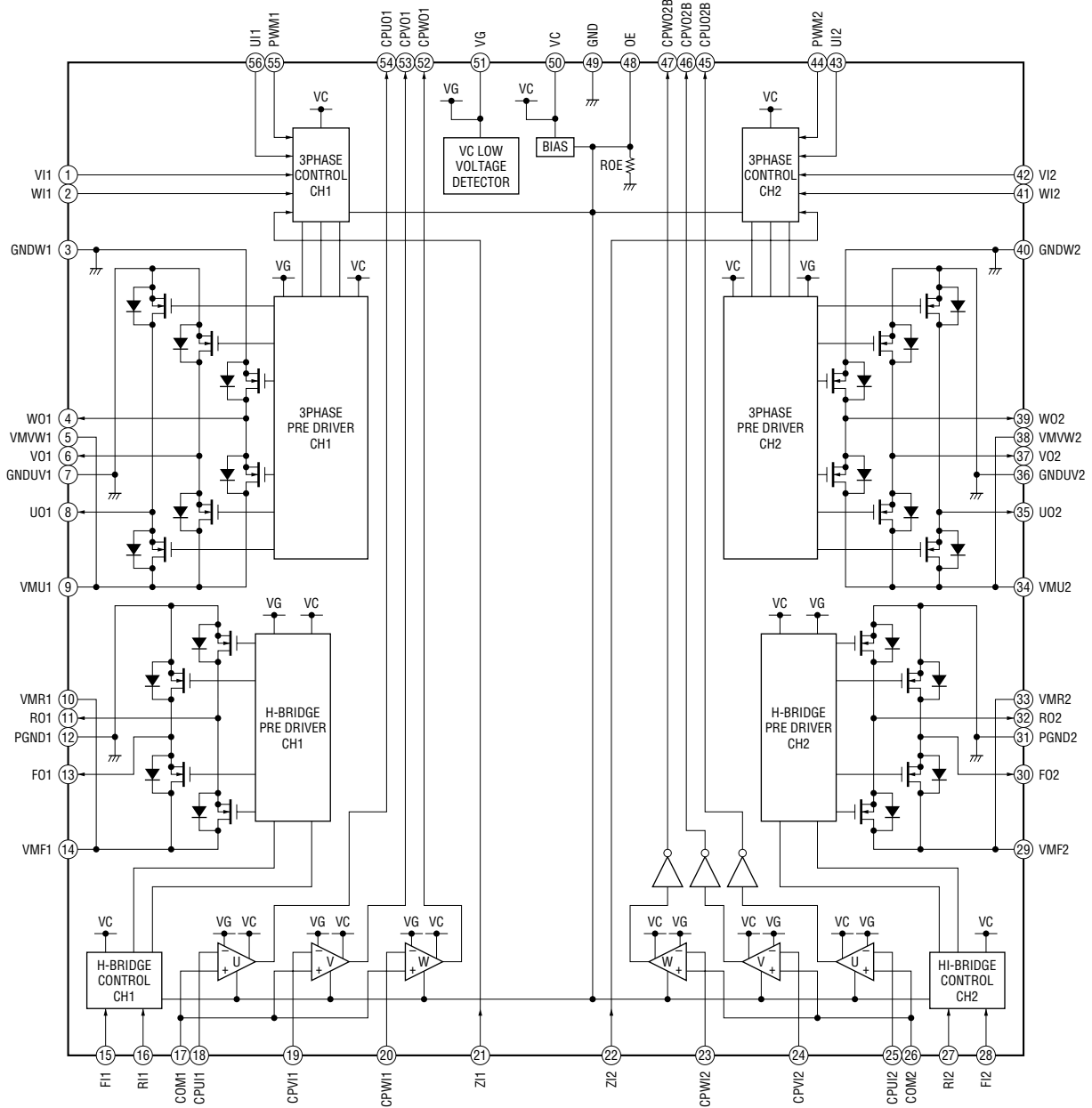
IC601 SC901585VAR2



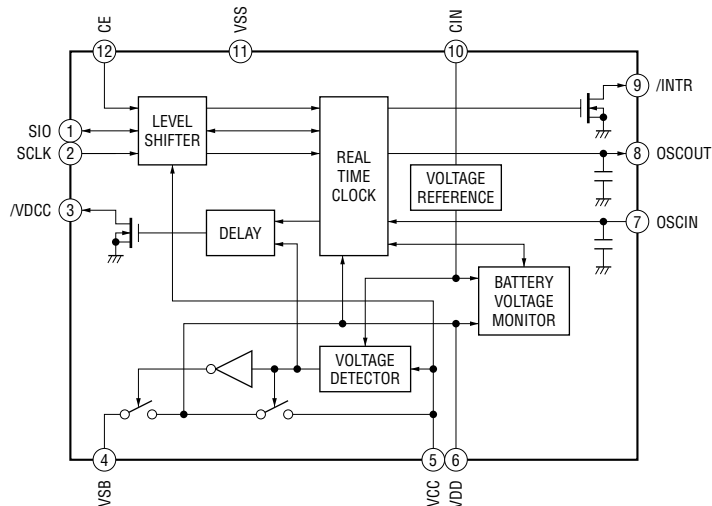
IC602 R1160N121B-TR-FA



IC701 SC901583EPR2

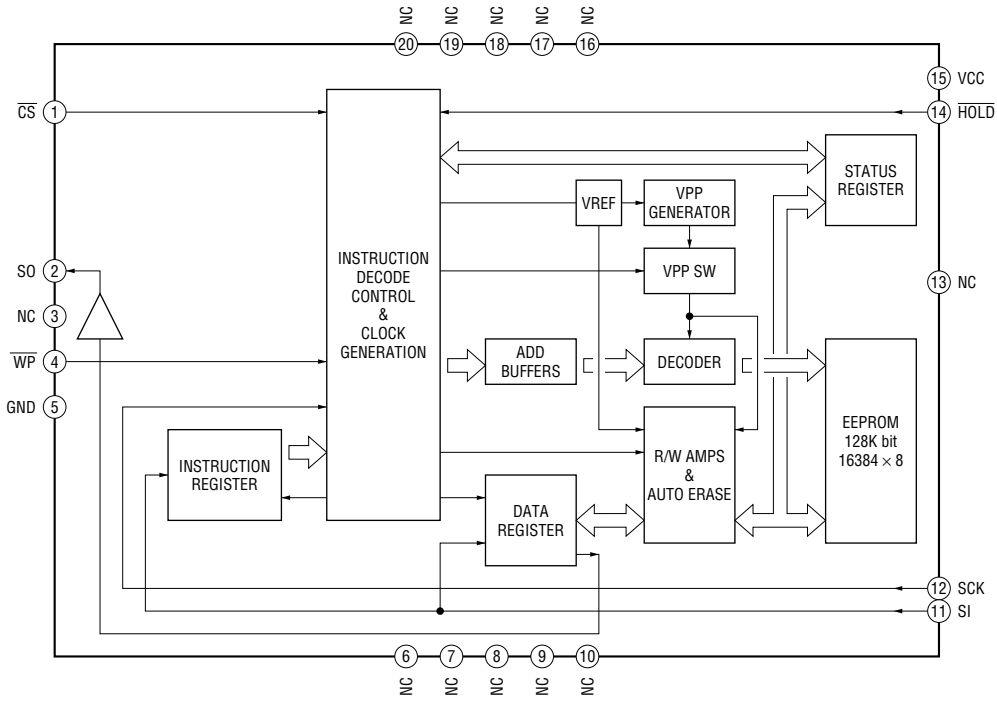


IC871 R2061K01-E2

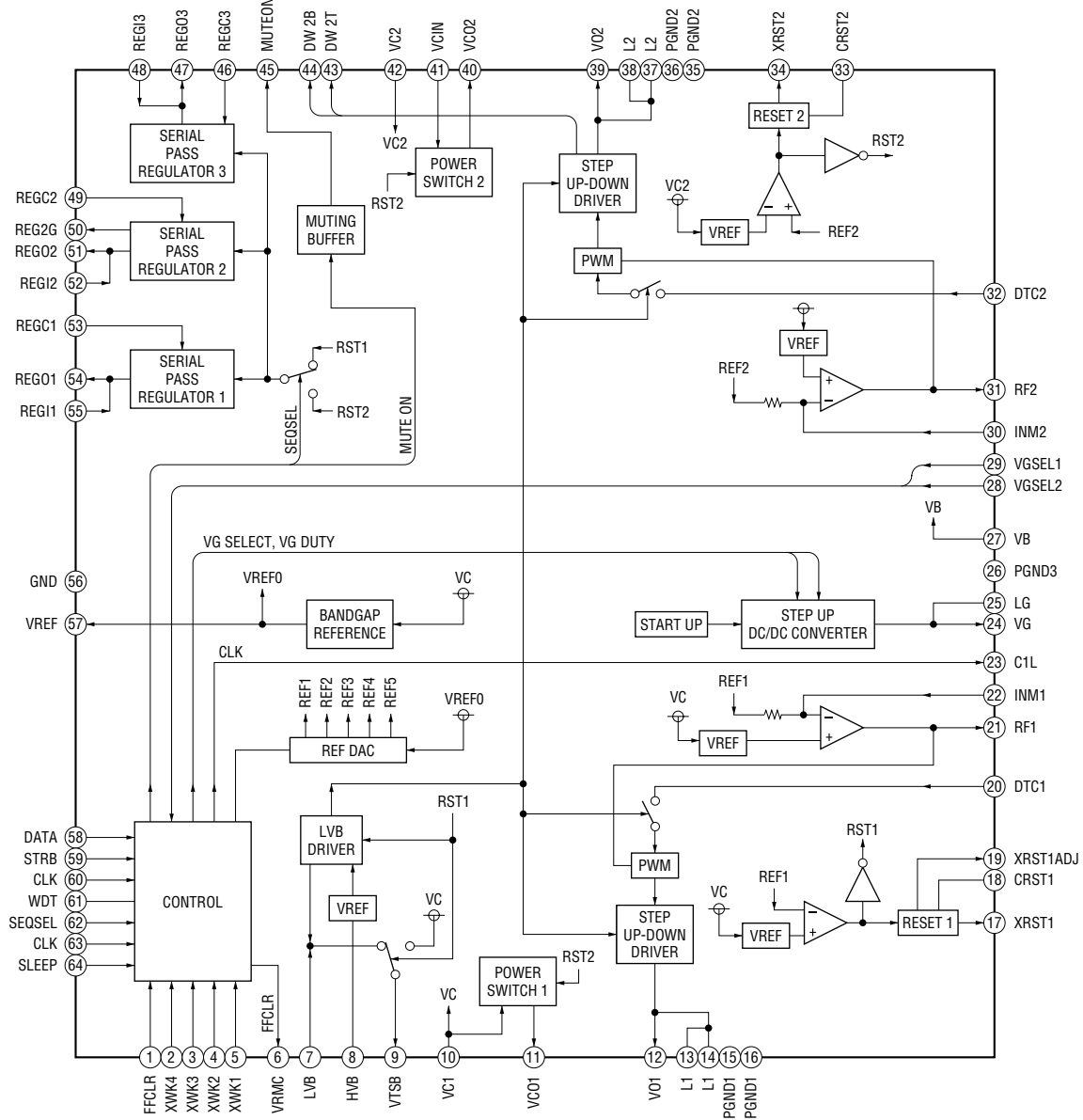


MZ-NH1

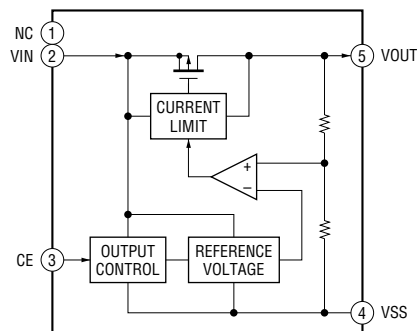
IC891 AK6514CN-L



IC901 SC901584EPR2



IC902 XC62HR5502MR



• IC Pin Function Description

IC801 CXD2681-222GG (SYSTEM CONTROLLER, DIGITAL SIGNAL PROCESSOR)

Pin No.	Pin Name	I/O	Description
1	DVDD1_0	—	Power supply terminal
2	DVSS1_0	—	Ground terminal
3	DVDD1_1	—	Power supply terminal
4	DVSS1_1	—	Ground terminal
5	DVDD1_2	—	Power supply terminal
6	DVSS1_2	—	Ground terminal
7	DVDD1_3	—	Power supply terminal
8	DVSS1_3	—	Ground terminal
9	DVDD1_4	—	Power supply terminal
10	DVSS1_4	—	Ground terminal
11	DVDD1_5	—	Power supply terminal
12	DVSS1_5	—	Ground terminal
13	DVDD1_6	—	Power supply terminal
14	DVSS1_6	—	Ground terminal
15	DVDD1_7	—	Power supply terminal
16	DVSS1_7	—	Ground terminal
17	DVDD1_8	—	Power supply terminal
18	DVSS1_8	—	Ground terminal
19	DVDD1_9	—	Power supply terminal
20	DVSS1_9	—	Ground terminal
21	DVDD3	—	Power supply terminal
22	VSS_3	—	Ground terminal
23	DVDD1_10	—	Power supply terminal
24	DVSS1_10	—	Ground terminal
25	DVDD1_11	—	Power supply terminal
26	DVSS1_11	—	Ground terminal
27	AVDD1A	—	Power supply terminal (for PLL)
28	AVSS1A	—	Ground terminal (for PLL)
29	AVDD1B	—	Power supply terminal
30	AVSS1B	—	Ground terminal
31	AVDD1C	—	Power supply terminal
32	AVDD2	—	Power supply terminal (for A/D converter)
33	DVDD25SVADC	—	Power supply terminal (for A/D converter)
34	AVSS2	—	Ground terminal (for A/D converter)
35	AVDD3	—	Power supply terminal (for A/D converter)
36	AVSS3	—	Ground terminal (for A/D converter)
37	AVDD4A	—	Power supply terminal (for PLL)
38	AVSS4A	—	Ground terminal (for PLL)
39	AVDD4B	—	Power supply terminal (for PLL)
40	AVSS4B	—	Ground terminal (for PLL)
41	AVDD4C	—	Power supply terminal (for D/A converter)
42	AVSS4C	—	Ground terminal (for D/A converter)
43	AVDD5	—	Power supply terminal (for PLL)
44	AVSS5	—	Ground terminal (for PLL)
45	AVDD6	—	Power supply terminal (for A/D converter)
46	AVSS6	—	Ground terminal (for A/D converter)

Pin No.	Pin Name	I/O	Description
47	DAVDD	—	Power supply terminal (for D/A converter)
48	DVDD25LPF	—	Power supply terminal (for D/A converter)
49	DAVSS	—	Ground terminal (for D/A converter)
50	OSCVDD	—	Power supply terminal (for 22 MHz OSC)
51	USBOSCVDD	—	Power supply terminal (for the USB 48 MHz OSC)
52	TSMVDD	—	Power supply terminal (for the TSB master communication)
53	MAIFVDD	—	Power supply terminal (for MA interface)
54	MSJTAGVDD	—	Power supply terminal (for AUX)
55	USBIFVDD	—	Power supply terminal (for USB interface)
56 to 58	VSS_0 to VSS_2	—	Ground terminal
59 to 62	IFVDD_1 to IFVDD_4	—	Power supply terminal (for interface)
63	IFVSS_1	—	Ground terminal (for interface)
64	IFVSS_2	—	Ground terminal (for interface)
65 to 69	DRAMVDD0 to DRAMVDD4	—	Power supply terminal (for D-RAM/DSP interface)
70 to 72	DRAMVSS0 to DRAMVSS2	—	Ground terminal (for D-RAM/DSP interface)
73	FCRAMVDD0	—	Power supply terminal (for D-RAM)
74	FCRAMVSS0	—	Ground terminal (for D-RAM)
75	FCRAMVDD1	—	Power supply terminal (for D-RAM)
76	FCRAMVSS1	—	Ground terminal (for D-RAM)
77	FVDD0	—	Power supply terminal (for AUX)
78	FVSS0	—	Ground terminal (for AUX)
79	SRAMVDD0	—	Power supply terminal (for AUX)
80	SRAMVSS0	—	Ground terminal (for AUX)
81	SRAMVDD1	—	Power supply terminal (for AUX)
82	SRAMVSS1	—	Ground terminal (for AUX)
83	EBIFVDD0	—	Power supply terminal (for interface circuit)
84	EBIFVSS0	—	Ground terminal (for interface circuit)
85	EBIFVDD1	—	Power supply terminal (for interface circuit)
86	EBIFVSS1	—	Ground terminal (for interface circuit)
87	EBIFVDD2	—	Power supply terminal (for interface circuit)
88	EBIFVSS2	—	Ground terminal (for interface circuit)
89	EBIFVDD3	—	Power supply terminal (for interface circuit)
90	EBIFVSS3	—	Ground terminal (for interface circuit)
91	EBIFVDD4	—	Power supply terminal (for interface circuit)
92	EBIFVSS4	—	Ground terminal (for interface circuit)
93	EBIFVDD5	—	Power supply terminal (for interface circuit)
94	EBIFVSS5	—	Ground terminal (for interface circuit)
95	EBIFVDD6	—	Power supply terminal (for interface circuit)
96	EBIFVSS6	—	Ground terminal (for interface circuit)
97	EBIFVDD7	—	Power supply terminal (for interface circuit)
98	EBIFVSS7	—	Ground terminal (for interface circuit)
99	ASYO	O	Playback EFM duplex signal output
100	ASYI	I	Playback EFM comparator slice level input
101	RFI	I	Playback EFM RF signal input from the RF amplifier

Pin No.	Pin Name	I/O	Description
102	PCO	O	Phase comparison output terminal for the playback EFM system master PLL
103	FILI	I	Filter input terminal for the playback EFM system master PLL
104	FILO	O	Filter output terminal for the playback EFM system master PLL
105	CLTV	I	Internal VCO control voltage input terminal for the playback EFM system master PLL
106	PEAK	I	Peak hold signal input of the light amount signal (RF/ABCD) the RF amplifier
107	BOTM	I	Bottom hold signal input of the light amount signal (RF/ABCD) the RF amplifier
108	ABCD	I	Light amount signal (ABCD) input from the RF amplifier
109	FE	I	Focus error signal input from the RF amplifier
110	VC	I	Middle point voltage input from the RF amplifier
111	ADIO	O	Monitor output terminal of A/D converter input signal Not used
112	ADRB	I	A/D converter the lower limit voltage input terminal
113	SE	I	Sled error signal input from the RF amplifier
114	TE	I	Tracking error signal input from the RF amplifier
115	AUX1	I	Auxiliary A/D input terminal
116	ADRT	I	The upper limit voltage of A/D converter input terminal Not used
117	DCHG	—	Connecting terminal with the analog power supply of low impedance
118	APC	I	Error signal input for the laser automatic power control
119	ADC1EXTC	—	Connection terminal for an external capacitor
120	D_VREGO	I	Voltage sensibility of regulator from the headphone amplifier
121	VB_MON	I	Unregulated power supply voltage monitoring terminal
122	CHG_MON	I	Charge or discharge current monitoring terminal
123	VREF_MON	I	Reference voltage input terminal
124	SET_KEY_1	I	Front panel key input terminal
125	SET_KEY_2	I	Front panel key input terminal
126	DCIN_DET	I	DC input voltage for battery charge monitoring terminal
127	HIDC_MON	I	High DC voltage monitoring terminal
128	WK_DET	I	Panel key input for wake-up
129	VBUS_MON	I	USB power supply voltage monitoring terminal
130	BATT_MINUS_MON	I	Voltage monitoring terminal for the minus terminal of rechargeable battery
131	RMC_KEY	I	Remote commander key input terminal
132	RST_CONT	O	System reset signal output to the power control IC
133	REC_KEY /DOWNLOAD	I	REC key input terminal
134	RADIO_ON	I	Radio on detection input from the remote commander jack Not used
135	HALF_LOCK_SW /OPEN_SW	I	Front panel open switch detection terminal
136	XRST	I	System reset signal input from the power control IC
137	PLL2EXTCI	I	Connection terminal for an external capacitor
138	PLL2EXTCO	O	Connection terminal for an external capacitor
139	PLL3EXTCI	I	Connection terminal for an external capacitor
140	PLL3EXTCO	O	Connection terminal for an external capacitor
141	DACVREFH	I	Reference voltage input terminal
142	APCREF_DA	O	Reference voltage output terminal
143	ADC3VREFH	I	Reference voltage input terminal
144	ADC3EXTC	—	Connection terminal for an external capacitor
145	VIN	I	RF signal input from the RF amplifier

Pin No.	Pin Name	I/O	Description
146	VREFL	I	Reference voltage terminal connected to the capacitor (for the built-in D/A converter L-CH)
147	AOUTL	O	Built-in D/A converter L-CH signal output
148	AOUTR	O	Built-in D/A converter R-CH signal output
149	VREFR	I	Reference voltage terminal connected to the capacitor (for the built-in D/A converter R-CH)
150	DCLSOUTR	O	PWM modulator signal output to the headphone amplifier (R-CH)
151	DCLSOUTL	O	PWM modulator signal output to the headphone amplifier (L-CH)
152	RTCK	—	Not used
153	ADFG	I	ADIP duplex FM signal (22.05±1kHz) input from the RF amplifier
154	TRDR	O	Tracking servo drive PWM signal output (–) to the coil driver
155	TFDR	O	Tracking servo drive PWM signal output (+) to the coil driver
156	FFDR	O	Focus servo drive PWM signal output (+) to the coil driver
157	FRDR	O	Focus servo drive PWM signal output (–) to the coil driver
158	FS4	O	176.4 kHz clock signal output
159	SFDR	O	Sled servo drive PWM signal output to the motor driver
160	SPRD	O	Spindle motor drive control signal output (U) to the motor driver
161	SPFD	O	Spindle servo drive PWM signal output to the motor driver
162	SPDV	O	Spindle motor drive control signal output (V) to the motor driver
163	SPDW	O	Spindle motor drive control signal output (W) to the motor driver
164	SPCU	I	Spindle motor drive comparison signal input (U) from the motor driver
165	SPCV	I	Spindle motor drive comparison signal input (V) from the motor driver
166	SPCW	I	Spindle motor drive comparison signal input (W) from the motor driver
167	SLDV	O	Sled motor drive control signal output (V) to the motor driver
168	SLDW	O	Sled motor drive control signal output (W) to the motor driver
169	SLCU	I	Sled motor drive comparison signal input (U) from the motor driver
170	SLCV	I	Sled motor drive comparison signal input (V) from the motor driver
171	SLCW	I	Sled motor drive comparison signal input (W) from the motor driver
172	SRDR	O	Sled motor drive control signal output (U) to the motor driver
173	DIN	I	Digital audio signal input terminal
174	FS256_OUT	O	11.2896 MHz clock output
175	CHOPPERCLK	O	Clock signal output for chopper
176 to 179	MNT0 to MNT3	O	Monitor output for DSP
180	OFTRK	I/O	Tracking signal input/output for MD3
181	RECP	O	Laser power changeover signal output
182	EFMO	O	EFM encode data output for the record
183	PAUSE_KEY	I	Pause key input terminal
184	PROTECT	I	Recording protector detection input for normal disc
185	OPT_DET	I	Optical digital input plug detection input terminal “H”: optical in
186	XJACK_DET	I	Line input plug detection input terminal “L”: plug in
187	XMIC_DET	I	Microphone input plug detection input terminal “L”: plug in
188	OPEN_CLOSE_SW	I	Open switch input terminal
189	XCS_ADC	O	Chip select signal output for A/D converter
190	XPD_ADC	O	Power control signal output for A/D converter
191	NC	—	Not used
192	XRST_LCD	O	Reset signal output for the LCD module
193	USB_WAKE	O	System wake up signal output by USB connect

Pin No.	Pin Name	I/O	Description
194	A7CAL_SW	O	A7 offset voltage CAL on/off control signal output terminal
195	SI0	I	Serial data input from the EEPROM and real time clock IC
196	SO0	O	Serial data output to the EEPROM, real time clock IC, A/D converter and power controller
197	SCK0	O	Serial clock output to the EEPROM, real time clock IC, A/D converter and power controller
198	XGUM_ON	I	Rechargeable battery detection switch input terminal
199	BEEP	O	Beep sound control signal output to the headphone amplifier
200	XOPT_CTL	O	Power supply on/off control signal output for the optical input jack
201	LAM_REQCHK	I	LAM power check terminal Not used
202	LAM_SPREQ	O	LAM force stop request signal output Not used
203	REC_LED /ACCESS_LED	O	REC LED drive signal output terminal
204	MDVCC_CTL	O	Power supply control signal output for the OP modulation
205	VBUS_VB_CTL	O	USB power supply control signal output terminal Not used
206	LAM_NAME	O	LAM name data request signal output terminal Not used
207	DRAM_ALONE	O	Self-refresh signal output for internal D-RAM
208	XRST_CHG_IC	O	Reset signal output to the charge controller
209	PD_S0	O	Connect to the optical pick-up block
210	PD_S1	O	Connect to the optical pick-up block
211	D_ENREG	O	Enable signal output to the headphone amplifier
212	XMUTE /MUTE	O	Muting on/off control signal output terminal
213	SI1	I	Serial data input from the LCD module
214	SO1	O	Serial data output to the LCD module
215	SCK1	I/O	Serial data transfer clock signal input/output terminal with the LCD module
216	SLD_MON	I	Sled servo monitoring terminal
217	AOUT_SEL	O	Headphone/line output switching terminal Not used
218	SLEEP	O	Chip enable output to the power control IC
219	FFCLR	O	Power on/off control signal output for FCRAM (internal RAM)
220	CHGI_CTL1	O	Charge current limiter control signal output at the time of AC adaptor use “L”: limit off, “H”: limit on
221	CHGI_CTL2	O	Charge current control signal output terminal “L”: low current charge
222	CHGI_CTL3	O	Charge current control signal output terminal “L”: low current charge
223	SLBUSY	I	Receive signal monitoring terminal for sled command
224	XTEST	I	Terminal for the test mode setting (normally open) “L”: test mode
225	XRF_RST	O	Reset signal output to the RF amplifier
226	VREC_SEL	O	VREC start-up timing control signal output terminal Not used
227	XHOLD_SW	I	HOLD switch input terminal
228	T_MARK_SW	I	Track mark switch input terminal Not used
229	XRST2_DET	I	Reset signal input from the power control IC
230	CHGI_SEL	O	Charge/discharge control signal output for current sense amplifier
231	RECP_MON	I	Laser power changeover signal monitoring terminal
232	SPDL_MON	I	Spindle servo monitoring terminal
233	XCS_PWR_IC	O	Chip select signal output to the power control IC
234	RXD	I	Not used
235	TXD	O	Not used
236	XCS_LCD	O	Chip select signal output to the LCD module
237	N1_VI_CTL	O	Constant current circuit control signal output terminal

Pin No.	Pin Name	I/O	Description
238	XRST_MTR_DRV	O	Reset signal output to the motor driver
239	XCS_NV	O	Chip select signal output to the EEPROM
240	CHG_PWM	O	Charge current or voltage control signal output terminal
241	IAMP_CAL	O	Offset signal output of current sense amplifier
242	NC	—	Not used
243	D_VCONT_PWM	O	For voltage control signal output to the headphone amplifier
244	CHG_OPR_LED	O	Charge indication LED drive signal output terminal
245	XCS_REC_DRV	O	Chip select signal output to the over write head driver
246	GND_SW	O	Ground line switching signal output terminal Not used
247	CS_RTC	O	Chip select signal output for real time clock
248	JOG_A	I	Jog dial pulse input terminal Not used
249	JOG_B	I	Jog dial pulse input terminal Not used
250	VBUS_DET	I	USB power supply voltage detection terminal
251	SSB_DATA	I/O	SSB data input/output with the RF amplifier
252	SSB_CLK	O	SSB clock output to the RF amplifier
253	HIMD_PROTECT	I	Recording protector detection input for Hi-MD disc
254	LDPEN	O	Pulse/DC light-emit switching signal output terminal
255	CHG_TYPE2	O	Battery charge control signal output terminal “H”: charging Not used
256	DRAM_HOLD_DET	I	Detection terminal for internal D-RAM power supply information keeping
257	DRAM_VDD_CLR	O	Internal D-RAM power latch clear signal output for quick mode sleep
258	AD2ENDF	I	Monitoring terminal for flag of servo signal A/D measuring finish
259	TEST	—	Not used
260	SRAM_MODE	I	Not used
261	HSALF	I	Not used
262 to 271	TIGER_MON0 to TIGER_MON9	O	Trigger monitoring terminal output clock=18.5 MHz
272	XLSRCK	O	Pulse output for laser strobe recording
273	TAT	—	Not used
274	TAN	—	Not used
275	NAR	—	Not used
276	IDO	—	Not used
277	SAK	—	Not used
278	LRCKI	I	L/R sampling clock signal input terminal for PCM data interface Not used
279	XBCKI	I	Bit clock signal input terminal for the PCM data interface Not used
280	DATAI	I	Serial clock signal input terminal for the PCM data interface Not used
281	SI3	I	Serial data input for LAM microcomputer communication Not used
282	SO3	O	Serial data output for LAM microcomputer communication Not used
283	SCK3	O	Serial data transfer clock signal output for LAM microcomputer communication Not used
284	SI4	I	Data input from ATRAC3 plus encoder communication Not used
285	SO4	O	Data output for ATRAC3 plus encoder communication Not used
286	SCK4	O	Clock signal output for ATRAC3 plus encoder communication Not used
287	SCS3	O	Chip select signal output for LAM microcomputer communication Not used

Pin No.	Pin Name	I/O	Description
288	SCS4	O	Chip select signal output for ATRAC3 plus encoder communication Not used
289	HI_Z_SLD	O	Standby signal output terminal for the sled motor
290	HI_Z_SPDL	O	Standby signal output terminal for the spindle motor
291 to 294	SET_CODE0 to SET_CODE3	I	Setting terminal for the destination
295, 296	D_EN1, D_EN2	O	Headphone/LINE/beep switching signal output to the headphone amplifier
297	D_ENVG	O	Power on/off control signal output for headphone amplifier
298	DADT	O	Audio data output terminal Not used
299	PWM_L1	O	LC drive PWM output terminal
300	PWM_L2	O	LC drive PWM output terminal
301	I2C_1	—	Open drain for IIC
302	I2C_2	—	Open drain for IIC
303, 304	TEST	—	Not used
305	CLKIN2	I	Clock signal input terminal (13.5 MHz or 27 MHz) Not used
306	FS256	O	Master clock signal (256Fs=11.2896 MHz) output to A/D converter
307	ADDT	I	Data input from A/D converter
308	LRCK	O	L/R sampling clock signal (44.1kHz) output to external A/D converter
309	XBCK	O	Bit clock (2.8224 MHz) output to the external A/D converter
310	OSCI	I	Main system clock input terminal (22.5792 MHz)
311	OSCO	O	Main system clock output terminal (22.5792 MHz)
312	FS512	O	Clock signal output to the headphone amplifier
313	DTCK	I/O	TSB master data clock input/output or SSB data input/output
314	UDP	I/O	USB data (+) input/output terminal
315	UDM	I/O	USB data (-) input/output terminal
316	USBHOLD	I	USB hold signal input terminal
317	SUSPEND	O	USB suspend signal output
318	UPUEN	O	USB pull-up resistor connection control output terminal
319	UOSCI	I	Resonator (48MHz) connection terminal for the USB oscillation circuit
320	UOSCO	O	Resonator (48MHz) connection terminal for the USB oscillation circuit
321 to 325	NC	—	Not used

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

CH : Chinese model

E18 : 100 V - 240 V AC Area in E model

HK : Hong Kong model

JE : Tourist model

KR : Korea model

- Color Variation

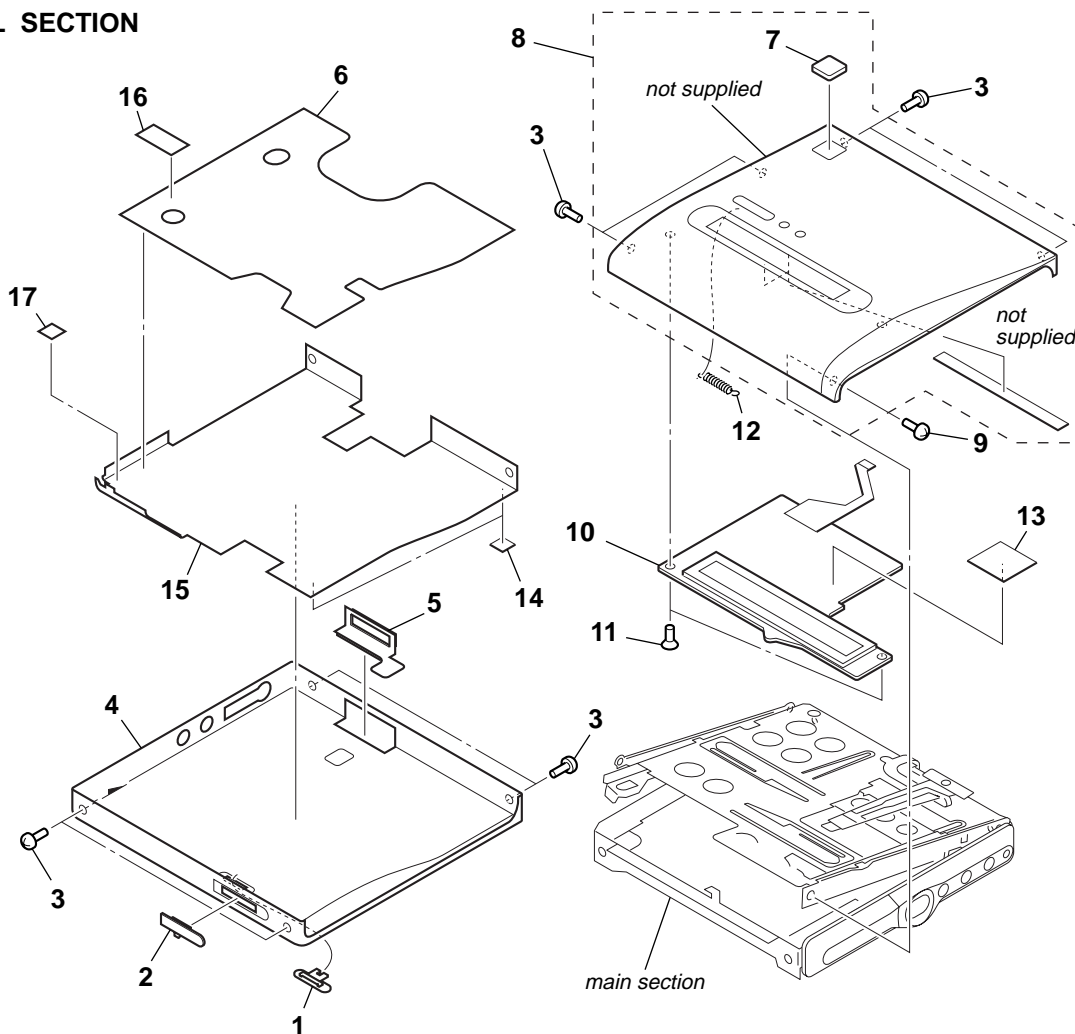
Silver : All models

Gold : HK, KR, CH, E18, JE models

- 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.

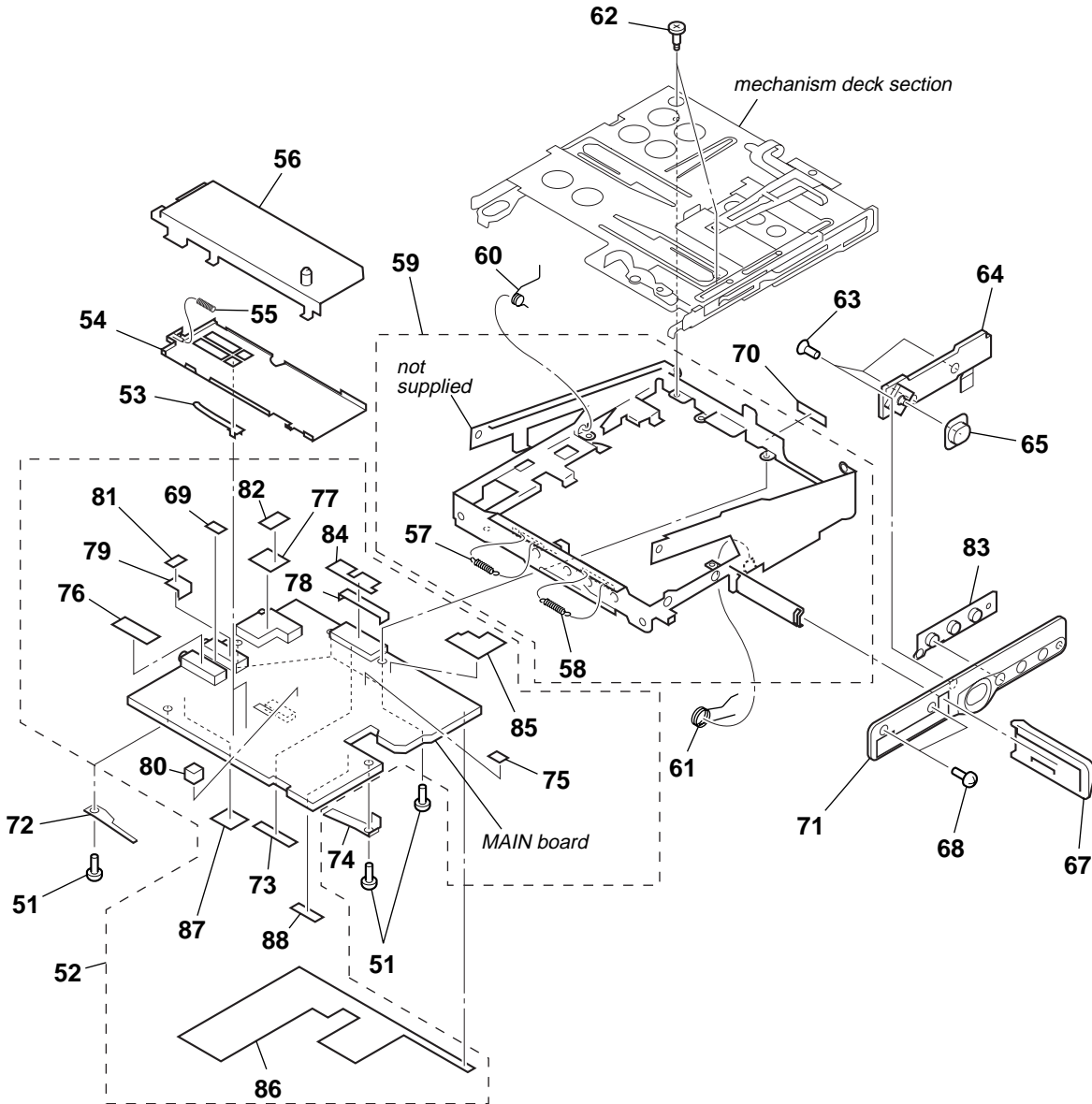
The components identified by mark \triangle or dotted line with mark \triangle are critical for safety. Replace only with part number specified.

7-1. PANEL SECTION



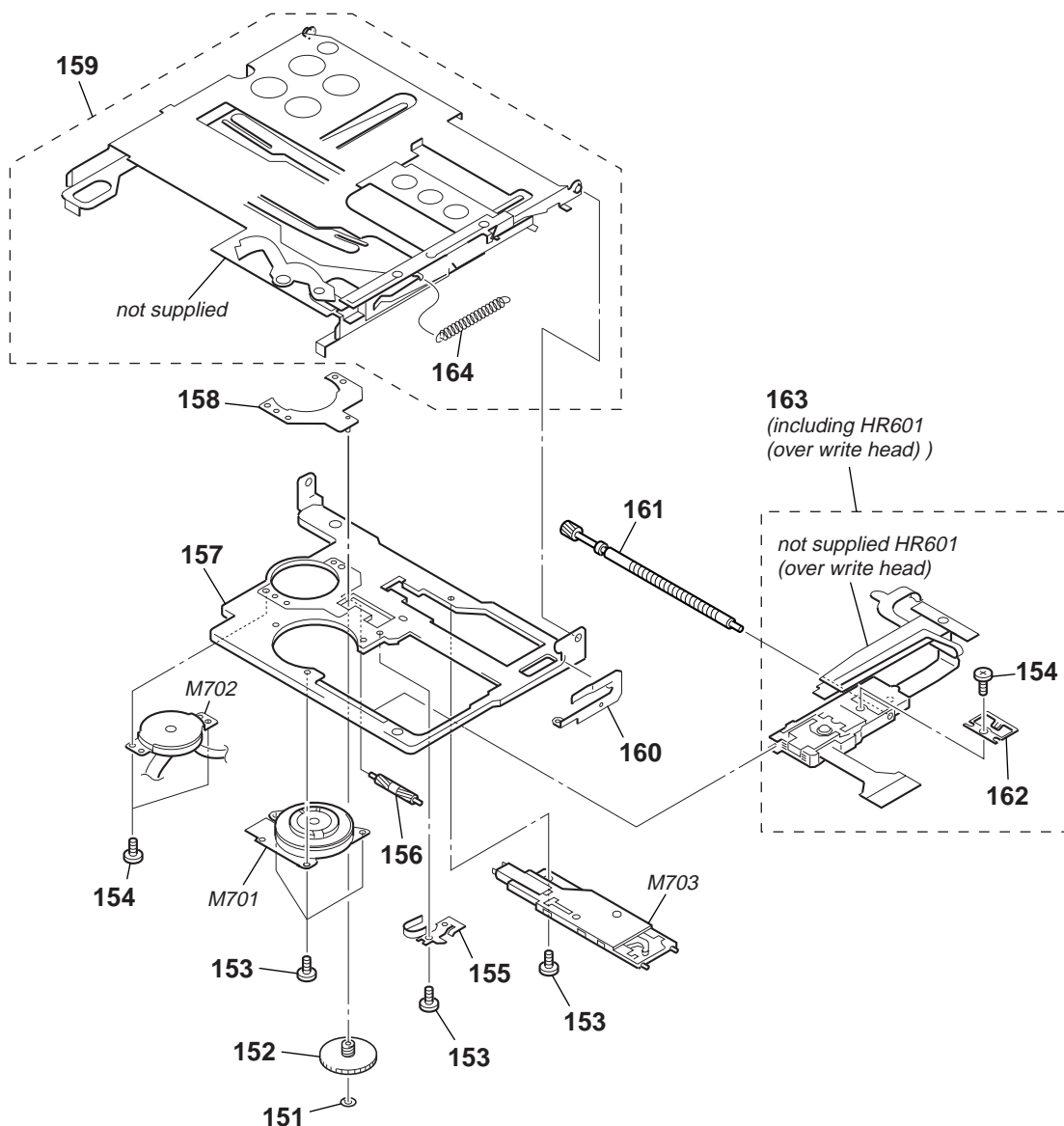
Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
1	3-264-157-01	KNOB (HOLD) (SILVER)		7	3-264-154-11	BADGE (HI-MD)	
1	3-264-157-31	KNOB (HOLD) (GOLD)		8	X-2021-801-1	PANEL (S) SUB ASSY, UPPER (SILVER)	
2	3-264-158-01	KNOB (OPEN)		8	X-2021-802-1	PANEL (N) SUB ASSY, UPPER (GOLD)	
3	3-225-873-09	SCREW (M1.4)		9	3-225-873-29	SCREW (M1.4)	
4	X-2023-574-1	PANEL (S-CE) SUB ASSY, BOTTOM (SILVER)	(AEP, UK)	10	1-805-493-11	LCD MODULE	
4	X-2023-575-1	PANEL (S-NONCE) SUB ASSY, BOTTOM (SILVER)	(EXCEPT AEP, UK)	11	3-254-003-01	SCREW	
4	X-2023-576-1	PANEL (N-NONCE) SUB ASSY, BOTTOM (GOLD)	(HK, KR, CH, E18, JE)	12	3-264-153-01	SPRING (REC), COMPRESSION	
5	3-264-156-01	ESCUTCHEON (CONNECTOR) (SILVER)		13	2-189-608-01	SHEET (LCD MODULE), INSULATING	
5	3-264-156-41	ESCUTCHEON (CONNECTOR) (GOLD)		14	2-186-565-01	SHEET (EMC LOWER B), ADHESIVE	
6	2-050-812-02	SHEET (LOWER PANEL)		15	2-177-997-01	SHEET (EMC LOWER)	
				16	2-024-015-01	SPACER (HP)	
				17	2-067-920-01	SPACER (COIL)	

7-2. MAIN SECTION



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
51	3-238-876-07	SCREW (M1.4), TOOTHED LOCK		69	2-190-061-01	SPACER (MIC-LINE)	
52	X-2023-571-1	MAIN BOARD, COMPLETE (for SERVICE)	(E18, JE)	70	2-178-887-01	SPACER (HEAD FLEXIBLE)	
52	X-2024-720-1	MAIN BOARD, COMPLETE (for SERVICE) (US)		71	X-2024-190-1	ORNAMENT SUB ASSY, CONTROL	
52	X-2024-721-1	MAIN BOARD, COMPLETE (for SERVICE)	(EXCEPT US, E18, JE)	72	2-176-415-01	SPRING (EMC) (2), LEAF	
53	3-264-138-01	TERMINAL, BATTERY		73	2-176-392-01	SPACER (RECEPTACLE)	
54	3-264-137-01	HOLDER, TERMINAL		74	2-176-414-01	SPRING (EMC) (1), LEAF	
55	3-264-139-01	SPRING (BATT)		75	2-067-920-01	SPACER (COIL)	
56	3-264-140-01	CASE, BATTERY		76	2-024-013-01	SPACER (LINE IN)	
57	3-264-131-01	SPRING (OPEN)		77	2-024-015-01	SPACER (HP)	
58	3-264-132-01	SPRING (LIMITER)		78	2-108-116-01	COVER (RECEPTACLE)	
59	X-3384-755-2	CHASSIS ASSY, SET		79	2-024-014-01	SPACER (MIC)	
60	3-264-136-01	SPRING (POP-L)		80	3-266-842-01	SPACER (SLED MOTOR)	
61	3-264-135-01	SPRING (POP-R)		81	2-067-464-01	SPACER (MIC) 2	
62	3-246-996-01	SCREW (MD), STEP		82	2-190-444-01	SPACER (HP) 2	
63	3-254-003-01	SCREW		83	3-264-143-01	CONTROL, BUTTON (SIDE)	
64	1-478-469-11	SWITCH UNIT		84	2-178-130-01	SHEET (SHEILD C)	
65	3-264-144-01	BUTTON CONTROL (5 DIRECTION) (▶ ENT)		85	2-178-129-01	SHEET (SHEILD B)	
67	3-264-161-01	LID, BATTERY CASE		86	2-178-128-01	SHEET (SHEILD A)	
68	3-234-449-25	SCREW (M1.4)		87	2-159-395-01	SPACER (IC)	
				88	2-178-259-01	SHEET (LEAF SPRING), INSULATING	

7-3. MECHANISM DECK SECTION



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

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
151	3-338-645-31	WASHER (0.8-2.5)		161	X-2023-012-1	SCREW SERVICE ASSY, LEAD	
152	3-244-882-02	GEAR (SA)		162	3-244-879-01	SPRING, RACK	
153	3-248-370-01	SCREW, SELF TAP		\triangle 163	X-2021-779-1	SERVICE ASSY, OP (ABX-U) (including HR601 (OVER WRITE HEAD))	
154	3-225-996-17	SCREW (M1.4) (EG), PRECISION PAN		164	3-259-981-01	SPRING (EJECT), TENSION	
155	3-244-880-01	SPRING, THRUST RETAINER		M701	8-835-782-02	MOTOR, DC SSM18D/C-NP (SPINDLE)	
156	3-244-883-02	GEAR (SB)		M702	8-835-778-11	MOTOR, DC SSM21A/C-NP (SLED)	
157	3-259-972-12	CHASSIS (REC)		M703	1-477-519-21	MOTOR UNIT, DC (OVER WRITE HEAD UP/DOWN)	
158	X-3382-398-3	BASE ASSY, MOTOR					
159	X-3384-181-2	HOLDER ASSY					
160	3-245-021-03	PLATE, RATCHET					

SECTION 8 ELECTRICAL PARTS LIST

MAIN

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS
All resistors are in ohms.
METAL: Metal-film resistor.
METAL OXIDE: Metal oxide-film resistor.
F: nonflammable
- Abbreviation
CH : Chinese model
E18 : 100 V - 240 V 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
- HK : Hong Kong model
JE : Tourist model
KR : Korea model

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

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

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
	X-2023-571-1	MAIN BOARD, COMPLETE (for SERVICE) (E18, JE)		C253	1-127-715-11	CERAMIC CHIP 0.22uF 10%	16V
	X-2024-720-1	MAIN BOARD, COMPLETE (for SERVICE) (US)		C254	1-135-868-11	TANTALUM CHIP 220uF 20%	2.5V
	X-2024-721-1	MAIN BOARD, COMPLETE (for SERVICE) (EXCEPT US, E18, JE)		C255	1-125-777-11	CERAMIC CHIP 0.1uF 10%	10V
		*****		C302	1-164-939-11	CERAMIC CHIP 0.0022uF 10%	50V
	2-024-013-01	SPACER (LINE IN)		C303	1-125-777-11	CERAMIC CHIP 0.1uF 10%	10V
	2-024-014-01	SPACER (MIC)		C304	1-164-874-11	CERAMIC CHIP 100PF 5%	50V
	2-024-015-01	SPACER (HP)		C305	1-164-874-11	CERAMIC CHIP 100PF 5%	50V
	2-067-464-01	SPACER (MIC) 2		C306	1-164-939-11	CERAMIC CHIP 0.0022uF 10%	50V
	2-067-920-01	SPACER (COIL)		C307	1-164-937-11	CERAMIC CHIP 0.001uF 10%	50V
	2-108-116-01	COVER (RECEPTACLE)		C308	1-164-937-11	CERAMIC CHIP 0.001uF 10%	50V
	2-159-395-01	SPACER (IC)		C310	1-117-919-11	TANTALUM CHIP 10uF 20%	6.3V
	2-176-392-01	SPACER (RECEPTACLE)		C311	1-125-777-11	CERAMIC CHIP 0.1uF 10%	10V
	2-190-061-01	SPACER (MIC-LINE)		C312	1-100-842-11	TANTALUM CHIP 47uF 20%	6.3V
	2-178-128-01	SHEET (SHIELD A)		C313	1-100-842-11	TANTALUM CHIP 47uF 20%	6.3V
	2-178-129-01	SHEET (SHIELD B)		C314	1-125-777-11	CERAMIC CHIP 0.1uF 10%	10V
	2-178-130-01	SHEET (SHIELD C)		C315	1-117-919-11	TANTALUM CHIP 10uF 20%	6.3V
	2-178-259-01	SHEET (LEAF SPRING), INSULATING		C316	1-100-453-11	TANTALUM CHIP 22uF 20%	6.3V
	2-190-444-01	SPACER (HP) 2		C318	1-100-840-11	TANTALUM CHIP 2.2uF 20%	10V
	3-266-842-01	SPACER (SLED MOTOR)		C319	1-125-777-11	CERAMIC CHIP 0.1uF 10%	10V
		< CAPACITOR >		C320	1-100-840-11	TANTALUM CHIP 2.2uF 20%	10V
C101	1-164-874-11	CERAMIC CHIP 100PF 5%	50V	C321	1-100-842-11	TANTALUM CHIP 47uF 20%	6.3V
C102	1-125-837-11	CERAMIC CHIP 1uF 10%	6.3V	C322	1-125-777-11	CERAMIC CHIP 0.1uF 10%	10V
C104	1-164-939-11	CERAMIC CHIP 0.0022uF 10%	50V	C323	1-117-919-11	TANTALUM CHIP 10uF 20%	6.3V
C105	1-125-777-11	CERAMIC CHIP 0.1uF 10%	10V	C324	1-125-777-11	CERAMIC CHIP 0.1uF 10%	10V
C106	1-164-937-11	CERAMIC CHIP 0.001uF 10%	50V	C325	1-125-777-11	CERAMIC CHIP 0.1uF 10%	10V
C107	1-100-843-11	TANTALUM CHIP 47uF 20%	4V	C327	1-125-837-11	CERAMIC CHIP 1uF 10%	6.3V
C108	1-125-926-11	TANTALUM CHIP 4.7uF 20%	6.3V	C328	1-125-837-11	CERAMIC CHIP 1uF 10%	6.3V
C151	1-125-777-11	CERAMIC CHIP 0.1uF 10%	10V	C351	1-125-891-11	CERAMIC CHIP 0.47uF 10%	10V
C152	1-164-937-11	CERAMIC CHIP 0.001uF 10%	50V	C352	1-125-777-11	CERAMIC CHIP 0.1uF 10%	10V
C153	1-127-715-11	CERAMIC CHIP 0.22uF 10%	16V	C353	1-164-937-11	CERAMIC CHIP 0.001uF 10%	50V
C154	1-135-868-11	TANTALUM CHIP 220uF 20%	2.5V	C354	1-165-884-11	CERAMIC CHIP 2.2uF 10%	6.3V
C155	1-125-777-11	CERAMIC CHIP 0.1uF 10%	10V	C355	1-112-011-21	TANTALUM CHIP 47uF 20%	6.3V
C201	1-164-874-11	CERAMIC CHIP 100PF 5%	50V	C356	1-100-842-11	TANTALUM CHIP 47uF 20%	6.3V
C202	1-125-837-11	CERAMIC CHIP 1uF 10%	6.3V	C357	1-100-842-11	TANTALUM CHIP 47uF 20%	6.3V
C204	1-164-939-11	CERAMIC CHIP 0.0022uF 10%	50V	C358	1-100-842-11	TANTALUM CHIP 47uF 20%	6.3V
C205	1-125-777-11	CERAMIC CHIP 0.1uF 10%	10V	C359	1-100-842-11	TANTALUM CHIP 47uF 20%	6.3V
C206	1-164-937-11	CERAMIC CHIP 0.001uF 10%	50V	C360	1-165-884-11	CERAMIC CHIP 2.2uF 10%	6.3V
C207	1-100-843-11	TANTALUM CHIP 47uF 20%	4V	C361	1-100-842-11	TANTALUM CHIP 47uF 20%	6.3V
C208	1-125-926-11	TANTALUM CHIP 4.7uF 20%	6.3V	C362	1-117-919-11	TANTALUM CHIP 10uF 20%	6.3V
C251	1-125-777-11	CERAMIC CHIP 0.1uF 10%	10V	C364	1-165-884-11	CERAMIC CHIP 2.2uF 10%	6.3V
C252	1-164-937-11	CERAMIC CHIP 0.001uF 10%	50V	C365	1-125-837-11	CERAMIC CHIP 1uF 10%	6.3V
				C367	1-125-837-11	CERAMIC CHIP 1uF 10%	6.3V
				C368	1-127-715-11	CERAMIC CHIP 0.22uF 10%	16V
				C370	1-100-352-11	CERAMIC CHIP 1uF 20%	16V

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
C401	1-125-777-11	CERAMIC CHIP	0.1uF 10% 10V	C555	1-164-941-11	CERAMIC CHIP	0.0047uF 10% 16V
C402	1-100-844-11	TANTALUM CHIP	22uF 20% 10V	C556	1-125-926-11	TANTALUM CHIP	4.7uF 20% 6.3V
C403	1-100-844-11	TANTALUM CHIP	22uF 20% 10V	C557	1-125-777-11	CERAMIC CHIP	0.1uF 10% 10V
C404	1-164-937-11	CERAMIC CHIP	0.001uF 10% 50V	C558	1-164-937-11	CERAMIC CHIP	0.001uF 10% 50V
C405	1-125-777-11	CERAMIC CHIP	0.1uF 10% 10V	C559	1-164-941-11	CERAMIC CHIP	0.0047uF 10% 16V
C406	1-125-777-11	CERAMIC CHIP	0.1uF 10% 10V	C560	1-125-777-11	CERAMIC CHIP	0.1uF 10% 10V
C407	1-125-777-11	CERAMIC CHIP	0.1uF 10% 10V	C561	1-125-837-11	CERAMIC CHIP	1uF 10% 6.3V
C408	1-125-777-11	CERAMIC CHIP	0.1uF 10% 10V	C562	1-125-837-11	CERAMIC CHIP	1uF 10% 6.3V
C409	1-164-943-11	CERAMIC CHIP	0.01uF 10% 16V	C564	1-131-860-11	TANTALUM CHIP	4.7uF 20% 10V
C410	1-125-777-11	CERAMIC CHIP	0.1uF 10% 10V	C565	1-125-777-11	CERAMIC CHIP	0.1uF 10% 10V
C412	1-107-826-11	CERAMIC CHIP	0.1uF 10% 16V	C566	1-125-777-11	CERAMIC CHIP	0.1uF 10% 10V
C415	1-125-777-11	CERAMIC CHIP	0.1uF 10% 10V	C567	1-125-926-11	TANTALUM CHIP	4.7uF 20% 6.3V
C431	1-164-939-11	CERAMIC CHIP	0.0022uF 10% 50V	C568	1-164-943-11	CERAMIC CHIP	0.01uF 10% 16V
C432	1-164-939-11	CERAMIC CHIP	0.0022uF 10% 50V	C569	1-164-943-11	CERAMIC CHIP	0.01uF 10% 16V
C433	1-164-939-11	CERAMIC CHIP	0.0022uF 10% 50V	C570	1-112-014-11	TANTALUM CHIP	4.7uF 20% 6.3V
C434	1-162-964-11	CERAMIC CHIP	0.001uF 10% 50V	C573	1-164-937-11	CERAMIC CHIP	0.001uF 10% 50V
C452	1-164-939-11	CERAMIC CHIP	0.0022uF 10% 50V	C574	1-164-935-11	CERAMIC CHIP	470PF 10% 50V
C453	1-164-939-11	CERAMIC CHIP	0.0022uF 10% 50V				(EXCEPT US, E18, JE)
C454	1-162-962-11	CERAMIC CHIP	470PF 10% 50V	C574	1-164-937-11	CERAMIC CHIP	0.001uF 10% 50V
C455	1-164-939-11	CERAMIC CHIP	0.0022uF 10% 50V				(US, E18, JE)
C456	1-164-939-11	CERAMIC CHIP	0.0022uF 10% 50V	C575	1-164-937-11	CERAMIC CHIP	0.001uF 10% 50V
C457	1-164-939-11	CERAMIC CHIP	0.0022uF 10% 50V				(US, E18, JE)
C460	1-100-506-11	CERAMIC CHIP	1uF 20% 6.3V	C601	1-125-837-11	CERAMIC CHIP	1uF 10% 6.3V
C460	1-164-935-11	CERAMIC CHIP	470PF 10% 50V	C602	1-125-777-11	CERAMIC CHIP	0.1uF 10% 10V
			(E18, JE)	C604	1-125-777-11	CERAMIC CHIP	0.1uF 10% 10V
			(EXCEPT E18, JE)	C611	1-164-943-11	CERAMIC CHIP	0.01uF 10% 16V
C503	1-164-937-11	CERAMIC CHIP	0.001uF 10% 50V	C612	1-100-453-11	TANTALUM CHIP	22uF 20% 6.3V
C511	1-125-777-11	CERAMIC CHIP	0.1uF 10% 10V	C613	1-100-453-11	TANTALUM CHIP	22uF 20% 6.3V
C513	1-164-943-11	CERAMIC CHIP	0.01uF 10% 16V	C614	1-100-453-11	TANTALUM CHIP	22uF 20% 6.3V
C515	1-125-777-11	CERAMIC CHIP	0.1uF 10% 10V	C615	1-100-453-11	TANTALUM CHIP	22uF 20% 6.3V
C516	1-125-777-11	CERAMIC CHIP	0.1uF 10% 10V	C616	1-100-844-11	TANTALUM CHIP	22uF 20% 10V
C517	1-125-777-11	CERAMIC CHIP	0.1uF 10% 10V	C617	1-100-453-11	TANTALUM CHIP	22uF 20% 6.3V
C518	1-125-926-11	TANTALUM CHIP	4.7uF 20% 6.3V	C619	1-125-837-11	CERAMIC CHIP	1uF 10% 6.3V
C519	1-125-777-11	CERAMIC CHIP	0.1uF 10% 10V	C620	1-107-819-11	CERAMIC CHIP	0.022uF 10% 16V
C520	1-125-777-11	CERAMIC CHIP	0.1uF 10% 10V	C621	1-117-919-11	TANTALUM CHIP	10uF 20% 6.3V
C521	1-164-850-11	CERAMIC CHIP	10PF 0.5PF 50V	C622	1-100-442-11	TANTALUM CHIP	10uF 20% 6.3V
C522	1-164-850-11	CERAMIC CHIP	10PF 0.5PF 50V	C624	1-164-933-11	CERAMIC CHIP	220PF 10% 50V
C523	1-125-777-11	CERAMIC CHIP	0.1uF 10% 10V	C625	1-125-777-11	CERAMIC CHIP	0.1uF 10% 10V
C524	1-162-970-11	CERAMIC CHIP	0.01uF 10% 25V	C626	1-164-943-11	CERAMIC CHIP	0.01uF 10% 16V
C525	1-164-941-11	CERAMIC CHIP	0.0047uF 10% 16V	C628	1-125-837-11	CERAMIC CHIP	1uF 10% 6.3V
C526	1-164-874-11	CERAMIC CHIP	100PF 5% 50V	C629	1-125-777-11	CERAMIC CHIP	0.1uF 10% 10V
C527	1-125-777-11	CERAMIC CHIP	0.1uF 10% 10V	C630	1-125-777-11	CERAMIC CHIP	0.1uF 10% 10V
C528	1-125-777-11	CERAMIC CHIP	0.1uF 10% 10V	C632	1-100-842-11	TANTALUM CHIP	47uF 20% 6.3V
C529	1-125-777-11	CERAMIC CHIP	0.1uF 10% 10V	C633	1-164-943-11	CERAMIC CHIP	0.01uF 10% 16V
C530	1-125-837-11	CERAMIC CHIP	1uF 10% 6.3V	C634	1-125-837-11	CERAMIC CHIP	1uF 10% 6.3V
C531	1-164-943-11	CERAMIC CHIP	0.01uF 10% 16V	C635	1-100-842-11	TANTALUM CHIP	47uF 20% 6.3V
C533	1-164-943-11	CERAMIC CHIP	0.01uF 10% 16V	C636	1-125-777-11	CERAMIC CHIP	0.1uF 10% 10V
C536	1-107-819-11	CERAMIC CHIP	0.022uF 10% 16V	C637	1-117-919-11	TANTALUM CHIP	10uF 20% 6.3V
C537	1-125-837-11	CERAMIC CHIP	1uF 10% 6.3V	C638	1-164-937-11	CERAMIC CHIP	0.001uF 10% 50V
C538	1-164-937-11	CERAMIC CHIP	0.001uF 10% 50V	C639	1-107-826-11	CERAMIC CHIP	0.1uF 10% 16V
C539	1-125-837-11	CERAMIC CHIP	1uF 10% 6.3V	C641	1-164-943-11	CERAMIC CHIP	0.01uF 10% 16V
C545	1-125-777-11	CERAMIC CHIP	0.1uF 10% 10V	C642	1-107-819-11	CERAMIC CHIP	0.022uF 10% 16V
C547	1-119-923-11	CERAMIC CHIP	0.047uF 10% 10V	C643	1-165-884-11	CERAMIC CHIP	2.2uF 10% 6.3V
C550	1-119-923-11	CERAMIC CHIP	0.047uF 10% 10V	C644	1-164-941-11	CERAMIC CHIP	0.0047uF 10% 16V
C552	1-164-943-11	CERAMIC CHIP	0.01uF 10% 16V	C645	1-164-943-11	CERAMIC CHIP	0.01uF 10% 16V
C553	1-125-926-11	TANTALUM CHIP	4.7uF 20% 6.3V	C646	1-119-923-11	CERAMIC CHIP	0.047uF 10% 10V
C554	1-125-777-11	CERAMIC CHIP	0.1uF 10% 10V	C647	1-165-176-11	CERAMIC CHIP	0.047uF 10% 16V
				C648	1-119-923-11	CERAMIC CHIP	0.047uF 10% 10V
				C649	1-125-777-11	CERAMIC CHIP	0.1uF 10% 10V

MAIN

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
C650	1-100-442-11	TANTALUM CHIP 10uF	20% 6.3V	C847	1-125-777-11	CERAMIC CHIP 0.1uF	10% 10V
C651	1-100-353-11	CERAMIC CHIP 4.7uF	10% 16V	C849	1-125-777-11	CERAMIC CHIP 0.1uF	10% 10V
C652	1-104-851-11	TANTALUM CHIP 10uF	20% 10V	C851	1-125-777-11	CERAMIC CHIP 0.1uF	10% 10V
C653	1-104-851-11	TANTALUM CHIP 10uF	20% 10V	C852	1-125-777-11	CERAMIC CHIP 0.1uF	10% 10V
C654	1-125-777-11	CERAMIC CHIP 0.1uF	10% 10V	C855	1-125-777-11	CERAMIC CHIP 0.1uF	10% 10V
C655	1-125-837-11	CERAMIC CHIP 1uF	10% 6.3V	C856	1-100-842-11	TANTALUM CHIP 47uF	20% 6.3V
C656	1-125-837-11	CERAMIC CHIP 1uF	10% 6.3V	C861	1-164-858-11	CERAMIC CHIP 22PF	5% 50V
C658	1-100-844-11	TANTALUM CHIP 22uF	20% 10V	C871	1-125-777-11	CERAMIC CHIP 0.1uF	10% 10V
C659	1-100-353-11	CERAMIC CHIP 4.7uF	10% 16V	C873	1-164-842-11	CERAMIC CHIP 2PF	0.25PF 50V
C660	1-125-777-11	CERAMIC CHIP 0.1uF	10% 10V	C874	1-100-842-11	TANTALUM CHIP 47uF	20% 6.3V
C662	1-164-943-11	CERAMIC CHIP 0.01uF	10% 16V	C877	1-125-777-11	CERAMIC CHIP 0.1uF	10% 10V
C663	1-164-937-11	CERAMIC CHIP 0.001uF	10% 50V	C878	1-125-777-11	CERAMIC CHIP 0.1uF	10% 10V
C674	1-112-010-11	CAP-CHIP 33PF	5% 100V	C879	1-100-352-11	CERAMIC CHIP 1uF	20% 16V
C701	1-107-819-11	CERAMIC CHIP 0.022uF	10% 16V	C880	1-100-352-11	CERAMIC CHIP 1uF	20% 16V
C702	1-107-819-11	CERAMIC CHIP 0.022uF	10% 16V	C881	1-125-777-11	CERAMIC CHIP 0.1uF	10% 10V
C703	1-107-819-11	CERAMIC CHIP 0.022uF	10% 16V	C883	1-125-837-11	CERAMIC CHIP 1uF	10% 6.3V
C705	1-164-943-11	CERAMIC CHIP 0.01uF	10% 16V	C884	1-164-943-11	CERAMIC CHIP 0.01uF	10% 16V
C706	1-107-819-11	CERAMIC CHIP 0.022uF	10% 16V	C885	1-125-837-11	CERAMIC CHIP 1uF	10% 6.3V
C707	1-164-943-11	CERAMIC CHIP 0.01uF	10% 16V	C888	1-125-777-11	CERAMIC CHIP 0.1uF	10% 10V
C708	1-107-819-11	CERAMIC CHIP 0.022uF	10% 16V	C890	1-125-777-11	CERAMIC CHIP 0.1uF	10% 10V
C709	1-164-943-11	CERAMIC CHIP 0.01uF	10% 16V	C891	1-125-777-11	CERAMIC CHIP 0.1uF	10% 10V
C710	1-107-819-11	CERAMIC CHIP 0.022uF	10% 16V	C892	1-164-874-11	CERAMIC CHIP 100PF	5% 50V
C712	1-125-777-11	CERAMIC CHIP 0.1uF	10% 10V	C894	1-164-937-11	CERAMIC CHIP 0.001uF	10% 50V
C713	1-107-826-11	CERAMIC CHIP 0.1uF	10% 16V				(US, E18, JE)
C714	1-125-777-11	CERAMIC CHIP 0.1uF	10% 10V	C901	1-125-777-11	CERAMIC CHIP 0.1uF	10% 10V
C715	1-125-777-11	CERAMIC CHIP 0.1uF	10% 10V	C902	1-125-777-11	CERAMIC CHIP 0.1uF	10% 10V
C716	1-125-777-11	CERAMIC CHIP 0.1uF	10% 10V	C903	1-164-937-11	CERAMIC CHIP 0.001uF	10% 50V
C717	1-125-777-11	CERAMIC CHIP 0.1uF	10% 10V	C905	1-100-352-11	CERAMIC CHIP 1uF	20% 16V
C801	1-164-850-11	CERAMIC CHIP 10PF	0.5PF 50V	C906	1-100-352-11	CERAMIC CHIP 1uF	20% 16V
C802	1-164-850-11	CERAMIC CHIP 10PF	0.5PF 50V	C909	1-100-845-11	TANTALUM CHIP 10uF	20% 16V
C803	1-164-943-11	CERAMIC CHIP 0.01uF	10% 16V	C910	1-100-845-11	TANTALUM CHIP 10uF	20% 16V
C804	1-164-943-11	CERAMIC CHIP 0.01uF	10% 16V	C911	1-100-845-11	TANTALUM CHIP 10uF	20% 16V
C805	1-125-891-11	CERAMIC CHIP 0.47uF	10% 10V	C912	1-100-845-11	TANTALUM CHIP 10uF	20% 16V
C808	1-125-837-11	CERAMIC CHIP 1uF	10% 6.3V	C913	1-100-845-11	TANTALUM CHIP 10uF	20% 16V
C809	1-125-777-11	CERAMIC CHIP 0.1uF	10% 10V	C914	1-100-442-11	TANTALUM CHIP 10uF	20% 6.3V
C810	1-125-777-11	CERAMIC CHIP 0.1uF	10% 10V	C916	1-100-442-11	TANTALUM CHIP 10uF	20% 6.3V
C811	1-125-777-11	CERAMIC CHIP 0.1uF	10% 10V	C917	1-125-777-11	CERAMIC CHIP 0.1uF	10% 10V
C812	1-125-837-11	CERAMIC CHIP 1uF	10% 6.3V	C918	1-164-227-11	CERAMIC CHIP 0.022uF	10% 25V
C813	1-119-923-11	CERAMIC CHIP 0.047uF	10% 10V	C919	1-164-227-11	CERAMIC CHIP 0.022uF	10% 25V
C814	1-125-777-11	CERAMIC CHIP 0.1uF	10% 10V	C920	1-125-777-11	CERAMIC CHIP 0.1uF	10% 10V
C816	1-100-842-11	TANTALUM CHIP 47uF	20% 6.3V	C922	1-100-453-11	TANTALUM CHIP 22uF	20% 6.3V
C817	1-125-777-11	CERAMIC CHIP 0.1uF	10% 10V	C924	1-100-842-11	TANTALUM CHIP 47uF	20% 6.3V
C818	1-100-842-11	TANTALUM CHIP 47uF	20% 6.3V	C925	1-125-777-11	CERAMIC CHIP 0.1uF	10% 10V
C819	1-100-842-11	TANTALUM CHIP 47uF	20% 6.3V	C926	1-164-937-11	CERAMIC CHIP 0.001uF	10% 50V
C820	1-125-777-11	CERAMIC CHIP 0.1uF	10% 10V	C927	1-164-874-11	CERAMIC CHIP 100PF	5% 50V
C821	1-164-874-11	CERAMIC CHIP 100PF	5% 50V	C928	1-164-874-11	CERAMIC CHIP 100PF	5% 50V
C822	1-125-777-11	CERAMIC CHIP 0.1uF	10% 10V	C929	1-164-937-11	CERAMIC CHIP 0.001uF	10% 50V
C823	1-125-777-11	CERAMIC CHIP 0.1uF	10% 10V	C931	1-165-884-11	CERAMIC CHIP 2.2uF	10% 6.3V
C825	1-164-937-11	CERAMIC CHIP 0.001uF	10% 50V	C932	1-164-943-11	CERAMIC CHIP 0.01uF	10% 16V
C826	1-164-937-11	CERAMIC CHIP 0.001uF	10% 50V	C934	1-165-884-11	CERAMIC CHIP 2.2uF	10% 6.3V
C827	1-125-777-11	CERAMIC CHIP 0.1uF	10% 10V	C936	1-165-884-11	CERAMIC CHIP 2.2uF	10% 6.3V
C835	1-125-777-11	CERAMIC CHIP 0.1uF	10% 10V	C938	1-165-884-11	CERAMIC CHIP 2.2uF	10% 6.3V
C836	1-100-442-11	TANTALUM CHIP 10uF	20% 6.3V	C939	1-100-453-11	TANTALUM CHIP 22uF	20% 6.3V
C838	1-100-442-11	TANTALUM CHIP 10uF	20% 6.3V	C940	1-100-453-11	TANTALUM CHIP 22uF	20% 6.3V
C839	1-125-777-11	CERAMIC CHIP 0.1uF	10% 10V	C941	1-100-352-11	CERAMIC CHIP 1uF	20% 16V
C843	1-125-777-11	CERAMIC CHIP 0.1uF	10% 10V	C942	1-100-352-11	CERAMIC CHIP 1uF	20% 16V
C845	1-125-777-11	CERAMIC CHIP 0.1uF	10% 10V	C948	1-100-453-11	TANTALUM CHIP 22uF	20% 6.3V
				C949	1-100-844-11	TANTALUM CHIP 22uF	20% 10V

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
C951	1-100-841-11	TANTALUM CHIP 100uF	20% 6.3V			< FUSE >	
C952	1-100-841-11	TANTALUM CHIP 100uF	20% 6.3V	F351	1-576-439-41	FUSE (SMD)	
C954	1-125-777-11	CERAMIC CHIP 0.1uF	10% 10V			< FERRITE BEAD/SHORT >	
C955	1-100-844-11	TANTALUM CHIP 22uF	20% 10V				
C957	1-125-777-11	CERAMIC CHIP 0.1uF	10% 10V				
		< CONNECTOR >					
CN451	1-818-137-21	CONNECTOR (GRADLE) (USB)		FB101	1-400-807-21	BEAD, FERRITE (1005)	
CN471	1-818-537-21	CONNECTOR, FPC (ZIF) 11P		FB102	1-414-594-11	INDUCTOR, FERRITE BEAD	
CN491	1-818-471-21	CONNECTOR, FPC (ZIF) 8P		FB151	1-400-180-21	INDUCTOR, EMI FERRITE (1608)	
CN501	1-818-539-21	CONNECTOR, FPC (ZIF) 26P		FB201	1-400-807-21	BEAD, FERRITE (1005)	
CN701	1-818-536-21	CONNECTOR, FPC (ZIF) 10P		FB202	1-414-594-11	INDUCTOR, FERRITE BEAD	
		< DIODE >		FB251	1-400-180-21	INDUCTOR, EMI FERRITE (1608)	
D152	8-719-046-91	DIODE MA2S111		FB301	1-400-807-21	BEAD, FERRITE (1005)	
D252	8-719-046-91	DIODE MA2S111		FB302	1-414-594-11	INDUCTOR, FERRITE BEAD	
D301	8-719-056-54	DIODE MAZS068008SO		FB303	1-400-807-21	BEAD, FERRITE (1005)	
D352	8-719-081-71	DIODE DF8A6.8FK (TE85R)		FB304	1-400-807-21	BEAD, FERRITE (1005)	
D401	6-500-369-01	DIODE FT1J3TP		FB351	1-400-180-21	INDUCTOR, EMI FERRITE (1608)	
D431	6-500-483-01	DIODE MA22D2800LSO		FB353	1-414-594-11	INDUCTOR, FERRITE BEAD	
D451	6-500-776-01	DIODE MAZW068HOLSO		FB354	1-414-594-11	INDUCTOR, FERRITE BEAD	
D455	8-719-056-54	DIODE MAZS068008SO		FB355	1-414-594-11	INDUCTOR, FERRITE BEAD	
D456	8-719-056-54	DIODE MAZS068008SO		FB357	1-414-594-11	INDUCTOR, FERRITE BEAD	
D457	8-719-056-54	DIODE MAZS068008SO (EXCEPT US, E18, JE)		FB451	1-469-869-21	INDUCTOR (EMI FERRITE) (2012)	
D491	8-719-056-54	DIODE MAZS068008SO		FB453	1-469-869-21	INDUCTOR (EMI FERRITE) (2012)	
D501	8-719-056-54	DIODE MAZS068008SO		FB454	1-469-869-21	INDUCTOR (EMI FERRITE) (2012)	
D601	8-719-072-27	DIODE MA2Z748001SO		FB501	1-400-620-21	INDUCTOR, FERRITE BEAD (1005)	
D602	6-500-483-01	DIODE MA22D2800LSO		FB502	1-216-864-11	SHORT CHIP 0	
D603	6-500-483-01	DIODE MA22D2800LSO		FB503	1-216-864-11	SHORT CHIP 0	
D604	6-500-483-01	DIODE MA22D2800LSO		FB801	1-414-226-21	INDUCTOR, FERRITE BEAD	
D605	6-500-910-01	DIODE MA2SD3000LSO		FB802	1-216-864-11	SHORT CHIP 0	
D606	6-500-909-01	DIODE MA22D1700LSO		FB803	1-216-864-11	SHORT CHIP 0	
D607	6-500-909-01	DIODE MA22D1700LSO		FB807	1-216-864-11	SHORT CHIP 0	
D608	6-500-910-01	DIODE MA2SD3000LSO		FB808	1-216-864-11	SHORT CHIP 0	
D609	8-719-072-27	DIODE MA2Z748001SO		FB809	1-216-864-11	SHORT CHIP 0	
D610	8-719-072-27	DIODE MA2Z748001SO		FB810	1-216-864-11	SHORT CHIP 0	
D611	6-500-912-01	DIODE MA2SD3100LSO				< IC >	
D613	8-719-072-27	DIODE MA2Z748001SO		IC301	6-702-894-01	IC AK5356VN-L	
D614	8-719-422-49	DIODE MA8056-L		IC302	6-706-528-01	IC XC6219B212MR	
D615	6-500-483-01	DIODE MA22D2800LSO		IC351	6-704-998-01	IC CXD9811K (TE4)	
D616	6-500-909-01	DIODE MA22D1700LSO		IC401	6-704-638-01	IC MM1655LCBE	
D617	6-500-909-01	DIODE MA22D1700LSO		IC501	6-705-012-01	IC SN761059ZQLR	
D618	6-500-912-01	DIODE MA2SD3100LSO		IC502	6-706-095-01	IC R1180Q301B-TR-FA	
D801	6-500-912-01	DIODE MA2SD3100LSO		IC601	6-705-000-01	IC SC901585VAR2	
D803	6-500-813-01	DIODE MA2SD32008SO		IC602	6-703-317-01	IC R1160N121B-TR-FA	
D871	6-500-813-01	DIODE MA2SD32008SO		IC603	6-706-079-01	IC R1180Q121C-TR-FA	
D881	8-719-072-27	DIODE MA2Z748001SO		IC604	6-706-214-01	IC TC7SL32FU (TE85R)	
D882	8-719-072-27	DIODE MA2Z748001SO		IC605	6-702-590-01	IC XC61CN1702NR	
D883	8-719-072-27	DIODE MA2Z748001SO		IC701	6-705-001-01	IC SC901583EPR2	
D884	6-500-483-01	DIODE MA22D2800LSO		IC801	8-753-225-26	IC CXD2681-222GG	
D901	8-719-072-27	DIODE MA2Z748001SO		IC804	6-706-089-01	IC XC61CC2502NR	
D902	8-719-072-27	DIODE MA2Z748001SO		IC871	6-703-012-01	IC R2061K01-E2	
D903	8-719-072-27	DIODE MA2Z748001SO		IC872	6-706-096-01	IC R1180Q331C-TR-FA	
D904	8-719-072-27	DIODE MA2Z748001SO		IC873	6-703-011-01	IC TC7SZ126AFE	
D905	8-719-072-27	DIODE MA2Z748001SO		IC881	8-759-664-89	IC XC61CN3102NR	
D906	8-719-072-27	DIODE MA2Z748001SO		IC882	6-706-094-01	IC R1180Q221B-TR-FA	
				IC891	(Not supplied)	IC AK6514CN-L	
				IC901	6-704-997-01	IC SC901584EPR2	
				IC902	6-706-090-01	IC XC62HR5502MR	
				IC903	6-704-245-01	IC XC61CC1702NR	

MAIN

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
		< JACK >					
J301	1-815-950-12	JACK (LINE IN (OPT))		Q603	6-550-671-01	FET	NTHC5513T1G
J302	1-818-135-11	JACK (MIC (PLUG IN POWER))		Q604	8-729-427-74	TRANSISTOR	XP4601
J351	1-816-153-21	JACK (LINE)		Q605	6-550-671-01	FET	NTHC5513T1G
		< COIL/SHORT >		Q606	6-550-354-01	FET	RTQ035P02TR
L152	1-400-582-21	INDUCTOR	47uH	Q607	8-729-427-74	TRANSISTOR	XP4601
L252	1-400-582-21	INDUCTOR	47uH	Q611	6-550-353-01	FET	SI1410EDH-T1
L303	1-400-342-21	INDUCTOR	10uH	Q801	8-729-051-50	FET	XP152A12C0MR
L501	1-216-296-11	SHORT CHIP	0	Q802	8-729-047-68	FET	SSM3K03FE (TPL3)
L502	1-469-535-21	INDUCTOR	10uH	Q803	8-729-037-52	TRANSISTOR	2SD2216J-QR (TX).SO
L503	1-469-535-21	INDUCTOR	10uH	Q881	8-729-037-75	TRANSISTOR	UN9214J-(TX).SO
L504	1-469-535-21	INDUCTOR	10uH	Q882	8-729-030-46	TRANSISTOR	XP4314-TX
L505	1-469-535-21	INDUCTOR	10uH	Q883	8-729-030-46	TRANSISTOR	XP4314-TX
L506	1-469-535-21	INDUCTOR	10uH	Q884	6-550-353-01	FET	SI1410EDH-T1
L507	1-216-864-11	SHORT CHIP	0	Q951	8-729-427-74	TRANSISTOR	XP4601
L601	1-400-402-21	INDUCTOR	4.7uH			< RESISTOR >	
L605	1-456-711-21	INDUCTOR	100uH	R101	1-208-927-11	METAL CHIP	47K 0.5% 1/16W
L606	1-400-306-11	INDUCTOR	100uH	R103	1-208-715-11	METAL CHIP	22K 0.5% 1/16W
L607	1-456-722-21	INDUCTOR	100uH	R106	1-208-707-11	METAL CHIP	10K 0.5% 1/16W
L701	1-216-296-11	SHORT CHIP	0	R107	1-208-715-11	METAL CHIP	22K 0.5% 1/16W
L702	1-456-724-21	FERRITE	22uH	R151	1-218-957-11	RES-CHIP	2.2K 5% 1/16W
L703	1-216-296-11	SHORT CHIP	0	R154	1-218-957-11	RES-CHIP	2.2K 5% 1/16W
L704	1-456-724-21	FERRITE	22uH	R201	1-208-927-11	METAL CHIP	47K 0.5% 1/16W
L801	1-469-535-21	INDUCTOR	10uH	R203	1-208-715-11	METAL CHIP	22K 0.5% 1/16W
L802	1-400-343-21	INDUCTOR	22uH	R206	1-208-707-11	METAL CHIP	10K 0.5% 1/16W
L803	1-216-797-11	METAL CHIP	10 5% 1/10W	R207	1-208-715-11	METAL CHIP	22K 0.5% 1/16W
L804	1-216-797-11	METAL CHIP	10 5% 1/10W	R251	1-218-957-11	RES-CHIP	2.2K 5% 1/16W
L870	1-400-342-21	INDUCTOR	10uH	R254	1-218-957-11	RES-CHIP	2.2K 5% 1/16W
L901	1-456-725-21	INDUCTOR	100uH	R301	1-218-953-11	RES-CHIP	1K 5% 1/16W
L902	1-456-725-21	INDUCTOR	100uH	R304	1-218-977-11	RES-CHIP	100K 5% 1/16W
L903	1-400-342-21	INDUCTOR	10uH	R305	1-218-941-11	RES-CHIP	100 5% 1/16W
L904	1-400-342-21	INDUCTOR	10uH	R306	1-218-965-11	RES-CHIP	10K 5% 1/16W
L906	1-456-723-21	COIL, CHOKE	220uH	R307	1-218-941-11	RES-CHIP	100 5% 1/16W
L907	1-456-723-21	COIL, CHOKE	220uH	R308	1-216-864-11	SHORT CHIP	0
		< LINE FILTER >		R309	1-218-953-11	RES-CHIP	1K 5% 1/16W
LF451	1-456-111-11	COIL, COMMON MODE CHOKE		R310	1-218-953-11	RES-CHIP	1K 5% 1/16W
		< TRANSISTOR >		R313	1-208-635-11	METAL CHIP	10 0.5% 1/16W
Q151	8-729-050-32	TRANSISTOR	2SC5585TL	R314	1-218-990-11	SHORT CHIP	0
Q251	8-729-050-32	TRANSISTOR	2SC5585TL	R315	1-218-990-11	SHORT CHIP	0
Q301	8-729-051-23	TRANSISTOR	2SA2018TL	R351	1-218-953-11	RES-CHIP	1K 5% 1/16W
Q351	6-550-859-01	FET	NTHD4508NT1G	R352	1-218-973-11	RES-CHIP	47K 5% 1/16W
Q352	8-729-037-61	TRANSISTOR	UN9113J-(TX).SO	R353	1-208-715-11	METAL CHIP	22K 0.5% 1/16W
Q401	6-550-326-01	TRANSISTOR	FZT968TA	R354	1-218-990-11	SHORT CHIP	0
Q404	6-550-192-01	TRANSISTOR	DTC144EET1	R355	1-218-989-11	RES-CHIP	1M 5% 1/16W
Q405	8-729-055-00	TRANSISTOR	UP04313008SO	R356	1-218-990-11	SHORT CHIP	0
Q431	8-729-046-45	FET	SI2302DS-T1	R357	1-218-990-11	SHORT CHIP	0
Q432	8-729-044-57	TRANSISTOR	FZT688B-TP	R358	1-218-990-11	SHORT CHIP	0
Q501	6-550-674-01	FET	MCH6604-K-TL-E	R360	1-218-990-11	SHORT CHIP	0
Q502	8-729-034-59	TRANSISTOR	2SA1745-6.7-TL-E	R361	1-208-635-11	METAL CHIP	10 0.5% 1/16W
Q503	8-729-037-52	TRANSISTOR	2SD2216J-QR (TX).SO	R363	1-218-990-11	SHORT CHIP	0
Q504	8-729-037-89	TRANSISTOR	2SC4627J-C (TX).SO	R364	1-218-990-11	SHORT CHIP	0
Q601	6-550-357-01	FET	CPH5614-TL-E	R401	1-218-957-11	RES-CHIP	2.2K 5% 1/16W
Q602	6-550-740-01	FET	MCH6617-TL-E	R402	1-245-454-21	METAL CHIP	0.022 1% 1/5W
				R403	1-245-639-11	METAL CHIP	2.2 1% 1/2W
				R404	1-245-638-21	METAL CHIP	1 1% 1W
				R405	1-218-990-11	SHORT CHIP	0
				R407	1-218-990-11	SHORT CHIP	0
				R411	1-208-935-11	METAL CHIP	100K 0.5% 1/16W

Ref. No.	Part No.	Description	Remark			Ref. No.	Part No.	Description	Remark		
R412	1-218-990-11	SHORT CHIP	0			R622	1-244-161-11	RES-CHIP	2.2	5%	1/16W
R413	1-220-804-11	RES-CHIP	2.2M	5%	1/16W	R623	1-244-161-11	RES-CHIP	2.2	5%	1/16W
R414	1-208-943-11	METAL CHIP	220K	0.5%	1/16W	R624	1-218-985-11	RES-CHIP	470K	5%	1/16W
R415	1-218-957-11	RES-CHIP	2.2K	5%	1/16W	R625	1-218-985-11	RES-CHIP	470K	5%	1/16W
R416	1-218-989-11	RES-CHIP	1M	5%	1/16W	R628	1-218-933-11	RES-CHIP	22	5%	1/16W
R417	1-218-957-11	RES-CHIP	2.2K	5%	1/16W	R629	1-220-804-11	RES-CHIP	2.2M	5%	1/16W
R418	1-218-977-11	RES-CHIP	100K	5%	1/16W	R630	1-218-990-11	SHORT CHIP	0		
R421	1-208-935-11	METAL CHIP	100K	0.5%	1/16W	R631	1-218-985-11	RES-CHIP	470K	5%	1/16W
R431	1-218-989-11	RES-CHIP	1M	5%	1/16W	R632	1-218-989-11	RES-CHIP	1M	5%	1/16W
R432	1-245-456-21	METAL CHIP	1	1%	1/5W	R633	1-208-935-11	METAL CHIP	100K	0.5%	1/16W
R433	1-245-455-21	METAL CHIP	0.47	1%	1/5W	R634	1-218-977-11	RES-CHIP	100K	5%	1/16W
R453	1-220-804-11	RES-CHIP	2.2M	5%	1/16W	R635	1-216-864-11	SHORT CHIP	0		
R455	1-218-989-11	RES-CHIP	1M	5%	1/16W	R636	1-216-864-11	SHORT CHIP	0		
R456	1-218-985-11	RES-CHIP	470K	5%	1/16W	R637	1-216-864-11	SHORT CHIP	0		
R458	1-220-804-11	RES-CHIP	2.2M	5%	1/16W	R638	1-216-864-11	SHORT CHIP	0		
R459	1-218-981-11	RES-CHIP	220K	5%	1/16W	R640	1-218-989-11	RES-CHIP	1M	5%	1/16W
R471	1-218-990-11	SHORT CHIP	0			R641	1-245-456-21	METAL CHIP	1	1%	1/5W
R473	1-218-941-11	RES-CHIP	100	5%	1/16W	R642	1-245-456-21	METAL CHIP	1	1%	1/5W
R474	1-218-941-11	RES-CHIP	100	5%	1/16W	R643	1-218-981-11	RES-CHIP	220K	5%	1/16W
R475	1-218-990-11	SHORT CHIP	0			R644	1-218-985-11	RES-CHIP	470K	5%	1/16W
R491	1-208-699-11	METAL CHIP	4.7K	0.5%	1/16W	R645	1-218-985-11	RES-CHIP	470K	5%	1/16W
R492	1-208-699-11	METAL CHIP	4.7K	0.5%	1/16W	R647	1-218-990-11	SHORT CHIP	0		
R493	1-218-990-11	SHORT CHIP	0			R648	1-218-969-11	RES-CHIP	22K	5%	1/16W
R501	1-218-957-11	RES-CHIP	2.2K	5%	1/16W	R650	1-220-804-11	RES-CHIP	2.2M	5%	1/16W
R502	1-218-953-11	RES-CHIP	1K	5%	1/16W	R651	1-216-789-11	METAL CHIP	2.2	5%	1/10W
R503	1-218-977-11	RES-CHIP	100K	5%	1/16W	R653	1-218-990-11	SHORT CHIP	0		
R504	1-218-977-11	RES-CHIP	100K	5%	1/16W	R654	1-220-804-11	RES-CHIP	2.2M	5%	1/16W
R505	1-208-635-11	METAL CHIP	10	0.5%	1/16W	R656	1-218-990-11	SHORT CHIP	0		
R507	1-218-957-11	RES-CHIP	2.2K	5%	1/16W	R657	1-218-945-11	RES-CHIP	220	5%	1/16W
R508	1-218-957-11	RES-CHIP	2.2K	5%	1/16W	R658	1-218-990-11	SHORT CHIP	0		
R509	1-218-990-11	SHORT CHIP	0			R660	1-216-864-11	SHORT CHIP	0		
R510	1-216-864-11	SHORT CHIP	0			R663	1-218-945-11	RES-CHIP	220	5%	1/16W
R511	1-218-990-11	SHORT CHIP	0			R668	1-216-864-11	SHORT CHIP	0		
R512	1-218-990-11	SHORT CHIP	0			R701	1-216-864-11	SHORT CHIP	0		
R513	1-218-965-11	RES-CHIP	10K	5%	1/16W	R702	1-216-864-11	SHORT CHIP	0		
R514	1-218-973-11	RES-CHIP	47K	5%	1/16W	R703	1-216-864-11	SHORT CHIP	0		
R515	1-218-965-11	RES-CHIP	10K	5%	1/16W	R704	1-216-864-11	SHORT CHIP	0		
R516	1-218-973-11	RES-CHIP	47K	5%	1/16W	R706	1-218-990-11	SHORT CHIP	0		
R517	1-218-965-11	RES-CHIP	10K	5%	1/16W	R707	1-218-953-11	RES-CHIP	1K	5%	1/16W
R518	1-218-973-11	RES-CHIP	47K	5%	1/16W	R801	1-218-961-11	RES-CHIP	4.7K	5%	1/16W
R519	1-218-953-11	RES-CHIP	1K	5%	1/16W	R802	1-218-937-11	RES-CHIP	47	5%	1/16W
R520	1-218-949-11	RES-CHIP	470	5%	1/16W	R804	1-218-933-11	RES-CHIP	22	5%	1/16W
R524	1-218-945-11	RES-CHIP	220	5%	1/16W	R805	1-218-933-11	RES-CHIP	22	5%	1/16W
R525	1-216-864-11	SHORT CHIP	0			R806	1-218-961-11	RES-CHIP	4.7K	5%	1/16W
R526	1-218-990-11	SHORT CHIP	0			R807	1-218-957-11	RES-CHIP	2.2K	5%	1/16W
R561	1-218-981-11	RES-CHIP	220K	5%	1/16W	R808	1-218-953-11	RES-CHIP	1K	5%	1/16W
R603	1-218-985-11	RES-CHIP	470K	5%	1/16W	R809	1-218-990-11	SHORT CHIP	0		
R604	1-218-990-11	SHORT CHIP	0			R810	1-218-990-11	SHORT CHIP	0		
R605	1-218-965-11	RES-CHIP	10K	5%	1/16W	R811	1-218-965-11	RES-CHIP	10K	5%	1/16W
R608	1-218-446-11	METAL CHIP	1	5%	1/10W	R812	1-218-977-11	RES-CHIP	100K	5%	1/16W
R609	1-218-981-11	RES-CHIP	220K	5%	1/16W	R813	1-218-990-11	SHORT CHIP	0		
R610	1-218-965-11	RES-CHIP	10K	5%	1/16W	R814	1-218-965-11	RES-CHIP	10K	5%	1/16W
R612	1-220-804-11	RES-CHIP	2.2M	5%	1/16W	R815	1-218-981-11	RES-CHIP	220K	5%	1/16W
R616	1-218-953-11	RES-CHIP	1K	5%	1/16W	R817	1-218-953-11	RES-CHIP	1K	5%	1/16W
R617	1-218-965-11	RES-CHIP	10K	5%	1/16W	R818	1-218-957-11	RES-CHIP	2.2K	5%	1/16W
R619	1-218-945-11	RES-CHIP	220	5%	1/16W	R819	1-218-953-11	RES-CHIP	1K	5%	1/16W
R620	1-244-161-11	RES-CHIP	2.2	5%	1/16W	R820	1-218-945-11	RES-CHIP	220	5%	1/16W
R621	1-244-161-11	RES-CHIP	2.2	5%	1/16W						

MAIN

Ref. No.	Part No.	Description	Remark
R821	1-220-804-11	RES-CHIP	2.2M 5% 1/16W
R822	1-218-989-11	RES-CHIP	1M 5% 1/16W
R823	1-218-965-11	RES-CHIP	10K 5% 1/16W
R824	1-208-635-11	METAL CHIP	10 0.5% 1/16W
R825	1-218-990-11	SHORT CHIP	0
R826	1-218-990-11	SHORT CHIP	0
R827	1-208-635-11	METAL CHIP	10 0.5% 1/16W
R828	1-218-957-11	RES-CHIP	2.2K 5% 1/16W
R830	1-218-990-11	SHORT CHIP	0
R832	1-218-933-11	RES-CHIP	22 5% 1/16W
R833	1-216-864-11	SHORT CHIP	0
R834	1-208-943-11	METAL CHIP	220K 0.5% 1/16W
R835	1-218-985-11	RES-CHIP	470K 5% 1/16W
R836	1-208-927-11	METAL CHIP	47K 0.5% 1/16W
R837	1-218-957-11	RES-CHIP	2.2K 5% 1/16W
R839	1-218-990-11	SHORT CHIP	0
R840	1-218-990-11	SHORT CHIP	0
R843	1-218-990-11	SHORT CHIP	0
R845	1-208-943-11	METAL CHIP	220K 0.5% 1/16W
R846	1-218-973-11	RES-CHIP	47K 5% 1/16W
R847	1-218-990-11	SHORT CHIP	0
R848	1-218-990-11	SHORT CHIP	0
R849	1-218-990-11	SHORT CHIP	0
R850	1-216-864-11	SHORT CHIP	0
R852	1-218-990-11	SHORT CHIP	0
R854	1-218-990-11	SHORT CHIP	0
R855	1-218-990-11	SHORT CHIP	0
R856	1-218-990-11	SHORT CHIP	0
R857	1-218-990-11	SHORT CHIP	0
R858	1-218-957-11	RES-CHIP	2.2K 5% 1/16W
R859	1-218-989-11	RES-CHIP	1M 5% 1/16W
R860	1-218-989-11	RES-CHIP	1M 5% 1/16W
R861	1-218-941-11	RES-CHIP	100 5% 1/16W
R862	1-218-990-11	SHORT CHIP	0
R863	1-218-990-11	SHORT CHIP	0
R864	1-218-990-11	SHORT CHIP	0
R865	1-218-990-11	SHORT CHIP	0
R866	1-218-990-11	SHORT CHIP	0
R867	1-218-990-11	SHORT CHIP	0
R868	1-218-990-11	SHORT CHIP	0
R869	1-218-989-11	RES-CHIP	1M 5% 1/16W
R870	1-218-990-11	SHORT CHIP	0
R871	1-218-981-11	RES-CHIP	220K 5% 1/16W
R872	1-218-990-11	SHORT CHIP	0
R876	1-218-990-11	SHORT CHIP	0
R881	1-218-989-11	RES-CHIP	1M 5% 1/16W
R882	1-218-977-11	RES-CHIP	100K 5% 1/16W
R883	1-218-977-11	RES-CHIP	100K 5% 1/16W
R884	1-218-981-11	RES-CHIP	220K 5% 1/16W
R885	1-218-973-11	RES-CHIP	47K 5% 1/16W
R886	1-220-804-11	RES-CHIP	2.2M 5% 1/16W
R887	1-218-981-11	RES-CHIP	220K 5% 1/16W
R888	1-218-990-11	SHORT CHIP	0
R890	1-218-965-11	RES-CHIP	10K 5% 1/16W
R891	1-218-977-11	RES-CHIP	100K 5% 1/16W
R892	1-218-977-11	RES-CHIP	100K 5% 1/16W
R893	1-218-990-11	SHORT CHIP	0
R894	1-218-965-11	RES-CHIP	10K 5% 1/16W

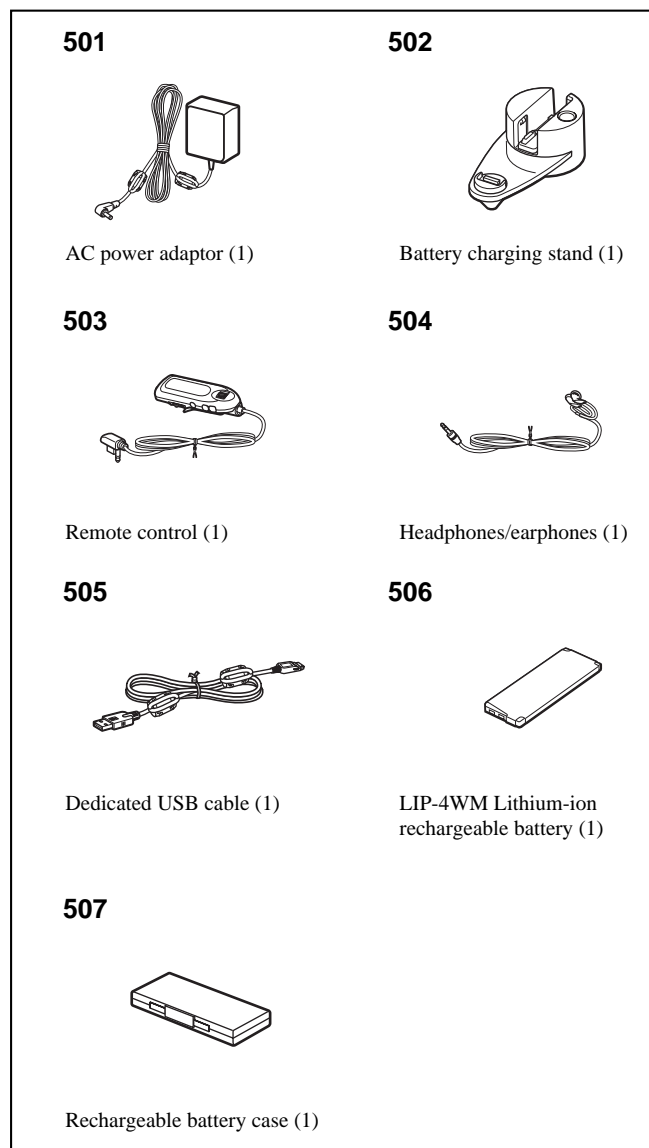
Ref. No.	Part No.	Description	Remark
R895	1-218-990-11	SHORT CHIP	0
R902	1-218-941-11	RES-CHIP	100 5% 1/16W
R903	1-218-989-11	RES-CHIP	1M 5% 1/16W
R904	1-218-989-11	RES-CHIP	1M 5% 1/16W
R906	1-218-977-11	RES-CHIP	100K 5% 1/16W
R907	1-218-965-11	RES-CHIP	10K 5% 1/16W
R908	1-218-969-11	RES-CHIP	22K 5% 1/16W
R910	1-208-715-11	METAL CHIP	22K 0.5% 1/16W
R912	1-218-981-11	RES-CHIP	220K 5% 1/16W
R914	1-208-707-11	METAL CHIP	10K 0.5% 1/16W
R917	1-218-981-11	RES-CHIP	220K 5% 1/16W
R918	1-218-985-11	RES-CHIP	470K 5% 1/16W
R922	1-218-977-11	RES-CHIP	100K 5% 1/16W
R923	1-218-990-11	SHORT CHIP	0
R924	1-218-985-11	RES-CHIP	470K 5% 1/16W
R925	1-208-927-11	METAL CHIP	47K 0.5% 1/16W
R926	1-208-935-11	METAL CHIP	100K 0.5% 1/16W
R927	1-208-683-11	METAL CHIP	1K 0.5% 1/16W
R929	1-208-935-11	METAL CHIP	100K 0.5% 1/16W
R931	1-218-990-11	SHORT CHIP	0
R933	1-208-943-11	METAL CHIP	220K 0.5% 1/16W
R934	1-208-715-11	METAL CHIP	22K 0.5% 1/16W
R935	1-208-935-11	METAL CHIP	100K 0.5% 1/16W
R936	1-208-927-11	METAL CHIP	47K 0.5% 1/16W
R937	1-208-715-11	METAL CHIP	22K 0.5% 1/16W
R938	1-208-927-11	METAL CHIP	47K 0.5% 1/16W
R939	1-208-927-11	METAL CHIP	47K 0.5% 1/16W
R940	1-218-981-11	RES-CHIP	220K 5% 1/16W
R941	1-218-990-11	SHORT CHIP	0
R944	1-218-990-11	SHORT CHIP	0
R945	1-218-990-11	SHORT CHIP	0
R946	1-218-977-11	RES-CHIP	100K 5% 1/16W
R947	1-218-973-11	RES-CHIP	47K 5% 1/16W
R952	1-218-973-11	RES-CHIP	47K 5% 1/16W
R953	1-218-973-11	RES-CHIP	47K 5% 1/16W
R954	1-218-985-11	RES-CHIP	470K 5% 1/16W
R956	1-218-973-11	RES-CHIP	47K 5% 1/16W
R957	1-218-985-11	RES-CHIP	470K 5% 1/16W
R958	1-218-990-11	SHORT CHIP	0
< COMPOSITION CIRCUIT BLOCK >			
RB701	1-233-963-21	RES, NETWORK (CHIP TYPE)	2.2K
RB702	1-233-967-11	RES, NETWORK (CHIP TYPE)	10K
< SWITCH >			
S431	1-786-545-21	SWITCH, PUSH LEVER (S)	(BATTERY INSERT DETECT)
S891	1-786-672-21	SWITCH, PUSH (2 KEY)	(PROTECT DETECT)
S892	1-786-448-21	SWITCH, PUSH (1 KEY)	(HALF LOCK)
S893	1-786-101-22	SWITCH, DETECTION	(OPEN/CLOSE DETECT)
S895	1-786-436-21	SWITCH, SLIDE	(HOLD)
< VIBRATOR >			
X801	1-795-780-21	VIBRATOR, CERAMIC	(48MHz)
X802	1-795-779-21	VIBRATOR, CRYSTAL	(22.5792MHz)
X872	1-795-602-11	VIBRATOR, CRYSTAL	(32.768kHz)

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

Ref. No.	Part No.	Description	Remark
		MISCELLANEOUS *****	
10	1-805-493-11	LCD MODULE	
64	1-478-469-11	SWITCH UNIT	
△ 163	X-2021-779-1	SERVICE ASSY, OP (ABX-U) (including HR601 (OVER WRITE HEAD))	
M701	8-835-782-02	MOTOR, DC SSM18D/C-NP (SPINDLE)	
M702	8-835-778-11	MOTOR, DC SSM21A/C-NP (SLED)	
M703	1-477-519-21	MOTOR UNIT, DC (OVER WRITE HEAD UP/DOWN)	

		ACCESSORIES *****	
	1-469-089-11	FILTER, CLAMP (FERRITE CORE) (for RM-MC40ELK: SIZE S) (EXCEPT E18, JE)	
	1-543-793-11	FILTER, CLAMP (FERRITE CORE) (for OPTIONAL STEREO MIKE: SIZE S) (EXCEPT E18, JE)	
	1-543-798-11	FILTER, CLAMP (FERRITE CORE) (for OPTIONAL CONNECTING CORD (ANALOG TYPE): SIZE L) (AEP, UK, HK, TW, KR, AUS, CH)	
△	1-569-007-12	ADAPTOR, CONVERSION 2P (JE)	
	1-794-451-11	CONNECTOR, OPTICAL (US, AEP, UK, TW, AUS, E18)	
	1-794-451-51	CONNECTOR, OPTICAL (HK, KR, CH, JE)	
	2-109-705-12	CD-ROM (APPLICATION) (SonicStage/MD Single Burner) (US)	
	2-109-705-22	CD-ROM (APPLICATION) (SonicStage/MD Single Burner) (AEP, UK)	
	2-179-850-31	CD-ROM (APPLICATION) (SonicStage/MD Single Burner) (HK, TW, KR, AUS, CH, E18)	
	2-179-850-41	CD-ROM (APPLICATION) (JE)	
	3-220-749-01	CASE, CARRYING (EXCEPT US)	
	3-266-450-12	MANUAL, INSTRUCTION (ENGLISH) (EXCEPT KR)	
	3-266-450-21	MANUAL, INSTRUCTION (FRENCH) (AEP)	
	3-266-450-31	MANUAL, INSTRUCTION (GERMAN) (AEP)	
	3-266-450-41	MANUAL, INSTRUCTION (SPANISH) (AEP, JE)	
	3-266-450-51	MANUAL, INSTRUCTION (DUTCH) (AEP)	
	3-266-450-61	MANUAL, INSTRUCTION (SWEDISH) (AEP)	
	3-266-450-71	MANUAL, INSTRUCTION (ITALIAN) (AEP)	
	3-266-450-81	MANUAL, INSTRUCTION (PORTUGUESE) (AEP, JE)	
	3-266-450-91	MANUAL, INSTRUCTION (FINNISH) (AEP)	
	3-266-451-11	MANUAL, INSTRUCTION (TRADITIONAL CHINESE) (HK, TW, E18, JE)	
	3-266-451-21	MANUAL, INSTRUCTION (SIMPLIFIED CHINESE) (CH, JE)	
	3-266-451-31	MANUAL, INSTRUCTION (KOREAN) (KR, JE)	

Ref. No.	Part No.	Description	Remark
△ 501	1-478-393-11	ADAPTOR, AC (AC-ES608K) (US, TW)	
△ 501	1-478-394-11	ADAPTOR, AC (AC-ES608K) (AEP, E18)	
△ 501	1-478-395-11	ADAPTOR, AC (AC-ES608K) (UK, HK)	
△ 501	1-478-396-11	ADAPTOR, AC (AC-ES608K) (KR)	
△ 501	1-478-397-11	ADAPTOR, AC (AC-ES608K) (JE)	
△ 501	1-478-398-11	ADAPTOR, AC (AC-ES608K) (CH)	
△ 501	1-478-399-11	ADAPTOR, AC (AC-ES608K) (AUS)	
△ 502	1-478-470-11	STAND, CHARGE (for SILVER)	
△ 502	1-478-470-21	STAND, CHARGE (for GOLD)	
503	1-478-468-11	REMOTE COMMANDER (RM-MC40ELK) (US, AEP, UK, TW, KR, AUS)	
503	1-478-468-21	REMOTE COMMANDER (RM-MC40ELK) (HK, CH, E18, JE)	
504	8-953-218-91	RECEIVER MDR-E838SP/SK SET	
505	1-828-071-11	CORD, CONNECTION (USB) (including FERRITE CORE)	
506	1-756-425-21	BATTERY, STORAGE, LITHIUM (LIP-4WM) (US)	
506	1-756-425-31	BATTERY, STORAGE, LITHIUM (LIP-4WM) (EXCEPT US)	
507	X-2022-498-1	BATTERY CASE ASSY	



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

