

NWZ-S515/S516/S615F/ S616F/S618F

SERVICE MANUAL

Ver. 1.5 2008.09



US Model
Canadian Model
E Model
Australian Model
Chinese Model
Tourist Model
NWZ-S615F/S616F/S618F
AEP Model
NWZ-S515/S516/S615F/
S616F/S618F
UK Model
NWZ-S515/S516/S616F/S618F

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SPECIFICATIONS

Supported file format

Music			
File format	MP3(MPEG1 Layer3) file format, ASF file format, MP4 file format, Wave-Riff file format		
File extension	MP3 (.mp3), WMA (.wma), AAC-LC*1 (.mp4, .m4a, .3gp), Linear PCM (.wav)		
Codec	MP3	Bit rate: 32 to 320 kbps (Supports variable bit rate (VBR)) Sampling frequency*2: 32, 44.1, 48 kHz	
	WMA	Bit rate: 32 to 192 kbps (Supports variable bit rate (VBR)) Sampling frequency*2: 44.1 kHz	
	AAC-LC*1	Bit rate: 16 to 320 kbps (Supports variable bit rate (VBR))*3 Sampling frequency*2: 8, 11.025, 12, 16, 22.05, 24, 32, 44.1, 48 kHz	
	Linear PCM	Bit rate: 1,411 kbps Sampling frequency*2: 44.1 kHz	
Video (NWZ-S615F/S616F/S618F only)			
File format	MP4 file format, "Memory Stick" video format		
File extension	.mp4, .m4v		
Codec	Video	AVC (H.264/AVC)	Profile: Baseline Profile Level: Max. 1.3 Bit rate: Max. 768 kbps
		MPEG-4	Profile: Simple Profile Bit rate: Max. 2,500 kbps
	Frame rate: Max. 30 fps Resolution: Max. QVGA (320 × 240)		
Audio	AAC-LC	Channel number: Max. 2 channels Sampling frequency*2: 24, 32, 44.1, 48 kHz Bit rate: Max. 288 kbps per 1 channel	
File size	Max. 2 GB		
The number of files	Max. 1,000		
Photo*4			
File format	Compatible with DCF 2.0/Exif 2.2 file format		
File extension	.jpg		
Codec	Profile: Baseline Profile		
	Number of pixels: Max. 4,000 × 4,000 pixels (16,000,000 pixels)		
The number of files	Max. 10,000		

*1 Copyright protected AAC-LC files cannot be played back.

*2 Sampling frequency may not correspond to all encoders.

*3 Non-standard bit rates or non-guaranteed bit rates are included depending on the sampling frequency.

*4 Some photo files cannot be played back, depending on their file formats.

– Continued on next page –

DIGITAL MEDIA PLAYER

SONY®

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Sony Corporation

Audio&Video Business Group

Published by Sony Techno Create Corporation

NWZ-S515/S516/S615F/S616F/S618F

Maximum recordable number of songs and time (Approx.)

The approximate times are based on the case in which you transfer or record only 4 minutes songs (not including videos (NWZ-S615F/S616F/S618F only) and photos) in the MP3 format. Other playable audio file format song numbers and times may differ from MP3 format.

NWZ-S515/S615F			NWZ-S516/S616F		
Bit rate	Songs	Time	Songs	Time	
48 kbps	1,150	76 hr. 40 min.	2,450	163 hr. 20 min.	
64 kbps	885	59 hr. 00 min.	1,850	123 hr. 20 min.	
128 kbps	440	29 hr. 20 min.	925	61 hr. 40 min.	
256 kbps	220	14 hr. 40 min.	460	30 hr. 40 min.	
320 kbps	175	11 hr. 40 min.	370	24 hr. 40 min.	

NWZ-S618F		
Bit rate	Songs	Time
48 kbps	5,050	336 hr. 40 min.
64 kbps	3,750	250 hr. 00 min.
128 kbps	1,850	123 hr. 20 min.
256 kbps	945	63 hr. 00 min.
320 kbps	840	56 hr. 00 min.

Maximum recordable time of videos (Approx.) (NWZ-S615F/S616F/S618F only)

The approximate recordable times are estimated in the case where only videos are transferred. The time may differ, depending on the conditions under which the player is used.

NWZ-S615F		NWZ-S616F		NWZ-S618F	
Bit rate	Time	Time	Time	Time	Time
Video Format: 384 kbps					
Audio Format: 128 kbps	7 hr. 10 min.	15 hr. 00 min.	30 hr. 40 min.		
Video Format: 768 kbps					
Audio Format: 128 kbps	4 hr. 00 min.	8 hr. 30 min.	17 hr. 30 min.		

Maximum recordable number of photos that can be transferred (Approx.)

Max. 10,000

Recordable number of photos may be less depending on file sizes.

Capacity (User available capacity)*1

NWZ-S515: 2 GB (Approx. 1.71 GB = 1,840,840,704 bytes)

NWZ-S516: 4 GB (Approx. 3.57 GB = 3,840,704,512 bytes)

NWZ-S615F: 2 GB (Approx. 1.71 GB = 1,840,775,168 bytes)

NWZ-S616F: 4 GB (Approx. 3.57 GB = 3,840,638,976 bytes)

NWZ-S618F: 8 GB (Approx. 7.30 GB = 7,840,956,416 bytes)

*1 Available storage capacity of the player may vary.

A portion of the memory is used for data management functions.

Output (headphones)

Frequency response

20 to 20,000 Hz (when playing data file, single signal measurement)

FM tuner (NWZ-S615F/S616F/S618F only)

FM Frequency range

87.5 to 108.0 MHz

IF (FM) (NWZ-S615F/S616F/S618F only)

375 kHz

Antenna (NWZ-S615F/S616F/S618F only)

Headphone cord antenna

Interface

Headphone: Stereo mini-jack

WM-PORT (multiple connecting terminal): 22 pins

Hi-Speed USB (USB 2.0 compliant)

Operating temperature

5 °C to 35 °C (41 °F to 95 °F)

Power source

- Built-in rechargeable lithium-ion battery
- USB power (from a computer via the supplied USB cable)

Charging time

USB-based charging

Approx. 3 hours (full charge), Approx. 1.5 hours (approx. 80 %)

Battery life (continuous playback)

By setting as follows, a longer battery life can be expected.

The time below is approximated when “New Song Pop Up”, “Clear Stereo”, “DSEE (Sound Enhance)”, “Dynamic Normalizer”, “Equalizer” and “VPT (Surround)” are deactivated, and “Screensaver” is set to “Blank.”

Furthermore, for videos (NWZ-S615F/S616F/S618F only), the time approximated when the brightness of the screen is set to “3.”

The time below may differ depending on ambient temperature or the status of use.

NWZ-S515/S516		NWZ-S615F/S616F/S618F	
Music			
Playback at MP3 128 kbps	Approximately 33 hours	Approximately 33 hours	
Playback at WMA 128 kbps	Approximately 33 hours	Approximately 33 hours	
Playback at AAC-LC 128 kbps	Approximately 32 hours	Approximately 32 hours	
Playback at Linear PCM 1411 kbps	Approximately 35 hours	Approximately 35 hours	
Video (NWZ-S615F/S616F/S618F only)			
Playback at MPEG-4 384 kbps	—	Approximately 9.5 hours	
Playback at MPEG-4 768 kbps	—	Approximately 8.5 hours	
Playback at AVC 384 kbps	—	Approximately 7.5 hours	
Playback at AVC 768 kbps	—	Approximately 7.5 hours	
At receiving FM broadcasting (NWZ-S615F/S616F/S618F only)	—	Approximately 24 hours	

Display

1.82-inch, TFT color display with white LED-backlight, QVGA (240 × 320 pixels), 262,144 colors

Dimensions (w/h/d, projecting parts not included)

42.0 × 79.5 × 11.5 mm (1 ¹¹/₁₆ × 3 ¹/₄ × ¹⁵/₃₂ inches)

Dimension (w/h/d)

42.0 × 79.5 × 11.5 mm (1 ¹¹/₁₆ × 3 ¹/₄ × ¹⁵/₃₂ inches)

Mass

Approx. 50 g (Approx. 1.8 oz)

Supplied Accessories

Headphones (1)

USB cable*1 (1)

Attachment (1)

Use when connecting the player to the optional cradle, etc.

CD-ROM*2*3 (1)

– MP3 Conversion Tool

– Windows Media Player 11

– Operation Guide (PDF file)

Quick Start Guide (1)

*1 Do not use any USB cable other than the supplied USB cable or the specified optional dedicated cables.

*2 Do not attempt to play this CD-ROM in an audio CD player.

*3 Depending on the country/region in which you have purchased the player, the supplied software may be different.

Design and specifications are subject to change without notice.

NWZ-S515/S516/S615F/S616F/S618F

SECTION 1

SERVICING NOTES

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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 soldering iron around 270 °C during repairing.
- Do not touch the soldering iron on the same conductor of the circuit board (within 3 times).
- Be careful not to apply force on the conductor when soldering or unsoldering.

CAUTION

Danger of explosion if battery is incorrectly replaced.
Replace only with the same or equivalent type.

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.

NOTE THE IC301, IC302, IC303, IC404, IC405, IC501, IC503, IC505, IC506, IC507, IC508, IC509, IC601, IC602, IC701, IC751, IC752, IC802, IC803, IC901 AND IC903 ON THE MAIN BOARD REPLACING

When IC301, IC302, IC303, IC404, IC405, IC501, IC503, IC505, IC506, IC507, IC508, IC509, IC601, IC602, IC701, IC751, IC752, IC802, IC803, IC901 and IC903 on the MAIN board is damaged, exchange the new MAIN board for the MAIN board which IC damaged.

NOTE THE CN881 ON THE MAIN BOARD REPLACING

When CN881 on the MAIN board is damaged, exchange the new MAIN board for the MAIN board which connector damaged.

NOTE THE C104 AND C204 ON THE MAIN BOARD REPLACING

When C104 and C204 on the MAIN board is damaged, exchange the new MAIN board for the MAIN board which capacitor damaged.

System Requirements

- Computer
IBM PC/AT or compatible computer preinstalled with the following Windows operating systems*:
Windows XP Home Edition (Service Pack 2 or later) / Windows XP Professional (Service Pack 2 or later) / Windows XP Media Center Edition (Service Pack 2 or later) / Windows XP Media Center Edition 2004 (Service Pack 2 or later) / Windows XP Media Center Edition 2005 (Service Pack 2 or later) / Windows Vista Home Basic / Windows Vista Home Premium / Windows Vista Business / Windows Vista Ultimate
Not supported by 64 bit version OS.
Not supported by OSs other than above.
* Excluding OS Versions not supported by Microsoft.
- CPU: Pentium III 1.0 GHz or higher
- RAM: 128 MB or more (For Windows Vista, 512 MB or more)
- Hard Disk drive: 380 MB or more of available space
- Display:
— Screen Resolution: 800 × 600 pixels (or higher) (recommended 1,024 × 768 or higher)
— Colors: 8 bit or higher (recommended 16 bit)
- CD-ROM drive (supporting Digital Music CD playback capabilities using WDM)
To create original CDs, a CD-R/RW drive is required.
- Sound board
- USB port (Hi-Speed USB is recommended)
- Internet Explorer 6.0 or later, Windows Media Player 10 or 11 (Windows Media Player 11 recommended. Some computers that already have Windows Media Player 10 installed may encounter file limitation (AAC, video* files, etc.) that can be transferred by dragging and dropping).
- * NWZ-S615F/S616F/S618F only
- Adobe Flash Player 8 or higher needs to be installed.
- Broadband Internet connection is required to use Electronic Music Distribution (EMD) or to visit the web site.

We do not guarantee operation for all computers even if they meet the above System Requirements.

Not supported by the following environments:

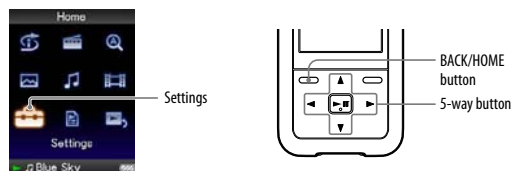
- Personally constructed computers or operating systems
- An environment that is an upgrade of the original manufacturer-installed operating system
- Multi-boot environment
- Multi-monitor environment
- Macintosh

NOTE THE MAIN BOARD REPLACING

When the MAIN board is replaced, format it according to the following.

Formatting Memory (Format)

You can format the built-in flash memory of the player. If the memory is formatted, all data and settings will be erased. Be sure to verify the data stored in memory prior to formatting and export any important data to the hard disk of your computer.



Note

- This function is only available in the pause mode.

- 1 Press and hold the BACK/HOME button in the pause mode until the Home menu appears.
- 2 Press the $\Delta/\nabla/\leftarrow/\rightarrow$ button to select (Settings), and then press the \triangleright button to confirm.

- 3 Press the $\Delta/\nabla/\leftarrow/\rightarrow$ button to select "Common Settings," and then press the \triangleright button to confirm.
The list of "Common Settings" options appears.

- 4 Press the $\Delta/\nabla/\leftarrow/\rightarrow$ button to select "Format," and then press the \triangleright button to confirm.
"All data including songs will be deleted. Proceed?" appears.

- 5 Press the Δ/∇ button to select "Yes," and then press the \triangleright button to confirm.
"All data will be deleted. Proceed?" appears.

- 6 Press the Δ/∇ button to select "Yes," and then press the \triangleright button to confirm.
While the memory is being formatted, an animated display appears. When initialization finishes, "Memory formatted." appears.

To cancel the operation

Select "No" in step 5 or 6 and press the \triangleright button to confirm. You can also cancel the operation by pressing the BACK/HOME button in step 5 or 6.

To return to the previous menu

Press the BACK/HOME button.

Note

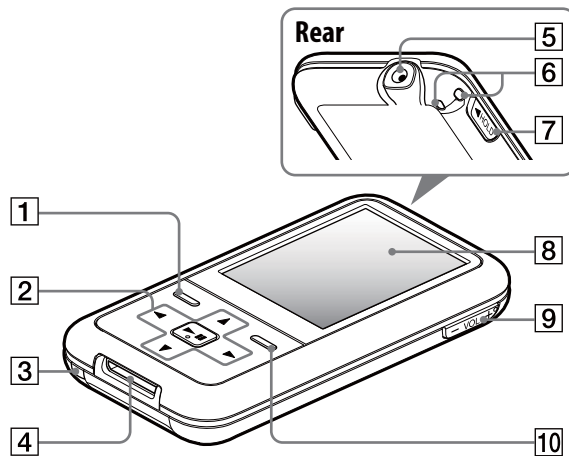
- Do not format the built-in flash memory using Windows Explorer, or the software you used to transfer the data.

COLOR VARIATION

Model	Destination	Color					
		Black	White	Pink	Blue	Silver	Red
NWZ-S515	AEP, UK	●	●	●	●		
NWZ-S516	AEP	●	●	●	●		
	UK	●					
NWZ-S615F	US	●		●		●	●
	US (Circuit City model)	●		●			
	US (Target model)						●
	US (Valentine's Day model)			●			●
	US (Mother's Day model)			●			
	Canadian	●		●		●	
	AEP	●				●	●
	French	●				●	●
	East European	●				●	●
	E, Australian, Tourist	●		●		●	
	Mexican	●	●		●		
	Chinese	●	●	●	●		
	NWZ-S616F	US	●		●		●
US (Circuit City model)		●					
Canadian		●		●		●	●
AEP		●				●	●
UK		●				●	●
French		●				●	●
East European		●				●	●
E, Australian, Tourist		●	●	●	●		●
Mexican		●				●	●
Chinese		●	●		●		●
NWZ-S618F	US	●					
	Canadian	●				●	
	AEP	●				●	●
	UK	●				●	●
	French	●				●	
	East European	●				●	●
	E, Australian, Tourist	●	●				
	Mexican	●					
	Chinese					●	

Parts and Controls

Front



1 BACK/HOME button^{*1}

Press to go up one list screen level, or to return to the previous menu. Press and hold the BACK/HOME button to display the Home menu.

2 5-way button^{*2}

Starts playback and enables navigation of the player's on-screen menus.

3 RESET button

Resets the player when you press the RESET button with a small pin, etc..

4 WM-PORT jack

Use this jack to connect the supplied USB cable, or optional peripheral devices, such as supported accessories for the WM-PORT.

5 Headphone jack

For connecting the headphones. Insert the jack pin until it clicks into place. If the headphones are connected improperly, the sound from the headphones may not sound right.

6 Strap hole

This is used to attach a strap (sold separately).

7 HOLD switch

You can protect the player against accidental operation by using the HOLD switch when carrying it. By sliding the HOLD switch in the direction of the arrow, all operation buttons are disabled. If you slide the HOLD switch to the opposite position, the HOLD function is released.

8 Display

The display may vary, depending on functions.

9 VOL +*2/- button


Adjusts the volume.

10 OPTION/PWR OFF button^{*1}

Displays the option menu. If you press and hold the OPTION/PWR OFF button, the screen turns off and the player enters the standby mode. If you press any button while the player is in the standby mode, the "Now Playing" screen, etc., appears and the player is ready for operation. Furthermore, if you leave the player in the standby mode for about a day, the player turns completely off automatically. If you press any button when the player is turned off, the start up screen appears first, then the "Now Playing" screen appears.

Note

- The player consumes battery power very slightly even when it is in the standby mode. Therefore, the player might turn completely off in a short time, depending on the power remaining in the battery.

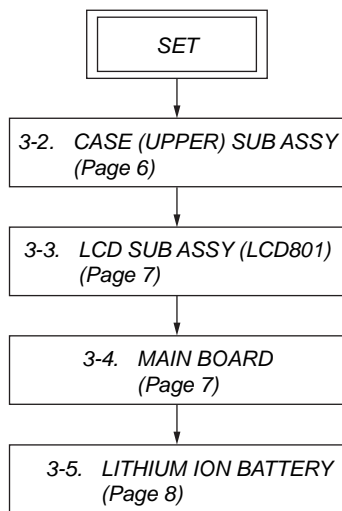
^{*1} Functions of marked with  on the player are activated if you press and hold the corresponding buttons.

^{*2} There are tactile dots. Use them to help with button operations.

SECTION 3 DISASSEMBLY

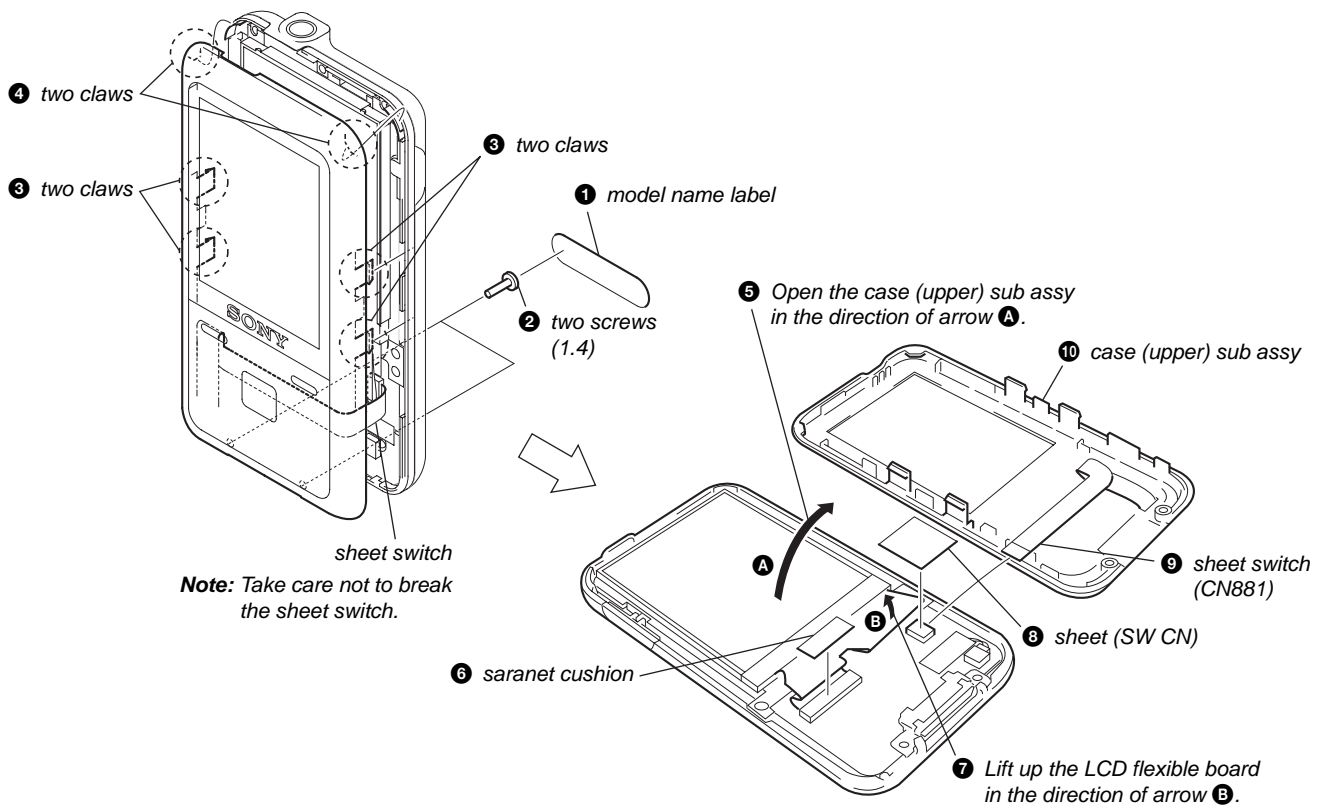
• This set can be disassembled in the order shown below.

3-1. DISASSEMBLY FLOW

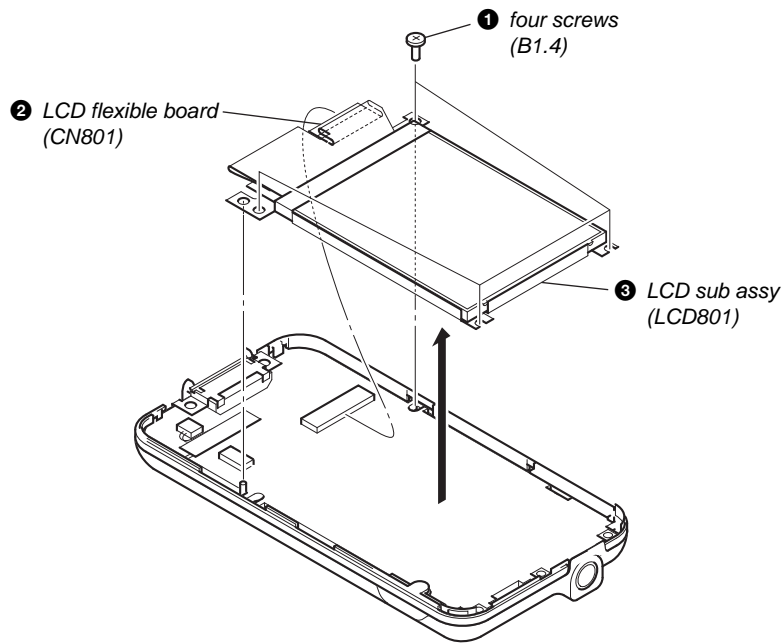


Note: Follow the disassembly procedure in the numerical order given.

3-2. CASE (UPPER) SUB ASSY

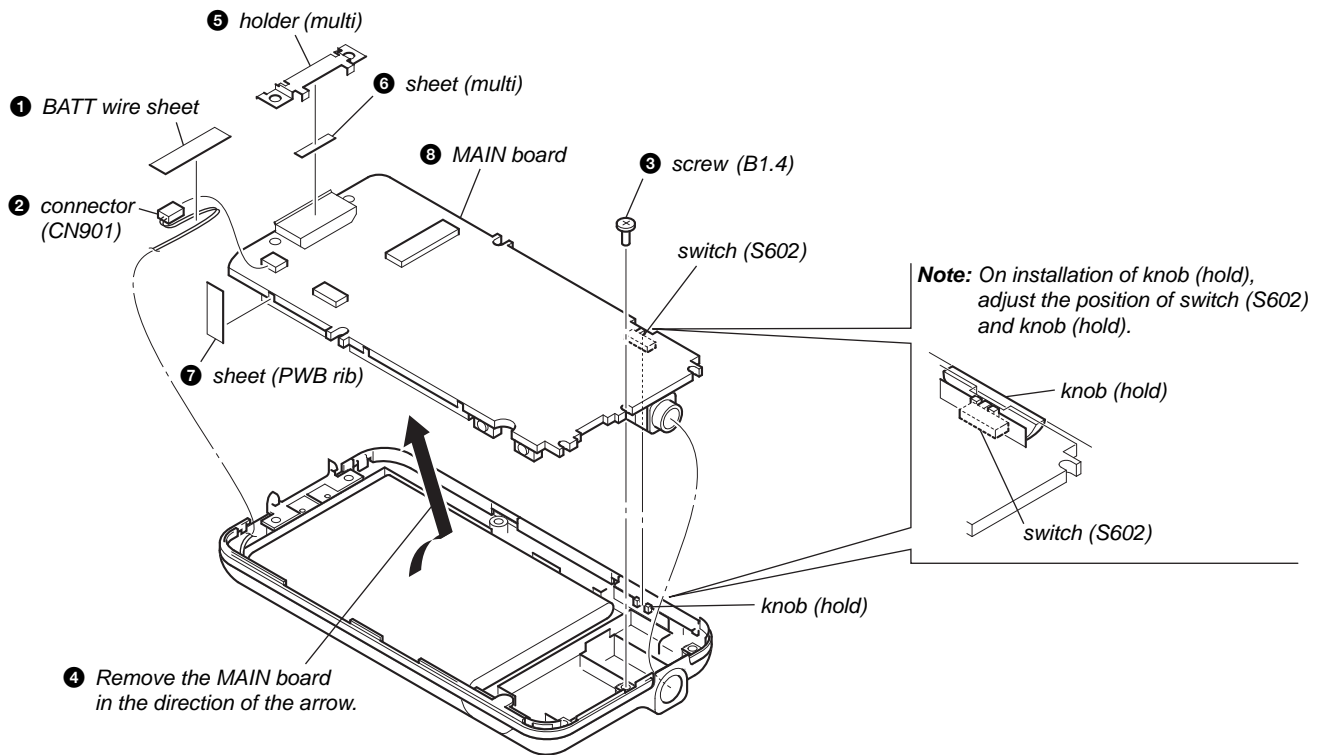


3-3. LCD SUB ASSY (LCD801)

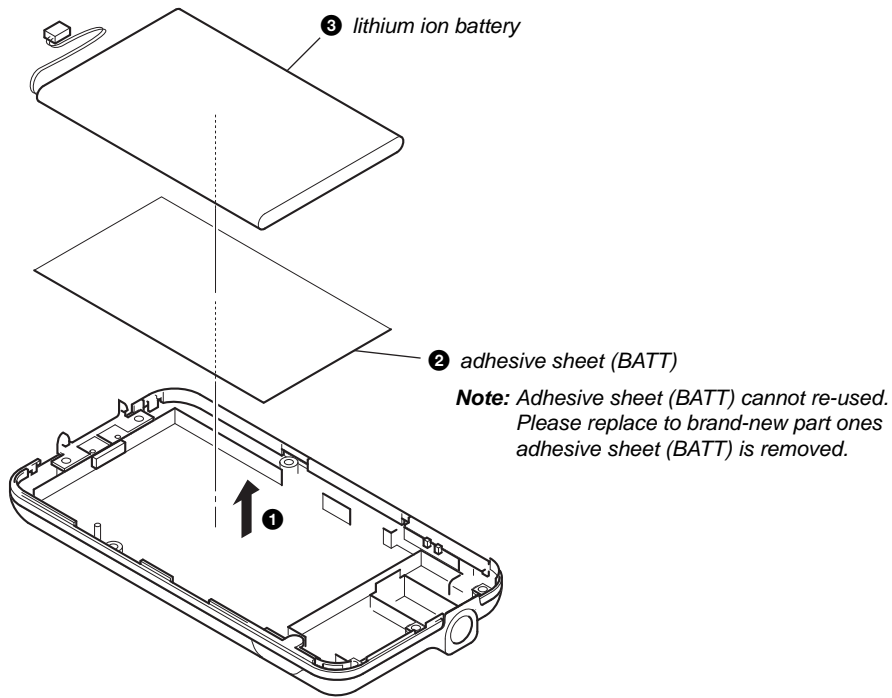


Note: When the LCD SUB ASSY (LCD801) is replaced, refer to SUPPLEMENT-2.

3-4. MAIN BOARD



3-5. LITHIUM ION BATTERY



SECTION 4 TEST MODE

Note: Information on the test mode must correspond in enough security. When the leakage has been revealed by any chance, the source of information is specified.

1. SETTING THE TEST MODE

Note: Perform the test mode in the state of 3.6 V or more in the battery voltage.

Setting method:

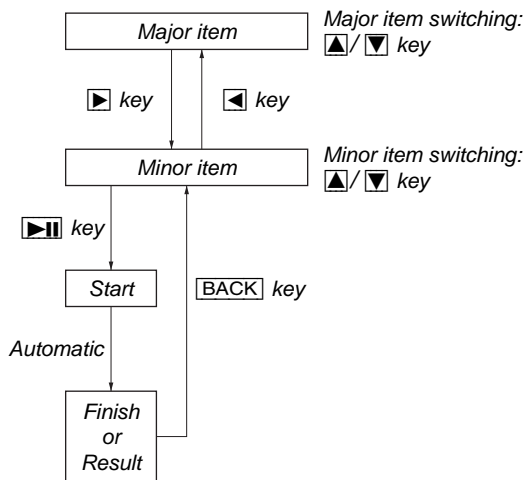
1. Turn the power on.
2. Press the [BACK] key for 1.5 seconds or more, the home menu is displayed.
3. Slide the [HOLD] key to set the hold on.
4. While pressing the [OPTION] key, press the key as following order.
[▲] → [▲] → [▼] → [▼] → [▶] → [◀] → [▲] → [▼] → [▲] → [▼] → [▶] → [▶||]
5. The set reboots when the [HOLD] key is slided to set the hold off, and the color bar is displayed in the liquid crystal display.
6. Enter the test mode when the [BACK] key is pressed in the state of step 5.

Note: The destination setting and sound pressure regulation setting cannot be executed by this test mode.

2. RELEASING THE TEST MODE

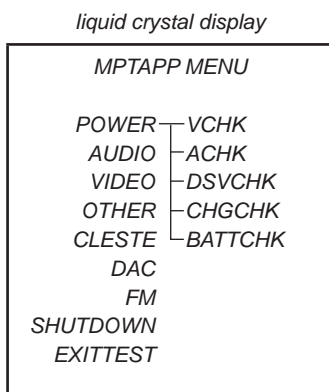
1. Display the major item selection screen.
2. Press the [▲]/[▼] key to select the "EXITTEST", and press the [▶] key to select the "SURE ?".
3. Press the [▶||] key, turn the power off and release the test mode.

3. CONFIGURATION OF THE TEST MODE



4. OPERATION OF THE TEST MODE

4-1. Power

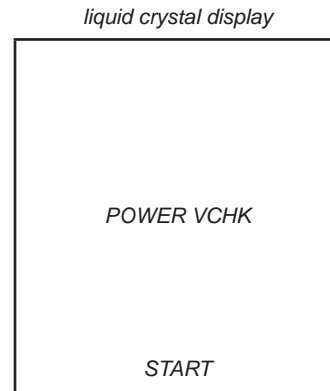


4-1-1. Power supply voltage check

This mode is used in case power supply voltage in the state where all power supply lines are starting is checked.

Checking method:

1. Enter the test mode.
2. Press the [▲]/[▼] key to select the "POWER", and press the [▶] key to enter the minor item.
3. Press the [▲]/[▼] key to select the "VCHK".
4. Press the [▶||] key, all power supply lines are started.



In this state, the power supply voltage of each power supply line can be confirmed by measuring the voltage.

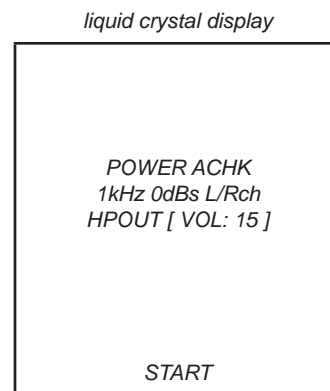
5. Press the [BACK] key, return to minor item selection screen.

4-1-2. Consumption current (audio playback) check

This mode is used in case consumption current (audio playback) is checked in the state where "1 kHz 0 dBs L-ch/R-ch VOLUME: 15" audio signal is outputted.

Checking method:

1. Enter the test mode.
2. Press the [▲]/[▼] key to select the "POWER", and press the [▶] key to enter the minor item.
3. Press the [▲]/[▼] key to select the "ACHK".
4. Press the [▶||] key, "1 kHz 0 dBs L-ch/R-ch VOLUE: 15" audio signal is outputted.



5. In this state, each time the [OPTION] key is pressed, LCD back light on/off switch is performed.

6. Press the [BACK] key, return to minor item selection screen.

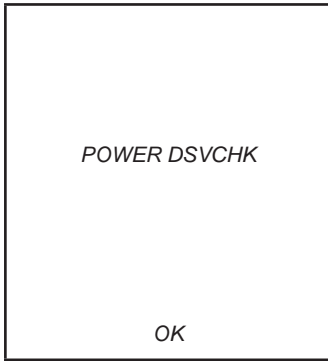
4-1-3. Standby current check

This mode is used in case standby current is checked.

Checking method:

1. Enter the test mode.
2. Press the [▲]/[▼] key to select the “POWER”, and press the [▶] key to enter the minor item.
3. Press the [▲]/[▼] key to select the “DSVCHK”.
4. Press the [▶||] key, enter the state of the deep sleep.
5. Press the [BACK] key, release the state of the deep sleep.

liquid crystal display



6. Press the [BACK] key, return to minor item selection screen.

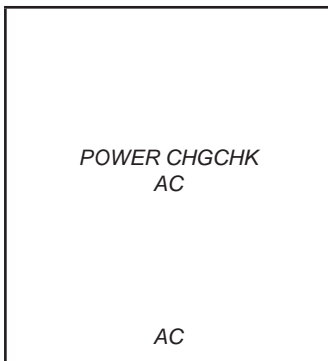
4-1-4. Charge current check

This mode is used in case charge current is checked.

Checking method:

1. Enter the test mode.
2. Press the [▲]/[▼] key to select the “POWER”, and press the [▶] key to enter the minor item.
3. Press the [▲]/[▼] key to select the “CHGCHK”.
4. Press the [▶||] key, the charge setting is displayed.

liquid crystal display



5. In this state, each time the [OPTION] key is pressed, the port setting for the charge is changed as shown in the table below.

	Port control		
Display	CHG_XCHGEN	CHG_PEN1	CHG_PEN2
AC	L	H	H
USB500	L	H	H
USB100	L	H	L

6. Press the [BACK] key, return to minor item selection screen.

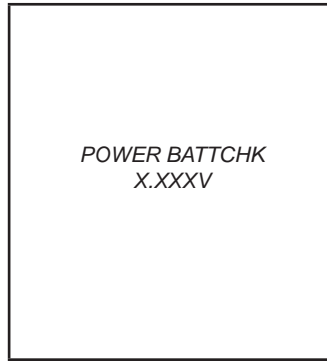
4-1-5. Battery voltage detection check

This mode is used in case battery voltage is checked.

Checking method:

1. Enter the test mode.
2. Press the [▲]/[▼] key to select the “POWER”, and press the [▶] key to enter the minor item.
3. Press the [▲]/[▼] key to select the “BATTCHK”.
4. Press the [▶||] key, the battery voltage is displayed.
When the battery voltage cannot be confirmed, “ERROR” is displayed.

liquid crystal display



X.XXXV: Battery voltage

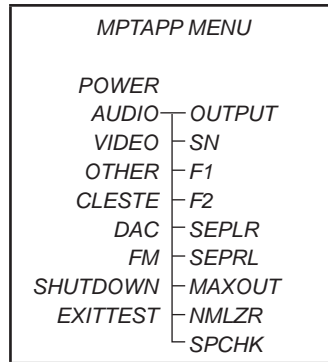
6. Press the [BACK] key, return to minor item selection screen.

4-2. Audio

While playing the audio track, it's in a repeat state. If [BACK] key is pressed, it's stopped.

Press the [VOL +] key to switch the HP/LINE.

liquid crystal display

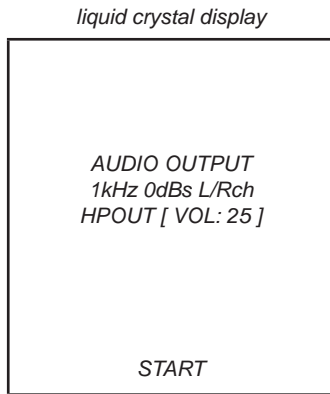


4-2-1. Output check

“1 kHz 0 dBs L-ch/R-ch VOLUME: 25” audio signal is outputted.

Checking method:

1. Enter the test mode.
2. Press the [▲]/[▼] key to select the “AUDIO”, and press the [▶] key to enter the minor item.
3. Press the [▲]/[▼] key to select the “OUTPUT”.
4. Press the [▶] key, “1 kHz 0 dBs L-ch/R-ch VOLUME: 25” audio signal is outputted.



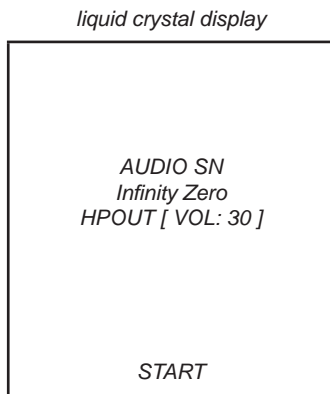
5. Press the [BACK] key, return to minor item selection screen.

4-2-2. S/N check

“Infinity Zero VOLUME: 30” audio signal is outputted.

Checking method:

1. Enter the test mode.
2. Press the [▲]/[▼] key to select the “AUDIO”, and press the [▶] key to enter the minor item.
3. Press the [▲]/[▼] key to select the “SN”.
4. Press the [▶] key, “Infinity Zero VOLUME: 30” audio signal is outputted.



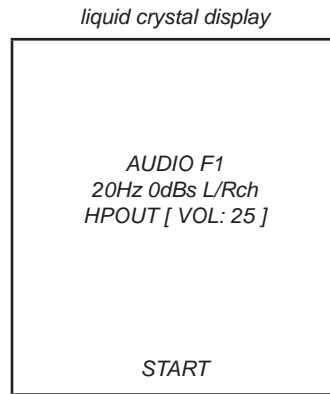
5. Press the [BACK] key, return to minor item selection screen.

4-2-3. Frequency characteristic 1 check

“20 Hz 0 dBs L-ch/R-ch VOLUME: 25” audio signal is outputted.

Checking method:

1. Enter the test mode.
2. Press the [▲]/[▼] key to select the “AUDIO”, and press the [▶] key to enter the minor item.
3. Press the [▲]/[▼] key to select the “F1”.
4. Press the [▶] key, “20 Hz 0 dBs L-ch/R-ch VOLUME: 25” audio signal is outputted.



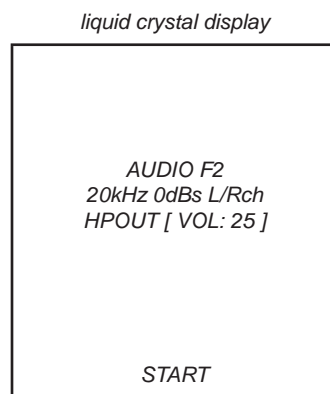
5. Press the [BACK] key, return to minor item selection screen.

4-2-4. Frequency characteristic 2 check

“20 kHz 0 dBs L-ch/R-ch VOLUME: 25” audio signal is outputted.

Checking method:

1. Enter the test mode.
2. Press the [▲]/[▼] key to select the “AUDIO”, and press the [▶] key to enter the minor item.
3. Press the [▲]/[▼] key to select the “F2”.
4. Press the [▶] key, “20 kHz 0 dBs L-ch/R-ch VOLUME: 25” audio signal is outputted.



5. Press the [BACK] key, return to minor item selection screen.

4-2-5. CH separation (L-ch) check

“1 kHz 0 dBs L-ch VOLUME: 25” audio signal is outputted.

Checking method:

1. Enter the test mode.
2. Press the [▲]/[▼] key to select the “AUDIO”, and press the [▶] key to enter the minor item.
3. Press the [▲]/[▼] key to select the “SEPLR”.
4. Press the [▶▶] key, “1 kHz 0 dBs L-ch VOLUME: 25” audio signal is outputted.

liquid crystal display



5. Press the [BACK] key, return to minor item selection screen.

4-2-6. CH separation (R-ch) check

“1 kHz 0 dBs R-ch VOLUME: 25” audio signal is outputted.

Checking method:

1. Enter the test mode.
2. Press the [▲]/[▼] key to select the “AUDIO”, and press the [▶] key to enter the minor item.
3. Press the [▲]/[▼] key to select the “SEPRL”.
4. Press the [▶▶] key, “1 kHz 0 dBs R-ch VOLUME: 25” audio signal is outputted.

liquid crystal display



5. Press the [BACK] key, return to minor item selection screen.

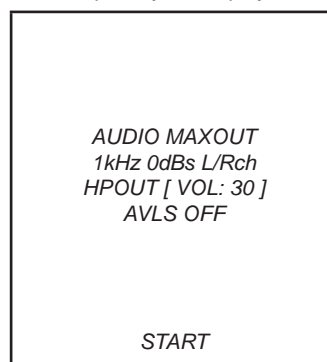
4-2-7. Maximum output check

“1 kHz 0 dBs L-ch/R-ch VOLUME: 30” (Headphone output when AVLS operates: “1 kHz 0 dBs L-ch/R-ch VOLUME: 13”) audio signal is outputted.

Checking method:

1. Enter the test mode.
2. Press the [▲]/[▼] key to select the “AUDIO”, and press the [▶] key to enter the minor item.
3. Press the [▲]/[▼] key to select the “MAXOUT”.
4. Press the [▶▶] key, “1 kHz 0 dBs L-ch/R-ch VOLUME: 30” (Headphone output when AVLS operates: “1 kHz 0 dBs L-ch/R-ch VOLUME: 13”) audio signal is outputted.

liquid crystal display



5. In this state, each time the [OPTION] key is pressed, AVLS on/off switch is performed.
6. Press the [BACK] key, return to minor item selection screen.

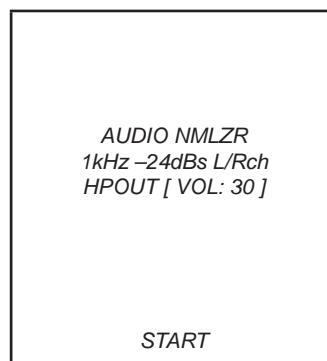
4-2-8. Normalizer check

“1 kHz – 24 dBs L-ch/R-ch VOLUME: 30” audio signal is outputted.

Checking method:

1. Enter the test mode.
2. Press the [▲]/[▼] key to select the “AUDIO”, and press the [▶] key to enter the minor item.
3. Press the [▲]/[▼] key to select the “NMLZR”.
4. Press the [▶▶] key, “1 kHz – 24 dBs L-ch/R-ch VOLUME: 30” audio signal is outputted.

liquid crystal display



5. Press the [BACK] key, return to minor item selection screen.

4-2-9. Sound pressure regulation level check

“1 kHz 0 dBs L-ch/R-ch VOLUME: 30” audio signal is outputted.

Checking method:

1. Enter the test mode.
2. Press the [▲]/[▼] key to select the “AUDIO”, and press the [▶] key to enter the minor item.
3. Press the [▲]/[▼] key to select the “SPCHK”.
4. Press the [▶||] key, “1 kHz 0 dBs L-ch/R-ch VOLUME: 30” audio signal is outputted.

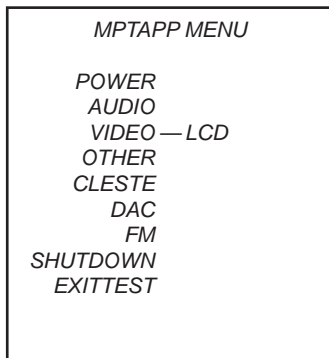
liquid crystal display



5. Press the [BACK] key, return to minor item selection screen.

4-3. Video

liquid crystal display



4-3-1. LCD display check

Liquid crystal display is checked.

Checking method:

1. Enter the test mode.
2. Press the [▲]/[▼] key to select the “VIDEO”, and press the [▶] key to select the “LCD”.
3. Press the [▶||] key, all black is displayed on the liquid crystal display.
4. In this state, each time the [OPTION] key is pressed, the screen display changes in the following order.

All black (default) → All red → All green → All blue → All white → Color bar → Maximum drawing size confirmation

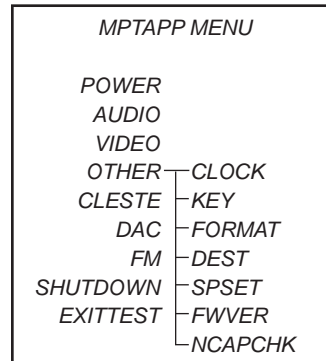
Maximum drawing size confirmation:

All blue (All sides are red) is displayed. Whether red in all sides is seen is confirmed.

5. In this state, each time the [VOL -] key is pressed, LCD back light brightness min/max/middle switch is performed.
6. Press the [BACK] key, return to minor item selection screen.

4-4. Other

liquid crystal display



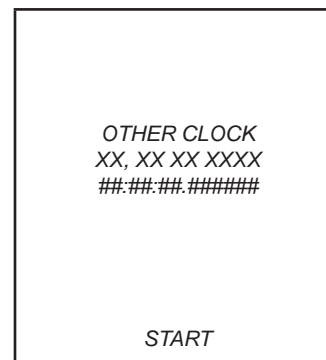
4-4-1. Clock check

The movement of an internal clock is confirmed.

Checking method:

1. Enter the test mode.
2. Press the [▲]/[▼] key to select the “OTHER”, and press the [▶] key to enter the minor item.
3. Press the [▲]/[▼] key to select the “CLOCK”.
4. Press the [▶||] key, date and time are displayed.

liquid crystal display



XX, XX XX XXXX : Date
##:##:##.##### : Time

“START” changes into “OK” if the movement of an internal clock is confirmed.

5. Press the [BACK] key, return to minor item selection screen.

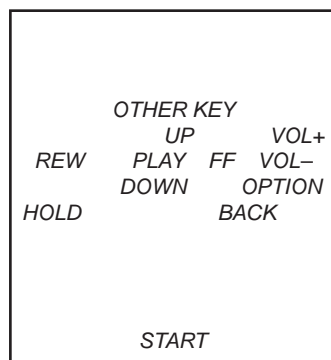
4-4-2. Key check

The operation of the key is confirmed.

Checking method:

1. Enter the test mode.
2. Press the [▲]/[▼] key to select the "OTHER", and press the [▶] key to enter the minor item.
3. Press the [▲]/[▼] key to select the "KEY".
4. Press the [▶||] key, all keys are displayed.

liquid crystal display



5. The character corresponding to the key is selected every time the key is pressed. "START" changes into "OK" if all keys are pressed.
6. Slide the [HOLD] key from ON to OFF, return to minor item selection screen.

4-4-3. Format

The user's area is formatted, and ICV for the video and ICV for audio are initialized.

Note: Not used for the servicing.
Format the set from "Settings" → "Common settings" → "Format" when it home menu in usually operates when the set should format it.

4-4-4. Destination setting

The destination setting, language information, and sound pressure regulation information are written in the NAND flash memory.

Note: Not used for the servicing.

4-4-5. Sound pressure regulation setting

ON/OFF of sound pressure regulation is confirmed.

Note: Not used for the servicing.

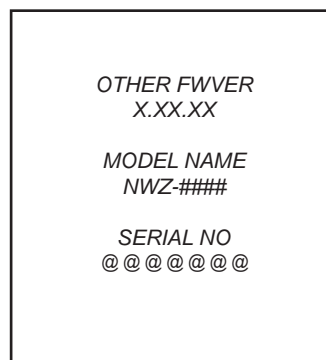
4-4-6. Firmware version check

The firmware version is displayed.

Checking method:

1. Enter the test mode.
2. Press the [▲]/[▼] key to select the "OTHER" and press the [▶] key to enter the minor item.
3. Press the [▲]/[▼] key to select the "FWVER".
4. Press the [▶||] key, the firmware version is displayed.

liquid crystal display



X.XX.XX : Firmware version
: S515, S516, S615F, S616F or S618F
@@@@@ : Serial No.

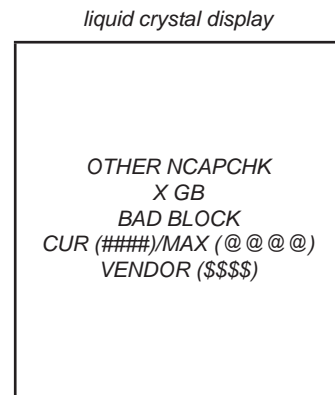
5. Press the [BACK] key, return to minor item selection screen.

4-4-7. NAND capacity check

Capacity of NAND flash memory, present bud block, maximum bud block, and vender ID are displayed.

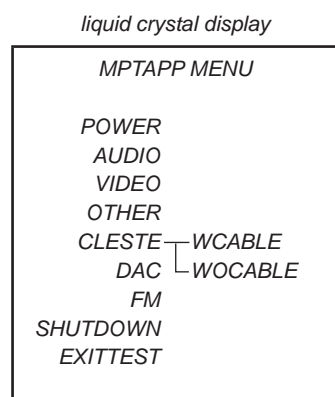
Checking method:

1. Enter the test mode.
2. Press the [▲]/[▼] key to select the "OTHER", and press the [▶] key to enter the minor item.
3. Press the [▲]/[▼] key to select the "NCAPCHK".
4. Press the [▶] key, capacity of NAND flash memory, present bud block, maximum bud block, and vender ID are displayed.



- X : Capacity of NAND flash memory
2/4/8 (2 GB/4 GB/ 8 GB)
 - @@@@ : Number of present bud block
(It makes an error the acquisition of the number of bud blocks at "-1")
 - #### : Number of maximum bud block
(It makes an error the acquisition of the vender ID at "-1")
 - \$\$\$\$: Vender ID of NAND flash memory
0x98/0xec (TOSHIBA/SAMSUNG)
(It makes an error the acquisition of the vender ID at "-1")
5. Press the [BACK] key, return to minor item selection screen.

4-5. CLESTE



4-5-1. Clear stereo setting (With cable)

This mode is according to an original sound playback, for adjustment to right and left sound.

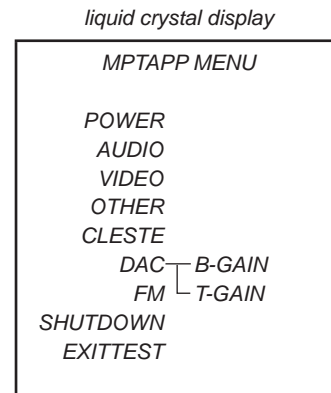
Note: Not used for the servicing.

4-5-2. Clear stereo setting (No cable)

This mode is according to an original sound playback, for adjustment to right and left sound.

Note: Not used for the servicing.

4-6. DAC



4-6-1. BASS-Gain/Fc setting

This mode is adjustment for the sound of BASS when playback.

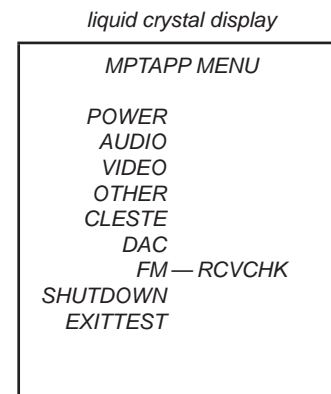
Note: Not used for the servicing.

4-6-2. TREBLE-Gain/Fc setting

This mode is adjustment for the sound of TREBLE when playback.

Note: Not used for the servicing.

4-7. FM (NWZ-S615F/S616F/S618F only)

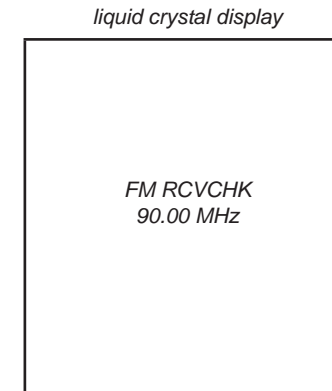


4-7-1. Reception output check

FM tuning checked.

Checking method:

1. Enter the test mode.
2. Press the [▲]/[▼] key to select the "FM", and press the [▶] key to select the "RCVCHK".
3. Press the [▶] key, "90.00 MHz".
4. In this state, each time the [OPTION] key is pressed, frequency is changes in the following order.



90.00 MHz (default) → 76.00 MHz → 95.75 MHz → 107.75 MHz → 87.50 MHz → 98.00 MHz → 108.00 MHz

5. Press the [BACK] key, return to minor item selection screen.

4-8. Shutdown

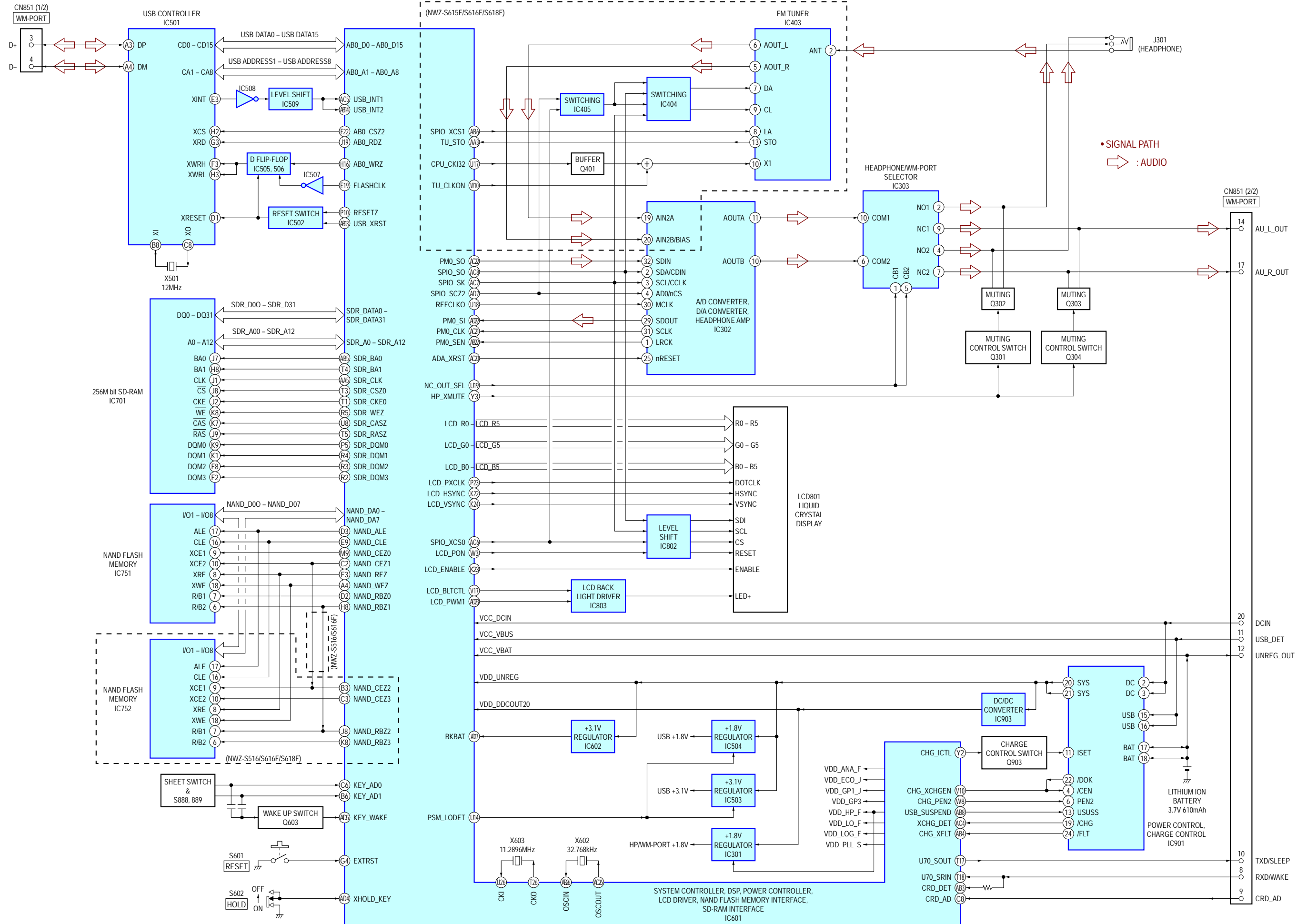
Function that power supply of set can be turned off without ending static test mode.

Procedure:

1. Enter the test mode.
2. Press the [▲]/[▼] key to select the "SHUTDOWN", and press the [▶] key to select the "SURE ?".
3. Press the [▶] key, turn the power off while having entered the test mode.

SECTION 5
DIAGRAMS

5-1. BLOCK DIAGRAM



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

For Printed Wiring Boards.

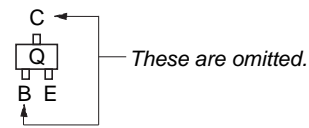
Note:

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

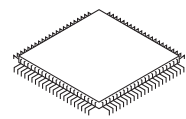
Caution:

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

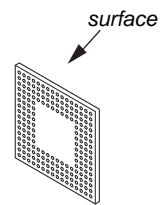
- MAIN board is multi-layer printed board. However, the patterns of intermediate-layers have not been included in diagrams.
- Indication of transistor.



- Lead layouts



Lead layout of conventional IC



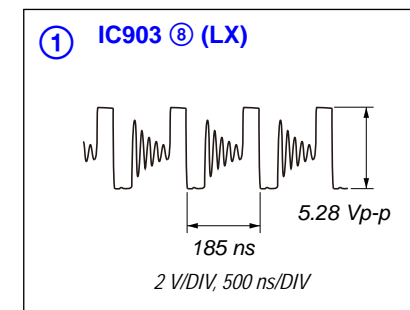
CSP (Chip Size Package)

For Schematic Diagrams.

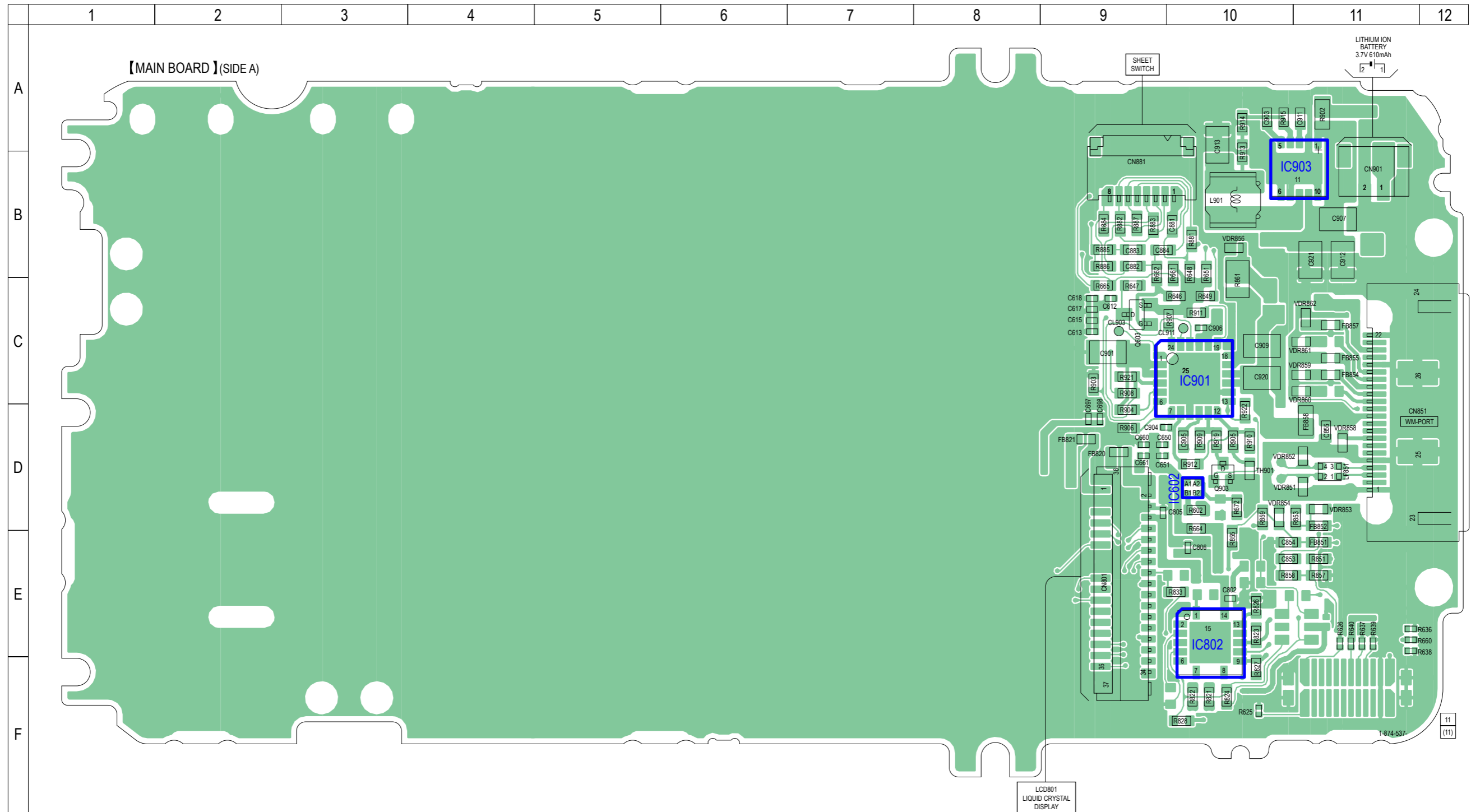
Note:

- 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 $1/4$ W or less unless otherwise specified.
- : panel designation.
- : B+ Line.
- Power voltage is dc 3.7 V and fed with regulated dc power supply from CN901 pin ① and pin ② on the MAIN board.
- Voltages and waveform are dc with respect to ground under no-signal conditions.
no mark: PLAY BACK
- Waveform is taken with an oscilloscope. Voltages variation may be noted due to normal production tolerances.
- Voltages are taken with a VOM (Input impedance 10 M Ω).
- Voltage variations may be noted due to normal production tolerances.
- Circled number refer to waveform.
- Signal path.
⇒ : AUDIO
⇒⇒ : VIDEO
- The voltage and waveform of CSP (chip size package) cannot be measured, because its lead layout is different form that of conventional IC.
- Abbreviation
FR : French model

- Waveform
– MAIN Board –



5-2. PRINTED WIRING BOARD - MAIN Board (Side A) - •  : Uses unleaded solder.



• **Semiconductor Location**

Ref. No.	Location
IC602	D-10
IC802	E-10
IC901	C-10
IC903	B-11
Q603	C-9
Q903	D-10

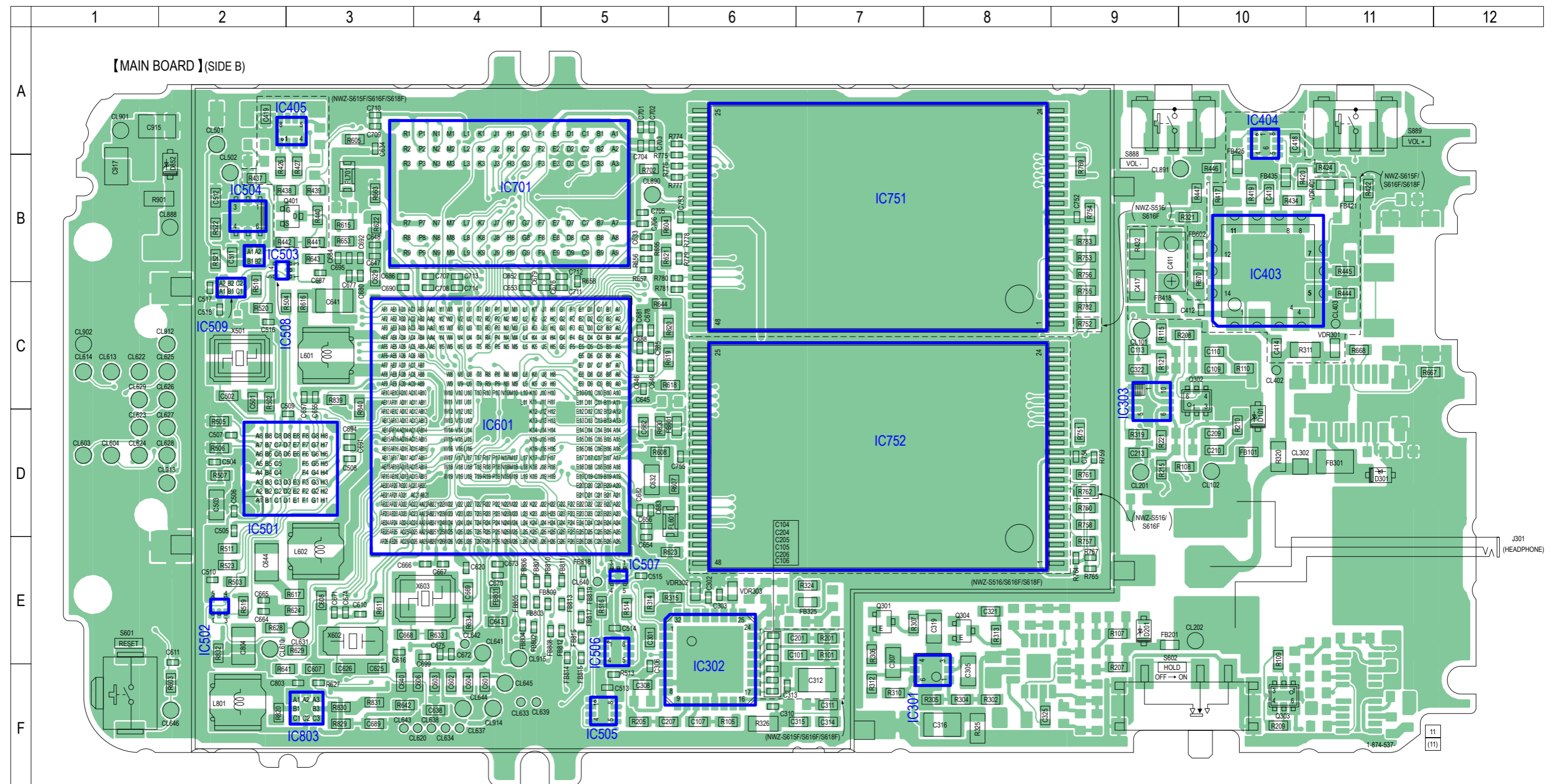
Note 1: When the MAIN board is replaced, format it according to the "NOTE OF MAIN BOARD REPLACING" (refer to page 4) of the servicing notes.

Note 2: When IC602, IC802, IC901 and IC903 on the MAIN board is damaged, exchange the new MAIN board for the MAIN board which IC damaged.

Note 3: When CN881 on the MAIN board is damaged, exchange the new MAIN board for the MAIN board which connector damaged.

Note 4: When the LCD SUB ASSY (LCD801) is replaced, refer to SUPPLEMENT-2.

5-3. PRINTED WIRING BOARD - MAIN Board (Side B) - •  : Uses unleaded solder.



Note 1: When the MAIN board is replaced, format it according to the "NOTE OF MAIN BOARD REPLACING" (refer to page 4) of the servicing notes.

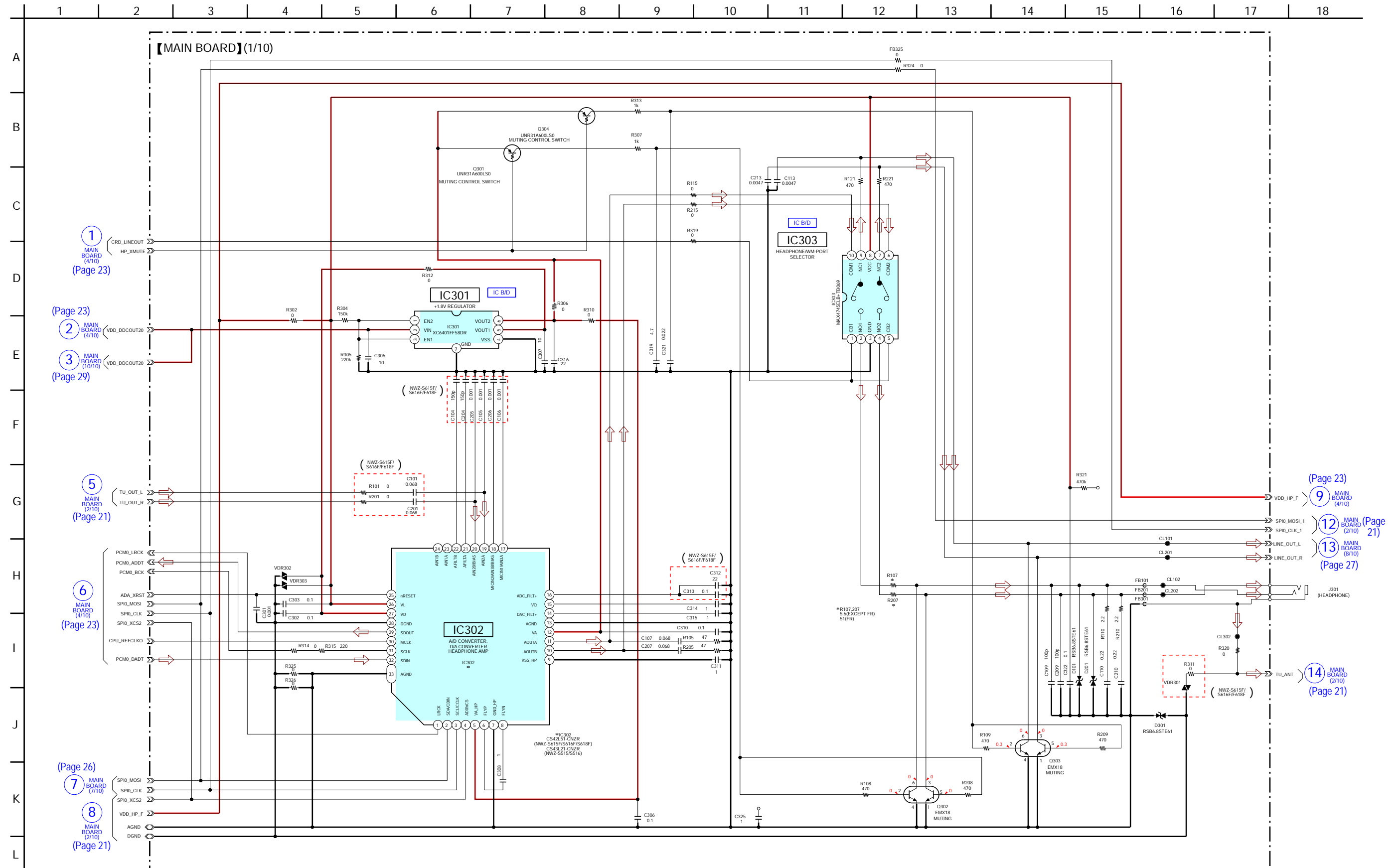
Note 2: When C104 and C204 on the MAIN board is damaged, exchange the new MAIN board for the MAIN board which capacitor damaged.

Note 3: When IC301, IC302, IC303, IC404, IC405, IC501, IC503, IC505, IC506, IC507, IC508, IC509, IC601, IC701, IC751, IC752 and IC803 on the MAIN board is damaged, exchange the new MAIN board for the MAIN board which IC damaged.

• **Semiconductor Location**

Ref. No.	Location	Ref. No.	Location	Ref. No.	Location
D101	D-10	IC501	D-3	IC751	B-7
D201	E-9	IC502	E-2	IC752	D-7
D301	D-11	IC503	B-2	IC803	F-3
D852	B-2	IC504	B-2		
		IC505	F-5	Q301	E-7
IC301	F-8	IC506	E-5	Q302	C-10
IC302	E-6	IC507	E-5	Q303	F-10
IC303	C-9	IC508	B-2	Q304	E-8
IC403	B-10	IC509	C-2	Q401	B-3
IC404	A-10	IC601	D-4		
IC405	A-3	IC701	B-4		

5-4. SCHEMATIC DIAGRAM - MAIN Board (1/10) - • See page 30 for IC Block Diagrams. • See page 33 for IC Pin Function Description.

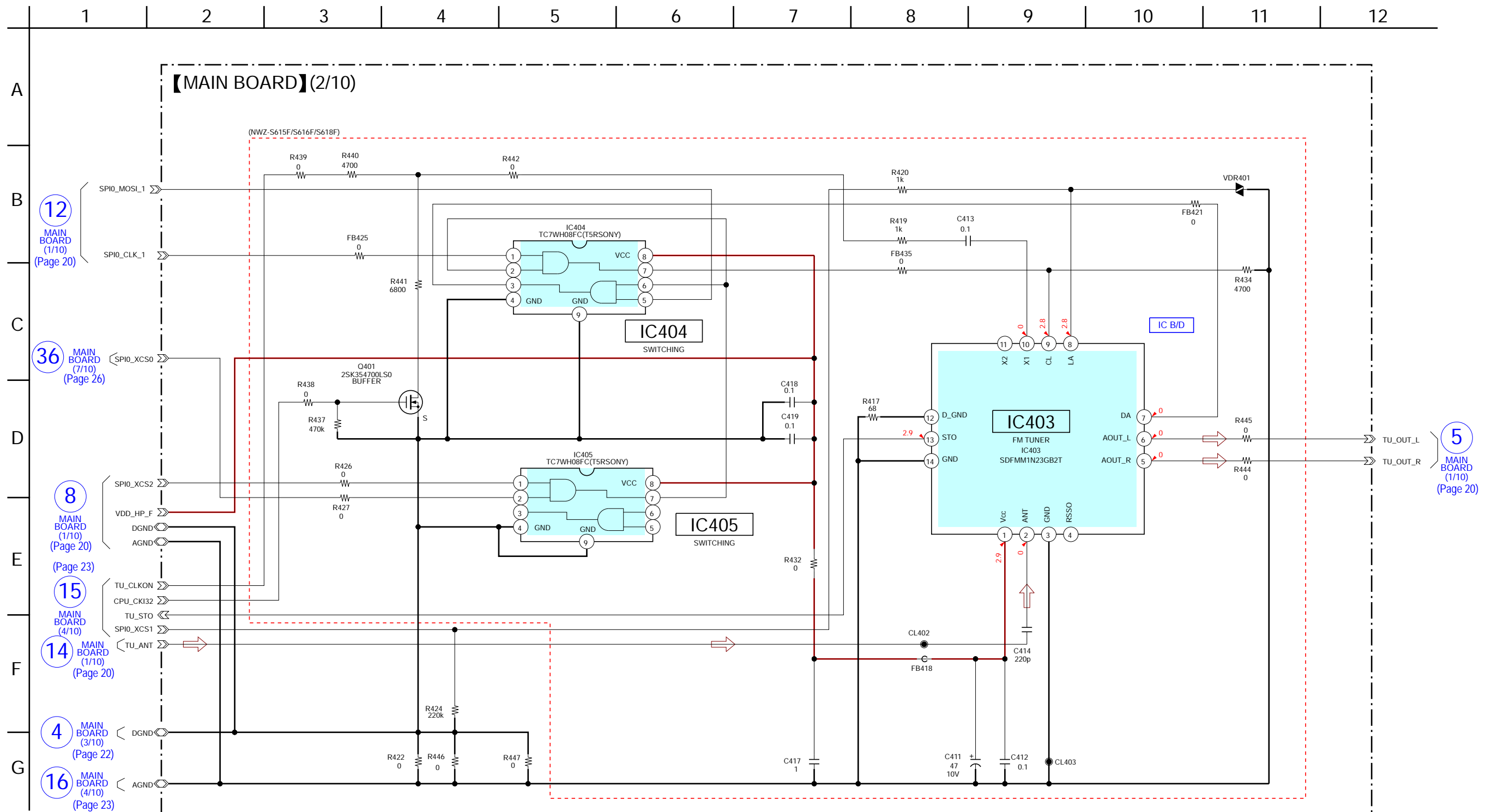


Note 1: When the MAIN board is replaced, format it according to the "NOTE OF MAIN BOARD REPLACING" (refer to page 4) of the servicing notes.

Note 2: When C104 and C204 on the MAIN board is damaged, exchange the new MAIN board for the MAIN board which capacitor damaged.

Note 3: When IC301, IC302 and IC303 on the MAIN board is damaged, exchange the new MAIN board for the MAIN board which IC damaged.

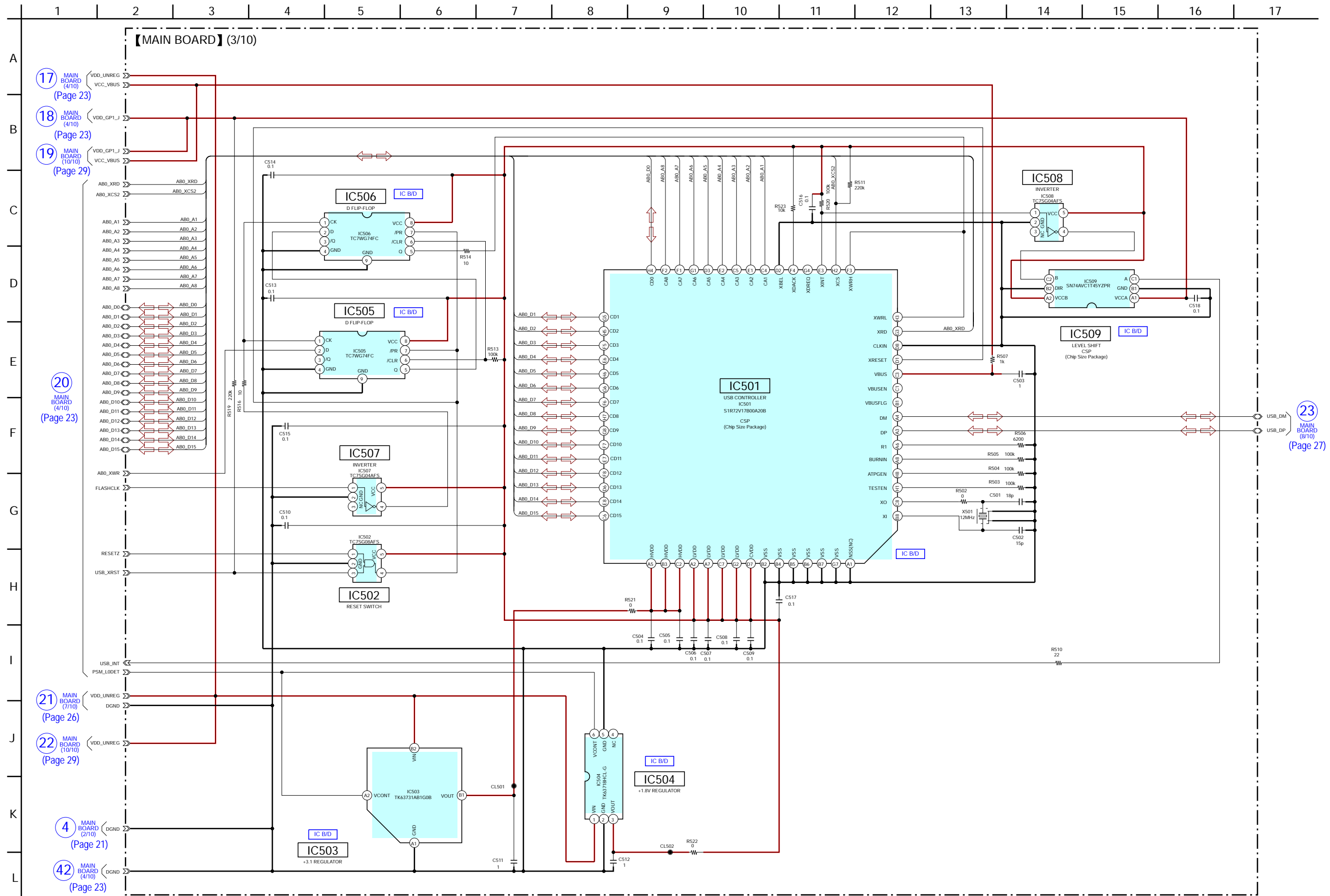
5-5. SCHEMATIC DIAGRAM - MAIN Board (2/10) - • See page 30 for IC Block Diagrams.



Note 1: When the MAIN board is replaced, format it according to the "NOTE OF MAIN BOARD REPLACING" (refer to page 4) of the servicing notes.

Note 2: When IC404 and IC405 on the MAIN board is damaged, exchange the new MAIN board for the MAIN board which IC damaged.

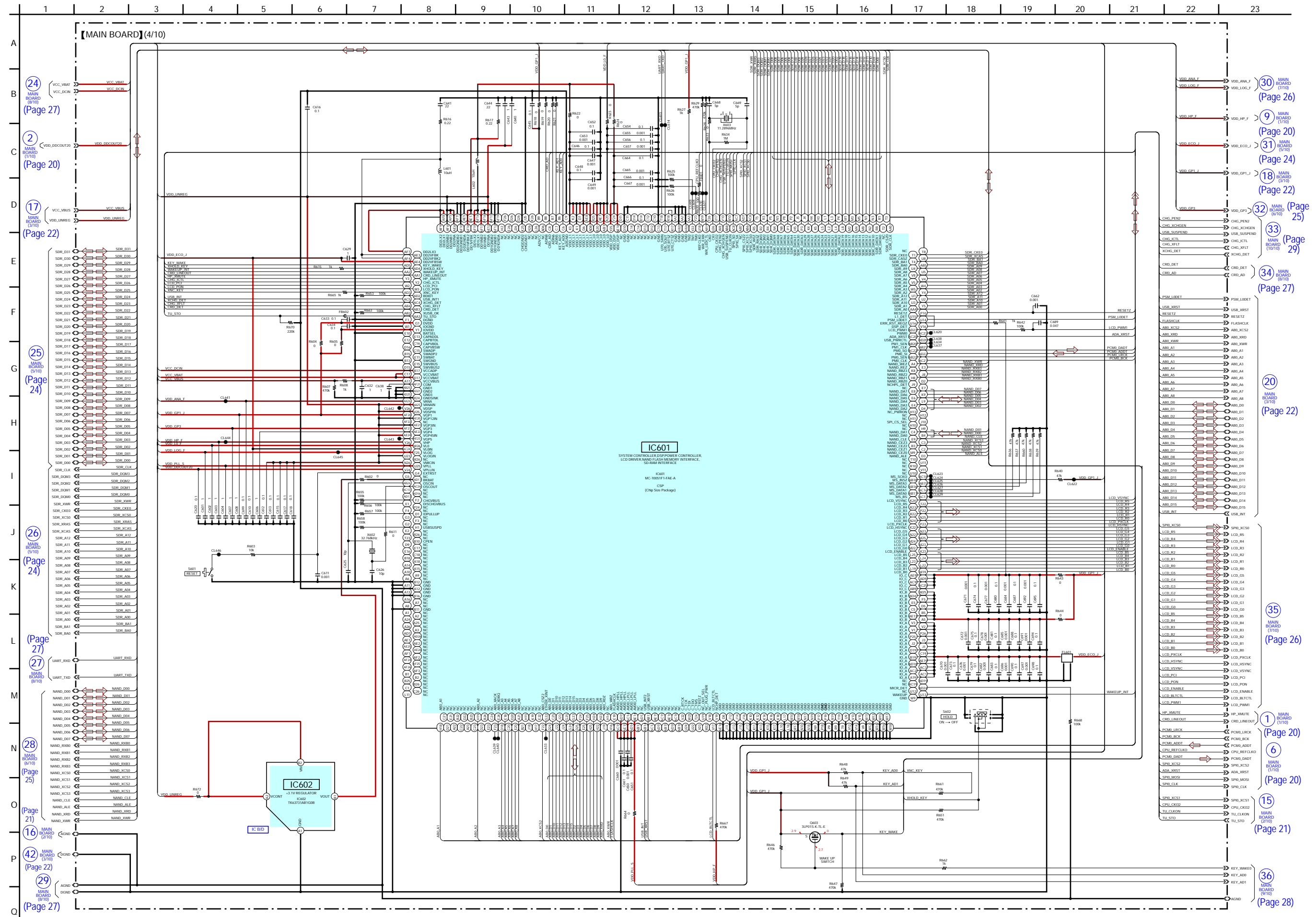
5-6. SCHEMATIC DIAGRAM - MAIN Board (3/10) - • See page 30 for IC Block Diagrams.



Note 1: When the MAIN board is replaced, format it according to the "NOTE OF MAIN BOARD REPLACING" (refer to page 4) of the servicing notes.

Note 2: When IC501, IC503, IC505, IC506, IC507, IC508 and IC509 on the MAIN board is damaged, exchange the new MAIN board for the MAIN board which IC damaged.

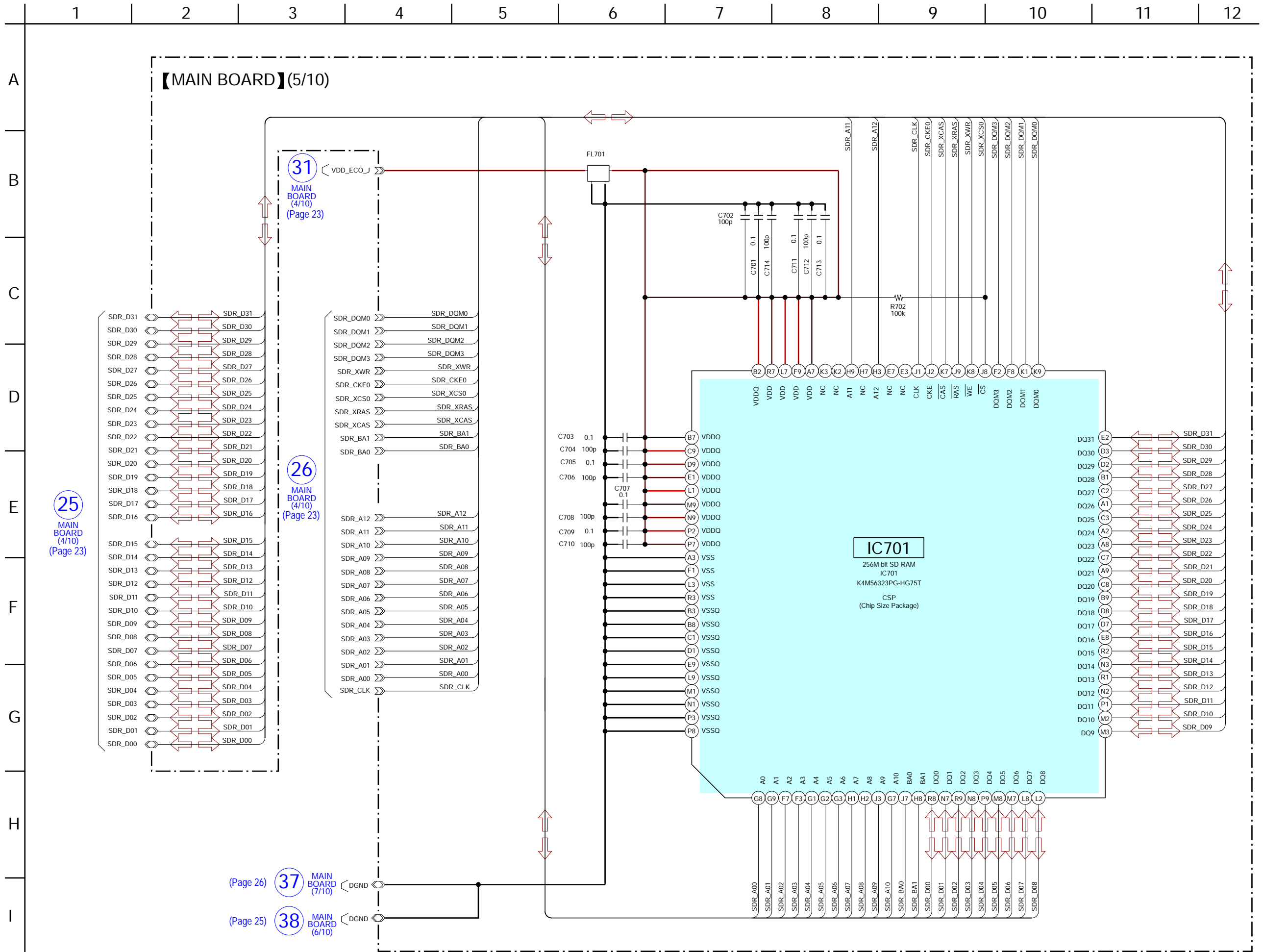
5-7. SCHEMATIC DIAGRAM - MAIN Board (4/10) - • See page 30 for IC Block Diagrams. • See page 33 for IC Pin Function Description.



Note 1: When the MAIN board is replaced, format it according to the "NOTE OF MAIN BOARD REPLACING" (refer to page 4) of the servicing notes.

Note 2: When IC601 and IC602 on the MAIN board is damaged, exchange the new MAIN board for the MAIN board which IC damaged.

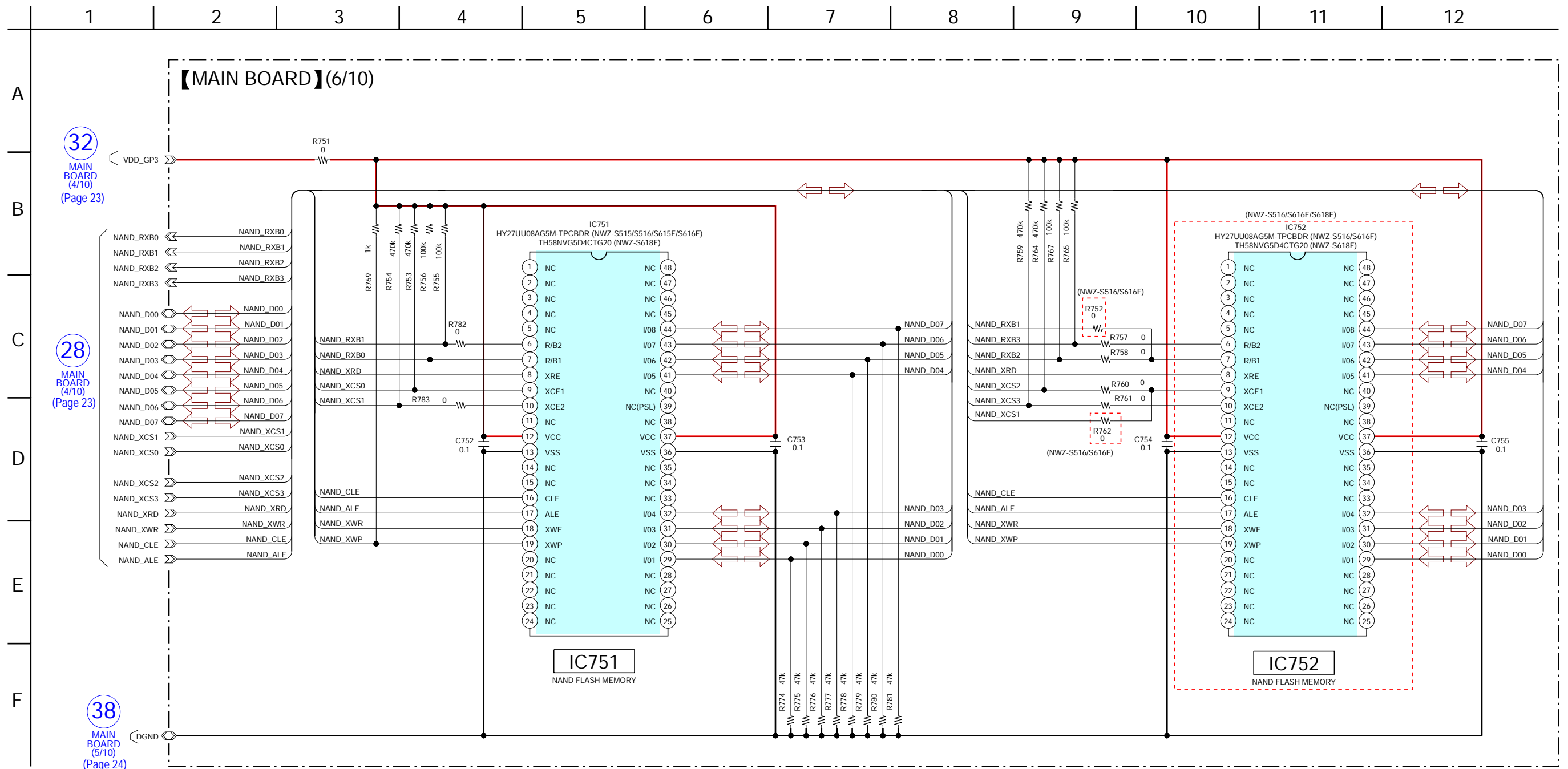
5-8. SCHEMATIC DIAGRAM - MAIN Board (5/10) -



Note 1: When the MAIN board is replaced, format it according to the "NOTE OF MAIN BOARD REPLACING" (refer to page 4) of the servicing notes.

Note 2: When IC701 on the MAIN board is damaged, exchange the new MAIN board for the MAIN board which IC damaged.

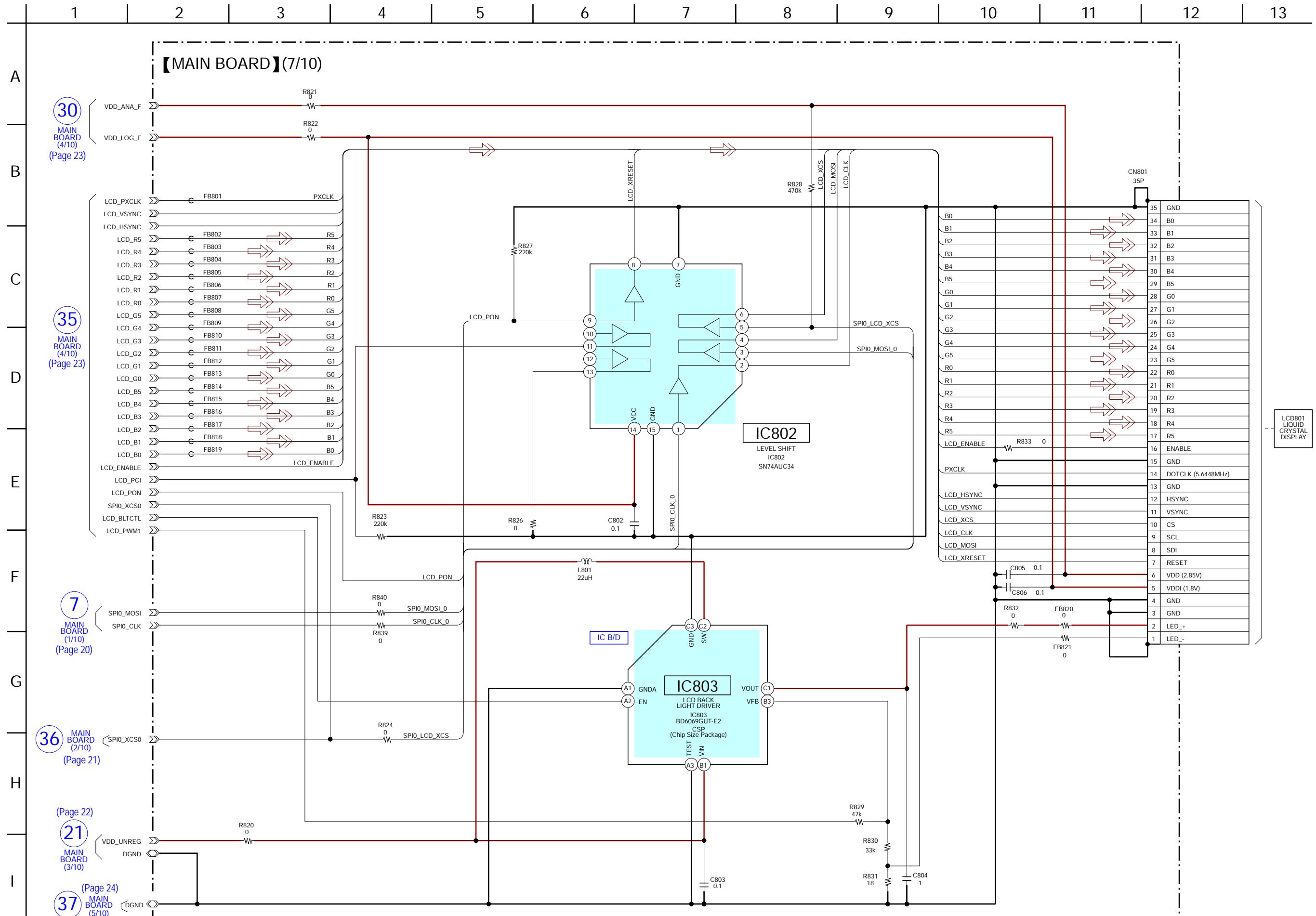
5-9. SCHEMATIC DIAGRAM - MAIN Board (6/10) -



Note 1: When the MAIN board is replaced, format it according to the "NOTE OF MAIN BOARD REPLACING" (refer to page 4) of the servicing notes.

Note 2: When IC751 and IC752 on the MAIN board is damaged, exchange the new MAIN board for the MAIN board which IC damaged.

5-10. SCHEMATIC DIAGRAM - MAIN Board (7/10) - • See page 30 for IC Block Diagrams.

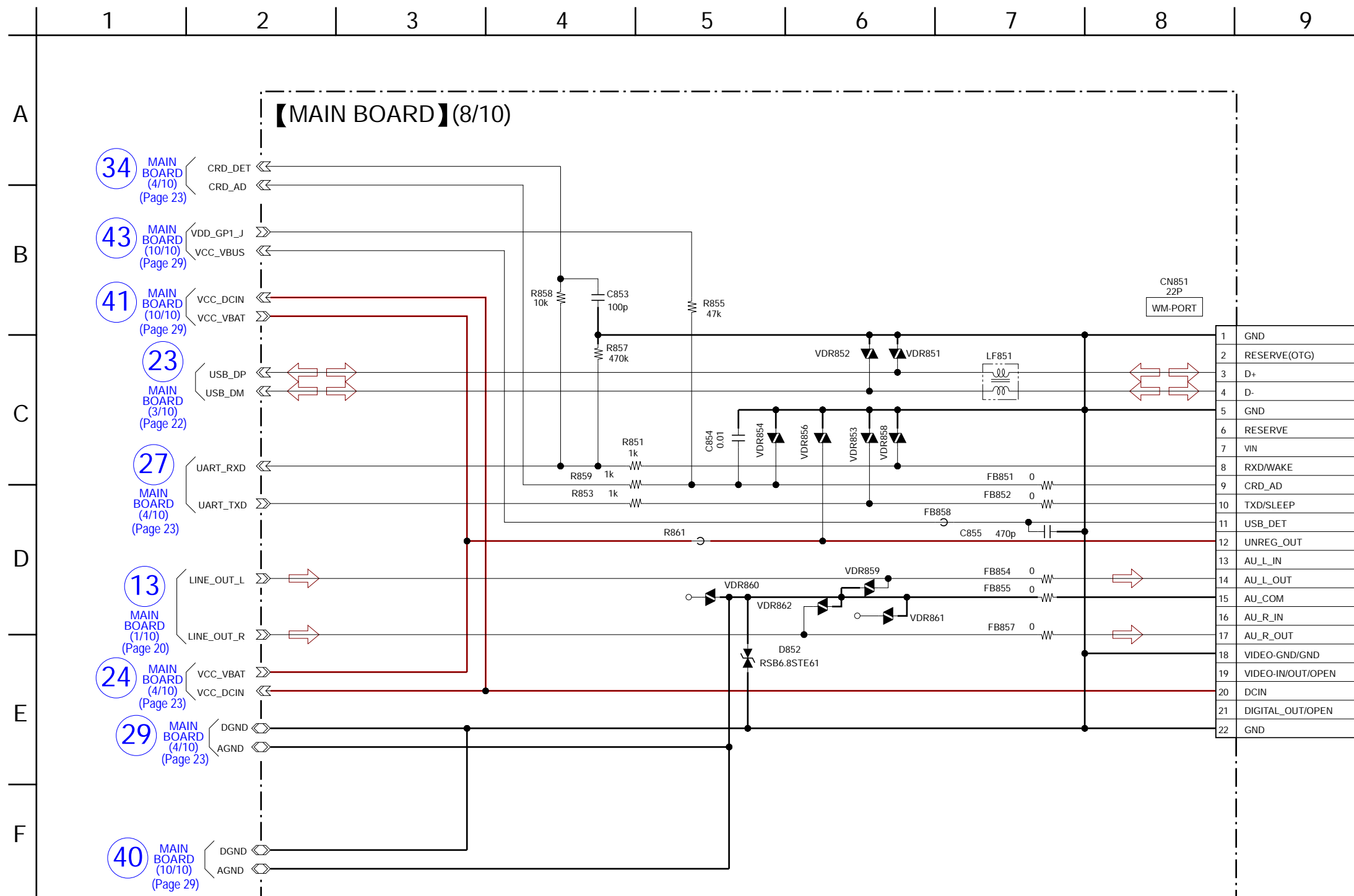


Note 1: When the MAIN board is replaced, format it according to the "NOTE OF MAIN BOARD REPLACING" (refer to page 4) of the servicing notes.

Note 2: When IC802 and IC803 on the MAIN board is damaged, exchange the new MAIN board for the MAIN board which IC damaged.

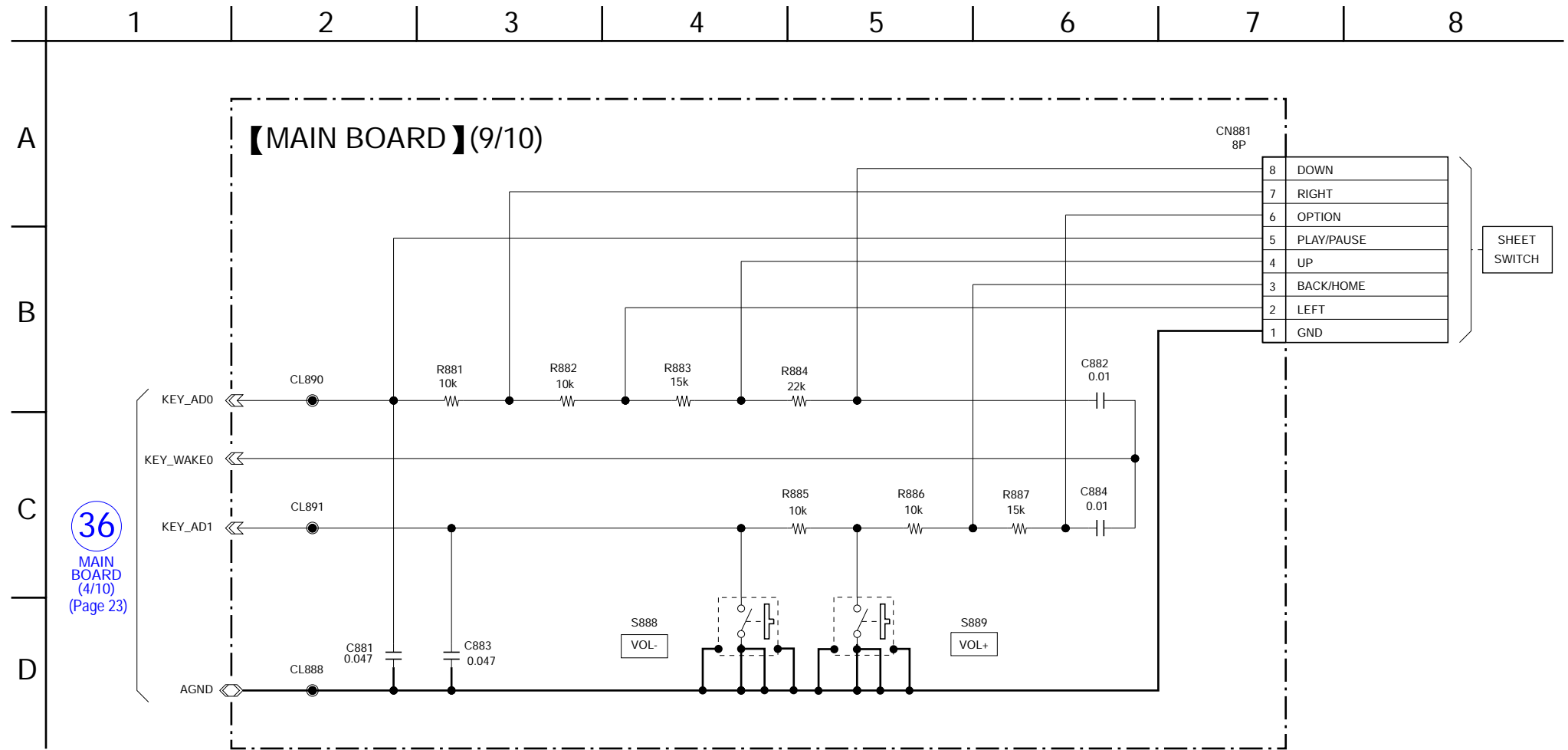
Note 3: When the LCD SUB ASSY (LCD801) is replaced, refer to SUPPLEMENT-2.

5-11. SCHEMATIC DIAGRAM - MAIN Board (8/10) -



Note: When the MAIN board is replaced, format it according to the "NOTE OF MAIN BOARD REPLACING" (refer to page 4) of the servicing notes.

5-12. SCHEMATIC DIAGRAM - MAIN Board (9/10) -

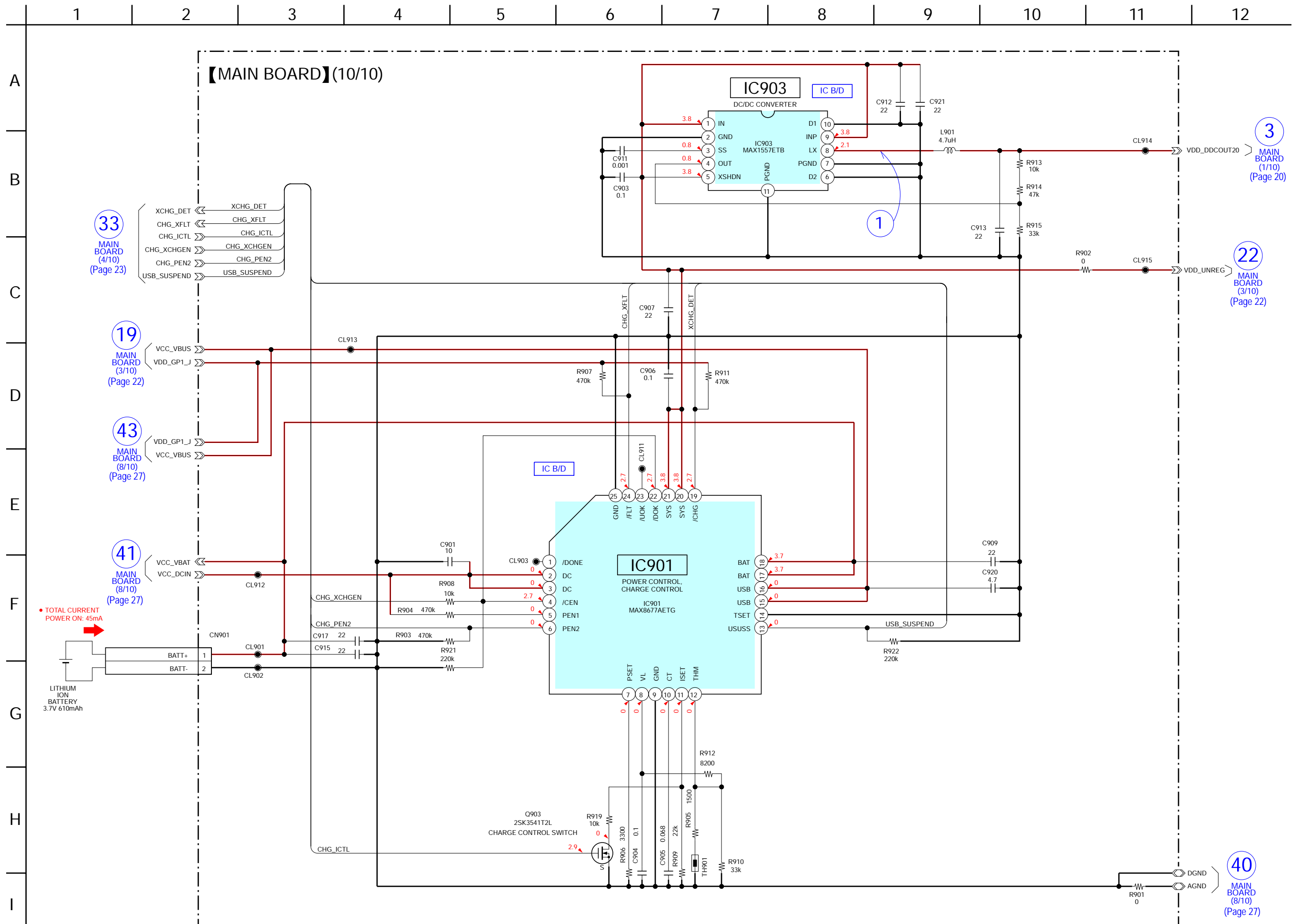


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MAIN BOARD (4/10)
(Page 23)

Note 1: When the MAIN board is replaced, format it according to the "NOTE OF MAIN BOARD REPLACING" (refer to page 4) of the servicing notes.

Note 2: When CN881 on the MAIN board is damaged, exchange the new MAIN board for the MAIN board which connector damaged.

5-13. SCHEMATIC DIAGRAM - MAIN Board (10/10) - • See page 17 for Waveform. • See page 30 for IC Block Diagrams.



Note 1: When the MAIN board is replaced, format it according to the "NOTE OF MAIN BOARD REPLACING" (refer to page 4) of the servicing notes.

Note 2: When IC901 and IC903 on the MAIN board is damaged, exchange the new MAIN board for the MAIN board which IC damaged.

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MAIN BOARD (8/10)
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22
MAIN BOARD (3/10)
(Page 22)

3
MAIN BOARD (1/10)
(Page 20)

33
MAIN BOARD (4/10)
(Page 23)

19
MAIN BOARD (3/10)
(Page 22)

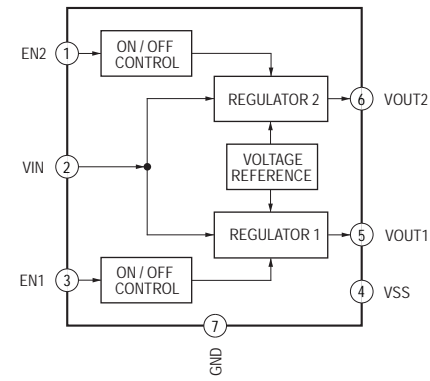
43
MAIN BOARD (8/10)
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MAIN BOARD (8/10)
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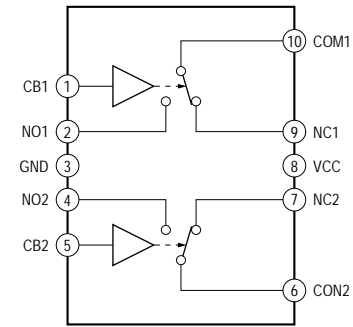
• IC Block Diagrams

– MAIN Board –

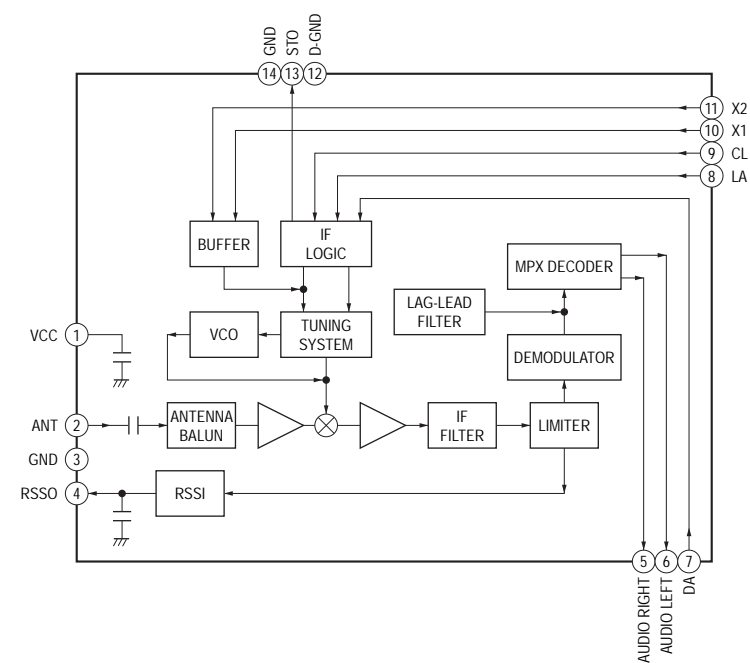
IC301 XC6401FF58DR



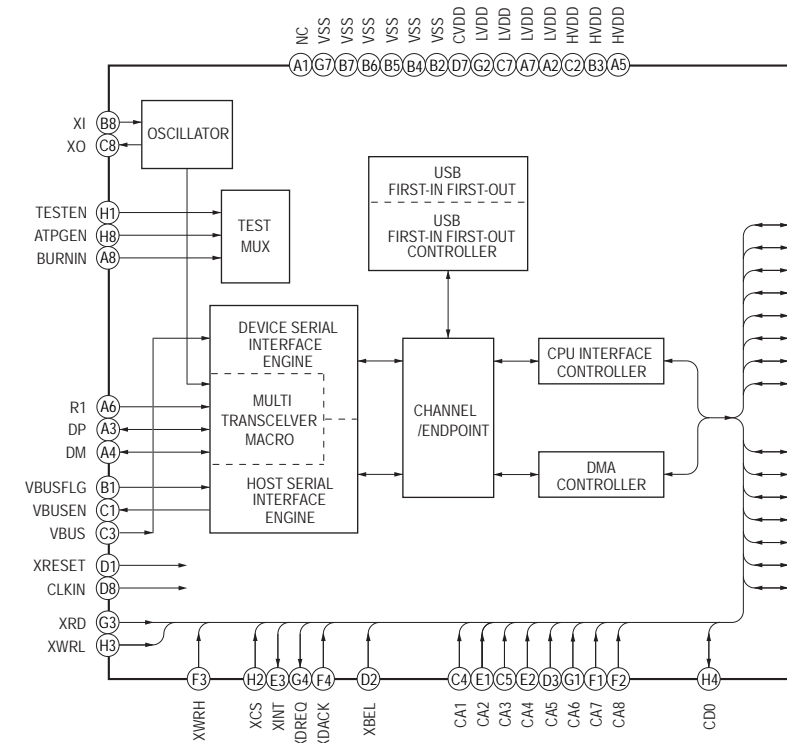
IC303 MAX4745



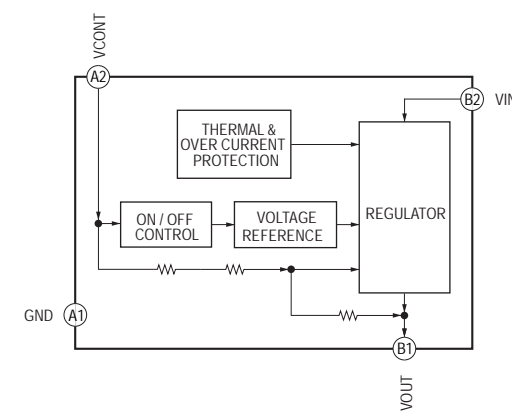
IC403 SDFMM1N23GB2T



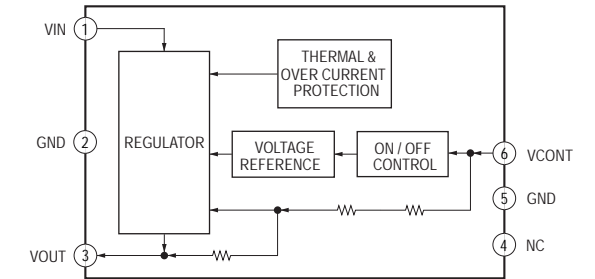
IC501 S1R72V17B00A20B



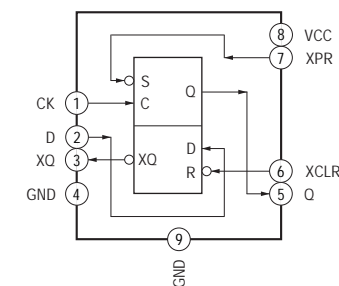
IC503, 602 TK63731BCB-G



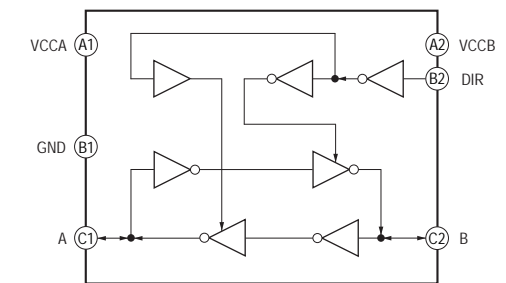
IC504 TK63718HCL-G



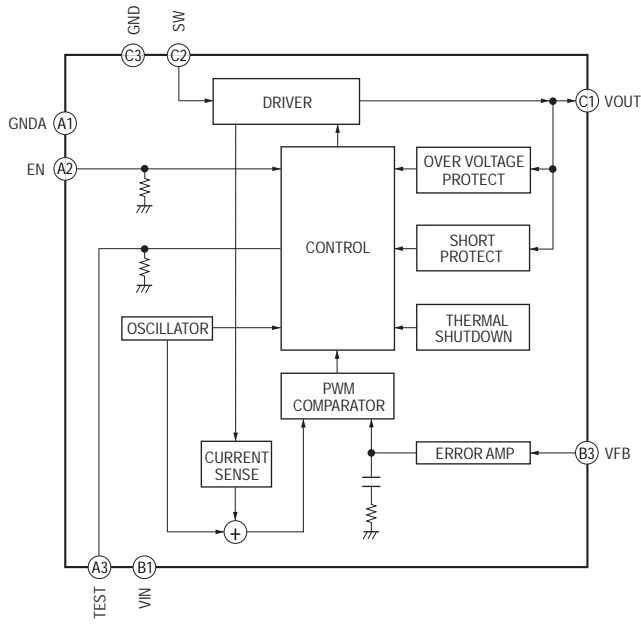
IC505, 506 TC7WG74FC



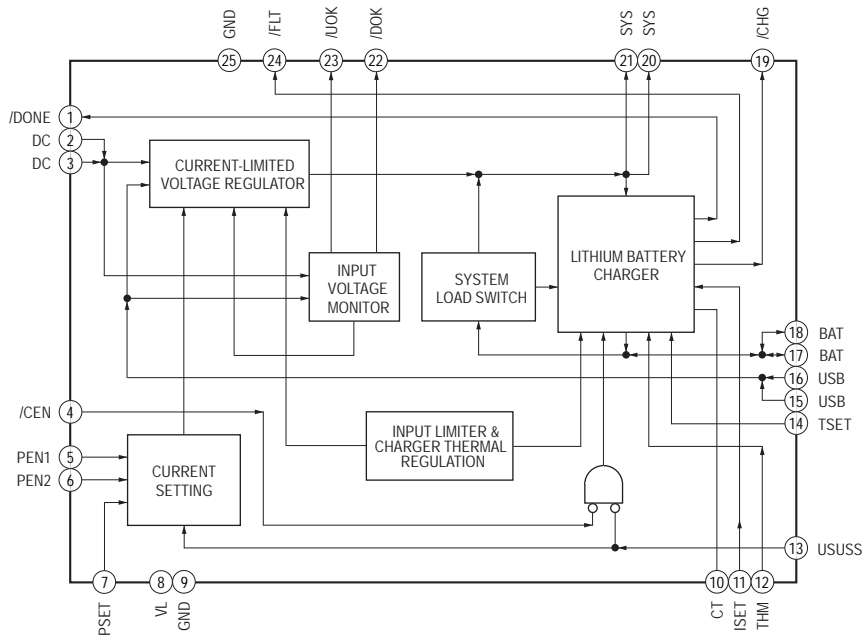
IC509 SN74AVC1T45YZPR



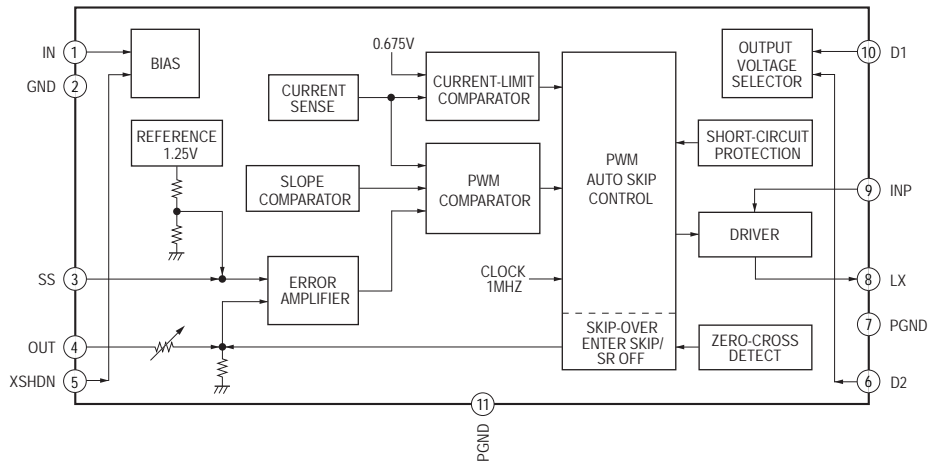
IC803 BD6069GUT-E2



IC901 MAX8677AETG



IC903 MAX1557ETB



• IC Pin Function Description

MAIN BOARD IC302 CS42L51-CNZR (NWZ-S615F/S616F/S618F), CS43L21-CNZR (NWZ-S515/S516)
(A/D CONVERTER, D/A CONVERTER, HEADPHONE AMP)

Pin No.	Pin Name	I/O	Description
1	LRCK	O	L/R sampling clock signal output to the system controller
2	SDA/CDIN	I	Serial data input from the system controller
3	SCL/CCLK	I	Serial data transfer clock signal input from the system controller
4	AD0/nCS	I	Chip select signal input from the system controller
5	VA_HP	-	Power supply terminal (+1.8V)
6	FLYP	I	External charge pump capacitor (positive node) connection terminal
7	GND_HP	-	Ground terminal
8	FLYN	I	External charge pump capacitor (negative node) connection terminal
9	VSS_HP	O	Negative voltage from charge pump output terminal
10	AOUTB	O	Analog audio (R-ch) signal output to the headphone and WM-PORT connector
11	AOUTA	O	Analog audio (L-ch) signal output to the headphone and WM-PORT connector
12	VA	-	Power supply terminal (+1.8V)
13	AGND	-	Ground terminal
14	DAC_FILT+	O	Positive reference voltage output terminal
15	VQ	O	Quiescent voltage output terminal
16	ADC_FILT+	O	Positive reference voltage output terminal
17	MICIN1/AIN3A	I	Microphone signal input terminal Not used
18	MICIN2/AIN3B/BIAS	I	Microphone signal input terminal Not used
19	AIN2A	I	Analog audio (L-ch) signal input from the FM tuner (NWZ-S615F/S616F/S618F only)
20	AIN2B/BIAS	I	Analog audio (R-ch) signal input from the FM tuner (NWZ-S615F/S616F/S618F only)
21, 22	AFILTA, AFILTB	O	Filter connection terminal
23	AIN1A	I	Analog audio (L-ch) signal input terminal Not used
24	AIN1B	I	Analog audio (R-ch) signal input terminal Not used
25	nRESET	I	Reset signal input from the system controller
26	VL	-	Power supply terminal (+2.9V)
27	VD	-	Power supply terminal (+1.8V)
28	DGND	-	Ground terminal
29	SDOUT	O	Serial audio data output to the system controller
30	MCLK	I	Master clock signal input from the system controller
31	SCLK	O	Bit clock signal output to the system controller
32	SDIN	I	Serial audio data input from the system controller
33	AGND	-	Ground terminal

NWZ-S515/S516/S615F/S616F/S618F

MAIN BOARD IC601 MC-10051F1-FAE-A (SYSTEM CONTROLLER, DSP, POWER CONTROLLER, LCD DRIVER, NAND FLASH MEMORY INTERFACE, SD-RAM INTERFACE)

Pin No.	Pin Name	I/O	Description
A1 to A3	NC	-	Not used
A4	NAND_WEZ	O	Write enable signal output to the NAND flash memory
A5	IO_B	-	Not used
A6 to A10	NC	-	Not used
A11 to A13	GND	-	Ground terminal
A14 to A16	NC	-	Not used
A17	VCCVBUS	I	Power supply input terminal (+5V)
A18	NC	-	Not used
A19	IO_A	-	Not used
A20	VDD_L0	I	Power supply input terminal (+1.2V)
A21	AB0_A8	O	Address signal output to the USB controller
A22 to A26	NC	-	Not used
B1, B2	NC	-	Not used
B3	NAND_CEZ2	O	Chip enable signal output to the NAND flash memory (NWZ-S516/S616F/S618F only)
B4	NAND_DA0	I/O	Two-way data bus with the NAND flash memory
B5	IO_B	-	Not used
B6	KEY_AD1	I	Key input terminal (A/D input)
B7, B8	ADIN6, ADIN8	-	Not used
B9	ADVCC	I	Power supply input terminal (+2.85V)
B10	CPEN	-	Not used
B11, B12	GND	-	Ground terminal
B13	SWGND	-	Ground terminal
B14	NC	-	Not used
B15	SWADP2	-	Not used
B16	GND	-	Ground terminal
B17	VCCADP	I	Power supply input terminal (+5V)
B18	NC	-	Not used
B19	IO_A	-	Not used
B20	VDD_L0	I	Power supply input terminal (+1.2V)
B21 to B26	NC	-	Not used
C1	NC	-	Not used
C2	NAND_CEZ1	O	Chip enable signal output to the NAND flash memory
C3	NAND_CEZ3	O	Chip enable signal output to the NAND flash memory (NWZ-S516/S616F/S618F only)
C4	NAND_DA1	I/O	Two-way data bus with the NAND flash memory
C5	IO_B	-	Not used
C6	KEY_AD0	I	Key input terminal (A/D input)
C7	ADIN5	-	Not used
C8	CRD_AD	I	A/D value detection signal input from the WM-PORT connector
C9	ADGND	-	Ground terminal
C10	NC	-	Not used
C11	GND	-	Ground terminal
C12	NC	-	Not used
C13	GND	-	Ground terminal
C14	NC	-	Not used
C15	SWADP	-	Not used
C16	CAPVBDL	-	Not used
C17	VCCVBAT	I	Power supply input terminal (+2.3 - 4.2V)
C18	NC	-	Not used
C19	IO_A	-	Not used
C20	AB0_A5	O	Address signal output to the USB controller
C21 to C24	NC	-	Not used
C25	AB0_D1	I/O	Two-way data bus with the USB controller
C26	NC	-	Not used

Pin No.	Pin Name	I/O	Description
D1	IDPULLUP	-	Not used
D2	NAND_RBZ0	O	Read/busy signal output to the NAND flash memory
D3	NAND_ALE	O	Address latch enable signal output to the NAND flash memory
D4	NAND_DA2	I/O	Two-way data bus with the NAND flash memory
D5	IO_B	-	Not used
D6, D7	VDD_L1	I	Power supply input terminal (+1.2V)
D8	GND	-	Ground terminal
D9	NC	-	Not used
D10	GND	-	Ground terminal
D11 to D14	NC	-	Not used
D15	SWVBUS2	-	Not used
D16	CAPVBSW	-	Not used
D17	VCCVBAT	I	Power supply input terminal (+2.3 - 4.2V)
D18	AB0_A3	O	Address signal output to the USB controller
D19	IO_A	-	Not used
D20	AB0_A6	O	Address signal output to the USB controller
D21 to D23	NC	-	Not used
D24, D25	AB0_D0, AB0_D2	I/O	Two-way data bus with the USB controller
D26	NC	-	Not used
E1	DISCHGVBUS	-	Not used
E2	NC	-	Not used
E3	NAND_REZ	O	Read enable signal output to the NAND flash memory
E4	NAND_DA3	I/O	Two-way data bus with the NAND flash memory
E5	IO_B	-	Not used
E6	NAND_DA5	I/O	Two-way data bus with the NAND flash memory
E7	NC	-	Not used
E8	NAND_DA7	I/O	Two-way data bus with the NAND flash memory
E9	NAND_CLE	O	Command latch enable signal output to the NAND flash memory
E10	BATSEL	-	Not used
E11	SWBAT	-	Not used
E12	CAPBTDL	-	Not used
E13	CAPADDL	-	Not used
E14	NC	-	Not used
E15	SWVBUS	-	Not used
E16, E17	NC	-	Not used
E18	AB0_A4	O	Address signal output to the USB controller
E19	FLASHCLK	O	Clock signal output terminal
E20	AB0_A7	O	Address signal output to the USB controller
E21 to E23	NC	-	Not used
E24	AB0_XDRQ	-	Not used
E25	AB0_D4	I/O	Two-way data bus with the USB controller
E26	NC	-	Not used
F1	DGND	-	Ground terminal
F2	CHGVBUS	-	Not used
F3, F4	NC	-	Not used
F5	IO_B	-	Not used
F22	AB0_CSZ2	O	Chip select signal output to the USB controller
F23	AB0_XACK	-	Not used
F24, F25	AB0_D3, AB0_D5	I/O	Two-way data bus with the USB controller
F26	NC	-	Not used
G1	DVDD	I	Power supply input terminal (+2.85V)
G2, G3	NC	-	Not used
G4	EXTRST	I	RESET switch input terminal
G5	NC	-	Not used
G22	ETHER_XINT	-	Not used

NWZ-S515/S516/S615F/S616F/S618F

Pin No.	Pin Name	I/O	Description
G23 to G25	AB0_D15 to AB0_D13	I/O	Two-way data bus with the USB controller
G26	NC	-	Not used
H1	USBSUSPD	-	Not used
H2	NC	-	Not used
H3 to H5	SDR_DATA25, SDR_DATA27, SDR_DATA31	I/O	Two-way data bus with the 256M bit SD-RAM
H8	NAND_RBZ1	O	Read/busy signal output to the NAND flash memory
H9 to H12	NC	-	Not used
H13	NC_POWER	O	Power control signal output terminal Not used
H14, H15	NC	-	Not used
H16	AB0_WRZ	O	Write strobe signal output to the USB controller
H17	NC	-	Not used
H18, H19	AB0_A1, AB0_A2	O	Address signal output to the USB controller
H22 to H25	AB0_D8, AB0_D9, AB0_D7, AB0_D6	I/O	Two-way data bus with the USB controller
H26	NC	-	Not used
J1 to J3	IO_A	-	Not used
J4, J5	SDR_DATA29, SDR_DATA30	I/O	Two-way data bus with the 256M bit SD-RAM
J8	NAND_RBZ2	O	Read/busy signal output to the NAND flash memory (NWZ-S516/S616F/S618F only)
J9	NC	-	Not used
J10	SPI_CS_SEL	O	Chip select signal selection signal output terminal Not used
J11 to J17	GND	-	Ground terminal
J18	NC	-	Not used
J19	AB0_RDZ	O	Read strobe signal output to the USB controller
J22 to J24	AB0_D10 to AB0_D12	I/O	Two-way data bus with the USB controller
J25	CHGGND1	-	Ground terminal
J26	NC	-	Not used
K1 to K3	VDD_L1	I	Power supply input terminal (+1.2V)
K4, K5	SDR_DATA28, SDR_DATA26	I/O	Two-way data bus with the 256M bit SD-RAM
K8	NAND_RBZ3	O	Read/busy signal output to the NAND flash memory (NWZ-S516/S616F/S618F only)
K9	NAND_DA6	I/O	Two-way data bus with the NAND flash memory
K10 to K18	GND	-	Ground terminal
K19	NC	-	Not used
K22	LCD_HSYNC	O	Horizontal sync signal output to the liquid crystal display
K23	LCD_ENABLE	O	Enable signal output to the liquid crystal display
K24	LCD_VSYNC	O	Vertical sync signal output to the liquid crystal display
K25	CHGGND2	-	Ground terminal
K26	NC	-	Not used
L1 to L5	SDR_DATA23 to SDR_DATA20, SDR_DATA24	I/O	Two-way data bus with the 256M bit SD-RAM
L8	SDR_DATA19	I/O	Two-way data bus with the 256M bit SD-RAM
L9	NAND_DA4	I/O	Two-way data bus with the NAND flash memory
L10	GND	-	Ground terminal
L11	NC	-	Not used
L17, L18	GND	-	Ground terminal
L19	LCD_B1	O	RGB video (blue) signal output to the liquid crystal display
L22 to L25	LCD_B2 to LCD_B5	O	RGB video (blue) signal output to the liquid crystal display
L26	NC	-	Not used
M1 to M5	SDR_DATA18 to SDR_DATA14	I/O	Two-way data bus with the 256M bit SD-RAM
M8	SDR_DATA13	I/O	Two-way data bus with the 256M bit SD-RAM
M9	NAND_CEZ0	O	Chip enable signal output to the NAND flash memory
M10	GND	-	Ground terminal
M17, M18	GND	-	Ground terminal

Pin No.	Pin Name	I/O	Description
M19	LCD_B0	O	RGB video (blue) signal output to the liquid crystal display
M22 to M25	LCD_G0 to LCD_G3	O	RGB video (green) signal output to the liquid crystal display
M26	NC	-	Not used
N1 to N5	SDR_DATA12 to SDR_DATA8	I/O	Two-way data bus with the 256M bit SD-RAM
N8	SDR_DATA7	I/O	Two-way data bus with the 256M bit SD-RAM
N9, N10	GND	-	Ground terminal
N17 to N19	GND	-	Ground terminal
N22, N23	LCD_G4, LCD_G5	O	RGB video (green) signal output to the liquid crystal display
N24, N25	LCD_R0, LCD_R1	O	RGB video (red) signal output to the liquid crystal display
N26	VMICIN	I	Power supply input terminal (+2.9 - 4.2V)
P1 to P4	SDR_DATA5 to SDR_DATA2	I/O	Two-way data bus with the 256M bit SD-RAM
P5	SDR_DQM0	O	Write mask signal output to the 256M bit SD-RAM
P8	SDR_DATA6	I/O	Two-way data bus with the 256M bit SD-RAM
P9	GND	-	Ground terminal
P10	RESETZ	O	Reset signal output to the USB controller
P17 to P19	GND	-	Ground terminal
P22	LCD_R3	O	RGB video (red) signal output to the liquid crystal display
P23	LCD_PXCLK	O	Pixel clock signal output to the liquid crystal display
P24	NC	-	Not used
P25, P26	IO_A	-	Not used
R1	SDR_DATA0	I/O	Two-way data bus with the 256M bit SD-RAM
R2 to R4	SDR_DQM3 to SDR_DQM1	O	Write mask signal output to the 256M bit SD-RAM
R5	SDR_WEZ	O	Write enable signal output to the 256M bit SD-RAM
R8	SDR_DATA1	I/O	Two-way data bus with the 256M bit SD-RAM
R9	GND	-	Ground terminal
R10	NC	-	Not used
R17	U70_CTSZ	-	Not used
R18	U70_RTSZ	-	Not used
R19	GND	-	Ground terminal
R22, R23	LCD_R2, LCD_R4	O	RGB video (red) signal output to the liquid crystal display
R24	GND_SINK	-	Ground terminal
R25	VDD_L0	I	Power supply input terminal (+1.2V)
R26	NC	-	Not used
T1	SDR_CKE0	O	Clock enable signal output to the 256M bit SD-RAM
T2	NC	-	Not used
T3	SDR_CSZ0	O	Chip select signal output to the 256M bit SD-RAM
T4	SDR_BA1	O	Bank address signal output to the 256M bit SD-RAM
T5	SDR_RASZ	O	Row address strobe signal output to the 256M bit SD-RAM
T8	NC	-	Not used
T9	GND	-	Ground terminal
T10	NC	-	Not used
T17	U70_SOUT	O	Serial data output to the WM-PORT connector
T18	U70_SRIN	I	Serial data input from the WM-PORT connector
T19	GND	-	Ground terminal
T22	LCD_R5	O	RGB video (red) signal output to the liquid crystal display
T23	NC	-	Not used
T24	C_TMS	I	Mode selection signal input terminal for JTAG
T25	VLOG	O	Power supply output terminal (+1.8V)
T26	CKO	O	Main system clock output terminal (11.2896 MHz)
U1 to U5	SDR_A12 to SDR_A8	O	Address signal output to the 256M bit SD-RAM
U8	SDR_CASZ	O	Column address strobe signal output to the 256M bit SD-RAM
U9	GND	-	Ground terminal

NWZ-S515/S516/S615F/S616F/S618F

Pin No.	Pin Name	I/O	Description
U10 to U12	NC	-	Not used
U13	WAKEUP	O	Wake up signal output terminal
U14	PSM_LODET	O	USB power control signal output terminal
U15	L1_DET	-	Not used
U16	ERR_RST_REQZ	-	Not used
U17	CPI_CLK32	O	Master clock signal output to the FM tuner (NWZ-S615F/S616F/S618F only)
U18	REFCLKO	O	Master clock signal output to the A/D, D/A converter
U19	NC_OUT_SEL	O	Line output selection signal output terminal
U22	C_TDO	O	Data output terminal for JTAG
U23	VLOGIN	I	Power supply input terminal (+2.9 - 4.2V)
U24	C_TCK	I	Clock signal input terminal for JTAG
U25	VPLL	O	Power supply output terminal (+1.2V)
U26	CKI	I	Main system clock input terminal (11.2896 MHz)
V1 to V3	IO_A	-	Not used
V4, V5	SDR_A6, SDR_A5	O	Address signal output to the 256M bit SD-RAM
V8	SDR_A7	O	Address signal output to the 256M bit SD-RAM
V9	GND	-	Ground terminal
V10	CHG_XCHGEN	O	Charge enable signal output to the power/charge control
V11	NC	-	Not used
V12 to V15	GND	-	Ground terminal
V16	DSP_DET	-	Not used
V17	LCD_BLTCTL	O	LCD back light control signal output to the LCD back light driver
V18	NC	-	Not used
V19	NCHP_DET	I	Headphone detection signal input terminal Not used
V22	C_RTCK	I	Clock signal input terminal for JTAG
V23	C_TRSTZ	I	Reset signal input terminal for JTAG
V24	VPLLIN	I	Power supply input terminal (+2V)
V25	VDSPIN	I	Power supply input terminal (+2.9 - 4.2V)
V26	VDSP	-	Not used
W1	IOGND	-	Ground terminal
W2	LCD_PCI	-	Not used
W3	LCD_PON	O	Reset signal output to the liquid crystal display
W4, W5	SDR_A4, SDR_A3	O	Address signal output to the 256M bit SD-RAM
W8	CHG_PEN2	O	Charge enable signal output to the power/charge control
W9	GND	-	Ground terminal
W10	TU_CLKON	O	Master clock control signal output terminal (NWZ-S615F/S616F/S618F only)
W11 to W18	GND	-	Ground terminal
W19	WR_ERR	-	Not used
W22	NC_PLUG_PWR	O	Power control signal output terminal Not used
W23	C_TDI	I	Data input terminal for JTAG
W24, W25	IO_B	-	Not used
W26	VLO	O	Power supply output terminal (+1.2V)
Y1	IOVDD	I	Power supply input terminal (+2.85V)
Y2	CHG_ICTL	O	Charge control signal output to the power/charge control
Y3	HP_XMUTE	O	Analog muting control signal output terminal
Y4, Y5	SDR_A2, SDR_A1	O	Address signal output to the 256M bit SD-RAM
Y22, Y23	TM1, TM0	-	Not used
Y24, Y25	VDD_DSP	I	Power supply input terminal (+1.2V)
Y26	VHP	O	Power supply output terminal (+2.9V)
AA1	CRD_LINEOUT	O	Line output selection signal output terminal Not used
AA2	WAKEUP_INT	I	Wake up signal input terminal
AA3	TU_STO	I	Status signal input from the FM tuner (NWZ-S615F/S616F/S618F only)
AA4	SDR_A0	O	Address signal output to the 256M bit SD-RAM
AA5	SDR_CLK	O	Clock signal output to the 256M bit SD-RAM

Pin No.	Pin Name	I/O	Description
AA22, AA23	GND	-	Ground terminal
AA24	TM2	-	Not used
AA25	VANAIN	I	Power supply input terminal (+2.9 - 4.2V)
AA26	VANA	O	Power supply output terminal (+2.85V)
AB1	VDD_L0	I	Power supply input terminal (+1.2V)
AB2	XUSB_OK	-	Not used
AB3	CRD_DET	I	Wake up signal input from the WM-PORT connector
AB4	CHG_XFLT	I	Fault signal input from the power/charge control
AB5	SDR_BA0	O	Bank address signal output to the 256M bit SD-RAM
AB6	SPIO_XCS1	O	Chip select signal output to the FM tuner (NWZ-S615F/S616F/S618F only)
AB7	NC	-	Not used
AB8	USB_SUSPEND	O	USB suspend signal output to the power/charge control
AB9	IO_C	-	Not used
AB10 to AB12	NC	-	Not used
AB13	USB_XRST	O	Reset signal output to the USB controller
AB14	USB_INT2	I	Interrupt request signal input from the USB controller
AB15 to AB17	MS_DATA3, MS_DATA2, MS_DATA0	-	Not used
AB18	MS_INSZ	-	Not used
AB19	WR_LEDCTL	-	Not used
AB20	PM1_SEN	-	Not used
AB21	PM1_CLK	-	Not used
AB22	PM0_SEN	I	L/R sampling clock signal input from the A/D, D/A converter
AB23, AB24	GND	-	Ground terminal
AB25	GND1	-	Ground terminal
AB26	OSCIN	I	Sub system clock input terminal (32.768 kHz)
AC1 to AC3	IO_A	-	Not used
AC4	XCHG_DET	I	Charge detection signal input from the power/charge control
AC5	USB_INT1	I	Interrupt request signal input from the USB controller
AC6	SPIO_XCS0	O	Chip select signal output to the liquid crystal display
AC7	SPI0_SK	O	Serial data transfer clock signal output to the A/D, D/A converter, FM tuner and liquid crystal display (FM tuner is NWZ-S615F/S616F/S618F only)
AC8	SPI0_SO	O	Serial data output to the A/D, D/A converter, FM tuner and liquid crystal display (FM tuner is NWZ-S615F/S616F/S618F only)
AC9	IO_C	-	Not used
AC10 to AC13	NC	-	Not used
AC14	AVDD_LPLL	I	Power supply input terminal (+1.2V)
AC15	AVDD_HPLL	I	Power supply input terminal (+1.2V)
AC16	MS_DATA1	-	Not used
AC17	MS_BS	-	Not used
AC18	MS_SCK0	-	Not used
AC19	NC	-	Not used
AC20	ADA_XRST	O	Reset signal output to the A/D, D/A converter
AC21	PM0_CLK	I	Bit clock signal input from the A/D, D/A converter
AC22	PM0_SO	O	Serial audio data output to the A/D, D/A converter
AC23	PWM0	-	Not used
AC24	VLOIN	I	Power supply input terminal (+1.8V)
AC25	IO_C	-	Not used
AC26	OSCOUT	O	Sub system clock output terminal (32.768 kHz)
AD1	NC	-	Not used
AD2	BDID1	-	Not used
AD3	XNC_KEY	I	Key input terminal Not used
AD4	XHOLD_KEY	I	HOLD switch input terminal

NWZ-S515/S516/S615F/S616F/S618F

Pin No.	Pin Name	I/O	Description
AD5	KEY_WAKE	I	Wake up signal input terminal
AD6	NC	-	Not used
AD7	SPI0_CSZ2	O	Chip select signal output to the A/D, D/A converter
AD8	VDD_L1	I	Power supply input terminal (+1.2V)
AD9	IO_C	-	Not used
AD10 to AD13	NC	-	Not used
AD14	AVDD_LPLL	I	Power supply input terminal (+1.2V)
AD15	AVDD_HPLL	I	Power supply input terminal (+1.2V)
AD16	NC	-	Not used
AD17	BKBAT	I	Rechargeable battery voltage detection signal input terminal
AD18	IO_A	-	Not used
AD19	NC	-	Not used
AD20	USB_PWRCTL	-	Not used
AD21	GND2	-	Ground terminal
AD22	PM0_SI	I	Serial audio data input from the A/D, D/A converter
AD23	LCD_PWM1	O	PWM signal output to the LCD back light driver
AD24	MICR_DET	I	Microphone detection signal input terminal Not used
AD25	GND3	-	Ground terminal
AD26	NC	-	Not used
AE1, AE2	NC	-	Not used
AE3	DD2VFBK	I	Power supply voltage feedback terminal
AE4	DD2VFBSW	O	Power supply output terminal (+1.8V)
AE5	DD2GNDA	-	Ground terminal
AE6	DD2INA	I	Power supply input terminal (+2.9 - 4.2V)
AE7	VDD_L0	I	Power supply input terminal (+1.2V)
AE8	VDD_L1	I	Power supply input terminal (+1.2V)
AE9	IO_C	-	Not used
AE10, AE11	NC	-	Not used
AE12	DD1INA	I	Power supply input terminal (+2.9 - 4.2V)
AE13	IO_B	-	Not used
AE14	AVDD_LPLL	I	Power supply input terminal (+1.2V)
AE15	AVDD_HPLL	I	Power supply input terminal (+1.2V)
AE16	GND	-	Ground terminal
AE17	DD1VFBK	I	Power supply voltage feedback terminal
AE18	VDD_DSP	I	Power supply input terminal (+1.2V)
AE19	IO_A	-	Not used
AE20	VGP12IN	I	Power supply input terminal (+2.9 - 4.2V)
AE21	VGP3IN	I	Power supply input terminal (+2.9 - 4.2V)
AE22	VGP4	O	Reference voltage output terminal
AE23	VGP5	O	Power supply output terminal Not used
AE24	VGP45IN	I	Power supply input terminal (+2.9 - 4.2V)
AE25, AE26	NC	-	Not used
AF1 to AF3	NC	-	Not used
AF4	DD2VFB2	I	Power supply voltage feedback terminal
AF5, AF6	DD2INB1, DD2INB2	I	Power supply input terminal (+2.9 - 4.2V)
AF7 to AF9	DD2LX3, DD2LX1, DD2LX2	O	Power supply output terminal (+1.8V)
AF10, AF11	DD2GNDB1, DD2GNDB2	-	Ground terminal
AF12, AF13	DD1GNDB1, DD1GNDB2	-	Ground terminal
AF14, AF15	DD1LX1, DD1LX2	O	Power supply output terminal (+1.2V)
AF16, AF17	DD1INB1, DD1INB2	I	Power supply input terminal (+2.9 - 4.2V)

Pin No.	Pin Name	I/O	Description
AF18	DD1VFBK2	I	Power supply voltage feedback terminal
AF19	DD1GNDA	-	Ground terminal
AF20	VGP1	O	Power supply output terminal (+2.85V)
AF21	COM	-	Not used
AF22	NC	-	Not used
AF23	VGP3	O	Power supply output terminal (+2.85V)
AF24 to AF26	NC	-	Not used

SECTION 6 EXPLODED VIEWS

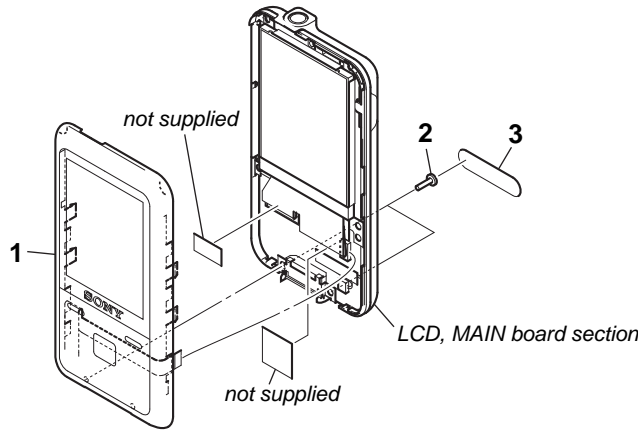
Note:

- -XX and -X mean standardized parts, so they may have some difference from the original one.
- 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.
 - Color Indication of Appearance Parts Example:
KNOB, BALANCE (WHITE) . . . (RED)
- Parts Color Cabinet's Color
- Accessories are given in the last of the electrical parts list.

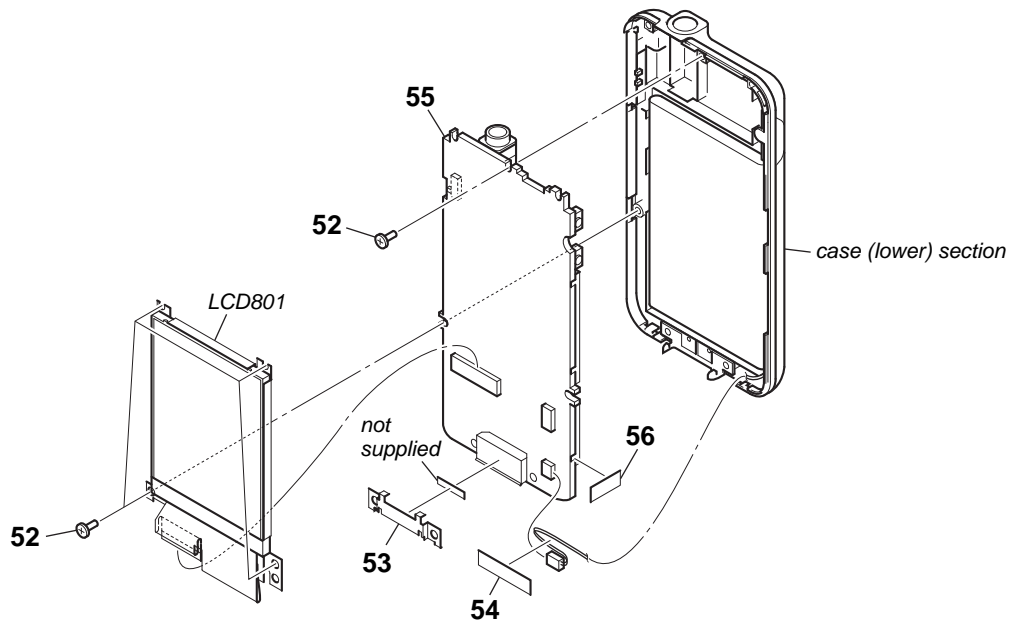
- Refer to “COLOR VARIATION” in the “SERVICING NOTES” (page 4) about color or variation of model and destination.
- Abbreviation
 AUS : Australian model
 CH : Chinese model
 CND : Canadian model
 EE : East European model
 FR : French model
 JE : Tourist model
 MX : Mexican model

6-1. CASE (UPPER) SECTION



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
1	X-2187-033-1	CASE (UPPER) (B) SUB ASSY (BLACK) (NWZ-S615F/S616F/S618F)		3	3-276-022-21	LABEL, MODEL NAME (SILVER) (NWZ-S616F: CND, AEP, FR, EE, UK, MX)	
1	X-2187-034-1	CASE (UPPER) (BW) SUB ASSY (BLACK) (NWZ-S515/S516)		3	3-276-022-31	LABEL, MODEL NAME (RED) (NWZ-S616F: CND, AEP, FR, EE, UK, E, MX, AUS, CH, JE)	
1	X-2187-035-1	CASE (UPPER) (W) SUB ASSY (WHITE)		3	3-276-022-41	LABEL, MODEL NAME (BLUE) (NWZ-S616F: E, AUS, CH, JE)	
1	X-2187-036-1	CASE (UPPER) (S) SUB ASSY (SILVER)		3	3-276-022-51	LABEL, MODEL NAME (PINK) (NWZ-S616F: CND, E, AUS, JE)	
1	X-2187-037-1	CASE (UPPER) (R) SUB ASSY (RED)		3	3-276-023-01	LABEL, MODEL NAME (BLACK) (NWZ-S616F: US)	
1	X-2187-038-1	CASE (UPPER) (L) SUB ASSY (BLUE)		3	3-276-023-21	LABEL, MODEL NAME (SILVER) (NWZ-S616F: US)	
1	X-2187-039-1	CASE (UPPER) (P) SUB ASSY (PINK)		3	3-276-023-31	LABEL, MODEL NAME (RED) (NWZ-S616F: US)	
2	3-252-824-01	SCREW (1.4)		3	3-276-023-51	LABEL, MODEL NAME (PINK) (NWZ-S616F: US)	
3	3-272-184-01	LABEL, MODEL NAME (BLACK) (NWZ-S615F: EXCEPT US)		3	3-276-024-01	LABEL, MODEL NAME (BLACK) (NWZ-S618F: EXCEPT US)	
3	3-272-184-11	LABEL, MODEL NAME (WHITE) (NWZ-S615F: MX, CH)		3	3-276-024-11	LABEL, MODEL NAME (WHITE) (NWZ-S618F: E, AUS, JE)	
3	3-272-184-21	LABEL, MODEL NAME (SILVER) (NWZ-S615F: CND, AEP, FR, EE, E, AUS, JE)		3	3-276-024-21	LABEL, MODEL NAME (SILVER) (NWZ-S618F: CND, AEP, FR, EE, UK, CH)	
3	3-272-184-31	LABEL, MODEL NAME (RED) (NWZ-S615F: AEP, FR, EE)		3	3-276-024-31	LABEL, MODEL NAME (RED) (NWZ-S618F: AEP, UK, EE)	
3	3-272-184-41	LABEL, MODEL NAME (BLUE) (NWZ-S615F: MX, CH)		3	3-276-025-01	LABEL, MODEL NAME (BLACK) (NWZ-S618F: US)	
3	3-272-184-51	LABEL, MODEL NAME (PINK) (NWZ-S615F: CND, E, AUS, CH, JE)		3	3-276-027-01	LABEL, MODEL NAME (BLACK) (NWZ-S515)	
3	3-276-021-01	LABEL, MODEL NAME (BLACK) (NWZ-S615F: US, US (Circuit City))		3	3-276-027-11	LABEL, MODEL NAME (WHITE) (NWZ-S515)	
3	3-276-021-21	LABEL, MODEL NAME (SILVER) (NWZ-S615F: US)		3	3-276-027-41	LABEL, MODEL NAME (BLUE) (NWZ-S515)	
3	3-276-021-31	LABEL, MODEL NAME (RED) (NWZ-S615F: US, US (Target))		3	3-276-027-51	LABEL, MODEL NAME (PINK) (NWZ-S515)	
3	3-276-021-51	LABEL, MODEL NAME (PINK) (NWZ-S615F: US, US (Circuit City))		3	3-276-028-01	LABEL, MODEL NAME (BLACK) (NWZ-S516)	
3	3-276-022-01	LABEL, MODEL NAME (BLACK) (NWZ-S616F: EXCEPT US)		3	3-276-028-11	LABEL, MODEL NAME (WHITE) (NWZ-S516: AEP)	
3	3-276-022-11	LABEL, MODEL NAME (WHITE) (NWZ-S616F: E, AUS, CH, JE)		3	3-276-028-41	LABEL, MODEL NAME (BLUE) (NWZ-S516: AEP)	
				3	3-276-028-51	LABEL, MODEL NAME (PINK) (NWZ-S516: AEP)	

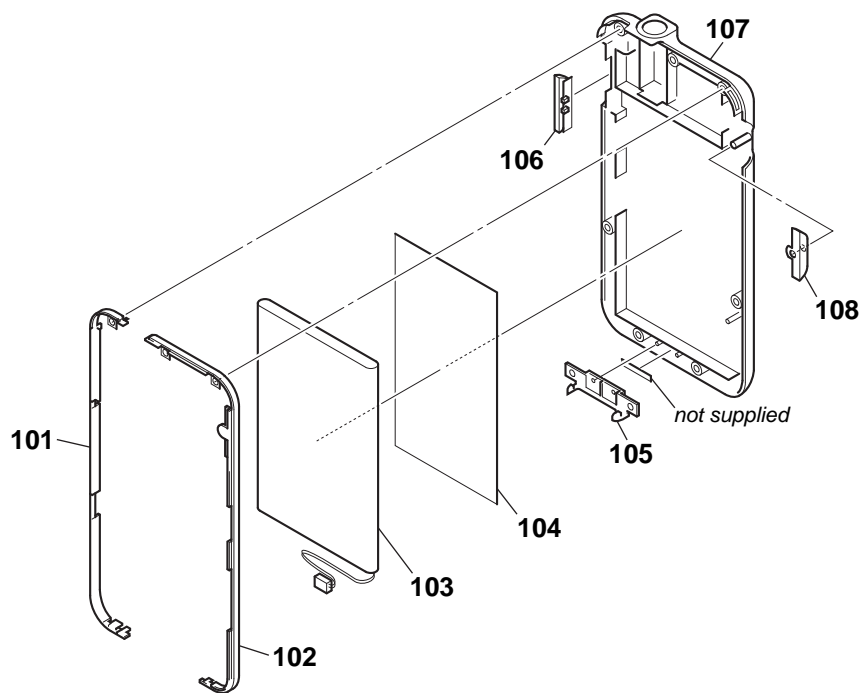
6-2. LCD, MAIN BOARD SECTION



Note: When the LCD SUB ASSY (LCD801) is replaced, refer to SUPPLEMENT-2.

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
52	3-254-136-11	SCREW (B1.4)		55	X-2187-854-1	MAIN BOARD, COMPLETE (4GB) (for SERVICE) (NWZ-S616F: AEP, EE, UK)	
53	3-218-638-01	HOLDER (MULTI)		55	X-2187-855-1	MAIN BOARD, COMPLETE (8GB) (for SERVICE) (NWZ-S618F: AEP, EE, UK)	
54	3-275-663-01	SHEET, BATT WIRE		55	X-2187-856-1	MAIN BOARD, COMPLETE (2GB) (for SERVICE) (NWZ-S615F: CH)	
55	X-2187-043-1	MAIN BOARD, COMPLETE (2GB) (for SERVICE) (NWZ-S515)		55	X-2187-857-1	MAIN BOARD, COMPLETE (4GB) (for SERVICE) (NWZ-S616F: CH)	
55	X-2187-044-1	MAIN BOARD, COMPLETE (4GB) (for SERVICE) (NWZ-S516)		55	X-2187-858-1	MAIN BOARD, COMPLETE (8GB) (for SERVICE) (NWZ-S618F: CH)	
55	X-2187-045-1	MAIN BOARD, COMPLETE (2GB) (for SERVICE) (NWZ-S615F: FR)		55	X-2187-859-1	MAIN BOARD, COMPLETE (2GB) (for SERVICE) (NWZ-S615F: E, MX, AUS, JE)	
55	X-2187-046-1	MAIN BOARD, COMPLETE (4GB) (for SERVICE) (NWZ-S616F: FR)		55	X-2187-860-1	MAIN BOARD, COMPLETE (4GB) (for SERVICE) (NWZ-S616F: E, MX, AUS, JE)	
55	X-2187-047-1	MAIN BOARD, COMPLETE (8GB) (for SERVICE) (NWZ-S618F: FR)		55	X-2187-861-1	MAIN BOARD, COMPLETE (8GB) (for SERVICE) (NWZ-S618F: E, MX, AUS, JE)	
55	X-2187-048-1	MAIN BOARD, COMPLETE (2GB) (for SERVICE) (NWZ-S615F: US, CND)		56	2-109-023-01	SHEET (PWB RIB)	
55	X-2187-049-1	MAIN BOARD, COMPLETE (4GB) (for SERVICE) (NWZ-S616F: US, CND)		LCD801	X-2187-040-1	LCD SUB ASSY (EPSON)	
55	X-2187-050-1	MAIN BOARD, COMPLETE (8GB) (for SERVICE) (NWZ-S618F: US, CND)		LCD801	X-2189-452-1	LCD SUB ASSY (TMD)	
55	X-2187-853-1	MAIN BOARD, COMPLETE (2GB) (for SERVICE) (NWZ-S615F: AEP, EE, UK)					

6-3. CASE (LOWER) SECTION



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
101	3-218-641-01	ORNAMENT (L)		107	3-218-631-01	CASE (LOWER) (BLACK)	
102	3-218-640-01	ORNAMENT (R)		107	3-218-631-11	CASE (LOWER) (WHITE)	
103	1-756-763-11	LITHIUM ION BATTERY (E, MX, AUS, CH, JE)		107	3-218-631-21	CASE (LOWER) (SILVER)	
103	X-2187-051-1	BATTERY SUB ASSY (US, CND)		107	3-218-631-31	CASE (LOWER) (RED)	
103	X-2189-927-2	BATTERY SUB ASSY (AEP, FR, EE, UK)		107	3-275-445-41	CASE (LOWER) (P) (BLUE)	
104	3-218-648-01	SHEET (BATT), ADHESIVE		107	3-275-445-51	CASE (LOWER) (P) (PINK)	
105	3-218-645-01	ESCUTCHEON (for BLACK, RED, BLUE)		108	3-218-635-01	BUTTON (VOL) (- VOL +) (BLACK)	
105	3-218-645-11	ESCUTCHEON (for WHITE, SILVER, PINK)		108	3-218-635-11	BUTTON (VOL) (- VOL +) (WHITE)	
106	3-218-634-01	KNOB (HOLD) (◀ HOLD) (BLACK)		108	3-218-635-21	BUTTON (VOL) (- VOL +) (SILVER)	
106	3-218-634-11	KNOB (HOLD) (◀ HOLD) (WHITE)		108	3-218-635-31	BUTTON (VOL) (- VOL +) (RED)	
106	3-218-634-21	KNOB (HOLD) (◀ HOLD) (SILVER)		108	3-218-635-41	BUTTON (VOL) (- VOL +) (BLUE)	
106	3-218-634-31	KNOB (HOLD) (◀ HOLD) (RED)		108	3-218-635-51	BUTTON (VOL) (- VOL +) (PINK)	
106	3-218-634-41	KNOB (HOLD) (◀ HOLD) (BLUE)					
106	3-218-634-51	KNOB (HOLD) (◀ HOLD) (PINK)					

SECTION 7
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.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- CAPACITORS
uF: µF
- COILS
uH: µH

- RESISTORS
All resistors are in ohms.
METAL: Metal-film resistor.
METAL OXIDE: Metal oxide-film resistor.
F: nonflammable
- SEMICONDUCTORS
In each case, u: µ, for example:
uA. . . : µA. . . , uPA. . . , µPA. . . ,
uPB. . . : µPB. . . , uPC. . . , µPC. . . ,
uPD. . . : µPD. . .

- Abbreviation
AUS : Australian model
CH : Chinese model
CND : Canadian model
EE : East European model
FR : French model
JE : Tourist model
MX : Mexican model

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

Ref. No.	Part No.	Description	Remark
	X-2187-043-1	MAIN BOARD, COMPLETE (2GB) (for SERVICE) (NWZ-S515)	
	X-2187-044-1	MAIN BOARD, COMPLETE (4GB) (for SERVICE) (NWZ-S516)	
	X-2187-045-1	MAIN BOARD, COMPLETE (2GB) (for SERVICE) (NWZ-S615F: FR)	
	X-2187-046-1	MAIN BOARD, COMPLETE (4GB) (for SERVICE) (NWZ-S616F: FR)	
	X-2187-047-1	MAIN BOARD, COMPLETE (8GB) (for SERVICE) (NWZ-S618F: FR)	
	X-2187-048-1	MAIN BOARD, COMPLETE (2GB) (for SERVICE) (NWZ-S615F: US, CND)	
	X-2187-049-1	MAIN BOARD, COMPLETE (4GB) (for SERVICE) (NWZ-S616F: US, CND)	
	X-2187-050-1	MAIN BOARD, COMPLETE (8GB) (for SERVICE) (NWZ-S618F: US, CND)	
	X-2187-853-1	MAIN BOARD, COMPLETE (2GB) (for SERVICE) (NWZ-S615F: AEP, EE, UK)	
	X-2187-854-1	MAIN BOARD, COMPLETE (4GB) (for SERVICE) (NWZ-S616F: AEP, EE, UK)	
	X-2187-855-1	MAIN BOARD, COMPLETE (8GB) (for SERVICE) (NWZ-S618F: AEP, EE, UK)	
	X-2187-856-1	MAIN BOARD, COMPLETE (2GB) (for SERVICE) (NWZ-S615F: CH)	
	X-2187-857-1	MAIN BOARD, COMPLETE (4GB) (for SERVICE) (NWZ-S616F: CH)	
	X-2187-858-1	MAIN BOARD, COMPLETE (8GB) (for SERVICE) (NWZ-S618F: CH)	
	X-2187-859-1	MAIN BOARD, COMPLETE (2GB) (for SERVICE) (NWZ-S615F: E, MX, AUS, JE)	
	X-2187-860-1	MAIN BOARD, COMPLETE (4GB) (for SERVICE) (NWZ-S616F: E, MX, AUS, JE)	
	X-2187-861-1	MAIN BOARD, COMPLETE (8GB) (for SERVICE) (NWZ-S618F: E, MX, AUS, JE)	

	< CAPACITOR >		
C101	1-137-987-81	CERAMIC CHIP 0.068uF 10% 10V (NWZ-S615F/S616F/S618F)	
C104	(Not supplied)	CERAMIC CHIP 150PF 10% 6.3V (NWZ-S615F/S616F/S618F)	
C105	1-128-627-91	CERAMIC CHIP 0.001uF 10% 16V (NWZ-S615F/S616F/S618F)	
C106	1-128-627-91	CERAMIC CHIP 0.001uF 10% 16V (NWZ-S615F/S616F/S618F)	
C107	1-137-987-81	CERAMIC CHIP 0.068uF 10% 10V	
C109	1-164-931-11	CERAMIC CHIP 100PF 10% 50V	
C110	1-165-887-91	CERAMIC CHIP 0.22uF 10% 6.3V	
C113	1-164-941-11	CERAMIC CHIP 0.0047uF 10% 16V	

Ref. No.	Part No.	Description	Remark
C201	1-137-987-81	CERAMIC CHIP 0.068uF 10% 10V (NWZ-S615F/S616F/S618F)	
C204	(Not supplied)	CERAMIC CHIP 150PF 10% 6.3V (NWZ-S615F/S616F/S618F)	
C205	1-128-627-91	CERAMIC CHIP 0.001uF 10% 16V (NWZ-S615F/S616F/S618F)	
C206	1-128-627-91	CERAMIC CHIP 0.001uF 10% 16V (NWZ-S615F/S616F/S618F)	
C207	1-137-987-81	CERAMIC CHIP 0.068uF 10% 10V	
C209	1-164-931-11	CERAMIC CHIP 100PF 10% 50V	
C210	1-165-887-91	CERAMIC CHIP 0.22uF 10% 6.3V	
C213	1-100-581-81	CERAMIC CHIP 0.0047uF 10% 50V	
C301	1-164-937-11	CERAMIC CHIP 0.001uF 10% 50V	
C302	1-112-716-11	CERAMIC CHIP 0.1uF 10% 6.3V	
C303	1-112-716-11	CERAMIC CHIP 0.1uF 10% 6.3V	
C305	1-112-815-91	CERAMIC CHIP 10uF 20% 6.3V	
C306	1-112-716-11	CERAMIC CHIP 0.1uF 10% 6.3V	
C307	1-112-815-91	CERAMIC CHIP 10uF 20% 6.3V	
C308	1-112-717-91	CERAMIC CHIP 1uF 10% 6.3V	
C310	1-112-716-11	CERAMIC CHIP 0.1uF 10% 6.3V	
C311	1-112-717-91	CERAMIC CHIP 1uF 10% 6.3V	
C312	1-100-611-91	CERAMIC CHIP 22uF 20% 6.3V (NWZ-S615F/S616F/S618F)	
C313	1-112-716-11	CERAMIC CHIP 0.1uF 10% 6.3V (NWZ-S615F/S616F/S618F)	
C314	1-112-717-91	CERAMIC CHIP 1uF 10% 6.3V	
C315	1-112-717-91	CERAMIC CHIP 1uF 10% 6.3V	
C316	1-100-611-91	CERAMIC CHIP 22uF 20% 6.3V	
C319	1-100-507-91	CERAMIC CHIP 4.7uF 20% 6.3V	
C321	1-107-819-11	CERAMIC CHIP 0.022uF 10% 16V	
C322	1-125-777-11	CERAMIC CHIP 0.1uF 10% 10V	
C325	1-112-717-91	CERAMIC CHIP 1uF 10% 6.3V	
C411	1-114-273-91	TANTALUM CHIP 47uF 20% 10V (NWZ-S615F/S616F/S618F)	
C412	1-100-504-91	CERAMIC CHIP 0.1uF 20% 6.3V (NWZ-S615F/S616F/S618F)	
C413	1-125-777-11	CERAMIC CHIP 0.1uF 10% 10V (NWZ-S615F/S616F/S618F)	
C414	1-164-933-11	CERAMIC CHIP 220PF 10% 50V (NWZ-S615F/S616F/S618F)	
C417	1-100-352-91	CERAMIC CHIP 1uF 20% 16V (NWZ-S615F/S616F/S618F)	
C418	1-125-777-11	CERAMIC CHIP 0.1uF 10% 10V (NWZ-S615F/S616F/S618F)	
C419	1-125-777-11	CERAMIC CHIP 0.1uF 10% 10V (NWZ-S615F/S616F/S618F)	
C501	1-164-856-81	CERAMIC CHIP 18PF 5% 50V	

Note 1: When the MAIN board is replaced, format it according to the "NOTE OF MAIN BOARD REPLACING" (refer to page 4) of the servicing notes.

Note 2: When C104 and C204 on the MAIN board is damaged, exchange the new MAIN board for the MAIN board which capacitor damaged.

NWZ-S515/S516/S615F/S616F/S618F

MAIN

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
C502	1-164-854-11	CERAMIC CHIP 15PF	5% 50V	C664	1-112-716-11	CERAMIC CHIP 0.1uF	10% 6.3V
C503	1-100-352-91	CERAMIC CHIP 1uF	20% 16V	C665	1-128-627-91	CERAMIC CHIP 0.001uF	10% 16V
C504	1-112-716-11	CERAMIC CHIP 0.1uF	10% 6.3V	C666	1-112-716-11	CERAMIC CHIP 0.1uF	10% 6.3V
C505	1-112-716-11	CERAMIC CHIP 0.1uF	10% 6.3V	C667	1-128-627-91	CERAMIC CHIP 0.001uF	10% 16V
C506	1-112-716-11	CERAMIC CHIP 0.1uF	10% 6.3V	C668	1-117-743-81	CERAMIC CHIP 5PF	0.1PF 16V
C507	1-112-716-11	CERAMIC CHIP 0.1uF	10% 6.3V	C669	1-117-743-81	CERAMIC CHIP 5PF	0.1PF 16V
C508	1-112-716-11	CERAMIC CHIP 0.1uF	10% 6.3V	C670	1-128-627-91	CERAMIC CHIP 0.001uF	10% 16V
C509	1-112-716-11	CERAMIC CHIP 0.1uF	10% 6.3V	C671	1-128-627-91	CERAMIC CHIP 0.001uF	10% 16V
C510	1-112-716-11	CERAMIC CHIP 0.1uF	10% 6.3V	C672	1-128-627-91	CERAMIC CHIP 0.001uF	10% 16V
C511	1-112-717-91	CERAMIC CHIP 1uF	10% 6.3V	C673	1-112-716-11	CERAMIC CHIP 0.1uF	10% 6.3V
C512	1-112-717-91	CERAMIC CHIP 1uF	10% 6.3V	C674	1-112-716-11	CERAMIC CHIP 0.1uF	10% 6.3V
C513	1-112-716-11	CERAMIC CHIP 0.1uF	10% 6.3V	C675	1-112-716-11	CERAMIC CHIP 0.1uF	10% 6.3V
C514	1-112-716-11	CERAMIC CHIP 0.1uF	10% 6.3V	C676	1-128-627-91	CERAMIC CHIP 0.001uF	10% 16V
C515	1-112-716-11	CERAMIC CHIP 0.1uF	10% 6.3V	C677	1-128-627-91	CERAMIC CHIP 0.001uF	10% 16V
C516	1-112-716-11	CERAMIC CHIP 0.1uF	10% 6.3V	C678	1-128-627-91	CERAMIC CHIP 0.001uF	10% 16V
C517	1-112-716-11	CERAMIC CHIP 0.1uF	10% 6.3V	C679	1-112-716-11	CERAMIC CHIP 0.1uF	10% 6.3V
C518	1-112-716-11	CERAMIC CHIP 0.1uF	10% 6.3V	C680	1-112-716-11	CERAMIC CHIP 0.1uF	10% 6.3V
C601	1-112-717-91	CERAMIC CHIP 1uF	10% 6.3V	C681	1-112-716-11	CERAMIC CHIP 0.1uF	10% 6.3V
C602	1-112-717-91	CERAMIC CHIP 1uF	10% 6.3V	C682	1-128-627-91	CERAMIC CHIP 0.001uF	10% 16V
C603	1-112-717-91	CERAMIC CHIP 1uF	10% 6.3V	C683	1-112-716-11	CERAMIC CHIP 0.1uF	10% 6.3V
C604	1-112-717-91	CERAMIC CHIP 1uF	10% 6.3V	C684	1-128-627-91	CERAMIC CHIP 0.001uF	10% 16V
C606	1-112-717-91	CERAMIC CHIP 1uF	10% 6.3V	C685	1-128-627-91	CERAMIC CHIP 0.001uF	10% 16V
C607	1-112-717-91	CERAMIC CHIP 1uF	10% 6.3V	C686	1-128-627-91	CERAMIC CHIP 0.001uF	10% 16V
C608	1-112-717-91	CERAMIC CHIP 1uF	10% 6.3V	C687	1-112-716-11	CERAMIC CHIP 0.1uF	10% 6.3V
C610	1-112-716-11	CERAMIC CHIP 0.1uF	10% 6.3V	C688	1-112-716-11	CERAMIC CHIP 0.1uF	10% 6.3V
C611	1-128-627-91	CERAMIC CHIP 0.001uF	10% 16V	C689	1-119-923-11	CERAMIC CHIP 0.047uF	10% 10V
C612	1-112-716-11	CERAMIC CHIP 0.1uF	10% 6.3V	C690	1-112-716-11	CERAMIC CHIP 0.1uF	10% 6.3V
C613	1-112-716-11	CERAMIC CHIP 0.1uF	10% 6.3V	C691	1-128-627-91	CERAMIC CHIP 0.001uF	10% 16V
C615	1-112-716-11	CERAMIC CHIP 0.1uF	10% 6.3V	C692	1-128-627-91	CERAMIC CHIP 0.001uF	10% 16V
C616	1-112-716-11	CERAMIC CHIP 0.1uF	10% 6.3V	C694	1-112-716-11	CERAMIC CHIP 0.1uF	10% 6.3V
C617	1-112-716-11	CERAMIC CHIP 0.1uF	10% 6.3V	C695	1-112-716-11	CERAMIC CHIP 0.1uF	10% 6.3V
C618	1-112-716-11	CERAMIC CHIP 0.1uF	10% 6.3V	C697	1-128-627-91	CERAMIC CHIP 0.001uF	10% 16V
C620	1-112-716-11	CERAMIC CHIP 0.1uF	10% 6.3V	C698	1-112-716-11	CERAMIC CHIP 0.1uF	10% 6.3V
C625	1-117-748-81	CERAMIC CHIP 10PF	0.1PF 16V	C699	1-112-716-11	CERAMIC CHIP 0.1uF	10% 6.3V
C626	1-117-748-81	CERAMIC CHIP 10PF	0.1PF 16V	C701	1-112-716-11	CERAMIC CHIP 0.1uF	10% 6.3V
C629	1-112-717-91	CERAMIC CHIP 1uF	10% 6.3V	C702	1-128-622-91	CERAMIC CHIP 100PF	10% 16V
C632	1-100-352-91	CERAMIC CHIP 1uF	20% 16V	C703	1-112-716-11	CERAMIC CHIP 0.1uF	10% 6.3V
C633	1-112-716-11	CERAMIC CHIP 0.1uF	10% 6.3V	C704	1-128-622-91	CERAMIC CHIP 100PF	10% 16V
C634	1-112-716-11	CERAMIC CHIP 0.1uF	10% 6.3V	C705	1-112-716-11	CERAMIC CHIP 0.1uF	10% 6.3V
C638	1-112-717-91	CERAMIC CHIP 1uF	10% 6.3V	C706	1-128-622-91	CERAMIC CHIP 100PF	10% 16V
C640	1-112-717-91	CERAMIC CHIP 1uF	10% 6.3V	C707	1-112-716-11	CERAMIC CHIP 0.1uF	10% 6.3V
C641	1-100-611-91	CERAMIC CHIP 22uF	20% 6.3V	C708	1-128-622-91	CERAMIC CHIP 100PF	10% 16V
C643	1-112-717-91	CERAMIC CHIP 1uF	10% 6.3V	C709	1-112-716-11	CERAMIC CHIP 0.1uF	10% 6.3V
C644	1-100-611-91	CERAMIC CHIP 22uF	20% 6.3V	C710	1-128-622-91	CERAMIC CHIP 100PF	10% 16V
C645	1-112-716-11	CERAMIC CHIP 0.1uF	10% 6.3V	C711	1-112-716-11	CERAMIC CHIP 0.1uF	10% 6.3V
C646	1-112-716-11	CERAMIC CHIP 0.1uF	10% 6.3V	C712	1-128-622-91	CERAMIC CHIP 100PF	10% 16V
C647	1-128-627-91	CERAMIC CHIP 0.001uF	10% 16V	C713	1-112-716-11	CERAMIC CHIP 0.1uF	10% 6.3V
C648	1-112-716-11	CERAMIC CHIP 0.1uF	10% 6.3V	C714	1-128-622-91	CERAMIC CHIP 100PF	10% 16V
C649	1-128-627-91	CERAMIC CHIP 0.001uF	10% 16V	C752	1-112-716-11	CERAMIC CHIP 0.1uF	10% 6.3V
C650	1-128-627-91	CERAMIC CHIP 0.001uF	10% 16V	C753	1-112-716-11	CERAMIC CHIP 0.1uF	10% 6.3V
C651	1-112-716-11	CERAMIC CHIP 0.1uF	10% 6.3V	C754	1-112-716-11	CERAMIC CHIP 0.1uF	10% 6.3V
C652	1-112-716-11	CERAMIC CHIP 0.1uF	10% 6.3V	C755	1-112-716-11	CERAMIC CHIP 0.1uF	10% 6.3V
C653	1-128-627-91	CERAMIC CHIP 0.001uF	10% 16V	C802	1-112-716-11	CERAMIC CHIP 0.1uF	10% 6.3V
C654	1-112-716-11	CERAMIC CHIP 0.1uF	10% 6.3V	C803	1-112-716-11	CERAMIC CHIP 0.1uF	10% 6.3V
C655	1-128-627-91	CERAMIC CHIP 0.001uF	10% 16V	C804	1-100-591-91	CERAMIC CHIP 1uF	10% 25V
C656	1-112-716-11	CERAMIC CHIP 0.1uF	10% 6.3V	C805	1-112-716-11	CERAMIC CHIP 0.1uF	10% 6.3V
C657	1-128-627-91	CERAMIC CHIP 0.001uF	10% 16V	C806	1-112-716-11	CERAMIC CHIP 0.1uF	10% 6.3V
C660	1-128-627-91	CERAMIC CHIP 0.001uF	10% 16V	C853	1-164-931-11	CERAMIC CHIP 100PF	10% 50V
C661	1-112-716-11	CERAMIC CHIP 0.1uF	10% 6.3V	C854	1-164-943-81	CERAMIC CHIP 0.01uF	10% 16V
C662	1-164-937-11	CERAMIC CHIP 0.001uF	10% 50V	C855	1-164-935-11	CERAMIC CHIP 470PF	10% 50V

Ref. No.	Part No.	Description	Remark
C881	1-119-923-11	CERAMIC CHIP 0.047uF 10%	10V
C882	1-164-943-81	CERAMIC CHIP 0.01uF 10%	16V
C883	1-119-923-11	CERAMIC CHIP 0.047uF 10%	10V
C884	1-164-943-81	CERAMIC CHIP 0.01uF 10%	16V
C901	1-100-966-91	CERAMIC CHIP 10uF 20%	10V
C903	1-125-777-11	CERAMIC CHIP 0.1uF 10%	10V
C904	1-112-716-11	CERAMIC CHIP 0.1uF 10%	6.3V
C905	1-137-987-81	CERAMIC CHIP 0.068uF 10%	10V
C906	1-112-716-11	CERAMIC CHIP 0.1uF 10%	6.3V
C907	1-100-611-91	CERAMIC CHIP 22uF 20%	6.3V
C909	1-100-611-91	CERAMIC CHIP 22uF 20%	6.3V
C911	1-164-937-11	CERAMIC CHIP 0.001uF 10%	50V
C912	1-100-611-91	CERAMIC CHIP 22uF 20%	6.3V
C913	1-100-611-91	CERAMIC CHIP 22uF 20%	6.3V
C915	1-100-611-91	CERAMIC CHIP 22uF 20%	6.3V
C917	1-100-611-91	CERAMIC CHIP 22uF 20%	6.3V
C920	1-100-670-11	CERAMIC CHIP 4.7uF 20%	16V
C921	1-100-611-91	CERAMIC CHIP 22uF 20%	6.3V
< CONNECTOR >			
CN801	1-821-232-11	CONNECTOR, FPC (ZIF) 35P	
CN851	1-820-771-21	CONNECTOR, MULTIPLE (RECEPTAL)	
CN881	(Not supplied)	CONNECTOR, FFC/FPC (ZIF) 8P (WM-PORT)	
CN901	1-794-375-21	PIN, CONNECTOR 2P	
< DIODE >			
D101	8-719-083-04	DIODE RSB6.8STE61	
D201	8-719-083-04	DIODE RSB6.8STE61	
D301	8-719-083-04	DIODE RSB6.8STE61	
D852	8-719-083-04	DIODE RSB6.8STE61	
< FERRITE BEAD/JUMPER RESISTOR >			
FB101	1-400-851-11	EMI, FERRITE (SMD) (1005)	
FB201	1-400-851-11	EMI, FERRITE (SMD) (1005)	
FB301	1-400-915-21	INDUCTOR (EMI FERRITE) (2012)	
FB325	1-218-990-81	SHORT CHIP 0	
FB418	1-400-829-31	BEAD, FERRITE (1005)	(NWZ-S615F/S616F/S618F)
FB421	1-218-990-81	SHORT CHIP 0 (NWZ-S615F/S616F/S618F)	
FB425	1-218-990-81	SHORT CHIP 0 (NWZ-S615F/S616F/S618F)	
FB435	1-218-990-81	SHORT CHIP 0 (NWZ-S615F/S616F/S618F)	
FB601	1-218-990-81	SHORT CHIP 0	
FB602	1-400-829-11	BEAD, FERRITE (1005)	
FB801	1-400-462-21	FERRITE, EMI (SMD) (1005)	
FB802	1-481-258-21	SMD EMI FERRITE	
FB803	1-481-258-21	SMD EMI FERRITE	
FB804	1-481-258-21	SMD EMI FERRITE	
FB805	1-481-258-21	SMD EMI FERRITE	
FB806	1-481-258-21	SMD EMI FERRITE	
FB807	1-481-258-21	SMD EMI FERRITE	
FB808	1-481-258-21	SMD EMI FERRITE	
FB809	1-481-258-21	SMD EMI FERRITE	
FB810	1-481-258-21	SMD EMI FERRITE	
FB811	1-481-258-21	SMD EMI FERRITE	
FB812	1-481-258-21	SMD EMI FERRITE	
FB813	1-481-258-21	SMD EMI FERRITE	
FB814	1-481-258-21	SMD EMI FERRITE	
FB815	1-481-258-21	SMD EMI FERRITE	
FB816	1-481-258-21	SMD EMI FERRITE	
FB817	1-481-258-21	SMD EMI FERRITE	

Note 1: When CN881 on the MAIN board is damaged, exchange the new MAIN board for the MAIN board which connector damaged.

Ref. No.	Part No.	Description	Remark
FB818	1-481-258-21	SMD EMI FERRITE	
FB819	1-481-258-21	SMD EMI FERRITE	
FB820	1-218-990-81	SHORT CHIP 0	
FB821	1-218-990-81	SHORT CHIP 0	
FB851	1-218-990-81	SHORT CHIP 0	
FB852	1-218-990-81	SHORT CHIP 0	
FB854	1-218-990-81	SHORT CHIP 0	
FB855	1-218-990-81	SHORT CHIP 0	
FB857	1-218-990-81	SHORT CHIP 0	
FB858	1-400-392-21	INDUCTOR, FERRITE BEAD (1608)	
< FILTER >			
FL601	1-234-939-21	FILTER, EMI REMOVAL (SMD)	
FL701	1-234-939-21	FILTER, EMI REMOVAL (SMD)	
< IC >			
IC301	(Not supplied)	IC XC6401FF58DR	
IC302	(Not supplied)	IC CS42L51-CNZR (NWZ-S615F/S616F/S618F)	
IC302	(Not supplied)	IC CS43L21-CNZR (NWZ-S515/S516)	
IC303	(Not supplied)	IC MAX4745ELB+TG069	
IC403	6-709-757-01	IC SDFMM1N23GB2T	(NWZ-S615F/S616F/S618F)
IC404	(Not supplied)	IC TC7WH08FC (T5RSONY)	(NWZ-S615F/S616F/S618F)
IC405	(Not supplied)	IC TC7WH08FC (T5RSONY)	(NWZ-S615F/S616F/S618F)
IC501	(Not supplied)	IC S1R72V17B00A20B	
IC502	6-708-511-01	IC TC7SG08AFS	
IC503	(Not supplied)	IC TK63731AB1G0B	
IC504	6-711-031-01	IC TK63718HCL-G	
IC505	(Not supplied)	IC TC7WG74FC	
IC506	(Not supplied)	IC TC7WG74FC	
IC507	(Not supplied)	IC TC7SG04AFS	
IC508	(Not supplied)	IC TC7SG04AFS	
IC509	(Not supplied)	IC SN74AVC1T45YZPR	
IC601	(Not supplied)	IC MC-10051F1-FAE-A	
IC602	(Not supplied)	IC TK63731AB1G0B	
IC701	(Not supplied)	IC K4M56323PG-HG75T	
IC751	(Not supplied)	IC HY27UU08AG5M-TPCBDR	(NWZ-S515/S516/S615F/S616F)
IC751	(Not supplied)	IC TH58NVG5D4CTG20 (NWZ-S618F)	
IC752	(Not supplied)	IC HY27UU08AG5M-TPCBDR	(NWZ-S516/S616F)
IC752	(Not supplied)	IC TH58NVG5D4CTG20 (NWZ-S618F)	
IC802	(Not supplied)	IC SN74AUC34RGYR	
IC803	(Not supplied)	IC BD6069GUT-E2	
IC901	(Not supplied)	IC MAX8677AETG	
IC903	(Not supplied)	IC MAX1557ETB	
< JACK >			
J301	1-821-454-11	WATER RESISTANT JACK (HEADPHONE)	
< COIL >			
L601	1-457-412-11	INDUCTOR 10uH	
L602	1-457-412-11	INDUCTOR 10uH	
L801	1-481-213-11	INDUCTOR 22uH	
L901	1-481-097-11	INDUCTOR 4.7uH	
LF851	1-456-984-11	COIL, COMMON MODE CHOKE (SMD1210)	

Note 2: When IC301, IC302, IC303, IC404, IC405, IC501, IC503, IC505, IC506, IC507, IC508, IC509, IC601, IC602, IC701, IC751, IC752, IC802, IC803, IC901 and IC903 on the MAIN board is damaged, exchange the new MAIN board for the MAIN board which IC damaged.

NWZ-S515/S516/S615F/S616F/S618F

MAIN

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
< TRANSISTOR >				R432	1-216-864-11	SHORT CHIP	0 (NWZ-S615F/S616F/S618F)
Q301	6-550-282-01	TRANSISTOR	UNR31A600LS0	R434	1-218-961-11	RES-CHIP	4.7K 5% 1/16W (NWZ-S615F/S616F/S618F)
Q302	6-551-186-01	TRANSISTOR	EMX18	R437	1-218-985-11	RES-CHIP	470K 5% 1/16W (NWZ-S615F/S616F/S618F)
Q303	6-551-186-01	TRANSISTOR	EMX18	R438	1-218-990-81	SHORT CHIP	0 (NWZ-S615F/S616F/S618F)
Q304	6-550-282-01	TRANSISTOR	UNR31A600LS0	R439	1-218-990-81	SHORT CHIP	0 (NWZ-S615F/S616F/S618F)
Q401	6-550-379-01	FET	2SK354700LS0 (NWZ-S615F/S616F/S618F)	R440	1-218-961-11	RES-CHIP	4.7K 5% 1/16W (NWZ-S615F/S616F/S618F)
Q603	6-550-747-01	FET	3LP01S-K-TL-E	R441	1-218-963-11	RES-CHIP	6.8K 5% 1/16W (NWZ-S615F/S616F/S618F)
Q903	6-551-346-01	FET	2SK3541T2L	R442	1-218-990-81	SHORT CHIP	0 (NWZ-S615F/S616F/S618F)
< RESISTOR/FERRITE BEAD >				R444	1-218-990-81	SHORT CHIP	0 (NWZ-S615F/S616F/S618F)
R101	1-218-990-81	SHORT CHIP	0 (NWZ-S615F/S616F/S618F)	R445	1-218-990-81	SHORT CHIP	0 (NWZ-S615F/S616F/S618F)
R105	1-218-937-11	RES-CHIP	47 5% 1/16W	R446	1-218-990-81	SHORT CHIP	0
R107	1-208-455-11	RES-CHIP	5.6 5% 1/16W (EXCEPT FR)	R447	1-218-990-81	SHORT CHIP	0
R107	1-220-167-81	RES-CHIP	51 5% 1/16W (FR)	R502	1-218-990-81	SHORT CHIP	0
R108	1-218-949-11	RES-CHIP	470 5% 1/16W	R503	1-218-977-11	RES-CHIP	100K 5% 1/16W
R109	1-218-949-11	RES-CHIP	470 5% 1/16W	R504	1-218-977-11	RES-CHIP	100K 5% 1/16W
R110	1-244-161-81	RES-CHIP	2.2 5% 1/16W	R505	1-218-977-11	RES-CHIP	100K 5% 1/16W
R115	1-218-990-81	SHORT CHIP	0	R506	1-208-906-81	METAL CHIP	6.2K 0.5% 1/16W
R121	1-218-949-11	RES-CHIP	470 5% 1/16W	R507	1-218-953-11	RES-CHIP	1K 5% 1/16W
R201	1-218-990-81	SHORT CHIP	0 (NWZ-S615F/S616F/S618F)	R510	1-218-933-11	RES-CHIP	22 5% 1/16W
R205	1-218-937-11	RES-CHIP	47 5% 1/16W	R511	1-218-981-91	RES-CHIP	220K 5% 1/16W
R207	1-208-455-11	RES-CHIP	5.6 5% 1/16W (EXCEPT FR)	R513	1-240-718-91	METAL CHIP	100K 5% 1/20W
R207	1-220-167-81	RES-CHIP	51 5% 1/16W (FR)	R514	1-218-929-11	RES-CHIP	10 5% 1/16W
R208	1-218-949-11	RES-CHIP	470 5% 1/16W	R516	1-218-929-11	RES-CHIP	10 5% 1/16W
R209	1-218-949-11	RES-CHIP	470 5% 1/16W	R519	1-218-981-91	RES-CHIP	220K 5% 1/16W
R210	1-244-161-81	RES-CHIP	2.2 5% 1/16W	R520	1-218-977-11	RES-CHIP	100K 5% 1/16W
R215	1-218-990-81	SHORT CHIP	0	R521	1-218-990-81	SHORT CHIP	0
R221	1-218-949-11	RES-CHIP	470 5% 1/16W	R522	1-218-990-81	SHORT CHIP	0
R302	1-218-990-81	SHORT CHIP	0	R523	1-218-965-11	RES-CHIP	10K 5% 1/16W
R304	1-218-979-11	RES-CHIP	150K 5% 1/16W	R602	1-218-990-81	SHORT CHIP	0
R305	1-218-981-91	RES-CHIP	220K 5% 1/16W	R603	1-218-965-11	RES-CHIP	10K 5% 1/16W
R306	1-218-990-81	SHORT CHIP	0	R604	1-218-990-81	SHORT CHIP	0
R307	1-218-953-11	RES-CHIP	1K 5% 1/16W	R605	1-218-990-81	SHORT CHIP	0
R310	1-218-990-81	SHORT CHIP	0	R607	1-218-985-11	RES-CHIP	470K 5% 1/16W
R311	1-216-864-11	SHORT CHIP	0 (NWZ-S615F/S616F/S618F)	R608	1-218-953-11	RES-CHIP	1K 5% 1/16W
R312	1-218-990-81	SHORT CHIP	0	R611	1-218-990-81	SHORT CHIP	0
R313	1-218-953-11	RES-CHIP	1K 5% 1/16W	R615	1-218-953-11	RES-CHIP	1K 5% 1/16W
R314	1-218-990-81	SHORT CHIP	0	R616	1-245-684-21	RES-CHIP	0.22 5% 1/8W
R315	1-218-945-11	RES-CHIP	220 5% 1/16W	R617	1-245-684-21	RES-CHIP	0.22 5% 1/8W
R319	1-218-990-81	SHORT CHIP	0	R618	1-218-990-81	SHORT CHIP	0
R320	1-216-864-11	SHORT CHIP	0	R619	1-218-990-81	SHORT CHIP	0
R321	1-218-985-11	RES-CHIP	470K 5% 1/16W	R620	1-218-990-81	SHORT CHIP	0
R324	1-218-990-81	SHORT CHIP	0	R621	1-218-990-81	SHORT CHIP	0
R325	1-216-864-11	SHORT CHIP	0	R622	1-218-990-81	SHORT CHIP	0
R326	1-216-864-11	SHORT CHIP	0	R623	1-218-990-81	SHORT CHIP	0
R417	1-218-939-11	RES-CHIP	68 5% 1/16W (NWZ-S615F/S616F/S618F)	R624	1-218-990-81	SHORT CHIP	0
R419	1-218-953-11	RES-CHIP	1K 5% 1/16W (NWZ-S615F/S616F/S618F)	R625	1-240-718-91	METAL CHIP	100K 5% 1/20W
R420	1-218-953-11	RES-CHIP	1K 5% 1/16W (NWZ-S615F/S616F/S618F)	R626	1-240-718-91	METAL CHIP	100K 5% 1/20W
R422	1-218-990-81	SHORT CHIP	0	R627	1-240-695-91	METAL CHIP	1K 5% 1/20W
R424	1-218-981-91	RES-CHIP	220K 5% 1/16W	R628	1-218-985-11	RES-CHIP	470K 5% 1/16W
R426	1-218-990-81	SHORT CHIP	0 (NWZ-S615F/S616F/S618F)	R629	1-218-985-11	RES-CHIP	470K 5% 1/16W
R427	1-218-990-81	SHORT CHIP	0 (NWZ-S615F/S616F/S618F)	R630	1-218-941-81	RES-CHIP	100 5% 1/16W
				R633	1-218-990-81	SHORT CHIP	0
				R634	1-218-989-11	RES-CHIP	1M 5% 1/16W
				R636	1-240-714-91	METAL CHIP	47K 5% 1/20W
				R637	1-240-714-91	METAL CHIP	47K 5% 1/20W
				R638	1-240-714-91	METAL CHIP	47K 5% 1/20W
				R639	1-240-714-91	METAL CHIP	47K 5% 1/20W

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
R640	1-240-714-91	METAL CHIP	47K 5% 1/20W	R829	1-208-927-11	METAL CHIP	47K 0.5% 1/16W
R641	1-218-953-11	RES-CHIP	1K 5% 1/16W	R830	1-208-719-11	METAL CHIP	33K 0.5% 1/16W
R642	1-208-935-11	METAL CHIP	100K 0.5% 1/16W	R831	1-220-876-81	METAL CHIP	18 0.5% 1/16W
R643	1-218-990-81	SHORT CHIP	0	R832	1-218-990-81	SHORT CHIP	0
R644	1-218-990-81	SHORT CHIP	0	R833	1-218-990-81	SHORT CHIP	0
R646	1-218-985-11	RES-CHIP	470K 5% 1/16W	R839	1-218-990-81	SHORT CHIP	0
R647	1-218-985-11	RES-CHIP	470K 5% 1/16W	R840	1-218-990-81	SHORT CHIP	0
R648	1-208-927-11	METAL CHIP	47K 0.5% 1/16W	R851	1-218-953-11	RES-CHIP	1K 5% 1/16W
R649	1-208-927-11	METAL CHIP	47K 0.5% 1/16W	R853	1-218-953-11	RES-CHIP	1K 5% 1/16W
R651	1-218-985-11	RES-CHIP	470K 5% 1/16W	R855	1-208-927-11	METAL CHIP	47K 0.5% 1/16W
R653	1-218-977-11	RES-CHIP	100K 5% 1/16W	R857	1-218-985-11	RES-CHIP	470K 5% 1/16W
R655	1-240-718-91	METAL CHIP	100K 5% 1/20W	R858	1-218-965-11	RES-CHIP	10K 5% 1/16W
R656	1-240-718-91	METAL CHIP	100K 5% 1/20W	R859	1-218-953-11	RES-CHIP	1K 5% 1/16W
R657	1-240-718-91	METAL CHIP	100K 5% 1/20W	R861	1-469-324-21	INDUCTOR (EMI FERRITE) (2012)	
R658	1-240-718-91	METAL CHIP	100K 5% 1/20W	R881	1-208-911-11	METAL CHIP	10K 0.5% 1/16W
R660	1-240-714-91	METAL CHIP	47K 5% 1/20W	R882	1-208-911-11	METAL CHIP	10K 0.5% 1/16W
R661	1-218-985-11	RES-CHIP	470K 5% 1/16W	R883	1-208-711-11	METAL CHIP	15K 0.5% 1/16W
R662	1-218-953-11	RES-CHIP	1K 5% 1/16W	R884	1-208-715-11	METAL CHIP	22K 0.5% 1/16W
R663	1-218-977-11	RES-CHIP	100K 5% 1/16W	R885	1-208-911-11	METAL CHIP	10K 0.5% 1/16W
R664	1-218-990-81	SHORT CHIP	0	R886	1-208-911-11	METAL CHIP	10K 0.5% 1/16W
R665	1-218-953-11	RES-CHIP	1K 5% 1/16W	R887	1-208-711-11	METAL CHIP	15K 0.5% 1/16W
R667	1-218-985-11	RES-CHIP	470K 5% 1/16W	R901	1-216-864-11	SHORT CHIP	0
R668	1-218-977-11	RES-CHIP	100K 5% 1/16W	R902	1-216-864-11	SHORT CHIP	0
R670	1-218-981-91	RES-CHIP	220K 5% 1/16W	R903	1-218-985-11	RES-CHIP	470K 5% 1/16W
R672	1-218-990-81	SHORT CHIP	0	R904	1-218-985-11	RES-CHIP	470K 5% 1/16W
R702	1-218-977-11	RES-CHIP	100K 5% 1/16W	R905	1-208-687-11	METAL CHIP	1.5K 0.5% 1/16W
R751	1-218-990-81	SHORT CHIP	0	R906	1-218-959-11	RES-CHIP	3.3K 5% 1/16W
R752	1-218-990-81	SHORT CHIP	0 (NWZ-S516/S616F)	R907	1-218-985-11	RES-CHIP	470K 5% 1/16W
R753	1-218-985-11	RES-CHIP	470K 5% 1/16W	R908	1-218-965-11	RES-CHIP	10K 5% 1/16W
R754	1-218-985-11	RES-CHIP	470K 5% 1/16W	R909	1-208-715-11	METAL CHIP	22K 0.5% 1/16W
R755	1-218-977-11	RES-CHIP	100K 5% 1/16W	R910	1-208-923-11	METAL CHIP	33K 0.5% 1/16W
R756	1-218-977-11	RES-CHIP	100K 5% 1/16W	R911	1-218-985-11	RES-CHIP	470K 5% 1/16W
R757	1-218-990-81	SHORT CHIP	0	R912	1-208-909-11	METAL CHIP	8.2K 0.5% 1/16W
R758	1-218-990-81	SHORT CHIP	0	R913	1-208-911-11	METAL CHIP	10K 0.5% 1/16W
R759	1-240-726-91	METAL CHIP	470K 5% 1/20W	R914	1-208-927-11	METAL CHIP	47K 0.5% 1/16W
R760	1-218-990-81	SHORT CHIP	0	R915	1-208-923-11	METAL CHIP	33K 0.5% 1/16W
R761	1-218-990-81	SHORT CHIP	0	R919	1-208-911-11	METAL CHIP	10K 0.5% 1/16W
R762	1-218-990-81	SHORT CHIP	0 (NWZ-S516/S616F)	R921	1-218-981-91	RES-CHIP	220K 5% 1/16W
R764	1-240-726-91	METAL CHIP	470K 5% 1/20W	R922	1-218-981-91	RES-CHIP	220K 5% 1/16W
R765	1-240-718-91	METAL CHIP	100K 5% 1/20W			< SWITCH >	
R767	1-240-718-91	METAL CHIP	100K 5% 1/20W	S601	1-786-227-21	SWITCH, TACTILE (RESET)	
R769	1-218-953-11	RES-CHIP	1K 5% 1/16W	S602	1-572-922-11	SWITCH, SLIDE (HOLD)	
R774	1-240-714-91	METAL CHIP	47K 5% 1/20W	S888	1-786-845-11	SWITCH, TACTILE (VOL -)	
R775	1-240-714-91	METAL CHIP	47K 5% 1/20W	S889	1-786-845-11	SWITCH, TACTILE (VOL +)	
R776	1-240-714-91	METAL CHIP	47K 5% 1/20W			< THERMISTOR >	
R777	1-240-714-91	METAL CHIP	47K 5% 1/20W	TH901	1-804-949-11	THERMISTOR, NTC (SMD)	
R778	1-240-714-91	METAL CHIP	47K 5% 1/20W			< VARISTOR >	
R779	1-240-714-91	METAL CHIP	47K 5% 1/20W	VDR301	1-805-774-21	VARISTOR, CHIP (NWZ-S615F/S616F/S618F)	
R780	1-240-714-91	METAL CHIP	47K 5% 1/20W	VDR302	1-805-774-21	VARISTOR, CHIP	
R781	1-240-714-91	METAL CHIP	47K 5% 1/20W	VDR303	1-805-774-21	VARISTOR, CHIP	
R782	1-218-990-81	SHORT CHIP	0	VDR401	1-805-774-21	VARISTOR, CHIP (NWZ-S615F/S616F/S618F)	
R783	1-218-990-81	SHORT CHIP	0	VDR851	1-805-774-21	VARISTOR, CHIP	
R820	1-218-990-81	SHORT CHIP	0	VDR852	1-805-774-21	VARISTOR, CHIP	
R821	1-218-990-81	SHORT CHIP	0	VDR853	1-805-774-21	VARISTOR, CHIP	
R822	1-218-990-81	SHORT CHIP	0	VDR854	1-805-774-21	VARISTOR, CHIP	
R823	1-218-981-91	RES-CHIP	220K 5% 1/16W	VDR856	1-805-774-21	VARISTOR, CHIP	
R824	1-218-990-81	SHORT CHIP	0	VDR858	1-805-774-21	VARISTOR, CHIP	
R826	1-218-990-81	SHORT CHIP	0				
R827	1-218-981-91	RES-CHIP	220K 5% 1/16W				
R828	1-218-985-11	RES-CHIP	470K 5% 1/16W				

NWZ-S515/S516/S615F/S616F/S618F

Ver. 1.5

MAIN

Ref. No.	Part No.	Description	Remark
VDR859	1-805-774-21	VARISTOR, CHIP	
VDR860	1-805-774-21	VARISTOR, CHIP	
VDR861	1-805-774-21	VARISTOR, CHIP	
VDR862	1-805-774-21	VARISTOR, CHIP	
< VIBRATOR >			
X501	1-813-877-11	VIBRATOR, CRYSTAL (12MHz)	
X602	1-813-206-11	VIBRATOR, CRYSTAL (32.768kHz)	
X603	1-795-758-21	VIBRATOR, CRYSTAL (11.2896MHz)	

MISCELLANEOUS *****			
103	1-756-763-11	LITHIUM ION BATTERY (E, MX, AUS, CH, JE)	
103	X-2187-051-1	BATTERY SUB ASSY (US, CND)	
103	X-2189-927-2	BATTERY SUB ASSY (AEP, FR, EE, UK)	
LCD801	X-2187-040-1	LCD SUB ASSY (EPSON)	
LCD801	X-2189-452-1	LCD SUB ASSY (TMD)	

ACCESSORIES *****			
1-833-490-12		CORD, PC CONNECTION (USB cable)	
3-218-247-11		MANUAL (QSG), INSTRUCTION (Quick Start Guide) (ENGLISH)	
3-218-247-21		MANUAL (QSG), INSTRUCTION (Quick Start Guide) (FRENCH) (NWZ-S515/S516/S615F: CND, AEP, FR, UK/ S616F: CND, AEP, FR, UK/ S618F: CND, AEP, FR, UK)	
3-218-247-31		MANUAL (QSG), INSTRUCTION (Quick Start Guide) (GERMAN) (NWZ-S515: AEP, UK/S516/S615F: AEP, UK/ S616F: AEP, UK/S618F: AEP, UK)	
3-218-247-41		MANUAL (QSG), INSTRUCTION (Quick Start Guide) (SPANISH) (NWZ-S515/S516/S615F: AEP, UK, MX/ S616F: AEP, UK, MX/S618F: AEP, UK, MX)	
3-218-247-52		MANUAL (QSG), INSTRUCTION (Quick Start Guide) (ITALIAN) (NWZ-S515/S516/S615F: AEP/ S616F: AEP, UK/S618F: AEP, UK)	
3-218-247-61		MANUAL (QSG), INSTRUCTION (Quick Start Guide) (RUSSIAN) (NWZ-S615F: EE/S616F: EE/S618F: EE)	
3-218-247-72		MANUAL (QSG), INSTRUCTION (Quick Start Guide) (SIMPLIFIED CHINESE) (NWZ-S615F: E, AUS, CH, JE/ S616F: E, AUS, CH, JE/S618F: E, AUS, CH, JE)	
3-218-247-81		MANUAL (QSG), INSTRUCTION (Quick Start Guide) (TRADITIONAL CHINESE) (NWZ-S615F: E, AUS, JE/S616F: E, AUS, JE/ S618F: E, AUS, JE)	
3-218-247-91		MANUAL (QSG), INSTRUCTION (Quick Start Guide) (KOREAN) (NWZ-S615F: E, AUS, JE/S616F: E, AUS, JE/ S618F: E, AUS, JE)	
3-218-248-01		ATTACHMENT (I) (Use when connecting the player to the optional cradle, etc.)	
3-219-865-11		MANUAL (QSG), INSTRUCTION (Quick Start Guide) (UKRAINIAN) (NWZ-S615F: EE/S616F: EE/S618F: EE)	
3-219-865-21		MANUAL (QSG), INSTRUCTION (Quick Start Guide) (PORTUGUESE) (NWZ-S615F: MX/S616F: MX/S618F: MX)	

Ref. No.	Part No.	Description	Remark
8-912-761-93		RECEIVER (MDRE804LPB19) SET (Headphones) (BLACK) (for BLACK, BLUE, RED, SILVER model)	
8-912-761-94		RECEIVER (MDRE804LPW19) SET (Headphones) (WHITE) (for PINK, WHITE model)	
X-2179-390-5		SOFT APPLICATION ASSY (CD-ROM: MP3 Conversion Tool/ Windows Media Player 11/ Operation Guide (PDF file)) (for Original, Target, Mother's Day model) (NWZ-S615F: US/S616F: US/S618F: US)	
X-2179-998-4		SOFT APPLICATION ASSY (CD-ROM: MP3 Conversion Tool/ Windows Media Player 11/ Operation Guide (PDF file)) (NWZ-S515/S516/S615F: EXCEPT US/ S616F: EXCEPT US/S618F: EXCEPT US)	
X-2186-429-5		SOFT APPLICATION ASSY (CD-ROM: MP3 Conversion Tool/ Windows Media Player 11/ Operation Guide (PDF file)) (for Circuit City, Valentine's Day model) (NWZ-S615F: US/S616F: US/S618F: US)	

Note: When the LCD SUB ASSY (LCD801) is replaced, refer to SUPPLEMENT-2.

SONY

SERVICE MANUAL

Ver. 1.2 2007.11

SUPPLEMENT-1

File this supplement with the service manual.

Subject: Change of MAIN board (Suffix-21)

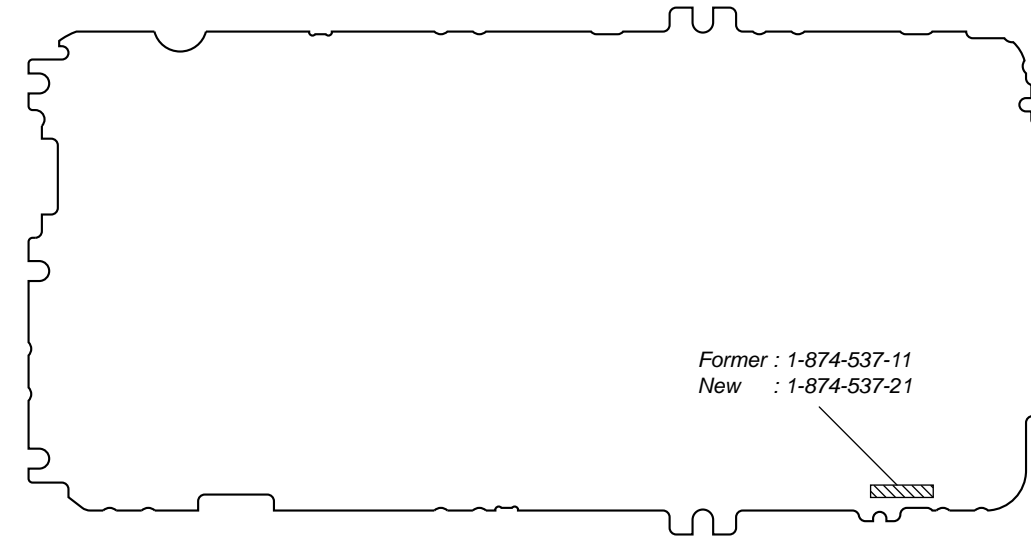
In this set, MAIN board has been changed in the midway of production. Printed wiring board, schematic diagram and electrical parts list of new type are described in this supplement-1. Refer to original service manual for other information.

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1. NEW/FORMER DISCRIMINATION

– MAIN Board (Side A) –



2. DIAGRAMS

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

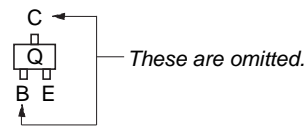
For Printed Wiring Boards.

Note:

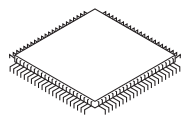
- : parts extracted from the conductor side.
- : Pattern from the side which enables seeing.
 (The other layers' patterns are not indicated.)

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

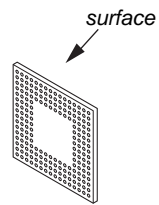
- MAIN board is multi-layer printed board. However, the patterns of intermediate-layers have not been included in diagrams.
- Indication of transistor.



- Lead layouts



Lead layout of conventional IC



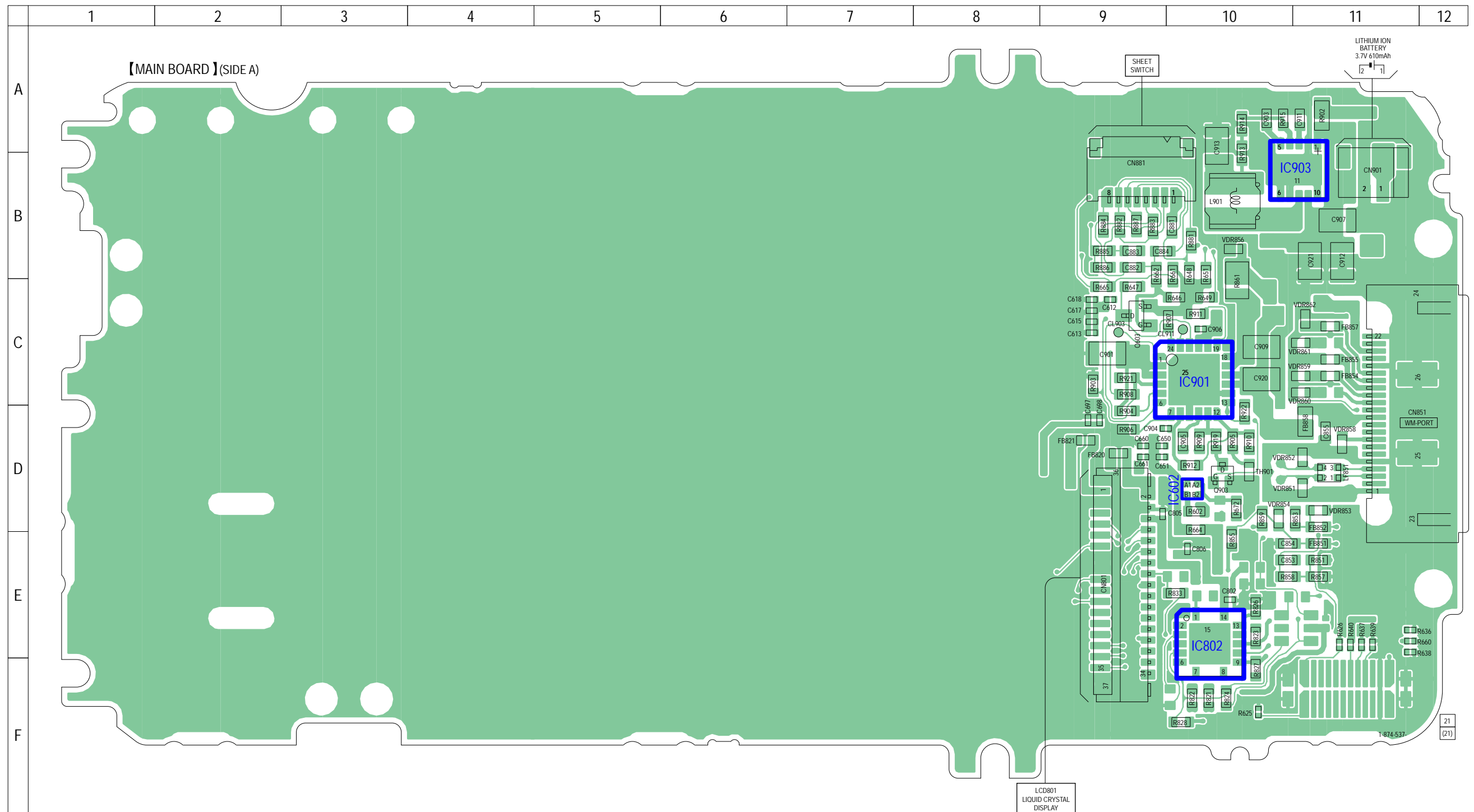
CSP (Chip Size Package)

For Schematic Diagrams.

Note:

- 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 $1/4$ W or less unless otherwise specified.
- : panel designation.
- : B+ Line.
- Power voltage is dc 3.7 V and fed with regulated dc power supply from CN901 pin ① and pin ② on the MAIN board.
- Voltages and waveform are dc with respect to ground under no-signal conditions.
 no mark: PLAY BACK
- Voltages are taken with a VOM (Input impedance 10 M Ω).
- Voltage variations may be noted due to normal production tolerances.
- Signal path.
 ⇨ : AUDIO
 ⇨⇨ : VIDEO
- The voltage and waveform of CSP (chip size package) cannot be measured, because its lead layout is different from that of conventional IC.
- Abbreviation
 FR : French model

2-1. PRINTED WIRING BOARD - MAIN Board (Side A) - •  : Uses unleaded solder.



• **Semiconductor Location**

Ref. No.	Location
IC602	D-10
IC802	E-10
IC901	C-10
IC903	B-11
Q603	C-9
Q903	D-10

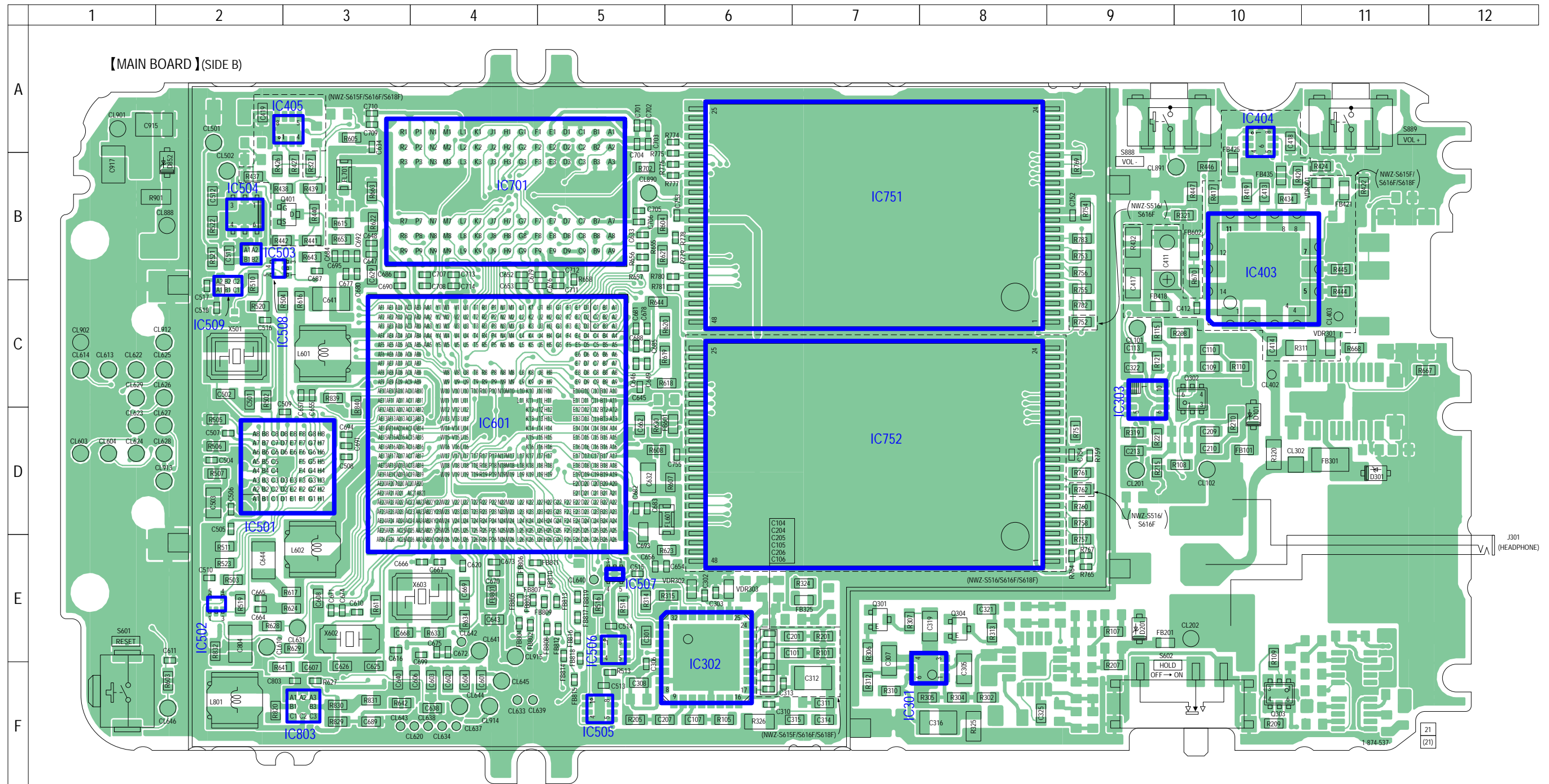
Note 1: When the MAIN board is replaced, format it according to the "NOTE OF MAIN BOARD REPLACING" (refer to page 4 on original service manual) of the servicing notes.

Note 2: When IC602, IC802, IC901 and IC903 on the MAIN board is damaged, exchange the new MAIN board for the MAIN board which IC damaged.

Note 3: When CN881 on the MAIN board is damaged, exchange the new MAIN board for the MAIN board which connector damaged.

Note 4: When the LCD SUB ASSY (LCD801) is replaced, refer to SUPPLEMENT-2.

2-2. PRINTED WIRING BOARD - MAIN Board (Side B) -  : Uses unleaded solder.



Note 1: When the MAIN board is replaced, format it according to the "NOTE OF MAIN BOARD REPLACING" (refer to page 4 on original service manual) of the servicing notes.

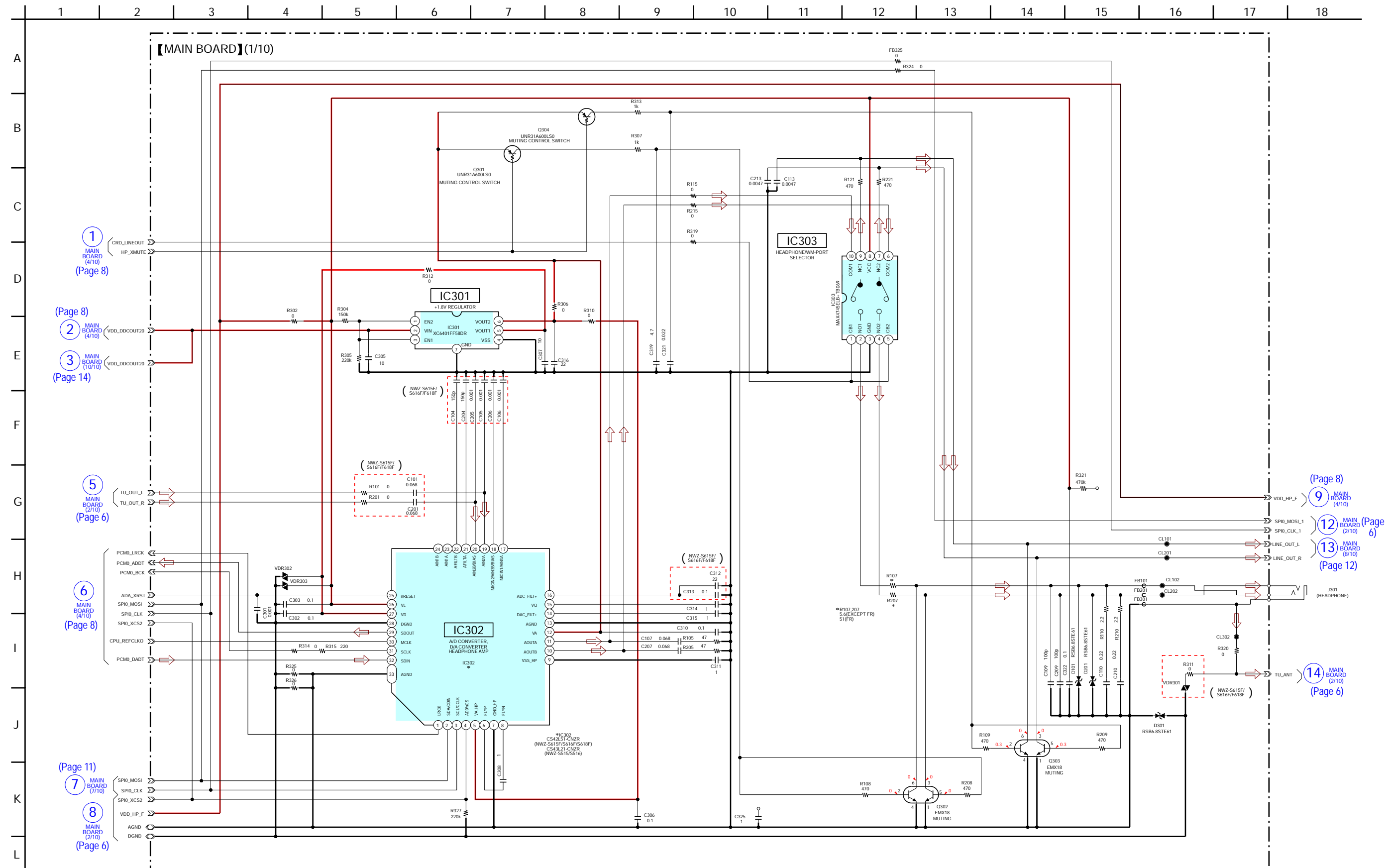
Note 2: When C104 and C204 on the MAIN board is damaged, exchange the new MAIN board for the MAIN board which capacitor damaged.

Note 3: When IC301, IC302, IC303, IC404, IC405, IC501, IC503, IC505, IC506, IC507, IC508, IC509, IC601, IC701, IC751, IC752 and IC803 on the MAIN board is damaged, exchange the new MAIN board for the MAIN board which IC damaged.

• Semiconductor Location

Ref. No.	Location	Ref. No.	Location	Ref. No.	Location
D101	D-10	IC501	D-3	IC751	B-7
D201	E-9	IC502	E-2	IC752	D-7
D301	D-11	IC503	B-2	IC803	F-3
D852	B-2	IC504	B-2		
IC301	F-8	IC505	F-5	Q301	E-7
IC302	E-6	IC506	E-5	Q302	C-10
IC303	C-9	IC507	E-5	Q303	F-10
IC403	B-10	IC508	B-2	Q304	E-8
IC404	A-10	IC509	C-2	Q401	B-3
IC405	A-3	IC601	D-4		
		IC701	B-4		

2-3. SCHEMATIC DIAGRAM - MAIN Board (1/10) -

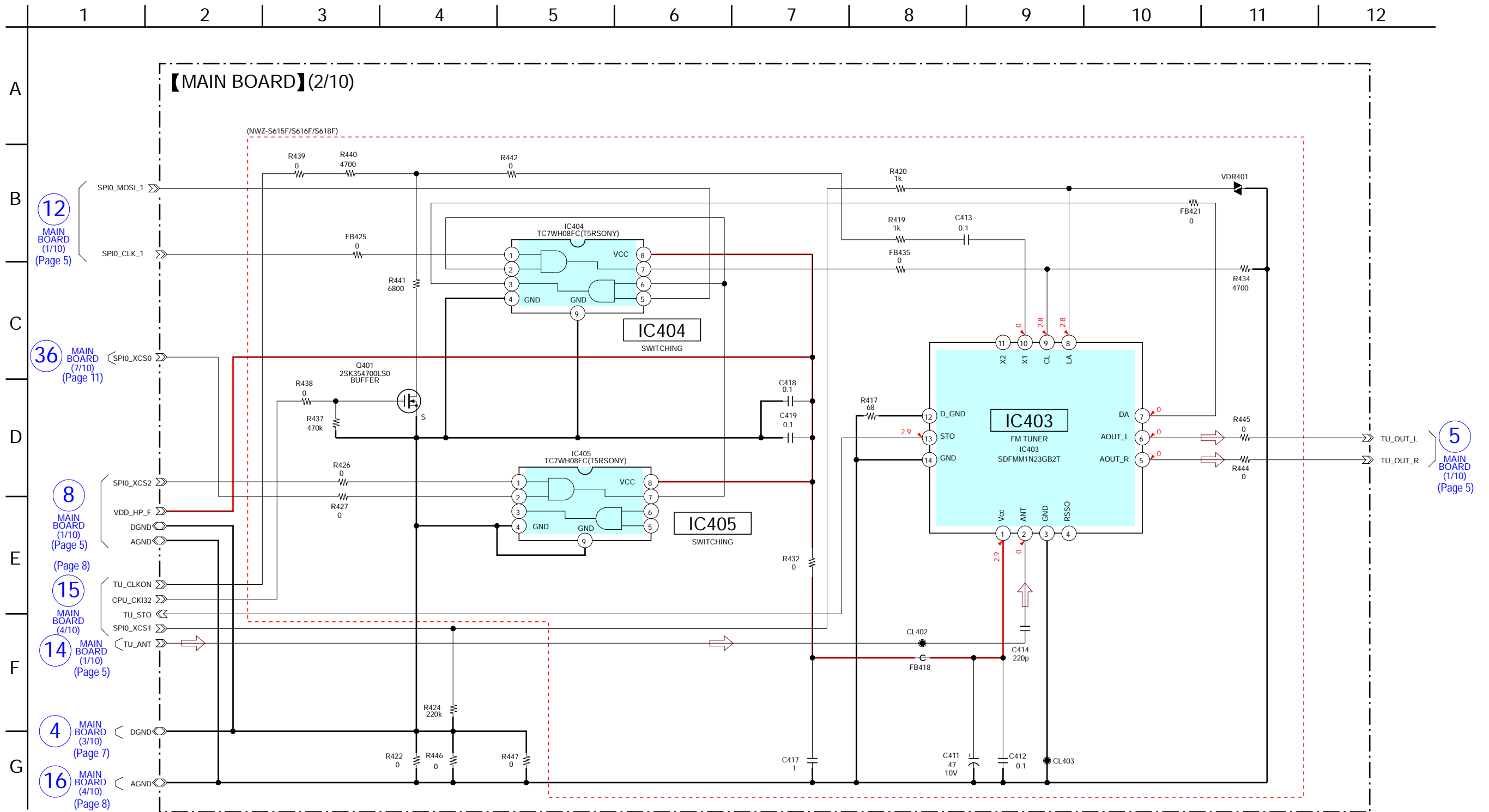


Note 1: When the MAIN board is replaced, format it according to the "NOTE OF MAIN BOARD REPLACING" (refer to page 4 on original service manual) of the servicing notes.

Note 2: When C104 and C204 on the MAIN board is damaged, exchange the new MAIN board for the MAIN board which capacitor damaged.

Note 3: When IC301, IC302 and IC303 on the MAIN board is damaged, exchange the new MAIN board for the MAIN board which IC damaged.

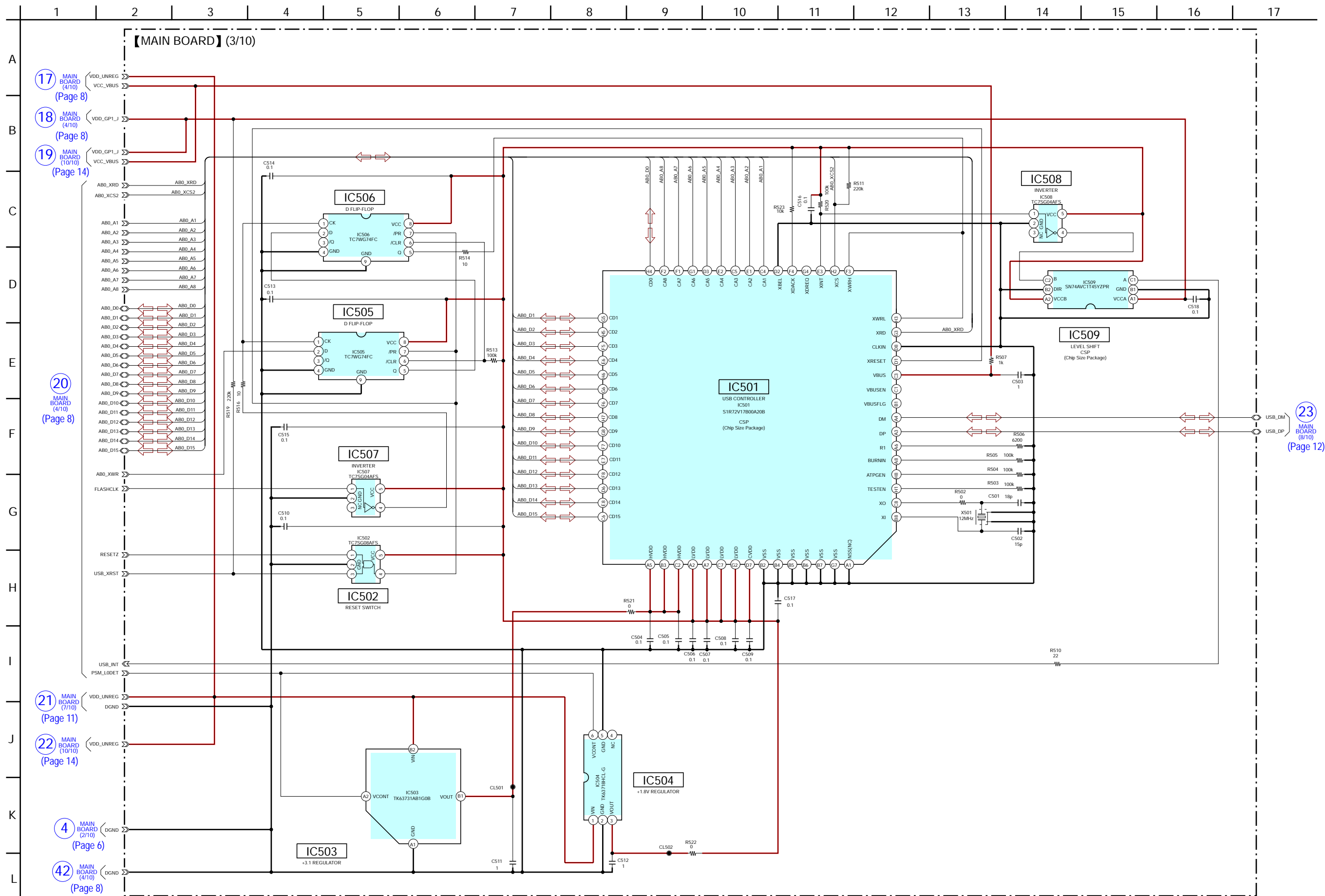
2-4. SCHEMATIC DIAGRAM - MAIN Board (2/10) -



Note 1: When the MAIN board is replaced, format it according to the "NOTE OF MAIN BOARD REPLACING" (refer to page 4 on original service manual) of the servicing notes.

Note 2: When IC404 and IC405 on the MAIN board is damaged, exchange the new MAIN board for the MAIN board which IC damaged.

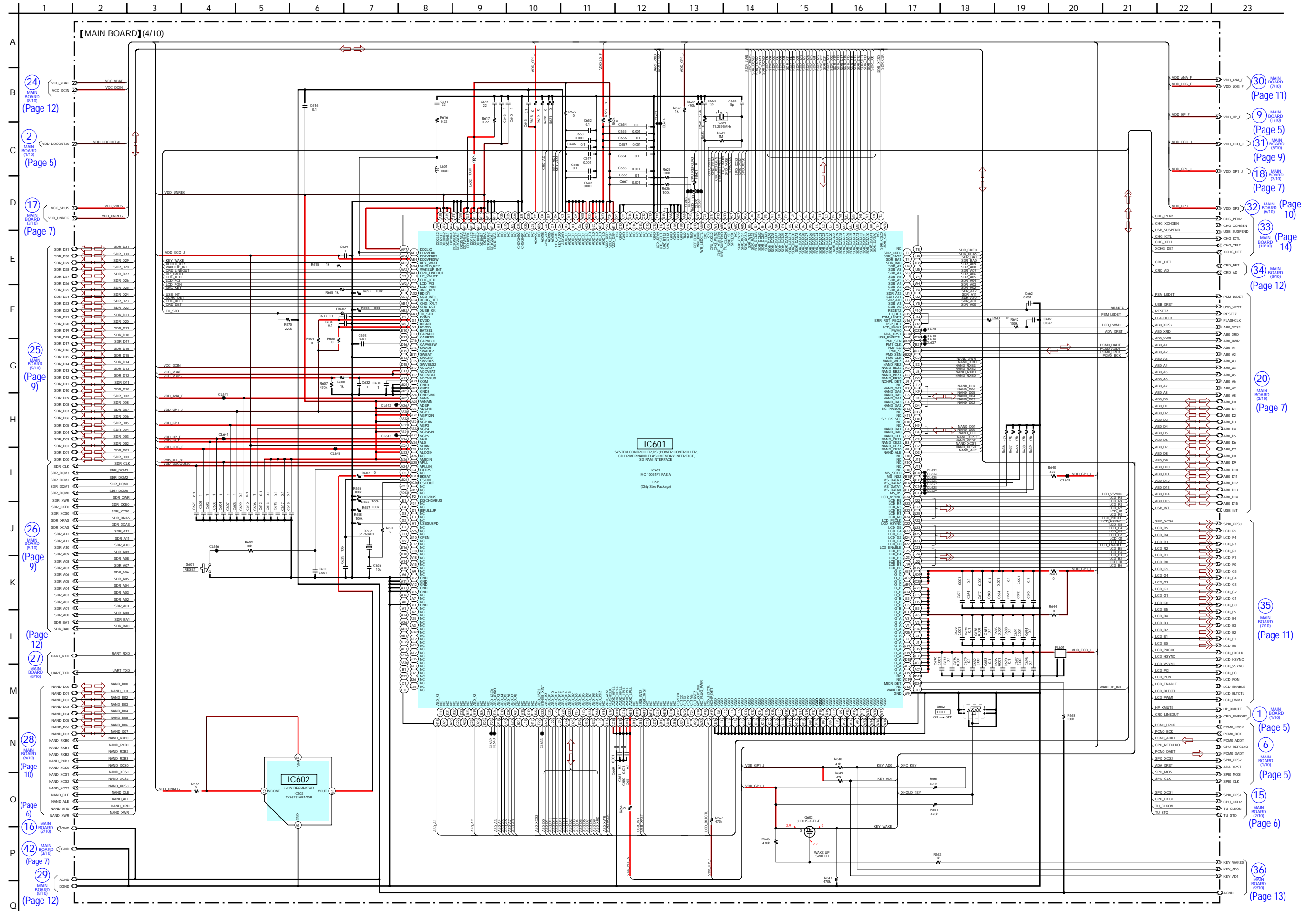
2-5. SCHEMATIC DIAGRAM - MAIN Board (3/10) -



Note 1: When the MAIN board is replaced, format it according to the "NOTE OF MAIN BOARD REPLACING" (refer to page 4 on original service manual) of the servicing notes.

Note 2: When IC501, IC503, IC505, IC506, IC507, IC508 and IC509 on the MAIN board is damaged, exchange the new MAIN board for the MAIN board which IC damaged.

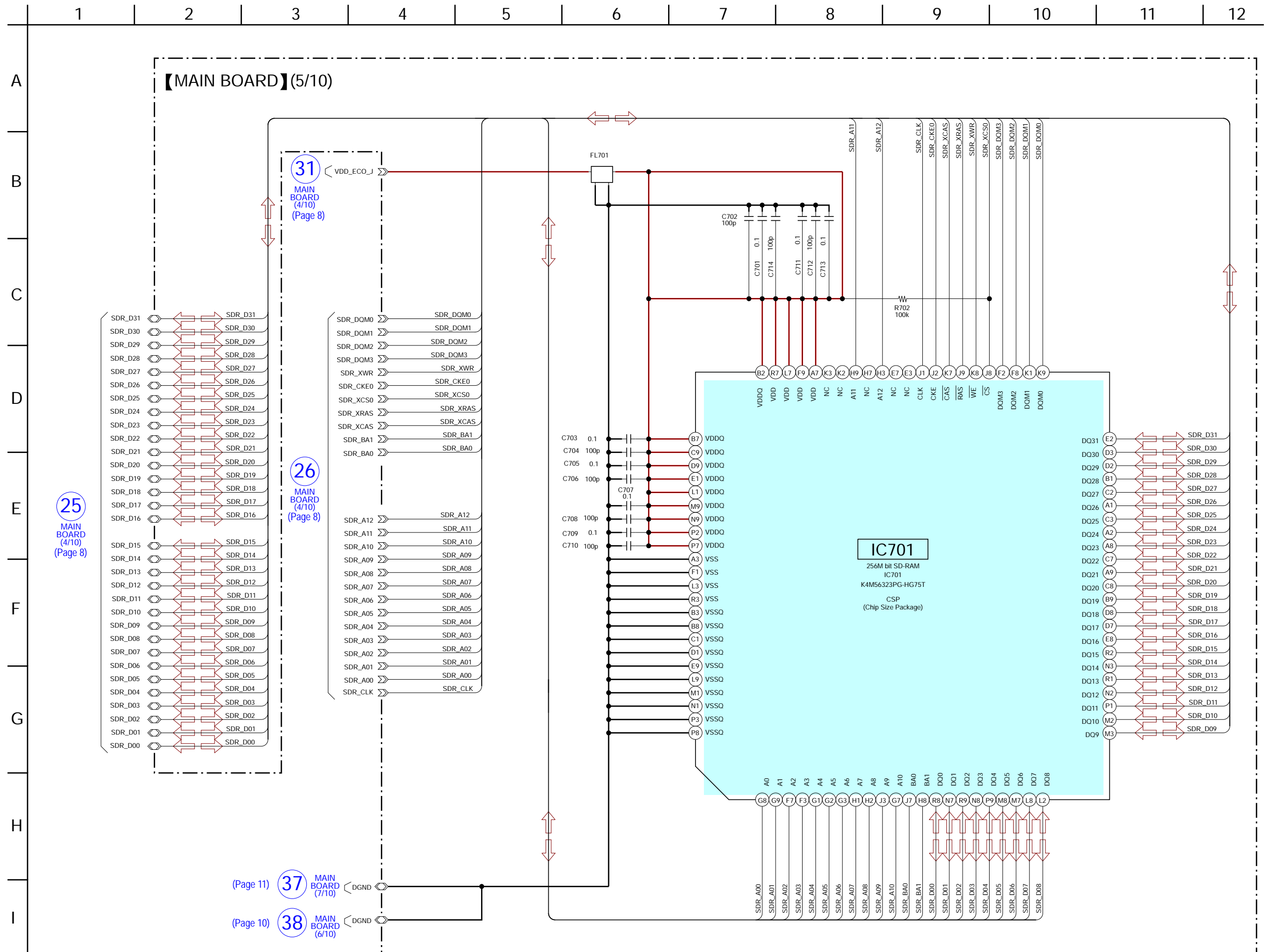
2-6. SCHEMATIC DIAGRAM - MAIN Board (4/10) -



Note 1: When the MAIN board is replaced, format it according to the "NOTE OF MAIN BOARD REPLACING" (refer to page 4 on original service manual) of the servicing notes.

Note 2: When IC601 and IC602 on the MAIN board is damaged, exchange the new MAIN board for the MAIN board which IC damaged.

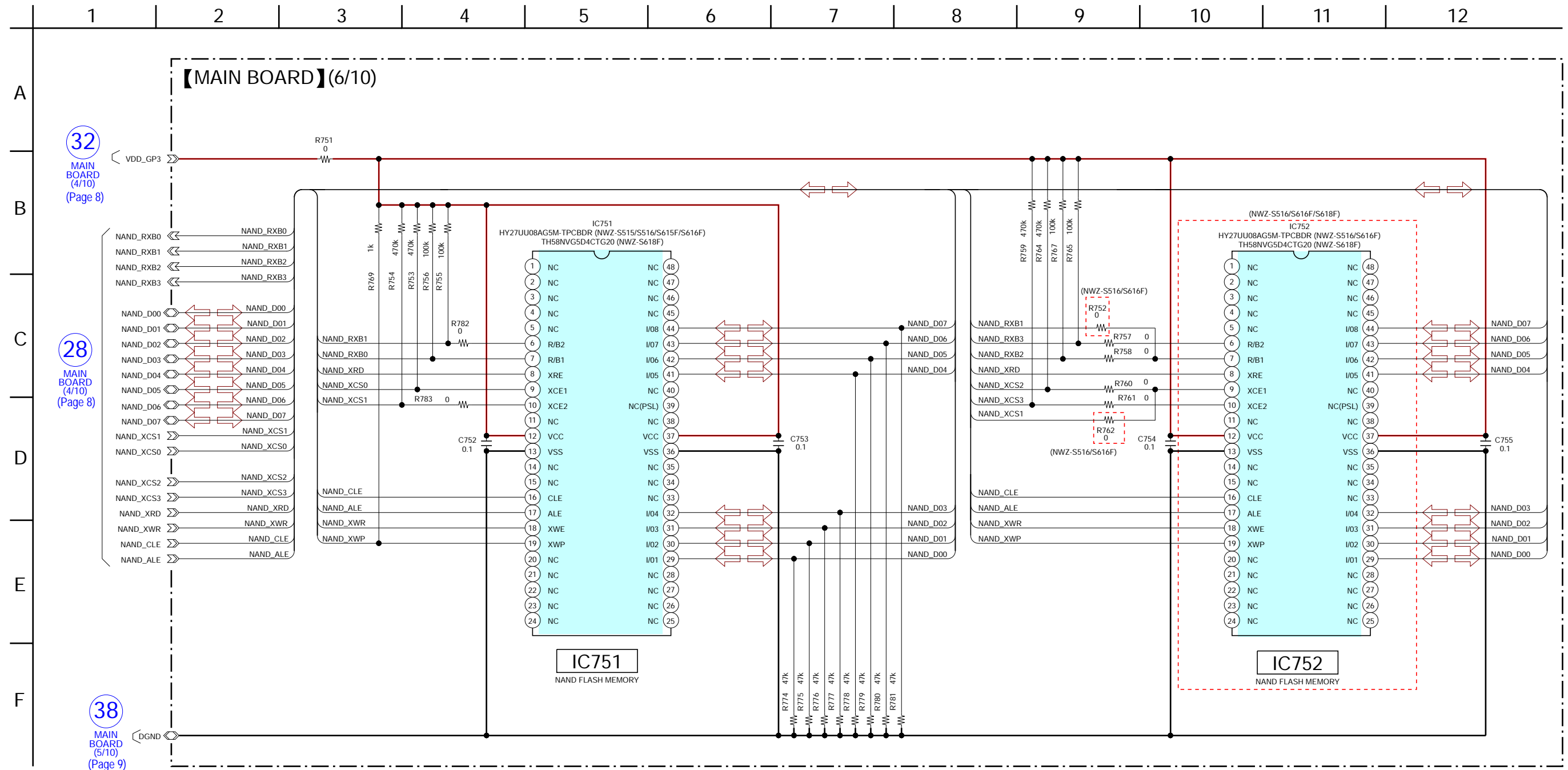
2-7. SCHEMATIC DIAGRAM - MAIN Board (5/10) -



Note 1: When the MAIN board is replaced, format it according to the "NOTE OF MAIN BOARD REPLACING" (refer to page 4 on original service manual) of the servicing notes.

Note 2: When IC701 on the MAIN board is damaged, exchange the new MAIN board for the MAIN board which IC damaged.

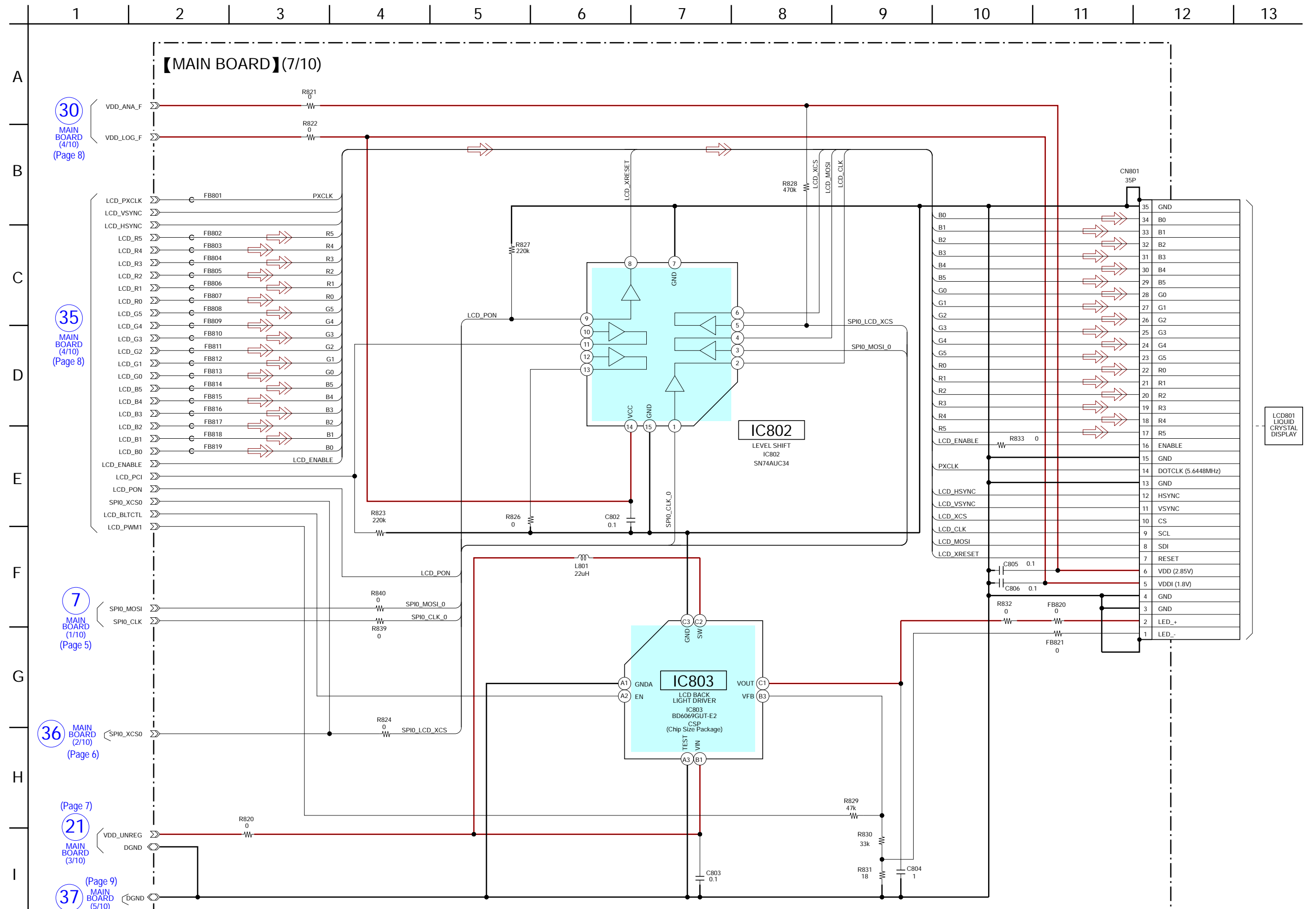
2-8. SCHEMATIC DIAGRAM - MAIN Board (6/10) -



Note 1: When the MAIN board is replaced, format it according to the "NOTE OF MAIN BOARD REPLACING" (refer to page 4 on original service manual) of the servicing notes.

Note 2: When IC751 and IC752 on the MAIN board is damaged, exchange the new MAIN board for the MAIN board which IC damaged.

2-9. SCHEMATIC DIAGRAM - MAIN Board (7/10) -

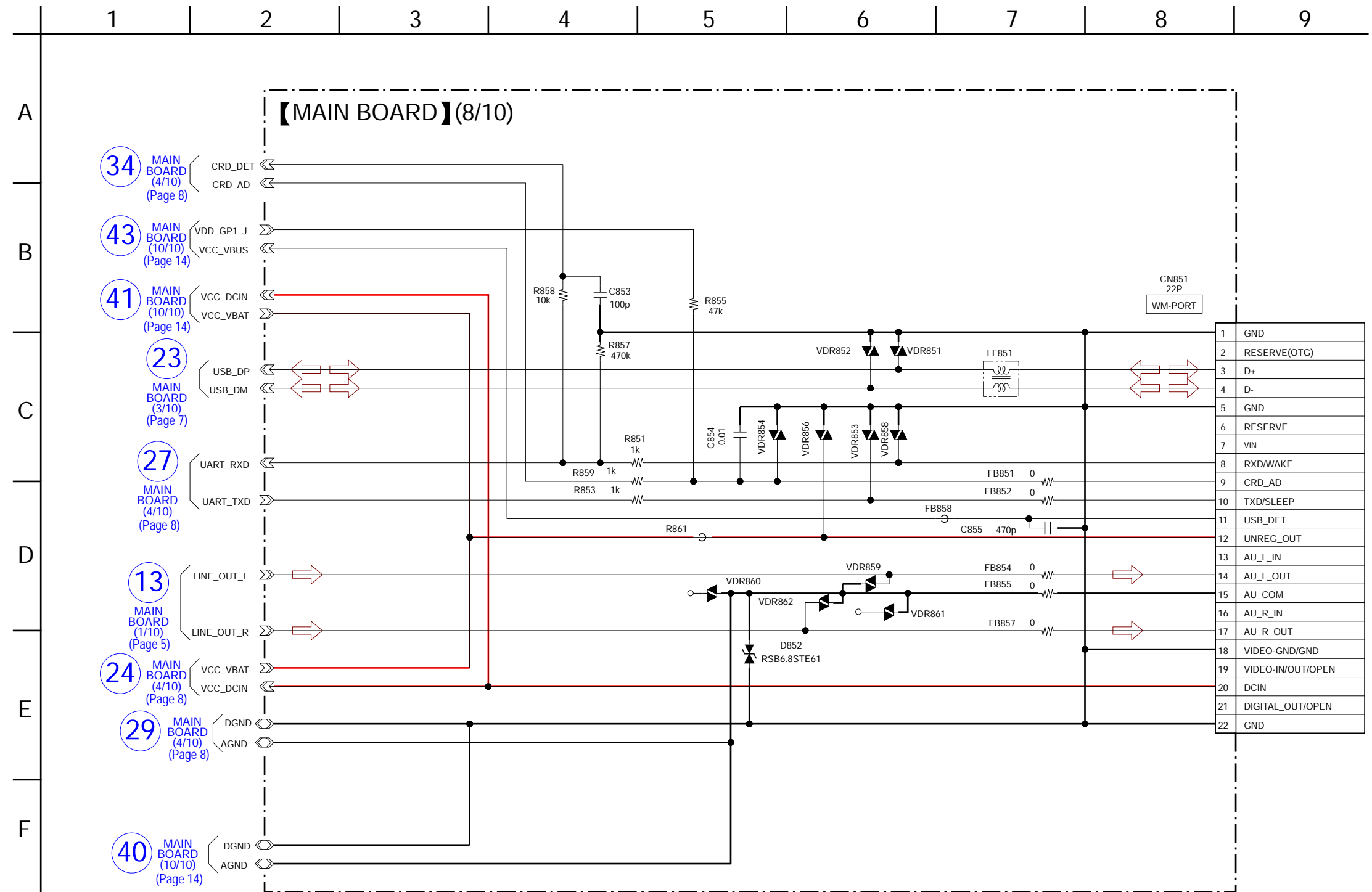


Note 1: When the MAIN board is replaced, format it according to the "NOTE OF MAIN BOARD REPLACING" (refer to page 4 on original service manual) of the servicing notes.

Note 2: When IC802 and IC803 on the MAIN board is damaged, exchange the new MAIN board for the MAIN board which IC damaged.

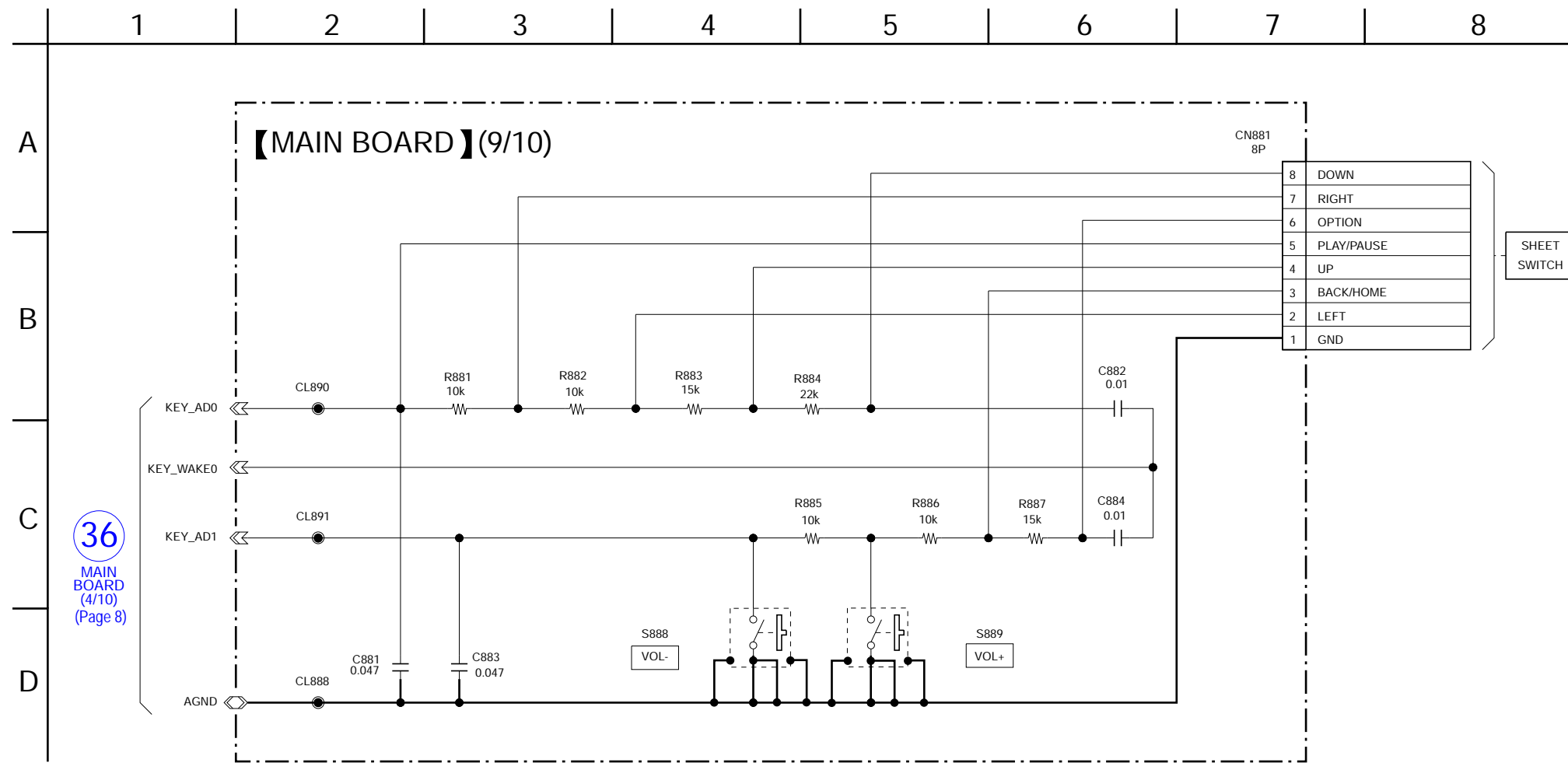
Note 3: When the LCD SUB ASSY (LCD801) is replaced, refer to SUPPLEMENT-2.

2-10. SCHEMATIC DIAGRAM - MAIN Board (8/10) -



Note: When the MAIN board is replaced, format it according to the "NOTE OF MAIN BOARD REPLACING" (refer to page 4 on original service manual) of the servicing notes.

2-11. SCHEMATIC DIAGRAM - MAIN Board (9/10) -

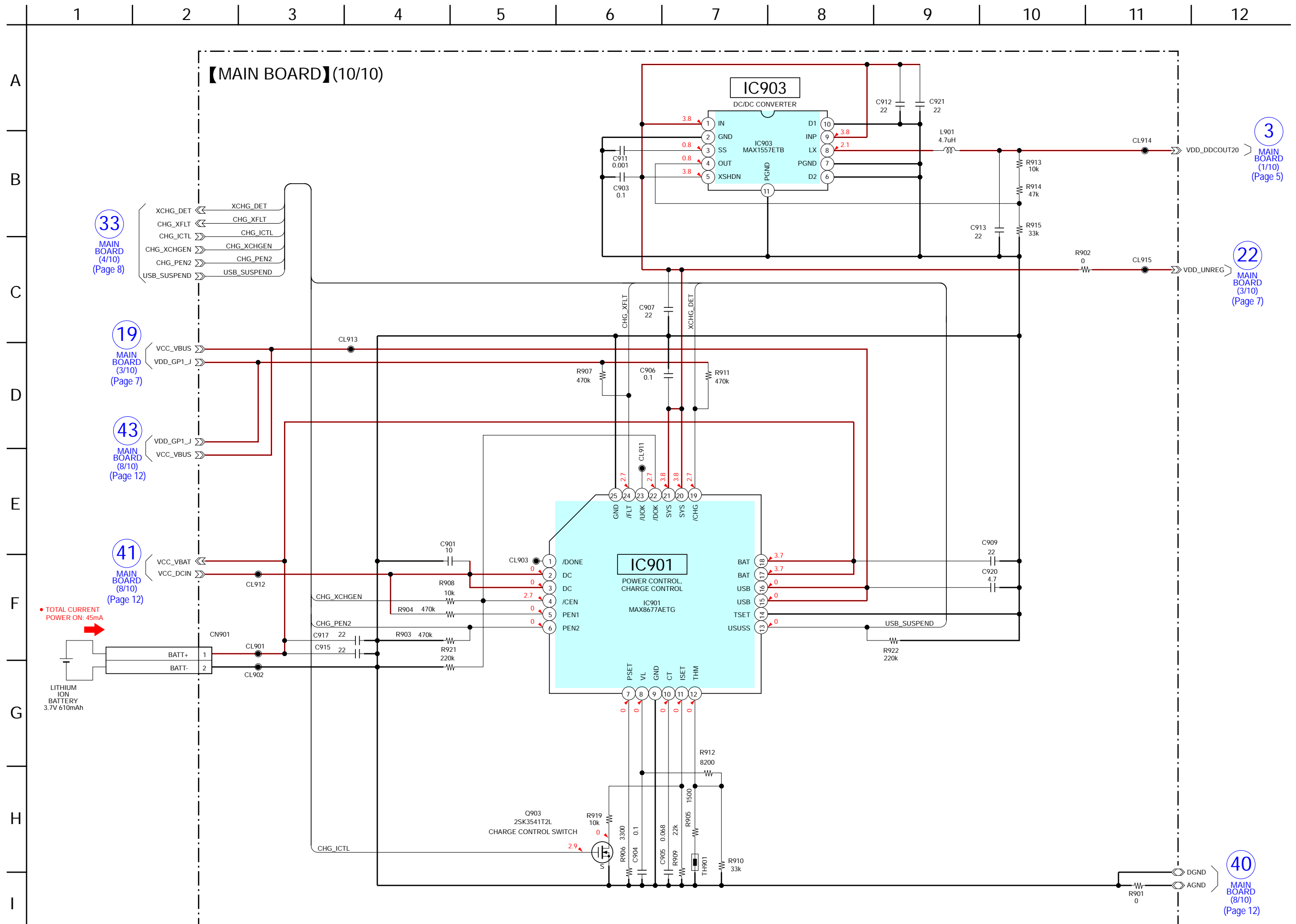


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MAIN BOARD (4/10) (Page 8)

Note 1: When the MAIN board is replaced, format it according to the "NOTE OF MAIN BOARD REPLACING" (refer to page 4 on original service manual) of the servicing notes.

Note 2: When CN881 on the MAIN board is damaged, exchange the new MAIN board for the MAIN board which connector damaged.

2-12. SCHEMATIC DIAGRAM - MAIN Board (10/10) -



33 MAIN BOARD (4/10) (Page 8)

19 MAIN BOARD (3/10) (Page 7)

43 MAIN BOARD (8/10) (Page 12)

41 MAIN BOARD (8/10) (Page 12)

TOTAL CURRENT POWER ON: 45mA

3 MAIN BOARD (1/10) (Page 5)

22 MAIN BOARD (3/10) (Page 7)

40 MAIN BOARD (8/10) (Page 12)

Note 1: When the MAIN board is replaced, format it according to the "NOTE OF MAIN BOARD REPLACING" (refer to page 4 on original service manual) of the servicing notes.

Note 2: When IC901 and IC903 on the MAIN board is damaged, exchange the new MAIN board for the MAIN board which IC damaged.

3. ELECTRICAL PARTS LIST

Note:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- Items marked “*” are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

• CAPACITORS

uF: μF

• COILS

uH: μH

• RESISTORS

All resistors are in ohms.
 METAL: Metal-film resistor.
 METAL OXIDE: Metal oxide-film resistor.
 F: nonflammable

• SEMICONDUCTORS

In each case, u: μ, for example:
 uA. . . : μA. . . , uPA. . . , μPA. . . ,
 uPB. . . : μPB. . . , uPC. . . , μPC. . . ,
 uPD. . . : μPD. . .

• Abbreviation

AUS : Australian model
 CH : Chinese model
 CND : Canadian model
 EE : East European model
 FR : French model
 JE : Tourist model
 MX : Mexican model

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

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
	X-2187-043-1	MAIN BOARD, COMPLETE (2GB) (for SERVICE) (NWZ-S515)		C201	1-137-987-81	CERAMIC CHIP 0.068uF 10% 10V (NWZ-S615F/S616F/S618F)	
	X-2187-044-1	MAIN BOARD, COMPLETE (4GB) (for SERVICE) (NWZ-S516)		C204	(Not supplied)	CERAMIC CHIP 150PF 10% 6.3V (NWZ-S615F/S616F/S618F)	
	X-2187-045-1	MAIN BOARD, COMPLETE (2GB) (for SERVICE) (NWZ-S615F: FR)		C205	1-128-627-91	CERAMIC CHIP 0.001uF 10% 16V (NWZ-S615F/S616F/S618F)	
	X-2187-046-1	MAIN BOARD, COMPLETE (4GB) (for SERVICE) (NWZ-S616F: FR)		C206	1-128-627-91	CERAMIC CHIP 0.001uF 10% 16V (NWZ-S615F/S616F/S618F)	
	X-2187-047-1	MAIN BOARD, COMPLETE (8GB) (for SERVICE) (NWZ-S618F: FR)		C207	1-137-987-81	CERAMIC CHIP 0.068uF 10% 10V	
	X-2187-048-1	MAIN BOARD, COMPLETE (2GB) (for SERVICE) (NWZ-S615F: US, CND)		C209	1-164-931-11	CERAMIC CHIP 100PF 10% 50V	
	X-2187-049-1	MAIN BOARD, COMPLETE (4GB) (for SERVICE) (NWZ-S616F: US, CND)		C210	1-165-887-91	CERAMIC CHIP 0.22uF 10% 6.3V	
	X-2187-050-1	MAIN BOARD, COMPLETE (8GB) (for SERVICE) (NWZ-S618F: US, CND)		C213	1-100-581-81	CERAMIC CHIP 0.0047uF 10% 50V	
	X-2187-853-1	MAIN BOARD, COMPLETE (2GB) (for SERVICE) (NWZ-S615F: AEP, EE, UK)		C301	1-164-937-11	CERAMIC CHIP 0.001uF 10% 50V	
	X-2187-854-1	MAIN BOARD, COMPLETE (4GB) (for SERVICE) (NWZ-S616F: AEP, EE, UK)		C302	1-112-716-11	CERAMIC CHIP 0.1uF 10% 6.3V	
	X-2187-855-1	MAIN BOARD, COMPLETE (8GB) (for SERVICE) (NWZ-S618F: AEP, EE, UK)		C303	1-112-716-11	CERAMIC CHIP 0.1uF 10% 6.3V	
	X-2187-856-1	MAIN BOARD, COMPLETE (2GB) (for SERVICE) (NWZ-S615F: CH)		C305	1-112-815-91	CERAMIC CHIP 10uF 20% 6.3V	
	X-2187-857-1	MAIN BOARD, COMPLETE (4GB) (for SERVICE) (NWZ-S616F: CH)		C306	1-112-716-11	CERAMIC CHIP 0.1uF 10% 6.3V	
	X-2187-858-1	MAIN BOARD, COMPLETE (8GB) (for SERVICE) (NWZ-S618F: CH)		C307	1-112-815-91	CERAMIC CHIP 10uF 20% 6.3V	
	X-2187-859-1	MAIN BOARD, COMPLETE (2GB) (for SERVICE) (NWZ-S615F: E, MX, AUS, JE)		C308	1-112-717-91	CERAMIC CHIP 1uF 10% 6.3V	
	X-2187-860-1	MAIN BOARD, COMPLETE (4GB) (for SERVICE) (NWZ-S616F: E, MX, AUS, JE)		C310	1-112-716-11	CERAMIC CHIP 0.1uF 10% 6.3V	
	X-2187-861-1	MAIN BOARD, COMPLETE (8GB) (for SERVICE) (NWZ-S618F: E, MX, AUS, JE)		C311	1-112-717-91	CERAMIC CHIP 1uF 10% 6.3V	
		*****		C312	1-100-611-91	CERAMIC CHIP 22uF 20% 6.3V (NWZ-S615F/S616F/S618F)	
		< CAPACITOR >		C313	1-112-716-11	CERAMIC CHIP 0.1uF 10% 6.3V (NWZ-S615F/S616F/S618F)	
C101	1-137-987-81	CERAMIC CHIP 0.068uF 10% 10V (NWZ-S615F/S616F/S618F)		C314	1-112-717-91	CERAMIC CHIP 1uF 10% 6.3V	
C104	(Not supplied)	CERAMIC CHIP 150PF 10% 6.3V (NWZ-S615F/S616F/S618F)		C315	1-112-717-91	CERAMIC CHIP 1uF 10% 6.3V	
C105	1-128-627-91	CERAMIC CHIP 0.001uF 10% 16V (NWZ-S615F/S616F/S618F)		C316	1-100-611-91	CERAMIC CHIP 22uF 20% 6.3V	
C106	1-128-627-91	CERAMIC CHIP 0.001uF 10% 16V (NWZ-S615F/S616F/S618F)		C319	1-100-507-91	CERAMIC CHIP 4.7uF 20% 6.3V	
C107	1-137-987-81	CERAMIC CHIP 0.068uF 10% 10V		C321	1-107-819-11	CERAMIC CHIP 0.022uF 10% 16V	
C109	1-164-931-11	CERAMIC CHIP 100PF 10% 50V		C322	1-125-777-11	CERAMIC CHIP 0.1uF 10% 10V	
C110	1-165-887-91	CERAMIC CHIP 0.22uF 10% 6.3V		C325	1-112-717-91	CERAMIC CHIP 1uF 10% 6.3V	
C113	1-164-941-11	CERAMIC CHIP 0.0047uF 10% 16V		C411	1-114-273-91	TANTALUM CHIP 47uF 20% 10V (NWZ-S615F/S616F/S618F)	
				C412	1-100-504-91	CERAMIC CHIP 0.1uF 20% 6.3V (NWZ-S615F/S616F/S618F)	
				C413	1-125-777-11	CERAMIC CHIP 0.1uF 10% 10V (NWZ-S615F/S616F/S618F)	
				C414	1-164-933-11	CERAMIC CHIP 220PF 10% 50V (NWZ-S615F/S616F/S618F)	
				C417	1-100-352-91	CERAMIC CHIP 1uF 20% 16V (NWZ-S615F/S616F/S618F)	
				C418	1-125-777-11	CERAMIC CHIP 0.1uF 10% 10V (NWZ-S615F/S616F/S618F)	
				C419	1-125-777-11	CERAMIC CHIP 0.1uF 10% 10V (NWZ-S615F/S616F/S618F)	
				C501	1-164-856-81	CERAMIC CHIP 18PF 5% 50V	

Note 1: When the MAIN board is replaced, format it according to the “NOTE OF MAIN BOARD REPLACING” (refer to page 4 on original service manual) of the servicing notes.

Note 2: When C104 and C204 on the MAIN board is damaged, exchange the new MAIN board for the MAIN board which capacitor damaged.

NWZ-S515/S516/S615F/S616F/S618F

MAIN

Ref. No.	Part No.	Description			Remark	Ref. No.	Part No.	Description			Remark
C502	1-164-854-11	CERAMIC CHIP	15PF	5%	50V	C664	1-112-716-11	CERAMIC CHIP	0.1uF	10%	6.3V
C503	1-100-352-91	CERAMIC CHIP	1uF	20%	16V	C665	1-128-627-91	CERAMIC CHIP	0.001uF	10%	16V
C504	1-112-716-11	CERAMIC CHIP	0.1uF	10%	6.3V	C666	1-112-716-11	CERAMIC CHIP	0.1uF	10%	6.3V
C505	1-112-716-11	CERAMIC CHIP	0.1uF	10%	6.3V	C667	1-128-627-91	CERAMIC CHIP	0.001uF	10%	16V
C506	1-112-716-11	CERAMIC CHIP	0.1uF	10%	6.3V	C668	1-117-743-81	CERAMIC CHIP	5PF	0.1PF	16V
C507	1-112-716-11	CERAMIC CHIP	0.1uF	10%	6.3V	C669	1-117-743-81	CERAMIC CHIP	5PF	0.1PF	16V
C508	1-112-716-11	CERAMIC CHIP	0.1uF	10%	6.3V	C670	1-128-627-91	CERAMIC CHIP	0.001uF	10%	16V
C509	1-112-716-11	CERAMIC CHIP	0.1uF	10%	6.3V	C671	1-128-627-91	CERAMIC CHIP	0.001uF	10%	16V
C510	1-112-716-11	CERAMIC CHIP	0.1uF	10%	6.3V	C672	1-128-627-91	CERAMIC CHIP	0.001uF	10%	16V
C511	1-112-717-91	CERAMIC CHIP	1uF	10%	6.3V	C673	1-112-716-11	CERAMIC CHIP	0.1uF	10%	6.3V
C512	1-112-717-91	CERAMIC CHIP	1uF	10%	6.3V	C674	1-112-716-11	CERAMIC CHIP	0.1uF	10%	6.3V
C513	1-112-716-11	CERAMIC CHIP	0.1uF	10%	6.3V	C675	1-112-716-11	CERAMIC CHIP	0.1uF	10%	6.3V
C514	1-112-716-11	CERAMIC CHIP	0.1uF	10%	6.3V	C676	1-128-627-91	CERAMIC CHIP	0.001uF	10%	16V
C515	1-112-716-11	CERAMIC CHIP	0.1uF	10%	6.3V	C677	1-128-627-91	CERAMIC CHIP	0.001uF	10%	16V
C516	1-112-716-11	CERAMIC CHIP	0.1uF	10%	6.3V	C678	1-128-627-91	CERAMIC CHIP	0.001uF	10%	16V
C517	1-112-716-11	CERAMIC CHIP	0.1uF	10%	6.3V	C679	1-112-716-11	CERAMIC CHIP	0.1uF	10%	6.3V
C518	1-112-716-11	CERAMIC CHIP	0.1uF	10%	6.3V	C680	1-112-716-11	CERAMIC CHIP	0.1uF	10%	6.3V
C601	1-112-717-91	CERAMIC CHIP	1uF	10%	6.3V	C681	1-112-716-11	CERAMIC CHIP	0.1uF	10%	6.3V
C602	1-112-717-91	CERAMIC CHIP	1uF	10%	6.3V	C682	1-128-627-91	CERAMIC CHIP	0.001uF	10%	16V
C603	1-112-717-91	CERAMIC CHIP	1uF	10%	6.3V	C683	1-112-716-11	CERAMIC CHIP	0.1uF	10%	6.3V
C604	1-112-717-91	CERAMIC CHIP	1uF	10%	6.3V	C684	1-128-627-91	CERAMIC CHIP	0.001uF	10%	16V
C606	1-112-717-91	CERAMIC CHIP	1uF	10%	6.3V	C685	1-128-627-91	CERAMIC CHIP	0.001uF	10%	16V
C607	1-112-717-91	CERAMIC CHIP	1uF	10%	6.3V	C686	1-128-627-91	CERAMIC CHIP	0.001uF	10%	16V
C608	1-112-717-91	CERAMIC CHIP	1uF	10%	6.3V	C687	1-112-716-11	CERAMIC CHIP	0.1uF	10%	6.3V
C610	1-112-716-11	CERAMIC CHIP	0.1uF	10%	6.3V	C688	1-112-716-11	CERAMIC CHIP	0.1uF	10%	6.3V
C611	1-128-627-91	CERAMIC CHIP	0.001uF	10%	16V	C689	1-119-923-11	CERAMIC CHIP	0.047uF	10%	10V
C612	1-112-716-11	CERAMIC CHIP	0.1uF	10%	6.3V	C690	1-112-716-11	CERAMIC CHIP	0.1uF	10%	6.3V
C613	1-112-716-11	CERAMIC CHIP	0.1uF	10%	6.3V	C691	1-128-627-91	CERAMIC CHIP	0.001uF	10%	16V
C615	1-112-716-11	CERAMIC CHIP	0.1uF	10%	6.3V	C692	1-128-627-91	CERAMIC CHIP	0.001uF	10%	16V
C616	1-112-716-11	CERAMIC CHIP	0.1uF	10%	6.3V	C693	1-164-943-81	CERAMIC CHIP	0.01uF	10%	16V
C617	1-112-716-11	CERAMIC CHIP	0.1uF	10%	6.3V	C694	1-112-716-11	CERAMIC CHIP	0.1uF	10%	6.3V
C618	1-112-716-11	CERAMIC CHIP	0.1uF	10%	6.3V	C695	1-112-716-11	CERAMIC CHIP	0.1uF	10%	6.3V
C620	1-112-716-11	CERAMIC CHIP	0.1uF	10%	6.3V	C697	1-128-627-91	CERAMIC CHIP	0.001uF	10%	16V
C625	1-117-748-81	CERAMIC CHIP	10PF	0.1PF	16V	C698	1-112-716-11	CERAMIC CHIP	0.1uF	10%	6.3V
C626	1-117-748-81	CERAMIC CHIP	10PF	0.1PF	16V	C699	1-112-716-11	CERAMIC CHIP	0.1uF	10%	6.3V
C629	1-112-717-91	CERAMIC CHIP	1uF	10%	6.3V	C701	1-112-716-11	CERAMIC CHIP	0.1uF	10%	6.3V
C632	1-100-352-91	CERAMIC CHIP	1uF	20%	16V	C702	1-128-622-91	CERAMIC CHIP	100PF	10%	16V
C633	1-112-716-11	CERAMIC CHIP	0.1uF	10%	6.3V	C703	1-112-716-11	CERAMIC CHIP	0.1uF	10%	6.3V
C634	1-112-716-11	CERAMIC CHIP	0.1uF	10%	6.3V	C704	1-128-622-91	CERAMIC CHIP	100PF	10%	16V
C638	1-112-717-91	CERAMIC CHIP	1uF	10%	6.3V	C705	1-112-716-11	CERAMIC CHIP	0.1uF	10%	6.3V
C640	1-112-717-91	CERAMIC CHIP	1uF	10%	6.3V	C706	1-128-622-91	CERAMIC CHIP	100PF	10%	16V
C641	1-100-611-91	CERAMIC CHIP	22uF	20%	6.3V	C707	1-112-716-11	CERAMIC CHIP	0.1uF	10%	6.3V
C643	1-112-717-91	CERAMIC CHIP	1uF	10%	6.3V	C708	1-128-622-91	CERAMIC CHIP	100PF	10%	16V
C644	1-100-611-91	CERAMIC CHIP	22uF	20%	6.3V	C709	1-112-716-11	CERAMIC CHIP	0.1uF	10%	6.3V
C645	1-112-716-11	CERAMIC CHIP	0.1uF	10%	6.3V	C710	1-128-622-91	CERAMIC CHIP	100PF	10%	16V
C646	1-112-716-11	CERAMIC CHIP	0.1uF	10%	6.3V	C711	1-112-716-11	CERAMIC CHIP	0.1uF	10%	6.3V
C647	1-128-627-91	CERAMIC CHIP	0.001uF	10%	16V	C712	1-128-622-91	CERAMIC CHIP	100PF	10%	16V
C648	1-112-716-11	CERAMIC CHIP	0.1uF	10%	6.3V	C713	1-112-716-11	CERAMIC CHIP	0.1uF	10%	6.3V
C649	1-128-627-91	CERAMIC CHIP	0.001uF	10%	16V	C714	1-128-622-91	CERAMIC CHIP	100PF	10%	16V
C650	1-128-627-91	CERAMIC CHIP	0.001uF	10%	16V	C752	1-112-716-11	CERAMIC CHIP	0.1uF	10%	6.3V
C651	1-112-716-11	CERAMIC CHIP	0.1uF	10%	6.3V	C753	1-112-716-11	CERAMIC CHIP	0.1uF	10%	6.3V
C652	1-112-716-11	CERAMIC CHIP	0.1uF	10%	6.3V	C754	1-112-716-11	CERAMIC CHIP	0.1uF	10%	6.3V
C653	1-128-627-91	CERAMIC CHIP	0.001uF	10%	16V	C755	1-112-716-11	CERAMIC CHIP	0.1uF	10%	6.3V
C654	1-112-716-11	CERAMIC CHIP	0.1uF	10%	6.3V	C802	1-112-716-11	CERAMIC CHIP	0.1uF	10%	6.3V
C655	1-128-627-91	CERAMIC CHIP	0.001uF	10%	16V	C803	1-112-716-11	CERAMIC CHIP	0.1uF	10%	6.3V
C656	1-112-716-11	CERAMIC CHIP	0.1uF	10%	6.3V	C804	1-100-591-91	CERAMIC CHIP	1uF	10%	25V
C657	1-128-627-91	CERAMIC CHIP	0.001uF	10%	16V	C805	1-112-716-11	CERAMIC CHIP	0.1uF	10%	6.3V
C660	1-128-627-91	CERAMIC CHIP	0.001uF	10%	16V	C806	1-112-716-11	CERAMIC CHIP	0.1uF	10%	6.3V
C661	1-112-716-11	CERAMIC CHIP	0.1uF	10%	6.3V	C853	1-164-931-11	CERAMIC CHIP	100PF	10%	50V
C662	1-164-937-11	CERAMIC CHIP	0.001uF	10%	50V	C854	1-164-943-81	CERAMIC CHIP	0.01uF	10%	16V

Ref. No.	Part No.	Description	Remark
C855	1-164-935-11	CERAMIC CHIP 470PF 10%	50V
C881	1-119-923-11	CERAMIC CHIP 0.047uF 10%	10V
C882	1-164-943-81	CERAMIC CHIP 0.01uF 10%	16V
C883	1-119-923-11	CERAMIC CHIP 0.047uF 10%	10V
C884	1-164-943-81	CERAMIC CHIP 0.01uF 10%	16V
C901	1-100-966-91	CERAMIC CHIP 10uF 20%	10V
C903	1-125-777-11	CERAMIC CHIP 0.1uF 10%	10V
C904	1-112-716-11	CERAMIC CHIP 0.1uF 10%	6.3V
C905	1-137-987-81	CERAMIC CHIP 0.068uF 10%	10V
C906	1-112-716-11	CERAMIC CHIP 0.1uF 10%	6.3V
C907	1-100-611-91	CERAMIC CHIP 22uF 20%	6.3V
C909	1-100-611-91	CERAMIC CHIP 22uF 20%	6.3V
C911	1-164-937-11	CERAMIC CHIP 0.001uF 10%	50V
C912	1-100-611-91	CERAMIC CHIP 22uF 20%	6.3V
C913	1-100-611-91	CERAMIC CHIP 22uF 20%	6.3V
C915	1-100-611-91	CERAMIC CHIP 22uF 20%	6.3V
C917	1-100-611-91	CERAMIC CHIP 22uF 20%	6.3V
C920	1-100-670-11	CERAMIC CHIP 4.7uF 20%	16V
C921	1-100-611-91	CERAMIC CHIP 22uF 20%	6.3V
< CONNECTOR >			
CN801	1-821-232-11	CONNECTOR, FPC (ZIF) 35P	
CN851	1-820-771-21	CONNECTOR, MULTIPLE (RECEPTACL)	
CN881	(Not supplied)	CONNECTOR, FFC/FPC (ZIF) 8P (WM-PORT)	
CN901	1-794-375-21	PIN, CONNECTOR 2P	
< DIODE >			
D101	8-719-083-04	DIODE RSB6.8STE61	
D201	8-719-083-04	DIODE RSB6.8STE61	
D301	8-719-083-04	DIODE RSB6.8STE61	
D852	8-719-083-04	DIODE RSB6.8STE61	
< FERRITE BEAD/JUMPER RESISTOR >			
FB101	1-400-851-11	EMI, FERRITE (SMD) (1005)	
FB201	1-400-851-11	EMI, FERRITE (SMD) (1005)	
FB301	1-400-915-21	INDUCTOR (EMI FERRITE) (2012)	
FB325	1-218-990-81	SHORT CHIP 0	
FB418	1-400-829-11	BEAD, FERRITE (1005)	(NWZ-S615F/S616F/S618F)
FB421	1-218-990-81	SHORT CHIP 0 (NWZ-S615F/S616F/S618F)	
FB425	1-218-990-81	SHORT CHIP 0 (NWZ-S615F/S616F/S618F)	
FB435	1-218-990-81	SHORT CHIP 0 (NWZ-S615F/S616F/S618F)	
FB601	1-218-990-81	SHORT CHIP 0	
FB602	1-400-829-11	BEAD, FERRITE (1005)	
FB801	1-400-462-21	FERRITE, EMI (SMD) (1005)	
FB802	1-481-258-21	SMD EMI FERRITE	
FB803	1-481-258-21	SMD EMI FERRITE	
FB804	1-481-258-21	SMD EMI FERRITE	
FB805	1-481-258-21	SMD EMI FERRITE	
FB806	1-481-258-21	SMD EMI FERRITE	
FB807	1-481-258-21	SMD EMI FERRITE	
FB808	1-481-258-21	SMD EMI FERRITE	
FB809	1-481-258-21	SMD EMI FERRITE	
FB810	1-481-258-21	SMD EMI FERRITE	
FB811	1-481-258-21	SMD EMI FERRITE	
FB812	1-481-258-21	SMD EMI FERRITE	
FB813	1-481-258-21	SMD EMI FERRITE	
FB814	1-481-258-21	SMD EMI FERRITE	
FB815	1-481-258-21	SMD EMI FERRITE	

Note 1: When CN881 on the MAIN board is damaged, exchange the new MAIN board for the MAIN board which connector damaged.

Ref. No.	Part No.	Description	Remark
FB816	1-481-258-21	SMD EMI FERRITE	
FB817	1-481-258-21	SMD EMI FERRITE	
FB818	1-481-258-21	SMD EMI FERRITE	
FB819	1-481-258-21	SMD EMI FERRITE	
FB820	1-218-990-81	SHORT CHIP 0	
FB821	1-218-990-81	SHORT CHIP 0	
FB851	1-218-990-81	SHORT CHIP 0	
FB852	1-218-990-81	SHORT CHIP 0	
FB854	1-218-990-81	SHORT CHIP 0	
FB855	1-218-990-81	SHORT CHIP 0	
FB857	1-218-990-81	SHORT CHIP 0	
FB858	1-400-392-21	INDUCTOR, FERRITE BEAD (1608)	
< FILTER >			
FL601	1-234-939-21	FILTER, EMI REMOVAL (SMD)	
FL701	1-234-939-21	FILTER, EMI REMOVAL (SMD)	
< IC >			
IC301	(Not supplied)	IC XC6401FF58DR	
IC302	(Not supplied)	IC CS42L51-CNZR (NWZ-S615F/S616F/S618F)	
IC302	(Not supplied)	IC CS43L21-CNZR (NWZ-S515/S516)	
IC303	(Not supplied)	IC MAX4745ELB+TG069	
IC403	6-709-757-01	IC SDFMM1N23GB2T	(NWZ-S615F/S616F/S618F)
IC404	(Not supplied)	IC TC7WH08FC (T5RSONY)	(NWZ-S615F/S616F/S618F)
IC405	(Not supplied)	IC TC7WH08FC (T5RSONY)	(NWZ-S615F/S616F/S618F)
IC501	(Not supplied)	IC S1R72V17B00A20B	
IC502	6-708-511-01	IC TC7SG08AFS	
IC503	(Not supplied)	IC TK63731AB1G0B	
IC504	6-711-031-01	IC TK63718HCL-G	
IC505	(Not supplied)	IC TC7WG74FC	
IC506	(Not supplied)	IC TC7WG74FC	
IC507	(Not supplied)	IC TC7SG04AFS	
IC508	(Not supplied)	IC TC7SG04AFS	
IC509	(Not supplied)	IC SN74AVC1T45YZPR	
IC601	(Not supplied)	IC MC-10051F1-FAE-A	
IC602	(Not supplied)	IC TK63731AB1G0B	
IC701	(Not supplied)	IC K4M56323PG-HG75T	
IC751	(Not supplied)	IC HY27UU08AG5M-TPCBDR	(NWZ-S515/S516/S615F/S616F)
IC751	(Not supplied)	IC TH58NVG5D4CTG20 (NWZ-S618F)	
IC752	(Not supplied)	IC HY27UU08AG5M-TPCBDR	(NWZ-S516/S616F)
IC752	(Not supplied)	IC TH58NVG5D4CTG20 (NWZ-S618F)	
IC802	(Not supplied)	IC SN74AUC34RGYR	
IC803	(Not supplied)	IC BD6069GUT-E2	
IC901	(Not supplied)	IC MAX8677AETG	
IC903	(Not supplied)	IC MAX1557ETB	
< JACK >			
J301	1-821-454-11	WATER RESISTANT JACK (HEADPHONE)	
< COIL >			
L601	1-457-412-11	INDUCTOR 10uH	
L602	1-457-412-11	INDUCTOR 10uH	
L801	1-481-213-11	INDUCTOR 22uH	

Note 2: When IC301, IC302, IC303, IC404, IC405, IC501, IC503, IC505, IC506, IC507, IC508, IC509, IC601, IC602, IC701, IC751, IC752, IC802, IC803, IC901 and IC903 on the MAIN board is damaged, exchange the new MAIN board for the MAIN board which IC damaged.

NWZ-S515/S516/S615F/S616F/S618F

MAIN

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
L901	1-481-097-11	INDUCTOR	4.7uH	R424	1-218-981-91	RES-CHIP	220K 5% 1/16W
LF851	1-456-984-11	COIL, COMMON MODE CHOKE (SMD1210)		R426	1-218-990-81	SHORT CHIP	0 (NWZ-S615F/S616F/S618F)
		< TRANSISTOR >		R427	1-218-990-81	SHORT CHIP	0 (NWZ-S615F/S616F/S618F)
Q301	6-550-282-01	TRANSISTOR	UNR31A600LS0	R432	1-216-864-11	SHORT CHIP	0 (NWZ-S615F/S616F/S618F)
Q302	6-551-186-01	TRANSISTOR	EMX18	R434	1-218-961-11	RES-CHIP	4.7K 5% 1/16W (NWZ-S615F/S616F/S618F)
Q303	6-551-186-01	TRANSISTOR	EMX18	R437	1-218-985-11	RES-CHIP	470K 5% 1/16W (NWZ-S615F/S616F/S618F)
Q304	6-550-282-01	TRANSISTOR	UNR31A600LS0	R438	1-218-990-81	SHORT CHIP	0 (NWZ-S615F/S616F/S618F)
Q401	6-550-379-01	FET	2SK354700LS0 (NWZ-S615F/S616F/S618F)	R439	1-218-990-81	SHORT CHIP	0 (NWZ-S615F/S616F/S618F)
Q603	6-550-747-01	FET	3LP01S-K-TL-E	R440	1-218-961-11	RES-CHIP	4.7K 5% 1/16W (NWZ-S615F/S616F/S618F)
Q903	6-551-346-01	FET	2SK3541T2L	R441	1-218-963-11	RES-CHIP	6.8K 5% 1/16W (NWZ-S615F/S616F/S618F)
		< RESISTOR/FERRITE BEAD >		R442	1-218-990-81	SHORT CHIP	0 (NWZ-S615F/S616F/S618F)
R101	1-218-990-81	SHORT CHIP	0 (NWZ-S615F/S616F/S618F)	R444	1-218-990-81	SHORT CHIP	0 (NWZ-S615F/S616F/S618F)
R105	1-218-937-11	RES-CHIP	47 5% 1/16W	R445	1-218-990-81	SHORT CHIP	0 (NWZ-S615F/S616F/S618F)
R107	1-208-455-11	RES-CHIP	5.6 5% 1/16W (EXCEPT FR)	R446	1-218-990-81	SHORT CHIP	0
R107	1-220-167-81	RES-CHIP	51 5% 1/16W (FR)	R447	1-218-990-81	SHORT CHIP	0
R108	1-218-949-11	RES-CHIP	470 5% 1/16W	R502	1-218-990-81	SHORT CHIP	0
R109	1-218-949-11	RES-CHIP	470 5% 1/16W	R503	1-218-977-11	RES-CHIP	100K 5% 1/16W
R110	1-244-161-81	RES-CHIP	2.2 5% 1/16W	R504	1-218-977-11	RES-CHIP	100K 5% 1/16W
R115	1-218-990-81	SHORT CHIP	0	R505	1-218-977-11	RES-CHIP	100K 5% 1/16W
R121	1-218-949-11	RES-CHIP	470 5% 1/16W	R506	1-208-906-81	METAL CHIP	6.2K 0.5% 1/16W
R201	1-218-990-81	SHORT CHIP	0 (NWZ-S615F/S616F/S618F)	R507	1-218-953-11	RES-CHIP	1K 5% 1/16W
R205	1-218-937-11	RES-CHIP	47 5% 1/16W	R510	1-218-933-11	RES-CHIP	22 5% 1/16W
R207	1-208-455-11	RES-CHIP	5.6 5% 1/16W (EXCEPT FR)	R511	1-218-981-91	RES-CHIP	220K 5% 1/16W
R207	1-220-167-81	RES-CHIP	51 5% 1/16W (FR)	R513	1-240-718-91	METAL CHIP	100K 5% 1/20W
R208	1-218-949-11	RES-CHIP	470 5% 1/16W	R514	1-218-929-11	RES-CHIP	10 5% 1/16W
R209	1-218-949-11	RES-CHIP	470 5% 1/16W	R516	1-218-929-11	RES-CHIP	10 5% 1/16W
R210	1-244-161-81	RES-CHIP	2.2 5% 1/16W	R519	1-218-981-91	RES-CHIP	220K 5% 1/16W
R215	1-218-990-81	SHORT CHIP	0	R520	1-218-977-11	RES-CHIP	100K 5% 1/16W
R221	1-218-949-11	RES-CHIP	470 5% 1/16W	R521	1-218-990-81	SHORT CHIP	0
R302	1-218-990-81	SHORT CHIP	0	R522	1-218-990-81	SHORT CHIP	0
R304	1-218-979-11	RES-CHIP	150K 5% 1/16W	R523	1-218-965-11	RES-CHIP	10K 5% 1/16W
R305	1-218-981-91	RES-CHIP	220K 5% 1/16W	R602	1-218-990-81	SHORT CHIP	0
R306	1-218-990-81	SHORT CHIP	0	R603	1-218-965-11	RES-CHIP	10K 5% 1/16W
R307	1-218-953-11	RES-CHIP	1K 5% 1/16W	R604	1-218-990-81	SHORT CHIP	0
R310	1-218-990-81	SHORT CHIP	0	R605	1-218-990-81	SHORT CHIP	0
R311	1-216-864-11	SHORT CHIP	0 (NWZ-S615F/S616F/S618F)	R607	1-218-985-11	RES-CHIP	470K 5% 1/16W
R312	1-218-990-81	SHORT CHIP	0	R608	1-218-953-11	RES-CHIP	1K 5% 1/16W
R313	1-218-953-11	RES-CHIP	1K 5% 1/16W	R611	1-218-990-81	SHORT CHIP	0
R314	1-218-990-81	SHORT CHIP	0	R615	1-218-953-11	RES-CHIP	1K 5% 1/16W
R315	1-218-945-11	RES-CHIP	220 5% 1/16W	R616	1-245-684-21	RES-CHIP	0.22 5% 1/8W
R319	1-218-990-81	SHORT CHIP	0	R617	1-245-684-21	RES-CHIP	0.22 5% 1/8W
R320	1-216-864-11	SHORT CHIP	0	R618	1-218-990-81	SHORT CHIP	0
R321	1-218-985-11	RES-CHIP	470K 5% 1/16W	R619	1-218-990-81	SHORT CHIP	0
R324	1-218-990-81	SHORT CHIP	0	R620	1-218-990-81	SHORT CHIP	0
R325	1-216-864-11	SHORT CHIP	0	R621	1-218-990-81	SHORT CHIP	0
R326	1-216-864-11	SHORT CHIP	0	R622	1-218-990-81	SHORT CHIP	0
R327	1-218-981-91	RES-CHIP	220K 5% 1/16W	R623	1-218-990-81	SHORT CHIP	0
R417	1-218-939-11	RES-CHIP	68 5% 1/16W (NWZ-S615F/S616F/S618F)	R624	1-218-990-81	SHORT CHIP	0
R419	1-218-953-11	RES-CHIP	1K 5% 1/16W (NWZ-S615F/S616F/S618F)	R625	1-240-718-91	METAL CHIP	100K 5% 1/20W
R420	1-218-953-11	RES-CHIP	1K 5% 1/16W (NWZ-S615F/S616F/S618F)	R626	1-240-718-91	METAL CHIP	100K 5% 1/20W
R422	1-218-990-81	SHORT CHIP	0	R627	1-240-695-91	METAL CHIP	1K 5% 1/20W
				R628	1-218-985-11	RES-CHIP	470K 5% 1/16W
				R629	1-218-985-11	RES-CHIP	470K 5% 1/16W
				R630	1-218-941-81	RES-CHIP	100 5% 1/16W
				R633	1-218-990-81	SHORT CHIP	0
				R634	1-218-989-11	RES-CHIP	1M 5% 1/16W
				R636	1-240-714-91	METAL CHIP	47K 5% 1/20W

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
R637	1-240-714-91	METAL CHIP	47K 5% 1/20W	R826	1-218-990-81	SHORT CHIP	0
R638	1-240-714-91	METAL CHIP	47K 5% 1/20W	R827	1-218-981-91	RES-CHIP	220K 5% 1/16W
R639	1-240-714-91	METAL CHIP	47K 5% 1/20W	R828	1-218-985-11	RES-CHIP	470K 5% 1/16W
R640	1-240-714-91	METAL CHIP	47K 5% 1/20W	R829	1-208-927-11	METAL CHIP	47K 0.5% 1/16W
R641	1-218-953-11	RES-CHIP	1K 5% 1/16W	R830	1-208-719-11	METAL CHIP	33K 0.5% 1/16W
R642	1-208-935-11	METAL CHIP	100K 0.5% 1/16W	R831	1-220-876-81	METAL CHIP	18 0.5% 1/16W
R643	1-218-990-81	SHORT CHIP	0	R832	1-218-990-81	SHORT CHIP	0
R644	1-218-990-81	SHORT CHIP	0	R833	1-218-990-81	SHORT CHIP	0
R646	1-218-985-11	RES-CHIP	470K 5% 1/16W	R839	1-218-990-81	SHORT CHIP	0
R647	1-218-985-11	RES-CHIP	470K 5% 1/16W	R840	1-218-990-81	SHORT CHIP	0
R648	1-208-927-11	METAL CHIP	47K 0.5% 1/16W	R851	1-218-953-11	RES-CHIP	1K 5% 1/16W
R649	1-208-927-11	METAL CHIP	47K 0.5% 1/16W	R853	1-218-953-11	RES-CHIP	1K 5% 1/16W
R651	1-218-985-11	RES-CHIP	470K 5% 1/16W	R855	1-208-927-11	METAL CHIP	47K 0.5% 1/16W
R653	1-218-977-11	RES-CHIP	100K 5% 1/16W	R857	1-218-985-11	RES-CHIP	470K 5% 1/16W
R655	1-240-718-91	METAL CHIP	100K 5% 1/20W	R858	1-218-965-11	RES-CHIP	10K 5% 1/16W
R656	1-240-718-91	METAL CHIP	100K 5% 1/20W	R859	1-218-953-11	RES-CHIP	1K 5% 1/16W
R657	1-240-718-91	METAL CHIP	100K 5% 1/20W	R861	1-469-324-21	INDUCTOR (EMI FERRITE) (2012)	
R658	1-240-718-91	METAL CHIP	100K 5% 1/20W	R881	1-208-911-11	METAL CHIP	10K 0.5% 1/16W
R660	1-240-714-91	METAL CHIP	47K 5% 1/20W	R882	1-208-911-11	METAL CHIP	10K 0.5% 1/16W
R661	1-218-985-11	RES-CHIP	470K 5% 1/16W	R883	1-208-711-11	METAL CHIP	15K 0.5% 1/16W
R662	1-218-953-11	RES-CHIP	1K 5% 1/16W	R884	1-208-715-11	METAL CHIP	22K 0.5% 1/16W
R663	1-218-977-11	RES-CHIP	100K 5% 1/16W	R885	1-208-911-11	METAL CHIP	10K 0.5% 1/16W
R664	1-218-990-81	SHORT CHIP	0	R886	1-208-911-11	METAL CHIP	10K 0.5% 1/16W
R665	1-218-953-11	RES-CHIP	1K 5% 1/16W	R887	1-208-711-11	METAL CHIP	15K 0.5% 1/16W
R667	1-218-985-11	RES-CHIP	470K 5% 1/16W	R901	1-216-864-11	SHORT CHIP	0
R668	1-218-977-11	RES-CHIP	100K 5% 1/16W	R902	1-216-864-11	SHORT CHIP	0
R670	1-218-981-91	RES-CHIP	220K 5% 1/16W	R903	1-218-985-11	RES-CHIP	470K 5% 1/16W
R672	1-218-990-81	SHORT CHIP	0	R904	1-218-985-11	RES-CHIP	470K 5% 1/16W
R702	1-218-977-11	RES-CHIP	100K 5% 1/16W	R905	1-208-687-11	METAL CHIP	1.5K 0.5% 1/16W
R751	1-218-990-81	SHORT CHIP	0	R906	1-218-959-11	RES-CHIP	3.3K 5% 1/16W
R752	1-218-990-81	SHORT CHIP	0 (NWZ-S516/S616F)	R907	1-218-985-11	RES-CHIP	470K 5% 1/16W
R753	1-218-985-11	RES-CHIP	470K 5% 1/16W	R908	1-218-965-11	RES-CHIP	10K 5% 1/16W
R754	1-218-985-11	RES-CHIP	470K 5% 1/16W	R909	1-208-715-11	METAL CHIP	22K 0.5% 1/16W
R755	1-218-977-11	RES-CHIP	100K 5% 1/16W	R910	1-208-923-11	METAL CHIP	33K 0.5% 1/16W
R756	1-218-977-11	RES-CHIP	100K 5% 1/16W	R911	1-218-985-11	RES-CHIP	470K 5% 1/16W
R757	1-218-990-81	SHORT CHIP	0	R912	1-208-909-11	METAL CHIP	8.2K 0.5% 1/16W
R758	1-218-990-81	SHORT CHIP	0	R913	1-208-911-11	METAL CHIP	10K 0.5% 1/16W
R759	1-240-726-91	METAL CHIP	470K 5% 1/20W	R914	1-208-927-11	METAL CHIP	47K 0.5% 1/16W
R760	1-218-990-81	SHORT CHIP	0	R915	1-208-923-11	METAL CHIP	33K 0.5% 1/16W
R761	1-218-990-81	SHORT CHIP	0	R919	1-208-911-11	METAL CHIP	10K 0.5% 1/16W
R762	1-218-990-81	SHORT CHIP	0 (NWZ-S516/S616F)	R921	1-218-981-91	RES-CHIP	220K 5% 1/16W
R764	1-240-726-91	METAL CHIP	470K 5% 1/20W	R922	1-218-981-91	RES-CHIP	220K 5% 1/16W
R765	1-240-718-91	METAL CHIP	100K 5% 1/20W			< SWITCH >	
R767	1-240-718-91	METAL CHIP	100K 5% 1/20W	S601	1-786-227-21	SWITCH, TACTILE (RESET)	
R769	1-218-953-11	RES-CHIP	1K 5% 1/16W	S602	1-572-922-11	SWITCH, SLIDE (HOLD)	
R774	1-240-714-91	METAL CHIP	47K 5% 1/20W	S888	1-786-845-11	SWITCH, TACTILE (VOL -)	
R775	1-240-714-91	METAL CHIP	47K 5% 1/20W	S889	1-786-845-11	SWITCH, TACTILE (VOL +)	
R776	1-240-714-91	METAL CHIP	47K 5% 1/20W			< THERMISTOR >	
R777	1-240-714-91	METAL CHIP	47K 5% 1/20W	TH901	1-804-949-11	THERMISTOR, NTC (SMD)	
R778	1-240-714-91	METAL CHIP	47K 5% 1/20W			< VARISTOR >	
R779	1-240-714-91	METAL CHIP	47K 5% 1/20W	VDR301	1-805-774-21	VARISTOR, CHIP (NWZ-S615F/S616F/S618F)	
R780	1-240-714-91	METAL CHIP	47K 5% 1/20W	VDR302	1-805-774-21	VARISTOR, CHIP	
R781	1-240-714-91	METAL CHIP	47K 5% 1/20W	VDR303	1-805-774-21	VARISTOR, CHIP	
R782	1-218-990-81	SHORT CHIP	0	VDR401	1-805-774-21	VARISTOR, CHIP (NWZ-S615F/S616F/S618F)	
R783	1-218-990-81	SHORT CHIP	0	VDR851	1-805-774-21	VARISTOR, CHIP	
R820	1-218-990-81	SHORT CHIP	0	VDR852	1-805-774-21	VARISTOR, CHIP	
R821	1-218-990-81	SHORT CHIP	0	VDR853	1-805-774-21	VARISTOR, CHIP	
R822	1-218-990-81	SHORT CHIP	0				
R823	1-218-981-91	RES-CHIP	220K 5% 1/16W				
R824	1-218-990-81	SHORT CHIP	0				

NWZ-S515/S516/S615F/S616F/S618F

MAIN

<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Remark</u>
VDR854	1-805-774-21	VARISTOR, CHIP	
VDR856	1-805-774-21	VARISTOR, CHIP	
VDR858	1-805-774-21	VARISTOR, CHIP	
VDR859	1-805-774-21	VARISTOR, CHIP	
VDR860	1-805-774-21	VARISTOR, CHIP	
VDR861	1-805-774-21	VARISTOR, CHIP	
VDR862	1-805-774-21	VARISTOR, CHIP	
		< VIBRATOR >	
X501	1-813-877-11	VIBRATOR, CRYSTAL (12MHz)	
X602	1-813-206-11	VIBRATOR, CRYSTAL (32.768kHz)	
X603	1-795-758-21	VIBRATOR, CRYSTAL (11.2896MHz)	

NWZ-S515/S516/S615F/ S616F/S618F

SONY[®]

SERVICE MANUAL

Ver. 1.3 2007.12

US Model
Canadian Model
E Model
Australian Model
Chinese Model
Tourist Model
NWZ-S615F/S616F/S618F
AEP Model
*NWZ-S515/S516/S615F/
S616F/S618F*
UK Model
NWZ-S515/S516/S616F/S618F

SUPPLEMENT-2

File this supplement with the service manual.

Subject: Change of LCD SUB ASSY (LCD801)

In this set, LCD sub assy (LCD801) has been changed in the midway of production.
Servicing note is described in this supplement-2.
Refer to original service manual and supplement-1 for other information.

NOTE THE LCD SUB ASSY (LCD801) REPLACING

The LCD sub assy (LCD801) used with this main unit has two kinds of types of made by EPSON and made by TMD.

When the LCD sub assy (LCD801) is replaced, it is necessary to write information on LCD used in the main board.

When the LCD sub assy (LCD801) is replaced, when it is sure to fulfill the conditions referring to “1. Discrimination” and “2. Condition to use the LCD Config Setting Tool”, information on LCD used for the main board is written according to “3. Prior preparation”, “4. Updating the firmware of the main unit” and “5. Use of the LCD Config Setting Tool”.

• Part No. of the LCD sub assy (LCD801)

made by EPSON	made by TMD
X-2187-040-1	X-2189-452-1

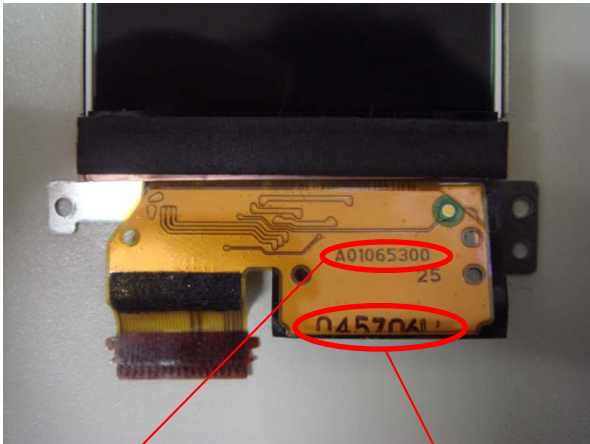
• About the service supply parts of the LCD sub assy (LCD801)

The LCD sub assy (LCD801) made of EPSON is substituted by the LCD sub assy (LCD801) made of TMD as soon as the stock of the service supply parts is digested.

Therefore, all the service supply parts are integrated into the LCD sub assy (LCD801) made of TMD in the futures.

1. Discrimination

• LCD made by EPSON



"A01065300" is marked.

Serial number is marked.

• LCD made by TMD



Not marked.

Serial number is pasted.

2. Condition to use the LCD Config Setting Tool

When corresponding to the following condition, write information on LCD that uses the LCD Config Setting Tool and uses it for the main board.

- When the LCD sub assy (LCD801) made of EPSON breaks down, and change parts are the LCD sub assy (LCD801) made of TMD.
- When the LCD sub assy (LCD801) made of TMD breaks down, and change parts are the LCD sub assy (LCD801) made of EPSON.
- When nothing is displayed in LCD by the energizing confirmation after the main board is replaced.

3. Prior preparation

Procedure:

1. Following jig is prepared.
- PC (OS: since Windows XP)
- LCD Config Setting Tool (Confirm the obtaining method to each service headquarters)
2. Unzip the zip file of the LCD Config Setting Tool.
3. Copy two made folders (“LCD_EPSON” and “LCD_TMD”) onto the right under of C drive of PC.

Note: There is no problem wherever the made folder is preserved. In “5. Use of the LCD Config Setting Tool”, it explains assuming that the folder is preserved right under C drive.

4. Updating the firmware of the main unit (US and Canadian models only)

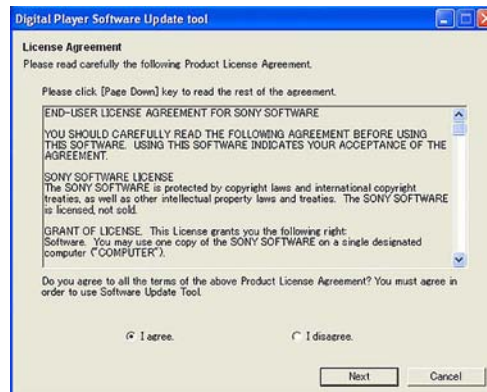
To use the LCD Config Setting Tool, the firmware of the main unit must be 1.00.51 or later.

As factory side has shipped the main unit with firmware Version 1.00.50 to US and Canadian, please check the firmware version of the main unit with test mode before using LCD Config Setting Tool.

If the firmware version is 1.00.50, please update the firmware to 1.00.51.

Procedure:

1. Following jig is prepared.
- PC (OS: since Windows XP)
- F/W Updater (Confirm the obtaining method to each service headquarters)
2. Unzip the zip file of the F/W Updater to get “10051-NWZ-S61X” folder.
3. Open the “PGImage-NWZ-S61X” folder under the folder in step 2.
4. Start FWUpdater.exe file.
5. Select “I agree.” and click next button.



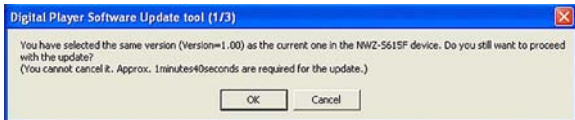
- Click OK button.



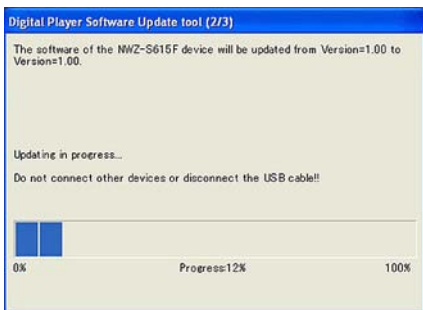
- Click OK button.



- Click OK button.



- Updating process starts.



- Click Finish button and update is completed.



5. Use of the LCD Config Setting Tool

Note: When you use the LCD Config Setting Tool, quit the SonicStage.

Procedure:

- the LCD sub assy (LCD801) is replaced.
- The power supply of main unit is turned on, and it connects it with PC.

Note: In this state, main unit of the state of energizing is not displayed to anything in LCD.

- Command Prompt is started, and move to the folder where the data that wants to be written is stored.

- When model is NWZ-S515/S516, and the LCD sub assy (LCD801) in change parts is made of EPSON:

cd c:\LCD_EPSON\NWZ_S51X

- When model is NWZ-S515/S516, and the LCD sub assy (LCD801) in change parts is made of TMD:

cd c:\LCD_TMD\NWZ_S51X

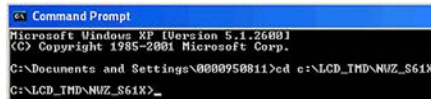
- When model is NWZ-S615F/S616F/S618F, and the LCD sub assy (LCD801) in change parts is made of EPSON:

cd c:\LCD_EPSON\NWZ_S61X

- When model is NWZ-S615F/S616F/S618F, and the LCD sub assy (LCD801) in change parts is made of TMD:

cd c:\LCD_TMD\NWZ_S61X

Fig. 1 Directory change (When model is NW-S615F/S616F/S618F, and the LCD sub assy (LCD801) in change parts is made of TMD)



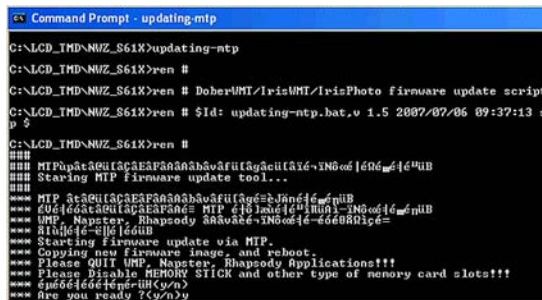
- Input “updating-mtp” and press the Enter key.

Fig. 2 Update tool start



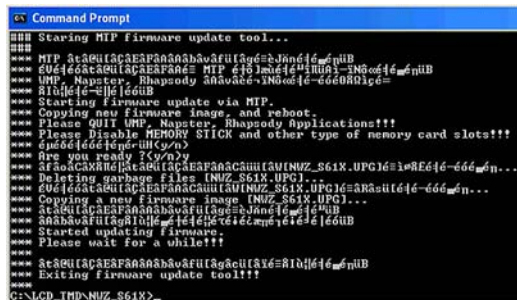
- Message of Fig.3 is displayed, input “y” and press the Enter key.

Fig. 3 Update confirmation screen



- Message of Fig.4 is displayed. Then, LCD_Config-data-copy-operation starts.

Fig. 4 Writing of LCD_Config data



- The main unit reboots automatically after LCD_Config data is updated. After rebooting, check that Connecting USB (MTP) is displayed on LCD of the main unit.

- Input “EXIT” to close Command Prompt.

Note: Change the setting of LCD_Config again according to the same procedure when the LCD sub assy (LCD801) connected with the main board and the LCD_Config data on the main board is not corresponding.

