MZ-NH600D

SERVICE MANUAL

US Model
Canadian Model

Ver 1.0 2004.05

US and foreign patents licensed from Dolby Laboratories.

Model Name Using Similar Mechanism	NEW
MD Mechanism Type	MT-MZNH900-181
Optical Pick-up Mechanism Type	ABX-U

SPECIFICATIONS

Audio playing system
MiniDisc digital audio system

Laser diode properties
Material: GaAlAs
Wavelength: λ = 790 nm
Emission duration: continuous
Laser output: less than 44.6 µW
(This output is the value measured at a distance of 200 mm from the lens surface on the optical pick-up block with 7 mm aperture.)

Recording and playback time
When using HMD1G (1GB disc):
Maximum 34 hours in Hi-LP stereo
When using MDW-80 in Hi-MD mode:
Maximum 10 hours and 10 min. in Hi-LP stereo
When using MDW-80 in MD mode:
Maximum 160 min. in monaural
Maximum 320 min. in LP4 stereo

Revolutions
380 rpm to 2,700 rpm (CLV)

Error correction
Hi-MD:
LDC (Long Distance Code)/BIS (Burst Indicator Subcode)
MD:
ACIRC (Advanced Cross Interleave Reed Solomon Code)

Sampling frequency
44.1 kHz

Sampling rate converter
Input: 32 kHz/44.1 kHz/48 kHz

Coding
Hi-MD:
ATRAC3plus (Adaptive TRansform Acoustic Coding 3 plus)
MD:
ATRAC
ATRAC3 – LP2/LP4

Modulation system
Hi-MD:
1-7RLL (Run Length Limited)/PRML (Partial Response Maximum Likelihood)
MD:
EFM (Eight to Fourteen Modulation)

Frequency response
20 to 20,000 Hz ± 3 dB

Outputs
🎧[1]: stereo mini-jack

Maximum output (DC)
Headphones:
5 mW + 5 mW (16 Ω)

Power requirements
One LR6 (size AA) alkaline battery (not supplied)

Operating temperature
+5°C (+41°F) to +35°C (+95°F)

Dimensions
Approx. 83.6 × 28.9 × 77.0 mm (w/h/d) ($3\,^3/_8 \times 1\,^3/_{16} \times 3\,^1/_8$ in.) (excluding projecting parts and controls)

Mass
Approx. 99 g (3.5 oz) (the player only)
[1]Measured in accordance with JEITA.

Supplied accessories
Headphones (US)
Earphones (Canadian)
Dedicated USB Cable
CD-ROM (Sonic Stage Ver. 2.0/MD Simple Burner Ver. 2.0)*
*Do not play a CD-ROM on an audio CD player.

– Continued on next page –

PORTABLE MINIDISC PLAYER

9-877-841-01
2004E05-1

Sony Corporation
Personal Audio Company
Published by Sony Engineering Corporation

SONY®

Battery life [1]
When playing continuously in Hi-MD mode

Disc type	Linear PCM	Hi-SP	Hi-LP
1GB Hi-MD disc	Approx. 11.0 hours[2]	Approx. 21.5 hours[2]	Approx. 25.5 hours[2]
60/74/80-minute standard disc	Approx. 9.5 hours[2]	Approx. 20.0 hours[2]	Approx. 24.5 hours[2]

[1] When using a new Sony LR6 (size AA) alkaline dry battery (produced in Japan)
[2] Measured in accordance with the JEITA (Japan Electronics and Information Technology Industries Association) standard.

When playing continuously in MD mode

Disc type	SP stereo	LP2 stereo	LP4 stereo
60/74/80-minute standard disc	Approx. 20.5 hours	Approx. 24.5 hours	Approx. 27.0 hours

Design and specifications are subject to change without notice.

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

Notes on chip component replacement

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

Flexible Circuit Board Repairing

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

UNLEADED SOLDER

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

: LEAD FREE MARK

Unleaded solder has the following characteristics.

- Unleaded solder melts at a temperature about 40 °C higher than ordinary solder.
  Ordinary soldering irons can be used but the iron tip has to be applied to the solder joint for a slightly longer time.
  Soldering irons using a temperature regulator should be set to about 350 °C.
  Caution: The printed pattern (copper foil) may peel away if the heated tip is applied for too long, so be careful!
- Strong viscosity
  Unleaded solder is more viscou-s (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.

SAFETY-RELATED COMPONENT WARNING!!

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

ATTENTION AU COMPOSANT AYANT RAPPORT À LA SÉCURITÉ!

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

SECTION 1
SERVICING NOTES

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

The laser diode in the optical pick-up block may suffer electrostatic break-down because of the potential difference generated by the charged electrostatic load, etc. on clothing and the human body.
During repair, pay attention to electrostatic break-down and also use the procedure in the printed matter which is included in the repair parts.
The flexible board is easily damaged and should be handled with care.

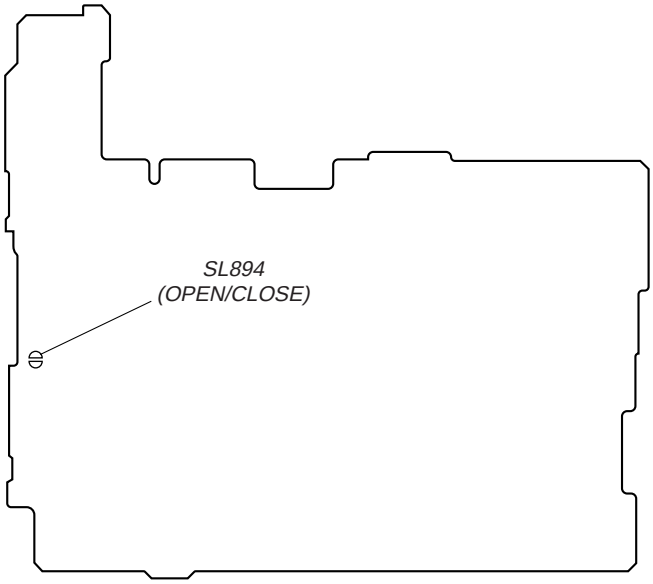
NOTES ON LASER DIODE EMISSION CHECK

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

OPERATION CHECK WHEN THE LID IS OPEN

In performing the repair with the power supplied to the set, removing the MAIN board causes the set to be disabled.
In such a case, make a solder bridge to short SL894 (OPEN/CLOSE) on the MAIN board in advance.

– MAIN Board (Conductor Side) –



Providing the required system environment

System requirements

The following system environment is required in order to use the SonicStage Ver. 2.0/MD Simple Burner Ver. 2.0 software for the MD Walkman.

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

This software is not supported by the following environments:

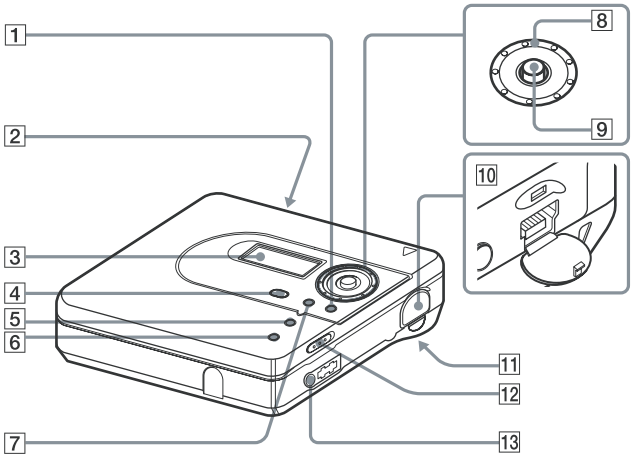
- OSs other than the indicated above
- Personally constructed PCs or operating systems
- An environment that is an upgrade of the original manufacturer-installed operating system
- Multi-boot environment
- Multi-monitor environment
- Macintosh

Notes

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

Looking at controls

The player



1 ■ (stop) • CANCEL button

2 OPEN switch

3 Display window

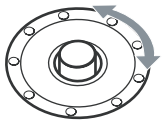
4 DOWNLOAD button
This button allows you to record music tracks from an audio CD in the CD drive of your computer to an MD Walkman using the supplied MD Simple Burner Ver. 2.0 software.

5 • NAVI/ ⬬ MENU button
Press lightly to go to the NAVI (navigation) setting mode.
Press for 2 seconds or more to go to the MENU setting mode.

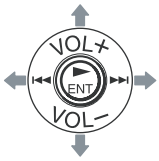
6 GROUP button

7 ❚❚ (pause) button

8 Jog dial



9 5-way control key



Operation	Function
Press ► ENT [1]	play, enter
Press towards ⏮	find the beginning of the previous track, rewind
Press towards ⏭	find the beginning of the next track, fast forward
Press towards VOL +[1] or VOL –	volume

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

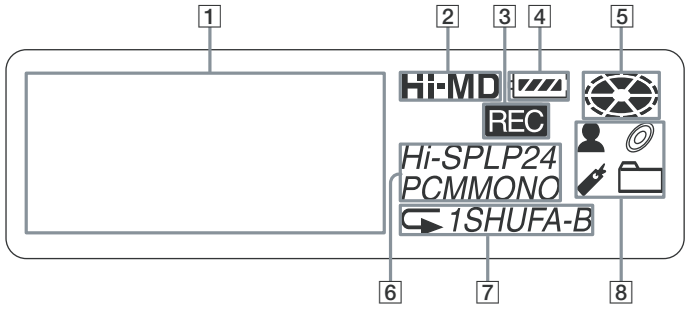
10 USB cable connecting jack

11 Battery compartment (at the bottom)

12 HOLD switch
Slide the switch in the direction of the arrow to disable the buttons on the player.
To prevent the buttons from being accidentally operated when you carry the player, use this function.

13 ∩ (headphones/earphones) jack

The display window of the player



1 Character information display
Displays the disc and track names, date, error messages, track numbers, etc.

2 Hi-MD/MD indication
"Hi-MD" lights up when the operation mode of the player is in Hi-MD mode and "MD" lights up when the operation mode is in MD mode.

3 REC indication
Lights up during file transfers from the computer. When flashing, the player is in record standby mode.

4 Battery indication
Shows the approximate remaining battery power. If the battery is weak, the indication becomes empty and starts flashing.

5 Disc indication
Shows that the disc is rotating for playing.

6 Track mode (PCM, Hi-SP, Hi-LP, SP, LP2, LP4, MONO) indication

7 Sub play mode/Repeat play indications
Shows the selected Sub play mode (single-track play, shuffle play, etc.) or Repeat play.

8 Main play mode indications
Shows the selected main play mode (group play, bookmark play, etc.).

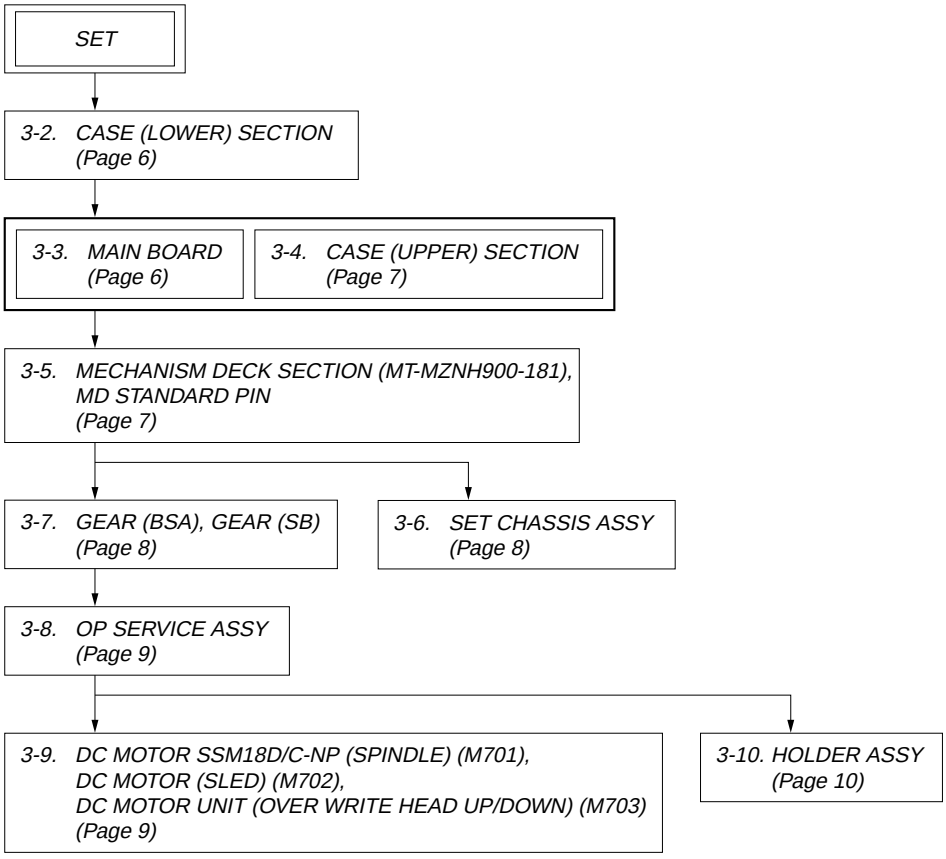
SECTION 3
DISASSEMBLY

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

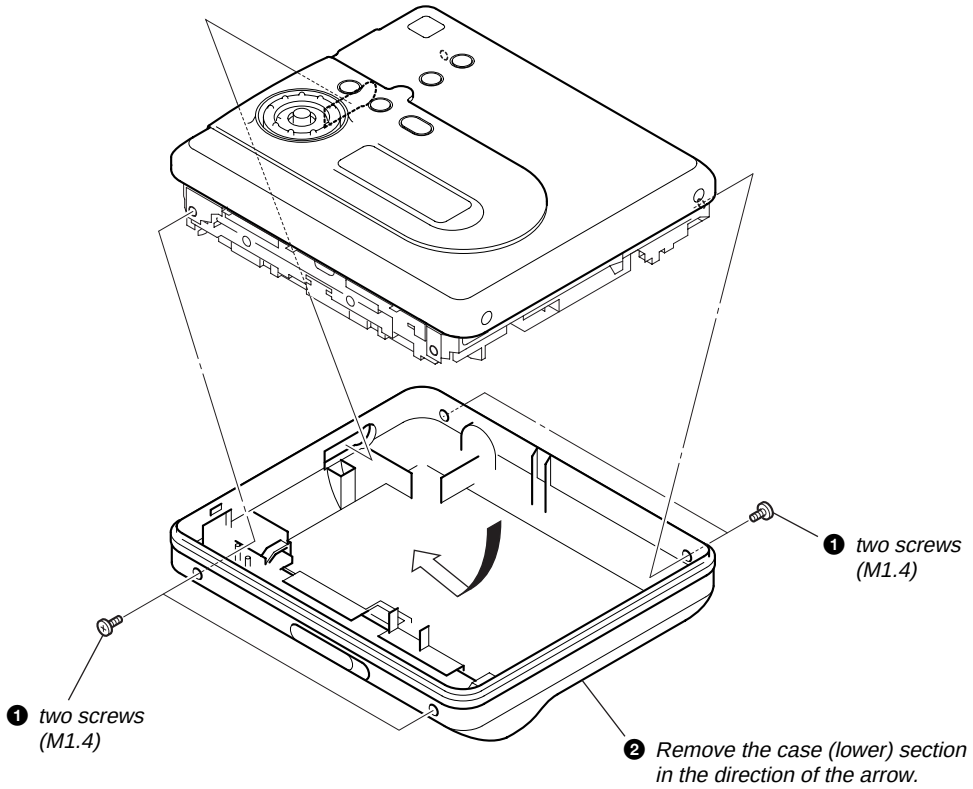
3-1. DISASSEMBLY FLOW

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

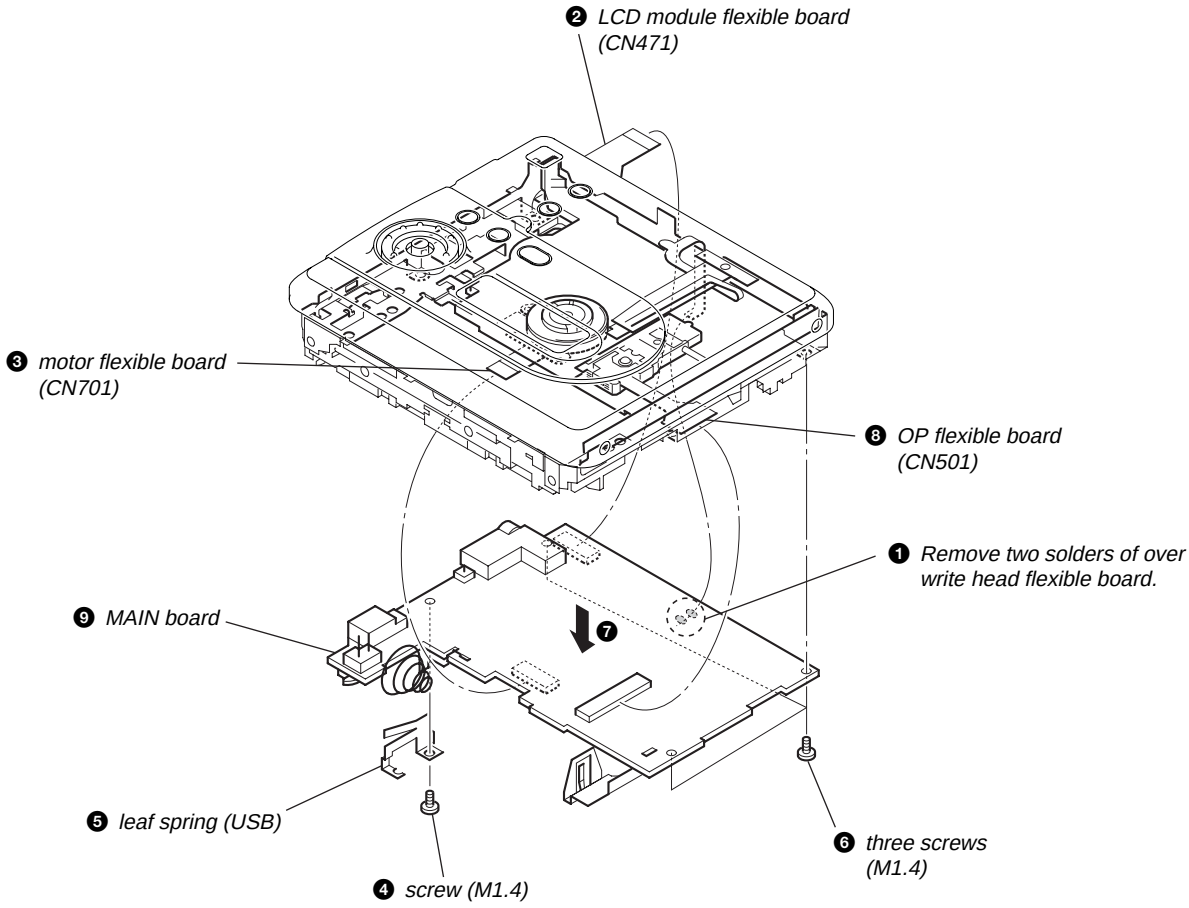
Note 2: *Without completing the process described in* ⊟*, the next process can not be performed.*



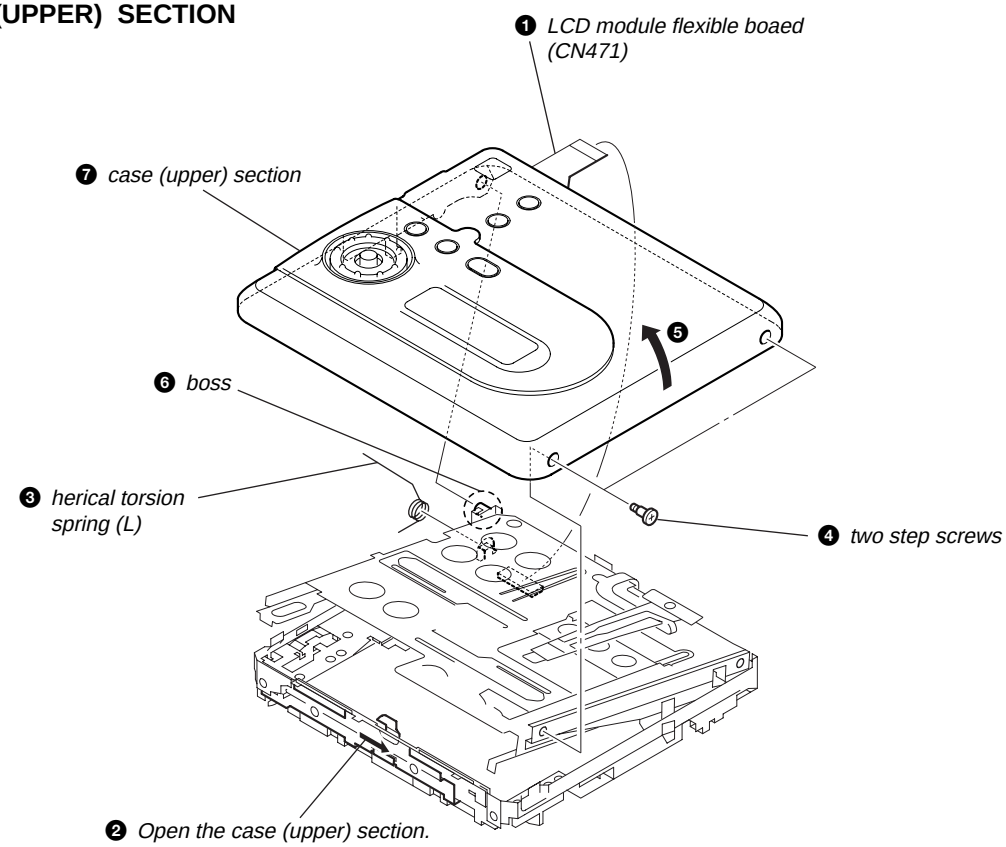
3-2. CASE (LOWER) SECTION



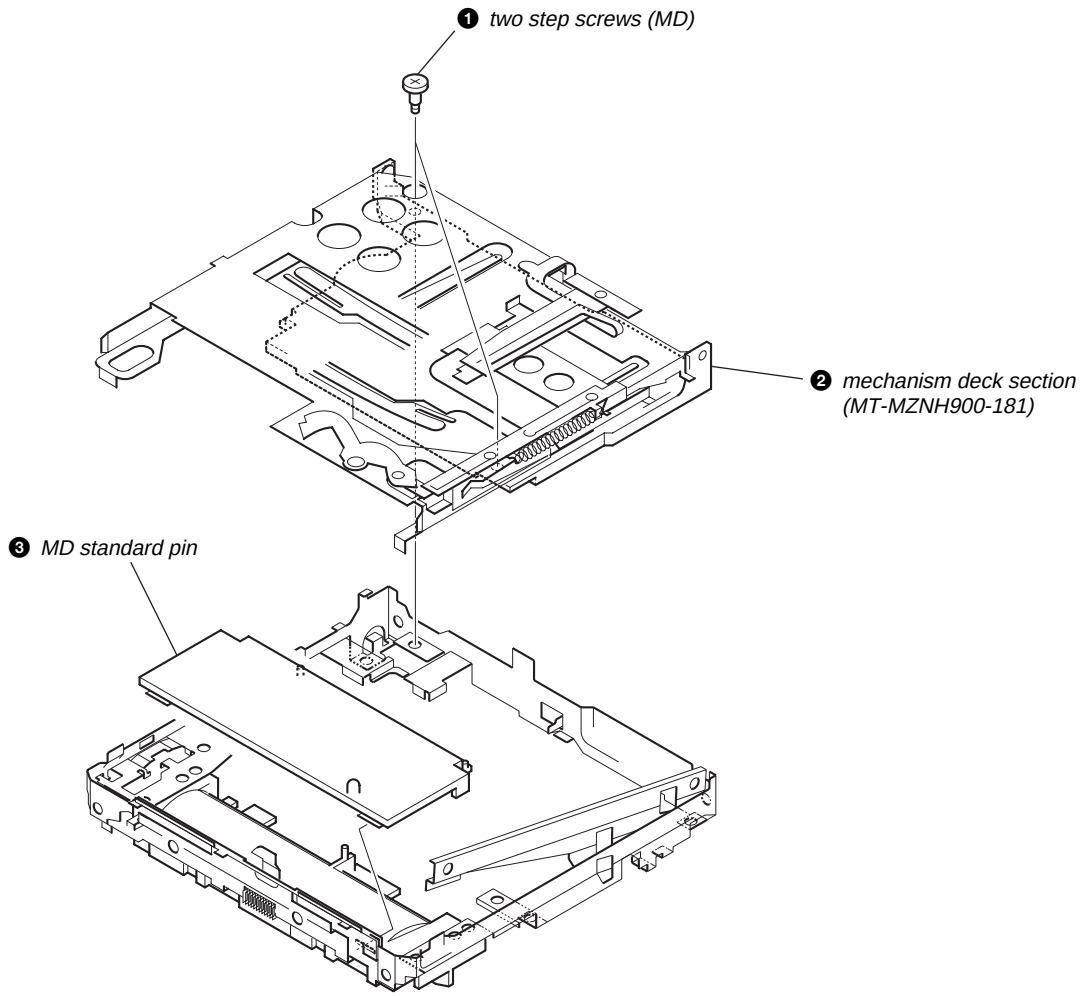
3-3. MAIN BOARD



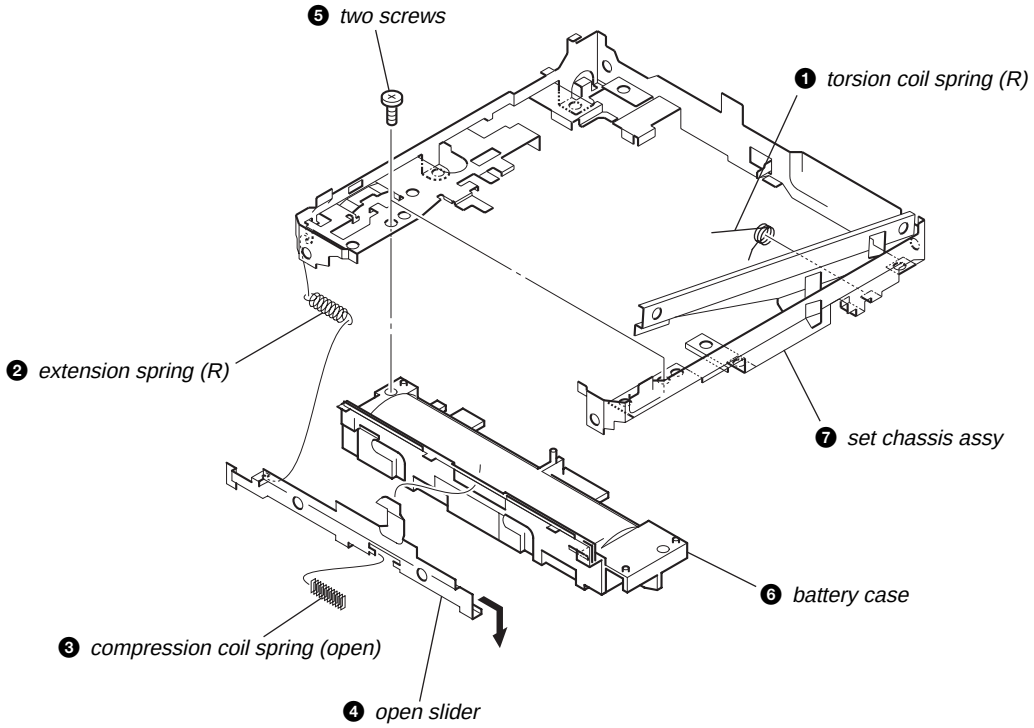
3-4. CASE (UPPER) SECTION



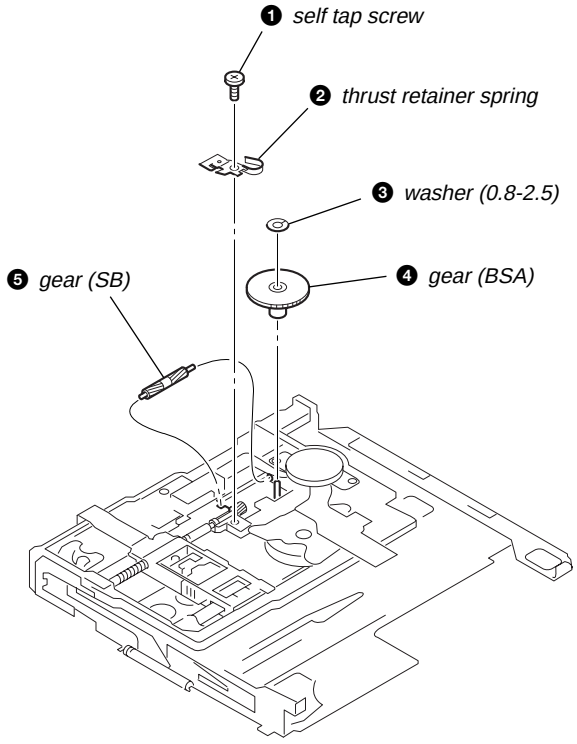
3-5. MECHANISM DECK SECTION (MT-MZNH900-181), MD STANDARD PIN



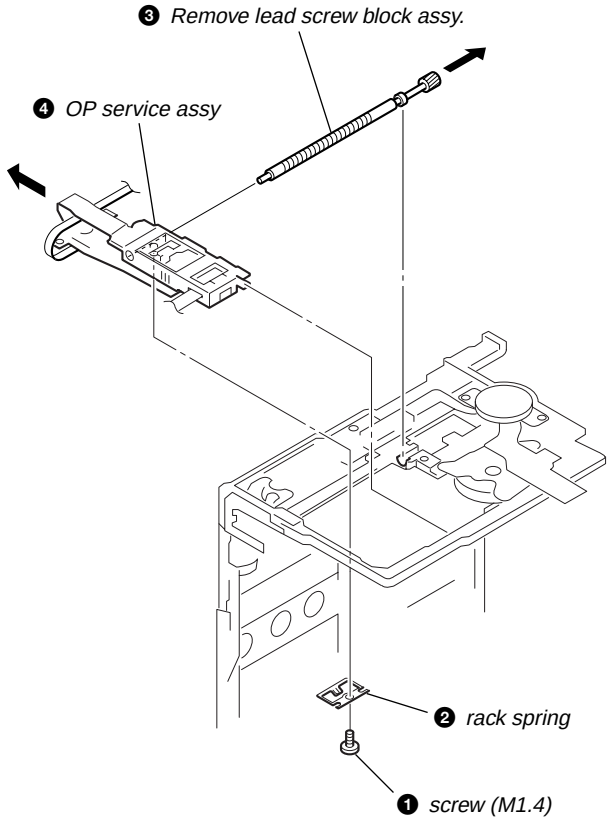
3-6. SET CHASSIS ASSY



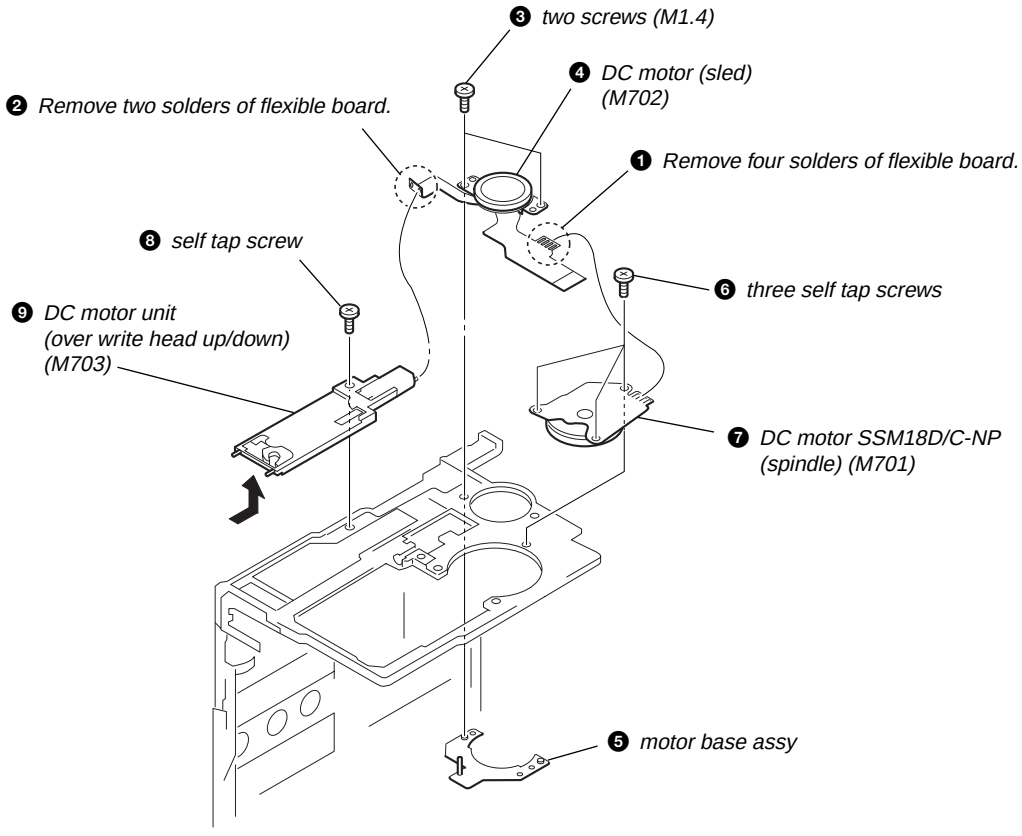
3-7. GEAR (BSA), GEAR (SB)



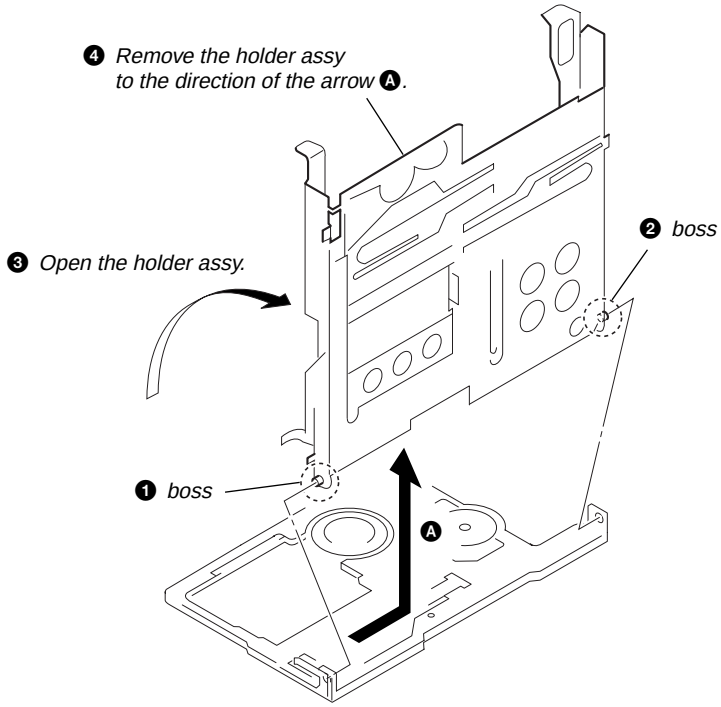
3-8. OP SERVICE ASSY



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

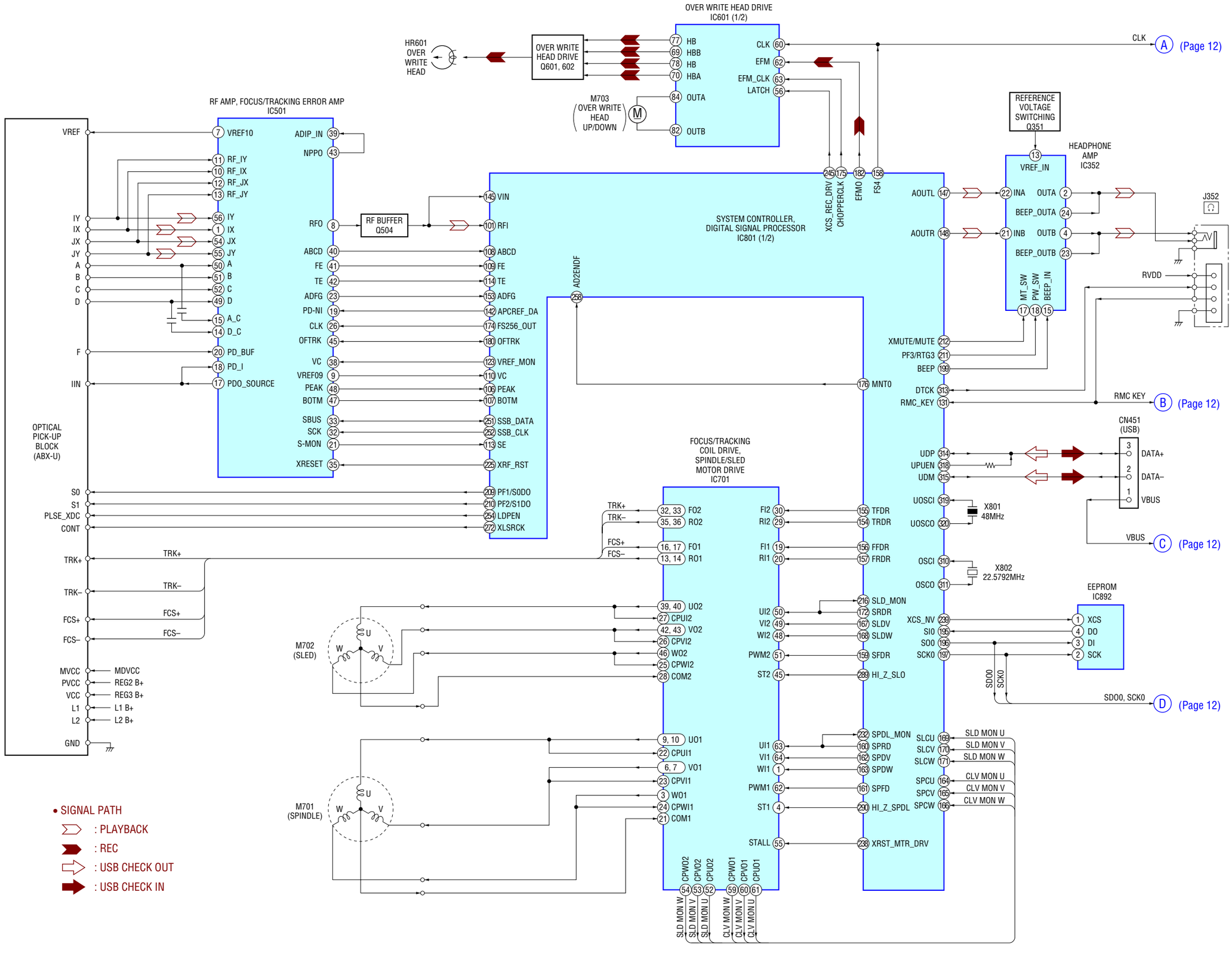


3-10. HOLDER ASSY

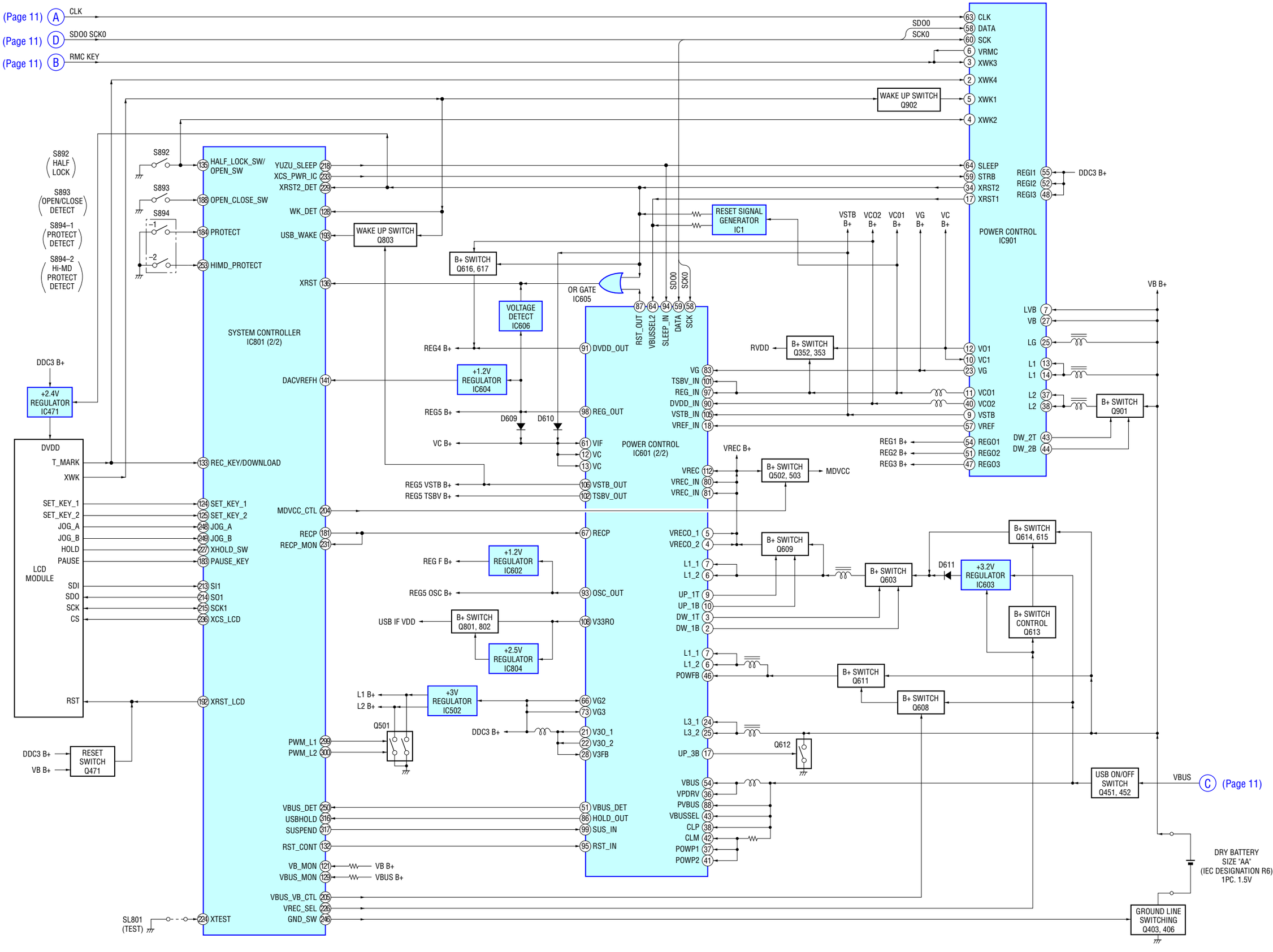


SECTION 4
DIAGRAMS

4-1. BLOCK DIAGRAM – MD SERVO Section –



4-2. BLOCK DIAGRAM – POWER SUPPLY Section –



• Note For Printed Wiring Boards and Schematic Diagrams

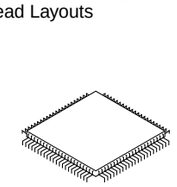
Note on Printed Wiring Board:

- ○——— : parts extracted from the component side.
- ——— : parts extracted from the conductor side.
- ▭ : Pattern from the side which enables seeing.

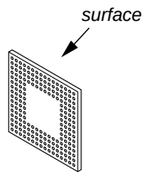
(The other layers' patterns are not indicated.)

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

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



Lead layout of conventional IC



CSP (chip size package)

Note on Schematic Diagram:

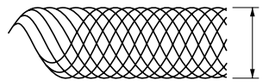
- All capacitors are in µF unless otherwise noted. (p: pF) 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4 W or less unless otherwise specified.
- △ : internal component.
- ▭ : panel designation.

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

- ▬ : B+ Line.
- Total current is measured with MD installed.
- Power voltage is dc 1.5 V and fed with regulated dc power supply from battery terminal.
- Voltages and waveforms are dc with respect to ground in playback mode.
  no mark : PLAYBACK
- Voltages are taken with a VOM (Input impedance 10 MΩ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope.
  Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.
  - : PLAYBACK
  - : REC
  - : USB CHECK OUT
  - : USB CHECK IN
- Abbreviation
  CND : Canadian model

• Waveforms

① IC501 ⑧ (RFO) (MD Play Mode)



500 mV/DIV, 500 ns/DIV

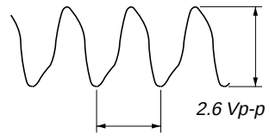
② IC501 ㊶ (FE) (MD Play Mode)

100 mV/DIV, 500 ns/DIV

③ IC501 ㊷ (TE) (MD Play Mode)

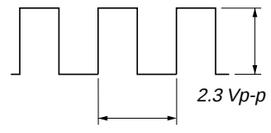
200 mV/DIV, 500 ns/DIV

④ IC801 ㊽ (FS4)



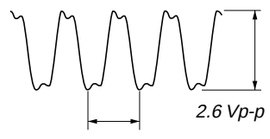
1 mV/DIV, 50 ns/DIV

⑤ IC801 ㉑ (FS256_OUT)



1 mV/DIV, 2 µs/DIV

⑥ IC801 ㉛ (OSCO)

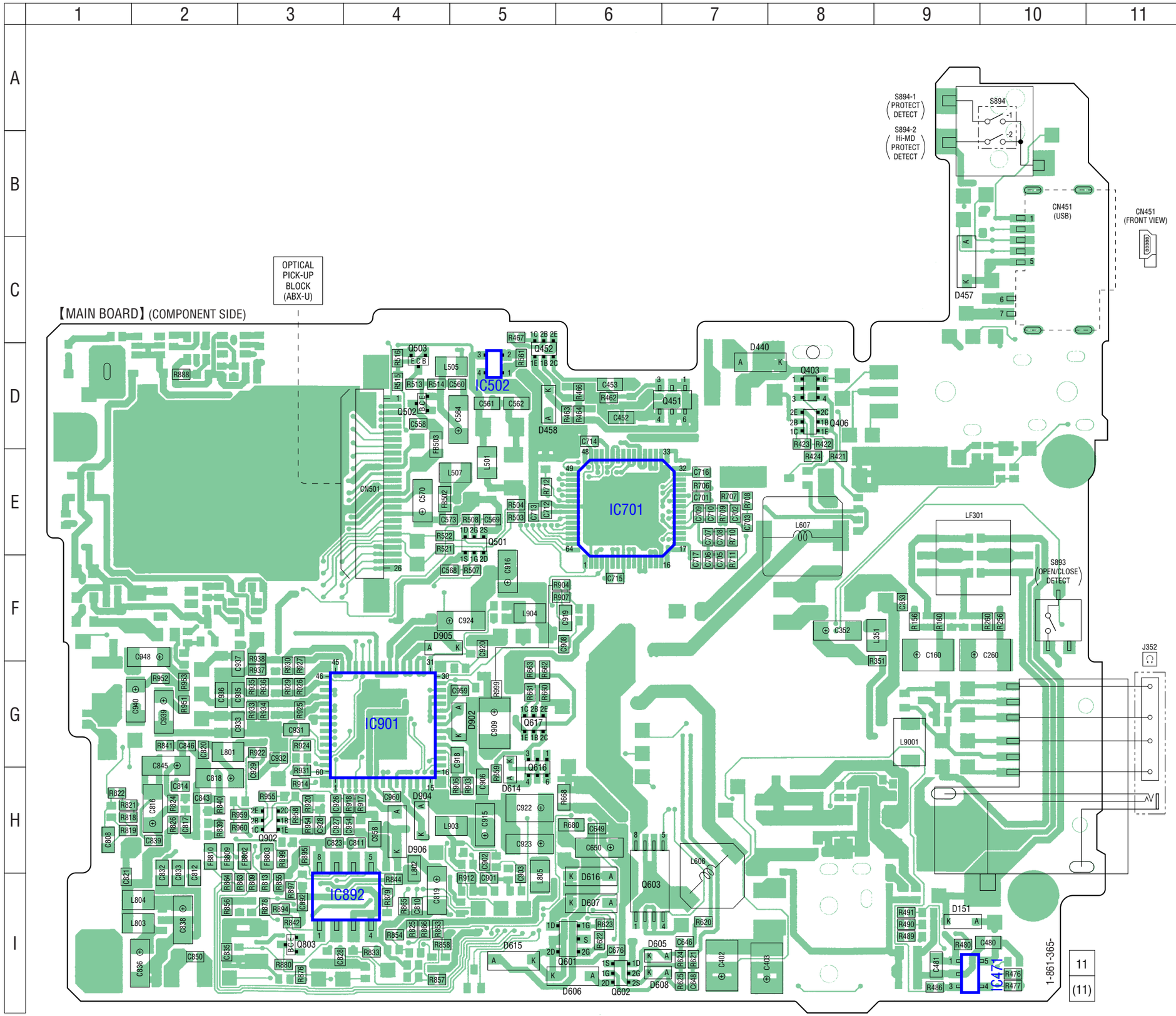


1 V/DIV, 20 ns/DIV

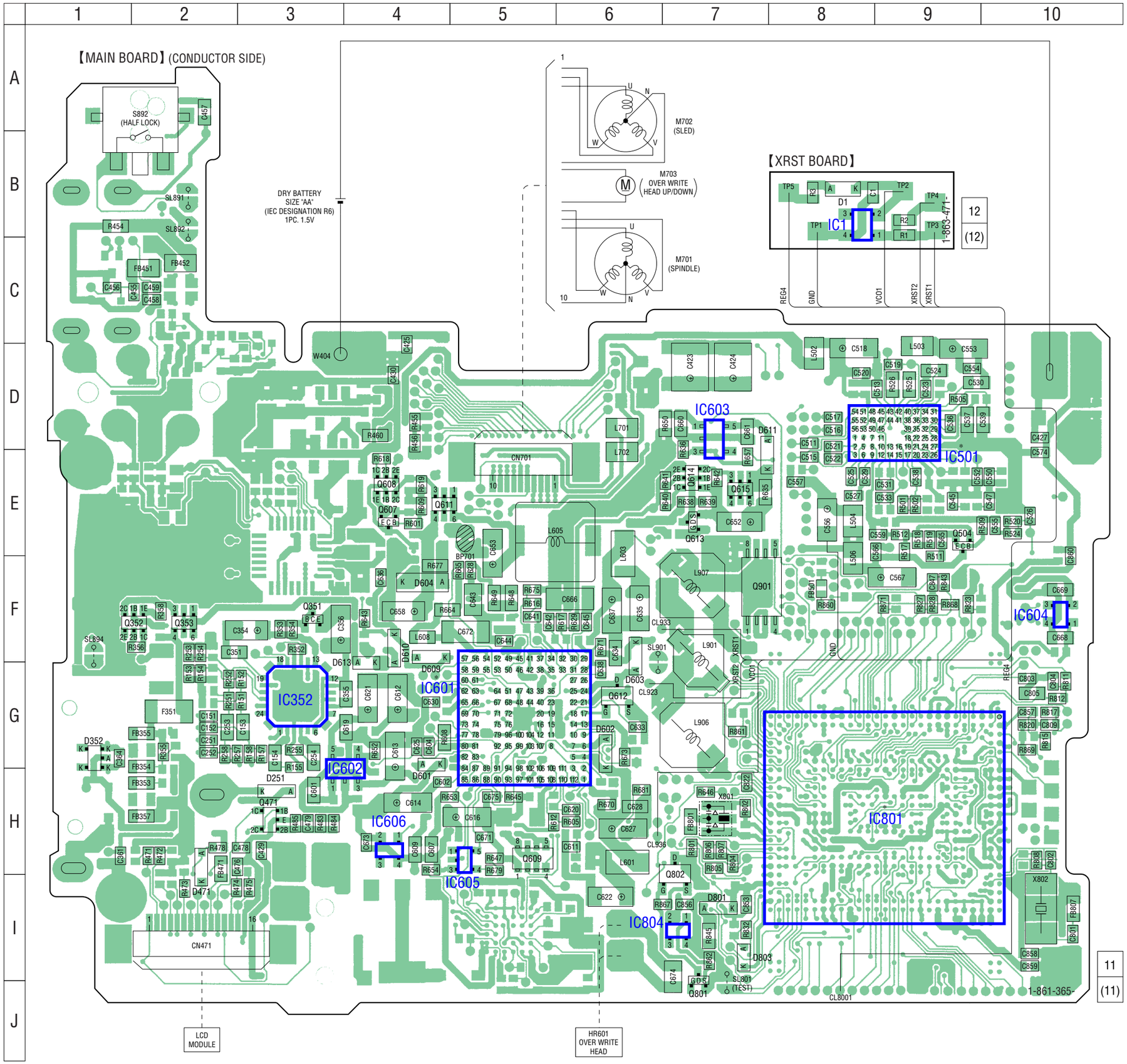
4-3. PRINTED WIRING BOARD – MAIN Section (1/2) – : Uses unleaded solder.

- **Semiconductor Location**

Ref. No.	Location
D151	I-9
D440	D-7
D457	C-9
D458	D-5
D605	I-6
D606	I-6
D607	I-6
D608	I-6
D614	H-5
D615	I-5
D616	I-6
D902	G-5
D904	H-4
D905	F-4
D906	H-4
IC471	I-9
IC502	D-5
IC701	E-6
IC892	I-4
IC901	G-4
Q403	D-8
Q406	D-8
Q451	D-7
Q452	D-5
Q501	E-5
Q502	D-4
Q503	D-4
Q601	I-6
Q602	I-6
Q603	I-6
Q616	G-5
Q617	G-5
Q803	I-3
Q902	H-3



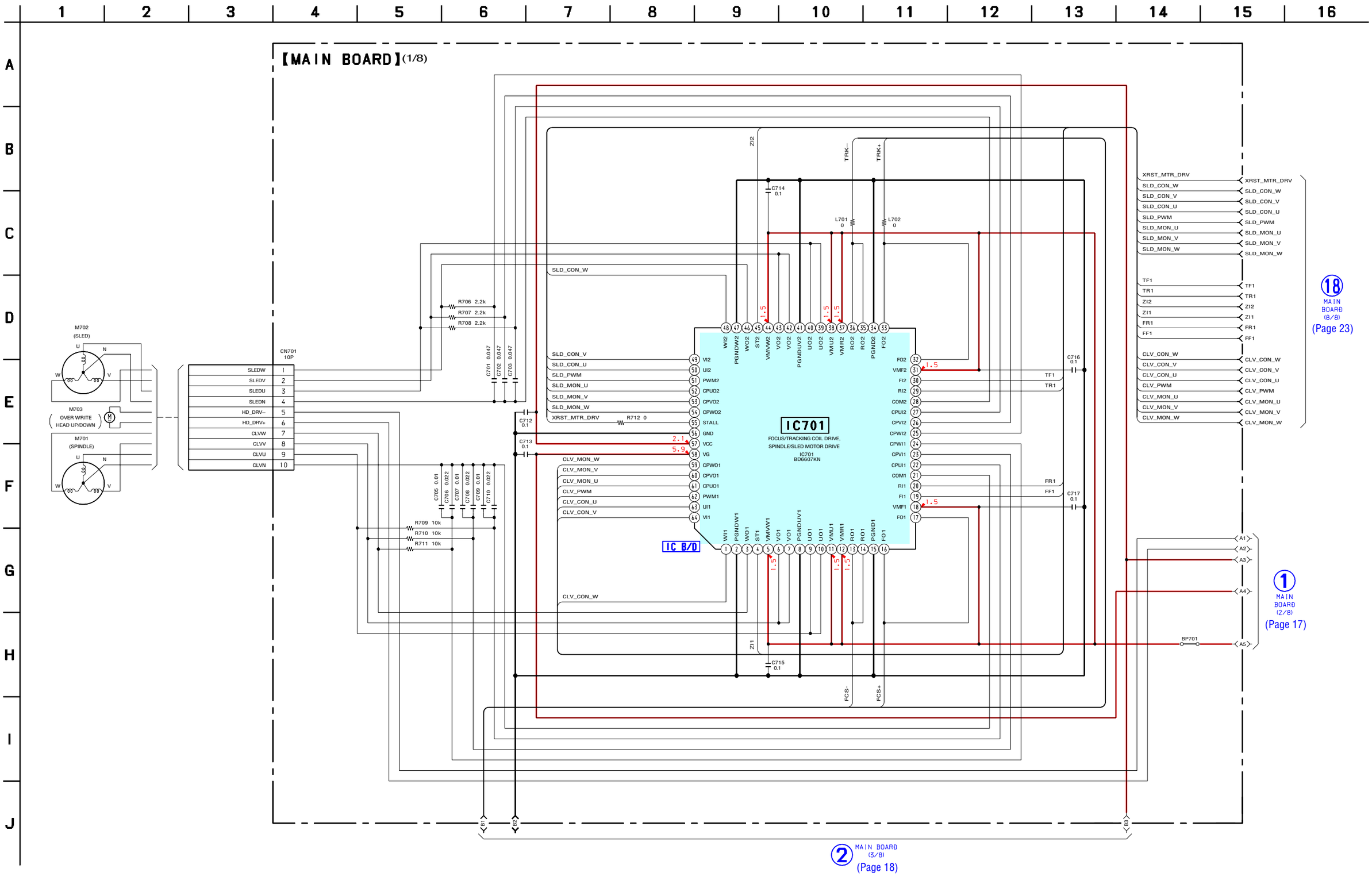
4-4. PRINTED WIRING BOARDS – MAIN Section (2/2) – : Uses unleaded solder.



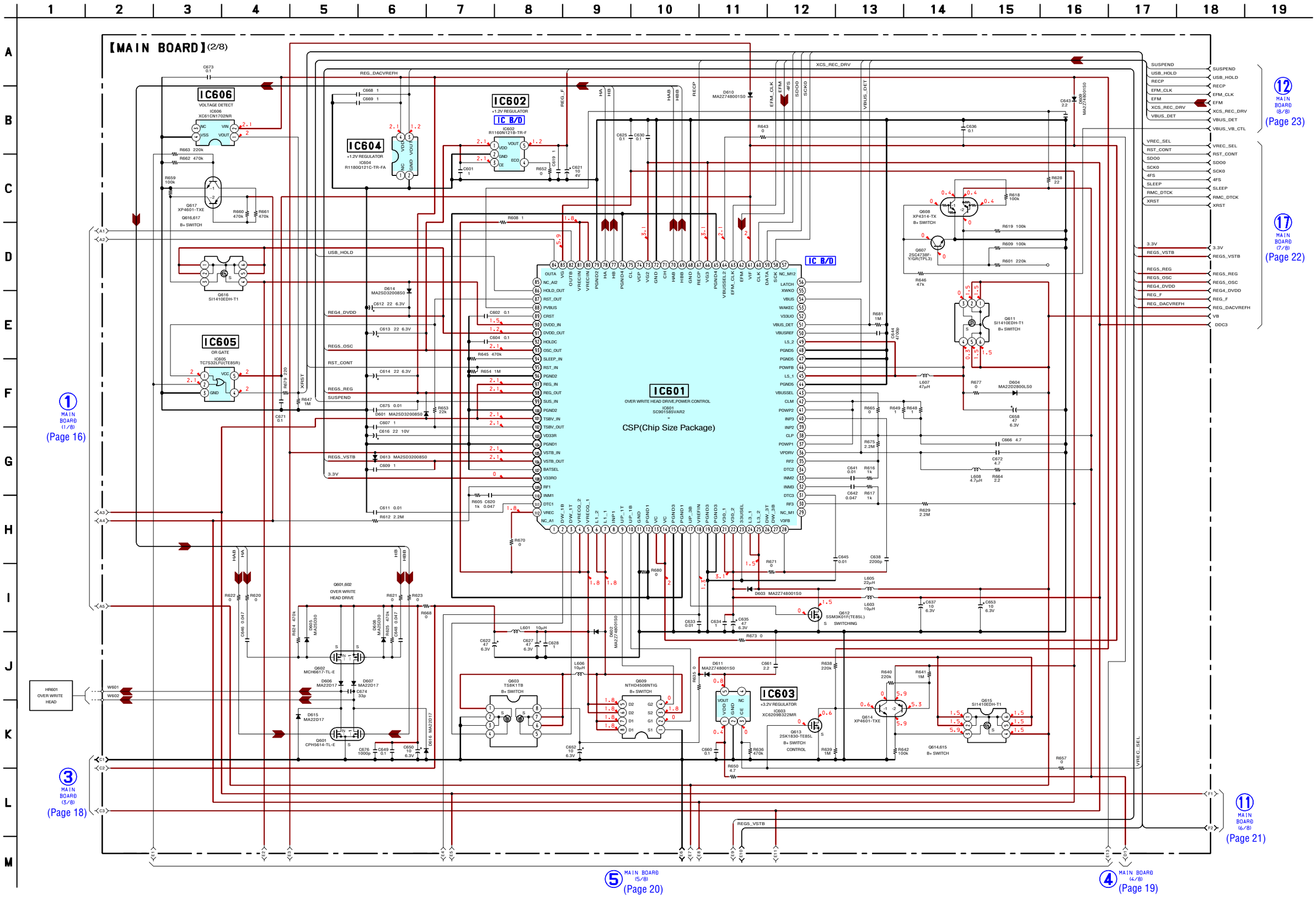
- **Semiconductor Location**

Ref. No.	Location
D1	B-8
D251	H-3
D352	G-1
D471	H-2
D601	G-4
D602	G-6
D603	F-6
D604	F-4
D609	F-4
D610	F-4
D611	E-7
D613	G-4
D801	I-7
D803	I-7
IC1	B-8
IC352	G-3
IC501	D-9
IC601	G-5
IC602	H-4
IC603	D-7
IC604	F-10
IC605	H-5
IC606	H-4
IC801	H-9
IC804	I-7
Q351	F-3
Q352	F-2
Q353	F-2
Q471	H-3
Q504	E-9
Q607	E-4
Q608	E-4
Q609	H-5
Q611	E-4
Q612	G-6
Q613	E-7
Q614	E-7
Q615	E-7
Q801	I-7
Q802	H-7
Q901	F-7

4-5. SCHEMATIC DIAGRAM – MAIN Section (1/8) – • See page 24 for IC Block Diagram.

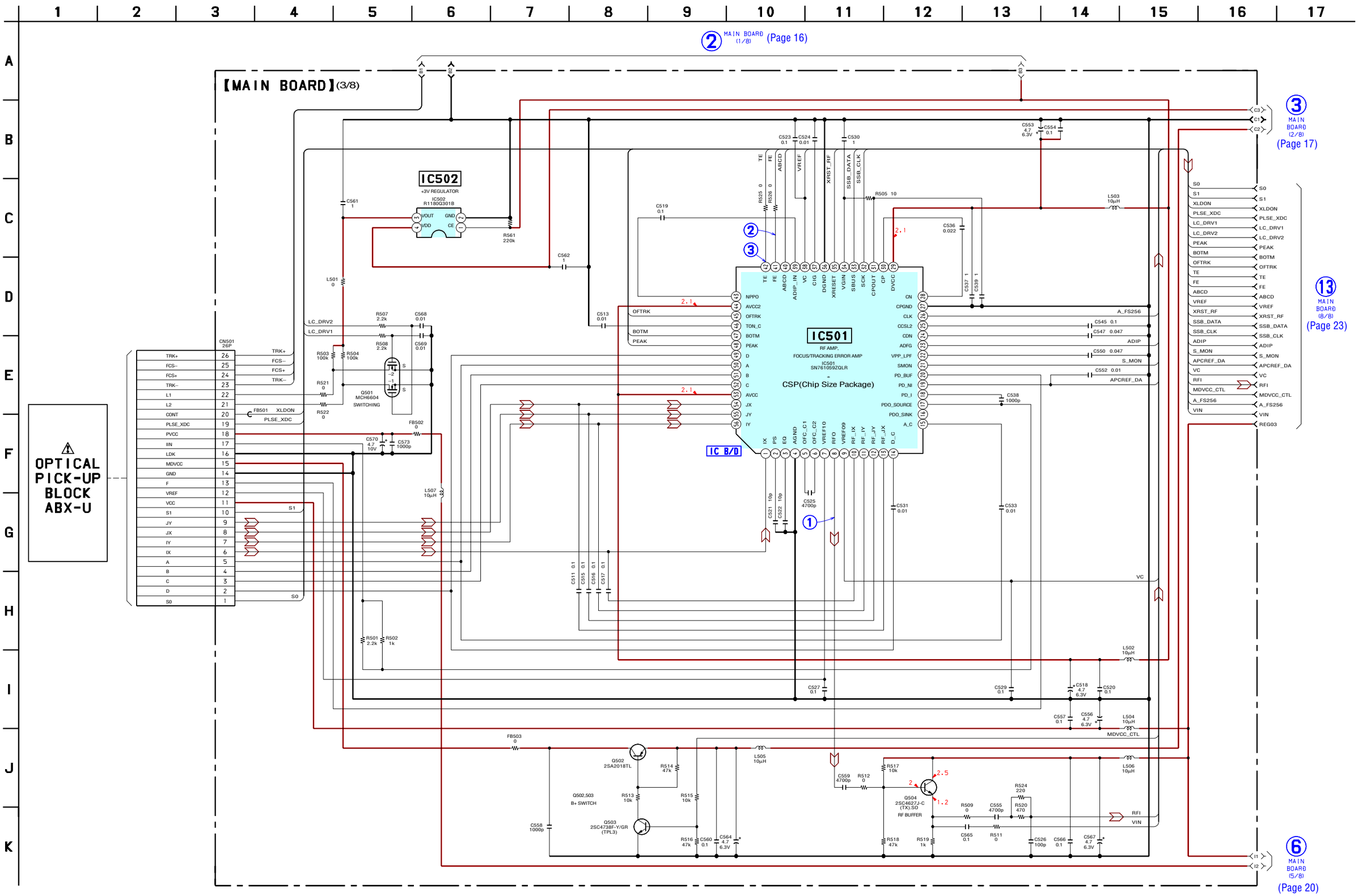


4-6. SCHEMATIC DIAGRAM – MAIN Section (2/8) – • See page 24 for IC Block Diagrams.



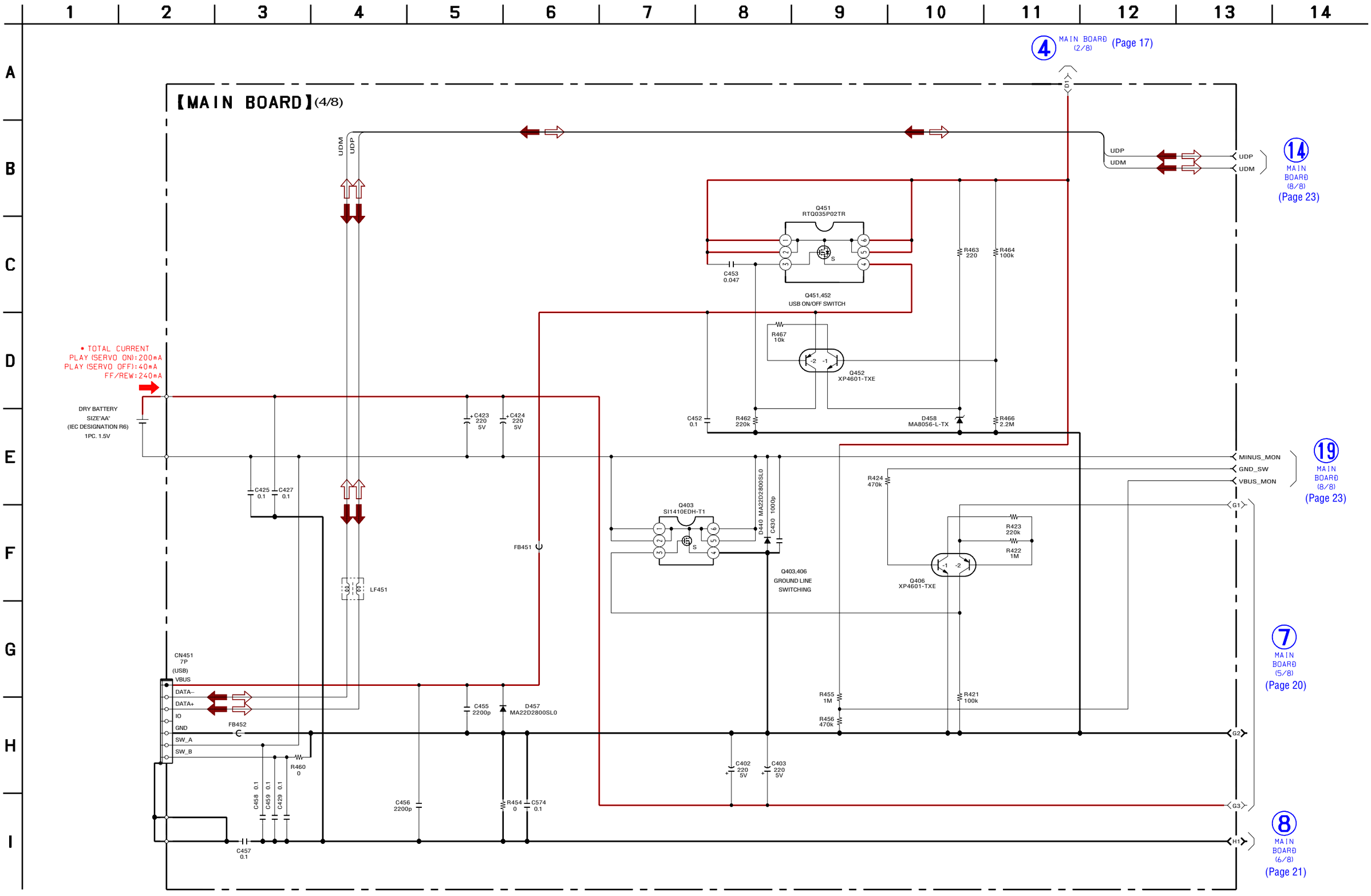
4-7. SCHEMATIC DIAGRAM – MAIN Section (3/8) –

• See page 13 for Waveforms. • See page 24 for IC Block Diagram.

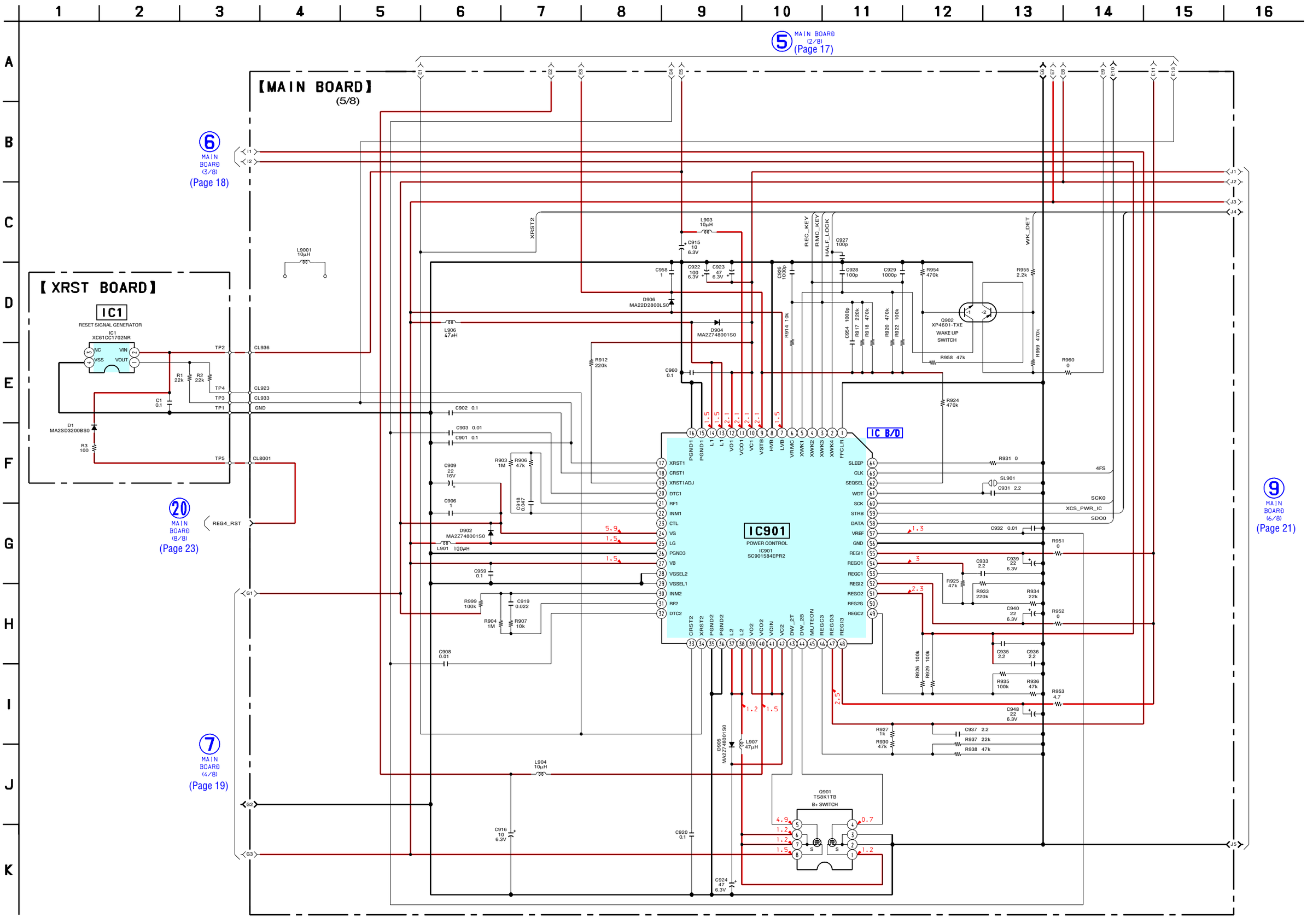


The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

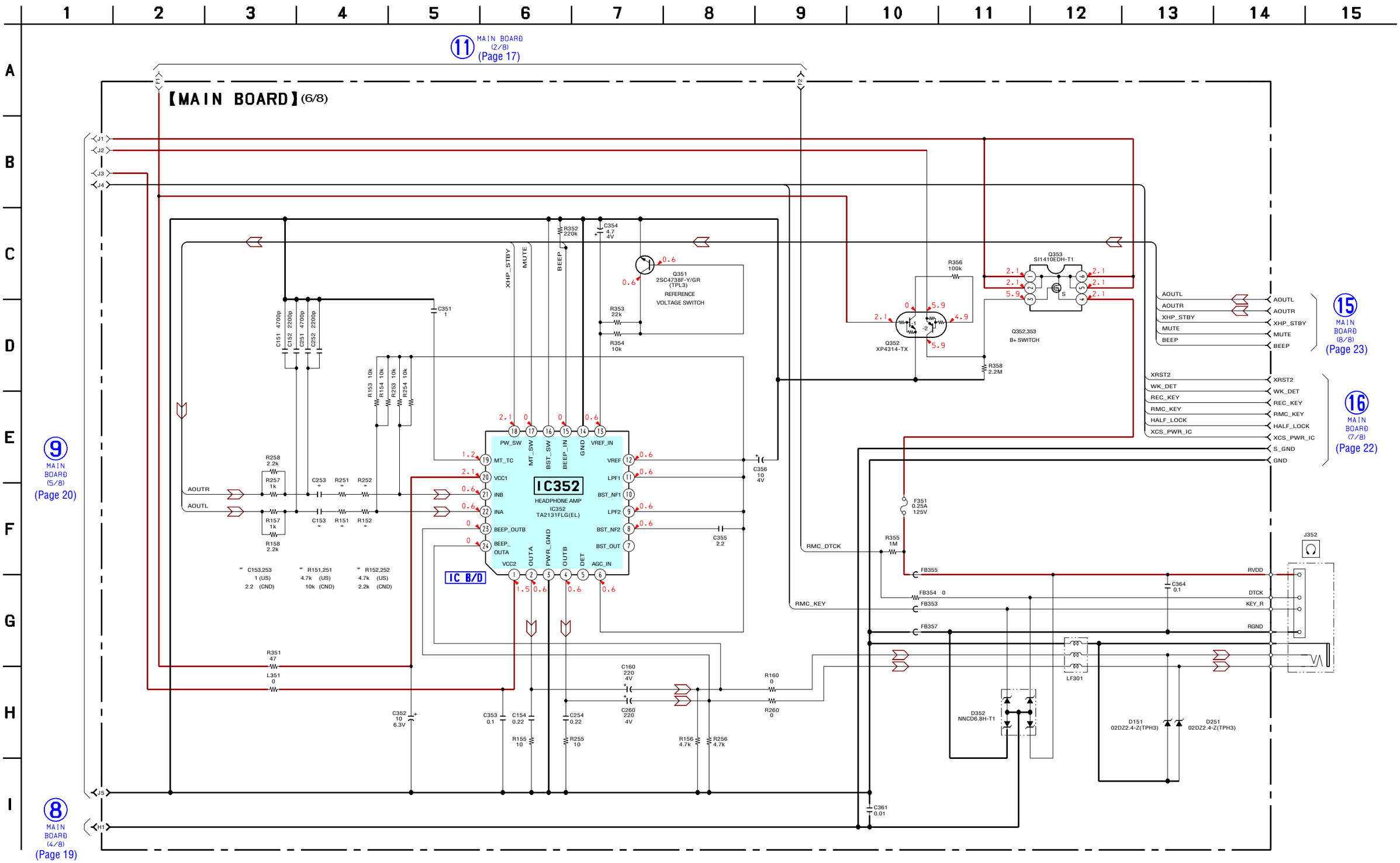
4-8. SCHEMATIC DIAGRAM – MAIN Section (4/8) –



4-9. SCHEMATIC DIAGRAM – MAIN Section (5/8) – • See page 24 for IC Block Diagram.

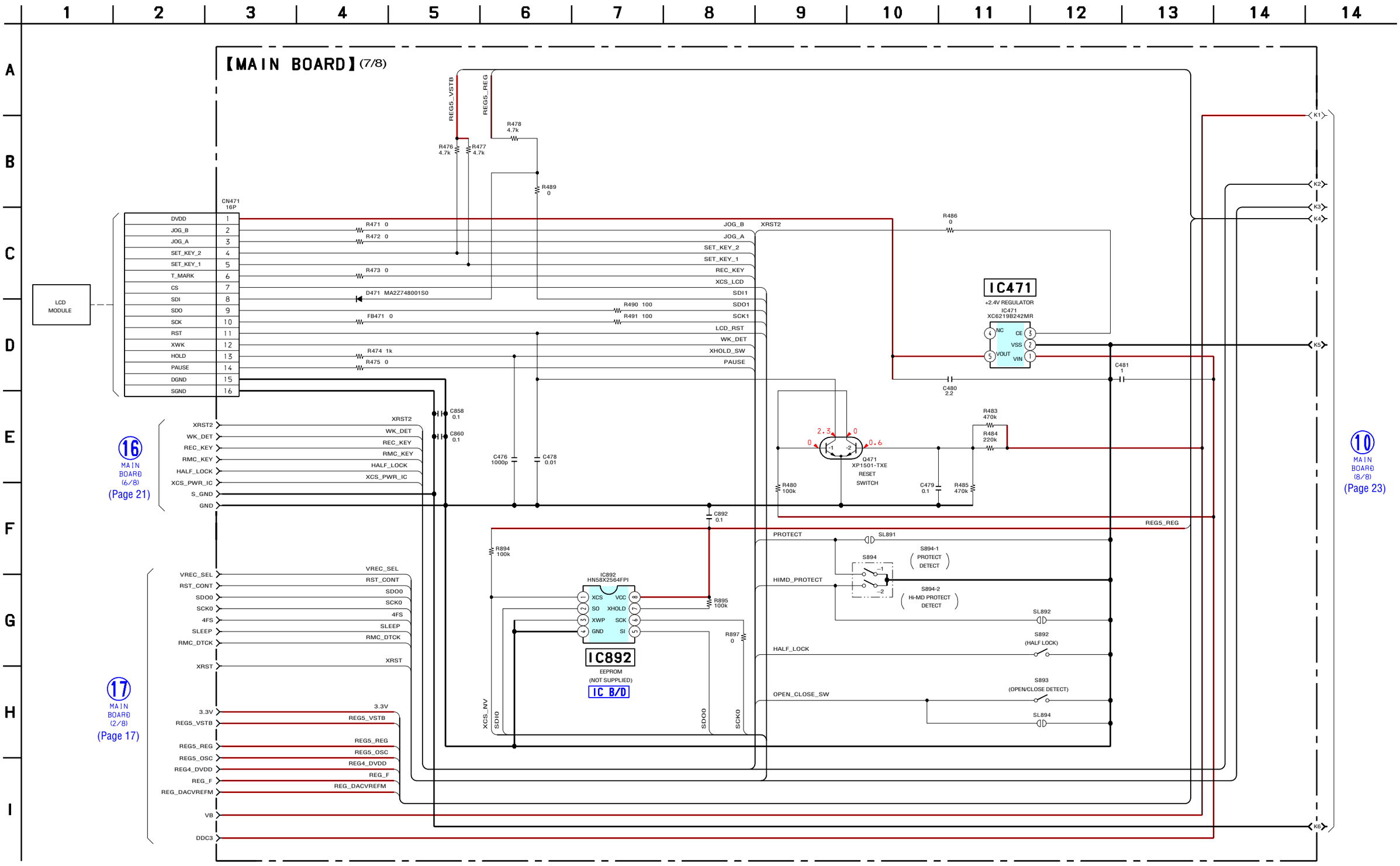


4-10. SCHEMATIC DIAGRAM – MAIN Section (6/8) – • See page 24 for IC Block Diagram.



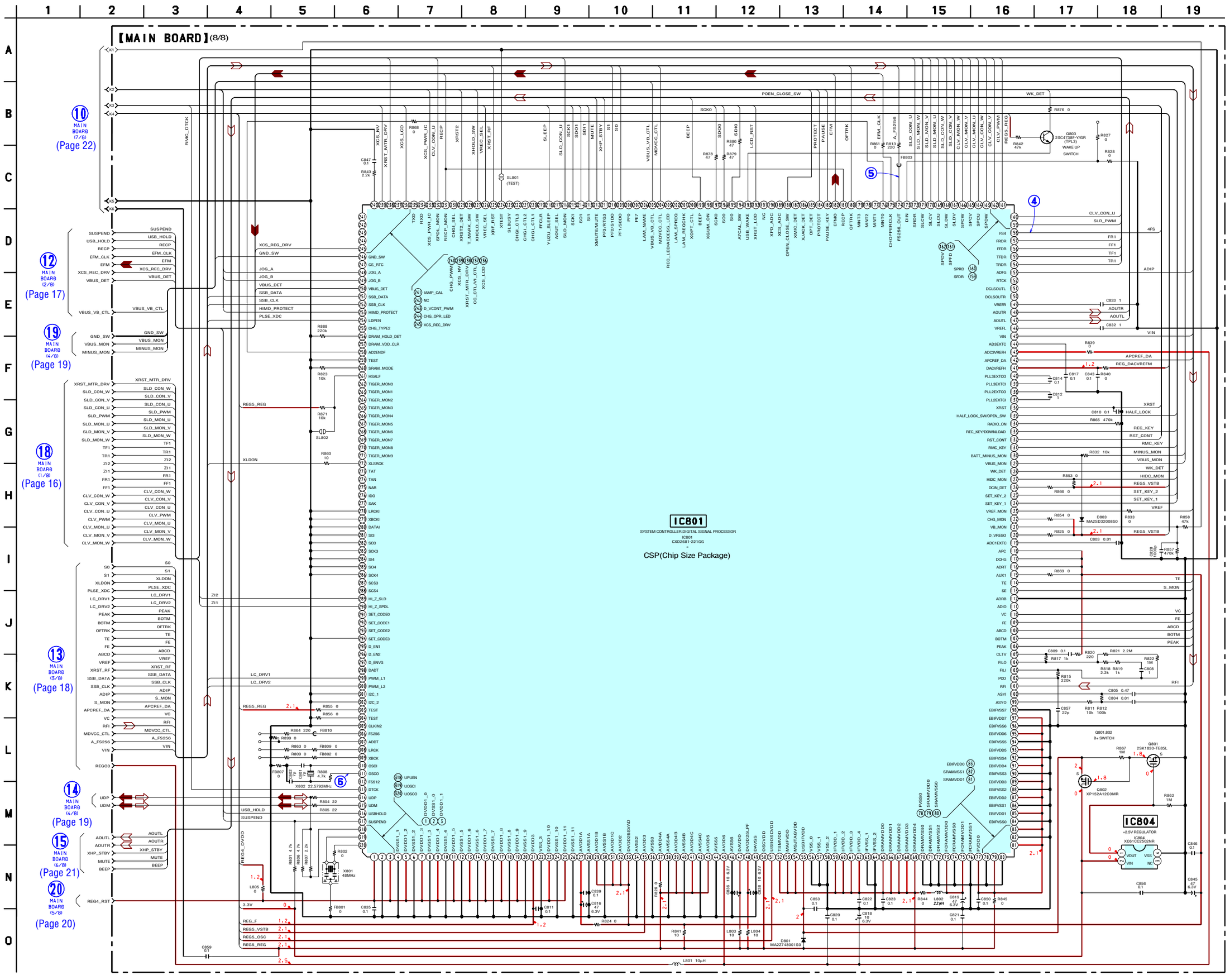
4-11. SCHEMATIC DIAGRAM – MAIN Section (7/8) –

• See page 24 for IC Block Diagram.



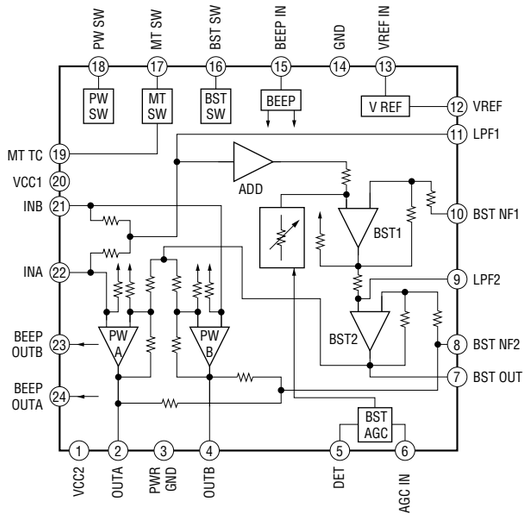
4-12. SCHEMATIC DIAGRAM – MAIN Section (8/8) –

• See page 13 for Waveforms. • See page 27 for IC Pin Function Description.

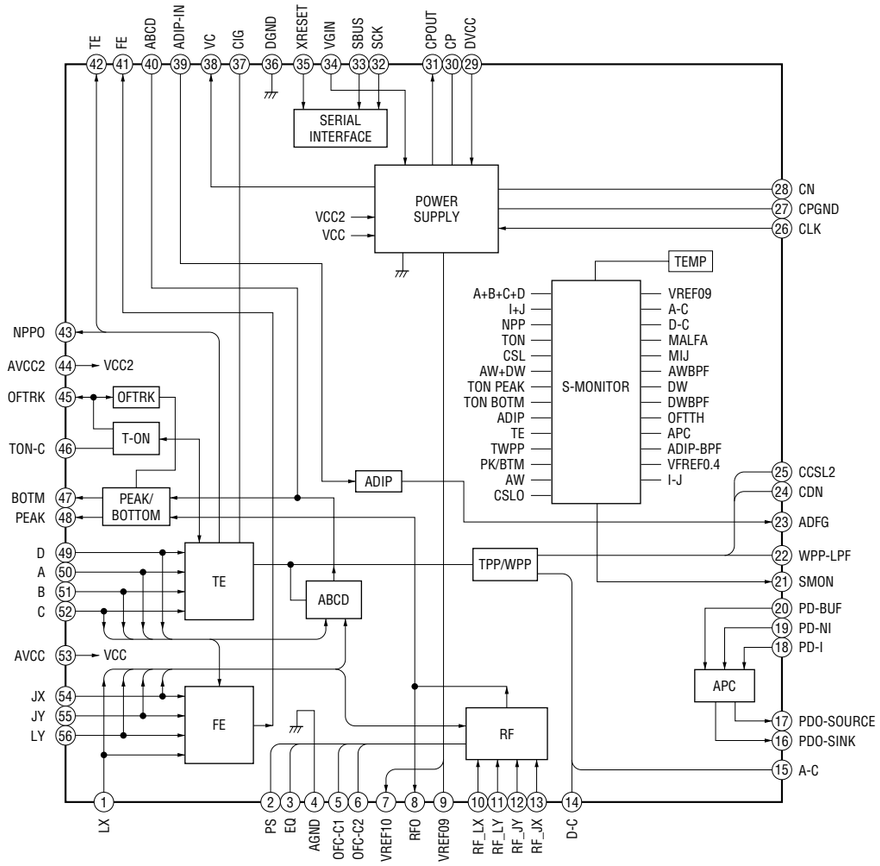


- **IC Block Diagrams**

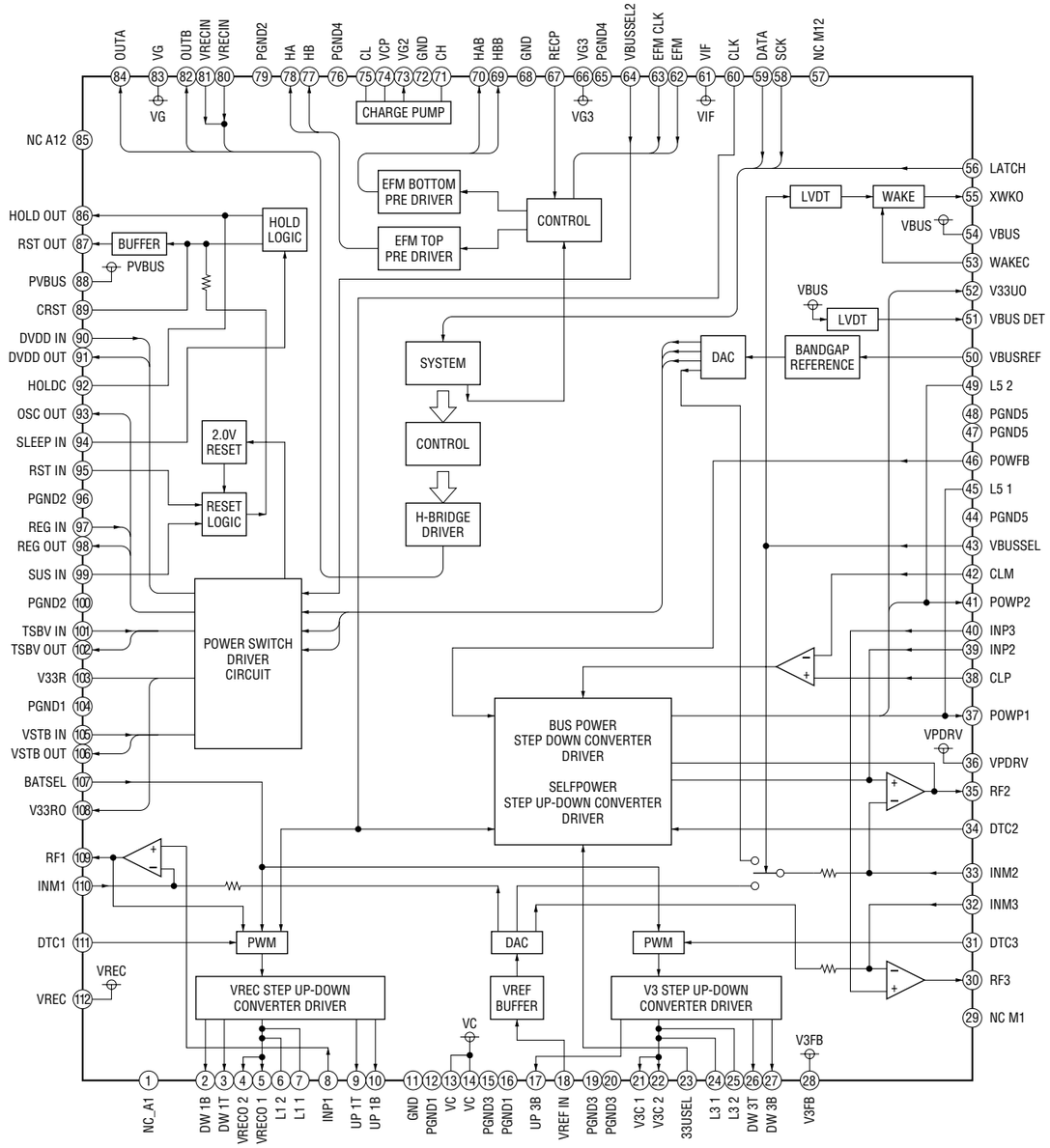
IC352 TA2131FLG (EL)



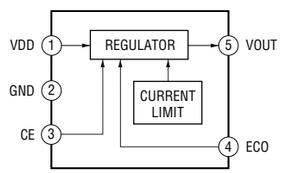
IC501 SN761059ZQLR



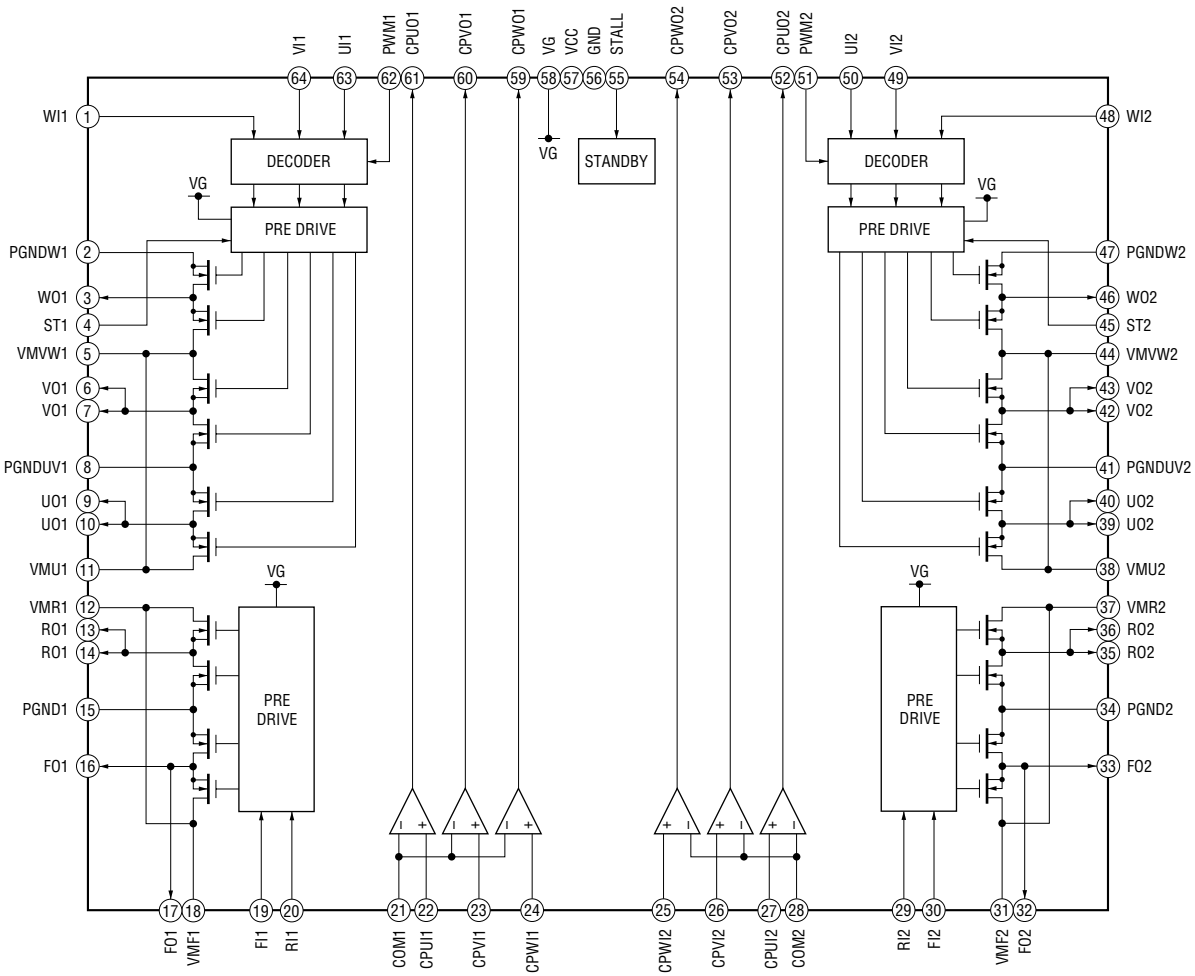
IC601 SC901585VAR2



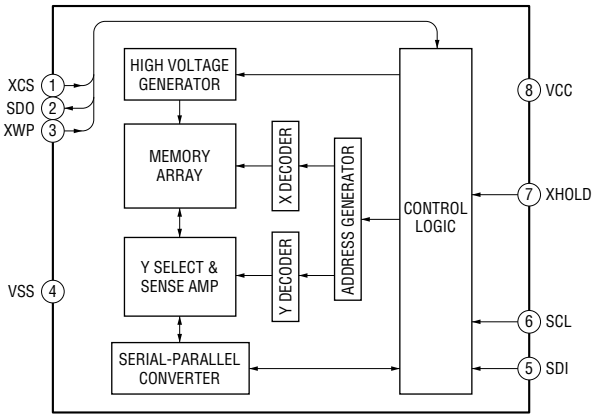
IC602 R1160N121B-TR-FA



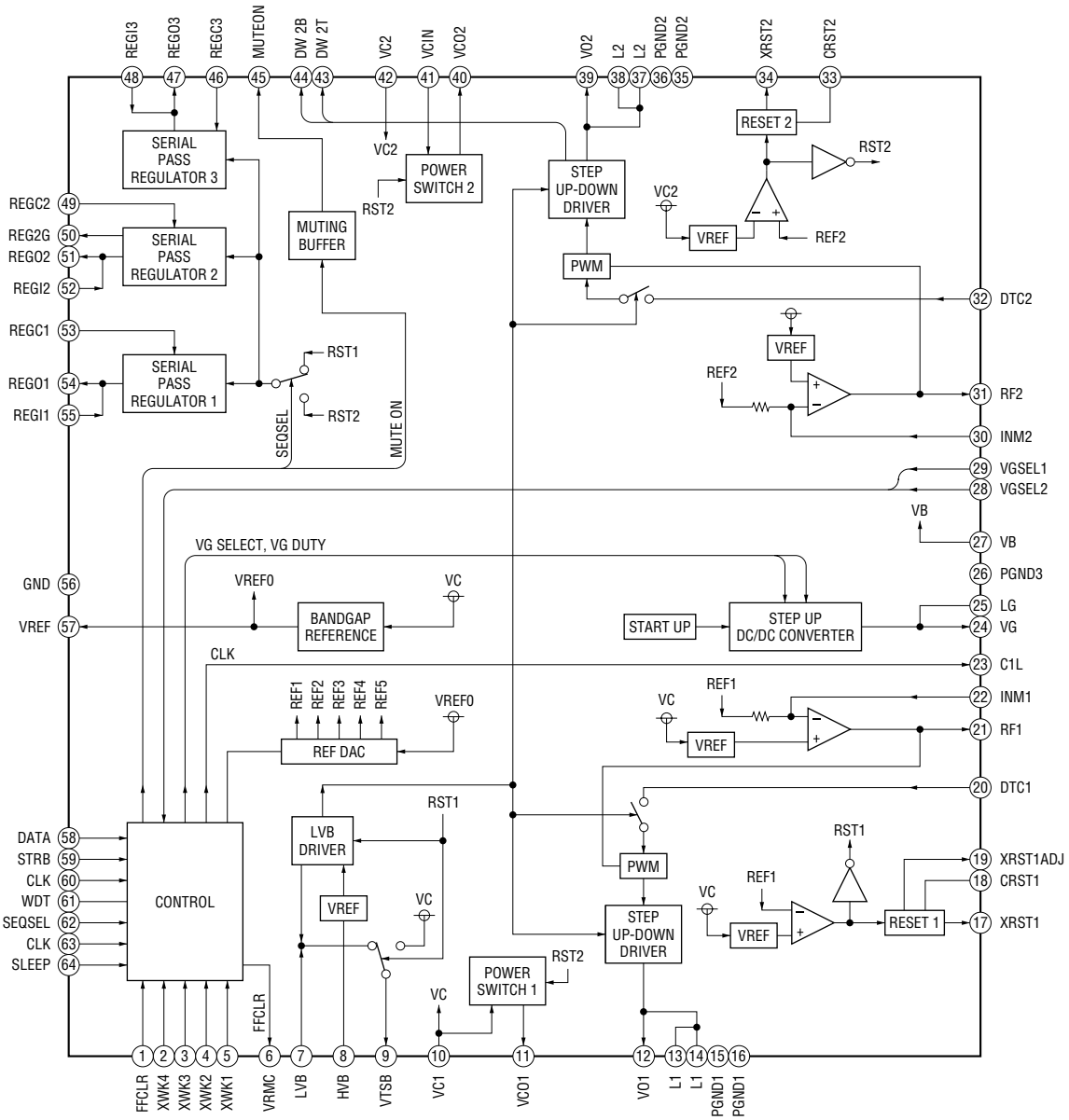
IC701 BD6607KN



IC892 HN58X2564FPIEZ



IC901 SC901584EPR2



- **IC Pin Function Description**

IC801 CXD2681-221GG (SYSTEM CONTROLLER, DIGITAL SIGNAL PROCESSOR)

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

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

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

Pin No.	Pin Name	I/O	Description
146	VREFL	I	Reference voltage terminal connected to the capacitor (for the built-in D/A converter L-CH)
147	AOUTL	O	Built-in D/A converter L-CH signal output
148	AOUTR	O	Built-in D/A converter R-CH signal output
149	VREFR	I	Reference voltage terminal connected to the capacitor (for the built-in D/A converter R-CH)
150	DCLSOUTR	O	PWM modulator signal output for the class-D headphone amplifier Not used
151	DCLSOUTL	O	PWM modulator signal output for the class-D headphone amplifier Not used
152	RTCK	—	Not used
153	ADFG	I	ADIP duplex FM signal (22.05±1kHz) input from the RF amplifier
154	TRDR	O	Tracking servo drive PWM signal output (–) to the coil driver
155	TFDR	O	Tracking servo drive PWM signal output (+) to the coil driver
156	FFDR	O	Focus servo drive PWM signal output (+) to the coil driver
157	FRDR	O	Focus servo drive PWM signal output (–) to the coil driver
158	FS4	O	176.4 kHz clock signal output
159	SFDR	O	Sled servo drive PWM signal output to the motor driver
160	SPRD	O	Spindle motor drive control signal output (U) to the motor driver
161	SPFD	O	Spindle servo drive PWM signal output to the motor driver
162	SPDV	O	Spindle motor drive control signal output (V) to the motor driver
163	SPDW	O	Spindle motor drive control signal output (W) to the motor driver
164	SPCU	I	Spindle motor drive comparison signal input (U) from the motor driver
165	SPCV	I	Spindle motor drive comparison signal input (V) from the motor driver
166	SPCW	I	Spindle motor drive comparison signal input (W) from the motor driver
167	SLDV	O	Sled motor drive control signal output (V) to the motor driver
168	SLDW	O	Sled motor drive control signal output (W) to the motor driver
169	SLCU	I	Sled motor drive comparison signal input (U) from the motor driver
170	SLCV	I	Sled motor drive comparison signal input (V) from the motor driver
171	SLCW	I	Sled motor drive comparison signal input (W) from the motor driver
172	SRDR	O	Sled motor drive control signal output (U) to the motor driver
173	DIN	I	Digital audio signal input terminal Not used
174	FS256_OUT	O	11.2896 MHz clock output
175	CHOPPERCLK	O	Clock signal output for chopper
176 to 179	MNT0 to MNT3	O	Monitor output for DSP
180	OFTRK	I/O	Tracking signal input/output for MD3
181	RECP	O	Laser power changeover signal output
182	EFMO	O	EFM encode data output for the record
183	PAUSE_KEY	I	Pause key input terminal
184	PROTECT	I	Recording protector detection input for normal disc
185	OPT_DET	I	Optical digital input plug detection input terminal “H”: plug in Not used
186	XJACK_DET	I	Line input plug detection input terminal “L”: plug in Not used
187	XMIC_DET	I	Microphone input plug detection input terminal “L”: plug in Not used
188	OPEN_CLOSE _SW	I	Open switch input terminal
189	XCS_ADC	O	Chip select signal output for A/D converter Not used
190	XPD_ADC	O	Power control signal output for A/D converter Not used
191	NC	—	Not used
192	XRST_LCD	O	Reset signal output for the LCD module
193	USB_WAKE	I	System wake up signal input by USB connect
194	A7CAL_SW	I/O	Current sense amplifier input, and short switch control output terminal Not used

Pin No.	Pin Name	I/O	Description
195	SI0	I	Serial data input from the EEPROM
196	SO0	O	Serial data output to the EEPROM
197	SCK0	O	Serial clock output to the EEPROM
198	XGUM_ON	I	Rechargeable battery detection signal terminal Not used
199	BEEP	O	Beep sound control signal output to the headphone amplifier
200	XOPT_CTL	O	Power supply ON/OFF control signal output for the DIN PD drive Not used
201	LAM_REQCHK	I	LAM power check terminal Not used
202	LAM_SPREQ	O	LAM force stop request signal output Not used
203	REC_LED /ACCESS_LED	O	REC or Access LED drive signal output terminal Not used
204	MDVCC_CTL	O	Power supply control signal output for the OP modulation
205	VBUS_VB_CTL	O	USB power supply control signal output terminal
206	LAM_NAME	O	LAM name data request signal output terminal Not used
207	PE7	—	Not used
208	PF0	—	Not used
209	PF1/S0DO	O	Connect to the optical pick-up block
210	PF2/S1DO	O	Connect to the optical pick-up block
211	PF3/RTG3	O	Connect to the headphone amplifier
212	XMUTE /MUTE	O	Muting on/off control signal output terminal
213	SI1	I	Serial data input from the LCD module
214	SO1	O	Serial data output to the LCD module
215	SCK1	I/O	Serial data transfer clock signal input/output terminal with the LCD module
216	SLD_MON	I	Sled servo monitoring terminal
217	AOUT_SEL	O	Headphone/line output switching terminal Not used
218	YUZU_SLEEP	O	Chip enable output to the power control IC
219	FFCLR	O	Input latch output for the start switching to the power control Not used
220	CHGI_CTL1	O	Charge current limiter control signal output at the time of DC adaptor use “L”: charge Not used
221	CHGI_CTL2	O	Charge current control signal output terminal “L”: low current charge Not used
222	CHGI_CTL3	O	Charge current control signal output terminal “L”: low current charge Not used
223	SLBUSY	I	Receive signal monitoring terminal for sled command
224	XTEST	I	Terminal for the test mode setting (normally open) “L”: test mode
225	XRF_RST	O	Reset signal output to the RF amplifier
226	VREC_SEL	O	VREC start-up timing control signal output terminal
227	XHOLD_SW	I	HOLD switch detection input terminal
228	T_MARK_SW	I	Track mark switch input terminal Not used
229	XRST2_DET	I	Reset signal input from the power control IC
230	CHGI_SEL	O	Charge/discharge control signal output for current sense amplifier Not used
231	RECP_MON	I	Laser power changeover signal monitoring terminal
232	SPDL_MON	I	Spindle servo monitoring terminal
233	XCS_PWR_IC	O	Chip select signal output to the power control IC
234	RXD	I	Not used
235	TXD	O	Not used
236	XCS_LCD	O	Chip select signal output to the LCD module
237	CC_CTL /VI_CTL	O	Constant current circuit control signal output terminal Not used

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

Pin No.	Pin Name	I/O	Description
288	SCS4	O	Chip select signal output for ATRAC3 plus encoder communication Not used
289	HI_Z_SLD	O	Standby signal output terminal for the sled motor
290	HI_Z_SPDL	O	Standby signal output terminal for the spindle motor
291 to 294	SET_CODE0 to SET_CODE3	I	Setting terminal for the destination
295	D_EN1	O	Control signal output for class-D amplifier Not used
296	D_EN2	O	Control signal output for class-D amplifier Not used
297	D_ENVG	O	Enable/disable switching control terminal for class-D amplifier booster circuit Not used
298	DADT	O	Audio data output terminal Not used
299	PWM_L1	O	LC drive PWM output terminal
300	PWM_L2	O	LC drive PWM output terminal
301	I2C 1	—	Open drain for IIC
302	I2C 2	—	Open drain for IIC
303	TEST	—	Not used
304	TEST	—	Not used
305	CLKIN2	I	Clock signal input terminal (13.5 MHz or 27 MHz) Not used
306	FS256	O	Master clock signal (256Fs=11.2896 MHz) output to external A/D, D/A converter Not used
307	ADDT	I	Data input from external A/D converter Not used
308	LRCK	O	L/R sampling clock signal (44.1kHz) output to external A/D, D/A converter Not used
309	XBCK	O	Bit clock (2.8224 MHz) output to the external A/D, D/A converter Not used
310	OSCI	I	Main system clock input terminal (22.5792 MHz)
311	OSCO	O	Main system clock output terminal (22.5792 MHz)
312	FS512	O	Clock signal output for class-D amplifier Not used
313	DTCK	I/O	TSB master data clock input/output or SSB data input/output
314	UDP	I/O	USB data (+) input/output terminal
315	UDM	I/O	USB data (–) input/output terminal
316	USBHOLD	I	USB hold signal input terminal
317	SUSPEND	O	USB suspend signal output
318	UPUEN	O	USB pull-up resistor connection control output terminal
319	UOSCI	I	Resonator (48MHz) connection terminal for the USB oscillation circuit
320	UOSCO	O	Resonator (48MHz) connection terminal for the USB oscillation circuit
321 to 325	NC	—	Not used

SECTION 5
EXPLODED VIEWS

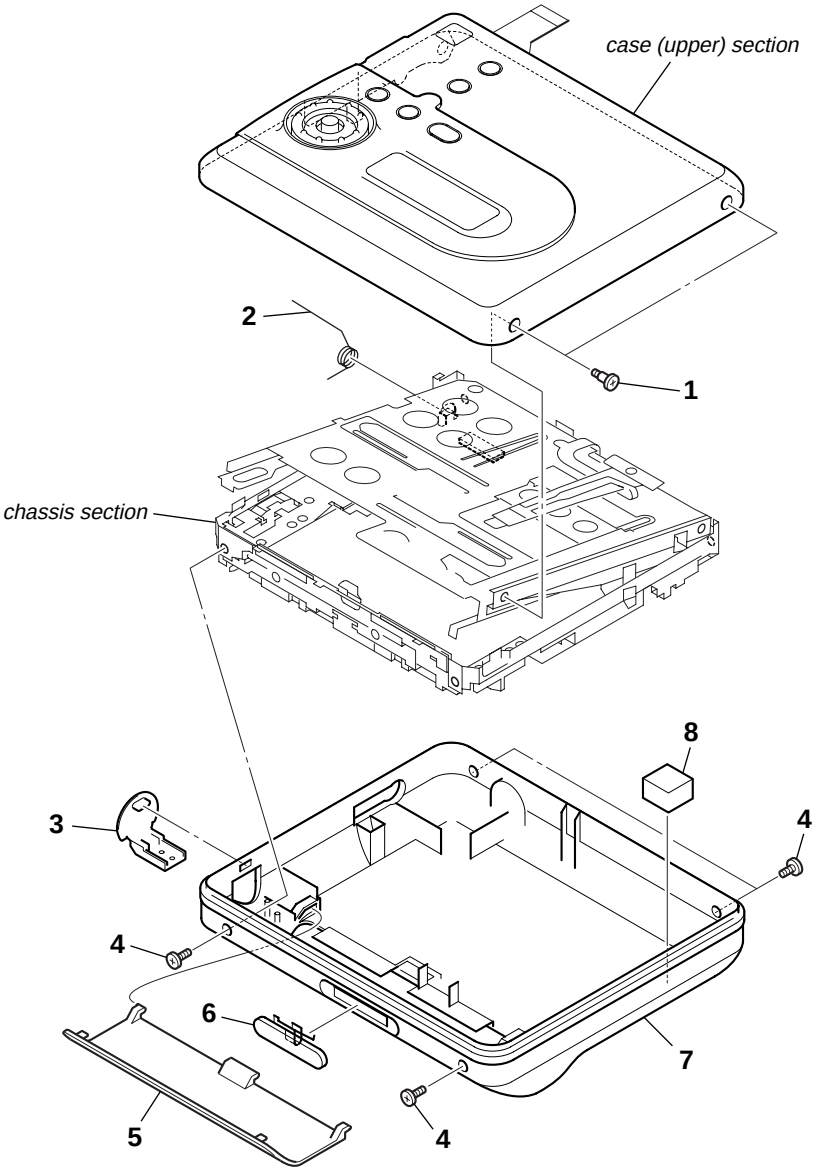
NOTE:

- -XX and -X mean standardized parts, so they may have some difference from the original one.
- Color Indication of Appearance Parts
  Example:
  KNOB, BALANCE (WHITE) . . . (RED)
  ↑ ↑
  Parts Color Cabinet's Color
- Abbreviation
  CND : Canadian model
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.
- Accessories are given in the last of the electrical parts list.

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

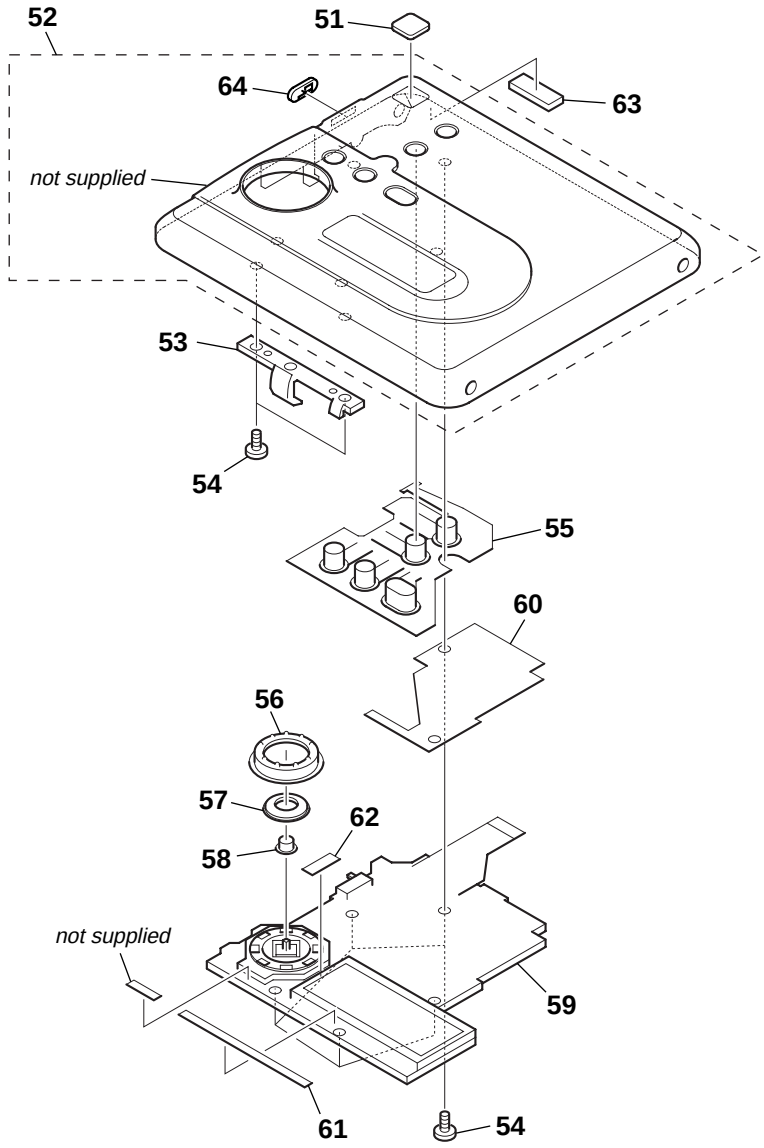
Les composants identifiés par une marque ⚠ sont critiquens pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

5-1. CASE (LOWER) SECTION



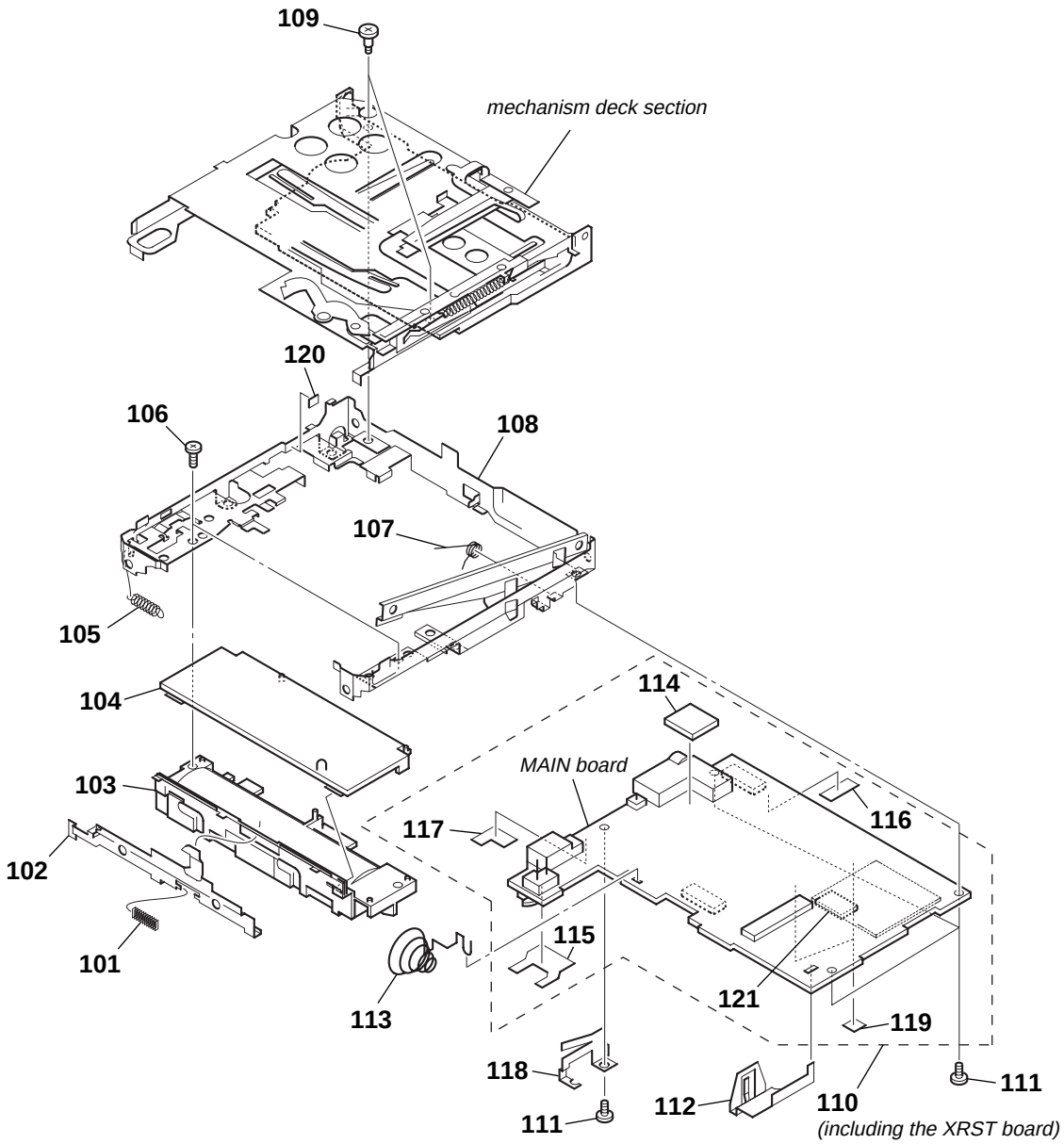
Ref. No.	Part No.	Description	Remark
1	3-241-529-01	SCREW, STEP	
2	3-266-359-01	HERICAL TORSION SPRING (L)	
3	3-246-248-01	CAP (USB)	
4	3-234-449-19	SCREW (M1.4)	
5	3-266-208-41	LID, BATTERY CASE	
6	3-266-206-51	KNOB (OPEN)	
7	3-266-214-11	CASE (LOWER)	
8	2-109-769-01	SHEET (RODEO)	

5-2. CASE (UPPER) SECTION



Ref. No.	Part No.	Description	Remark
51	3-264-154-01	BADGE (HI-MD)	
52	X-2022-631-1	CASE (UPPER) (S) (SV) ASSY	
53	3-266-189-01	OPEN LOCKER	
54	3-254-014-01	SCREW	
55	3-266-215-01	BUTTON (CONTROL) (DOWNLOAD. ❚❚. ■. NAVI/MENU. GROUP)	
56	3-266-216-01	KNOB (ROTARY)	
57	3-266-192-01	ESCUTCHEON (5 DIRECTION) (VOL +. ▶▶I. VOL –. I◀◀)	
58	3-266-219-01	KNOB (5DIR) (► FNT)	
59	1-805-515-11	LCD MODULE	
60	2-109-912-01	SHEET (LCD COVER)	
61	2-176-384-01	SHEET (LCD1)	
62	2-176-385-01	SHEET (LCD2)	
63	2-148-440-01	CUSHION (LCD FPC)	
64	3-249-687-71	KNOB (HOLD)	

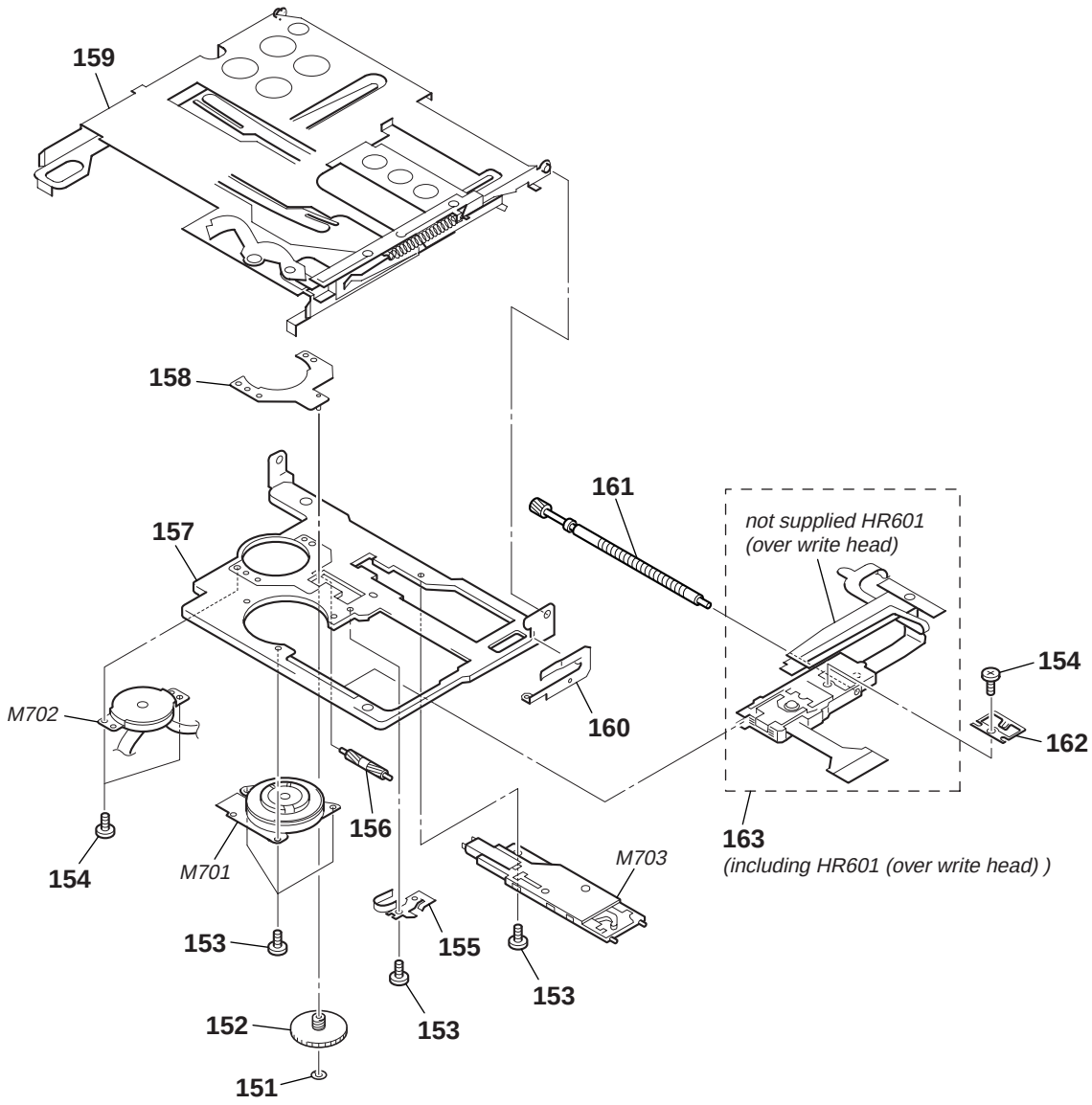
5-3. CHASSIS SECTION



Ref. No.	Part No.	Description	Remark
101	3-266-202-01	SPRING (OPEN), COMPRESSION COIL	
102	3-266-197-01	OPEN SLIDER	
103	3-266-196-01	CASE, BATTERY	
104	3-266-194-01	MD STANDARD PIN	
105	3-266-201-01	SPRING (R), EXTENSION	
106	3-254-003-01	SCREW	
107	3-266-199-01	SPRING (R), TORSION COIL	
108	X-3385-057-1	CHASSIS ASSY, SET	
109	3-246-996-01	SCREW (MD), STEP	
110	X-2022-642-1	MAIN BOARD, COMPLETE (CND) (including XRST board)	
110	X-2022-643-1	MAIN BOARD, COMPLETE (US) (including XRST board)	

Ref. No.	Part No.	Description	Remark
111	3-238-876-04	SCREW (M1.4), TOOTHED LOCK	
112	3-266-204-01	TERMINAL (+), BATTERY	
113	3-266-203-01	TERMINAL (–), BATTERY	
114	2-102-902-01	SHEET (JACK FRONT)	
115	2-109-022-01	SHEET (PWB SW)	
116	2-109-024-01	SHEET (PWB DC)	
117	2-109-025-01	SHEET (PWB LINE)	
118	2-109-497-01	SPRING (USB), LEAF	
119	2-148-633-01	SHEET TEST POINT	
120	2-176-386-01	SHEET (SET CHASSIS L)	
121	A-1067-848-A	XRST BOARD, COMPLETE	

5-4. MECHANISM DECK SECTION (MT-MZNH900-181)



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

Ref. No.	Part No.	Description	Remark
151	3-338-645-31	WASHER (0.8-2.5)	
152	3-263-454-01	GEAR (BSA)	
153	3-248-370-01	SCREW, SELF TAP	
154	3-225-996-17	SCREW (M1.4) (EG), PRECISION PAN	
155	3-244-880-01	SPRING, THRUST RETAINER	
156	3-263-455-01	GEAR (SB)	
157	3-259-972-21	CHASSIS (REC)	
158	X-3384-651-1	BASE ASSY, MOTOR	
159	X-3384-650-1	HOLDER ASSY	

Ref. No.	Part No.	Description	Remark
160	3-263-453-01	PLATE, RATCHET	
161	A-4576-495-A	SCREW BLOCK ASSY, LEAD	
162	3-244-879-01	SPRING, RACK	
⚠163	X-2021-785-1	OP SERVICE ASSY (ABX-U) (including HR601(OVER WRITE HEAD))	
M701	8-835-782-12	MOTOR, DC SSM18D/C-NP (SPINDLE)	
M702	1-787-143-11	MOTOR, DC (SLED)	
M703	1-477-519-21	MOTOR UNIT, DC (OVER WRITE HEAD UP/DOWN)	

SECTION 8
ELECTRICAL PARTS LIST

MAIN

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS
  All resistors are in ohms.
  METAL: Metal-film resistor.
  METAL OXIDE: Metal oxide-film resistor.
  F: nonflammable
- Abbreviation
  CND : Canadian model
- Items marked "*" are not stocked since they are seldom required for routine service.
  Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS
  In each case, u: µ, for example:
  uA... : µA... uPA... : µPA...
  uPB... : µPB... uPC... : µPC...
  uPD... : µPD...
- CAPACITORS
  uF: µF
- COILS
  uH: µH

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

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

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

Ref. No.	Part No.	Description			Remark
	X-2022-642-1	MAIN BOARD, COMPLETE (CND)			
	X-2022-643-1	MAIN BOARD, COMPLETE (US)			
		**********			
		(Including the XRST board)			
	2-102-902-01	SHEET (JACK FRONT)			
	2-109-022-01	SHEET (PWB SW)			
	2-109-024-01	SHEET (PWB DC)			
	2-109-025-01	SHEET (PWB LINE)			
	2-148-633-01	SHEET TEST POINT			
		< CAPACITOR >			
C151	1-164-941-11	CERAMIC CHIP	0.0047uF	10%	16V
C152	1-164-939-11	CERAMIC CHIP	0.0022uF	10%	50V
C153	1-125-837-11	CERAMIC CHIP	1uF	10%	6.3V (US)
C153	1-165-884-11	CERAMIC CHIP	2.2uF	10%	6.3V (CND)
C154	1-115-467-11	CERAMIC CHIP	0.22uF	10%	10V
C160	1-137-859-11	TANTALUM CHIP	220uF	20%	4V
C251	1-164-941-11	CERAMIC CHIP	0.0047uF	10%	16V
C252	1-164-939-11	CERAMIC CHIP	0.0022uF	10%	50V
C253	1-125-837-11	CERAMIC CHIP	1uF	10%	6.3V (US)
C253	1-165-884-11	CERAMIC CHIP	2.2uF	10%	6.3V (CND)
C254	1-115-467-11	CERAMIC CHIP	0.22uF	10%	10V
C260	1-137-859-11	TANTALUM CHIP	220uF	20%	4V
C351	1-125-837-11	CERAMIC CHIP	1uF	10%	6.3V
C352	1-135-259-11	TANTALUM CHIP	10uF	20%	6.3V
C353	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C354	1-135-151-21	TANTALUM CHIP	4.7uF	20%	4V
C355	1-165-884-11	CERAMIC CHIP	2.2uF	10%	6.3V
C356	1-135-201-11	TANTALUM CHIP	10uF	20%	4V
C361	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C364	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C402	1-100-609-11	TANTALUM CHIP	220uF		5V
C403	1-100-609-11	TANTALUM CHIP	220uF		5V
C423	1-100-609-11	TANTALUM CHIP	220uF		5V
C424	1-100-609-11	TANTALUM CHIP	220uF		5V
C425	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C427	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C429	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C430	1-164-937-11	CERAMIC CHIP	0.001uF	10%	50V
C452	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C453	1-165-176-11	CERAMIC CHIP	0.047uF	10%	16V

Ref. No.	Part No.	Description			Remark
C455	1-164-939-11	CERAMIC CHIP	0.0022uF	10%	50V
C456	1-164-939-11	CERAMIC CHIP	0.0022uF	10%	50V
C457	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C458	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C459	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C476	1-164-937-11	CERAMIC CHIP	0.001uF	10%	50V
C478	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C479	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C480	1-165-884-11	CERAMIC CHIP	2.2uF	10%	6.3V
C481	1-125-837-11	CERAMIC CHIP	1uF	10%	6.3V
C511	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C513	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C515	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C516	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C517	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C518	1-135-210-11	TANTALUM CHIP	4.7uF	20%	10V
C519	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C520	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C521	1-164-850-11	CERAMIC CHIP	10PF	0.5PF	50V
C522	1-164-850-11	CERAMIC CHIP	10PF	0.5PF	50V
C523	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C524	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C525	1-164-941-11	CERAMIC CHIP	0.0047uF	10%	16V
C526	1-164-874-11	CERAMIC CHIP	100PF	5%	50V
C527	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C529	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C530	1-125-837-11	CERAMIC CHIP	1uF	10%	6.3V
C531	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C533	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C536	1-107-819-11	CERAMIC CHIP	0.022uF	10%	16V
C537	1-125-837-11	CERAMIC CHIP	1uF	10%	6.3V
C538	1-164-937-11	CERAMIC CHIP	0.001uF	10%	50V
C539	1-125-837-11	CERAMIC CHIP	1uF	10%	6.3V
C545	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C547	1-119-923-11	CERAMIC CHIP	0.047uF	10%	10V
C550	1-119-923-11	CERAMIC CHIP	0.047uF	10%	10V
C552	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C553	1-135-210-11	TANTALUM CHIP	4.7uF	20%	10V
C554	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C555	1-164-941-11	CERAMIC CHIP	0.0047uF	10%	16V
C556	1-135-210-11	TANTALUM CHIP	4.7uF	20%	10V
C557	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C558	1-164-937-11	CERAMIC CHIP	0.001uF	10%	50V

MAIN

Ref. No.	Part No.	Description			Remark
C559	1-164-941-11	CERAMIC CHIP	0.0047uF	10%	16V
C560	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C561	1-125-837-11	CERAMIC CHIP	1uF	10%	6.3V
C562	1-125-837-11	CERAMIC CHIP	1uF	10%	6.3V
C564	1-135-210-11	TANTALUM CHIP	4.7uF	20%	10V
C565	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C566	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C567	1-135-210-11	TANTALUM CHIP	4.7uF	20%	10V
C568	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C569	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C570	1-165-847-91	TANTALUM CHIP	4.7uF	20%	10V
C573	1-164-937-11	CERAMIC CHIP	0.001uF	10%	50V
C574	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C601	1-125-837-11	CERAMIC CHIP	1uF	10%	6.3V
C602	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C604	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C607	1-125-837-11	CERAMIC CHIP	1uF	10%	6.3V
C609	1-125-837-11	CERAMIC CHIP	1uF	10%	6.3V
C611	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C612	1-119-750-11	TANTALUM CHIP	22uF	20%	6.3V
C613	1-119-750-11	TANTALUM CHIP	22uF	20%	6.3V
C614	1-119-750-11	TANTALUM CHIP	22uF	20%	6.3V
C616	1-165-897-11	TANTALUM CHIP	22uF	20%	10V
C619	1-125-837-11	CERAMIC CHIP	1uF	10%	6.3V
C620	1-119-923-11	CERAMIC CHIP	0.047uF	10%	10V
C621	1-135-201-11	TANTALUM CHIP	10uF	20%	4V
C622	1-100-539-91	TANTALUM CHIP	47uF	20%	6.3V
C625	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C627	1-100-539-91	TANTALUM CHIP	47uF	20%	6.3V
C628	1-125-837-11	CERAMIC CHIP	1uF	10%	6.3V
C630	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C633	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C634	1-125-837-11	CERAMIC CHIP	1uF	10%	6.3V
C635	1-100-539-91	TANTALUM CHIP	47uF	20%	6.3V
C636	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C637	1-165-851-91	TANTALUM CHIP	10uF	20%	6.3V
C638	1-164-939-11	CERAMIC CHIP	0.0022uF	10%	50V
C641	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C642	1-119-923-11	CERAMIC CHIP	0.047uF	10%	10V
C643	1-100-743-91	CERAMIC CHIP	2.2uF	10%	16V
C644	1-164-941-11	CERAMIC CHIP	0.0047uF	10%	16V
C645	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C646	1-119-923-11	CERAMIC CHIP	0.047uF	10%	10V
C648	1-119-923-11	CERAMIC CHIP	0.047uF	10%	10V
C649	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C650	1-165-851-91	TANTALUM CHIP	10uF	20%	6.3V
C652	1-135-259-11	TANTALUM CHIP	10uF	20%	6.3V
C653	1-135-259-11	TANTALUM CHIP	10uF	20%	6.3V
C658	1-100-539-91	TANTALUM CHIP	47uF	20%	6.3V
C660	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C661	1-165-884-11	CERAMIC CHIP	2.2uF	10%	6.3V
C666	1-127-820-11	CERAMIC CHIP	4.7uF	10%	16V
C668	1-125-837-11	CERAMIC CHIP	1uF	10%	6.3V
C669	1-125-837-11	CERAMIC CHIP	1uF	10%	6.3V
C671	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C672	1-127-820-11	CERAMIC CHIP	4.7uF	10%	16V
C673	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C674	1-112-010-91	CAP, CHIP MICA	33PF		
C675	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C676	1-164-937-11	CERAMIC CHIP	0.001uF	10%	50V
C701	1-119-923-11	CERAMIC CHIP	0.047uF	10%	10V
C702	1-119-923-11	CERAMIC CHIP	0.047uF	10%	10V
C703	1-119-923-11	CERAMIC CHIP	0.047uF	10%	10V
C705	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C706	1-107-819-11	CERAMIC CHIP	0.022uF	10%	16V
C707	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C708	1-107-819-11	CERAMIC CHIP	0.022uF	10%	16V
C709	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C710	1-107-819-11	CERAMIC CHIP	0.022uF	10%	16V
C712	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C713	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C714	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C715	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C716	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C717	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C801	1-164-847-11	CERAMIC CHIP	7PF	0.5PF	50V
C802	1-164-847-11	CERAMIC CHIP	7PF	0.5PF	50V
C803	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C804	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C805	1-125-891-11	CERAMIC CHIP	0.47uF	10%	10V
C808	1-125-837-11	CERAMIC CHIP	1uF	10%	6.3V
C809	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C810	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C811	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C812	1-125-837-11	CERAMIC CHIP	1uF	10%	6.3V
C814	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C816	1-100-539-91	TANTALUM CHIP	47uF	20%	6.3V
C817	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C818	1-165-851-91	TANTALUM CHIP	10uF	20%	6.3V
C819	1-100-539-91	TANTALUM CHIP	47uF	20%	6.3V
C820	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C821	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C822	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C823	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C828	1-164-937-11	CERAMIC CHIP	0.001uF	10%	50V
C832	1-125-837-11	CERAMIC CHIP	1uF	10%	6.3V
C833	1-125-837-11	CERAMIC CHIP	1uF	10%	6.3V
C835	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C836	1-165-851-91	TANTALUM CHIP	10uF	20%	6.3V
C838	1-165-851-91	TANTALUM CHIP	10uF	20%	6.3V
C839	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C843	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C845	1-100-539-91	TANTALUM CHIP	47uF	20%	6.3V
C846	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C847	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C850	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C853	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C856	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C857	1-164-858-11	CERAMIC CHIP	22PF	5%	50V
C858	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C859	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C860	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C892	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C901	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C902	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V

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Ref. No.	Part No.	Description			Remark
C903	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C906	1-100-352-91	CERAMIC CHIP	1uF	10%	16V
C908	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C909	1-119-751-11	TANTALUM CHIP	22uF	20%	16V
C915	1-165-851-91	TANTALUM CHIP	10uF	20%	6.3V
C916	1-165-851-91	TANTALUM CHIP	10uF	20%	6.3V
C918	1-165-176-11	CERAMIC CHIP	0.047uF	10%	16V
C919	1-164-227-11	CERAMIC CHIP	0.022uF	10%	25V
C920	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C922	1-128-964-11	TANTALUM CHIP	100uF	20%	6.3V
C923	1-100-539-91	TANTALUM CHIP	47uF	20%	6.3V
C924	1-100-539-91	TANTALUM CHIP	47uF	20%	6.3V
C926	1-164-937-11	CERAMIC CHIP	0.001uF	10%	50V
C927	1-164-874-11	CERAMIC CHIP	100PF	5%	50V
C928	1-164-874-11	CERAMIC CHIP	100PF	5%	50V
C929	1-164-937-11	CERAMIC CHIP	0.001uF	10%	50V
C931	1-165-884-11	CERAMIC CHIP	2.2uF	10%	6.3V
C932	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C933	1-165-884-11	CERAMIC CHIP	2.2uF	10%	6.3V
C935	1-165-884-11	CERAMIC CHIP	2.2uF	10%	6.3V
C936	1-165-884-11	CERAMIC CHIP	2.2uF	10%	6.3V
C937	1-165-884-11	CERAMIC CHIP	2.2uF	10%	6.3V
C939	1-119-750-11	TANTALUM CHIP	22uF	20%	6.3V
C940	1-119-750-11	TANTALUM CHIP	22uF	20%	6.3V
C948	1-119-750-11	TANTALUM CHIP	22uF	20%	6.3V
C954	1-164-937-11	CERAMIC CHIP	0.001uF	10%	50V
C958	1-125-837-11	CERAMIC CHIP	1uF	10%	6.3V
C959	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C960	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
		< CONNECTOR >			
CN451	1-818-190-21	CONNECTOR, SQUARE TYPE (USB)			
CN471	1-818-543-21	CONNECTOR, FFC/FPC (ZIF) 16P			
CN501	1-818-545-21	CONNECTOR, FFC/FPC (ZIF) 26P			
CN701	1-818-540-21	CONNECTOR, FFC/FPC (ZIF) 10P			
		< DIODE >			
D151	8-719-056-72	DIODE	UDZ-TE-17-2.4B		
D251	8-719-056-72	DIODE	UDZ-TE-17-2.4B		
D352	6-500-116-01	DIODE	NNCD6.8H-T1		
D440	6-500-483-01	DIODE	MA22D2800LS0		
D457	6-500-483-01	DIODE	MA22D2800LS0		
D458	8-719-422-49	DIODE	MA8056-L		
D471	8-719-072-27	DIODE	MA2Z748001S0		
D601	6-500-813-01	DIODE	MA2SD32008S0		
D602	8-719-072-27	DIODE	MA2Z748001S0		
D603	8-719-072-27	DIODE	MA2Z748001S0		
D604	6-500-483-01	DIODE	MA22D2800LS0		
D605	6-500-910-01	DIODE	MA2SD3000LS0		
D606	6-500-909-01	DIODE	MA22D1700LS0		
D607	6-500-909-01	DIODE	MA22D1700LS0		
D608	6-500-910-01	DIODE	MA2SD3000LS0		
D609	8-719-072-27	DIODE	MA2Z748001S0		
D610	8-719-072-27	DIODE	MA2Z748001S0		
D611	8-719-072-27	DIODE	MA2Z748001S0		
D613	6-500-813-01	DIODE	MA2SD32008S0		
D614	6-500-813-01	DIODE	MA2SD32008S0		

Ref. No.	Part No.	Description	Remark
D615	6-500-909-01	DIODE MA22D1700LS0	
D616	6-500-909-01	DIODE MA22D1700LS0	
D801	8-719-072-27	DIODE MA2Z748001S0	
D803	6-500-813-01	DIODE MA2SD32008S0	
D902	8-719-072-27	DIODE MA2Z748001S0	
D904	8-719-072-27	DIODE MA2Z748001S0	
D905	8-719-072-27	DIODE MA2Z748001S0	
D906	6-500-483-01	DIODE MA22D2800LS0	
		< FUSE >	
F351	1-576-439-21	FUSE (SMD) (0.25A/125V)	
		< FERRITE BEAD/SHORT >	
FB353	1-414-594-11	INDUCTOR, FERRITE BEAD	
FB354	1-216-864-11	SHORT CHIP 0	
FB355	1-414-594-11	INDUCTOR, FERRITE BEAD	
FB357	1-414-594-11	INDUCTOR, FERRITE BEAD	
FB451	1-469-869-21	INDUCTOR (EMI FERRITE) (2012)	
FB452	1-469-869-21	INDUCTOR (EMI FERRITE) (2012)	
FB471	1-216-864-11	SHORT CHIP 0	
FB501	1-400-620-21	INDUCTOR, FERRITE BEAD (1005)	
FB502	1-216-864-11	SHORT CHIP 0	
FB503	1-216-864-11	SHORT CHIP 0	
FB801	1-216-864-11	SHORT CHIP 0	
FB802	1-216-864-11	SHORT CHIP 0	
FB803	1-414-760-21	INDUCTOR, FERRITE BEAD	
FB807	1-216-864-11	SHORT CHIP 0	
FB809	1-216-864-11	SHORT CHIP 0	
FB810	1-414-760-21	INDUCTOR, FERRITE BEAD	
		< IC >	
IC352	6-705-942-01	IC TA2131FLG (EL)	
IC471	6-705-715-01	IC XC6219B242MR	
IC501	6-705-012-01	IC SN761059ZQLR	
IC502	6-706-095-01	IC R1180Q301B-TR-FA	
IC601	6-705-000-01	IC SC901585VAR2	
IC602	6-703-317-01	IC R1160N121B-TR-FA	
* IC603	6-706-038-01	IC XC6209B322MR	
IC604	6-706-079-01	IC R1180Q121C-TR-FA	
IC605	6-706-214-01	IC TC7SL32FU (TE85R)	
IC606	6-702-590-01	IC XC61CN1702NR	
IC701	6-704-999-01	IC BD6607KN	
IC801	8-753-224-31	IC CXD2681-221GG	
IC804	6-706-089-01	IC XC61CC2502NR	
IC892	(Not supplied)	IC HN58X2564FPIEZ	
IC901	6-704-997-01	IC SC901584EPR2	
		< JACK >	
J352	1-817-447-12	JACK (🎧)	
		< COIL/SHORT >	
L351	1-216-295-00	SHORT CHIP 0	
L501	1-216-295-00	SHORT CHIP 0	
L502	1-400-397-11	INDUCTOR 10uH	
L503	1-400-397-11	INDUCTOR 10uH	
L504	1-400-397-11	INDUCTOR 10uH	
L505	1-400-397-11	INDUCTOR 10uH	

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Ref. No.	Part No.	Description			Remark
L506	1-400-397-11	INDUCTOR	10uH		
L507	1-400-397-11	INDUCTOR	10uH		
L601	1-414-398-11	INDUCTOR	10uH		
L603	1-414-398-11	INDUCTOR	10uH		
L605	1-416-669-11	INDUCTOR	22uH		
L606	1-400-626-21	INDUCTOR	10uH		
L607	1-419-881-11	INDUCTOR	47uH		
L608	1-400-402-21	INDUCTOR	4.7uH		
L701	1-216-295-00	SHORT CHIP	0		
L702	1-216-295-00	SHORT CHIP	0		
L801	1-400-397-11	INDUCTOR	10uH		
L802	1-400-343-21	INDUCTOR	22uH		
L803	1-216-001-00	RES-CHIP	10	5%	1/10W
L804	1-216-001-00	RES-CHIP	10	5%	1/10W
L805	1-216-295-00	SHORT CHIP	0		
L901	1-456-711-21	COIL, CHOKE	100uH		
L903	1-400-397-11	INDUCTOR	10uH		
L904	1-400-397-11	INDUCTOR	10uH		
L906	1-456-677-21	COIL, CHOKE	47uH		
L907	1-456-677-21	COIL, CHOKE	47uH		
L9001	1-414-398-11	INDUCTOR	10uH		
LF301	1-456-827-11	COIL, COMMON MODE CHOKE			
LF451	1-456-111-11	COIL, COMMON MODE CHOKE			
		< TRANSISTOR >			
Q351	8-729-037-52	TRANSISTOR	2SD2216J-QR (TX).SO		
Q352	8-729-030-46	TRANSISTOR	XP4314-TX		
Q353	6-550-353-01	FET	SI1410EDH-T1		
Q403	6-550-353-01	FET	SI1410EDH-T1		
Q406	8-729-427-74	TRANSISTOR	XP4601		
Q451	6-550-354-01	FET	RTQ035P02TR		
Q452	8-729-427-74	TRANSISTOR	XP4601		
Q471	8-729-429-44	TRANSISTOR	XP1501		
Q501	6-550-674-01	FET	MCH6604-K-TL-E		
Q502	8-729-051-23	TRANSISTOR	2SA2018TL		
Q503	8-729-037-52	TRANSISTOR	2SD2216J-QR (TX).SO		
Q504	8-729-037-89	TRANSISTOR	2SC4627J-C (TX).SO		
Q601	6-550-357-01	FET	CPH5614-TL-E		
Q602	6-550-740-01	FET	MCH6617-TL-E		
Q603	8-729-053-71	FET	TS8K1TB		
Q607	8-729-037-52	TRANSISTOR	2SD2216J-QR (TX).SO		
Q608	8-729-030-46	TRANSISTOR	XP4314-TX		
Q609	6-550-859-01	FET	NTHD4508NT1G		
Q611	6-550-353-01	FET	SI1410EDH-T1		
Q612	8-729-049-81	FET	SSM3K01F (TE85L)		
Q613	8-729-047-68	FET	SSM3K03FE (TPL3)		
Q614	8-729-427-74	TRANSISTOR	XP4601		
Q615	6-550-353-01	FET	SI1410EDH-T1		
Q616	6-550-353-01	FET	SI1410EDH-T1		
Q617	8-729-427-74	TRANSISTOR	XP4601		
Q801	8-729-047-68	FET	SSM3K03FE (TPL3)		
Q802	8-729-051-50	FET	XP152A12C0MR		
Q803	8-729-037-52	TRANSISTOR	2SD2216J-QR (TX).SO		
Q901	8-729-053-71	FET	TS8K1TB		
Q902	8-729-427-74	TRANSISTOR	XP4601		
		< RESISTOR >			
R151	1-218-961-11	RES-CHIP	4.7K	5%	1/16W (US)

Ref. No.	Part No.	Description			Remark
R151	1-218-965-11	RES-CHIP	10K	5%	1/16W (CND)
R152	1-218-957-11	RES-CHIP	2.2K	5%	1/16W (CND)
R152	1-218-961-11	RES-CHIP	4.7K	5%	1/16W (US)
R153	1-218-965-11	RES-CHIP	10K	5%	1/16W
R154	1-218-965-11	RES-CHIP	10K	5%	1/16W
R155	1-208-635-11	METAL CHIP	10	0.5%	1/16W
R156	1-218-961-11	RES-CHIP	4.7K	5%	1/16W
R157	1-208-683-11	METAL CHIP	1K	0.5%	1/16W
R158	1-208-691-11	METAL CHIP	2.2K	0.5%	1/16W
R160	1-218-990-11	SHORT CHIP	0		
R251	1-218-961-11	RES-CHIP	4.7K	5%	1/16W (US)
R251	1-218-965-11	RES-CHIP	10K	5%	1/16W (CND)
R252	1-218-957-11	RES-CHIP	2.2K	5%	1/16W (CND)
R252	1-218-961-11	RES-CHIP	4.7K	5%	1/16W (US)
R253	1-218-965-11	RES-CHIP	10K	5%	1/16W
R254	1-218-965-11	RES-CHIP	10K	5%	1/16W
R255	1-208-635-11	METAL CHIP	10	0.5%	1/16W
R256	1-218-961-11	RES-CHIP	4.7K	5%	1/16W
R257	1-208-683-11	METAL CHIP	1K	0.5%	1/16W
R258	1-208-691-11	METAL CHIP	2.2K	0.5%	1/16W
R260	1-218-990-11	SHORT CHIP	0		
R351	1-218-937-11	RES-CHIP	47	5%	1/16W
R352	1-218-981-11	RES-CHIP	220K	5%	1/16W
R353	1-218-969-11	RES-CHIP	22K	5%	1/16W
R354	1-218-965-11	RES-CHIP	10K	5%	1/16W
R355	1-218-989-11	RES-CHIP	1M	5%	1/16W
R356	1-218-977-11	RES-CHIP	100K	5%	1/16W
R358	1-220-804-11	RES-CHIP	2.2M	5%	1/16W
R421	1-218-977-11	RES-CHIP	100K	5%	1/16W
R422	1-218-989-11	RES-CHIP	1M	5%	1/16W
R423	1-218-981-11	RES-CHIP	220K	5%	1/16W
R424	1-218-985-11	RES-CHIP	470K	5%	1/16W
R454	1-216-864-11	SHORT CHIP	0		
R455	1-218-989-11	RES-CHIP	1M	5%	1/16W
R456	1-218-985-11	RES-CHIP	470K	5%	1/16W
R460	1-216-864-11	SHORT CHIP	0		
R462	1-218-981-11	RES-CHIP	220K	5%	1/16W
R463	1-218-945-11	RES-CHIP	220	5%	1/16W
R464	1-208-935-11	METAL CHIP	100K	0.5%	1/16W
R466	1-220-804-11	RES-CHIP	2.2M	5%	1/16W
R467	1-218-965-11	RES-CHIP	10K	5%	1/16W
R471	1-218-990-11	SHORT CHIP	0		
R472	1-218-990-11	SHORT CHIP	0		
R473	1-218-990-11	SHORT CHIP	0		
R474	1-218-953-11	RES-CHIP	1K	5%	1/16W
R475	1-218-990-11	SHORT CHIP	0		
R476	1-208-699-11	METAL CHIP	4.7K	0.5%	1/16W
R477	1-208-699-11	METAL CHIP	4.7K	0.5%	1/16W
R478	1-218-961-11	RES-CHIP	4.7K	5%	1/16W
R480	1-218-977-11	RES-CHIP	100K	5%	1/16W
R483	1-218-985-11	RES-CHIP	470K	5%	1/16W
R484	1-218-981-11	RES-CHIP	220K	5%	1/16W

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Ref. No.	Part No.	Description			Remark
R485	1-218-985-11	RES-CHIP	470K	5%	1/16W
R486	1-218-990-11	SHORT CHIP	0		
R489	1-218-990-11	SHORT CHIP	0		
R490	1-218-941-81	RES-CHIP	100	5%	1/16W
R491	1-218-941-81	RES-CHIP	100	5%	1/16W
R501	1-218-957-11	RES-CHIP	2.2K	5%	1/16W
R502	1-218-953-11	RES-CHIP	1K	5%	1/16W
R503	1-218-977-11	RES-CHIP	100K	5%	1/16W
R504	1-218-977-11	RES-CHIP	100K	5%	1/16W
R505	1-208-635-11	METAL CHIP	10	0.5%	1/16W
R507	1-218-957-11	RES-CHIP	2.2K	5%	1/16W
R508	1-218-957-11	RES-CHIP	2.2K	5%	1/16W
R509	1-218-990-11	SHORT CHIP	0		
R511	1-218-990-11	SHORT CHIP	0		
R512	1-218-990-11	SHORT CHIP	0		
R513	1-218-965-11	RES-CHIP	10K	5%	1/16W
R514	1-218-973-11	RES-CHIP	47K	5%	1/16W
R515	1-218-965-11	RES-CHIP	10K	5%	1/16W
R516	1-218-973-11	RES-CHIP	47K	5%	1/16W
R517	1-218-965-11	RES-CHIP	10K	5%	1/16W
R518	1-218-973-11	RES-CHIP	47K	5%	1/16W
R519	1-218-953-11	RES-CHIP	1K	5%	1/16W
R520	1-218-949-11	RES-CHIP	470	5%	1/16W
R521	1-218-990-11	SHORT CHIP	0		
R522	1-218-990-11	SHORT CHIP	0		
R524	1-218-945-11	RES-CHIP	220	5%	1/16W
R525	1-216-864-11	SHORT CHIP	0		
R526	1-216-864-11	SHORT CHIP	0		
R561	1-218-981-11	RES-CHIP	220K	5%	1/16W
R601	1-218-981-11	RES-CHIP	220K	5%	1/16W
R605	1-218-953-11	RES-CHIP	1K	5%	1/16W
R608	1-218-446-11	METAL CHIP	1	5%	1/10W
R609	1-218-977-11	RES-CHIP	100K	5%	1/16W
R612	1-220-804-11	RES-CHIP	2.2M	5%	1/16W
R616	1-218-953-11	RES-CHIP	1K	5%	1/16W
R617	1-218-953-11	RES-CHIP	1K	5%	1/16W
R618	1-218-977-11	RES-CHIP	100K	5%	1/16W
R619	1-218-977-11	RES-CHIP	100K	5%	1/16W
R620	1-218-990-11	SHORT CHIP	0		
R621	1-218-990-11	SHORT CHIP	0		
R622	1-218-990-11	SHORT CHIP	0		
R623	1-218-990-11	SHORT CHIP	0		
R624	1-218-985-11	RES-CHIP	470K	5%	1/16W
R625	1-218-985-11	RES-CHIP	470K	5%	1/16W
R628	1-218-933-11	RES-CHIP	22	5%	1/16W
R629	1-220-804-11	RES-CHIP	2.2M	5%	1/16W
R635	1-216-864-11	SHORT CHIP	0		
R636	1-218-985-11	RES-CHIP	470K	5%	1/16W
R638	1-218-981-11	RES-CHIP	220K	5%	1/16W
R639	1-218-989-11	RES-CHIP	1M	5%	1/16W
R640	1-218-981-11	RES-CHIP	220K	5%	1/16W
R641	1-218-989-11	RES-CHIP	1M	5%	1/16W
R642	1-218-977-11	RES-CHIP	100K	5%	1/16W
R643	1-218-990-11	SHORT CHIP	0		
R645	1-218-985-11	RES-CHIP	470K	5%	1/16W
R646	1-218-973-11	RES-CHIP	47K	5%	1/16W
R647	1-218-989-11	RES-CHIP	1M	5%	1/16W

Ref. No.	Part No.	Description			Remark
R648	1-245-456-21	METAL CHIP	1	1%	1/5W
R649	1-245-456-21	METAL CHIP	1	1%	1/5W
R650	1-216-793-11	METAL CHIP	4.7	5%	1/10W
R652	1-218-990-11	SHORT CHIP	0		
R653	1-218-969-11	RES-CHIP	22K	5%	1/16W
R654	1-218-989-11	RES-CHIP	1M	5%	1/16W
R657	1-218-990-11	SHORT CHIP	0		
R659	1-218-977-11	RES-CHIP	100K	5%	1/16W
R660	1-218-985-11	RES-CHIP	470K	5%	1/16W
R661	1-218-985-11	RES-CHIP	470K	5%	1/16W
R662	1-218-985-11	RES-CHIP	470K	5%	1/16W
R663	1-218-981-11	RES-CHIP	220K	5%	1/16W
R664	1-216-789-11	METAL CHIP	2.2	5%	1/10W
R665	1-218-990-11	SHORT CHIP	0		
R668	1-216-864-11	SHORT CHIP	0		
R670	1-218-990-11	SHORT CHIP	0		
R671	1-218-990-11	SHORT CHIP	0		
R673	1-218-990-11	SHORT CHIP	0		
R675	1-220-804-11	RES-CHIP	2.2M	5%	1/16W
R677	1-216-864-11	SHORT CHIP	0		
R679	1-218-945-11	RES-CHIP	220	5%	1/16W
R680	1-216-864-11	SHORT CHIP	0		
R681	1-218-989-11	RES-CHIP	1M	5%	1/16W
R706	1-218-957-11	RES-CHIP	2.2K	5%	1/16W
R707	1-218-957-11	RES-CHIP	2.2K	5%	1/16W
R708	1-218-957-11	RES-CHIP	2.2K	5%	1/16W
R709	1-218-965-11	RES-CHIP	10K	5%	1/16W
R710	1-218-965-11	RES-CHIP	10K	5%	1/16W
R711	1-218-965-11	RES-CHIP	10K	5%	1/16W
R712	1-218-990-11	SHORT CHIP	0		
R801	1-218-961-11	RES-CHIP	4.7K	5%	1/16W
R802	1-218-990-11	SHORT CHIP	0		
R804	1-218-933-11	RES-CHIP	22	5%	1/16W
R805	1-218-933-11	RES-CHIP	22	5%	1/16W
R806	1-218-961-11	RES-CHIP	4.7K	5%	1/16W
R807	1-218-957-11	RES-CHIP	2.2K	5%	1/16W
R808	1-218-961-11	RES-CHIP	4.7K	5%	1/16W
R809	1-218-990-11	SHORT CHIP	0		
R811	1-218-965-11	RES-CHIP	10K	5%	1/16W
R812	1-218-977-11	RES-CHIP	100K	5%	1/16W
R813	1-218-945-11	RES-CHIP	220	5%	1/16W
R815	1-218-981-11	RES-CHIP	220K	5%	1/16W
R817	1-218-953-11	RES-CHIP	1K	5%	1/16W
R818	1-218-957-11	RES-CHIP	2.2K	5%	1/16W
R819	1-218-953-11	RES-CHIP	1K	5%	1/16W
R820	1-218-945-11	RES-CHIP	220	5%	1/16W
R821	1-220-804-11	RES-CHIP	2.2M	5%	1/16W
R822	1-218-989-11	RES-CHIP	1M	5%	1/16W
R823	1-218-965-11	RES-CHIP	10K	5%	1/16W
R824	1-218-990-11	SHORT CHIP	0		
R825	1-218-990-11	SHORT CHIP	0		
R826	1-218-990-11	SHORT CHIP	0		
R827	1-218-990-11	SHORT CHIP	0		
R828	1-218-990-11	SHORT CHIP	0		
R832	1-218-965-11	RES-CHIP	10K	5%	1/16W
R833	1-218-990-11	SHORT CHIP	0		
R839	1-218-990-11	SHORT CHIP	0		
R840	1-218-990-11	SHORT CHIP	0		

MAIN **XRST**

Ref. No.	Part No.	Description			Remark
R841	1-208-635-11	METAL CHIP	10	0.5%	1/16W
R842	1-218-973-11	RES-CHIP	47K	5%	1/16W
R843	1-218-957-11	RES-CHIP	2.2K	5%	1/16W
R844	1-218-990-11	SHORT CHIP	0		
R845	1-216-864-11	SHORT CHIP	0		
R853	1-218-990-11	SHORT CHIP	0		
R854	1-218-990-11	SHORT CHIP	0		
R855	1-218-990-11	SHORT CHIP	0		
R856	1-218-990-11	SHORT CHIP	0		
R857	1-218-985-11	RES-CHIP	470K	5%	1/16W
R858	1-208-927-11	METAL CHIP	47K	0.5%	1/16W
R860	1-208-635-11	METAL CHIP	10	0.5%	1/16W
R861	1-218-990-11	SHORT CHIP	0		
R862	1-218-989-11	RES-CHIP	1M	5%	1/16W
R863	1-218-990-11	SHORT CHIP	0		
R864	1-218-945-11	RES-CHIP	220	5%	1/16W
R865	1-218-985-11	RES-CHIP	470K	5%	1/16W
R866	1-218-990-11	SHORT CHIP	0		
R867	1-218-989-11	RES-CHIP	1M	5%	1/16W
R868	1-218-990-11	SHORT CHIP	0		
R869	1-218-990-11	SHORT CHIP	0		
R871	1-218-965-11	RES-CHIP	10K	5%	1/16W
R876	1-218-990-11	SHORT CHIP	0		
R878	1-218-937-11	RES-CHIP	47	5%	1/16W
R879	1-218-937-11	RES-CHIP	47	5%	1/16W
R880	1-218-937-11	RES-CHIP	47	5%	1/16W
R888	1-218-981-11	RES-CHIP	220K	5%	1/16W
R894	1-218-977-11	RES-CHIP	100K	5%	1/16W
R895	1-218-977-11	RES-CHIP	100K	5%	1/16W
R897	1-218-990-11	SHORT CHIP	0		
R899	1-218-990-11	SHORT CHIP	0		
R903	1-218-989-11	RES-CHIP	1M	5%	1/16W
R904	1-218-989-11	RES-CHIP	1M	5%	1/16W
R906	1-218-973-11	RES-CHIP	47K	5%	1/16W
R907	1-218-965-11	RES-CHIP	10K	5%	1/16W
R912	1-218-981-11	RES-CHIP	220K	5%	1/16W
R914	1-208-707-11	METAL CHIP	10K	0.5%	1/16W
R917	1-218-981-11	RES-CHIP	220K	5%	1/16W
R918	1-218-985-11	RES-CHIP	470K	5%	1/16W
R920	1-218-985-11	RES-CHIP	470K	5%	1/16W
R922	1-218-977-11	RES-CHIP	100K	5%	1/16W
R924	1-218-985-11	RES-CHIP	470K	5%	1/16W
R925	1-208-927-11	METAL CHIP	47K	0.5%	1/16W
R926	1-208-935-11	METAL CHIP	100K	0.5%	1/16W
R927	1-208-683-11	METAL CHIP	1K	0.5%	1/16W
R929	1-208-935-11	METAL CHIP	100K	0.5%	1/16W
R930	1-208-927-11	METAL CHIP	47K	0.5%	1/16W
R931	1-218-990-11	SHORT CHIP	0		
R933	1-208-943-11	METAL CHIP	220K	0.5%	1/16W
R934	1-208-715-11	METAL CHIP	22K	0.5%	1/16W
R935	1-208-935-11	METAL CHIP	100K	0.5%	1/16W
R936	1-208-927-11	METAL CHIP	47K	0.5%	1/16W
R937	1-208-715-11	METAL CHIP	22K	0.5%	1/16W
R938	1-208-927-11	METAL CHIP	47K	0.5%	1/16W
R951	1-218-990-11	SHORT CHIP	0		
R952	1-218-990-11	SHORT CHIP	0		
R953	1-220-803-81	RES-CHIP	4.7	5%	1/16W

Ref. No.	Part No.	Description			Remark
R954	1-218-985-11	RES-CHIP	470K	5%	1/16W
R955	1-218-957-11	RES-CHIP	2.2K	5%	1/16W
R958	1-218-973-11	RES-CHIP	47K	5%	1/16W
R959	1-218-985-11	RES-CHIP	470K	5%	1/16W
R960	1-218-990-11	SHORT CHIP	0		
R999	1-216-246-00	RES-CHIP	100K	5%	1/8W
		< SWITCH >			
S892	1-771-339-41	SWITCH, PUSH (HALF LOCK)			
S893	1-762-805-21	SWITCH, PUSH (1 KEY) (OPEN/COLSE DETECT)			
S894	1-786-703-21	SWITCH, PUSH (2 KEY) (PROTECT DETECT, Hi-MD PROTECT DETECT)			
		< VIBRATOR >			
X801	1-813-353-21	VIBRATOR, CERAMIC (48MHz)			
X802	1-813-314-11	VIBRATOR, CRYSTAL (22.5792MHz)			
**********					
	A-1067-848-A	XRST BOARD, COMPLETE			
		**********			
		< CAPACITOR >			
C1	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
		< DIODE >			
D1	6-500-813-01	DIODE MA2SD32008S0			
		< IC >			
IC1	6-704-245-01	IC XC61CC1702NR			
		< RESISTOR >			
R1	1-218-969-11	RES-CHIP	22K	5%	1/16W
R2	1-218-969-11	RES-CHIP	22K	5%	1/16W
R3	1-218-941-81	RES-CHIP	100	5%	1/16W
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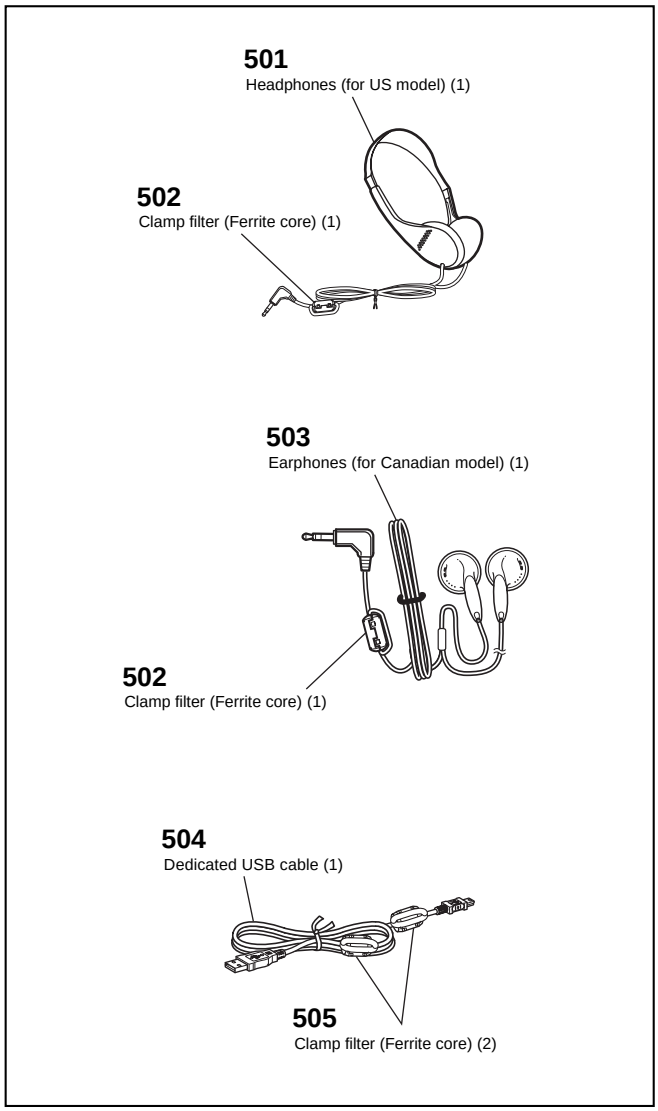
Ref. No.	Part No.	Description	Remark
		MISCELLANEOUS	
		**********	
⚠163	X-2021-785-1	OP SERVICE ASSY (ABX-U) (including HR601(OVER WRITE HEAD))	
M701	8-835-782-12	MOTOR, DC SSM18D/C-NP (SPINDLE)	
M702	1-787-143-11	MOTOR, DC (SLED)	
M703	1-477-519-21	MOTOR UNIT, DC (OVER WRITE HEAD UP/DOWN)	
**********			
		ACCESSORIES	
		**********	
	3-266-467-11	MANUAL, INSTRUCTION (ENGLISH)	
	3-266-467-21	MANUAL, INSTRUCTION (FRENCH) (CND)	
	X-2022-247-1	CD-ROM (APPLICATION) ASSY (Sonic Stage Ver. 2.0/MD Simple Burner Ver. 2.0)	
501	8-954-007-93	RECEIVER, EAR (MDR-027LP/1 SET) (US)	
502	1-543-793-11	FILTER, CLAMP (FERRITE CORE) (for EAR RECEIVER)	
503	8-954-008-92	RECEIVER, EAR MDR-E808LP/C SET (CND)	
504	1-823-519-61	CORD, CONNECTION (DEDICATED USB CABLE)	
505	1-543-798-31	FILTER, CLAMP (FERRITE CORE) (for DEDICATED USB CABLE)	



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

MEMO

REVISION HISTORY

Clicking the version allows you to jump to the revised page.
Also, clicking the version at the upper right on the revised page allows you to jump to the next revised page.

Ver.	Date	Description of Revision
1.0	2004.05	New