XP-ZR810

SERVICE MANUAL

Ver. 1.1 2005.03

US Model
Canadian Model
AEP Model
E Model

Photo : US model

Model Name Using Similar Mechanism	D-EJ760
CD Mechanism Type	CDM-3325ER
Optical Pick-up Type	DAX-25E

SPECIFICATIONS

CD player

System
Compact disc digital audio system

Laser diode properties
Material: GaAlAs
Wavelength: λ = 770 - 800 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 objective lens surface on the optical pick-up block with 7 mm aperture.)

D-A conversion
1-bit quartz time-axis control

Frequency response
20 - 20 000 Hz $^{+1}_{-2}$ dB (measured by JEITA)

Output (at 4.5 V input level)
Headphones (stereo minijack)
Approx. 5 mW + Approx. 5 mW at 16 Ω
(Approx. 1.5 mW + Approx. 1.5 mW at 16 Ω)*
*For the customers in Europe

Radio

Frequency range

● AEP models
FM: 87.5 - 108.0 MHz
AM: 531 - 1 602 kHz

● MX, E19 models
•9 kHz step:
FM: 87.5 - 108.0 MHz
AM: 531 - 1 710 kHz
•10 kHz step:
FM: 87.5 - 108.0 MHz
AM: 530 - 1 710 kHz

● E13 model
•9 kHz step:
FM: 87.5 - 108.0 MHz
AM: 531 - 1 602 kHz
•10 kHz step:
FM: 87.5 - 108.0 MHz
AM: 530 - 1 710 kHz

● US, Canadian models
•10 kHz step:
TV: 2 - 13 ch
WB (weather band): 1 - 7 ch
FM: 87.5 - 108.0 MHz
AM: 530 - 1 710 kHz
•9 kHz step:
TV: 2 - 13 ch
WB (weather band): 1 - 7 ch
FM: 87.5 - 108.0 MHz
AM: 531 - 1 710 kHz

Antenna
FM: Headphones/earphones cord antenna
AM: Built-in ferrite bar antenna

General

Power requirements
• Two LR6 (size AA) batteries: 1.5 V DC × 2
• AC power adaptor (DC IN 4.5 V jack):

Battery life*1 (approx. hours)
When you use the CD player on a flat and stable surface.
When SOUND mode is set to “OFF.”
Playing time varies depending on how the CD player is used.

When using two Sony alkaline batteries LR6 (SG) (produced in Japan)

	E•A•S•S GP “EASS GP 1”	E•A•S•S GP “EASS GP 2”
Audio CD	50	45
ATRAC CD*2	80	80
MP3 CD*3	62	62
RADIO ON	75	

*1 Measured value by the standard of JEITA (Japan Electronics and Information Technology Industries Association)
*2 Recorded at 48 kbps
*3 Recorded at 128 kbps

— Continued on next page —

FM/AM PORTABLE CD PLAYER

9-961-563-02
2005C16-1

Sony Corporation
Personal Audio Group
Published by Sony Engineering Corporation

Operating temperature
5°C - 35°C (41°F - 95°F)

Dimensions (w/h/d) (excluding projecting parts and controls)
Approx. 136.2 × 30.1 × 143.0 mm
(5 3/8 × 1 1/4 × 5 3/4 in.)

Mass (excluding accessories)
Approx. 230 g (8.2 oz.)

Supplied accessories
- AC power adaptor (1)
  (not supplied with US model)
- Head phones (1)
  (FOR US, E19, MX)
- Ear phones (1)
  (EXCEPT US, E19, MX)
- CD-ROM* (SonicStage)(1)
- User's guide for SonicStage (1)
- Operating instruction

US and foreign patents licensed from Dolby Laboratories.

Design and specifications are subject to change without notice.

Abbreviation
E13 : 220-230V AC area in E model
E19 : 230V AC area in E model
MX : Mexican model

TABLE OF CONTENTS

Unleaded solder

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

: LEAD FREE MARK

Unleaded solder has the following characteristics.

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

DANGER

Invisible laser radiation when open and interlock failed or defeated. Avoid direct exposure to beam.

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

Laser component in this product is capable of emitting radiation exceeding the limit for Class 1.

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

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.

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.

On AC power adaptor

- Use only the AC power adaptor supplied. If your CD player is not supplied with the one, use the AC-E45HG AC power adaptor. Do not use any other AC power adaptor. It may cause a malfunction.

Polarity of the plug

- Do not touch the AC power adaptor with wet hands.
- Connect the AC power adaptor to an easily accessible AC outlet. Should you notice an abnormality in the AC power adaptor, disconnect it from the AC outlet immediately.

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 IDENTIFÉS PAR UNE MARQUE ⚠ SUR LES DIAGRAMMES SCHÉMATIQUES ET LA LISTE DES PIÈCES SONT CRITIQUES POUR LA SÉCURITÉ DE FONCTIONNEMENT. NE REMPLACER CES COMPOSANTS QUE PAR DES PIÈSES SONY DONT LES NUMÉROS SONT DONNÉS DANS CE MANUEL OU DANS LES SUPPÉMENTS 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 breakdown because of the potential difference generated by the charged electrostatic load, etc. on clothing and the human body. During repair, pay attention to electrostatic breakdown 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 30cm away from the objective lens.

BEFORE REPLACING THE OPTICAL PICK-UP BLOCK

Please be sure to check thoroughly the parameters as per the "Optical pick-up Block Checking Procedure" (Part No. : 9-960-027-11) issued separately before replacing the optical Pick-up block.
Note and specifications required to check are given below.

- FOK output : IC601 ⑮ pin (AP606)
  When checking FOK, remove the lead wire to disc motor.
- RF signal P-to-P value : 0.4 to 0.7Vp-p

LASER DIODE AND FOCUS SEARCH OPERATION CHECK

During normal operation of the equipment, emission of the laser diode is prohibited unless the upper panel is closed while turning ON the S820 (push switch type).
The following two checking methods for the laser diode are operable.

Method :
Emission of the laser diode is visually checked.

1. Open the upper lid.
2. Push the S820 as shown in Fig. 1 .
3. Check the object lens for confirming normal emission of the laser diode. If not emitting, there is a trouble in the automatic power control circuit or the optical pick-up. During normal operation, the laser diode is turned ON about 2.5 seconds for focus searching.

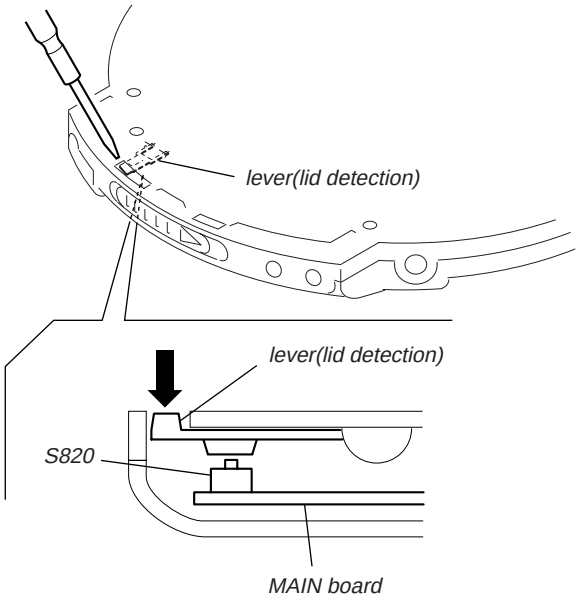
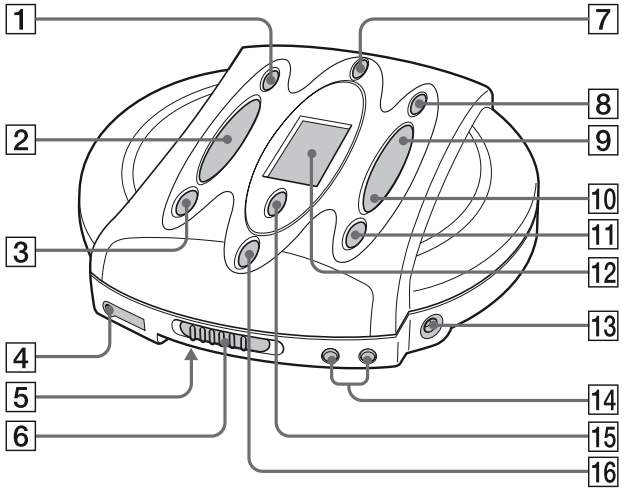


Fig. 1 Method to push the S820

SECTION 2
GENERAL

This section is extracted from instruction manual.

Locating The Controls



1 🗀 (group)/TUNE – button
2 RADIO ON/BAND button
3 🗀 (group)/TUNE + button
4 🎧 (headphones)jack
5 HOLD switch (rear)
6 OPEN switch
7 SCROLL ∨ button
8 PRESET–/⏮ (skip/search) button
9 RADIO OFF/■ (stop) button
10 ▶II* (play/pause) button
11 PRESET+/⏭ (skip/search) button
12 Display window
13 DC IN 4.5 V jack
14 VOL +*/– button
15 DSPL/MENU/ENTER button
16 SCROLL ∧ button

* The button has a tactile dot.

Music sources playable on this CD player

You can play the following 3 music sources on this CD player:
- Audio CDs (CDDA format)
- CDs with ATRAC3plus/ATRAC3 format files (ATRAC CD)
- CDs with MP3 format files (MP3 CD)

Usable disc formats

You can use ISO 9660 Level 1/2 and Joliet extension format discs only.

About CD-Rs/RWs

This CD player can play CD-Rs/RWs recorded in the ATRAC3plus/ATRAC3, MP3 or CDDA* format, but playback capability may vary depending on the quality of the disc and the condition of the recording device.

* CDDA is the abbreviation for Compact Disc Digital Audio. It is a recording standard used for the Audio CDs.

Music discs encoded with copyright protection technologies

This product is designed to play back discs that conform to the Compact Disc (CD) standard. Recently, various music discs encoded with copyright protection technologies are marketed by some record companies. Please be aware that among those discs, there are some that do not conform to the CD standard and may not be playable by this product.

Notes

- This CD player cannot record music content on recordable media, such as CD-Rs/RWs.
- CD-Rs/RWs recorded in the ATRAC3plus/ATRAC3 format cannot be played on your computer.

Using the dry batteries

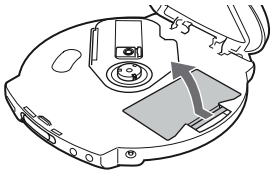
Use only the following dry battery type for your CD player:
• LR6 (size AA) alkaline batteries

For the battery life, see “Specifications.”

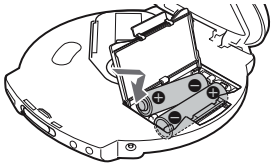
Note

Be sure to remove the AC power adaptor when using the dry batteries.

1 Slide OPEN to open the lid of your CD player, then open the battery compartment lid inside the player.



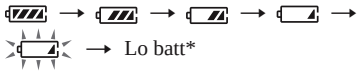
2 Insert two LR6 (size AA) batteries by matching to the diagram in the battery compartment and close the lid until it clicks into place.



Insert the ⊖ end first (for both batteries).

When to replace the batteries

You can check the remaining power of the batteries in the display.



* Beep sounds.

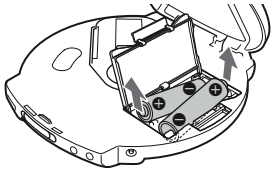
When the batteries are depleted, replace both batteries with new ones.

Notes

- The indicator sections of  roughly show the remaining battery power. One section does not always indicate one-fourth of the battery power.
- Depending on operating conditions, the indicator sections of  may increase or decrease.

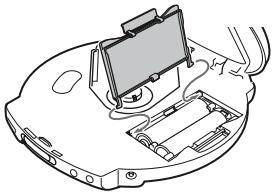
To remove the batteries

Remove the batteries as illustrated below.



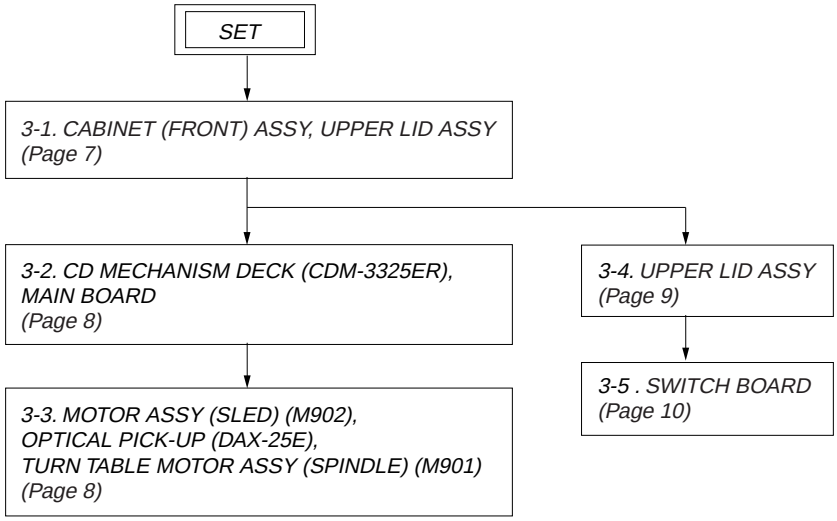
To attach the battery compartment lid

If the battery compartment lid is detached by an accidental drop, excessive force, etc., attach it as illustrated below.



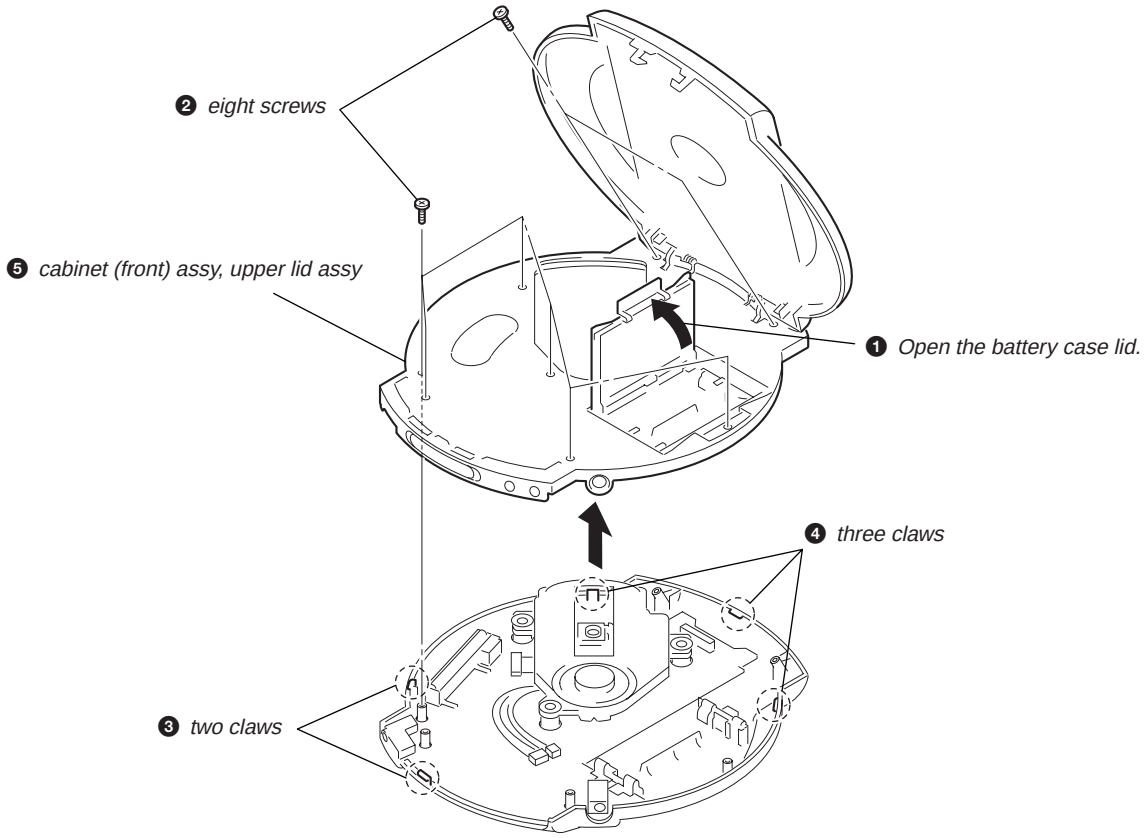
SECTION 3
DISASSEMBLY

Note : Disassemble the unit in the order as shown below.

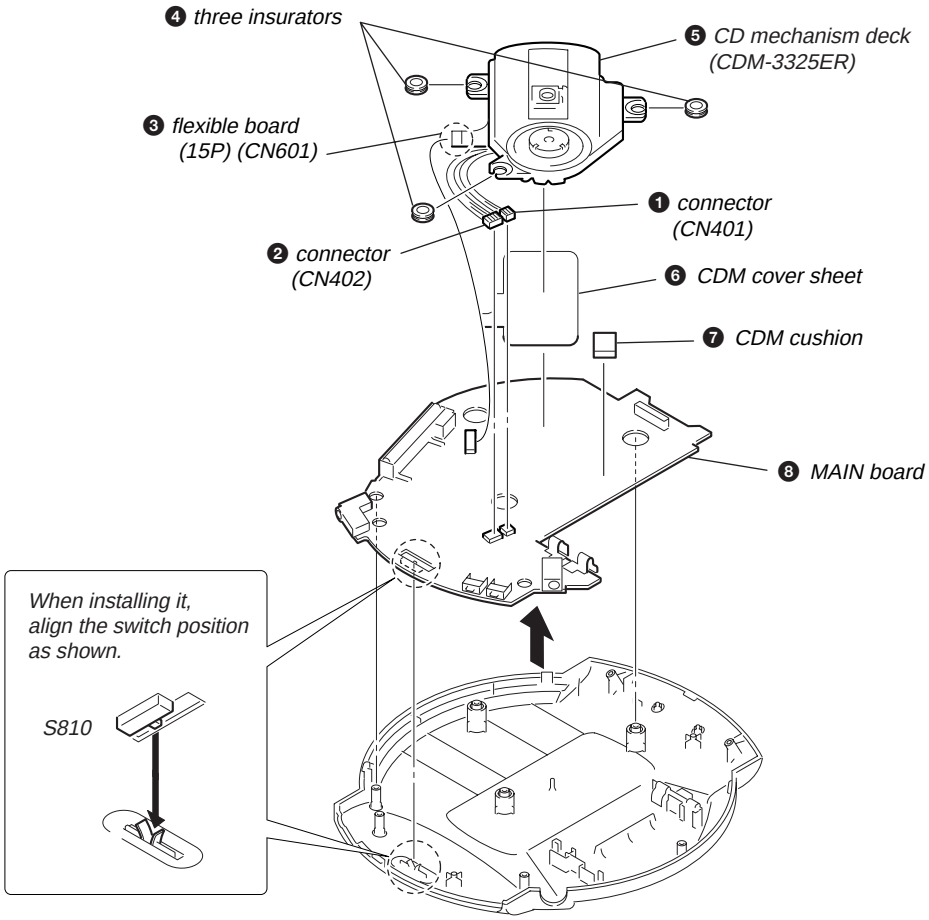


Note : Follow the disassembly procedure in the numerical order given.

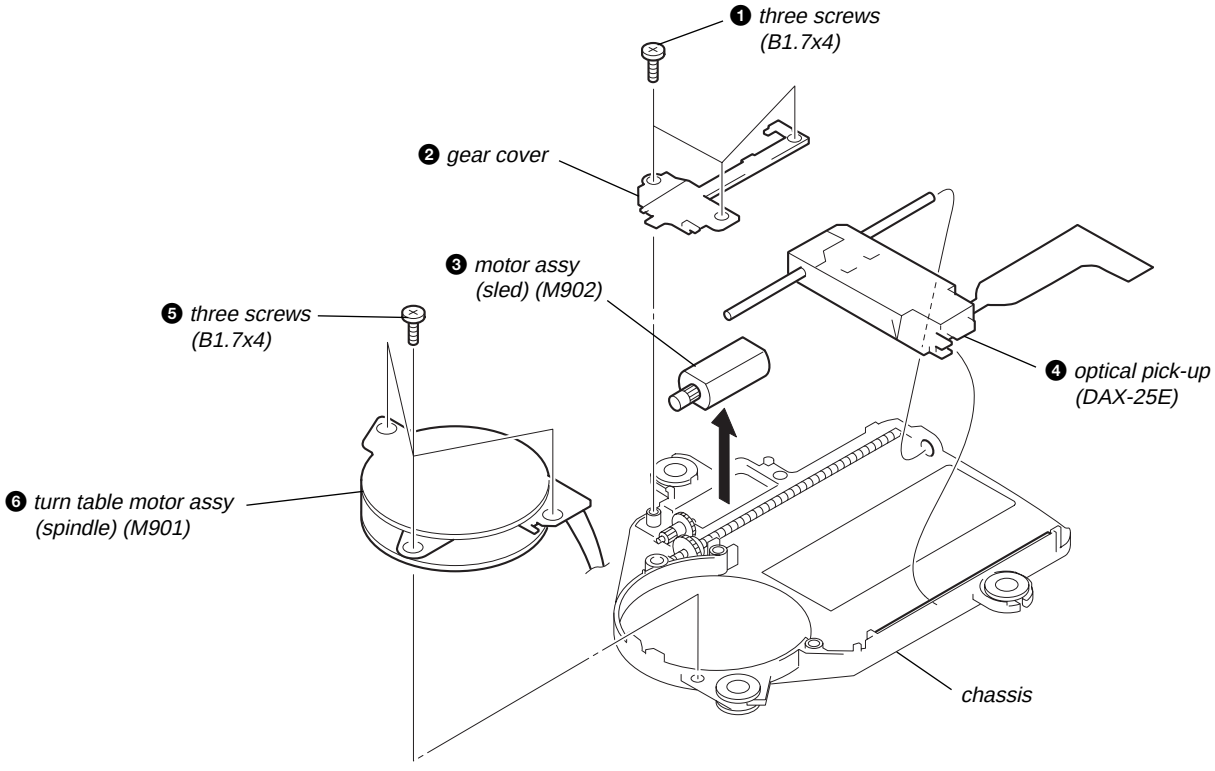
3-1. CABINET (FRONT) ASSY, UPPER LID ASSY



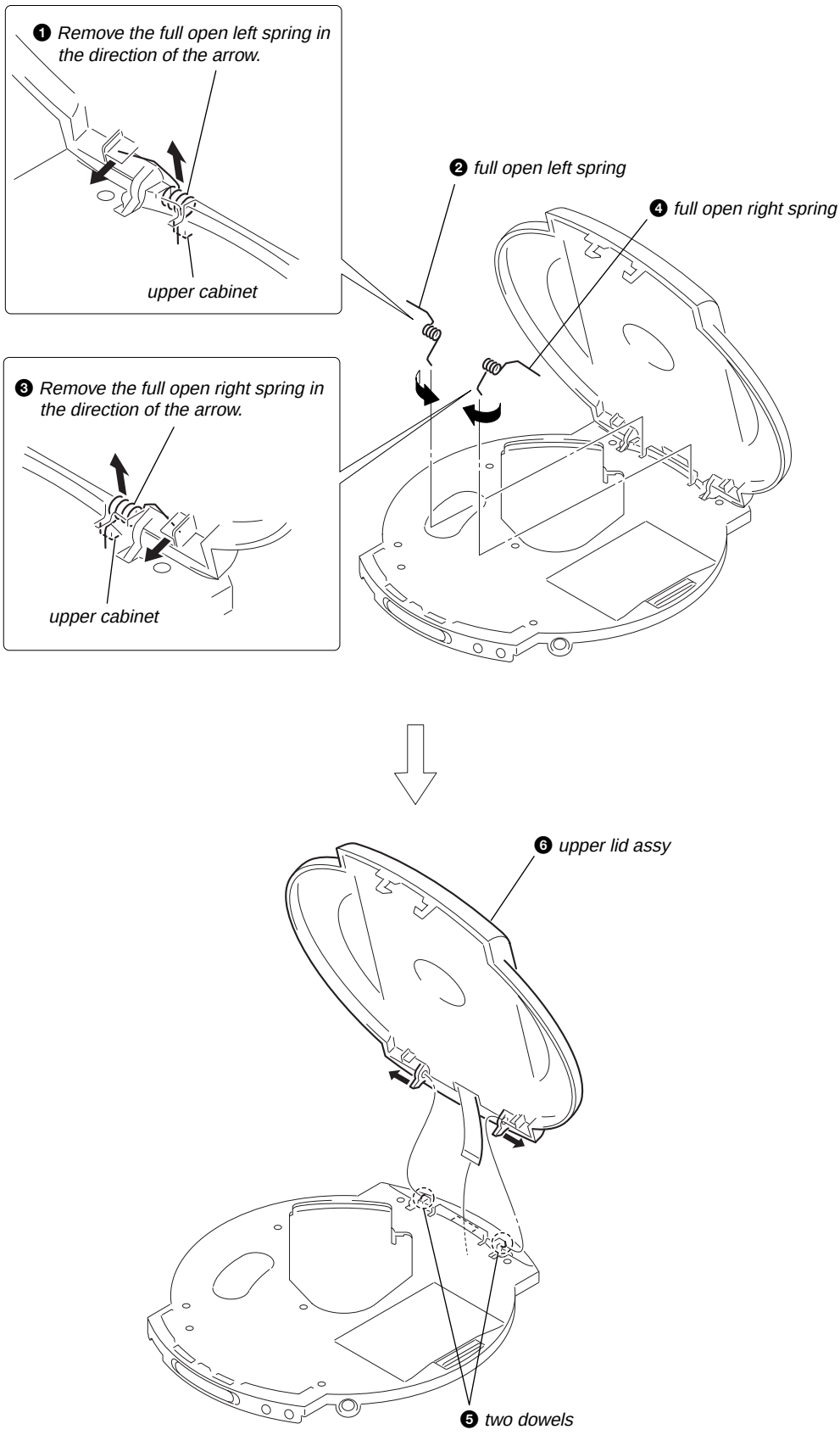
3-2. CD MECHANISM DECK (CDM-3325ER), MAIN BOARD



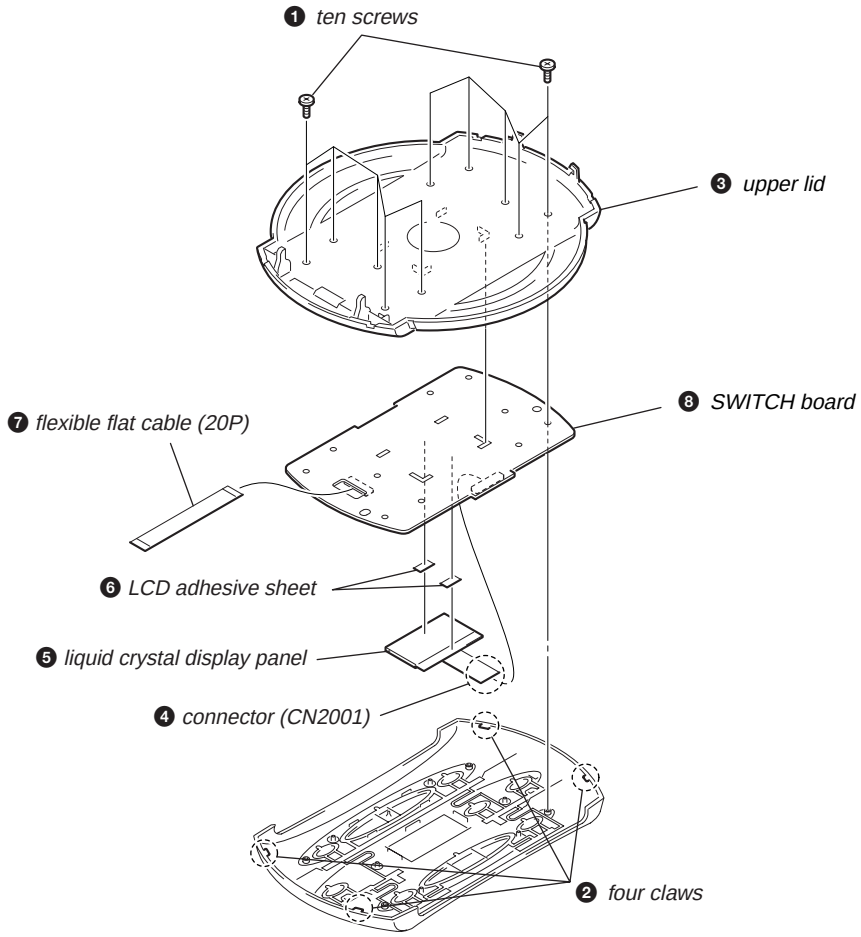
3-3. MOTOR ASSY (SLED)(M902), OPTICAL PICK-UP (DAX-25E), TURN TABLE MOTOR ASSY (SPINDLE)(M901)



3-4. UPPER LID ASSY



3-5. SWITCH BOARD



SECTION 4
ELECTRICAL ADJUSTMENTS

CD SECTION

The CD section adjustments are done automatically in this set.

Precautions for Check

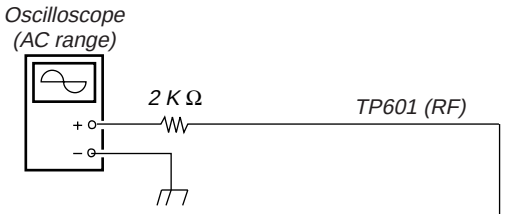
1. Perform check in the order given.
2. Use YEDS-18 disc (Part No.: 3-702-101-01) unless otherwise indicated.
3. Power supply voltage requirement : DC4.5 V in DC IN jack. (J401)
   VOLUME : Minimum
   HOLD switch : OFF

Focus bias Check

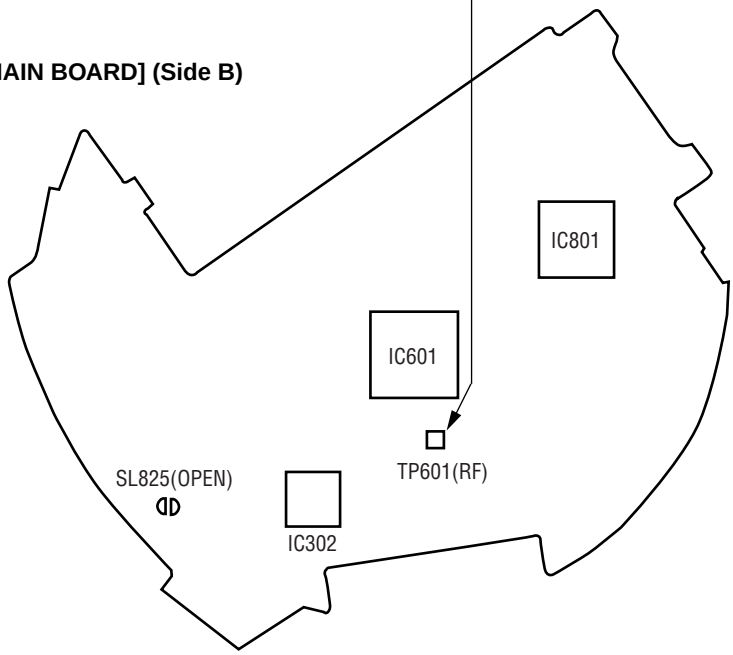
Condition:

• Hold the set in horizontal state.
• Terminate SL825 (OPEN) by solder.

Connection:



[MAIN BOARD] (Side B)



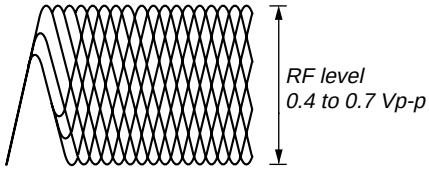
Procedure:

1. Connect the oscilloscope to the test point TP601 (RF) on the MAIN board.
2. Set a disc. (YEDS-18)
3. Press the ▶II button.
4. Check the oscilloscope waveform is as shown below.
   A good eye pattern means that the diamond shape (◊) in the center of the waveform can be clearly distinguished.

RF Signal reference Waveform (Eye Pattern)

To watch the eye pattern, set the oscilloscope to AC range and

VOLT/DIV : 100 mV (With the 10 : 1 probe in use)
TIME/DIV : 500ns



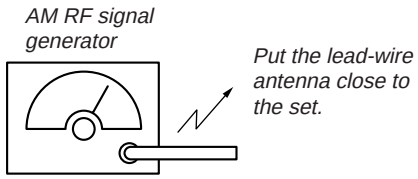
increase the vertical sensitivity of the oscilloscope for easy watching.

5. Stop revolving of the disc motor by pressing the ■ button.

TUNER SECTION

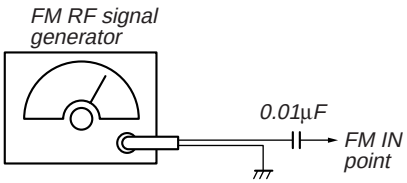
0 dB = 1 μV

[AM]
BAND: AM
Signal generator



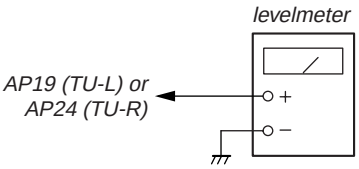
30% amplitude modulation by 400Hz signal.
Output level : as low as possible

[FM]
BAND : FM
Signal generator

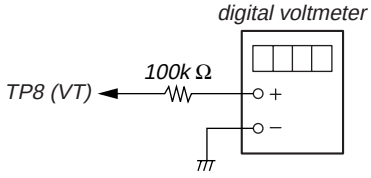


75kHz(100%) amplitude modulation by 1kHz signal.
Output level: as low as possible

• Connecting levelmeter



• Connecting digital voltmeter



- Repeat the procedures in each adjustment several times for the maximum level meter indication.
- The AM tracking adjustments should be finally done by the trimmer capacitors.

( ) : US, Canadian models

AM FREQUENCY COVERAGE CHECK		
Adjustment Part	Frequency Display	Reading on Digital Voltmeter
Confirmation	531kHz (530kHz)	1.0 ± 0.5V (1.0 ± 0.5V)
Confirmation	1602kHz (1710kHz)	6.8 ± 0.5V (7.6 ± 0.5V)

AM TRACKING ADJUSTMENT	
Adjust for a maximum reading on levelmeter	
L3	621kHz (620kHz)
CT3	1404kHz (1400kHz)

FM/TV (L) FREQUENCY COVERAGE CHECK		
Adjustment Part	Frequency Display	Reading on Digital Voltmeter
Confirmation	TV 2CH	0.7 ± 0.4V
Confirmation	108MHz	8.7 ± 0.5V

FM TRACKING ADJUSTMENT	
Adjust for a maximum reading levelmeter	
L1	98.0MHz

US, Canadian models only

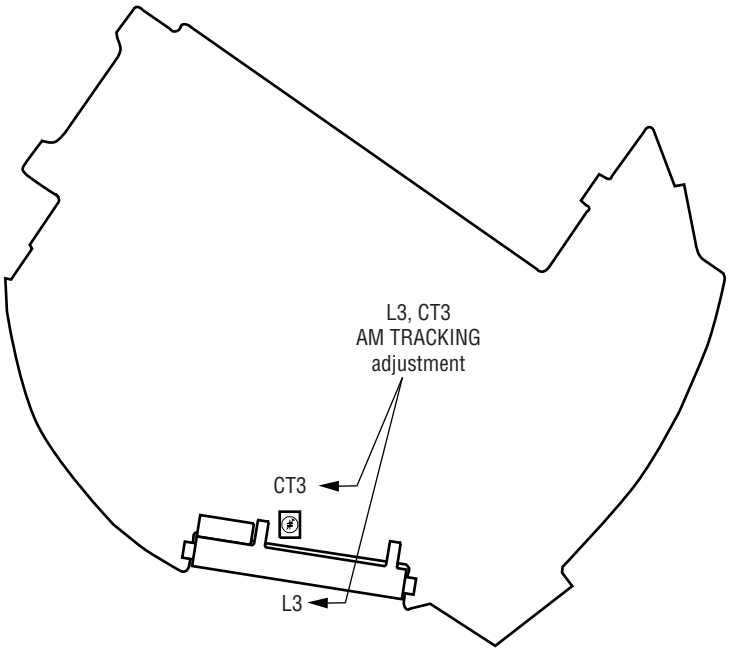
TV (H)/WB FREQUENCY COVERAGE CHECK		
Adjustment Part	Frequency Display	Reading on Digital Voltmeter
Confirmation	WB 1CH	3.3 ± 0.5V
Confirmation	TV 13CH	7.8 ± 0.5V

TV TRACKING ADJUSTMENT	
Adjust for a maximum reading on levelmeter	
L5	TV 10CH (197.75MHz)

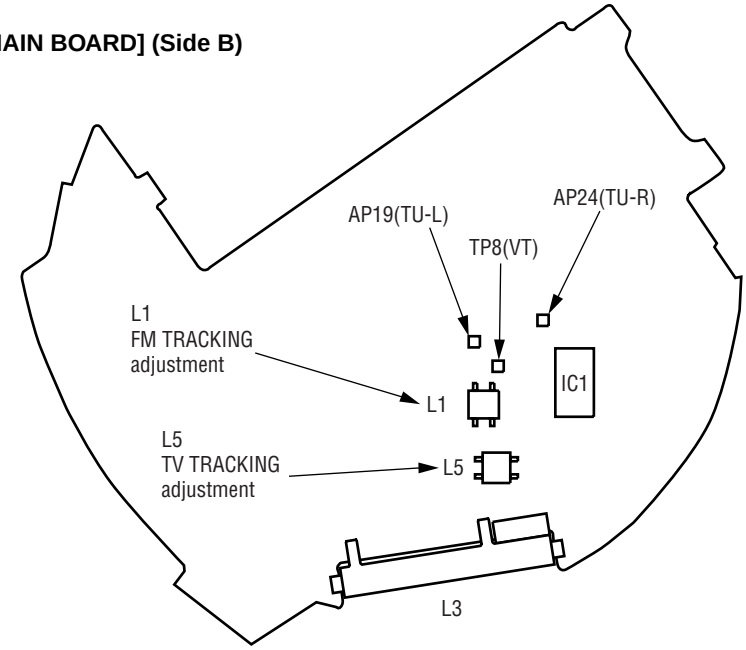
Adjustment location : MAIN board (see page 13)

Adjustment Location:

[MAIN BOARD] (Side A)



[MAIN BOARD] (Side B)



SECTION 5
DIAGRAMS

NOTE FOR PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS

Note on Printed Wiring Board

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

(The other layers' patterns are not indicated.)

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

Note on Schematic Diagram:

- All capacitors are in µF unless otherwise noted. pF: µµF 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.
- % : indicates tolerance.
- ▭ : 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.

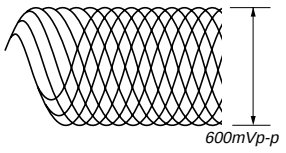
- ▬ : B+ Line.
- Total current is measured with CD installed.
- Power voltage is dc 4.5 V and fed with regulated dc power supply from DC IN jack (J401).
- Voltages and waveforms are dc with respect to ground in playback mode.
- Voltages are taken with a VOM (Input impedance 10 MΩ). Voltage variations 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.
  ⇨ : FM
  ⇛ : CD PLAY (ANALOG OUT)

☆ When either IC803 or IC62 is damaged, replace the MAIN board.

- Abbreviation
  CND : Canadian model
  E13 : 220-230V AC area in E model
  E19 : 230V AC area in E model
  MX : Mexican model

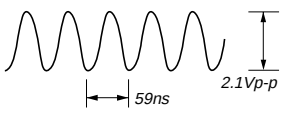
• Waveforms

① TEST POINT (IC601,84)



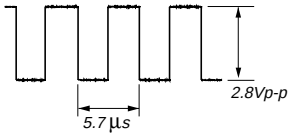
200mV/DIV, 400ns/DIV

② IC601 48 (XTAO)



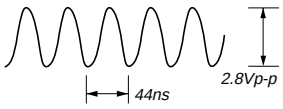
1V/DIV, 40ns/DIV

③ IC403 34 (SYNC)



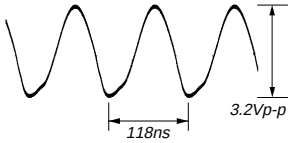
1V/DIV, 2 µs/DIV

④ IC701 30 (XTAL)



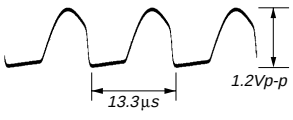
500mV/DIV, 20ns/DIV

⑤ IC801 28 (XIN)



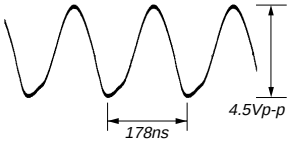
1V/DIV, 40ns/DIV

⑥ IC3 74 (X_O)



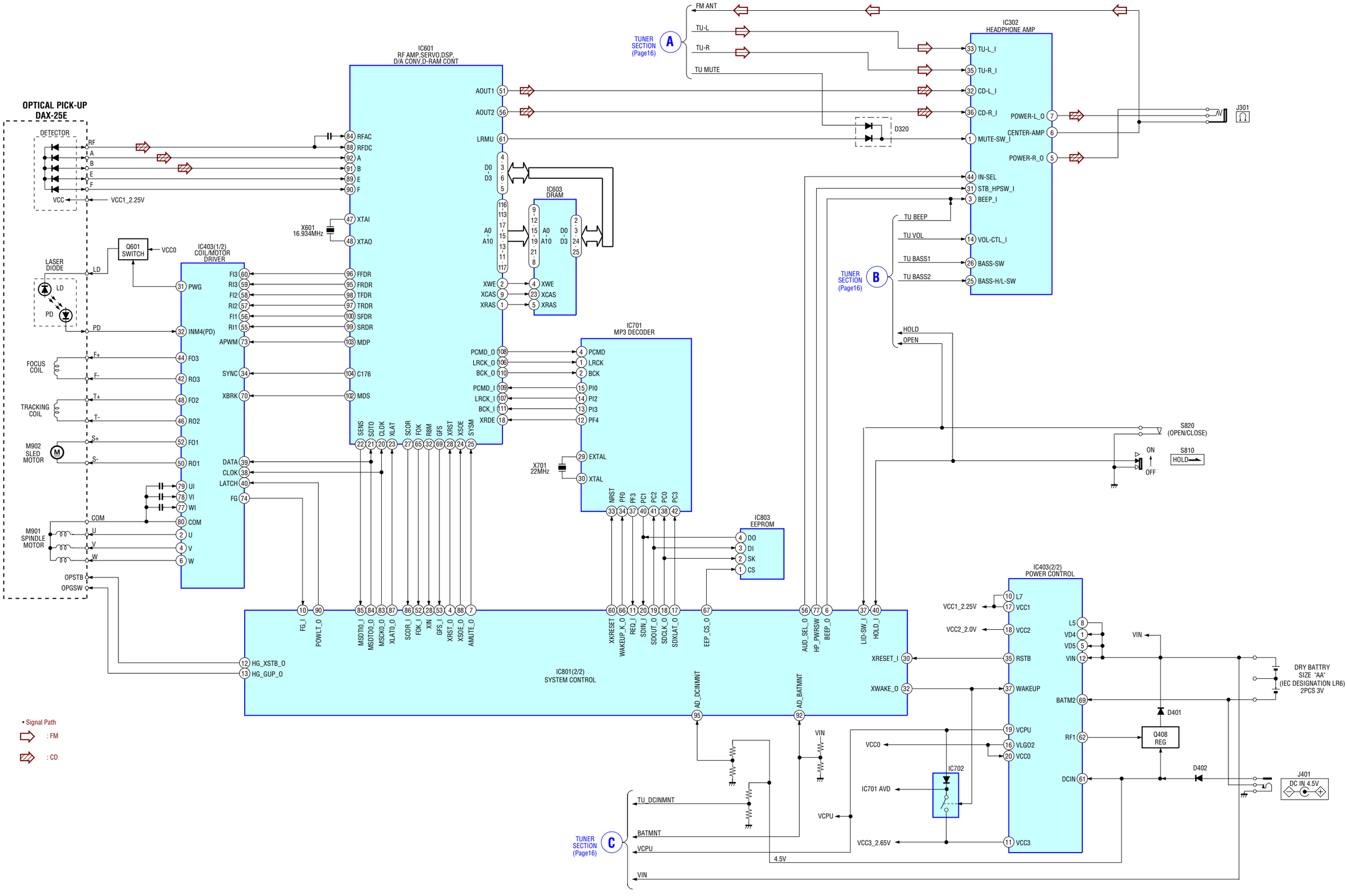
500mV/DIV, 4 µs/DIV

⑦ Q86 (collector) (FM)



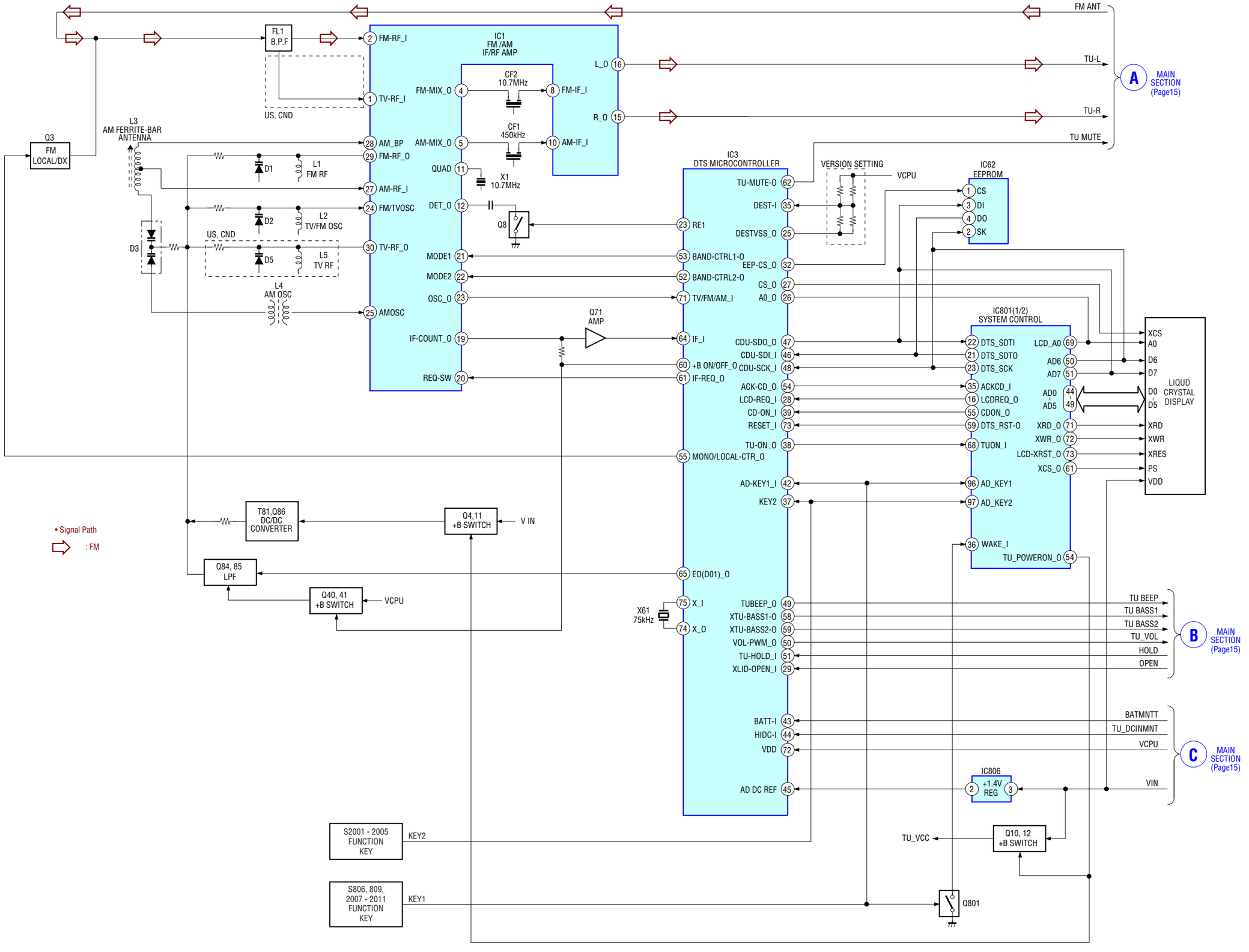
1V/DIV, 100ns/DIV

5-1. BLOCK DIAGRAMS – MAIN SECTION –

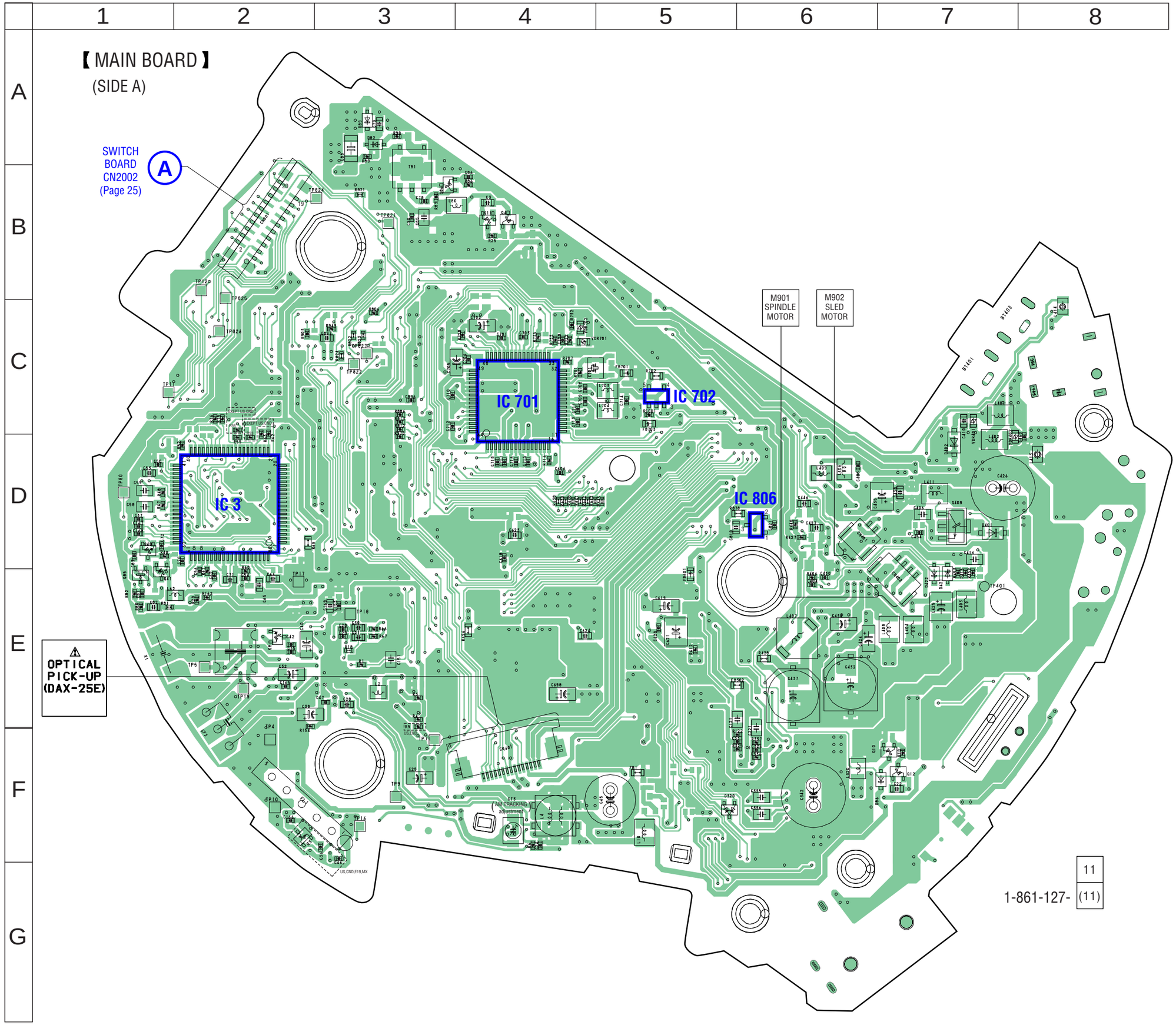


XP-ZR810

– TUNER SECTION –



5-2. PRINTED WIRING BOARD – MAIN BOARD (SIDE A) – : Uses unleaded solder.

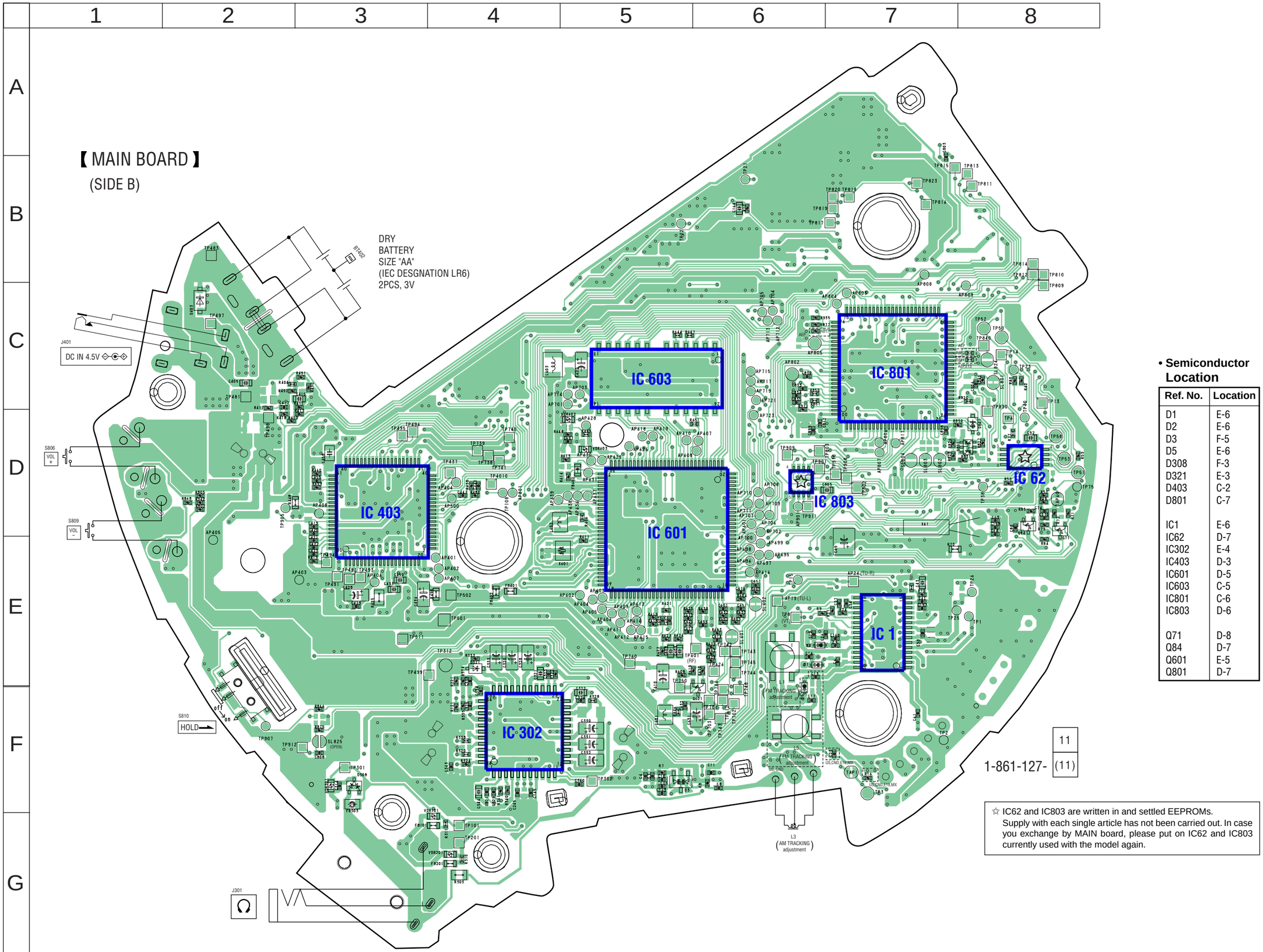


- **Semiconductor Location**

Ref. No.	Location
D82	A-3
D86	F-6
D89	A-3
D320	E-5
D401	D-7
D402	C-7
D421	D-7
D422	D-7
IC3	D-2
IC701	C-4
IC702	C-5
IC806	D-5
Q3	F-3
Q4	B-4
Q8	E-2
Q10	E-6
Q11	B-4
Q12	E-7
Q40	D-2
Q41	D-2
Q85	D-1
Q86	B-4
Q408	D-7

1-861-127- 11 (11)

5-3. PRINTED WIRING BOARD – MAIN BOARD (SIDE B) – : Uses unleaded solder.



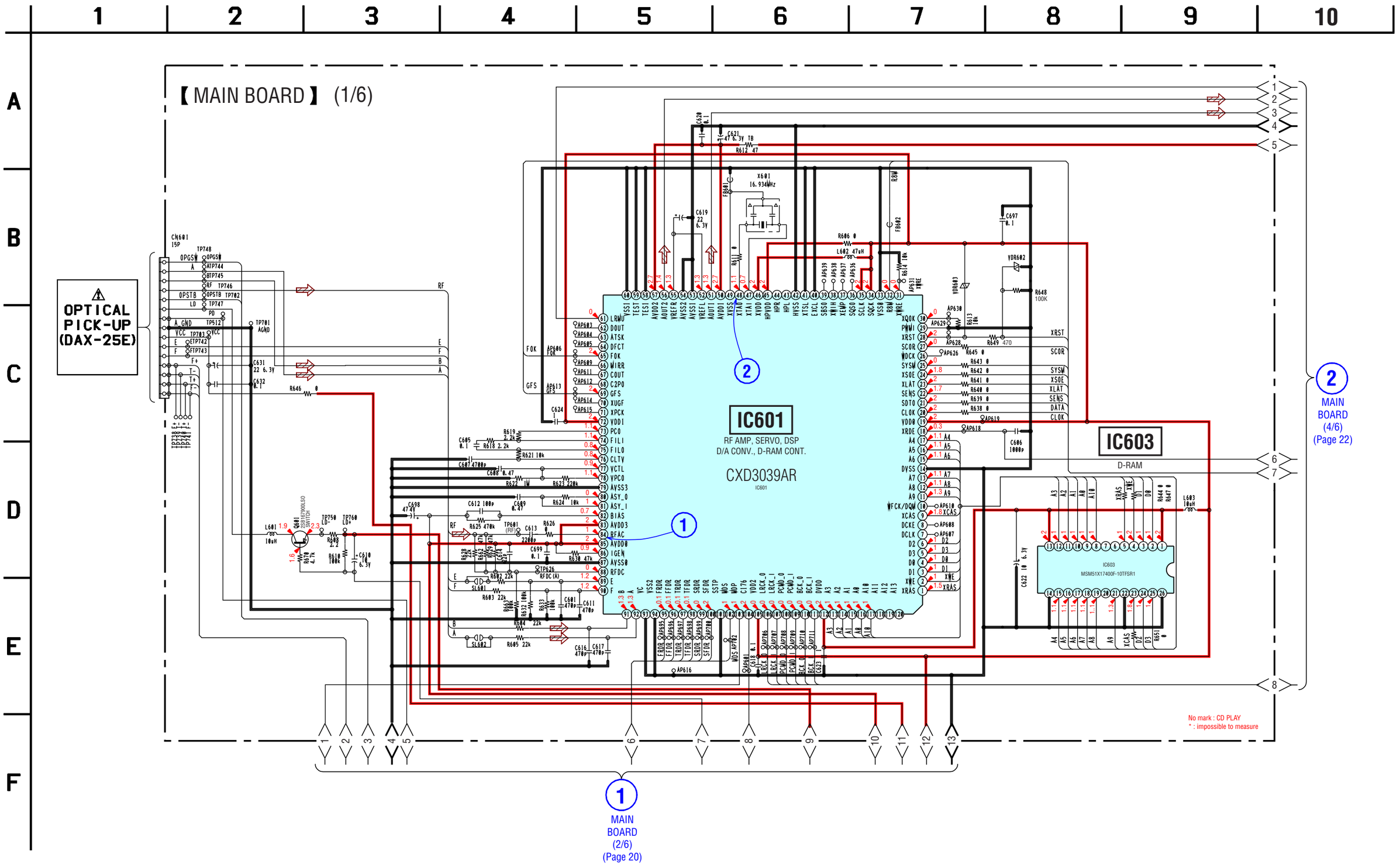
- **Semiconductor Location**

Ref. No.	Location
D1	E-6
D2	E-6
D3	F-5
D5	E-6
D308	F-3
D321	E-3
D403	C-2
D801	C-7
IC1	E-6
IC62	D-7
IC302	E-4
IC403	D-3
IC601	D-5
IC603	C-5
IC801	C-6
IC803	D-6
Q71	D-8
Q84	D-7
Q601	E-5
Q801	D-7

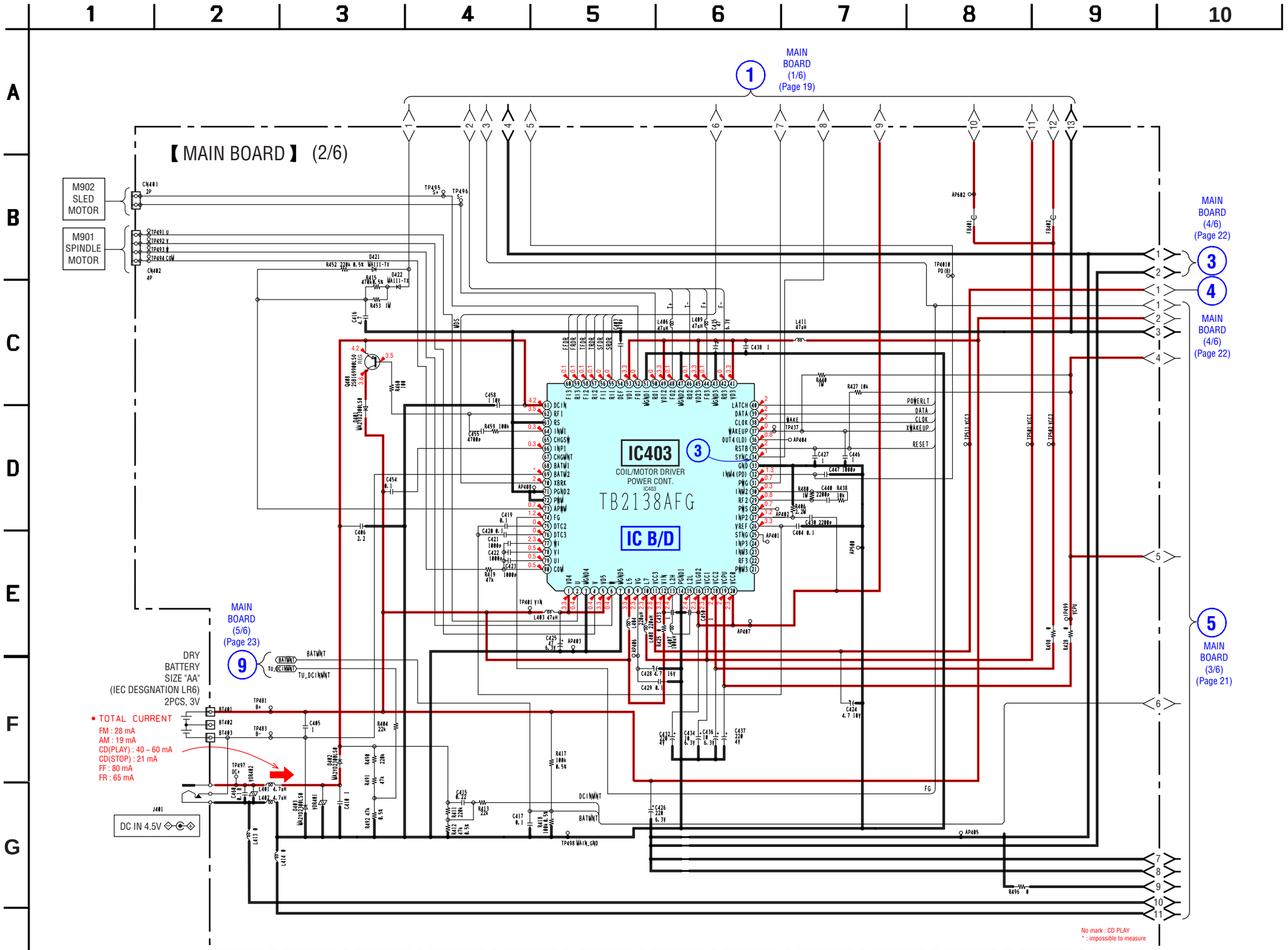
11
1-861-127- (11)

☆ IC62 and IC803 are written in and settled EEPROMs.
Supply with each single article has not been carried out. In case you exchange by MAIN board, please put on IC62 and IC803 currently used with the model again.

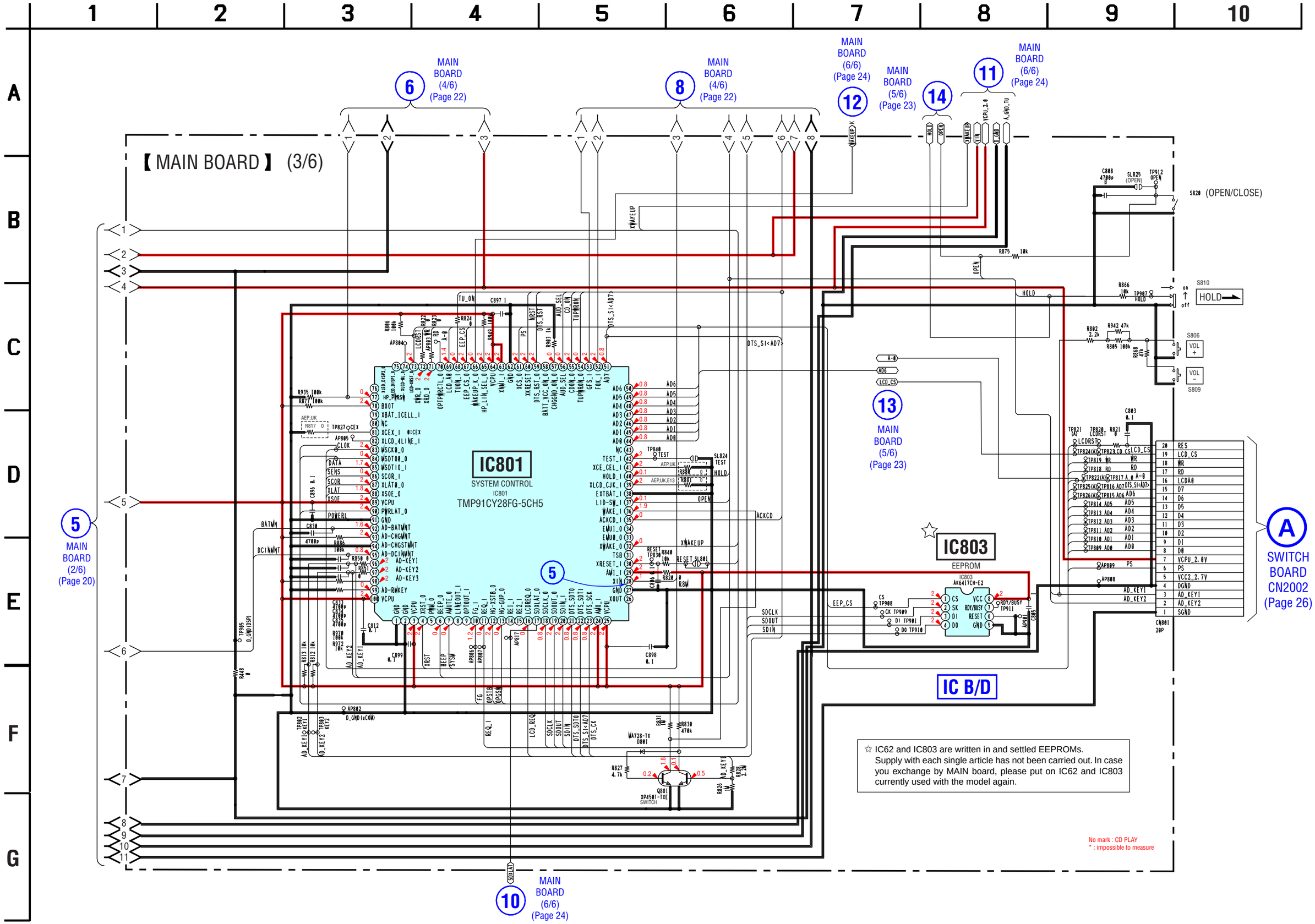
5-4. SCHEMATIC DIAGRAM – MAIN BOARD (1/6) – See page 35 for IC PIN FUNCTION DESCRIPTION.



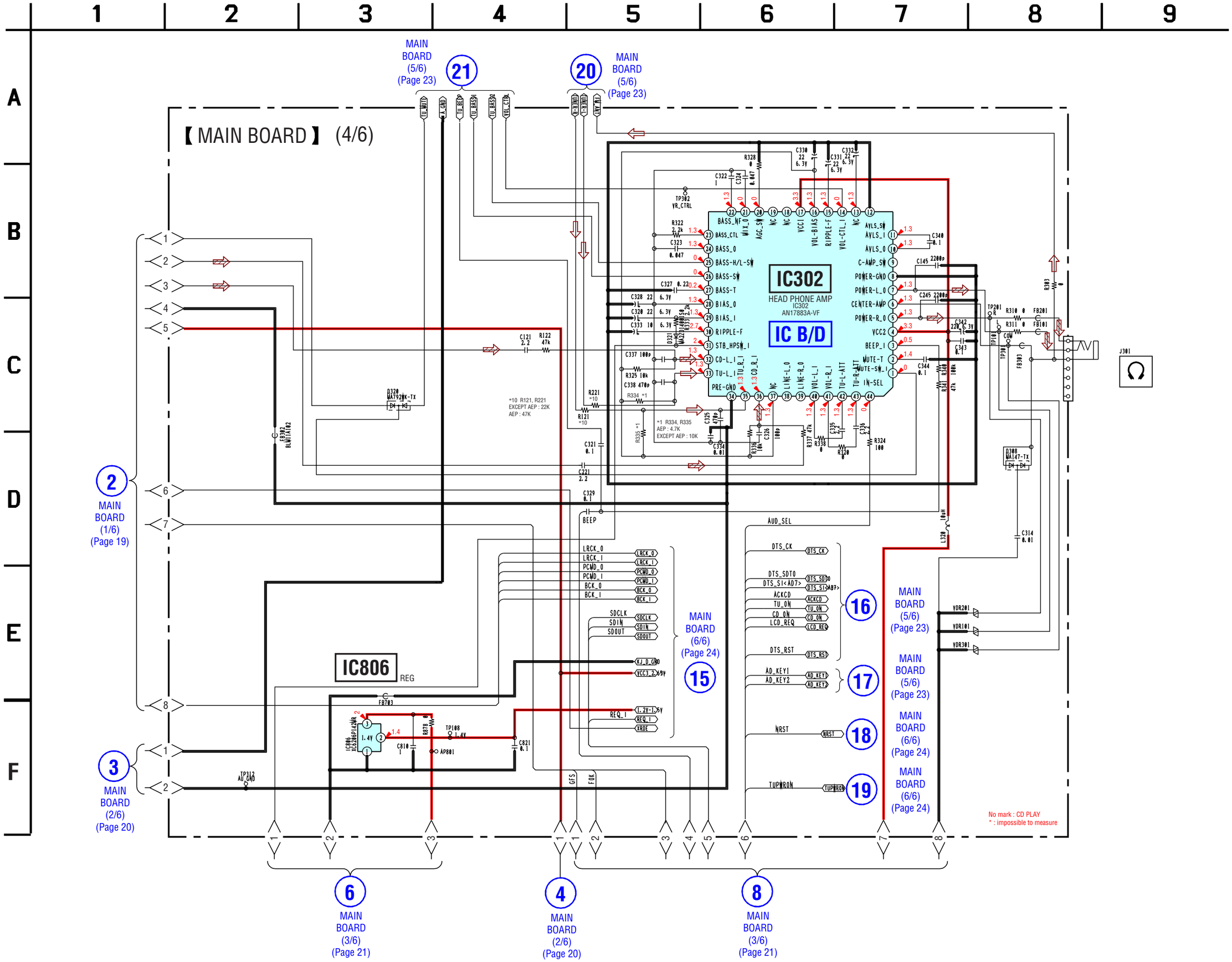
5-5. SCHEMATIC DIAGRAM – MAIN BOARD (2/6) –



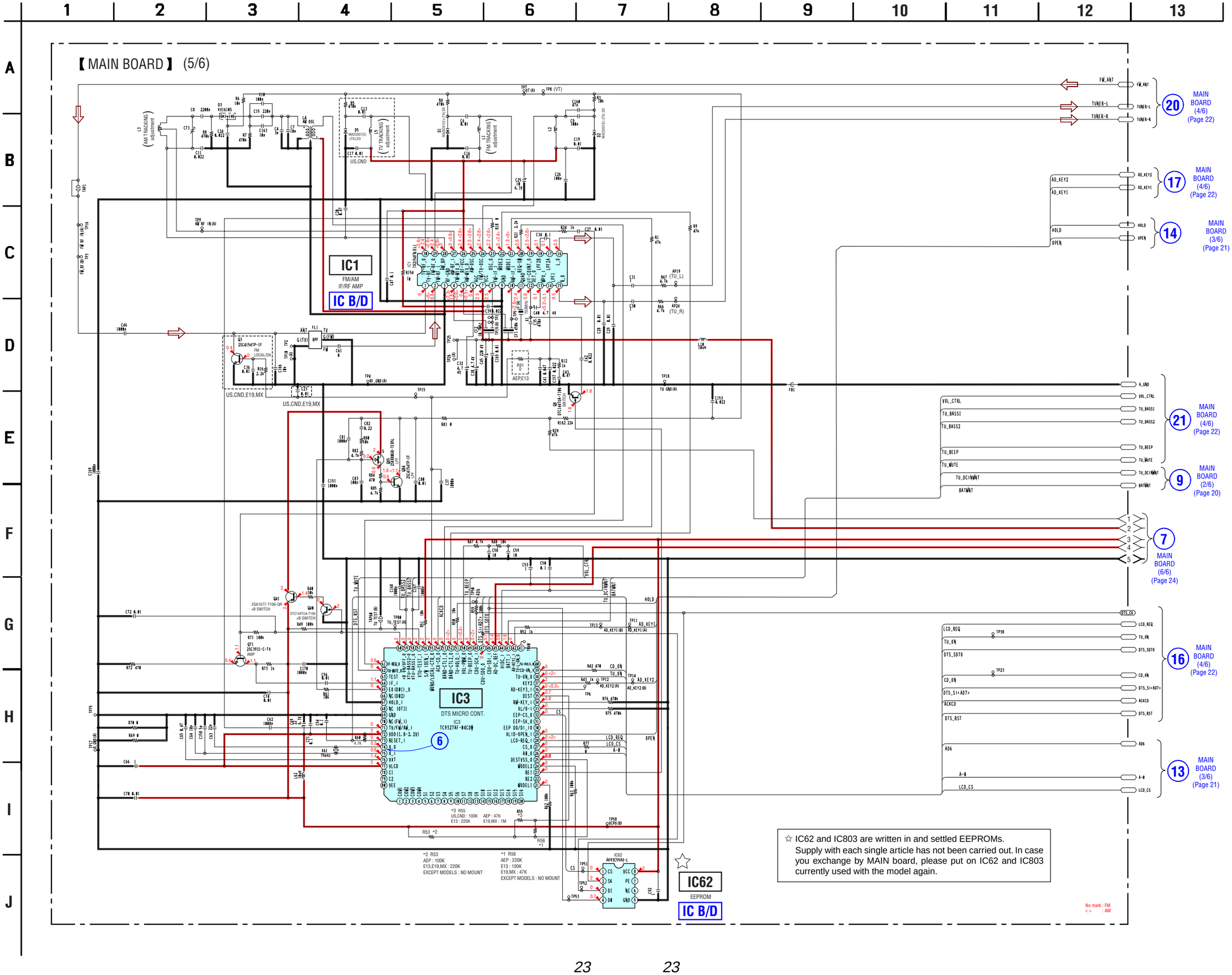
5-6. SCHEMATIC DIAGRAM – MAIN BOARD (3/6) – See page 38 for IC PIN FUNCTION DESCRIPTION.



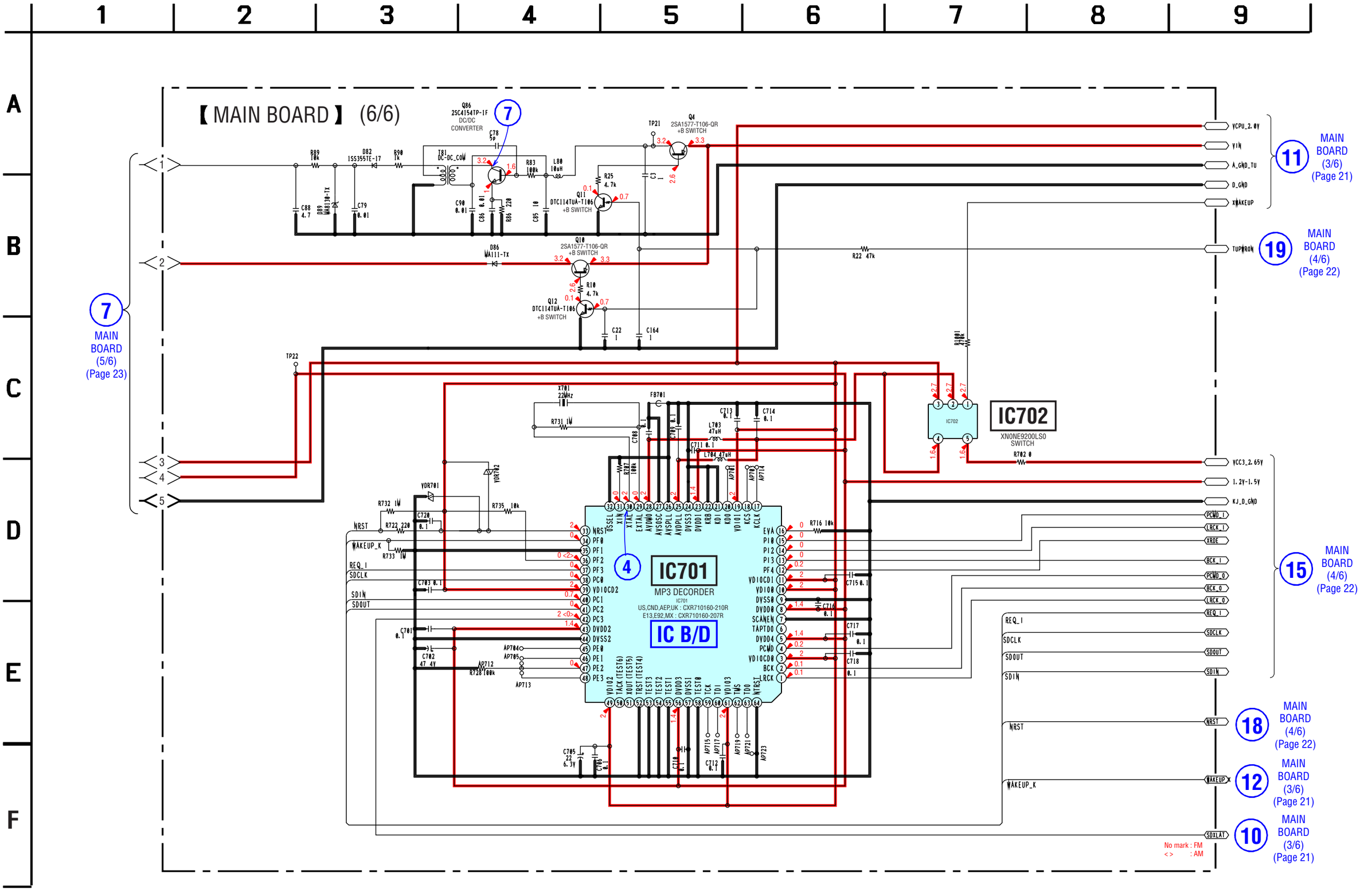
5-7. SCHEMATIC DIAGRAM – MAIN BOARD (4/6) –



5-8. SCHEMATIC DIAGRAM – MAIN BOARD (5/6) – See page 33 for IC PIN FUNCTION DESCRIPTION.

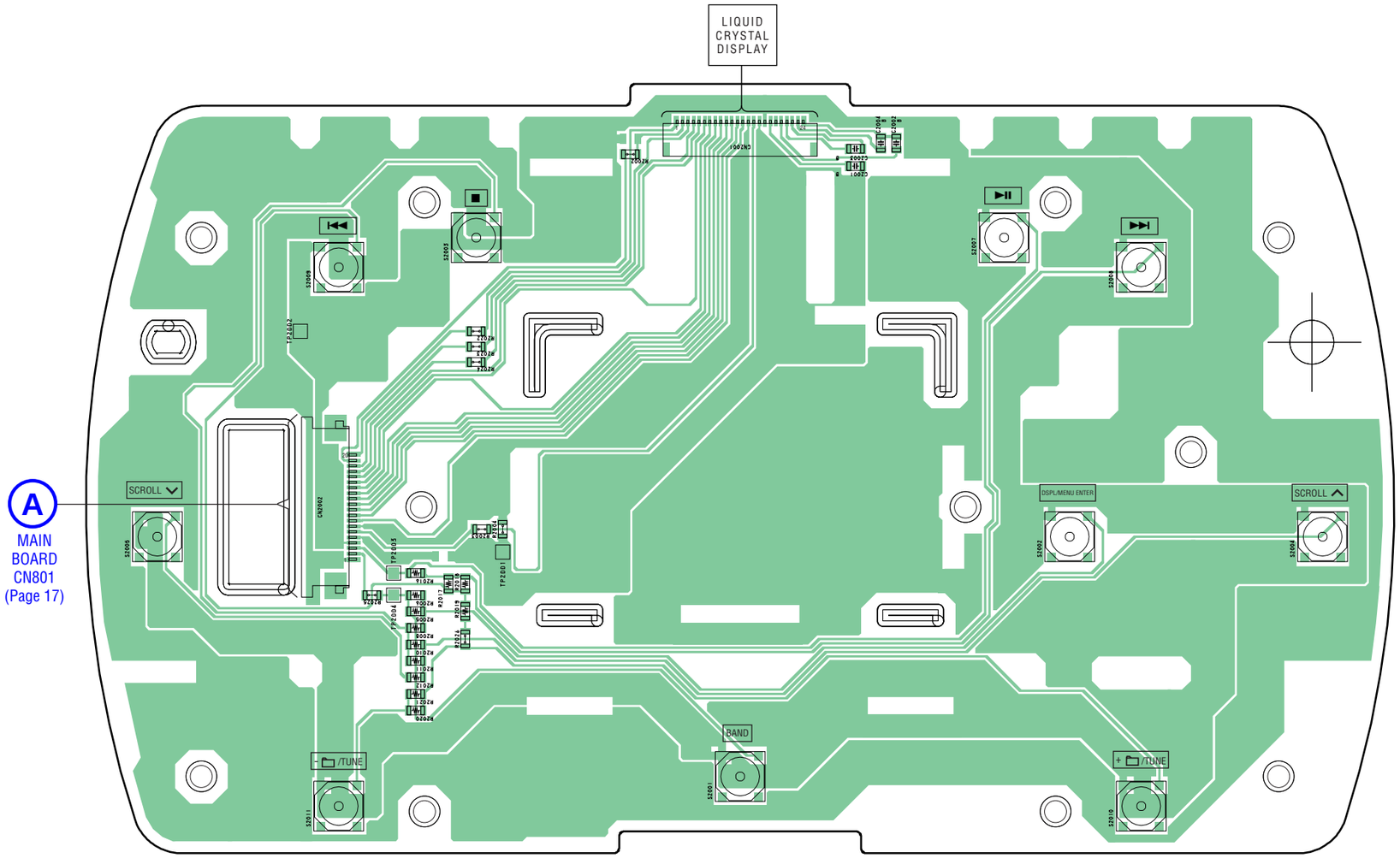


5-9. SCHEMATIC DIAGRAM – MAIN BOARD (6/6) –



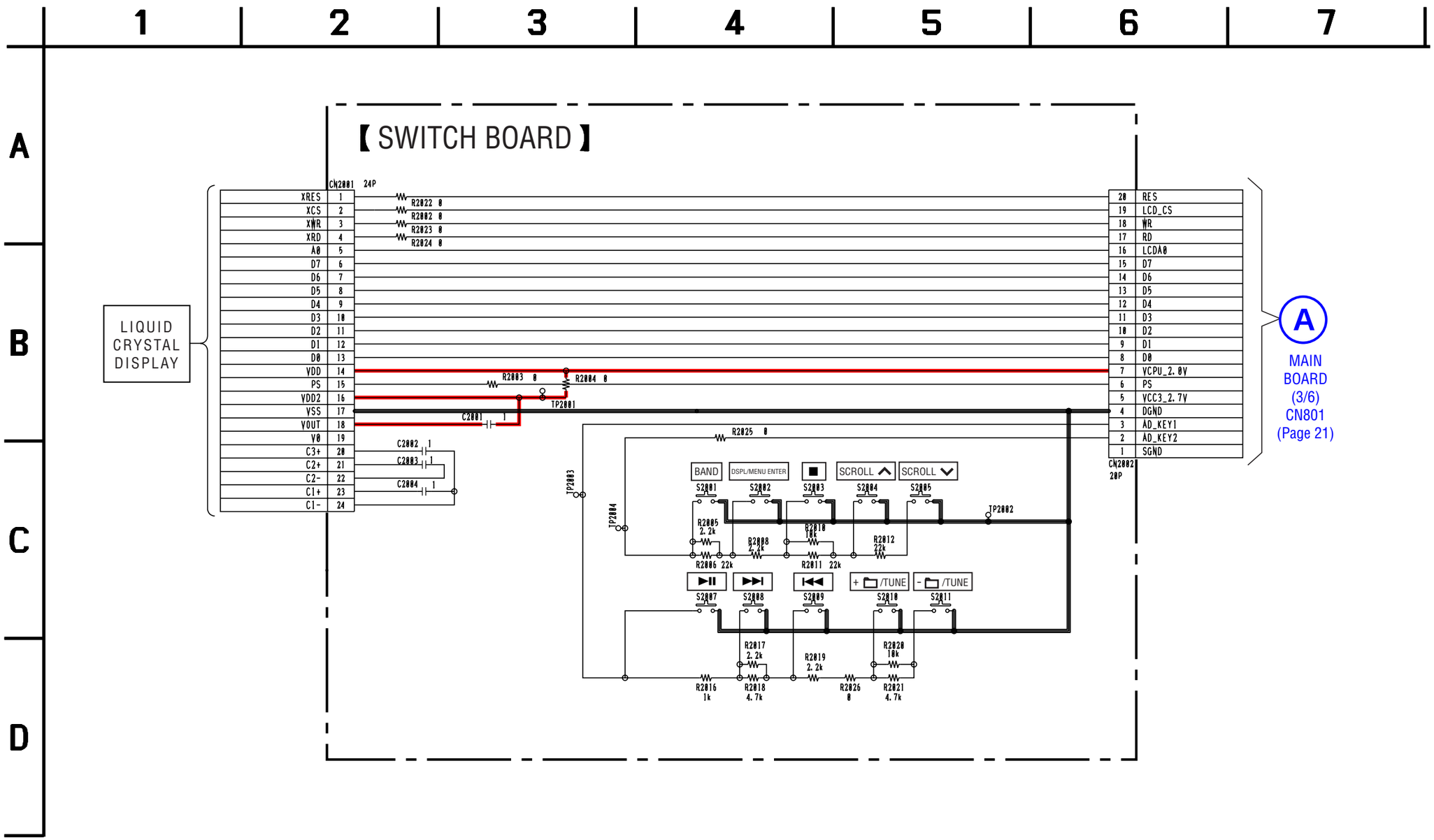
5-10. PRINTED WIRING BOARD – SWITCH BOARD –

【SWITCH BOARD】



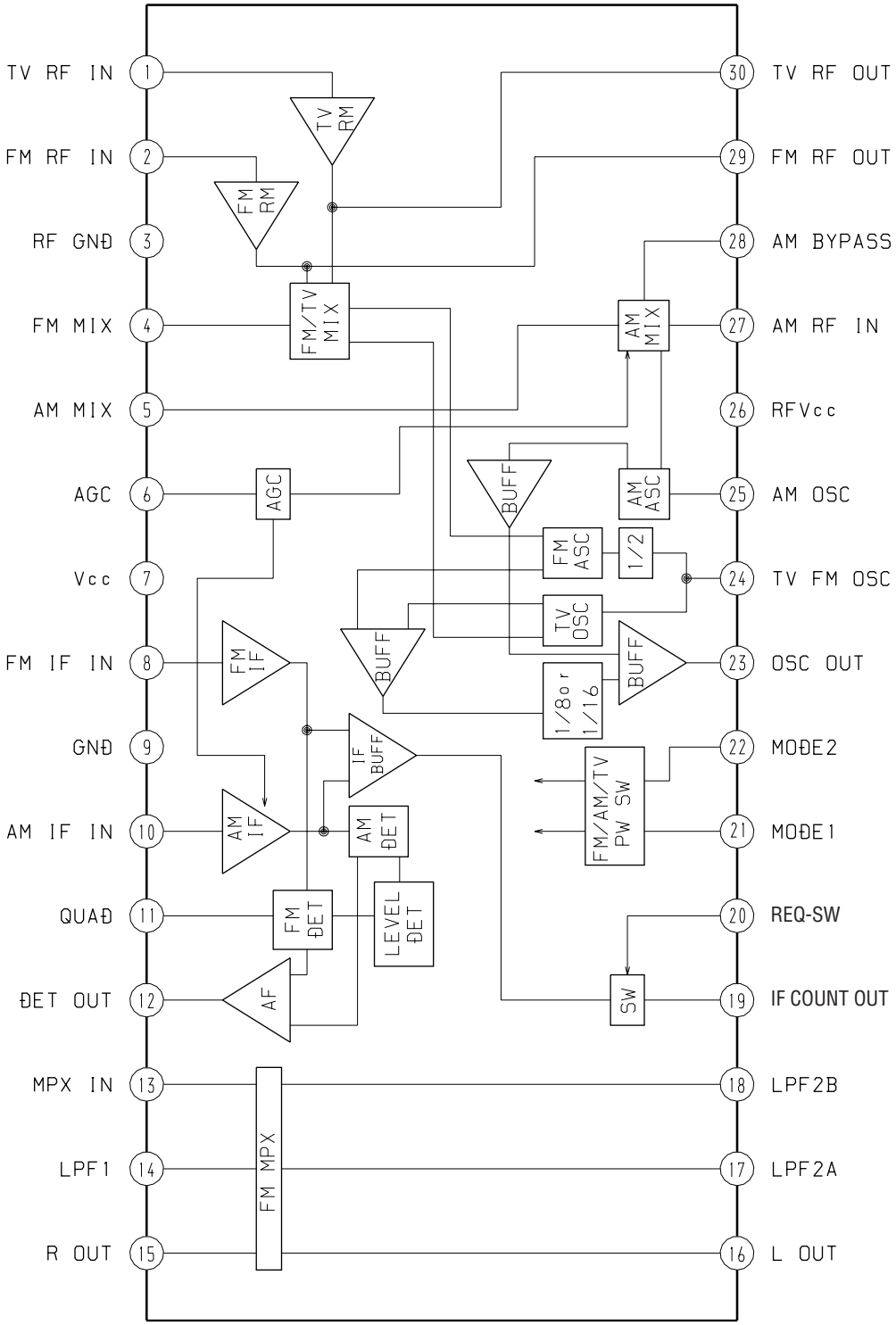
1-861-128-11 (11)

5-11. SCHEMATIC DIAGRAM – SWITCH BOARD –

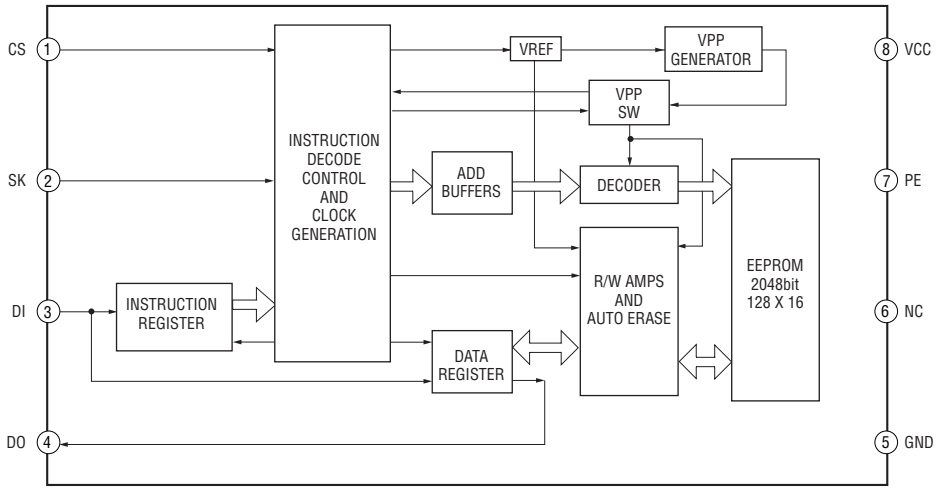


• **IC BLOCK DIAGRAMS**

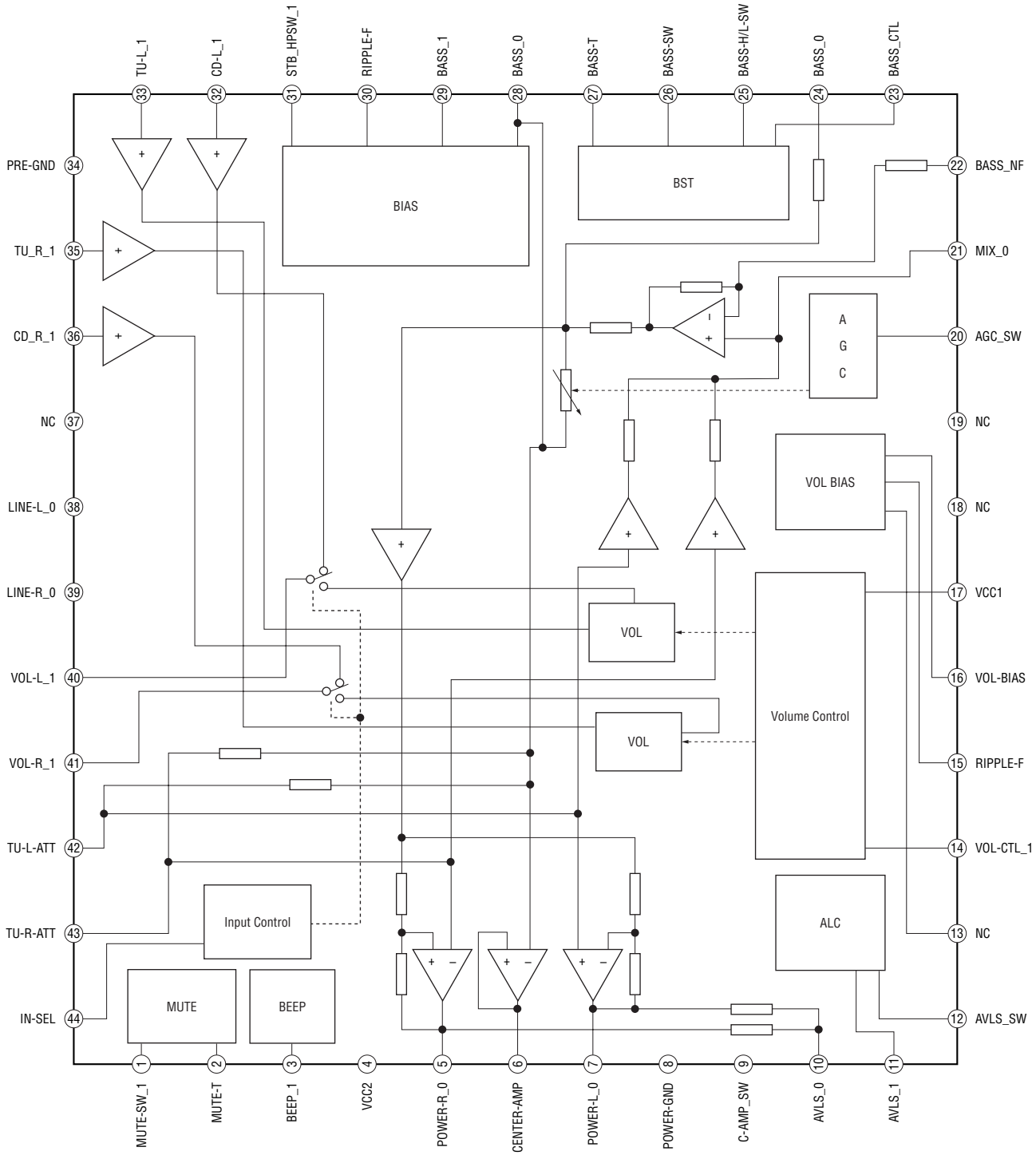
IC1 TA2154FN (EL)(MAIN Board)



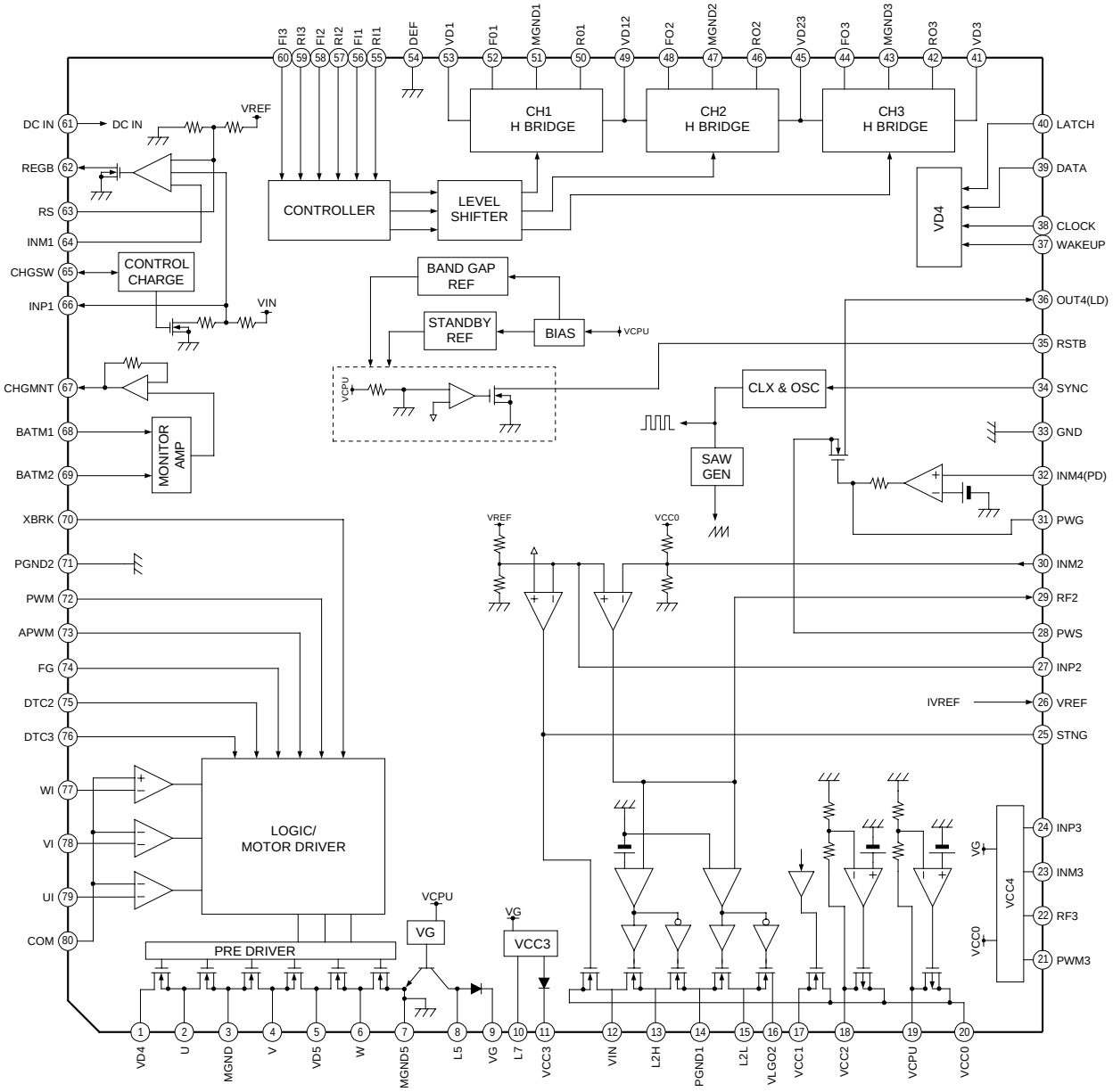
IC62 AK93C55AV-L (MAIN Board)



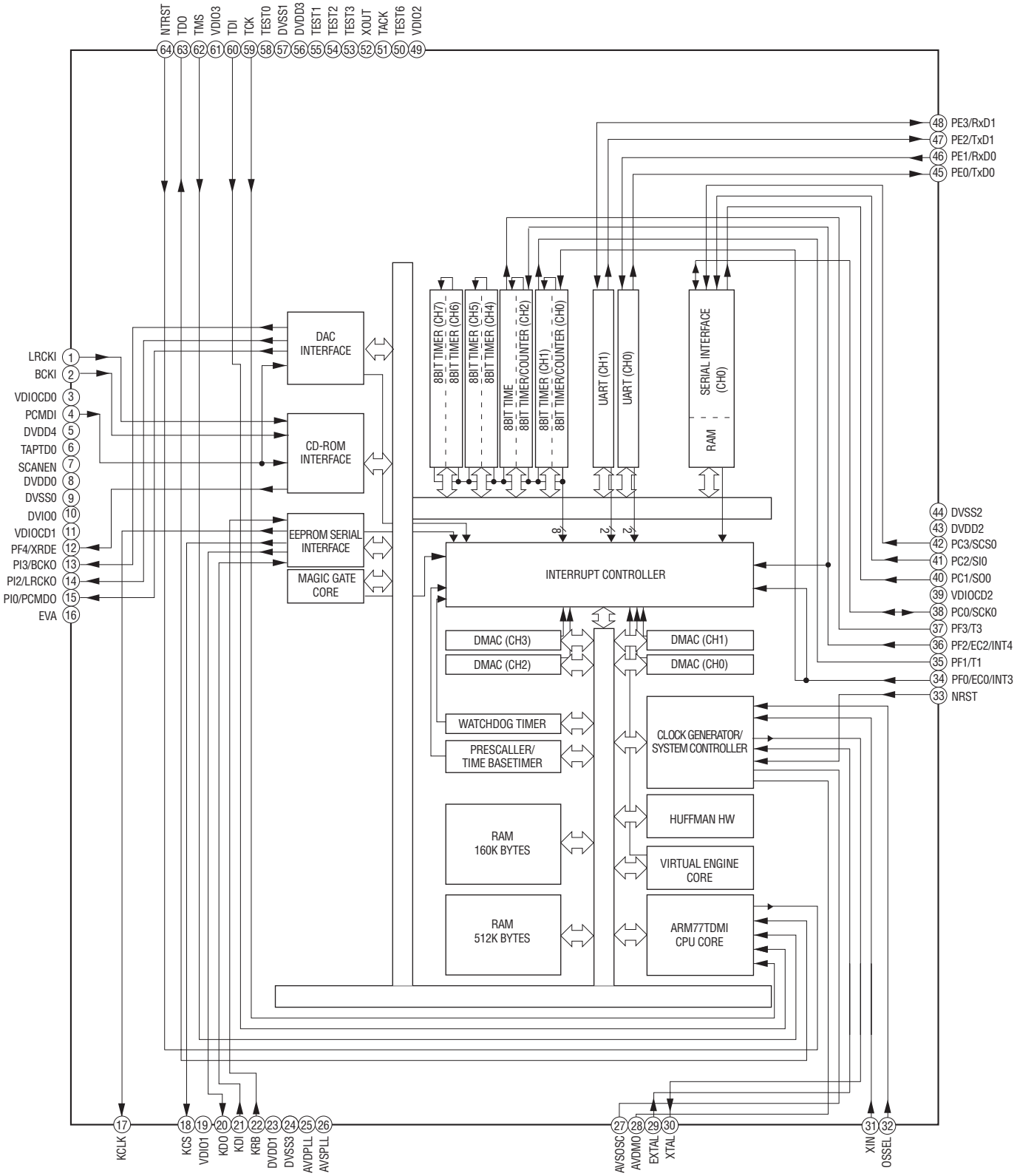
IC302 AN17883A-VF (MAIN Board)



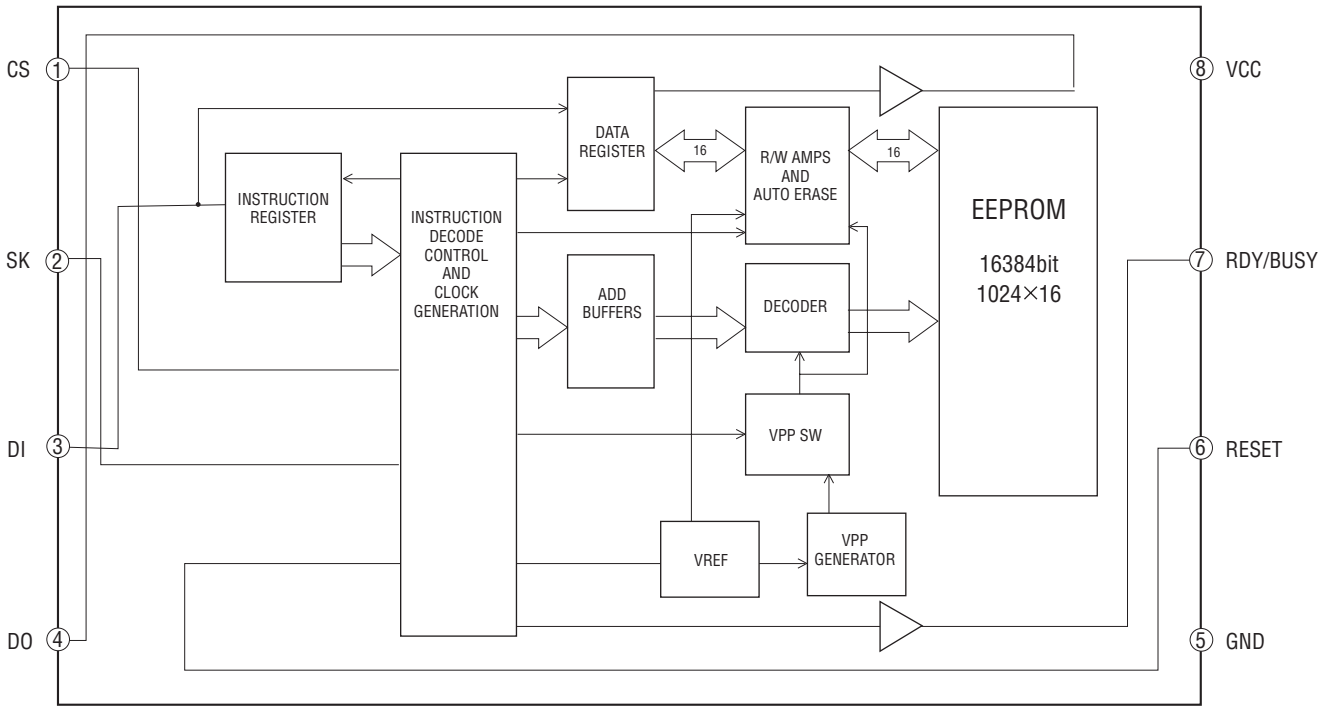
IC403 TB2138AFG (MAIN Board)



IC701 CXR710160-207R (E13,E92,MX)(MAIN Board)
IC701 CXR710160-210R (US,CND,AEP,UK)(MAIN Board)



IC803 AK6417CH-E2 (MAIN Board)



5-12. IC PIN FUNCTION DESCRIPTION

• IC3 TC9327AF-04CDW DTS MICRO CONTROLLER (MAIN Board)

Pin No.	Pin Name	I/O	Description
1 to 4	COM1 to COM4	O	LCD drivers (not used (open))
5 to 20	S1 to S16	O	LCD drivers (not used (open))
21	MODEL1	I	Key setting selector signal input (fixed at “L”)
22	RE2	O	Not used (open)
23	RE1	O	AM mode DD con on/off control signal output
24	MODEL2	I	Not used (fixed at “L”)
25	DESTVSS_O	I	Local/DX or Mono/Stereo ON-Off switch detection signal input
26	A0_O	O	A0 signal output to the LCD unit
27	CS_O	O	Chip select signal output to the LCD unit
28	LCD-REQ_I	I	LCD display request signal from the IC801
29	XLID-OPEN_I	I	CD lid open/close detection signal input
30	EEP DO/DI-IO	I/O	Data input/output for EEPROM (not used (open))
31	EEP-SK_O	O	Clock output for EEPROM (not used (open))
32	EEP-CS_O	O	Chip select signal output for EEPROM
33	XL/O-I	I	Line out jack detection signal input (fixed at “L”)
34	RM-KEY_I	I	Key signal input from the remote commander (fixed at “L”)
35	DEST	I	Destination detection signal input
36	AD-KEY3_I	I	Key signal input (not used (open))
37	KEY2	I	Key signal input
38	TU ON_O	O	Radio mode status signal output to the IC801
39	CD ON_I	I	CD ON request signal input from the IC801 (Wakeup TU in sleep mode)
40	TU-AVLS_O	—	Not used (open)
41	TV-L-ON_O	O	TV-L (ch 2, 3 and 4) selection switch control signal output (not used (open))
42	AD-KEY1_I	I	Key signal input from the function keys
43	BATT_I	I	Battery voltage detection signal input (external DC 1.5V as reference)
44	HIDC_I	I	HiDC voltage detection signal input
45	AD-DC_REF	—	DC reference of A/D converter (used for HiDC and batt detection with external DC 1.5V as reference)
46	CDU-SDI_I	I	Serial data input from the IC801
47	CDU-SDO_O	O	Serial data output to the IC801
48	CDU-SCK_I	I	Serial clock input from the IC801
49	TU-BEEP_O	O	Beep sound signal output to the headphone amplifier
50	VOL-PWM_O	O	PWM volume control signal output
51	TU-HOLD_I	I	HOLD switch detection signal input from the S810
52	BAND-CTL2_O	O	BAND CONTROL 2 signal output
53	BAND-CTL1_O	O	BAND CONTROL 1 signal output
54	ACK-CD_O	O	CD acknowledge and status signal output to the IC801
55	MONO/ LOCAL-CTR_O	O	Local/DX or Mono/Stereo ON-Off control signal output
56	S/W IDEN_I	I	Switch signal input (fixed at “H”)
57	XTU-TEST_I	I	TU test mode detection signal input (“L” : active)
58	XTU-BASS1_O	O	Bass On (sound mode) control signal output
59	XTU-BASS2_O	O	Bass H/L (sound mode) control signal output
60	+B ON/OFF-O	O	Radio power On/Off control signal output (VCO and IF amplifier block)
61	IF-REQ_O	O	IF request signal output
62	TU-MUTE_O	O	Tuner muting control signal output
63	TEST	—	Not used (open)
64	IF_I	I	TV/WB/FM/AM IF signal input
65	EO(DO1)_O	O	PLL error signal output
66	NC(DO2)	—	Not used (open)

Pin No.	Pin Name	I/O	Description
67	HOLD_I	I	Not used (connected to ground)
68	NC (OT1)	O	Not used (open)
69	GND	—	Ground terminal
70	NC (FM_I)	I	Not used (open)
71	TV/FM/AM_IN	I	TV/WB/FM/AM OSC signal input
72	VDD(1.8-2.2V)	—	Power supply terminal
73	RESET_I	I	Reset signal input from the IC801
74	XOUT	O	Crystal oscillator terminal
75	XIN	I	Crystal oscillator terminal
76	VXT	—	Crystal oscillator terminal
77	VLCD	—	LCD voltage doubler
78	C1	—	LCD voltage doubler
79	C2	—	LCD voltage doubler
80	VEE	—	Constant voltage for LCD 1.55V

• IC601 CXD3048R RF AMP, DSP, DIGITAL SERVO PROCESSOR, D-RAM CONTROLLER (MAIN Board)

Pin No.	Pin Name	I/O	Description
1	XRAS	O	Low address strobe signal output to the D-RAM
2	XWE	O	Data input enable signal output to the D-RAM
3 to 6	D1, D0, D3, D2	I/O	Two-way data bus with the D-RAM
7	DCLK	O	Not used (open)
8	DCKE	O	Not used (open)
9	XCAS	O	Column address strobe signal output to the D-RAM
10	WFCK/DQM	O	Not used (open)
11 to 13	A9 to A7	O	Address signal output to the D-RAM
14	DVSS	—	Ground terminal
15 to 17	A6 to A4	O	Address signal output to the D-RAM
18	XRDE	I	D-RAM read enable signal input
19	VDD0	—	Power supply terminal
20	CLOK	I	Serial data transfer clock input from the TMP91CY28FG
21	SDTO	I	Serial data input from the TMP91CY28FG
22	SENS	O	Serial data output to the TMP91CY28FG
23	XLAT	I	Serial data latch pulse signal input from the TMP91CY28FG
24	XSOE	I	Serial data output enable signal input from the TMP91CY28FG
25	SYSM	I	Analog muting on/off control signal input from the TMP91CY28FG “H”: muting on
26	WDCK	O	Not used (open)
27	SCOR	O	Subcode sync (S0+S1) detection signal output to the TMP91CY28FG
28	XRST	I	Reset signal input from the TMP91CY28FG “L”: reset
29	PWMI	I	Not used (connected to the ground)
30	XQOK	I	Not used (fixed at “L”)
31	XWRE	I	Not used (fixed at “L”)
32	R8M	O	System clock output to the TMP91CY28FG
33	VSS0	—	Ground terminal
34	SQCK	I	SQSO readout clock input (not used (fixed at “H”))
35	SCLK	I	SENS serial data read clock input (not used (fixed at “H”))
36	SQSO	O	Not used (open)
37	XEMP	O	Not used (open)
38	XWIH	O	Not used (open)
39	SBSO	O	Not used (open)
40	EXCL	I	SBSO readout clock input (not used (fixed at “L”))
41	XTSL	I	Input terminal for the system clock frequency setting (fixed at “L”)
42	HVSS	—	Ground terminal
43	HPL	O	Not used (open)
44	HPR	O	Not used (open)
45	HPVDD	—	Power supply terminal
46	XVDD	—	Power supply terminal
47	XTAI	I	System clock input (16.934 MHz)
48	XTAO	O	System clock output (16.934 MHz)
49	XVSS	—	Ground terminal
50	AVDD1	—	Power supply terminal
51	AOUT1	O	L-ch analog audio signal output
52	VREFL	O	L-ch reference voltage output
53, 54	AVSS1, AVSS2	—	Ground terminal
55	VREFR	O	R-ch reference voltage output
56	AOUT2	O	R-ch analog audio signal output
57	AVDD2	—	Power supply terminal
58	TES1	I	Input terminal for the test (fixed at “L”)

Pin No.	Pin Name	I/O	Description
59	TEST	I	Input terminal for the test (fixed at “L”)
60	VSS1	—	Ground terminal
61	LRMU	O	Muting on/off control signal output to the headphone amplifier
62	DOUT	O	Not used (open)
63	ATSK	I/O	Not used (open)
64	DFCT	I/O	Not used (open)
65	FOK	O	Focus OK signal output to the TMP91CY28FG
66	MIRR	I/O	Not used (open)
67	COUT	I/O	Not used (open)
68	C2PO	O	Not used (open)
69	GFS	O	GFS signal output to the TMP91CY28FG
70	XUGF	O	Not used (open)
71	XPCK	O	Not used (open)
72	VDD1	—	Power supply terminal
73	PCO	O	Charge pump output for master PLL
74	FILI	I	Filter input for master PLL
75	FILO	O	Filter output for master PLL
76	CLTV	I	VCO1 control voltage input for multiplier
77	VCTL	I	VCO2 control voltage input for broad-band EFM PLL
78	VPCO	O	Charge pump output for broad-band EFM PLL
79	AVSS3	—	Ground terminal
80	ASY_O	O	EFM full-swing output
81	ASY_I	I	Asymmetry comparator voltage input
82	BIAS	I	Asymmetry circuit constant current input
83	AVDD3	—	Power supply terminal
84	RFAC	I	EFM signal input from the optical pick-up
85	AVDD0	—	Power supply terminal
86	IGEN	I	Stabilized current input (pull up)
87	AVSS0	—	Ground terminal
88	RFDC	I	RF signal input from the optical pick-up
89	E	I	E signal input from the optical pick-up
90	F	I	F signal input from the optical pick-up
91	B	I	B signal input from the optical pick-up
92	A	I	A signal iuput from the optical pick-up
93	VC	I	Middle point voltage input (not used (fixed at “L”))
94	VSS2	—	Ground terminal
95	FRDR	O	Focus servo drive signal (-) output to the TB2138AFG
96	FFDR	O	Focus setvo drive signal (+) output to the TB2138AFG
97	TRDR	O	Tracking servo drive signal (-) output to the TB2138AFG
98	TFDR	O	Tracking servo drive signal (+) output to the TB2138AFG
99	SRDR	O	Sled servo drive signal (-) output to the TB2138AFG
100	SFDR	O	Sled servo drive signal (+) output to the TB2138AFG
101	SSTP	I	Disc inner position detection signal input (not used (fixed at “L”))
102	MDS	O	Spindle motor drive signal output
103	MDP	O	Spindle motor servo control signal output
104	C176	O	176.4 kHz clock output to TB2138AFG
105	VDD2	—	Power supply terminal
106	LRCK_O	O	L/R sampling clock output to the CXR710160
107	LRCK_I	I	L/R sampling clock input from the CXR710160
108	PCMD_O	O	Serial data output to the CXR710160

Pin No.	Pin Name	I/O	Description
109	PCMD_I	I	Serial data input from the CXR710160
110	BCK_O	O	Bit clock output to the CXR710160
111	BCK_I	I	Bit clock input from the CXR710160
112	DVDD	—	Power supply terminal
113 to 117	A3 to A0, A10	O	Address signal output to the D-RAM
118 to 120	A11 to A13	O	Not used (open)

• IC801 TMP91CY28FG-5CH5 SYSTEM CONTROL (MAIN Board)

Pin No.	Pin Name	I/O	Description
1	GND	—	Ground terminal
2	GND	—	Ground terminal
3	VCPU	—	Power supply terminal (+2.0 V)
4	XRST_O	O	System reset signal output
5	PWM_O	O	Power on/off signal output (not used (open))
6	BEEP_O	O	Beep signal output
7	AMUTE_O	O	Mute signal output to the CXD3048R
8	LINEOUT_I	I	Not used (open)
9	OPTOUT_I	I	Not used (open)
1O	FG_I	I	Motor flag monitor input from the TB2138AFG
11	REQ_I	I	REQ signal input from the CXA710160
12	HG-XSTB_O	O	Strobe signal output to optical pick up block
13	HG-GUP_O	O	Gain-up signal output to optical pick up block
14	RE1_I	I	Encode signal input from jog dial (not used (open))
15	RE2_I	I	Encode signal input from jog dial (not used (open))
16	LCDREQ_O	O	LCD request signal output
17	SDXLAT_O	O	Data latch signal output to the CXD3048R
18	SDCLK_O	O	Serial clock output to the EEPROM
19	SDOUT_O	O	Serial data output to the EEPROM
20	SDIN_I	I	Serial data input from the EEPROM
21	DTS_SDTO	O	Serial data output
22	DTS_SDTI	I	Serial data input
23	DTS_SCK	O	Serial data transfer clock output
24	AMO_I	I	Not used (fixed at “H”)
25	VCPU	—	Power supply terminal (+2.0 V)
26	XOUT	O	Not used (open)
27	GND	—	Ground terminal
28	XIN	I	System clock signal input
29	AM1_I	I	Not used (fixed at “H”)
30	XRESET_I	I	System reset signal input from the TB2138AFG
31	TSB	I	TSB signal input from headphones with remote controller (not used (open))
32	XWAKE_O	O	WAKE-UP signal output to the TB2138AFG
33	EMU0_O	O	Not used (open)
34	EMU1_O	O	Not used (open)
35	ACKCD_I	I	CD acknowledge and status signal input
36	WAKE	I	KEY interrupt signal input
37	LID-SW_I	I	CD Iid switch signal input
38	EXTBAT_I	I	Not used (fixed at “L”)
39	XLCD_CJK_I	I	Not used (open)
40	HOLD_I	I	HOLD switch signal input
41	XCE_CEL_I	I	Not used (open)
42	TEST_I	I	Test mode setting input
43	NC	—	Not used (open)
44 to 51	AD0 to AD7	I/O	Address and data input/output to the LCD unit
52	FOK_I	I	Focus OK signal input from the CXD3048R
53	GFS_I	I	GFS signal input from the CXD3048R
54	TUPWRON_O	O	Tuner power on/off control signal output
55	CDON_O	O	CD ON request signal output
56	AUD_SEL	O	Audio input selection signal output to the headphone amplifier
57	CHGGND_ON_O	O	Not used (pull down)

Pin No.	Pin Name	I/O	Description
58	BAT_VCC_ON_O	O	Not used (open)
59	DTS_RST_O	O	Reset signal output to the TC9327AF
60	XKRESET	O	Reset signal output to the CXR710160
61	XCS_O	O	P/S signal output to the LCD unit
62	GND	—	Ground terminal
63	XNMI_I	I	Not used (fixed at “H”)
64	VCPU	—	Power supply terminal (+2.0 V)
65	HP_LIN_SEL_I	I	HP/LINE select input (fixed at “H”)
66	WAKEUP_K_O	O	Interrupt signal output to the CXR710160
67	EEP_CS_O	O	Chip select signal output to the EEPROM
68	TUON_I	I	Tuner mode status signal input
69	LCD_A0	O	A0 signal output to the LCD
70	OPTPWRCTL_O	O	Not used (open)
71	XRD_O	O	Read signal output to the LCD unit
72	XWR_O	O	Write signal output to the LCD unit
73	LCD-XRST_O	O	Reset signal output to the LCD unit
74	XLCD-BL_O	O	Not used (open)
75	DISPLAY_TYPE	I	DISPLAY type setting input (open)
76	XLED_DISP2_O	O	Not used (open)
77	HP_PWRSW	O	Power control switch signal output to the headphone amplifier
78	BOOT	I	Single boot setup terminal
79	XBAT_1CELL_I	I	Not used (open)
80	NC	I	Not used (open)
81	XCEX_I	I	Not used (open)
82	XLCD_4LINE_I	I	Not used (open)
83	MSCK0_O	O	Serial data transfer clock output to the CXD3048R and the TB2138AFG
84	MSDTO0_O	O	Serial data output to the CXD3048R and the TB2138AFG
85	MSDTIO_I	I	SENS signal input from the CXD3048R
86	SCOR_I	I	Sub-code sync (S0+S1) detect signal input from the CXD3048R
87	XLAT0_O	O	Latch signal output to the CXD3048R
88	XSOE_O	O	Serial data enable signal output to the CXD3048R
89	VCPU	—	Power supply terminal (+2.0 V)
90	PWRLAT_O	O	Data Latch signal output to the TB2138AFG
91	GND	—	Ground terminal
92	AD-BATMNT	I	Battery voltage level monitor input
93	AD-CHGMNT	I	Not used (pull up)
94	AD-CHGSTMNT	I	Not used (fixed at “L”)
95	AD-DCINMNT	I	DC IN voltage level monitor input
96	AD-KEY1	I	Key input from switch unit
97	AD-KEY2	I	Key input from switch unit
98	AD-KEY3	I	Key input (not used (fixed at “H”))
99	AD-RMKEY	I	Key input from headphones with remote controller (not used (fixed at “L”))
100	VCPU	—	Power supply terminal (+2.0 V)

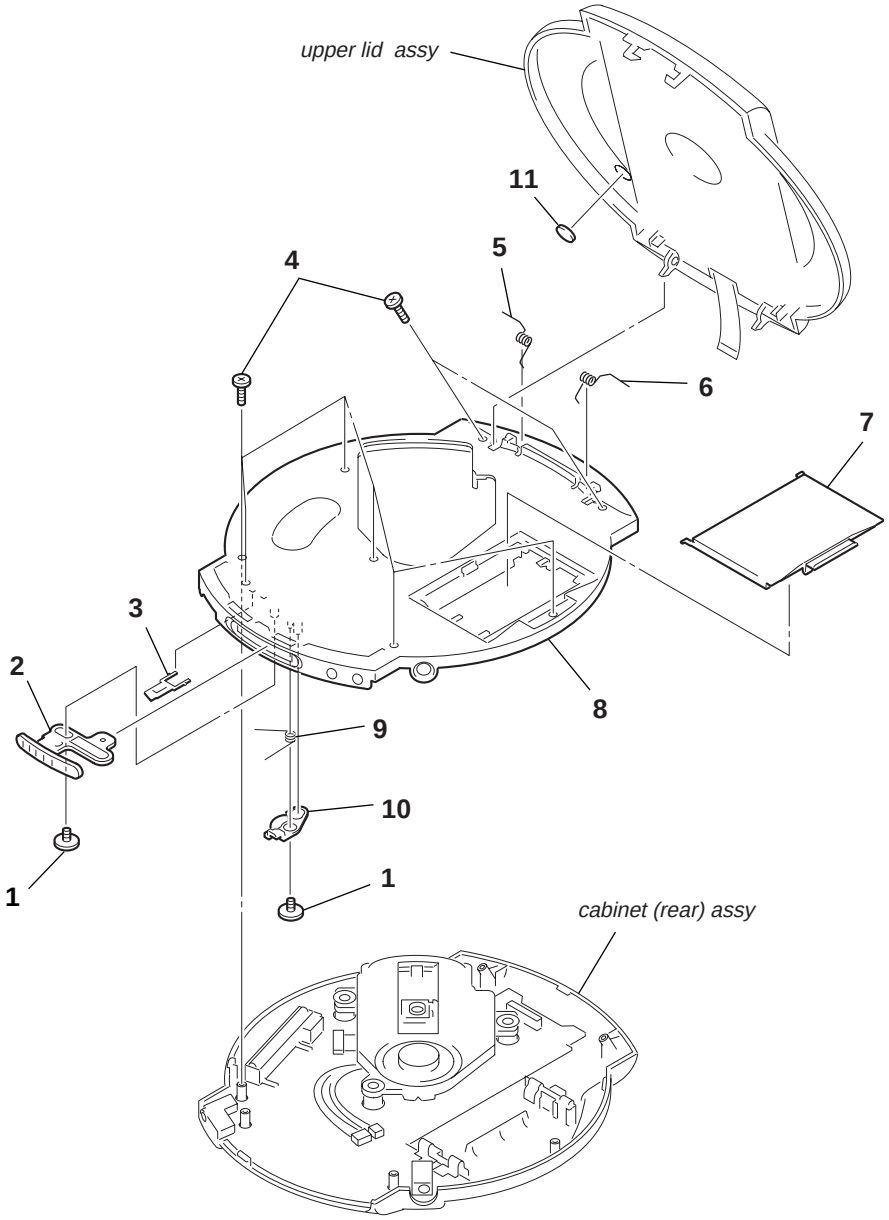
SECTION 6
EXPLODED VIEWS

NOTE:
- -XX, -X mean standardized parts, so they may have some differences 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.
- Abbreviation
  CND : Canadian Model.
  E13 : 220-230V AC area in E model
  E19 : 230V AC area in E model
  MX : Mexican model

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

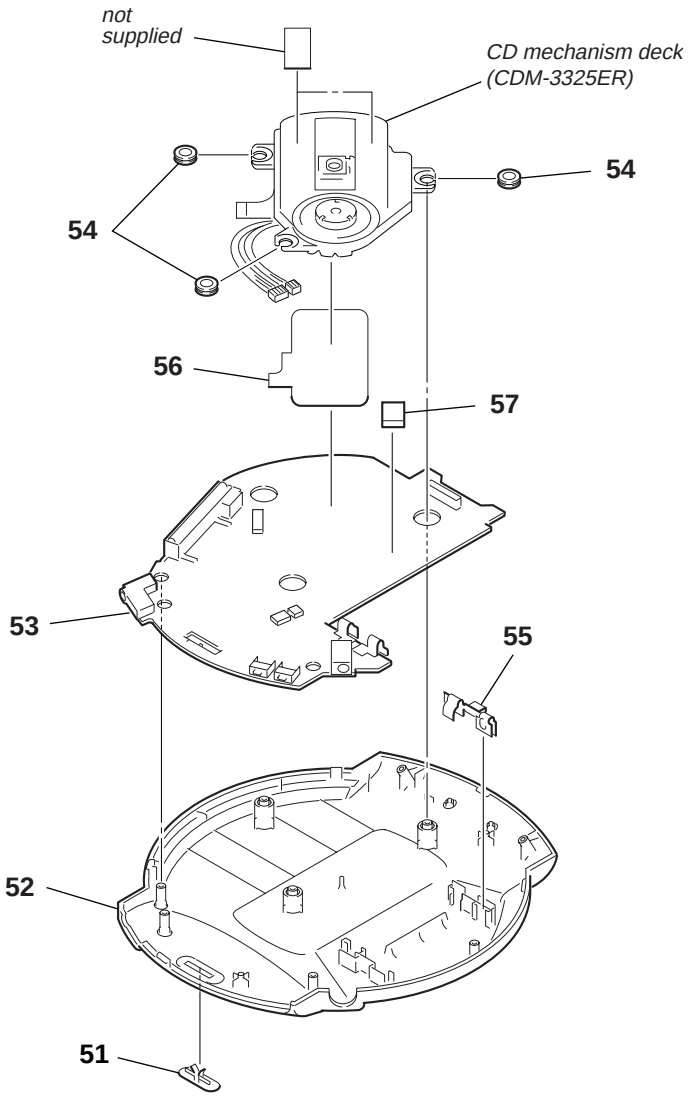
Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

6-1. OVERALL SECTION



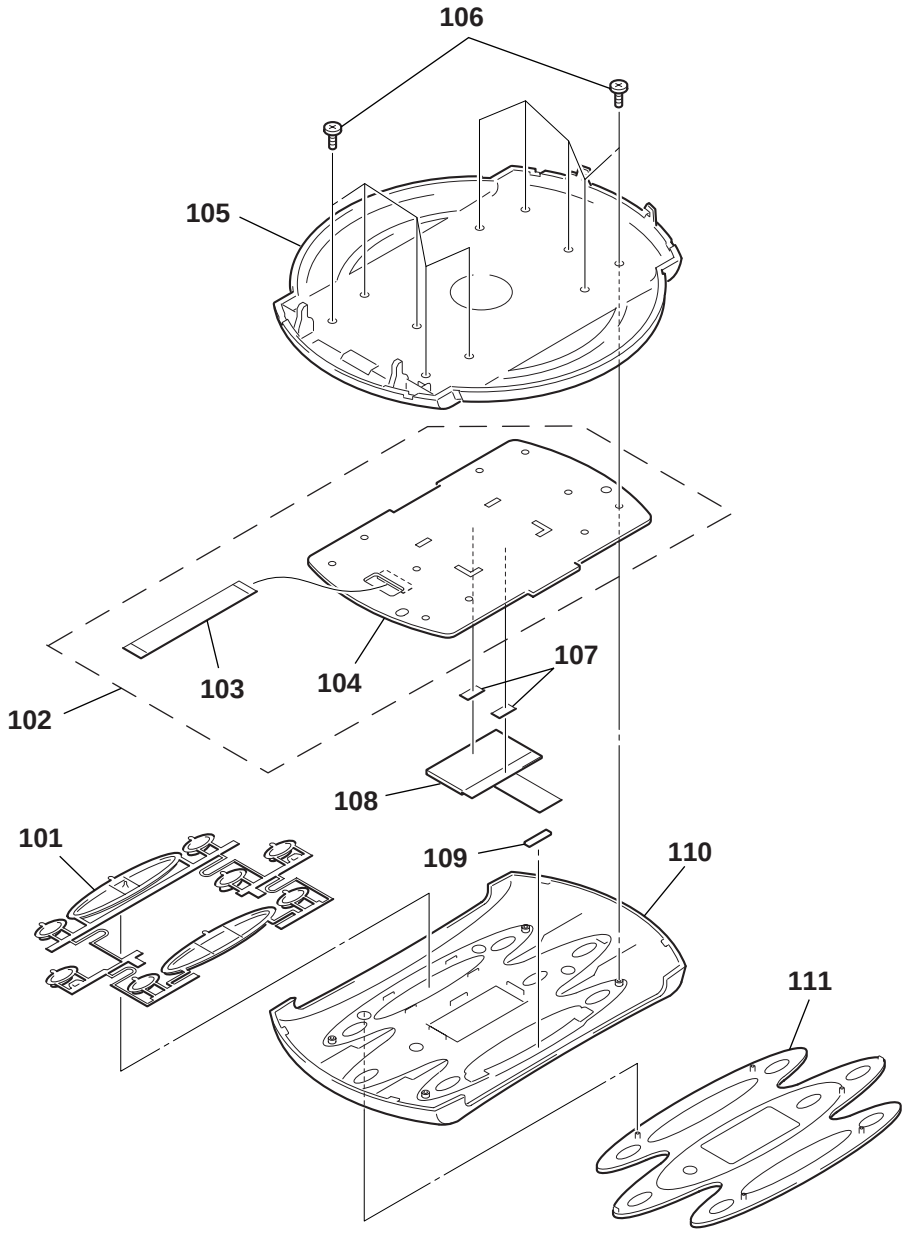
Ref. No.	Part No.	Description	Remarks
1	3-034-792-11	SCREW, TAPPING (B2.0)	
2	3-261-239-21	KNOB (OPEN)	
3	3-261-240-01	LEVER (DETECTION)	
4	3-254-070-11	SCREW	
5	3-261-487-01	SPRING,FULL OPEN LEFT	
6	3-261-488-01	SPRING,FULL OPEN RIGHT	
7	3-261-258-41	LID, BATTERY CASE	
8	X-3385-067-1	CABINET (UPPER) SUB ASSY	
9	3-261-251-01	SPRING (OPEN)	
10	3-261-250-01	LOCK, OPEN	
11	3-261-492-01	SHEET,LID	

6-2. CABINET (REAR) ASSY



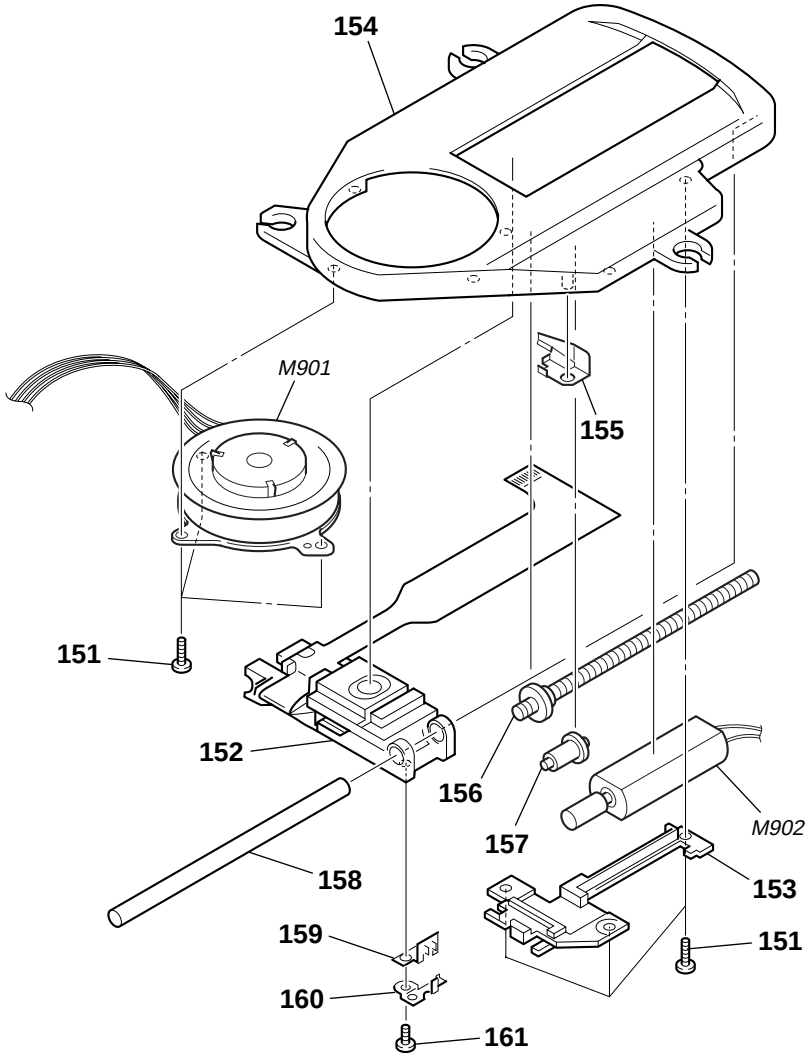
Ref. No.	Part No.	Description	Remarks
51	3-261-238-41	KNOB (HOLD)	
52	3-261-486-01	CABINET,LOWER	
* 53	A-4547-182-A	MAIN BOARD, COMPLETE (US,CND)	
53	A-4547-186-A	MAIN BOARD, COMPLETE (AEP)	
53	A-4547-190-A	MAIN BOARD, COMPLETE (E13)	
53	A-4547-194-A	MAIN BOARD, COMPLETE (E19,MX)	
54	3-245-331-02	INSULATOR	
55	3-261-254-01	TERMINAL,BATTERY LINK	
56	3-265-793-01	SHEET, CDM COVER	
57	2-022-300-01	CUSHION, CDM	

6-3. UPPER LID ASSY



Ref. No.	Part No.	Description	Remarks
101	3-261-484-01	BUTTON,CONTROL	
* 102	A-4576-434-A	SWITCH UNIT ASSY	
103	1-828-428-11	CABLE, FLEXIBLE FLAT 20P	
* 104	A-4542-886-A	SWITCH BOARD, COMPLETE	
105	3-261-481-11	LID,UPPER (US,CND)	
105	3-261-481-21	LID,UPPER (AEP,E13,E19)	
105	3-261-481-31	LID,UPPER (MX)	
106	3-254-083-11	SCREW	
107	3-261-493-01	SHEET,LCD ADHESIVE	
108	1-805-467-11	DISPLAY PANEL, LIQUID CRYSTAL	
109	3-265-826-01	CUSHION,PANEL	
110	3-261-482-01	PANEL,CONTROL	
111	3-261-483-01	WINDOW,LCD	

6-4. CD MECHANISM DECK (CDM-3325ER)



Ref. No.	Part No.	Description	Remarks
151	3-318-203-61	SCREW (B1.7X4), TAPPING	
⚠152	X-3380-950-1	OPTICAL PICK-UP (DAX-25E)	
153	3-221-473-01	COVER, GEAR	
154	3-221-472-02	CHASSIS	
155	3-221-474-01	SPRING, SLED	
156	A-3331-663-A	SCREW (FEED) ASSY	
157	3-221-268-01	GEAR (B)	
158	3-221-475-01	SHAFT, STANDARD	
159	3-222-298-01	RACK	
160	3-222-299-01	SPRING, RACK RETAINER	
161	3-348-998-31	SCREW (M1.4X2.5), TAPPING, PAN	
M901	A-3174-848-A	MOTOR ASSY, TURN TABLE (SPINDLE)	
M902	A-3174-850-A	MOTOR ASSY, SLED (SLED)	

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.

SECTION 7
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, -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
- CAPACITORS:
  uF: µF
- 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...
- COILS
  uH: µH

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

- Abbreviation
  CND : Canadian model
  E13 : 220-230V AC area in E model
  E19 : 230V AC area in E model
  MX : Mexican model
- Accessories are given in the last of this 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 critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

Ref. No.	Part No.	Description			Remarks
	A-4547-182-A	MAIN BOARD, COMPLETE (US,CND)			
	A-4547-186-A	MAIN BOARD, COMPLETE (AEP)			
	A-4547-190-A	MAIN BOARD, COMPLETE (E13)			
	A-4547-194-A	MAIN BOARD, COMPLETE (E19,MX)			
		**********			
	3-261-252-01	TERMINAL,BATTERY (+)			
	3-261-253-01	TERMINAL,BATTERY (-)			
	3-265-793-01	SHEET,CDM COVER			
		< CAPACITOR >			
C3	1-115-156-11	CERAMIC CHIP	1uF		10V
C4	1-164-843-11	CERAMIC CHIP	3PF	0.25PF	50V
C6	1-164-943-11	CERAMIC CHIP	0.01uF	10.00%	16V
C7	1-164-850-11	CERAMIC CHIP	10PF	0.50PF	50V
C8	1-164-939-11	CERAMIC CHIP	0.0022uF	10.00%	50V
C9	1-164-874-11	CERAMIC CHIP	100PF	5.00%	50V
C10	1-164-874-11	CERAMIC CHIP	100PF	5.00%	50V
C11	1-107-819-11	CERAMIC CHIP	0.022uF	10.00%	16V
C13	1-164-943-11	CERAMIC CHIP	0.01uF	10.00%	16V (US,CND)
C15	1-164-882-11	CERAMIC CHIP	220PF	5.00%	16V
C16	1-164-943-11	CERAMIC CHIP	0.01uF	10.00%	16V
C17	1-164-943-11	CERAMIC CHIP	0.01uF	10.00%	16V (US,CND)
C19	1-164-943-11	CERAMIC CHIP	0.01uF	10.00%	16V
C20	1-125-891-11	CERAMIC CHIP	0.47uF	10.00%	10V
C22	1-115-156-11	CERAMIC CHIP	1uF		10V
C23	1-164-943-11	CERAMIC CHIP	0.01uF	10.00%	16V (US,CND,E19,MX)
C24	1-107-819-11	CERAMIC CHIP	0.022uF	10.00%	16V
C25	1-135-259-11	TANTAL. CHIP	10uF	20.00%	6.3V
C26	1-164-874-11	CERAMIC CHIP	100PF	5.00%	50V
C27	1-164-943-11	CERAMIC CHIP	0.01uF	10.00%	16V
C28	1-164-943-11	CERAMIC CHIP	0.01uF	10.00%	16V
C29	1-164-943-11	CERAMIC CHIP	0.01uF	10.00%	16V
C30	1-115-156-11	CERAMIC CHIP	1uF		10V
C31	1-115-156-11	CERAMIC CHIP	1uF		10V
C32	1-135-151-21	TANTALUM CHIP	4.7uF	20%	4V
C34	1-125-777-11	CERAMIC CHIP	0.1uF	10.00%	10V
C35	1-164-935-11	CERAMIC CHIP	470PF	10.00%	50V
C36	1-164-943-11	CERAMIC CHIP	0.01uF	10.00%	16V (US,CND,E19,MX)
C37	1-164-937-11	CERAMIC CHIP	0.001uF	10.00%	50V
C38	1-135-151-21	TANTALUM CHIP	4.7uF	20%	4V
C39	1-107-819-11	CERAMIC CHIP	0.022uF	10.00%	16V
C40	1-135-151-21	TANTALUM CHIP	4.7uF	20%	4V
C41	1-119-923-11	CERAMIC CHIP	0.047uF	10.00%	10V
C42	1-107-819-11	CERAMIC CHIP	0.022uF	10.00%	16V
C43	1-117-863-11	CERAMIC CHIP	0.47uF	10.00%	6.3V
C45	1-124-434-00	ELECT	220uF	20.00%	4V
C46	1-164-937-11	CERAMIC CHIP	0.001uF	10.00%	50V
C47	1-125-777-11	CERAMIC CHIP	0.1uF	10.00%	10V
C50	1-107-820-11	CERAMIC CHIP	0.1uF		16V
C53	1-115-156-11	CERAMIC CHIP	1uF		10V
C54	1-125-777-11	CERAMIC CHIP	0.1uF	10.00%	10V
C56	1-164-943-11	CERAMIC CHIP	0.01uF	10.00%	16V
C58	1-137-710-11	CERAMIC CHIP	10uF	20%	6.3V
C59	1-137-710-11	CERAMIC CHIP	10uF	20%	6.3V
C61	1-218-990-11	SHORT CHIP	0		
C62	1-164-937-11	CERAMIC CHIP	0.001uF	10.00%	50V
C63	1-164-858-11	CERAMIC CHIP	22PF	5.00%	50V
C64	1-164-850-11	CERAMIC CHIP	10PF	0.50PF	50V
C65	1-117-863-11	CERAMIC CHIP	0.47uF	10.00%	6.3V
C66	1-125-837-91	CERAMIC CHIP	1uF	10%	6.3V
C69	1-104-852-11	TANTAL. CHIP	22uF	20.00%	6.3V
C70	1-164-943-11	CERAMIC CHIP	0.01uF	10.00%	16V
C71	1-107-826-11	CERAMIC CHIP	0.1uF	10.00%	16V
C72	1-164-943-11	CERAMIC CHIP	0.01uF	10.00%	16V
C74	1-164-943-11	CERAMIC CHIP	0.01uF	10.00%	16V
C78	1-164-845-11	CERAMIC CHIP	5PF	0.25PF	50V
C79	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C80	1-164-943-11	CERAMIC CHIP	0.01uF	10.00%	16V
C81	1-164-937-11	CERAMIC CHIP	0.001uF	10.00%	50V
C82	1-115-467-11	CERAMIC CHIP	0.22uF	10.00%	10V
C83	1-164-874-11	CERAMIC CHIP	100PF	5.00%	50V
C85	1-137-710-11	CERAMIC CHIP	10uF	20%	6.3V
C86	1-164-943-11	CERAMIC CHIP	0.01uF	10.00%	16V
C88	1-164-506-11	CERAMIC CHIP	4.7uF		16V
C90	1-164-943-11	CERAMIC CHIP	0.01uF	10.00%	16V
C92	1-115-156-11	CERAMIC CHIP	1uF		10V
C121	1-125-838-11	CERAMIC CHIP	2.2uF	10%	6.3V
C145	1-164-939-11	CERAMIC CHIP	0.0022uF	10.00%	50V
C151	1-163-009-91	CERAMIC CHIP	0.001uF	10.00%	50V
C153	1-107-819-11	CERAMIC CHIP	0.022uF	10.00%	16V
C157	1-107-819-11	CERAMIC CHIP	0.022uF	10.00%	16V
C158	1-164-845-11	CERAMIC CHIP	5PF	0.25PF	50V
C160	1-164-866-11	CERAMIC CHIP	47PF	5.00%	50V
C163	1-164-850-11	CERAMIC CHIP	10PF	0.50PF	50V
C164	1-115-156-11	CERAMIC CHIP	1uF		10V
C165	1-164-943-11	CERAMIC CHIP	0.01uF	10.00%	16V
C166	1-164-850-11	CERAMIC CHIP	10PF	0.50PF	50V
C166	1-164-937-11	CERAMIC CHIP	0.001uF	10.00%	50V
C167	1-164-937-11	CERAMIC CHIP	0.001uF	10.00%	50V

Ref. No.	Part No.	Description			Remarks
C168	1-164-937-11	CERAMIC CHIP	0.001uF	10.00%	50V
C169	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C170	1-164-937-11	CERAMIC CHIP	0.001uF	10.00%	50V
C221	1-125-838-11	CERAMIC CHIP	2.2uF	10%	6.3V
C245	1-164-939-11	CERAMIC CHIP	0.0022uF	10.00%	50V
C314	1-164-943-11	CERAMIC CHIP	0.01uF	10.00%	16V
C320	1-119-750-11	TANTAL. CHIP	22uF	20.00%	6.3V
C321	1-107-820-11	CERAMIC CHIP	0.1uF		16V
C322	1-125-837-91	CERAMIC CHIP	1uF	10%	6.3V
C323	1-119-923-11	CERAMIC CHIP	0.047uF	10.00%	10V
C324	1-119-923-11	CERAMIC CHIP	0.047uF	10.00%	10V
C325	1-164-935-11	CERAMIC CHIP	470PF	10.00%	50V
C326	1-164-874-11	CERAMIC CHIP	100PF	5.00%	50V
C327	1-115-467-11	CERAMIC CHIP	0.22uF	10.00%	10V
C328	1-119-750-11	TANTAL. CHIP	22uF	20.00%	6.3V
C329	1-107-820-11	CERAMIC CHIP	0.1uF		16V
C330	1-119-750-11	TANTAL. CHIP	22uF	20.00%	6.3V
C331	1-119-750-11	TANTAL. CHIP	22uF	20.00%	6.3V
C332	1-119-750-11	TANTAL. CHIP	22uF	20.00%	6.3V
C333	1-127-688-21	TANTAL. CHIP	10uF	20%	6.3V
C334	1-164-943-11	CERAMIC CHIP	0.01uF	10.00%	16V
C335	1-125-838-11	CERAMIC CHIP	2.2uF	10%	6.3V
C336	1-125-838-11	CERAMIC CHIP	2.2uF	10%	6.3V
C337	1-164-874-11	CERAMIC CHIP	100PF	5.00%	50V
C338	1-164-935-11	CERAMIC CHIP	470PF	10.00%	50V
C340	1-125-777-11	CERAMIC CHIP	0.1uF	10.00%	10V
C342	1-126-369-11	ELECT	220uF	20%	6.3V
C343	1-107-820-11	CERAMIC CHIP	0.1uF		16V
C344	1-107-826-11	CERAMIC CHIP	0.1uF	10.00%	16V
C403	1-164-935-11	CERAMIC CHIP	470PF	10.00%	50V
C404	1-125-777-11	CERAMIC CHIP	0.1uF	10.00%	10V
C405	1-115-156-11	CERAMIC CHIP	1uF		10V
C406	1-164-505-11	CERAMIC CHIP	2.2uF		16V
C410	1-115-156-11	CERAMIC CHIP	1uF		10V
C415	1-115-467-11	CERAMIC CHIP	0.22uF	10.00%	10V
C416	1-127-760-11	CERAMIC CHIP	4.7uF	10%	6.3V
C417	1-107-820-11	CERAMIC CHIP	0.1uF		16V
C419	1-125-777-11	CERAMIC CHIP	0.1uF	10.00%	10V
C420	1-125-777-11	CERAMIC CHIP	0.1uF	10.00%	10V
C421	1-164-937-11	CERAMIC CHIP	0.001uF	10.00%	50V
C422	1-164-937-11	CERAMIC CHIP	0.001uF	10.00%	50V
C423	1-164-937-11	CERAMIC CHIP	0.001uF	10.00%	50V
C424	1-135-210-11	TANTALUM CHIP	4.7uF	20%	10V
C425	1-110-569-11	TANTAL. CHIP	47uF	20.00%	6.3V
C426	1-126-369-11	ELECT	220uF	20%	6.3V
C427	1-125-837-91	CERAMIC CHIP	1uF	10%	6.3V
C428	1-107-686-11	TANTAL. CHIP	4.7uF	20.00%	16V
C429	1-107-820-11	CERAMIC CHIP	0.1uF		16V
C430	1-164-939-11	CERAMIC CHIP	0.0022uF	10.00%	50V
C432	1-126-246-11	ELECT CHIP	220uF	20%	4V
C433	1-115-156-11	CERAMIC CHIP	1uF		10V
C434	1-165-851-91	TANTAL. CHIP	10uF	20%	6.3V
C435	1-110-569-11	TANTAL. CHIP	47uF	20.00%	6.3V
C436	1-127-688-21	TANTAL. CHIP	10uF	20%	6.3V
C437	1-126-246-11	ELECT CHIP	220uF	20%	4V
C438	1-125-837-91	CERAMIC CHIP	1uF	10%	6.3V
C440	1-164-939-11	CERAMIC CHIP	0.0022uF	10.00%	50V
C446	1-125-837-91	CERAMIC CHIP	1uF	10%	6.3V
C447	1-164-937-11	CERAMIC CHIP	0.001uF	10.00%	50V
C450	1-115-156-11	CERAMIC CHIP	1uF		10V
C454	1-125-777-11	CERAMIC CHIP	0.1uF	10.00%	10V
C455	1-164-941-11	CERAMIC CHIP	0.0047uF	10.00%	16V
C458	1-109-982-11	CERAMIC CHIP	1uF	10.00%	10V
C460	1-125-777-11	CERAMIC CHIP	0.1uF	10.00%	10V
C601	1-164-935-11	CERAMIC CHIP	470PF	10.00%	50V
C605	1-125-777-11	CERAMIC CHIP	0.1uF	10.00%	10V
C606	1-164-937-11	CERAMIC CHIP	0.001uF	10.00%	50V
C607	1-164-941-11	CERAMIC CHIP	0.0047uF	10.00%	16V
C608	1-117-863-11	CERAMIC CHIP	0.47uF	10.00%	6.3V
C609	1-117-863-11	CERAMIC CHIP	0.47uF	10.00%	6.3V
C610	1-127-688-21	TANTAL. CHIP	10uF	20%	6.3V
C611	1-164-935-11	CERAMIC CHIP	470PF	10.00%	50V
C612	1-164-874-11	CERAMIC CHIP	100PF	5.00%	50V
C613	1-164-939-11	CERAMIC CHIP	0.0022uF	10.00%	50V
C614	1-164-858-11	CERAMIC CHIP	22PF	5.00%	50V
C616	1-164-935-11	CERAMIC CHIP	470PF	10.00%	50V
C617	1-164-935-11	CERAMIC CHIP	470PF	10.00%	50V
C618	1-125-777-11	CERAMIC CHIP	0.1uF	10.00%	10V
C619	1-119-750-11	TANTAL. CHIP	22uF	20.00%	6.3V
C620	1-107-820-11	CERAMIC CHIP	0.1uF		16V
C621	1-110-569-11	TANTAL. CHIP	47uF	20.00%	6.3V
C622	1-127-688-21	TANTAL. CHIP	10uF	20%	6.3V
C623	1-125-837-91	CERAMIC CHIP	1uF	10%	6.3V
C624	1-115-156-11	CERAMIC CHIP	1uF		10V
C631	1-119-750-11	TANTAL. CHIP	22uF	20.00%	6.3V
C632	1-107-820-11	CERAMIC CHIP	0.1uF		16V
C697	1-107-820-11	CERAMIC CHIP	0.1uF		16V
C698	1-131-862-91	TANTAL. CHIP	47uF	20%	4V
C699	1-107-820-11	CERAMIC CHIP	0.1uF		16V
C701	1-107-820-11	CERAMIC CHIP	0.1uF		16V
C702	1-131-862-91	TANTAL. CHIP	47uF	20%	4V
C703	1-107-820-11	CERAMIC CHIP	0.1uF		16V
C705	1-119-750-11	TANTAL. CHIP	22uF	20.00%	6.3V
C706	1-107-820-11	CERAMIC CHIP	0.1uF		16V
C708	1-107-820-11	CERAMIC CHIP	0.1uF		16V
C709	1-107-820-11	CERAMIC CHIP	0.1uF		16V
C710	1-107-820-11	CERAMIC CHIP	0.1uF		16V
C711	1-107-820-11	CERAMIC CHIP	0.1uF		16V
C712	1-107-820-11	CERAMIC CHIP	0.1uF		16V
C713	1-107-820-11	CERAMIC CHIP	0.1uF		16V
C714	1-107-820-11	CERAMIC CHIP	0.1uF		16V
C715	1-107-820-11	CERAMIC CHIP	0.1uF		16V
C716	1-107-820-11	CERAMIC CHIP	0.1uF		16V
C717	1-107-820-11	CERAMIC CHIP	0.1uF		16V
C718	1-107-820-11	CERAMIC CHIP	0.1uF		16V
C720	1-107-820-11	CERAMIC CHIP	0.1uF		16V
C803	1-125-777-11	CERAMIC CHIP	0.1uF	10.00%	10V
C805	1-115-156-11	CERAMIC CHIP	1uF		10V
C806	1-107-820-11	CERAMIC CHIP	0.1uF		16V
C808	1-164-941-11	CERAMIC CHIP	0.0047uF	10.00%	16V
C810	1-125-837-91	CERAMIC CHIP	1uF	10%	6.3V
C812	1-107-820-11	CERAMIC CHIP	0.1uF		16V
C821	1-107-820-11	CERAMIC CHIP	0.1uF		16V
C830	1-164-941-11	CERAMIC CHIP	0.0047uF	10.00%	16V
C833	1-164-941-11	CERAMIC CHIP	0.0047uF	10.00%	16V

MAIN

Ref. No.	Part No.	Description			Remarks
C834	1-164-941-11	CERAMIC CHIP	0.0047uF	10.00% 16V	
C835	1-164-941-11	CERAMIC CHIP	0.0047uF	10.00% 16V	
C896	1-107-820-11	CERAMIC CHIP	0.1uF	16V	
C897	1-115-156-11	CERAMIC CHIP	1uF	10V	
C898	1-107-820-11	CERAMIC CHIP	0.1uF	16V	
C899	1-107-820-11	CERAMIC CHIP	0.1uF	16V	
		< FILTER >			
CF1	1-767-480-11	FILTER, CERAMIC (AM)(450kHz)			
CF2	1-767-021-21	FILTER, CERAMIC (10.7MHz)			
		< CONNECTOR >			
CN401	1-784-342-21	HOUSING, CONNECTOR 2P			
* CN402	1-785-877-21	HOUSING, CONNECTOR 4P			
CN601	1-818-127-11	CONNECTOR, FFC/FPC (ZIF) 15P			
CN801	1-818-129-21	CONNECTOR, FFC/FPC (ZIF) 20P			
		< TRIMMER >			
CT3	1-141-615-21	CAP, ADJ			
		< DIODE >			
D1	8-719-080-77	DIODE	MA2S357(E)-(TX).SO		
D2	8-719-080-77	DIODE	MA2S357(E)-(TX).SO		
D3	6-500-338-01	DIODE	KV1610S		
D5	8-719-080-77	DIODE	MA2S357(E)-(TX).SO (US,CND)		
D82	8-719-988-61	DIODE	1SS355TE-17		
D86	8-719-404-50	DIODE	MA111-TX		
D89	8-719-420-87	DIODE	MA8130-TX		
D308	8-719-421-33	DIODE	MA147-TX		
D320	8-719-044-74	DIODE	MA792WK-TX		
D321	8-719-072-70	DIODE	MA2ZD14001S0		
D401	8-719-085-43	DIODE	MA2YD2300LS0		
D402	8-719-085-43	DIODE	MA2YD2300LS0		
D403	8-719-085-43	DIODE	MA2YD2300LS0		
D421	8-719-404-50	DIODE	MA111-TX		
D422	8-719-404-50	DIODE	MA111-TX		
D801	8-719-421-27	DIODE	MA728-TX		
		< FERRITE BEAD >			
FB1	1-216-864-11	METAL CHIP	0	5% 1/16W	
FB101	1-500-234-22	FERRITE	0uH		
FB201	1-500-234-22	FERRITE	0uH		
FB302	1-414-760-21	FERRITE	0uH		
FB303	1-414-553-11	FERRITE	0uH		
FB401	1-216-864-11	METAL CHIP	0	5% 1/16W	
FB402	1-216-864-11	METAL CHIP	0	5% 1/16W	
FB601	1-414-760-21	FERRITE	0uH		
FB602	1-414-760-21	FERRITE	0uH		
FB701	1-414-760-21	FERRITE	0uH		
FB703	1-414-760-21	FERRITE	0uH		
		< FILTER >			
FL1	1-781-765-11	FILTER, BAND PASS (US,CND)			
FL1	1-236-711-21	FILTER, BAND PASS (EXCEPT US,CND)			

Ref. No.	Part No.	Description		Remarks
		< IC >		
IC1	6-701-310-01	IC	TA2154FN (EL)	
IC3	6-803-850-01	IC	TC9327AF-04CDW	
☆ IC62	----------	IC	AK93C55AV-L	
IC302	6-704-626-01	IC	AN17883A-VF	
IC403	6-704-187-01	IC	TB2138AFG	
IC601	8-752-420-71	IC	CXD3039AR	
IC603	6-702-737-01	IC	MSM51X17400F-10TFSR1	
IC701	8-753-217-12	IC	CXR710160-210R	
IC702	6-550-559-01	TRANSISTOR	XN0NE9200LS0	
IC801	6-803-855-01	IC	TMP91CY28FG-5CH5	
☆ IC803	----------	IC	AK6417CH-E2	
IC806	6-705-397-01	IC	XC6206P142MR	
		< JACK >		
J301	1-818-051-11	JACK (🎧)		
J401	1-778-153-51	JACK,DC (POLARITY UNIFIED TYPE)		(DC IN 4.5V ⟐⊖⟐)
		< COIL >		
L1	1-428-917-21	COIL, FM RF		
L2	1-400-680-21	INDUCTOR	0uH	
L3	1-424-851-31	COIL, FERRITE-ROD ANTENNA (MW)		
L4	1-406-404-11	COIL (MW OSCILATION)		
L5	1-428-918-21	COIL, TV RF (US,CND)		
L10	1-414-410-21	INDUCTOR	10uH	
L62	1-412-006-31	INDUCTOR	10uH	
L80	1-400-389-21	INDUCTOR	10uH	
L320	1-400-389-21	INDUCTOR	10uH	
L401	1-400-373-21	INDUCTOR	4.7uH	
L402	1-400-373-21	INDUCTOR	4.7uH	
L403	1-400-387-21	INDUCTOR	47uH	
L404	1-400-388-21	INDUCTOR	220uH	
L406	1-400-145-21	INDUCTOR	47uH	
L407	1-456-178-21	INDUCTOR	100uH	
L408	1-400-388-21	INDUCTOR	220uH	
L409	1-400-145-21	INDUCTOR	47uH	
L411	1-400-387-21	INDUCTOR	47uH	
L413	1-216-295-91	SHORT CHIP	0	
L414	1-216-295-91	SHORT CHIP	0	
L601	1-400-389-21	INDUCTOR	10uH	
L602	1-400-390-21	INDUCTOR	47uH	
L603	1-400-386-21	INDUCTOR	10uH	
L703	1-400-390-21	INDUCTOR	47uH	
L704	1-400-390-21	INDUCTOR	47uH	
		< TRANSISTOR >		
Q3	8-729-602-21	TRANSISTOR	2SC4154TP-1F	(MX,E19,CND,US)
Q4	8-729-922-10	TRANSISTOR	2SA1577-T106-QR	
Q8	8-729-029-15	TRANSISTOR	DTC144TUA-T106	
Q10	8-729-922-10	TRANSISTOR	2SA1577-T106-QR	
Q11	8-729-028-97	TRANSISTOR	DTC114TUA-T106	
Q12	8-729-028-97	TRANSISTOR	DTC114TUA-T106	
Q40	8-729-029-15	TRANSISTOR	DTC144TUA-T106	

☆ IC62 and IC803 are written in and settled EEPROMs.
Supply with each single article has not been carried out. In case you exchange by MAIN board, please put on IC62 and IC803 currently used with the model again.

Ref. No.	Part No.	Description			Remarks
Q41	8-729-922-10	TRANSISTOR	2SA1577-T106-QR		
Q71	8-729-423-52	TRANSISTOR	2SC3931-C-TX		
Q84	8-729-602-21	TRANSISTOR	2SC4154TP-1F		
Q85	8-729-053-44	TRANSISTOR	2SK880GR-TE85L		
Q86	8-729-602-21	TRANSISTOR	2SC4154TP-1F		
Q408	6-550-396-01	TRANSISTOR	2SB16990LSO		
Q601	8-729-054-79	TRANSISTOR	2SB167900LSO		
Q801	8-729-427-72	TRANSISTOR	XP4501-TXE		
		< RESISTOR >			
R1	1-218-973-11	RES-CHIP	47K	5%	1/16W
R3	1-218-961-11	RES-CHIP	4.7K	5%	1/16W
R4	1-218-985-11	RES-CHIP	470K	5%	1/16W
R5	1-218-985-11	RES-CHIP	470K	5%	1/16W (US,CND)
R6	1-218-965-11	RES-CHIP	10K	5%	1/16W
R7	1-218-985-11	RES-CHIP	470K	5%	1/16W
R8	1-218-985-11	RES-CHIP	470K	5%	1/16W
R9	1-218-973-11	RES-CHIP	47K	5%	1/16W
R10	1-218-961-11	RES-CHIP	4.7K	5%	1/16W
R12	1-218-953-11	RES-CHIP	1K	5%	1/16W
R16	1-218-957-11	RES-CHIP	2.2K	5%	1/16W (US,CND,E19,MX)
R18	1-218-990-11	SHORT CHIP	0		
R21	1-218-957-11	RES-CHIP	2.2K	5%	1/16W
R22	1-218-973-11	RES-CHIP	47K	5%	1/16W
R24	1-218-953-11	RES-CHIP	1K	5%	1/16W
R25	1-218-961-11	RES-CHIP	4.7K	5%	1/16W
R29	1-218-973-11	RES-CHIP	47K	5%	1/16W
R40	1-218-965-11	RES-CHIP	10K	5%	1/16W
R42	1-218-949-11	RES-CHIP	470	5%	1/16W
R43	1-218-953-11	RES-CHIP	1K	5%	1/16W
R47	1-218-961-11	RES-CHIP	4.7K	5%	1/16W
R48	1-218-965-11	RES-CHIP	10K	5%	1/16W
R49	1-218-977-11	RES-CHIP	100K	5%	1/16W
R50	1-218-965-11	RES-CHIP	10K	5%	1/16W
R51	1-218-965-11	RES-CHIP	10K	5%	1/16W
R52	1-218-953-11	RES-CHIP	1K	5%	1/16W
R53	1-218-977-11	RES-CHIP	100K	5%	1/16W (AEP)
R53	1-218-981-11	RES-CHIP	220K	5%	1/16W (E13,E19,MX)
R55	1-218-973-11	RES-CHIP	47K	5%	1/16W (AEP)
R55	1-218-977-11	RES-CHIP	100K	5%	1/16W (US,CND)
R55	1-218-981-11	RES-CHIP	220K	5%	1/16W (E13)
R55	1-218-989-11	RES-CHIP	1M	5%	1/16W (E19,MX)
R56	1-218-973-11	RES-CHIP	47K	5%	1/16W (E19,MX)
R56	1-218-977-11	RES-CHIP	100K	5%	1/16W (E13)
R56	1-218-981-11	RES-CHIP	220K	5%	1/16W (AEP)
R59	1-218-977-11	RES-CHIP	100K	5%	1/16W
R60	1-218-961-11	RES-CHIP	4.7K	5%	1/16W
R61	1-218-965-11	RES-CHIP	10K	5%	1/16W
R62	1-218-977-11	RES-CHIP	100K	5%	1/16W
R63	1-218-977-11	RES-CHIP	100K	5%	1/16W
R66	1-218-961-11	RES-CHIP	4.7K	5%	1/16W
R67	1-218-961-11	RES-CHIP	4.7K	5%	1/16W
R69	1-216-864-11	METAL CHIP	0	5%	1/16W
R70	1-216-864-11	METAL CHIP	0	5%	1/16W
R71	1-218-977-11	RES-CHIP	100K	5%	1/16W
R72	1-218-949-11	RES-CHIP	470	5%	1/16W
R73	1-218-953-11	RES-CHIP	1K	5%	1/16W
R75	1-218-985-11	RES-CHIP	470K	5%	1/16W
R76	1-218-985-11	RES-CHIP	470K	5%	1/16W
R77	1-218-990-11	SHORT CHIP	0		
R80	1-218-965-11	RES-CHIP	10K	5%	1/16W
R81	1-218-990-11	SHORT CHIP	0		
R82	1-218-961-11	RES-CHIP	4.7K	5%	1/16W
R83	1-218-977-11	RES-CHIP	100K	5%	1/16W
R84	1-218-949-11	RES-CHIP	470	5%	1/16W
R85	1-218-961-11	RES-CHIP	4.7K	5%	1/16W
R86	1-218-945-11	RES-CHIP	220	5%	1/16W
R89	1-218-965-11	RES-CHIP	10K	5%	1/16W
R90	1-218-953-11	RES-CHIP	1K	5%	1/16W
R91	1-218-990-11	SHORT CHIP	0 (AEP,E13)		
R121	1-218-969-11	RES-CHIP	22K	5%	1/16W (EXCEPT AEP)
R121	1-218-973-11	RES-CHIP	47K	5%	1/16W (AEP)
R122	1-218-973-11	RES-CHIP	47K	5%	1/16W
R154	1-208-635-11	RES-CHIP	10	5%	1/16W
R162	1-218-969-11	RES-CHIP	22K	5%	1/16W
R221	1-218-969-11	RES-CHIP	22K	5%	1/16W (EXCEPT AEP)
R221	1-218-973-11	RES-CHIP	47K	5%	1/16W (AEP)
R303	1-216-295-91	SHORT CHIP	0		
R310	1-218-990-11	SHORT CHIP	0		
R311	1-218-990-11	SHORT CHIP	0		
R320	1-218-990-11	SHORT CHIP	0		
R322	1-218-957-11	RES-CHIP	2.2K	5%	1/16W
R324	1-218-941-81	RES-CHIP	100	5%	1/16W
R325	1-218-965-11	RES-CHIP	10K	5%	1/16W
R328	1-218-990-11	SHORT CHIP	0		
R333	1-218-957-11	RES-CHIP	2.2K	5%	1/16W
R334	1-218-965-11	RES-CHIP	10K	5%	1/16W (EXCEPT AEP)
R334	1-218-961-11	RES-CHIP	4.7K	5%	1/16W (AEP)
R335	1-218-961-11	RES-CHIP	4.7K	5%	1/16W (AEP)
R335	1-218-965-11	RES-CHIP	10K	5%	1/16W (EXCEPT AEP)
R336	1-218-965-11	RES-CHIP	10K	5%	1/16W
R337	1-218-973-11	RES-CHIP	47K	5%	1/16W
R338	1-218-990-11	SHORT CHIP	0		
R340	1-218-977-11	RES-CHIP	100K	5%	1/16W
R341	1-218-973-11	RES-CHIP	47K	5%	1/16W
R404	1-218-969-11	RES-CHIP	22K	5%	1/16W
R406	1-220-804-11	RES-CHIP	2.2M	5%	1/16W
R411	1-208-943-11	METAL CHIP	220K	0.5%	1/16W
R412	1-208-927-11	METAL CHIP	47K	0.5%	1/16W
R413	1-218-969-11	RES-CHIP	22K	5%	1/16W
R415	1-218-985-11	METAL CHIP	470K	0.5%	1/16W

MAIN

Ref. No.	Part No.	Description			Remarks
R417	1-208-935-11	METAL CHIP	100K	0.5%	1/16W
R418	1-208-935-11	METAL CHIP	100K	0.5%	1/16W
R419	1-218-973-11	RES-CHIP	47K	5%	1/16W
R425	1-216-295-91	SHORT CHIP	0		
R427	1-218-965-11	RES-CHIP	10K	5%	1/16W
R428	1-216-864-11	METAL CHIP	0	5%	1/16W
R438	1-218-965-11	RES-CHIP	10K	5%	1/16W
R440	1-218-989-11	RES-CHIP	1M	5%	1/16W
R448	1-216-864-11	METAL CHIP	0	5%	1/16W
R452	1-208-943-11	METAL CHIP	220K	0.5%	1/16W
R453	1-218-989-11	RES-CHIP	1M	5%	1/16W
R459	1-218-977-11	RES-CHIP	100K	5%	1/16W
R460	1-218-941-81	RES-CHIP	100	5%	1/16W
R480	1-218-989-11	RES-CHIP	1M	5%	1/16W
R490	1-208-943-11	METAL CHIP	220K	0.5%	1/16W
R491	1-208-927-11	METAL CHIP	47K	0.5%	1/16W
R492	1-208-927-11	METAL CHIP	47K	0.5%	1/16W
R496	1-216-864-11	METAL CHIP	0	5%	1/16W
R498	1-216-864-11	METAL CHIP	0	5%	1/16W
R602	1-218-969-11	RES-CHIP	22K	5%	1/16W
R603	1-218-969-11	RES-CHIP	22K	5%	1/16W
R604	1-218-969-11	RES-CHIP	22K	5%	1/16W
R605	1-218-969-11	RES-CHIP	22K	5%	1/16W
R606	1-218-990-11	SHORT CHIP	0		
R608	1-244-161-81	RES-CHIP	2.2	5%	1/16W
R610	1-218-977-11	RES-CHIP	100K	5%	1/16W
R611	1-218-990-11	SHORT CHIP	0		
R612	1-218-937-11	RES-CHIP	47	5%	1/16W
R613	1-218-965-11	RES-CHIP	10K	5%	1/16W
R614	1-218-965-11	RES-CHIP	10K	5%	1/16W
R618	1-218-957-11	RES-CHIP	2.2K	5%	1/16W
R619	1-218-957-11	RES-CHIP	2.2K	5%	1/16W
R621	1-218-965-11	RES-CHIP	10K	5%	1/16W
R622	1-218-989-11	RES-CHIP	1M	5%	1/16W
R623	1-218-981-11	RES-CHIP	220K	5%	1/16W
R624	1-218-965-11	RES-CHIP	10K	5%	1/16W
R625	1-218-985-11	RES-CHIP	470K	5%	1/16W
R626	1-218-990-11	SHORT CHIP	0		
R628	1-218-969-11	RES-CHIP	22K	5%	1/16W
R629	1-218-973-11	RES-CHIP	47K	5%	1/16W
R630	1-218-973-11	RES-CHIP	47K	5%	1/16W
R632	1-218-977-11	RES-CHIP	100K	5%	1/16W
R633	1-218-977-11	RES-CHIP	100K	5%	1/16W
R638	1-218-990-11	SHORT CHIP	0		
R639	1-218-990-11	SHORT CHIP	0		
R640	1-218-990-11	SHORT CHIP	0		
R641	1-218-990-11	SHORT CHIP	0		
R642	1-218-990-11	SHORT CHIP	0		
R643	1-218-990-11	SHORT CHIP	0		
R644	1-218-990-11	SHORT CHIP	0		
R645	1-218-990-11	SHORT CHIP	0		
R646	1-218-990-11	SHORT CHIP	0		
R647	1-218-990-11	SHORT CHIP	0		
R648	1-218-977-11	RES-CHIP	100K	5%	1/16W
R649	1-218-949-11	RES-CHIP	470	5%	1/16W
R651	1-218-990-11	SHORT CHIP	0		
R662	1-218-973-11	RES-CHIP	47K	5%	1/16W
R663	1-218-977-11	RES-CHIP	100K	5%	1/16W
R670	1-218-961-11	RES-CHIP	4.7K	5%	1/16W
R702	1-216-864-11	METAL CHIP	0	5%	1/16W
R707	1-218-977-11	RES-CHIP	100K	5%	1/16W
R716	1-218-965-11	RES-CHIP	10K	5%	1/16W
R722	1-218-945-11	RES-CHIP	220	5%	1/16W
R728	1-218-977-11	RES-CHIP	100K	5%	1/16W
R731	1-218-989-11	RES-CHIP	1M	5%	1/16W
R732	1-218-989-11	RES-CHIP	1M	5%	1/16W
R733	1-218-989-11	RES-CHIP	1M	5%	1/16W
R735	1-218-965-11	RES-CHIP	10K	5%	1/16W
R802	1-218-957-11	RES-CHIP	2.2K	5%	1/16W
R805	1-218-977-11	RES-CHIP	100K	5%	1/16W
R806	1-218-977-11	RES-CHIP	100K	5%	1/16W
R812	1-208-707-11	METAL CHIP	10K	0.5%	1/16W
R813	1-208-707-11	METAL CHIP	10K	0.5%	1/16W
R817	1-218-990-11	SHORT CHIP	0 (AEP)		
R820	1-218-990-11	SHORT CHIP	0		
R821	1-218-990-11	SHORT CHIP	0		
R822	1-218-990-11	SHORT CHIP	0		
R823	1-218-990-11	SHORT CHIP	0		
R824	1-218-990-11	SHORT CHIP	0		
R826	1-218-989-11	RES-CHIP	1M	5%	1/16W
R827	1-218-961-11	RES-CHIP	4.7K	5%	1/16W
R828	1-220-804-11	RES-CHIP	2.2M	5%	1/16W
R830	1-218-985-11	RES-CHIP	470K	5%	1/16W
R831	1-218-989-11	RES-CHIP	1M	5%	1/16W
R840	1-218-965-11	RES-CHIP	10K	5%	1/16W
R850	1-218-990-11	SHORT CHIP	0		
R851	1-218-990-11	SHORT CHIP	0		
R866	1-218-965-11	RES-CHIP	10K	5%	1/16W
R868	1-218-973-11	RES-CHIP	47K	5%	1/16W
R875	1-218-965-11	RES-CHIP	10K	5%	1/16W
R877	1-218-977-11	RES-CHIP	100K	5%	1/16W
R878	1-216-864-11	METAL CHIP	0	5%	1/16W
R880	1-218-990-11	SHORT CHIP	0 (AEP)		
R881	1-218-990-11	SHORT CHIP	0 (AEP,E13)		
R886	1-218-977-11	RES-CHIP	100K	5%	1/16W
R903	1-218-953-11	RES-CHIP	1K	5%	1/16W
R935	1-218-977-11	RES-CHIP	100K	5%	1/16W
R942	1-218-973-11	RES-CHIP	47K	5%	1/16W
R949	1-218-977-11	RES-CHIP	100K	5%	1/16W
R970	1-218-977-11	RES-CHIP	100K	5%	1/16W
R972	1-218-965-11	RES-CHIP	10K	5%	1/16W
R1001	1-218-985-11	RES-CHIP	470K	5%	1/16W
		< SWITCH >			
S806	1-572-499-21	SWITCH, TACTIL (VOL +)			
S809	1-572-499-21	SWITCH, TACTIL (VOL -)			
S810	1-572-922-11	SWITCH, SLIDE (HOLD ➡)			
		< TRANSFORMER >			
T81	1-449-021-21	TRANSFORMER, DC/DC CONVERTER			
		< VARISTOR >			
VDR101	1-801-862-11	VARISTOR, CHIP (1608)			
VDR201	1-801-862-11	VARISTOR, CHIP (1608)			

Ref. No.	Part No.	Description			Remarks
VDR301	1-801-862-11	VARISTOR, CHIP (1608)			
VDR401	1-801-864-21	VARISTOR, CHIP (1608)			
VDR402	1-801-864-21	VARISTOR, CHIP (1608)			
VDR602	1-801-862-11	VARISTOR, CHIP (1608)			
VDR603	1-801-862-11	VARISTOR, CHIP (1608)			
VDR701	1-801-862-11	VARISTOR, CHIP (1608)			
VDR702	1-801-862-11	VARISTOR, CHIP (1608)			
		< VIBRATOR >			
X1	1-795-411-21	FILTER, CERAMIC (700MHz)			
X61	1-577-262-11	VIBRATOR, CRYSTAL (75KHz)			
X601	1-795-101-21	VIBRATOR, CERAMIC (16.93MHz)			
X701	1-795-392-41	VIBRATOR, CERAMIC (22.579MHz)			
**********					
*	A-4542-886-A	SWITCH BOARD, COMPLETE			
		**********			
		< CAPACITOR >			
C2001	1-125-837-91	CERAMIC CHIP	1uF	10%	6.3V
C2002	1-125-837-91	CERAMIC CHIP	1uF	10%	6.3V
C2003	1-125-837-91	CERAMIC CHIP	1uF	10%	6.3V
C2004	1-125-837-91	CERAMIC CHIP	1uF	10%	6.3V
		< CONNECTOR >			
CN2001	1-817-947-21	CONNECTOR, FFC/FPC (ZIF) 24P			
CN2002	1-818-128-11	CONNECTOR, FFC/FPC (ZIF) 20P			
		< RESISTOR >			
R2002	1-216-864-11	METAL CHIP	0	5%	1/16W
R2003	1-216-864-11	METAL CHIP	0	5%	1/16W
R2004	1-216-864-11	METAL CHIP	0	5%	1/16W
R2005	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R2006	1-216-837-11	METAL CHIP	22K	5%	1/16W
R2008	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R2010	1-216-833-11	METAL CHIP	10K	5%	1/16W
R2011	1-216-837-11	METAL CHIP	22K	5%	1/16W
R2012	1-216-837-11	METAL CHIP	22K	5%	1/16W
R2016	1-216-821-11	METAL CHIP	1K	5%	1/16W
R2017	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R2018	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R2019	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R2020	1-216-833-11	METAL CHIP	10K	5%	1/16W
R2021	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R2022	1-216-864-11	METAL CHIP	0	5%	1/16W
R2023	1-216-864-11	METAL CHIP	0	5%	1/16W
R2024	1-216-864-11	METAL CHIP	0	5%	1/16W
R2025	1-216-864-11	METAL CHIP	0	5%	1/16W
R2026	1-216-864-11	METAL CHIP	0	5%	1/16W
		< SWITCH >			
S2001	1-786-650-21	SWITCH, TACTILE (BAND)			
S2002	1-786-650-21	SWITCH, TACTILE (DSPL/MENU ENTER)			
S2003	1-786-650-21	SWITCH, TACTILE (■)			
S2004	1-786-650-21	SWITCH, TACTILE (SCROLL ∧)			
S2005	1-786-650-21	SWITCH, TACTILE (SCROLL ∨)			
S2007	1-786-650-21	SWITCH, TACTILE (▶II)			
S2008	1-786-650-21	SWITCH, TACTILE (▶▶I)			
S2009	1-786-650-21	SWITCH, TACTILE (I◀◀)			

Ref. No.	Part No.	Description	Remarks
S2010	1-786-650-21	SWITCH, TACTILE (+ 🗀 /TUNE)	
S2011	1-786-650-21	SWITCH, TACTILE (– 🗀 /TUNE)	
**********			
		MISCELLANEOUS	
		**********	
	1-805-467-11	DISPLAY PANEL, LIQUID CRYSTAL	
	1-828-428-11	CABLE, FLEXIBLE FLAT 20P	
**********			
		ACCESSORIES	
		**********	
⚠	1-477-661-11	ADAPTOR, AC (AC-ET455K)(CND, MX)	
⚠	1-477-662-11	ADAPTOR, AC (AC-ET455K)(AEP, E13,E19)	
	1-542-514-13	HEADPHONE (HP-M070)(CND, AEP, E13)	
	1-542-548-11	HEADPHONE (HP-M133)(US, E19, MX)	
	1-543-798-11	FILTER, CLAMP (FERRITE CORE)(EXCEPT US)	
	3-263-346-11	MANUAL, INSTRUCTION (SS 2.0)(SonicStage) (ENGLISH)(US, E13, E19, MX)	
	3-263-346-21	MANUAL, INSTRUCTION (SS 2.0)(SonicStage) (ENGLISH, FRENCH, SPANISH)(CND, AEP)	
	3-263-346-31	MANUAL, INSTRUCTION (SS 2.0)(SonicStage) (GERMAN, ITALIAN, HUNGARIAN)(AEP)	
	3-263-346-41	MANUAL, INSTRUCTION (SS 2.0)(SonicStage) (POLISH, CZECH)(AEP)	
	3-263-346-51	MANUAL, INSTRUCTION (SS 2.0)(SonicStage) (SIMPLIFIED CHINESE)(E13)	
	3-263-346-61	MANUAL, INSTRUCTION (SS 2.0)(SonicStage) (SPANISH)(US, E19, MX)	
	3-263-346-71	MANUAL, INSTRUCTION (SS 2.0)(SonicStage) (AEP)	
	3-263-390-11	MANUAL, INSTRUCTION (ENGLISH) (US, E13, E19, MX)	
	3-263-390-21	MANUAL, INSTRUCTION (ENGLISH, FRENCH, SPANISH)(CND, AEP)	
	3-263-390-31	MANUAL, INSTRUCTION (GERMAN, ITALIAN, HUNGARIAN)(AEP)	
	3-263-390-41	MANUAL, INSTRUCTION (POLISH, CZECH, RUSSIAN)(AEP)	
	3-263-390-51	MANUAL, INSTRUCTION (SIMPLIFIED CHINESE)(E13)	
	3-263-390-61	MANUAL, INSTRUCTION (SPANISH)(US, E19, MX)	
	3-265-095-01	BAG, CCP (MX, CND, US)	
	X-3385-129-5	APPLICATION (SS)(CD-ROM) ASSY (SonicStage)(US, CND)	
	X-3385-131-5	APPLICATION (SS)(CD-ROM) ASSY (SonicStage)(AEP)	
	X-3385-132-5	APPLICATION (SS)(CD-ROM) ASSY (SonicStage)(E13)	
	X-3385-133-5	APPLICATION (SS)(CD-ROM) ASSY (SonicStage)(E19)	
	X-3385-134-5	APPLICATION (SS)(CD-ROM) ASSY (SonicStage)(MX)	

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.

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	2004.02	New
1.1	2005.03	Change of Parts No. of APPLICATION (SS)(CD-ROM) ASSY (SPM-05026) Deletion of UK and E92 model Addition of E19 model