

# JVC

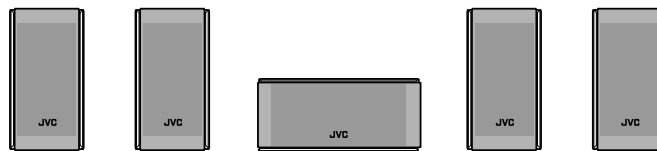
# SCHEMATIC DIAGRAMS

## DVD DIGITAL CINEMA SYSTEM

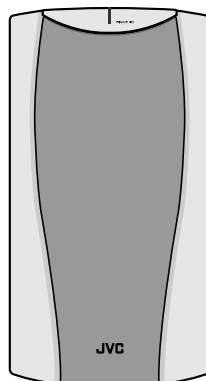
### TH-V70

CD-ROM No.SML200207

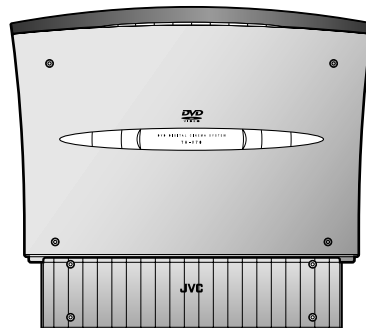
Area suffix	
A .....	Australia
US .....	Singapore
UB .....	Hong Kong
UX .....	Saudi Arabia



SP-XSV70 SP-XSV70 SP-XCV70 SP-XSV70 SP-XSV70



SP-PWV70



XV-THV70



**AV COMPU LINK**

*Digital Direct Progressive Scan*



### Contents

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Printed circuit boards .....	2-21 ~ 26

## TH-V70

In regard with component parts appearing on the silk-screen printed side (parts side) of the PWB diagrams, the parts that are printed over with black such as the resistor (■), diode (▬) and ICP (●) or identified by the "⚠" mark nearby are critical for safety.

(This regulation does not correspond to J and C version.)

# Block diagrams

## <Main body section>

### ■ Overall block diagram

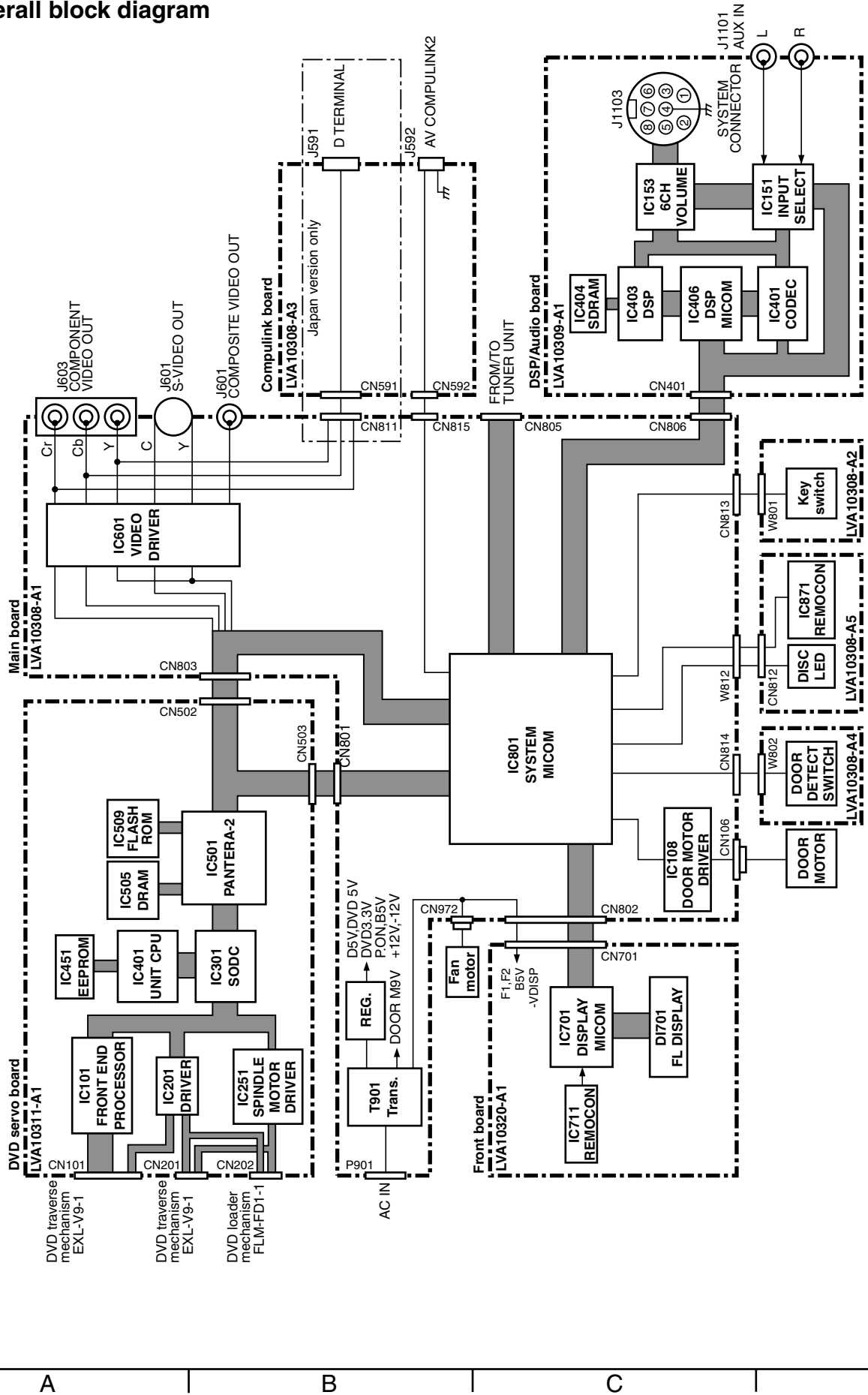
5

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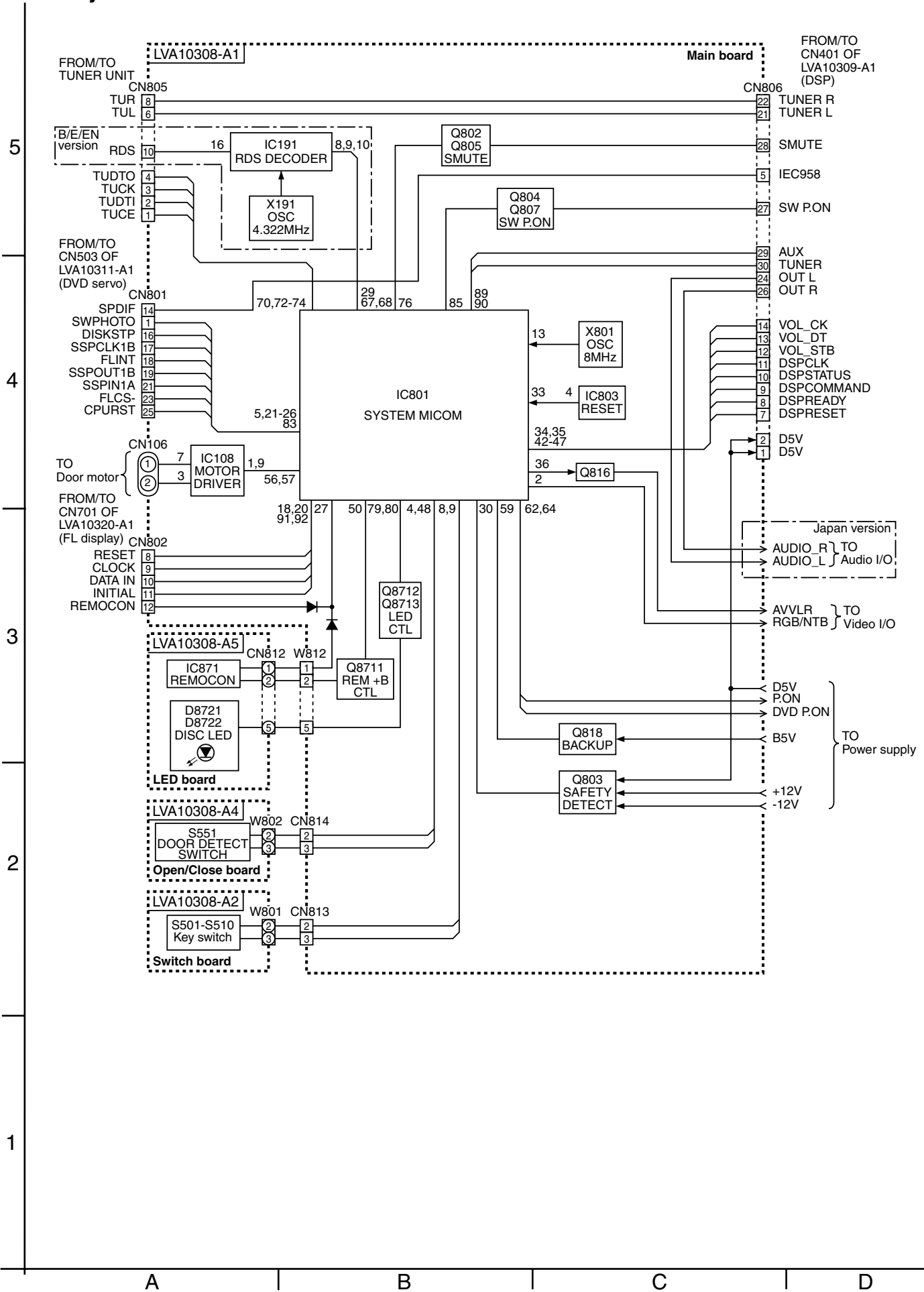
3

2

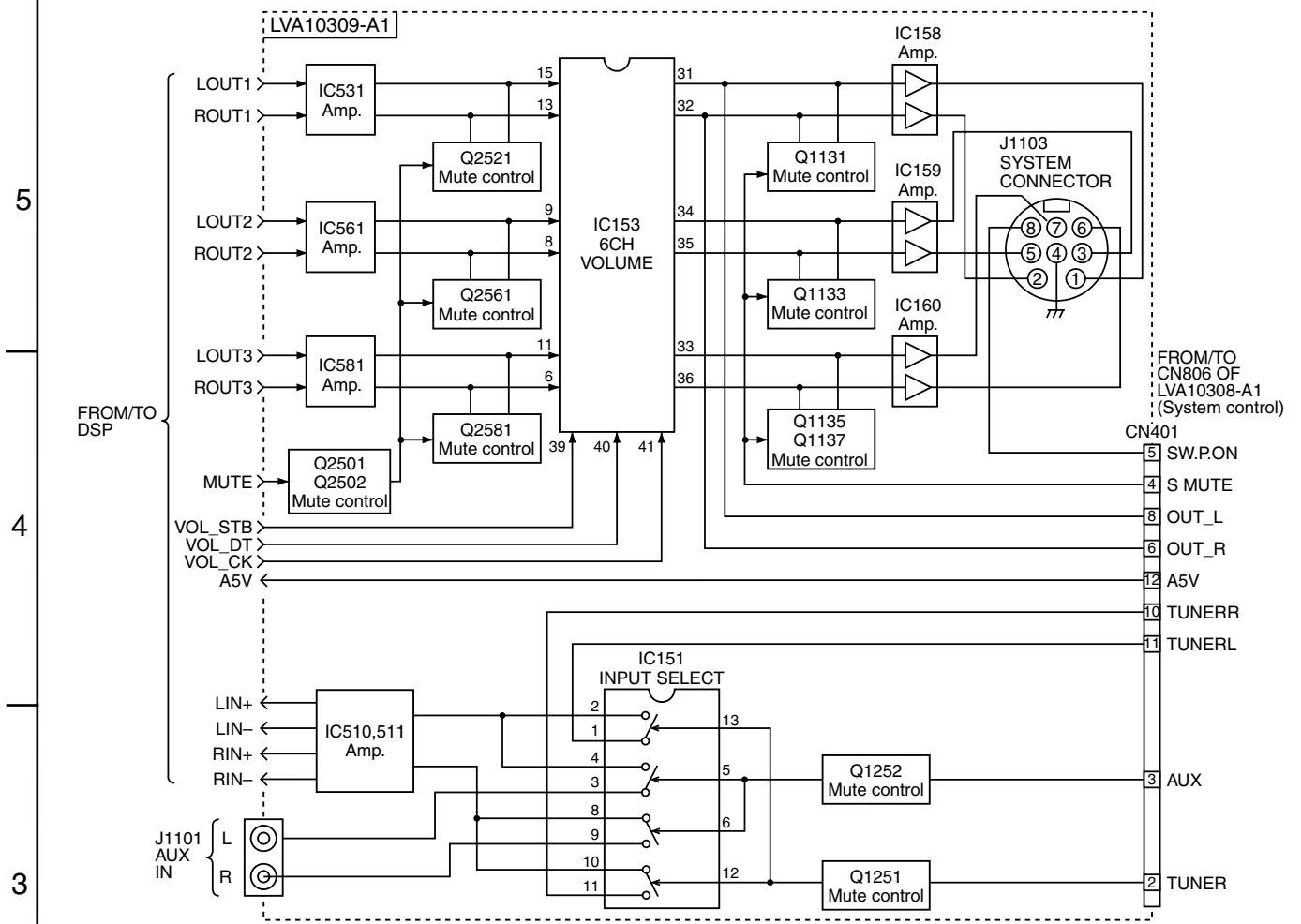
1



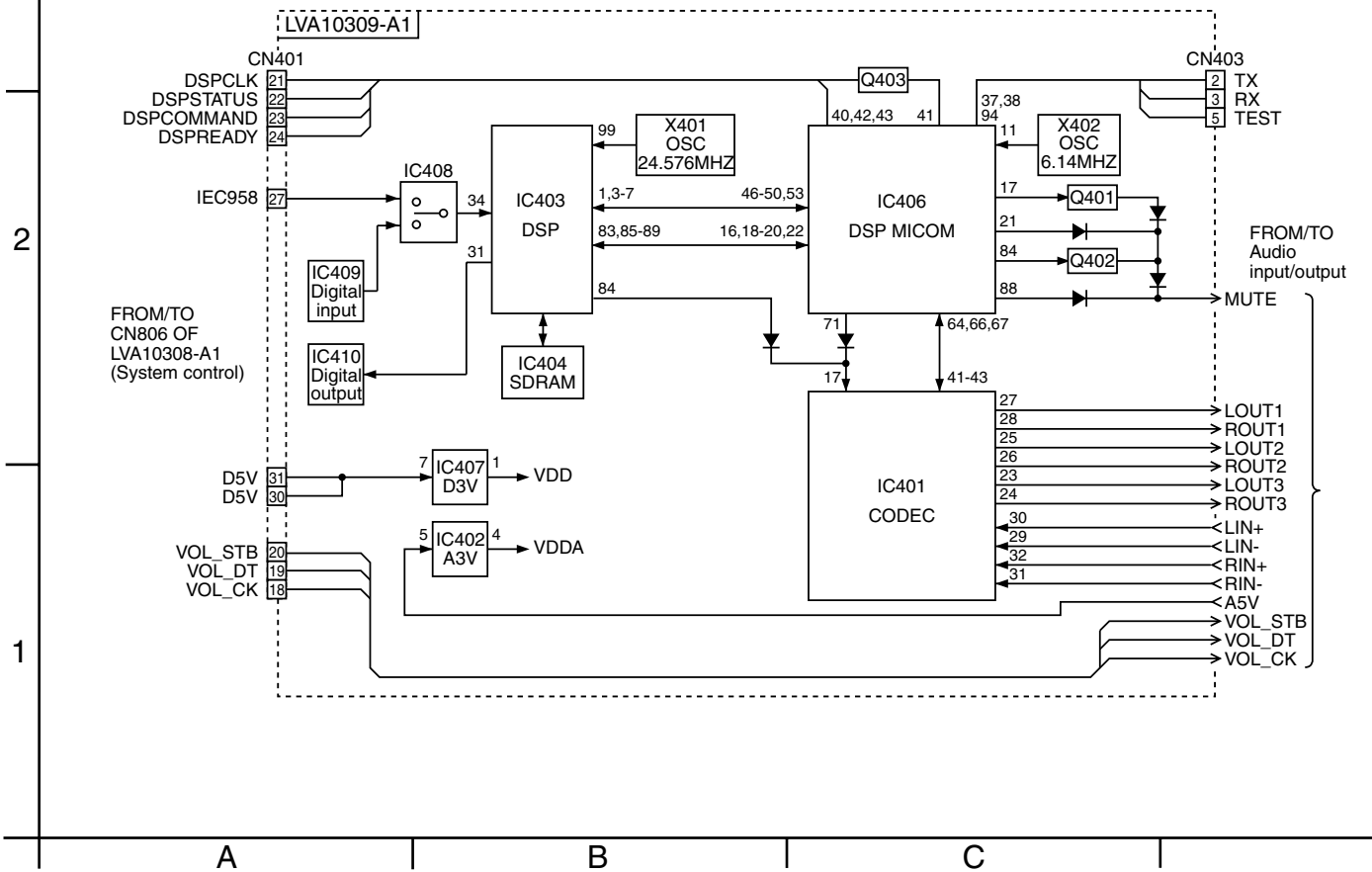
■ System control section



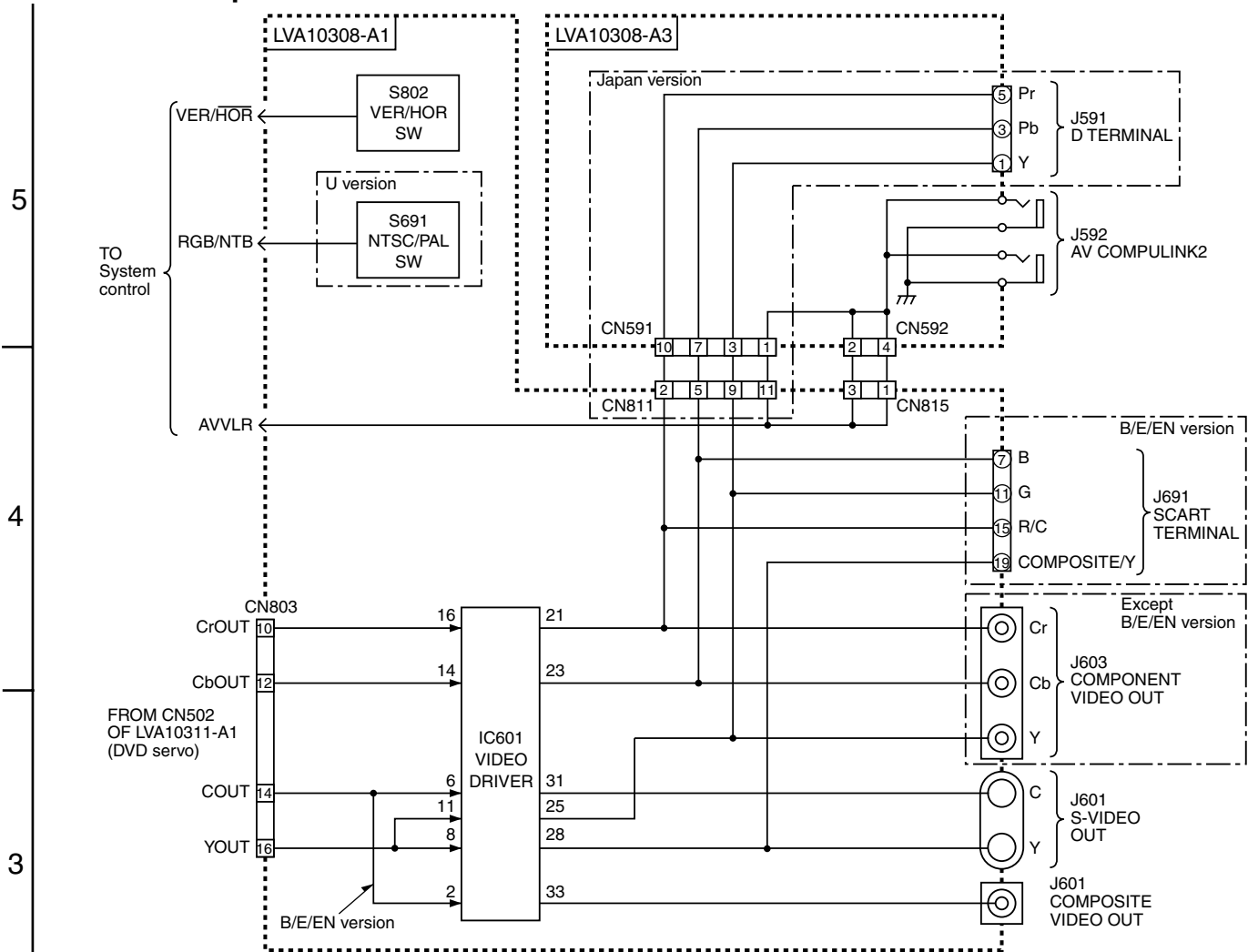
■ Audio input/output section



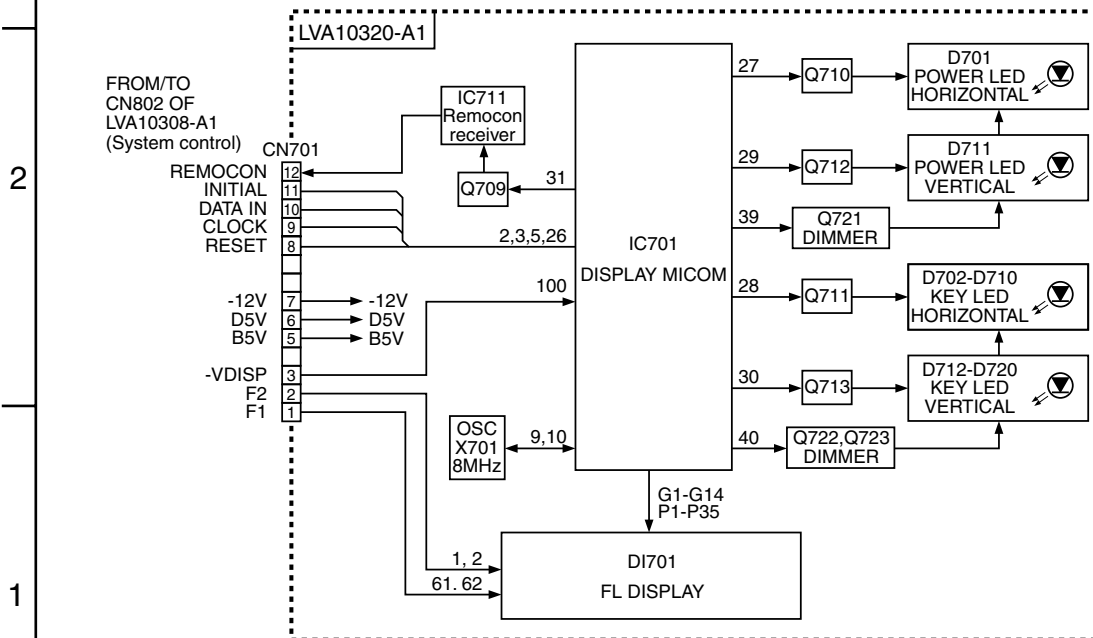
■ DSP section



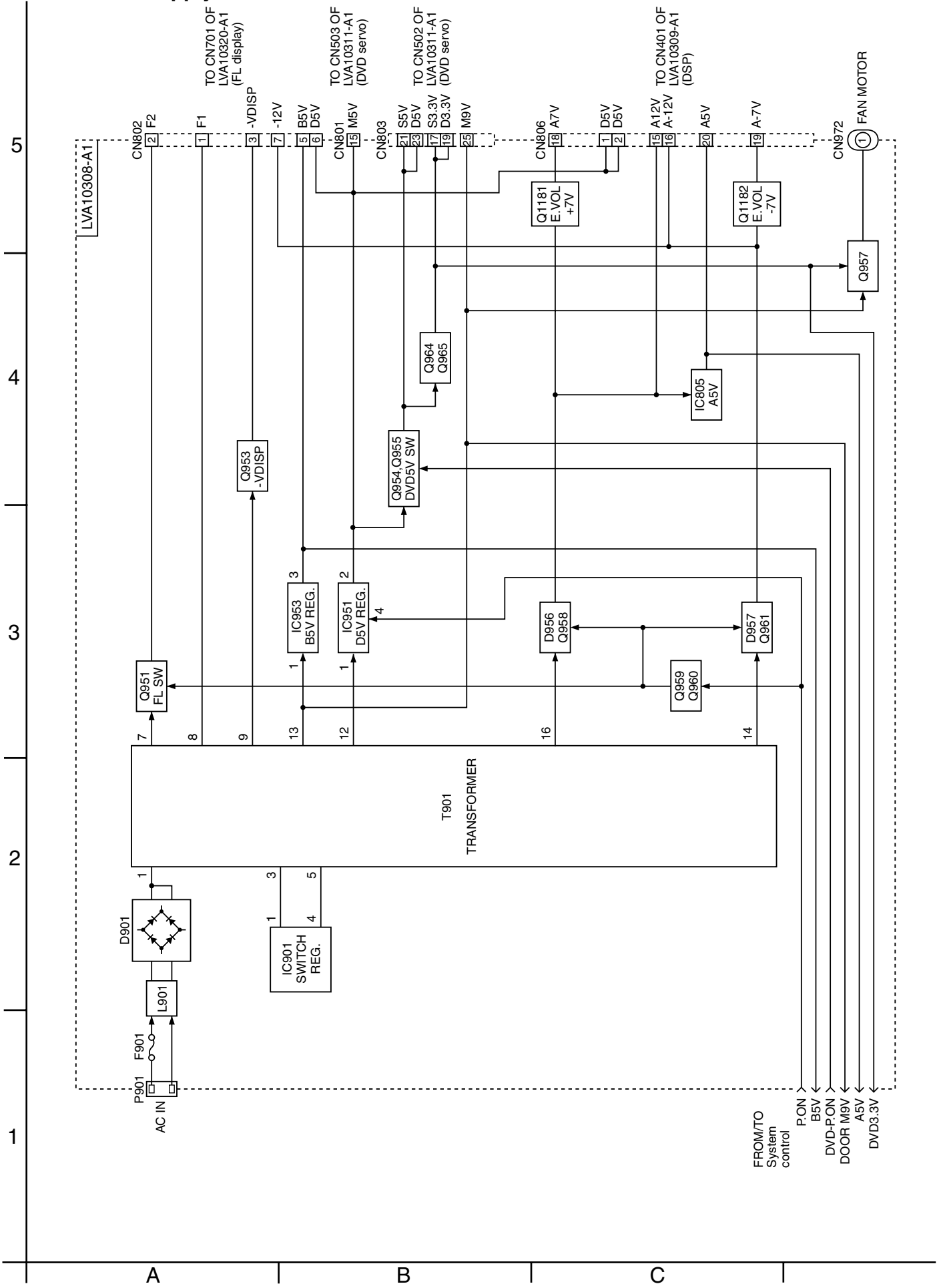
■ Video output section



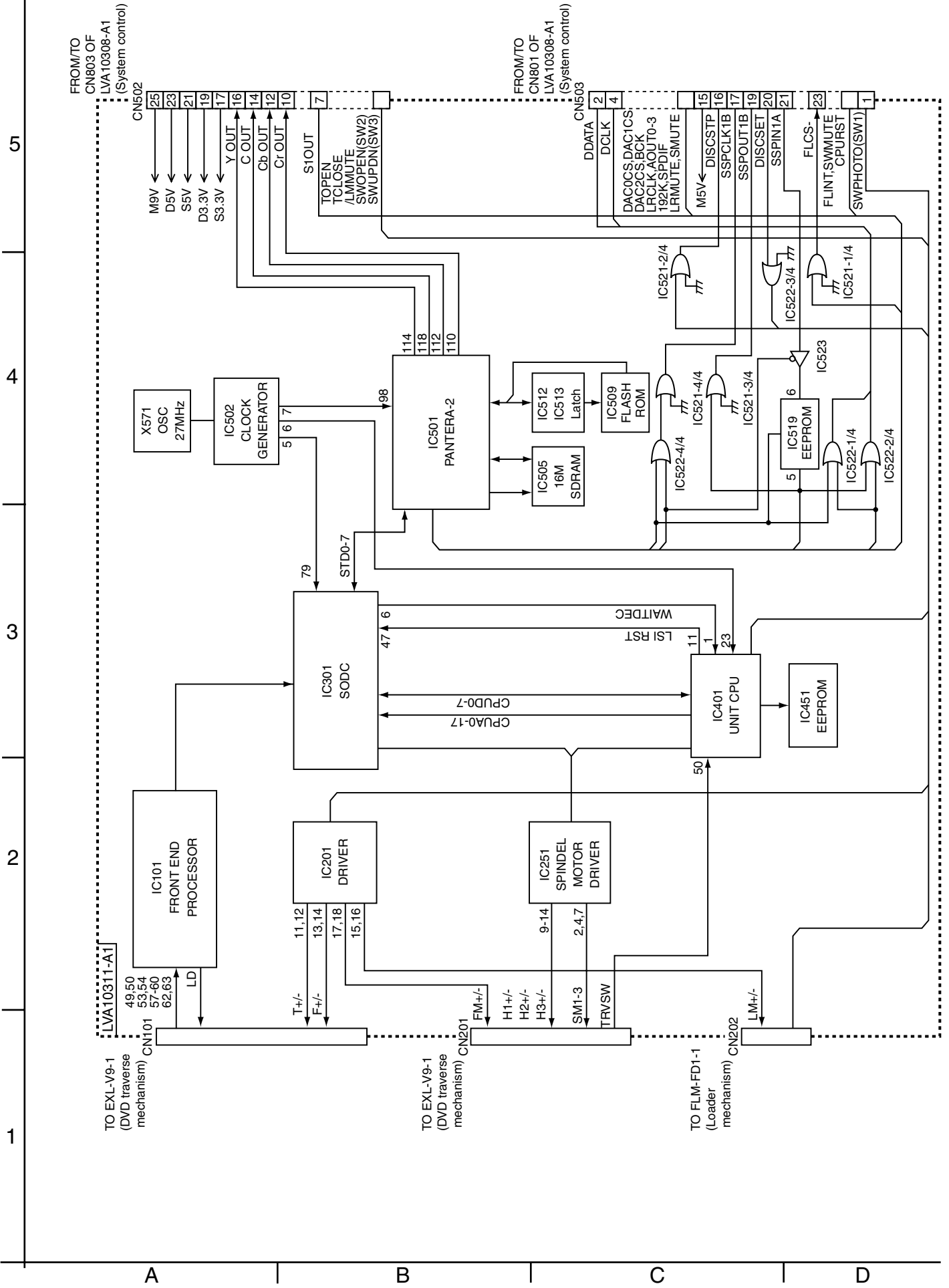
■ FL display section



■ Power supply section

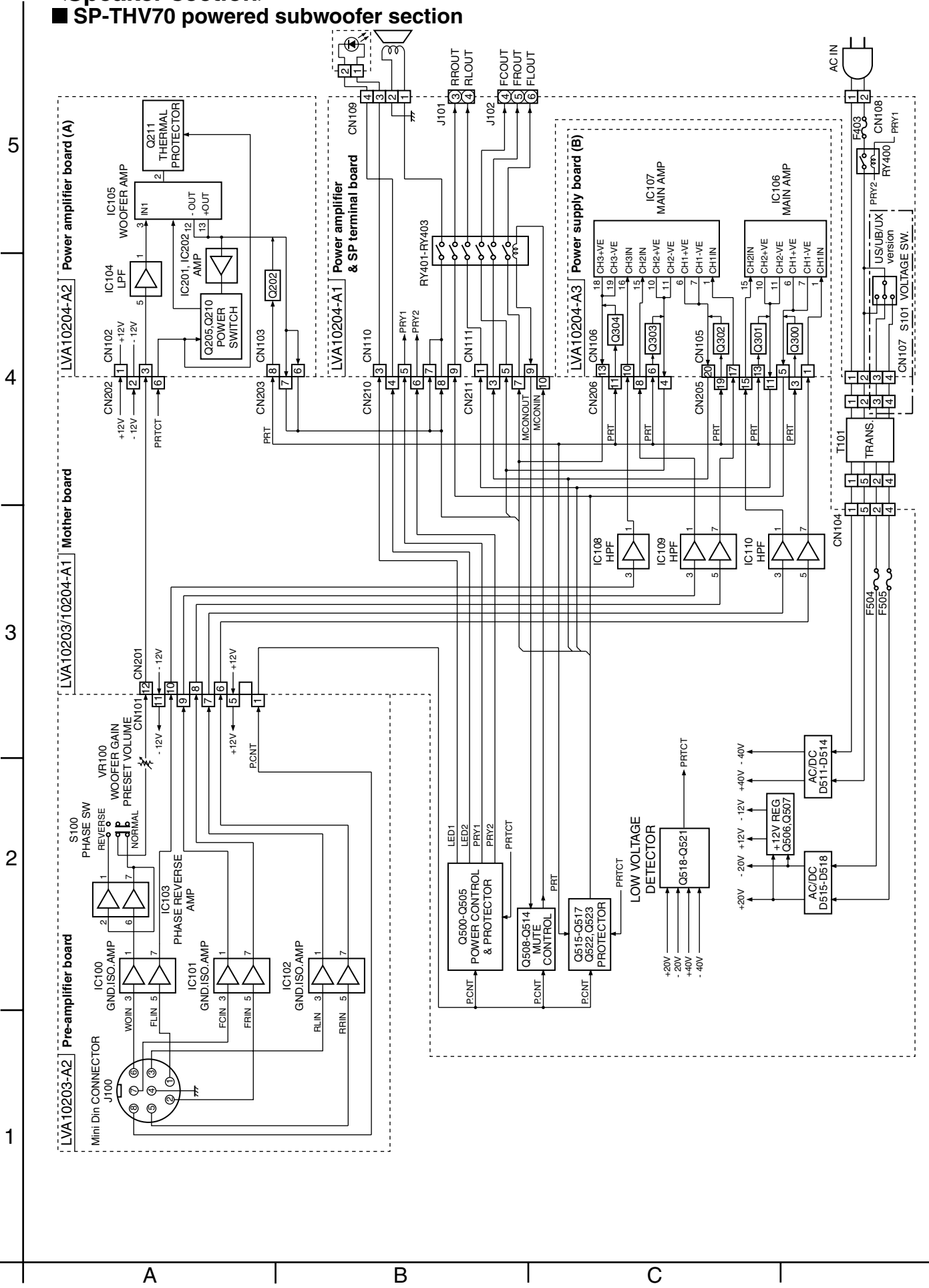


DVD servo section





<Speaker section>  
■ SP-THV70 powered subwoofer section



< MEMO >

# Standard schematic diagrams

## <Main body section>

### System control section

5  
4  
3  
2  
1

TO DVD  
TO CHECK OF  
LVA10311-A1

(To G-1 and G-2  
on page 2-16)

TO DVD  
TO CHECK OF  
LVA10311-A1

(To G-4 and G-5  
on page 2-16)

TO POWER BLOCK

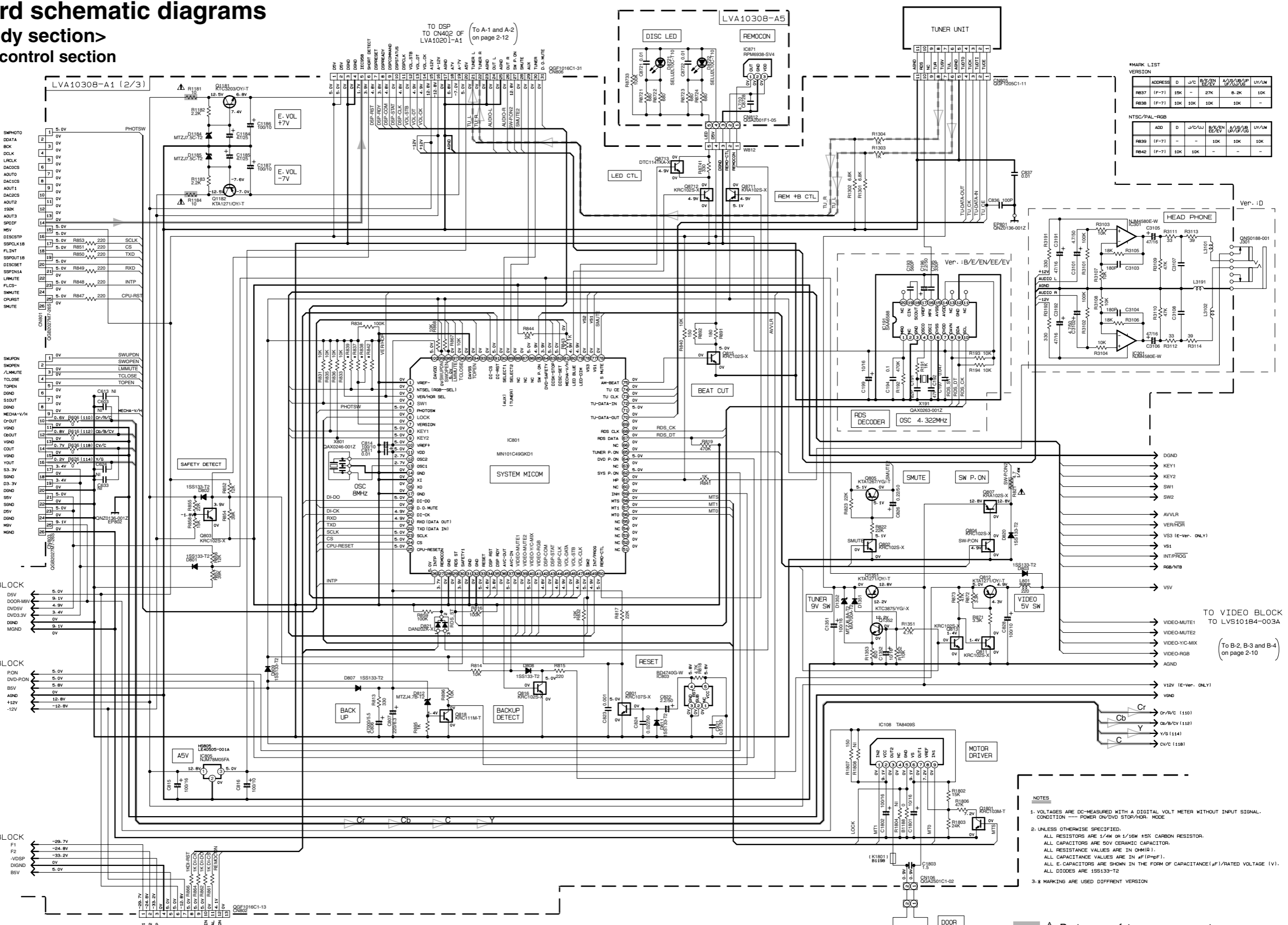
(To G-4  
on page 2-11)

TO POWER BLOCK

(To G-1 and G-2  
on page 2-11)

TO POWER BLOCK

(To G-5  
on page 2-11)



MARK LIST

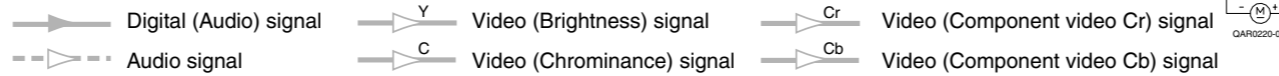
ADDRESS	D	J/C	REV	APP	U/V/W
R837 (F-7)	10K	-	27K	8-2K	10K
R838 (F-7)	10K	10K	10K	10K	-

ADD	D	J/C/U/W	REV	APP	U/V/W
R839 (F-7)	-	-	10K	10K	10K
R842 (F-7)	10K	10K	-	-	-

**NOTES**

1. VOLTAGES ARE DC-MEASURED WITH A DIGITAL VOLT METER WITHOUT INPUT SIGNAL. CONDITION --- POWER ON/DVD STOP/HDR. MODE
2. UNLESS OTHERWISE SPECIFIED. ALL RESISTORS ARE 1/4W OR 1/16W 1% CARBON RESISTOR. ALL CAPACITORS ARE 50V CERAMIC CAPACITOR. ALL RESISTANCE VALUES ARE IN OHM(Ω). ALL CAPACITANCE VALUES ARE IN μF(μF). ALL ELECTROLYTIC CAPACITORS ARE SHOWN IN THE FORM OF CAPACITANCE(μF)/RATED VOLTAGE (V).
3. \* MARKING ARE USED DIFFERENT VERSION



**Parts are safety assurance parts.**  
When replacing those parts make sure to use the specified one.

Video output section

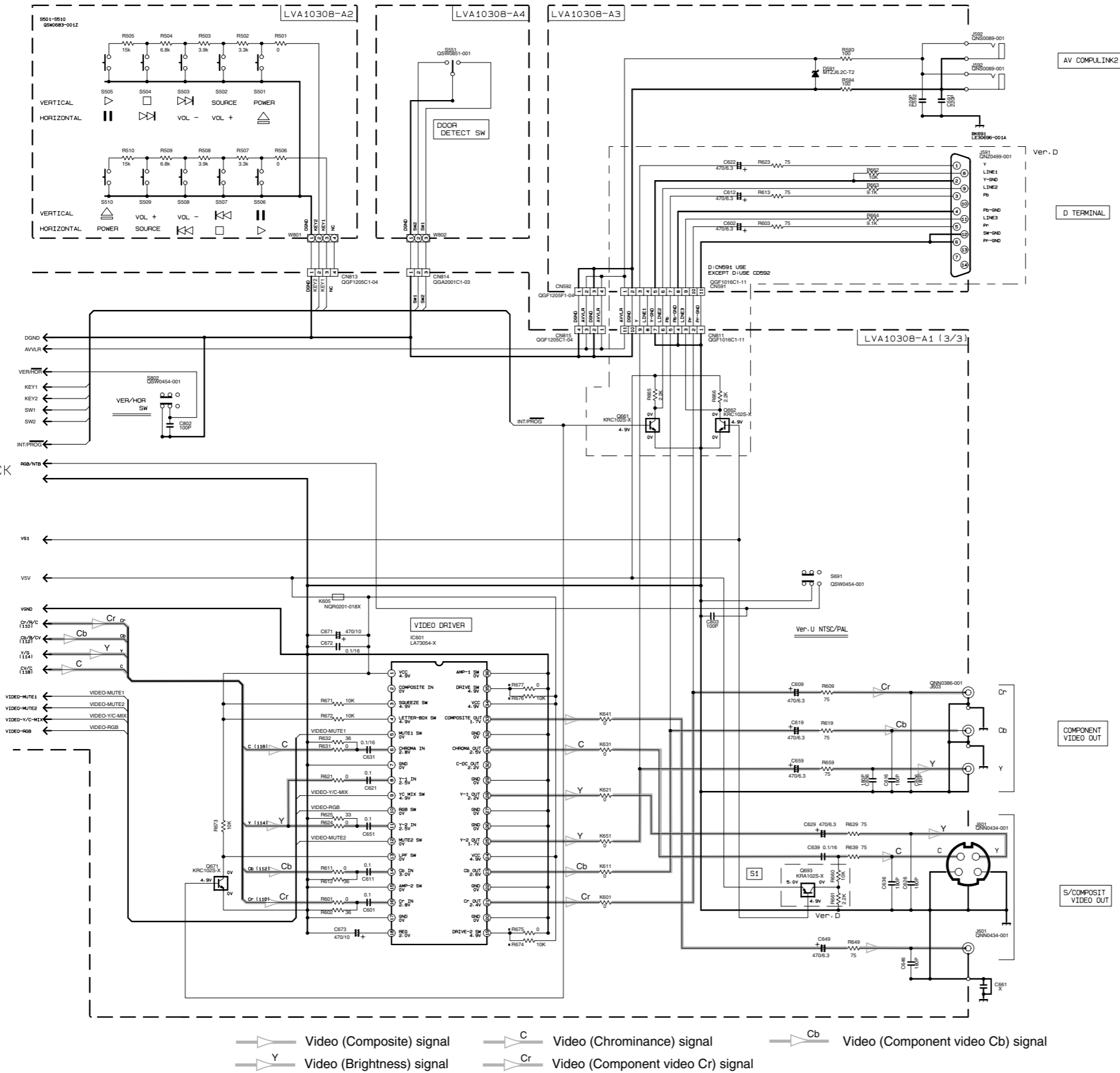
5

4

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2

1



TO MICOM BLOCK  
TO LVS101B4-002A  
(To G-2 and G-3 on page 2-9)

DVD VIDEO OUT

ALL VERSION	
Cv/Cv (118)	C
Y/S (114)	Y
Cb/Cb/Cv (112)	Cb
Cr/Cr/Cv (110)	Cr

IC601 INPUT SIGNAL

ALL VERSION	
B/COMPOSITE IN	---
B/CHROMA IN	C
B/Y-1 IN	Y
11/Y-2 IN	Y
14/Cb IN	Cb
16/Cr IN	Cr

MARK LIST

ADDRESS	D	J/C	OTHER VER.
R674 (1-101)	—	○	○
R675 (1-101)	○	—	—
R676 (1L-101)	○	○	—
R677 (1L-101)	—	—	○

- ▶ Video (Composite) signal
- ▶ Y Video (Brightness) signal
- ▶ C Video (Chrominance) signal
- ▶ Cr Video (Component video Cr) signal
- ▶ Cb Video (Component video Cb) signal

Power supply section

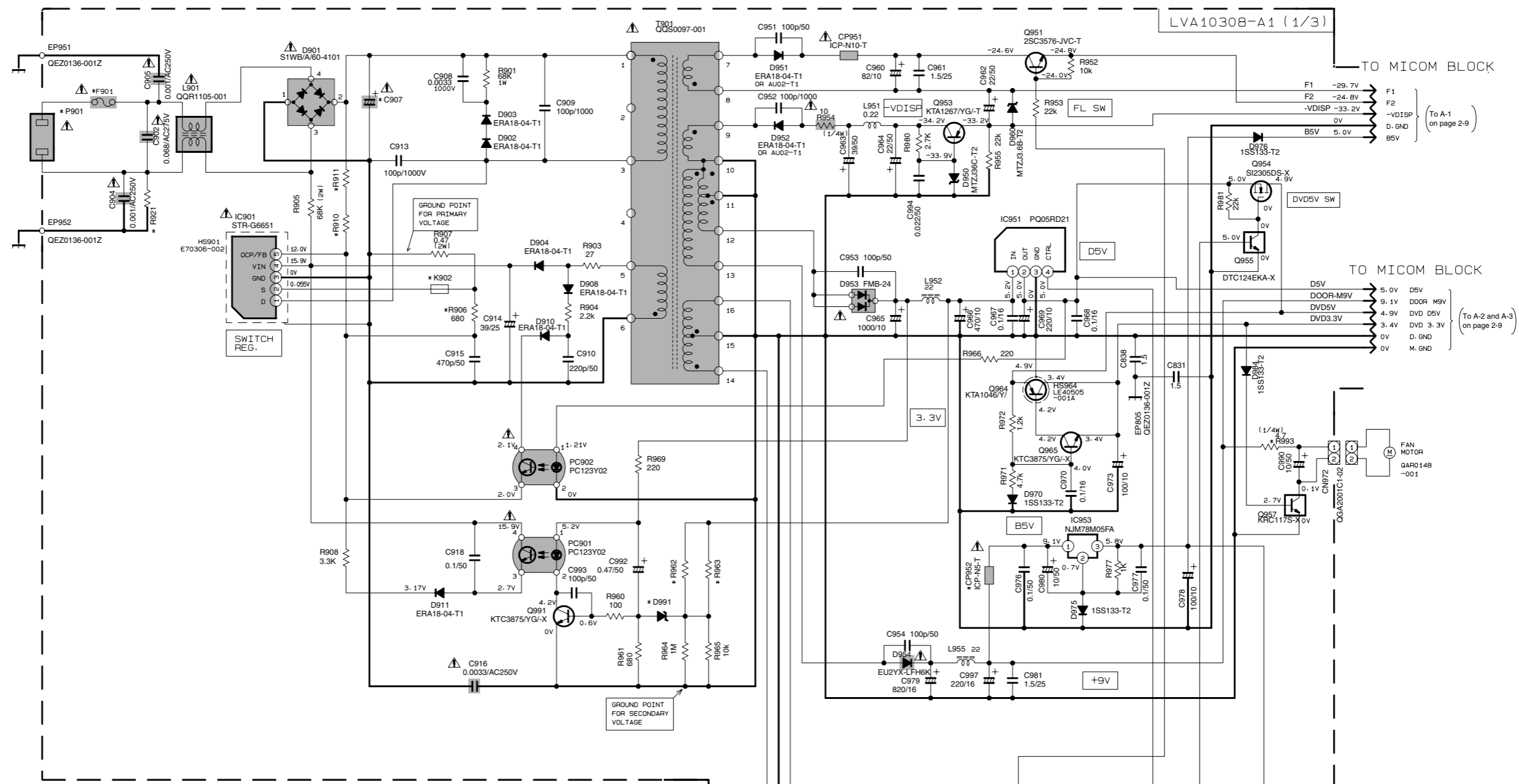
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4

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2

1



- Ver. J/C  
120V 60Hz
- Ver. D  
100V 50/60Hz
- Ver. B/A/E/EN/EE/EE  
230V 50Hz
- Ver. US/UW/UJ/UG  
110-230V 50/60Hz
- Ver. UP  
220V 60Hz
- Ver. UB/UF/UY  
220V 50Hz

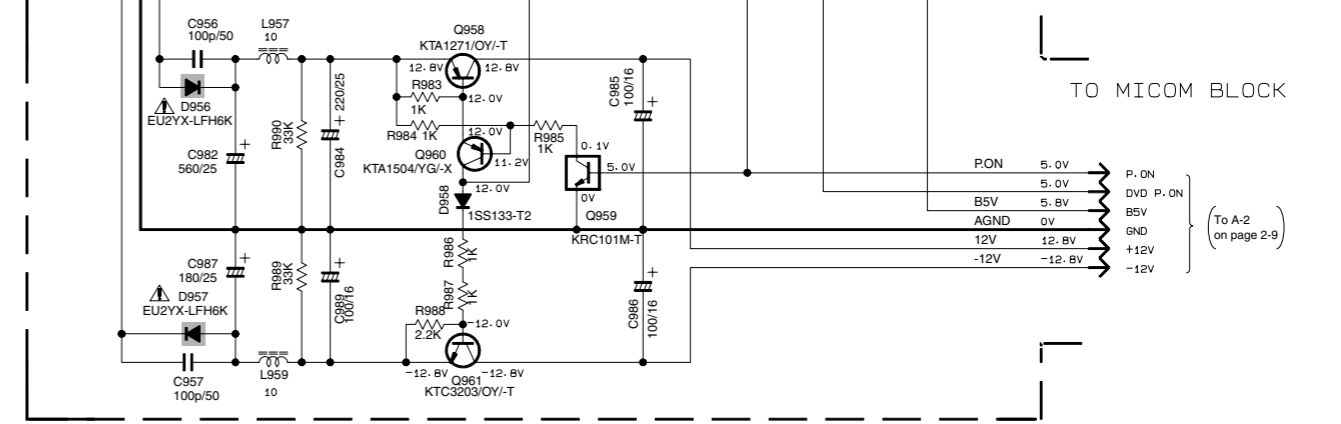
Ver	REF NO	ADDRESS	D	J/C	B/E/EN/EE/EV	US/US/UW/UJ/UP/UF/A/UB/UY/UX/UT
	*F901	[A-3]	GMF51U1-1R6-JB (1.6A/125V)	GMF51U1-1R6-JB (1.6A/125V)	GMF51E2-1R6-J1 (T1.6AL)	GMF51E2-1R6-J1 (T1.6AL)
	*R962	[E-7]	1M	1M	0 (B9099)	0 (B9099)
	*R963	[E-8]	100	100	NONE	NONE
	*R993	[D-12]	0 (B1149)	FR 4.7 (1/4W) (GR23006-4R7X)	0 (B1149)	0 (B1149)
	*D991	[F-7]	MTZJ5. 1C-T2	MTZJ5. 1C-T2	MTZJ5. 1B-T2	MTZJ5. 1B-T2
	*K902	[C-5]	QQR0779-001Z	QQR0779-001Z	0 (B9098)	0 (B9098)
	*R921	[B-3]	NONE	3.3M	NONE	NONE
	*P901	[B-2]	GNC0081-001	GNC0082-001	GNC0081-001	GNC0081-001
	*R910 *R911	[B-5]	750k	750k	470k	470k
	*CP952	[F-10]	0 (B1189)	0 (B1189)	ICP-N5-T	ICP-N5-T

Ver	REF NO	ADDRESS	D	J/C	B/E/EN/EE/EV A/UB/UP/UF/UY	US/UW/UJ/US/UX/UT
	*C907	[B-5]	QETM2DM-157 (150/200)	QETM2DM-157 (150/200)	QE20532-B25 (82/400)	QE20532-127 (82/400)

VERSION CODES

J: U. S. A.  
 C: CANADA  
 D: JAPAN  
 E: GERMANY/FRANCE/HOLLAND  
 EE: RUSSIA  
 EN: SWEDEN/NORWAY/FINLAND/DENMARK  
 B: GREAT BRITAIN  
 UW: BRAZIL/MEXICO/PERU  
 US: SINGAPOLE  
 UF: CHINA  
 UJ: USA MILITARY BASE  
 UG: TURKEY/EGYPT/SOUTHAFRICA  
 UP: KOREA  
 A: AUSTRALIA  
 EV: EAST EUROPE  
 UB: HONG KONG  
 UY: ARGENTINA  
 UX: SAUDI ARABIA  
 UT: TAIWAN



Parts are safety assurance parts. When replacing those parts make sure to use the specified one.

DSP section

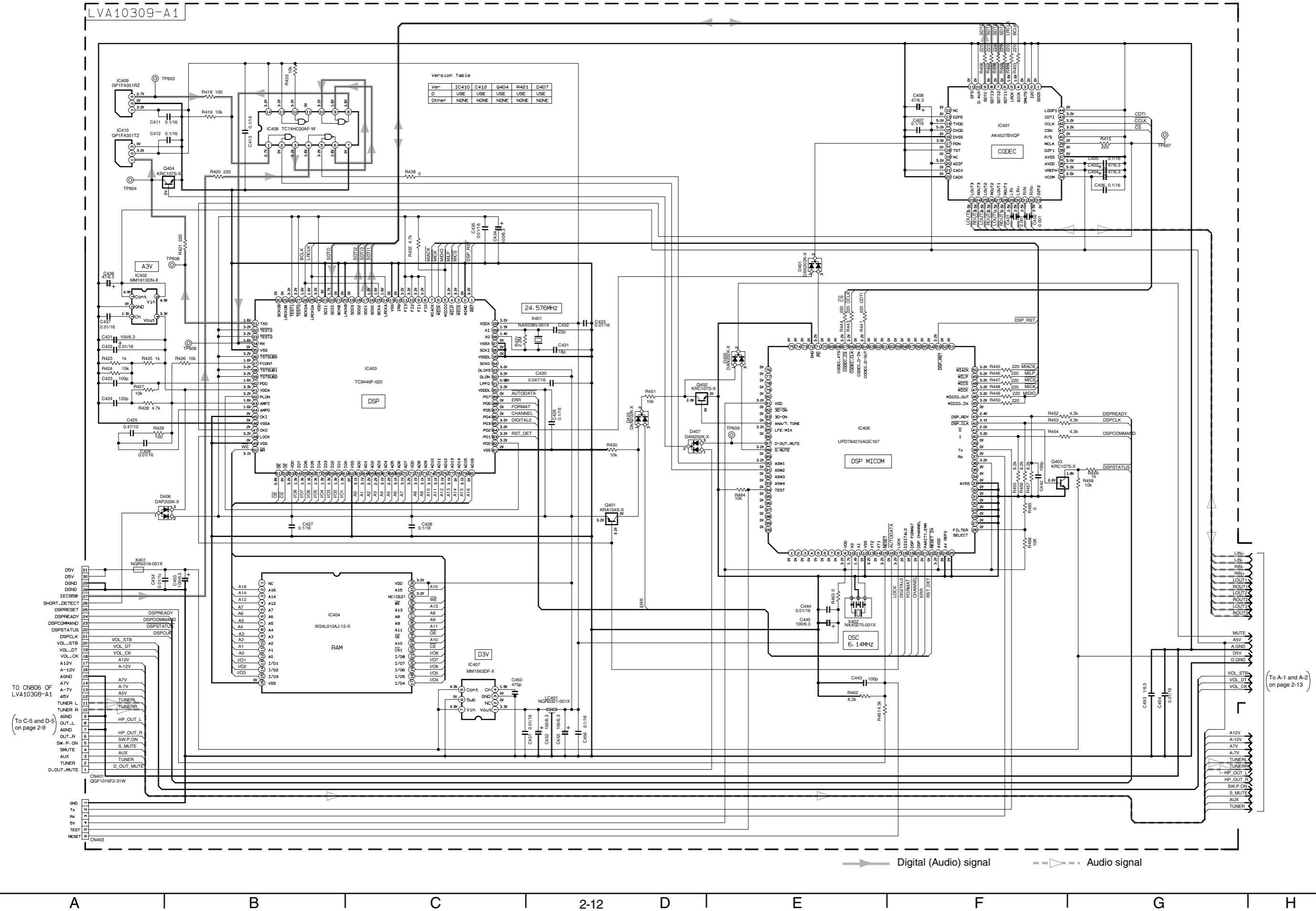
5

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DSV 31  
DSV 30  
DSND 29  
IEC95B 28  
SHORT\_DETECT 27  
DSPRESET 26  
DSPREADY 25  
DSPCOMMAND 24  
DSPSTATUS 23  
DSPCLK 22  
VOL\_STB 21  
VOL\_DT 20  
VOL\_DT 19  
VOL\_DT 18  
VOL\_DT 17  
A-12V 16  
A-12V 15  
AGND 14  
A7V 13  
A-7V 12  
ASV 11  
TUNER L 10  
TUNER R 9  
AGND 8  
OUT\_L 7  
OUT\_R 6  
SW.P.ON 5  
SMUTE 4  
AUX 3  
TUNER 2  
D.OUT\_MUTE 1

DSV 31  
DSV 30  
DSND 29  
IEC95B 28  
SHORT\_DETECT 27  
DSPRESET 26  
DSPREADY 25  
DSPCOMMAND 24  
DSPSTATUS 23  
DSPCLK 22  
VOL\_STB 21  
VOL\_DT 20  
VOL\_DT 19  
VOL\_DT 18  
VOL\_DT 17  
A-12V 16  
A-12V 15  
AGND 14  
A7V 13  
A-7V 12  
ASV 11  
TUNER L 10  
TUNER R 9  
AGND 8  
OUT\_L 7  
OUT\_R 6  
SW.P.ON 5  
SMUTE 4  
AUX 3  
TUNER 2  
D.OUT\_MUTE 1

TO CN806 OF LVA10308-A1  
(To C-5 and D-6 on page 2-9)

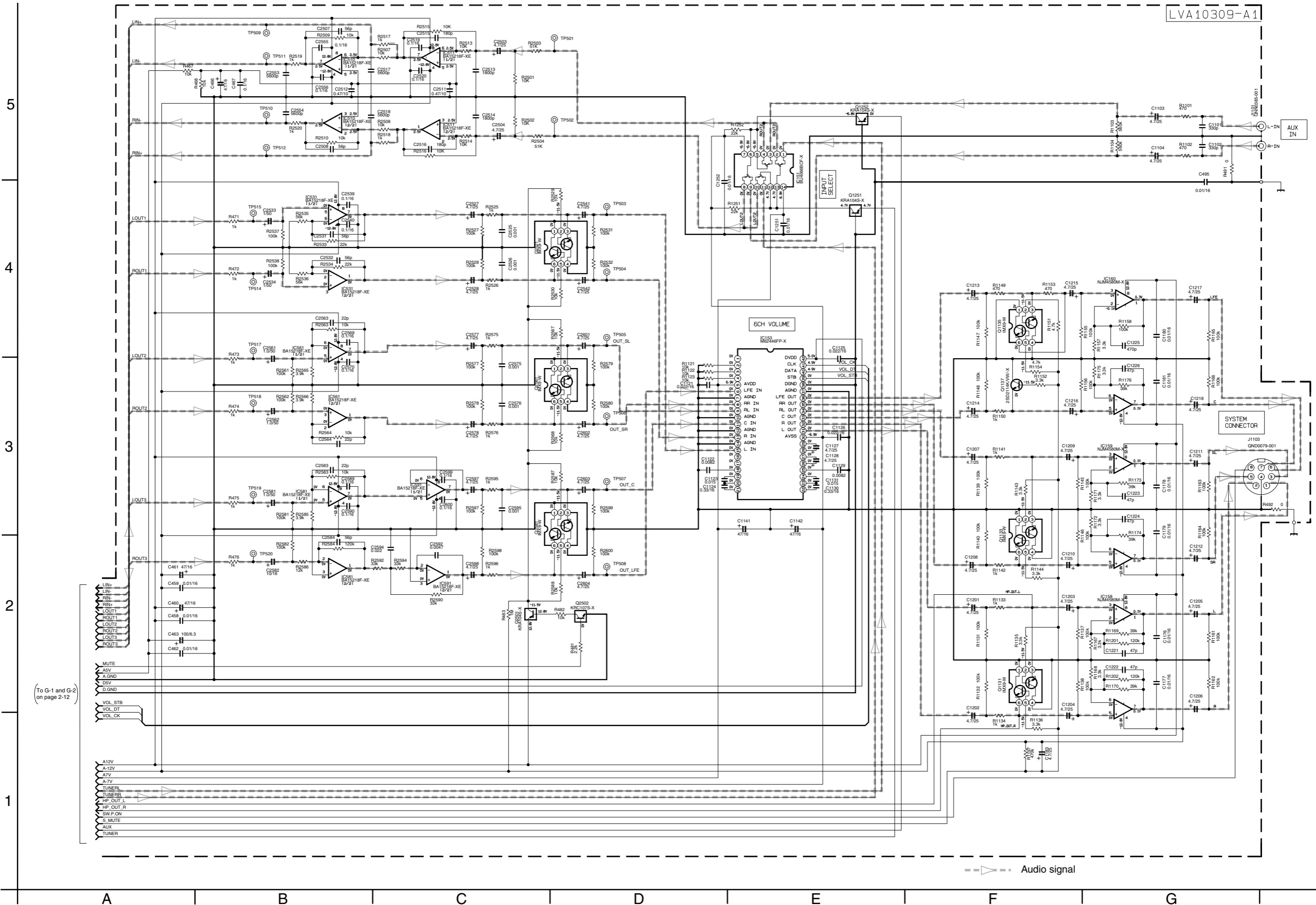
MUTE 31  
ASV 30  
A.GND 29  
DSV 28  
D.GND 27  
VOL\_STB 26  
VOL\_DT 25  
VOL\_DT 24

A12V 31  
A-12V 30  
A-7V 29  
A-7V 28  
TUNER L 27  
TUNER R 26  
HP\_OUT\_L 25  
HP\_OUT\_R 24  
SW.P.ON 23  
S.MUTE 22  
AUX 21  
TUNER 20

(To A-1 and A-2 on page 2-13)

Audio input/output section

LVA10309-A1



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4

3

2

1

To G-1 and G-2 on page 2-12

DVD servo section 1/4

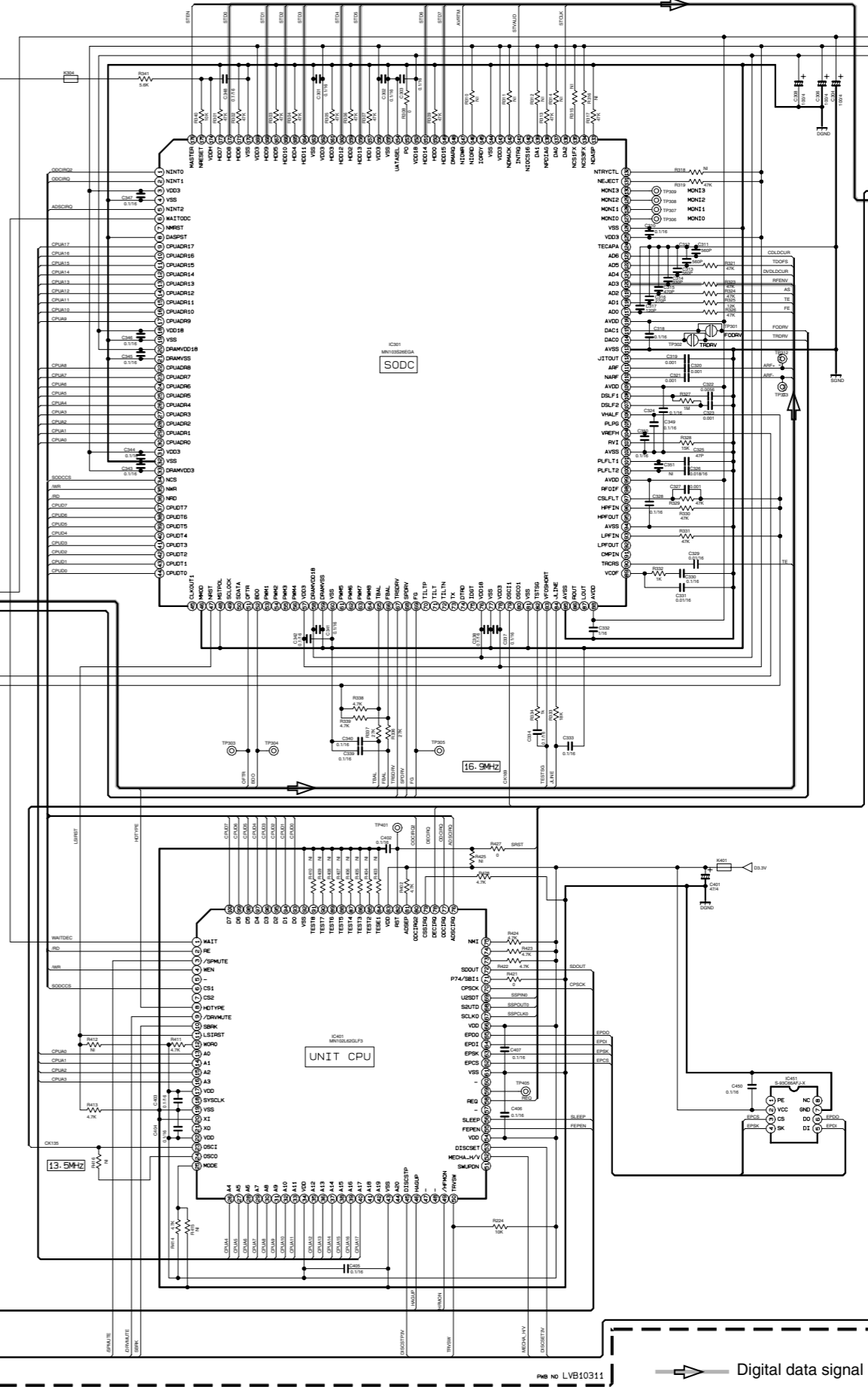
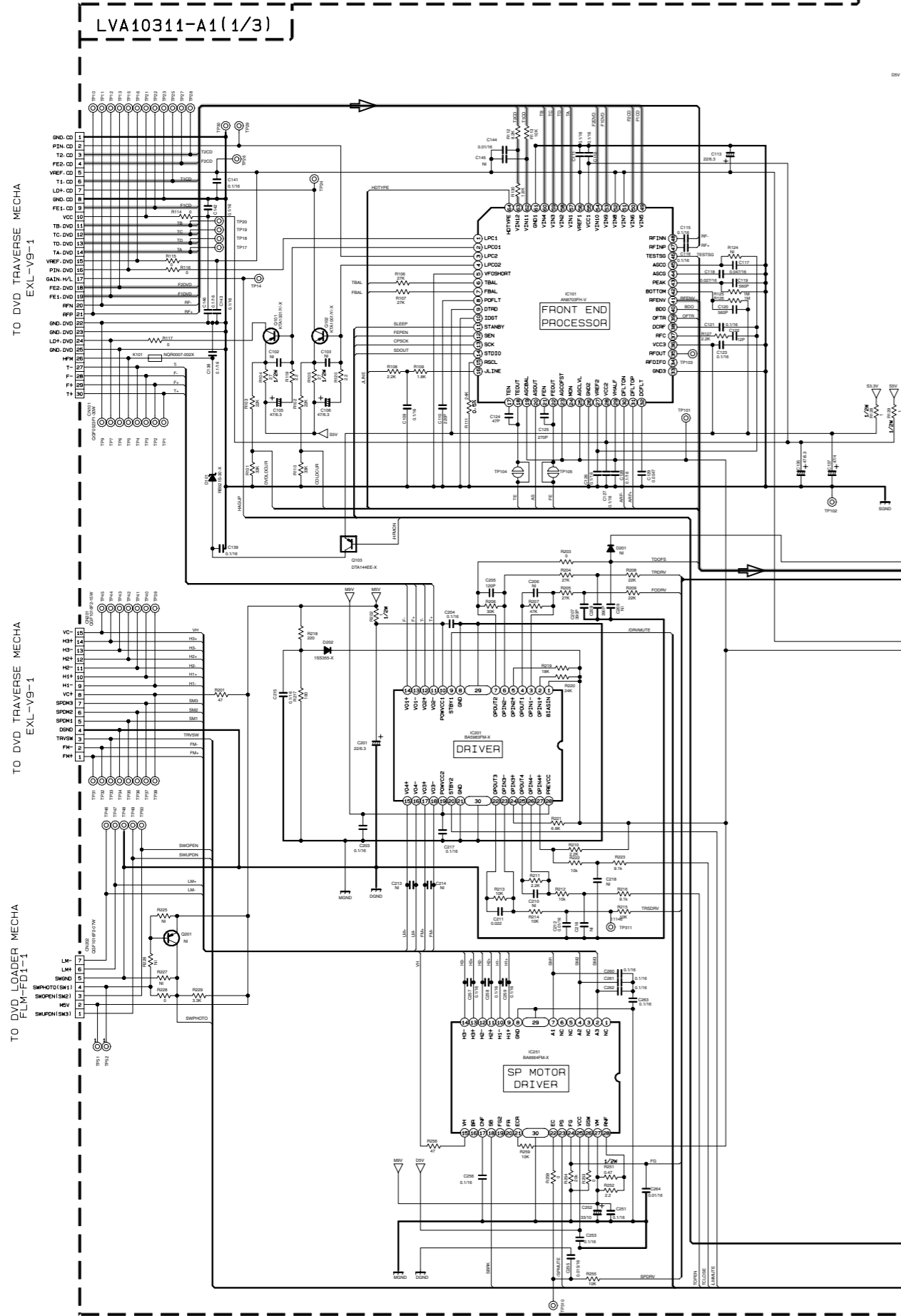
5

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(To A-5 on page 2-15)

(To A-1 on page 2-15)

Digital data signal



DVD servo section 2/4

LVA10311-A1 (2/3)

To G-5 on page 2-14

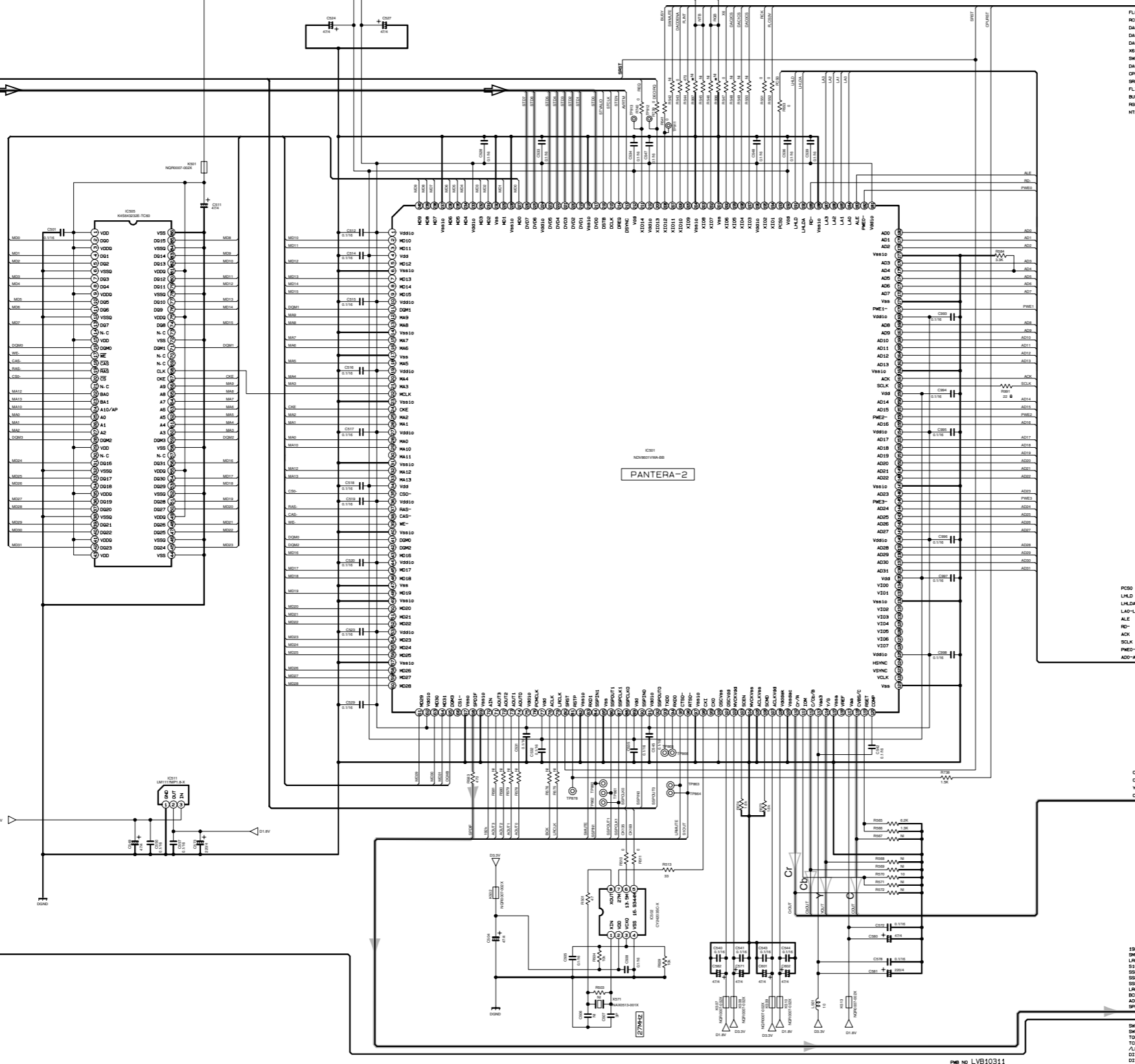
To G-1 on page 2-14

To A-5 on page 2-16

To A-3 on page 2-16

To A-2 on page 2-16

To A-1 on page 2-16

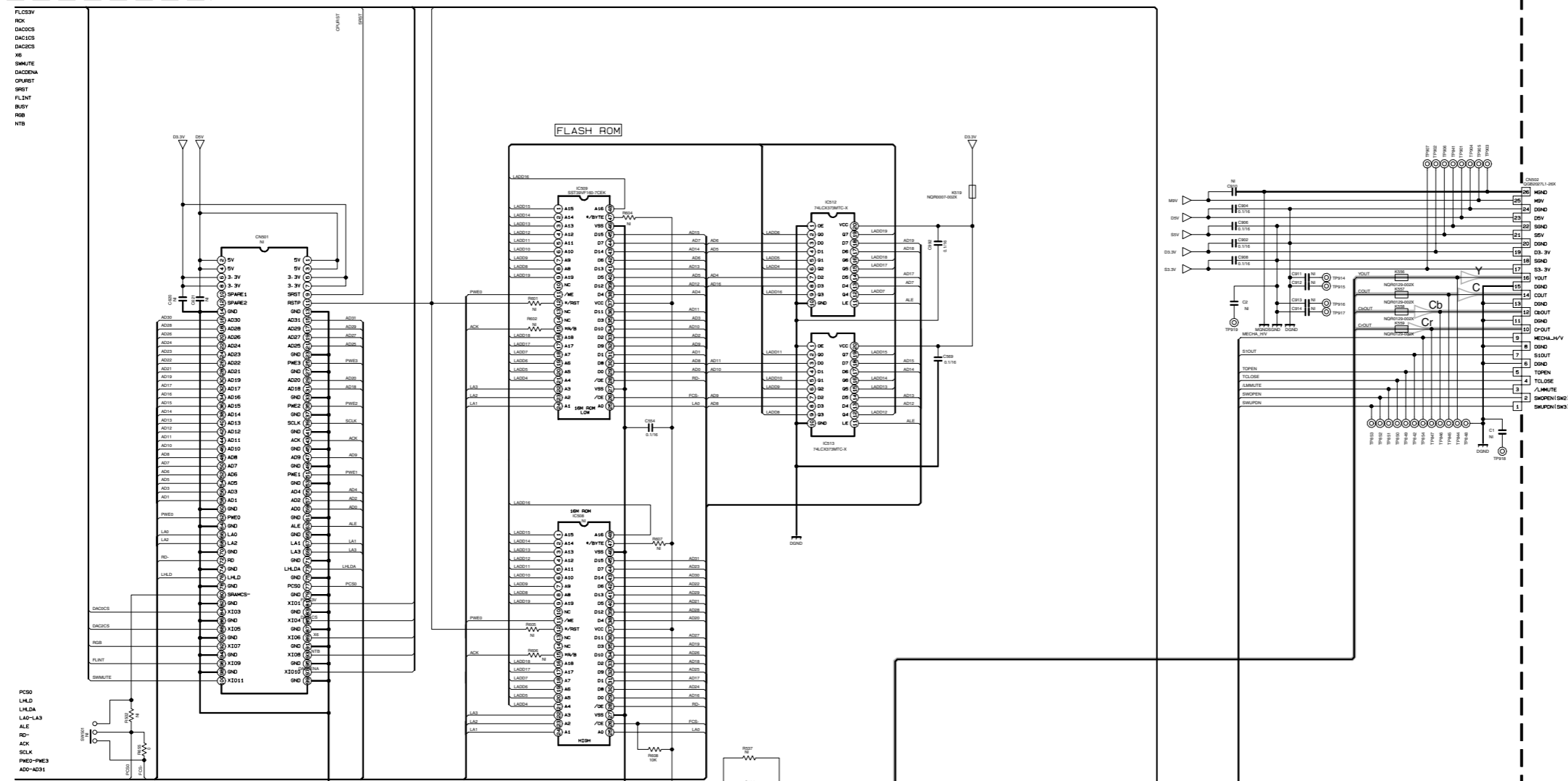


- Digital data signal
- Digital (Audio) signal
- Video (Brightness) signal
- Video (Chrominance) signal
- Video (Component video Cr) signal
- Video (Component video Cb) signal

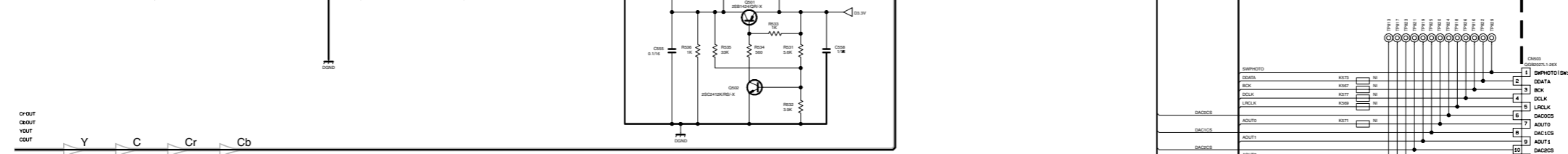
DVD servo section 3/4

LVA10311-A1(2/3)

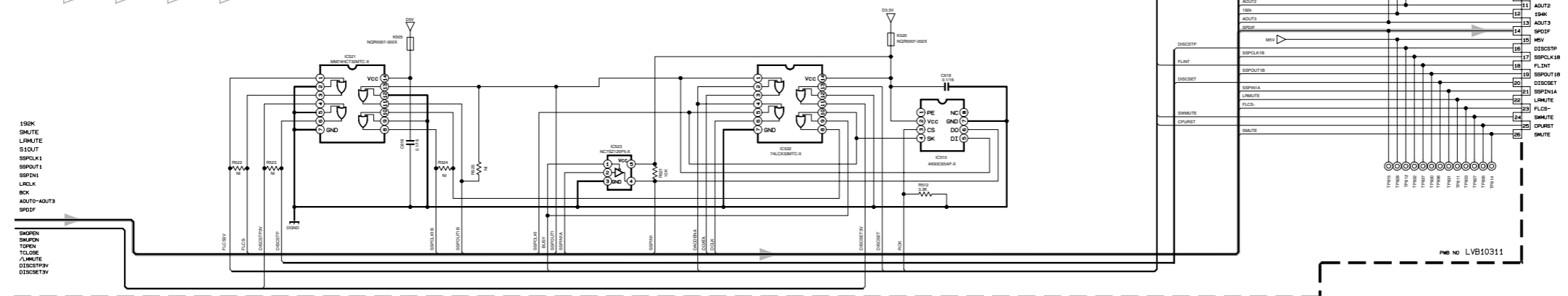
(To F-5  
on page 2-15)



(To F-2  
on page 2-15)



(To F-2  
on page 2-15)



(To F-1  
on page 2-15)

PHW NO LVB10311

TO MICOM BLOCK  
TO CNB03 OF  
LVA1030B-A1  
(To A-3 and A-4  
on page 2-9)

TO MICOM BLOCK  
TO CNB01 OF  
LVA1030B-A1  
(To A-4 and A-5  
on page 2-9)

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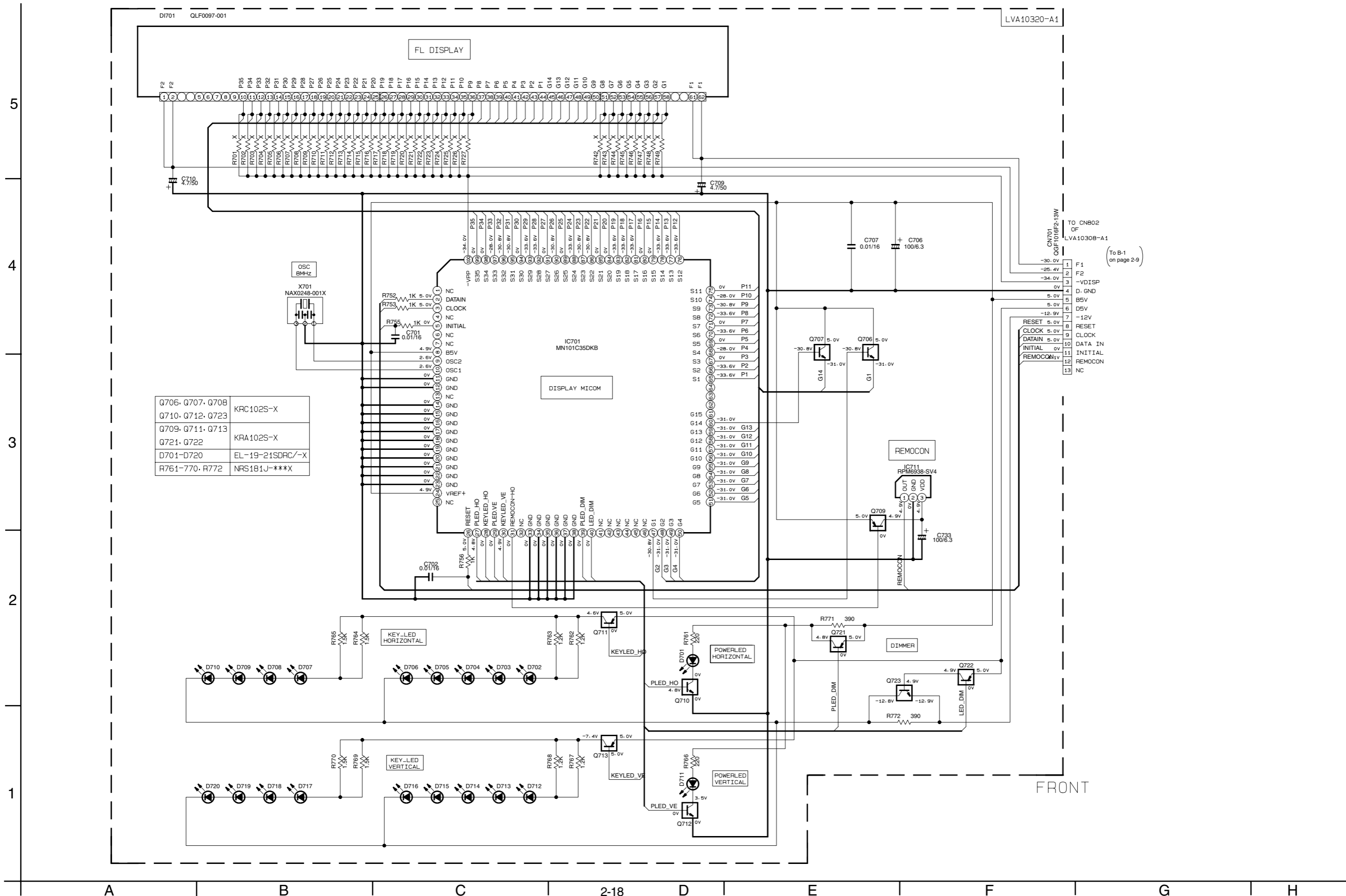
2

1

A B C 2-16 D E F G H



FL display section



Q706, Q707, Q708	KRC102S-X
Q710, Q712, Q723	KRA102S-X
Q721, Q722	EL-19-21SDRC/-X
R761-770, R772	NRS181J-***X

LVA10320-A1

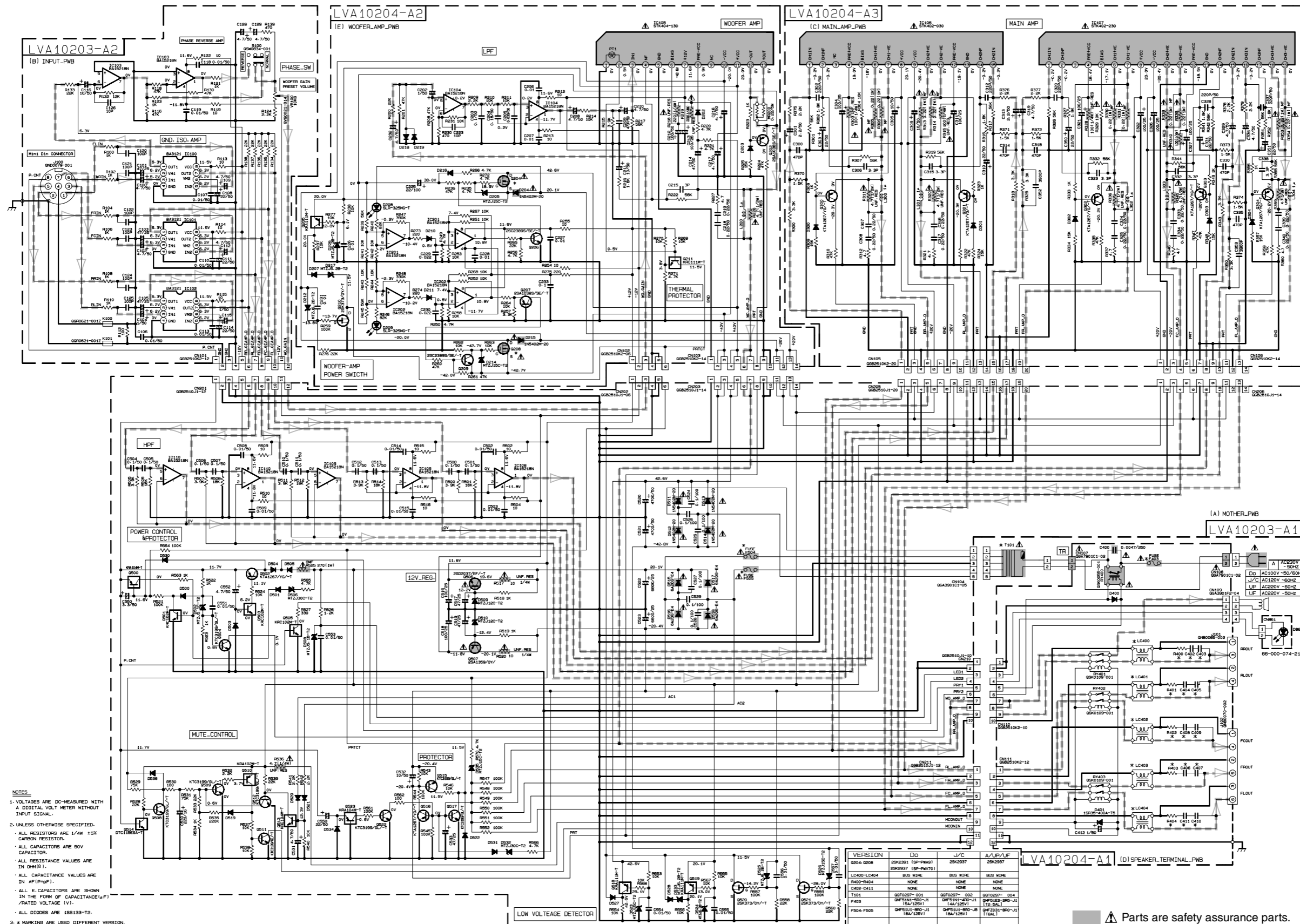
TO CN802 OF LVA10308-A1 (To B-1 on page 2-9)

1	F1	-30.0V
2	F2	-28.4V
3	-VDISP	-34.0V
4	D. GND	0V
5	B5V	5.0V
6	D5V	5.0V
7	-12V	-12.9V
8	RESET	5.0V
9	CLOCK	5.0V
10	DATA IN	5.0V
11	INITIAL	0V
12	REMOCON	5.0V
13	NC	NC

FRONT

# <Speaker section>

## ■ Powered subwoofer section (A version)



- NOTES
1. VOLTAGES ARE DC-MEASURED WITH A DIGITAL VOLT METER WITHOUT INPUT SIGNAL.
  2. UNLESS OTHERWISE SPECIFIED, ALL RESISTORS ARE 1/4W 5% CARBON RESISTOR.
  3. ALL CAPACITORS ARE 50V CAPACITOR.
  4. ALL RESISTANCE VALUES ARE IN OHM (Ω).
  5. ALL CAPACITANCE VALUES ARE IN #F(P=PF).
  6. ALL E-CAPACITORS ARE SHOWN IN THE FORM OF CAPACITANCE (μF) / RATED VOLTAGE (V).
  7. ALL DIODES ARE 1SS133-T2.
  8. \* MARKING ARE USED DIFFERENT VERSION.

--- Audio signal

▲ Parts are safety assurance parts. When replacing those parts make sure to use the specified one.

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A B C D E F G

■ Powered subwoofer section (US/UB/UX version)

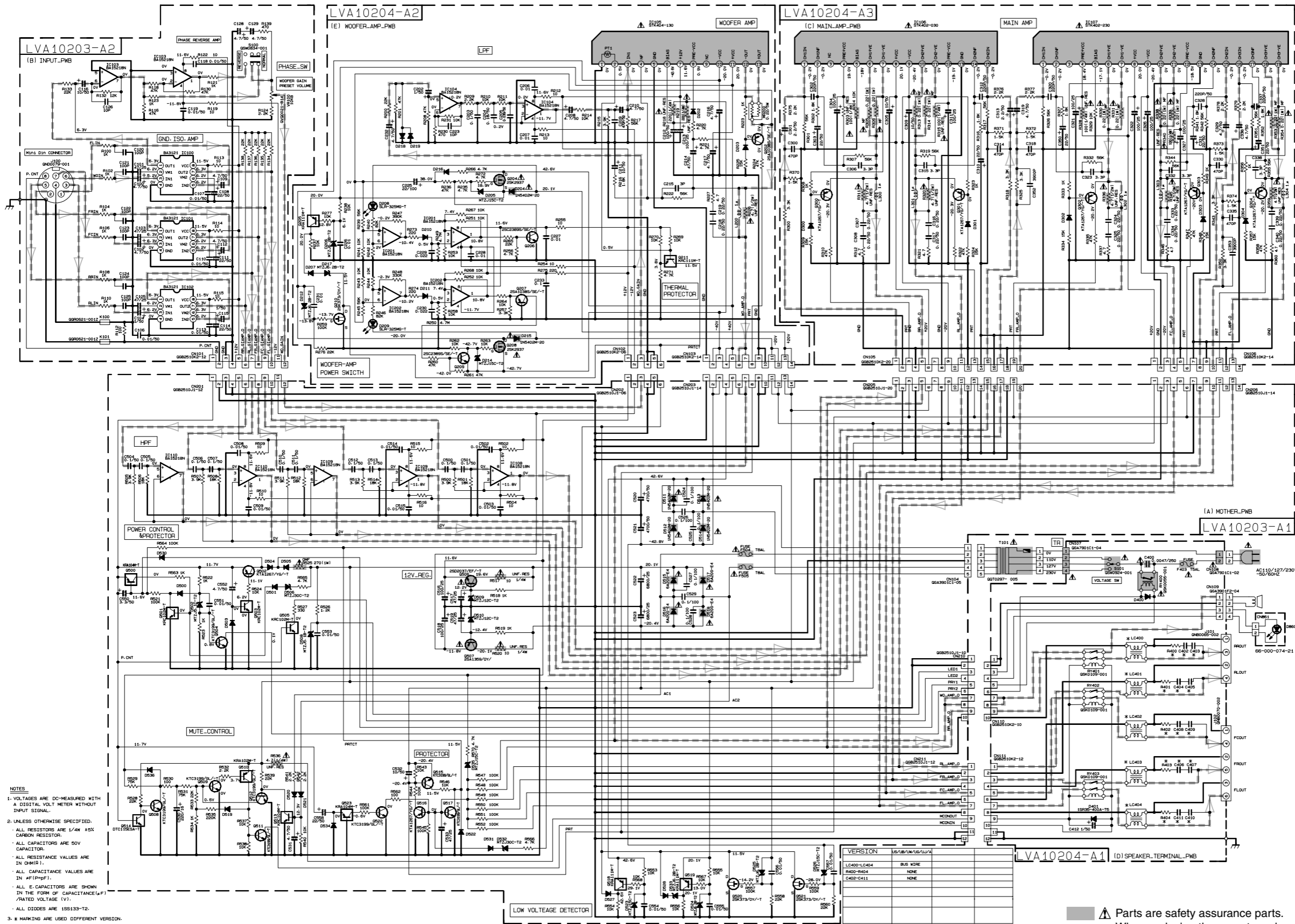
5

4

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2

1



- NOTES
1. VOLTAGES ARE DC-MEASURED WITH A DIGITAL VOLT METER WITHOUT INPUT SIGNAL.
  2. UNLESS OTHERWISE SPECIFIED, ALL RESISTORS ARE 1/4W ±5% CARBON RESISTOR. ALL CAPACITORS ARE 50V CAPACITOR. ALL RESISTANCE VALUES ARE IN OHM (Ω). ALL CAPACITANCE VALUES ARE IN pF (pF). ALL ELECTROLYTIC CAPACITORS ARE SHOWN IN THE FORM OF CAPACITANCE (μF) / RATED VOLTAGE (V). ALL DIODES ARE 1SS133-T2.
  3. \* MARKING ARE USED DIFFERENT VERSION.

VERSION	US/UB/UX/US/UB/UX	BUS WIRE
LC400-LC404		NONE
R400-R404		NONE
C400-C411		NONE

▲ Parts are safety assurance parts. When replacing those parts make sure to use the specified one.

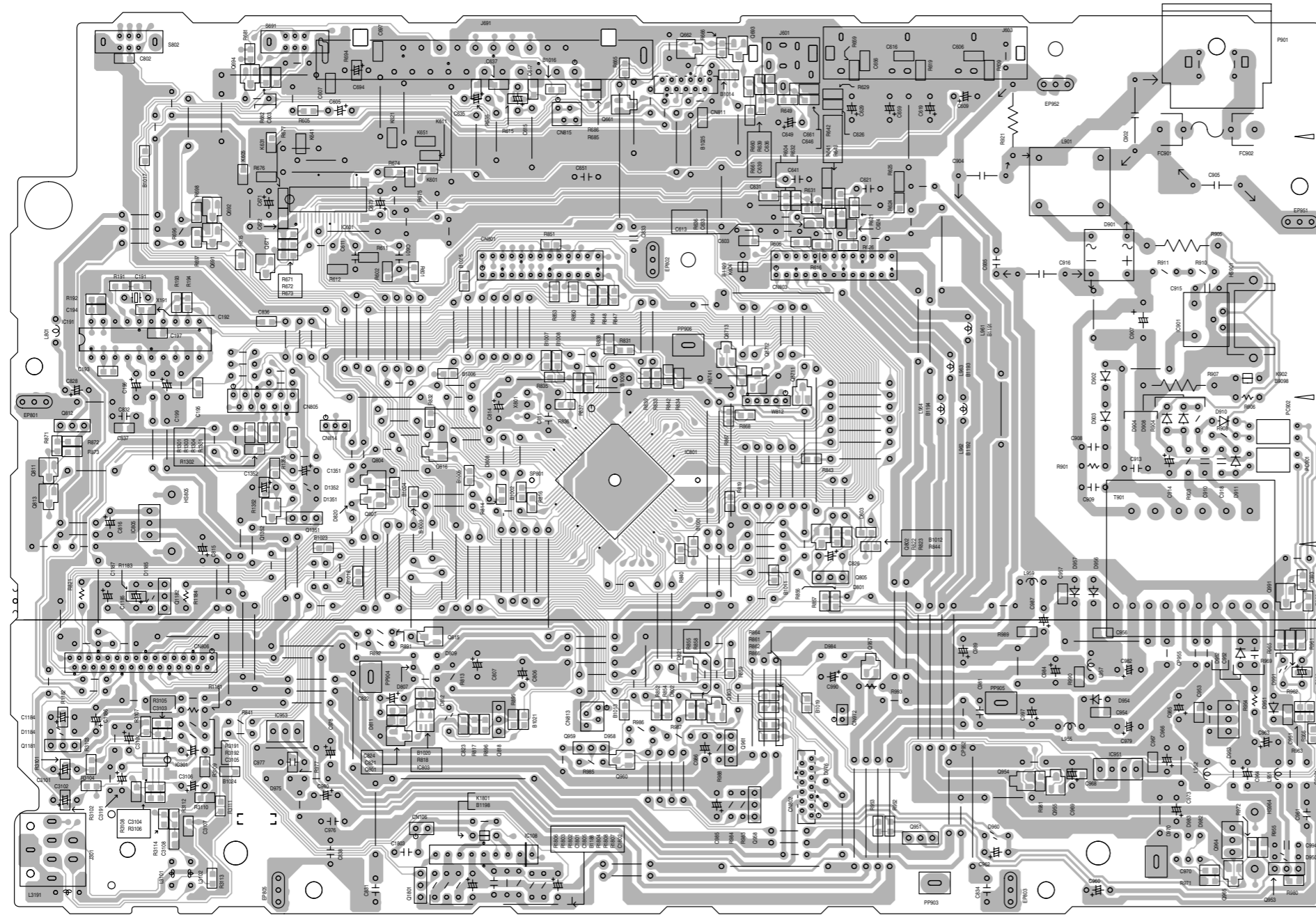
---▶--- Audio signal

# Printed circuit board

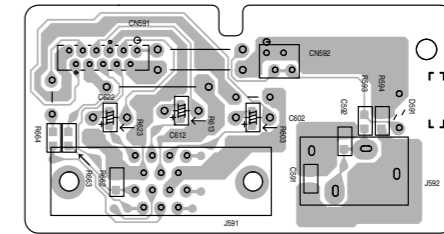
## <Main body section>

■ Main board

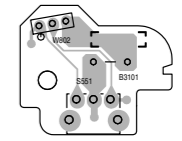
5  
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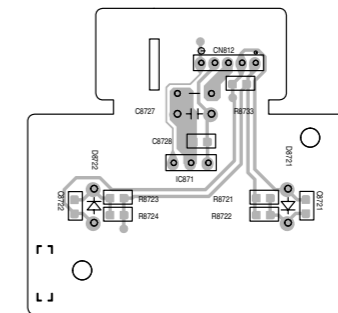
(Main board)



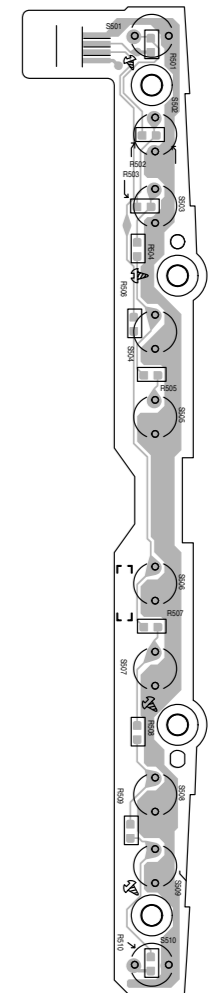
(Compulink board)



(Open/Close board)



(LED board)



(Switch board)

A

B

C

D

E

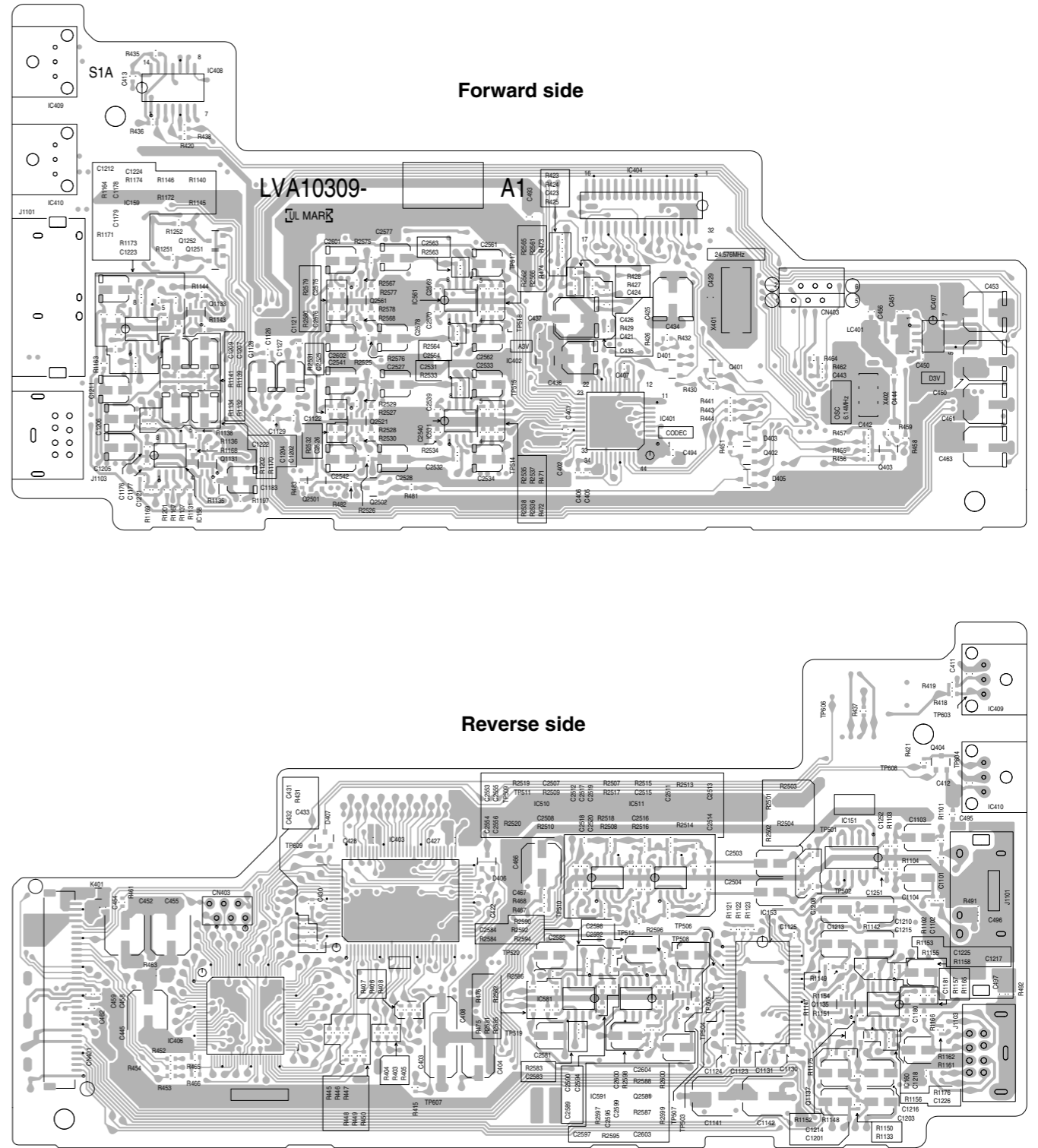
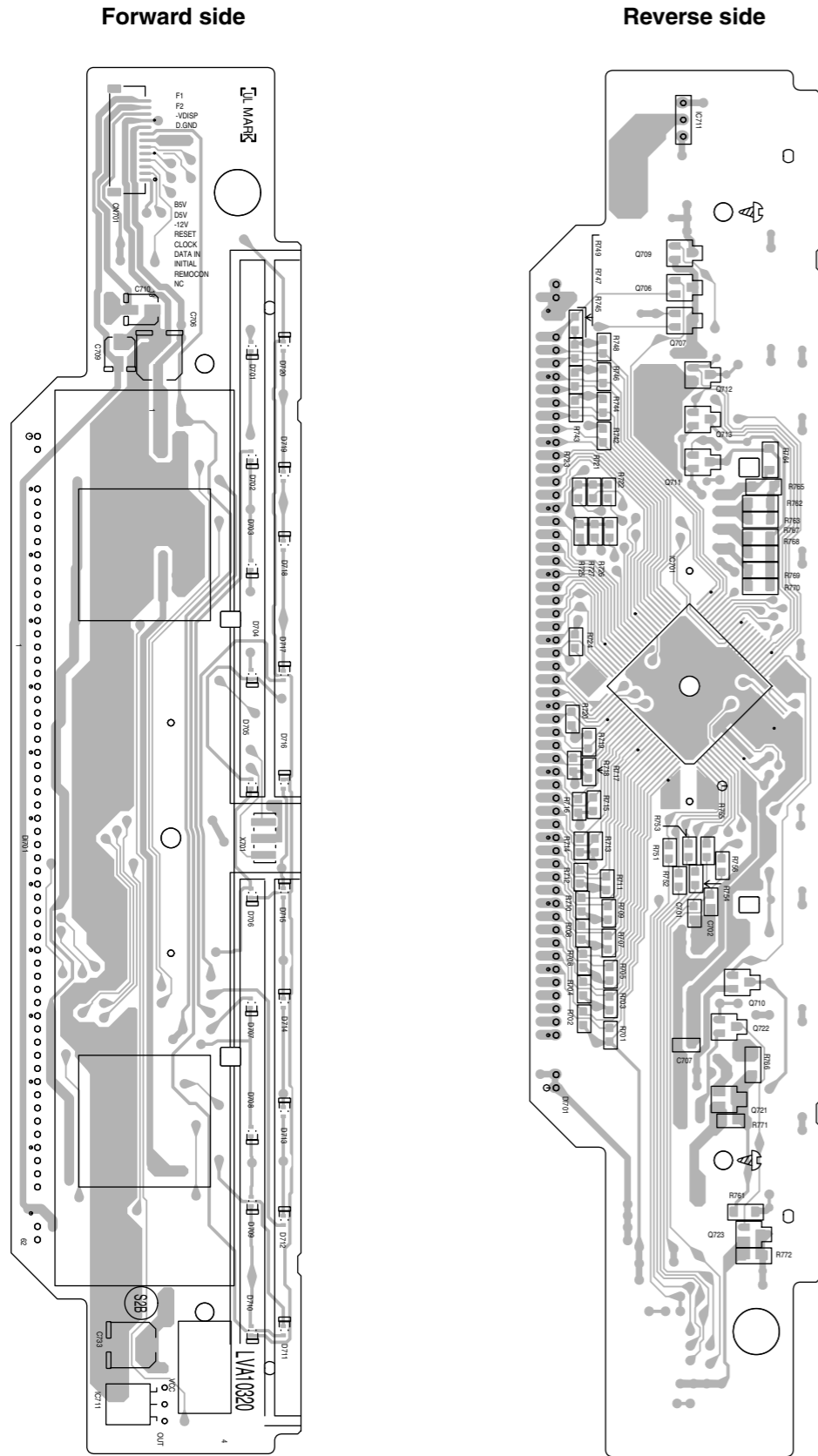
F

G

FL display board

DSP/Audio board

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4  
3  
2  
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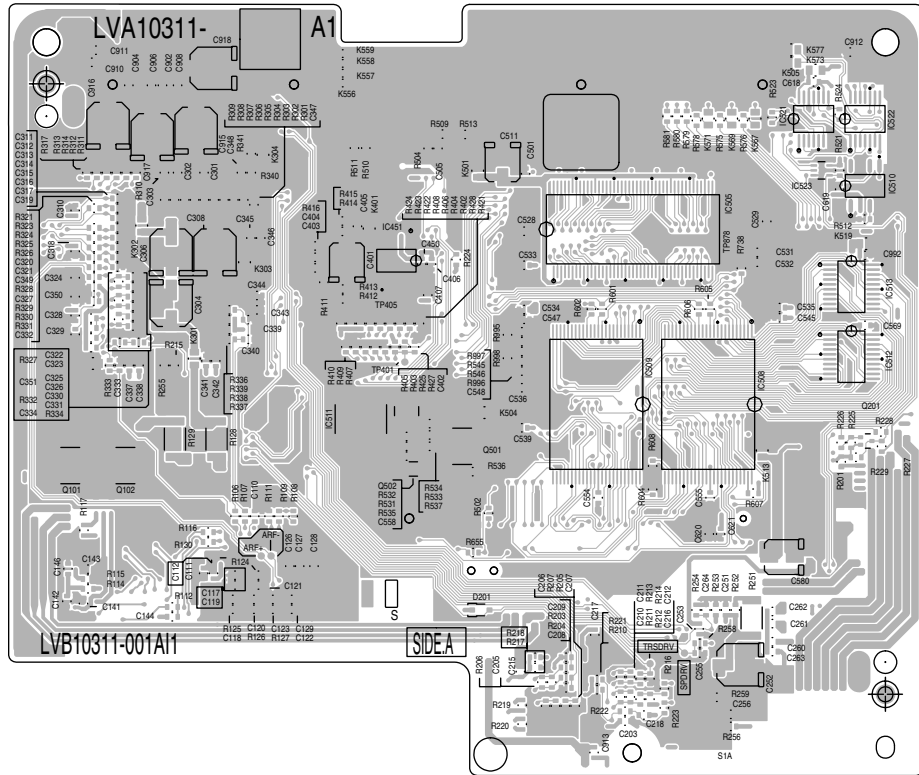


A B C 2-22 D E F G H

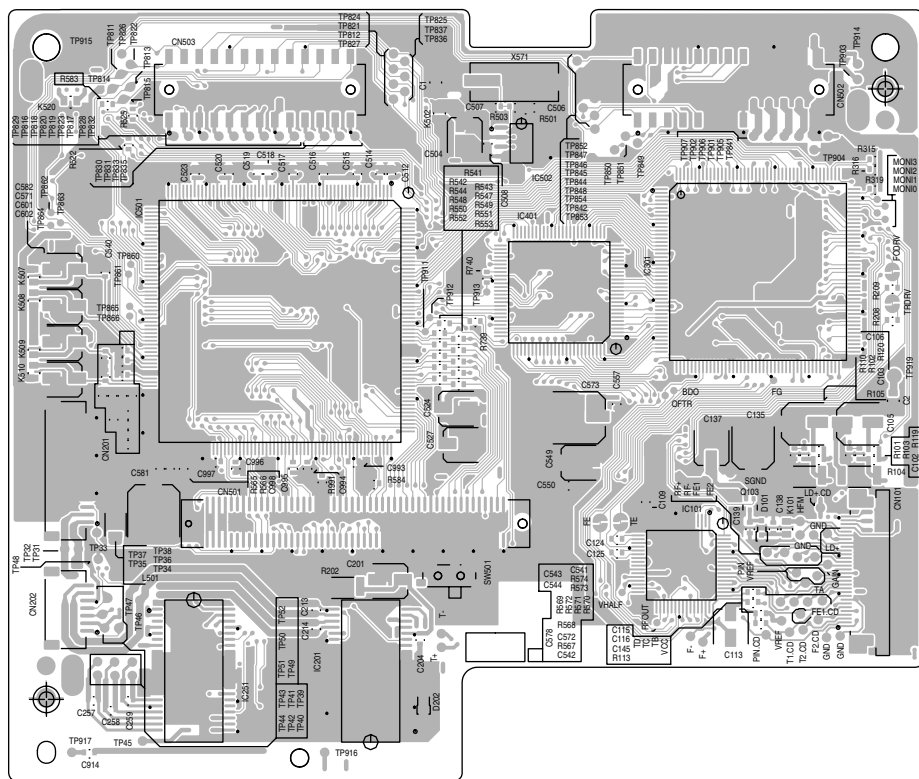


■ DVD servo board

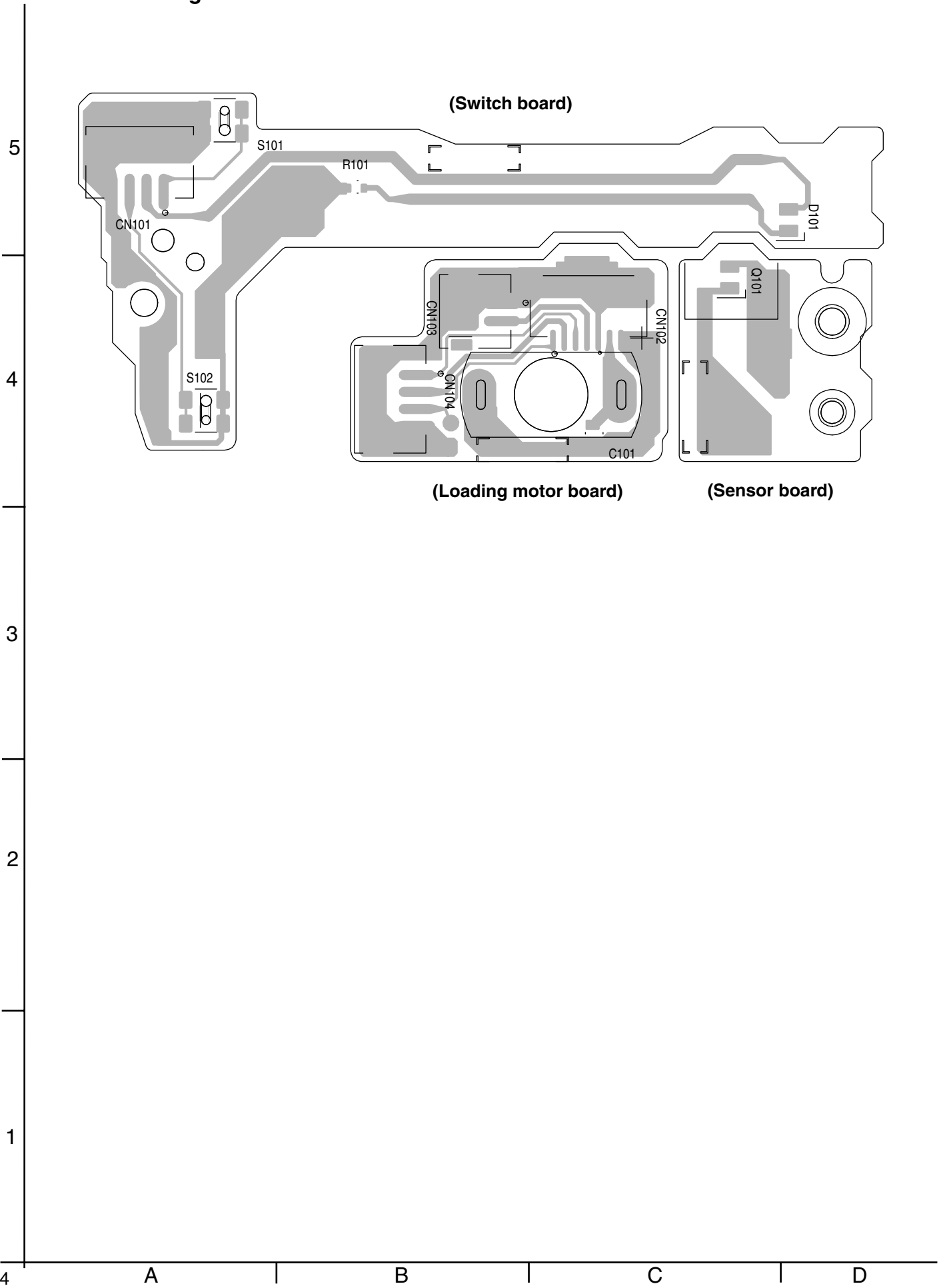
Forward side



Reverse side

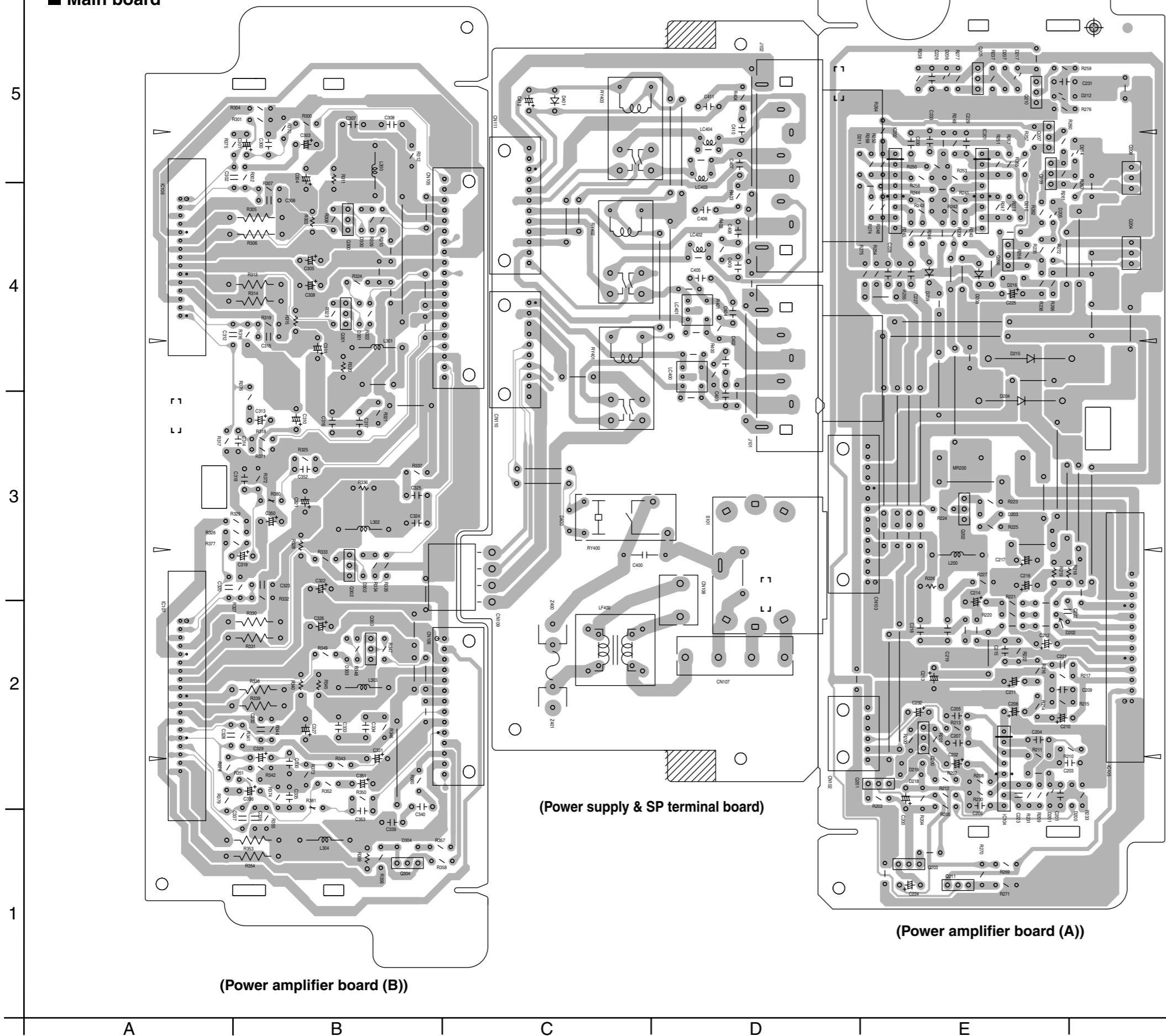


■ DVD loading board



<Speaker section>

■ Main board



(Power amplifier board (B))

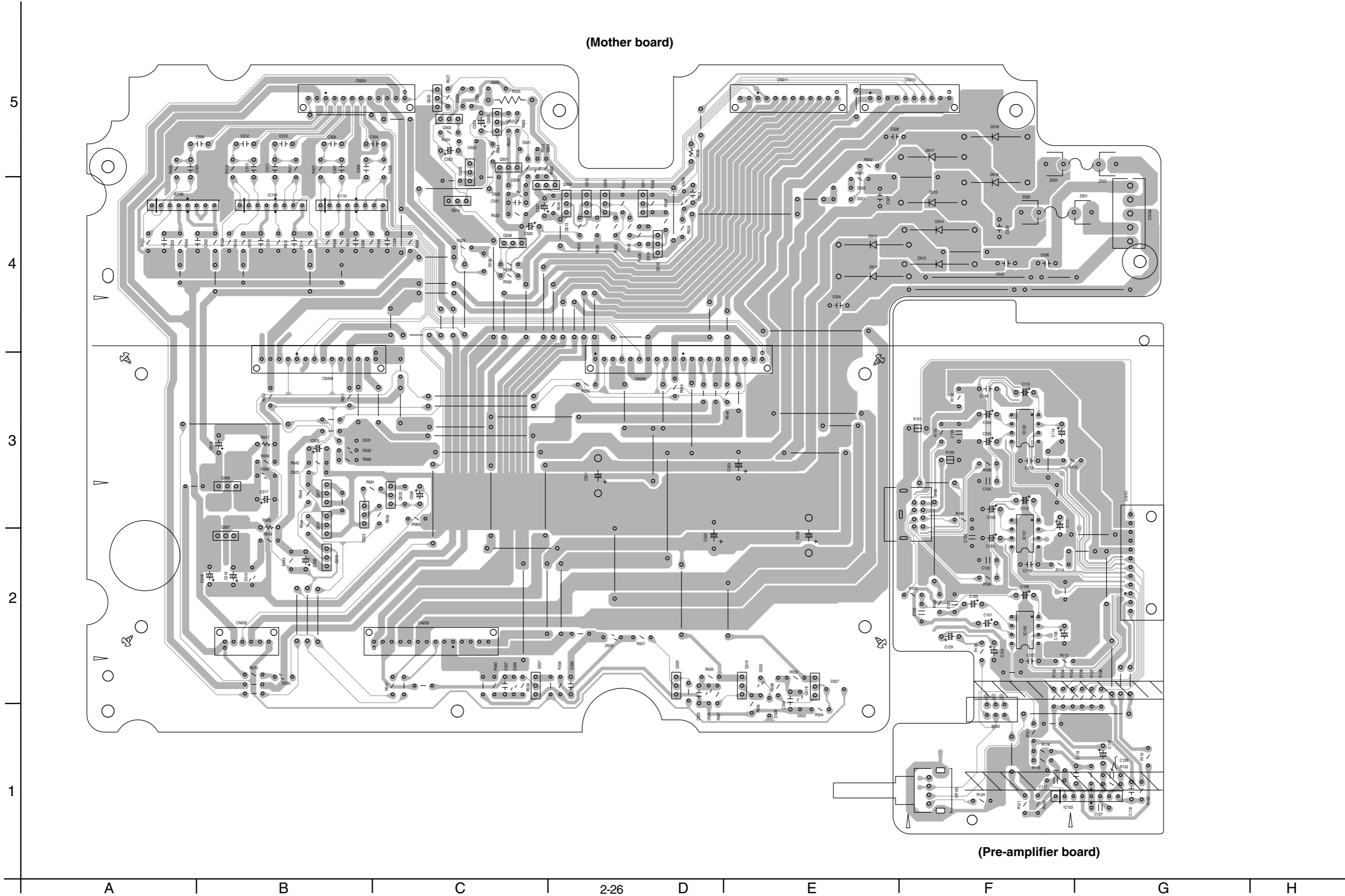
(Power supply & SP terminal board)

(Power amplifier board (A))

■ Sub board

(Mother board)

(Pre-amplifier board)



< MEMO >



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