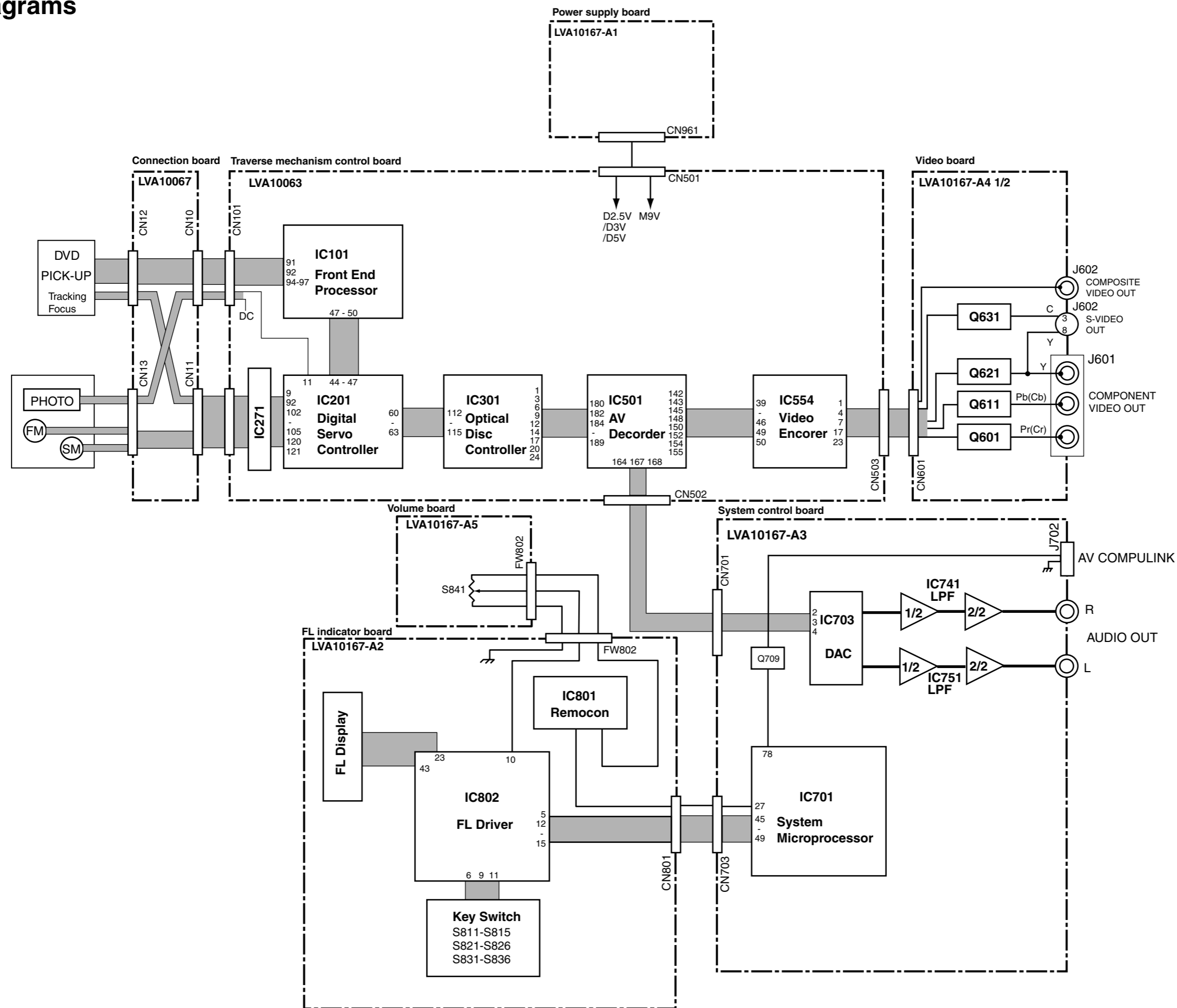
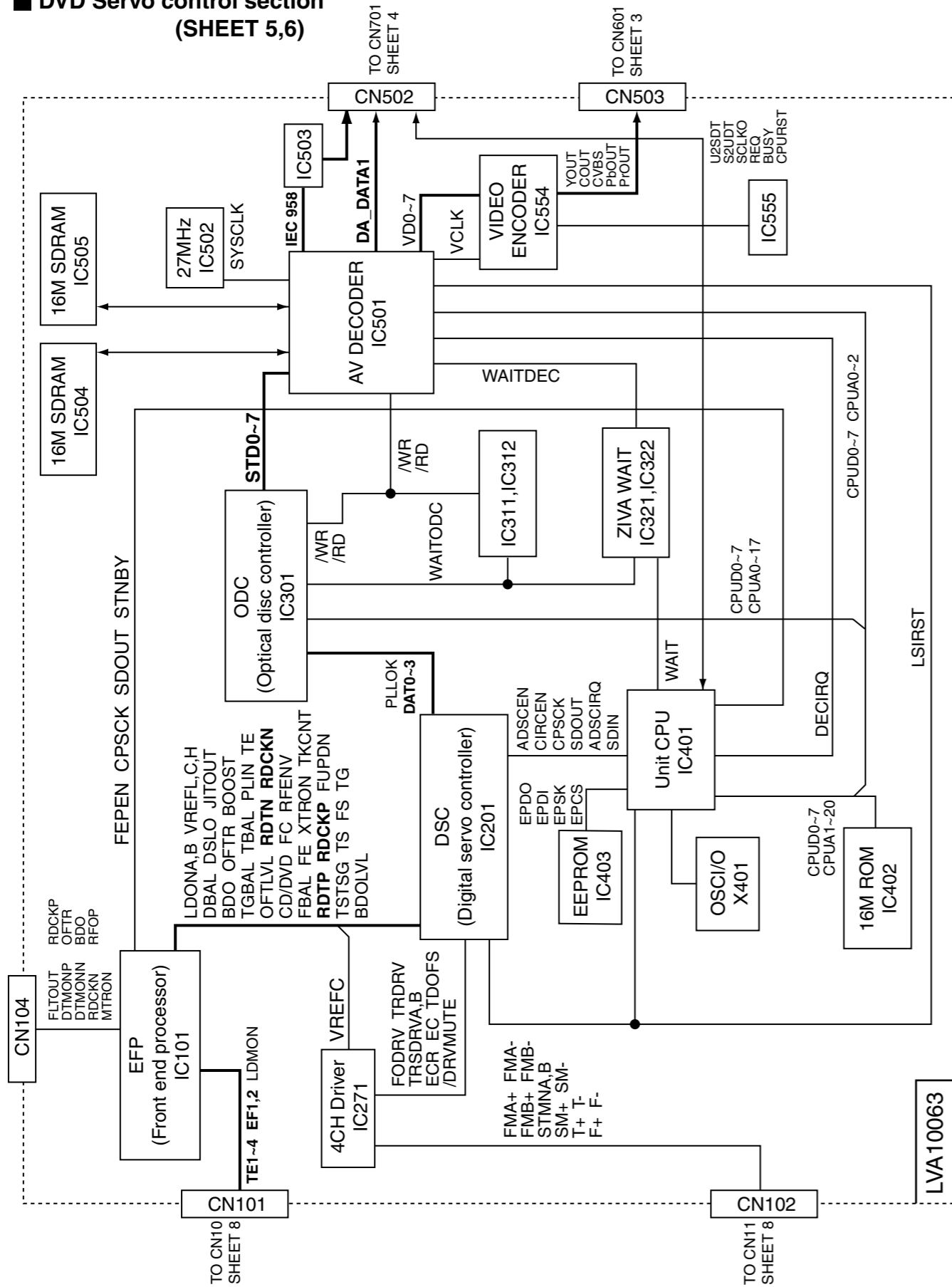


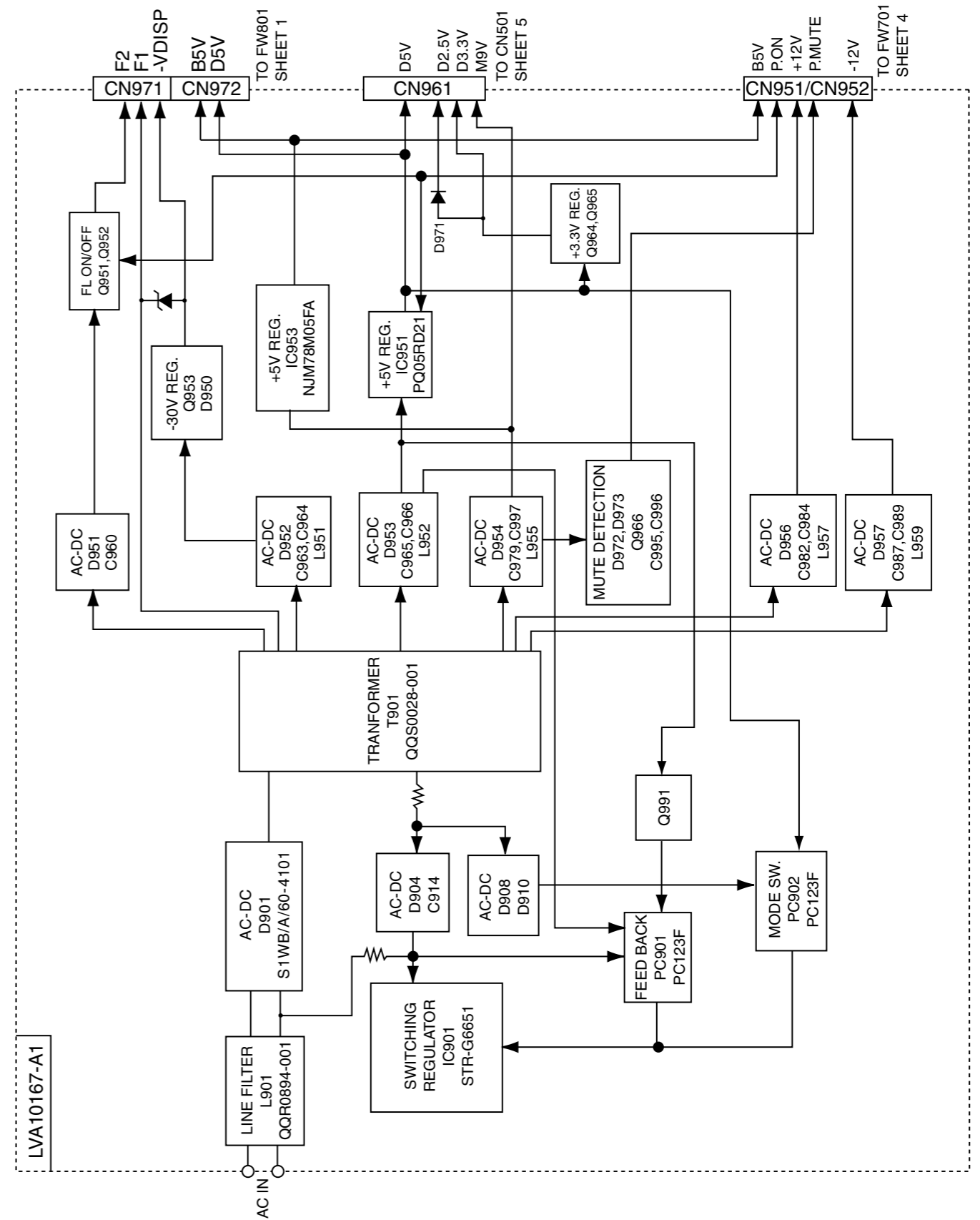
Block diagrams



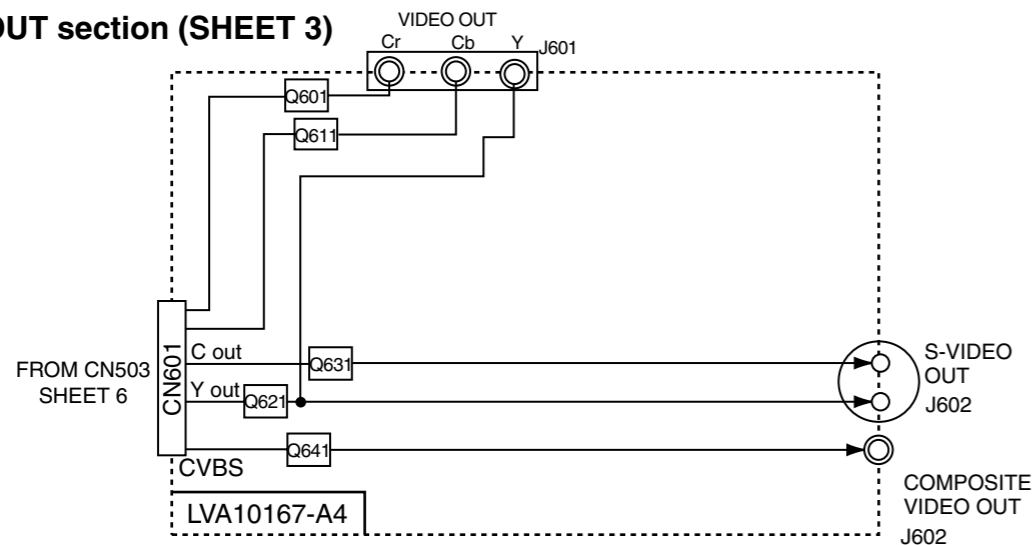
■ DVD Servo control section (SHEET 5,6)



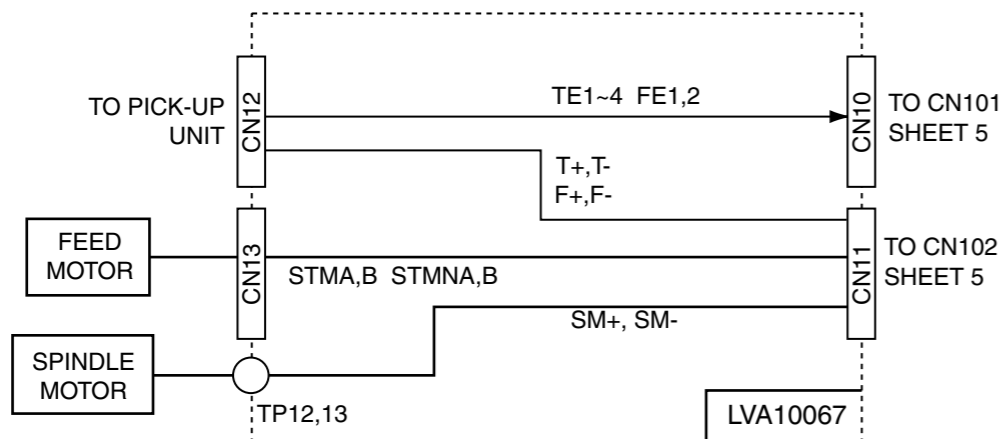
■ DC Regulator section (SHEET 2)



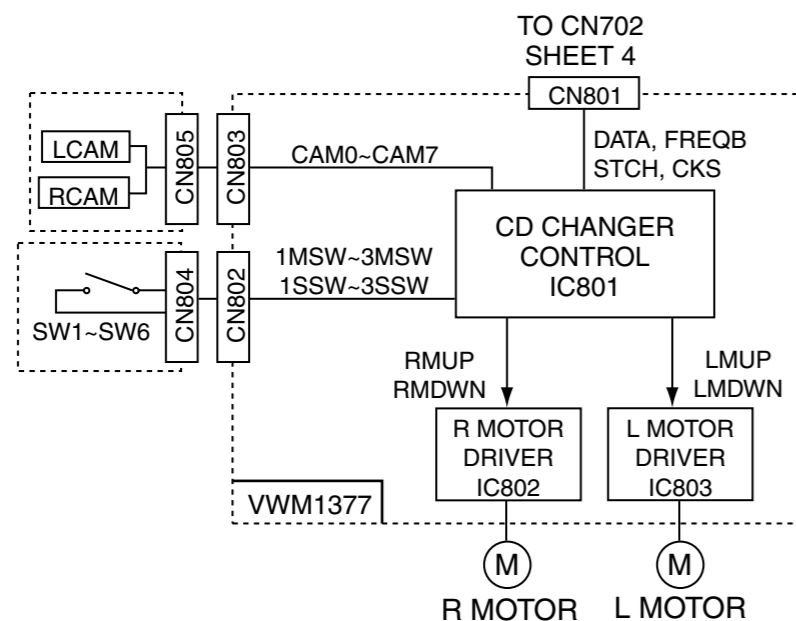
■ AV OUT section (SHEET 3)



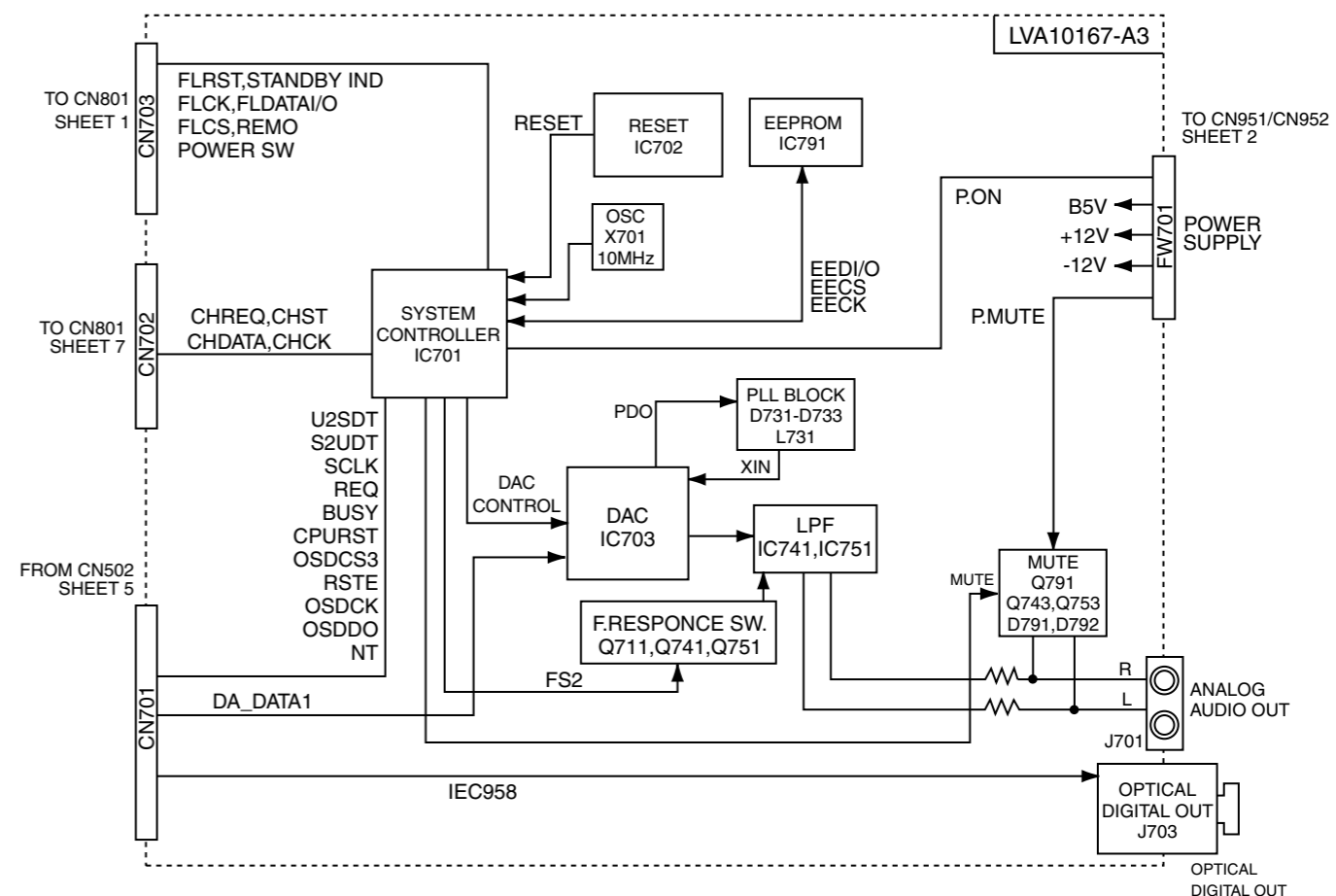
■ Connection to pick-up section (SHEET 8)



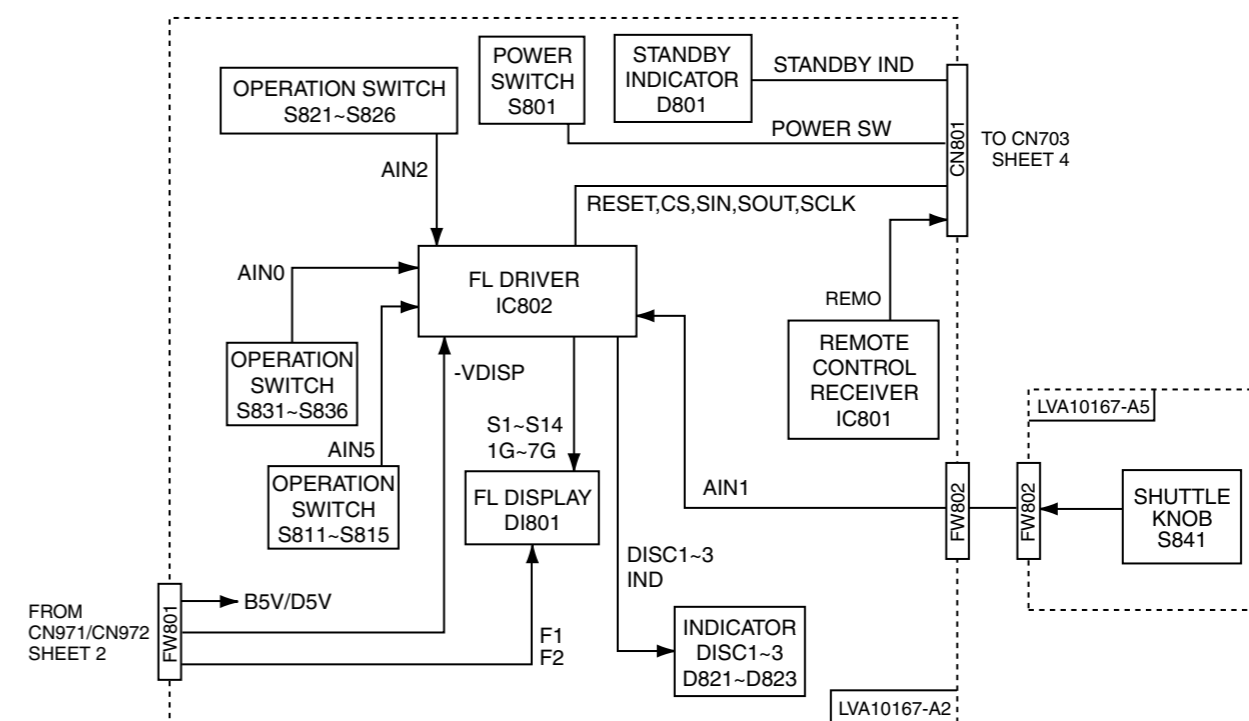
■ Changer mechanism control section (SHEET 7)



■ System control section (SHEET 4)



■ FL Driver section (SHEET 1)



Standard schematic diagrams

Mechanism control circuit

To B-3 on page 2-9

FROM CN702 OF
LVA10167-A3
(SHEET 4/9)

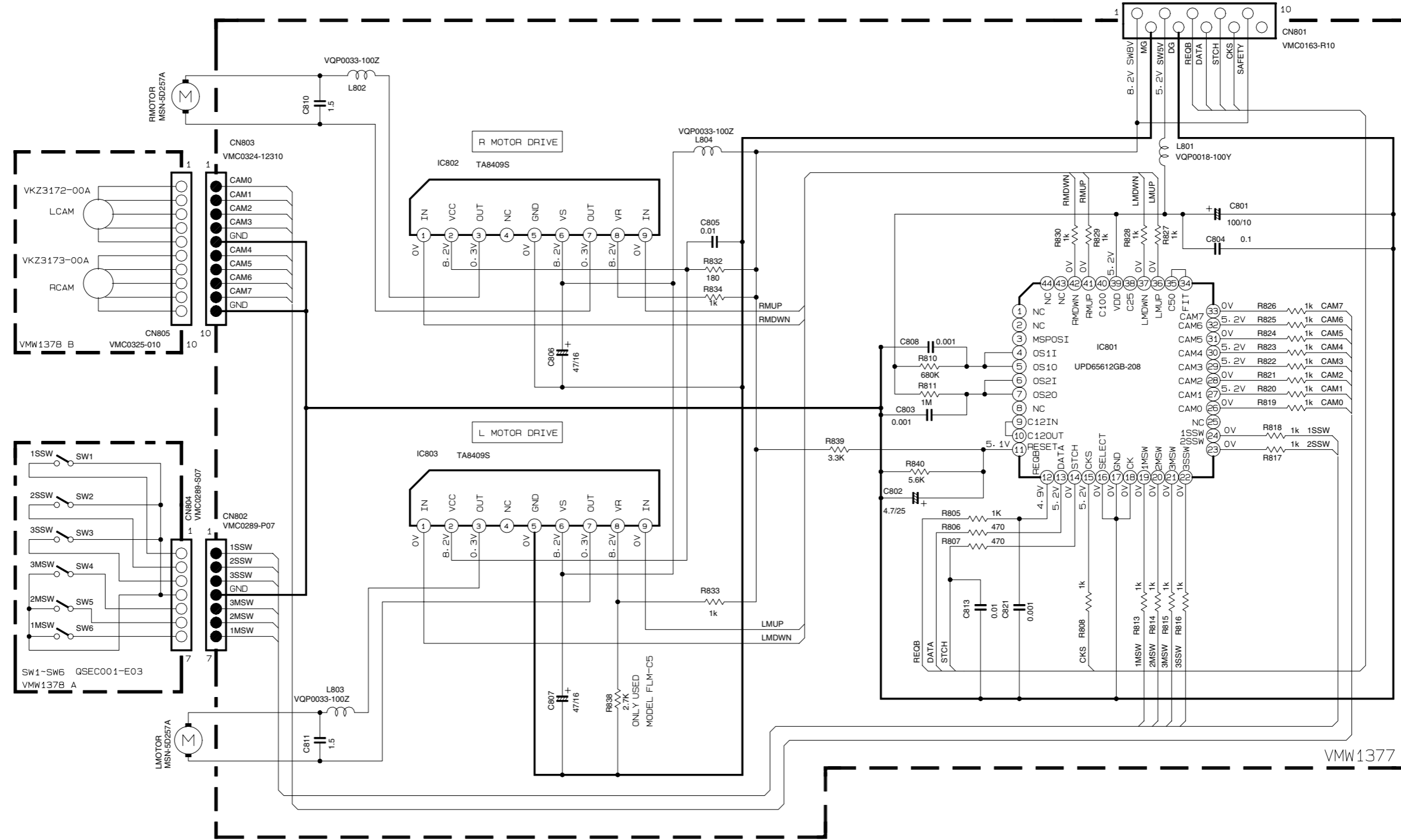


TABLE 1 CAM PATTERN LIST

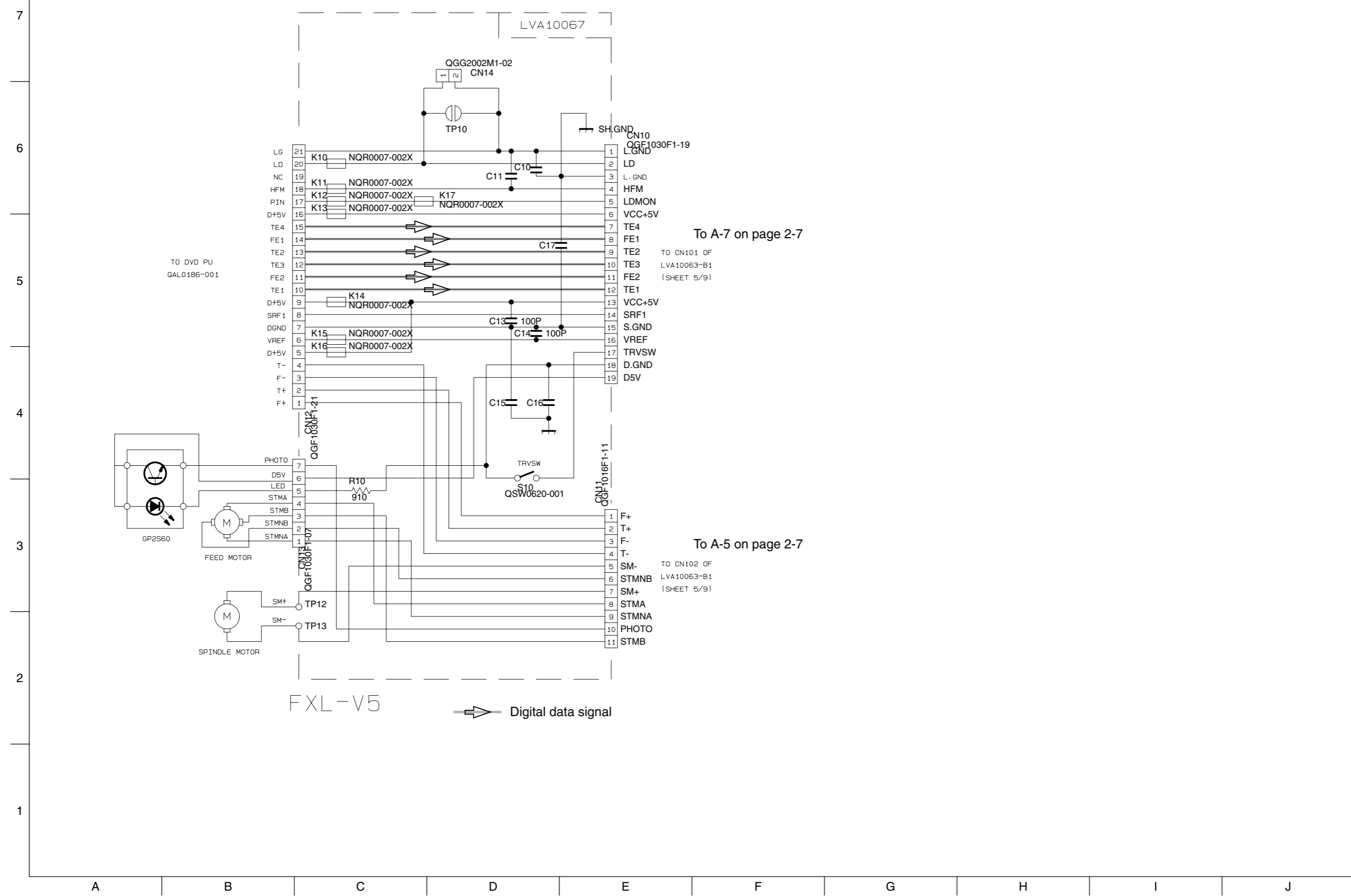
CAM NO.	LCAM	RCAM	POSITION
MAIN TRAY1	0 1 1 1 1 0	1 1 1 0	EMERGENCY
SUB TRAY1	0 0 1 1 0 1 0 1 0	1 1 0 0	TRAY1 STAND-BY
CAMR 1	0 1 0 1 0 1 0 1 0	1 1 0 0	TRAY1 CHACKING
MAIN TRAY2	1 0 0 1 0 1 0 1 0	1 1 0 0	TRAY2 STAND-BY
SUB TRAY2	1 1 1 1 0 0 0 1 1 1	1 1 1 1	TRAY2 CHACKING
CAMR 2	1 0 1 0 0 0 0 1 0 1	1 1 0 0	TRAY3 STAND-BY
MAIN TRAY3	1 1 0 0 0 0 0 0 1 1	1 1 1 1	TRAY3 CHACKING
SUB TRAY3	1 0 0 0 0 0 0 0 0 0		
OFF	1 1 1 1 1 0 0 1 1 1	1 1 1 1	OFF

0=0V
1=5V

- NOTES**
- VOLTAGES ARE DC-MEASURED WITH A DIGITAL VOLT METER OR OSCILLOSCOPE WITHOUT INPUT SIGNAL.
CONDITION --- DISC 1 CD STOP MODE
 - UNLESS OTHERWISE SPECIFIED, RESISTORS ARE 1/6W ±5% CARBON RESISTOR. ALL RESISTANCE VALUES ARE IN OHM(Ω). ALL CAPACITORS ARE CERAMIC CAPACITOR OR MYLAR CAPACITOR. ALL CAPACITANCE VALUES ARE IN μF(P=pF). ALL INDUCTANCE VALUES ARE IN μH(m=mH). ALL E-CAPACITORS ARE SHOWN IN THE FORM OF CAPACITANCE (μF)/RATED VOLTAGE (V).

- Ⓜ UNFLAMMABLE CARBON RESISTOR
- Ⓜ METAL FILM RESISTOR
- Ⓜ OXIDE METAL FILM RESISTOR
- Ⓜ ±20% LOW LEAK CURRENT ELECTROLYTIC CAPACITOR
- Ⓜ NON-POLARISED ELECTROLYTIC CAPACITOR
- Ⓜ POLYPROPYLENE CAPACITOR
- Ⓜ POLYSTYROL CAPACITOR

■ Connection circuit



■ Front circuit

7

6

5

4

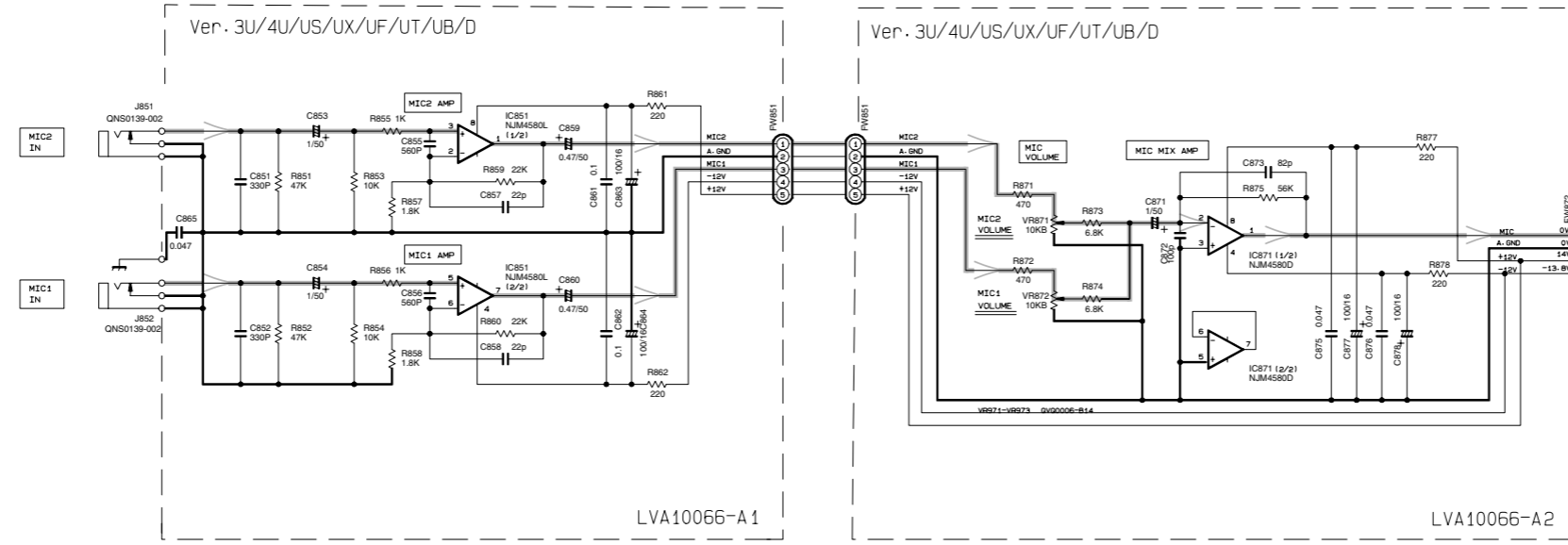
3

2

1

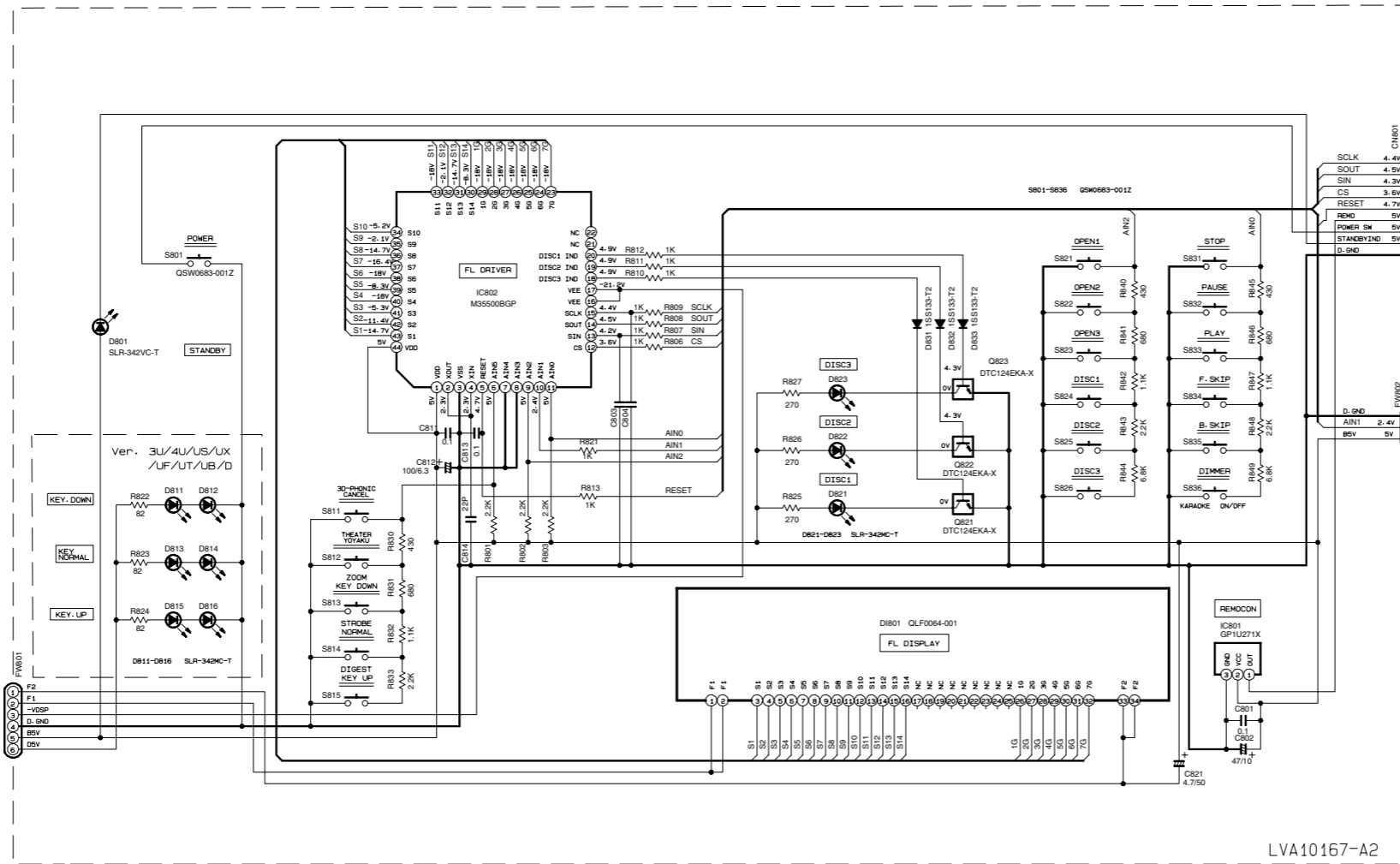
To I-7 on page 2-11

TO CN071 OF
LVA10167-A1
(SHEET 2/9)



To I-3 on page 2-11

TO CN061 OF
LVA10167-A1
(SHEET 2/9)

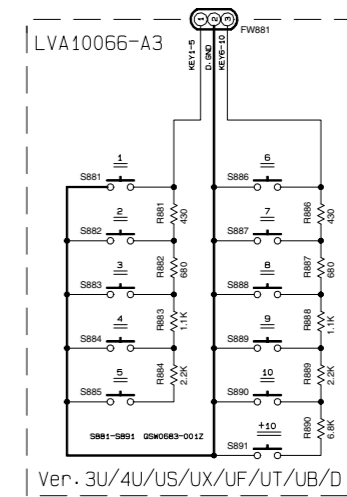


To B-4 on page 2-9

TO CN703 OF
LVA10167-A3
(SHEET 4/9)

To B-4 on page 2-9

TO CN712 OF
LVA10167-A3
(SHEET 4/9)

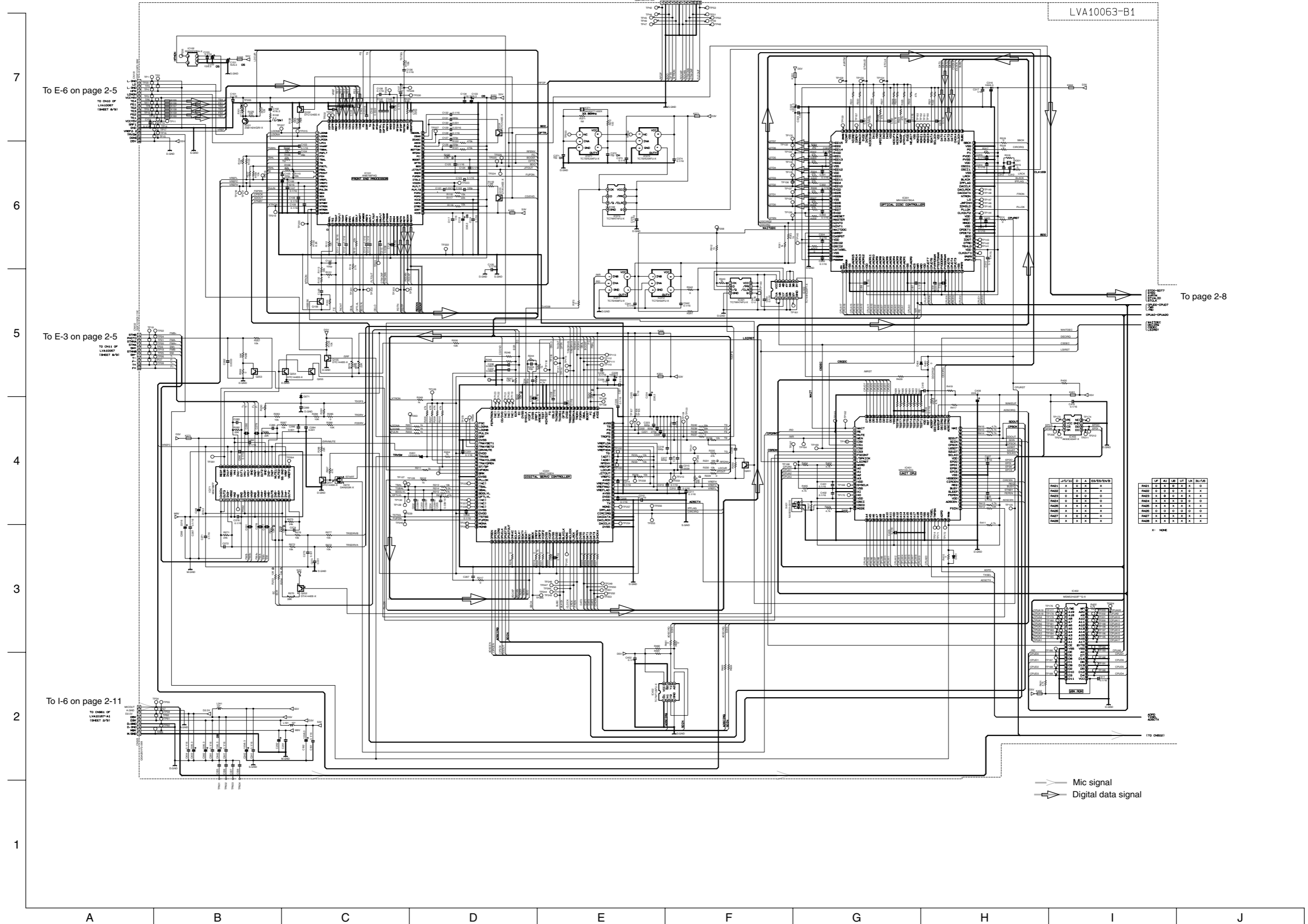


[LVA10167-A5]

LVA10167-A2

➤ Mic signal

■ Traverse mechanism control circuit



LVA10063-B1

To E-6 on page 2-5
TO CHAS OF
LVA10067
(SHEET 6/9)

To E-3 on page 2-5
TO CHAS OF
LVA10067
(SHEET 6/9)

To I-6 on page 2-11
TO CHAS OF
LVA10067-A1
(SHEET 6/9)

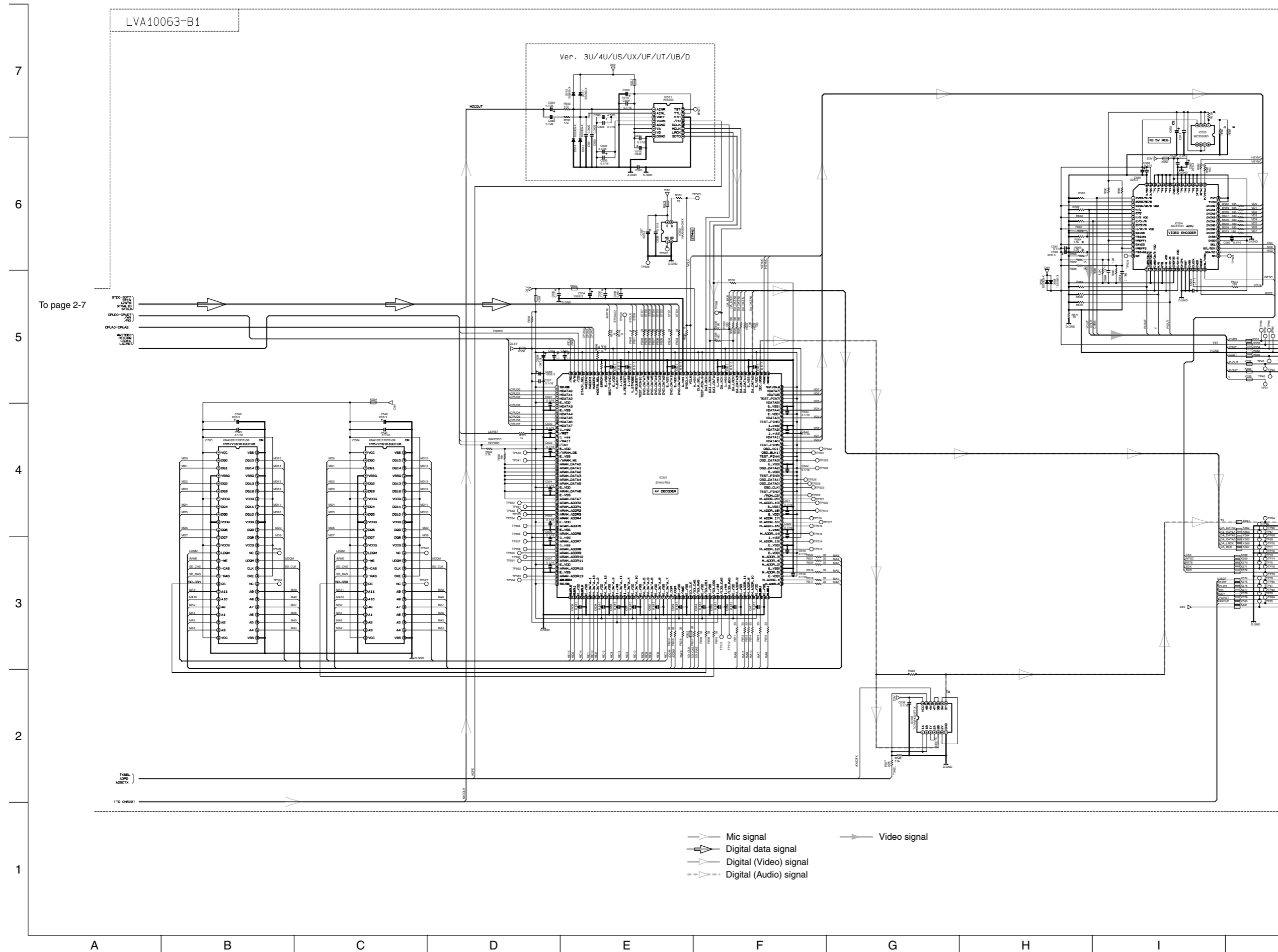
To page 2-8
TO CHAS OF
LVA10067
(SHEET 6/9)

— Mic signal
— Digital data signal

IC/UNIT	D	A	ES/RS/WS
PH21	X	X	X
PH22	X	X	X
PH23	X	X	X
PH24	X	X	X
PH25	X	X	X
PH26	X	X	X
PH27	X	X	X
PH28	X	X	X

IC/UNIT	D	A	ES/RS/WS
PH21	X	X	X
PH22	X	X	X
PH23	X	X	X
PH24	X	X	X
PH25	X	X	X
PH26	X	X	X
PH27	X	X	X
PH28	X	X	X

■ M PEG circuit



LVA10063-B1

Ver. 3U/4U/US/UX/UF/UT/UB/D

To page 2-7

To B-4 on page 2-10

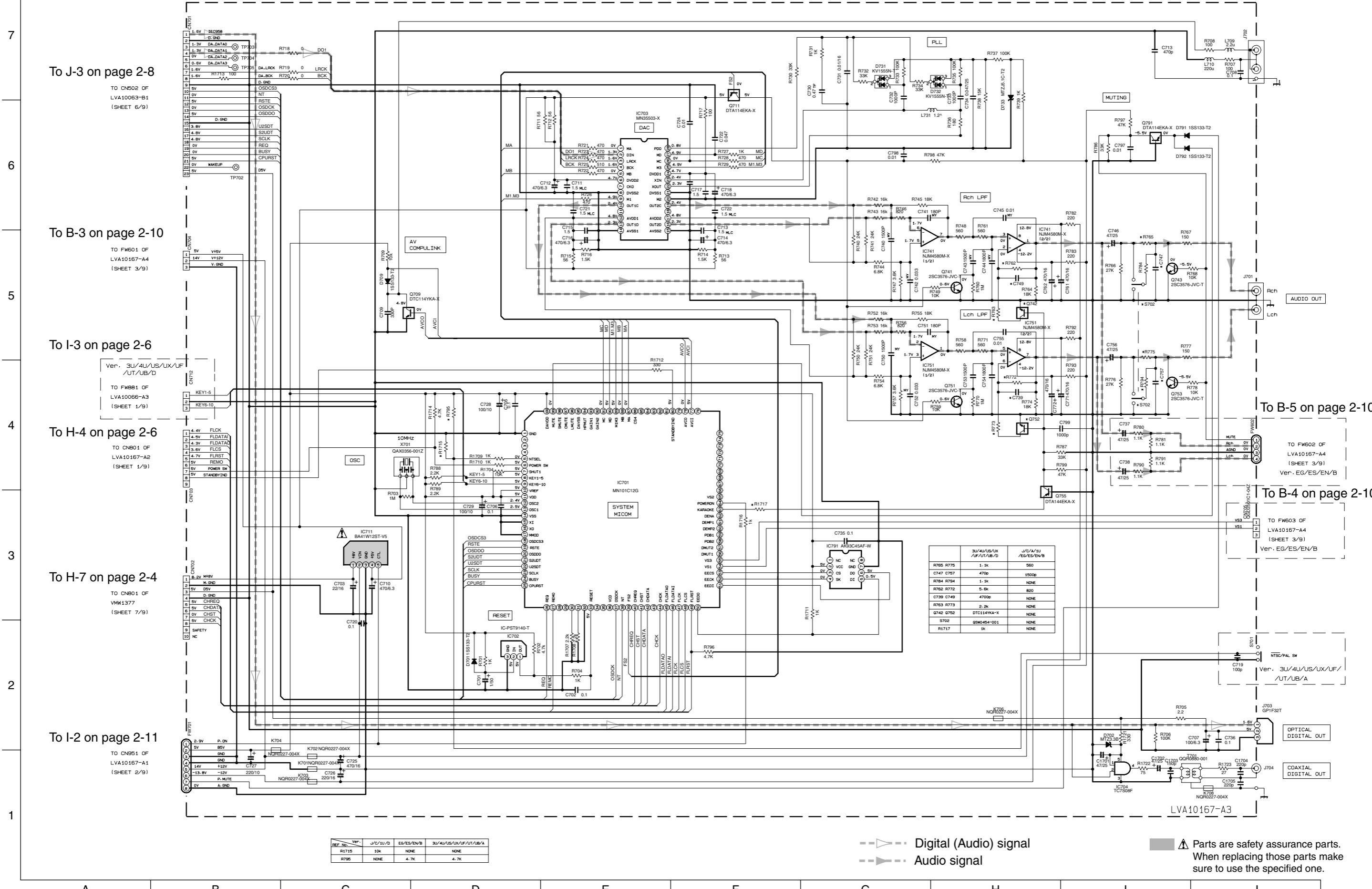
FROM CN601 OF LVA10167-A4 (SHEET 3/9)

To B-7 on page 2-9

FROM CN701 OF LVA10167-A3 (SHEET 4/9)

- Mic signal
- ▶— Digital data signal
- ▽— Digital (Video) signal
- ◇— Digital (Audio) signal

System control circuit



To J-3 on page 2-8

TO CN502 OF LVA10063-B1 (SHEET 6/9)

To B-3 on page 2-10

TO FW601 OF LVA10167-A4 (SHEET 3/9)

To I-3 on page 2-6

Ver. 3U/4U/US/UX/UF/UT/UB/D TO FWB1 OF LVA10066-A3 (SHEET 1/9)

To H-4 on page 2-6

TO CNB04 OF LVA10167-A2 (SHEET 1/9)

To H-7 on page 2-4

TO CNB01 OF VM11377 (SHEET 7/9)

To I-2 on page 2-11

TO CNB51 OF LVA10167-A1 (SHEET 2/9)

To B-5 on page 2-10

TO FW602 OF LVA10167-A4 (SHEET 3/9) Ver. EG/ES/EN/B

To B-4 on page 2-10

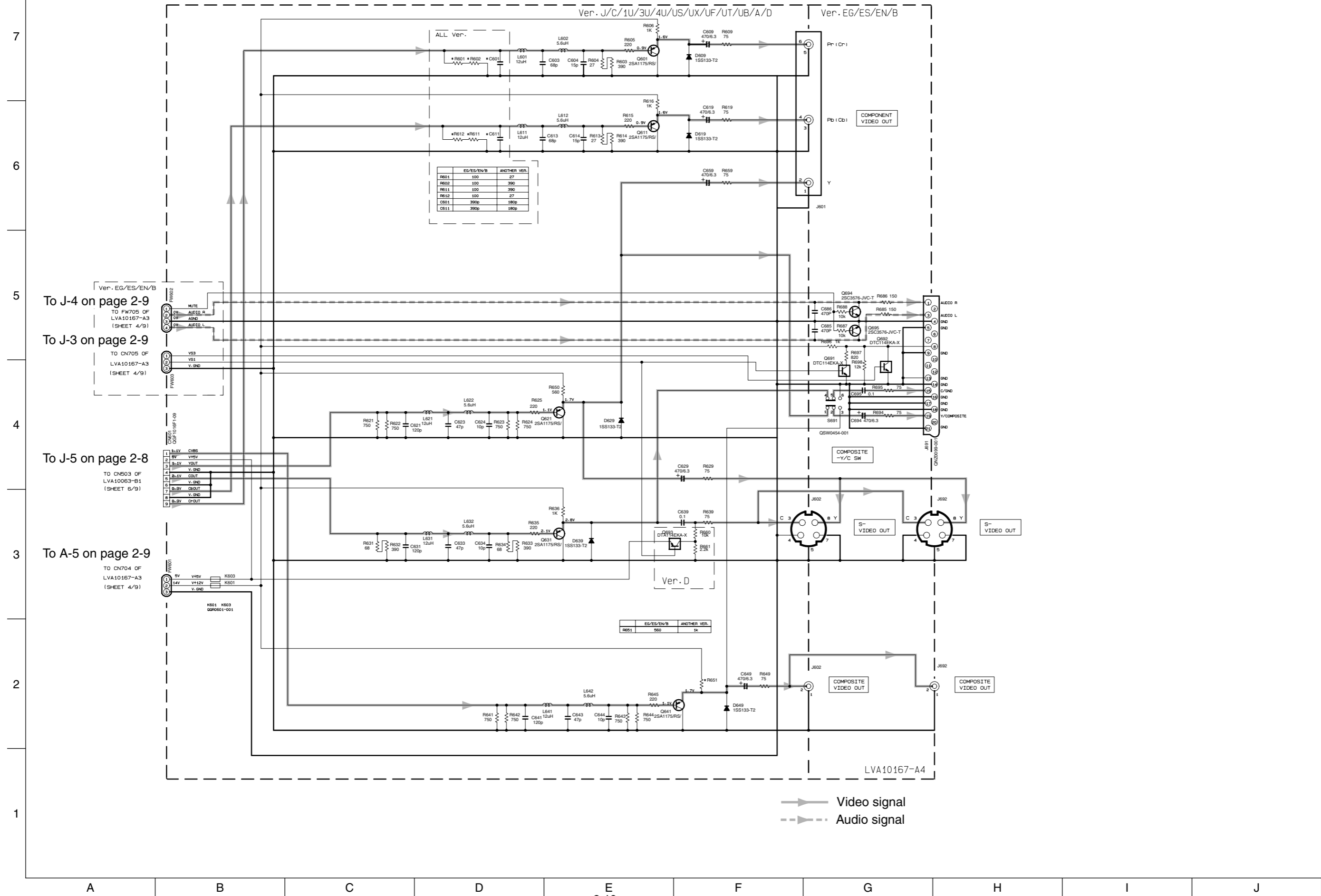
TO FW603 OF LVA10167-A4 (SHEET 3/9) Ver. EG/ES/EN/B

REF. NO.	VAL.	J/C/U/D	EG/ES/EN/B	3U/4U/US/UX/UF/UT/UB/A
R1715	10K		NONE	NONE
R795	NONE		4.7K	4.7K

--- Digital (Audio) signal
 --- Audio signal

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

Video out circuit



	ES/ES/EN/B	ANOTHER VER.
R601	100	27
R602	100	390
R611	100	390
R612	100	27
C601	390p	180p
C611	390p	180p

	EG/ES/EN/B	ANOTHER VER.
R651	500	1K

Ver. EG/ES/EN/B
To J-4 on page 2-9
TO FN705 OF LVA10167-A3 (SHEET 4/9)

Ver. EG/ES/EN/B
To J-3 on page 2-9
TO CN705 OF LVA10167-A3 (SHEET 4/9)

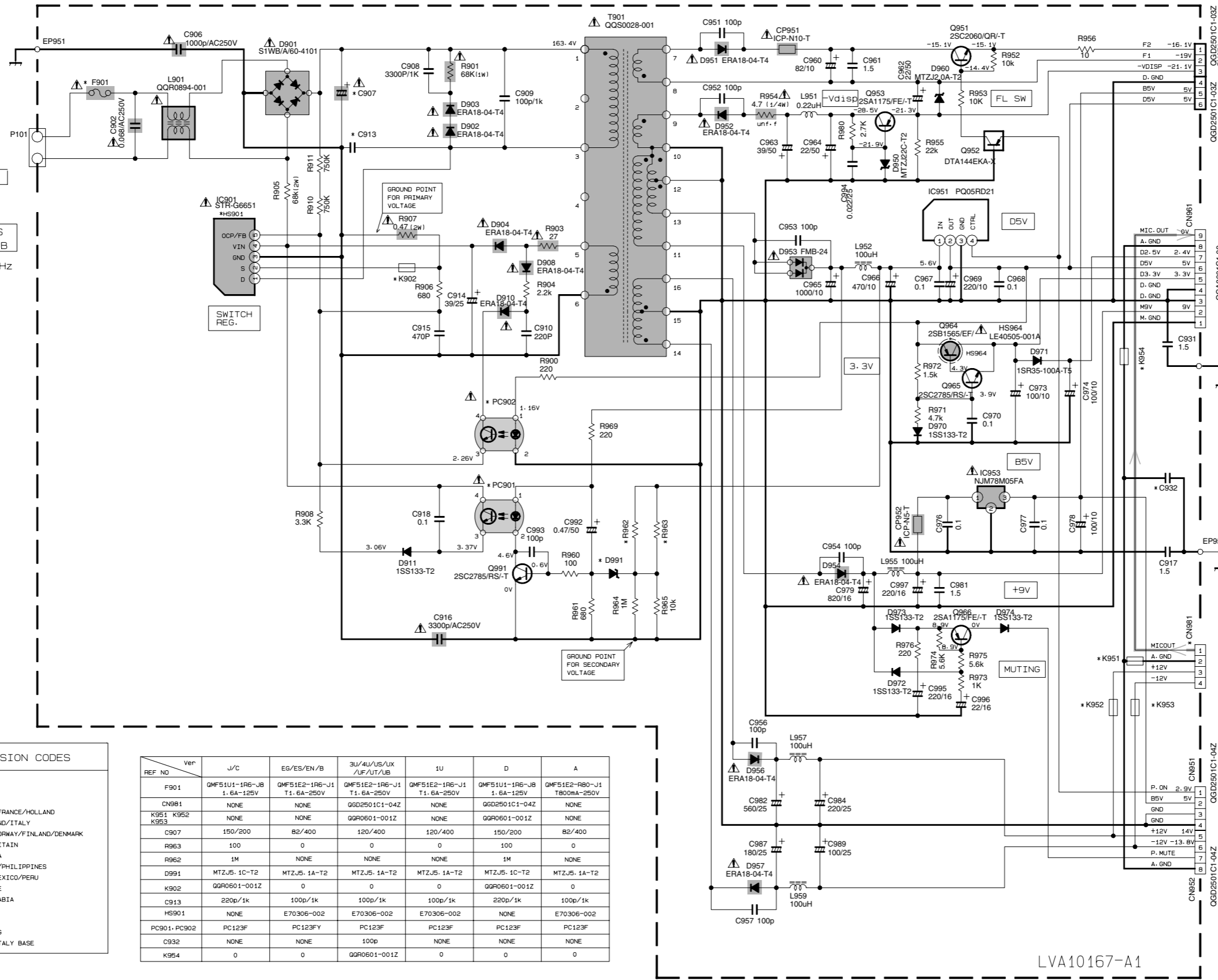
To J-5 on page 2-8
TO CN503 OF LVA10063-B1 (SHEET 6/9)

To A-5 on page 2-9
TO CN704 OF LVA10167-A3 (SHEET 4/9)

—▶— Video signal
- - -▶- - - Audio signal

■ Power supply circuit

- Ver. J/C
120V 60Hz
- Ver. EG/ES/EN/B
230V 50Hz
- Ver. 1U/3U/4U/US
/UX/UF/UT/UB
110-240V 50/60Hz
- Ver. A
240V 50Hz
- Ver. D
100V 50/60Hz



VERSION CODES

- J·U·S·A
- C·CANADA
- D·JAPAN
- EG·GERMANY/FRANCE/HOLLAND
- ES·SWITZERLAND/ITALY
- EN·SWEDEN/NORWAY/FINLAND/DENMARK
- B·GREAT BRITAIN
- A·AUSTRALIA
- 3U·MALAYSIA/PHILIPPINES
- 4U·BRAZIL/MEXICO/PERU
- US·SINGAPOLE
- UX·SAUDI ARABIA
- UF·CHINA
- UT·TAIWAN
- UB·HONG KONG
- 1U·USA MILITARY BASE

REF NO	Ver	J/C	EG/ES/EN/B	3U/4U/US/UX/UF/UT/UB	1U	D	A
F901		QM51U1-1R6-J8 1.6A-125V	QM51E2-1R6-J1 T1.6A-250V	QM51E2-1R6-J1 T1.6A-250V	QM51E2-1R6-J1 T1.6A-250V	QM51U1-1R6-J8 1.6A-125V	QM51E2-R80-J1 T800mA-250V
CN981		NONE	NONE	QG02501C1-04Z	NONE	QG02501C1-04Z	NONE
K951 K952 K953		NONE	NONE	QGR0601-001Z	NONE	QGR0601-001Z	NONE
C907		150/200	B2/400	120/400	120/400	150/200	B2/400
R963		100	0	0	0	100	0
R962		1M	NONE	NONE	NONE	1M	NONE
D991		MTZJ5. 1C-T2	MTZJ5. 1A-T2	MTZJ5. 1A-T2	MTZJ5. 1C-T2	MTZJ5. 1A-T2	MTZJ5. 1A-T2
K902		QGR0601-001Z	0	0	0	QGR0601-001Z	0
C913		220p/1k	100p/1k	100p/1k	100p/1k	220p/1k	100p/1k
HS901		NONE	E70306-002	E70306-002	E70306-002	NONE	E70306-002
PC901, PC902		PC123F	PC123FY	PC123F	PC123F	PC123F	PC123F
C932		NONE	100p	NONE	NONE	NONE	NONE
K954		0	0	QGR0601-001Z	0	0	0

To B-1 on page 2-6

TO FWB01
LVA1016
(SHEET

To A-2 on page 2-7

TO CN501
LVA10063
(SHEET 5

To H-6 on page 2-6

TO FWB72
LVA10066-
(SHEET 1/

To B-1 on page 2-9

TO FW701 0
LVA10167-A
(SHEET 4/9

LVA10167-A1

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

→ Mic signal

■ Voltage value section

7

6

5

4

3

2

1

NO	DC(V)	NO	DC(V)
1	0V	51	3.2V
2	0V	52	1.3V
3	4.4V	53	4.9V
4	0V	54	0V
5	1.6V	55	4.9V
6	1.6V	56	0.5V
7	1.8V	57	1.2V
8	2.1V	58	2.2V
9	1.6V	59	2.2V
10	1.4V	60	2.2V
11	0.8V	61	1.5V
12	1.4V	62	1.6V
13	1.4V	63	0V
14	1.4V	64	1.4V
15	0.6V	65	0.2V
16	1.4V	66	0.2V
17	2.1V	67	1.5V
18	4.6V	68	1.4V
19	5.0V	69	1.3V
20	4.9V	70	2.2V
21	4.9V	71	2.1V
22	4.9V	72	1.0V
23	3.2V	73	2.2V
24	4.9V	74	2.9V
25	1.0V	75	4.9V
26	1.2V	76	3.4V
27	1.4V	77	1.1V
28	1.4V	78	2.1V
29	1.4V	79	2.1V
30	0V	80	2.1V
31	2.1V	81	4.9V
32	0V	82	0V
33	1.4V	83	2.1V
34	1.2V	84	3.3V
35	1.5V	85	3.3V
36	1.6V	86	2.0V
37	1.5V	87	2.1V
38	2.1V	88	1.4V
39	0V	89	2.2V
40	3.6V	90	1.4V
41	2.1V	91	2.0V
42	2.3V	92	2.1V
43	2.3V	93	4.9V
44	4.9V	94	2.1V
45	0V	95	2.1V
46	0V	96	2.1V
47	1.6V	97	2.1V
48	1.6V	98	2.1V
49	1.6V	99	2.1V
50	1.6V	100	2.1V

NO	DC(V)
2	5.0V
4	0V
5	0V

NO	DC(V)	NO	DC(V)	NO	DC(V)
1	3.2V	51	0V	101	1.4V
2	0V	52	3.2V	102	1.4V
3	0V	53	3.2V	103	1.4V
4	0V	54	0V	104	1.3V
5	0V	55	1.9V	105	1.2V
6	0V	56	0V	106	3.2V
7	3.2V	57	3.2V	107	0.2V
8	3.2V	58	3.2V	108	0.1V
9	3.2V	59	0V	109	0.2V
10	3.2V	60	1.4V	110	1.6V
11	3.2V	61	1.6V	111	2.7V
12	4.2V	62	1.6V	112	0V
13	3.2V	63	1.6V	113	0V
14	3.2V	64	1.5V	114	4.9V
15	0V	65	0V	115	2.4V
16	3.2V	66	0V	116	0V
17	0V	67	0V	117	1.2V
18	0V	68	0V	118	1.6V
19	1.6V	69	3.2V	119	0V
20	1.6V	70	0V	120	1.6V
21	1.6V	71	1.4V	121	1.6V
22	2.0V	72	3.2V	122	0V
23	1.6V	73	0V	123	0V
24	1.6V	74	3.2V	124	0V
25	1.6V	75	0V	125	0V
26	1.8V	76	0.6V	126	0V
27	0V	77	1.4V	127	0V
28	3.2V	78	2.1V	128	3.2V
29	0V	79	3.2V		
30	1.6V	80	1.4V		
31	1.6V	81	1.9V		
32	1.6V	82	1.8V		
33	5.0V	83	1.4V		
34	5.0V	84	1.4V		
35	3.2V	85	1.4V		
36	5.0V	86	1.4V		
37	5.0V	87	1.4V		
38	0V	88	2.1V		
39	0V	89	1.4V		
40	1.6V	90	0.6V		
41	1.6V	91	1.4V		
42	1.6V	92	1.4V		
43	1.6V	93	1.4V		
44	0.2V	94	1.4V		
45	0V	95	1.4V		
46	0V	96	0V		
47	3.2V	97	3.2V		
48	0V	98	1.4V		
49	0V	99	1.7V		
50	0V	100	1.6V		

NO	DC(V)
1	0V
2	0V
3	0V
4	9V
5	9V
6	0V
7	0V
8	1.37V
9	3.9V
10	3.4V
11	0V
12	3.4V
13	4.5V
14	5.7V
15	3V
16	0V
17	0V
18	0V
19	0V
20	1.37V
21	0V
22	1.37V
23	1.37V
24	0V
25	0V
26	3.16V
27	1.37V
28	0V
29	1.41V
30	2.37V
31	2.56V
32	0V
33	2.39V
34	2.56V
35	1.34V
36	1.37V
37	4.93V
38	0V
39	0V
40	1.37V
41	3.2V
42	3V

NO	DC(V)	NO	DC(V)	NO	DC(V)	NO	DC(V)
1	5.0V	51	3.7V	101	1.6V		
2	0V	52	3.6V	102	3.2V		
3	5.0V	53	4.1V	103	0V		
4	5.0V	54	1.2V	104	3.2V		
5	0V	55	3.5V	105	3.2V		
6	5.0V	56	0V	106	3.2V		
7	5.0V	57	0.4V	107	0V		
8	0V	58	5.0V	108	0V		
9	5.0V	59	5.0V	109	3.2V		
10	3.2V	60	4.6V	110	0V		
11	5.0V	61	3.2V	111	1.5V		
12	5.0V	62	2.7V	112	1.4V		
13	5.0V	63	3.5V	113	1.7V		
14	5.0V	64	4.0V	114	1.7V		
15	5.0V	65	0V	115	1.4V		
16	5.0V	66	3.2V	116	3.2V		
17	5.0V	67	0V	117	3.2V		
18	0V	68	1.9V	118	3.2V		
19	0V	69	1.6V	119	0V		
20	5.0V	70	1.4V	120	0V		
21	0V	71	0V	121	0V		
22	5.0V	72	2.0V	122	0V		
23	5.0V	73	1.1V	123	0V		
24	0V	74	0.9V	124	4.9V		
25	5.0V	75	1.6V	125	5.0V		
26	5.0V	76	3.2V	126	5.0V		
27	5.0V	77	0V	127	0V		
28	0V	78	3.2V	128	5.0V		
29	0V	79	0V	129	5.0V		
30	3.2V	80	0.2V	130	3.2V		
31	3.2V	81	0V	131	2.5V		
32	0V	82	0V	132	5.0V		
33	0V	83	0V	133	0V		
34	0V	84	0V	134	0V		
35	0V	85	4.9V	135	5.0V		
36	3.2V	86	3.2V	136	0V		
37	0.1V	87	0V	137	0V		
38	0.1V	88	0V	138	5.0V		
39	0V	89	1.2V	139	5.0V		
40	4.5V	90	0V	140	0V		
41	4.6V	91	0V	141	2.8V		
42	4.7V	92	3.2V	142	0V		
43	1.5V	93	0V	143	5.0V		
44	3.2V	94	3.2V	144	0V		
45	3.9V	95	0V				
46	4.0V	96	3.2V				
47	0.7V	97	0V				
48	3.8V	98	3.2V				
49	1.1V	99	0V				
50	4.5V	100	1.6V				

NO	DC(V)
1	5.0V
2	4.6V
3	0V
4	4.7V
5	5.0V

NO	DC(V)
2	1.6V
3	0V
4	1.4V
5	3.2V

NO	DC(V)	NO	DC(V)
1	5.0V	51	0.6V
2	5.0V	52	5.0V
3	5.0V	53	5.0V
4	5.0V	54	5.0V
5	0V	55	5.0V
6	5.0V	56	5.0V
7	5.0V	57	0V
8	4.4V	58	0V
9	0V	59	5.0V
10	0V	60	0V
11	4.9V	61	0V
12	5.0V	62	0V
13	0V	63	0V
14	0V	64	0V
15	2.1V	65	0V
16	1.9V	66	5.0V
17	5.0V	67	4.8V
18	2.3V	68	3.8V
19	0V	69	4.8V
20	0V	70	5.0V
21	5.0V	71	0V
22	5.0V	72	5.0V
23	2.4V	73	5.0V
24	2.4V	74	5.0V
25	5.0V	75	5.0V
26	2.7V	76	5.0V
27	1.8V	77	5.0V
28	2.1V	78	3.1V
29	1.7V	79	0V
30	3.5V	80	5.0V
31	3.5V	81	5.0V
32	2.1V	82	4.9V
33	2V	83	5.0V
34	5.0V	84	5.0V
35	2.6V	85	0V
36	4.3V	86	0V
37	4V	87	0V
38	0V	88	5.0V
39	5V	89	5.0V
40	0V	90	5.0V
41	0V	91	5.0V
42	0V	92	0V
43	0V	93	1.1V
44	0V	94	1.5V
45	0V	95	0V
46	0V	96	0V
47	0V	97	2.3V
48	5V	98	2.3V
49	0V	99	2.3V
50	5.0V	100	2.4V

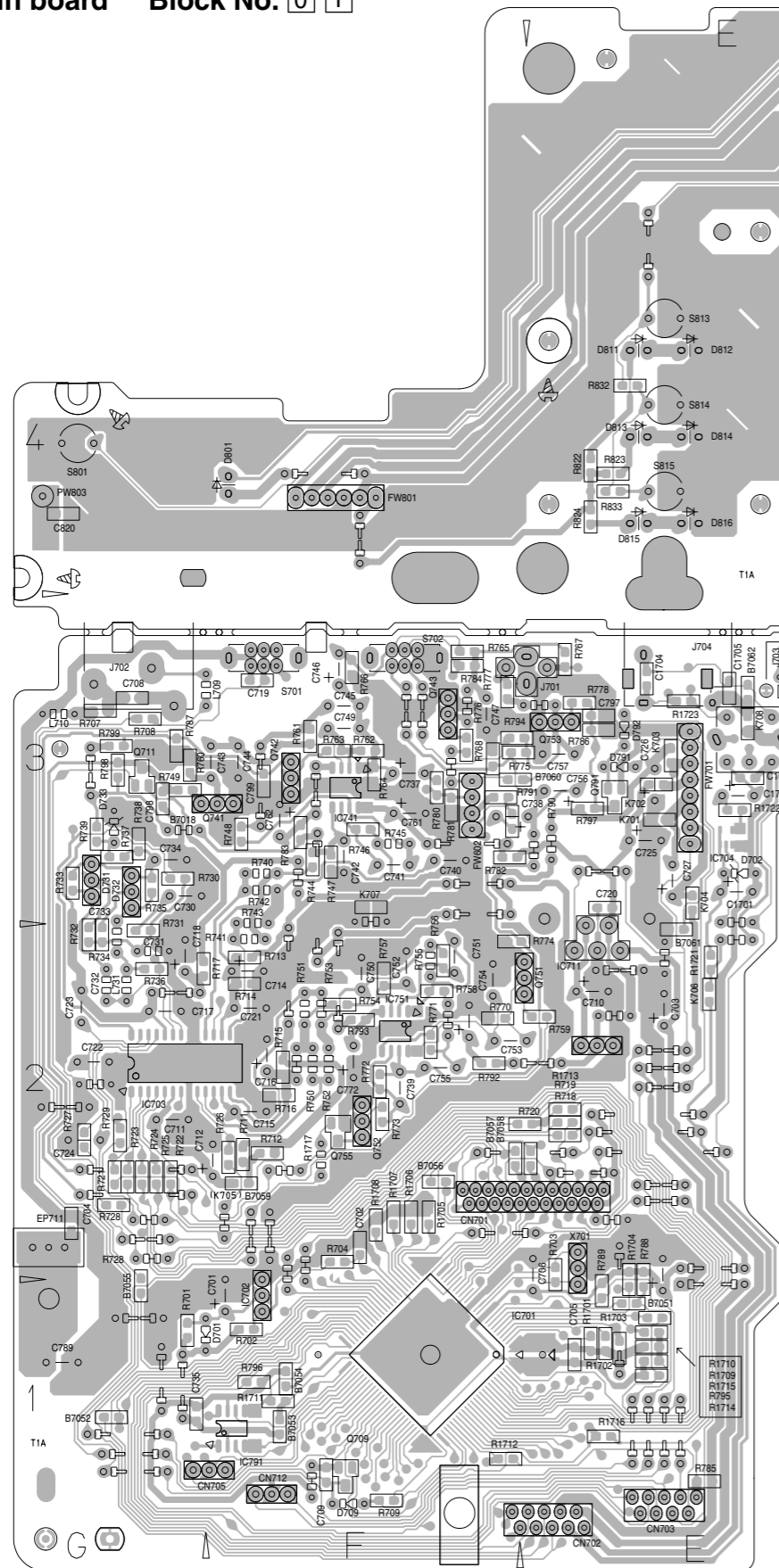
NO	DC(V)
2	0V
3	0V
4	3.5V
5	1.7V
6	2.1V
7	1.8V
8	2.7V
9	1.9V
10	2.1V
11	0V
12	4.6V
13	0V
14	4.2V
15	1.1V
16	0V
17	1.5V
18	0V
19	0V
20	0V
21	0V
22	0V
23	5V
24	0V
25	0V
26	3.2V
27	0V
28	2.3V
29	0V
30	2.4V
31	0V
32	0V
33	0V
34	0V
35	0V
36	0V
37	4V
38	4.3V
39	2.6V
40	2V
41	2.1V
42	3.6V
43	0V
44	0V

NO	DC(V)
1	4.9V
2	5.0V
3	0V
4	0V
5	1.7V
6	1.0V
7	0V
8	5.0V
9	5.0V
10	5.0V
11	1.6V
12	1.6V
13	1.6V
14	1.6V
15	1.6V
16	1.6V
17	1.6V
18	1.6V
19	1.6V
20	1.6V
21	1.6V
22	1.6V
23	1.6V
24	1.6V
25	1.6V
26	1.6V
27	1.6V
28	1.6V
29	1.6V
30	1.6V
31	1.6V
32	1.6V
33	1.6V
34	1.6V
35	1.6V

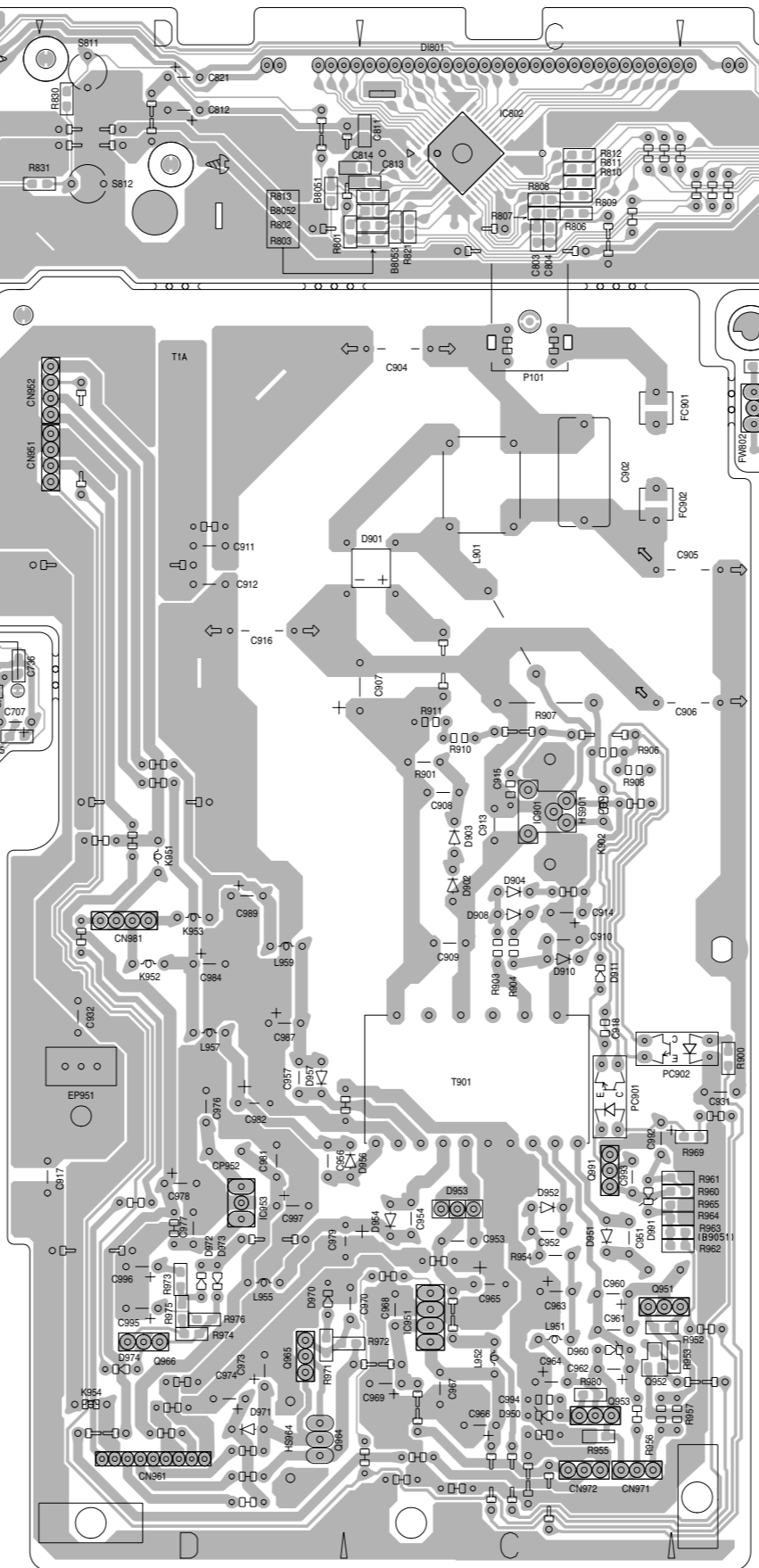
Printed circuit boards

■ Main board Block No. 0 1

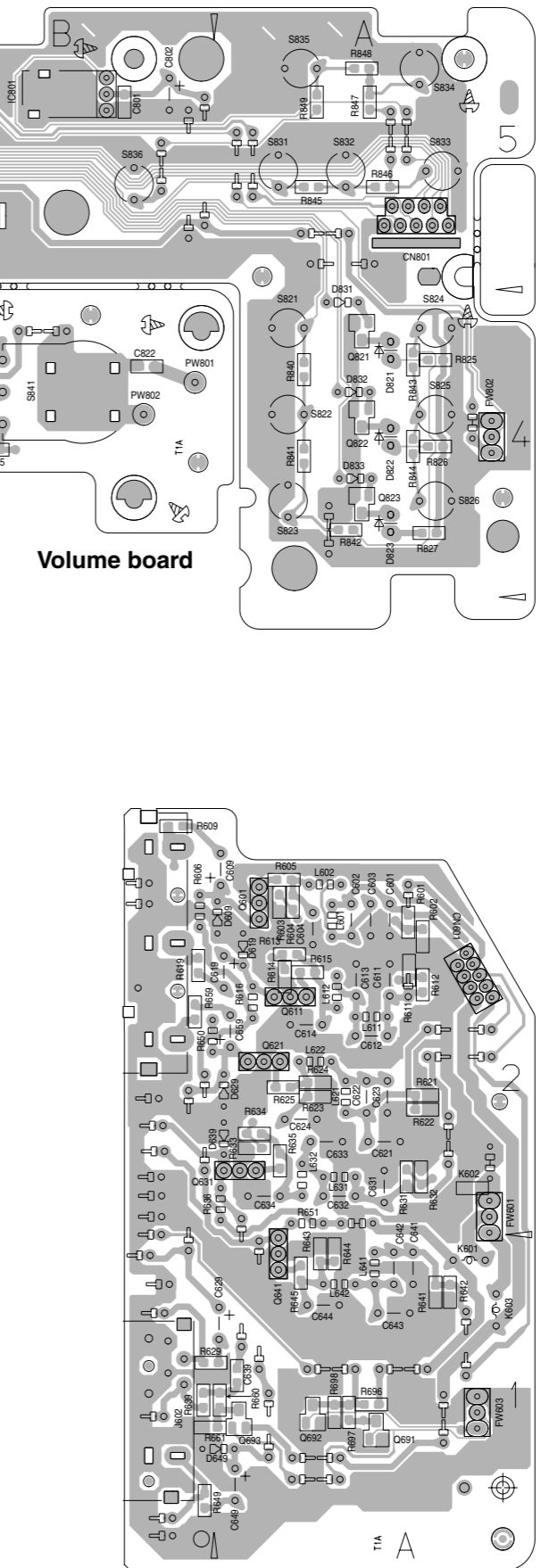
7
6
5
4
3
2
1



System control board



Power supply board



Video board

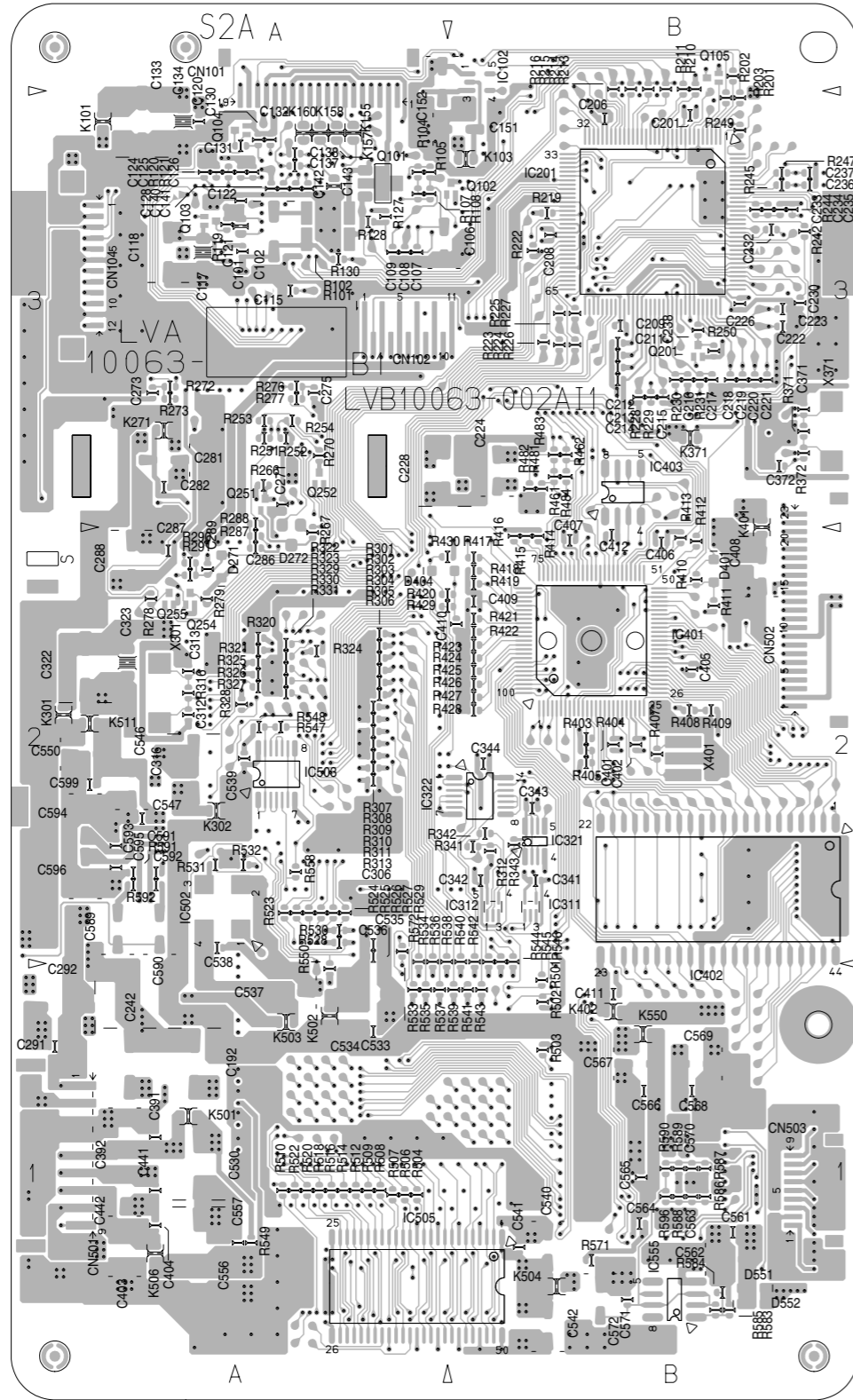
FL indicator board

Volume board

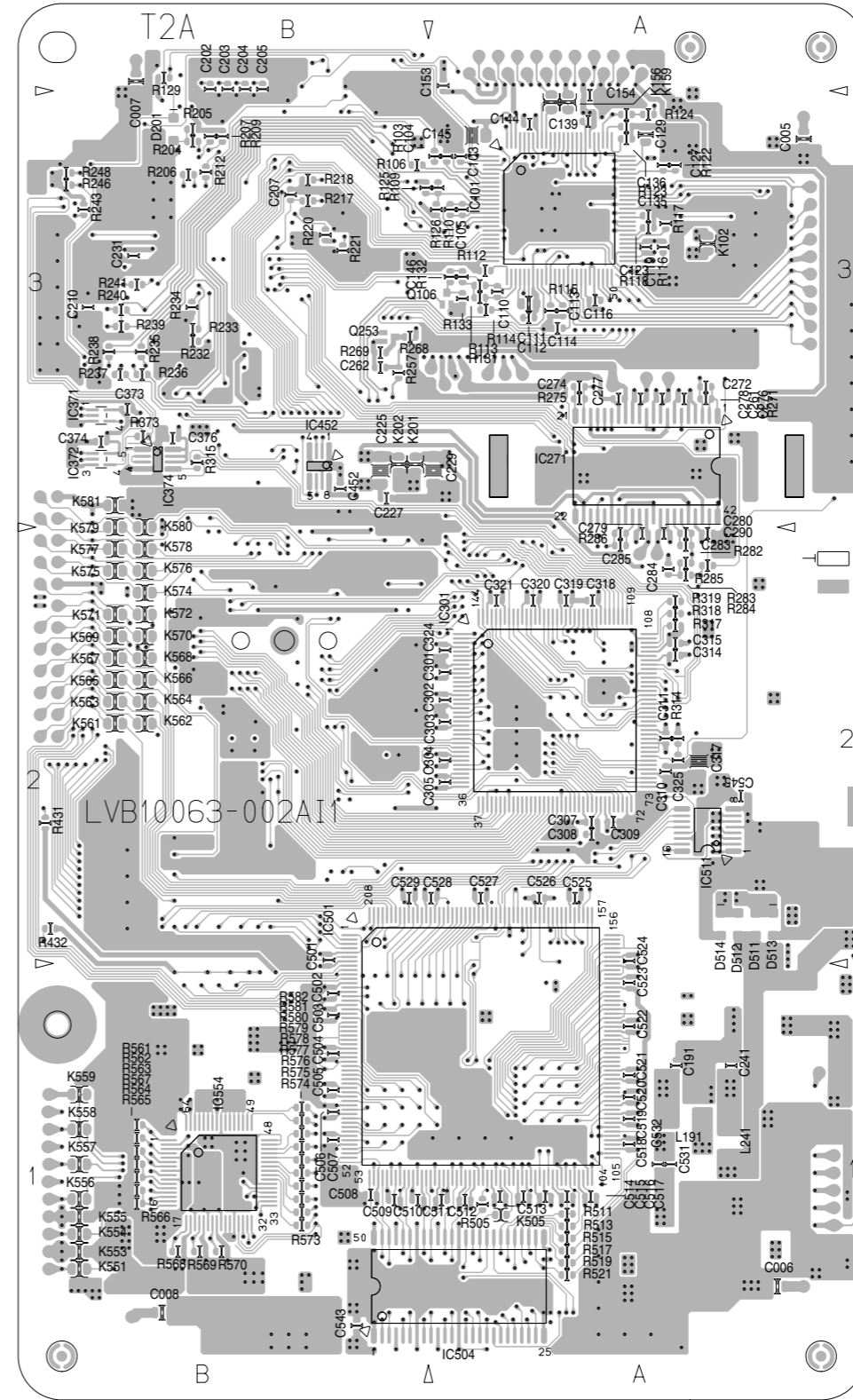
A B C D E F G H I J

■ Traverse mechanism control board Block No. 0 2

Surface side view



Bottom side view



A

B

C

D

E
2-14

F

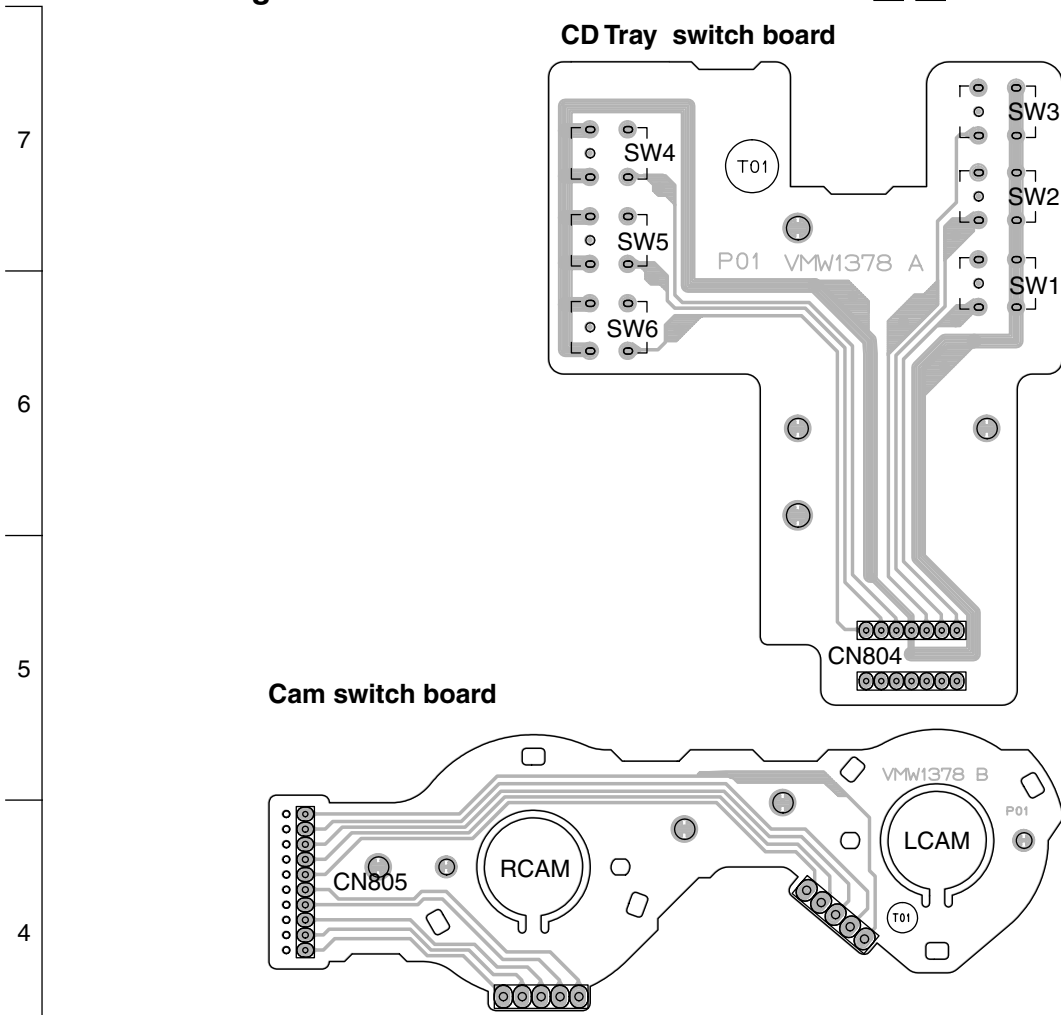
G

H

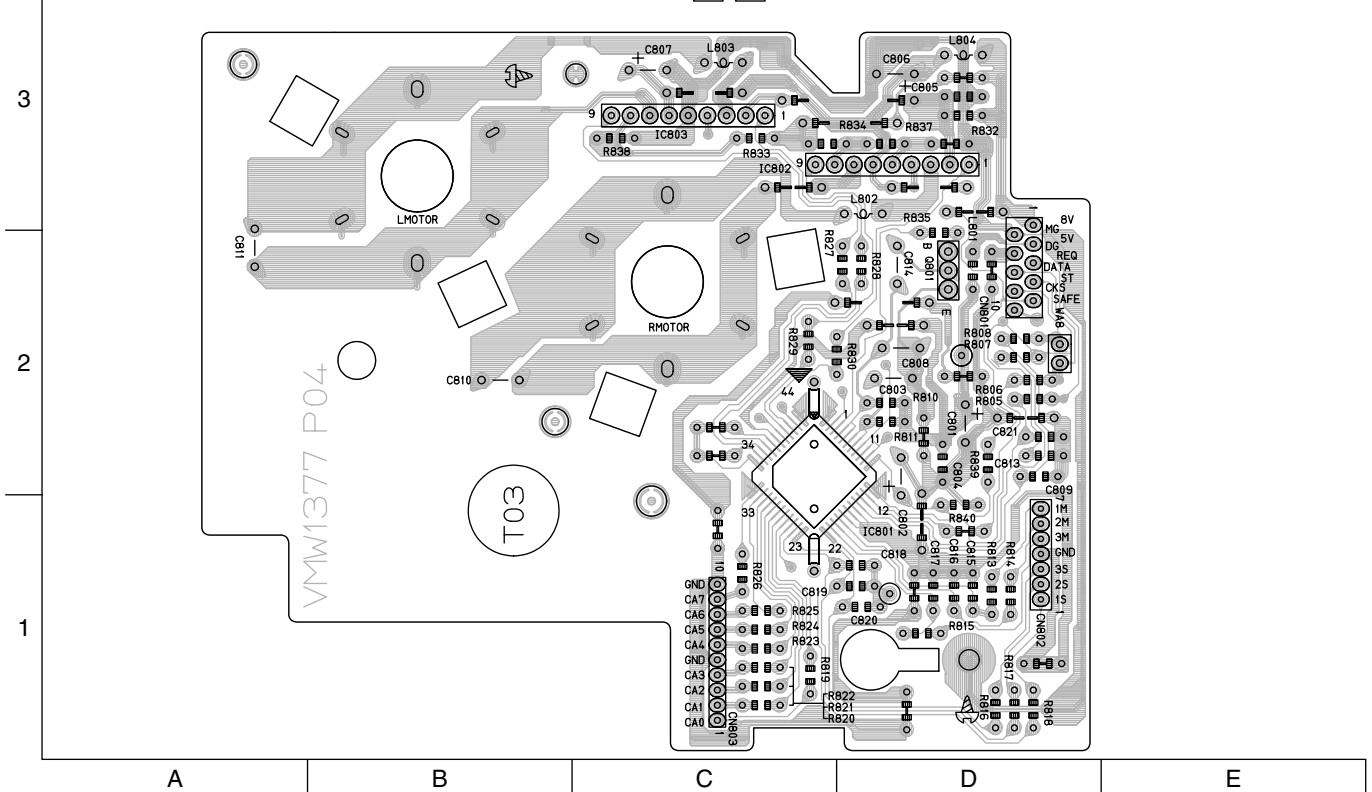
I

J

■ CD Changer mechanism switch board Block No. 0 3

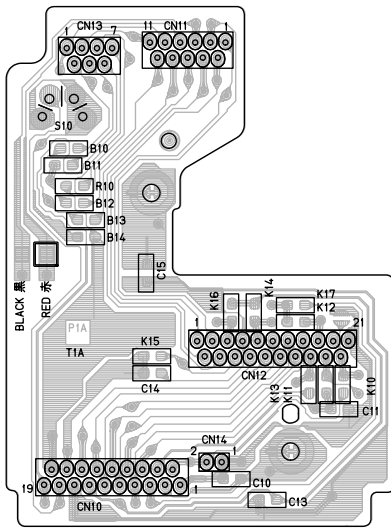


■ Mechanism control board Block No. 0 4



■ Connection board Block No. 0 5

7
6
5
4
3
2
1

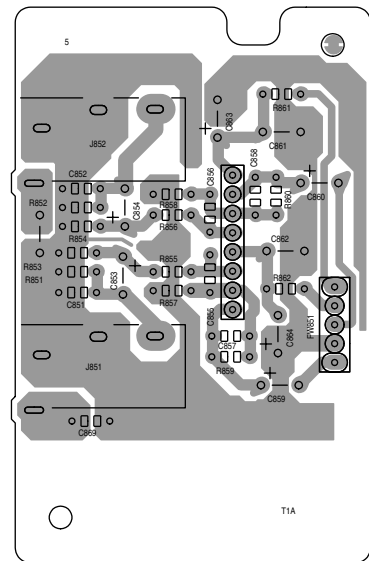
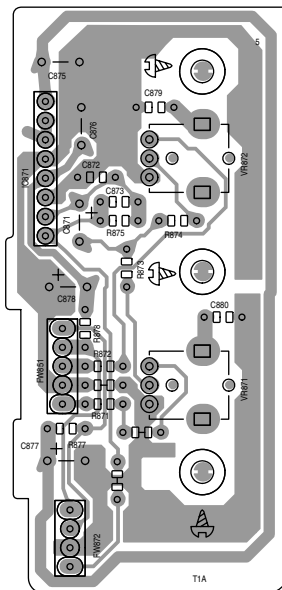
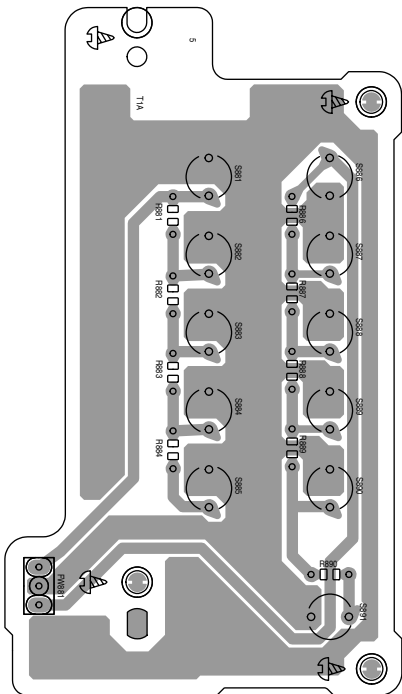


■ KARAOKE board Block No. 0 6

Key switch board

Mic mix amp. board

Mic amp. board



A B C D E