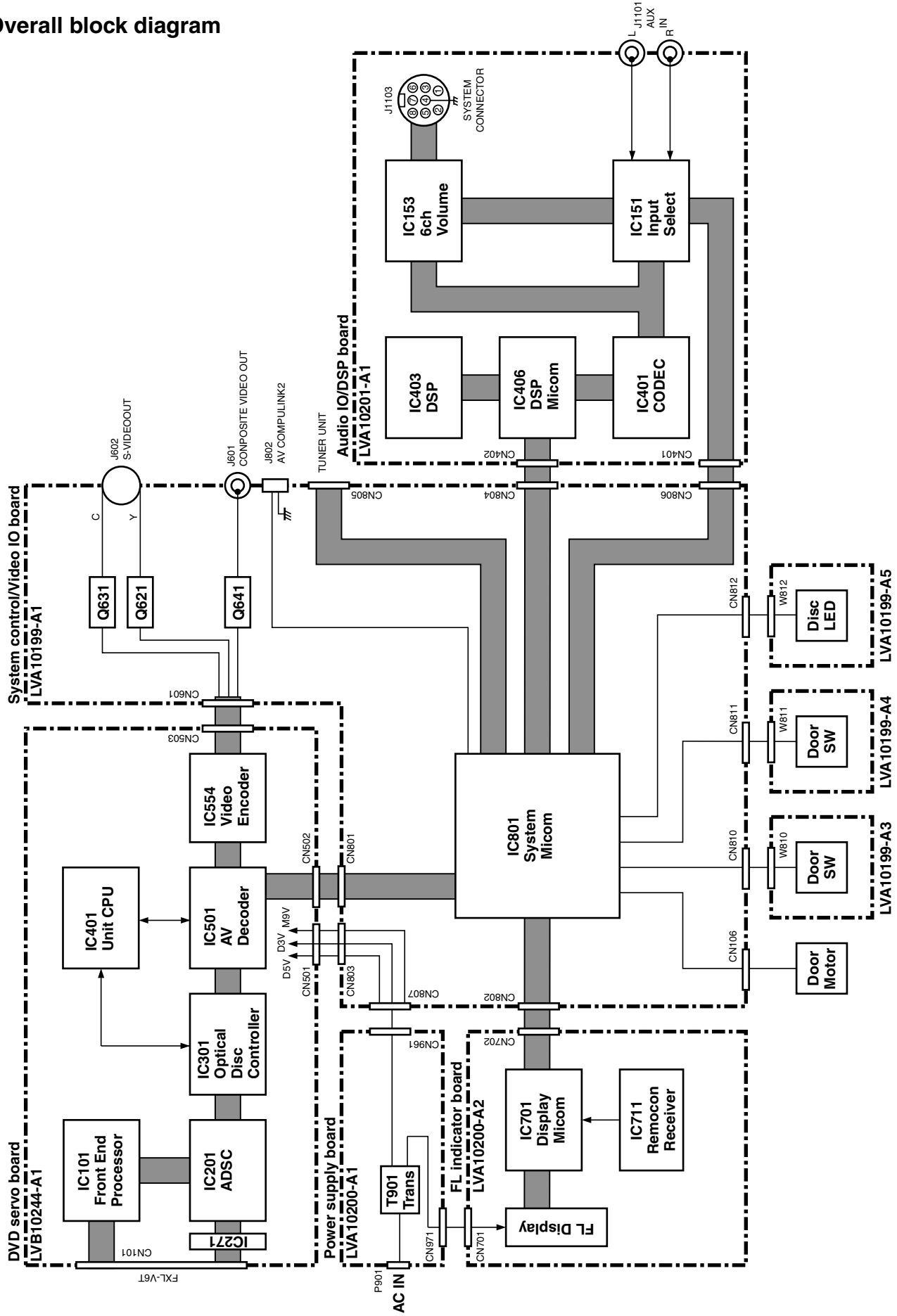
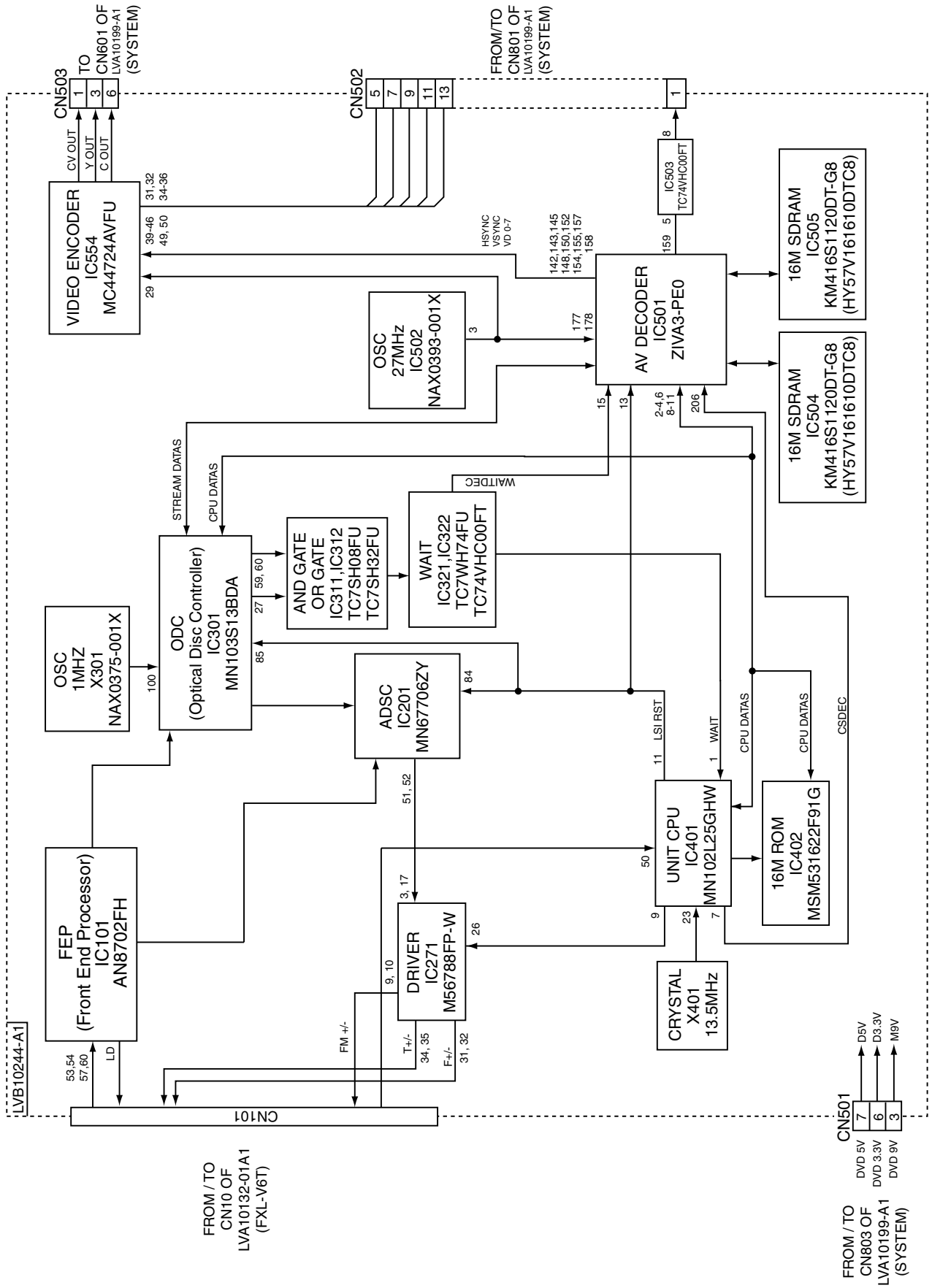
Block diagrams

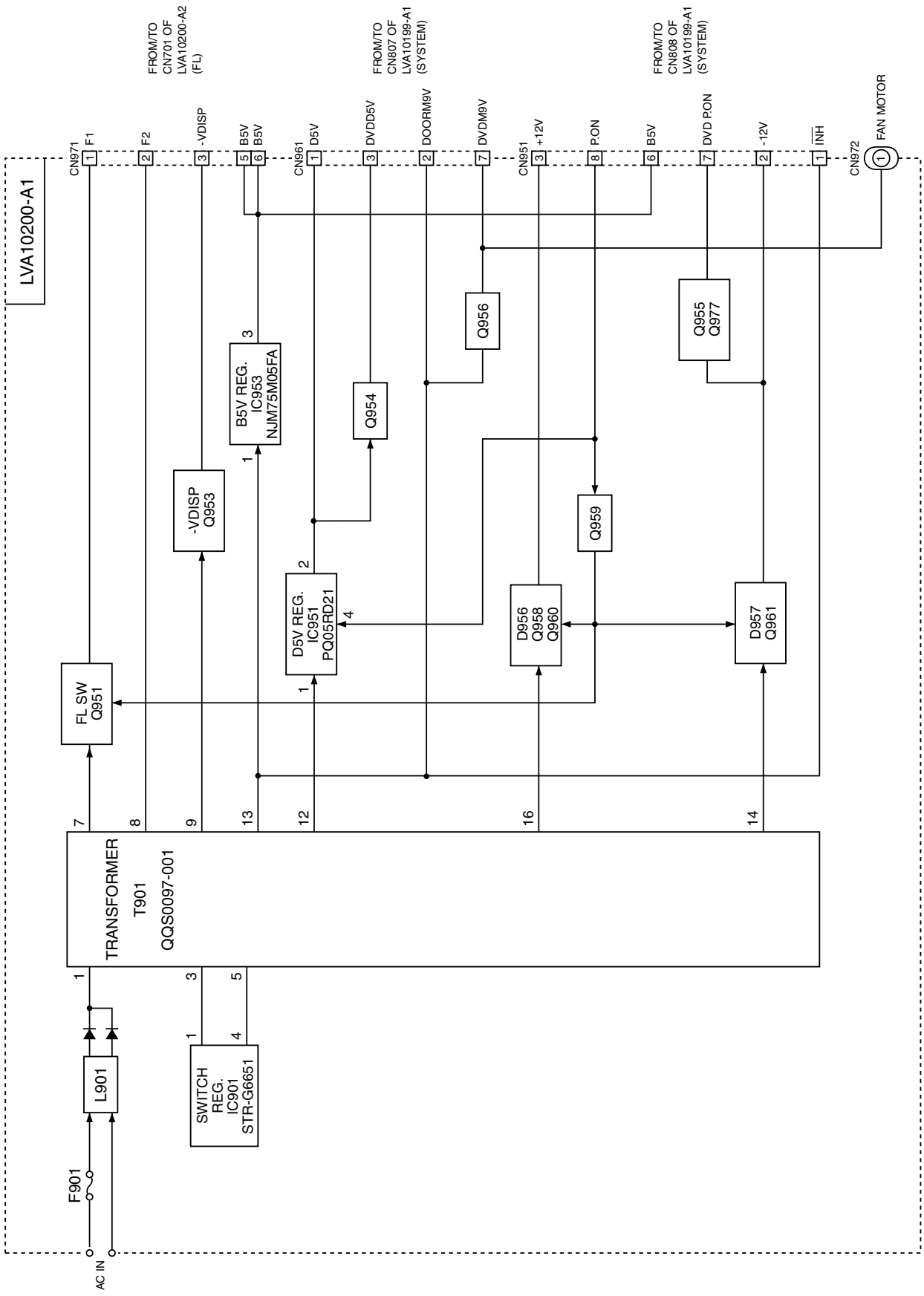
■ Overall block diagram



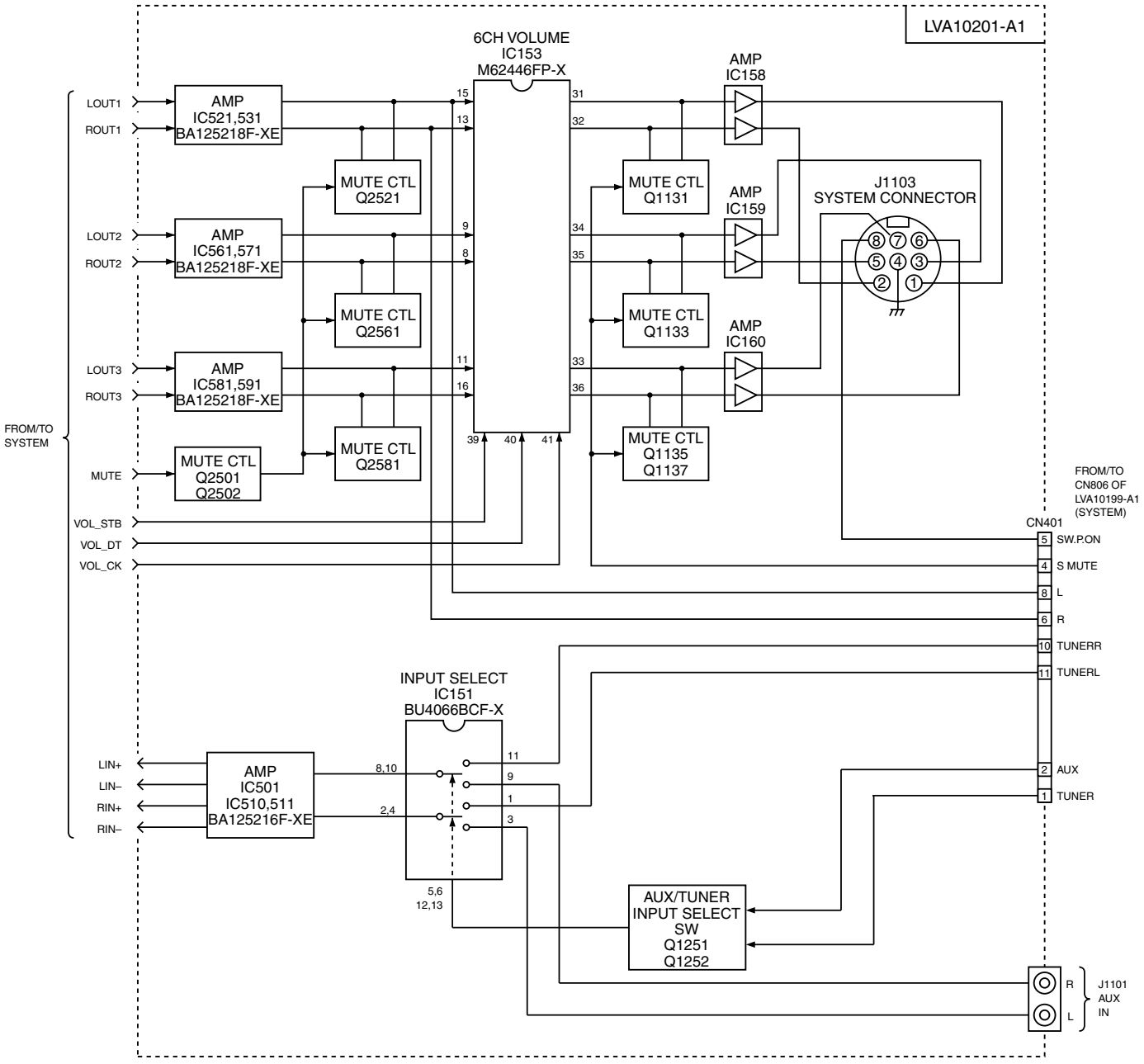
■ Overall block diagram



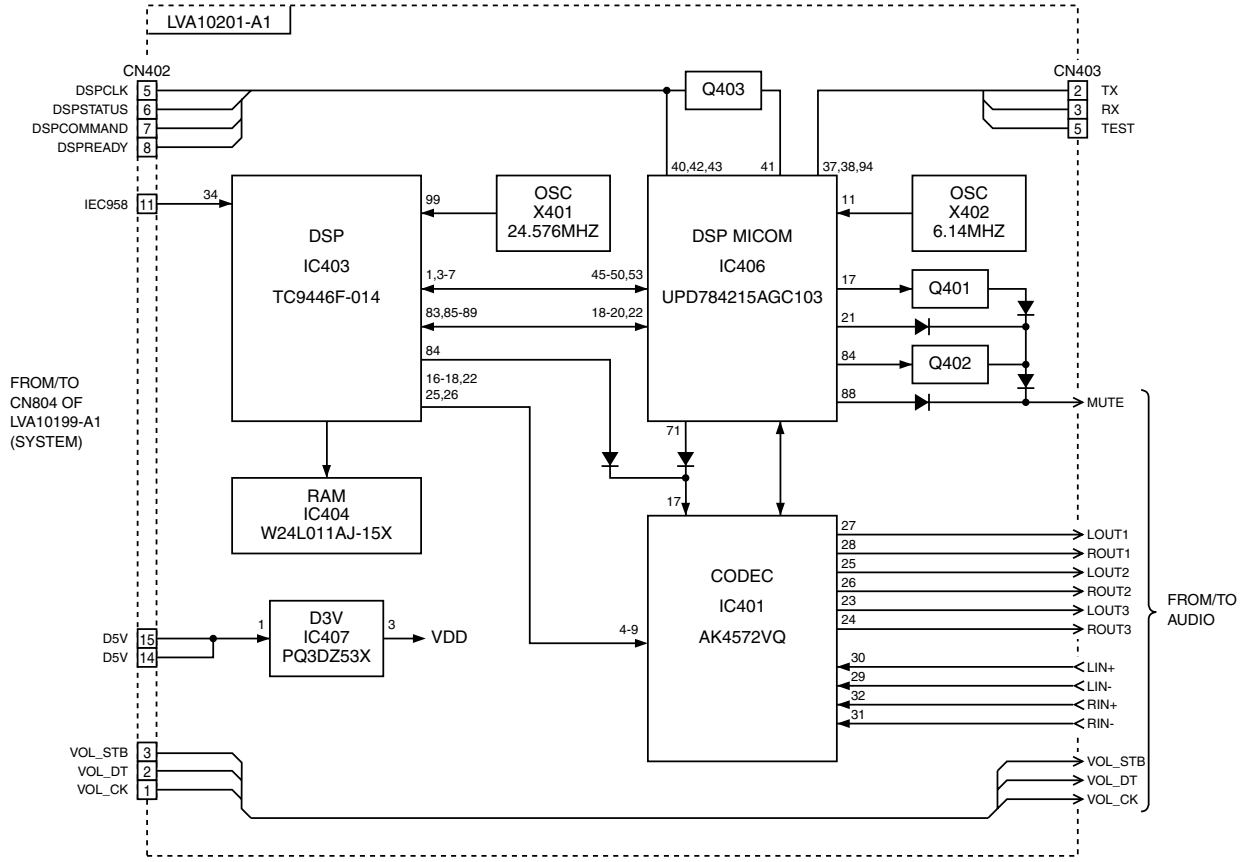
■ Block diagram (power supply section)



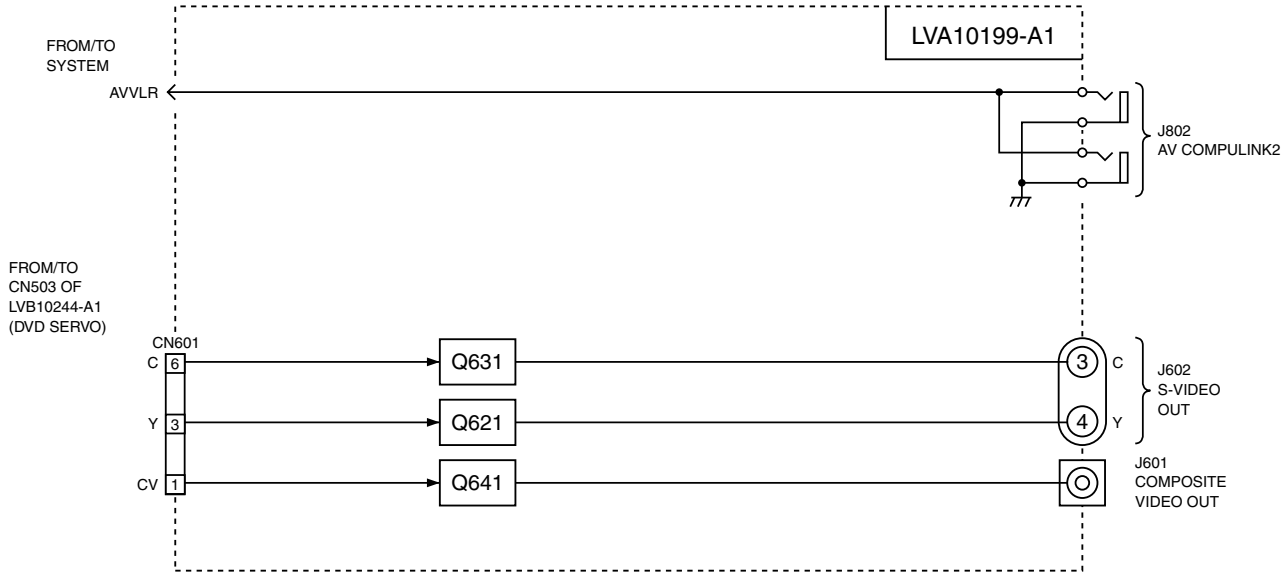
■ Block diagram (audio input/output section)



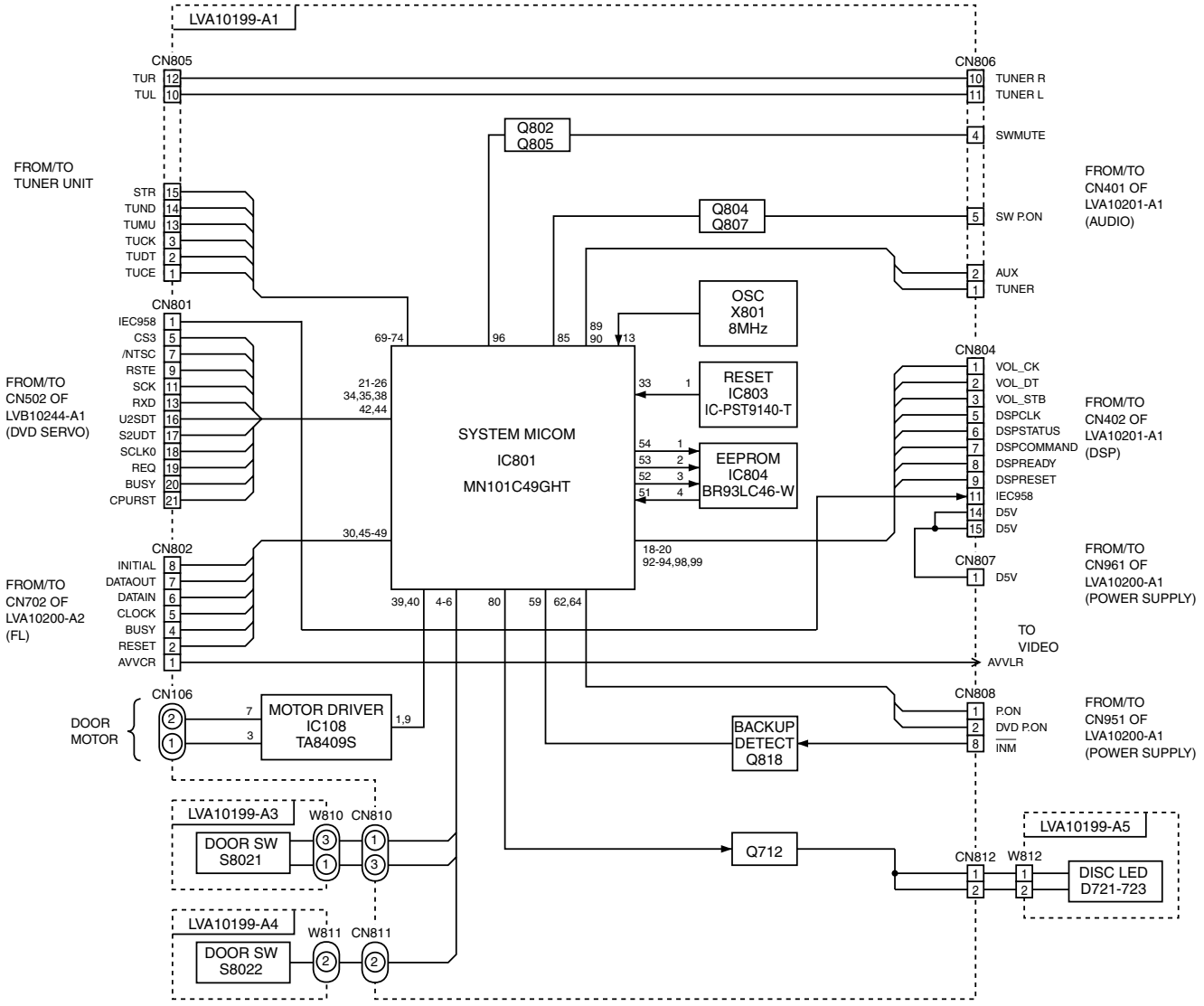
■Block diagram (DSP section)



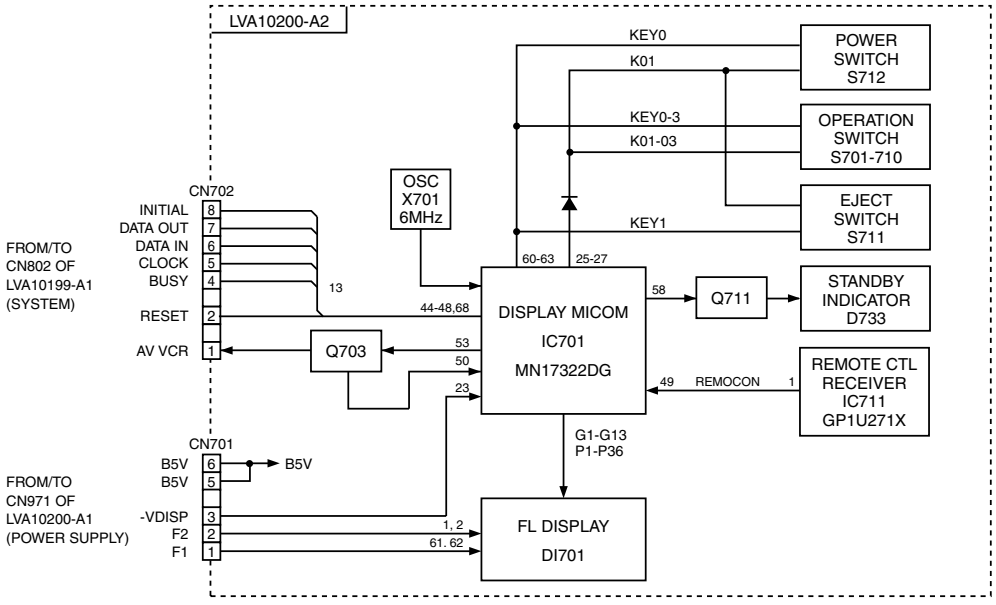
■Block diagram (video input/output section)



■ Block diagram (system control section)

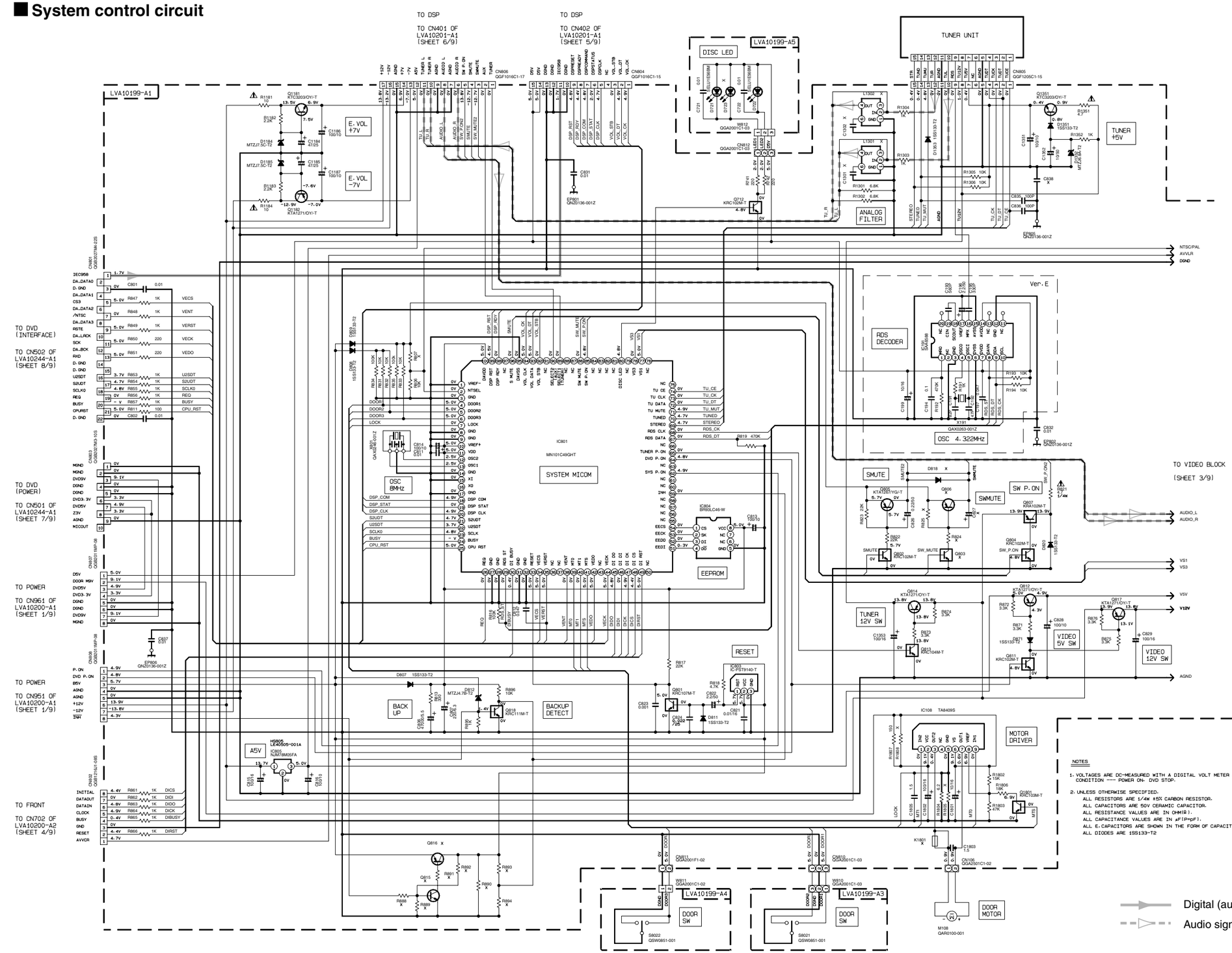


■ Block diagram (FL section)

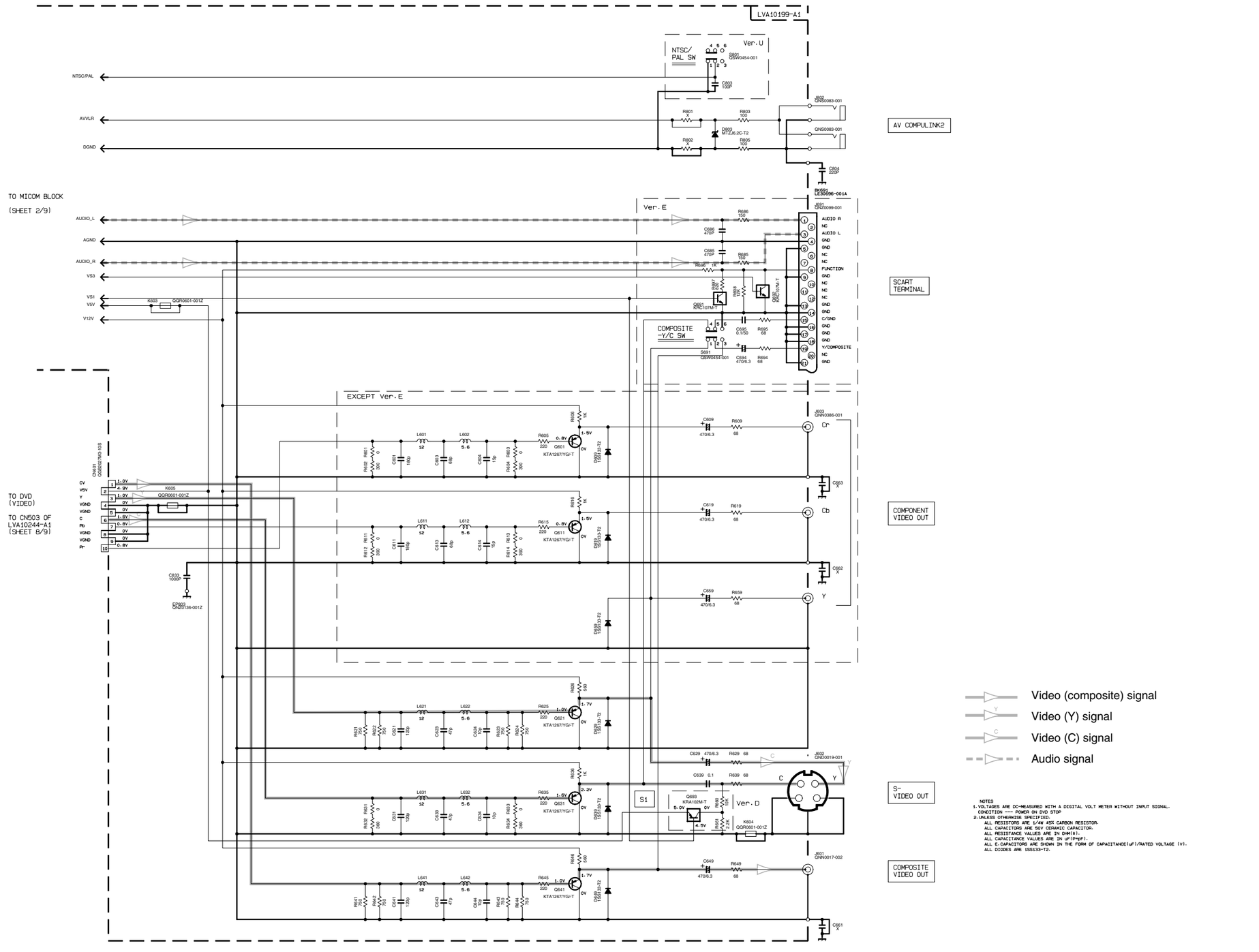


Standerd schematic diagrams

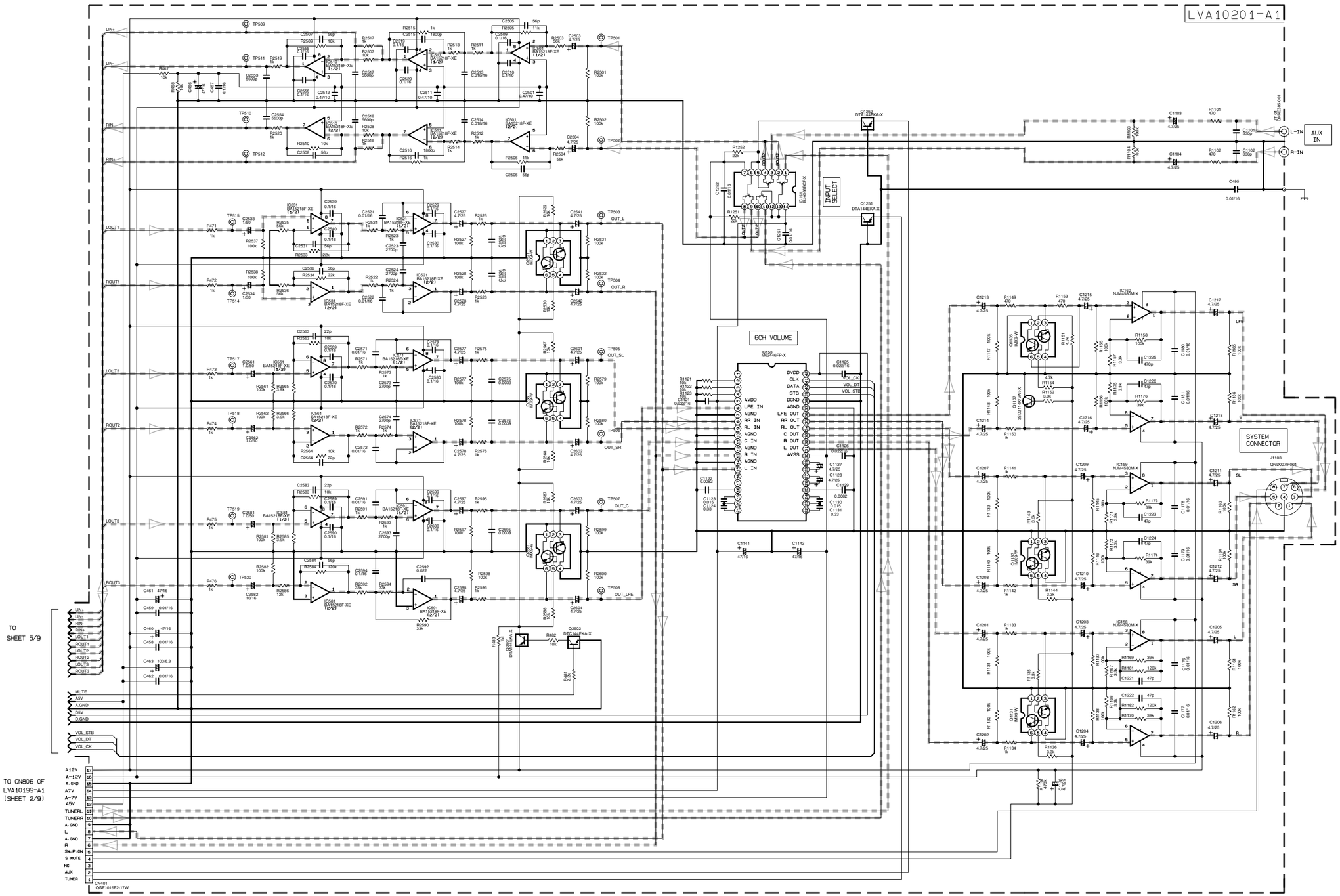
■ System control circuit



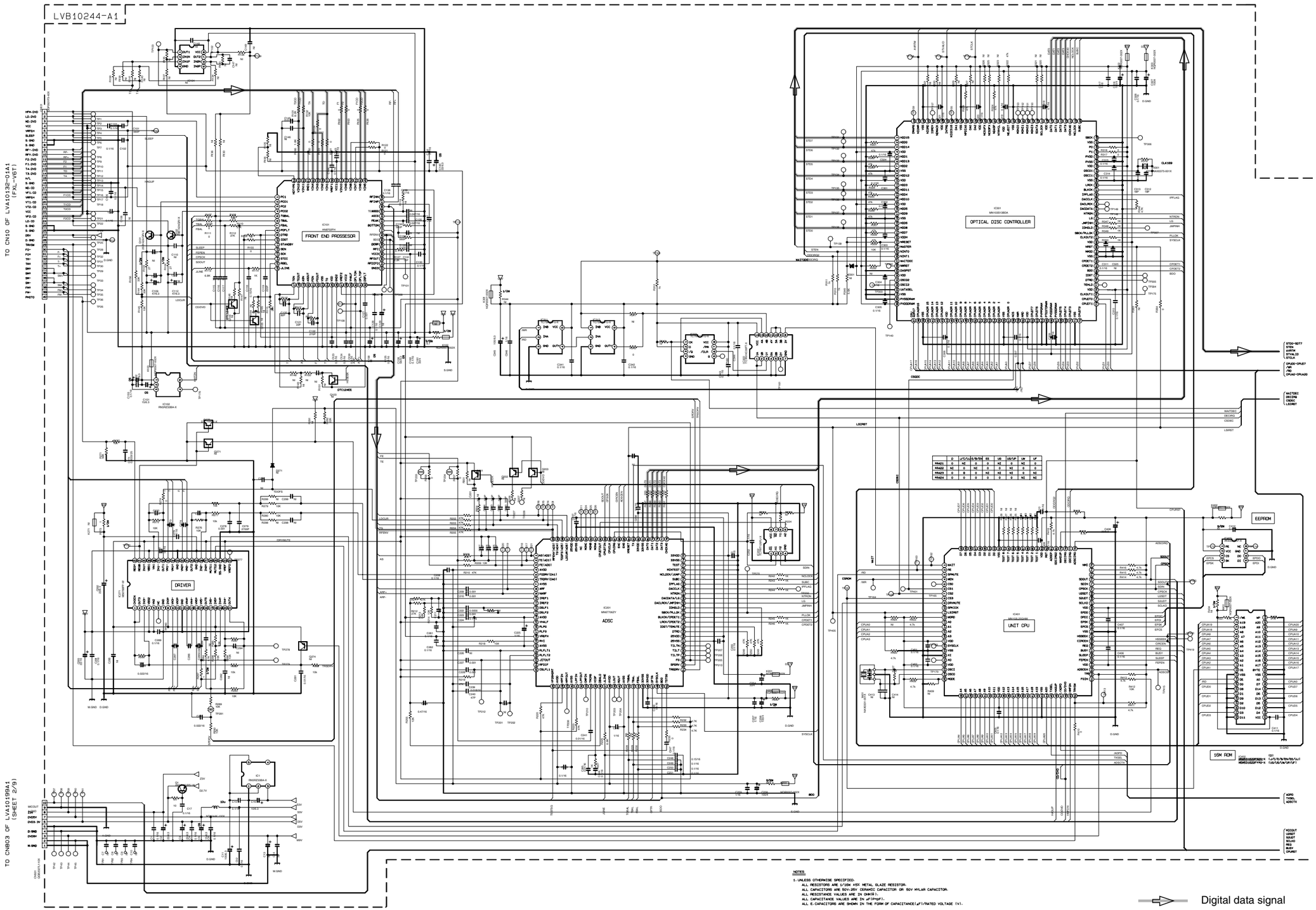
■ Video input/output circuit



■ Audio input/output circuit

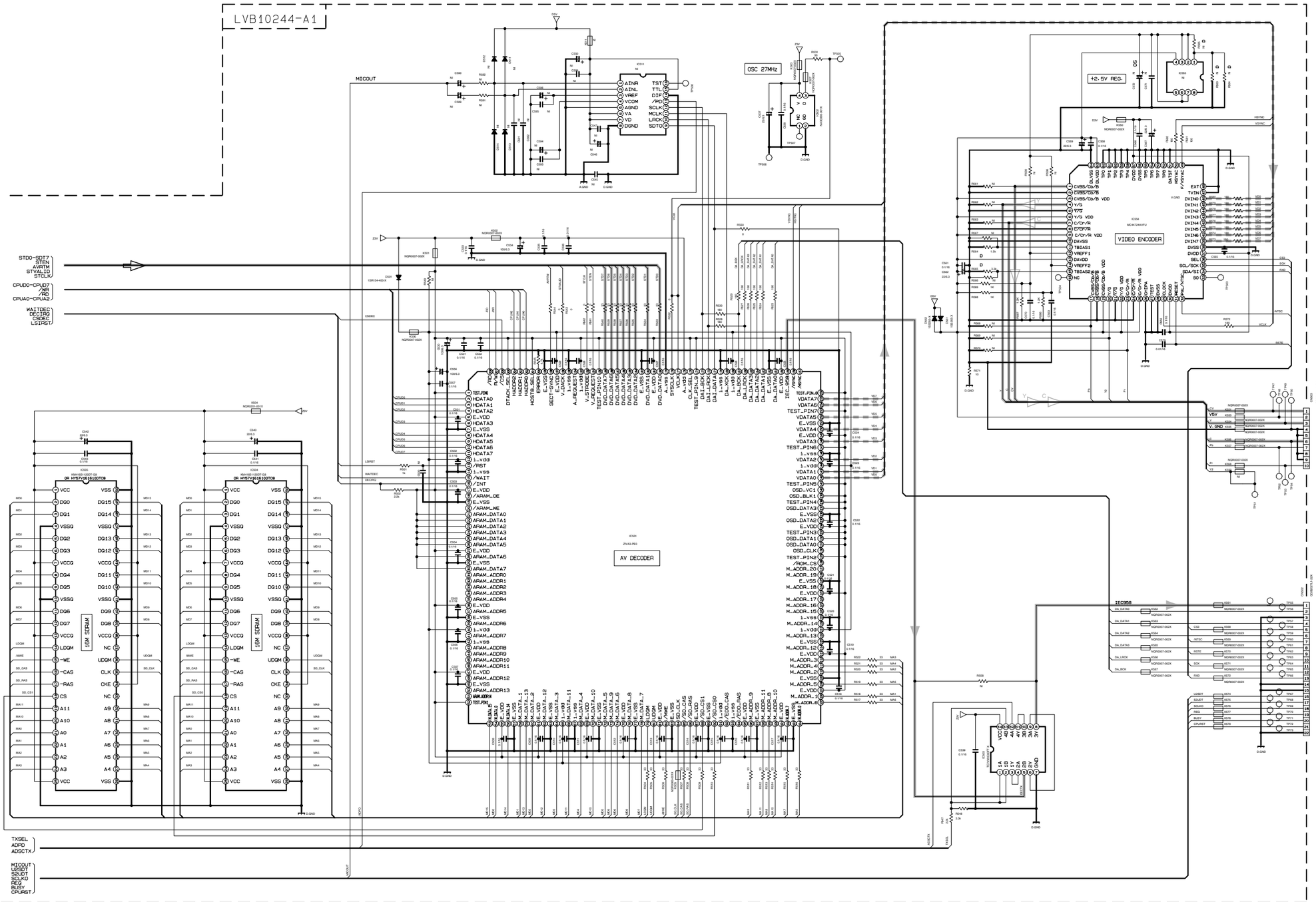


■DVD servo circuit 1/2



■DVD servo circuit 2/2

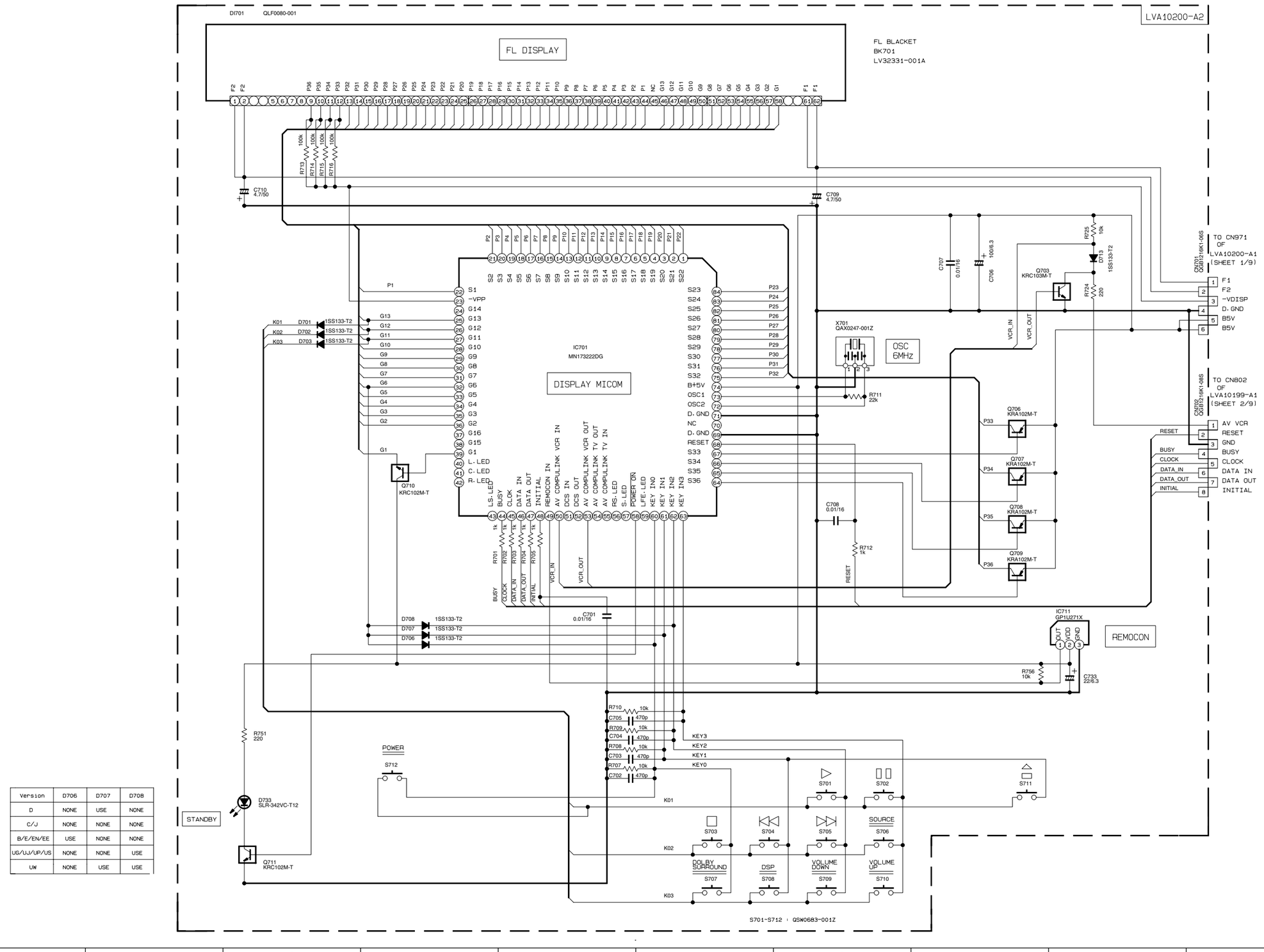
LVB10244-A1



NOTES

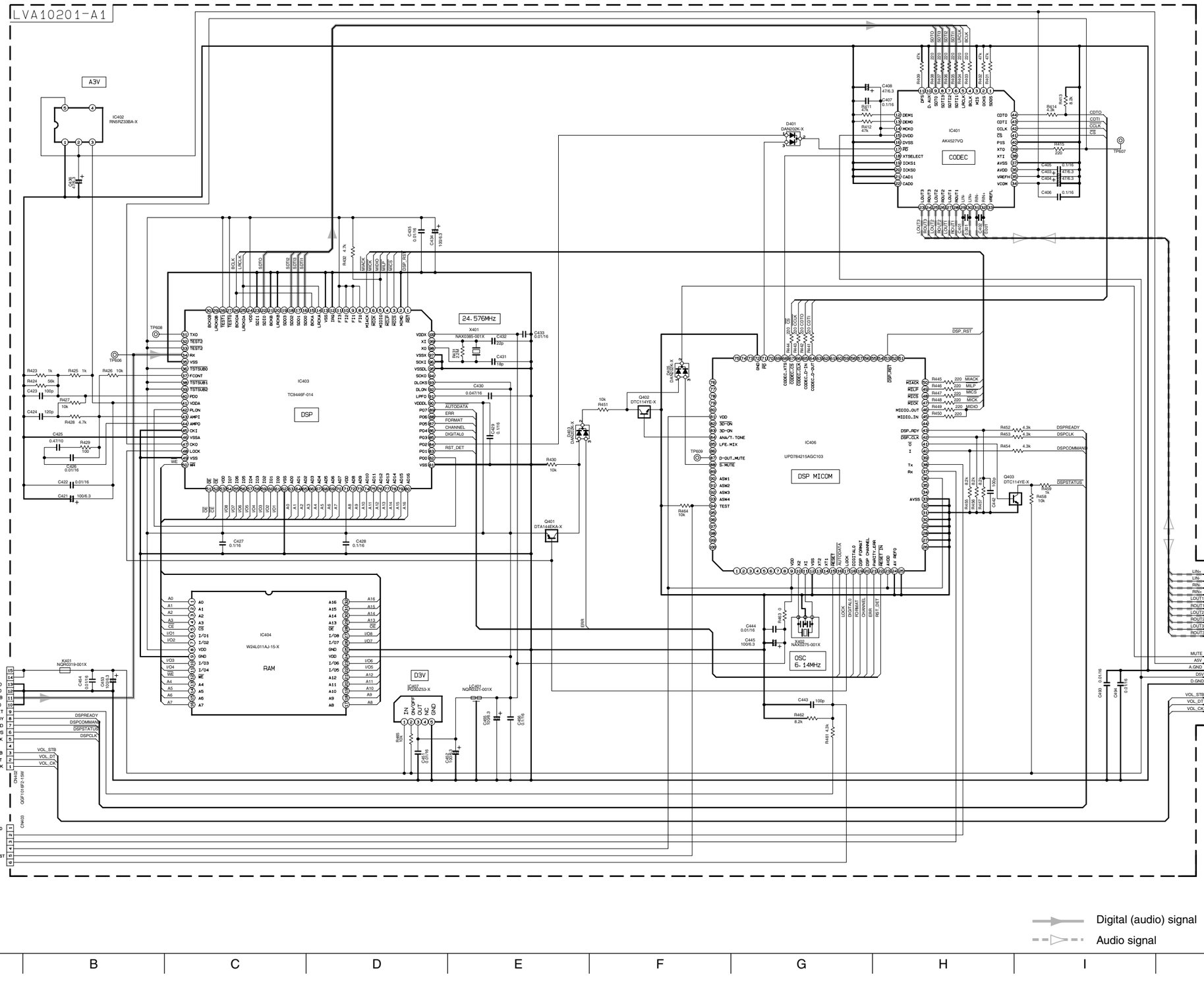
1. UNLESS OTHERWISE SPECIFIED.
   ALL RESISTORS ARE 1/16W ±5% METAL GLAZE RESISTOR.
   ALL CAPACITORS ARE 50V.25V CERAMIC CAPACITOR OR 50V MYLAR CAPACITOR.
   ALL RESISTANCE VALUES ARE IN Ω=Ω(Ω).
   ALL CAPACITANCE VALUES ARE IN μF(P=pF).
   ALL E.CAPACITORS ARE SHOWN IN THE FORM OF CAPACITANCE(μF)/RATED VOLTAGE (V).

■ FL circuit

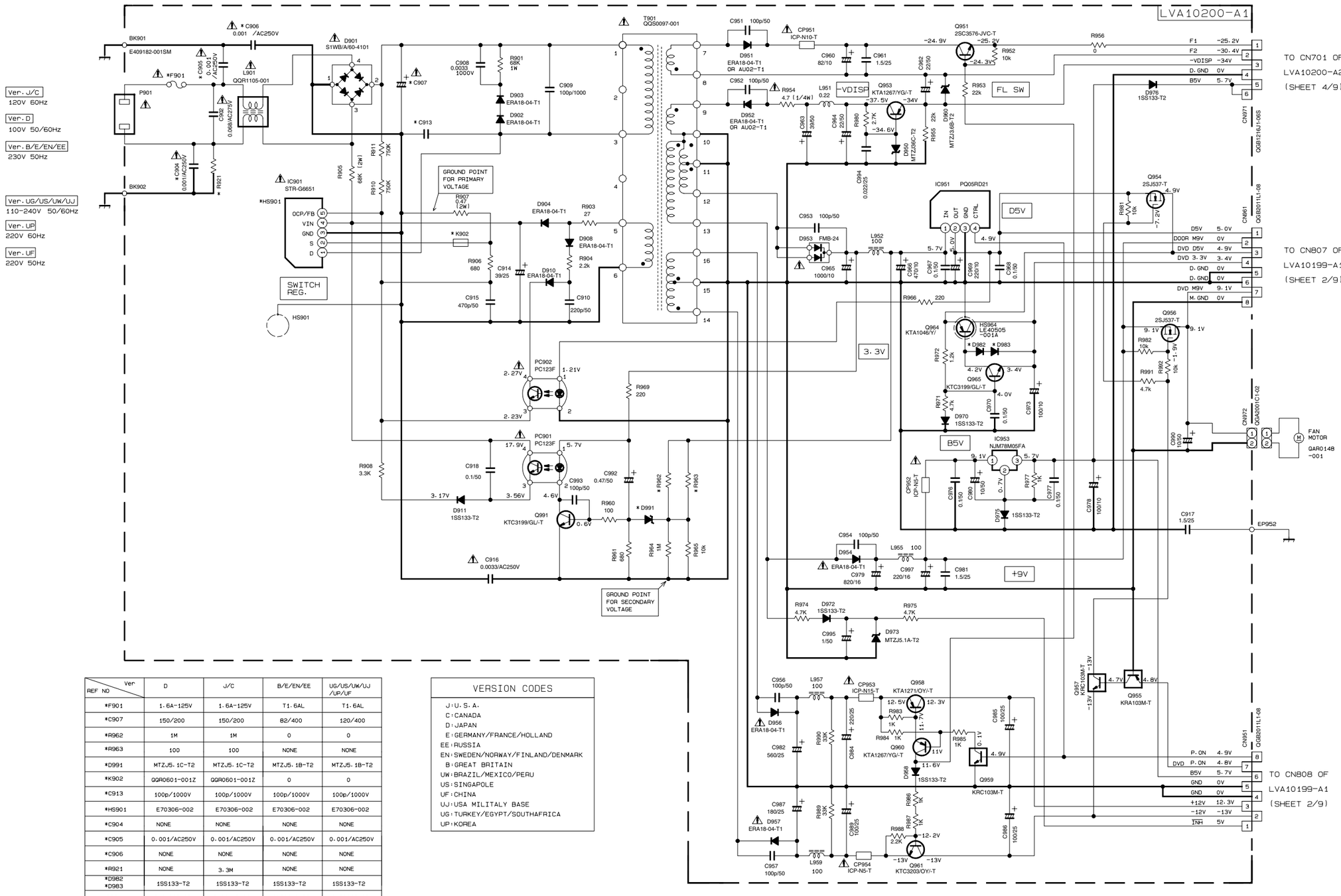


Version	D706	D707	D708
D	NONE	USE	NONE
C/J	NONE	NONE	NONE
B/E/EN/EE	USE	NONE	NONE
UG/UJ/UP/US	NONE	NONE	USE
UW	NONE	USE	USE

■ DSP circuit


LVA10201-A1
A3V
IC402
RN5RZ33BA-X
IC401
AK4527VQ
CODEC
IC403
TC9446F-014
DSP
IC404
W24L011AJ-15-X
RAM
IC406
UPD784215AGC103
DSP MICOM
24.576MHz
X401
NAX0385-001X
OSC
6.14MHz
X400
NAX0275-001X
D3V
IC407
R5Z02Z53-X
K401
NQR0319-001X
LC401
NQR0321-001X
CN403
OGF101BF3-15W
TP608
TP606
TP609
TP607
D401
DAN202K-X
D403
DAN202K-X
Q401
DTA144EKA-X
Q402
DTC114YE-X
Q403
DTC114YE-X
DSP_RST
DSPREADY
DSPCLK
DSPCOMMAND
DSPSTATUS
VOL_STB
VOL_DT
VOL_CK
MUTE
TO CN804 OF LVA10159-A1 (SHEET 2/9)
TO SHEET 6/9
Digital (audio) signal
Audio signal

■ Power supply circuit



REF NO \ Ver	D	J/C	B/E/EN/EE	UG/US/UW/UJ /UP/UF
*F901	1.6A-125V	1.6A-125V	T1.6AL	T1.6AL
*C907	150/200	150/200	82/400	120/400
*R962	1M	1M	0	0
*R963	100	100	NONE	NONE
*D991	MTZJ5.1C-T2	MTZJ5.1C-T2	MTZJ5.1B-T2	MTZJ5.1B-T2
*K902	QQR0601-001Z	QQR0601-001Z	0	0
*C913	100p/1000V	100p/1000V	100p/1000V	100p/1000V
*HS901	E70306-002	E70306-002	E70306-002	E70306-002
*C904	NONE	NONE	NONE	NONE
*C905	0.001/AC250V	0.001/AC250V	0.001/AC250V	0.001/AC250V
*C906	NONE	NONE	NONE	NONE
*R921	NONE	3.3M	NONE	NONE
*D982 *D983	1SS133-T2	1SS133-T2	1SS133-T2	1SS133-T2
P901	QNC0006-001	QNC0046-001	QNC0006-001	QNC0006-001

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 MILITALY BASE
UG : TURKEY/EGYPT/SOUTHAFRICA
UP : KOREA

■ Voltage value table

IC102

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

IC101

NO	DC(V)	NO	DC(V)	NO	DC(V)	NO	DC(V)
1	0V	17	1.7V	33	0V	49	2.2V
2	4.2V	18	1.7V	34	1.3V	50	2.2V
3	0V	19	1.7V	35	2.4V	51	2.2V
4	4.3V	20	1.7V	36	3.3V	52	2.2V
5	1.7V	21	1.7V	37	1.9V	53	2.2V
6	1.7V	22	1.7V	38	2.4V	54	2.2V
7	1.7V	23	0V	39	0V	55	4.8V
8	4.1V	24	1.7V	40	0V	56	2.2V
9	3.3V	25	3.3V	41	1.7V	57	2.2V
10	0V	26	0V	42	1.5V	58	2.2V
11	4.9V	27	2.1V	43	1.6V	59	2.2V
12	4.9V	28	4.8V	44	1.1V	60	2.2V
13	4.9V	29	4.8V	45	2.5V	61	0V
14	4.9V	30	2.1V	46	2.1V	62	2.2V
15	1.2V	31	2.1V	47	2.1V	63	2.2V
16	1.7V	32	2.0V	48	2.1V	64	1.6V

IC311

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

IC312

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

IC321

NO	DC(V)
1	5.0V
2	5.0V
3	5.0V
4	0V
5	0V
6	0V
7	5.0V
8	5.0V

IC322

NO	DC(V)
1	5.0V
2	5.0V
3	0V
4	0V
5	0V
6	5.0V
7	0V
8	5.0V
9	0V
10	0V
11	0V
12	5.0V
13	5.0V
14	5.0V

IC202

NO	DC(V)
1	0V
2	3.3V
3	4.9V
4	0V
5	0V
6	4.9V
7	0V
8	4.9V

IC301

NO	DC(V)	NO	DC(V)	NO	DC(V)	NO	DC(V)
1	3.3V	37	0V	73	0.8V	109	2.5V
2	3.3V	38	0.3V	74	0.8V	110	0V
3	3.3V	39	0V	75	1.7V	111	1.7V
4	3.3V	40	4.1V	76	3.3V	112	1.1V
5	0V	41	4.3V	77	0V	113	1.1V
6	3.3V	42	4.2V	78	3.3V	114	1.1V
7	3.3V	43	1.6V	79	0V	115	1.1V
8	0V	44	2.6V	80	3.3V	116	3.3V
9	3.3V	45	3.3V	81	0V	117	3.3V
10	3.6V	46	3.6V	82	0V	118	3.3V
11	3.3V	47	3.7V	83	0V	119	0V
12	3.3V	48	3.8V	84	0V	120	0V
13	3.3V	49	3.7V	85	4.8V	121	0V
14	3.3V	50	3.8V	86	2.6V	122	0V
15	3.3V	51	1.0V	87	1.7V	123	0V
16	3.3V	52	1.0V	88	0V	124	3.3V
17	3.3V	53	3.6V	89	0V	125	2.6V
18	0V	54	3.8V	90	0V	126	1.3V
19	0V	55	1.0V	91	0V	127	0V
20	3.3V	56	0V	92	3.3V	128	1.4V
21	3.3V	57	0.7V	93	0V	129	1.1V
22	4.5V	58	4.9V	94	3.3V	130	3.3V
23	4.5V	59	4.9V	95	0V	131	1.6V
24	0V	60	4.4V	96	3.3V	132	3.3V
25	0.1V	61	3.3V	97	0V	133	0V
26	4.9V	62	1.2V	98	0V	134	0V
27	4.9V	63	2.4V	99	0V	135	3.3V
28	1.4V	64	0V	100	1.6V	136	1.3V
29	0V	65	0V	101	1.6V	137	0V
30	3.3V	66	2.6V	102	3.3V	138	3.3V
31	0V	67	0V	103	0V	139	1.3V
32	3.3V	68	1.0V	104	3.3V	140	1.0V
33	0V	69	2.1V	105	3.3V	141	1.1V
34	0V	70	1.0V	106	3.3V	142	0V
35	0V	71	0V	107	0V	143	3.3V
36	2.6V	72	2.3V	108	0V	144	3.3V

IC403

NO	DC(V)
1	4.9V
2	5.0V
3	0V
4	0V
5	0V
6	1.0V
7	0V
8	0V

IC402

NO	DC(V)	NO	DC(V)
1	4.9V	23	5V
2	0V	24	2.3V
3	0V	25	0V
4	3.5V	26	2.3V
5	1.7V	27	0V
6	2.1V	28	2.3V
7	1.8V	29	0V
8	2.7V	30	2.4V
9	1.9V	31	0V
10	2.1V	32	0V
11	0V	33	0V
12	4.6V	34	0V
13	0V	35	5V
14	4.2V	36	0V
15	1.1V	37	4V
16	0V	38	4.3V
17	1.5V	39	2.6V
18	0V	40	2V
19	0V	41	2.1V
20	0V	42	3.5V
21	0V	43	0V
22	0V	44	0V

IC201

NO	DC(V)	NO	DC(V)	NO	DC(V)	NO	DC(V)
1	1.7V	26	2.1V	76	1.7V	51	1.7V
2	1.7V	27	3.2V	77	1.1V	52	1.7V
3	1.7V	28	1.7V	78	1.1V	53	3.2V
4	3.2V	29	0V	79	1.1V	54	0V
5	1.7V	30	0V	80	1.1V	55	0V
6	1.7V	31	1.7V	81	0V	56	0V
7	0V	32	0V	82	3.3V	57	0V
8	1.6V	33	1.7V	83	3.3V	58	2.6V
9	1.6V	34	1.7V	84	4.8V	59	0V
10	1.5V	35	0.1V	85	4.9V	60	0V
11	1.5V	36	1.6V	86	4.9V	61	0V
12	1.7V	37	1.7V	87	3.3V	62	0V
13	1.5V	38	3.2V	88	4.9V	63	0V
14	3.2V	39	1.6V	89	4.9V	64	0V
15	1.7V	40	1.6V	90	0.5V	65	0V
16	2.7V	41	0V	91	1.7V	66	0V
17	0.2V	42	1.7V	92	2.5V	67	3.3V
18	2.2V	43	1.7V	93	3.3V	68	1.7V
19	1.5V	44	1.7V	94	0.7V	69	3.3V
20	0V	45	0V	95	0V	70	2.5V
21	1.6V	46	3.3V	96	2.6V	71	0V
22	1.6V	47	0V	97	1.8V	72	0V
23	1.5V	48	1.7V	98	1.6V	73	0V
24	1.7V	49	0V	99	1.6V	74	0V
25	1.5V	50	0.3V	100	1.7V	75	3.3V

IC401

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

IC271

NO	DC(V)	NO	DC(V)
1	0V	22	1.37V
2	0V	23	1.37V
3	0V	24	0V
4	9V	25	5.0V
5	9V	26	5.0V
6	0V	27	1.37V
7	0V	28	1.37V
8	1.37V	29	0V
9	3.9V	30	1.41V
10	3.4V	31	2.37V
11	0V	32	2.56V
12	3.4V	33	0V
13	4.5V	34	2.39V
14	5.7V	35	2.56V
15	3V	36	1.34V
16	0V	37	1.37V
17	0V	38	4.93V
18	0V	39	9V
19	0V	40	1.37V
20	1.37V	41	3.2V
21	0V	42	3V

VOLTAGES ON SHEET 7/9

IC502

NO	DC(V)
1	3.1V
2	0V
3	1.6V
4	3.2V

IC554

NO	DC(V)	NO	DC(V)	NO	DC(V)	NO	DC(V)
1	1.3V	17	0.9V	33	0.9V	49	3.2V
2	0V	18	0V	34	1.3V	50	2.8V
3	5V	19	5V	35	2.1V	51	0V
4	1.27V	20	5V	36	1.3V	52	0V
5	0V	21	0V	37	0.6V	53	0V
6	5V	22	0.3V	38	0V	54	0V
7	2.1V	23	0V	39	1V	55	0V
8	0V	24	0V	40	1.4V	56	0V
9	5V	25	0V	41	1.2V	57	3.2V
10	0V	26	0V	42	1.6V	58	0V
11	2.8V	27	0V	43	1.2V	59	0V
12	2.8V	28	0V	44	1.2V	60	0V
13	5V	29	1.6V	45	1.2V	61	0V
14	2.7V	30	3.2V	46	1.2V	62	0V
15	0V	31	5V	47	0V	63	5.1V
16	0V	32	0V	48	0V	64	0V

IC501

NO	DC(V)	NO	DC(V)	NO	DC(V)	NO	DC(V)
1	3.1V	53	0.7V	105	0V	157	0.9V
2	1.7V	54	0.7V	106	0V	158	0.9V
3	0.7V	55	3.1V	107	3.1V	159	0V
4	2.0V	56	0.6V	108	0V	160	3.1V
5	3.1V	57	0V	109	0V	161	0V
6	1.6V	58	0.6V	110	0V	162	0V
7	0V	59	0.5V	111	0V	163	0V
8	0V	60	0.5V	112	0V	164	0V
9	2.4V	61	3.1V	113	3.1V	165	0V
10	2.9V	62	0.6V	114	0V	166	0V
11	2.6V	63	0V	115	0V	167	0V
12	2.5V	64	0.6V	116	0V	168	2.5V
13	5.0V	65	2.5V	117	2.5V	169	0.9V
14	0V	66	0.7V	118	0V	170	0V
15	5.0V	67	0V	119	0V	171	0V
16	3.1V	68	0.7V	120	0V	172	1.6V
17	3.1V	69	3.1V	121	0V	173	1.6V
18	3.1V	70	0.6V	122	0V	174	3.1V
19	0V	71	0V	123	3.1V	175	3.1V
20	3.1V	72	0.7V	124	0V	176	3.1V
21	3.1V	73	0.7V	125	0V	177	1.6V
22	3.1V	74	0.6V	126	0V	178	3.1V
23	3.1V	75	3.1V	127	0V	179	0V
24	3.1V	76	0.7V	128	0.8V	180	5.0V
25	3.1V	77	0V	129	3.1V	181	3.1V
26	3.1V	78	0.8V	130	3.1V	182	5.0V
27	3.1V	79	3.2V	131	3.1V	183	0V
28	3.1V	80	3.2V	132	3.1V	184	5.0V
29	0V	81	3.1V	133	3.1V	185	5.0V
30	3.1V	82	3.2V	134	3.1V	186	5.0V
31	0V	83	0V	135	3.1V	187	5.0V
32	0V	84	0V	136	0V	188	5.0V
33	0V	85	3.2V	137	3.1V	189	5.0V
34	0V	86	0V	138	3.1V	190	3.1V
35	3.1V	87	3.1V	139	3.1V	191	3.1V
36	3.1V	88	0V	140	0.8V	192	2.6V
37	0V	89	0V	141	3.1V	193	3.1V
38	0V	90	3.1V	142	0.9V	194	0V
39	0V	91	2.5V	143	0.9V	195	0V
40	2.5V	92	3.1V	144	2.5V	196	0V
41	3.1V	93	0V	145	0.9V	197	2.5V
42	0V	94	3.1V	146	0V	198	5.0V
43	3.1V	95	3.1V	147	3.1V	199	0V
44	0V	96	0V	148	0.9V	200	0V
45	3.1V	97	0V	149	3.1V	201	3.1V
46	3.1V	98	0V	150	0.9V	202	2.2V
47	0V	99	0V	151	0V	203	2.4V
48	3.1V	100	0V	152	0.9V	204	2.5V
49	0V	101	3.1V	153	3.1V	205	3.1V
50	3.1V	102	0V	154	0.9V	206	5.0V
51	0V	103	0V	155	0.9V	207	5.0V
52	3.1V	104	0V	156	3.1V	208	2.0V

IC505

NO	DC(V)	NO	DC(V)
1	3.2V	26	0V
2	0V	27	3.1V
3	0V	28	0V
4	0V	29	3.1V
5	0V	30	0V
6	0.3V	31	3.1V
7	3.2V	32	0V
8	0V	33	0V
9	0V	34	3.2V
10	0V	35	1.7V
11	0V	36	0V
12	0V	37	0V
13	3.2V	38	3.2V
14	0V	39	0V
15	3.1V	40	0V
16	3.1V	41	0V
17	3.1V	42	0V
18	2.3V	43	0V
19	0V	44	3.2V
20	0V	45	0V
21	0V	46	0V
22	3.1V	47	0V
23	3.1V	48	0V
24	0V	49	0V
25	3.2V	50	0V

IC504

NO	DC(V)	NO	DC(V)
1	3.2V	26	0V
2	0V	27	3.1V
3	0V	28	0V
4	0V	29	3.1V
5	0V	30	0V
6	0.3V	31	3.1V
7	3.2V	32	0V
8	0V	33	0V
9	0V	34	3.2V
10	0V	35	1.7V
11	0V	36	0V
12	0V	37	0V
13	3.2V	38	3.2V
14	0V	39	0V
15	3.1V	40	0V
16	3.1V	41	0V
17	3.1V	42	0V
18	2.3V	43	0V
19	0V	44	3.2V
20	0V	45	0V
21	0V	46	0V
22	3.1V	47	0V
23	3.1V	48	0V
24	0V	49	0V
25	3.2V	50	0V

IC503

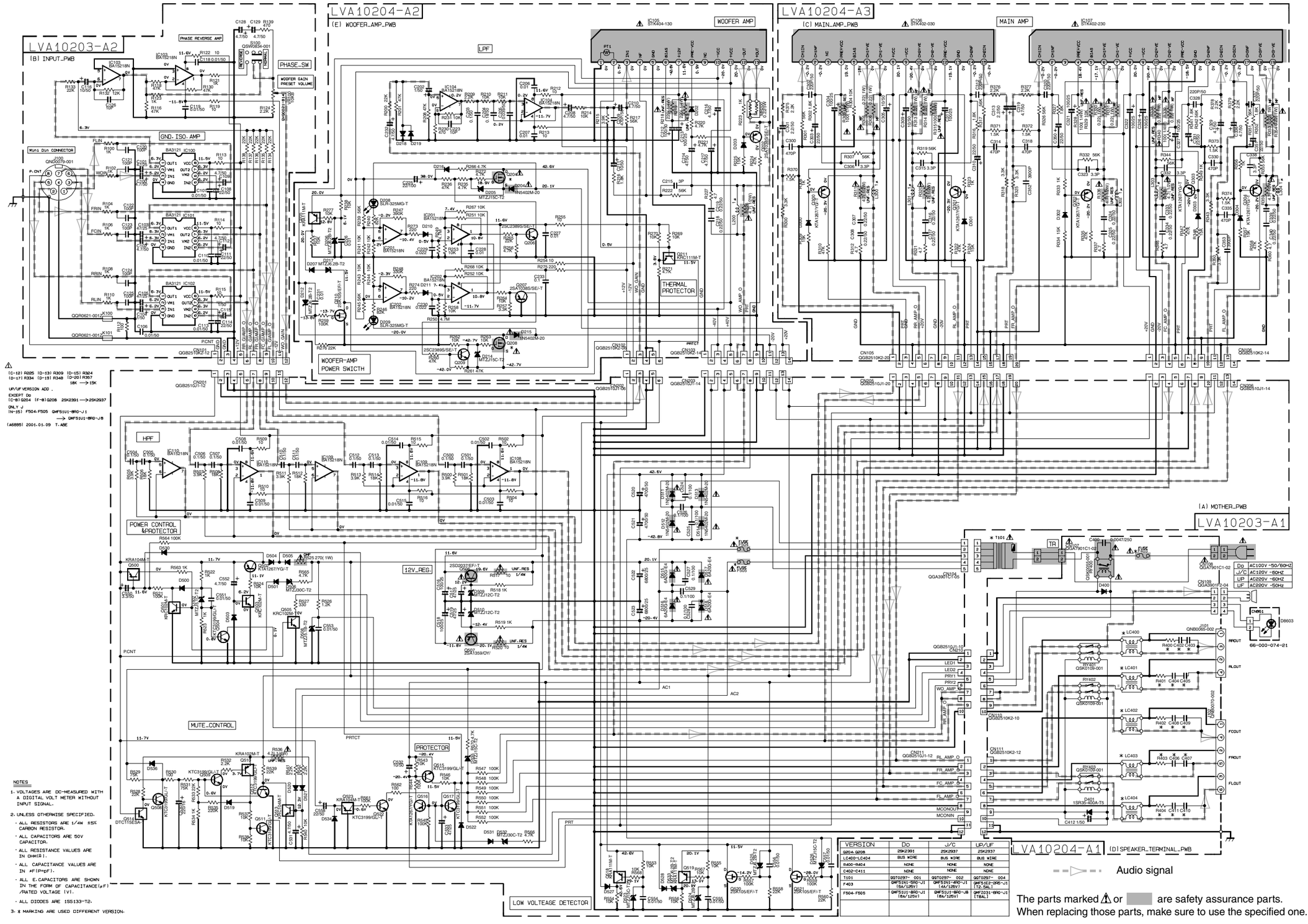
NO	DC(V)
1	0V
2	0V
3	3.2V
4	3.2V
5	1.6V
6	1.6V
7	0V
8	1.6V
9	1.6V
10	3.2V
11	3.2V
12	3.2V
13	0V
14	3.2V

VOLTAGES ON SHEET 8/9

NOTES

1. VOLTAGES ARE DC-MEASURED WITH A DIGITAL VOLT METER

■ Powered subwoofer circuit (SP-PWA9)



NOTES

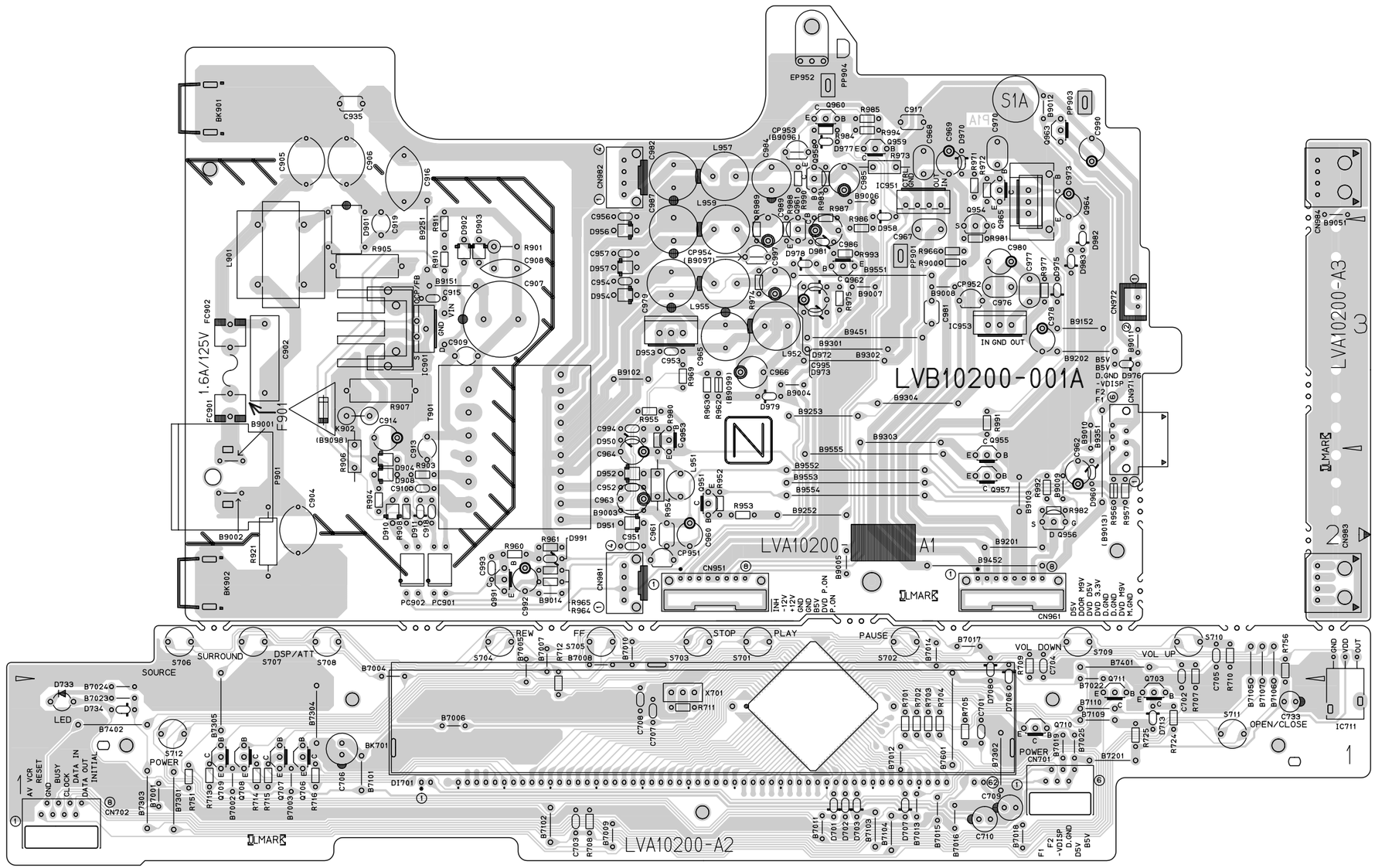
1. VOLTAGES ARE DC-MEASURED WITH A DIGITAL VOLT METER WITHOUT INPUT SIGNAL.
2. UNLESS OTHERWISE SPECIFIED.
   - ALL RESISTORS ARE 1/4W ±5% CARBON RESISTOR.
   - ALL CAPACITORS ARE 50V CAPACITOR.
   - ALL RESISTANCE VALUES ARE IN Ω(Ω).
   - ALL CAPACITANCE VALUES ARE IN μF(P=pF).
   - ALL E.CAPACITORS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

VERSION	Do	J/C	UP/UF
Q204, Q208	2SK2391	2SK2937	2SK2937
LC400~LC404	BUS WIRE	BUS WIRE	BUS WIRE
R400~R404	NONE	NONE	NONE
C402~C411	NONE	NONE	NONE
T101	9GT0297- 001	9GT0297- 002	9GT0297- 004
F403	QMF51N1-6R0-J1 (6A/125V)	QMF51N1-6R0-J1 (4A/125V)	QMF51E2-2R5-J1 (T2.5AL)
F504·F505	QMF51U1-6R0-J1 (8A/125V)	QMF51U1-6R0-J8 (8A/125V)	QMF7231-6R0-J1 (T8AL)

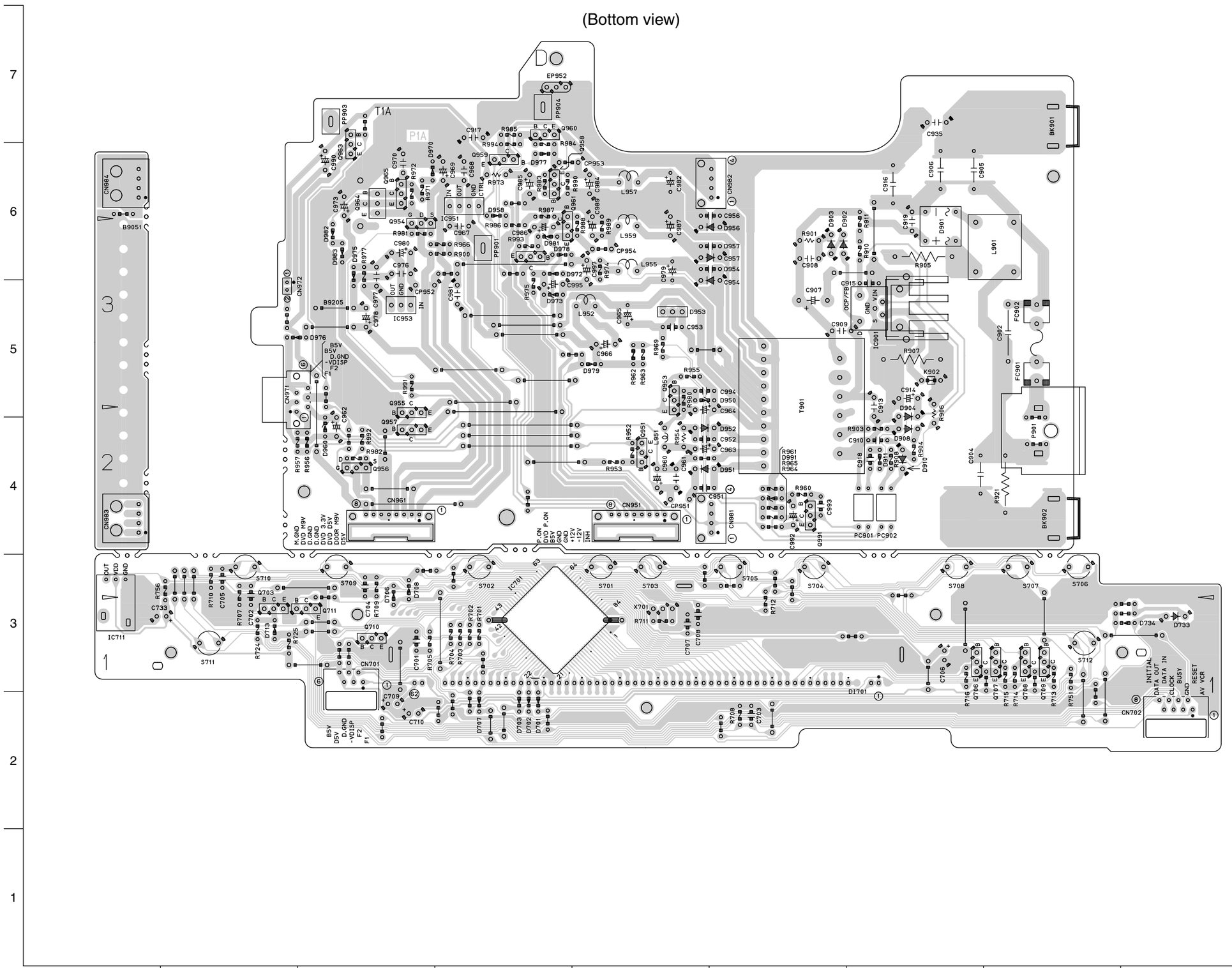
Printed circuit boards

■ Power supply and front panel boards

(Surface view)

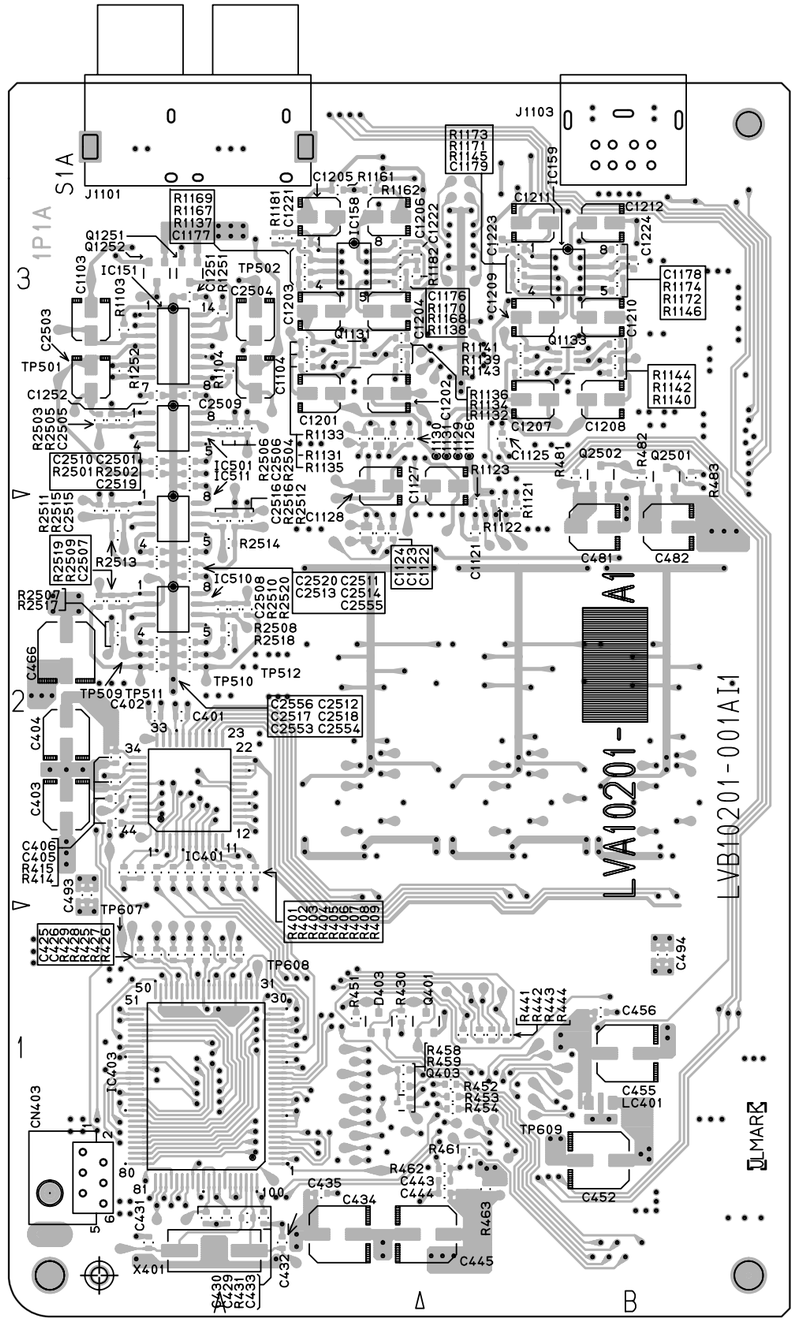


(Bottom view)

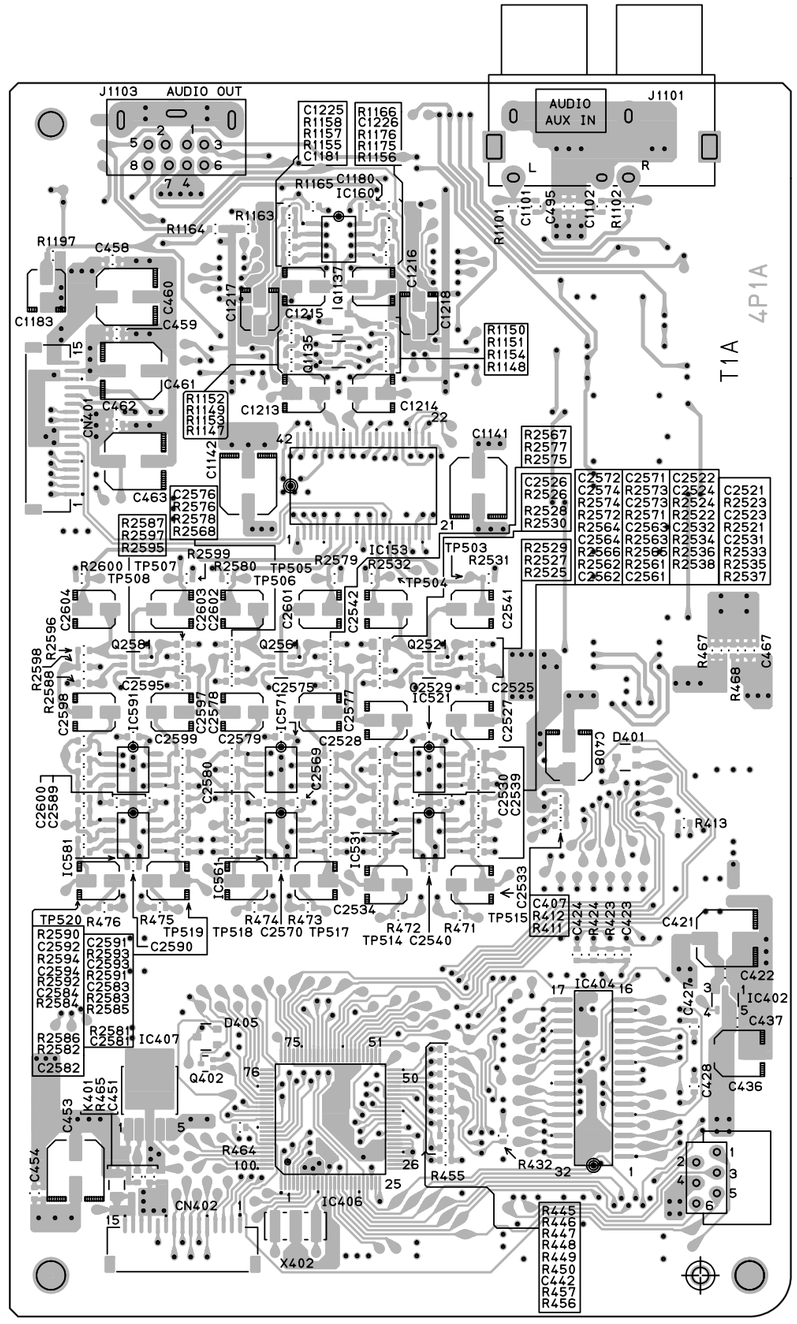

T1A
P1A
EP952
PP903
PP904
PP901
CN984
B9051
CN983
CN972
B9205
CN971
B5V
D.GND
-VDISP
F2
F1
IC953
IC951
Q954
Q955
Q957
Q956
CN961
M.GND
D.GND
DVD 3.3V
DVD 5V
DOOR M9V
D5V
CN951
P.ON
DVD
B5V
GND
+12V
-12V
INH
CP951
CN981
CN982
L957
L959
L955
L952
L951
CP952
CP953
CP954
T901
IC901
L901
BK901
BK902
PC901
PC902
K902
FC901
FC902
P901
CN902
R921
OCP/FB
GND
VIN
S
IC711
S710
S709
S702
S701
S703
S705
S704
S708
S707
S706
S711
S712
Q703
Q711
Q710
CN701
IC781
X701
D1701
CN702
INITIAL
DATA OUT
DATA IN
CLOCK
BUSY
RESET
AV VCR

■ Audio input/output and DSP boards

(Surface view)

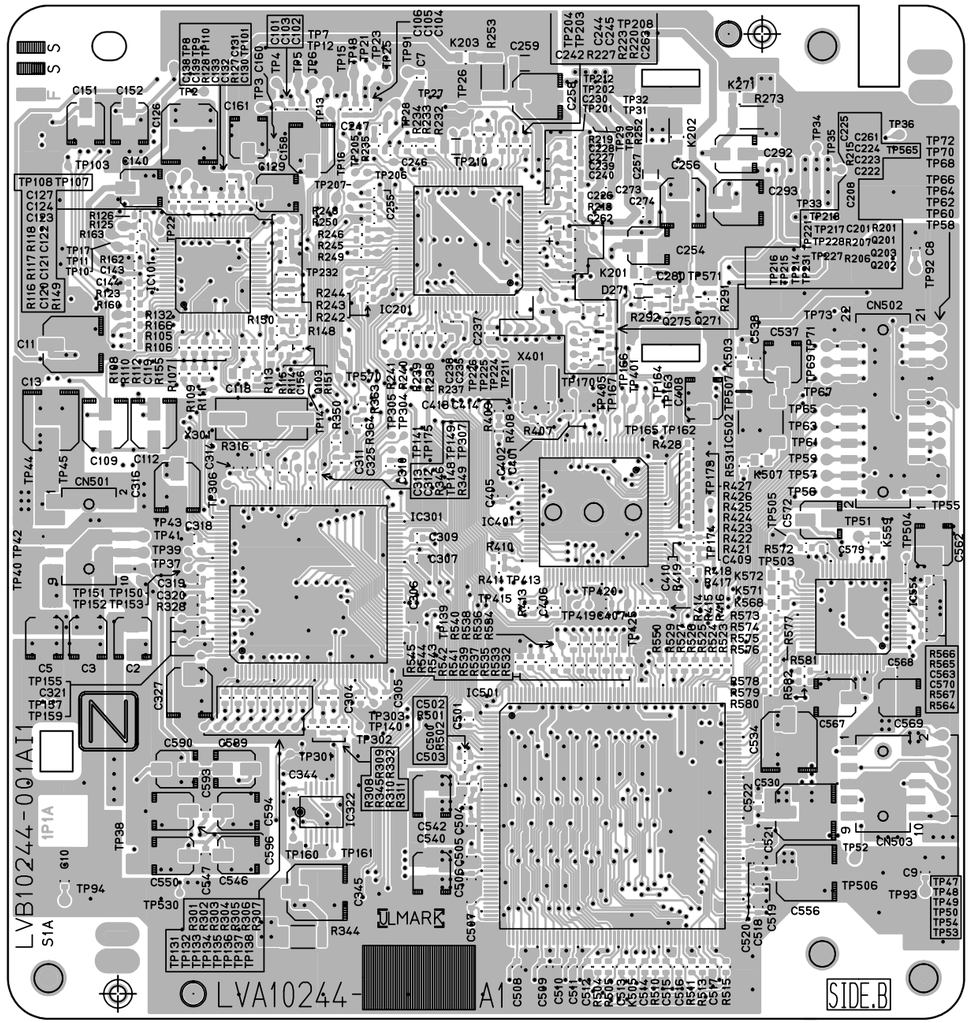


(Bottom view)

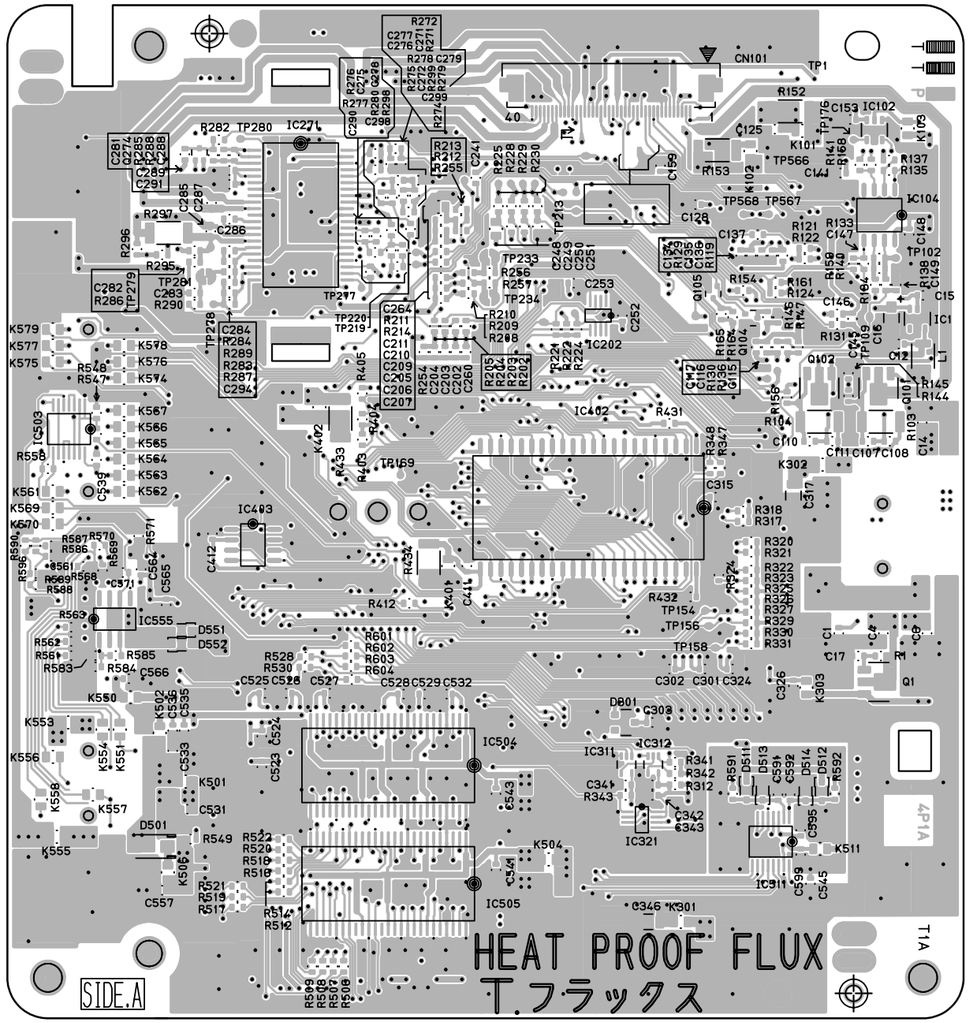


■ DVD servo board

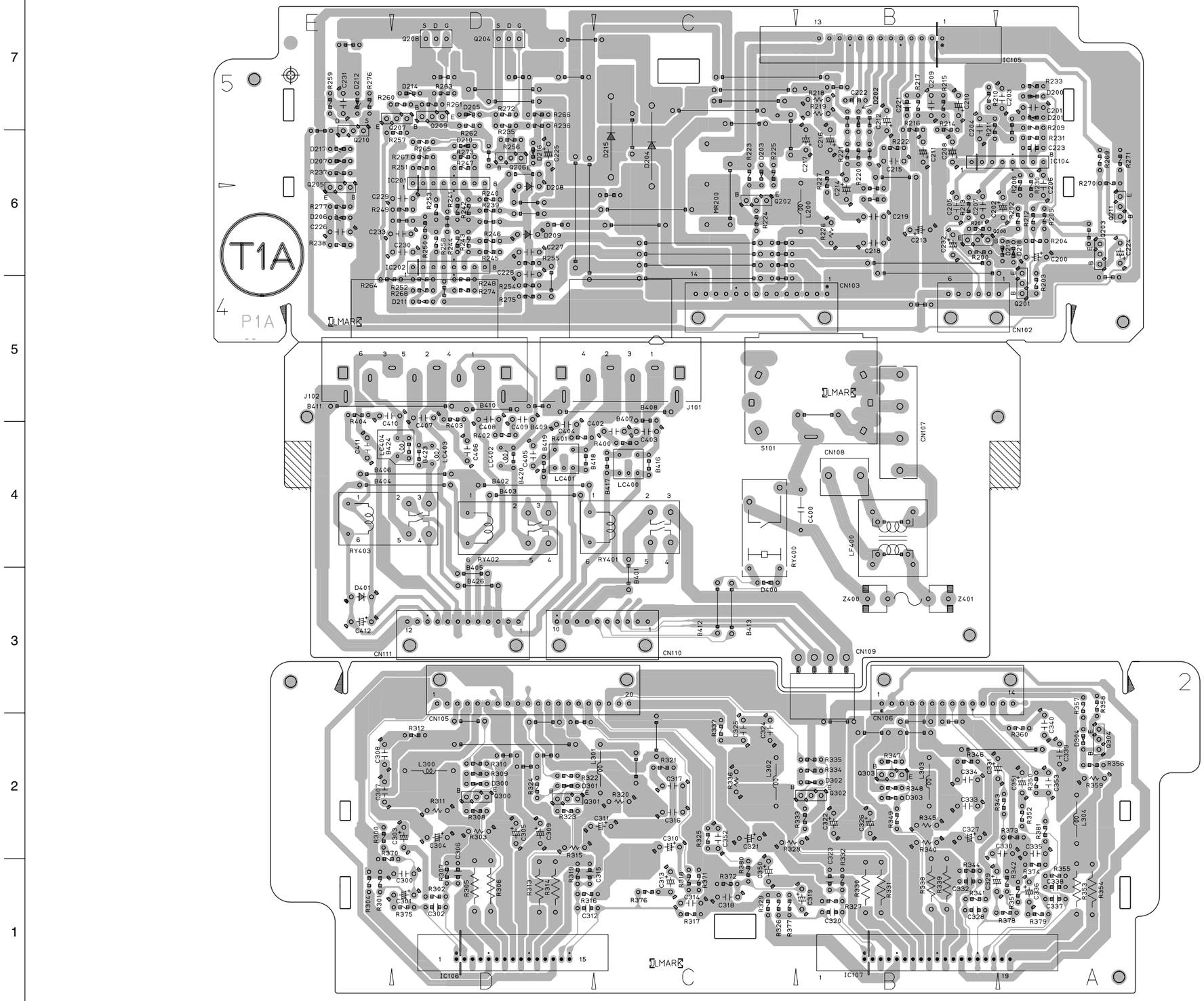
(Surface view)



(Bottom view)



■ Powered subwoofer board (SP-PWA9) 1/2



■ Powered subwoofer board (SP-PWA9) 2/2