

14 Voltage and Waveform Chart

Note:

Circuit voltage and waveform described herein shall be regarded as reference information when probing defect point, because it may differ from an actual measuring value due to difference of Measuring instrument and its measuring condition and product itself.

14.1. CD Servo P.C.B. & Main P.C.B.

CD SERVO P.C.B.(SIDE A)																				
Ref No.	IC7001																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
CD PLAY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3.4
STANDBY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1.7	0	0	1.6	0
Ref No.	IC7001																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
CD PLAY	0	0	1.7	1.7	1.9	0	3.4	1.5	3.4	3.4	0	1.7	1.6	1.7	1.8	1.8	1.7	1.7	1.7	1.7
STANDBY	1.7	3.4	1.7	1.7	1.7	0	3.4	1.5	3.4	3.4	0	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
Ref No.	IC7001																			
MODE	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
CD PLAY	0.2	2.5	1.4	1.7	1.7	1.8	3.4	1.2	1.2	1.3	1.7	1.7	0.8	1.5	1.5	1.5	0	3.1	1.5	0
STANDBY	0	3.4	1.4	1.7	1.7	1.8	3.4	1.2	1.2	1.2	0	1.7	0.8	1.1	0	1.5	0	3.1	1.5	0
Ref No.	IC7001																			
MODE	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
CD PLAY	3.4	3.4	0	0	0	0	3	2.5	3.7	2.3	0	3.7	0	1.7	0	1.5	3.4	0	3.4	1.7
STANDBY	3.4	0.8	0.8	0	3.2	0	3.7	0	3.7	0	0	3.7	0	1.7	0	1.5	3.4	0	3.4	1.7
Ref No.	IC7001																			
MODE	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
CD PLAY	-	3.4	0	0	0	0	0	0	0	0	0	0	3.4	0	0	0	0	0	0	0
STANDBY	1.6	3.4	0	0	0	0	0	0	0	0	0	0	3.4	0	0	0	0	0	0	0
Ref No.	IC7002																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
CD PLAY	1.7	0	1.7	0	0	0	0	0	0	7.2	4	3.4	3.4	3.4	3	3.8	3.5	3.2	7.2	0
STANDBY	1.7	0	1.7	3.3	0	0	0	0	0	7.5	3.8	3.8	3.4	3.4	3.4	3.4	3.4	3.4	7.5	0
Ref No.	IC7002																			
MODE	21	22	23	24	25	26	27	28												
CD PLAY	7.3	0	0	0	7.3	1.7	1.7	1.7												
STANDBY	7.5	0	0	0	7.5	1.7	1.7	1.7												

MAIN P.C.B.																				
Ref No.	IC2501																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
CD PLAY	2	0	2	0	0	5	5.2	3.8	6	0	4.9	3.6	0	1.5	1.9	2	2	0	0	0.1
STANDBY	2	6	2	2	0	5	5.2	0	6	0	4.9	0	1.5	1.5	1.9	2	2	0	0	0
Ref No.	IC2501																			
MODE	21	22	23	24																
CD PLAY	2.4	2.4	6	4.6																
STANDBY	2.4	2.4	6	4.6																
Ref No.	IC2602																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
CD PLAY	2.6	0	0	0	5.2	0	1.2	4.6	0	14.9	0	0	2.6	0	0	0	0	15	0	2.6
STANDBY	2.6	0	0	0	5.2	4.9	0.8	4.6	0	15	0	0	2.6	0	5.2	0	0	0	0	0
Ref No.	IC2801																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
CD PLAY	2.5	0	0	2.5	2.5	0	0	0	0	0	0.0	0.7	5.5	2.7	-	5.5	5.5	5.4	5.5	3.6
STANDBY	0	0	0	2.4	2.5	0	0	0	0	0.6	0.7	0	2.7	0	2.7	5.5	5.5	5.5	0	3.7
Ref No.	IC2801																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
CD PLAY	5.1	5.1	0	0	0	0	5.5	0	0	0	0	0	0	0	0	0	5.4	0	5.4	0
STANDBY	5.2	5.1	0	0	0	0	5.5	0	0	0	0	0	5	0	0	0	5.4	0	5.5	5.5
Ref No.	IC2801																			
MODE	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
CD PLAY	0	0	0	0	0	5.4	5.4	0	0	0	0	0	5.1	0	0	0	0	5.5	5.5	5.5
STANDBY	0	0	0	0	0	5.4	5.4	0	0	0	0	5	5.1	0	0	0	0	5.5	5.5	5.5
Ref No.	IC2801																			
MODE	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
CD PLAY	0	5.5	0	0	0	5.5	0	0	0	3.5	3.8	4.7	0	5.5	1	5.4	4.2	4.9	5.1	0
STANDBY	0	5.5	0	0	0	5.5	0	0	0	5.5	5.5	5.5	5.5	5.5	5.1	5.5	0	5.5	5.1	0
Ref No.	IC2801																			
MODE	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
CD PLAY	0	4.6	5.1	0	0	5.1	0	0	0	0.1	5.1	5.5	4.6	4.6	4.7	0	4.7	5.5	5.5	5.4
STANDBY	0	4.6	5.1	0	0	5.1	0	0	0	0.1	5.1	5.5	4.6	4.6	4.7	0	4.7	5.5	5.5	5.4

Ref No.	IC2803																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
CD PLAY	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	0	4.6	4.6	4.6	4.6	4.6	4.6	4.6
STANDBY	0	4.6	0	0	4.6	4.6	4.6	0	0	4.6	0	4.6	0	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Ref No.	IC2803																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
CD PLAY	4.6	4.6	4.6	4.6	4.6	4.6	4.6	0	0	0	4.6	4.6	4.6	4.6	4.6	4.6	4.6	9.2	5.5	0
STANDBY	4.6	4.6	4.6	4.6	4.6	4.6	4.6	0	0	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	9.2	5.5	0
Ref No.	IC2803																			
MODE	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56				
CD PLAY	0	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.5	4.5	4.6	4.6	4.6	8	2.2				
STANDBY	0	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.5	0	0	4.6	0	0	0				
Ref No.	IC2804																			
MODE	1	2	3	4	5	6	7	8												
CD PLAY	7.5	7.4	7.3	0	15.1	7.5	7.4	7.3												
STANDBY	7.5	7.4	7.3	0	15.1	7.5	7.5	7.3												

CD SERVO P.C.B.(SIDE A)

Ref No.	Q7601																			
MODE	E	C	B																	
CD PLAY	3.2	2.1	2.5																	
STANDBY	3.4	0.2	3.4																	

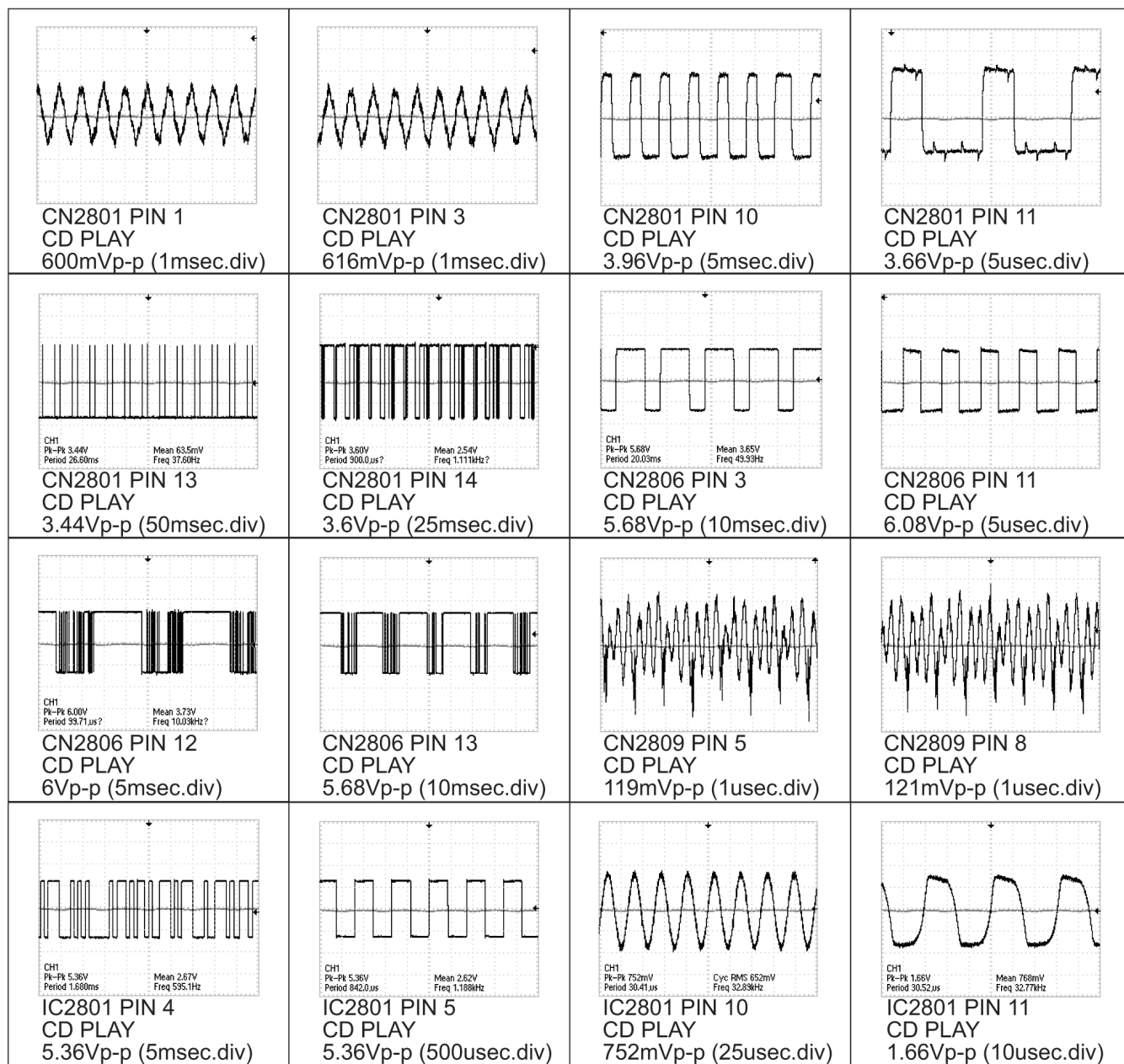
MAIN P.C.B.

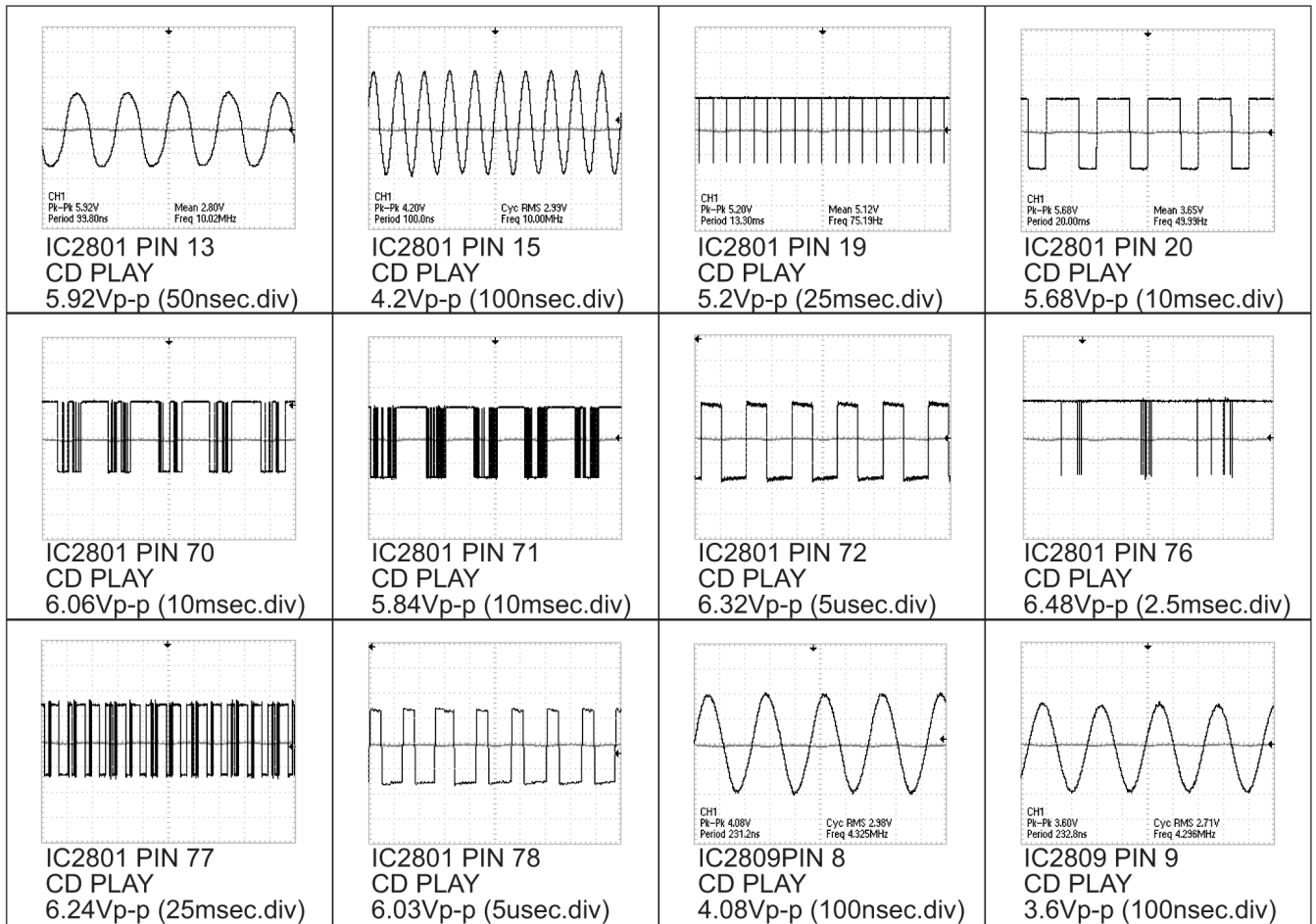
Ref No.	Q2142				Q2242				Q2311				Q2317				Q2341			
MODE	E	C	B		E	C	B		E	C	B		E	C	B		E	C	B	
CD PLAY	0	0	0		0	0	0		0	0	-3.5		0	0	-3.5		0	0	-3.5	
STANDBY	0	0	0		0	0	0		0	0	0.6		0	0	0.6		0	0	0.6	
Ref No.	Q2411				Q2417				Q2441				Q2501				Q2511			
MODE	E	C	B		E	C	B		E	C	B		E	C	B		E	C	B	
CD PLAY	0	0	-3.5		0	0	-3.5		-	-	-		0.3	2.2	1		0	-3.9	0	
STANDBY	0	0	0.6		0	0	0.6		0	0	0.6		0.4	0.6	1.1		2.7	2.7	0	
Ref No.	Q2521				Q2601				Q2606				Q2980				Q2803			
MODE	E	C	B		E	C	B		E	C	B		E	C	B		E	C	B	
CD PLAY	0.1	2.6	0.8		0	0	0		15.1	0	15.1		5.1	-0.4	5.4		0	5.5	0	
STANDBY	0.1	2.9	0.8		0	0	0		14.9	0	14.9		5.1	-0.4	5.4		0	5.5	0	
Ref No.	Q2901				Q2902				Q2906				Q2907				Q2936			
MODE	E	C	B		E	C	B		E	C	B		E	C	B		E	C	B	
CD PLAY	5.7	3.4	5		2.6	5.1	3.2		0	5.1	0		0	1.7	0.4		12	0	12	
STANDBY	6.9	3.4	6.2		2.6	6.2	2.2		0	5.1	0		0	5.1	0		12.1	2	12.1	
Ref No.	Q2937				Q2942				Q2943				Q2948				Q2949			
MODE	E	C	B		E	C	B		E	C	B		E	C	B		E	C	B	
CD PLAY	0	12	0		12	0	12		0	12	0		0	0	0.2		0	5.4	0	
STANDBY	0	12.1	0		12.1	0	0		0	12	0		0	0	0.2		0	5.4	0	
Ref No.	Q2950				Q2951				Q2952				Q2957				Q2958			
MODE	E	C	B		E	C	B		E	C	B		E	C	B		E	C	B	
CD PLAY	5.5	5.5	4.8		5.5	5.5	0		0	0.1	5.4		0	12	0		12	0	12	
STANDBY	5.5	5.5	4.8		5.5	5.5	4.8		0	0.1	5.4		0	12.1	0		2.6	6.2	3.2	
Ref No.	Q2959				Q2960				Q2978											
MODE	E	C	B		E	C	B		E	C	B									
CD PLAY	0	12	0		12	0	12		5.1	0	5.4									
STANDBY	0	12.1	0		12.1	0	0		5.1	0	5.4									

14.2. Power P.C.B. and Transformer P.C.B.

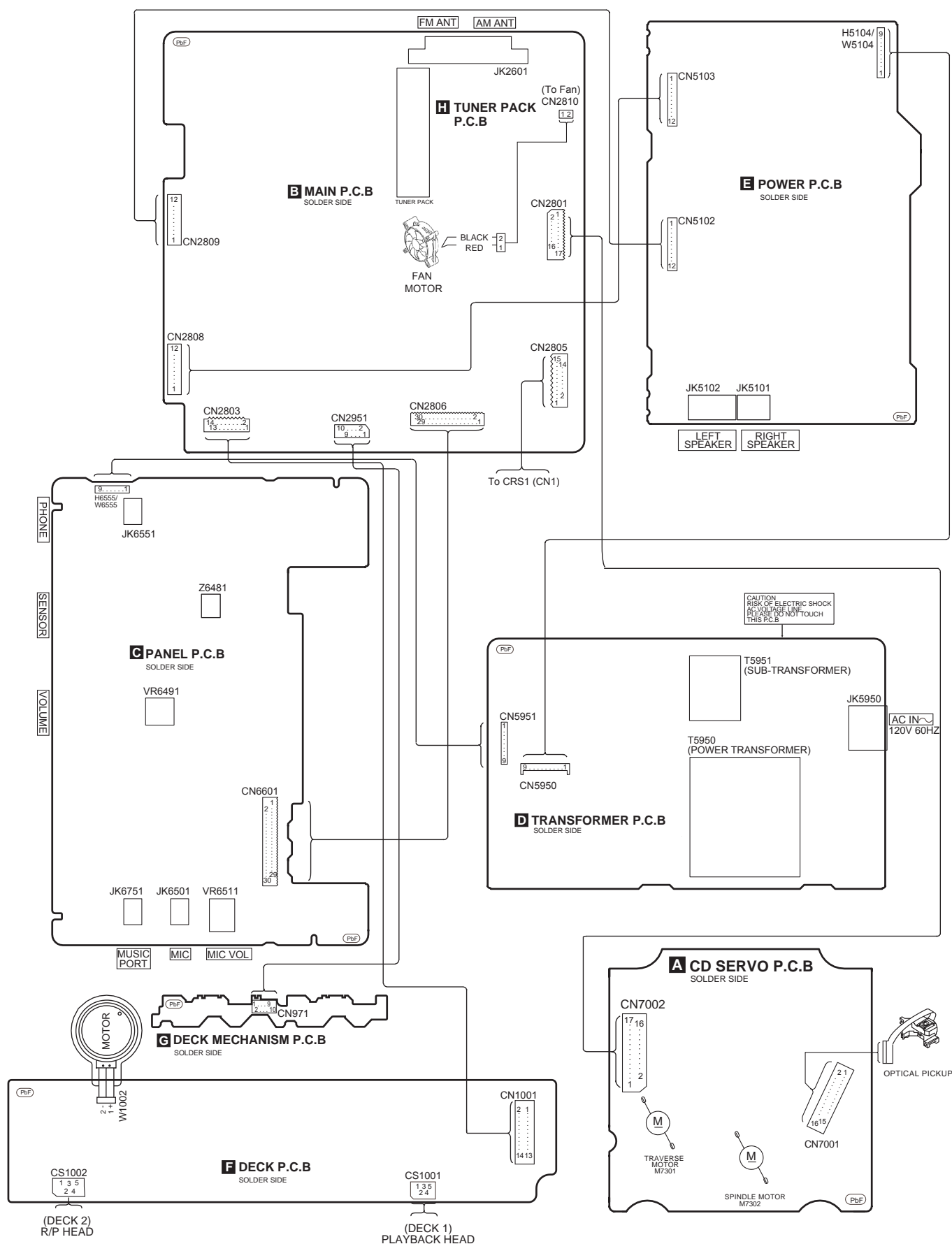
POWER P.C.B.																					
Ref No.	IC5201																				
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14							
CD PLAY	0	5	2.4	2.5	2.3	2.4	0	4.2	1.6	2.5	2.6	3.2	1.5	5							
STANDBY	0	0	0	0	0	0	0	0	0	0.07	0	0	0	0							
Ref No.	IC5301																				
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
CD PLAY	2.43	0.05	0.05	28.54	-0.02	-30	-22	28.95	11	-0.1	-30	-18	-30	-0.1	10.8	29	-30	-30	0	28.6	
STANDBY	0.1	0	0	0.1	0	0.5	0.1	0.1	0.05	0.2	0.5	0.1	0.5	0.2	0	0.1	0.5	0.8	0	0.1	
Ref No.	IC5301																				
MODE	21	22	23																		
CD PLAY	-0.1	-0.1	4.6																		
STANDBY	0	0	0																		
Ref No.	IC5401																				
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
CD PLAY	24.3	-0.05	-0.05	28.5	-0.01	-30	-22	28	0	-0.1	-30	17	30	0	11	28.9	-30	-30	0	28.55	
STANDBY	0	0	0	0.1	0	0.5	0.1	0.1	0.1	0.25	0.5	0.1	0.5	0.2	0	0.1	0.5	0.5	0	0.1	
Ref No.	IC5401																				
MODE	21	22	23																		
CD PLAY	-0.1	-0.1	45.8																		
STANDBY	0	0	0																		
POWER P.C.B.																					
Ref No.	Q5101				Q5102				Q5103				Q5104				Q5108				
MODE	E	C	B		E	C	B		E	C	B		E	C	B		E	C	B		
CD PLAY	29	40.7	32.5		-41	30.4	-37.7		0	5.4	-0.3		-0.3	5.4	0		-41	-37.8	-40.5		
STANDBY	0	0	10.5		-1	0	0		0	0.5	0.2		0.2	0.5	0		-0.6	0	0.7		
Ref No.	Q5109				Q5110				Q5111				Q5112				Q5113				
MODE	E	C	B		E	C	B		E	C	B		E	C	B		E	C	B		
CD PLAY	-5	-15.3	-3.6		28.4	32.5	29		15.4	28.3	16.1		17.1	12	16.4		17.3	16.5	17.1		
STANDBY	0	-0.7	0		0	11	0		0.06	0.06	0.07		0.42	0.08	0.45		0.47	0.45	0.47		
Ref No.	Q5114				Q5115				Q5201				Q5202								
MODE	E	C	B		E	C	B		E	C	B		E	C	B						
CD PLAY	11.3	16.4	11.8		5.1	5.7	8		2.6	2.5	2.4		2.6	0	5.1						
STANDBY	0	0.43	0.47		0	0	0		0	0	0		0	0	0						
TRANSFORMER P.C.B.																					
Ref No.	Q5950				Q5951				Q5952				Q5953								
MODE	E	C	B		E	C	B		E	C	B		E	C	B						
CD PLAY	6.2	6.8	12.2		-24.6	-45	-25		0	3.6	-0.4		0	0.1	0.8						
STANDBY	6.2	6.8	14.8		-20	-20	-20		0	3.8	-0.4		0	6.2	0						
Ref No.																					
MODE																					
CD PLAY																					
STANDBY																					
Ref No.																					
MODE																					
CD PLAY																					
STANDBY																					
Ref No.																					
MODE																					
CD PLAY																					
STANDBY																					

14.3. Waveform Chart

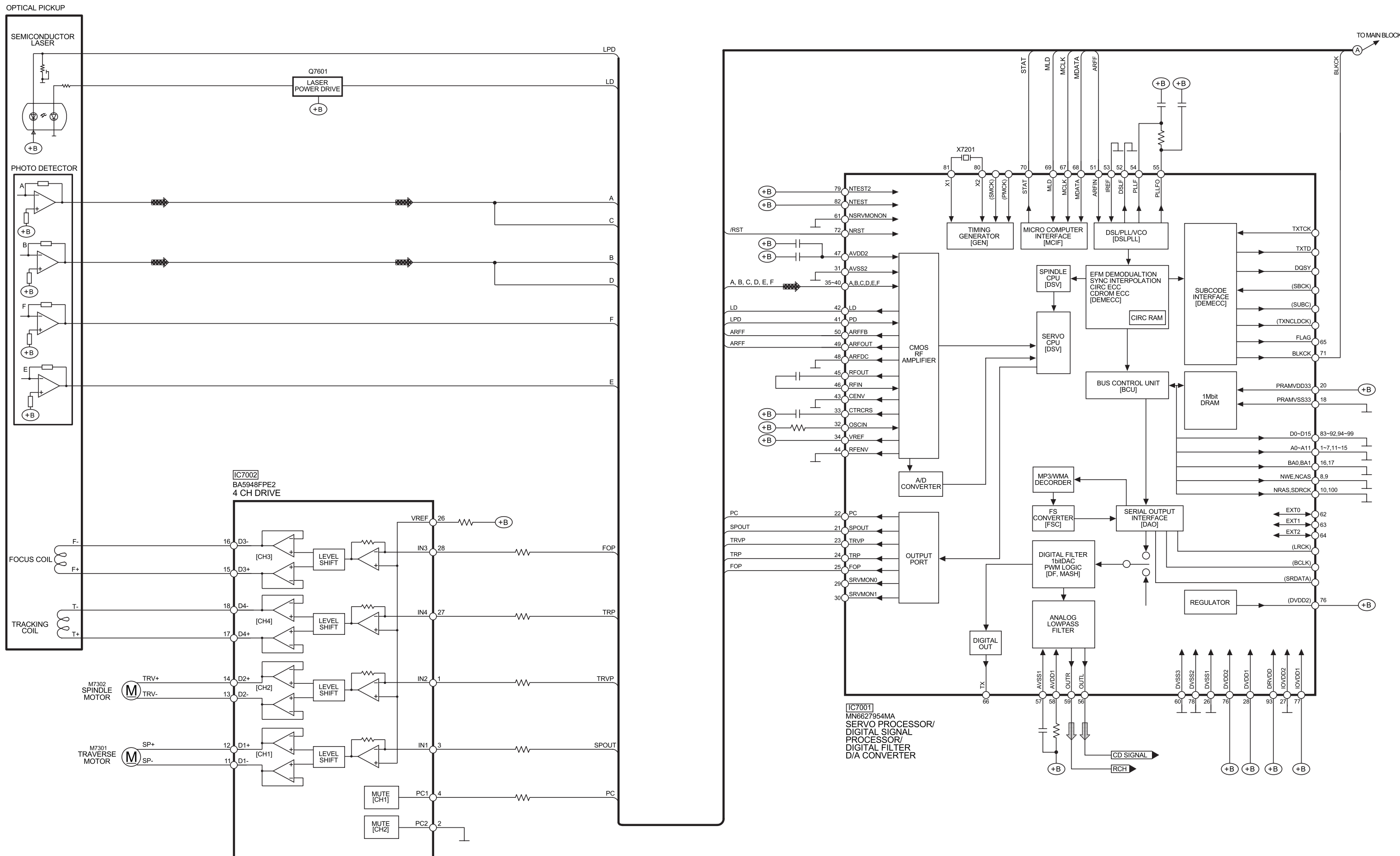


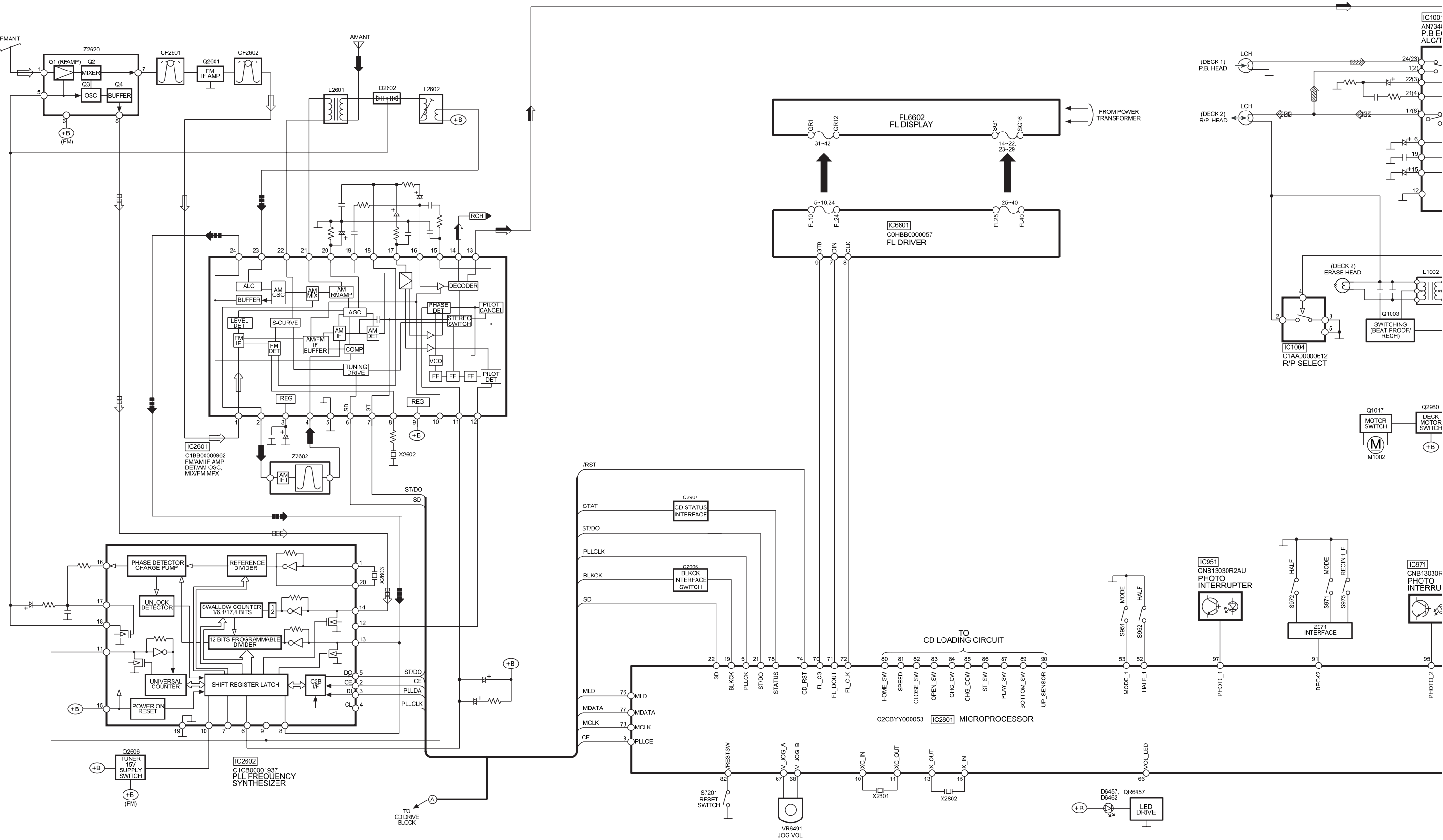


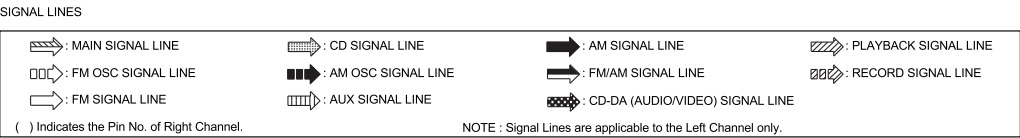
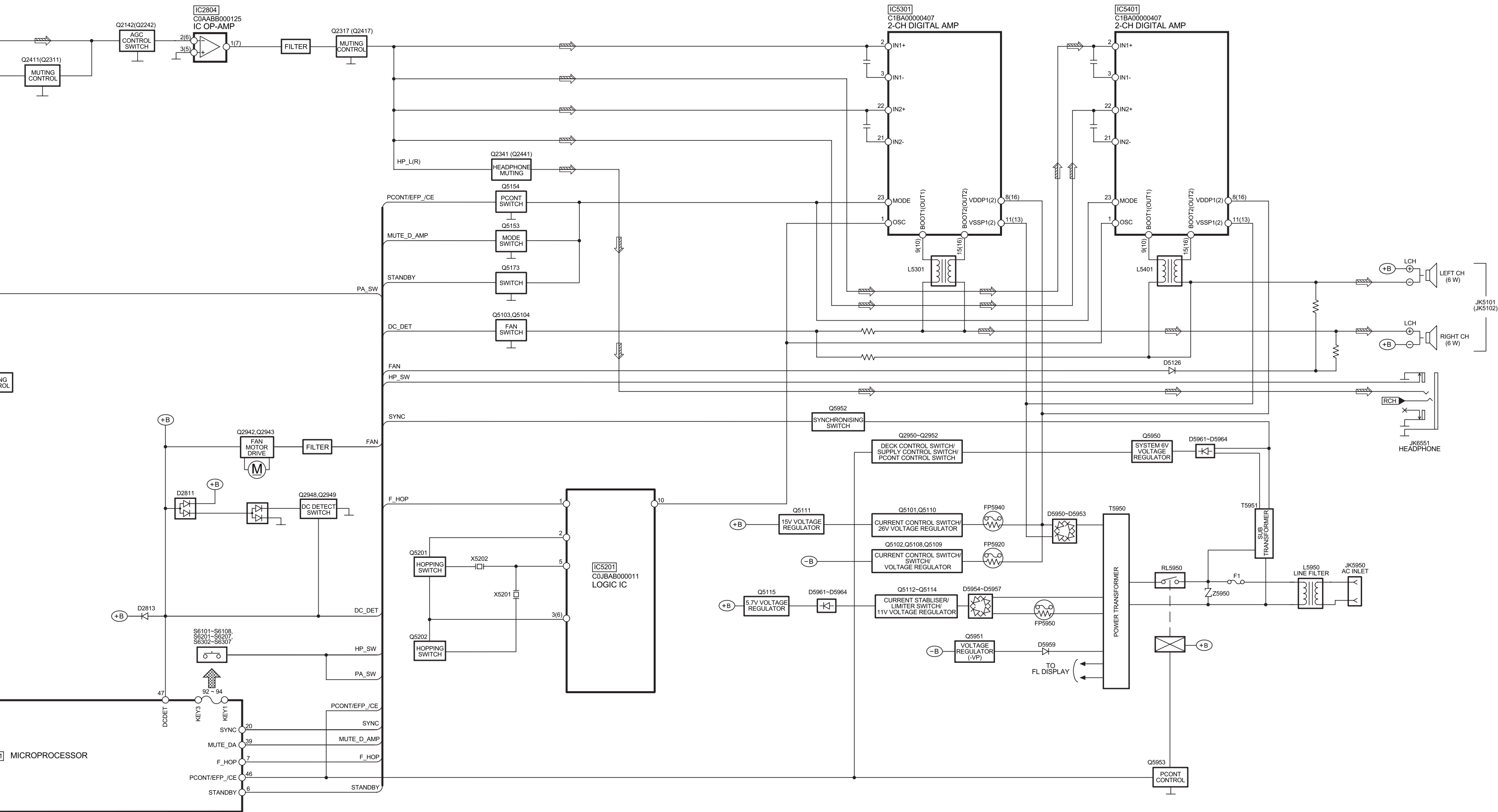
15 Wiring Connection Diagram



16 Block Diagram







17 Schematic Diagram


(All schematic diagrams may be modified at any time with the development of the new technology)

17.1. Notes of Schematic Diagrams

S951	: MODE Switch
S952	: HALF Switch
S971	: MODE Switch
S972	: HALF Switch
S975	: RECINH_F Switch
S6101	: POWER Switch
S6102	: SINGLE DISC CHANGE Switch
S6103	: OPEN/CLOSE Switch
S6104	: CD1 Switch
S6105	: CD2 Switch
S6106	: CD3 Switch
S6107	: CD4 Switch
S6108	: CD5 Switch
S6201	: DECK 2 OPEN Switch
S6202	: DISPLAY/DEMO Switch
S6203	: DECK 1/2 Switch
S6204	: H.BASS Switch
S6205	: FF Switch
S6206	: REW Switch
S6207	: DECK 1 OPEN Switch
S6301	: CD Switch
S6302	: TAPE Switch
S6303	: STOP Switch
S6304	: REC Switch
S6305	: TUNER/BAND Switch
S6306	: MUSIC PORT Switch
S6308	: MULTI DISC CHANGE SWITCH
S7201	: REST SWITCH
VR6491	: VR VOLUME JOG
VR6511	: VR MIC VOLUME

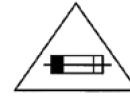
- The voltage value and waveforms are the reference voltage of this unit measured by DC electronic voltmeter (high impedance) and oscilloscope on the basis of chassis. Accordingly, there may arise some error in voltage values and waveforms depending upon the internal impedance of the tester or the measuring unit.

• Importance safety notice :

Components identified by  mark have special characteristics important for safety. Furthermore, special parts which have purposes of fire-retardant (resistors), high-quality sound (capacitors), low-noise (resistors), etc. are used. When replacing any of components, be sure to use only manufacturer's specified parts shown in the parts list.

Caution !

CAUTION : FOR CONTINUED PROTECTION AGAINST FIRE HAZARD, REPLACE ONLY WITH SAME TYPE **F1, 4A, 125V FUSE**.



RISK OF FIRE-REPLACE FUSE AS MARKED.

FUSE CAUTION



These symbols located near the fuse indicates that the fuse used is a fast operating type. For continued protection against fire hazard, replace with the same type fuse. For fuse rating, refer to the marking adjacent to the symbol.



Ce symbole indique que le fusible utilisé est à rapide. Pour une protection permanente, n'utiliser que des fusibles de même type. Ce dernier est indiqué là où le présent symbole est apposé.

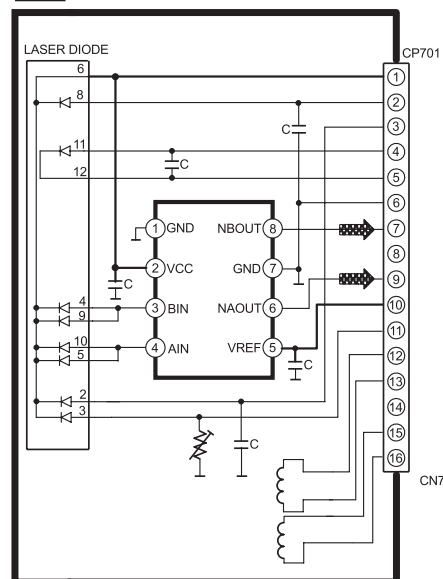
IC, LSI and VLSI are sensitive to static electricity.

Secondary trouble can be prevented by taking care during repair.

- Cover the parts boxes made of plastics with aluminium foil.
- Put a conductive mat on the work table.
- Ground the soldering iron.
- Do not touch the pins of IC, LSI or VLSI with fingers directly.

17.2. (A) CD Servo Circuit

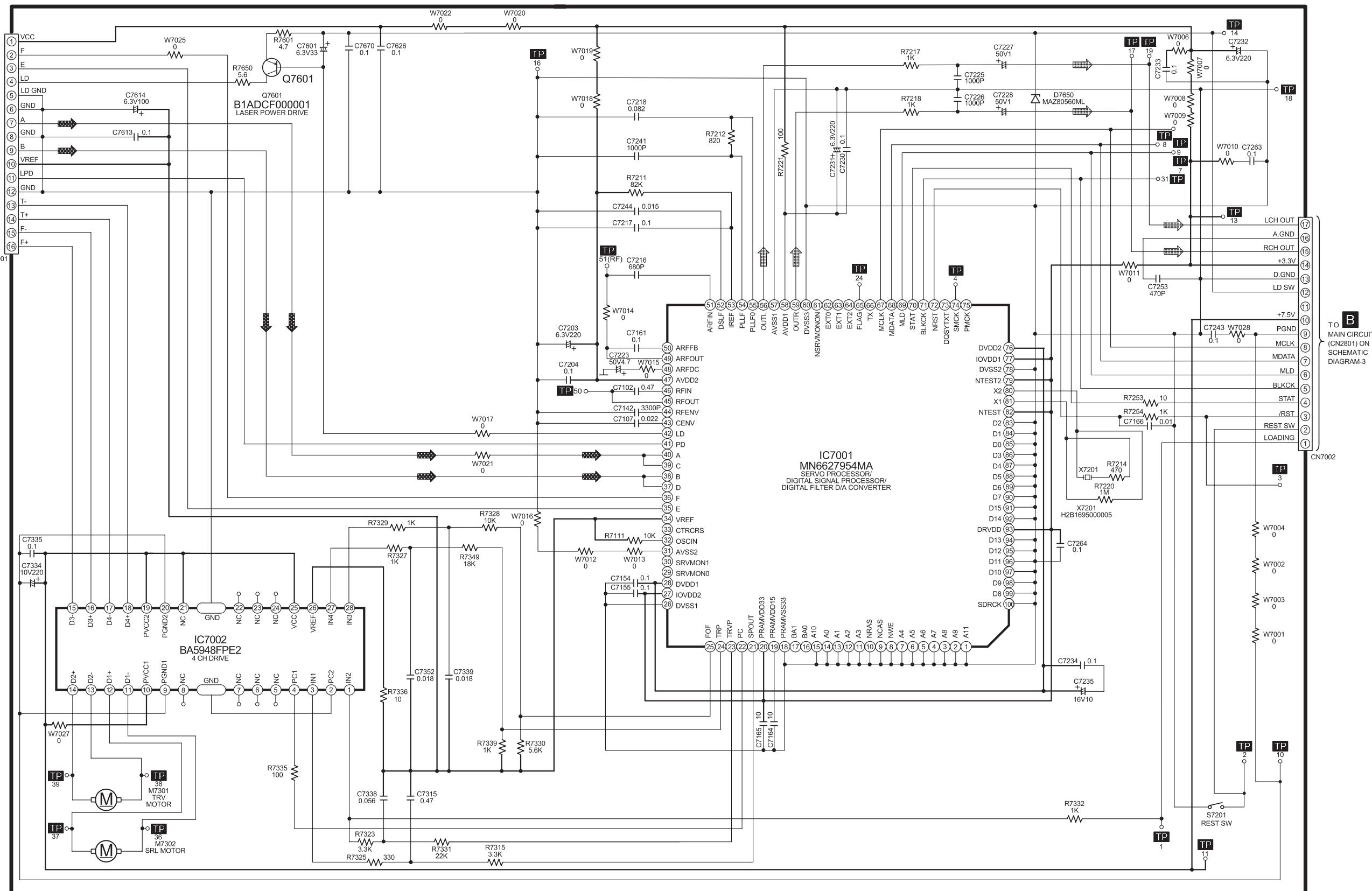
 OPTICAL PICKUP CIRCUIT



SCHEMATIC DIAGRAM - 1

A CD SERVO CIRCUIT

— : +B SIGNAL LINE  : CD-DA SIGNAL LINE  : CD SIGNAL LINE



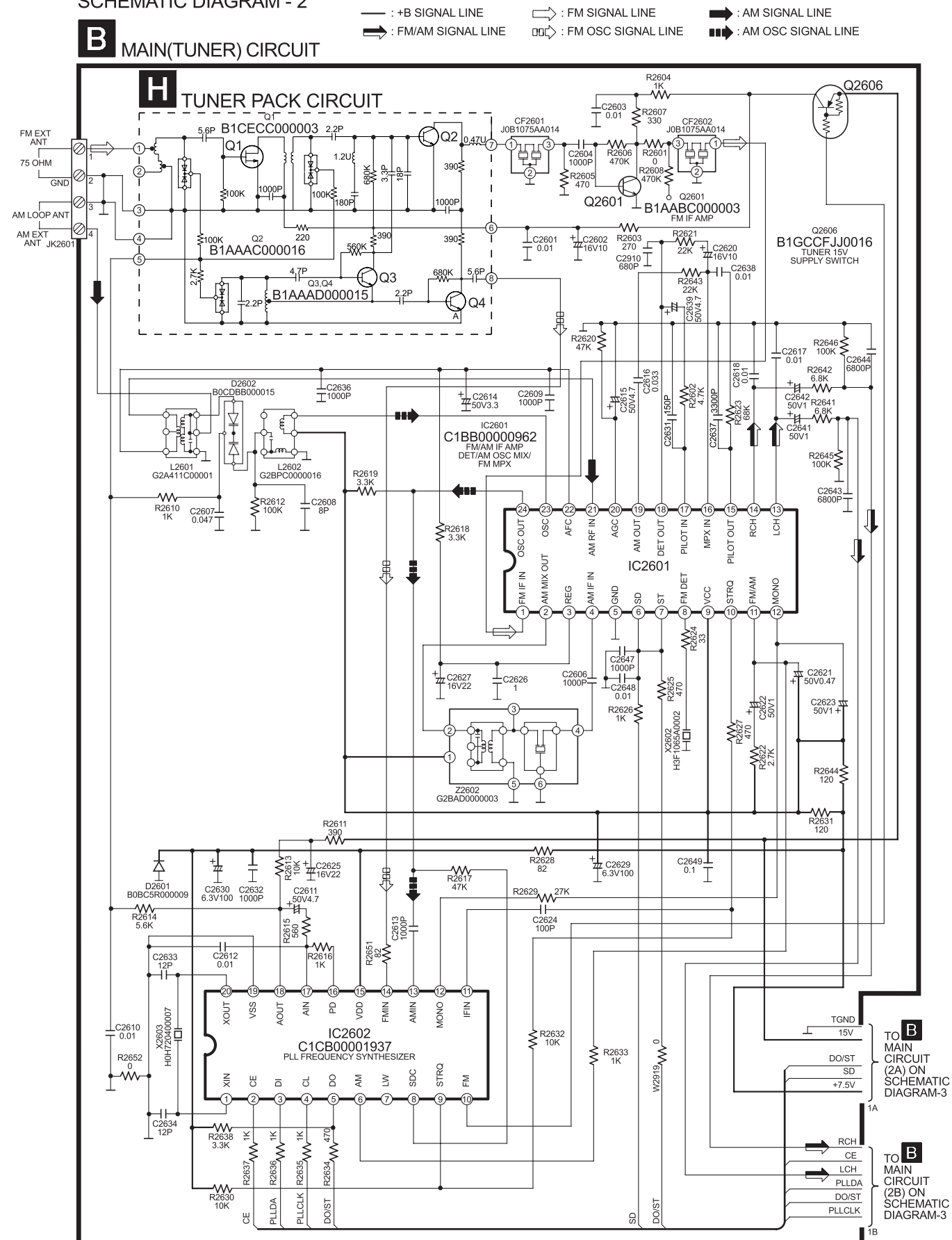
TO **B**
MAIN CIRCUIT
(CN2801) ON
SCHEMATIC
DIAGRAM-3

CN7002

SA-AK340PL CD SERVO CIRCUIT

17.3. (B) Main (Tuner) Circuit

SCHEMATIC DIAGRAM - 2



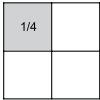
SA-AK340PL MAIN(TUNER) CIRCUIT

17.4. (B) Main Circuit

SCHEMATIC DIAGRAM - 3

B MAIN CIRCUIT

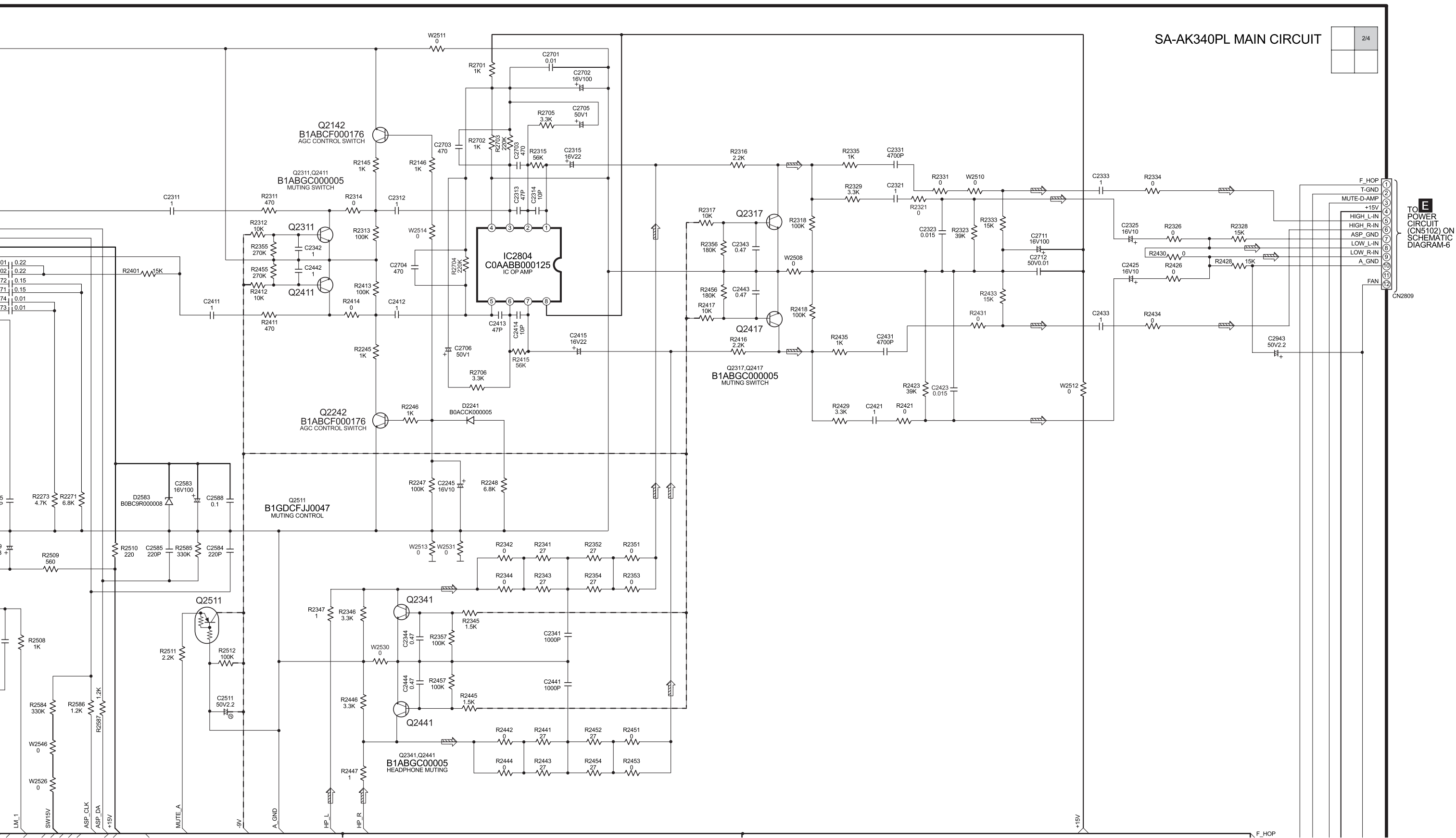
— : +B SIGNAL ➡ : FM/AM SIGNAL LINE [RECORD] : TAPE RECORD SIGNAL LINE [CD] : CD SIGNAL LINE
- - : -B SIGNAL ➡ : MAIN SIGNAL LINE [REPLAY] : TAPE PLAYBACK SIGNAL LINE



SA-AK340PL MAIN CIRCUIT

TO DECK
CIRCUIT (CN1001) ON
SCHEMATIC
DIAGRAM-7

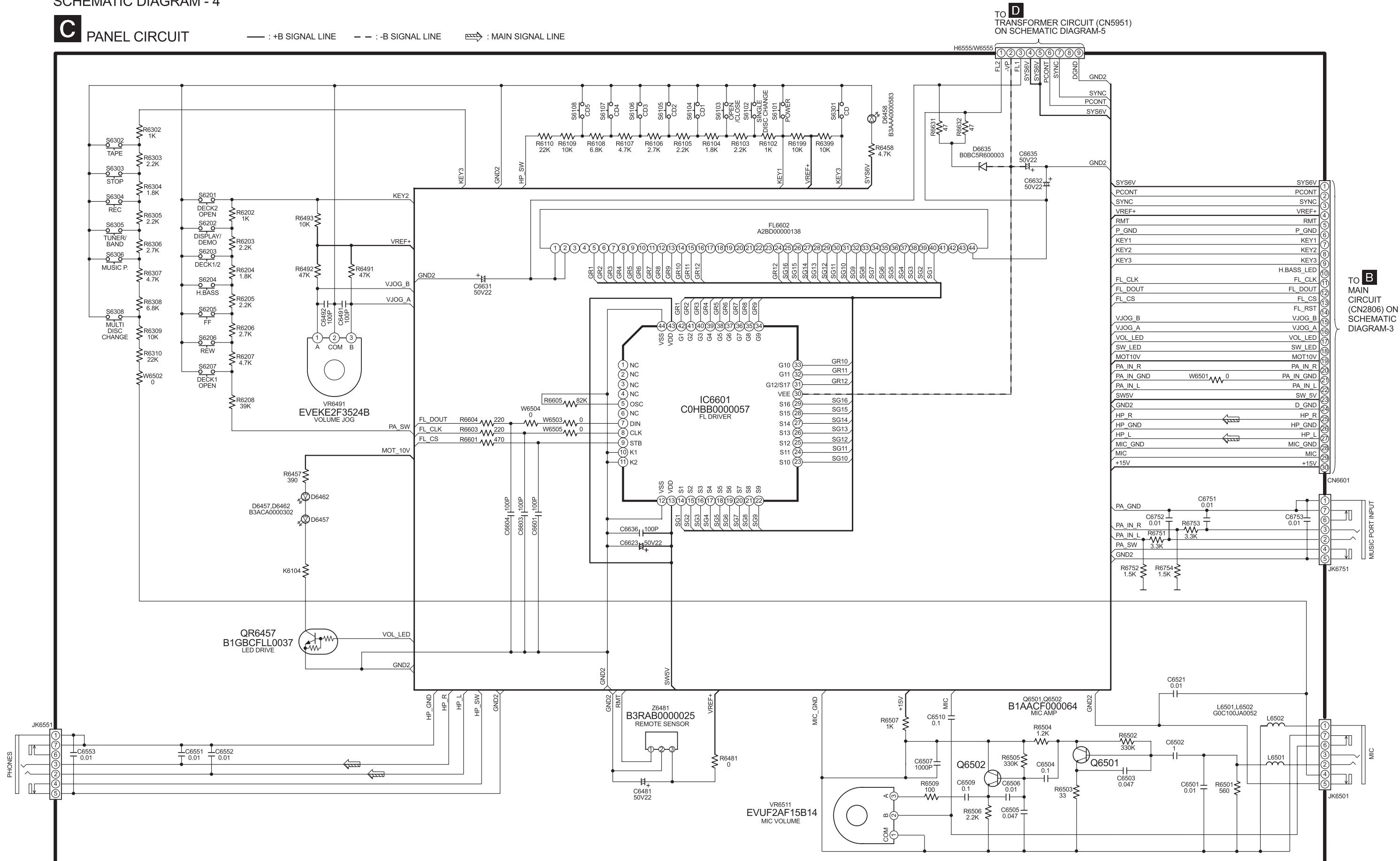
CN2803





17.5. (C) Panel Circuit

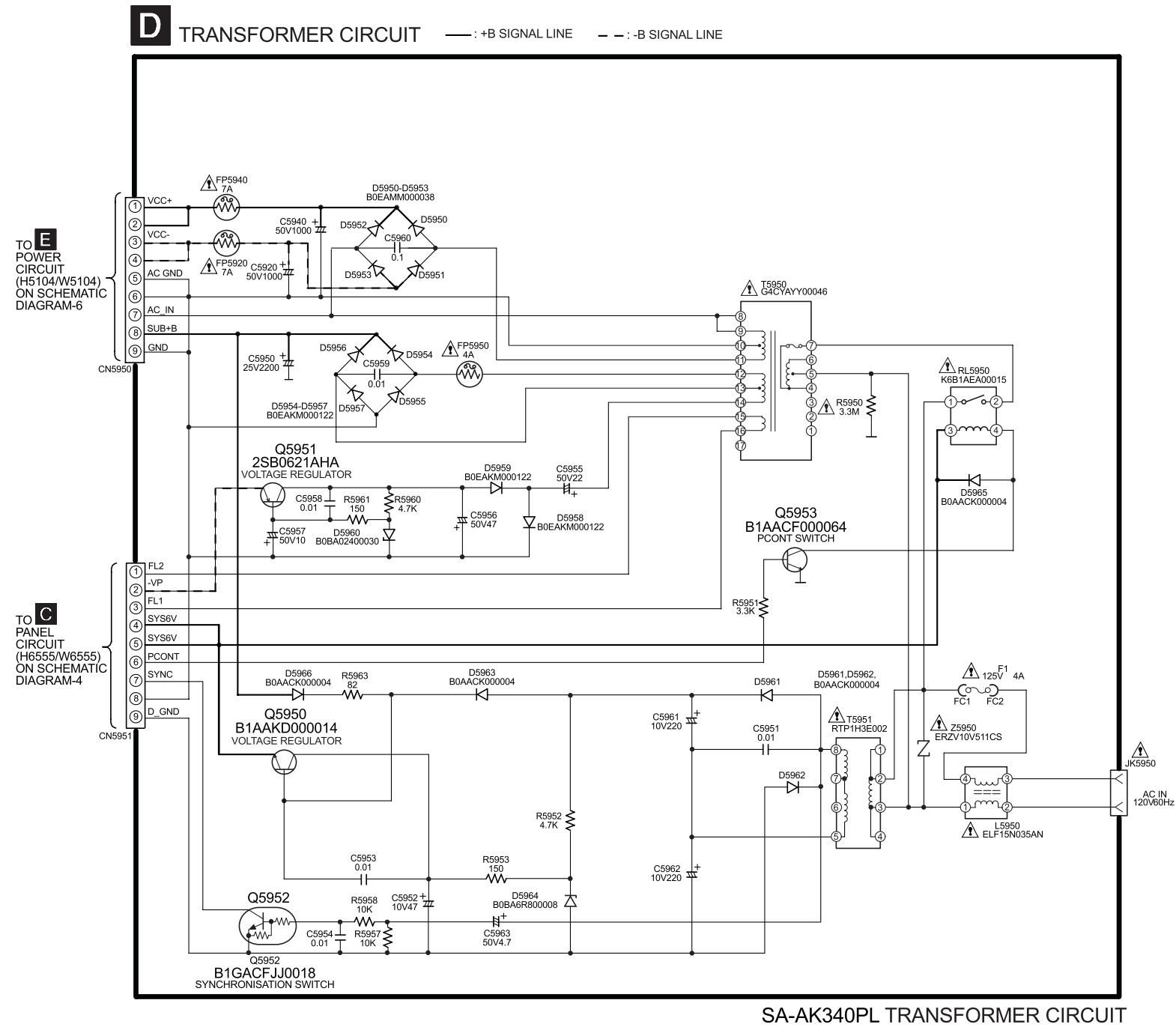
SCHEMATIC DIAGRAM - 4



SA-AK340PL PANEL CIRCUIT

17.6. (D) Transformer Circuit

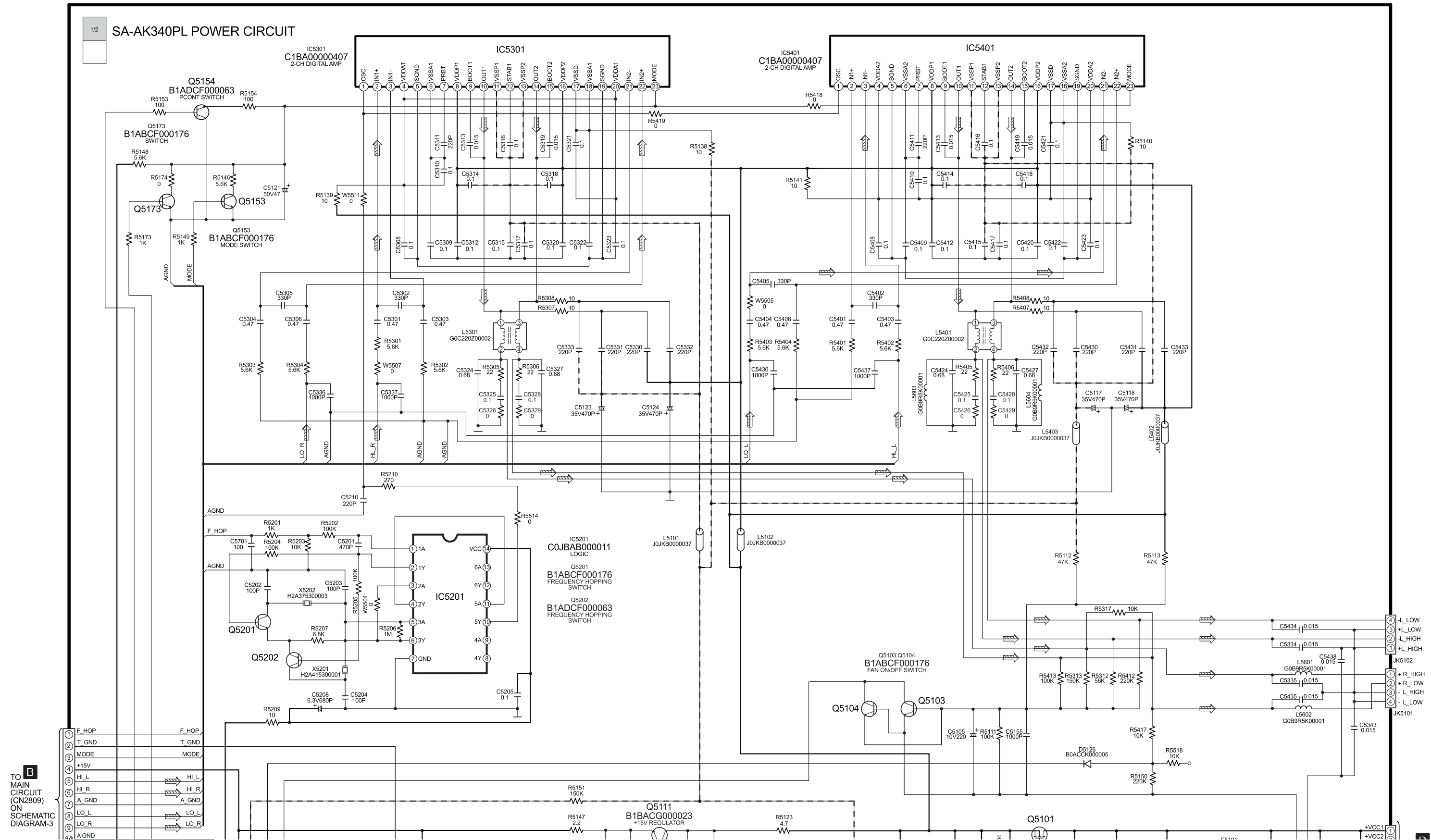
SCHEMATIC DIAGRAM - 5

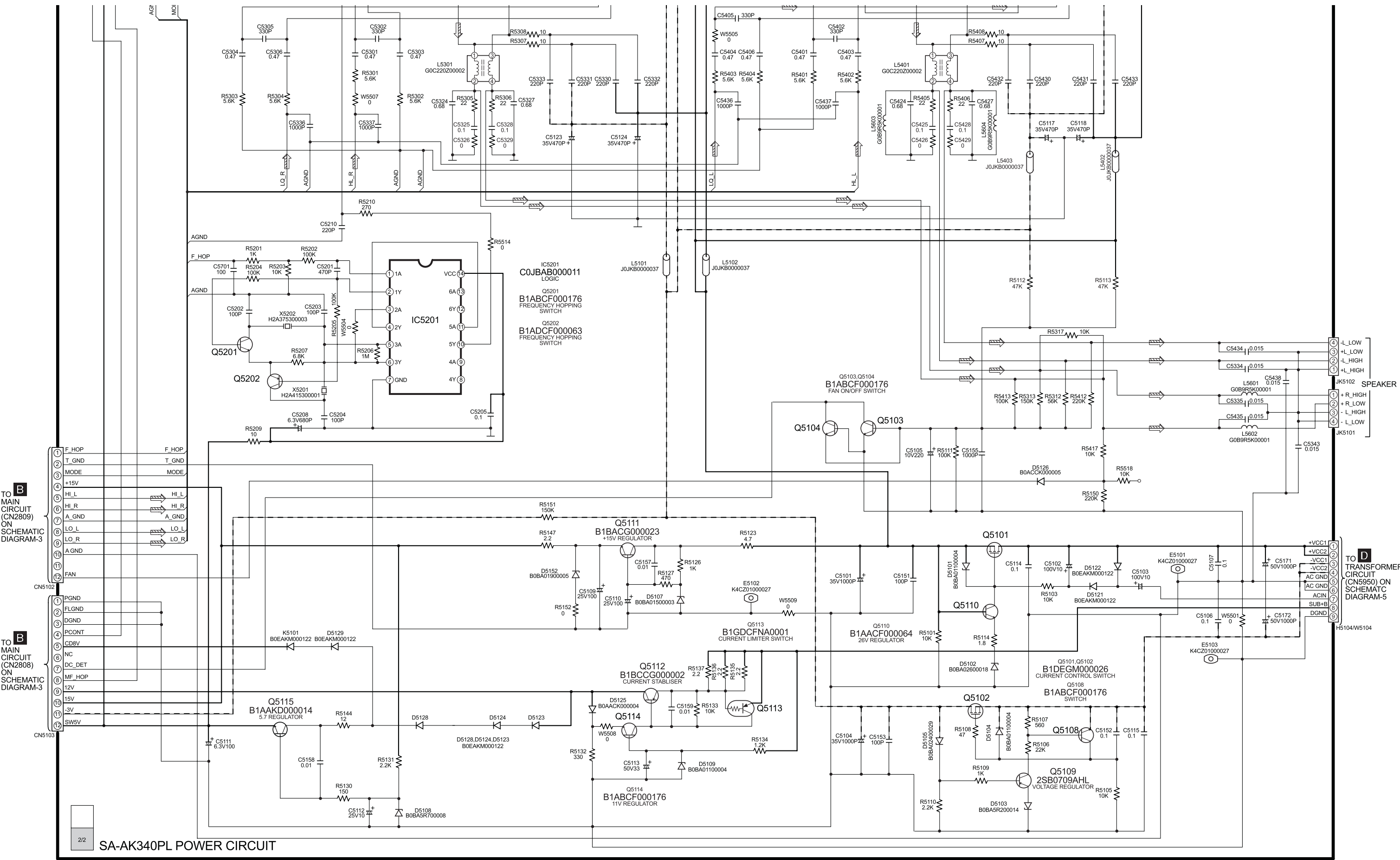


17.7. (E) Power Circuit

SCHEMATIC DIAGRAM - 6

E POWER CIRCUIT — : +B SIGNAL LINE - - : -B SIGNAL LINE \Rightarrow : MAIN SIGNAL LINE





SA-AK340PL POWER CIRCUIT

17.8. (F) Deck Circuit & (G) Deck Mechanism Circuit

SCHEMATIC DIAGRAM - 7

