CHAPTER 4. DIAGRAMS

[1] Block diagram

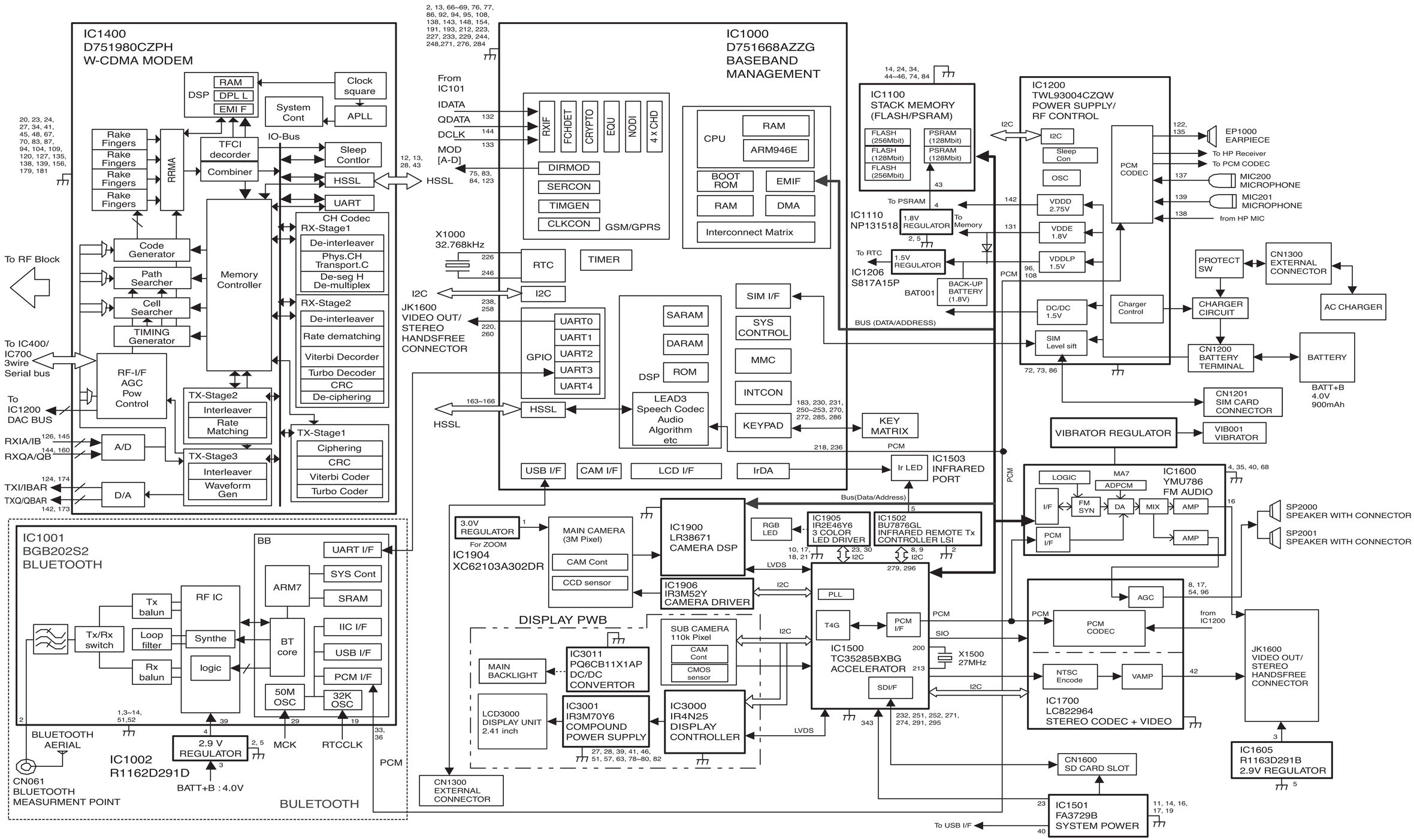
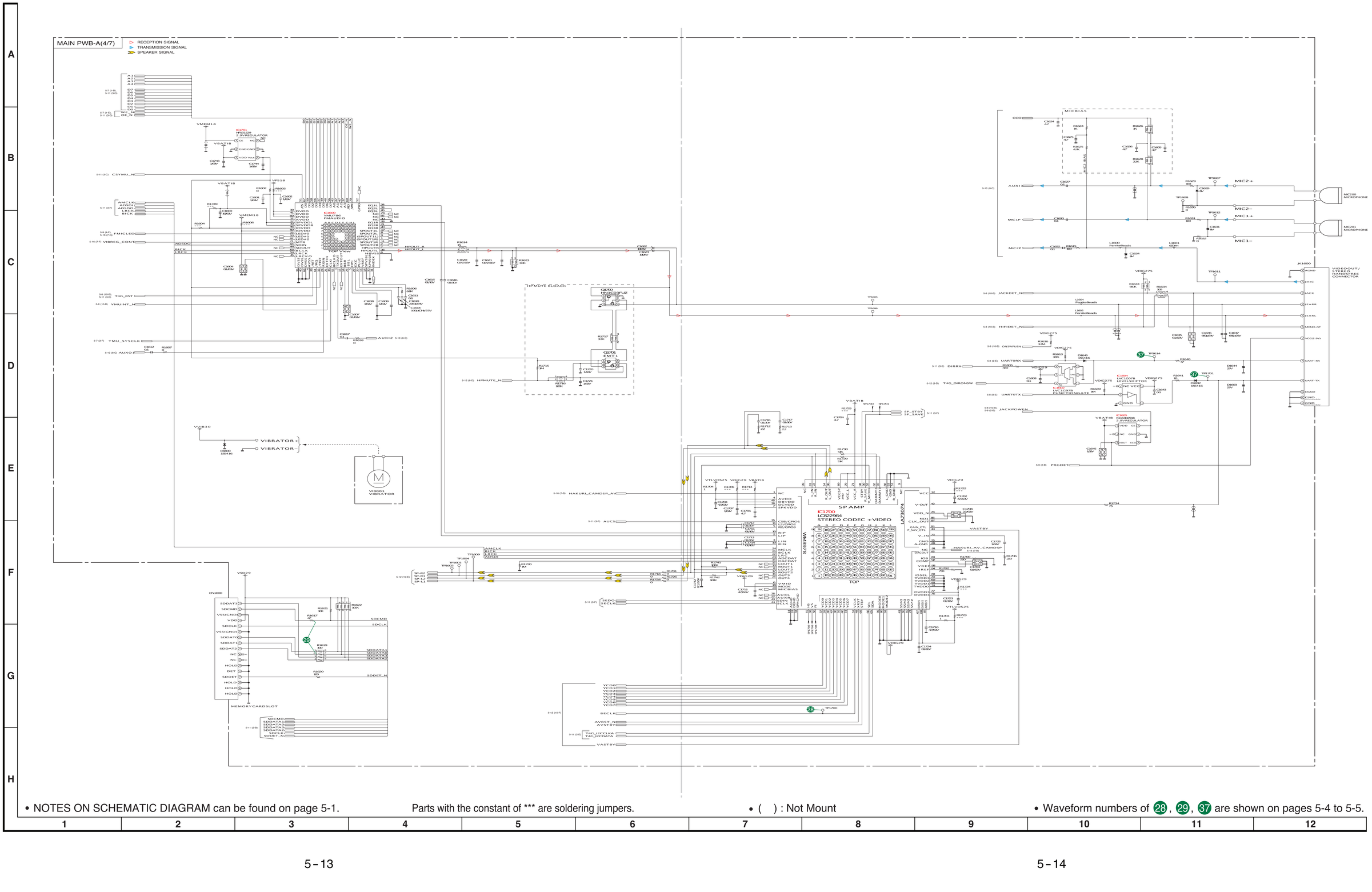


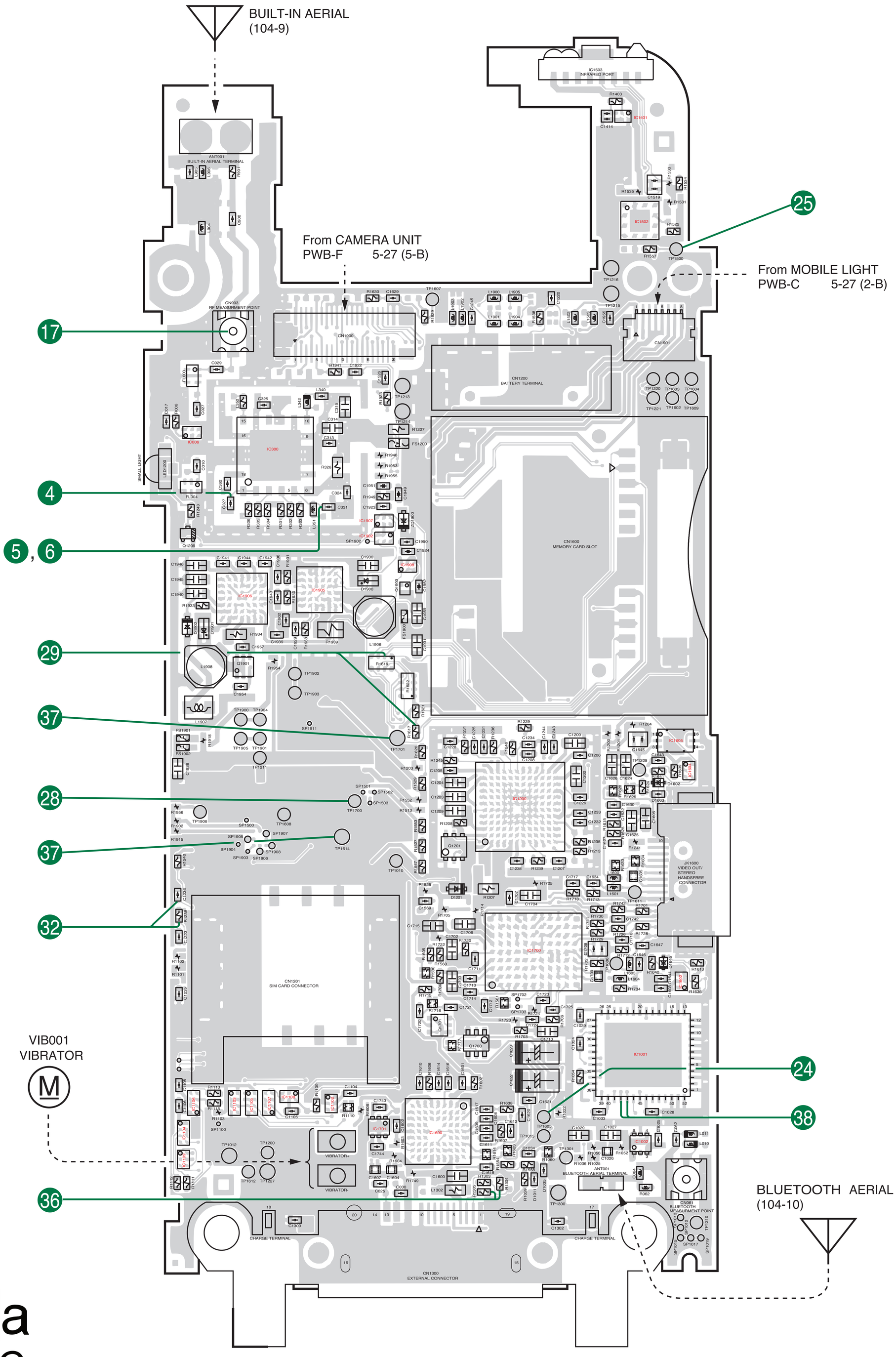
Figure 1 MAIN BLOCK DIAGRAM

[7] Schematic diagram (Main 4/7)



- NOTES ON SCHEMATIC DIAGRAM can be found on page 5-1.
- Parts with the constant of *** are soldering jumpers.
- ( ) : Not Mount
- Waveform numbers of 28, 29, 37 are shown on pages 5-4 to 5-5.

MAIN PWB-A (REAR SIDE)



LFa

Sn-Ag-Cu

This PWB employs lead-free solder.

- Waveform numbers of 1 to 45 are shown on pages 5-2 to 5-6.

7	8	9	10	11	12

IC1600 VHIYMU786++-1L (YMU786):FM AUDIO

Pin No.	Terminal name	Input/Output	Description of terminal
1*	(SPOUT1R)	Output	Internally connected to No. 11 terminal. No. 11 terminal is used as SPOUT1R terminal. (Not used)
2*	SPOUT2R	Output	R-ch speaker connection terminal 2 (Not used)
3	TXOUT	Output	Transmitted voice analogue output terminal
4	AVSS	-	Analogue earth
5	HPC	-	Capacitance connection terminal for preventing headphone pop noise
6	HPVSS	-	Earth for headphone amplifier
7	HPOUTR	Output	R-ch headphone output terminal
8*	SPOUT2L	Output	L-ch speaker connection terminal 2 (Not used)
9*	(SPOUT1L)	Output	Internally connected to No. 17 terminal. No. 17 terminal is used as SPOUT1L terminal. (Not used)
10	SPVSSR	-	Analogue earth for R-ch speaker amplifier
11*	SPOUT1R	Output	R-ch speaker connection terminal 1 (Not used)
12	AVDD	-	Analogue power supply (2.70 to 3.30 V)
13	VREF	-	Analogue reference voltage terminal
14	BBR	-	Capacitance connection terminal for R-ch bus boost (0.1 µF)
15*	EXTOUT	Output	External analogue output terminal (Not used)
16	HPOUTL	Output	L-ch headphone output terminal
17*	SPOUT1L	-	L-ch speaker connection terminal 1 (Not used)
18	SPVSSL	-	Analogue earth for L-ch speaker amplifier
19	SPVDDR	-	Analogue power supply for R-ch speaker amplifier (AVDD to 4.50 V)
20	EQ3R	-	R-ch equaliser terminal 3
21	EQ2R	-	R-ch equaliser terminal 2
22	EXC	-	Capacitance connection terminal for preventing external output pop noise (1 µF)
23	BBL	Output	Capacitance connection terminal for L-ch bus boost (0.1 µF)
24	RXIN	Input	Received voice analogue input terminal
25	EXTIN	Input	External analogue input terminal
26	EQ3L	-	L-ch equaliser terminal 3
27	SPVDDL	-	Analogue power supply for L-ch speaker amplifier (AVDD to 4.50 V)
28	EQ1R	-	R-ch equaliser terminal 1
29	PLLC	-	PLL capacitance connection terminal for sound source
30	(DVSS)	-	Earth
31*	INDEX	-	Index terminal (Not used)
32	/TEST	Input	Terminal for LSI test
33	EQ2L	-	L-ch equaliser terminal 2
34	EQ1L	-	L-ch equaliser terminal 1
35	DVSS	-	Digital earth
36	CLKI	Input	Clock input terminal
37	A3	Input	CPU interface address signal 3
38	/RST	Input	Hardware reset input
39	DVDD	-	Digital core power supply (1.65 to 1.95 V)
40	DVSS	-	Digital earth
41	DVDD	-	Digital core power supply (1.65 to 1.95 V)
42	A1	Input	CPU interface address signal 1
43	A0	Input	CPU interface address signal 0
44*	SDOUT	Output	Data output for digital audio output (Not used)
45*	LRCKO	Output	LR clock for digital audio output (Not used)
46	IOVDD2	-	Power supply for terminal (DVDD to 3.30 V)
47	A2	Input	CPU interface address signal 2
48	D6	Input/Output	CPU interface data bus 6
49	D5	Input/Output	CPU interface data bus 5
50	D1	Input/Output	CPU interface data bus 1
51	/CS	Input	CPU interface chip select
52*	GPIO0	Input/Output	GPIO port (Not used)
53*	LED#1	Output	External LED control terminal #1 (Not used)
54	LRCK	Input/Output	LR clock for external audio input
55*	BCLKO	Output	BIT clock for digital audio output (Not used)
56	D7	Input/Output	CPU interface data bus 7
57	D4	Input/Output	CPU interface data bus 4
58	D2	Input/Output	CPU interface data bus 2
59	IOVDD	-	Terminal power supply for CPU interface
60	/RD	Input	CPU interface read enable
61	/IRQ	Output	Interrupt output

Pin No.	Terminal name	Input/Output	Description of terminal
62*	LED#2	Output	External LED control terminal #2 (Not used)
63	BCLK	Input/Output	BIT clock for digital audio input
64	SDIN	Input	Data input for digital audio input
65*	NC	-	Not used
66	D3	Input/Output	CPU interface data bus 3
67	D0	Input/Output	CPU interface data bus 0
68	DVSS	-	Digital earth
69	DVDD	-	Digital core power supply (1.65 to 1.95 V)
70	/WR	Input	CPU interface write enable
71	MTR	Output	External vibrator control terminal
72	LED#0	Output	External LED control terminal #0
73*	NC	-	Not used

In this unit, the terminal with asterisk mark (*) is (open) terminal which is not connected to the outside.