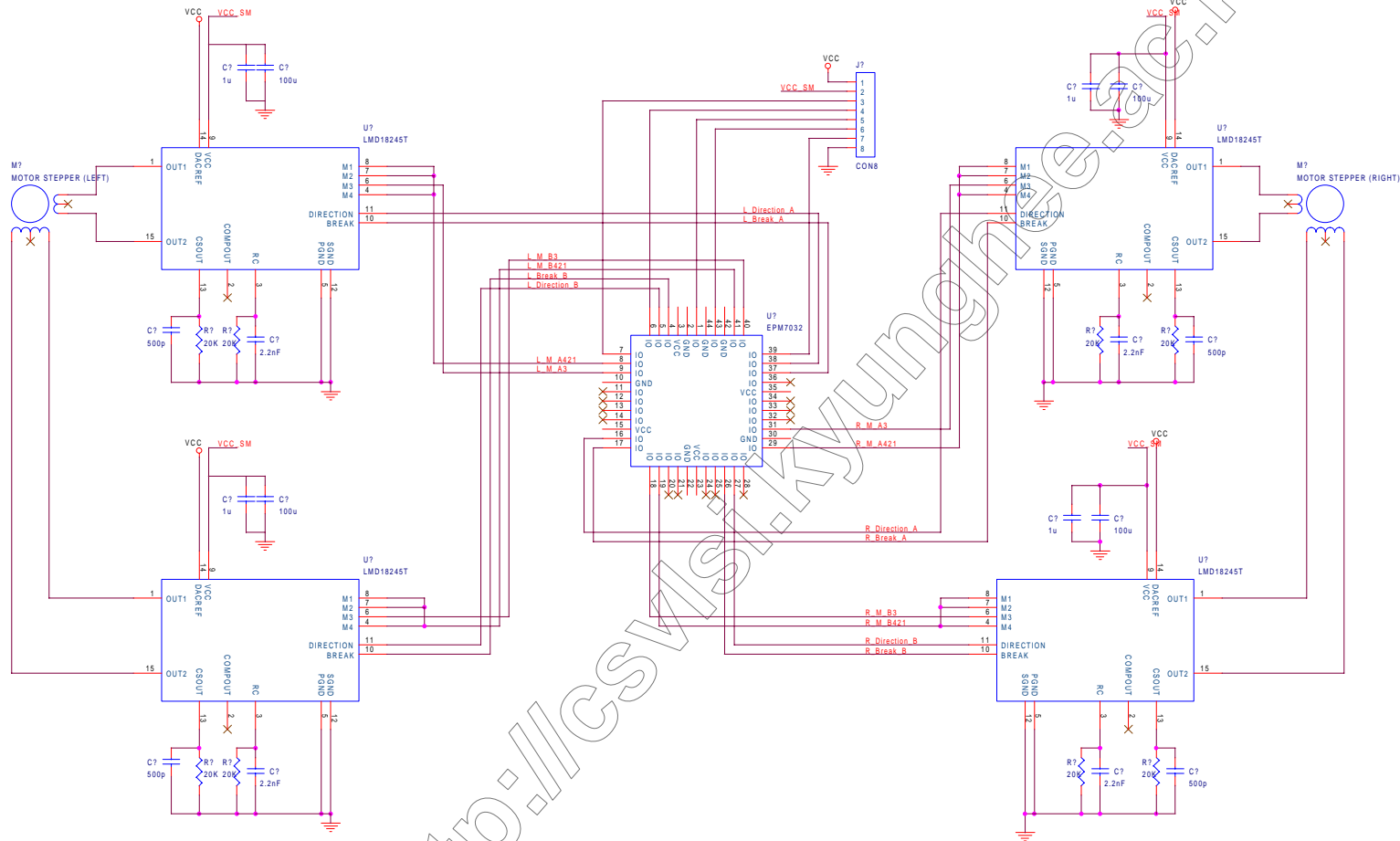
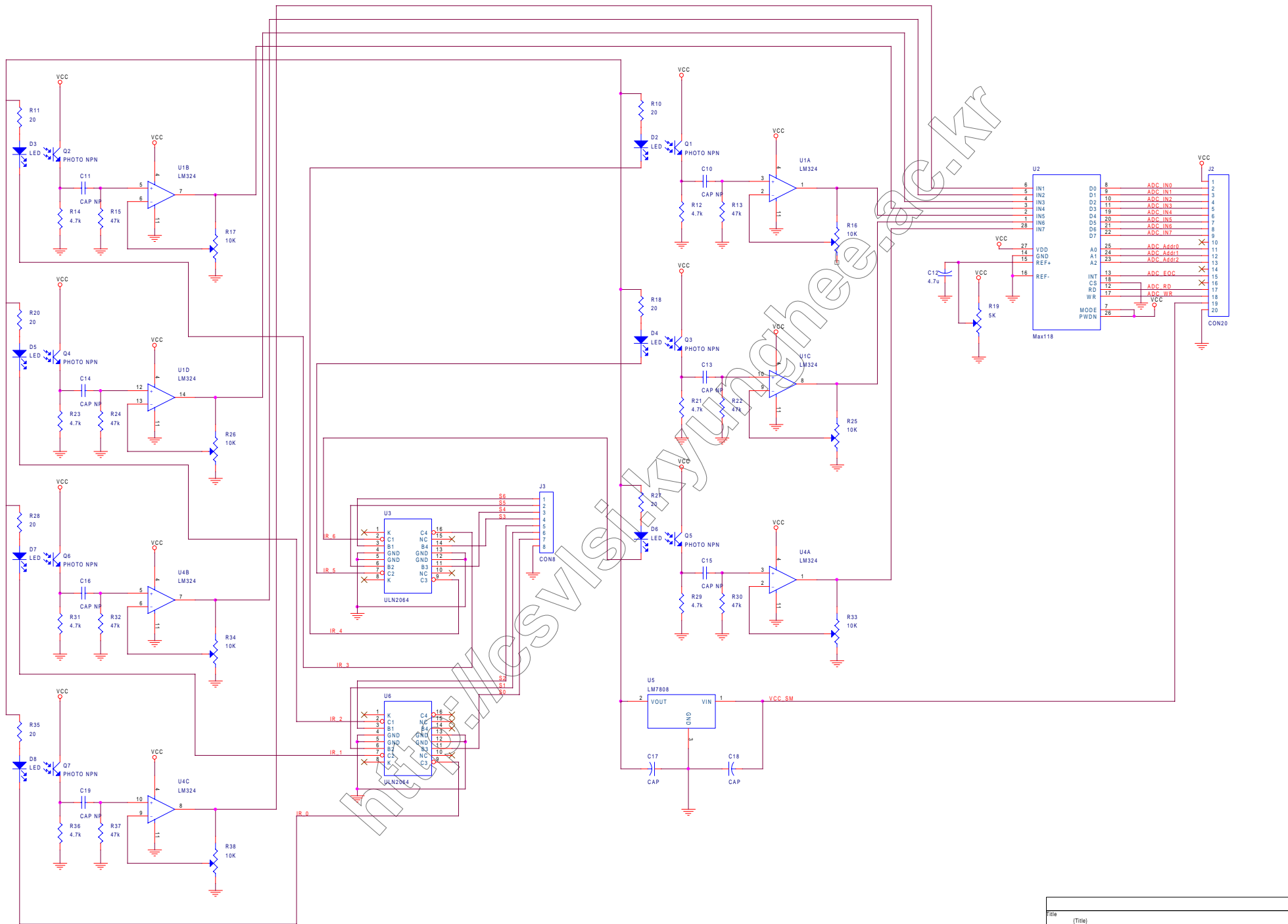


http://icvisi.kuning.com

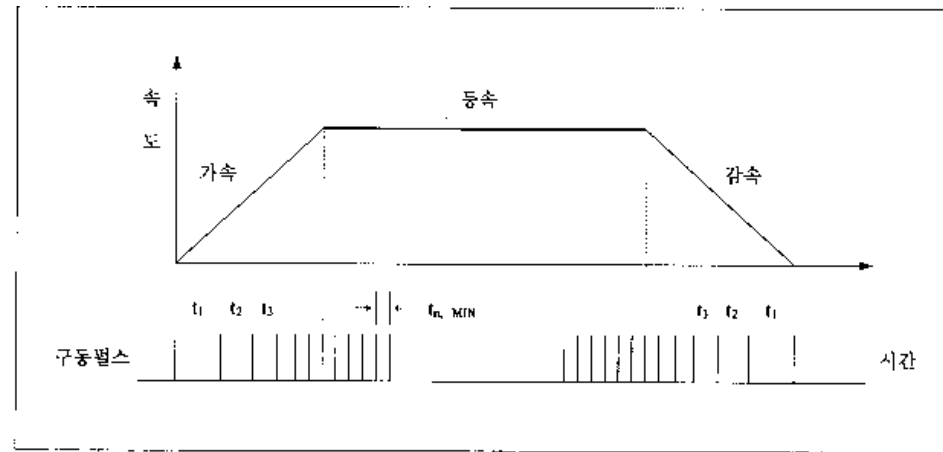
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95	95	95
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97	97	97
98	98	98
99	99	99
100	100	100



http://cs.vsn.kr



Title		(Title)
Size	Document Number	Rev
C	(Doc)	(RevCode)
Date	Tuesday, August 18, 1998	Sheet 2 of 2



$$t_2 = \frac{t_1}{\sqrt{2}}$$

$$t_3 = \frac{t_1}{\sqrt{3}}$$

$$\vdots$$

$$t_n = \frac{t_1}{\sqrt{n}}$$

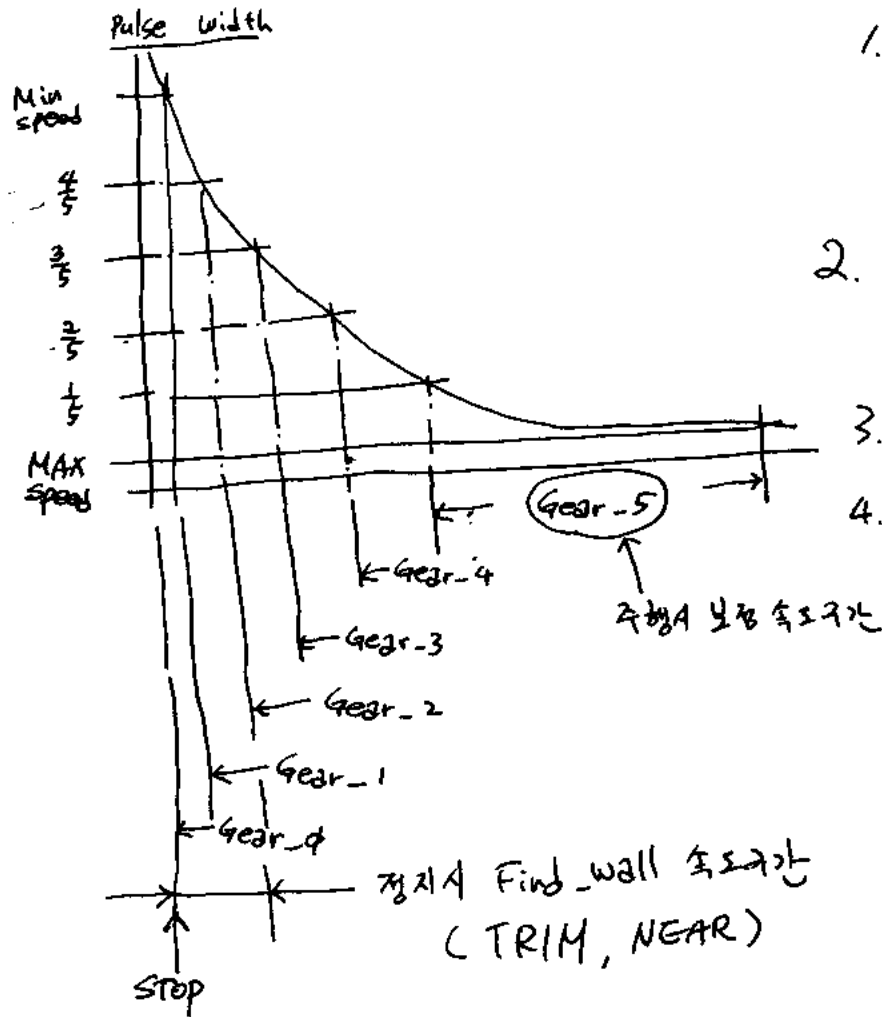
따라서 n번째의 펄스 간격은 첫 번째 간격  $t_1$ 의  $1/\sqrt{n}$ 배가 된다는 것만 기억해도 좋겠다. 가속도를 표현하고자 한다면 첫 번째 펄스간격에 의해 결정이 되는데 (결과만 알아두자)

$$a = \frac{\Delta}{2t_1^2} \quad (\Delta : \text{한 펄스당 움직이는 거리})$$

로 나타낼수 있다. 첫 번째 펄스 간격이 클수록 그 제곱비로 가속도가 작아진다고 생각하면 된다.

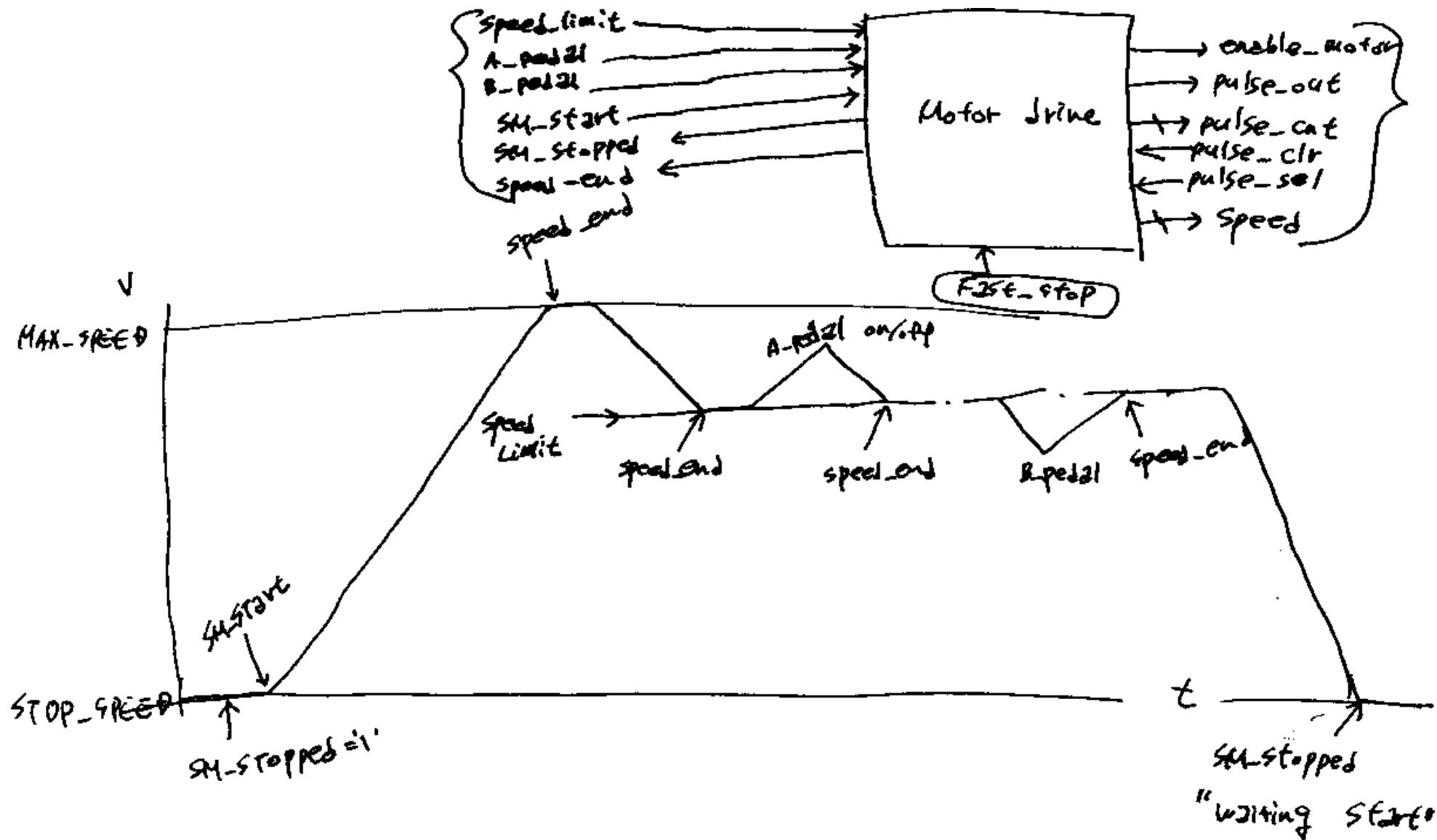
## Note on “Accelerated Start & Stop”

# Motor Drive

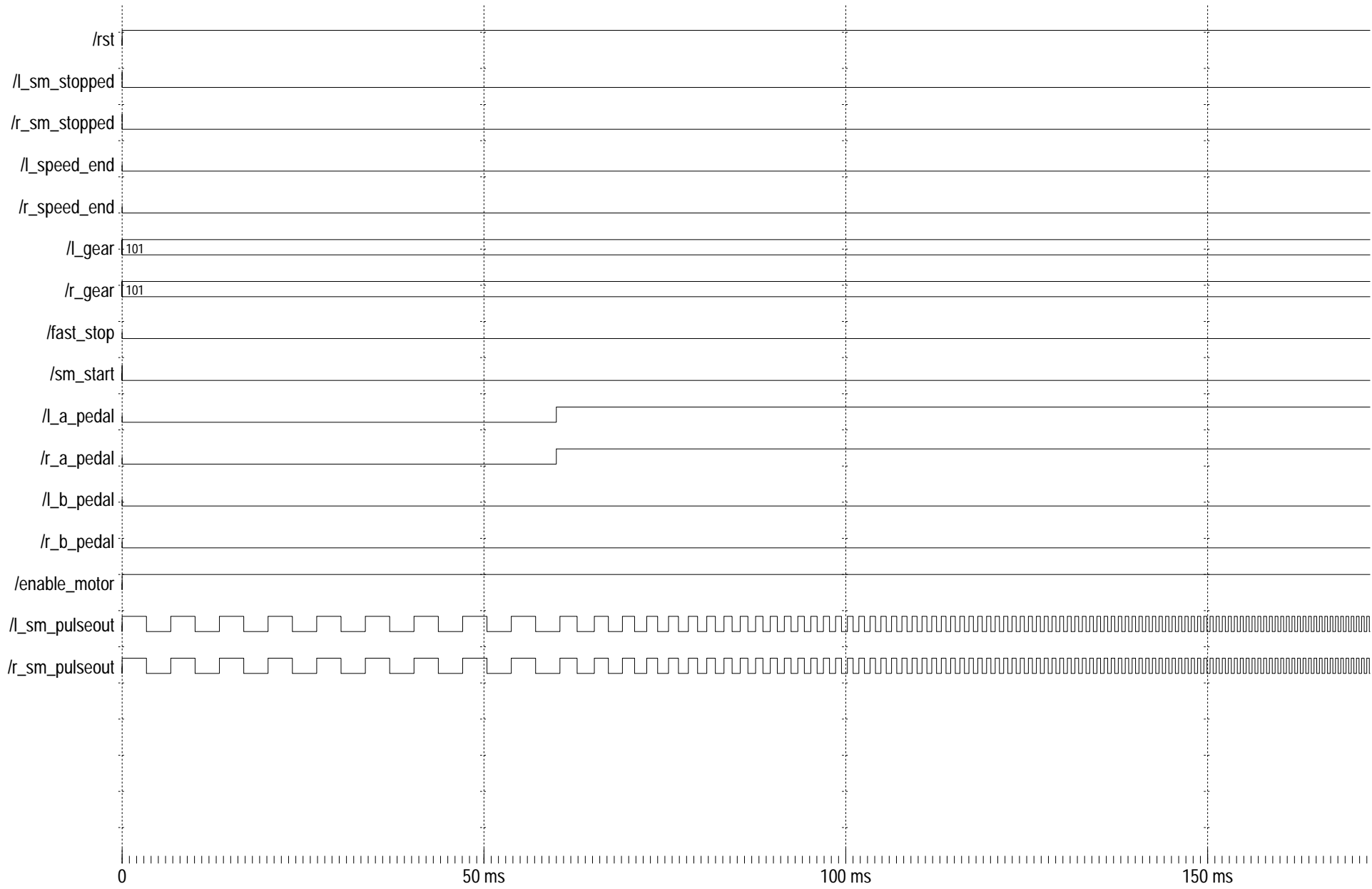


1. Gear 에 의하여 속도구간 지정후  
A-pedal, B-pedal 에 의하여 구간내  
가감속
2. A-pedal 에 의하여 B-pedal 이  
우선 순위 있음.
3. Gear-φ 이어서 계속 B-pedal 이면 정지.
4. 정지후 START 는 "SM-START" 신호이행  
의하여 시작 가능.

Note on "Motor Drive" (goodkook@cvslsi.kyunghee.ac.kr)



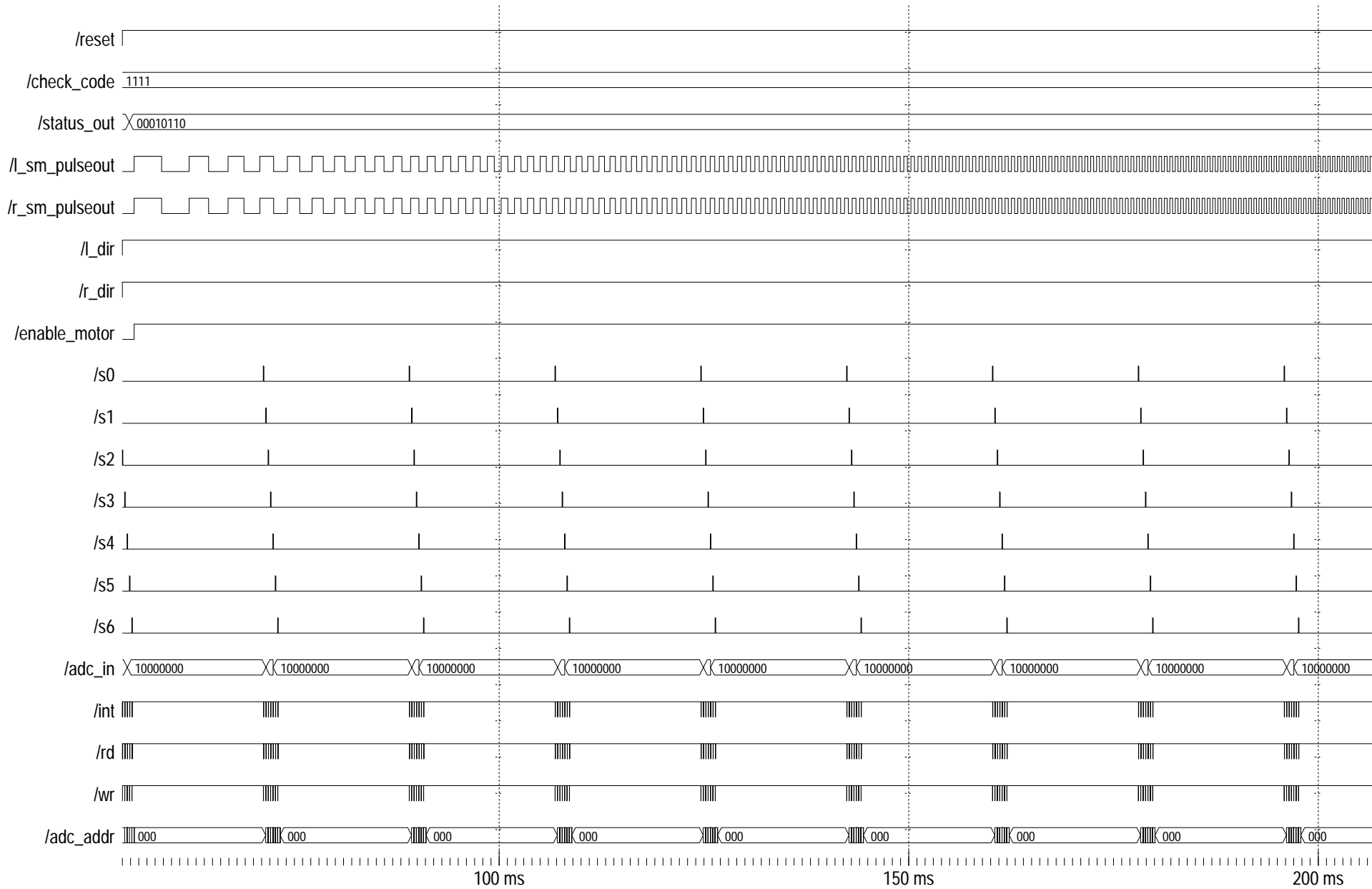
Note on "Motor Drive" ([goodkook@csvlsi.kyunghee.ac.kr](mailto:goodkook@csvlsi.kyunghee.ac.kr))



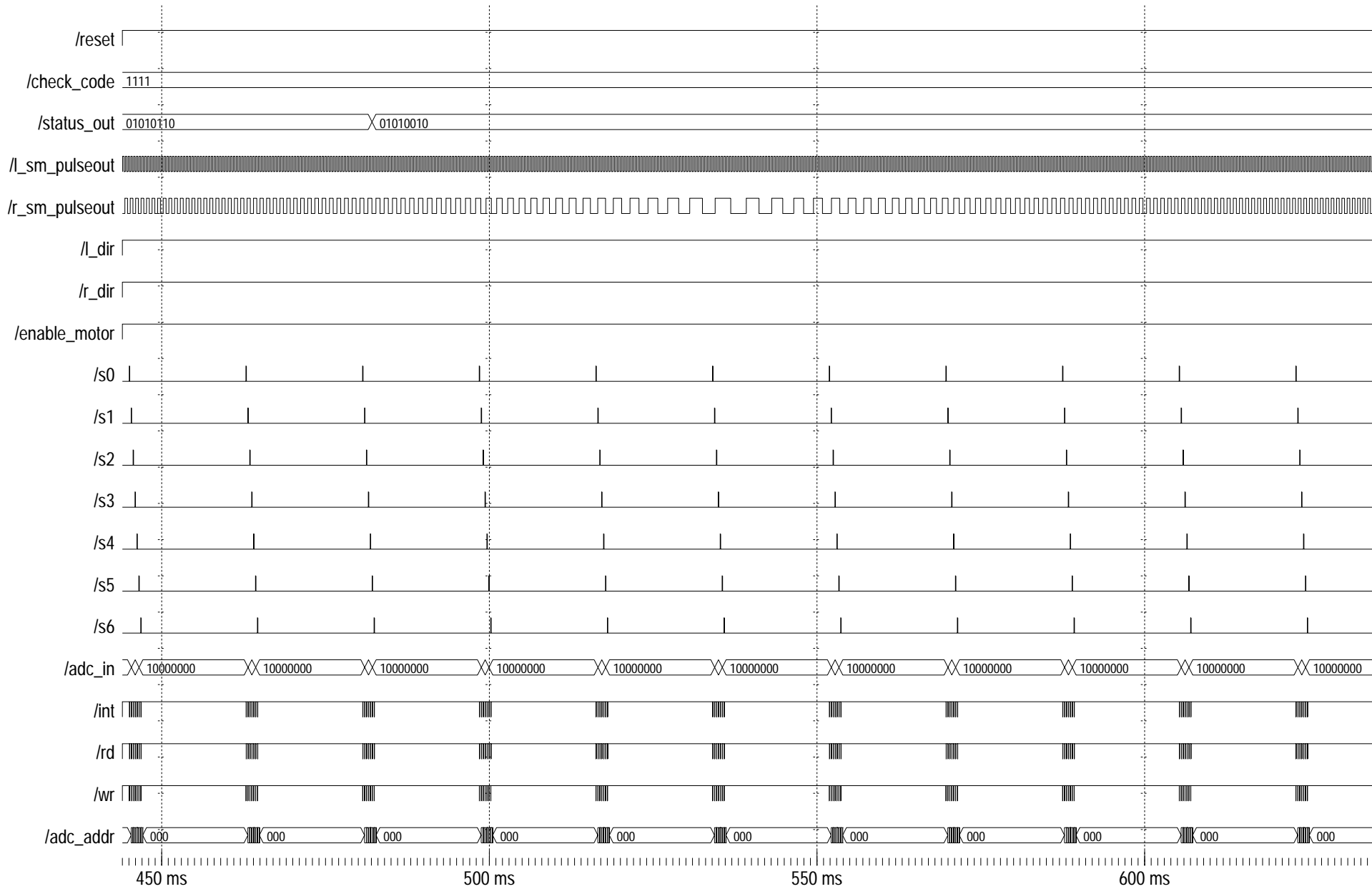
Motor Drive VHDL Simulation-Accelerated Start (goodkook@csvlsi.kyunghee.ac.kr)



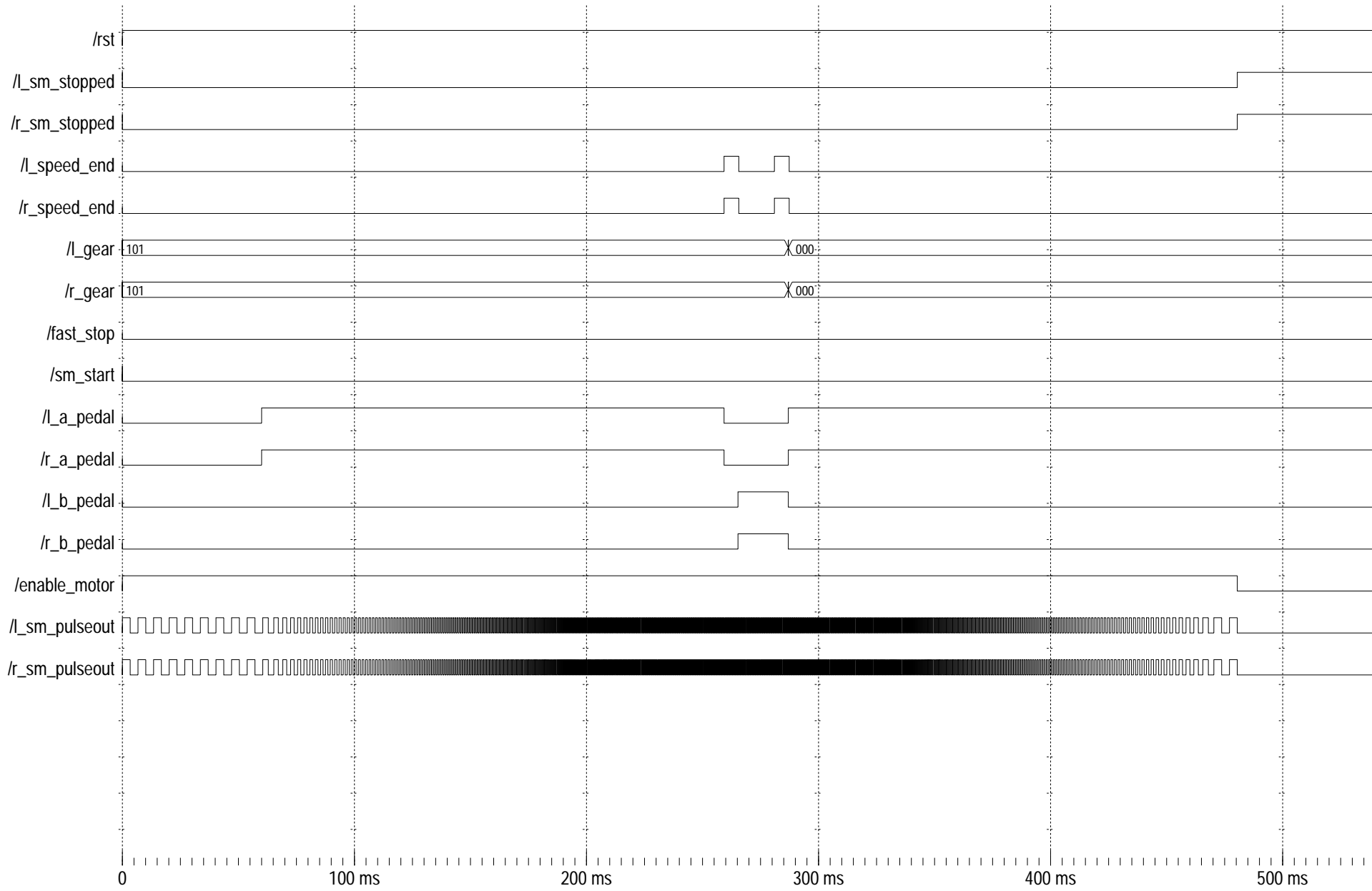




MicroMouse Board-Level Simulation : Smoothed START (goodkook@cslvsi.kyunghee.ac.kr)

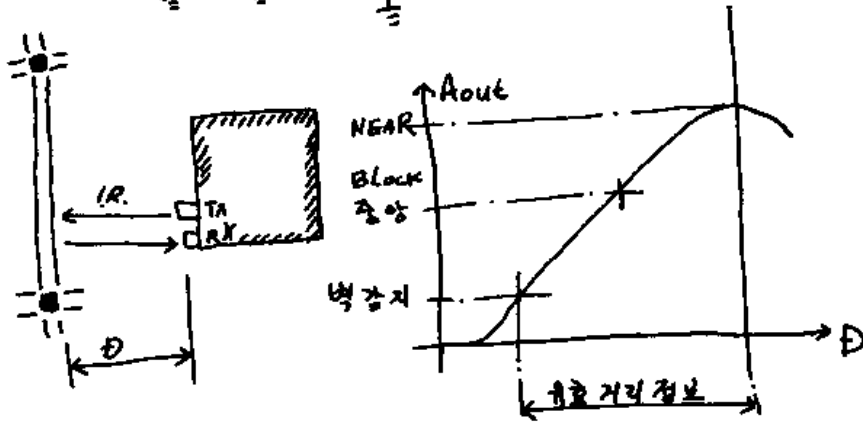
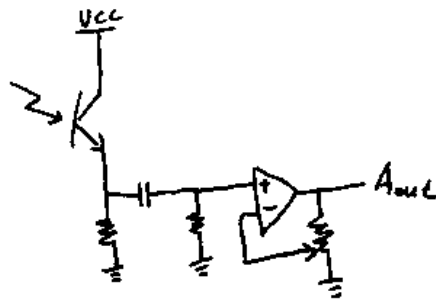


MicroMouse Board-Level Simulation : Smooth-Turn RIGHT (goodkook@csvlsi.kyunghee.ac.kr)

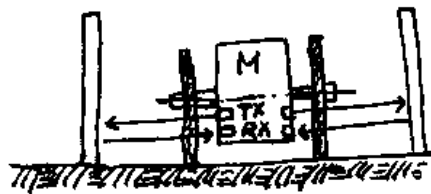


Motor Drive (Accelerated Start & Stop) VHDL Simulation (goodkook@cslvlsi.kyunghee.ac.kr)

IR. Sensor :

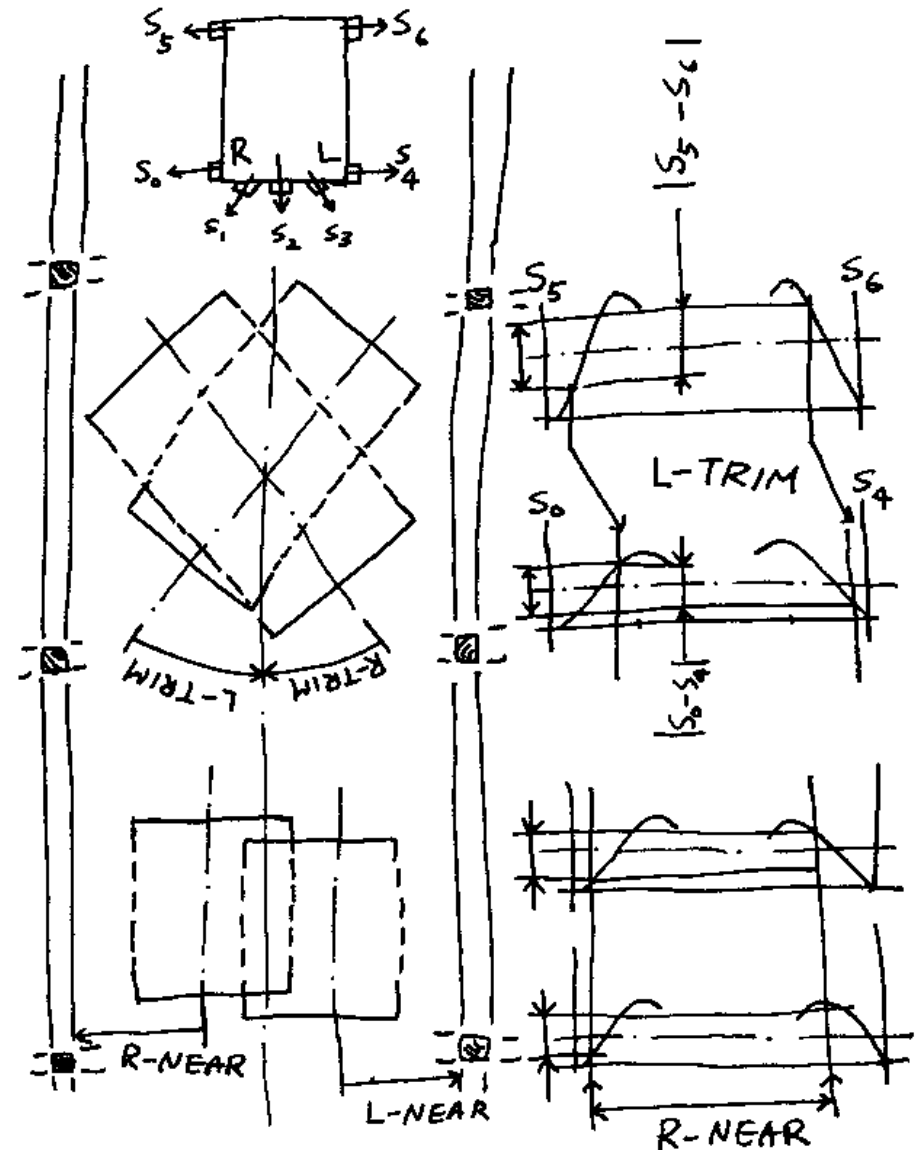


"IR-Sensor TRX 위치"



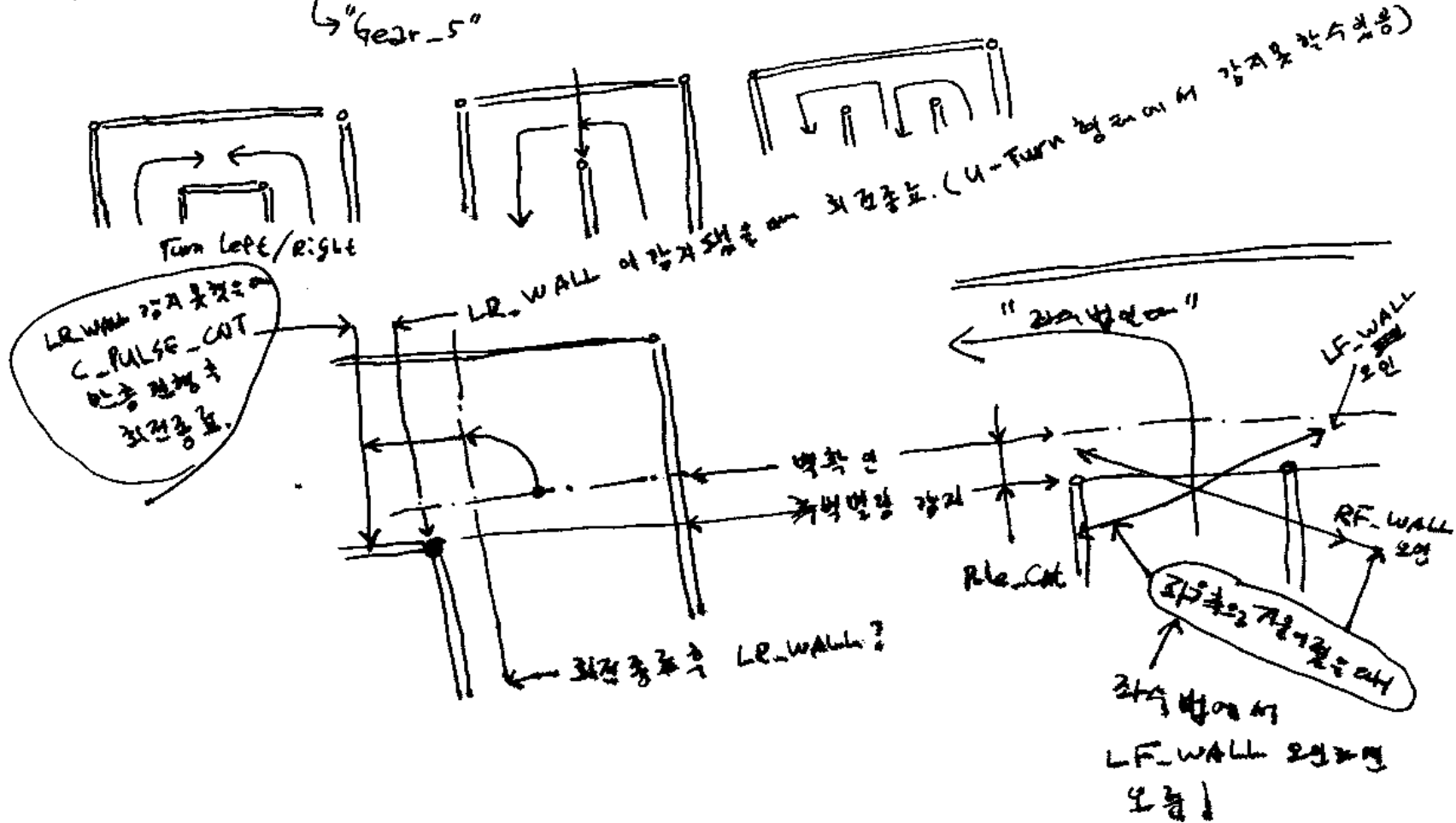
TX - upper pos.  
RX - Lower pos.

"차이조정 IR-Sensor 거리 정보"



Note on "IR Sensor" (goodkook@csvlsi.kyunghee.ac.kr)

Smooth-turn: 이종중 전환. start ↔ stop.  
↳ "gear-5"



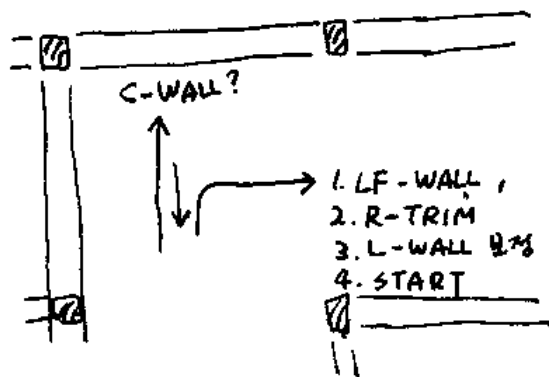
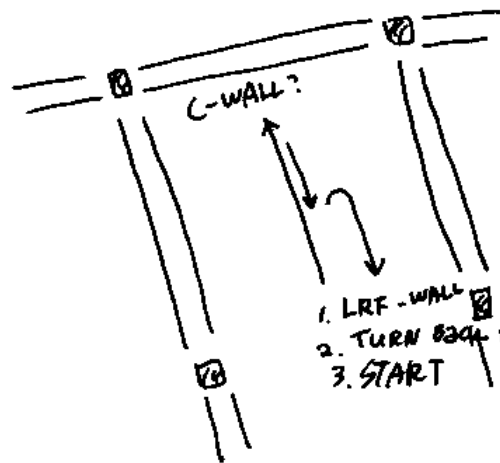
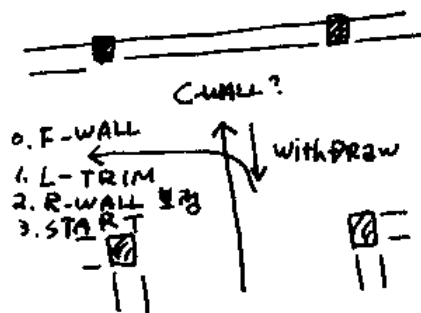
Note on "Smoothed-Turn" (goodkook@csvlsi.kyunghee.ac.kr)

# Find LR-Wall

주행중 정지시 "LR-Wall" 찾을때 START

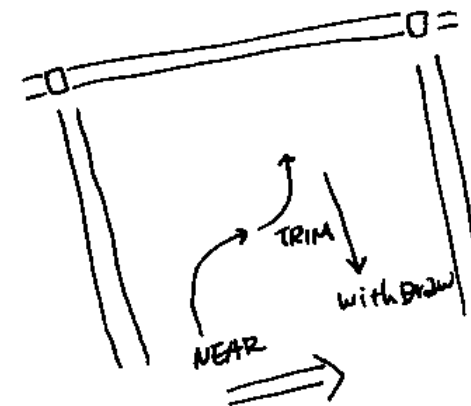
"주행중 정지하는경우"

1. C-WALL 앞쪽. (FAST STOP)
2. LRF-WALL 앞쪽

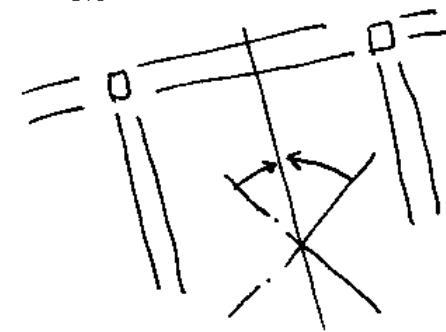


"정지시 보정"

1. L/R-NEAR



2. TRIM



Note on "Find LR-Wall when stopped" (goodkook@csvlsi.kyunghee.ac.kr)

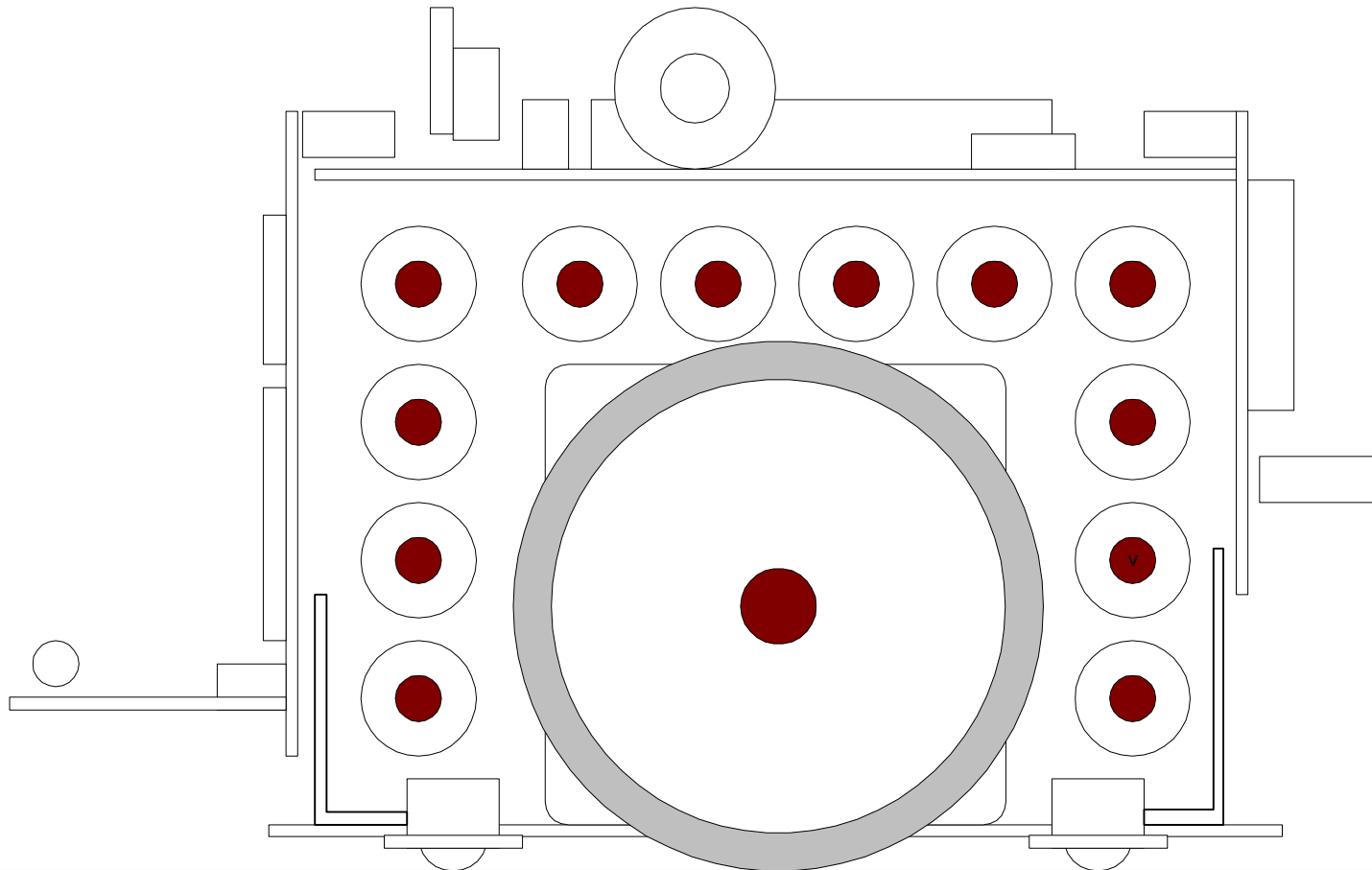
# ***Micro Mouse-VHDL/FPGA***

(c)1999, GoodKook

goodkook@csvglsi.kyunghee.ac.kr

URL: <http://csvglsi.kyunghee.ac.kr>

<http://vlsi2.kyunghee.ac.kr>



***Reseller : EasyTech***

***Tel: +82-02-6966***



CN1

1	GND
2	VSS
3	VCC
4	S3
5	S2
6	S1
7	S0
8	ADC_D0
9	ADC_D1
10	ADC_D2
11	ADC_D3
12	ADC_D4
13	ADC_D5
14	ADC_D6
15	ADC_D7
16	ADC_A2
17	ADC_A1
18	ADC_A0
19	ADC_CLK
20	ADC_READ
21	ADC_EOC
22	ADC_START
23	VCC
24	VSS
25	GND

Sensor\_ADC

CN3

1	VSS
2	GND
3	VCC
4	L_ENA
5	L_BRK
6	L_DIR
7	L_CLK
8	R_ENA
9	R_BRK
10	R_DIR
11	R_CLK
12	TDO
13	TDI
14	TMS
15	TCK
16	GND

Step\_Motor

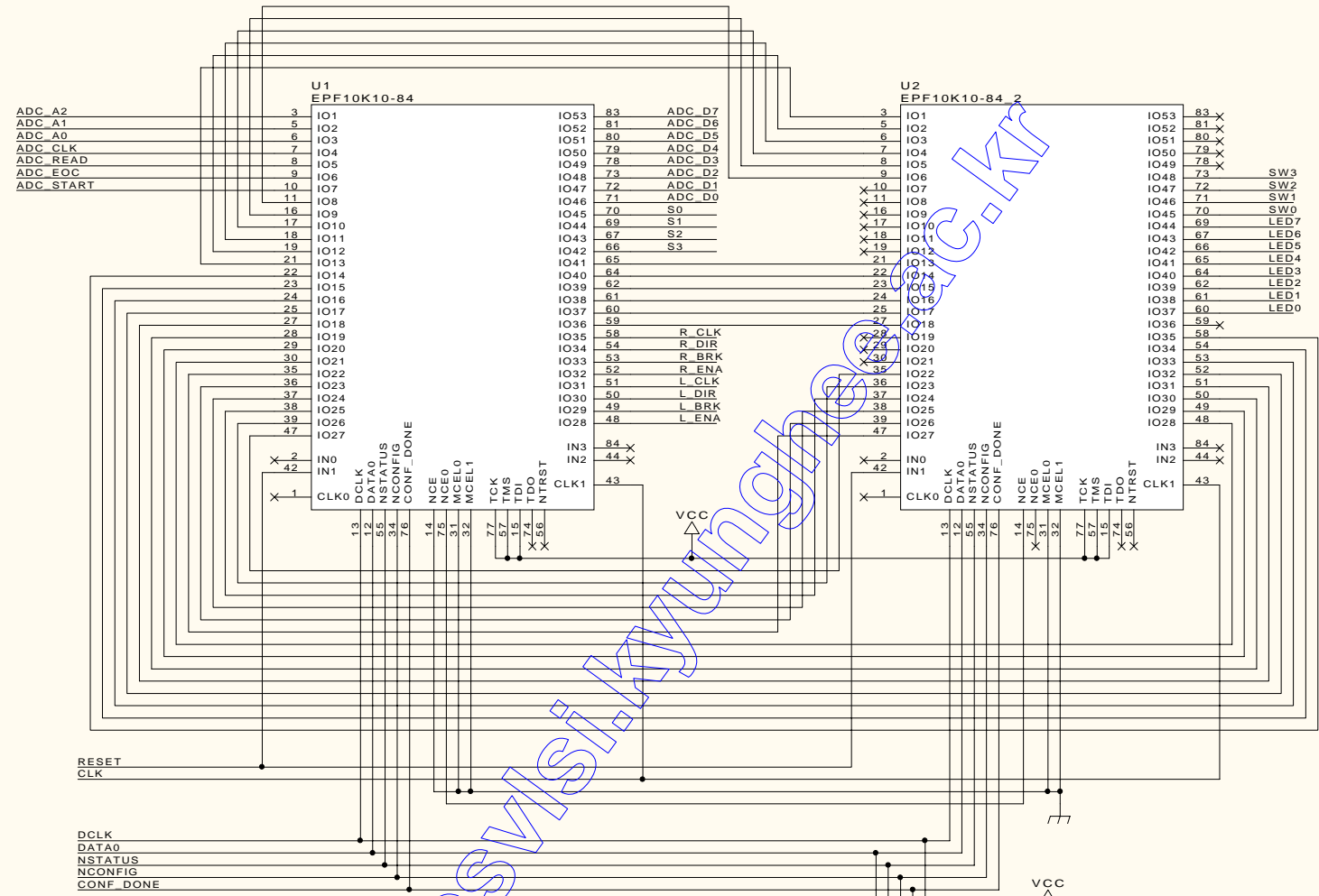
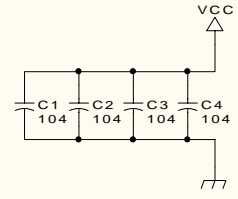
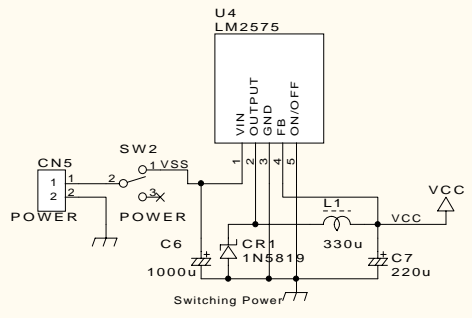
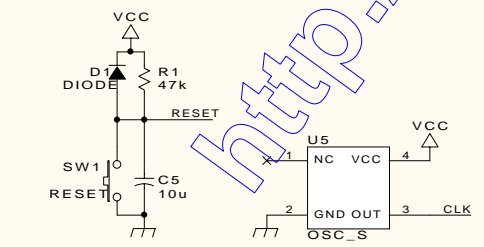
U3

VCC	1	VCC
TDO	2	TDO
TDI	3	TDI
TMS	4	TMS
TCK	5	TCK
GND	6	GND

M5\_ISP\_CON

CN4

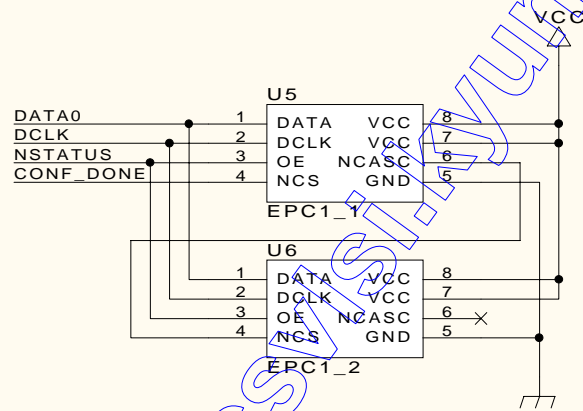
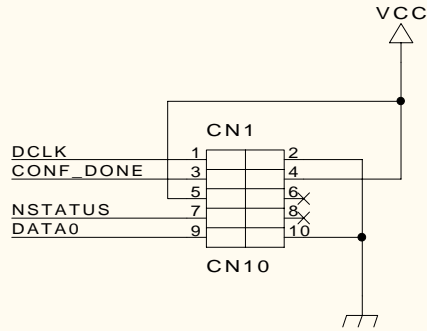
DCLK	1	DCLK	GND	2	GND
CONF_DONE	3	CONF_DONE	VCC	4	VCC
NCONFIG	5	NCONFIG	NC	6	X
NSTATUS	7	NSTATUS	NC	8	X
DATA0	9	DATA0	GND	10	GND
BB_PS					



CN2

VCC	1	1
SW3	2	2
SW2	3	3
SW1	4	4
SW0	5	5
LED7	6	6
LED6	7	7
LED5	8	8
LED4	9	9
LED3	10	10
LED2	11	11
LED1	12	12
LED0	13	13
GND	14	14

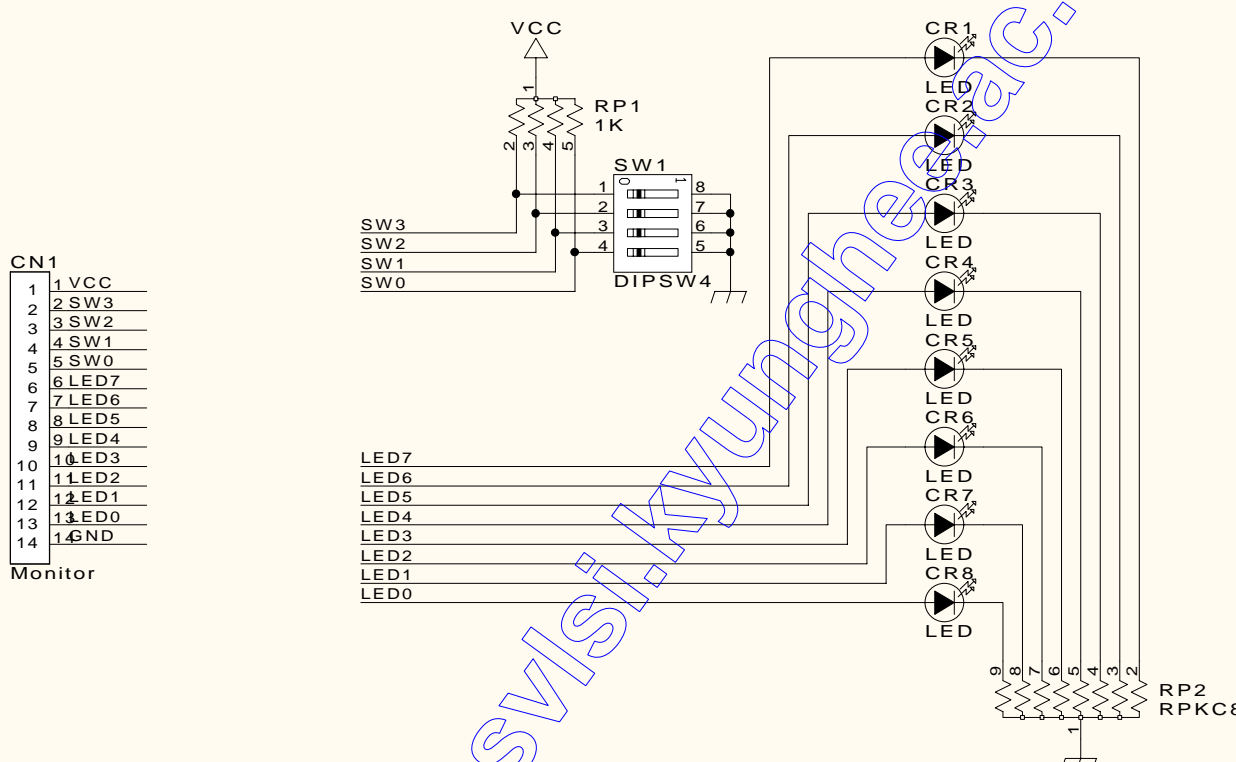
Monitor



<http://cs.vlsi.kyunghee.ac.kr>

Title		(c)1999, GoodKook	
Micro Mouse (Serial ROM)		goodkook@csvlsi.kyunghee.ac.kr	
Size		http://vlsi2.kyunghee.ac.kr	
A4	No. docno.	Rev. .rev.	Kyunghee Univ. ELECTRONICS
File d:\home\micromouse4\circuits\pgm_rom.s		Date 99/02/11	Time 14:27
		1 of 1	





CN1

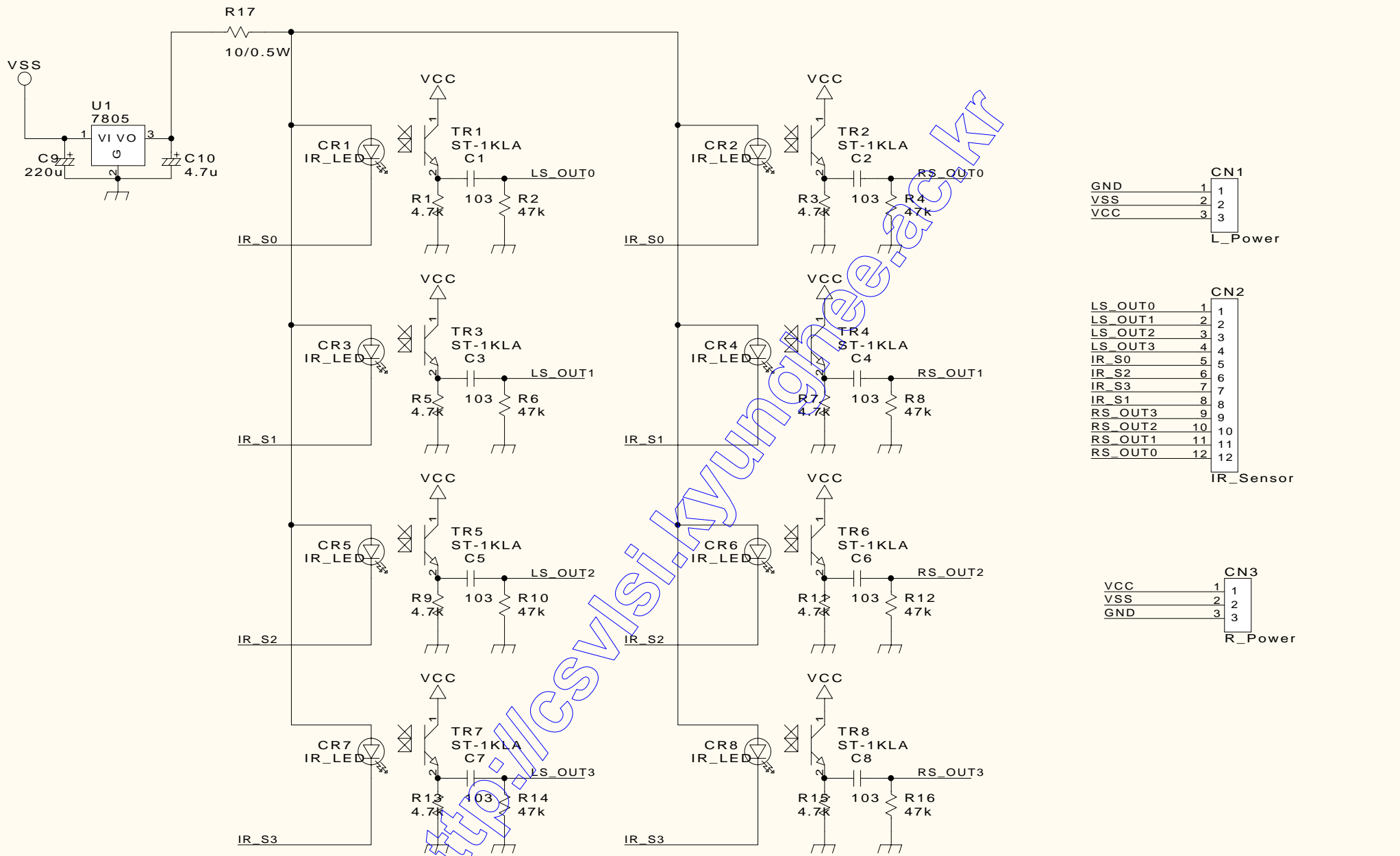
1	VCC
2	SW3
3	SW2
4	SW1
5	SW0
6	LED7
7	LED6
8	LED5
9	LED4
10	LED3
11	LED2
12	LED1
13	LED0
14	GND

Monitor

<http://csvlsi.kyunghee.ac.kr>

Title		(c)1999, GoodKook	
Micro Mouse (Debug Monitor)		goodkook@csvlsi.kyunghee.ac.kr	
Size		http://vlsi2.kyunghee.ac.kr	
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File d:\home\micromouse4\circuits\acc_led.sch		Data 99/02/11	Time 14:26
		1 of 1	CSA & VLSI Lab





CN1

GND	1
VSS	2
VCC	3

L\_Power

CN2

LS_OUT0	1	1
LS_OUT1	2	2
LS_OUT2	3	3
LS_OUT3	4	4
IR_S0	5	5
IR_S2	6	6
IR_S3	7	7
IR_S1	8	8
RS_OUT3	9	9
RS_OUT2	10	10
RS_OUT1	11	11
RS_OUT0	12	12

IR\_Sensor

CN3

VCC	1	1
VSS	2	2
GND	3	3

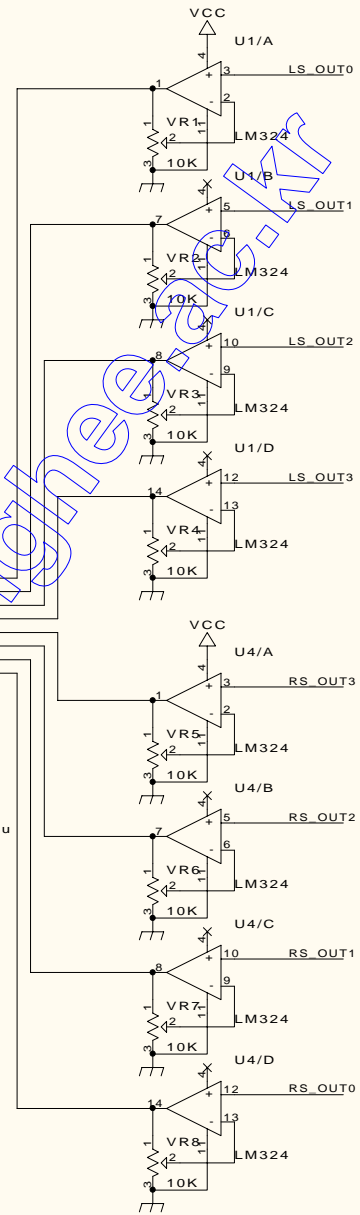
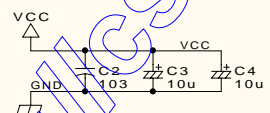
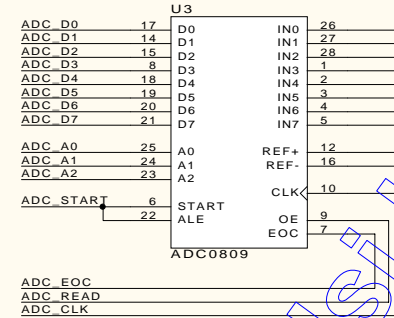
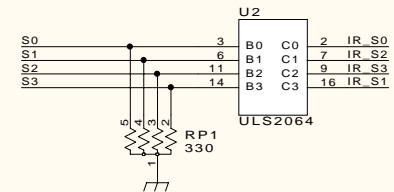
R\_Power

Title			(c)1999, GoodKook		
Micro Mouse (Sensor Array)			goodkook@csvlsi.kyunghee.ac.kr		
Size			http://vlsi2.kyunghee.ac.kr		
A4			Kyunghee Univ. ELECTRONICS		
No.			CSA & VLSI Design Lab.		
docno.			Computer System Architecture		
File			VLSI Design Lab.		
d:\home\micromouse4\circuits\ls_array.sch			KNU&S Electronics		
Data			99/02/11		
Time			14:29		
1 of 1					

CN1

1	GND
2	VSS
3	VCC
4	S3
5	S2
6	S1
7	S0
8	ADC D0
9	ADC D1
10	ADC D2
11	ADC D3
12	ADC D4
13	ADC D5
14	ADC D6
15	ADC D7
16	ADC A2
17	ADC A1
18	ADC A0
19	ADC CLK
20	ADC READ
21	ADC EOC
22	ADC START
23	VCC
24	VSS
25	GND

ADC



CN2

1	GND
2	VSS
3	VCC

L\_Power

CN3

1	LS_OUT0
2	LS_OUT1
3	LS_OUT2
4	LS_OUT3
5	IR_S0
6	IR_S2
7	IR_S3
8	IR_S1
9	RS_OUT3
10	RS_OUT2
11	RS_OUT1
12	RS_OUT0

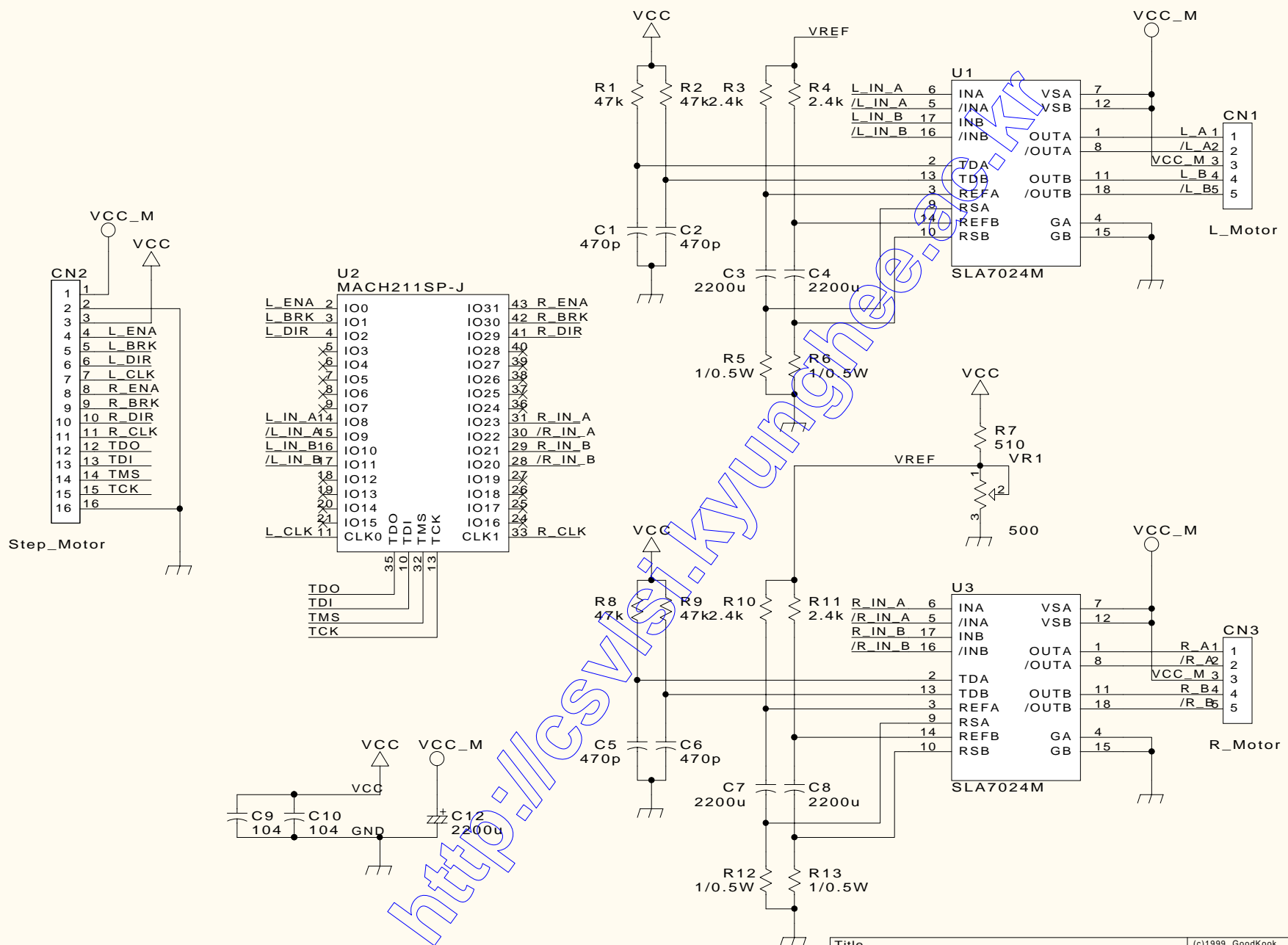
IR\_Sensor

CN4

1	VCC
2	VSS
3	GND

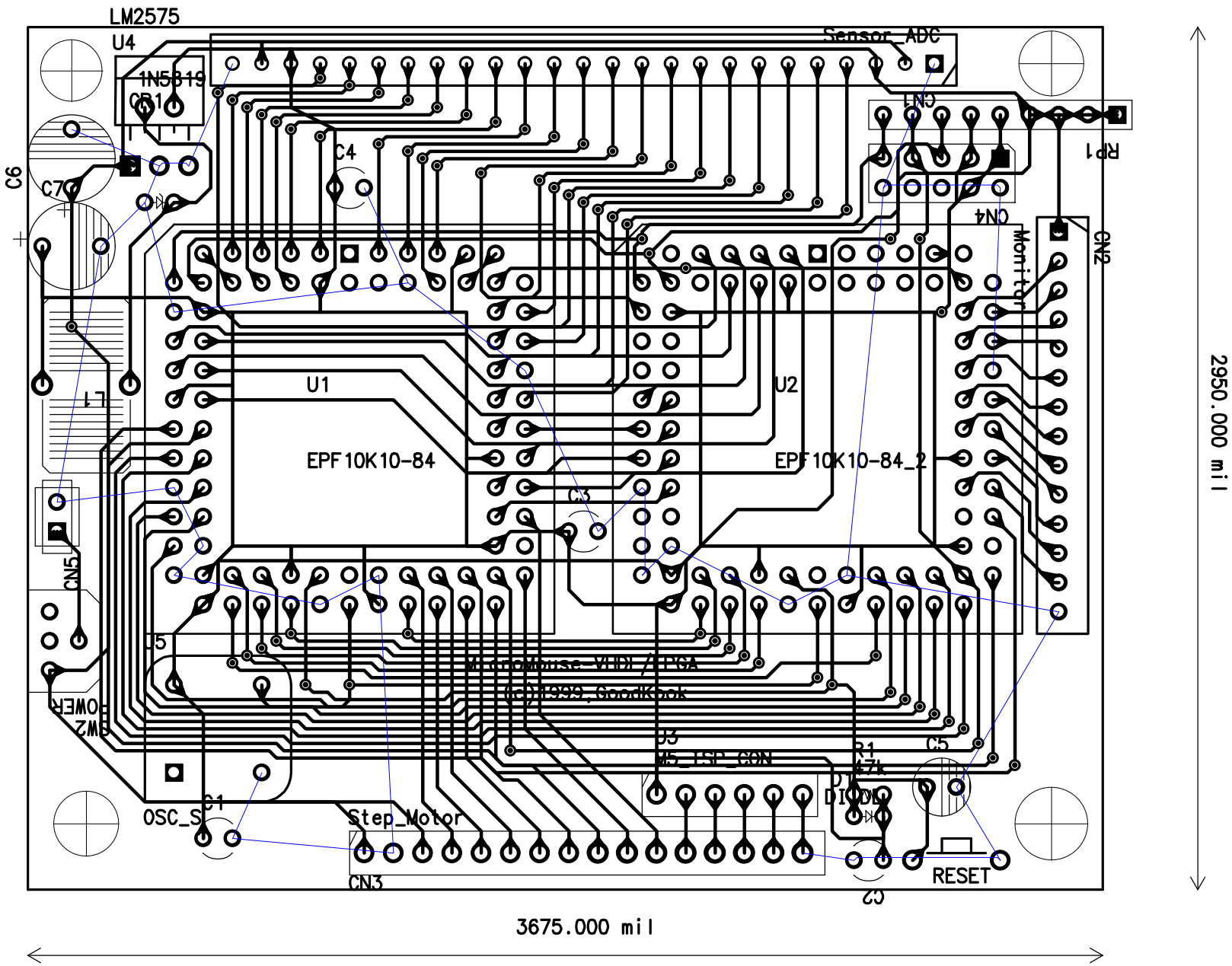
R\_Power

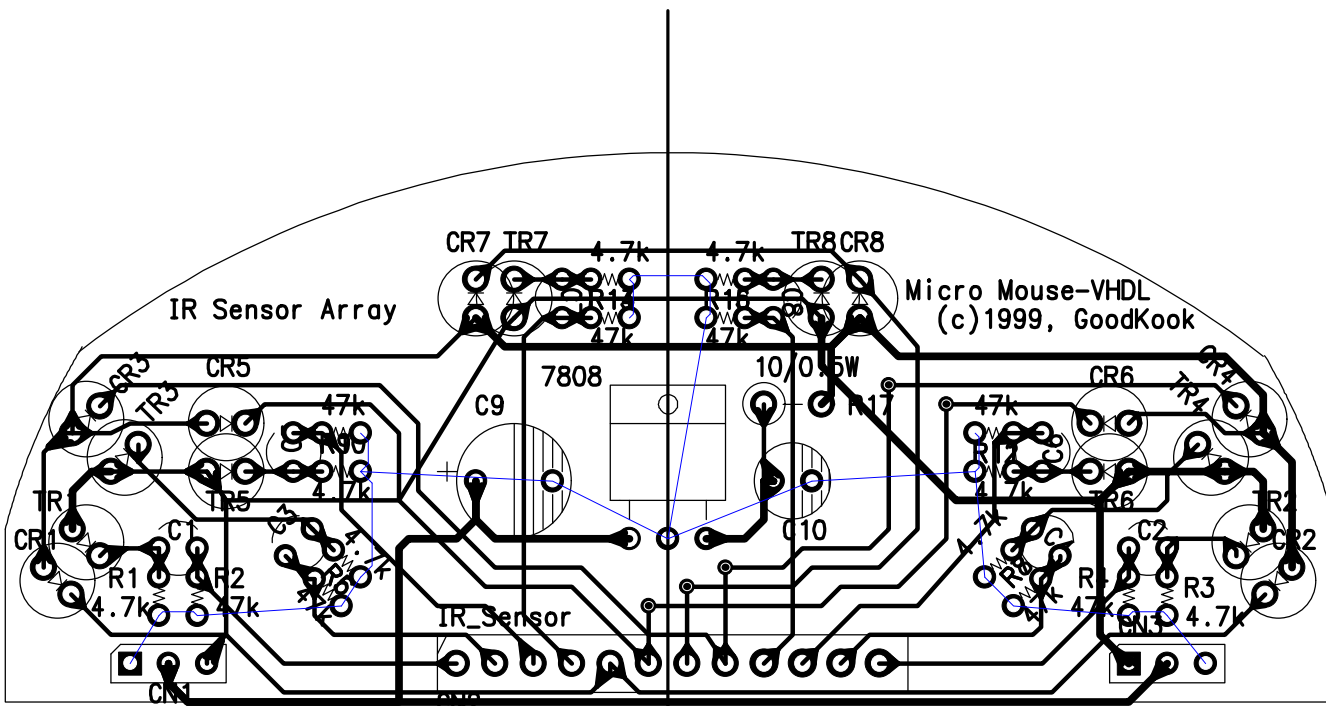
<http://cs.vlsi.kyunghee.ac.kr>



Title		(c)1999, GoodKook	
Micro Mouse (Motor Driver)		goodkook@cvsvisi.kyunghee.ac.kr	
Size		http://visi2.kyunghee.ac.kr	
A4	No. docno.	Rev. .rev.	Kyunghee Univ. ELECTRONICS
File d:\home\micromouse4\circuits\sm_driver		Date 99/02/11	Time 14:29
			1 of 1







3450 000 mil

2900 000 mil



