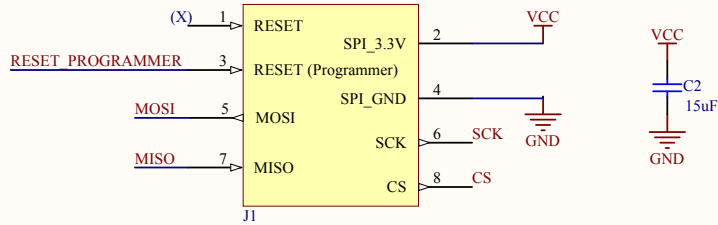
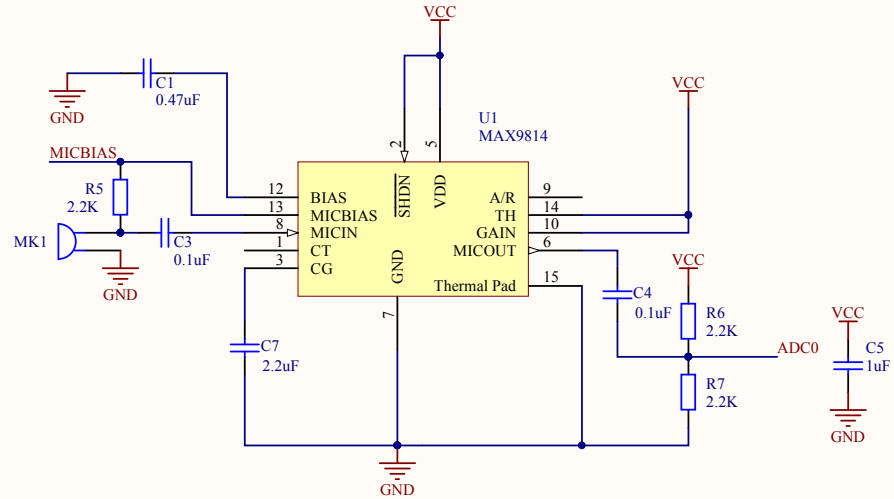


## ISP Programming/SPI Connector



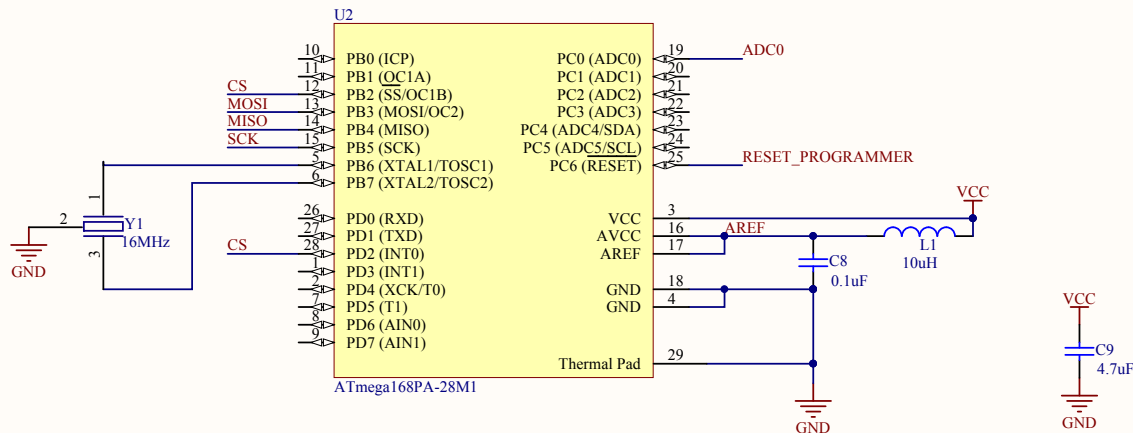
Use Pin 3 for programmer's reset connection, because the PR2's Pin 1 (RESET) send constant high, which will reset the ATmega168PA microcontroller infinitely.

## Microphone Preamplifier



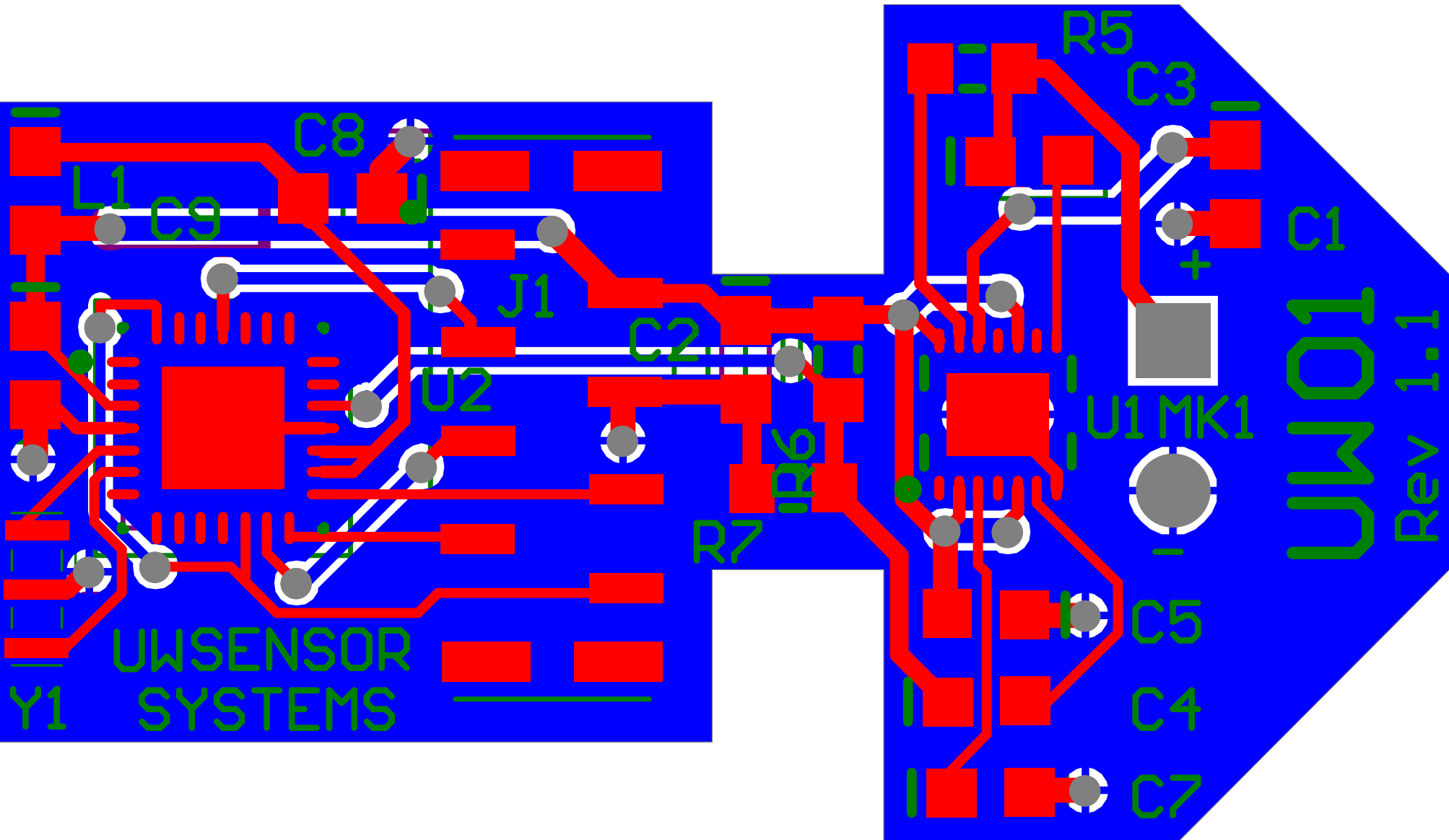
Connect GAIN to Vcc: 40dB Total Gain  
AGC is disabled by setting TH to Vcc (or MICBIAS)

## Microcontroller



ATmega168pa fuse setting: Ifuse:E6 hfuse:DF  
CKDIV8=1, CKSEL=0110, SUT=10  
Clock source: 16MHz Full Swing External Crystal

Title UW PR2 Seashell Pretouch Finger Sensor		
Size Letter	Number UW Sensor Systems Lab - jianglt@uw.edu	Revision 1.1
Date: 4/3/2014	Sheet 1 of 1	
File: C:\Users\seashell.SchDoc	Drawn By: Liang-Ting Jiang	



Comment	Description	Designator	Footprint	LibRef	Quantity
0.47uF	0603 SMD Capacitor	C1	CAPC1608N	Cap	1
15uF	0603 SMD Capacitor	C2	CAPC1608N	Cap	1
0.1uF	0603 SMD Capacitor	C3, C4, C8	CAPC1608N	Cap	3
1uF	0603 SMD Capacitor	C5	CAPC1608N	Cap	1
2.2uF	0603 SMD Capacitor	C7	CAPC1608N	Cap	1
4.7uF	0603 SMD Capacitor	C9	CAPC1608N	Cap	1
FFC 8-PIN Connector (1mm)	FFC 8-PIN Connector (1mm) (SMT)	J1	Hirose FFC connector 8-Pin	FFC Connector-8Pin-SMT-1mm	1
10uH	0603 SMD Inductor	L1	INDC1608N	Inductor	1
Panasonic WM-61A	Electret Microphone	MK1	PIN2	Mic1	1
2.2K	0603 SMD Resistor	R5, R6, R7	RESC1608N	Res2	3
MAX9814	Microphone Amplifier with AGC and Low-Noise Microphone Bias	U1	QFN-14-Minnimum-Solder-Mask-Relief	MAX9814	1
ATmega168PA-28M1	8-Bit AVR Microcontroller with 8K Bytes of In-System Programmable Flash Memory	U2	28M1	ATmega168-28M1	1
AVX PRQC16.00SR5010X	16MHz Ceramic Chip Res	Y1	AVX-PRQC Ceramic Reso	Ceramic Resonator SMT	1