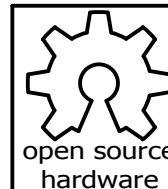
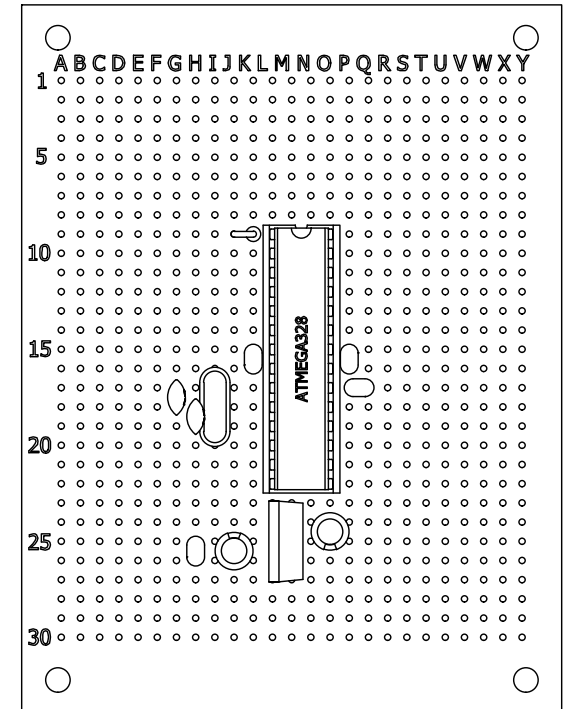
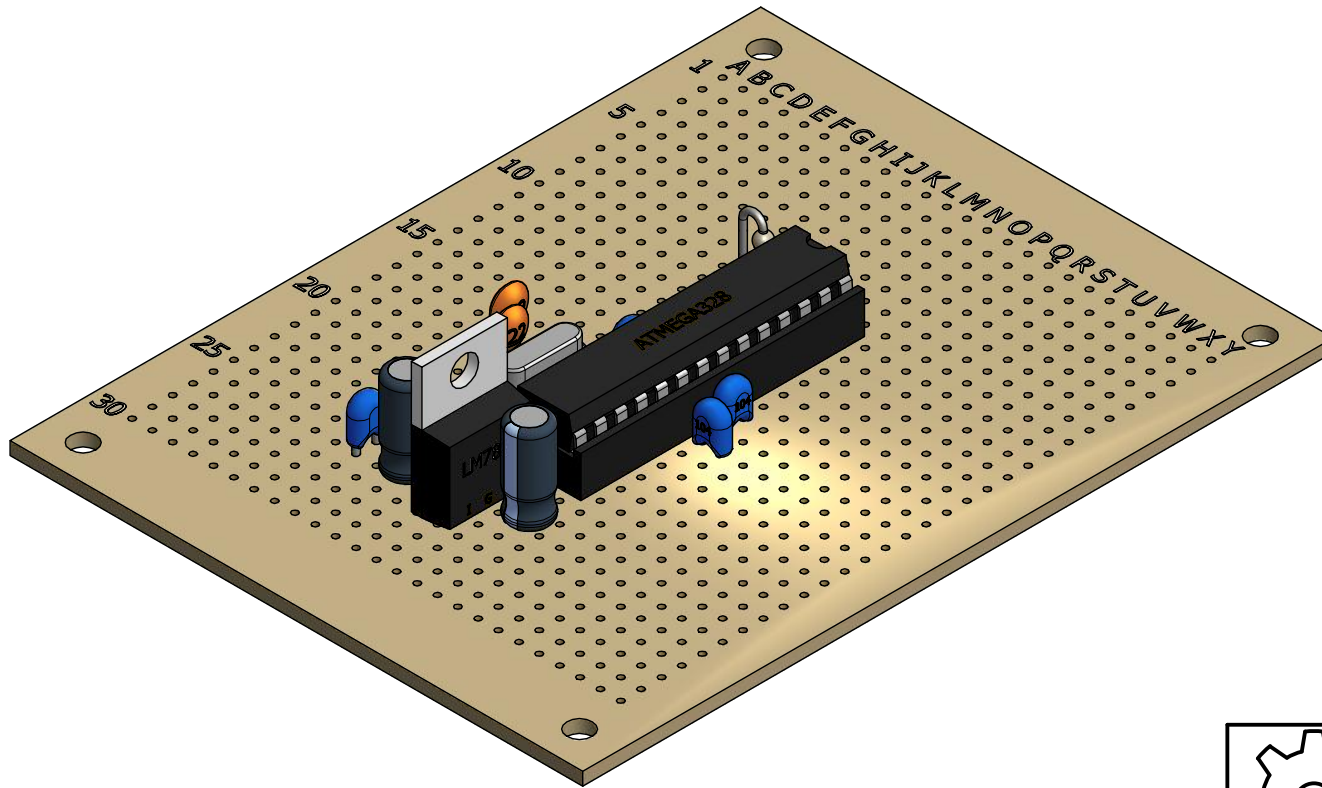
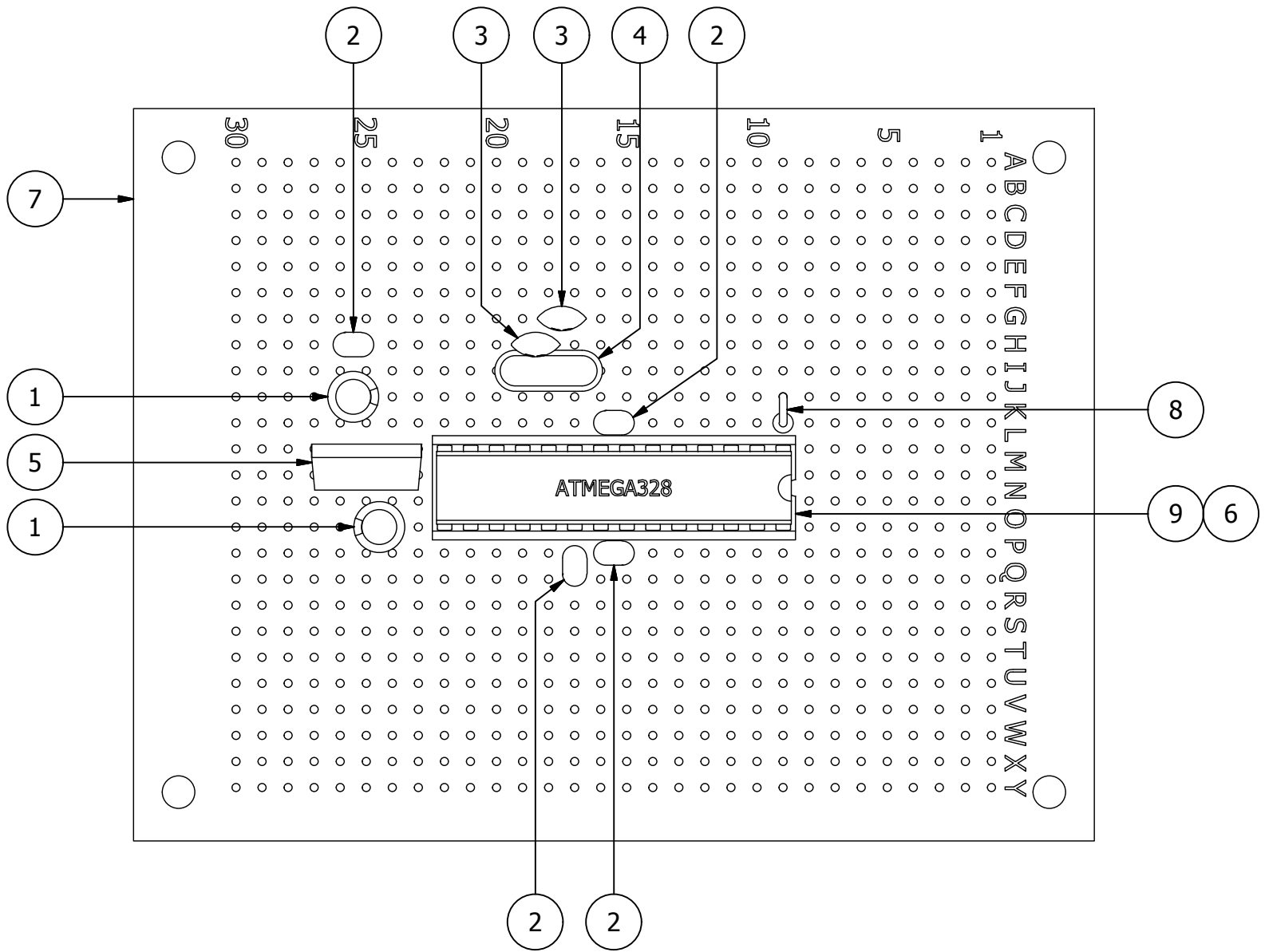


## PARTS LIST

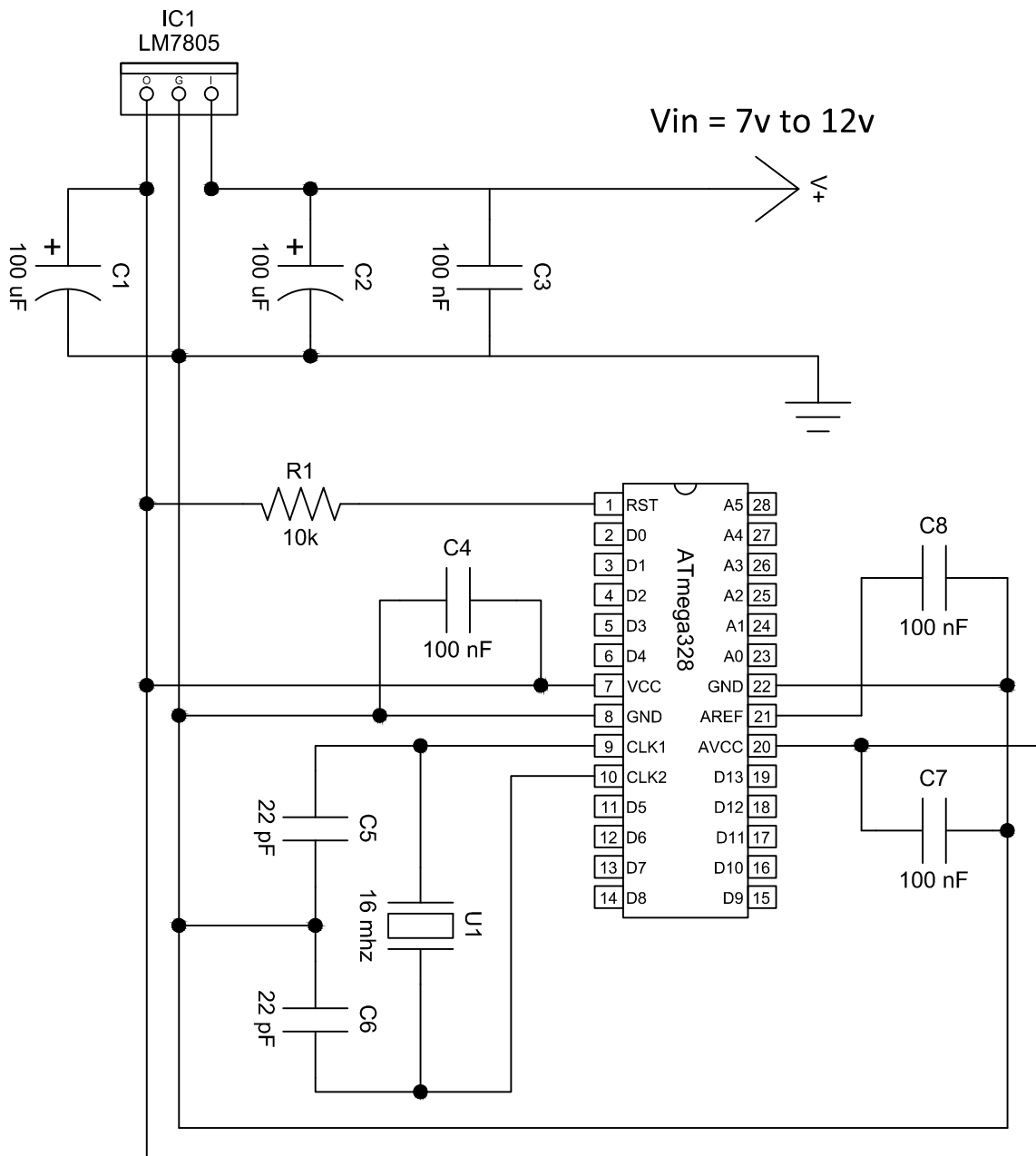
ITEM	QTY	VENDOR	VENDOR NUMBER	DESCRIPTION
1	2	Digi-Key	P14391-ND	CAP ALUM 100UF 16V 20% RADIAL
2	4	Digi-Key	478-5741-ND	CAP CER 0.1UF 50V 20% RADIAL
3	2	Digi-Key	29PH-ND	CAP CER 22PF 100V 5% RADIAL
4	1	Digi-Key	XC1759-ND	CRYSTAL 16.00000 MHZ 20PF
5	1	Digi-Key	LM7805CT-ND	IC REG 1A POS 5V TO-220 (LM7805)
6	1	Digi-Key	ATMEGA328P-AN-ND	MCU AVR 32K FLASH 20MHZ 32TQFP (ATMEGA328)
7	1	RadioShack	276-158	PC Board 2.750 x 3.687 750 Holes
8	1	Digi-Key	10KQBK-ND	RES 10K OHM 1/4W 5% CARBON FILM
9	1	Digi-Key	3M5480-ND	SOCKET IC OPEN FRAME 28POS .3"



Description:			
ARDUINO BASIC, 5V Circuit			
DWG No.:	1001	Rev:	00
Drawn by:	D Smith	Sheet: 1 of 3	Date: 8/18/2012



Description:			
ARDUINO BASIC, 5V Circuit			
DWG No.:	1001	Rev:	00
Drawn by:	D Smith	Sheet: of:	2 3
Date:	8/18/2012		



**Arduino Basic**

Bare minimum circuitry needed to power the Atmel chip and run programs. The chip will need to be programmed on a separate board and transplanted to this assembly.

R1 - (10k pull-up resistor) +5V to Pin 1 (RESET). Prevents the chip from resetting itself during normal operation. The RESET pin reboots the chip when pulled down to ground.

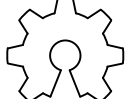
U1 - 16 MHz external clock. (A 20 MHz crystal will also work)

C4, C7, C8 - Low-pass filters. Reduces noise (ripple) from the power source.

Pin 7 - (Vcc) Digital Supply Voltage

Pin 20 - (AVcc) Supply voltage for A/D Converter

Pin 21 - (AREF) Analog reference pin for ADC

 open source hardware	Description:		Rev: 00
	ELECTRICAL SCHEMATIC ARDUINO BASIC, 5v Circuit		
	DWG No.:	1001	
	Draw by:	D Smith	Sheet: 3 of 3 Date: 8/17/2012