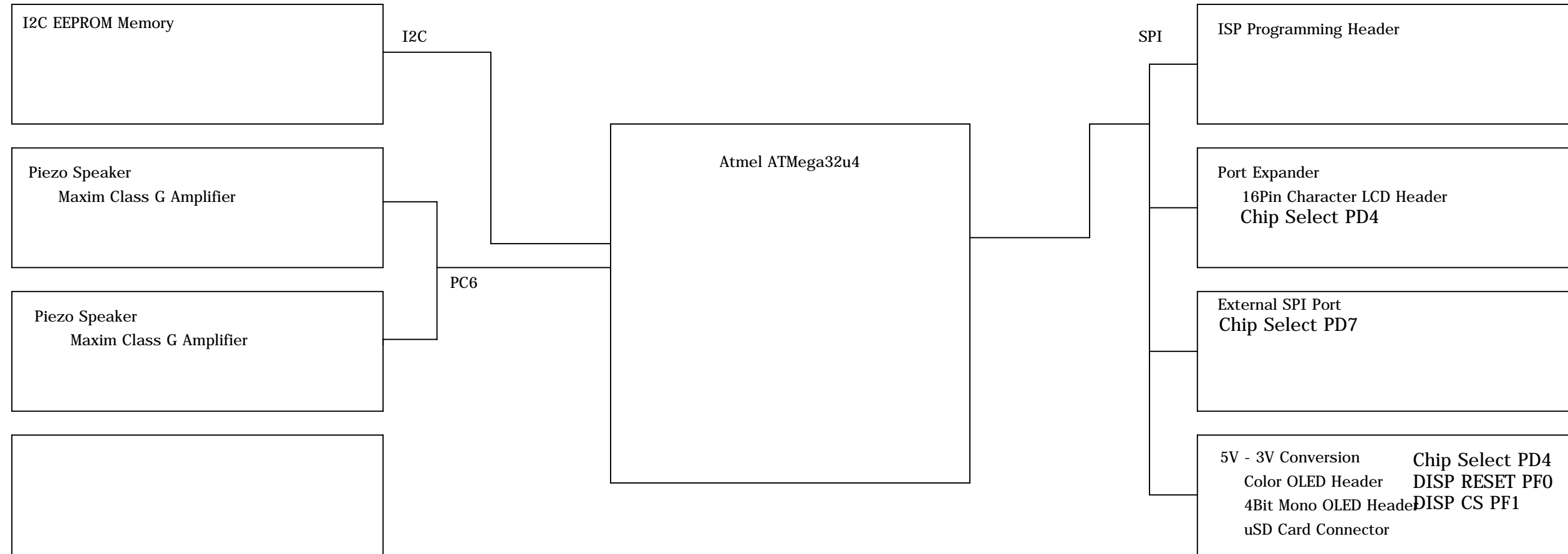
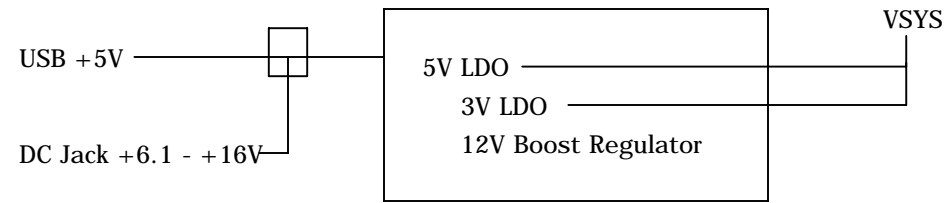
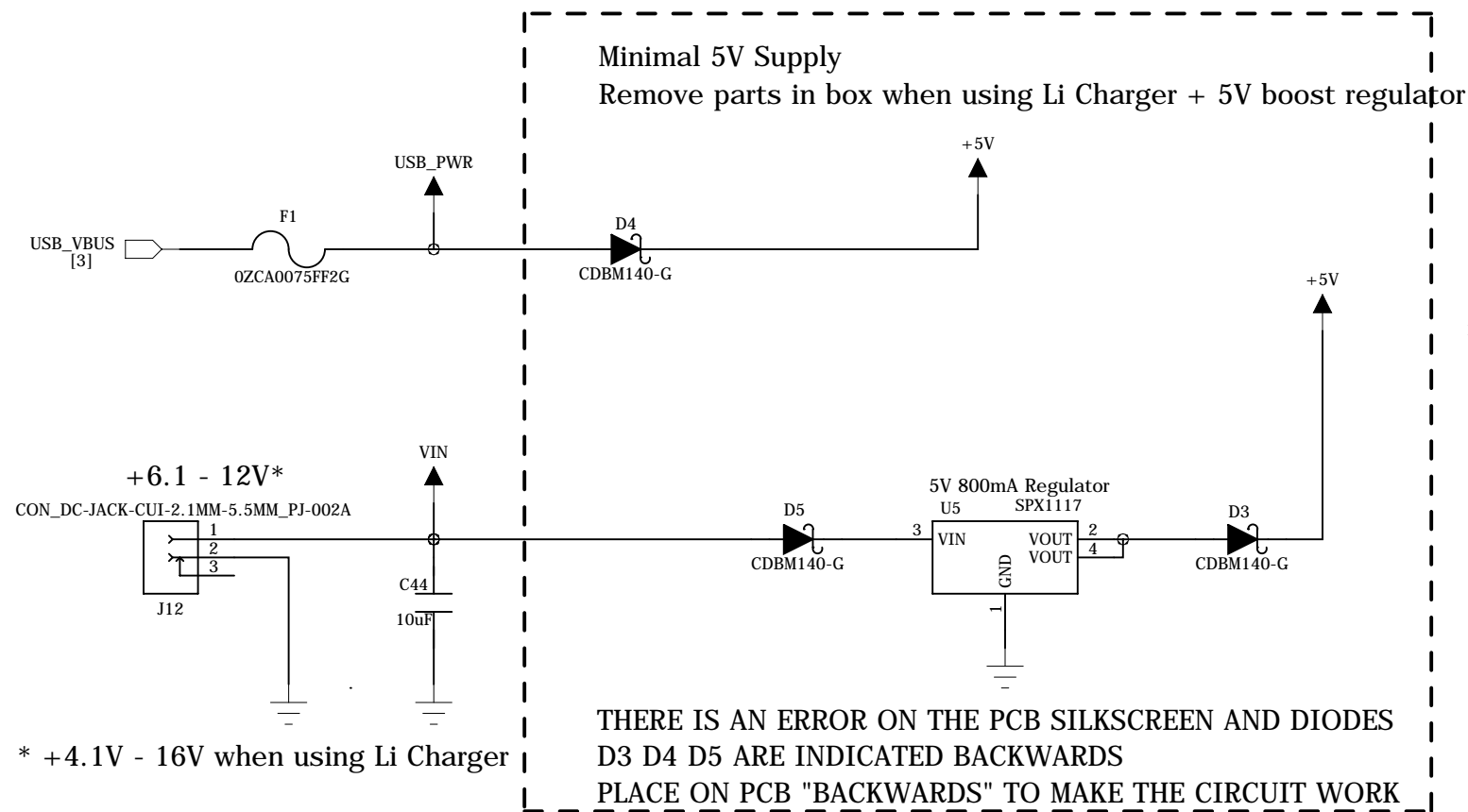


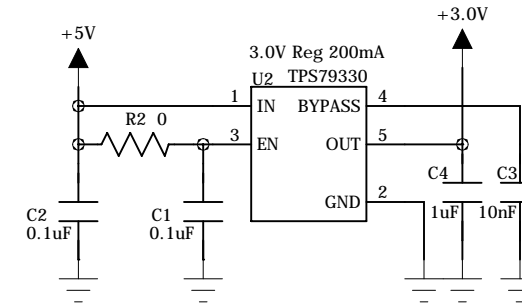
VSYS is set by R5 or R6 to switch VSYS from 5V or 3V Operation.



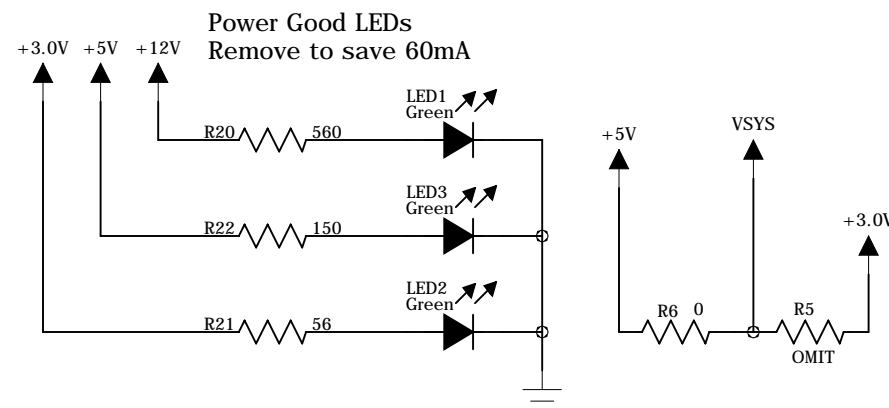
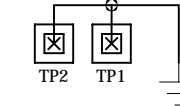
COMPANY:				Fenchurch Org			
TITLE:				Atmel 32U4 Example			
DRAWN: Richard Greenway	DATED: 2/19/2012	CODE:	SIZE: B	DRAWING NO:		REV:	
CHECKED:	DATED:	SCALE: 2:1		SHEET: 1 OF 7			
QUALITY CONTROL:	DATED:						
RELEASED:	DATED:						



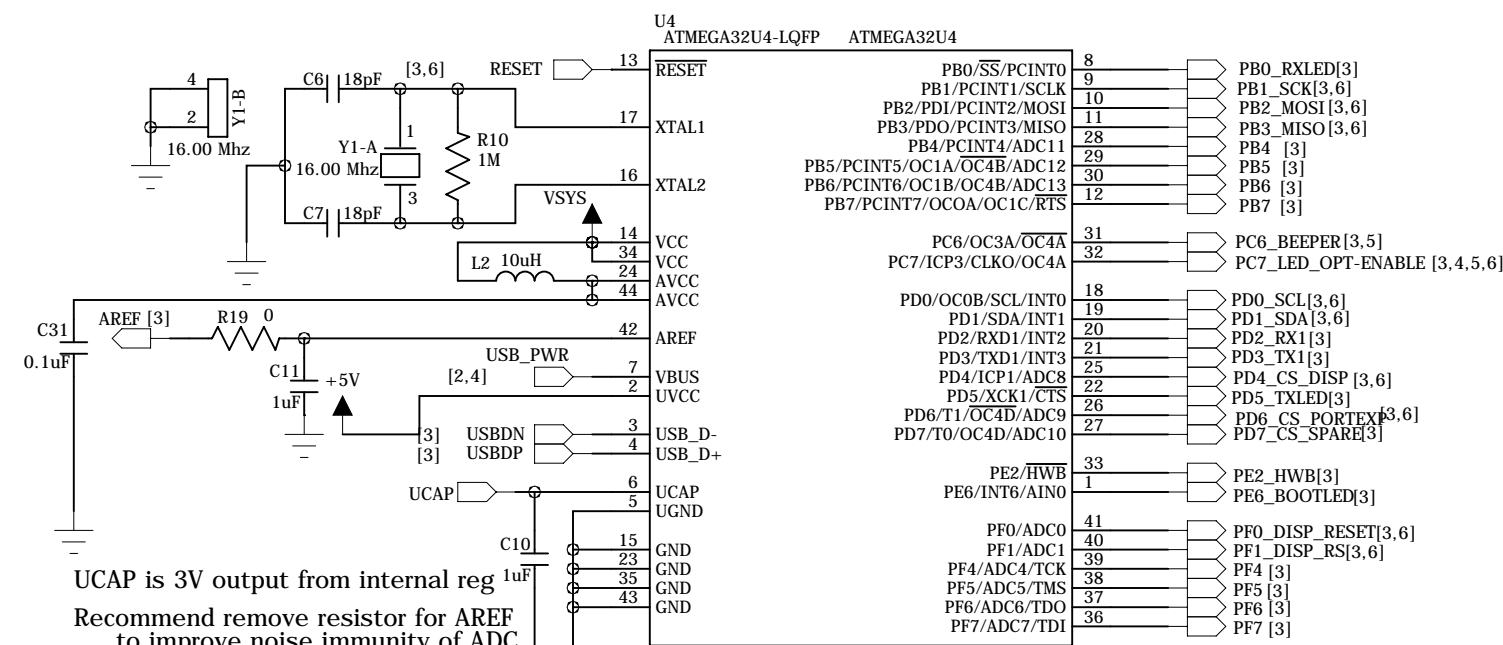
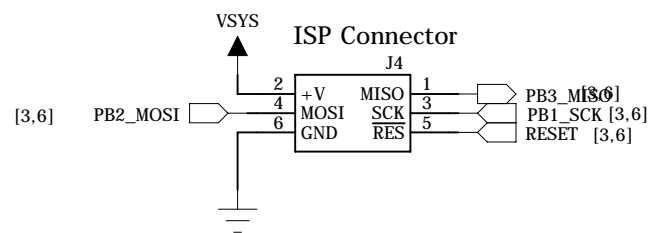
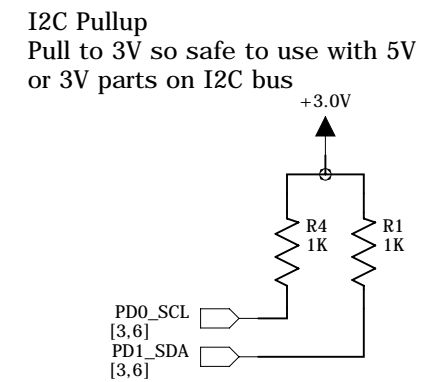
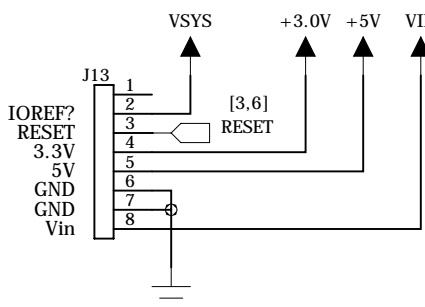
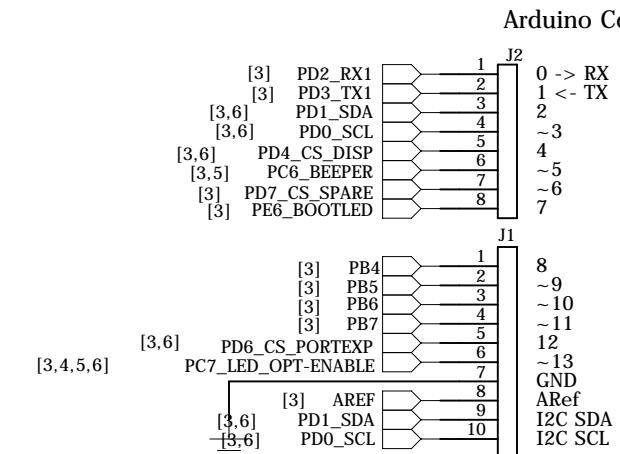
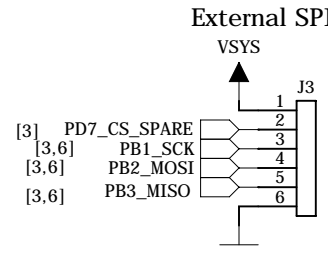
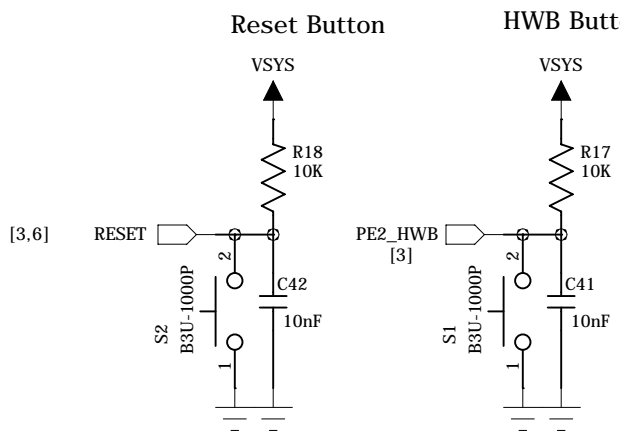
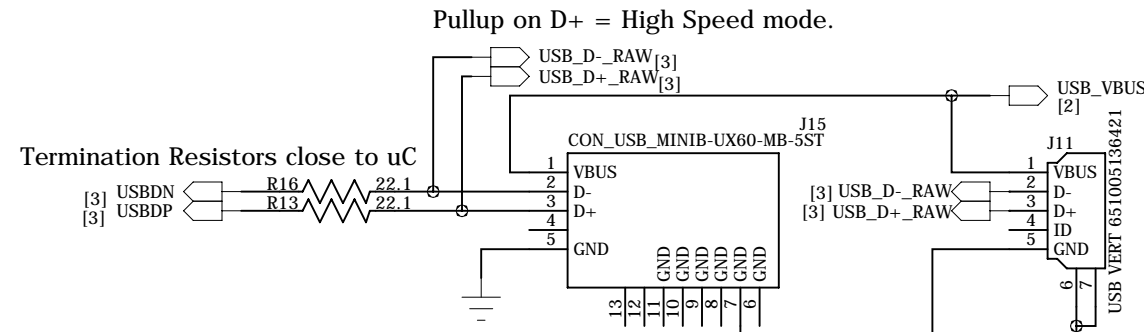
R2 forces 3V regulators on. can mod to pull down to force off or lift and tie to an IO to have the uC control 3V Supply



GND TEST POINTS



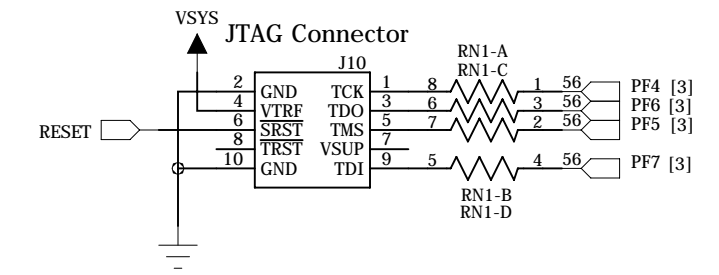
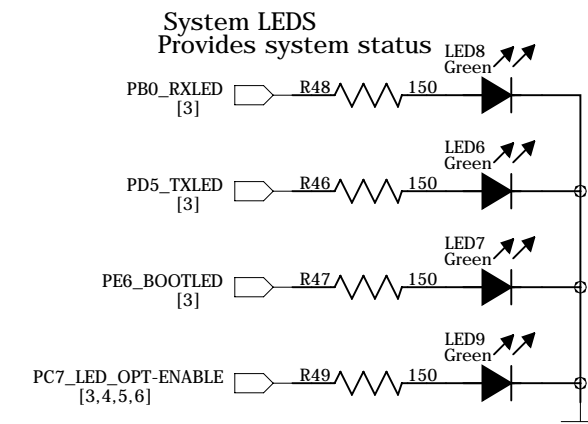
COMPANY:				Fenchurch Org	
TITLE:				Atmel 32U4 Example	
CHECKED:	DATED:	CODE:	SIZE:	DRAWING NO:	REV:
Richard Greenway	2/19/2012		B	Power Supplies	1.5
QUALITY CONTROL:	DATED:	SCALE: 2:1			SHEET: 2 OF 7
RELEASED:	DATED:				



UCAP is 3V output from internal reg
Recommend remove resistor for AREF to improve noise immunity of ADC

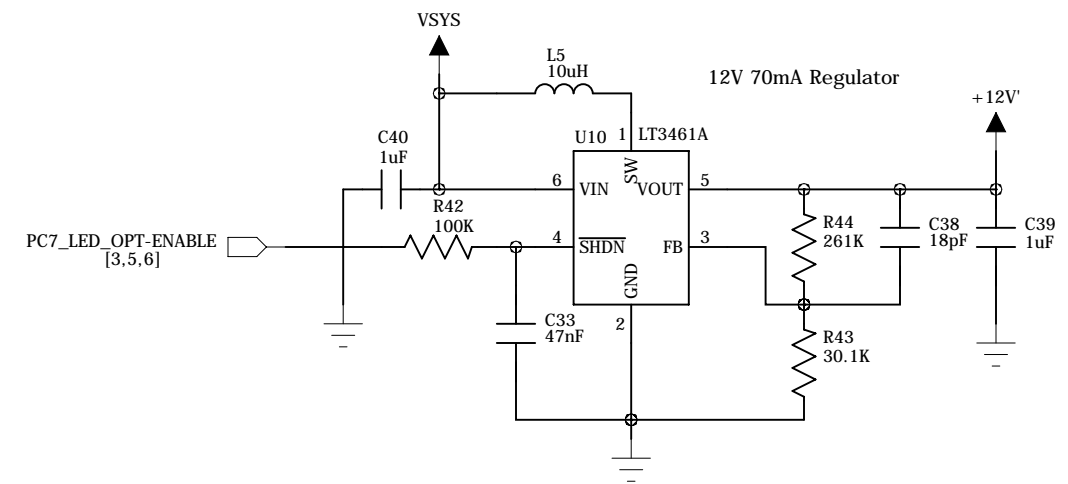
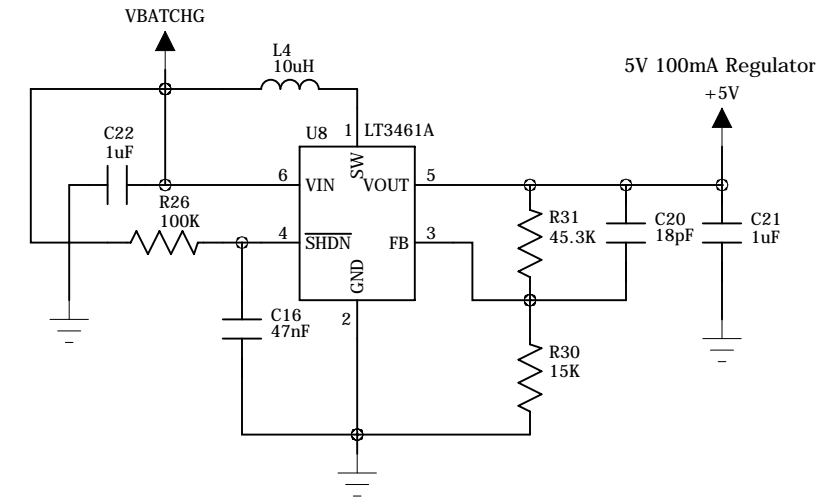
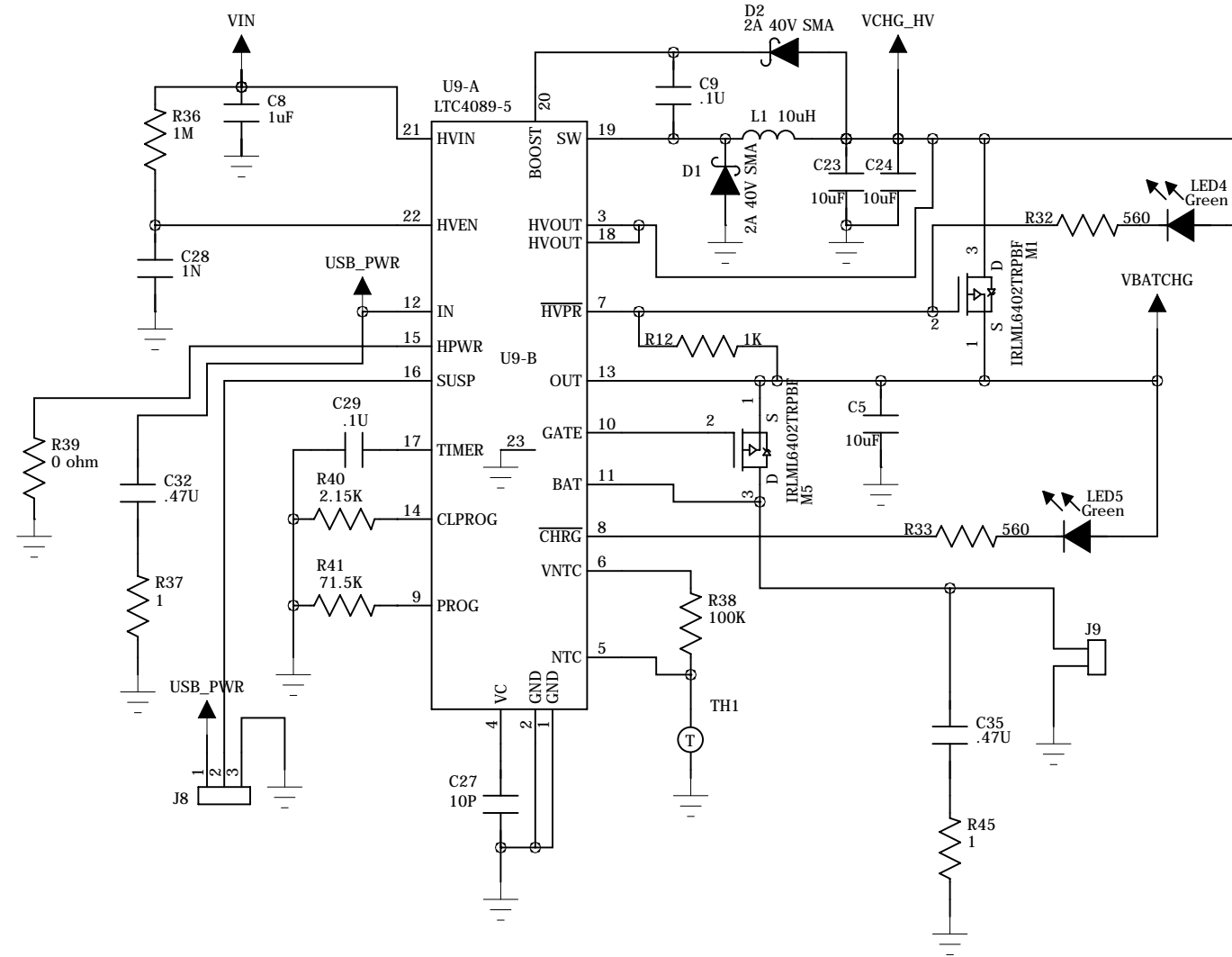
UVCC is source for the 3V LDO at UCAP
Needs to be > 3.7V input

PF4:7 used for JTAG
If JTAG used, PINS Unavailable for other uses



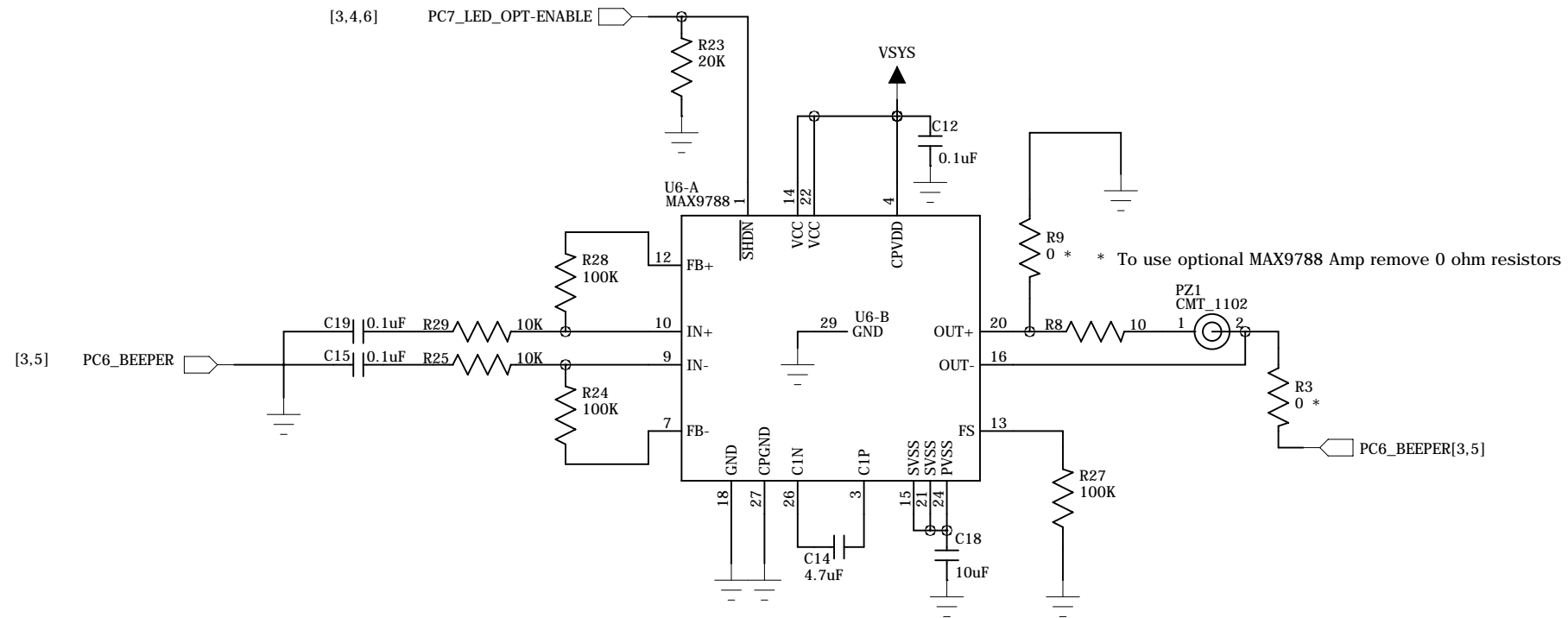
COMPANY:				Fenchurch Org	
TITLE:				Atmel 32U4 Example	
DRAWN: Richard Greenway	DATED: 2/19/2012	CODE:	SIZE:	DRAWING NO:	REV:
CHECKED:	DATED:	B		Processor	1.5
QUALITY CONTROL:	DATED:	SCALE: 2:1		SHEET: 3 OF 7	
RELEASED:	DATED:				

adds lipoly charger and 5v boost regulator



COMPANY:				Fenchurch Org	
TITLE:				Atmel 32U4 Example	
DRAWN:	DATED:	CODE:	SIZE:	DRAWING NO:	REV:
Richard Greenway	2/19/2012	<Code>	B	Optional Supplies	1.5
CHECKED:	DATED:	SCALE: 2:1			SHEET: 4 OF 7
QUALITY CONTROL:	DATED:				
RELEASED:	DATED:				

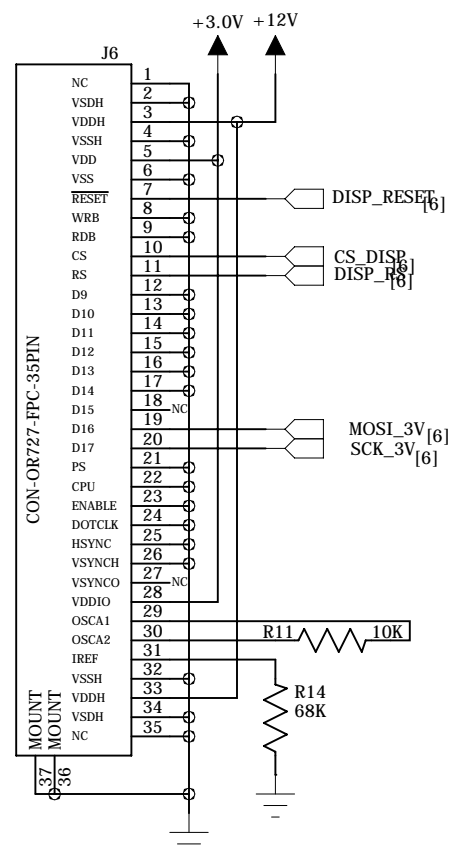
Beeper



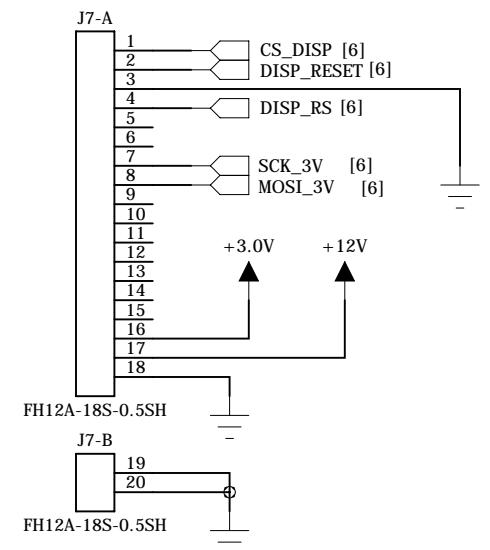
COMPANY:				Fenchurch Org			
TITLE:				Atmel 32U4 Example			
DRAWN:		DATED:		CODE:		DRAWING NO:	
Richard Greenway		2/19/2012					
CHECKED:		DATED:		SIZE:		REV:	
				B		1.5	
QUALITY CONTROL:		DATED:		Piezo Speaker			
RELEASED:		DATED:		SCALE: 2:1			
				SHEET: 5 OF 7			

Color 160x128 OLED
Available from OSD Displays

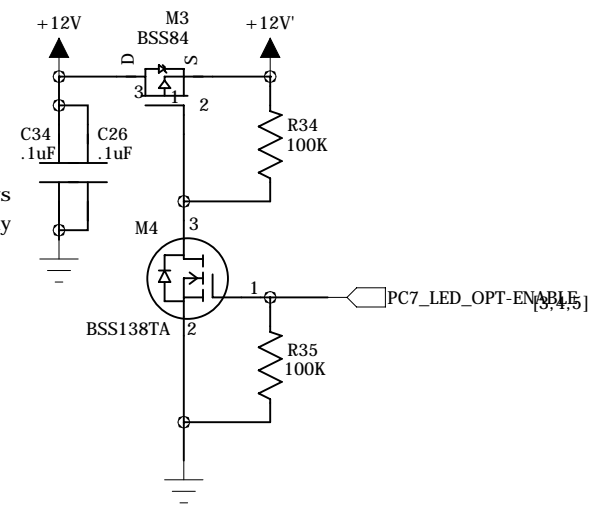
NOTE: This wiring order is for attaching the display to the connector when the connector is below the display or on the back of the board with the display cable wrapped around the board. Pins on Top
DISP_RS Also referred too and used as Command/Data switch in datasheets



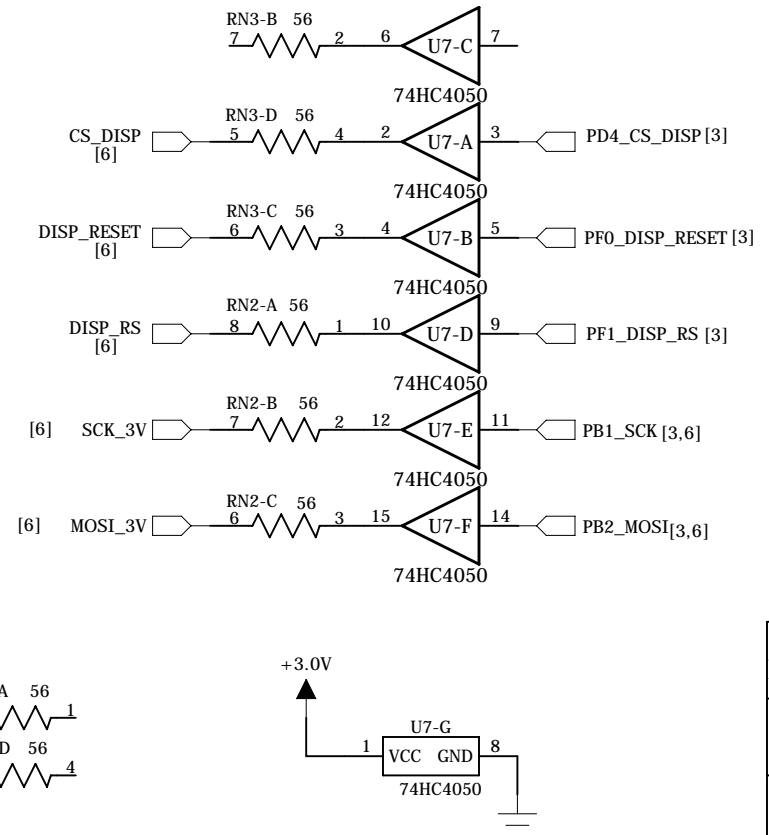
4bit Mono 128x64 OLED
Available from Truly Electronics
OSRAM OS128064PK16M



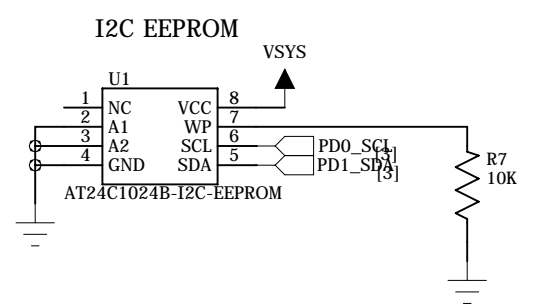
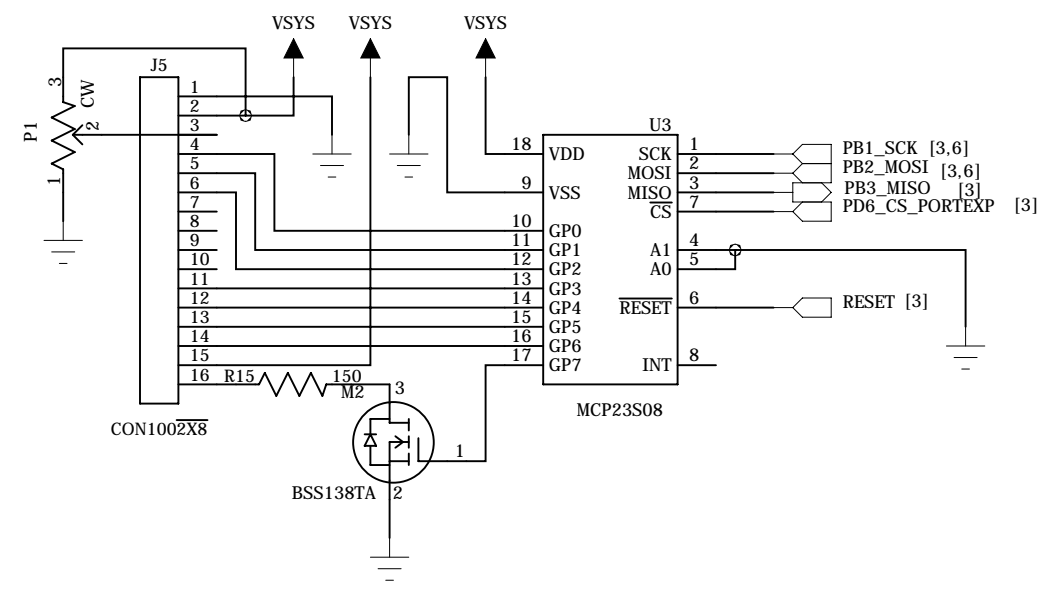
Switch the +12V to the Displays
don't let VSYS through the inductor to 12V supply



5V to 3V Level converter to interface to OLED Displays and SD Card slot



Hitachi HD44780 Display Header
Because of limited IO available, display is put onto the SPI port through a port expander IC
Can also just be used as 8 additional digital IO lines



COMPANY:		Fenchurch Org		
TITLE:		Atmel 32U4 Example		
DRAWN: Richard Greenway	DATED: 2/19/2012	CODE:	SIZE: B	DRAWING NO:
CHECKED:	DATED:	Display Options		REV: 1.5
QUALITY CONTROL:	DATED:	Display Options		REV: 1.5
RELEASED:	DATED:	Display Options		REV: 1.5
SCALE: 2:1		SHEET: 6 OF 7		

DRAWN: Richard Greenway	DATED: 2/19/2012
CHECKED:	DATED:
QUALITY CONTROL:	DATED:
RELEASED:	DATED:

COMPANY: Fenchurch Org			
TITLE: Atmel 32U4 Example			
CODE:	SIZE: B	DRAWING NO: Notes	REV: 1.5
SCALE: 2:1		SHEET: 7 OF 7	