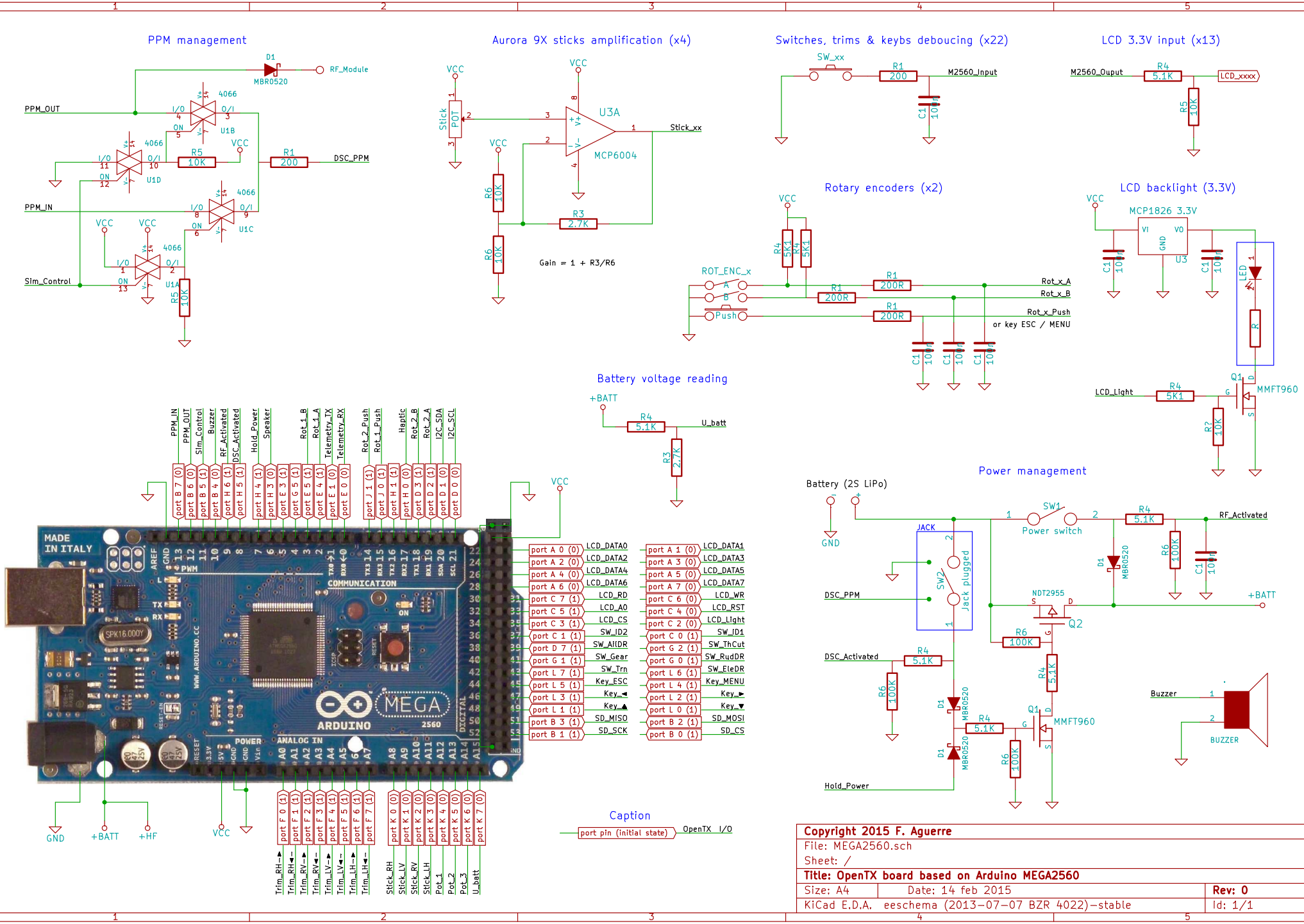

PPM management
Aurora 9X sticks amplification (x4)
Switches, trims & keybs debouncing (x22)
LCD 3.3V input (x13)
Rotary encoders (x2)
LCD backlight (3.3V)
Battery voltage reading
Power management
Battery (2S LiPo)
Caption
port pin (initial state)
OpenTX I/O
Gain = 1 + R3/R6
Rot_x_Push
or key ESC / MENU
Power switch
Jack plugged
Copyright 2015 F. Aguerre
File: MEGA2560.sch
Sheet: /
Title: OpenTX board based on Arduino MEGA2560
Size: A4
Date: 14 feb 2015
Rev: 0
KiCad E.D.A. eeschema (2013-07-07 BZR 4022)-stable
Id: 1/1

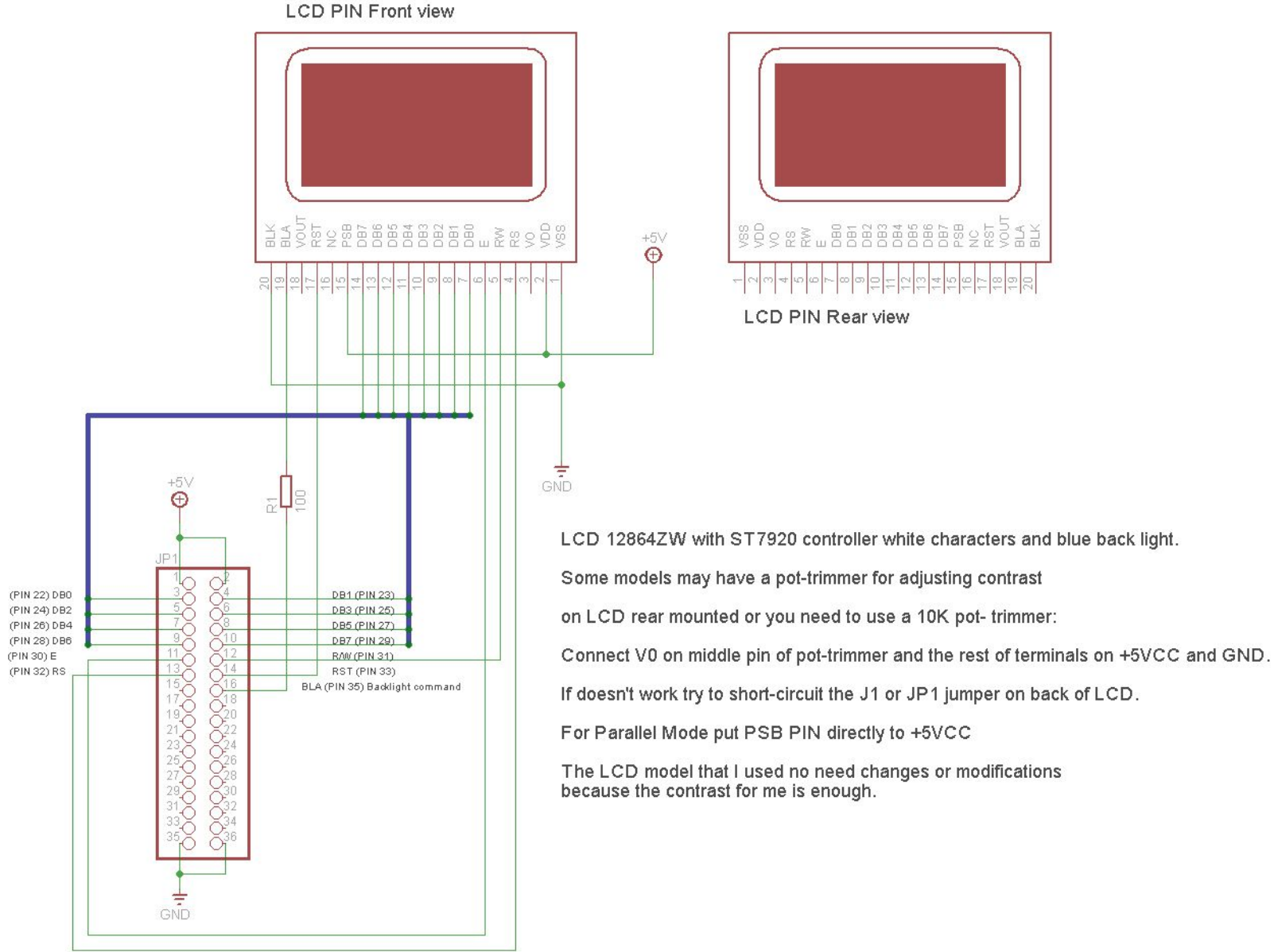
Arduino Pin	Connection	Comments
AREF	NC	
GND	NC	
PWM13	NC	
PWM12	PPM Out	SR = 330
PWM11	NC	
PWM10	Buzzer	SR = 330
PWM9	NC	
PWM8	Tie Lo	SR to GND = 3.3K
PWM7	NC	
PWM6	NC	
PWM5	NC	
PWM4	NC	
PWM3	Rot1A	SW + SR = 3.3K
PWM2	Rot1B	SW + SR = 3.3K
TX0	NC	
RX0	NC	
TX3	NC	
RX3	Rot1Push	SW + SR = 3.3K
TX2	NC	
RX2	NC	
TX1	NC	
RX1	NC	
SDA	NC	
SCL	NC	

Arduino Pin	Connection	Comments
22	LCD_DATA1	DC
23	LCD_DATA0	DC
24	LCD_DATA3	DC
25	LCD_DATA2	DC
26	LCD_DATA5	DC
27	LCD_DATA4	DC
28	LCD_DATA7	DC
29	LCD_DATA6	DC
30	LCD_E	DC
31	LCD_WR	DC
32	LCD_RS	DC
33	LCD_RST	DC
34	LCD_CS	DC
35	LCD_Light	SR = 220
36	SW_ID1	SW + SR = 3.3K
37	SW_ID2	SW + SR = 3.3K
38	SW_THCut	SW + SR = 3.3K
39	SW_AILDR	SW + SR = 3.3K
40	SW_RudDR	SW + SR = 3.3K
41	SW_Gear	SW + SR = 3.3K
42	SW_ELEDR	SW + SR = 3.3K
43	SW_TRN	SW + SR = 3.3K
44	Key_MENU	SW + SR = 3.3K
45	Key_ESC	SW + SR = 3.3K

Arduino Pin	Connection	Comments
47	Key_>	SW + SR = 3.3K
46	Key_<	SW + SR = 3.3K
49	Key_v	SW + SR = 3.3K
48	Key_^	SW + SR = 3.3K
A15	U_batt	DC Preset center pin
A14	Pot 3	DC Pot center pin
A13	Pot_2	DC Pot center pin
A12	Pot_1	DC Pot center pin
A11	Stick_LH	DC Pot center pin
A10	Stick_RV	DC Pot center pin
A9	Stick_LV	DC Pot center pin
A8	Stick_RH	DC Pot center pin
A7	Trim_LH<	SW + SR = 3.3K
A6	Trim_LH>	SW + SR = 3.3K
A5	Trim_LV<	SW + SR = 3.3K
A4	Trim_LV>	SW + SR = 3.3K
A3	Trim_RV<	SW + SR = 3.3K
A2	Trim_RV>	SW + SR = 3.3K
A1	Trim_RH<	SW + SR = 3.3K
A0	Trim_RH>	SW + SR = 3.3K
Vin	NC	
GND	Ground	Ground to all switches, pots
GND	NC	
5V	+5V	+5V for LCD, pull ups
3.3V	NC	
Reset	NC	

Notes:

1. NC = No connect
2. DC = Direct Connect
3. SR = Series resistor
4. SR to GND = connect pint to ground via series resistor
5. SW + SR = Connect the pin to a switch and the other pin of switch is connected to ground via series resistor
6. PSB pin on LCD needs to be pulled up via 3.3K



LCD 12864ZW with ST7920 controller white characters and blue back light.

Some models may have a pot-trimmer for adjusting contrast

on LCD rear mounted or you need to use a 10K pot- trimmer:

Connect V0 on middle pin of pot-trimmer and the rest of terminals on +5VCC and GND.

If doesn't work try to short-circuit the J1 or JP1 jumper on back of LCD.

For Parallel Mode put PSB PIN directly to +5VCC

The LCD model that I used no need changes or modifications
because the contrast for me is enough.