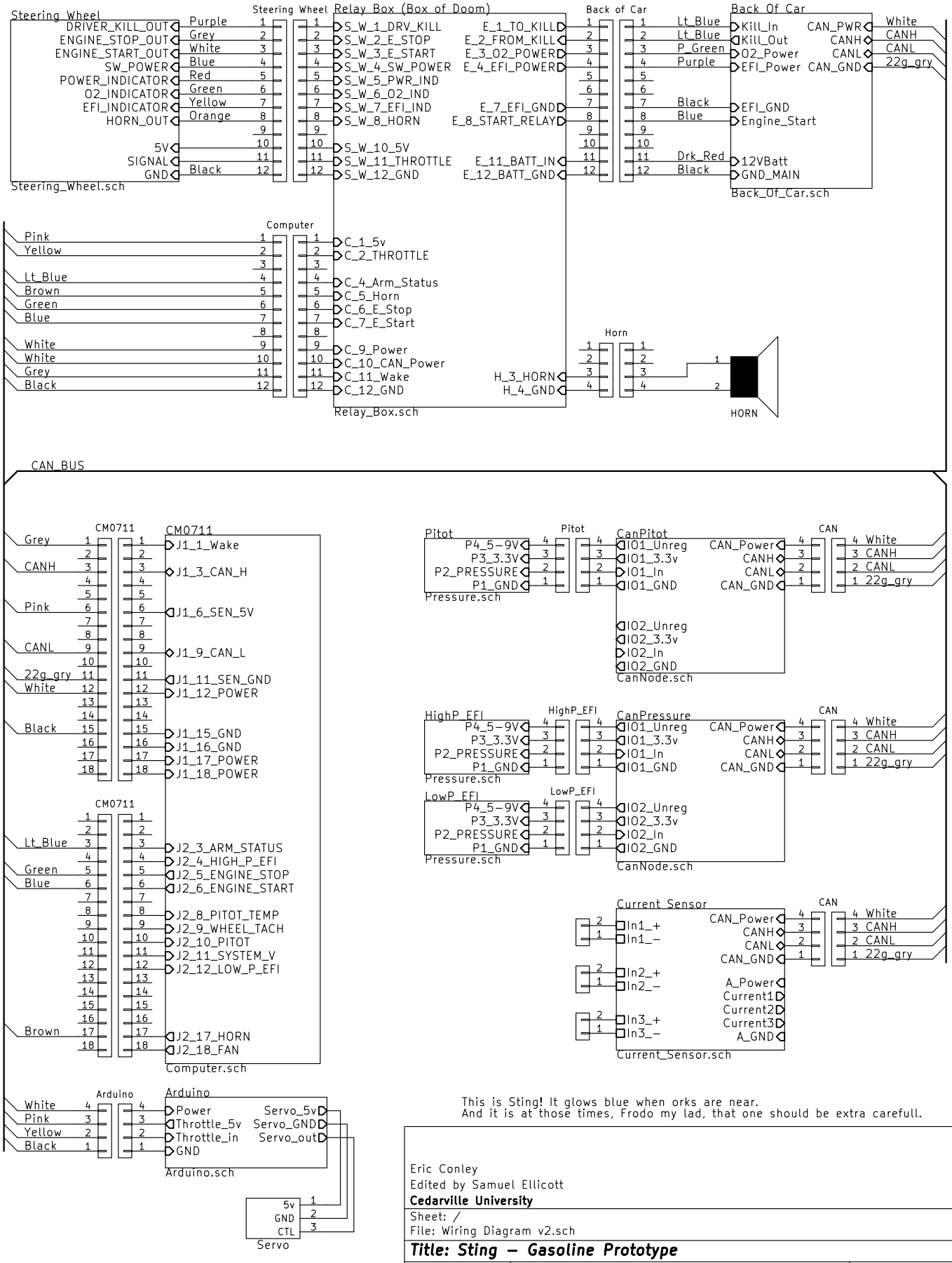


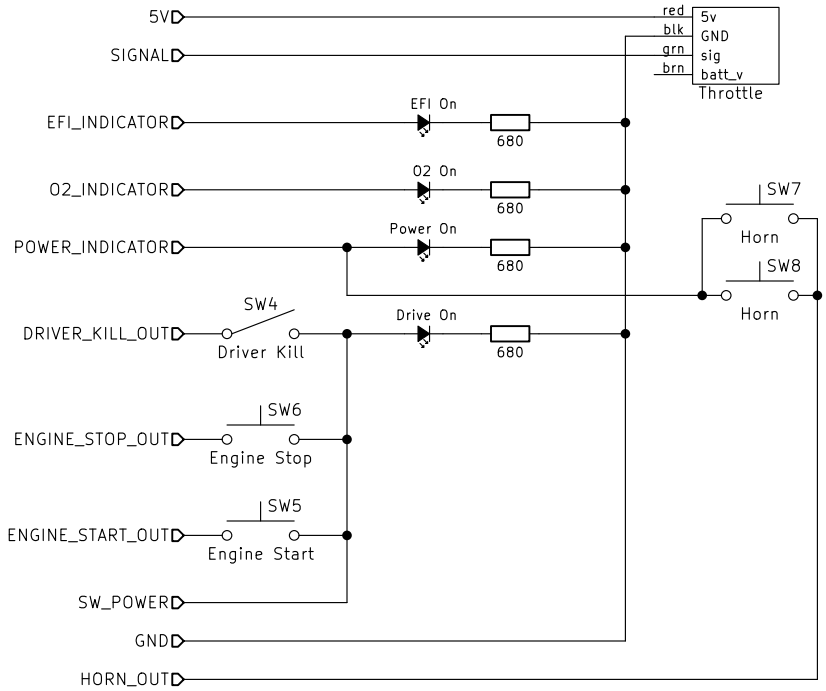
This is Sting! It glows blue when orks are near.
And it is at those times, Frodo my lad, that one should be extra carefull.

Eric Conley
Edited by Samuel Ellicott
Cedarville University

Sheet: /
File: Wiring Diagram v2.sch

Title: Sting – Gasoline Prototype

Size: USLetter	Date: 2016-05-25	**Rev: 1.6**
KiCad E.D.A. kicad 4.0.2+dfsg1-stable		Id: 1/14

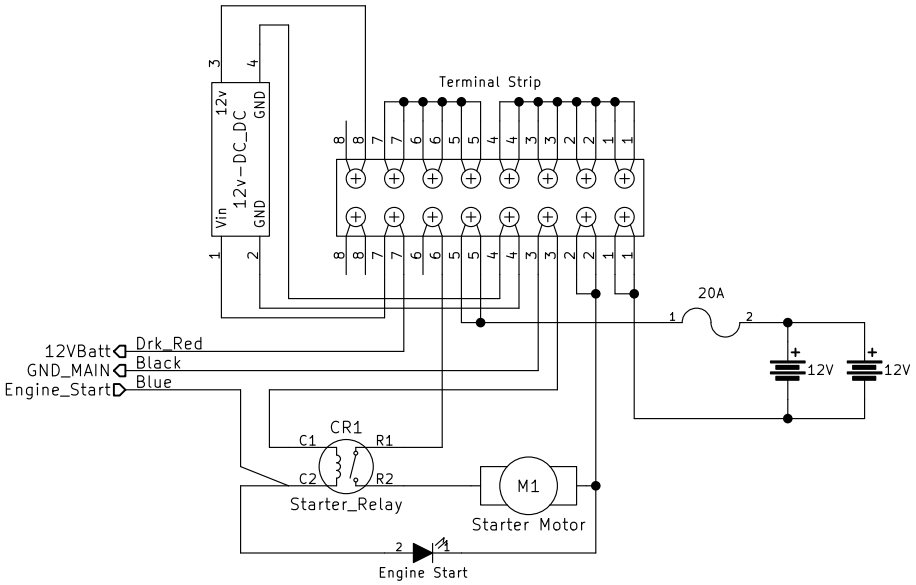


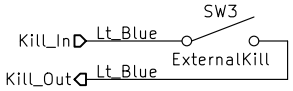
Eric Conley
Edited by Samuel Ellicott
Cedarville University

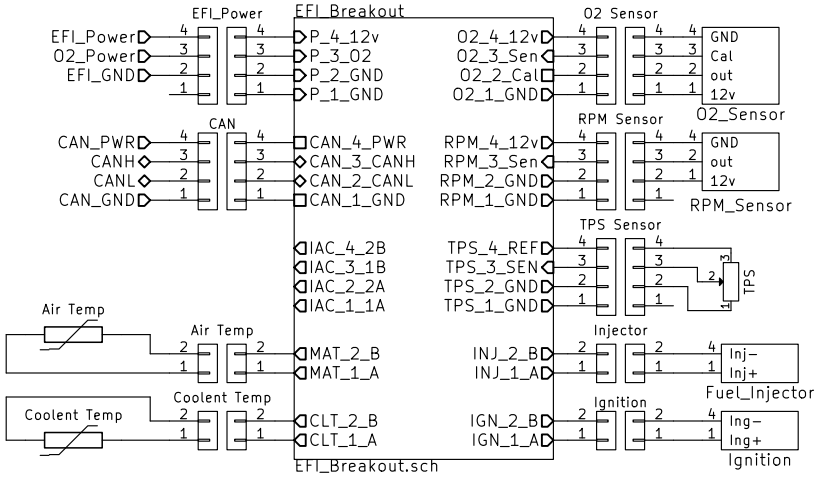
Sheet: /Steering_Wheel/
File: Steering_Wheel.sch

Title: Sting – Gasoline Prototype

Size: USLetter	Date: 2017-01-04	**Rev: 1.2**
KiCad E.D.A. kicad 4.0.2+dfsg1-stable		Id: 2/14





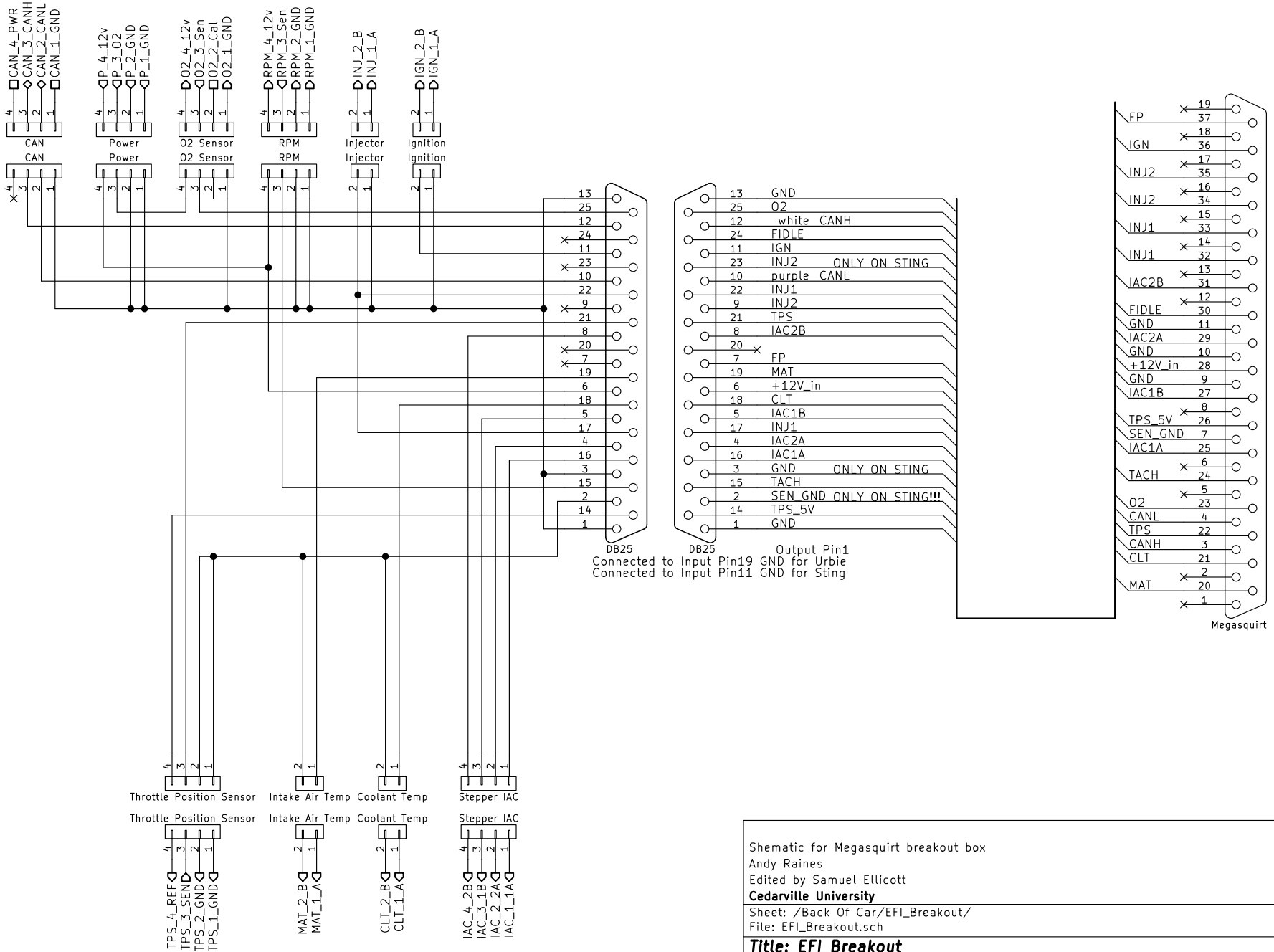


Wiring diagram for the back of Sting
Eric Conley
Edited by Samuel Ellicott
Cedarville University

Sheet: /Back Of Car/
File: Back_Of_Car.sch

Title: Sting – Gasoline Prototype

Size: USLetter	Date: 2017-01-02	**Rev: 1.2**
KiCad E.D.A. kicad 4.0.2+dfsg1-stable		Id: 3/14

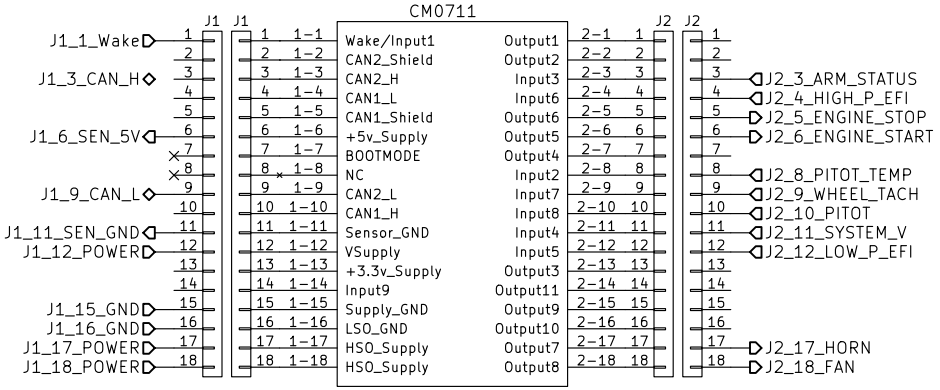


Shematic for Megasquirt breakout box
Andy Raines
Edited by Samuel Ellicott
Cedarville University

Sheet: /Back Of Car/EFI_Breakout/
File: EFI_Breakout.sch

Title: EFI Breakout

Size: USLetter	Date: 2017-01-04	**Rev: 1.7**
KiCad E.D.A. kicad 4.0.2+dfsg1-stable		Id: 4/14

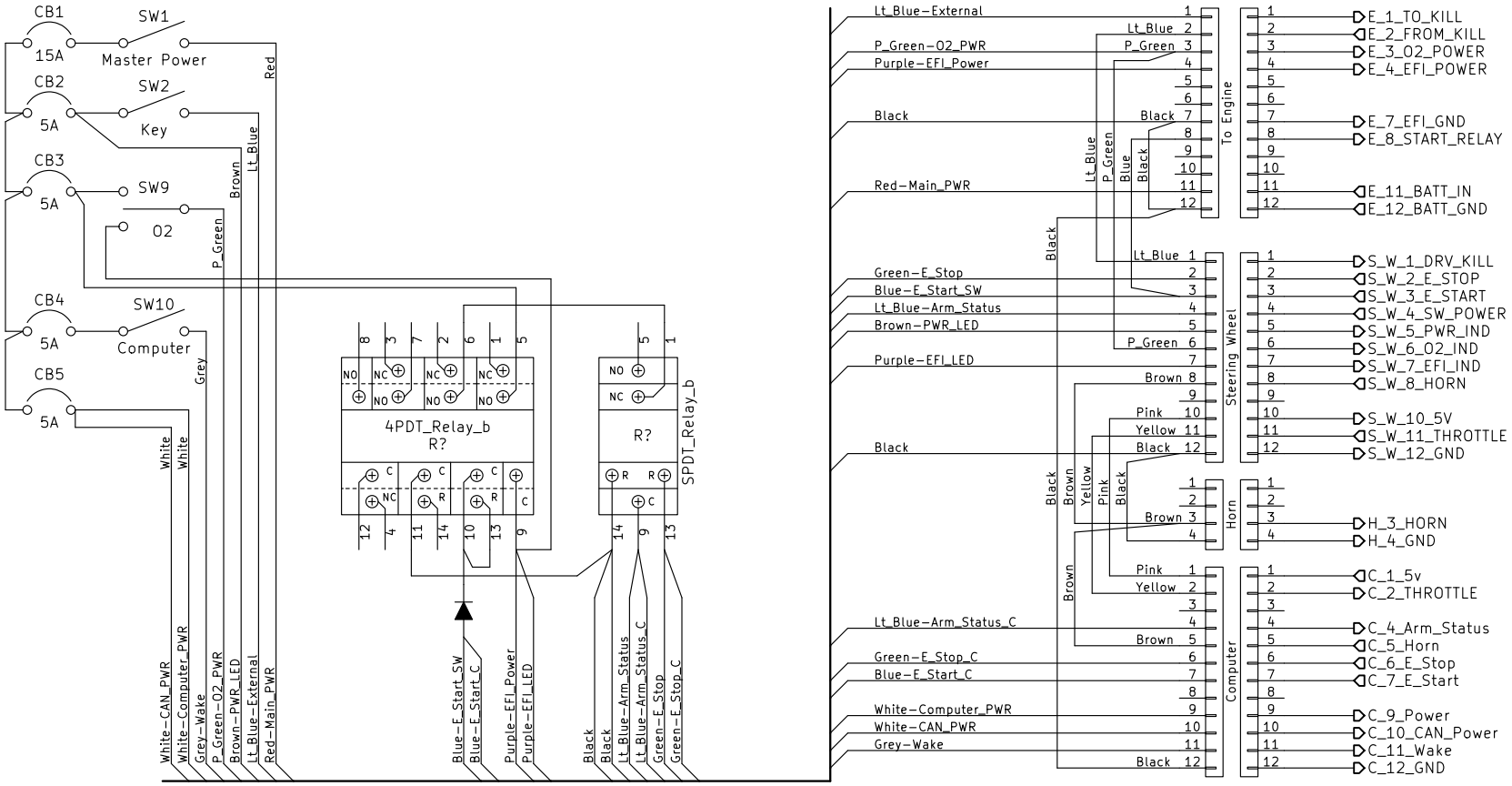


Samuel Ellicott
CM0711 Computer sheet
Cedarville University

Sheet: /CM0711/
File: Computer.sch

Title: Sting – Gasoline Prototype

Size: USLetter	Date: 2017-01-01	**Rev: 1.0**
KiCad E.D.A. kicad 4.0.2+dfsg1-stable		Id: 5/14



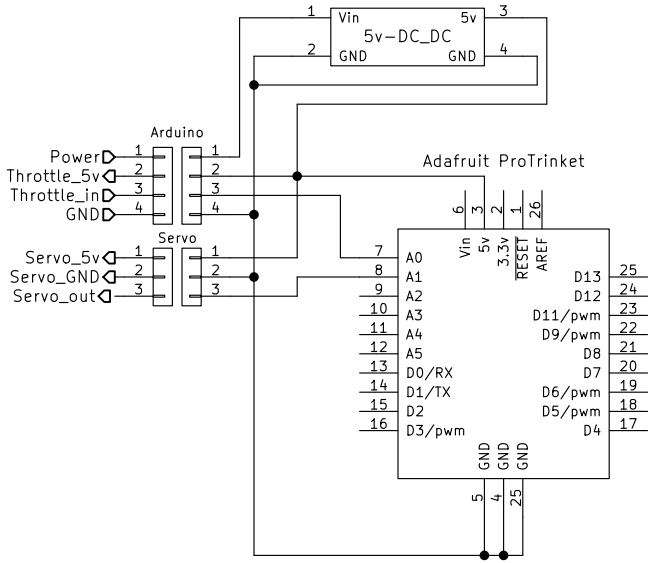
Wires with a C sufix provide the same functionality as the non-C wire but are connected to the computer.

Eric Conley
Edited by Samuel Ellicott
Cedarville University

Sheet: /Relay Box (Box of Doom)/
File: Relay_Box.sch

Title: Sting – Gasoline Prototype

Size: USLetter	Date: 2017-01-04	**Rev: 1.6**
KiCad E.D.A. kicad 4.0.2+dfsg1-stable		Id: 6/14

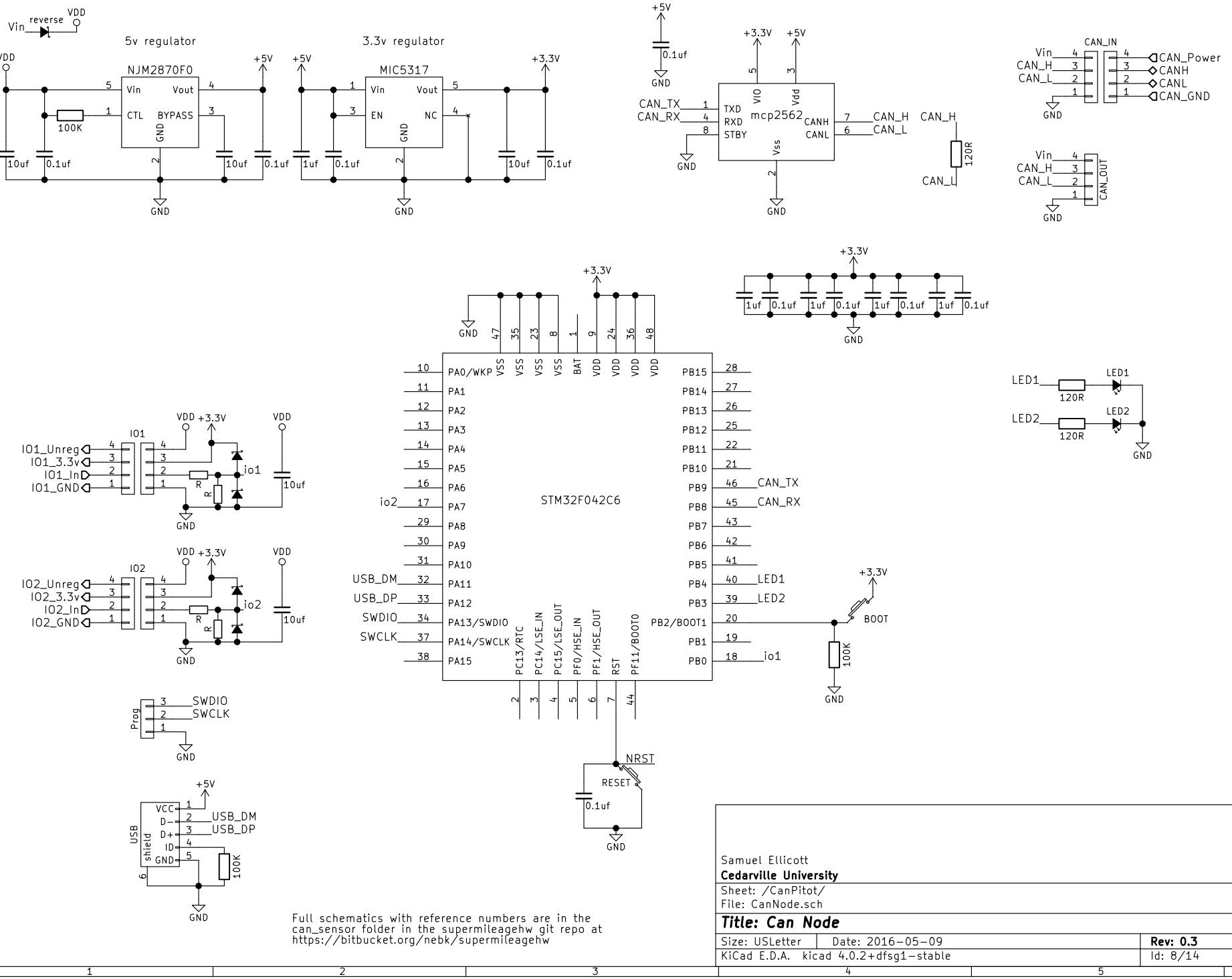


Samuel Ellicott
Cedarville University

Sheet: /Arduino/
File: Arduino.sch

Title: Arduino Breakout

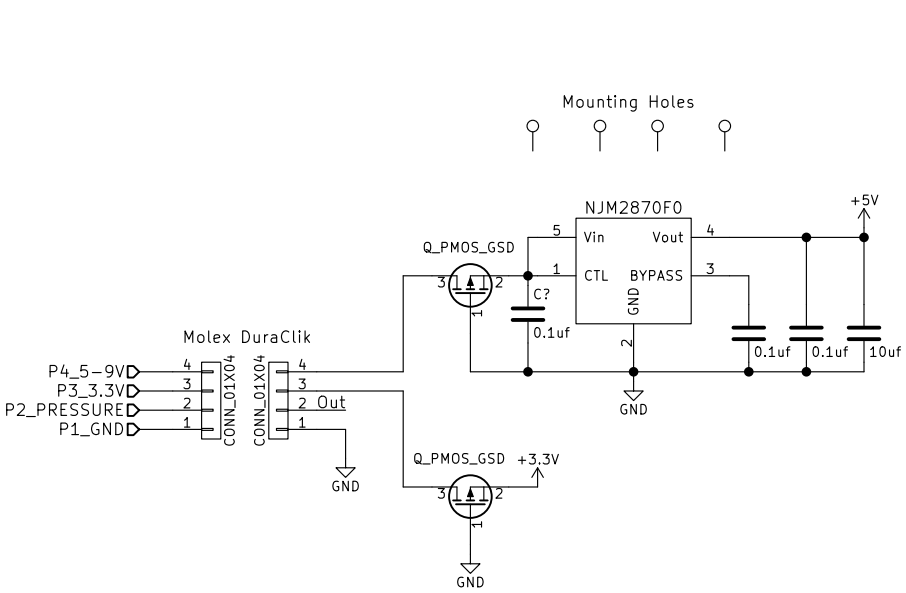
Size: USLetter	Date: 2017-01-04	**Rev: 1.0**
KiCad E.D.A. kicad 4.0.2+dfsg1-stable		Id: 7/14

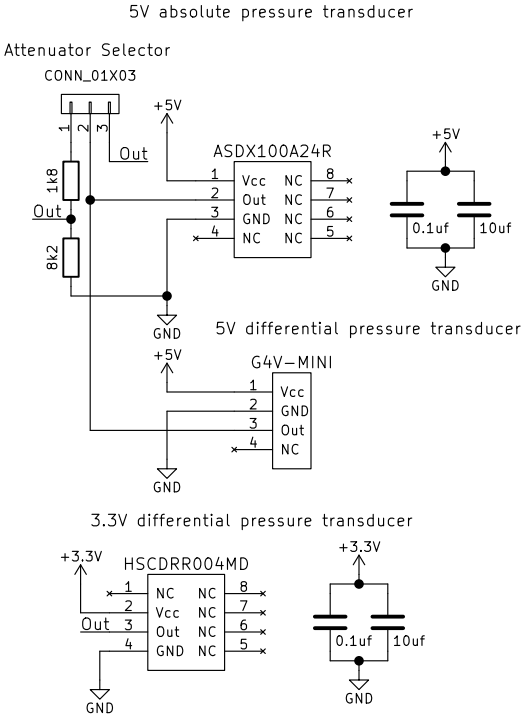

Vin
reverse
VDD
5v regulator
NJM2870F0
Vin
Vout
CTL
BYPASS
GND
100K
10uf
0.1uf
+5V
3.3v regulator
MIC5317
EN
NC
1uf
MCP2562
TXD
RXD
STBY
VIO
Vdd
Vss
CANH
CANL
CAN_TX
CAN_RX
CAN_H
CAN_L
120R
CAN_IN
CAN_Power
CANH
CANL
CAN_GND
CAN_OUT
STM32F042C6
PA0/WKP
PA1
PA2
PA3
PA4
PA5
PA6
PA7
PA8
PA9
PA10
PA11
PA12
PA13/SWDIO
PA14/SWCLK
PA15
PB15
PB14
PB13
PB12
PB11
PB10
PB9
PB8
PB7
PB6
PB5
PB4
PB3
PB2/BOOT1
PB1
PB0
PC13/RTC
PC14/LSE_IN
PC15/LSE_OUT
PF0/HSE_IN
PF1/HSE_OUT
RST
PF11/BOOT0
LED1
LED2
BOOT
NRST
RESET
IO1
IO1_Unreg
IO1_3.3v
IO1_In
IO1_GND
io1
IO2
IO2_Unreg
IO2_3.3v
IO2_In
IO2_GND
io2
Prog
SWDIO
SWCLK
USB
VCC
D-
D+
ID
shield
USB_DM
USB_DP
Full schematics with reference numbers are in the
can_sensor folder in the supermileagehw git repo at
https://bitbucket.org/nebk/supermileagehw
Samuel Ellicott
Cedarville University
Sheet: /CanPitot/
File: CanNode.sch
Title: Can Node
Size: USLetter
Date: 2016-05-09
Rev: 0.3
KiCad E.D.A. kicad 4.0.2+dfsg1-stable
Id: 8/14

Comments:

Q1 and Q2 are reverse polarity protection transistors. They are P-Channel Mosfets, so they have a very small resistance when on.
Care should be taken in their selection so that their V-GS threshold is under 1v

U2 is a 5v regulator for the 5v pressure transducer. The output of U3 goes through a selectable attenuator for a full 5v output or a 3.3v output.





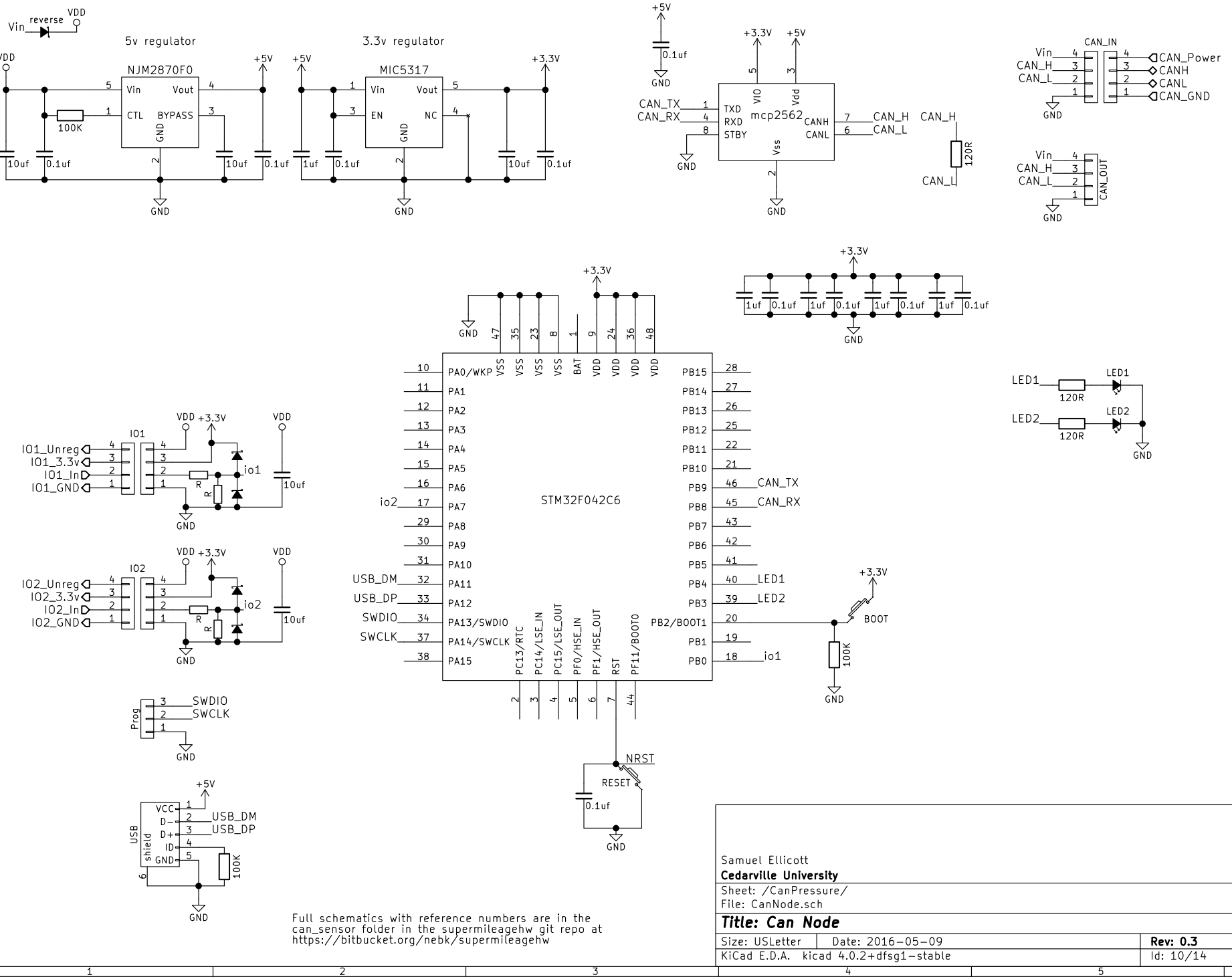
Full schematics with reference numbers are in the pressure_sensor folder in the supermileagehw git repo at https://bitbucket.org/nebk/supermileagehw

Sam Ellicott
Cedarville University

Sheet: /Pitot/
File: Pressure.sch

Title: Pressure Sensor

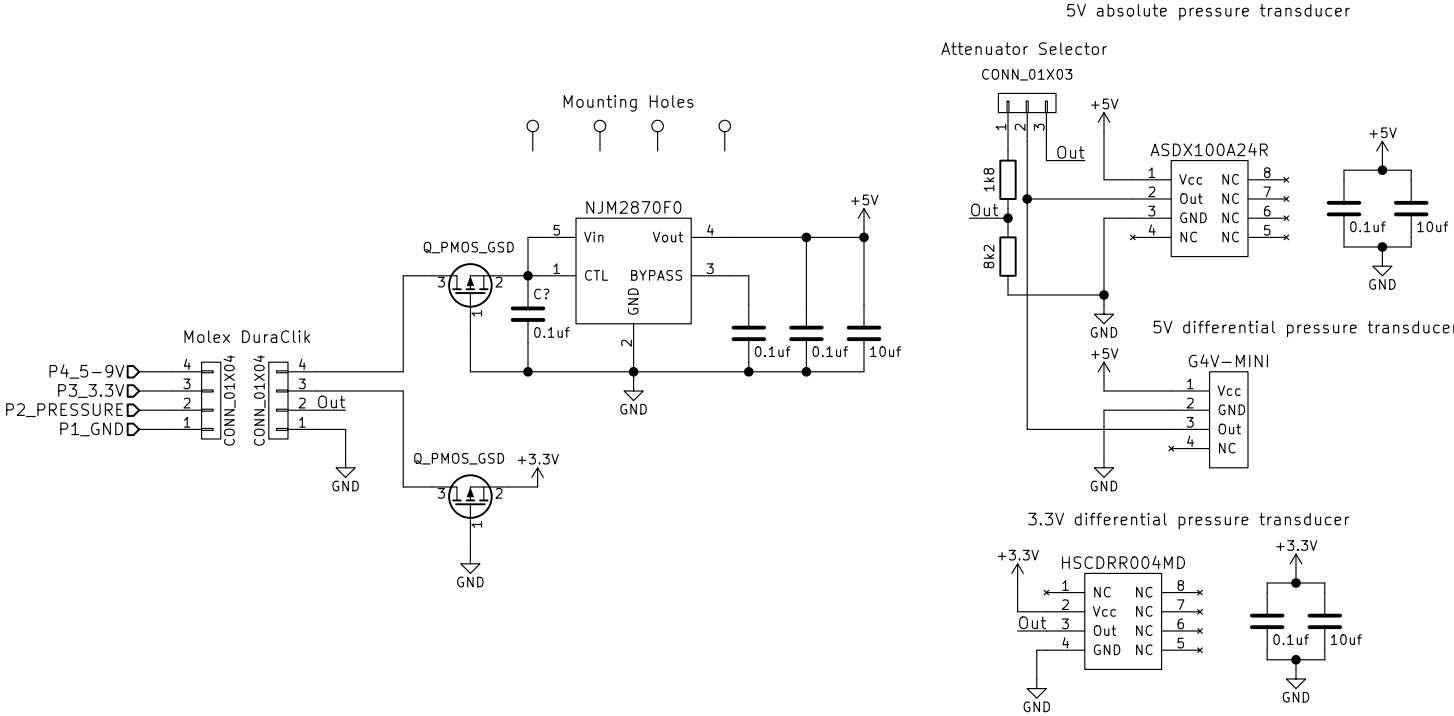
Size: USLetter	Date: 2016-10-20	**Rev: 2**
KiCad E.D.A. kicad 4.0.2+dfsg1-stable		Id: 9/14


5v regulator
3.3v regulator
NJM2870F0
MIC5317
mcp2562
CAN_IN
CAN_OUT
STM32F042C6
Prog
USB
IO1
IO2
RESET
BOOT
Full schematics with reference numbers are in the
can_sensor folder in the supermileagehw git repo at
https://bitbucket.org/nebk/supermileagehw
Samuel Ellicott
Cedarville University
Sheet: /CanPressure/
File: CanNode.sch
Title: Can Node
Size: USLetter
Date: 2016-05-09
Rev: 0.3
KiCad E.D.A. kicad 4.0.2+dfsg1-stable
Id: 10/14

Comments:

Q1 and Q2 are reverse polarity protection transistors. They are P-Channel Mosfets, so they have a very small resistance when on.
Care should be taken in their selection so that their V-GS threshold is under 1v

U2 is a 5v regulator for the 5v pressure transducer. The output of U3 goes through a selectable attenuator for a full 5v output or a 3.3v output.



Full schematics with reference numbers are in the pressure_sensor folder in the supermileagehw git repo at https://bitbucket.org/nebk/supermileagehw

Sam Ellicott
Cedarville University

Sheet: /HighP_EFI/
File: Pressure.sch

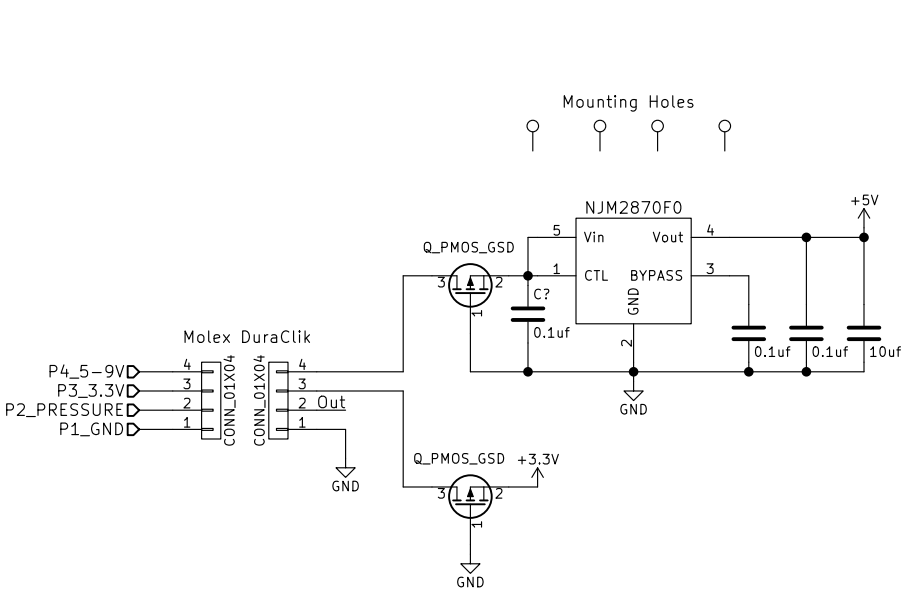
Title: Pressure Sensor

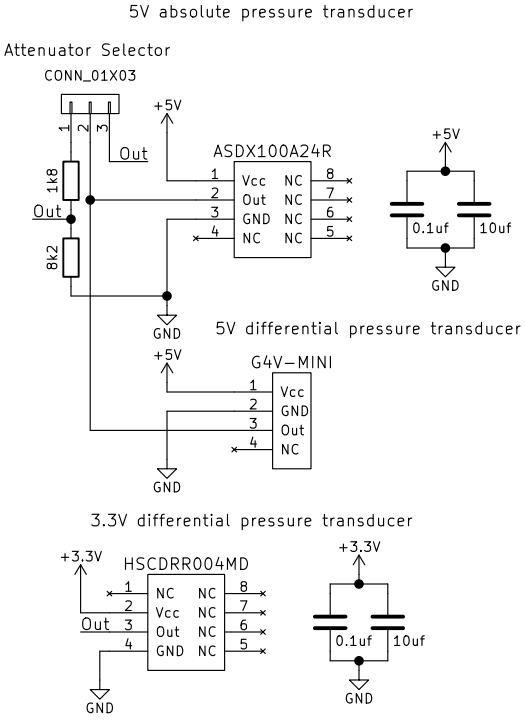
Size: USLetter	Date: 2016-10-20	**Rev: 2**
KiCad E.D.A. kicad 4.0.2+dfsg1-stable		Id: 11/14

Comments:

Q1 and Q2 are reverse polarity protection transistors. They are P-Channel Mosfets, so they have a very small resistance when on.
Care should be taken in their selection so that their V-GS threshold is under 1v

U2 is a 5v regulator for the 5v pressure transducer. The output of U3 goes through a selectable attenuator for a full 5v output or a 3.3v output.





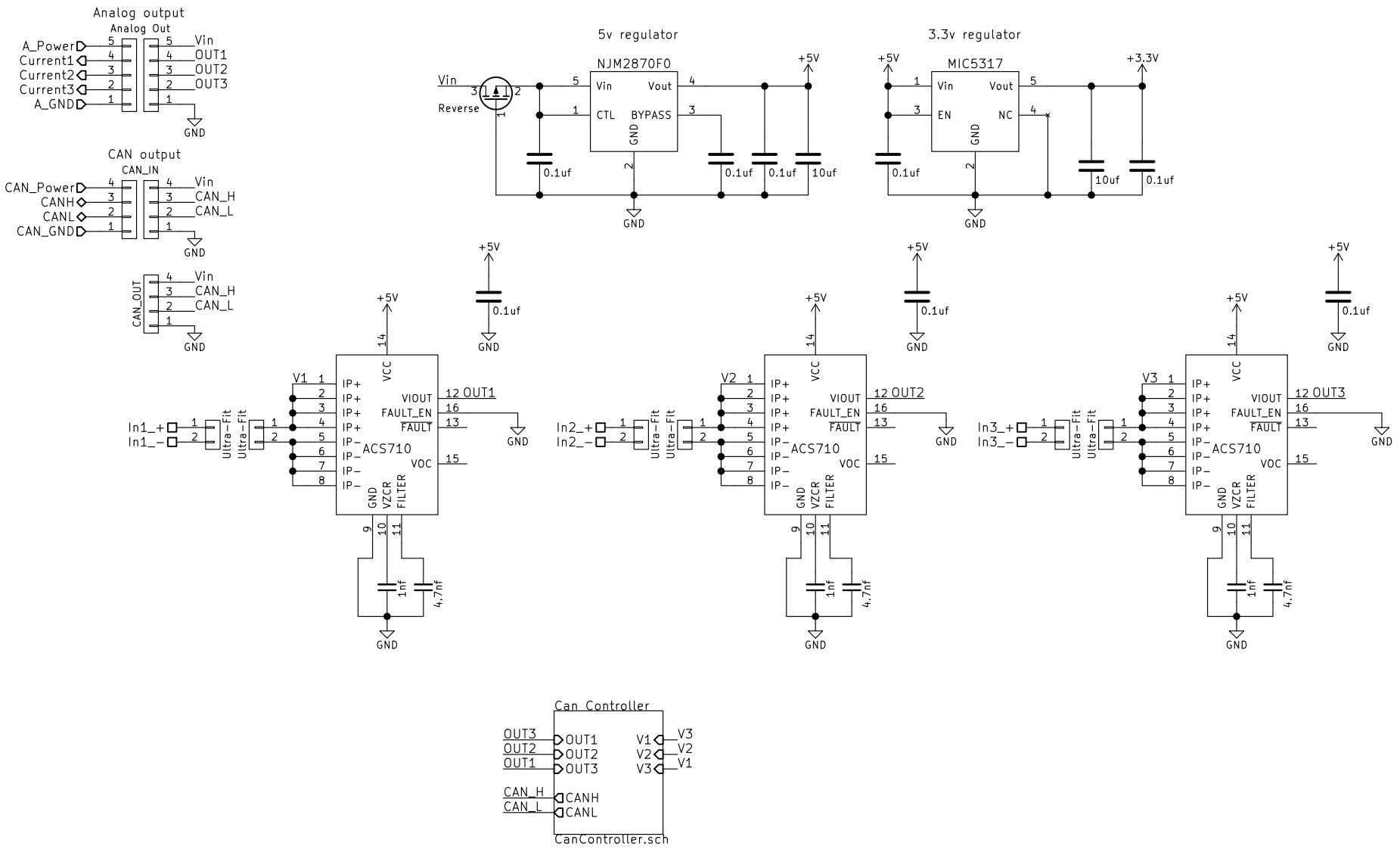
Full schematics with reference numbers are in the pressure_sensor folder in the supermileagehw git repo at https://bitbucket.org/nebk/supermileagehw

Sam Ellicott
Cedarville University

Sheet: /LowP_EFI/
File: Pressure.sch

Title: Pressure Sensor

Size: USLetter	Date: 2016-10-20	**Rev: 2**
KiCad E.D.A. kicad 4.0.2+dfsg1-stable		Id: 12/14



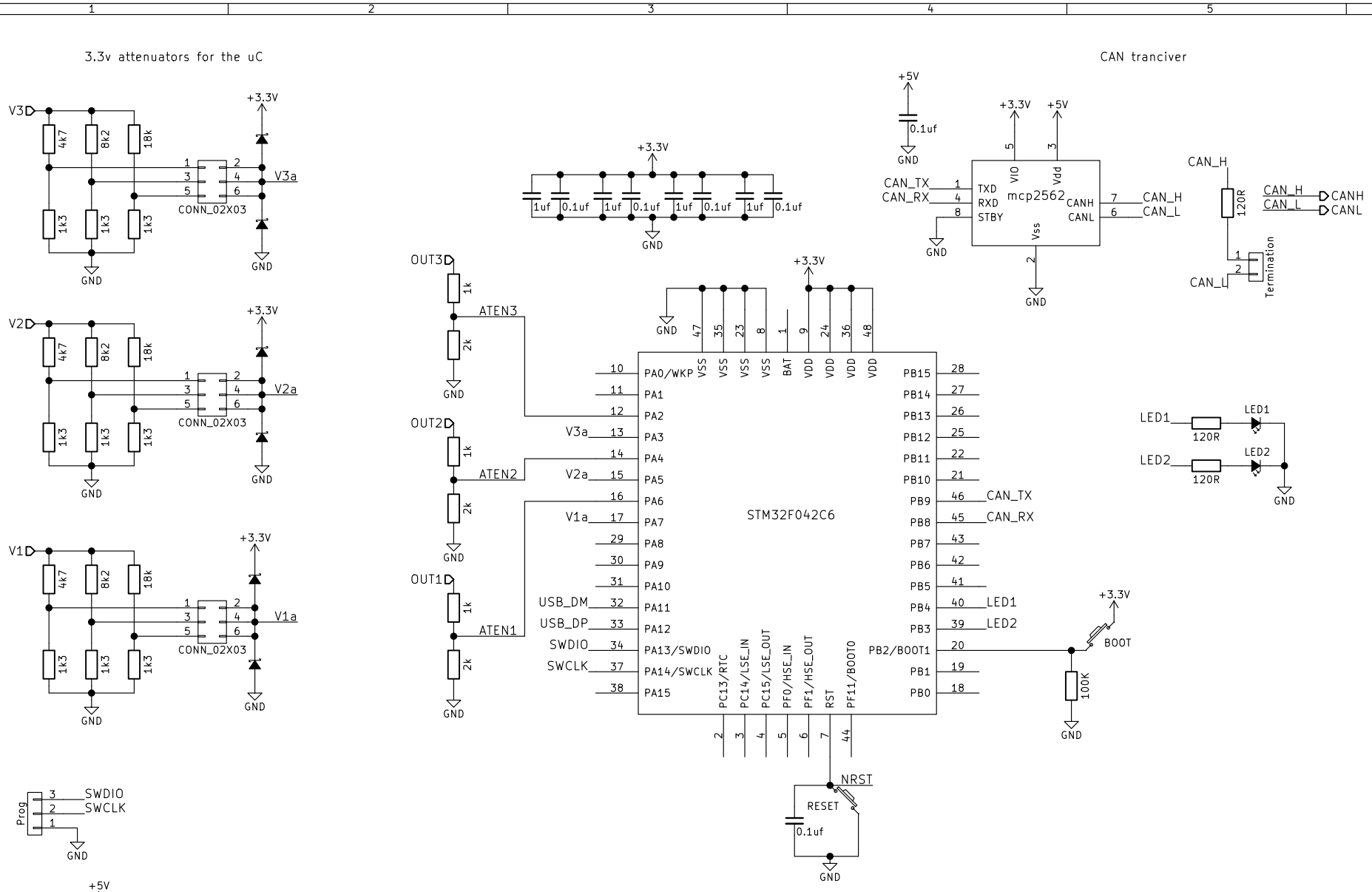
Full schematics with reference numbers are in the current_sensor folder in the supermileagehw git repo at https://bitbucket.org/nebk/supermileagehw

Samuel Ellicott
Cedarville University

Sheet: /Current Sensor/
File: Current_Sensor.sch

Title: Current Sensor

Size: USLetter	Date: 2017-01-05	**Rev: 2.0**
KiCad E.D.A. kicad 4.0.2+dfsg1-stable		Id: 13/14



Samuel Ellicott	
Cedarville University	
Sheet: /Current Sensor/Can Controller/	
File: CanController.sch	
Title: Current Sensor	
Size: USLetter | Date: 2016-05-09	**Rev: 2.0**
KiCad E.D.A. kicad 4.0.2+dfsg1-stable	Id: 14/14