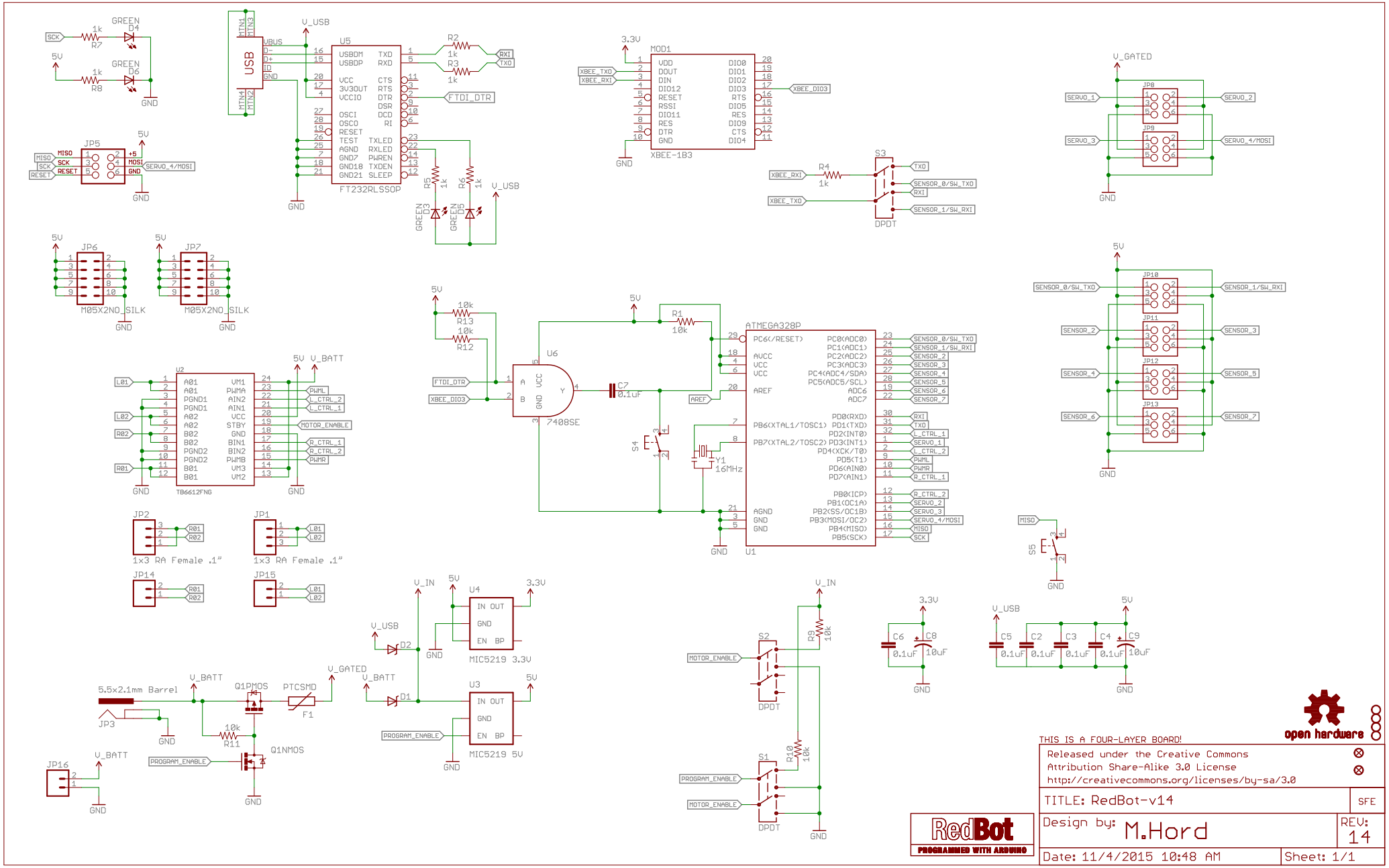
SCK
1k
R7
GREEN
D4
5V
1k
R8
GREEN
D6
GND
USB
MTN1
MTN3
MTN4
MTN2
VBUS
D-
D+
ID
GND
V_USB
U5
USBDM
USBDP
VCC
3V3OUT
VCCIO
OSCI
OSCO
RESET
TEST
AGND
GND7
GND18
GND21
TXD
RXD
CTS
RTS
DTR
DSR
DCD
RI
TXLED
RXLED
PWREN
TXDEN
SLEEP
FT232RLSSOP
R2
1k
R3
1k
RXI
TXO
FTDI_DTR
R5
1k
R6
1k
GREEN
D3
GREEN
D5
V_USB
GND
JP5
MISO
SCK
RESET
+5
MOSI
GND
SERVO_4/MOSI
5V
GND
3.3V
MOD1
VDD
DOUT
DIN
DIO12
RESET
RSSI
DIO11
RES
DTR
GND
DIO0
DIO1
DIO2
DIO3
RTS
DIO5
RES
DIO9
CTS
DIO4
XBEE-1B3
XBEE_TXO
XBEE_RXI
XBEE_DIO3
GND
V_GATED
JP8
JP9
SERVO_1
SERVO_2
SERVO_3
SERVO_4/MOSI
GND
XBEE_RXI
R4
1k
XBEE_TXO
S3
DPDT
TXO
SENSOR_0/SW_TXO
RXI
SENSOR_1/SW_RXI
5V
JP6
JP7
M05X2NO_SILK
M05X2NO_SILK
GND
GND
5V
10k
R13
10k
R12
FTDI_DTR
XBEE_DIO3
U6
A
B
VCC
GND
Y
7408SE
C7
0.1uF
5V
R1
10k
AREF
S4
Y1
16MHz
ATMEGA328P
PC6(/RESET)
AVCC
VCC
VCC
AREF
PB6(XTAL1/TOSC1)
PB7(XTAL2/TOSC2)
AGND
GND
GND
PC0(ADC0)
PC1(ADC1)
PC2(ADC2)
PC3(ADC3)
PC4(ADC4/SDA)
PC5(ADC5/SCL)
ADC6
ADC7
PD0(RXD)
PD1(TXD)
PD2(INT0)
PD3(INT1)
PD4(XCK/T0)
PD5(T1)
PD6(AIN0)
PD7(AIN1)
PB0(ICP)
PB1(OC1A)
PB2(SS/OC1B)
PB3(MOSI/OC2)
PB4(MISO)
PB5(SCK)
SENSOR_0/SW_TXO
SENSOR_1/SW_RXI
SENSOR_2
SENSOR_3
SENSOR_4
SENSOR_5
SENSOR_6
SENSOR_7
RXI
TXO
L_CTRL_1
SERVO_1
L_CTRL_2
PWML
PWMR
R_CTRL_1
R_CTRL_2
SERVO_2
SERVO_3
SERVO_4/MOSI
MISO
SCK
U1
5V
JP10
JP11
JP12
JP13
SENSOR_0/SW_TXO
SENSOR_1/SW_RXI
SENSOR_2
SENSOR_3
SENSOR_4
SENSOR_5
SENSOR_6
SENSOR_7
GND
5V
V_BATT
U2
A01
A01
PGND1
PGND1
A02
A02
B02
B02
PGND2
PGND2
B01
B01
VM1
PWMA
AIN2
AIN1
VCC
STBY
GND
BIN1
BIN2
PWMB
VM3
VM2
TB6612FNG
L01
L02
R02
R01
PWML
L_CTRL_2
L_CTRL_1
MOTOR_ENABLE
R_CTRL_1
R_CTRL_2
PWMR
GND
GND
JP2
JP1
R01
R02
L01
L02
1x3 RA Female .1"
1x3 RA Female .1"
JP14
JP15
R01
R02
L01
L02
MISO
S5
GND
V_IN
5V
U4
IN OUT
GND
EN BP
MIC5219 3.3V
3.3V
V_USB
D2
GND
V_IN
S2
DPDT
MOTOR_ENABLE
R9
10k
3.3V
C6
0.1uF
C8
10uF
GND
V_USB
C5
0.1uF
C2
0.1uF
C3
0.1uF
C4
0.1uF
C9
10uF
5V
GND
5.5x2.1mm Barrel
JP3
GND
V_BATT
Q1PMOS
PTCSMD
F1
V_GATED
10k
R11
Q1NMOS
PROGRAM_ENABLE
GND
V_BATT
D1
U3
IN OUT
GND
EN BP
MIC5219 5V
PROGRAM_ENABLE
5V
GND
JP16
V_BATT
GND
S1
DPDT
PROGRAM_ENABLE
MOTOR_ENABLE
R10
10k
GND
open hardware
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TITLE: RedBot-v14
SFE
Design by: M.Hord
REV: 14
Date: 11/4/2015 10:48 AM
Sheet: 1/1
RedBot
PROGRAMMED WITH ARDUINO