Sheet: OpenAVRc_Power

File: OpenAVRc_Power.sch

Sheet: OpenAVRc_Sticks

File: OpenAVRc_Sticks.sch

Sheet: OpenAVRc_I2C

File: OpenAVRc_I2C.sch

Sheet: OpenAVRc_CoreConnects

File: OpenAVRc_CoreConnects.sch

Sheet: OpenAVRc_HF_Telemetry

File: OpenAVRc_HF_Telemetry.sch

Sheet: OpenAVRc_Audio_Haptic

File: OpenAVRc_Audio_Haptic.sch

PWR_FLAG

+BATT

PWR_FLAG

GND

Shield pour RC OpenAVRc

By Antho.breizh / pierrotm777
Reproduction et commercialisation interdite

Sheet: /
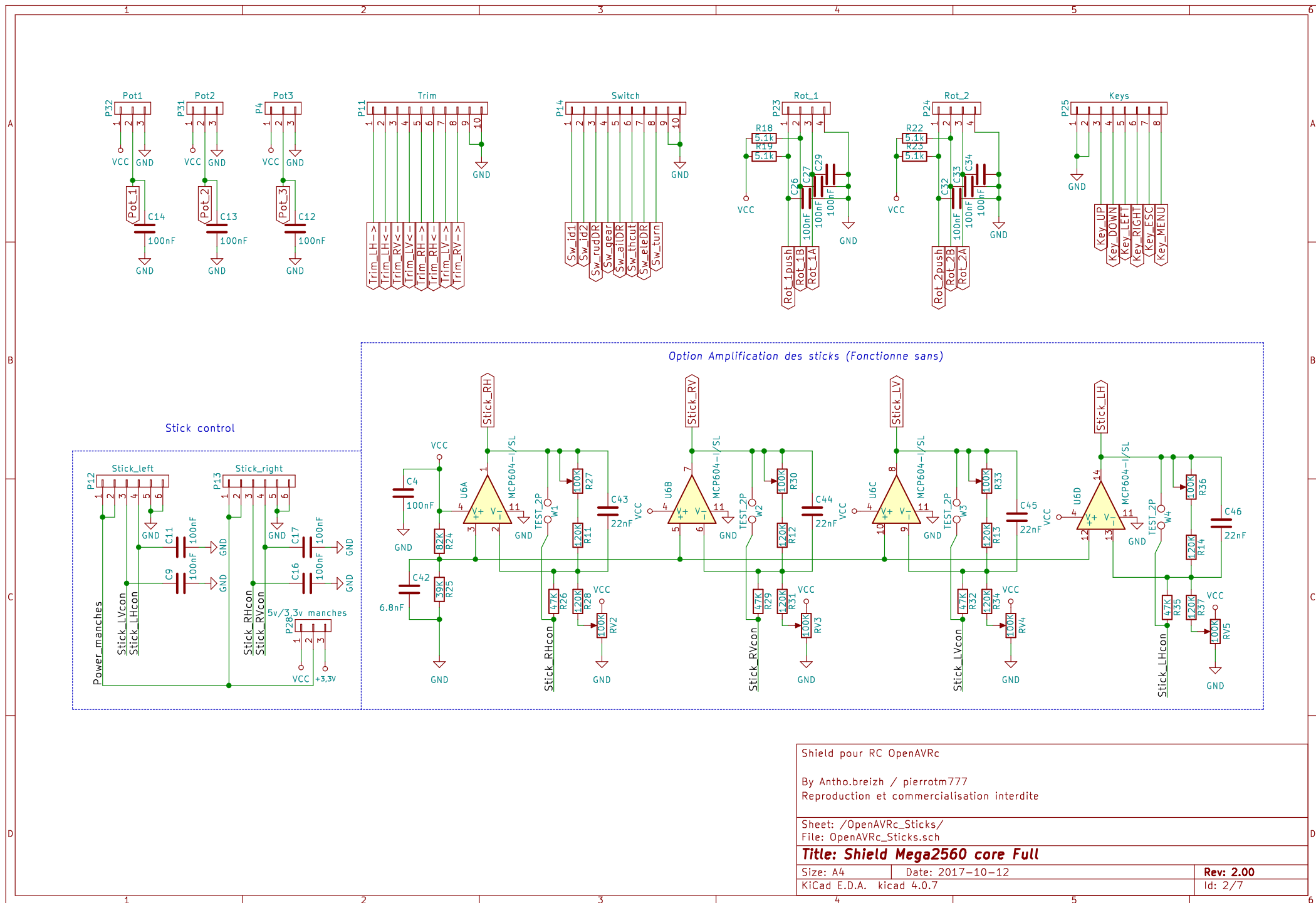File: Mega_2560 core mini_full_2.0.sch

Title: Shield Mega2560 core Full
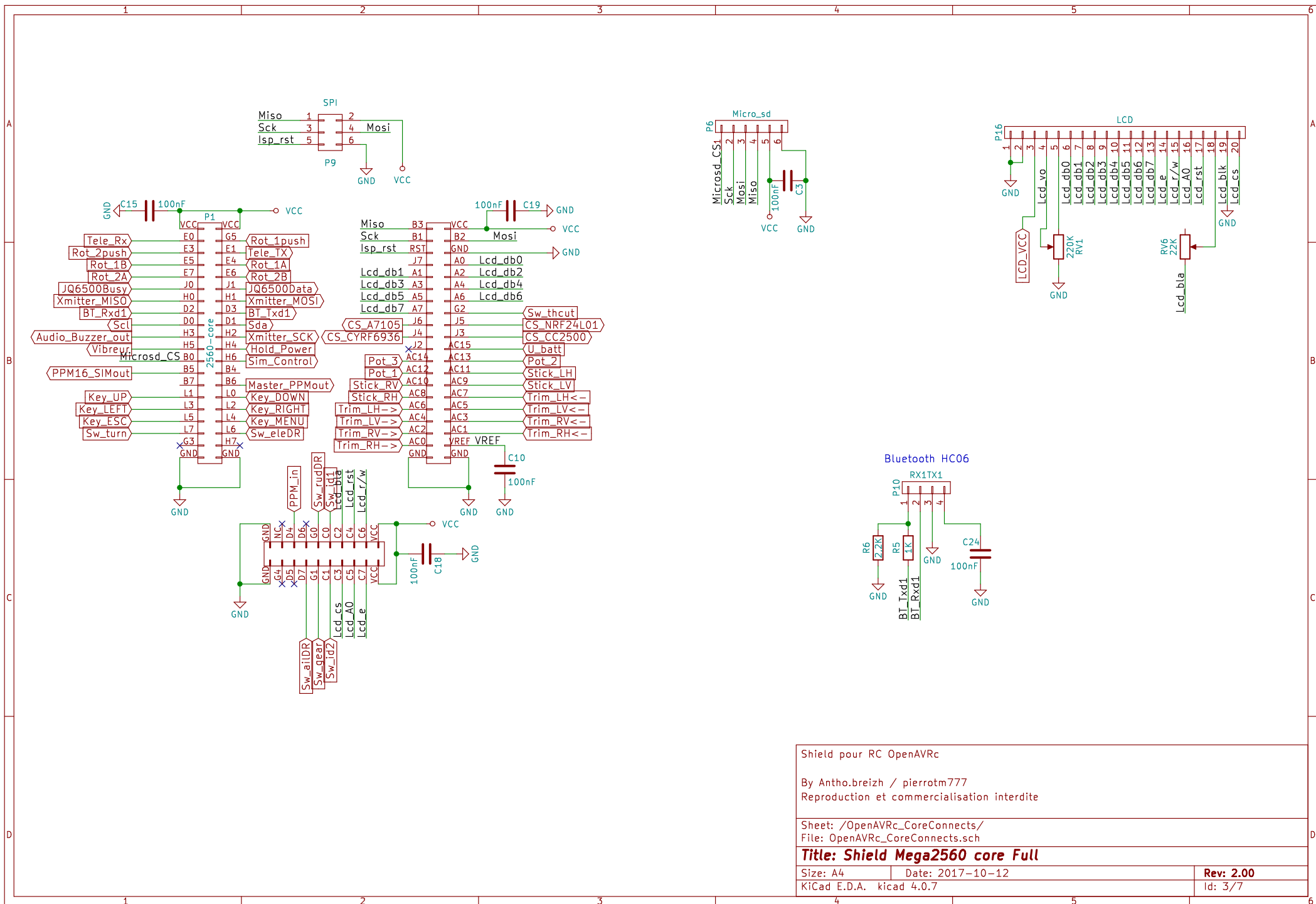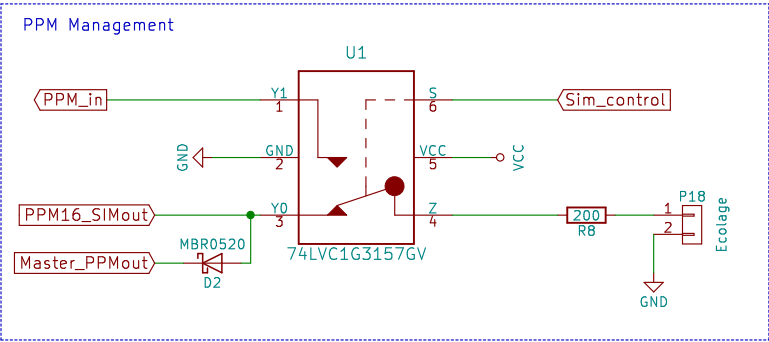
| Size: A4 | Date: 2017-10-12 | Rev: 2.00 |
| KiCad E.D.A. kicad 4.0.7 | | Id: 1/7 |

Pot1 · Pot2 · Pot3 · Trim · Switch · Rot_1 · Rot_2 · Keys

P32 · P31 · P4 · P11 · P14 · P23 · P24 · P25

VCC GND · VCC GND · VCC GND · GND · GND · VCC · VCC · GND

Pot_1 C14 100nF GND · Pot_2 C13 100nF GND · Pot_3 C12 100nF GND

Trim_LH→ · Trim_LH←↑ · Trim_RV←↑ · Trim_RV←↓ · Trim_LV←↓ · Trim_RH→↑ · Trim_RH←↓ · Trim_LV→ · Trim_RV→

Sw_id1 · Sw_id2 · Sw_rudDR · Sw_gear · Sw_ailDR · Sw_thcut · Sw_eleDR · Sw_turn

R18 5.1k · R19 5.1k · C26 C27 100nF · C29 100nF 100nF · Rot_1push · Rot_1B · Rot_1A

R22 5.1k · R23 5.1k · C32 C33 100nF · C34 100nF 100nF · Rot_2push · Rot_2B · Rot_2A

Key_UP · Key_DOWN · Key_LEFT · Key_RIGHT · Key_ESC · Key_MENU

Option Amplification des sticks (Fonctionne sans)

Stick_RH · Stick_RV · Stick_LV · Stick_LH

VCC

C4 100nF · GND

C42 6.8nF

82K R24 · 39K R25

U6A MCP604-I/SL · TEST_2P W1 · 100K R27 · 120K R11 · C43 22nF · 47K R26 · 120K R28 · 100K RV2 · Stick_RHcon · VCC · GND

U6B MCP604-I/SL · TEST_2P W2 · 100K R30 · 120K R12 · C44 22nF · 47K R29 · 120K R31 · 100K RV3 · Stick_RVcon · VCC · GND

U6C MCP604-I/SL · TEST_2P W3 · 100K R33 · 120K R13 · C45 22nF · 47K R32 · 120K R34 · 100K RV4 · Stick_LVcon · VCC · GND

U6D MCP604-I/SL · TEST_2P W4 · 100K R36 · 120K R14 · C46 22nF · 47K R35 · 120K R37 · 100K RV5 · Stick_LHcon · VCC · GND

Stick control

Stick_left P12 · Stick_right P13

GND · C11 100nF · C9 100nF · GND · C17 100nF · C16 100nF · GND

Power_manches · Stick_LVcon · Stick_LHcon · Stick_RHcon · Stick_RVcon

5v/3,3v manches P28.3x · VCC +3,3v

Title: Shield Mega2560 core Full
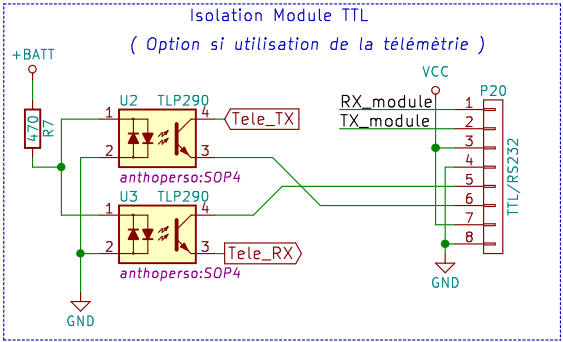
Size: A4 | Date: 2017-10-12 | **Rev: 2.00**
KiCad E.D.A. kicad 4.0.7 | Id: 2/7

SPI

Miso	1 — 2
Sck	3 — 4 Mosi
Isp_rst	5 — 6

P9

GND VCC

Micro_sd

P6
- Microsd_CS1
- Sck
- Mosi
- Miso
- 100nF C3

VCC GND

LCD

P16
- Lcd_vo
- Lcd_db0
- Lcd_db1
- Lcd_db2
- Lcd_db3
- Lcd_db4
- Lcd_db5
- Lcd_db6
- Lcd_db7
- Lcd_e
- Lcd_r/w
- Lcd_A0
- Lcd_rst
- Lcd_blk
- Lcd_cs

GND

LCD_VCC 220K RV1
RV6 22K
Lcd_bla
GND

P1 (2560-core)

GND C15 100nF — VCC

VCC | VCC

Signal	Pin	Pin	Signal
Tele_Rx	E0	G5	Rot_1push
Rot_2push	E3	E1	Tele_TX
Rot_1B	E5	E4	Rot_1A
Rot_2A	E7	E6	Rot_2B
JQ6500Busy	J0	J1	JQ6500Data
Xmitter_MISO	H0	H1	Xmitter_MOSI
BT_Rxd1	D2	D3	BT_Txd1
Scl	D0	D1	Sda
Audio_Buzzer_out	H3	H2	Xmitter_SCK
Vibreur	H5	H4	Hold_Power
Microsd_CS	B0	H6	Sim_Control
PPM16_SIMout	B5	B4	
	B7	B6	Master_PPMout
Key_UP	L1	L0	Key_DOWN
Key_LEFT	L3	L2	Key_RIGHT
Key_ESC	L5	L4	Key_MENU
Sw_turn	L7	L6	Sw_eleDR
GND	G3	H7	GND

GND

(center connector)

GND NC D4 — PPM_in
Sw_rudDR
Sw_id1
Lcd_bla
Lcd_rst
Lcd_r/w

G4 D5 D7 G1 C1 C3 C5 C7 VCC
G0 C0 C2 C4 C6 VCC

Sw_ailDR
Sw_gear
Sw_id2
Lcd_cs
Lcd_A0
Lcd_e

100nF C18 VCC GND

GND

(right connector)

100nF C19 GND

Signal	Pin	Pin	Signal
Miso	B3	VCC	
Sck	B1	B2	Mosi
Isp_rst	RST	GND	
	J7	A0	Lcd_db0
Lcd_db1	A1	A2	Lcd_db2
Lcd_db3	A3	A4	Lcd_db4
Lcd_db5	A5	A6	Lcd_db6
Lcd_db7	A7	G2	Sw_thcut
CS_A7105	J6	J5	CS_NRF24L01
CS_CYRF6936	J4	J3	CS_CC2500
	J2	AC15	U_batt
Pot_3	AC14	AC13	Pot_2
Pot_1	AC12	AC11	Stick_LH
Stick_RV	AC10	AC9	Stick_LV
Stick_RH	AC8	AC7	Trim_LH<—
Trim_LH—>	AC6	AC5	Trim_LV<—
Trim_LV—>	AC4	AC3	Trim_RV<—
Trim_RV—>	AC2	AC1	Trim_RH<—
Trim_RH—>	AC0	VREF	VREF
GND		GND	

GND GND

C10 100nF GND

Bluetooth HC06

RX1TX1
P10
1 2 3 4

R6 2.2K R5 1K GND C24 100nF

BT_Txd1
BT_Rxd1

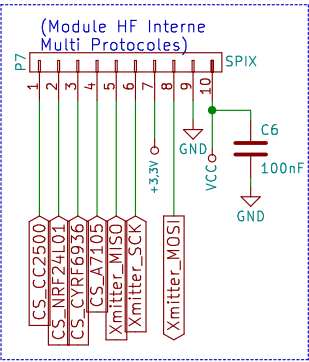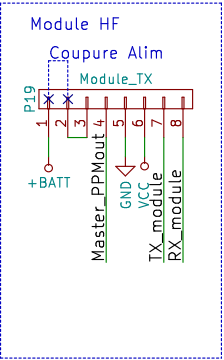GND GND

Shield pour RC OpenAVRc

By Antho.breizh / pierrotm777
Reproduction et commercialisation interdite

Sheet: /OpenAVRc_CoreConnects/
File: OpenAVRc_CoreConnects.sch

Title: Shield Mega2560 core Full

Size: A4	Date: 2017-10-12	**Rev: 2.00**
KiCad E.D.A. kicad 4.0.7		Id: 3/7

Module HF

Coupure Alim

P19

Module_TX

+BATT

Master_PPMout
GND
VCC
TX_module
RX_module

(Module HF Interne Multi Protocoles)

P7 SPIX

+3.3V
GND
VCC

C6
100nF

GND

CS_CC2500
CS_NRF24L01
CS_CYRF6936
CS_A7105
Xmitter_MISO
Xmitter_SCK
Xmitter_MOSI

Isolation Module TTL
(Option si utilisation de la télémètrie)

+BATT

VCC

R7 470

U2 TLP290

anthoperso:SOP4

U3 TLP290

anthoperso:SOP4

RX_module
TX_module

Tele_TX

Tele_RX

P20

TTL/RS232

GND

GND

PPM Management

U1

PPM_in

Y1

S

Sim_control

GND

GND

VCC

VCC

PPM16_SIMout

Y0

Z

R8 200

P18

Ecolage

Master_PPMout

MBR0520
D2

74LVC1G3157GV

GND

Shield pour RC OpenAVRc
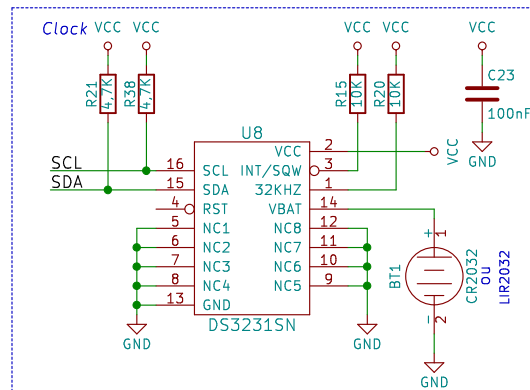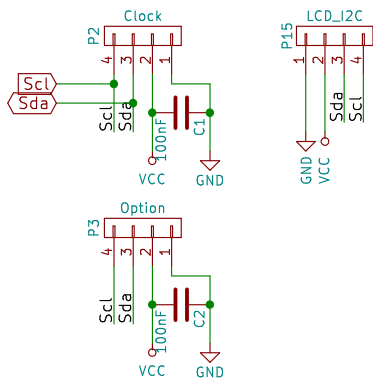
By Antho.breizh / pierrotm777
Reproduction et commercialisation interdite

Sheet: /OpenAVRc_HF_Telemetry/
File: OpenAVRc_HF_Telemetry.sch

Title: Shield Mega2560 core Full

| Size: A4 | Date: 2017-10-12 | Rev: 2.00 |
| KiCad E.D.A. kicad 4.0.7 | | Id: 4/7 |

Clock

P2

Scl
Sda

Scl
Sda

100nF
C1

VCC
GND

LCD_I2C

P15

GND
VCC
Sda
Scl

Option

P3

Scl
Sda

100nF
C2

VCC
GND

Clock

VCC VCC

R21 R38
4,7K 4,7K

VCC VCC

R15 R20
10K 10K

VCC

C23
100nF

GND

U8

16 SCL	VCC	2
15 SDA	INT/SQW	3
	32KHZ	1
4 RST	VBAT	14
5 NC1	NC8	12
6 NC2	NC7	11
7 NC3	NC6	10
8 NC4	NC5	9
13 GND		

SCL
SDA

VCC

GND

GND

DS3231SN

BT1
CR2032
OU
LIR2032

GND

Fram

VCC

C22
100nF

GND

U7

1 A0	WP	7
2 A1		
3 A2	SCL	6
	SDA	5

VCC

GND

GND

GND

Scl
Sda

FM24W256

Sheet: /OpenAVRc_I2C/
File: OpenAVRc_I2C.sch

Title: Shield Mega2560 core Full
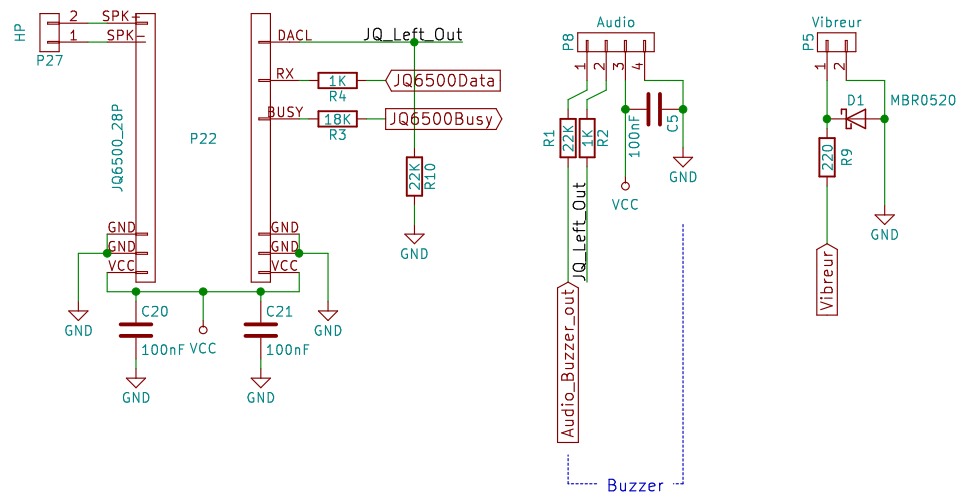
Size: A4	Date: 2017-10-12	Rev: 2.00
KiCad E.D.A. kicad 4.0.7		Id: 5/7

HP
2 SPK+
1 SPK-
P27

JQ6500_28P
P22

DACL   JQ_Left_Out
RX   1K   JQ6500Data
          R4
BUSY   18K   JQ6500Busy
          R3
          22K
          R10
          GND

GND
GND
VCC

GND

C20   C21
100nF VCC 100nF
GND   GND

Audio
P8
1 2 3 4
R1 22K
R2 1K
100nF
C5
VCC
GND

JQ_Left_Out
Audio_Buzzer_out

Buzzer

Vibreur
P5
1 2
D1   MBR0520

220
R9

Vibreur

GND

Sheet: /OpenAVRc_Audio_Haptic/
File: OpenAVRc_Audio_Haptic.sch
Title: Shield Mega2560 core Full
Size: A4   Date: 2017-10-12   Rev: 2.00
KiCad E.D.A. kicad 4.0.7   Id: 6/7

Power Management

Power Switch
P21

+BATT

MBR0520
D6

DCDC_IN+

L4941

+5V

VCC

LIPO+

BATT
P17
2
1

Sw_power

GND

+ C28
100µF U4

GND

IN OUT
GND

GND

C31
100nF

GND

+ C7
100µF

GND

P26
LCD_Alim

LCD_VCC

VCC

5,1K
R17

VCC

D3
LL4148

U_batt

R16
2,7K

D4
LL4148

GND

GND

LD1117S33TR

+3,3V

VI VO
GND VO

+3,3V

C38
100nF

+ C8
47µF

U5

GND

GND

MiniDCDC3A
8
7
6
5
4
3
2
1
P30

VCC

DCDC_IN+

DCDC_IN−

GND

Option module DCDC 3A

Option si utilisation du 3.3V dans le montage

Title: **Shield Mega2560 core Full**

Size: A4	Date: 2017−10−12	Rev: 2.00
KiCad E.D.A. kicad 4.0.7		Id: 7/7