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
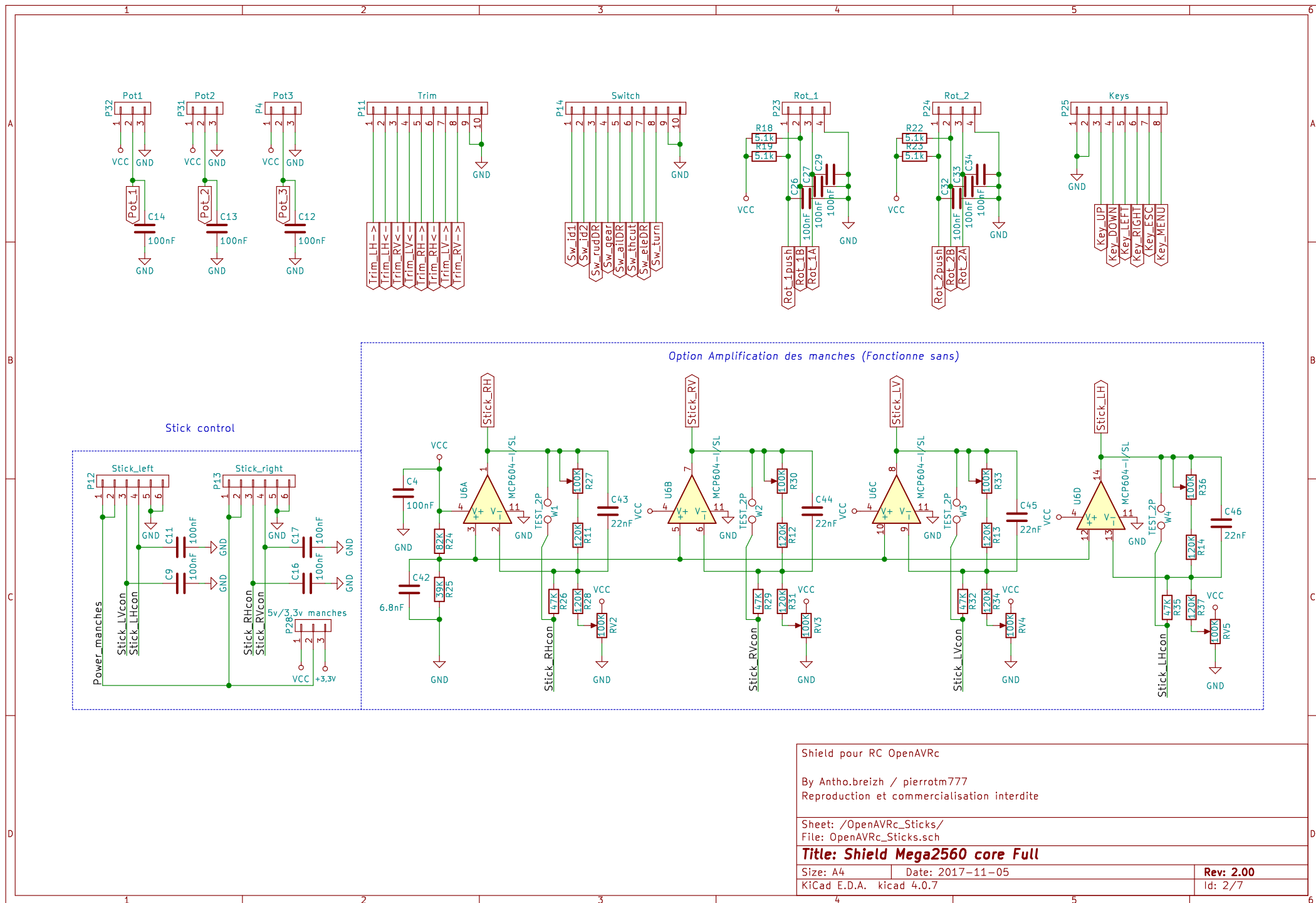
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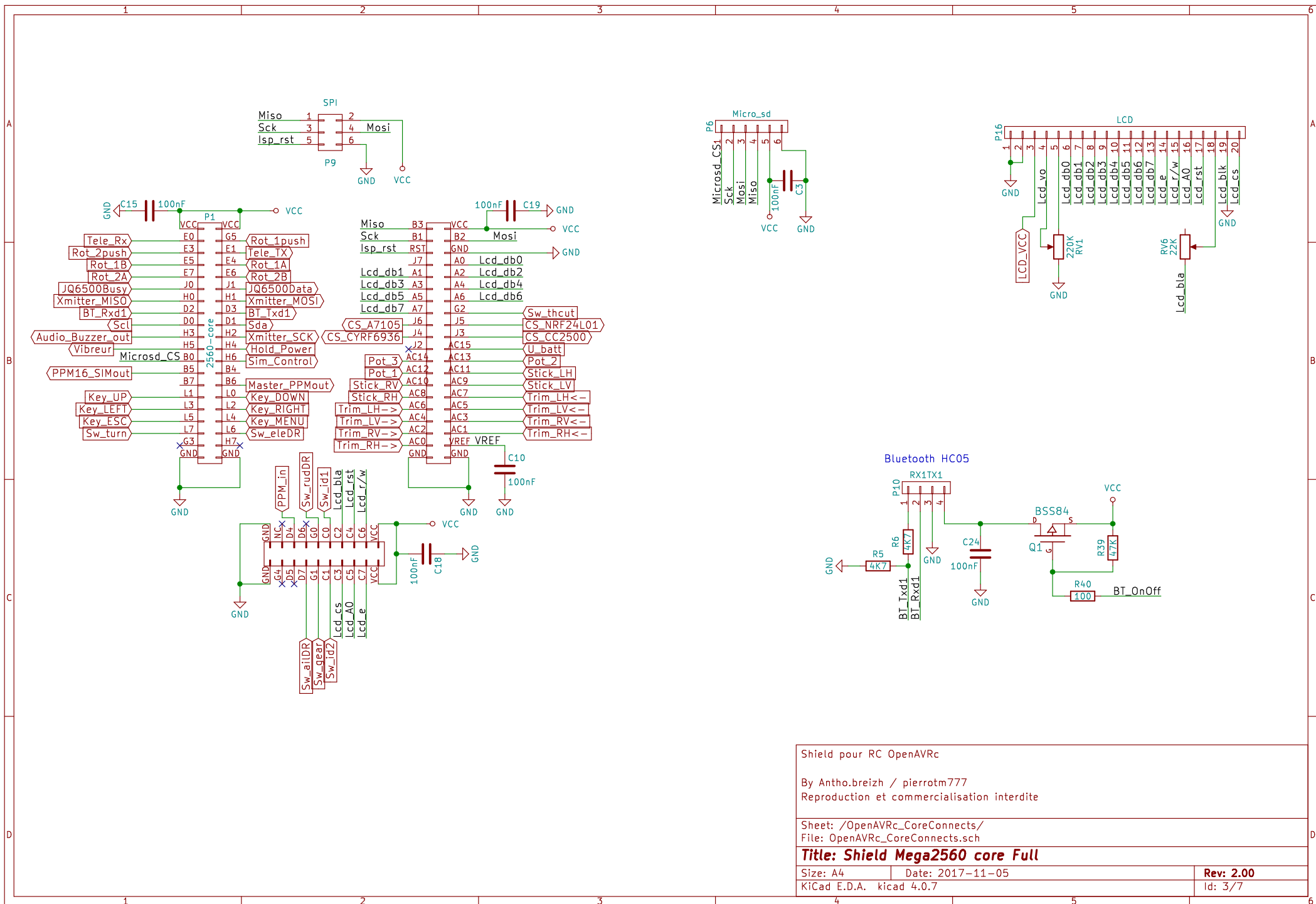
| Size: A4 | Date: 2017-11-05 | Rev: 2.00 |
| KiCad E.D.A. kicad 4.0.7 | | Id: 1/7 |

Pot1 — P32 — VCC GND — Pot_1 C14 100nF GND

Pot2 — P31 — VCC GND — Pot_2 C13 100nF GND

Pot3 — P4 — VCC GND — Pot_3 C12 100nF GND

Trim — P11 — GND — Trim_LH->, Trim_LH-<, Trim_RV->, Trim_RV-<, Trim_LV->, Trim_RH-<, Trim_RH->, Trim_LV-<, Trim_RV->

Switch — P14 — GND — Sw_id1, Sw_id2, Sw_rudDR, Sw_gear, Sw_ailDR, Sw_thcut, Sw_eleDR, Sw_turn

Rot_1 — P23 — R18 5.1k, R19 5.1k — VCC — C26 C27 C29 100nF 100nF 100nF — GND — Rot_1push, Rot_1B, Rot_1A

Rot_2 — P24 — R22 5.1k, R23 5.1k — VCC — C32 C33 C34 100nF 100nF 100nF — GND — Rot_2push, Rot_2B, Rot_2A

Keys — P25 — GND — Key_UP, Key_DOWN, Key_LEFT, Key_RIGHT, Key_ESC, Key_MENU

Stick control

Stick_left — P12 — GND — Power_manches, Stick_LVcon, Stick_LHcon — C11 100nF, C9 100nF — GND

Stick_right — P13 — GND — Stick_RHcon, Stick_RVcon — C17 100nF, C16 100nF — GND

5v/3,3v manches — P28 — VCC +3,3v

Option Amplification des manches (Fonctionne sans)

Stick_RH — VCC — C4 100nF — GND — U6A MCP604-I/SL — R24 82K, R25 39K, C42 6.8nF — TEST_2P W1 — R27 100K, R11 120K — C43 22nF — Stick_RHcon — R26 47K, R28 120K, RV2 100K — VCC GND

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

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

Stick_LH — U6D MCP604-I/SL — TEST_2P W4 — R36 100K, R14 120K — C46 22nF — Stick_LHcon — R35 47K, R37 120K, RV5 100K — VCC GND
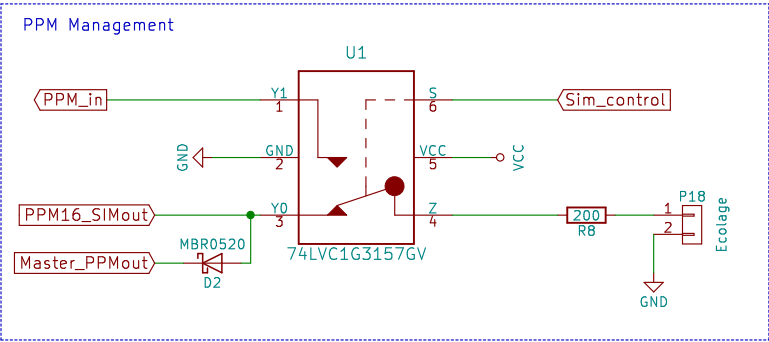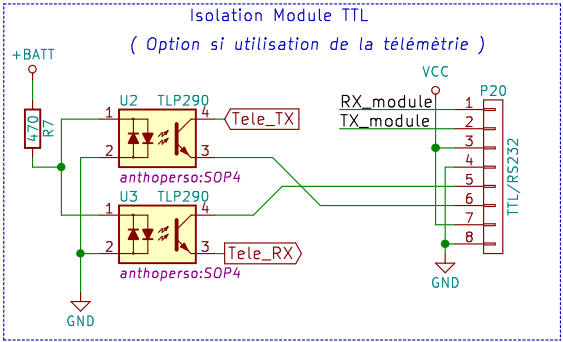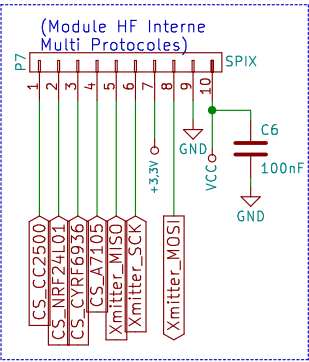
Shield pour RC OpenAVRc

By Antho.breizh / pierrotm777
Reproduction et commercialisation interdite

Sheet: /OpenAVRc_Sticks/
File: OpenAVRc_Sticks.sch

Title: Shield Mega2560 core Full

Size: A4 | Date: 2017-11-05 | 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
- 1 Microsd_CS1
- 2 Sck
- 3 Mosi
- 4 Miso
- 5
- 6

100nF C3
VCC GND

LCD

P16
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20

GND
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

LCD_VCC
220K RV1
GND
RV6 22K
Lcd_bla

GND C15 100nF VCC

P1

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

2560-core

GND

100nF C19 GND

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

GND C10 100nF GND

GND
NC D4 PPM_in Sw_rudDR Sw_id1 Lcd_bla Lcd_rst Lcd_r/w
G4 D5 D7 D6 G0 C0 C2 C4 C6
G1 C1 C3 C5 C7 VCC

VCC
100nF C18 GND

GND

Sw_ailDR Sw_gear Sw_id2 Lcd_cs Lcd_A0 Lcd_e

Bluetooth HC05

P10 RX1TX1
1 2 3 4

GND
R5 4K7
R6 4K7
BT_Txd1
BT_Rxd1
GND
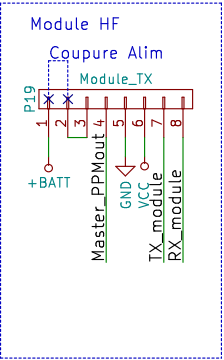C24 100nF
GND
BSS84
Q1
D S
G
VCC
R39 47K
R40 100 BT_OnOff

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: 2017-11-05	**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

470
R7

U2   TLP290
RX_module   Tele_TX
TX_module
anthoperso:SOP4

U3   TLP290
Tele_RX
anthoperso:SOP4

GND

P20
1
2
3
4
5
6
7
8

TTL/RS232

VCC
GND

PPM Management

U1

PPM_in   Y1   1   S   6   Sim_control

GND   GND   2   VCC   5   VCC

PPM16_SIMout   Y0   3

Master_PPMout   MBR0520   D2

Z   4   200   R8   1   P18   Ecolage

74LVC1G3157GV

2

GND

Sheet: /OpenAVRc_HF_Telemetry/
File: OpenAVRc_HF_Telemetry.sch

Title: Shield Mega2560 core Full
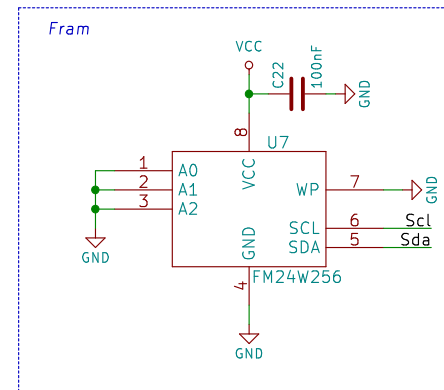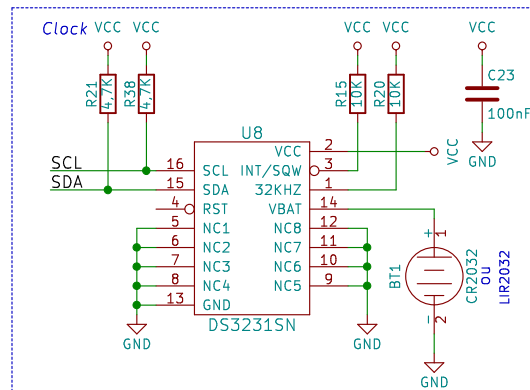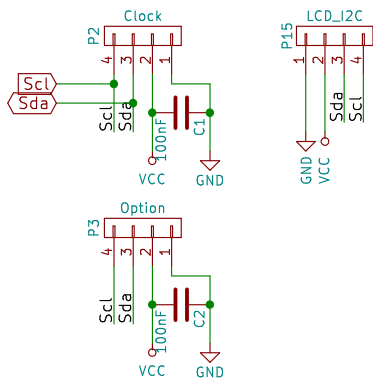
Size: A4   Date: 2017-11-05   Rev: 2.00

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   VCC VCC   VCC

R21 R38   R15 R20   C23
4,7K 4,7K   10K 10K   100nF

U8

SCL   16 SCL   VCC   2
SDA   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

BT1
CR2032
OU
LIR2032

DS3231SN

GND   GND   VCC GND

Fram

VCC

C22 100nF
GND

U7

1 A0   WP   7
2 A1   GND
3 A2
   VCC   SCL   6 Scl
   GND   SDA   5 Sda

8

4 FM24W256

GND

GND

Sheet: /OpenAVRc_I2C/
File: OpenAVRc_I2C.sch

Title: Shield Mega2560 core Full
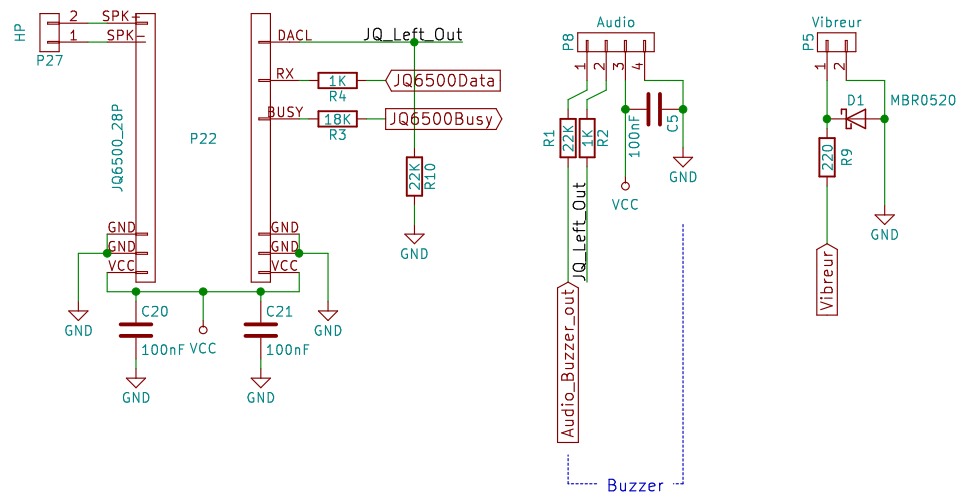
| Size: A4 | Date: 2017-11-05 | Rev: 2.00 |
| KiCad E.D.A. kicad 4.0.7 | | Id: 5/7 |

HP
P27
2 SPK+
1 SPK−

JQ6500_28P
P22

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

GND
GND
VCC

GND
C20
100nF VCC
GND

GND
GND
VCC

GND
C21
100nF
GND

Audio
P8
Audio_Buzzer_out
JQ_Left_Out
R1 22K
R2 1K
100nF
C5
VCC
GND
Buzzer

Vibreur
P5
D1 MBR0520
220 R9
Vibreur
GND

Sheet: /OpenAVRc_Audio_Haptic/
File: OpenAVRc_Audio_Haptic.sch

Title: Shield Mega2560 core Full

| Size: A4 | Date: 2017−11−05 | Rev: 2.00 |
| KiCad E.D.A. kicad 4.0.7 | | Id: 6/7 |

Power Management

Power Switch
+BATT
DCDC_IN+
PM5033
+5V

P21
MBR0520
VIN
5V
VCC

LIPO+
D6
EN
3V3
LCD_VCC

BATT
Sw_power
C28
100µF
+3.3v
C31
100nF
C7
100µF
P26
LCD_Alim

P17
GND
GND
U4
GND
GND
GND

R17 5.1K
VCC
D3
LL4148
+3.3V

MiniDCDC3A
VCC
U_batt
LD1117S33TR

R16 2.7K
D4
LL4148
VI
VO1
+3.3V

DCDC_IN+
GND
VO2

DCDC_IN−
GND
GND
U5
C38
100nF
C8
47µF

P30
GND
GND
GND

Option module DCDC 3A
Option si utilisation du 3.3V dans le montage

Title: Shield Mega2560 core Full
Size: A4 | Date: 2017−11−05 | Rev: 2.00
KiCad E.D.A. kicad 4.0.7 | Id: 7/7