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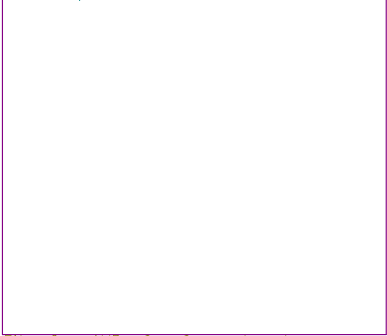
File: OpenAVRc_Power.sch

Sheet: OpenAVRc_Sticks

File: OpenAVRc_Sticks.sch

Sheet: OpenAVRc_I2C

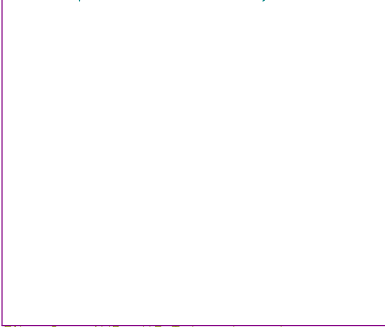File: OpenAVRc_I2C.sch

Sheet: OpenAVRc_CoreConnects

File: OpenAVRc_CoreConnects.sch

Sheet: OpenAVRc_HF_Telemetry

File: OpenAVRc_HF_Telemetry.sch

Sheet: OpenAVRc_Audio_Haptic
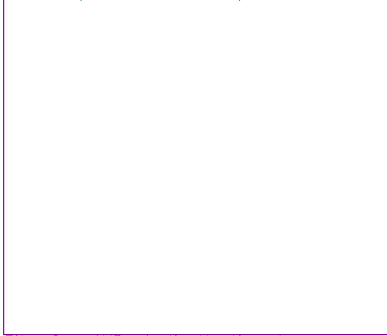
File: OpenAVRc_Audio_Haptic.sch

PWR_FLAG

+BATT

PWR_FLAG

GND

Shield pour RC OpenAVRc

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Sheet: /
File: Mega_2560 core mini_full_2.2.sch

Title: Shield Mega2560 core Full

| Size: A4 | Date: 2019−09−02 | Rev: 2.2 |
| KiCad E.D.A. kicad (5.0.2)−1 | | Id: 1/7 |

Stick control

Option Amplification des manches (Fonctionne sans)

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_RV <- / Trim_LV <- / Trim_RH <- / Trim_LH -> / Trim_RH -> / Trim_LV -> / Trim_RV -> / Trim_LH <-
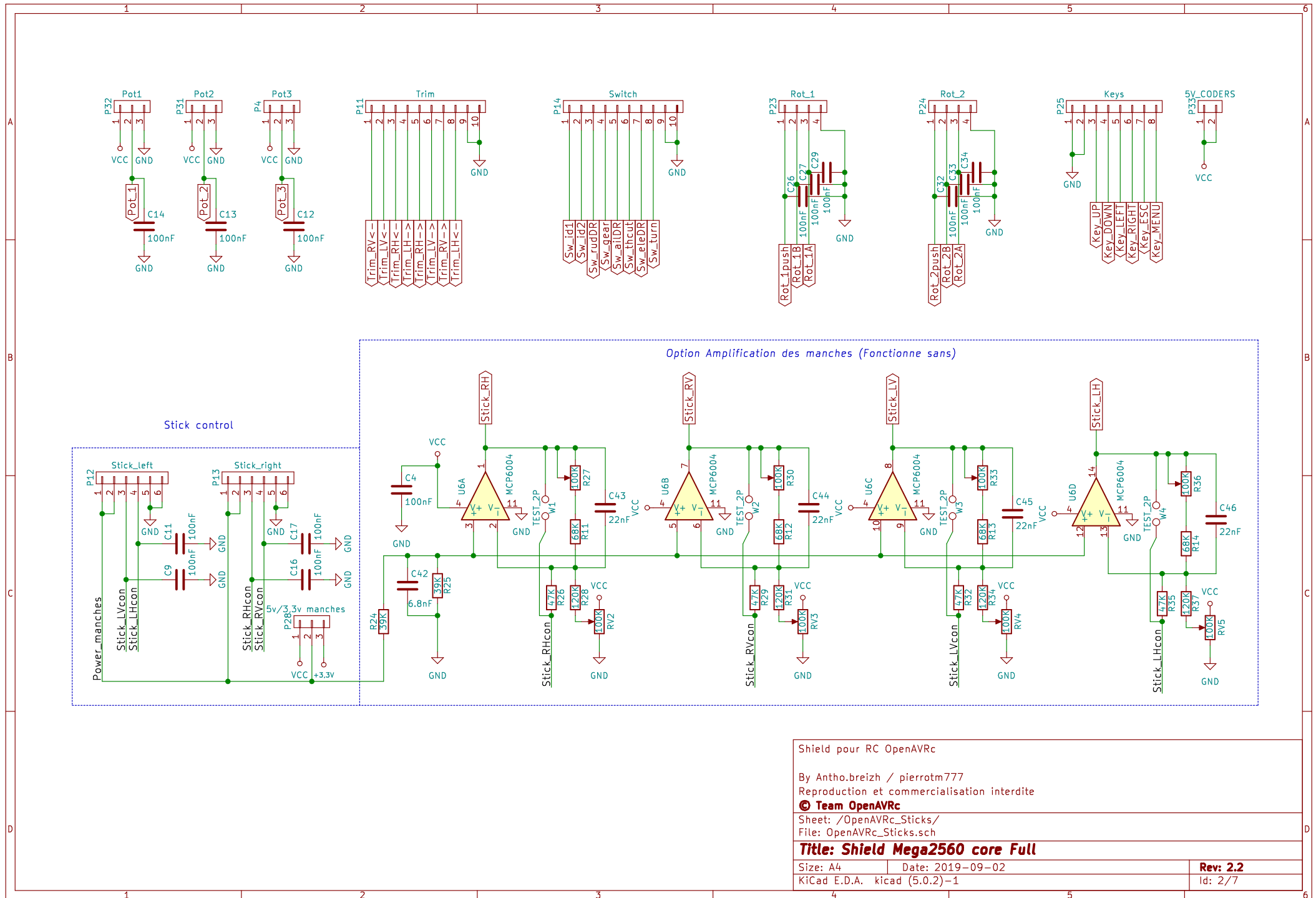
Switch — P14 — GND
Sw_id1 / Sw_id2 / Sw_rudDR / Sw_gear / Sw_ailDR / Sw_thcut / Sw_eleDR / Sw_turn

Rot_1 — P23 — C26 C27 C29 100nF 100nF — GND
Rot_1push / Rot_1B / Rot_1A

Rot_2 — P24 — 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

5V_CODERS — P33 — VCC

Stick_left — P12
Stick_right — P13
Power_manches / Stick_LVcon / Stick_LHcon
GND C11 100nF / C9 100nF
Stick_RHcon / Stick_RVcon
GND C17 100nF / C16 100nF
5v/3.3v manches — P28 — VCC +3.3v

R24 39K / C42 6.8nF / 39K R25

Stick_RH — VCC — C4 100nF — GND — U6A MCP6004 — TEST_2P W1 — 100K R27 — C43 22nF — VCC
Stick_RHcon — 47K R26 / 120K R28 — VCC — 100K RV2 — GND — 68K R11 — GND

Stick_RV — U6B MCP6004 — TEST_2P W2 — 100K R30 — C44 22nF — VCC
Stick_RVcon — 47K R29 / 120K R31 — VCC — 100K RV3 — GND — 68K R12 — GND

Stick_LV — U6C MCP6004 — TEST_2P W3 — 100K R33 — C45 22nF — VCC
Stick_LVcon — 47K R32 / 120K R34 — VCC — 100K RV4 — GND — 68K R13 — GND

Stick_LH — U6D MCP6004 — TEST_2P W4 — 100K R36 — C46 22nF — VCC
Stick_LHcon — 47K R35 / 120K R37 — VCC — 100K RV5 — GND — 68K R14 — GND
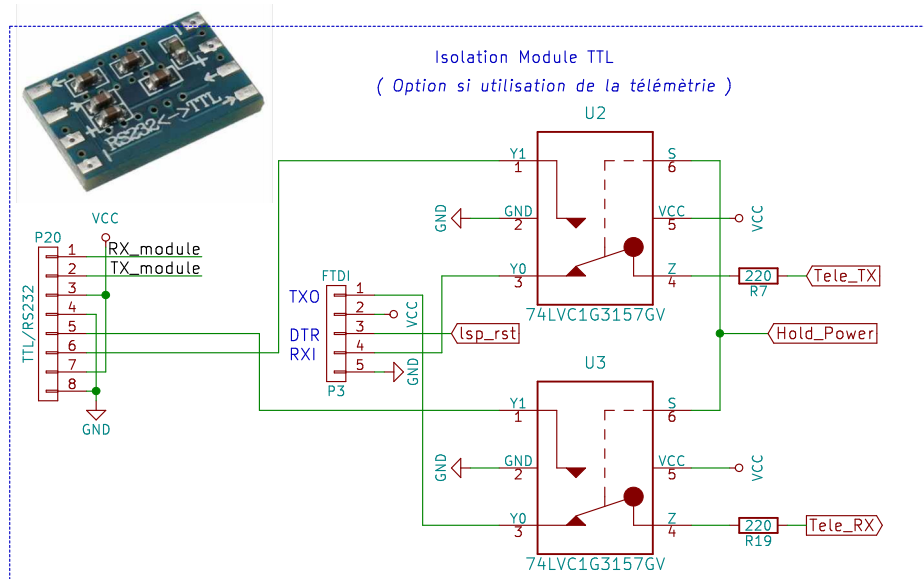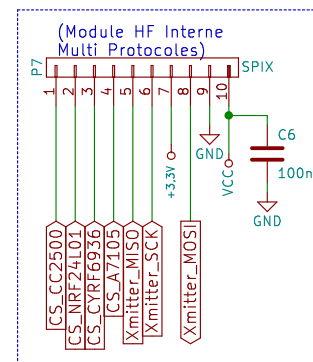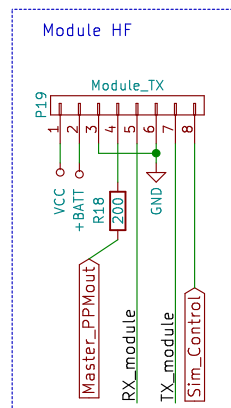
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Sheet: /OpenAVRc_Sticks/
File: OpenAVRc_Sticks.sch
Title: Shield Mega2560 core Full
Size: A4 | Date: 2019-09-02 | **Rev: 2.2**
KiCad E.D.A. kicad (5.0.2)-1 | Id: 2/7

SPI

Miso	1	2	
Sck	3	4	Mosi
lsp_rst	5	6	

P9

GND   VCC

Micro_sd

P6
Microsd_CS1
Sck
Mosi
Miso
100nF C3
VCC   GND

LCD

P16
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
GND

LCD_VCC   10K RV1   GND   R10 100
RV6 1K   Lcd_bla

v2.1:Connectors-2560-core

GND C15 100nF   VCC   P1   VCC

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	BT_KEY_CMD
	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
Spare_2	G3	H7	Spare_1
	GND	GND	

2560-core

GND

100nF C19   GND

Miso	B3		VCC
Sck	B1	B2	Mosi
lsp_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	
	GND	GND	

GND   VCC   GND

AGND

	GND	NC		
	G4	D4		
	D5	D6		
	D7	G0		
	G1	C0		
	C1	C2		
	C3	C4		
	C5	C6		
	C7	VCC		

AGND   GND
PPM_in Sw_rudDR Sw_id1 Lcd_bla Lcd_rst Lcd_r/w
BT_OnOff Sw_ailDR Sw_gear Sw_id2 Lcd_cs Lcd_A0 Lcd_e

VCC   100nF C18   GND

51.5mm   36.5 mm   MEGA 2560 core

Bluetooth HC-05/HM-10

P10 RX1TX1
GND   R5 2K7
R6 1K
BT_Txd1
BT_Rxd1
C10 100nF   GND
IRLML5203 Q1   VCC   R39 47K
R40 100   BT_OnOff
R38 1K   BT_KEY_CMD
R23 2K7   GND

Pin out libre

DUMMY	3	
	2	Spare_2
	1	Spare_1

P15

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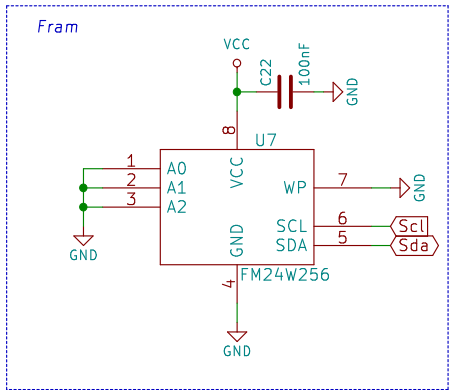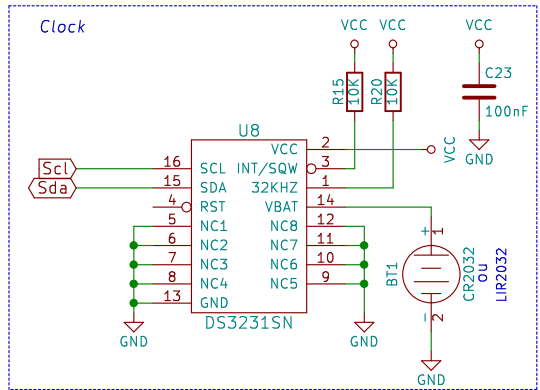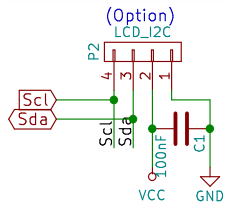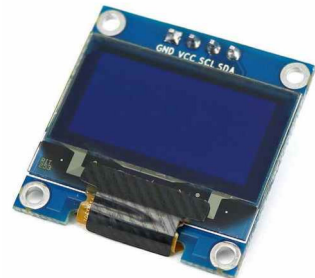
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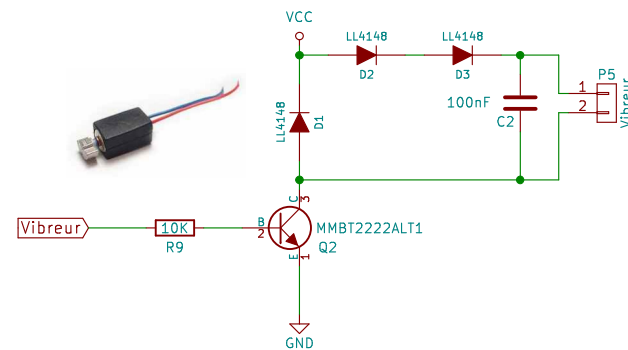File: OpenAVRc_CoreConnects.sch

Title: Shield Mega2560 core Full

| Size: A4 | Date: 2019-09-02 | Rev: 2.2 |
| KiCad E.D.A. kicad (5.0.2)-1 | | Id: 3/7 |

Module HF

P19
Module_TX

1 2 3 4 5 6 7 8

VCC
+BATT
R18 200
GND
Sim_Control

Master_PPMout
RX_module
TX_module

(Module HF Interne Multi Protocoles)

P7
SPIX

1 2 3 4 5 6 7 8 9 10

CS_CC2500
CS_NRF24L01
CS_CYRF6936
CS_A7105
Xmitter_MISO
Xmitter_SCK
+3,3V
Xmitter_MOSI
GND
VCC

C6
100nF
GND

Isolation Module TTL
(Option si utilisation de la télémètrie)

U2
74LVC1G3157GV

Y1 1 — S 6
GND 2 — GND — VCC 5 — VCC
Y0 3 — Z 4 — 220 R7 — Tele_TX

Hold_Power

U3
74LVC1G3157GV

Y1 1 — S 6
GND 2 — GND — VCC 5 — VCC
Y0 3 — Z 4 — 220 R19 — Tele_RX

P20
TTL/RS232

1 VCC
2 RX_module
3 TX_module
4
5
6
7
8
GND

FTDI
P3

TXO
1
VCC
DTR 2
RXI 3
4
5
GND

lsp_rst

PPM Management

U1
74LVC1G3157GV

PPM_in — Y1 1 — S 6 — Sim_Control
GND 2 — GND — VCC 5 — VCC
PPM16_SIMout — Y0 3 — Z 4 — 200 R8

P18
Ecolage
1
2
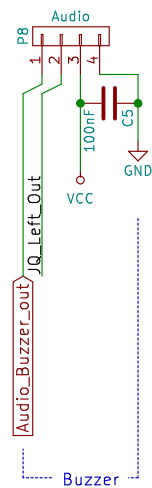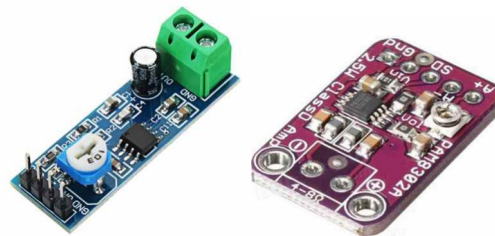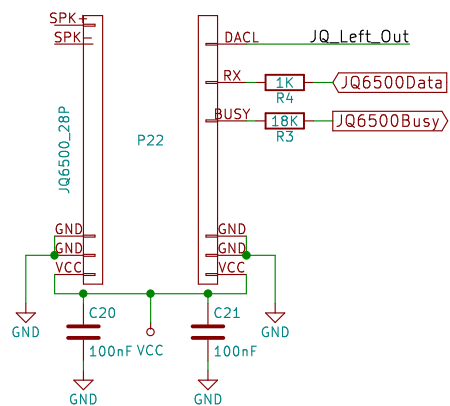GND

Title: Shield Mega2560 core Full

Size: A4 | Date: 2019-09-02 | Rev: 2.2
KiCad E.D.A. kicad (5.0.2)-1 | Id: 4/7

(Option)
LCD_I2C

P2

| 4 | 3 | 2 | 1 |

Scl
Sda

Scl
Sda

100nF C1

VCC   GND

PCF8574

Clock

VCC VCC

R15 10K
R20 10K

VCC

C23
100nF

GND

U8

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

Scl
Sda

VCC

GND

GND

DS3231SN

BT1
CR2032
OU
LIR2032

GND

Fram

VCC

C22
100nF

GND

U7

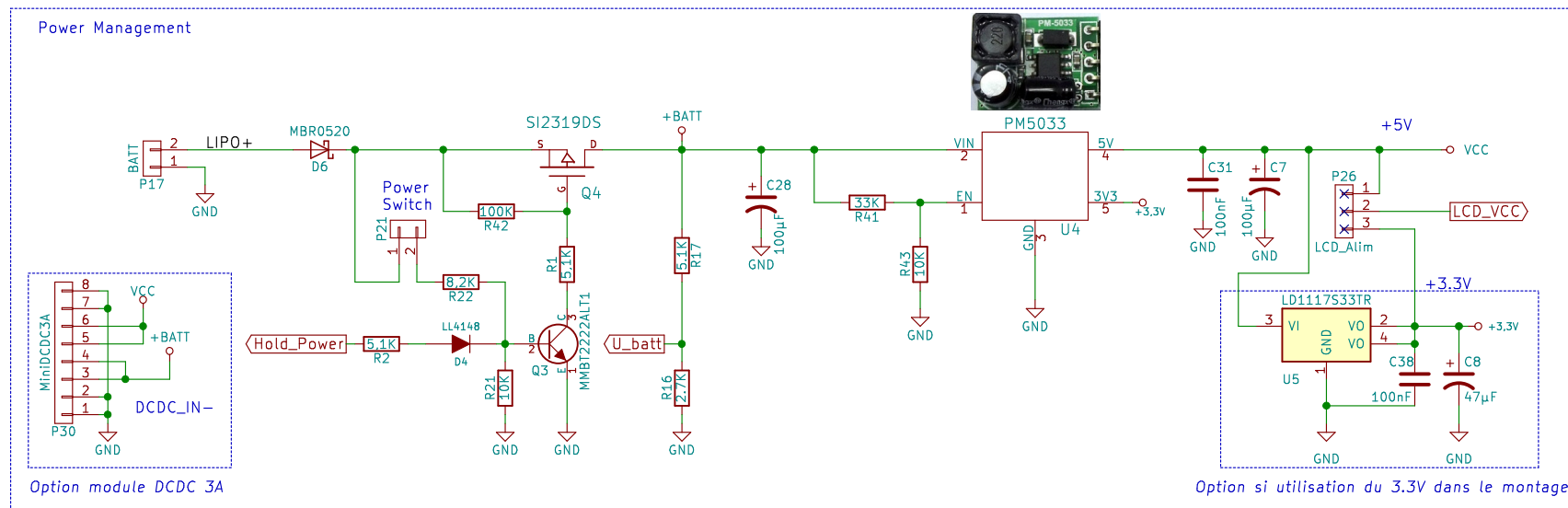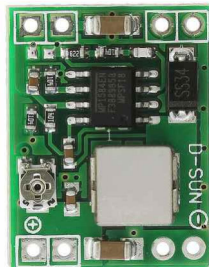| 1 | A0 | | WP | 7 |
2	A1	VCC		
3	A2		SCL	6
		GND	SDA	5

GND

GND

GND

Scl
Sda

FM24W256

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Sheet: /OpenAVRc_I2C/
File: OpenAVRc_I2C.sch

Title: Shield Mega2560 core Full

| Size: A4 | Date: 2019-09-02 | **Rev: 2.2** |
| KiCad E.D.A. kicad (5.0.2)-1 | | Id: 5/7 |

SPK+
SPK-

DACL — JQ_Left_Out

RX — [1K] R4 — JQ6500Data

BUSY — [18K] R3 — JQ6500Busy

JQ6500_28P

P22

GND
GND
VCC

GND
GND
VCC

GND   GND

C20   C21

100nF VCC   100nF

GND   GND

Audio

P8

1 2 3 4

100nF   C5

VCC   GND

Audio_Buzzer_out

JQ_Left_Out

Buzzer

VCC

LL4148 D2   LL4148 D3

LL4148 D1

100nF C2

P5

1
2

Vibreur

Vibreur — [10K] R9 — B 2 / C 3 / E 1 — MMBT2222ALT1 Q2

GND

Sheet: /OpenAVRc_Audio_Haptic/
File: OpenAVRc_Audio_Haptic.sch

Title: Shield Mega2560 core Full

Size: A4	Date: 2019-09-02	Rev: 2.2
KiCad E.D.A. kicad (5.0.2)-1		Id: 6/7

Power Management

LIPO+
BATT
P17

MBR0520
D6

Power Switch
P21

SI2319DS
Q4

100K
R42

8,2K
R22

LL4148
D4

5,1K
R1

R21
10K

MMBT2222ALT1
Q3

+BATT

5,1K
R17

R16
2,7K

+ C28
100µF

33K
R41

R43
10K

PM5033

VIN
EN
5V
3V3
GND
U4

+3.3V

+ C31
100nF

+ C7
100µF

P26
LCD_Alim

+5V

VCC

LCD_VCC

+3.3V

LD1117S33TR

VI
GND
VO
VO
U5

C38
100nF

+ C8
47µF

+3.3V

Option si utilisation du 3.3V dans le montage

Hold_Power
5,1K
R2

U_batt

GND

Option module DCDC 3A

MiniDCDC3A
P30

8
7
6
5
4
3
2
1

VCC

+BATT

DCDC_IN−

GND

Shield pour RC OpenAVRc

By Antho.breizh / pierrotm777

Sheet: /OpenAVRc_Power/
File: OpenAVRc_Power.sch

Title: Shield Mega2560 core Full

| Size: A4 | Date: 2019−09−02 | Rev: 2.2 |
| KiCad E.D.A. kicad (5.0.2)−1 | | Id: 7/7 |