Addendum **30/12/16-001**

Guide for the placement of **“eclaire XL”** in a Mini ITX case

For this guide a **MHero-S-R** Mini-ITX case have been used. Keeping in mind that the rest of "mini ITX cases" exist in markets is almost the same, this guide can be applied also to those.

Preparing the mini ITX case.

1. First remove the upper metal lid of your new case. To be this possible unscrew the back center bolt, and slide back the upper lid.
2. Unscrew the three bolts and remove the HDD/FAN metal holder.
3. After remove the front plastic fascia pressing gently the internal 6 plastic ears. Carefully take out the cables.
4. Unscrew the two bolts and remove also the internal PSU (dc to dc converter).
5. Remove the small plastic cover in right side of fascia. Unscrew also there the 4 bolts, and remove the unneeded Molex and SATA connectors. Place back the small plastic cover.
Pictures 1-5

Preparing the “eclaire XL” board.

6. Unscrew the three upper bolts and remove the sub-board from the main. Remove also the two ribbon cables SIO/PBI, and the power two pole cable.
7. Unscrew the bolt from bottom and remove the spacer located at right side of main board.
8. If you can not find a 18mm spacer with male thread in bottom, then you must construct one. You need a bolt as used in PC's, with 2.5 to 3 cm height, and the spacer which removed in step **6**.
8a. Cut the head of bolt, and screw the half of thread in spacer with a bit of epoxy glue. After wait a minute to dry.
9. Only for the 5 prototype boards you must remove from the two 10-pin IDC male connectors on the main board, the lock/polarity pin.
For AC97 Audio is the **pin Nr.8.**
For USB A_B is the **pin Nr.9**
This could be possible using your solder iron to heat up the pin from the solder side, and a plier as to pull it out from the top. You must have support first the main board in a vice.
Attention must be given here as to not overtight the board in the vise!!
Also to not catch any components!!!
Pictures 6-15

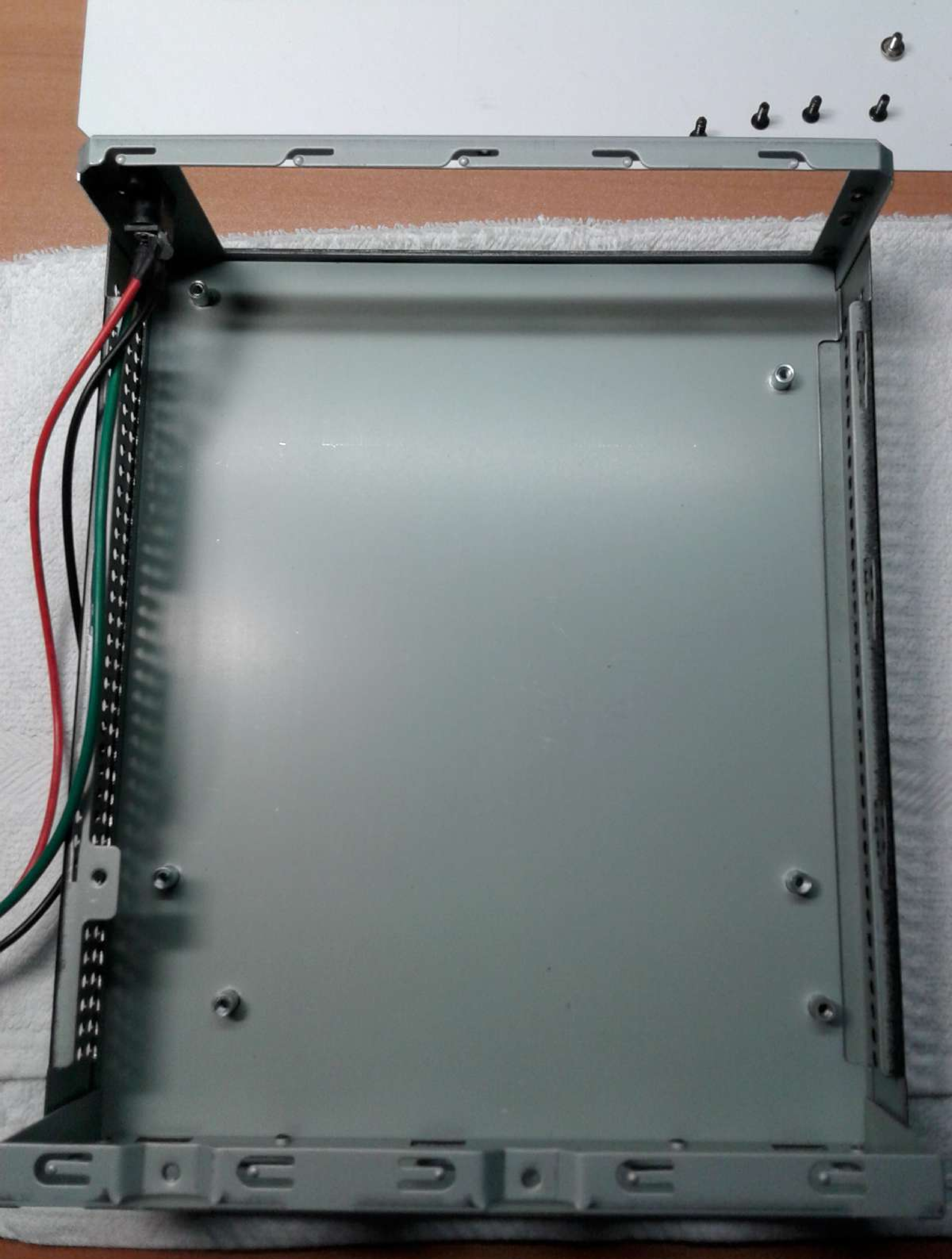
Assembly

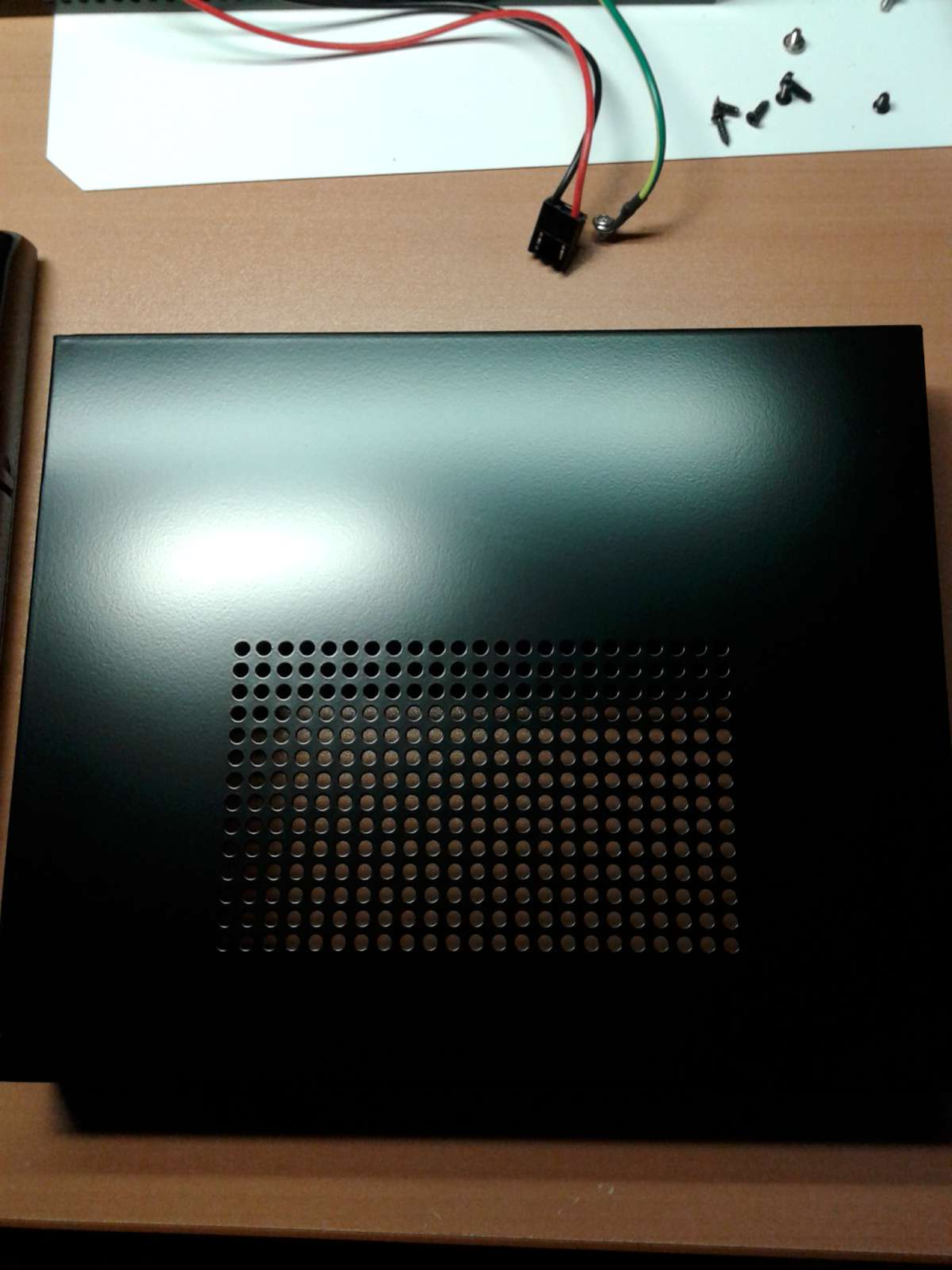
10. Use two silver bolts from the bag which came with your new ITX case, and screw from bottom two spacers with height 5mm, in the two support holes in center of main board.

11. Place the main board in your new case, and use 3 silver bolts from your bag as to fix it in position.
12. Then screw the new constructed spacer with thread in the last support hole.
13. Place and screw the sub board in it's position, and snap into their place the two ribbon cables. The same for 2 pole power cable.
14. Snap the “Power Switch” cable from fascia, in Reset connector of main board.
15. Snap the “Power Led” cable from fascia, in Led connector of main board, using the right polarity. Cable marked “+” go to the outer side (metal frame of case).
16. Last you must snap the two 10pin IDC connectors, marked as “USB” and “AC'97”, at “USB A_B” and “AC97_AUDIO” of main board respectively.
17. Tie the cables together using 1-2 tie wraps.
18. Place carefully the plastic fascia back in its initial position on metal frame.
19. Close the upper metal lid of your case.
Pictures 16 - 38

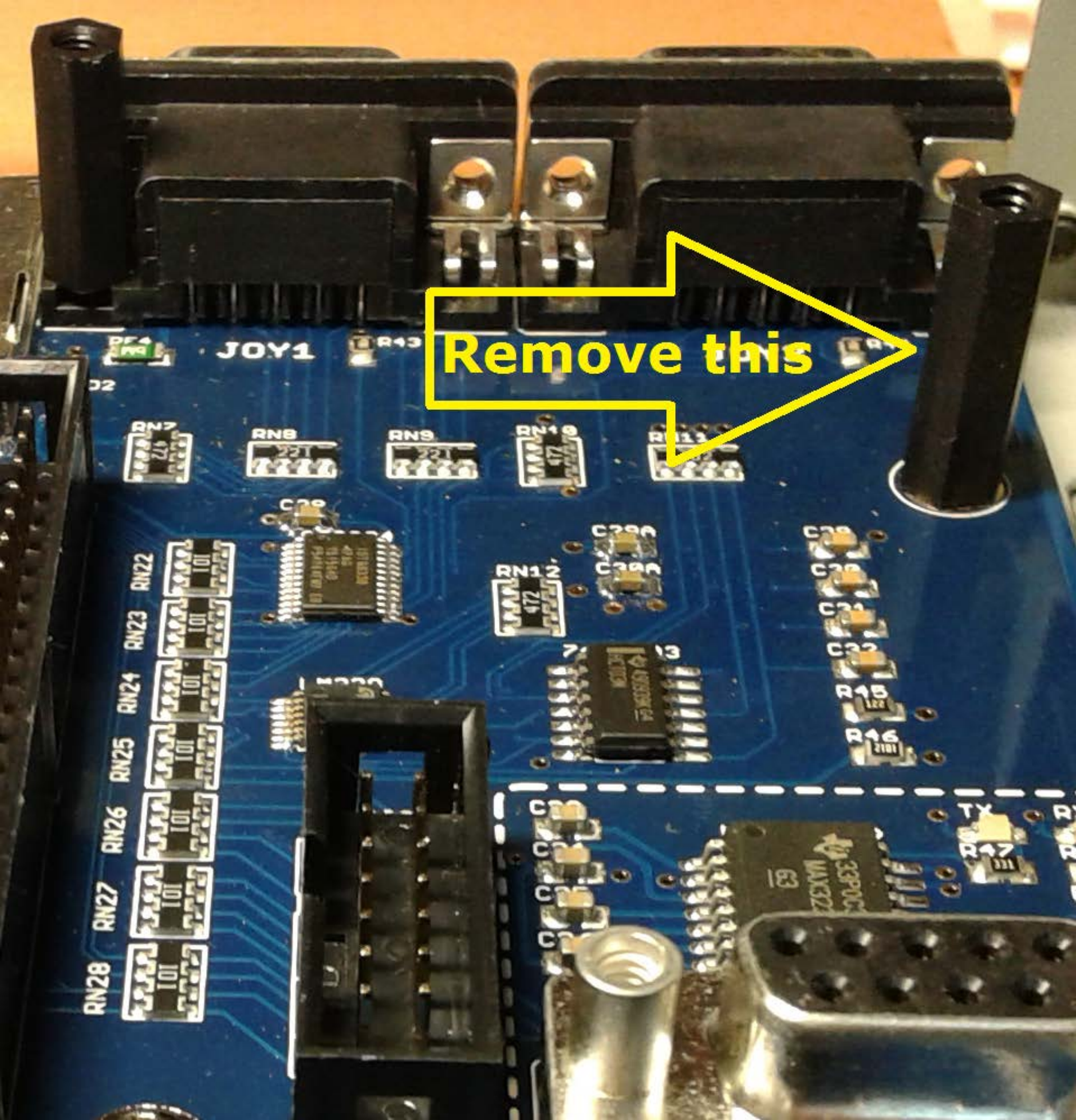
ENJOY

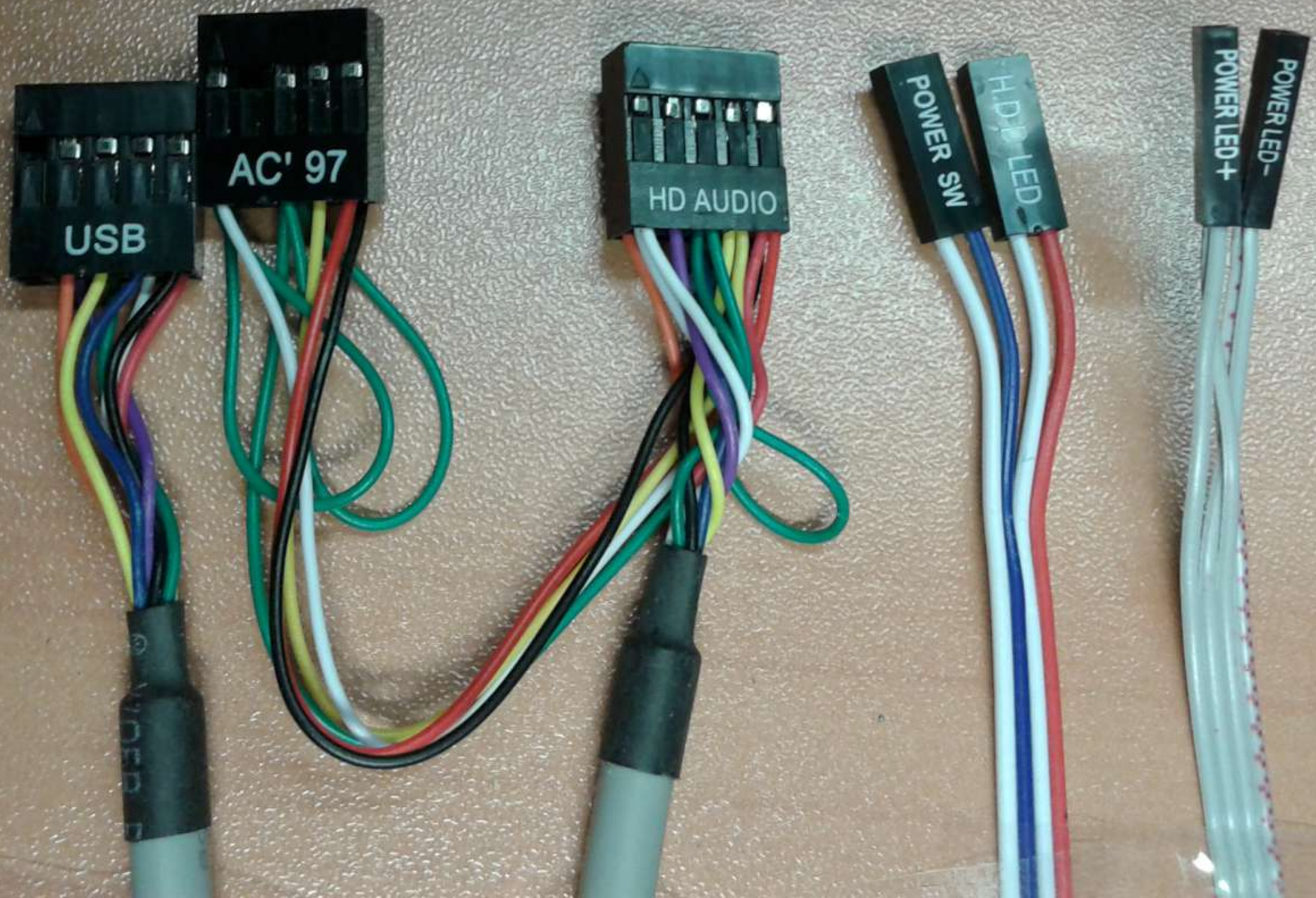
Created by
Panos Santos





AC/DC ADAPTER
Model:90W-TF07
INPUT:AC: 100-240V ~ 1.5A 50/60Hz
OUTPUT:DC: 12V ⎓ 7.0A
WARNING:
(1)this device may not cause harmful
interference
(2)this device must accept any interference
received, including interference that may
cause undesired operation.
CAUTION:INDOOR USE ONLY
MADE IN CHINA


Remove this
JOY1
RN7
RN8
RN9
RN22
RN23
RN24
RN25
RN26
RN27
RN28
R15
R16
R17

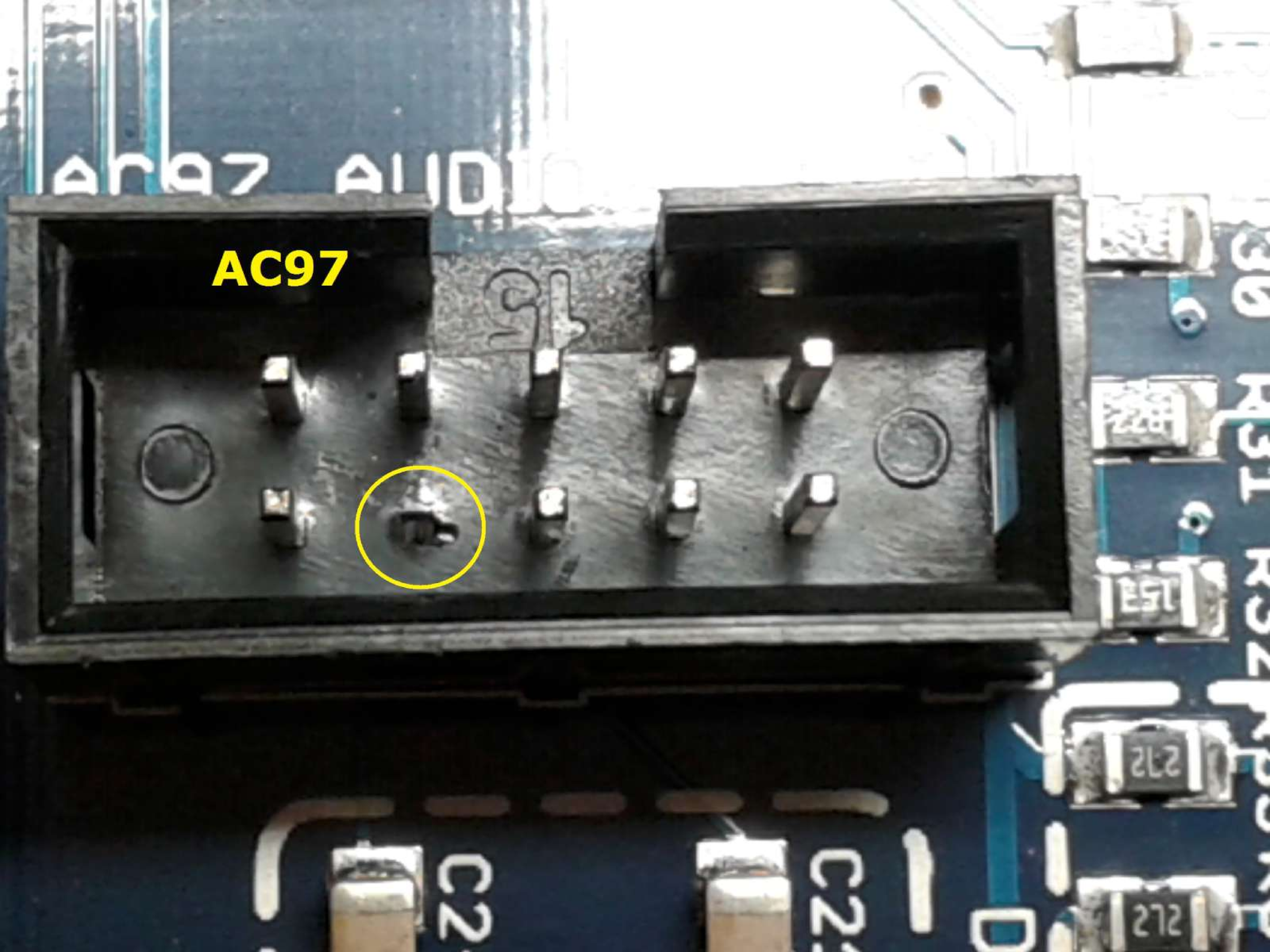

USB
AC' 97
HD AUDIO
POWER SW
POWER LED+
POWER LED-

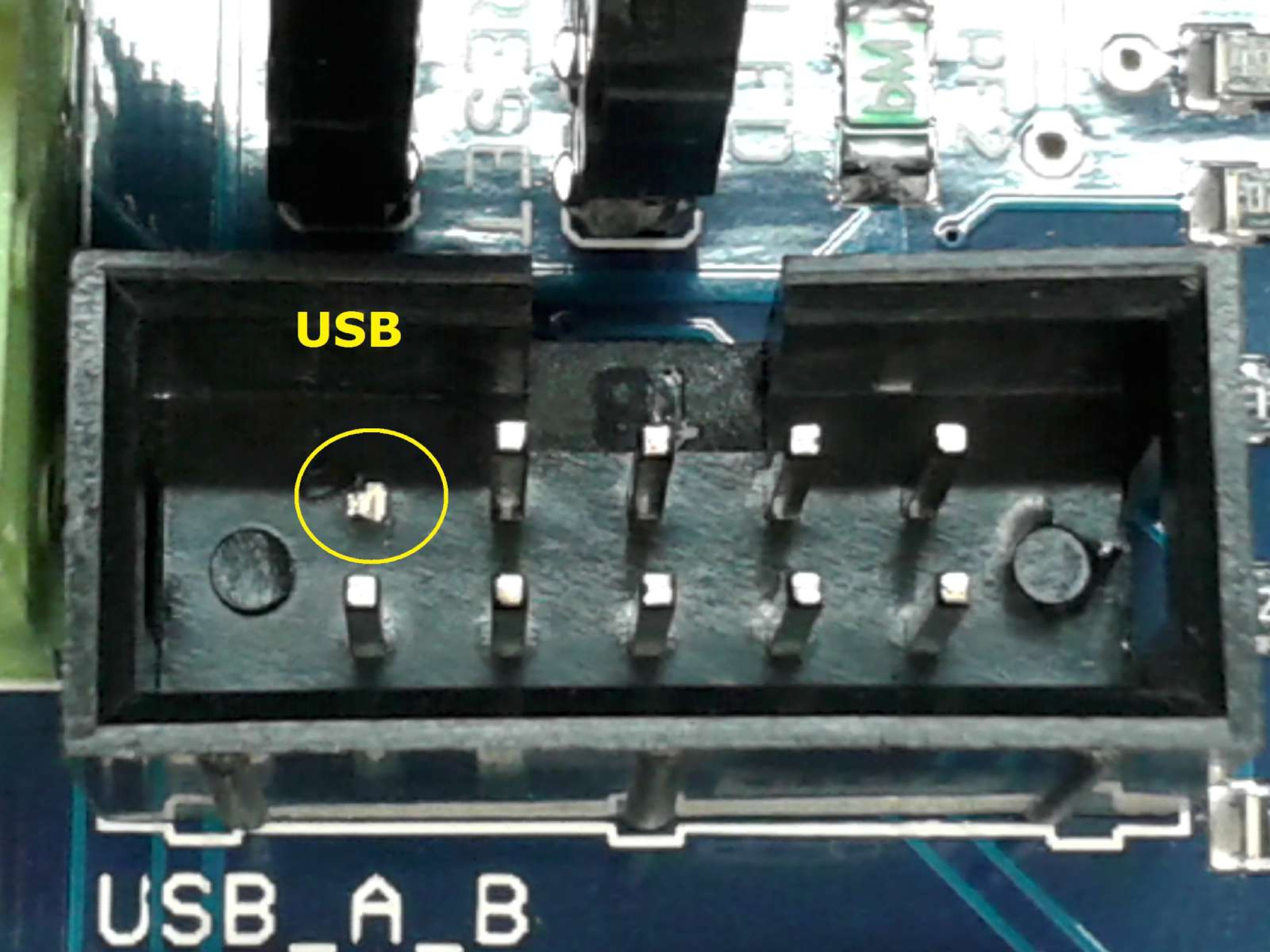
USB A_B

AC97_AUDIO

USB

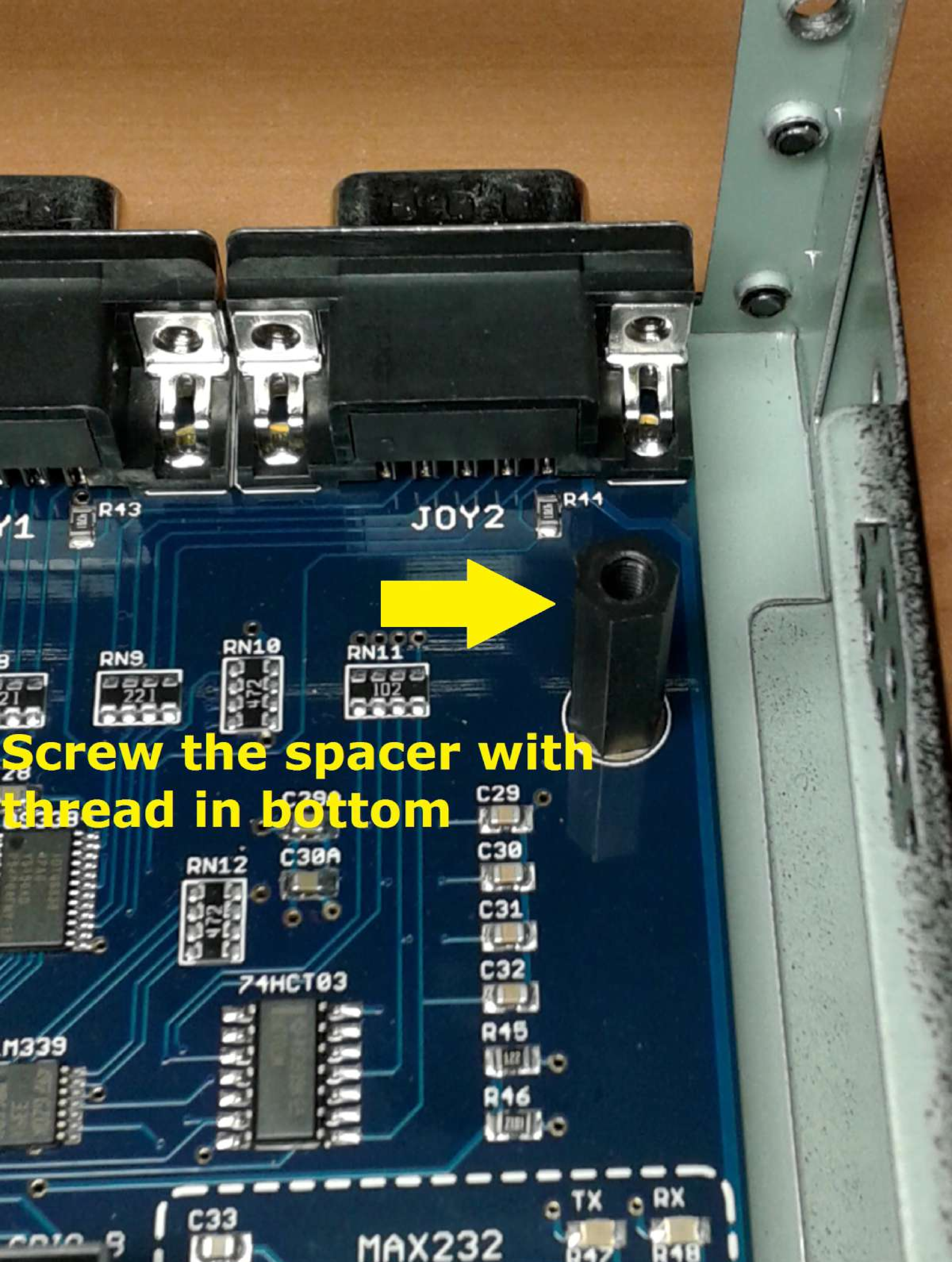
AC' 97


AC97

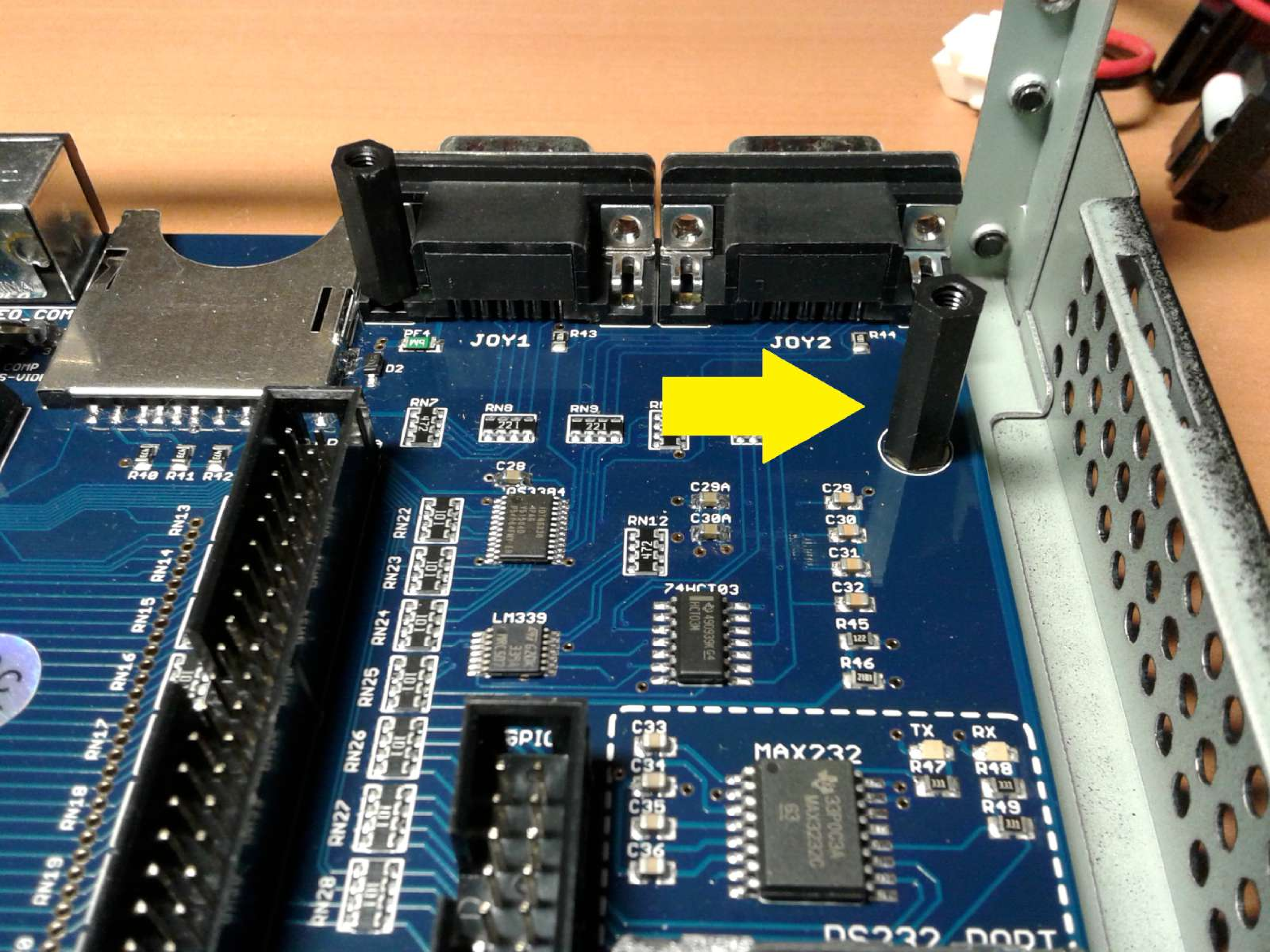

USB
USB_A_B

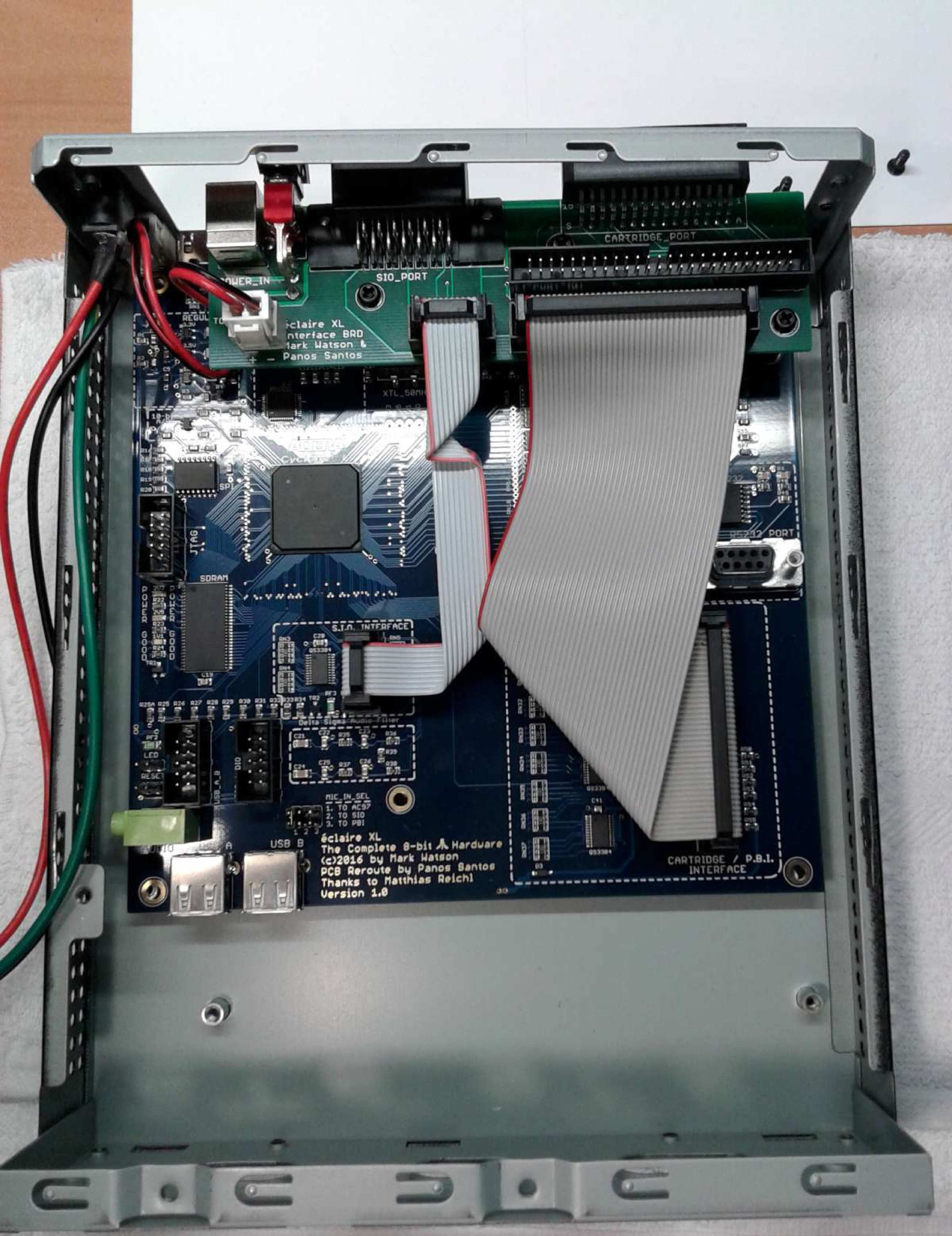
5mm Height

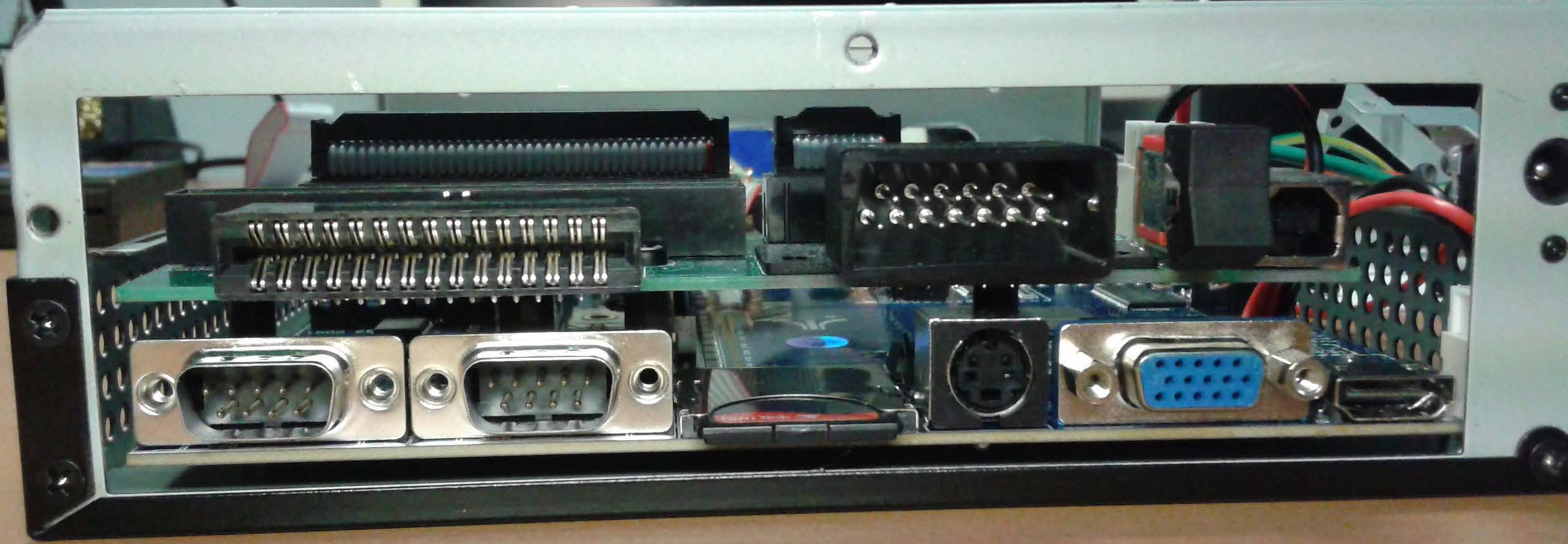
Yellow marks holders in case.
Red marks 5mm height spacers.



Screw the spacer with thread in bottom


JOY1
JOY2
R43
R44
D2
RN7
RN8
RN9
R40
R41
R42
C28
C29A
C30A
C29
C30
C31
C32
RN12
74HCT03
LM339
R45
R46
RN13
RN14
RN15
RN16
RN17
RN18
RN19
RN22
RN23
RN24
RN25
RN26
RN27
RN28
C33
C34
C35
C36
MAX232
TX
RX
R47
R48
R49


SIO_PORT
CARTRIDGE_PORT
éclaire XL
nterface BRD
lark Watson &
Panos Santos
XTL_50MH
SPI
JTAG
SDRAM
S.I.O. INTERFACE
RS232 PORT
Delta Sigma Audio Filter
LED
RESET
USB A-B
MIC_IN_SEL
1. TO AC97
2. TO SIO
3. TO PBI
éclaire XL
The Complete 8-bit Hardware
(c)2016 by Mark Watson
PCB Reroute by Panos Santos
Thanks to Matthias Reichl
Version 1.0
USB A
USB B
CARTRIDGE / P.B.I.
INTERFACE




PBI PORT

POWER_IN
SIO_PORT
CARTRIDGE_PORT
PBI_PORT
SIO_INT
PBI_CART_INT
éclaire XL
nterface BRD
lark Watson &
Panos Santos
ALTERA
Cyclone
SPI
JTAG
SDRAM
S.I.O. INTERFACE
Delta Sig
MIC_IN_SEL
1. TO AC97
2. TO SIO
3. TO PBI
USB A
éclaire XL
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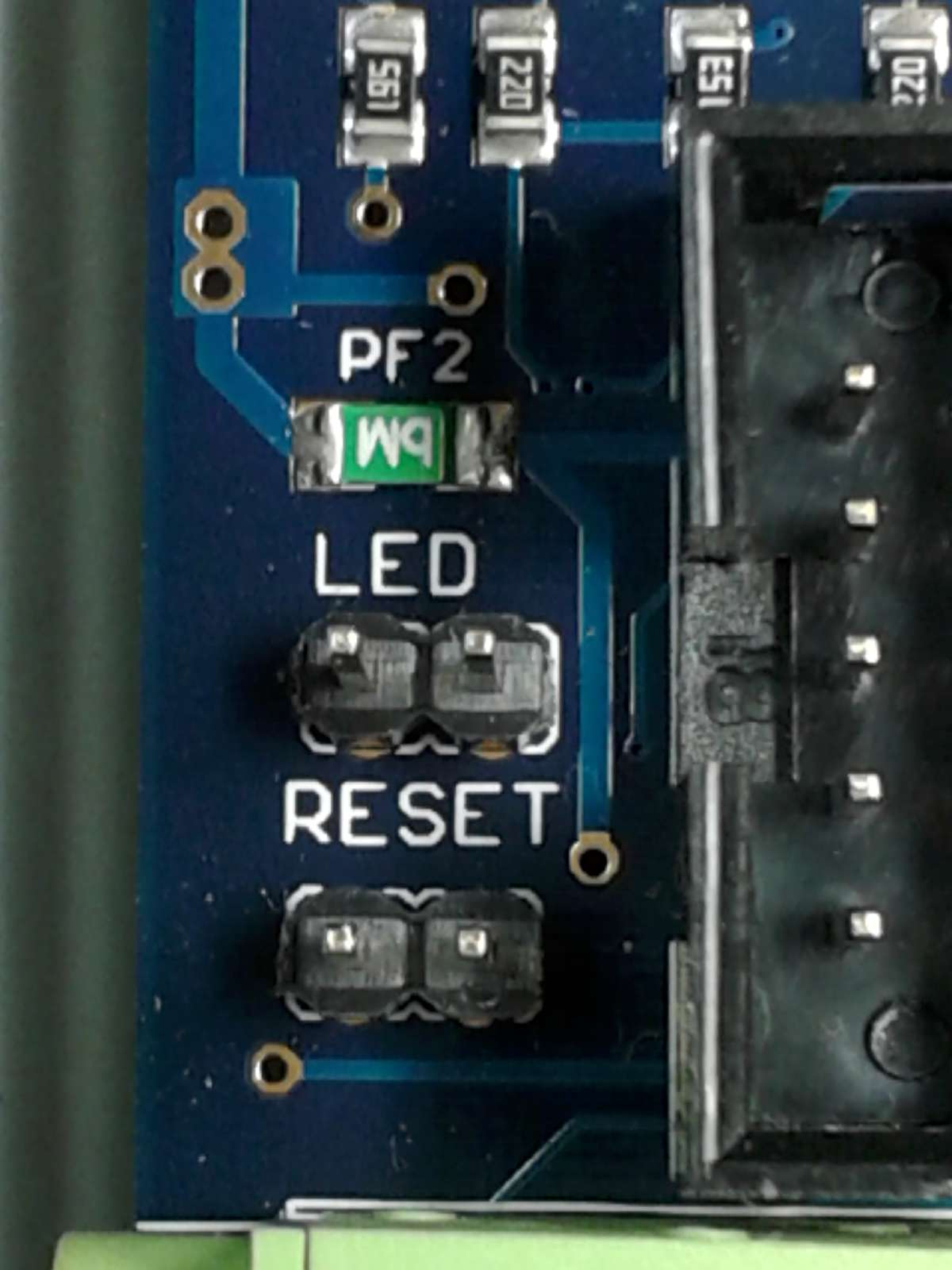
Version 1.0
P.B.I.

POWER SW

POWER LED-

POWER LED+


561
220
151
270
PF 2
W9
LED
RESET


POWER SW
AC97_AUDIO

R25A R25 R26 R27 R2

PF2

LED

RESET

R25A R25 R26 R27

PF2

LED

POWER LED-

POWER LED+

SB

SDRAM
POWER GOOD
3V3
R22
2V5
R23
1V1
R24
TR1
C19
S.I.O._INTERFACE
RN3
C20
QS3384
RN4
RN5
RN6
PF3
D1
TR2
R25A R25 R26 R27 R28 R29 R30 R31 R32 R33 R34
Delta Sigma
C21 C22 R35 C23 R36
R39
C24 C25 R37 C26 R38
PF2
LED
USB_A_B
AC97_AUDIO
MIC_IN_SEL
1. TO AC97
2. TO SIO
3. TO PBI
USB A
USB
Éclaire XL
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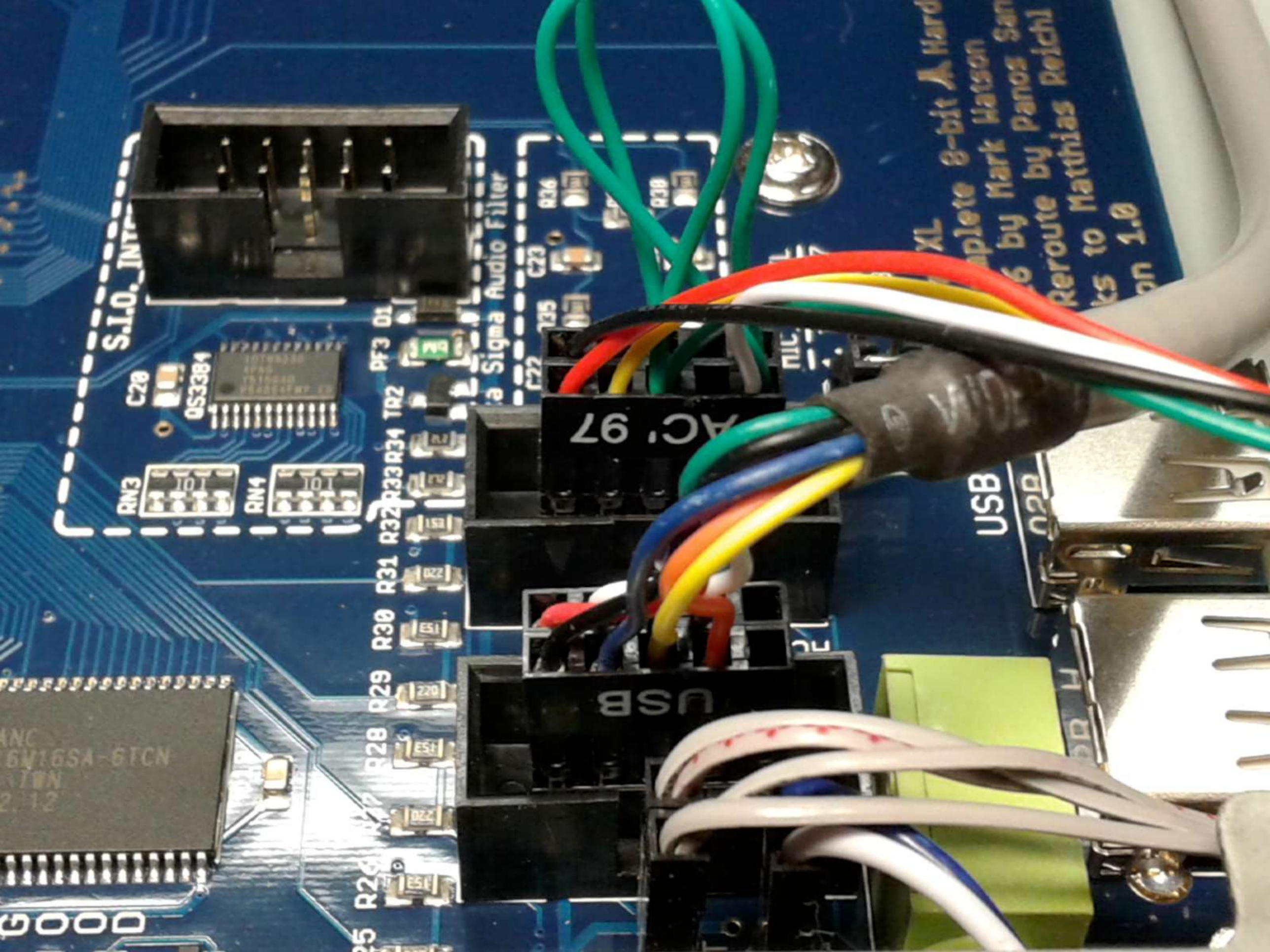
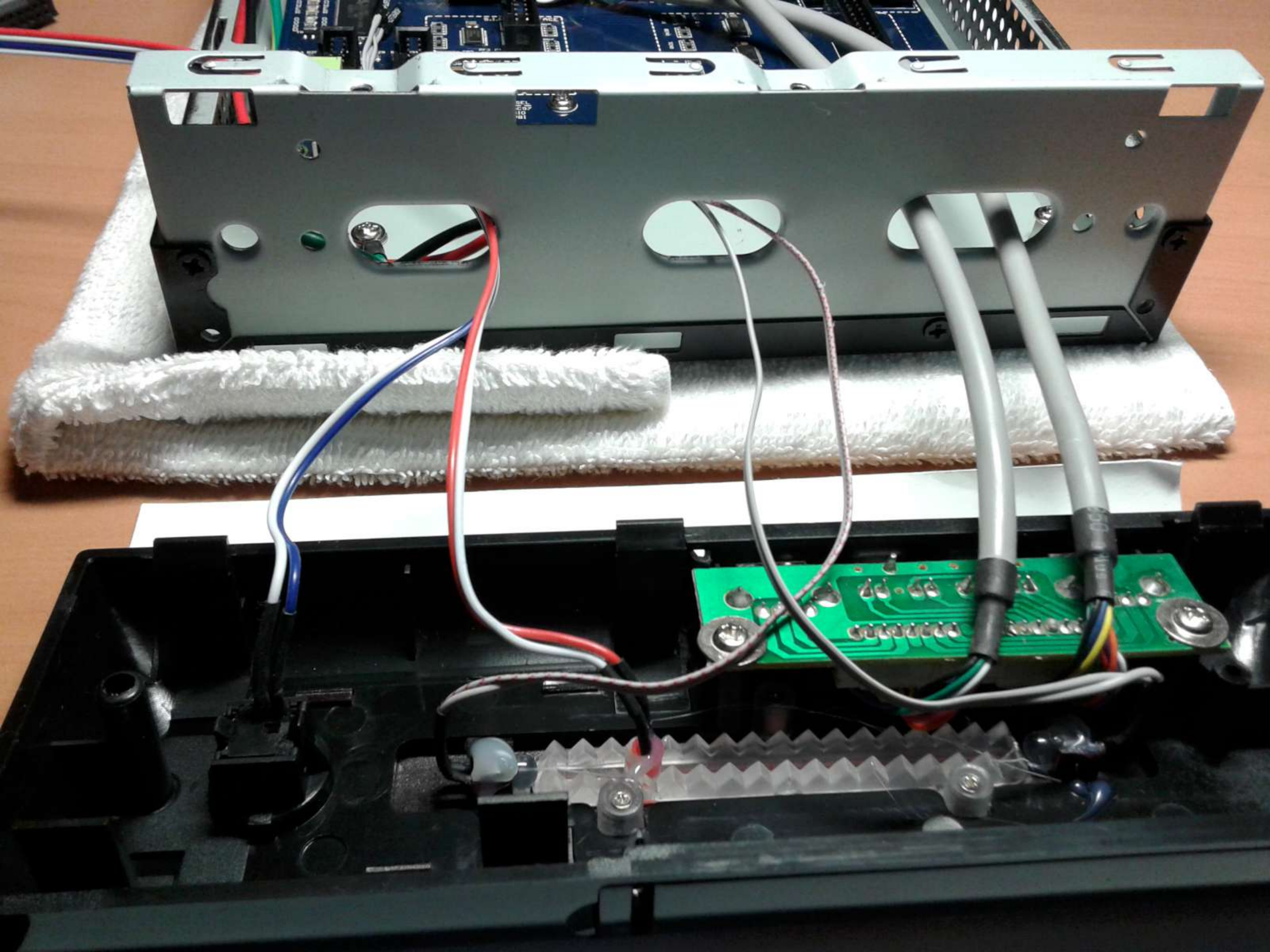
Version 1.0
RN21
RN29
RN30
RN31
RN32
RN33
RN34
RN35
RN36
RN37
D3
QS3384


S.I.O. INT
C28
OS33B4
PF3 01
TR2
R34
R33
R32
R31
R30
R29
R28
R27
R26
R25
RN3
RN4
C23
C22
R36
R38
a Sigma Audio Filler
USB
USB



éclaire XL
nterface BRD
lark Watson &
Panos Santos

ALTERA
Cyclone V

JTAG

SDRAM

POWER GOOD

Delta Sigma Audio Filter

AC97_AUDIO

MIC_IN_SEL
1. TO AC97
2. TO SIO
3. TO PBI

AUDIO

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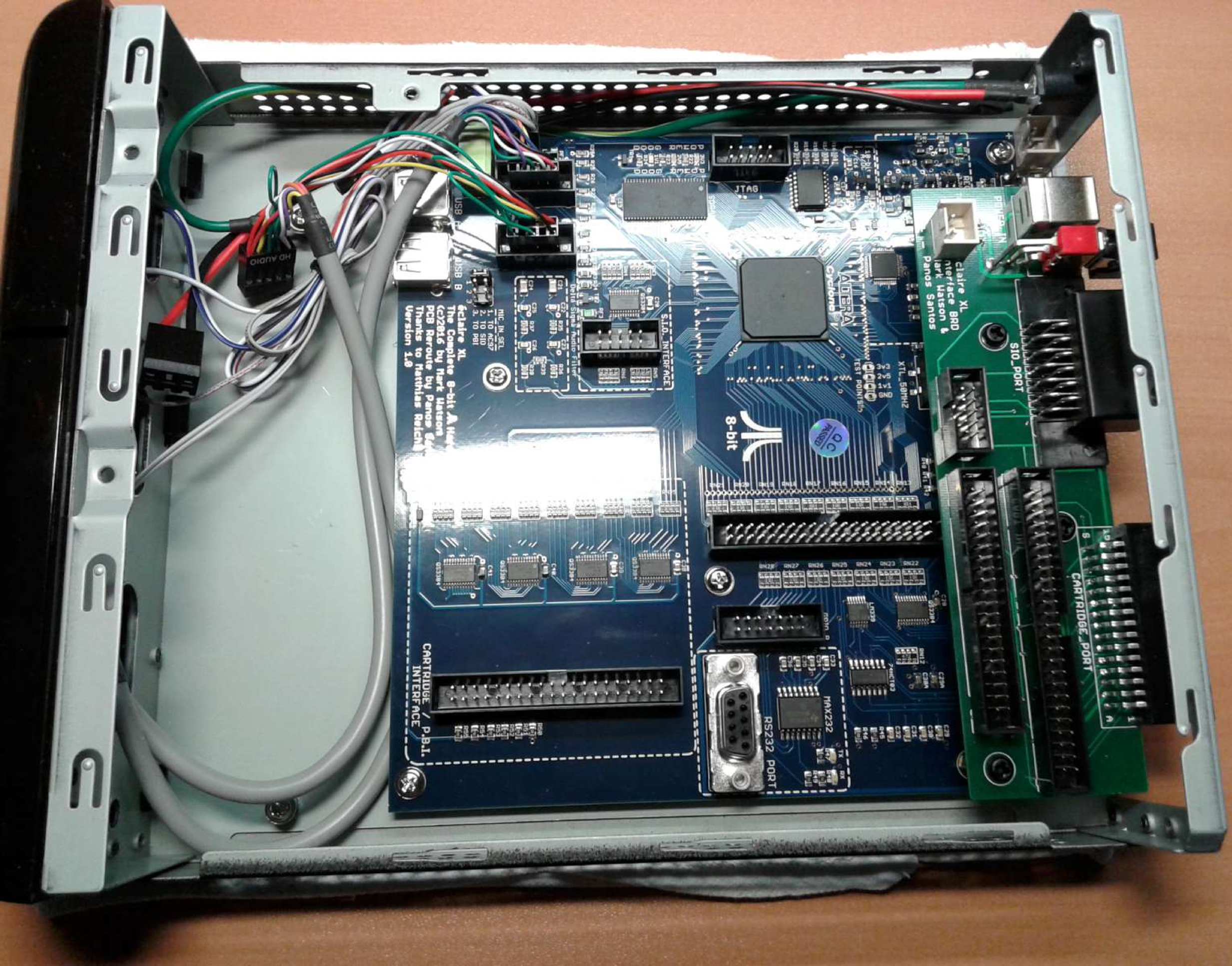
Version 1.0

CARTRIDGE
INTERFAC


JTAG
USB
USB B
HD AUDIO
MIC_IN_SEL
1-2 TO AC97
2-3 TO SIO
3-4 TO PBI
S.I.O. INTERFACE
ALTERA
Cyclone V
XTL_50MHZ
3V3
2V5
1V1
GND
TEST POINTS
PROPEN_IN
Claire XL
nterface BRD
lark Watson &
Panos Santos
SIO_PORT
8-bit
CARTRIDGE_PORT
CARTRIDGE / P.B.I. INTERFACE
RS232 PORT
MAX232


JTAG
SDRAM
SPI
POWER
+ -
Panos Santos
SIO_PORT
CARTRIDGE / P.B.I.
INTERFACE


FUJITSU COMPUTERS
SIEMENS
Menu
Auto


FUJITSU
SIEMENS


FUJITSU COMPUTERS
SIEMENS
Menu


FUJITSU COMPUTERS
SIEMENS
Menu
Auto


SETTINGS
CPU Turbo:1x
Drive Turbo:Fast(6)
Ram:320K(Compy)
Rom:ATARIXL.ROM
NONE
NONE
NONE
NONE
USB joysticks
Exit
1.HID Keyboard
Mouse
FUJITSU COMPUTERS
SIEMENS
Menu
Auto

SETTINGS

CPU Turbo:1x
Drive Turbo:Fast(6)
Ram:320K(Compy)
Rom:ATARIXL.ROM

Drive 1: NONE
Drive 2: NONE
Drive 3: NONE
Drive 4: NONE
Cart: NONE
Rotate USB joysticks

Exit

1.HID Keyboard
  Mouse

READY

FUJITSU COMPUTERS
SIEMENS

Menu
−
+
Auto


READY

SETTINGS

CPU Turbo:1x
Drive Turbo:Fast(6)
Ram:320K(Compy)
Rom:ATARIXL.ROM

Drive 1: NONE
Drive 2: NONE
Drive 3: NONE
ive 4: NONE
rt: NONE
tate USB joysticks

it

HID Keyboard
ouse