How to: Get the Nucleo-F103RB board working with Arduino IDE (based on leaflabs maple)

Hardware modifications:

There are a few things we need to change to get the board working properly:

OSC clock: (necessary step!)

Currently there are are two working possibilities: MCO from ST-LINK or HSE on-board oscillator.

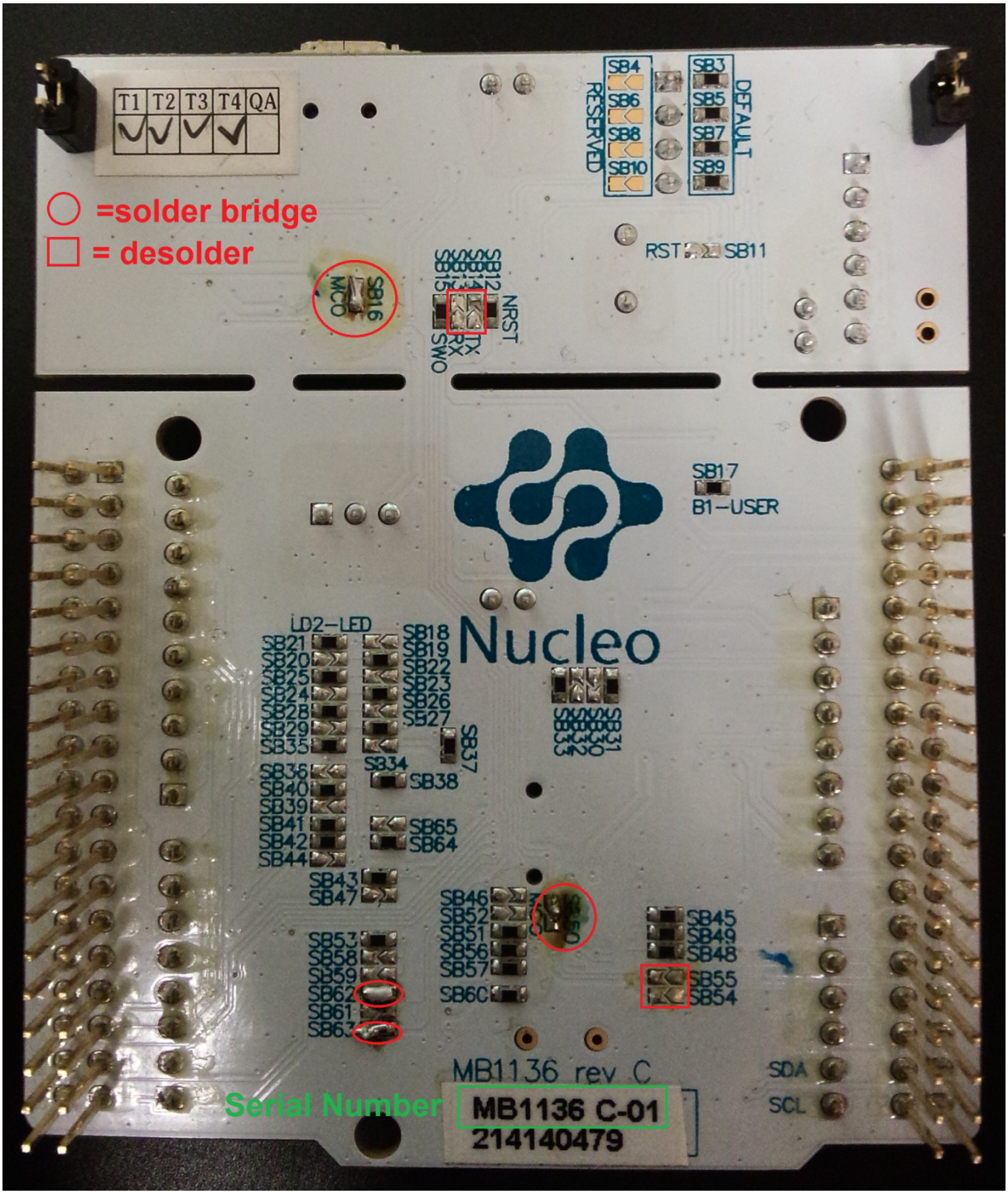
Solution 1 MCO from ST-LINK: Check your serial number on the backside of your board (see photo):
If your number is “MB1136 C-02” or higher, than you are ready to go to the next step.
If your serial number is “MB1136 C-02” you need following changes:
Desolder the 0-Ohm-resistors on SB55 and SB54 (bottom right) to cut the trace.
Solder a little bridge on: SB16(MCO) (top left) and SB50 (bottom middle)

Solution 2 HSE oscillator on-board from X3 crystal: Please consider the reference manual for further steps.

Free pins D0(PA3) and D1(PA2) and route Serial2 Debug (optional!)

If you need the two pins and/or you wanna route the debug serial signal (the serial signal you get into Arduino IDE) follow this steps:
Desolder the 0-Ohm-resistors on SB13 and SB14 (top middle) to cut the trace.
Solder a little bridge on: SB62 and SB63 (bottom left)

Now you are free to use the STLINK TX/RX connector (upside top left) for every serial signal you want! UART3 (Serial2) is remapped per software, so the pins PC10(TX) and PC11(RX) can easily jumpered to the ST-Link.


T1 T2 T3 T4 QA
=solder bridge
= desolder
SB4
SB6
SB8
SB10
RESERVED
SB3
SB5
SB7
SB9
DEFAULT
RST
SB11
SB16
MCO
SB12
SB13
SB14
SB15
NRST
TX
RX
SWO
SB17
B1-USER
Nucleo
LD2-LED
SB18
SB19
SB22
SB23
SB26
SB27
SB21
SB20
SB25
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SB57
SB6C
SB45
SB49
SB48
SB55
SB54
SB53
SB58
SB59
SB62
SB61
SB63
SB31
SB33
SB30
MB1136 rev C
SDA
SCL
Serial Number
MB1136 C-01
214140479