CH341 programmer "black" voltage modification

Reasons of voltage modification:

The "black" edition of this programmer is equipped with a 3.3 volts voltage regulator which allows to lower the 5 volts coming from the USB socket.

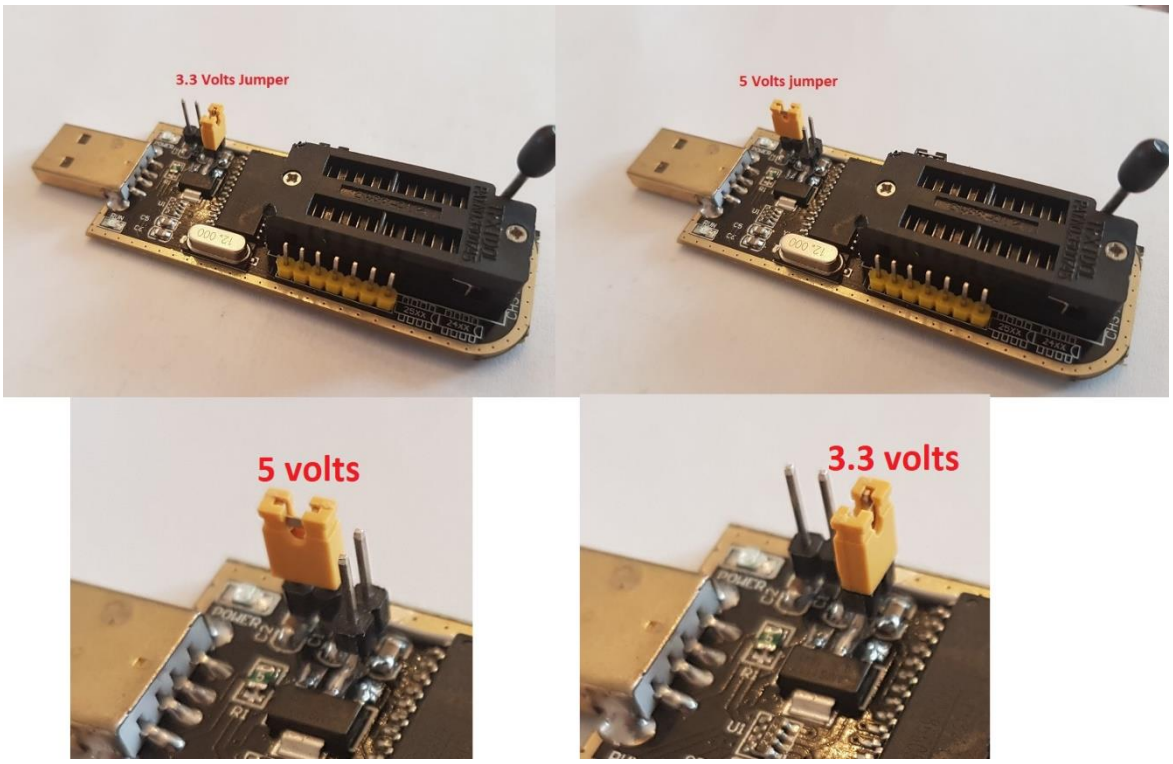
The VCC voltage of ZIF socket is 3.3 volts, however CH341A and pins voltage is 5 volts, most of the time there is no consequences.

But it can cause malfunctions with few components which are not voltage tolerant. (XTX Spi flash for example).

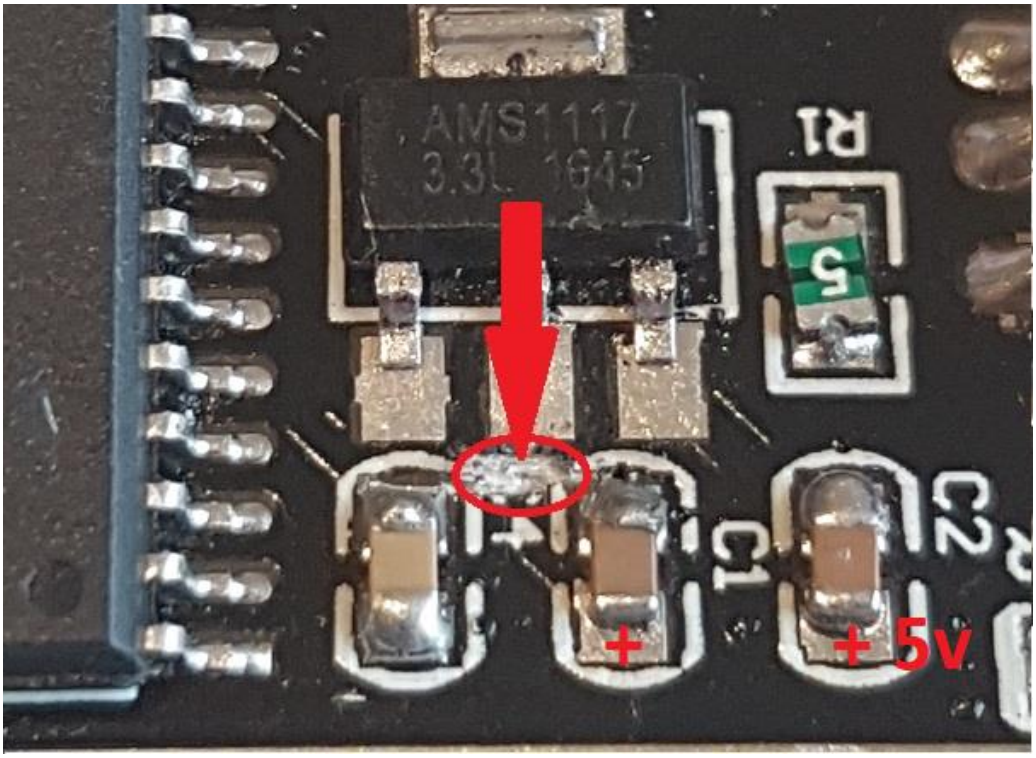
There are also components which do not operate at 3.3 Volts and which must be supplied with 5 Volts.

This document will guide you to modify our programmer so that it will have dual selectable voltage, 3.3 and 5 volts.

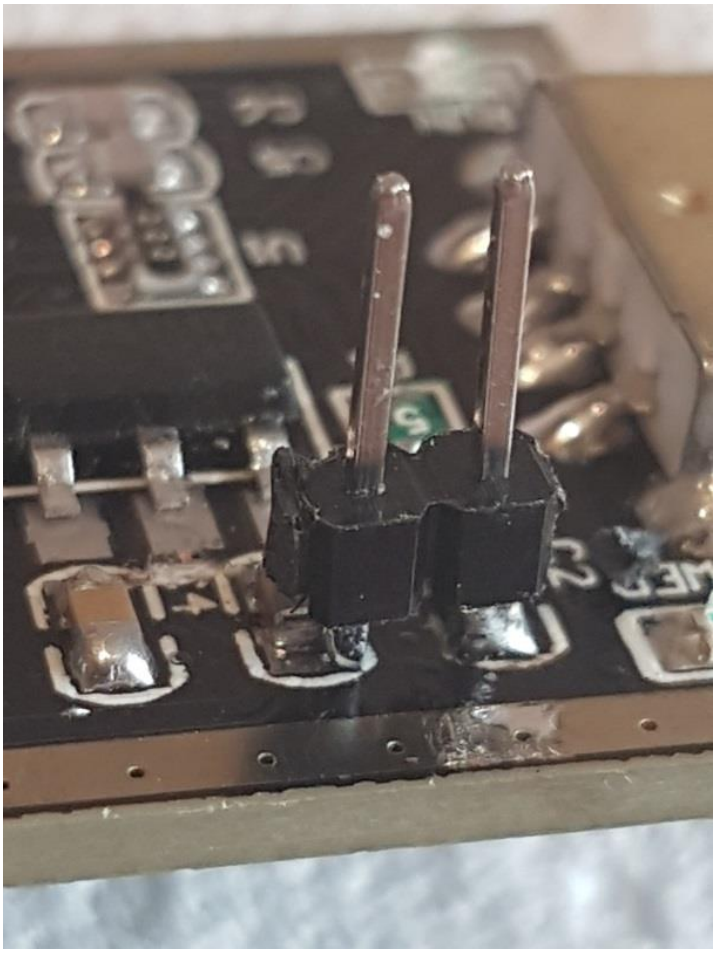
Once finished:



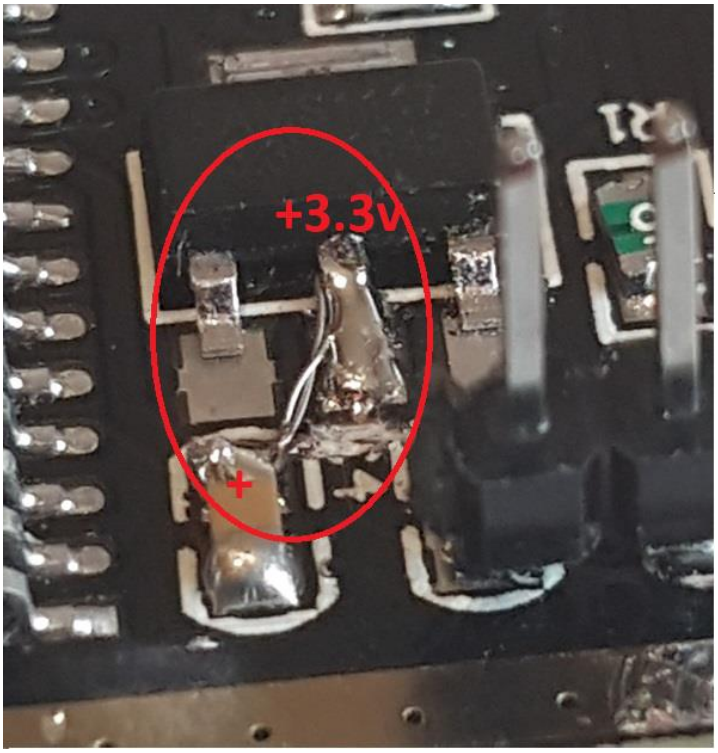
Cut the copper link that connects the 3.3 volts output to the + of capacitor C1.



Solder a jumper (C2 side)

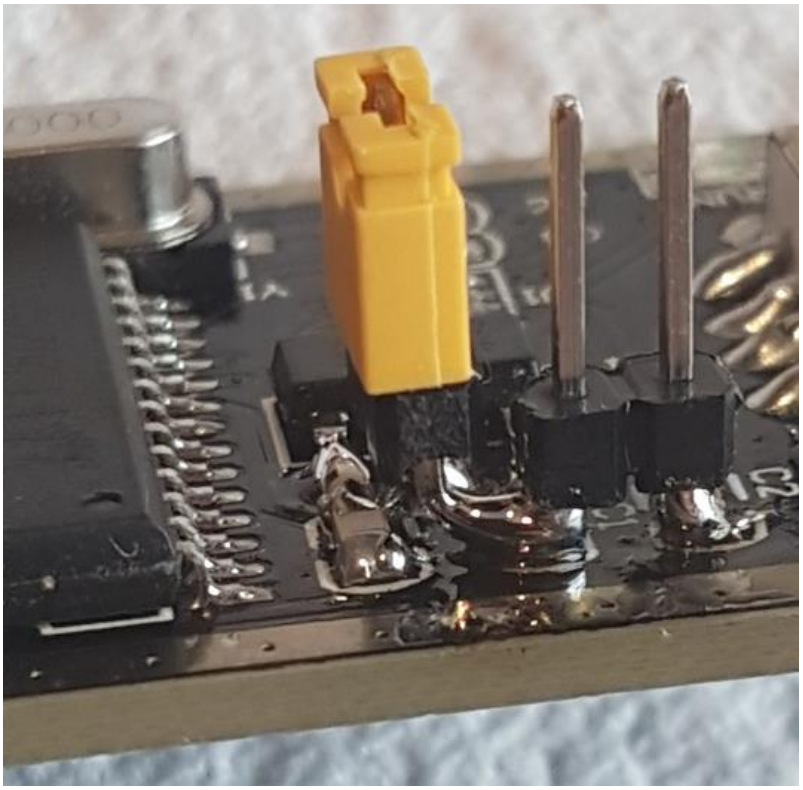


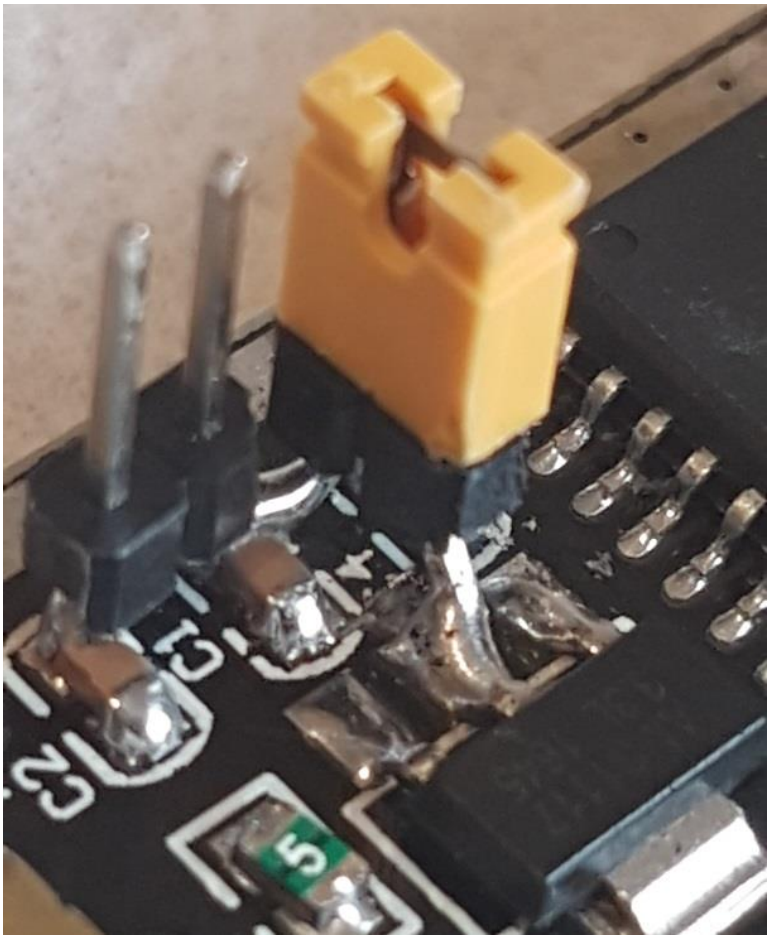
Connect 3.3 volts output of voltage regulator to + of C4



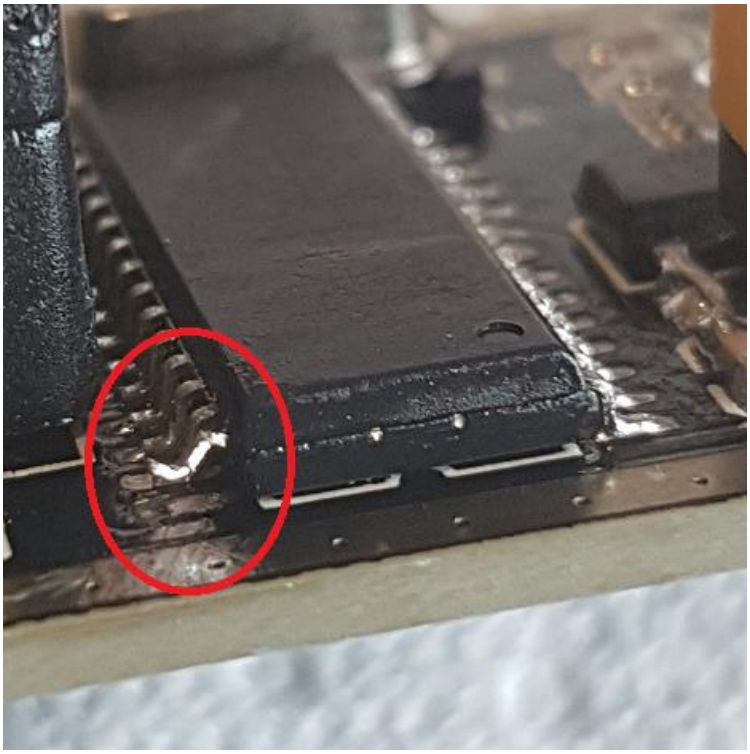
Bend a jumper pins as shown:

Put it in place once correctly bent.

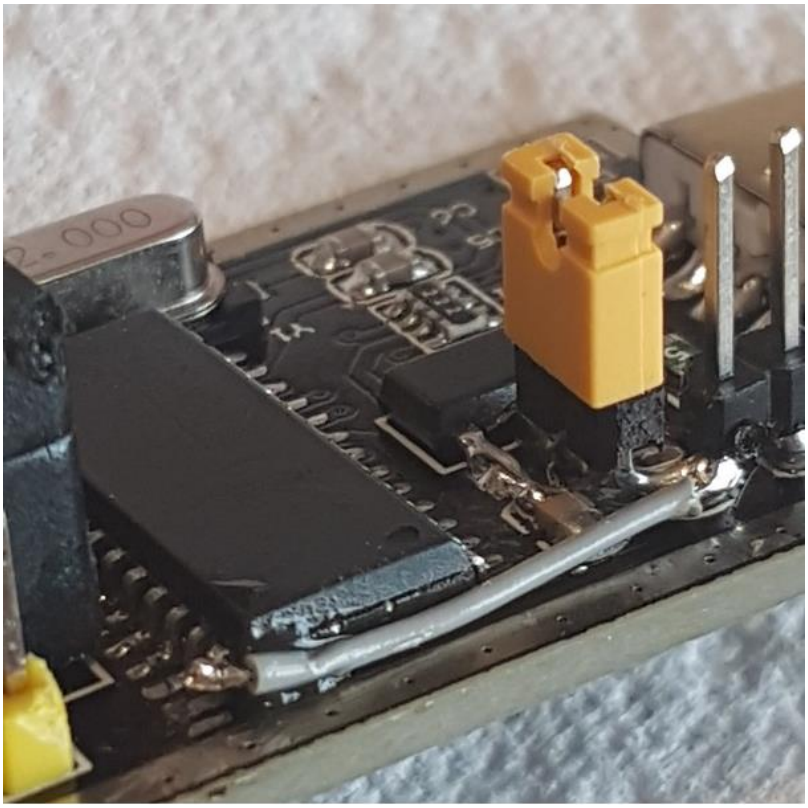




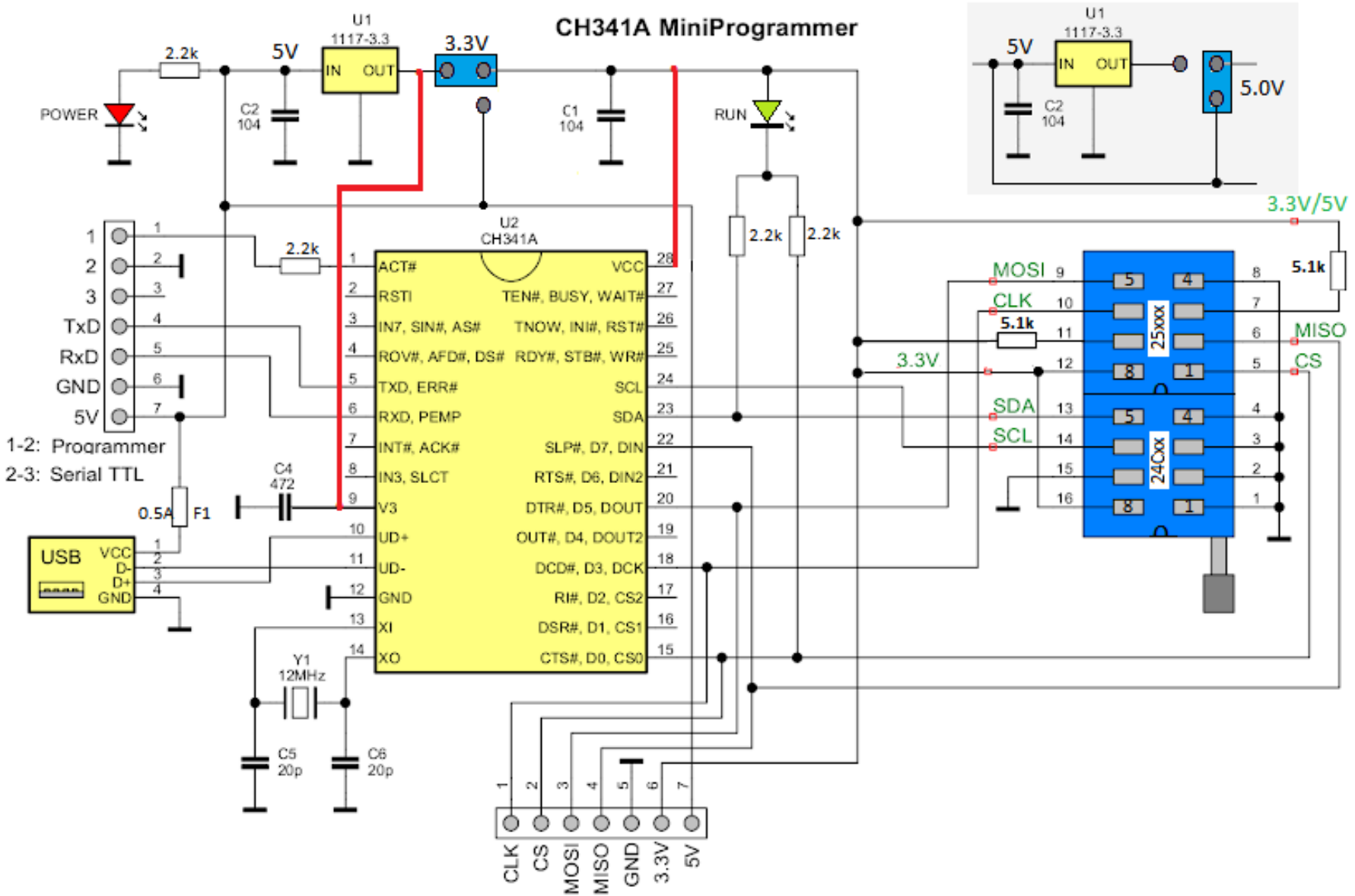
Carefully lift pin 28 from CH341A.



Solder a wire between the raised pin and the common point of the two jumpers.



END.


CH341A MiniProgrammer
U1
1117-3.3
IN
OUT
5V
3.3V
2.2k
POWER
C2
104
C1
104
RUN
U2
CH341A
ACT#
RSTI
IN7, SIN#, AS#
ROV#, AFD#, DS#
TXD, ERR#
RXD, PEMP
INT#, ACK#
IN3, SLCT
V3
UD+
UD-
GND
XI
XO
VCC
TEN#, BUSY, WAIT#
TNOW, INI#, RST#
RDY#, STB#, WR#
SCL
SDA
SLP#, D7, DIN
RTS#, D6, DIN2
DTR#, D5, DOUT
OUT#, D4, DOUT2
DCD#, D3, DCK
RI#, D2, CS2
DSR#, D1, CS1
CTS#, D0, CS0
1
2
3
TxD
RxD
GND
5V
1-2: Programmer
2-3: Serial TTL
C4
472
0.5A
F1
USB
VCC
D-
D+
GND
Y1
12MHz
C5
20p
C6
20p
CLK
CS
MOSI
MISO
GND
3.3V
5V
MOSI
CLK
SDA
SCL
5.1k
3.3V/5V
MISO
CS
25xxx
24Cxx
5.0V

Tools:


77 MULTIMETER
OFF
goot wick
WIDTH
3.5 mm
CP-3515
ALPHA OM-338 PT
Lot: 90314252FS
Mfg: 14 Mar 09
Exp: 14 Sep 09
CAUTION
HARMFUL IF INGESTED OR
INHALED
RESPIRATORY IRRITANT