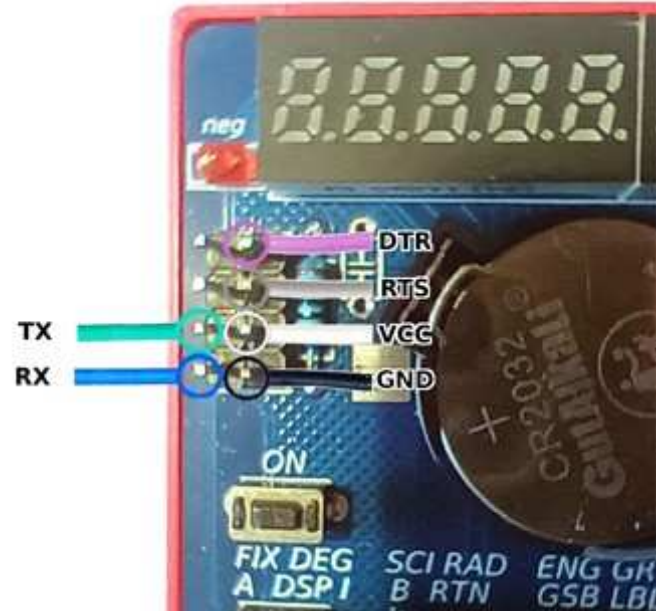
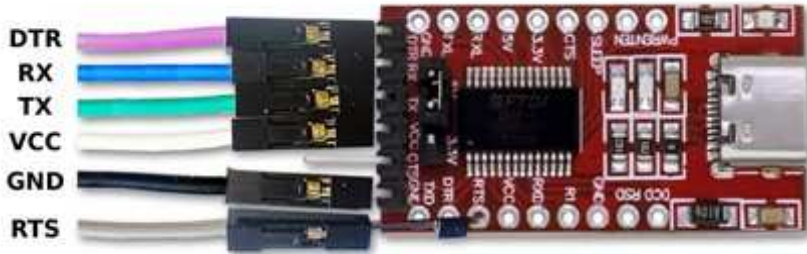


# Firmware flashing procedure using USB TTL Dongle

*use at own risk, there is a chance to brick your unit*

- you can use a **USB TTL** dongle YP-05 (FTDI) to flash firmware via BSL (Bootloader) protocol.
- connection is done through 6 dupont wires with pin headers on the **NP-34**



		...Display.....	
DTR	-> RESET (R)	o o R / \	
RTS	-> TEST (T)	o o T   CR2032	
TX	-> BSL (Rx)	Rx o o + \ /	3.3V -> VCC (+)
RX	-> BSL (Tx)	Tx o o G	GND -> GND (G)

1) Download and install "**BSL Scripter**", from

[https://software-dl.ti.com/msp430/msp430\\_public\\_sw/mcu/msp430/MSPBSL\\_Scripter/latest/index\\_FDS.html](https://software-dl.ti.com/msp430/msp430_public_sw/mcu/msp430/MSPBSL_Scripter/latest/index_FDS.html)

2) Install from **BSLScripter-3.4.0.2-windows-installer.exe**  
after installation, the directory must be **C:\ti\BSL-Scripter**

3) In **C:\ti\BSL-Scripter\DEPRECATED\BSLDEMO**  
unzip **BSLDEMO.zip** and copy **BSLDEMO.exe** to **C:\ti\BSL-Scripter**

4) The command syntax to update the firmware is as follows :

```
C:\ti\BSL-Scripter\BSLDEMO.exe -tUSB serial -cCOM? -pPASS-xx.txt +pvr np34-xx.txt
```

com? **pass-xx.txt** and **np34-xx.txt** depending of your context

All instructions and firmware are on:  
<https://github.com/simpleavr/NP34>

Example DOS batch file to :

- Update the **NP-34**

```
@echo off
cls
@echo +=====+
@echo !           NP-34 FIRMWARE UPDATE           !
@echo !           using USB TTL YP-05             !
@echo +=====+
DIR 34\np34-*.txt /W /B
SET numv=
SET /P numv=Version (01, 02, 03,...) [or Q] ?
IF "%numv%"=="q" GOTO endupd
IF "%numv%"=="Q" GOTO endupd
if exist 34\np34-%numv%.txt (
    C:\ti\BSL-Scripter\BSLDEMO.exe -tUSB serial -cCOM16 -p34\PASS-%numv%.txt +pvr 34\np34-%numv%.txt
    rem FORCE C:\ti\BSL-Scripter\BSLDEMO.exe -tUSB serial -cCOM16 -m1 +epvr 34\np34-%numv%.txt
) else (
    @echo file doesn't exist
)
pause
:endupd
```

- Back up the MCU  
*This will capture a 256 byte block off 0x1000 of the MCU, which is the info-memory containing the factory calibration values.*  
*You should save the file read.txt in case you brick your device (not likely, but can happen) in the future and with it you will be able to flash these values back to the MCU.*

```
@echo off
cls
@echo +=====+
@echo !           NP-34 MCU SAVE                   !
@echo !           using USB TTL YP-05             !
@echo +=====+
DIR 34\np34-READ.txt /W /B
SET Confirm=
SET /P Confirm= Confirm Y or N ?
IF "%Confirm%"=="y" GOTO OKsav
IF "%Confirm%"=="Y" GOTO OKsav
GOTO endsav
:OKsav
if exist 34\np34-READ.txt (
    @echo file already exist
) else (
    C:\ti\BSL-Scripter\BSLDEMO.exe -tUSB serial -cCOM16 -p34\PASS-02.txt -r1000 100 34\np34-READ.txt
+r
)
pause
:endsav
```