



MEMS-ROSCO

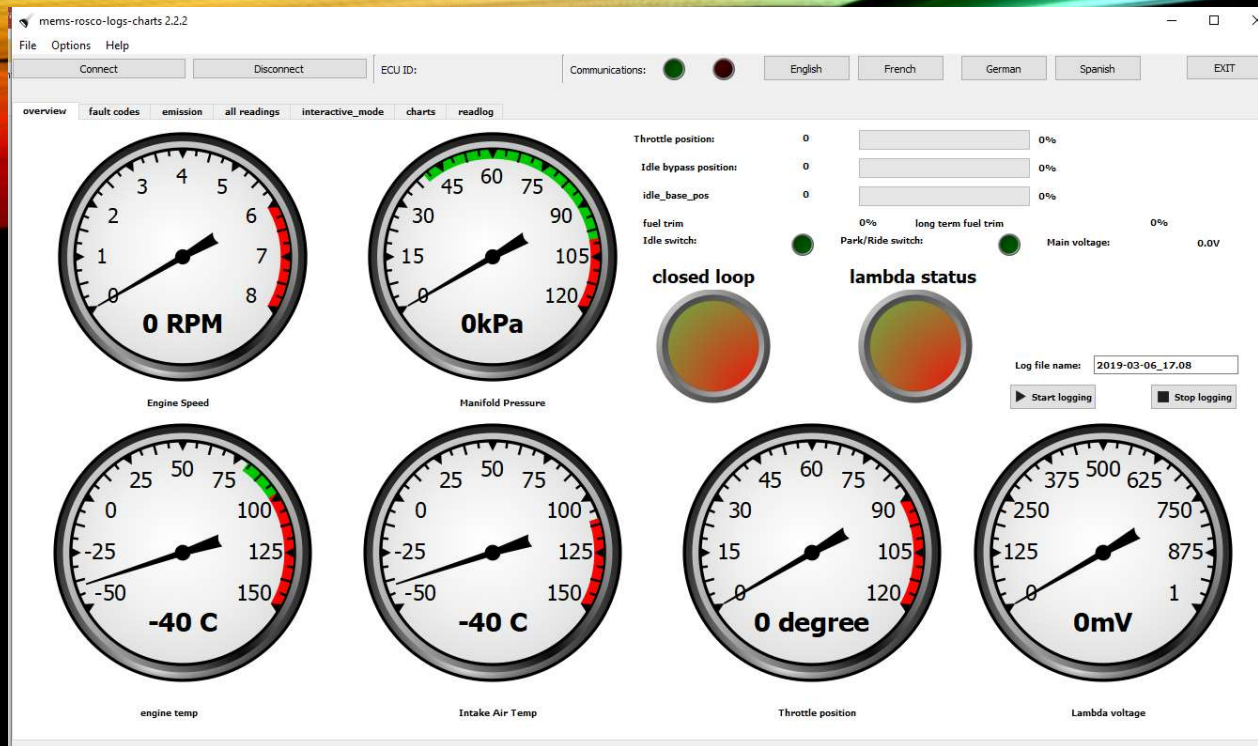
Analyzer for austin mini mems 1.3 and 1.6

REQUIREMENTS

- Analyzing tool based on collin bourassa's mems gauge
- First you need an interface (usb TTL) with special 3 point connector or you solder any a pair of 3 point sockets parallel to your origin white socket in the car
- For building this interface have a look here:
- <https://github.com/colinbourassa/librosco/blob/wiki/HardwareInterface.md>

Pin number	FTDI wire color	Pin assignment	Wire color on mating connector in car
C549-1	Black	Signal ground	Pink w/ black
C549-2	Yellow	Rx (car ECU to PC)	White w/ yellow
C549-3	Orange	Tx (PC to car ECU)	Black w/ green

- Then of course you need the software :<https://github.com/LeopoldG>
- And a laptop or Pc



MAIN PIC WHEN YOU OPEN
MEMS-ROSCO

FOUR DIFFERENT LANGUAGES



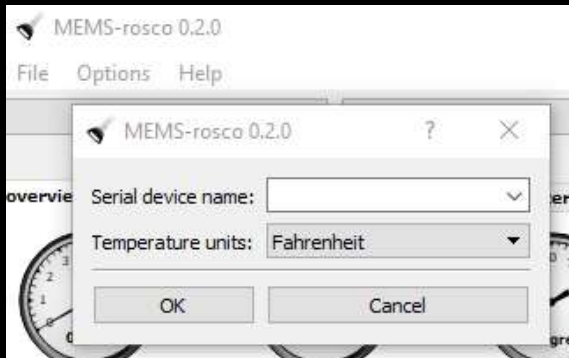
English

French

German

Spanish

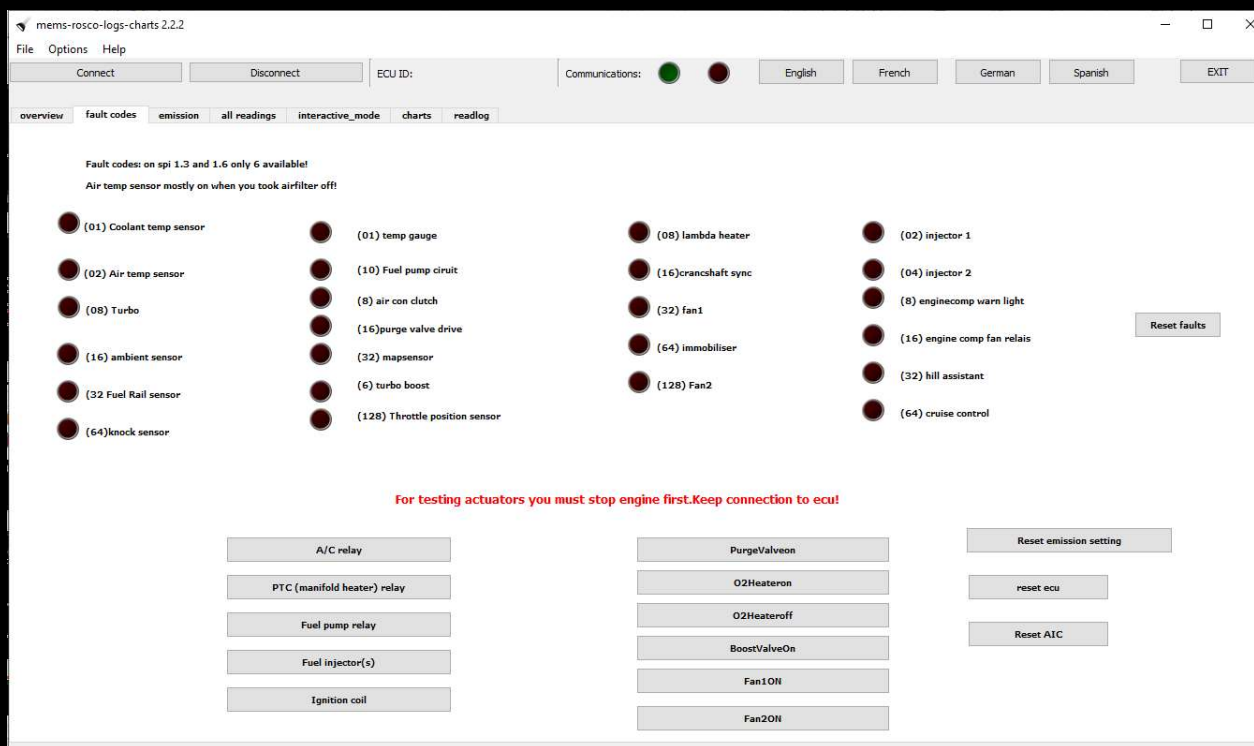
FIRST OF ALL CONNECT YOUR INTERFACE AND OPEN OPTIONS



Set com port and temp units then press connect

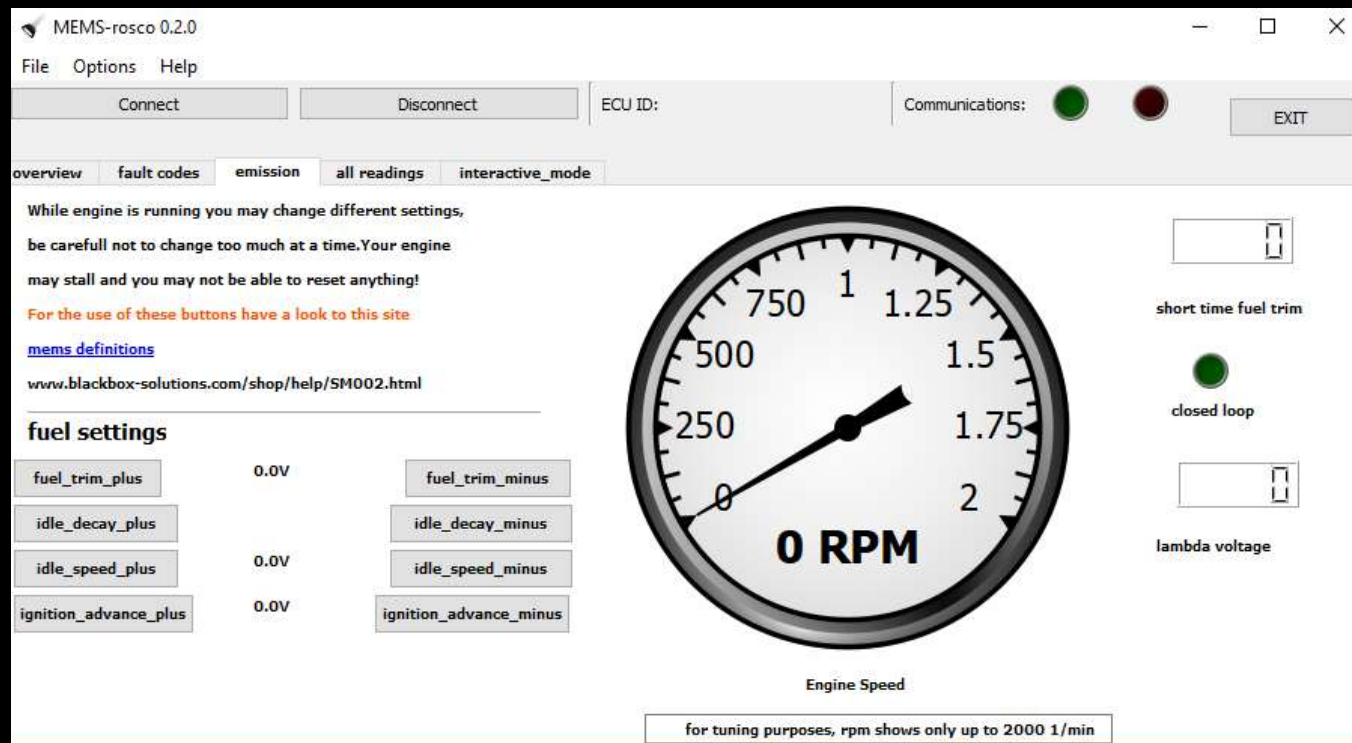
All readings and knobs are self explaining

THE TAB FAULT CODES





Everything is explained as well

FINE TUNING ON TAB EMISSIONS



ALL READINGS WILL SHOW YOU A LOT OF PARAMETERS

Connect		Disconnect		ECU ID:		Communications:  		English	French	German	Spanish	EXIT
overview	fault codes	emission	all readings	charts	readlog							
RPM	0	unknown2	0	lambda voltage	0	unknown9	0					
RPM + idle dev	0	idleairContPos	0	lambda frequency	0	unknown10	0					
idlespeedDev	0	idle hot	0	lambda dutycycle	0	faultcode4	0					
idleerror2	0	idlesetpoint	0	lamda status	0	unknown11	0					
idle_base_position	0	ignition adv offset	0	closed loop	0	unknown12	0					
waterTemp	0	ignition advance	0	long term fuel trim	0	unknown13	0					
ambient	0	coil time	0	short term fuel trim	0	unknown14	0					
intakeAir	0	crankSensor	0	fuel trim dev	0	unknown15	0					
fuelTemp	0	unknown4	0	carbon can dutycycle	0	unknown16	0					
Map	0	unknown5	0	faultcode1	0	unknown1A	0					
BatteryV	0	ignition switch	0	unknown7	0	unknown1B	0					
ThrottlePot	0	throttle angle	0	unknown8	0	jack count	0					
idle switch	0	unknown6	0	ignition advance	0	faultcodes	0					
unknown1	0	air_fuel_ratio	0	Park/nut	0	faultcode0	0					

Even those we do not know what they stand for the unknowns „UK“ If you know what those unknown values stand for you can tell us at The forum:

<https://groups.google.com/forum/#!forum/mems-diagnostics>

When you hover over the parameters you will be shown some hints!


LOGGING

If you started logging there will be a logfile in the mems-rosc0/logs directory
You may change the name bevor starting logging

Log file name: 2017-07-02_18.38

▶ Start logging

■ Stop logging



WITH FIND AND READ FILE YOU WILL BE
SHOWN YOUR MEMS-ROSCO LOGS
DIRECTORY ,CHOOSE YOUR LOGFILE.WITH
THIS TOOL YOU CAN READ LOGFILES FROM

MEMS-GAUGE
MEMS-ANALYZER
MEMS-SCAN
MEMS-DIAG
MEMS-READ
MEMS-ROSCO

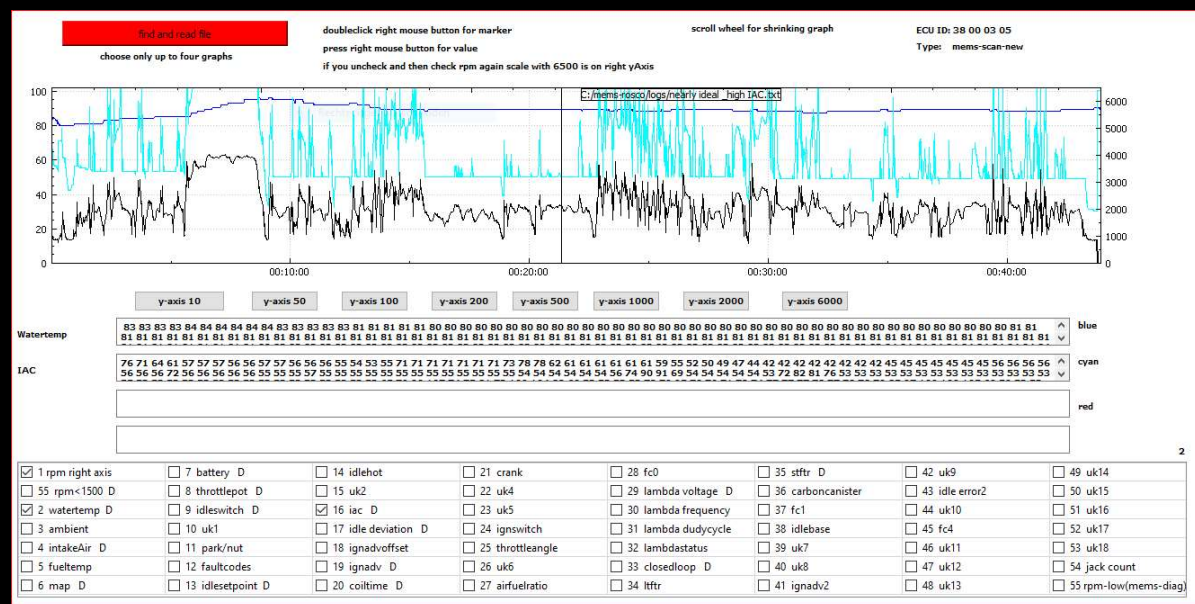
IF YOU HAVE A *.TXT OR *.CSV YOU CAN NOT READ COPY IT TO THE FORUM AND DESCRIBE THE
PROBLEM

INBUILT ANALYZING TOOL

You may open up to 4 graphs at a time.

With the mice you can shrink and extend the graphs.

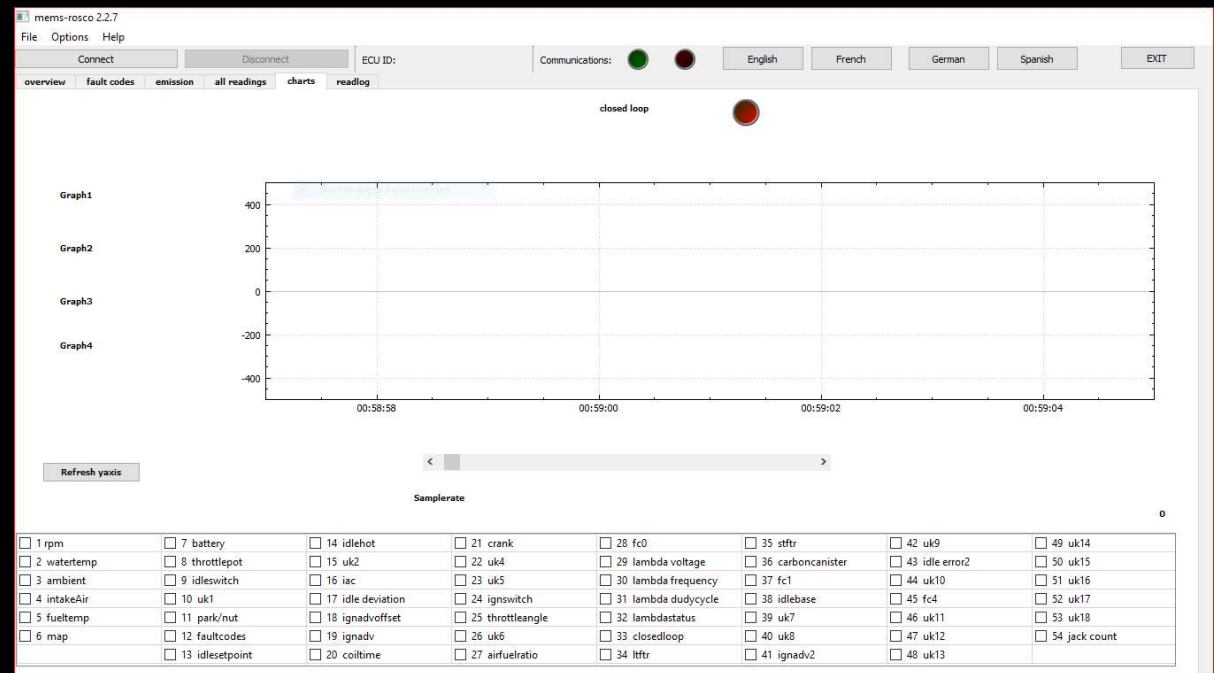
Read everything on the tab it is self explaining



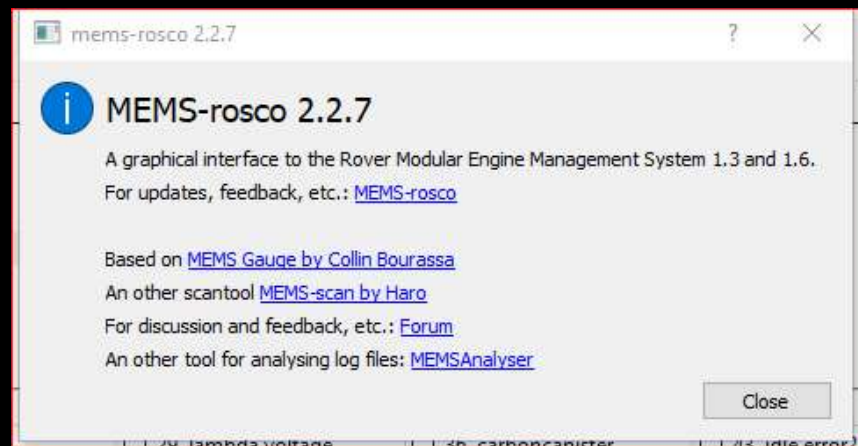
CHARTS

On this side you may see all parameters from ecu like on an oszyloskop.

Up to four at a time are possible!



READ HELP CONTENTS AND ABOUT



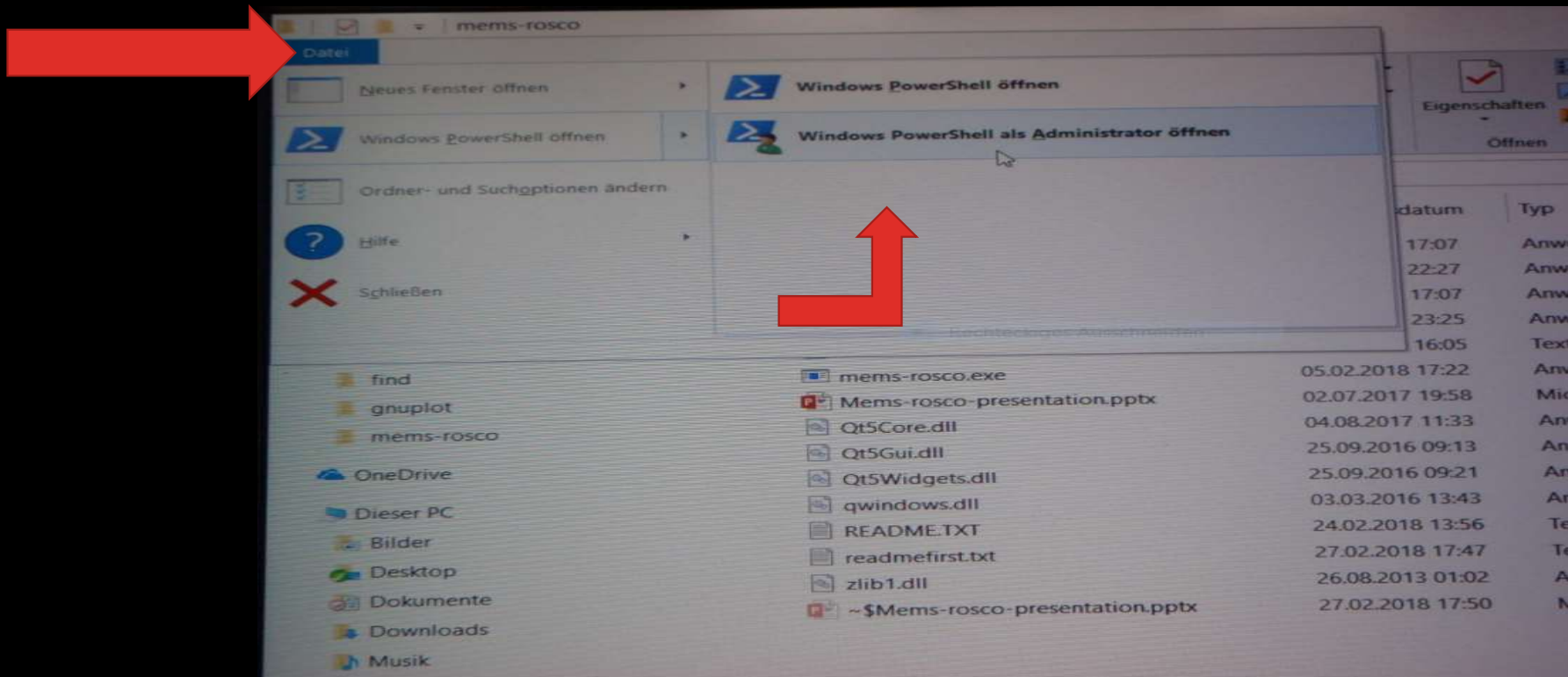


READMEMS FOR SPECIALISTS

- Even you can do nearly everything on the graphical interface there is a spezial tool within the directory mems-roscobin.
- Readmems works in „dos“ mode
- You may call all the commands and speak to the ecu based on Colins protocol
- So only work with this tool if you are familiar with this protocol and you know what you are doing.

INTERACTIVE WORK WITH ECU


- Close mems-roscos
- Open explorer and switch to mems roscos directory
- Open file->window powershell->window powershell->admin mode

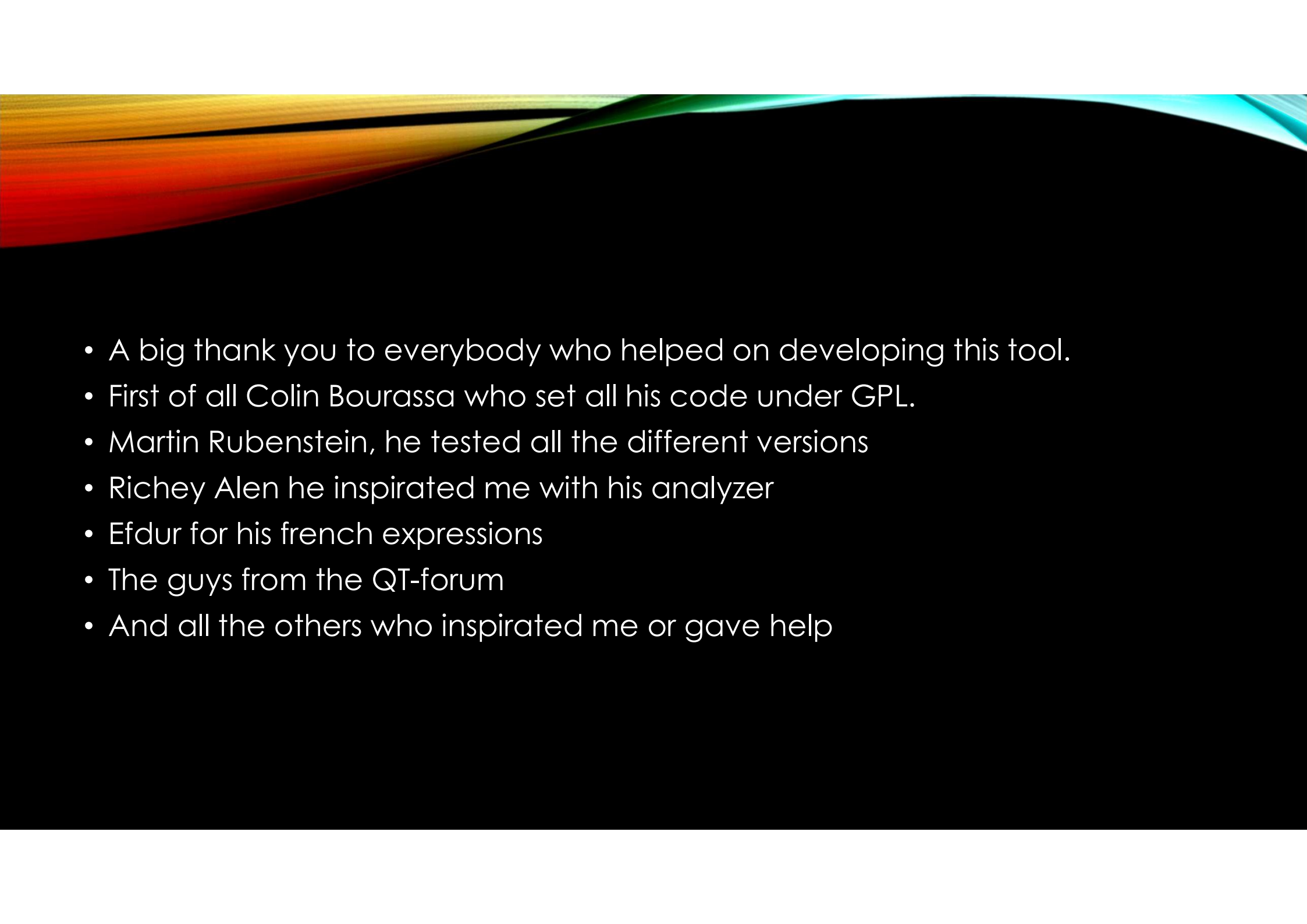


- Powershell should show that
- you are in the directory
- „mems-rosc0“
- Otherwise switch
- to „ cd c:\mems-rosc0“
- Then cd bin
- No you may type:
- .\readmems and get the
- following

```
Windows PowerShell
PS C:\mems-rosc0>
```

```
Administrator: Windows PowerShell
PS C:\mems-rosc0> .\readmems
readmems using librosco v0.1.12
Diagnostic utility using ROSCO protocol for MEMS 1.6 systems
Usage: readmems.exe <serial device> <command> [read-loop-count]
where <command> is one of the following:
    read
    read-raw
    read-iac
    ptc
    fuelpump
    iac-close
    iac-open
    ac
    coil
    injectors
    fuel_trim_plus
    fuel_trim_minus
    idle_decay_plus
    idle_decay_minus
    idle_speed_plus
    idle_speed_minus
    ignition_advance_plus
    ignition_advance_minus
    interactive
and [read-loop-count] is either a number or 'inf' to read forever.
PS C:\mems-rosc0>
```

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- To talk to the ecu you have memsread to tell on which comport your interface is hooked up. Supposed it is com 1
 - So type `.\memsread com1 interactive` or one of the shown commands.
 - To reset ecu type `.\readmems com1 interactive 0x0F` and `readmems com1 interactive 0xFA`
 - Now start mems –rosco again , switch on ignition, start login, start the engine.

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- A big thank you to everybody who helped on developing this tool.
 - First of all Colin Bourassa who set all his code under GPL.
 - Martin Rubenstein, he tested all the different versions
 - Richey Alen he inspired me with his analyzer
 - Efdur for his french expressions
 - The guys from the QT-forum
 - And all the others who inspired me or gave help