

Summary

WINDOWS, MAC.....	2
Driver.....	2
Troubleshooting.....	3
COM Port.....	5
Terminal.....	6
Connection.....	8
ANDROID.....	9
OTG capable phone and cable.....	9
Terminal Android App.....	10
Menu.....	12
Setup.....	13
Modification [M].....	15
Dump [U].....	16
AutoSpark [A].....	17
Bypass [B].....	18
Console [C].....	19
Restricted Mode.....	20
EEPROM content.....	21
Console during Running mode.....	22

WINDOWS, MAC

Driver

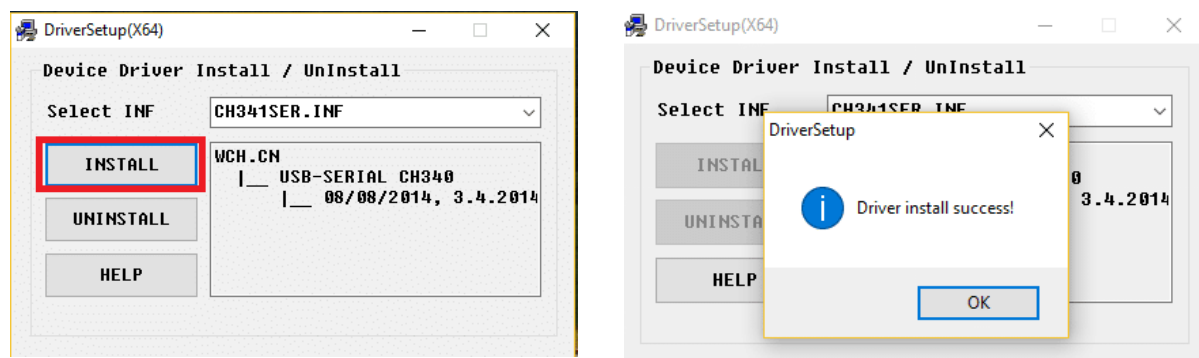
The ignition uses a CH340 chip which is a Serial to USB converter. This IC needs a driver.
Download **CH340G** driver.

Windows: <http://www.arduined.eu/tag/windows-7/>

Mac: https://github.com/wemos/ch340_driver

or on the Chip Manufacturer site http://www.wch-ic.com/download/CH341SER_EXE.html

Install **CH340G** driver as "*Administrator*"

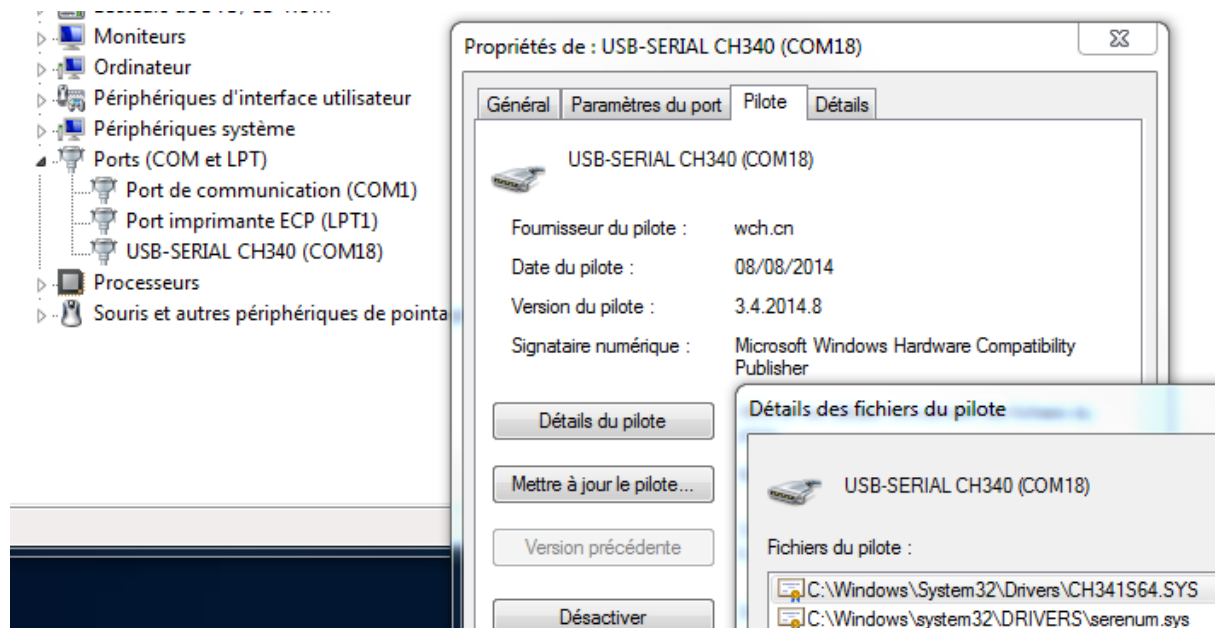


Restart the computer.

Head over to the "*Device Manager*" (Start Menu > Run > **devmgmt.msc**) go down to "*Ports*" open that up.

Plug in the ACCDI v10 or TCI v10 via USB connector, you should hear a bell sound and the ignition device pop up into "*Ports*" section.

Now you ready to go!

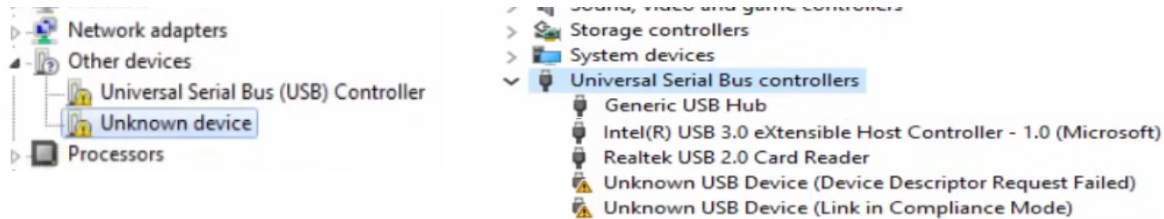


Troubleshooting

Open "[Device Manager](#)" (Start Menu > Run > **devmgmt.msc**) , plug the CDI/TCI in, open [Ports](#), [Driver](#) tab.

A) if the device appear with another driver then right-click, select "[Update driver](#)", find the downloaded driver for CH340-CH341, unzip it and install it.

B) If Windows does not recognize the device this one may also appear in "[Port \(COM&LPT\)](#)" or "[Other devices](#)" or in "[Universal Serial Bus Controllers](#)" folders with an exclamation mark or as a "[USB Controller](#)" or "[Unknown device](#)" or "[Generic USB Hub](#)":



Check those folders before and after you connected the device to see if something appears...

Restart the computer, if the driver still appear with an exclamation mark, then right-click on the driver, read the information in the status bar.

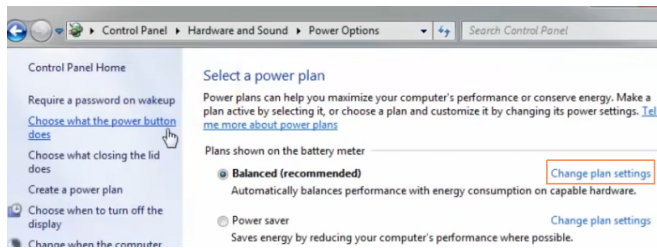
C) Click on **CH340G** driver, choose "[Uninstall](#)".

Try to connect the ignition box to the computer before installing the driver again.

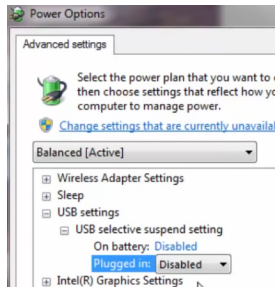
D) If the device is not shown in "[Port \(COM&LPT\)](#)", "[Other devices](#)" or "[Universal Serial Bus Controller](#)" folders then restart the computer, try another USB port

E) I like to use [USBDeview from Nir Sofer](#) utility to have more information on USB devices connected to my PC.

F) Open "*Device Manager*" (Start Menu > Run > **powercfg.cpl**) , Select a power plan > check Balanced > Change plan settings



> Change advanced power settings > USB settings > USB selective suspend setting > *Disabled* both > Apply



G) You don't hear a bell sound when connecting the ignition to a USB port?

Nothing appear in "*Port (COM&LPT)*" or "*Other devices*" or "*Universal Serial Bus Controller*" folders?

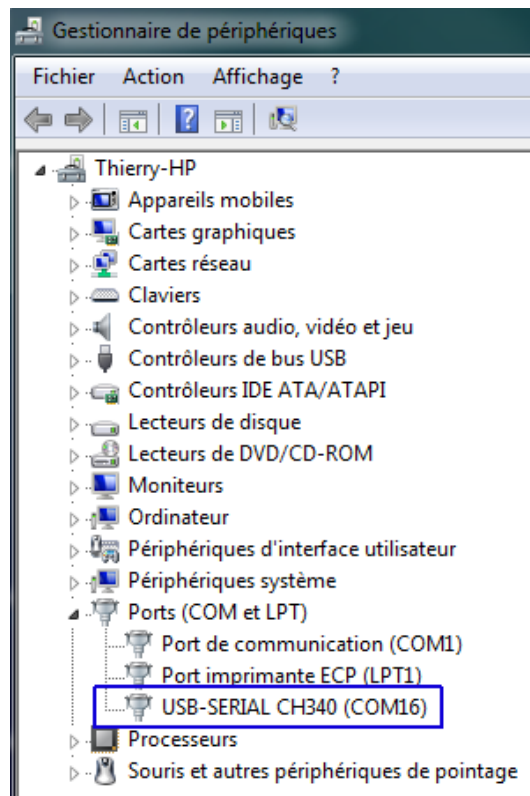
Then try **another USB cable**.

Some cables are for cellular charge only and don't work for data, some bad quality cables don't support high speed transmission...

COM Port

Open "[Device Manager](#)". Under "[Ports \(COM&LPT\)](#)" you should notice a new COM-port.

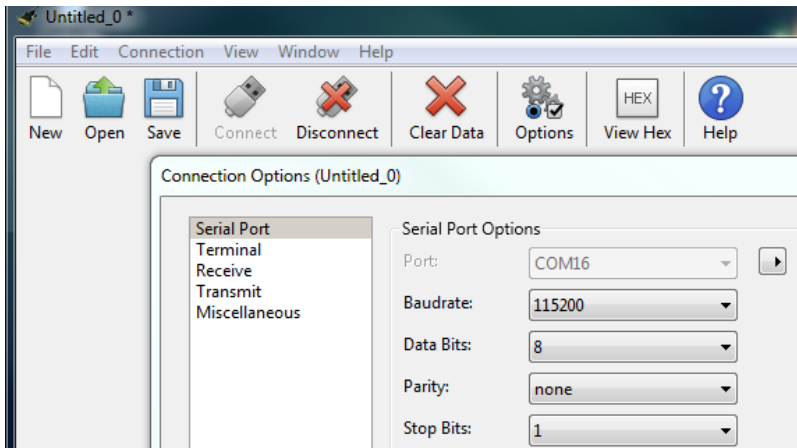
Note the number.



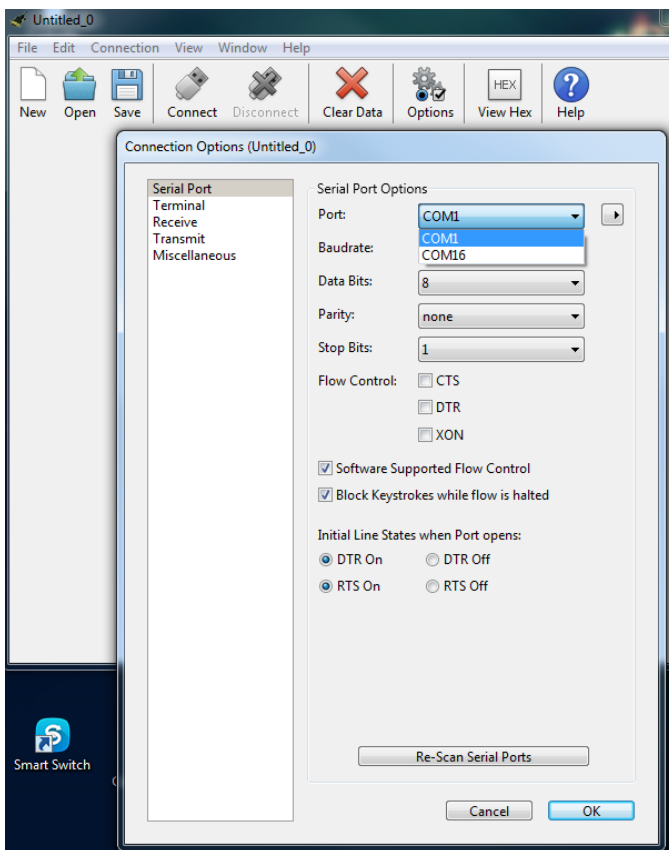
Terminal

Launch a terminal on your PC (I recommend **CoolTerm** <http://freeware.the-meiers.org>)
But [Putty](#) or [Kitty](#), [Teraterm](#) are usable too...

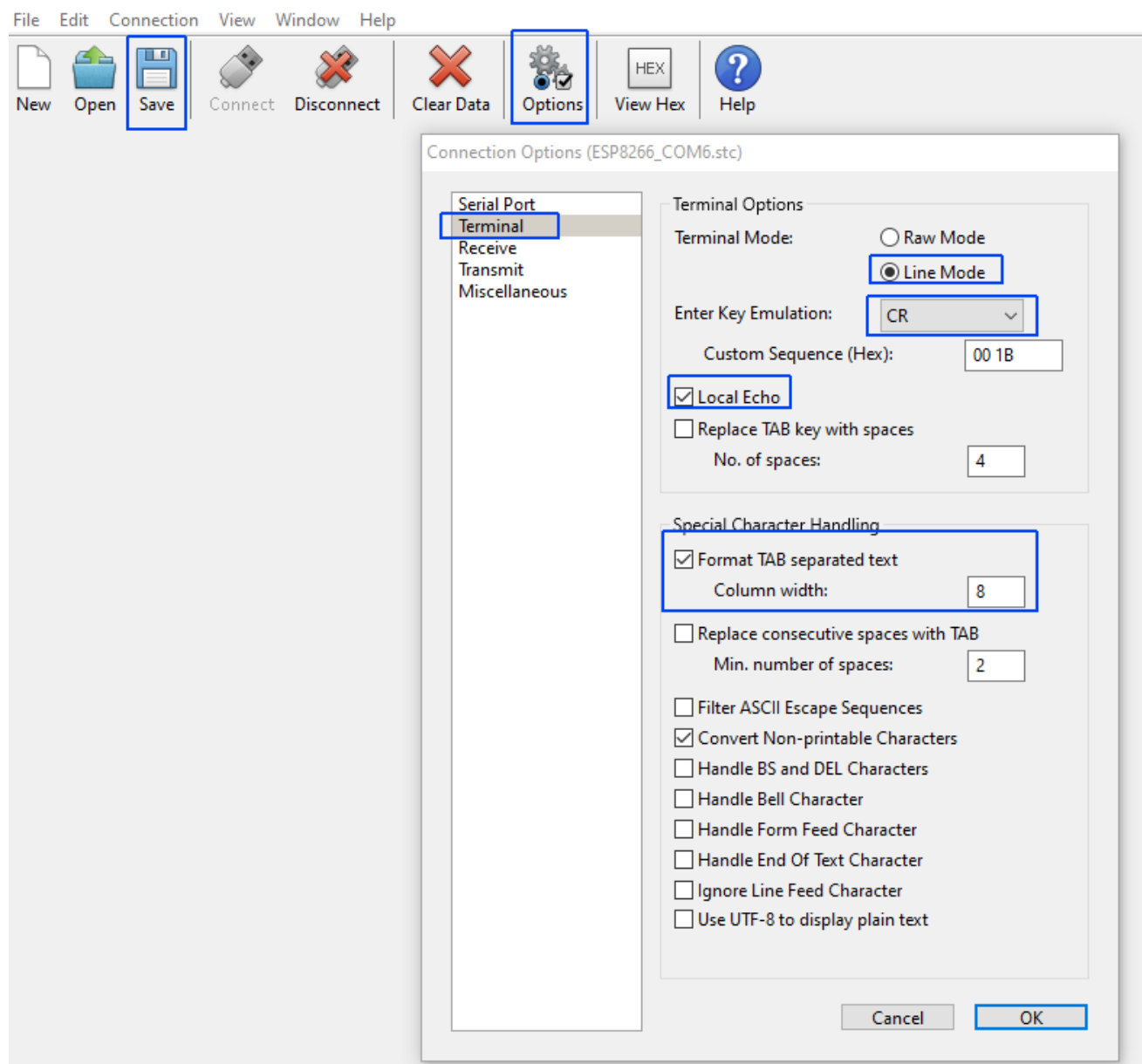
Go to **Options > Serial Port**, Setup the terminal to **115200.N.8.1**



Select the **COM-port** you have noted above.



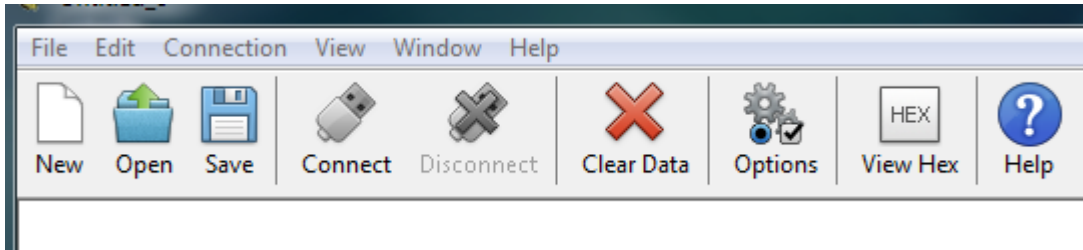
Under **Options > Terminal** check *Line Mode*, *Enter Key Emulation*, *local Echo* and *Format TAB* > **OK**.



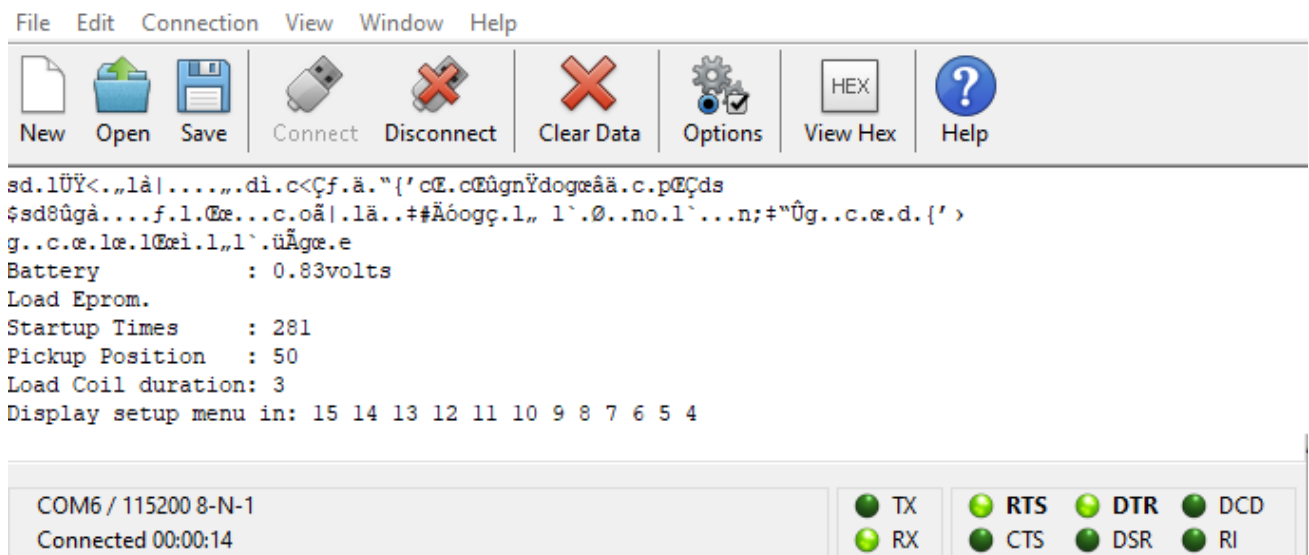
Save this configuration

Connection

Click on "**Connect**" button



ACCDI v10 or TCI v10 banner is displayed:



After being powered on, the ignition box waits 15 seconds to let you connect the communication software.
A blue led inside the CDI/TCI blinks 1 time per second.
Launch the Terminal console (CoolTerm, Putty) during those 15 seconds.

If you connect the Terminal after the countdown is finished then press ? (*question mark key*) at any time to display the Menu.

ANDROID

You can use an Android phone too.

OTG capable phone and cable



The smartphone **MUST** be OTG compatible.

Check that with a "[USB OTG Checker](#)" App

Some phones also need the OTG function to be enable:

Settings—additional settings—enable/disable OTG.



Use a Male-Male USB **OTG** connector.

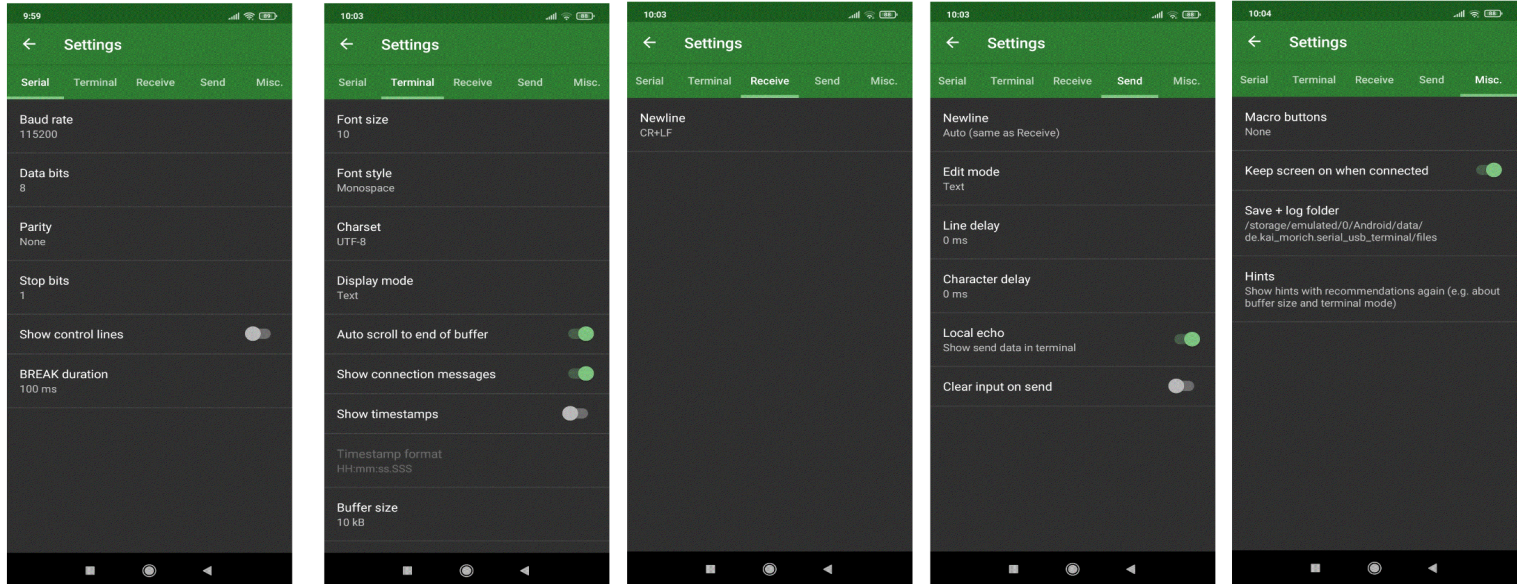
MicroType B on Ignition side, micro-USB Type B or type-C depending on your phone

I'm using [this one](#)

Terminal Android App

Then install this [Serial USB Terminal by Kai Morich](#) App on the phone.

Adjust Settings :



Connect the phone to the ignition box with the OTG cable.

Serial USB Terminal App should detect the USB device and starts automatically

Connect the App:



See [video](#)

10:26



Terminal



104^I0
108^I0
112^I50
116^I0
120^I3
124^I0

```
----- Syntax: -----
pickup Position BTDC:  P <deg BTDC>                (@112)
pickup Type           :  T <value (0:Auto,1:PN,2:NP)> (@108)
dwell duration        :  L <1 to 10ms>              (@120)
Setup timing          :  S <rpm> <degrees>
Modify data           :  M <line> <new value>
AutoSpark Mode        :  A <value (0:off,1:on)>      (@104)
Bypass advance        :  B <value (0:off,1:on)>      (@126)
console Output        :  O <value (0:off,1:on)>      (@124)
Read eprom            :  R
Write and save        :  W
Clear eprom           :  C
dUmp eprom            :  U
about Version         :  V
Quit setting          :  Q
Help Syntax           :  ?
-----
```

U

```
[000]:F4 01 00 00 05 00 00 00 E8 03 00 00 05 00 00 00
[016]:B8 0B 00 00 28 00 00 00 40 1F 00 00 1E 00 00 00
[032]:00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
[048]:00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
[064]:00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
[080]:00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
[096]:00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
[112]:32 00 00 00 00 00 00 00 03 00 00 00 00 00 00 00
```

```
----- Syntax: -----
pickup Position BTDC:  P <deg BTDC>                (@112)
pickup Type           :  T <value (0:Auto,1:PN,2:NP)> (@108)
dwell duration        :  L <1 to 10ms>              (@120)
Setup timing          :  S <rpm> <degrees>
Modify data           :  M <line> <new value>
AutoSpark Mode        :  A <value (0:off,1:on)>      (@104)
Bypass advance        :  B <value (0:off,1:on)>      (@126)
console Output        :  O <value (0:off,1:on)>      (@124)
Read eprom            :  R
Write and save        :  W
Clear eprom           :  C
dUmp eprom            :  U
about Version         :  V
Quit setting          :  Q
Help Syntax           :  ?
-----
```

U



Menu

When the countdown is done or **? key** has been entered, the Setup **MENU** is displayed:

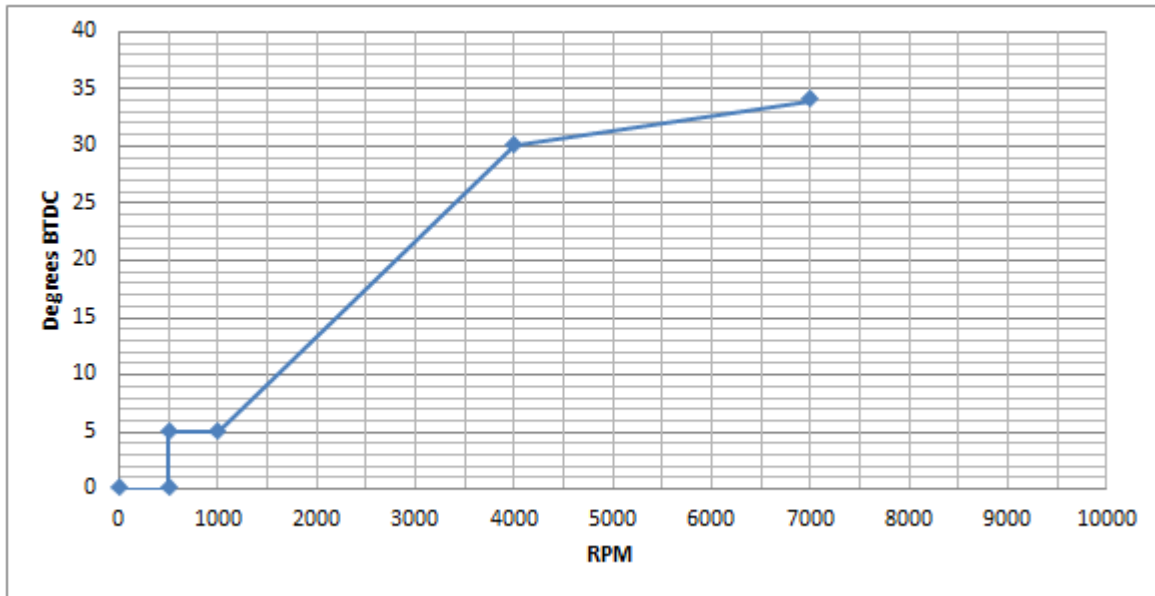
```
Battery          : 0.95volts

Console detected, goto Programming Mode!
-----
Startup Times    : 38
Pickup Position  : 50

----- Syntax: -----
pickup Position BTDC: P <deg BTDC>
pickup Type       : T <value (0:Auto,1:PN,2:NP)>
dwell duration    : L <1 to 10ms>
Setup timing      : S <rpm> <degrees>
Modify data       : M <line> <new value>
AutoSpark Mode    : A <value (0:off,1:on)>
Bypass advance    : B <value (0:off,1:on)>
console Output    : O <value> (0:no, 1:yes)
Read eprom        : R
Write and save     : W
Clear eprom       : C
dUmp eprom        : U
about Version     : V
Quit setting      : Q
Help Syntax       : ?
-----
```

Setup

Assuming you want this ignition timing:



One can define the curve with 4 points but you can use up to 13 points.

(0 to 500rpm at 0° BTDC is hard coded for no kickback.)

Console detected, goto Programing Mode!

```
-----  
Startup Times      : 1  
Pickup Position    : 0  
Load Coil duration: 0
```

```
----- Syntax: -----  
pickup Position BTDC: P <deg BTDC>  
pickup Type         : T <value (0:Auto,1:PN,2:NP)>  
dwell duration      : L <1 to 10ms>  
Setup timing        : S <rpm> <degrees>  
Modify data         : M <line> <new value>  
AutoSpark Mode      : A <value (0:off,1:on)>  
Bypass advance      : B <value (0:off,1:on)>  
console Output      : O <value> (0:no, 1:yes)  
Read eprom          : R  
Write and save      : W  
Clear eprom         : C  
dUmp eprom          : U  
about Version       : V  
Quit setting        : Q  
Help Syntax         : ?  
-----
```

Red: command you type in.

Blue: ignition box response

P 50

capital P <space> 50 <ENTER>

Pickup Position: 50 deg BTDC.

L 3

capital L <space> 3 <ENTER>

Load Coil Duration(ms): 3

S 500 5

capital S <space> 500 <space> 5 <ENTER>

@1 500rpm = 5deg.

S 1000 5

@9 1000rpm = 5deg.

S 4000 30

@17 4000rpm = 30deg.

S 7000 35

@25 7000rpm = 35deg.

R

capital R <ENTER>

<Line><value>

0	500	<= 5° btdc @ 500rpm
4	5	
8	1000	
12	5	<= 30° btdc @ 4000rpm
16	4000	
20	30	
24	7000	<= 35° btdc @ 7000rpm
28	35	
32	0	
...		
104	0	
108	0	
112	50	
116	0	

----- Syntax: -----

W

capital W <ENTER>

<= Setup are ONLY written once you enter W key

Saved.

Q

capital Q <ENTER>

Quit.

Ignition box is now rebooting...

Disconnect the Terminal software and unplug the USB cable.

Modification [M]

If you want to modify the advance timing for 7000rpm and set 34° instead of 35° at line 28:

M 28 34 capital M <space> 28 <space> 34 <ENTER>

<Line><new value>

Modify Line:28 with new value:34

R

0 500

4 5

8 1000

12 5

16 4000

20 30

24 **7000** <= 34° btdc @ 7000rpm

28 34

32 0

W

Saved.

Q

Quit.

Ignition box is now rebooting...

Disconnect Terminal software and unplug the USB cable.

Dump [U]

Read EEPROM addresses 000 to 127 and display them in HEX values

```
[000]:F4 01 00 00 05 00 00 00 E8 03 00 00 05 00 00 00
[016]:B8 0B 00 00 28 00 00 00 70 17 00 00 1E 00 00 00
[032]:00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
[048]:00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
[064]:00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
[080]:00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
[096]:00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
[112]:32 00 00 00 00 00 00 00 03 00 00 00 00 00 00 00
```

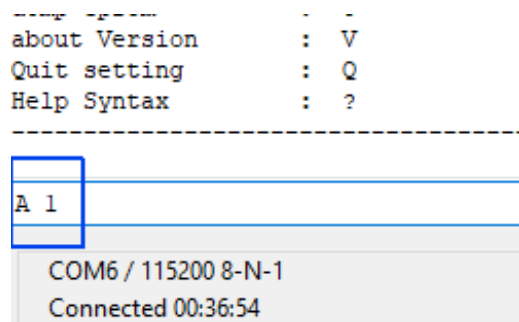

AutoSpark [A]

Default: A = 0

This **autotest function** is only usable with TCI.

TCI sends sparks at 3000rpm WITHOUT any pickup connected.

This way you can test the wiring, the TCI, the coil and sparkplug.



A 1 capital A <space> 1 <ENTER>

AutoSpark Mode : 1

W

Saved.

Bypass [B]

Default: B = 0

This function bypass the advance timing and trigger a spark AS SOON AS a pickup pulse has been detected.

This function comes handy when you want to know the pickup position with a Timing Lamp :

Remove the sparkplug out of the engine and connect it to the metal frame then rotate the engine with a drill machine.

With points and mechanical advance system, TCI is acting as a simple Transistorized Ignition.

/!\ Don't use the function on a running engine with pickups or hall sensors otherwise the spark will append way too soon and can harm the piston !!

B 1 capital B <space> 1 <ENTER>

Bypass Mode : 1

W

Saved.

Console [C]

Default: $C = 0$

USB terminal can display the RPM and calculated timing of the engine.

Turn console ON:

C 1 capital C <space> 1 <ENTER>

```
Console Output : 1
```

W

Saved.

Restricted Mode

This function create a temporary rev-limiter that restrict the engine to 3600rpm max.

It is useful for 50cc bikes to seem to be « *Street legal* » in countries where there are limited to 50km/h... ;-)

To enter in this restricted mode :

- Turn on the master ignition key.
- Start the bike
- Flip the **Kill switch** ON then OFF once during the first 30seconds.
- Engine is now limited to 3600rpm until you stop the engine.

After 30 seconds, the Kill switch acts normally.

EEPROM content

	Address		Address
RPM N°1	0	ADVANCE N°1	4
RPM N°2	8	ADVANCE N°2	12
RPM N°3	16	ADVANCE N°3	20
RPM N°4	24	ADVANCE N°4	28
RPM N°5	32	ADVANCE N°5	36
RPM N°6	40	ADVANCE N°6	44
RPM N°7	48	ADVANCE N°7	52
RPM N°8	56	ADVANCE N°8	60
RPM N°9	64	ADVANCE N°9	68
RPM N°10	72	ADVANCE N°10	76
RPM N°11	80	ADVANCE N°11	84
RPM N°12	88	ADVANCE N°12	92
RPM N°13	96	ADVANCE N°13	100

AutoSpark	104
Pickup Type	108
Pickup Position	112
Dwell type (TCI)	116
Load duration (TCI)	120
Console	124
Bypass	126

Console during Running mode

While the Ignition box is connected via USB to a PC and the countdown is displayed, power the box ON with a +12Vdc power supply.

At the end of the countdown, the box will detect the battery and restart in running mode.

```
Display setup menu in: 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1 0
Battery               : 12.36volts
Battery detected, Restart in running mode...
```

<glibberrish...>

```
Battery               : 12.38volts
Load Eprom.
Startup Times        : 3
Pickup Position      : 50
Load Coil duration: 3
```

```
-----
Pickup Type          : AUTO
Waiting for Pickup...
```

Crank the engine

```
Detected Type: NP
Ready to race!
```

Auto detection mode cannot be 100% reliable, especially when the pickup signal is weak!

I hardly recommend to hard setup the *pickup Type* once for all by typing: **T 1** or **T 2** accordingly.