Igni-Power for supermoto-KTM*

FOR COMPETITION USE ONLY

No warranty of any engine damage

WARNING!

This is a powerful tool that can yield great benefit for modified, limited or stock engines. However this tool is meant for ***experienced engine tuners only***, and can easily cause severe engine damage if misused! Please use caution when using Igni-power for there is no warrante for any engine damage related to the use of this product.

The change from the original ignition system to Igni-Power is very simple, just follow all of the included instructions.
We wish you great success with your new Igni-Power.

Included parts

1 x Igni-Power system(ECU)
1 x Mounting hardware
1 x Disc (software and manual)
optional : Programming cable
USB_RS232 Adapter

Install instruction

Insert the included CD to the CD-Rom drive in your computer, and follow the instructions !
If the installation setup doesn't work, please copy the Igni-Power folder from the CD to your computer.
For the first setting, look in the "igni-Power\data" folder from the CD. The folder include a setting for a stock and limited engine.
The Igni-Power Team is looking forward to crate new setup and setting datas. You can download the datas at **igni-power.com**. Please save the download in your data folder.

Read the manual and follow the instructions.

Igni-Power connector:

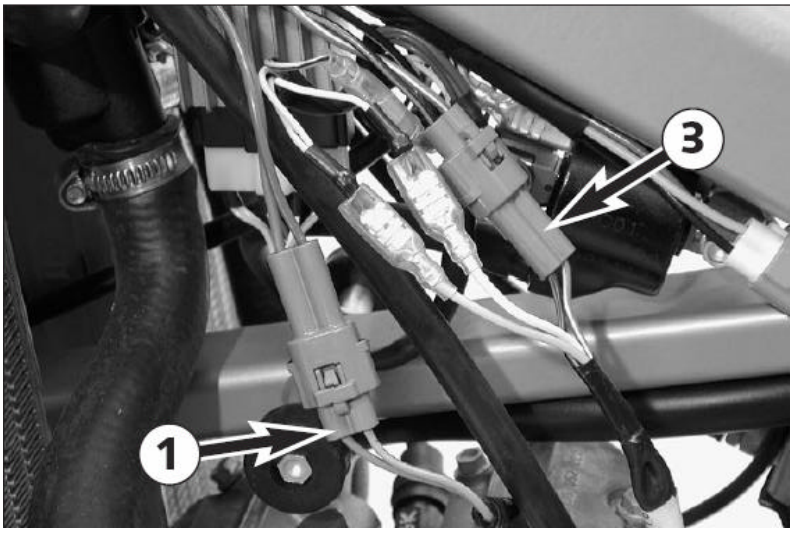
rot	supply **+12 V**
black	ground
red	inlet for crankshaft position sensor (**CPS**)
green	ground (for **CPS**)
white/red	generator1
white/red	generator2
black/grey	inlet for engine OFF switch (**KILL SWITCH**)
white	IC **(**outlet to ignition coil)
brown	IC **GND**
blue	TPS**_Vcc**
black	TPS**_GND**
yellow	TPS**_sensor**
yellow/green	tacho
violet	gear shift light
white/blue	IG-**retard**
white/red	second**_IG-map**
black/green	start-limiter
black/grey	clutch-master
RS232/sub D	connection to **PC** is realized by 9-pin serial port (COM)

Note:

Please consult your OEM shop manual to assist in ignition system removal and installation.

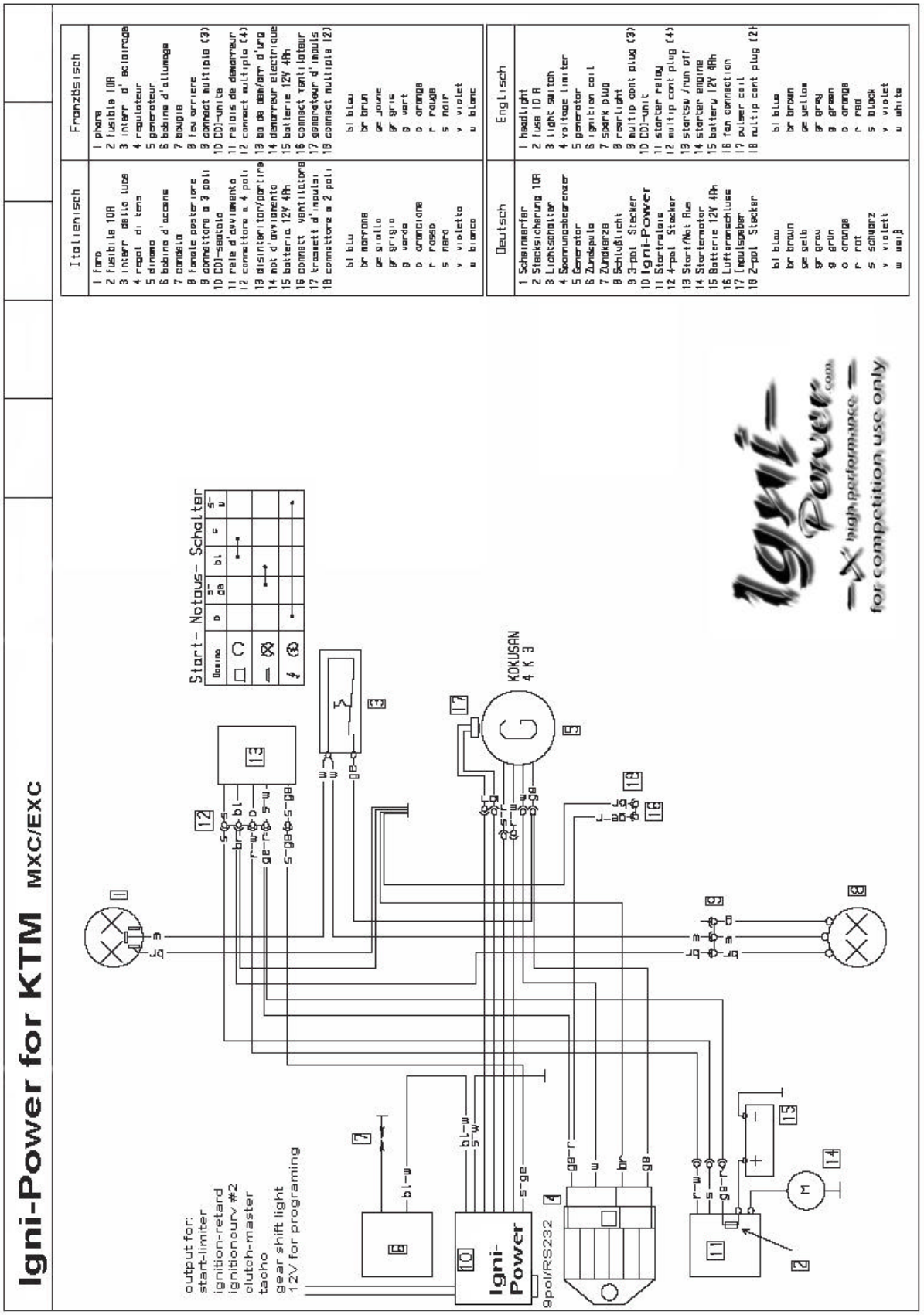
Step 1: Remove the original Ignition.

Remove the ignition from the motorcycle and disconnect from wiring harnis !



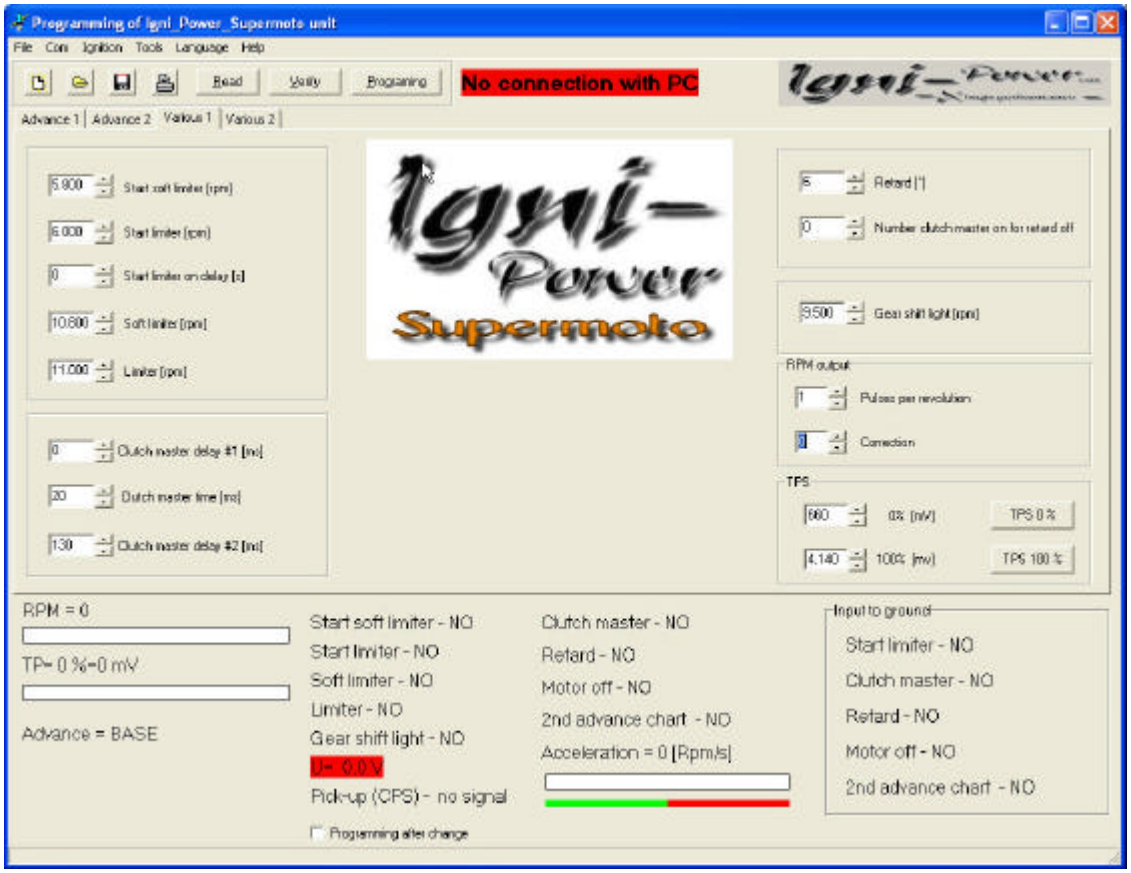
Step 2: Install the Igni-Power in your system, see the follow wiring diagram

wiring diagram:



Software Igni-Power.EXE

Igni-Power.EXE Always open with default calibration file ! **(igni-power data)**



Pull down menus

File - includes items

New	- default settings **(igni-power data)**
Open	- opens data file
Save	- saves data into file (to"Igni-Power\Data"folder)
Print	- prints the current settings
Print all	- prints the current settings all tab sheets
Exit	- exits the program

Com - includes items

Com1 to Com20 - selection of communication line
For PC without COM (USB only) apply adapter USB/RS232.

Ignition - includes items

Read_F7	- reads data from the unit
Verify_F8	- compares data in PC with data in the unit
Program_F9	- sends data to the unit and conducts verification

Tools - include items of collective settings (**minus**_F4, **plus**_F5)

Language - language settings **English, German, and French**

Help - includes items

Contents_F1	- opens assembly guide (this file)
About the program	- data on the software (version, date)

Icons menus

- Default settings **(igni-power data)**

Warning!!! Clicking this icon results in automatic default settings of all parameters

- opens data file
- saves data file
- prints the current settings

Read Verify Program - see pull down menu **Ignition**

Advance map1 and map2

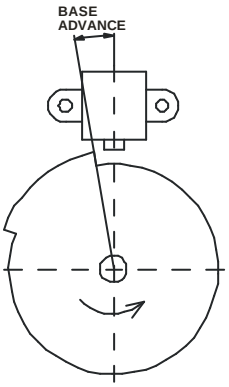
Setting element

TP map includes 150 adjustable advance options (in relation revolution and throttle position). Collective setting of the whole column is possible using the arrows under columns. Collective adjustment of the whole map can be done by collective change tool (+ and – buttons with selection **All**)

When the motor is running and PC connected with the unit current segment in the fuel map is highlighted. Use of collective change tool + and – button without selection **All** - just the current segment will be changed.

TPS - option advance map/advance curve

Base advance - setting of base advance here is necessary inscribe value of base advance normally **8 °** (KTM*)



Various 1

Limiter:

Start-soft-limiter - here it is possible to set the start RPM for engine Protection (sets value of starting revolution without ignition)

Start-limiter - If the input is connected to ground, the limiter is working with value of start limiter.

Start limiter on delay time - 2 modes for start limiter.

mode_1:"start limiter on delay time" if it is programmed to 0[sec.] the function is deactivated normal on / off function.

mode_2:(for clutch lever) to activated this function; the clutch lever has to be pulled for the programmed time ("start limiter on delay time")

After the clutch is total released the start function is deactivated.

Soft-limiter - sets value of starting revolution without ignition

Hard-limiter - here it is possible to set the maximum RPM for engine protection

Gear shift light - here it is possible to set the RPM value for gear shift light output

Clutch master:
If the input is connected to ground, the ignition is blocked for by software-preset time.
Clutch master delay#1 - setting of clutch master delay time.
Clutch master time - setting of clutch master off time.
Clutch master delay#2 - setting of clutch master delay time after off time.

Ignition retard - If the input is connected to ground, the advance is decreased by preset value.
Retard off (Clutch master) - 2 modes for retard
mode_1:(with **switch function**)"number clutch master on for retard off" is program to 0 normal on / off function.
mode_2:(with **key function**) for start retard "number clutch master on for retard off"
If set to 1 or more, function is programmed. To activate this retard function press the key once. If the programmed number (e.g.: 2 = two times shifting) is reached, retard function is deactivated.

Revolution indicator - TACHO output.
The revolution indicator output is compatible with most of board devices used on motorbikes. Pulse number for one revolution is set within igni-power.EXE software. TACHO output should be connected to connector (green/yellow).
Pulses per revolution - Setting of tacho output
Correction - Correction of tacho in %

Throttle position sensor TPS input.
An input is ready for standard TPS sensors used on your motorbike. It is designed for voltage range 0 - 5 V. Sensor settings for 0 % and 100 % is set by igni-power.EXE software.
TPS is powered by referential voltage + 5 V (blue) and GND (black). Sensor outlet will be connected to connector (yellow). Ignition with throttle position sensor TPS input is only done on demand.
TPS - limit TPS voltage values can be set here % and [mV]

- measures and sets 0% TPS (supply on, unit connected with PC, no gas)

- measures and sets 100% TPS (supply on, unit connected with PC, full gas)

<u>Various 2</u>

Reverse polarity
(crankshaft position sensor (**CPS**),Start limiter, Cluch master, Retard, Motor off, 2nd advance chart**)**
Switch activation - input logic settings (if the box is checked the function is activated by switch on input)

Ignition per revolution - number of ignition per revolution

No reading - reading is not allowed (after programming with this option data cannot be retrieved from the unit)

Extended Monitor - Extended Monitor on, bring of the display the TPS value in [mV]

Number of programming - number of times the unit has been reprogrammed

File - program file location (full path)

Switching intro 2nd advance chart - here it is possible to set the RPM value for switch from advance chart 1 to advance chart 2

Monitor

Monitor is located on the right and lower side of the screen – sensor values and motor operational characteristics can be observed here. If there is **No connection with PC** displayed in the upper right corner, the unit is not connected or the Com is not set properly.

RPM - motor revolution [1/min]
TP - Throttle position [%]
Advance - Ignition advance [°]
Start soft limiter - Start soft limiter is activ (yes / no)
Start limiter - Start limiter is activ (yes / no)
Soft limiter - Soft limiter is activ (yes / no)
Limiter - Hard limiter is activ (yes / no)
Gear shift light - Gear schift light is activ (yes / no)
U - supply voltage [V]
Pick up(CPS) - display whether pick up is running or stopped
Clutch master - Clutch master is activ (yes / no)
Retard - IG retard is activ (yes / no)
Motor off - Motor stop is activ (yes / no)
2nd Advance chart - 2nd Advance chart is activ (yes / no)
Acceleration - switchpoint monitor (2nd Advance chart is activ (yes / no))

Imput to ground monitor

Start limiter - Start limiter to ground (yes / no)
Clutch master - Clutch master to ground (yes / no)
Retard - IG retard to ground (yes / no)
Motor off - Motor stop to ground (yes / no)
2nd Advance chart - 2nd Advance chart switch to ground (yes / no)

Programming after change - automatic programming settings after every change

Establishing communication path

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We wish you great success with your new Igni-Power.

www.igni-power.com

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