HONDA TCI

- inductive ignition for HONDA motorbikes - detailed description

1. Hardware

HONDA TCI unit is produced in several versions for individual bike types:

1) Version for CBR, CBF, VT, VTR, XLV, NTV, VFR750…. (approx. 1990 ÷ 1999) – connector 16 pins
2) Version for CBR, CBF, VTR, XLV …. (approx. od r. 1997) – connector 22 pins

Software HONDA TCI.EXE is common for all version.

Crankshaft position sensor CKPS.
An input is ready for standard pickup sensors used on Honda motorbikes as CKPS.

Revolution indicator output TACHO.
The tachometer indicator output is compatible with major part of board devices used on Honda motorbikes (1 or 2 puls / rev.).

NEUTRAL and SIDE STAND blocking inputs.
In case at least one of these inputs is not grounded the unit locks ignition. Blocking feature can be switched off within HONDA TCI.EXE software.

Induction coils IC 1, 4 and IC 2, 3.
Induction coils outputs are ready for standard types, designed for inductive ignition and used on Honda motorbikes (primary coil resistance approx. 1 to 2 Ohm).

Supply voltage +12 V.
Nominal supply voltage is 14 V. It must be within 8 - 16 V range. In this range the unit is able to provide optimal control of all the processes. Ignition is stoped for supply voltage greater than 18.

Connection to PC.
Connection to PC is realized by 9-pin serial port (COM).

2. HONDA TCI software

Pull down menus

File - includes items	**New**	- default settings (serial adjustment)
	Open	- opens data file
	Save	- saves data file
	Print	- prints the current settings
	Exit	- exits the program

Warning!!! Clicking New results in automatic default settings of all parameters (serial adjustment) for the motorbike.

Port - includes items	**Com1 to Com10**	- selection of communication line

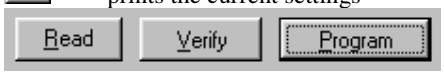
Device - includes items	**Read**	- reads data from the unit
	Verify	- compares data in PC with data in the unit
	Program	- sends data to the unit and conducts verification

Tools – include items of collective settings

Language – language settings: **English, Czech, and German**

Help – includes items	**Help**	- opens assembly guide (this file)
	About the program	- data on the software (version, date)

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

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


- see pull down menu **Device**

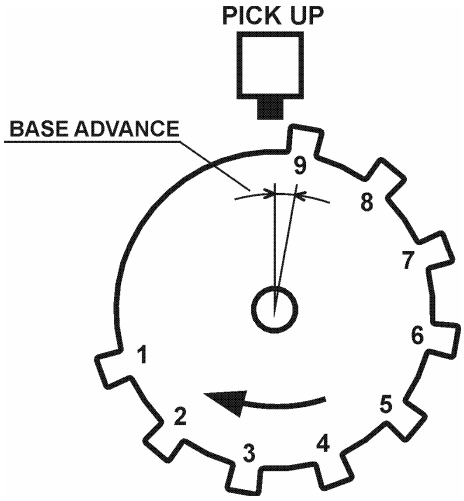
Setting element

10 adjustable options for revolution/advance
Collective adjustment of the whole advance curve can be done by collective change tool (**+** and **–** buttons with selection **All**)
When the motor is running current segment is highlighted in the advance curve. Use of collective change tool **+** and **–** button without selection **All** - just the current segment will be changed.

Base advance	- here is necessary inscribe value of base advance (by figure 1)
Limiter	- here is it possible to set maximal revolution.
Tachometer 2x	- tachometer output settings
Blocking enable	- enable or disable blocking by side stand.
Programming after a change	- automatic programming settings (after every change)

File: - full path to currently opened file

Pick-up system settings.
Ignition is designed for pick-up system on next figure. For in-line engines and V-engines with 30, 60 and 90° is dividing of noses by 30°. For V-engines with 52° is dividing by 26°.
Noses of pulse rotor are numbering 1 to 9. To field **TOP 1, 4** and to field **TOP 2, 3** you must inscribe number of nose bound to pick-up (at TOP position of several cylinder). For V-engines is 1, 4 rear cylinder and 2, 3 front cylinder.



Configuration for some motorbikes:

Motorbike	Cylinder 1, 4 (rear)	Cylinder 2, 3 (front)
CBR, CB	3	9
VF, XL125V, VTR	6	9
VT	8	9
NTV, XLV600,	4	9

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 proper set.

RPM	- engine revolution [1/min]
U	- supply voltage [V]
ADVANCE	- ignition advance [°]
Blocking	- activation signal of BLOCKING by side stand
NEUTRAL	- activation signal NEUTRAL
SIDE STAND	- activation signal SIDE STAND
Number of programming	- Number of times the unit has been programmed (applies only for Extended monitor option)