



# INSTALLATION MANUAL: TRANSISTOR IGNITION 12V-T-1 Ø31mm 1 cylinder crankshaft

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HPI wants to thank you for your confidence in its products.

Please read this manual carefully to ensure years of enjoyment of this specialised high end electronic device.

This manual shows you how to properly install the CDI-unit, wiring loom, rotor disk, pickup and HT-coil on your engine.

## Pickup Installation (see picture):

- Place the pickup so the metal receiver is at a distance of **16 to 16.1 mm** from the axis centre line or at **0.5 to 0.6 mm** from the tooth of the rotor disk.
- Along the axis, the tooth's middle must be aligned with the middle of the metal receiver on the pickup.

Only with this setup, the pickup will guarantee a reliable signal to the CDI

## Rotor disk installation:

The rotor disk has to be placed on an axis which rotates at the engines RPM (crankshaft).

The cylinder requires 1 pulse / crankshaft rotation. Since the rotor disk turns at the engines speed, it requires 1 tooth to generate 1 pulse / crankshaft rotation for the cylinder.

- Make the necessary adjustments to the axis or the rotor disk to fit.
- Turn the cylinder in its Top Dead Centre. (Remove the spark plug and use a micrometer to make a correct measurement).
- Place the rotor on the axis and position it as shown in the picture.  
**The falling edge of the tooth should be aligned with the start of the metal receiver of the pickup.**
- Tighten the rotor to the axis in this position.

This position corresponds with 0° in the TuneBox v4 software to program the CDI units.

## Installing the CDI-unit:

Mount the CDI-unit to the frame.

- |                       |                         |   |
|-----------------------|-------------------------|---|
| • <b>power</b>        | short red<br>black ring | connect the red cable through the on/off switch to the 12V of the battery.<br>connect the black ring to the mass (frame or battery ground)  |
| • <b>powerjet</b>     | short grey              | connect this to the power jet. This will switch to ground at the programmed values. (optional)  |
| • <b>Pickup</b>       | yellow/white<br>black   | connect to the cable of pickup.   |
| • <b>HT-coil</b>      | yellow<br>red           | connect the HT-coil to the frame. To minimize electrical interference, try to keep all cables at a safe distance from the HT cable.<br>connect the long, red cable to the + of the ht-coil,<br>connect the long, yellow cable to the – of the ht-coil |
| • <b>Curve switch</b> | yellow<br>yellow/green  | connect the curve button to these wires. (optional)<br>switch the button to select the desired advance curve.   |

Fasten all the cables to the frame and keep them clear of hot places and moving parts.

Please attend to the following remarks:

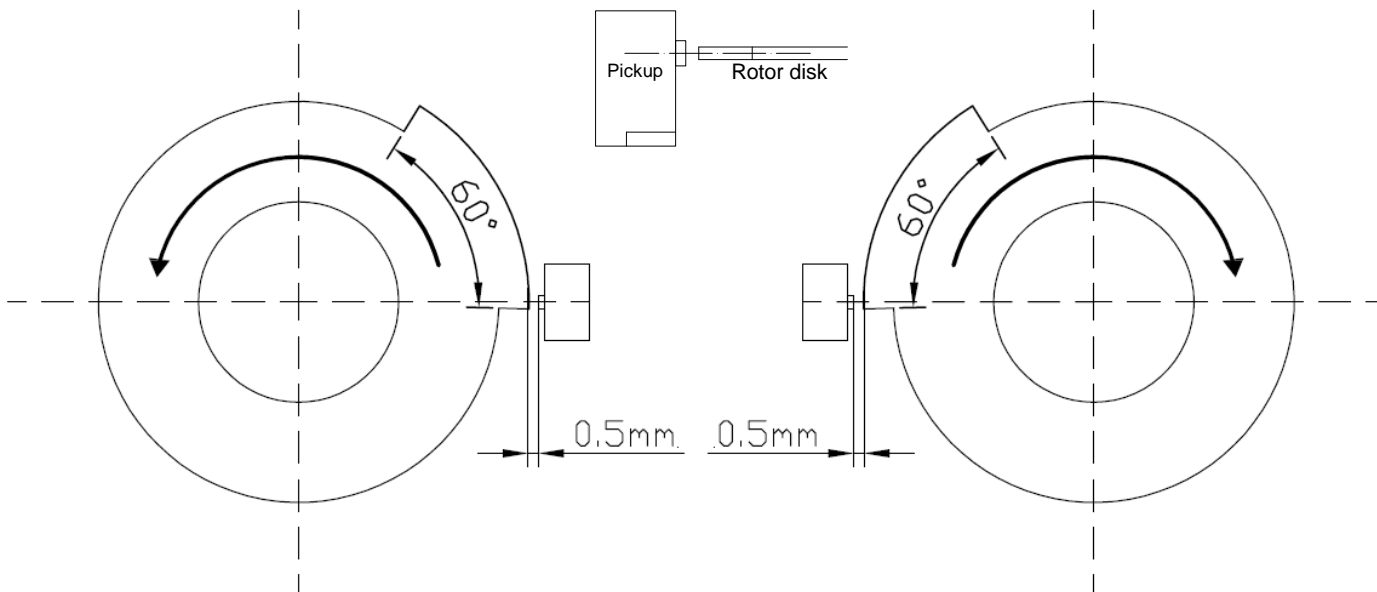
- the CDI-unit and cables must not be exposed to **mechanical stress**
- the CDI-unit must not be exposed to **excessive heat** (not behind the radiator, close to the cylinder or the exhaust)
- the CDI-unit must not be exposed to **electrical interferences** (not close to the ht-coil)
- the CDI-unit must not be directly exposed to **fluids** (water, gasoline, oil,...)
- **Do NOT** extend cables, this may cause interference and damage to the CDI or the engine.

## ATTENTION

**Use resistive spark plug with resistive spark plug cap (typically 5K)**

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## Programming the CDI-unit:

The advance curve(s) of all our programmable CDI units can be changed using the *TuneBox v4* software and a *USB interface*. With this powerful software tool you are able to design your own ignition curves to obtain maximum performance of your engine.

You can freely download TuneBox v4 from hpi's website: [www.hpi.be](http://www.hpi.be).

To avoid damage to your CDI and engine, stop the engine and switch off the power to the CDI while programming.

## Contents of the set:

The 12V-T-1 set is designed for 1 cylinder 2 and 4 stroke engines, crankshaft mounted.

- 1 CDI *1 or 2 curves programmable or non programmable*
- 1 Rotor disk *Ø31 mm, 1 tooth of 60°*
- 1 pickup *with connector to the wire loom*
- 1 wire loom *with fitting connectors*
- 1 HT coil *with mounting bracket*
- 1 curve switch *comes with the 2 curve sets*

## **ATTENTION**

**Use resistive spark plug with resistive spark plug cap (typically 5K)**