Short Manual

trijekt premium

as a replacement for Bosch ME7.x

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1. Installation - Preamble

1.1 introduction

This Installation Instruction will support you in installing and tunning our **trijekt** Control Unit.

For most positionings you get clear and detailed information.

Nevertheless, we kindly request you to consider the following notes:

trijekt can work perfectly only if installation of the components and of the electrical connections is carried out with due care.
So please read this installation instruction carefully, **before** starting installation and keep it for future application.
In many places installation requires an extensive expert knowledge, experience and craftmanship. For this reason you should install the control unit on your own **only** in case that

- you dispose of the necessary knowledge and experience as motor mechanic or car electrician personally,
- in cases of doubt you can take expert advice.

In all other cases please charge competent experts with the installation of the control unit – experienced tuners or a specialized garage!

Please note that **trijekt** GmbH will not assume liability for any damages caused by improper self installation or incorrect handling of the control unit.

1. Installation - Preamble

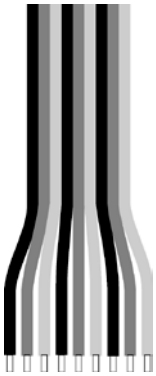
1.2 safety instructions

Before installing the control unit **it is imperative**
to consider the following warning notices:

Preface	For installation of the control unit you have to dispose of extensive expert knowledge. **Improper procedure during installation can cause damage or destruction of the connected engine.** In case of doubt please contact an expert prior **before!**
Installation	**During installation and connection of trijekt disconnect the vehicle battery!** Thereby it is imperative to consider all safety instructions of the vehicle producer (e.g. concerning Airbag, alarm system, on-board computer, immobiliser system). **Caution working at the fuel system!** **At all costs you have to avoid smoking, open flames and unshielded candles! Make provisions against flying sparks and static eletricity!** **Especially pay attention that there won't arise any leakages, since even slight leakages in the area of engine and exhaust system represent fire danger or explosion risk!** When drilling holes please take care that no vehicle parts (battery, cables, hoses etc.) will be damaged! Don't lay cable connections (especially in the engine compartment) in areas being at risk of splash water. According to our experience soldering the crimp connections has turned out to be rather a source of defect than to be useful. Due to engine vibrations connections break more easily at soldered contacts. Please fix the cable harness and signal transmitter in the way that they are not situated near rotating or moving engine parts (danger of chafe marks).
Operation	Before using your vehicle equipped with our **trijekt** engine management unit in road traffic, this installation has to be approved by an authorized test centre (e.g. TÜV (Technical Control Board) or DEKRA). This approval must be registered in the motor vehicle registration certificate. Please note that you lose any insurance coverage in case of using **trijekt** in road traffic without approval!

2. Installation

2.1 cable harness



trijekt premium is substantially pin compatible with Bosch ME7 ECUs.

A 100% compatibility with all ME7 vehicles is technically not possible. The wiring harnesses of the vehicles with ME7 ECUs are slightly different, so that it is essential to compare the original schematics of your vehicle with the **trijekt** premium pinout.

You have to compare the following pins with the original schematics of your car and (if necessary) to remove the wire or connect to another pin, **before starting the engine**:

9,12,13,17,18,19, 20, 21, 22, 23, 25, 30, 32, 38, 44, 45, 46, 47, 48, 49, 51, 53, 54, 61, 66, 70, 85, 86, 87, 104, 105, 109, 114, 115, 116, 119, 121

Our distribution partners and we will assist you in reviewing your schematics.

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Attention! Pin 21:

In vehicles where “terminal 15“ is **NOT** connected to pin 21, you have to cut the wire and connect it to the free pin 23. Now you have to connect “terminal 15” with the free pin 21.
Generally: Pin 21 must be connected to “terminal 15”!

Attention! Pin 23:

The Switching-Output 1 (pin 23) must be set in the pc-software (define errors and outputs), that it immediately turns on when the ignition is turned on.
e.g.: when the battery voltage is above 7V.

Attention! Pins 68 & 69 (PC-Connection):

The wires at these two pins must be removed (if existing).
In general, the wires of the oxygen sensor behind of the catalyst were connected to these pins. Please read again the original schematics of your vehicle! The lambda sensor behind the catalyst is inapplicable with **trijekt** premium.

Connect a 9-pin COM connector at the free pins 68 & 69 (see **trijekt** premium installation instructions). For this connection the **trijekt** GmbH offers a prefabricated cable (Item number: 9405).

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2.2 trijekt – control unit - fixing

2.2.1 fixing

Fix the control unit at the original installation place. This is usually the chamber between engine and passenger cabin. Mount it in a slightly elevated position in order to protect it from intense moisture.
Ideally, the installation occurs directly on the original bracket, which must be modified slightly for this purpose.

Example: modified bracket

The original fastening clip is bent outward,
so that the contact area increases for the control unit.
Now it can be mounted on the bracket.

Please mind hidden hollow spaces when drilling the holes and turning in the fixing screws!
In any case do not damage any vehicle parts such as cable harnesses laid in the hollow spaces, hoses or lines!

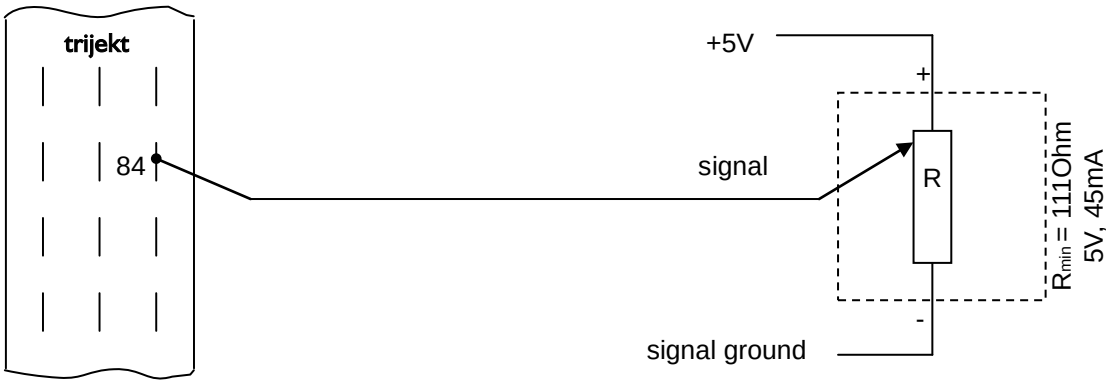
2. Installation

2.3 throttle & throttle pedal

Although it is possible to control electronic throttle with **trijekt** premium, you should always be aware that this is a highly safety-related component. The settings can and may make only authorized **trijekt** partner. The Settings will be provided with password protection.

To handle this issue, we always recommend the conversion of the electronic throttle control to a mechanical throttle (cable).
According to our current knowledge all vehicles in which ME7 controls the engine were used always with a alternative engine with mechanical actuation. This means it should be visible on every auto body already suitable mounts for a mechanical gas pedal. Similarly, there is for each engine an appropriate range of cable-throttles of similar engines. Please ask your **trijekt** partner to help in selecting the throttle.

If you opt for a conversion to mechanical throttle, the plug must be changed according to the throttle.
The wires for the throttle actuator (DC motor, pins 117/118) and the second signal line (throttle 2, Pin 92) are not needed for mechanical throttle control. So you have only 3 wires for a simple throttle:



The signal voltage must rise when you open the throttle.

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2.4 lambda oxygen sensor

Engines with Bosch ME7 ECUs are usually operated with 4-pole lambda probes or with wideband lambda sensors type LSU4.2, and with various combinations (before / after catalytic converter) from both types of lambda sensors.
With **trijekt** premium you can use up to two standard 4-pole lambda sensors or alternatively with one (optionally two) wideband lambda sensor type LSU4.9.

Please note:
A wideband lambda sensor type LSU4.2 can't be used with **trijekt** premium. Always follow the original schematic of your vehicle and compare it with the premium **trijekt** pinout!

Generally, we recommend the use of one (resp. two, in V-engines) wideband lambda sensor type LSU 4.9. To connect the sensor to your standard wiring harness, you need the following parts:

- 1x wideband lambda sensor VW part number: **06F906262J**
- 1x plug VW part number: **6Q0973713A**
- 3x wire (0,5mm²) VW part number: **000979131E**

If your vehicle is equipped with a wideband lambda sensor type LSU 4.2 (resp. two in V-engines), you can simply attach the sensor type LSU 4.9. At the central plug of the ECU the appropriate pins are already connected.

The lambda oxygen sensors behind the catalysts (if present) are not applicable with **trijekt** premium. These wires can be used for the operation of a 6-pin wideband lambda sensor, unless the vehicle is not factory-equipped with a wideband lambda sensor in front of the catalytic converter. For this, you have to change the wires at the central plug to the corresponding pins. Note the original schematic of your vehicle!

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wideband lambda sensor LSU4.9