DAKTON

# *J-BOX*

*User Manual*

J-BOX is a sensor junction box designed to expand DASHBOARD and µ-BOX, allowing logging of up to extra n.4 sensors.

The following sensor types are available for use with J-BOX:

-PEDAL POSITION (both throttle and brake pedals)

-STEERING ANGLE

-PROPORTIONAL EXHAUST VALVE POSITION

-GYRO

-TYRE TEMPERATURE

All these sensors are “contactless” type to improve significantly reliability and simplify installation compared to more traditional potentiometers.

J-BOX has been designed with an exclusive method for automatically detecting sensor type and related calibrations making system setup as easy as possible for the user.

You can connect to your J-BOX and configure it through DATAVIEW. Refer to DATAVIEW user manual or on line help for more detail


**JBOX connection schematic for n.4 additional sensor logging**

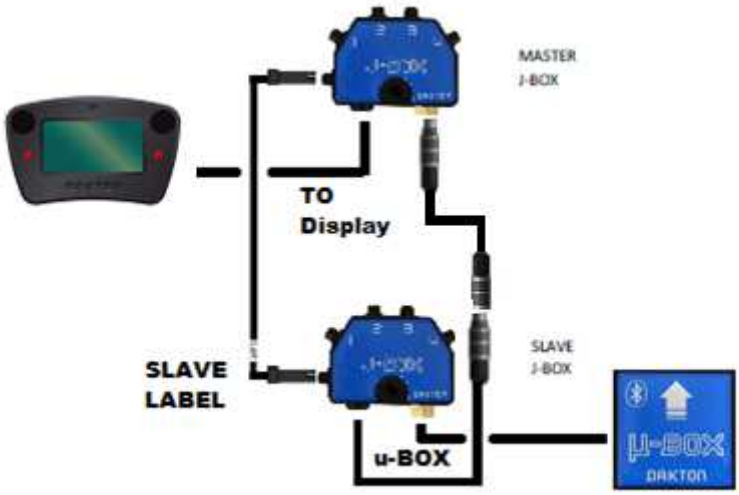

**Connection schematic for configuring JBOX through PC. Adaptor DASH-JBOX will have to be fitted to USB cable with switch on “JBOX”.**

## SISTEMA CON DOPPIA JBOX MASTER and SLAVE

If n.8 total additional inputs will be required, user can always fit n.2 JBOX in a Master-Slave configuration. This will be necessary if you will have to log n.4 tyre temperatures sensors as well as pedals and steer.

*Tyre temperature sensors will have to be connected to SLAVE JBOX while the other sensors to the MASTER ONE.*

To do that it is necessary to use the MS-KIT (Master-Slave wiring kit) and follow the schematic below:




## POSITIONING YOUR J-BOX

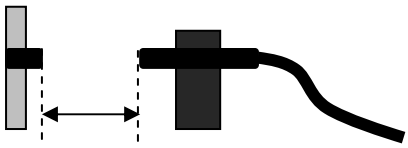
J-BOX is designed to be directly secured through its fixing hole and a M5 bolt. The preferable place would be upside down under your kart front fairing.

## POSITIONING and CALIBRATING THROTTLE AND BRAKE PEDAL SENSORS

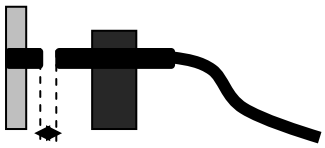
In order to measure and log throttle e brake pedals positions you will need to fit both sensor and target magnet.

It's important to minimize the distance between sensor and magnet while avoiding the magnet to touch the sensor when the pedal is fully pushed. Just to provide a reference maximum magnet-sensor distance should be 20mm when pedal is released and minimum distance (pedal pushed to its end stop) should be 1mm.

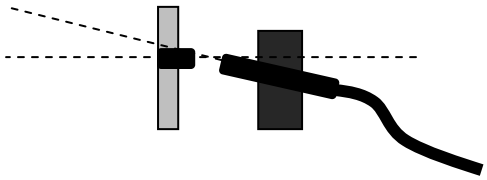
PEDAL RELEASED POSITION




PEDAL END STOP POSITION




Due to the nature of pedal movement (i.e. rotation) the pedal position sensor is tolerant of small missed alignment between magnet and sensor.

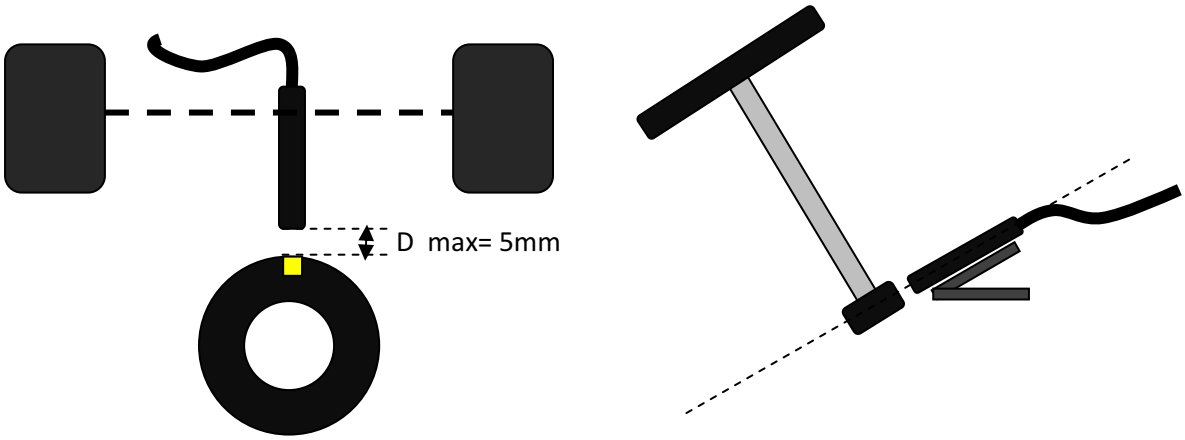


Pedal sensor calibration requires a 5 steps procedure (0%-25%-50%-75%-100% see DATAVIEW user manual for details). The user should take care to provide a precise reference for holding the pedal to these 5 positions while calibrating.

**POSITIONING and CALIBRATING STEERING ANGLE SENSOR**

In order to measure and log steering angle you will need to fit both sensor and target magnet. The distance between sensor and magnet should be kept within 5mm.

It's also necessary to make sure the target magnet is correctly oriented on the steering column with the orientation mark at 0º when the front wheels are straight.




Steering angle sensor calibration requires a 5 steps procedure (-60 º -30 º 0 º 30 º 60 º see DATAVIEW user manual for details). The user should take care to provide a

precise reference for positioning the steering wheel to these 5 angular position while calibrating.

## POSITIONING and CALIBRATING EXHAUST VALVE SENSOR

Exhaust valve sensor is installed using the relative KIT (RKS.Kit.Val). Also you will need to make sure the valve piston is fitted with the target magnet.

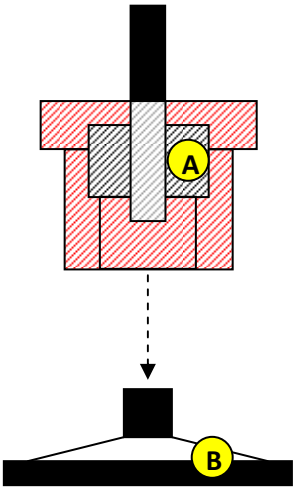
Sensor calibration requires a 5 steps procedure (0%-25%-50%-75%-100% see DATAVIEW manual for details). The user should take care to provide a precise reference for holding the valve sensor to these 5 positions while calibrating.

Below are some details on how to position valve sensor piston during calibration.

*0% and 100% POSITIONS* SETUP:

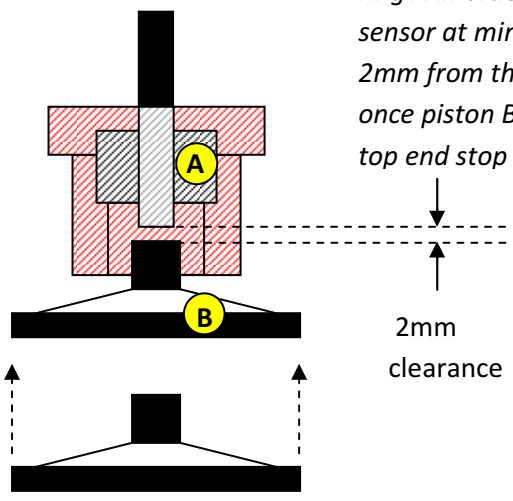
***0% POSITION***

*Once piston B is at its bottom end stop distance between sensor and magnet should not exceed 20mm*




***100% POSITION***

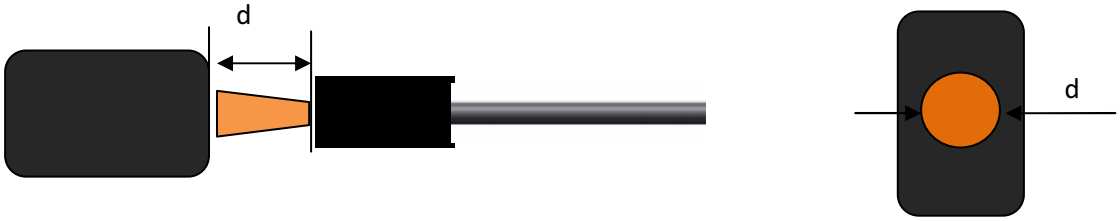
*Trim sensor position in ring A in order to have sensor at minimum 2mm from the magnet once piston B is at its top end stop*



Intermediate positions (25%-50%-75%) must be equally distributed between 0% and 100%.

## TYRE TEMPERATURE SENSORS

Tyre temperature sensors do not require calibration. However it's necessary to make sure those are correctly placed with reference to the tyre. In order to decide the correct distance of this sensor from the tyre surface, consider that the distance is also equal to the measurement circle spot diameter.




## GYRO

Gyros do not require calibration but user needs to check sensors properly zeroed.

Refer to Dataview manual and to the specific section of sensor zeroing procedure.