Please read the instructions carefully before installing the product.

IOPEDAL

IOPEDAL - Installation Manual

Table of content

Symbol declaration

ⓘ   Information

🛡   Warnings

💡   Tips and tricks

Content of package

IOPEDAL
Device for connection at the throttle pedal

Remote + Clip
Fast and intuitive remote control
Mounting clip for dashboard installation

Loom
Vehicle specific loom in automotive grade quality

Installation material
Variety of fasteners, glue pads and others to fixate the IOPEDAL and remote in it's place

Screwdriver
Opens the remote control to swap the CR2032 battery

Installation

The IOPEDAL is developed for easy installation. Please perform the following steps one after the other as described.

ⓘ	If you need help with the installation, contact our support or an auto repair shop.

Pre-installation checklist

1. Park the vehicle in a spacious environment and open the driver-side door as far as possible.

2. Make sure that the handbrake is applied and a neutral gear is engaged.

3. Switch of the ignition, remove the key from the contact and with the door opened, lock the vehicle (if possible).

4. Wait at least 10 minutes until all systems of the vehicle have been deactivated before starting the installation.

ⓘ	For key-less-entry types of some vehicles, the accelerator pedal is powered-up when the driver approaches the car. Place the key well out-of-range of the vehicle.

①   Disconnect the accelerator pedal

Locate the pedal sensor

Depending on the type of vehicle the pedal can be floor-mounted or mounted hanging. In both cases the process is similar. For a floor-mounted version, it is possible that the pedal needs to be disassembled.
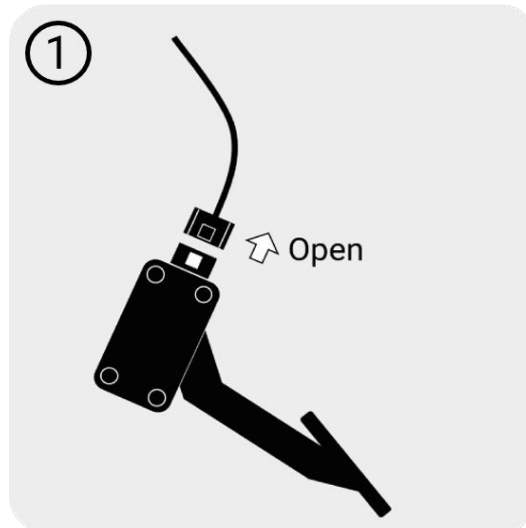
Disconnect the pedal sensor

All automotive connectors have some kind of locking mechanism. Locate this mechanisms, pull back the retainer when available, push the locking mechanism to unlock and pull the connector off.
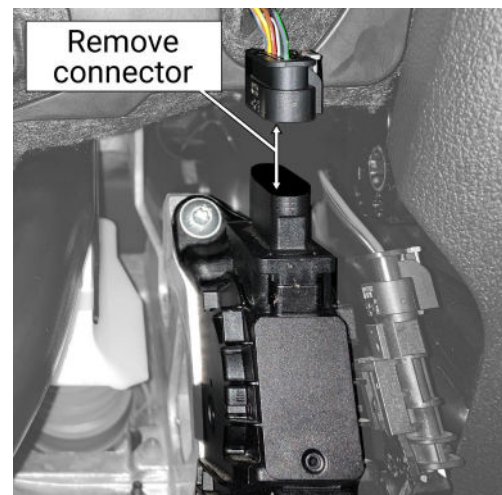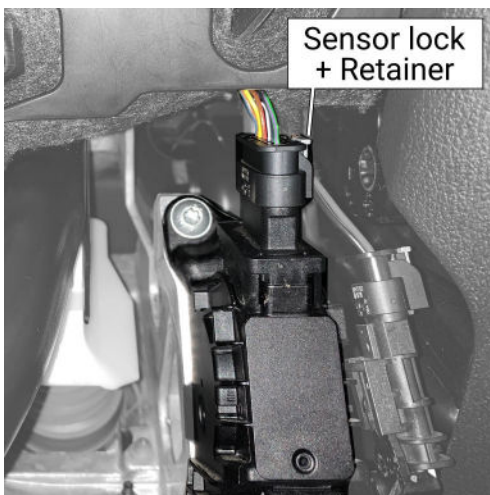
②   Connect the loom

Connect the wiring harness between the original connectors. Make sure that you hear a clear click when connecting the connectors. If necessary, lock the locking mechanism at both ends.
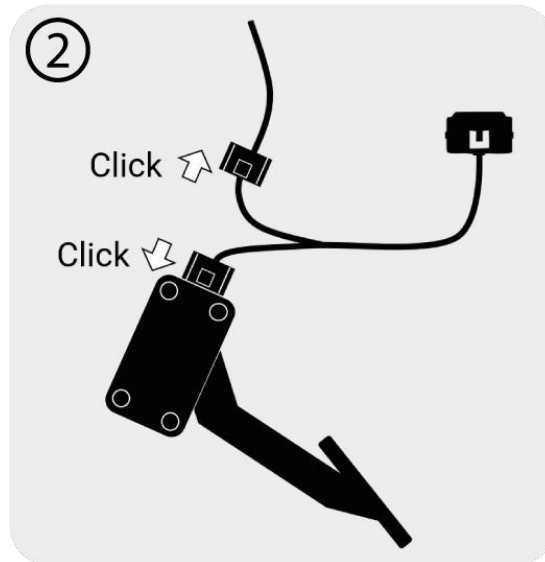
③   Connect the IOPEDAL-Unit (ECU)

The IOPEDAL-Unit can now be connected to the loom.
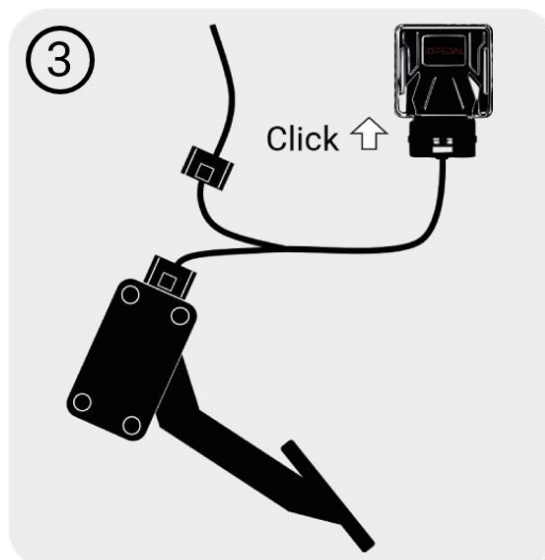
④   Turn on ignition

Make sure once again that the handbrake is activated and that the neutral gear is engaged or, in the case of an automatic transmission, that it is set to the park position. Then switch on the ignition.

If you are using the IOPEDAL with remote control, activate the remote control and check the connection status. The connection LED should now light up blue and the sport mode should be selected.

If you are using the IOPEDAL basic version, you can connect or pair the app at this point. See chapter "The IOTUNING smartphone app". If you have performed the pairing, the connection to the control unit has been successfully established.

⑤   Training of the IOPEDAL (auto ranging function)

The Auto-Ranging-Mode starts automatically when the IOPEDAL is started up for the first time (ignition on/engine on). This function analyzes all incoming signals from your accelerator pedal over the entire pedal way. All drivingModes (driving programs) are individually adjusted and adapted to your vehicle according to the determined data.
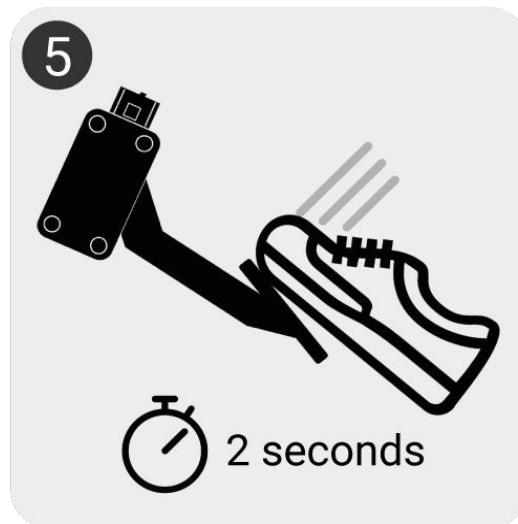

To do this: Please slowly depress the accelerator pedal to the full throttle position (including kick-down) and hold this position for approx. 2 seconds and repeat this twice. The IOPEDAL is now fully configured and the installation is complete.

Mounting the IOPEDAL-Unit

> ⚠️ It's of high importance that the module is mounted firmly and secure. The cables or the module falling on the floor while driving poses a safety risk.

Depending on the vehicle, several places can be used to mount the IOPEDAL. Most common places are [A] inside the center console, [B] on the left side above the foot-rest and [C] above the pedals in the plastic cover.
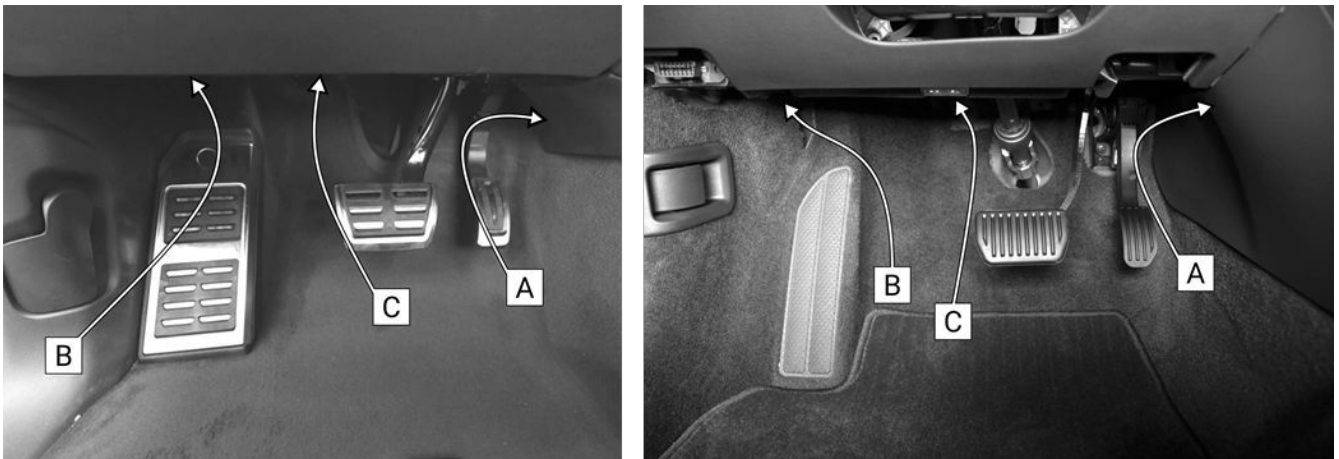
Use the glue pads and/or the straps to firmly mount the module and the loom so it can not interfere with the driving of the vehicle.

[A] Positioning the IOPEDAL control unit in the area of the center console is the easiest thing to do on most vehicles.
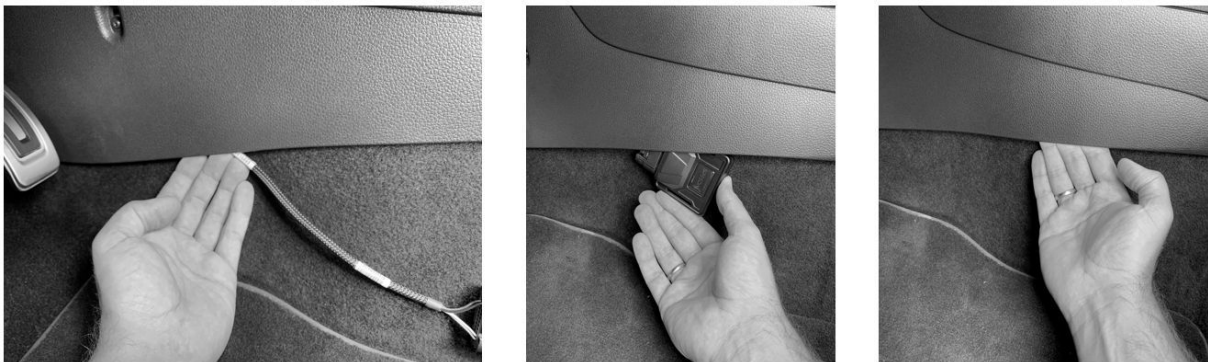
[B, C] The control unit can also be attached to plastic surfaces using the adhesive pads.

Mounting the Remote Control

The control unit is supplied with a holder in which the remote control can be placed while driving. Use the supplied adhesive pads to attach the holder. Choose the position of the holder particularly carefully so that operation is easy while driving.

Apply the glue pad to the backside of the clip.

①	②	③
Glue pad	Clip backside	Clip with glue pad

Apply the clip with glue pad at a suitable location.

Test the stability of the wireless signal by starting the remote. If necessary rearrange the module or the remote.

> ⓘ When the secureMode or valetMode is used, it's recommend not to leave the remote in the vehicle. The remote can be easily taken out of the clip and carried in a pocket or a bag.

Remote Control

Once activated, the control unit automatically establishes a radio connection with the IOPEDAL control unit and allows the driver to select the programs, subprograms, Secure and ValetMode to adapt the system to the driver's specific needs.

Starting the remote

By pressing any button, the unit starts and the connection is established (ignition or engine on). While the connection is being established, the upper LEDs light up blue and change from left to right. Once the connection is created, the LEDs show the current setup of the IOPEDAL..
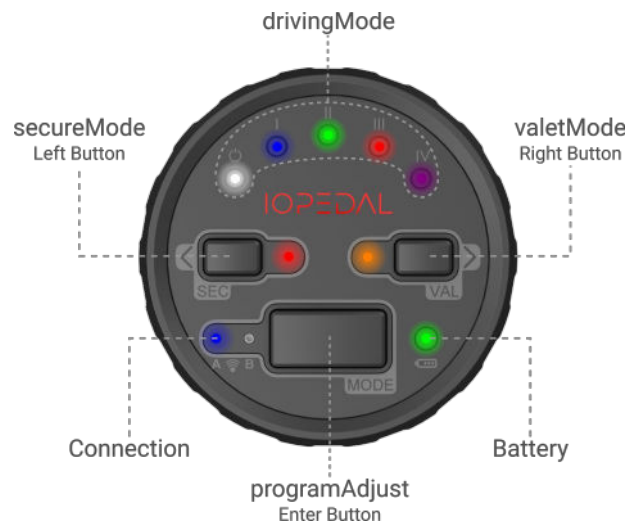
Driving modes

The vehicle can be tuned with these different driving programs.
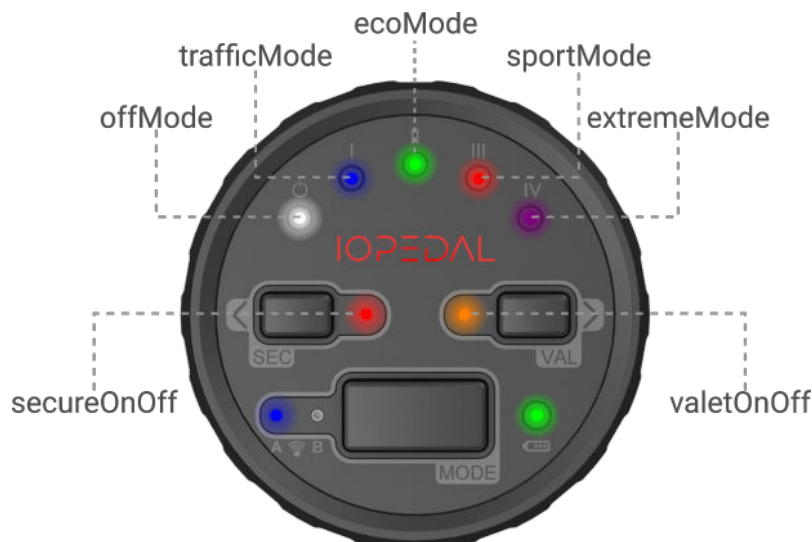
offMode (White) stock performance
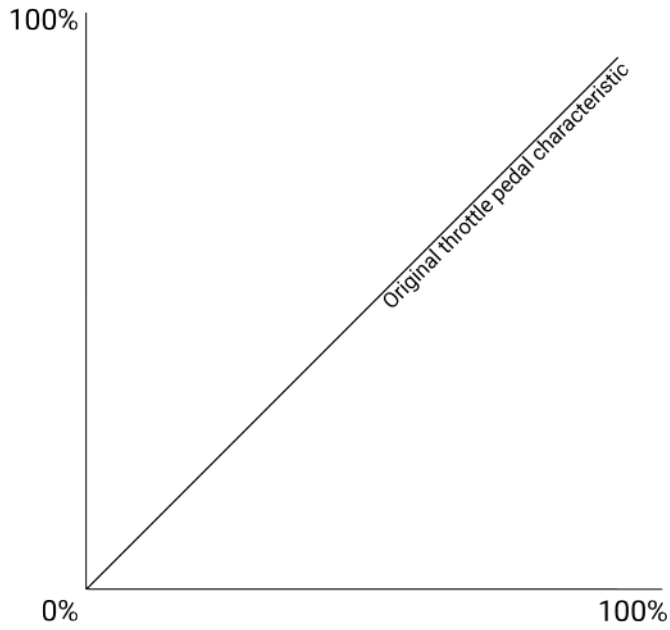
trafficMode (Blue) optimized for city traffic and traffic jams
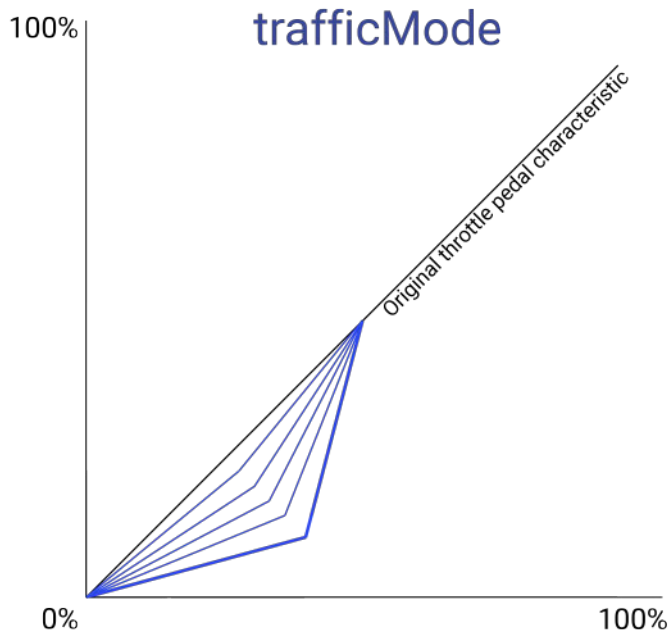
ecoMode (Green) Supports efficient driving
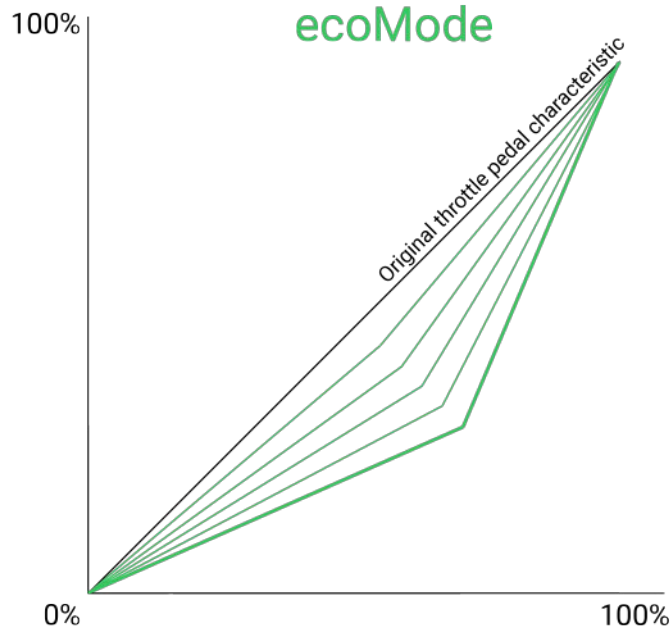
sportMode (Red) great response and no throttle lag
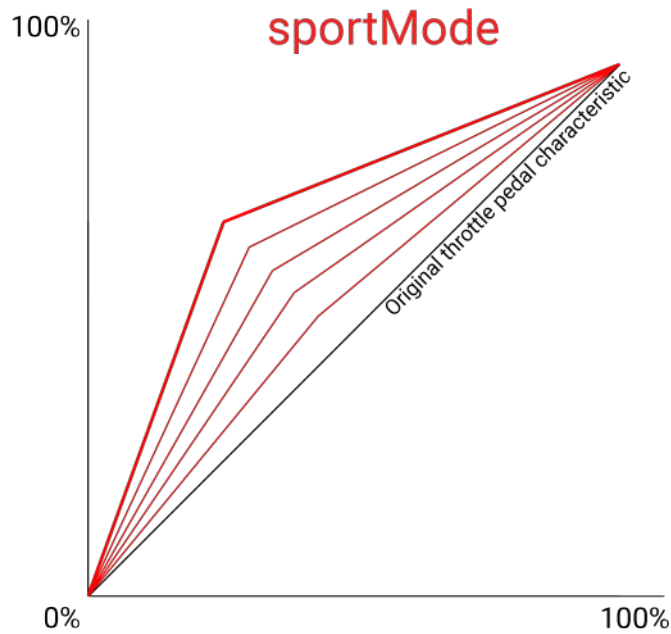
extremeMode (Purple) Maximum response
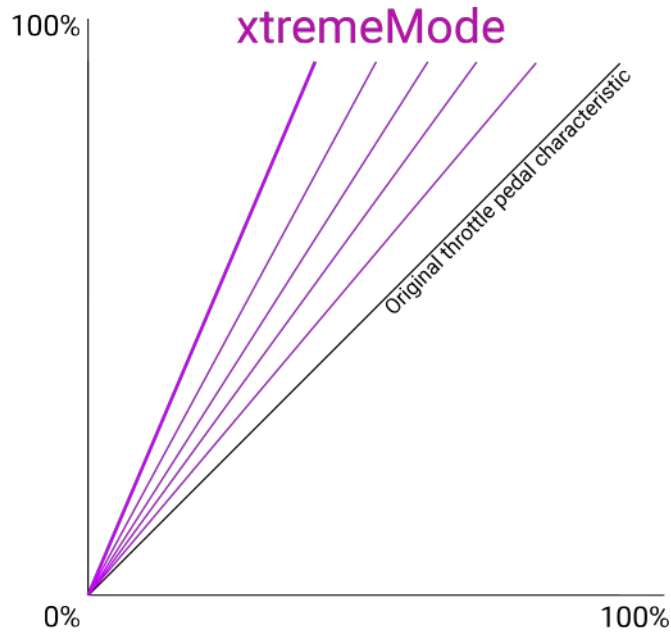
To switch between driving modes, press the left or right button until you reach the desired intensity.

Sub-program adjust

Each program consists of 5 sub-programs. These programs all have the same character and vary in precision and strength. Cycling through these programs allows for a precise adjustment of the selected drivingMode.

The sub-program selection can be activated by pressing the programAdjust-button (Mode) once. In the sub-program adjust-mode the LEDs are all lit in the in the same color as the program. The actual adjust is highlighted and the 4 other LEDs are slightly dimmed.

Pressing the left- and right-button cycles through the sub-programs where left is preciser and right is stronger.

Valet mode

The valet mode reduces the maximum travel of the accelerator pedal. This will result in a power reduction of the vehicle. This mode can be used for when an inexperienced driver uses the vehicle. For example: parking service, student drivers, high power vehicles.

To activate the valet function press and hold the valetMode-button until the blue LED lights up. In valet mode the all corresponding LEDs will start blinking orange. The top 5 LEDs now display the fine adjust of the valet function. The left-button will decrease the travel and the right-button will increase the travel.

To disable this function hold the valetMode-button until the blue LED lights up. Release the bottun and the system will return to it's previous state.

After a button inactivity of 1 second the IOPEDAL will be updated automatically.

> (i) The valet function remains active even after the vehicle is switched on/off

Secure mode

The secure mode disables the accelerator pedal on the next vehicle start (IOPEDAL power cycle). This makes it impossible to rev-up the engine without having the remote control.

To activate secure mode, press and hold the secureMode-button until the blue LED lights up. The secure LED will light up red to indicate this feature is on.

On the next IOPEDAL power cycle, the pedal will be disabled. To re-enable the pedal for this session press any button on the remote and allow it to connect. The accelerator pedal will now function normally.

The secure function is still activated for the next power cycle. To deactivate the secure mode press and hold the secureMode-button once more until the blue LED lights up.

After a button inactivity of 1 second the IOPEDAL will be updated automatically.

> ⚠️ The secure-mode has priority over the valet-mode. So if both are active the secure-mode will disable the pedal on the next vehicle start.

User menu

The user menu contains additional settings to further personalize the system the your needs. To enter the menu press and hold the left- AND right-button until both LEDs light up blue.

> ⓘ The user menu is active when both secure and valet LEDs are blinking red or blue.

There are 2 user menus available:

- red (IOPEDAL settings) and
- blue (remote settings).

Pressing the right- or left button cycles the menus. When the end of the red menu is reached it will jump to the blue menu. The enter-button (Mode) is used to confirm the selection.

---Warm-up timer 0...8 minutes
--Flavor select
--empty
--Start auto-ranging
--Stop auto-ranging

---Remote power-off 4...12 seconds
--empty
--empty
--Reset bondings
---LED test
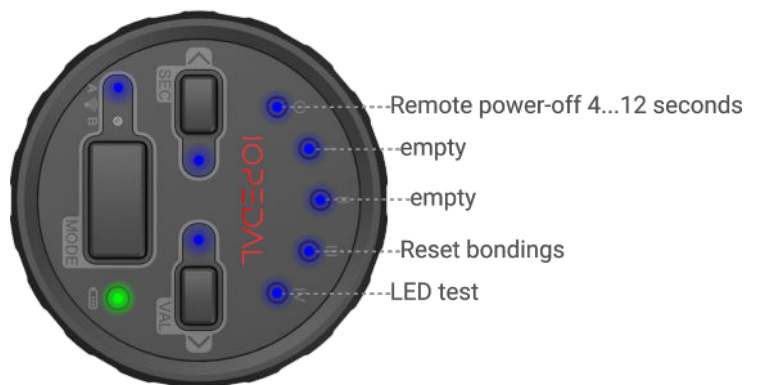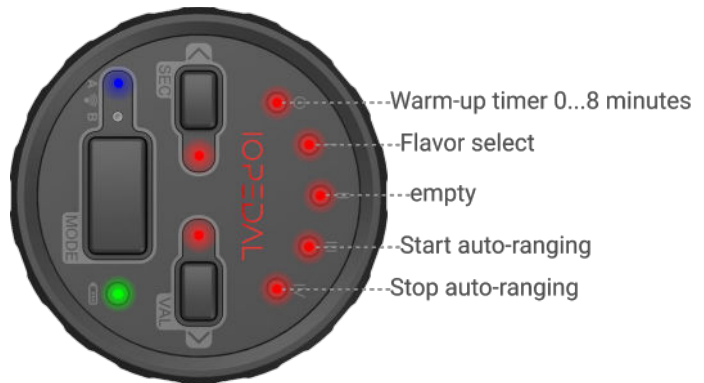
Warm-up timer

The warm-up timer gives the vehicle time to reach operating temperature before throttle tuning is activated. The default setting for this value is OFF. Select the desired warm-up time and press the Enter button (Mode) to confirm.

ⓘ	If no button is pressed within the power-off time of the remote, the remote will power down and no user function will be executed.

Flavor select

The IOPEDAL contains 3 different flavors (**Normal** / **Power** / **Precise**) of the predefined drivingModes. Switching the flavor changes all the programs and sub-programs to an other set of characteristics. Select the desired flavor and press the enter-button (Mode).

ⓘ	If no button is pressed within the power-off time of the remote, the remote will power down and no user function will be executed.

Start and stop auto-ranging

This function allows for a controlled start and stop of the auto-ranging function. This allows the IOPEDAL to be transferred to a different vehicle and start the configuration process after installation. Please contact support for further assistance in this process.

Remote power-off time

The battery powered remote turns itself of after a certain period of inactivity. The default value for this 8 seconds but this value can be changed between 4 to 12 seconds.

Select the value and press the enter-button (Mode).

Reset bonding in the remote

This function allows the wireless stack of the remote to be reset and reconnect to any factory configured device. This function should only be used after contacting the support.

LED Test

This function cycles through all RGB LEDs on the remote and makes it possible to verify that all are still functioning. This function should only be used after contacting the support.

Connection status indicator

The connection status of the remote is constantly monitored and the result is shown on the connection status indicator.

Off: connecting

Blue: connection up and running

Blue/Red blinking: connection lost, trying to reconnect

Red: connection lost

Battery status indicator

The battery status of the remote is constantly monitored and the result is shown on the battery status indicator.

Green: battery good
Orange: buy a CR2032 battery
Red blinking: time to swap the battery

Swapping the battery of the remote

As soon as the battery status indicator start blinking red, the internal battery of the remote should be swapped. Use the included screwdriver **T8x40** to remove the 4 screw from the back of the remote.

Carefully remove the back cover from the remote. Make sure the printed circuit board doesn't fall out of the housing and remove the battery.
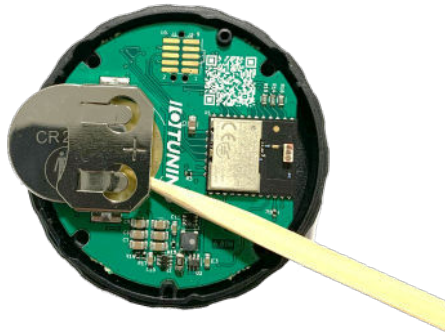
Place the new **CR2032** battery.
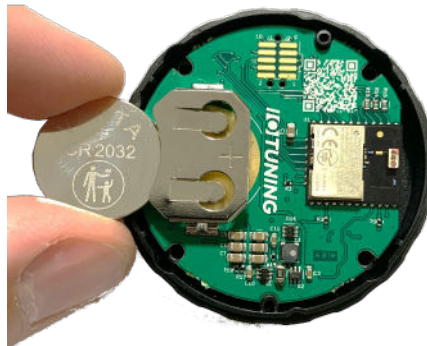
Replace the back cover and put the screws back in their positions. Test the battery installation by pressing any button on the remote. The remote starts connection process. The vehicle needs to be in range before the connection can succeed.

The IOTuning smartphone app

The smartphone app can be downloaded free of charge from the Play Store for Android smartphones and from the App Store for iPhones. By clicking on the corresponding app logo below or by scanning the QR code, you will be automatically directed to the app.

Required Android version

Android 7.0 or higher

Required iOS version

iOS 15.2 or higher

ⓘ	Legal note: Using a smartphone while driving on the roads or stationary with the engine running is prohibited in most countries. Please inform yourself about the local regulations in your country and follow them.

Make connection

After installing the IOPEDAL, the connection can be established as follows.

1. Install the IOTuning app on your smartphone.

2. Turn on the Bluetooth functionality on your smartphone.

3. Switch on the ignition on your vehicle.

4. Start the app on your smartphone. After the IOPEDAL is found, the pairing request is started.

5. Now enter the unique **6-digit PassKey**. You can find the PassKey in two different places.

    a) On the type plate of the IOPEDAL module (rear).

    b) On the label of the IOPEDAL packaging.

6. After a successful connection, the app switches to the main menu.

7. You can now use the app and make settings.

> (i) Legal note: Using a smartphone while driving on the roads or stationary with the engine running is prohibited in most countries. Please inform yourself about the local regulations in your country and follow them.

The functions of the IOTuning app

All settings and functions are clearly arranged in the main screen of the IOTuning app.
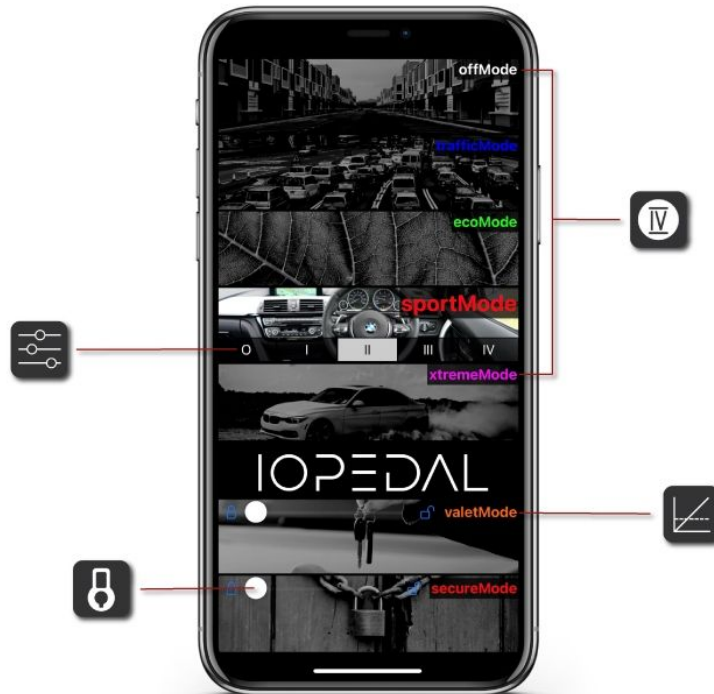
(i)	Legal note: Using a smartphone while driving on the roads or stationary with the engine running is prohibited in most countries. Please inform yourself about the local regulations in your country and follow them.

Selection of the different drivingModes

The various driving programs can be selected as wanted directly on the smartphone with a click.

The activated driving program is highlighted in color.

In the picture on the right, sportMode is activated.
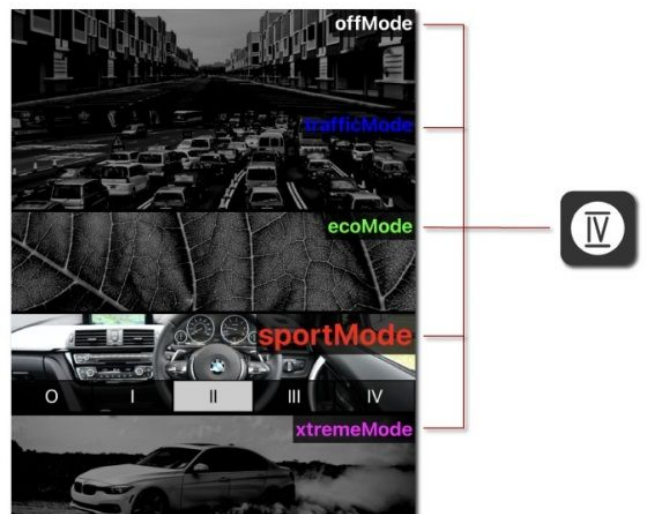
Fine tuning of a driving program

When a driving program is activated, the selection menu for fine tuning is also displayed below. The fine tuning is divided into 5 levels in the smartphone app, just like it can be found in the remote control.

By selecting the individual levels, the selected driving program is directly adapted to the respective vehicle and serves to customize it.

Activation and setting of the valetMode

The valetMode is one of the security features of the IOPEDAL. Activation or deactivation is done by moving the lock side from left to right.

Similar to the remote control, the 5 individual stages for reducing the vehicle performance are also displayed below. These can be easily selected on the smartphone.
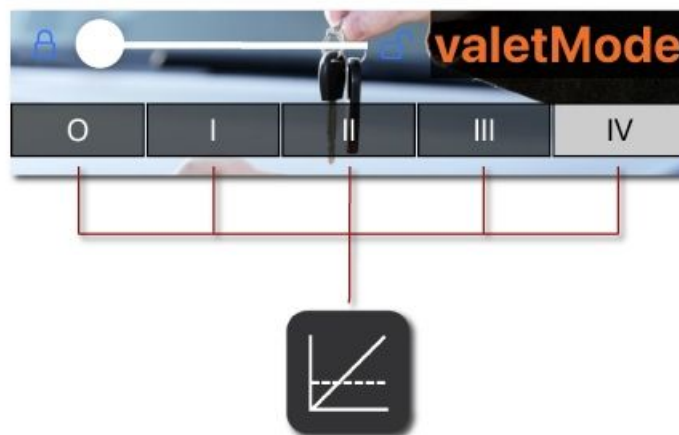
Activation of secureMode

Activation or deactivation of secureMode is also done using the lock slide. Similar to the remote control, the drivingModes can be used in parallel to the secureMode. Please read about the secureMode function in the "secureMode" chapter.
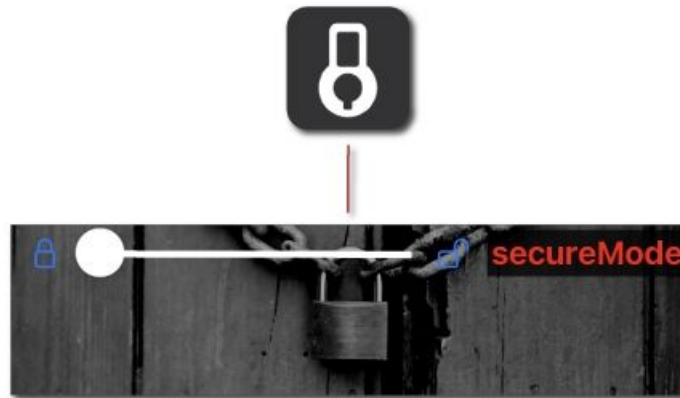

ⓘ	Legal note: Using a smartphone while driving on the roads or stationary with the engine running is prohibited in most countries. Please inform yourself about the local regulations in your country and follow them.

FLAVOR SELECT – Overview

	Normal	Power	Precise
Traffic			
Eco			
Sport			
Extreme			
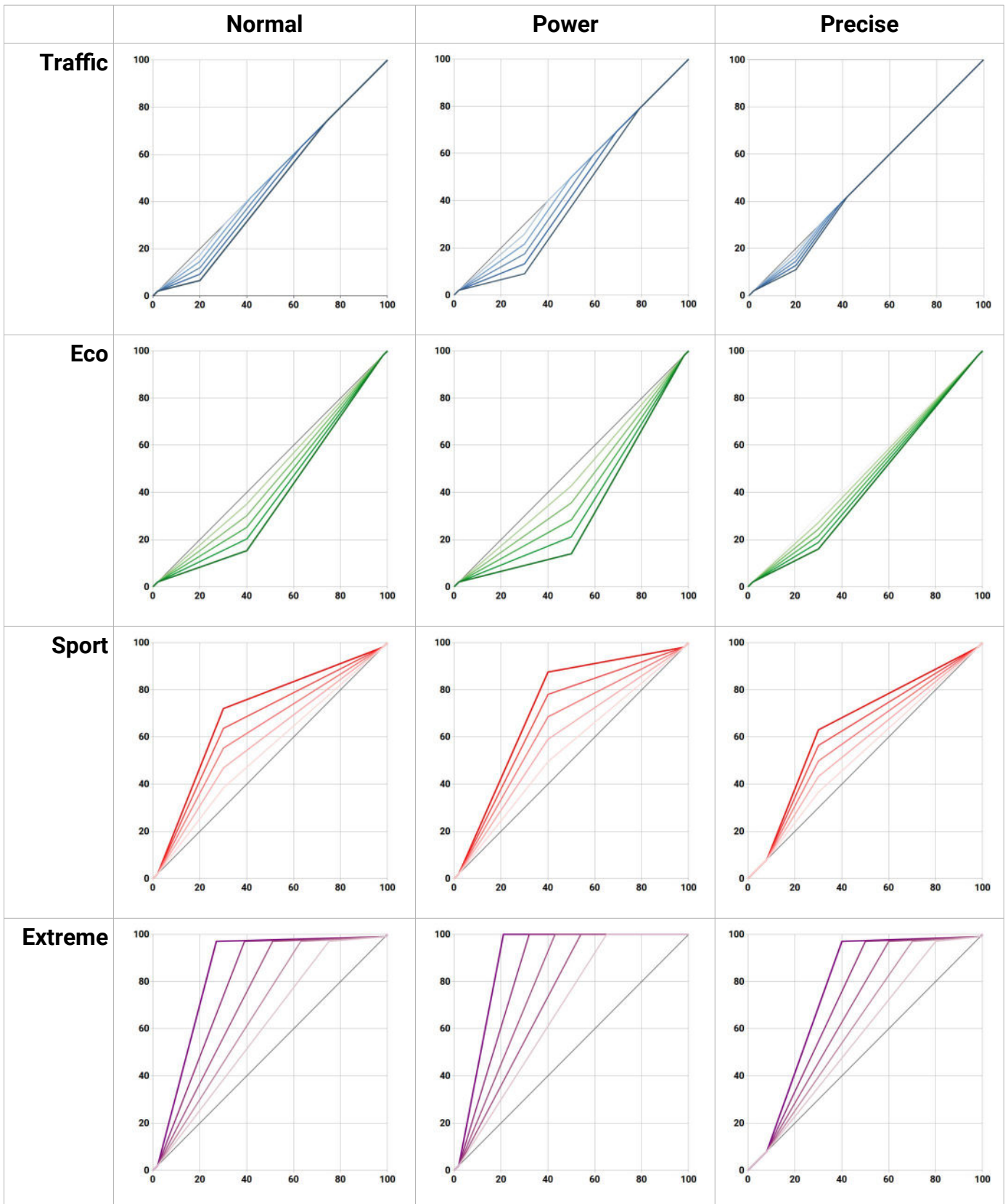
FAQ

Q: How long after entering the vehicle should one wait before removing the OEM connector of the accelerator pedal?

A: This is vehicle dependent but as a rule of thumb it is prudent to wait for 10 minutes and until all in-vehicle displays or powered off.

Q: Is the IOPEDAL active after installation?

A: Yes. After installation the auto-ranging function will start configuring the IOPEDAL. This process runs autonomous and immediately applies the new found setting.

Q: Can the installation do damage to my vehicle?

A: When the correct procedure of the installation manual is followed, no harm can be done to the vehicle. Always use the correct tools for the job. This simplifies the installation and avoid any damage to the vehicle.

Q: Is it possible to disable the IOPEDAL until my engine is warmed-up?

A: Yes. It is possible adjust the warm-up time of the engine according to your needs from disabled to 8 minutes. In the user menu of the remote you can select this value. The vehicle must be running to adjust this setting. The standard value is disabled.

Q: The remote stays on too long/short. How can I change this?

A: In the user menu of the remote power-off time in seconds can be adjusted between 4 to 12 seconds. The standard value is 8 seconds.

Q: The overall settings of all programs are still too strong/weak. Are there any other options to adjust my experience?

A: The IOPEDAL comes with 3 flavors of programs. Normal / Power / Precise. The normal-flavor are the default settings. The power-flavor throws even more power in the experience. The precise-flavor gives more control to the accelerator pedal. In the remote's user menu can be switched between these flavors.

Troubleshooting

Problem	Solution
Check engine light is on after first starting the engine.	• Turn off the ignition, check all connections and retry.
	• If the check engine is caused by an installation error which has been resolved (the accelerator pedal works as excepted) it is possible that the check engine light remains active for several vehicle starts. After 5 vehicle starts this warning light should disappear.
	• If the accelerator pedal still doesn't work as expected, contact customer support for assistance.
Connector doesn't fit or needs a lot of force to fit.	• Compare the OEM connector with the connector on the wiring loom and see if they match.
	• If the connectors don't match, the wiring loom isn't suitable for your car. Contact customer support for further assistance.
Connector does fit but check engine light is on and there is a poor to no throttle response.	• Possibly a wrong wiring loom was ordered with the same connector plugs but different pinning.
	• Contact the customer support for further assistance.
The response of the vehicle is too strong. The acceleration is too high or the engine goes in too high RPMs.	• Select a less powerful sub-program by pressing the modeButton and moving the selector to the left. If this reduction isn't enough, select a lower type of program.
The response of the vehicle is too weak.	• Select a more powerful sub-program by pressing the modeButton and moving the selector to the right. If this increase isn't enough, select a stronger type of program.
The remote can't connect to	• The wireless signal is getting interference or is

the IOPEDAL or looses it's connection too often.	being obstructed.
	• Try changing the position and/or orientation of the module.
The engine's RPM goes up slowly or is too high at idle.	• Reset the auto-ranging by accessing the user menu in the remote. Start the engine and select the "Start auto-ranging" function.
	• Press the accelerator completely down for 2 seconds and release.
	• Select the "Stop auto-ranging" from the remote's user menu.
Other issues and problems	• Contact the customer support for assistance.

Declaration of Conformity

EU Declaration of Conformity (DoC)

We

Company name:	IOTuning GmbH
Postal address:	Am Alten Ostbahnhof 38
Postcode:	44135
City:	Dortmund
Country:	Deutschland
E-Mail address:	info@iotuning.com

declare that the DoC is issued under the sole responsibility and belongs to the following product:

Apparatus:	Accelerator Pedal Tuning
Type:	PDL21 / RMT21

Object of the declaration:

Commercial name:	IOPEDAL
Article numbers:	M1-001
	M1-002
E-type approval	E1*10R06/01*9562*00

The object of declaration described above is in conformity with the relevant harmonization legislation:

Automotive EMC Directive, UN ECE R10
Radio Equipment Directive, RED 2014/53/EU
Restriction of Hazardous Substances in Electrical and Electronic Equipment Directive (RoHS) 2011/65/EU

Standards used:

| CISPR 25 Ed 2.0:2002	EN 301 489-1 v2.2.0 (2017-03)
ISO 11452-4:2020	ISO 11452-2:2019

Signed for and on behalf of:

Dortmund	15.12.2021	Mr. Andre Henkel, CEO
Place of issue	Date of issue	Name, function, signature

Disclaimer

This product has been developed to the best of our knowledge and manufactured on state-of-the-art equipment. Nevertheless, do not be careless and use the enclosed notes and legal regulations to inform yourself. The manufacturer cannot monitor compliance with these operating procedures or conditions and methods during installation, operation, use and maintenance of the product. Therefore, we do not assume any costs resulting from or in any way connected with incorrect or negligent use or operation.

Waste electrical equipment and batteries

1. it should be noted that all owners of waste electrical and electronic equipment are required by law to collect this equipment separately from unclassified municipal waste. Accordingly, it is forbidden to throw old electrical and electronic equipment into the residual waste garbage cans or yellow garbage cans. The obliterated dustbin symbol shown below and affixed to electrical and electronic equipment also indicates the obligation to collect separately.
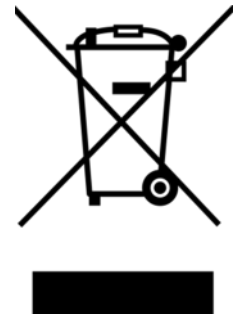
2. point out to all owners of waste electrical and electronic equipment that it is a legal requirement to remove them before handing over these waste equipment, waste batteries, waste accumulators, unless they are surrounded by these waste equipment.

3. point out that all end users of WEEE are responsible for deleting the personal data of the WEEE they dispose of.

4. owners of WEEE have defined and available options for return or collection of WEEE by public waste management authorities to ensure proper disposal of WEEE. It is also possible to hand in electrical and electronic equipment for reuse. For more information, please contact the relevant collection point or collection service.

The following link provides the option of viewing an online directory of collection and take-back points:

https://www.ear-system.de/ear-verzeichnis/sammel-und-ruecknahmestellen

5. note on the WEEE registration number: (WEEEReg.Nr. DE) registered: DE 71202783

Battery:

Since batteries and rechargeable batteries may be included, we are required by the Battery Act (BattG) to point out the following: Batteries and rechargeable batteries may not be disposed of with household waste, but the return of used batteries and rechargeable batteries is required by law. .. Used batteries may contain harmful substances and may be harmful to the environment and human health if stored or disposed of improperly. The battery also contains important raw materials such as: B. can be recycled with iron, zinc, manganese or nickel. You can return the battery free of charge after use or drop it off at a nearby location (store, municipal collection point, shipping store, etc.). Retail sales are limited to regular consumer quantities and spent batteries that the distributor has or had in stock as new batteries.

A sign with a wheeled garbage can and a cross means that the battery and accumulator must not be disposed of in household waste. Below this symbol there are also the following symbols, which have the following meaning:

Pb: Battery contains lead

Cd: Battery contains cadmium

Hg: Battery contains mercury

The following batteries are present in our electrical appliances:

Battery type: CR2032

Height: 3.2 mm

Width: 20 mm

Voltage: 3 Volt

Capacity: 0,23 Ah

Chemical composition: Lithium

Contact

The IOTuning support team is available to assist you during the office hours.

Ticketing support via https://support.iotuning.com/

Email support via support@iotuning.com

For a fast and efficient support experience please add following information on first contact:

- Name, email, telephone number

- Sales invoice (PDF/picture)

- Vehicle make, type, engine and year

- IOPEDAL, remote and wiring loom bar codes

- Accelerator pedal pictures and installation pictures

- Problem description

Legal notice

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