

KIYO D ULTIMATE

User and installation manual

rev.: 171024

KIYO D ULTIMATE

Complete Speed Capture Defense System

COMPLETE SPEED CAPTURE DEFENSE SYSTEM – ALL IN ONE PACKAGE

The KIYO D Ultimate system ensures safe driving conditions by detecting all types of speed enforcement cameras that may occur in traffic. With the help of its radar antenna, laser sensors and updatable GPS database, it warns the driver to fixed- and mobile cameras, LIDAR speedcams, average speed cameras and to many other dangers.

The system is made up of different modules that can be bought separately and some of these can function on their own. To achieve full protection against speed cameras, the installation of the complete system is needed, which includes a GPS U1 fixed camera detector, a RAD U1 radar detector, an Ultimate laser unit and all the necessary accessories to connect these modules.

OPERATION OF THE KIYO D ULTIMATE SYSTEM

The different features of the KIYO D Ultimate system, like the USB updatability, the external speaker, the LED indicator and the sensors built into the license plate frame make the completely stealth installation possible.

There is no need to activate the modules one by one, because the system is connected directly into the electrical system of the vehicle, therefore it switches on automatically upon ignition, and when the engine is shut off, the system will also switch off. After the installation and first setup, the system will be ready to use immediately after ignition, without adjusting the settings every time. The devices run a system check upon every activation and in case of problem, the loudspeaker gives a warning signal and the LED indicator starts flashing red. When the system check does not detect any problem, the LED indicator flashes according to the currently selected mode and the loudspeaker states the name of this mode as well.

Operation when detecting fixed- or mobile LIDAR devices:

The sensors, built into the license plate frame, detect the signal of both fixed- and mobile LIDAR cameras. When the system detects a camera, different LED colors, sound effects, and a warning voice draw the driver's attention to imminent dangers. When hearing these warnings, the driver has to cautiously adjust the speed of the vehicle, while paying attention to the rest of the traffic as well

Operation when detecting fixed speed cameras:

The fixed speed cameras are detected by the GPS U1 module of the system. Thanks to its freely updatable Europe database, it is able to detect fixed speed cameras, average speed cameras, red light cameras and other traffic enforcement devices. Depending on its settings, the device can give LED and voice warnings even from a 750m distance.

Upon closing to a fixed speed camera faster than allowed, the device warns the driver to adjust the speed of the vehicle according to that specific zone.

Operation when detecting radar signals:

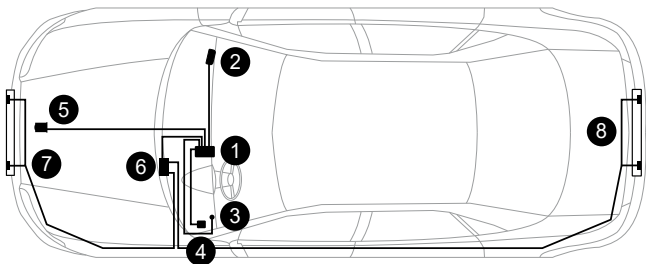
GPS- and laser detectors cannot detect radar-based speed cameras. These types of devices can only be detected with the RAD U1 radar detector module, which can identify the radar waves that these cameras emit.

Upon detecting a radar signal, the device warns the driver with different sound effects, LED signals and voice alarms. The driver then has to adjust the speed of the vehicle according to that specific zone, while paying attention to rest of the traffic as well.

COMPONENTS OF THE KIYO D ULTIMATE SYSTEM

For the best efficiency of the KIYO D Ultimate system, it is recommended to trust experienced professionals with the installation of the system. For the proper operation and efficiency of the laser unit, the different components must be installed precisely, furthermore, the number and position of the required sensors may vary in each vehicle.

Contact our customer service and we help you find the closest official KIYO TECHNOLOGY workshop!



1. KIYO GPS U1 fixed speed camera detector module:

The KIYO GPS U1 device is the central unit of the KIYO Ultimate system, as it processes the different signals of the other modules and warns the driver to imminent dangers. The device comes with a display screen, but it can also be hidden under the dashboard. Further information regarding the device itself and the installation, are available in its user manual.

2. External speaker:

The external speaker is useful in case of stealth installation, as it amplifies the volume of the different warnings and ensures that the driver notices the danger. The loudspeaker can be connected to the GPS U1 with the Communication cable included in the set.

3. Multi-colored LED indicator:

The LED indicator shows the current status of the complete system at all times and warns the driver with different colored signals. It is useful in case of stealth installation, because it is able to inform the driver about everything, therefore the GPS U1 unit can

be hidden under the dashboard. The LED indicator can be connected to the GPS U1 with the Communication cable included in the set.

4. External GPS antenna:

Although the GPS U1 has a built-in GPS antenna, in case of stealth installation (when the device is installed under the dashboard) an external GPS antenna is required for establishing connection with the GPS satellites. The GPS antenna can only operate properly, if its upper side has a clear view to the sky.

5. RAD U1 radar detector module:

The RAD U1 module is able to detect the signals of both fixed and mobile radar-based speed cameras. The module connects to the GPS U1 unit and it can be installed behind the plastic bumper of a vehicle. Further information regarding the installation and operation of the module are available in the user manual of the device.

6. Central unit of the D Ultimate laser module:

The D Ultimate laser module connects to the GPS U1 unit with the Communication cable included in the set. The power supply of the whole system is ensured by the laser module, therefore it must be connected into the electrical system of the vehicle. Further information regarding the steps of the installation are available in this manual.

The laser sensors in the license plate frame (7. and 8.) connect to the central unit of the laser module. Further information regarding the installation, update and operation of the laser unit are available in this manual.

WARNING! If the complete system is installed, the GPS U1 is powered through the Communication cable of the D Ultimate module, therefore no power cable may be connected to the GPS U1 directly, because it may disturb and damage the electrical system of the vehicle!

Due to the laser-muting features of the GPS U1, the beeping sound of the laser module must be terminated. To do this, the buzzer of the laser module has to be removed or its wirings must be disconnected from the 10-pin socket.



If the complete system is installed, the LED indicator of the laser module may remain hidden under the dashboard with the central unit, because the GPS U1 unit will give the alarms to the driver.

The central unit of the laser module and the GPS U1 device must be updated and configured separately at first startup. In order to do this, always follow the instructions found in the user manual and on the website of the manufacturer.

KIYO GPS U1

Short product description



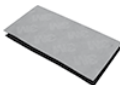
The KIYO GPS U1 is a device that can detect fixed speed cameras. In order to create a complete defense system against speed cameras, it can be connected with a radar- and a laser detector module. It receives and processes all of the other modules' signals and warns the driver to imminent dangers. The English speaking KIYO GPS U1 comes with a display screen, but if needed, it can also be hidden under the dashboard of the vehicle.

Accessories of the KIYO GPS U1:

USB cable



Velcro tape



Cigar lighter power cable



User Manual



Radar Module (optional)



External GPS antenna (optional)



The device can be updated through an USB cable and a computer. After connecting the optional Radar Module to the GPS U1, the system can detect the signals of radar-based speed cameras as well. In case of stealth installation, the external GPS antenna ensures the connection with the GPS satellites.



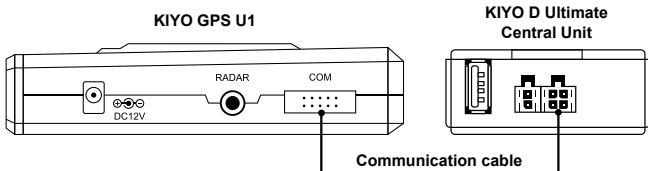
WARNING! The cigar lighter power cable of the GPS U1 device can only be used if the GPS U1 operates as a separate detector. If it is connected with the laser module, then it is powered through the Communication cable of the laser module, therefore its power cable must not be connected!

Further information regarding the operation, installation and configuration of the GPS U1 and its radar module are available in the user manual of the KIYO GPS U1 device.

Communication cable and other accessories

Installation and operational information

To establish a complete system, the KIYO GPS U1 and the KIYO D Ultimate devices must be connected with the Communication cable included in the package.



The communication cable can be used with the KIYO GPS U1 device alone. In case of stealth installation, the LED indicator of the Communication cable and the voice of the GPS U1 will alert the driver to imminent dangers. Thanks to these features, the display screen of the GPS U1 can be hidden under the dashboard or into the different compartments of the vehicle. To amplify the volume of the alarms, an external speaker can be connected into the mono jack socket of the cable.



Parts of the communication cable:

1. Multi-colored LED indicator
2. External speaker socket
3. COM socket for the GPS U1
4. COM socket for the D Ultimate central unit.

Another part of the communication cable is a 2-pin plug cable that allows two D Ultimate central units to be connected in series. In this way, the laser unit can be expanded up to 8 sensors. The KIYO D Ultimate laser unit can process that two central units are connected in series. The central unit that is connected directly into the laser unit will handle the frontal sensors, while the next central unit will handle the rear sensors. This is important when the device states the direction from which the signals are detected. (In case of one CPU, the frontal sensors must be connected to ports 1 and 2, while the rear sensors must be connected to ports 3 and 4.)



KIYO D ULTIMATE Laser Module

User and installation manual

The KIYO D Ultimate is an active laser detector, developed and manufactured in Hungary, especially for European markets. With its laser sensors (hidden into the special license plate frame), it is able to detect most of the European speed cameras and it can be installed quickly and easily. The device is freely updatable via USB, therefore it can always be up to date.

The sensors in the license plate frame detect the signals of both fixed- and mobile LIDAR speed cameras. When the GPS U1 device is connected, voice alarms, sound effects and LED warnings alert the driver to speed cameras. However, the laser detector can operate on its own. In this case, LED lights and beeping sounds will alert the driver.

In case of an alert, the driver has to adjust the speed of the vehicle, while paying attention to the rest of the traffic as well.

MODES OF THE KIYO D ULTIMATE LASER DETECTOR

The different modes of the device can be set with a three-way switch. In position II. the device is in active mode, while in position I. it is in passive mode. In position 0. the device is turned off. When the GPS U1 is connected, it will state the name of each mode upon starting the system or changing between modes.

Three-way switch



Position II. : ACTIVE MODE

Position 0.: OFFLINE

Position I. : PASSIVE MODE

Panic button:



With the hidden panic switch, the device can be deactivated at any time and can only be used as a parking assist. Only the distributor can reactivate the device, therefore **it is recommended to avoid using the panic button!** Push and hold the switch to deactivate the system, a short beeping sound indicates that the process has started and a longer beeping sound is heard when it is finished.

COMPONENTS OF THE KIYO D ULTIMATE LASER DETECTOR:

Central unit



Sensor (2 / 4 pieces)



USB extension cable



Pendrive



Plastic card



Hex key



License plate frame (1 / 2 pieces)



Power cable

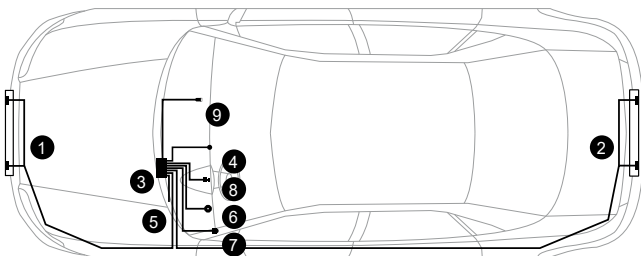


INSTALLATION OF THE LASER UNIT:

The operation and efficiency of the laser detector depend on the number of sensors used, their precise installation and proper aligning. The structure and size of the vehicle determine the number of the required sensors.

One central unit can handle up to 4 sensors, however, bigger vehicles and the detection of special speed cameras may require 6-8 sensors. In these cases, another central unit must be connected to the system with extra power- and communication cables. It is recommended to trust official workshops with the determination of the required sensors and the installation of the device. Contact our customer service and we help you finding the nearest workshop!

1-2. Installing the license plate frame and the sensors:

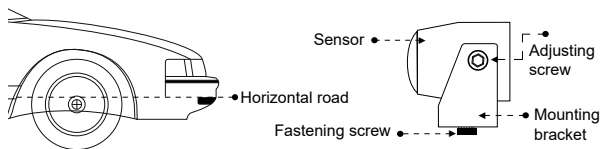


The sensors must be placed into the special, infrared-transmitting license plate frame included in the set. During installation, the original frame has to be replaced with this special frame and then the wirings of the sensors must be led to the cabin of the vehicle and connected into the central unit (3).



Sensors

If the license plate frame of the vehicle is angled, then for the best efficiency, the sensors have to be aligned to be parallel with the road. The angle of the sensors can be adjusted with the screw on the side of the mounting bracket.



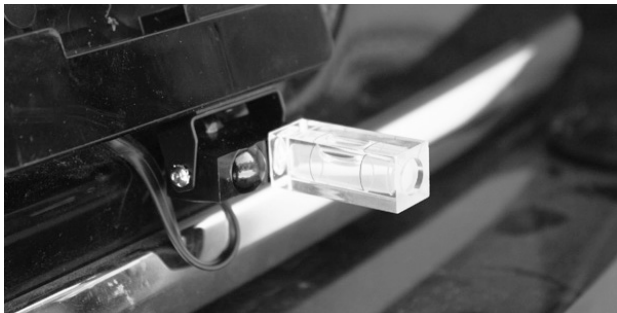
To maintain the optimal detection efficiency, the license plate frame must be kept clear of mud, bugs and other contaminations. There may be situations, when the device signals too late or not at all (f.e.: strong solar radiation, refraction, rainy weather, snow, contaminated sensors). These are not caused by the malfunction of the device, but by the law of physics.

- a) Remove the original license plate frame of the car!
- b) Try on the special license plate frame to the car.



The thicker part of the frame holds the sensors and for the best aesthetic view, ensure that this part goes to the bottom. If the license plate is fastened to the bumper, you may put the sensors to the upper part of the frame, to be closer to the middle of the car.

- c) If the license plate frame of the vehicle is angled, then for the best efficiency, the sensors have to be aligned to be parallel with the road. The angle of the sensors can be adjusted with the screw on the side of the mounting bracket.



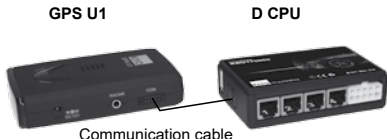
Remove the sensors from the special frame and fasten it to the vehicle. With a double-sided tape, fasten the sensors to the outer panel, which is parallel to the inner panel of the frame. There you can align the angle of the sensors properly. After aligning them to horizontal, fasten the angle with the fastening screw on the side of the bracket.

- d) After following the steps of removing the frame, mounting the sensors and then reattaching the special frame, the sensors will be aligned to horizontal and the license plate can be put back.
- e) Find a suitable position for the central unit under the dashboard of the vehicle!

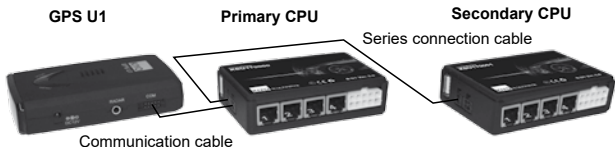


f) Lead the sensor cables into the cabin, but pay attention that they cannot touch any rotating, moving or sharp parts, or hot surfaces (radiator, fan, engine block, etc.)! Do not stretch the cables too much, but they cannot be too loose either. Fasten the cables with cable ties or with electrical tape! Never knot or break the cables, because damaged cables may lead to malfunction of the device and to the loss of warranty!

g) Connecting the sensors to the central unit:



In case of a 4-sensor system, only one central unit is needed. If a GPS U1 device is connected to the system, the frontal sensors must be connected to ports 1. and 2., while the rear sensors go to ports 3. and 4.



In case of a system with 6 or 8 sensors, two central units are needed. If you use them with a GPS U1 device, then the two CPUs must be connected with the communication cable of the set.

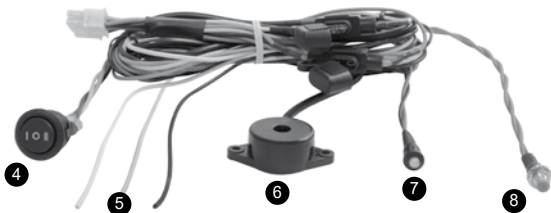
After it, choose which unit will be the primary CPU (does not matter which), and connect it to the GPS U1 device. The frontal sensors must be connected to the primary CPU, while the rear sensors go to the secondary CPU. This is important when the device states the direction from which the signal comes

In case of two central units, it is recommended to use the power cable distributor that can be bought separately. With this, only one of the power cables connect to the electrical system of the car and the distributor powers the other unit.



If a GPS U1 device is connected to the system, it is forbidden to connect the cigar lighter power cable, because it may disturb and damage the electrical system of the vehicle!

Connecting the power cable



4. Mode switch:

Install the mode switch on- or under the dashboard, where you can reach it while driving. If the size of the switch is right, it is recommended to place the switch into an empty slot on the dashboard.

5. Power supply wiring:

RED: constant +12V. In order to avoid accidental panic button use, the fuse of the red wire is removed when packaging the device. After finishing the installation, place the fuse back to the wire!

YELLOW: ignition +12v. The yellow wire has to be connected to the +12V wire that is powered upon ignition.

BLACK: ground wire, which goes to the body of the car or to the negative terminal of the battery.

6. Buzzer:

When only the laser detector is used, the buzzer below the dashboard warns the driver with sound alarms. If the GPS U1 device is connected to the system, the buzzer must be removed from the wiring either by disconnecting the 10-pin plug or by cutting and insulating them separately. It is needed, because the sound alarms will be given by the built-in loudspeaker of the GPS U1 or by the external loudspeaker. Furthermore, in a complete system, the false alarm filtering features can only work this way.

7. Two-colored LED indicator:

When only the laser detector is used, the LED indicator (placed in the lower corner of the A column on the driver's side) will show the alarms. If the GPS U1 device is connected to the system, this LED indicator may remain hidden under the dashboard or can be removed, because the alarms will be given by the communication cable's LED indicator.

8. Panic button

The panic button must be placed where the driver cannot push it accidentally. It is recommended to place it under the dashboard, where it cannot be reached by the driver's legs.

9. USB extension cable:

The USB extension cable must be installed to an easily accessible place, because in case of updating or configuring the settings, the pendrive will be connected to this cable. If there are two CPUs, then both USB extension cables have to be accessible, as the CPUs have to be updated separately. Recommended installation place is the glove compartment.

CONFIGURATION AND SOFTWARE UPDATE OF THE LASER UNIT:

The KIYO D Ultimate laser unit can be configured and its software updated with the help of a pendrive and a computer. The setup and update software can be downloaded from the website of the manufacturer: <https://kiyotechnology.com>. After updating the software, some feature of the device may differ from what is written in this manual.

ALARMS OF THE KIYO D ULTIMATE:

When only the laser unit is used, the device communicates with LED lights and beeping sounds. If the GPS U1 is connected, voice alarms of the selected language clarify the different warnings.

Warning! Some of the alarms may change with new software updates!

- **Short beeping sound, continuous GREEN light:** the device is ready to use in active mode.
- **Three beeping sounds and flashing GREEN light:** the device is ready to use in passive mode.
- **Rhythmical beeping sound and flashing RED light:** obstacle detected in parking assist mode.
- **Rhythmical beeping sound and flashing RED and GREEN light:** laser detection alert.
- **Change in the rhythm of the laser detection alert:** The active mode timer has expired and the device changed back to passive mode. After the reset time, a beeping sound indicates that the device is in active mode again.
- **Silent, flashing RED and GREEN light:** unknown laser detection alert, with muted sound.
- **Crackling beeping sound and flashing RED and GREEN light:** unknown laser detection alert, with enabled sound
- **Silent, continuous RED light:** The pendrive is still connected after the last update (so the device is not ready to use), or the system is deactivated with the panic button.
- **Continuous beeping and RED light:** no sensor connected.
- **Silent, quickly flashing RED light:** update in progress.
- **Silent, slowly flashing RED light:** corrupted or no update file can be found on the pendrive.
- **Continuous RED light and repeating beeping sounds:** One of the sensors may be malfunctioning, the number of the repeating beeping sound indicates the number of the port where the damaged sensor is connected.

