



Fitting instructions

Ver. 02_English

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1 INTRODUCTION

The PATRIOT EU communication module takes advantage of the most advanced technology. It has been designed to protect your vehicle and transmit information to your mobile device. You can operate the communication unit using a free mobile application for Android, iOS and Windows Mobile. There is also a MyCar web application, available on www.patrioteu.com. The unit can be utilized as a stand-alone unit or it can be connected to a car alarm. It uses a 3D gravity sensor to detect unauthorized motion, tilting and even a crash. Installation of the unit is easy and quick thanks to its small dimension (68 x 70 x 23 mm) and integrated GSM and GPS antennae. The backup battery in the unit also ensures that it works even after it has been disassembled.

The setting and testing of the PATRIOT EU unit is done via a web portal. In order to install and set the PATRIOT EU unit we advise you to refer to an authorized service company.

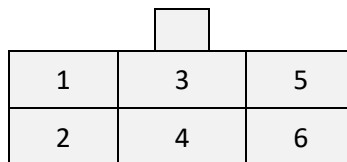
2 FITTING THE PATRIOT EU

The functioning of the unit is directly related to its correct installation and setting, therefore, we recommend you contact your authorized service or go carefully over the installation manual.

We recommend activating the SIM in the unit just before installing the unit into the car.

2.1 Electronic diagram

The front view to the unit connector CON1 – 2x3 pin



PIN	COLOR OF THE WIRE	WIRE DESCRIPTION
1	Black wire	Negative supply wire GND - must be connected to the original vehicle grounding point with an eyelet between 6 mm and 8 mm.
2	Red wire	Positive power wire +30 – connect the power wire through the 3A fuse to the positive terminal of the car battery. Place the fuse holder as close as possible to the point of attachment.
3	Green wire	+15 (ignition in position ON)
4	Violet wire	Minus polarity output - max. 300mA (see the Relay wiring)
5	Yellow wire	Alarm input
6	Yellow/black wire	Original car siren (see 2.4)

2.2 Fitting instructions

Activate the SIM card in the unit before installing the unit into the vehicle.

Install the unit with the negative pole of the car battery disconnected (pay attention to the coded radio). PATRIOT EU is intended for vehicles with an operating voltage of 12V / 24V. Make the connection according to the attached diagram. Place the unit wiring, if possible, together with the original wiring of the vehicle and secure it with tie-wraps. The black earth wire GND (connector - position no. 1) must be connected as close as possible to the original vehicle grounding point. All wires connected to + 12V must be protected by a 3A fuse. To connect the wires, do not use a quick coupling but solid soldering or crimp connections. As a point of reference for all measurements, use pin 1 (GND) directly on the PATRIOT EU unit.

With the ignition ON and when starting the vehicle , the +15 green wire (connector - position no. 3) must be on with a continuous voltage of 12V.

Yellow wire - alarm input (connector - position no. 5) is to be connected to the car alarm. When resting, the voltage must be at least 3V and less than 0.5V when in state of alarm.

For connection to the original car alarm use the integrated current sensor in the unit (diagram 2.4 Alarm Input - connect to the original siren).

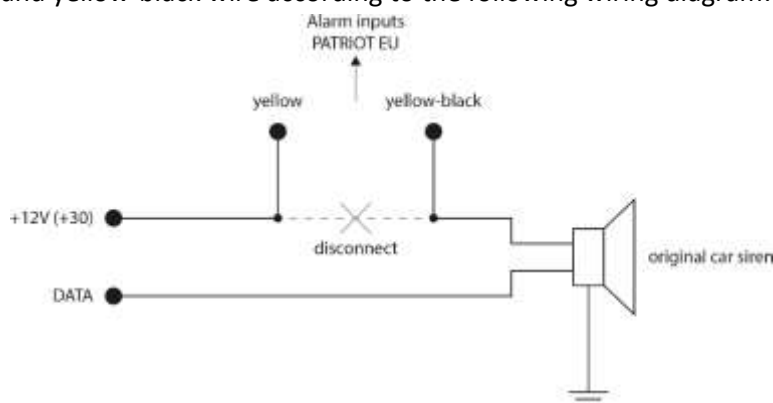
If you have not activated the SIM unit before installing it into the vehicle, it is necessary to activate the SIM with the car ignition off. After sending the activation command, switch the ignition ON or press the reset button on the unit.

2.3 Final placement

PATRIOT EU must be firmly fixed into the vehicle using double-sided tape or cable ties. GSM and GPS antennae have been integrated. Therefore, it is necessary that the "GPS" mark on top of the unit is not overshadowed by metal parts and pointing upwards. The unit, when mounted under a vehicle's metalized wind shield, may have an insufficient GPS signal reception. We recommended keeping sufficient distance from sources of heat and from electronic units inside the vehicle. Place the unit in a hidden place in order to make attempts at tampering difficult. Choose the mounting location whilst taking the fact that the unit is not waterproof into account.

2.4 Alarm input – connection to the original siren

For connecting the alarm input, interrupt the original siren power supply wire (original alarm) and connect the yellow and yellow-black wire according to the following wiring diagram:



3 UNIT SETTING AND TESTING

Programming the communication unit is done via www.patrioteu.com.

The functioning of the unit is directly related to its correct installation and setting, therefore, we recommend you contact your authorized service or go carefully over the installation manual.

3.1 Setting the web portal

The setting of the web portal is primarily intended for configuring and testing the PATRIOT EU unit when installing the unit into the vehicle. It also allows for the editing of some settings that are not available from the mobile app. The setting of the web portal is available at www.patrioteu.com. The general user manual is located directly in the setting portal under the (i) help button.

3.1.1 Unit

Defines a set unit.

UNIT IDENTIFICATER (UID)

A unique eight digit code is a part of each packaging and you can find it on the unit label. This unique code cannot be changed.

SIM STATUS

When switched on for the first time, the SIM status displays „inactive“. For the correct functioning it is necessary to activate the SIM by clicking the ACTIVATE button. If the unit activation is successful, the **ACTIVATE** button disappears and the SIM status is displayed as "active".

Activate the unit before fitting. The eventual unit activation after the installation is performed with the car ignition off and then turn the car on through the ignition or restart the unit by pressing the reset button.

LICENSE

Displays the date on which the service PATRIOT EU was subscribed. By pressing **BUY** you will be redirected to the payment gateway, where you can choose the method of payment and extend the license for another year.

UNIT PIN

Factory setting 111111. After completing the unit setting, we advise the user to change the PIN. Change the PIN by clicking the **CHANGE** button in the mobile application. This prevents unauthorized connection with the installed unit.

3.1.2 Vehicle

A description of the vehicle in which the Patriot EU unit has been placed. The description is also reflected in mobile applications.

VEHICLE	Choose a vehicle name.
VEHICLE MODEL	Closer vehicle specification
PLATE NR.	Vehicle plate number.
VIN	Vehicle identification number - VIN is composed of 17 characters (digits and capital letters).
VEHICLE INSPECTION	Notifies the user about the date of periodical motor vehicle inspection.

After entering data, press the **SAVE** button to save the inscribed values.

The unit's response may take several minutes.

3.1.3 State of the vehicle

Use this section to test the PATRIOT EU unit after its installation into the vehicle.

TACHOMETER	Input the state of car tachometer. The unit will measure the distance travelled.
GSM SIGNAL	GSM signal strength. Minimum for correct unit function = 30%.
GPS SATELLITES	Number of visible satellites. Minimum for correct unit function = 4
SPEED	The vehicle speed at the time of update.
CAR BATTERY VOLTAGE	Car battery voltage at the time of update.
IGNITION	Vehicle ignition status at the time of update On /Off.
OUTPUT	Status of the output On/Off.
POSITION	The vehicle location at the time of update. The position can be displayed in Google Maps.

Button **ON / OFF** used to test the unit output.

Button **UPDATE** used to retrieve the latest information from the PATRIOT EU unit.

The unit's response may take several minutes.

3.1.4 Events history

In this section The last 20 events are displayed in this section. The history of events may be used in the PATRIOT EU unit testing.

3.1.5 HW SETTINGS

The hardware setting of the PATRIOT EU unit may significantly affect the functioning of the unit and the transfer of alarm events!

ALARM TRANSFER

Switch **ON / OFF** in order to enable or disable the transfer of alerts, for example, when getting your car repaired. By switching it to the OFF position you will disable the alarm triggering a.e. when disconnecting the car battery or switching tyres at your maintenance garage.

ALARM INPUT IMMUNITY

The **ON / OFF** switch defines the way of handling car alarm messages based on the car ignition. When in the **ON** position the system will not transfer messages from car alarm input when the car ignition is on.

DEVICE OUTPUT DEPENDENCE ON THE CAR IGNITION (S15)

The **ON / OFF** button defines the behavior of the output depending on whether the car's ignition has been switched on or off. With the button in the ON position, the unit output is activated only after the car ignition has been switched off

TILTING

Allows you to change the angle when the tilting alert is generated.

3.1.6 Buttons

It allows you to rename or edit some software buttons in the application.

TEXT OF THE LOCALIZE BUTTON

Editing the displayed button description in the mobile app.

DISPLAY THE OUTPUT BUTTON

In case the unit output were connected it allows you to display the button for its activation. From the roll menu you can chose the output setting which suit the best your way of installation.

The “custom setting” supports your own adjustment.

TEXT OF THE OUTPUT BUTTON Editing the displayed button description in the mobile app.

TEXT OUTPUT ON Will affect the mobile app. Description of the output icon in the bookmark STATE.

TEXT OUTPUT OFF Will affect the mobile app. Description of the output icon in the bookmark STATE.

TEXT SWITCHING ON Changes the menu text after pressing the output control button on the main screen of the application

TEXT SWITCHING OFF Changes the menu text after pressing the output control button on the main screen of the application

TEXT IMPULSE Changes the text in the ipulse control menu

OUTPUT TIMING Defines the time period the output is active when switched on.

The **DEFAULT** button sets all options to factory settings.

After entering new values, confirm the new setting by pressing the **SAVE** button.

The unit's response may take several minutes.

3.1.7 Accounts

It allows you to create or eventually remove a user account (even on behalf of a customer) and this is necessary to access the mobile application.

Confirm the email address inscribed in the white box "email" with the **Add** button, then a password will be automatically sent to that email in order to log into the mobile applications. The password can be changed in the mobile application.

The **DELETE** button serves to remove an account for this unit.

3.2 Factory settings

- Safety code - **111111**
- Output – off
- Device output dependence on the car ignition (s15) - off
- Tilting – the angle set at 1.7°
- Alarm input immunity 0,3 s

3.3 Final testing

After installing the PATRIOT EU, take the vehicle to a place with a good (unshielded) sky view and proceed as described below:

- The ignition key must be in the ON position for at least 10 minutes.
- Press Update in the testing portal section State of vehicle (see Section 3.1.3 State of the vehicle) and check the obtained values.
- Verify the transfer of alarm information from the car alarm (if connected).
- Set the unit output dependence on the car ignition S15 (see section 3.1.5 HW setting).
- Test the unit output control, if connected (see Section 3.1.3 State of the vehicle).
- Make the final adjustment according to the customer's request (create user account, enter phone numbers, change button text, etc.).

3.4 LED signalization

LED STATUS	
1x short flashing every 2s	Program running
Fast flashing	Pending alarm
LED GSM	
1x fast flashing every 2s	Unit registered in home 2G network.
1x long flashing every 2s	Unit registered in home 3G network.
2x short flashing every 2s	Unit registered in roaming network.
Steady light	Data transfer
Not flashing	Sleep mode.

4 USER OPERATING MANUAL



The basic communication channel and control element of the PATRIOT EU unit is the mobile applications. The application communicates with the unit via data, so a data tariff or other access to the Internet must be available on your mobile device. Install the application in the usual way on your device from Google Play, App Store or Windows Store portals. If necessary, you can find the link to download the application at www.patrioteu.com. The detailed user manual for the mobile application and unit operating is available for download at www.patrioteu.com.

4.1 Alarms transfer

The PATRIOT EU unit is primarily designed for use with the mobile applications. Generated alarms and alerts are transmitted via push notifications on your mobile device and then displayed in the application. For transferring the push notification it is necessary to have an active data connection on your mobile device (data plan or Wi-Fi)! After your journey, the unit needs 180seconds to analyze the reference position using its 3D gravity sensor. In the course of this analysis, alarm messages "Unauthorized vehicle movement" and "Vehicle tilt" are not transmitted.

4.2 Alarm messages

	Alarm description
CAR INTRUSION	Alarm input information. Alarm activation via falling edge (min. impulse length 300ms/4s). Next alarm can be generated in 60s after the termination of the first alarm.
CAR INTRUSION	Alarm notification generated by the current sensor A13 (connection to the original car alarm). Activated by higher current than 80mA lasting more than 4 s. Next alarm can be generated after 60 minutes after the termination of the first alarm.
CAR BATTERY VOLTAGE DROP	Car battery voltage drop information. Voltage drop below 11,2V lasting more than 60s.
CAR BATTERY DISCONNECTION	Alarm notification in case of car battery disconnection. Voltage drop under 8V lasting more than 10s.
UNAUTHORIZED MOVEMENT	Vehicle movement with the ignition switched off. Vehicle movement notification (from 3D gravity sensor) lasting more than 4s. Next alarm can be generated after 60 minutes (vehicle at rest) or after switching on and off the ignition.
CAR EMERGENCY	Vehicle emergency status (accident, crash). Notification from the 3D gravity sensor when G-force value is greater than 2,5G.
CAR MANIPULATION	Alarm generated by the 3D gravity sensor when tilt bigger than 1,8° is detected (e.g. in case of wheel theft).
SPEED LIMIT	With the function On an alert is generated after a preset speed limit exceeding. The next alert can be generated only 10 minutes after the speed drops under the preset limit.
GEOFENCE	With the geofence On, an alert is generated when the car enters or leaves the zone depending on function setting.
VEHICLE INSPECTION	Notifies the user about the date of periodical motor vehicle inspection, if preset.
VIRTUAL GARAGE ALERT	During the defined period notifies the user about switching on the ignition of the vehicle

5 SIM CARD AND PATRIOT EU TARIFF

A Global SIM has been installed in the PATRIOT EU unit.

The Patriot EU Global tariff enables data communication with the unit in the range of the European Union + 2 other countries.

The tariff also uses the national roaming and in case of insufficient GSM signal of a preferred partner logs on any available GSM network.

The SIM card has no standard telephone number and communicates only via encrypted data transmission. It cannot make calls or send SMS. The SIM card is placed in the unit in a sealed slot, be careful not to violate the seal.

6 TECHNICAL SPECIFICATIONS

GSM	Modul SARA-G3 Quadband 850 / 900 / 1800 / 1900MHz
Communication	Push notifications
GPS	72 channels receiver, GPS/QZSS L1 GLONASS L10F, BeiDou B1I, Galileo E1B/C, SBAS: WAAS, EGNOS, MSA, GAGAN sensitivity up to -167dBm
3G sensor	3D gravity sensor
Output	1 open collector output (500mA)
Feeding	Power supply: 10-24V DC
Average power consumption	<4mA; Maximal value 500 mA
Time synchronization	Date and time GPS synchronized
Dimensions	68 x 70 x 23mm
Weight	110g
Operating temperature range	-20°C - +60°C

7 SAFETY PRECAUTIONS

7.1 Alarm messages

The device contains a battery. Battery replacement can be done by an authorized service center only. Batteries should be disposed of in compliance with local regulations.

ATTENTION

RISK OF EXPLOSION IF BATTERY IS REPLACED BY AN INCORRECT TYPE. DISPOSE OF USED BATTERIES ACCORDING TO THE MANUFACTURER'S INSTRUCTIONS.

7.2 Instalation and use

- In order to avoid human exposure to electromagnetic fields, the distance of the device with respect to the occupants of the vehicle must be greater than 0.25 m.
- the device emits signals on radio frequencies that can interfere with unshielded or poorly screened electronic equipment such as pacemakers, hearing aids, medical devices. If there is any interference problem, contact the manufacturer of the electrical equipment
- When using observe local legislation and regulations
- Do not use in hospitals could be impaired functioning of medical devices
- Please read the manual carefully before installing and commissioning
- Do not use the device on an airplane
- Do not use the device in area where work with explosives are being carried out or there is a risk of explosion
- Dse recommended accessories only
- It is not allowed to open the device
- Keep away from children, they might swallow SIM card
- Do not expose to extreme ambient conditions. protect the device from dust, moisture, leakage of liquids or foreign matter and extreme temperatures.
- The voltage on the nameplate must not be exceeded under any circumstances
- The manufacturer is not liable for damages resulting from the use of the product contrary to instructions

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