






Precautionary Measures during Installation


 **CAUTION:** Non-compliance with these instructions can cause damage to the device and to the vehicle.


 **Qualified installation personnel**
The device must only be installed in the vehicle and serviced by qualified specialists.

 **Consequences of incorrect installation**
Incorrect installation can cause damage to the vehicle. Incorrect assembly or service can have hazardous consequences and can void the warranty and possibly the operating permit of your vehicle.

 **Airbag**
With vehicles that are equipped with an airbag, remember that the airbag fills with a strong force. Do not install any components in the area impacted by the filled airbag.

 **Antennas**
Before start-up of the device, the GSM or UMTS antenna and the GPS antenna, for a device with integrated GPS module, must be connected (antennas are not included in the scope of supply). The device must not be operated without antenna(s), since this can lead to the destruction of the device.

 **Connection to the power supply of the vehicle**
In some cases settings must be done in modern vehicles after attaching the battery. Absolutely be sure to refer to the operating manual of your vehicle for this.

 **Environmental influences: Water and dust**
The PTCarPhone and all accessories are neither dustproof nor waterproof. Make sure that the PTCarPhone is always protected from moisture and from water penetrating the vehicle. Prevent penetration of dust particles in the housing by cleaning regularly.

More information is available in "PTCarPhone 5 Series Operating Manual" at:
<http://www.ptcarphone.de/en/downloads>



Installation Instructions

PTCarPhone 5 Series

The professional car phone with hands-free equipment for permanent installation

ENGLISH



www.ptcarphone.de

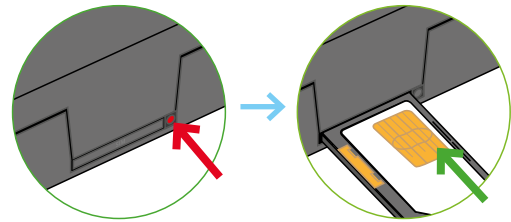
A member of the peiker group



Setting up the PTCarPhone

Inserting the SIM card

A valid and activated SIM card is required to operate the device. This is available from your mobile phone provider. It saves all the important data of your connection. To open the SIM card holder, push the round button in the housing with a pointed object. Place the SIM card in the holder and push it back in the electronics box.




NOTE:

- Insert the SIM card only if the device and the vehicle ignition are turned off.
- Make sure to insert the SIM card holder in the correct position. Closing does not require strong force.
- If a piece of plastic remains on the edge of the SIM card when taking it out, it is necessary to remove this before inserting the SIM card.

Inputting PIN

If a PIN is required it will be requested with an appropriate message when starting the device.

Enter the PIN using the input keys  and confirm with the **OK** function key. Corrections can be made with the **Delete** function key.

PIN input is shown with asterisks so that it cannot be seen. The subsequent registration in the network can take a few seconds.

After entering an incorrect PIN three times the SIM card is blocked. The PUK is requested for unblocking.

Setting the delay time

After turning off the ignition the device runs for the set delay time and then turns off.

Use the following menu path to set the delay time:

System > Configuration > device code input > Delay timer

The device code at delivery is: 0000

Software update

Software updates for the handset and PTCarPhone are done via the Internet access of the mobile network. Therefore, Internet access must be set up beforehand.

System > Device info > Update > device code input > Update process

The device code at delivery is: 0000

Turning on virtual ignition

In modern vehicles without ignition wiring it is recommended to activate the Virtual ignition function.

System > Configuration > device code input > Virtual ignition

The device code at delivery is: 0000

Technical details of the connections

Line-out connection

To connect to the vehicle audio system.

- Galvanically isolated
- Can be extended as needed

I/O connections

The TPU has six freely programmable inputs and outputs:

- Model: Open-Drain output (wired ground) with recovery diode / input with 15 kOhm pull-up resistor against the device operating voltage
- Only ohmic and inductive loads are allowed (no capacitive loads!)
- Maximum current carrying capacity: 150 mA per connection
- Dielectric strength smaller than/equal to the connected device operating voltage (however, max. 32 V)
- Recovery diode for relay (inductive loads) included; use of device-specific power supply (pins 4, 5, 6) is required for this

Radio mute output

- Model: Open-Drain output (wired ground)
- Only ohmic loads allowed!
- Maximum current carrying capacity: 50 mA
- Maximum dielectric strength against ground: +32 V

Imprint

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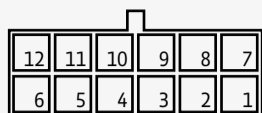
pei tel reserves the right to modify these instructions at any time, to correct typing mistakes or to add new functions in the course of technical progress or further development. Every current version of these instructions can be found on the Internet at <http://www.ptcarphone.de/en/downloads>.

Legal notices

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Connection Diagram and Assembly

I/O connections (Top view)

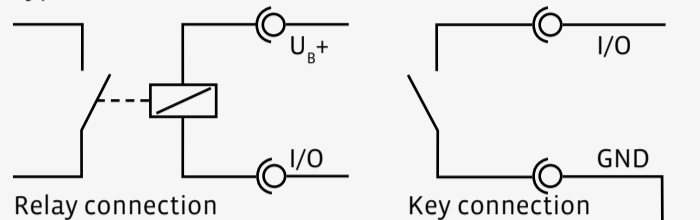


PIN	Signal
1, 2, 3	GND
4, 5, 6	U _{B+}
7 to 12	I/O 1 to 6

CAUTION:

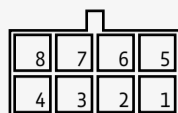
The respective operating voltage of the vehicle electrical system is applied to the I/O connection. Please keep this in mind when selecting your I/O components.

Types of connection:



Technical data of the connections can be found on the back! The "I/O connections manual" can be found at: <http://www.ptcarphone.de/en/downloads>

Cable set connection (Top view)



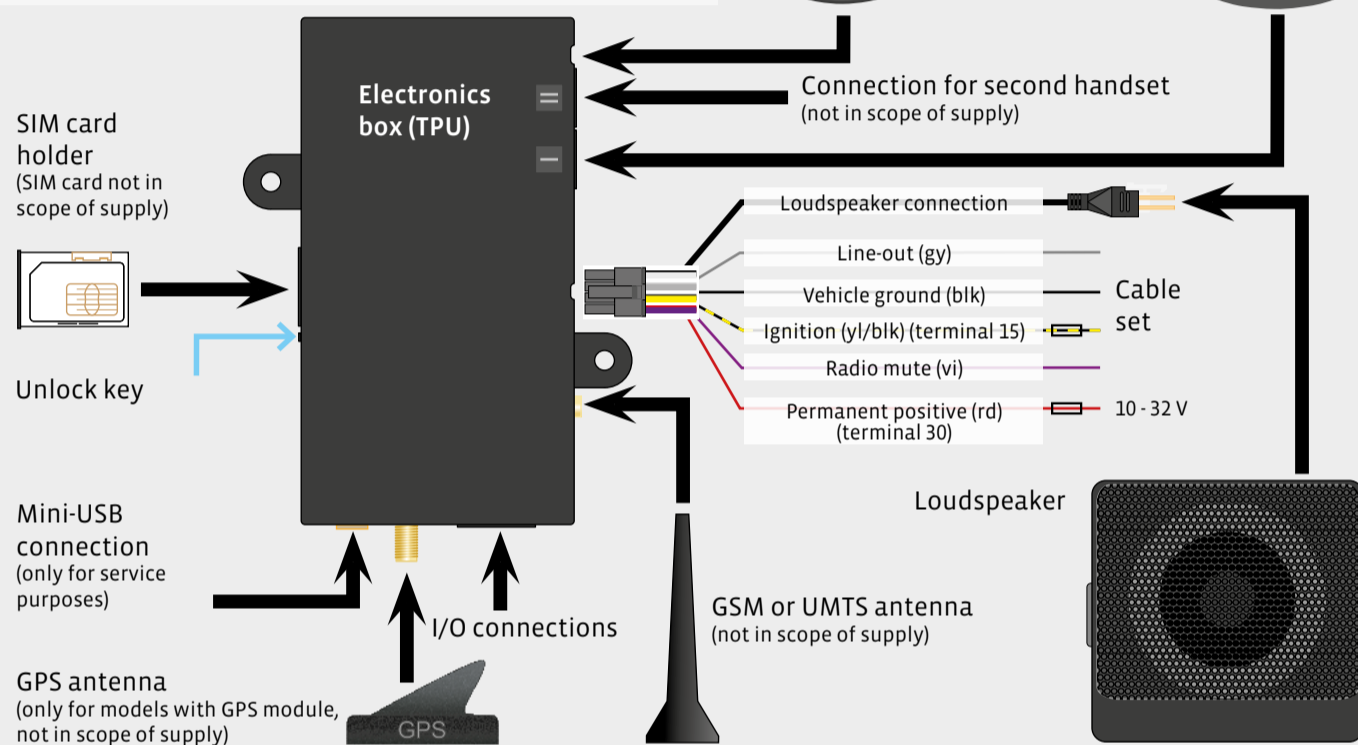
1 LSPK - (blk)	5 LSPK + (wht)
2 Line-out - (gy)	6 Line-out + (gy)
3 GND (blk)	7 Ignition (yl/blk)
4 Permanent positive (rd)	8 Radio mute (vi)

Abbreviations

UB+:	Operating voltage PTCarPhone
GND:	Vehicle ground (minus terminal)
I/O:	Switch input/switch output
LSPK:	Loudspeaker connection
TPU:	TelePhoneUnit
blk:	black
gy:	gray
rd:	red
wht:	white
yl/blk:	yellow/black
vi:	violet

Hands-free microphone

Handset HA59



Scope of supply

- Electronics box (TPU)
- Handset HA59 with cradle
- Loudspeaker
- Hands-free microphone
- 2.5 m extension cable for handset
- Cable set
- Quick reference guide
- Installation instructions

Available accessories

- Handset HA59 incl. 5.0 m extension cable
Article number: 6508-006-100-51
- I/O cable installation set (12x 200 mm strands and plug housing)
Article number: 6708-004-000-00
- 2.5 m extension cable for the handset
Article number: 6098-260-005-51
- 5.0 m extension cable for the handset
Article number: 6098-260-007-51

Additional required hardware

GSM or UMTS antenna

Model-specific GSM or UMTS antenna with FME connection (not in scope of supply).

GPS antenna for devices with optional GPS

GPS antenna with SMA connection (not included in the scope of supply). Power supply: 3.3 V, max. 50 mA;

SIM card

Mini-SIM card with mobile phone contract with phone and data plan. This is available from your mobile phone provider.

TIPS:

- If the PTCarPhone should be operated with the same telephone number as the mobile phone of the user, it is recommended to use a so-called multi-SIM card. For this, contact your mobile phone provider.
- It is recommended to make sure before assembly, whether the electronics box should be positioned so that easy access to the SIM card is provided.

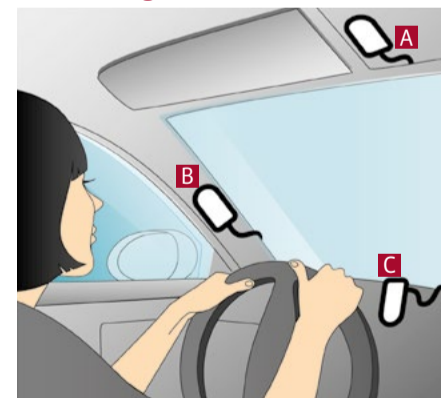
Screws and adhesive tape

Depending on the installation situation it can be necessary to fasten the electronics box, the handset and the accessories with other fastening material than that which is partially supplied. Please do not forget: Safety first! Nevertheless, it is recommended to pay attention to aesthetics.

Assembly Sequence

1. Become familiar with the connections. Disconnect the negative terminal of the vehicle battery while following the safety instructions of the vehicle manufacturer.
2. Select the installation locations for the electronics box, handset, loudspeaker, hands-free microphone and the antenna(s), paying attention to the cable lengths and installation instructions and mount the components. When drilling holes make sure that the vehicle is not damaged. Use cable bushings on sharp-edged holes.
3. Install the included hands-free microphone. Make sure that air flow from the vents is not in the direction of the microphone. Also refer to "Mounting locations for the microphone" below. Then install the loudspeaker (a good location is the passenger footwell). During installation of the microphone and loudspeaker make sure of sufficiently large spatial separation, to avoid acoustic feedback.
4. Connect the power supply cable (red) on the permanent positive and the ignition input (yellow/black) to the ignition *, if present. Do not connect the ignition input (yellow/black) onto permanent positive, since this limits the scope of function of the device. Connection of the ground cable is done directly to the vehicle battery, the central ground point (ground block) or a part of the vehicle body. * For vehicles without ignition wiring it is recommended at the end of the installation to activate the "Virtual ignition" function.
5. Connect the violet cable with the mute input of the car radio. This ensures automatic radio mute switching for incoming and outgoing calls.
6. Insulate unused cables so no short circuits can occur.
7. Connect the individual components of the device with each other using the plug and screw connections (see connection diagram).
8. Check the total installation and insert a valid SIM card. Connect the vehicle battery.
9. For vehicles **with ignition wiring**: Turn on the ignition. The device now turns on and requests the input of the PIN (if this was not deactivated on the SIM card). For vehicles **without ignition wiring**: Turn the device on with the end key / on the handset.
10. Enter the PIN. The telephone is now registered in the network.
11. Make a call in order to check the basic functions.
12. Check whether there is new software available and if necessary perform a software update. Downloading of software updates can incur costs, depending on the mobile phone contract.
13. If desired, make personal settings on the device (see chapter "Setting up the PTCarPhone" on the back) and finish the installation.

Mounting location for the microphone



- A Optimum position
- B Alternative position
- C Limited suitability

Microphone alignment



- 1 Maximum sensitivity
- 2 Adhesive tape for smooth (flat) surfaces