



User Manual

PTCarPhone 5 Series

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



GSM

UMTS



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Table of Contents

Introduction	4
Safety Instructions	4
Instructions for Use	5
PTCarPhone 5 Series - Models	5
About this User Manual	6
Icons for Warning Messages and Notices	6
Menu Navigation	7
Calling up the Start Menu Items	7
Selection Lists	7
Display Symbols	8
Turning the Device On and Off	8
First Steps	9
General Tips	10
Editors	11
Character Tables	12
Connection Plan	13
Precautionary Measures and Installation	14
Precautionary Measures	14
Microphone Mounting	14
Accessory Mounting	15
Additional Required Hardware	15
Instructions for Mounting	15
Sequence of Installation	16
Setting up the PTCarPhone	17
Inserting the SIM Card	17
Inputting PIN	17
Setting the Delay Time	17
Turning on Virtual Ignition	17
Adjusting Display Brightness	17
System Menu	18
Calling-up the Device Info	18
Performing a Software Update (OTA: Over-the-Air)	18
Access to the System Configuration Menu	18
Configuration of the USB Interface	19
Setting up Usage Restrictions (Operation Modes)	19
Changing the Delay Timer	20
Activation of the Virtual Ignition	20
Resetting the PTCarPhone to Factory Defaults	20
Digital Inputs and Outputs (I/Os)	21
Speed Dial Menu	22
Adding Speed Dial Numbers	22
Deleting a Speed Dial Number	22
Using a Speed Dial Number	22
Settings Menu	23
Adjusting Display and Keypad Illumination	23
Adjusting the Display Brightness	23
Call Settings	23
Calling Line Identification Restriction	24
Call Waiting	24
Automatic Answer	24
Incoming Call	25
Call Duration Display	25
Setting up a Call Divert	25
Enabling the SMS Signal Tone	25
Adjusting the Ringer Volume	25
Selecting a Ring Tone Melody	26
Security Codes	26
Select a PIN Code Request Mode	26
Changing the Security Codes	27
Automatic Network Selection	27
Selecting a Mobile Phone Network	27
Internet Access Configuration	28
Setting Date and Time	28

Table of Contents

Changing Date and Time Display Modes.....	29
Language Selection.....	29
Phone Book Settings.....	29
Access Memory Status.....	30
Copying Phone Numbers from the SIM Card to the Phone Book.....	30
Sorting Contacts by First Name or Surname.....	31
Setting up Direct Call.....	31
Accessing SMS Settings.....	31
Phone Book Menu.....	32
Editing Contacts in the Phone Book.....	32
SMS Menu.....	33
Writing an SMS Message.....	33
Opening Received SMS Messages.....	34
Deleting SMS Messages.....	34
Replying to SMS Messages.....	34
Forwarding SMS Messages.....	34
Calling a Phone Number Retrieved from an SMS Message.....	34
Saving a Phone Number from an SMS Message.....	35
Saving SMS Messages.....	35
Retrieving the Memory Status.....	35
Opening Saved SMS Messages.....	35
Call Register Menu.....	36
Opening the Call Register.....	36
Saving a Phone Number from the Call Register.....	36
Calling a Phone Number from the Call Register.....	36
Sending an SMS Message to a Phone Number from the Call Register.....	36
Redialling.....	37
Deleting Call Register Lists.....	37
Additional Information.....	38
Features of the GPS Module.....	38
Setting the time via GPS.....	38
The second handset.....	38
Using the PTCarPhone as a Modem.....	38
Scope of supply.....	39
Accessories.....	39
Care and Cleaning Tips.....	39
Technical Data.....	39
Technical Details of the Connections.....	40
Disposal.....	40
Declaration of Conformity.....	40
Support.....	41
Support.....	41
Menu Overview.....	42

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Legal Notes

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Safety Instructions

Emergency Call 112/911/999

There is no guarantee that the emergency call will function in all situations!

For this reason you should not depend only on the device for crucial communication (e.g., medical emergencies).

You can only telephone with the device when it is turned on and in an area with sufficient signal strength.

Emergency calls can only be made with a SIM card activated by the mobile phone service provider. In some circumstances you cannot be connected in all mobile phone networks.

It is possible that emergency calls can also not be made when certain network services and/or telephone functions are activated or deactivated.

Traffic Safety

Phoning while driving can distract from traffic and cause accidents! The same is true for using other functions of the telephone.

Only use the hand-free function of the device while driving. The handset must only be used when the engine is turned off. The hands-free equipment is only active if the handset is in its cradle.

Always fasten the handset in its cradle; do not lay the handset on the seat or anywhere that it could move in the event of a collision or sudden braking.

Please follow the current laws of the country where you are located.

Operating Environment

When using the telephone, observe the legal regulations and local restrictions. Turn off the device wherever you are requested by the appropriate warnings, e.g. near fuel and/or flammable chemicals.

Health

The function of medical devices, such as a heart pacemaker, can be disturbed. Therefore always keep a minimum distance of 20 cm between the antenna of this device and the pacemaker. During a conversation hold the phone on the ear farther away from the pacemaker. For more information consult your doctor.

If interfering noises occur in connection with a hearing aid, please contact the manufacturer of the hearing aid or your hearing care professional.

The PTCarPhone is Not a Toy

Do not let children play with the PTCarPhone. The spiral cable of the handset or swallowed small parts can lead to suffocation!

Take Care of your Hearing

Only set the volume as loud as necessary and avoid exposing your hearing to loud volumes over a longer period of time.

Do Not Drown Out Warning Signals

Awareness of the warning signals of others on the road must not be adversely affected by the telephone. Set the volume of the telephone appropriately so that you can always be clearly aware of warning signals from the surroundings, for example horns and sirens.

Safe Installation

Avoid mounting all components in the deployment area of the airbag. Fasten the PTCarPhone and accessories sufficiently so that in the case of sudden, hard braking they cannot cause damage flying around. Use the included fastening material or suitable materials for the corresponding surfaces for this.

Introduction

Instructions for Use

Electronic Devices

High frequency signals can adversely affect the function of improperly installed or insufficiently shielded electronic systems in the vehicle in certain circumstances.

Accessories

Only use accessories that are approved for use on this device. The use of non-approved accessories voids the warranty. Ask your dealer or the manufacturer about approved accessories.

Service, Installation and Repairs

Only qualified specialists may service, install and/or repair this device. The device must not be opened. Any manipulation on the device is not allowed and voids the warranty.

Network Services

Some functions of this device are designated as network services. Network services are added services that are made available by the mobile phone service provider at the request of the user.

Before the user can use these, authorization must be given for the use of these services from the mobile phone service provider. Some networks may not support all services and/or functions.

Environmental Influences: Water & 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. Regular cleaning of exposed accessory parts and the interior of the vehicle can prevent the penetration of dust particles in the housing. A soft, lint-free, dry cloth is suitable for cleaning.

PTCarPhone 5 Series - Models

Feature	PTCarPhone 510	PTCarPhone 520	PTCarPhone 530
Technology	Quad band GSM, GPRS	Quad band GSM, GPRS/Edge, UMTS/HSPA+	Quad band GSM, GPRS/Edge, UMTS/HSPA+
GSM	850, 900, 1800, 1900 MHz	850, 900, 1800, 1900 MHz	850, 900, 1800, 1900 MHz
UMTS (3G)	-	800/850, 900, 2100 MHz	800/850, 900, AWS 1700, 1900, 2100 MHz
Audio	Clear Voice & Sound Technology™	Clear Voice & Sound Technology™	Clear Voice & Sound Technology™
Audio +	-	HD Voice	HD Voice
Positioning	-	-	GPS tracking
UMTS modem	-	PTCarPhone as modem via USB	PTCarPhone as modem via USB

Introduction

About this User Manual

This user manual describes the PTCarPhone 5 Series with the software versions v.5.01.03 (PTCarPhone 5) and v.01.14 (HA59) and previous versions. Future firmware versions might contain features that are not included in this user manual.

Depiction of Keys and Icons

Keys and icons (e.g. 📞 or 🔄) might change in this user manual as well as on the phone display their colour (for example black turns into white), to assure their visibility and legibility on changing backgrounds. Function key symbols are printed in this user manual using the font Helvetica Neue e.g. *System*, *Speed D.*

Step-by-Step Instructions

The chapter **First Steps** describes important and comprehensive operations in Step-by-Step format.

Once you are familiar with the main features of the PTCarPhone, it will be easy for you to follow the pattern of menu paths, which are used in the other chapters. Example:

Main menu > sub menu > sub menu

Bold printed terms of the menu paths are menu points, text in *italic* are instructions and regular printed text stands for keys. Example:

Main menu > sub menu > *device code input* > sub menu > function key *Options* > call key 📞

Icons for Warning Messages and Notices

Hazard symbol: Warning



Marks danger of injury and life

Hazard symbol: Caution



Danger of destruction of the product and other objects

Advice symbol: Notice



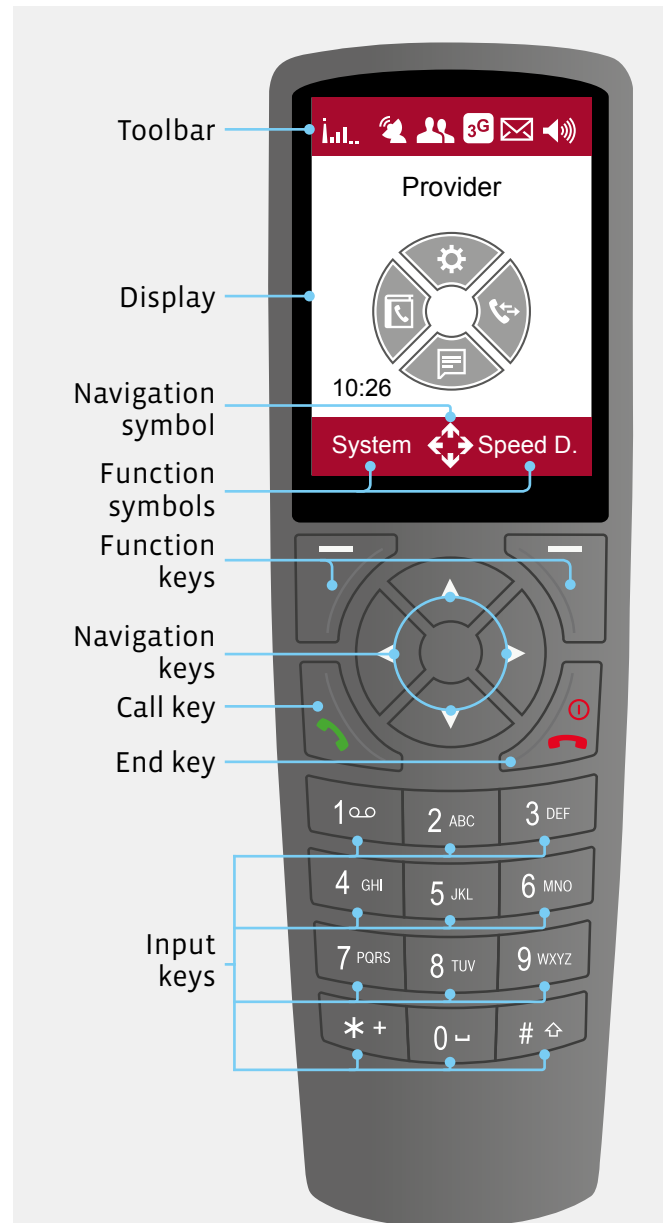
Marks important notices for hassle free usage of the product.

Advice symbol: Tip



Marks information worth knowing on handling the product.

General Drawing



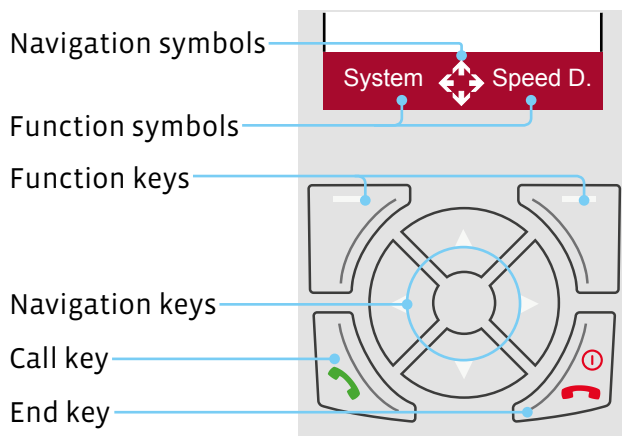
Introduction

Menu Navigation

Navigating the phone menu is done using the navigation keys (up ▲, down ▼, right ►, left ◀) and the function keys (also known as soft keys).

The respective function of the function keys is shown on the bottom of the display on the left and right side of the navigation symbol. The function symbols change as needed (e.g. System, Speed D., OK, Cancel, Back, Name).

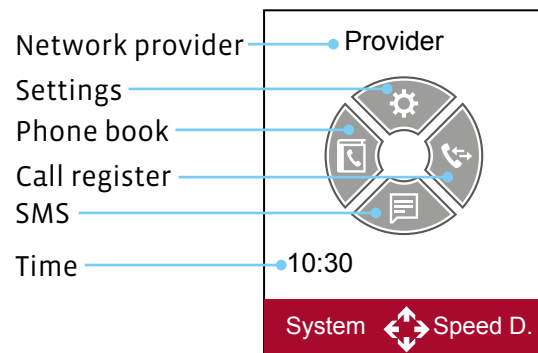
The navigation symbol ◀► indicates, which navigation keys are currently active.



The call key  is used for establishing outgoing calls or accepting incoming calls.

The end key  / ① is used for ending calls, turning the phone on and off and returning to the start screen when navigating through the phone menu.

Calling up the Start Menu Items



The start menu items Settings [▲], Phone book [◀], SMS [▼] and Call register [►] are called up using the four navigation keys.

The system and speed dial menus can be opened from the start menu with the System and Speed D. function keys.

Selection Lists

One or more options can be chosen, activated or deactivated from the selection lists. Control the desired option with the navigation keys and select your choice with the OK function key.

 Selected option

 Not selected option

Display Symbols

Symbol	Description
	Signal strength low
	Signal strength high
	Data transmission via the GPRS or EDGE network
	Data transmission via the UMTS, HSDPA and HSPA+ network
	GPS: No satellite
	GPS: 2D-Fix, 3D-Fix
	Private mode, phoning using handset
	Hands-free mode, phoning via hands-free system
	Microphone mute (MUTE)
	New text message (SMS)
	Only one free SMS storage location
	Volume low
	Volume high
	Phone book entry - Business
	Phone book entry - Mobile
	Phone book entry - Private
	Phone number
	Date
	Time
	Active navigation keys

Turning the Device On and Off

The PTCarPhone is automatically started when the vehicle ignition is turned on.

If the Virtual Ignition function is activated (see also “Activation of the Virtual Ignition” on page 20), the PTCarPhone starts when the engine is turned on. The PTCarPhone turns off when the ignition or the engine is turned off and after the subsequent delay time (see also “Changing the Delay Timer” on page 20) has elapsed.

Independently of this, the PTCarPhone can also be turned on or off by holding down the end key  /  for an extended time.

First Steps

Content

- Phoning
- Accepting a Call
- Rejecting a Call
- Regulating the Call Volume
- Muting the Microphone
- Changing from Hands-free Mode to Private Mode
- Creating a Contact
- Calling a Contact
- Adding Phone Number to Contact

Please find detailed descriptions of all phone features on page 18 ff.

Phoning

1. Enter the phone number with the input keys .
2. Press the call key .
3. First the message “Dial number” appears on the display and after the connection is made, the message “Connected with”.
4. Talk.
5. To end the call press the end key .

Accepting a Call

1. For an incoming call, press the **Accept** function key or the call key .
2. To end the call press the end key .

Rejecting a Call

For an incoming call, press the **Cancel** function key or the end key .

Regulating the Call Volume

The volume during a call is regulated with the navigation keys  and .

The PTCarPhone can differentiate with the volume control between private mode  and hands-free mode .



NOTE:

In private mode the volume of the handset loudspeaker is regulated. However, the volume of the external loudspeaker is set in hands-free mode.

Muting the Microphone

During a call, the active microphone can be muted and reactivated using the function key **MUTE**. When muted, the mute symbol  appears instead of the data transmission symbols  or  in the toolbar of the display.

Mute is automatically cancelled after the call is ended.

Changing from Hands-free Mode to Private Mode

If the handset is in the cradle hands-free mode  is active and calls go over the hands-free system (hands-free microphone and external loudspeaker).

When the handset is lifted the PTCarPhone switches to private mode , i.e. from the hands-free system to the handset.



NOTE:

For ring tones the PTCarPhone always uses the external loudspeaker.

Creating a Contact

A contact consists of “First name”, “Surname” and up to three phone numbers, which can be assigned to the categories business , mobile  or private .

Phone book > function key **Options** > **Add contact**

1. To open the phone book, press the navigation key .
2. Press the **Options** function key.
3. Select “Add contact” with the navigation key .
4. Press the **OK** function key.
5. Enter the first name with the input keys  (also see Chapter “Editors”).
6. Press the navigation key .
7. Enter the surname with the input keys .
8. Press the **Next** function key.
9. Select a phone number category (business , mobile  or private ) with the navigation key .
10. Enter the phone number with the input keys .

Introduction

11. This process is repeated for more phone numbers if necessary.
12. End the process with the **OK** function key. The message “Entry saved” is displayed.

Calling a Contact

Phone book > *paging*   > **Call key** 

1. Press the navigation key , the phone book opens.
2. Scroll with the navigation keys  and  until the contact to be called is marked.
3. Press the call key , the phone book entry for the selected contact opens.
4. Select the desired phone number with the navigation keys  and  (business , mobile  or private .
5. Press the **OK** function key.
6. First the message “Dial number” appears on the display and after the connection the message “Connected with”.



NOTE:

When you take the handset out of the cradle, a call can be made in private mode  with the handset. When the handset is hung in the cradle, hands-free mode  is activated.

Adding Phone Number to Contact

Phone book > function key *Options* > **Edit contact**

1. To open the phone book, press the navigation key .
2. Scroll with the navigation keys  and , to select the contact.



TIP:

The phone book shortens when you input the first letter, or several letters, of the searched name with the input keys .

3. Push the *Options* function key when the desired contact is marked.
4. Select “Edit contact” with the navigation key .
5. Press the **OK** key.
6. Press the *Next* function key.
7. Select a free phone number category with the navigation keys  and  (business , mobile  or

private .

8. Enter the new phone number with the input keys .
9. Press the **OK** key. Editing is completed and the contact is saved.

General Tips

- Always enter phone numbers as follows
+ [country code] [local area code] [phone number]

Example: +491711234567890

- Inserting special characters (* and P) for pauses and other functions: By repeatedly pressing the * key, pauses and other functions can be initialised. The symbols represent the following functions:

* = For GSM commands, device codes or DTMF tones (example: *#06# or *135#)

P = Sends the “pause” command via DTMF

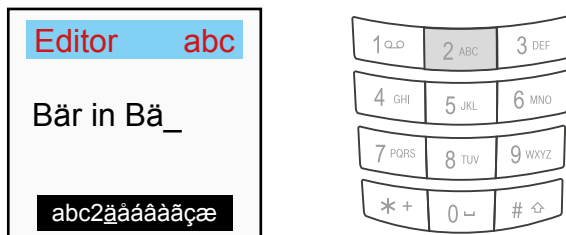
Introduction

Editors

Using the Editors in Text Mode

The editors are used for the input of text and numbers with the input keys  of the handset. In the top right of the display it is displayed whether numbers (123) or letters (abc, Abc or ABC) are input.

To input letters and punctuation marks you can page through the available letters and punctuation marks by briefly pushing the corresponding input key .



Example: Input window with input key 2

During the input a black bar is shown on the bottom edge of the display, which displays the characters available for the input key used.

Input key

Change between upper case **ABC**, lower case **abc** and capitalized **Abc**.

Input keys 0 - 9, press key briefly

Output according to character table left of cursor

Input keys 0 - 9, press key longer

Direct output of the character left of cursor

Function key , press key briefly

Delete the character left of the cursor

Function key , press key longer

Delete the entire text field contents

Function key (Text field is empty)

Leave the editor without saving the data

Function key

Leave the editor with saving data

Upwards navigation key

Cursor _ in the previous rows

Left navigation key

Cursor _ one character back

Downwards navigation key

Cursor _ in the next rows

Right navigation key

Cursor _ one character forwards

Introduction

Character Tables

Lower Case Mode

Key	1x	2x	3x	4x	5x	6x	7x	8x	9x	10x	11x	12x	13x	14x
1	.	,	'	?	!	”	1	-	(	)	/	:	_	
2	a	b	c	2	ä	å	à	æ						
3	d	e	f	3	é	è	€							
4	g	h	i	4	ì									
5	j	k	l	5	s									
6	m	n	o	6	ö	ñ	ò	ø						
7	p	q	r	s	7	ß								
8	t	u	v	8	ü	ù								
9	w	x	y	z	9									
0	┐	.	,	=										
*	*	#	;	<	>	&	@	£	¿	~				

Upper Case Mode

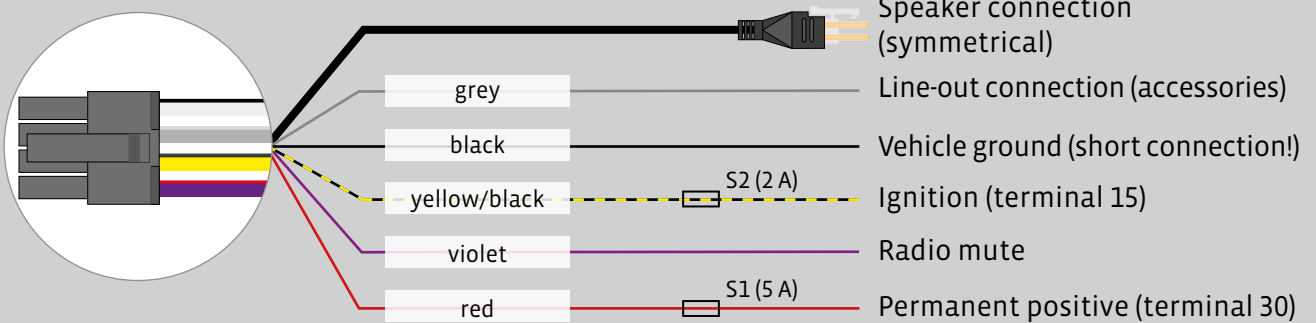
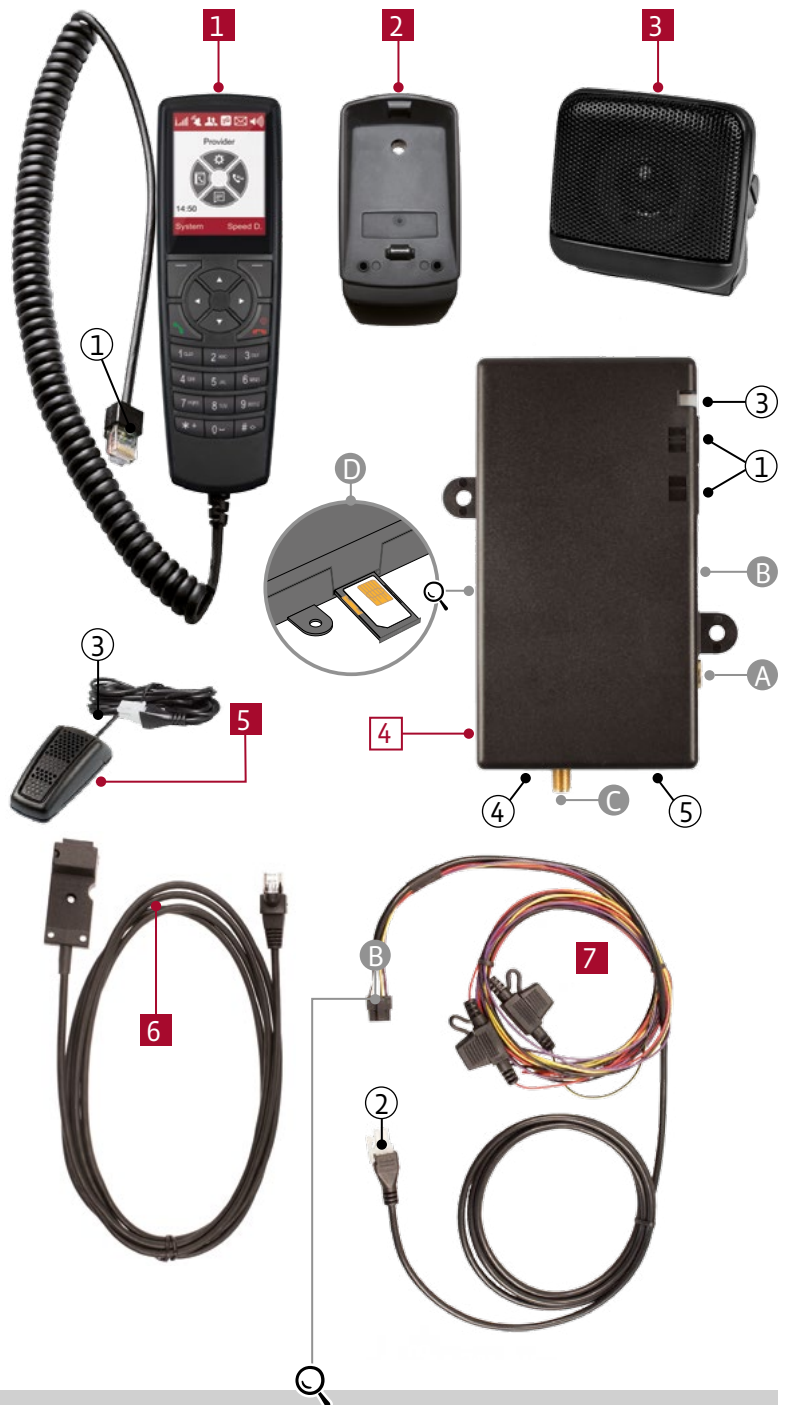
Key	1x	2x	3x	4x	5x	6x	7x	8x	9x	10x	11x	12x	13x	14x
1	.	,	'	?	!	”	1	-	(	)	/	:	_	
2	A	B	C	2	Ä	Å	Ç	Æ						
3	D	E	F	3	É	€								
4	G	H	I	4										
5	J	K	L	5	S									
6	M	N	O	6	Ö	Ñ	Ø							
7	P	Q	R	S	7	ß	¥							
8	T	U	V	8	Ü									
9	W	X	Y	Z	9									
0	┐	+	=	0										
*	*	#	;	<	>	&	@	£	¿	~				

Connection Plan

- 1 Handset HA59
- 2 Cradle for HA59
- 3 Loudspeaker
- 4 Electronics box (not shown)
- 4 Electronics box with GPS module
- 5 Hands-free microphone
- 6 2.5 m extension cable for handset
- 7 Cable set
- 8 Brief instructions and installation instructions (not shown)

- A GSM/UMTS antenna connection (FME)
- B Cable set connection
- C GPS antenna connection (SMA)
(Electronics box with integrated GPS module)
- D SIM card holder
(Valid SIM card required)

- ① Connections for handsets
(both handset connections are identical)
- ② Speaker connection
- ③ Connection for hands-free microphone
- ④ Mini USB connection
(only for service purposes; optional modem connection)
- ⑤ I/O connection



Precautionary Measures and Installation

Precautionary Measures



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

The PTCarPhone and all accessories are not waterproof. Make sure that the PTCarPhone is always protected from moisture penetrating the vehicle. Prevent penetration of dust particles in the housing by cleaning regularly.

Microphone Mounting

Mounting location for the microphone

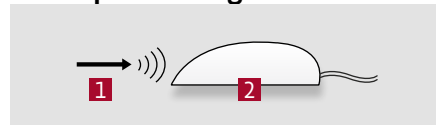


A Optimum position

B Alternative position

C Limited suitability

Microphone alignment



1 Maximum sensitivity

2 Adhesive tape for smooth (flat) surfaces

Instructions for Mounting

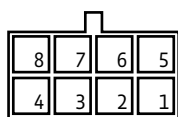
Accessory Mounting

Line-out connection

The line-out cable offers the possibility to link-up the PTCarPhone directly to the sound system or the radio of the vehicle. In this case, the included speaker doesn't need to be installed.

A galvanically isolated line-out connection enables the integration of the PTCarPhone to the audio system of the vehicle.

Connection specifications:



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)



The crimped contacts of the two grey strands of the accessory package are pushed into the two free slots no. 2 and 6 of the cable set plug and can be extended as needed.

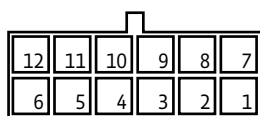
I/O cable installation set

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.

The six programmable inputs and outputs of the PTCarPhone offer the possibility of the phone being used as a control unit for vehicle accessories. The accessory set contains 12 strands and a plug housing. The crimped contacts of the strands are pushed into the plug housing as needed.

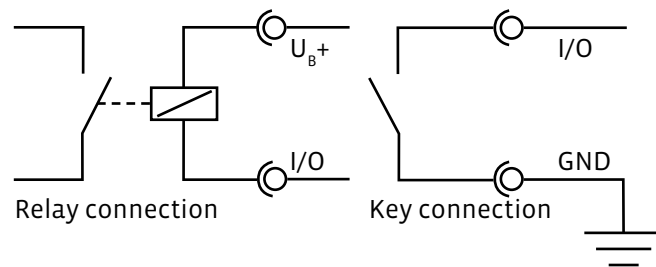
Connection specifications:



I/O connection (Top view)

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

Types of connection:



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.

Sequence of Installation

1. Become familiar with the connections (see also “Connection Plan” on page 13). 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” on page 14.
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 (see also “Changing the Delay Timer” on page 20). 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.

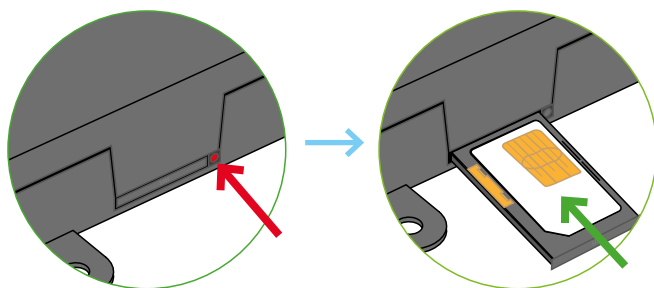
* For vehicles without ignition wiring it is recommended at the end of the installation to activate the “Virtual ignition” function.
5. Connect the violet cable with the mute input of the car radio. This ensures automatic radio mute switching for incoming and outgoing calls.
6. Insulate unused cables 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 on page 13).
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.
See also “Performing a Software Update (OTA: Over-the-Air)” on page 18.
13. If desired, make personal settings on the device (see chapter “Setting up the PTCarPhone” on page 17) and finish the installation.

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.



NOTES:

- 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

See also “Changing the Delay Timer” on page 20.

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

See also “Activation of the Virtual Ignition” on page 20.

Adjusting Display Brightness

Adjustment of the display brightness in illuminated state (Active) and in dimmed state (Inactive).

Settings > Display > Brightness

See also “Adjusting the Display Brightness” on page 23.

Calling-up the Device Info

The device info lists the software versions of the handsets and the PTCarPhone. Additionally, the IMEI number, the IMSI number and the MCC/MNC are displayed.

System > Device Info

Performing a Software Update (OTA: Over-the-Air)

Software update for handset and PTCarPhone are using the internet access of the mobile phone network. For this reason, the internet access needs to be configured (see also “Internet Access Configuration” on page 28).

System > Device Info > Update > device code input > update process

For the software update, the device code is requested (see also “Security Codes” on page 26). After the device code input, the device checks, whether new software versions are available for the handset and the PTCarPhone. If so, the new software is downloaded and after that, the installation process is started. After the installation, the car phone is rebooted.



CAUTION:

Make sure that the software installation process never gets interrupted.



NOTES:

- pei tel cannot guarantee that during an update, all data stored on the phone (e.g. customised logo, contacts and text messages) and settings will be preserved. Do not keep important phone numbers on the PTCarPhone only.
- Downloading of software updates can incur costs, depending on the mobile phone contract.

Access to the System Configuration Menu

The system configuration menu lists settings for special functions of the PTCarPhone. To access this part of the phone menu, the device code is needed.

System > Configuration > device code input

Options

USB interface:	Configuration of the USB interface
Operation mode:	Changing of the operation mode
Digital I/O:	Setting up digital inputs and outputs
Delay timer:	Changing the delay timer
Virtual Ignition:	Activation of the digital ignition
Reset:	Resetting the PTCarPhone to factory settings

Configuration of the USB Interface

The mini USB socket of the electronics box of the PTCarPhone is intended for maintenance works by service technicians only. The standard setting is **Service**.

Exception are PTCarPhone devices with UMTS modules that can be used as a modem.

System > Configuration > device code input > USB interface

Options

Modem, Service

Setting up Usage Restrictions (Operation Modes)

Four operation modes allow for restricting the usage of the phone step by step.

System > Configuration > device code input > Operation mode

Options

- Operation mode 0: In this mode the device works like a normal phone. There are no restrictions on the handset's menu tree. This is the active mode when the device is issued.
- Operation mode 1: This mode restricts the use of the phone in terms of its phone book. Only the already configured phone book is available and copying of contacts from the SIM card is locked. There are however no restrictions on dialling and sending messages via the keypad.
- Operation mode 2: All the phone book functions are the same as in operation mode 1. Dialling via the keypad is restricted to emergency numbers and phone numbers from the phone book. Only enabled numbers of the phone book can still be dialled. These restrictions also apply to the sending of messages.
- Operation mode 3: The restrictions of operation mode 2 apply here as well. Additionally, receiving calls is restricted to phone numbers which are listed in the phone book. These restrictions do not apply to receiving messages.



TIP:

Configure the phone book in operation mode 0 and then switch to operation mode 1, 2 or 3.

Overview operation modes

Operation modes	Phone book	Copying contacts from the SIM card	Dialling restrictions exist	Restrictions on receiving calls
0	x	x		
1	x			
2	x		x	
3	x		x	x

System Menu



NOTE:

In operation mode 1, 2 and 3 the phone can only be used restrictively. This is a security feature, which is especially suitable for fleet vehicles as a cost-saving measure.

Changing the Delay Timer

The delay time starts, when the ignition is switched off. If a key on the phone is pressed during the delay time, the delay timer restarts.

System > Configuration > device code input > Delay timer

Options

0 min (the device is powered down, when the ignition is turned off), 5 min, 15 min, 1 h, 2 h, 4 h, 8 h, 12 h, 1 d, 7 d, 10 d or 30 d (min = minute/s; h = hour/s; d = day/s)



NOTE:

When the feature Virtual Ignition was activated, the delay time starts after switching off the engine of the vehicle.

Activation of the Virtual Ignition

If the PTCarPhone was installed correctly, it powers up automatically when the ignition of the vehicle is started. For modern vehicles without ignition wiring, the feature **Virtual Ignition** is intended. The Virtual Ignition detects changes in the power supply and powers the PTCarPhone up, when the engine is started.

System > Configuration > device code input > Virtual Ignition

Options

On: Automatic detection of the ignition

Off: Ignition over the true ignition contact (terminal 15)



NOTE:

This setting needs to be done only once, during the PTCarPhone installation.

Resetting the PTCarPhone to Factory Defaults

System > Configuration > device code input > Reset

Options

No, Yes (confirmation message)



CAUTION:

The phone will be reset to factory defaults. All data and settings stored on the phone will be deleted!

Digital Inputs and Outputs (I/Os)

The PTCarPhone offers six digital inputs and outputs. Each connection can be used either as an input as well as an output. Inputs are marked with a green sign ●, outputs are marked with a red sign ●.

System > Configuration > device code input > Digital I/O

Digital I/O 1	●
Digital I/O 2	●
Digital I/O 3	●
Digital I/O 4	○
Digital I/O 5	○
Digital I/O 6	○

Options

Digital input:

- Panic key (*E/A 2 and 6 only*)
- Sending SMS
- Hangup/Answer call
- Volume +
- Volume -

Digital output:

- Ring indic.
- Phone ON
- Active call
- Switch (feature not yet implemented)

Reset

Detailed information on the topic digital inputs and outputs can be found in the Application Note 1500: "I/O Interface Manual for the PTCarPhone 5 Series", available for download on: <http://www.ptcarphone.de/en/downloads>

Speed Dial Menu

Adding Speed Dial Numbers

Nine speed dial numbers are available, respective to the input key numbers  1 to 9. Speed dial numbers can be allocated to single phone numbers of already created contacts.

Speed D. > *select free speed dial number* > function key **Options** > **Change** > function key **OK** > *select contact* > *select phone number*



TIP:

It is recommended to use the speed dial number “1” for the mailbox number, as the mailbox symbol is already printed on this key.

Deleting a Speed Dial Number

Speed D. > *select speed dial number* > function key **Options** > **Delete** > function key **OK**

Using a Speed Dial Number

Pressing an input key for a long time, which was associated with a speed dial number, starts the speed dial process. When “Direct call” is activated, dialling will start immediately. When “Direct call” is inactive, the speed dial entry will be shown and the call can be initialised with the function key **Dial** or with the call key .

See also “Setting up Direct Call” on page 31.

Settings Menu

Adjusting Display and Keypad Illumination

This menu point adjusts the illumination of the display and keypad. The setting **Perm. backlight** activates the illumination permanently. **Aut. backlight** switches the illumination of display and keypad off 10 Seconds after the last push of a key.

Settings > Display > Backlight

Options

Aut. backlight: Automated illumination: 10 Seconds after pushing the last key, the backlight is dimmed.
Perm. backlight: The illumination stays permanently switched on and is not dimmed.

Adjusting the Display Brightness

The display brightness can be adjusted to the present lighting conditions within a certain limit using the navigation keys ▲ and ▼. The handset beeps when the upper and lower limits of the adjustment range are reached.

Settings > Display > Brightness

Options

Active: Display brightness in illuminated state.
Inactive: Display brightness in dimmed state.

Call Settings

The call settings menu lists all settings for incoming and outgoing calls. Some settings are stored at the mobile phone provider's system (so called network services) and need to be retrieved over the mobile phone network, when the menu point is selected. As this might take some time, "Please wait" appears on the display. Network services depend on the mobile phone provider and might need to be registered or unlocked separately.

Settings > Call settings

Options

Sending own no.: Network service; If enabled, the own phone number might be displayed on the phone of the recipient of outgoing calls.
See also "Calling Line Identification Restriction" on page 24.

Call waiting: Network service; During a phone call a second incoming phone call is announced by a sound signal. It is possible to switch between the two phone calls back and forward. See also "Call Waiting" on page 24.

Automatic answer: Phone calls are forwarded automatically to the hands-free system after 2 or 5 ring tones. This feature is disabled (Off) by default.
See also "Automatic Answer" on page 24.

Incoming call: Decides, to which handset connection incoming calls are switched, provided, two handsets are connected to the system.
See also "Incoming Call" on page 25.

Call duration: Shows the total call duration of all incoming and outgoing calls. The call duration counter can be deleted. For this it is necessary to enter the device code.
See also "Call Duration Display" on page 25.

Settings Menu

Call divert: Network service; Call divert can be disabled and enabled. During the enabling process, a phone number needs to be provided. See also “Setting up a Call Divert” on page 25.

Calling Line Identification Restriction

The **Calling Line Identification Restriction** is set up by disabling (Off) the menu point “Sending own no.”.

Settings > Call settings > Sending own no.

Options

On, Off

Call Waiting

The network service Call Waiting can be turned on and off with this setting. A second incoming call is announced with a sound signal during a phone call. It is possible to toggle between the calls by pressing the function key SWITCH.

Settings > Call settings > Call waiting

Options

On, Off

Automatic Answer

Automatic Answer makes it possible to answer calls during driving automatically, without touching the handset. However, it may be the case that callers are connected without the knowledge of the passengers, and thereby be privy to conversations taking place in the vehicle.

Settings > Call settings > Automatic answer

Options

Off: The Automatic Answer is disabled by default.

After 2 rings: After 2 ring tones incoming phone calls are forwarded to the hands-free system.

After 5 rings: After 5 ring tones incoming phone calls are forwarded to the hands-free system.

Settings Menu

Incoming Call

This setting controls the behaviour of the phone when two handsets are connected. If only one handset is connected, the setting has no impact. If one handset is occupied by a call, the second handset is deactivated during this time.

Settings > Call settings > Incoming call

Options

- Handset 1: Incoming calls are diverted to the handset, which is connected to the handset socket on the electronics box marked with I.
- Handset 2: Incoming calls are diverted to the handset, which is connected to the handset socket on the electronics box marked with II.
- Both: Incoming calls can be answered on both handsets.

Call Duration Display

The total call time since the last deletion is displayed. The function key **Delete** can reset the counter. The device code is needed to deleting the call duration.

Settings > Call settings > Call duration

Setting up a Call Divert

Incoming calls can be forwarded to a specific phone number. This is a network service, which needs to be supported by the mobile phone provider. These settings are sent by the phone to the mobile phone provider and vice versa are retrieved from the provider when requested. This setting is disabled by selecting the setting "Off".

Settings > Call settings > Call divert > On

Options

- Add number: Add the call divert phone number with the input keys .
- From phone book: Add the call divert phone number by selecting it from the phone book.

Enabling the SMS Signal Tone

The SMS signal tone is enabled  and disabled  by pressing the function key **OK**.

Settings > Signals/Tones > SMS signal tone

Adjusting the Ringer Volume

The ringer volume is adjusted by pressing the navigation keys  and .

Settings > Signals/Tones > Ringer volume

Settings Menu

Selecting a Ring Tone Melody

27 melodies are provided to be selected as a ring tone.

Settings > Signals/Tones > Ring tone

Options

Selecting a melody: Press the navigation keys ▲ or ▼.

Play and save: Press the function key OK.

Security Codes

Settings > Security

Security codes which are stored on the PTCarPhone or on the SIM card:

Code	Intended Purpose	Standard	Origin	Length
PIN	Protects the SIM card from mis-use; editable	See SIM card documents	Mobile phone provider / SIM card	4 to 8 characters
PUK	Unlocks the SIM card after putting in a wrong PIN three times; not editable	See SIM card documents	Mobile phone provider / SIM card	8 characters
Device code	Changing of system settings and for software updates; editable	0000	PTCarPhone	4 to 8 characters



NOTE:

It is recommended to change the device code.

Select a PIN Code Request Mode

A SIM card has only two settings for the PIN code request: **On** and **Off**. To ensure that the PTCarPhone is not switched on automatically when the vehicle is started, the PIN code is requested and the PTCarPhone menu adds another setting, **Automatic**. When selected, the SIM card remains secure by a PIN request (setting: **On**), but entering the PIN is done automatically by the PTCarPhone.

Settings > Security > PIN code request



NOTE:

In cases where the SIM card is replaced or the PIN on the SIM card was changed on another device, the PIN entry will fail and the phone will ask for a manual PIN entry. The PIN code request mode will then be set automatically to the default setting **On**.

Settings Menu

Options

- On: PIN entry required at phone start-up.
This setting is saved to the SIM card.
- Off: PIN entry not required.
This setting is saved to the SIM card.
This setting is not supported by all SIM cards due to security risks.
- Automatic: The PIN entry at start-up is done by the PTCarPhone automatically.
On the SIM card, the PIN code request setting is set to **On**.

Changing the Security Codes

The PIN on the SIM card and the device code can be changed individually.
See also “Changing the Security Codes” on page 27.

Settings > Security > Change codes

Options

Change PIN code, Change HS code (HS: handset; device code of the PTCarPhone)



NOTE:

Security codes cannot be changed without the current code.

Automatic Network Selection

The default Automatic setting in the Network menu is generally recommended when selecting a mobile phone network manually is not required.

Settings > Network > Automatic

Options

- Enabled : Press the function key  to enable this feature.
- Disabled : This feature is disabled by selecting a mobile phone network in the “select from list” menu.

Selecting a Mobile Phone Network

When close to national borders, it might be necessary to select a fixed mobile phone network to prevent the occurrence of roaming charges for calls over foreign mobile phone networks.

When **Select from list** is selected, the PTCarPhone searches for available mobile phone networks. Networks marked with a green mark  can be selected, networks marked with a red mark  cannot.

Settings > Network > Select from list

Settings Menu

Internet Access Configuration

An internet connection is required for Over-the-air software updates. The access data for the internet portal of the mobile phone network need to be entered. For many mobile phone providers, the access data is already stored in the PTCarPhone. In other cases, access data needs to be added manually.

Settings > Internet

Options

MCC/MNC: Mobile Country Code / Mobile Network Code
APN: Access Point Name
Login: User Name
Password: User Password



TIP:

To exit the menu, use the function key **OK** to store modifications. Otherwise, exit the menu using the end key **END**.

Setting Date and Time

There are several display modes for time and date for choice. After confirming the selected display mode with the function key **OK**, you will be prompted to enter the time or date. The input is done using the input keys **NUM**.

Settings > Date/Time

Options

Time: 24 hours mode, 12 hours mode
Date: DD.MM.YY, MM/DD/YY, YY-MM-DD

DD: Day (01 – 31), MM: Month (01 – 12), YY: Year (00 – 99)



TIP:

When setting the time in 12 hour mode, use the navigation keys **▲** or **▼** to toggle between “am” (mornings between 00:00 and 11:59) and “pm” (afternoons between 12:00 and 23:59).

Changing Date and Time Display Modes

After selecting the date or time display mode, the time or date is displayed and can be modified if necessary. See also “Setting Date and Time” on page 28.

Settings > Date/Time

Options

Time: 24 hours mode, 12 hours mode

Date: DD.MM.YY, MM/DD/YY, YY-MM-DD

Language Selection

The default setting **Automatic** will use the language setting from the SIM card. If this language is not available, English is selected automatically. Alternatively, languages can be selected manually.

Settings > Language

Options

Automatic, German, English, French, Italian, Spanish, Dutch, Swedish, Finnish, Romanian, Norwegian



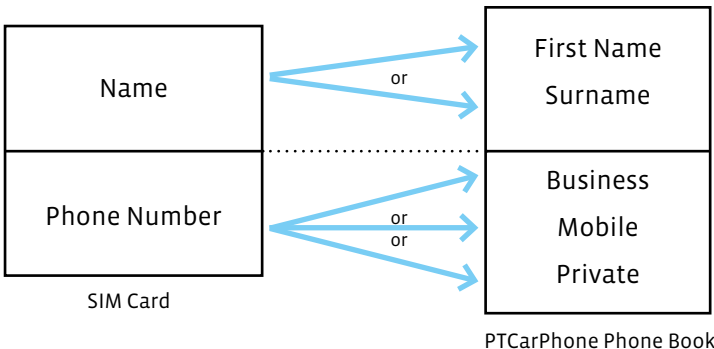
NOTE:

Languages without selection box ☐ are currently unavailable, but will be added in future software updates.

Phone Book Settings

The PTCarPhones phone book doesn't show contacts which are stored on the SIM card. However, it is possible to import contacts from the SIM card to the phone book.

Copying contacts from the SIM card to the PTCarPhone:



Settings > Phone Book

Settings Menu

Options

- Memory status: Lists the total amount of storage spaces for contacts on the SIM card and in the phone book memory and how much is already occupied.
- Copy SIM: Copies all contacts from the SIM card to the phone book memory. During this process, it is necessary to decide whether the names of all contacts on the SIM card are stored as first names or surnames and if all phone numbers are sorted into in one of the categories business , mobile  or private .
- Display order: Decides if the phone book is sorted alphabetically by first name (first, last) or by surname (last, first).

Access Memory Status

This menu point lists the amount of free and total storage spaces for contacts in the PTCarPhone phone book and on the SIM card.

Settings > Phone book > Memory status

Example:

Phone book
maximum: 5000
free: 4988

SIM
maximum: 250
free: 238

Copying Phone Numbers from the SIM Card to the Phone Book

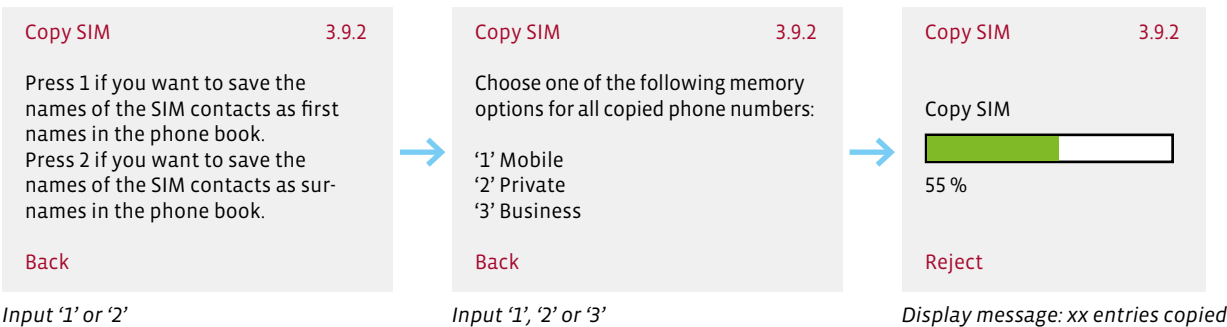
Imports the contacts from the SIM card to the phone book of the PTCarPhone.

Settings > Phone book > Copy SIM



NOTE:

All decisions made during this process are made once for all contacts.



Settings Menu

Sorting Contacts by First Name or Surname

Decides if the phone book is sorted alphabetically by first name (first, last) or by surname (last, first).

Settings > Phone book > Display order

Options

First, last

Last, first

Setting up Direct Call

The **Direct call** feature determines how the phone acts when an input key , which is associated with a speed dial number, is pressed down for a certain time.

Settings > Speed Dial

Options

Direct call enabled : The call starts directly after pressing the respective input key  for a certain time.

Direct call disabled : After pressing the respective input key  for a certain time, the speed dial entry is shown. To dial press the function key  Dial.

Accessing SMS Settings

The SMS settings offer the possibility to enter or change the SMS Centre as well as to select whether sent SMS are stored on the phone.

Settings > SMS

Options

SMS Centre: The SMS Centre phone number of the mobile phone provider can be entered or changed. It is recommended to leave this menu by pressing the function key .

Send & Save SMS: When enabled, SMS are stored in the SMS memory after sending. See also “Opening Saved SMS Messages” on page 35.

Editing Contacts in the Phone Book

Contacts in the phone book can be deleted or edited, or new contacts can be added. Select a contact with the navigation keys and then press the function key **Options**.

Phone book > function key **Options**

Options

Delete contact: A contact is deleted from the phone book. Just confirm the message “Delete entry?” with the function key **Yes**.

Edit contact: First name, surname and phone numbers for the categories business , mobile  or private  can be changed or added. First, first name and surname are displayed. Pressing the function key **Next** opens the phone number window.

Add contact: A new contact is added. The boxes for first name, surname, business, mobile and private are empty.



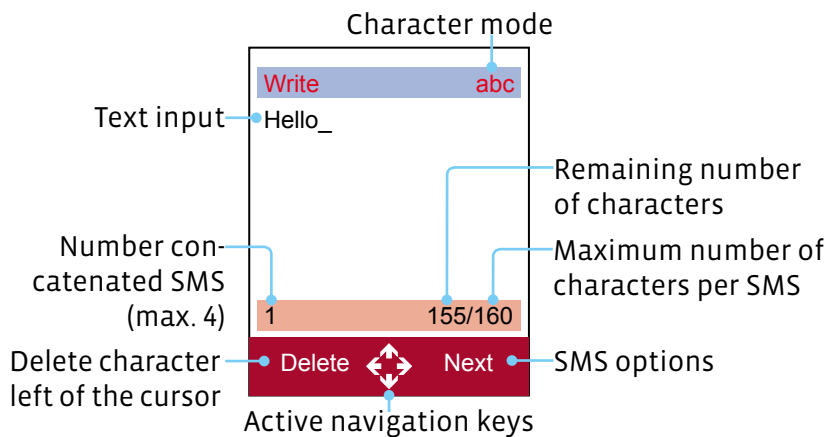
NOTE:

- At least one name and one phone number are necessary for the contact to be able to be stored.
- In cases where no changes were made, exit the options **Edit contact** or **Add contact** using the end key .

Writing an SMS Message

SMS are written in the SMS text editor window.

SMS > Write > SMS text editor



Character mode: The upper right corner displays **ABC** if upper case, **abc** if lower case or **Abc** for word capitalisation.

Remaining number of characters: Is reduced by 1 for every character input.

Maximum number of characters per SMS: Maximum number of characters for a single SMS.

Concatenated SMS: To extend the maximum number of 160 characters per SMS, up to 4 SMS can be automatically stringed and sent together. The “Remaining number of characters” and the “Maximum number of characters” always apply to the respective single SMS. The second, third and fourth SMS consist for technical reasons of less than 160 characters.

During the input, a black text field appears on the lower border of the display showing the available characters for the input button in use. See also “Editors” on page 11.

abc2_ääääääçæ *Figure: Black text field with character selection for the input key “2”*

Draft SMS which are not sent, stored or erased remain in the SMS text editor window.

SMS > Write > SMS text editor > function key *Next*

Options

Sending SMS:	Send a SMS to a contact or phone number
Save SMS:	Save SMS for later use
Erase SMS:	Delete SMS

Opening Received SMS Messages

When receiving an SMS, the SMS symbol  is displayed in the toolbar of the display. When enabled, a SMS signal tone sounds. See also “Enabling the SMS Signal Tone” on page 25.

SMS > Inbox > function key *Select*

Options

Delete, Answer, Forward, Call-back, Save number, Save SMS

Deleting SMS Messages

Draft SMS or saved SMS can be deleted as follows:

Open the SMS, then:

Function key *Next* or *Options* > **Delete SMS** or **Delete** > function key *Yes*

Replying to SMS Messages

Replies can only be sent to SMS which are in the inbox.

Open the SMS, then:

Function key *Options* > **Answer** > *write the answer* > function key *Send* > *edit phone number if necessary* > function key *Send*

Forwarding SMS Messages

Only SMS stored in the inbox or SMS archive can be forwarded.

Open the SMS, then:

Function key *Options* > **Forward** > *edit SMS if necessary* > function key *Next*

Options

Add number: The phone number is entered using the input keys

From phone book: The phone number is selected from the phone book

Calling a Phone Number Retrieved from an SMS Message

This is only possible for SMS stored in the inbox.

Open the SMS, then:

Function key *Options* > **Call-back**

Saving a Phone Number from an SMS Message

The phone number can only be saved from SMS stored in the inbox.

Open the SMS, then:

Function key **Options** > **Save number** > function key **OK** > *enter first name and surname* > function key **Next** > *select a category* > function key **Select** > *another phone number might be added* > function key **Next**

Phone number categories: business , mobile  or private 

Saving SMS Messages

SMS can be saved directly after writing or when they are stored in the inbox. To save sent SMS to the SMS archive, see (SMS settings).

Open the SMS, then:

Function key **Next** or **Options** > **Save SMS** > function key **OK**

Retrieving the Memory Status

The phone can store up to 50 SMS in total, either in the inbox, or in the SMS archive. It is recommended to delete older SMS on a regular basis.

SMS > **Memory status** > function key **OK**

Opening Saved SMS Messages

SMS > **SMS archive** > *select SMS* > function key **Select**

Options

Delete, Forward

Call Register Menu

Opening the Call Register

The last ten calls are registered in each category (list), consisting of **Missed calls**, **Received calls** and **Dialled numbers**. The phone menu offers the possibility to delete one or more lists or to dial or store phone numbers in the phone book.

Call register > *select list* > *select an entry* > function key *Options*

Options

- Save to phone book: Use the phone number of a selected call register entry to add a new contact.
- Sending SMS: Send an SMS to the phone number of a selected call register entry.
- Dial number: Dial the phone number from a selected call register entry.

NOTE:



Calls with unidentified phone number are marked as anonymous. In this case, options are not available.

Saving a Phone Number from the Call Register

Selecting the phone number from the call register and opening the phone book editor:

Call register > *select list* > *select entry* > function key *Options* > **Save to phone book** > function key *OK*

Saving the phone number in the phone book:

1. Enter first name and surname.
2. Press the function key *Next*.
3. The category (business , mobile  or private ) for the phone number can be chosen using the navigation keys  or  and saved with the function key *Selection*.
4. If required, additional phone numbers can be added to the other free categories.
5. Press the function key *Next* to save the contact.

Calling a Phone Number from the Call Register

Selecting a phone number from the call register and opening the phone book:

Call register > *select list* > *select entry* > function key *Options* > **Dial number** > function key *OK*

Sending an SMS Message to a Phone Number from the Call Register

Selecting a phone number from the call register and opening the phone book:

Call register > *select list* > *select entry* > function key *Options* > **Sending SMS** > function key *OK* > edit SMS if required > function key *Send* > edit phone number if required > function key *Send*

Call Register Menu

Redialling

To repeat a call, select the call register **Dialled numbers**, select the last call and press the call key .

Call register > Dialled numbers



TIP:

The call register **Dialled numbers** can also be opened from the main menu by pressing the call key .

Deleting Call Register Lists

Select one or more call register lists with the navigation button and select them by pressing the function key **OK**. Once all are selected, press the function key **Delete**.

Call register > Delete list



NOTE:

When deleting call register lists, all contained data will be permanently deleted!



TIP:

Use the function key **OK** to remove already selected call register lists from the selection.

Features of the GPS Module

The GPS icon in the symbol bar of the display represents the strength of the GPS reception as shown below:

	GPS: No satellite
	GPS: 2D-Fix
	GPS: 3D-Fix

Setting the time via GPS

When the GPS module contacts the global satellite system for the first time, the PTCarPhone receives the UTC time and, if the time was not set up, manually or by receiving a text message (SMS), is shown on the display. The difference between the received UTC time and the time setting is stored on the PTCarPhone and applied at the next start-up.

The second handset

With the second handset, which is offered as an accessory, calls can be forwarded from one handset to the other. For call settings for the second handset, see “Incoming Call” on page 25.



NOTE:

- When both handsets are connected, software updates will be applied to both handsets.
- Use the function key *Change* to forward a call from one handset to the next. The forwarded call will be announced on the other handset by a tone signal and needs to be accepted by pressing the function key *Answer*.
- The handset not in use is switched to inactive mode during a call. On the display the message “occupied” appears. Both handsets can be used for phone calls, just not in the time.
- The handset which is plugged into the socket on the electronics box marked with “I” is connected to the hands-free system.
- SMS are displayed on both handsets.

Using the PTCarPhone as a Modem

Devices with UMTS module can be used as modem for a internet connection. For this purpose, the USB interface needs to be set to “Modem”, see also “Configuration of the USB Interface” on page 19.

In-depth instructions for setting-up a dial-up connection can be downloaded from: <http://www.ptcarphone.de/en/downloads>.

Additional Information

Scope of supply

Components of the 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 and installation instructions

Accessories

Accessories for the PTCarPhone 5 Series:

- Handset HA59 incl. 5.0 m extension cable
Article number: 6508-006-100-51
- Line-out connection to connect to the vehicle audio system (2x 200 mm strands)
Article number: 6708-003-000-00
- I/O cable installation set (12x 200 mm strand and plug housing)
Article number: 6708-004-000-00
- 3.0 m extension cable for the microphone
Article number: 6098-083-000-51
- 3.0 m extension cable for the loudspeaker
Article number: 6098-084-000-51
- 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

Care and Cleaning Tips

Switch off the PTCarPhone for all cleaning purposes.

It is recommended to use a paint brush or a fine brush to remove dust particles from the hands-free microphone, the external speaker or the handset.

To remove stubborn dirt, use a damp, soft, lint-free cloth. Make sure that no liquids penetrate the housing.

Never use harsh chemicals, cleaning agents, abrasive cleaners, or soaked cloths or sponges.

It is generally recommended to keep the surroundings of the equipment free from dust.

Technical Data

GSM/UMTS module

- GSM: 850, 900, 1800, 1900 MHz
- UMTS: PTCarPhone 520: 800/850, 900, 2100 MHz; PTCarPhone 530: 800/850, 900, AWS 1700, 1900, 2100 MHz
- Power for 850/900 MHz 2 watt
- Power for 1800/1900 MHz 1 watt
- Power for UMTS max. 0.25 watt
- Emergency call function (112/911)
- SMS capability
- Concatenated SMS (up to 4 x 160 characters per message)

Interface

- RS232 with V24 level
- Baud rate: 115200
- Parity: none
- Data bits: 8
- Stop bits: 1
- Handshake: OFF

Operating Voltage

10 V to 32 V

Power Consumption

- Off < 0.07 watt
- Standby: about 1.5 W to 3 W (depending on connected accessories)
- Max. power consumption during hands-free mode: 2 A

Temperature

Operating: -20 °C to 70 °C
Storage: -30 °C to 80 °C

Additional Information

Fuses

- Fuse for permanent positive: 5 A mini blade type fuse
- Fuse for ignition: 2 A mini blade type fuse

GSM or UMTS antenna

GSM or UMTS antenna with FME connection is required for the operation of the telephone. It is not included in the scope of delivery.

The selection of the antenna, GSM or UMTS depends on your PTCarPhone model.

GPS antenna

GPS antenna with SMA connection. It is not included in the scope of delivery.



NOTE: Be aware of the antennas' installation conditions in the vehicle. Please contact your qualified mobile personnel with any questions.

E-Mark



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Technical Details of the Connections

I/O connections

The electronics box is equipped with six programmable input and outputs (I/Os).

- Type: Open drain output with snubber diode / input with 15 kOhm pull-up resistor connected to the operation voltage of the device
- Only resistive and inductive loads permitted (no capacitive loads!)
- Maximum current: 150 mA per connection
- Max. voltage less or equal to the operation voltage of the device (but max. 32 V)
- Snubber diode for the relay (inductive loads) included; It is necessary to use the internal power supply (Pin 4, 5, 6) for this purpose

Radio mute output

- Type: Open drain output (switched to ground)
- Resistive loads permitted only!
- Maximum current: 50 mA
- Maximum against ground: +32 V

Disposal



The image of the crossed-out waste bin reminds you to dispose of waste electronic equipment separately from normal household waste.

Please don't dispose of your car phone and its accessories together with household waste, but rather bring it to a local recycling or collection centres.

Also, please dispose of packaging and documentation separately at your local recycling centre.

WEEE registration number DE 94398883

Declaration of Conformity



Please find the declaration of conformity on our homepage:
www.ptcarphone.de/de/downloads

Support

- Answers to frequently asked questions are found in our FAQ at <http://www.ptcarphone.de/en/faq-2.html>
- If you still have questions, please contact **Technical Support** at **+49 (0)3328 – 3516 99 (Monday to Friday, 9 am to 3 pm – CET)**
- If your device or an accessory needs repair, whether under warranty or following expiration of the warranty period, the device can be sent directly to pei tel.
For this purpose, please download the return form for PTCarPhone systems from www.peitel.de/return. Fill in, print and sign the form and include it in a carefully wrapped return packet.



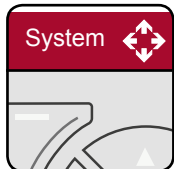
NOTE:

- Before sending in the defective electronics box, please remove the SIM card, cables and accessories. Only send in the defective device.
- Please note that in case of a repair, all data stored in the PTCarPhone (settings, contact and text messages) will likely be deleted.

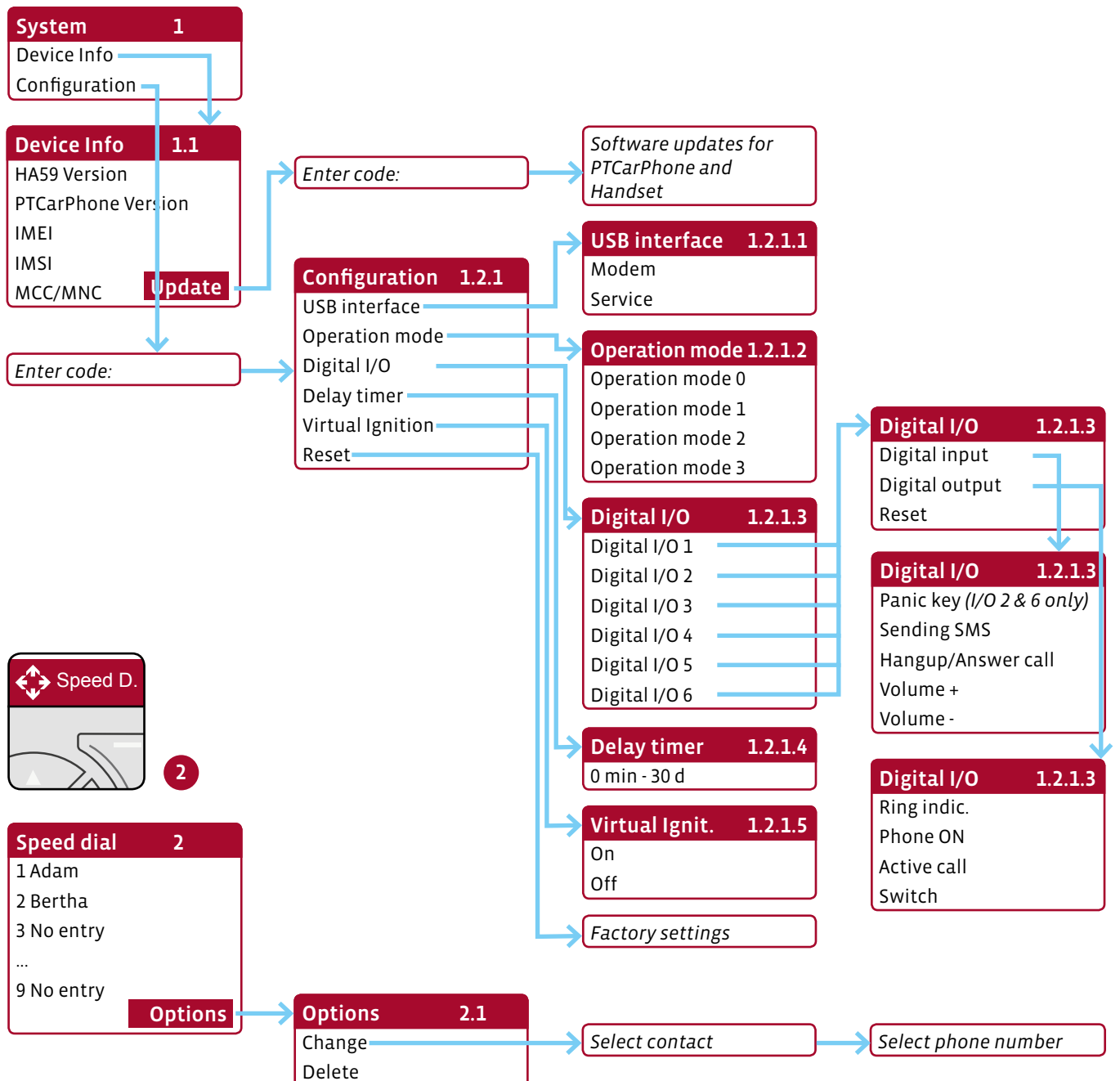
Menu Overview

Menu headline	1.2.1.2
Menu item (regular font)	
<i>Description / instruction (italic)</i>	
1.2.1.2: Menu numbering	
Forward with function key:	
	Next

How to read the menu overviews



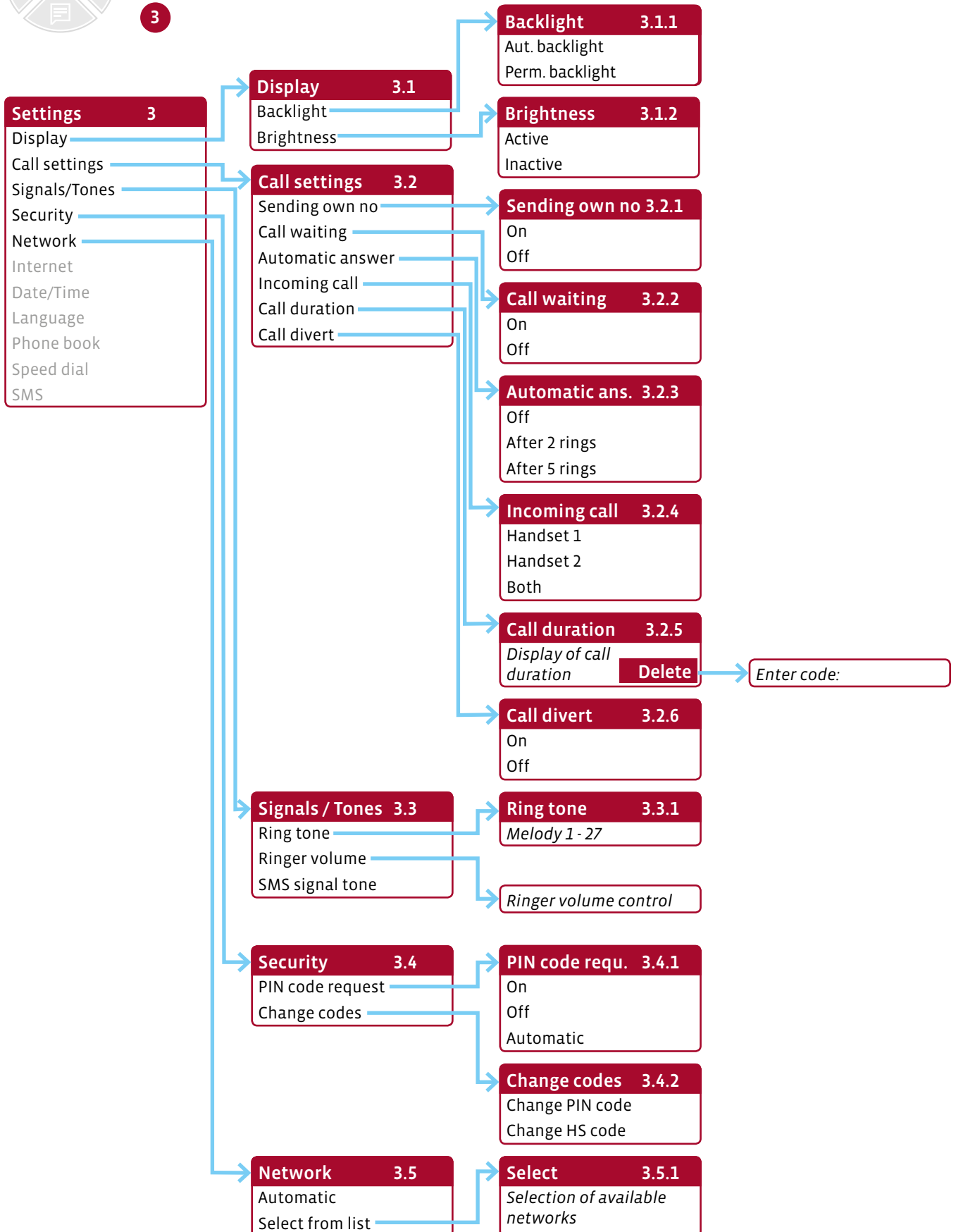
1



Menu Overview



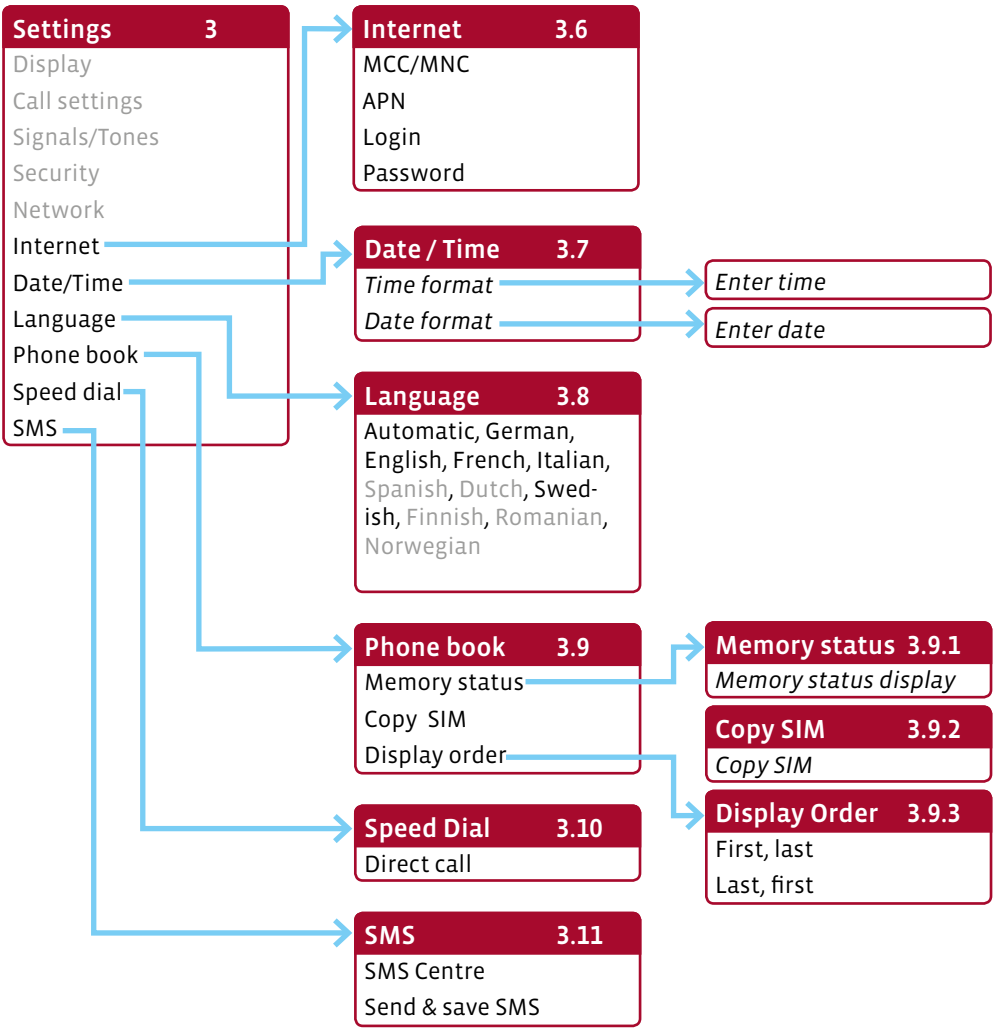
3



Menu Overview



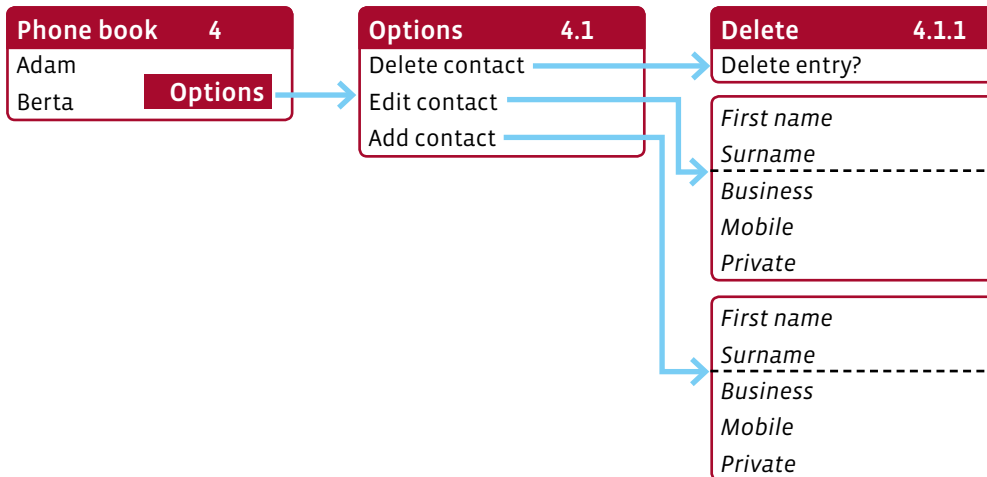
3



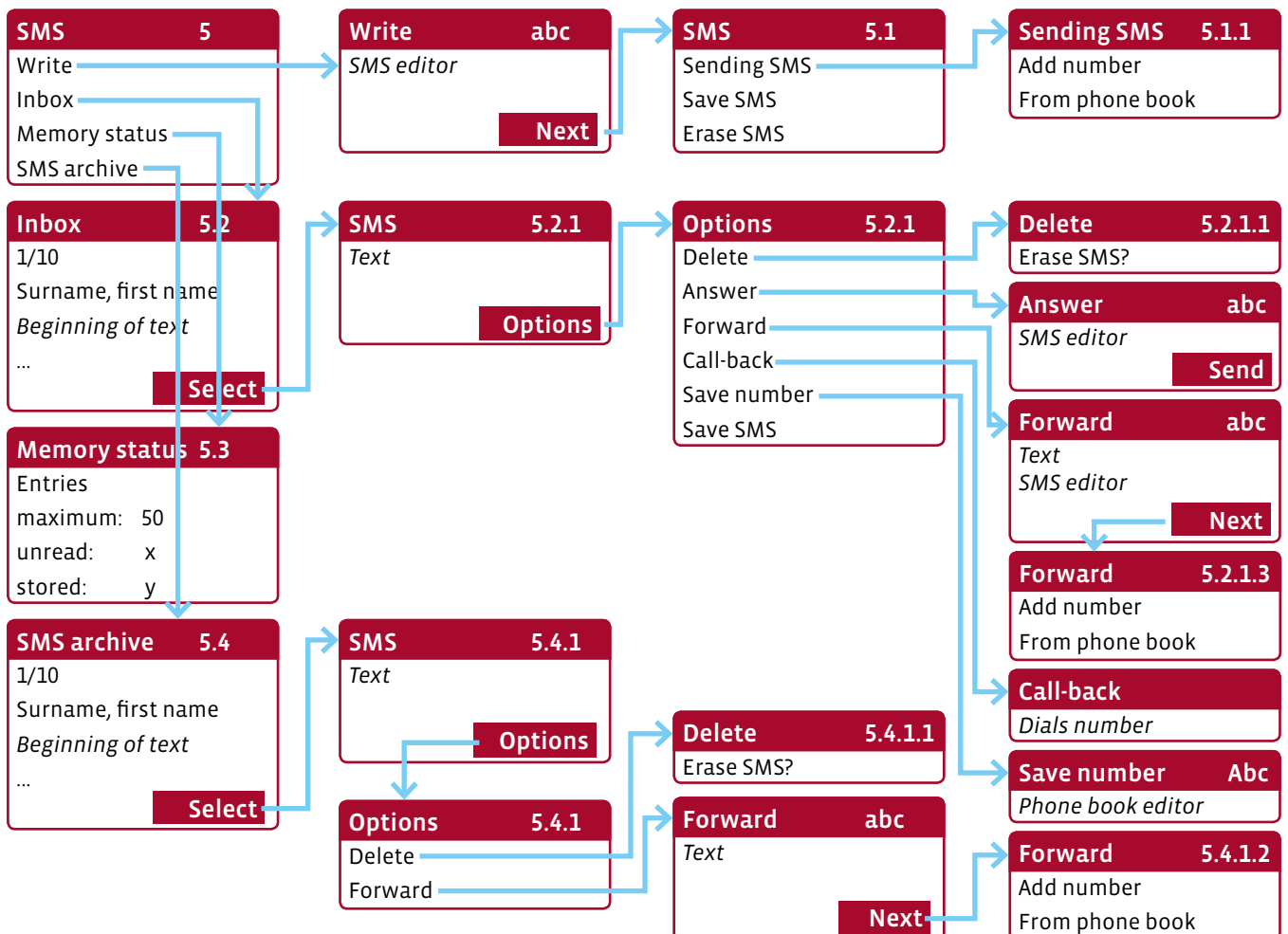
Menu Overview



4



5



Menu Overview

