

# REMUC

# REMUC 3

v 1.1

User Manual



## Foreword

Thank you for purchasing Remuc-3 remote control system. We are confident to claim that you have chosen one of the best remote controlling products available.

**Please familiarize yourself with this manual before installation and device use.**

Parts of this manual might differ from the supplied product and/or services and is subject to change without separate notice. Embelin Oy reserves the right to modify, add or remove parts of this manual without further notice.



More information: [www.remuc.com](http://www.remuc.com)

All manuals can also be downloaded in selected languages from the web site: [www.remuc.fi/downloads](http://www.remuc.fi/downloads)

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# 1 General description

REMUC-3 brings a smart access to all kinds of devices like parking heaters, alarm controls and home automation gadgets with your mobile phone. REMUC uses GSM network for communication and GPS for positioning.

## 1.1 Package contents

- REMUC-3 controller
- External GSM antenna (lilac connector)
- External GPS antenna (blue connector)
- Connectivity cable set
- Illuminated use button with a temperature sensor
- 2 pcs device id stickers
- 3M™ Dual Lock™ fasteners for device mounting (2 pcs)
- Quick guide (FIN, ENG, SWE)



## 1.2 SIM card

Depending on the delivery and country, this Remuc device might have a preinstalled SIM card. To be able to connect to service using this SIM, the card needs to be activated first. Activation instructions are in section 2.6 *Installation steps*.

SIM card includes one (1) month prepaid credit and it starts from activation. After this trial period more credit is required to be able to continue using Remuc. More credit is purchased in My Remuc-service (<https://my.remuc.com>).

SIM card user fee includes unlimited Remuc data usage. When paid credit nears running out, user gets a notification in the mobile application.

User may replace the supplied SIM card with which ever operator card he wants. Remuc requires a fixed-fee data plan.

## 1.3 IMPORTANT INFORMATION!



- **WARNING!** Familiarize yourself with use, service and safety instructions of the device that will be controlled by Remuc.
- Controller must be installed so that given supply voltage and current limits are never exceeded. **Supply current must be limited with a 5 A fuse.**
- Always install Remuc in a dry space. For example, under the dashboard. Do not install Remuc in engine compartment.
- When installing GPS and GSM antennae, pay attention to antenna safety instructions presented in this guide's installation phase.
- To ensure correct functionality and a safe installation, we encourage using professional installation service when acquiring and installing REMUC.

## 2 Controller installation

It is strongly encouraged to have a professional car service install the REMUC. Controller must be installed in a dry, liquid-protected place, e.g. under the dashboard. REMUC must not be installed in the engine department.

### 2.1 REMUC-3 controller description



\*) Only used in special installations

### 2.2 Electrical characteristics

<b>Supply voltage</b>	+9V...32V
<b>Operating temperature</b>	-40...+80C
<b>Typical current consumption</b>	< 60mA (12V)
<b>Temperature sensor operating range</b>	-55...+125C

### 2.3 Status light

	OK
	Fault condition, requires attention

## 2.4 Reset button (device restart, settings reset)

REMUC reset functionality can be done with both use button and the reset button on the side of the device.

### REMUC restart with the reset button or with the use button

1. **Keep button pressed for at least 10 s. Release button.**

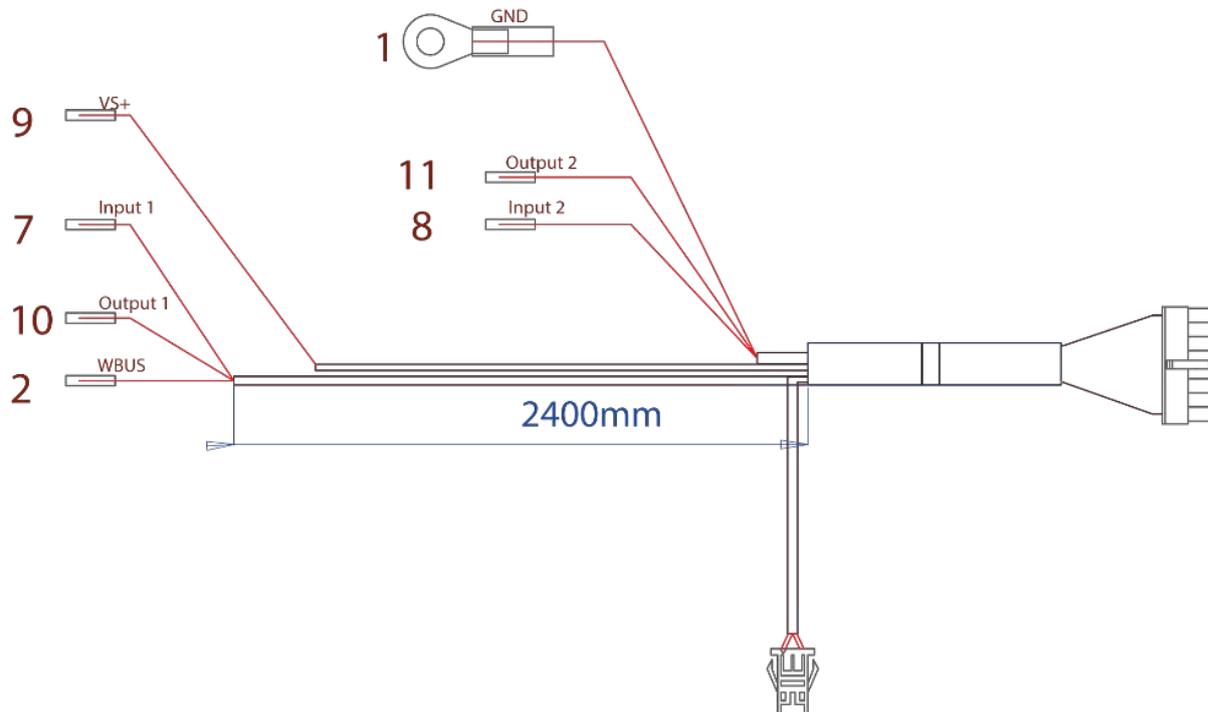
### REMUC settings reset with the reset button or with the use button

1. **Keep reset button pressed for at least 10 seconds. Release button.**
2. **When REMUC status light blinks, press reset button three times.**
3. **REMUC restarts**

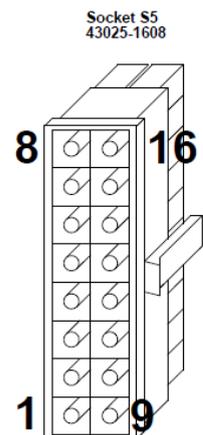
**Settings reset** performs the following functions:

- Connection settings back to default
- Remove paired mobile users
- Remove timers and location-based events

## 2.5 Connector cable schematics



PIN NBR	FUNCTION	DESCRIPTION
1	Ground	
2	WBUS	Webasto control bus
3	- -	Not connected
4	- -	Not connected
5	-	Not in use
6	Button	
7	Input 1	+0V...+32V, min. imp. 10kΩ, transition up >3 V, transition down <0,5 V
8	Input 2	+0V...+32V, min. imp. 10kΩ, transition up >3 V, transition down <0,5 V
9	Supply voltage	+9V...+32V, <b>5A fuse required</b>
10	Output 1	0,5 A, same as supply voltage when controlled
11	Output 2	0,5 A, same as supply voltage when controlled
12	Button	
13	Button	
14	Button	
15	- -	Not connected
16	- -	Not connected



## 2.6 Installation steps

### 1. Perform SIM card activation (device-supplied SIM only)

(If included in delivery, there's a sticker on SIM card slot) SIM card needs to be activated before Remuc is to be used. Activation can be initiated either by

A) Mobile application: Make a new device connection in application (3.2 *Connecting application with REMUC*). When the non-activated SIM card is detected, a web link is presented where to start the activation.

B) With web browser in <https://www.remuc.fi/sim>

### 2. Locate an installation spot for Remuc

Remuc must be installed inside car, in a dry and protective place. Below dashboard on driver side is usually a good place. Fix Remuc only on flat surfaces to avoid bending of the casing.

### 3. Install GSM and GPS antennae



The install height of the antenna plays a great role in getting the best possible signal reception. Generally, the higher the antenna is, the better is the reception. Bottom edge of the windshield is a good example.

Wipe the install spot clean of any dirt, grease or stains before attaching the antenna.

Same applying rules apply to GPS antenna also. Antenna needs to have a clear view of the sky to achieve best possible satellite reception. On top of the dashboard is most likely the best place. Note that GPS antenna must be placed so that the text "GPS" is facing up.

Avoid the following installation spots with both antennae:



- Inside, on top of or under (closer than 2cm) a metallic structure. Metallic objects degrade the signal performance drastically.
- Under 20cm from persons inside the vehicle
- Outside of the vehicle
- In hot, cold and/or humid place. Allowed limits are -40 - +85C, <95% relative humidity
- On top of or in immediate vicinity of air bags or any other active or passive protective equipment
- In a place where it might prevent the correct use of the vehicle or block the visibility from the vehicle

#### 4. Install the use button



Use button has three purposes: switch heater/default output on/off, acknowledge new users and measure temperature. The buttons should be installed to a location where it is usable, but shielded from direct air flow from ventilation channels.

Avoid install spots where user might accidentally push the button with hand or leg.

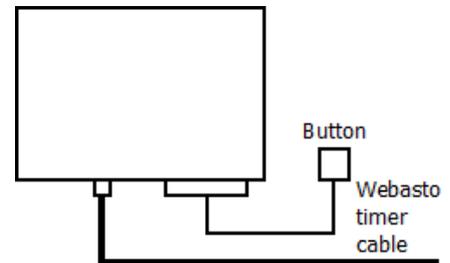
Note cable connector direction when plugging in.



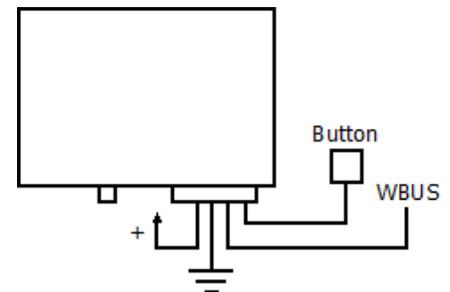
## 5. Connect the installation cable

Tarvittavat kytkennät riippuvat asennuskohteesta.

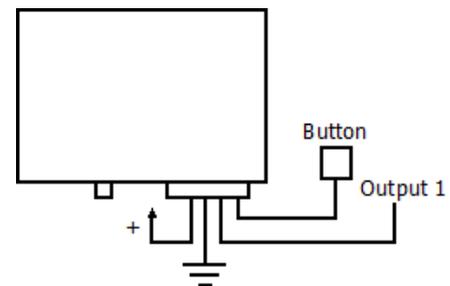
- When replacing Webasto timer, insert Webasto timer cable in Remuc Webasto connector. Only use button is required from the Remuc cable set.



- In case of a WBUS-controllable Webasto, connect WBUS (PIN2) to Webasto heater's WBUS line. Connect also supply voltage (PIN9) and ground (PIN1).



- For voltage-controlled devices (for example Eberspächer) use OUT1 or OUT2 (PIN10 or PIN11). Connect also supply voltage (PIN9) and ground (PIN1).



Remuc can be configured to control vehicle ventilation. In this case connect Output 2 (PIN11) to car ventilation control. This enables user to control ventilation either simultaneously with or separately from heating.



**Attention:** In multi-battery systems Remuc must be connected to same battery as the car heater.

## 6. Attach device identification label

Device ID label is needed when pairing mobile application with Remuc controller. **Attach the sticker to a place where it can be scanned using phone camera**, for example to car A- or B-pillar, side of dashboard or on fuse compartment lid. The other label can be attached on the cover of this manual.



## 2.7 Connecting external signal sources to inputs

REMUC features two input lines where a signal source (e.g. car or home alarm) can be connected. Input voltage must be between 0 V -  $V_{in}$ . When 3V limit exceeds, input state changes from low to high (. When voltage drops under 0,5 V, high state turns to low. Input signal is sampled in 500 ms intervals which means shorter signal changes might go unnoticed.

PIN NBR	FUNCTION	DESCRIPTION
7	Tuloliitäntä 1	+0V...+32V, min. imp. 10k $\Omega$ , transition up >3 V, transition down <0,5 V
8	Tuloliitäntä 2	+0V...+32V, min. imp. 10k $\Omega$ , transition up >3 V, transition down <0,5 V

Input state changes can be monitored with mobile app and with web browser (My REMUC service). See chapter 4.5 *REMUC input management (e.g. alarm control)* for a tutorial on how to add input control on mobile app.

### 3 Basic usage and settings

Before using Remuc you need to install Remuc mobile application to phone and form a connection to Remuc controller.



To be able to connect, REMUC has to have a working SIM card with a fixed-fee data plan.

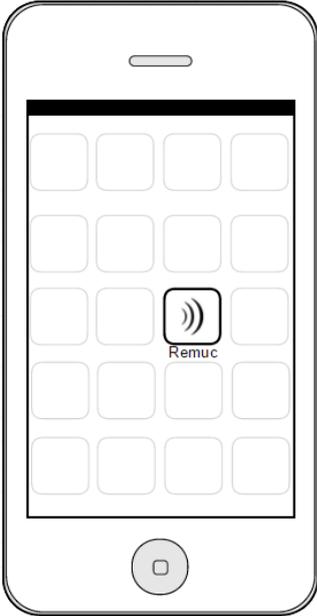
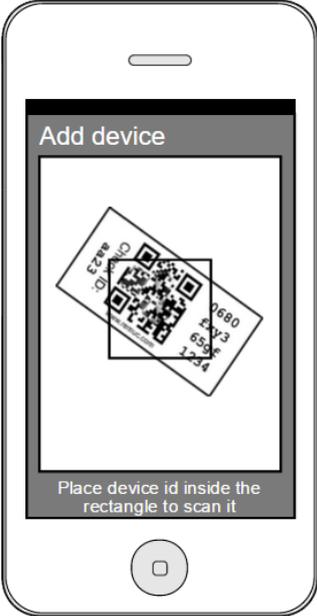
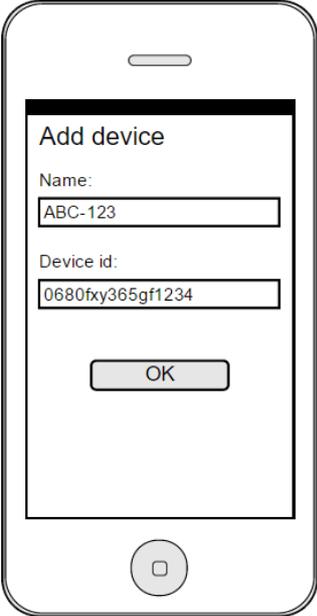
#### 3.1 Installing mobile application

Remuc mobile application is available on iPhone-, Android- and Windows Phone- platforms:

- Search from mobile phone application store for **”remuc”**  
OR
- Scan the appropriate QR code with mobile phone barcode application:

		
<b>Apple iPhone/iPad</b>	<b>Android</b>	<b>Windows Phone</b>
		

## 3.2 Connecting application with REMUC

<p><b>1. Launch Remuc mobile application by clicking "Remuc"-icon</b></p>  <p>The image shows a smartphone home screen with a grid of app icons. The 'Remuc' icon, which features a stylized signal icon, is highlighted in the center.</p>	<p><b>2. After clicking "Add device", enter device name and scan the device QR code using phone camera.</b></p>  <p>The image shows the 'Add device' screen of the application. It features a large QR code in the center. Below the QR code, there is a rectangular frame with the text 'Place device id inside the rectangle to scan it'. The QR code itself contains the text '0680 fxy3 659f 1234'.</p>
<p><b>3. Confirm new device information by clicking "OK/Create"</b></p>  <p>The image shows the 'Add device' form. It has two input fields: 'Name:' with the value 'ABC-123' and 'Device id:' with the value '0680fxy365gf1234'. Below the fields is an 'OK' button.</p>	<p><b>4. Application is ready for use!</b></p>  <p>The image shows the main dashboard of the application. At the top, it displays 'REMUC' and 'ABC-123'. Below this, it shows '12 C' and '12.7 V'. There are three main sections: 'Heater' with a flame icon, '22 Acacia Avenue, London' with a house icon, and 'My Remuc Log in to service' with a signal icon.</p>

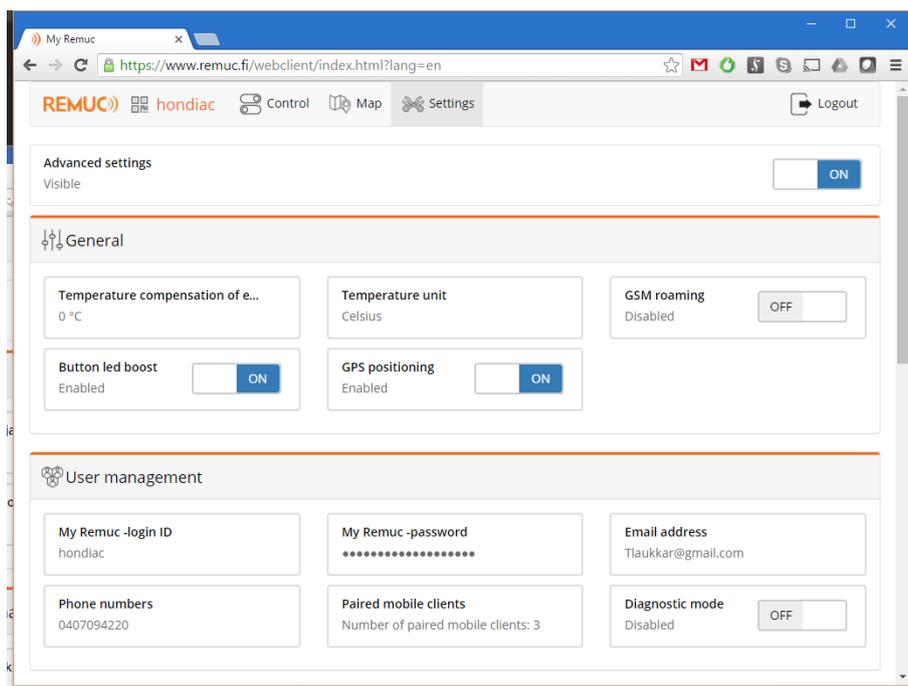
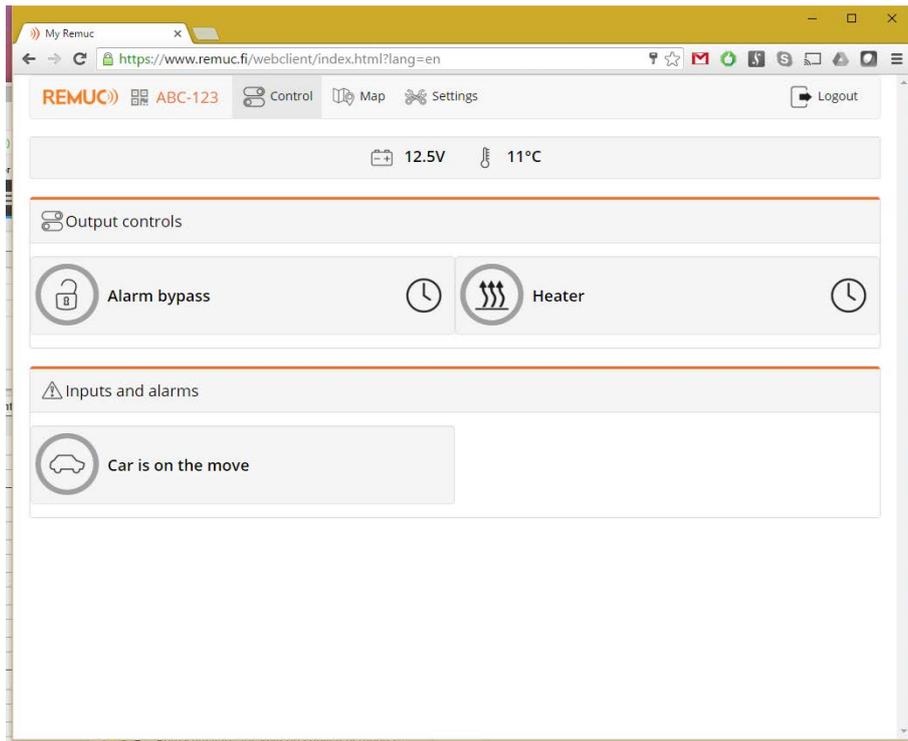
### 3.3 Modifying settings in My REMUC -service

The most convenient way to modify REMUC settings is via My REMUC -service (<http://my.remuc.com>). Detailed explanation is found in chapter 4.4 My REMUC -service



My REMUC service requires a working data connection for REMUC.

The easiest way to login to My REMUC –service is via mobile application. You can access a temporary login number by clicking “My REMUC – Log in to service” button on mobile application.



### 3.4 Adding user phone number

A limited REMUC usage is also possible with SMS and phone calls. No data connection is required with SMS communication, only SMS sending and phone call capability is needed. It is advised to enable data connection blocking on SIM card to avoid possible data costs if planning to use SMS only.



**NOTE:** If SIM card does not have a data connection, REMUC device software update is not possible.

SMS usage requires adding the controlling phone number as REMUC SMS user. SMS user can be added either via My REMUC –service (data connection required) or by making a phone call to REMUC.

#### Add SMS user via My REMUC

1. Login to My REMUC service
2. Go to "Settings" tab
3. In "User management" -> "Phone numbers", add all phone numbers that will be used to control REMUC by SMS.
4. Click "OK"
5. Remember to save settings (bottom of the page)

The screenshot shows a mobile application interface for 'User management'. At the top, there is a header with a gear icon and the text 'User management'. Below the header, there are two input fields. The first field is labeled 'My Remuc -login ID' and the second field is labeled 'Phone numbers'. Both fields are empty and have a light gray border.

#### Adding SMS user via phone call

1. Reboot REMUC by keeping use button pressed for 10 seconds. Release button.
2. REMUC restarts and the button light starts to blink.
3. When blinking ends, use the controlling phone to call to REMUC phone number.
4. Your number is now added as a REMUC SMS user.

## 4 REMUC usage

REMUC can be used in many ways:

- ✓ Use button
- ✓ Mobile application
  - Windows Phone
  - Android
  - Apple iPhone/iPad
- ✓ My REMUC –service (web browser)
- ✓ Phone call \*)
- ✓ SMS \*)

\*) Phone and SMS usage: see the following chapters:

- *3.4 Adding user phone number*
- *4.8 Phone calls and SMS control*

Normal usage requires that the REMUC device is installed to target properly, it has a working data SIM card, REMUC is powered and connected to GSM network.

Use button controls the default output on and off. Default output can be changed in My REMUC service.

Mobile applications allow controlling REMUC outputs on/off both immediately and per schedule. Also, mobile apps allow defining repeating timers, like “Switch output 1 on for 30 minutes at 07:00 on Mon, Tue, Wed, Thu, Fri”.

### 4.1 Use button

Use button toggles default output on and off independent from REMUC GSM coverage, defined users or connected mobile applications.

Use button can be used to reset REMUC in a similar as the reset button on the side of device, see chapter 2.4 *Reset button (device restart, settings reset)*.



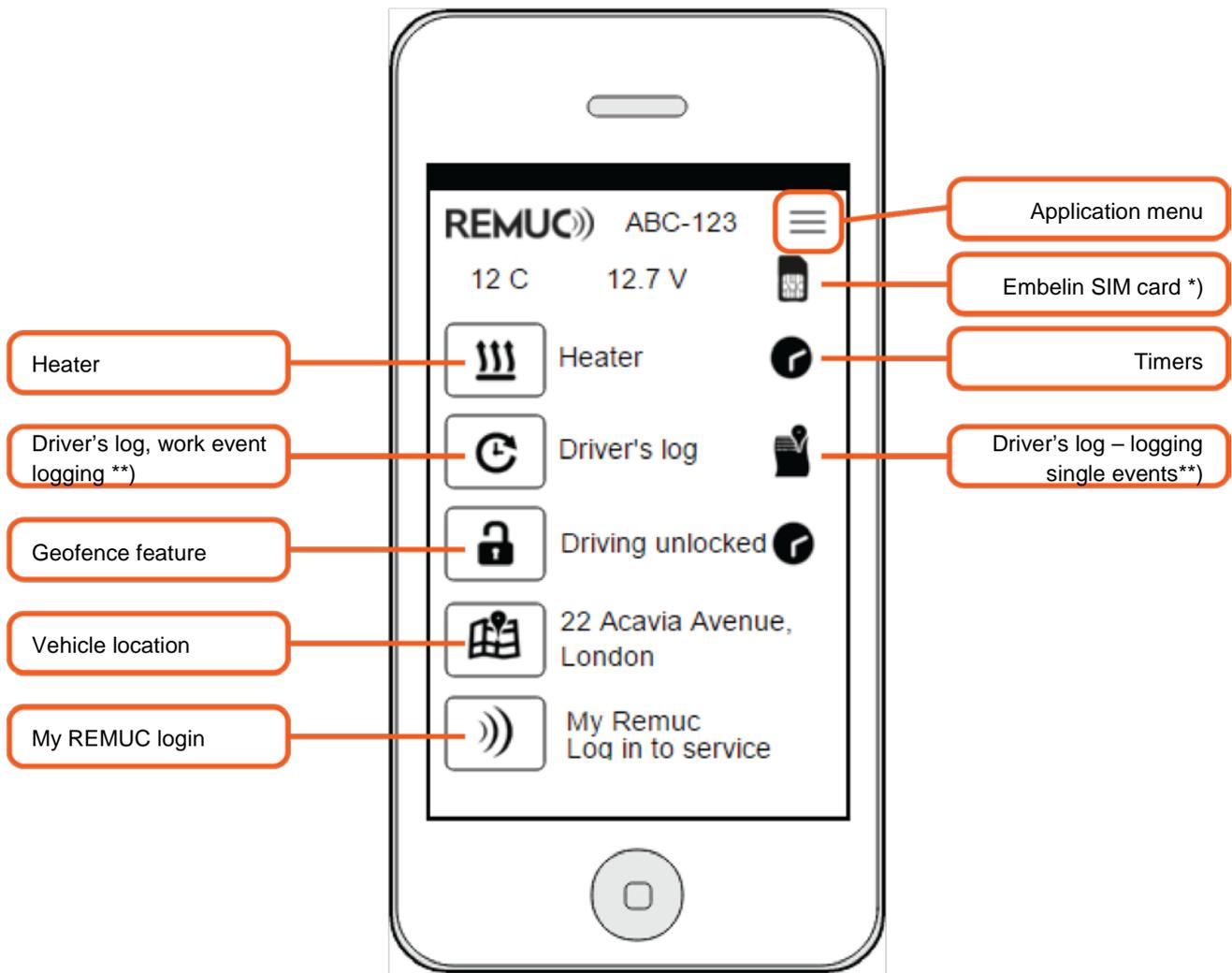
REMUC has to have a working SIM to ensure normal operation.



## 4.2 Mobile application

Mobile application makes REMUC use easy. After application is installed and app is connected according to this guide, shall the basic controls appears on the mobile application automatically. Mobile application buttons are called *controls* in this manual.

See chapter 3.2 *Connecting application with REMUC* on how to connect mobile application with REMUC.



\*) Visible only if REMUC has an Embelin SIM card installed, see 1.2 *SIM card*

\*\*\*) Can be activated in My REMUC, additional fees are applied, see 4.4.6 *Driver's log*

\*\*\*) Can be activated in My REMUC, see 4.6 *Geo-fence*

## Switching control on for default duration (e.g. Heating)

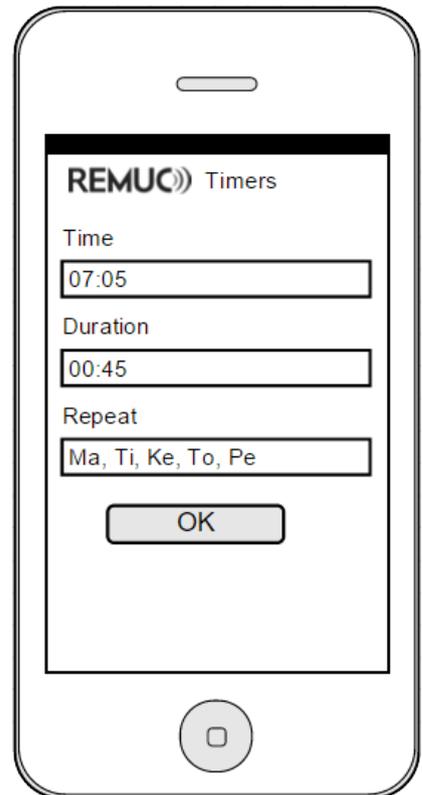
Tap on heating button to start the heating with default duration. Default duration (60 min) can be configured in My Remuc-service. **Long press** opens a dialog to select single-shot heating duration.

## Control scheduling

Remuc system makes it possible to schedule single and repeatable heating/controlling events. You can define as many timers as you wish. "**Add/+**"-button in Timers-view brings the timer configuration dialog shown on the right.

<b>Time</b>	Controlling start time, hh:mm
<b>Duration</b>	Controlling duration, hh:mm
<b>Repeat</b>	Weekdays when to repeat timer

Already added timers can be disabled separately with the checkbox in Timers-view. A **single timer can be deleted by opening the timer item and selecting "Remove"**. (In iPhone: Drag timer item left and tap "Remove").



 All active timers are defined per REMUC. All active timers are shown on all mobile apps connected to the REMUC. *Disabled timers are only seen on the phone that defined them.*

## Positioning features

**Vehicle location**-button opens the phone's own map application with a pinpoint on vehicle's latest known position.

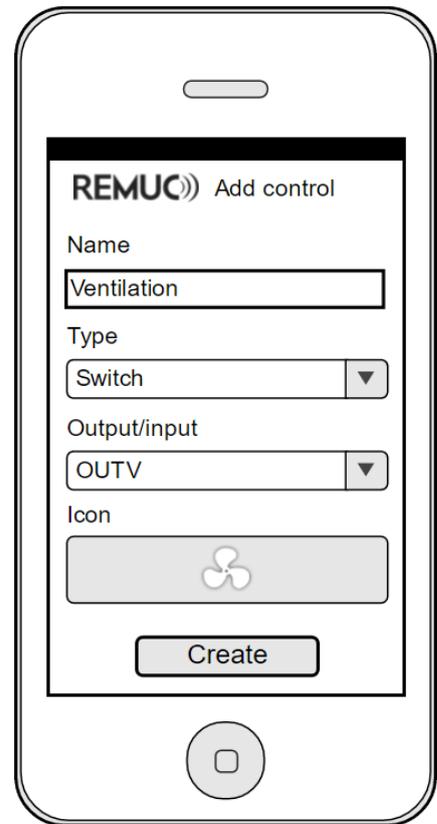
**Geofence**-feature needs to be activated in My Remuc -service's Settings tab (see 4.6 Geo-fence). **Tap on icon** toggles the lock state (on = moving allowed, off = moving not allowed), **long press** pops up a duration-selecting dialog where you can define a single-shot timer after which button state is switched automatically to "off".

**Driver's Log**-feature comes with a separate monthly fee and can be activated in My Remuc -service. See more from chapter 4.4.6 *Driver's log*.

## Adding a new control

Click on Application Menu-button and choose “*Add control*” from the dialog. Configure the control accordingly and click “*Create*”.

- Name:
- Type:
- Output/input:
  - OUTH = Webasto-heating (depends on the installation)
  - OUTV = Webasto-ventilation (depends on the installation)
  - OUT1, OUT2 = Normal REMUC outputs
  - OUTA = Remuc alarm control, see chapter 4.5 *REMUC input management (e.g. alarm control)*
  - IN1, IN2 = REMUC input channels, see 2.7 *Connecting external signal sources to inputs*
  - ING = Geofence alarm, see 4.6 *Geo-fence*
- Icon
- Sound and notification (input only)



## Modifying control settings

To modify control settings, **open dialog with a long press on control label** (e.g. “Heater”). From the dialog select “Modify”.

- Name
- Output/input (Cannot be modified after control creating)
- Icon
- Active state (input only)
- Alarm (input only)

## Removing a control

Long tap on control label. Select “Remove control” from the opening dialog.

## Application menu

- **Add device:** Pairs another REMUC device. If the REMUC to be added has already other users, must one of the previous users accept the new user. New user enters a passphrase which will be shown to previous users in their mobile application. Alternatively, new user can be accepted by holding the REMUC use button pressed for 10 seconds.
- **Modify:** Change device name, check the device ID code, allow diagnostics mode for service.
- **Remove device:** Remove the paired device from application
- **Add control:** Depending on the installation, it's possible to add more controls to application. Additional control can be for example for vehicle ventilation (output) or alarm status icon (input).
- **About:** Application license and version information

## Switching between multiple devices

If there's more than one REMUC paired with the application, you can switch between them with a horizontal swipe.

## 4.3 Widget in Android phones

### Adding the widget

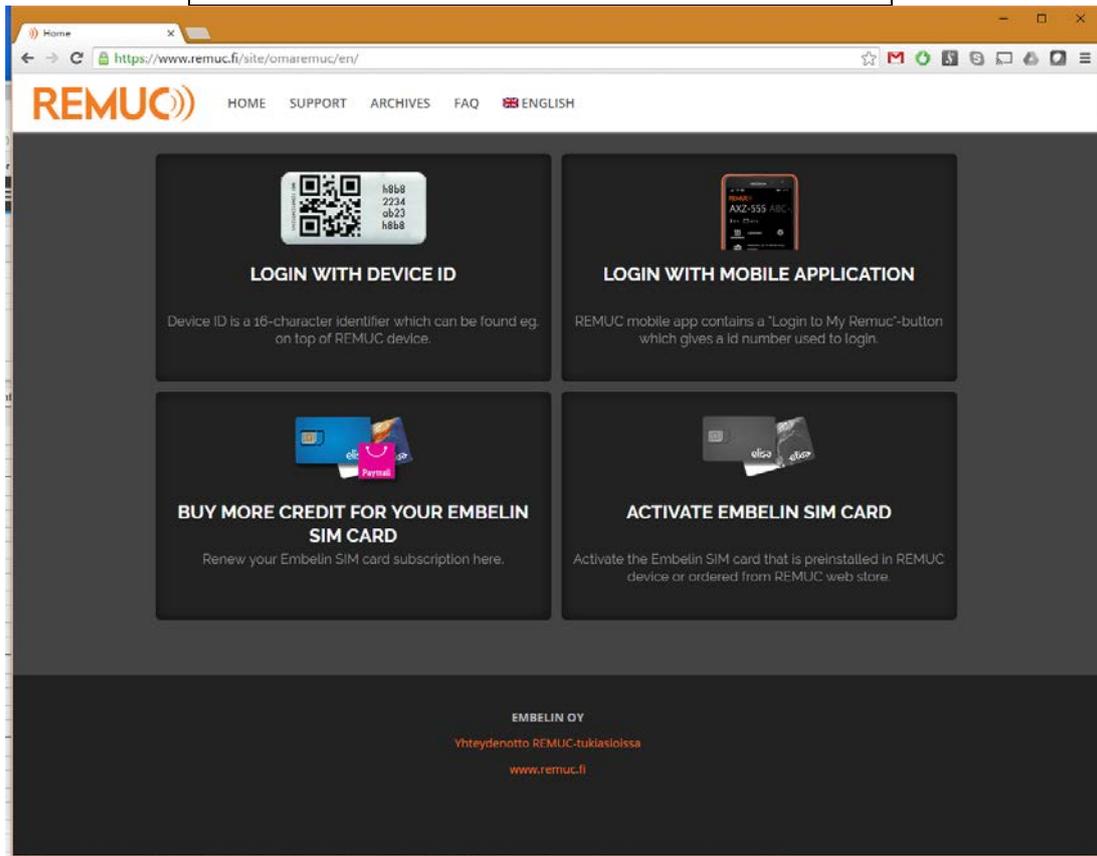
Android application comes with a widget which can be added to phone home view. Widget allows quick REMUC control and status monitoring without launching the app itself. Widget can't be added if there are not devices or controls defined in the application.



## 4.4 My REMUC -service

**My REMUC** -service brings Remuc features and settings to a web browser. You can also purchase SIM credit and different additional services there. My Remuc web address is:

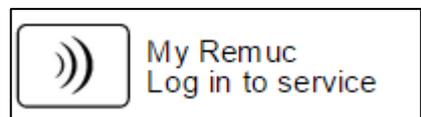
<http://my.remuc.com>



### 4.4.1 Logging in

There are two ways to log in to My Remuc:

- With a temporary ID number: **Press "My Remuc-  
login"-button** on mobile application and follow instructions
- Use device ID and password (or previously defined **device name and password**).



If you haven't previously logged in to service, it is recommended to log in using mobile application.

#### 4.4.2 My REMUC navigation bar

After logging in a navigation bar appears on top of the page. It is used to switch between different tabs in My REMUC.

Navigation bar buttons:

	Shows the REMUC device identifier code (QR code)
ABC-123	Login ID defined in My REMUC – Settings tab
	<b>Control tab</b> <ul style="list-style-type: none"><li>• Output control, scheduling, geofence activation</li><li>• Input states</li><li>• Alarm acknowledgement</li></ul>
	<b>Map tab</b> <ul style="list-style-type: none"><li>• Latest REMUC location in map</li><li>• Location events</li></ul>
	<b>Services</b> <ul style="list-style-type: none"><li>• Embelin SIM card subscription renewal</li><li>• Driver's log activation</li></ul>
	<b>Settings</b> <ul style="list-style-type: none"><li>• User management</li><li>• REMUC's device-specific settings</li><li>• Define buttons for Control tab</li><li>• Geo-fence settings</li></ul>
	Log out from My REMUC

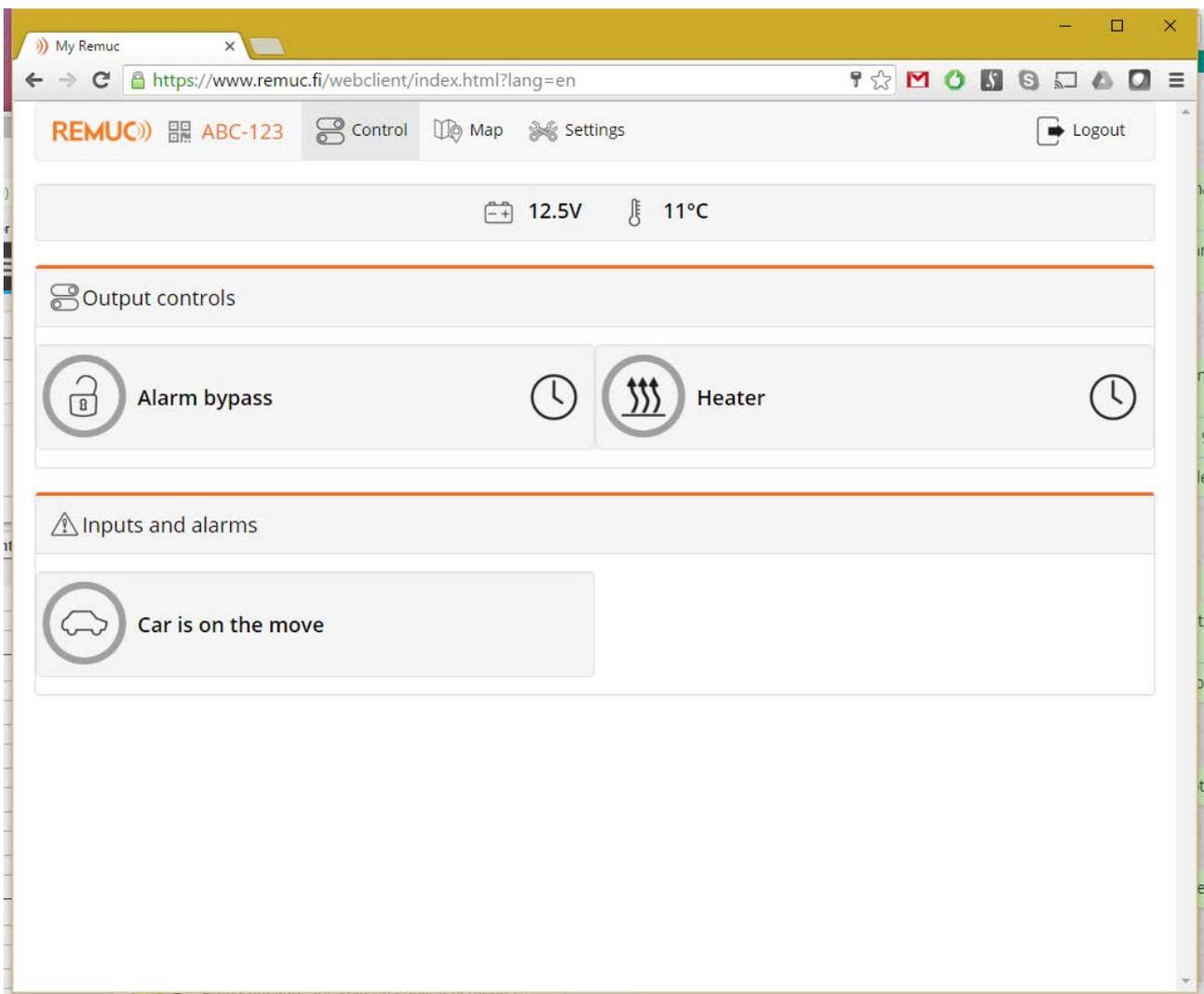
### 4.4.3 Control tab

My REMUC Control tab consists of output and input control buttons defined in Settings tab.

Control tab allows to:

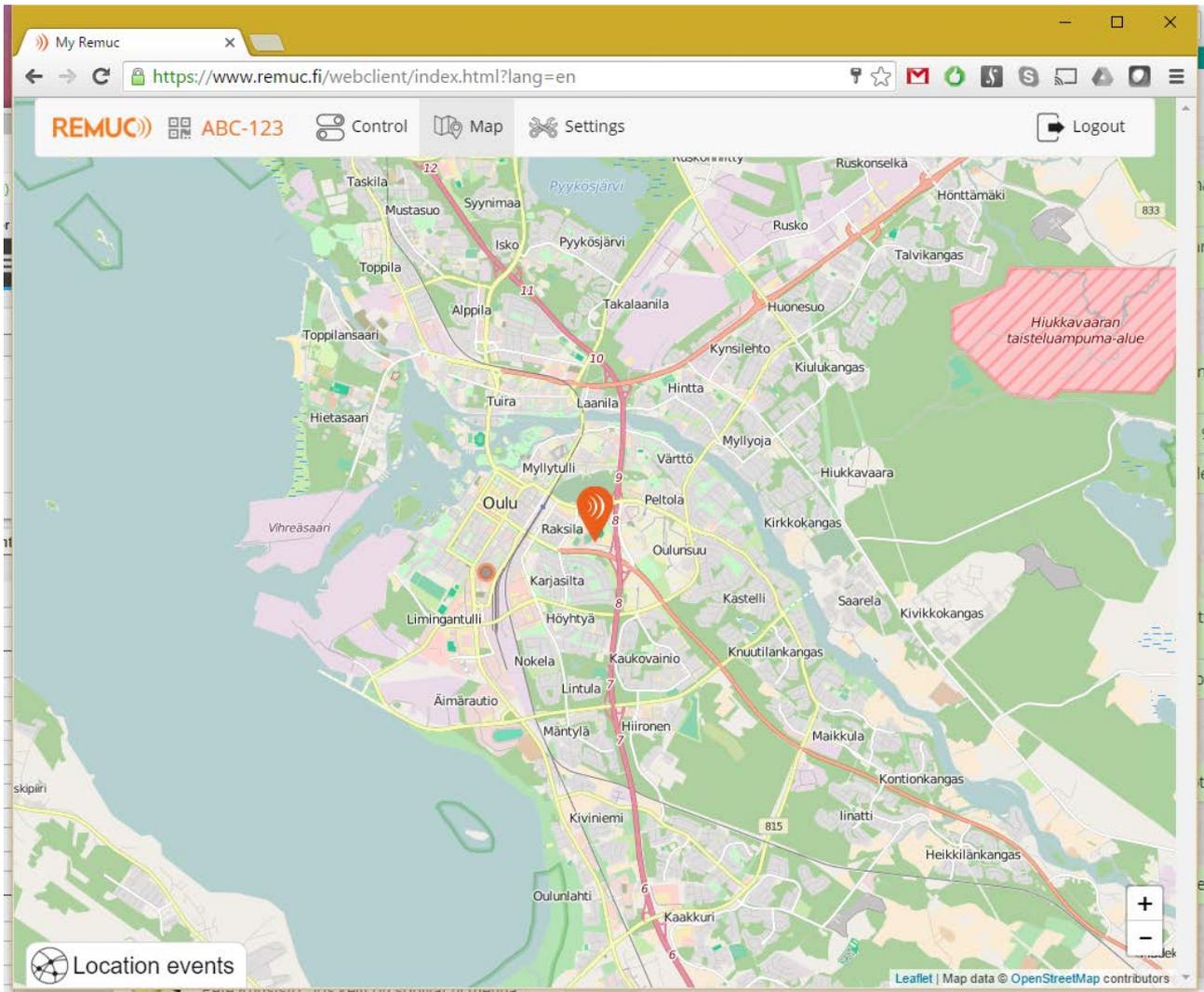
- Control and schedule REMUC outputs
- Monitor REMUC input states
- Acknowledge possible alerts

On top of the view is current supply voltage and measured temperature. REMUC temperature sensor is inside the use button.



#### 4.4.4 Map tab, location events

Tab shows the latest reported position. Location events can be edited by clicking the tab on bottom of the view.



#### Location events

In Map tab user can define different location events that trigger automatic events for REMUC. Some examples:

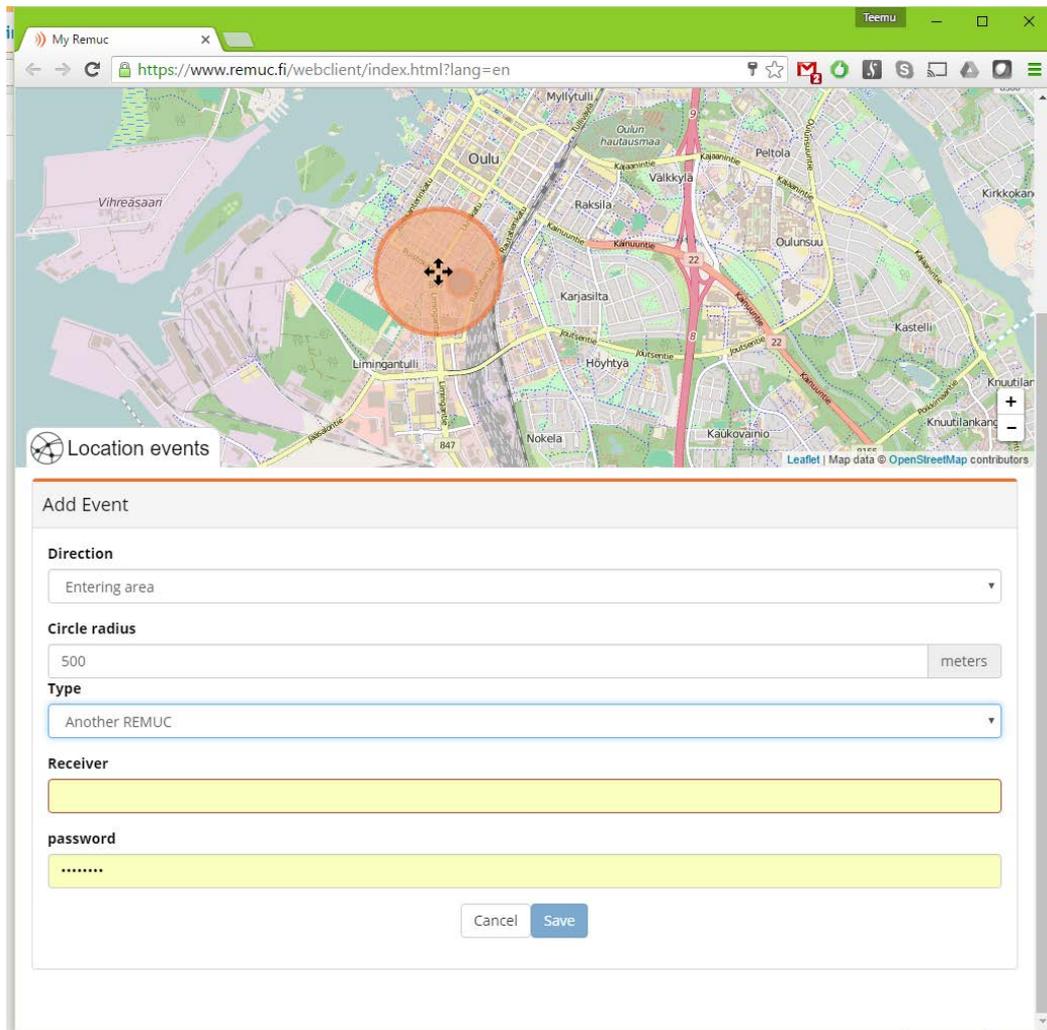
- ✓ Call a predefined phone number
- ✓ Send an SMS to a predefined phone number
- ✓ Control another REMUC (output on/off)

Event area is defined as a circle with user-selectable radius. Event trigger can be configured either on area entry or area exit. These triggers are useful for example for:

- ✓ Open garage door with a phone call
- ✓ Switch home alarm system off by an SMS
- ✓ Switch car auxiliary heater off when arriving home

## Adding a new event area

Right-clicking on map opens the location event dialog:



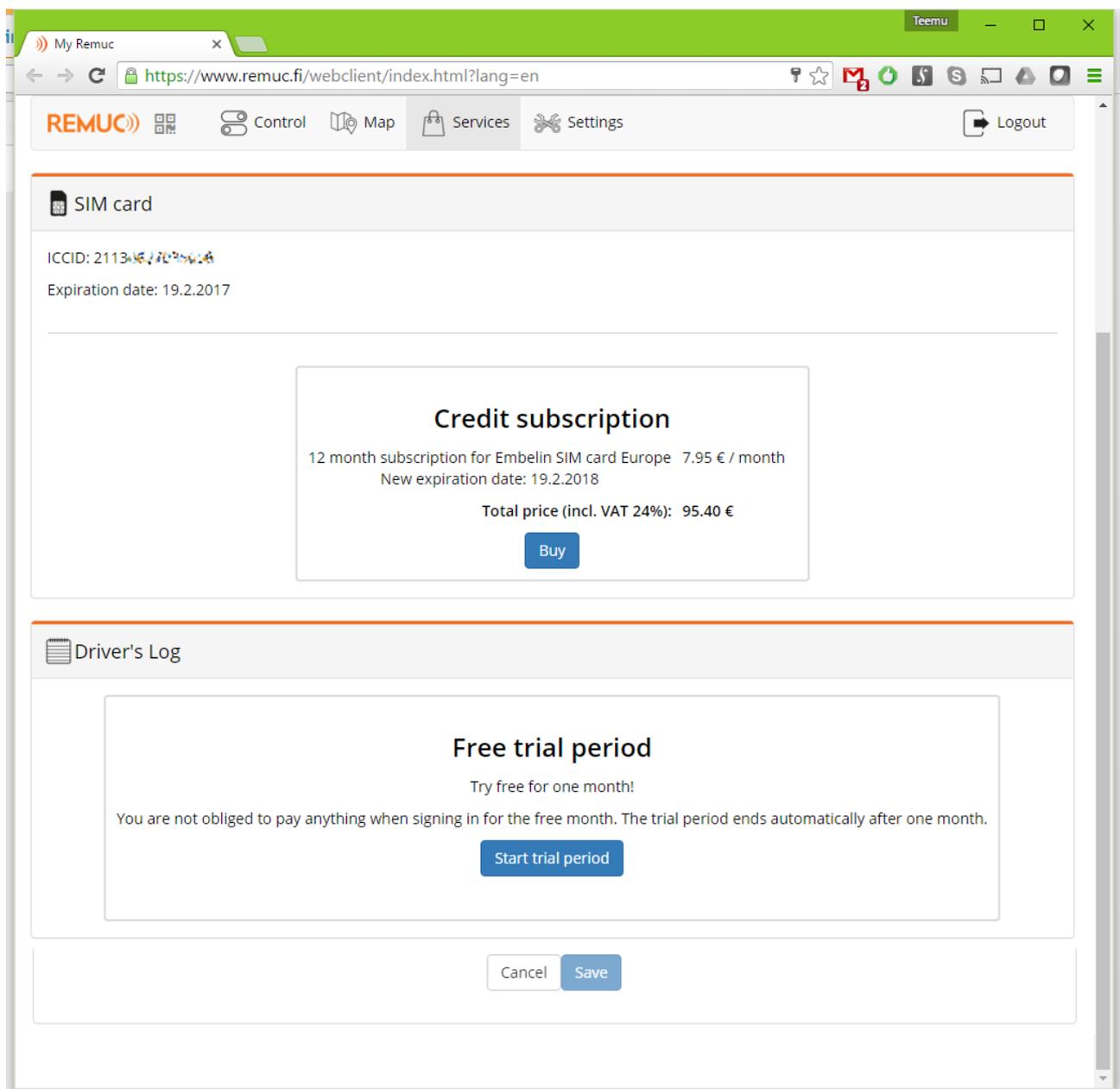
Event setting	Description
<b>Direction</b>	Event trigger on either entering or exiting the area
<b>Circle radius</b>	Area size
<b>Type</b>	Command type: Control output/Another REMUC/SMS/Call
<b>Receiver</b>	If: <ul style="list-style-type: none"> <li>Type = Another REMUC, target device id (QR code)</li> <li>Type = SMS, target phone number</li> <li>Type = Soitto, target phone number</li> </ul>
<b>Command</b>	If: <ul style="list-style-type: none"> <li>Type = Control output, control own output</li> <li>Type = Another REMUC, control another REMUC output</li> </ul>
<b>Password</b>	If: <ul style="list-style-type: none"> <li>Type = Another REMUC, target REMUC login password defined in My REMUC settings</li> </ul>
<b>Message</b>	Mikäli: <ul style="list-style-type: none"> <li>Type = SMS, the message to send to target phone number</li> </ul>

## Controlling another REMUC

When the desired direction and radius is chosen, enter the device ID of the device to control. When device ID is verified, you can enter the password. Once password is verified, a command list is shown. If device id or password is wrong, command selection is not shown at all.

### 4.4.5 Services tab

Services tab shows all purchasable services available:



The screenshot shows a web browser window with the URL <https://www.remuc.fi/webclient/index.html?lang=en>. The page has a green header with the REMUC logo and navigation tabs for Control, Map, Services, and Settings. A Logout button is in the top right. The main content area is divided into two sections:

- SIM card**: Displays ICCID: 2113467203046 and Expiration date: 19.2.2017. Below this is a **Credit subscription** offer: "12 month subscription for Embelin SIM card Europe 7.95 € / month" with a "New expiration date: 19.2.2018" and a "Total price (incl. VAT 24%): 95.40 €". A blue **Buy** button is at the bottom.
- Driver's Log**: Features a **Free trial period** offer: "Try free for one month!" with the text "You are not obliged to pay anything when signing in for the free month. The trial period ends automatically after one month." and a blue **Start trial period** button. At the bottom of this section are **Cancel** and **Save** buttons.

## SIM card

If your REMUC is equipped with Embelin SIM card (Finland tai Europe version), you'll the current expiration date and a purchase button on Services tab. SIM card section also contains the unique ICCID code for SIM card.



**ATTENTION (Embelin SIM card):** If the Embelin SIM card subscription is not renewed by the expiration date, the card will be closed. To continue SIM card use after closing, it needs to be reactivated (with a separate fee). Otherwise the card needs to be replaced. You can get a new Embelin SIM card from [www.remuc.com](http://www.remuc.com) web store.

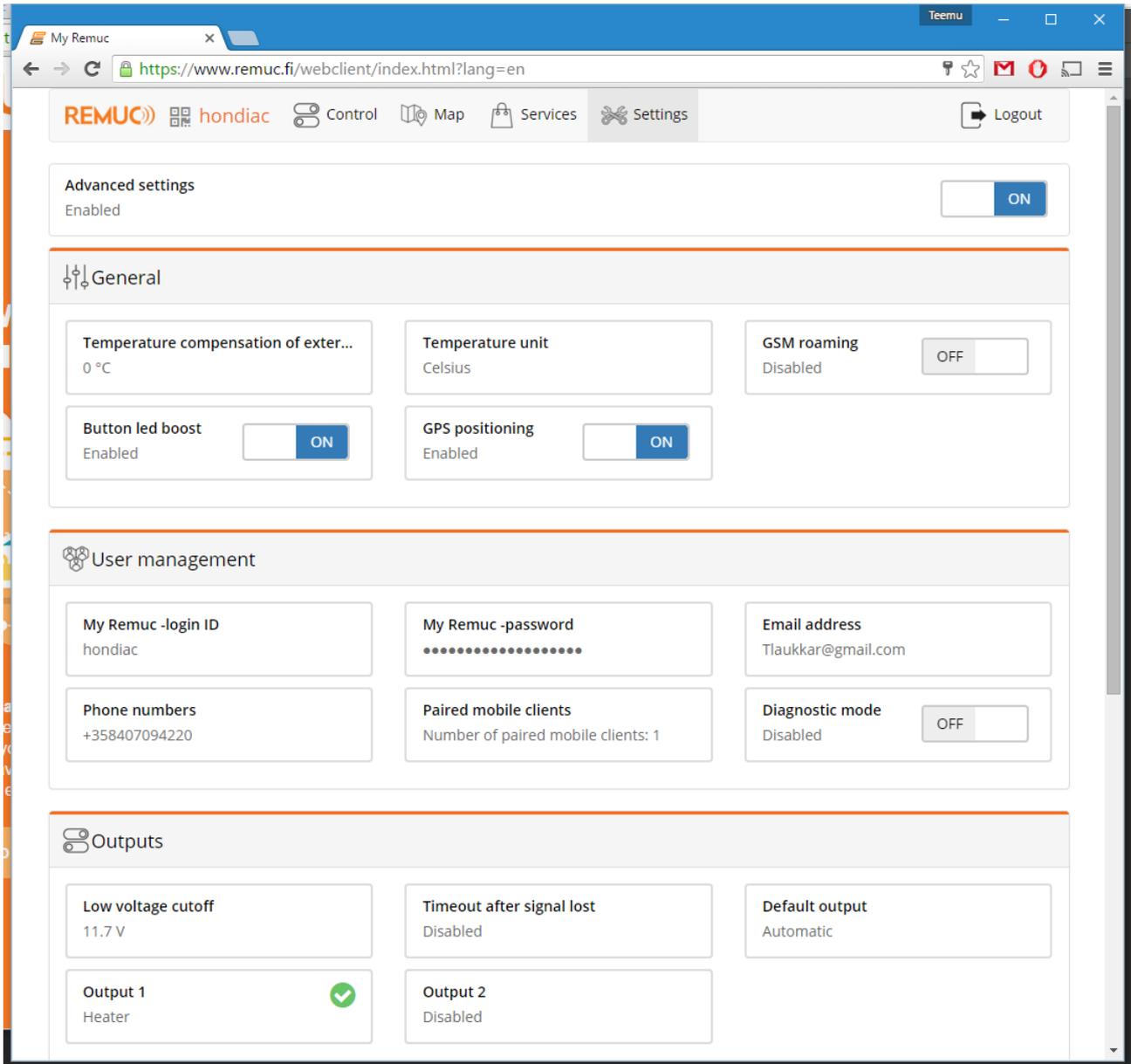
### 4.4.6 Driver's log

Driver's log can be activated in Services tab. Driver's log feature logs all driving events automatically into REMUC cloud service and makes it possible to separate personal driving from work-related events by using mobile app's "Driver's log"-button. Driving events can be inspected in My REMUC service, where also different kinds of reports can be outputted.

You'll get a **free trial period** when you activate Driver's log in Services tab. No payment info is required for trial.

#### 4.4.7 Settings tab

Settings tab allows an easy REMUC configuration manipulation.



By default only reduced set of settings are visible. Enable “Advanced settings” to make all settings visible \*).

<b>General</b>	
GPS-positioning	Enable GPS positioning
* Temperature compensation of external sensor	If REMUC temp sensor shows a deviation (e.g. too close to heating vent), you can compensate the sensor value with this.
* GSM roaming	Allow GSM network connection outside home network (e.g. abroad). May lead to additional SIM cost.
<b>User management</b>	
My Remuc –login ID	Alternative login name for the device. Can be used in login instead of 16-character QR code.
My Remuc –password	Password that is used when logging in with login ID or QR code.
Email address	User email address for REMUC informative emails.
Phone numbers	Phone numbers that are approved for SMS command sending. Also, input status changes and alarms are sent to these phone numbers.
Paired mobile clients	List all paired mobile apps. Allows removing all paired clients.
Diagnostic mode	Provides a diagnostics access for selected REMUC service personnel. Diagnostics mode gives service access to device history (location, output and input states, device status etc. from at least 7 days ago)
<b>Outputs</b>	
Output 1	Settings for output 1
Output 2	Settings for output 2
* Low voltage cutoff	Lower threshold for supply voltage. If voltage level goes below limit, all outputs are switched off
* Timeout after signal loss	If device drops from GSM network, switches all outputs off after defined time.
* Default output	Selects which output is controlled with use button and phone call control.
<b>* Webasto W-BUS</b>	
* Webasto emulation mode	Defines REMUC addressing when communicating via W-BUS.
<b>* Inputs and alarms</b>	
* Input 1	Settings for input 1, see <i>4.5 REMUC input management (e.g. alarm control)</i>
* Input 2	Settings for input 2, see <i>4.5 REMUC input management (e.g. alarm control)</i>
* Geo-fence	Geo-fence activation, see <i>4.6 Geo-fence</i>
* Alarm control	Defines the alarm control button for Control tab. Button can be used to switch alarm monitoring on and off. When alarm control is active, no alert are triggered. NOTE: does not apply to inputs that are configured as “24h alarm”.

\*) Visible only if "Advanced settings" is enabled.

## 4.5 REMUC input management (e.g. alarm control)

You can connect different signal sources (e.g. theft alarms, motion detectors, fire alarms) to REMUC inputs for monitoring purposes. Mobile application can then show a separate indicator for input states. In addition input status changes can be configured to trigger alerts (SMS, phone calls, mobile app notifications)

### Alarm control (OUTA)

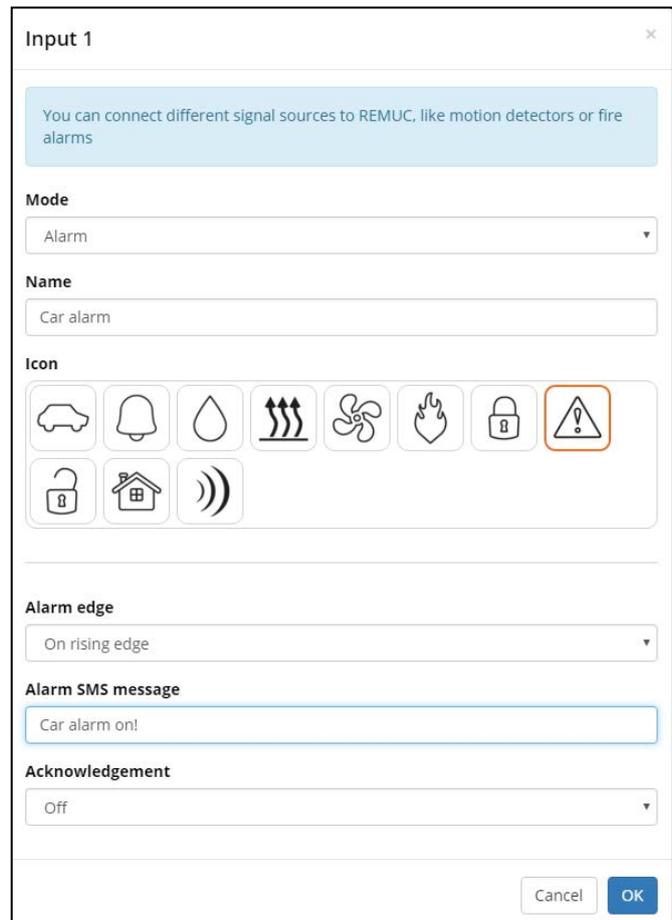
If either input or geo-fence is configured, can alarm monitoring be controlled with "Alarm control" button. When "Alarm control" is active, REMUC **does not trigger alerts from input/geo-fence status changes**. Alarm control has no effect on inputs where type is "24h alarm". "24h alarm" input triggers alert every time input status changes (based on configuration)

### Input configuration

Input configuration is done in My REMUC Settings tab.



Clicking an input setting opens a dialog:



## Mode

Input mode defines, how the input is monitored.

Name	Description
<b>Off</b>	Input changes do not trigger status reports or alerts
<b>Indicator</b>	Input change triggers a status reports (mobile app icon changes) no call alarms.
<b>Alarm</b>	<p>Input status change triggers a status reports (mobile app icon changes), SMS message is received. REMUC makes a phone call to each user configured user phone number. OUTA can be used to control input monitoring and reporting off temporarily.</p> <p>Use case: connect home motion detector signal to REMUC input and set input type as "Alarm".</p> <ul style="list-style-type: none"><li>– Add a new control to mobile app for input "OUTA". Switching this control on you can disable input monitoring.</li><li>– Add a new control for input 1 (or 2) Set type as "Indicator". This will indicate the input status. Clicking on icon acknowledges the alert.</li></ul>
<b>24h alarm</b>	<p>Input status change triggers a status reports (mobile app icon changes), SMS message is received. REMUC makes a phone call to each user configured user phone number. Cannot be disabled with OUTA.</p> <p>Use case: Connect fire alarm signal to this input.</p>

## Name

Input name that will be shown in Control tab.

## Icon

Icon that will be shown in Control tab.

## Alarm edge.

Alarm edge defines which input transition triggers the alert.

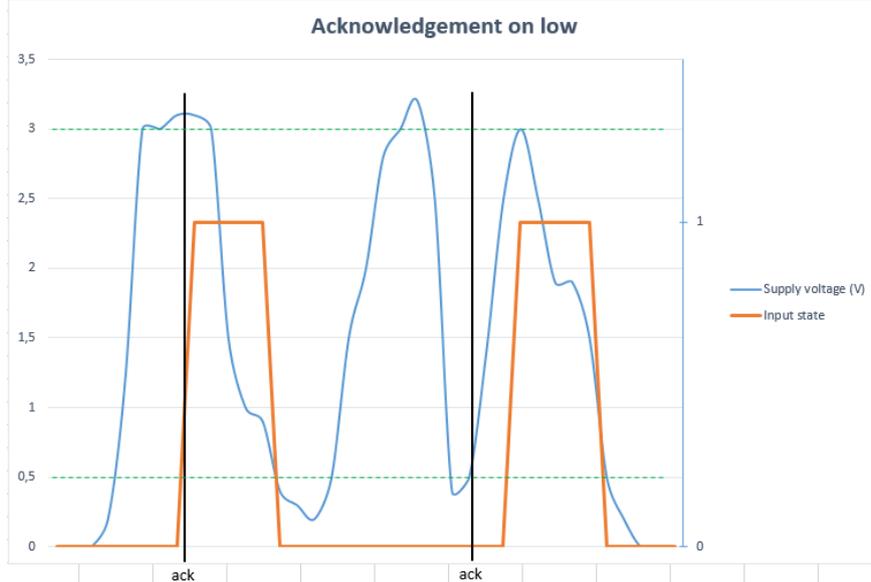
## Alarm SMS message

Input status change is reported with an 150-character SMS.

## Acknowledgement

Acknowledgement can be used in cases where you want to prevent consecutive alert triggering, for example when a motion detector is connected to a REMUC input. Acknowledgement is done either with an SMS "ACK <input\_number>" or by clicking the input state icon in the mobile app (must be configured beforehand).

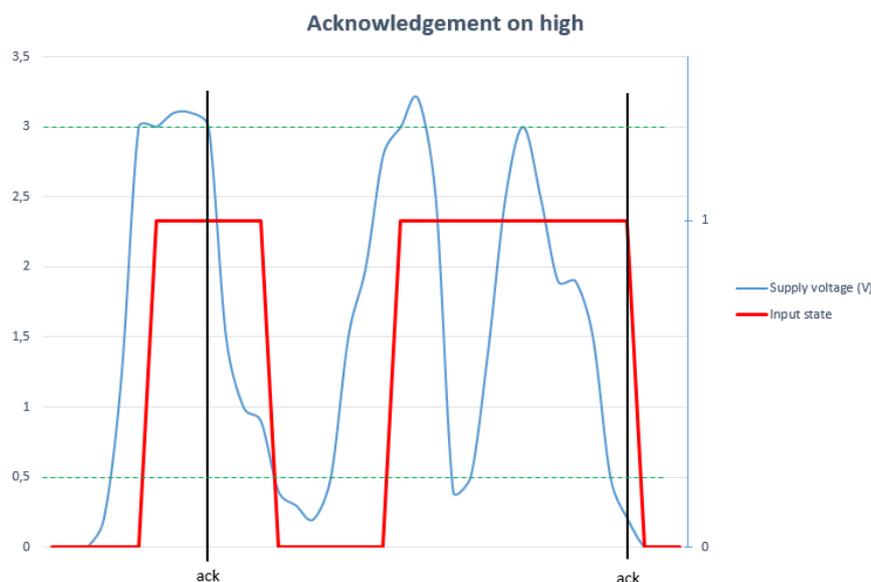
Name	Description
Off	Acknowledgement not needed. Input status changes according to input signal.
On	Acknowledgement needed. Input state changes only after previous status change is acknowledged.
High (only indicator)	Input state stays high, until acknowledged.
Low (only indicator)	Input state stays low, until acknowledged.



### Tulojännitteen raja-arvot

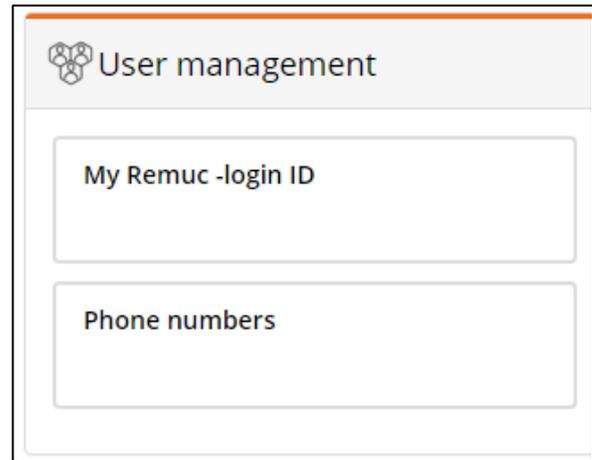
+0V...+32V, min. imp. 10kΩ,

tila ylös >3 V, tila alas <0,5 V



## SMS users' phone numbers

The surest way to get alerts from status changes is to use SMS alerts. Mobile app notifications use mobile phones' platform notifications which might have some latency.



## 4.6 Geo-fence

Geo-fence allows locking the device location so that when target is moved, it causes an alert to user phone. If there are user phone numbers defined, you also get call and SMS alerts.

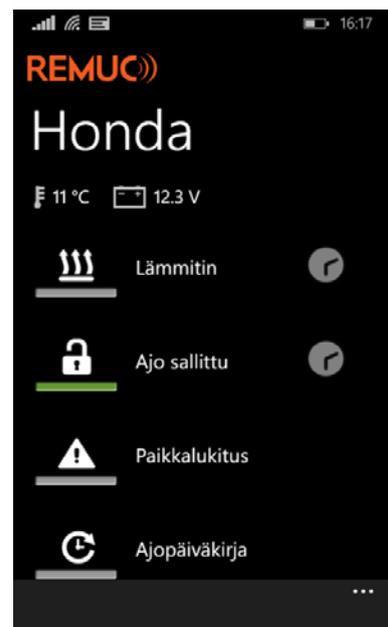
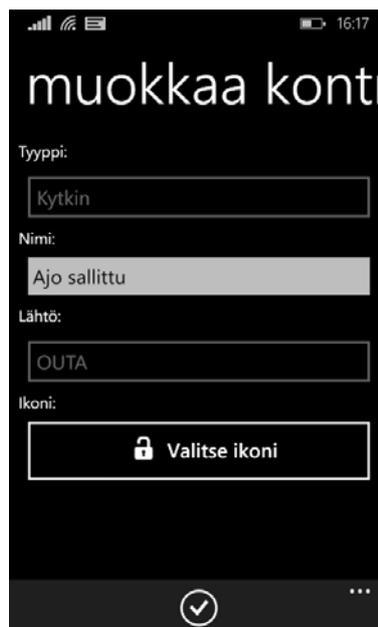


## Activating geo-fence

If geo-fence is not automatically added to mobile application, this is how it is activated:

1. Define a desired geo-fence size in kilometers.
2. Add your phone number in user management to get alerts as SMS.
3. Add two new control buttons in mobile app:
  - a) **OUTA** (switch A), used to disable geo-fence temporarily.
  - b) **ING** (indicator G), shows the alarm state. Used for acknowledgement.

The screenshot shows a 'Geo-fence' configuration window. At the top, there is a blue informational box: 'By enabling geo-fence you can use your mobile phone app to lock the device position so that if vehicle is moved during lockdown, you'll get notification, phone call and an SMS on your phone'. Below this, there is a toggle switch for 'Enabled' which is currently turned 'ON'. The 'Geo-fence' radius is set to '1 km'. The 'Name' field contains 'Geo-fence'. Under the 'Icon' section, there are two rows of icons; the first icon in the second row (an open padlock) is highlighted with an orange border. The 'Alarm SMS message' field contains the text 'Car is moving without permission!'. At the bottom right, there are 'Cancel' and 'OK' buttons.



## 4.7 Thermostat control

Chosen output can be configured for an automatic thermostat control when on/off switching happens automatically based on given parameters.



*This feature is not fit for car heater control, but works better for example with cabin heater.*

Thermostat control  ON

Thermostat setting allows automatic output control based on a specified temperature limit

**Thermostat control sensor**

External

**Active state**

Active state = Output is switched on when measured temperature goes above/below (based on configuration) of set limit

Low

**Temperature**

Set desired target temperature

0 °C

**Hysteresis**

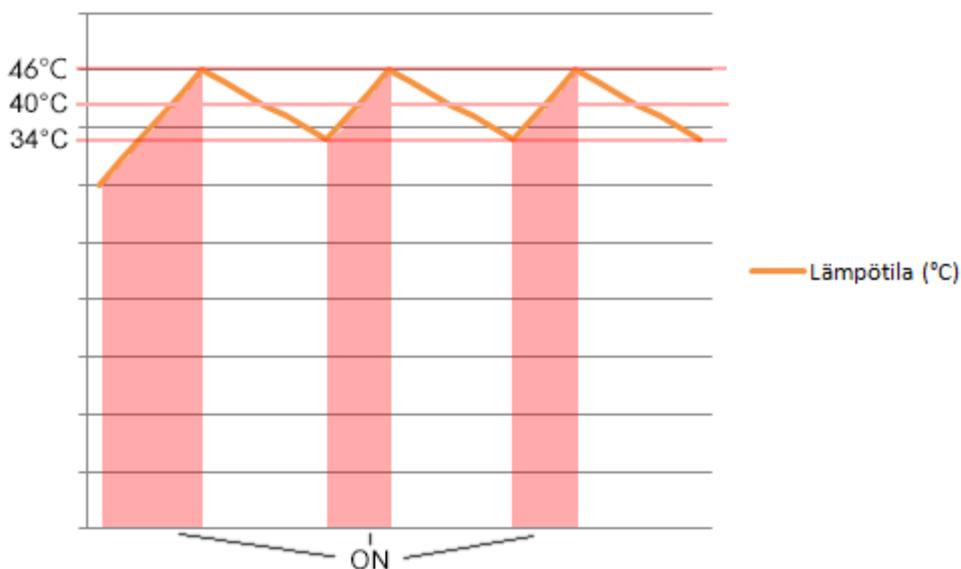
Allowed temperature margin before output is switched on/off

2 °C

### 4.7.1 Heating with thermostat control

Aims to keep the temperature above given temperature, heating switches on when temp drops 6C below defined limit.

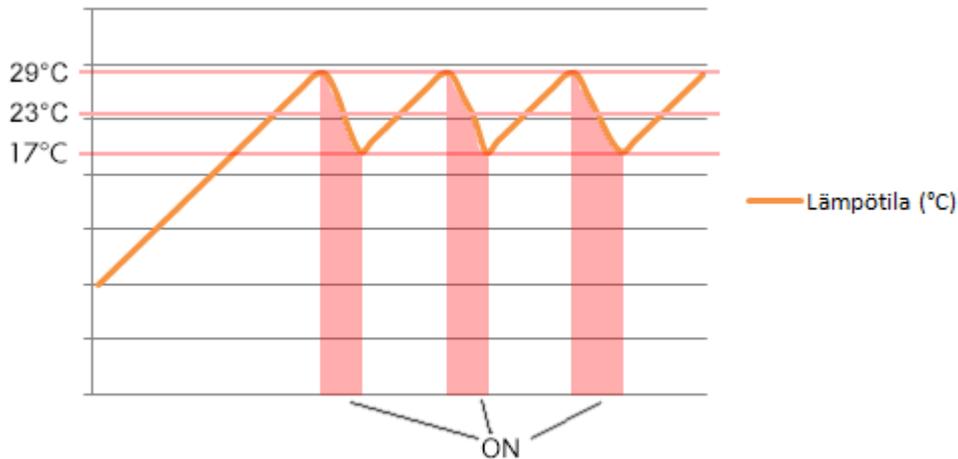
Temperature: 40°C, Active state: low, hysteresis: 6°C



### 4.7.2 Cooling with thermostat control

Aims to keep the temperature below given target. Cooling starts when temp has risen 6C above defined limit.

Temperature: 23°C, Active state: high, hysteresis: 6°C



### 4.8 Phone calls and SMS control

Controlling REMUC with phone calls and SMS requires that user phone number is added to the list of approved users, see chapter 3.4 *Adding user phone number*

#### Output control (OUT)

Switches output state. Return message contains all output and input statuses, temp and voltage.

```
OUT <PORT> <STATE> <RUNNING_TIME> <START_DELAY>
```

Examples:

OUT 1 ON

- Switch out 1 immediately, stays on for default time (60 min).

OUT 2 ON 45 900

- Switch out 2 on for 45 seconds, starts after 900 minutes

OUT 1 ON 1800

- Switch out 1 on for 1800 seconds, starting immediately.

VARIABLE	VALUE	DESCRIPTION
<b>PORT</b>	1, 2, H, V, A	1,2 = OUT1, OUT2 H = W-BUS, Webasto heating V = W-BUS, Webasto ventilation A = Alarm control
<b>STATE</b>	ON, OFF	
<b>RUNNING_TIME</b>	0-65534	Running time in seconds. If not given, output is on for default duration. In case when outputs 1 or 2 are controlled and running_time is "0", stays on until manually switched off. Outputs H and V will stay on the maximum time defined by Webasto heater.
<b>START_DELAY</b>	0-65534	Start delay in minutes. If not given or "0", output will switch immediately.

### Device ID query (QR)

Returns the device identifier (QR code)

```
QR
```

### Setting the APN

Sets the access point network for data connection. Needs manual setting in cases REMUC's default APN list does not work.

```
SET APN <ADDRESS>
```

Examples:

```
SET APN M2M
```

```
SET APN INTERNET
```

## 5 Copyrights

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## 6 Warranty and legal information

1. Remuc controller has a two (2) year warranty
2. Warranty is valid from the date of purchase
3. Defects caused by material or manufacturing errors during warrant period will be handled either by replacing or fixing the faulty unit, as to Embelin Oy consideration. Warranty does not cover any refund claims, claims to reduce purchase price or any direct or indirect reclamations of damage. Warranty period is not extended in case of warranty service.
4. Any self-acting service or attempts to open the device voids the warranty
5. If your device is in need of service covered by warranty, contact your retailer. If it is necessary to send the device to manufacturer for warranty service, make sure to agree this with manufacturer. RMA form has to be completely fulfilled before sending the device for repairs. RMA form is found from [www.remuc.com](http://www.remuc.com)
6. Warranty does not cover any expenses caused by:
  - i. Incorrect installation or usage,
  - ii. overloading of the device,
  - iii. damage caused by external force,
  - iv. any damage that is a direct or indirect consequence of self-acting service attempt, opening or customizing of the device.
  - v. Third party service that is not approved by Embelin Oy.

### CE certification

This device fulfils the requirements set by CE certificate EN 50498 (2010). Embelin Oy declares that Remuc conforms directive 1999/5/EC relevant standards and regulations. Full Declaration of Conformity is located at <http://www.remuc.com/doc>

### WEEE directive

This symbol indicates that this product is not to be disposed of among regular household waste, according to WEEE directive (2012/19/EC) and your national law. This product must be handed over to a designated collection point or to an authorized collection site for recycling waste electrical and electronic equipment (WEEE).



### User manual

This user manual is prepared thoroughly. Constant product development may cause some information to end up being out of date. Embelin Oy reserves the right to modify this user manual without any further notice. Embelin Oy disclaims any responsibility of any possible technical or delivery related errors, lack of information, random or direct damages caused by the quality or usage of this material.

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Latest SIM card-related terms of service can be found from [www.remuc.com/tos](http://www.remuc.com/tos)

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