



ArgusKAI

Bluetooth Guard · OpenTeam × CamperStation

USER MANUAL

ArgusKAI user manual

Everything about placing, setting up and living with your Bluetooth guard day to day. How the app works in detail is explained in the app guide.

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Always up to date online: www.arguskai.com/manual



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1 What ArgusKAI does

Many batteries with a Bluetooth BMS, solar chargers and other Bluetooth devices accept connections from any phone within range, often without a PIN. Whoever is connected can operate the device and, for example, switch off discharging on the battery. At the same time, such a device can only ever be connected to one other device.

ArgusKAI makes use of exactly that: it connects to your devices itself and holds that connection around the clock. For strangers' phones, the line is busy.

- **Guard:** up to three Bluetooth devices at once, of any type. Up to five can be saved; permanently paused devices do not count. From the fourth active device on, the connections are not consistently stable.
- **See:** In the ArgusKAI app you can see whether everything is guarded, the readings of supported devices, and a red alarm bar if discharging has been switched off.
- **Release:** If you want to get in yourself with your device manufacturer's app, release the line for ten minutes. Afterwards, ArgusKAI takes over again by itself.
- **Without internet:** Everything runs over Bluetooth, right on site. ArgusKAI only needs Wi-Fi for updates.

This manual describes the device. The [App guide](#) explains the app step by step.

2 Package contents and what you need

In the box:

- ArgusKAI with device label
- USB cable, USB-A to USB-C, 1 m
- Quick start guide (German and English)

You will also need:

- Power via USB (5 volts): a USB-A socket in the vehicle or a USB power adapter with a USB-A port. For a USB-C socket you will need a USB-C cable.
- an Android phone with Android 12 or later, or an iPhone with iOS 15 or later
- the “ArgusKAI” app; you will find the links at www.arguskai.com/app

3 The label: your access details

The label on the device shows the access details of your ArgusKAI. They are different for every device and never change, not even after a factory reset.

Detail	Purpose
Device name ArgusKAI-XXXXXX	The name of your ArgusKAI in the app and as a Wi-Fi network (hotspot). The last six characters set it apart from others.
Pairing code 6 digits	Your phone asks for it the first time you connect with the app (Bluetooth pairing).
Wi-Fi password 10 characters	For the device's hotspot, and therefore for the web interface.
QR code	Connects a phone straight to the hotspot: scan it with the camera app.
Serial number (S/N) 12 characters	For support enquiries.

Treat the label like a key. Anyone who knows the pairing code and is within range can pair with your ArgusKAI. Take a photo of the label for your records, but do not show it publicly, for example in forums or on social media.

A phone that is already paired also shows the pairing code and serial number in the app under **Settings**.

4 Placing and connecting

- 1 Choose a location.** As close as possible to the devices ArgusKAI is meant to guard. Metal blocks radio signals: not in a metal box and not behind sheet metal. Somewhere dry, out of direct sunlight and not right next to a heater or cooker.
- 2 Connect the power.** Plug the supplied USB cable into ArgusKAI and into a USB socket or USB power adapter. There is no on/off switch: as soon as it has power, ArgusKAI starts up and is ready within a few seconds.
- 3 Set it up.** Continue in the app, see [section 5 “First steps”](#).

The right power source. If ArgusKAI is powered by the battery it guards and discharging is switched off there, ArgusKAI loses power too. This can be triggered by the battery's own protection, for example in the event of undervoltage, or by a switch command from the app. The battery is then unguarded and you can no longer reach it via the app; discharging can only be re-enabled on site. So, where possible, power ArgusKAI from a source that is not affected by this, for example a different circuit or the starter battery.

Permanent power. Many USB sockets in motorhomes are wired to the main switch of the living area or to the ignition. When these are off, ArgusKAI is off too, and your devices are unguarded. For round-the-clock protection, ArgusKAI needs a power source that is always on.

5 First steps

- 1 Install the app.** Download the “ArgusKAI” app from the App Store (iPhone) or Google Play (Android); you will find the links at www.arguskai.com/app. Switch on Bluetooth on your phone.
- 2 Connect ArgusKAI to power.** It is ready after a few seconds.
- 3 Open the app and allow Bluetooth.** The app asks for permission to use Bluetooth; on Android it is called “Nearby devices”. Without this permission, the app cannot find ArgusKAI.
- 4 Tap ArgusKAI.** The app searches by itself and shows your ArgusKAI with the name from the label. If there are several nearby, compare the last six characters.
- 5 Pair.** Your phone asks for a code. Enter the six-digit pairing code from the label within 30 seconds. This is only needed the first time; after that, the app connects by itself.
- 6 Add devices.** Tap **Add device** and then **Scan for devices**. After about five seconds, the Bluetooth devices nearby appear. Tap your device, confirm and give it a name. From now on, ArgusKAI holds the line.
- 7 Enter your home Wi-Fi (recommended).** This lets ArgusKAI fetch updates by itself, see [section 10](#) “Home Wi-Fi and updates”.

Device not found? A Bluetooth device that is currently connected to a phone is invisible to others. Close the device manufacturer's app on all phones and search again.

Only add your own devices. ArgusKAI keeps the connection of an added device permanently occupied. With other people's devices, for example your neighbour's at the campsite, that would be unauthorised interference.

6 Day to day: guarding, releasing, pausing

Once set up, ArgusKAI works by itself, around the clock. You only need the app to check on things or to change something; it does not have to stay open.

What the indicators mean

Indicator	Meaning
guarded	ArgusKAI is connected to the device and holds the line.
disconnected - searching...	The connection has been lost for more than 25 seconds. ArgusKAI reconnects by itself as soon as the device can be reached. Shorter dropouts are normal and are not reported.
paused · 10 min left paused · permanently	The device is paused and is currently not guarded.
Guard active Release active	In the app's header: the guard is working, or the release for all devices is running.

The light on the device

A small green light in the housing roughly shows what ArgusKAI is doing. The app shows exactly what is going on.

Light	Meaning
off	Normal operation: all devices are guarded.
on for about 3 minutes	Confirmation after plugging in or after an action.
on continuously	A firmware update is running. Do not disconnect ArgusKAI from power.
blinks slowly	No device saved yet, the release is running or a device is paused.
blinks fast	Problem: a device has been disconnected for more than 25 seconds, or discharging has been switched off at a battery. Please check the app.

If several states apply at once, the light shows the most important one: update before problem before notice before confirmation. These light signals apply from firmware 3.6.45; older versions blink differently. The update comes over the home Wi-Fi, see [section 10 “Home Wi-Fi and updates”](#).

Release: all devices for ten minutes

Want to get in yourself with the app from your battery or solar charger manufacturer? In the overview, tap **Release for 10 minutes**. ArgusKAI drops all connections and your usual app gets through. After ten minutes, ArgusKAI takes over again by itself, or sooner with **End release**.

During the release, ArgusKAI guards nothing. Close the manufacturer's app when you are done: as long as it is connected, ArgusKAI cannot get to the device either.

Pause: a single device

Pause 10 min releases just this one device for ten minutes; the others stay guarded. **Pause permanently** leaves the device alone until you tap **Resume**, even across a restart; useful, for example, when a device has been taken out for a longer period. A permanently paused device uses no connection and does not count towards the three devices guarded at once.

Renaming and removing

Rename changes a device's name; key, PIN and pause are kept. **Remove** deletes the device from ArgusKAI after asking for confirmation; it is then no longer guarded.

7 Alarm: discharge switched off

For batteries whose readings ArgusKAI shows, it keeps an eye on the discharge switch of the battery management system (BMS). If discharging is switched off, everything connected to this battery is left without power, such as the fridge, lights and heating.

The app then shows a red bar at the top reading “⚠ *Discharge is switched off!*” and the event log records when it happened. The alarm appears within 25 seconds and stays until discharging is switched back on.

What to do

1. **Check the cause.** Tap the battery. The device details show whether a BMS protection is active, for example cell undervoltage or over-temperature. If so, the battery has protected itself.
2. **Look in the event log.** An entry “*Switch command sent to*” means the switch command came via ArgusKAI, that is, from the app.
3. **Switch it back on** once no protection is active any more: in the device details under **Switches**, or in the way your battery's manufacturer intends.

ArgusKAI does not alert your phone on its own. You will see the alarm as soon as you open the app within Bluetooth range.

8 Devices and readings

ArgusKAI can **guard** any Bluetooth Low Energy device that accepts connections: battery, solar charger, cool box, heater, power station. The type of device does not matter for this.

ArgusKAI can **show readings** if its firmware knows the device's data format:

- **Lithium batteries with a widely used Bluetooth BMS:** voltage, current, power, level, cell voltages, temperatures, charge cycles, capacity and protection status. Charging and discharging can be switched from the app.
- **Solar chargers and battery monitors that broadcast their readings encrypted:** for solar chargers PV power, voltage, state and yield today; for battery monitors voltage, current, level, consumed amp hours and time to go. For this, ArgusKAI needs a key from the manufacturer's app, see below.

- **More device types** are being tested or worked on and will arrive by update.

When you add a device, the app shows for each device found whether ArgusKAI can show its readings (**readings are shown**) or only guards it (**guard only, no readings**).

Key and PIN

In the device details under **Key/PIN** :

- **Key**: 32 characters made up of the digits 0 to 9 and the letters a to f. Some solar chargers and battery monitors only send their readings encrypted. You will find the key in the manufacturer's app; the input window in the ArgusKAI app shows exactly where. Once it is saved, the device carries the badge **Key** ✓.
- **PIN**: just a note for you, for example the PIN you set in the manufacturer's app. ArgusKAI never tries out PINs. Badge: **PIN** ✓.

Saving a field empty deletes the entry.

Limits

- ArgusKAI cannot guard devices with classic Bluetooth (not “Low Energy”).
- Devices that force pairing can keep dropping the connection.

9 The web interface

ArgusKAI has its own Wi-Fi network (hotspot) with a user interface in the browser. You will rarely need it: for operation without the app, for the factory reset and as a fallback for updates without internet.

Hotspot

- Each time ArgusKAI is plugged in, the hotspot is on for ten minutes. It stays on as long as a phone is connected to it. If no device has been set up yet, it stays on permanently.
- To switch it back on: in the app under **Settings** with **Turn on the device hotspot for 10 minutes** , or briefly unplug ArgusKAI and plug it back in.

Connecting

1. In the Wi-Fi menu of your phone or laptop, choose the network **ArgusKAI-XXXXXX** and enter the Wi-Fi password from the label. It is quicker with the QR code on the label.
2. The web interface usually opens by itself. If not, enter **http://192.168.4.1** in the browser.
3. If the phone reports that this Wi-Fi has no internet: stay connected anyway.

What you will find there

- **Status** : the guarded devices with readings; pause, resume, rename, remove, key and PIN
- **Add device** : as in the app
- **Release (all devices)** : release for ten minutes
- **Events** : times are counted from device start-up
- **Settings** : change the Wi-Fi password, show the pairing code, lift the pairing throttle, factory reset

- **Firmware update** : install a firmware file

You choose the language at the top right.

Security: The web interface can only be reached via the hotspot, never via your home Wi-Fi or the internet. You can change the Wi-Fi password (at least 8 characters) under **Settings** or in the app; afterwards, connect with the new password. A factory reset restores the password from the label.

10 Home Wi-Fi and updates

Over a Wi-Fi network with internet access, ArgusKAI fetches new firmware by itself, for example via the Wi-Fi router in your vehicle or your Wi-Fi at home. The Bluetooth protection does not need Wi-Fi.

Setting up home Wi-Fi

1. In the app, open **Settings**, section **Home Wi-Fi**.
2. Tap **Set up Wi-Fi**. ArgusKAI searches for the Wi-Fi networks around it.
3. Choose the network, enter the password, tap **Save**.

From then on, ArgusKAI connects by itself after every start. The password stays in the device and is never shown again. **Remove home Wi-Fi** deletes the access details.

ArgusKAI operates in the 2.4 GHz band; it cannot see Wi-Fi networks that only offer 5 GHz. The connection is outgoing only: ArgusKAI cannot be reached from outside via your home Wi-Fi, and neither can the web interface.

Updating via the app

1. When new firmware is available, the overview and **Settings** in the app show the notice *"Firmware update x.y.z available."*
2. Tap **Update now** and confirm.
3. ArgusKAI switches off Bluetooth, downloads the firmware, checks signature and checksum, and restarts. The app loses the connection in the process; that is normal. Once ArgusKAI has restarted, the app reconnects by itself, usually after one to two minutes.
4. The event log then shows *"Update successful: old → new version."*

During the update, ArgusKAI guards nothing. Keep it connected to power. Saved devices, keys, pairings and settings are kept. If something goes wrong, the previous firmware keeps running and the guard works as before; the log then shows *"Update failed (...)."*

Updating via the web interface

The fallback without internet: in the web interface under **Firmware update**, choose a firmware file (**.bin**) and tap **Install update**. If you need it, you can get the right file from us. Do not disconnect the power during the update.

11 Several phones, several ArgusKAI

- **Several phones:** ArgusKAI remembers up to three paired phones. Each one needs the pairing code from the label when connecting for the first time. Only ever connect one phone at a time: besides the guarded devices, ArgusKAI has one slot for the app.
- **Removing a paired phone:** This cannot be done for a single phone. A factory reset deletes all pairings, see [section 14 “Factory reset”](#).
- **Several ArgusKAI:** one per place, for example in the camper and on the boat. In the app, you switch under **Settings** with **Connect a different ArgusKAI**.

12 Security

- **Encrypted and paired:** The app and ArgusKAI talk over an encrypted Bluetooth connection (LE Secure Connections). Without the pairing code from the label, no phone gets in.
- **Protection against unwanted connections:** If a device does not pair within 30 seconds of connecting, ArgusKAI disconnects it. If this happens twice within ten minutes, the device is blocked for ten minutes. The log then shows *“Foreign Bluetooth device rejected (...), blocked for 10 min.”*
- **Pairing throttle:** After three failed pairing attempts within ten minutes, ArgusKAI accepts no new pairing for ten minutes; even the correct code is then rejected. Phones that are already paired keep working. To lift it: on a paired phone in the app under **Settings** with **Lift pairing throttle**, in the web interface under **Settings**, or wait ten minutes.
- **Your devices' PINs:** ArgusKAI never tries out PINs. Keep the PINs on your devices anyway, and change them from the factory value. Two layers are better than one.

13 Event log

ArgusKAI records what happens: start-up, connections and dropouts, adding and removing, pause and release, alarms, switch commands, changed passwords and keys, Wi-Fi, hotspot and updates.

- It keeps the last 30 entries, newest at the top. After a restart or power failure, the log starts afresh.
- ArgusKAI counts the time since it started. From this, the app works out the date and time using your phone's clock; the web interface shows the time since start-up (`hh:mm:ss`).

14 Factory reset

A factory reset returns ArgusKAI to the state it was delivered in.

Deleted	Kept
all guarded devices with their names, keys and PINs; all paired phones; a changed Wi-Fi password; the home Wi-Fi access details	device name, pairing code and Wi-Fi password from the label; the installed firmware

How to do it

1. Switch on the hotspot and open the web interface, see [section 9 “The web interface”](#).
2. **Settings** → **Factory reset** → confirm the prompt. ArgusKAI restarts.
3. On every phone that was paired: in the phone's Bluetooth settings, remove the pairing **ArgusKAI-XXXXXX** (on iPhone this is called “Forget This Device”). Then connect again in the app, using the code from the label.

A factory reset is deliberately not possible from the app. Only someone who is on site and connected to the device's hotspot should be able to carry one out.

Before you pass ArgusKAI on or dispose of it, do a factory reset. That way, your Wi-Fi access details, for example, do not remain in the device.

15 Troubleshooting

Problem	What to do
The app does not find ArgusKAI.	Does ArgusKAI have power? Some USB sockets are only live when the ignition or the main switch is on. Move closer; a few metres are enough. Is the phone's Bluetooth on, and has the app been given permission? If another phone is connected to ArgusKAI, close the app on that phone. Quick test: for the first ten minutes after plugging in, the Wi-Fi network ArgusKAI-XXXXXX appears in your phone's Wi-Fi list; if it does, the device is running.
Pairing fails, the code is rejected.	Enter the code within 30 seconds. Remove the old pairing in the phone's Bluetooth settings and connect again, especially after a factory reset. After several failed attempts, the pairing throttle is active: wait ten minutes or tap Lift pairing throttle on a paired phone, see section 12 “Security” .
A device is not found when adding it.	Is it switched on and within range? If a phone is currently connected to it, for example via the manufacturer's app, it is invisible to others: close that app and search again. Devices with classic Bluetooth do not appear.
A device shows disconnected – searching...	The device is off, out of range or currently connected to another app. ArgusKAI reconnects by itself. If this happens often: place ArgusKAI closer to the device, not behind metal.

Problem	What to do
A device shows no readings.	ArgusKAI does not yet know the data format for this device type; it is still guarded. With devices that broadcast encrypted readings, the key is missing or wrong, or sending readings is switched off in the manufacturer's app.
The hotspot does not appear.	It switches off ten minutes after start-up. Tap Turn on the device hotspot for 10 minutes in the app or briefly disconnect ArgusKAI from power.
The web interface does not open.	Enter <code>http://192.168.4.1</code> in the browser. Stay connected to the hotspot, even if the phone reports "no internet"; if necessary, briefly switch off mobile data.
You have forgotten the hotspot's Wi-Fi password.	Set a new one in the app under Settings with Change Wi-Fi password .
The home Wi-Fi is not found.	ArgusKAI only sees Wi-Fi networks in the 2.4 GHz band. If the router is too far away, move one of the two.
ArgusKAI does not report back after the update.	Wait up to three minutes and stay nearby. Then briefly disconnect ArgusKAI from power: it starts with either the new or the previous firmware. The result is shown in the event log.
The label is no longer legible.	A paired phone shows the pairing code and serial number in the app under Settings ; the web interface shows the pairing code under Settings . Otherwise, write to us.

16 What ArgusKAI cannot do

- **It protects as long as it has power and is within range.** If ArgusKAI is off, or a release or pause is running, only your device's own protection applies during that time.
- **It does not replace a PIN.** Keep the PINs on your devices and change them from the factory value.
- **It guards the radio link, not the hatch.** It does not help against someone who goes straight to the battery or solar charger.
- **It only guards Bluetooth Low Energy.** It cannot hold devices with classic Bluetooth or devices that force pairing.
- **It does not alert you remotely.** You see alarms in the app when you are within Bluetooth range. ArgusKAI is not an alarm system.

17 Specifications

Product	ArgusKAI, Bluetooth guard, USB version
Dimensions	60 × 40 × 12 mm
Weight	18 g (without cable)
Power supply	5 V via USB-C
Current draw	approx. 35 mA at 5 V (about 0.2 W); from a 12 V battery via a USB adapter, about 0.4 Ah per day
Radio	Bluetooth Low Energy and Wi-Fi (IEEE 802.11 b/g/n), 2.4 GHz band (2400–2483.5 MHz)
Max. transmit power	Wi-Fi 2412–2472 MHz: max. 20 dBm EIRP · Bluetooth LE 2402–2480 MHz: max. 8 dBm EIRP
Guarded devices	up to 3 at once, all types combined (5 memory slots)
Paired phones	up to 3
Operation	App for Android 12 or later and iOS 15 or later; web interface via its own hotspot
Languages	German, English, French, Spanish, Italian
Firmware	3.6, updates via Wi-Fi
Event log	the last 30 entries

18 Safety information

- Only operate with a suitable USB power source (5 V), such as a CE-marked USB power adapter or a USB socket in the vehicle.
- Only use in dry rooms or inside the vehicle. Protect from moisture, condensation, dust, heat and direct sunlight. Do not cover.
- Do not use if the device or cable is damaged. Do not modify the device.
- Route the cable so that nobody can trip over it and nothing gets trapped.
- Take care when switching from the app: “Discharge off” cuts power to everything connected to this battery, including things you need right now, such as cooling, heating or pumps. That is why the app asks twice.

- ArgusKAI supplements the protective functions of your devices. It does not replace an alarm system or a fuse.
- Keep the device and cable away from small children. Not a toy.

19 Disposal



Electrical equipment does not belong in household waste; the crossed-out wheeled bin symbol indicates this. At the end of its life, hand ArgusKAI in free of charge at a collection point for waste electrical equipment, such as your local recycling centre, or at a retailer that takes back old equipment.

Before doing so, delete your data with a factory reset, see [section 14 “Factory reset”](#). This is your own responsibility.

20 Manufacturer and contact

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For questions, requests and problems, use the [contact form on **www.arguskai.com**](#). Please state the serial number and firmware version; you will find both in the app under **Settings**.

Still have questions?

Write to us and we will reply by e-mail. It helps if you include the serial number and firmware version of your ArgusKAI; you will find both in the app under **Settings**.

To the contact form · <https://www.arguskai.com/#kontakt>