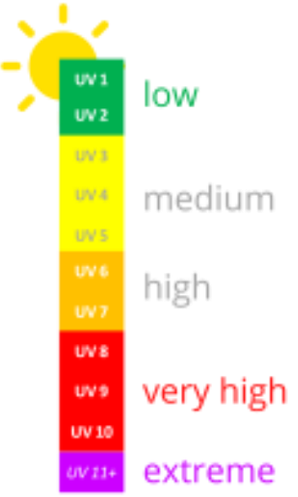
UV-Bodyguard: MANUAL

UV-Bodyguard by ajuma: Be SMART in the SUN

UV-Bodyguard TypNo. 4270001827302

We are happy that our UV-Bodyguard can accompany you on your excursions!



The UV-Bodyguard is your little sun protection assistant. With its help, you can avoid sunburn, reduce your risk of developing skin cancer and improve your vitamin D levels at the same time. This way, you can easily improve your healthy skin!

UV intensity is measured by the so-called UV index. The UV index ranges from 0 = no UV radiation to 11+ = extreme UV radiation. You can see this value of the UV strength in the app. This table should help you to correctly estimate your need of protection:

UV-Index	Value	Protection	
0 - 2	low	No protection required	
3 - 5	medium	Protection recommended	Sun screen, hat, sun glasses
6 - 7	high	Protection required	Sunscreen, hat, sun glasses, shadow (noon 11-15:00)
8 - 10	very high	Protection absolutely necessary	
11+	extreme		Avoid spending time outdoors as much as possible / only with protection and in the shade

Of course, how long you can stay individually in the sun depends not only on the sun, but also on your skin type and your sunscreen (sun protection factor, SPF) used. Of course, the UV-Bodyguard also uses this information – we´ll come back to that later!

The UV-Bodyguard was created in Munich from a family project. Annette and Julian have come up with a solution to protect their child from too much sun and to continue to be active outside as a family: just measure the UV dose! The idea of the UV-Bodyguard was born. Sustainability is important to us: we manufacture the UV-Bodyguard completely locally in southern Germany, and pay attention to good recyclability at the same time.

1. Before starting

1.1 Fields of application

The UV-Bodyguard can help you avoid sunburn. So you can enjoy the sun in a healthy way – while the UV-Bodyguard takes care of you!

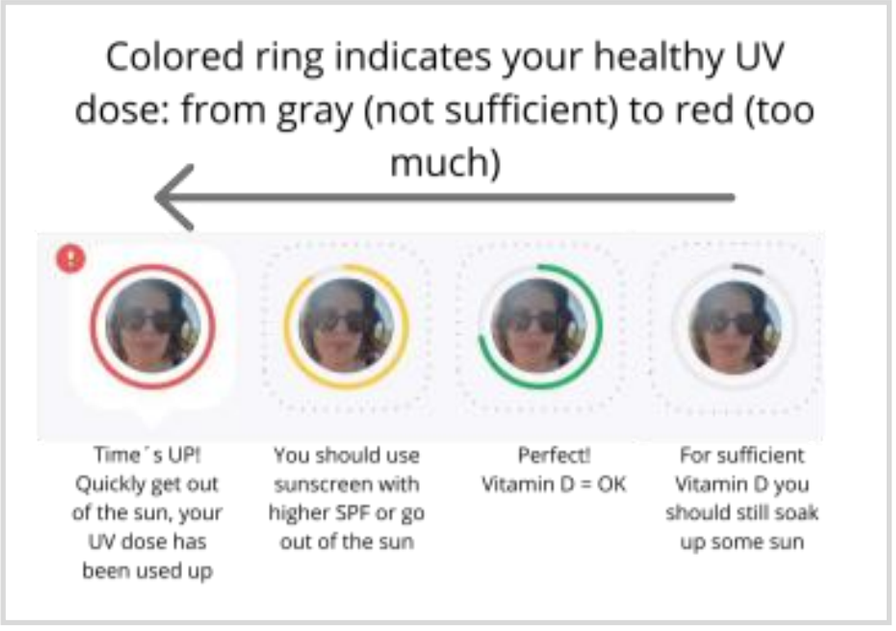
In the app you can see the current UV strength at any time, and you can create a profile (ONE) or any number of profiles at the same time (FAMILY). This way you can see your healthy UV dose in % for the respective day in the app any time. At 50%, 75% and 95%, you get a warning (system sound or warning sound + notification) on your smartphone and can thus effectively protect yourself from sunburn. If you are close to a UV dose of 95%, you should end your stay in the sun right away at the latest. The use of the UV-Bodyguard can help you prevent sunburn and thus minimize the risk of premature skin aging and an increased risk of skin cancer. Healthy skin is beautiful skin! In the FAMILY version you also get a UV forecast for the next 5 days and your latest UV tracks.

The UV-Bodyguard can also help you avoid vitamin D deficiency. An exact calculation of the amount of vitamin D produced during sunbathing is difficult – when you get older, for example, vitamin D synthesis decreases. In addition, a build-up and a degradation

reaction takes place in your skin at the same time, which makes it difficult to derive a net production. However, the UV bodyguard can help you to check the quality of your body's vitamin D production. In doing so, we follow the recommendations of the "agreed recommendation of the Federal Office for Radiation Protection and other institutions located in the field of "radiation". According to this recommendation, to stimulate vitamin D production, you should:

- expose as many skin areas as possible to UV radiation until the 50% mark has been reached (or at least expose face, arms, hands to the sun),
- not use sunscreen until the 50% mark has been reached (because starting from SPF 8, vitamin D production in your skin is reduced, starting from SPF 15, vitamin D synthesis is almost completely blocked),
- and finally after reaching the 50% mark in the app, you should protect yourself with enough clothing and sunscreen or visit the shade.

In the app's dashboard, the visible ring around the profile picture is displayed in "grey" when less than 50% of the healthy sun dose is reached and then in "green" once you have reached the UV dose recommended for vitamin D production.



1.2 Instructions for use

- If you use the UV-Bodyguard, please make sure that the lens of the UV Bodyguard is aligned as directly as possible to the sun and is not shaded. A shading of the disc is of course ok if you are also in the shade.

- If you use any sunscreen, please make sure to use enough sunscreen (about 4 tablespoons for an average adult, which is usually more than you think). And reapply sunscreen regularly to maintain your sun protection. Sweating, bathing or friction washes off or rubs off some of the sunscreen, so the sunscreen becomes weaker over time.

- Particularly at risk are your so-called “sun terraces”, i.e. the areas of your body that are directly exposed to the sun. These are, for example, your nose, your forehead, the shoulders or the top of your feet. When you're lying in the sun, it's your stomach or back. That's why it's so important that the UV-Bodyguard is always towards the sun as good as possible. Ideally, the pointing of the UV-Bodyguard corresponds to the mostly exposed parts of your body such as your nose. Otherwise, you might get sunburn on your nose without realizing it and without being warned.

- The current UV intensity and the remaining time in the sun are constantly changing – is this a mistake? No, quite the opposite: The strength of the UV radiation depends on many environmental factors: if the sky is clear or cloudy, how high on the mountain are you, what type of surface are you standing on (sand or water, for example, reflects much more UV radiation than meadow). UV radiation scatters very strongly and is hardly blocked by clouds (unlike IR = heat radiation, for example). This means that you could also get sunburned in the shade or with cloudy skies on a cool and

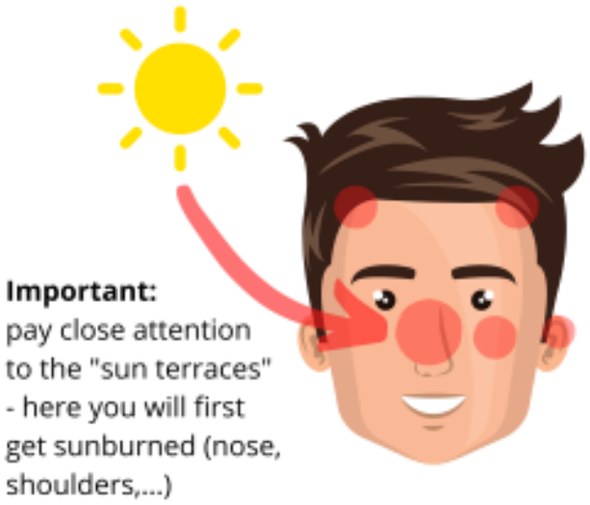
windy day. And that's exactly why it is good and sensible to measure UV radiation!

- Range: to protect the battery and keep the UV-Bodyguard as small and portable as possible, we use Bluetooth Low Energy BLE with a range of 10m (distance between smartphone – UV-Bodyguard). If the connection breaks off, it is automatically restored as soon as the UV-Bodyguard comes back within range of your smartphone. What´s interesting to note: the UV measurement values collected in the meantime (up to approx. 2.5 hours) are transferred upon reconnection, so no UV values get lost. We need contact with the smartphone because all data, i.e. UV measurement data, ozone values/solar zenith angle (based on satellite data) and your profile information are processed on the smartphone. So there is really a lot going on "under the hood", which of course does not always make it easy.

- Recommendations for the placement and alignment of the UV-Bodyguard
    1. Staying in one place (e.B. lying on the beach, in the garden, on the terrace, sitting at a bench at the playground): Ideally, you should place the UV-Bodyguard oriented towards the sun. This way you always measure the highest possible UV value and can be sure that you will be warned in time of too much sun. In the dashboard you can track the UV radiation in real time. Our tip: Scan the environment and find out from which direction you measure the strongest UV radiation. Then align the UV-Bodyguard according to this direction and place it in a safe place.

2. In movement (i.e. when hiking, cycling or doing other sports activities): If you are in motion, stationary positioning is naturally not possible and you should wear the UV-Bodyguard as close as possible to your body. Generally, an exact orientation towards the sun at all times is difficult when used during outdoor activities due to possible (in most cases constant) changes in direction. In this case you should place your UV-Bodyguard in such a way that the UV irradiation of the so-called "sun terraces" (i.e. shoulders, cheekbones, nose, etc.) is simulated by the UV sensor. Good places of attachment are, for example, the headgear, the backpack, the sports equipment (i.e.. on the bicycle handlebar or helmet) or your clothes.

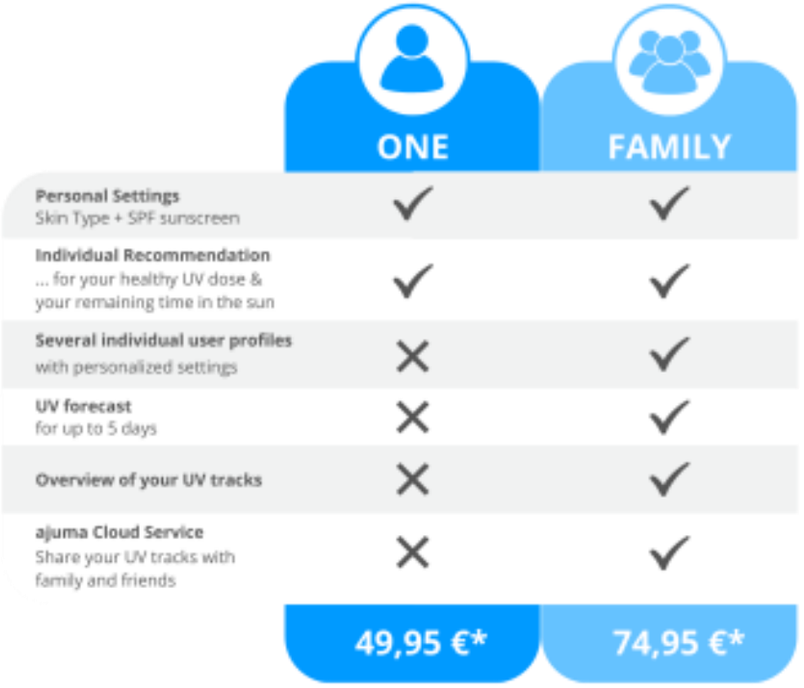
3. Usage with / for children: If you want to keep an eye on your child's UV dose, we recommend placing the UV-Bodyguard either next to the child facing the sun (stationary case, for example if your sitting on a bench at the playground) or attaching it to the child's headgear, backpack or clothing (dynamic case: kindergarten, walk,...). Basically, it makes sense to simply attach the UV-Bodyguard to your own clothes when you are in the sun with children. As long as you are in a comparable environment, the values will not differ significantly.



1.3 Content of packaging and product options

The packaging of the UV-Bodyguard contains the UV-Bodyguard itself, a clip, a stretch Velcro strap, instructions for use and a USB charging cable. The corresponding app can be downloaded free of charge from the respective app stores of Google and Apple.

There is the variant ONE (including ONE user profile), or the variant FAMILY (any number of user profiles at the same time, in addition to UV forecasts, UV tracks, cloud functions for sharing data with family and friends). An upgrade from ONE to FAMILY is possible at any time, either as a monthly subscription which can be cancelled on a monthly base, or as a one-time lifetime upgrade. For your full control: the subscription management runs via the Apple or Google Playstore and your associated profile (settings or subscription management).



2. Safety

2.1 Intended use and disclaimer

ATTENTION
➢ Please read these instructions for use carefully and carefully before the first use. ➢ Please keep the instructions for use for future use!

The UV-Bodyguard is not a toy. The UV-Bodyguard is intended for private use only and only for intended use. In concrete terms, this means: the UV-Bodyguard can help you to correctly **estimate the current strength of UV radiation and the time for a safe stay in the sun**. Of course, the quality of the results depends on the correct operation: is the UV-

Bodyguard correctly pointed towards the sun? Have you put on enough sunscreen? Did you enter your skin type correctly? Can the app access ozone levels determined via satellite data (location access required)?

Please note: we cannot exclude the risk of skin damage caused by UV radiation even despite the support of the UV-Bodyguard and assume no liability for skin and consequential damage due to UV radiation.

2.2 Safety instructions and precautions

ATTENTION
Damage of UV-Bodyguard or its battery ➢ Always keep the UV-Bodyguard dry and protect the UV-Bodyguard from contact with liquids. The UV-Bodyguard is only splash-proof and must never be submerged in water, as it is not waterproof sealed. A small downpour should be possible, but it is generally better if you avoid contact with the water in general. And: Immersion in salt water is always a big problem, which usually also applies to (waterproof) mobile phones, etc. ➢ The UV-Bodyguard is powered by a rechargeable battery. Please be careful not to expose the UV-Bodyguard directly and permanently to excessive heat (>80 degrees Celsius, such as on the dashboard of your car) or cold (<-5 degrees Celsius), as this can impair the functionality of the UV-Bodyguard and permanently damage the device. ➢ Please fully charge the battery before use and check the state of charge regularly. ➢ The device must not be opened and repairs may only be carried out by ajuma GmbH

CAUTION

Skin damage caused by improper use

- To display current UV values, the UV-Bodyguard requires a Bluetooth connection to your smartphone. Therefore, it is important that the Bluetooth connection is and remains switched on on your smartphone, and that the UV-Bodyguard always remains within range of the smartphone (<10m). If a disconnection takes place, data is stored on your device and sent to your UV-Bodyguard app as soon as an (automatic) reconnect is established. Nonetheless, during disconnection, no warning is displayed, even if your healthy time in the sun has been used up.
- The UV-Bodyguard app asks for your location. This is important to enable the app to combine the measured UV values with ozone data (from the European space and satellite programme Copernicus). This significantly increases the measurement and prediction accuracy. Therefore, we ask you to always allow the app access to your current location.
- Please always pay attention to proper sun protection – with or without the UV-Bodyguard: In summer, if possible, avoid the midday sun between 11 a.m. and 3:00 p.m., use sunscreen and, if necessary, a sun hat, sunglasses and long-sleeved clothing.

3. Use

3.1 Charging via USB cable

The UV-Bodyguard is equipped with a rechargeable battery. To charge the battery, all you have to do is carefully pull the outer cover (turtle or sports ring) upwards, and the battery can be charged with a USB charging cable.

We recommend that you always fully charge the battery (green light) and not charge it with a fast charger. Please pull the outer cover back over the housing after charging, as this is the only way to protect the UV-Bodyguard from splashing water, sand or falling.

3.2 Steps for first use

To put the UV bodyguard into operation, proceed as follows:

1) Fully charge the UV-Bodyguard with the help of the USB charging cable. (Please note: for safety reasons during transport, the UV-Bodyguard is switched off when you receive it). If the UV-Bodyguard was switched off, it is switched on again by briefly connecting it to a USB charging cable. The battery status can be seen under ❶.
2) If necessary, turn on the Bluetooth function on your smartphone.
3) Download and install the UV-Bodyguard app from the App Store (Apple or Google Play Store).
4) Open the app.
5) Search the UV-Bodyguard Wearable in the app (very important: **ONLY IN THE APP, not via the device settings of the smartphone**) via the list and agree to the Bluetooth pairing of the UV bodyguard with your smartphone. There are two variants here:
   a. a. Variant 1: You can do the Bluetooth pairing either at this point during the onboarding process, i.e. when you use the app for the first time.
   b. b. Variant 2: you can also establish Bluetooth pairing at any time via ❿ Settings – Connections. Uv.bguard appears in the list of available devices, tap the name 1x (shorter or longer depending on your smartphone operating system), and then confirm via OK button.
6) The UV-Bodyguard and the smartphone are connected to each other, the UV-Bodyguard is ready for use.

7) When you start up for the first time, you will now be guided through the onboarding process.
   a. Here you get information and safety instructions for using the UV-Bodyguard.
   b. During the onboarding process, you will be asked if you agree to a location sharing. We ask you to agree to this location sharing as we use not only the UV measurement values, but also your local ozone levels to show you accurate and reliable values for your healthy UV dose and your remaining time in the sun.
   c. With the ONE version you can create one profile now, with the FAMILY version you can create several profiles at once for your family´s healthy UV dose (see 3.4 Create individual measurement profiles and read UV dose). All you have to do is tap on the profile card. You can then enter a name and upload a profile photo (in case of FAMILY of course several names and photos). Now all you have to do is enter the sun protection factor of your sunscreen (6c) and your skin type. Ready! By the way: via settings – users can change the data at any time, as well as delete or create new users.

3.3 Measure UV intensity

1) Measure current UV intensity ❸

In the dashboard ❼ you can see all information about the current UV situation at a glance. The current UV strength ❸ (on a scale 1-11+) is automatically measured as soon as you have connected the UV-Bodyguard to your smartphone.

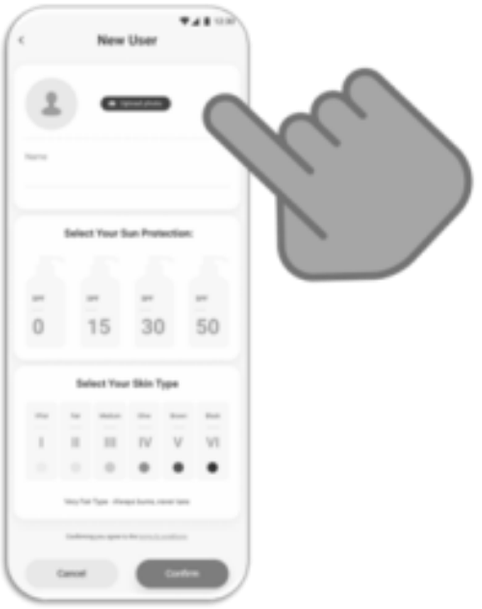
2) Recommendations regarding proper sun protection ❹

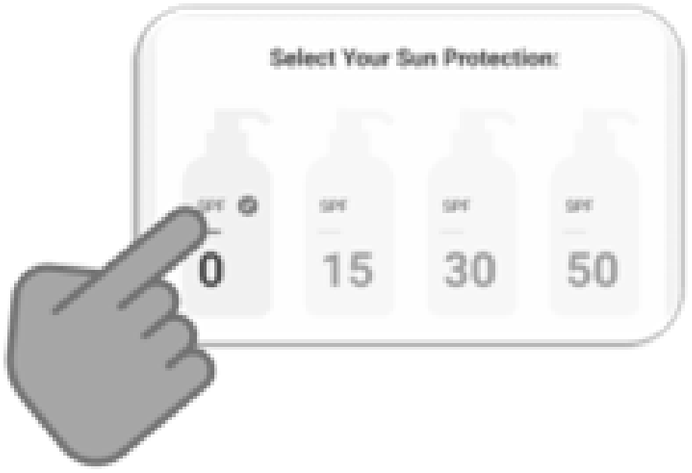
Under ❹ you can see recommendations for sun protection, is your sunscreen sufficient, or should you also use a hat, sunglasses and long-sleeved clothing or even go into the shade or indoors?

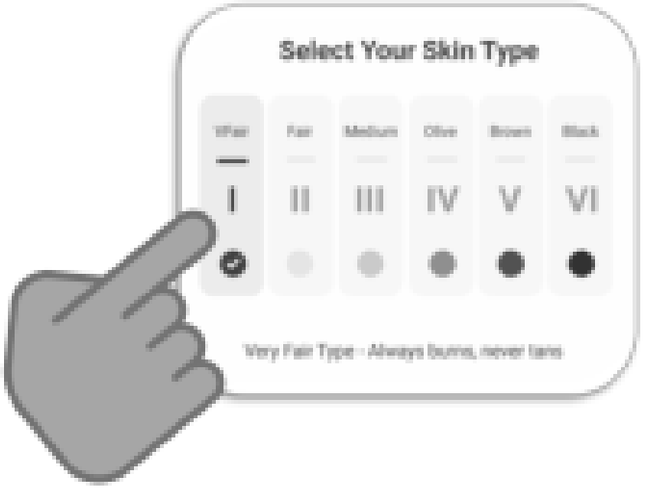
3.4 Individual UV dose prediction: create profile, adjust skin type and sun protection factor

1) Depending on if you have the ONE or FAMILY variant, you have the option to create one or more profiles❻. All you have to do is tap on the profile card (profile information). You can then enter a name and upload a profile photo.

2) Then you can enter the sun protection factor of your sunscreen (6c) and your skin type. Ready!







You can find out your skin type with the help of this table:

	Skin Type 1	Skin Type 2	Skin Type 3	Skin Type 4	Skin Type 5	Skin Type 6
Color of Hair	reddish or light blonde hair	blonde or light brown hair	dark blonde, light brown, dark brown hair	brown or black hair	black hair	black hair
Color of Eyes	blue, green or light grey eyes	blue, grey or green eyes	brown, blue, green or grey eyes	brown eyes	brown eyes	dark brown or black eyes
Skin Color	very light skin color; no tanning but freckles instead	light skin color, often freckles; light and slow tanning	medium light skin color, seldom freckles; continous and progressive but slow tanning	brownish or olive colored skin even without sun exposure, no freckles; fast tanning (reaches a medium brown skin color)	dark to light brown skin even without sun exposure; fast tanning (reaches a darker brown skin color)	dark brown or black skin without sun exposure, no freckles
Sunburn and Risk of Skin Cancer	very often sunburn, very high risk of skin cancer	very often sunburn, high risk of skin cancer	sometimes sunburn, medium risk of skin cancer	seldom sunburn low risk of skin cancer	very seldom sunburn low risk of skin cancer	hardly any sunburn low risk of skin cancer
Self-Protection Time of Skin	<10 minutes	10-20 minutes	20-30 minutes	> 45 minutes	> 60 minutes	> 90 minutes

If you are unsure, it is best to ask your dermatologist about your skin type, or take the more sensitive skin type. So you are on the safe side.

3) ❻ In the app, you will then see the healthy UV dose (6a) achieved so far for each profile. Around your or the profile photos, you will see a colored ring.

a. The ring is gray at first as long as you haven't reached your healthy vitamin D dose yet. Once you reach the required amount of UV for your optimal vitamin D levels, the ring turns green.

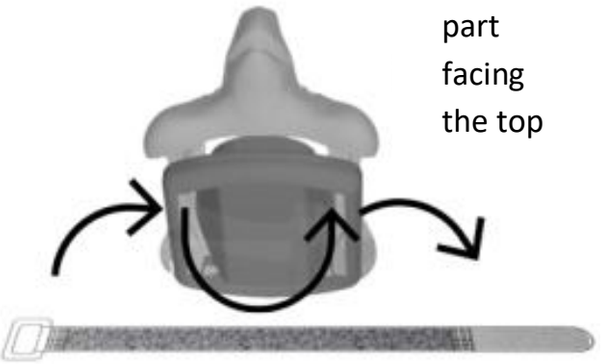
b. Once you reach 75% of your healthy UV dose, it turns yellow, and then red at 95%. This means that you should get out of the sun as soon as possible by now! In addition, you can see the remaining time in the sun in real time and get a warning = system sound or warning sound + notification at 75% and 95% of the healthy UV dose.

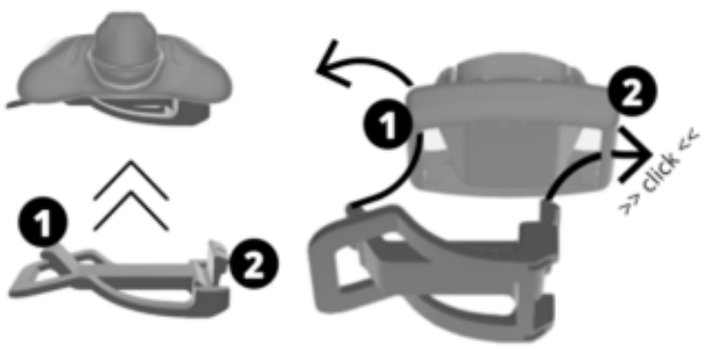
4) ❺ In the graph you can see the UV history of the last 15 minutes. This helps to assess how the UV situation is at the moment and whether the UV-Bodyguard is properly attached.
5) ❽ In the UV forecast you can see the UV forecast for the next few days. This helps you to plan your stays in the sun well and, for example, to avoid times with excessive UV exposure. For this purpose, we use satellite data atmospheric observation service of the European space program Copernicus. [License Agreement: "Generated using Copernicus Atmosphere Monitoring Service information [2020]"]
6) ❾ Under tracking you can see your past UV tracks depending on your subscription. This will help you estimate your healthy UV dose over time. Because not only the one-time UV overdose up to sunburn increases your risk of skin cancer, but also the cumulative dose.
7) Profiles can also be paused with one click in the respective profile card via a slider. This function is important, for example, for families who are not always all on the road together. The profile records when the green button "running" is visible, the profile is paused when the button is gray and shows "paused". With the paused profile, pause strokes are also visible in the upper left corner of the profile picture, and the numbers are grayed out. In this case, nothing is recorded. By clicking on the button, the profile is reactivated.

3.5 Attaching the UV bodyguard to clothing or backpack

It is important that the lens of the UV-Bodyguard is always pointing towards the sun so that the UV values can be measured correctly. To attach the UV Bodyguard, you have two options:

1) You can pull the Velcro strap under the case with the Velcro side upwards and then attach it to the bicycle handlebar or arm, for example.





2) You can clip in the included clip. To do this, first hang Part 1 in opening 1 and then press Part 2 up into opening 2 until it clicks.

3) The clip can be unmounted on the closed side of the trough. If the clip is pushed onto a hard surface (important: thin (!) Plastic or metal plate, umbrella cap, hard pocket leather,...), it no longer blocks. We like to use a dough scraper.

Then simply hold the clip sideways on both sides with one hand (1), and pull with the other hand on the housing near the recess (2) in the opposite direction. There is also a video on Youtube.

(1) carefully attach to a thin (!!!) sturdy cardboard or similar

(2) Pull apart: one hand on the right and left at the wide point of the clamp, one hand at the back of the edge

Remove clip

(3) Reattach the bracket: thread on the side of the open bracket, snap the other side into place

Reattach clip

4. Possible causes of errors and their correction

If the UV bodyguard does not display current UV values or significantly too low values, this could have the following causes of error:

Problem	Root cause	Solution
The UV Bodyguard does not display any UV values.	There is no connection between UV-Bodyguard and smartphone: The Bluetooth	Please check the Bluetooth connection and, if necessary, perform the

	connection has been interrupted on your smartphone, or UV-Bodyguard is further than 10m away from your smartphone.	pairing process again.
The UV Bodyguard does not display any UV values.	The connection between smartphone and UV-Bodyguard is interrupted because the battery of the UV-Bodyguard is empty.	If you cannot connect to the UV-Bodyguard, please check the battery status in the app and, if necessary, completely recharge the UV-Bodyguard again.
The UV-Bodyguard shows too low UV values.	The UV-Bodyguard is shaded as it is either not properly aligned with the sun or has slipped. Geolocation may not work (smartphone issue)	Please check again the correct orientation or position of the UV-Bodyguard to the sun.
The UV-Bodyguard displays UV values, but the dose is not calculated.	The profile may be paused.	Activate the measurement in the profile (runs instead of paused), see point 3.4 (7)

5. Cleaning, maintenance and disposal

Special maintenance of the UV-Bodyguard is not required. To clean the housing, a mist-damp cloth should ideally be used, in exceptional cases additionally mild cleaning agents. For good measurement results, we recommend cleaning the window of the UV-Bodyguard every now and then.

If the battery can no longer be charged, please contact ajuma GmbH (info@ajuma.eu) so that we can work out why this is the case and, if necessary, replace the battery.

We use recycled material for packaging and do not use plastic components. We ask you to dispose of all packaging parts in an environmentally friendly way so that they can be recycled and reused.

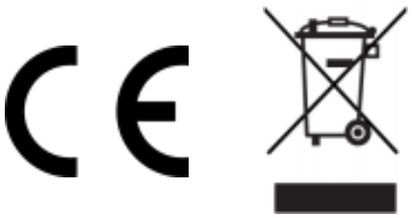
Devices marked with the crossed garbage can symbol must not be disposed of with household waste. There is an obligation to dispose of such WASTE electrical and electronic equipment separately. The respective municipality informs about the possibilities of regulated disposal.

6. Warranty service

ajuma assumes the legal warranty for the UV bodyguard. The warranty expires if the device is damaged, improperly used or unauthorized intervention has been made.

7. Technical data and other features

- Display of the UV index from 0 – 11+
- Sun protection factor of the sunscreen (SPF) adjustable in levels from 0 – 50
- Sun exposure dose as a percentage of the HEALTHY UV dose for the skin type / alarm in case of sunburn risk
- Calculation of the sun exposure dose in % based on the determined UV index, the set sun protection factor and the skin type. At a percentage of 95%, it is advised to leave the sun.
- Selection of skin type from type 1 - 6. See table above
- Weight: approx. 23 grams with battery
- High-quality UV sensor with a measuring range of around 390 nm. A patent-pending process covers both the UV-A and UV-B ranges.
- The UV Bodyguard transmits in the 2.4 GHz band and can therefore be operated worldwide. Test reports can be requested from info@ajuma.eu.
- Operation with 4.2V battery / power 90 mAh, rechargeable via USB
- Connection UV-Bodyguard – Smartphone via Bluetooth Low Energy BLE (range <10m, class 3, max. transmission power 1 dBm).
- This device complies with the CE directives, EMC Directive 2014/30/EU, Radio Equipment Directive (2014/53/EU).
- The complete declaration of conformity is available under ajuma.eu (footer).
- App available for Android and iOS



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