

Independent

Mobility Aid

Combined Ultrasonic & Lidar Sensor



USER MANUAL

EN

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1. THE INDEPENDENT

Independent is a small and lightweight device which is equipped with an ultrasonic and laser sensor. It can be attached to clothes with its clip or with the enclosed magnet holder. In this way, the device detects obstacles in the area of the head and the upper body. Information is given via acoustic signals. *It is recommended to always use the enclosed lanyard so that you cannot lose the Independent.*

Scope of supply:

Independent device, micro USB cable with power plug adaptor, lanyard, small pouch, magnet holder, two holders (11 and 14 mm diameter to attach the device to a cane) user manual in black-print and an USB flash drive including the manual.

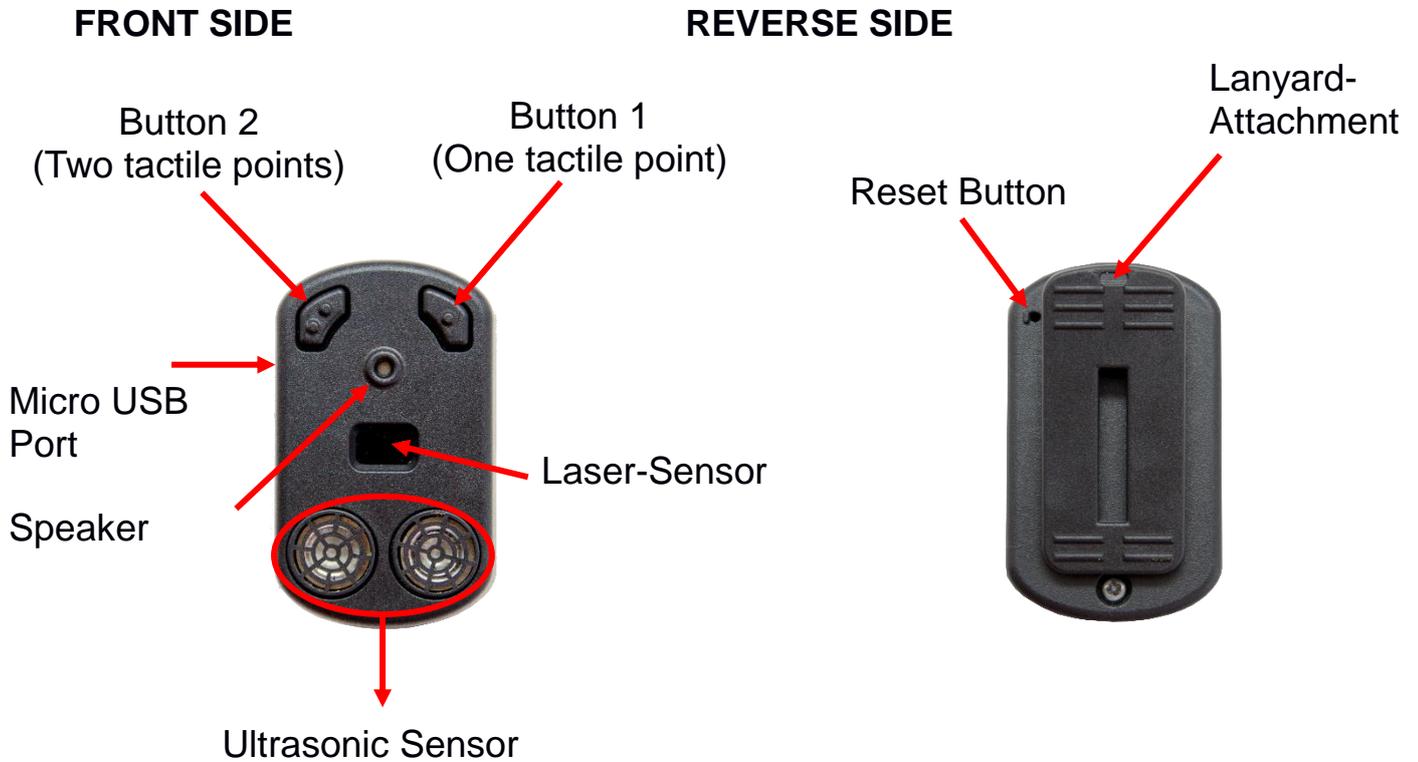
How to turn on the device:

By pressing and holding both operating buttons, you can turn on Independent. The power on sequence is signalled with a Start-Up sound. If the distance is not changing (remains constant) 30 min the device switches off automatically after 30 minutes of inactivity in order to save energy. In case there is an obstacle in the surroundings, the 30-minutes countdown starts from the beginning until the switch-off. The power off sequence is signalled with a Switch-Off Signal. By pressing and holding both operating buttons, you can turn off the Independent manually.

If the measured distance is constant for 5 seconds, the device is going into Stand-By mode, which is signaled with the Stand-By sound. As soon as the distance to obstacles has changed by 0,3 m, the Independent is reactivated and it outputs corresponding signals. The device goes also into standby mode when the user stands in front of obstacles without moving (for example if the user stands still facing a person while talking with that person).

In the default setting, the volume level is set to level 3 and the ultrasonic and laser sensors are active.

Place the Independent in front of you so that the front side of the device (with its operating buttons) is on the top and the USB port is pointed to the left.



Front side

On the front side of the device, you will find two operating buttons with tactile markings. The upper right button is button 1, which is marked with one tactile point. The upper left button is button 2, which is marked with two tactile points. At the lower side below the operating buttons, you can feel centrally located a small hole, which is the speaker. Below directly under the speaker, there is also centred the laser sensor. Below the laser sensor, you can feel two round covers: this is the ultrasonic sensor.

Reverse side

On the reverse side of the device, you will find a clip, which is respectively grooved on the top and bottom. (3 horizontal lines on the top and 2 horizontal lines on the bottom). In the top corner on the left, behind the clip, there is a small palpable hole of about one millimetre deep – this is the Reset button.

1.1. BUTTON COMBINATION

To operate Independent different key combinations and either a short or a long press of one or two buttons are used.

Buttons 1+2

- Short button press: to adjust gradually the volume level
- Long button press: to switch on the device; you will hear the “Start-up sound”

To switch off the device keep the buttons 1+2 long pressed. You will hear the “Switch-off sound”.

Button 1

- Short button press: sets the range
- Long button press: activates the wireless connection

Button 2

- Short button press: informs the user which sensor mode is active; a second short press within the next 5 seconds changes the operation mode
- Long button press: checks the battery level

1.2. ACOUSTIC SIGNAL – VOLUME LEVEL

Independent offers three volume levels. The default setting is level 3; it is the highest volume level.

To change the volume, press the buttons 1+2 briefly.

Starting from the default setting level 3, the device goes through all the 3 levels: A single, short press of both buttons sets the volume to level 1 (very low).

Output:

- 1 short signal = volume level 1
- 2 short signals = volume level 2
- 3 short signals = volume level 3

1.3. RANGE

You have the possibility of setting on the Independent the range up to 1 or up to 2 m. The default setting is up to 2 m.

To change the range, press the button 1 briefly.

Output:

1 short signal = range up to 1 m

2 short signals = range up to 2 m

1.4. SENSOR MEASUREMENT

By using the Independent, you can select between three sensor modes. The active measurement can be ultrasonic- or laser sensor only, or both sensors combined. The factory setting is the combination of ultrasonic and laser sensor.

To change the sensor measurement, press the button briefly.

A first press informs you about the actual mode that is operating.

A second short press within the next 5 seconds changes the sensor mode.

The mode setting is stored, which means that the device will use the same selected settings after it has been powered off and turned on again the next time.

Please note that if the battery is completely discharged, the user settings (sensor mode, distance range and audio volume) will be reset to the factory values.

Output:

1 short signal = the ultrasonic sensor is active

2 short signals = the laser sensor is active

3 short signals = the ultrasonic- and laser sensors are active



Notice:

The laser sensor is in laser class 1. The laser is completely safe and not dangerous for the user!

Extract from the brochure „Information about laser safety“ (AUVA):

Safe laser devices. These are either safe because their output is very low, or because in normal operation they have a protecting casing which shields the laser outward.

The laser products in laser class 1 are not dangerous for the users.

1.5. CHARGING THE BATTERY – CHECKING THE BATTERY LEVEL

To charge the battery, connect the device via Micro-USB cable with a power socket. Alternatively, you can recharge your battery by connecting it to your PC. By doing so, you will hear the signal sequence „Battery Charging Started“. At the end of this operation, you will hear the signal sequence „Battery Charging Completed“. When the battery is fully discharged, the recharging process can take up to 2 hours.

To check the load status, press and hold button 2.

Battery status:

- 1 short signal = battery almost empty
- 2 short signals = battery half full
- 3 short signals = battery fully charged

To find out if Independent is already fully loaded, press and hold button 2 during the charging process. If the battery is still being recharged, you will get the „Battery Charging Started“-signal sequence. If the battery has been fully charged, you will get the „Battery Charging Completed“-signal sequence.



Notice:

To prolong the life span of the USB connection and USB port, we recommend good maintenance. Plug in the USB connector properly, thus ensuring that the USB plug fits correctly into the port. If the battery is completely discharged, the user settings (sensor mode ultrasonic and lidar, distance range and audio volume) will be reset to the factory values.

2. TROUBLESHOOTING

If the device does not function properly, connect your device to the included USB charger for at least one hour. Try switching on the device as usual.

Resetting the device to the factory settings

If Independent, despite fully charged battery, does not output any signal in case of obstacles or it does not react to button presses, it is advisable to reset the device to its factory settings. Take a suitable pointed object (e.g. a paper clip or wire).

Insert the wire into the small (1 mm) Reset hole in the top left corner on the reverse side of the device and press briefly. If you hear the start-up sound, your device is ready for operation again. If this reset procedure does not function, the device must be repaired. Therefore, please contact the manufacturer.

3. SAFETY INSTRUCTIONS

To guarantee safe usage and a long life span of Independent, please observe the following maintenance instructions:

- Do not open the device.
- Do not use Independent in heavy rain.
- Do not expose Independent to extreme temperature.
- Functional safety of Independent can only be guaranteed at temperatures between +0 and +40° Celsius:
 - Working temperature: -10 ~ +40 °C
 - Charging temperature: 0 ~ +40 °C
- Use Independent only in undamaged condition.
- If you use a different micro-USB cable or battery recharger than the ones delivered with this product, make sure that the electrical characteristics do not surpass 5V and the electric charge does not surpass 2.4A.

4. TECHNICAL DATA

Power supply:	1 x 3.7 V 160 mAh Lithium-Polymer battery
Dimensions:	42 x 25 x 15 mm, 21 mm with clip
Weight:	16 g
Storage temperature:	-5°C ~ +35°C
Operating temperature:	operating temperature: -10°C ~ +45°C charging temperature: 0°C ~ +45°C
Ultrasonic measuring angles:	80°
Laser measuring angles:	27°
Operating time:	- Ultrasound: up to 40 hours - Laser: up to 10 hours - Combined: up to 8 hours

5. GUARANTEE AND SERVICE

Guarantee starts as of the date of invoice receipt and covers:

- 24 months product guarantee
- 12 months accessories guarantee (accessories: power supply etc.)
- 6 months guarantee on wearing parts (e.g. battery)

If the device is eligible for repair under the device warranty, the manufacturer (CareTec) will repair or replace the device with a new one (if necessary) free of charge.

CareTec reserves the right to make any changes or improvements to its products without further notice.

In case of improper usage of the device –as immersion into chemically aggressive liquids, dropping the device, submitting the device to extreme temperatures or improper handling of the device –the warranty claim expires.

In case of a complaint or if repair is necessary, please get in touch with your distributor.

6. DISPOSAL OF USED ELECTRONICAL DEVICES



- Devices labelled with this sign are to be disposed of separately from ordinary household waste.
- Follow the local regulations when disposing of the device. Dispose of used devices according to the WEEE 2002/96/EC (Waste Electrical and Electronic Equipment) regulation. For further information, please contact your local authorities.
- Used and fully discharged batteries should be disposed of in designated collection containers, at a suitable recycling facility, or via an electrical retailer. You are required by law to dispose of used batteries.



Notice:

- Pb-Cd-Hg, these chemical symbols are found on contaminant-laden batteries:
 - Pb = contains lead ;
 - Cd = contains cadmium
 - Hg = contains mercury

7. SYMBOLS USED

	<ul style="list-style-type: none">▪ Warning
	<ul style="list-style-type: none">• Information
	Does not belong in household waste
	Information provided by the manufacturer

8. MANUFACTURER

Independent is a device developed by the company

CareTec International GmbH

CareTec has been developing and producing talking and tactile aids for the visually impaired, the blind and deaf-blind as well as the colour-blind ever since 1988. Devices produced by Caretec are sold by distribution partners all over the world:

Simple aids: AutoGraph Signature guide, Wooffy T. - Tactile battery tester, AuPair socks sorter, Sherlock braille label writer AMICO - Euro Cashbox, and the CashTest - Note and Coin Gauge with more than one million users in countries worldwide

Sophisticated products: High-quality tactile drawing board DraftsMan Standard, color and light measurement aids such as Colorino, talking kitchen and bathroom scales such as talking kitchen scale Vivienne, commercial and scientific pocket calculators such as Platon - Scientific Calculator, tag reader Foxy Reader Set, an ultrasonic sensor for detecting objects, Power-Max® talking battery charger, talking tape measure Talking Tape Measure, several Braille watches and white canes.

Earlier developments: The first blood glucose meter that can be used by the blind all on their own; Due to temporary production stop of the test strips this product is currently not available; resumption of production is planned. First German-speaking braille-organizer (resumption of production is not planned but can technically be resumed at any time; the market is currently saturated).

Awards: "Louis-Braille-Prize" awarded by the German Federation of Blind and Partially Sighted. "Winston Gordon-Prize" awarded by the Canadian Blind Union. First Mercur-Prize and five Mercur-acknowledgment awards by the Viennese Economic Chamber WKO.



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