

# User manual

# KK901





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## **Warnings and safety instructions**



- The battery in this product must comply with the relevant IEC safety standards for batteries.
- Do not consume or eat the battery as there is a risk of chemical burns.
- Keep new and used batteries away from children.
- If the battery compartment cannot be closed properly, discard the product, and keep it away from children.
- Read the intended use before using.
- The product is not water-resistant unless noted in product specification.

### **Contraindications**

In general, the product cannot be used if:

- The disabled client/patient is mentally ill.
- The disabled client/patient is critically ill.
- The client/patient is unable to use the transmitters.

### **Lifetime after mounting of the device**

The battery, if applies, must be replaced when the battery replacement information appears on the display and according to the user manual.

Lifetime is evaluated in relation to the pressure button. This is made according to the supplier's specification.

### **Lifetime battery (products using battery, only)**

KNOP calculates the life of the batteries. See specification in the user manual.

### **Intended use**

In general, the different variants of the medical device (transmitters/receiver system from KNOP Elektronik) are made as assistive aid for impaired/disabled patients to be able to call for assistance.

The various variants of the medical equipment consist of a combination of products (transmitter and receiver) designed to call for help to impaired/disabled patients; The transmitter-receiver system can be activated in different ways:

- For example, patients who actively do this and are aware that they are calling for help, such as e.g., people with walking difficulties who need help going to the toilet.
- Or disabled patients who are not aware that they are inadvertently putting pressure on the sendere.g. during a seizure.



- Or patients with intellectual and cognitive deficits who are not aware that a receiver is receiving a signal from their transmitter when they leave a house or room.

The system is not designed for critically or mentally ill persons.

**General product description**

The products manufactured by KNOP elektronik consist of several variants of transmitters and receivers that can be combined with each other. In addition, these products are used in combination with positioning and repeater systems.

These products are medical devices intended to call for assistance and are used for disabled/mobile people, such as those with walking difficulties who need help going to the toilet. The transmitters are activated, for example, by a sound or by pressure (e.g. by pressure with a finger or a breath through the mouth). The recipient is supervised by health care personnel or lay people in private homes.

The system is not designed for critically or mentally ill people.

Part of product	Function in the product system
Transmitter	The transmitter can send the signal obtained from the patient to the receiver monitored by the healthcare personnel or lay person. The transmitter products can be activated by button, sound, blow or movements.
Receiver	The transmitters can be coded into all the receivers and to several receivers at the same time. Some receivers also have a summon button for calling assistance from their coworkers.
Repeatersystem	If it is needed to cover a more comprehensive and larger area a repeater system is used. The repeater system also gives an increased functionality as e.g. that an alarm automatically is received at first at the healthcare person closest to the client.
Positionssystem	If a sender is equipped with a position receiver it can be used in connection with a Position system. Not all product variants include position receivers. Typically, it is seen in connection with nursing homes and security for patients with dementia. The receivers can be portable or stationary.



## ***Product description***

The product is designed to be placed close to the user's head, for example, so that the alarm can be activated by turning the user's head towards KK901.

KK901 can be used when the user cannot activate an alarm with a pull cord or push button.

KK901 can activate a KNOP 900 series wireless receiver.

Pay attention to the range as described in the section "Checking the coverage area".

## ***Commissioning:***

After installation, it is important that the user and staff test the product.

Staff should receive an alarm on their alarm device/receiver.

Refer to the user manual of the receivers used.

## ***Check the coverage area***

One person activates KK901 (as described above), while another person systematically walks around the area and makes a sketch of the building and the area where there is protection. The sketch is placed in the office so that anyone who needs to use the system can see where there is coverage. Outside the coverage area, alarms cannot be received.

The coverage area can be increased by using a repeater system from KNOP Elektronik.

Contact your dealer for more information.



## ***Service***

When the user activates KK901, it will flash a green light.

The recipient sends back a confirmation, after which KK901 lights up constantly in green, indicating that the transmission was successful.

If the transmission fails, KK901 lights up red and repeats the transmission up to two times at 30-second intervals.

## ***Location***

KK901 should be positioned so that the user can easily activate the ball on the switch.

For example, the child switch can be mounted on a gooseneck, contact your dealer for more information.



## **Battery alarm**

If the battery in KK901 is low, the receiver will display "Low battery" when an alarm is received from KK901.

## **Changing the battery**

The top and bottom of KK901 can be unscrewed without tools.



The battery is gently pushed out of the holder with the end of the for example a cotton swab or a match.

**Never use a metal object.**

Carefully insert the new battery into the holder **WITHOUT** using tools, as this may short-circuit the battery.

**Use a CR2477 battery. The device must be facing up.**

After replacing the battery, check the KK901 as described under "Testing and commissioning"

## **Cleaning**

The product can be cleaned with a moist cloth or a wet wipe.

## **Spare parts and accessories**

Spare parts and accessories can be ordered from Knop Elektronik A/S at [www.knop.dk](http://www.knop.dk).



## Technical data

<b>Frequency HF:</b>	869.2125 MHz
<b>Range:</b>	Up to 500 m of unobstructed view to an RX901B <sup>(1)</sup>
<b>Battery type:</b>	1 pc. CR2477, lithium 3V 950 mAh (KK900/901 before S/N 57028 used CR2354)
<b>Battery life (expected):</b>	Up to 5 years with 5 activations per day. <sup>(2)</sup>
<b>Low battery alarm:</b>	At approximately 1/3 of residual capacity.
<b>Surrounding environment:</b>	Indoor use. ≤ 90% non-condensing
<b>Ambient temperature:</b>	0°C to +40°C
<b>Cabinet type:</b>	White polyoxymethylene
<b>Cabinet dimensions:</b>	Ø: 43mm L: 106mm
<b>Thread for assembly:</b>	3/8"
<b>Density:</b>	IP40
<b>Connections:</b>	None, wireless communication.
<b>Weight:</b>	90g

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

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<sup>(1)</sup> Measured outdoors with an unobstructed view between transmitter and receiver. In buildings, the range is reduced.

<sup>(2)</sup> Expected battery life depends on usage and battery brand.



## Explanation of symbols and approvals

	<p><b>This product complies with:</b></p> <table border="0"> <tr> <td>Directive 2017/745/EU</td> <td>MDR</td> </tr> <tr> <td>Directive 1907/2006/EU</td> <td>REACH</td> </tr> <tr> <td>Directive 2011/65/EU</td> <td>RoHS</td> </tr> <tr> <td>Directive 2012/19/EU</td> <td>WEEE</td> </tr> <tr> <td>ISO 14971:2019</td> <td>Risk Management for Medical devices</td> </tr> <tr> <td>EN 301 498-1 V2.2.3</td> <td>Electro Magnetic Compatibility</td> </tr> <tr> <td>EN 301 489-3 V3.1.1</td> <td>Electro Magnetic Compatibility</td> </tr> <tr> <td>EN 50130-4:2011 + 2014</td> <td>Immunity alarm systems</td> </tr> <tr> <td>EN 300 220-1 V3.1.1</td> <td>Short Range Devices</td> </tr> <tr> <td>EN 300 220-2 V3.1.1</td> <td>Short Range Devices</td> </tr> <tr> <td>EN 300 220-3 V2.1.1</td> <td>Short Range Devices</td> </tr> <tr> <td>EN 60601-1-2:2014 + 2015</td> <td>Electromagnetic compatibility (Medical)</td> </tr> <tr> <td>EN 62368-1:2020</td> <td>Electrical safety</td> </tr> <tr> <td>EN 50581:2012</td> <td>Hazardous substances</td> </tr> </table>	Directive 2017/745/EU	MDR	Directive 1907/2006/EU	REACH	Directive 2011/65/EU	RoHS	Directive 2012/19/EU	WEEE	ISO 14971:2019	Risk Management for Medical devices	EN 301 498-1 V2.2.3	Electro Magnetic Compatibility	EN 301 489-3 V3.1.1	Electro Magnetic Compatibility	EN 50130-4:2011 + 2014	Immunity alarm systems	EN 300 220-1 V3.1.1	Short Range Devices	EN 300 220-2 V3.1.1	Short Range Devices	EN 300 220-3 V2.1.1	Short Range Devices	EN 60601-1-2:2014 + 2015	Electromagnetic compatibility (Medical)	EN 62368-1:2020	Electrical safety	EN 50581:2012	Hazardous substances
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	<p>The product must not be used if the packaging is damaged.</p>																												
	<p><b>Medical Device</b> Class 1, rule 1</p>																												
	<p><b>Manufacturer</b> KNOP Elektronik A/S, Fabriksvej 20, DK-7600 Struer, Denmark</p>																												
	<p>Read the manual(s) before installation and commissioning at <a href="http://www.knop.dk">www.knop.dk</a>.</p>																												
	<p>Interference may occur in an environment with equipment marked with this symbol.</p>																												
	<p>Must be protected against liquids.</p>																												
	<p>0 °C to +40 °C, temperature limit for transport/storage and use.</p>																												
	<p>The product must not be disposed of with normal household waste.</p>																												
	<p><b>Single Registration Number</b> DK-MF-000025631</p>																												
	<p><b>Unique Device Identifier</b> KK901: 05744002850397 KK901P: 05744002850373</p>																												
	<p><b>Product reference/product number/warning text.</b> KK901: Cheek switch KK901P: Cheek switch with position,</p>																												
	<p><b>Serial number</b> Placed on the product</p>																												
	<p><b>Ingress Protection Code</b> IP40</p>																												