



THIS MANUAL APPLIES TO THE SOFTWARE VERSION 3.X

# User manual for

# CT901-BED

Contains: CT901R, TX901, D4106011A\_8pin, Relay cable



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## Possible applications for CT901-BED:

CT901-BED can be used as a bedside monitor, giving an alarm if the user does not return to bed within a preset time. CT901-BED can also be switched on when the user leaves the bed, to reduce the risk of falls when it is dark in the room. If you want it to light up in the hallway or in the toilet, you can connect up to 5 CT901-BEDs. LS901, which are lit together with the CT901-BED.

CT901-BED has a relay output that is activated in case of an alarm and provides a connection to the existing alarm system.

## Quick guide for connecting the CT901-BED



1. Place the bed mat in the bed and connect it to TX901 transmitter.  
Open the screw on the back of TX901 and carefully tighten the cap to insert the batteries.
2. Place CT901R control unit in a wall socket so that it lights up.
3. Connect the relay cable to the control unit and to the existing alarm system.  
**Points 4 to 8 are factory set, if the units are purchased in a set (CT901-BED)**
4. Code TX901 with the control unit by entering the main menu (hold both arrow buttons for 3 sec)
5. Select Main Menu -> Transmitters -> Learn new then press Ent
6. When the display shows "Activate new transmitter" press the bed mat
7. Then decide how long the person can be out of bed before the alarm is sent.  
This is set under "Bed, timer" 0-99 minutes. (Set to 0 minutes from factory)
8. If you want the bed alarm to light up when the person gets up, set this under "Light, always"  
(Set to "No light" from factory)
9. Now the bed frame is ready to use

CT901-BED consists of:

- CT901R with relay output and light.
- TX901, transmitter for bed mat.
- Bed mat, D4106011A\_3.5jack, with 3m cord and 3.5mm plug.
- Relay cable, MK204, 3m, 3.5mm to 6.3mm jack.

See Getting started and setting up the CT901R on the next page.

See also TX901 User Manual.

## Start-up

When CT901R is shipped from the factory, the display is off.

CT901R is plugged into an electrical outlet, after which the display lights up.

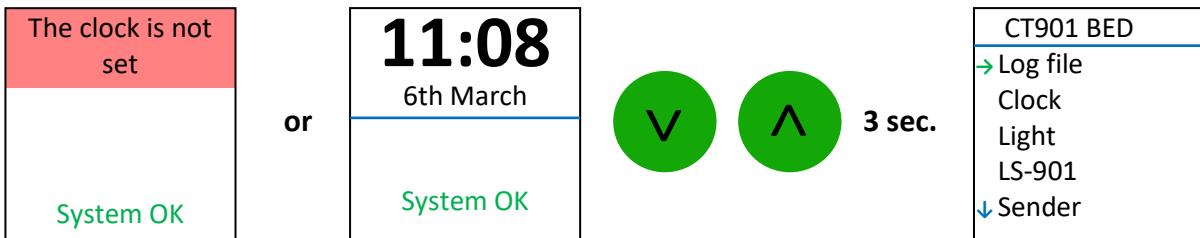
CT901R should be on at all times, so it should be mounted in a fixed electrical outlet.

CT901R has a built-in battery backup.

If the display shows "Clock not set", the clock should be set. See "Setting the clock" on page 4.

## General information about programming the CT901R

Enter the Main Menu by holding down both arrow buttons for 3 seconds



Then you can navigate up and down with the green arrow buttons.

A menu line is selected with **Ent**

"→" shows the active row.

"↓" at the bottom of the screen indicates that you can scroll further down.

"↑" at the top of the screen indicates that you can scroll further up.

"↔" shows that the value can be changed with the arrow buttons.

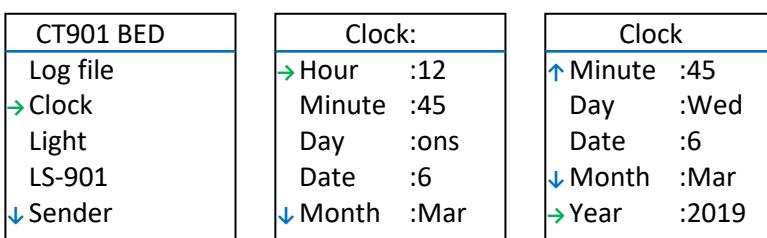
An entry is saved with **Ent**

You jump back to the previous menu with **Esc**

## Setting the clock

Enter the Main Menu by holding down both arrow buttons for 3 seconds.

Navigate to the "Clock" menu and press **Ent**. Then set the clock using the arrow buttons.



## Setting the light

The bedside guard can switch on the light when the user leaves the bed and switch it off a short time after the user returns to bed.

If the user does not wish to use the light, Max is set to 0%.

The Max value is factory set to 0%.

In the menu below, the brightness and the time the light should be on, after a transmitter has been activated, is set.

CT901 BED	Light
Log file	<b>The light goes out after:</b>
Clock	→ Min. : 0%
→ Light	Max. : 90%
LS-901	Minutes : 30
↓ Sender	

## CT901R paired coding with a "Light slave" LS901

If you wish to use the CT901R to light up an apartment, e.g. when a patient gets up at night, you can place up to 5 additional light slaves in different rooms, all of which light up when the patient leaves the bed.

In the main menu, select LS-901. Then you follow the following scheme.

CT901 BED	LS-901	LS-901 nr. 1	Add new #1	LS-901 nr. 1
Log file	→ LS-901 nr. 1	Empty	Put LS-901 in the mains socket and wait	ID:xxxxxx
Clock	LS-901 nr. 2	→ Add new	...	→ Add new
Light	LS-901 nr. 3			Delete
→ LS-901	LS-901 nr. 4			
↓ Sender	LS-901 nr. 5			

Press **Esc** to menu "LS-901" to encode more light slaves.

## Time management

If you only want to send alarms and turn on the light for a certain time, it can be set in "Time control".

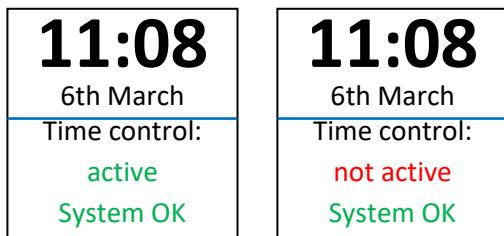
If time control is enabled, the alarm is triggered and the light is lit only during the specified time period from 21:00 to 11:00 in the example below.

For example, the user can go to bed and rest in the middle of the day without the light and alarm being activated when the person gets up.

If time control is not activated, the light is switched on and the alarm is activated as soon as the user leaves the bed.

CT901 BED	Time control
LS-901	For light and alarms:
Sender	→ Active Yes
→ Time control	From 21:00
System set.	To 11:00

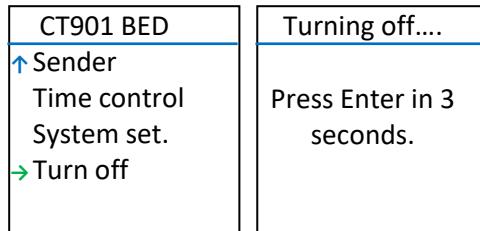
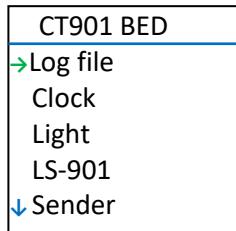
If Time Control is active, it is displayed in the Start menu as shown in the pictures below.



Time control is disabled by default.

## Switching off the device

CT901R can be switched off completely so that it is only activated by plugging it into an electrical socket.

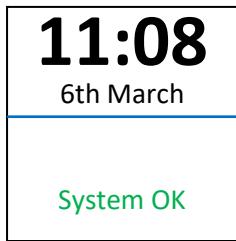


### Turning off....

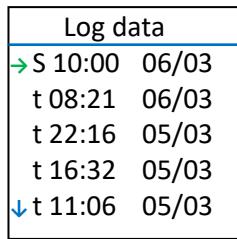
Press Enter in 3  
seconds.

## Log history

In the Start menu:



press and hold **Ent** for about 2 seconds, then you will enter the log:



It shows a list of the last 100 events, with type, time and date.

The last line shows "Delete log?" select the line with → and press **Ent** to delete the log.

Types of activities:

- S      Bed guard alarm.
- t      Have been out of bed for more than 8 minutes and come back within the set time.

## Programming/encoding of bed guard

The bed mat is placed in the bed under the sheet or bed mattress and connected to TX901 transmitter. You can attach the bed mat with tape, so that it does not move.

CT901R is placed in an electrical socket and MK204 relay cable is connected to the existing alarm system. The clock and any light must be set if you wish to use it.

### Co-encoding of TX901 and CT901R

Select "Main menu" => "Transmitters" => "Learn new" press Ent and activate the bed mat.

Then you can choose different settings:

Sender nr. 1
TX-900-1
Batt.: 2.83V
Bed guard
→ Light, time
↓ Alarm, time: 2

Light: move the green arrow downwards to " No light " and press Ent. Then use the arrow buttons to change the value.

The "No light" light never comes on.

"Light, time" means that the light turns on in the time period selected in Time Control, page 6.

"Light, always" the light is always on when the user leaves the bed.

The menu can also be accessed under "Main menu" => "Transmitters"

Bed, timer:

Here you can set how long the user can be out of bed before the bed alarm sounds.

Sender nr. 1
↑ Bed guard
Light, time
↓ Alarm, time: 2
→ Bed, timer
↓ Bedtimes

Move the green arrow to "Bed, timer" and press Ent.

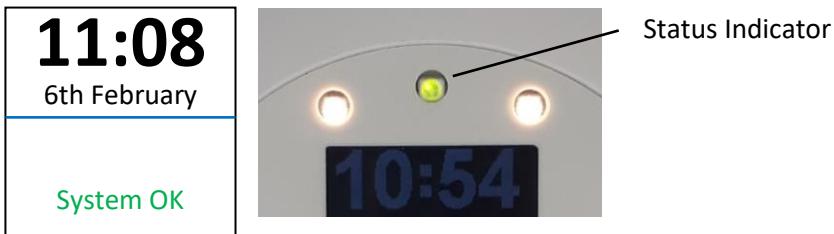
Select the value with the arrow buttons and confirm with Ent.

Return to the Start menu by pressing Esc.

## System test:

CT901R continuously monitors that everything is OK.

If everything is OK, the text "System OK" appears in green text at the bottom of the Start menu and the "Status Indicator" lights up green.



If the system finds a fault on CT901R or one of the encoded transmitters or LS901 devices, the "Status Indicator" changes from green to red and an error message with a red background is displayed. If there are multiple error messages, scroll with the up/down arrow.

The system tests the following elements:

- Voltage drop of 230 Vac.
- Bad or no battery in CT901R and encoded LS901 units.
- Bad battery in encoded Transmitters.
- No activity from Bed Guard (bed not left) for 50 hours.
- No contact with LS901 devices for 25 hours.

## Cleaning:

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

## Environment:

The product contains electronics and battery. When the product is used up, it must not be thrown away with normal household waste and must be recycled as electrical waste. If you don't know where you can dispose of your electrical waste, contact your local authority.



## Technical data CT901R:

<b>Operating voltage:</b>	230Vac.
<b>Connection:</b>	2-pole EURO contact.
<b>Backup battery:</b>	1 pc. Li-Ion 3,7V 1200 mAh
<b>Operating time on battery:</b>	<b>Without</b> light, about 15 hours. With light, approx. 3 hours.
<b>Frequency:</b>	869.2125 MHz
<b>Range:</b>	1500m at free sight to RX900B (**)
<b>Display:</b>	Graphic LCD.
<b>Menu language</b>	Danish, Norwegian, Swedish.
<b>Light source:</b>	LED, adjustable from 0 - 100 %. Approx. 100 lumen max
<b>Lightslaves:</b>	Connection of 5 additional LS901 light slaves wirelessly.
<b>Sender</b>	Encoding of 1st transmitter in Knop's 900/901 series.
<b>Log history</b>	Saves the last 100 events.
<b>Operating environment:</b>	Indoor use. <90% humidity
<b>Ambient temperature:</b>	0-40° C
<b>Cabinet type:</b>	White ABS
<b>Cabinet dimensions:</b>	Ø: 110 mm. Depth from wall: 52 mm.
<b>IP class:</b>	IP40
<b>Weight incl. Batteries:</b>	135g
<b>Clock deviation</b>	Maximum 1 minute per year.
<b>Accessories</b>	See <a href="http://www.knop.se">www.knop.se</a>

*\*\*) Measured outdoors with unobstructed view between transmitter and receiver.  
Indoors, the range is reduced.*

The right to make changes is reserved.

