



**Crdl**<sup>®</sup>

User Manual Crdl  
Model B110, version 2021.05.EN  
Interactive Care Instrument

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### Thank you

Thank you for using this Crdl.

This interactive care instrument has been designed, manufactured and tested with the utmost care.

Crdl is designed to create impactful connections between people. It provides a sensorial experience that explores the beauty of touch and sound.

As makers, we wish that Crdl will contribute in creating many beautiful contact moments between its users.

[www.crdl.com](http://www.crdl.com)



## Safety Precautions

**Please read all these instructions carefully, make sure you understand them and keep them for future use. Be sure to follow safety precautions to prevent fire, risk of electric shock and other damage.**

1) Immediately stop using the instrument in the case you notice any abnormal scent, heat, smoke or anything else unusual emitting.

2) Do not allow the instrument to get wet. Never submerge the instrument in water.

3) Do not drop the instrument and do not expose it to sudden impact.

4) Do not place the instrument in direct sunlight for long periods of time. Do not place the instrument nearby heaters. Avoid fluctuations in temperature or humidity of surroundings.

5) Do not let organic solvents (such as benzene, turpentine etc.) get in contact with the instrument. Please use a soft, dry cloth to clean the instrument.

6) Do not use the instrument in the vicinity of television, radio, or any electronic device nearby that may cause electromagnetic interference.

7) Do not try to open or disassemble the instrument yourself. Any attempt to do so will void the warranty. Always contact the supplier for technical support or maintenance.

## Disclaimer

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This device complies with EU Directive 2011/65/EU on the Restriction of Hazardous Materials. These limits require manufacturers to ensure that they do not use materials or components that contain restricted substances that may be harmful to the environment.



This device complies with EU Directive 2014/30/EU on Electromagnetic compatibility.



## Product Specifications

Dimensions	405 * 250 * 155 (l * w * h in mm)
Weight	2,9 kg.
Operating temperature Range	10 - 40 °C
Operating Humidity Range	40 - 60% relative
Operating Voltage / Power Consumption	3.7 V / 3.75 W
Battery type	Lithium-Ion
Battery Energy	21.6 Wh
Standby time on 1 battery charge	17 hours
Average operating time on 1 battery charge	6 hours
Battery charging time (empty to full)	4 hours
Protection rating	IP20

## Product Care

### Storage and Transportation

Store the Crdl in a dry location at room temperature, away from direct sunlight, preferably in the supplied shipping & storage crate you received it in.

### Maintenance and cleaning

Please use a soft slightly moistened cloth to clean the instrument. For disinfecting please use an anti-bacterial cleaning cloth (f.e. Dettol). Do not let organic solvents (like gasoline, white spirit etc.) get in contact with the instrument.

If the instrument has suffered surface damage like scratches or dents and you would like this to be repaired, please contact us at [info@crdl.com](mailto:info@crdl.com)

### Disposal and recycling

Obsolete electrical appliances must not be disposed together with other residual waste, but have to be disposed of separately. The disposal at the communal collecting point via private persons is free of charge. The owner of obsolete appliances is responsible for bringing the appliances to these or similar collecting points. With this little personal effort, you will contribute to recycling valuable raw materials and to the correct disposal of toxic substances.



## Material



The Crdl has been assembled out of high quality solid wood. Wood is a natural material that is subject to variation in grain, density and color by nature. External factors such as temperature, light and humidity can be of influence on the appearance and properties of the wood. The Crdl has been pre-treated during production with a wood-oil (Rubio Monocoat Pure) to help limit possible stains, scratches and moisture. Be sure not to expose the Crdl to direct sunlight for long periods of time or placing it in spaces that are subject to large fluctuations in temperature or humidity.

## Crdl concept

The Crdl is an interactive care instrument that translates touch between users into sound. It is designed to enable new forms of contact between people who have difficulty with communication or social interaction, such as people suffering from dementia, autism or mental disabilities and their caretakers, family members or friends. The Crdl invites users to engage each other by approaching physical contact in a playful and exploratory manner.

To translate touch into sound, it is important that a closed circuit is formed between users and the Crdl:

- 1) Two users both lay one hand on the opposing touchpad of the Crdl.
- 2) Whilst resting their hand on the touchpad, users touch each other (bareskin), thus closing a circuit.
- 3) The Crdl registers and recognises different forms of touch between users and translates these into sound / music fragments.

More users can join by simply adding them into the circuit, like links in a chain.



## Crdl concept

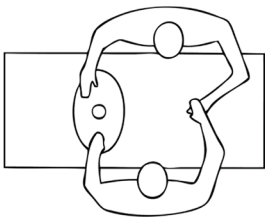


Fig. 1: Closed circuit concept - 2 persons

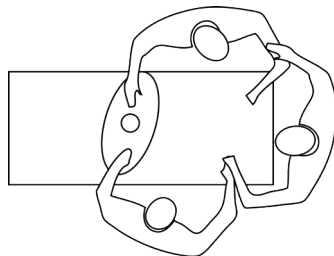


Fig. 2: Closed circuit concept - 2+ persons

## Crdl concept

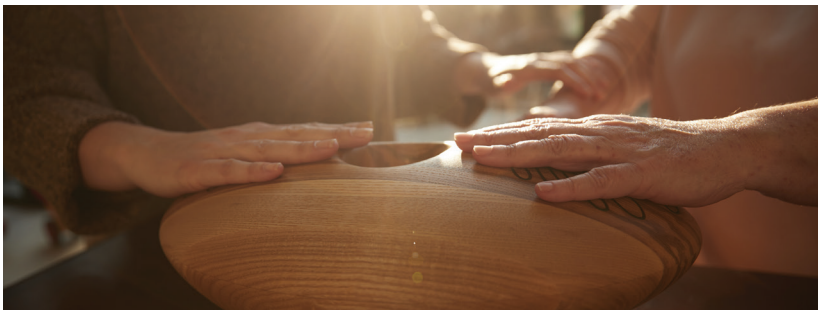


*Fig. 3a: Different kinds of (interpersonal) gestures that can be recognized by the Crdl.*

The intelligent software and electronics of the Crdl can recognize different ways of touch between users and translate them into sound. For example, users can make contact by: tapping, holding, stroking, tickling and kneading. Different ways of touch will generate different sound output.

Temperature and humidity of the surroundings can affect the workings of the Crdl, as can the hydration of the human body. In the case of a user with (very) dry skin, try applying moisturizing lotion to the skin prior to using the Crdl.

## Crdl concept



*Fig. 3b: A closed circuit is being formed when users place one hand on the touchpad of the Crdl and touch each other.*

## Crdl Control Panel

The control panel is located behind the wooden latch.

- 1) **ON/ OFF button + led.**
- 2) **Volume / Audio select.**
- 3) **Magnetic micro-USB charging port.**
- 4) **SD card.**

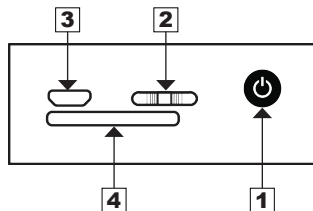


Fig. 4: Crdl Control Panel

## Crdl Operations

### 1. POWER ON

1. Press button 1. Green led will turn on.

The Crdl will start up in approximately 20 seconds. A threetone audio signal will play when the Crdl is ready for use.

2. Close the door and initiate a circuit.

### 2. VOLUME / AUDIOSELECT

Turn button 2 to the left for softer volume;  
Turn to the right for louder volume.

For selecting the next Crdl audio library, press button 2 once.

### POWER OFF

Press button 1 until a threetone audio signal is heard and then let go.

The Crdl will now close its system, led light will turn off.

### 3. CHARGING

The red led will indicate the Crdl needs charging.

Place the provided magnetic micro- USB cable in charging port 3, whilst the Crdl is turned off. The Crdl will be fully charged in 4 hours.

Attention: the micro usb cable can only be connected correctly in one way. Never force the cable in the charging port.

## Crdl Soundscapes

The Crdl comes with 5 different soundscapes pre-programmed. Each soundscapes consist of five sounds. These soundscapes are categorized by theme:

1. Sounds from nature: such as the sea, seagulls, running stream of water, etc.
2. Sounds from the city: such as bicycle bell, steam locomotive, church bell, etc.
3. Sounds from farm animals: such as chickens, cats, ducks, etc.
4. Sounds from musical instruments: such as piano, cello, citar, etc.
5. Soundscape theme. A dreamy underwater-world that can be explored together.

The first 4 soundscapes are loaded on the internal memory of the Crdl, the 5th is loaded on SD card. Users can load alternative sounds on the SD card as long as they are wav. files and named according to the description below. For more information on how to change sounds yourself, visit our website [www.crdl.com](http://www.crdl.com) or send an email to [info@crdl.com](mailto:info@crdl.com)

Please note that exact contents of provided soundscapes may vary over time.

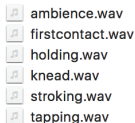


Fig. 5: Crdl custom wav.files files

## Recommendations for use

The Crdl offers new ways to engage in making contact. The following recommendations can help during the use of the Crdl.

1. Try to make use of the Crdl a recurring activity for its users. Embedding use of Crdl in the daily routine for users can help to deliver the optimal use of the instrument.
2. Actively offer visitors of nursing-homes the possibility to use the instrument during the visit to their loved ones.
3. Place the Crdl in such a way that it can be easily reached by all users. The Crdl can be placed on a table or comfortably on ones lap.
4. When using the Crdl, approach in a playful and exploratory way, without wanting to control the outcome too much. There is no right or wrong way to use the Crdl while engaging with each other.
5. Take notice how users react to both touch and sound and adjust your actions accordingly. Remember that spontaneity is encouraged.

EN

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