

# Circular Ring

## User Guide

**You can find the user guide in a digital version at [circular.xyz/user-guide](https://circular.xyz/user-guide)**

### English

Welcome! Your journey to better health starts here;

This startup guide will take you through all the steps to setup your Circular ring and App.

Please read the user guide carefully before using your ring, mobile app, and any other related services. Failure to follow the instructions below could result in product damage or malfunction, or even injury.

*Designed by Circular in Paris. Assembled in France.*

Your box includes at least:

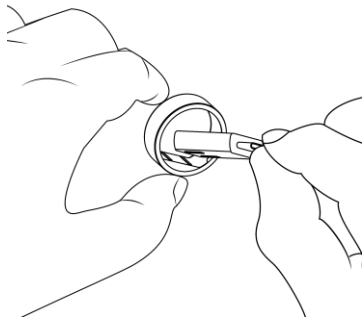
1x Circular ring

1x Charger

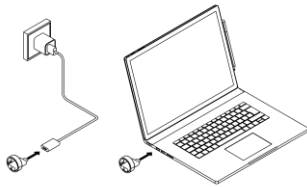
### Getting Started

#### Setup your Circular ring with your charger

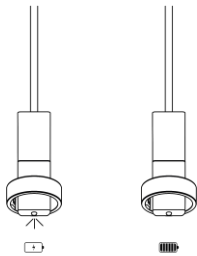
1. Charge your ring: You just received your new Circular Ring, congrats! You first need to wake it up by placing it on the charger. To do so, you need to take out the charger and place both magnetic pins on those located on your ring.



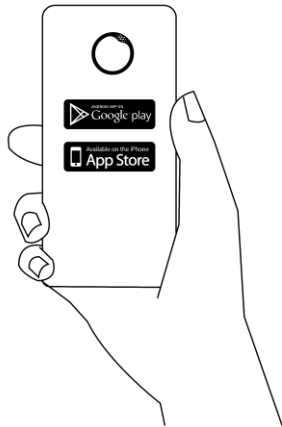
2. Understand charging: You can plug the charger into a power source (laptop, power bank, phone...). The connector needs to be USB-C.



3. Look out for the charger's LED: The LED of the charger will fade in and out when the ring is charging and the LED will turn off when the battery of the ring is full.



4. Install the app: Search for "Circular ring" on the App Store or Google Play. Once downloaded, follow the instructions to create an account and to pair your ring!



5. Once you have a ring paired with your account, you are all set! The ring will automatically start tracking your metrics as soon as it detects that you are wearing it. Don't forget that the ring is water resistant, suitable for rain, hand washing and showering.

To see your data in the app, make sure that a sync between the ring and the app has been done. You will see a loading bar appear 5 seconds after you connect to your ring. If it is not the case you can force a synchronization by swiping down on the home page.



### **Wear instructions**

You can wear Circular on any finger except the thumb. It is best to wear Circular on the fingers of your non-dominant hand. Eg: If you are right-handed, wear it on your left hand. The three middle fingers give the most accurate readings.

The flat part of the ring should be towards the palmar side of your hand. The button of the ring should be accessible with your thumb.

Finger size can vary through the day, your fingers may swell in the morning or evening.

The Circular ring can be worn in a shower, sauna, or when swimming.

### **Changeable Outer-shell materials**

Resistant and high-grade alloy of stainless steel and carbon with high-end coating.

### **Inner-shell materials**

Non-allergenic, nonmetallic clinical-grade biocompatible inner molding.

### **Charger materials**

High-end polymer.

### **Sensors**

- 3 LEDs Oximeter sensor: Infrared, Red, and Green. Red and Green LEDs are used in the visible color range. Infrared, Red, and Green LEDs are safe to the user and to the people around.
- 3-axis accelerometer
- Digital temperature sensor

### **Input and Output active component**

- Mechanical push button
- Vibration motor

### **Memory Capacity**

Flash ROM memory (up to 10 days) depending on type and frequency of use.

### **Battery**

Rechargeable 24 mAh - 31 mAh Li-Ion battery, non-replaceable.

### **Battery life**

Up to 4 days.

### **Charging**

45 min of charging.

### **Connectivity**

Bluetooth Low Energy 4.2 to 5.0. Encrypted communication is used between the ring and the app and the between the app and the cloud servers.

### **Firmware Update**

Automatic firmware updates via the Circular app. Bluetooth Secure DFU.

### **Waterproof**

- The ring is water resistant.
- The charger is not waterproof and is intended for indoor use only. Do not use or store the charger in humid environments.

### **Ring size & characteristics**

- 8 sizes: from 6 US to 13 US
- 9 mm large x 2.75 mm wide
- 4-5 grams

### **Operating temperature**

-10°C / 45°C

- charging temperature 10°C - 45°C
- discharging temperature 20°C - 60°C

### **Charger input connector and voltage**

- USB Type-C connector 5V
- If you use an extension cable to charge the ring, please use the one sold on the Circular website.
- The charger shall be supplied by a power source that shall meet the standard for limited power supply.

### **Certifications**

- Bluetooth SIG
- CE
- FCC part 15 Class B digital device
- IC
- UKCA
- RCM
- ROHS

## Regulation

Dispose of the ring and internal battery in accordance with applicable laws and regulations. Special handling may be required. The charger is an electronic device and local legislation for electronics recycling should be followed.

## Circular mobile app availability

- iPhone app on App Store
- Android app on Google Play

## Circular mobile app compatibility

Please see [circular.xyz/compatibility](https://circular.xyz/compatibility)

## Features

- Smart Alarm with vibrations
  - Wake Up score
- Sleep analysis
  - Sleep quality score
  - Chronotype
  - Total sleep duration
  - Real sleep duration
  - Disturbances
  - Tranquility
  - Circadian rhythm
  - Sleep stages including deep and rem sleep
  - Sleep latency
  - Sleep debt
- Activity analysis
  - Energy score
  - Active minutes
  - Steps
  - Distance
  - Total calories burned
  - Cardio points
  - VO2 max estimate
  - Max heart rate
  - Body recovery
  - Activity volume
  - Resting heart rate
  - Heart rate

- Breathing rate
  - Blood oxygen
  - Heart rate variability
  - Temperature variation
- Live measurement
  - Heart rate
  - Heart rate variability
  - Blood oxygen
- Guided breathing

## Care and maintenance

In case the ring gets stuck on your finger:

1. Use cold water and soap and slowly twist the ring to remove it.
2. Hold your hand up above your heart until the blood pressure lowers and then try to remove your ring.

In order to clean your ring, use a soft cloth or hand wash with mild soap and water.

Keep the ring away from children. Do not leave the ring exposed to heat, such as in a vehicle under the sun.

The changeable Outer-shells may get scratches against harder metal jewelry or other objects in close contact made of harder materials.

Like with all rings made of metals, be careful when handling batteries when you are wearing the ring. If the electrodes of a battery are in contact with the ring, the battery may short circuit.

## Determining your current battery level

You can check the level of your battery by logging into your Circular app and looking at the top-right corner of the home page. If your ring is on the charger and is fully charged, the charger LED will be off.

IMPORTANT NOTE: If your ring has reached 0% battery, please connect to your ring with the app. If you don't do it, your ring won't acquire data.

## Charging your Circular ring

IMPORTANT NOTE: If your ring has reached 0% battery, please connect to your ring with the app. If you don't do it, your ring won't acquire data.

The Circular ring is held magnetically to the charger. To charge your Circular ring:

1. Place the magnetic contact pins from your Circular ring on the charger's pins.
2. Plug the charger dongle into a USB-C port on your computer or an adaptor on any plug.
3. If charging works then the led of the charger should blink. Your ring is fully charged when the led stops blinking.

Some pro tips for charging success:

1. Try placing the ring on the charger first, then plugging in the USB port. If you do not see the LED come on, try lightly moving the ring on the charger.
2. Try taking the ring off the charger and then putting back.
3. If you still do not see the LED, try flipping the ring 180 degrees (like spinning a penny, not rotating like a wheel) so the opposite charging contact connects. If you still do not see the LED, try cleaning the contact pins of your charger and your ring using warm water and soap, then drying with a soft cloth.
4. If you still do not see the LED, try a different power source or other adapter/charger.
5. When charging a Circular device using a wall outlet, it is recommended that a premium brand AC adapter should be used. Some off-market adapters will prevent the ring from reaching the charging state.
6. Charge your ring at room temperature. Avoid charging in your cold car, garage, or a room that is too hot.
7. After a firmware update, the battery display in your Circular app can be off. To make sure the displayed battery charge is accurate, please fully charge your ring again.

### **Airports, Secure Buildings, Magnetic Scans**

The magnetic field created by metal detecting gates present at airports or entrances to secure buildings are known to harm electronic equipment, such as laptops, cell phones and the Circular ring. Security wands create the same magnetic pulse and can also damage your devices. Even a single exposure can impact your devices in a way that's not immediately visible. It is recommended to send all your electronic devices through the x-ray scanner with your carry-on.

## **Accuracy**

Circular tests accuracy against medical grade gold standard device while building each of the tracked metrics. Pulse oximeter for SpO2, holter monitor for heart metrics and foot pods which are the best source of “truth” for Steps.

### **Factors That May Impair Data Accuracy**

#### *Sport sessions*

For certain exercises, such as Crossfit, weightlifting or riding a bike, it may be difficult to auto-detect sport sessions. This is because when you’re lifting heavy weights for an extended period of time or gripping something tightly, it’s more difficult for the heart rate sensor to get a clear reading. This is because the sensor is being pushed against your skin which becomes compressed and harder to see through.

It is recommended to turn the flat part of the ring on the top of your finger during an activity as Crossfit, weightlifting or riding a bike.

Another factor that can impair signal quality is temperature, as in cold weather blood can retreat from your fingers, which can also make it difficult for the heart rate sensor to get a clear reading.

#### *Heart metrics*

Regarding heart metrics, Circular will only report average measurements per minute, so if the max HR is not sustained over a span of a minute or so, the minute average for that time will be lower than what other trackers can report, as they can report HR with higher temporal resolution.

There is a trade-off between higher temporal resolution and battery life.

#### *Steps during transportation*

The vibrations of your transportation on the road or on the rail line may sometimes transfer to your hand and look like steps to the ring. Especially when your ring-wearing hand is resting on the door, window or the steering wheel.

### **Requirements for Use of the Circular Services**

The full Circular experience requires Circular products, internet access to the Mobile App and Websites, and other required software (if any). Periodic updates to any of these elements may be required for improved performance, and the performance of the whole may be affected by the performance of any of these elements. You are responsible for obtaining your own internet access and mobile device to access the Circular Services.

## Privacy

- GDPR & HIPAA compliant
- Data encryption, secure pairing of the ring and the app

## Support and Questions

If you have any questions about getting started with or using your ring, mobile app, and any other Circular services, or you have any issues with your product, please refer to the FAQs at [circular.xyz](https://circular.xyz). If you can't find what you are looking for, send us an email at [support@circular.xyz](mailto:support@circular.xyz).

## Safety Information

Please note that Circular is not intended to diagnose, treat, cure or prevent any disease or medical condition without the assistance of a health professional. The information and guidance provided by Circular are there for informational purposes only and cannot replace the services of health professionals or physicians. You should always consult a health professional if you have any questions regarding any changes you intend to make to your sleep or activity or regarding a medical condition. Never disregard professional medical advice or delay in seeking it because of something you have read through Circular services.

Circular is not responsible for any health problems that may result from information or guidance you learn through the Circular services. If you make any change to your sleep or activity based on the Circular services, you agree that you do so fully at your own risk.

Please be cautious that the ring or any other Circular product you are wearing does not get caught on fixed structures or heavy objects when moving or moving heavier objects.

If you experience redness or skin irritation on your finger due to the ring or any Circular product, remove it immediately. If symptoms persist longer than 2-3 days of not using your Circular product, please contact a dermatologist.

The inside of the Circular ring is medical grade biocompatible and gold plating on the charging contacts. There is no nickel in contact with your finger in the Circular ring.

## Warranty Disclaimer

Except for the limited warranty for the Circular product set forth below, the Circular services are provided by Circular and its affiliates "as is."

Neither Circular nor its partners, suppliers, or affiliates make any representations or warranties of any kind, express or implied, as to the operation of the Circular services (including the Circular products), its contents, or any information made available by or through the Circular services. In addition, Circular and its partners, suppliers, and affiliates disclaim all warranties with respect to the Circular services (including the Circular products), express or implied, including but not limited to the implied warranties of merchantability, title, fitness for a particular purpose, and non-infringement. Furthermore, Circular does not warrant that use of the Circular services will be uninterrupted, available at any time or from any particular location, secure or error-free, that defects will be corrected, or that the Circular services (including any Circular product) are free of viruses or other potentially harmful components.

Limited warranty for the Circular product, for example, the ring. Circular warrants to the original end-user purchaser that the Circular product is free from defects in material and workmanship for one (1) year from the date of purchase. If your local law in effect at the time of purchase requires a warranty period longer than one (1) year, this warranty shall be extended to the extent required by such law. Within the warranty period, Circular shall repair or replace at no charge to you any components of the Circular product that fail the limited warranty provided. You shall be responsible for any related transportation charges. Replacement products may be new or refurbished at our discretion. This limited warranty does not apply to (i) normal wear and tear, including scratches and dents; (ii) consumable parts included in the Circular product, such as batteries, unless product damage has occurred due to a defect in materials or workmanship; (iii) damage resulting from your failure to use the Circular product in accordance with the instructions accompanying the Circular product or available at the website; (iv) damage resulting from an accident, flood, fire, misuse, or abuse; (v) damage resulting from service performed, or damage resulting from tampering or alterations to the Circular product, by anyone not authorized by Circular; or (vi) use of the Circular product with any other application or software than the mobile app.

Circular retains the exclusive right to repair or replace the Circular product, or offer a full refund, at its sole discretion. Such remedy shall be your sole and exclusive remedy for any breach of warranty. Warranty repairs and replacements have a new warranty which is the longer of ninety (90) days or the balance of the original one (1) year warranty.

### **Limitation of liability**

In no event will Circular or any of its affiliates be liable for direct, indirect, incidental, punitive, or consequential damages (including without limitation those resulting from lost profits, lost data, or business interruption) arising out of the use, inability to use, or the results of the use of the Circular services, whether such damages are based on warranty, contract, tort or any other legal theory and whether or not Circular has been advised of the possibility of such damages. The aggregate liability

of Circular, arising from or relating to the Circular services (regardless of the form of action or claim, e.g. Contract, warranty, tort, strict liability, negligence, or any other legal theory) is limited to €100. Circular's affiliates, providers, and partners have no liability whatsoever arising from the website. In some locations, applicable law may not allow certain of the limitations described above, in which case such limitations will apply to the maximum extent allowed by such applicable law.

## **Terms of use**

Your use of the Circular products and services is subject to our Terms of Use, available at [circular.xyz/terms-and-conditions](https://circular.xyz/terms-and-conditions), and Privacy Policy available at [circular.xyz/privacy-policy](https://circular.xyz/privacy-policy).

## **Intellectual Property Rights**

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Manufactured by Circular.

## **Regulatory & Safety Notices**

USA: Federal Communications Commission (FCC) statement.

This device complies with FCC part 15 FCC Rules. Operation is subject to the following two conditions:

1. This device may not cause harmful interference and
2. This device must accept any interference received, including interference that may cause undesired operation.

### **FCC Warning**

Changes or modifications not approved by Circular could void the user's authority to operate the equipment.

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful

interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna
- Increase the separation between the equipment and receiver
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

This device meets the FCC requirements for RF exposure in public or uncontrolled environments.

FCC ID: 2A8NL-CIRCULAR110

#### Canada: Industry Canada (IC) statement

This device meets the IC requirements for RF exposure in public or uncontrolled environments.

IC Notice to Users in accordance with RSS GEN Issue 3:

This device complies with Industry Canada license-exempt RSS standard(s).  
Operation is subject to the following two conditions:

1. this device may not cause interference, and
2. this device must accept any interference, including interference that may cause undesired operation of the device

IC ID: 29243-CIRCULAR110

#### European Union (EU)

This product is compliant with Directive 2012/19/EU. Please dispose used electrical and electronic equipment (WEEE) according to national laws and regulations with electrical waste. It should not be mixed with general household waste.

#### Australia and New Zealand

Compliant with the standard R&TTE 99/CE/05 Australia and New Zealand R-NZ

## French

### **Avis de réglementation et de sécurité**

#### États-Unis : déclaration de la Federal Communications Commission (FCC).

Cet appareil est conforme à la partie 15 des règles de la FCC. Le fonctionnement est soumis aux deux conditions suivantes :

1. Cet appareil ne doit pas causer d'interférences nuisibles et
2. Cet appareil doit accepter toute interférence reçue, y compris les interférences pouvant entraîner un fonctionnement indésirable.

#### Avertissement de la FCC

Les changements ou modifications non approuvés par Circular pourraient annuler le pouvoir de l'utilisateur d'utiliser l'équipement.

Remarque : Cet équipement a été testé et jugé conforme aux limites d'un appareil numérique de classe B, conformément à la partie 15 des Règles de la FCC. Ces limites sont conçues pour fournir une protection raisonnable contre les interférences nuisibles dans une installation résidentielle. Cet équipement génère, utilise et peut émettre de l'énergie radiofréquence et, s'il n'est pas installé et utilisé conformément aux instructions, peut causer des interférences nuisibles aux communications radio. Cependant, il n'y a aucune garantie que des interférences ne se produiront pas dans une installation particulière. Si cet équipement cause des interférences nuisibles à la réception de la radio ou de la télévision, ce qui peut être déterminé en éteignant et en allumant l'équipement, l'utilisateur est encouragé à essayer de corriger les interférences par une ou plusieurs des mesures suivantes:

- Réorienter ou déplacer l'antenne de réception
- Augmenter la séparation entre l'équipement et le récepteur
- Connecter l'équipement à une prise sur un circuit différent de celui auquel le récepteur est connecté.
- Consulter le concessionnaire ou un technicien radio/TV expérimenté pour obtenir de l'aide.

Cet appareil répond aux exigences de la FCC en matière d'exposition aux RF dans des environnements publics ou non contrôlés.

NUMÉRO FCC: 2A8NL-CIRCULAR110

### Canada : Déclaration d'Industrie Canada (CI)

Cet appareil répond aux exigences des circuits intégrés pour l'exposition aux RF dans des environnements publics ou non contrôlés.

Avis IC aux utilisateurs conformément au numéro 3 de RSS GEN :

Cet appareil est conforme aux normes RSS exemptées de licence d'Industrie Canada. Le fonctionnement est soumis aux deux conditions suivantes :

1. cet appareil ne peut pas causer d'interférences, et
2. cet appareil doit accepter toute interférence, y compris les interférences pouvant entraîner un fonctionnement indésirable de l'appareil

ID IC: 29243-CIRCULAR110

### Union européenne (UE)

Déclaration de conformité à la directive européenne 1999/5/CE

Circular est autorisé à apposer le marquage CE sur CIRCULAR RING ONE, déclarant ainsi la conformité aux exigences essentielles et autres dispositions pertinentes de la directive 1999/5/CE et d'autres directives applicables.

### Australie et Nouvelle-Zélande

Conforme à la norme RCM Australie et Nouvelle-Zélande R-NZ