

# PowerPlug FAQ Doc

## FAQ DOCUMENT

### General Information

#### What are PowerPlugs?

Ultrahuman, a pioneer in wearable technology, launches PowerPlugs, a platform for individual apps and plugins built on top of Ultrahuman's health and wellness data stack. This is the world's first in a smart ring form factor.

Recognizing each individual's health journey is unique, PowerPlugs enable you to choose and focus on the aspects of your health that matter most. It's designed for highly personalized health insights, ensuring that you can personalize your health tracking to your unique needs and goals.

#### How to use PowerPlugs?

To activate PowerPlugs, you can tap the "Activate more PowerPlugs" icon on the ring homepage. You can then browse the available options and tap "get" next to the PowerPlug you want. In case this is a paid subscription, you will be redirected to the app store to enter the payment details.

#### What PowerPlugs are available on the app?

PowerPlugs include:

- **Circadian Rhythm**
- **Pregnancy Insights**
- **Cycle Tracking**
- **Caffeine Window**
- **Vitamin D**
- **Jet Lag (Coming Soon)**
- **AFib Detection**
- **Weight Loss (Coming Soon)**
- **Ovulation (Coming Soon)**
- **Caffeine Window**
- **Cardio Adaptability**
- **Screen time (Coming Soon)**

More PowerPlugs are being developed and will be available soon.

**Is this available for R1 also?**

Yes, PowerPlugs are specifically designed for the Ultrahuman Ring and can be used with the R1 as well.

**Why is this a paid subscription?**

The development and maintenance of PowerPlugs involve advanced algorithms and continuous updates to provide personalized health insights. PowerPlugs are available in both free and premium versions. The subscription fee applies only to certain PowerPlugs, which offer specialized insights and features that are niche use cases. This allows users to enjoy the essential functionalities while opting for additional, more specialized features as needed. The support through subscriptions helps us sustain ongoing enhancements and ensure the delivery of high-quality and accurate data across both access levels. This approach allows us to further develop features and expand accessibility while maintaining our commitment to providing valuable health insights.

**What if I use it for a month and feel like it is not helping?**

Each PowerPlug includes a trial period — 7 days for a yearly subscription and 3 days for a monthly subscription — allowing you to test its effectiveness. This gives you the opportunity to try it out and decide if it meets your needs.

**Can I customize which PowerPlugs are active at the same time?**

Yes, you can choose and activate multiple PowerPlugs based on your health goals and needs, customizing your health insights accordingly.

**Are there any special features for athletes or fitness enthusiasts?**

Yes, PowerPlugs like Caffeine Window, Cardio Adaptability, and Weight Loss provide insights and recommendations tailored to enhance athletic performance and support fitness goals.

**What is the difference between the free and premium options?**

The free option provides essential health tracking and insights, while the premium subscription offers advanced features like AFib Detection, personalized jet lag plans, and other specialized PowerPlugs. Our premium subscription offers additional features such as AFib Detection and personalized jet lag plans, designed to cater to specific health insights that may not be necessary for all users. For example, frequent travellers might find personalized jet lag plans particularly useful in managing their travel schedules effectively.

The ring will retain the essential tracking of markers like Heart rate, sleep, movement index etc but personalized tracking can be achieved through a subscription.

## Specific PowerPlugs FAQ

**What is AFib Detection?**

This PowerPlug discreetly monitors your nocturnal heart rhythm every night to detect early signs of Atrial Fibrillation (AFib). It helps prevent strokes and heart issues through proactive monitoring and daily medical-grade reports. Powered by FibriCheck (TBC by Legal) .

**Is AFib Detection available everywhere?**

AFib Detection is available in these geographies: Australia, Europe, Singapore, UAE, UK and Saudi Arabia.

**Can this PowerPlug be used to monitor chronic conditions?**

Yes, PowerPlugs like AFib Detection offer tools to monitor and manage chronic conditions such as arrhythmia and cardiovascular health. However, it is best to work with your healthcare provider to understand the data and its implications better.

**What does the Circadian Rhythm PowerPlug do?**

Understanding the importance of aligning with natural circadian rhythms, the Ring AIR provides actionable recommendations tailored to your lifestyle. The circadian clock has four different phases; namely Circadian Dead Zone, Phase Advance Zone, Phase Delay

and Minima. This is depicted through a phase response curve on the Ultrahuman App. This curve describes the relationship between a stimulus, such as light exposure, food and exercise mapped to a response, in this case, a shift in circadian rhythm.

These suggestions include the optimal times to expose yourself to natural light, exercise, and wind down in the evening, aiming to enhance your energy levels, improve sleep quality, and bolster your overall health.

### **Is the Circadian clock dynamic and adjusts on a day to day basis?**

The Circadian feature on the app includes four zones designed to help you align your body clock. These zones are determined by your body's lowest temperature during sleep, known as the minima. As you follow the routines and your body adjusts to its natural clock, these zones will shift accordingly. We use a 7-day baseline to establish these zones, and if there is a significant change in your sleep schedule, your baseline will shift as well. Consequently, the timings of your zones will also adjust, making them dynamic and responsive to your sleep patterns.

### **How does the Circadian Rhythm PowerPlug improve sleep quality?**

The Circadian Rhythm PowerPlug enhances sleep quality by analyzing your individual sleep patterns in relation to your natural biological clock. It helps regulate your sleep-wake cycles by suggesting optimal times for sleep onset and waking up. Additionally, it provides personalized recommendations on light exposure and bedtime routines, aiming to align your sleep habits with your circadian rhythm for better overall sleep quality.

### **What is the Caffeine Window PowerPlug?**

The Caffeine Window PowerPlug is designed to help users in managing the effects of stimulants, such as caffeine, on their body. It offers personalized insights and recommendations to optimize energy levels and enhance performance throughout the day. By analyzing individual responses to caffeine intake, this feature helps users make informed decisions about when and how much caffeine to consume, aligning with their daily routines for optimal results.

**Is the Caffeine window feature dynamic and adjusts basis my data gathered during the day/previous night's sleep?**

Yes, these recommendations are based on your sleep timings. We consider your sleep patterns to provide suggestions that help you stay focused and productive while maintaining a healthy circadian rhythm.

**What is the Vitamin D PowerPlug?**

This tool manages Vitamin D intake through sun exposure, calculating optimal times based on skin type, location, and UV index. This is based on the user's location to ensure tailored suggestions that are relevant to an individual.

**How does the app calculate the best times for sun exposure?**

The app calculates optimal sun exposure times based on your skin type, location, and current UV index, ensuring safe and effective Vitamin D intake.

**How does the Caffeine Window PowerPlug help improve sleep?**

Track and optimize your consumption of stimulants such as caffeine throughout the day. By understanding your body's response to different stimulants, this tool advises on the best times for consumption to boost your alertness without affecting your nightly rest. Ideal for maintaining high energy levels and ensuring restful sleep.

**What benefits does Cycle Tracking offer?**

Cycle Tracking offers a comprehensive overview of your menstrual cycle phases and predicts upcoming cycles with high accuracy. This tool provides personalized insights into your fertility windows and symptom patterns, enabling proactive health management and lifestyle adjustments. Empower yourself with knowledge to make informed decisions about your reproductive health.

**How does the Ovulation PowerPlug assist women?**

It helps women understand their ovulation cycles, identify fertile days for conception, and monitor menstrual health.

**How can the Ovulation feature help with conception?**

The Ovulation PowerPlug helps to identify your most fertile days, helping you plan for conception by providing accurate ovulation detection and fertility window predictions.

**What health metrics does Pregnancy Mode track?**

Pregnancy Mode tracks metrics such as sleep patterns, movement, heart rate (HR), heart rate variability (HRV), temperature, and resting heart rate (RHR), providing tailored insights for each trimester.

**How does the Jet Lag PowerPlug work?**

The Jet Lag PowerPlug provides personalized plans to help you adjust to new time zones. It uses strategies such as light exposure, melatonin supplements, caffeine intake, and naps to minimize the effects of jet lag and help you reset your internal clock efficiently.

**Is the Jet Lag plan customized for each trip?**

Yes, the Jet Lag PowerPlug provides customized plans based on your travel itinerary, sleep patterns, and chronotype, helping you adjust to new time zones efficiently.

**How does the Jet Lag feature help with travel?**

The Jet Lag PowerPlug offers personalized strategies involving light exposure, melatonin supplements, caffeine, and naps to minimize the effects of jet lag and reset your internal clock.

**What features does the Weightloss PowerPlug offer?**

It integrates meal planning with real-time glucose monitoring, tracking calories burnt and

syncing with automated food logging for a comprehensive view of calorie intake vs. expenditure. A periodic trend in this feature can be used to help with weight loss over time.

#### **How does the Weight Loss feature integrate with meal planning?**

The Weight Loss PowerPlug integrates meal planning with real-time glucose monitoring, providing a comprehensive view of calorie intake vs. expenditure. It syncs with automated food logging to help users maintain a balanced diet.

## **Additional Questions- Need answers for this**

What is cardio adaptability? How does it help?

Cardio Adaptability refers to the heart's ability to adjust its function in response to varying physical demands, stress levels, and environmental conditions. It reflects how effectively the heart can change its rate and strength of contractions to meet the body's immediate needs for blood and oxygen.

The importance of Cardio Adaptability lies in its role in overall cardiovascular health and resilience. A heart with good adaptability can efficiently increase its output during activities such as exercise, and quickly return to a resting state afterwards. This flexibility helps to reduce the strain on the heart over time, lowers the risk of cardiovascular diseases, and enhances recovery from physical exertion. Moreover, strong cardio adaptability is associated with better management of stress and longer life expectancy. Maintaining high cardio adaptability is crucial for sustaining long-term heart health and improving quality of life.

Get a detailed cardio adaptability report each morning. The Ring continuously monitors your heart's performance overnight, enabling accurate assessment of your heart's adaptability. Based on your nightly heart trends, visualized through tachograms and Lorenz plots, you can expect one of several comprehensive evaluations.

How can I improve my cardio adaptability?

#### **8. Maintain a Heart-Healthy Diet:**

- **Eat a Balanced Diet:** Focus on fruits, vegetables, whole grains, and lean proteins.
- **Limit Sodium:** Excessive salt can increase blood pressure and strain your heart.
- **Reduce Caffeine and Alcohol:** Both can aggravate heart rhythm irregularities in some individuals.

#### **9. Exercise Regularly:**

- **Aerobic Exercise:** Engage in moderate aerobic activities like walking, swimming, or cycling.

- **Strength Training:** Incorporate strength training exercises to improve overall cardiovascular health.
  - **Consult Your Doctor:** Ensure your exercise regimen is safe given your specific condition.
10. **Manage Stress:**
- **Practice Relaxation Techniques:** Use mindfulness, meditation, or yoga to reduce stress.
  - **Prioritize Sleep:** Aim for 7-9 hours of quality sleep each night.
11. **Avoid Stimulants:**
- **Limit Stimulants:** Avoid over-the-counter stimulants like cold medicines that can trigger arrhythmias.
  - **No Smoking:** Quit smoking to improve heart health and reduce the risk of irregularities.
12. **Stay Hydrated:** Proper hydration helps maintain blood volume and pressure, aiding heart function.
13. **Monitor Your Heart:**
- **Use Monitoring Devices:** Devices like the Ultrahuman Ring Air can track your heart's activity and provide valuable insights.
  - **Regular Check-Ups:** Schedule regular appointments with your healthcare provider to monitor your condition.
14. **Understand Your Triggers:** Identify and avoid specific triggers that may cause your heart irregularities, such as certain foods, stress, or lack of sleep.
15. **Follow Medical Advice:** Adhere strictly to your healthcare provider's recommendations, including taking prescribed medications on schedule.

Can I use the Vitamin D power plug without giving access to location?

No. This is required.

Why is PowerPlug a paid subscription? (We have an answer written to it, but let's get a better one from product team)

7. **Advanced functionality:** Paid PowerPlugs often provide more sophisticated features and in-depth analysis, requiring more complex algorithms and development.
8. **Personalization:** Premium PowerPlugs typically offer highly tailored insights and recommendations, which demand more resources to deliver accurately.
9. **Continuous improvement:** There's ongoing research, development, and updates to ensure the technology remains cutting-edge.
10. **Specialized expertise:** Certain PowerPlugs, like AFib Detection, may involve medical-grade technology and require regulatory approvals, increasing their development and maintenance costs.
11. **Value proposition:** Paid PowerPlugs often provide significant value to users in terms of health insights and potential early detection of health issues.
12. **Resource intensity:** Some PowerPlugs may require more computational power or data analysis, making them more expensive to operate and maintain.



13. Optional enhancement: By offering both free and premium options, Ultrahuman allows users to choose the level of health tracking that best suits their needs and budget.

While Ultrahuman offers a range of free PowerPlugs to provide value to all users, the premium options allow those who want more advanced features to access them, supporting the platform's growth and development.

How long do I have to use the ring to get this data to show up?

This depends on each PowerPlug.

Can I not have both cardio adaptability and Afib switched on at the same time?

No, we don't support that today.

Do I need to keep my internet and bluetooth switched on all night for cardio adaptability and Afib reports to be generated?

Your ring needs to be connected to the app in order for it to take background heart measurements. For your ring to be connected to the app, you will need internet and bluetooth connection to be switched on overnight.

How is cardio adaptability different from Afib?

Cardio Adaptability vs. AFib PowerPlug: Understanding the Difference

### Cardio Adaptability

Cardio Adaptability is designed to provide insights into your cardiovascular trends and how well your heart adapts to various physical activities and stressors. This PowerPlug focuses on:

- **Heart Rate Variability (HRV):** Analyzing HRV to assess the autonomic nervous system's balance and responsiveness, indicating your heart's ability to adapt to physical and mental stress.
- **Fitness Levels:** Monitoring your cardiovascular fitness over time to provide insights into your endurance, and recovery capacity.
- **Stress Response:** Evaluating how your heart rate responds to different stressors, both physical and emotional, offering recommendations to improve heart health and manage stress more effectively.

### AFib PowerPlug

The AFib PowerPlug is specifically focused on detecting Atrial Fibrillation (AFib), a common type of irregular heart rhythm that can lead to serious health complications if left undetected. This PowerPlug includes:

- **AFib Detection:** Continuously monitoring your heart rhythm, especially at night, to identify any signs of AFib.
- **Early Intervention:** Providing alerts if potential AFib episodes are detected, enabling you to seek early medical intervention and reduce the risk of complications such as stroke or heart failure.

- **Medical Validation:** Ensuring the accuracy and reliability of AFib detection through rigorous testing and compliance with medical regulations in various markets.
- **Targeted Monitoring:** Specifically tailored for individuals with a history of irregular heart rhythms or those at risk of developing AFib, offering focused and precise monitoring.

### Key Differences

- **Purpose:** Cardio Adaptability focuses on overall cardiovascular trends and stress response, while the AFib PowerPlug is dedicated to detecting and managing Atrial Fibrillation.
- **Monitoring Scope:** Cardio Adaptability provides a broader view of heart health and adaptability, whereas the AFib PowerPlug offers targeted monitoring for a specific condition.
- **User Focus:** Cardio Adaptability is ideal for those looking to optimize fitness and manage stress, while the AFib PowerPlug is crucial for individuals concerned about irregular heart rhythms and potential AFib episodes.
- **Medical Aspect:** The AFib PowerPlug involves medical-grade monitoring and regulatory compliance, reflecting its critical role in early detection and intervention.

Both PowerPlugs offer valuable insights into heart health but serve different purposes, allowing users to choose the monitoring and insights that best align with their health needs and goals.

How many data points are taken during the night?

Several, but we cap it to about three successful high quality readings.

Is only HR measured for cardio adaptability or will other factors be considered?

These are trends from your ppg data, not just measured using HR.

Why does the AFib detection only happen at night?

7. **Reduced Movement:** Less motion during sleep minimizes noise and artifacts in PPG signals.
8. **Stable Conditions:** Physiological conditions are more stable at night, enhancing measurement accuracy.
9. **Higher Detection Sensitivity:** Continuous nighttime monitoring captures intermittent AFib episodes more effectively.
10. **Fewer External Influences:** Reduced stress, caffeine, and physical exertion at night provide clearer cardiac data.
11. **Extended Monitoring:** Longer, uninterrupted monitoring periods during sleep improve data collection.
12. **Sleep Disorder Correlation in the future:** Nighttime monitoring can identify links between AFib and sleep apnea.
13. **Better Compliance:** Users are more likely to wear PPG devices consistently at night.

What are free and premium options for poweplugs?

Free - VitD, cycle tracking, pregnancy insights, circadian alignment, caffeine window.

Paid - AFib Detection, Cardio Adaptability.