



RUXBURY

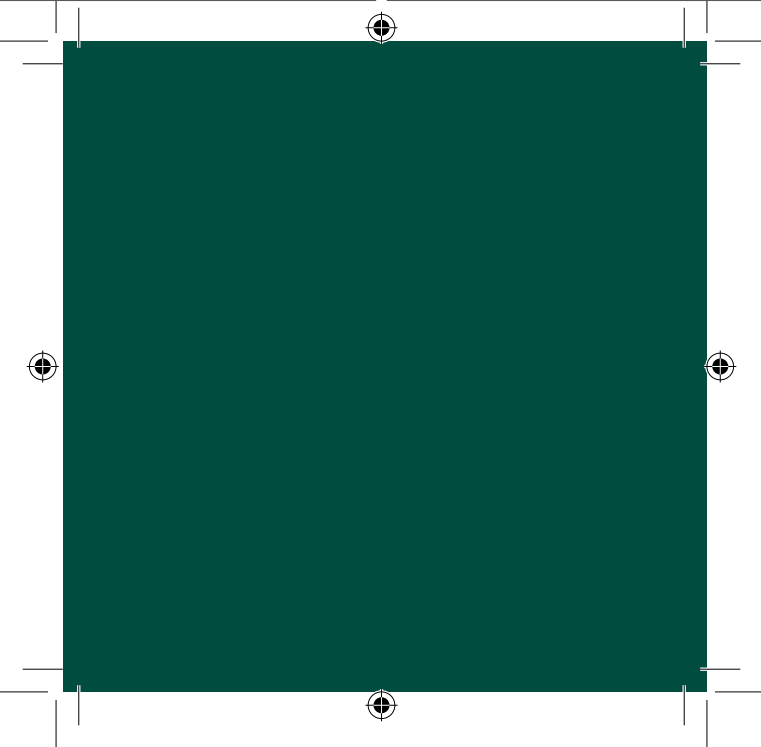
Equestrian Heart Rate and Motion Monitor

Quick User Guide











English

Ruxbury Equestrian Heart Rate
and Motion Monitor EM1

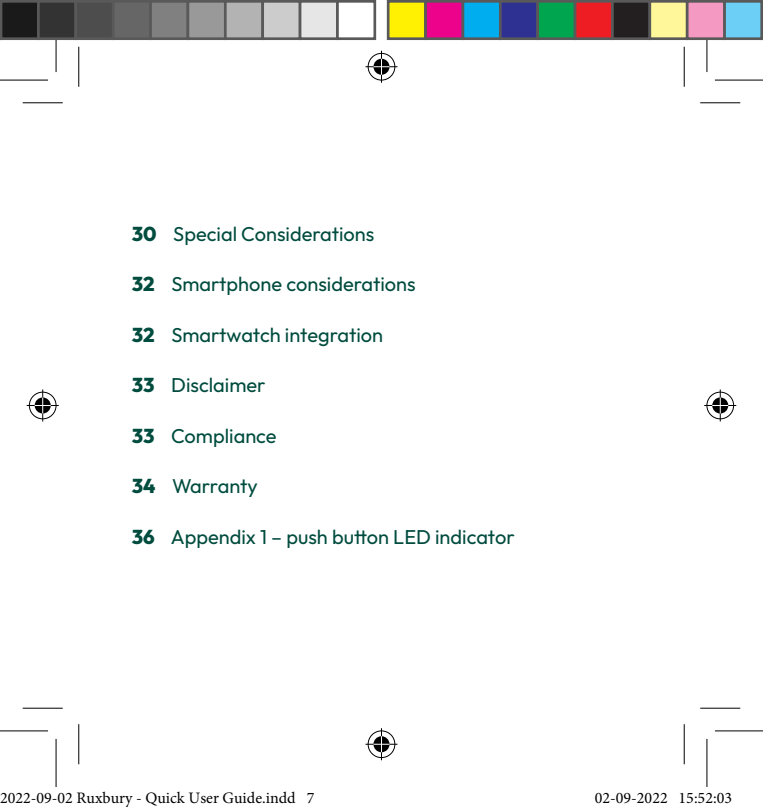
Quick User Guide



Table of contents

- 10** Features
- 11** You shall provide the following items
- 12** Operating the Ruxbury EM1 sensor
- 16** Mounting the Ruxbury sensor device on a horse
- 18** Session Types
- 22** Getting Started
- 25** Using the Ruxbury Monitor for well-being monitoring
- 28** Ruxbury sensor maintenance





30 Special Considerations

32 Smartphone considerations

32 Smartwatch integration

33 Disclaimer

33 Compliance

34 Warranty

36 Appendix 1 – push button LED indicator





Ruxbury Equestrian Heart Rate and Motion Monitor is the ultimate fitness tracker for horses. Use it to...

- Improve your riding
- Keep track of your training
- Monitor your horse's well-being

The Ruxbury Monitor can be used for training and for in-box horse monitoring with a user receiving distress notifications.



Features

Easy to mount and operate Ruxbury EM1 sensor for measuring and logging horse heart rate and motion, attaching to a head collar using the included sleeve with an integrated elastic strap.

- **Dual use:** Training or well-being monitoring, training metrics indicate fitness and performance level, Well-being monitoring detects unusual conditions (e.g., colic, foaling) using the heart rate and motion.
- **Distress notifications**
- **Route tracking**
- **Built-in rechargeable battery** (up to 5 days x 24 hours for training, up to 15 days x 24 hours for monitoring)



- **One button EM1 sensor operation** (on, off, battery status) with integrated LED indicator (power on/off, ready to connect, connected, software update)

The Ruxbury EM1 sensor is designed for over-the-air software update by the user. Ruxbury may from time to time introduce new features by means of software update. Check www.ruxbury.com.



You shall provide the following items

- **Smartphone.** Download Ruxbury App available for iOS and Android phones.
- **Head collar or bridle** for your horse. You may optionally use a girth to mount the sensor on horse's belly.





Check www.ruxbury.com for replacement protective sleeves, software updates for EM1 sensor device and information about new app versions.

Operating the Ruxbury EM1 sensor

Push button and LED light

The Ruxbury sensor shall be used with a smartphone app. Therefore, you shall have your smartphone near the sensor, typically within 10-20 meters.

You operate the Ruxbury sensor using a button with an integrated LED indicator.

There are two gestures – a long press and a short tap:



- **Power on** – short tap, indicated by a red blink, followed by a slow blue blink
- **Power off** – long press (>3 seconds), indicated by a long red light

You can also see an approximate battery level indication





by a short tap when the Ruxbury sensor is turned on:

- **1 green flash** – less than 25% battery capacity left
- **2 green flashes** – between 25% and 75% battery capacity left
- **3 green flashes** – more than 75% battery capacity left

The push button gestures, their functions and LED indications are described in Appendix 1.

Charging

Observe the following precautions when charging the Ruxbury sensor:

- **Do not charge** the device while the Ruxbury sensor is



mounted on a horse

- **Ensure that the temperature** in the location where you charge is above 10 degrees Celsius / 50 degrees Fahrenheit and below 40 degrees Celsius / 104 degrees Fahrenheit

Please note, that there is no need to remove the protective sleeve to charge the Ruxbury sensor.



15



Use a fingernail to open the rubber lid covering the USB port on the sensor's long side and plug in the provided micro-USB cable. Make sure a proper orientation of the cable towards the USB port.

The Ruxbury sensor turns on when power is applied to the USB port. The charging state is indicated by a slow green blink.

Mounting the Ruxbury sensor device on a horse

You shall set up a head collar or bridle for a horse. The elastic strap will fit any head collar. Mount the Ruxbury sensor on the head collar, below a horse ear as shown with the circular sensor facing towards a horse. For best accuracy use a stiff collar.





For a long-term in-box monitoring, it may be more convenient to use an abdominal belt or girth. Mount the Ruxbury sensor on horse's belly on the left side with the circular sensor facing towards a horse.

Make sure that the Ruxbury sensor applies a slight pressure to the horse fur, but without causing discomfort.

Check www.ruxbury.com for replacement protective sleeves, software updates for EM1 sensor device and information about new app versions.

Session Types

The Ruxbury Monitor supports different types of sessions:



1. Sensor session, with the Ruxbury sensor mounted on a horse. There are different types of sensor rate sessions:

- **Field or track Training** – used for any form of horse training or competition. The Ruxbury Monitor records heart rate and motion data each second, with additional summary 1-minute interval data. The app will show a heart rate notification if the heart rate in 1 minute interval is above a set maximum.
- **3 types of well-being monitoring sessions** for a long-term monitoring, while a horse is in a box, with the Ruxbury app receiving summary reports for one-minute intervals each 30th second. If the recorded heart rate or motion level indicates an unusual condition a distress notification is logged and optionally sent in a text message or email.



- **Health monitoring** – motion and heart rate monitoring, to detect e.g., a distress situation indicated by a high heart rate of unusual motion.
- **Foaling monitoring** – monitors a heart rate and motion.
- **Geofencing** – used to detect either (1) a missing communication between smartphone/tablet and the Ruxbury sensor, or (2) a missing heart rate signal. This monitoring could be used as a theft detection to indicate a “missing horse”.

During a monitoring session the Ruxbury app will send a distress notification under the following circumstances: (1) the one-minute heart rate exceeds a user-defined max. value, (2) or the prevalent motion level during a one-minute indicates a rapid





motion.

Note, that a single smartphone/tablet can control up to 8 monitoring sessions.

- 2. Smartphone session without a sensor** – the user shall just keep the smartphone with her/him while riding a horse. The Ruxbury app will use smartphone sensors to record duration, distance, pace, speed, and route.

Before starting a session check a horse profile to set or change the thresholds used to generate notifications. Setting some threshold values may require prior experience with your horse.



Getting Started

Sign up and register

1. **Download the Ruxbury app** to your smartphone, open the app and sign up.
2. **Register your first horse.**



Usually when you sign-in to the smartphone app, you will see a home screen showing your horse. If you have more than one horse registered, you can (in version 1 of the app) swipe horse pictures left or right to navigate to the desired horse, or (in version 2 of the app) by using Horses menu function.



You start a new session using the plus '+' button or '>' button when viewing a horse.





During a training session the Ruxbury app will show performance metrics, graphs, and charts. During a monitoring session the Ruxbury app shows a 1-minute median heart rate graph and a motion level chart. You can view all data after a session.

Notifications are stored in the notification log and can be viewed using the notification icon.

Prepare for a ride

- 1. Power up the Ruxbury sensor** using the sensor button.
- 2. Mount the Ruxbury sensor** on a bridle below ear with a circular sensor facing towards a horse skin.
 - Use the integrated elastic strap to attach the Ruxbury sensor to the bridle.



- Ensure contact to a skin but avoid too tight a fit.

Start a training or competition session, ride, and finish

- 1. Use the Ruxbury app**, touch “+” or “>” button.
- 2. Select a “Heart rate session”**, wait and select the Ruxbury EM1 sensor which appears on screen.
- 3. Select “Training”** as the session type.
- 4. Touch “Start tracking”** to begin a session.
- 5. Ride your horse.**
- 6. Touch “Stop session”** to terminate a session. The Ruxbury sensor will automatically power off.



Using the Ruxbury Monitor for well-being monitoring

Setup

For health or foaling monitoring a horse while you are far away from your stable you will need a monitoring phone or tablet which stays with a horse in a stable. The monitoring phone can be any low-cost phone, connected to a power source for long term operation and running the Ruxbury app. Note that one monitoring phone or tablet can monitor up to 8 horses

You will need to connect the monitoring phone to Internet. You can use WiFi if it is available in a stable, or a mobile network connection. It is sufficient to use a low cost, low capacity data-only mobile network subscription.



Place a monitoring phone or tablet running the Ruxbury app in a stable. Configure your phone number or email address in the app in settings, account, to receive remote notifications from your horse.

Prepare for a monitoring session

- 1. Power up the Ruxbury sensor** using the sensor button.
- 2. Check the horse profile** and consider the maximum resting heart rate used as a limit to generate distress notifications when this limit is exceeded.
- 3. Mount the Ruxbury sensor** on a bridle below ear with a circular sensor facing towards a horse skin or on a girth going around the abdomen.



- Use the integrated elastic strap to attach the Ruxbury sensor to the bridle or girth.
- Ensure contact to a skin but avoid too tight a fit.

Start a monitoring session, monitor a horse and finish

- 1. Open the Ruxbury app**, navigate to a horse, and touch “+” or “>” button, then select a Sensor session.
- 2. Wait for the Ruxbury EM1 sensor to appear** in the device list, and then select this device.
- 3. Select “Health monitoring” or “Foaling” or “Geofencing”** if you just want to keep track of your horse.
 - You can enable real-time notifications before



starting a session.

- You can set the maximum acceptable resting heart rate in the horse profile.
4. Touch the **Start tracking** button to begin a monitoring session.
 5. **During the session**, keep the phone or tablet within the range of a sensor, e.g., mounted on a wall and connected to a power source.
 6. **To end a session**, use the Roxbury app, and touch the Stop session button. The Roxbury app will show a flash card with the key performance metrics.

Remember to power off the Roxbury sensor using a long press on the button.

To run **multiple monitoring sessions** on the same



smartphone or tablet, navigate to the home screen, select another horse, and start a new monitoring session. You can run up to 8 monitoring sessions at the same time.

Ruxbury sensor maintenance

- **Storage** - Keep your Ruxbury sensor in the provided protective velvet dust bag or in a box when not in use. Clean the Ruxbury sensor after use. Keep the Ruxbury Monitor updated with the latest available software for the Ruxbury sensor and the latest Ruxbury app.
- **Cleaning** - use a damp soft cloth with a mild detergent. Finish with a damp cloth and dry it.
- **Replacing the protective sleeve** - you can obtain a



new protective sleeve from Ruxbury at web address www.ruxbury.com/shop.

To mount a new sleeve, start by pulling the sleeve over the two small hooks, then pull the sleeve over the surface with the circular censor and finish by pulling the strap over the entire body of the sensor. Double check using your finger that the sleeve has no folds and use the strap to stretch and pull the sleeve in place.

To remove the sleeve, follow the steps above in a reverse order.

- **Software update** – the Ruxbury app will notify you when a new sensor software is available. Use your app, navigate to the menu, select “Settings”, and then “Sensor settings” to start the software upgrade process.





Do not turn power off during the software update process and keep your phone near the Ruxbury sensor.

Special Considerations

- **Comfort vs. accuracy considerations** – the accuracy of the sensor's heart rate depends on a fit to the horse's skin. It is tradeoff between comfort and accuracy
- **Connectivity and range** – the Ruxbury sensor is designed for long range operation, of up to 100m distance between a phone and the sensor in free space outside, and up to 30m inside a building.
- **External conditions** – the Ruxbury sensor shall not be used when the horse is under or very near infrared



heating lamps.

- **Very loosely fitted sensor** in a strong sunlight may also fail to operate correctly.
- **If a training session takes place indoors** then do not use route tracking. A route tracking using smartphone's GPS signal is not reliable indoors.



Smartphone considerations



- **Bluetooth** – you shall have Bluetooth enabled on your smartphone or tablet. If you try to start a session with Bluetooth disabled, you will be asked to enable Bluetooth in your phone's settings.
- **Route tracking** – is possible if your phone has enabled location services. If you have disabled





location services and try to enable route tracking when starting a session, you will asked to allow location services.

Smartwatch integration

Please keep your app up to date and check www.ruxbury.com to see when the smartphone integration is available.

Disclaimer

The provided Ruxbury EM1 sensor is not a medical device. However, every consideration has been made to make it as accurate as possible.



Compliance

Please refer to the Ruxbury EM1 Safety Manual provided with the Ruxbury sensor or visit www.ruxbury.com.

Warranty

See www.ruxbury.com/support.







Appendix 1 – push button LED indicator

When powered off:

Short press > Power on, one **RED** blink.

While waiting for a connection:

Fast **BLUE** blink, first 2 min., slow **BLUE** blink hereafter.

Connected to a smartphone:

Slow **GREEN** blink.

Charging:

Slow **GREEN** blink while charging, steady **GREEN** when fully charged.

Updating sensor software:

Activated from the Ruxbury app, **GREEN** blink when transferring data, then alternating **BLUE** and **RED** blink.





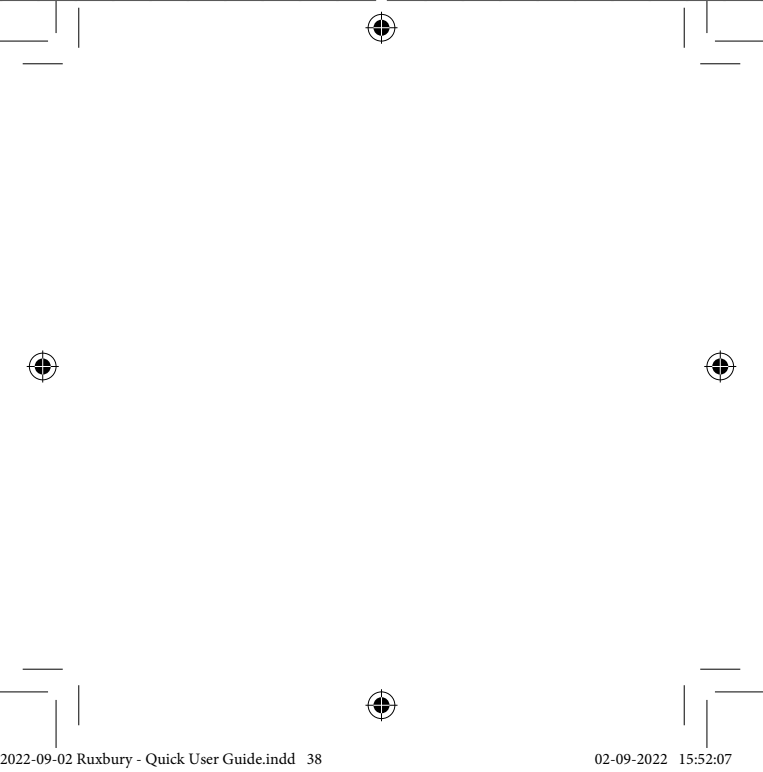
Power off:

Long press when the sensor is turned on except when charging > Power off, one **RED** blink.

Battery check:

Short press when the sensor is turned on except when charging > Battery check: 1, 2 or 3 **GREEN** blinks corresponding to less than 25%, 25%-75%, or more than 75% battery capacity left.







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This publication has part number P/N RX-0301.



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Quick User Guide - Version 01

www.ruxbury.com



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App Store



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