RACE RESULT
TRACK BOX
* actual size

What is the Track Box Passive?

The Track Box Passive is a unique device designed for timing with UHF transponders. It simplifies the process of setting up splits and checkpoints for your races like never before. Since its market launch in 2020, the Track Box Passive has emerged as the preferred solution for events such as trail runs and mountain bike races worldwide, enabling race scenarios that were previously unimaginable.

Helpers can effortlessly transport the box to remote locations, activate it with a single button click, and livestream all data directly to your timing software. A ground antenna should still be used for start and finish situations. However, the Track Box Passive is the ideal addition for additional measuring points along the route.

Equipped with integrated UHF reader, GPS, and battery, the box serves as a comprehensive timing system, eliminating the need for additional devices or volunteers to operate it. Moreover, it can be connected to external power sources and even solar panels for permanent setups.

Engineered and produced at RACE RESULT headquarters in Karlsruhe, Germany, the Track Box Passive holds patents in the United States and Europe.

Hands-free solution

Pre-configured and activated with a single button click, the device now runs autonomously, requiring no further operation by volunteers to send detection data for 10-18 hours. With integrated stand and magents, it can be setup in various positions.

No more need for manual bib scanning with handheld devices!

Unmatched dimensions

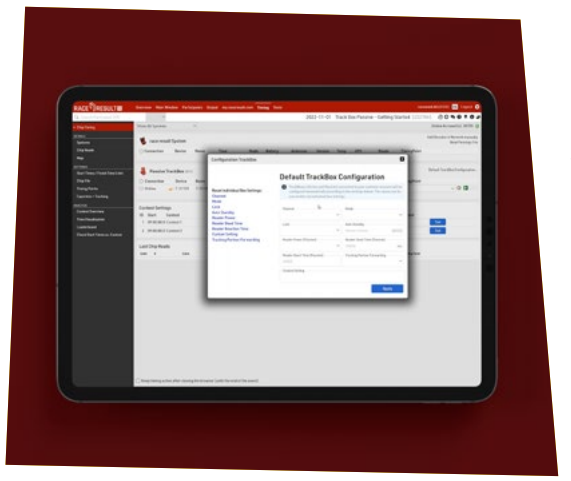
Weighing only 1.7 kg/3.7 lbs, the box can be easily transported to remote locations, such as mountain passes in trail running. Its automatic standby mode preserves energy during the night.

No more need to deploy heavy timing mats in remote places!

Self-sufficient device

The Track Box Passive functions like a timing system with side antennas, all within a small form factor. In addition to internal batteries, it can be externally powered and even connected to a solar panel to run for weeks.

No more need for carrying car batteries or generators up the hill!



Remote control

The main functionalities of the box can be configured and managed via an online interface. The SIM card inside the device allows for seamless communication between the device and your timing software.

No more volunteers pressing the wrong buttons!

© WMTRC

EVENT REFERENCE

Trail Running World Championships (WMTRC)

With over 1,200 runners representing 68 nations, the 2023 WMTRC in Innsbruck, Austria, showcased the pinnacle of mountain and trail running.

The event was timed by our customer race result Swiss. With more than 50 timing points on five different courses, the Track Box Passive proved to be the ideal device, easily deployed by helpers, and capable of delivering live data even from very remote mountainous locations.

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EVENT REFERENCE

absa Cape Epic

In 2024, the 20th edition of the legendary mountain bike stage race in South Africa was timed for the first-time using RACE RESULT passive technology. Transponders were attached to the backside of riders' handlebar plates.

Track Boxes were deployed by the same helpers who also managed the water stations. This streamlined logistics significantly, as devices are small, light, reliable and the team didn't need to set up large decoders out on the course.

Timing and data processing was provided by racebase.pro (Croatia) and partners, a team which covers the whole Epic Series, providing API data for various applications like event mobile app, TV production, print production data via RACE RESULT 12.

EVENT REFERENCE

HARDI 24hour Trial

The race in the Australian outback pushes riders and bikes to their limits and has special requirements for timing. The lap course has a distance of 200 km, and the Track Box Passive made it possible to easily install 26 timing points along the route. The boxes were setup by the organizers. Passive transponders were attached to the bikes.

Eventtiming, our customer and distributor, managed the timing remotely. The Track Boxes were shipped to the organizers prior to the event. Remarkably, despite over 10,000 passings during the race, not a single chip read was missed. The live data from the course offered race marshals a valuable overview of the 150 competitors' current status, and delivered accurate race results down to a fraction of a second.

© HARDI 24 HOUR TRIAL

EVENT REFERENCE

Salzkammergut Trophy

The largest MTB event in Austria could not take place in 2020 due to the pandemic. Instead, a semi-permanent MTB race track was installed on the original course. For this purpose, Track Boxes were set up along the route, which were switched on during the day. Some were permanently supplied with electricity via connected solar panels.

The participants were able to drive their personal race and receive official results within three months. The project was planned and implemented by our customer Global-Sportservice GmbH.

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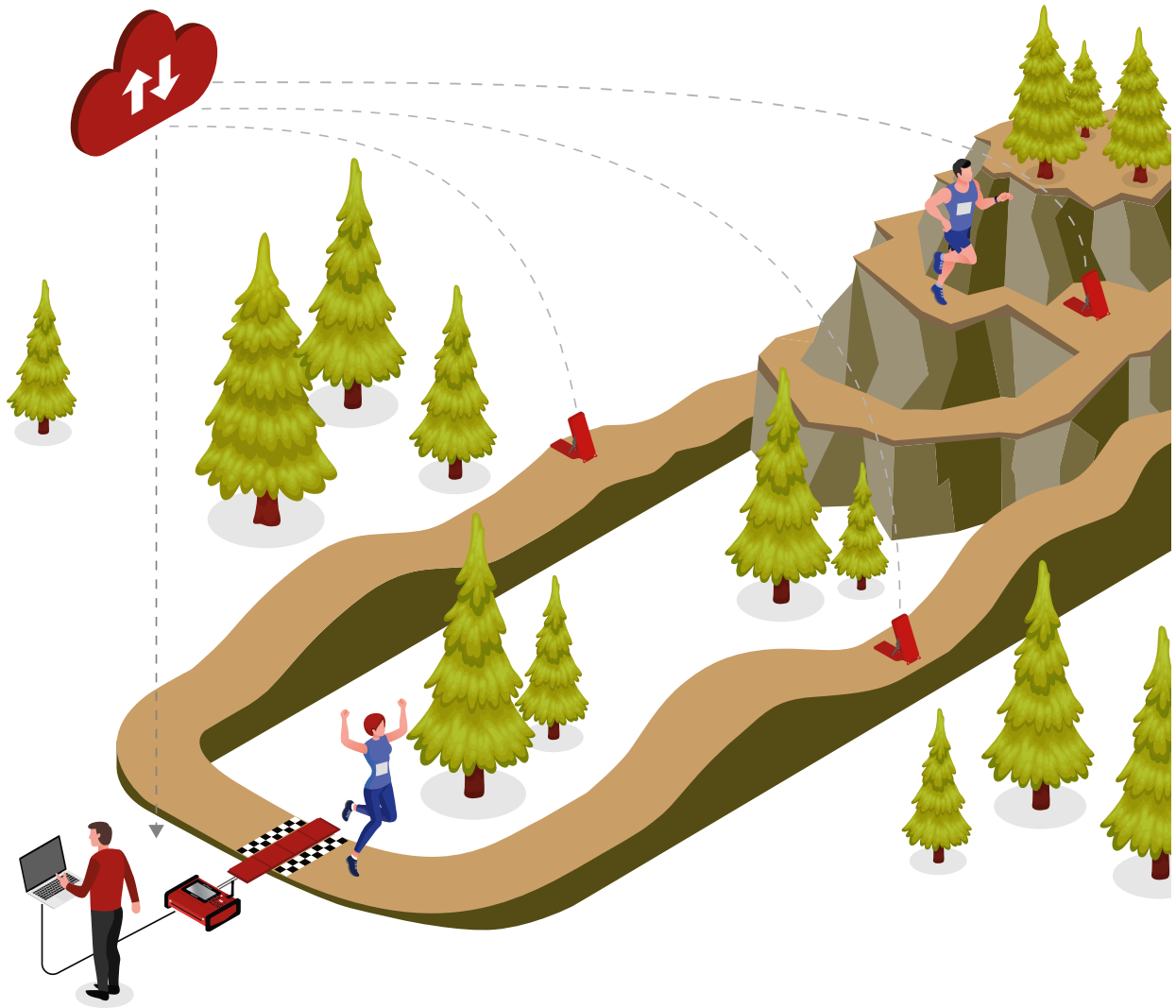


How to set up?

The Track Box Passive is set up along the course where the density of participants is not too high. Ideally, the device is installed perpendicular (90 degrees) to the direction of travel.

With the optimal setup and transponders worn correctly, you can expect **> 99 % detections within 4 meters range**. Two boxes facing each other can cover a **track width of up to 8 meters** and will sync automatically for optimal results.

Transponders up to 25 meters away may be detected, but with reduced read rates. Please note: All UHF timing systems need a direct line of sight between transponder and receiving antenna.

The Track Box Passive **combines the transponder read with the current GPS position** and sends the data via SIM card to a defined server. It is seamlessly integrated into RACE RESULT 12 timing software where it is operated like a conventional timing system.

The **configuration** of the box is done via online interface.
Some parameters can even be changed by **sending an SMS** to the box.

Please note: The Track Box Passive is not designed to be used as timing system for start and finish lines. Wherever you require highest precision and rely on a detection, please use a ground antenna.

RACE RESULT Timing Solutions

RACE RESULT passive technology uses UHF to detect transponders. It is the optimal choice for all kinds of running races, cross country MTB, trail runs or smaller triathlons. Combining the foldable ground antenna with our sports optimized transponders creates an unmatched setup in terms of reliability, flexibility and highest detection rates.
Besides the Track Box Passive, the key components are:

Ubidium

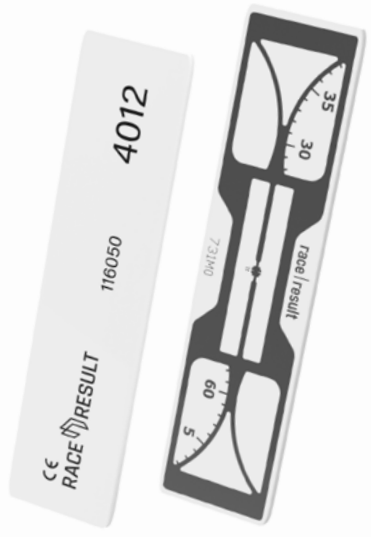
The cutting-edge timing system designed for superior performance and versatility. Boasts exceptional weatherproofing, lightweight design, and up to 12 hours battery life with two hot swappable batteries. Data is transmitted in real-time through multiple options, including SIM, Ethernet, POE, or USB-C connections.

Ubidium Ground Antenna

The new foldable ground antenna delivers unprecedented flexibility and the highest detection rates. Each element contains a specially developed RACE RESULT UHF reader. The mat can be adjusted in length as desired, up to 23 meters per system (30 segments) is possible. It connects directly to Ubidium with a single plug.

RACE RESULT UHF Transponders

UHF transponders specially developed for sports timekeeping. Praised by customers worldwide for highest detection rates. The accuracy is 0.2 s. Transponders are available on roll or ready-attached to a customized, personalized Tyvek bib.



RACE RESULT 12 Software

The complete software for timing and managing of any kind of sports event. The intuitive user interface allows you to setup events without complicated formulas or calculations. Featuring registration, event timing, scoring, live results and various output options, APIs and more - all in one browser-based solution. RACE RESULT hardware can also be integrated into your own software solutions.

RACE RESULT
Precision · Passion · German Engineering

ABOUT RACE RESULT

As the leading innovator in sports timing technology worldwide, we provide solutions for all types of events, from small club events to world championships.

Our products are designed for both race organizers and event timers, checking off all race day timing requirements, greatly improving processes, and transponder read rates.

More than 6 million athletes per year at over 12,000 events benefit from RACE RESULT technology. Timing companies and race organizers around the world trust our solutions.

Our headquarters are near Karlsruhe, in Southern Germany. Here, development and production are closely intertwined, ensuring the highest reliability and quality of the products we deliver. We have distributors and offices around the world, ensuring personal advice and fast support at any time.

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