

# RB Ranking — User Manual (EN)

## What is RB Ranking

RB Ranking is a tool to manage off-road events with:

- fast reading of **META** data (team, times, penalties) from QR codes generated by RB Reader at the end of the digital roadbook created with Roadbook Editor;
- **TRIAL** management with obstacles, attempts and live penalties;
- **rankings** (Accuracy, CAP, Speed, Regularity, Trial, Ranking);
- **PDF printing** of the ranking.

## Key ideas

- Individual columns (Accuracy, CAP, Speed, Regularity, Trial) are **raw values** (no weights).
- The **RANKING** column applies **CRITERIA** weights using:  
$$R = w_{acc} \cdot Accuracy + w_{cap} \cdot CAP + w_{speed} \cdot Speed + Regularity - w_{trial} \cdot Trial$$
*(Regularity has no multiplier: it uses the target average only).*
- **Decimals**: on screen and in PDF (Ctrl+P) values show **1 decimal**, rounded to hundredths (decimal comma style can be used in texts; values are consistent).

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## 60-second flow

1. **Enter event title and date** (format **dd/mm/yy**, e.g. 09/11/25).  
**ATTENTION: the date must be the same as the event date, if it does not match it will not be possible to read the participants' QR codes**
2. **CRITERIA**: enable/disable criteria with one click.  
Set **weights** (Accuracy, CAP, Speed, TRIAL). If using **Regularity**, set the **target average** (e.g. **27.5 km/h**).  
In **TRIAL**, also set the **number of obstacles** (max 9).
3. **SCAN**: add teams by scanning the **QR** (or typing META by hand\*).  
When done, press **FINISH** (SCAN).  
\* Without a scanner: open the .csv on the participant's Android (folder **Download**) and take the **first line of 49 characters**.  
Example: 0010911251238161248450054000001830012000000046263
4. **TRIAL**: first set **points per attempt** (1st/2nd/3rd) and **Knocked Down / Reverse** penalties in **SETUP TRIAL**.  
Enter the **TEAM** as they arrive, log **KD/RV**, and use **two-colour** buttons (red = failed, green = passed).  
Click the next obstacle to activate it and confirm the previous one.  
The team's **Trial total** updates **live** (it can be negative).  
After the last obstacle, press **OK TEAM** and proceed with the next team. To end TRIAL, click **FINISH** (TRIAL).
5. **RANKING**: review the standings and **print** with **Ctrl+P**.

**Note:** you can complete TRIAL or SCAN first, depending on whether the **TRIAL stage** occurs before or after the roadbook is closed.

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## The 4 tabs

### 1) HEADER

- **Event title** and **date** (required; **dd/mm/yy**, e.g. 02/11/25).
- **CRITERIA** weights are set in their panel and applied **only** in **RANKING**.
- If using **Regularity**, set the **average** (e.g. **27.5 km/h**).
- If a **TRIAL** course is planned, set the **number of obstacles**.

### 2) SCAN

- Field to **paste/read META** (11 separated fields or **49-char** format).
- Automatic parsing into: ○ **TEAM** (3) ○ **DATE** (6, **DDMMYY**) ○ **START** (6, **HHMMSS**)
  - **END** (6, **HHMMSS**) – used for overall average ○ **PTS** (4) = waypoint deviation penalties (metres) ○ **P\_SKIP** (4) = skipped notes (e.g. 0450) ○ **P\_EXTRA** (4) = extra metres (error + return) ○ **P\_CAP** (4) = CAP penalty (metres) ○ **P\_SPD** (4) = **speed** penalty (10 points per km/h above the limit) ○ **KM\_RB** (5) = roadbook km in **×0.1** (e.g. 01605 → 160.5 km)
  - **AVG×10** (3) = average in **×10** km/h (e.g. 085 → 8.5 km/h)
- These feed the **raw columns** (Accuracy, CAP, Speed, Regularity, Trial).

### 3) TRIAL

- **SETUP TRIAL** (top row):
  - **Points** for 1st/2nd/3rd attempt, **KD** (poles) and **RV** (reverse), **#obstacles**.
  - **Setup lock**: locks **at the first attempt** (first red/green click) and stays locked until **restart**; it does not unlock when changing team.
- **TEAM**: enter one team at a time as they show up.
- **Obstacle rows**:
  - 3 **two-colour** buttons per attempt (Fail/Pass).
  - **KD/RV** per row: knocked-down poles and reverses. ○ **Row points** = **attempt base** – (**KD×penKD** + **RV×penRV**) → may be **negative**. ○ **Third FAIL** or **PASS**: closes the row and saves current points (even < 0).

- When moving to the next obstacle, previous row buttons are **locked**.
- **Team Trial total**: visible until **OK TEAM**, then cleared for the next team.
- **Team closing**:
  - **OK TEAM**: available only when **all** obstacles are completed; enables **FINISH (TRIAL)**.
  - When entering a new team, **FINISH** is disabled again until **OK TEAM**.
  - **FINISH (TRIAL)**: ends the TRIAL session.

#### 4) RANKING

- **Raw columns** (no weights):  
**Accuracy, CAP, Speed, Regularity** in **ascending** order; **TRIAL** in **descending**.
- **RANKING** (weighted column):  

$$R = w_{acc} \cdot \text{Accuracy} + w_{cap} \cdot \text{CAP} + w_{speed} \cdot \text{Speed} + \text{Regularity} - w_{trial} \cdot \text{Trial}$$
**Ascending** order (lower is better).  
 Shows **1 decimal**, rounded to **hundredths**.
- If a criterion is **disabled** in **CRITERIA**, its column **remains visible** and shows **0**.
- click on one or more columns for automatic scrolling

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#### PDF printing

- Start with **Ctrl+P**.
- Column layout with **centred title**.
- Values **right-aligned**; headers **centred**.
- **RANKING** printed with **1 decimal** (rounded to hundredths).
- Widths adjusted to avoid **truncation** (handles up to 5 digits with sign).

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#### Tips

- Test your **2D scanner** with a 49-char QR before the event. • In **CRITERIA**, set **weights** and **#obstacles** (TRIAL) carefully.
  - In **TRIAL**, set **points** and **penalties** before the first attempt.
  - Use **OK TEAM** as soon as obstacles are done: it enables **FINISH (TRIAL)**.  
 To proceed with a new team, enter the **TEAM** number (FINISH disables); or click **FINISH** to close the TRIAL session.
  - A **negative Trial** is possible: it counts **against** in RANKING.
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#### Notes & limits

- **SETUP TRIAL** stays locked until **restart** (race-consistency choice).
- **Disabled** CRITERIA columns are **not** hidden: they show **0**.