EVENT CONCEPT / AUSTRALIA

# MT STROMLO E-MTB RACE WEEKEND

## PROFESSIONALISING E-MTB RACING

A dedicated two-day race format built around electric mountain-bike performance, technical fairness and purpose-designed competition.

**2 DAYS**
**2 DIRECTIONS**
**1 E-MTB EXPERIENCE**

TECHNICAL INSPECTION BY EBIKE LAB

THE OPPORTUNITY

# BUILT FOR E-BIKES. NOT ADAPTED FROM MTB.

This concept creates a standalone E-MTB racing weekend at Mt Stromlo - designed around the technology, speed and strategic demands of electric mountain bikes.

01 / PURPOSE

## DEDICATED FORMAT

A true E-MTB event with its own course, categories, race procedures and identity.

02 / FAIRNESS

## MEASURED COMPETITION

Motor-based classes and professional inspections create closer, more credible racing.

03 / DEVELOPMENT

## TEST. LEARN. REFINE.

The first edition collects real race data to balance categories and build a scalable series.

RACE FORMAT

# ONE WEEKEND. TWO RACES.

The same venue produces two distinct challenges. Reversing the circuit rewards complete riders and creates a stronger overall test.

DAY 01

## QUALIFY + RACE

1 qualifying lap to establish the starting grid. Category-based starts followed by six full racing laps.

DAY 02

## REVERSE + RACE

Category-based starts. Six racing laps on the circuit in the opposite direction.

## WHAT IT TESTS

- RIDER SKILL
- BIKE PERFORMANCE
- BATTERY STRATEGY
- CONSISTENCY

PROPOSED COMPETITION STRUCTURE

# FOUR PERFORMANCE CLASSES

## SL

**UNDER 60 NM**

Lightweight E-MTB platforms.

## OPEN

**UP TO 750 W**

Standard and race-focused bikes capped at 750 W.

## OPEN PLUS

**ABOVE 750 W**

High-performance, unrestricted-power platforms.

## UCI

**APPROVED DRIVE UNITS**

Competition class using eligible UCI drive systems.

Final class thresholds and eligibility to be confirmed following test-event data and current regulations.

TECHNICAL CREDIBILITY

# INSPECTED BY EBIKE LAB

Professional pre-race inspection protects riders, organisers and results. Approved bikes receive technical clearance before entering the start grid.

- ✓ **Drive-unit identification**
- ✓ **Power and torque classification**
- ✓ **Firmware and software configuration**
- ✓ **Speed-limit settings**
- ✓ **Battery and electrical safety**
- ✓ **Mechanical condition**
- ✓ **Category compliance**

**UCI DRIVE-UNIT CLASS / EXAMPLES**

**Shimano EP801 • SRAM Eagle Powertrain • Bosch Performance Line CX / CX-R • Avinox M2S Race 750 • Askoll Ultra • Polini E-P3+**

Eligibility must be verified against the official UCI list applicable on the event date.

COURSE AND FUTURE

# A CIRCUIT THAT REWARDS THE COMPLETE RIDER

The course is purpose-designed for E-MTB racing - using electric assistance as part of the challenge while keeping technical ability at the centre of the result.

- TECHNICAL CLIMBS
- SAFE OVERTAKING ZONES
- FAST TECHNICAL DESCENTS
- POWER-FOCUSED SECTIONS
- NATURAL + BUILT FEATURES
- BATTERY STRATEGY

## THE LONG-TERM VISION

Use the inaugural event as a controlled test platform. Refine category thresholds, inspection protocols, race duration and course design - then scale the model into standalone events, state championships and a national E-MTB series.

TEST EVENT → STATE LEVEL → NATIONAL SERIES

## FAIR. TECHNICAL. ELECTRIC.

VENUE OPERATIONS

# EVENT VILLAGE & START / FINISH

A compact event hub beside Stromlo Leisure Centre creates a strong rider experience, efficient technical control and excellent visibility for partners.




START / FINISH

## RACE CONTROL ZONE

A long, visible straight supports grid formation, timing, commentary and safe race operations.

EVENT VILLAGE

## TEAM & PARTNER TENTS

A dedicated paddock zone for teams, technical support, exhibitors and event partners.

PURPOSE-BUILT VENUE

# THE E-MTB CIRCUIT CONCEPT

A dedicated course shaped around electric performance - technical, physical, spectator-friendly and designed to produce close racing.



## DESIGNED AROUND THE TERRAIN

The concept combines power climbs, technical switchbacks, rock gardens, overtaking zones, bermed descents and short feature sections while retaining the natural woodland character.

POWER | SKILL | STRATEGY | SPECTACLE

PROJECT LEADERSHIP

# THE E-BIKE SPECIALIST

Thiago Boaretto has built his career at the centre of the cycling industry - racing, testing products, supporting technical development, creating projects and representing leading national and international brands.

TECHNICAL EXPERTISE

## BEYOND RACING

Professionally trained to work with Bosch, Shimano, TQ, Fazua and Brose systems, Thiago brings extensive hands-on experience in e-bike diagnostics, servicing, performance setup and product testing.

BOSCH | SHIMANO | TQ | FAZUA | BROSE

EBIKE LAB / CANBERRA

## SPECIALIST CENTRE

Founder of EBIKE LAB, a specialist e-bike centre in Canberra located next to Stromlo Forest Park - one of Australia's leading mountain-bike destinations.

E-MTB RACE CHECK

## FAIRER COMPETITION

EBIKE LAB is expanding into professional race inspections - supporting one of cycling's fastest-growing disciplines through fairer competition and reliable technical control.

## TECHNICAL KNOWLEDGE. RACING EXPERIENCE.

**FAIR CATEGORIES. RELIABLE CHECKS. PURPOSE-BUILT CIRCUITS.**

EXPERIENCE BEHIND THE EVENT

# THIAGO BOARETTO - EVENT ORGANISER

A professional rider and trail builder, Thiago organised mountain-bike events in Brazil for many years. His rider-first approach introduced new formats, elevated course quality and helped establish MTB Enduro within the national racing scene.

## SELECTED EVENTS ORGANISED

| | | |
|---|---|---|
| 2015 | **FIRST BRAZILIAN MTB ENDURO CHAMPIONSHIP** | A landmark event for the discipline's national development. |
| 2016 | **BRAZILIAN NATIONAL CHAMPIONSHIP** | National-level competition delivery and course design. |
| 3 ROUNDS | **ENDURO BRASIL CUP** | A multi-round enduro racing series. |
| 12 STAGES | **SUPER ENDURO BRASIL** | EWS qualifier event with an ambitious twelve-stage format. |
| 4 DISCIPLINES | **DESAFIO TRILHAS DA SERRA** | Downhill, Enduro, Slopestyle and Best Trick racing weekend. |
| FIRST IN BRAZIL | **ENDURO AVALANCHE** | Introduction of the mass-start Avalanche format to Brazil. |
| STATE LEVEL | **SAO PAULO DOWNHILL CHAMPIONSHIP** | Delivery of state championship downhill competition. |

## BUILT FROM THE RIDER'S PERSPECTIVE.

EVENT DESIGN • TRAIL DESIGN • RACE OPERATIONS • TECHNICAL CONTROL

# UCI E-MTB TECHNICAL GUIDE

2026 race categories, drive-unit homologation, professional bike inspection and technical compliance

| | |
|---|---|
| **REFERENCE EDITION** | Based on four unique supplied documents<br>Source cut-off: 13 August 2026 |

Prepared as a practical technical reference. Always verify the latest UCI Regulations, official communiqués and current homologation list before an event.

# 1. Purpose and compliance hierarchy

This guide consolidates the E-MTB / EPAC-specific content found in the supplied 2026 UCI World Championships technical guide and the unique supplied drive-unit documents. It also defines the proposed race categories and EBIKE LAB inspection controls.

## The decisive compliance hierarchy

| | | |
|---|---|---|
| 1 | Current UCI Regulations, including Arts. 1.3.010bis, 1.3.006 and 1.3.002 | Defines whether the bicycle and equipment may be used. |
| 2 | Current UCI List of Approved EPAC Drive Units | Confirms homologated model, development ID, software and approval date. |
| 3 | Event technical guide and official communiqués | Sets registration, inspection times, locations and event procedure. |
| 4 | Supplemental power-category lists supplied with this pack | Useful screening reference only; not proof of UCI homologation. |

**KEY RULE** A drive unit appearing on a “less than 750 W” list is not automatically UCI-approved. Match the exact model, development ID and software version against the official homologation list.

## Core definitions

• EPAC: only EPACs within UCI Article 1.3.010bis are authorised in E-Mountain Bike events (Art. 4.8.001).

• Homologation: from 1 January 2025, new EPAC drive units used by licence holders in E-MTB events must pass the UCI approval process.

• Approval scope: the official list records manufacturer/brand, model, development ID, software version and approval date.

# 2. Proposed race categories

The category system separates lightweight machines, standard high-power E-MTBs, unrestricted high-performance machines and officially homologated UCI competition drive units.

| | | |
|---|---|---|
| SL - Lightweight E-MTB | Less than 60 Nm maximum torque | Lightweight e-bikes producing less than 60 Nm of torque. |
| Open - Up to 750 W | Maximum motor power no greater than 750 W | E-bikes producing no more than 750 W maximum motor power. |
| Open Plus - Above 750 W | Maximum motor power greater than 750 W | High-performance e-bikes producing more than 750 W. |
| UCI Drive Units | Approved motor, development ID and firmware | Bikes compliant with the current official UCI EPAC homologation list. |

## UCI Drive Units included

| | |
|---|---|
| Shimano | DU-EP801 |
| SRAM | Eagle Powertrain |
| Bosch | Performance Line CX / CX-R |
| Avinox | M2S Race 750 |
| Askoll Ultra | C90A |
| Polini | E-P3+ EVO2 |

**CATEGORY CONTROL** Torque and peak-power claims must be supported by reliable manufacturer data or an accepted technical measurement. The UCI category requires a separate exact homologation and firmware check.

# 3. Official UCI homologated drive units

Official list version: 15 April 2026. A model is permitted from its publication date, while use remains subject to UCI Article 1.3.006.

| | | | | |
|---|---|---|---|---|
| Askoll Ultra | C90A | EME400 | SWE30000001500 | 07 Aug 2025 |
| Avinox | M2S RACE750 | M2S RACE750 | 01.99.09.08 | 15 Apr 2026 |
| Bosch | Performance Line CX | BDU3840 / BDU3843 | 16.19.0 | 07 Aug 2025 |
| Bosch | Performance Line CX-R | BDU3863 | 16.19.0 | 07 Aug 2025 |
| Polini Motori | E-P3+ EVO2 | E-P3+ EVO2 | MTI-1.00.27 | 15 Apr 2026 |
| Shimano | DU-EP801 | DU-EP801 | 4.4.0 / 4.4.1 | 06 Aug 2025 |
| Specialized | G87942-100 | Specialized 3.1 Motor, BD03 | 1.11.4 / 1.13.1 (1.D.1) / 1.13.4 (1.D.4) | 07 Aug 2025; 06 Apr 2026 |
| SRAM | Eagle Powertrain | DU-ETP-36V-A1 | 9.3.0 / 9.0.1 | 13 Aug 2025 |

## Mechanic verification rule

• Do not verify by marketing name alone. Record the exact drive-unit model, development ID and installed software.

• Where a model has multiple permitted software versions, the installed version must be one explicitly shown in the current list.

• Check for evidence of tampering, aftermarket tuning, region/speed modifications or non-approved firmware.

**AVINOX RACE NOTE**

The approved competition entry is specifically M2S RACE750, development ID M2S RACE750, firmware 01.99.09.08. A standard M2S entry on a power list is not an equivalent approval.

# 4. Supplemental power-category reference

The unique “less than 750 W” classification is reproduced below. This list contains more models than the official homologation list and must therefore be treated as a screening/classification reference, not as an approval certificate.

| | | |
|---|---|---|
| Askoll Ultra C90A | Aventon A100 | Avinox M2S Race750 |
| Bafang M510 | Bosch BDU314Y SX | Bosch BDU346Y Performance Line |
| Bosch BDU347Y PX Performance Line | Bosch BDU374Y CX Gen4 | Bosch BDU376Y CX-R |
| Bosch BDU384Y CX Gen5 | Bosch BDU386Y CX-R | Brose Drive 3 Peak |
| Brose Drive S Mag | Delta Delta | Fazua Ride 50 Evation |
| Fazua Ride 60 | Giant SyncDrive Pro2 | Hepha P101C |
| HPS Watt Assist Maxxon | HPS Watt Assist Pro | Mahle M20 |
| Mahle M30 | Maxxon Air | Maxxon Airs |
| Maxxpro GXM/Panasonic | OLI Sportplus | Panasonic GX Ultimate |
| Panasonic GXM 100Mg | Panasonic GXM 75 | Panasonic GXM 95 |
| Pinion MGU E1.12 | Polini E-P3+ EVO2 | Polini E-P3+ MX |
| Preeto P110 | Preeto P90 | Rocky Mountain Dyname 4.0 |
| Rocky Mountain Dyname S4 Lite | Shimano DU-EP800 | Shimano DU-EP801 |
| Shimano DU-EP801 RS | Siral MGU 8 | Specialized SBC 2.2 |
| Specialized SBC 3.1 (FW 1.B.4) | Specialized SBC 3.1 (FW 1.D.4) | Specialized SBC 3.1 S-Works (FW 1.B.4) |
| Specialized SBC SL1.2 | SRAM Eagle Powertrain | TQ HPR40 |
| TQ HPR50 | TQ HPR60 | Urtopia Quark DM1.2 |
| Valeo Cyclee Go 7 | Vivax Assist | Yamaha PW-L1 |
| Yamaha PW-S2 | Yamaha PW-S3 | Yamaha PW-X3 |
| Yamaha PW-XM | ZF Centrix | ZF Sachs RS |

# 4. Supplemental power-category reference (continued)

More than 750 W list supplied on 16 April 2026.

| | |
|---|---|
| Avinox M2S | More than 750 W |
| Avinox M2 | More than 750 W |
| Avinox M1 | More than 750 W |
| Gobao P100 Pro | More than 750 W |
| Aventon Ultro X | More than 750 W |
| Mahle M40 | More than 750 W |
| Specialized SBC 3.1 S-Works (FW 1.D.4) | More than 750 W |
| TQ HPR120S | More than 750 W |
| Ananda M230 | More than 750 W |
| Giant SyncDrive Pro3 | More than 750 W |
| Yamaha PW-X4 | More than 750 W |
| Bafang M510 RS | More than 750 W |

## How to use these lists safely

• Use the power list to identify which machines need immediate escalation or exclusion under an event-specific power limit.

• Then confirm eligibility against the current official UCI homologation list.

• Never infer approval from motor family similarity. “M2S” and “M2S RACE750”, for example, are distinct entries in the supplied documents.

• Treat power, software, hardware ID and homologation as separate checks.

# 5. Professional bike inspection

EBIKE LAB will conduct professional pre-race technical inspections. For the 2026 UCI Mountain Bike World Championships, each participant must also complete the event E-Bike information form. Inspections are ordered by approved drive unit and rider surname; the rider or representative must attend.

## EBIKE LAB verification scope

| | |
|---|---|
| Drive-unit model | Identify manufacturer, exact model and development ID. |
| Power and torque | Confirm classification against the selected race category. |
| Firmware and software | Read and record the installed configuration; compare against UCI approval where applicable. |
| Speed-limit settings | Verify configured assistance cut-off and detect unauthorised changes. |
| Battery and electrical safety | Inspect battery retention, connections, wiring and visible damage. |
| Mechanical condition | Check safety-critical bicycle condition before release. |
| Category compliance | Issue pass, fail or technical escalation for the selected category. |

## Recommended inspection workflow

| | | |
|---|---|---|
| 1 | Registration | Rider entered; event E-Bike form submitted. |
| 2 | Identity | Frame/vehicle serial, number plate and rider details recorded. |
| 3 | Drive unit | Exact brand, model and development ID match current UCI list. |
| 4 | Software | Diagnostic readout matches an approved software version. |
| 5 | Integrity | No tuning device, altered sensor, non-approved firmware or suspicious wiring. |
| 6 | Battery | Only the battery fitted for the start; no additional battery carried. |
| 7 | Functional check | Normal startup, no relevant error state, assistance behaviour consistent with approved configuration. |
| 8 | Seal and record | Apply event control method; capture inspector, time, result and exception notes. |

## Event-specific timing in the supplied guide

- 25 August 2026, 14:00-17:00. Location to be confirmed at rider confirmation.
- The final inspection order is communicated by official communiqué.

| | |
|---|---|
| **FAILURE CONSEQUENCE** | Failure to submit the questionnaire, non-compliance with the referenced UCI Regulations, or failure to report for inspection results in refusal of participation or disqualification. |

# 6. Race and post-race controls

## Battery and bicycle continuity

• The rider may use only the battery fitted to the bicycle at the start.

• The rider may not carry an additional battery during competition.

• Changing the battery during E-XC technical assistance is prohibited.

• Bike changes are not permitted. The rider must finish with the same number plate used at the start.

## Technical assistance

• Repairs or replacement of any bicycle part other than the frame are authorised, subject to the stated conditions.

• Technical assistance is provided only in designated feed/technical assistance zones, except permitted rider-to-rider assistance.

• At World Championships, assistance outside the zone is permitted only between riders of the same national team.

• Tools and spares may be carried only if they do not endanger the rider or others.

• A rider may not turn back on course to reach the assistance zone; doing so results in disqualification. Turning back within the zone is permitted if it does not obstruct others.

## Post-race inspection

• Selected riders are notified by commissaires in the finish area.

• The bicycle must be presented immediately to parc fermé in the finish area.

• Recommended controls: verify seal integrity, re-read firmware/configuration, preserve diagnostic records and document any discrepancy before release.

# 7. Field checklists

## Rider / team - before travel

• Confirm the exact motor and software are on the latest UCI homologation list.

• Arrange manufacturer support for competition firmware where access is restricted.

• Complete the event E-Bike information form and retain confirmation.

• Plan battery transport: the supplied guide warns that e-bike batteries are not accepted on regular commercial flights.

• Bring compatible charger, diagnostic access/support contact and proof of the approved configuration.

## Mechanic - bike-check station

• Use a controlled checklist and photograph/read serial and software data consistently.

• Quarantine ambiguous bikes; do not approve based on brand, casing appearance or nominal watts alone.

• Record tool/version used for diagnostics and preserve screenshots/export where allowed.

• Escalate mismatched software, unlisted development IDs, tuning artefacts, sensor modifications or broken seals.

## Organizer - minimum controls

• Publish the accepted homologation-list version and inspection timetable.

• Provide secure inspection space, power, internet/offline references, lighting, stands and parc fermé.

• Group inspection order by approved drive unit and rider surname, consistent with the supplied event procedure.

• Issue a documented pass/fail/escalation outcome and communicate consequences clearly.

| | |
|---|---|
| **DOCUMENT CONTROL** | Recheck the UCI website and official event communiqués immediately before competition. Homologation lists are updated when new models are approved. |

# 8. Sources and limitations

## Unique source documents reviewed in full

| | | |
|---|---|---|
| Technical Guide MTB 2026 EN V8 | 13 Aug 2026 | Event rules, technical assistance, registration and inspections. |
| List of Approved Models of EPAC Drive Unit | 15 Apr 2026 | Official homologated models, IDs, software and dates. |
| EPAC Drive Units -750W.pdf | 16 Apr 2026 | Supplemental less-than-750 W classification. |
| EPAC Drive Units +750W.pdf | 16 Apr 2026 | Supplemental more-than-750 W classification. |

## Limitations

• This is a consolidated operational guide, not a replacement for the UCI Regulations or a commissaire decision.

• The official homologation table reflects the supplied list dated 15 April 2026; later UCI updates may supersede it.

• The power-category PDFs do not state that every listed model is UCI-homologated. They are reproduced as supplied and clearly separated from the official table.

• Event dates, links and inspection locations can change by communiqué.

Prepared from the documents supplied by Thiago Boaretto / EBIKE LAB.