ERTF
COMPETITION

USER MANUAL

UNIK4 RALLY RAID GPS
BIKE - QUAD



SOMMAIRE

01. Presentation P3

02. Physical Buttons P5

03. Connections P6

04. Screens P7

- Overview
- Power & Satellite Icons
- Speed Limits
- Neutralised Zones

05. Remote Control P13

- Physical Keys
- Menus

06. Shutdown P27

07. Special Stage Display P27

08. Problem Resolution P28

09. Settings P30

01. UNIK4 PRESENTATION

ALL-IN-ONE DEVICE

The Unik4 is a **complete device** combining racing control and navigation functions with an **electronic roadbook,** alongside the **Sentinel system** for collision prevention and overtaking management.



01. UNIK4 PRESENTATION

COLLISION PREVENTION

Enhanced Collision Alert Function provides an **improved awareness of potential collision risks** from any direction. It uses the radio signal emitted by each vehicle to analyze the distance between vehicles, their speed, the estimated time to collision, and the closing speed, in order to determine whether a collision risk is present. If a collision risk is detected, the buzzer emits **an alert sound and a message is displayed** on the Unik4 screen.
The Collision Alert is deactivated during r**oad sections, transfer zones, neutralizations, controlled speed zones**, and between the **last WPT and the ASS.** It may also be deactivated in specific situations, such as during prologues held in confined areas.

CRASH ALERT

In the event of a **breakdown** or an **accident** during a special stage, **an alert signal is automatically sent** to other competitors as soon as the device detects a speed below **15 km/h**. The alert can also be activated manually using the **Alarm** button available in the device menus. The alert is automatically deactivated as soon as the detected speed rises above the 15 km/h threshold.

When entering an area where an alert has been issued, the Unik4 emits an **audible signal and displays a banner** indicating the type of vehicle in difficulty and the distance at which it is located.

02. UNIK4 PHYSICAL BUTTONS



SETTINGS

Short press: access to the Unik4 settings and configuration menu.

POWER BUTTON

Short press: sleep mode / wake-up

Long press: displays the full device shutdown menu.

INFORMATION

The other physical buttons and connection ports on the device are intended **exclusively for ERTF technicians** for **programming, configuration,** and **maintenance operations.**

03. UNIK4 CONNECTIONS

WIRING & CONNECTION OVERVIEW



INFORMATION

All equipment shown here, along with **detailed installation and connection instructions** for the Unik4, are available on our website at **Ertf.com**.

04. UNIK 4 SCREENS

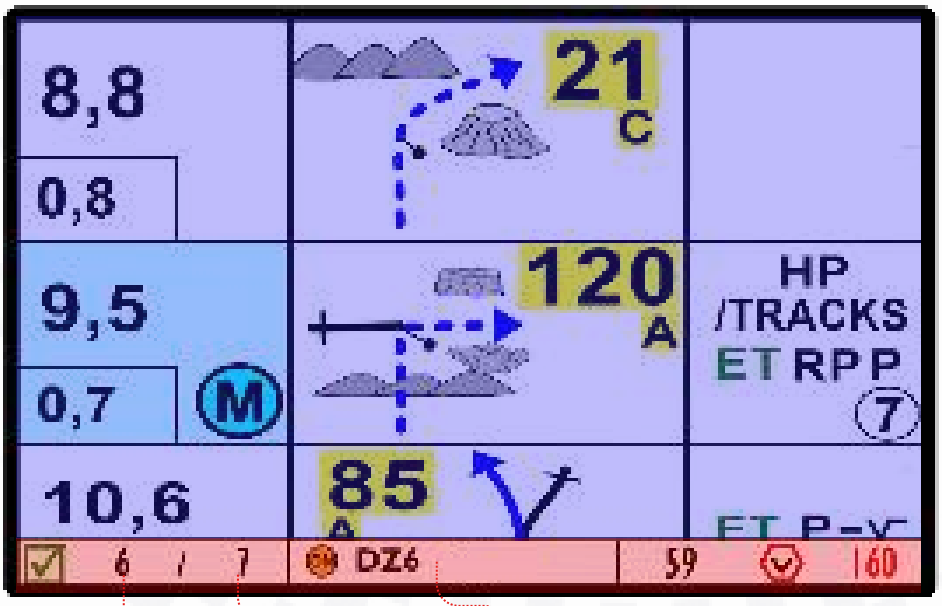
The Unik4 Moto offers **three different display formats**, accessible from the settings menu: **Fullscreen "Standard"** mode, **"Fullscreen 2 Lines"** mode, and **"All-In-One"** mode.

FULLSCREEN MODE

This display mode is designed to operate with **one or two Speedocaps**. The information displayed on the Speedocaps **is not duplicated** on the Unik4, in order to **maximize the space** dedicated to the roadbook.

EXAMPLE OF IN-RACE SCREEN

1 **OUTSIDE VISIBILITY RADIUS**



ZONE 2
Roadbook

ZONE 1
GPS Data

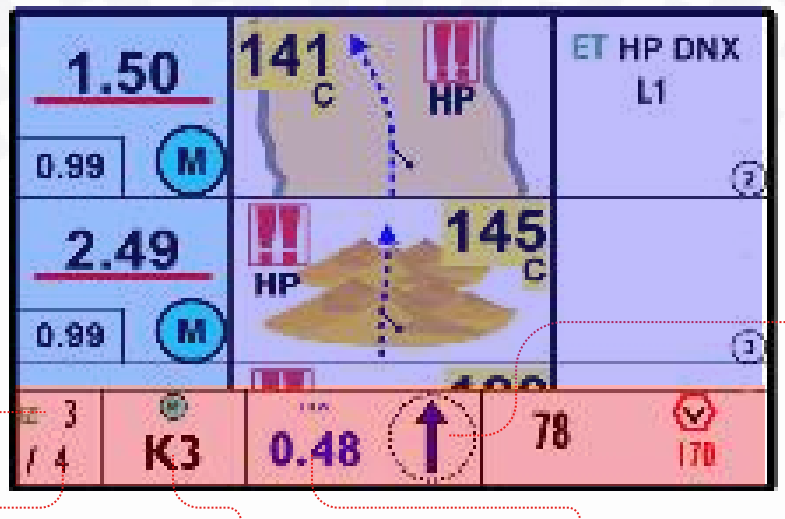
Number of validated WPT

Target WPT Number

Target WPT Name

04. ÉCRANS DE L'UNIK 4

2 WITHIN VISIBILITY RADIUS



Number of validated WPT

***CTW* : Heading to follow to target WPT.**

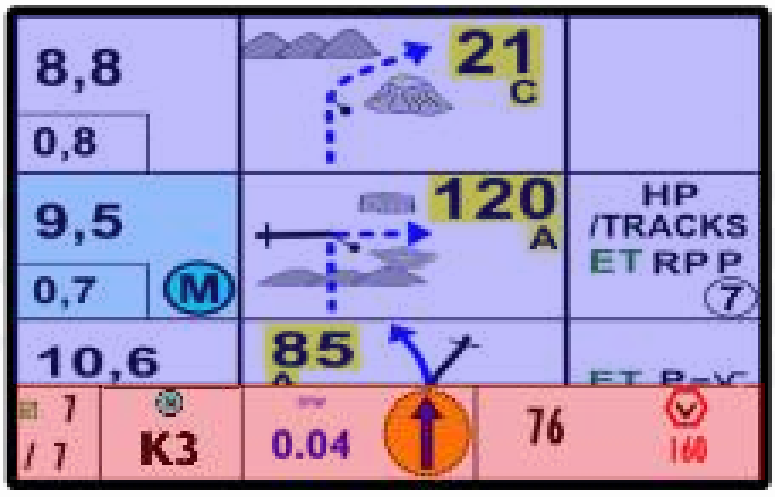
Target WPT Number

Target WPT Name

***DTW* : Distance to target WPT**

3 WITHIN VALIDATION RADIUS

The **CTW arrow circle** turns **orange** to confirm **WPT validation.**



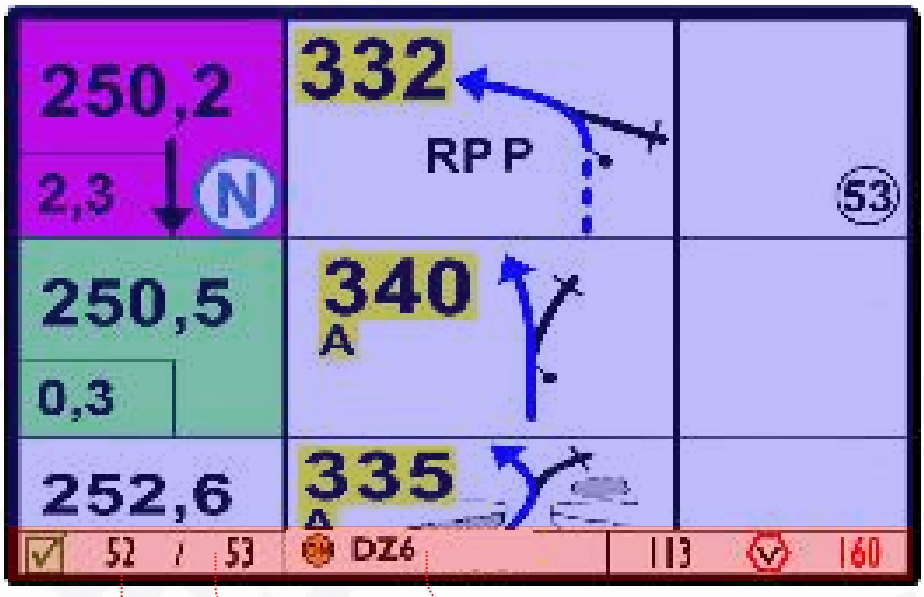
04. ÉCRANS DE L'UNIK 4

"2 LINES" FULLSCREEN MODE

This display mode has been designed to operate in the same way as the **Fullscreen "Standard"** display mode, by **not showing the GPS information already provided by the Speedocap**. However, in this mode, the first two roadbook lines are **displayed larger**, while the third line is **slightly cropped.**

EXAMPLE OF IN-RACE SCREEN

1 **OUTSIDE VISIBILITY RADIUS**



ZONE 2
Roadbook

ZONE 1
GPS Data

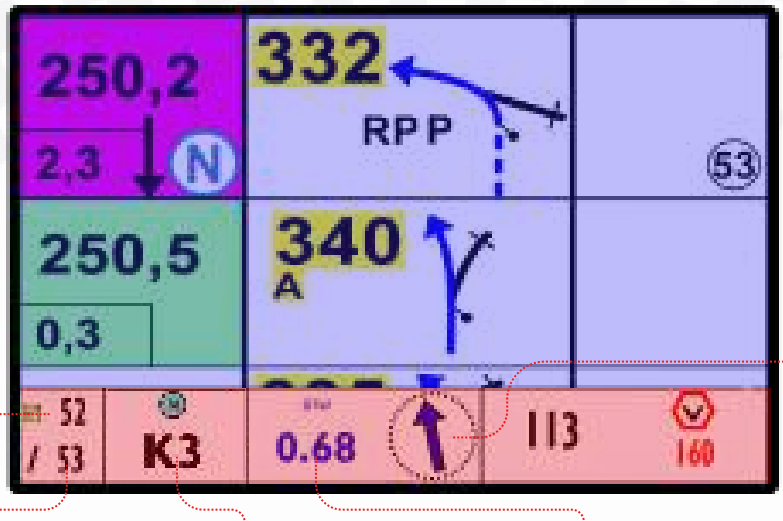
Number of validated WPT

Target WPT Number

Target WPT Name

04. ÉCRANS DE L'UNIK 4

2 WITHIN VISIBILITY RADIUS



Number of validated WPT

***CTW* : Heading to follow to target WPT.**

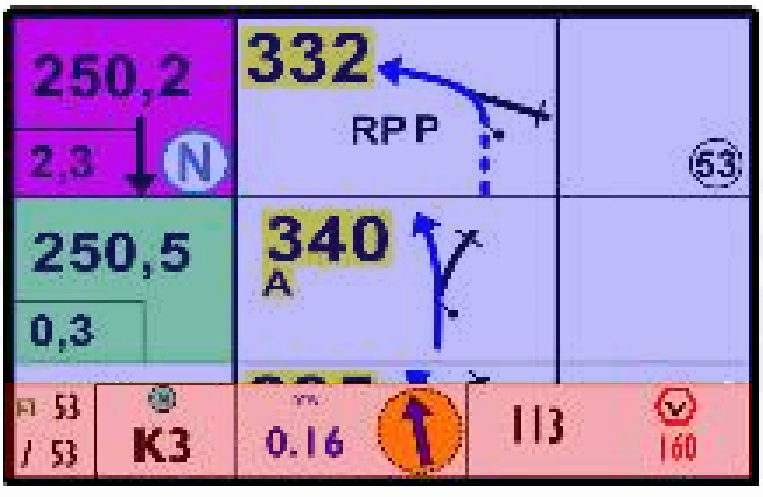
Target WPT Number

Target WPT Name

***DTW* : Distance to target WPT**

3 WITHIN VALIDATION RADIUS

The **CTW arrow circle** turns **orange** to confirm **WPT validation.**



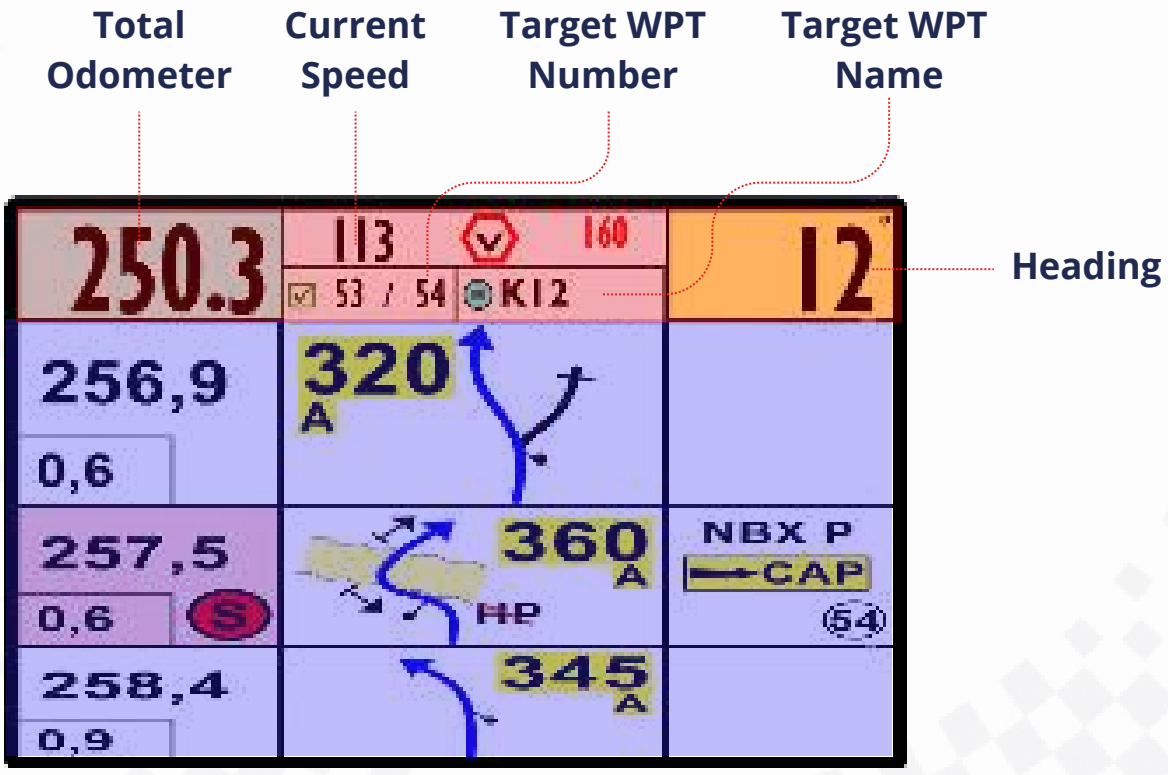
04. ÉCRANS DE L'UNIK 4

"ALL IN ONE" MODE

The All-In-One mode is designed for **standalone operation,** without the use of a Speedocap : the GPS information displayed is **more extensive and detailed** than in the other display modes.

EXAMPLE OF IN-RACE SCREEN

1 **OUTSIDE VISIBILITY RADIUS**

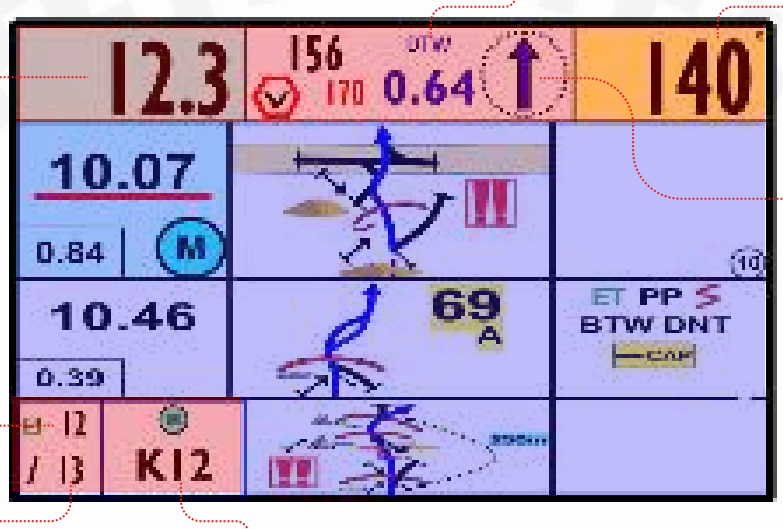


ZONE 1 GPS Data

ZONE 2 Roadbook

04. ÉCRANS DE L'UNIK 4

2 WITHIN VISIBILITY RADIUS



DTW : Distance to target WPT

Current Heading

Odo Total

CTW : Heading to follow to target WPT.

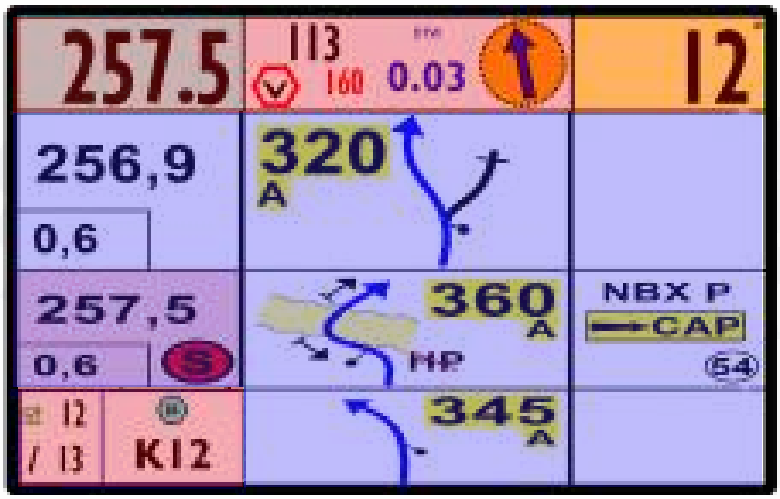
Number of validated WPT

Target WPT Number

Target WPT Name

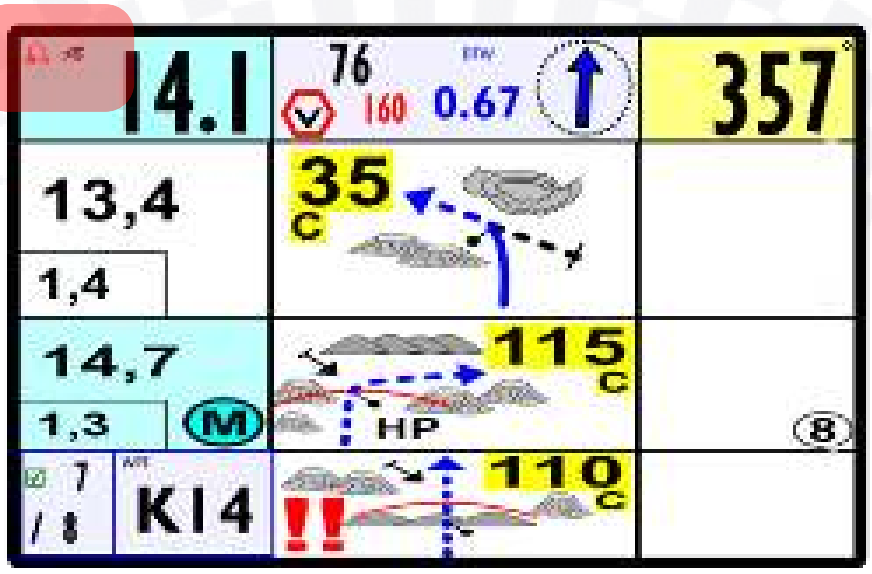
3 WITHIN VALIDATION RADIUS

Once again, WPT validation is confirmed by the **CTW arrow circle turning orange**.



4.1 POWER & SATELLITE ICONS

EXAMPLE OF IN-RACE SCREEN



NO ICON

No issues detected. Satellite reception is good with a **strong signal lock.**

NO ICON

No issues detected. Unik4 is powered by the vehicle battery.

FIXED BELL ICON

Unik4 is unable to establish a satellite connection. Installation **to be checked.**

BATTERY ICON

Battery **low but charging**. Unik4 is powered by the vehicle battery.

FLASHING BELL ICON

Satellite reception is via the **internal antenna**. Installation **to be checked.**

PLUG ICON

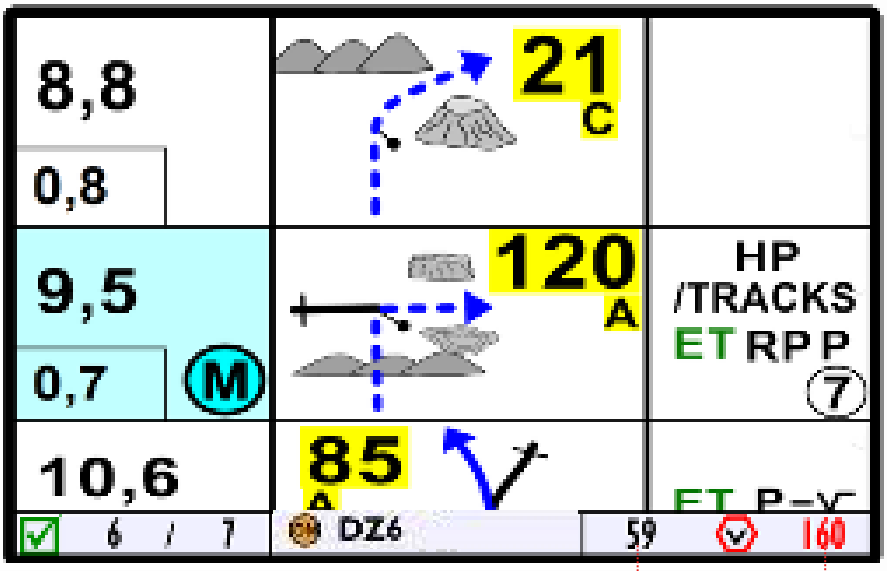
The Unik4 is powered by its **internal battery.** Installation **to be checked.**

4.2 SPEED LIMITS

CATEGORY-SPECIFIC SPEED LIMITS

The applicable speed limits are configured in accordance with the **race regulations** and the **vehicle's entered category.**
The GPS automatically displays the **maximum permitted speed**, and when an overspeed is detected, an **audible alert may be triggered** to warn the crew.

EXAMPLE OF IN-RACE SCREEN



Current Speed
Speed measured by the Unik4

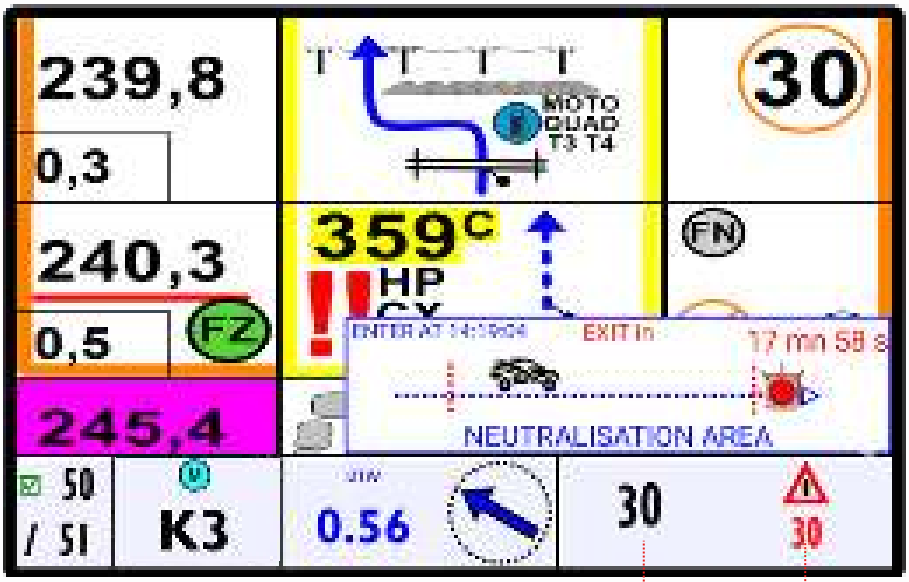
Speed Limit:
Maximum speed based on vehicle category

4.2 SPEED LIMITS

ZONE-SPECIFIC SPEED LIMITS

In addition to the speed limits defined by vehicle category, the course may include specific sections with **special speed limits**. These are **automatically managed and displayed** by the Unik4.

EXAMPLE OF IN-RACE SCREEN



Current Speed
Speed measured by the Unik4

Speed Limit:
Maximum speed in this zone.

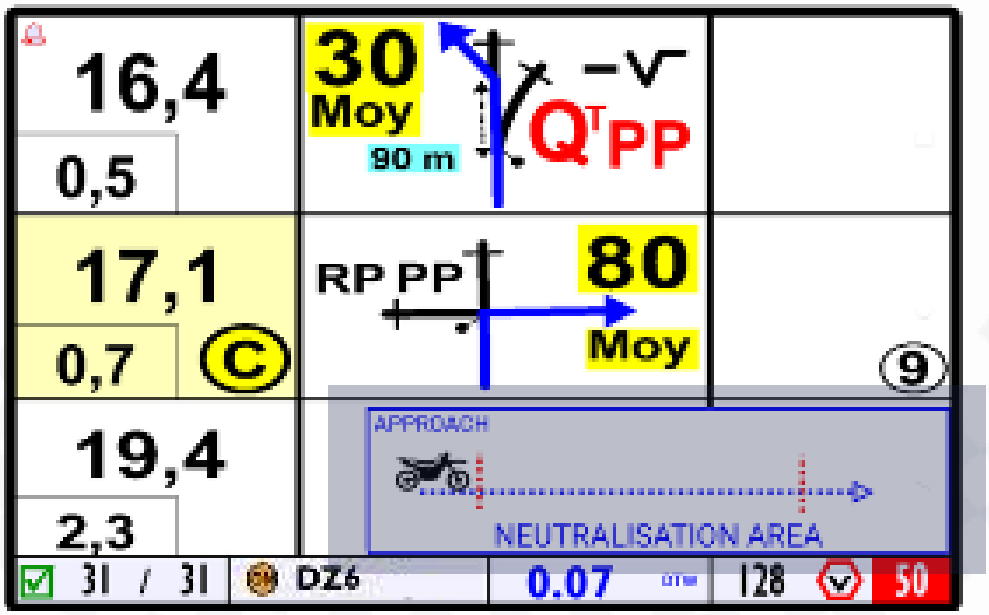
4.3 NEUTRALISED ZONES

Crossing a neutralization zone is divided into **three distinct phases**: **approaching** the zone, **crossing** it, and **exiting** the neutralization area. Each phase has a **dedicated display** on the Unik4, which varies depending on the **selected display mode.**

FULLSCREEN MODE

1 APPROACH PHASE

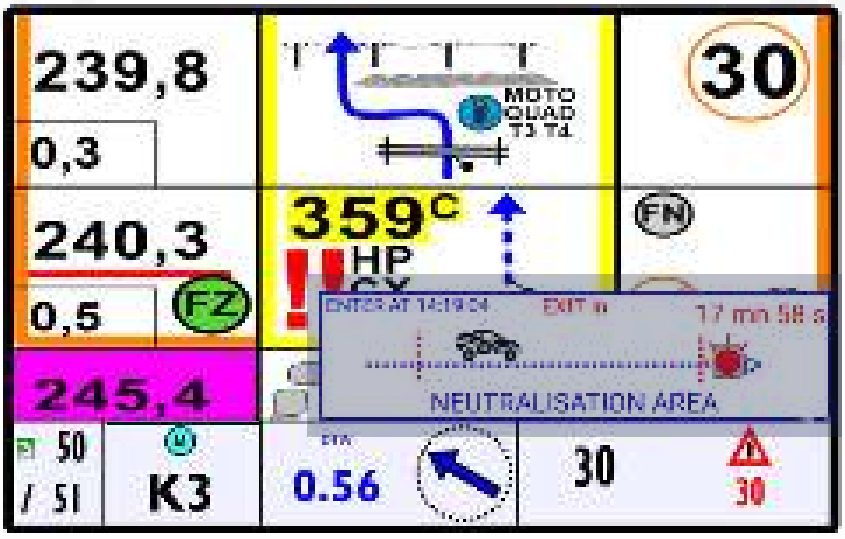
As soon as the Waypoint **marking the entrance to the neutralization zone** is reached, the Unik4 displays a **first approach screen** to warn the driver.



4.3 NEUTRALISED ZONES

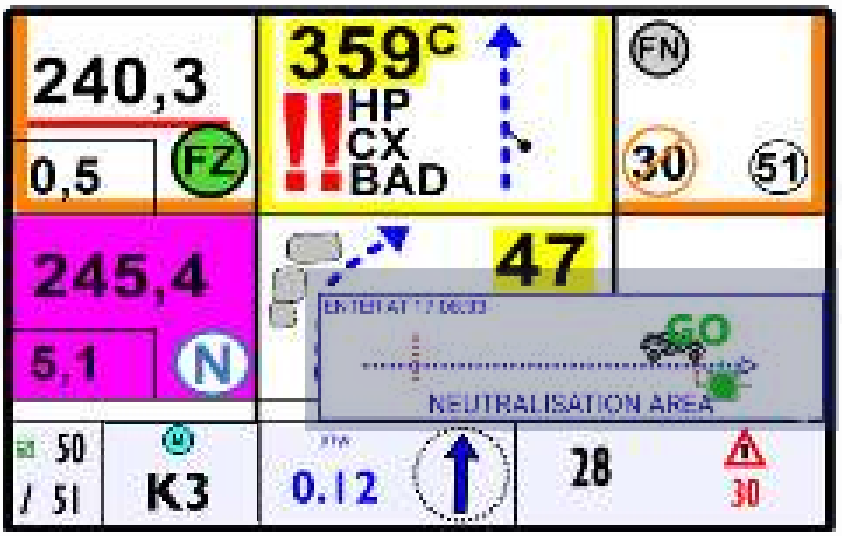
2 CROSSING PHASE

The countdown is triggered when the vehicle crosses the **center of the zone entry waypoint.**



3 EXIT PHASE

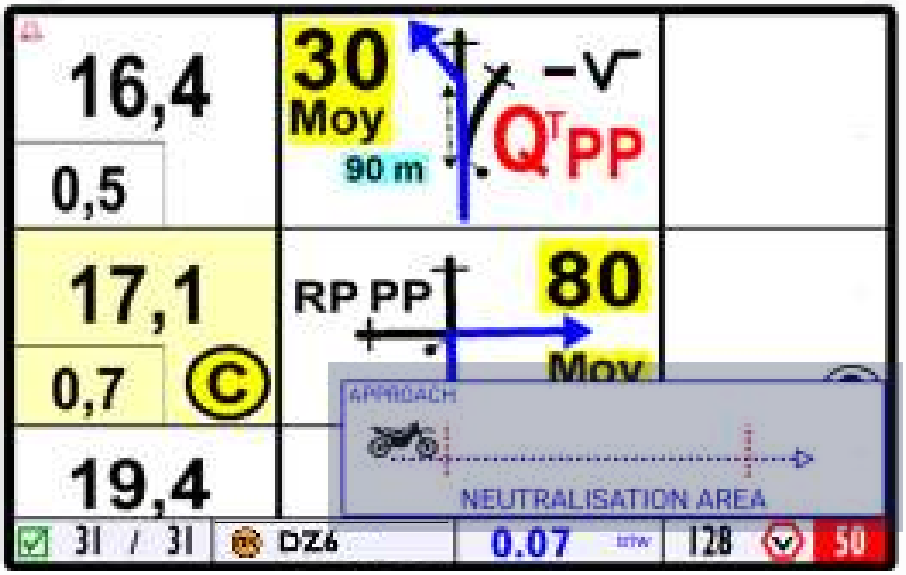
Once the countdown reaches zero, the **exit from the neutralization zone is authorized** and signaled by the device.



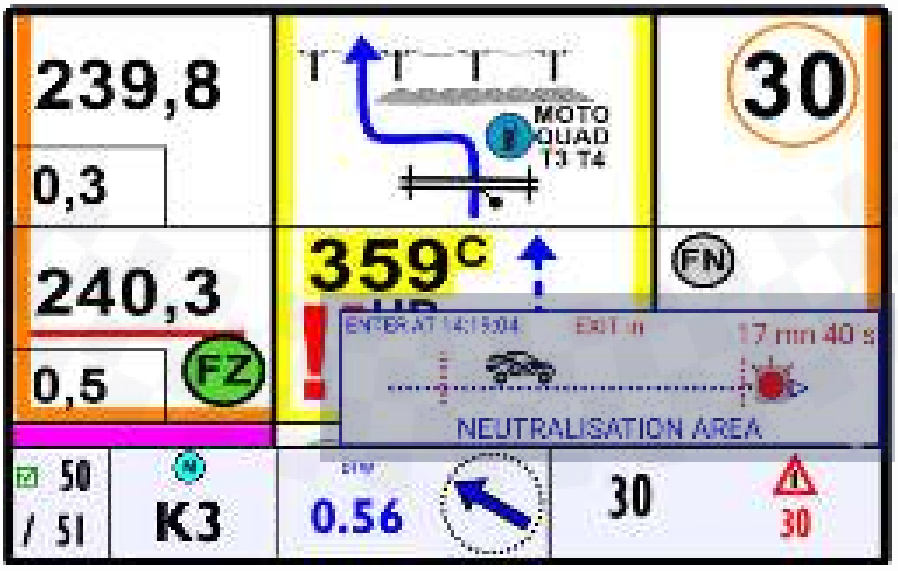
4.3 NEUTRALISED ZONES

"2 LINES" FULLSCREEN MODE

1 APPROACH PHASE

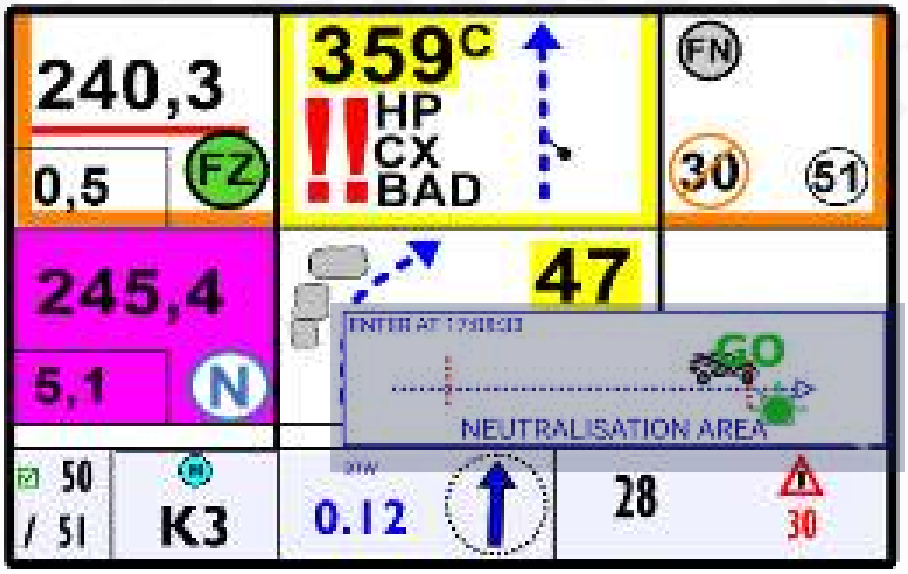


2 CROSSING PHASE



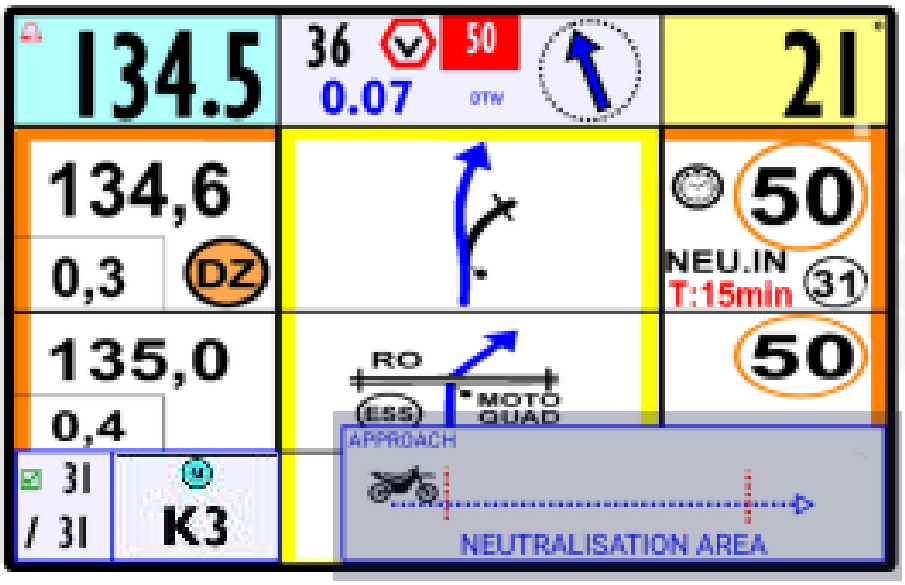
4.3 NEUTRALISED ZONES

3 EXIT PHASE



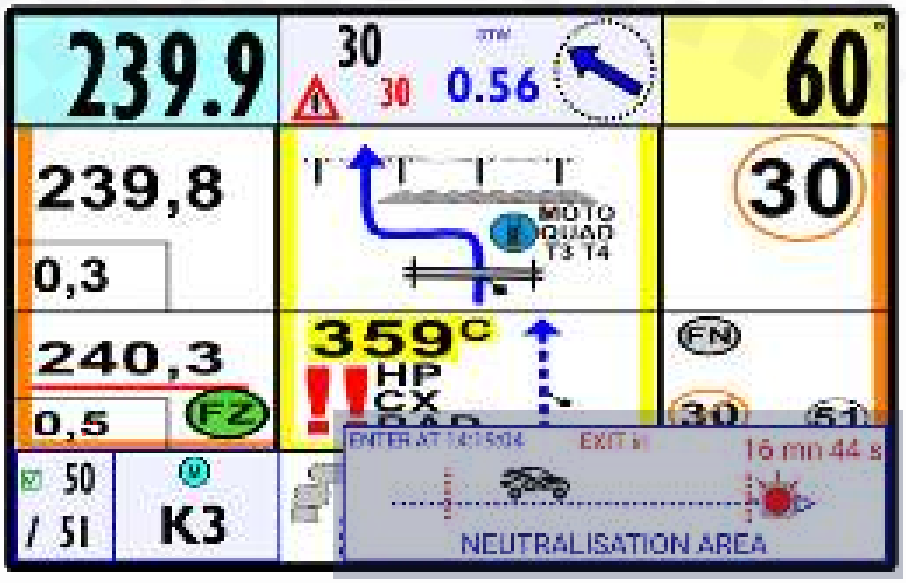
"ALL-IN-ONE MODE"

1 APPROACH PHASE

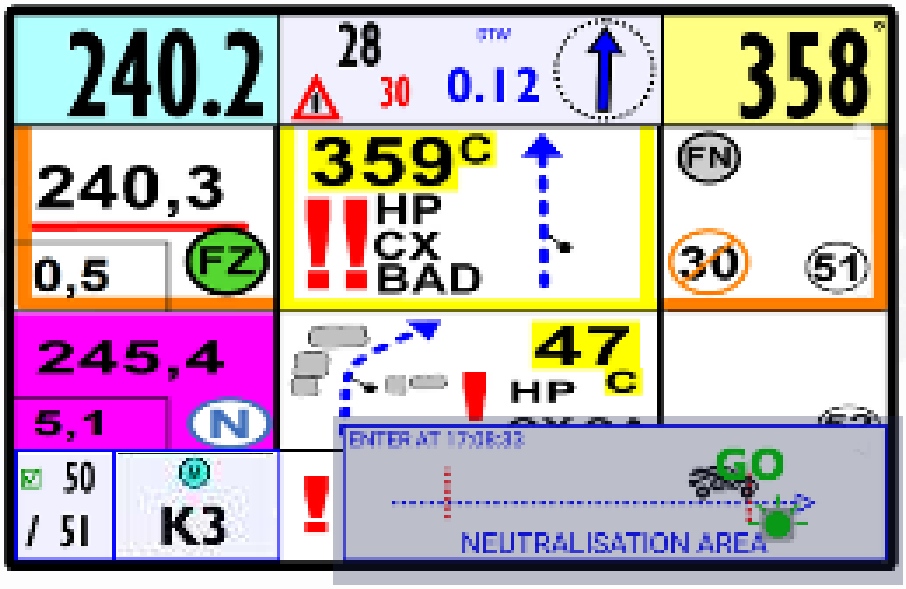


4.3 NEUTRALISED ZONES

2 CROSSING PHASE



3 EXIT PHASE



05. UNIK4 REMOTE CONTROL

PHYSICAL KEYS & BUTTONS

Trip Management

Allows the **Trip** to be **increased** or **decreased**

Access to the GPS Menus



Roadbook Navigation

Allows **scrolling forward** or **backward** through the Roadbook

06. UNIK4 MENUS

MENU NAVIGATION

The Unik4 menus can be accessed by pressing the **Menu key** on the **physical remote control** or by using the **Menu button** on the **virtual remote control.**
When stationary, all menus are available. While driving, only the menus required for navigation remain accessible.

1 MENU SCROLLING WHEN STATIONARY

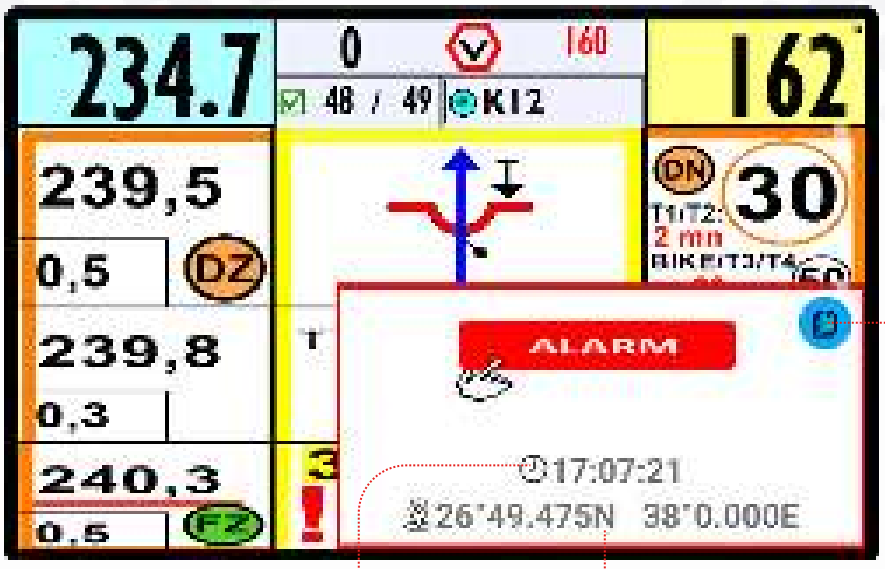
Alarm Time Position → Wpt + Wpt - → Trace → CP Table → Control Screens

2 MENU SCROLLING WHILE DRIVING

Wpt + Wpt - → Trace → CP Table

5.1.1 ALARM - TIME & POSITION MENU

EXAMPLE OF IN-RACE SCREEN

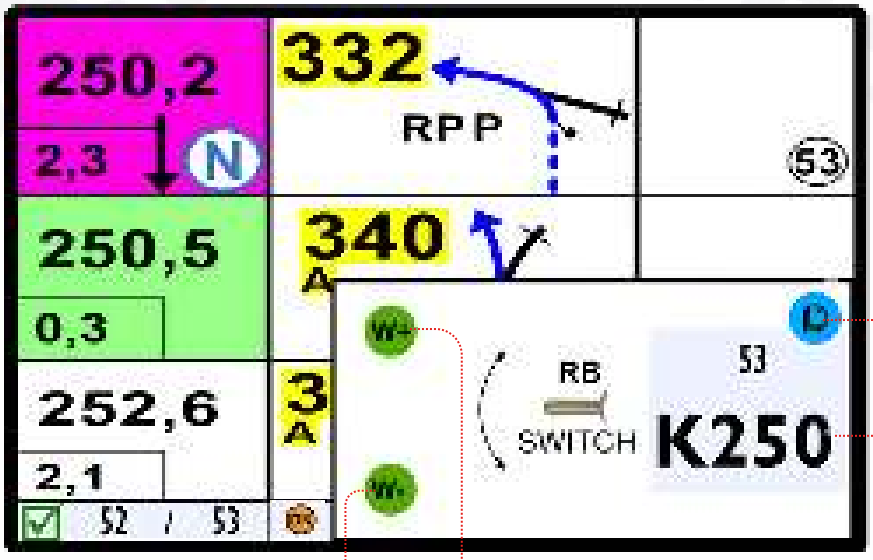


INFORMATION

This menu allows a **manual alarm signal to be sent** to other competitors in the event of a breakdown, accident, or any situation requiring the vehicle to remain stationary. Pressing the "**Alarm**" button a second time stops the signal transmission.
This page also displays the **local time** and the **device's GPS coordinates**.

5.1.2 WAYPOINT MENU

EXAMPLE OF IN-RACE SCREEN



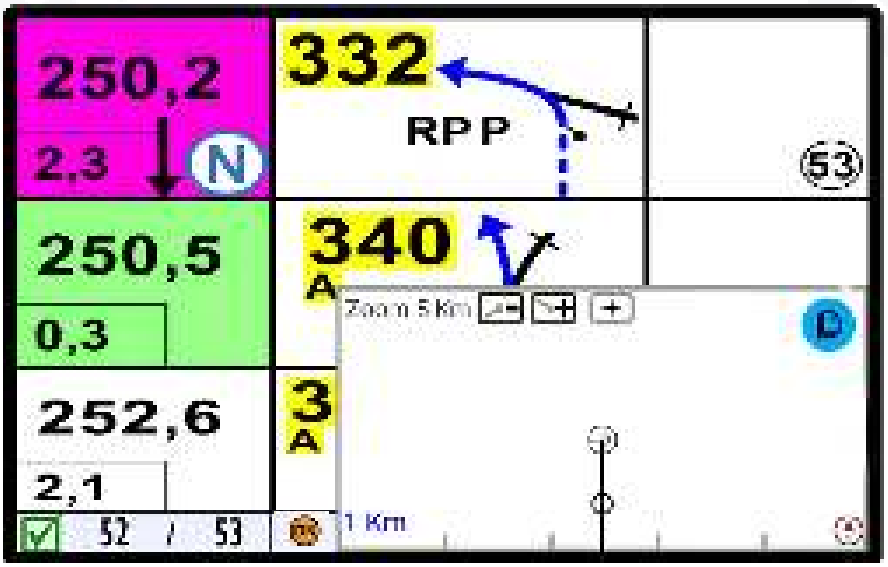
INFORMATION

During the race, as soon as a Waypoint is validated, the Unik4 **automatically targets the next Waypoint.**
This menu allows the Waypoint currently targeted by the device to be manually changed using the **push button** on the remote control.
This action can also be performed directly from the Unik4 screen: the **W+** button moves to the **next Waypoint** in the list, while the **W-** button returns to the **previous Waypoint**.

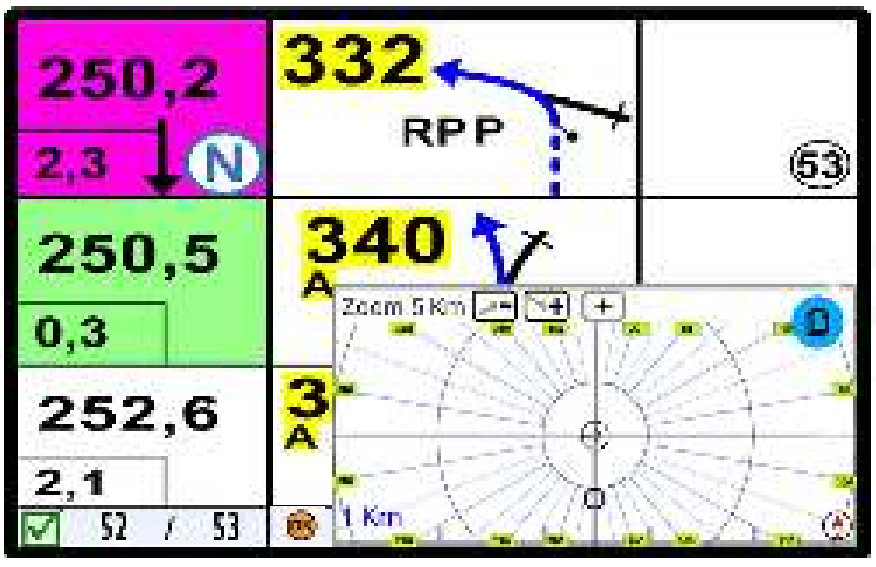
5.1.3 TRACE MENU

EXAMPLE OF IN-RACE SCREEN

1 WITHOUT RADIAL DISPLAY

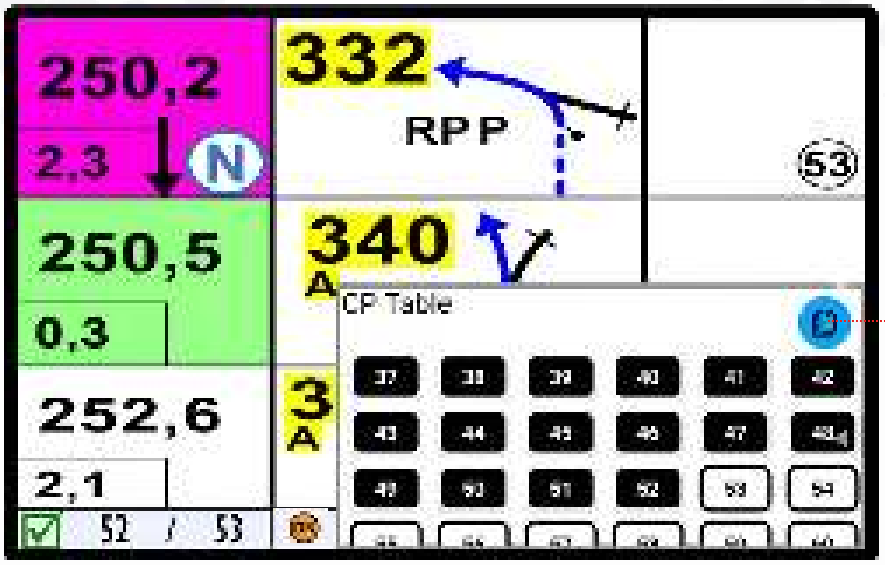


2 WITH RADIAL DISPLAY



5.1.4 CP TABLE MENU

EXAMPLE OF IN-RACE SCREEN



Access to the next menu

INFORMATION

This screen allows the **list of Waypoints** for the event to be displayed and their validation status to be monitored in real time.
Validated WPT are displayed in **black**, while WPT that have not yet been validated or reached are displayed in **white**.
This screen provides a quick **overview of the progress** along the route and allows verification that **all checkpoints have been correctly recorded**.

06. SHUTDOWN OF THE UNIK4

END-OF-STAGE SHUTDOWN

Upon arrival at the bivouac, the Unik4 should be **fully powered off** to preserve battery life and ensure a full restart before the next stage.

To power off the device, use the button located **on the right side** of the Unik4. Press and hold it for a few seconds until the shutdown screen is displayed, then **confirm** the shutdown.

07. SPECIAL STAGE DISPLAY

PARTIAL ROADBOOK DISPLAY

At the start of the stage, if the first section is a liaison, the electronic Roadbook displays only the information related to that liaison. Once the first waypoint of the special stage has been validated, the whole Roadbook is unlocked, providing access to the full stage overview.

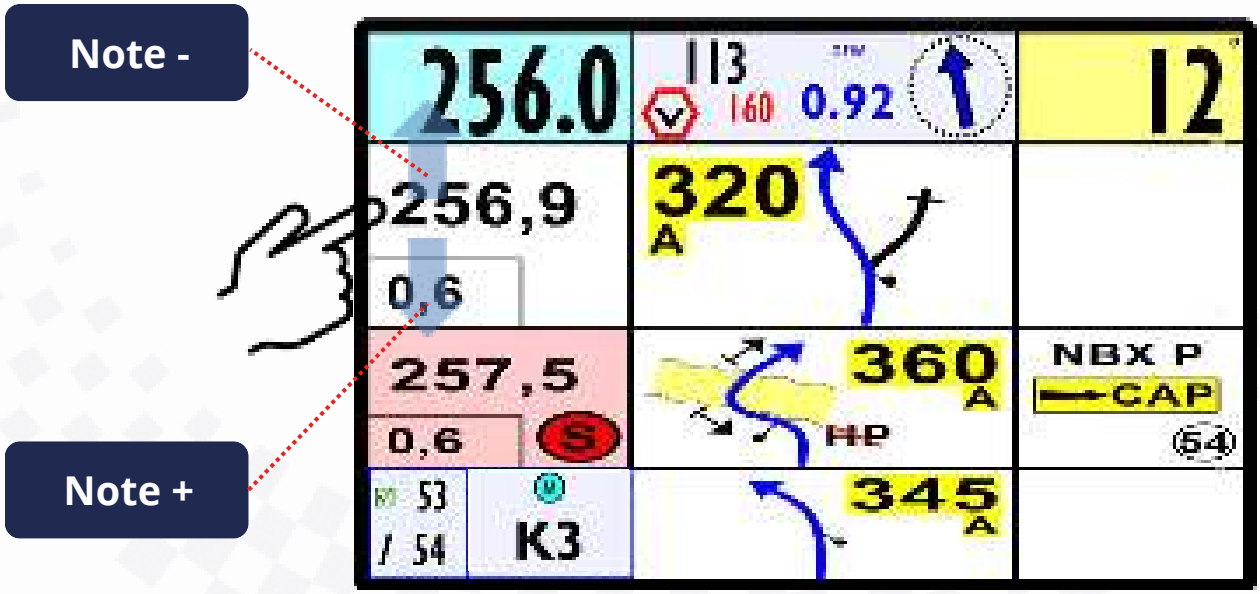
08. PROBLEM RESOLUTION

TOUCHSCREEN NAVIGATION

In the event of a remote control failure, the "**Touchscreen**" mode must be **enabled in the Settings** menu. The **GPS information remains displayed,** while the **Roadbook arrows are hidden but remain active**. Tapping the upper corner of the screen briefly displays the arrows and allows the Roadbook to be **advanced or moved back** to the previous note.

If the **GPS connection is lost**, the GPS screen is no longer available, but the **Roadbook display remains accessible**. Navigation is performed in the **same way.**

EXAMPLE OF IN-RACE SCREEN

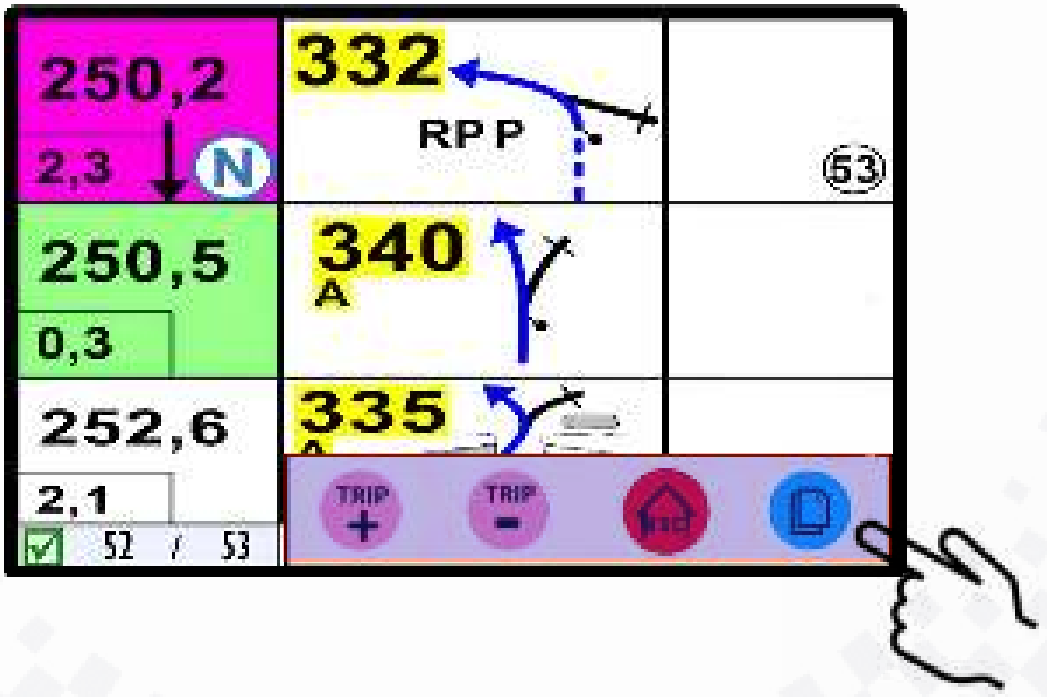


08. PERTES DE CONNEXION

VIRTUAL REMOTE

A **virtual remote control** can also be accessed by briefly tapping the **lower-right corner** of the screen. It provides the same functions as the physical remote control, including the **TRIP+** and **TRIP-** keys, as well as the **Menu key.**

EXAMPLE OF IN-RACE SCREEN



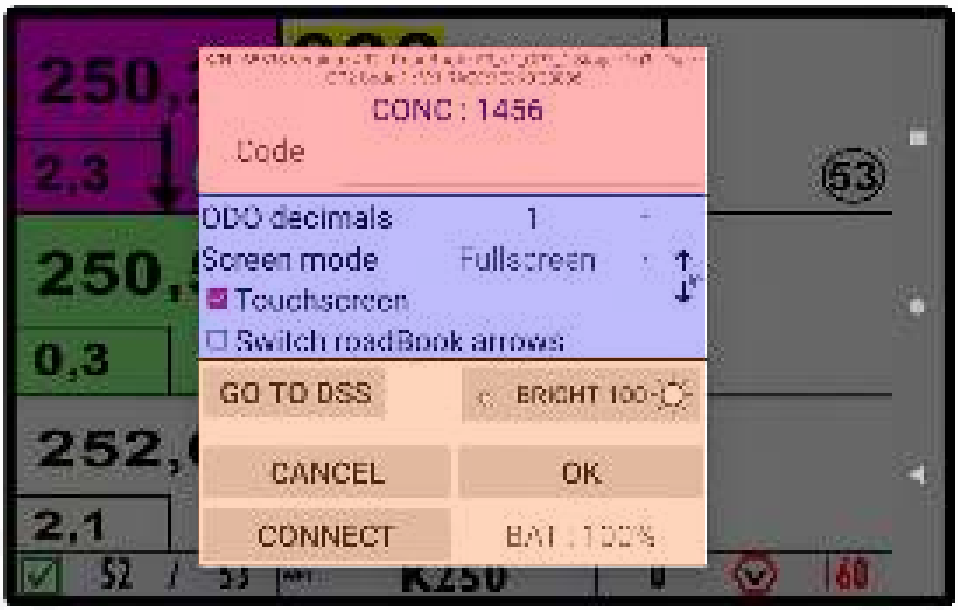
09. UNIK4 SETTINGS

THREE DEFINED ZONES

Z1 Information at the top, stage code entry, and the Unik4 operating mode: **FULL ROADBOOK** or **MULTI SCREEN.**

Z2 The device settings list.

Z3 Brightness and action buttons: **GO TO DSS**, **CANCEL**, **OK**, and **CONNECT**. *GO TO DSS scrolls the Roadbook to the last note of the liaison section.*



INFORMATION

A **swipe gesture** on the screen allows navigation through the settings. Enable **“Expert Mode”** to access advanced settings.

9.1 GENERAL SETTINGS

1 STAGE CODE

Stage code is displayed below the competitor number in the Information section of the settings screen. It can be entered via a **virtual numeric** keypad. Confirm with **OK**.

2 SCREEN MODE

Allows selection of the display mode from the t**hree available options:**

- "Fullscreen"
- "Fullscreen 2 Lines"
- "All-in-One"

3 MODE TOUCHSCREEN

Enabling the **"Touchscreen"** mode allows limited operation directly from the touchscreen.
This mode is also used in **case of a loss of communication** with the remote control.

4 SWITCH ROADBOOK ARROWS

Reverses the Roadbook scrolling controls:

- The **Note+** key scrolls the Roadbook **upwards**.
- The **Note−** key scrolls the Roadbook **downwards**.

5 BUZZER LEVEL

Allows adjustment of the **buzzer sound intensity.**
The level ranges from **1** (lowest) to **3** (highest).

6 BUZZER DANGER

Allows selection of which dangers will trigger the Buzzer alarm:

- **None** or **All**
- Danger **2 and 3** *(default)*
- Danger **3** only

9.1 GENERAL SETTINGS

7 BUZZER NOTIFICATION

By default, actions such as Note+/Note-, W+/W-, and WPT validation activate the external buzzer :
“No”: the function is disabled.
“Yes”: the function is always enabled.
“Only When Moving”: the function is enabled only when the vehicle is moving.
“Only WPT”: the function is enabled only upon **WPT validation.**

9.2 ADVANCED SETTINGS

1 ODO DECIMALS

Enables configuration of the ODO counter display **with one or two decimal** places.

2 WPT JUMP

"**Yes**" – When a waypoint is missed, the GPS prompts to skip directly to the next one.
"**No**" – No prompt is displayed; the GPS continues to target the missed waypoint.

3 SPEEDOX MODE

Configures the speed limit alert operating mode:
"**Stop**": Alert inactive
"**Security**": One beep every 2 seconds at 5 km/h below the limit, then continuous beep at 3 km/h below the limit.
"**Performance**": One beep every 2 seconds at 4 km/h below the limit, then continuous beep at 2 km/h below the limit.

4 SEE CP VALIDATION

Displays a line at the top of the device screen showing **the most recently validated CP.**

9.2 ADVANCED SETTINGS

7 OFFSET RB

Defines an **offset for the CTW arrow transition** point when crossing a waypoint:
(–X) triggers the transition **X meters before the waypoint center**
(+X) triggers the transition **X meters after the center**

---

8 ODO PITCH ADJUST

Default value is **100 m.**
Defines the increment applied by the **TRIP management** buttons with each press: **100 m, 50 m,** or **10 m.**

9 UTC SETTINGS

Enables selection of **the correct UTC time zone** for displaying local time on the device.