

USER MANUAL

UNIK4 RALLY RAID GPS
AUTO - TRUCK



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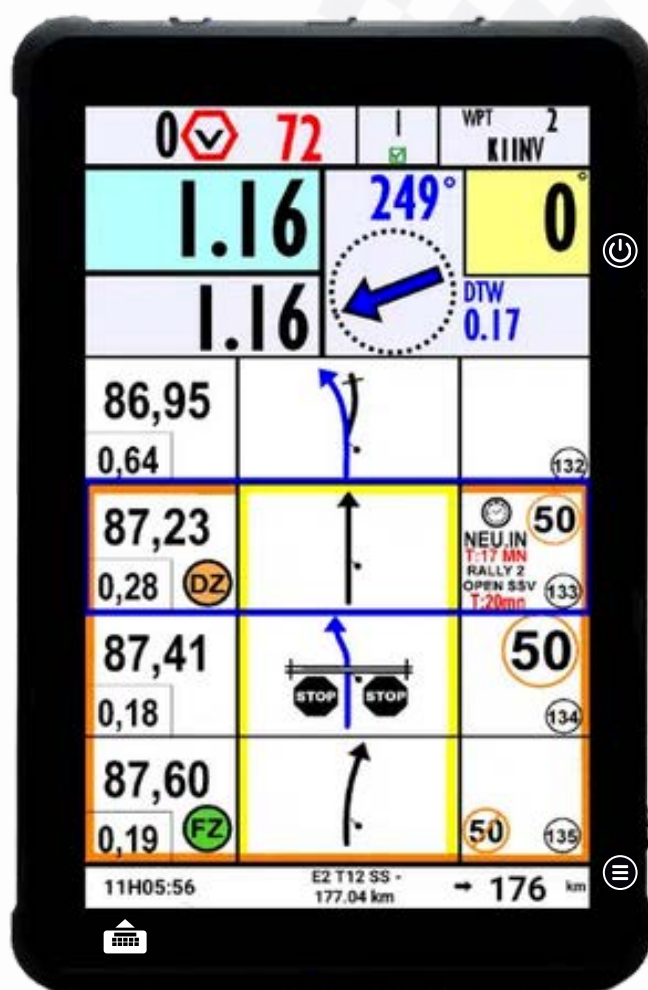
P40

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 **road 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.



EXAMPLE OF IN-RACE SCREEN

Number of the competitor involved in a detected collision risk.

Indicates the current position of the approaching vehicle.

215	COLLISION ALERT 129 m			
39	✓	170	5 ✓	WPT 6 DZIS
6.01				I
0.81				

02.

UNIK4 PHYSICAL BUTTONS



POWER BUTTON

Short press: sleep mode / wake-up

Long press: displays the full device shutdown menu.



SETTINGS

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



INFORMATION

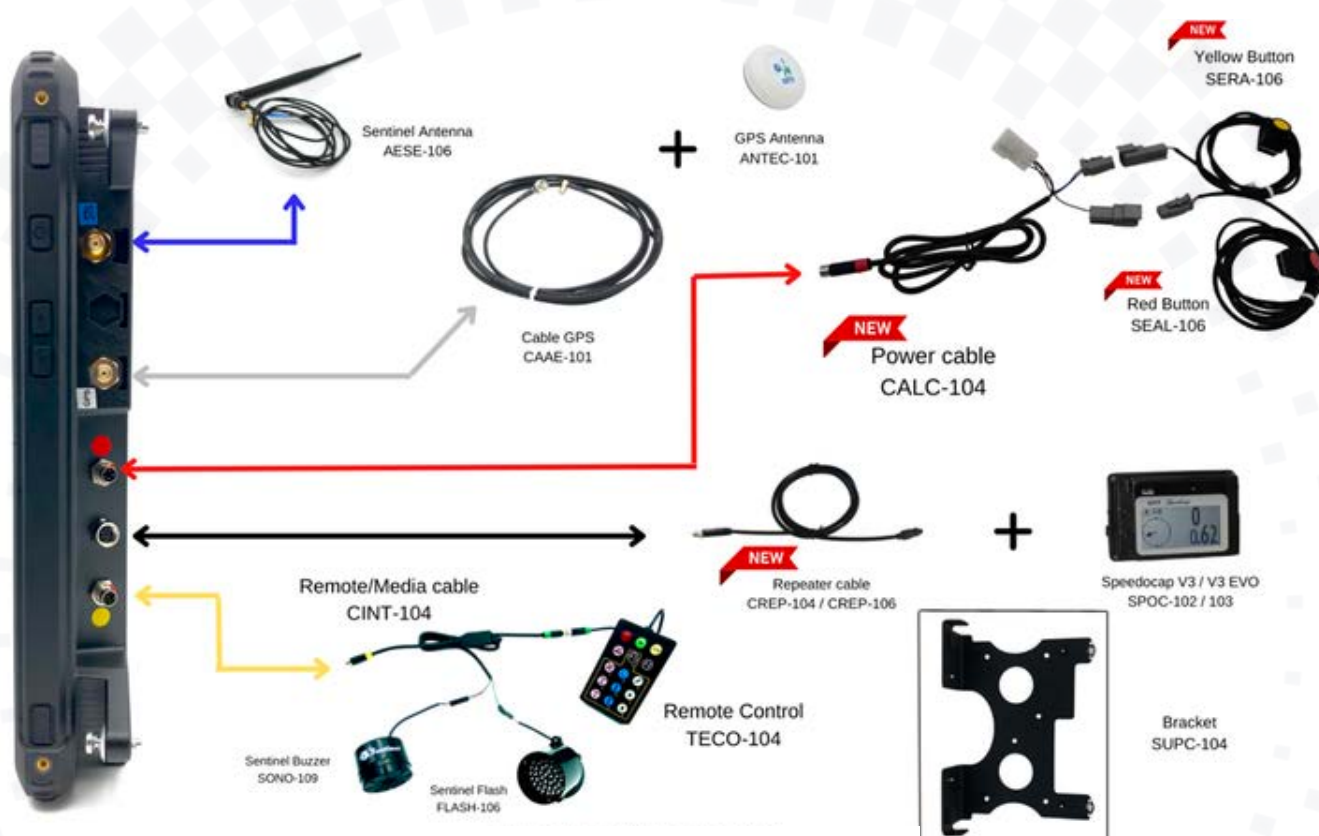
The other physical buttons and connection ports on the device are intended **exclusively for ERTF technicians** for **programming, configuration, and maintenance operations**.

03.

UNIK4 CONNECTIONS



WIRING & CONNECTION OVERVIEW



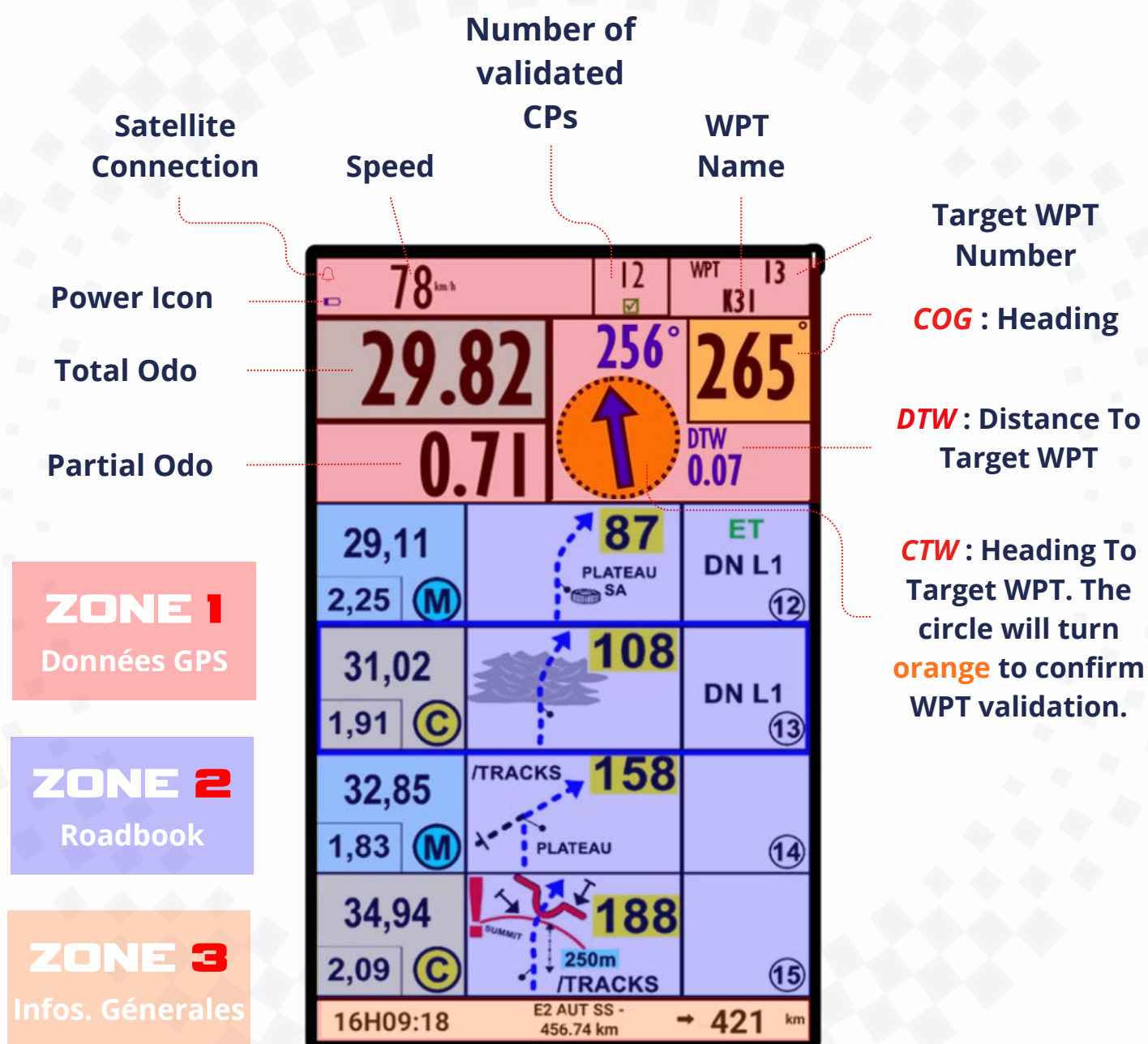
INFORMATION

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

04.

UNIK4
SCREENS

GENERAL OVERVIEW

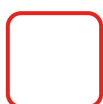
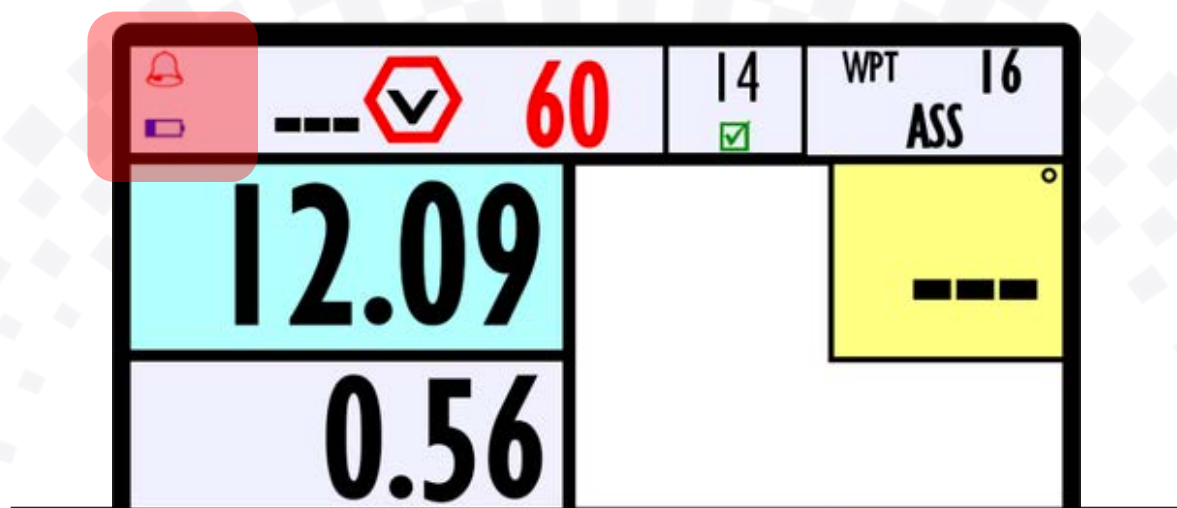


4.1

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

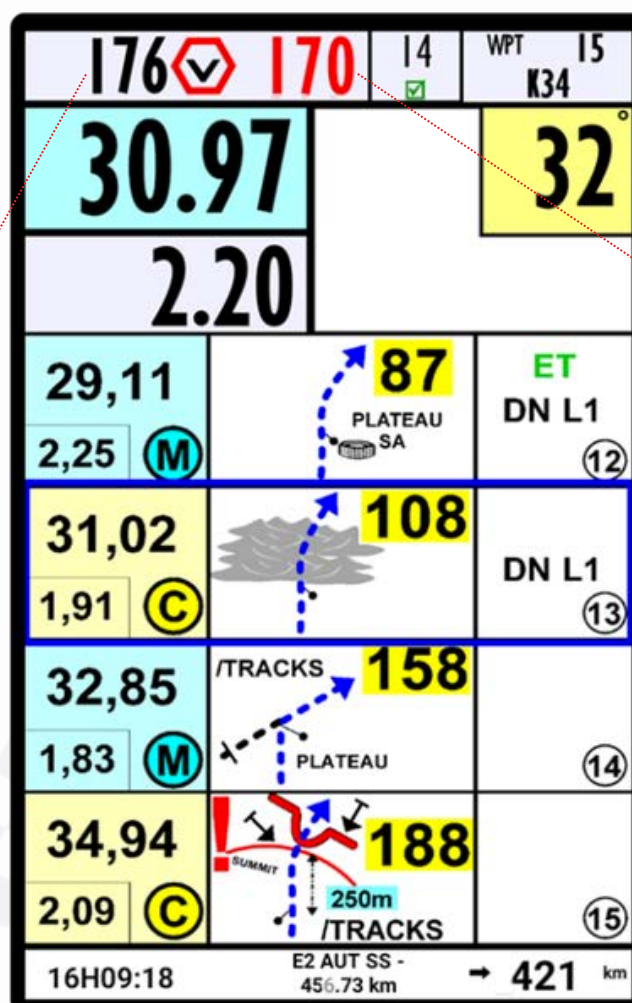
CATEGORY-SPECIFIC SPEED LIMITS

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

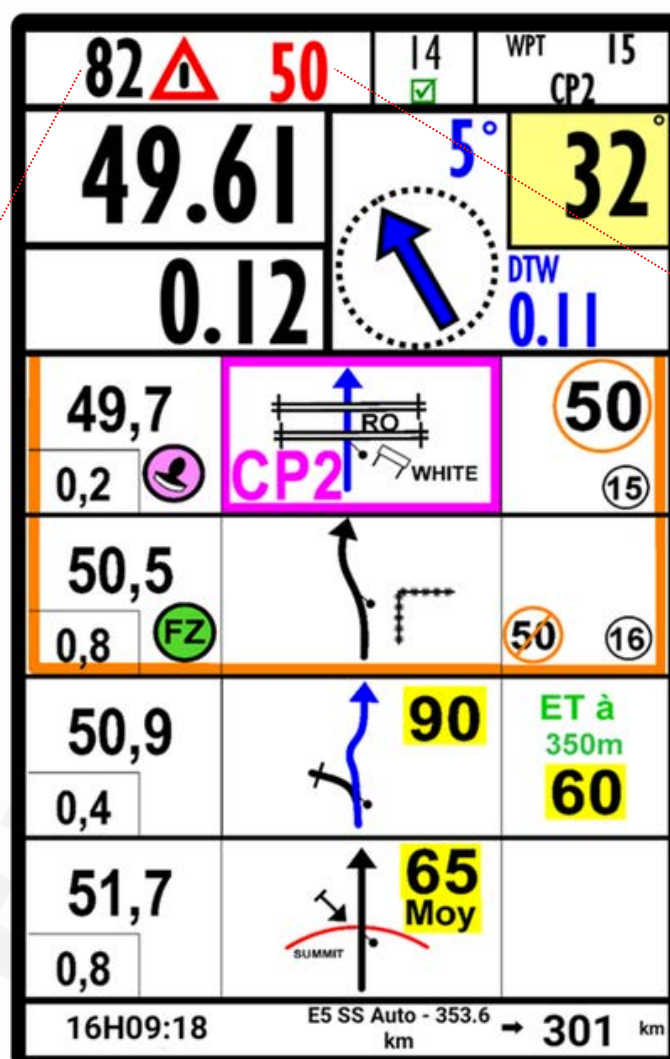
ZONE-SPECIFIC SPEED LIMITS

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

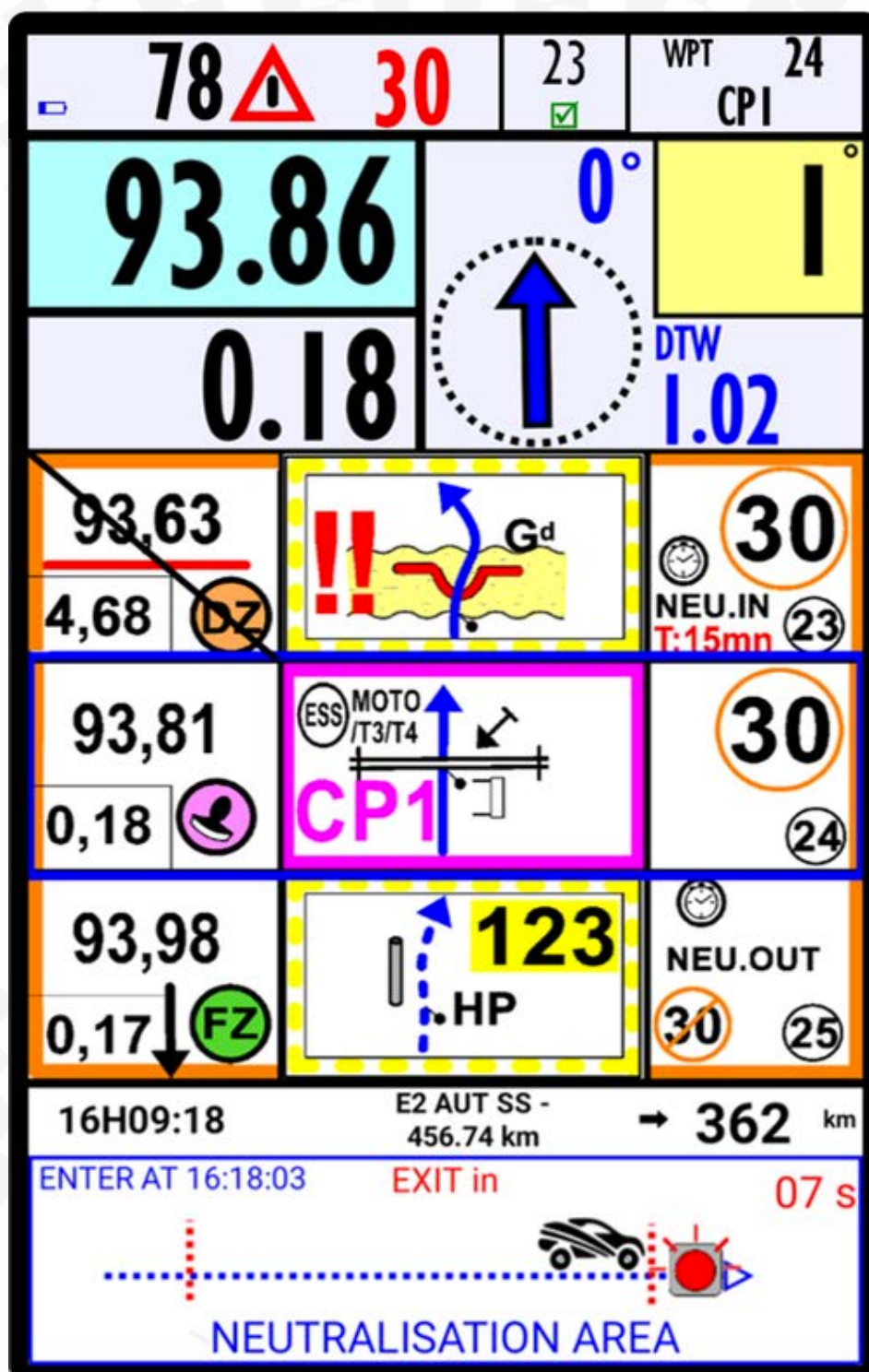


Speed Limit:
Maximum speed
in this zone.

4.3

NEUTRALISED
ZONES

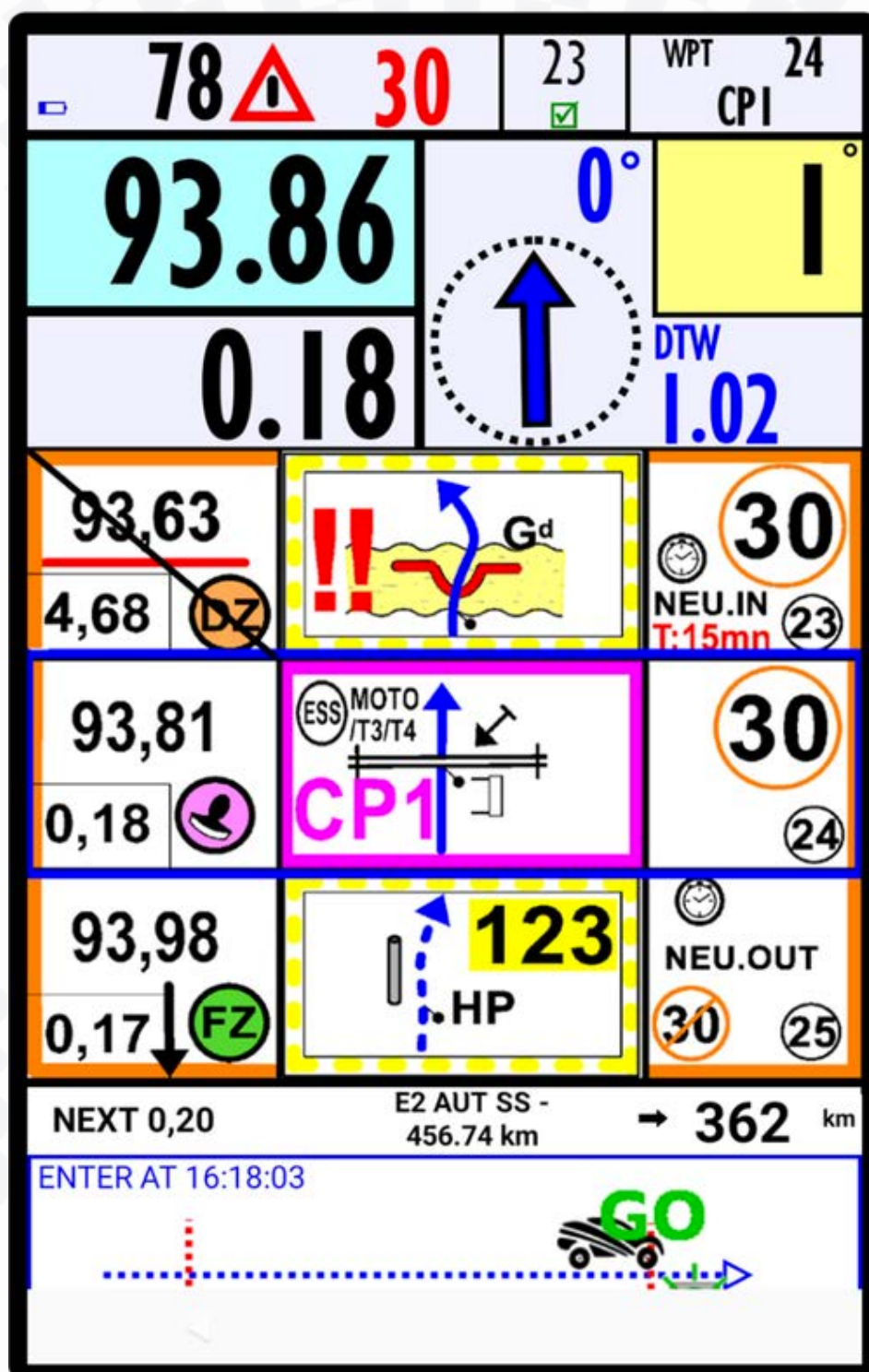
EXAMPLE SCREEN AT ZONE ENTRY



4.3

NEUTRALISED
ZONES

EXAMPLE SCREEN AT ZONE EXIT



05.

UNIK4 REMOTE CONTROL



Return to
Standard
Situation



Choice
Confirmation



Overtake
Request



Odo
Management



Partial Reset



Odo + Total



Odo - Total



Functions
to Program



Cross
Out



Note +



Note -



Waypoint
Navigation



Waypoint
Navigation



Access to
GPS Menus

5.1

SENTINEL
FUNCTION**OVERTAKES**

In case of overtaking, press and **hold** (> 2 s) the **yellow button** or the **STN** key to **send an request** to the vehicle ahead.

The request is valid up to **250 m** when the speed difference is below 20 km/h, and up to **400 m** when the speed difference is above 20 km/h. Beyond **400 m**, the overtaking request is not taken into account.

**KEYS**

Sending an
overtake request
or a **request**
acknowledgment

When another competitor requests an overtake, the Unik4 triggers an **audible alert** and **displays a top-screen banner** showing the vehicle type and distance.

To acknowledge the request, briefly press the yellow button (< 1 s) or the **STN** key on the remote control. If no manual confirmation is made, an acknowledgment is automatically sent **after 6 seconds**.

**CRASH ALERT**

In the event of a breakdown or accident in a sensitive area, the red **"Alarm"** button sends a signal to competitors within a **250 m radius**, depending on the terrain configuration. The alert is cancelled by **pressing the button again**.

Upon entering an area where an alert has been issued, the Unik4 triggers **an audible warning** and **displays a banner** showing the **vehicle type** in difficulty **and its distance**.

5.2

NOTE +
& NOTE -**SHORT PRESS**

1

A short press on these buttons moves the Roadbook forward or backward by one line.

LONG PRESS

2

A long press enables much **faster scrolling** through the Roadbook, both **forward and backward**.

**INFORMATION**

In fast forward mode, **an icon appears**. As long as it remains visible, it is possible to return to the start line by long-pressing the **ESC** key.

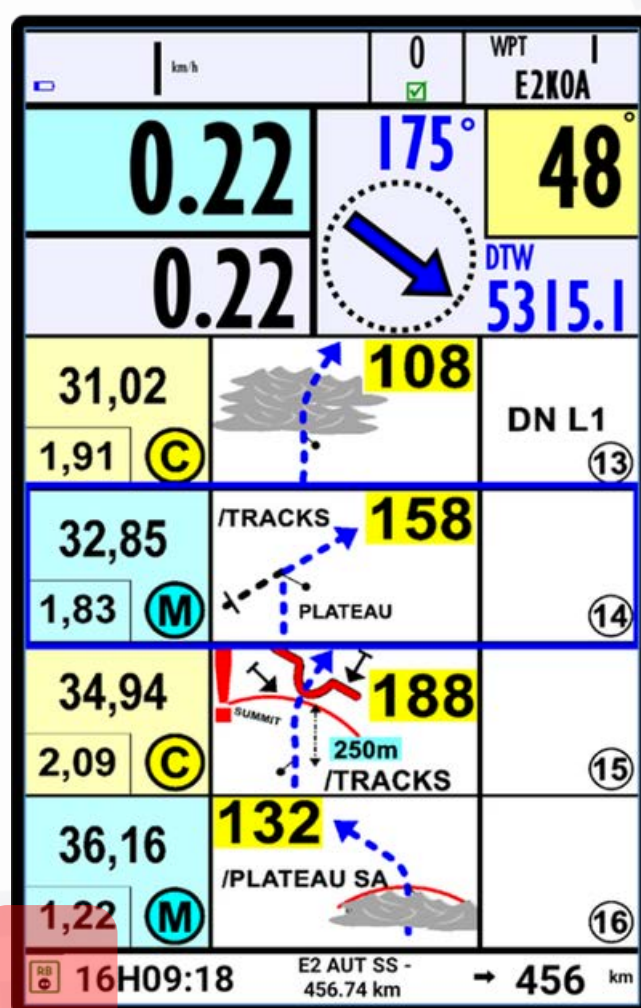
After 1 minute, in standby mode or during any other action, the icon **disappears** and returning to the start line is **no longer possible**.

**KEYS****NOTE -**

Navigate the roadbook upwards

**NOTE +**

Navigate the roadbook downwards

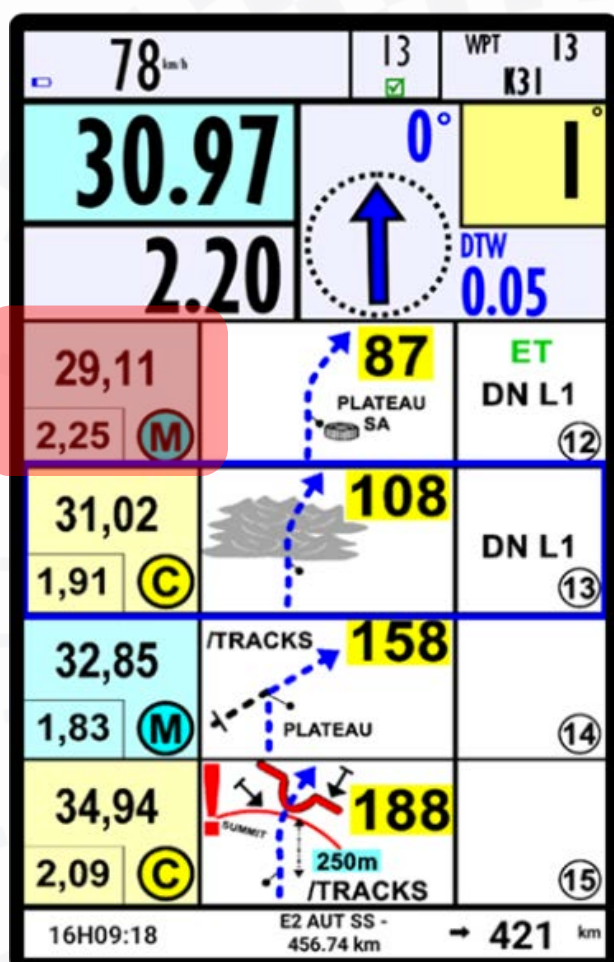


5.3

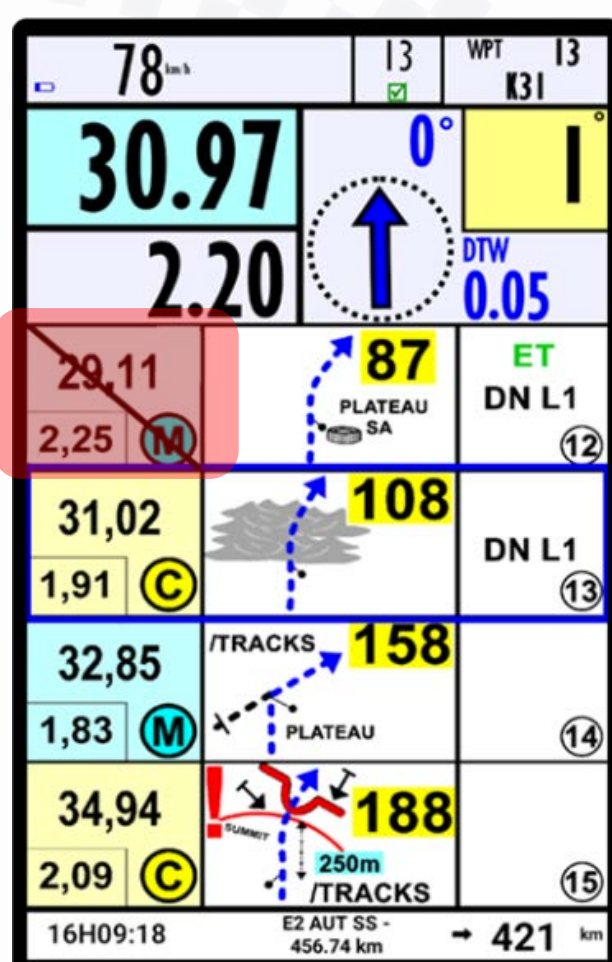
CROSS
OUT

NO CROSSED OUT BOX ON THE PAGE

BEFORE CROSSING OUT



AFTER CROSSING OUT



KEYS

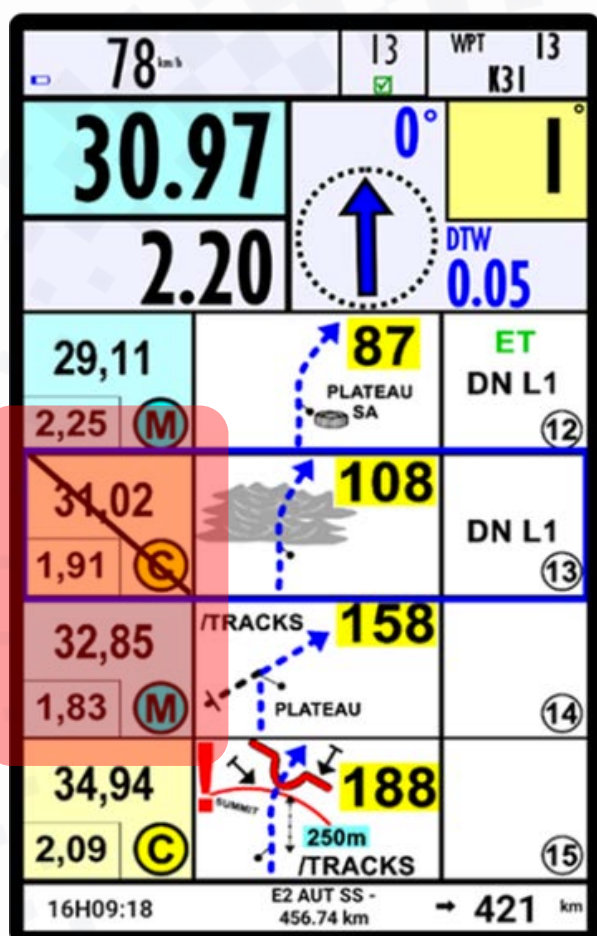


Starting from the top of the roadbook, **the last uncrossed box is then crossed out.**

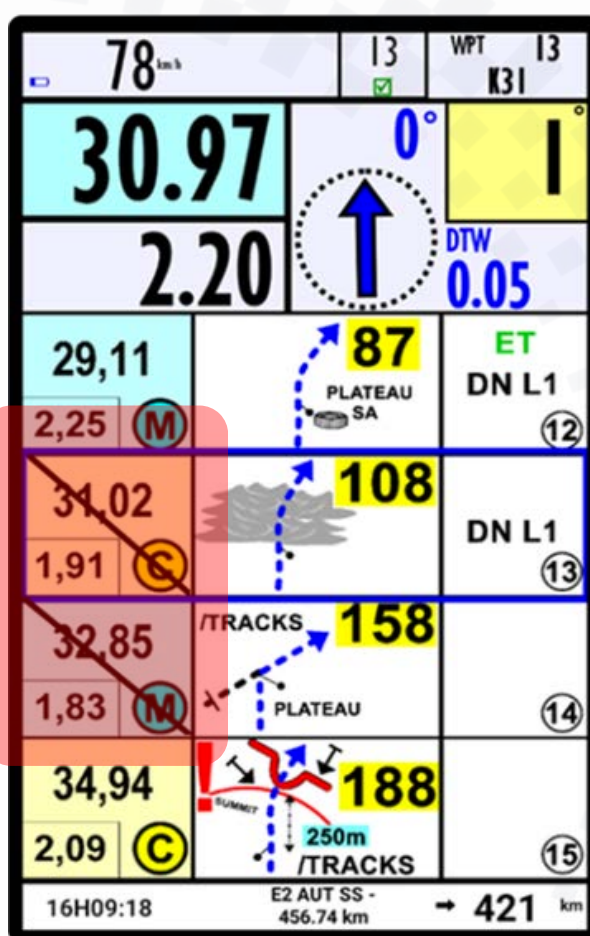
5.3

CROSS
OUTCROSSED OUT BOX ALREADY ON THE PAGE

BEFORE CROSSING OUT



AFTER CROSSING OUT



1

SHORT PRESS

From the top of the roadbook, cross out the last **uncrossed box**, without going beyond an already crossed-out box.

2

LONG PRESS

Uncross the last crossed-out box displayed on the screen.

3

EXTENDED PRESS

Uncross all the boxes displayed on the screen.

5.4

TRIP +
& TRIP -

KEYS



A **short press** **increases** or **decreases** the ODO according to the value defined in '**Settings**'.
A **long press** increases or decreases the ODO **more quickly**.

WAYPOINT +
& WAYPOINT -

5.5



KEYS

A **short press** allows you to move **forward** or **backward** through waypoint numbers.
A **long press** enables **faster navigation**.



5.6

F1
& F2

KEYS

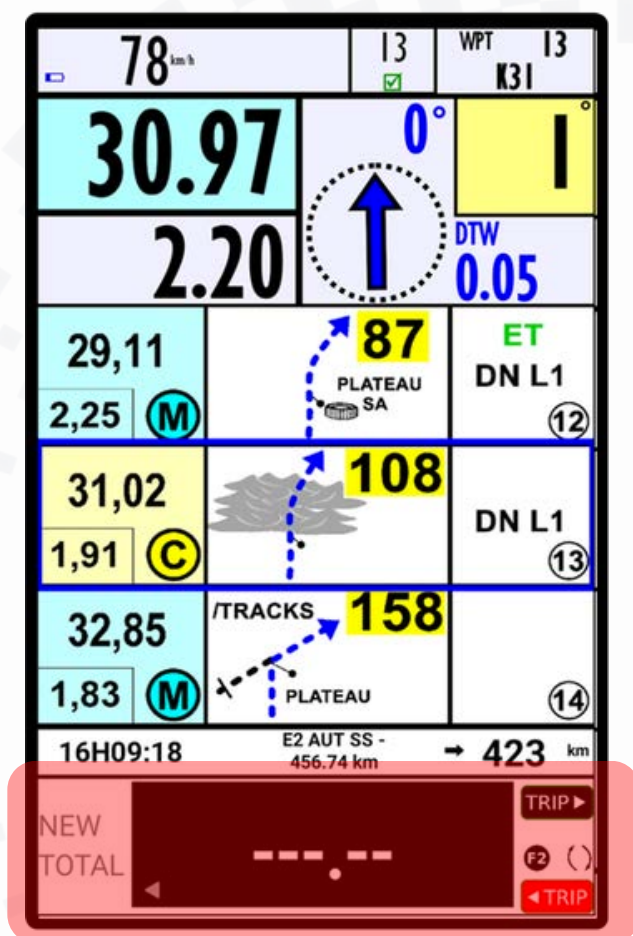


These are **programmable function** keys. At present, only **F2** is assigned to the **TRIP MODE** function.

5.7

TRIP
MOD

EXAMPLE OF IN-RACE SCREEN



INFORMATION

When **TRIP MODE** is activated, the remote keypad switches to a **numeric keypad**, allowing a numerical value to be entered for the ODO.



REMOTE CONTROL FUNCTIONS



Switches the device to "**Trip Mode**".



XX.XX then OK
Enter the total odometer value (X) and exit the menu.



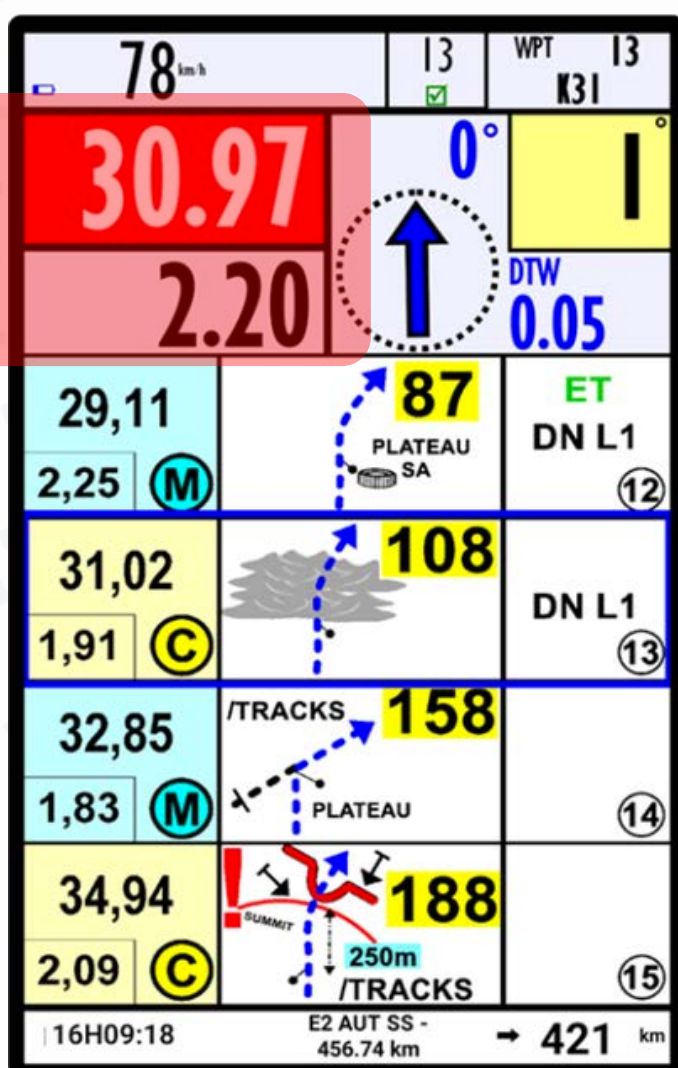
Switches the device to "**Countdown Mode**".

5.7

TRIP
MODCOUNTDOWN MODE

The Countdown mode is accessible by pressing the **F2** key from the **TRIP MODE** page.

A second press on **F2** exits countdown mode.

EXAMPLE OF IN-RACE SCREENINFORMATION

Once Countdown mode is activated, the **total ODO** is displayed in **white on a red background**. Upon exiting the mode, the display returns to normal.

06.

UNIK4 MENUS

1

ONE PRESSFirst press opens the **CP** page

2

TWO PRESSESSecond press opens the **Track** page.

3

THREE PRESSESThird press opens the **Menu** list.**KEYS**Access to
Unik4 Menus**INFORMATION**

To navigate within a page, the remote control must be assigned to it.
Press **OK** to assign it.

The remote is then assigned to the selected window, which turns green.
Only two roadbook lines remain visible.

**REMOTE CONTROL FUNCTIONS**

Close the window or
return to the
standard Roadbook
view.



Deselect the window
and go to the **next**
window.



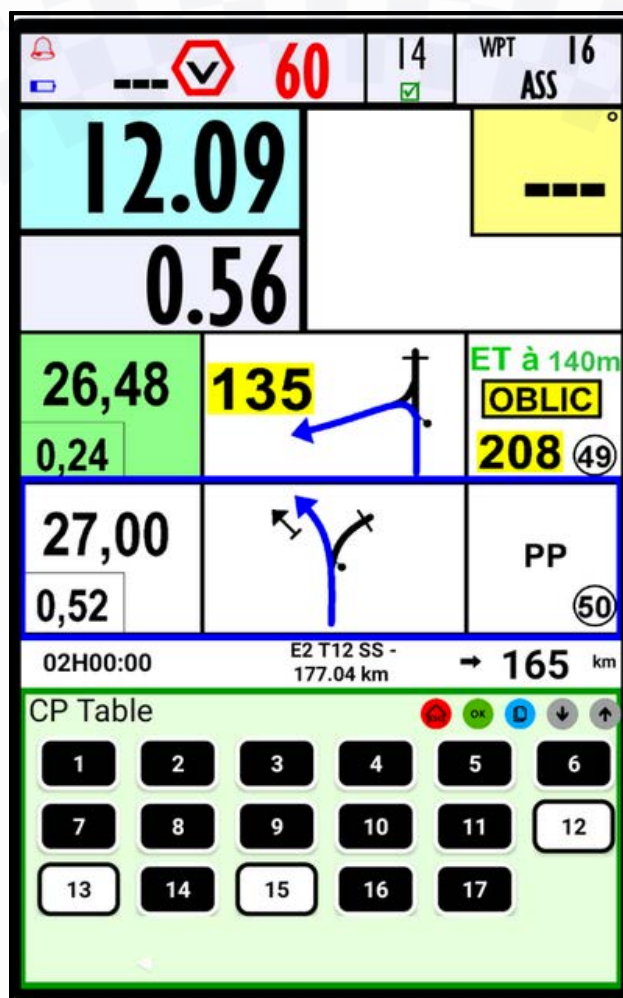
Select a window.
Assigns or
Unassigns the
remote control.

6.1

“CP TABLE” MENU



EXAMPLE OF IN-RACE SCREEN



REMOTE CONTROL FUNCTIONS



Switch to the **“Trace”** Screen. The remote control is reassigned to the RoadBook.



Select a window.
Assigns or Unassigns the remote control.

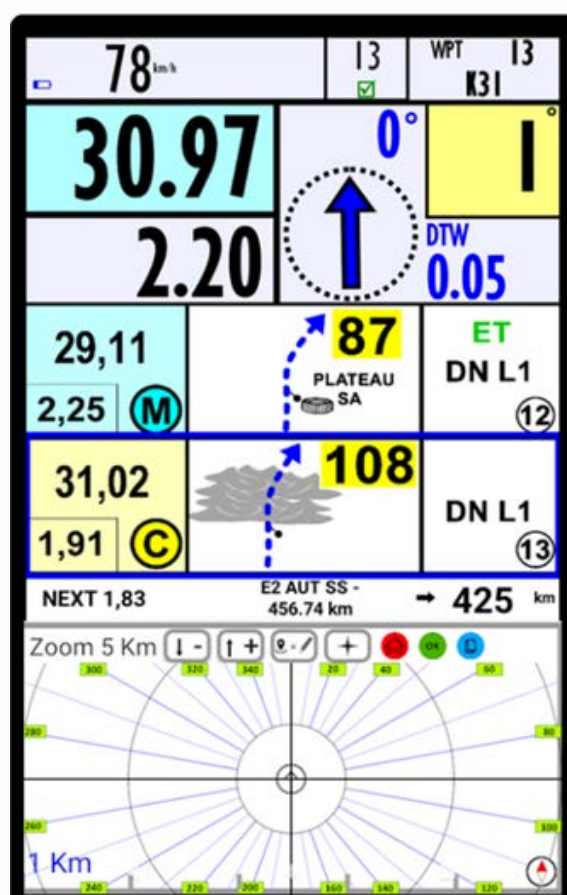
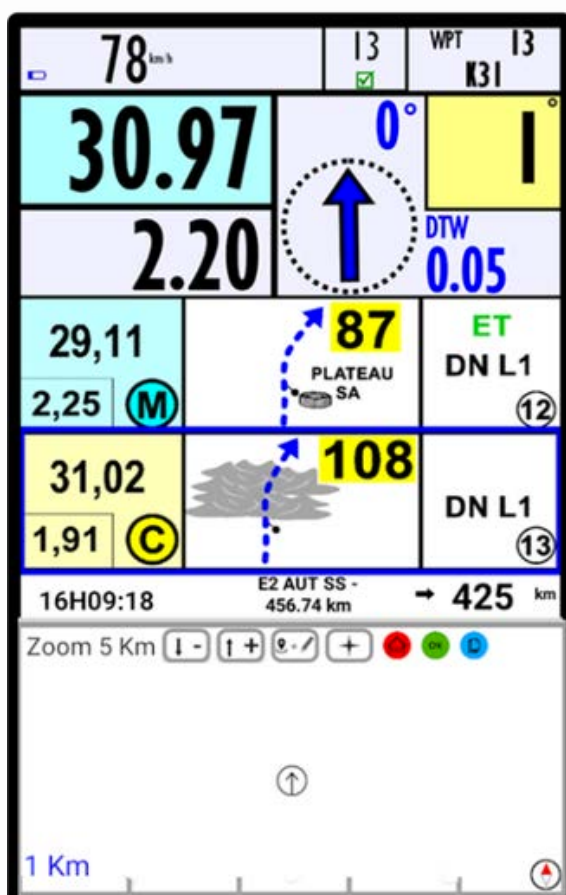


Allows **navigation** within the table.

6.2

“TRACE”
MENU

EXAMPLE OF IN-RACE SCREEN



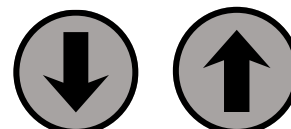
REMOTE CONTROL FUNCTIONS



Switch to the “List” Screen. The remote control is reassigned to the RoadBook.



Recenter the Trace



Allows navigation within the table.

6.2

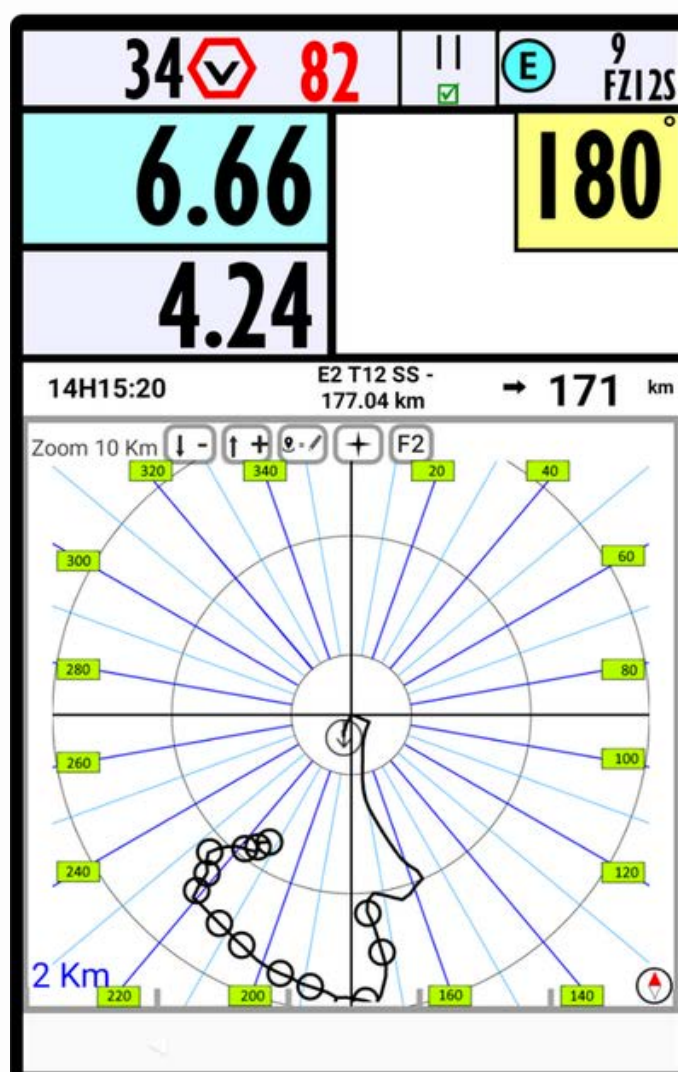
MENU
"TRACE"

MENU "TRACE" EN MULTISCREEN

For an crew using two Unik4 devices configured in **Multi-Screen** (see *page 33*), pressing the **F2** key from the **"Trace"** menu allows the trace to be **displayed across the entire Roadbook area of the screen**. Only the GPS information remains unchanged at the top of the screen.



EXEMPLE ÉCRAN EN COURSE

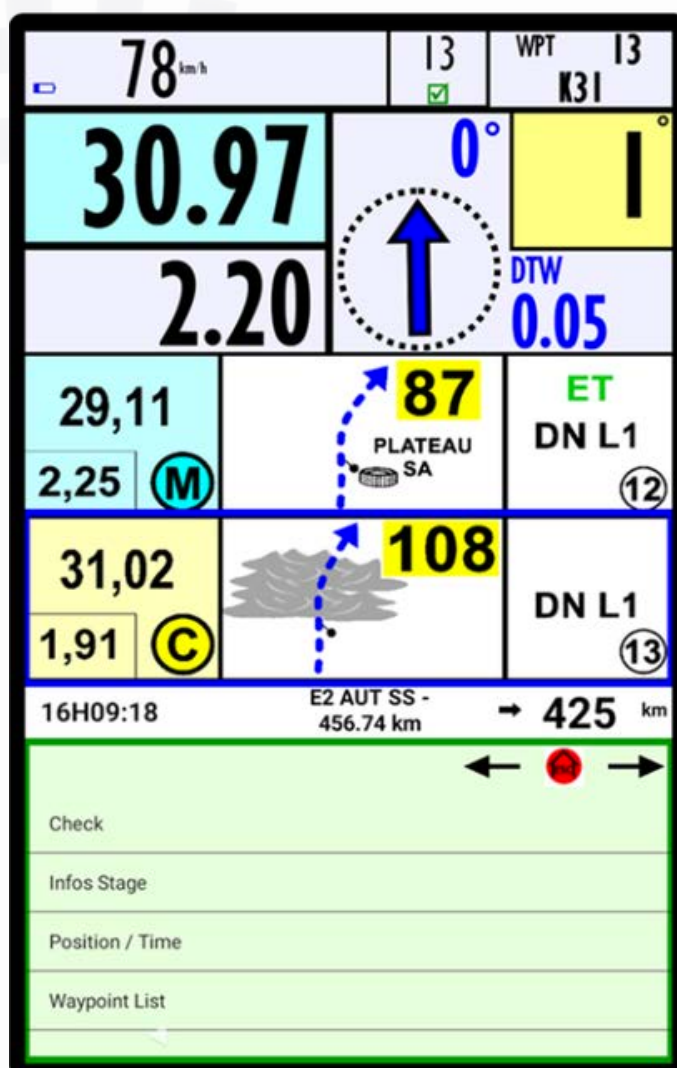


6.3

“LIST”
MENU**INFORMATIONS**

This page is the last screen of the main menus.

It provides access to all Unik4 submenus : “Check” “Infos Stage”, “Position & Time” and “Waypoint List”

**REMOTE CONTROL FUNCTIONS**

Exit and **return** to the Roadbook.



Displays the **screen selected** from the drop-down list.



Allows **navigation** within the table.

6.3.1

“CHECK” SUBMENU

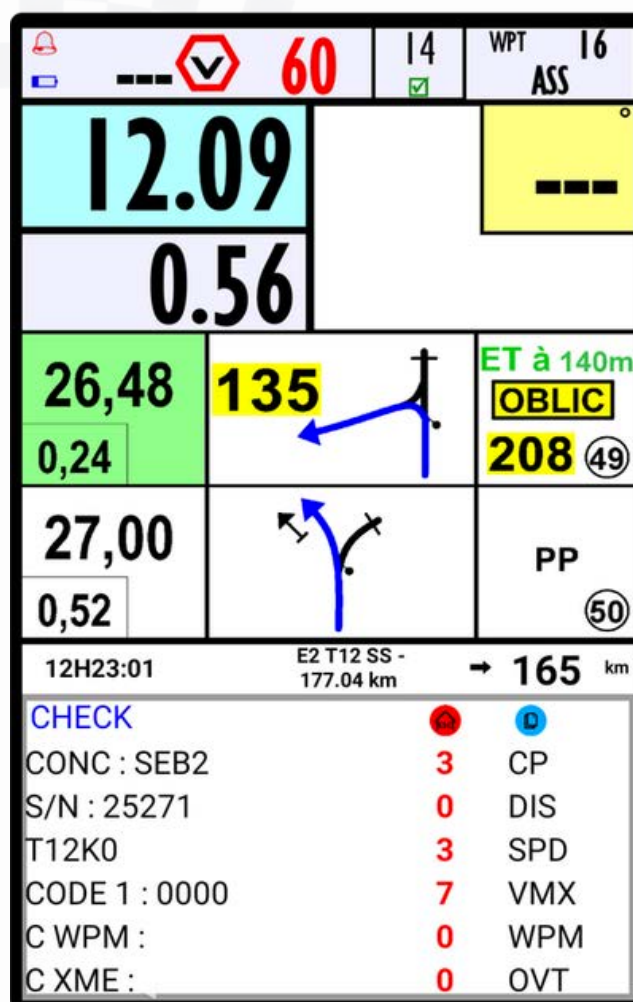


INFORMATION

First submenu of the List page. This page displays a set of information:

- **CP** : Number of missed waypoints
- **SPD** : Number of DZ/FZ speed violations
- **VMX** : Number of category speed violations
- **OVT** : Number of recorded overtaking refusals

The **DIS** and **WPM** lines are intended for ERTF technicians.



REMOTE CONTROL FUNCTIONS

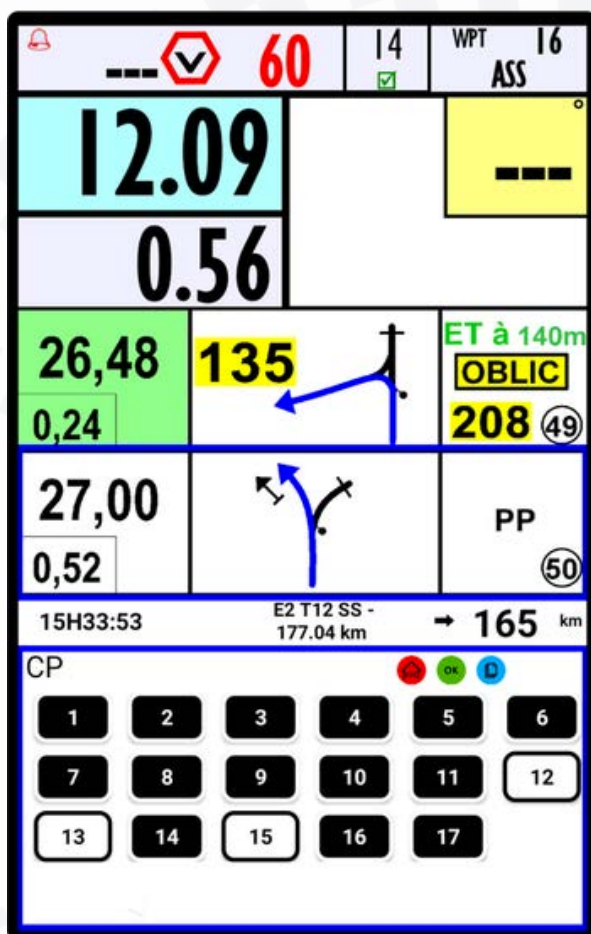


Unselect the window and go to the **next page**.

ESC

Exit and **return** to the Roadbook.

6.3.1

SOUS-MENU
"CHECK""CP" SCREENINFORMATION

This screen displays the **list of CPs for the stage** and enables real-time tracking of their validation status. **Validated CPs** are shown in **black**, while **unvalidated or missed CPs** are shown in **white**.

REMOTE CONTROL FUNCTIONS

Unselect the window and go to the **next page**.

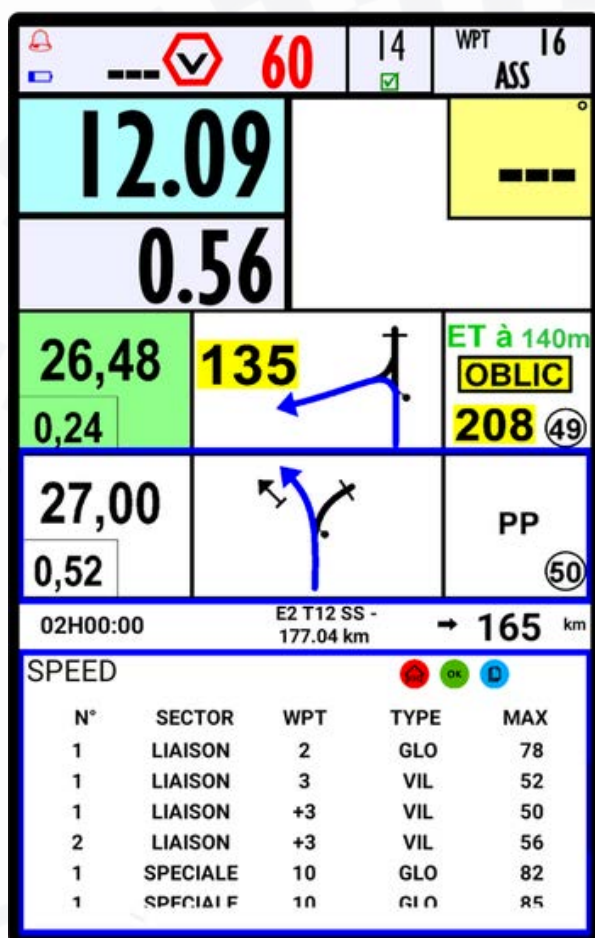


Select a window. **Assigns/Unassigns** the remote control.



Allows **navigation** within the page.

6.3.1

SOUS-MENU
"CHECK""SPEED" SCREENINFORMATION

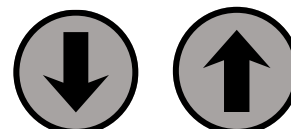
This screen displays the details of the different **speed violations** and infringements of Neutralisation and Transit times recorded by the device during the stage.

REMOTE CONTROL FUNCTIONS

Unselect the window and go to the **next page**.



Select a window. **Assigns/Unassigns** the remote control.

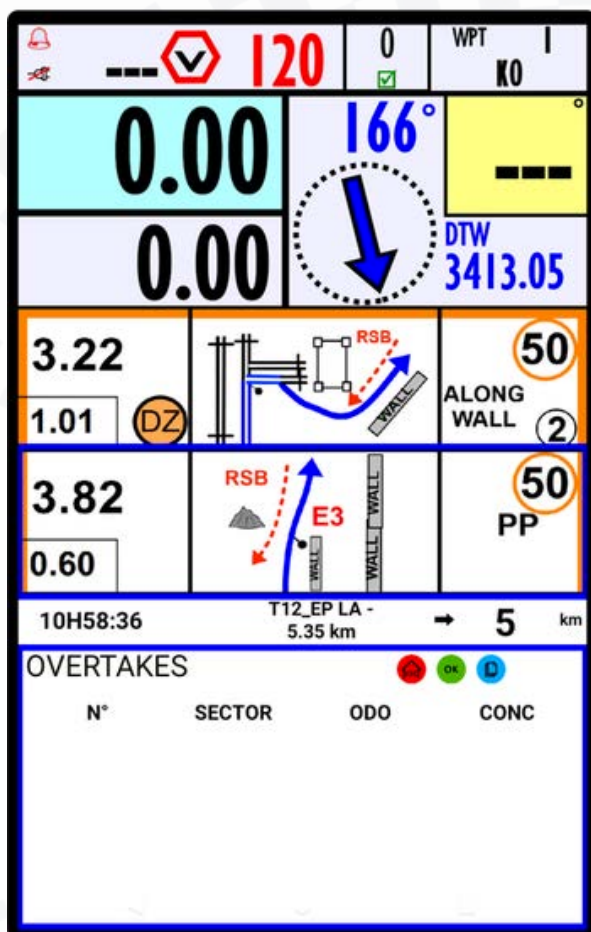


Allows **navigation** within the page.

6.3.1

SOUS-MENU
“CHECK”

“OVERTAKES” SCREEN



INFORMATION

This screen allows the user to view the list of **overtaking requests received but refused** by the crew during the stage.



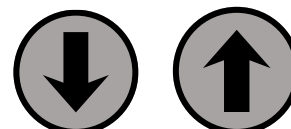
REMOTE CONTROL FUNCTIONS



Unselect the window and go to the **next page**.

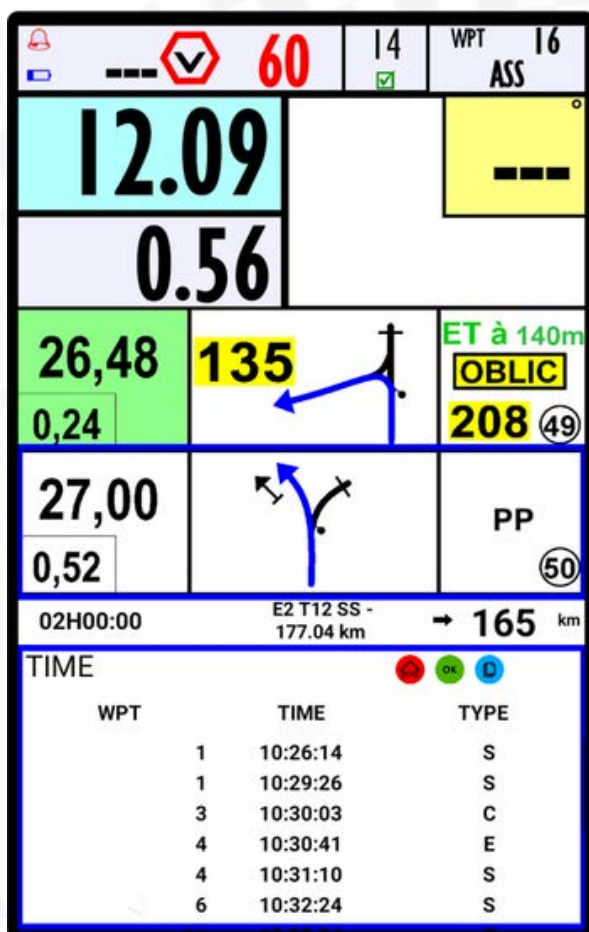


Select a window. **Assigns/Unassigns** the remote control.



Allows **navigation** within the page.

6.3.1

SOUS-MENU
"CHECK""TIME" SCREENINFORMATION

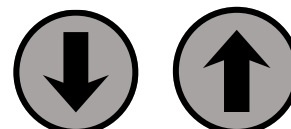
This screen shows the history of **precise passing times** at **each waypoint** along the route.

REMOTE CONTROL FUNCTIONS

Unselect the window and go to the **next page**.



Select a window. **Assigns/Unassigns** the remote control.

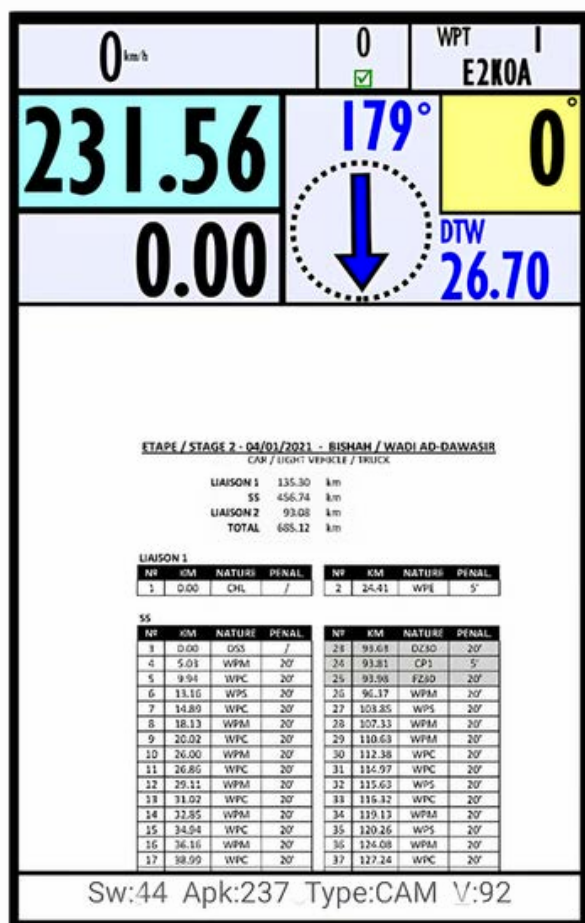


Allows **navigation** within the page.

6.3.2

SUBMENU
“INFOS STAGE”

EXAMPLE OF IN-RACE SCREEN



INFORMATION

The “Stage Info” screen provides a **summary** of the main information for the **current stage**.



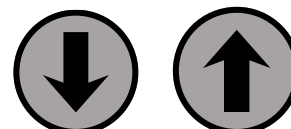
REMOTE CONTROL FUNCTIONS



Return to the **Roadbook** with the “CP” page displayed.



Select a window. **Assigns/Unassigns** the remote control.

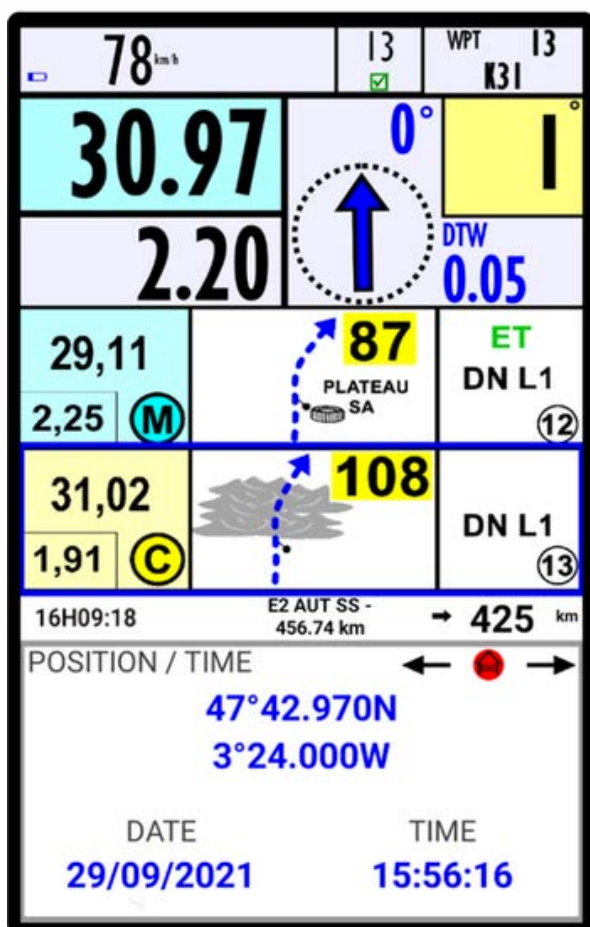


Allows **navigation** within the page.

6.3.3

“POSITION/TIME”
SUBMENU

EXAMPLE OF IN-RACE SCREEN



INFORMATION

This screen displays the device's real-time GPS position in **geographic coordinates**, along with the **local date and time**.



REMOTE CONTROL FUNCTIONS

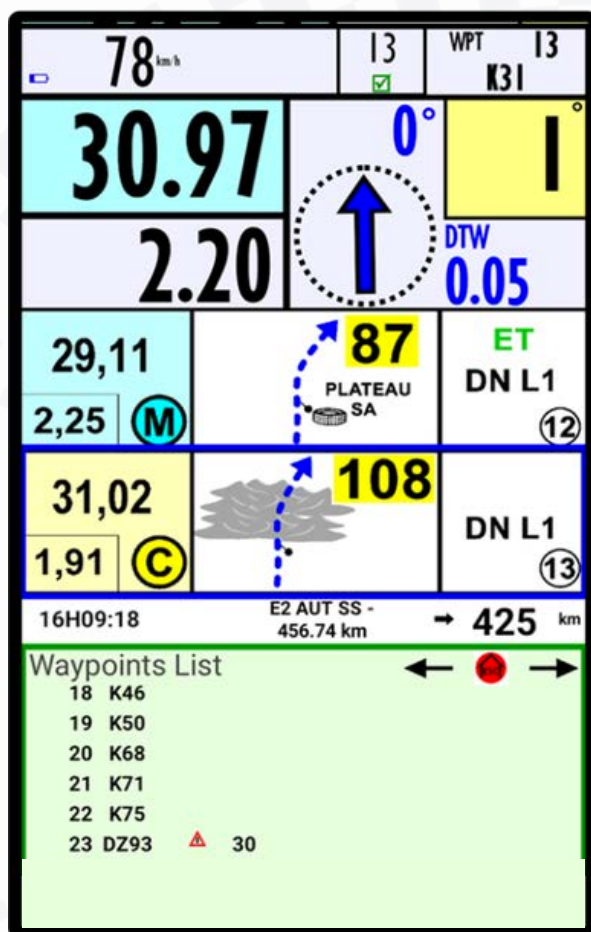


Both buttons exit the **page** and return to the **Standard Roadbook**.

6.3.4

“WP LIST”
SUBMENU

EXAMPLE OF IN-RACE SCREEN



INFORMATION

This screen displays **all waypoints** for the current stage, providing a **complete overview** of the navigation route structure.



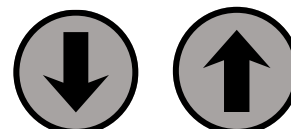
REMOTE CONTROL FUNCTIONS



Unselect the window and go to the **next page**.

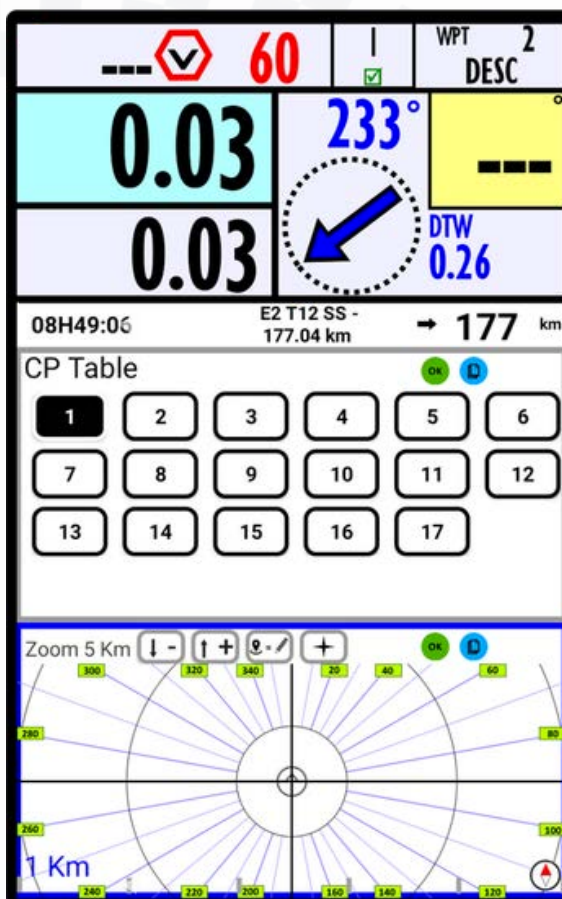


Select a window. **Assigns/Unassigns** the remote control.



Allows **navigation** within the page.

0 60	I 	WPT 2 DESC
0.03	233° 	0°
0.03	DTW 0.25	
4,21 0,54	!!	(12)
5,54 1,33	230 !!	ET à 600m 188 Moy (13)
6,74 1,20		(14)
7,42 0,68		(15)
08H49:06	E2 T12 SS - 177.04 km	→ 177 km



If the vehicle is equipped with two GPS units, **Multi-Screen** mode can be activated in the main Unik4 settings to display multiple windows simultaneously. The layout is **fully customisable** according to the crew's preferences. The recommended setup is to **display GPS information on the main unit** and the **electronic Roadbook on the secondary unit**.

34

08.

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.

SPECIAL STAGE DISPLAY

09.



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.

10.

PROBLEM RESOLUTION



GPS CONNECTION LOSS

If the GPS connection is lost, the GPS screen is no longer accessible. The **Roadbook screen remains displayed**, and navigation is still possible using the **Note +** and **Note -** buttons.



EXAMPLE OF IN-RACE SCREEN

Note -

X

Note +

31,95 14,39	 SOL	
37,87 5,92	 WPE	②
39,09 1,22 DZ	 50	③
39,36 0,27	 BAR	50

10.

PROBLEM RESOLUTION



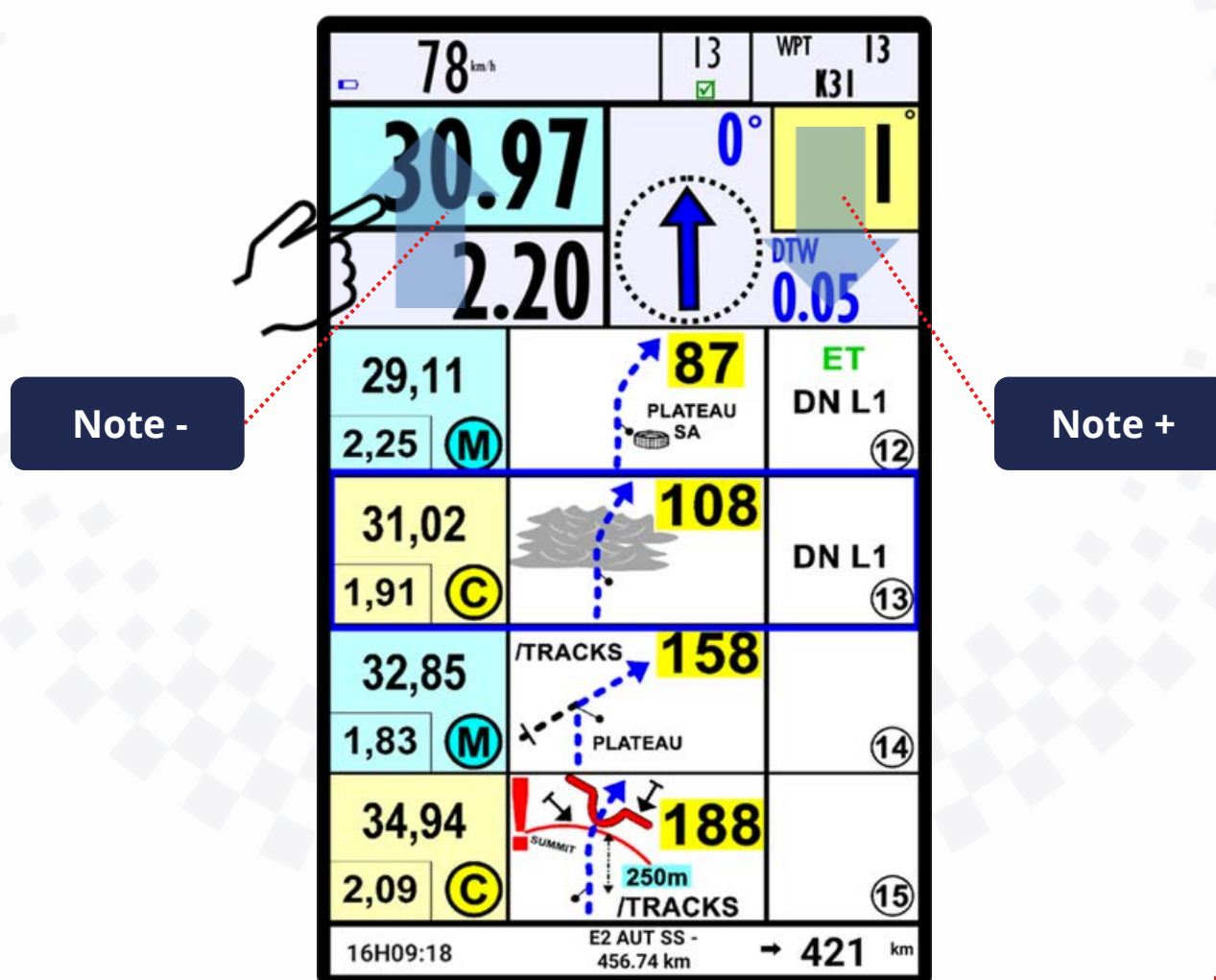
REMOTE CONTROLE CONNECTION LOSS

In the event of remote control failure, **"Touchscreen"** mode must be activated in the **Settings**. GPS information remains displayed, and the **roadbook arrows are hidden but remain active**.

Tapping one of the upper corners of the screen temporarily displays the arrows, allowing the user to **change the note**.



EXAMPLE OF IN-RACE SCREEN



10.

PROBLEM RESOLUTION

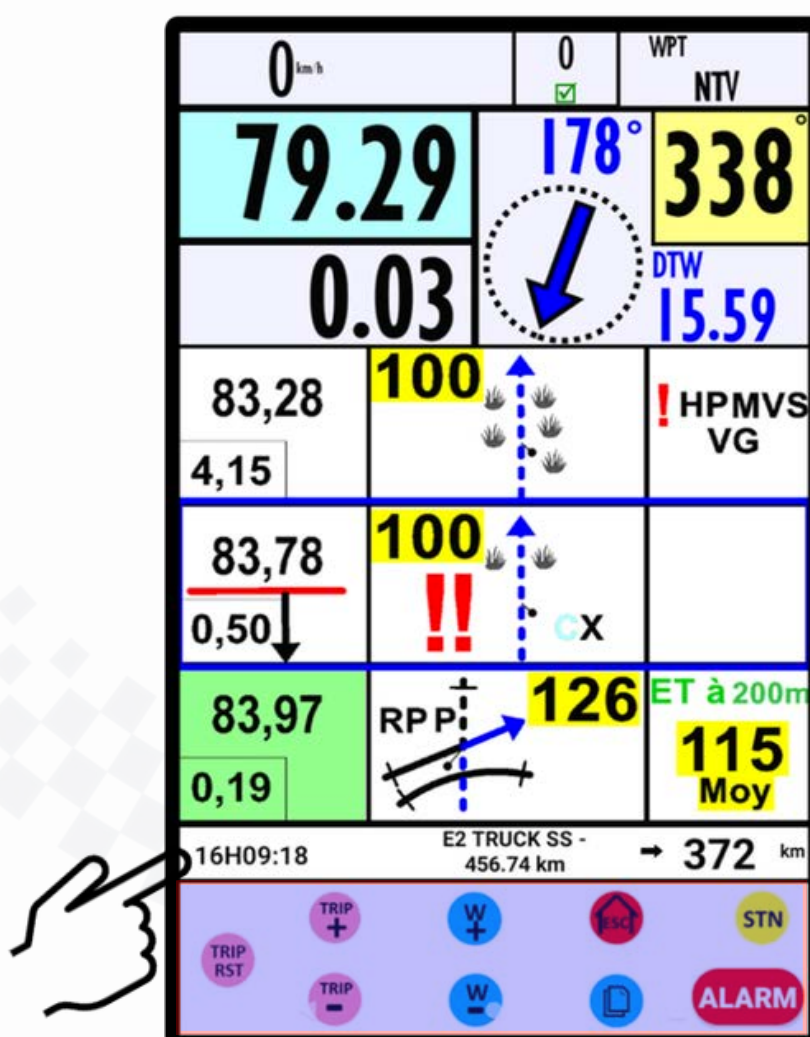


ON-SCREEN REMOTE CONTROL

A **virtual remote control** is available by briefly pressing the time display in the lower-left corner of the screen. It mirrors the physical remote control functions, except for **F1**, **F2**, **OK**, and **TRIP MOD**, which are not available. **STN** and **ALARM** are exclusive to the main Unik4 unit, and the **ALARM** function is only shown when the vehicle is travelling below 15 km/h.



EXAMPLE OF IN-RACE SCREEN



11.

UNIK4 SETTINGS



THREE DEFINED ZONES

Z1

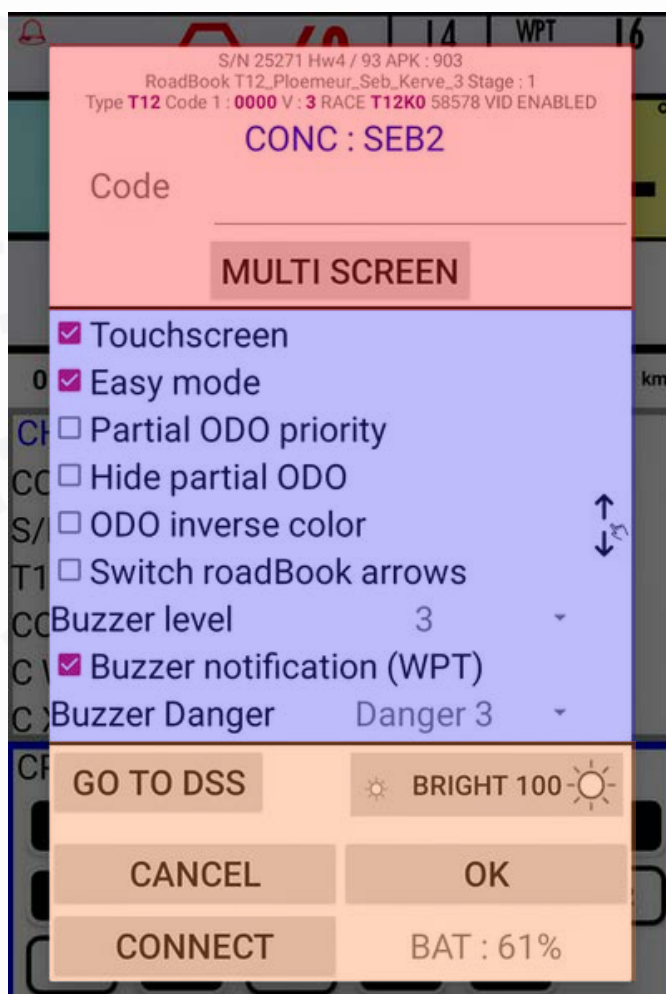
Information at the top, stage code entry, and the Unik4 operating mode: **FULL ROADBOOK** or **MULTI SCREEN**.

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.

11.1

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

FULL ROADBOOK / MULTISCREEN

Allows **switching between modes**. In Multi-Screen mode, the electronic Roadbook is **not displayed on the screen**. To switch between modes, simply tap the area.

3

TOUCHSCREEN MODE

"Touchscreen" mode enables **partial operation** via the touchscreen. It can also be used in the event of loss of connection with the remote control.

4

EASY MODE

When enabled, a press of **TRIP RST** on the remote control triggers **three different actions** simultaneously: odometer reset, note clearing, and advancement to the next roadbook note.

5

PARTIAL ODO PRIORITY

Increases the **partial ODO counter** while decreasing the Total counter.

6

HIDE PARTIAL ODO

The **partial ODO counter** is **hidden** from the display. Only the Total counter remains visible.

11.1

GENERAL
SETTINGS

7

ODO INVERSE
COLOR

Inverts the **colors** of the Total Odometer display.



In-Race Example

8

SWITCH ROADBOOK
ARROWS

Reverses the Roadbook scrolling controls:

The **Note +** arrow scrolls the Roadbook **upwards**.

The **Note -** arrow scrolls the Roadbook **downwards**.

9

BUZZER
LEVEL

Allows adjustment of the **buzzer sound intensity**.

The level ranges from **1** (lowest) to **3** (highest).

10

BUZZER NOTIFICATION
(WPT)

If enabled, the external buzzer sounds **each time a waypoint is validated** during the stage.

11

BUZZER
DANGER

Allows selection of which hazards trigger an audible alert:

None or **All**

Hazards **2 and 3**

Hazard **3 only**

12

ENCART
"BRIGHT"

Enables adjustment of the Unik4 **display brightness**.

Pressing the small sun **decreases** brightness, while the large sun **increases** it.

11.2

ADVANCED
SETTINGS

1

ODO
DECIMALS

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

2

HIGHLIGHTED
LINE

In the Roadbook section, **enables a frame** to be displayed around the selected line:

"0" – No frame displayed

"1" – Frame on line 1

"2" – Frame on line 2

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

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**.

10.2

ADVANCED SETTINGS

7

SEE CP VALIDATION

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

8

OFFSET RB

Defines an offset for the arrow transition point when crossing a waypoint:

(-X) triggers the transition X meters **before** the waypoint center, while **(+X)** triggers it X meters **after** the center.

9

ODO PITCH ADJUST

Default value is **100 m**.

Defines the increment applied by the **TRIP-** and **TRIP+** buttons with each press: **100 m**, **50 m**, or **10 m**.

10

UTC SETTINGS

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