



EXPERIA DASHBOARD FIRMWARE RELEASE NOTE

FIRMWARE BUNDLE 43

ENERGICA MOTOR COMPANY S.p.A.

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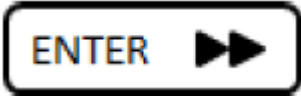
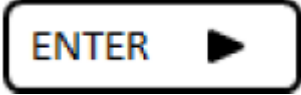
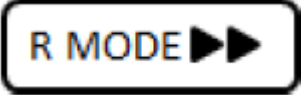
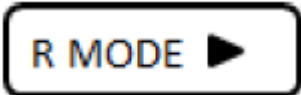
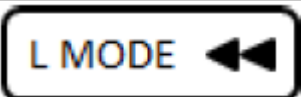
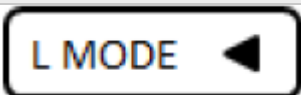
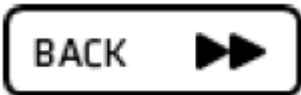

I. Document Scope

List the differences between the Dashboard firmware released in the previous firmware bundle and the new Dashboard firmware for firmware bundle 43.

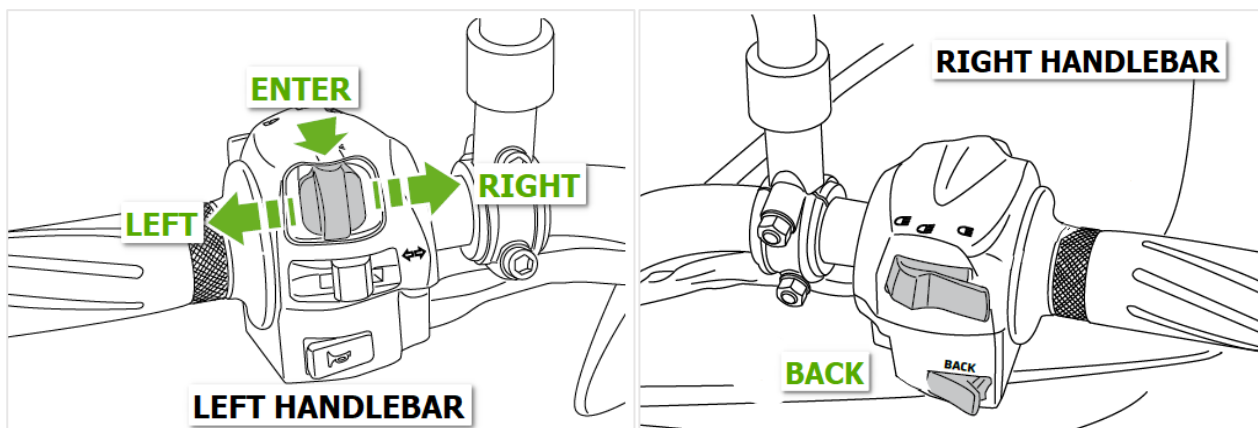
II. Glossary

Label	Description
DSB	Dashboard
FW	Firmware
IMU	Inertial Measurement Unit

III. Symbols

Symbol	Description
	ENTER button LONG pressure
	ENTER button SHORT pressure
	RIGHT selector LONG pressure
	RIGHT selector SHORT pressure
	LEFT selector LONG pressure
	LEFT selector SHORT pressure
	BACK button LONG pressure
	BACK button SHORT pressure

1. Dashboard 5" EN.W.010194



1.1. New features

1.1.1. CLEAN MODE screen

1.1.1.1. Description

The CLEAN MODE screen is an extra driving page that can be enabled or disabled from the SETTINGS.

The CLEAN MODE screen is a simplified driving page, including only a sized-up version of the speedometer and other essential information for the rider.

The CLEAN MODE screen allows the rider to:

- Change the regeneration level (B0 - B1 – B2 - B3)
- Change the driving profile (U – E – S – W – C1 – C2 – C3)
- Reset Trip value

The CLEAN MODE screen does not allow the rider to:

- Access the menu
- Modify the custom maps (C1 – C2 – C3)

The CLEAN MODE screen is available both in NIGHT(FIGURE 1) and DAY(FIGURE 2) modes.

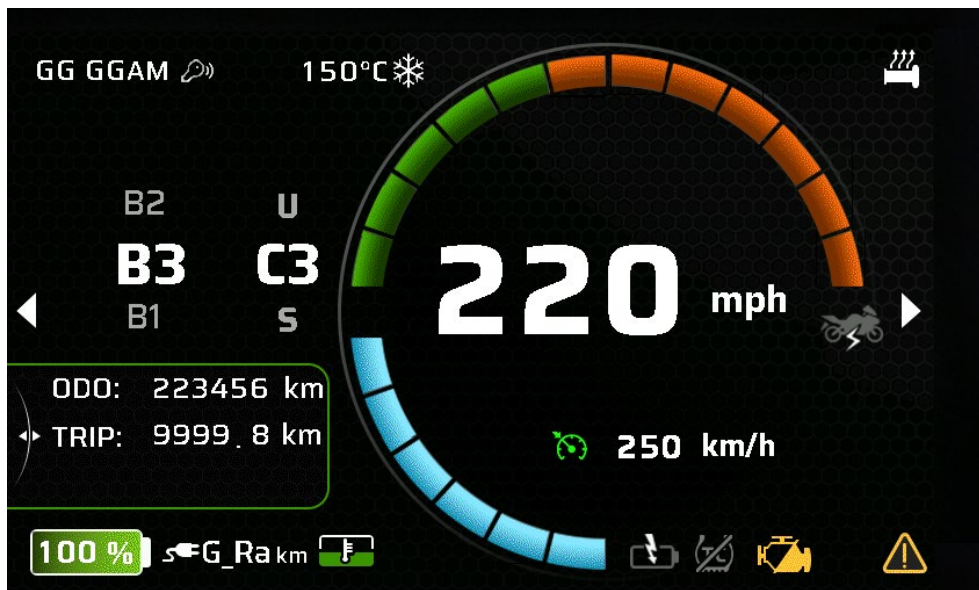


Figure 1 CLEAN MODE screen night version

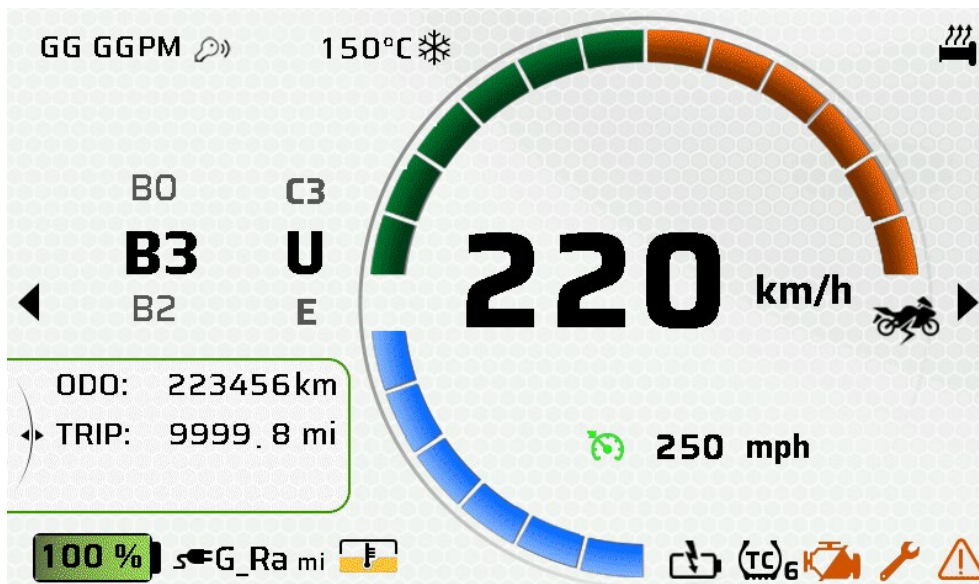


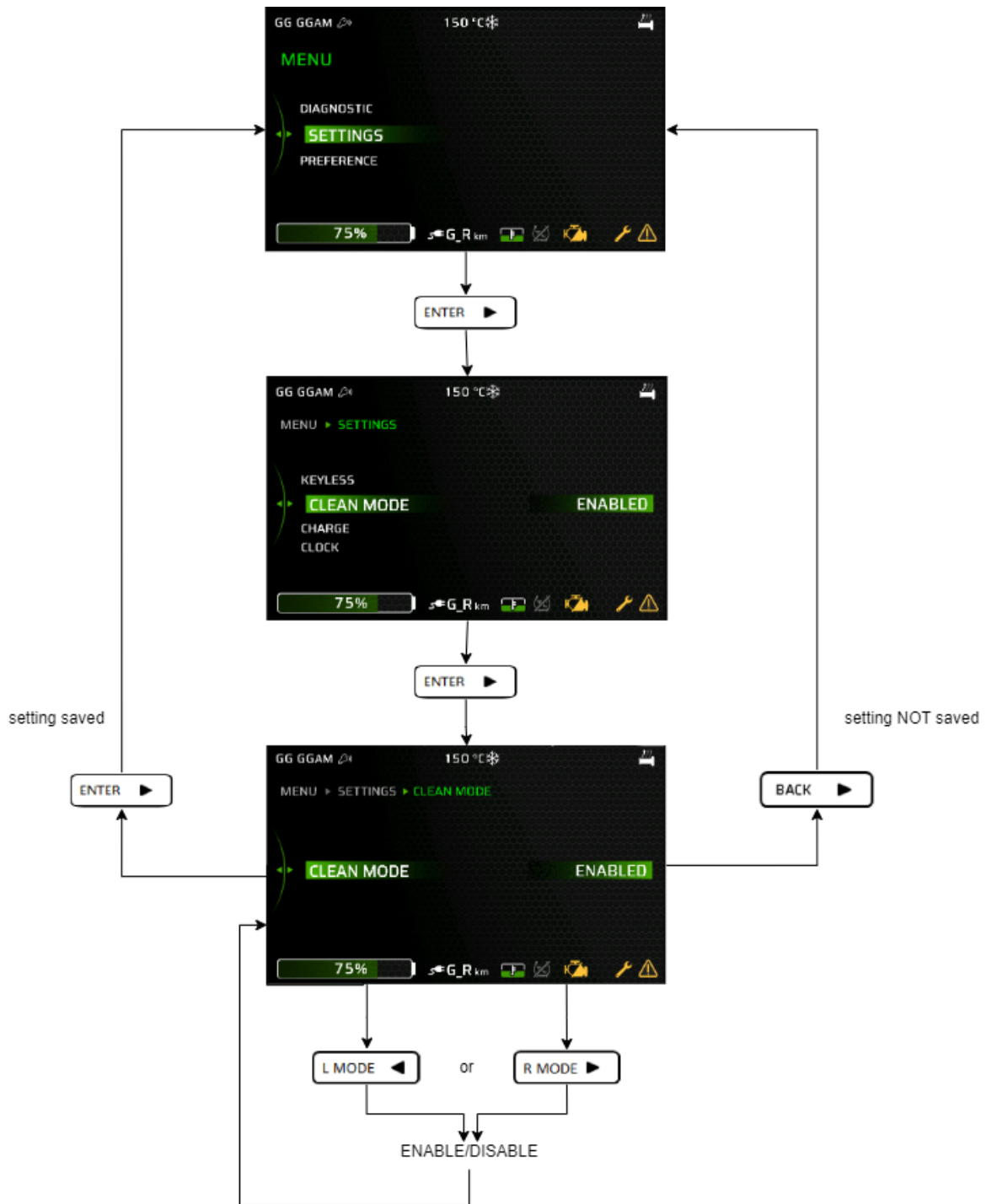
Figure 2 CLEAN MODE screen day version

1.1.1.2. Enabling/Disabling Clean Mode

The CLEAN MODE page can be enabled or disabled in **MENU**→ **SETTINGS**→**CLEAN MODE**, as shown in SCHEME 1.

The setting is saved at turn-off.

The default setting is DISABLED.



Scheme 1

1.1.1.3. Reaching Clean Page

When enabled, the CLEAN MODE screen is placed between the PERFORMANCE screen and the DRIVING screen.



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Scheme 2 Reaching the CLEAN MODE page

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1.1.2. Heated handgrip shortcut

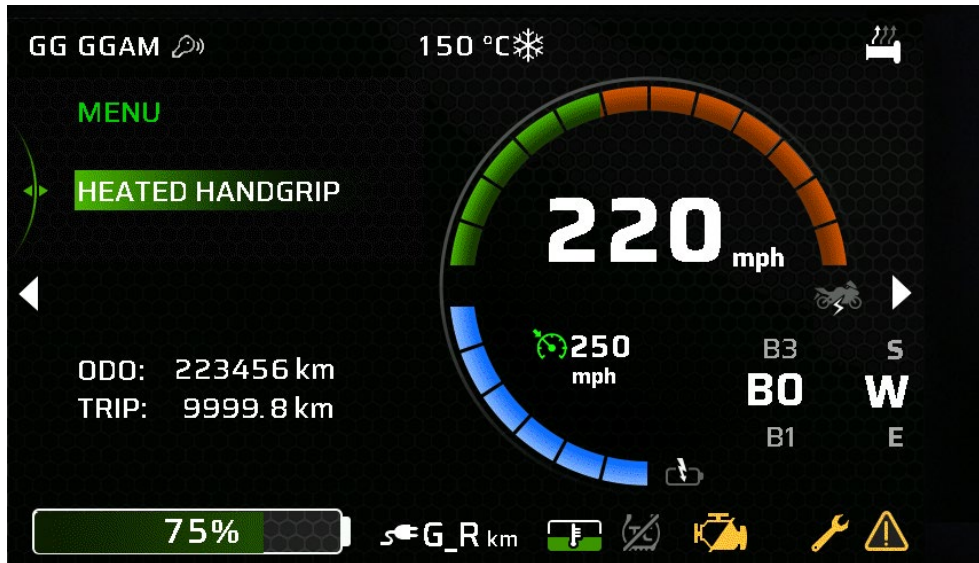


Figure 3 Heated Handgrip shortcut selected

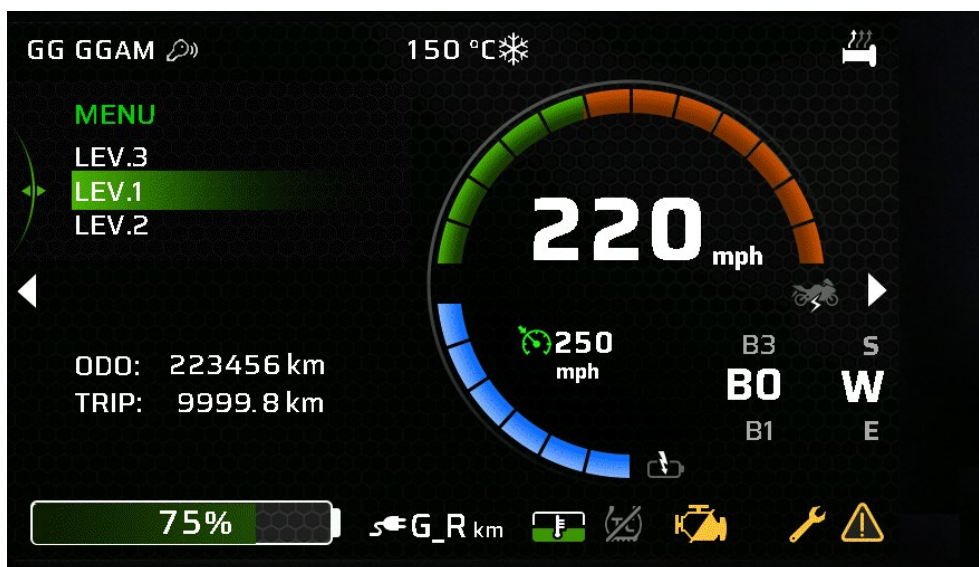


Figure 4 Heated Handgrip level selection

For safety reasons, MENU access is disabled when riding at speed > 3 km/h. This made impossible to change the handgrips' hotness level while riding. To overcome the issue, a shortcut to the Heated Handgrip sub-menu, usually under MENU → PREFERENCES, was created.

The shortcut is only available on bikes provided with the heated handgrips option, where it automatically substitutes the standard menu in the riding page when the speed exceeds 3 km/h.

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The menu section in the main riding page, as shown in SCHEME 3, behaves as follows:

- **Speed < 3km/h:** standard MENU section available and selectable
- **Speed > 3km/h:**
 - **With heated handlebar option:** standard MENU section replaced by HEATED HANDGRIP shortcut. By pressing ENTER on the shortcut, the different hotness levels can be chosen directly from the main riding screen.
 - **Without heated handlebar option:** standard MENU section still visible but disabled.

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Scheme 3

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1.1.3. ABOUT menu under DIAGNOSTICS

The installed firmware bundle version and dashboard revision are now shown in the ABOUT section of the DIAGNOSTIC menu.



Figure 5 ABOUT menu selection under DIAGNOSTIC

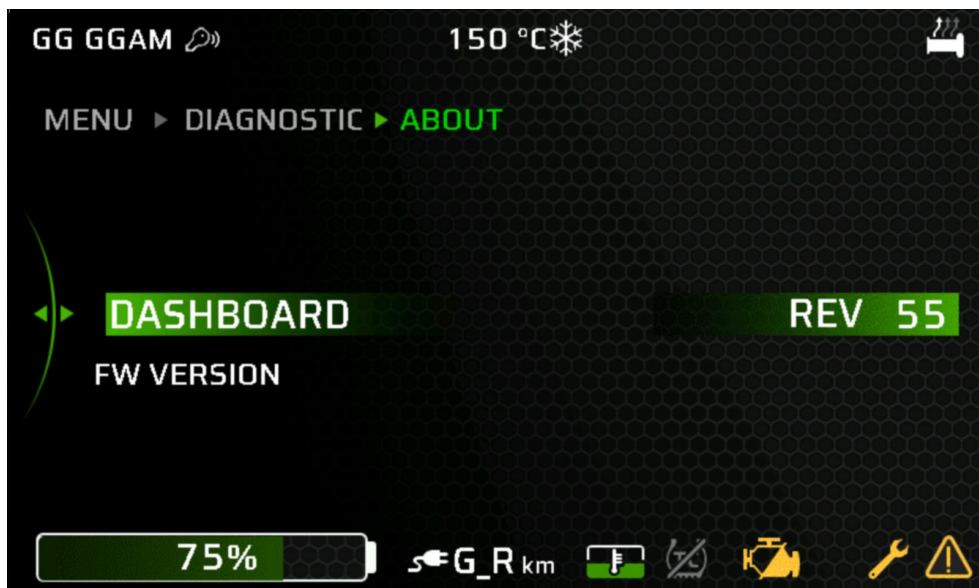


Figure 6 Info about Dashboard firmware revision

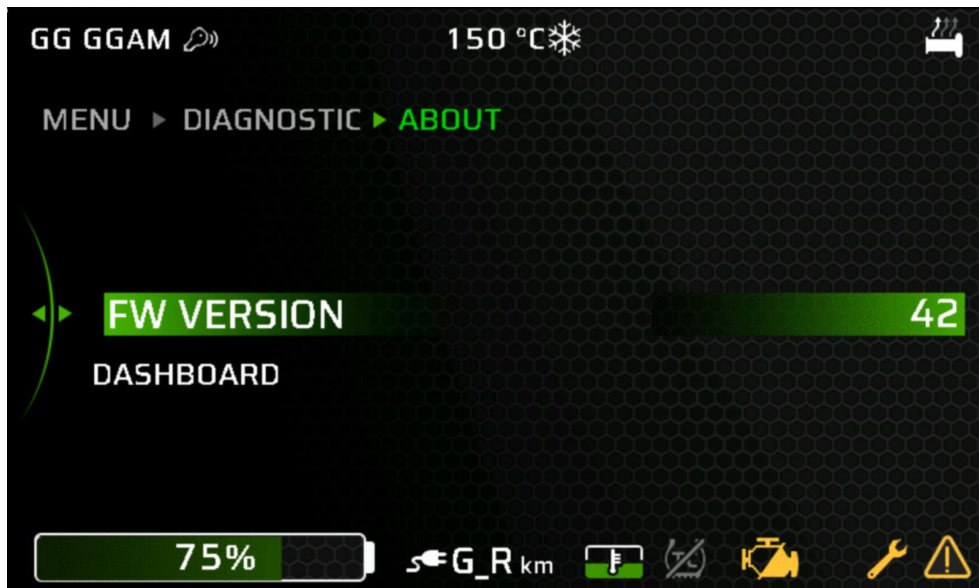


Figure 7 Info about firmware bundle version

1.2. Changes in implemented features.

1.2.1. Performance screen

The PERFORMANCE SCREEN shows the Roll, Pitch and Yaw angle values measured by the IMU (Inertial Monitoring Unit).

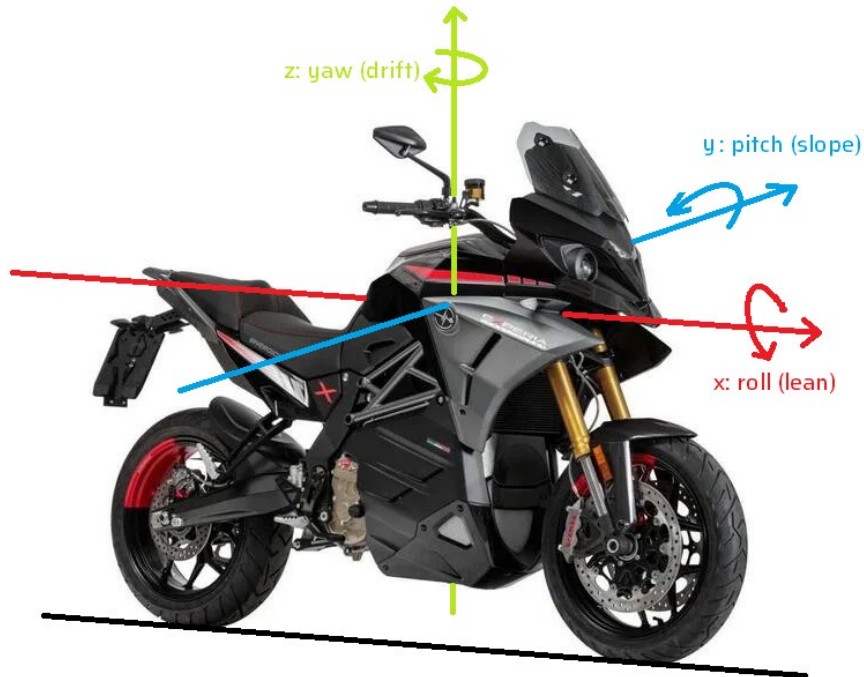


Figure 8 Roll, Pitch and Yaw angles

The roll, pitch, and yaw angles (shown in FIGURE 8) give information about the LEAN ANGLE (Roll), the DRIFT ANGLE (Yaw) and the SLOPE (Pitch), where:

- LEAN ANGLE shows the bike's tilt angle in relation to an axis perpendicular to the ground.
- DRIFT ANGLE shows the angle between the bike's rear wheel and the bike's direction.
- SLOPE shows the angle of elevation of the front wheel in relation to the rear wheel.



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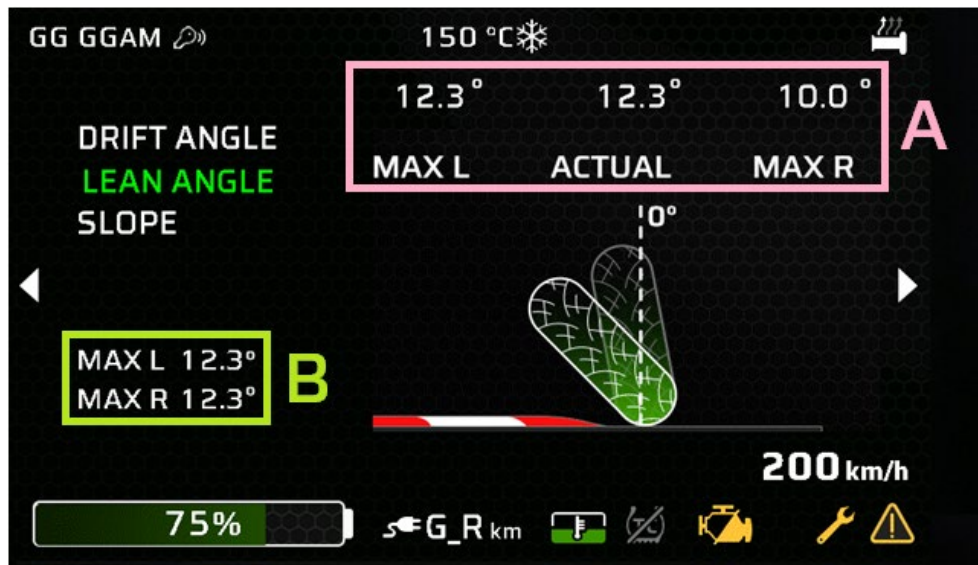


Figure 9 Performance screen Example

An example of the PERFORMANCE SCREEN is illustrated in FIGURE 9.

The screen shows two different sets of values:

- **A**: in the central part of this section, the current value of the angle is shown, on the sides, the maximum and the minimum angle regarding the ride. These values are reset at key-off.
- **B**: absolute maximum and minimum. These values are saved upon key-off, and their reset is manual.

Values saved in B are reset by selecting the focus area and performing a long-press of the ENTER button, as shown in SCHEME 4.

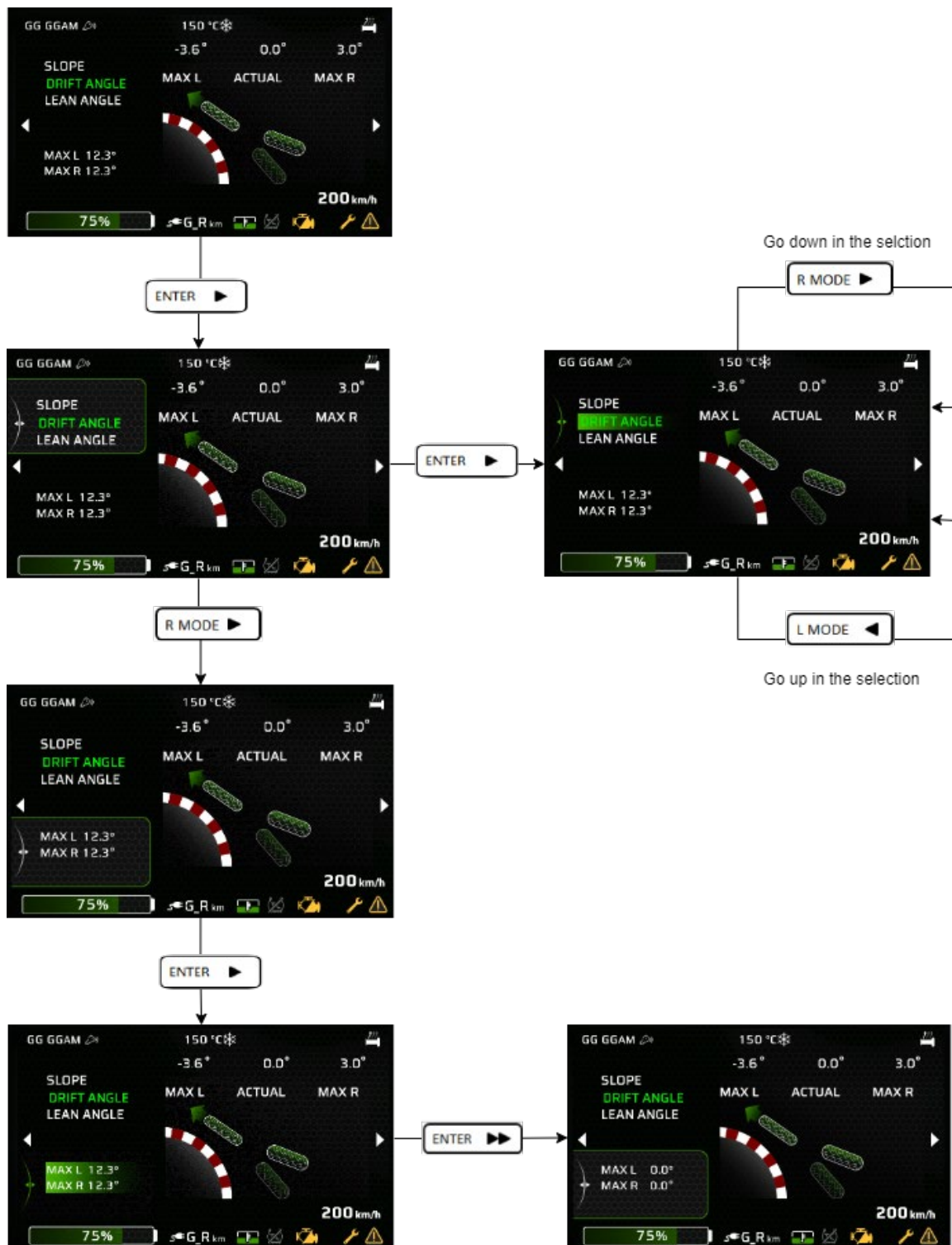
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Scheme 4 Resetting performance absolute values

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1.2.1.1. Slope

The SLOPE is the elevation angle between front and rear wheel.

If the elevation of the front wheel is greater than the rear wheel's one, the angle is considered positive.

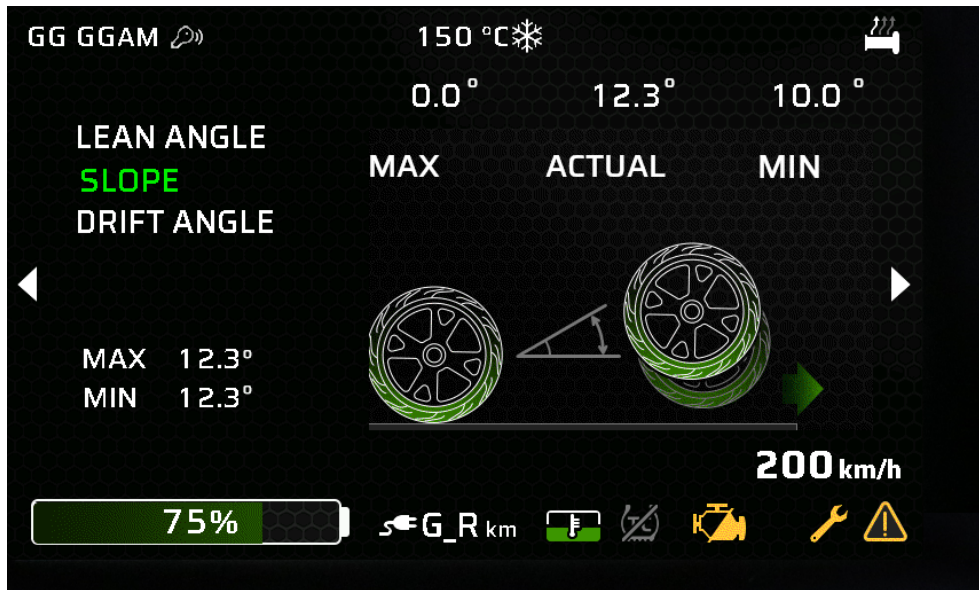


Figure 10 Performance Screen: Slope

1.2.1.1.1. Slope Offset calibration

The 0° reference of the slope angle is heavily influenced by the rider's and luggage weight.

If not calibrated, when sitting on the bike on a flat surface, the ACTUAL angle value might show angles greater than 0°.

To adapt to different weights, it is possible to calibrate the slope offset as described by SCHEME 5.



Scheme 5 Slope Offset calibration

Before starting the calibration, place the bike on a flat surface: the angle should be a fraction of one. To calibrate the offset, select the SLOPE section of the PERFORMANCE SCREEN and long press ENTER on the SLOPE selector. The ACTUAL angle should return 0°.



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1.2.1.2. Lean Angle

The LEAN ANGLE indicates the bike leaning i.e., the bike's rotation in relation to an axis parallel to the ground.

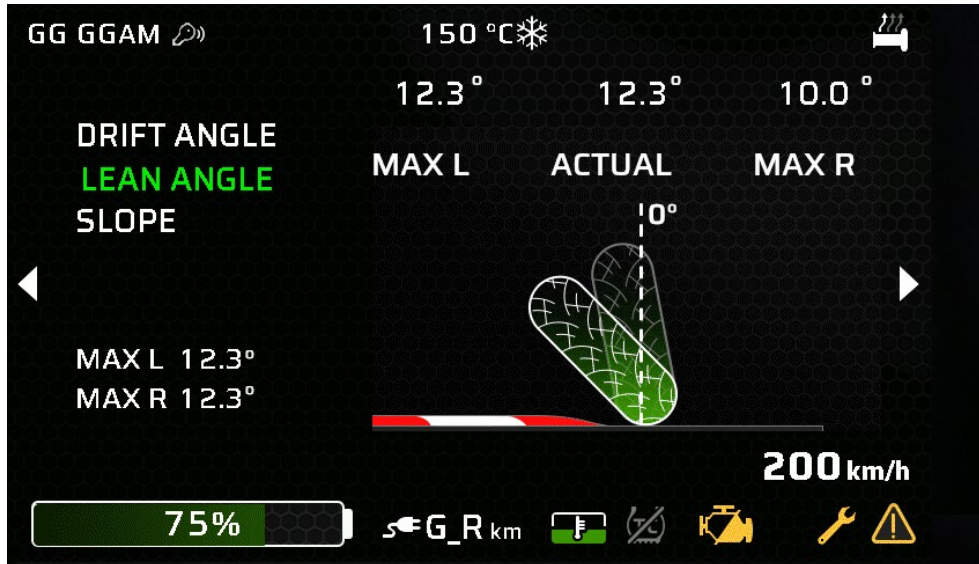


Figure 11 Performance Screen: Lean Angle

1.2.1.3. Drift Angle (yaw angle)

Slippage of the rear wheel relative to the front wheel, which is interpreted as rotation along an axis perpendicular to the ground.

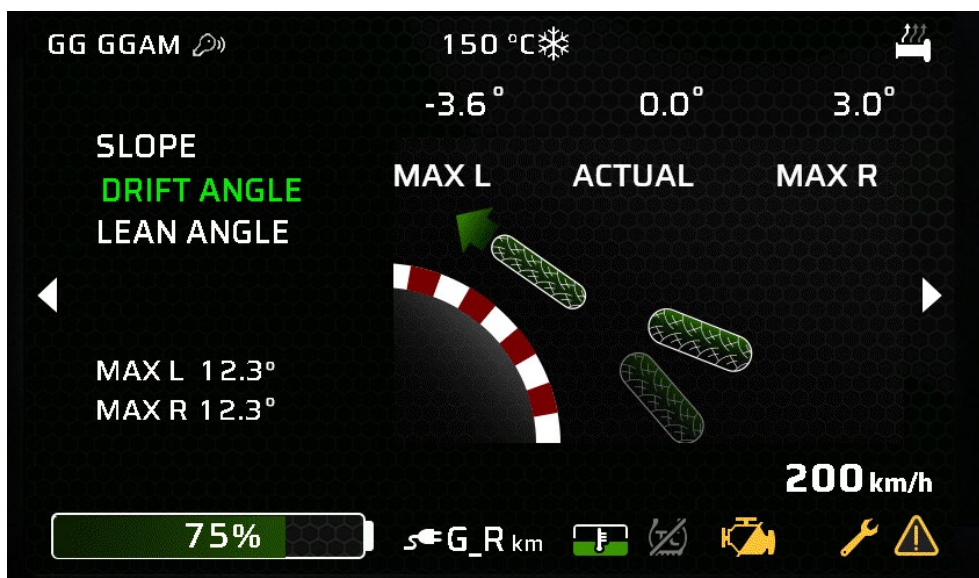


Figure 12 Performance Screen: Drift Angle

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1.2.2. Cruise Control screen

The CRUISE CONTROL screen follows the same logic as before, but the graphics have been made cleaner.

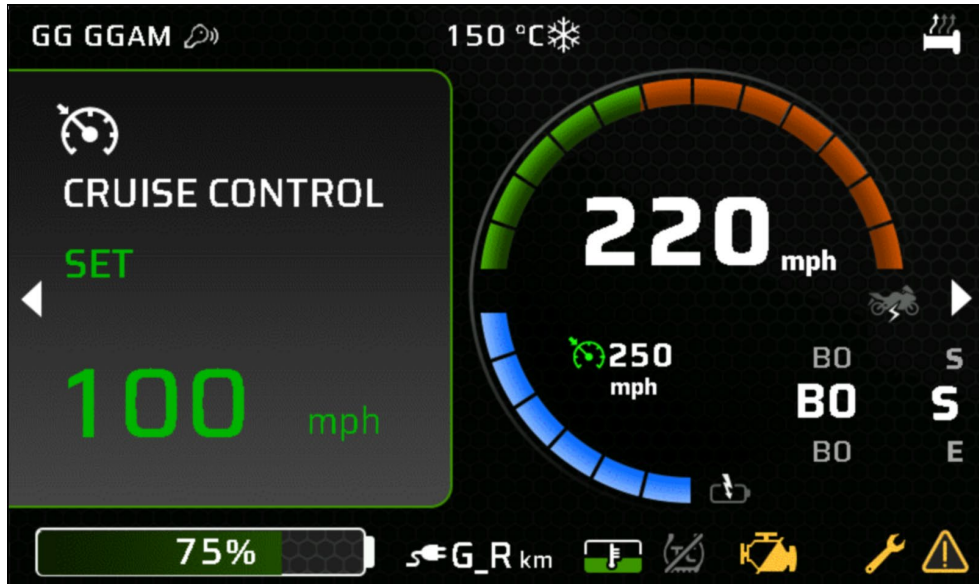


Figure 13 New cruise control screen

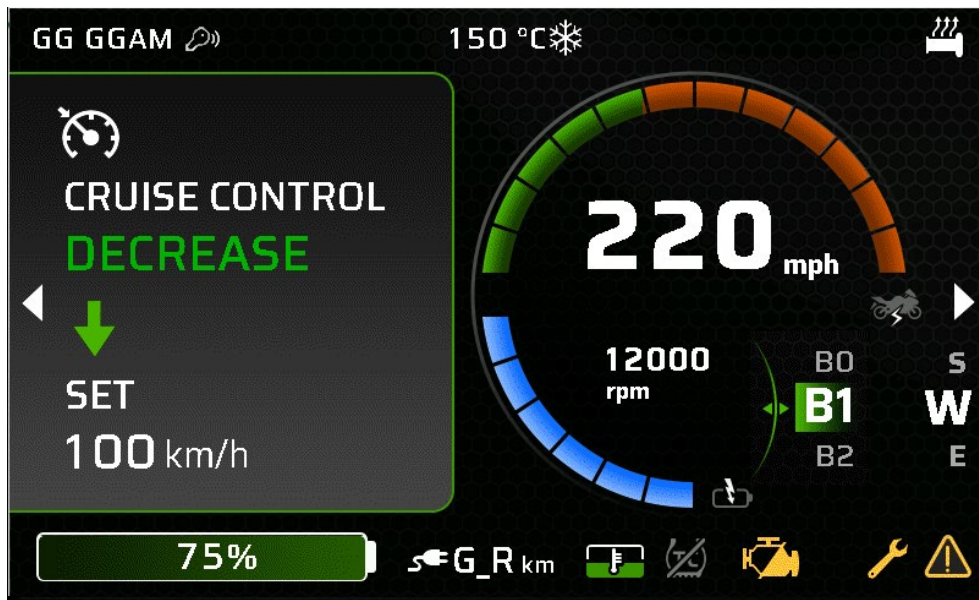


Figure 14 Old cruise control screen



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1.2.3. Menu navigation changes

Now, access to the menu occurs with a single press, entering the selected item directly from the driving screen. Going back with the "BACK" button will maintain the second menu level. Therefore, menu access has one level less.



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1.2.4. TIME SET navigation changes

The logic for changing the time has undergone slight variations as illustrated. When accessing TIME SET, the hours will blink. Use the RIGHT button to increase them, and the LEFT button to decrease. Press ENTER to confirm the hours, and the minutes will start blinking. Again, use RIGHT to increase and LEFT to decrease. Press ENTER to confirm the minutes.

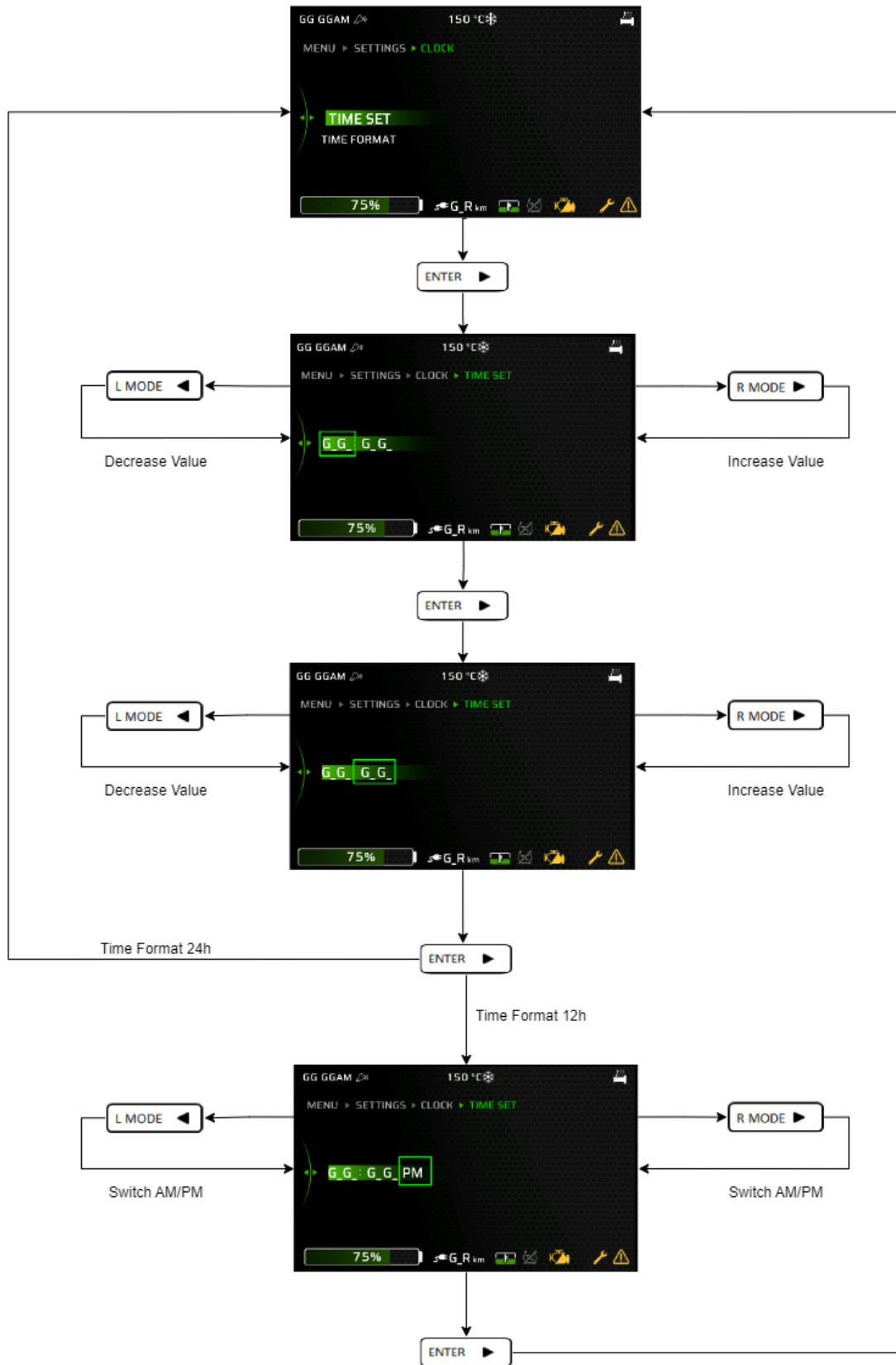
If the 24-hour option is selected, the previous menu will be displayed afterward. If the 12-hour option is chosen, once the minutes are set, you will proceed to the AM/PM option. Confirm this by pressing ENTER (then the previous menu will be displayed).

The modification will be immediately available and visible at the top of the dashboard.

CAUTION: Leaving the modification by pressing "BACK" will still save the changes.



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1.2.5. Heated Handgrip menu disabled if option not present

The HEATED HANDGRIP option, if not available, cannot be selected from the menu. The item appears grayed out, and selecting it yields no results.

