User Manual

HALO MINI
DUAL CAN + LIN BUS IMMOBILISER

Contents

1. Introduction

Welcome to your HALO MINI Immobiliser, a state-of-the-art system designed to safeguard your vehicle using secure, driver-authenticated recognition without the need for remote fobs or signals.

2. Features

- Invisible engine immobiliser

- Driver-authenticated via factory buttons

- No radio frequency signal or key cloning risk

- Service/valet mode

- Fully CAN + LIN integrated

- No subscription or app required

3. System Overview

The HALO MINI communicates directly with your vehicle's digital control systems. Once armed, it blocks starting functions via CAN or LIN communication. It requires a valid PIN code input to disarm and enable normal use.

4. Driver Recognition

- System recognises a specific button press pattern as input (PIN)

- Works with factory vehicle buttons (e.g., window, steering wheel, pedals)

- No external fob or phone signal required

- Secure against relay attacks and key cloning

5. Immobilisation Process

Arming:

- Occurs automatically when ignition is turned off or driver door opened

- A double flash will confirm activation

6. Disarming the System

To disarm:

- Turn ignition on

- Enter the programmed button sequence (PIN)

- A single flash will confirm disarming

7. Changing Your PIN Code

- Turn on ignition without starting the engine

- Enter the programmed button sequence (PIN)

- A single flash will confirm disarming

- Press service button 10 times

- Wait for double flash (programming mode)

- Enter a new PIN using supported buttons

- Turn ignition off to save

- A single flash confirms new PIN

8. Service / Valet Mode

- Turn on ignition

- Enter PIN and hold last button for 10 seconds

- 5 flashes confirm service mode ON

- To exit, repeat the procedure

Warning: While in service mode, immobiliser protection is disabled.

9. Emergency Override Code

If you forget your programmed PIN code, the HALO MINI Immobiliser can be disarmed using the unique Emergency Override Code supplied during installation.

Step-by-Step Instructions: (e.g. 523432).

- Turn on ignition without starting the engine

- Enter the code one digit at a time using the brake and service button as follows

- Press and hold the brake pedal.

- Press the service button the number of times corresponding to the **first** digit of your code (e.g. press **5** times for digit '**5**').

- Release the brake pedal.

- The LED will flash once to confirm the digit has been accepted.

- Press and hold the brake pedal again.

- Press the service button the number of times corresponding to the **second** digit of your code (e.g. press 2 times for digit '**2**').

- Release the brake pedal.

- The LED will flash once to confirm the digit has been accepted.

- Repeat the same process for the remaining four digits (e.g. 3, 4, 3, 2).

- After the final (**sixth**) digit is entered, the LED will flash four times to confirm the full code has been accepted and the system has been disarmed.

Important:

- Ensure each digit is entered precisely—too many or too few presses will result in an incorrect code.

- Wait for the confirmation flash before proceeding to the next digit.

- If you make a mistake, switch the ignition OFF and start the procedure again from the beginning.

- The Emergency Override Code only works when the immobiliser is armed.

- The override will not function in vehicles where the immobiliser prevents the ignition from switching on.

- Once access is regained, we strongly recommend setting a new disarm sequence using the standard PIN code procedure.

Next Step – Reset Your PIN Code:

- Refer to Section 7: From Step 4, Changing Your PIN code

10. Important Notice

The Service Mode **must** be activated whenever the vehicle is undergoing servicing, inspection, diagnostics, or repair by a third-party garage, dealership, or technician.

Failure to enable Service Mode may result in:

- Unintentional immobilisation of the vehicle

- Disruption to diagnostic procedures, and/or incorrect diagnosis

- Potential damage to vehicle electronics or the immobiliser system.

Activating Service Mode ensures the immobiliser **does not** interfere with standard workshop operations.

Always deactivate Service Mode once the service is complete and before resuming normal vehicle use.

11. Technical Information

- Power supply (12V) 9÷16 V

- Current consumption in work mode (at 12V) 36,5 mA

- Current consumption in sleep mode (at 12V) 8,0 mA

- Current consumption when ignition ON (at 12V) 36,5 mA

- Supported CAN BUS speed 20÷1000 kbit/s

- Supported UART speed 1,2÷125 kbit/s

- Transition time to sleep mode 5 s

- Time of going out from sleep mode 800 µs

- Number of supported CAN BUSes 2

- Number of supported LIN BUSes 1

- 1−wire CAN BUS support (SAE J2411)

- 2−wire CAN BUS support (SAE J1939)

- Overcurrent protection of pin 6/10 output

- Overcurrent protection of pin 9/10 output

- Current rating of pin 9/10 output 1000 mA

- Operating temperature range −40c - +85c

- Dimensions 52 x 21 x 7 mm

Homologation Number :

| E20*10R06/01*004633*00 |
| E20*116R00/08*004014*00 |

| E | 10 | 06 004633 |
| 20 | 116 | I 00 004014 |

| E20*10R06/01*004682*00 |
| E20*116R00/08*004021*00 |

| E | 10 | 06 004021 |
| 20 | 116 | I 00 004682 |