Hefei Yaoshi Electronic Products Co., Ltd.

CK-OBDProg

Vehicle Diagnostic Device

Key Programming and Instrument Data Repair

Bluetooth Low Energy OBD device Companion app: HUIDAO CK

Model	CK-OBDProg
Companion app	HUIDAO CK (Android / iOS)
Wireless	Bluetooth Low Energy 5.0
Document version	1.0
Issued	October 2026

Read the section "Read Before Use" in full before operating.

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Read Before Use

The four requirements below affect the safety of both the device and the vehicle. Confirm each one before first use.

No.	Requirement	Details
1	Back up before you operate	Keep a copy of the generated OBD, and back up the original data before writing or modifying anything, verifying that the file opens correctly.
2	The vehicle must be stationary	Park the vehicle throughout the procedure with the parking brake engaged, the transmission in P (automatic) or neutral (manual). Never work on a lift, on a slope, or while the vehicle is moving.
3	Initialise before first use	Once the app is installed, three steps must be completed by hand: sync the device information, update the firmware (including the algorithm), and update the software and resources (resource files, Key Programming, Instrument cluster data repair). Do not start a job until all three are done; see Section 3.4.
4	The use must be lawful	The device is intended only for vehicle repair and key duplication. The operator must be able to present proof of vehicle ownership.

> Failure to follow these requirements, resulting in an immobiliser lockout, instrument damage or data loss, is not covered by the warranty.

1. Product Overview

CK-OBDProg is a vehicle diagnostic device that draws power from the OBD diagnostic connector and communicates with a phone over Bluetooth Low Energy (BLE). Used with the HUIDAO CK app, it performs two tasks: reading immobiliser data and completing key programming, and reading, modifying and writing the internal data of the instrument cluster for instrument data repair.

The device has no operable buttons and no display. All interaction takes place in the app. Protocol handling runs on the chip inside the device, which supports multiple communication protocols including CAN, CAN FD and DoIP. The app handles model selection, parameter entry and result display. Part of the immobiliser data is computed on the server, so the phone needs to stay online during the job.

1.1 Main Functions

Two function groups share one device. The first concerns the immobiliser system, the second the instrument cluster.

OBD key programming

- Generate OBD for programming from the model, model year and key type (mechanical key, remote control or smart key)
- Read internal data from the immobiliser control unit (IMMO / BCM / CAS and similar)
- Read the number and status of registered keys
- Add keys, and reprogram after all keys are lost
- Learn remote controls and smart keys (PEPS)
- Back up and restore immobiliser data

Instrument data repair

- Read instrument memory data (EEPROM / MCU data area)
- Back up, modify and write data
- Repair needle zero position and display segment faults

1.2 Supported Vehicles

The device covers mainstream brands and vehicle families, including but not limited to the brands listed below. Support for specific models, model years and trim levels follows the model library that is updated live inside the HUIDAO CK app.

Table 1 Brand coverage

Origin	Brands
German	Volkswagen, Audi, BMW, Mercedes-Benz, Porsche, Skoda, Opel
Japanese	Toyota, Honda, Nissan, Mazda, Mitsubishi, Subaru, Suzuki, Lexus, Infiniti, Acura

Origin	Brands
American	Ford, Chevrolet, Buick, Cadillac, Chrysler, Jeep, Dodge, Lincoln, GMC
Korean	Hyundai, Kia, SsangYong
French	Peugeot, Citroen, Renault
Chinese	BYD, Geely, Changan, Great Wall (Haval / WEY), Chery, Roewe, GAC Trumpchi, FAW Besturn, Dongfeng Aeolus, Wuling Baojun, Hongqi, Lynk and Co, NIO, XPeng, Li Auto

Note: brand coverage does not mean full model and trim coverage. Certain newly launched models, immobiliser systems with a high encryption level, and vehicles that rely on online programming require network authorisation or dedicated adapters. Follow the prompts in the app.

1.3 Unsupported and Restricted Cases

The device cannot complete the following, or requires extra conditions. Explain this to the owner before accepting the job:

- Models and model years not registered in the model library
- Vehicles with abnormal 12 V supply or battery voltage below 11.5 V

2. Hardware

This chapter describes the housing, the meaning of each indicator and the specifications. Familiarise yourself with the parts against the physical unit before first use.

2.1 Appearance and Connectors

The device plugs directly into the diagnostic connector. The main body has a white housing and a standard 16-pin OBD-II male connector at the top, which fits the vehicle diagnostic socket. The front carries a black panel with the brand logo in the upper area and three status indicators arranged from left to right for Bluetooth, power and communication. The orange part below the panel is a decorative trim and is not a button; do not press it. The lower housing is textured for a secure grip when plugging and unplugging.



Figure 2-1 Front view: three status indicators, the orange part is decorative

The middle of the rear side carries the MCU read/write adapter interface, a double-row pin header with pin labels silk-screened on the panel: the upper row is 12V, 5V, A3, A2, A1 and 3.3V, B4, B3, GND, GND; the lower row is C5, C4, C3, C2, C1 and D5, D4, D3, D2, D1. The interface accepts the optional MCU read/write adapter (see Section 2.5) for bench reading of instruments or immobiliser boxes, covering the models that cannot be reached over OBD.



Figure 2-2 Rear view: MCU read/write adapter interface

The tail of the device carries two Type-C ports: the left port connects the optional RFID adapter (see Section 2.5) for reading and writing keys over radio frequency, and the right port is the power supply port for bench work or when the vehicle supply is insufficient. The tail panel carries the model marking and the certification mark, plus a QR code linking to model library updates and how-to videos.



Figure 2-3 Tail view: Type-C ports (left RFID adapter / right power)

2.2 Indicator Definitions

Two of the three indicators carry fixed meanings: the power and Bluetooth indicators can be used directly to judge supply and connection state. The communication indicator is a status display only. It lights, flashes or goes dark as communication activity varies, there is no fixed mapping, and diagnostic results must be read from the app.

Table 2 Indicator states

Indicator	Colour	State	Meaning
Power indicator	Blue	Steady	Power present, device booted
Power indicator	Blue	Off	No power, check the OBD socket and fuse
Bluetooth indicator	Green	Steady	Connected to the phone
Bluetooth indicator	Green	Off	Bluetooth not connected, waiting for the app to connect
Communication indicator	Red	Varies with activity	Communication status display only; there is no fixed mapping, and it must not be used to diagnose a device or vehicle fault

2.3 Specifications

The values below are the factory ratings. In service, the nameplate and the firmware information in the app prevail.

Table 3 Technical specifications

Item	Specification
Model	CK-OBDProg
Interface	OBD-II 16-pin standard diagnostic connector
Communication protocols	CAN (ISO 15765); K-line (ISO 9141, KWP2000); CAN FD (ISO 11898-1); DoIP (ISO 13400)
Operating voltage	DC 9 V to 16 V (supplied by the vehicle OBD socket)
Operating current	120–200 mA (12 V supply)

Item	Specification
Wireless	Bluetooth Low Energy 5.0, range 3 m
Bluetooth name	CK-OBD-XXXXXXXX (XXXXXXXX is the 8-digit machine number shown on the Sync page of the app, e.g. CK-OBD-147383CA)
Operating temperature	-20 °C to +70 °C
Storage temperature	-40 °C to +85 °C
Expansion ports	MCU read/write adapter interface on the rear (double-row pin header); two Type-C ports on the tail (left: RFID adapter, right: power supply)

2.4 Reset

If the device cannot connect, shows abnormal indicators, or loses communication and repeated reconnection fails, unplug it from the OBD socket, wait about 10 seconds and plug it back in. Power cycling is complete when the power indicator is steady again. At the same time, switch the vehicle ignition off and back to ON.

Power cycling does not erase the backup data stored in the device. If the fault persists after power cycling, work through Chapter 7, and contact support if it remains unresolved.

2.5 Optional Accessories

Both accessories below are **optional** and are not part of the standard package; purchase them only when needed. They are used solely for key programming on certain special models. Key programming on regular models and every instrument data repair job need no accessory at all.

1. MCU read/write adapter (Figure 2-4): a bare green board used to read immobiliser or key boxes on the bench. Mount the board onto the "MCU read/write adapter" connector on the back of the device (the double-row pin seat, Figure 2-2) so that the board pins match the silkscreen one to one; then connect the reading points inside the key box with the DuPont wires as instructed by the app for that model. The OBD connector on the board plugs into the vehicle OBD socket for power, and the DC socket accepts a power adapter to keep the supply stable during the job.



Figure 2-4 MCU read/write adapter (optional): DuPont wires connect to the reading points inside the key box; the DC socket takes the power adapter



Figure 2-5 MCU read/write adapter connection: the DC power cable goes into the adapter board, and the DuPont wires connect to the reading points inside the key box

2. RFID adapter (Figure 2-6): a black-cased unit that reads and writes keys over radio frequency. Connect it with the supplied Type-C cable to the left Type-C port on the tail of the device (Figure 2-7); no further setup is required.



Figure 2-6 RFID adapter (optional): reads and writes keys over radio frequency



Figure 2-7 RFID adapter connected to the device

For a special model, the wiring positions, pin definitions and operation order follow the in-app guide for that model. Both accessories attach to the device purely physically and work out of the box; no account or pairing is involved.

3. App Installation and Device Connection

All operations run through the HUIDAO CK app. This chapter covers the download channels, permission setup and connection method. If a connection problem occurs, refer first to Chapter 7.

3.1 Download and Install

HUIDAO CK is distributed through the official channels below. Do not install it from any other source.

Table 4 Download channels

Platform	How to get it	System requirement
Android	Search for HUIDAO CK in an app market, or scan the QR code on the package	Android 8.0 or later
iOS	Search for HUIDAO CK on the App Store	iOS 13.0 or later

Once installed, simply follow the prompts in the app. After the connection succeeds, the app automatically jumps to the OBD operation screen; to use a different phone, just connect the same device again.

3.2 Permissions

The app needs the following permissions. Grant them in the phone system settings:

- **Bluetooth**: required to find and connect to the device
- **Location (Android)**: Android requires location permission to scan for Bluetooth devices. This is unrelated to collecting location data, and the permission may be set to "while using the app"
- **Storage**: used to save backup files and operation logs
- **Notifications**: used for firmware update prompts and operation results

3.3 Connection Steps

Follow the order below and confirm both the indicators and the app state at each step before continuing.

1. Turn the ignition to ON so the instrument lights up, without starting the engine, and locate the OBD diagnostic socket
2. Plug CK-OBDProg into the OBD socket and confirm that the power indicator is steady

3. Turn on the phone Bluetooth and open HUIDAO CK. The home screen shows the connection status at the top; tap the ⊕ icon in the upper-left corner to open the device search page (Figure 3-1)

4. On the search page tap the orange round icon to start scanning (Figure 3-2). Make sure the device is powered on and not connected to another phone; the app connects to an enabled device automatically

5. Under "Available devices" tap the entry whose name starts with CK-OBD- (for example CK-OBD-147383CA, suffixed with the machine number) to connect

6. After a successful connection the Bluetooth indicator becomes steady and the home screen shows "Connected". Tap the CK-OBDProg card on the home screen to open the device function menu (Figure 3-3) with five entries: Key Programming, Instrument cluster data repair, Sync, Update and Firmware upgrade

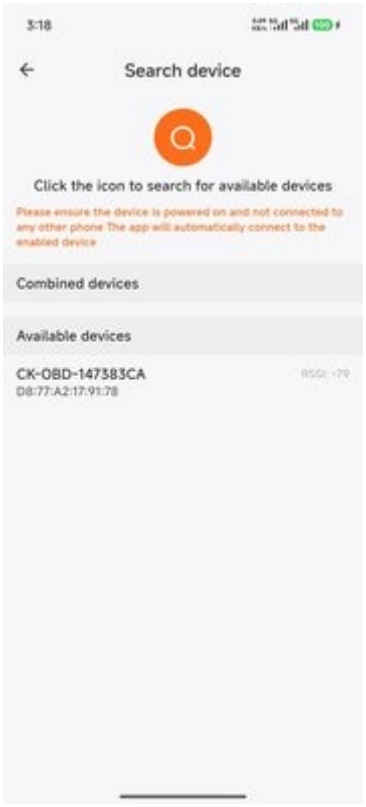


Figure 3-1 App home screen: connection status and CK-OBDProg entry



Figure 3-2 Device search: tap the round icon to scan and choose the CK-OBD- entry



Figure 3-3 Device function menu: five entries

3.4 First Use: Complete Three Initialisation Steps

The device ships with the firmware and resource packages that were current at the time of manufacture. **Nothing is updated automatically** when the app is installed, so a new device must be initialised by hand before its first job. Skipping these steps usually shows up as models missing from the vehicle database, failed key programming, or read and write errors on the instrument cluster.

1. **Sync the device information.** Connect the device, open "Sync" and tap the "Sync" button at the bottom. Confirm that the Device PSN, firmware version, algorithm version and device status are all displayed. Once the sync completes, the app records the device PSN and version information for later reference.
2. **Update the firmware.** Return to the device function menu and open "Firmware upgrade". Compare the latest version shown on the page with the installed version. If a newer version is available, tap "Start upgrade", then leave the device powered and the app in the foreground until the progress bar completes (about 2 to 5 minutes). The firmware and the algorithm are versioned separately, so check both and bring both up to date.
3. **Update the software and resources.** Open "Update" and work through all three categories: "Resource files", "Key Programming" and "Instrument cluster data repair". In each one, tap "Select all" in the upper-right corner and then "Download" at the bottom. The first update is large, so run it over Wi-Fi.

> Complete all three steps before the first job. Out-of-date firmware leaves the app and the device on mismatched versions, which shows up as repeated disconnections; stale resources leave newer models missing from the vehicle database.

Sections 3.5 and 3.6 below describe the screens and fields of each step in detail.

3.5 Device Sync and Firmware Update

Tap "Sync" in the device function menu to view the Device PSN (machine number), firmware version, algorithm version and device status, then tap the "Sync" button at

the bottom to sync the device information to the app (Figure 3-4). If the device status is abnormal, reconnect the device before syncing.



Figure 3-4 Sync page: Device PSN, firmware and algorithm versions

Tap "Firmware upgrade" to open the upgrade page. The app shows the latest and installed versions of both the firmware and the algorithm (Figure 3-5). When a new version is available, tap "Start upgrade"; the progress bar appears at the bottom. The update takes about 2 to 5 minutes. Throughout the update the device must stay powered: do not disconnect power, close the app or send it to the background. An interrupted update may place the device in recovery mode, in which case power-cycle it and retry following the app prompts.

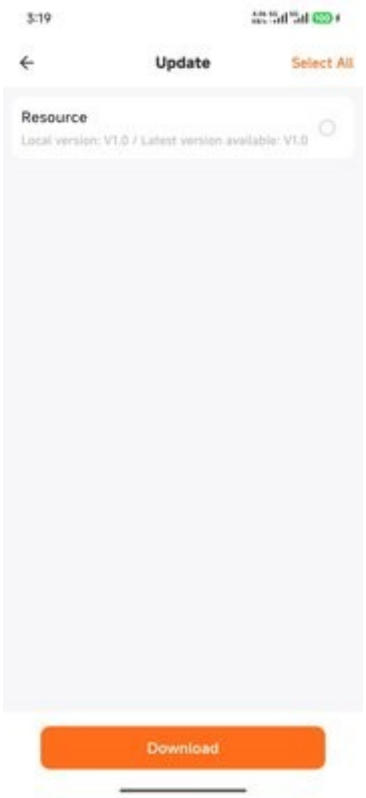


Figure 3-5 Firmware upgrade: firmware and algorithm versions

3.6 Data and Resource Updates

Keep the vehicle database and algorithm resources up to date, otherwise newer models cannot be programmed. Tap "Update" in the device function menu; the updates come in three categories (Figure 3-6): **Resource files** (common resources), **Key Programming** (immobiliser data per brand) and **Instrument cluster data repair** (instrument data per brand).



Figure 3-6 Update centre: three update categories

Inside any category the entries are listed by brand (Figure 3-7), each showing the local and the latest version. Tick individual entries or tap "Select all" in the upper-right corner, then tap "Download" at the bottom. Update the resources for the brands you work on before every job.

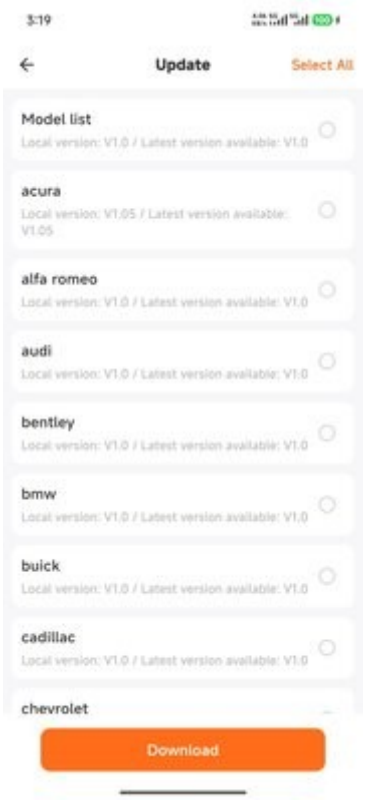


Figure 3-7 Update list: per-brand versions with batch download

4. OBD Key Programming

This chapter involves the vehicle immobiliser system. Before erasing or writing key entries, confirm the vehicle ownership and the owner authorisation.

4.1 Preparation

Preparation largely determines the success rate. Check each item below before connecting the device.

Item	Requirement
Vehicle supply	The battery is sufficiently charged; connect a power supply if necessary
Keys	All keys provided by the owner, including spares, are present
Ownership	Proof of ownership and owner authorisation have been confirmed
Model check	The model, model year and key type are confirmed and all three can be found in the app model library
First use	The sync, firmware update and resource update in Section 3.4 have been completed, and the app model library lists the brand for this job

Item	Requirement
Optional accessories	For a special-model job, confirm that the required accessory (MCU read/write adapter or RFID adapter) is on site and connected as described in Section 2.5

4.2 Standard Procedure

The procedure has six steps. At each step the app shows the current state and the next action; follow its prompts in order.

1. **Connect the device to the vehicle.** Plug CK-OBDProg into the vehicle OBD socket and confirm that the power indicator is steady. Turn the ignition to ON.
2. **Open the app and connect.** Launch HUIDAO CK and connect to the device as described in Chapter 3. Confirm that the Bluetooth indicator is steady and that the home screen shows "Connected".
3. **Select the model, model year and key type.** Open "Key programming", choose a market region (Figure 4-1), then select the model, the model year and the key type: mechanical key, remote control or smart key. The key type determines how the key is learned in step 5 and must match the key the owner supplied; a wrong selection makes learning fail.
4. **Generate OBD.** Tap "Generate OBD" and wait for it to finish. The device communicates with the vehicle immobiliser during this step, so keep it plugged in and leave the ignition alone. The result is the data used for this job; keeping a backup copy is advisable so that it can be compared if anything goes wrong.
5. **Program the key as prompted.** Once step 4 has completed, follow the on-screen prompts: insert a mechanical key into the ignition lock and complete the learning step; pair a remote control for a remote key; place a smart key in the in-vehicle detection area and complete the learning step. For an all-keys-lost job, erase the existing key entries first and then learn each key in turn, which invalidates every previous key.
6. **Finish and disconnect.** When every key starts the vehicle and the remote functions work, exit the app and unplug the device from the OBD socket.

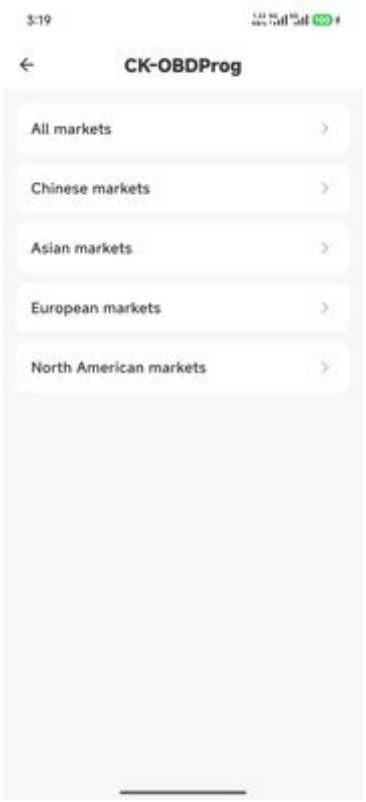


Figure 4-1 Key Programming: market region selection

4.3 Prohibited During Operation

The following actions break the data link and are the main cause of immobiliser lockout. Avoid them throughout the operation.

- Do not unplug the device, switch off the ignition or switch app pages while generating OBD or writing
- Do not operate other in-vehicle electronics (windows, audio, air conditioning) during a write
- Do not connect several phones at once or occupy the link with Bluetooth headsets
- Do not write immobiliser data with the engine running

4.4 Troubleshooting

Establish first whether the failure occurred during the read or the write. If a write failed, never attempt another write before restoring the backup.

Table 5 Key programming faults

Symptom	Likely cause	Action
Generating OBD fails	Wrong model, model year or key type	Verify the model, model year and key type, then generate again
Generation stalls at a percentage	Communication loss, supply voltage fluctuation	Check the connector seating, connect a stabilised power supply and retry
Key learning fails	Wrong key type, wrong detection area position	Confirm the key frequency matches the model and reposition the key
Previous keys stop working after programming	The all-keys-lost procedure was run	Relearn every key
Engine will not start after writing	Incomplete data write	Restore the immobiliser data from the backup immediately, then repeat the procedure

5. Instrument Data Repair

Writing instrument data is irreversible. The procedure below mirrors Chapter 4: connect the device first, then follow the app prompts. Confirm a stable vehicle supply before starting; on first use, complete the sync, firmware update and resource update in Section 3.4 as well.

5.1 When It Applies

This function serves repair scenarios only and must never be used to alter the genuine mileage of a vehicle.

- The display is faulty, the needles are misaligned or display segments are missing and the internal data must be repaired
- The original parameter configuration must be restored after instrument repair

5.2 Standard Procedure

The procedure has six steps and matches Chapter 4. At each step the app shows the current state and the next action.

1. **Connect the device to the vehicle.** Plug CK-OBDProg into the vehicle OBD socket and confirm that the power indicator is steady. Turn the ignition to ON.

2. **Open the app and connect.** Launch HUIDAO CK and connect to the device as described in Chapter 3. Confirm that the Bluetooth indicator is steady and that the home screen shows "Connected".

3. **Select the model, model year and instrument type.** Open "Instrument cluster data repair", choose a market region, then select the model, the model year and the instrument type as prompted (for example "New LCD instrument", Figure 5-1), and enter the specific function such as "Modify mileage data". The app shows the memory type and the read method for that instrument.

4. **Generate OBD.** Tap "Generate OBD" and wait for it to finish. The device communicates with the instrument during this step, which takes longer on some models; that is normal. Keep the device plugged in and leave the ignition alone. The result is the data used for this job; keeping a backup copy is advisable so that it can be restored if a write fails.

5. **Repair the data as prompted.** Once step 4 has completed, follow the on-screen prompts: enter the target values, checking the unit and the upper limit first because out-of-range values are rejected, then confirm and write. The app verifies automatically when the write completes; once verification passes, switch off the ignition, wait 10 seconds and switch it on again to check the self-test, the display and the needles.

6. **Finish and disconnect.** When every indication matches the actual vehicle state, exit the app and unplug the device from the OBD socket.

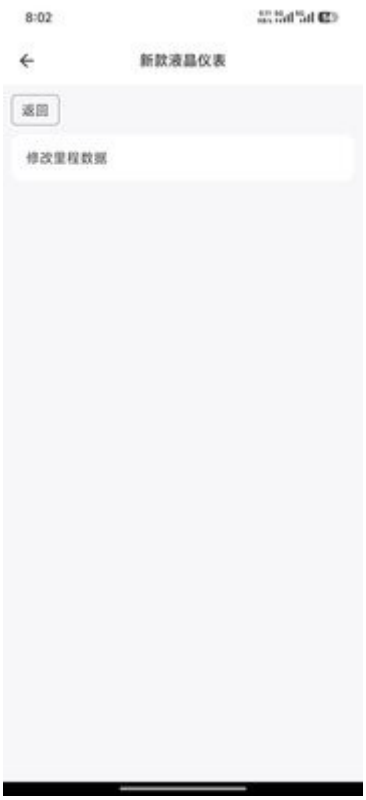


Figure 5-1 Instrument cluster data repair: pick the instrument model, then enter the specific function

5.3 Risks and Cautions

The four points below account for most instrument repair failures. Watch for them in day-to-day work.

- Writing instrument data is irreversible. Writing incorrect data may put the instrument into a protected state
- Power loss during a write is the main cause of instrument damage. Confirm a stable vehicle supply before starting
- Some instruments must be read on the bench; this cannot be done over OBD, and the app states so explicitly. Bench reading is done with the MCU read/write adapter connected to the adapter interface on the rear of the device
- Instrument data repair must reflect the genuine state of the vehicle. Never use this function to alter the genuine mileage

6. Safety and Compliance

The terms in this chapter are preconditions for using the product. Purchase and use constitute acceptance of them.

6.1 Lawful Use

1. The device is intended for qualified repair shops, professional locksmith services and authorised technicians.
2. Before programming keys, verify the proof of ownership and the identity of the owner, and retain the operation record.
3. Instrument data repair is limited to repair scenarios such as instrument repair and post-damage data repair.
4. Using the device to alter mileage or misrepresent a vehicle's condition in used-car transactions is strictly prohibited. The user bears the legal consequences.
5. Users must comply with the laws and regulations of their jurisdiction, including those covering road traffic safety, metrology and the used-vehicle trade.

6.2 Operating Safety

Personal and vehicle safety takes precedence over throughput. None of the requirements below may be waived.

- Keep the vehicle parked throughout the procedure and chock the wheels where necessary
- Never write immobiliser or instrument data with the engine running
- Do not operate during thunderstorms, in damp conditions or where the vehicle has an electrical leak
- Keep your hands dry when plugging or unplugging the device, and avoid touching the OBD pins

6.3 Disclaimer

The manufacturer is not liable in the following situations. Agree the boundaries of responsibility with the owner before work begins.

- The manufacturer accepts no liability for vehicle damage or data loss caused by failure to follow this manual, incorrect model selection, abnormal power supply or unauthorised disassembly
- The manufacturer accepts no liability for failed operations caused by pre-existing vehicle faults, including immobiliser faults, instrument hardware damage and loose wiring
- Backup data stored on the device is the responsibility of the user. Backups lost through phone loss, accidental deletion or system reinstallation cannot be recovered by the manufacturer
- The supported models and functions listed in this manual change with model library updates. The live information in the app prevails

7. Troubleshooting

Work from the outside in: confirm power and connection first, then the model and communication, and only then decide whether the unit needs service.

Table 6 Fault isolation

No.	Symptom	Checks
1	No indicator after plugging in	Confirm the ignition is ON; check whether the OBD socket is powered (it is permanently live on some models); check the OBD fuse; test the device on another vehicle
2	Phone cannot find the device	Confirm the device is powered (power indicator steady); confirm phone Bluetooth is on; Android requires location permission; move within 3 m of the device; restart the app
3	Bluetooth disconnects immediately	Switch off other Bluetooth devices in the vehicle; unpair the old entry in the system Bluetooth settings and pair again; run a reset
4	No communication with the vehicle	Confirm the model selection; confirm the ignition is ON; check the OBD pins for corrosion; some models need a dedicated adapter cable

No.	Symptom	Checks
5	Generating OBD or reading fails partway	Check the connector seating; connect a stabilised power supply; switch off in-vehicle loads and retry
6	Write fails or verification does not pass	Restore from the backup and repeat; confirm the values are within range; confirm a stable vehicle supply
7	No display after writing	Switch the ignition off for 1 minute and retry; restore from the backup; if the display stays blank, remove the instrument for inspection
8	Firmware update interrupted	Power-cycle the device; the app offers recovery mode, retry the update; contact support if it fails repeatedly

8. Care and Maintenance

The device connects directly to vehicle electronics, so routine care centres on keeping the connector clean and the firmware current.

- Unplug the device when not in use. Once in the OBD socket the device draws power continuously, at 120–200 mA while operating, so a vehicle left standing for long periods, or one with a weak battery, should have the device removed after use
- Store in a dry place, away from direct sunlight, liquids and strong vibration
- Clean the connector pins periodically with a dry soft cloth; do not use aggressive cleaners
- Check the app and firmware versions quarterly and keep them current to gain support for new models

9. Warranty and Support

The warranty is validated by the proof of purchase. Try remote diagnosis by email before returning the unit.

9.1 Warranty

The device carries a 12-month warranty from the date of purchase. Hardware faults not caused by user action are repaired or replaced free of charge within the warranty period.

9.2 Excluded From Warranty

The cases below are handled as chargeable repairs once confirmed by inspection.

- Unauthorised disassembly, modification or firmware alteration
- Damage from liquid ingress, dropping, crushing or high temperature
- Damage caused by failure to follow this manual
- Damage caused by vehicle faults such as overvoltage or short circuits
- Expiry of the warranty period

9.3 Support

When returning the device, include the proof of purchase, a description of the fault and the operation record so that the issue can be diagnosed quickly.

Table 7 Support channels

Channel	Detail
Support email	ck@ck-yaokey.com

Appendix A Quick Reference

The table summarises the workflow for on-site work. Chapters 4 and 5 remain the authoritative detail.

Table 8 Scenario quick reference

Scenario	Key steps	Mandatory action
First-use initialisation	Install app, connect device, sync, update firmware (plus algorithm), update resources (all three categories)	All three done before the first job
Special-model key programming	Fit the optional accessory, connect device, connect app, select model/year/key type,	Follow the in-app wiring guide

Scenario	Key steps	Mandatory action
	generate OBD, read and write keys as prompted, verify, exit and unplug	
Add one key	Plug in device, connect app, select model/year/key type, generate OBD, learn new key as prompted, verify, exit and unplug	Correct key type
All keys lost	Plug in device, connect app, select model/year/key type, generate OBD, erase existing keys, learn each key, verify, exit and unplug	Confirm owner authorisation
Repair instrument display	Plug in device, connect app, select model/year/instrument type, generate OBD, modify parameters, write, verify, exit and unplug	Stable power

Brand and model names mentioned in this manual are used only to describe device compatibility and remain the property of their respective owners. Specifications and functions may change as firmware is improved without prior notice.