PANDA

Automatic Key Cutting Machine
XA-006

User Manual
V1.0
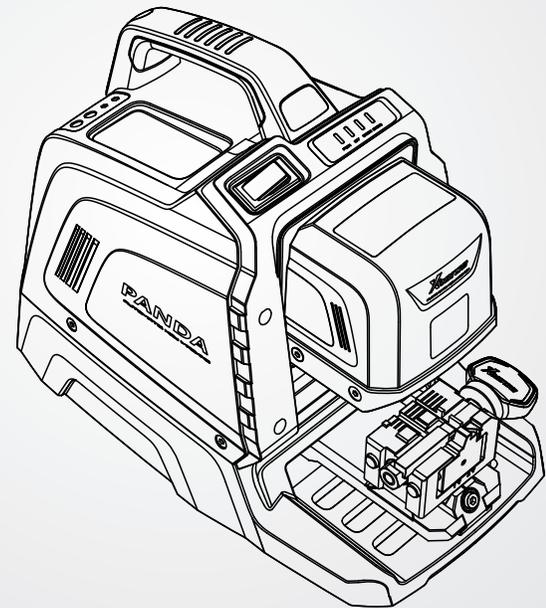
Xhorse®

XA-006
Automatic Key Cutting Machine

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1. Safety precautions and warnings

To avoid injuries to operators and damages to machines, please read this product user manual carefully before you start and follow the safety notes listed below:

- Always use the machine under safe environment

- Wear protective goggles that are in line with ANSI standard

- Put down the protective shield when the machines is working

- Do not have clothes, hair, hands and other tools close to the machine when it is working

- Do not leave the machine unattended when it is working

- Do not use a damaged or loose socket

- Unplug the machine when it is not in use for a long time

- Do not place the machine in a place that is damp, greasy and dusty

- Do not put things like tool or containers on the machine

- Put the machine on a flat and firm surface

- Keep the machine dry and clean

- Unplug the machine instantly under unusual circumstance

2. General information

2.1 Machine description

Dear customers, thank you for choosing XA-006 automatic key cutting machine.
Dolphin XA-006 is a portable machine, with a small volume and light weight, is particularly and carefully designed for locksmiths worldwide.
This product user manual provides operating instructions for you to use the machine correctly and safely. To avoid injuries and financial loss, please carefully read this manual through before you start to operate the machine. And we kindly remind you to keep this manual properly for future reference.

2.2 Machine characteristics

Panda is a new generation of portable automatic cutting machine, the product has the following characteristics:

- Compact and portable, suitable for outside job

- Ergonomics design, exquisite appearance, easy to operate

- APP smart control, support iOS and Android system

- Support all key lost online query result

- Support connecting to car cigarette lighter(12V)as power supply

- All aluminum die casting process, high rigidity

- Standard equipped multi-functional clamp

- Support sided /nternal track/ external track keys

- Simple operation, no need height adjustment or clamp calibration

- Built-in bluetooth, support function expansion

- Free online update

- Free online technical support

3 . Product packaging checklist

The panda machine factory packaging box contains the following items.
If there are any missing items, please contact the dealer.

Name	Sample picture	Quantity	Description
Machine		1	Key cutting machine
Clamp A1 + link stoppe+shim		1	Place key
1.5mm cutter		1	Cutting tool (φ1.5*φ6*40L)
2.0mm cutter		1	Cutting tool (φ2.0*φ6*40L)
Probe		2	Probing tool (φ1.0*φ6*40L)
2 mm hexagon bar wrench		1	For change cutter and probe
4mm hexagon bar wrench		1	For fix clamp
USB cable		1	Tool of connecting machine with computer

Power adapter		1	Power supply
1.5m Power cord of Mainland China standard		1	Connect to power
1.5m Power cord of UK standard (optional)		1	Connect to power
1.5m Power cord of US standard (optional)		1	Connect to power
1.5m Power cord of EU standard (optional)		1	Connect to power
Brush		1	Cleaning tool
Product quality certificate		1	Factory inspection report and packing list
User manual		1	Machine assembly/adjustment/oper ation instruction

4. Overview

4.1 Structure diagram
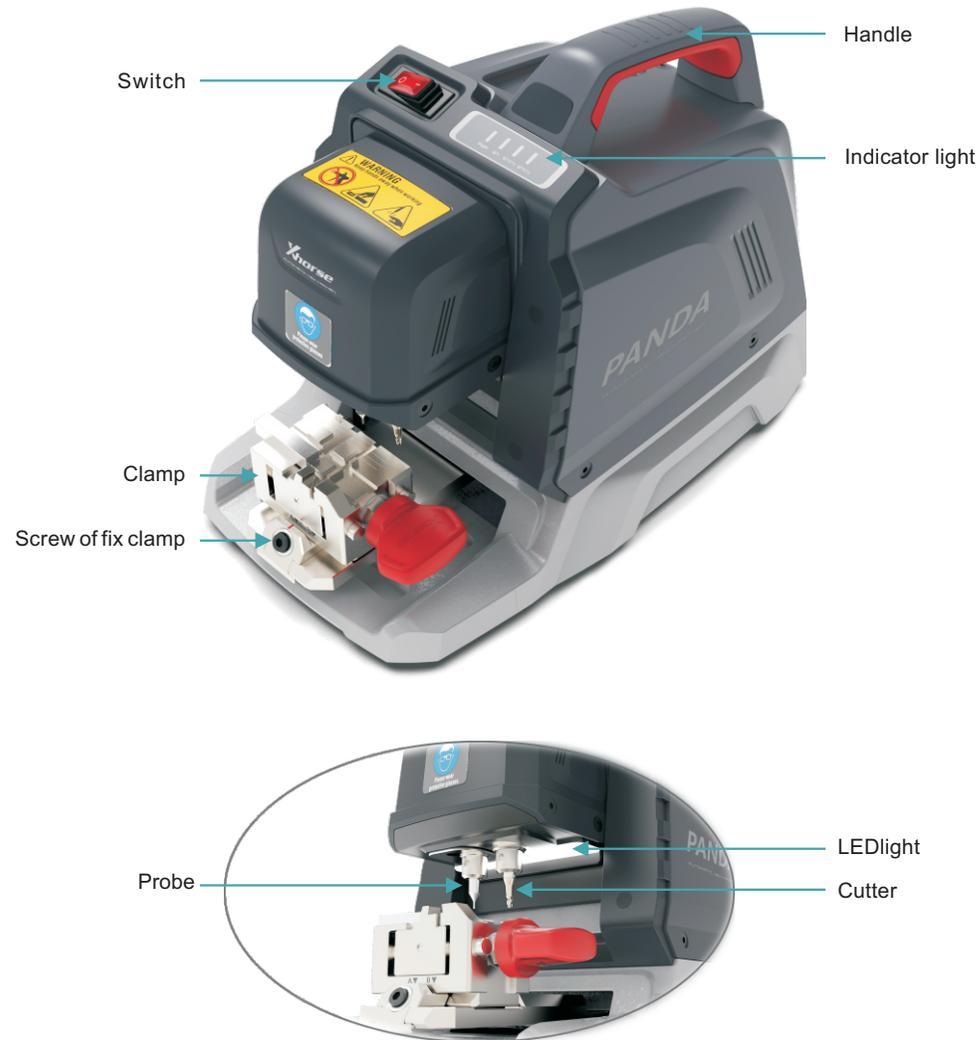
4.2 Specification

Input voltage	12V DC
Input Power	80W
Power consumption	70W
Principal axis rotation speed	11000rpm
USB socket	USB2.0
Working temperature	0-45℃(-4-113°F)
Humidity	10-90%
Net weigh	10kg
Gross weight	13kg
Machine size	316mm*184mm*234mm
Package size	415mm*360mm*310mm

4.3 Indicator status

Power Status   Buletooth Status   Machine Status 1   Machine Status 2
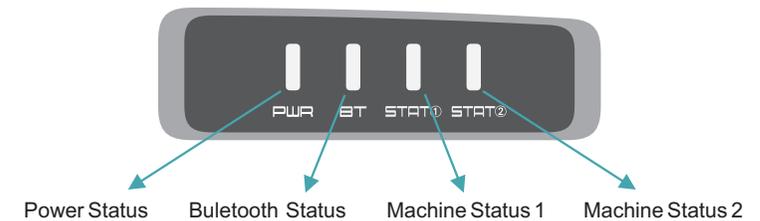
● Power indicator light: the power indicator light is green, indicating that the voltage is normal; when the indicator light is flashing red, it indicates that the voltage is abnormal.

● Bluetooth indicator light:After the machine is connected via APP, the green light is steady.

● Status indicator: The machine status indicator includes machine status 1 and machine status 2, and both lights are displayed at the same time. When the machine is working normally, it is flashing in blue; when the machine prompts information, it is flashing in yellow; when the machine is alarming, it is flashing in red.

234mm

316mm

184mm

Machine size

310mm

360mm

415mm

Package size
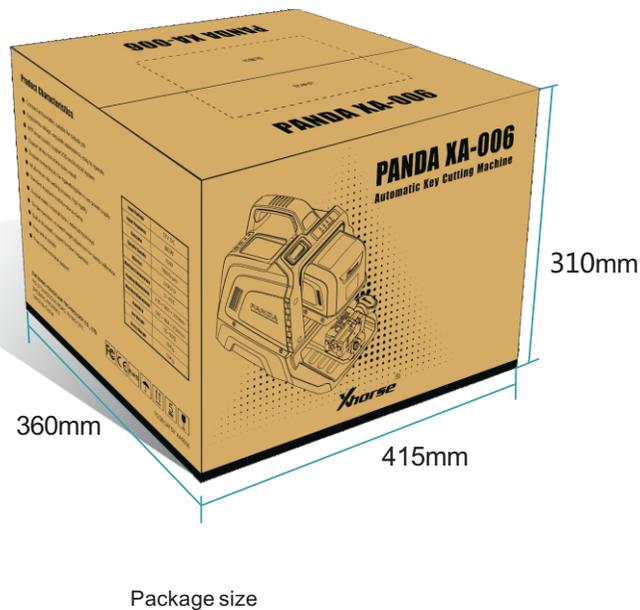
4.4 Software overview

4.4.1 Introduction

- Support Bluetooth connection and operation with APP
- Support machine self-check function
- Supports the learning and cutting of a variety of common car keys
- Supports universal key duplication of multiple key types
- Support all key lost and finding bit
- Support equipment parameters and key customization function,
- Support photo reading and single bit cut
- Support online upgrade
- Support online customer service function

4.4.2 Smart phone system support

- Android: Android 4.0 and above
- Apple: IOS8.0 and above

4.4.3 version update

- Firmware upgrade: Update by App with buletooth connect or update by PC with upgrade kit.
- Database upgrade: Update by App with buletooth.
- APP upgrade: install the latest version from the APP store or upgrade directly from the push message.

5. Installation instruction

5.1 Cutter and probe installation
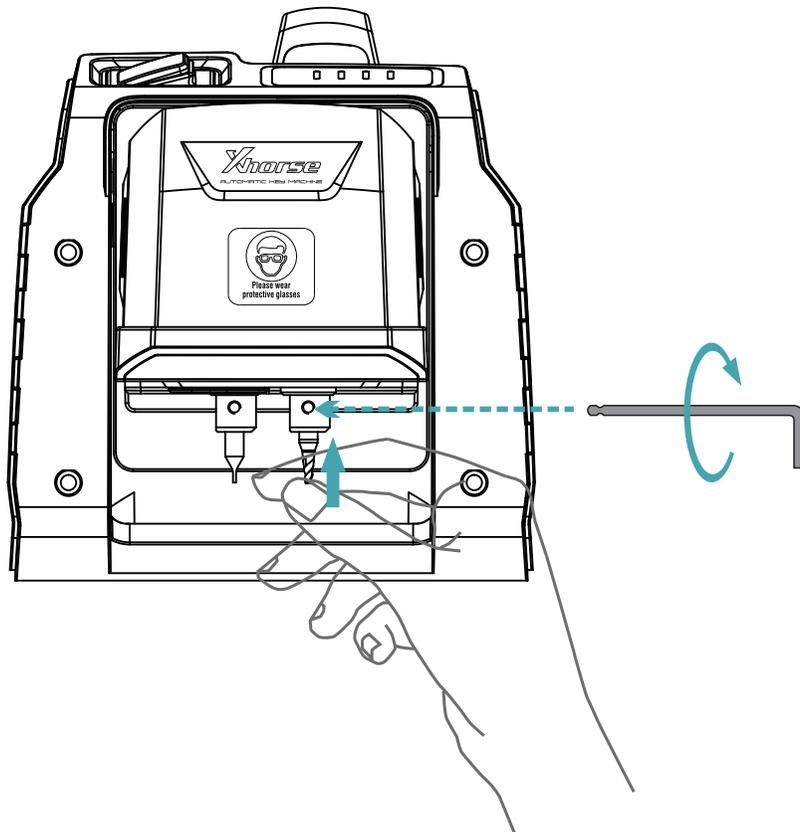
Cutter and probe installation steps:
1) Insert the cutter into the cutter hole and push it up to the limit. When the screw is vertically against the notch on the side of the cutter, turn the locking screw clockwise and tighten to fix the cutter.
2) Insert the probe into the probe hole and push it up to the limit, turn the locking screw clockwise and tighten to fix the probe.

*Do not replace the locking screws of different specifications at the probe/cutter. It is recommended to use the probe/cutter locking screws with the original factory standard or the same specifications.

5.2 Cutter and probe uninstallation
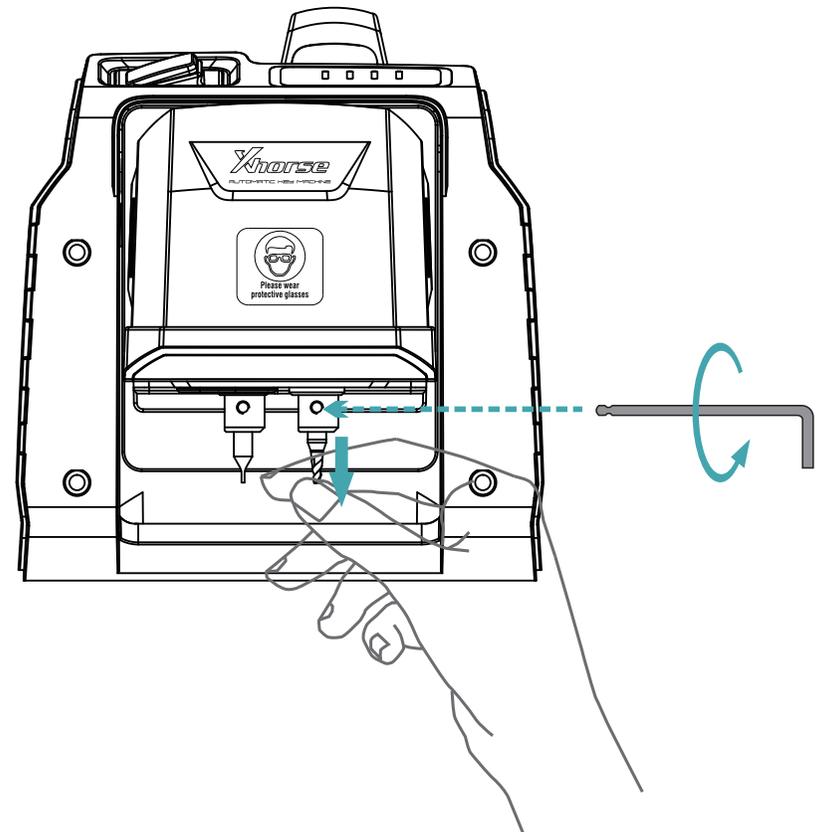
Disassembly steps of cutter or probe:
1) Hold the handle of the cutter or probe with your hand, and loosen the cutter or probe counterclockwise according to the installation principle of the cutter and probe.
2) After the cutter or probe becomes loose, just take it out.
*The machine detects the key through conductivity. Please clean the probe, cutter, clamp, and key to ensure that there is no debris left.
/Plastic keys and non-conductive keys do not support learning and cutting, otherwise the probe will be broken
*Please use the original standard probe and cutter,
*Do not use milling cutters with a diameter of 2. 5mm and above
*In order to ensure cutting accuracy, please replace the cutter regularly (the wear of the cutter depends on the cutting frequency and the material of the key blank, the user can replace the cutter according to the actual situation)

5.3 Clamp installation

5.4 Pictures of clamps

Clamp A1

A side support type (as shown below)
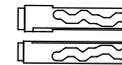
Channel track
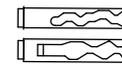
4 track internal

HU162T

B side support type (as shown below)
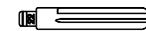
Standard single/double sided key
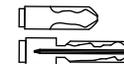
4 Track external

2 Track external

Clamp installation steps:
1) First, turn the locking screw on the "clamp locking device" counterclockwise to remove the "clamp locking device";
2) Push the clamp into the fixture base from the right side, and select the appropriate groove point according to the type of key to be processed;
3) Turn the locking screw on the "clamp locking device" clockwise to lock the clamp completely.

6. Operation instructions on APP

The system needs to initialize for first use. The steps as follows:

6.1 Smart phone APP connects to the machine

1. To obtain the Xhorse APP, customers can search for Xhorse in the App Store according to different mobile phone systems, download and install it, or directly scan the provided QR code as shown below.

2. Connect the machine to the power supply and turn it on, open the Xhorse APP, switch to the homepage of the CNC machine, click "Switch Device", and select Panda.

3. Click Connect "Select Device" and turn on Bluetooth, click the serial number to connect to the machine. (Customers can set up the automatic connection function according to their needs).

Scan it
Download Xhorse APP
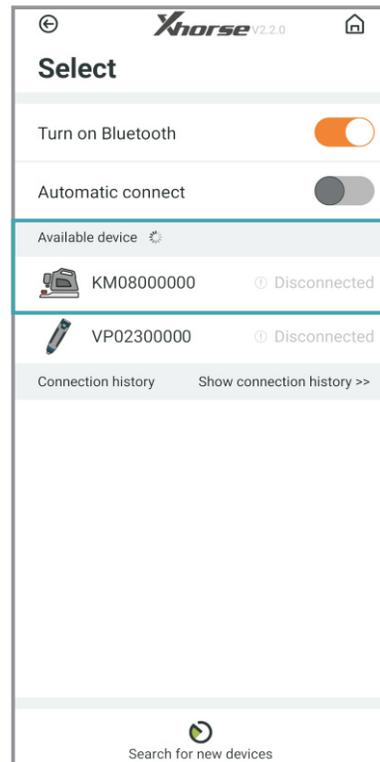
6.2 Cutting calibration

The cutting calibration must be completed when using the machine for the first time
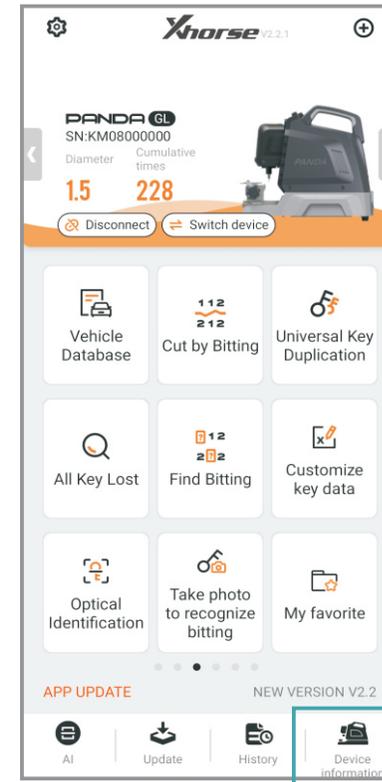
1) Enter the main interface and click "Device information ".
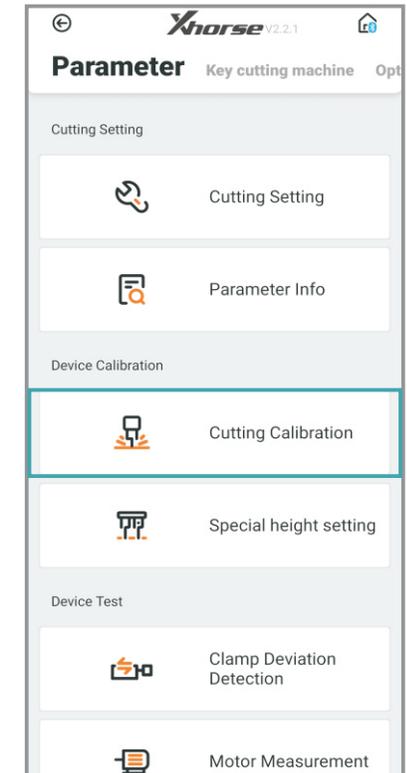
2) Select " Cutting Calibration".

Cutting Calibration

Select current cutter diameter

1.5mm

2.0mm

Setting cutter diameter
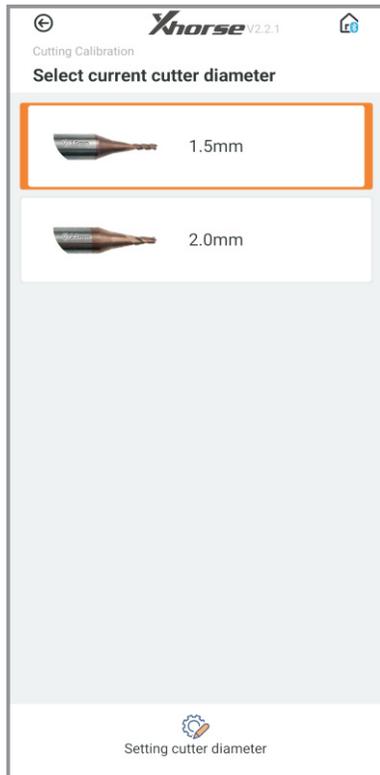
3) Please select the diameter of the milling cutter actually installed.

Machine Parameter

Cutting Calibration

Tip：
1.Probe and cutter need to be up to the upper limit.
2.This function can cut a blank key, mainly for Calibration.
3.Install clamp then select B position, and tighten the clamp knob.
4.Please insert and tight a HON66 blank key at the position of tip align to 4th line of the clamp .
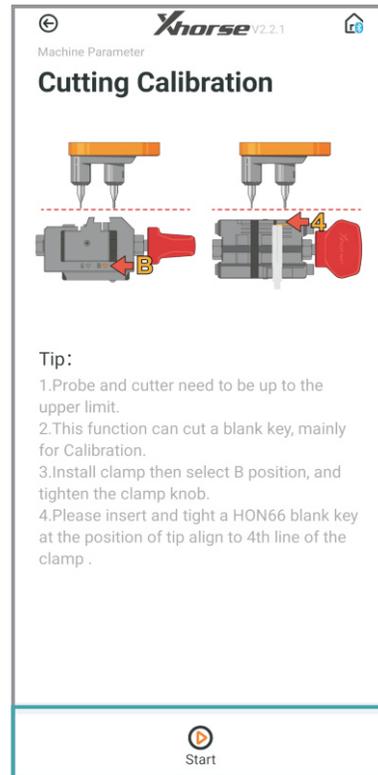
Start

4) Follow the instructions on the page and text, click "Start ", and the machine will start cutting.
*Must use a brand new HON66 key blank.

Machine Parameter

Cutting Calibration

Tip：
1.Probe and cutter need to be up to the upper limit.
2.This function can cut a blank key, mainly for Calibration.
3.Install clamp then select B position, and tighten the clamp knob.
4.Please insert and tight a HON66 blank key at the position of tip align to 4th line of the clamp .

Start
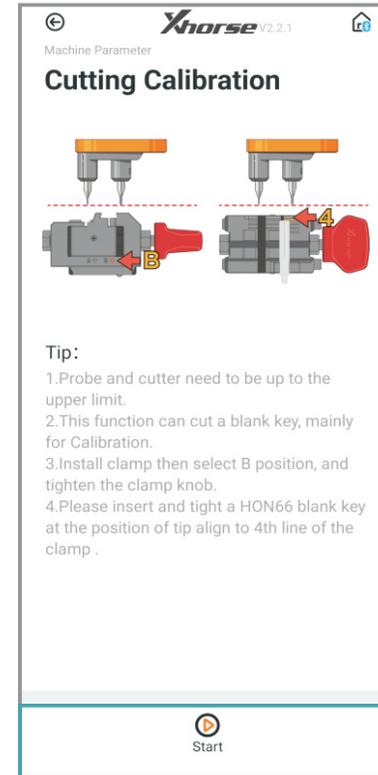
5) Clean the probes, milling cutters, jigs, and keys that have been cut with a brush to ensure that there are no residual metal shavings. Click the "Continue" to complete the calibration.

6.3 How to use the All Key Lost

*This function needs to register and log in to the APP account, and needs to be online for inquiries, please keep the network unblocked. There are three ways to obtain the key code for processing keys using the function of losing all keys:
1. The key plate provided by the car factory.
2. The key code is printed on the lock body of some models.
3.Other ways to get the key code.
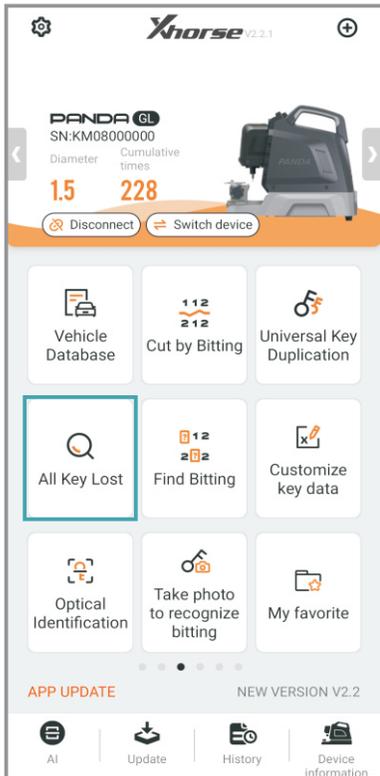
1) Click "All Key Lost" to enter the vehicle brand selection interface.
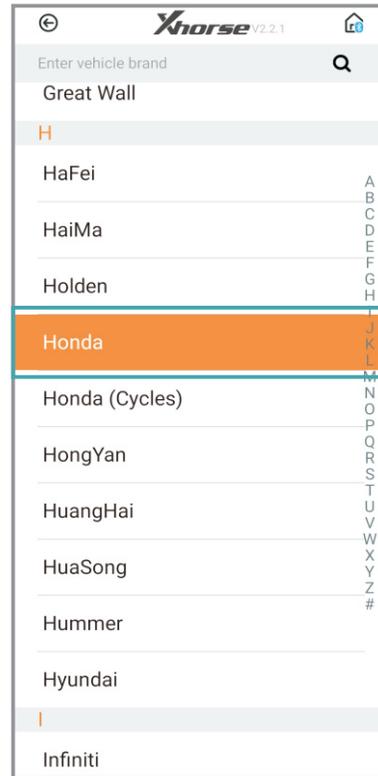
2) Selected vehicle brand to go to the next page.

3) Enter the key code and click "QUERY".
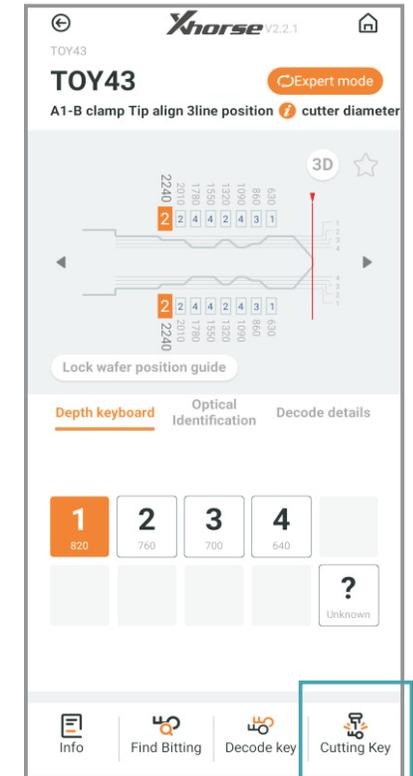
4)The key bit profile will be automatically generated. After confirming that it is correct, click "Cutting key" to start processing.

6.4 How to use the Vehicle Database

To use the car database, you must first determine the model and year of the car.
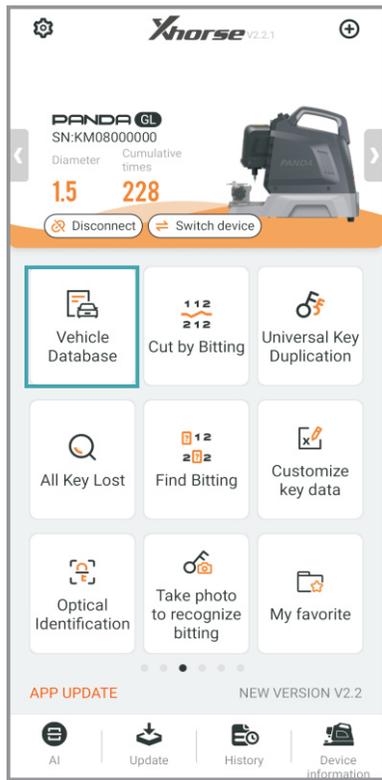
1) Click "Vehicle Database" to enter the vehicle brand or model selection interface.
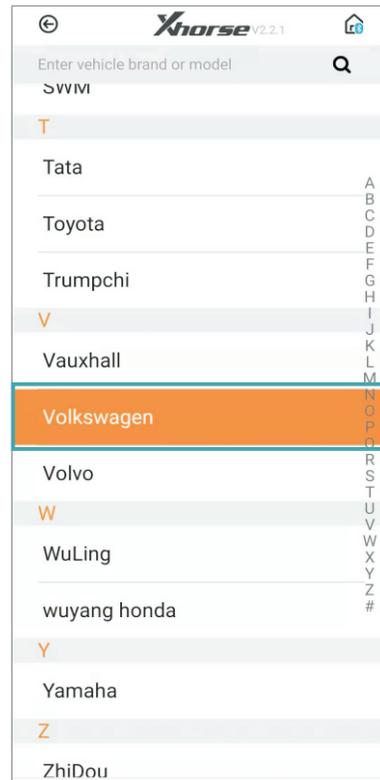
2) Select car brand.
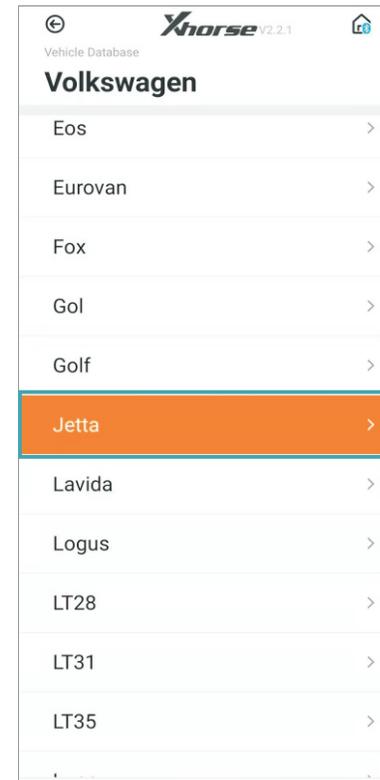
3) Select the car model .
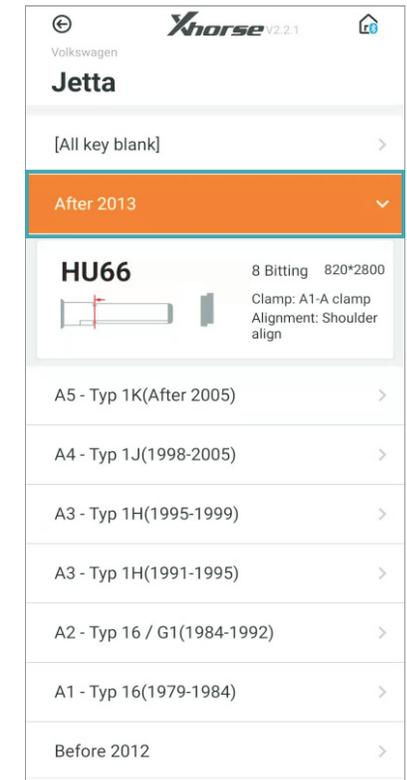
4) Select the model and year, and click to enter the processing interface.

6.5 How to use Cuy by bitting

There are two methods for Cuy by bitting processing according to whether there is an original key.

Method one:

Without the original key,there are two ways to get key bit.

1. Get the key bit with some professional tools.

2. Disassemble the car lock, check the lock plate to get the key bit.
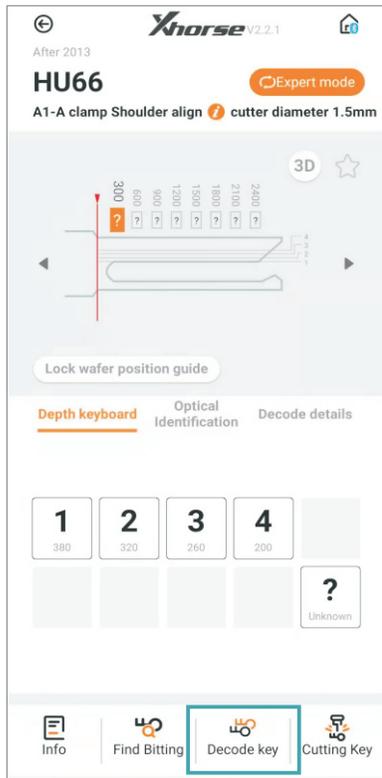
5) Follow the prompts to correctly install the key, and click "Decode key".
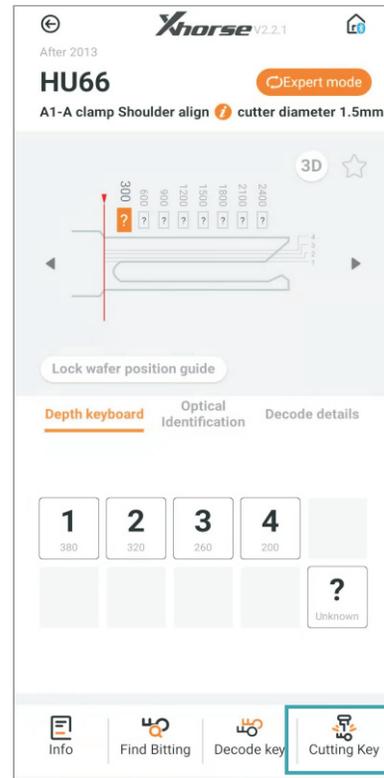
6) Click "Cutting key" after confirming all key bit correct.
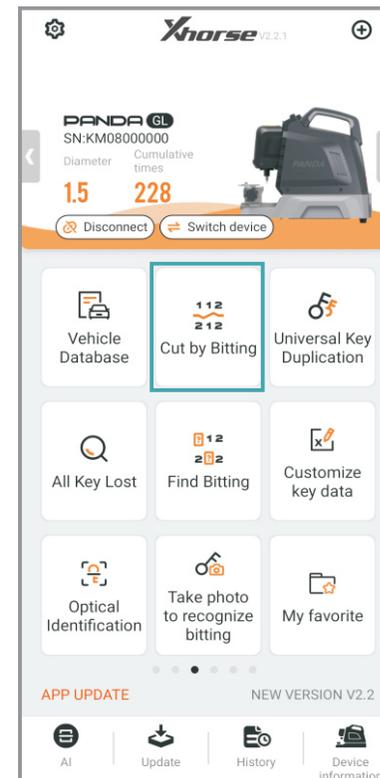
1)Click "Cuy by bitting" to enter the key blade selection interface.
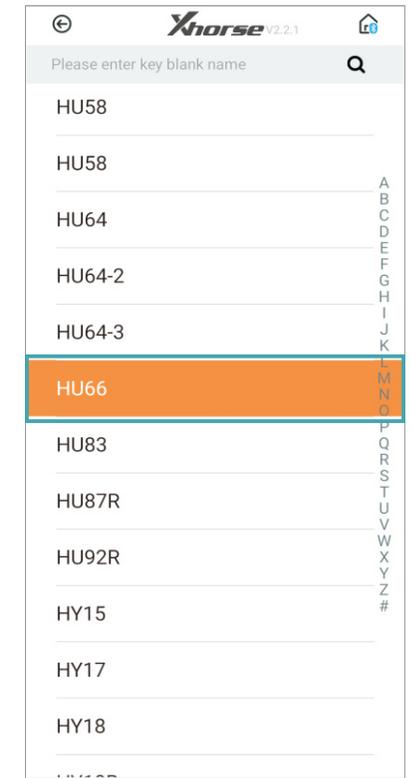
2) Select or enter the key blank type.

Shoulder align
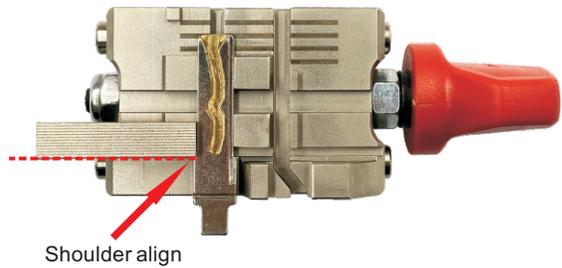
Method Two:
There is the original car key and use key bit to cut key.
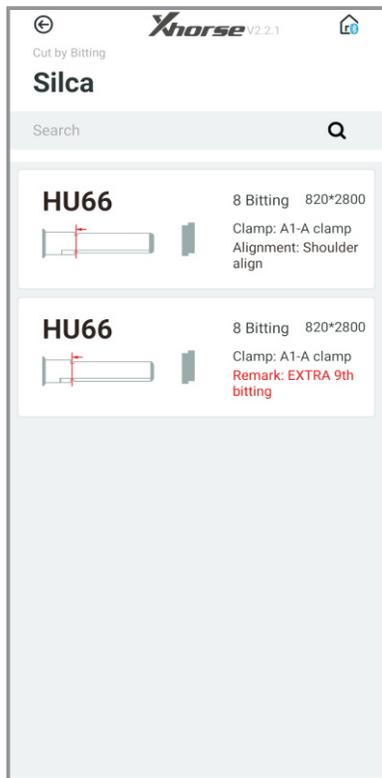
3) Select the key type and enter the proce-
ssing page.
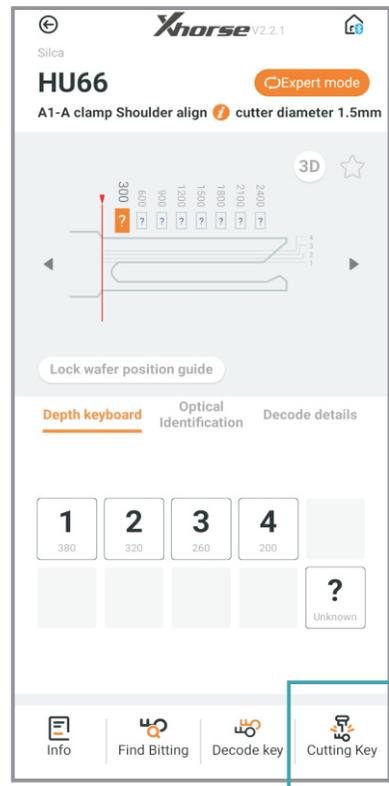
4) According to the prompts on the page,
confirm the clamp type and adjust the
clamp position.Enter the known key bit
and click " Cutting key" after confirming
that it is correct.
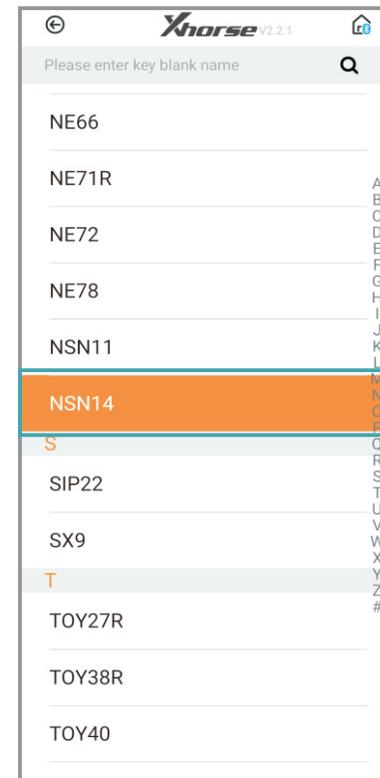
1) Click "Cut by bitting", select or input the
key blank type, and click to enter.
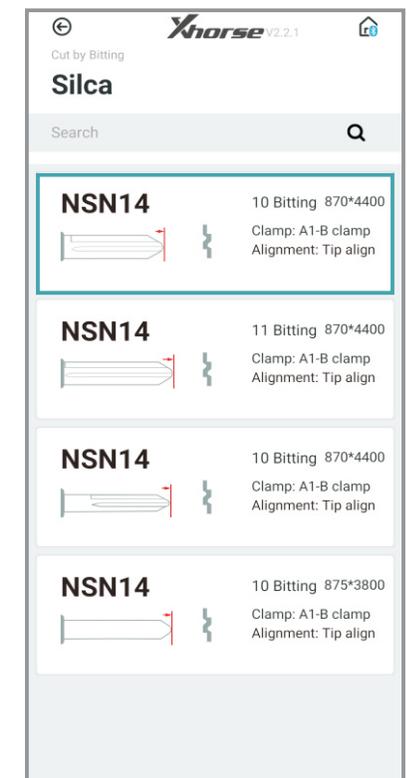
2) Select the key type and click to enter the
processing interface.

6.6 How to use Find Bitting

Compared with the ignition lock, the door locks and tail box locks of some models are missing lock plate pieces. You can disassemble the car lock to find the key bit missing piece position, replace it with "?", and enter it into the Find Bitting.

APP will display all possible results, and test and unlock after cutting to determine the final key bit be processed.
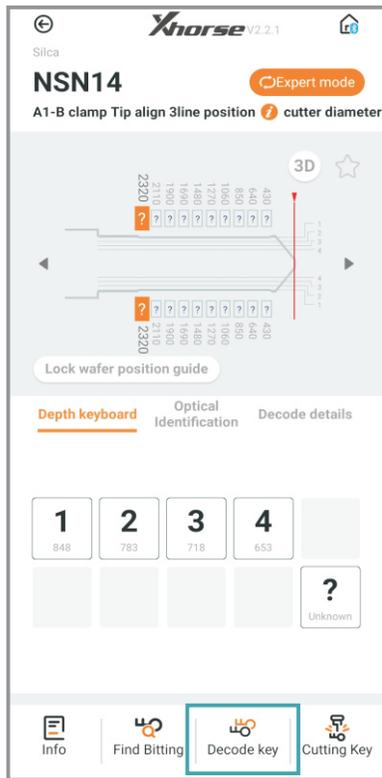
3) Click "Decode key" to get the original key bit.
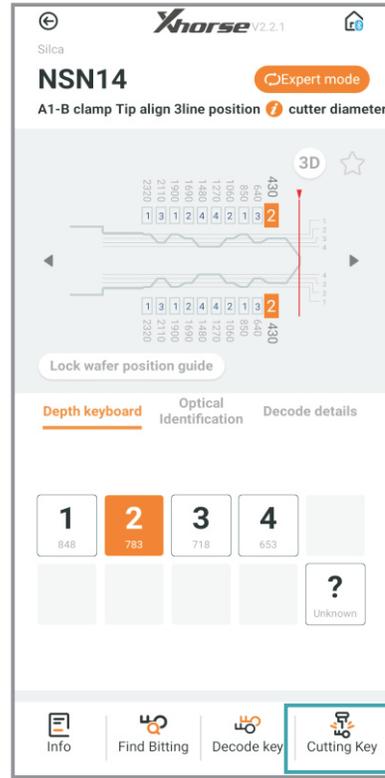
4) After confirming that it is correct, click "Cutting key".
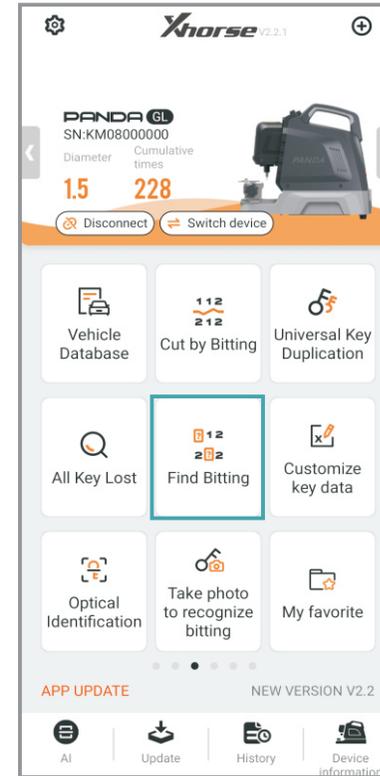
1) Click "Find Bitting" to enter the vehicle brand or model selection interface.
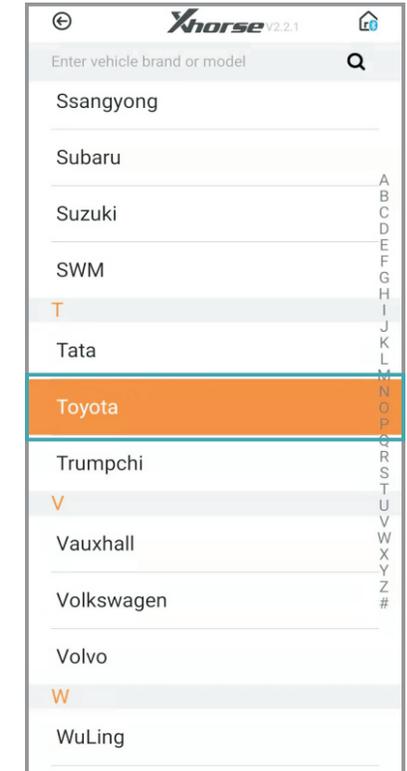

2) Select or enter the vehicle brand or model, and click to enter the "Find Bitting" interface.
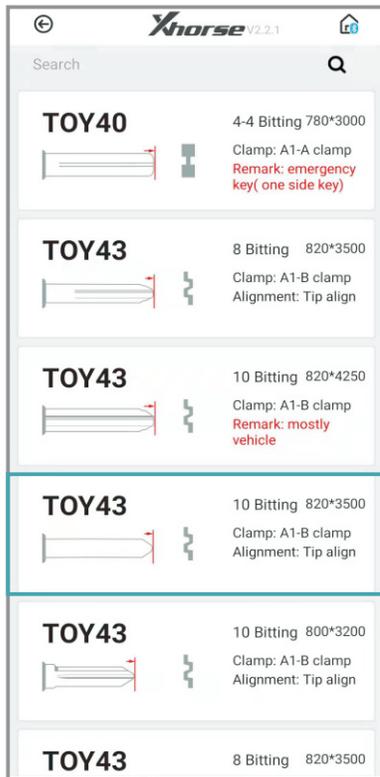
3) Select or input the key blank type, and click to enter.
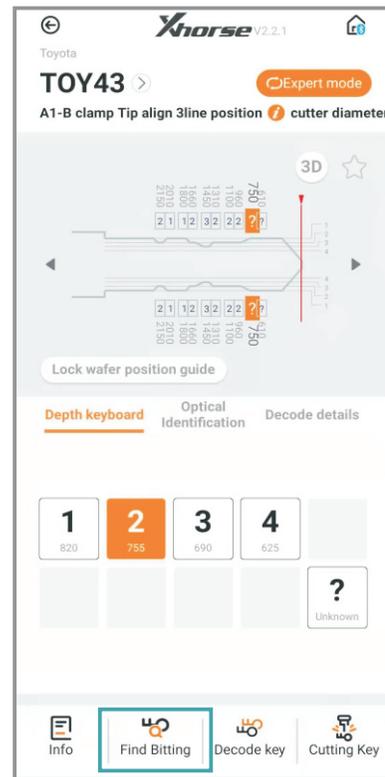
4) Enter the known key bit, if the key bit is not clear, directly enter "?" and click "Find Bitt-ing" after input. It can be processed accor-ding to the key bit which calculated by the system.
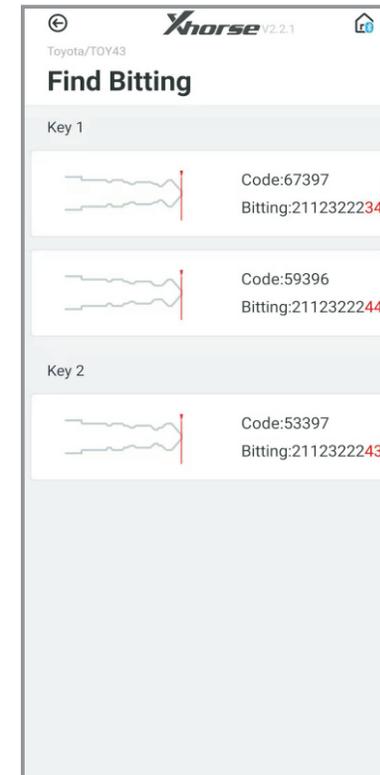
5) APP will display all possible results, and test and unlock after cutting to determine the final key bit be processed.

6.7 How to use Cut by single-bitting

This function requires the APP to select the expert mode;

Cut by single-bitting is suitable for individual processing of a certain key bit, it is mostly used for Find bitting, and there are multiple possible results. It is necessary to cut sequentially.
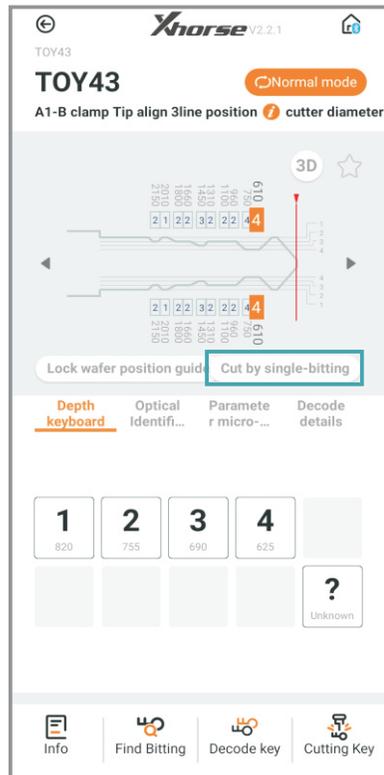
1) Select the key blade what need to be process , and select Cut by single-bitting.
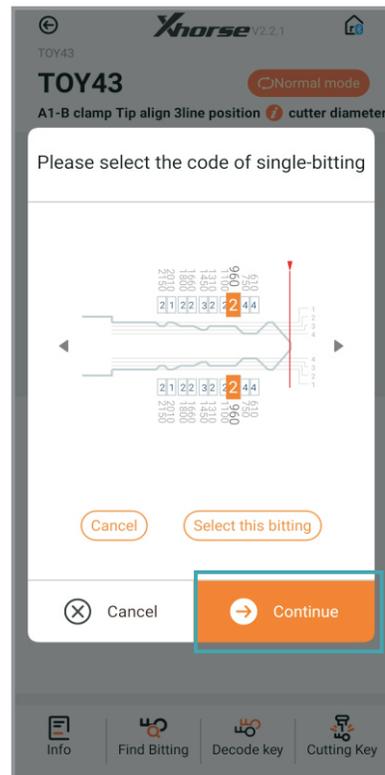
2) Select the key blade what need to be cut and click 'Continue.

6.8 How to use 3D function

*This function currently only supports some side cut keys, and will continue to upgrade more different types of keys.
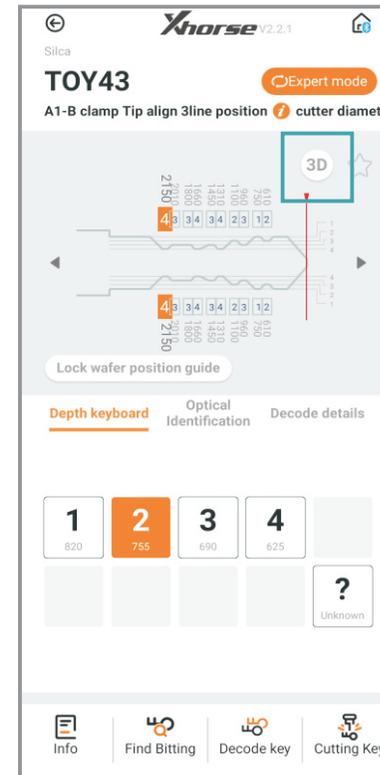
1) Enter the key to be operated interface and click "3D".

2) The 3D picture of the key can be adjusted from multiple angles to preview the key blank and the key bit to be processed.

6.9 How to use photos to get key bit

* This function can support direct photo or select key picture from mobile phone album.
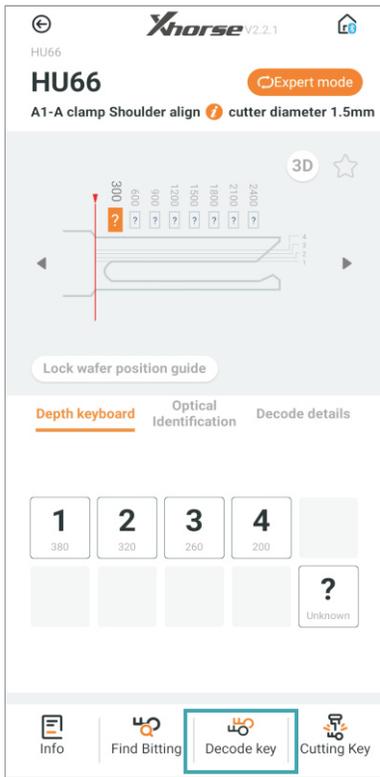

1) Click "Decode key".
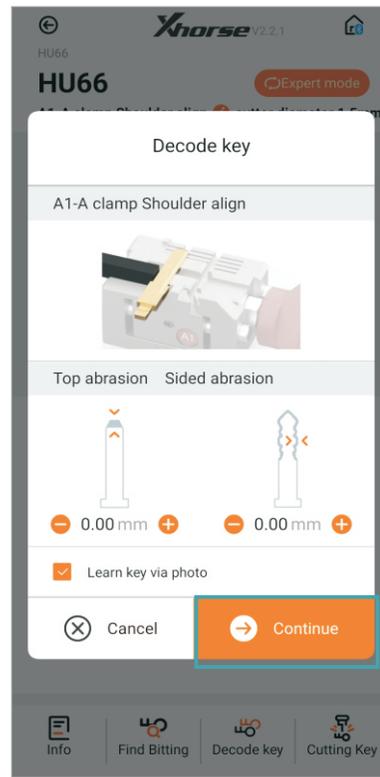
2) Select Learn key via photo and click "Continue" (make sure the key is placed horizontally when taking pictures).

3) Take a picture of the original key and adjust it according to the prompts in the frame.
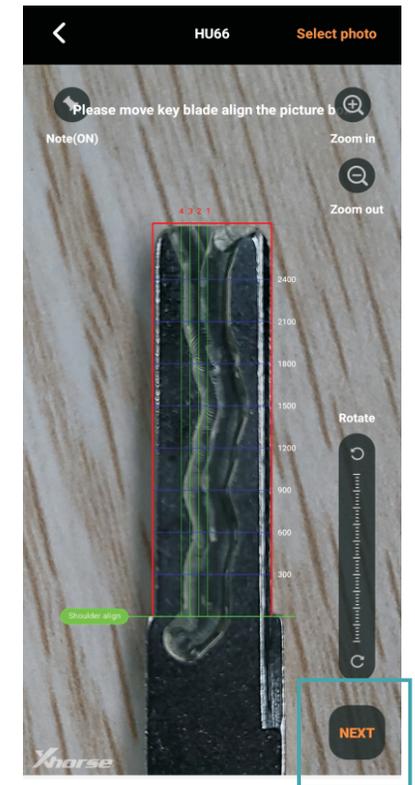
4) Adjust the position of the picture key according to the interface prompts, and click "Next".

6.10 How to use the parameter fine-tuning function

*This function APP needs to select the expert mode, which is suitable for fine-tuning the parameters after the key learning.
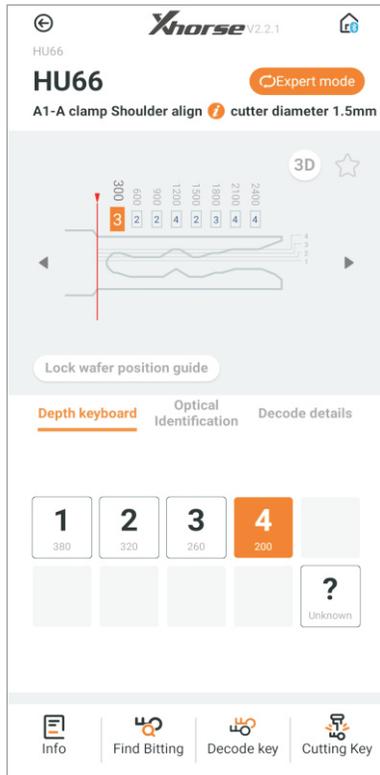

5) Follow the prompt box in the picture and click "Finish".
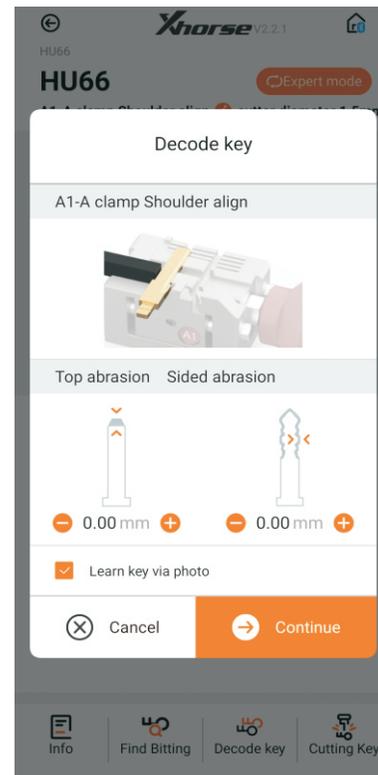

6) Confirm that the key learns the key bit.

1) Enter the key to be operated interface, and click "Decode key".

Bitting	Space	Refe-value	Actu-value	Diff
4	300	200	207	7
3	600	260	267	7
4	900	200	205	5
3	1200	260	264	4
2	1500	320	324	4
3	1800	260	263	3
4	2100	200	202	2
4	2400	200	202	2
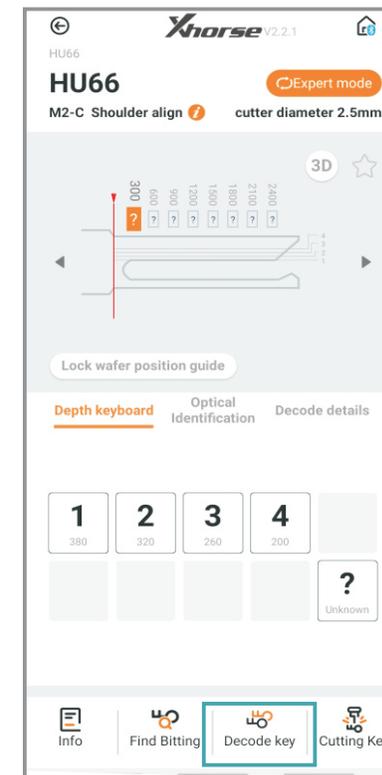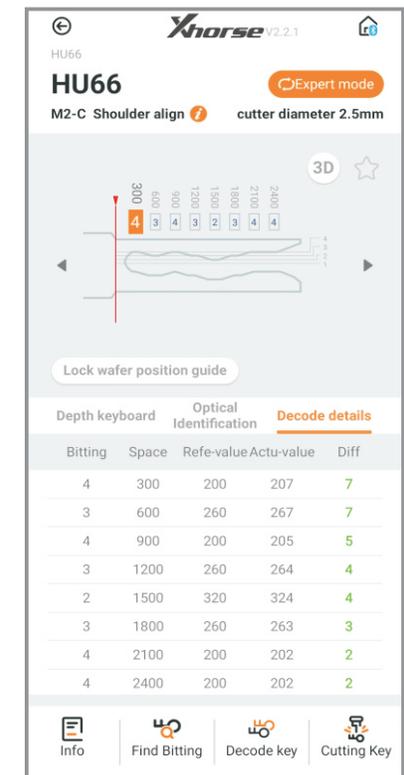
2) After the decode key is completed, the specific learning parameters will be displayed in the APP".

7. Online upgrade

7.1 Online database upgrade
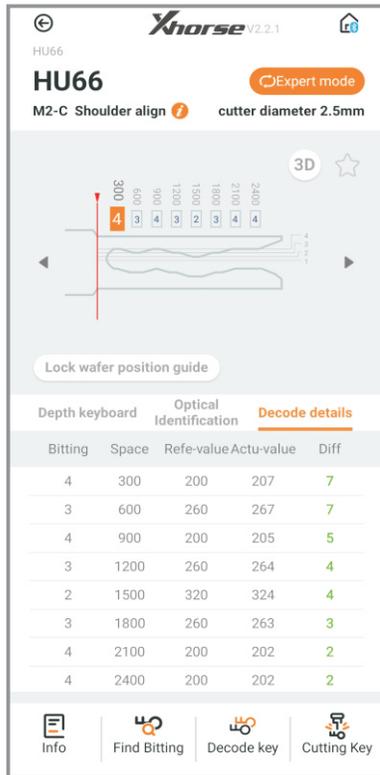
3) Adjust the parameters according to actual needs, and then cut the key.
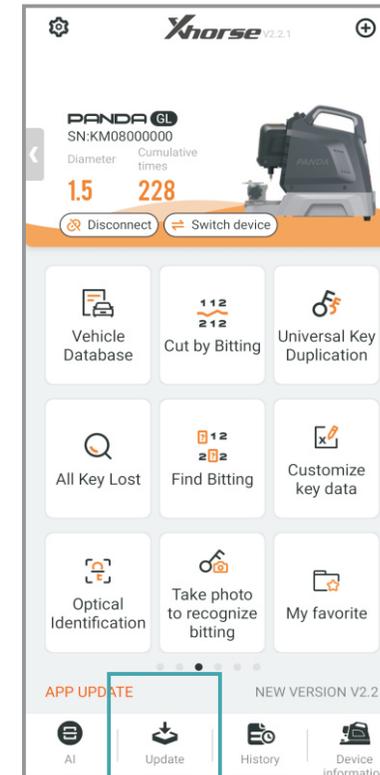
1) Enter the main interface of the APP and click "Update" .
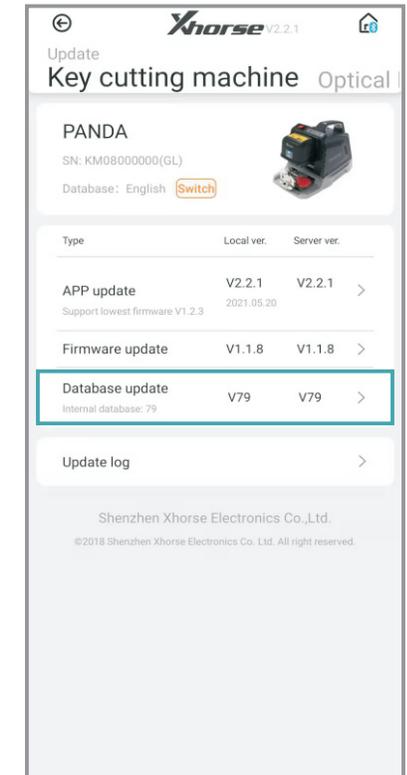
2)Click "Database Update" to enter the database update New interface.

7.2 Firmware upgrade

APP Bluetooth upgrade or use Upgrade kit.

7.2.1APP Bluetooth firmware upgrade（recommended to use）

3) Click "Update" to download the updated content of the new version.
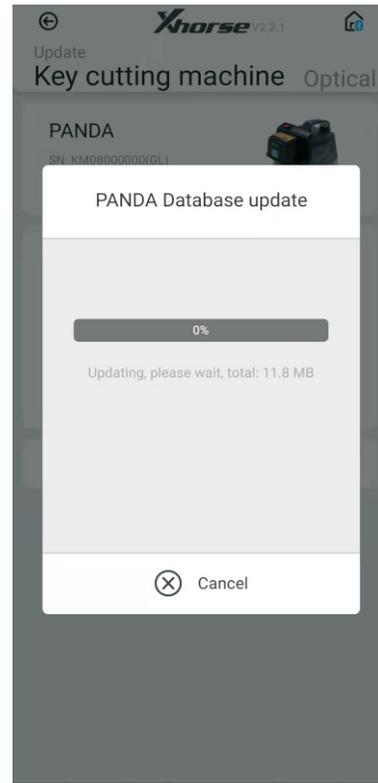
4) Wait for the device offline data package download to complete.
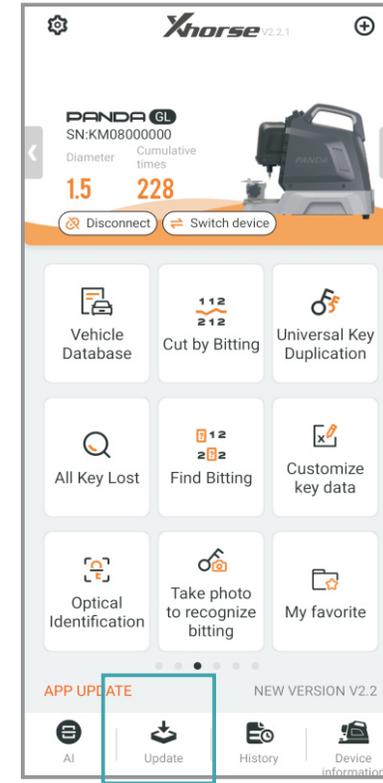
1) Enter the main interface of the APP and click "Update".
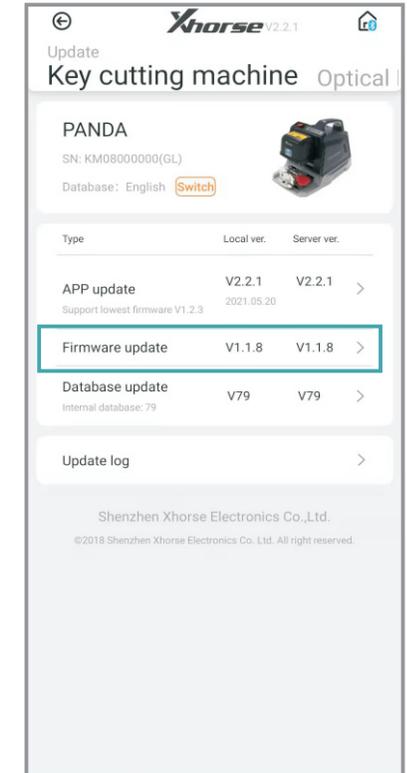
2) Click "Firmware Update" to enter the database update interface.

7.2.2 Use the upgrade kit to upgrade.

1. Contact the dealer to obtain the "upgrade kit" software

2. Send an email titled "Upgrade kit" to support@xhorse.com

3. Consult online customer service in Xhorse App to obtain it.
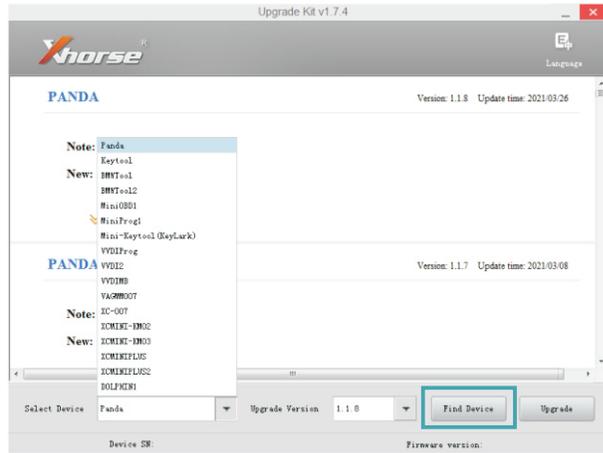

1) Connect the machine to the computer via a USB cable, open the upgrade kit, and click "Find Device".
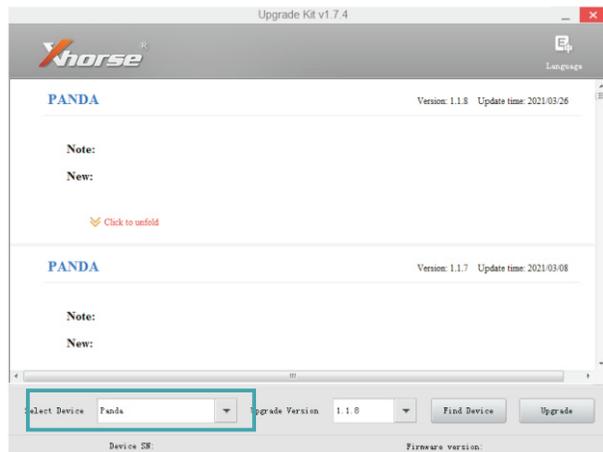
2) The read device name will be displayed in the lower left corner of the upgrade kit interface.
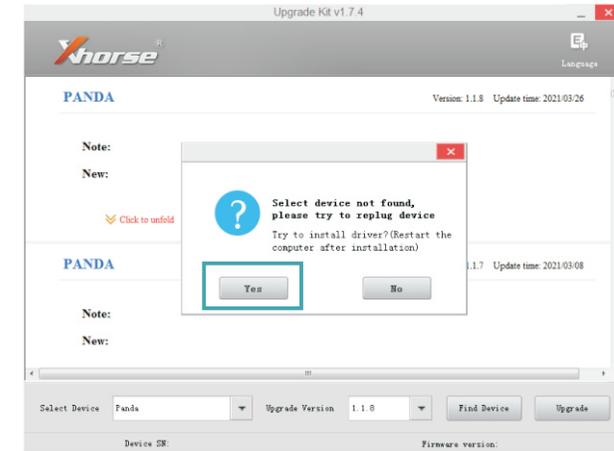
3) If the computer page will prompt: the selected device is not found, and the device driver is missing, click "Yes" to install the device driver.
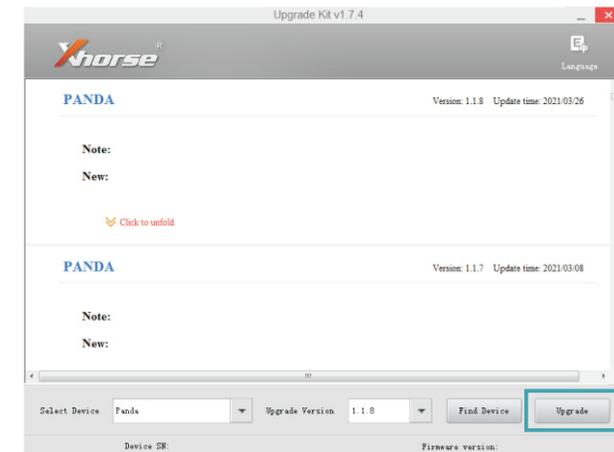
4) In the main interface of the upgrade kit, after the find device, click "Update" to upgrade.

8. Maintenance

● Please clean the area around clamps with a brush before the machine starts to work. This is to assure cutting precision and avoid components damage by metal particles.

● To avoid damage or corrosion to the machine, please do not use detergent or other cleaning products to clean the machine.

● Please do not flush or wet the machine with water, in case rust and electrical current leakage.

● Under any circumstance, please do not try to clean the working area with air guns and drying machines, in case any metal carvings getting inside the machine.

9. Warranty and after-sale description

DOLPHIN XP-005 has a warranty of 1 year for machine and six months for battery. The warranty starts from the date on invoice. If there is no invoice or the invoice is missing, purchase records from factory is used as reference.

Within Warranty, free maintenance and repairing is not provided if the machine becomes dysfunctional due to the following reasons:

● Operation without referring to or violating the user manual

● Modifications or repairs to the machine by individuals

● Falling, knocking or wrong voltage

● Force majeure

● Use of the machine in places such as ships that are bad for the machine for a long time

● Damaged or worn-out plastic case and protective shield due to frequent use

Regarding to customer service and technical support, please contact distributors or Xhorse online customer service team by scanning the QR code below and downloading Xhorse official App.

Xhorse APP

5) The upgrade kit automatically writes the file. It takes a few minutes. After the upgrade is completed, click "Confirm" to complete the upgrade.
Note: Please keep the USB data cable connected normally when upgrading.