

MIRACLE-A9

Instruction Manual

- Please read the manual before operating this equipment without fail
- The appearance and performance of this product is subject to change without prior notice for usability improvement, and there may be parts not homologous with the manual



Miracle-A9

User Manual

*Make sure to read the User Manual before using this machine.

*The product appearance and specifications are subject to change for performance and usability improvement without an announcement, and some parts may be unmatched with the picture shown in the User Manual.



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Make sure to comply with the following when you use the machine.

- ✓ Miracle-A9 is designed to be operated under DC24V. Normal operation is only made when DC24V is supplied. When other power supply than DC24V is applied, the machine may not be operated accurately. In particular, under low voltage (less than 24V), DC motor output decreases, which leads to slower rotation.
- ✓ Replace the cutter on a regular basis. Delayed replacement may deteriorate the cutting force, which leads to failure of accurate key cutting.
- ✓ Depending on the alloy of the key blank, the cutting force of the end mill differs. Set the cutting speed and cutting unit by the strength of the key blank.
- ✓ Take cautions not to drop the machine or get it get wet by rain or snow when used outside.
- ✓ Make sure to check errors on key blank before cutting the key. The error on key blank itself may produce unexpected results even if the machine cuts the key with accurate measurement.
- ✓ This machine is not equipped with a function to sense the clamp contact to the tools. Therefore, in key cutting, the clamp may be damaged by the tools, depending on the type of the key or the type of the clamp selected. Take cautions when operating the key and the clamp. The company is not responsible for the clamp damaged during the key cutting.

◆ Cautions for Safety

Make sure to observe the followings for safe use of the product.

-  The below information is provided to promote the user safety and prevent property loss.
-  Read the cautions carefully for correct use.

	It indicates that you may get injured or experience equipment damage if you fail to follow the instructions.
	It indicates that It's the sign that you can be seriously injured if you fail to follow the instructions.

■ Cautions for Power

	Never use damaged power cords or loose plugs or sockets. ➤ They may cause electric shock or fire.		Never plug in many power cords in an outlet simultaneously. The outlet may get too hot and cause fire.
	Never pull out the plug by tugging the power-cord, or touch the power plug.		Keep the machine unplugged when unused for a long time.
	If smoke rises up while using the machine, turn off the power right away. Contact your dealer or our factory for advice.		Cigar jack fuse may blow out when you connect the machine to the vehicle cigar jack. In such a case, replace the old fuse with the new fuse with 10A or more. You can only use the machine connected to the cigar jack, while the vehicle engine is running.

■ Cautions for Installation

	Do not install the machine in a place with oil, smog, moist, dust and water splashing. ➤ It may cause electric shock or fire.		Do not put burning cigarettes or candles on the machine and install it away such heating apparatus such as stoves. The unit could get overheated, resulting in failure or fire.
	Make sure to install the main body on a stable flat surface. The machine weighs about 21.5Kg and generates vibration on both sides during operation. If you use the machine on a weak or bumpy surface, it may lead to damages on machine/worktable and injuries on users.		

■ Cautions for Use

 WARNING	➤ The blade of the machine spins at high speed during its operation. Be careful not to put any part of worker's body or clothing or other things inside of the machine. ➤ The operator may get seriously injured by the cutter if this is ignored. 	 WARNING	Do not put any tools, water containers, mugs, cups or small metal pieces on the unit or cutting bed. ➤ Vibration of the machine and carelessness of the user may cause falling of the above objects, which leads to injuries on the user. Overheating or electric leakage may lead to fire or malfunction. ➤ It may also cause electric shock or fire when the unit gets wet.
 WARNING	Be careful not to catch any part of your body or clothing in the route of each axis of the machine so as not to be scratched by its blade. When a part of body or object is jammed in the axis path of the machine, or gets scratched by a sharp blade, serious injuries, machine damage and failure may occur.		

■ Other Cautions

 WARNING	Do not disassemble or remodel the body of the machine. ➤ It may cause fire, electric shock & equipment failure. If you need a check-up, adjustment, repair of the machine, please ask your dealer for service or contact our factory.	 WARNING	Curiosity or carelessness of the young children about the machine may lead them to touch the machine and be hurt. Keep them away from the machine.
 CAUTION	In winter, sub-zero temperatures, may cause the unit to be unable to work properly. If such thing happens, increase the temperature of the work environment. Do not let the machine room temperature go below zero.		

Parts

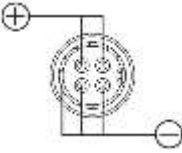
Contents	Figure	Quantity	Purpose
AC adapter (CP-04)		1 EA	Power supply 24V 5A
Power cable (CP-02)		1 EA	
Cutter (T60-E20)		2 EA	Tool for key cutting
Decoder (T60-P10)		2 EA	Tool for decoding
T Wrench (CP-T25)		1 EA	Tool change
M5 bolt (CP-95)		2 EA	Used to fasten cutter or decoder in the spindle
Stopper (CP-91)		1 EA	Guide for alignment-key location

Stopper Right-to-Left (CP-96)		1 EA	Guide for alignment-key location to fix a key from right-to-left
Auxiliary key hold bracket set SX9 clamp (CP-92)	 	1 SET 5 EA	Preventing to detach of the key
Spindle belt (CP-SB35)		6 EA	It transmits spindle motor power to spindle (G:35 3mm thick, 30mm in diameter)
Tools rack (CP-98)		1 EA	Tools storage
Mounting bracket (BP-95)		2 EA	Holding the product on floor
Back bracket (BP-94BMA9)		1 EA	Protecting the power connector and USB port
Calibration bar		1 EA	Using the calibration the Key clamp and Dimple key clamp
User manual		1 EA	Product manual

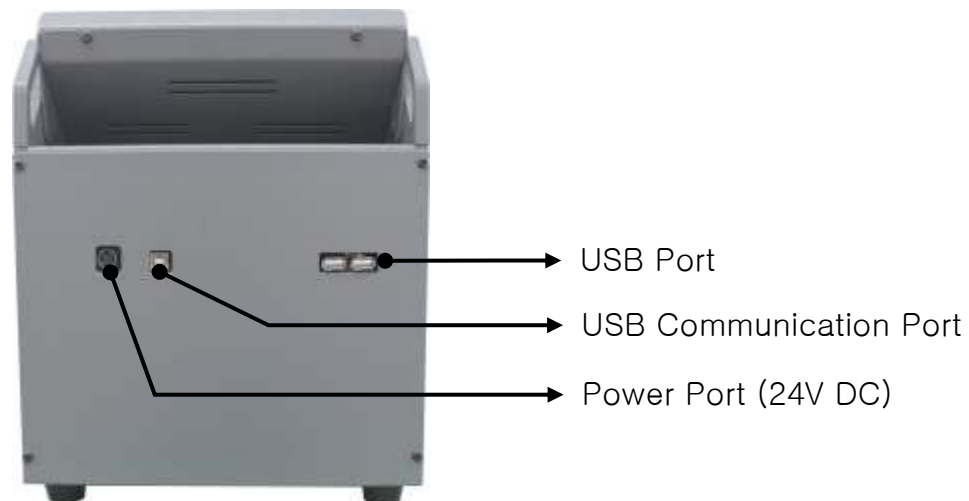
 TIP)

- Cutters and spindle belts are consumables. Make sure to replace them with the new one after a certain amount of time.

Specification

Power Input		24V DC / 5A 
Power Consumption		120W
Dimension		255 (W)×360 (H)×340 (D)mm
Weight		24kg
Resolution		XY Axis: 0.005mm, Z Axis: 0.0015mm
Spindle Revolution		8,750 rpm
Bluetooth	Spec.	Bluetooth Specification V1.2
	Frequency	2.4GHz ISM Band
	Profile	SPP, GAP
Temperature		0 - 40 °C
Humidity		10 - 90 %
Usage		Cutting and duplicating keys

Parts Name



Convenient Features for Users

Miracle-A9 offers the following features to users for convenient and safe operation.

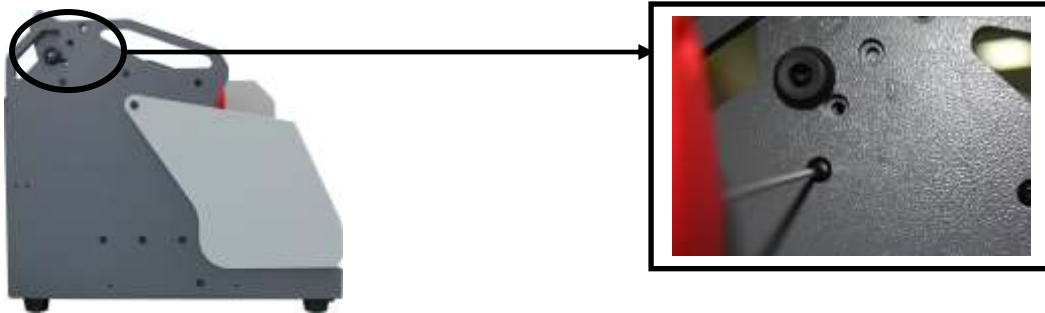
1) Screen Angle Control

- LCD screen angle is adjustable for your preference.



[How to Adjust Screen Angle]

Remove LCD fixing bolts on left/right side of the machine by a wrench and set the screen angle to your convenience. Fasten LCD fixing bolts again.



- Impacts or heavy objects on LCD will lead to LCD damages.
Never impact LCD or place a heavy object on it.

2) Mounting Bracket

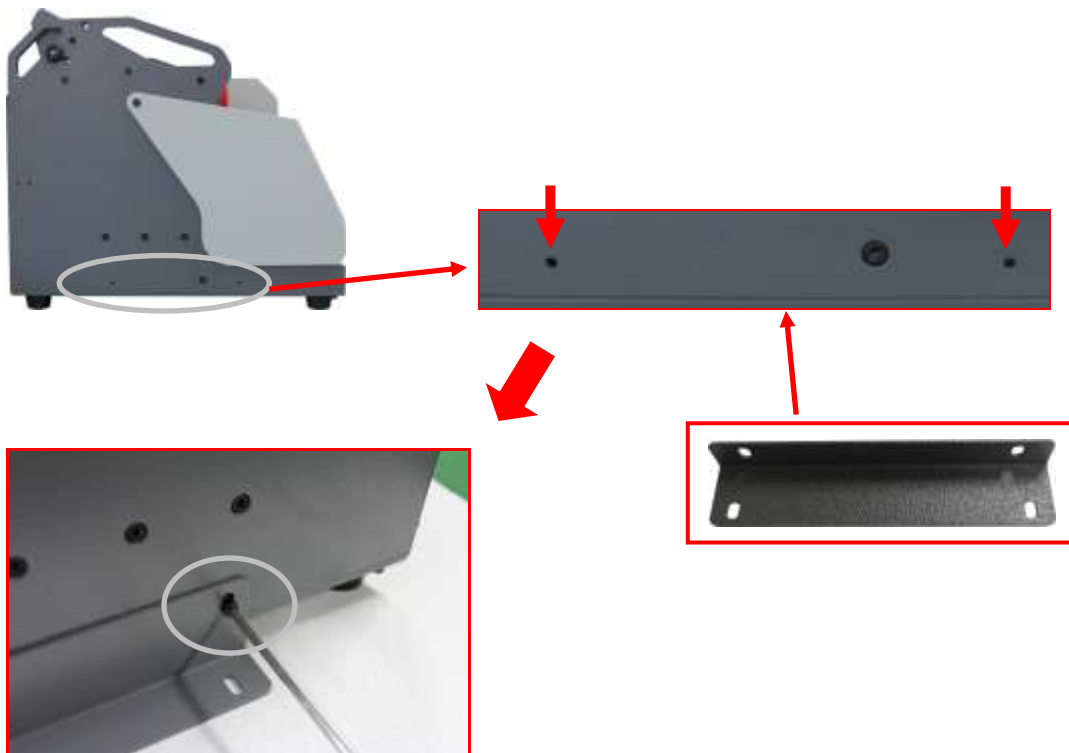


- Use the mounting bracket to fix the machine on the vehicle or somewhere.



[How to Assemble Mounting Bracket]

Align the mounting bracket to the holes on left/right side of the machine and fasten them with bolts by a wrench.



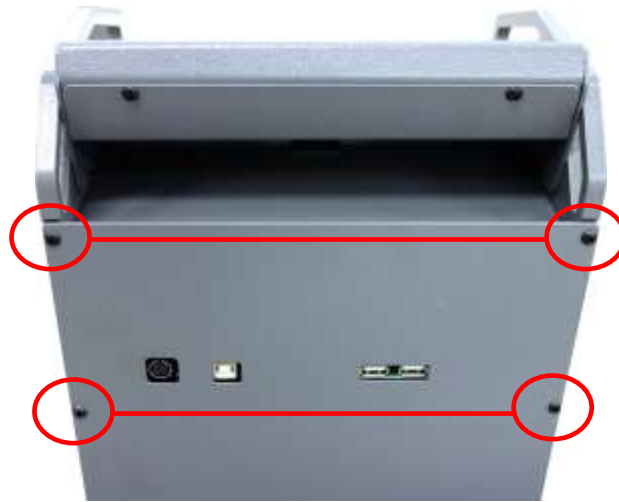
3) Back Bracket



The back bracket is a component to protect the power connector and the USB port located at the back of the machine. You can choose to use the back bracket or not, as well as its usage, depending on the operation environment.

[How to Assemble Back Bracket]

Unfasten two bolts at the top or two bolts located in the middle of the machine by a wrench and fix the back bracket.



Fix at the Top



Fix in the Middle



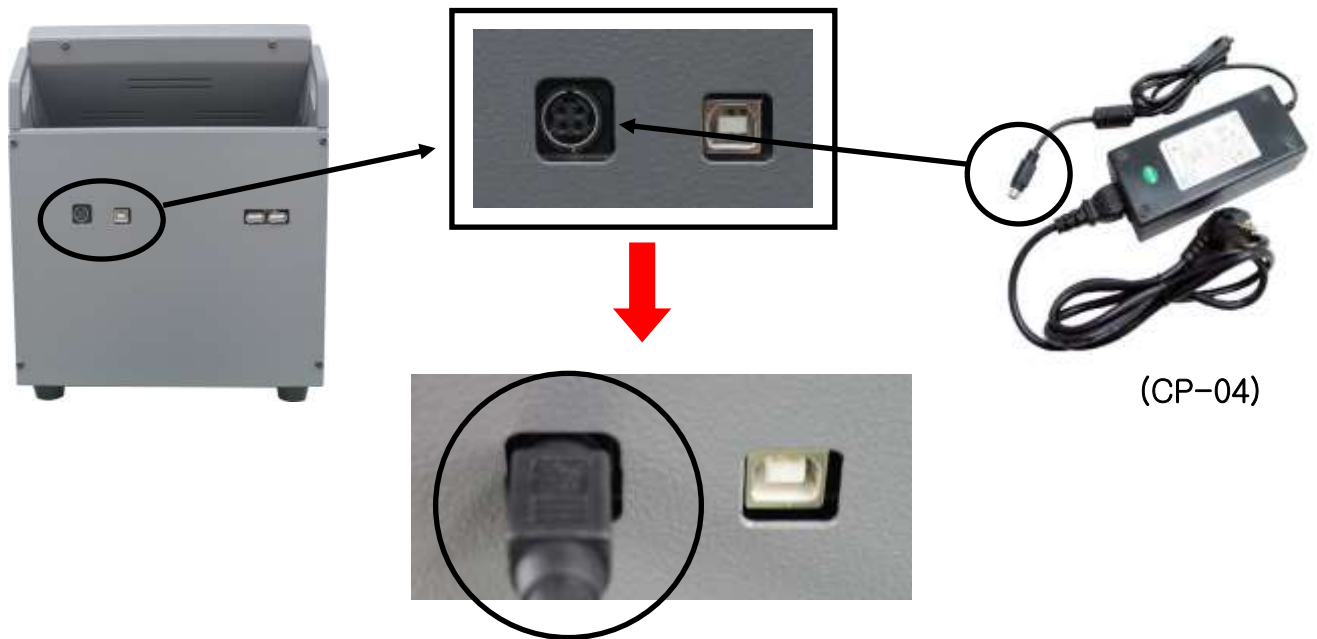
- If the power connector is damaged, you must bring the machine to the service center for repair.
- The back bracket may protect the power connector from damages. It is recommended to use the back bracket.

Power

Miracle-A9 is operated using “24V/5A” power adapter.

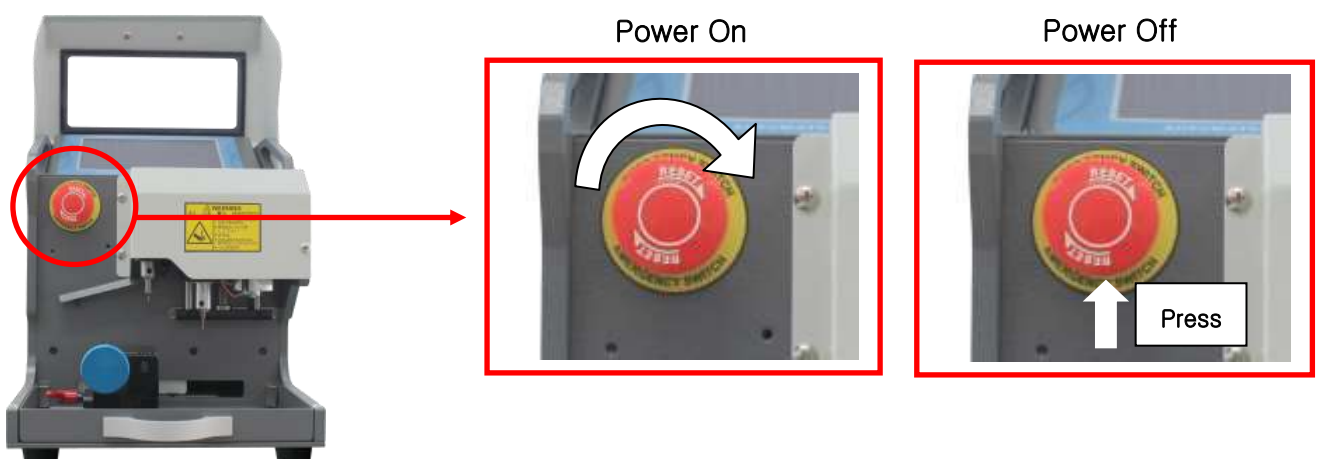
1) Power Adaptor Connection

- Connect the power adapter to the power connector located at the back of the machine.



2) Power On/Off

- Power On: Turn the emergency switch clock-wise.
- Power Off: Press the emergency switch.



TIP)

- An inverter is necessary when using the machine in the vehicle.

Replacement of Cutter

The cutter is a tool used to cut the key, and 1.0mm~2.4mm cutters are available for use.



Type	Flat Endmill (T60-E20)
Shank Diameter	6mm
Blade Diameter	1.0~2.4mm 2.0mm is recommended.

[How to Replace]



1. Loosen the bolt by T-wrench to replace the cutter.
2. Exchange the cutter.
3. Tighten the cutter.



Click  to go to the setting screen.



Click  and measure the cutter length.

TIP)

- The cutter is a consumable. If the key is not cut accurately or there is a loud noise in cutting, check the cutter condition and replace it if necessary.

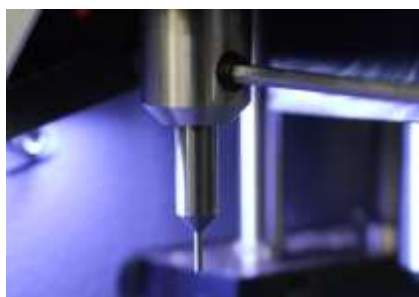
Replacement of Decoder

The decoder is a tool used for decoding and copying keys.



Type	Decoder (T60-P10)
Shank Diameter	6mm
Blade Diameter	1.0mm

[How to Replace]



Loosen the bolt by T-wrench to replace the Decoder.



Click  to go to the setting screen.



Click  and measure the Decoder length.



- The decoder is a consumable and it is easy to break.
- If the decoder is bent, a measurement error is generated. The machine is designed in a way that when the strong power to bend the decoder is imposed, the decoder will break off.
- Take extra cautions not to drop decoder, not to give impacts to decoder or not to make mistakes when using it.
- The company is not responsible for the broken decoder, in any cases.

Replacement of Belt

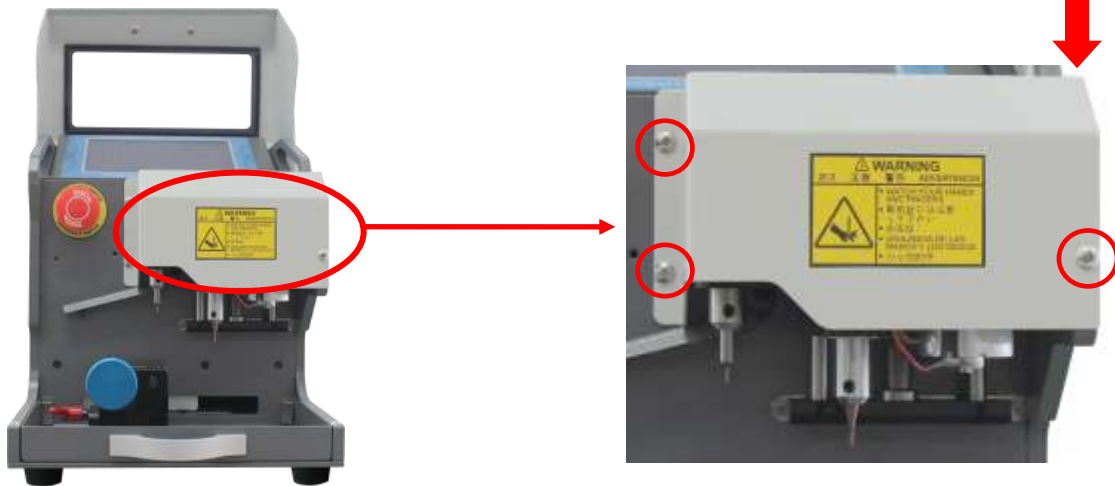
Miracle-A9 delivers the spindle motor rotation to the spindle through the spindle belt. The spindle belt is a consumable. If the key is not cut accurately or there is a loud noise in cutting, check the spindle belt condition and replace it if necessary.



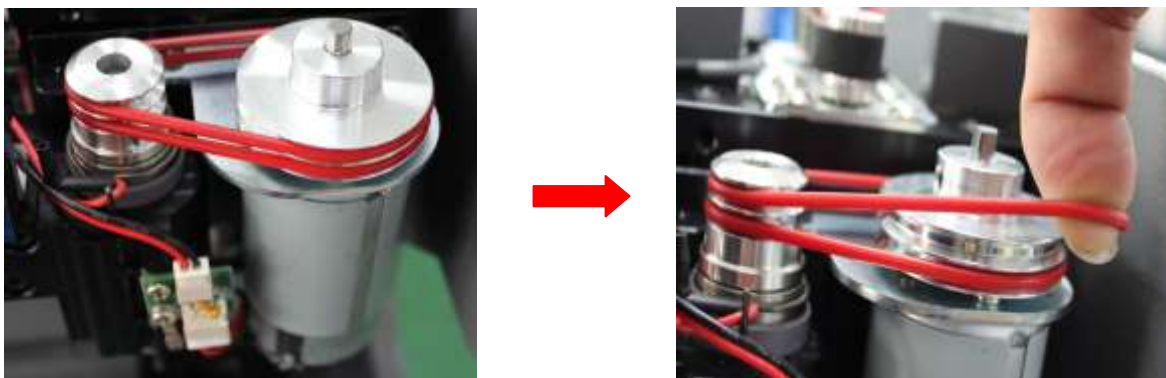
Type	Silicon Belt (CP-SB35)
Thickness	3mm
Diameter(Inside)	35mm

[How to Replace]

1. Loosen the bolts on the front cover to remove the cover.



2. Remove the existing belt and replace it with the new belt.



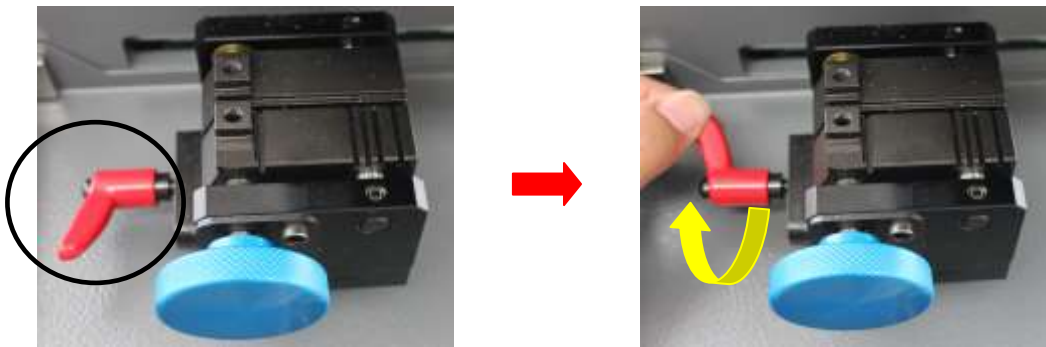
- When the spindle belt wears out, the cutter life is reduced and key cutting is not made properly.
- Check the spindle belt condition periodically and make replacement if necessary.

Replacement of Clamp

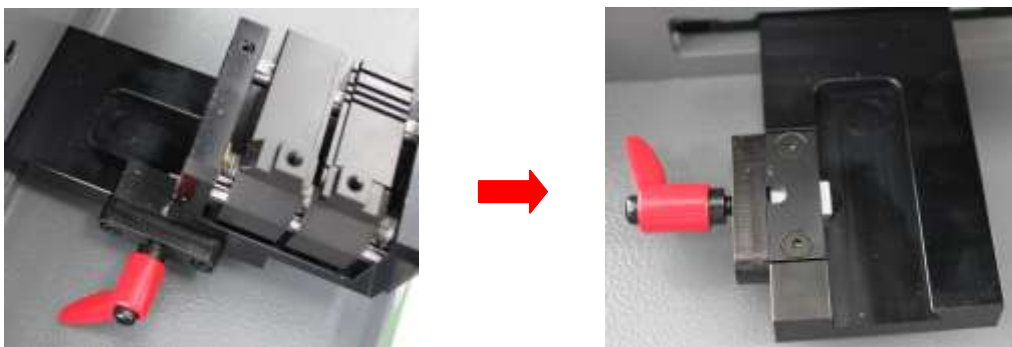
Miracle-A9 cuts the key by fixing it on the clamp. It is available to cut various kinds of key by changing the clamp depending on the key type.

[How to Replace]

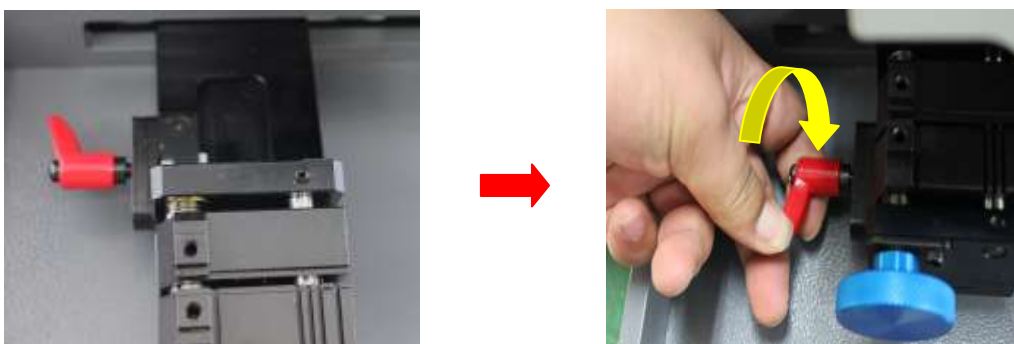
1. Unfasten the clamp fix knob.



2. Pull out the clamp.



3. Set the desired clamp to the groove and push it back as much as possible and fasten the fixing lever.

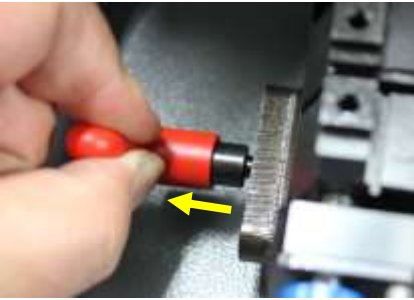


TIP)

- If the clamp fix lever is located in a position that prevents you from fastening the clamp, you can adjust the lever position.

[How to Adjust Clamp Fix Lever Position]

1. Pull out the clamp fix lever.



2. While pulling out, turn it backward.



3. Push it into the original position.



- If you fasten the clamp by pressing down the lever repeatedly, the clamp may wobble. The clamp must be fixed by turning the lever.



No Press Down



Turn Clamp

How to Fix Key by Clamp Type

Miracle-A9, in addition to car keys, can cut various kinds of keys. It provides the clamp and the stopper to fix various types of key easily.

[Clamp Type]



1) Car Key (CP-86)



2) Dimple Key (CP-88)



3) Single Side Domestic (CP-89)



4) Tubular Key (CP-87)



TIP)

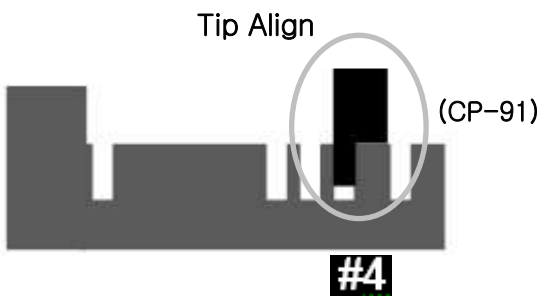
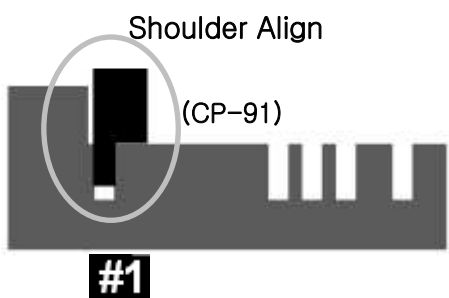
- The car key clamp is the basic component. Dimple key, single side domestic key and tubular key clamp are options for separate purchase.

1) Car Key Clamp (CP-86)



[How to Fix Key]

Position of the stopper (CP-91) is changed based on the reference point of the key. The following the position of the standard stopper (CP-91) in the shoulder align key and the tip align key.



◆ Shoulder Align Key

Example of Standard Key



1. Insert the stopper in the shoulder align groove.



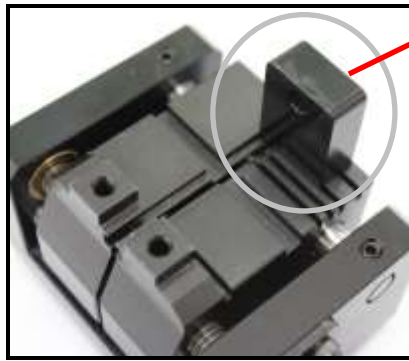
2. Place the key on the upper area of the clamp. When the reference point touches the stopper, fasten the clamp knob to fix the key.

Cross-Section of Shoulder Align Key Fixed



◆ Tip Align Key

Example of Laser Key



(CP-91)



1. Insert the stopper to the tip align groove.

(Follow the instruction displayed in LCD of the machine for the groove to use or decide the groove based on the key length.)

2. Place the key on the lower area of the clamp.

Make the key tip to touch the stopper and fasten the clamp knob.

Cross-Section of Laser Key Fixed

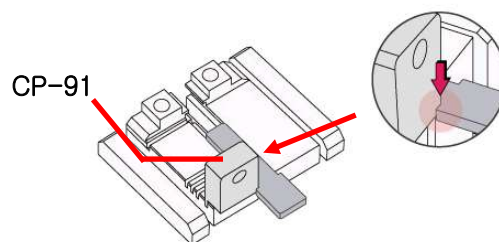


 TIP)

- In case the laser key is unavailable to be fixed in a normal way, you can flip the key and fix the opposite side.

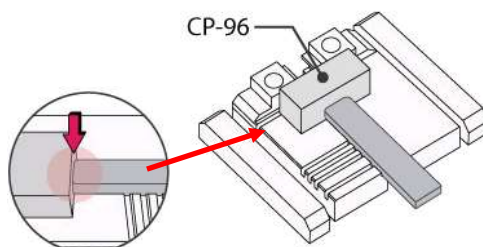
◆ Shoulder Align Laser Key

* Display in LCD



◆ Tip Align Laser Key

* Display in LCD



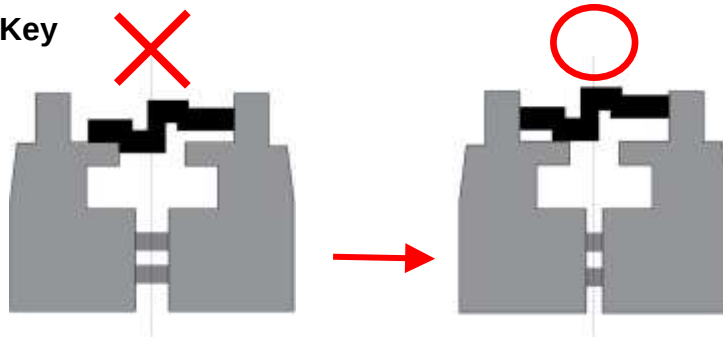
If you fix the opposite side of the key, an additional Clamp (CP-96) is required.



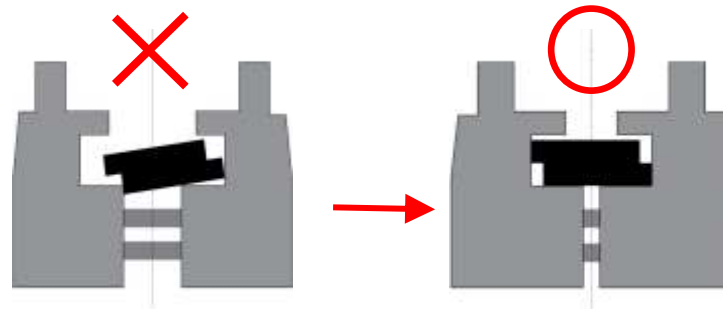


- Take extra cautions not to fix the key incorrectly as in the below examples:

Standard Key



Laser Key



[How to Use Auxiliary Standard Key Clamp Set]



CP-92

When the key is too thin, it is hard to fix the key by the clamp and the key may bound up during cutting. In such cases, you can use an auxiliary clamp set for proper operation.



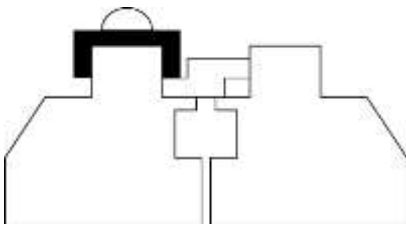
1. Fix the key on the clamp.



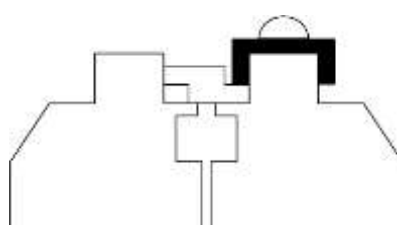
2. Insert the auxiliary key clamp set into the deeper groove between the two sides of the key.



3. Fasten the bolt.



[When the inner groove is shallower]



[When the outer groove is shallower]



1. Fix the key on the clamp.

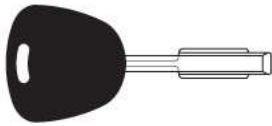


2. Place the auxiliary key clamp set on the clamp and loosely fasten the bolt.



3. Put the bolt into middle hole of the auxiliary key clamp set and fasten it to press the key.

[How to Use Tibbe Clamp]



(CP-61)

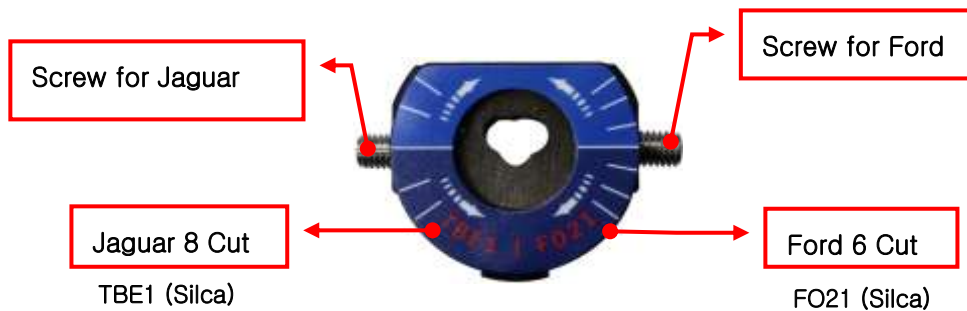
Miracle-A9 can cut Ford or Jaguar keys using Tibbe clamp.

◆ Direction

(e.g.: Ford 6 cut, Silca: FO21)

Unfasten the bolt (Jaguar 8 Cut) on the left of the clamp image below and fasten the bolt (Ford 6 Cut) on the right by hands (Make sure to fasten by hands and do not fasten too hard).

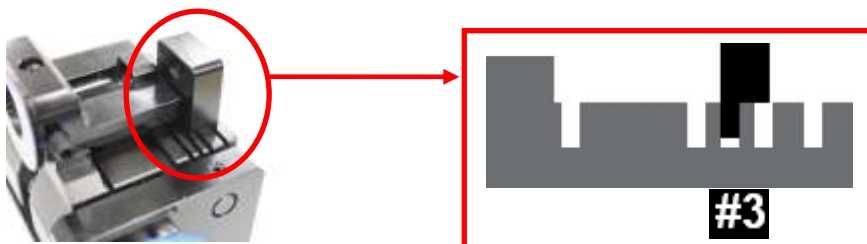
Front



Top



- When fixing the Tibbe clamp, make sure to fix the stopper on the third groove.

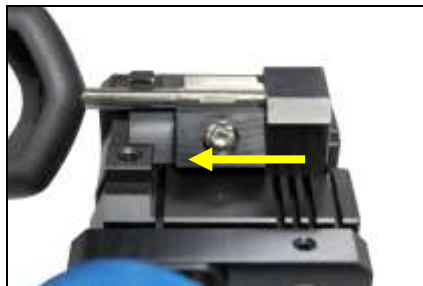
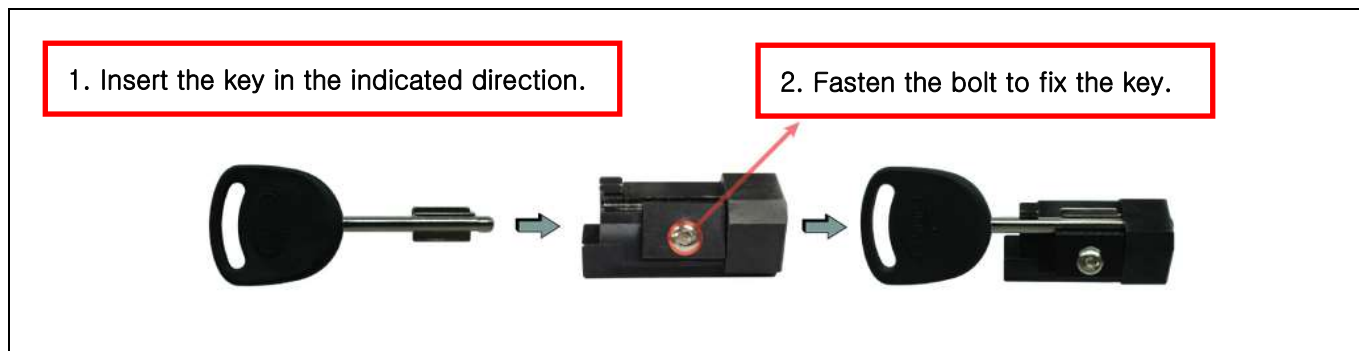


[How to Use LDV (FO19) Clamp]



Miracle-A9 can cut LDV key using LDV (FO19) Clamp.

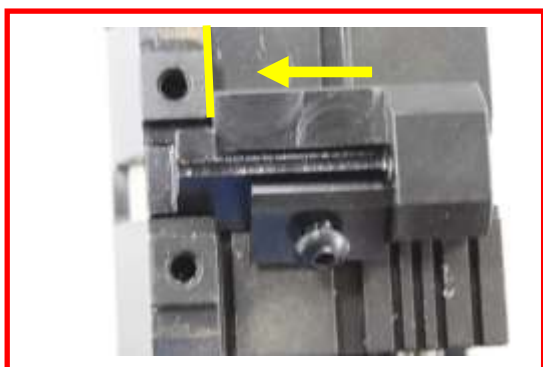
◆ How to Use



Place the LDV Clamp on the car key clamp and adhere it to the left to the maximum and fix it.



- When fixing the LDV (FO19) Clamp, make sure to adhere closely to the left to fix it.



☞ TIP)

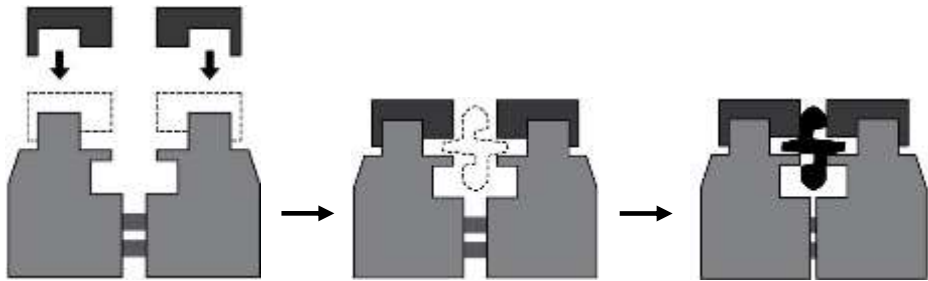
- LDV (FO19) Clamp does not use the stopper (CP-91).

[How to Use SX9 Key Clamp]



Auxiliary clamp enables easy SX9 key (Side A) and thin standard (edge) key holding.

SX9 Key Holding



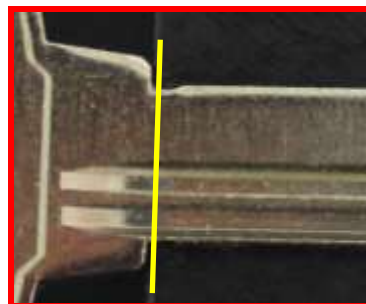
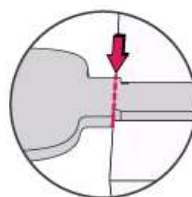
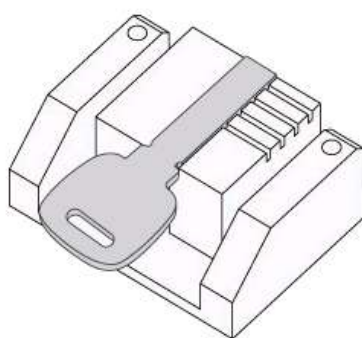
2) Dimple Key Clamp (CP-88)



[How to Fix Key]

◆ Shoulder Align Key

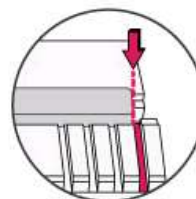
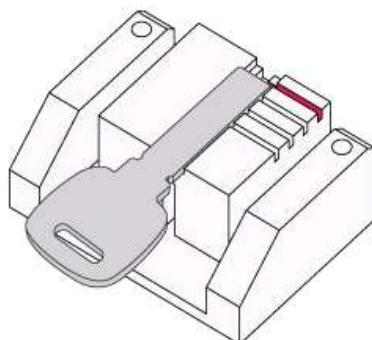
* Program Screen



Fix the key by aligning the shoulder as shown in the picture.

◆ Tip Align Key

* Program Screen

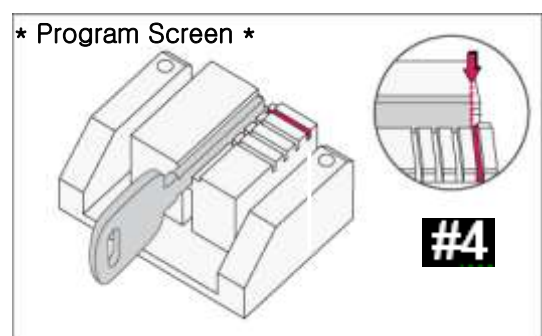
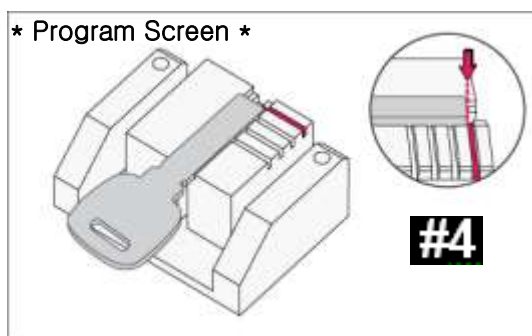
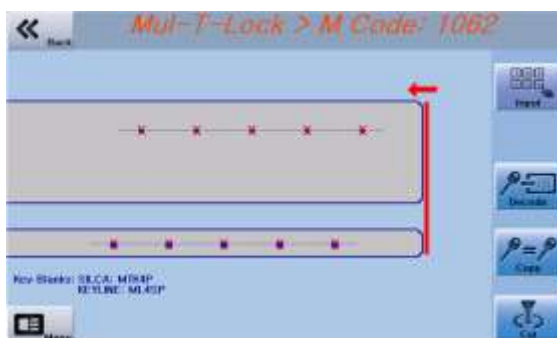


#4

1. Set the stopper as shown in the program screen.	2. Align the key to the stopper and fasten the clamp knob to fix the key.

[Dimple Key Side Cutting]

If the side of the key should be cut along with the surface of the key, follow the order displayed in the program screen: Surface→Side→Surface→Side.



Side Fixed

[Multi Key Cut]

It is a kind of the dimple key manufactured by the multi-lock company. There are two numbers in one place in the multi-key.

TIP)

- Miracle-A9 offers separate tools to cut the multi-key as an option.

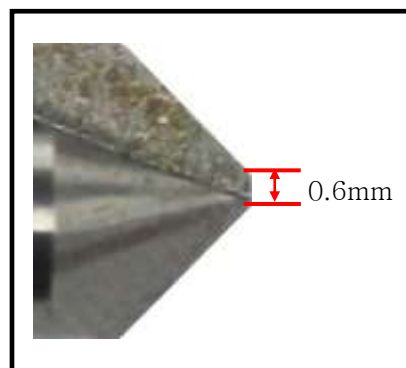
Multi-Key



Dimple-Key Exclusive Decoder
(T60-P10M)



Multi-Key Exclusive Cutter
(T60-MC06-45)



3) Single Side Domestic Key Clamp (CP-39)

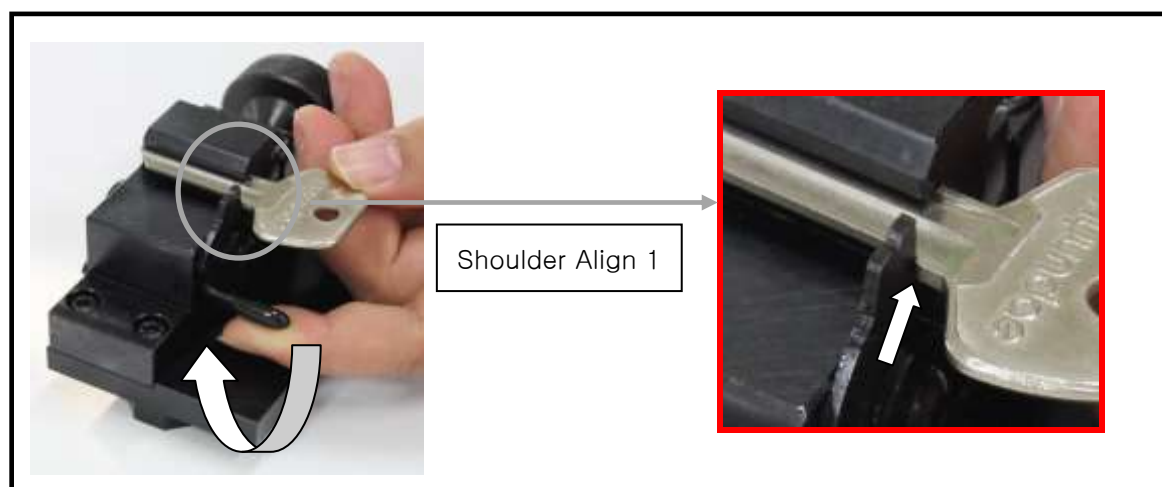


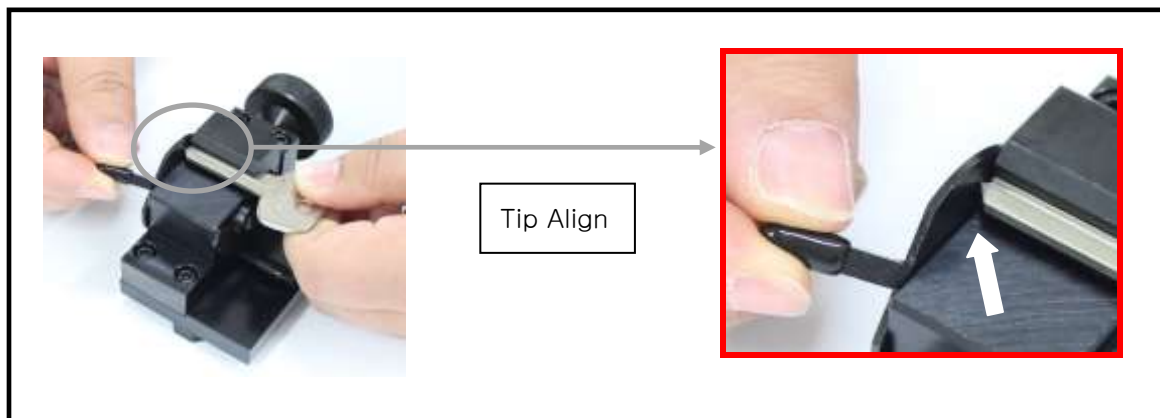
[How to Fix Key]

In the two grooves on the key clamp guide with different depth (3.5mm and 5mm, respectively), select the groove that fits the desired key. Place the key and turn the clamp knob to fix the key.

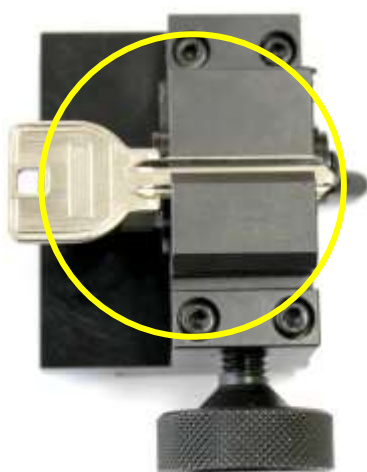


Insert the key horizontally on the above groove and fix it by turning the clamp knob.



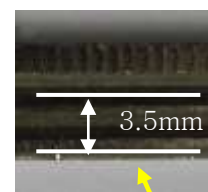
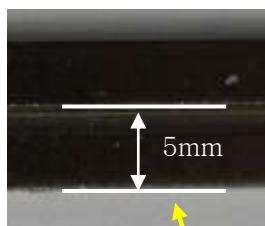
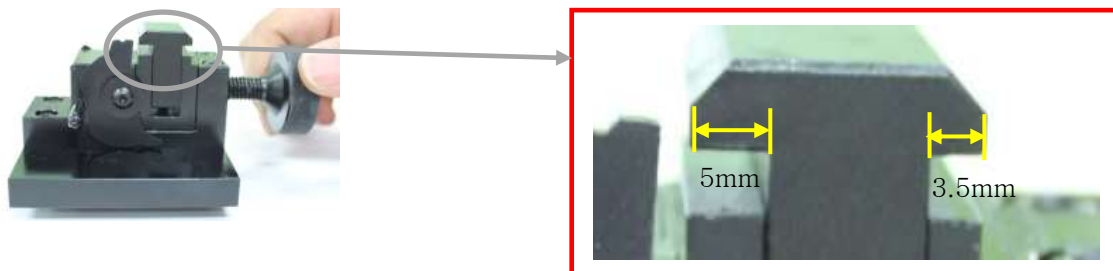


- When fixing the key, place it by horizontally aligning with the clamp as shown in the below.



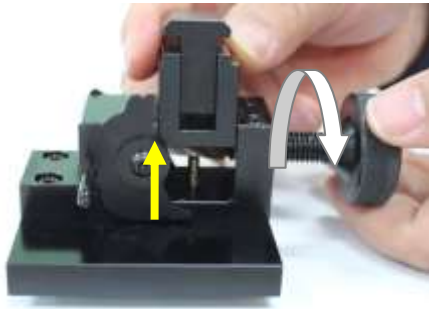
[Use of Guide by Type of Single Side Domestic Key]

The single side domestic key clamp is designed to stretch out by **3.5mm** and **5mm** on the side, respectively. You can set the direction of the guide based on the width of the desiring key.



- If the maximum cutting depth of the key is deeper than the width of the guide you want to use, the guide is damaged by the cutter. Make sure to use the guide with wider width than the minimum cutting depth of the key.
- Miracle-A9 doesn't have the function to sense appropriateness of the selected guide. Take extra cautions when selecting the direction of the guide. Users are totally responsible for guide and clamp damages.

[How to Change Clamp Direction]



1. Loosen the clamp knob as much as possible and separate the guide.



2. Change the guide direction.

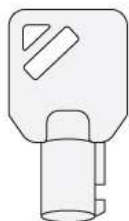


3. Insert the guide into the groove again.



4. Fasten the clamp knob to fix the guide.

4) Tubular Key Clamp (CP-87)

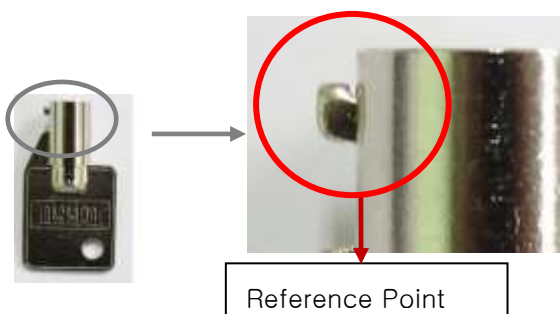


[How to Fix Key]



Push the key knob closely to the key support and fasten the clamp knob to fix it.

[Tubular Key Fixing Side]



The tubular key is fixed on your left-hand side, and the height of the key should be 5mm higher than the clamp surface.

Clamp Origin Setting

Click “Setting” to move to the setting screen. Click “Next” to move to the clamp origin setting screen.



Before using the clamp, you should assign the origin of the decoder and the cutter, respectively when using Miracle-A9.



- When you use the auto clamp origin setting function, you must replace the cutter with the decoder.
- You cannot measure the clamp origin with the cutter.

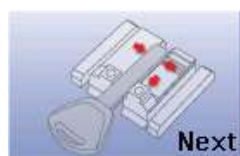


Replace

1) Car Key Clamp Origin Setting



1. After fixing the car key clamp, fix the center measure bar on the top of the clamp.
2. Click [Setting] → [Next] to move to the clamp origin setting screen.



3. Click each button to measure the origin of the decoder/the cutter, respectively.



Decoder Origin



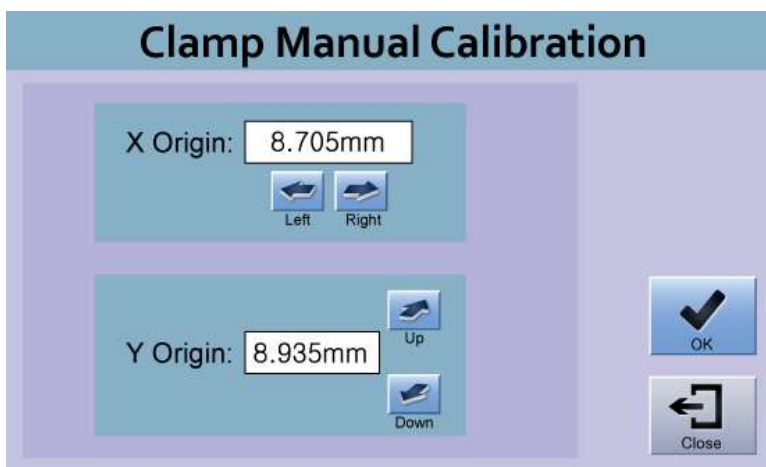
Cutter Origin

[Car Key Clamp Origin Manual Setting]

You can manually assign the car key clamp setting value.



Click  to check the car key clamp center value. You can manually adjust the center value by clicking the direction buttons displayed in the center value screen.



👁 TIP)

- Remember to write down X, Y origin value for easy follow-up.
- X, Y origin value is the origin value of the car key clamp. For dimple key, single side domestic key and tubular key clamps, manual setting option is not available.

2) Dimple Key Clamp Origin Setting



1. After fixing the dimple key clamp, fix the center measure bar to the clamp as shown in the picture.
2. Click [Setting] → [Next] to move to the clamp origin setting screen.



3. Click each button to measure the origin of the decoder/the cutter, respectively.



Decoder Origin

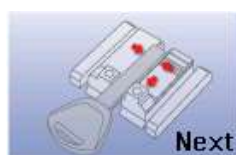


Cutter Origin

3) Single Side Domestic Key Clamp Origin Setting



1. Fix the single side domestic key clamp.
2. Click [Setting] -> [Next] to move to the clamp origin setting screen.



3. Click each button to measure the origin of the decoder/the cutter, respectively.



Decoder Origin



Cutter Origin

TIP)

- When measuring the single side domestic key clamp origin, the center measure bar is not used.

4) Tubular Key Clamp Origin Setting



1. Fix the tubular key clamp.
2. Click [Setting] -> [Next] to move to the clamp origin setting screen.



3. Click each button to measure the origin of the decoder/the cutter, respectively.



Decoder Origin



Cutter Origin

 TIP)

- When measuring the tubular key clamp origin, the center measure bar is not used.

Basic Menu

Miracle-A9 offers 6 menus for data search.



1) Automobile key



When you click Automobile key in the initial screen, a list of manufacturer appears.



Move to the next screen clicking the arrow.



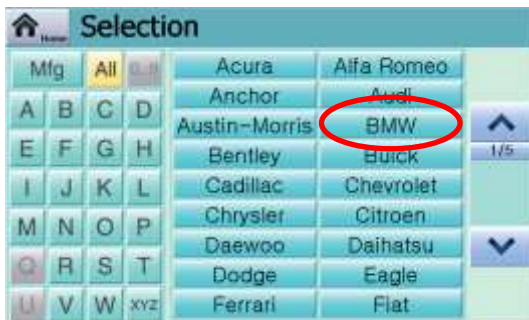
Select the manufacturer, model and year for the operating key and load the data.

[Selection in Key List]

e.g.) Manufacturer: BMW
 Model: M3
 Year: 2011
 Key manufacturer: SILCA
 Key blank: HU92

All

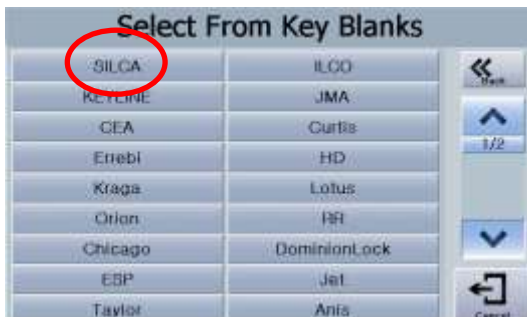
Select the relevant manufacturer and vehicle and click **All** located in the lower right of the screen to open the key data in the list of key manufacturer.



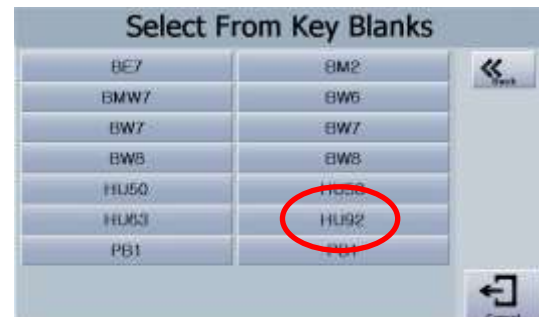
1. Select BMW in the manufacturer list.



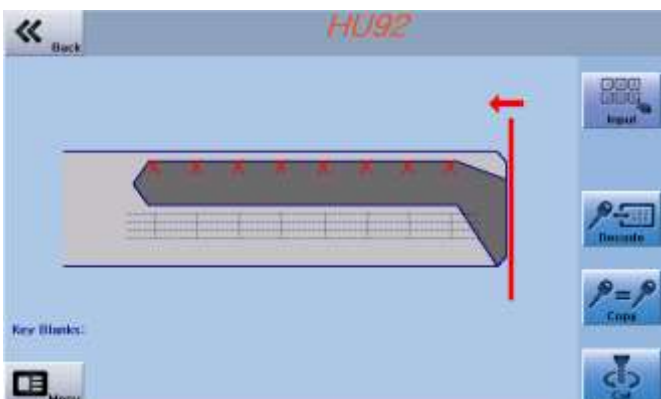
2. Click **All** in the lower right of the screen.



3. Select the key blank.



4. Select HU92.



When you know the exact name of the operating key blank, you can select it from the key list to open the data.

2) Motorcycle Key



When you click Motorcycle Key in the initial screen, a list of motorcycle key manufacturer appears.



Select the manufacturer, model and year for the operating key and load the data.

3) Standard Key (General Key)



When you click Standard Key in the initial screen, a list of general key manufacturer appears.



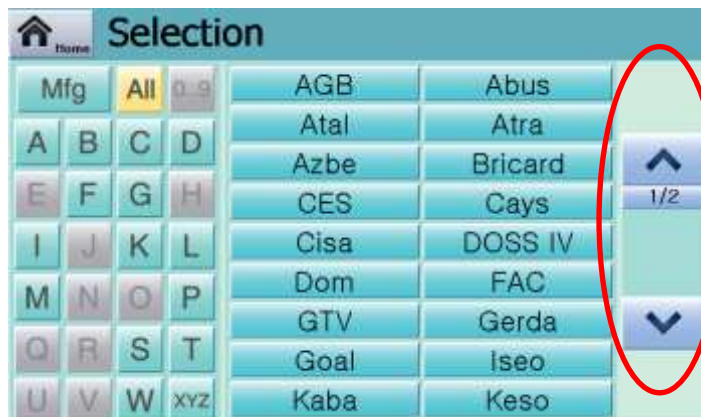
Move to the next screen clicking the arrow.

Select the manufacturer and model of the operating key and load the data.

4) Dimple Key



When you click Dimple Key in the initial screen, a list of dimple key manufacturer appears.



Move to the next screen clicking the arrow.

Select the manufacturer and model of the operating key and load the data.

5) Tubular Key



When you click Tubular Key in the initial screen, a list of tubular key manufacturer appears.



Select the manufacturer and model of the operating key and load the data.

6) Data Search



You can search the key data easily and there are two search methods.

[Search by Key Type Name]

When you know the key type of the relevant model:

e.g.) Manufacturer: Audi

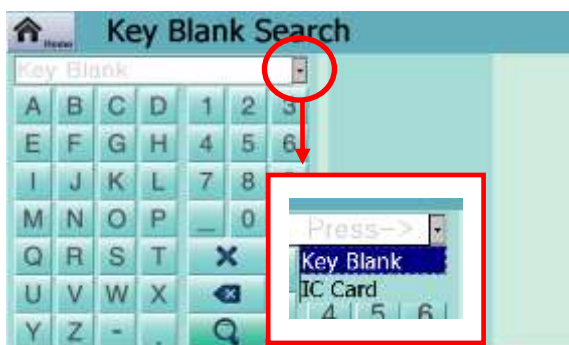
Model: A4

Key Manufacturer: SILCA

Key blank: HU66



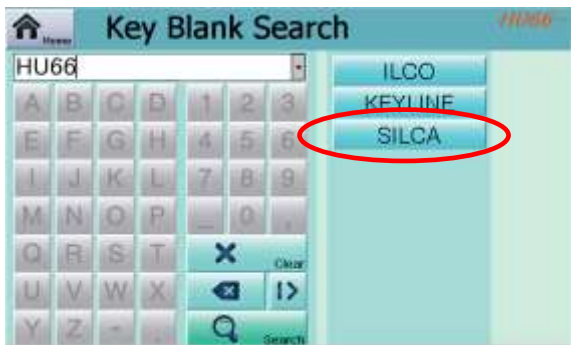
1. Click  in the initial screen.



2. Click the arrow indicated in the red circle and change the key search method to “Key Blank.”



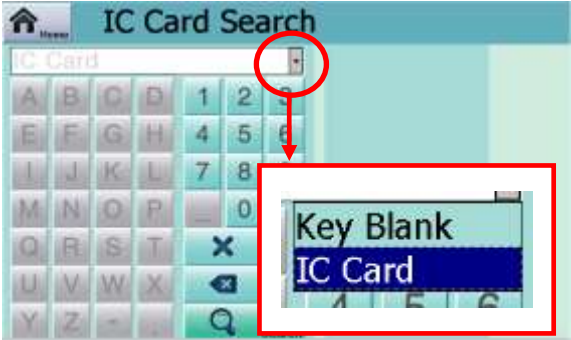
3. Enter the key type and click .



4. Select the key manufacturer and load the data.

[“IC Card” Search]

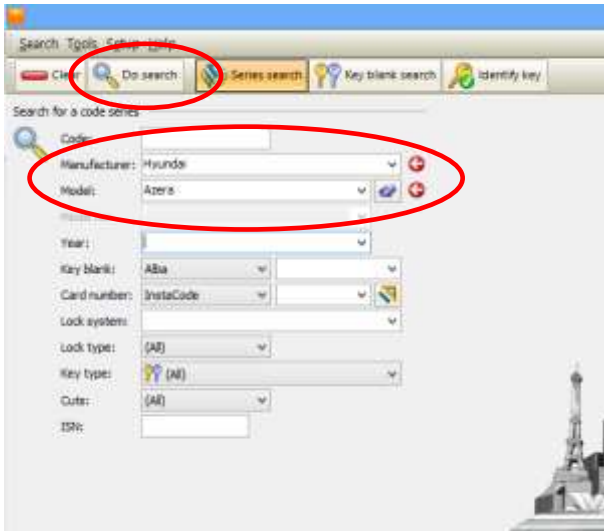
You can search the key data by entering “IC Card” number registered in InstaCode.

	 1. Click  in the initial screen.
	2. Click the arrow indicated in the red circle and change the key search method to “IC Card.”
	3. Enter “IC Card” number and click  to load the data.

* IC Card is... *

It is the registration number of the key data in the InstaCode Program. You can search the key data in the InstaCode to check “IC Card” number.

e.g.) Manufacturer: Hyundai
Model: Azera (Grandeur [TG])



1. Select “Hyundai” in “Manufacturer.”

2. Select “Model.”

(Grandeur [TG] is registered as “Azera” in the instar code.)

3. Click “Do search”.

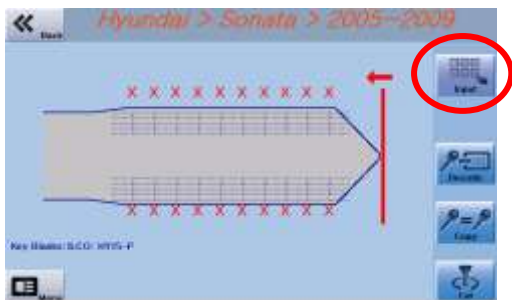


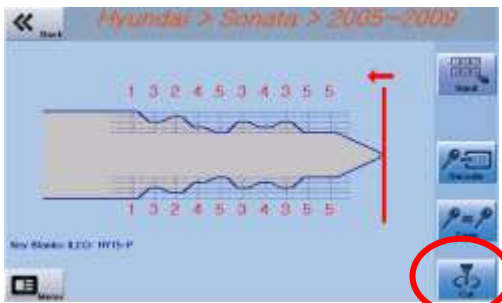
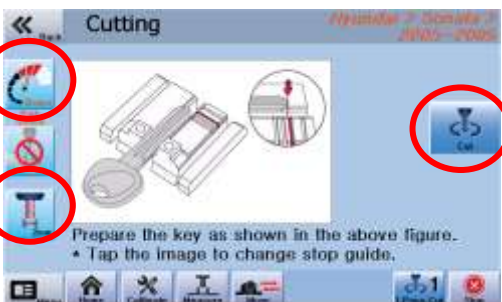
You can check Grandeur TG’s “IC Card” number: “824”

Key Cutting Procedure

[Standard Key]

e.g.) Manufacturer: Hyundai
 Model: Sonata [NF]
 Key Type: Standard Key
 Align: Tip Align
 Year: 2007

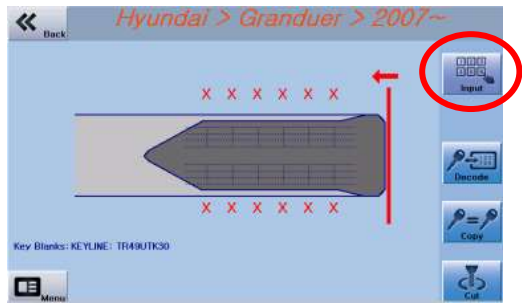
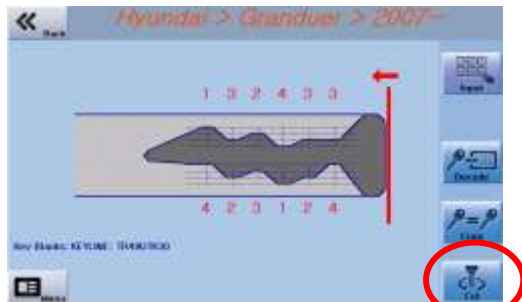
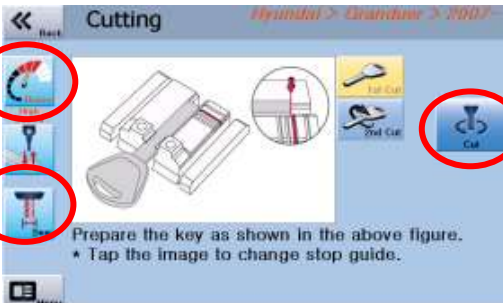
1,		Click Car Key in the initial screen to open the list of manufacturer.
2.		Select "Hyundai" in the manufacturer list.
3.		Select "Sonata" in the model.
4.		Select "Year" in list.
5		Click  on the upper right of the screen.

6		Enter the biting in order and click  .
7		After checking the biting, click  on the lower right of the screen.
8.		Fix the key on the clamp as explained in the screen. (refer to key fixing methods) Check  speed and  tool thickness and click  .

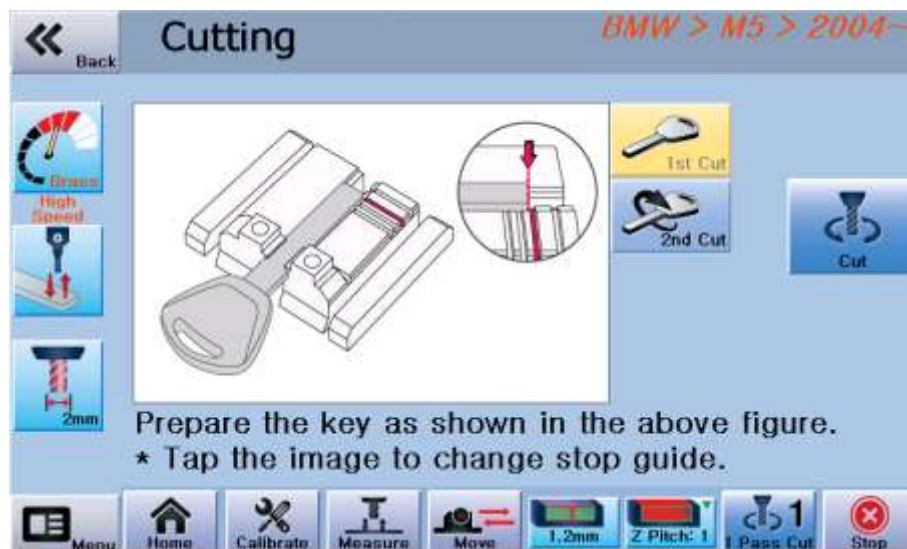
[Laser key]

e.g.) Manufacturer: Hyundai
Model: Grandeur [TG]
Key Type: laser key
Align: Tip Align

1.		Click Car Key in the initial screen to open the list of manufacturer.
2.		Select "Hyundai" in the manufacturer list.

3.		Select "Grandeur" in the model.
4.		Click  on the upper right of the screen.
5.		Enter the biting in order and click  .
6.		After checking the biting, click  on the lower right of the screen.
7.	 Prepare the key as shown in the above figure. ★ Tap the image to change stop guide.	Fix the key on the clamp as explained in the screen. (refer to key fixing methods)
	 	Check  speed and  tool thickness
		and click  .

Key Cut Setting Screen



Speed Setting	Auto Key Measure	Cutter Thickness Setting	Cutting Depth Setting	Multi-Stage Cutting Count	Trim	Stop

1) Speed Setting

– You can assign the cutting speed based on intensity of key materials in four stages: Low–Normal–High–Maximum.



When you click the button, the cutting speed is changed in the following order.



- If you cut key materials with high intensity at high speed, the cutter may break off or cutting may not be done properly.
- Make sure to assign proper speed based on the nature of materials.

2) Auto Key Measurement

– You can measure thickness, center and length of the key for more accurate key cutting.



When you click the button, the measurement setting is changed in the following order.

1.	2.	3.	4.	5.
No Measure	Key Height Measure	Key Center Measure	Key Length Measure	Key Length and Center Measure
	No Measurement			
	Used in laser key cutting. It automatically measures thickness of the key to prevent the clamp damage and ensure cutting to accurate depth.			
	Used regardless of the reference point of the key. It automatically measures center of the key (this function is used when there is an error in key materials).			

	Used only for the tip align key. It automatically measures length of the key. (When the key does not touch the stopper because it is too short, you can use this function to ensure accurate key cutting.) In this case, you may not need to use the stopper.
	Used only for the tip align key. It automatically measures length and center of the key.

3) Cutter Setting

- You can assign thickness of the cutter.

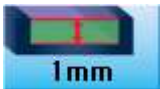


Click the button to select the desired cutter thickness. Cutter setting range is from 1.5mm to 2.4mm.



4) Cutting Depth Setting

- For laser key cutting, you can assign cutting depth.



Click the button to select the desired cutting depth in the range of 0.9mm ~ 1.5mm.



5) Multi-Stage Cutting Count

- For laser key cutting, you can select the desired button to make cutting in multiple stages.



Click the button to assign the cutting stage up to 3 counts.



6) Trim

- Click the button to trim the key after cutting.



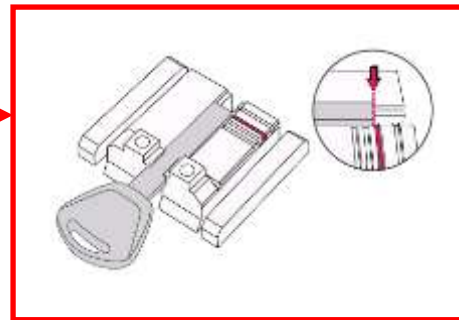
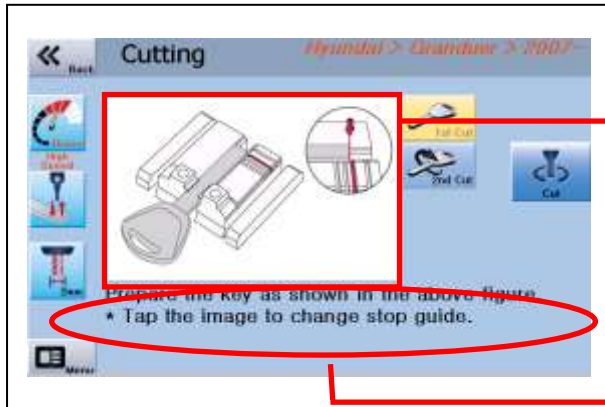
7) Stop

- Click the button to stop key cutting.



8) Clamp Reference Point Change

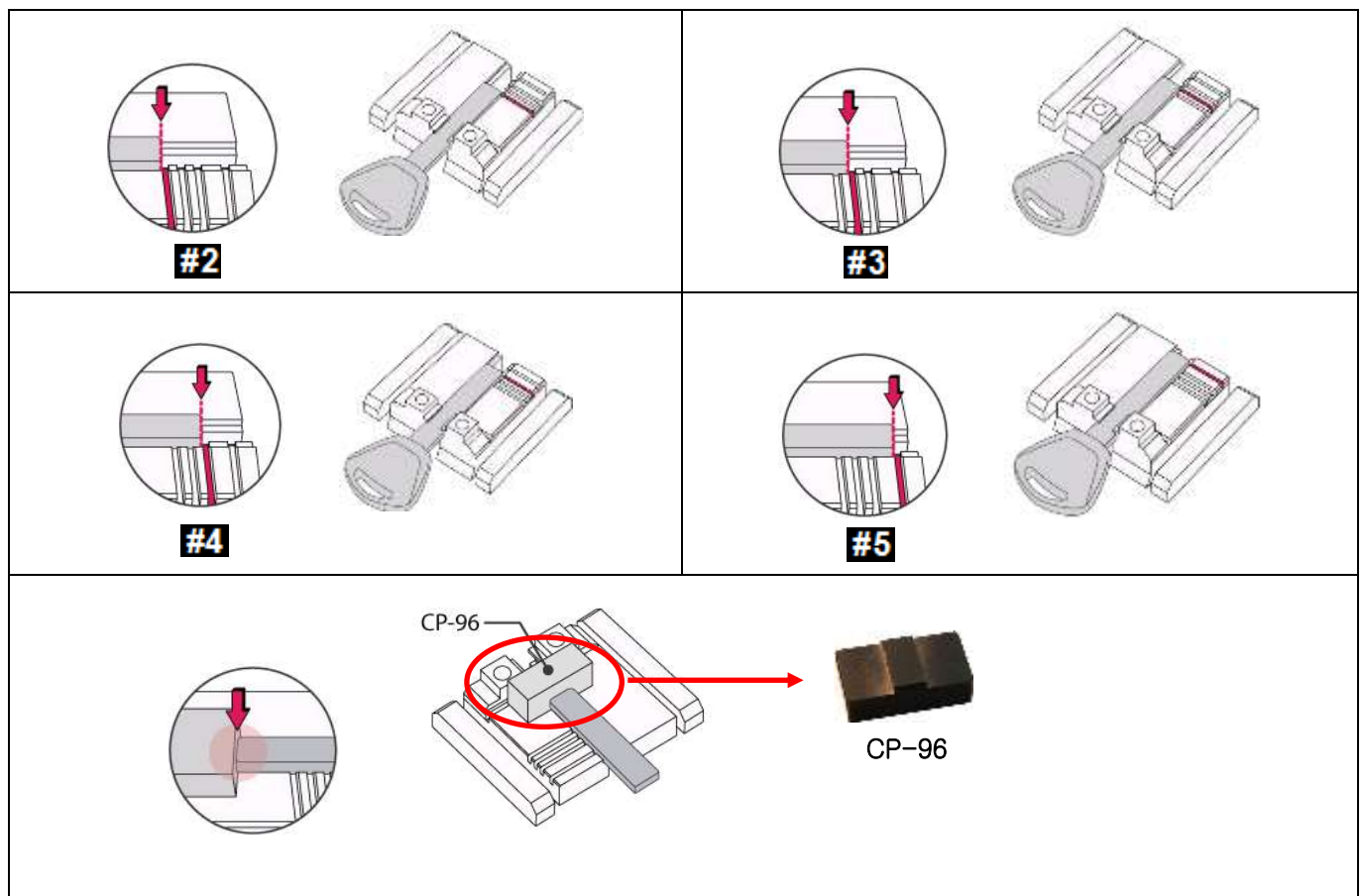
- You can change the stopper position based on the key length.



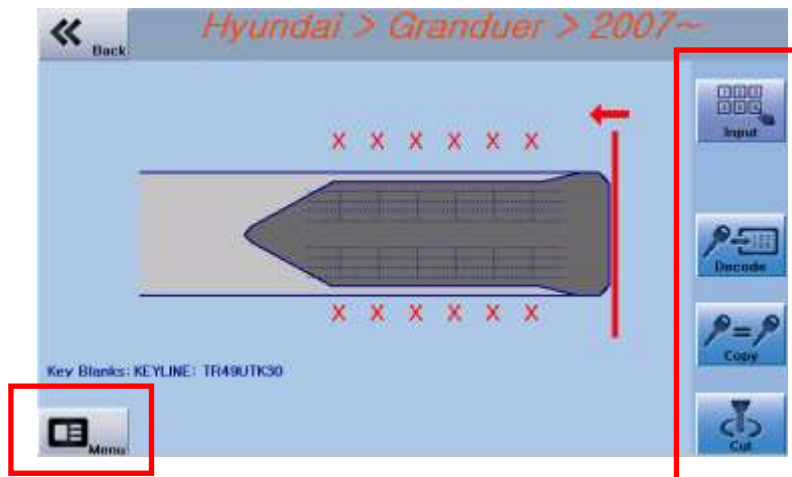
*** Tap the image to change stop guide.**

When you click the clamp picture repeatedly in the cutting setting screen, you can change the clamp reference point based on the key type and fix the key material.

e.g.) Tip Align Laser Key

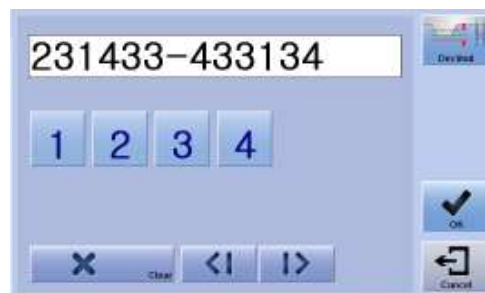


Key Data Load Screen



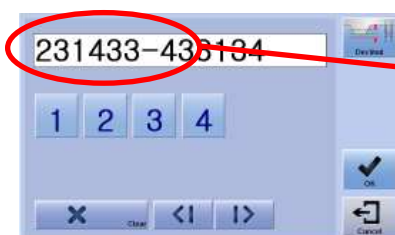
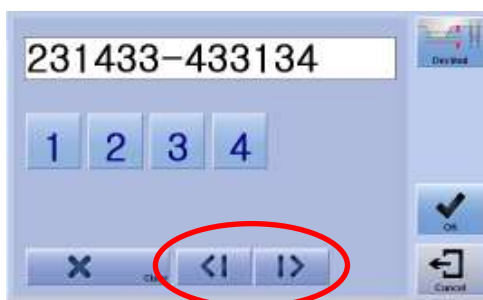
1) Bitting Input

- When you click the button below, the biting input screen appears. Enter the biting in number.

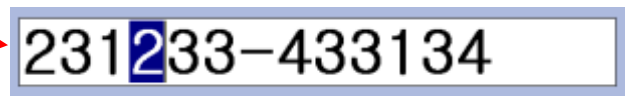


[Biting Edit]

You can edit the biting by using the arrows at the bottom of the screen or manually changing the number.

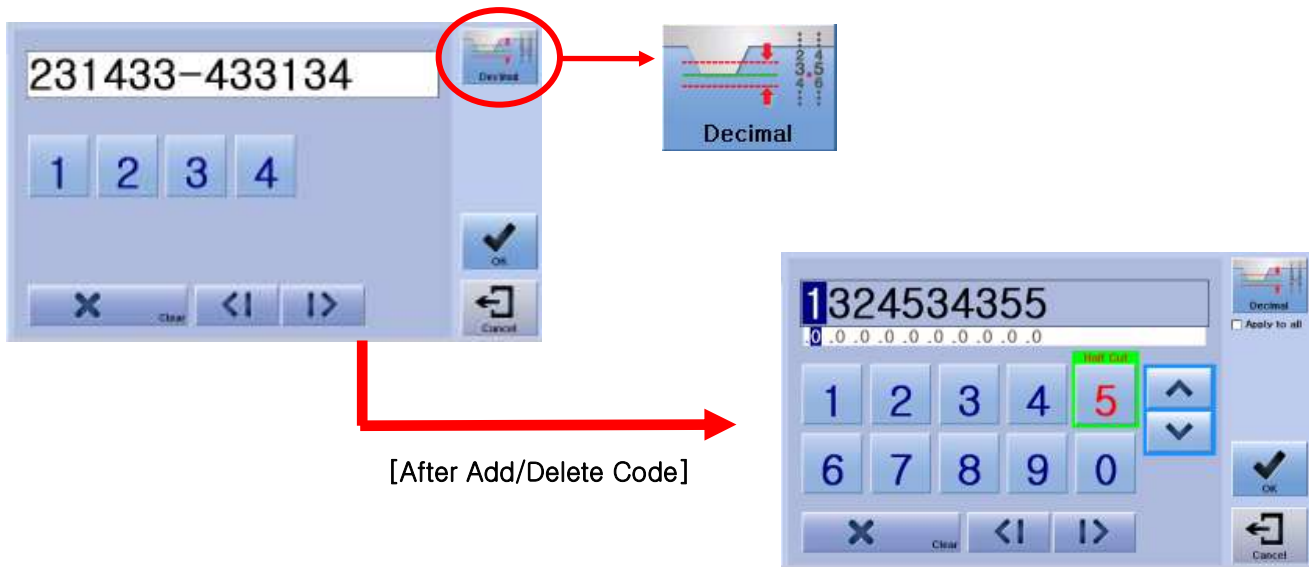


* After Edit *



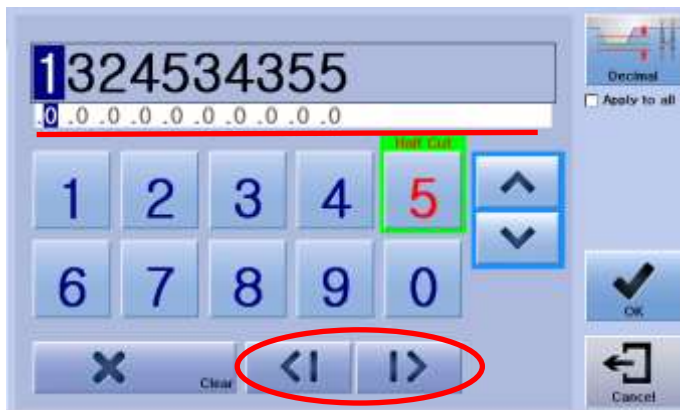
[Add/Delete Code]

You can enter the bitting in the decimal point.



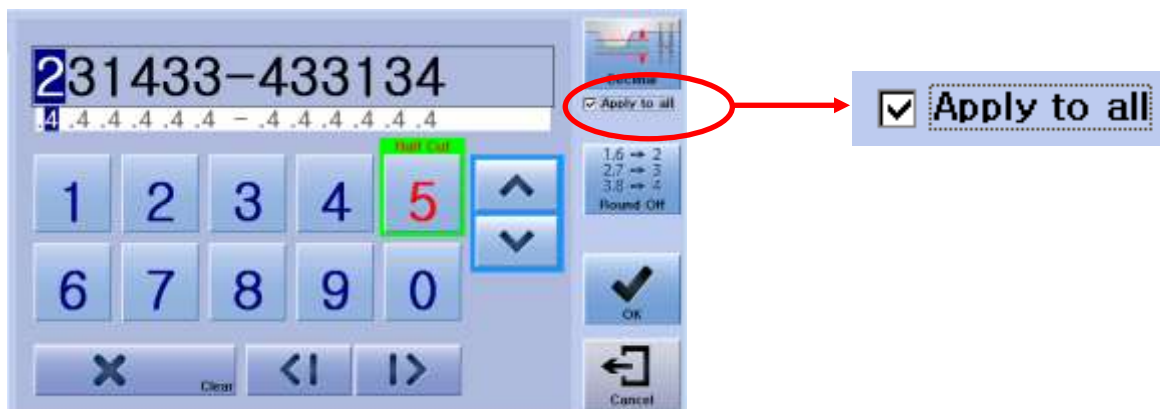
◆ Add/Delete to Individual Biting

Click the individual biting you want to add or delete or use the arrows at the bottom of the screen to move to the desired individual biting. Enter the decimal point.



◆ Add/Delete to Entire Biting

Click “Add/Delete to Entire Biting” and enter the decimal point to apply the same number to the entire biting.



◆ Code Change

Round off the code-added/deleted biting or the decoded number into the integer to make it to the general biting.

1.6	→	2
2.7	→	3
3.8	→	4
Round Off		

e.g.) 1.2 → 1 and 1.7 → 2

🔑 TIP)

- The biting in the decimal point is displayed in blue.

2) Read/Copy Original Key

- Click the button to read or copy the original key.



(Refer to P. 62)

3) Key Cutting

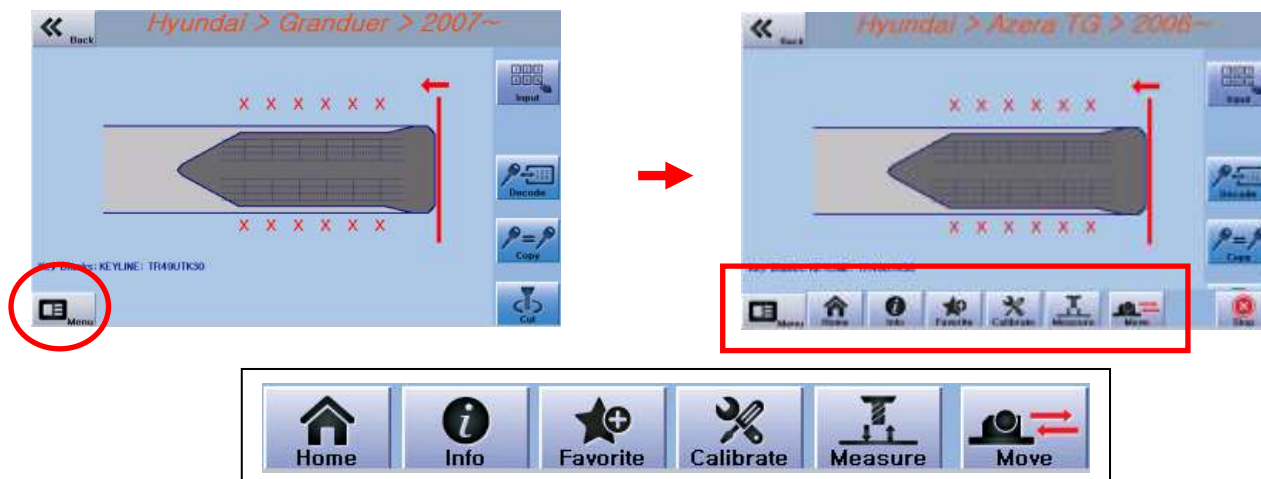
- Click the button to cut the key.



(Refer to P. 52)

4) Menu

- Click the button to display new menu.



[Home]

Return to the initial screen.

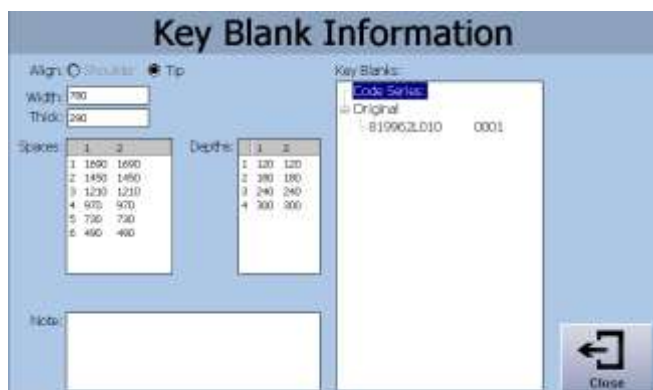


[Key Data View]

It show the key data detail.



Click the button to see the key data detail.



[Favorite]

Click the button to register the current key data to Favorite.



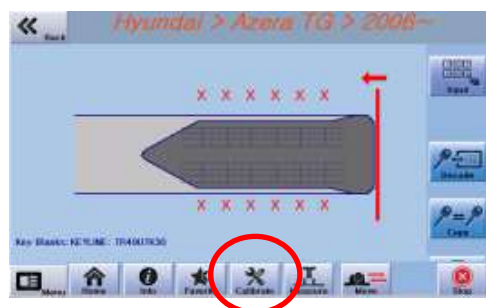
(Refer to P. 68)

[Calibrate]

Click the button to directly go to the setting menu without going through the initial screen.



The below setting screen appears.



[Tool Measure]

When you replace the cutter during operation, you can measure the cutter length without going to the setting menu.



[Clamp Move]

Click the button to move the clamp to the place convenient for replacement.

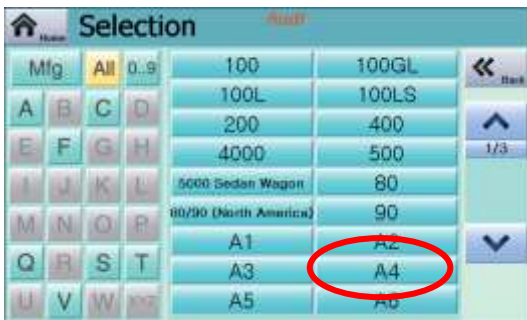
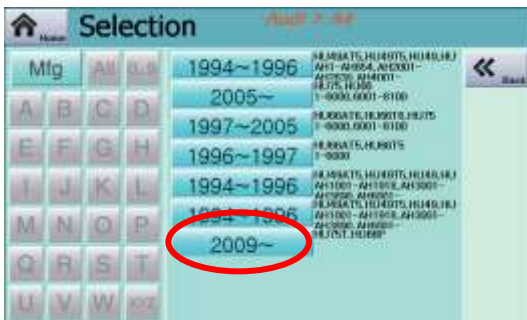
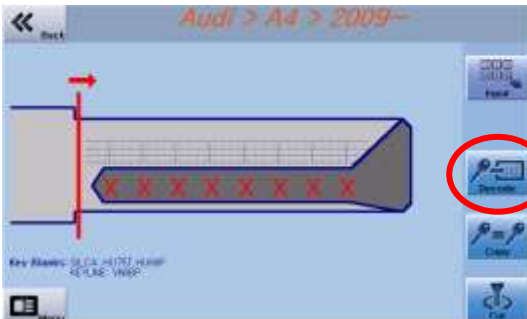


Original Key Read and Key Copy

e.g.) Manufacturer: Audi

Model: A4

Year: 2005

1.		Click the vehicle key icon in the initial screen to open the manufacturer list.
2.		Select "Audi" in the list.
3.		Select "A4" in the vehicle model list.
4.		Select the vehicle manufactured year.
5.		Click  on the right.

6.		Fix the key on the clamp as shown in the picture (refer to Key Fixation) and Click
7.		
8.		click for key cutting.

Convenient Features

Miracle-A9 offers various convenient features for users.



[Convenient Features]

1.		You can read the data easily without additional operation when you scan the barcode attached on the key. Click the button to move the clamp to the position convenient for barcode scan.
2.		Click the button to view the previous key data.
3.		Click the button to view the key data record.
4.		Register the frequently used key in “Favorite” for faster and easier data reading. You can view the key data list added to Favorite.

1) Clamp Move and Barcode Scan



For barcode scan, Click the above button to move the clamp to the place convenient for barcode scanning and following the below instruction.

A photograph of a barcode scanner device. A hand is holding a barcode and placing it under the scanner's red light. The device has a blue handle and a red light.	1. Place the barcode under the scanner line as shown in the picture. (The longer the barcode length is, the farther the distance to the scanner.)
A screenshot of the MIRACLE-A9 software interface. It shows a barcode and the text "Loading PB08000817". The interface has a blue background with various icons and buttons.	2. When the barcode is scanned, the scanned number appears on the LCD.
A screenshot of the MIRACLE-A9 software interface. It shows a key blank and the text "Hyundai > Granduer > 2007~". The interface has a blue background with various icons and buttons.	3. When the key data is loading, key cutting begins.

TIP)

- When the barcode length is over 60mm, scanning may be unavailable. The longer the barcode length is, place the barcode farther from the scanner.

e.g.) 55mm Barcode



TIP)

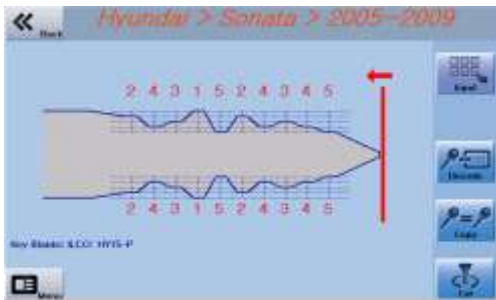
- You can scan the barcode using the built-in scanner or an external scanner by USB connection. When you use the external scanner, you can scan the barcode longer than 60mm.



2) Previous Key Data View



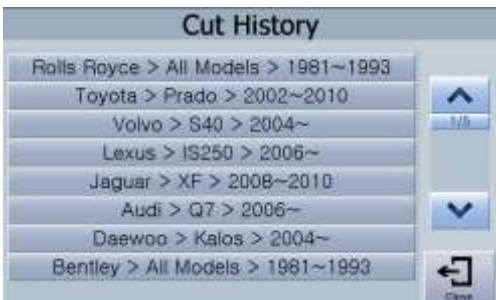
Click the above button to load the previous key data automatically

 A screenshot of the "Previous Key Data View" interface. It shows a blue background with a white arrow pointing right. Above the arrow, the text "Hyundai > Sonata > 2005~2009" is displayed. Below the arrow, a sequence of numbers "2 4 3 1 5 2 4 3 4 5" is shown. A red vertical line is positioned to the right of the numbers. On the right side, there are several icons: a magnifying glass, a printer, a document, and a "Cut" button.	You can read previous key data for reworking.
---	--

3) Key Cut List View



Click the above button to view the recent key cutting list and data as shown in the below picture.

 A screenshot of the "Cut History" interface. It shows a list of car models and their corresponding key cutting data. The list includes: "Rolls Royce > All Models > 1981~1993", "Toyota > Prado > 2002~2010", "Volvo > S40 > 2004~", "Lexus > IS250 > 2006~", "Jaguar > XF > 2008~2010", "Audi > Q7 > 2006~", "Daewoo > Kalos > 2004~", and "Bentley > All Models > 1981~1993". On the right side, there are navigation buttons: "Up", "1/5", "Down", and "Clear".	You can check the cut key list.
--	--

4) Favorite



Click the above button to read the registered frequently used key data.

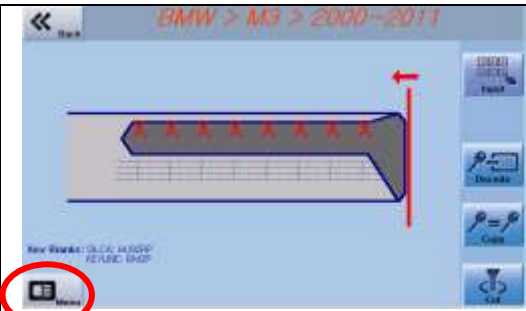
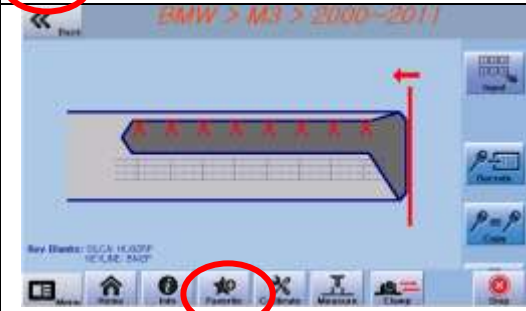
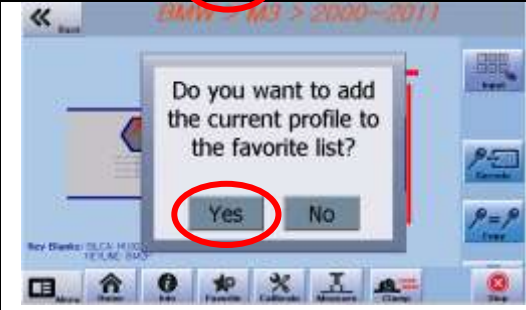
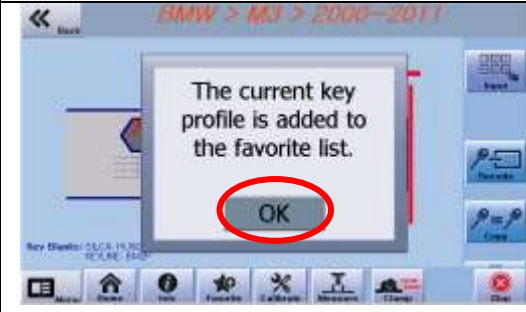
 A screenshot of the "Favorite Key Blanks" interface. It shows a list of car models and their corresponding key data. The list includes: "Hyundai > Grandeur TG", "Audi > HU66", and "Test -> Test". On the right side, there is a "Delete" button. At the bottom right, there is a "Clear" button.	You can register the frequently used key data in Favorite for faster data reading.
--	---

Register/Open/Delete Key in Favorite

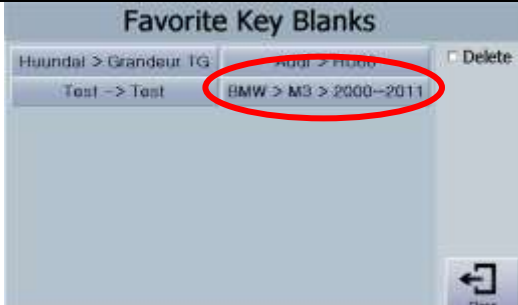
Miracle-A9 offers Favorite function that registers the frequently used key data for faster and easier data reading.

e.g.) Manufacturer: BMW
Model: M3

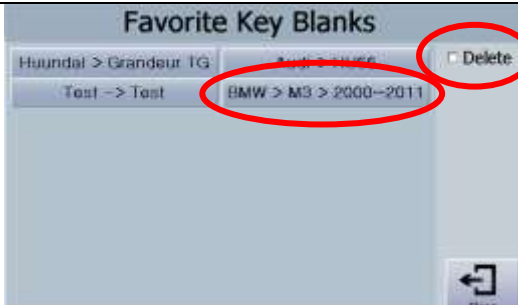
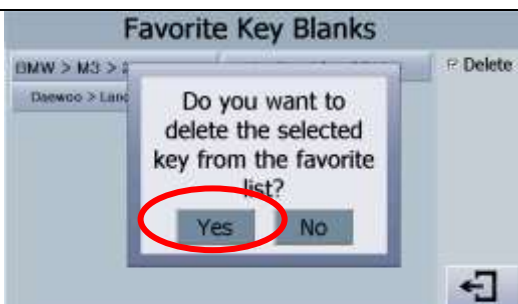
1) Register

1.		Open the registering key data and click  on the lower left.
2.		Click  in the menu at the bottom of the screen.
3.		Click  in the box.
4.		Click  in the box.

2) Open

1.		Click  in the initial screen.
2.		Click Favorite to check the registered key data.

3) Delete

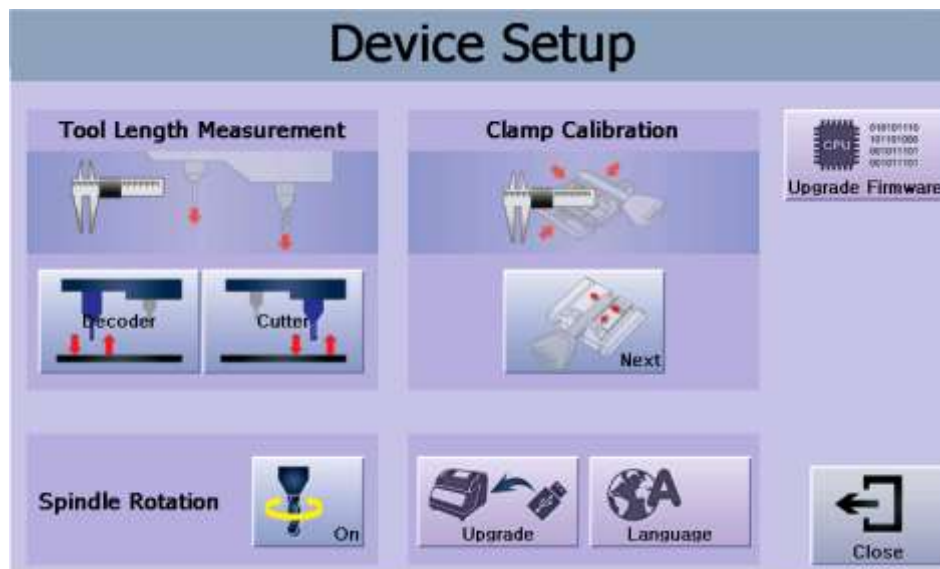
1.		Click  in the initial screen.
2.		Click  and Click the data button you want to delete.
3.		Click  .

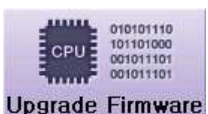
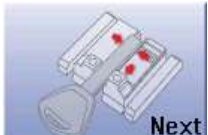
Setting Menu

In the setting menu, clamp origin setting, language selection, and data/firmware upgrade is available.



When you Click  in the initial screen, the below setting screen appears.



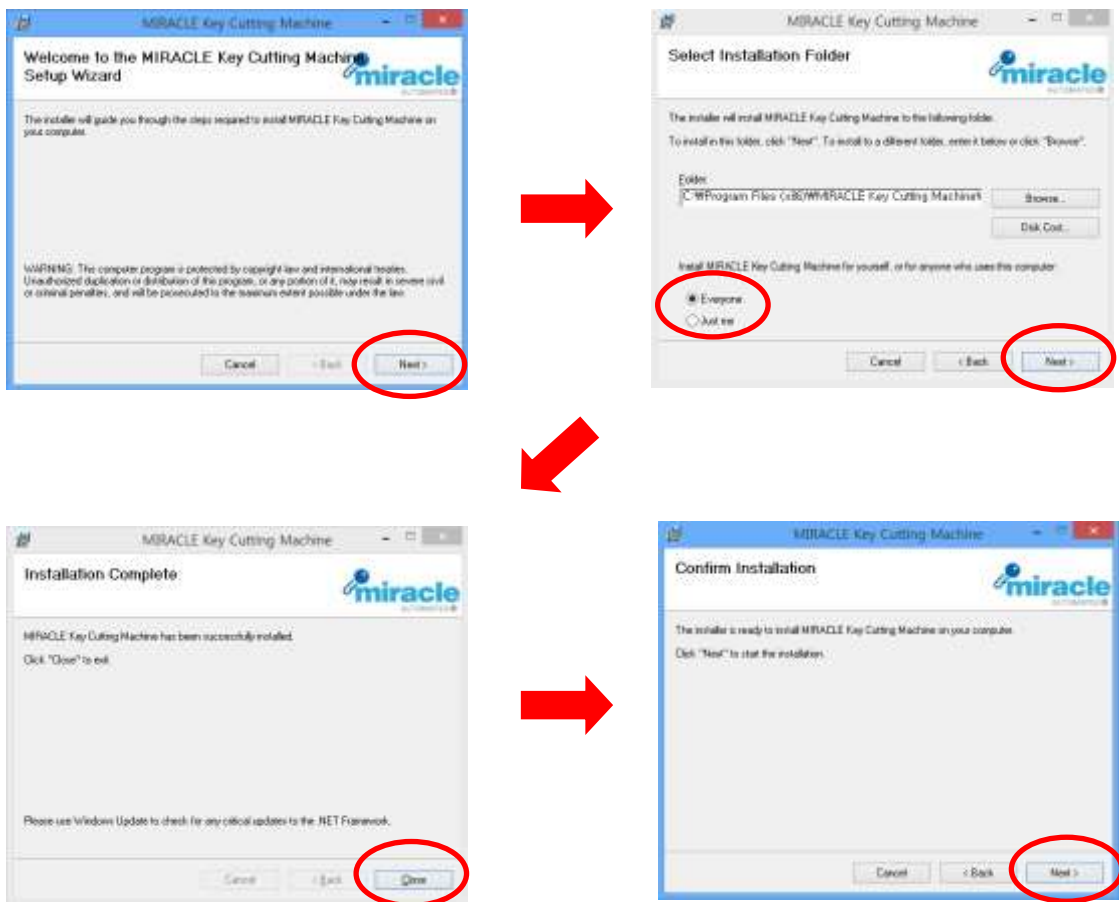
1.		Decoder Length Measure (Refer to P. 15)
2.		Cutter Length Measure (Refer to P. 14)
3.		Data/Program Upgrade (Refer to P. 74)
4.		Firmware Upgrade (Refer to P. 75)
5.		Spindle Rotation Check
6.		Language Setting
7.		Clamp Origin Setting (Refer to P. 65)

Program Installation

When you purchase Miracle-A9, installation CD is also provided. By installing the CD in your computer, you can upgrade the program and key data.

[Program Installation]

1. Insert the CD into the computer and run the installation program.
2. Install the program.



3. When the program is successfully installed, the below "Portal to Miracle" icon appears on the Desktop.



Data and Firmware Upgrade

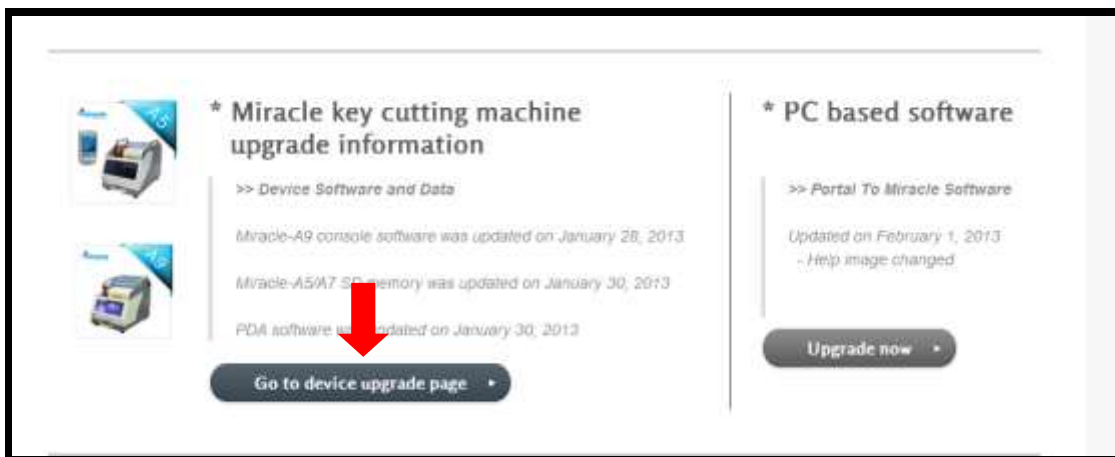
Miracle-A9 offers automatic data/firmware upgrade function to allow users to easily add new key data and new function.

[Data and Firmware Download]



1. Double-click  to run the program.

2. When the program runs, the below data upgrade screen appears. Click the button indicated in red in order to download the data and perform upgrade.



Click the button indicated in the above and move to the screen below.



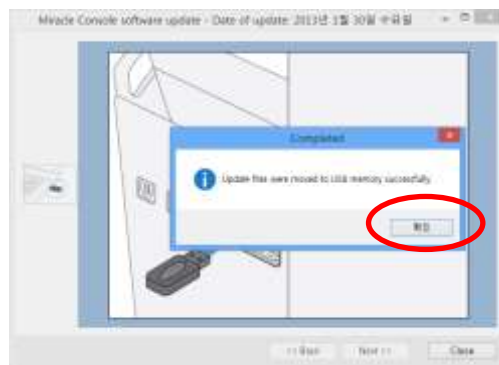
Click the button indicated in the above and move to the data download screen.



Insert the USB memory into the USB port and click
“NEXT”.

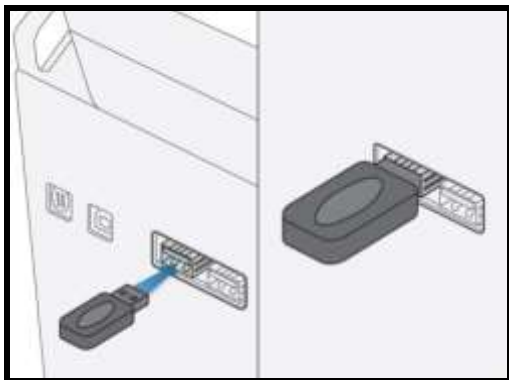


After checking the USB memory, click
“Update Now” to copy the update file into
the USB memory.



Once copying is complete, insert the “USB Memory” into the “USB Port” located at the back of the product and perform data upgrade or firmware upgrade.

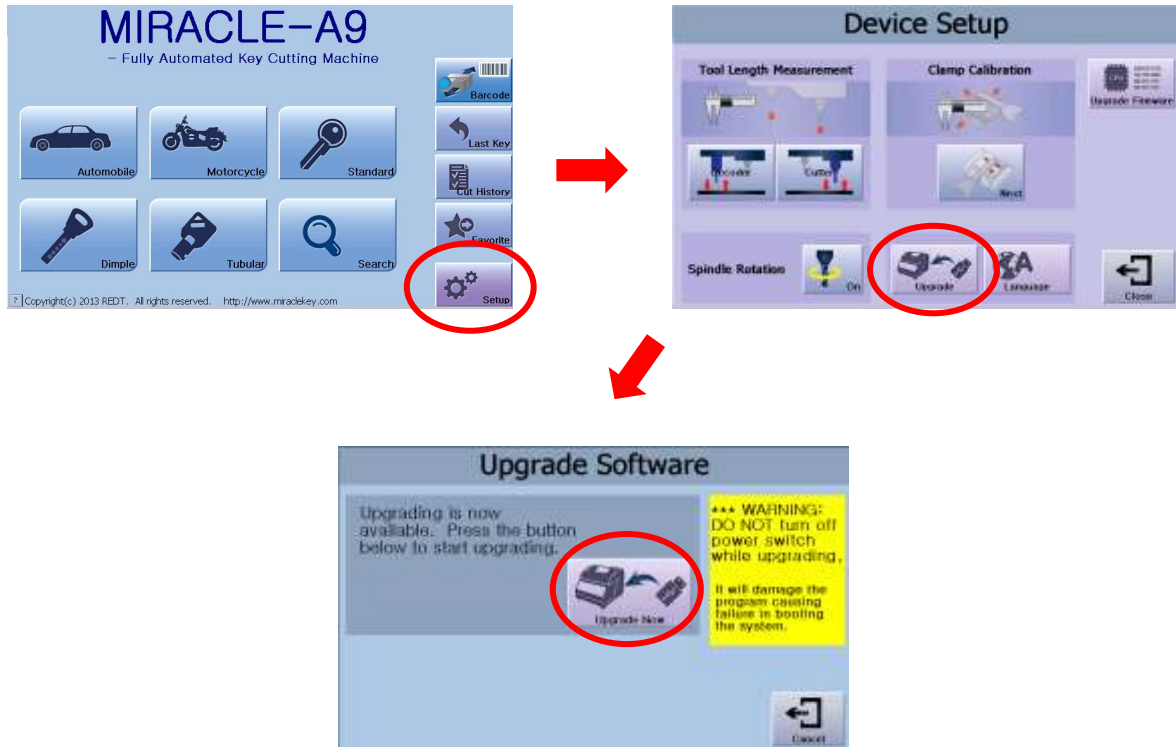
Product Back



[Key Data Upgrade]



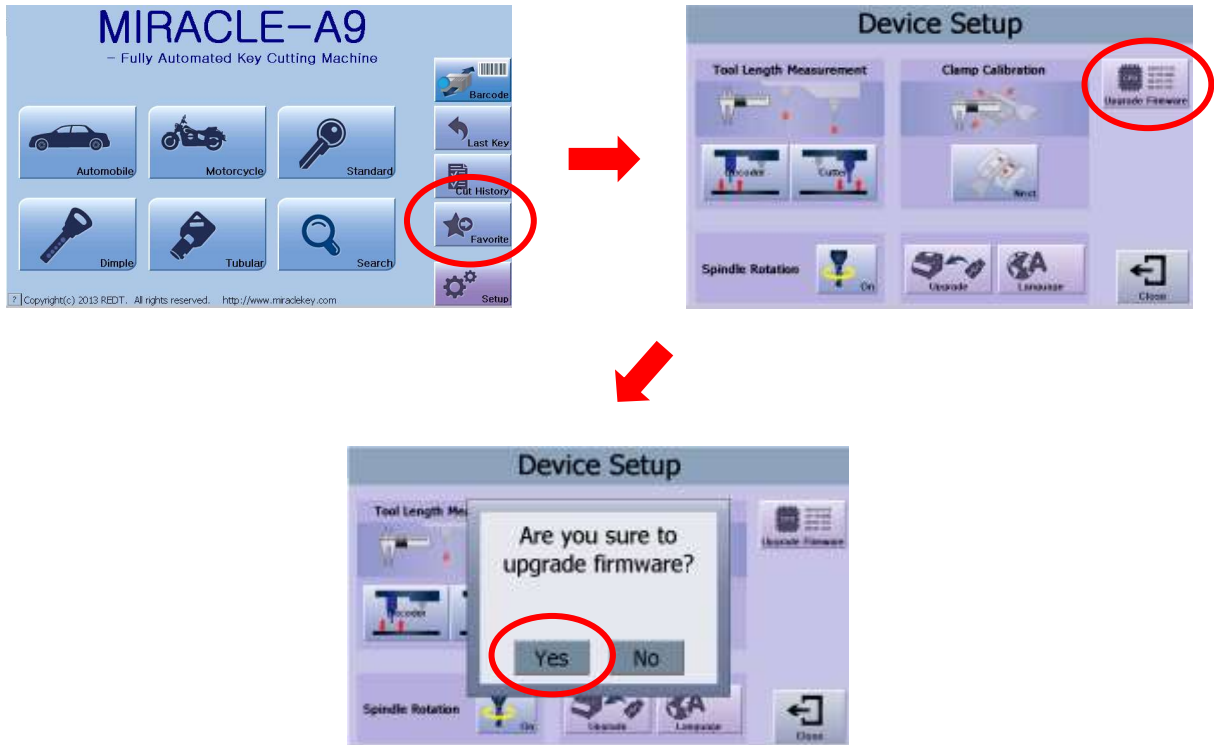
Insert the “USB Memory” into the “USB Port” at the back of the product and wait for about 5 seconds. Or click “Upgrade” to perform update.



[Firmware Upgrade]



Insert the “USB Memory” that contains the firmware for upgrade into the “USB Port” at the back of the product and click “Firmware Upgrade” to perform update.



- Never turn off power during firmware upgrade.
- If a problem occurs during firmware upgrade, the product may not function properly. In such a case, bring the product to the service center.

TIP)

- To upgrade data and firmware in Miracle-A9, a USB memory must be used.
- Firmware is a built-in program in the main board of CPU in the product and it controls the machine operation.
- “Firmware Upgrade” button is only activated when the upgrading firmware is included in the data update through the USB memory.



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