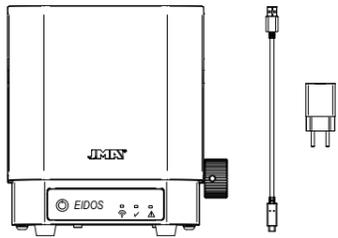
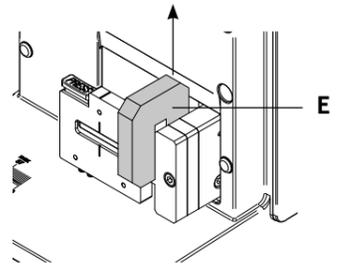


1. EN\ PREPARING THE MACHINE

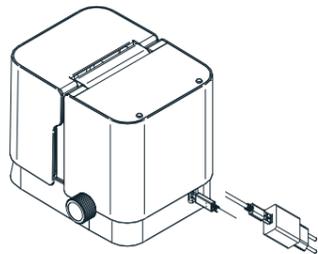
1.1. EN\ Unpack.



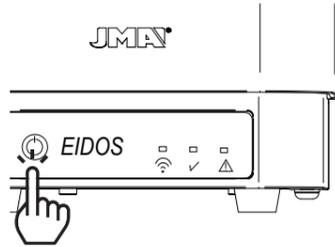
1.2. EN\ Remove the foam (E) and keep it in a safe place for transporting the machine in the future.



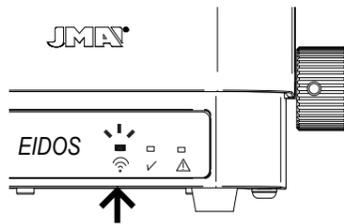
1.3. EN\ Plug in.



1.4. EN\ Switch on.



1.5. EN\ Wait 1 minute until the Wi-Fi light comes on and changes from flashing steadily (1s) to a flash every 5-6s (ad-hoc).



1.6. EN\ Enable Wi-Fi on the mobile device.



2. EN\ PREPARING THE APP

2.1. EN\ Download JMA Key Reader.



android
EN\ Open the app and grant permissions to the app as necessary.



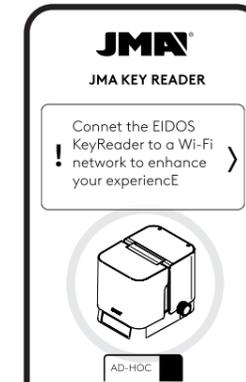
iOS *
EN\ Select the EIDOS Wi-Fi network and open the app.



2.2. EN\ Confirm EIDOS connection.

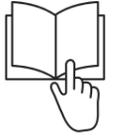
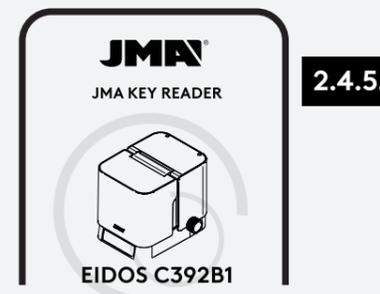
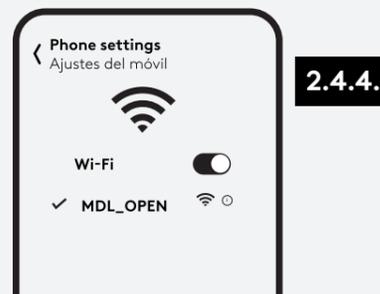
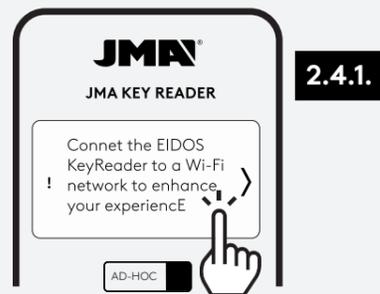


2.3. EN\ EIDOS in AD-HOC mode.



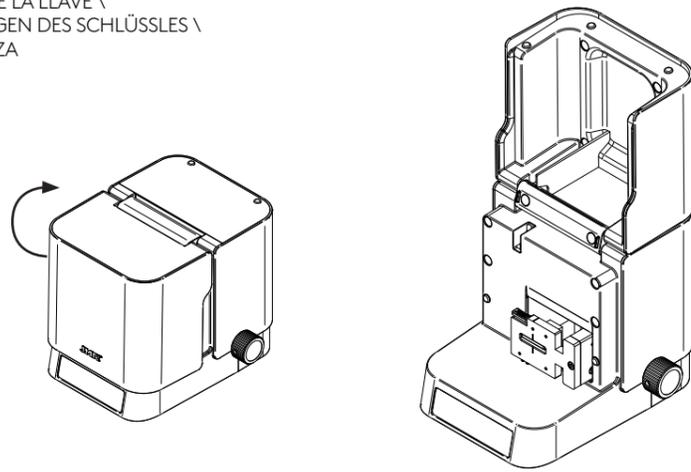
2.4. OPTIONAL

EN\ Assign a Wi-Fi network to the EIDOS machine for smoother operation.

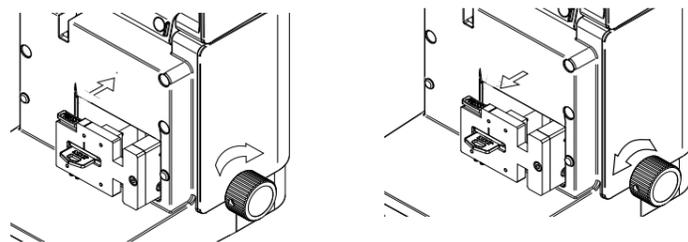
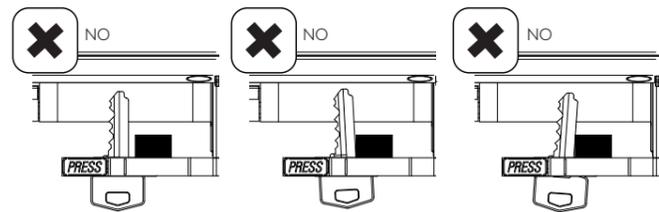
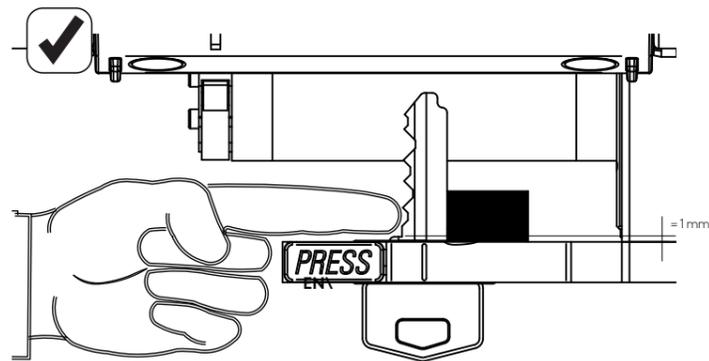


3. EN\ INSERTING A KEY - ES\ COLOCACIÓN DE LA LLAVE \
FR\ MISE EN PLACE DE LA CLE - DEU\ EINLEGEN DES SCHLÜSSELS \
PT\ COLOCAÇÃO- PL\ UMIESZCZENIE KLUCZA

3.1.
EN\ Open the EIDOS cover.



3.2.
EN\ Insert the key as straight as possible into the clamp slot, resting it on the support base so that the shoulder stop extends out from the clamp 1 mm.



3.3.
EN\ Move the key into the correct position.



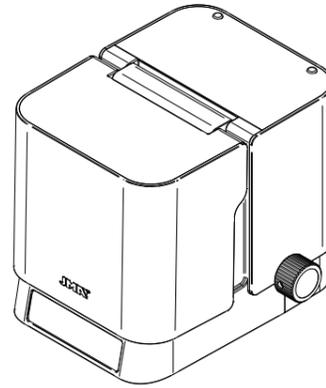
EN\ This means the key is too close to the camera. Move it back.



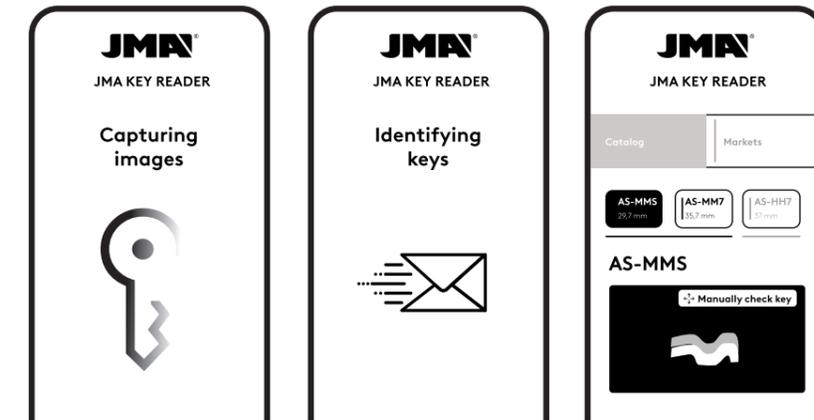
EN\ Solid green light, correct position for capturing an image.

4. EN\ READING THE KEY

4.1.
EN\ Close the EIDOS cover.



4.2.
EN\ JMAKeyReader will display the result.



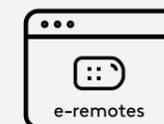
TO PROVIDE A SIMPLER AND EASIER WORK EXPERIENCE FOR DAILY OPERATIONS TO OUR CUSTOMERS.



EN\ Tutorial videos



EN\ Key catalogue



EN\ Remote control catalogue



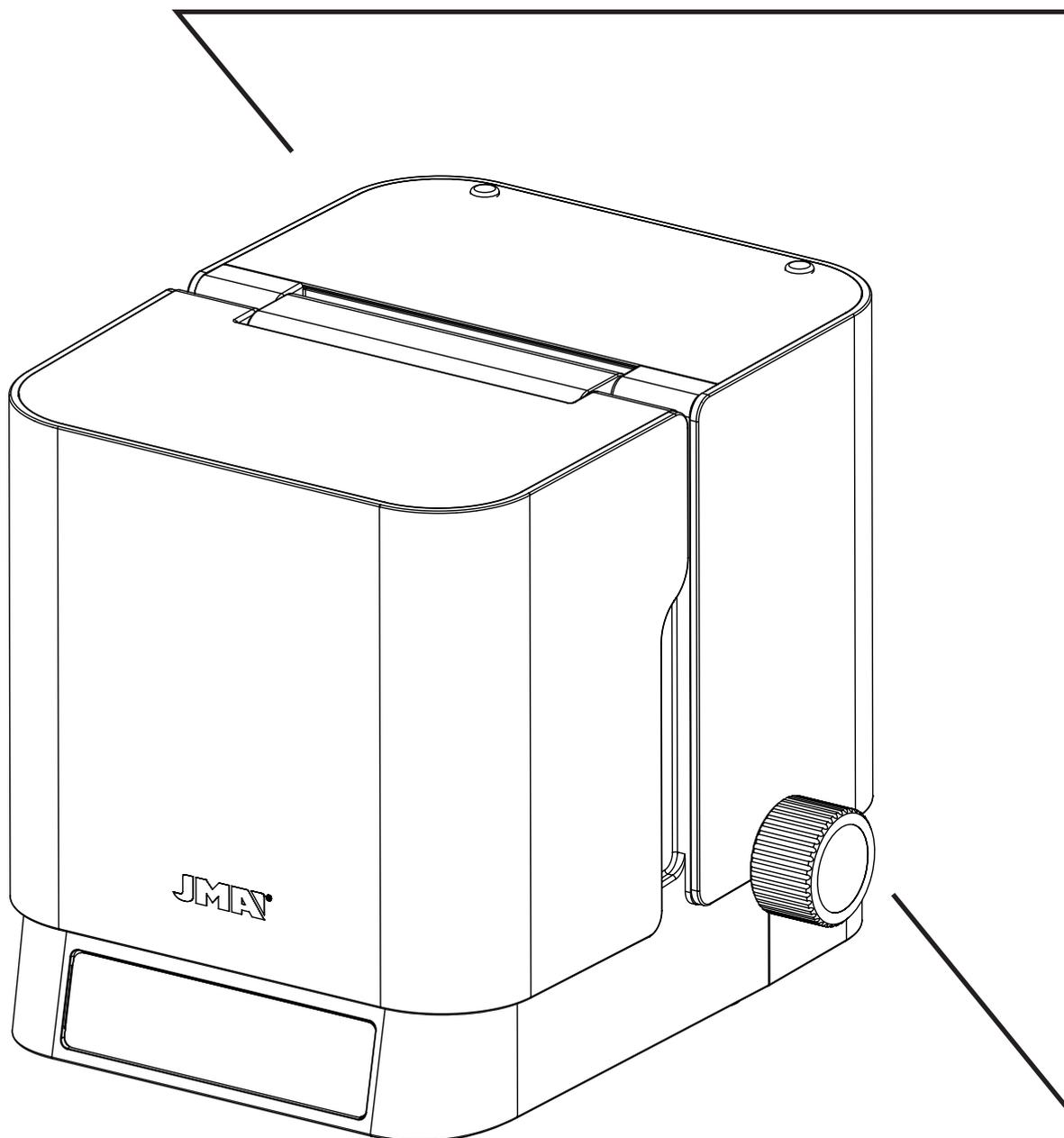
EN\ Buy online



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Bidekurtzeta, 6
20500 Mondragón
ESPAÑA





EIDOS

User Manual
Manual de Usuario

V01

EIDOS

User Manual

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1. INTRODUCTION AND GENERAL OVERVIEW

This manual has been written by the manufacturer and forms an integral part of the basic equipment supplied with the machine.

This manual provides information that the operator should be aware of and that will enable safe use of the machine.

SYMBOLS USED IN THIS MANUAL



1. Indicates a dangerous operation for people and/or proper operation of the machine.



2. You **MUST** read this user manual



3. The safety measures indicated in this manual **MUST** be followed, especially when operating or maintaining the machine.



4. This manual **MUST** be read carefully **BEFORE** using the machine.

Keep this manual in a safe place for as long as you have the machine and ensure that it is always available to the operator.

1.1 OVERVIEW

The EIDOS key reader has been designed according to current EEC safety regulations.

Safety for the people who operate this type of machine can only be achieved through a well-designed personal safety programme accompanied by implementation of a maintenance programme while following the recommended advice, as well as compliance with the safety instructions contained in this user manual.

- Follow the procedures defined in this manual.
- Always use original JMA parts.

IMPROPER USE

The machine must be installed and operated according to the instructions contained in this manual. The manufacturer accepts no liability for any material damage or personal injury if the machine is operated improperly and any improper use will void all guarantees to which the machine may be subject.

The machine leaves our factory ready for use and needs no calibration whatsoever.

1.2 TRANSPORT AND PACKAGING

For transport, the machine comes protected with packaging foam inside a sturdy cardboard box of the following size:

width = 380 mm, height = 260 mm, depth = 210 mm

Weight (machine + packaging) = 3.4 + 1.2 = 4.6 kg.

When unpacking the machine, you will find a second box or case for presentation and storage. Carefully check for any damage that may have occurred during transport.

If you find something out of the ordinary, immediately notify the carrier and do nothing with the machine until the carrier's agent has performed the corresponding inspection.



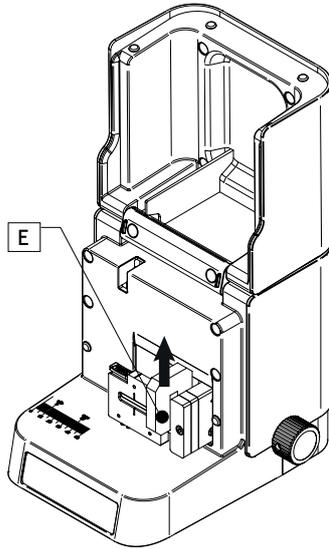
1. To move the machine from one place to another, only lift the machine by the handles on its base and not by any other parts.



2. The machine must always be transported in its original packaging to ensure its physical integrity.



3. To use the machine, remove the protective foam (E) from the carriage assembly before operating the carriage assembly wheel (keep this somewhere safe because it must be replaced when moving the machine as gravity will move the carriage assembly forwards and backwards during transport).



1.3 IDENTIFICATION LABEL

The EIDOS key reader comes with an identification label (Fig. 1A) that indicates the serial or registration number of the machine, the name and address of the manufacturer, the CE mark and the year of manufacture.



“Host Name: EIDOS 0EA835” refers to the network transmitted by the EIDOS machine in ad-hoc mode and the name via which the app can be found.

Fig. 1A

2. SAFETY MEASURES

2.1 REGULATIONS

The EIDOS key reader and its safety devices are compliant with **Directive 2006/42 EC on Machinery**.

This manual cites all the safety regulations that the user must respect when installing and operating the machine. Failure to follow these instructions may compromise the safety conditions provided for during design and testing.

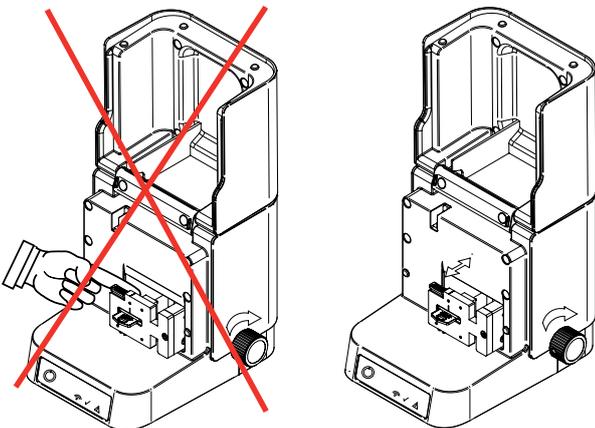
When used for the purpose for which they have been designed, all machines bearing the CE mark are compliant with EU Directive **2006/42 EC on Machinery**.



1. The machine operator must know and follow the instructions provided in this manual.

2.1.1 User Protection

- This machine is designed for use by one person.
- The key should be positioned inside the clamp using both hands; one to open the clamp and the other to insert the key. As a result, neither hand should be able to move the carriage assembly during this process.
- The carriage assembly is moved forwards to focus using the carriage assembly motion wheel. This should only be done when no other item, finger or hand is inside the carriage assembly in order to avoid a crushing risk.



- Following the safety rules and instructions indicated by the manufacturer in this manual leaves no room for error.

2.1.2 Safety Signs and Symbols

The EIDOS key reader uses the following safety signs and symbols:



1. Read the instruction manual before operating the machine.



2. WARNING! Hazardous operation

2.1.3 Power Supply

The machine is powered via a 5V DC USB-C port. This voltage does not represent an electrocution hazard. Nonetheless, follow the steps below to ensure correct usage:

- Always disconnect the power supply before carrying out any maintenance or cleaning.
- Always disconnect the power supply when the machine is not in use.
- Do not use the machine in hazardous, damp or wet locations.

2.1.4 Residual Risks

The EIDOS key reader has been designed with the utmost care to ensure it is safe during transport, use and maintenance. Nonetheless, it is impossible to eliminate all risks, whether for technological reasons or for issues related to use of the machine (excessively complex operations). Therefore, the following residual risks should be taken into consideration when using the machine, as well as the risks associated with its use:



1. RISKS RELATED TO THE INSTALLATION LOCATION

The location where the machine is installed may present risks that can impact correct operation of the machine (temperature, humidity, rain, etc.).



2. ELECTRICAL RISK

This machine is fitted with a USB power adapter. Do not open the power adapter (which is sealed) in the event of a fault with this device. No risk of electrocution exists whatsoever. The electrical power cord should be fitted with suitable control and protection devices (thermal magnetic circuit breaker and differential circuit breaker).



3. MECHANICAL RISK

The machine is fitted with a carriage assembly that is necessary for reading and focusing on keys. The operator should therefore take every precaution to avoid inserting hands or fingers into the carriage assembly when moving this component to focus the camera.

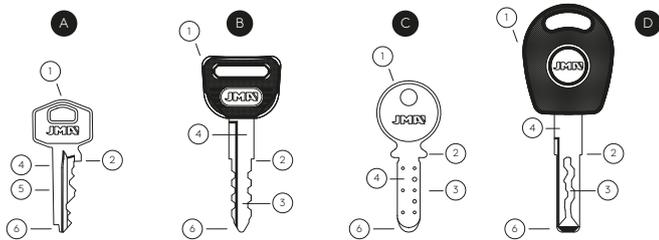
3. CHARACTERISTICS OF THE MACHINE



EIDOS is a machine for identifying keys. After placing a key inside the EIDOS machine, it takes a photograph of that key and then uses the JMAKeyReader app to transmit that photograph to a server, which uses AI technology to identify the key. Two parameters are used to identify the key: the key profile and the blade length.

The EIDOS machine can identify the following types of keys:

- Cylinder keys (A) and vehicle keys (B);
- Dimple keys (C), laser/groove keys (for vehicles) (D).

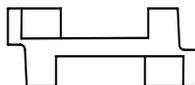
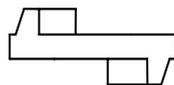
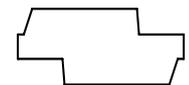


- 1. Key grip 2. Shoulder step 3. Bitting
- 4. Blade 5. Shaft 6. Tip

The key lengths that this machine is capable of measuring are: 9 mm to 37 mm.



- 1. *The original key profile can be changed to such a degree on laser (groove) keys that they become unrecognisable.



Original profile

Profile once cut

The machine recognises the tip of the key and, in these cases, the loss is such that the profile is unrecognisable.

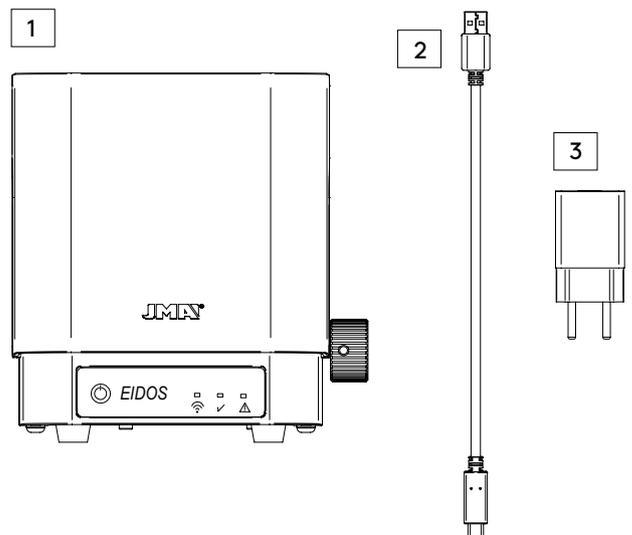
TECHNICAL DATA:

- Power supply: USB-C 5V DC 0.6 A 3W max.
- Connection: Wi-Fi 802.11n, single band 2.4 GHz (35 Mb/s)
- Key length measurement range: 9 mm to 37 mm
- Dimensions:
 - Height: 200 mm (cover open - 350 mm)
 - Width: 190 mm
 - Depth: 225 mm
- Weight: 3.4 kg

3.1 ITEMS SUPPLIED

The following items will be found when unpacking your EIDOS machine:

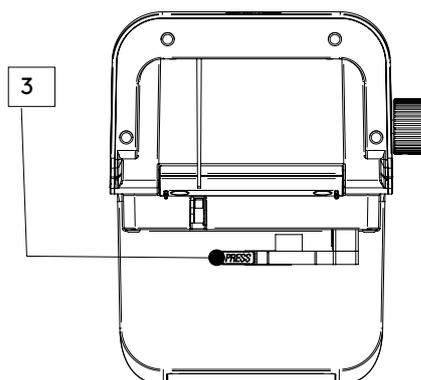
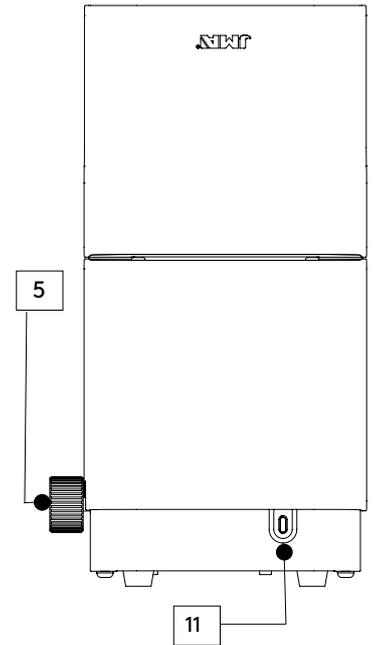
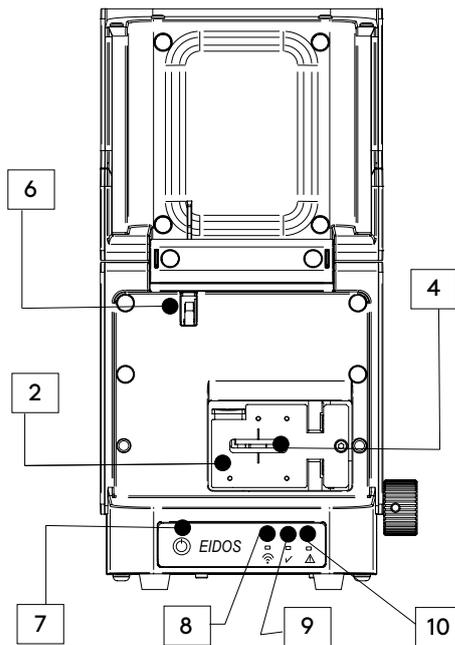
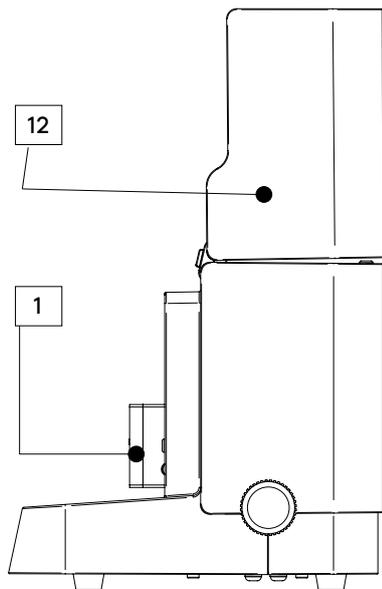
1. The EIDOS machine
 2. USB-C (male) to USB-A (male) cable
 3. 110-220V AC to 5V 2.0 A USB-A (female) power supply
- The EIDOS machine barely reaches 3W of power consumption so it can be connected to any USB outlet (external USB battery packs, the USB port on a laptop or desktop computer, etc.).



- 1. For those countries where the European-style two-pin plug is not compatible, an additional adaptor is supplied.

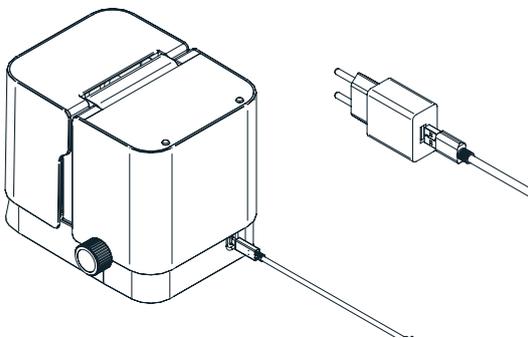
3.2 MAIN PARTS OF THE MACHINE

- 1. Carriage assembly
- 2. Clamp
- 3. Clamp release PRESS button
- 4. Key support base
- 5. Carriage assembly motion wheel
- 6. Door switch
- 7. On/Off button
- 8. Wi-Fi indicator
- 9. Photo capture OK indicator
- 10. Error indicator
- 11. USB-C socket
- 12. Cover or lid

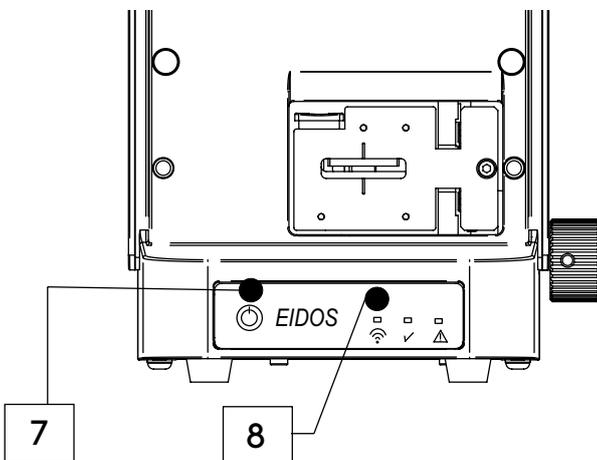


3.3 SETUP

The EIDOS machine is very simple to use. Just connect the USB-C end of the cable provided to the USB-C port (N° 11 in Main Parts of the Machine) on the EIDOS machine and the other end of the cable (USB-A) to the plug (also provided). Once both ends of the cable are connected, you can then connect it to a power supply.



Next, switch on the machine by pressing the On/Off button (N° 7). The EIDOS machine comes with an operating system and it may take between 90 seconds and 2 minutes to boot up. Please wait until the Wi-Fi indicator (N° 8) comes on. Once on (or flashing every 5-6 seconds), you can install JMAKeyReader from Google Play Store or Apple Store.



PLAY STORE (Android)



APPLE STORE (iOS)



Once the EIDOS machine is on and the white Wi-Fi indicator is lit, use a smartphone or tablet and tap the previously downloaded JMAKeyReader app icon.

Follow the onboarding steps in the app, which will configure your machine for subsequent use.



1. It is important to allow the app to access location services as this lets it find the device (not allowing location services will mean the machine cannot be found in ad-hoc mode). See Fig. 10

After location settings are activated, the app will find the machine that is within Wi-Fi range. On Android devices, no action is required (see Fig. 11):

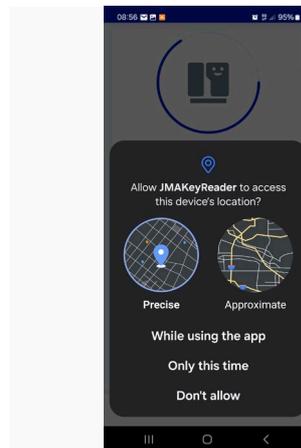


Fig. 10

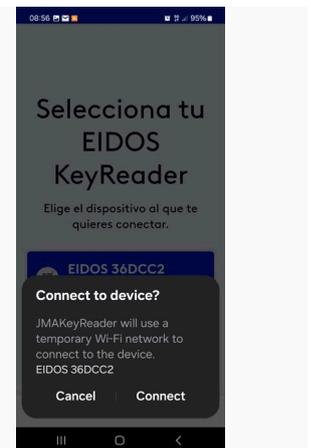
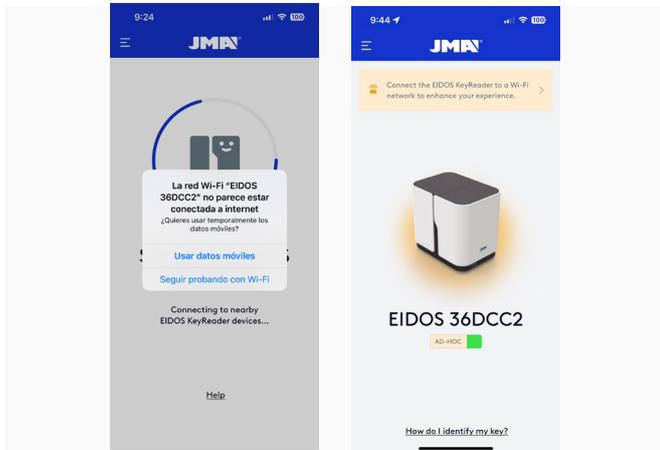
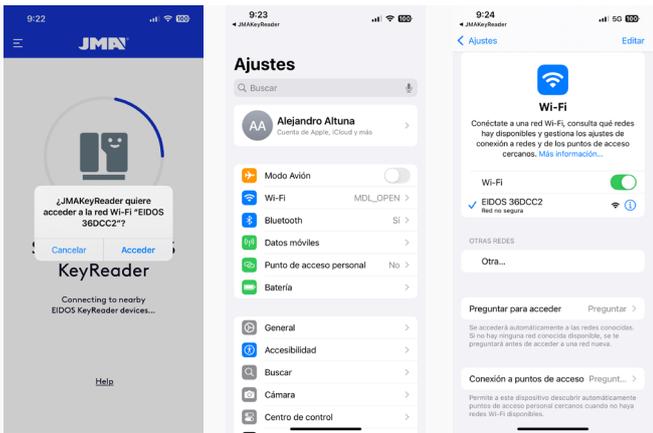


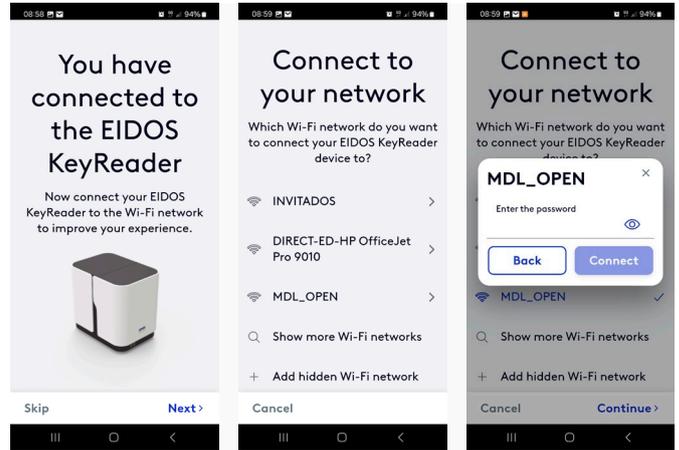
Fig. 11

On iOS devices (iPhones), the Wi-Fi EIDOS XXXXXX network must be selected manually. The app will display the Wi-Fi network selection screen on iOS devices. See the images below:



This manual selection is not necessary once the machine is connected to the local Wi-Fi network of your establishment, as explained in the next section.

Once the JMAKeyReader app is connected, the app will notify you on the screen and then ask if you want to connect to a Wi-Fi network.

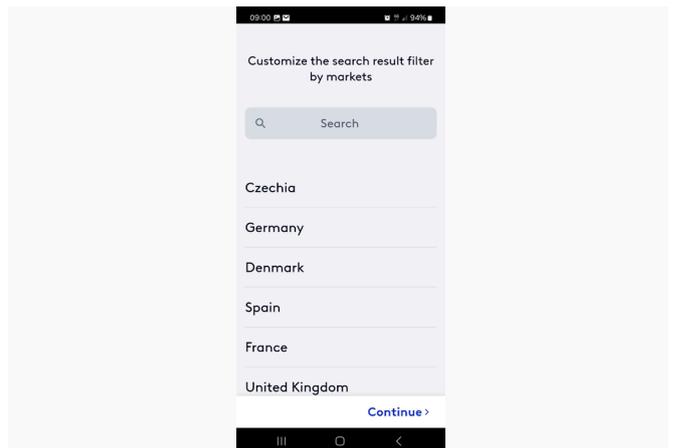


Connecting the EIDOS machine to a Wi-Fi network makes the identification process faster because the Wi-Fi network will be used to send photos to the server. However, if no Wi-Fi is available, the JMAKeyReader app will use whatever network is available (e.g. 4G/5G). In this case, you should also bear in mind that mobile costs may be incurred when using these networks based on whatever data plan you have contracted.



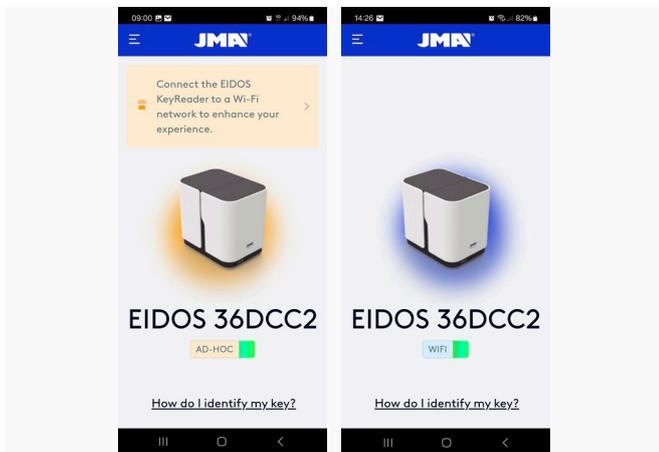
1. The use of 4G/5G networks without a data plan may incur usage costs with your mobile service provider.

After choosing a Wi-Fi network (and entering the password) or cancelling to activate ad-hoc mode, the next screen will ask whether you want to set a specific market. This option lets you display the most common JMA keys in whichever market you select. Even so, all results from the JMA catalogue will still be shown.



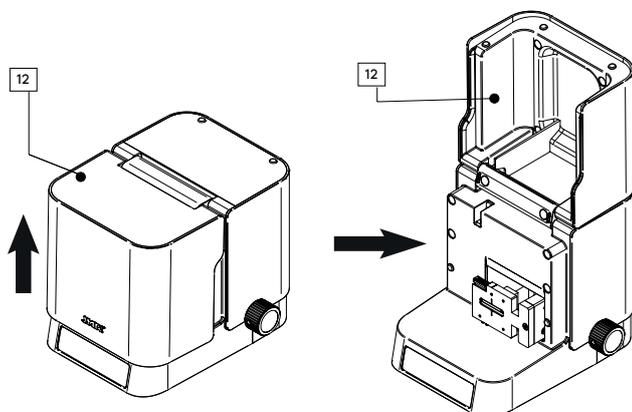
You can select a market for your country or skip this option and use the general results from the entire catalogue without the software applying any market-based filters.

This will complete the software setup and take you to the main menu. The EIDOS machine will be displayed with an orange aura when operating in ad-hoc mode or a blue aura when connected to a Wi-Fi network.

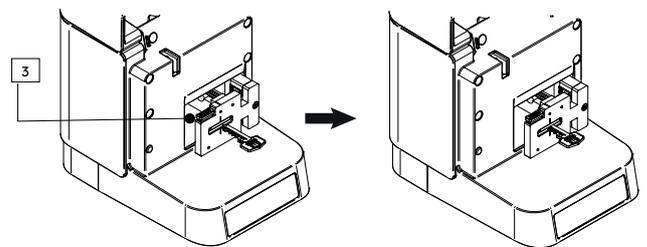


3.4 INSERTING A KEY

First of all, lift up the lid or cover (12) on the machine to access the clamp.



Press the button (N° 3 in the image) to enable the clamp that will hold the key to be opened and insert the key into the mouth of the clamp as shown in the images below.

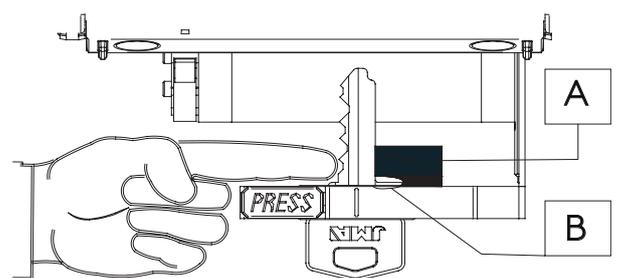


The teeth on keys will always need to be facing left and the key spine facing right.

The clamp has a specific part (A) for resting the key spine against to ensure that the key is positioned straight in front of the camera. It is essential to ensure the key is straight so identification is possible.

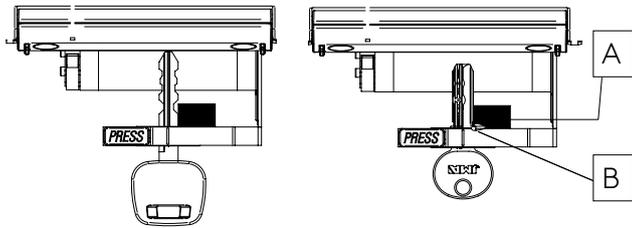
Consider the following to ensure the machine can measure the key correctly:

1. Use a finger to push the teeth of the key to ensure the key spine is resting straight against the support block (A).
2. Ensure the key shoulder extends out from the clamp about **1 mm** so that the EIDOS machine can measure the length of the blade. For keys with a double shoulder, you can use the inner stop (B) of the support block (A).



Cylinder keys with double bitting should be positioned so that the blade is as straight as possible with one side resting against the support block (A).

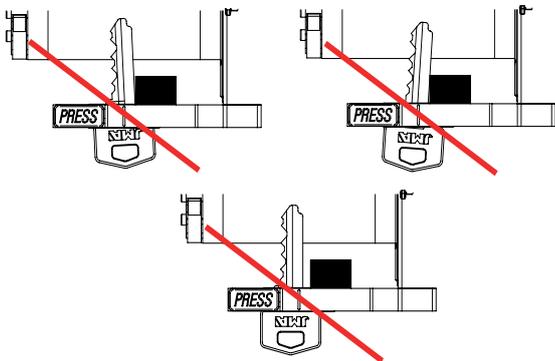
The image below shows a key with a double shoulder resting against the internal stop (B) of the support block (A). It also shows a tip-stop key with double bitting (a key with no shoulder stop). This type of key should be inserted so that one side of the bitting rests against the support block while ensuring that all the teeth can be seen.



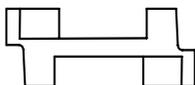
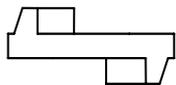
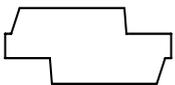
Key with double bitting and tip stop (no shoulder)

key with double shoulder

The three images below show examples of how not to insert a key into the machine. This will produce less accurate and probably incorrect results.



1. The original key profile can be changed to such a degree on laser (groove) keys that they become unrecognisable.



Original profile

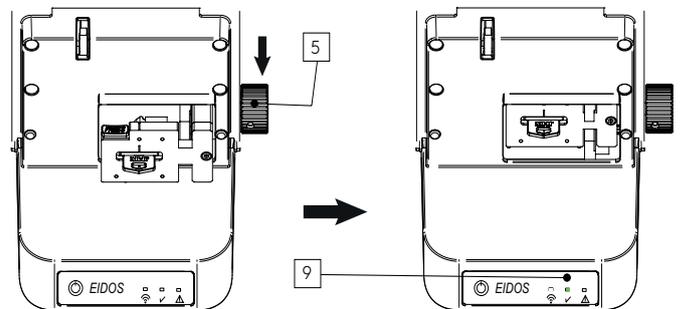
Profile once cut

3.5 FOCUS ADJUSTMENT AND IMAGE CAPTURE

Once the key is secured in place, the carriage assembly simply needs to be moved to the optimal position for the machine to focus. This process is supervised by the machine and is very simple. The carriage assembly wheel (5) needs to be rotated forwards until the machine finds the focus point, at which time the green LED (N° 9) indicating correct focus will illuminate.

When moving past the focus point, the machine will start to beep. This beep will intensify the closer you move the camera to the key as a warning to start turning the carriage assembly wheel (5) the other way and move the camera away from the key, returning to the focus point.

The focus point has more or less 1 mm of leeway in either direction. This process is required because each key model differs in length while the focus point is the same, so it needs to be adjusted manually.



1. The camera that captures the image is located at the back. Do not force the carriage assembly beyond the limit indicated by the beep so that the key and camera do not come into contact. Poor use and continuous contact between the camera and the keys could damage the lens and impact recognition performance.

Once the carriage assembly and key are positioned at the focus point and the green LED (9) illuminates, all you need to do is lower the lid or cover of the EIDOS machine (12) so that it can begin capturing images automatically (it will beep during this image capture process).

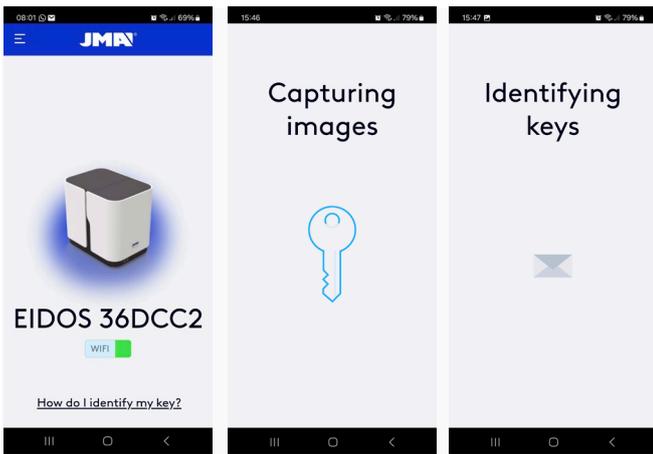
If the JMAKeyReader app is open and the EIDOS machine is already linked to the software, the JMAKeyReader app will capture the images and send them to the server for processing. The next chapter provides a more in-depth explanation about this software and all its features.

4. CHARACTERISTICS OF JMAKEYREADER

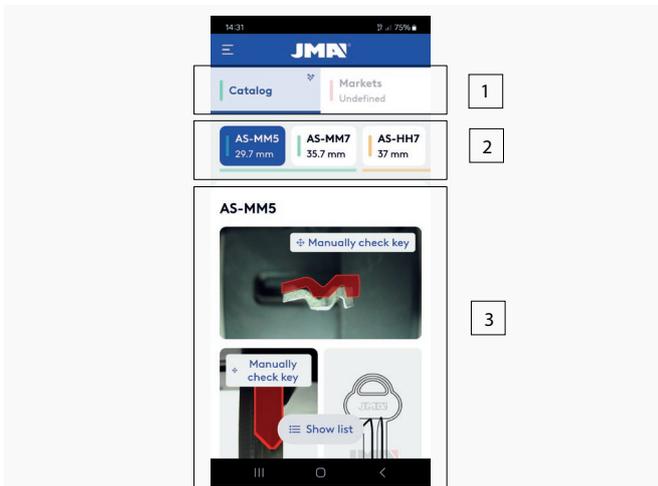
The previous chapter explained the necessary steps for setting up your EIDOS machine and the JMAKeyReader app, as well as the process for positioning a key, focusing the camera and closing the lid to automatically take a photograph.

4.1 KEY RECOGNITION

After closing the cover on your EIDOS machine with a key positioned within the zone of focus and the green LED lit, the JMAKeyReader app will detect that the EIDOS machine is taking photographs and will switch to the main screen for sending the captured images to the server. This process is accompanied by a series of dynamic screens in the JMAKeyReader app, which are shown below:



After a few seconds, the results from your photo capture analysis should be shown.



The screen is divided into three sections:

1. Results:

- Catalogue: This shows all the identification results. This checks against all the keys in the JMA catalogue (over 7,000 items).
- Markets: This shows the result after filtering by the keys sold in the specified market (keys not sold in that market will not be shown).

2. Keys:

A list of the JMA keys that match the photographed profile and filtered by blade length. The list will always be shown in order of the most relevant key or strongest match to the weakest match. The match strength of these keys is shown by using different colours:

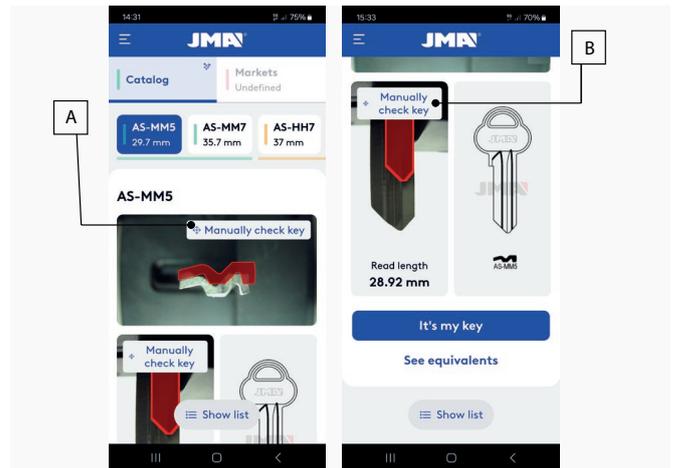
- Green: keys with a very strong match.
- Orange: similar keys but without a complete match.
- Red: keys with a poor match, most likely unsuitable as a replacement key.

3. Analysis section:

This provides a graphical composition superimposing the profile and blade of the key from the list of results with the strongest match over the profile and blade of the key inserted into the EIDOS machine for analysis. Different key results can be selected from section 2 to display its profile over the captured photograph, both the key profile and the key blade.

4.2 ANALYSIS OF THE CAPTURED PHOTO

Section 3, explained above, lets you scroll the screen (up and down) to examine whether the key indicated by the machine coincides with the profile and whether the blade is the same size. The two images below show an example of how the JMAKeyReader app displays the result (more information is shown by scrolling down):



One of the most interesting features of this app is that it lets you compare a profile straight from the JMA catalogue with the photograph of your key. To do so, just tap the “Check Manually” icon (A). This will take you to the next screen, where it is possible to zoom the profile from the catalogue (in red) or move it wherever you want, even right over the real photo to check that the profile curves match perfectly. See Fig. 25

To exit this screen, tap the (←) icon. The key blade can also be checked against the image. To do this, tap the “Check Manually” icon (B) and open the screen shown below. See Fig. 26

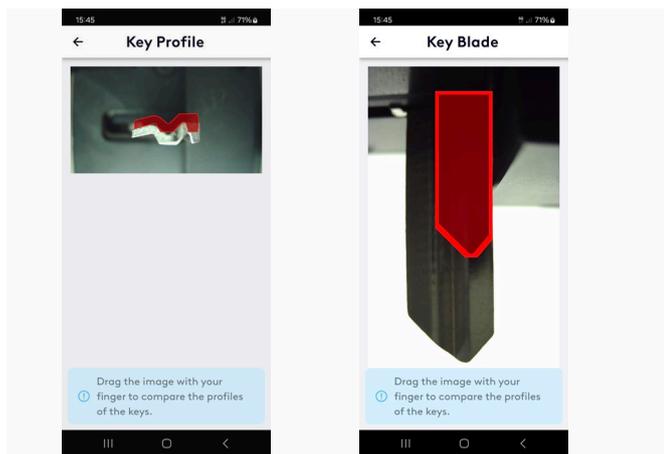


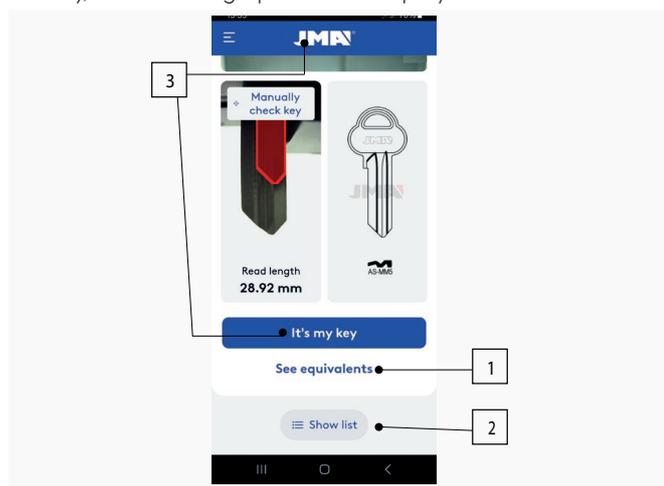
Fig. 25

Fig. 26

The same actions can be taken on this screen as the previous (checking the profile). Here, you can zoom the blade from the catalogue (in red) and move it to fit over the blade of the key in the photograph.

To exit this screen, tap the (←) icon.

Finally, in the section third from top (at the bottom of the screen), the following options are displayed.



1. The “Show Equivalents” option will display this key from other manufacturers. See Fig. 28
2. Show list: The keys matching the captured image are listed from top to bottom in a more compact format, rather than from left to right. See Fig. 29
3. To leave the results and return to the main screen, you can either tap “That’s my key” to conclude the process or tap the JMA logo to skip to the HOME screen. The “Yes” option concludes the process and returns you to the main screen. See Fig. 30

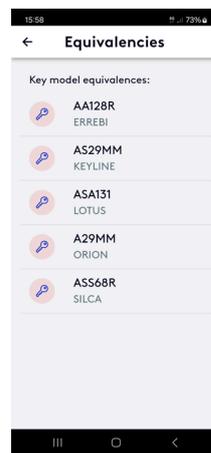


Fig. 28

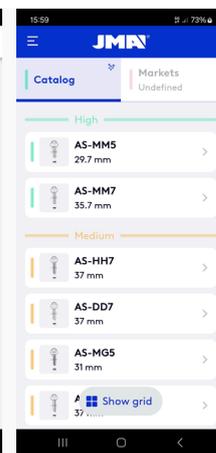


Fig. 29

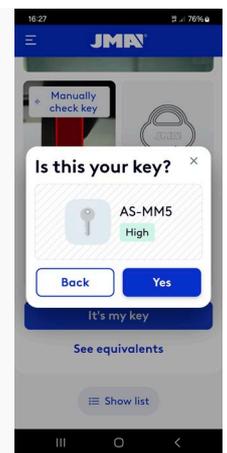
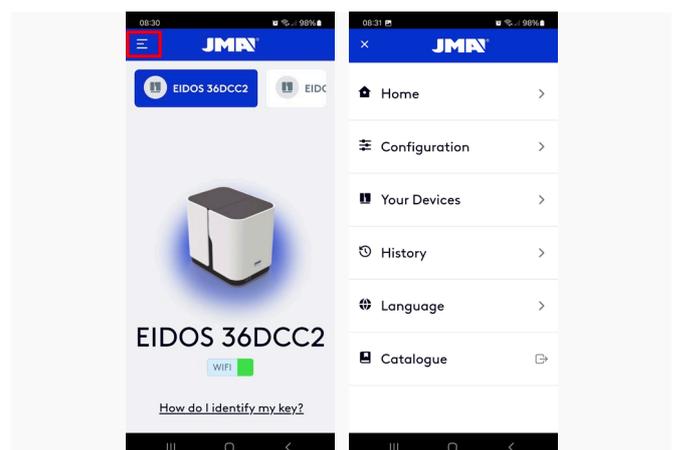


Fig. 30

4.3 JMAKEYREADER OPTIONS

JMAKeyReader has several customisation options to tailor the experience to specific user requirements. The following options can be found in the “Options” menu (three lines in the top-left):



Each section is covered separately below:

4.3.1. Configuration

This menu sub-section lets you configure the following parameters. See Fig. 32

4.3.1.1 General Information

This provides information about the app and database versions.

There is an option to download the full database in the event that a problem occurs with the local database or the app experiences an issue on start-up or when applying an update patch. See Fig. 33

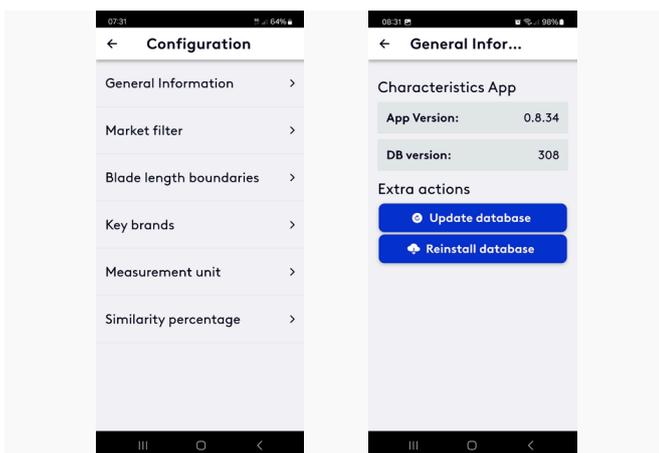


Fig. 32

Fig. 33

4.3.1.2 Market Filter

This is where you can select a specific market so the query results are filtered by the keys available in your market.

Countries can be selected or removed as per your requirements for filtering the results. See Fig. 34

4.3.1.3 Blade Length Filter

Besides analysing the profile, the EIDOS machine measures the blade boundaries. This sub-section is where you can configure the precision with which the blade is measured, between a value below and a value above. In the example shown, we have a value below of -1. This means that all those keys with a length value of 1 mm less than the value measured will be shown. The value above of 3 means that the results will include all those keys with a length value up to 3 mm more than the value measured. See Fig. 35

These values can be changed at will on this screen. If you want to see all the keys without filtering by length, simply set these values to maximum. The more precise you set these values, fewer results will be produced but with a stronger match

to the measured length. That said, there may not be a key with precisely the same length in the JMA catalogue. In these cases, a slightly longer key may still be suitable.

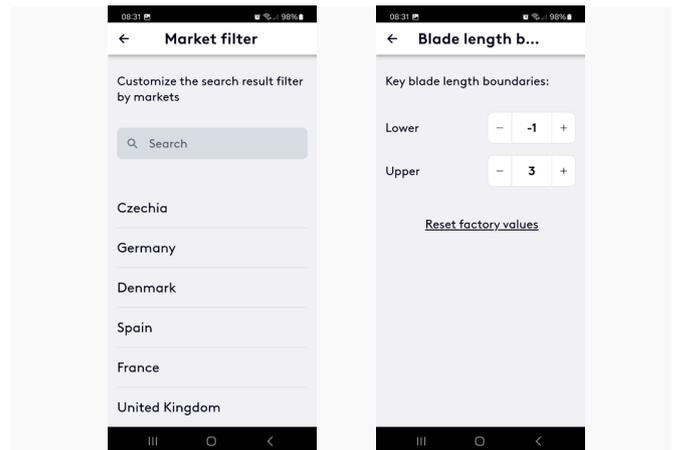


Fig. 34

Fig. 35

4.3.1.4 Key Brands

The final screen of results from the JMAKeyReader app displays the key most similar to the one photographed. However, it also provides a table of equivalents to different key brands other than JMA. In this sub-section of the Settings menu, you can decide which brands to include in that comparison table by de-selecting the ones you are not interested in. See Fig. 36

4.3.1.5 Measurement Units

You can choose whether the app displays measurements using the metric system (millimetres) or the imperial system (inches). See Fig. 37

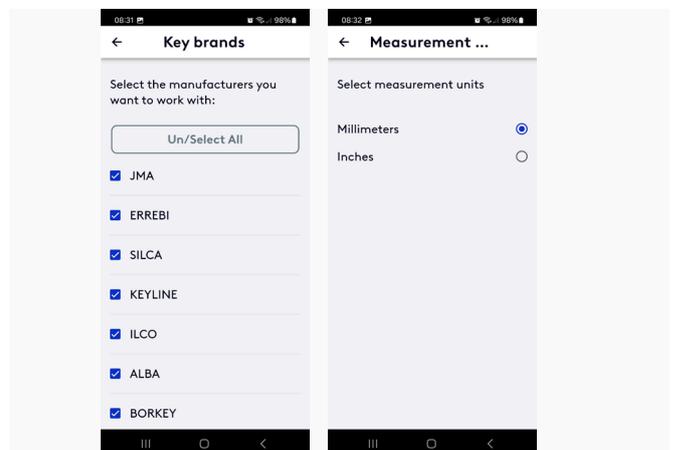


Fig. 36

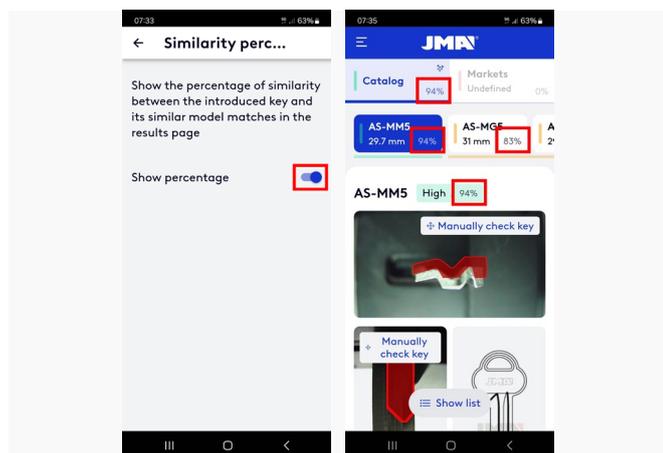
Fig. 37

4.3.1.6 Similarity Percentage

Activating the option to show a similarity percentage between the profile photographed and the profile selected as most similar is a helpful feature. This can help you differentiate the results and better see the difference between the first and second options. If there is a large difference between the two options, the first can be easily selected as the best. However, if these percentages are very close (a difference of 1-2%), then the second or even third suggested result could also be valid options.

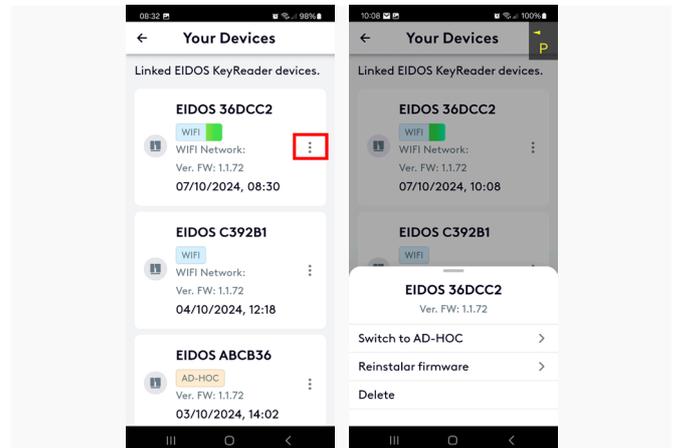
It should be taken into account that similarity is based on the photograph of the tip of a key, which may be worn or even cut, resulting in a profile loss and making it difficult to identify the profile. In those cases where the top options are all of a similar percentage, none of the results should be disregarded as a poor choice.

The image below shows how the results screen changes to display a similarity percentage with the results. In this case, it can be clearly seen that the first choice is good as it displays a 94% similarity compared to only 83% for the second choice.



4.3.2 Your Devices

Your Devices is the next sub-section in the Options menu. This is a list of all the EIDOS machines that have connected to the app. Tap on the three dots icon to access the following options:



Switch to ad-hoc or to WIFI, depending on the machine status.

Reinstall firmware -> Tapping this option will update the firmware on the machine to the latest version. Wait for the process to finish and follow the on-screen instructions. Never switch off the machine as it will restart automatically once the new firmware is installed.

Delete -> Remove the machine from your list of devices (when you no longer own that machine, for example).

4.3.3 History

This provides a list of all the latest keys recognised by the machine. See Fig. 40

4.3.4 Language

You can select the language in which to use the JMAKeyReader app, although the language is automatically detected from the operating system when installing the app. See Fig. 41

4.3.5 Catalogue

Tapping this icon takes you to the e-Catalogue on the JMA website. See Fig. 42

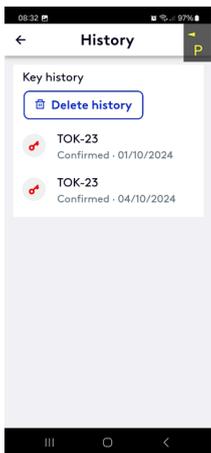


Fig. 40



Fig. 41

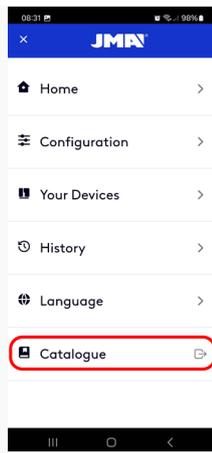
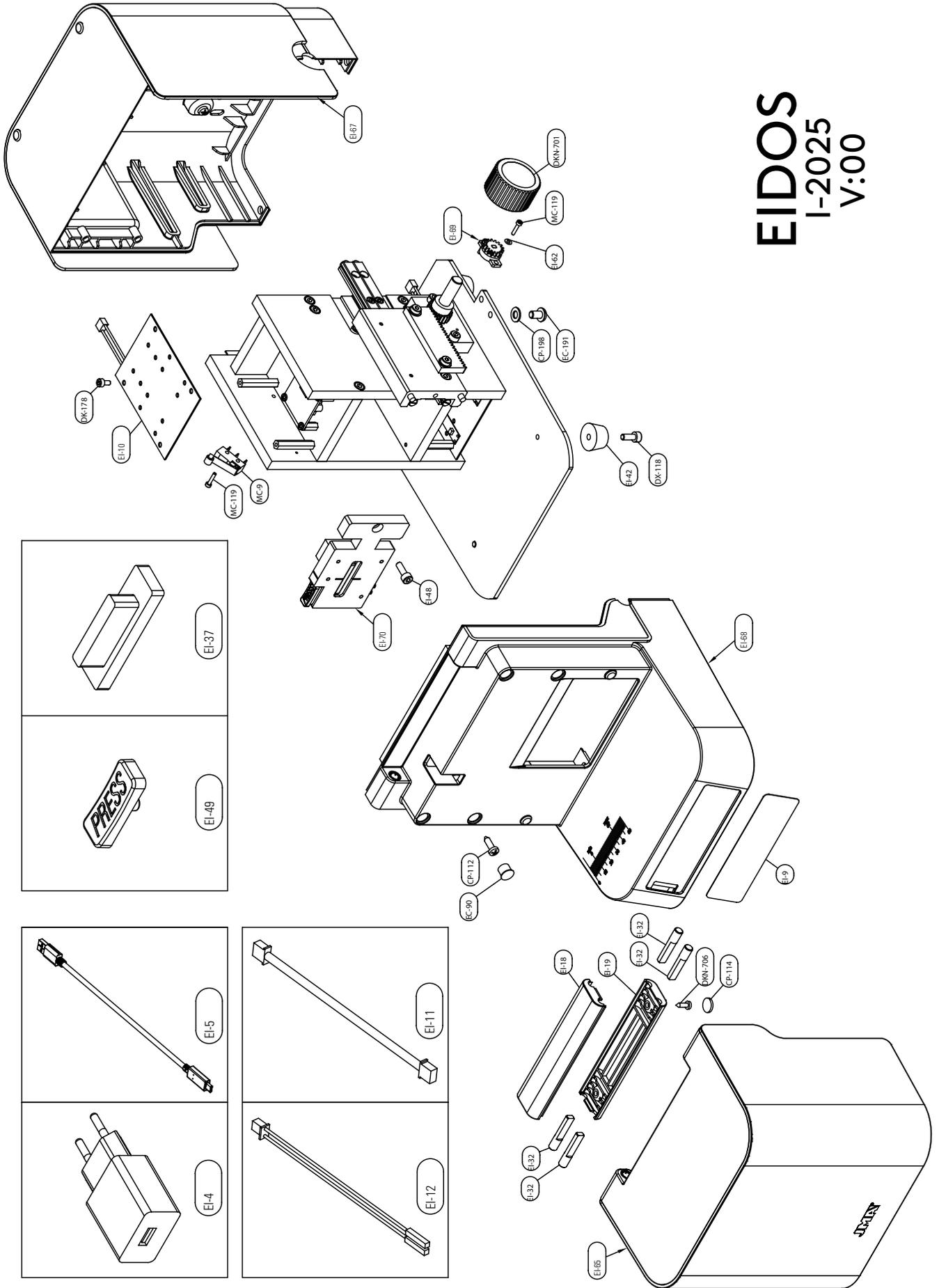


Fig. 42

5. EXPLODED VIEW

See Figure 43

EIDOS I-2025 V:00



EXPLOSIONADO - Fig. 43

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