ICOPY-X

Instruction
Manual

EXPLORING YOUR ICOPY–X

Charging Port

Arrow Keys & Enter Buttons

Display Screen

Left Select Button

Right Select Button

Power / Cancel / Force Reset Button

One Button Auto Copy (Scan / Read / Write)

RFID Card Placement Area

- **USB charging port:** This machine uses a TYPE C interface,use the distribution data cable to connect to the adapter or computer USB port to start charging. The battery icon will turn green when fully charged.

  Display screen: Use for display content

- **Left selection button:** Used to select the function prompted at the bottom left corner of the screen.

- **Right selection button:** Used to select the function prompted at the bottom left corner of the screen.

  Direction buttons: Used to select items up, down, left, and right.

- **Confirm button:** Used to confirm the selected item.

- **Scan/read card/write card button:** One–key automatic copy button, press it to quickly return to the "AUTO COPY" page.

- **Cancel/Switch/Reset button:** used to return to the previous page, cancel the operation, long press for 3 seconds to turn on,and long press for 3 seconds to turn off. Long press for 15 seconds to force reset.

EXPLORING YOUR ICOPY−X
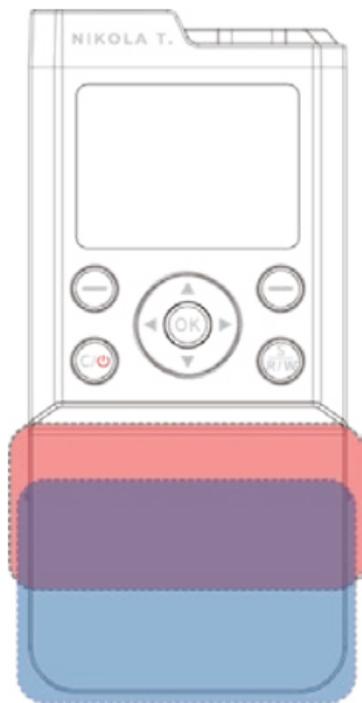
The different
RFID Areas of the
iCopy−X

● RFID Card Placement Area:

The red area as shown in the figure is the 125k low−frequency
card identification area. If it is a small keyfob card, it is recommended to put
the card in the red area of the transparent cover for the operation.

The blue area as shown in the figure is the 13.56mhz high frequency card
identification area. If it is an keyfob size card, it is recommended to put the
card in the blue area of the transparent cover for operation.If it is a full−size
white card, it can be placed directly on the transparent cover or read on the
back.

▲TIPS: The transparent cover is used to load keyfob small−size
cards, which will not slide when reading the card, and you can
carry the device around.

GETTING STARTED

Main Page ¹/² 🔋	Main Page ²/³ 🔋
⊞ Auto Copy	⌨ PC–Mode
⊟ Scan Tag	⚲ Backlight
▤ Read Tag	⊞ Diagnosis
���� Sniff Traffic	◁ Volume
⊟ Simulation	▤ About
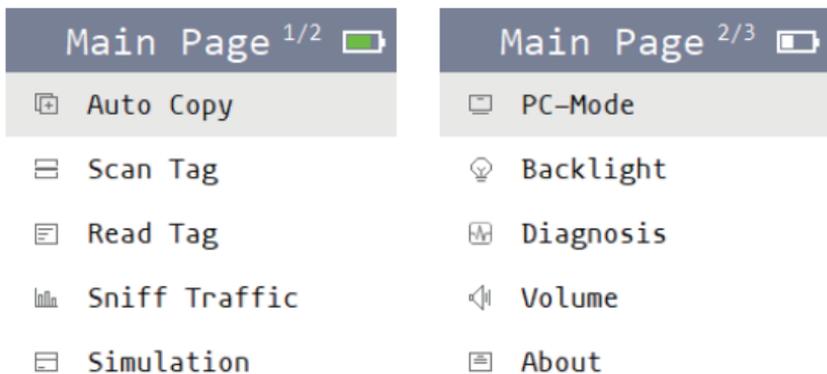
- **1. Auto Copy**
  Automatic scanning, reading, and writing of all information of the original RFID Tag to a new UID card/tag.
- **2. Scan Tag**
  Scanning of tag and getting the basic information of the tag type.
- **3. Read Tag**
  Reading of all available information of tag (including blocks and sectors).
- **4.Sniff Traffic**
  Sniffing of locked sector keys for MIFARE cards/tag.
- **5. Simulation**
  Simulation of Low and High Frequency RFID Tags
- **6.PC–MODE**
  Enters PC–Mode, used with the supplied USB cable for advanced command line functions and Mifare cracking
- **7.Backlight**
  Switches the screen backlight On/Off
- **8. Diagnosis**
  Diagnosis has two modes:User Test: Checks internal memory and both LF/HF antennasnFactory Test: Used by the factory before sale
- **9. Volume**
  Used to adjust the volume of voice prompts and button selection
- **10.About**
  Displays serial number, firmware and hardware information

CLONING 101 ON ICOPY–X

Quickly copy a card:

- **Step 1:** Place the original card
- **Step 2:** Click the "S/R/W" button or select "Auto Copy" in themenu to start the automatic copy process.
- **Step 3:** When the prompt "Read successful!" appears, take the original card, and put the UID card card.
- **Step 4:** Click the "S/R/W" button again will automatically write the card.
- **Step 5:** When the prompt "Write and verify successful!" appears, it means that you have copied a card perfectly.

⚠ **TIP:** When encountering an unsupported card, you will not be able to proceed to the next step. Some cards with encryption will automatically prompt multiple options.

- **Option 1:** Go to the reader to sniff keys.(Take the original card to the card reader to sniff, obtain the secret key, and assist in reading the card)
- **Option 2:** Enter known keys manually.(Enter a known secret key to assist in reading the card)
- **Option 3:** Force read to get partial data.(Ignore the encrypted sector, read only the unencrypted area to make a copy card)
- **Option 4:** Go into PC Mode to perform hardnest. For details about these four options, please see "Advance Use".

ADVANCE USE / PC MODE

Once connected to a windows PC via the USB Type C cable supplied.You can access a hardnested attack to crack the unknown keys of a MIFARE token.

- **Step 1:** Connect to your computer and then enter PC–MODE on the iCopy–X select Start and wait for the iCopy–X to say "PC mode Running…"
- **Step 2:** A USB flash drive will appear on the computer. Open the drive and then right click on "AUTO–Hardnest. exe"and Choose "Run as Administrator" .A program will open and should automatically connect to the iCopy if it doesn't, you will need to manually connect using the connect button and by typing in the appropriate COM port.
- **Step 3:** Click "Read Card" and the analysis will start automatically.
- **Step 4:** After the analysis is completed, the password is automatically saved you can then exit PC Mode on the iCopy –X and click "Auto Copy" again.

⚠ **TIPS:** If interrupted by an accidental error, click "Read Card" to reread the card to continue from the breakpoint.Manually add frequently used secret keys to the password library.

- **Step 1:** On the U disk, locate the following file: keys\mf1\mf_user_key.dic. Open it with Notepad or Notepad++.
- **Step 2:** Add secret keys to the list. Each secret key ends with a carriage return. Save the file after editing. All keys added to this file will be checked whenever a MIFARE series token is read.

Be aware the more secret keys stored in the cryptographic library the slower the scanning will be,
(1000 keys will take around 100 seconds to scan).

ADVANCE USE / PC MODE

To use the command line options in PC–MODE.

- **Step 1:** Connect to your computer and then enter PC–MODE on the iCopy–X select Start and wait for the iCopy–X to say "PC　mode Running…"
- **Step 2:** A USB flash drive will appear on the computer. Open the drive and then double click on "RUN.bat" This will open the Windows Command Prompt Application.It will ask you to enter the connected numeric COM Port for the iCopy–X. Enter it (device manager, COM ports)
- **Step 3:** Type help and press enter, this will bring up the firstlevel of commands that can be used with the iCopy–X

⚠ **TIP:** You can refer to the PM3 examples found online in github.com for further commands and their usage or if you are familiar with command line help commands you can use those.E.G. To use the sniffing function to sniff the interaction between a genuine reader and the token. (This will aid in advanced decryption)

- **Step 1:** At the command prompt type: 14A Sniff mode.
- **Step 2:** Remove the antenna protective cover and place the antenna between the genuine reader and the token you will be sniffing the traffic between. Swipe the token to ensure the reader recognises it.
- **Step 3:** Click "start".
- **Step 4:** You may need to continually adjust the distance between the three (Reader, iCopy–X, Token), and swipe the token multiple times at different distances to get a good data dump.
- **Step 5:** When you are happy that you have enough data bytes for a complete trace, click "finish", iCopy–X will automatically start to parse the password, display the password list.It will automatically save the password to the dictionary library.
- **Step 6:** To view the Interaction between reader and token click"SAVE", the trace will be saved to the trace directory of the U disk.

Equipment maintenance and software updates

- **Step 1:** Enter the device SN (found under the "About" menu) on the website and download the upgrade package to your PC.
- **Step 2:** Connect the ICOPY-X to your computer using the supplied USB TYPE C cable and delete any files that end in ".ipk" from the root directory.
- **Step 3:** Copy the newly downloaded upgrade package to the root directory.
- **Step 4:** Press "OK" on the second page of the "About" menu on the ICOPY-X to start the automatic upgrade.

⚠ **TIP:** Ensure that the serial number has been entered correctly before starting as this could cause the upgrade to fail.

Updating Firmware

USING iCopy-X
Please visit www.icopyx.com/updates
to download the latest firmware.
Please connect iCopy-X to a computer
with updated software.
Note: Do not disconnect when iCopy-X is updating.

FAQ

What should I do if the device crashes?

The device may freeze or freeze due to various abnormal conditions. Long press the "Power" button for 15 seconds to force a reset.

Why can't the device complete the decryption?

In the list of supported cards, 98% of the cards can be decrypted and copied. But it is not ruled out that a few special variant cards cannot be cracked conventionally. Decryption can be assisted by sniffing, chameleon detection and other means.

How to choose when there are four options: "Sniff", "Enter", "Force", and "PC-MODE"?

If you have a computer, the system is W10, and the CPU is i3 and above, it is recommended to select "PC-MODE" first to use the computer's advanced cracking function. If the computer fails to crack, or there is no computer. You can try to use "Sniff" to sniff the password, and you need to prepare the credit card machine or access control corresponding to the card. If you have obtained one or several passwords through "Sniff", you can try to use "Force" to force the card to be read. Use incomplete data to make a cloned card. There is still an 80% probability that it can be used normally. If you already have one or more passwords of the card, you can manually add the known passwords by pressing "Enter".

Technical Support

To use the command line options in PC-MODE.

- Warranty regulations:
  1. This product enjoys a one-year limited quality guarantee from the date of your initial purchase.

  2. Please keep the valid proof of purchase, and ensure that the product serial number is not worn out as a proof of warranty.

  3. During the warranty period, if this product is used due to

4. Normal wear and tear or normal aging and damage caused by accident or improper use are not covered by iCopy-X's warranty.

5. If there is no valid sales certificate or the product serial number is unclear and altered, the product can be regarded as an unauthorized sale product, and the company has the right torefuse service online technical support:

SAFETY GUIDELINES

In order to achieve maximum safety while using your iCopy-X,we suggest that you adopt the following guidelines:

Should you have trouble operating the device properly and troubleshooting does not work, unplug the device and contact iCopy-X support for assistance. Do not take apart the device (doing so will voidyour warranty) and do not attempt to operate it under abnormal current loads.

Keep the device away from liquid, humidity, or moisture.Operate the device only within the specific temperature range of 0°C (32°F) to 40°C (104°F). Should the temperature exceed this range, unplug and/or switch off the device in order to let the temperature stabilize to an optimal level.

Maintenance and Use

The iCopy-X requires minimum maintenance to keep it in optimum condition. Once a month we recommend you to unplug the device and clean it using a soft cloth swab to prevent dirt buildup. Do not use soap or harsh cleaning agents.

WHAT SYSTEMS ARE SUPPORTED FOR RFID CARD CLONING (LOW FREQUENCY)

LF READ Supported	iCopy–X	iCopy–XR	iCopy–XS
EM Marin	YES	YES	YES
HID Prox	YES	YES	YES
HID Indala(Motorola)	YES	YES	YES
AWID	YES	YES	YES
IoPorx	YES	YES	YES
G–Prox	YES	YES	YES
SecuraKey	YES	YES	YES
Viking(FDI)	YES	YES	YES
Pyramid	YES	YES	YES
FDX–B	YES	YES	YES
Gallagher	YES	YES	YES
Jablotron	YES	YES	YES
Keri	YES	YES	YES
Nedap	YES	YES	YES
Noralsy	YES	YES	YES
PAC/Stanley	YES	YES	YES
Paradox	YES	YES	YES
Presco	YES	YES	YES
Visa2000	YES	YES	YES
HITAG	YES	YES	YES
Nexwatch	YES	YES	YES
EM4305(unencryption)	YES	YES	YES
T5577(encryption)	YES	YES	YES

WHAT RFID CARDS ARE WE ABLE TO WRITE/ CLONE

Tag WRITE Supported	iCopy–X	iCopy–XR	iCopy–XS
M1–4b–L1	YES (Manufacturer limit)	YES (Manufacturer limit)	YES
M1–4b–L2	YES (Manufacturer limit)	YES (Manufacturer limit)	YES
M1–4b–L13	YES (Manufacturer limit)	YES (Manufacturer limit)	YES
iD1	YES (Manufacturer limit)	YES (Manufacturer limit)	YES
iD2	YES	YES	YES
M4–4b		YES	YES
M1–7b		YES	YES
M4–7b		YES	YES
UL		YES	YES
UL–C		YES	YES
ULEV1		YES	YES
Ntag		YES	YES
iCode			YES
iCL			YES (Manufacturer limit)
iCE			YES (Manufacturer limit)

WHAT SYSTEMS ARE SUPPORTED FOR RFID CARD CLONING (HIGH FREQUENCY)

Tag WRITE Supported	iCopy–X	iCopy–XR	iCopy–XS
MIFARE 1k S60 4 Byte	YES	YES	YES
MIFARE 2k 4 Byte		YES	YES
MIFARE Mini 4 Byte		YES	YES
MIFARE 1k S60 7 Byte		YES	YES
MIFARE 4k S60 4 Byte		YES	YES
MIFARE 4k S70 7 Byte		YES	YES
MIFARE Ultralight		YES	YES
MIFARE Ultralight_C		YES	YES
MIFARE Ultralight EV1		YES	YES
NTAG213 215 216		YES	YES
Others READ Supported	iCopy–X	iCopy–XR	iCopy–XS
iCLASS Legacy			YES
iCLASS Elite			YES
iCODE SLI(Partial)			YES
iCODE SLIX(Partial)			YES

OTHER FUNCTIONALITY

	iCopy–X	iCopy–XR	iCopy–XS
Sniff	YES	YES	YES
SIMULTION	YES	YES	YES
PC MODE	YES	YES	YES
GUI in U disk	YES	YES	YES
CMD in U disk		YES	YES
OTG support	YES	YES	YES

WHAT SYSTEMS ARE NOT SUPPORTED FOR RFID CARD CLONING (LOW & HIGH FREQUENCY)

	iCopy–X	iCopy–XR	iCopy–XS
iCLASS ER	NOT SUPPORTED	NOT SUPPORTED	NOT SUPPORTED
iCLASS SE	NOT SUPPORTED	NOT SUPPORTED	NOT SUPPORTED
iCLASS SEOS	NOT SUPPORTED	NOT SUPPORTED	NOT SUPPORTED
SHOWA	NOT SUPPORTED	NOT SUPPORTED	NOT SUPPORTED
SECURAKEY	NOT SUPPORTED	NOT SUPPORTED	NOT SUPPORTED
MIFARE DESFIRE	NOT SUPPORTED	NOT SUPPORTED	NOT SUPPORTED
OTHERS NOT MENTIONED	NOT SUPPORTED	NOT SUPPORTED	NOT SUPPORTED

Hardware Specification

Charging and battery

Battery capacity	2000mAh 7.4Wh		
Charging interface	USB type-C double-sided charging interface		
Charging power	10W (MAX)	Charging time	2 hours
OTG function	supports	Standby time	4.5 hours

Processor and memory

CPU technology	Cortex-A7	CPU frequency	600MHz
GPU	ARM Mali		

Memory

256MB+4GB (iCopy-X)	256MB+8GB (iCopy-XR)
256MB+16GB (iCopy-XS)	

*The actual usable capacity will be reduced and different due to many factors: because the operating system occupies part of thec memory (RAM), the actual available space is less than the marked memory capacity; because the operating system and preinstalled programs occupy part of the flash memory (ROM), the actual available storage space is less than the identified flash memory capacity.

Hardware Specification

Screen

Refresh rate	50Hz	Resolution	240 x 240
Size	1.3 inches		

RFID system

HF(13.56MHz)	ISO14443A/ISO14443B/ISO15693/PICOPASS
LF(125/134kHz)	ASK/FSK/PSK

Protocol type

MIFARE/ICODE/Legic/Felica/SRI512/TOPAZ/iClass/EMMarin/
HIDProx/Indala/Motorola/AWID/IoProx/G Prox/SecuraKey/
Viking(FDI)/Pyramid/FDX–B/ Gallagher/Jablotron/ Keri/ Nedap/
Noralsy/PAC/Stanley/Paradox/Presco/Visa2000/HITAG/
Nexwatch/EM4305/T5577

Physical dimension

Height	120.5mm	Width	55.2mm
Thickness	24mm	Weight	113.5g
Antenna thickness		9.7mm	

Operating System

NIUI 1	Based on Linux

Packing list

iCopy–X x1、USB TYPE–C DATA CABLE x1、Box of RFID Cards x1
Manual x1

NIKOLA T.
LAB