



Váš nápad, náš hardvér

USER MANUAL

NFC / RFID reader and writer MOD337

13.56 MHz and 125 kHz
with the Cyb_Nfctool software

Applies to Cyb_Nfctool V2.60
and reader firmware H00S07
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1. What is the MOD337

The MOD337 is a USB reader, writer and emulator for contactless chips in two bands: **13.56 MHz** (HF – Mifare cards and key fobs, NTAG stickers) and **125 kHz** (LF – EM4100, HID and similar key fobs and cards). It connects to a computer with a USB cable and is controlled by the **Cyb_Nfctool** program (Windows, Android).

Important: use the right software

This reader works with **Cyb_Nfctool**. The wCopy / nfcPro (NSCCN) program does not communicate with it and reports "Failed to read card." or "Card reading error." – even when both the reader and the chip are fine. See chapter 11 for details.

2. Which chips the reader supports

Band	Chip type	Reading	Copying
13.56 MHz	Mifare Classic 1K / 4K (S50, S70) and compatible	yes – number (UID) and content, if the keys can be found	yes, to a blank UID / CUID / FUID / UFUID chip
13.56 MHz	NTAG213 / 215 / 216	yes	yes, content to a blank NTAG
125 kHz	EM4100 / TK4100 (EM-Marin)	yes – chip ID	yes, to a blank T5577 or EM4305
125 kHz	HID Prox and other types listed in the program	yes	yes, to a blank T5577
13.56 MHz	Mifare DESFire, Mifare Plus, iClass, Legic, payment cards, ID documents	chip number at most	no – encrypted chips cannot be copied

The list of supported chips comes from the manufacturer's documentation. At Techfun we have verified reading of a Mifare Classic 1K card (number and full content) and of a 125 kHz EM4100-type key fob (chip ID) on this reader.

3. Connection and software

- 1 Connect the reader to the computer with a **data** USB cable (not a charge-only cable). No drivers are needed.
- 2 A small USB drive appears on the computer, containing a single file **cyb_nfctool.url**. It is a link to the manufacturer's software page. This drive also tells you that you have the reader version this manual applies to.
- 3 Open **<https://www.camelote.cn/nfctools/>** and download **Cyb_Nfctool.exe** (Windows) or the Android app. The program needs no installation, just run it.
- 4 The program connects to the reader by itself; there is no port to select. A green **Connected** label appears at the bottom left.
- 5 If the program is in Chinese, switch it to English with the  button at the top of the left menu.

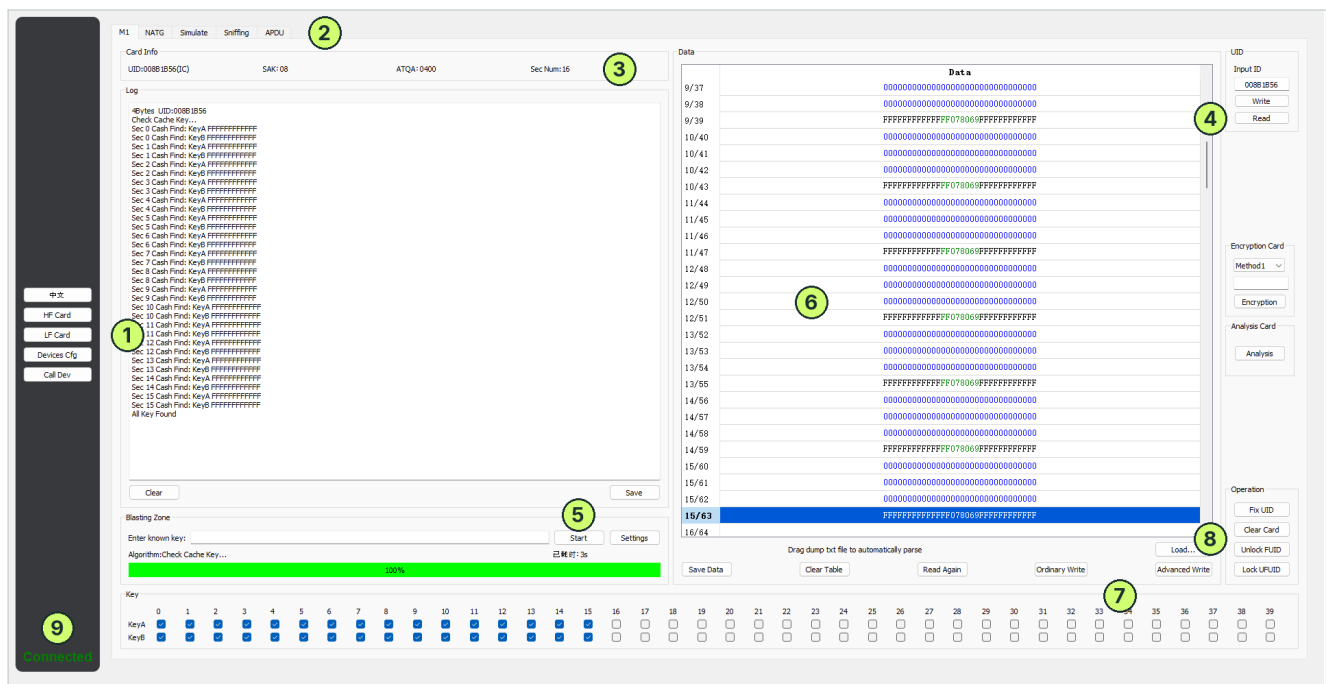
The reader identifies itself as a USB device with VID 0483 / PID 4343. It does not create a serial (COM) port and does not act as a keyboard – it never “types” the chip number anywhere; it reads only on command from the program.

4. The program window

How to move around the program

- On the left there is a **dark panel with buttons**. They switch the main screens: **HF Card** for 13.56 MHz chips and **LF Card** for 125 kHz chips.
- At the top there are **tabs** (for example M1, NATG, Simulate...). The program remembers the last tab you opened, so after clicking HF Card or LF Card a different tab than you need may be shown – always click the tab named in the procedure as well.
- A **single click with the left mouse button** is enough for everything. The result appears within a few seconds.
- After some reads a **small message window** pops up (for example "Read ID Ok"). Click **OK** in it – while it is open, the program does not react to other clicks.
- Leave the chip lying **on the centre of the reader** the whole time. Do not hold it in your hand above the reader.
- Reading cannot break anything. Only the **Write, Format, Clear Card, Fix UID, Lock and Unlock** buttons change a chip – do not click them when reading.

Screen overview



The HF Card → M1 screen after reading a Mifare Classic 1K card. The numbers match the description below.

- Main menu.** – language switch, **HF Card** – 13.56 MHz chips, **LF Card** – 125 kHz chips, **Devices Cfg** – firmware version and reader settings, **Call Dev** – locate the connected reader.
- HF tabs.** M1 = Mifare Classic, NATG = NTAG (a typo in the program), Simulate = card emulation, Sniffing = capturing communication, APDU = commands for advanced users.
- Card Info.** Chip number (UID), SAK and ATQA values and the number of sectors of the card on the reader.
- UID → Read.** Quick read of the chip number. The Write button above it writes the number to a blank chip.
- Start.** Reads the full content of the card – the program first finds the keys of each sector. Progress is shown in the Log window.

- ⑥ **Data.** The blocks read from the card. **Save Data** stores them in a file, **Load...** loads them from a file.
- ⑦ **Ordinary Write / Advanced Write.** Writes the loaded data to a blank chip, i.e. the actual copying.
- ⑧ **Operation.** Service functions for special chips (Fix UID, Clear Card, Unlock FUID, Lock UFUID). Do not use them without a reason – they erase or permanently lock the chip.
- ⑨ **Connection status.** Connected = the reader is connected and ready.

5. How to find out which chip you have

A key fob usually does not say whether it works at 13.56 MHz or 125 kHz. You can find out in a minute:

- 1 Place the chip on the centre of the reader. According to the manufacturer the reader beeps **twice** for a 13.56 MHz chip and **once** for a 125 kHz chip. If there is no beep, the chip was not recognised – try moving it.
- 2 Click **HF Card → M1** and then **Read** in the UID section at the top right. If “Read ID OK” appears and the Card Info line is filled in, you have a **13.56 MHz** chip.
- 3 If reading fails, click **LF Card → Reading and writing** and then the **upper Read in the ID row** (not the Read in the HID row). If “ID Scan: 125Khz OK” and the chip ID appear, you have a **125 kHz** chip.
- 4 If that fails too, try **Read** in the HID row, change the position of the chip and, if needed, the frequency in the Freq field.

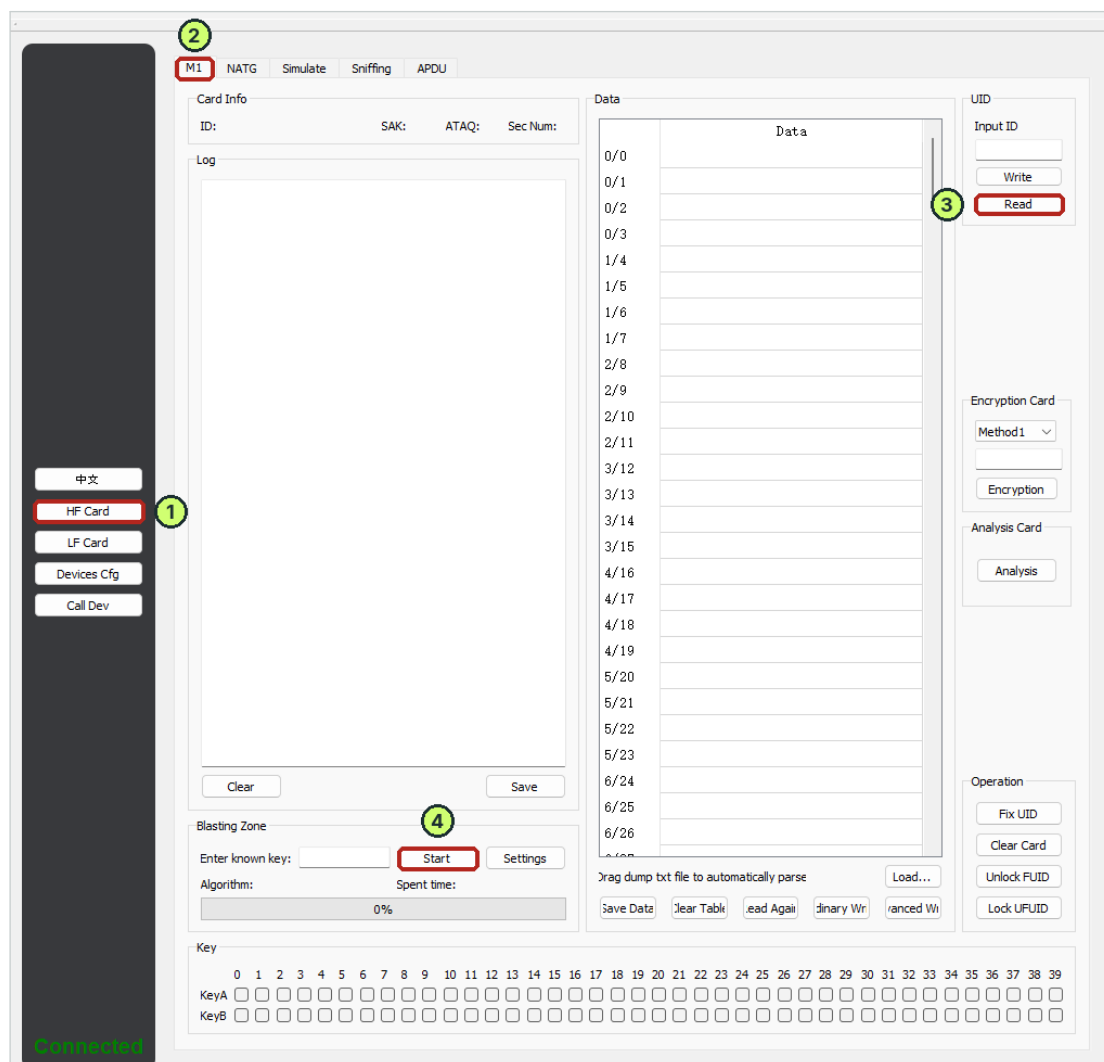
Card Info			
UID:008B1B56(IC)	SAK: 08	ATQA: 0400	Sec Num: 16

Successful read of a 13.56 MHz chip: the Card Info line with the chip number, SAK, ATQA and the number of sectors.

SAK	Chip type	Can it be copied?
08	Mifare Classic 1K	yes
18	Mifare Classic 4K	yes
00	Mifare Ultralight / NTAG	content yes
20	DESFire, Mifare Plus or another encrypted chip	no

6. Reading a 13.56 MHz chip

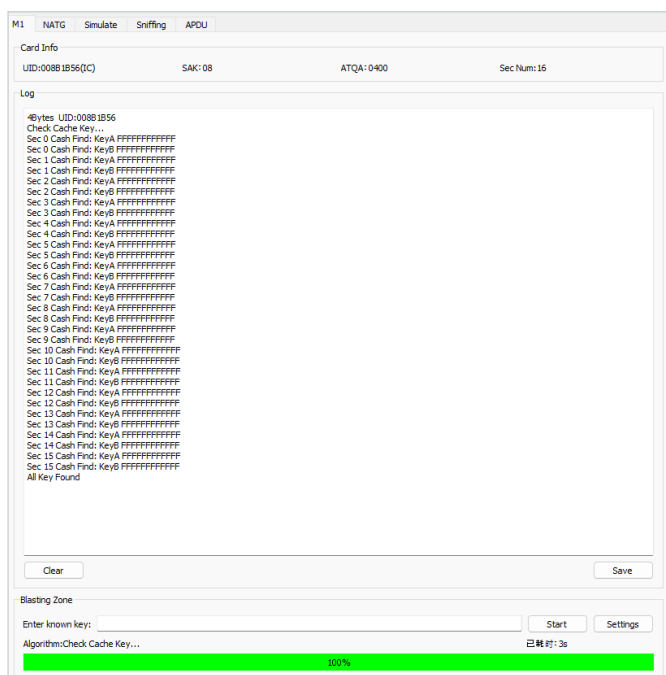
Place the card or key fob on the centre of the reader and leave it there. Then click in the order of the numbers in the picture:



Where to click when reading a 13.56 MHz chip. Numbers show the order, red frames mark the buttons.

- ① In the dark panel on the left click **HF Card**.
- ② At the top click the **M1** tab (leftmost).
- ③ In the UID box at the top right click **Read** – it is the lower of the two buttons; do not use the upper Write. A “Read ID Ok” window pops up, click OK. The Card Info line at the top shows the chip number (UID).
- ④ To read the full content of the chip, click **Start**. Lines are added to the Log window, ending with “All Key Found”; the bar below the button turns green at 100 %.

If a “No valid card found, please place the correct card” window pops up after clicking Read, the reader does not see a 13.56 MHz chip: move it, or it is a 125 kHz chip (chapter 7). Reading with Start takes from a few seconds to tens of minutes, depending on how the chip is protected – do not move the chip meanwhile. Use **Save Data** (below the Data table) to store the content in a file as a backup.



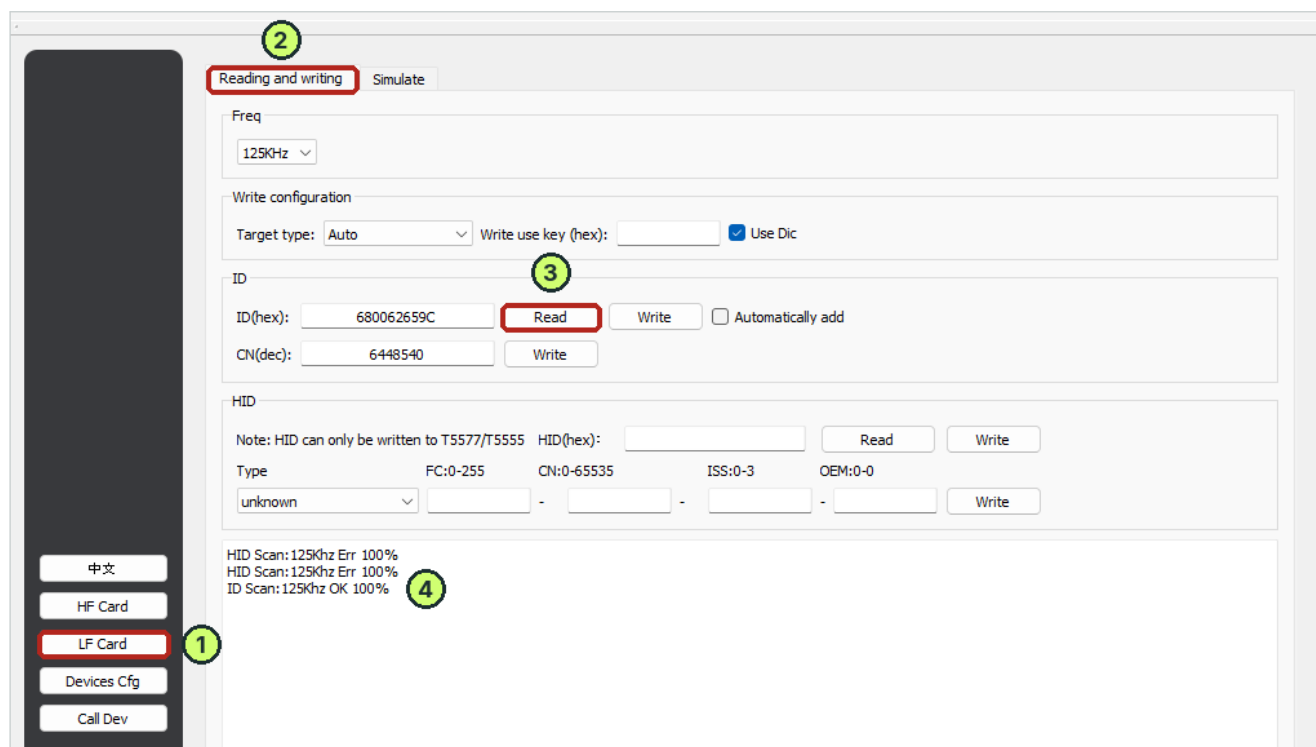
What the result looks like: a whole card read in 3 seconds, the Log window lists the keys found for all 16 sectors.

7. Reading a 125 kHz chip

Note: there are two Read buttons on the screen

Common 125 kHz key fobs and cards (EM4100) are read with the **upper Read in the ID row** – right next to the ID(hex) field. The lower Read in the HID row is only for HID Prox cards; with a common key fob it reports "HID Scan: 125Khz Err" even when both the key fob and the reader are fine.

Place the key fob on the centre of the reader and leave it there. Then click in the order of the numbers in the picture:



Where to click when reading a 125 kHz chip. The output shows two failed attempts with Read in the HID row, then a successful read with Read in the ID row.

- 1 In the dark panel on the left click **LF Card**.
- 2 At the top click the **Reading and writing** tab.
- 3 Click **Read in the ID row** – the upper of the two Read buttons, right next to the ID(hex) field.
- 4 Look at the white area below the buttons. Within a few seconds a line "**ID Scan: 125Khz OK**" is added, the bar at the very bottom is green and the ID(hex) and CN(dec) fields are filled in. That is the number of your chip – done.

If the line "ID Scan: 125Khz Err" is added and the bar is red, move the key fob slightly and click Read again. Only if it keeps failing, try Read in the HID row and then HF Card (chapter 6). The Clear button at the bottom right removes old lines from the output.

What the other fields mean

- **Freq** – operating frequency. Common key fobs use 125 kHz; no need to change it.
- **Write configuration** – type of blank chip when writing. Leave it on Auto.
- **ID(hex)** – the chip number in hexadecimal, **CN(dec)** – the same number in decimal.
- **HID row** – reading and writing HID Prox cards and related types.

- **Write buttons** – write to a blank chip. Do not click them when reading.

The ten-digit number printed on the key fob

EM4100 key fobs usually carry a printed ten-digit number, for example 0006448540. It is the last 8 characters of the chip ID converted from hexadecimal to decimal – in the picture the ID is 68**0062659C**, i.e. 6448540. The program shows the same number in the CN(dec) field, so you can easily check that it read the right chip.

8. Copying a chip

Copy only your own chips

Make a copy only of a chip that belongs to you, or with the consent of the system administrator (building manager, employer). Writing overwrites the content of the target chip – when writing, keep only the blank chip on the reader, never the original.

125 kHz chip

- 1 Place the original on the reader and click **Read in the ID row** in **LF Card → Reading and writing** (chapter 7).
- 2 Remove the original and place a blank **T5577** chip.
- 3 Click **Write** in the same row you read from (ID or HID).
- 4 Click **Read** again and compare the number with the original.

13.56 MHz chip (Mifare Classic)

- 1 Place the original and read its full content with **Start** (chapter 6). Store it with **Save Data**.
- 2 Remove the original and place a blank UID, CUID, FUID or UFUID chip (chapter 9).
- 3 Click **Advanced Write**. If the chip does not support this method, the program falls back to a standard write (Ordinary Write).
- 4 The program reports the number of blocks written. Blocks that could not be written are marked red in the Data table.
- 5 If the system checks only the chip number, it is enough to use **UID → Read** on the original, swap the chip and click **UID → Write**.

At Techfun we have verified reading in both bands on this reader. The writing procedure is given according to the manufacturer's documentation.

9. Which blank chips to buy

Original	Blank chip	Note
125 kHz – EM4100 / TK4100	T5577 (or EM4305)	Rewritable. A plain EM4100 chip is read-only and cannot be rewritten.
125 kHz – HID Prox	T5577	HID can only be written to T5577 / T5555.
13.56 MHz – Mifare Classic	UID	The cheapest, can be rewritten repeatedly. Some systems detect it as a copy.
	CUID	Rewritable, the chip number is changed by a standard write. Passes most checks.
	FUID	The chip number can be written only once, then the chip behaves like an original. For systems that reject copies.
	UFUID	Rewritable until you lock it (Lock UFUID). After locking it behaves like an original.

An ordinary “Mifare 1K” card has its chip number fixed at the factory, so it is not enough for a faithful copy.

10. Other functions of the program

- **HF Card → NATG** – reading NTAG stickers (Read tag) and writing a phone number, web address, Wi-Fi details or a business card.
- **Simulate** (HF and LF) – the reader can behave like a stored chip. There are 16 memory slots for each band.
- **HF Card → Sniffing** – captures the communication between a card and the door reader; used to obtain keys that the Start button could not find.
- **Devices Cfg → Versioning** – reader firmware version and its update with a .pack file from the manufacturer.
- In these windows **Reread** means “load from the reader” and **Rewrite** means “store to the reader”.

11. Troubleshooting

What happens	Cause and solution
wCopy / nfcPro reports "Failed to read card." or "Card reading error."	Wrong software. wCopy looks for a different type of reader and does not communicate with this one at all, so it does not matter which section or frequency you choose in it. Use Cyb_Nfctool (chapter 3).
Cyb_Nfctool does not show Connected	Replace the USB cable with a data cable, connect the reader directly to the computer (not through a hub), close other reader programs and start Cyb_Nfctool again.
No drive with cyb_nfctool.url appeared after connecting	You probably have a different reader version. Write to us and send a photo of the reader from both sides.
HF Card → Read fails	The chip may be 125 kHz – try LF Card. Move the chip, remove the metal key ring.
LF Card → "HID Scan: 125Khz Err"	You clicked Read in the HID row. Common EM4100 key fobs are read with the upper Read in the ID row (chapter 7).
LF Card → "ID Scan: 125Khz Err"	The chip is badly positioned – move it and try again. Or it is not an EM4100 type (try Read in the HID row or HF Card). A new blank T5577 chip can be read only after the first write.
Start runs very long or does not find all keys	The chip uses its own keys. Let the reading finish and do not move the chip. If the keys are not found, the chip has stronger protection and may not be copyable this way.
Some rows are red after writing	The target chip is not rewritable (UID/CUID/FUID/UFUID), is locked, or has a weak signal – change its position.
The copy reads fine but does not open the door	The system detects rewritable chips – try an FUID chip. Or the original uses encryption that cannot be copied.
The program is in Chinese	Switch the language with the top 中文 button in the left menu.

12. Frequently asked questions

- **Do I need to install a driver?** No, the reader works right after connecting.
- **Will the reader type the chip number into Excel like a keyboard?** No. The number is shown only in Cyb_Nfctool.
- **Can reading damage the chip?** No. Only the Write, Format, Clear Card, Fix UID, Lock and Unlock buttons change a chip.
- **Can a payment card or an ID card be copied?** No.
- **Does the program run on macOS or Linux?** The manufacturer offers versions for Windows and Android.

Need help?

Write to techfun@techfun.sk or call **+421 952 559 014** (working days 7:30 – 17:00). A photo of the chip from both sides and a screenshot of the program will help us.