

Proxmark3 Easy quick start Manual

Hardware description:



LF area: For Low Frequency ID card

HF area: For High Frequency IC card

Usb: connect to PC

Button: for stopping command or reset

Card: ID-T5577 is Low Frequency, the ones that start with IC are High Frequency, the blue key is High frequency IC card.

Software description:

For the convenience of beginners, we downloaded the latest compilation-free Proxmark Easy software from github (the software version is v4.17511 2023, the download method can be found at the end of the document.) and copied the software to a USB flash drive. You insert the USB flash drive into your computer and you can use the software directly. (It is recommended to copy it to your computer and keep a copy)

The following program uses win10 as an example.

1. Use the original data cable to connect the proxmark easy device and PC. Under normal circumstances, the computer will beep to indicate that a device is connected.
2. Insert the USB flash drive in the box and enter the E:\FOR_Proxmark_Easy_512K\PM3_2023 directory. The specific drive letter is subject to the actual display.
3. Double-click **pm3-flash-bootrom.bat** to run the script

```
C:\Windows\system32\cmd.exe
[+] Session log E:\FOR_Proxmark_Easy_512K\PM3_2023\client\.\proxmark3/logs/log_20231123131611.txt
[+] loaded from JSON file E:\FOR_Proxmark_Easy_512K\PM3_2023\client\.\proxmark3/preferences.json
[+] About to use the following file:
[+] bootrom.elf
[+] Loading ELF file bootrom.elf
[+] ELF file version Iceman/master/v4.17511-19-g34a9eb76a-suspect 2023-11-21 11:51:50 e2be592c1

[+] Waiting for Proxmark3 to appear on COM7
[+] 59 found
[+] Entering bootloader...
[+] (Press and release the button only to abort)
[+] Waiting for Proxmark3 to appear on COM7
[+] 48 found
[+] Available memory on this board: 512K bytes

[+] Permitted flash range: 0x00100000-0x00180000
[+] Loading usable ELF segments:
[+] 0: V 0x00100000 P 0x00100000 (0x00000200->0x00000200) [R X] @0x94
[+] 1: V 0x00200000 P 0x00100200 (0x00000d18->0x00000d18) [R X] @0x298

[+] Flashing...
[+] Writing segments for file: bootrom.elf
[+] 0x00100000..0x001001ff [0x200 / 1 blocks]
[+] ok
[+] 0x00100200..0x00100f17 [0xd18 / 7 blocks]
[+] ..... ok
[+] All done

[+] Have a nice day!
```

4. Double-click **pm3-flash-all.bat** to run the script

```
C:\Windows\system32\cmd.exe
[+] Session log E:\FOR_Proxmark_Easy_512K\PM3_2023\client\.\proxmark3/logs/log_20231123130042.txt
[+] loaded from JSON file E:\FOR_Proxmark_Easy_512K\PM3_2023\client\.\proxmark3/preferences.json
[+] About to use the following files:
[+] bootrom.elf
[+] fullimage.elf
[+] Loading ELF file bootrom.elf
[+] ELF file version Iceman/master/v4.17511-19-g34a9eb76a-suspect 2023-11-21 11:51:50 e2be592c1

[+] Loading ELF file fullimage.elf
[+] ELF file version Iceman/master/v4.17511-19-g34a9eb76a-suspect 2023-11-21 11:52:02 e2be592c1

[+] Waiting for Proxmark3 to appear on COM7
[+] 59 found
[+] Entering bootloader...
[+] (Press and release the button only to abort)
[+] Waiting for Proxmark3 to appear on COM7
[+] 48 found
[+] Available memory on this board: 512K bytes

[+] Permitted flash range: 0x00100000-0x00180000
[+] Loading usable ELF segments:
[+] 0: V 0x00100000 P 0x00100000 (0x00000200->0x00000200) [R X] @0x94
[+] 1: V 0x00200000 P 0x00100200 (0x00000d18->0x00000d18) [R X] @0x298

[+] Loading usable ELF segments:
[+] 0: V 0x00102000 P 0x00102000 (0x00049d2c->0x00049d2c) [R X] @0x98
[+] 1: V 0x00200000 P 0x0014bd2c (0x00001b74->0x00001b74) [R X] @0x49dc8
[+] Note: Extending previous segment from 0x49d2c to 0x4b8a0 bytes

[+] Flashing...
[+] Writing segments for file: bootrom.elf
[+] 0x00100000..0x001001ff [0x200 / 1 blocks]
[+] ok
[+] 0x00100200..0x00100f17 [0xd18 / 7 blocks]
[+] ..... ok

[+] Writing segments for file: fullimage.elf
[+] 0x00102000..0x0014d89f [0x4b8a0 / 605 blocks]

.....
@@@ @@@@@@@ @@@@@@@@ @@@@@@@@ @@@@@@ @@@ @@@
@! !@@ @! @! @! @! @! @! @! @! @!
!! @! @! !: @! ! @! @! @! @! @! @!
! !: !! !: !: !: !: !: !: !:
: : : : : : : : : : : :
.....
..... ok
[+] All done

[+] Have a nice day!
```

5. Double-click **pm3.bat** to run the script:

```
C:\Windows\system32\cmd.exe
[=] Session log E:\FOR_Proxmark_Easy_512K\PM3_2023\client\.\proxmark3\logs\log_20231123130338.txt
[+] loaded from JSON file `E:\FOR_Proxmark_Easy_512K\PM3_2023\client\.\proxmark3\preferences.json`
[=] Using UART port COM7
[=] Communicating with PM3 over USB-CDC

88888888b. 888b   d888   d88888b.
888  Y88b 8888b  d8888  d88P  Y88b
888  888 88888b.d88888  .d88P
888  d88P 888Y88888P888  8888"
88888888P" 888 Y888P 888  "Y8b.
888  888  Y8P  888 888  888
888  888  "    888 Y88b d88P
888  888  888  888 "Y8888P" [ ]

[ Proxmark3 RFID instrument ]
MCU..... AT91SAM7S512 Rev A
Memory.... 512 KB ( 61% used )

Client.... Iceman/master/v4.17511-19-g34a9eb76a 2023-11-21 11:52:11
Bootrom... Iceman/master/v4.17511-19-g34a9eb76a-suspect 2023-11-21 11:51:50
OS..... Iceman/master/v4.17511-19-g34a9eb76a-suspect 2023-11-21 11:52:02
Target.... PM3 GENERIC

[=] No previous history could be loaded
[usb] pm3 -->
```

When you see pm3-->, congratulations, you have completed the environment construction and can execute specific command lines.

The order is **pm3-flash-bootrom.bat**, then **pm3-flash-all.bat**, and **pm3.bat** at last.

Common commands:

Help

```
[usb] pm3 --> help
help      Use `<command> help` for details of a command
prefs     { Edit client/device preferences... }

----- Technology -----
analyse   { Analyse utils... }
data      { Plot window / data buffer manipulation... }
emv       { EMV ISO-14443 / ISO-7816... }
hf        { High frequency commands... }
hw        { Hardware commands... }
lf        { Low frequency commands... }
nfc       { NFC commands... }
piv       { PIV commands... }
reveng    { CRC calculations from RevEng software... }
smart     { Smart card ISO-7816 commands... }
script    { Scripting commands... }
trace     { Trace manipulation... }
wiegand   { Wiegand format manipulation... }

----- General -----
auto      Automated detection process for unknown tags
clear     Clear screen
hints     Turn hints on / off
msleep    Add a pause in milliseconds
rem       Add a text line in log file
quit      Exit program
exit      Exit program

[usb] pm3 -->
```

Hf

```
[usb] pm3 --> hf help
----- High Frequency -----
14a { ISO14443A RFIDs... }
14b { ISO14443B RFIDs... }
15 { ISO15693 RFIDs... }
cipurse { Cipurse transport Cards... }
epa { German Identification Card... }
emrtd { Machine Readable Travel Document... }
felica { ISO18092 / FeliCa RFIDs... }
fido { FIDO and FIDO2 authenticators... }
fudan { Fudan RFIDs... }
gallagher { Gallagher DESFire RFIDs... }
ksx6924 { KS X 6924 (T-Money, Snapper+) RFIDs }
jooki { Jooki RFIDs... }
iclass { ICLASS RFIDs... }
legic { LEGIC RFIDs... }
lto { LTO Cartridge Memory RFIDs... }
mf { MIFARE RFIDs... }
mfp { MIFARE Plus RFIDs... }
mfu { MIFARE Ultralight RFIDs... }
mfdes { MIFARE Desfire RFIDs... }
ntag424 { NXP NTAG 4242 DNA RFIDs... }
seos { SEOS RFIDs... }
st25ta { ST25TA RFIDs... }
tesla { TESLA Cards... }
texkom { Texkom RFIDs... }
thinfilm { Thinfilm RFIDs... }
topaz { TOPAZ (NFC Type 1) RFIDs... }
vas { Apple Value Added Service }
wvshare { Waveshare NFC ePaper... }
xerox { Fuji/Xerox cartridge RFIDs... }
----- General -----
help This help
list List protocol data in trace buffer
plot Plot signal
tune Continuously measure HF antenna tuning
search Search for known HF tags
sniff Generic HF Sniff

[usb] pm3 -->
```

Lf

```
[usb] pm3 --> lf help
help This help
----- Low Frequency -----
awid { AWID RFIDs... }
cotag { COTAG CHIPS... }
destron { FDX-A Destron RFIDs... }
em { EM CHIPS & RFIDs... }
fdxb { FDX-B RFIDs... }
gallagher { GALLAGHER RFIDs... }
gproxii { Guardall Prox II RFIDs... }
hid { HID Prox RFIDs... }
hitag { Hitag CHIPS... }
idteck { Idteck RFIDs... }
indala { Indala RFIDs... }
io { ioProx RFIDs... }
jablotron { Jablotron RFIDs... }
keri { KERI RFIDs... }
motorola { Motorola Flexpass RFIDs... }
nedap { Nedap RFIDs... }
nexwatch { NexWatch RFIDs... }
noralsy { Noralsy RFIDs... }
pac { PAC/Stanley RFIDs... }
paradox { Paradox RFIDs... }
pcf7931 { PCF7931 CHIPS... }
presco { Presco RFIDs... }
pyramid { Farpointe/Pyramid RFIDs... }
securakey { Securakey RFIDs... }
ti { TI CHIPS... }
t55xx { T55xx CHIPS... }
vikings { Vikings RFIDs... }
visa2000 { Visa2000 RFIDs... }
----- General -----
config Get/Set config for LF sampling, bit/sample, decimation, frequency
cmdread Modulate LF reader field to send command before read
read Read LF tag
search Read and Search for valid known tag
sim Simulate LF tag from buffer
simask Simulate ASK tag
simfsk Simulate FSK tag
simpsk Simulate PSK tag
simbidir Simulate LF tag (with bidirectional data transmission between reader and tag)
sniff Sniff LF traffic between reader and tag
tune Continuously measure LF antenna tuning
```

Operate specific cards:

HF command

1. Place the ic-uid card in the hf area and enter **hf search**

```
[usb] pm3 --> hf search
[+] Searching for ISO14443-A tag...
[+] UID: 10 16 30 19
[+] ATQA: 00 04
[+] SAK: 08 [2]
[+] Possible types:
[+]   MIFARE Classic 1K
[+]   proprietary non iso14443-4 card found, RATS not supported
[+] Magic capabilities : Gen 1a
[+] Prng detection: weak
[+] Auth error
[?] Hint: try `hf mf` commands

[+] Valid ISO 14443-A tag found
```

Get ISO 1443-A tag tips. It means that it is a 14a type card.

Enter **hf 14a help**

```
[usb] pm3 --> hf 14a help
----- General -----
help      This help
list      List ISO 14443-a history
----- operations -----
antifuzz   Fuzzing the anticollision phase. Warning! Readers may react strange
config     Configure 14a settings (use with caution)
cuids     Collect n>0 ISO14443-a UIDs in one go
info      Tag information
sim       Simulate ISO 14443-a tag
sniff     sniff ISO 14443-a traffic
raw       Send raw hex data to tag
reader    Act like an ISO14443-a reader
----- apdu -----
apdu      Send ISO 14443-4 APDU to tag
apdufind  Enumerate APDUs - CLA/INS/P1P2
chaining  Control ISO 14443-4 input chaining
----- ndef -----
ndefformat Format ISO 14443-A as NFC Type 4 tag
ndefread  Read an NDEF file from ISO 14443-A Type 4 tag
ndefwrite Write NDEF records to ISO 14443-A tag
```

Enter **hf 14a reader**

```
[usb] pm3 --> hf 14a reader
[+] UID: 10 16 30 19
[+] ATQA: 00 04
[+] SAK: 08 [2]
```

Change another ic-uid card, Enter **hf 14a reader**

```
[usb] pm3 --> hf 14a reader
[+] UID: 6A 89 2E 19
[+] ATQA: 00 04
[+] SAK: 08 [2]
```

2. Place the ic-cuid card in the hf area and enter **hf 14a reader**

```
[usb] pm3 --> hf 14a reader
[+] UID: 85 C9 F5 4E
[+] ATQA: 00 04
[+] SAK: 08 [2]
[usb] pm3 --> hf 14a reader
[+] UID: 85 E2 A8 4E
[+] ATQA: 00 04
[+] SAK: 08 [2]
[usb] pm3 -->
```

3. Place the blue key card in the hf area and enter **hf 14a reader**

```
[usb] pm3 --> hf 14a reader
[+] UID: BB 7E BB 6E
[+] ATQA: 00 04
[+] SAK: 08 [2]

[usb] pm3 -->
```

4. Place the ID-T5577 card in the hf area and enter hf 14a reader.

Get nothing, because it is a LF card.

```
[usb] pm3 --> hf 14a reader
[!] isol4443a card select failed
[usb] pm3 --> hf 14a reader
[!] isol4443a card select failed
[usb] pm3 -->
```

Lf Command

1. Place the ID-T5577 card in the Lf area and enter **Lf search**

```
[usb] pm3 --> lf search
[=] NOTE: some demods output possible binary
[=] if it finds something that looks like a tag
[=] False Positives ARE possible
[=]
[=] Checking for known tags...
[=]
[?] Specify one authentication mode
[=] No known 125/134 kHz tags found!
[+] Chipset detection: T55xx
[?] Hint: try `lf t55xx` commands
```

Get tip to use lf t55xx command

enter **LF t55xx**

```
[usb] pm3 --> lf t55xx
----- notice -----
Remember to run `lf t55xx detect` first whenever a new card
is placed on the Proxmark3 or the config block changed.

help      This help
-----
clonehelp Shows the available clone commands
config    Set/Get T55XX configuration (modulation, inverted, offset, rate)
dangerraw Sends raw bitstream. Dangerous, do not use!!
detect    Try detecting the tag modulation from reading the configuration block
deviceconfig Set/Get T55XX device configuration
dump      Dump T55xx card Page 0 block 0-7
info      Show T55x7 configuration data (page 0/ blk 0)
pidetect  Try detecting if this is a t55xx tag by reading page 1
read      Read T55xx block data
resetread Send Reset Cmd then lf read the stream to attempt to identify the start of it
restore   Restore T55xx card Page 0 / Page 1 blocks
trace     Show T55x7 traceability data (page 1/ blk 0-1)
wakeups   Send AOR wakeup command
write     Write T55xx block data
-----
recovery -----
bruteforce Simple bruteforce attack to find password
chk        Check passwords from dictionary/flash
protect    Password protect tag
recoverpw  Try to recover from bad password write from a cloner
sniff     Attempt to recover T55xx commands from sample buffer
special   Show block changes with 64 different offsets
wipe      Wipe a T55xx tag and set defaults (will destroy any data on tag)
```


enter **LF t55xx detect**

```
[usb] pm3 --> lf t55xx detect
[=] Chip type..... T55x7
[=] Modulation..... ASK
[=] Bit rate..... 2 - RF/32
[=] Inverted..... No
[=] Offset..... 32
[=] Seq. terminator... Yes
[=] Block0..... 000880E8 (auto detect)
[=] Downlink mode.... default/fixed bit length
[=] Password set..... No
```

Get the info.

2.Place the ID-4100 card on the Lf area and enter **Lf search**

```
[usb] pm3 --> lf search
[=] NOTE: some demods output possible binary
[=] if it finds something that looks like a tag
[=] False Positives ARE possible
[=]
[=] Checking for known tags...
[=]
[+] EM 410x ID 52003252E4
[+] EM410x ( RF/64 )
[=] ----- Possible de-scramble patterns -----
[+] Unique TAG ID      : 4A004C4A27
[=] HoneyWell IdentKey
[+]   DEZ 8           : 03298020
[+]   DEZ 10          : 0003298020
[+]   DEZ 5.5         : 00050.21220
[+]   DEZ 3.5A        : 082.21220
[+]   DEZ 3.5B        : 000.21220
[+]   DEZ 3.5C        : 050.21220
[+]   DEZ 14/IK2      : 00352190616292
[+]   DEZ 15/IK3      : 000317832579623
[+]   DEZ 20/ZK       : 04100000041204100207
[=]
[+] Other              : 21220_050_03298020
[+] Pattern Paxton      : 1380356324 [0x524690E4]
[+] Pattern 1           : 5818769 [0x58C991]
[+] Pattern Sebury     : 21220 50 3298020 [0x52E4 0x32 0x3252E4]
[=] -----
[+] Valid EM410x ID found!
[=] Couldn't identify a chipset
[usb] pm3 -->
```

enter **Lf em 410 reader**

```
[usb] pm3 --> lf em 410 reader
[+] EM 410x ID 52003252E4
```

ID-t5577 card support writing, we can clone ID-4100 card to ID-t5577 card.

3.Put the ID-t5577 card on the Lf area.

Enter `lf em 410 clone --id 52003252E4`

```
[usb] pm3 --> lf em 410 clone --id 52003252E4
[+] Preparing to clone EM4102 to T55x7 tag with EM Tag ID 52003252E4 (RF/64)
[#] Clock rate: 64
[#] Tag T55x7 written with 0xffa8a0018aa2f536

[+] Done
[?] Hint: try `lf em 410x reader` to verify
[usb] pm3 -->
```

Enter `LF em 410 reader`, get the id info.

```
[usb] pm3 --> lf em 410 reader
[+] EM 410x ID 52003252E4
[usb] pm3 -->
```

Enter `LF search`, get more info of the current ID-t5577 card.

```
[usb] pm3 --> lf search

[=] NOTE: some demods output possible binary
[=] if it finds something that looks like a tag
[=] False Positives ARE possible
[=]
[=] Checking for known tags...
[=]
[+] EM 410x ID 52003252E4
[+] EM410x ( RF/64 )
[=] ----- Possible de-scramble patterns -----
[+] Unique TAG ID      : 4A004C4A27
[=] HoneyWell IdentKey
[+]   DEZ 8            : 03298020
[+]   DEZ 10           : 0003298020
[+]   DEZ 5.5          : 00050.21220
[+]   DEZ 3.5A         : 082.21220
[+]   DEZ 3.5B         : 000.21220
[+]   DEZ 3.5C         : 050.21220
[+]   DEZ 14/IK2       : 00352190616292
[+]   DEZ 15/IK3       : 000317832579623
[+]   DEZ 20/ZK        : 04100000041204100207
[=]
[+] Other              : 21220_050_03298020
[+] Pattern Paxton     : 1380356324 [0x524690E4]
[+] Pattern 1          : 5818769 [0x58C991]
[+] Pattern Sebury     : 21220 50 3298020 [0x52E4 0x32 0x3252E4]
[=] -----

[+] Valid EM410x ID found!

[+] Chipset detection: T55xx
[?] Hint: try `lf t55xx` commands
[usb] pm3 -->
```


Abnormal situation recovery:

Scene 1: When the device is connected to the PC but is not recognized by the PC,

A. press and hold the button, wait a few seconds, then connect the USB cable to the PC.

B.Wait a few seconds again, then release the button.

C.Wait a few seconds again, the PC will recognize the device.

Scene 2: After executing pm3-flash-bootrom.bat, the device is not found in the second step

Of running pm3-flash-all.bat. At this time, the cmd page is in waiting state.

At this time, unplug the USB, keep pressing the button, and then connect the USB. After recognizing the device, the command line page will automatically execute the current script, output the printing content, and return to normal.

Tips:

A.When entering the command line, enter the upward arrow to quickly enter the previous command.

B.The command line executes the automatic matching principle: Lf t55xx detect and If t5 detect are the same.

C.The command line is not case sensitive.

Software download address:

<https://github.com/RfidResearchGroup/proxmark3>

In the middle section, find

Precompiled binaries

See [Proxmark3 precompiled builds](#)

The jump link is <https://www.proxmarkbuilds.org/>

Windows binaries for the Proxmark3

These builds are compiled with the newest version of [ProxSpace](#) and are always up to date.
Here I will post the latest compiled Windows versions from the official Proxmark repository and some forks. If you want me to add a fork please [contact me](#).

Having problems? Please look at the [Known issues](#) first.

Latest official build
Latest build for Proxmark3 RDV4
Latest build for Proxmark3 RDV4 with blueshark addon
Recommended:
Latest RRG / Iceman generic build for Proxmark3 devices (non RDV4), for Proxmark3 Easy, RDV1, RDV2, RDV3, etc etc
All builds

Click the link below Recommended, because the current device is **Proxmark3 Easy**

Latest official build
Latest build for Proxmark3 RDV4
Latest build for Proxmark3 RDV4 with blueshark addon
Recommended:
Latest RRG / Iceman generic build for Proxmark3 devices (non RDV4), for Proxmark3 Easy, RDV1, RDV2, RDV3, etc etc

After clicking, the compressed package of
rrg_other-20231122-43f64887f7714919e8bce03a12e16c715d0ace97.7z will be automatically
downloaded. The software in the USB flash drive is obtained from here. (The software on the
website may continue to be updated, and we will also keep updating the software on the USB
flash drive)

After-sales support: Thank you for purchasing the Proxmark3 Easy device from our store. If you
have any questions after using it, you can also contact us by email hamsdr123@163.com

We have also placed operation demonstration videos on the USB flash drive, hoping to help you reduce your learning time.

If you feel that this instruction document and video have really helped you reduce your learning time, please feel free to share your using experience with other consumers in the Review and feedback area.

For more learning materials, you will definitely find a lot on YouTube and google.

Enjoy it.