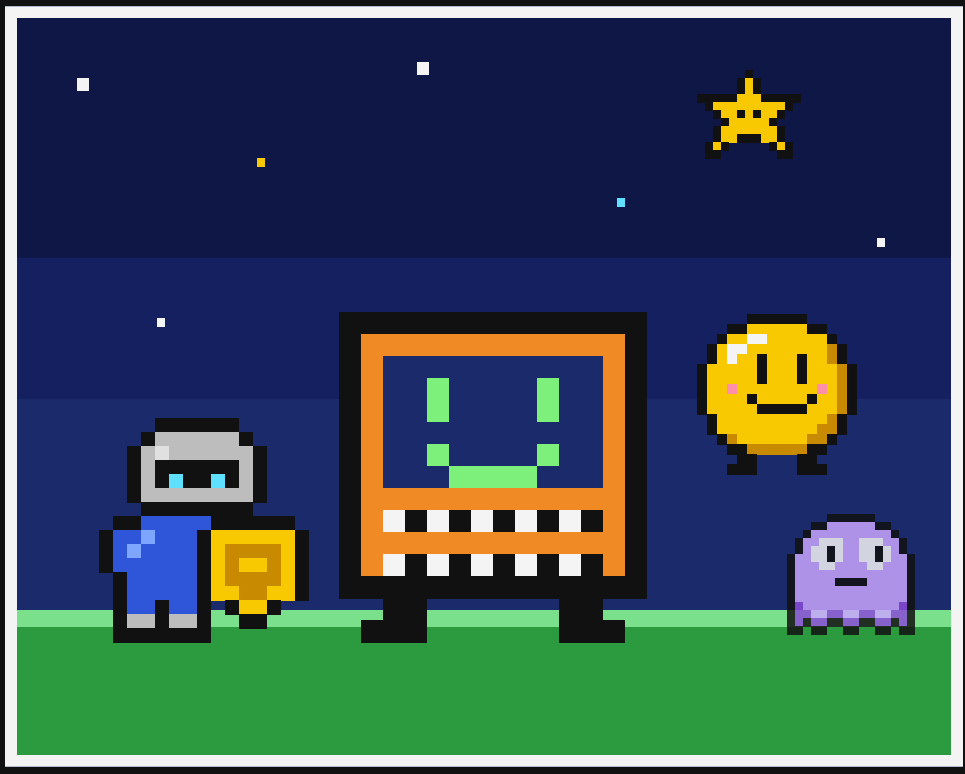
CARDPUTER ZERO

1 PLAYER

# INSERT COIN

## THE VAULT QUEST

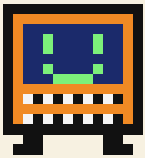


## INSTRUCTION BOOKLET

A Bitcoin wallet for the Cardputer Zero

BITCOIN ONLY

# WELCOME



Thank you for choosing **Insert Coin** for your Cardputer Zero. Please read this booklet before your first adventure, and keep it somewhere safe. Unlike your seed words, it's fine if someone else reads it.

## PRECAUTIONS

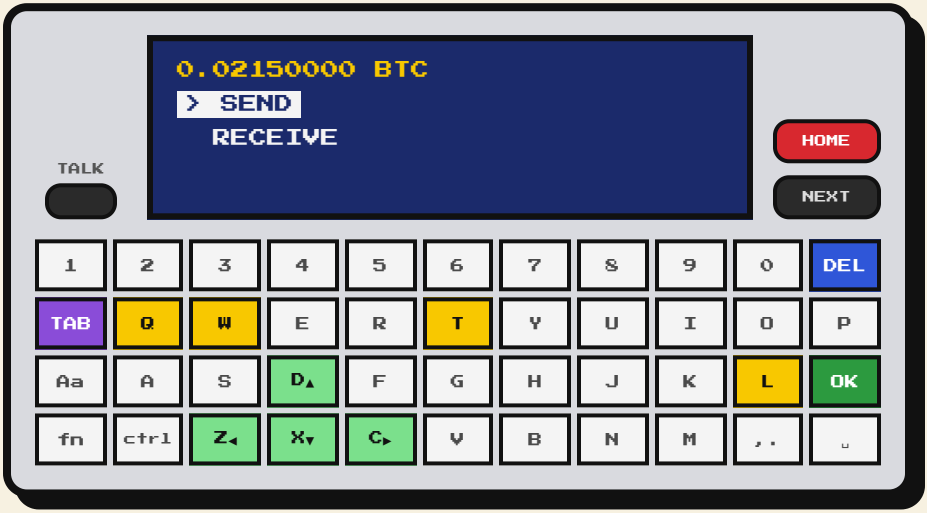
1. Write your seed words on paper or metal. Never photograph them or type them into a computer.
2. Only trust screens showing the gold shield in the corner and your own security words.
3. Ten wrong PINs erase the wallet. Your seed words are the only way back.
4. This game is brand new and hasn't been reviewed by outside experts. Play with small amounts.

## CONTENTS


Controls 03
Meet the heroes 04
Know your enemies 05
Starting a new game 06
Vault world and Online world 07
The home screen 08
Wallets and accounts 09
Power-ups 10
Secret moves and saving 11
Shields 12
House rules: spending policy 13
Paper wallets and printing 14
SETUP map 15
Screen tour 16
Hints and tips 20

# CONTROLS

There's no on-screen keyboard. Every move is made with the Cardputer Zero's real keys. The arrows are printed on **D Z X C**, at the left.




**D Z X C** — Arrows: move through menus

**OK** — Choose, or say YES

**DEL** — Go back one screen

**HOME** — Button by the screen: jump home

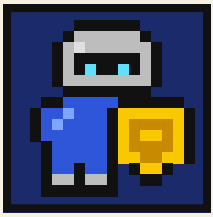
**TAB** — Scan a QR or tap a card into a field

**fn+DZXC** — Move the text cursor

### HOME-SCREEN HOTKEYS

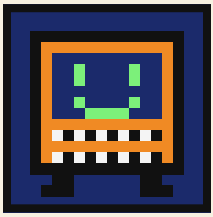
**Q** scan anything • **T** tap a card • **W** wallets • **L** lock

# MEET THE HEROES



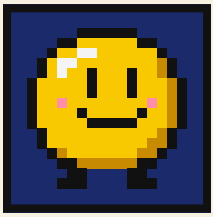
## SIR SIGNER

Keeper of the keys. Only he can unlock your seed, show your words, and say YES to a payment. He lives in his own locked tower, apart from everyone else.



## CARDY

Your Cardputer Zero. Cardy runs the menus, shows balances and talks to the outside world, but never sees your seed. Cardy only passes notes to Sir Signer.



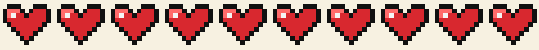
## SATS

Your coins. Sats live at your addresses and only move when Sir Signer says so. One bitcoin is 100,000,000 Sats.



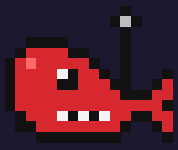
### HOW TO SPOT SIR SIGNER

When he's on screen, a **gold shield** sits in the top corner next to your own **security words**, set when you made your wallet. No shield or wrong words? Don't type your PIN. Press HOME.



**Ten hearts = ten PIN tries.** Each wrong PIN costs a heart. Lose them all and the wallet erases itself; only your seed words can bring it back.

# KNOW YOUR ENEMIES



## PHISHY

Fakes a screen or a message that asks for your PIN or seed words.

**Defeat:** check for the gold shield and your security words before typing anything secret.



## GLITCH MIMIC

A booby-trapped QR code built to crash the reader and sneak inside.

**Defeat:** every QR is opened in a sealed room with no keys, no files and no internet. The Mimic bites air.



## SNOOP

Watches the network to learn which addresses are yours.

**Defeat:** Insert Coin talks through Tor to your own server, and in Vault mode every radio is off.

### BOSS WARNING: THE SWAPPER

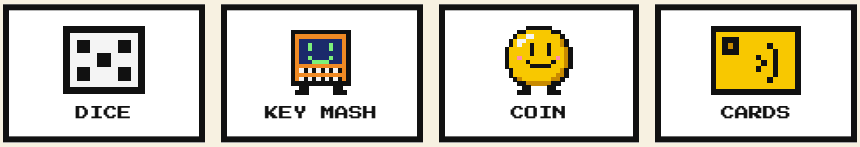
Swaps a payment's address for its own. Sir Signer draws the final confirm screen himself from the real transaction, so read the address and amount there before pressing OK.

# NEW GAME

Press OK on the title screen (listen for the coin!), then choose **CREATE NEW WALLET**. Sir Signer takes over from here.

1. **Pick 12 or 24 words.** Both are very safe; 24 gives extra headroom.

2. **Add your own luck (optional).** The device already mixes its own randomness, camera noise and the secure chip, if one is plugged in. Stack more on top:




**DICE ONLY** (expert mode) makes the seed from your rolls alone, so you can check it with another tool.

3. **Write down your words**, in order, on paper. Sir Signer then quizzes you on three of them.

4. **Passphrase (optional).** An extra word that makes a whole different wallet. Forget it and those coins are gone.

5. **Choose a PIN.** It unlocks the device; your words unlock everything.

### CONTINUE A SAVED GAME

Choose **RESTORE**: type your words (the first 4 letters and a space is enough), scan a SeedQR, or gather your split shares.

# TWO WORLDS

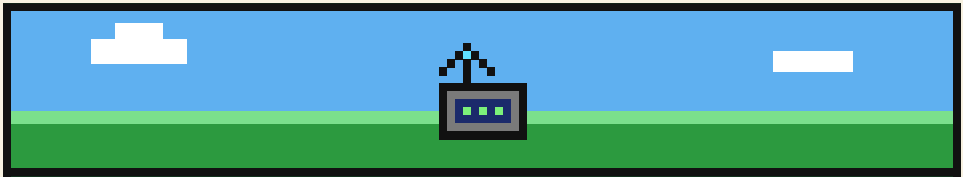
Every game starts in **Vault World**. Choose **MODE** on the home screen to travel between them.



## VAULT WORLD

- Wi-Fi and every other radio switched off
- Sign payments by trading QR codes with Sparrow or another wallet
- Payments you sign here wait in the **Outbox** until you go online
- The only world where **Savings** accounts can spend

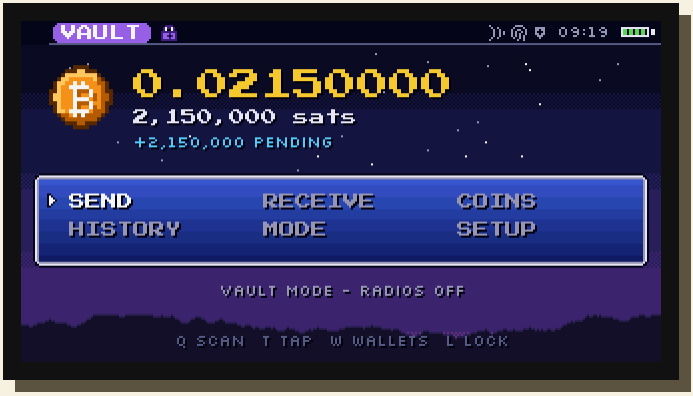
▼ MODE ▲



## ONLINE WORLD

- Join Wi-Fi from SETUP; no phone or computer needed
- Talks to your own Electrum server, through Tor by default
- Sends payments straight away and empties the Outbox
- An **online cap** limits how much can leave per day

# THE HOME SCREEN




**SEND** Type or scan (TAB) an address, choose an amount and fee, then confirm on Sir Signer's screen.

**RECEIVE** Shows a QR. **N** new address • **L** label • **V** verify with Sir Signer • **M** sign a message.

**COINS** Pick exactly which coins to spend with OK, then **S** to send them.

**HISTORY** Open a payment to label it, see its ID, bump its fee or cancel it while it's still unconfirmed.

**MODE** Travel between Vault and Online worlds.

**SETUP** Security, backups, network, files, tools, display and sound.



**Press Q anywhere on home** to scan: an address starts a payment, a PSBT gets signed, a signed payment gets sent.

# WALLETS

One set of seed words can open many wallets. Press **W** on the home screen to switch, or choose **NEW ACCOUNT**.

### MAIN

Your starting wallet. Native SegWit addresses (bc1q…).

### SAVINGS

Vault only: Sir Signer refuses to spend from it while any radio is on.

### SPENDING

Everyday pocket money, limited by the online cap and your spending rules.

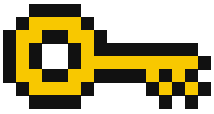
### CUSTOM

Extra accounts with Taproot (bc1p…) or SegWit addresses. Hide any you don't use.



### MULTISIG PARTY

Team up: 2-of-3, 2-of-2 or 3-of-5 keys, up to 15. Trade signatures by QR. A TAPSIGNER card can join the party.



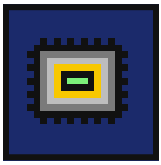
### INHERITANCE

You can spend any time. If the coins sit untouched for 3 to 15 months (you choose), your heir's key starts working too.

**Hint:** owners, choose **REFRESH TIMER** before it runs out. Home warns you when it's close.

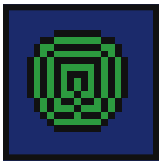
# POWER-UPS

Plug in an add-on and its icon lights up in the status bar. Find them all in **SETUP › SECURITY › HARDWARE**.



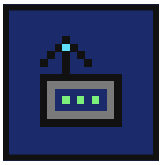
### SECURE CHIP

Locks your wallet to this one chip, so a copied SD card is useless without it. Also adds its own randomness to new seeds.



### FINGERPRINT

Unlock the screen with a finger while Sir Signer is still awake. After a restart, the PIN is needed again.



### NFC CAP

Press **T** and tap a card on the back. Its sub-GHz radio is put to sleep and never used.



### SATSCARD

Check it's genuine, see what's loaded, sweep it into your wallet, set up the next slot.



### TAPSIGNER

A key on a card. Add it to a multisig party, then tap to co-sign.

Power-ups are optional. The game plays fine without any of them.

# SECRET MOVES

| | |
|---|---|
| BUMP OR CANCEL | In HISTORY, open a stuck payment to raise its fee or call it back. |
| CHILD SEEDS | Make fresh seed words for another wallet, all recoverable from your main words. |
| SIGN MESSAGE | On RECEIVE press **M** to prove an address is yours. |
| VERIFY ADDRESS | On RECEIVE press **V** and Sir Signer redraws the address himself. |

## SAVING YOUR GAME

**SEED WORDS**
The master save. Paper or metal, kept safe and private.

**SEEDQR**
Your words as a QR you copy by hand, for quick restores.

**SPLIT BACKUP**
Cut your save into shares, e.g. 2 of 3. Any one share alone reveals nothing.

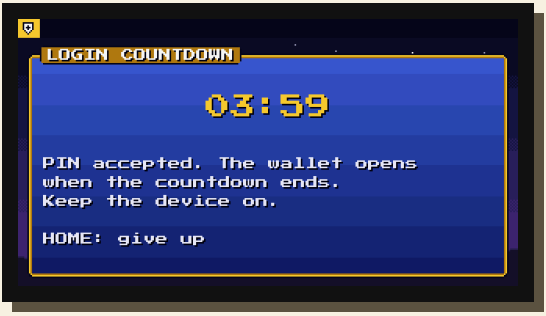
**CARD BACKUP**
Accounts, multisig, labels and settings on the microSD, locked with your seed. No seed inside.



**Combo:** restore from your words and the game offers to load your card backup too, bringing every account back.

# SHIELDS

Guards against a thief, or someone pushing you to open the wallet. All live in **SETUP › SECURITY**, and every change asks for your PIN.



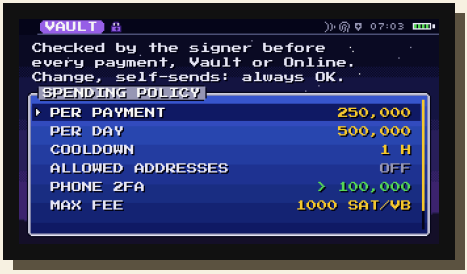

**Login countdown** in action. No key skips it; HOME gives up and the PIN is asked again.

| | |
|---|---|
| AUTO LOCK | Locks after 2, 5, 10 or 15 minutes with no key pressed, a time you choose, or never. Sharing files keeps it awake. |
| LOGIN COUNTDOWN | After the right PIN, wait 5 minutes to 24 hours before the wallet opens. Anyone forcing you has to wait too. |
| WIPE PIN | A PIN that erases everything and starts the device like new. Nothing is bricked: restore from your words. |
| DURESS PIN | Opens a small decoy wallet instead. It can also quietly erase the real one. |
| ONLINE CAP | The most that can leave per day while Online World is on. |

**No tells:** every PIN takes exactly the same time to check and the files look the same, so nobody can see which of these you've set.

# HOUSE RULES

**SETUP › SECURITY › SPENDING POLICY**. Sir Signer checks these before every payment, in both worlds. Change is always fine.







**PER PAYMENT**
Most one payment may send.

**PER DAY**
Most all payments may send in one day.

**COOLDOWN**
Least time between two payments, up to 7 days.

**ALLOW-LIST**
Pay only addresses on your list (up to 50).

**PHONE 2FA**
A code from an authenticator app, for all payments or big ones.

**MAX FEE**
Refuse fee rates above this. Default 1,000 sat/vB.

**BYPASS PIN** Locks the rules: changing them needs both PINs, and the seed words can't be shown or exported while it's set.



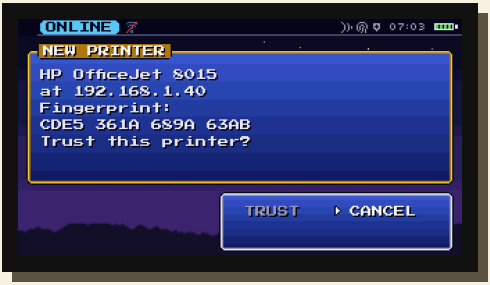
2FA needs the clock set: go Online once after switching on.

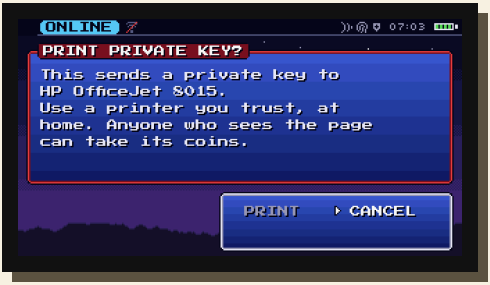
# PAPER WALLETS

**SETUP › TOOLS › PAPER WALLETS** makes a brand-new key, separate from your seed: a gift, or a savings slip for the drawer.

**1 · MAKE NEW**
Sir Signer makes the key and keeps the file inside the device, never on the microSD card.

**2 · GET IT OUT**
PRINT it at home over Wi-Fi, or SHARE FILES to a computer with your own password.




| | |
|---|---|
| **ENCRYPTED ONLY** | Printers that can't take an encrypted job are refused. |
| **TRUST ONCE** | Compare the fingerprint with the printer's own settings page. If it ever changes, you're warned. |
| **HOME ONLY** | Jobs go to addresses on your own network, never the internet. |
| **FIND IT** | Printers show up by themselves, or type the IP address. |



Anyone who sees the page can take its coins. Collect it straight away, and delete the file once it's printed.

# SETUP MAP

Six groups and three buttons. Leave a screen and SETUP comes back with the cursor where you left it.

### SECURITY

Change PIN
Auto lock
Login countdown
Wipe PIN
Duress PIN
Spending policy
Online cap
Hardware
Lock now

### BACKUP

Show seed words
SeedQR backup
Split backup
Card backup

### NETWORK

Wi-Fi
Server
Tor
Explorer

### FILES

Share files
Export history
Export labels
Export watch-only

### TOOLS

Paper wallets
Child seeds
Wallets

### DISPLAY & SOUND

Appearance
Sound
QR format

### ON THEIR OWN

Update
About
Wipe device



**Sound** is one switch. Off silences the menu boop and the title fanfare, and stays off next time.

# SCREEN TOUR 1



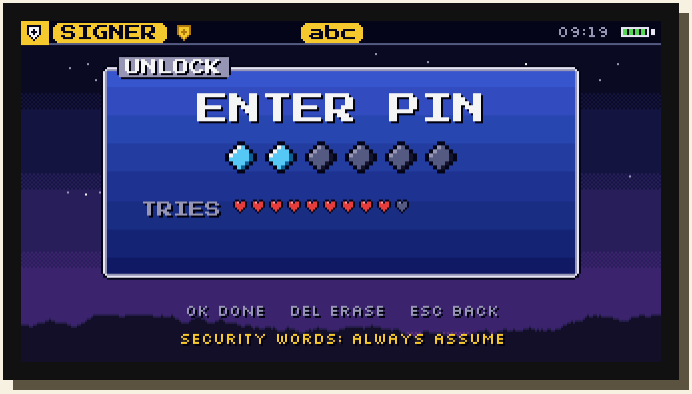

## TITLE SCREEN

Every game starts here. Press OK and listen for the coin.




## NEW WALLET

Sir Signer's own menu. Pick 12 or 24 words, and add dice, keys, coins or cards for extra luck.




## ENTER PIN

Each heart is a try left. The gold shield and your security words prove it's Sir Signer.

# SCREEN TOUR 2




## RECEIVE

Your address as a QR, split into groups so it's easy to compare. N for a new one.




## VERIFY

Press V and Sir Signer redraws the address from your keys, in his gold frame.




## CONFIRM SEND

The last word before coins move. Check the address, amount and fee, then YES.

# SCREEN TOUR 3



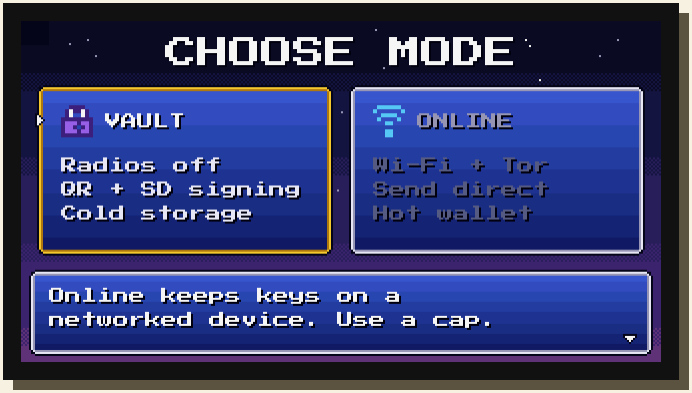

## COINS

Each deposit on its own line. OK picks a coin, S spends just the ones you picked.




## HISTORY

Every payment in and out. PENDING until it's in a block; open one to label or bump it.




## CHOOSE MODE

Vault World with radios off, or Online World with Wi-Fi and Tor. Switch any time.

# SCREEN TOUR 4



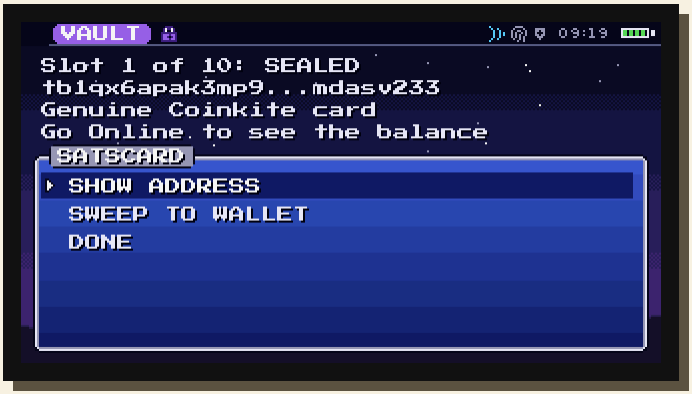

## SETUP

Six groups: Security, Backup, Network, Files, Tools, Display & Sound. Map on page 15.




## WALLETS

Press W to switch, or start Savings, Spending, multisig or inheritance wallets.




## SATSCARD

Press T and tap a card: see its slot, check it's genuine, sweep it in.

# HINTS & TIPS

1. Practice with play money first: pick testnet4 or signet under NETWORK when you start.
2. Keep big savings in a Savings account and only small change in Spending.
3. Press **V** before sharing a new address, every time.
4. Make a card backup after adding accounts or multisig wallets.
5. Set a spending policy before you need one; it only loosens with your PIN (and bypass PIN).
6. Updates must be signed. The game refuses any that aren't.

### GAME OVER?

**Forgot your PIN?** Choose WIPE DEVICE, then RESTORE with your seed words.

**Lost the device?** Your coins aren't on it. Restore your words on a new one, then load your card backup.

**Lost your words?** Make a new wallet with new words and move your coins there right away, while you still can.



# INSERT COIN

Version 0.8.20 • Free and open source • Bitcoin only