CryptoTicr

User manual

How to set up and use the ticker: every feature, every setting, and what the screen tells you.

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The product

What CryptoTicr is



What it shows

CryptoTicr is a small desk display, about the size of a golf ball (1.38 by 1.57 by 1.77 inches), that shows cryptocurrency prices all day without you picking up a phone.

One coin at a time, it shows the coin's logo and name, its price in US dollars in green or red by the day's direction, a row of figures such as the 24-hour change, volume, market cap and rank, and a chart of the price over a range you choose, from 24 hours up to 90 days. Or it shows two or four coins to a screen, without the chart. Between coins it can show a card on the whole market.

You choose up to 12 coins from the top 1,000 by market value, and how long each one stays on the screen.

Options

Everything it can do is on Features at a glance. What it deliberately does not do, such as connect to a wallet or send alerts, is on What it does not do. The hardware is on Specifications.

Where to set it

In a web browser. The ticker serves its own settings page on your Wi-Fi: open its address on a phone, tablet or computer, and most changes reach the screen as you make them; changes to the coin list wait for `Save & Apply`. There is no app to install and no account. Setup takes a few minutes: Quick start.

How it is run

Prices come from CoinGecko through CryptoTicr's own server, with no fee and no subscription. The firmware updates itself over Wi-Fi. It runs from any USB port on about one watt and is built to stay on. And it is supported by the person who built it: Lee, in Hudson, Ohio. See Contact.

Features at a glance



What it shows

Coins

- Up to twelve coins from the 1,000 largest, chosen by name or symbol on the settings page. Choosing coins
- Fill all twelve from the market's top coins in one tap. Load top coins
- One, two or four coins per screen; each layout keeps its own timing and style. One, two or four coins per screen
- Pause a coin without removing it; jump to a coin; a remote with previous, pause and next. Pausing coins, Jump to a coin and the remote buttons

The screen

- Title with logo, symbol or name; a price colored by the day's direction; volume, market cap, rank and 24h change. Title area, Price area
- Charts over 24h to 90d, several per coin, with a movable range label and optional helper lines. Charts and time ranges
- Ten colorsets including a colourblind one, custom stat colors, brightness, and quiet hours that dim at night. Colorsets, Brightness, Nighttime quiet hours
- Market overview and sector heat cards between coins. Market info cards

The settings page

- Served by the ticker on your Wi-Fi; no app, no account; every change applies at once. A tour of the settings page
- Export and import your setup as a file; an optional password; twelve page themes. Export and import settings, Lock the settings with a password

Wi-Fi and updates

- Setup from any phone, tablet or computer in minutes; change networks later without losing settings. Quick start, Change to a different Wi-Fi network
- Firmware and coin-logo updates arrive by themselves. Automatic firmware updates

On its own

- Tells you in plain words what it is doing, from setup to an outage. What the screen is telling me
- Checks its own Wi-Fi signal and power supply and says when either needs a look. The Wi-Fi signal check, The power check
- Keeps a backup copy of your settings, recovers from faults, and reports its health. Settings health and the backup copy, Restarts the ticker does by itself

Options

Every feature is on by default or one tap away on the settings page; there is nothing to install.

Where to set it

The settings page: Opening the settings page.

What it does not do

Wi-Fi

- 2.4 GHz only. The setup page says `I need 2.4GHz. I can't see 5GHz-only networks.`
- WEP, WPA and WPA2 networks, not WPA3. The setup page's own words: `I can join WEP, WPA and WPA2 Wi-Fi, but not WPA3.`

- No networks with a sign-in page: hotels, cafés, most guest networks, and corporate networks that want a username. See Hotel, cafe and public Wi-Fi, Office and corporate Wi-Fi.

Data

- US dollars only; no other currency.
- Cryptocurrencies only; no stocks, metals or currencies. See Does it show stocks or gold?.
- No price alerts or notifications; it displays, it does not warn. See Can it alert me when a price moves?.
- No wallet or exchange connection. See Can it connect to my wallet or exchange?.

This model

- No touch screen and no screen rotation; the shipped firmware for this model leaves both out.
- No clock card; the ticker has no clock of its own and shows no time.
- No manual update button and no way to switch updates off: they arrive by themselves.

Software

- No app and no account: a browser on your Wi-Fi is the whole interface. See Is there an app?.
- No cloud control: the settings page is reachable only on your own network.

Requirements and compatibility



Wi-Fi

A home Wi-Fi network on 2.4 GHz, secured with WEP, WPA or WPA2, connected to the internet. The setup page says `I need 2.4GHz` and `I can join WEP, WPA and WPA2 Wi-Fi, but not WPA3.` A router that offers both bands under one name is fine. Networks with a sign-in page (hotels, cafés, many guest and office networks) do not work; a phone hotspot does. Details on Wi-Fi requirements.

A device for setup and settings

Any phone, tablet or computer with Wi-Fi and a browser: iPhone, iPad, Mac, Android phones and tablets, Windows and Linux. It joins the ticker's setup network once, and later opens the settings page on your Wi-Fi. Nothing is installed on it, and it need not stay connected.

Power

Any USB port, or the included adapter; the ticker draws about one watt. See Power and the USB cable.

Placement

Within range of the router, away from metal, mirrors and microwaves, with as few thick walls between as possible. See Placement and care.

Placement and care



Within reach of the router

The ticker's Wi-Fi radio is small, so give it a clear path to the router:

- Keep brick, concrete and stone walls, floors, and big appliances out of the line between them where you can.

- Keep it a little away from metal, mirrors, microwave ovens, cordless phone bases and USB 3 drives or hubs, all of which get in the way of 2.4 GHz Wi-Fi.
- On a mesh system, near any of its units is as good as near the router.

The ticker tells you when the connection is struggling. Its signal card says `Weak Wi-Fi signal`, or `Wi-Fi drops out` when the link keeps dropping, and it repeats at most every 15 minutes. The settings page's advice for that case is the right one: `Moving it nearer the router, or a cheap 2.4 GHz extender, usually helps.` See The Wi-Fi signal check.

A good cable and adapter

The ticker measures its own power supply. A thin or very long cable, a worn adapter, or a USB hub shared with other devices can sag, and the ticker shows `Power a bit low` when it does. The adapter and cable from the box, into a wall outlet, are the known-good pair. See The power check.

Dry and out of the sun

The ticker is not waterproof. Keep it away from sinks, drinks and plant watering, and out of direct sun, which heats the case and washes out the screen.

Brightness

Set the brightness to whatever looks right in your room. The settings page gives the reasoning: `the screen's backlight is my biggest power draw and my main source of warmth, and electronics generally last longest kept cool, so mid-range makes a good everyday choice.` Quiet hours can dim it overnight by themselves. See Brightness and Nighttime quiet hours.

Cleaning

Wipe the screen with a clean, soft cloth, slightly damp with water or rubbing alcohol. A microfiber lens cloth is ideal. Press lightly: the screen is a bare panel set a little behind the window, not glass. Not paper towels or tissues, their fibers scratch its soft front film, and not glass cleaner, ammonia clouds it. A soft brush clears dust from the edge of the window. The case takes the same cloth with water alone, since alcohol can lift its printed marks. Unplug it first, and never spray anything onto the ticker.

Leave it on

It is built to run day and night and draws about one watt, so there is nothing to gain by switching it off. Switching it off loses nothing either: it rejoins the Wi-Fi and carries on. One caution: switching it off and on five times in a row, each within five seconds, is the factory reset, which erases its settings. See Can it stay on all the time?.

Running several tickers



Each one is its own

A ticker's setup network is `CT` and three digits from its own serial, so two tickers set up side by side show two names on the glass and in your Wi-Fi list; the ticker's scan hides other tickers' networks from its own list of choices. Once on your Wi-Fi each gets its own address from the router and serves its own settings page, and the page's footer shows that unit's `MAC`.

Telling them apart

Read the address off each ticker's screen, or open a page and tap a coin's badge: the ticker that switches coins is the one you are on. See Two tickers: which address is which?. A fixed address for each, reserved in the router by MAC, keeps the pages where you bookmarked them; see Give the ticker a fixed address.

Same setup, or different

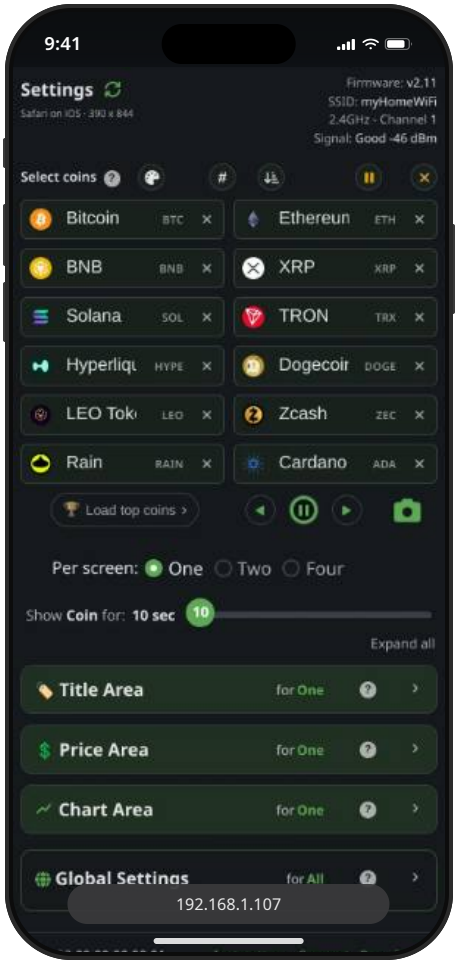
`Export` on one page and `Import` on the other copies the coins, colors and timings; the page calls it `the easy way to copy your setup to a second ticker`. Or give each its own list: one for the coins you hold, one for the market's top twelve. See Export and import settings.

Models and firmware versions

The model

One model ships: the CryptoTicr with a 1.54-inch square screen, 240 by 240 pixels, on an ESP8266 Wi-Fi chip. Its model number is CT-MICRO-BK. See Specifications.

The version



The settings page shows the version at the top right, on the `Firmware:` line, as a short number such as `v2.09`. The start screen on the glass shows the same number under the logo.



The footer of the settings page has the full build name on its `Config` line, for example `v2.09_ST7789_S`: the version first, then the build it was made for. Lee may ask for that line when you contact him.

Updates

The firmware updates itself over Wi-Fi, so the number climbs on its own and every ticker ends up on the same release. There is nothing to download or install. See Automatic firmware updates and Which firmware do I have?.

Specifications



Screen

- **Size:** 1.54 inches (39 mm), measured diagonally

- **Resolution:** 240 by 240 pixels, square
- **Type:** IPS color panel, readable from the side
- **Brightness:** adjustable, with a quieter setting for night hours; see Brightness and Nighttime quiet hours

Size

- **Dimensions:** 1.38 inches wide, 1.57 tall and 1.77 deep (35 by 40 by 45 mm)
- **Model number:** CT-MICRO-BK
- **Color:** black

Wi-Fi

- **Band:** 2.4 GHz only (802.11 b/g/n)
- **Security:** WPA2, WPA, WEP and open networks. Not WPA3-only networks, and not networks that ask for a username.
- **Controller:** Espressif ESP8266, on an ESP-12F module

Most routers offer 2.4 GHz. Wi-Fi requirements has the full list, and Router issues and how to fix them covers the router settings that get in the way.

Power

- **Socket:** USB Type-C, on the back
- **Supply:** 5 V from any USB port or the included adapter
- **Draw:** about 0.2 A, which is about one watt
- **Battery:** none; it is built to stay on

See Power and the USB cable.

What it shows

Up to 12 coins in rotation, chosen from the top 1,000 by market value, one, two or four to a screen. Prices come from CoinGecko through CryptoTicr's own server. See Features at a glance.

Software

The firmware updates itself over Wi-Fi. Setup and settings happen in a web browser on your phone, tablet or computer; there is no app and no account.

In the box

The ticker, a USB cable with an on/off button, a 110 V power adapter, and the printed Quick-Start card. See What's in the box.

32° Front view **Bottom view**



What's in the box



Contents

- The CryptoTicr.
- A USB cable, USB-A at one end and USB-C at the other, with an on/off button in the lead.
- A 110 V AC power adapter with a USB-A socket.
- The Quick-Start card. The back of it explains the Wi-Fi setup in plain English. Both sides are on The Quick-Start card in the box if you lose it.
- The two-year limited warranty and regulatory card.

What you add

- A Wi-Fi network on the 2.4 GHz band, connected to the internet. Almost every home router has one. See Wi-Fi requirements.
- A phone, tablet or computer with Wi-Fi and a web browser, for the few minutes of setup. There is no app to install.

The adapter is there for convenience. Any USB port that stays powered, on a computer, a TV or a wall charger, runs the ticker as well; see Power and the USB cable.

Next

Unboxing and first power-up takes it from the box to its first setup screen.

Getting started

Quick start

Before you start

- A 2.4 GHz home Wi-Fi network with internet access, and its password. The ticker cannot see 5 GHz-only networks, and it cannot use hotel, cafe or office networks that ask you to tap “I agree” or sign in with a username.
- A phone, tablet or computer with a web browser. You use it twice: once to hand the ticker your Wi-Fi password, and again to pick your coins.
- USB power for the ticker.

Steps

1. Plug the ticker in. The glass shows the CryptoTicr logo and the firmware version, then `Let's get me set up` / `on your home Wi-Fi`, with `Instructions follow.` and `They will repeat.` under a router icon.



2. Watch the cards that follow: `For help...` (Lee’s phone number and email), `The steps:` (the three steps you are about to do), `Join my Wi-Fi` (the name of the ticker’s own setup network) and `Scan to join Wi-Fi` (a QR code that joins it for you). They repeat until you join. Full detail: The setup cards on the glass.

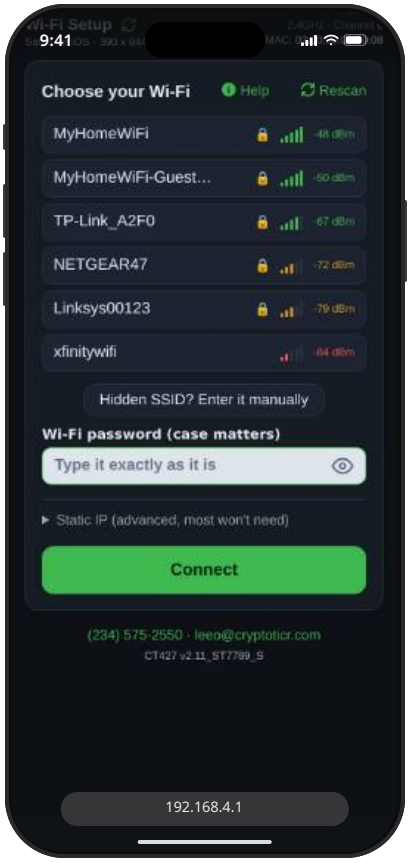


3. On your phone, open its Wi-Fi settings and join the network whose name is `CT` followed by three digits, the name shown on the `Join my Wi-Fi` card. It has no password. If your phone warns that this network has no internet, that is normal: the network exists only for this step. The glass changes to `You're on my Wi-Fi!`.
4. A setup page opens on your phone by itself. If it does not, open a browser and go to `http://192.168.4.1`. The page shows four short welcome cards; read them and tap `Got it, let's set up!`. The glass shows `Doing great!` / `On that page, pick` / `your Wi-Fi network.`

The cards it opens with

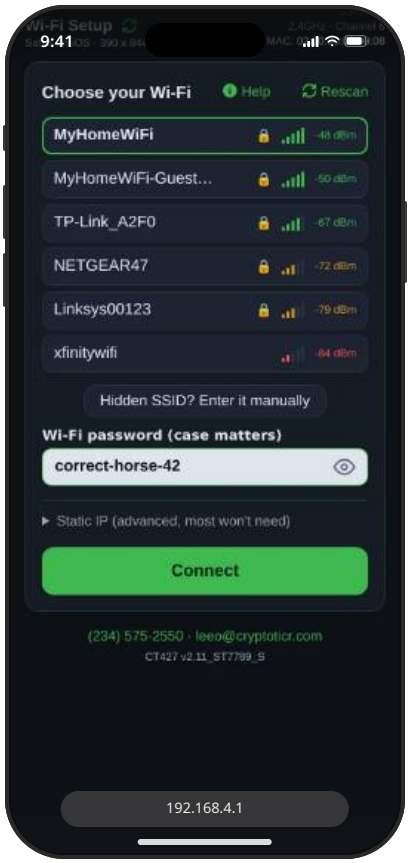


Then your own Wi-Fi in the list



5. Under `Choose your Wi-Fi`, tap your home network in the list, type its password in the box, and tap `Connect`. The button changes to `Working on it… 60s` and counts down; under it the page says `👀 Watch my screen.` The glass shows `Got it - thanks!` / `Connecting to:` and your network's name.





6. Wait. On success the glass shows a `Status report:` table for a few seconds, then `You're all set!` / `My IP Address` with the ticker's new address, then it restarts onto your Wi-Fi. The phone shows `Connected!` 🎉 `My setup Wi-Fi is off now.` and `My new address, remember it:` with the address. Once your phone can reach the ticker it says `Online. Taking you to your settings now:` and takes you to the settings page. If the glass shows `Can't get online` instead, the network let the ticker in but has no working internet: answer on the phone with `Pick another Wi-Fi`, or `Use it anyway` if it is your home Wi-Fi and the internet is down for now. See Setup says it can't get online.







7. If the page did not take you there, put your phone back on your usual Wi-Fi, open a browser, and type the address into the address bar with `http://` in front, not into a search box. The glass repeats the address on its own after the restart: `Open a browser.` / `Enter into its` / `ADDRESS BAR:` and the address, then a `Scan for my settings` QR code.



8. On the settings page, type a coin's name or symbol into each box (a list appears as you type), or open `Load top coins` and tap the slider's button to fill all twelve at once. Then tap `Save & Apply Coins` (it reads `Save & Apply` once there is a change you could undo).

You're done when

- The page shows `Saved & applied to your Ticker.`
- The glass shows `You're in settings!` / `Pick your coins,` / `hit Save, and` / `I'll get to work!` for a few seconds, then starts cycling your coins with their prices.

Problems?

- The CT network is not in your phone's Wi-Fi list: The CT setup network is not in my phone's Wi-Fi list
- The setup page did not open by itself: The setup page did not open by itself
- Your phone jumped back to its usual Wi-Fi mid-setup: My phone keeps leaving the setup network
- Your home network is not in the list: My Wi-Fi network is not in the setup page's list
- The ticker says the password was refused: The password was refused
- The settings page will not open at the address shown: The settings page won't open

Watch the setup once on video if you would rather see it than read it.

Unboxing and first power-up

Before you start

- Nothing but the box. Wi-Fi comes in the next guide.

Steps

1. Take out the ticker, the USB cable with the on/off button in its lead, and the power adapter. The printed Quick-Start card is in there too. See What's in the box.
2. Plug the small USB-C end of the cable into the socket on the back of the ticker. Plug the other end into the adapter, and the adapter into a wall outlet. Any USB port that stays powered works instead of the adapter.
3. Press the button on the cable if the screen stays dark; it switches the ticker on and off.
4. Look at the screen. It shows the CryptoTicr logo and the firmware version, and under them `Let's get me set up` / `on your home Wi-Fi`, a router icon, `Instructions follow.` and `They will repeat.` This screen stays for nine seconds.



5. Watch the cards that follow. The first is `For help...`, with `Call or text Lee:`, a phone number and an email address, and `He built me,` / `wrote my code,` / `is happy to help!`. After it come the setup steps: `The steps:`, then `Join my`

`Wi-Fi`. The cards go round in a loop, so you can read them again. The setup cards on the glass lists every one.



6. If a card titled `Power` appears first, with `My USB power is` / `very low right now.`, the ticker has measured its own supply and it is too low to run reliably. Do what the card says, `Use different USB cable` / `and/or power source.`, before you go on. If it says `very high right now.` instead, the card reads `Unplug me. Use a` / `different power source.`; do that at once. The card appears only while the reading is in that danger range.



You’re done when

- The card `Join my Wi-Fi` is on the screen, showing a network name that begins with `CT`. That is the ticker’s own setup network, and joining it is the next guide: Join the ticker's setup network.

Problems?

- The screen stays dark: The screen is dark or looks off
- The `Power` card keeps appearing: The power card says low or high
- The `CT` network does not show on your phone: The CT setup network is not in my phone's Wi-Fi list

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Join the ticker's setup network

Every step with pictures, the phone and the ticker side by side: the Device page.

Before you start

- The ticker is on and cycling its setup cards. The card `Join my Wi-Fi` shows the name you are looking for.
- Your phone (or tablet or computer) is within a few meters of the ticker.

Steps

1. Read the network name off the `Join my Wi-Fi` card. It is `CT` followed by three digits. The digits come from the ticker’s own chip, so two tickers in one home almost always show different names.



2. On your phone, open the Wi-Fi settings and wait for the list to refresh. The ticker's network has no password, so it shows as an open network. It accepts up to four devices at once, so a second device can join alongside a first one that got stuck.
3. Tap the `CT` network to join it. Your phone may warn you that the network has no internet, or ask whether to stay connected. Stay on it: the network exists only to carry your Wi-Fi password to the ticker, and it shuts itself down the moment the ticker is on your Wi-Fi.
4. Look at the glass. It changes to `You're on my Wi-Fi!` with a revolving middle line: `My setup page should pop up now.`, `iPhones & most Androids pop it up...`, `Some, like Samsung won't and will...`, `...need a Sign-in tap, or browse to the IP.`, `Stuck? I'll show a QR code to scan soon...`. Under it: `If not, browse to:`, the address `192.168.4.1`, and `http:// not https://`.



5. Wait a few seconds for the setup page. Most phones open it by themselves as a sign-in window. Some show a sign-in notification instead, tap it; the glass says as much: `...need a Sign-in tap, or browse to the IP.`
6. If nothing opens, open your browser and type `http://192.168.4.1` into the address bar. The ticker answers every address on its setup network with its own page, so any address works, but that one is the shortest.
7. When the page has loaded, the glass shows `Doing great!` / `On that page, pick` / `your Wi-Fi network.`, with a reminder that placing the ticker on a public or guest network probably won't work.



You’re done when

- The setup page is open on your phone, showing its four welcome cards, and the glass says `Doing great!`. Continue with The welcome cards on your phone and Choose your Wi-Fi and connect.

Problems?

- The `CT` network is not in the list: The CT setup network is not in my phone's Wi-Fi list
- The glass says `My setup page` / `did not open.`: The setup page did not open by itself
- Your phone left the `CT` network on its own: My phone keeps leaving the setup network
- The glass shows `No activity` and a countdown: nobody used the setup network for 15 minutes, so the ticker restarts and starts its cards again. Join the `CT` network once it is back. See Setup restarted for a fresh start.
- Per-device notes: Setting up from an iPhone or iPad, Setting up from an Android phone, Setting up from a Windows PC, Setting up from a Mac.

Setting up from an iPhone or iPad

Before you start

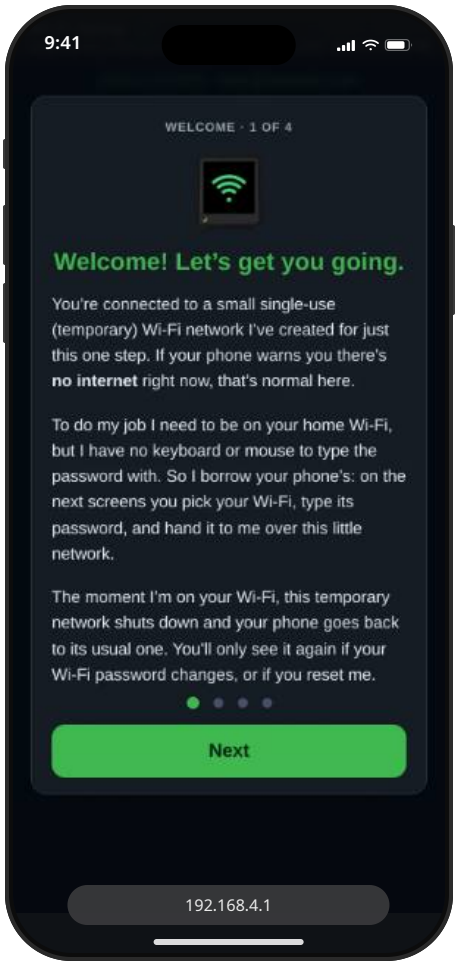
- The ticker is on and showing `Join my Wi-Fi` with a `CT` network name.
- Wi-Fi is on in the iPhone’s Settings.

Steps

1. Open Settings, tap Wi-Fi, and tap the `CT` network. It has no password.
2. Wait for the sign-in sheet. An iPhone checks every new network for a sign-in page, and the ticker answers that check by pointing it at its setup page, so the sheet opens with the page inside it. The glass says `You're on my Wi-Fi!`.



3. Read the four welcome cards in the sheet and tap `Got it, let's set up!`.



4. Pick your home network, type its password, tap `Connect`. The page is written so the iPhone does not offer its password AutoFill or a suggested password here; if a keyboard toolbar appears anyway, ignore it and type the password.
5. Leave the sheet open while the ticker connects. When the ticker joins your Wi-Fi it restarts, its own network goes away, and the sheet closes by itself. The page warns you: `If this popup closes by itself, that's normal: rejoin your usual Wi-Fi and open the address above.`
6. Go back to Settings › Wi-Fi and make sure the iPhone is on your home network again, then open Safari and type the address the glass shows, with `http://` in front.

If the sheet never opened, or you closed it: with the iPhone still on the `CT` network, open Safari and go to `http://192.168.4.1`.

Using the iPhone's own hotspot as the ticker's network? In the hotspot settings turn on `Maximize Compatibility`, otherwise the hotspot runs only on a band the ticker cannot see.

You're done when

- The settings page is open in Safari at the ticker's address on your home Wi-Fi.

Problems?

- The setup page did not open by itself
- My phone keeps leaving the setup network
- The settings page won't open

Setting up from an Android phone

Before you start

- The ticker is on and showing `Join my Wi-Fi` with a `CT` network name.
- Wi-Fi is on.

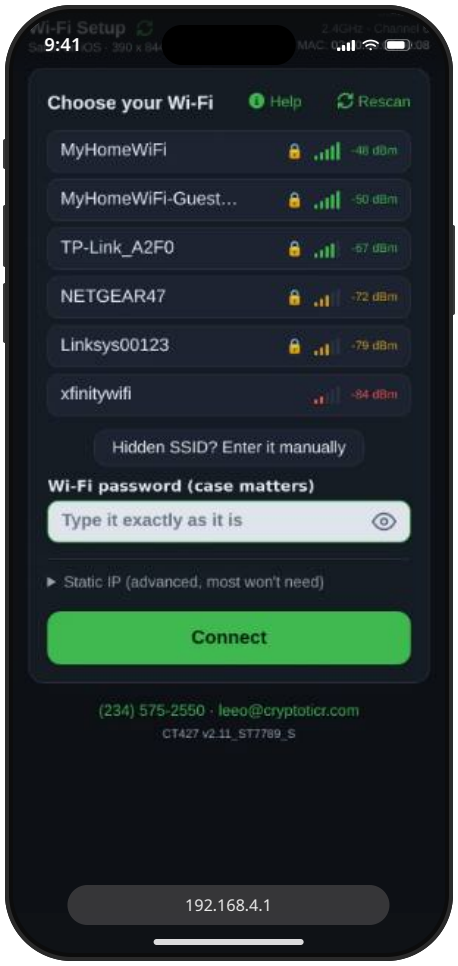
Steps

1. Open the phone's Wi-Fi settings and tap the `CT` network. It has no password.

2. If the phone asks whether to stay connected to a network without internet, say yes. The network is only for this step.
3. Wait for the sign-in page. Android checks every new network for a sign-in page, and the ticker answers that check by sending it to the setup page. Most phones open it as a window by themselves. Some, and the glass names Samsung, show a notification instead, such as “Sign in to network”; tap it. The glass says `You're on my Wi-Fi!`, and its revolving line reads `Some, like Samsung won't and will...` / `...need a Sign-in tap, or browse to the IP.`



4. If no window and no notification appears, open Chrome and go to `http://192.168.4.1`.
5. Read the four welcome cards and tap `Got it, let's set up!`, then pick your home network, type its password and tap `Connect`.



6. When the ticker joins your Wi-Fi it restarts, its own network goes away, and the phone goes back to your usual Wi-Fi. If the window closes on its own, that is normal. Open Chrome and type the address the glass shows under `My settings are here:`, with `http://` in front.

Using the phone's hotspot as the ticker's network? Set the hotspot band to 2.4 GHz. A 5 GHz-only hotspot is invisible to the ticker.

You're done when

- The settings page is open in the browser at the ticker's address on your home Wi-Fi.

Problems?

- The setup page did not open by itself
- My phone keeps leaving the setup network
- The settings page won't open

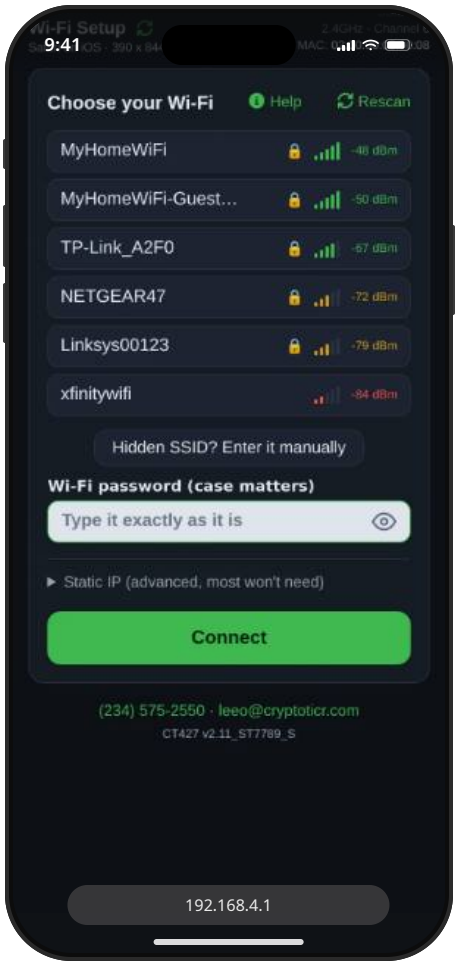
Setting up from a Windows PC

Before you start

- The ticker is on and showing `Join my Wi-Fi` with a `CT` network name.
- The PC's Wi-Fi is on.

Steps

1. Click the Wi-Fi icon in the taskbar and connect to the `CT` network. It has no password.
2. Windows checks a new network for a sign-in page and the ticker answers that check, so Windows may mark the network as needing action and open a browser at the setup page by itself.
3. If no page opens, open a browser and go to `http://192.168.4.1`; the setup page's own Help says this is common on Windows laptops. The glass shows the same address under `If not, browse to:`.
4. Read the four welcome cards, click `Got it, let's set up!`, pick your home network, type its password and click `Connect`.



5. When the ticker joins your Wi-Fi it shuts its own network down. Reconnect the PC to your home Wi-Fi, then open a browser and type the address the glass shows, with `http://` in front.



You’re done when

- The settings page is open in the browser at the ticker’s address on your home Wi-Fi.

Problems?

- The setup page did not open by itself
- The settings page won't open
- The browser turns http into https
- A VPN blocks the settings page

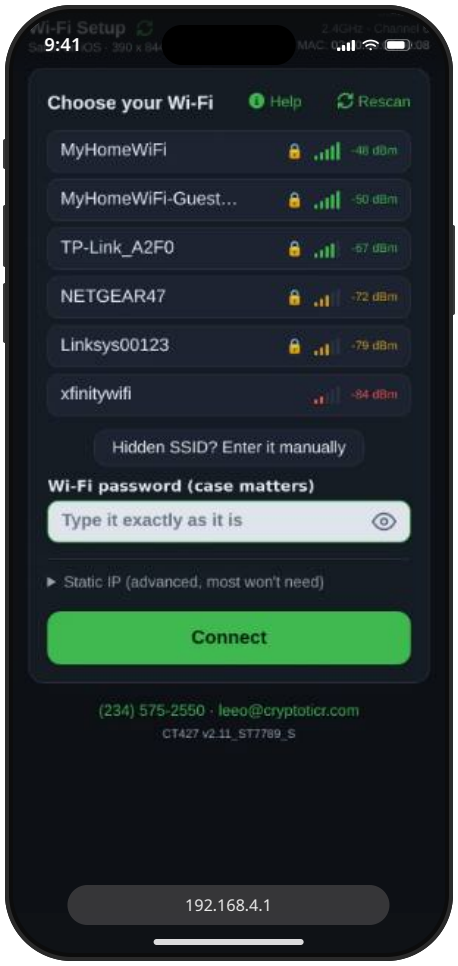
Setting up from a Mac

Before you start

- The ticker is on and showing `Join my Wi-Fi` with a `CT` network name.
- The Mac’s Wi-Fi is on.

Steps

1. Click the Wi-Fi icon in the menu bar and choose the `CT` network. It has no password.
2. A Mac checks every new network for a sign-in page. The ticker answers that check by pointing it at its setup page, so a small window with the setup page in it usually opens by itself.
3. If no window opens, open Safari and go to `http://192.168.4.1`. The glass shows the same address under `If not, browse to:`.
4. Read the four welcome cards, click `Got it, let's set up!`, pick your home network, type its password and click `Connect`.



5. When the ticker joins your Wi-Fi it restarts, and its own network goes away with it. The window, if you used it, goes blank; that is expected. Reconnect the Mac to your home Wi-Fi, open Safari and type the address the glass shows under `My settings are here:`, with `http://` in front.



You’re done when

- The settings page is open in Safari at the ticker’s address on your home Wi-Fi.

Problems?

- The setup page did not open by itself
- The settings page won't open
- The browser turns http into https

Choose your Wi-Fi and connect

Every step with pictures, the phone and the ticker side by side: the Device page.

Before you start

- The setup page is open and past its welcome cards. Its heading reads `Choose your Wi-Fi`, with `Help` and `Rescan` beside it.
- You know your home Wi-Fi password exactly, capitals included.

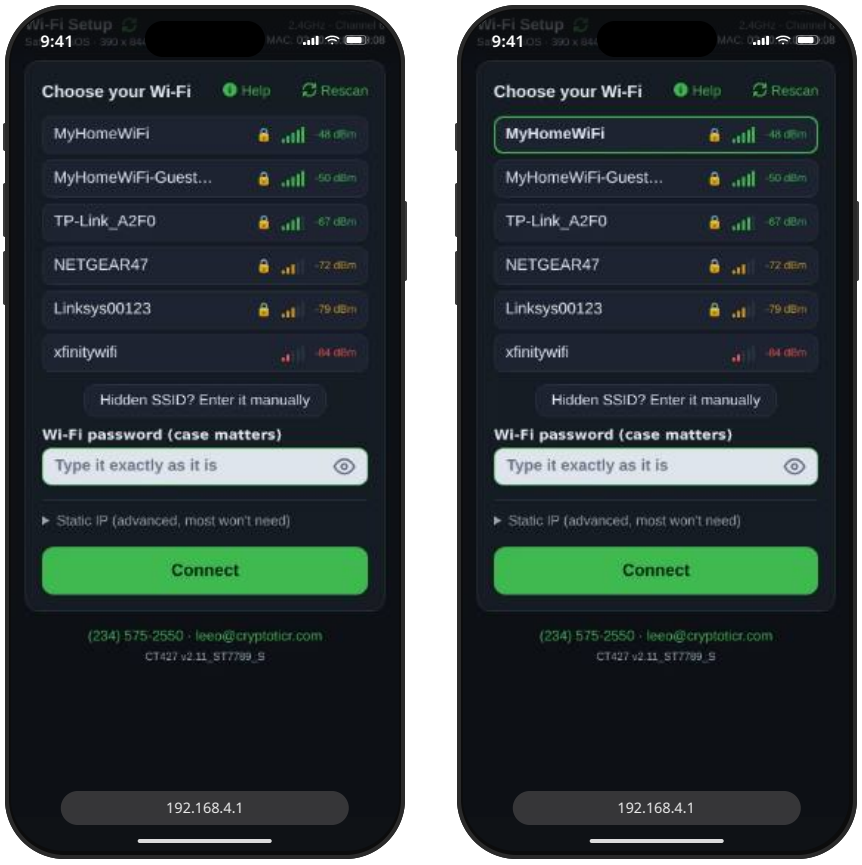
Steps

1. Wait for the list. Networks appear as the ticker finds them. While it scans, the page shows `Scanning for Wi-Fi in your area…` above the list, with `Hold on, this takes a few seconds.` until the first one appears. Each network in the list shows

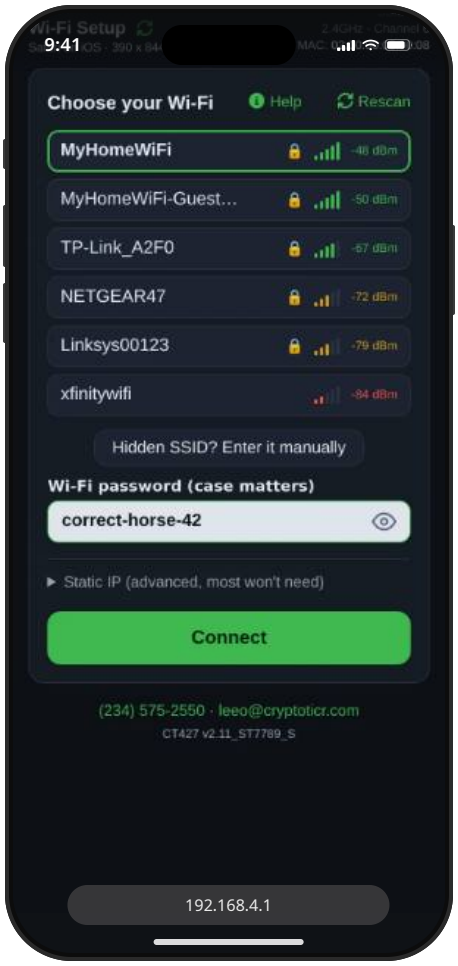
its name, a lock if it has a password, five signal bars, and the signal in dBm. The bars and the number are colored together: green is good, amber is fair, red is weak. A network the page thinks is a guest network carries a `guest` badge.

2. Tap your home network. Pick the main network, not a guest one, and if your router offers a 2.4 GHz and a 5 GHz name, pick the 2.4 GHz one. If your network is not listed, tap `Rescan`: each search adds what it finds and keeps the rows already shown. If it is hidden, tap `Hidden SSID? Enter it manually` and type the name exactly.

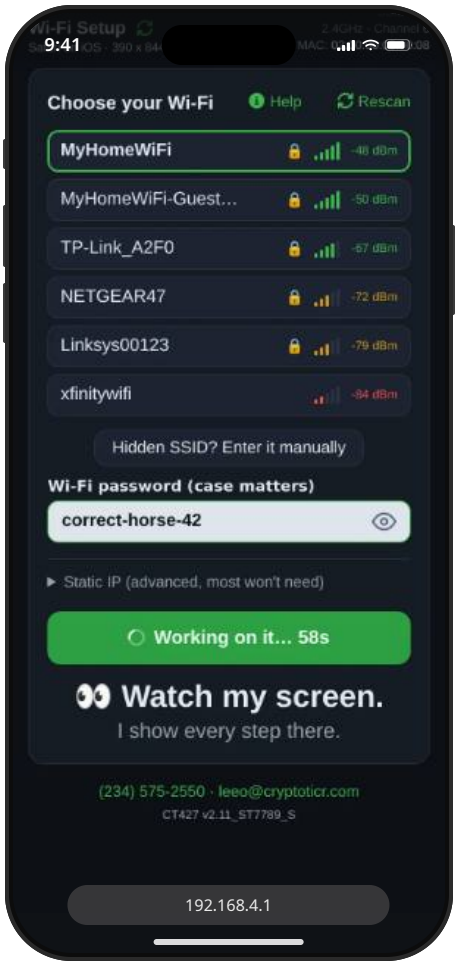
The networks it can see **The one you picked**



3. Type the password in the box under the list. It is a plain text box with the hint `Type it exactly as it is`, and it shows what you type; the eye button beside it hides it. What the eye does also decides whether the ticker's screen shows the password while it connects.



4. Leave `Static IP (advanced, most won't need)` closed unless you know you need a fixed address; see Give the ticker a fixed address.
5. Tap `Connect`. The button turns into `Working on it… 60s` and counts down; under it: `👀 Watch my screen.` / `I show every step there.` If the page has a doubt about what you typed it says so first, `⚠️ That doesn't seem right. Are you sure?`, and a second tap on `Connect` sends it anyway; if it cannot use the entry at all it says `⚠️ I can't use that.` and explains.



6. Watch the glass. It shows `Got it - thanks!` / `Connecting to:` and the network name, then `Password:` and the password as asterisks (or in clear, if you left the eye open), then `Logging in...`. If a first try fails, the glass shows `No luck yet.` / `Trying again (2 of 3)` / `Each try sharpens` / `my diagnosis...` and, below, `On my previous try:` with the reason. The page shows nothing new meanwhile: the button’s countdown is its only sign of progress until there is a result.





7. Read the result. On success the glass shows `Status report:`, your network's name, `Signal`, `Me` (the new address), `DHCP`, `DNS`, and three `IP` rows that show whether the ticker could reach its server and two internet addresses, for eight seconds, then `You're all set!` / `My IP Address` / the address / `One moment...` for eight seconds, then it restarts. The page shows `Connected! 🎉 My setup Wi-Fi is off now. Your phone should hop back to your usual Wi-Fi by itself. If not, open Settings → Wi-Fi and tap it.`





If the ticker gets onto the network but nothing on the internet answers, the glass shows `Can't get online` instead, and the page asks: `Use it anyway` or `Pick another Wi-Fi`. Pick another network if this one was a mistake. Use it anyway if it is your home Wi-Fi and the internet is down for now. With no answer, the ticker uses it after about 3 minutes and the glass shows `Wi-Fi joined.` with the address.



The page's `USB Power:` line, shown from the moment the page loads, is the ticker's reading of its own supply: `USB Power: good` with a voltage, or a warning with advice. It is about the ticker's cable and adapter, not your phone's battery.

You're done when

- The glass has shown `You're all set!` with an address and restarted, and the page has shown `Connected!` 🎉. On a network you chose to use without internet, the glass shows `Wi-Fi joined.` instead, and prices start when the internet answers. Continue with Find the settings page after setup.

Problems?

- The list is empty or your network is missing: My Wi-Fi network is not in the setup page's list
- `The password was refused.` or `Wrong password`: The password was refused
- `The router turned me away.`: The router turned me away
- `The router says it's full.`: The router says it's full
- `No address was given to me.`: No address was given to me
- `Can't get online`, or the page asks `Use it anyway`: Setup says it can't get online
- `The signal here is very weak.`: The signal here is very weak
- `I lost sight of the router.`: I lost sight of the router
- `Nothing came back.`: Nothing came back when I asked to join
- A network that wants a username: This network wants a username
- `It failed and didn't say why.`: It failed and didn't say why

- The page says it has lost touch with the ticker: My phone keeps leaving the setup network

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Find the settings page after setup

Before you start

- The ticker has restarted after `You're all set!`. Its glass shows `Looking good!` / `Starting up...` (or `Wi-Fi saved.` / `Starting up...` on a network used without internet), then the logo with `My settings are here:` and an address.

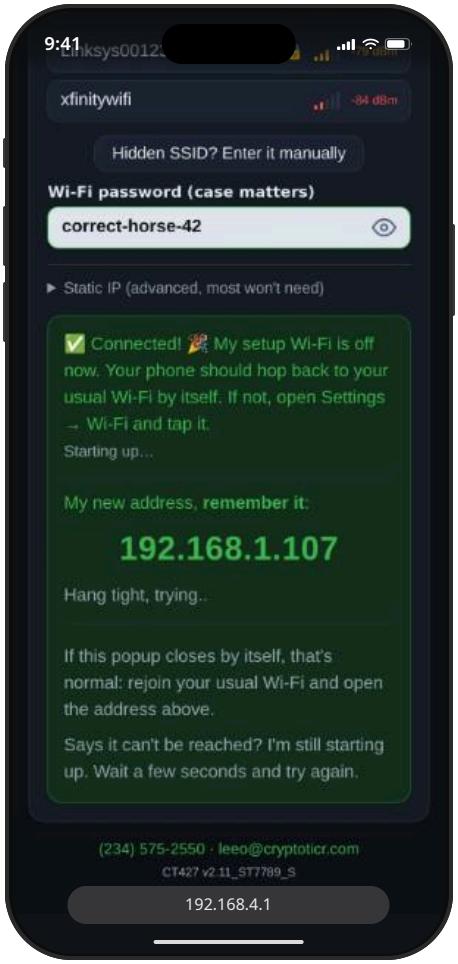


- The phone or computer you are using is on your home Wi-Fi, the same network you gave the ticker. It must be, or nothing below can reach the ticker.

Steps

1. Look at the setup page if it is still open. After `Connected! 🎉` it shows `My new address, remember it:` and the address large, with `Hang tight, trying...` under it. The page keeps checking that address; when the ticker answers it shows `Online. Taking you to your settings now:` and opens the settings page for you. If the page had lost touch with the ticker before that, it says `✅ Found me! I'm up and running on your Wi-Fi.` and `Taking you there now…` instead. Tapping the address makes it check right now. After `Use it anyway` the page

says `I'm on “<network>” now. I can't get online through it, so no prices until I can.` and asks you to put the phone on that network to reach the settings page.



2. If the page says `Says it can't be reached? I'm still starting up. Wait a few seconds and try again.`, wait: the ticker is between the restart and being on your Wi-Fi. It keeps trying by itself.
3. If the setup page is gone (the phone closed it when the setup network shut down), read the address off the glass instead. After the restart the ticker shows it several ways, in turn: under `My settings are here:` on the start screen; on a page reading `Open a browser.` / `Enter into its` / `ADDRESS BAR:` with the address large and `Not a search box!` under it; and as a QR code titled `Scan for my settings`.





4. Open a browser and type the address into the address bar with `http://` in front, for example `http://192.168.1.42`. Do not type it into a search box, and do not let the browser change it to `https://`, the ticker's page is `http://` only. That is safe: the page stays on your own network and never goes over the internet. The glass says so under the address: `http:// not https://`.
5. Or scan the `Scan for my settings` QR code with the phone's camera; it opens the same address.

You're done when

- The page opens with the CryptoTicr logo, `Settings` under it, and the banner `First time here? That's Lee (in Ohio).`, you are on the settings page. The glass shows `You're in settings!` Continue with Pick your first coins.

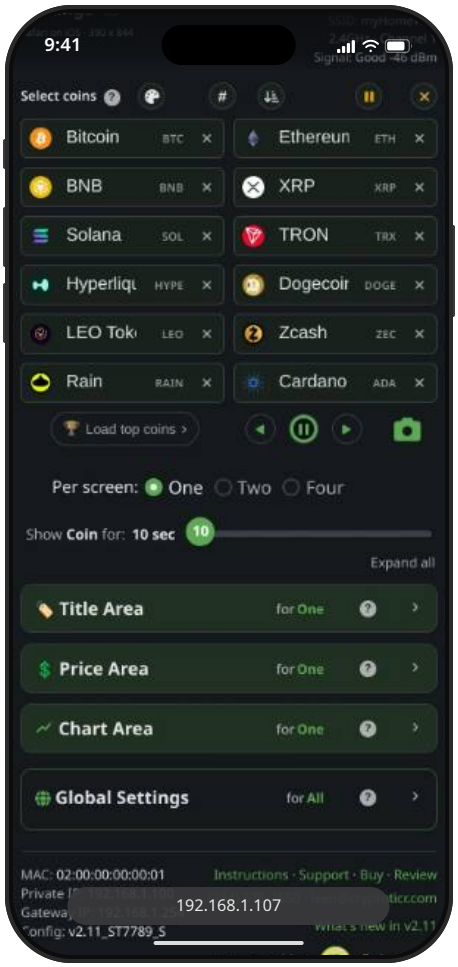
Problems?

- The page will not open: The settings page won't open
- The browser insists on `https://`: The browser turns http into https
- You missed the address and the glass has moved on: I lost the ticker's address
- The page opens but the coin boxes are empty: The coin boxes are empty when the settings page opens
- The page says the ticker is busy: The settings page says your ticker is busy

Pick your first coins

Before you start

- The settings page is open. Near the top is the heading `Select coins` with twelve boxes under it, labeled `1st coin` to `12th coin`.



Steps

1. Tap the first box and type a coin's name or its symbol: `bitcoin` or `btc` both work. A list appears as you type, each row with the coin's logo, name, symbol and market-cap rank.
2. Tap the coin you want in the list. The box fills with the coin's full name, its logo appears at the left of the box, and its symbol appears as a badge at the right.
3. Repeat for as many boxes as you want, up to twelve. Press Tab to move to the next box. Leave the rest empty.

4. Or fill all twelve at once: tap the `Load top coins` chip under the boxes. A slider appears with a caption such as `Top 1–12`; slide it to preview twelve coins at a time by market value, and when the slider's button turns orange, tap it to drop those twelve into the boxes. The caption under the slider says `Slide through top market cap coins. The button turns orange - tap it to load them.` Stablecoins are left out of these lists. Edit the boxes afterwards however you like.
5. Tap `Save & Apply`. The button appears under the boxes, beside `Undo`, once anything in them has changed.

You're done when

- The page shows `Saved & applied to your Ticker.`
- The glass shows `You're in settings!` / `Pick your coins,` / `hit Save, and` / `I'll get to work!` for a few seconds if the tour was still running, then the first of your coins with its price.

Problems?

- `Add at least one coin first.` (every box is empty; fill one and save again).
- `"xyz" isn't a coin I know. Pick one from the list as you type, or clear the box.` The box holds text that is not a coin: Save refuses a coin it doesn't know
- `All your coins are paused, tap a coin's icon to bring at least one back, then save.` See Save says all my coins are paused
- The boxes were empty when the page opened: The coin boxes are empty when the settings page opens
- `Couldn't load the top-coins list, the ticker may have lost its internet connection.` Tap `Try again`; if it keeps failing, see Glass says I can't see my server

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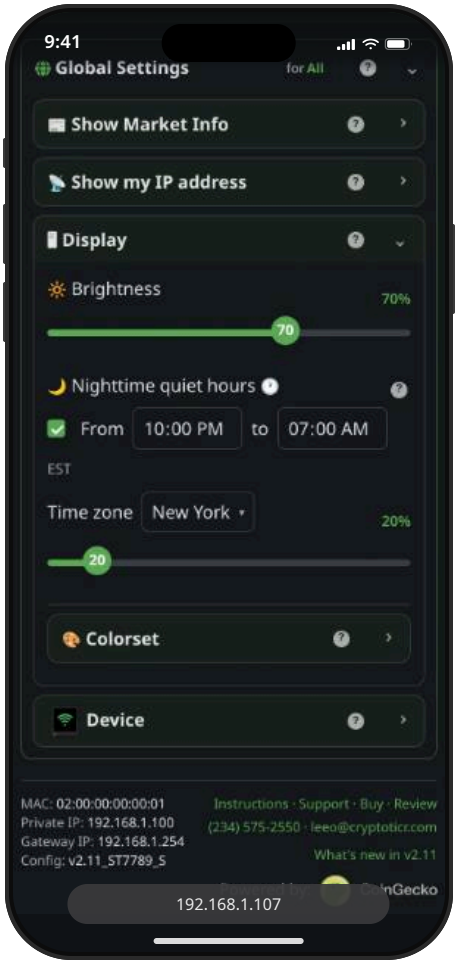
Things to do in the first hour

Before you start

- Your coins are saved and the ticker is cycling them. Everything below applies to the ticker the moment you change it; only the coin list has a save button.

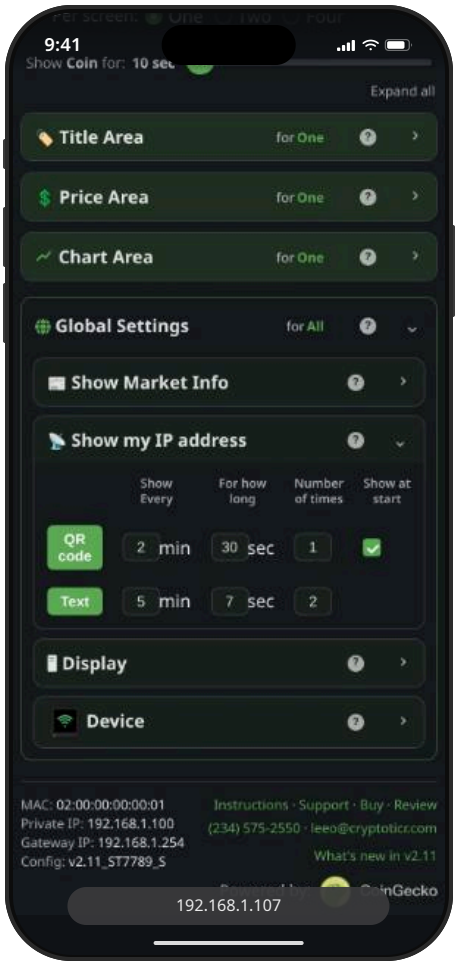
Steps

1. Set the brightness. Open the `Display` section and drag the `Brightness` slider; the glass follows as you drag. Mid-range suits most rooms.
2. Choose a color scheme. Under `Display`, open `Colorset` and tap a swatch; the glass changes at once. `Colorblind` uses blue and yellow instead of green and red for up and down.

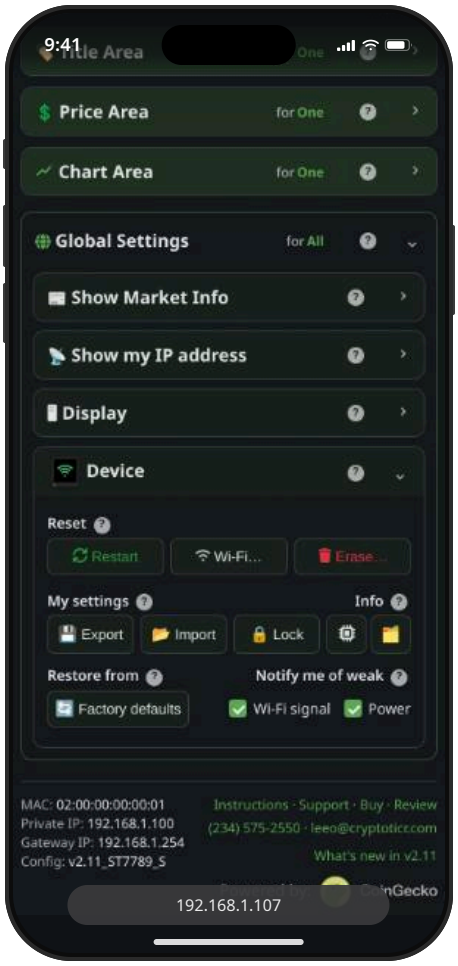


3. Choose a layout. `Per screen:` offers `One`, `Two` and `Four`, how many coins share the glass at a time. `One` has room for a chart; `Two` and `Four` do not.
4. Set how long each screen stays. Drag the `Show Coin for:` slider under the coin boxes (it reads `Show Two for:` or `Show Four for:` in those layouts). Each layout remembers its own time.
5. Turn on the market cards. Open `Show Market Info` inside `Global Settings` and tick `Market overview` or `Sector heat`; ticking one shows that card on the glass right away.

6. Decide about the address popup. `Show my IP address` has a `QR code` row and a `Text` row; each puts the ticker's address on the glass on its own schedule so the page is always findable. Turn off both to stop it, or leave the defaults.



7. Pick a page theme. The palette button beside `Select coins` offers dark and light themes for the page itself; it changes nothing on the ticker.
8. Optional: lock the page. `Lock` in the `Device` section sets a password that stops anyone else on your network changing settings. Most homes do not need it.



Every section has a `?` beside its title that explains it in place, and F1 opens the page's own Help.

You're done when

- The ticker looks the way you want it in your room, and you know where the `?` buttons are.

Problems?

- A change did not reach the ticker and the page said `Couldn't reach your ticker just now.` : Couldn't reach your ticker message
- The screen looks too dim or too bright at night: Nighttime quiet hours

Instructions



Everything below is the manual, in the order most owners need it.

Watch it instead

Set up your CryptoTicr with an iPhone: the whole thing done once, start to finish. All the videos are on one page, from setup on a laptop to what to do when a phone goes a different way.

Start here

- Quick start: the whole setup on one page. Plug in, join the ticker's `CT` network, pick your Wi-Fi, choose coins.
- Unboxing and first power-up: what is in the box and what the first screen looks like.

Setting up, step by step

- Join the ticker's setup network, then the guide for your device: Setting up from an iPhone or iPad, Setting up from an Android phone, Setting up from a Windows PC, Setting up from a Mac.
- Choose your Wi-Fi and connect: the setup page, the password, and what the glass shows while it joins.

- Find the settings page after setup and Pick your first coins.
- Things to do in the first hour: the settings worth a look on day one.

Using it

- Coins: Choosing coins, One, two or four coins per screen, How long each screen stays.
- The screen: Title area, Price area, Charts and time ranges, Colorsets, Brightness, Nighttime quiet hours.
- The page itself: A tour of the settings page, Opening the settings page.
- Wi-Fi later on: Change to a different Wi-Fi network, Moving to a new home or a new router, Wi-Fi.

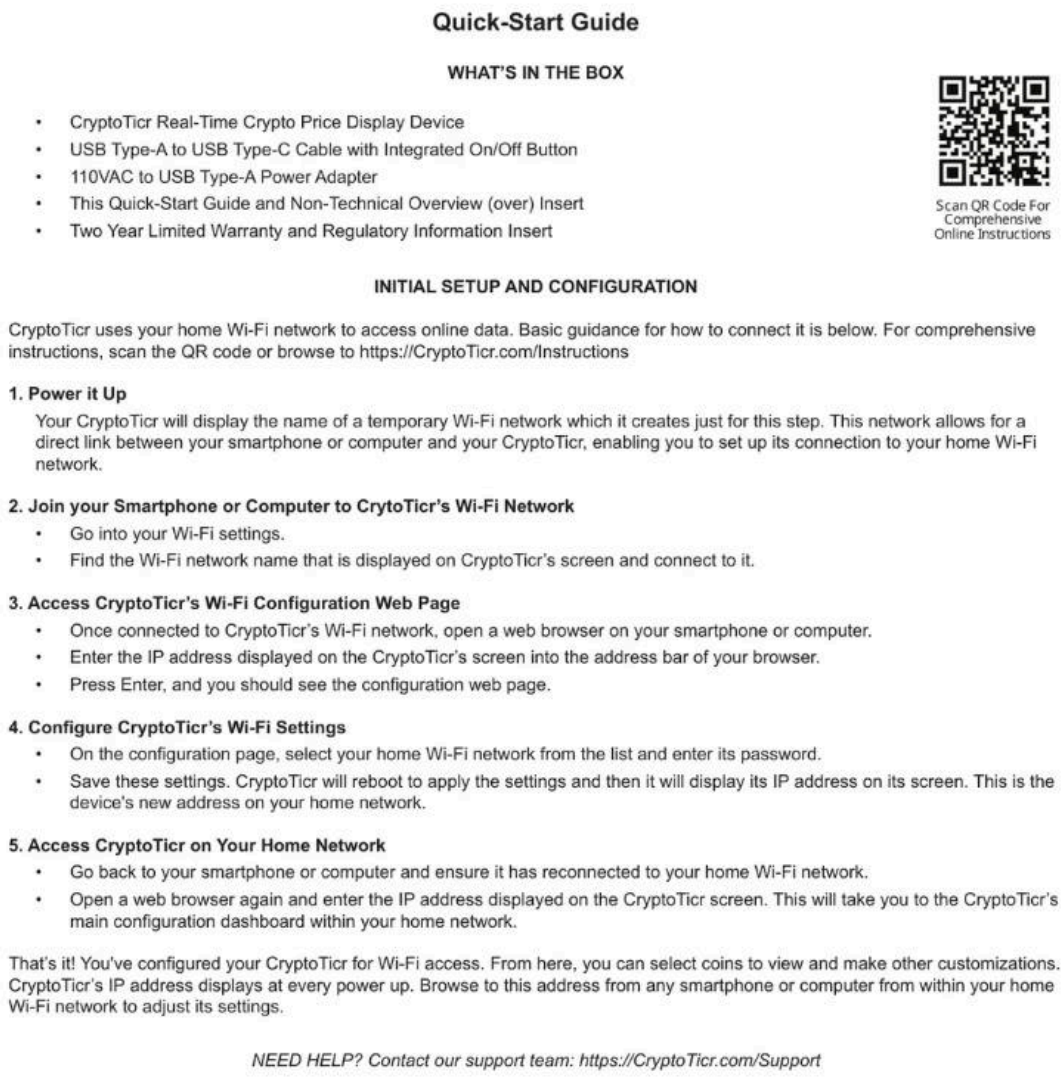
When something is odd

- What the screen is telling me: every message the glass can show, one line each.
- Support: what to have ready and how to reach Lee.

The Quick-Start card in the box

Every ticker ships with one printed card, front and back. The front is the Quick-Start Guide; the back explains the same thing without the jargon. Both sides are here, as pictures and as the file itself, for anyone who has lost the card or would rather read it on a screen.

The front: Quick-Start Guide



Quick-Start Guide

WHAT'S IN THE BOX

- CryptoTicr Real-Time Crypto Price Display Device
- USB Type-A to USB Type-C Cable with Integrated On/Off Button
- 110VAC to USB Type-A Power Adapter
- This Quick-Start Guide and Non-Technical Overview (over) Insert
- Two Year Limited Warranty and Regulatory Information Insert

Scan QR Code For Comprehensive Online Instructions

INITIAL SETUP AND CONFIGURATION

CryptoTicr uses your home Wi-Fi network to access online data. Basic guidance for how to connect it is below. For comprehensive instructions, scan the QR code or browse to https://CryptoTicr.com/Instructions

1. Power it Up

Your CryptoTicr will display the name of a temporary Wi-Fi network which it creates just for this step. This network allows for a direct link between your smartphone or computer and your CryptoTicr, enabling you to set up its connection to your home Wi-Fi network.

2. Join your Smartphone or Computer to CrytoTicr's Wi-Fi Network

- Go into your Wi-Fi settings.
- Find the Wi-Fi network name that is displayed on CryptoTicr's screen and connect to it.

3. Access CryptoTicr's Wi-Fi Configuration Web Page

- Once connected to CryptoTicr's Wi-Fi network, open a web browser on your smartphone or computer.
- Enter the IP address displayed on the CryptoTicr's screen into the address bar of your browser.
- Press Enter, and you should see the configuration web page.

4. Configure CryptoTicr's Wi-Fi Settings

- On the configuration page, select your home Wi-Fi network from the list and enter its password.
- Save these settings. CryptoTicr will reboot to apply the settings and then it will display its IP address on its screen. This is the device's new address on your home network.

5. Access CryptoTicr on Your Home Network

- Go back to your smartphone or computer and ensure it has reconnected to your home Wi-Fi network.
- Open a web browser again and enter the IP address displayed on the CryptoTicr screen. This will take you to the CryptoTicr's main configuration dashboard within your home network.

That's it! You've configured your CryptoTicr for Wi-Fi access. From here, you can select coins to view and make other customizations. CryptoTicr's IP address displays at every power up. Browse to this address from any smartphone or computer from within your home Wi-Fi network to adjust its settings.

NEED HELP? Contact our support team: https://CryptoTicr.com/Support

View or download the Quick-Start side (PDF)

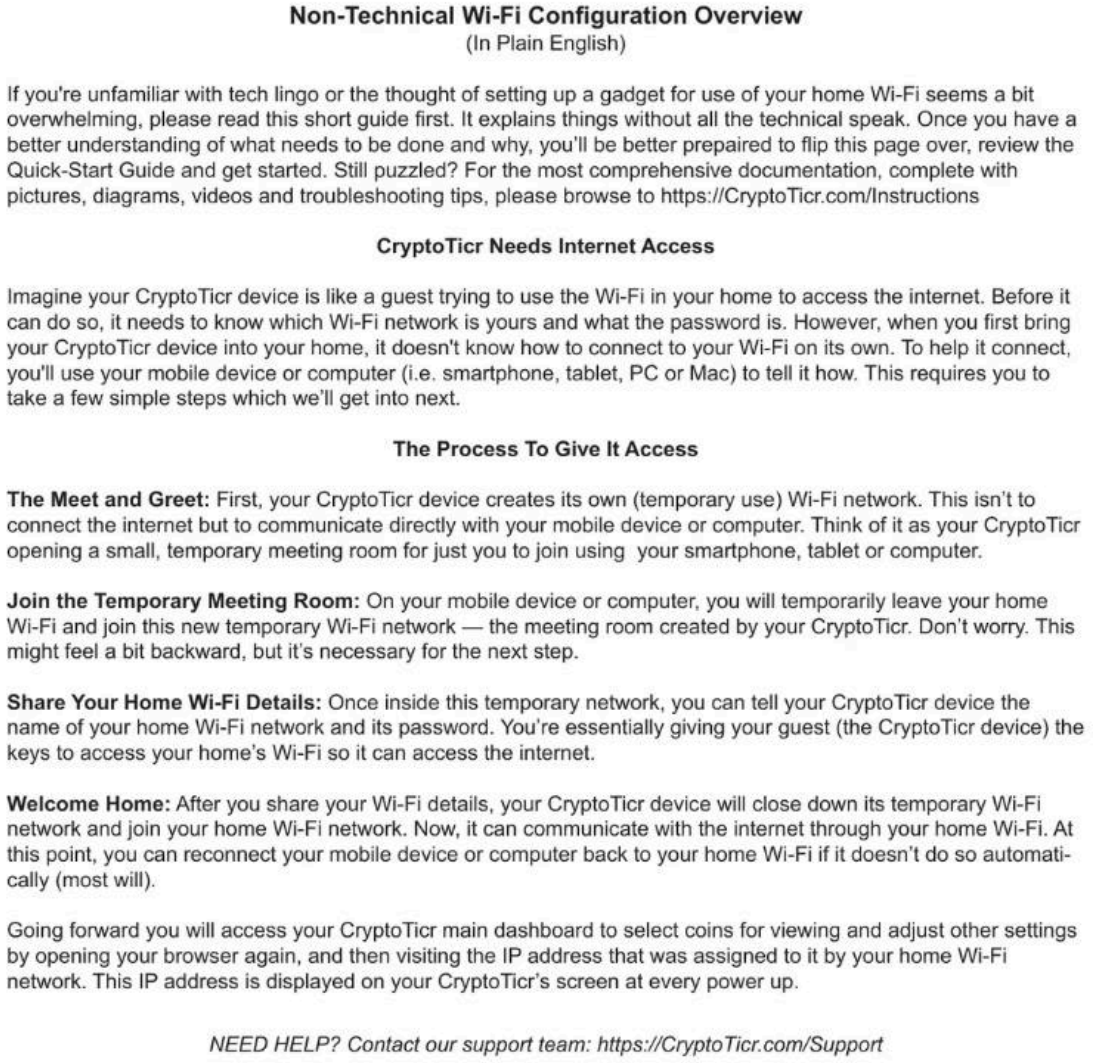
What's in the box

- The CryptoTicr itself.
- A USB Type-A to Type-C cable with an on/off button in the lead.
- A 110 V AC to USB Type-A power adapter.
- This Quick-Start card, with the plain-English overview on the back.
- The two-year limited warranty and regulatory card.

The five steps, as printed

1. **Power it up.** The ticker shows the name of a temporary Wi-Fi network it makes for this one job. That network is how your phone talks to the ticker directly.
2. **Join that network.** Open your phone's Wi-Fi settings, find the name on the ticker's screen, and join it.
3. **Open the ticker's setup page.** With your phone on that network, open a browser and go to the address the ticker shows.
4. **Give it your Wi-Fi.** Pick your home network from the list, type its password, and save. The ticker restarts and shows its new address on your home network.
5. **Come back on your own Wi-Fi.** Let your phone rejoin your home network, then open that address to reach the settings page.

The back: the same thing in plain English



Non-Technical Wi-Fi Configuration Overview
(In Plain English)

If you're unfamiliar with tech lingo or the thought of setting up a gadget for use of your home Wi-Fi seems a bit overwhelming, please read this short guide first. It explains things without all the technical speak. Once you have a better understanding of what needs to be done and why, you'll be better prepaired to flip this page over, review the Quick-Start Guide and get started. Still puzzled? For the most comprehensive documentation, complete with pictures, diagrams, videos and troubleshooting tips, please browse to https://CryptoTicr.com/Instructions

CryptoTicr Needs Internet Access

Imagine your CryptoTicr device is like a guest trying to use the Wi-Fi in your home to access the internet. Before it can do so, it needs to know which Wi-Fi network is yours and what the password is. However, when you first bring your CryptoTicr device into your home, it doesn't know how to connect to your Wi-Fi on its own. To help it connect, you'll use your mobile device or computer (i.e. smartphone, tablet, PC or Mac) to tell it how. This requires you to take a few simple steps which we'll get into next.

The Process To Give It Access

The Meet and Greet: First, your CryptoTicr device creates its own (temporary use) Wi-Fi network. This isn't to connect the internet but to communicate directly with your mobile device or computer. Think of it as your CryptoTicr opening a small, temporary meeting room for just you to join using your smartphone, tablet or computer.

Join the Temporary Meeting Room: On your mobile device or computer, you will temporarily leave your home Wi-Fi and join this new temporary Wi-Fi network — the meeting room created by your CryptoTicr. Don't worry. This might feel a bit backward, but it's necessary for the next step.

Share Your Home Wi-Fi Details: Once inside this temporary network, you can tell your CryptoTicr device the name of your home Wi-Fi network and its password. You're essentially giving your guest (the CryptoTicr device) the keys to access your home's Wi-Fi so it can access the internet.

Welcome Home: After you share your Wi-Fi details, your CryptoTicr device will close down its temporary Wi-Fi network and join your home Wi-Fi network. Now, it can communicate with the internet through your home Wi-Fi. At this point, you can reconnect your mobile device or computer back to your home Wi-Fi if it doesn't do so automatically (most will).

Going forward you will access your CryptoTicr main dashboard to select coins for viewing and adjust other settings by opening your browser again, and then visiting the IP address that was assigned to it by your home Wi-Fi network. This IP address is displayed on your CryptoTicr's screen at every power up.

NEED HELP? Contact our support team: https://CryptoTicr.com/Support

View or download the plain-English side (PDF)

The whole of that side is on Wi-Fi setup in plain English.

What has changed since the card was printed

The card is still right about the shape of the job. Two details on the ticker are friendlier now than the card describes:

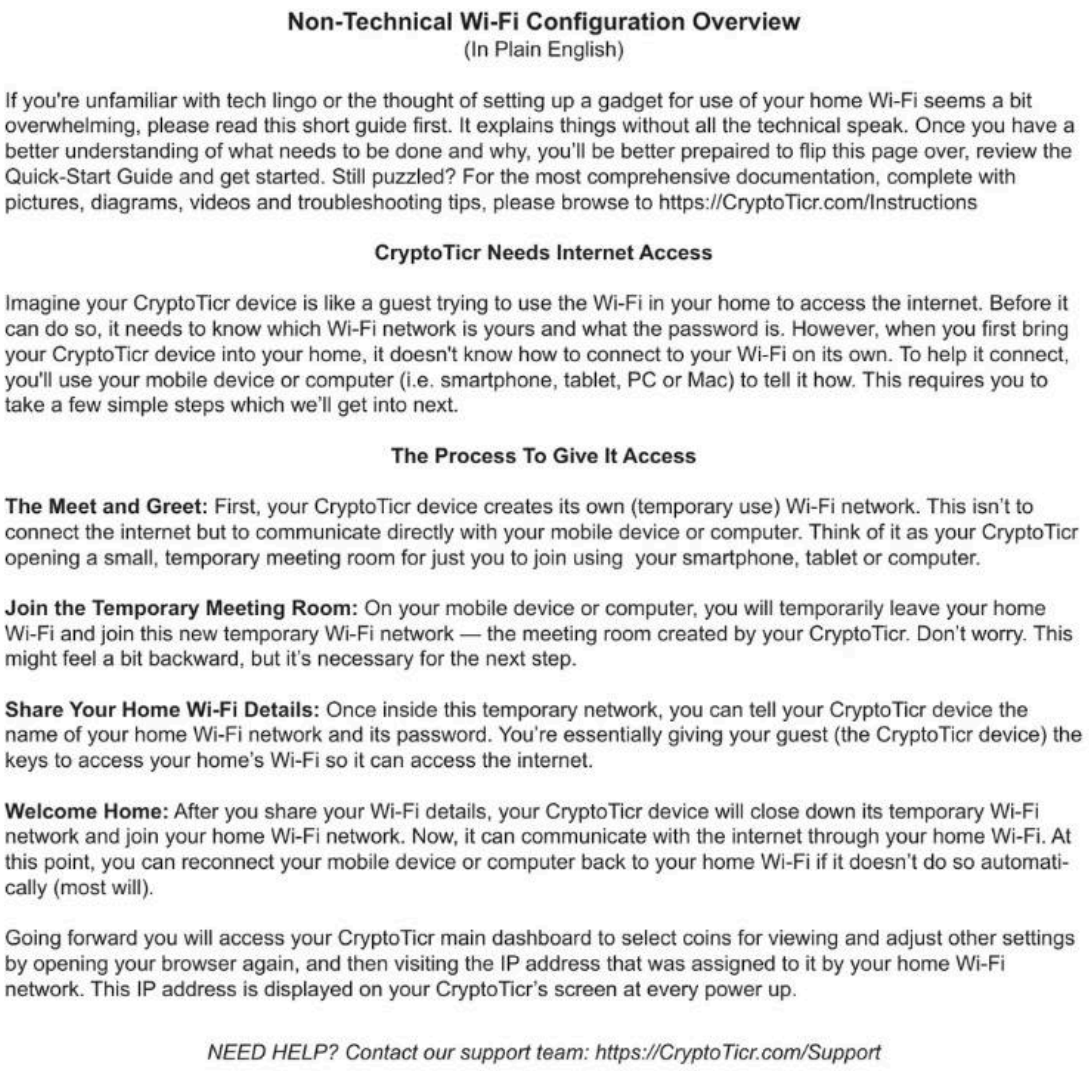
- **The setup page usually opens by itself.** On most phones, joining the ticker's network pops the page up without you typing anything. The ticker says so on its screen, and gives the address to type only if the page does not appear. That address is `192.168.4.1`, and it is shown as a QR code too.

- **The ticker now explains itself while you work.** It shows what it is doing at each step, names the network it is joining, and says what went wrong if a join fails, rather than leaving you to guess. Every one of those screens is on Screen messages during setup.

The current step-by-step, with a picture at each step, is Quick start.

Wi-Fi setup in plain English

If setting up a gadget on your home Wi-Fi sounds like more than you signed up for, read this first. It is the back of the card in the box, and it explains what is about to happen without the technical words. Once it makes sense, the step-by-step is Quick start.



Non-Technical Wi-Fi Configuration Overview
(In Plain English)

If you're unfamiliar with tech lingo or the thought of setting up a gadget for use of your home Wi-Fi seems a bit overwhelming, please read this short guide first. It explains things without all the technical speak. Once you have a better understanding of what needs to be done and why, you'll be better prepaired to flip this page over, review the Quick-Start Guide and get started. Still puzzled? For the most comprehensive documentation, complete with pictures, diagrams, videos and troubleshooting tips, please browse to https://CryptoTicr.com/Instructions

CryptoTicr Needs Internet Access

Imagine your CryptoTicr device is like a guest trying to use the Wi-Fi in your home to access the internet. Before it can do so, it needs to know which Wi-Fi network is yours and what the password is. However, when you first bring your CryptoTicr device into your home, it doesn't know how to connect to your Wi-Fi on its own. To help it connect, you'll use your mobile device or computer (i.e. smartphone, tablet, PC or Mac) to tell it how. This requires you to take a few simple steps which we'll get into next.

The Process To Give It Access

The Meet and Greet: First, your CryptoTicr device creates its own (temporary use) Wi-Fi network. This isn't to connect the internet but to communicate directly with your mobile device or computer. Think of it as your CryptoTicr opening a small, temporary meeting room for just you to join using your smartphone, tablet or computer.

Join the Temporary Meeting Room: On your mobile device or computer, you will temporarily leave your home Wi-Fi and join this new temporary Wi-Fi network — the meeting room created by your CryptoTicr. Don't worry. This might feel a bit backward, but it's necessary for the next step.

Share Your Home Wi-Fi Details: Once inside this temporary network, you can tell your CryptoTicr device the name of your home Wi-Fi network and its password. You're essentially giving your guest (the CryptoTicr device) the keys to access your home's Wi-Fi so it can access the internet.

Welcome Home: After you share your Wi-Fi details, your CryptoTicr device will close down its temporary Wi-Fi network and join your home Wi-Fi network. Now, it can communicate with the internet through your home Wi-Fi. At this point, you can reconnect your mobile device or computer back to your home Wi-Fi if it doesn't do so automatically (most will).

Going forward you will access your CryptoTicr main dashboard to select coins for viewing and adjust other settings by opening your browser again, and then visiting the IP address that was assigned to it by your home Wi-Fi network. This IP address is displayed on your CryptoTicr's screen at every power up.

NEED HELP? Contact our support team: https://CryptoTicr.com/Support

View or download this side of the card (PDF)

The ticker needs your Wi-Fi

Think of the ticker as a guest who has arrived and wants to use your Wi-Fi. Before it can, it has to be told which network is yours and what the password is. It cannot find that out by itself, and it has no keyboard for you to type on. So you tell it, using the phone or computer you already have.

How you tell it

It opens a room of its own. A ticker with no network makes a small Wi-Fi network of its own, named `CT` and three digits. That network reaches nothing but the ticker. It exists so your phone can talk to it directly, like a meeting room opened for one conversation.



You step into that room. On your phone, you leave your home Wi-Fi for a minute and join the ticker's network instead. This is the part that feels backwards, and it is normal. Your phone may warn that this network has no internet. That is true, and it is the point: the network is there for one exchange, not for browsing.

You hand over the keys. Once your phone is on it, a page opens on your phone. Most phones open it by themselves; if yours does not, the ticker's screen shows the address to type. On that page you pick your home network from a list and type its password. You are handing your guest the key to the house.





It moves in. The ticker closes its own little network, joins your home Wi-Fi, and from then on reaches the internet through your router like everything else you own. Your phone hops back to your home network by itself, on nearly every phone.



After that

The ticker shows its address on your home network every time it starts. Open that address in a browser, from any phone or computer on the same Wi-Fi, and you reach its settings page: which coins it shows, how long each one stays, colors, brightness and the rest.



Nothing about this repeats. You do it once, and after a power cut the ticker rejoins your Wi-Fi on its own.

If it does not go to plan

The ticker says what went wrong in plain words rather than a code. Take it from Screen messages during setup, or start at What the screen is telling me and find the words you can see.

The setup cards on the glass

This page covers the loop a new ticker runs before anything has joined its setup network: which cards play, in what order, and for how long. What each card says word for word, and everything that happens after a phone joins, is on Screen messages during setup.

The first screen

A ticker that has never been on a Wi-Fi network starts on its welcome screen: the CryptoTicr logo, the firmware version, then `Let's get me set up` / `on your home Wi-Fi`, a router icon, and two lines at the bottom, `Instructions follow.` in yellow and `They will repeat.` in gray. It holds for nine seconds, then the cards begin.



The cards, in order

The cards play in a loop, in this order, for as long as nothing has joined the setup network:

1. `For help...`, 11 seconds.
2. `The steps:`, 9 seconds. Plays on the first two laps only, then drops out.
3. `Join my Wi-Fi`, 90 seconds.
4. `Scan to join Wi-Fi`, 61 seconds.

From the second lap the cards run a little faster (10 percent shorter on lap two, 15 percent from lap three on), so someone who has read them once is not held up.

A fifth card, `Power`, joins the loop only when the ticker measures its own USB supply in the danger band. It stays in the loop for as long as that reading holds.

For help...

The header is `For help...` with a question-mark icon. Under it: `Call or text Lee:`, then the phone number large, then the email address. Beside a photo of Lee, three yellow lines: `He built me,` / `wrote my code,` / `is happy to help!` This card plays on every lap, because the person who is stuck on lap three needs the number more than the person on lap one.



The steps:

A list icon and `The steps:`, then three numbered lines:

1. `Join my Wi-Fi.`
2. `A page opens on` / `your phone.`
3. `Pick your home` / `Wi-Fi network.`

Step 3 says “home” on purpose: step 1 asked you to join the ticker’s network, and step 3 asks you to pick your own.



Join my Wi-Fi

The header is `Join my Wi-Fi` with a picture of the ticker. Under it, large and green, the name of the ticker's setup network: `CT` followed by three digits taken from the ticker's own chip. The name pulses three times when the card appears so the eye lands on it. Then `from any of these:` above a row of device icons, a phone, a tablet, a computer, because any of them can do the next step.



Scan to join Wi-Fi

`Scan to join Wi-Fi` across the top, the network name in green, and a QR code that holds the network's join details. Point a phone camera at it and the phone offers to join the network without you finding it in a list. Two device icons sit beside the code. A red bar inside the code counts down how long the card stays.

If the ticker cannot build the code, this card shows `Join this Wi-Fi:` and the network name instead.



The Power card

Header `Power` in red with a warning icon. Then `My USB power is` and either `very low right now.` or `very high right now.` A bolt icon, then the advice in yellow: for a low reading `Use different USB cable` / `and/or power source.`; for a high one `Unplug me. Use a` / `different power source.` It plays only while the ticker's own measurement of its supply is in the danger band.



The Heads up card

A `Heads up` card leads the loop only on a ticker that already had a Wi-Fi network and could not get back on it; see The ticker opened its setup network by itself. In that loop it plays on every lap and again between `Join my Wi-Fi` and `Scan to join Wi-Fi`, the second time ending `Fixed it on the router?` or `Wi-Fi working again?` / `Restart me once.` `Join my Wi-Fi` is shorter there, 60 seconds, with a green line counting down from the start.









What ends the loop

- **A device joins the setup network.** The how-to-join cards (`The steps:`, `Join my Wi-Fi`, `Scan to join Wi-Fi`) leave the loop while a device is on it, and the glass shows what stage you have reached instead: What the glass shows while joining.

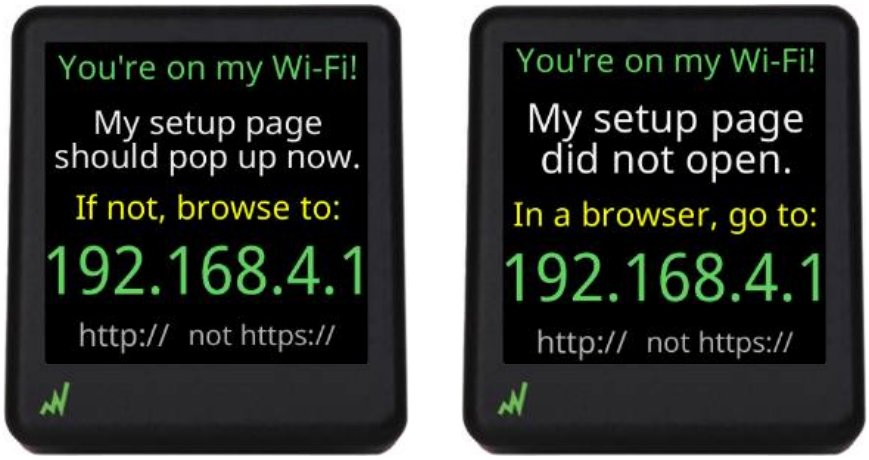
- **Nobody joins for 15 minutes, on a ticker whose saved network has worked before.** The ticker shows `Retrying your Wi-Fi` / the network's name / `I'll restart and try it again` with a countdown, restarts, and tries that network again. A new ticker, or one whose Wi-Fi was erased, keeps waiting in setup instead.

What the glass shows while joining

You're on my Wi-Fi!

The moment a device joins the setup network, the how-to-join cards leave the loop and this card takes the glass: `You're on my Wi-Fi!` in green, then a middle line that changes every few seconds: `My setup page should pop up now.`, `iPhones & most Androids pop it up...`, `Some, like Samsung won't and will...`, `...need a Sign-in tap, or browse to the IP.`, `Stuck? I'll show a QR code to scan soon...`. Then `If not, browse to:`, the address `192.168.4.1` large and green, and `http:// not https://` in gray. It holds for 90 seconds.

If the only thing that fetched the page was the phone's own network check and no browser followed, the card says `My setup page` / `did not open.` and `In a browser, go to:` above the address instead.



Scan to open my page

After the 90 seconds, if the setup page still has not been opened in a browser, the glass shows `Scan to open my page` with a QR code holding `http://192.168.4.1` and two device icons, for 60 seconds; then the two cards alternate. Point a camera at the code and the phone opens the page.



Doing great!

When a real browser has loaded the setup page, the glass shows `Doing great!` under a star-swish icon, then `On that page, pick` / `your Wi-Fi network.` and three smaller rows: `Tech Tip: Placing me` / `on a Public or Guest` / `probably won't work.`



Got it - thanks!

When you tap `Connect`, the glass shows `Got it - thanks!` with a green Wi-Fi icon, `Connecting to:` and the network's name in green, `Password:` and the password, as asterisks unless you left the eye on the setup page open, in which

case it is shown in clear so you can catch a typo, and `Logging in...` in yellow. For an open network the password row reads `(none - open network)`.



No luck yet.

If a try fails and the ticker is going to try again, the glass shows `No luck yet.` under a magnifier icon, `Trying again (2 of 3)` with the count, `Each try sharpens my diagnosis...`, and, when it has one, `On my previous try:` with the reason from the last attempt in yellow.



Status report:

On a successful join, before the celebration, the glass shows a table titled `Status report:`. Its rows:

- your network's name
- `Signal`, the strength in dBm
- `Me`, the address your router gave the ticker
- `DHCP`, how long the address took to arrive, in milliseconds
- `DNS`, how long a name lookup took, or `no address`
- `IP my server`, how long the ticker's own server took to answer, `refused`, `silent`, or `not tried`
- `IP 8.8.8.8` and `IP 1.1.1.1`, the same for two public internet addresses

Rows that answered are green; a row that did not is orange or red. If the ticker's server did not answer, or a sign-in page answered in its place, a last row says why in plain words: `A sign-in page blocks me.`, `No internet here.`, `My name fails here.`, `443 fails here, 80 works.` or `My end, not yours.` The table holds for eight seconds, or 15 when a row is not green.



Can't get online

When the ticker gets onto a network but nothing on the internet answers, the status report is followed by `Can't get online` in yellow with a yellow Wi-Fi icon crossed out in red, the network's name in green, and `Answer on your phone.` /

`Use it, or pick another.` / `3 min, then I'll use it.` The setup page asks the same question with two buttons, `Use it anyway` and `Pick another Wi-Fi`. Pick another and nothing is saved. Use it anyway, or let the 3 minutes run out, and the glass shows `Wi-Fi joined.` / `My IP Address` / the address / `Can't get online.` for eight seconds, without the color-cycling title, then restarts onto that network.





You’re all set!

`You're all set!` in a color-cycling title, `My IP Address`, the address as large as it fits, `One moment...`, and an hourglass. It holds for eight seconds, then the ticker restarts onto your Wi-Fi. This is the address the settings page lives at; the phone captures it during these seconds.



Don’t give up!

The first failed attempt paints no card of its own; the page carries the verdict. From the second failure the glass shows `Don't give up!` under a raised-fist icon, the reason in white (for example `Password refused 2x - Wrong password?`), then `Try again` in yellow, `on my setup page:` and `192.168.4.1` in green. After it, the failure cards take over the loop: `What happened`, `Let's try again.`, `Tech tip` (only after a refusal), `Also worth trying` (only when the signal was poor) and `Don't give up!` again, each for 11 seconds. Every one of those cards, quoted and pictured, is under “When a join fails” on Screen messages during setup; the individual fixes start with The password was refused.

After the restart

The first screen after the restart is `Looking good!` / `Starting up...`, or `Wi-Fi saved.` / `Starting up...` after a network used without internet. What follows is on The first run on the glass.



The first run on the glass

The start screen

After `You're all set!` the ticker restarts. The first thing it paints is `Looking good!` / `Starting up...` in green. After a network used without internet (`Wi-Fi joined.`), it paints `Wi-Fi saved.` / `Starting up...` instead. Then the start

screen: the CryptoTicr logo, the firmware version, and, once the router has given it an address, `My settings are here:` with the address in large type.



Waiting for the server

Before showing prices the ticker asks its server for a go-ahead. Usually that takes a moment. If it takes longer, a small box at the bottom of the start screen says what is happening and counts the tries: `My server says: wait.`, `My server's having trouble.`, `Not your fault. Retrying...`, `Rejoining your Wi-Fi...` or `Waiting for an address...`. When the fault is on the ticker's side of the internet the box says so, `My server's down right now.`, `The trouble is at my end.`, `I'll keep trying.`, and when this network blocks it, `Something here blocks me.` / `I can't get past this network.` / `Use home Wi-Fi or a hotspot.` The ticker keeps trying on its own; nothing here needs you.

The signal check

If the ticker's link to your router is weak, a reading below -79 dBm, it shows a `Weak Wi-Fi signal` card once before the first coin, with your network's name, `Strength:` and the reading, and `2.4GHz - Channel` with the channel number. A ticker with a good or fair signal shows no card at startup. The card is described on The Wi-Fi signal check.



The proof-of-life show

On a ticker that has never been introduced to its owner, the first coins are a short demonstration that everything works, run faster than normal: any Market Info cards that are switched on play first, briefly, then two coins for about two and a half seconds each. The demonstration ends by itself after those two coins, or after 90 seconds at most.

The tour

Then the ticker turns to you. It cycles through these pages, each with a thin green bar that empties as the page's time runs out:

1. `Nicely done!` in a color-cycling title, a picture equation, a gem, plus raised hands, an arrow, a moon, and `Let's catch` / `the next move.` Six seconds, shown once.



2. The address page: `Open a browser.` / `Enter into its` / `ADDRESS BAR:`, the address large, `Not a search box!`, and `http:// not https://` (plain http, because the page stays on your own network and never crosses the internet). 45 seconds. This page exists because the commonest first-day call is an address typed into a search box.



3. The phone page: `Scan for my settings` and a QR code holding the address, with a red bar inside the code counting down. 60 seconds.



4. The `For help...` card from setup, with Lee's number and email, for ten seconds, every second lap, and only while nobody has opened the settings page.

The address and phone pages repeat until one of two things happens.

How the tour ends

- **You open the settings page.** The glass changes at once to `You're in settings!` with a party-popper icon and `Pick your coins,` / `hit Save, and` / `I'll get to work!`, holds it for five seconds, and starts the coins. Once you are on the page, the address and phone pages still to come are cut to a quarter of their time, because you no longer need them.
- **One full pass has played**, every page has had its whole time, and nobody has arrived. The coins start on their own. The tour is marked as played and does not return on later power-ups.

The first automatic firmware check happens five minutes after power-up whether or not the tour is running.

Wi-Fi

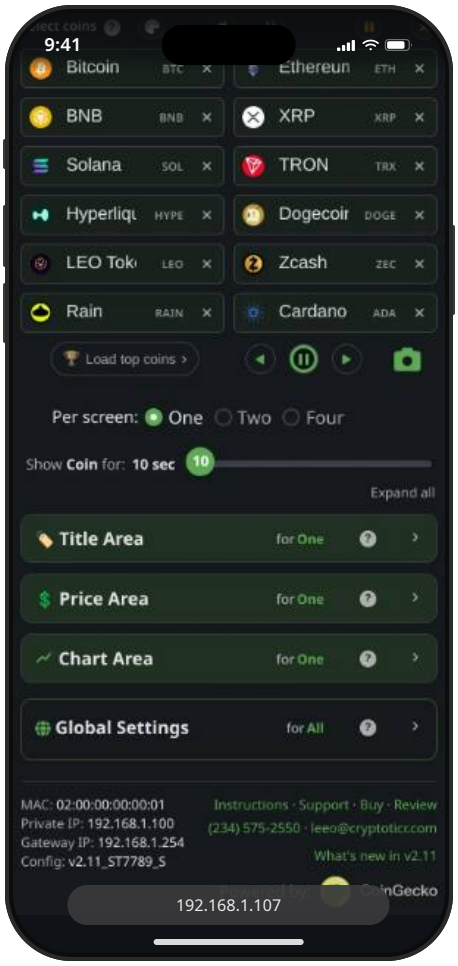
Give the ticker a fixed address

Before you start

- Most owners do not need this. The ticker takes an address from your router automatically. Fix the address only if you want the settings page at the same address forever, for a bookmark, say.
- The recommended way is a reservation on your router: the router promises the ticker the same address every time, and nothing is typed into the ticker. It keeps working through a factory reset and through Erase Wi-Fi.
- You need the ticker's MAC address. It is on the settings page, in the footer row `MAC`, and at the top of the setup page as `MAC:`. It never changes.

Steps

1. Open the settings page and write down the value in the footer row `MAC`: six pairs of characters, for example `A4:CF:12:3B:9E:01`.



The picture comes from this site's demonstration ticker, whose made-up MAC starts `02:` so that it can never be a real unit's. Yours will look like the example above.

2. Open your router's admin pages and find its address reservation screen. Routers call it different things: DHCP reservation, address reservation, static lease, fixed IP or IP binding.
3. Add a reservation and type the ticker's MAC in by hand, character by character. Do not pick the ticker from the router's list of connected devices. Phones join Wi-Fi with made-up private MACs that change, and that list is full of them; a reservation made on one of those holds the address for a device that never comes back, and the ticker ends up with a settings page that still opens but no way out to the internet. A private MAC has 2, 6, A or E as its second character. The ticker's never does.
4. Choose the address to reserve. If the reservation screen offers a DNS setting for that one device, leave it blank.

5. Save the reservation, then unplug the ticker, wait a few seconds and plug it back in, so it asks the router for an address again and receives the reserved one.

You're done when

- The settings page opens at the reserved address, and its footer row `Private IP` shows that address.

Problems?

- The settings page does not open at the reserved address: The settings page won't open
- The settings page opens but prices stop updating: check that the reservation was made on the ticker's MAC, typed by hand, and not on a device picked from the router's list.

Typing the address into the ticker instead

Use this only if your router cannot reserve addresses.

1. On the setup page (or the Change Wi-Fi page), open `Static IP (advanced, most won't need)`. The hint reads `Fill in the first three boxes together, or leave them all blank for automatic (DHCP).`
2. Type the address into `IP address`, the router's address into `Gateway`, and the mask into `Subnet`. Leave `DNS (blank = your router)` empty unless you have a reason. Spaces are removed as you type.
3. Pick your network and type its password as usual, then tap `Connect`. The page checks the numbers first. Something that cannot be an address at all, such as a part over 255 or not four numbers, is refused: `⚠ I can't use that.` with the reason, for example `IP address 192.168.1.300 has a number over 255. The highest any part of an address can be is 255.` Something that is merely odd is questioned once: `⚠ That doesn't seem right. Are you sure?` with lines such as `Did you mean 255 rather than 225? They are one key apart.`, `Gateway 10.0.0.1 isn't on the same network as 192.168.1.50, so I'd have no way out.`, or `A fixed address needs the IP, Gateway and Subnet boxes filled in together. Leave any of them blank and I quietly fall back to automatic (DHCP).` A second tap on `Connect` sends it as typed.
4. Let the ticker connect. If the three boxes do not all make sense on the ticker's side, it uses none of them and takes an address from the router instead.
5. Check the result: the settings page footer shows the address as `Private IP`.

What the ticker does with a typed address

- At every start it checks that the fixed address can reach its server. If it cannot, the glass shows `That fixed address` / `isn't working.` / `Asking your router...`, and the ticker takes an address from the router for that session while keeping yours on file: `Your router gave me` / `one that works.` If that fails too: `No luck either way.` / `Keeping yours.`



- When it starts on the fixed address it says so during the connection story: `I'm using the fixed` / `address you gave me:` and the address.
- To change or clear the address later, open Change Wi-Fi, pick the network you are on (the row marked `on it now`), edit the boxes, which come pre-filled with what is saved, and tap `Connect`. The glass shows `Updating my address...` and then the success card, or `Couldn't apply that address` if the new one reaches nothing, in which case the old one is kept. Picking a different network clears the boxes, because an address belongs to the network it was set for. To go back to automatic, clear all the boxes. The ticker waits up to 12 seconds for an address from the router. If none comes, it keeps the old fixed address: the glass shows `Couldn't apply that address`, and the page says `The router gave me no working address. I'm still on “YourNetwork” with the address I had.` With a settings password, unlock on the settings page first, in the same browser.
- If you replace the router itself, the address may not fit the new network. The start-up check above keeps the ticker reachable meanwhile, and a reservation on the new router is the lasting fix.

- `Erase Wi-Fi` and a factory reset erase a typed address along with the network. A router reservation is not affected.

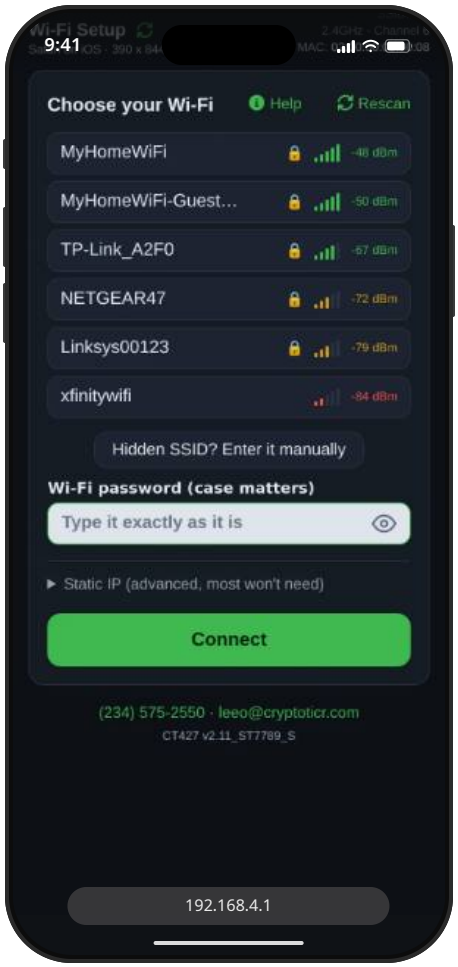
Join a hidden network

Before you start

- Know the name exactly. A hidden network cannot be picked from a list, so a typo in the name means the ticker keeps looking for a network that does not exist.

Steps

1. Under the network list, tap `Hidden SSID? Enter it manually`. A `Network name (SSID)` box with the hint `Exact Wi-Fi name` appears under the button, which now reads `Pick from the list instead`. The list stays above it.



2. Type the name. The password box is already under it: the page cannot tell whether a hidden network has a password, so it assumes it does.
3. Type the password and tap `Connect`. If the name begins or ends with a space the page asks once, `The network name ends with a space. That is allowed, but did you mean “MyNetwork”?`, and a second tap sends it as typed. A name longer than 32 bytes is refused.
4. Watch the glass as for any join. On the Change Wi-Fi page the glass says `Not in my scan - trying anyway (hidden?)` before it tries.



You’re done when

- The ticker joins and shows `You're all set!` (setup) or `Connected!` and `My new address:` with the address (Change Wi-Fi).

Problems?

- The join fails: It failed and didn't say why
- The password was refused: The password was refused

What is different on a hidden network

- The ticker never sees a hidden network in a scan, so it has no signal reading for it. It still tells a network that is not there (`I can't find that network right now.`) from one that refused it, but it cannot say why a refusal happened, so a

refused try usually ends with `Something stopped me joining your home Wi-Fi, and I can't tell exactly why.` rather than the more specific verdicts a network in the list can get.

- Everything else, the address, the signal check, updates, works the same.

Change to a different Wi-Fi network

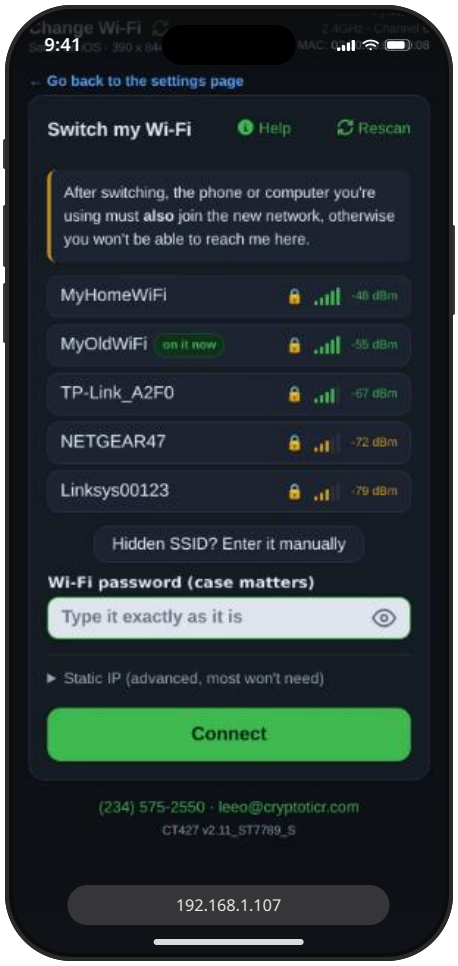
Every step with pictures, the phone and the ticker side by side: the Device page.

Before you start

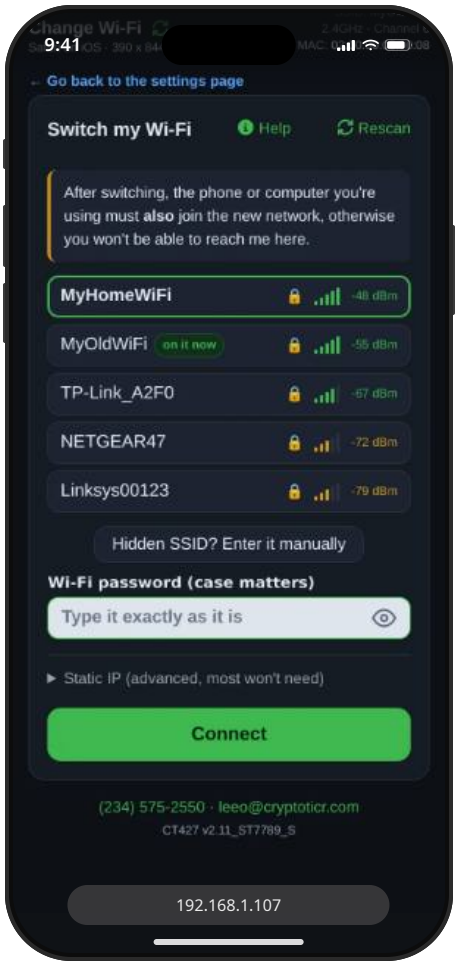
- The ticker keeps its current network until the new one has been proven. If the new one fails, nothing changes.
- The phone or computer you are using has to move to the new network afterwards too, or it cannot reach the ticker's page any more.

Steps

1. On the settings page, open the `Device` section and tap `Wi-Fi…`, then `Change Wi-Fi` (`Move me to a different network. No setup restart.`). The Change Wi-Fi page opens, with `← Go back to the settings page` at the top and the heading `Switch my Wi-Fi`. Under it: `After switching, the phone or computer you're using must also join the new network, otherwise you won't be able to reach me here.`



2. Wait for the list. The network the ticker is on carries the badge `on it now`. Tap the new network.

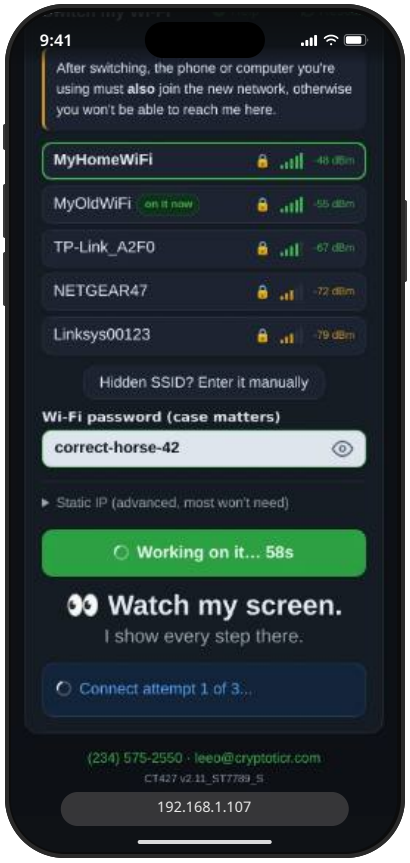


3. Type its password and tap `Connect`. The page shows `Trying "NewNetwork"…` and then relays what the ticker is doing.

Type the new password



Then it tells you how it went

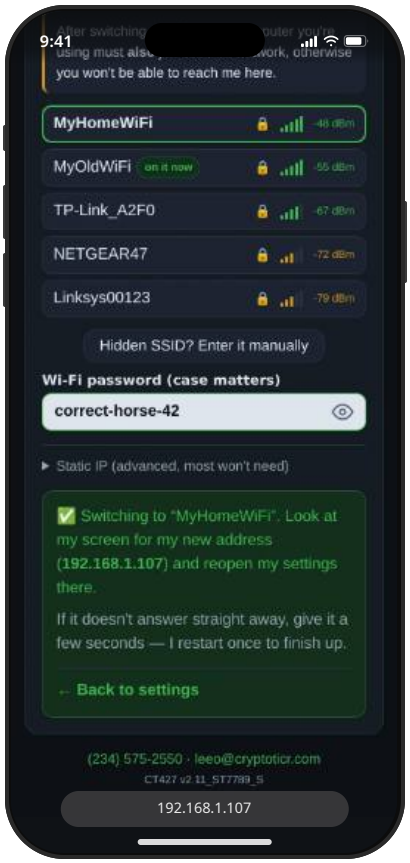


4. Watch the glass. It shows a band of short phases: `Looking for that network nearby...`, then `Found it (signal 78%). Connecting...` (or `Not in my scan - trying anyway (hidden?)`), then `Connect attempt` and `1 of 3...`. Each attempt is given nine seconds; a failed one shows its reason and `Retrying... (1 of 3)`. A join that works is followed by `Wi-Fi OK - checking the internet...`.



5. On success the glass shows `Connected!` and `My new address:` with the new address for 20 seconds, then the ticker restarts once onto the new network (`Restarted to reconnect`, `to your Wi-Fi`). The page shows `✅ Switching to "NewNetwork". Look at my screen for my new address (…) and reopen my settings there.` with the address as a link, and `If it doesn't answer straight away, give it a few seconds, I restart once to finish up.` The page may instead report `I've stopped answering here, which usually means I've moved to "NewNetwork". Look at my screen: it either shows my new address, or it says what went wrong.` The ticker has left the network your phone is on, so the page has lost it.





6. Move your phone or computer to the new network and open the address the glass showed.

You’re done when

- The ticker cycles coins on the new network and the settings page opens at the new address.

Problems?

- The new network is not in the list: My Wi-Fi network is not in the setup page's list
- The change failed: Change Wi-Fi did not work
- The page went quiet and you cannot find the ticker afterwards: I can't reach the ticker after changing its Wi-Fi
- You want to change the password of the network you are on, not the network: Changing your router's Wi-Fi password

If it fails

The ticker goes back to the network it was on. The glass shows `Couldn't join. Back on your saved Wi-Fi.`, then a card headed `Couldn't switch` with the network name, the reason, and `Your Wi-Fi settings`, `were not changed.` for 15 seconds.



The page shows the verdict, one of `I can't find “NewNetwork” at this location.`, `“NewNetwork” let me in, but I couldn't reach the internet through it.`, or `“NewNetwork” didn't let me on. What I saw is below, it says which part went wrong.`, with `What I saw` under it and the offer to `Save it anyway`, which is for a ticker you are about to move; see Save a network for another place.

When you only changed the fixed address on the network the ticker is on, the verdict is about the address instead: `That address didn't reach anything. I'm still on “YourNetwork” with the address I had.` for an address you typed, or `The router gave me no working address. I'm still on “YourNetwork” with the address I had.` when you cleared the boxes.

If the settings have a password, unlock them in the settings page’s banner first, in the same browser; the Change Wi-Fi page uses that unlock. A browser that has not unlocked sees `My settings are locked. Unlock them on my settings page first, then change my Wi-Fi.` in place of the network list.

Save a network for another place

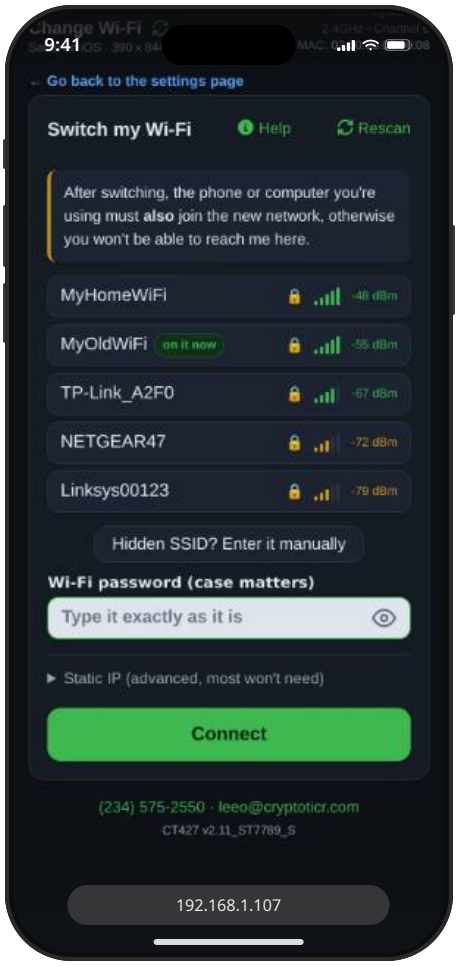


Before you start

- This is for a network the ticker cannot see from where it is now. If the network is in range, use Change to a different Wi-Fi network instead, that proves the network before switching.
- The name and password must be exactly right. The ticker cannot check them, and once saved it leaves your current network for good.
- If the settings have a password, unlock them on the settings page first, in the same browser. The Change Wi-Fi page uses that unlock. Without it the network list reads `My settings are locked. Unlock them on my settings page first, then change my Wi-Fi.`

Steps

1. On the settings page, open `Device` → `Wi-Fi…` → `Change Wi-Fi`.



2. Tap `Hidden SSID? Enter it manually` (the network is not in the list), type the name exactly, and the password, then `Connect`.
3. Let the attempt fail: the page reports `⚠️ I can't find “NewNetwork” at this location.` and offers `Save it anyway if you're moving me or about to switch this network to it, otherwise keep your current Wi-Fi.`
4. Tap `Save it anyway`. The page spells out the consequence: `I'll leave “CurrentNetwork” right now and wait for “NewNetwork”. If that name isn't exactly right I can't come back on my own.` with `Yes, save it and leave` and `Cancel`.
5. Tap `Yes, save it and leave`. The glass shows `Saving this network...` then `Saved. Leaving this network now.` for eight seconds. The page shows `✅ Saved “NewNetwork”. Moving me? Unplug me and plug me in there. Otherwise I'll join it once it's on. If my setup screen comes up first, restart me once it is.`
6. Unplug the ticker, take it to the other place, and plug it in.

You’re done when

- At the other place the ticker starts, shows `Connecting to:` and the saved name, and joins.

Problems?

- The ticker opened its setup network instead of joining: The ticker opened its setup network by itself
- The new network was not on yet when you plugged the ticker in, and its setup network came up: once the network is on, unplug the ticker and plug it back in. It joins.

If the saved name or password was wrong

The ticker has never connected with the saved details, so it does not wait for that network indefinitely. It tries twice at start-up, waits and tries again, and after two failed rounds it opens its setup network with its cards, keeping every coin and setting; the waiting screen’s footer says `I'll retry a few times.` and then `1 more try, then I'll open my setup page.` Join the `CT` network and set it up as on day one: Join the ticker's setup network.

Once the ticker has joined the saved network one time, even by itself while running, it treats it like any network it has used and waits for it after a power cut.

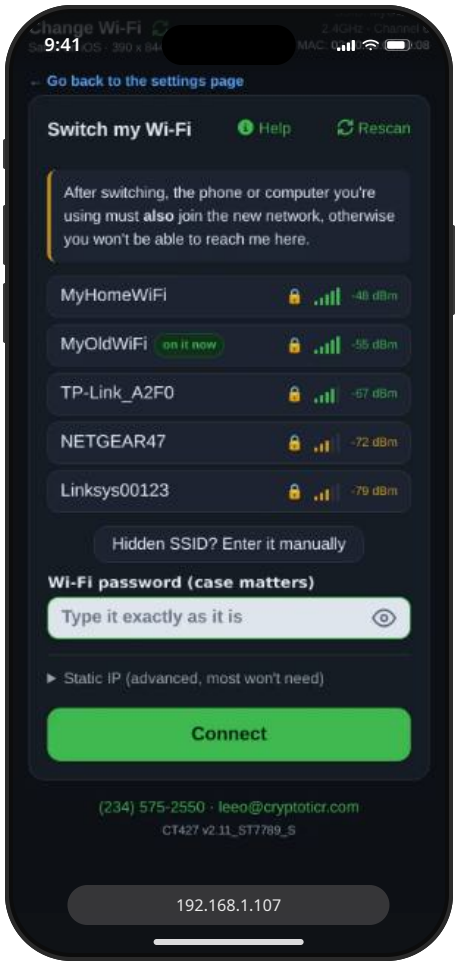
Changing your router's Wi-Fi password

Before you start

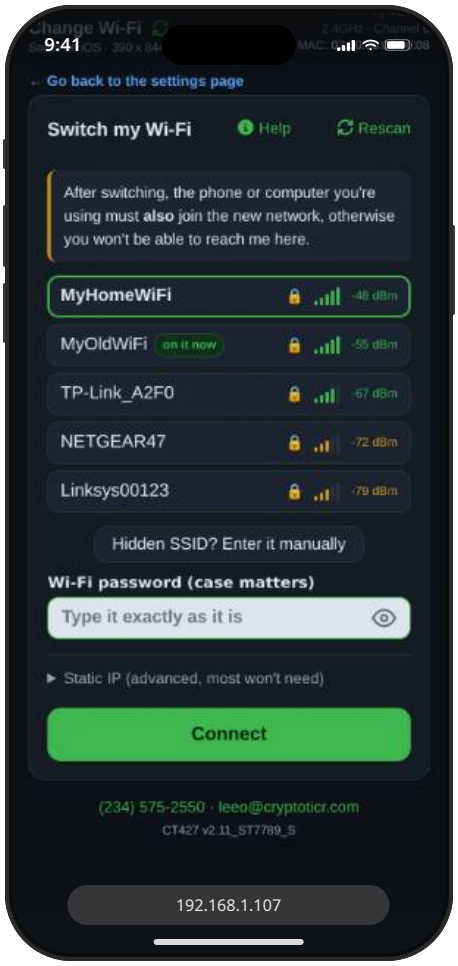
- You cannot type the new password into the ticker ahead of time: it would be a password that does not exist yet. What you can do is warn the ticker, so it stops waiting patiently and opens its setup screen a couple of minutes after the network drops.
- Everything below keeps your coins and settings. Only the Wi-Fi is re-entered.
- If the settings have a password, unlock them on the settings page first, in the same browser. Without that, the Change Wi-Fi page’s list reads `My settings are locked. Unlock them on my settings page first, then change my Wi-Fi.`, and `Continue` answers `My settings are locked, so I didn't take that. Unlock them on my settings page first.`

Steps

1. On the settings page, open `Device` → `Wi-Fi…` → `Change Wi-Fi`.



2. In the list, tap the network the ticker is on, the row with the `on it now` badge. Instead of a password box the page says `You're on this one now - I already have what I need, so there's nothing to type.`



3. Under that, tap `I'm about to change this password`. The page explains: `Here's what happens. You change the password at your router. I drop off your Wi-Fi, and this page goes with me. A few minutes later I'll open my setup screen and ask for the new password - type it there and I'm back, with everything I had.` If you have a fixed address it adds: `About your fixed address (…). If you're swapping the router itself, not just changing its password, that address may not fit the new one.`
4. Tap `Continue`. The page shows `Ready. Go and change it at your router now. When I lose the Wi-Fi I'll open my setup screen and ask you for the new password.` The warning stays armed for 30 minutes.
5. Change the password at your router. The ticker drops off the network; its glass shows the `Looking for Wi-Fi` card with `I'll open my setup page` under it, or, when the router turns it away, a box over the coins that says `Wi-Fi refused.`
6. About two minutes after the drop the ticker restarts (`Restarted to reconnect`, `to your Wi-Fi`), tries the old password twice, and is refused. It waits and tries a few more times: the glass shows `Wi-Fi rejected my password` (or `Can't join`

`Wi-Fi`), the network's name, and `Did the password change?`, `I'll keep trying, then`, `open my setup to fix it.` After four refusals in a row it opens its setup network, leading with a `Heads up` card: `Your Wi-Fi refused me`, the network's name, the reason, and `I'll retry by myself` / `in 15 minutes.`





7. Join the `CT` network with your phone. The setup page's first card now reads `I couldn't get back on your Wi-Fi.` and says the saved password `may have stopped working`. Pick the network, type the new password, `Connect`.

You're done when

- The ticker shows `You're all set!` and restarts onto your Wi-Fi with everything as before.

Problems?

- Setup did not open and the ticker keeps saying `Waiting for Wi-Fi` with `I can't see it right now.`: the router is not refusing it, it cannot see the network at all, see Glass says: I can't find your Wi-Fi
- The new password is refused too: The password was refused

If you change the password without warning the ticker

The same thing happens, more slowly. A ticker that loses its Wi-Fi while running waits about 30 minutes before it restarts, because most drops are the router's, not yours, and a restart during a short outage would only lose prices. After the restart the refusals count the same way and setup opens after four. If you would rather

not wait, unplug the ticker and plug it back in: the restart happens at once and the refusals begin. Meanwhile the box over the coins says `Wi-Fi refused.`, and the `Is it on?` card does not appear, because the router is plainly on.

Erase the Wi-Fi and set up again

Every step with pictures, the phone and the ticker side by side: the Device page.

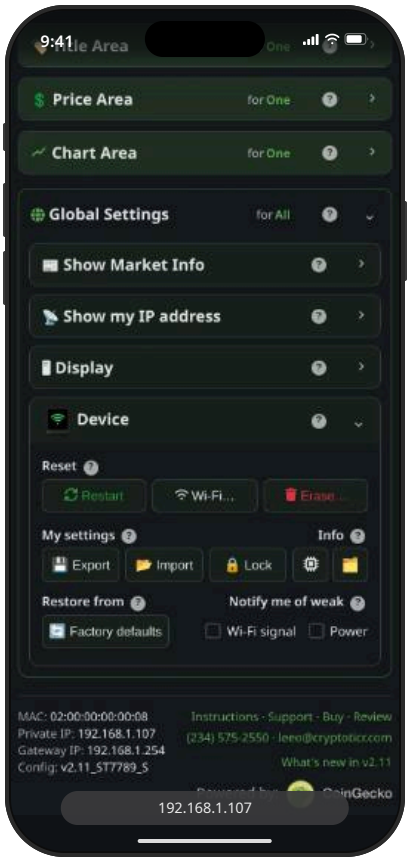
Before you start

- This keeps your coins, colors and timings. It erases the saved network, its password, and any fixed address.
- After it, the ticker shows no prices until it is on a network again.

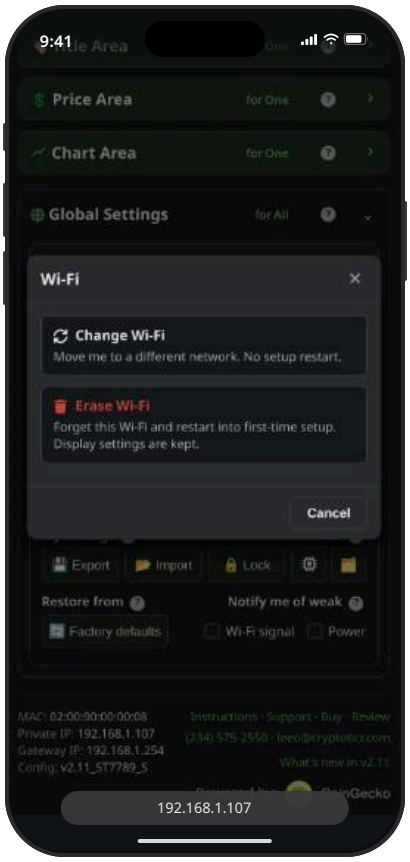
Steps

1. On the settings page, open the `Device` section and tap `Wi-Fi…`.

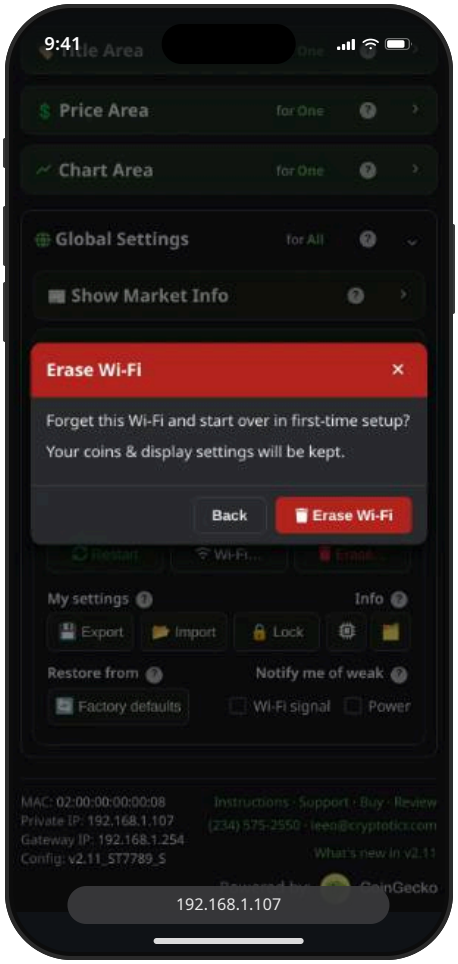
The Reset row in Device



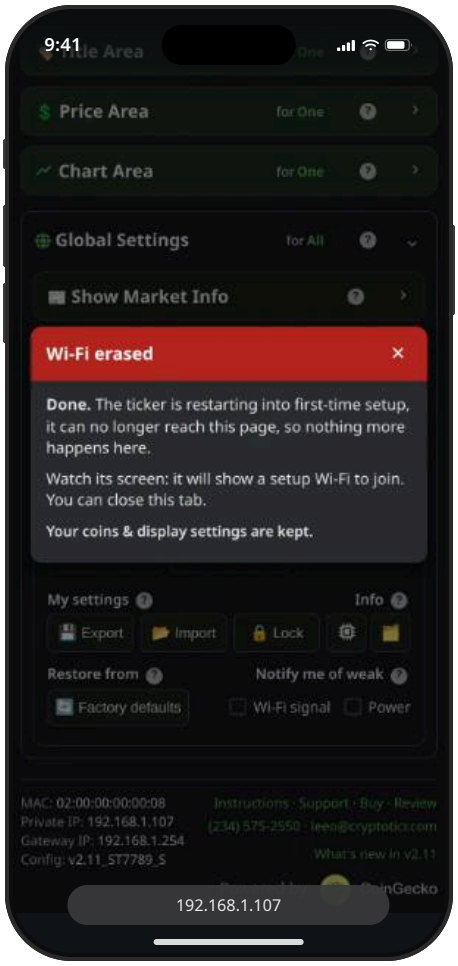
And what Erase offers



2. Tap `Erase Wi-Fi` (`Forget this Wi-Fi and restart into first-time setup. Display settings are kept.`).
3. Read the confirmation, `Forget this Wi-Fi and start over in first-time setup?`, `Your coins & display settings will be kept.`, and tap `Erase Wi-Fi`.



4. The page shows `Wi-Fi erased`, `Done. The ticker is restarting into first-time setup, it can no longer reach this page, so nothing more happens here.`, `Watch its screen: it will show a setup Wi-Fi to join. You can close this tab.` That card closes by itself after a minute.



5. Look at the glass: the ticker restarts, shows `Let's get me set up` and `on your home Wi-Fi`, and starts its setup cards with the `CT` network name.



You’re done when

- The `Join my Wi-Fi` card is on the glass. Continue with Join the ticker's setup network.

Problems?

- The `CT` network does not appear on your phone: The CT setup network is not in my phone's Wi-Fi list

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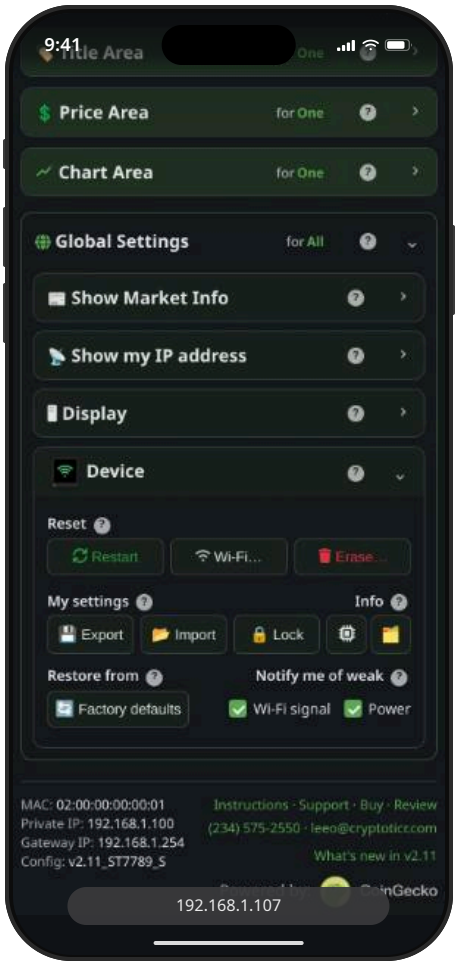
Moving to a new home or a new router



Before you start

- A ticker that has completed setup and then cannot find its network waits for that network to come back, indefinitely, restarting every two minutes and trying again. It never opens setup by itself in that case, because a network that is off the air is

far more often a power cut than a move. The waiting screen's footer says `New Wi-Fi? Restart me` / `5 times fast. Wipes me.`, and that reset erases your coins and settings along with the network.

- So the one thing to do before you unplug it for a move is to forget the old network first. That keeps everything else.

Steps

1. Decide which case you are in:
   - **New home, or a router with a new network name:** use option A or B below before you unplug.
   - **Same network name, new password** (a replacement router set up with the old name): do nothing in advance. The ticker will be refused by the new router, and after four refusals it opens its setup network by itself, keeping your settings, see Changing your router's Wi-Fi password.
   - **Same name and password:** the ticker joins the new router as if nothing happened. If it had a fixed address that does not fit the new router, it takes one from the router for the session and says `Your router gave me` / `one that works.`
2. **Option A, forget the network before you go.** On the settings page: `Device` → `Wi-Fi…` → `Erase Wi-Fi`. The ticker restarts into setup and stays there, ready for the new place; see Erase the Wi-Fi and set up again.
3. **Option B, store the new network in advance.** If you already know the new network's exact name and password: `Device` → `Wi-Fi…` → `Change Wi-Fi`, enter it by hand, let the attempt fail, and use `Save it anyway`; see Save a network for another place. At the new place the ticker joins on its own if the details were right, and opens setup after a couple of failed rounds if they were not. If its setup screen comes up only because the network was not on yet, unplug it and plug it back in once the network is on.
4. **If it is too late**, the ticker is already at the new place, showing `Waiting for Wi-Fi` or `Trying to connect` with the old network's name, the only way back to setup is the factory reset: power it off and on five times, quickly. See Factory reset by switching it off and on five times. Export your settings first if you still can reach the page from somewhere; otherwise re-pick your coins afterwards.



You’re done when

- The ticker is on the new network and cycling coins, and the settings page opens at its new address.

Problems?

- The `CT` network does not appear: The CT setup network is not in my phone's Wi-Fi list
- The ticker keeps showing `Waiting for Wi-Fi` at the new place: Glass says: I can't find your Wi-Fi

Using a phone hotspot

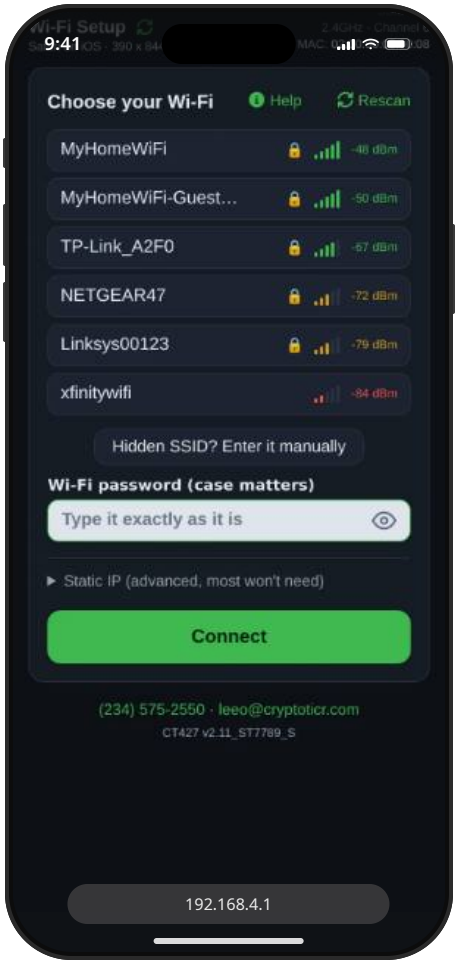


Before you start

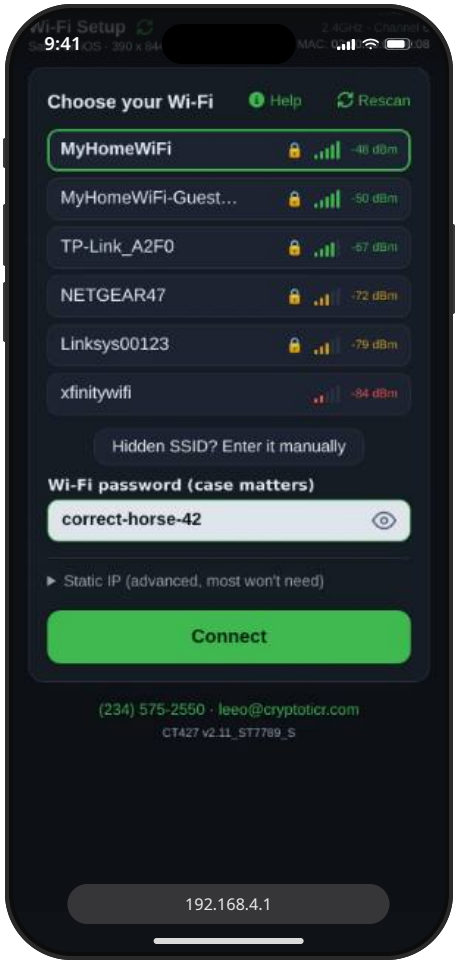
- The ticker can only see 2.4 GHz networks. Both major phones can run a hotspot that the ticker cannot see unless one setting is changed: on an iPhone, `Maximize Compatibility` must be on; on Android, the hotspot's band must be set to 2.4 GHz. The ticker's own screens say the same thing when a network blocks it: `Use home Wi-Fi or a hotspot.` / `iOS: Maximize Compatibility.`
- The ticker fetches a coin's price at most every nine seconds, so it uses data continuously while it runs. Keep that in mind on a metered plan.

Steps

1. Turn the hotspot on, with the 2.4 GHz setting above. Note its name and password.
2. Set the ticker up as usual, Join the ticker's setup network, and pick the hotspot in the list. If you are setting up from the same phone that runs the hotspot, use another device for the setup page, or run the setup from a phone that is not the hotspot.



3. Type the hotspot's password and tap `Connect`.



You’re done when

- The ticker joins the hotspot and shows `You're all set!`, then cycles coins.

Problems?

- The hotspot is not in the list: it is probably on 5 GHz only, change the band and tap `Rescan`; see My Wi-Fi network is not in the setup page's list
- The glass says `Can't get online` and the page asks `Use it anyway` or `Pick another Wi-Fi`: the hotspot has no mobile data. Turn on mobile data, tap `Pick another Wi-Fi`, then pick the hotspot again and tap `Connect`.



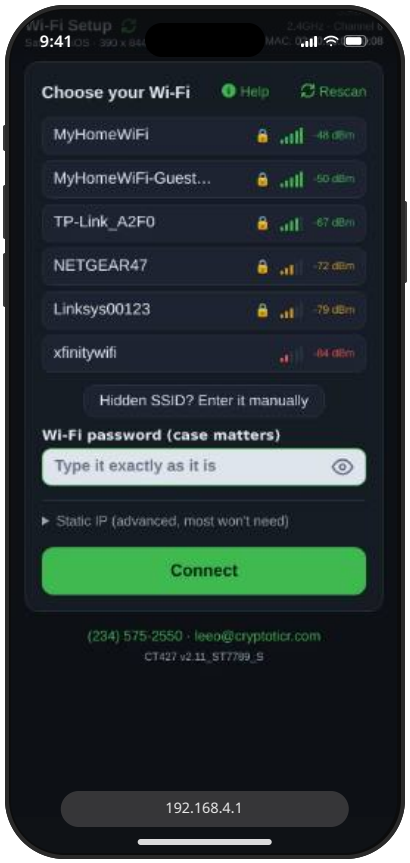
Worth knowing

- Every time the hotspot goes off (the phone leaves, or the hotspot times out), the ticker loses its network and waits for it to return, restarting every two minutes; it rejoins by itself when the hotspot is back.
- The settings page is reachable only from a device on the same hotspot.

Wi-Fi

Every step with pictures, the phone and the ticker side by side: the Device page.





What it needs

A 2.4 GHz network with a password, the ordinary home kind. Requirements and the cases that do not work (5 GHz only, sign-in pages) are on Wi-Fi requirements; the words are defined on Wi-Fi terms used by the ticker.

Getting on

- The setup network: the `CT` network the ticker makes for setup, and why it is open.
- The setup page: the page that opens when you join it.
- Choose your Wi-Fi and connect, Join a hidden network, Give the ticker a fixed address.

Changing later

- Change to a different Wi-Fi network, Save a network for another place, Moving to a new home or a new router, Changing your router's Wi-Fi password, Erase the Wi-Fi and set up again, Using a phone hotspot.

Staying on

- What happens when the Wi-Fi drops, After a power cut, Signal bars and dBm, The Wi-Fi signal check.

When it will not join

- The join failed and said why: Screen messages during setup lists every verdict with its page, from The password was refused to It failed and didn't say why.
- The ticker cannot find or keep the network: Glass says: I can't find your Wi-Fi, Glass says: Your Wi-Fi refused me.
- The router is the problem: Router issues and how to fix them.
- Guests, hotels and offices: Guest networks, Hotel, cafe and public Wi-Fi, Office and corporate Wi-Fi.

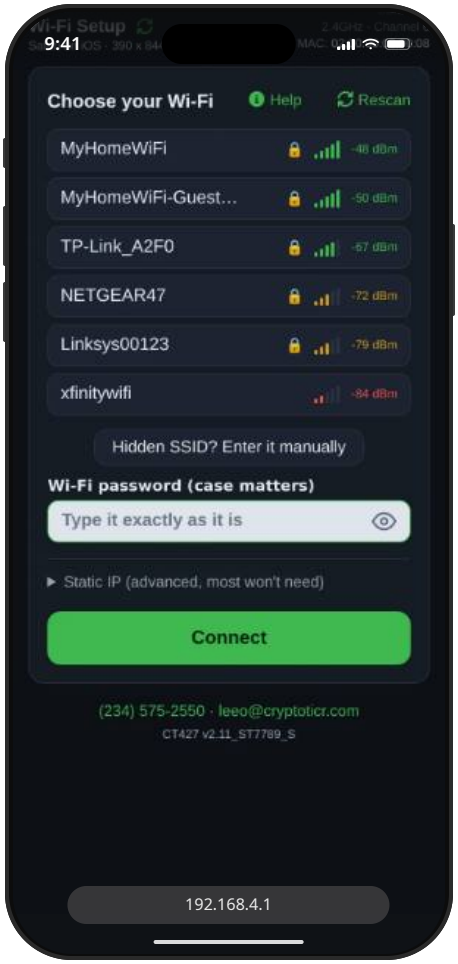
Wi-Fi requirements



The band

The ticker's radio is 2.4 GHz only. It cannot see a 5 GHz network at all: a router that offers one name for both bands works, and a router that splits them into two names works if you pick the 2.4 GHz one. A network that exists only on 5 GHz is invisible to it, and the setup page says so when it cannot find one: `I can't find that network right now. Make sure it's on and in range. I can only`

`join 2.4 GHz networks, so a 5 GHz-only one is invisible to me.` The settings page's header shows the channel it is on as `2.4GHz - Channel` followed by the number.



Security types

The ticker joins open networks, WEP, WPA and WPA2. It cannot join a network that is set to WPA3 only, and the setup page says so when a router insists on a security type it does not have: `Your router and I could not agree on a security type. I can join WEP, WPA and WPA2 Wi-Fi, but not WPA3.` A router set to WPA2/WPA3 mixed mode still joins as WPA2. WEP and the original WPA are accepted on purpose so that an old router still works; the ticker does not lower any router's security, it accepts whatever the router already uses.

Networks that ask for more than a password

- A network that wants a **username and password** (business, campus and hotel-staff networks) cannot be joined; the ticker has no way to type a username. The setup page says: `This network wants a business style sign in with a username, and I have no way to type one. Please use a normal home Wi-Fi or a phone hotspot instead.`
- A network that opens a **terms or sign-in page** before it lets anything online (hotels, cafes, airports, stores) cannot be used. The ticker has no browser to tap "I agree" in. See Hotel, cafe and public Wi-Fi.
- A **guest network** usually joins fine but walls your phone off from the ticker's settings page. See Guest networks.

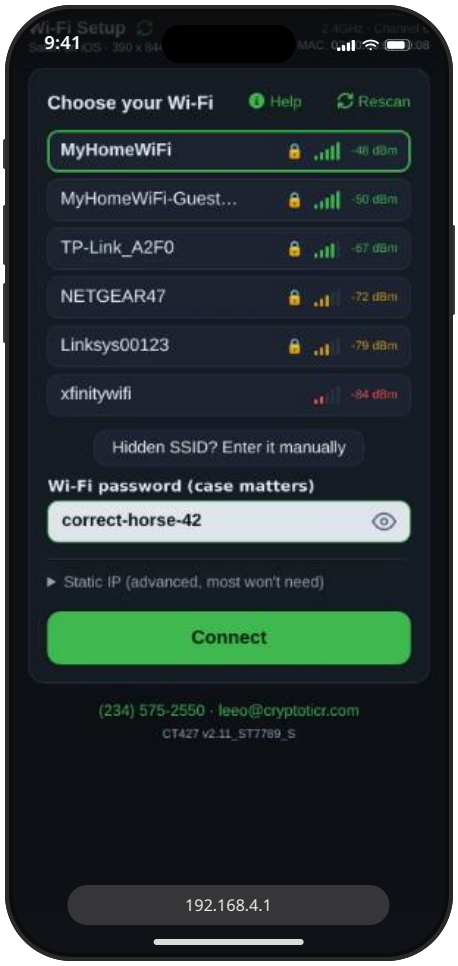
Internet access

The network must reach the internet. After joining, the ticker checks that it can reach its own server and two public addresses. When nothing answers, the setup page says so, ⚠️ `"<network>" let me in, but` and the reason, then `On this Wi-Fi I can't show prices.`, and asks you to pick: `Use it anyway` or `Pick another Wi-Fi`.

Network names

A network name can be up to 32 bytes long. Accented letters and emoji count as several bytes each, and the setup page refuses a name over the limit. A name that includes characters the ticker's fonts cannot draw still joins, but the name looks wrong on the glass; the page warns: `That network name has characters my screen can't draw. I'll still join it, but the name will look wrong.` Four plain characters are drawn on the glass as stand-ins without a warning: `\` as `/`, `^` as `'`, `{` as `(` and `}` as `)`. The name still joins exactly as typed. Names with control characters in them are left out of the network list; type one by hand with `Hidden SSID? Enter it manually`. A hidden network (one that does not broadcast its name) can be joined by typing the name; see Join a hidden network.

Passwords

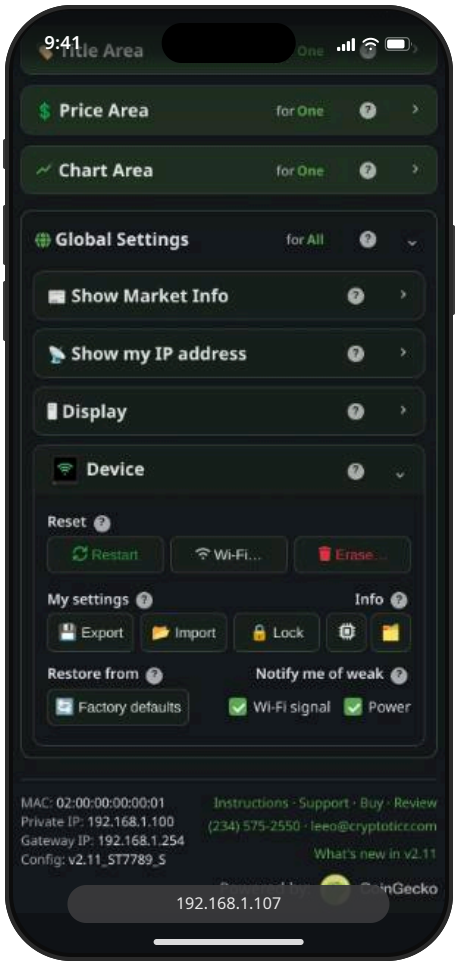


- A password shorter than five characters is refused outright: no network accepts one that short.
- A password of five to seven characters is questioned once (`Your password is only 6 characters. Most Wi-Fi passwords are at least 8.`) because it is legal for WEP but more likely a typo; a second tap on `Connect` sends it anyway.
- A leading or trailing space is questioned, not refused: it is legal, and phone keyboards add one by accident.
- Capitals matter. The ticker sends the password exactly as typed.

Addresses

The ticker takes its address from your router automatically. A fixed address is optional and is set on the setup page; if the four boxes do not all make sense together, the ticker falls back to automatic rather than apply half of them. See Give the ticker a fixed address.

The setup network



The name

The setup network is named `CT` followed by three digits, `CT000` to `CT999`. The digits come from the ticker's own chip, so they never change for a given ticker, and two tickers in one home almost always have different names. The same name is the ticker's hostname on your router while it is running, so an owner who can see one can find the other.

What it is

The network is open, no password, and it exists only to carry your Wi-Fi details from your phone to the ticker. It runs on channel 1 and accepts up to four devices at once, so if a laptop gets stuck mid-setup a phone can join alongside it. Nothing on it reaches the internet, which is why your phone may warn you about the network; the setup page's first card says the same thing.





The ticker's address on it is `192.168.4.1`. The ticker answers every web address a device asks for on this network with its own page, and it answers the "is there a sign-in page here?" checks that iPhones, Android phones, Windows and Macs make when they join a new network, that is how the setup page opens by itself. Scanning the QR code gets there the same way.



When it appears

- A ticker that has never been on a Wi-Fi network turns it on at power-up, after the welcome screen.
- After `Erase Wi-Fi` on the settings page, and after a factory reset.

- A ticker whose saved network refuses it four times in a row during its wait (the usual sign of a changed router password) opens it by itself, keeping every setting.
- A ticker holding a network it has never once connected to opens it after two failed tries.
- A ticker that has never completed setup, whose saved network cannot be reached, opens it after three restarts.

A ticker that has completed setup and whose network is merely off the air does not open it; it waits for the network to come back instead. See What happens when the Wi-Fi drops.

When it goes away

- The moment the ticker joins your Wi-Fi it shuts the setup network down and restarts. If nothing on the internet answers through that network, it first asks on the glass and the setup page whether to use it anyway, for up to 3 minutes. The phone drops back to its usual network by itself.
- On a ticker whose saved network has worked before, 15 minutes with nobody using setup brings a countdown: `Retrying your Wi-Fi`, the network's name, `I'll restart and try it again`. It restarts and tries that network again before reopening setup. A new ticker, or one whose Wi-Fi was erased, has nothing to go back to, so it waits in setup for as long as it takes.



- On a ticker that opened setup because its saved network was missing, the ticker keeps scanning for that network in the background. When it reappears and nobody has used the setup page for three minutes, the glass shows `Your Wi-Fi is back!`, the network's name, `Reconnecting...`, `It just showed up in my scan.`, `Restarting to rejoin it -`, `nothing for you to do.`, and the ticker restarts onto it. A phone or tablet left joined to the `CT` network does not stop this; only someone using the setup page does.



A device counts as using the setup network while it is joined and for 45 seconds after it last spoke to the ticker, so reading a card or typing a long password never trips the idle restart.

While it is on

The glass cycles the setup cards until a device joins; then it shows what stage you are at. Prices are not shown while the setup network is up. See The setup cards on the glass and What the glass shows while joining.

The setup page



Where it comes from

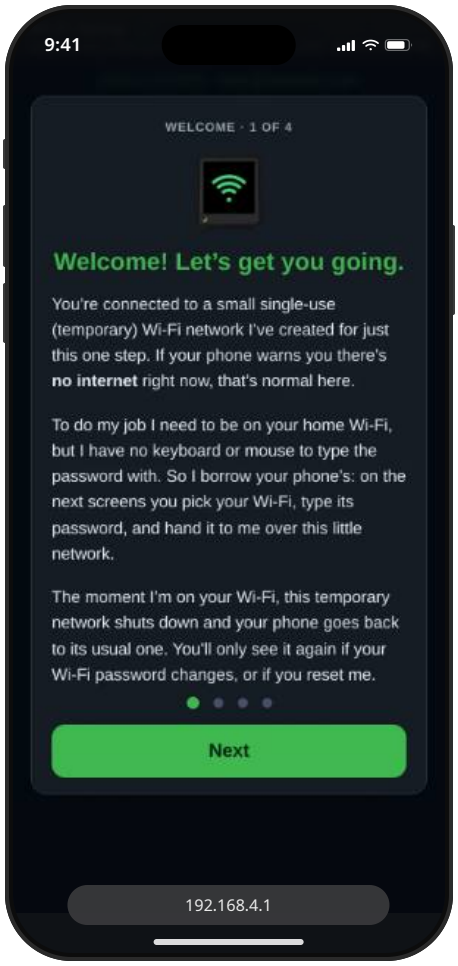
The setup page is served by the ticker itself, so it needs no internet. In setup mode it lives at `192.168.4.1` on the setup network; the same page, with the subtitle `Change Wi-Fi`, is reached from the settings page through `Device` → `Wi-Fi…` → `Change Wi-Fi`, and there it carries a `← Go back to the settings page` link. The two look the same and differ only in the sentences that depend on whether the ticker is already on a network.

The header

The CryptoTicr logo and the subtitle (`Wi-Fi Setup` or `Change Wi-Fi`); tapping anything on that side asks the ticker for a fresh scan, without reloading the page. Under the subtitle is one line naming your browser and screen size, so support can ask you to read it out. On the right: `Firmware:`, `SSID:` (in setup mode this is the setup network's own name), `2.4GHz - Channel` with the channel, and `MAC:`.

The welcome cards

A fresh setup session opens with four full-screen cards; see The welcome cards on your phone. They are not shown in Change Wi-Fi mode.

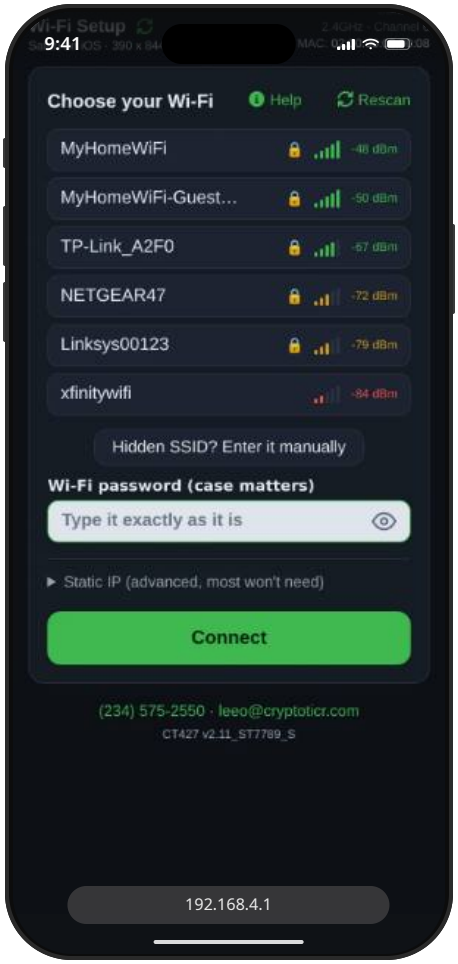


The network list

The heading `Choose your Wi-Fi` (or `Switch my Wi-Fi`) has two small controls beside it: `Help` and `Rescan`. `Rescan` does nothing while a scan is already running. Networks appear as the ticker finds them, and rows already shown keep their place. While it scans, `Scanning for Wi-Fi in your area…` sits above the list, with `Hold on, this takes a few seconds.` under it until the first network arrives. `Rescan` adds what it finds to the rows already there. In Change Wi-Fi mode the list instead arrives all at once, and `Rescan` replaces it with a fresh one. If nothing is found it says `No networks found. Move me closer to your router and tap Rescan.` (in Change Wi-Fi mode: `I couldn't get a list just then, I was busy drawing prices. Tap Rescan.`).

Each network is one row: its name, badges (`guest` for a name that looks like a guest network, `my saved Wi-Fi` for the network the ticker already holds, and in Change Wi-Fi mode `on it now`), a lock if it has a password, five signal bars, and the signal in dBm. Bars and the number take the same color: green for a good

signal, amber for fair, red for weak, see Signal bars and dBm. Tap a row to pick it. Hidden networks, and names with control characters in them, are left out of the list. Use `Hidden SSID? Enter it manually` for those.



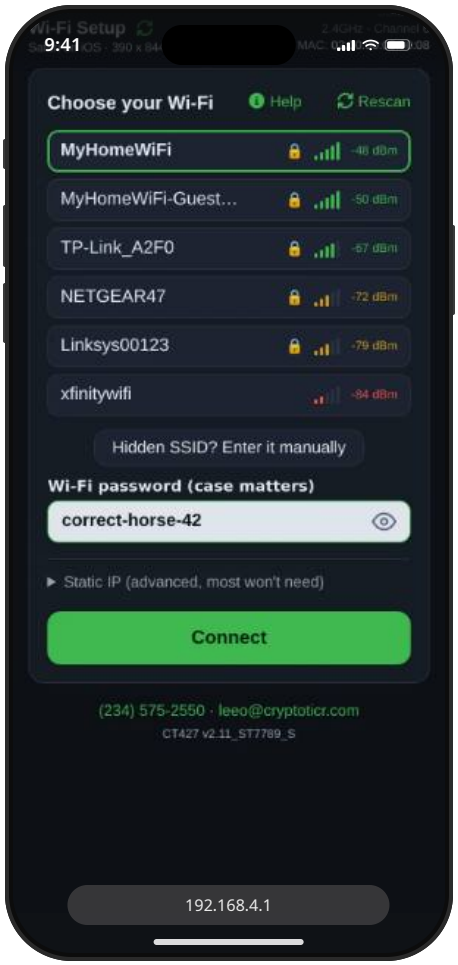
In setup mode, a page left open asks the ticker for its list again after five quiet minutes, but the ticker answers from the list it already has until that list is half an hour old. To bring in a router that was off when you opened the page, tap `Rescan`. The page never asks while you are typing or once you have picked a network.

Entering a name by hand

`Hidden SSID? Enter it manually` adds a `Network name (SSID)` box under it, with the hint `Exact Wi-Fi name`, and the button then reads `Pick from the list instead`. The list stays where it is. See Join a hidden network.

The password box

The password box is on the page from the start, with the hint `Type it exactly as it is` and an eye button beside it; picking a network without a lock hides it. The box shows what you type until you tap the eye to hide it, and the eye also decides whether the ticker paints the password on its own screen while it connects. The box is deliberately not labeled “password”, so your phone does not offer saved passwords for it.



Under the box, notes appear for two kinds of network. A `guest` network: `This looks like a guest network. I'd still get prices on it, but guest networks are walled off from your main one, so afterwards this phone probably couldn't open my settings to pick coins. Your main Wi-Fi is the safe choice.` An open network: `This network is open. Hotel/cafe/store Wi-Fi usually makes you tap "I agree" on a web page, and I have no browser to do that.`

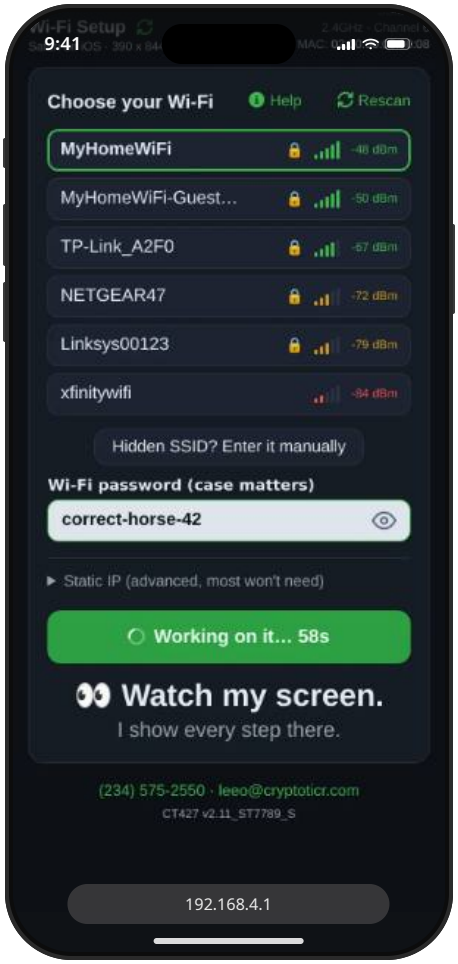
In Change Wi-Fi mode, picking the network the ticker is already on shows no password box; instead: `You're on this one now - I already have what I need, so there's nothing to type. Picking it again only applies the Advanced, Static IP settings below.` and the password-change heads-up described on Changing your router's Wi-Fi password.

Static IP

A closed section headed `Static IP (advanced, most won't need)` with the hint `Fill in the first three boxes together, or leave them all blank for automatic (DHCP).` and four boxes: `IP address`, `Gateway`, `Subnet`, `DNS (blank = your router)`. See Give the ticker a fixed address.

Connect

`Connect` sends everything above. It then reads `Working on it… 60s` and counts down; while it counts, the page shows `👀 Watch my screen.`, `I show every step there.` and ignores extra presses, because every extra press would make the ticker start over. The button comes back early when the ticker has a verdict you can act on. Pressing the keyboard's go key does the same as `Connect`. Once the ticker has joined and is restarting, a late `Connect` gets `I'm already restarting on "<network>". To use a different Wi-Fi, open my settings page once I'm back, or restart me 5 times in a row, quickly, to set me up again.`



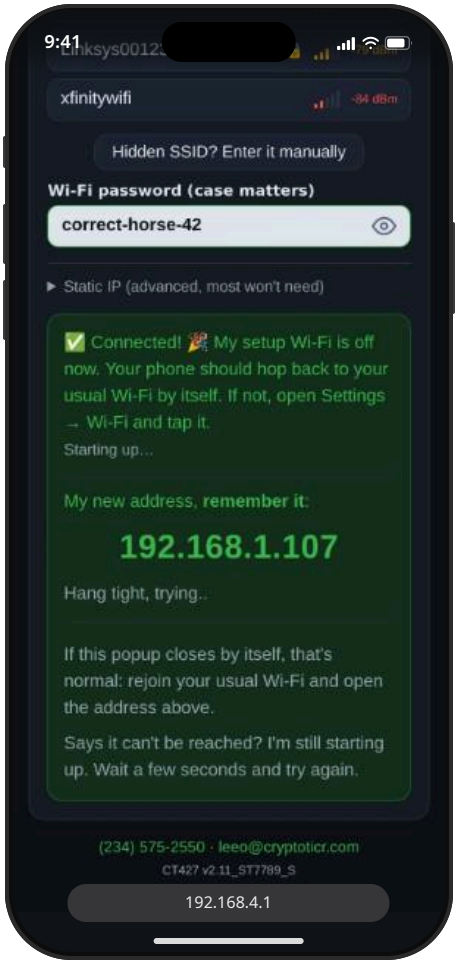
USB Power

From the moment the page loads it shows the ticker's reading of its own supply: `USB Power: good` with a voltage, `USB Power: a bit low`, `USB Power: a bit high`, `USB Power: very low` or `USB Power: very high`, with advice under the bad readings. It is about the ticker's cable and adapter, not the phone's battery. See Power and the USB cable.

The status panel

Results appear in a panel under the button: a green tick for success, a warning for something to act on. The panel names the verdict first, then `What to do`, then, folded away as `Extra technical detail`, the evidence the ticker recorded, including any reason codes the router sent, labeled `Router reason N` when the router sent them and `My radio N` when the ticker's own radio concluded it. Every failure page under Wi-Fi quotes its verdict.

When the ticker gets onto a network but cannot get online through it, the panel asks a question instead: `⚠️ “<network>” let me in, but` and the reason, then `On this Wi-Fi I can't show prices.`, and two buttons, `Use it anyway` and `Pick another Wi-Fi`. With no answer, the ticker uses it in about 3 minutes. After `Use it anyway` the panel says `I'm on “<network>” now. I can't get online through it, so no prices until I can.`



After a failed Change Wi-Fi the panel also offers `Save it anyway`; see Save a network for another place.

Help

`Help` opens a panel with `If I won't connect` (a numbered list: check what you typed, pick your main Wi-Fi not Guest, it needs 2.4 GHz, don’t see your network (tap `Rescan`, or type the name with `Hidden SSID? Enter it manually`), move closer to the router, open `http://192.168.4.1` if the page did not open, still stuck (restart me and rejoin), call or text Lee), then `Hotel, cafe and airport`

`Wi-Fi`, `Guest networks`, `Office and corporate Wi-Fi`, and `Worth knowing` (signal, after a power cut, and how to start over by switching it off and on five times, quickly). It ends with `▶ Replay the welcome cards` and `Close`.

The footer

The same in both modes: the phone number and email address, and the ticker's name with its build, for example `CT124 v2.09_ST7789_S`.

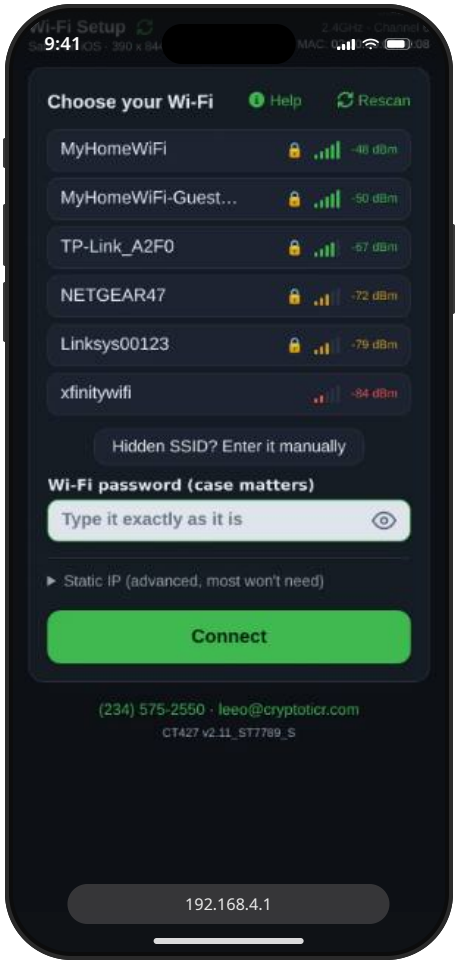
Signal bars and dBm

The number

Every network in the setup page's list shows its signal in dBm, how strongly the ticker hears that router from where it is. The number is negative, and closer to zero is better: -50 is strong, -70 is fair, -85 is weak. It is the ticker's own reading, so it tells you about the ticker's position, not your phone's.

The bars

Five bars, one per 10 dB, so moving the ticker across a room visibly changes them. Five bars at -60 dBm or better, four at -70, three at -80, two at -90, one down to -96, and none below that.



The bars and the number share one color, which is the ticker's verdict: green at -67 dBm or better, amber from -68 to -79, red at -80 and worse. Red is the band the ticker itself calls weak, and where it warns you on the glass. The Help panel's advice: aim for three bars or more; at one or two the ticker keeps telling you its signal is weak.

The words on the glass

Where the ticker writes signal strength in words, the signal card, the settings page header, it grades the same number: `Excellent` at -20 dBm or better, `Strong!` and `Strong` down to -40, `Good` down to -55, `Fair` down to -79, `Weak` below -79, `Very Weak` below -80, `Useless` below -85, `Dead!` below -90. The settings page's `Signal:` line turns yellow at the same -79 dBm line the glass warns at.







Three lines the ticker draws

- **-79 dBm, the warning line.** Below it the ticker calls the signal weak and shows its `Weak Wi-Fi signal` card. See The Wi-Fi signal check.
- **-85 dBm, the update line.** Below it the ticker puts off a firmware update at its hourly check, and after ten checks put off it installs the update anyway.
- **-67 dBm, the so-so line.** Between -67 and -79 the ticker gives no verdict at all: the signal is neither good nor bad, and the card shows no thumb.

The ticker holds a verdict for a while after the number improves, so a link that dipped has to prove itself again before it is called good.

Guest networks

What a guest network does

A guest network is walled off from your main network on purpose: devices on it can reach the internet but not each other, and not the devices on your main network. The ticker on a guest network gets prices and runs normally. Your phone, on your main network, cannot open the ticker's settings page, and if your phone joins the guest network too, it may still be unable to, because many routers keep guests apart from each other as well.

The setup page puts it this way on its third welcome card: `A guest network would give me internet just fine. I'd happily sit there showing prices. The catch is the wall: guest networks deliberately keep guests away from your main network, where your phone lives. Put me on the guest side and I'm a guest too, so your phone probably won't be able to reach my settings page, where you pick your coins.`

How the ticker warns you

- In the network list, a name that looks like a guest network carries a `guest` badge, and picking it shows: `This looks like a guest network. I'd still get prices on it, but guest networks are walled off from your main one, so afterwards this phone probably couldn't open my settings to pick coins. Your main Wi-Fi is the safe choice.`
- When the setup page opens, the glass shows `Doing great!` with the reminder `Tech Tip: Placing me`, `on a Public or Guest`, `probably won't work.`
- The page's Help panel adds: `Some routers can let guests through, but it's normally switched off and plenty can't do it at all.`



What to do instead

Put the ticker on the same network your phone or computer uses. If you have already put it on a guest network and cannot reach the settings page, the fix is to move it: from the ticker's side that means Erase the Wi-Fi and set up again is out of reach (the page is what you cannot open), so use the five-restart reset described on Factory reset by switching it off and on five times, or change your router's guest settings to allow guests to reach the main network, if it can.

Hotel, cafe and public Wi-Fi

The terms page

Hotel, cafe, airport and store networks nearly always open a page, "tap I agree", "enter your room number", before they let a device online. The ticker has no browser and no finger; it can never get past that page, and there is no setting that changes it. The setup page's second welcome card says: `Hotel, cafe, airport and store Wi-Fi almost always opens a terms page (a "tap I Agree" screen) before letting anything online. I have no browser and no finger, so I can never get past it. It's not a setting. It just can't work there.`



How the ticker tells you

- Picking an open network on the setup page shows: `This network is open. Hotel/cafe/store Wi-Fi usually makes you tap "I agree" on a web page, and I have no browser to do that.`
- If the ticker joins such a network and meets the terms page instead of its server, the glass's `Status report:` ends with `A sign-in page blocks me.`, even if the row for its own server is green. Then the glass shows `Can't get online` and the setup page asks: `⚠️ “<network>” let me in, but it wants a sign-in page first, and I can't sign in to one.`, then `On this Wi-Fi I can't show prices.`, with two buttons, `Use it anyway` and `Pick another Wi-Fi`. Tap `Pick another Wi-Fi` and choose a different network: nothing is saved.



- The ticker saves such a network only if you tap `Use it anyway`, or nobody answers within 3 minutes. Then the glass shows `Wi-Fi joined.` / `Can't get online.` If the block is real, the glass shows the start screen with `Something here blocks me.` / `I can't get past this network.` / `Use home Wi-Fi or a hotspot.` / `iOS: Maximize Compatibility.` in turn, and once running, the signal card says `This network is blocking me`.

What works instead

A phone hotspot: on an iPhone with `Maximize Compatibility` turned on, on Android with the hotspot band set to 2.4 GHz. See Using a phone hotspot.

Office and corporate Wi-Fi

Two different problems

Networks with a username. A network that signs you in with a username and password (the kind IT departments run) cannot be joined at all. The ticker has no way to enter a username, and the setup page says so: `This network wants a business style sign in with a username, and I have no way to type one. Please use a normal home Wi-Fi or a phone hotspot instead.`

Networks that are locked down. A workplace network the ticker can join may still stop it reaching its price data, in ways that vary from office to office and that nobody can see from the outside. The setup page's Help panel puts it plainly:

`Anywhere with real IT staff, the network is locked down in ways you can't see, and it varies enormously. Even on the main network something may quietly stop me reaching my price data, and there's no way to tell in advance.`

What the ticker can tell you

After joining, the ticker checks whether it can reach its own server and two public addresses on the two ports it uses. The `Status report:` on the glass shows each as green, orange or red, and when its server is out of reach, or a sign-in page answered in its place, it adds one line naming the shape of the block: `443 fails here, 80 works.` (secure traffic blocked), `My name fails here.` (the name lookup is filtered), `A sign-in page blocks me.` or `No internet here.` That line is what to show whoever runs the network, if you ask them to make an exception. When a sign-in page is in the way, the name lookup fails, or nothing on the internet answers, the setup page then asks whether to use the network anyway (`Use it anyway`) or pick another (`Pick another Wi-Fi`). Nothing is saved unless you tap `Use it anyway` , or nobody answers within 3 minutes.



The honest advice

Getting an exception for a crypto ticker is rarely worth the trouble. The Help panel says: `Take me home and I'll have a proper chance. Home routers are what I'm built for. Not sure? Call or text Lee and he'll tell you`

`straight.` A phone hotspot on your desk is the other way: Using a phone hotspot.

Mesh and band-steering routers



Two kinds of router, one behavior

A mesh system is several units sharing one network name. A band-steering router is one unit that offers its 2.4 GHz and 5 GHz bands under one name and chooses which band each device gets. Many mesh systems do both. From the ticker's side they behave alike: during a join, or a few minutes after it, the router may ask the ticker to leave so it can move it somewhere else. The ticker has only a 2.4 GHz radio, so being steered toward 5 GHz leads nowhere.

What the setup page says

When that happens, the setup page explains it under `Extra technical detail`:

- `Your router asked me to leave. That usually means it restarted, or it moved me to a different access point. Tap Connect again.`
- `Your router and I could not agree on a security type. I can join WEP, WPA and WPA2 Wi-Fi, but not WPA3.` Some mesh systems in mixed WPA2/WPA3 mode send this once with a good password and accept the next try. If it repeats,

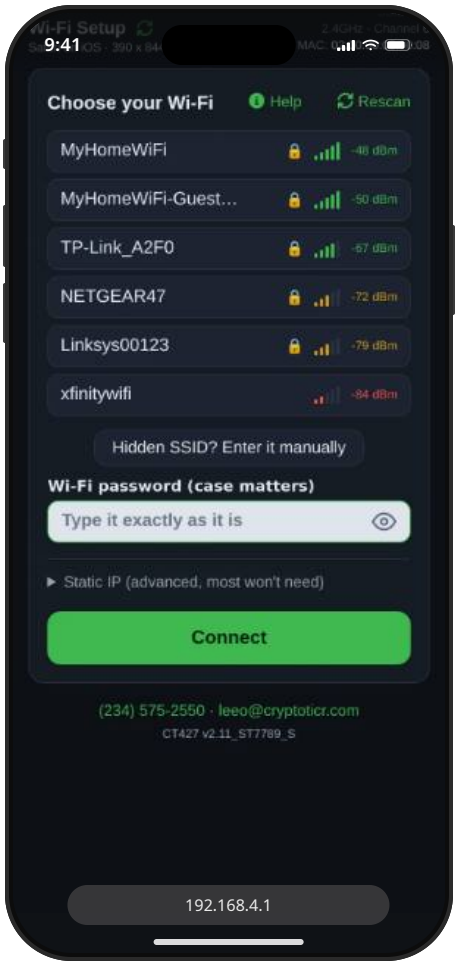
the network is set to WPA3 only, or it requires Protected Management Frames; see Your router and I could not agree on a security type.

Neither line means the password is wrong, and the page does not say it is.

For most failures the ticker already retries on its own, up to three tries for each tap of `Connect`, and the glass shows `No luck yet.` and `Trying again (2 of 3)` between them.

What to do

1. Tap `Connect` again. A handoff is a moment's event, and the next try is often let in.
2. If your system can give its 2.4 GHz band a name of its own, do that and pick the 2.4 GHz name. A network that exists only on 5 GHz is invisible to the ticker: `I can't find that network right now. Make sure it's on and in range. I can only join 2.4 GHz networks, so a 5 GHz-only one is invisible to me.`
3. If it cannot, use its temporary 5 GHz pause or its IoT network, where it has one. Router issues and how to fix them lists where those settings are on eero, Google Nest, TP-Link Deco, NETGEAR Orbi, ASUS and others.
4. Turn off **Fast Roaming** (802.11r, sometimes called Fast Transition) for the network the ticker uses. Many small devices cannot join a network that advertises it.
5. Set the ticker up near the unit it will use, and check the bars beside the network name in the setup page's list: Signal bars and dBm.



A mesh behind another router

If the mesh is plugged into a router from your internet provider and both are running their own network, the ticker can end up on one and your phone on the other, and then the phone cannot open the ticker's settings page. Put the mesh in bridge mode, which TP-Link Deco calls **Access Point** mode and eero calls **Bridge** mode, so there is one network in the house. Or turn off the Wi-Fi on the provider's router and let the mesh do it all.

Once it is on

The ticker stays with the unit it joined until that connection breaks. It does not look for a nearer unit while it runs, so a ticker carried to another room keeps talking to the unit it started with. Switch it off and on after a move, and it joins again from where it now sits.

When a mesh does drop it, the ticker reconnects by itself, and shows nothing unless the drops become frequent: three within an hour and its signal card says `Wi-Fi drops out`. See The Wi-Fi signal check.

Router settings that block new devices

Approval lists

Some routers hold every new device until someone approves it in the router's app ("access control", "device approval", "MAC filtering"). To the ticker that looks like a router that lets it in and then never gives it an address, or turns it away without a reason. The setup page says:

- `Your router let me in, then never sent me an address to use with it. Tap Connect again first. If it keeps happening, get me and the router closer together, and check your router's app for a list that has to approve new devices.`
- `Your router turned me away without saying why. That can be the password, so check that first. Some routers also hold new devices for approval: look for access control in your router app and let me in.`

Look for the ticker in the router's app under its name, `CT` and three digits, and approve it.

Device limits

A router that has reached its limit of connected devices refuses the next one. The setup page says `The router says it's full.` and, in detail: `Your router is already holding as many devices as it allows. Restart it, or remove something you no longer use, then try again.`

No address handed out

A router that lets the ticker on but never answers its request for an address leaves the join half-done. If the signal is strong the page says `The router let me in but never sent me an address to use with it. My signal here is strong, so distance isn't the problem. Tap Connect again, that often settles it.` If the ticker has already joined and is waiting, its screen shows `Almost connected` with `Wi-Fi is up. No IP address assigned yet.` and a reason under it, `DHCP server not responding` or `Is DHCP setup right?`.



The usual fix is a router restart; the old support pages also list a router whose pool of addresses has run out, which a restart clears and the router's DHCP settings enlarge.

Security set to WPA3 only

The ticker joins WEP, WPA and WPA2, not WPA3. A router set to WPA3 only refuses it: `Your router and I could not agree on a security type. I can join WEP, WPA and WPA2 Wi-Fi, but not WPA3.` Set the router to WPA2, or to WPA2/WPA3 mixed mode.

5 GHz only

A network that exists only on 5 GHz is invisible to the ticker: `I can't find that network right now. Make sure it's on and in range. I can only join 2.4 GHz networks, so a 5 GHz-only one is invisible to me.` Turn the 2.4 GHz band on, or pick the router's 2.4 GHz name.

Country or channel settings

Rarely, a router refuses the ticker's radio settings: `Your router refused my radio settings. This one is rare, and usually means the router is set to a country or channel I cannot use.` Setting the router's region to your own country, and its 2.4 GHz channel to 1–11, resolves it.

What happens when the Wi-Fi drops

While the ticker is running

A short drop is invisible: the radio reconnects on its own and the coins carry on. A longer one shows the signal card with the title `Looking for Wi-Fi`, your network's name, `Is it on?` and, under it, `I'll reconnect by myself`. Prices stop updating meanwhile; the last ones stay on the glass with their age. If the router is on but turning the ticker away, most often because its password changed, the box over the coins says `Wi-Fi refused.` instead, and that card is skipped. A router that lets the ticker on but hands out no address gives `No IP address from router.`, also without the card.



If the network stays away for about 30 minutes without a break, the ticker restarts once, on the theory that a fresh start reconnects better than an old one: the first screen after it reads `Restarted to reconnect`, `to your Wi-Fi`. The one exception is a ticker you have warned about a password change, which restarts after two minutes instead; see Changing your router's Wi-Fi password.



At start-up

Every start-up begins with `Connecting to:` and the saved network's name, and a line under it: `I'm looking for your`, `saved Wi-Fi now...`, `Try 1 of 2 - 10s each`. A ticker that has completed setup tries twice, ten seconds each.



When a try succeeds the ticker narrates the rest: `I'm logging in using`, `my saved password...` (`I'm logging in...` on a network with no password), `I've logged in!`, then `Your router gave me`, `this address to use:` (or `I'm using the fixed`, `address you gave me:`) and the address.



When the network is not there

A ticker that has completed setup does not open setup mode for a missing network. It waits. The waiting screen is headed by what it knows:

Header	Under it
`Trying to connect`	nothing has answered yet: `No answer yet. I keep trying.`
`Waiting for Wi-Fi`	the last try failed for a definite reason: `I can't see it right now.` when its scan missed the network, or `It's there. I can't join yet.` when the scan saw it
`Wi-Fi answered`	the router is there and answering but the ticker cannot get on: `It's there. I can't join yet.`, or `It rejected my password.` when the router proved that.
`Almost connected`	joined, but no address yet: `Wi-Fi is up. No IP address assigned yet.`



Under the headline: the network's name, a reason line when the ticker has one (for example `No reply from your router yet`), and a footer that rotates between three things: a hint (`New Wi-Fi? Restart me` / `5 times fast. Wipes me.`), the cadence (`I retry every 15 seconds,` / `restart every 2 minutes.`) and the router's own evidence when the reason line is not already showing it. It keeps trying every 15 seconds, restarts every two minutes, and joins the moment the network is back, nothing for you to do after a power cut or a router reboot. See After a power cut.

Two cases do leave the wait on their own:

- **The router refuses the password four times in a row.** The screen changes to `Wi-Fi rejected my password` (or `Can't join Wi-Fi`) with `Did the password change?`, `I'll keep trying, then`, `open my setup to fix it.`, and after the fourth refusal the setup network opens, leading with a `Heads up` card. Every setting is kept.

- **The saved details have never worked.** A network stored but never once joined is not waited for: after two failed rounds the setup network opens, the footer having said `I'll retry a few times.` and `1 more try, then I'll open my setup page.`

A ticker that never completed setup

A ticker that has a saved network but never finished setup, the join was interrupted, say, tries three times, then restarts to try again, up to three restarts, telling the story on the way: `One more try...`, `Restarting to reach`, `your Wi-Fi (1 of 3).`, `If this doesn't work,`, `I'll open setup mode.`, with `Wi-Fi trouble`, `No worries!` and `Fallback plan` cards the first time.



Between attempts it names the way out: `Changed your Wi-Fi?`, `Restart me`, `5 times fast to set it up.` If the third restart fails too, it opens its setup network with the `Heads up` card `I can't find your Wi-Fi` and the network's

name, and keeps scanning for that network in the background; if the network reappears it says `Your Wi-Fi is back!` and restarts onto it. If the router answered and refused the saved password, it skips the restarts and opens setup led by `Heads up` / `Your Wi-Fi refused me`, and does not watch for the network, because the network never went away.

After a power cut

The ticker is faster than the router

After a power cut the ticker is back on in a few seconds; most routers take a minute or more. So the ticker's first two tries, ten seconds each, under `Connecting to:` and your network's name, usually find nothing. That is expected, and the ticker is built for it. The setup page's Help says so: `I come back faster than most routers. If I can't find your Wi-Fi straight away I'll wait and restart myself until it's back, nothing for you to do.`

What you see

The waiting screen: `Trying to connect` or `Waiting for Wi-Fi`, the network's name, `No answer yet. I keep trying.` or `I can't see it right now.`, and a footer that rotates `I'll keep retrying.`, `I retry every 15 seconds,` / `restart every 2 minutes.`, `New Wi-Fi? Restart me` / `5 times fast. Wipes me.` and any evidence the router has sent. Ignore the restart hint after a power cut: it is the factory reset. Every two minutes the ticker restarts, the screen goes back to `Connecting to:`, and tries again.





The moment the router is up, a try succeeds and the ticker continues with `I'm logging in using`, `my saved password...` (`I'm logging in...` on a network with no password), `I've logged in!`, the address, and then the coins. Nothing needs to be pressed.

Restarting it yourself

Unplugging and replugging the ticker during this wait is harmless, each restart is one more try. Two things to know:

- Switching it off and on five times in quick succession, each within five seconds of power-up, is the factory-reset gesture, and it erases the ticker's settings and Wi-Fi. A restart after the waiting screen has been up for more than a few seconds does not count toward it. See Factory reset by switching it off and on five times.
- A ticker that has never completed setup shows a different story after a failed start, `One more try...` and `Restarting to reach`, `your Wi-Fi (1 of 3).`, and opens its setup network after three restarts. That ticker was mid-setup when the power went; finish its setup as on day one.



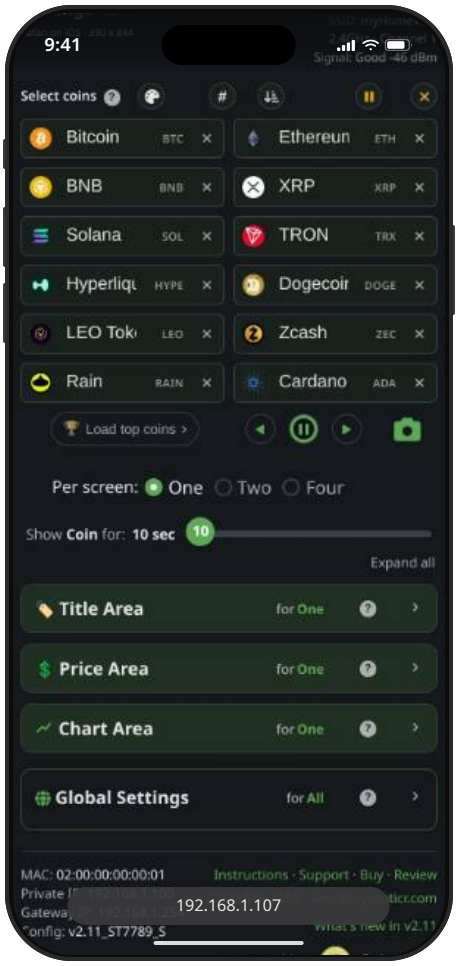
Power cuts and the power itself

If a power card such as `Power a bit low` or `Power very low!` appears after the mains came back, the supply is sagging; see The power card says low or high.


Power a bit low
2.98v
Try a different USB power source.

Coins

Choosing coins



What it shows

The `Select coins` section of the settings page: twelve boxes, one coin each, in the order the ticker will show them. Each filled box carries the coin's logo and a small badge with its symbol, such as `BTC`.

Type into a box and a list appears as you type. The page says: `Type either a symbol (btc, eth) or a name (solana), both find the coin, and a list appears as you type.` The list shows up to six matches, best first: a symbol or name that starts with what you typed, then matches ignoring spaces and punctuation, then names containing it, then the coin's identifier. Each suggestion shows the logo, the name, the symbol and the market-cap rank. Pick one and the box fills.

The choices come from the ticker's server, which offers the 1,000 largest coins by market value, each with a logo; the list is on Supported coins. A box holding text that is not a coin on that list will not save; see Save refuses a coin it doesn't know.

What a filled box turns into once it reaches the glass, here the first box with the factory coin, Bitcoin, in One per screen:



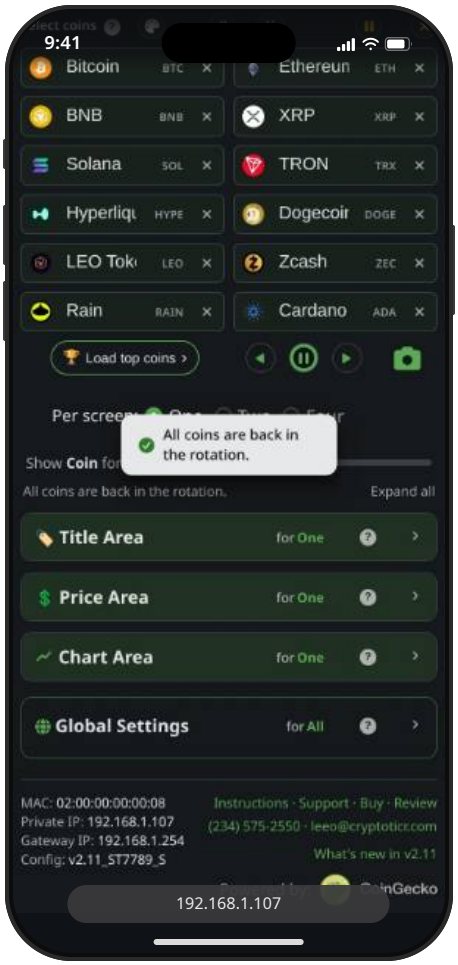
Options

- Up to twelve coins. The ticker cycles them in box order; see Ordering and sorting coins.
- Fill the boxes in one go from the market's biggest coins: Load top coins.
- Keep a coin in the list but out of the rotation: Pausing coins.
- Nothing changes on the ticker until `Save & Apply Coins` : Save & Apply and the coin list.

Where to set it

The `Select coins` section at the top of the settings page. Its reference page is Setting: the coin list.

Load top coins



What it shows

Under the coin boxes, a row headed `Load top coins` with a trophy. Open it and a slider steps through the market's biggest coins twelve at a time: position one is `Top 1–12`, position two `Top 13–24`, and so on, up to the tenth group. As you slide, the twelve logos of that group appear under it so you can see what you would get. The page describes the rule: `Stablecoins and untraded assets omitted.`

The slider's button is green while a tap would change nothing and turns orange when tapping it will load the twelve you are previewing. Tap it and those twelve drop into the boxes above, replacing what was there and un-pausing everything. If your current list is exactly one of the groups, the slider opens already sitting on it.

Nothing changes on the ticker until `Save & Apply Coins`. An `Undo` button appears under the boxes and puts back the list you had, until you save.

Options

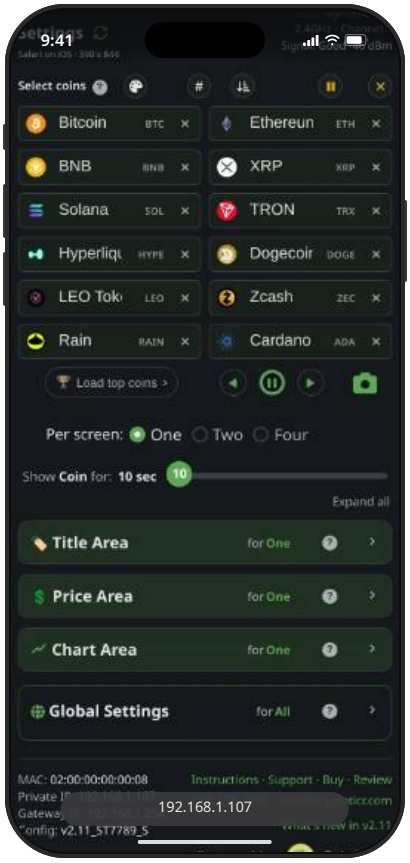
- Load a group, then edit it: swap, delete, add and reorder in the ordinary boxes. The page's words: `a loaded set is just a starting point, not a commitment.`
- The rankings are fetched from the market each time the page loads, so a group's members change over time.
- If the list cannot be fetched the row shows `No top coins available right now.` and a `Try again` button.

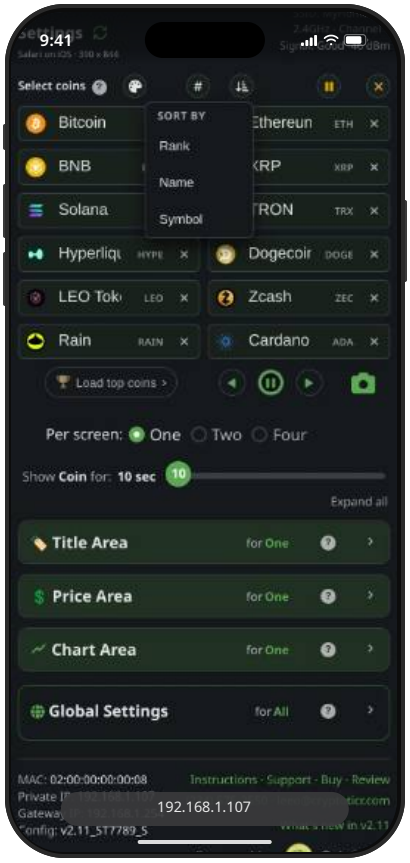
Where to set it

`Select coins` → `Load top coins`, on the settings page.

Ordering and sorting coins

The order you typed **And the sort menu that reorders it for you**





What it shows

The twelve boxes read top to bottom, and that is the order the ticker shows them in. The controls above the boxes and on each box change the order without retyping:

- **Insert**: tap a box, then its `⊕` corner button, and an empty box opens there; that coin and everything below shift down. If all twelve were full, the last one falls off the end and a note says so: `All 12 slots were full, "…" fell off the end. Undo (below) brings it back.`
- **Clear**: the `×` on a box empties it and the boxes below close the gap.
- **Clear all**: empties every box except the first. The note reads `Cleared all but: #1 (BTC) - must show at least one.`
- **Sort**: the sort button offers `Rank`, `Name` and `Symbol`. Sorting by the same key again reverses the order. Sorting by rank also switches the badges to ranks.
- **Rank badges**: the `#` button swaps every badge's symbol for the coin's market-cap rank; tap again for symbols.

- **Undo**: after a sort, a batch load or an insert that dropped a coin, `Undo` puts back the list from before the first of those, until you save.

Typing goes box to box with the Tab key, so filling twelve is name, Tab, name, Tab.

Options

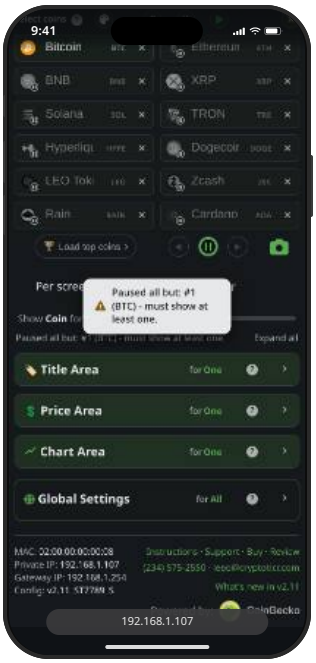
- Every change here waits for `Save & Apply Coins`. On save the ticker starts its rotation again from the first coin (or the first page).
- The order is also what the remote buttons step through and what a tap on a badge jumps to; see Jump to a coin and the remote buttons.

Where to set it

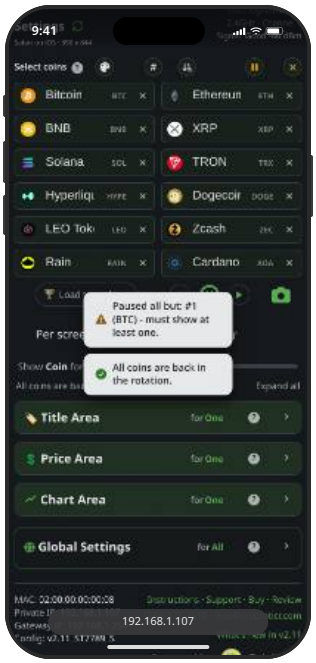
The `Select coins` section of the settings page.

Pausing coins

Paused: still in the list, out of the rotation



Showing again



A showing coin. A paused one never reaches the glass



What it shows

Tap the logo in a coin's box and the box dims: the coin stays in your list but leaves the ticker's rotation. A note confirms it, `BTC is out of the rotation.`; tap again and `BTC is back in the rotation.` The page suggests the use: `Great for "just Bitcoin today" without losing your lineup.`

Above the boxes, a pause button pauses every coin except the first in one tap (`Paused all but: #1 (BTC) - must show at least one.`) and a play button brings everyone back (`All coins are back in the rotation.`). Pausing the last showing coin is refused with `I have to show at least one coin.`

Options

- A paused coin cannot be jumped to from its badge; the badge's tip reads `Paused - tap its icon to bring it back first`.
- The ticker's rotation, position dots and fetches all run over the showing coins only; paused ones cost nothing.
- Pausing does not wait for `Save & Apply`: the ticker moves on from a paused coin at once, and un-pausing jumps straight to it. Saving with every coin paused is refused; see Save says all my coins are paused.

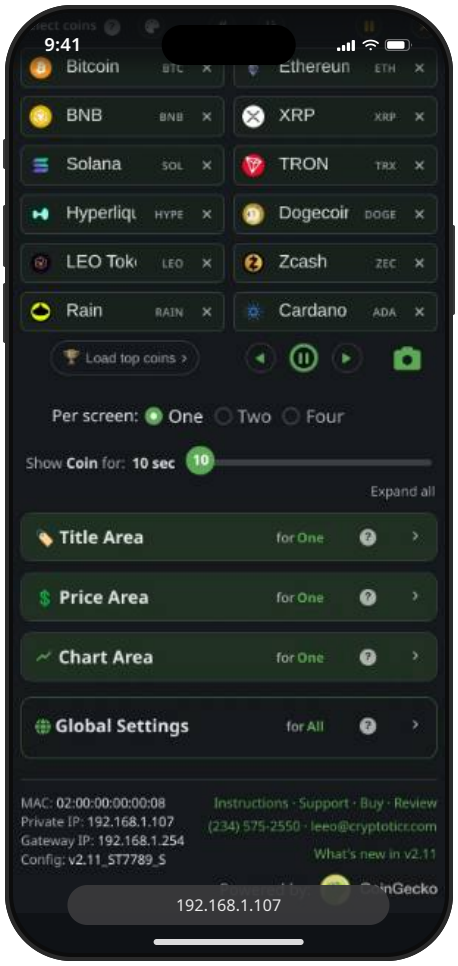
Where to set it

The logo in each box of the `Select coins` section, and the pause and play buttons above the boxes. Pause state is saved as part of the coin list, Setting: the coin list.

Jump to a coin and the remote buttons

What a jump puts on the glass





What it shows

Jump. Tap the small badge in a coin's box (`BTC`) and the ticker shows that coin at once, with the rotation carrying on from there. The box blinks to confirm. A paused coin cannot be jumped to until it is un-paused. While the ticker is still starting the page says `Still starting up, try again in a moment`.

The remote. Under the boxes sit `◄`, `⏸` and `►`: previous coin, pause the screen a while, next coin. In Two or Four per screen the arrows step by page. Whatever lands on the glass also blinks in the coin list, so you can see which coin it switched to. The pause button holds the current screen for thirty seconds, with a ring on the button and a small ring on the glass counting down, and resumes by itself; tap again to resume early.

The arrows are dimmed when the whole list fits on one screen, because there is nowhere to go.

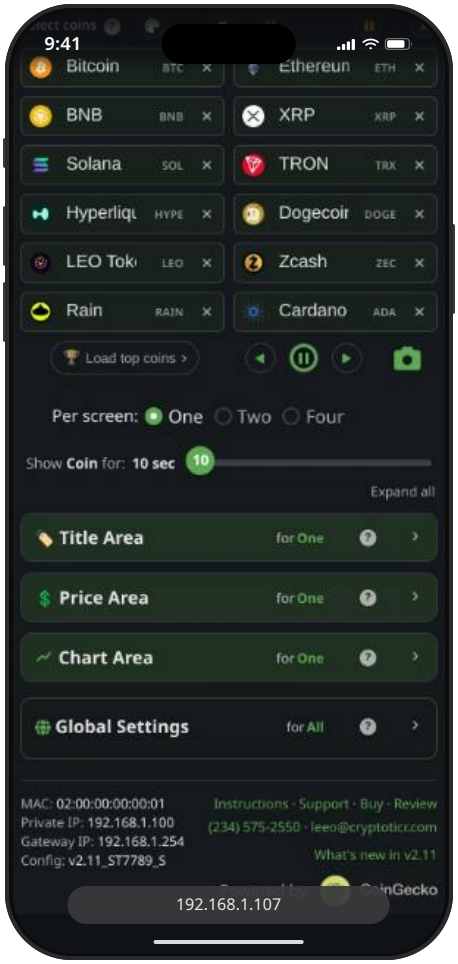
Options

Stepping makes the ticker fetch, so the arrows are rate-limited: twelve steps in a minute, refilling steadily. Once spent they go dark until half the allowance has come back, and a tap in that state says `Too fast — wait ~5s`. See The ◀▶ buttons went dark.

Where to set it

Nothing to set. The badges are in the `Select coins` boxes; the remote is directly under them.

One, two or four coins per screen



What it shows

- **One**: the coin fills the screen: title band with logo and name, the price, the stats row, and a chart (or the 7d/30d/90d panel when no chart period is chosen). The rotation moves one coin at a time.
- **Two**: two coins stacked, each with its title band, price, change and stats. No chart. The rotation moves a page of two at a time.
- **Four**: four rows, each a logo or symbol and a price colored by the day's direction. No chart, no stats. The rotation moves a page of four at a time.

Two and Four per screen have no chart at all; the page's chart controls say `Applies to One coin mode only.`

The three side by side, all at factory settings:







Options

- Each layout keeps its own `Show … for:` time and its own title style. The page says: `One, Two, and Four per screen each remember their own choice here.`
- A page of two or four is filled from your list in order; a last page with fewer coins shows what is left.
- Changing the layout applies at once and restarts the rotation from the first coin or page.

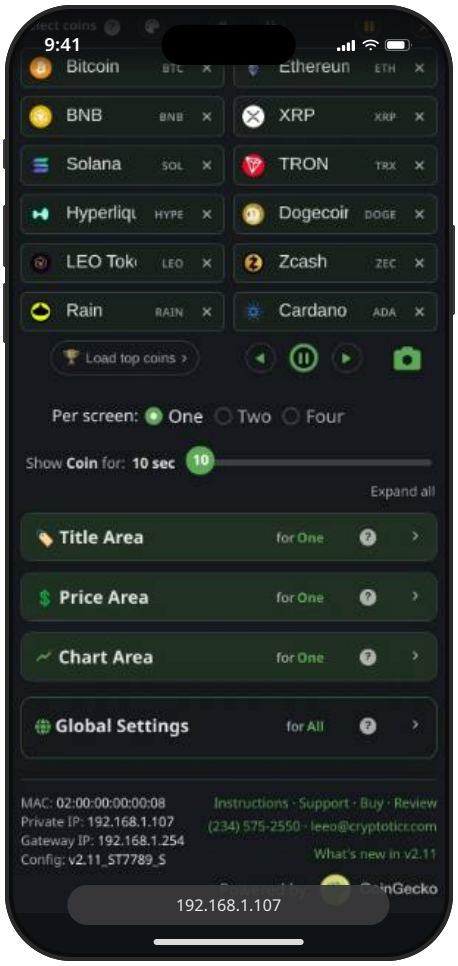
Where to set it

`Per screen:` `One` / `Two` / `Four`, above the `Display` section of the settings page. Reference: Setting: coins per screen.

How long each screen stays

What it shows

A slider under the coin boxes labeled `Show Coin for:` in One per screen, `Show Two for:` or `Show Four for:` in the others, with the chosen time beside it, for example `20 sec`. The page explains: `It sets how long each coin, or each page of coins, is shown before the next takes its turn.`



Each label names the layout it times:

The view this slider times







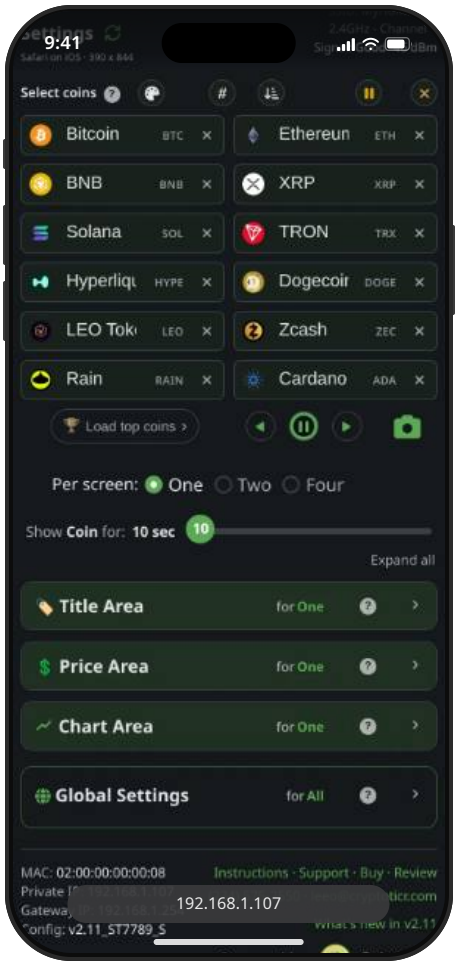
Options

- Five stops: ten, fifteen, twenty, twenty-five and thirty seconds. The firmware holds the value to the same range.
- One, Two and Four per screen each remember their own time, so switching layouts brings back the time you set for that layout.
- In One per screen with more than one chart period selected, the coin's time is split evenly across its charts. The page says: `Want each chart up longer? Give the coin more time.` See Charts and time ranges.
- The `⏸` remote button holds a screen beyond its time for thirty seconds; see Pause from the page.

Where to set it

The slider directly under the coin boxes on the settings page. It applies as you slide. Reference pages: Setting: Show Coin for (One per screen), Setting: Show Two for (Two per screen), Setting: Show Four for (Four per screen).

Save & Apply and the coin list



Why the coin list waits

Sliders, switches and colors reach the ticker the moment you change them. The coin list does not: twelve boxes being typed into, cleared, sorted and paused would otherwise redraw the ticker at every keystroke. So the list is the one thing that waits for the `Save & Apply Coins` button, which appears when the list differs from what the ticker has.

What Save checks

1. At least one box holds a coin: otherwise `Add at least one coin first.`
2. At least one coin is not paused: otherwise `All your coins are paused, tap a coin's icon to bring at least one back, then save.`

3. Every filled box is a coin from the list that appeared as you typed: otherwise `"…" isn't a coin I know. Pick one from the list as you type, or clear the box.`

What happens on the ticker

The ticker stores the list and redraws at once, starting the rotation again from the first coin (or the first page in Two or Four per screen), and the page says `Saved & applied to your Ticker.` A scheduled address popup that you changed in the same save shows a few seconds later as a preview.

Undo and Reset

`Undo` under the boxes reverses a sort, a batch load or an insert that dropped a coin. The page's reset button puts the whole list back to the last save, with the note `Coin list restored.`

Coins that share a symbol

The warning

Symbols are not unique: more than one project can call itself, say, `SOL` or `BTC`. When your list holds two different coins with the same symbol and the title style for the current layout is `Symbol` only, the `Title area` controls show a note: `⚠ SOL is shared by two of your coins, with Symbol only they'll look identical. Add Icon to tell them apart.` With more than one clash it reads `are each shared by`.

What to do

Choose a title style that includes the icon or the name for that layout, and the two coins are told apart on the glass. The note tracks the saved coin list, so it appears once the second coin is saved and disappears when the style changes. In Four per screen, where each row has room for one field, choose `Icon`.

`Symbol` only, the style the warning is about, next to `Icon + Symbol`, which tells the two coins apart:



The same coin twice is a different case: see Can I show the same coin twice?.

What you see on a coin screen

One coin per screen

- **Title band**: the coin's logo and name, symbol, or both, as chosen in `Title area`. A coin whose name cannot be drawn in the ticker's fonts falls back to its logo and identifier.
- **Price**: large, in the colorset's up color when the day's change is positive and the down color when it is negative. A change that rounds to 0.00% shows in a neutral gray instead, the same in every colorset. See Colorsets.
- **Stats row**: under the price, the 24-hour change on the right, and on the left one of volume (`V`), market cap (`M`) or rank (`#`), rotating through whichever you have switched on. A missing figure reads `No VOL` , `No MC` or `No RNK` . See Price area.
- **Chart**: the rest of the screen, one period at a time when several are chosen. With no chart period chosen the same space holds a panel of the price change over `7d` , `30d` and `90d` (and `24h` when the stats row is off). See Charts and time ranges.

The full One-coin screen at factory settings, title band and stats row above a 24-hour chart:



The left side of the stats row rotates between three figures, or none. Market cap and rank shown here, each beside the 24-hour change:





The row can also show the 24-hour change alone, or nothing at all, leaving more room above the chart:



Two per screen

Two blocks, each a title band, a price and a stats row, no chart. The page turns as one.



Four per screen

Four rows: a logo or a symbol on the left, the price on the right in the day’s color, nothing else. Prices share one size down the column where they can.



Tiny prices

A price with many leading zeros is written as `$0.0` followed by a small count of zeros and the significant digits, in every layout, so a coin worth a fraction of a cent is still readable.

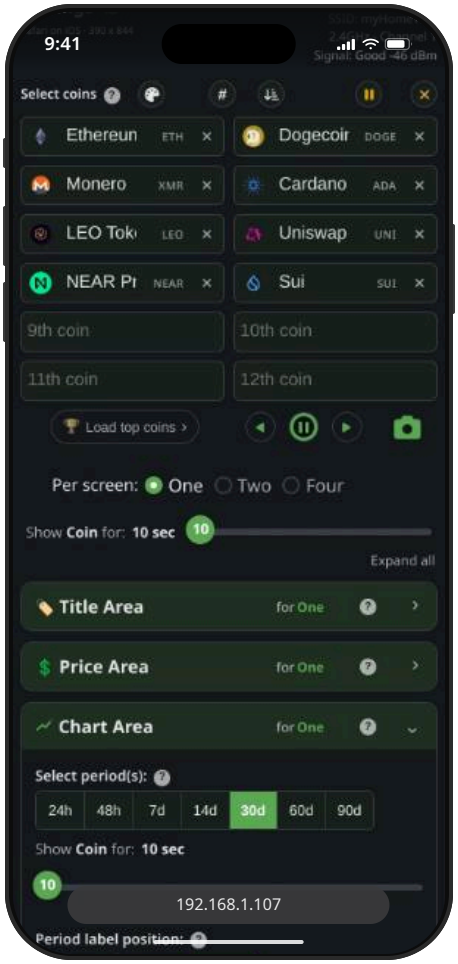
When a price is missing

The price reads `-.--` with a dim note saying why, such as `No reply` or `Busy (429)`. See Prices stopped updating.

Setting: the coin list

> **Factory default:** 12 coins: BTC, ETH, BNB, XRP, SOL, TRX, HYPE, DOGE, LEO, ZEC, RAIN, ADA

The list this ticker is set to



The control

`Select coins` - the twelve boxes at the top of the settings page.

What it does

Holds the coins the ticker cycles, in the order of the boxes. Each entry is the coin's identifier on the server, its symbol and name for the title band, its market-cap rank for the badge, and a paused mark that keeps it in the list but out of the rotation.

The choices

- Up to twelve coins, each chosen from the server's list as you type; the firmware itself holds up to thirty-two.
- Any coin may be paused; at least one must be showing.
- The same coin may appear more than once.

On the glass

The rotation runs over the showing coins in box order and restarts from the first coin when the list is saved. A coin the server no longer carries is removed by the ticker itself.

The same eight coins, in box order - sped up 3x

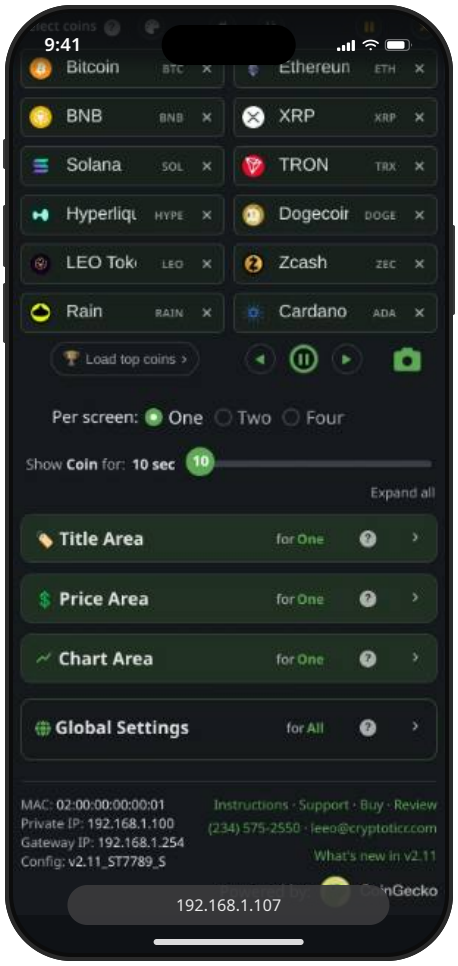


The stored key

`coins` in the ticker's settings, and in the file that `Export` writes. The shipped value is generated from the one source of defaults and shown on this page by the site, never typed here.

Setting: coins per screen

> **Factory default:** One per screen



The control

`Per screen:` `One` / `Two` / `Four`, above the `Display` section.

What it does

Selects the screen layout. It also selects which of the three per-layout values the page shows for the title style, the display options, the market cards and the `Show … for:` time.

The choices

- `One`: one coin, full screen, with the chart or the period panel.
- `Two`: two coins stacked, no chart.
- `Four`: four rows, logo or symbol and price, no chart or stats.







On the glass

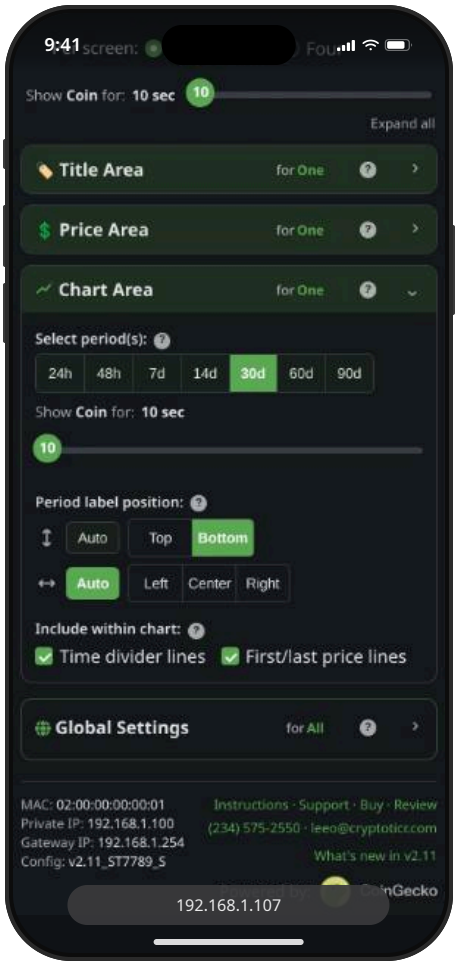
Applies at once; the rotation restarts from the first coin or page in the new layout.

The stored key

`display_type` in the ticker's settings, and in the file that `Export` writes. The shipped value is generated from the one source of defaults and shown on this page by the site, never typed here.

Setting: Show Coin for (One per screen)

> **Factory default:** 10 seconds



The control

`Show Coin for:` - the slider under the coin boxes, shown while `Per screen:` is `One`.



What it does

Sets the dwell for the One per screen layout only; the other two layouts keep their own values. In One per screen with several chart ranges selected, this time is split evenly across the coin’s charts.

The choices

- Ten, fifteen, twenty, twenty-five or thirty seconds; the firmware holds any other value into that range.

On the glass

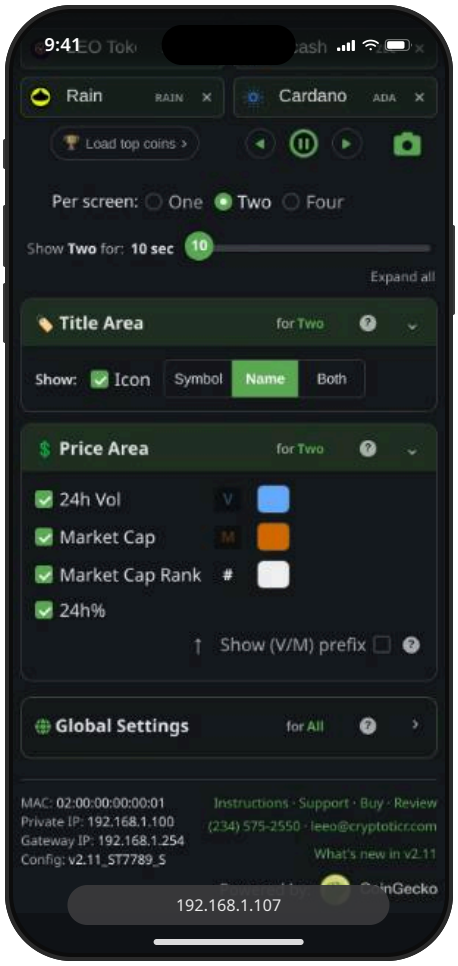
Applies at once to the next screen; the current screen finishes its time.

The stored key

`holdc` in the ticker’s settings, and in the file that `Export` writes. The shipped value is generated from the one source of defaults and shown on this page by the site, never typed here.

Setting: Show Two for (Two per screen)

> **Factory default:** 10 seconds



The control

`Show Two for:` - the slider under the coin boxes, shown while `Per screen:` is `Two`.



What it does

Sets the dwell for the Two per screen layout only; the other two layouts keep their own values.

The choices

- Ten, fifteen, twenty, twenty-five or thirty seconds; the firmware holds any other value into that range.

On the glass

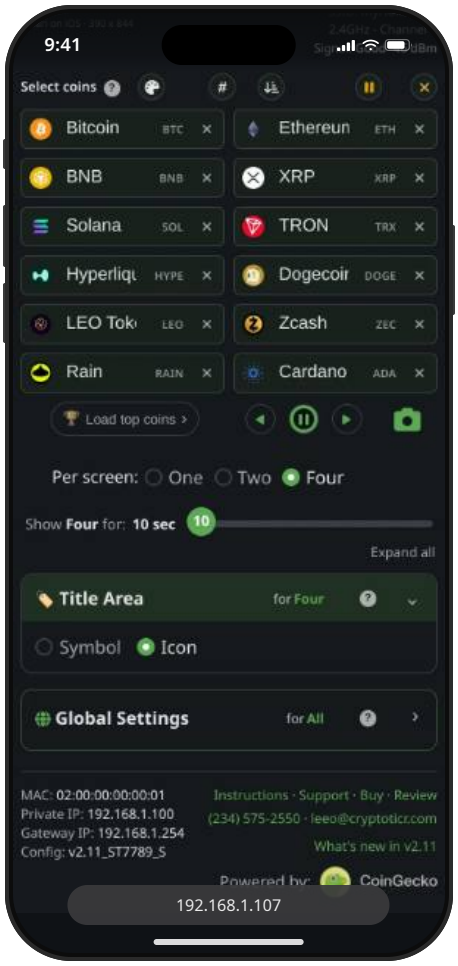
Applies at once to the next screen; the current screen finishes its time.

The stored key

`hold2m` in the ticker's settings, and in the file that `Export` writes. The shipped value is generated from the one source of defaults and shown on this page by the site, never typed here.

Setting: Show Four for (Four per screen)

> **Factory default:** 10 seconds



The control

`Show Four for:` - the slider under the coin boxes, shown while `Per screen:` is `Four`.



What it does

Sets the dwell for the Four per screen layout only; the other two layouts keep their own values.

The choices

- Ten, fifteen, twenty, twenty-five or thirty seconds; the firmware holds any other value into that range.

On the glass

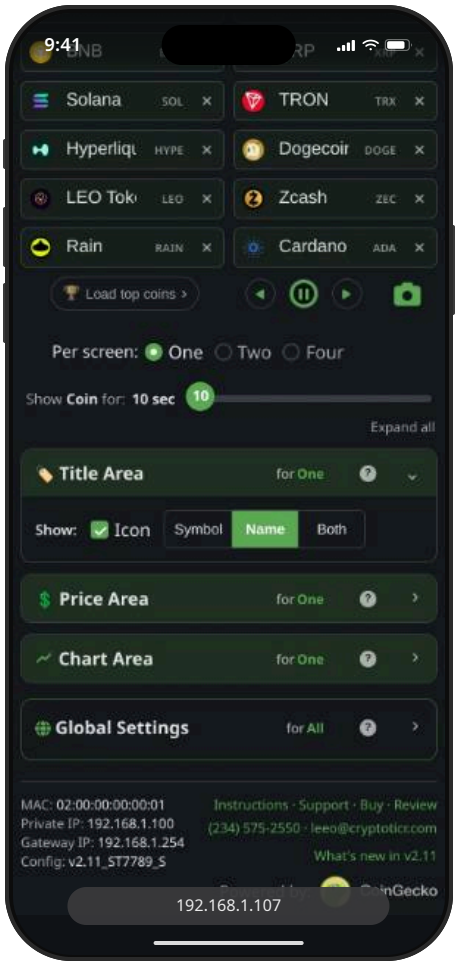
Applies at once to the next screen; the current screen finishes its time.

The stored key

`hold4m` in the ticker’s settings, and in the file that `Export` writes. The shipped value is generated from the one source of defaults and shown on this page by the site, never typed here.

The screen

Title area



What it shows

The band across the top of a coin screen. It can hold the coin's icon (its logo), its symbol (`BTC`), its name (`Bitcoin`), or a pair. The page's description: `Both shows symbol and name together, the symbol drawn large, the name smaller beside it.`











The title sizes itself: `a long name steps down through smaller, then narrower type until it fits, and only as a last resort gets trimmed.` A coin whose name is its symbol shows it once, never `XRP XRP`. A coin whose logo is

not on the ticker yet shows its symbol and name until the next icon update, and a coin whose name cannot be drawn in the ticker's fonts falls back to its logo and identifier.

Options

- **One and Two per screen**: an `Icon` switch plus `Symbol`, `Name` or `Both`. Six combinations reach the glass: icon and name, icon and symbol, symbol and name, name only, symbol only, and (on larger screens only) icon with both.
- **This ticker's screen cannot fit the icon plus both texts.** Ask for it and the page keeps your latest pick and drops the other, saying `Icon+Both won't fit, deselecting Icon` or `Icon+Both won't fit, selecting Name`. The firmware makes the same choice if such a setting ever reaches it.
- **Four per screen**: rows are small, so the choice is `Symbol` or `Icon`, one field per row.

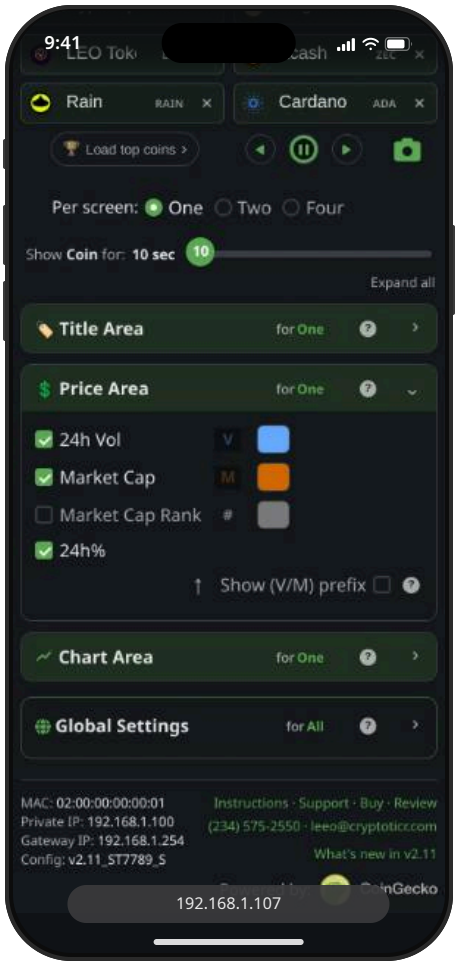


- Each layout remembers its own choice: `Set per mode: One, Two, and Four per screen each remember their own choice here.`

Where to set it

`Display` → `Title Area` on the settings page. It applies as you change it.
Reference: Setting: title style.

Price area



What it shows

Under the big price, one row. On the right, `24h%`: how far the price moved over the last 24 hours, always in the colorset's up or down color so the color tells the direction. A move that rounds to 0.00% shows in a neutral gray instead. On the left, one of three figures, taking turns:

- `24h Vol`: how much of the coin was traded worldwide in the last 24 hours.
- `Market Cap`: the value of all of the coin's coins put together.
- `Market Cap Rank`: the coin's position among all coins by that value, shown like `#7`.











The page's rule: `Volume, Market Cap, and Rank share the left spot and take turns: the coin's screen time is split evenly among the ones you've turned on.` All 24-hour figures are rolling, counting back from now, and

refresh when the coin's turn comes up. Big numbers are compact, like `$1.73T`. A missing figure reads `No VOL`, `No MC` or `No RNK`.

Two per screen draws the row smaller; Four per screen has no room for it. With every figure off, the row is gone and the chart takes the space.

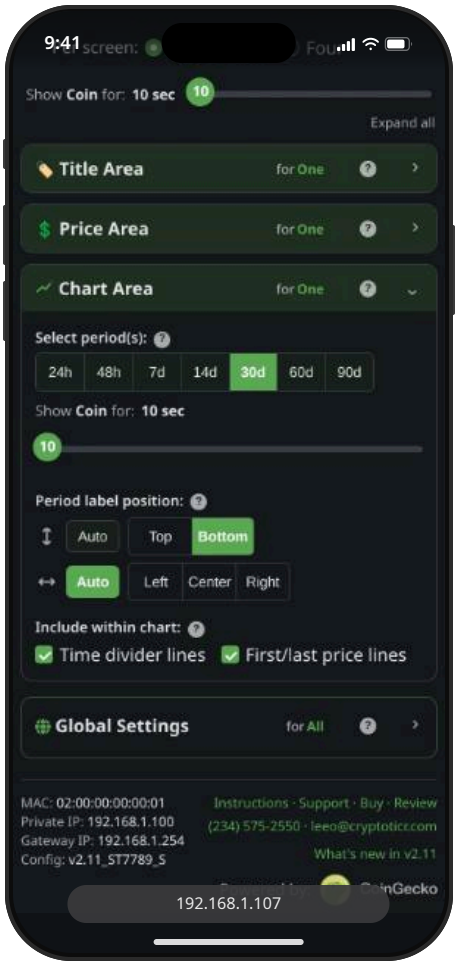
Options

- Four switches: `24h Vol`, `Market Cap`, `Market Cap Rank`, `24h%`.
- `Show (V/M) prefix`: puts a `V` before the volume and an `M` before the market cap so the two can be told apart without color; rank always carries its `#`. Saved per colorset.
- A color swatch beside each of the three left-hand figures recolors it; see Custom colors. The percentage cannot be recolored.
- Set per layout: One, Two and Four per screen each remember their own switches.

Where to set it

`Display` → `Price Area` on the settings page; changes apply at once. Reference: Setting: price area and chart line switches, Setting: V/M letters before volume and market cap.

Charts and time ranges



What it shows

In One per screen, the lower part of a coin's screen is a line of its price over a time range, named in a corner: `24h`, `48h`, `7d`, `14d`, `30d`, `60d` or `90d`. All ranges count back from now.


Ethereum
$2,244
9.45 B +0.95%
24h


Ethereum
$2,244
9.45 B +0.95%
48h


Ethereum
$2,244
9.45 B +0.95%
7d


Ethereum
$2,244
9.45 B +0.95%
14d


Ethereum
$2,244
9.45 B +0.95%
30d





The line is drawn in the colorset's up color when the latest price is above where the range began and the down color when it is below; in the Colorblind set that is blue and yellow. A line whose two ends sit level is drawn in a neutral gray, because it went neither way. The newest price is drawn live at the right end, so the end of the line is always now.



With several ranges selected, the coin plays a chart for each, shortest first, and its `Show Coin for:` time is split evenly across them. With none selected, the same space shows the coin's percentage change over `7d`, `30d` and `90d` in three rows, and `24h` as a fourth row when the stats row is off.

A range the server has no data for shows an empty frame with `(No 7d Data)`; see The chart shows (No Data).

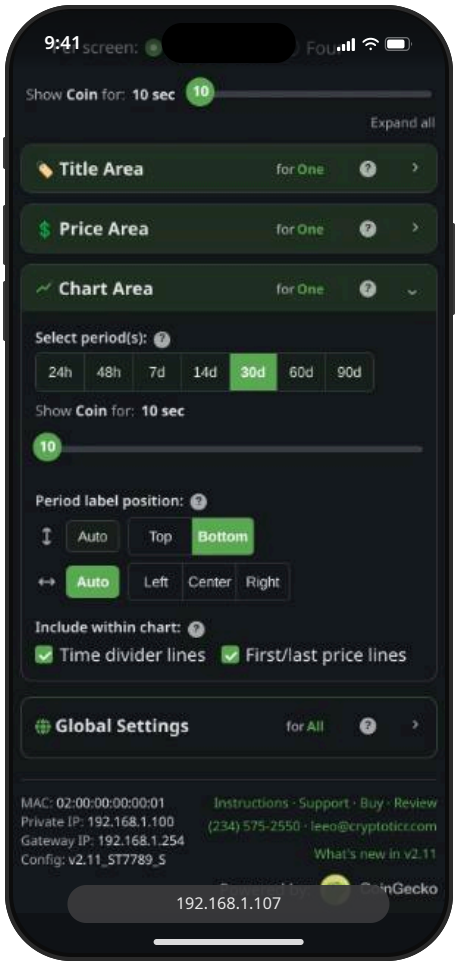
Options

- `Select period(s):` seven buttons, any number of them.
- Where the range's name sits: Chart period label position.
- Faint helper lines inside the chart: Chart lines.
- How long each chart stays: the `Show Coin for:` slider; see How long each screen stays.
- Charts exist in One per screen only: `Two and Four per screen modes have no chart.`

Where to set it

`Display` → `Chart Area` → `Select period(s):`. Applies at once. Reference: Setting: chart time ranges.

Chart period label position



What it shows

Each chart carries its range's name, such as `24h`, in one corner of the chart area. Two choices place it, in the page's words: `which row (the up-down arrows), and the spot along it (the left-right arrows)`.

- **Up-down**: `Top` or `Bottom` pin the row. `Auto` prefers the bottom and hops to the top only when the price line crowds it.
- **Left-right**: `Left`, `Center` or `Right` pick the spot. `Auto` scans the whole row on every chart and takes the slot with the most room from the price line.

Both on `Auto`: the label goes wherever fits best, chart by chart. Both forced, say `Bottom` and `Left`: always that corner, and if the price line runs through it the label slides one slot sideways to the clearest nearby spot. The label sits inside the chart's time slices, never on a divider line.





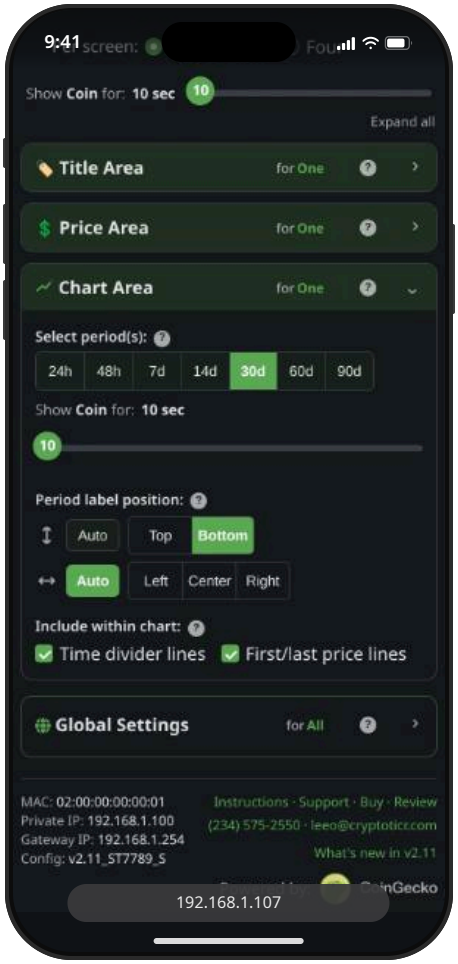
Options

- `Period label position:` two small arrow controls, `Auto` / `Top` / `Bottom` and `Auto` / `Left` / `Center` / `Right`.

Where to set it

`Display` → `Chart Area` → `Period label position:`. Applies at once.
Reference: Setting: chart label left-right position, Setting: chart label row.

Chart lines



What it shows

- **Time divider lines**: faint vertical lines splitting the chart into ten equal time slices, oldest at the left. The page's examples: `On a 30d chart each slice is 3 days; on a 24h chart, about 2½ hours.`
- **First/last price lines**: two faint dotted horizontal lines, one at the price where the range began and one at the price now. `When the "now" line sits above the "start" line, the range is up`, a companion to the line's color.



Both are drawn even on an empty chart frame, so a `(No 24h Data)` chart still shows its slices.

Options

- `Include within chart:` two switches, `Time divider lines` and `First/last price lines`, set per layout with the other display options.

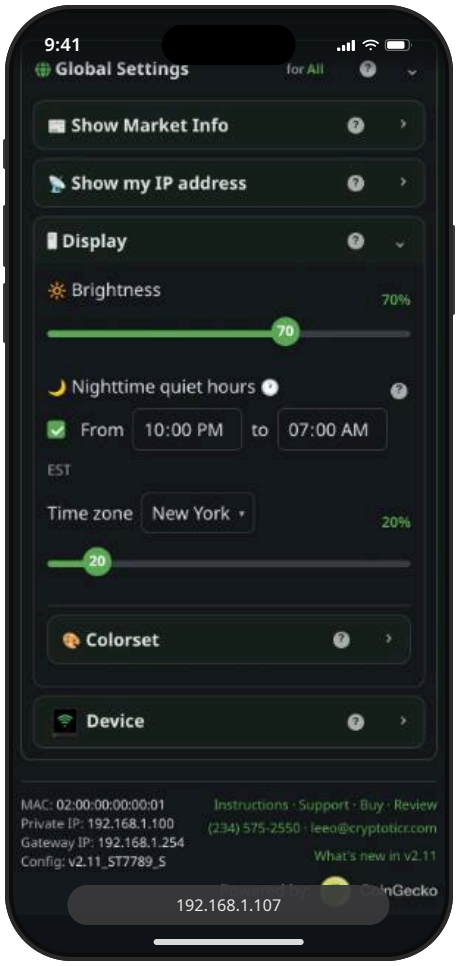
Where to set it

`Display` → `Chart Area` → `Include within chart:`. Applies at once.
Reference: Setting: price area and chart line switches.

Colorsets

What it shows

A colorset is the ticker's whole color scheme: the price's up and down colors, the chart line, the stats figures, the chart's helper lines, the title, and the small status colors. Tap a swatch on the settings page and the ticker changes at once; the page says `Tapping a swatch applies it instantly, no Save & Apply needed, so flip through them and watch the ticker change live.`



On the glass, choosing a set shows a short reveal: three blocks labeled `Up`, `Flat` and `Down`, a band of the set's other colors along the bottom, and the set's name. `Up` and `Down` are that set's own price colors; the middle one is the neutral gray a price that has not moved shows in, and it is the same in every set.





The names as the glass paints them: `Default`



, `Vivid` , `Colorblind` , `Acid Trip` , `Funky` , `Amber` , `Terminal Green` , `Tokyo` , `Neon` , `Toxic` . The settings page labels the same ten `Default` , `Vivid` , `Colorblind` , `Acid Trip` , `Funky` , `Amber` , `Green` , `Tokyo` , `Neon` , `Toxic` .





`Colorblind` uses blue for up and yellow for down instead of green and red. `Amber` and `Terminal Green` are single-hue sets.

Options

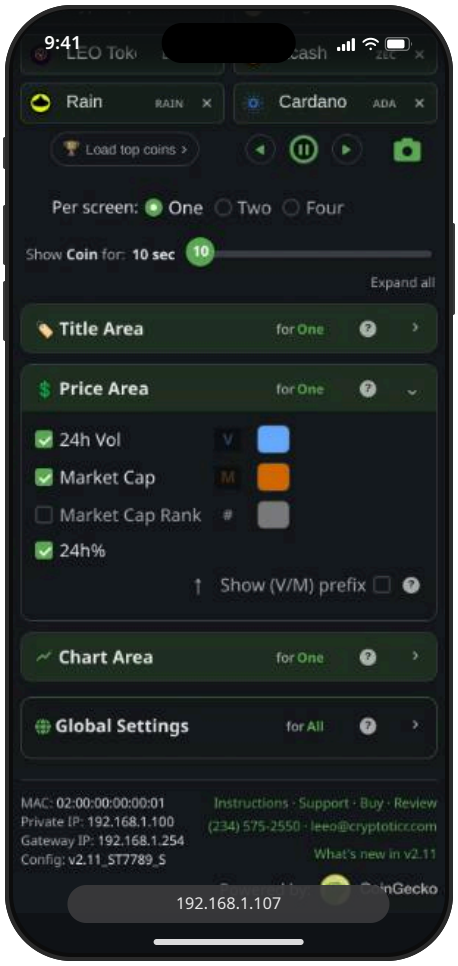
- Ten sets. Each remembers its own custom stat colors and its own `Show (V/M) prefix` choice, so switching back brings back what you set for it; see Custom colors.

- The pause ring on the glass and the page's accents follow the chosen set.

Where to set it

`Display` → `Colorset` on the settings page. Reference: Setting: colorset.

Custom colors



What it shows

Beside `24h Vol`, `Market Cap` and `Market Cap Rank` in the `Price Area` controls sits a color swatch. Tap it to open a picker; the figure on the glass takes the new color as you choose.



The `24h Vol` figure shown here, and `Market Cap` and `Market Cap Rank` in their turn, are the three that take a custom color. The `24h%` cannot be recolored: it always wears the colorset's up and down colors, because its color is its meaning. It wears a neutral gray when it rounds to 0.00%, the same in every set.

The picker will not go to black, which would be invisible on the ticker: the brightness is held to a visible floor, and a typed-in black is bumped to a visible gray. A `Default` button beside an edited color returns that colorset's normal color.

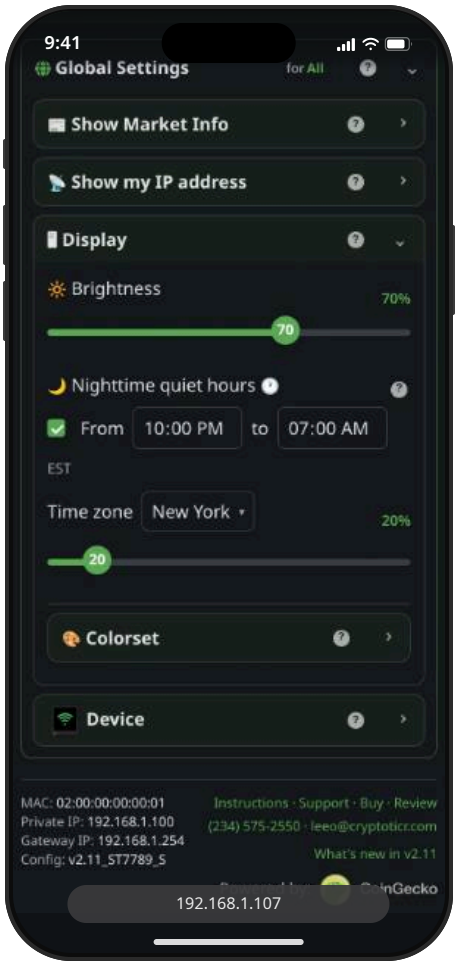
Options

- Three colors per colorset, kept separately for each of the ten sets: `Choices are remembered per colorset, and Reset returns that colorset's normal color.`
- Colors are typed as a hex value or picked; both apply at once.

Where to set it

`Display` → `Price Area`, the swatch beside each figure. Reference: Setting: 24h Vol color, Setting: Market Cap color, Setting: Market Cap Rank color.

Brightness



What it shows

The backlight level of the screen, as a percentage. Moving the slider changes the ticker at once; the page says `Brightness takes effect the moment you move the slider, no Save & Apply needed.`

The slider runs from ten to a hundred in steps of ten. It does not reach zero: the firmware holds the backlight to a floor of ten percent, so the lowest step is dim, not off. A ticker that appears off is either unpowered or in its quiet hours at a low night level; see The screen is dark or looks off.

The page's advice: `Set it to whatever looks right in your room. A gentle tip: the screen's backlight is my biggest power draw and my main source of warmth, and electronics generally last longest kept cool, so`

`mid-range makes a good everyday choice. Full brightness is there for the spots that need it, like a sunny window.`

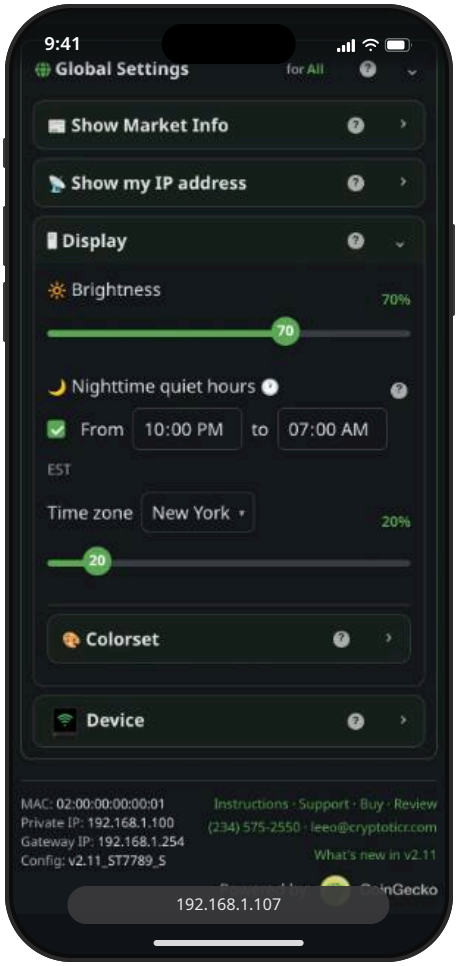
Options

- The slider is the daytime level. A second slider under `Nighttime quiet hours`, which the page's help calls the `Night level`, applies during quiet hours; see Nighttime quiet hours.

Where to set it

`Display` → `Brightness` on the settings page. Reference: Setting: brightness.

Nighttime quiet hours



What it shows

Between the `From` time and the `to` time the ticker runs at the night level, set with the slider under the times, instead of the daytime `Brightness`. The page's description: `Dim the ticker between two times, then bring it back. Handy on a bedside table or a desk you sit at in the evening.` Both levels apply the moment you change them.

The window is checked every second against the local time the ticker works out from its server's replies and your time zone. Crossing midnight is normal: ten in the evening to seven in the morning is one stretch. Setting both times the same means never dim.

Quiet hours stand down, and the ticker returns to the daytime level, whenever it cannot trust the time: it has no clock of its own, and after a day without a reply from its server it stops guessing. They also stand down during a firmware update and in setup mode.

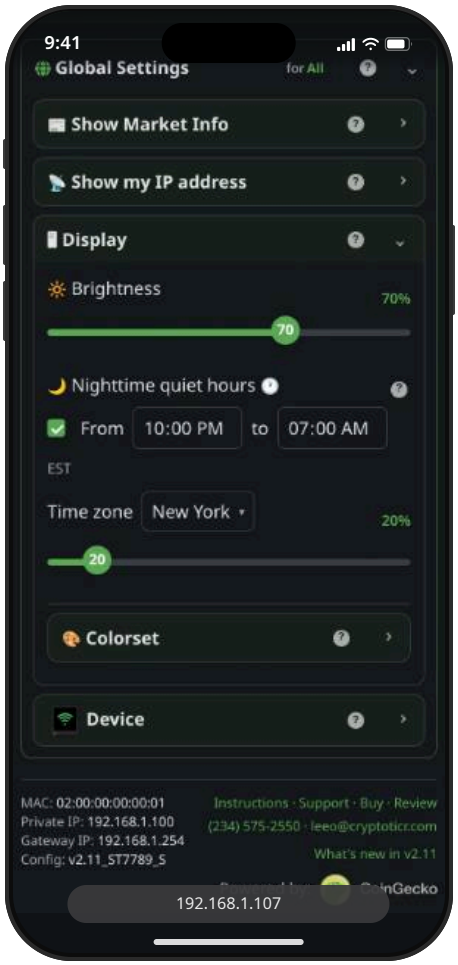
Options

- A switch for the feature, `From` and `to` times, the time zone row, and a slider for the night level from ten to a hundred in steps of ten. That slider has no label of its own, only its percentage at the end of the time zone row; the page's help calls it the `Night level`.
- A night level above the daytime level is allowed; the page marks it `brighter than daytime`.
- The time zone is taken from your phone or computer the first time the page opens, and can be changed in the row under the times; see The time zone and how the ticker knows the time.

Where to set it

`Display` → `Nighttime quiet hours`. Reference: Setting: quiet hours on or off, Setting: quiet hours start time, Setting: quiet hours end time, Setting: night level, Setting: time zone.

The time zone and how the ticker knows the time



No clock of its own

The ticker has no battery and no clock. It takes the current time from its server with every price it fetches, so the time is refreshed constantly while the ticker is online. If it goes a whole day without a reply, it stops trusting its count: quiet hours stand down and the screen returns to the daytime level rather than dimming at a guessed hour.

Where the zone comes from

Universal time says nothing about where the ticker is. The first time you open the settings page, the page reads the zone your phone or computer reports and sends it to the ticker; the page says `I quietly take the zone your phone or`

`computer reports and remember it.` The row under the quiet-hours times lists the United States zones first, then a set of world zones, and can be changed at any time, for example after opening the page from a borrowed laptop abroad.

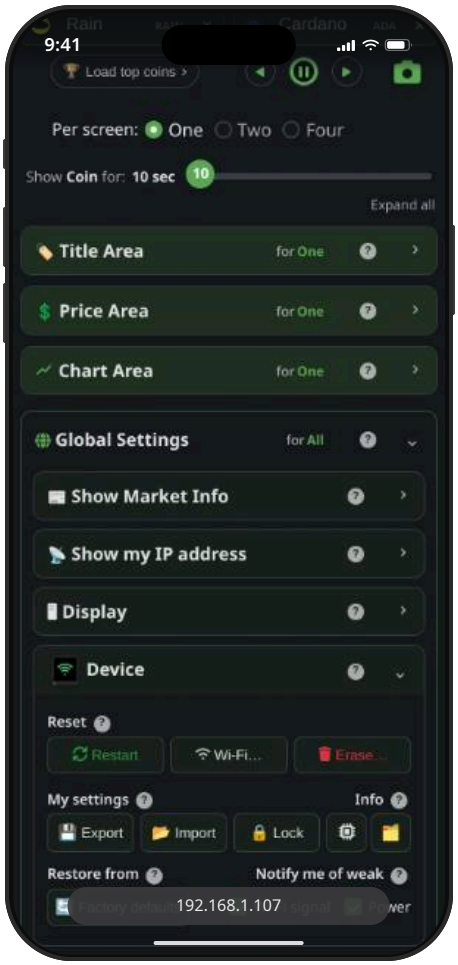
Daylight saving

Daylight saving needs nothing from you and no firmware update: the ticker knows your zone, and the rules for every zone are kept up to date on the server.

If never told

A ticker that has never been given a zone uses New York time, with its daylight saving worked out on the ticker itself.

Per-layout and shared settings



Per layout

The controls whose tips say `Set per mode: One, Two, and Four per screen each remember their own choice here.` keep three values, one for each layout, and the page shows the one for the layout you have chosen with `Per screen:`. They are:

- The title style (`Title Area`).
- The price-area switches: `24h Vol` , `Market Cap` , `Market Cap Rank` , `24h%` , and the chart helper lines.
- The `Show … for:` time.

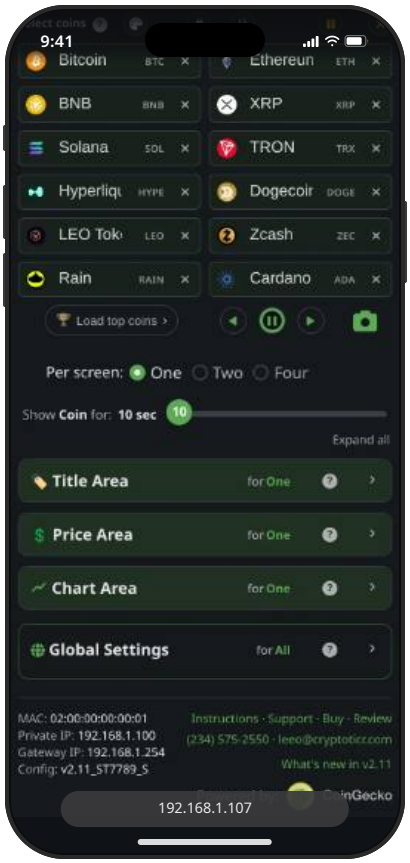


Switching layouts brings back what you set for that layout; nothing is overwritten. The two pictures above show One and Two per screen each carrying its own title choice at the same time, on the same ticker.

Shared by the ticker

Everything else has one value: the coin list and its pause marks, the chart ranges and label position, the colorset with its custom colors and V/M letters (which are kept per colorset rather than per layout), brightness and quiet hours, the address popup rows, and everything in the `Device` section.

The three screen layouts side by side


9:41
Bitcoin BTC
Ethereum ETH
BNB BNB
XRP XRP
Solana SOL
TRON TRX
Hyperliqu HYPE
Dogecoir DOGE
LEO Toke LEO
Zcash ZEC
Rain RAIN
Cardano ADA
Load top coins
Per screen: One Two Four
Show Coin for: 10 sec
Expand all
Title Area for One
Price Area for One
Chart Area for One
Global Settings for All
MAC: 02:00:00:00:00:01
Private IP: 192.168.1.100
Gateway IP: 192.168.1.254
Config: v2.11_ST7789_S
Instructions · Support · Buy · Review
(234) 575-2550 · leeo@cryptoticr.com
What's new in v2.11
192.168.1.107


Ethereum
$2,244
9.45 B +0.95%
24h


Bitcoin
$75,968
25.85 B +0.59%
Ethereum
$2,244
9.45 B +0.95%


75,968
2,244
694.41
1.16

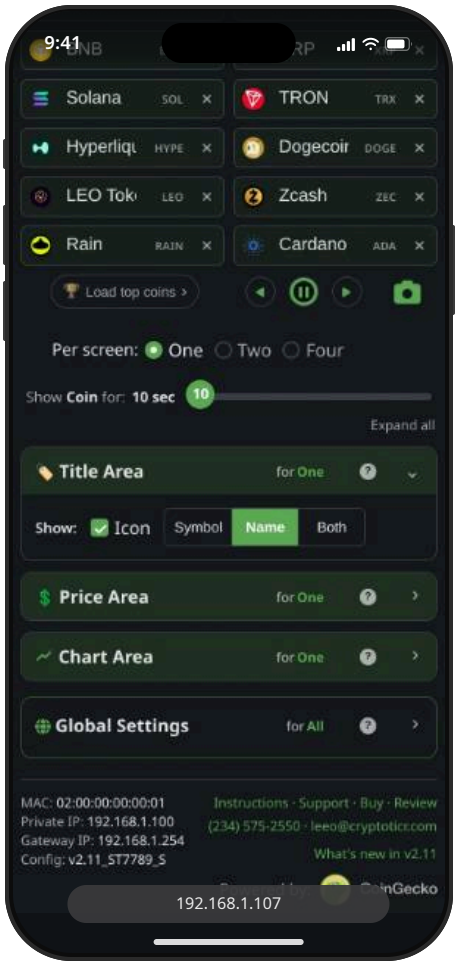
Side by side

	One	Two	Four
Coins on the glass	1	2	4
Title	icon, symbol, name or a pair	icon, symbol, name or a pair	symbol or icon
Price	large, colored by the day	medium, colored by the day	small, colored by the day
Stats row	yes, rotating	yes, smaller	no
Chart	yes, or the 7d/30d/90d panel	no	no
Rotation step	one coin	a page of two	a page of four
Own `Show … for:` time	yes	yes	yes

Choosing

`One` is for reading a coin: chart, change, volume. `Two` and `Four` are for watching a list at a glance. All three keep their own title style, stats switches and time, so trying one costs nothing; see Per-layout and shared settings. The control is `Per screen:` above the `Display` section; see One, two or four coins per screen.

Setting: title style



The control

`Title Area` → `Show:` with the `Icon` switch and `Symbol` / `Name` / `Both` (One and Two per screen), or `Symbol` / `Icon` (Four per screen).

What it does

Chooses which of the coin's identity fields the title band draws, per layout. The ticker cannot draw the icon with both texts on this screen; that combination is turned into icon and name.



The choices

- Icon with name, icon with symbol, symbol with name, name only, symbol only (One and Two per screen).
- Symbol only or icon only (Four per screen).

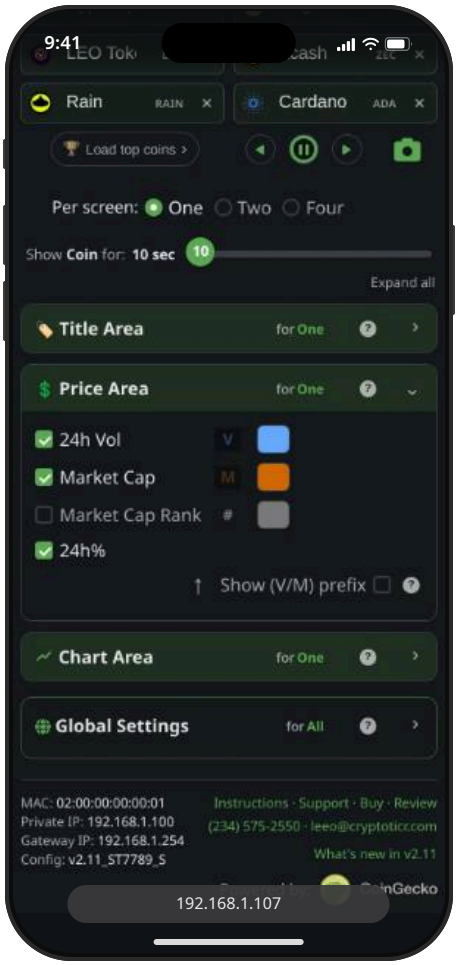
On the glass

The title band redraws on the next coin.

The stored key

`title_options` in the ticker's settings, and in the file that `Export` writes. The shipped value is generated from the one source of defaults and shown on this page by the site, never typed here.

Setting: price area and chart line switches



The control

`Price Area` switches and `Chart Area` → `Include within chart:`.

What it does

One value per layout holding several on/off switches: whether volume, market cap, rank and the 24-hour change appear under the price, and whether the chart draws its time divider lines and its first/last price lines.



The choices

- `24h Vol`, `Market Cap`, `Market Cap Rank`, `24h%`: any combination; the three left-hand figures take turns.
- `Time divider lines`, `First/last price lines`: on or off.

On the glass

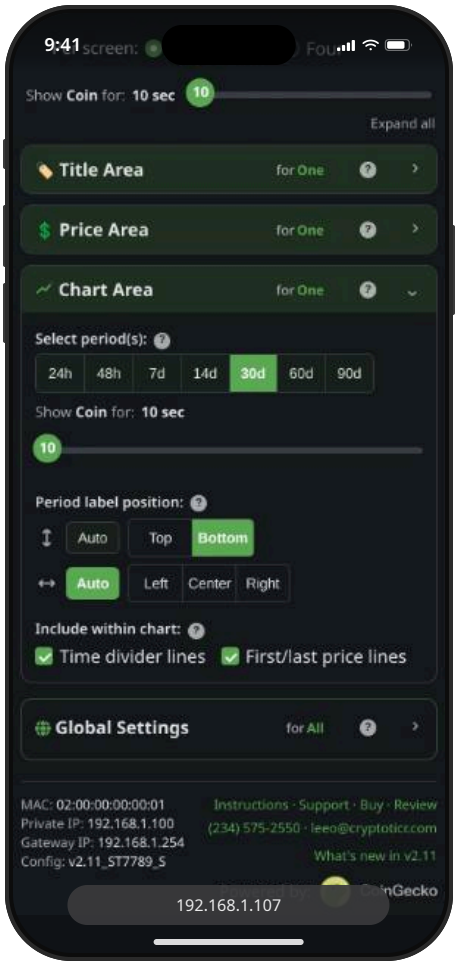
The stats row and chart redraw on the next coin; with every figure off the chart takes the row's space.

The stored key

`display_options` in the ticker's settings, and in the file that `Export` writes. The shipped value is generated from the one source of defaults and shown on this page by the site, never typed here.

Setting: chart time ranges

> **Factory default:** 24-hour and 90-day charts



The control

`Chart Area` → `Select period(s):` — seven buttons.

What it does

Any combination of the seven ranges. The coin plays a chart for each selected range, shortest first, splitting its screen time across them. With none selected the chart area shows percentage changes over 7d, 30d and 90d.



The choices

- `24h` , `48h` , `7d` , `14d` , `30d` , `60d` , `90d` , any number of them, or none.

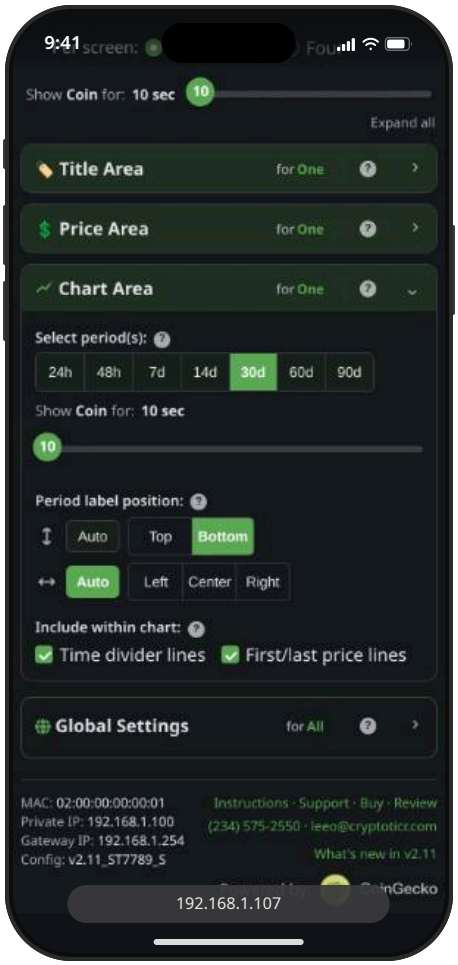
On the glass

Applies to the next coin in One per screen; Two and Four per screen have no chart.

The stored key

`chart_period` in the ticker's settings, and in the file that `Export` writes. The shipped value is generated from the one source of defaults and shown on this page by the site, never typed here.

Setting: chart label left-right position



The control

`Chart Area` → `Period label position:` — the left-right arrows and `Auto`.

What it does

Picks the spot along the label's row. `Auto` scans the row on every chart and chooses the clearest slot; a forced spot slides one slot sideways only when the price line runs through it.



The choices

- `Auto`, `Left`, `Center`, `Right`.

On the glass

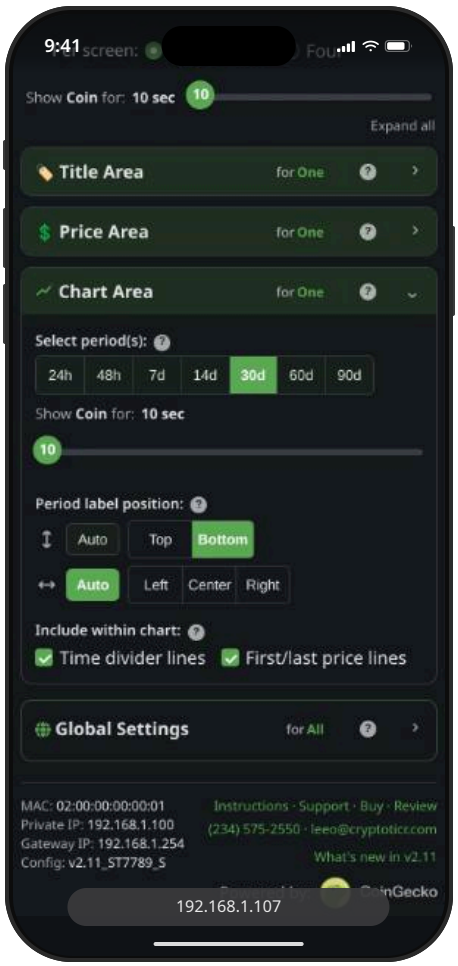
The next chart draws its label in the chosen spot.

The stored key

`chart_period_position` in the ticker's settings, and in the file that `Export` writes. The shipped value is generated from the one source of defaults and shown on this page by the site, never typed here.

Setting: chart label row

> **Factory default:** On



The control

`Chart Area` → `Period label position:` — the up-down arrows and `Auto`.

What it does

Pins the label's row, or lets the chart choose. With both this and the left-right choice on `Auto`, the label goes wherever fits best, chart by chart.



The choices

- `Auto`, `Top`, `Bottom`.

On the glass

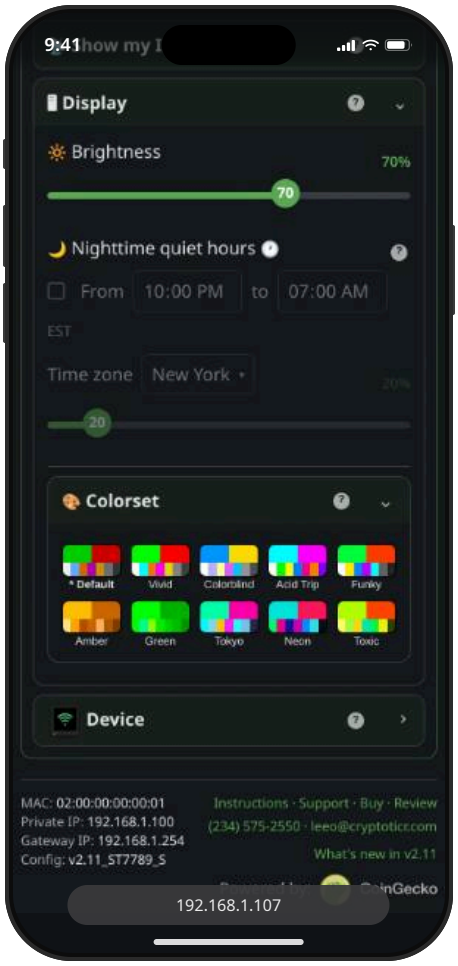
The next chart draws its label on the chosen row.

The stored key

`chart_period_keep` in the ticker's settings, and in the file that `Export` writes. The shipped value is generated from the one source of defaults and shown on this page by the site, never typed here.

Setting: colorset

> **Factory default:** the first of the ten colorsets



The control

`Colorset` — the row of swatches in the `Display` section.

What it does

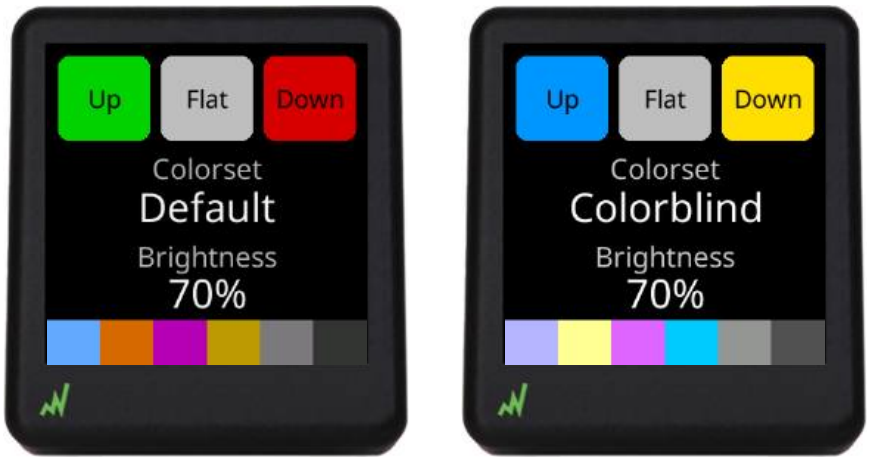
Selects the whole color scheme: price up and down colors, chart line, stats figures, helper lines and status colors. A price that has not moved is the exception: it shows in a neutral gray that is the same in all ten schemes. The value is written under two keys, `c` and the older `cs`, so a settings file from earlier firmware still reads correctly.

The choices

- `Default`, `Vivid`, `Colorblind`, `Acid Trip`, `Funky`, `Amber`, `Green` (painted `Terminal Green` on the glass), `Tokyo`, `Neon`, `Toxic`.

On the glass

Applies at once with a short reveal card showing the set's `Up` and `Down` colors and its name.

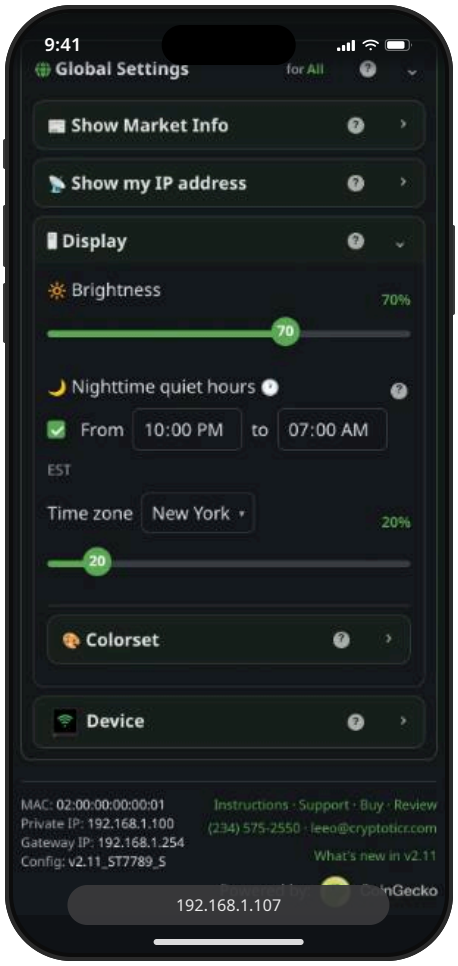


The stored key

`c` in the ticker's settings, and in the file that `Export` writes. The shipped value is generated from the one source of defaults and shown on this page by the site, never typed here.

Setting: brightness

> **Factory default:** 70%



The control

`Display` → `Brightness` slider.

What it does

Sets the backlight while quiet hours are not active. The firmware holds the level to a floor of ten percent, so the screen never goes fully off by this setting.

The choices

- Ten to a hundred percent in steps of ten.

On the glass

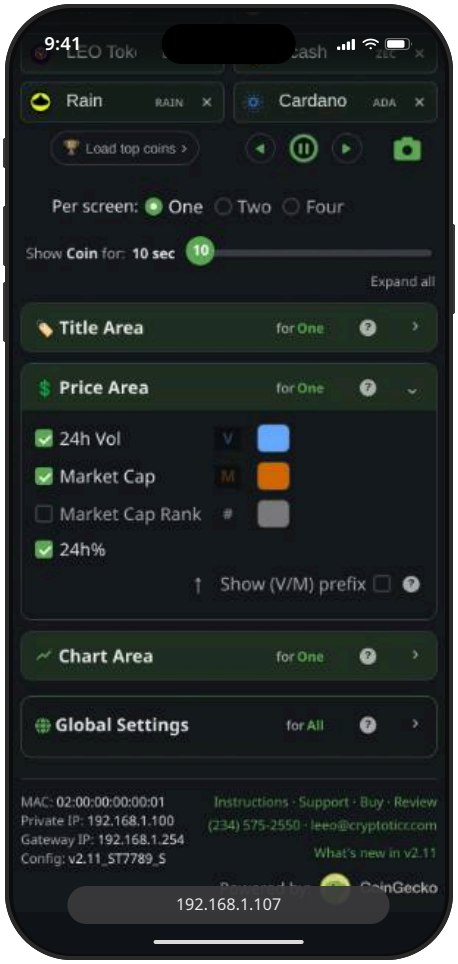
Applies at once.

The stored key

`br` in the ticker's settings, and in the file that `Export` writes. The shipped value is generated from the one source of defaults and shown on this page by the site, never typed here.

Setting: 24h Vol color

> **Factory default:** each colorset's own color



The control

`Price Area` → the swatch beside `24h Vol`, with its `Default` button.

What it does

Overrides the volume figure's color within the current colorset only; switching colorsets brings back that set's own choice. The picker will not go to black.



The choices

- Any color from the picker or typed as a hex value; `Default` returns the colorset's own color.

On the glass

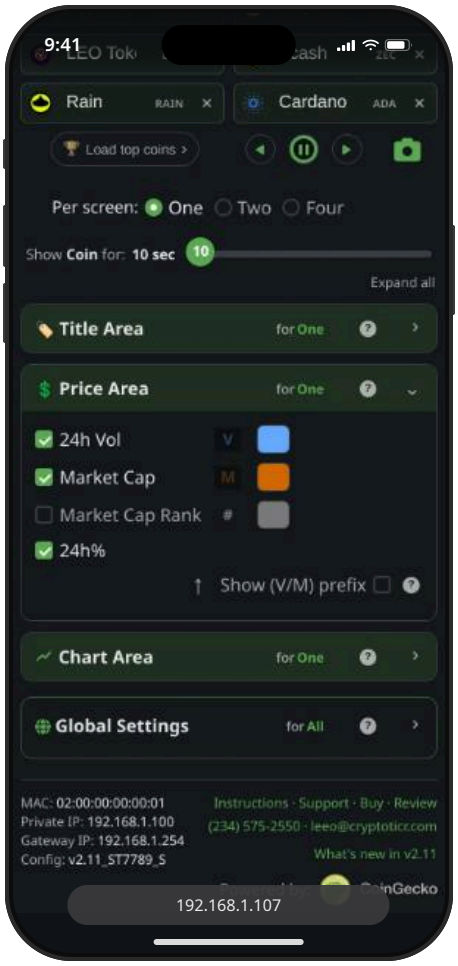
The figure redraws in the new color on its next turn in the stats row.

The stored key

`vol_color` in the ticker's settings, and in the file that `Export` writes. The shipped value is generated from the one source of defaults and shown on this page by the site, never typed here.

Setting: Market Cap color

> **Factory default:** each colorset's own color



The control

`Price Area` → the swatch beside `Market Cap`, with its `Default` button.

What it does

Overrides the market cap figure's color within the current colorset only; switching colorsets brings back that set's own choice. The picker will not go to black.



The choices

- Any color from the picker or typed as a hex value; `Default` returns the colorset's own color.

On the glass

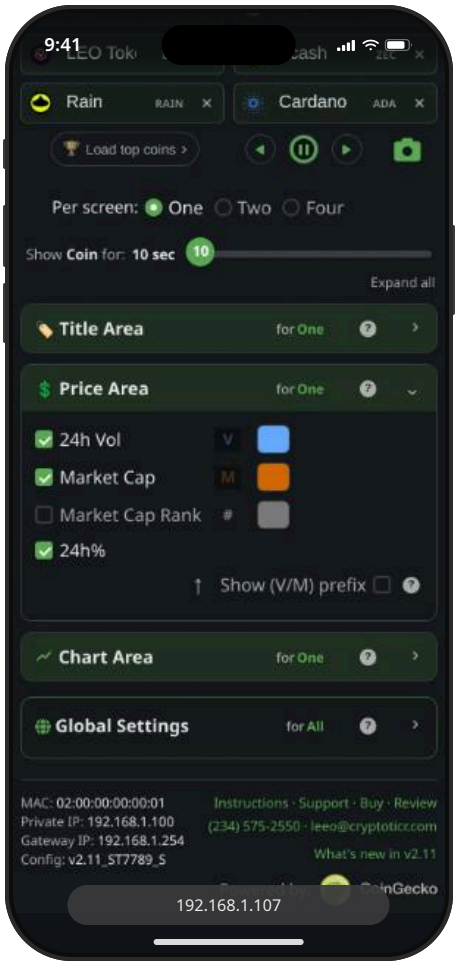
The figure redraws in the new color on its next turn in the stats row.

The stored key

`mcap_color` in the ticker's settings, and in the file that `Export` writes. The shipped value is generated from the one source of defaults and shown on this page by the site, never typed here.

Setting: Market Cap Rank color

> **Factory default:** each colorset's own color



The control

`Price Area` → the swatch beside `Market Cap Rank`, with its `Default` button.

What it does

Overrides the rank figure's color within the current colorset only; switching colorsets brings back that set's own choice. The picker will not go to black.



The choices

- Any color from the picker or typed as a hex value; `Default` returns the colorset's own color.

On the glass

The figure redraws in the new color on its next turn in the stats row.

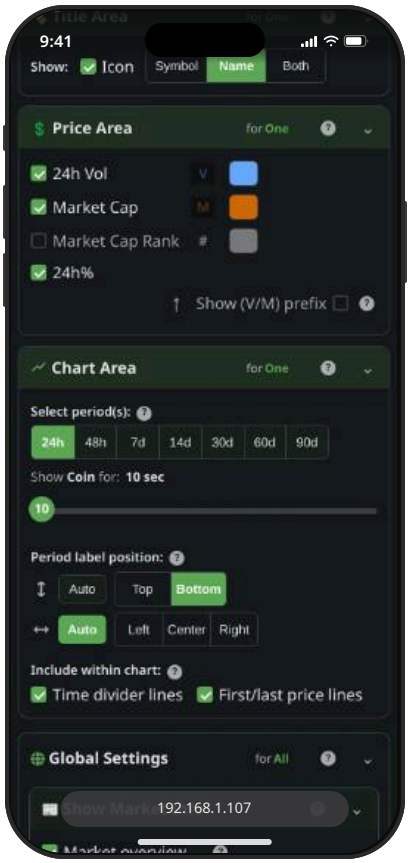
The stored key

`rank_color` in the ticker's settings, and in the file that `Export` writes. The shipped value is generated from the one source of defaults and shown on this page by the site, never typed here.

Setting: V/M letters before volume and market cap

> **Factory default:** Off, except in 2 of the 10 colorsets





The control

`Price Area` → `Show (V/M) prefix`.

What it does

Adds a letter prefix to the volume and market-cap figures for the current colorset. Rank always carries its `#` whatever this says.

The choices

- On or off, per colorset.

On the glass

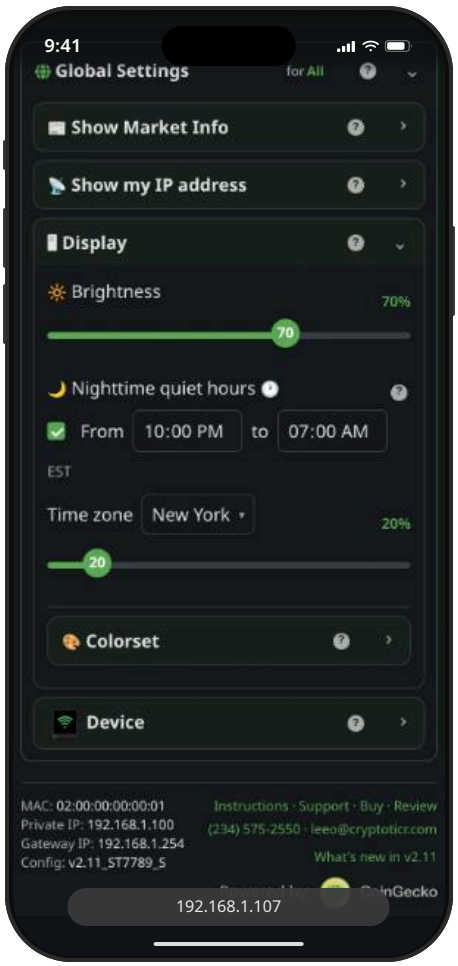
The figures redraw with or without the letter on their next turn.

The stored key

`stat_prefix` in the ticker's settings, and in the file that `Export` writes. The shipped value is generated from the one source of defaults and shown on this page by the site, never typed here.

Setting: quiet hours on or off

> **Factory default:** Off



The control

`Display` → `Nighttime quiet hours` switch.

What it does

Enables the dimming window. Off, the times and night level are kept but ignored. The window also stands down by itself whenever the ticker cannot trust the time, during an update, and in setup mode.

The choices

- On or off.

On the glass

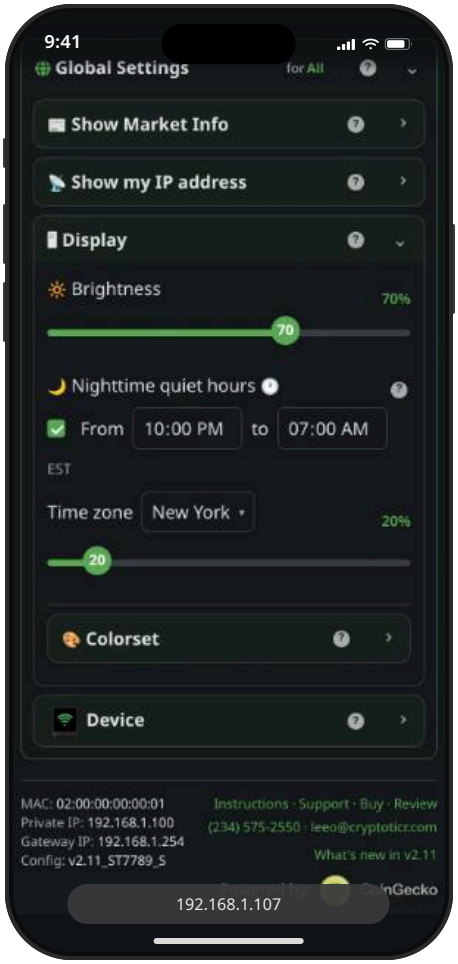
Applies within a second: the screen dims or brightens if the window is open now.

The stored key

`quiet_on` in the ticker's settings, and in the file that `Export` writes. The shipped value is generated from the one source of defaults and shown on this page by the site, never typed here.

Setting: quiet hours start time

> **Factory default:** 10:00 PM



The control

`Nighttime quiet hours` → `From` time.

What it does

Marks the start of the dimming window in the ticker’s local time, which it works out from the server’s clock and your zone. A start equal to the end means never dim.

The choices

- Any time of day, entered as hours and minutes on the page.

On the glass

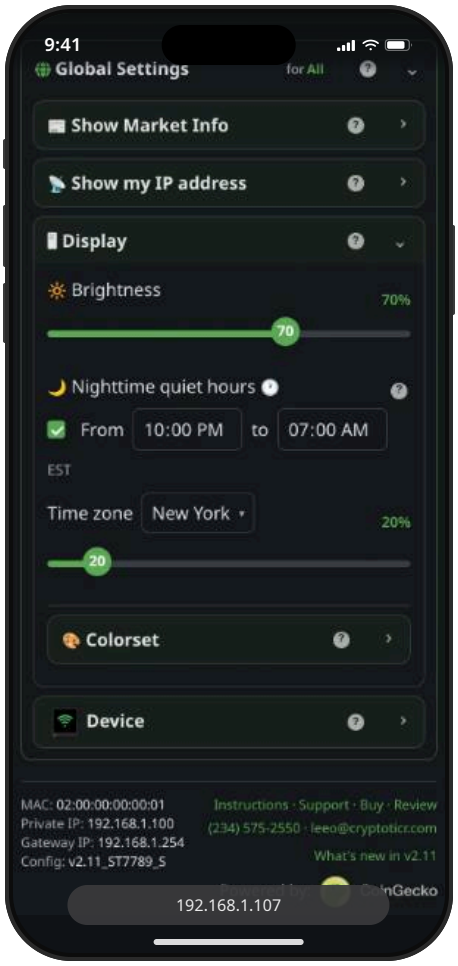
Applies within a second.

The stored key

`quiet_from` in the ticker’s settings, and in the file that `Export` writes. The shipped value is generated from the one source of defaults and shown on this page by the site, never typed here.

Setting: quiet hours end time

> **Factory default:** 7:00 AM



The control

`Nighttime quiet hours` → `to` time.

What it does

Marks the end of the dimming window in local time. Equal to the start means never dim.

The choices

- Any time of day, entered as hours and minutes on the page.

On the glass

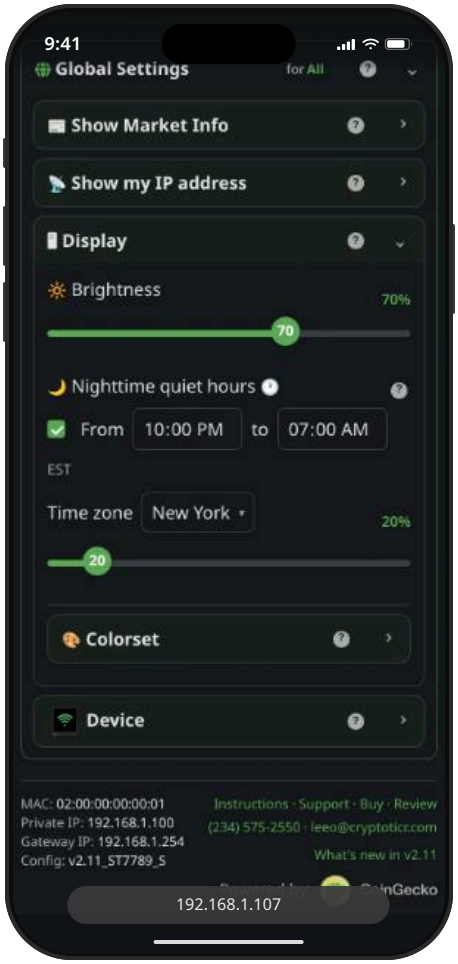
Applies within a second.

The stored key

`quiet_to` in the ticker's settings, and in the file that `Export` writes. The shipped value is generated from the one source of defaults and shown on this page by the site, never typed here.

Setting: night level

> **Factory default:** 20%



The control

`Nighttime quiet hours` → the slider under the `From` and `to` times (the section's help calls it `Night level`).

What it does

Sets the backlight while the window is open; the daytime `Brightness` applies the rest of the time.

The choices

- Ten to a hundred percent in steps of ten.

On the glass

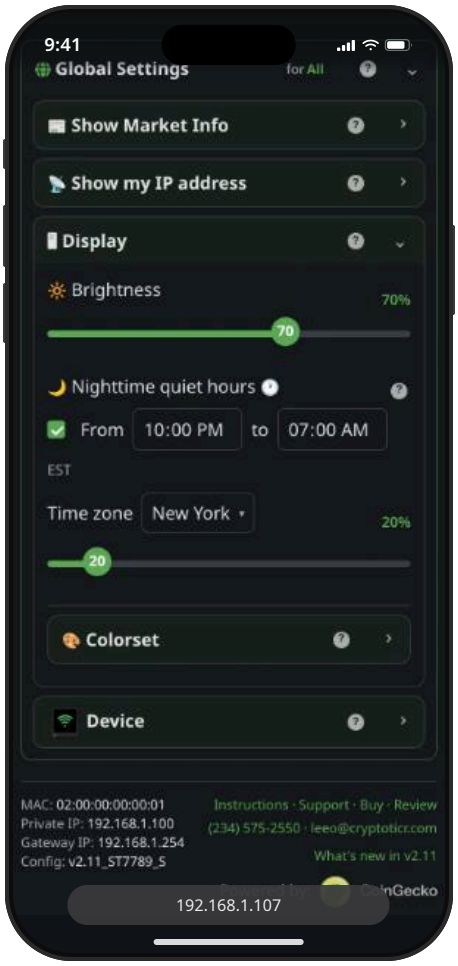
Applies at once if the window is open now.

The stored key

`quiet_br` in the ticker’s settings, and in the file that `Export` writes. The shipped value is generated from the one source of defaults and shown on this page by the site, never typed here.

Setting: time zone

> **Factory default:** none yet: the ticker is told its zone the first time it reaches the server



The control

`Nighttime quiet hours` → the zone row under the times.

What it does

Stores a zone name such as `America/New_York`. The server turns it into the local offset used for quiet hours. Empty means never told; the ticker then uses New York time.

The choices

- The United States zones, then a set of world zones, plus whatever zone your device reported.

On the glass

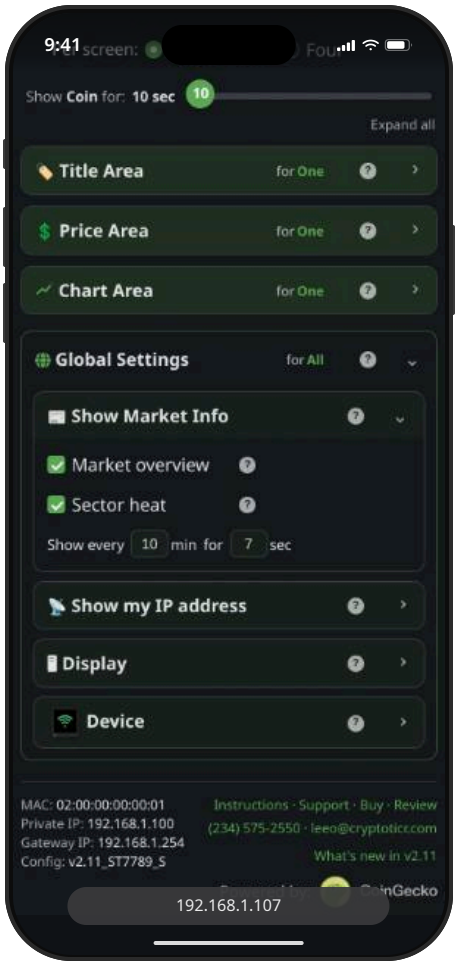
Quiet hours re-evaluate within a second.

The stored key

`tz` in the ticker's settings, and in the file that `Export` writes. The shipped value is generated from the one source of defaults and shown on this page by the site, never typed here.

Market Info

Market info cards



What it shows



Between your coins, now and then, a card about the whole market rather than any one coin. The page introduces them as `a heartbeat check on crypto as a whole, not any one coin. Turn them all off to show only coins.` On this ticker there are two: the Market overview card and the Sector heat card.

The rules, as the page states them:

- `All the cards share one schedule: when the interval comes around, every card you've turned on shows once, in the order listed, each held for the "Show for" seconds.`
- `The cards never steal a coin's turn, when they finish, the coin rotation carries on exactly where it left off.`
- Turn a card on, or tap its run button, and it shows on the ticker at once, held at least long enough to look at, then the coins carry on.
- At power-on the enabled cards lead, going past at a quicker pace before the first coin, then settle into their interval.
- A card whose data has not arrived yet, for example right after power-on, is skipped and appears once its data is in.

Cards are spaced from the ticker's other pop-ins (the signal and power cards, the address popup) by a shared minimum gap, so two never stack.

Options

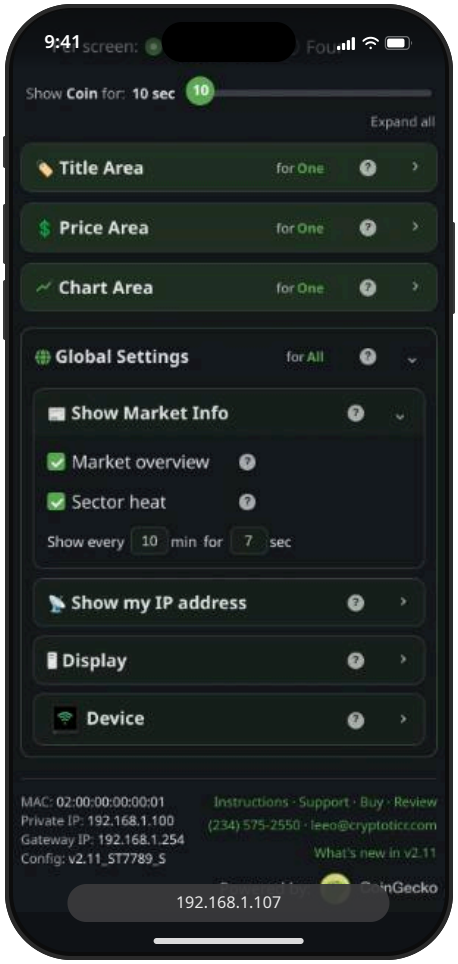
- A switch per card: `Market overview`, `Sector heat`.
- `Show every` (minutes between rounds of cards) and `for` (seconds each card stays up), one pair shared by all the cards, kept per layout.

- A run button beside each card previews it on the glass without changing the schedule.

Where to set it

`Display` → `Show Market Info` on the settings page. Reference: Setting: Market overview card, Setting: Sector heat card, Setting: minutes between market cards, Setting: seconds each market card stays.

Market overview card



What it shows



A card headed `Total Market Cap`, with a globe and the total value of every cryptocurrency combined as its big number, compact like `$3.21T`. Under it, how that total moved over the last 24 hours, as a percentage in the colorset's up or down color. A move that rounds to 0.00% shows in a neutral gray, with a flat bar in place of the arrow. Then two rows: `BTC dom`, Bitcoin's share of the total as a percentage (the page: `Rising dominance means money favoring Bitcoin over the rest.`), and `24h vol`, how much was traded market-wide in the last 24 hours.

The figures come from the ticker's server, which refreshes them every ten minutes from its data source; see Where the prices come from.

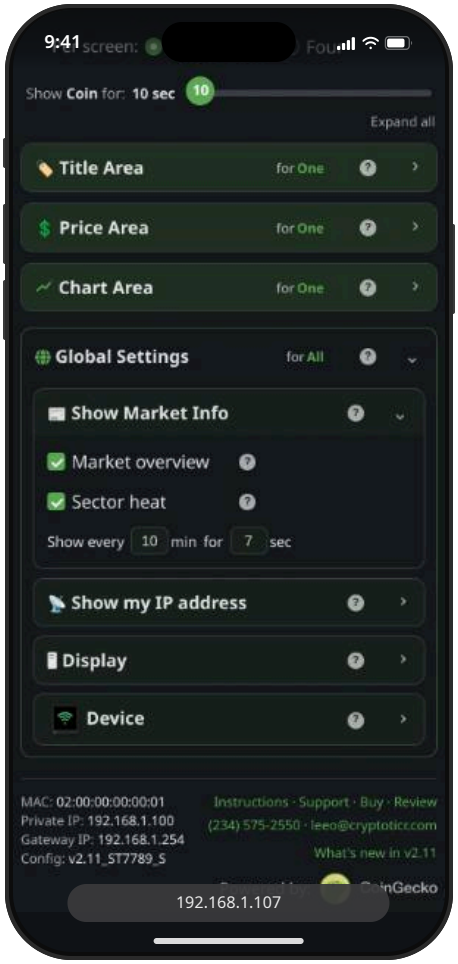
Options

- On or off with the `Market overview` switch, and the shared `Show every` / `for` schedule; see Market info cards.

Where to set it

`Display` → `Show Market Info` → `Market overview`. Reference: Setting: Market overview card.

Sector heat card



What it shows



A card headed `Sector Heat`. The page defines the word: `A "sector" is a family of coins with the same purpose, gaming, AI, DeFi, meme coins, and so on.` A flame and `Hottest now` introduce the sector's name (split over two rows when it is long), its 24-hour move as a percentage in the up or down color (a neutral gray with a flat bar in place of the arrow when it rounds to 0.0%), and `Value`, the combined market value of its coins.

The server ranks the sectors its data source tracks by their 24-hour change, ignoring sectors worth under a billion dollars so a tiny sector's swing does not top the list, and refreshes the ranking every ten minutes. The card shows the head of that list.

The page also describes a `Sector movers` leaderboard card; this ticker's screen is too small for its six rows, and the shipped firmware for this model leaves that card out.

Options

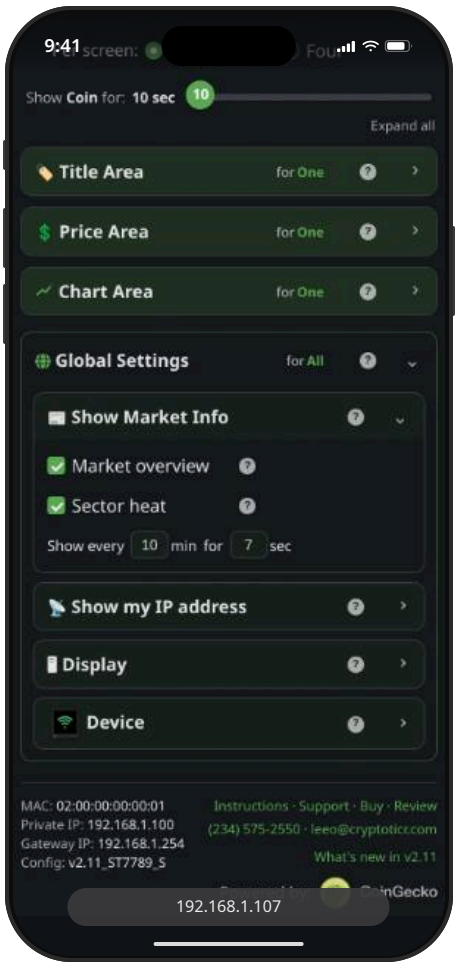
- On or off with the `Sector heat` switch, and the shared `Show every` / `for` schedule; see Market info cards.

Where to set it

`Display` → `Show Market Info` → `Sector heat`. Reference: Setting: Sector heat card.

Setting: Market overview card

> **Factory default:** On



The control

`Show Market Info` → `Market overview`.

What it does

Enables the card for the current layout on the shared market-card schedule. Turning it on shows it at once as a preview.

The choices

- On or off, per layout.

On the glass



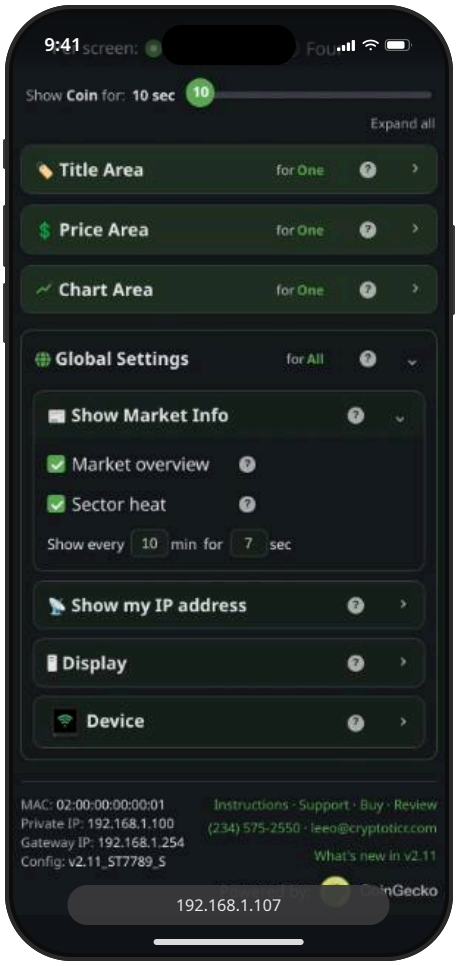
The card takes a turn between coins at each interval, and leads at power-on.

The stored key

`news_global` in the ticker's settings, and in the file that `Export` writes. The shipped value is generated from the one source of defaults and shown on this page by the site, never typed here.

Setting: Sector heat card

> **Factory default:** On



The control

`Show Market Info` → `Sector heat`.

What it does

Enables the card for the current layout on the shared market-card schedule. Turning it on shows it at once as a preview.

The choices

- On or off, per layout.

On the glass



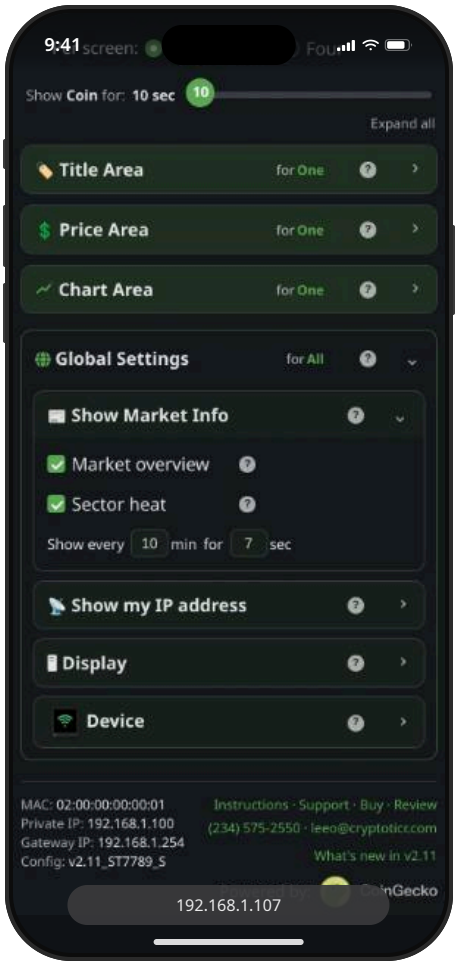
The card takes a turn between coins at each interval, after the Market overview when both are on.

The stored key

`news_sector_hot` in the ticker's settings, and in the file that `Export` writes. The shipped value is generated from the one source of defaults and shown on this page by the site, never typed here.

Setting: minutes between market cards

> **Factory default:** every 10 minutes



The control

`Show Market Info` → `Show every` … `min`.

What it does

Sets the interval of the shared schedule. When it comes round, every enabled card shows once, in order.

The choices

- Two to thirty minutes.

On the glass

One of the two market cards this shared interval can bring round:



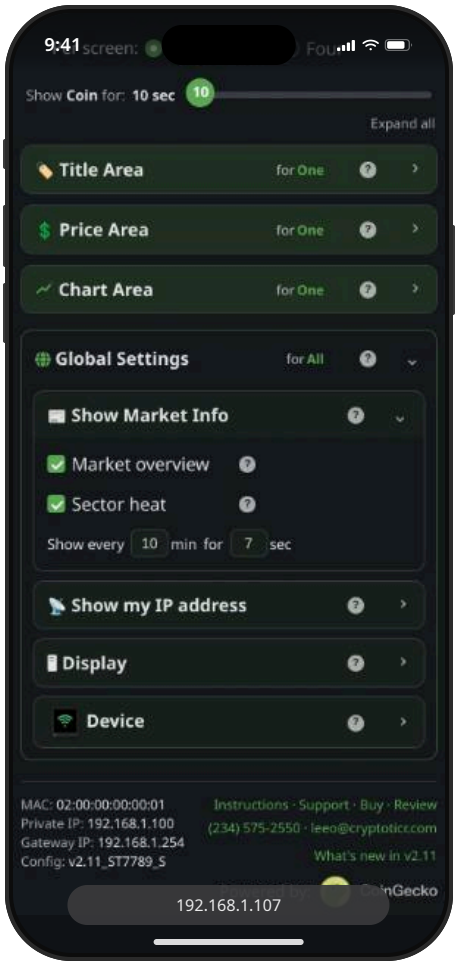
The next round of cards follows the new interval.

The stored key

`news_mins` in the ticker's settings, and in the file that `Export` writes. The shipped value is generated from the one source of defaults and shown on this page by the site, never typed here.

Setting: seconds each market card stays

> **Factory default:** 7 seconds



The control

`Show Market Info` → `for` … `sec`.

What it does

Sets the dwell of each card in a round. A card shown as a preview from the page is held at least long enough to read, whatever this says.

The choices

- Four to fifteen seconds.

On the glass

One of the two market cards this shared dwell holds on screen:



The next card follows the new dwell.

The stored key

`news_secs` in the ticker's settings, and in the file that `Export` writes. The shipped value is generated from the one source of defaults and shown on this page by the site, never typed here.

Prices and data

Where the prices come from

The path

The ticker never talks to CoinGecko itself. It asks CryptoTicr's own server, which fetches the data from CoinGecko and serves every ticker from one up-to-date copy, so a hiccup at CoinGecko leaves the last good answer standing rather than an empty screen. The settings page carries the `Powered by: CoinGecko` mark in its footer for this reason.

US dollars

Every price, market cap and volume is in US dollars, with a `$` in front. The ticker has no other currency; see Can it show prices in another currency?.

How often prices refresh

When a coin is fetched

The ticker fetches a coin's price and chart as that coin's turn comes up in the rotation, and, in Two or Four per screen, as each page turns. The page puts it as `Fresh prices and chart data are fetched as each coin's turn comes up.` The ticker paces its own fetches; stepping through coins quickly with the remote buttons shows `Too fast` or `Easing off` under a price rather than hammering the server.

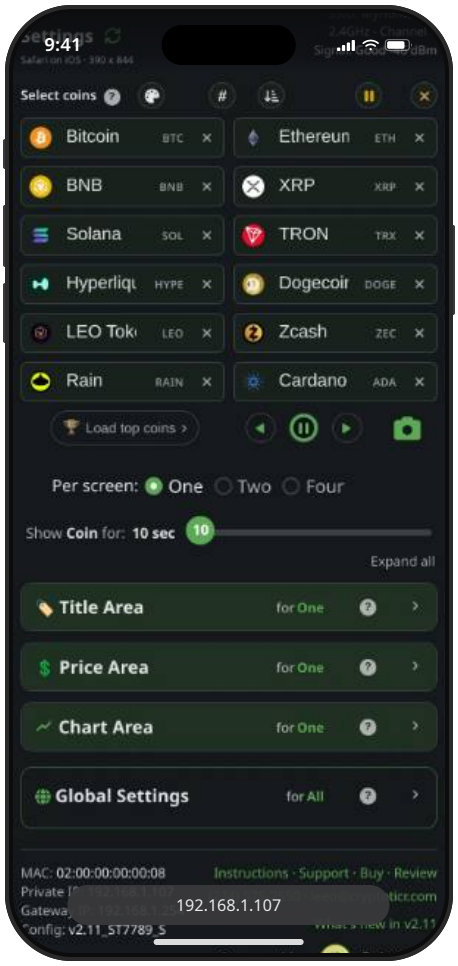
What "24h" means

Every 24-hour figure is rolling: `always the last 24 hours counting back from this moment, not "since midnight"`. It refreshes with the coin's fetch.

Which coins are available

The list

The settings page's coin boxes are where the choice happens:



Its suggestions come from the server's list of supported coins: the 1,000 largest by market value, each with an identifier, a symbol, a name and a logo. The server refreshes the list daily, and refuses to publish a broken one, so an upstream problem never shrinks your choice to a handful. Rankings move every day, so a coin near the end of the list can drop out and come back as its market value changes. The current list is on Supported coins.

The top-coins loader

`Load top coins` draws from a separate, shorter list: the top coins by market value, stablecoins and untraded assets left out, as the page's note says: `Stablecoins and untraded assets omitted.` The server keeps a list of a few hundred stablecoin identifiers for that purpose. A stablecoin can still be typed into a box by name; it is only left out of the loader.

Coins that leave the list

When the data source stops carrying a coin, the server reports it as unsupported and the ticker removes it from your list on its own, after a confirming second sighting, so the rotation does not keep stopping on a coin with no data. Pick a replacement on the settings page.

Accuracy, rounding and tiny prices

Rounding

A coin’s screen carries the same rules wherever the rotation shows it:



A price of a thousand dollars or more is written without decimals; from one dollar to a thousand with two; below a dollar with four significant places after its leading zeros. Volume and market cap are compact: `T`, `B` and `M` for trillions, billions and millions, two decimals, as in `$1.73T`. Percentages carry their sign and one or two decimals. The `$` is always there; the ticker shows US dollars only.

Tiny prices

A coin worth a fraction of a cent would need a row of zeros. The glass writes it as `$0.0`, a small subscript count of the zeros that follow, then the significant digits, in every layout. The page describes it as `a $0.0…052-style price shows the number of zeros as a small subscript`.

Stale or missing data

The ticker never invents a figure. When a price cannot be fetched it shows `-.--` with a dim note saying why, such as `No reply` or `Busy (429)`, and during a server outage it keeps the last good screen on the glass and says how old it is. See Prices stopped updating.

The device

Restart the ticker

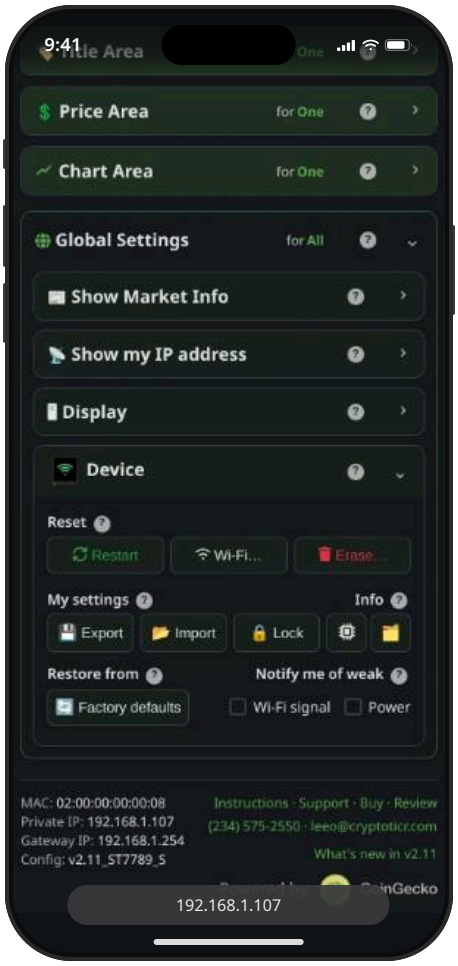
Every step with pictures, the phone and the ticker side by side: the Device page.

Before you start

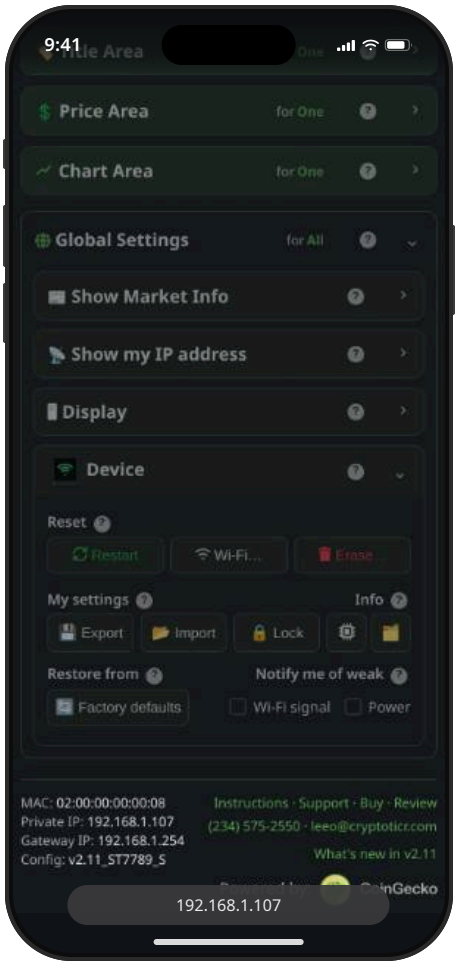
- Nothing is required. A restart keeps every setting and the Wi-Fi. Unplugging and replugging does the same for the ticker; the button saves you the walk. Two differences: the button never counts toward the five-restart factory reset, and it first saves any change still waiting to be written. A change that applies at once, such as brightness, is written about 30 seconds after your last one, so unplugging inside that time loses it.
- Do not restart during a firmware update. The `Updating` / `Firmware` screen says `Keep me powered on!` for a reason. See Automatic firmware updates.

Steps

1. Open the settings page and scroll to the `Device` section. The page describes the button: `Restart: restarts the ticker right away; it reconnects and carries on. Nothing is lost. (The universal first fix. It never counts toward the five-restart reset, which needs the power switched off and on.)`



2. Under `Reset`, tap `Restart`. There is no confirmation.
3. A bar appears at the top of the page: `Restarting. Nothing lost, and this page fills back in by itself.` The page dims while the ticker is away.



4. Watch the ticker: it goes dark, shows its start screen with `Connecting to:` and your network's name, then `My settings are here:` and the address, and returns to its coins.



5. When the ticker answers again the page reloads its data and shows `Back online, everything is as you left it.`

You're done when

- The ticker is cycling through its coins again and the page is live.

Problems?

- The page never came back: the address may have changed across the restart. See I lost the ticker's address.
- The ticker restarted again on its own afterwards: The ticker restarts by itself.

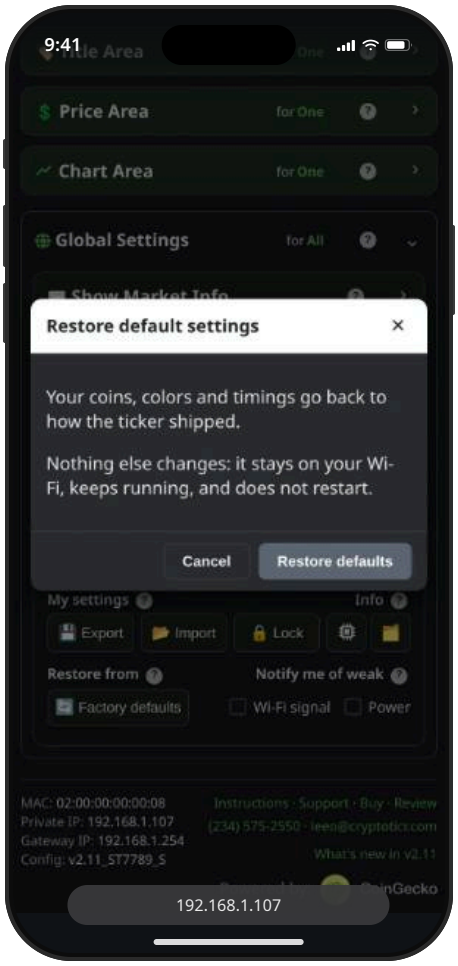
Restore the factory default settings

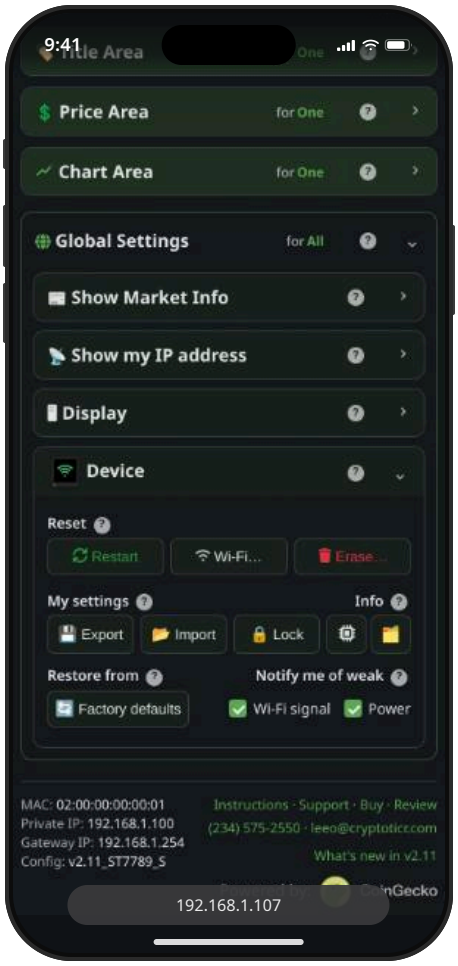
Before you start

- This is the gentlest of the erasures. The page describes it as: `puts your coins, colors and timings back to how the ticker shipped. Nothing else changes: it stays on your Wi-Fi, keeps running, and does not restart. You confirm first.`
- If you might want your current setup back, save it first with `Export` in the same section. See Export and import settings.

Steps

1. Open the settings page and scroll to the `Device` section.


9:41
Price Area
for One
Chart Area
for One
Global Settings
for All
Restore default settings
Your coins, colors and timings go back to how the ticker shipped.
Nothing else changes: it stays on your Wi-Fi, keeps running, and does not restart.
Cancel
Restore defaults
My settings
Info
Export
Import
Lock
Restore from
Notify me of weak
Factory defaults
Wi-Fi signal
Power
MAC: 02:00:00:00:00:08
Private IP: 192.168.1.107
Gateway IP: 192.168.1.254
Config: v2.11_ST7789_S
Instructions · Support · Buy · Review
(234) 575-2550 · ieee@cryptotics.com
What's new in v2.11
CoinGecko
192.168.1.107



2. Below the `My settings` buttons, under the heading `Restore from`, tap `Factory defaults`.
3. A confirmation titled `Restore default settings` opens. It says `Your coins, colors and timings go back to how the ticker shipped.` and `Nothing else changes: it stays on your Wi-Fi, keeps running, and does not restart.` Tap `Restore defaults`.
4. The page shows `Default settings restored.` and fills in with the shipped values. The ticker redraws its screen with the starter coins and the shipped colorset and brightness on its next pass; there is no restart.

You’re done when

- The page’s coin list and every control show the shipped values, and the ticker is cycling through the starter coins.

Problems?

- The page answered with a busy message: the ticker was mid-draw. Wait a moment and tap again.
- You wanted a true fresh start, welcome screens included: Start over but keep the Wi-Fi.

Start over but keep the Wi-Fi



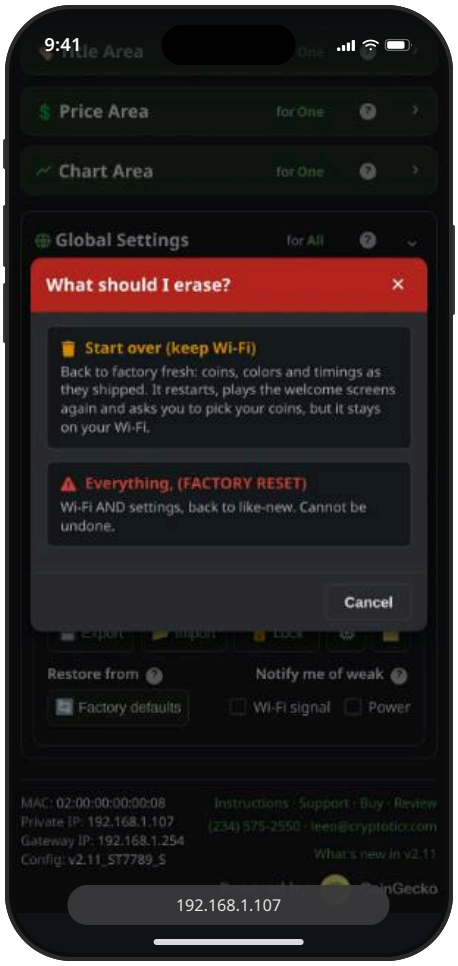
Every step with pictures, the phone and the ticker side by side: the Device page.

Before you start

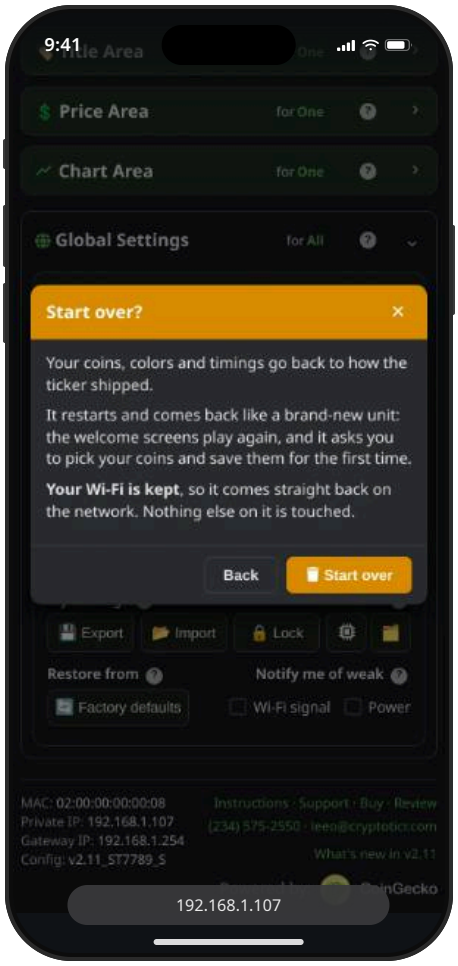
- This is the middle of the three erasures. It is more than `Factory defaults` (which changes settings and nothing else) and less than a factory reset (which also forgets the Wi-Fi).
- The ticker restarts and behaves like a new unit on your network: the welcome screens play again and the page asks you to pick coins. Your Wi-Fi, and a fixed address if you set one, are kept.

Steps

1. Open the settings page and scroll to the `Device` section.
2. Under `Reset`, tap `Erase…`. A chooser opens titled `What should I erase?`.



3. Tap `Start over (keep Wi-Fi)`. Its card reads `Back to factory fresh: coins, colors and timings as they shipped. It restarts, plays the welcome screens again and asks you to pick your coins, but it stays on your Wi-Fi.`
4. The confirmation, titled `Start over?`, repeats the outcome and adds `Your Wi-Fi is kept, so it comes straight back on the network. Nothing else on it is touched.` Tap `Start over`.



5. Watch the ticker. It restarts, joins your Wi-Fi, and runs the first-run sequence described on The first run on the glass. The settings page will not answer for a short while.

You're done when

- The ticker is back on the same address, showing the starter coins, and the settings page greets you as a first-time visitor.

Problems?

- The page did not come back: wait for the ticker to finish restarting, then reload. If it still does not answer, I lost the ticker's address.
- You wanted the Wi-Fi gone too: Factory reset from the settings page.

Factory reset from the settings page

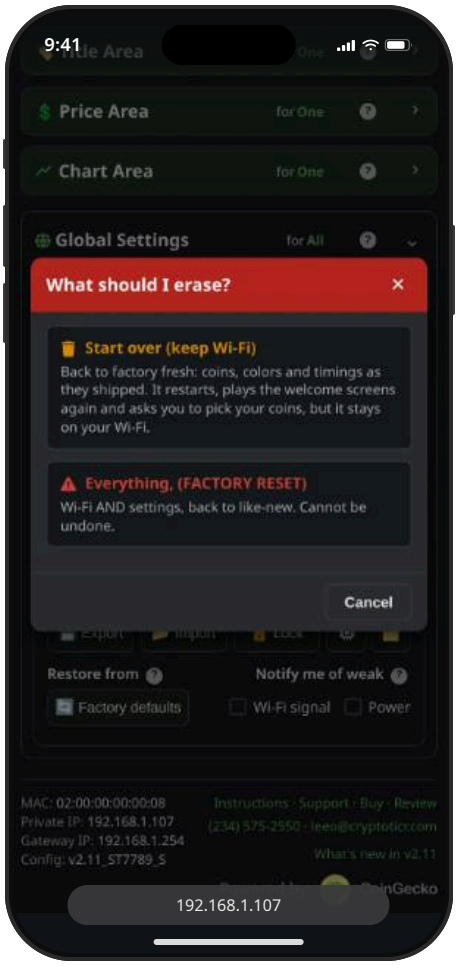
Every step with pictures, the phone and the ticker side by side: the Device page.

Before you start

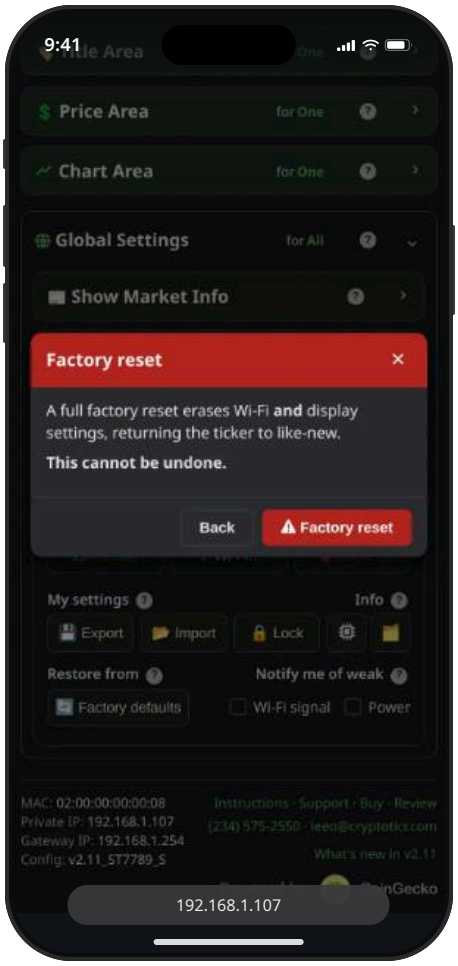
- This erases the saved Wi-Fi network and every display setting. The page says so: `Wi-Fi AND settings, back to like-new. Cannot be undone.`
- If all you want is fresh settings, use Start over but keep the Wi-Fi instead; it keeps the network.
- If all you want is to move it to another network, use Change to a different Wi-Fi network; nothing is erased.

Steps

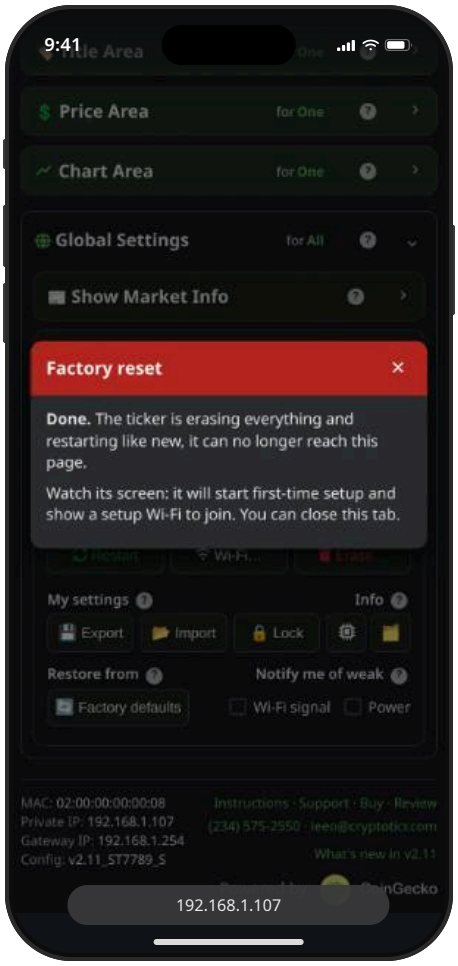
1. Open the settings page and scroll to the `Device` section.
2. Under `Reset`, tap `Erase…`. A chooser opens titled `What should I erase?` with two choices.



3. Tap `Everything, (FACTORY RESET)`. The confirmation is titled `Factory reset` and says `A full factory reset erases Wi-Fi and display settings, returning the ticker to like-new.` and `This cannot be undone.`



4. Tap the red `Factory reset` button. The page shows `Done. The ticker is erasing everything and restarting like new, it can no longer reach this page.` and `Watch its screen: it will start first-time setup and show a setup Wi-Fi to join. You can close this tab.`



5. Watch the ticker. It shows `Factory Reset Done` / `Wi-Fi and settings erased` / `Restarting for setup...`, restarts, and plays the setup cards with its `CT` network name.



You're done when

- The ticker's screen shows `Let's get me set up` and a setup network name, and the old settings page address no longer answers.

Problems?

- The page will not load or the button does nothing: the five-restart gesture does the same job without the page. See Factory reset by switching it off and on five times.
- To set it up again: Quick start.

Factory reset by switching it off and on five times

Every step with pictures, the phone and the ticker side by side: the Device page.

Before you start

- The ticker has completed setup at least once and holds a Wi-Fi network. Without one the counter never runs.
- You can reach the plug or the button on the cable. Each restart is a full power cut. The `Restart` button on the settings page does not count.
- Everything on it will be erased: the Wi-Fi network, the coins and every setting. Read What each reset erases and keeps first if you want to keep the Wi-Fi.

Steps

1. Unplug the ticker (or press the button on the cable), wait a second, and plug it back in. The screen lights and shows the start screen. Nothing else appears yet.
2. Within five seconds of switching it on, cut the power again and restore it. This time a row of five circles appears, two of them red, with `3 more` / `quick reboots` / `for factory reset` and a red line that grows under the words, left to right.



3. Cut the power again while that line is still growing, and restore it. Three red circles, `2 more`.



4. Again. Four red circles, `1 more` / `quick reboot`.



5. Once more. All five circles red and `Factory Reset` in red, then a green `Factory Reset Done` with `Wi-Fi and settings erased` and `Restarting for setup...`.



6. Leave it plugged in. It restarts into first-time setup and shows `Let's get me set up` and its setup network's name.

You're done when

- The screen shows `Factory Reset Done`, and after the restart the setup cards play with a `CT` network name on them.

Problems?

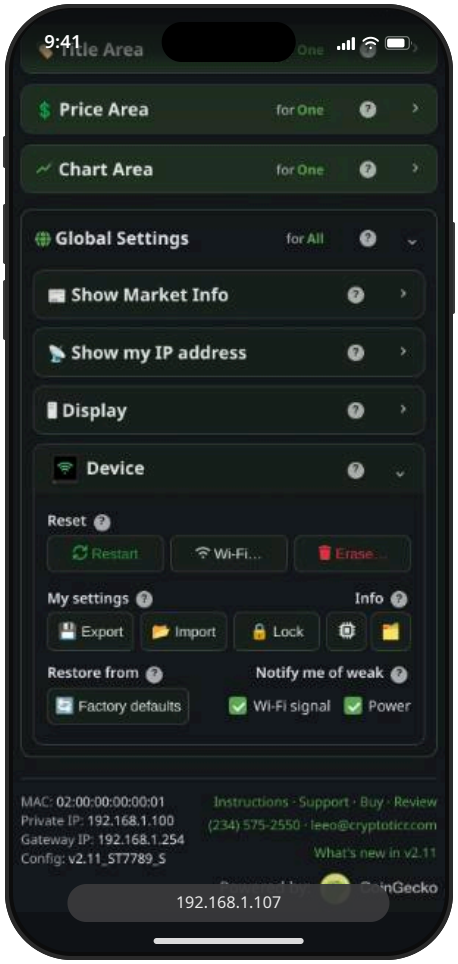
- The circles never appeared, or the count went back to the start: The five-restart factory reset is not working.

- You only wanted to change the Wi-Fi: Change to a different Wi-Fi network keeps your coins, and Erase the Wi-Fi and set up again keeps everything but the network.

How the count works

Every power-on adds one to a counter, and the counter is cleared the moment the ticker has been running for five seconds. So five power-ons in a row, none of them five seconds apart, reach the reset. The circles appear from the second power-on, so the first one gives you no sign; the growing line on the countdown card shows how much of the window has gone. A restart caused by a fault, a restart the ticker makes by itself, and the settings page's `Restart` button do not count: only a real power cut does. A ticker with no saved network resets the counter at every boot, which is why the gesture cannot fire on a ticker that has never been set up.

The power check



What it shows

A card with a title, a large voltage figure, a thumb beside it and one row of context:

- `Power very low!` with a red thumb down and `Switch to a different USB power source.` The supply sagged into the danger band, where the ticker can brown out or corrupt its storage.
- `Power a bit low` with a thumb down and `Try a different USB power source.`
- `Power a bit high` with a thumb down and `Switch to a different USB power source.`
- `Power very high!` with a red thumb down and `Unplug. Use a different power source.`









- `Power is good`, or `Power is good now` when the session has already seen a dip or a peak, with a thumb up and a colored line showing the range the supply has moved in. A brownout-level sag at start-up is called out as `But 2.85V at startup!`
- `Measuring power...` with `Ready in under 2 min.` before the first verdict.
- Ahead of an update the bottom row says `All good, updating now`, `Not great, updating anyway`, or `Still measuring, updating now` when the first verdict is not in yet. The reading includes the update's download.



The ticker reads its supply many times a second, and every minute turns that window into one verdict: the lowest reading against the low lines, the average against the high lines. A verdict gets worse the moment a line is crossed and only improves once the reading clears it by a margin, so the card does not flicker between two faces on a borderline supply.

During setup the same measurement drives a `Power` card (`My USB power is` / `very low right now.`, with `Use different USB cable` / `and/or power source.`) and a `USB Power: check now` notice on the setup page.



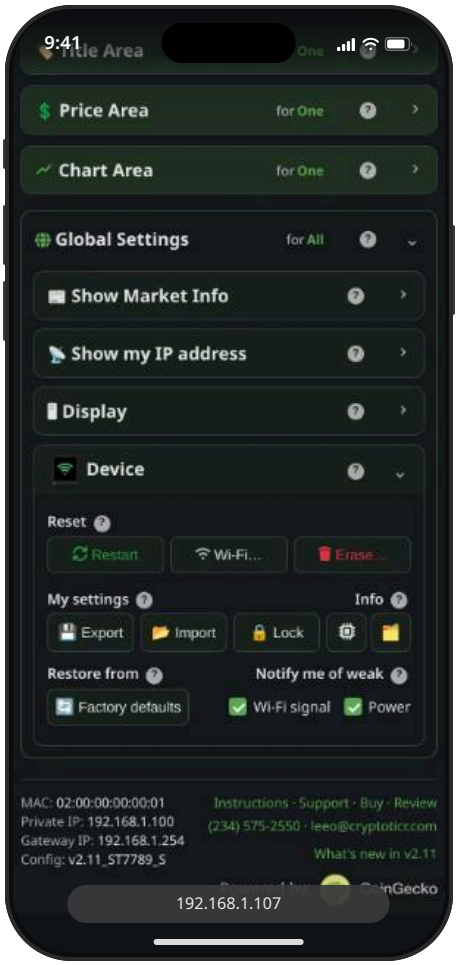
Options

- **Notify me of weak → Power** (`Device` section). Ticked, the card comes back every quarter of an hour while the verdict is not good. Unticked, it stops repeating. The page says: `Unticking a box stops that card's repeats - the ticker runs exactly the same either way. Ticking one shows you the card on the glass right away.`
- A good verdict never schedules a card. The figure is always available under `Info → System Info`.
- The start-up showing is not optional: a bad verdict after the first minute or so of running shows the card once whatever the checkbox says.

Where to set it

`Device` → `Notify me of weak` → `Power`. The setting's reference page is Setting: notify me of weak power.

The Wi-Fi signal check



What it shows

Five rows: a title, a router icon with a thumb, your network's name, `Strength:` with a grade word and the reading, and a bottom line.

- Titles: `Weak Wi-Fi signal` (the reading is worse than the weak line), `Wi-Fi drops out` (a working link has been lost three times inside an hour, whatever the reading; a router restart counts once), `Wi-Fi signal` (a fair or good signal, shown on request or ahead of an update), `Looking for Wi-Fi` (the link is down).
- The thumb is up for a good signal, red and down for weak or down, and absent in the middle band, where the ticker has no verdict to give.
- `Strength:` reads for example `Fair -68 dBm`. The words run `Excellent`, `Strong!`, `Strong`, `Good`, `Fair`, `Weak`, `Very Weak`, `Useless`, `Dead!`. Only the last four are a warning. While the link is down the row reads `Is it on?`







- The bottom line is normally the band and channel, `2.4GHz - Channel 6`. Ahead of a firmware update it reads `All good, updating now` or `Not great, updating anyway`. While the link is down it reads `I'll reconnect by myself`, or `I'll open my setup page` after you have told the ticker your password is changing. During a server outage it names what the ticker has worked out: `Your internet looks down`, `This network is blocking me`, `Your Wi-Fi is fine, it's our end`, `The trouble is at our end`, `Try moving it closer`, `I can't reach my server yet`. The card is skipped when the router is refusing the ticker or gave it no address; the outage box names that instead.



The reading is an average over the last few seconds, never a single sample, and the grade steps down the moment the average crosses a line but steps back up only after clearing it by a margin. What the numbers mean is on Signal bars and dBm.

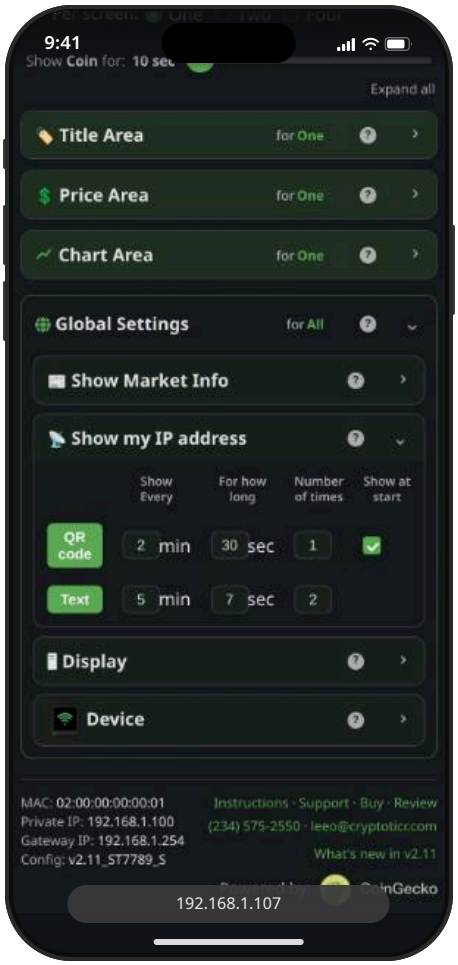
Options

- **At start-up** the card shows once, and only when the signal is weak. A ticker with a good signal starts straight into its coins.
- **While running**, the card repeats every quarter of an hour only when the link needs attention: it has actually dropped three times in the last hour, or the reading is so poor that drops are only a matter of time. A merely weak reading on a link that is not dropping does not interrupt the coins.
- **Notify me of weak → Wi-Fi signal** (`Device` section) stops those repeats. It does not stop the start-up showing or the outage face. Ticking it shows the card at once.

Where to set it

`Device` → `Notify me of weak` → `Wi-Fi signal`. The setting's reference page is Setting: notify me of weak Wi-Fi signal.

The address popup and QR code



What it shows

Two forms, over the coins:

- **Text**: `My settings are here:` and the address in large type, for a few seconds, long enough to read and type.
- **QR code**: the same address as a code, with phone and tablet icons beside it and a seconds badge that counts down, held longer because scanning takes longer than reading.



The page explains the difference: `The address written out is read off the glass and typed into a browser; it only has to be read, so a few seconds on screen is usually plenty. The QR code is that same address to scan with a phone camera: the page opens with nothing to type.`

The schedule starts when the first coin is on the glass, not at power-on. If the QR row's `Show at start` is on, the code's first showing comes a few seconds after that first coin; it counts as one of the row's showings, not an extra. The text form has no start-up switch because the address is on the start screen already. When you open the settings page while a popup is up, the popup stands down: its job is done.

The exception, in the page's words: `Your router can give the ticker a different address than it had before`. When that happens the ticker shows both forms together, once straight away if it was running, and once more the next time it starts, whatever the switches say. After that it returns to your schedule.



Options

Each row, `QR code` and `Text`, has the same columns:

- `Show Every`: minutes between one showing and the next.
- `For how long`: seconds it stays up each time.
- `Number of times`: showings in total, then it stops; tap down to `∞` for forever.
- Switching a row on puts that form on the ticker at once. The page says `The address is on your ticker's screen now.` (or `The QR code is on your ticker's screen now.`). Right after a restart it says `Still starting up, so the address isn't on your ticker's screen yet.` (or the QR code), and the row still takes effect.
- `Show at start` (QR row only): moves the first showing to shortly after start-up.

`Turning both off turns the whole thing off.` A row whose count is spent stays quiet until the next power-on.

Where to set it

The `Show my IP address` section of the settings page. Reference pages: Setting: show my IP address, Setting: address popup forms, Setting: written address, minutes between, Setting: written address, seconds shown, Setting: written address, number of times, Setting: QR code, minutes between, Setting: QR code, seconds shown, Setting: QR code, number of times, Setting: QR code at start.

Factory reset

Every step with pictures, the phone and the ticker side by side: the Device page.

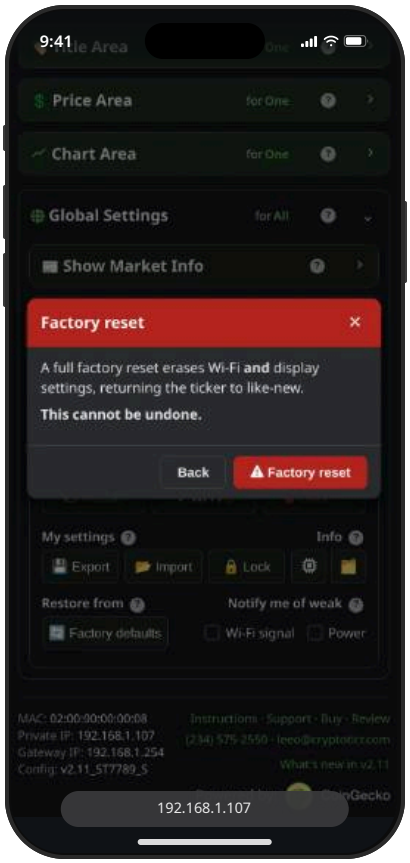
Which reset

A factory reset erases everything: the Wi-Fi network, the coin list and every setting. The ticker restarts into first-time setup as if new. Before choosing it, check the gentler resets on What each reset erases and keeps: `Factory defaults` puts the settings back and keeps the Wi-Fi; `Start over (keep Wi-Fi)` replays the welcome and keeps the Wi-Fi; `Erase Wi-Fi` forgets the network and keeps the settings.

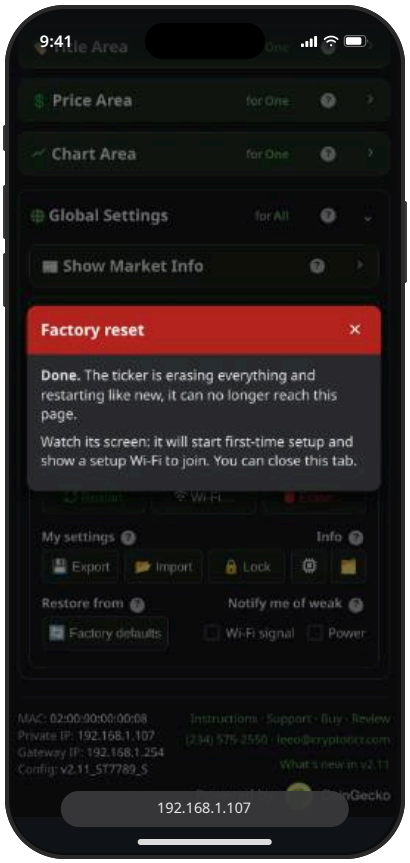
From the settings page

`Device` → `Erase…` → `Everything, (FACTORY RESET)`, then confirm. The ticker shows `Factory Reset Done` and restarts into setup.

What it asks first



And what it says when it is done



Step by step: Factory reset from the settings page.

Without the page: five quick restarts

Cut the power and restore it five times in a row, each time within five seconds of the screen lighting. From the second restart a row of circles counts you down (`3 more` / `quick reboots` / `for factory reset`); on the fifth the screen shows `Factory Reset` , then `Factory Reset Done` . A ticker that has never been set up cannot be reset this way and does not need to be.



Step by step, with the timing: Factory reset by switching it off and on five times.

Afterwards

Set the ticker up again with Quick start. A file saved with `Export` beforehand puts the coins and settings back in one tap; see Export and import settings.

Power and the USB cable

The socket and the cable

The power socket on the back of the ticker is USB Type-C. The box holds a cable with a USB-A plug at one end, USB-C at the other and an on/off button in the lead, and a 110 V power adapter with a USB-A socket.

The adapter is a convenience. Any USB port that stays powered, on a computer, a TV, a hub or a phone charger, gives the ticker what it needs. A port that switches off when its computer sleeps switches the ticker off too.

How much power

About 0.2 amps at 5 volts, which is about one watt. It is built to stay on, day and night.

The button on the cable is the only switch. There are no buttons on the ticker itself.

The ticker measures its own supply

The ticker reads the voltage reaching it many times a second and judges it over each minute, so a single blip never counts. When the supply sags, from a thin or very long cable, a tired adapter, or a port shared with hungry devices, it shows `Power a bit low` or `Power very low!`. When it runs high, it shows `Power a bit high` or `Power very high!`. While it is fine, the power card reads `Power is good`.



The very-low and very-high readings matter more than a warning. At those levels the ticker can restart without warning, or damage its stored settings while it saves them. That is why the card's advice is a different power source, not a different setting: for very low, `Switch to a different USB power source.`; for very high, unplug it and use a different one.

During first-time setup a supply in that danger range shows a `Power` card among the setup cards. The whole feature is on The power check.

After a power cut

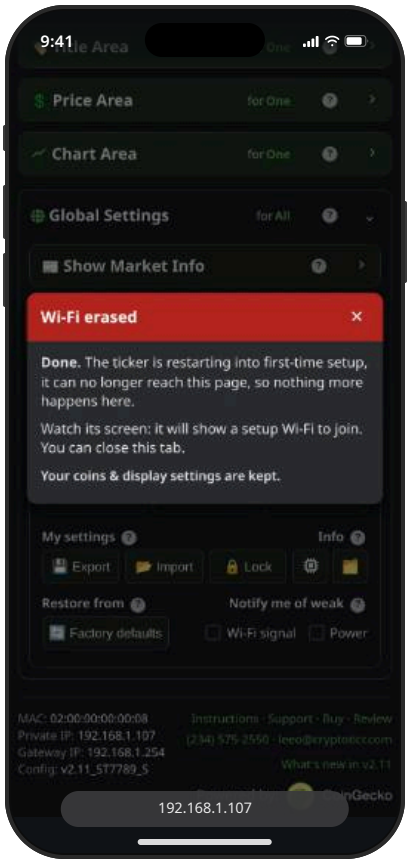
The ticker starts by itself when the power comes back, rejoins the Wi-Fi and carries on, with nothing lost. See After a power cut.

What each reset erases and keeps

The five, gentlest first

Action	Where	Coins and settings	Wi-Fi network	Restarts?	Welcome screens again?
`Restart`	Device → Reset	kept	kept	yes	no
`Factory defaults`	Device → Restore from	back to shipped	kept	no	no
`Start over (keep Wi-Fi)`	Device → Reset → Erase…	erased	kept, with any fixed address	yes	yes
`Erase Wi-Fi`	Device → Reset → Wi-Fi…	kept	erased	yes, into setup	no
`Everything, (FACTORY RESET)`	Device → Reset → Erase…, or power it off and on five times, quickly	erased	erased, fixed address too	yes, into setup	yes

A settings password, if you set one, is erased by `Start over (keep Wi-Fi)` and by a factory reset. `Restart`, `Factory defaults` and `Erase Wi-Fi` keep it.





What “kept” means for each

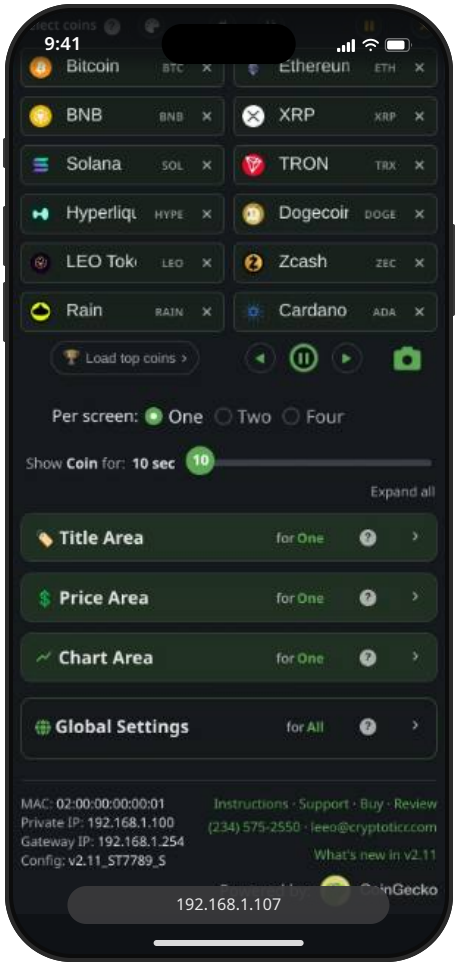
- **Restart** first saves any change still waiting to be written: a change that applies at once, such as brightness, is written about 30 seconds after your last one, and unplugging inside that time loses it. Otherwise it does what unplugging and replugging does, except that it never counts toward the five-restart factory reset, which needs the power switched off and on.
- **Factory defaults** rewrites only what you can change on the page: the coin list, colors, brightness and timings. The ticker’s own history (that it has been set up, that it has taken an update) is untouched, and the screen redraws without a restart.
- **Start over (keep Wi-Fi)** clears the whole settings store and restarts, then restores three things on the way out: the Wi-Fi network, a fixed address if one was set, and the record that this ticker has been set up and has reached its server. That last record is what keeps the ticker from behaving like a never-set-up unit on its Wi-Fi.
- **Erase Wi-Fi** erases the network and the fixed address and restarts straight into setup; every coin and display setting survives. See Erase the Wi-Fi and set up again.

- **Factory reset** erases the settings store, the Wi-Fi network, the fixed address, and the live brightness and colorset cache. It keeps the downloaded coin logos when they pass their check, so the ticker does not spend its first minutes on your network fetching artwork again.

Two things every reset keeps

The icon pack is kept unless it has been found faulty, and the note that a faulty pack was quarantined survives every erase, so a bad download cannot be fetched again by a reset. The ticker’s record of having taken a firmware update also survives; it is a fact about the device, not a setting.

Settings health and the backup copy



Two copies

The ticker keeps a backup copy of your settings and checks both copies at every start. A damaged working copy is restored from the backup, and only if both fail does the ticker fall back to the starter set of coins and shipped settings.

The Health status card

The card appears once, at start-up, only when the check found something you should know.







Four texts:

The card says	What it means
`A storage check found a` / `problem and repaired it.` / `Your settings are intact -` / `restored from my backup.` / `Nothing for you to do.`	the working copy failed and the mirror stood in
`A storage check found both` / `copies of your settings` / `unreadable.` / `Your coins are back to` / `the starter set.` / `Re-pick them any time on` / `my settings page.`	both failed and your coin list is gone
`Both copies of my` / `settings storage failed` / `their check.` / `Your coins look intact.` / `Check my settings page` / `to be sure.`	both failed their check, but the coin list read back sensibly
`I could not set up a` / `backup copy of your` / `settings on this unit.` / `Everything works normally` / `- please let Lee know.`	the mirror could not be written; the ticker runs on one copy

A mirror rebuilt from a good working copy, and a clean check, show no card.

The Settings copy line

The settings page's footer shows a `Settings copy` line only when there is something to say. Its phrases: `verified OK`, `backup rebuilt`, `restored from backup`, `no backup available`, `fresh after upgrade` (a ticker that arrived on v2 from v1 has no mirror until its first save), and `reset to defaults`.

What you can do

Nothing is required after a repair. If the card said your coins are back to the starter set, pick them again on the settings page, or load a file you exported earlier: Export and import settings. If the card asked you to let Lee know, see Contact.

Restarts the ticker does by itself

Restarts with a reason

When the ticker chooses to restart, it says why in two green lines on the start screen:







The screen says	Because
`Restarted to reconnect` / `to your Wi-Fi`	the link had been gone for a long stretch, or a Wi-Fi change proved itself and the ticker restarted onto the new network
`Restarted to refresh` / `my server link`	the Wi-Fi was fine but the server had not answered for a long time; one clean restart is the cure it tries
`Restarted to refresh` / `my memory`	free memory had stayed below the level a fetch needs for ten minutes, or an update could not start for lack of memory; a fresh start returns it, and a waiting update runs two minutes later
`Looking good!` / `Starting up...`	the restart that follows a completed setup
`Wi-Fi saved.` / `Starting up...`	the restart that follows a setup on a network you chose to use without internet
`Restarting...`	a restart you asked for from the settings page







None of these restarts counts toward the five-restart factory reset, and neither does Restart on the settings page: only a real power-on counts, from unplugging the ticker or cutting its power. A restart caused by a fault never counts either.

Restarts after a fault

`Freeze recovery` means the ticker stopped responding and its watchdog restarted it. `Glitch recovery` means a fault restarted it. Under either, a dim technical row names the reset and what the ticker was doing, such as `3: Soft watchdog | mid a data fetch`.





Faults that arrive without ten healthy minutes between them are counted: `Glitch 2`. The count climbs a ladder of cures, and each rung says what it did:

1. Clear the live memory cache: `I cleared my memory` / `to try to fix this.`
2. Discard the saved settings and start from the shipped ones: `I restored my defaults.` / `Your Wi-Fi is safe.`

3. Discard the coin-logo pack and note its fingerprint so it is not fetched again: `I refreshed my icons.` / `Your Wi-Fi is safe.`
4. Erase everything but the Wi-Fi and a fixed address: `I started over fresh.` in red, then `Your Wi-Fi is safe.`



Before any rung fires, the row reads which counts trigger the first two, in the form `5=clear RTC, 10=defaults`. Ten minutes without a fault clears the count to zero. A fault more than ten minutes into a run starts a new count, and a fault during a firmware download is not counted at all. The Wi-Fi network survives every rung on purpose: a ticker curing itself must stay reachable, and must stay able to take the next firmware update.

The plain restart line

A start that interrupted real work without a named fault shows one dim line, `Restarted during:` and the task, for support. It needs nothing from you.



The crash report card

When it appears

On the start screen after a fault that left a record, once the ticker has shown its `Glitch recovery` or `Freeze recovery` lines and the technical row under them.



The QR card holds for a minute, with a thin green line counting it down: `Crash report data` above the code, `Scan and send to Lee` below it. Then the start screen comes back and the ticker carries on to its coins.

What is in it

The technical record of the fault: the reason code, the program address where it happened, the faulting memory address, how long the ticker had been running, how much memory was free, and a short trace of what it was doing. When a firmware download was cut short and left the image damaged, the technical row on the screen before the code reads `Update was interrupted` instead of the addresses. Nothing about you, your network or your coins is in the code.

What to do

Nothing is required. The ticker has already restarted and is curing itself; the card exists so a fault can be traced if it keeps happening. If it does keep happening, scan the code with your phone's camera and send what it opens to Lee at leeo@cryptoticr.com, or text it to (234) 575-2550. See Contact.

If the code will not scan in the minute it is up, a photograph of the technical rows on the screen before it (they stay up for ten seconds), for example `3: Soft watchdog | mid a data fetch` and the `PC` line, carries most of the value.

The ticker's name and identity

CT and three digits

The ticker's name is `CT` followed by three digits, for example `CT504`. The digits are worked out from the serial number of its Wi-Fi chip, so they stay the same for the life of the ticker, and two tickers usually differ. With only a thousand possible names, two tickers can share one, which is rare.

That one name turns up in three places:

- **The setup network.** During first-time setup the ticker makes its own Wi-Fi network under this name, with no password, for your phone to join.
- **Your router's list of devices.** The ticker gives your router the same name when it joins your Wi-Fi, so it appears there as `CT504` or similar. Some routers show only a maker's name or the address; the MAC below settles it.
- **The settings page.** The `System Info` panel lists it as `My Hostname:`.



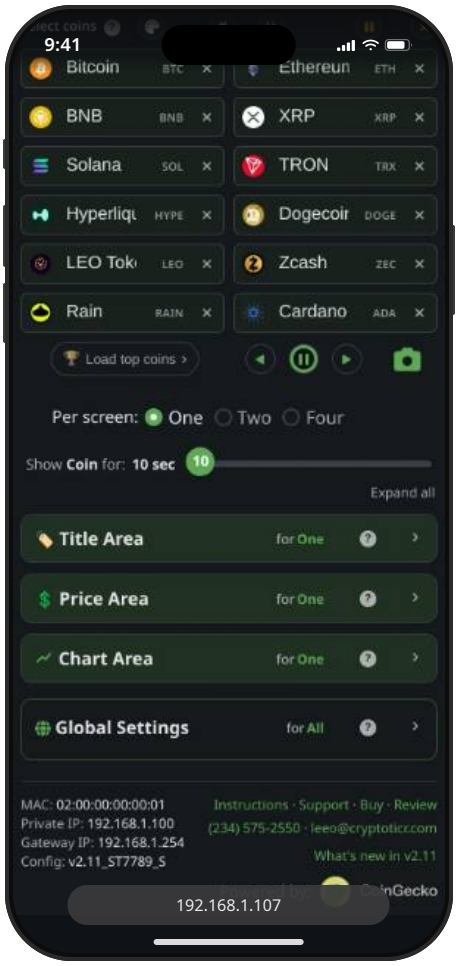
When the ticker lists networks for you to join, it leaves out any network named `CT` and three digits, and any named `CryptoTicr-` and a number, so a neighbor's ticker in setup never appears as a choice.

The MAC address

Every ticker has a hardware address, its MAC, which never changes. Your router uses it to recognize the ticker, and an address reservation is tied to it; see Give the ticker a fixed address.

Where to read it:

- **On the settings page,** in the footer, as `MAC:`. This is the address your router sees.
- **In `System Info`,** which opens when you tap the read-out in the settings page's footer, as `MAC:` among the network details.



During setup, the setup page's header also shows a `MAC:`. That one belongs to the ticker's own setup network, and it differs from the address your router will see once the ticker joins your Wi-Fi. Use the one on the settings page.

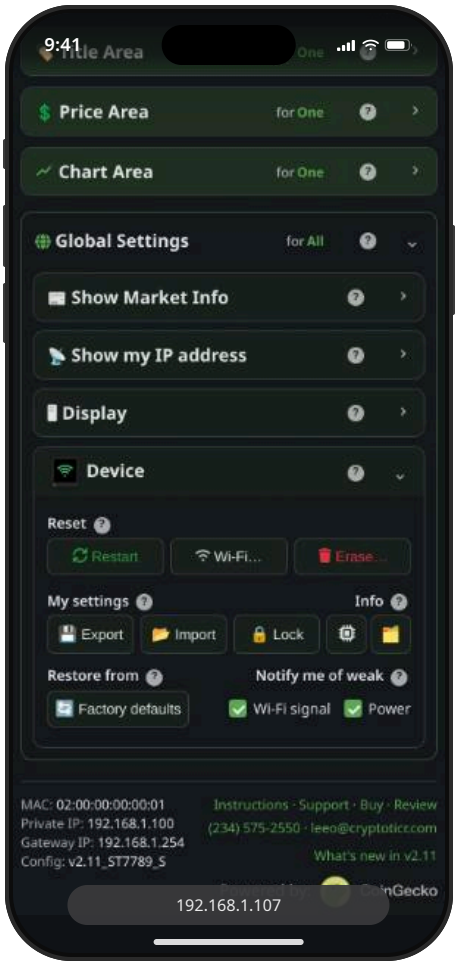
The glass itself never shows the MAC. If you need it before the ticker can join your network, for example to register it with a building's Wi-Fi, see Router issues and how to fix them.

Setting: notify me of weak Wi-Fi signal

> **Factory default:** On

The control

`Device` → `Notify me of weak` → `Wi-Fi signal`.



What it does

Silences or allows the recurring signal card. The card at start-up, and the outage face during a server outage, show regardless. Ticking the box shows the card at once.

The choices

- On or off.

On the glass

Ticked: the card returns while the link needs attention. Unticked: no repeats; the ticker runs the same.



The stored key

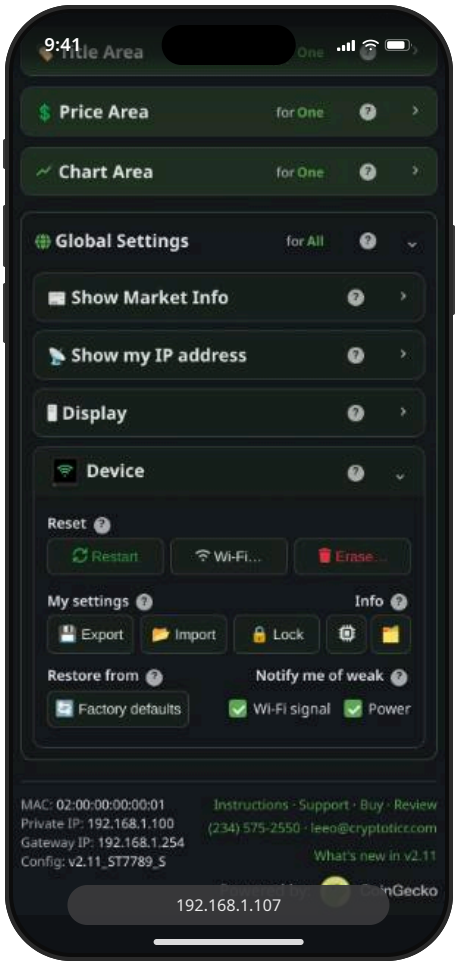
`weak_wifi_warn` in the ticker's settings, and in the file that `Export` writes. The shipped value is generated from the one source of defaults and shown on this page by the site, never typed here.

Setting: notify me of weak power

> **Factory default:** On

The control

`Device` → `Notify me of weak` → `Power`.



What it does

Silences or allows the recurring power card. A bad verdict still shows once after start-up. Ticking the box shows the card at once.

The choices

- On or off.

On the glass

Ticked: the card returns while the supply is low or high. Unticked: no repeats; the ticker runs the same.



The stored key

`volt_warn` in the ticker's settings, and in the file that `Export` writes. The shipped value is generated from the one source of defaults and shown on this page by the site, never typed here.

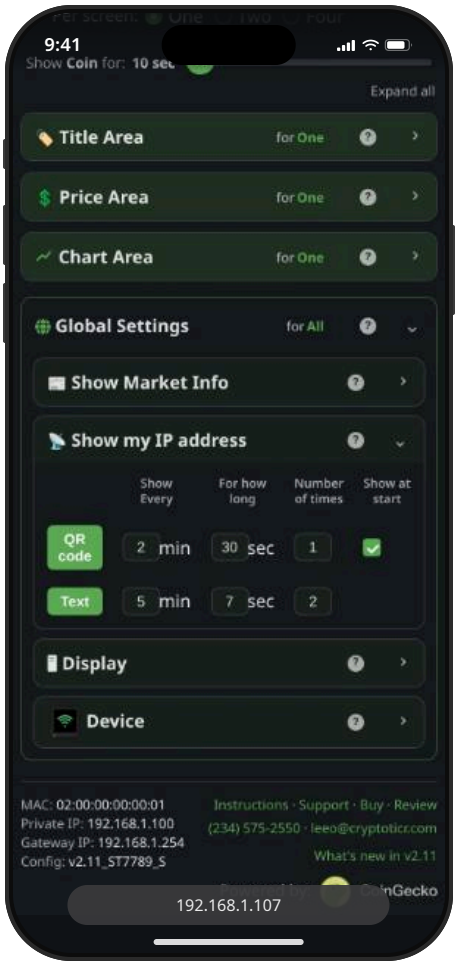
Setting: show my IP address

> **Factory default:** On



The control

`Show my IP address` — the section’s own switch.



What it does

Enables the scheduled popups. The one showing after the router changes the ticker’s address happens whatever this says.

The choices

- On or off.

On the glass

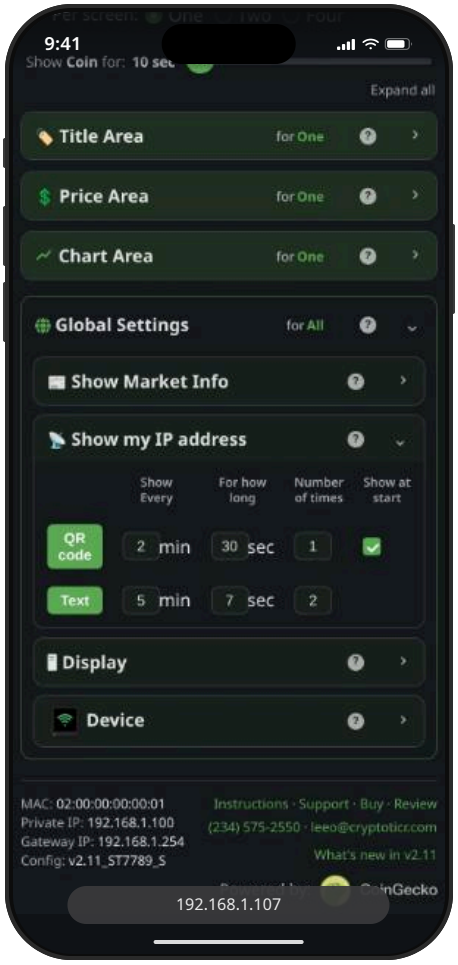
On: the two rows run their schedules. Off: no scheduled popups.

The stored key

`show_ip` in the ticker's settings, and in the file that `Export` writes. The shipped value is generated from the one source of defaults and shown on this page by the site, never typed here.

Setting: address popup forms

> **Factory default:** both the written address and the QR code



The control

`Show my IP address` → the `QR code` and `Text` rows' switches.

What it does

Two bits, one per form. Each form on has its own schedule; a form off takes part only in the moved-address showing.

The choices

- Text only, QR code only, or both.

On the glass

The enabled forms appear on their schedules.



The stored key

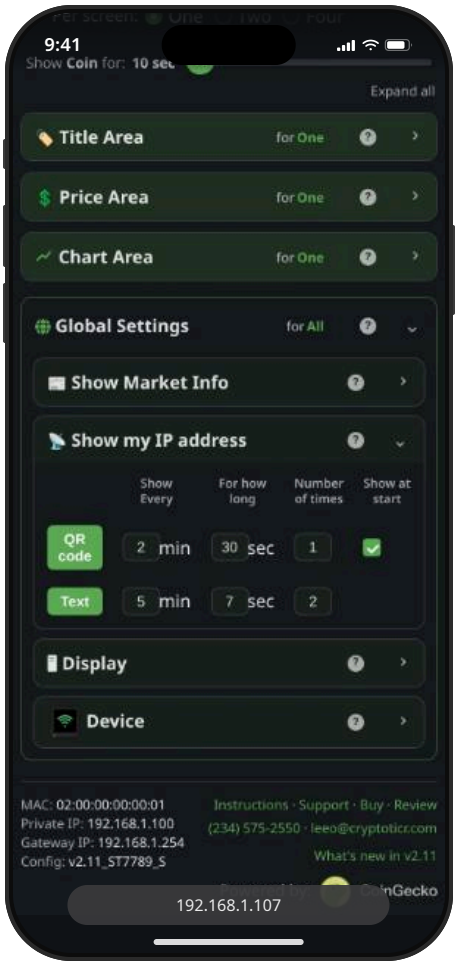
`ip_style` in the ticker's settings, and in the file that `Export` writes. The shipped value is generated from the one source of defaults and shown on this page by the site, never typed here.

Setting: written address, seconds shown

> **Factory default:** 7 seconds

The control

`Show my IP address` → `Text` row → `For how long`.



What it does

Sets the text popup's dwell. It only has to be read, so a few seconds is usually enough.

The choices

- Five to thirty seconds.

On the glass

The next text showing uses the new time.



The stored key

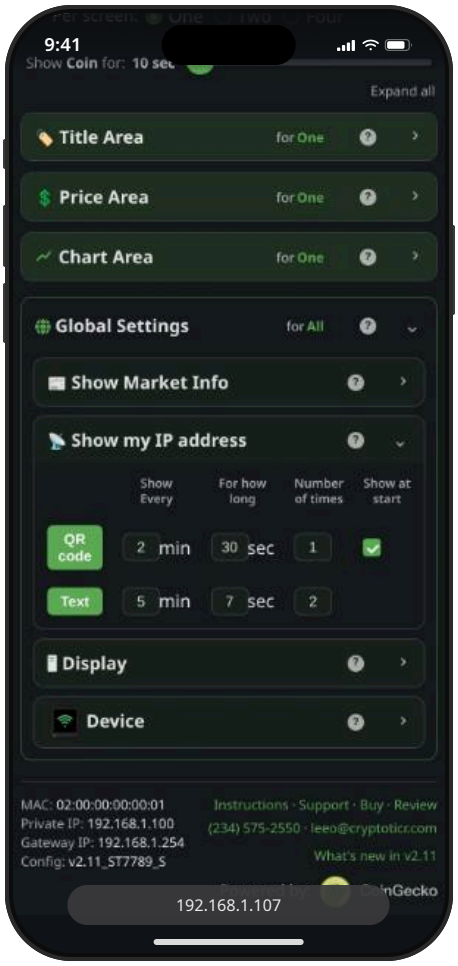
`ip_secs` in the ticker's settings, and in the file that `Export` writes. The shipped value is generated from the one source of defaults and shown on this page by the site, never typed here.

Setting: written address, minutes between

> **Factory default:** every 5 minutes

The control

`Show my IP address` → `Text` row → `Show Every`.



What it does

Sets the interval of the text popup's schedule, measured from the first coin on the glass.

The choices

- One to sixty minutes.

On the glass

The next text showing follows the new interval.



The stored key

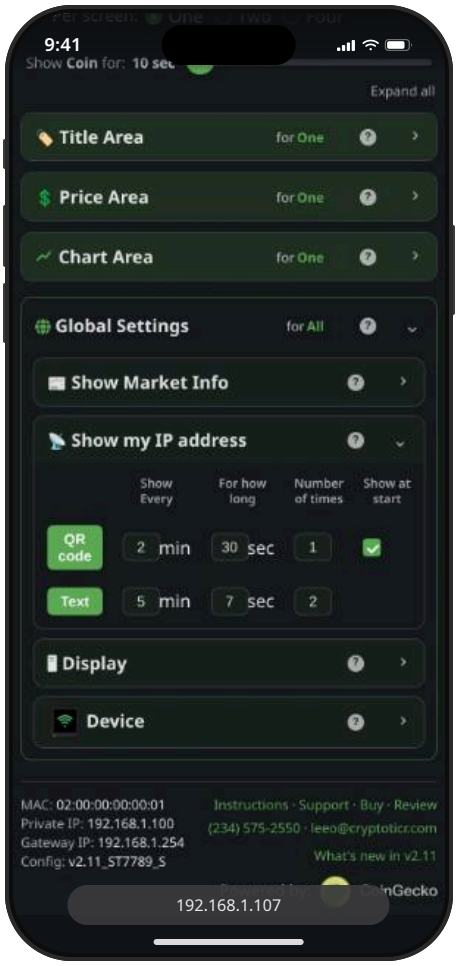
`ip_mins` in the ticker's settings, and in the file that `Export` writes. The shipped value is generated from the one source of defaults and shown on this page by the site, never typed here.

Setting: written address, number of times

> **Factory default:** twice each time it comes round

The control

`Show my IP address` → `Text` row → `Number of times` (tap down past one for `∞`).



What it does

Counts the text popup's showings since power-on; the schedule stops when the count is reached. Zero, shown as `∞`, never stops.

The choices

- One to ninety-nine, or forever.

On the glass

After the last showing the text form stays quiet until the next power-on.



The stored key

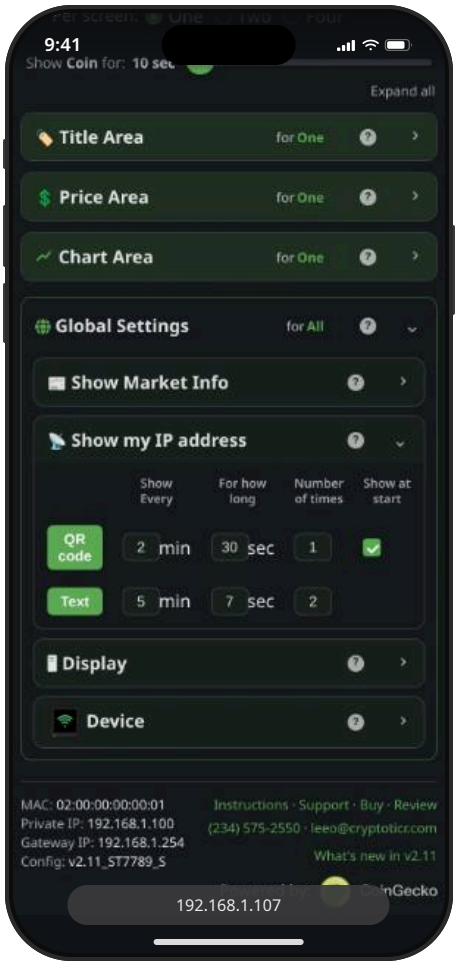
`ip_times` in the ticker's settings, and in the file that `Export` writes. The shipped value is generated from the one source of defaults and shown on this page by the site, never typed here.

Setting: QR code, seconds shown

> **Factory default:** 30 seconds

The control

`Show my IP address` → `QR code` row → `For how long`.



What it does

Sets the QR popup's dwell. Scanning takes longer than reading, so its range starts higher than the text form's.

The choices

- Twenty to sixty seconds.

On the glass

The next QR showing uses the new time, with the red bar inside the code draining over it.



The stored key

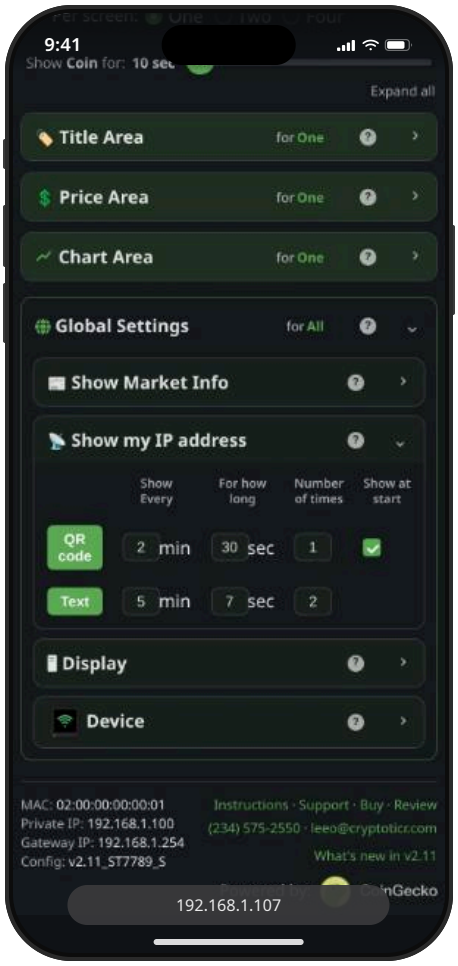
`ip_qr_secs` in the ticker's settings, and in the file that `Export` writes. The shipped value is generated from the one source of defaults and shown on this page by the site, never typed here.

Setting: QR code, minutes between

> **Factory default:** every 2 minutes

The control

`Show my IP address` → `QR code` row → `Show Every`.



What it does

Sets the interval of the QR popup's schedule, measured from the first coin on the glass, unless `Show at start` moves the first showing earlier.

The choices

- One to sixty minutes.

On the glass

The next QR showing follows the new interval.



The stored key

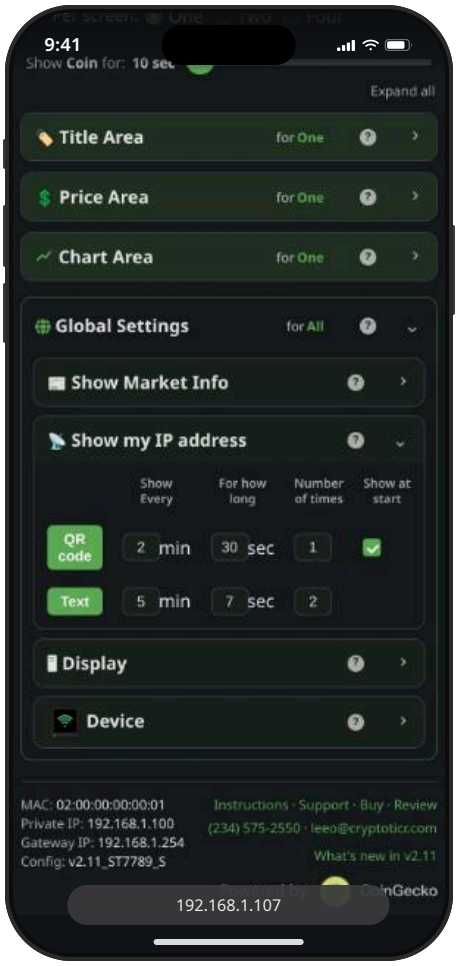
`ip_qr_mins` in the ticker's settings, and in the file that `Export` writes. The shipped value is generated from the one source of defaults and shown on this page by the site, never typed here.

Setting: QR code, number of times

> **Factory default:** once each time it comes round

The control

`Show my IP address` → `QR code` row → `Number of times` (tap down past one for `∞`).



What it does

Counts the QR popup's showings since power-on; the schedule stops when the count is reached. Zero, shown as `∞`, never stops. Most people scan once, at setup.

The choices

- One to ninety-nine, or forever.

On the glass

After the last showing the QR form stays quiet until the next power-on.



The stored key

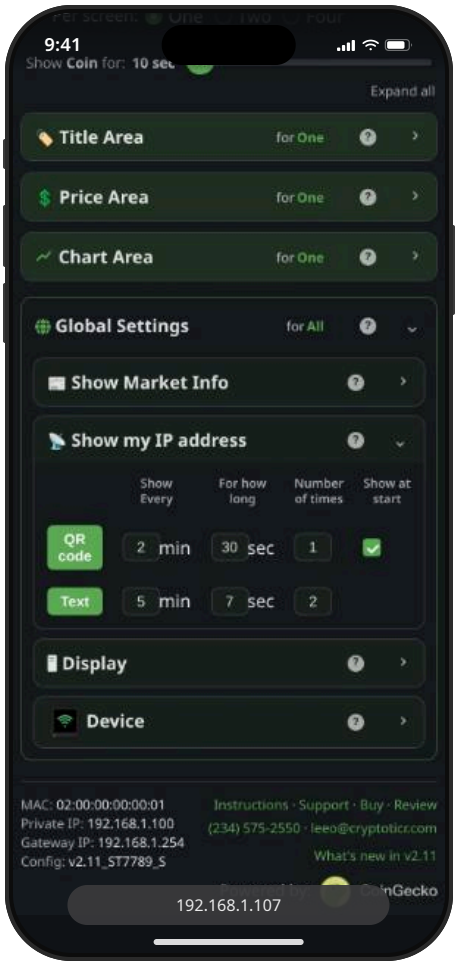
`ip_qr_times` in the ticker's settings, and in the file that `Export` writes. The shipped value is generated from the one source of defaults and shown on this page by the site, never typed here.

Setting: QR code at start

> **Factory default:** On

The control

`Show my IP address` → `QR code` row → `Show at start`.



What it does

Brings the first QR showing forward; it does not add one. The page: `Show at start does not add a showing-it moves the first one to just after startup, so "2 times" still means twice.`

The choices

- On or off.

On the glass

On: a QR code shortly after the first coin at start-up. The written address has no such switch; it is on the start screen already.



The stored key

`ip_qr_at_startup` in the ticker's settings, and in the file that `Export` writes. The shipped value is generated from the one source of defaults and shown on this page by the site, never typed here.

The settings page

Opening the settings page

Before you start

- You need the ticker's address, something like `192.168.1.42`. It is on the ticker's start screen and in the address popup, both under `My settings are here:`, and in the QR code the ticker shows on request.
- The page is served by the ticker itself, so only devices on the same Wi-Fi can reach it. It works without internet.

Steps

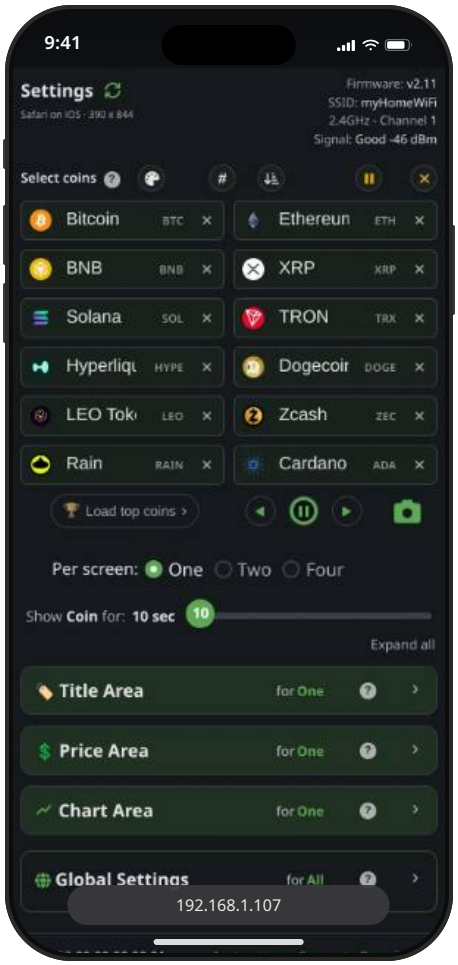
1. Read the address off the ticker, or unplug and replug it to see the start screen, which shows `My settings are here:` and the address for a few seconds.



2. On your phone or computer, open a browser and type the address into the address bar, with `http://` in front: `http://192.168.1.42`. The ticker's own page says `Enter into its ADDRESS BAR: … Not a search box!` and `http:// not https://`. Plain http is fine here: the page travels only between your phone and the ticker on your own network, never over the internet.



3. Press Go. The page opens with `Settings` at the top, your coin boxes, and the ticker's firmware line on the right.



4. To skip the typing next time, scan the ticker's QR code with your camera when it shows one; it opens the same page. Or bookmark the page in your browser.



You're done when

- The page shows `Settings`, the `Firmware:` line matches the version on the ticker's start screen, and the coin boxes hold your coins.

Problems?

- The address does not load: The settings page won't open.
- The browser changed `http` to `https` or shows a security warning: The browser turns http into https.
- You do not know the address any more: I lost the ticker's address.
- The page loads but says the ticker is busy or cannot be reached: The settings page says your ticker is busy.

Lock the settings with a password

Every step with pictures, the phone and the ticker side by side: the Device page.

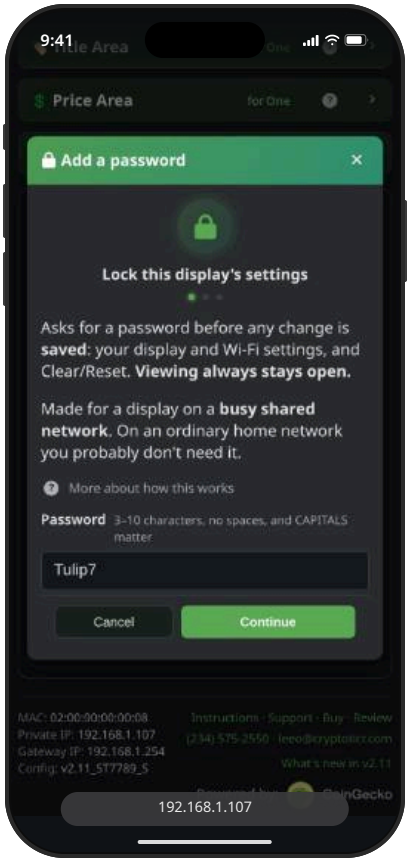
Before you start

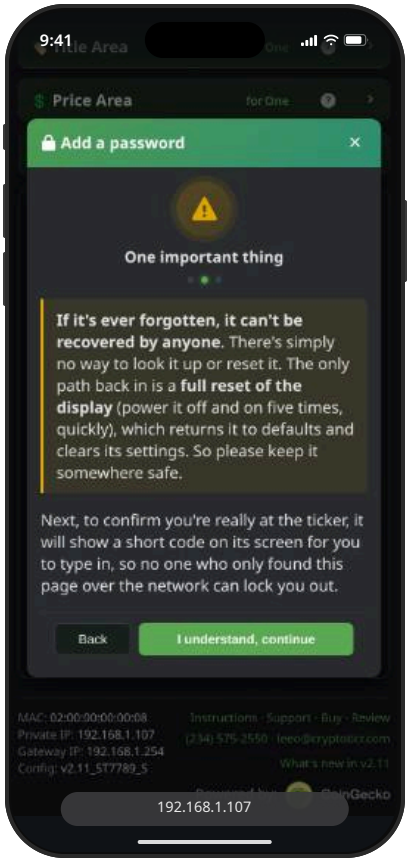
- The lock stops changes, not viewing. The page's words: `Asks for a password before any change is saved: your display and Wi-Fi settings, and Clear/Reset. Viewing always stays open.`
- It is one password for the ticker, for everyone on the network including you. Made for `a display on a busy shared network`; on an ordinary home network you may not need it.
- A forgotten password cannot be looked up or reset by anyone. The only way back is a factory reset. Keep it somewhere safe.
- Password rules: three to ten characters, printable, no spaces; capitals matter.

Steps

1. Open the settings page, scroll to `Device` → `My settings`, and tap `Lock`. A dialog opens: `Add a password`.
2. Type the password. Under three characters the page says `A little longer, please, at least 3 characters.` Tap `Continue`.
3. Read the warning headed `One important thing`: `If it's ever forgotten, it can't be recovered by anyone`. Tap `I understand, continue`.

Type a password **Read what it warns**



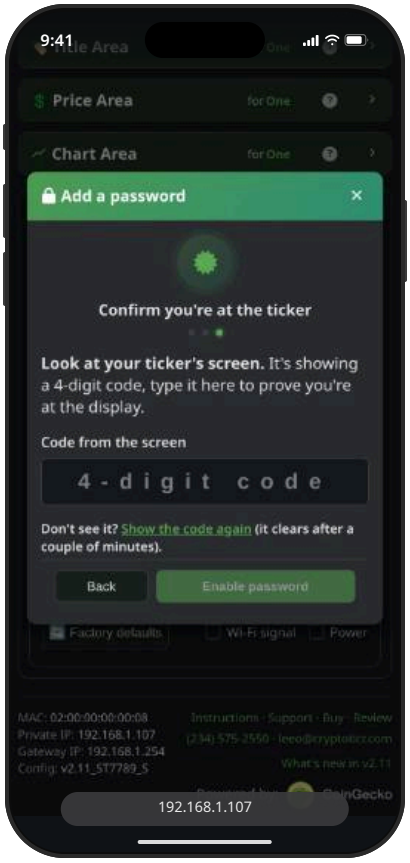


4. Look at the ticker. It shows `Password setup code`, a four-digit number, and `Type this on your phone`. The code proves you are at the ticker, `so no one who only found this page over the network can lock you out`. Read the code off the ticker itself: while a code is up, a settings-page screenshot is refused. Right after a restart the page may say `Still starting up, try again in a moment`; the first code can go up 30 seconds after the ticker starts.

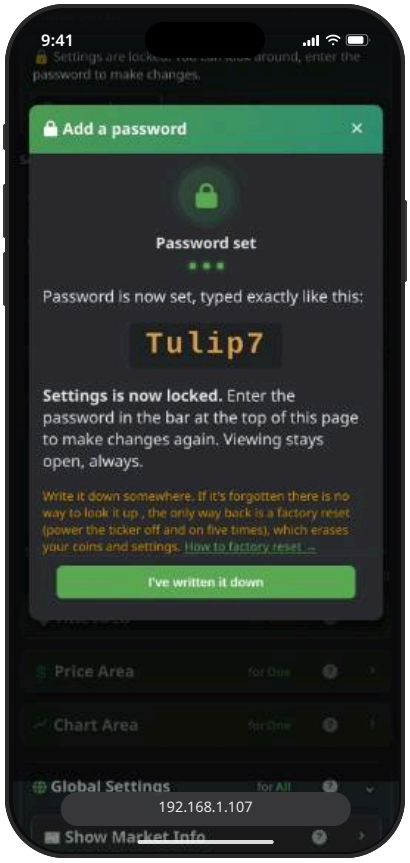


5. Type the four digits into `Code from the screen`. The page checks the code by itself on the fourth digit; `Enable password` does the same if you need it. A wrong code says `That code didn't match the one on your ticker. Try again: 2 more tries with this code.`, then `1 more try with this code.` The same code stays on the screen. After the third wrong try a fresh code goes up: `That code didn't match the one on your ticker. A fresh code is on the screen, try again.` A code lasts two minutes, and `Show the code again` asks for a new one. The ticker shows at most one new code every 30 seconds, so a second ask may say `Your ticker will show a new code in N seconds.` and then ask again by itself.
6. The final card confirms the lock. Tap `I've written it down`.

Then the four digits that unlock it



Locked



You're done when

- This browser is locked too: the page scrolls to the top, where a bar reads `Settings are locked. You can look around, enter the password to make changes.`, and `Lock` is gone from the `My settings` row. Type the password into that bar and tap `Unlock`; the row then shows `Unlock`. Every other phone or computer shows the same bar.

Problems?

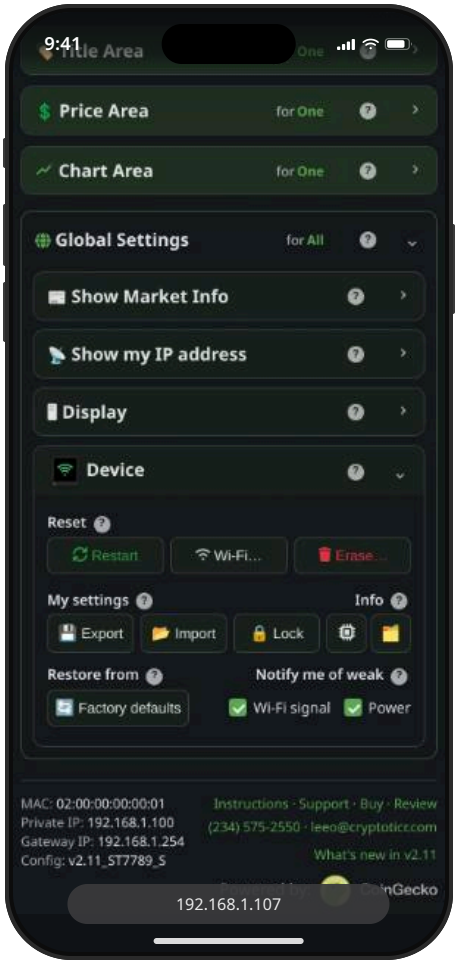
- Every other browser now needs the password once: Using the page from several devices.
- Unlocking: type the password into the banner and tap `Unlock`; `Unlocked on this device.` A wrong one says `That password didn't match. Viewing is still fine.`; typing the four-digit code instead is caught with `Not that one, that's the 4-digit code from my screen…`. See Unlock refuses the 4-digit code.

- `Unlock` on an unlocked browser offers `Log out here` (this browser back to view-only) or `Remove password` (the lock gone for everyone).
- Too many wrong tries: Too many password tries. Forgotten: I forgot the settings password.

Export and import settings

Before you start

- The file holds everything on the page: coins, colors, timings, the popup rows, quiet hours. It does not hold the Wi-Fi network or password. The page says: `Export downloads everything on this page (coins, colors, timings, not Wi-Fi) as a small file named after the ticker and the date.`
- Import applies straight away, with no extra Save step.



Steps

1. Scroll to `Device` → `My settings`.
2. Tap `Export`. The browser saves a file named after the ticker and the date and time, ending in `.json`, and the page says `Settings exported.`
3. Keep the file somewhere you will find it: a backup before experimenting, or the way to copy a setup to a second ticker.
4. To load a file, tap `Import` and choose it. The page checks it is a settings file, applies it to the ticker, and says `Imported, saved and applied to your Ticker.`

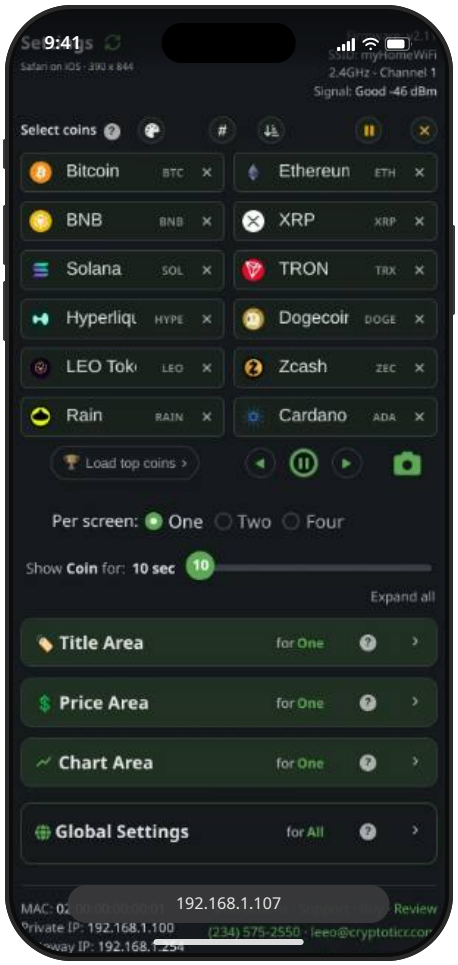
You're done when

- After Export: the file is on your device. After Import: the page's coin boxes and controls show the file's values and the ticker has redrawn.

Problems?

- `Import failed: not a settings file`, or another import error: Import failed.
- The browser did not offer to save (some in-app browsers cannot download): open the page in Safari, Chrome or another full browser and export again.

Themes

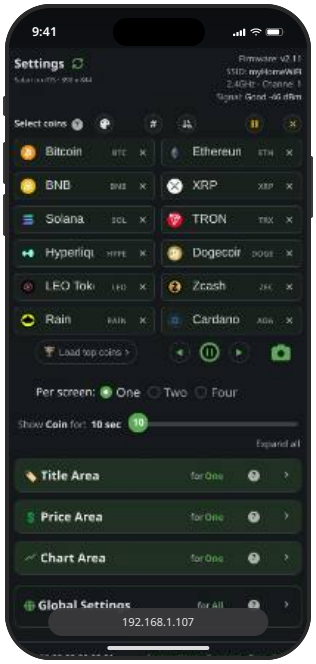


What it shows

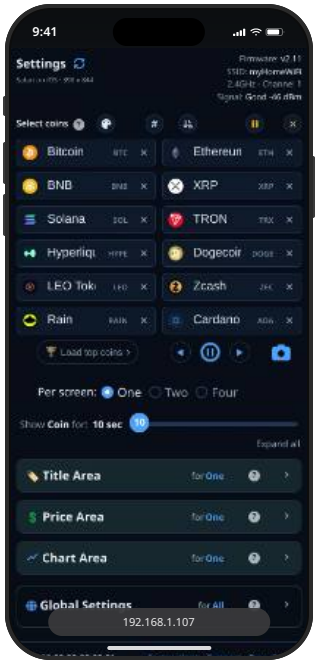
The page's background, text and accent colors. Seven dark themes, `Default`, `Midnight`, `Nebula`, `Ember`, `Aqua`, `Rosewood` and `Graphite`, and five light ones, `Daylight`, `Linen`, `Sky`, `Mint` and `Blossom`. The choice changes the page only; what the ticker shows is set by the colorset, see Colorsets.

The seven dark themes

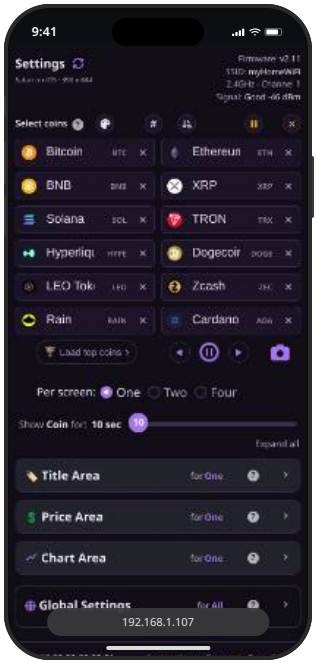
Default



Midnight



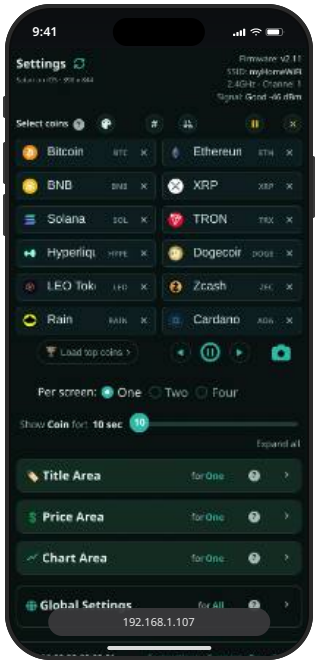
Nebula



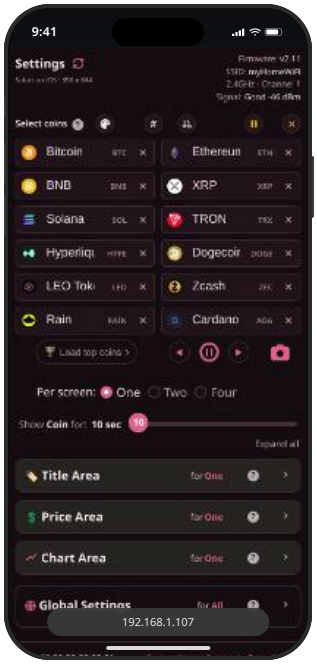
Ember



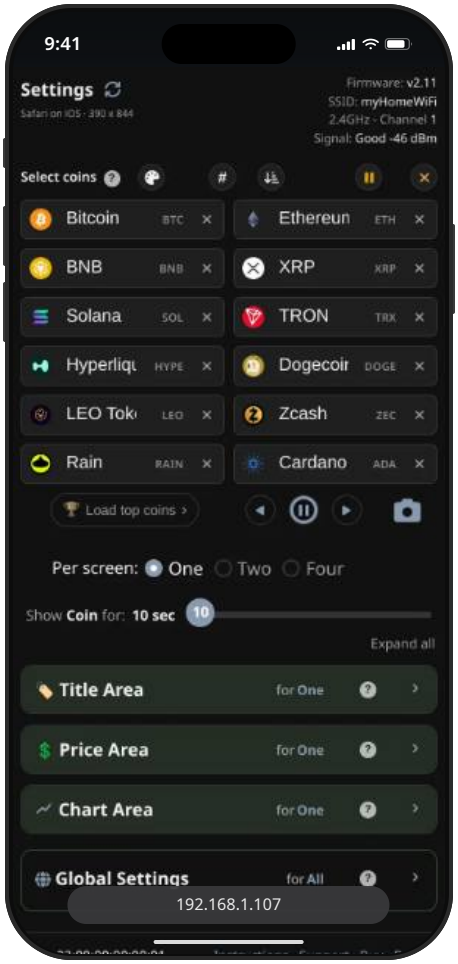
Aqua



Rosewood

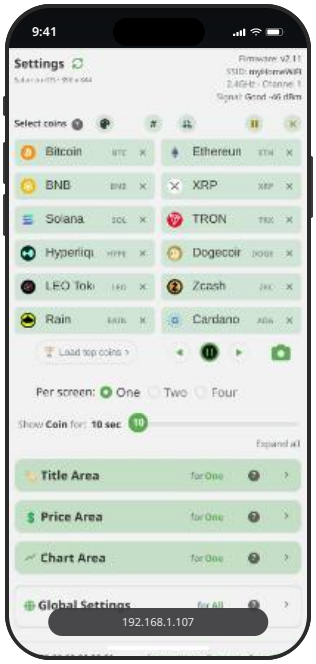


Graphite

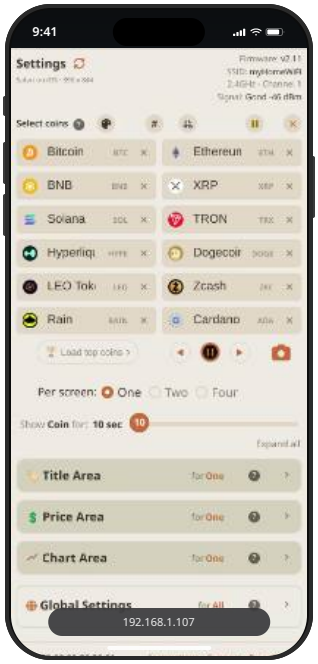


The five light ones

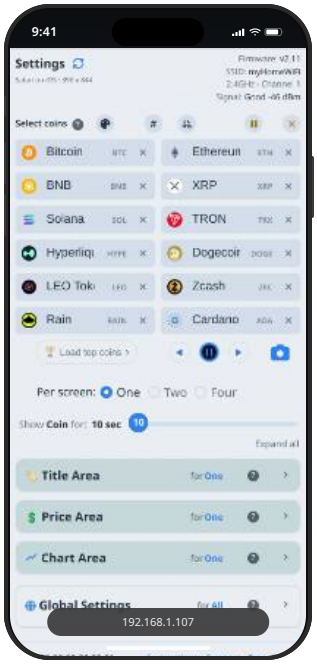
Daylight



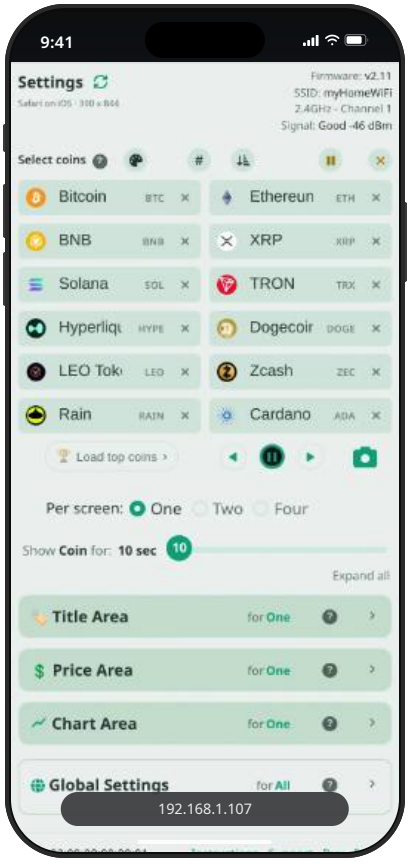
Linen



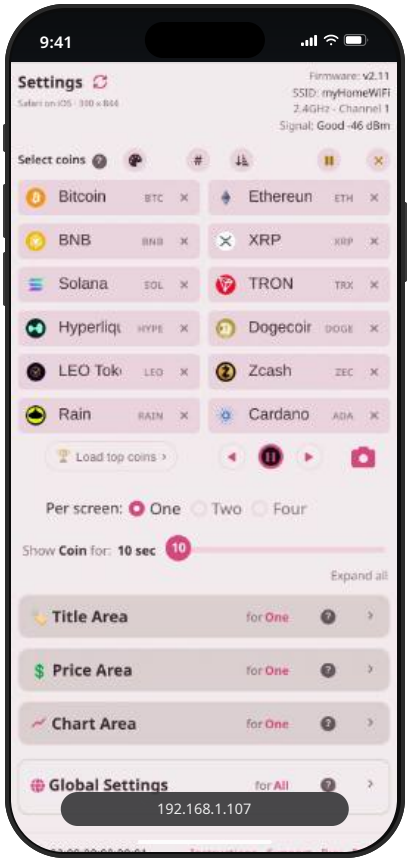
Sky



Mint



Blossom



Options

- A theme button in the page's header opens the picker, split into `Dark` and `Light`. The `Escape` key closes it.
- The choice is kept in this browser's own storage, so another phone or browser has its own theme.

Where to set it

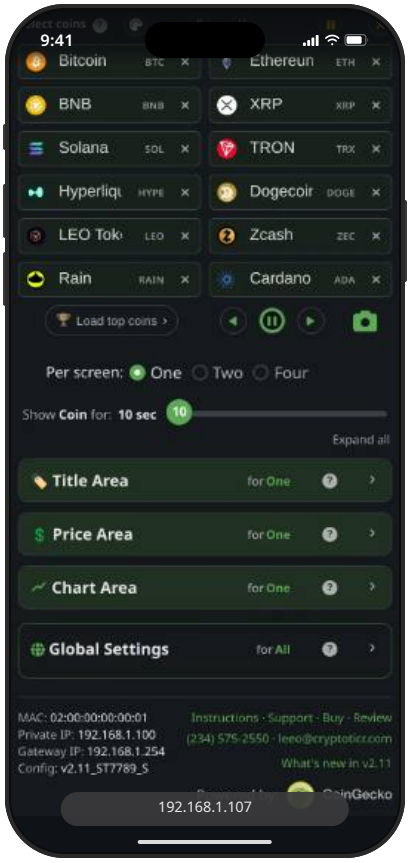
The theme button at the top of the settings page.

Collapsing sections

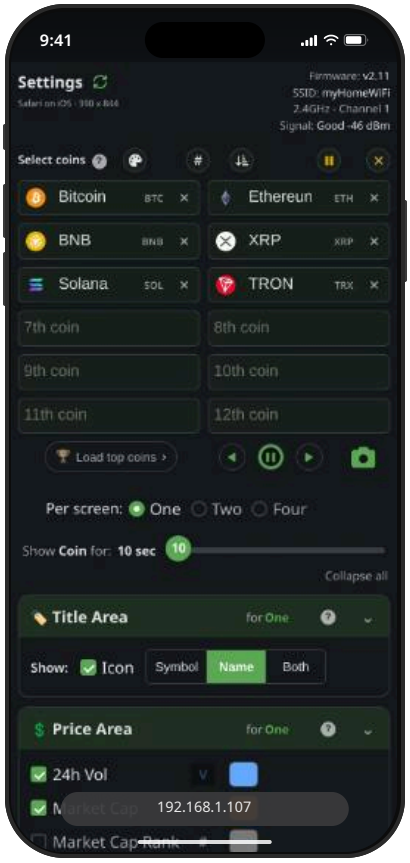
What it shows

Tap a section's title bar and the section folds to its title; tap again to unfold. A `Collapse all` / `Expand all` link above `Title Area` does every section at once. A section that does not apply to the current layout, such as `Chart Area` in Two or Four per screen, stays folded and says so.

All sections folded



All sections unfolded



Options

- The folded set is remembered in this browser and also sent to the ticker, so a fresh browser on the same ticker opens with the same sections folded.

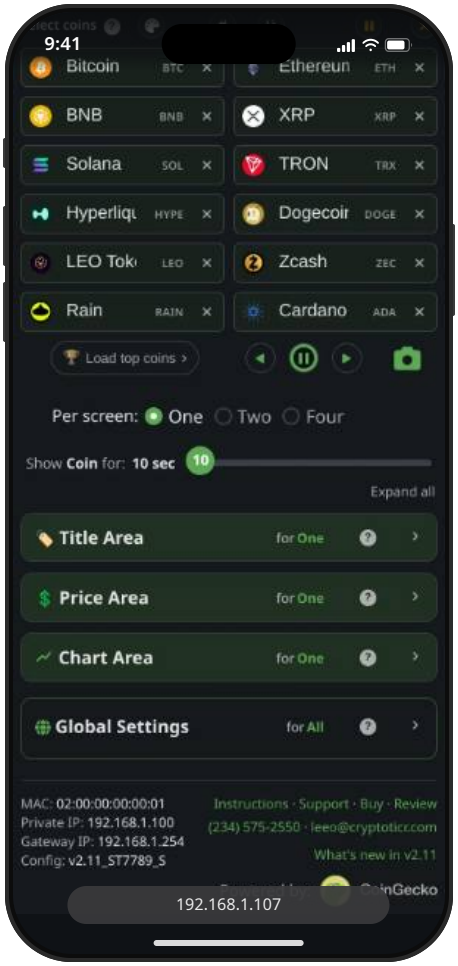
Where to set it

The title bar of any section. Reference: Setting: folded sections.

Pause from the page

The screen a pause holds, for thirty seconds





What it shows

A round button in the `◀ ⏸ ▶` strip under the coin boxes. Tap it and the ticker freezes whatever is on its screen: the page's help says `freezes whatever's on the ticker so you can read a chart without it moving on`. A ring on the button and a small ring in a corner of the glass drain over thirty seconds, then the rotation resumes by itself. Tap again to resume early.

The ring on the glass borrows the colorset's colors so it does not stand out. Any save or change that redraws the ticker ends the hold.

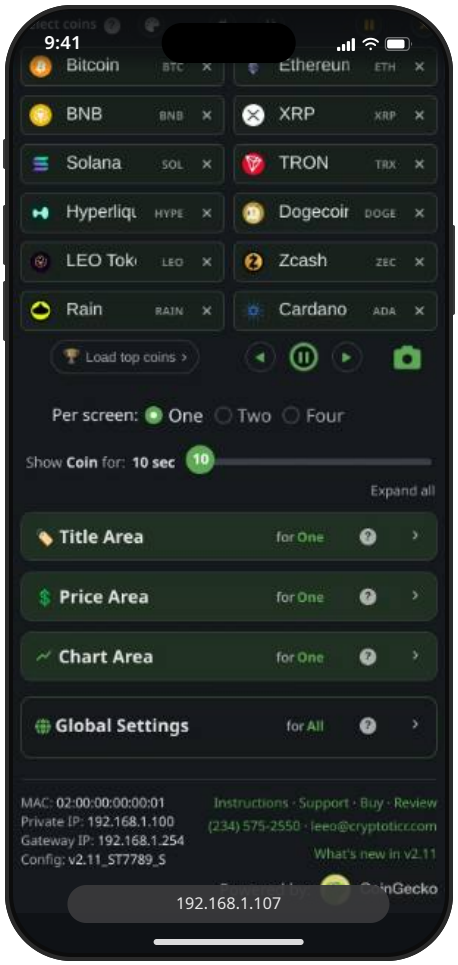
Options

- None. The hold is thirty seconds; the firmware caps any pause at ten minutes however it was earned.

Where to set it

Nothing to set. The button is in the arrow strip under the coin boxes and the coin remote.

See the screen from the page



What it shows

The camera button sits in the strip under the coin boxes, to the right of `◀ ⏸ ▶`. Press it and a picture of the ticker's screen opens on the page, drawn inside a picture of the enclosure, so what you see is what is on the glass at that moment.

It is the screen itself, not a guess: the ticker sends what it is drawing and your browser puts it into the enclosure picture.

Options

- The picture is a still. Press again for a fresh one.
- Saving it: the picture opens as a link, so a click saves it, or right-click and `Save link as`. It arrives as a `.webp` file named after the ticker.

- The button is offered when the ticker's screen is one this page has an enclosure drawing for. On a unit whose panel has no drawing yet, there is no button.
- Nothing changes for anyone watching the ticker: taking the picture makes it redraw the screen it is already showing.
- One at a time. While a picture is being sent, a second press is answered `busy` and tries again by itself, which is why a press during an update can take a second try.
- While a settings password is being set up and its four-digit code is on the glass, the camera button gets no picture: the page says `Couldn't build the screenshot: the ticker said 503 (busy: a password setup is in progress)`. The code is meant to be read at the ticker. Once it is used, spent or two minutes have passed, the button works again.

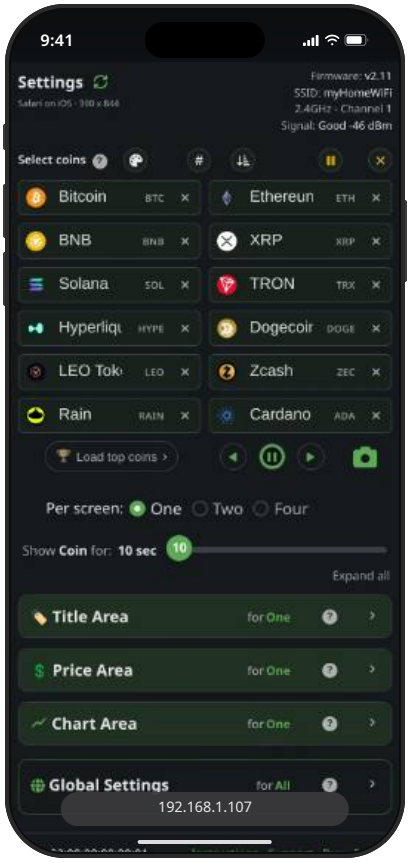
Where to set it

Nothing to set. The button is under the coin boxes whenever the ticker offers it.

A tour of the settings page

From the top

Every section folded **Every section unfolded**



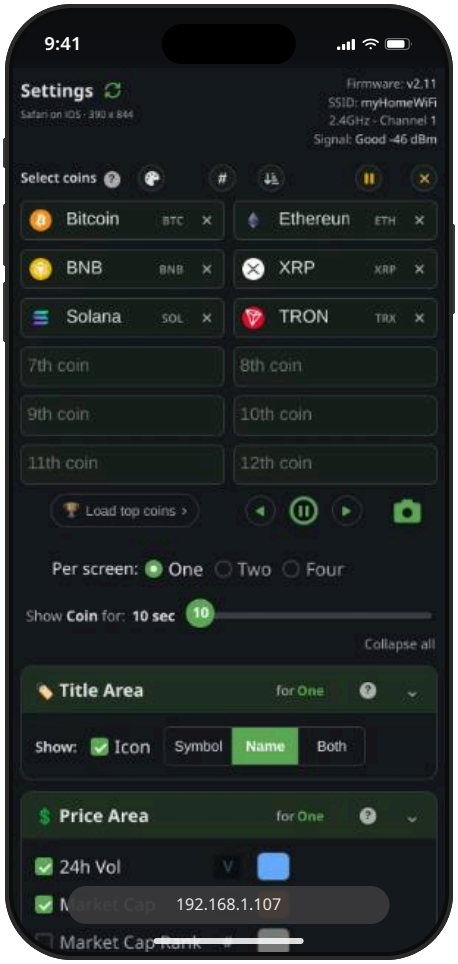
- **Header**: the logo and `Settings`, with the line naming your browser under it; on the right `Firmware:`, `SSID:`, `2.4GHz - Channel`, `Signal:`, and `Power:` when the supply needs a look. Tapping the left side reloads the page. See The header lines.
- **Banner**: on a first visit, `First time here? That's Lee (in Ohio).`; after an update, `Welcome to v2.09!` with a `What's new?` link. See The welcome banner.
- **Select coins**: twelve boxes, the sort, pause, rank and clear buttons above them, `Save & Apply Coins` and `Undo` under them, the `◀ ⏸ ▶` remote, the `Show Coin for:` slider, and `Load top coins`. See Choosing coins.
- **Per screen**: `One` / `Two` / `Four`. See One, two or four coins per screen.
- **Show Market Info**: the market cards and their schedule. See Market info cards.
- **Title Area**, **Price Area**, **Chart Area**: what a coin screen shows, per layout. See Title area, Price area, Charts and time ranges.
- **Show my IP address**: the QR and text popup rows. See The address popup and QR code.

- **Display**: `Brightness`, `Nighttime quiet hours`, `Colorset`. The pause button is not here; it is in the arrow strip under the coin boxes. See Brightness, Nighttime quiet hours, Colorsets.
- **Device**: `Restart`, `Wi-Fi…`, `Erase…`; `Export`, `Import`, `Lock`; `Factory defaults`; `Notify me of weak` for Wi-Fi and power; `Info` with `System Info` and `Files Info`. See Restart the ticker, Export and import settings, Lock the settings with a password.
- **Footer**: the read-out of addresses and build, `Instructions`, `Support`, `Buy`, `Review`, `Powered by: CoinGecko`, and a `What's new?` link. See The footer read-out.

Every section has a question mark that explains it; the `Help` overlay opens with the `Help` link or the F1 key. See Help and the question marks.

Instant apply, and the one thing that waits for Save

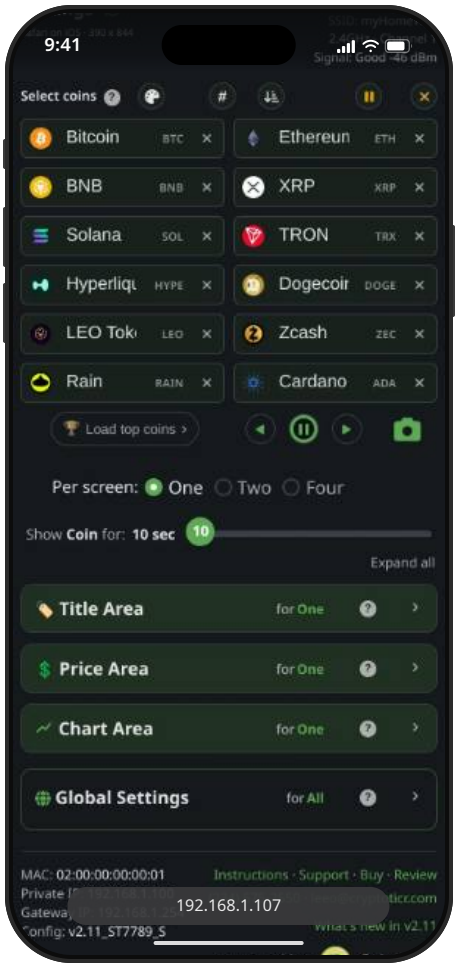
Everything but the coin list applies as you touch it



Instant

The help overlay says it: `Everything else applies the moment you change it: so you can watch the ticker while you experiment. Nothing to save, nothing to undo.` Brightness, colorset, the display switches, chart ranges, quiet hours, the address popup rows, the market cards and the notify boxes all go to the ticker as you change them, and the ticker redraws. Frequent live changes are written to the ticker's storage a little later, in one go, so a run of slider moves does not wear it.

If the ticker cannot be reached for a live change the page says `Couldn't reach your ticker just now, nothing has changed on this page. Try again in a moment.` and leaves the control where it was; see Couldn't reach your ticker message.



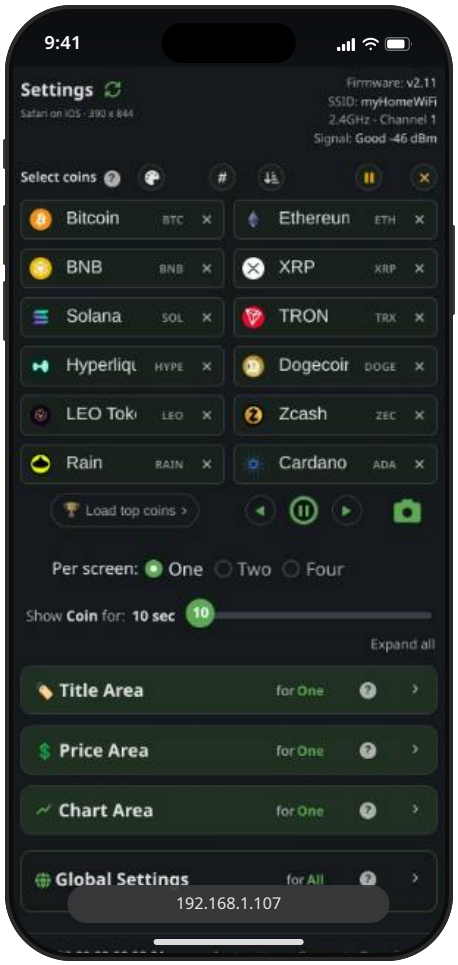
The coin list

The coin boxes are the exception. They wait for `Save & Apply Coins`, which appears as a green button when the list differs from what the ticker holds. On success the page says `Saved & applied to your Ticker.`; a refused save says why. See Save & Apply and the coin list.

Reload

Tapping the logo, the `Settings` heading or the browser line reloads the page from the ticker. If you had unsaved coin edits the page says `Refreshed from your ticker, your unsaved coin changes were dropped.`; otherwise `Up to date with your ticker.` See Refresh and reload.

The header lines



Left side

The logo, `Settings`, and under it one line naming your browser and screen, such as `Chrome, 390×844`. It exists for support calls: `read me the line under Settings` answers what device and browser you are on. The whole left side is one link that reloads the page from the ticker.

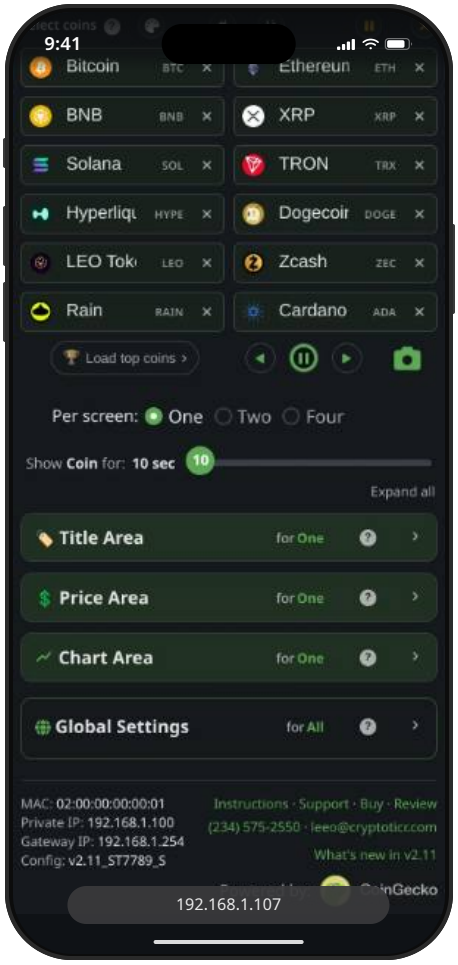
Right side

- `Firmware:` the version, for example `v2.09`. Tapping it opens the `What's new?` list.
- `SSID:` the Wi-Fi network the ticker is on.
- `2.4GHz - Channel` and the channel number.

- `Signal:` the ticker's reading of its link. The line turns yellow when the signal is weak.
- `Power:` appears only when the supply verdict is not good: `Check` for a bit low or high, `Check now` in red for the danger band. See The power check.

Tapping any of the network lines opens `System Info`, which holds the full read-out.

The footer read-out



The read-out

Seven facts, each tappable to open the fuller `System Info`. A fact with nothing to say, such as `Public IP` before the ticker has one, is left off the list rather than shown empty:

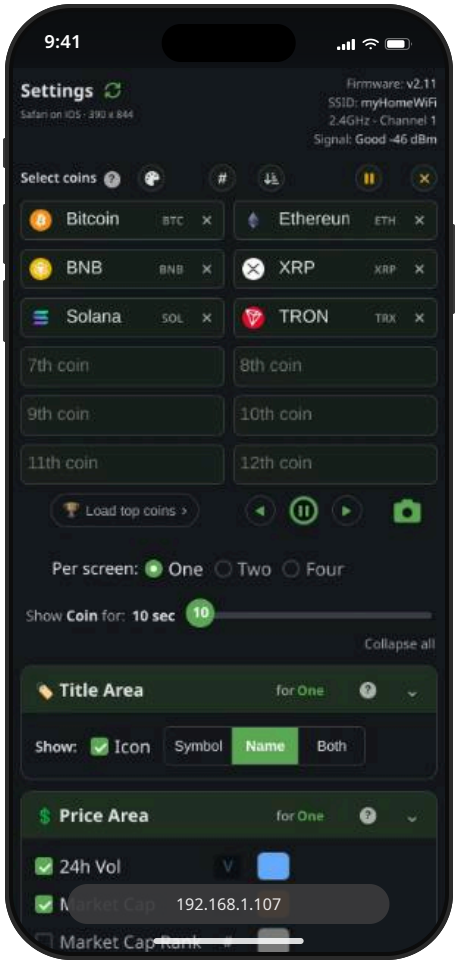
- `MAC` : the ticker's hardware address, the one to reserve an address for in your router.
- `Private IP` : the ticker's address on your network, the settings page's address.
- `Gateway IP` : your router's address.
- `Public IP` : how your home appears to the internet.
- `API Svr IP` : the CryptoTicr server the ticker is talking to.
- `Config` : the firmware build identity.
- `Settings copy` : only when there is something to say about the settings backup, such as `restored from backup` . See Settings health and the backup copy.

The links

`Instructions` and `Support` lead to this site. `Buy` opens the ticker's store listing and `Review` its review page. Under them, `What's new in v2.09` opens the current version's list of changes, and `Powered by: CoinGecko` credits the data source.

Help and the question marks

A question mark on every card



The question marks

Beside every section title, and beside most rows, sits a small `?`. Tap it and a note opens describing what that setting does and what to expect on the glass. The help overlay puts it this way: `Every section and most rows have one. Tap it and it tells you what that setting does, in plain words. That is the fastest way to answer almost any question on this page.` The notes on this site quote those descriptions where they apply.

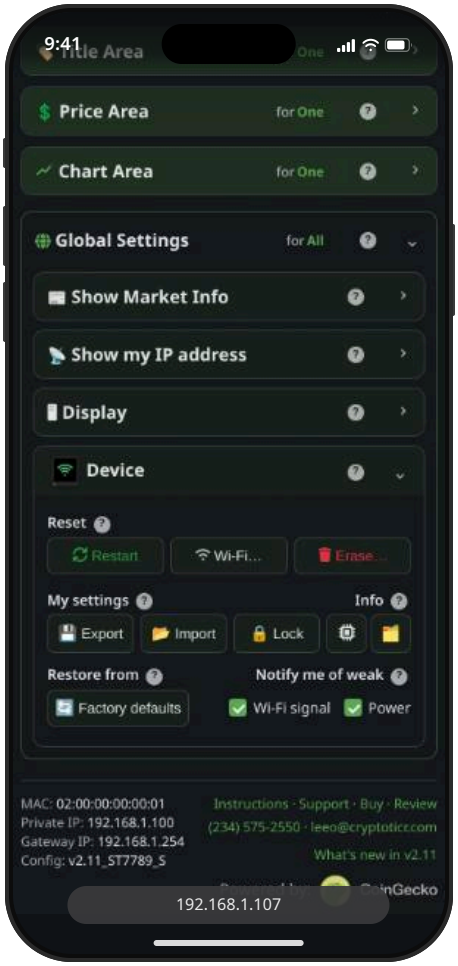
The Help overlay

The `Help` link at the bottom of the page, or the F1 key on a keyboard, opens an overlay that walks the page in a few paragraphs: what is saved where (`Everything here is saved on the ticker itself, nothing leaves your home network.`), the coin list and `Save & Apply` , instant apply for everything else, and the `Per screen` layouts. The `Escape` key or the close button dismisses it.

Beyond the page

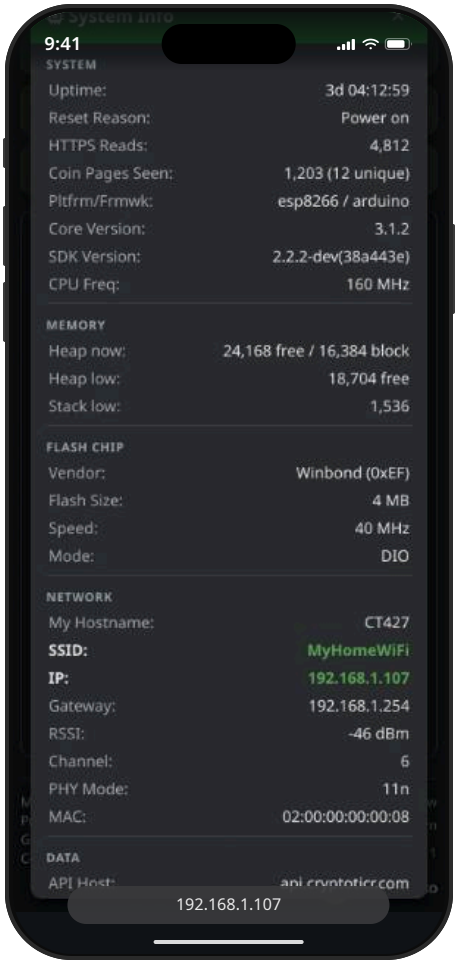
For anything the notes do not answer, Contact reaches Lee, and Before you call: what to have ready lists what to have to hand.

System Info and Files Info



System Info

`Device` → `Info` → `system` opens `System Info`: one list of everything about the ticker, fetched fresh when opened. The page describes it as `everything about the ticker including its network` and says the two read-outs are `for the curious, and for troubleshooting with support`. It gathers the system rows (version, build, uptime, restart reason), the memory rows, the Wi-Fi rows (network, channel, signal, the addresses that also sit in the footer), the supply voltage, and the icon pack's state. The network lines in the header and the footer facts open the same list.



Files Info

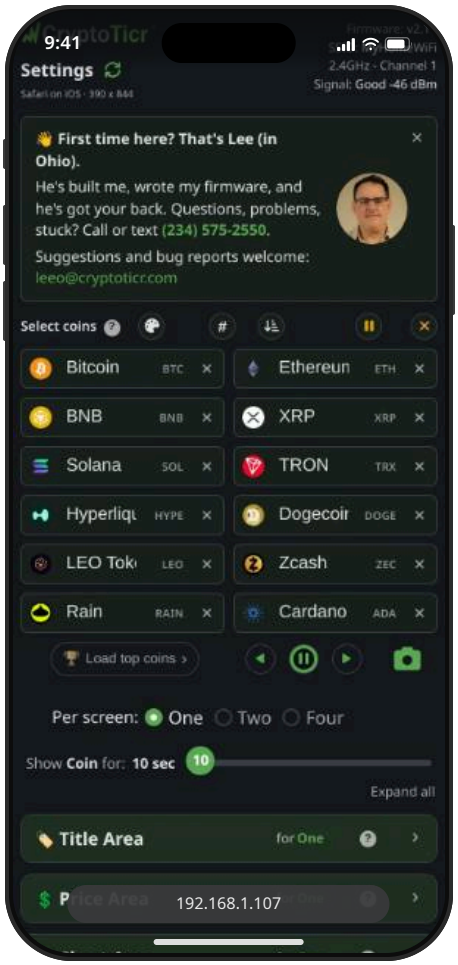
`Device` → `Info` → `files` opens `Files Info`: the files on the ticker with their sizes in kilobytes, sortable by name or size. It is rarely needed by an owner; support may ask for it when the icon pack or the settings page will not load.



When they help

A screenshot of `System Info` answers most questions about a running ticker in one picture. See Before you call: what to have ready.

The welcome banner



On a first visit

A banner with Lee's photo: `First time here? That's Lee (in Ohio).` / `He's built me, wrote my firmware, and he's got your back. Questions, problems, stuck? Call or text` the number, and `Suggestions and bug reports welcome:` the email address. It is there for owners who joined the Wi-Fi in seconds without watching the ticker's own setup cards.

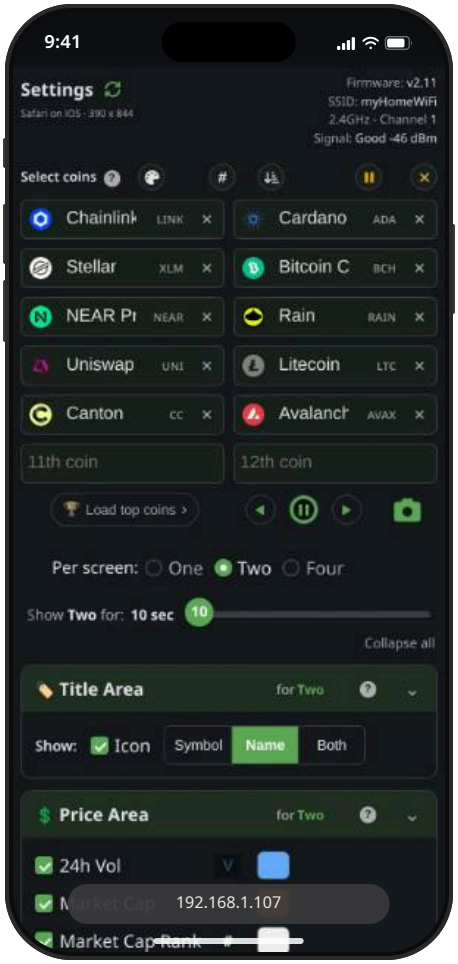
The banner shows until the ticker has saved anything, or until this browser dismisses it. The dismissal is remembered in the browser; the saved flag lives on the ticker, so a second phone does not see the banner on a ticker that is already set up.

After an update

A different banner, `Welcome to v2.09!` with a `What's new?` link, appears on a version you have not been shown. Dismissing it is recorded on the ticker, so no other browser shows it again. See After an update.

Using the page from several devices

The same page, open on a second device



Shared

The settings live on the ticker. Every device that opens the page reads the same coins, colors and timings, and a change from one device shows on the others the next time they load or reload. There is no account and no sign-in; being on the Wi-Fi is the credential, unless a password is set.

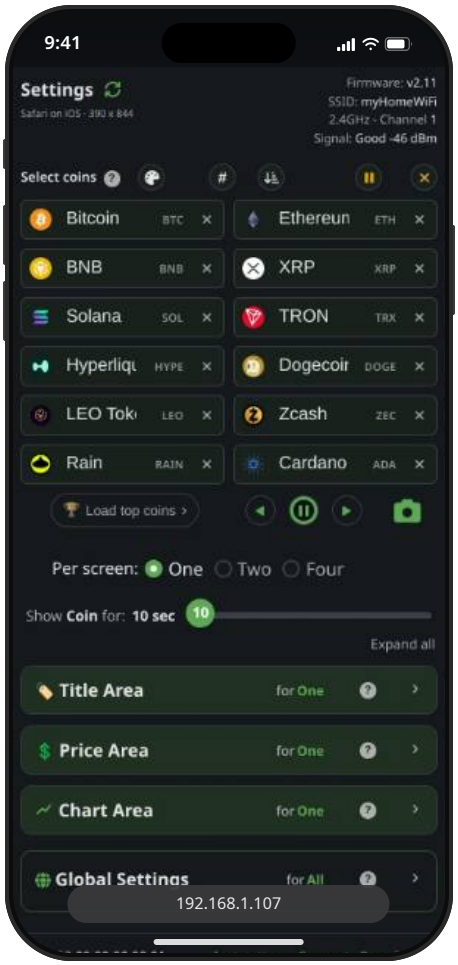
Per device

- **The unlock.** With a password set, each browser asks once and then keeps its own key in that browser's private storage. The page's words: `Open this page on another phone, or in another browser, and it asks again there.` `Log out here` returns one browser to view-only and leaves the others alone. The unlock also carries to the Change Wi-Fi page opened from that browser.
- **The theme** of the page.
- **Which sections are folded** (also sent to the ticker so a fresh browser starts the same way).
- The dismissed first-visit banner.

Two devices editing at once

The page does not merge. If another device saved a coin list while yours was open, your next reload says `Refreshed from your ticker, your unsaved coin changes were dropped.` Save from one device at a time. See The page shows different settings than the ticker.

Refresh and reload



The reload target

The whole left of the header, logo, `Settings` and the browser line, is one link that reloads the page from the ticker. It exists because some browsers hide their reload button and in-app browsers never had one: `tap anything under the logo` is the instruction on a support call. It is a real reload, not a cached copy, so what you see afterwards is what the ticker holds.

What it says

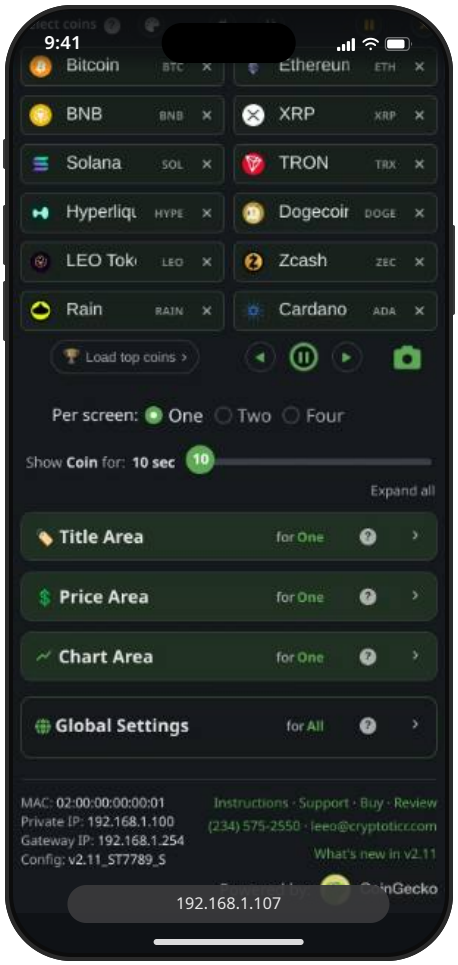
- `Up to date with your ticker.` when nothing was pending.
- `Refreshed from your ticker, your unsaved coin changes were dropped.` when you had coin edits that were never saved.

- `Couldn't reach your ticker just now. If it's installing an update that can take a few minutes.` when the ticker did not answer; see Couldn't reach your ticker message.

Reloads the page does itself

After a firmware update the page reloads once on its own, because its code is served by the ticker and must match the firmware. See After an update.

Setting: folded sections



The control

The title bar of each section, and `Collapse all` / `Expand all`.

What it does

One value per layout, a set of on/off marks, one per section in a fixed order. The page also keeps the same set in the browser; the ticker’s copy seeds a browser that has none.

The choices

- Any set of sections folded or unfolded.

On the glass

Nothing changes on the glass; this is about the page only.

The stored key

`collapsed` in the ticker’s settings, and in the file that `Export` writes. The shipped value is generated from the one source of defaults and shown on this page by the site, never typed here.

Updates

Automatic firmware updates

What it shows

Nothing, most of the time. The ticker checks for newer firmware about five minutes after it starts and then about once an hour, and a check that finds nothing newer is silent. Only a check that finds a newer version changes the screen.

When there is a newer version the ticker first shows its two health cards, the Wi-Fi signal and the power supply, with a bottom line of `All good, updating now` or `Not great, updating anyway`. In the first minutes after power-up the power card has no verdict yet and says `Still measuring, updating now`. Then the update screen takes over.



The download screen carries `Updating` / `Firmware`, the version pair, `Keep me powered on!` in yellow, and two dim rows naming the file's build date and where it is coming from. Under them a phase label, a percentage and a progress bar run while the file arrives and is checked.

`Almost done!` closes it: the version now installed, `Keep me powered` / `on while I reboot!`, and what the download cost, for example `(Download: 1023 KB in 8.2s)`. The card stays up for seven seconds; two-thirds of the way through, a bar appears and sweeps across the bottom. Then the screen goes dark for about as long while the arriving image is moved into place, and the ticker restarts. When the release brings new coin artwork, about half an hour later the ticker shows `New artwork`, fetches about 1.8 MB of logos and restarts once more. See Icon updates.

The ticker refuses any file that does not pass its check: an interrupted or corrupted download is discarded and the current firmware keeps running. The power reading covers the download itself, so a supply that sagged under it can bring the power card up afterwards. What can go wrong is on A firmware update didn't finish.

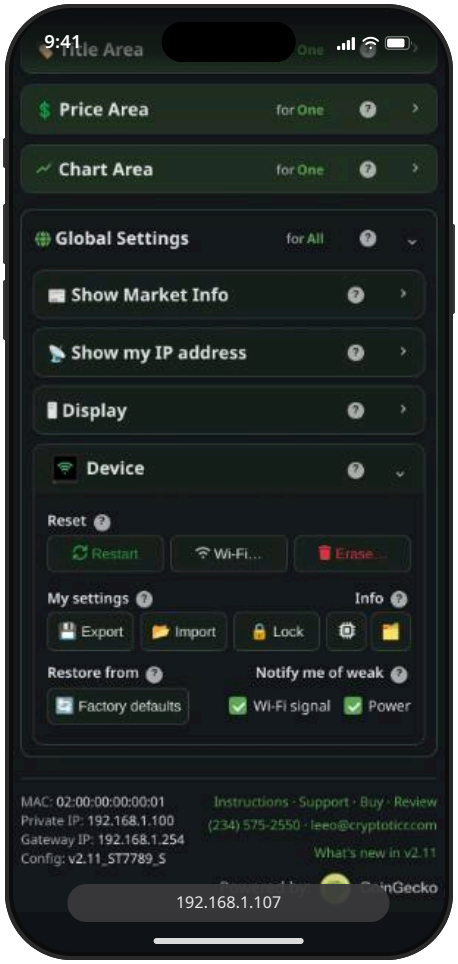
Options

- **None on the settings page.** Updates are automatic and cannot be switched off by an owner; there is no check-now button either. A check runs by itself within an hour of any change on the server.
- **Weak signal** postpones a download: below the update line the ticker shows `Signal too weak` / `Postponing update.` and tries again at the next hourly check, up to ten times, after which it updates anyway. See Update postponed because the signal is weak.

Where to set it

There is nothing to set. The firmware version you are on is at the top right of the settings page, `Firmware:`. See Which firmware do I have?.

Icon updates



What it shows

The logos are not part of the firmware. They are one pack, close to two megabytes, stored beside it, and the ticker checks the pack is present and intact at every start. When it is not, the ticker fetches it in the background:





It explains itself for five seconds before it starts: `New artwork`, the size to fetch, `Takes a minute or two.`, `Please keep me plugged in.` and `Your coins return on their own.` Then the download, with the same progress bar a firmware update uses.





A verified pack needs one restart to appear, and the ticker counts down to it rather than surprising you. The start screen afterwards names the reason for that restart.



A pack that does not verify shows `Icons not ready yet` with the reason in yellow and four rows, `size expect` / `size actual` / `crc expect` / `crc actual`, the wrong ones highlighted, and `I'll try again in` / `30 minutes`. The `Icons not ready yet` card appears only when the ticker is left without a pack; a fetch that fails while the old pack is still intact keeps that pack and shows nothing. Until a pack is on the ticker, coins are drawn by symbol and name without a logo.

Options

- **None.** The fetch runs by itself. If the pack is missing it is fetched about half an hour after start, then every half hour until a download verifies; a firmware update that left no pack fetches it before the coins appear. When a release comes with new artwork, an updated ticker also swaps its intact pack for the new one, about half an hour into its first start on the new version, with one more restart. A coin that is not in the pack shows its symbol and name even when the pack is fine. A pack that has crashed the ticker is quarantined by its fingerprint and not fetched again until the server publishes a different one, or until the ticker keeps restarting with no pack at all, which proves the pack was not the cause.
- The background fetch makes one attempt per half hour. A fault streak holds the fetch off for the first five minutes after a restart, so a ticker curing itself takes its firmware fix before its artwork.

Where to set it

Nothing to set. Whether logos appear on the coin screen is a display choice, `Title area` in the `Display` section; see Title area.

After an update

On the ticker

The first start after an update looks like any other start: the start screen, `Connecting to:` and your network, then the coins. The ticker reports in to its server once so the update is known to have landed. If the release came with new coin artwork, about half an hour into this first start the ticker shows `New artwork`, fetches about 1.8 MB of logos and restarts once more. The coins keep their old logos until then, and the start screen's logo changes with the new set. See Icon updates.



For a routine release nothing more appears on the glass. After a major jump, from v1 to v2 for example, a rotation card joins the coins: a party horn, `New firmware!` in green, the version in a green badge, and `(reload browser page)` under it. It shows twice per power-up, ten minutes apart, until you open the settings page.

On the settings page

A settings page that is already open when the ticker comes back on the newer version reloads itself once, to load the page made for the firmware the ticker now runs. The reloaded page carries a banner with Lee's photo: `Welcome to v2.09!`, a `What's new?` link that opens the release's list of changes, and `Lee here (Ohio), the software engineer who wrote the firmware for your ticker. Questions, problems, suggestions? Please call or text me at (234) 575-2550.` Dismiss it with the `×`; the ticker records that you have seen it, so no other phone or browser shows it again for this version.

The banner appears for a version you have not been shown. A fix release that arrives while you were already current on the previous one stays quiet, except after a major jump, when the banner always shows. The `What's new?` list is also always available from the `Firmware:` line at the top of the page. The same list is on this site at What's new in v2.

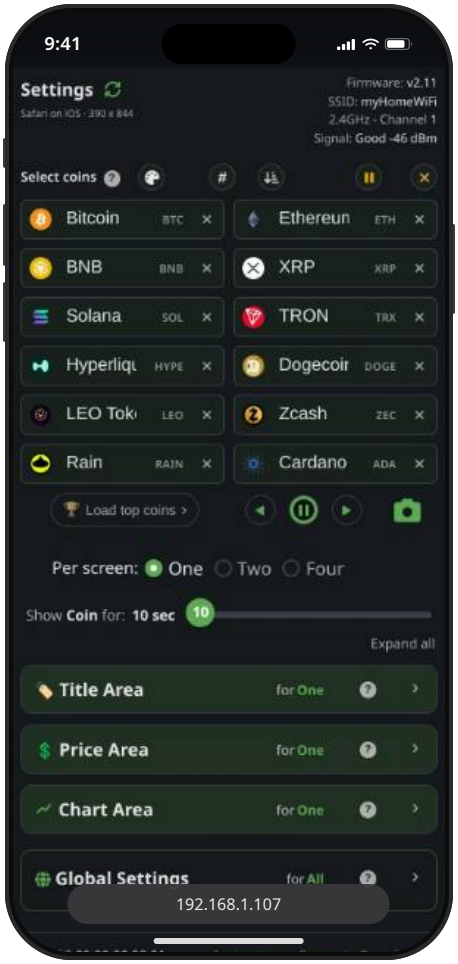
What is kept

Everything: coins, colors, timings, the Wi-Fi network, a fixed address, a settings password. An update rewrites the firmware and nothing else. Settings that arrived from an older format are read as they are; the ticker's storage keeps every earlier meaning.

Which firmware do I have?

On the settings page

The header's right side reads `Firmware:` followed by the version, for example `v2.09`. Tapping it opens the `What's new?` list for that version. The footer's `Config` line carries the full build identity, for example `v2.09_ST7789_S`, and opens `System Info`, which adds the build's date and time as `Built`.



On the glass

The start screen shows the version under the logo at every power-up, and the setup cards carry it on a ticker that is not yet on Wi-Fi. During an update the `Updating` / `Firmware` screen shows the pair, the version you have and the one arriving.





Reading the string

`v2.09` is the version; the rest of the string names the build. A page that shows only `v2.09` has shortened the same string.

Screen messages

What the screen is telling me

Find the words you are looking at on the glass, and this says what they mean and where the full explanation is. The wording in `code` is exactly what the ticker prints. The groups follow what the ticker is doing at the time.

If you would rather see the screens than read them, each group's own page has a picture of every card. One from each group, to show the range:







Setting up, before the ticker is on your Wi-Fi

On the screen	What it means	Read more
`Let's get me set up` / `on your home Wi-Fi`	a new ticker's first screen	Screen messages during setup
`For help...`, `The steps:`, `Join my Wi-Fi`, `Scan to join Wi-Fi`	the setup cards, on rotation	The setup cards on the glass
`Power` / `My USB power is` / `very low right now.`	the supply is in the danger band	The power check
`Heads up` / `Your Wi-Fi refused me` / `I'll retry by myself`	setup opened because the router refused the saved password; it retries by itself in 15 minutes	Glass says: Your Wi-Fi refused me
`Heads up` / `I can't find your Wi-Fi`	setup opened because the saved network could not be reached	The ticker opened its setup network by itself
`Heads up` / `Fixed it on the router?` or `Wi-Fi working again?` / `Restart me once.`	the Heads up card's second showing each lap: restart the ticker once if the problem is fixed	The ticker opened its setup network by itself
`You're on my Wi-Fi!`	a phone or computer has joined the setup network	Join the ticker's setup network
`Scan to open my page`	the setup page has not been opened; this code opens it	The setup page did not open by itself
`Doing great!` / `On that page, pick` / `your Wi-Fi network.`	the setup page is open and waiting for a network	What the glass shows while joining

On the screen	What it means	Read more
`Got it - thanks!` / `Connecting to:` / `Logging in...`	joining the network you chose	What the glass shows while joining
`No luck yet.` / `Trying again (2 of 3)`	a try failed and another is starting	What the glass shows while joining
`Status report:`	the join worked, and this is what it could reach	What the glass shows while joining
`Can't get online` / `Answer on your phone.`	the ticker joined a network with no working internet and is asking whether to use it	Setup says it can't get online
`You're all set!` / `My IP Address`	setup is done, and this is the settings page's address	Find the settings page after setup
`Wi-Fi joined.` / `My IP Address` / `Can't get online.`	the ticker is using a network without internet, as asked	Setup says it can't get online
`Don't give up!` / `Try again` / `on my setup page:`	two tries failed; this is the way back in	Screen messages during setup
`What happened`, `Let's try again.`, `Tech tip`, `Also worth trying`	the cards that rotate after a failed join	Screen messages during setup
`No activity` / `Restarting for a fresh start`	nobody used the setup network for 15 minutes	Setup restarted for a fresh start
`Your Wi-Fi is back!` / `Reconnecting...`	the missing network reappeared in a scan	The setup network

The verdict after a failed join

On the screen	Read more
`The password was refused.`	The password was refused
`The router turned me away.`	The router turned me away
`I can't see that network.`	My Wi-Fi network is not in the setup page's list
`The router says it's full.`	The router says it's full
`No address was given to me.`	No address was given to me
`Joined, but my server is quiet.`	Setup says it can't get online
`The signal here is very weak.`	The signal here is very weak
`I lost sight of the router.`	I lost sight of the router
`Nothing came back.`	Nothing came back when I asked to join
`It failed and didn't say why.`	It failed and didn't say why

Wi-Fi: starting up, waiting, changing

On the screen	What it means	Read more
`Connecting to:` with the network's name, `I'm looking for your` / `saved Wi-Fi now...`	every start-up begins here	What happens when the Wi-Fi drops
`I've logged in!`, `Your router gave me` / `this address to use:`	a start-up that worked	Screen messages about Wi-Fi
`That fixed address` / `isn't working.`	the fixed address you set does not reach anything	Give the ticker a fixed address
`Trying to connect`, `Waiting for Wi-Fi`, `Wi-Fi answered`, `Almost connected`	waiting for the saved network, with what it knows so far	Glass says: I can't find your Wi-Fi
`It's there. I can't join yet.`	the router is on and answering but the ticker cannot get on	Glass says: Your Wi-Fi refused me
`Wi-Fi rejected my password` / `Did the password change?`	the router is refusing the saved password	Glass says: Your Wi-Fi refused me
`Weak Wi-Fi signal` / `Poor Wi-Fi signal.`	too far from the router to join	The signal here is very weak
`New Wi-Fi? Restart me` / `5 times fast. Wipes me.`	the waiting screen's footer offering the way out	Factory reset by switching it off and on five times
`I couldn't connect.` / `About to restart & try again.`, `One more try...`	a setup that never finished, retrying	The ticker keeps restarting to reach my Wi-Fi
`Changed your Wi-Fi?`, `New password?` or `New Wi-Fi router?` / `Restart me` / `5 times fast to set it up.`	the yellow hint between start-up retries	The ticker keeps restarting to reach my Wi-Fi

On the screen	What it means	Read more
`Looking for Wi-Fi` / `Is it on?`	the network dropped while the ticker was running	What happens when the Wi-Fi drops
`Looking for that network nearby...`, `Connect attempt` / `1 of 3...`, `Connected!` / `My new address:`, `Couldn't switch`	a change started from the settings page	Change to a different Wi-Fi network
`Saving this network...` / `Saved. Leaving this network now.`	a network saved for somewhere else	Save a network for another place
`Reconnecting WiFi...` with a code line	the radio is rejoining	Screen messages about Wi-Fi

Data and the server

On the screen	What it means	Read more
`My server says: wait.`, `My server's having trouble.`, `Rejoining your Wi-Fi...`, `Waiting for an address...`, `No internet yet.`, `Is your internet working?`, `Redo setup: 5 fast restarts.`	the start screen waiting for a go-ahead	The start screen says it is waiting, retrying, or rejoining
`Something here blocks me.` / `I can't get past this network.`	something on the network answers in the server's place	Glass says: This network is blocking me
`I can't get through` / `to my server.`	the start-up test could not reach the server	Screen messages about data and the server
`The server says:`	the go-ahead itself, in the server's own words	Screen messages about data and the server
`Retry 1 of 3`	a small pill over the coins while a fetch is retried	Glass says I can't see my server
`I can't see my server` / `Trying again in ~8s`	the outage box, with what it measured	Glass says I can't see my server
`Wi-Fi refused.`, `Wi-Fi down.`, `No IP address from router.`	the outage box's first line: the router is turning the ticker away, the link is gone, or the router gave no address	Glass says I can't see my server
a code such as `-1: Connection failed` with `Trying again`	one fetch failed	Screen messages

On the screen	What it means	Read more
`shortly...`		about data and the server
`Heavy Server Load`	the server asked the ticker to slow down	Prices stopped updating
`Too fast`, `Easing off`, `No reply`, `Updating... (202)`, `Busy (429)`, `Reply cut off` under a price of `-.--`	why that one price is missing	Prices stopped updating
`Tidying my memory`	the ticker paused fetching to free memory	Screen messages about data and the server
`Your internet looks down`, `The trouble is at our end`, `Your Wi-Fi is fine, it's our end`, `Try moving it closer`, `I can't reach my server yet`	the signal card naming which part is at fault	Glass says I can't see my server

Power and signal

On the screen	What it means	Read more
`Weak Wi-Fi signal`, `Wi-Fi drops out`, `Wi-Fi signal` with `Strength:`	the signal card	The Wi-Fi signal check
`Power a bit low`, `Power very low!`, `Power a bit high`, `Power very high!`, `Power is good`, `Measuring power...`	the power card	The power check

Updates

On the screen	What it means	Read more
`Checking for` / `firmware...`	a check somebody asked for	Screen messages during updates
`Updating` / `Firmware` / `Keep me powered on!`	a firmware update is downloading	Automatic firmware updates
`Almost done!`, `Now on` with the version, `Keep me powered` / `on while I reboot!`	the update finished and it is restarting	Automatic firmware updates
`I'll try again in`	an attempt did not complete; the next is scheduled	A firmware update didn't finish
`Update paused`, `Update failed`, `Firmware update` / `didn't finish.`, `Server problem`, `Can't reach server`	the ways an update can stop	A firmware update didn't finish
`Already current` / `No newer firmware.`	an asked-for check found nothing	Screen messages during updates
`Signal too weak` / `Postponing update.`	the signal is below the line updates need	Update postponed because the signal is weak
`New artwork`, `Updating` / `Icons`, `New icons`, `Icons updated!`, `Icons not ready yet`	the coin artwork pack	Icon updates
`New firmware!` with a version badge and `(reload browser page)`	after a major update	After an update

Restarts and recovery

On the screen	What it means	Read more
`Looking good!` / `Starting up...`	the first start after setup	The first run on the glass
`Wi-Fi saved.` / `Starting up...`	the first start after setup on a network chosen without internet	The first run on the glass
`Restarted to reconnect` / `to your Wi-Fi`, `Restarted to refresh` / `my server link`, `Restarted to refresh` / `my memory`, `Restarting...`	why the ticker restarted itself	The ticker restarts by itself
`Freeze recovery`, `Glitch recovery`, `Glitch 2`	it recovered from a fault	The ticker restarts by itself
`I cleared my memory`, `I restored my defaults.`, `I refreshed my icons.`, `I started over fresh.`, `Your Wi-Fi is safe.`	what a repeated fault made it do	The ticker says it started over fresh
`Crash report data` / `Scan and send to Lee`	a QR code holding the technical record	A Crash report card with a QR code appeared
red circles with `2 more quick reboots` / `for factory reset`, `Factory Reset`, `Factory Reset Done`	the five-restart reset, in progress	Factory reset by switching it off and on five times
`Health status`	the settings storage was checked, and what came of it	A Health status card appeared at start-up

The address and the settings page

On the screen	What it means	Read more
`My settings are here:` with an address	on the start screen, every time	Opening the settings page
`Open a browser.` / `Enter into its` / `ADDRESS BAR:` / `Not a search box!`	the address, spelled out for a computer	Find the settings page after setup
`Scan for my settings`	the same address as a QR code	Find the settings page after setup
`Nicely done!` / `Let's catch` / `the next move.`	the first-run celebration	The first run on the glass
`You're in settings!` / `Pick your coins,` / `hit Save, and` / `I'll get to work!`	you opened the settings page for the first time	The first run on the glass
`My settings are here:` with the address, or the address as a QR code	the scheduled address popup	The address popup and QR code
`IP > 192.168.1.42`	the ticker's own address changed	I lost the ticker's address
`Server reassigned`, `I can now see my` / `server's API again:`	small notes about our server; nothing to do	Screen messages about the address and settings
`Password setup code` with four digits	you are setting the settings password	Lock the settings with a password
two blocks labeled `Up` and `Down` with a colorset's name	the colorset changed	Colorsets
a small ring counting down in a corner	the screen is paused from the settings page	Pause from the page

Screen messages during setup

A ticker that has no network to join runs a short show on its own screen until it has one. Every card below is the real thing, painted by the ticker. If you are looking at a screen right now and want to know what it means, find it here.

Which cards play, and for how long, is covered in The setup cards on the glass.

The first screen



The logo, the firmware version, and what is about to happen. `Instructions follow.` and `They will repeat.` say the rest: nothing here needs to be caught the first time. It holds for nine seconds, then the cards begin.

The cards

They rotate, in this order, until a phone joins the ticker's setup network.



`For help...` gives the number and address of the person who wrote the firmware. The warnings about guest and public networks are on your phone, on the setup page's welcome cards.







`The steps:` is the whole job in three lines. `Join my Wi-Fi` names the setup network, always `CT` and three digits, and `Scan to join Wi-Fi` is the same network as a QR code your camera can take. If the code cannot be built, that card shows `Join this Wi-Fi:` and the name instead.



`Power` appears only while the supply is actually in the danger band, low or high, and it names the cable as well as the adapter, because a thin or long cable drops voltage under load exactly as a tired adapter does.

On a ticker that already had a network



`Heads up` leads the rotation when the setup network opened because a network the ticker knew went missing or turned it away. It names the network and says what happened on the last try. When the network vanished, it promises to keep checking for it. When the router refused it, it says `I'll retry by myself` / `in 15 minutes.` and counts down. It comes back once more each lap, between `Join my Wi-Fi` and `Scan to join Wi-Fi`, ending `Fixed it on the router?` / `Restart me once.` (refused) or `Wi-Fi working again?` / `Restart me once.` (missing).

Once your phone is on the setup network





The moment a device joins, the screen changes. The first face expects the sign-in page to pop up by itself, which is what most phones do. The second face is for the phones that do not, and it gives the address to type. Both insist on `http://` rather than `https://`, which matters: a typed address that starts with `https` will not reach the ticker.





After ninety seconds with a phone joined and no page opened, the ticker offers the address as a QR code. Once the page is open, `Doing great!` stays up until you submit a network, with a last word about public and guest networks.

While it joins





`Got it - thanks!` repeats the network and the password back, as dots unless you left the eye open on the page. `No luck yet.` narrates the retries and names the reason the previous try gave, so a wrong password is visible before the last attempt runs out.





The `Status report:` is the diagnosis: the network's name, the signal, the address the router gave, and how long DHCP, DNS and each of three servers took to answer. A row can read `refused`, `silent` or `not tried` instead of a time. When the ticker's own server did not answer, or a sign-in page was caught answering in its place, a line underneath names which part is at fault, one of `A sign-in page blocks me.`, `No internet here.`, `My name fails here.`, `443 fails here, 80 works.` or `My end, not yours.`



On a network where nothing on the internet answers (behind a sign-in page, for example, or a phone hotspot with no data), the status report is followed by `Can't get online`: the network's name, then `Answer on your phone.` / `Use it, or pick another.` / `3 min, then I'll use it.` If you pick another network on your phone, nothing is saved. If you tap `Use it anyway`, or nobody answers in 3 minutes, the card that follows reads `Wi-Fi joined.` / `My IP Address` / the address / `Can't get online.`, and the ticker restarts with `Wi-Fi saved.` / `Starting up...`.

`You're all set!` gives the address the settings page will live at from now on, then the ticker restarts into normal running.

When a join fails

One line says what happened, on the glass and at the top of the page's panel. Each links to what to do about it.

What the screen says	What it means
`The password was refused.` or `Wrong password - the router rejected it outright.`	The password was refused
`The router turned me away.`	The router turned me away
`I can't see that network.`	My Wi-Fi network is not in the setup page's list
`The router says it's full.`	The router says it's full
`No address was given to me.`	No address was given to me
`Joined, but my server is quiet.`	Setup says it can't get online
`The signal here is very weak.`	The signal here is very weak
`I lost sight of the router.`	I lost sight of the router
`Nothing came back.`	Nothing came back when I asked to join
`It failed and the Wi-Fi router didn't say why.`	It failed and didn't say why

After repeated refusals the wording hardens to `Password refused 2x - Wrong password?`

The first failure paints nothing more than that line. From the second, a second rotation replaces the teaching cards, because someone whose router has already turned them away is past being told how to open the page.





`What happened` carries the router's own words in gray, and it changes with the verdict: a network that was never found reads `I can't see that network.` instead. `Let's try again.` is there to say the ticker is not broken, which is the first thing an owner assumes.







`Tech tip` appears after a refusal, and its second line is the trick that solves most of them: forget the network on your own phone and rejoin it, which proves the password before the ticker tries it. `Also worth trying` appears only when the signal was actually measured poor, and it prints the reading. `Don't give up!` closes every lap with the setup address, so a closed browser tab is never a dead end.

If setup is left alone







Fifteen minutes with nobody on the setup network and the ticker restarts itself for a clean start. On a ticker that has a saved network, it restarts to try that network again instead. And if the missing network reappears in a scan while the ticker is waiting, it says so and restarts to rejoin it, with nothing for you to do.

Screen messages about Wi-Fi

A ticker that already knows a network says out loud how the joining is going, every time it starts up. The screens below are that commentary, plus what it shows while it waits, retries, or moves to a different network.

Starting up









`Connecting to:` with the saved network's name is the header for all of it. Under it, in order: the search, `Try 1 of 2 - 10s each`, then the sign-in (`I'm logging in using` / `my saved password...`, or `I'm logging in...` on a network with no password), then the address.







A ticker that was restarted specifically to retry adds `This is restart #2 of 3` on a further row. A ticker that was given a fixed address says `I'm using the fixed` / `address you gave me:` instead. If that fixed address turns out not to reach anything, it says so and asks the router for one: `That fixed address` / `isn't working.` / `Asking your router...`, ending in either `Your router gave me` / `one that works.` or `No luck either way.` / `Keeping yours.`

Waiting for the saved network



When the network does not answer at once, the ticker settles into a calm waiting screen rather than an alarm. The header states what it actually knows:

Header	Under it
`Trying to connect`	`No answer yet. I keep trying.`
`Waiting for Wi-Fi`	`I can't see it right now.` when its scan missed the network, or `It's there. I can't join yet.` when the scan saw it
`Wi-Fi answered`	`It's there. I can't join yet.`, or `It rejected my password.`
`Almost connected`	`Wi-Fi is up. No IP address assigned yet.`, with `DHCP server not responding`, `Is DHCP setup right?` or the router's own reply
`Wi-Fi rejected my password`, or `Can't join Wi-Fi` when it cannot prove that	`Did the password change?` / `I'll keep trying, then` / `open my setup to fix it.`
`Weak Wi-Fi signal`	`Poor Wi-Fi signal.` / `Get me and the router` / `closer together.`







Under the header sits the network's name, a reason line such as `No reply from your router yet` or the router's own words, and a footer that rotates through `I'll keep retrying.`, `I retry every 15 seconds,` / `restart every 2 minutes.`, `New Wi-Fi? Restart me` / `5 times fast. Wipes me.` and the router's evidence, unless the reason line above it already shows that evidence. On a ticker holding details that have never once worked, the footer reads `I'll retry a few times.` and `1 more try, then I'll open my setup page.`

A setup that never finished





A ticker that has details but has never got onto the network runs through its own escalation, and narrates every stage of it.









`Wi-Fi trouble` is the one that saves the most calls: after a power cut, a router can take minutes longer to come back than the ticker does, and the ticker knows to wait rather than declare a fault.







Alongside those, a yellow hint offers the way out, worded for what probably changed: `Changed your Wi-Fi?`, `New password?` or `New Wi-Fi router?`, each followed by `Restart me` and `5 times fast to set it up.`, `5 times fast to enter it.` or `5 times fast to switch.` That is Factory reset by switching it off and on five times, offered before it is needed.

While running





If the network disappears while the ticker is running, the signal card takes a turn titled `Looking for Wi-Fi`, with the network's name, `Is it on?` and `I'll reconnect by myself`. After you have warned it that the password changed, that last line becomes `I'll open my setup page` instead.

When the router is on but turning the ticker away, most often after its password changed, the box over the coins says `Wi-Fi refused.` and this card does not appear. When the router let it on but gave no address, the box says `No IP address from router.`, again without the card.

The radio's own rejoining shows as a small box headed `Reconnecting WiFi...` with a code line, one of `1: SSID not found`, `4: Join failed`, `5: Disconnected from` the network, `6: Handshake failed` or `7: Disconnected`, and `Trying again shortly...`

Changing Wi-Fi from the settings page





A change started from the settings page is narrated on the glass as a band of phases, in this order:

1. `Looking for that network nearby...`
2. `Found it (signal 78%). Connecting...`, or `Not in my scan - trying anyway (hidden?)`
3. `Connect attempt` / `1 of 3...`, and on a failed attempt the reason and `Retrying... (1 of 3)`
4. `Wi-Fi OK - checking the internet...`, and if that part is missing, `Joined, but no internet yet.` / `Retrying...`
5. Either the `Connected!` card, with `My new address:` and the address, or `Couldn't join. Back on your saved Wi-Fi.`



A failed change ends on the `Couldn't switch` card with the network's name, the reason, the router's own words, and the line that matters most: `Your Wi-Fi settings` / `were not changed.` The ticker goes back to the network it was on. When there was no network to go back to, the verdict is the shorter `Couldn't join.`

Two smaller variants use the same band. Changing only the address says `Updating my address...` and ends in the success screen or `Couldn't apply that address`. Going back to an automatic address waits up to 12 seconds for the router, with a thin line along the bottom. Saving a network for somewhere else says `Saving this network...` and then `Saved. Leaving this network now.`

The whole procedure from the page's side is on Change to a different Wi-Fi network.

Screen messages about data and the server

Prices come from a server, and sometimes the road to it is blocked. The ticker narrates that rather than freezing: it says which step failed, what it measured, and when it will try again. None of these screens asks you to do anything, and every one of them tells whoever is helping you where the fault sits.

While it is starting up







On the way up, the ticker walks through the chain in order and shows each step: the router, then the name lookup, then the internet, then its own server. A step that passes says so and moves on.







A step that fails names the part that failed and what it tried, which is the whole point of walking the chain in the open:

It says	The step that failed
`This network's DNS service isn't working.` with the resolver's address	the network's name lookup
`I can't look up my server.` with the server's name	the name lookup for our name in particular
`My test sites are blocked here.` with the addresses it tried	anything beyond the router
`I found my server but it can't answer yet.`	the server refused the connection
`I can't get through to my server.`	the server's address refused the connection and the internet test sites did not answer either, so the fault may be this network's
`My server isn't answering right now.`	the server took the connection and said nothing
`No answer yet. I'll keep trying.` with an error number	the request itself failed







The start screen's wait box

Before the first prices, the ticker asks its server for a go-ahead. A box at the bottom of the start screen names what it is waiting on, with a try counter such as `Try 3 of 10.` or `Try 12 every 10s.`

The box says	Meaning
`My server says: wait.`	the server answered and has not said go yet
`My server's having trouble.`, and from the sixth try `Not your fault. Retrying...`	the server answered with an error
`Rejoining your Wi-Fi...`	the link to the router dropped
`Waiting for an address...`	joined, but the router has not handed out an address
`Something here blocks me.` / `I can't get past this network.` / `Use home Wi-Fi or a hotspot.`	something on the network answers in the server's place, which is what a sign-in page does
`My server's down right now.`, `Your Wi-Fi is fine - my end.`, `I'll keep trying.`	the fault is ours, and it is saying so
`Weak Wi-Fi signal.` alternating with `I'll keep trying.`	the radio link is the weak part
`Reaching my server...`, `Wi-Fi OK, no internet yet.`, `No internet yet.`, then on the sixth try `Is your internet working?`, and from the twelfth `Redo setup: 5 fast restarts.`	nothing past the router is answering. Check the internet on another device first: powering the ticker off and on five times, quickly, is the factory reset and erases the coins and settings



When the answer arrives, the box shows `The server says:` and the server's own words, with the round trip under it, for example `round trip 318ms`.

The verdict line

Several of these boxes carry one short line stating what the ticker measured rather than what it guesses. The full set:

`Wi-Fi down.` / `Wi-Fi refused.` / `No IP address from router.` / `DNS is flaky here.` / `My name fails, others work.` / `DNS 192.168.1.1:53 unreachable (net OK)` / `DNS 192.168.1.1:53 silent (weak wifi)` / `DNS 192.168.1.1:53 unreachable, no answer` / `something answers for my server` / `443 fails here, 80 works.` / `Connection is flaky here.` / `Server up, API refused.` / `Answered, then silence.` / `No reply, internet looks down.` / `Connected, no reply yet.` / `Server down (internet OK).` / `Can't reach the internet.` / `No internet.`

`Wi-Fi refused.` means the router turned the ticker away twice in a row while the signal was fine, most often because its password changed.

The outage loop





When fetches keep failing while the ticker is running, it settles into one rhythm: three retries carrying only a small pill, then one box you can actually read, then back to the coins.

The pill is `Retry 1 of 3` over the chart, for about three seconds. The box is headed `I can't see my server` and runs one flowing line: the verdict, then `| OK 4m ago` for when the last good data arrived, `| restart 43m` for when a restart is scheduled, and `| Try 7`. Under that, the addresses it could and could not reach, in green and red, and `Trying again in ~8s` with a draining bar. It holds for about nine seconds.





After the box, the signal card may take a turn with its bottom line naming the layer at fault. It skips its turn when the router is refusing the ticker or gave it no address, because the box has already said so. The power card takes a turn only when the supply is in the danger band. In place of the verdict you may see `Tidying my memory`, which means the ticker paused fetching to free some.

The error box



One failed fetch posts a box over the coin for about eight seconds: a code line such as `-1: Connection failed`, `-11: Timeout reading data`, `503: Service Unavailable` or `500: Internal Server Err`, the verdict line where the code is a negative one, then `Trying again shortly...`

`429: Heavy Server Load` is the exception: no retry line, and it holds for ten seconds while the ticker deliberately backs off.



Under a missing price

When a coin's price cannot be shown, the price reads `-.--` with a dim note under it saying why: `Too fast` or `Easing off` when the ticker held its own fetch back, `No reply`, `Updating... (202)` when the server is still preparing that coin, `Busy`

`(429)`, `Updating... (200)` when the server had no price ready, `Reply cut off` when the link dropped partway through the answer, or the code's own name and number, such as `Connection failed (-1)`.

Screen messages about power and signal

Two cards report on the ticker's own health rather than on the market: how strong its Wi-Fi is, and what its USB supply is doing. Both appear between coins, and both can be called up from the settings page.

The signal card



The title states the verdict. `Wi-Fi signal` is a fair or good reading shown because it was asked for. `Weak Wi-Fi signal` means the reading is below -79 dBm. `Wi-Fi drops out` means the link has dropped repeatedly, whatever the reading says. `Looking for Wi-Fi` means the link is down right now. The card skips its turn when the router is turning the ticker away or gave it no address; the box over the coins already says so.

Under it: a router icon, and outside the middle band a thumb up or a red thumb down. Then the network's name, and `Strength:` with a grade word and the reading, one of `Excellent`, `Strong!`, `Strong`, `Good`, `Fair`, `Weak`, `Very Weak`, `Useless` or `Dead!`, followed by a figure such as `-72 dBm`. When the link is down the reading is replaced by `Is it on?`

The bottom line changes with the reason the card is up:

The bottom line reads	Because
`2.4GHz - Channel 6`	nothing is wrong; it is naming the band and channel
`All good, updating now` or `Not great, updating anyway`	the card is being shown ahead of a firmware update
`I'll reconnect by myself` or `I'll open my setup page`	the link is down, and this is what happens next
`Your internet looks down`, `This network is blocking me`, `Your Wi-Fi is fine, it's our end`, `The trouble is at our end`, `Try moving it closer`, `I can't reach my server yet`	the ticker cannot reach its server, and this is the part it believes is at fault







The difference between those three matters: the first is the ticker's own link, the second says the fault is at our end and there is nothing to do, the third is the one case where moving the ticker helps.

When the card appears, and what a reading means, is on The Wi-Fi signal check.

The power card







The title is the verdict, in seven states: `Power very low!`, `Power a bit low`, `Power a bit high`, `Power very high!`, `Power is good`, `Power is good now` (good at this moment, but not all session) and `Measuring power...` while there is no full reading yet.

Then the voltage itself, large, with a thumb beside it: up for good, down for a bit off, a red thumb down in the danger band.

The row underneath carries either the advice or the evidence:

The row reads	Meaning
`Switch to a different USB power source.` or `Try a different USB power source.`	the supply is low, and the cable counts as part of the supply
`Unplug. Use a different power source.`	the supply is high enough to be a risk
a colored range, for example `5s: 3.25 - 3.33`	the reading is good, and this is how far it moved while it watched
`But 2.85V at startup!`	it is good now, and it was not at start-up
`Ready in under 2 min.`	it is still measuring
`Still measuring, updating now`, `All good, updating now` or `Not great, updating anyway`	the card is being shown ahead of a firmware update



During setup, before the ticker has a network, the same warning has its own card with the same advice:





When the card appears, and what the thresholds are, is on The power check.

Screen messages during updates

Updates arrive on their own and mostly say nothing. The cards below are what the screen shows when there is something worth telling you: a download in progress, or an attempt that did not finish. Nothing here needs an answer from you, beyond leaving the ticker plugged in.

Downloading





The download takes the whole screen: the version it is coming from and going to, the build date and the server it is talking to, `Keep me powered on!` in yellow, and a progress bar labeled with the phase and a percentage.

When it lands, `Almost done!` gives the new version, asks again to stay powered, and reports what the download cost, for example `(Download: 1023 KB in 8.2s)`. Then the ticker restarts.



After a major version jump only, a card joins the rotation with the new version in a green badge and `(reload browser page)` under it. It shows twice per power-up until you open the settings page.

Postponed or failed

Nothing in this group asks you to do anything. The ticker keeps its old firmware, which still works, and schedules another attempt.

The card says	What happened
`Signal too weak` / `Postponing update.`	the signal is below the line updates need; it will try again later
`I'll try again in` with `a minute`, `12 minutes` or `2 hours`	an attempt failed and the next one is already scheduled
`Update paused`	the server offered a file with no fingerprint to check it against
`Update failed`	the connection dropped part way
`Firmware update` / `didn't finish.`	the same, held for three minutes before the next attempt
`Server problem`, `No manifest file (404).` or `Can't reach server`	the update list itself could not be fetched
`Update was interrupted`	shown on the crash-report card, when an interrupted update left the image damaged





The block of small gray lines under the headline is the evidence, not an error code to act on: what was being fetched, from which server, how far it got, and which firmware and icon pack the ticker is on. It is there so that one photograph of the screen answers every question support would otherwise have to ask.





Icons

Coin artwork updates the same way, separately from the firmware, and never at the cost of your settings. When a release comes with new coin artwork, this sequence runs once by itself about half an hour after the update's restart, and ends with one more restart.





The announcement says what is coming and what it will cost, including `Please keep me plugged in.` and `Your coins return on their own.` Then the download, with the same progress bar the firmware uses.



A verified pack needs a restart to appear, and the ticker counts down to it.



`Icons not ready yet` means the pack did not match its own fingerprint and was thrown away, leaving the ticker without logos until the retry in 30 minutes. The rows name what was expected and what arrived. Your coins and settings are kept. A failed fetch that kept the old pack shows nothing.

Screen messages about restarts and recovery

A ticker that restarts itself says why on the way back up. None of these screens is a fault you have to act on, and every one of them is written so that a photograph of it answers the question “what happened?” without anything else.

The first screen after a restart







When the ticker restarted itself rather than being plugged in, the start screen carries two green lines saying which of these it was:

The lines read	Because
`Restarted to reconnect` / `to your Wi-Fi`	the link had been gone a long time, or you changed networks
`Restarted to refresh` / `my server link`	a long stretch without a reply from the price server
`Restarted to refresh` / `my memory`	memory ran low, or was too low to start an update, and a fresh start was cheaper than struggling on
`Looking good!` / `Starting up...`	this is the restart that finishes setup
`Wi-Fi saved.` / `Starting up...`	the restart that finishes setup on a network used without internet
`Freeze recovery`	the ticker stopped responding and its watchdog restarted it
`Glitch recovery`	a fault restarted it
`Restarting...`	you asked for it, from the settings page









Under those lines sits a small technical row: the reset's number and name, such as `3: Software restart` or `4: Exception/panic`, and where relevant `| mid` and what the ticker was doing at the time, one of `settings save`, `defaults restore`, `icon update`, `a data fetch`, `a settings write`, `an icon draw`, `a screen draw`, `a network check`, `a settings-page request` or `a screen redraw`. That row is for whoever is helping you. Nothing on it is addressed to you.

Repeated faults





`Glitch 2` in yellow counts faults that arrive without a healthy ten minutes between them. Before any cure has run, a dim row names the counts that trigger the first two: `5=clear RTC, 10=defaults`. These screens hold for ten seconds, with a thin green line along the bottom near the end. As the count climbs, the ticker reaches for stronger cures and tells you which one it used:

It says	What it did
`I cleared my memory` / `to try to fix this.`	wiped its working memory and started again
`I restored my defaults.` / `Your Wi-Fi is safe.`	put the settings back to the factory ones
`I refreshed my icons.` / `Your Wi-Fi is safe.`	fetched the coin artwork again
`I started over fresh.` (in red) / `Your Wi-Fi is safe.`	the deepest cure it has: everything is erased except the Wi-Fi and a fixed address

`Your Wi-Fi is safe.` is on three of those four for a reason: the network you taught it, and a fixed address if you set one, is kept through all of them, so the ticker comes back by itself rather than asking you to set it up again.

The crash-report card



After a fault that left a record, the start screen shows a QR code for a minute, headed `Crash report data` with `Scan and send to Lee` under it, and a thin green line runs along the bottom while it is up. The code holds the technical record and nothing about you. There is a preview version on the settings page, headed `Crash report` or `Crash report (sample)`, with a line such as `3: Soft watchdog` or `Exception` and the time and memory at the moment of the crash.

The factory-reset countdown







From the second quick restart in a row, the start screen shows a row of five circles with the ones already counted in red, `3 more` / `quick reboots` / `for factory reset`, and a red line under it that grows through the window you have to restart again inside.



On the fifth, `Factory Reset` in red, and then the confirmation. The whole procedure, and how to avoid doing it by accident, is on Factory reset by switching it off and on five times.

The settings health card



`Health status` reports on the ticker's own storage, in one of four texts:

It says	What it means
`A storage check found a` / `problem and repaired it.` / `Your settings are intact -` / `restored from my backup.`	the backup copy did its job; nothing for you to do
`A storage check found both` / `copies of your settings` / `unreadable.` / `Your coins are back to` / `the starter set.`	the settings were lost and rebuilt from the factory ones; re-pick your coins when convenient
`Both copies of my` / `settings storage failed` / `their check.` / `Your coins look intact.`	the check failed but the settings look right; worth a glance at the settings page
`I could not set up a` / `backup copy of your` / `settings on this unit.` / `Everything works normally`	the ticker is working, but without its spare copy, and Lee would like to know

More on what to do about each is on A Health status card appeared at start-up.

Screen messages about the address and settings

Everything you change about the ticker happens on a page it serves to your phone or computer, and the ticker spends a fair amount of its screen time telling you where that page is. These are those screens.

Where the settings page is







`My settings are here:` with an address appears on the start screen, under the logo, once the ticker has an address.

The first-run tour spells it out twice over, once for a computer and once for a phone. The computer card insists on the two things people get wrong: `Not a search box!` and `http:// not https://`, plain http because the page travels only on your own network, never over the internet. The phone card is the same address as a QR code.



The scheduled address popup is the small version, a green-bordered box over whatever was on screen, with the address and the network it is on. It has a QR form too, with phone and tablet icons and a seconds badge. What it is and how to switch it off is on The address popup and QR code.

The first-run tour



`Nicely done!` opens the tour, the moment the ticker first joins a network. `For help...` follows, the same card the setup rotation uses, with the phone number and email address on it. The tour ends with `You're in settings!` / `Pick your coins,` / `hit Save, and` / `I'll get to work!` once the page has been opened for the first time.

Small notes about addresses

These are dim, short notes, about seven seconds each. They are written for the person helping you rather than for you, and nothing is asked of you.



The note reads	What it means
`IP > 192.168.1.42`	the ticker's own address changed; the address popup follows with the new one, whether or not the popup is switched on
`Server reassigned` with an old and a new address	the price server moved to another machine, which is our business rather than yours
`I can now see my` / `server's API again:` with a name and an address	the server's name resolved again after a stretch when it did not

Setting the password



`Password setup code` with four digits appears when you start the lock flow on the settings page. Typing it back proves you are standing at the ticker rather than only on the network. It lasts two minutes and three tries; a wrong try keeps the same code, and the third wrong try puts up a fresh one. The ticker shows at most one new code every 30 seconds. While the code is up, the settings page cannot take a screenshot, so read the code off the ticker itself. The page has a `Show the code again` link that asks for a new one. The whole procedure is on Lock the settings with a password.

Colors



When a colorset is chosen, the ticker shows what it picked: the words `Up`, `Flat` and `Down` in that set's own price colors, the set's name, the brightness, and a band of the other colors it uses.

Paused from the page

Pausing from the settings page puts a small dark disc in a corner of the screen, with a ring that empties as the hold runs out and the time left in the middle of it, counted in seconds or, for a long hold, as something like `2m`. It clears by itself.

Glossary

Crypto terms on the ticker







Terms

- **Symbol**: the coin's short code, `BTC` for Bitcoin. Not unique; two coins can share one.
- **Price**: in US dollars, from the server's cache of CoinGecko data.
- **24h%**: how far the price moved over the last 24 hours, counting back from now. Green or red (or the colorset's pair) by direction.

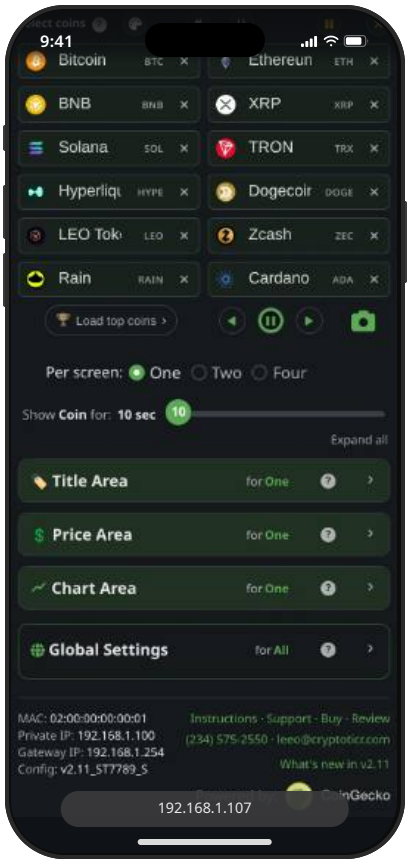
- **24h Vol** (`V` on the glass when the prefix is on): how much of the coin was traded, worldwide, in the last 24 hours.
- **Market Cap** (`M`): the value of all of a coin's coins put together, price times how many exist.
- **Market Cap Rank** (`#`): the coin's position among all coins by market cap; `#1` is the biggest.
- **Total Market Cap**: every cryptocurrency's market cap combined, the big number on the market overview card.
- **BTC dom**: Bitcoin's share of the total market cap. `Rising dominance means money favoring Bitcoin over the rest.`
- **24h vol** (market-wide): how much was traded across the whole market in the last 24 hours.
- **Sector**: `a family of coins with the same purpose, gaming, AI, DeFi, meme coins, and so on.` The sector heat card shows the one with the biggest 24-hour move.
- **Stablecoin**: a coin pegged to a currency such as the dollar; left out of the top-coins loader because its price does not move.

Wi-Fi words are on Wi-Fi terms used by the ticker.

Wi-Fi terms used by the ticker







SSID

The name of a Wi-Fi network — what you see in a phone's Wi-Fi list. The setup page's manual box is labeled `Network name (SSID)`. A hidden network has an SSID that is not broadcast.

2.4 GHz and 5 GHz

The two radio bands home Wi-Fi uses. The ticker works on 2.4 GHz only. Many routers offer both under one name; some give each its own name.

WEP, WPA, WPA2, WPA3

The generations of Wi-Fi password protection. The ticker joins WEP, WPA and WPA2 networks; it cannot join a network set to WPA3 only.

DHCP and IP address

An IP address is a device's number on your network, such as `192.168.1.42`. DHCP is the router handing those numbers out automatically — the normal arrangement, and what the ticker uses unless you give it a fixed address. The

settings page's footer shows the ticker's as `Private IP`.

Static IP, gateway, subnet, DNS

A static (fixed) IP is an address you choose for the ticker instead of letting the router pick. It needs two companions: the gateway (the router's own address) and the subnet mask (which addresses count as your network, usually `255.255.255.0`). DNS is the service that turns names into addresses; left blank, the ticker uses the router's.

dBm

The strength of the signal the ticker hears from your router, as a negative number: -50 is strong, -70 fair, -85 weak. See Signal bars and dBm.

Captive portal

A network that shows a web page — terms to accept, a room number to enter — before letting a device online. Hotel, cafe and airport Wi-Fi. The ticker cannot use one; see Hotel, cafe and public Wi-Fi.

Guest network

A second network a router offers to visitors, walled off from the main one. A ticker on it shows prices but cannot be reached from your phone on the main network; see Guest networks.

MAC address

The ticker's permanent hardware address, shown in the settings page footer as `MAC` and in the setup page header. Routers use it to identify devices — for a reservation or an approval list.

Hostname and the CT name

The ticker announces itself to your router as `CT` and three digits; the same name is its setup network. See The setup network.

Public IP and API server IP

The address your whole home has on the internet, and the address the ticker's price server answers at, both in the settings page footer. Useful only when support asks.

Support

Before you call: what to have ready

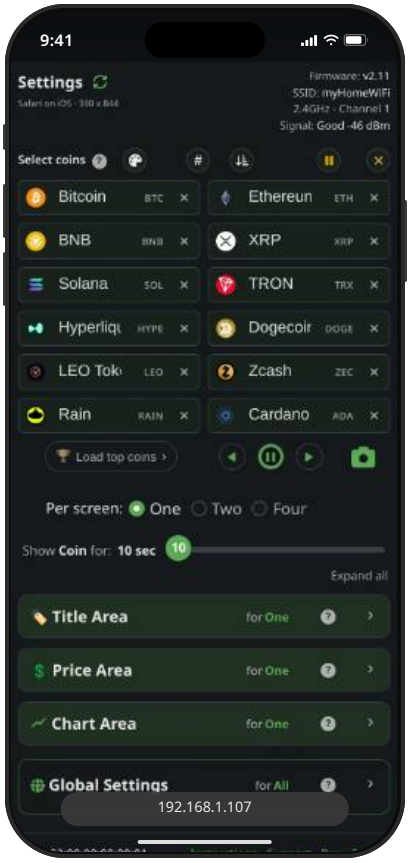
Before you start

- Nothing is required. Every item below makes the conversation shorter; none is needed to have it.

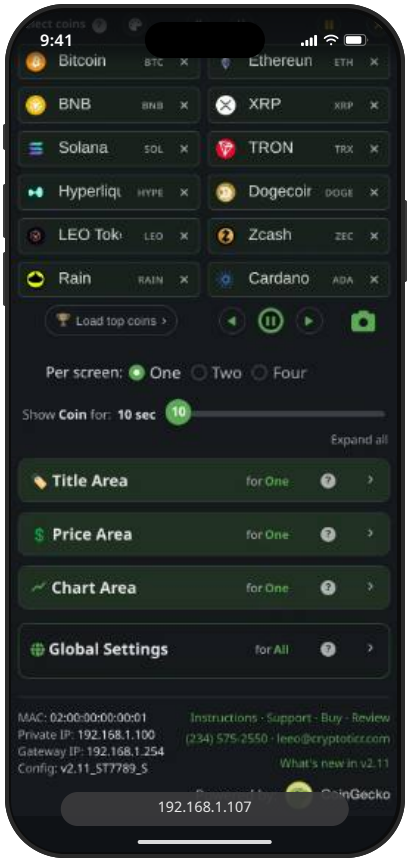
Steps

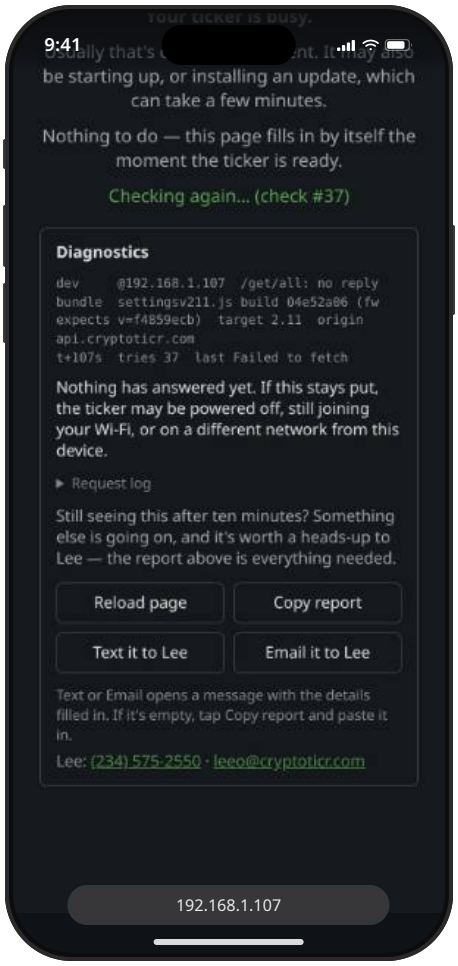
1. Read the line under `Settings` at the top of the settings page. It names your browser and screen size in one line, so support never has to ask what you are using.
2. Read the `Firmware:` line on the right of the header, for example `v2.09`, and, in the footer, the `Config` line, which names the full build, for example `v2.09_ST7789_S`.
3. If the ticker's screen is showing a message, write down its exact words, or photograph it. The technical row under a recovery line (`3: Soft watchdog | mid a data fetch`) and the `Status report:` table at the end of setup are written for exactly this moment.
4. If the settings page will not load, use the row of buttons on its wait card: `Copy report` puts a full report on the clipboard, `Text it to Lee` and `Email it to Lee` open a message with it filled in. The `Diagnostics` box above the buttons holds the short technical version.
5. If a Wi-Fi join failed, open `Extra technical detail` (or `What I saw`) in the setup page's status panel and screenshot it. The `Router reason` and `My radio` lines are what Lee reads. The page says as much: `None of this needs to mean anything to you. If you call or text Lee, he may ask what it says.`
6. For anything else, the settings page's `Info` buttons open `System Info` (everything about the ticker and its network) and `Files Info`; a screenshot of `System Info` answers most questions about a running ticker.

The header: firmware, network and signal



The footer: address, MAC and config





You’re done when

- You can read the browser line, the firmware line and the screen’s exact words down the phone, or have screenshots of them.

Problems?

- The page will not load at all: The settings page won't open
- Then Contact.

Security

The settings page is local

The ticker’s settings page is served by the ticker to your own network only. Someone on the internet cannot reach it; someone on your Wi-Fi can. That is the whole model: anyone you let onto your network can look at, and by default

change, the ticker's display settings, the same trust you extend to them for your printer.

A web page you visit elsewhere on the internet cannot reach the ticker or change anything on it.

Why it is http, not https

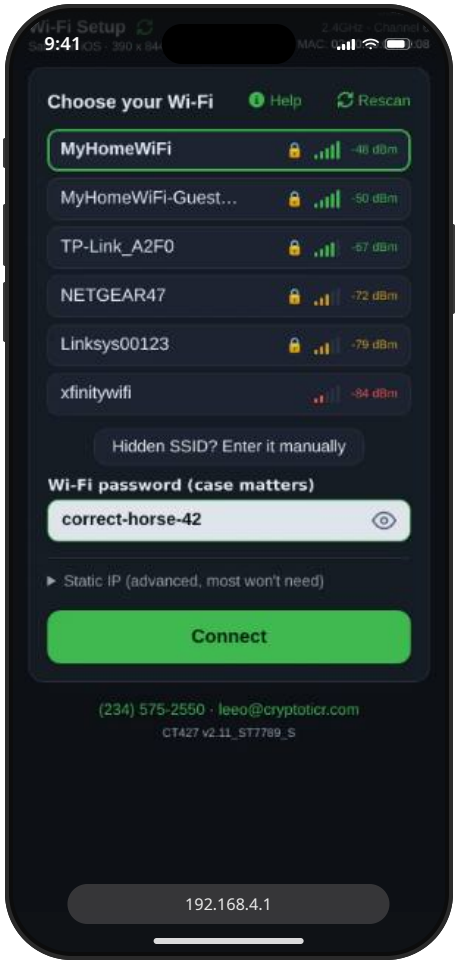
The page's address is `http://` followed by a private address such as `192.168.1.42`. Browsers reserve the padlock for names on the public internet with certificates behind them; a small device on a home network has neither, and a browser told to use `https://` for it shows an error. The ticker therefore speaks plain http, and its screens say `http:// not https://` wherever they show the address. Everything between your phone and the ticker stays on your own network; none of this traffic goes over the internet. The page travels from the ticker to your phone and no further:



Nothing on the page is a secret to your own network: it carries your coin list, not your password.

The setup network

The `CT` setup network has no password and exists only until the ticker is on your Wi-Fi. It carries your Wi-Fi password once, from your phone to the ticker, and shuts down the moment the join succeeds:



The setup page is written so your phone does not offer it saved passwords, and while the ticker connects it paints the password on its own screen only if you left the page's eye button open; otherwise it shows asterisks.

The optional password

`Lock` in the settings page's `Device` section sets a password that stops anyone on your network changing settings; viewing stays open. Setting it requires typing a four-digit code that the ticker shows on its own screen, headed `Password setup code`, so nobody who only found the page over the network can lock you out.



Each browser you unlock stays unlocked; another phone asks again. Repeated wrong tries are slowed down, and a forgotten password cannot be looked up by anyone: the only way back is a factory reset. See Lock the settings with a password.

What the ticker will not do

It has no camera or microphone, it never connects to a wallet or exchange, and it stores nothing of yours on any server. See Privacy.