CryptoTicr

Installation manual

Setting the ticker up on your Wi-Fi from a phone, a tablet or a computer, and what to do if setup does not go through.

Need help? Call or text Lee, who designed it: (234) 575-2550

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Before you start

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

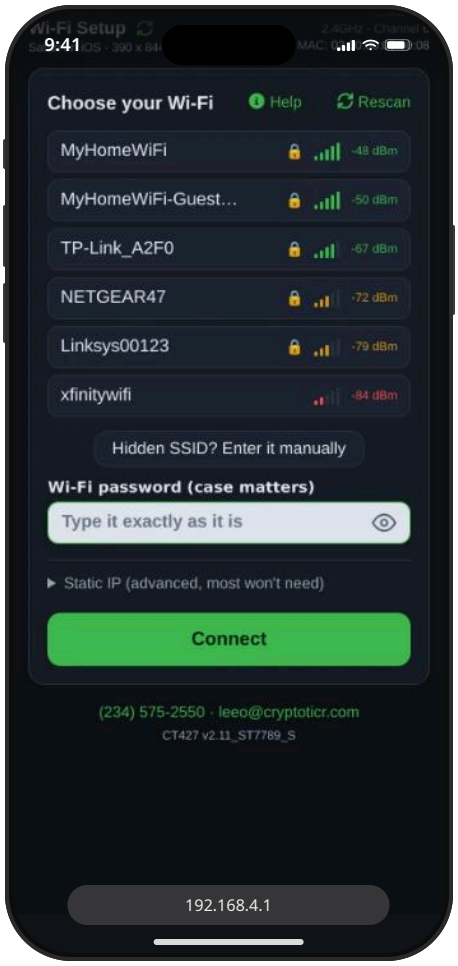
Within range of the router, away from metal, mirrors and microwaves, with as few thick walls between as possible. See Placement and care.

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.

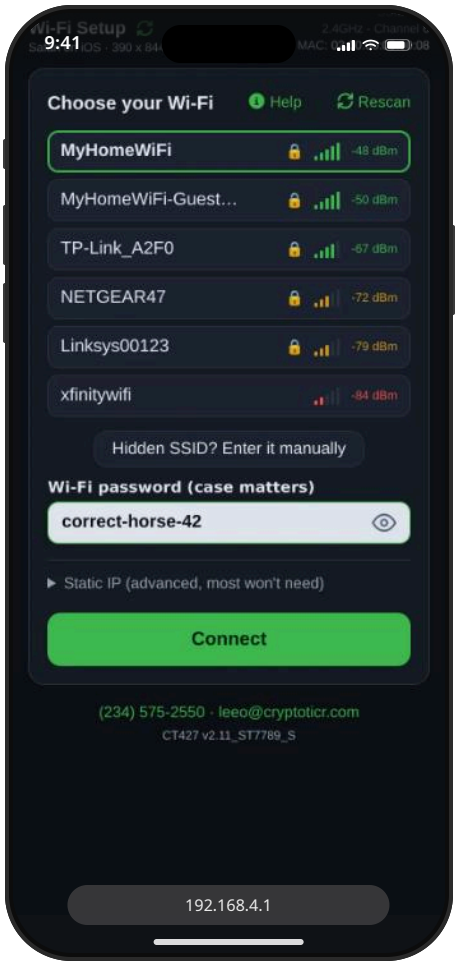
Internet access

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.

What's in the box



Contents

- The CryptoTicr.
- Two USB cables, each USB-A at one end and USB-C at the other: a plain one, and one with an on/off push button in the lead, so you can switch the ticker off without unplugging it.
- 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.

Unboxing and first power-up

Before you start

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

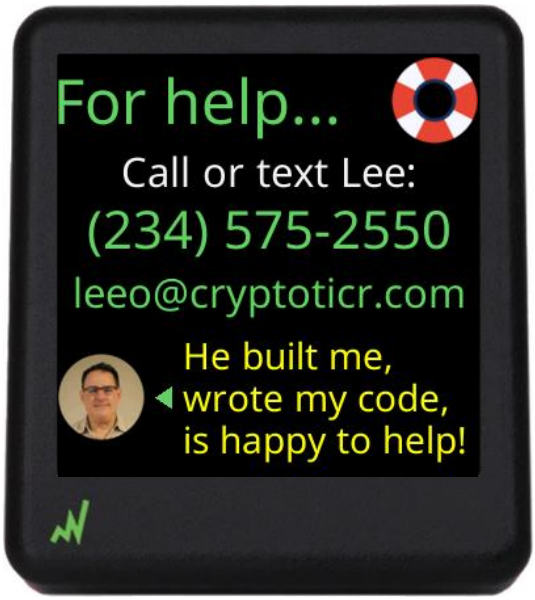
Steps

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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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?.

Set it up

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.

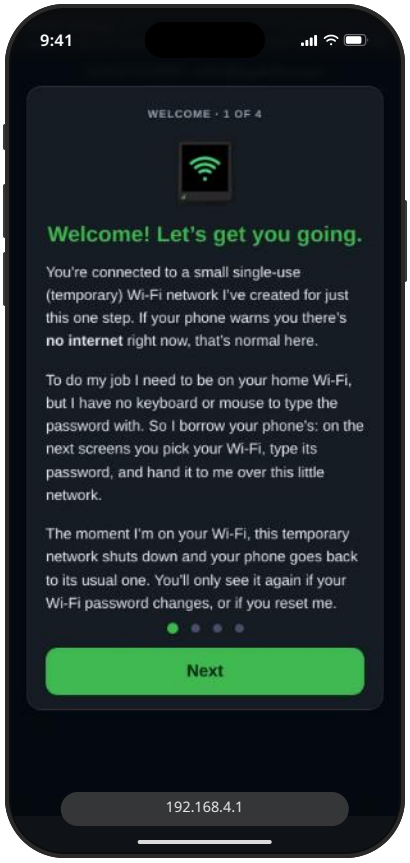


2. Watch the cards that follow: `For help...` (Lee’s phone number and email), `The steps:` (the three steps you are about to do), `Join my Wi-Fi` (the name of the ticker’s own setup network) and `Scan to join Wi-Fi` (a QR code that joins it for you). They repeat until you join. Full detail: The setup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

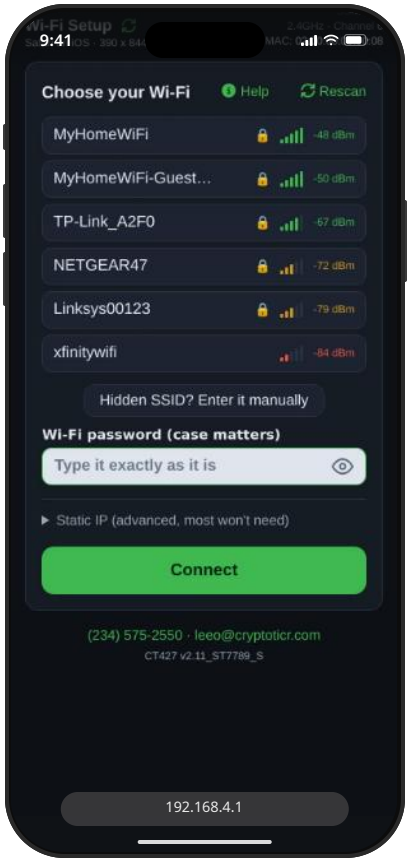


3. On your phone, open its Wi-Fi settings and join the network whose name is `CT` followed by three digits, the name shown on the `Join my Wi-Fi` card. It has no password. If your phone warns that this network has no internet, that is normal: the network exists only for this step. The glass changes to `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

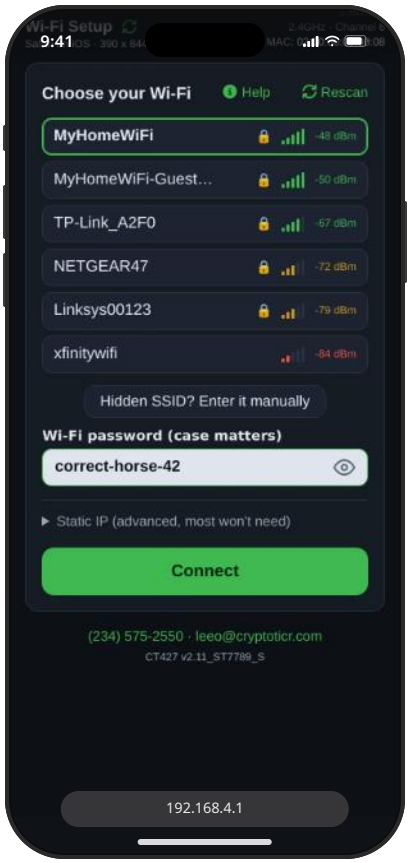


Then your own Wi-Fi in the list



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.

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

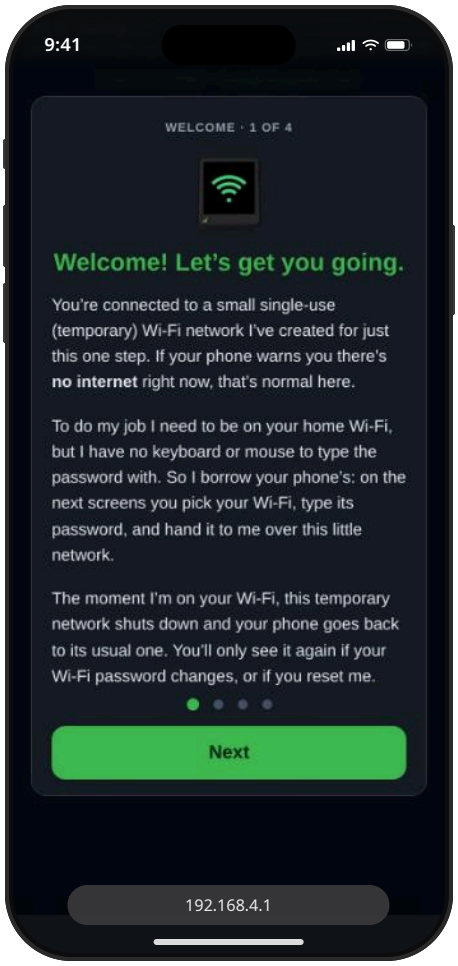
- The ticker is on and showing `Join my Wi-Fi` with a `CT` network name.
- Wi-Fi is on in the iPhone's Settings.

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

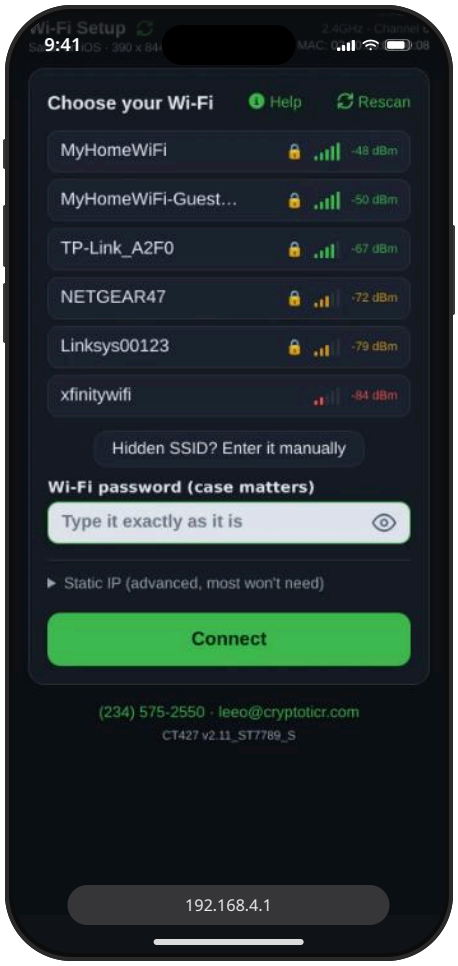
- The ticker is on and showing `Join my Wi-Fi` with a `CT` network name.
- Wi-Fi is on.

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

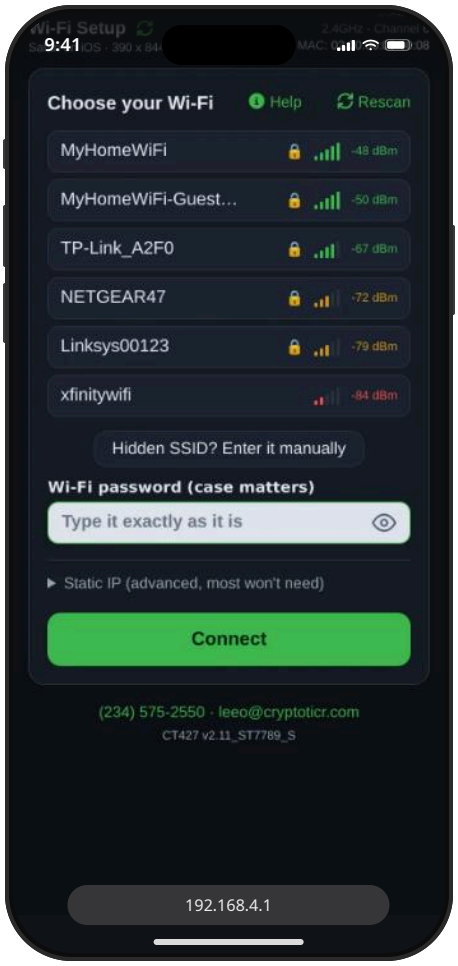
Setting up from a Windows PC

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

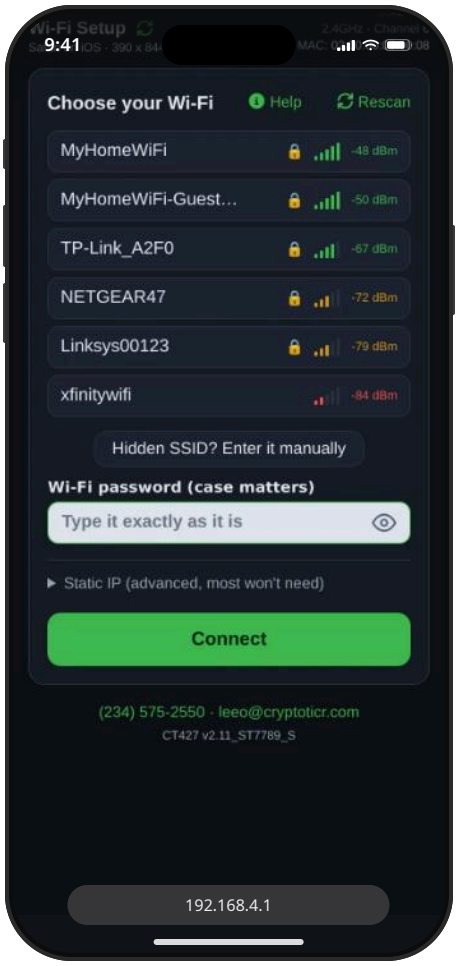
Setting up from a Mac

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.

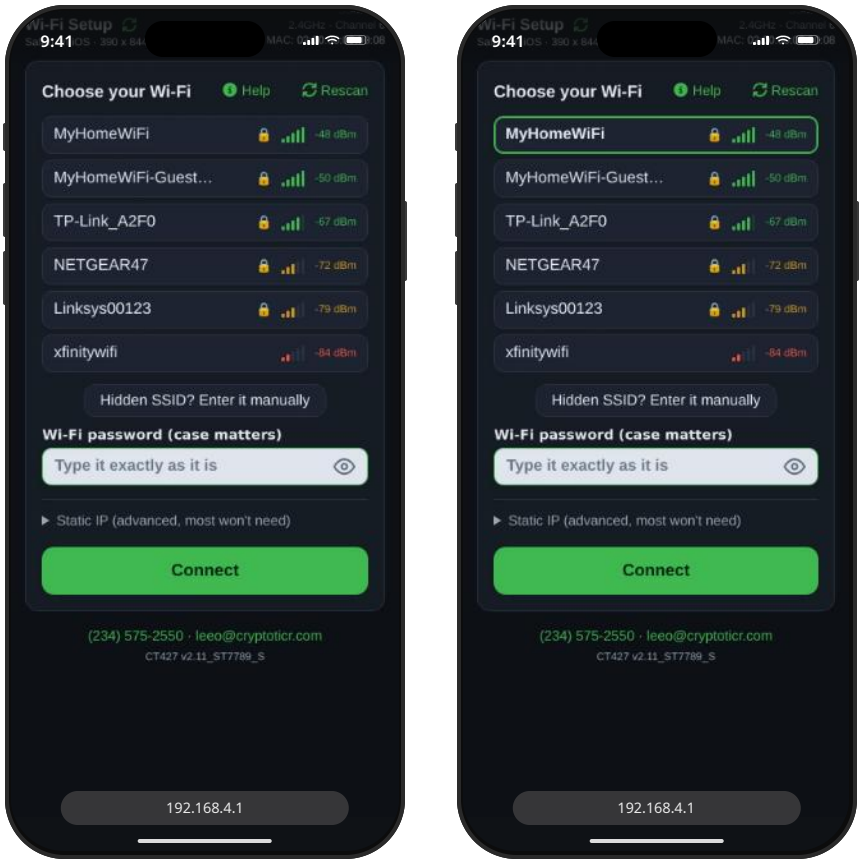
Steps

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

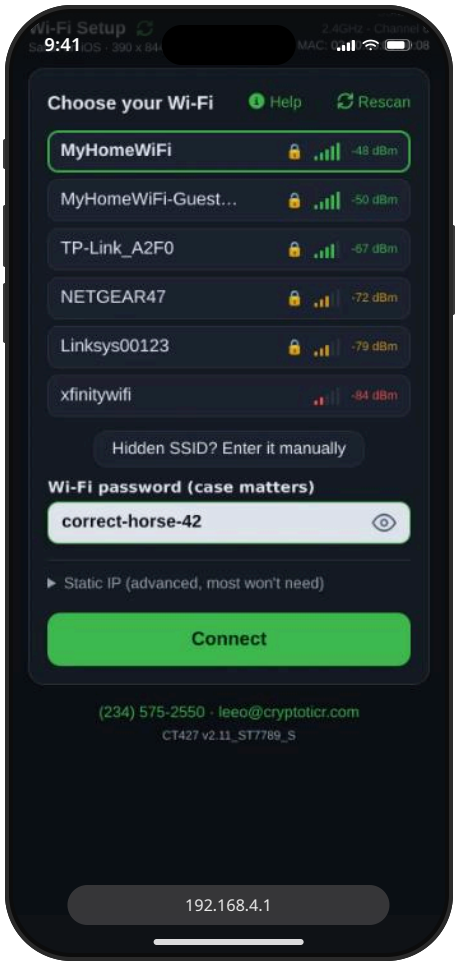
its name, a lock if it has a password, five signal bars, and the signal in dBm. The bars and the number are colored together: green is good, amber is fair, red is weak. A network the page thinks is a guest network carries a `guest` badge.

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.

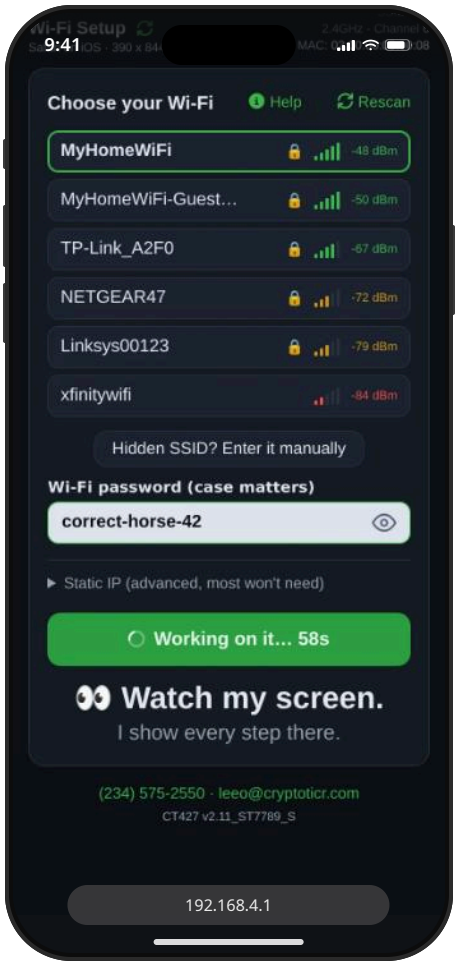
The networks it can see **The one you picked**



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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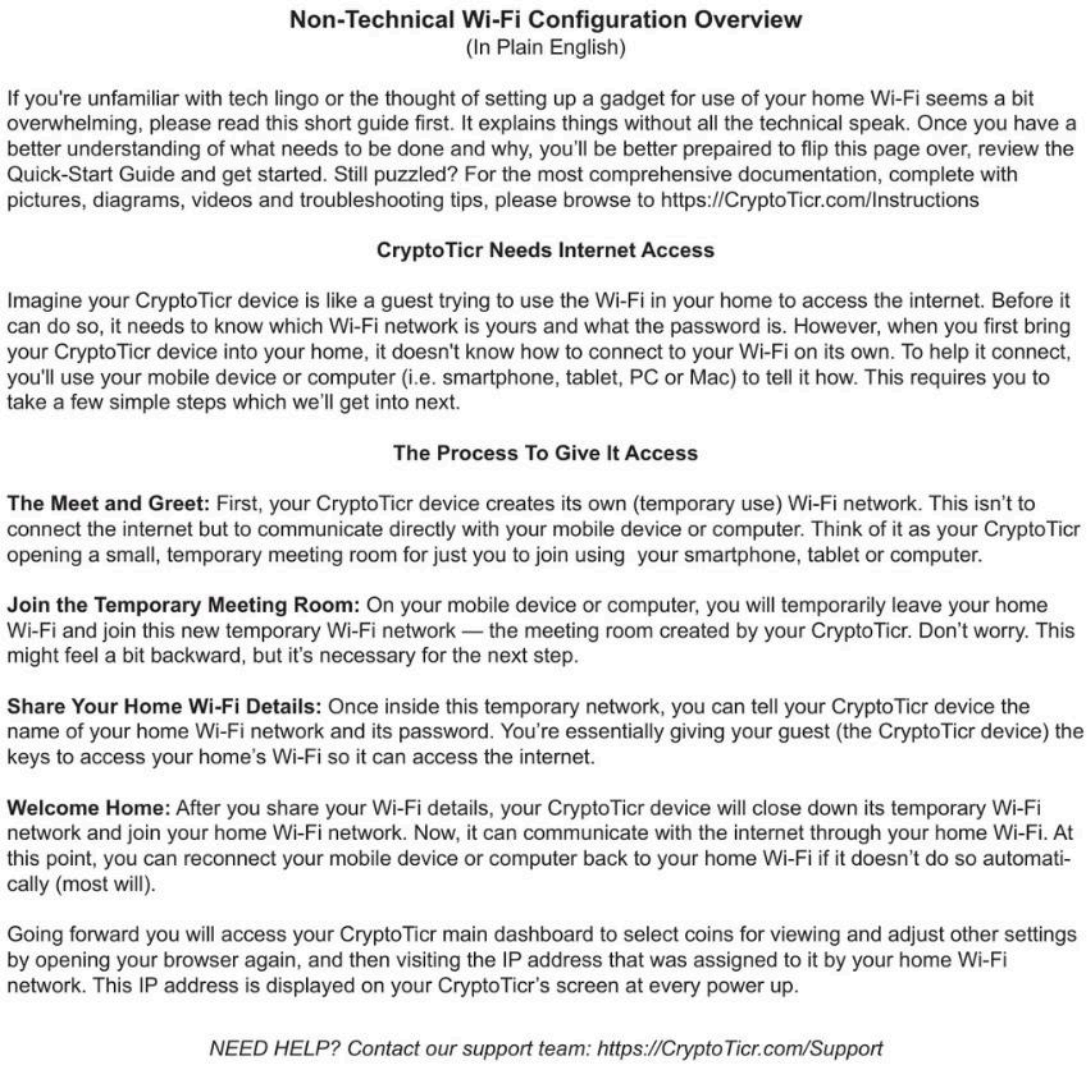
Wi-Fi setup in plain English

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.



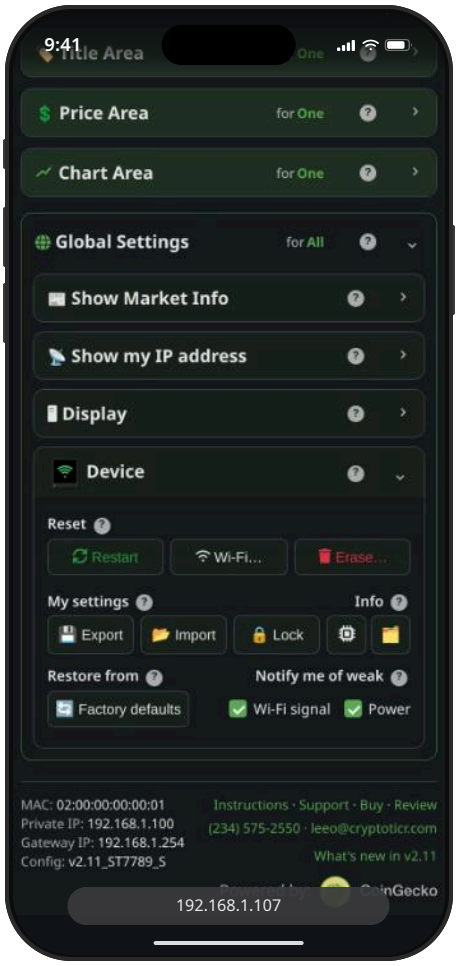
Nothing about this repeats. You do it once, and after a power cut the ticker rejoins your Wi-Fi on its own.

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.

What you see during setup

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

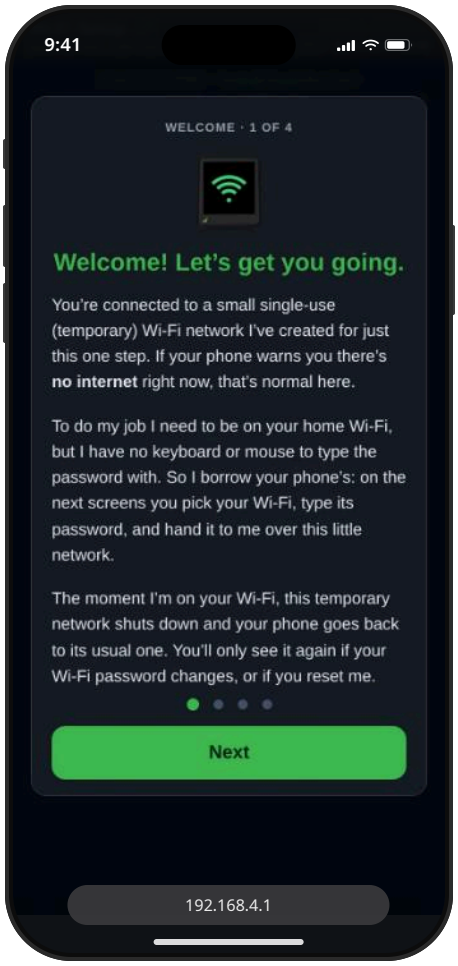
The setup page is served by the ticker itself, so it needs no internet. In setup mode it lives at `192.168.4.1` on the setup network; the same page, with the subtitle `Change Wi-Fi`, is reached from the settings page through `Device` → `Wi-Fi…` → `Change Wi-Fi`, and there it carries a `← Go back to the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

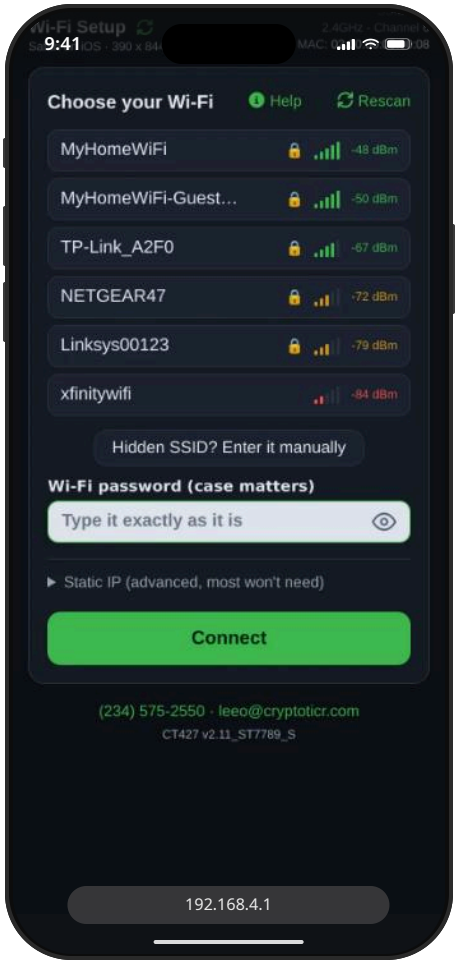


The network list

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.



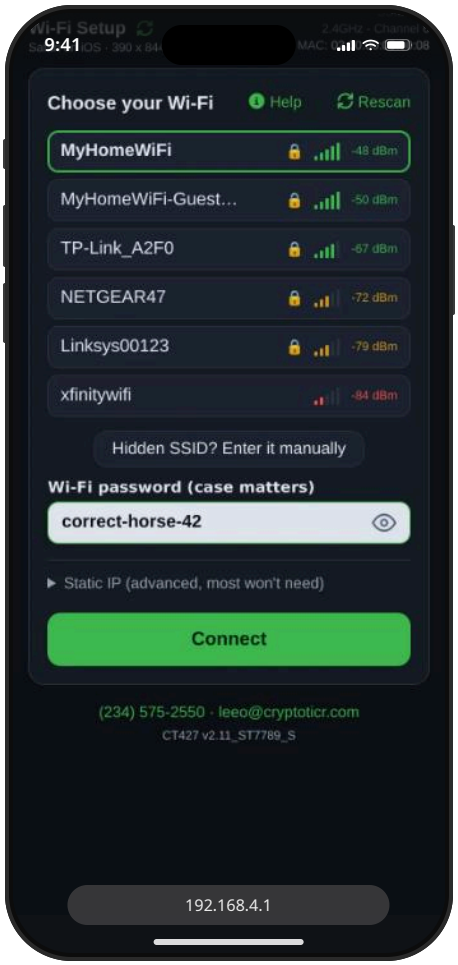
In setup mode, a page left open asks the ticker for its list again after five quiet minutes, but the ticker answers from the list it already has until that list is half an hour old. To bring in a router that was off when you opened the page, tap `Rescan`. The page never asks while you are typing or once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

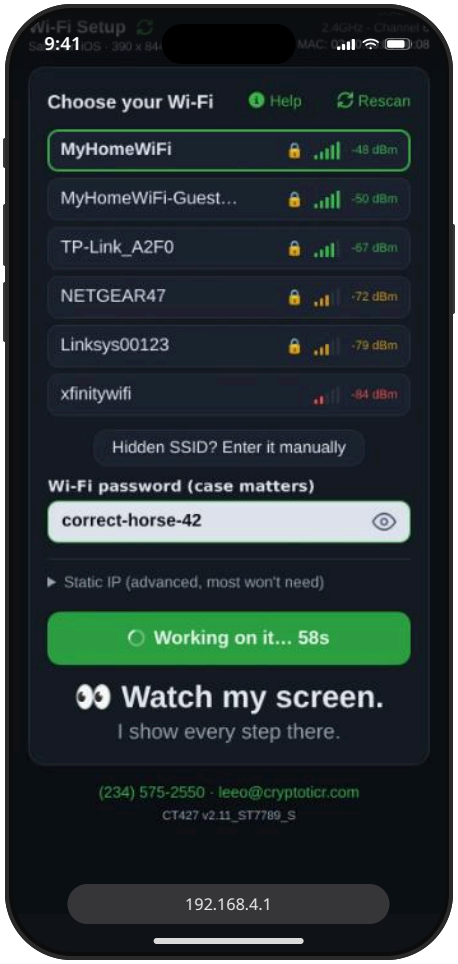
In Change Wi-Fi mode, picking the network the ticker is already on shows no password box; instead: `You're on this one now - I already have what I need, so there's nothing to type. Picking it again only applies the Advanced, Static IP settings below.` and the password-change heads-up described on Changing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



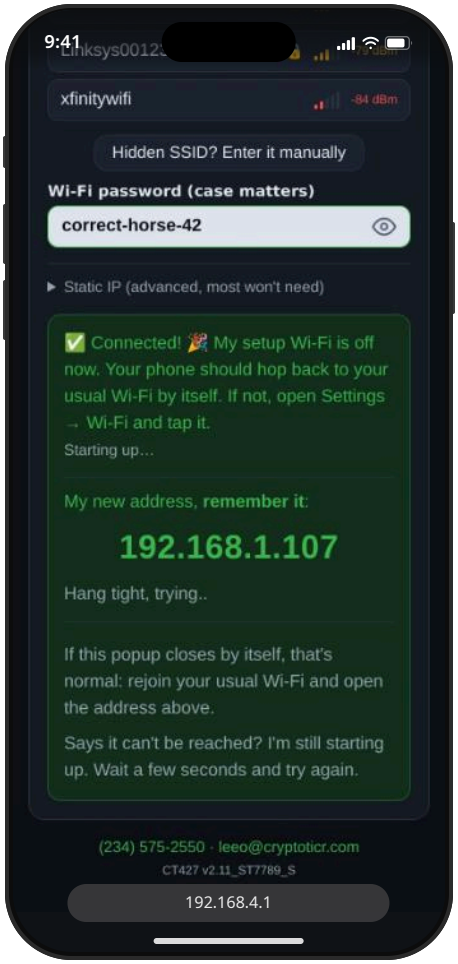
USB Power

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`.

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:

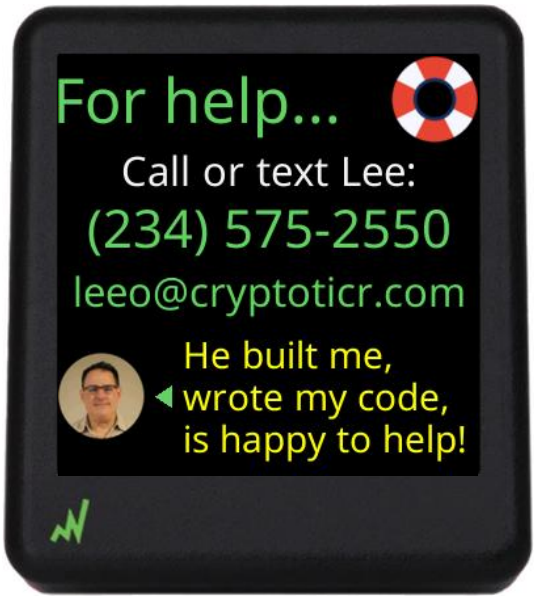
1. `For help...`, 11 seconds.
2. `The steps:`, 9 seconds. Plays on the first two laps only, then drops out.
3. `Join my Wi-Fi`, 90 seconds.
4. `Scan to join Wi-Fi`, 61 seconds.

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

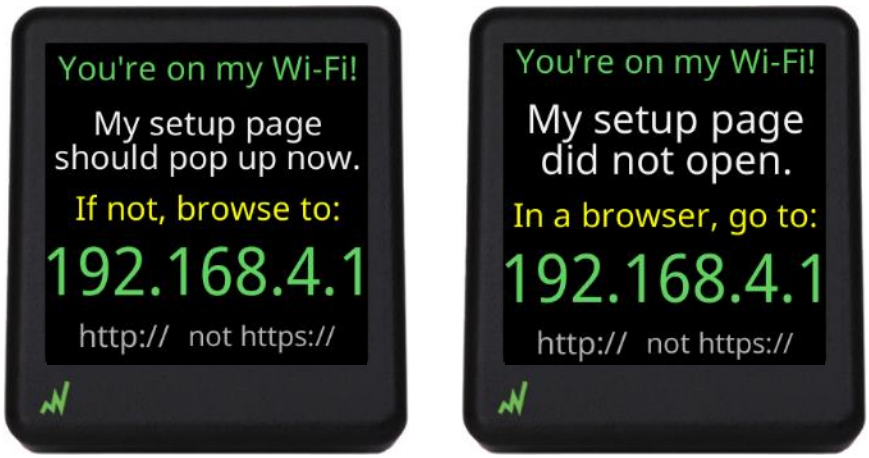
- **A device joins the setup network.** The how-to-join cards (`The steps:` , `Join my Wi-Fi` , `Scan to join Wi-Fi`) leave the loop while a device is on it, and the glass shows what stage you have reached instead: What the glass shows while joining.
- **Nobody joins for 15 minutes, on a ticker whose 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.



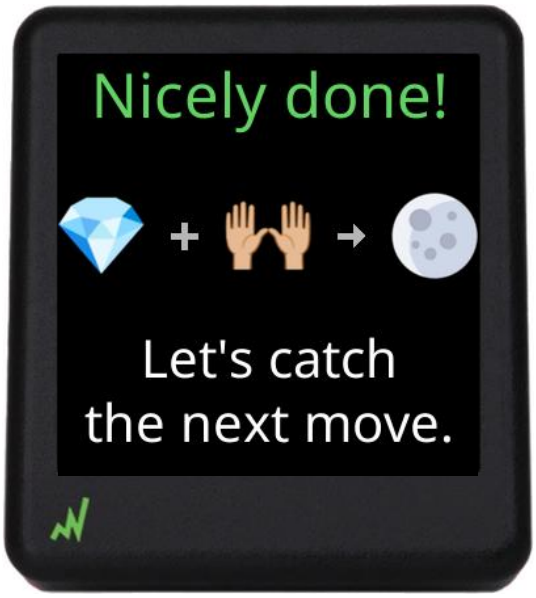
The proof-of-life show

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.

After setup

Find the settings page after setup

Before you start

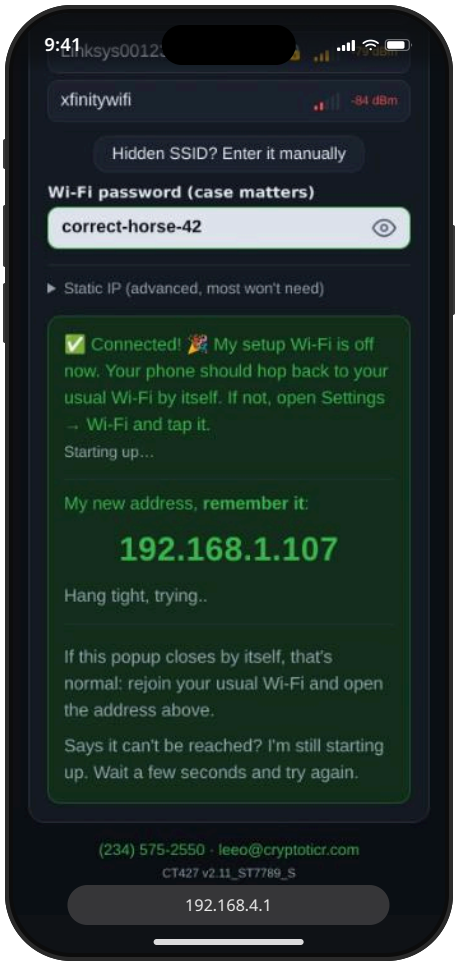
- The ticker has restarted after `You're all set!`. Its glass shows `Looking good!` / `Starting up...` (or `Wi-Fi saved.` / `Starting up...` on a network used without internet), then the logo with `My settings are here:` and an address.



- 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.

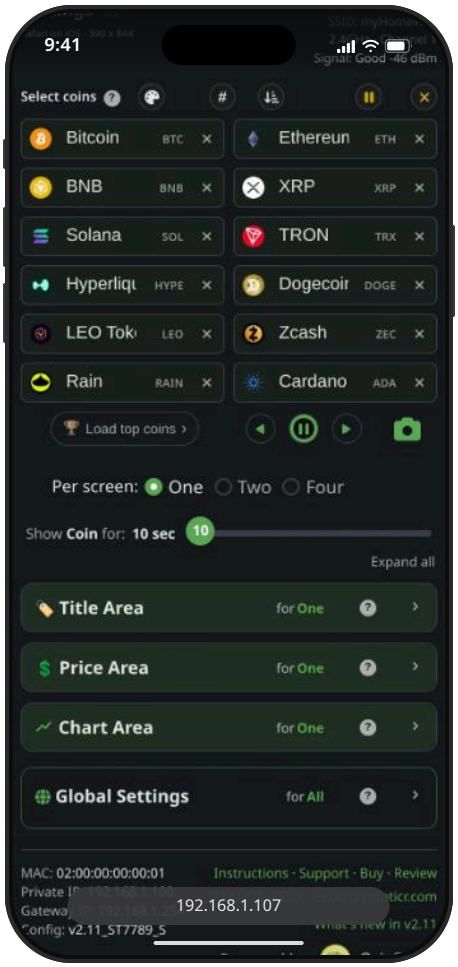
Problems?

- 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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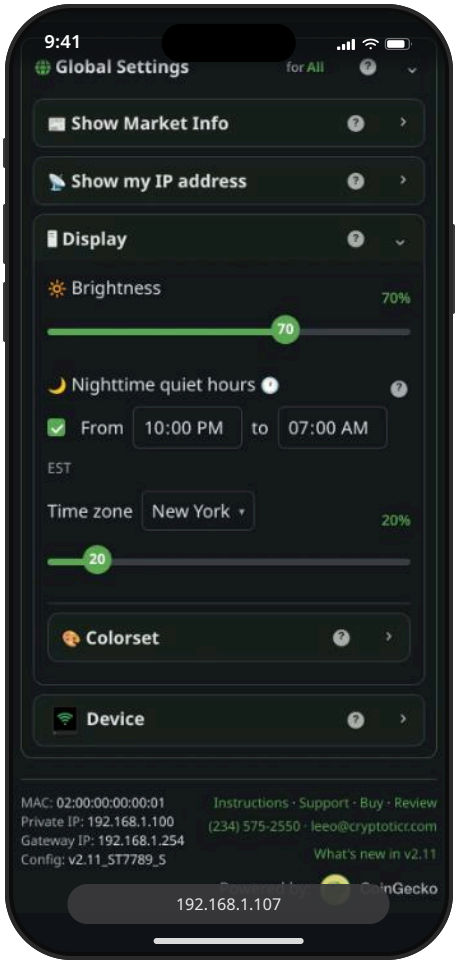
Things to do in the first hour

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.

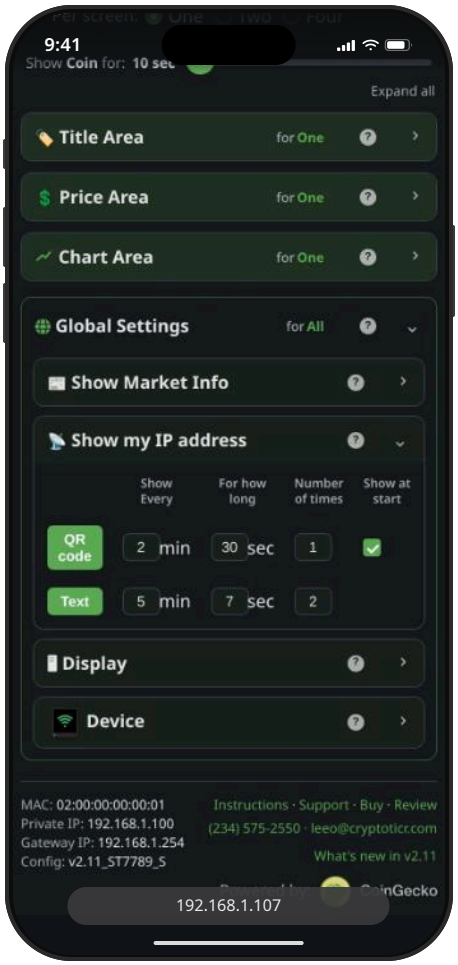
Steps

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.

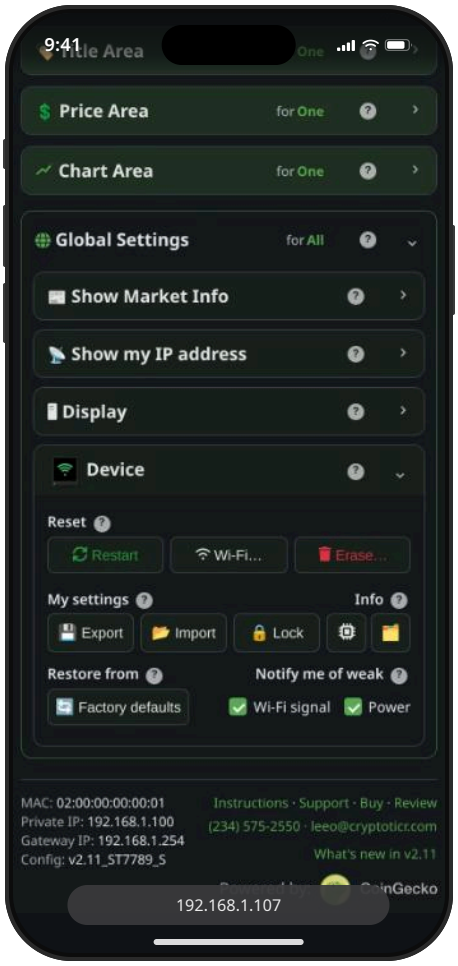


3. Choose a layout. `Per screen:` offers `One`, `Two` and `Four`, how many coins share the glass at a time. `One` has room for a chart; `Two` and `Four` do not.
4. Set how long each screen stays. Drag the `Show Coin for:` slider under the coin boxes (it reads `Show Two for:` or `Show Four for:` in those 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

Networks that need a little more

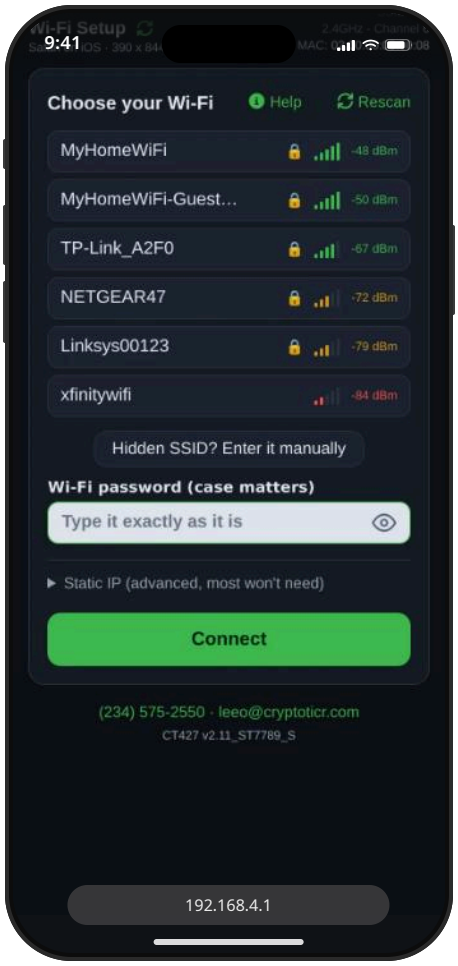
Join a hidden network

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.

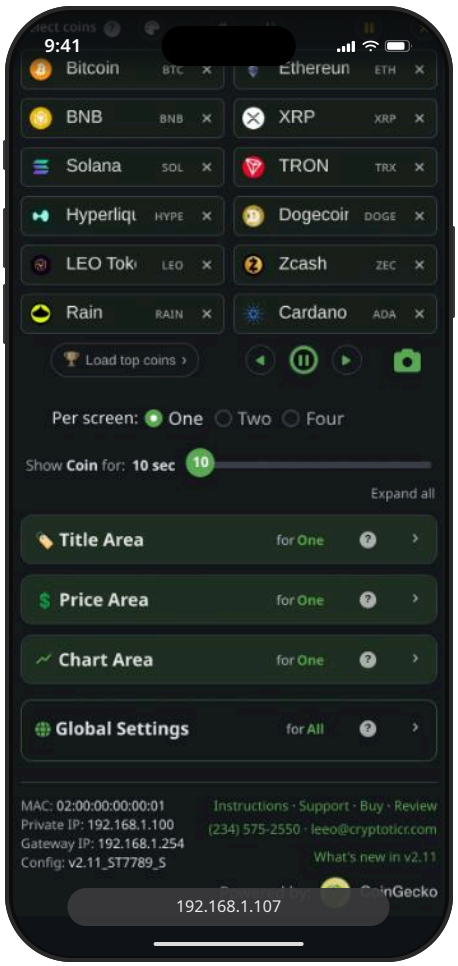
Give the ticker a fixed address

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.

Using a phone hotspot

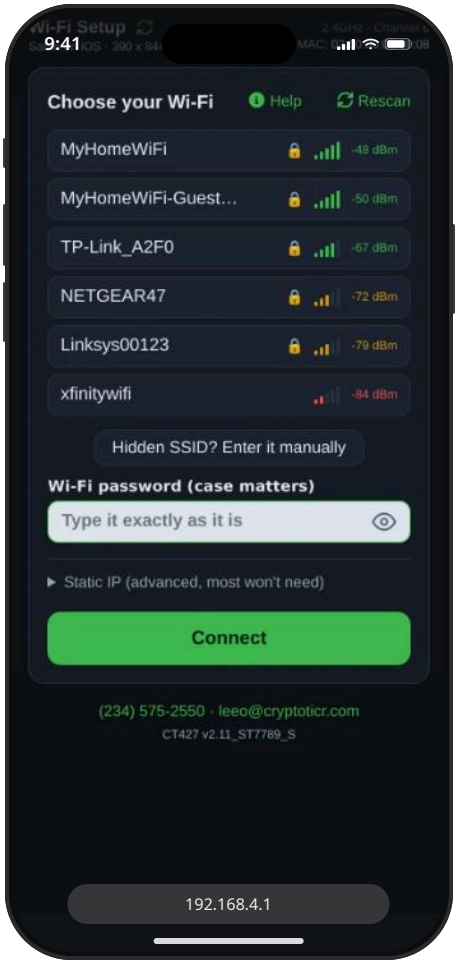


Before you start

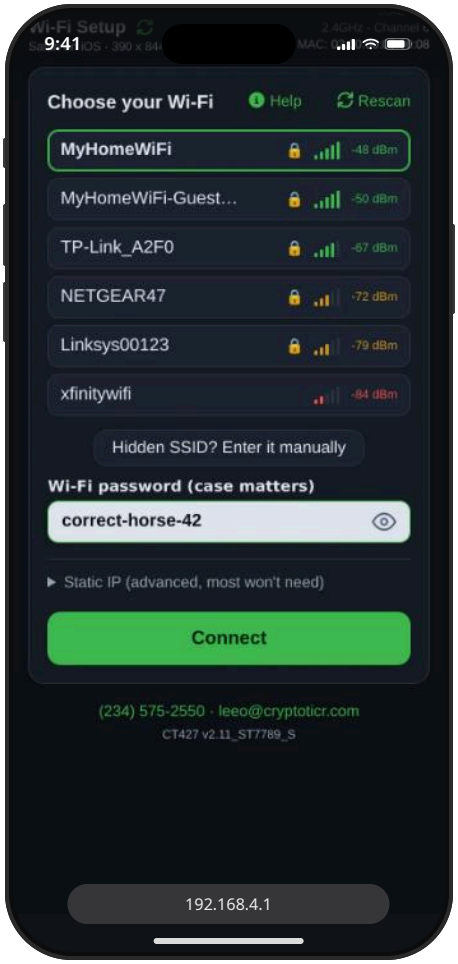
- The ticker can only see 2.4 GHz networks. Both major phones can run a hotspot that the ticker cannot see unless one setting is changed: on an iPhone, `Maximize Compatibility` must be on; on Android, the hotspot's band must be set to 2.4 GHz. The ticker's own screens say the same thing when a network 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.

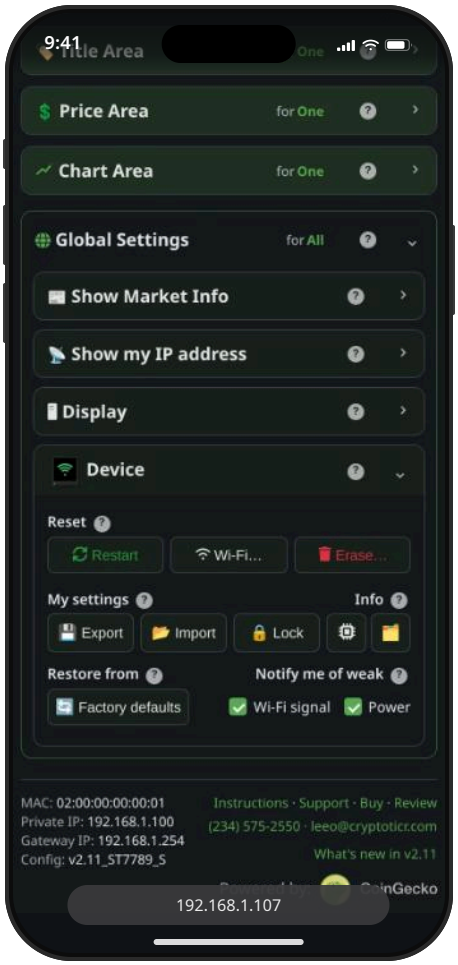
If setup does not go through

The CT setup network is not in my phone's Wi-Fi list

> No network beginning with CT appears in the phone's Wi-Fi list

> The ticker's screen does not show `Join my Wi-Fi`

> The ticker's screen shows `Connecting to:` or `Waiting for Wi-Fi` with a network name



Symptoms

Your phone's Wi-Fi list has no network whose name starts with `CT`, or the name comes and goes. Look at the ticker's screen: the network exists only while the screen is cycling the setup cards: `For help...`, `The steps:`, `Join my Wi-Fi`,

`Scan to join Wi-Fi`.



Cause

The setup network is on only while the ticker is in setup mode. A ticker whose screen shows `Connecting to:` and a network name, or `Waiting for Wi-Fi` / `Trying to connect`, already has a saved network and is trying to reach it; it does not offer setup while it does that. A ticker in setup mode that nobody joined for 15 minutes restarts (`No activity` / `Restarting for a fresh start` with a countdown) and the network is off for a few seconds while it does. Otherwise the network is a plain, open 2.4 GHz network on channel 1, which every phone can see.





Fix

1. Read the ticker's screen. If it shows `Join my Wi-Fi` with a `CT` name, the network is on: pull your phone's Wi-Fi list down to refresh it, and stand within a few meters of the ticker.
2. If the screen shows `No activity` and a countdown, wait for the restart; the cards and the network come back within a minute.
3. If the screen shows `Connecting to:` or one of the waiting screens with a network name, the ticker is not in setup mode. If you can reach its settings page, use `Device` → `Wi-Fi…` → `Erase Wi-Fi` to put it into setup; see Erase the Wi-Fi and set up again.
4. If you cannot reach the settings page either, use the five-restart factory reset: Factory reset by switching it off and on five times. The ticker comes back in setup mode with its cards.
5. Join the `CT` network: Join the ticker's setup network.

If that didn't work

- The screen is dark: The screen is dark or looks off
- The network appears but the setup page does not open: The setup page did not open by itself
- Still stuck: Contact

The setup page did not open by itself

> Phone joined the CT network but nothing opened

> Glass shows `You're on my Wi-Fi!` and `If not, browse to:` with `192.168.4.1`

> Glass shows `My setup page` / `did not open.`

Symptoms

Your phone or computer is on the `CT` network, the ticker's screen says `You're on my Wi-Fi!`, but no setup page has appeared. The screen may add `My setup page` / `did not open.` and `In a browser, go to:` above the address `192.168.4.1`.



Cause

Phones open the page by asking a new network “is there a sign-in page here?”; the ticker answers yes and hands over its page. Some phones, the glass names Samsung, show a notification instead of opening a window; Windows laptops often show nothing at all; and a device that has joined the `CT` network before may skip the check. The page is always there at `192.168.4.1`; only the automatic opening varies.

Fix

1. Look for a notification such as “Sign in to network” on the phone and tap it.
2. If there is none, open your browser and type `http://192.168.4.1` into the address bar. The setup page opens; the glass changes to `Doing great!`.
3. If the browser says the address cannot be reached, check that the device is still on the `CT` network (phones drop a network with no internet quickly) and rejoin it, then try the address again.
4. If the page still does not load, restart the ticker (unplug it and plug it back in), wait for the `Join my Wi-Fi` card, rejoin the `CT` network and try again. The Help panel’s own words: `Still stuck? Restart me, rejoin my setup network (it's called CT followed by three numbers) and try again.`

If that didn’t work

- After about 90 seconds on the `CT` network with no page, the glass shows `Scan to open my page` with a QR code: scan it with the phone’s camera to open the page.



- The phone keeps leaving the network: My phone keeps leaving the setup network
- Still stuck: Contact

My phone keeps leaving the setup network

> The phone shows a 'no internet' warning on the CT network and switches back to home Wi-Fi

> Setup page: `⚠️ I've lost touch with your setup device (phone/tablet/PC).`

> The setup page stopped responding or the sign-in window closed

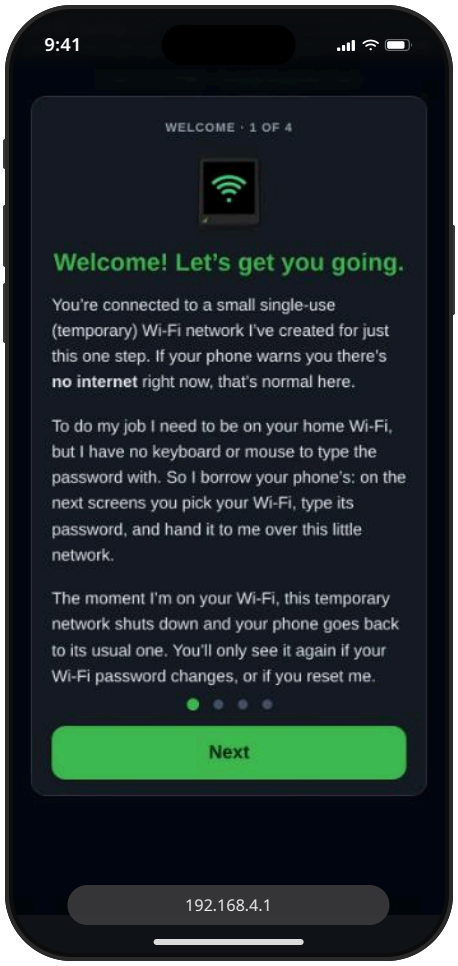


Symptoms

The setup page shows `⚠️ I've lost touch with your setup device (phone/tablet/PC). Usually that means it left my setup Wi-Fi — but I can also go quiet for a while when I'm busy joining your network.` Or the phone's Wi-Fi settings show it back on your home network without you touching them, and the setup page will not load.

Cause

Phones and tablets treat a network with no internet as broken and hop back to the last good one on their own, and the `CT` network deliberately has no internet. The setup page's first card warns about it: `If your phone warns you there's no internet right now, that's normal here.` Two other things look the same from the page's side: the ticker goes quiet for some seconds while it scans or joins a network, and the ticker shuts the `CT` network down the moment it has joined your Wi-Fi, which is success, not a fault.



Fix

1. Decide where you were. If you had already tapped `Connect` and the ticker's screen shows `You're all set!` or has restarted onto your Wi-Fi, nothing is wrong: the page says `Then this is normal: I shut my setup Wi-Fi down and joined your home network.` Put your phone on your usual Wi-Fi and open the address the ticker showed; see Find the settings page after setup.
2. If the ticker's screen shows `Can't get online`, it is waiting for your answer. Rejoin the `CT` network and reopen the setup page: the question comes back with `Use it anyway` and `Pick another Wi-Fi`. With no answer, the ticker uses that network after 3 minutes.
3. If you had not got that far, open the phone's Wi-Fi settings and rejoin the `CT` network. If the phone asks whether to stay connected without internet, say yes.
4. Go back to the setup page. It resumes where you were; a password you typed is kept while the page stays open.

5. If the page shows an address under `Back on your home Wi-Fi already?`, the ticker has already reported it: put the phone on your home network and type that address into the browser.

If that didn’t work

- The page will not open even on the `CT` network: The setup page did not open by itself
- You are back on your home Wi-Fi and the ticker’s address does not answer: The settings page won't open

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The start screen says it is waiting, retrying, or rejoining

> `My server says: wait.`

> `My server's having trouble.` or `Not your fault. Retrying...`

> `Rejoining your Wi-Fi...` or `Waiting for an address...`

> `Reaching my server...`, `Wi-Fi OK, no internet yet.` or `No internet yet.`

> `Is your internet working?` or `Redo setup: 5 fast restarts.`

Symptoms

The ticker shows its logo and version, `My settings are here:` with an address (or your network’s name and a router icon), and a box at the bottom that keeps changing its headline and a try counter: `My server says: wait.`, `My server's having trouble.`, `Not your fault. Retrying...`, `Rejoining your Wi-Fi...`, `Waiting for an address...`, `Reaching my server...`, `Wi-Fi OK, no internet yet.`, `No internet yet.`, `Is your internet working?` or `Redo setup: 5 fast restarts.` No coins appear.



Cause

Before it shows prices the ticker asks its server for a go-ahead, and it stays on this screen until it gets one. The headline says which step is holding it up. `My server says: wait.` and `My server's having trouble.` mean the internet works and the server itself answered, the delay is at the ticker's end of the world, and it clears when the server does. `Rejoining your Wi-Fi...` means the link to your router dropped; `Waiting for an address...` means the router accepted the ticker but has not handed it an address yet. `Reaching my server...` and `no internet yet` mean your network is up but nothing beyond the router is answering. The ticker keeps trying by itself, every 20 seconds or so, and restarts itself once if a stretch of tries gets nowhere.

Fix

1. Read the headline and give it a minute. Most of these clear on their own.
2. `Rejoining your Wi-Fi...` for more than a couple of minutes: check the router is on and within range; the ticker restarts itself and tries again if the link stays down.
3. `Waiting for an address...` for more than a couple of minutes: restart the router; some routers hold new devices until approved in their app, see Router settings that block new devices.
4. `No internet yet.` or `Reaching my server...`: check that another device on the same Wi-Fi can reach the internet. If it cannot, the fault is your internet connection, not the ticker. After a long wait the box asks `Is your internet`

`working?` and then says `Redo setup: 5 fast restarts.` Fix the internet first. Five fast restarts (powering it off and on five times, quickly) is the factory reset, which erases the coins and settings, so use it only if the ticker should be on a different network.

5. `My server says: wait.` or `My server's having trouble.`: nothing to do; the ticker is working and waiting for its server.

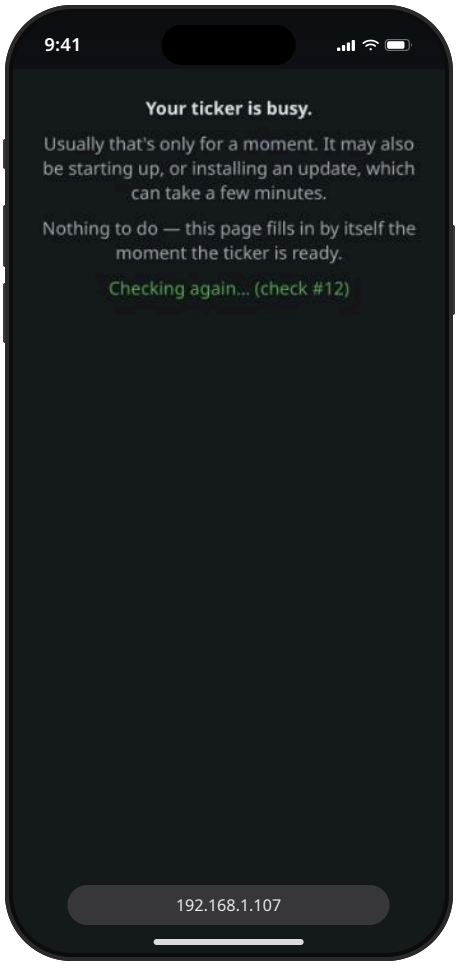
If that didn't work

- The box says `Something here blocks me.`: Glass says: This network is blocking me
- The box says `Weak Wi-Fi signal.`: move the ticker nearer the router; see Signal bars and dBm
- Still on this screen after ten minutes: Contact

The coin boxes are empty when the settings page opens

> Twelve empty coin boxes on a ticker that was showing coins a moment ago

> `Your ticker is busy.` and `Checking again… (check #3)` on the settings page



Symptoms

The settings page opened but every coin box is empty, or the page shows `Your ticker is busy.` / `Usually that's only for a moment.` with `Checking again… (check #n)` counting up. The ticker itself is on your Wi-Fi and may already be cycling coins.

Cause

The ticker’s web server starts before its settings have finished loading, so a page opened in the seconds after setup can be answered before the coin list is ready. The page knows this: when the ticker reports that settings were saved but sends no coins, the page keeps asking rather than show empty boxes as if that were the truth. A brand-new ticker that has never had a list saved is the one case where empty boxes are real, and even then it ships with a starter set of coins already marked as saved, so that case is rare.

Fix

1. Wait. The page fills itself in the moment the ticker answers with its coins; the `Checking again…` counter proves it is still asking.
2. If nothing changes after a minute, tap the CryptoTicr logo at the top of the page to reload it.
3. If the boxes are still empty after a reload and the ticker is showing coins on its screen, type your coins again and tap `Save & Apply Coins` ; see Pick your first coins.

If that didn’t work

- The busy card stays for minutes with a diagnosis under it: The settings page says your ticker is busy
- The ticker’s screen says it lost its settings: The ticker says it started over fresh

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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.

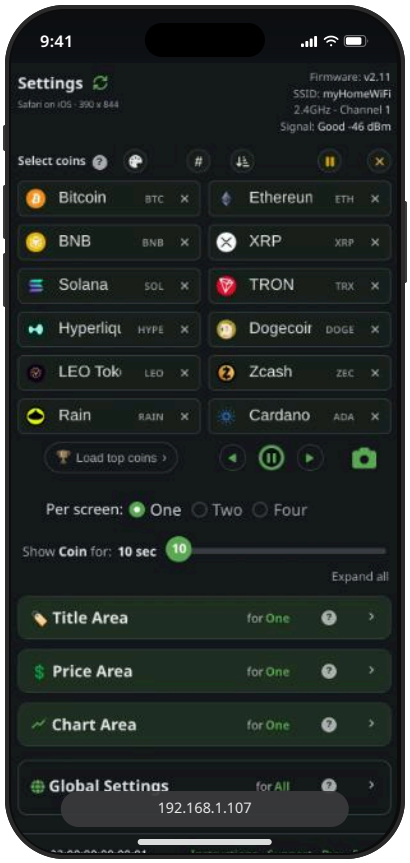
Steps

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

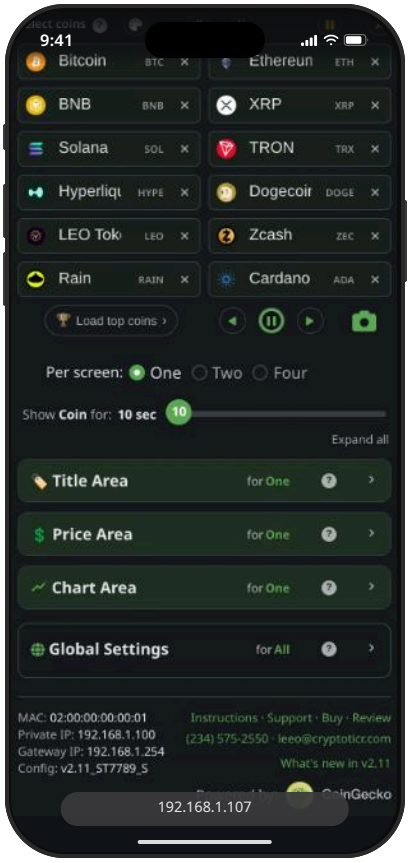
holds the short technical version.

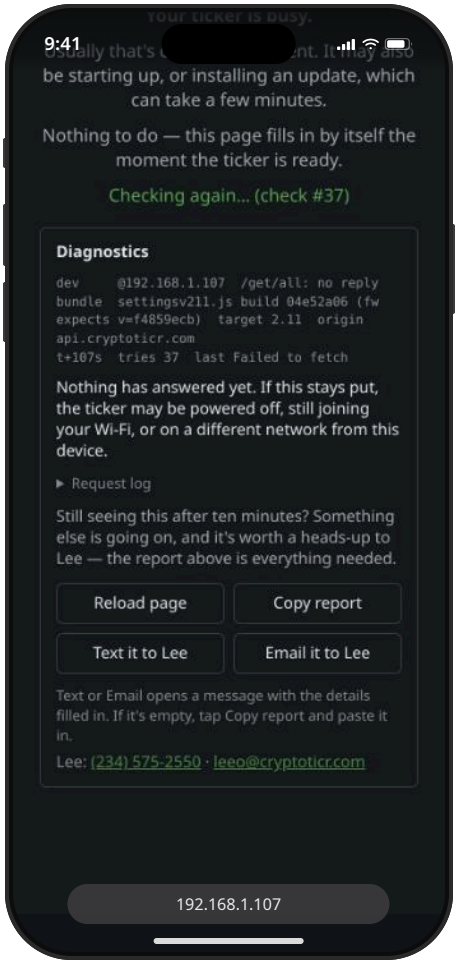
5. If a Wi-Fi join failed, open `Extra technical detail` (or `What I saw`) in the setup page's status panel and screenshot it. The `Router reason` and `My radio` lines are what Lee reads. The page says as much: `None of this needs to mean anything to you. If you call or text Lee, he may ask what it says.`
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.