WE Hatch

User manual

Two-tray egg incubator controller with knob control, Wi-Fi web app and laptop app. Installation, wiring and daily use. Firmware v1.0.

Turn right · Turn left · Press · Hold 1 s

WE Solutions, Pune. November 2026.



Contents

1 Meet your incubator

2 The controller box

3 Installing and wiring

4 Before you start

5 The knob: four moves

6 Start-up and the dashboard

7 Egg profiles

8 Editing a profile

9 Trays and batches

10 Settings: finding your way

11 Settings, card by card

12 Alerts

13 Phone, web and laptop

14 Troubleshooting

15 Care and quick reference

New in this edition

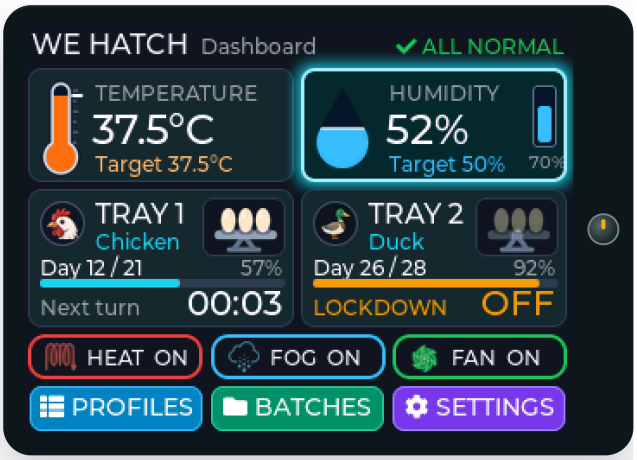
- **The controller box** and **Installing and wiring**: photos of every side, the terminal map, a wiring diagram and step-by-step installation.
- **Temperature to 0.1 °C**: the dashboard now shows tenths, averaged over the last 4 readings.
- **Wi-Fi power save** switch in Settings > WI-FI and on the web app's Network tab.
- **Clearer highlights**: cyan cursor, green frame for the open card, white ring on coloured buttons.
- New troubleshooting for wiring and outputs, and an updated technical data table.

Meet your incubator

The WE Hatch is a two-tray egg incubator with a colour screen and one control knob. It keeps an eye on temperature and humidity, turns the eggs on time, counts the days to hatch and warns you the moment something needs attention.

What it does for you

- **Watches the climate.** A sensor inside reads temperature and humidity every 2 seconds and shows both on the dashboard against the target of your bird.
- **Turns the eggs.** Each tray has its own motor. The incubator turns it every set number of minutes and stops turning on the lockdown day.
- **Counts the days.** Each tray knows its bird, its day and its hatch day, and shows the progress.
- **Raises alerts.** Too hot, too cold, too dry, too humid, low water, a heater or fogger that does nothing, or a sensor that stops reading: a pop-up and a beep tell you what is wrong and what to check.
- **Works from your phone or laptop.** On your Wi-Fi, the incubator has its own web page and a Windows app, protected by a PIN.



The dashboard: climate on top, the two trays in the middle, outputs and menus at the bottom.

Parts of the machine

Part	What it is for
Colour screen	2.4 inch, 320 × 240 pixels. Shows every screen in this manual.
Control knob	Turn it to move, press it to choose, hold it to go back. It is the only control you need.
Climate sensor	DHT11 temperature and humidity sensor inside the cabinet.
Heater	Heating lamp on the BULB output, switched by a relay.
Fogger	Adds humidity from the water tank. FOGGER output.

Part	What it is for
Fan	Moves and cools the air, lowers humidity. FAN output on the back.
Buzzer	Beeps for alerts.
Tray 1 and tray 2 motors	Tilt each egg tray from side to side. TRAY 1 and TRAY 2 outputs.
Wi-Fi	Connects to your 2.4 GHz router, or opens its own hotspot for set-up.

> **Heater, fogger and fan in this firmware version**
>
> In firmware v1.0 you switch the heater, fogger and fan on and off yourself in Settings > HARDWARE. The incubator watches the result and raises an alert if the temperature or humidity leaves its limits, or if an output that is on does not change anything. Egg turning, day counting and alerts are fully automatic.

Words used in this manual

Word	Meaning
Profile	The settings for one kind of bird: temperature, humidity, days, turning. There are 9: Chicken, Duck, Quail, Turkey, Goose, Pheasant, Peafowl, Ostrich and Custom.
Tray / batch	A tray of eggs that is incubating, with its bird, its day and its hatch day.
Lockdown	The last days before hatching. Turning stops so the chicks can get into position.
Cursor	The glowing border that shows where the knob is. You move it by turning the knob.
Card	One page of the Settings menu, for example SENSORS or WI-FI.

The controller box

Everything runs from one black box: the screen and knob on top, the climate sensor at the right end, the outputs on the front and the mains on the back.



1. **Screen.** 2.4 inch colour display behind a recessed window.
2. **Knob.** Turn, press and hold. The white line shows its position.
3. **Sensor window.** The DHT11 temperature and humidity sensor looks out through the grille. The red LED below it is the power light.
4. **BOOT and RESET.** Two small service buttons on the riser under the screen.
5. **PROG port.** USB socket for loading firmware by cable. Service only.
6. **Output terminals.** FOGGER, BULB, TRAY 1 and TRAY 2, two holes each (NO and NC).
7. **Base plate.** Four corner holes and two keyhole slots for screwing the box down.

All the way round



Front. Output labels above the terminals, PROG beside the USB slot.



Back. A AC MAIN L and N, **B** FAN NO and NC. The four holes between them are not used.



Right end. Sensor grille and power LED. Keep it uncovered.



Top. Screen, knob and the knob guide: turn to move, press to choose, hold to go back.

Terminal map

Every output has two holes. **NO** (normally open) carries live only while the output is ON. **NC** (normally closed) carries live only while it is OFF. Loads go on **NO**. The screw for each hole is reached from above, through the row of small holes on the step over the terminals.

Side	Holes, left to right as you face that side	Label	Switched by
Front	1 and 2	FOGGER NO / NC	FOG tile, Settings > HARDWARE
Front	3 and 4	BULB NO / NC	HEAT tile (heating lamp)
Front	5 and 6	TRAY 1 NO / NC	Tray 1 turning schedule, TEST TURN

Side	Holes, left to right as you face that side	Label	Switched by
Front	7 and 8	TRAY 2 NO / NC	Tray 2 turning schedule, TEST TURN
Back	1 and 2	AC MAIN L / N	Mains supply in, 230 V AC
Back	3 to 6	not used	Leave empty
Back	7 and 8	FAN NO / NC	FAN tile, Settings > HARDWARE

> **Rating of each output**
>
> Each output is a relay contact rated **5 A at 250 V AC**. At 230 V that is about 1,100 W, but keep every load well below it: a 100 W lamp draws under 0.5 A.

Service buttons and port

You never need BOOT, RESET or PROG in daily use: updates arrive over Wi-Fi (Settings > FIRMWARE UPDATE). They are there for a technician.

- **RESET** restarts the controller, exactly like switching it off and on. Trays, days and settings are kept.
- **BOOT + RESET** puts it in cable-programming mode: hold BOOT, press and release RESET, then release BOOT. The screen stays dark until new firmware is loaded through PROG.
- Use a thin non-metal pin to press the buttons. Do not press the knob while the controller starts up.

Size

	Width	Depth	Height
Body	101.6 mm	102 mm	65.5 mm
With knob	101.6 mm	102 mm	83 mm
Base plate	131.6 mm	102 mm	9.8 mm

Installing and wiring

Mount the box, wire the five loads, connect the mains last, then test each output from the knob. Allow about an hour.

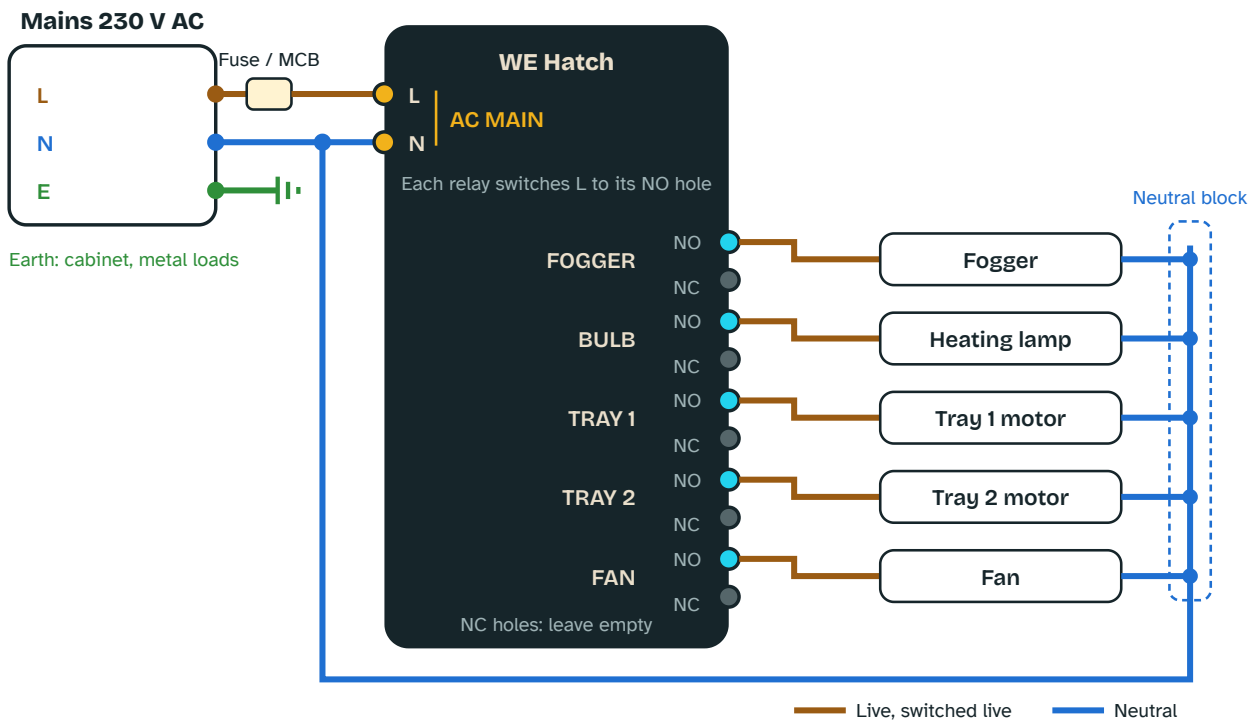
> **Mains voltage**
>
> The terminals carry 230 V AC. Only a qualified electrician should wire the controller, with the supply switched off and unplugged. Never open the box or touch a terminal while it is connected.

What you need

- Flexible copper wire, 0.75 to 1.5 mm², in brown or red (live), blue (neutral) and green-yellow (earth), with crimp ferrules for the ends.
- A neutral terminal block (or lever connectors) to join the neutral wires of the loads.
- A 3-pin plug or a switched supply with a fuse or MCB, for example 6 A.
- Four screws for the base plate, a small flat screwdriver and a wire stripper.

How it is wired

Mains live comes in at **AC MAIN L**. When an output switches ON, its relay connects that live to the output's **NO** hole, and the load runs. The other wire of every load goes to neutral, not back to the controller.



Every load takes its live from an NO hole and its neutral from the neutral block. The NC holes stay empty.

Step by step

1 Check each load

Read the watts on the lamp, fogger, fan and tray motors. Each one must stay under 5 A, and the fuse must cover all of them running together.

2 Mount the box

Screw the base plate to a flat, dry panel through its four corner holes, or hang it on the two keyhole slots. Leave about 5 cm free in front of and behind the box for the wires, and keep the sensor end open to the air you want to measure.

3 Prepare the wires

Strip 7 mm from each end and crimp a ferrule on stranded wire. Loosen the terminal screw from above, through the small hole on the step.

4 Wire the loads

For each load: live wire into the **NO** hole of its output (FOGGER, BULB, TRAY 1, TRAY 2 on the front, FAN on the back). Neutral wire into the neutral block. Earth any metal-cased load. Tighten each screw and give the wire a firm tug.

5

Connect the mains last

Supply live to **AC MAIN L**, supply neutral to **AC MAIN N**, and one wire from the neutral block to the supply neutral as well. Earth goes to the cabinet.

6

Check before power

No loose strands, no copper showing outside a hole, no wire in an NC hole unless you meant it, and nothing pressing on the sensor grille.

7

Switch on and test

Wait for the dashboard. In Settings > HARDWARE switch HEAT, FOG and FAN on one at a time: you hear a click and the load runs. In TRAYS press TEST TURN for each tray. Then carry on with Before you start.

> **NC holes**
>
> An NC hole is live while its output is OFF. It is meant for special set-ups, such as an alarm lamp that lights when the heater is off. For a normal incubator leave all NC holes empty.

4 Before you start

A few minutes of set-up keep the eggs and the electronics safe.

Placing the incubator

- Use a steady, level table in a room that stays between 20 and 28 °C.
- Keep it out of direct sunlight, away from heaters, air-conditioner outlets, open windows and draughts.
- Leave at least 10 cm of space around the air vents.
- Put it where you can hear the alert beep.

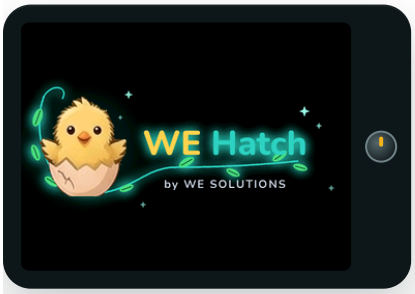
Safety

- The incubator runs on mains power. Unplug it before you open the electronics, clean it or change the lamp.
- The heating lamp gets hot. Let it cool before you touch it.
- Fill the water tank with the power off, and wipe up any spills before switching on.
- Never block the fan or the vents.
- Keep children away from the open incubator.

First run, without eggs

1 Fill the water tank

Clean water, up to the mark. The fogger stops by itself when the tank runs low.



2 Switch on and wait for the dashboard

The start-up animation plays for about 10 seconds, then the dashboard appears.



3 Choose your bird

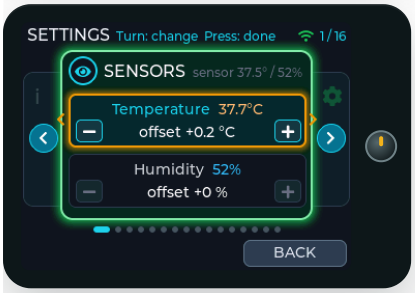
Press

Open EGG PROFILES, pick the bird and press APPLY. The dashboard targets change to that bird. See Egg profiles.



4 Switch the heater, fan and fogger on

Settings > HARDWARE. Let the incubator run for 2 to 4 hours until temperature and humidity are steady near the target.



5 Check the reading

Put a trusted thermometer inside. If it disagrees, correct the screen with an offset in Settings > SENSORS.



6 Set the eggs

Place the eggs, then add the tray in BATCHES so turning and day counting start. See Trays and batches.

The knob: four moves

Everything on the incubator is done with one knob. Learn these four moves and the colours of the cursor, and you can use every screen.

Turn right

Moves the cursor to the next item, the next bird or the next card. While you change a value, it raises the value.

Turn left

Moves the cursor back. While you change a value, it lowers the value.

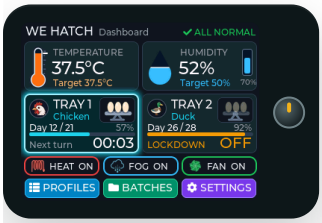
Press

Chooses the item under the cursor: opens a screen, switches a tile, starts or finishes changing a value.

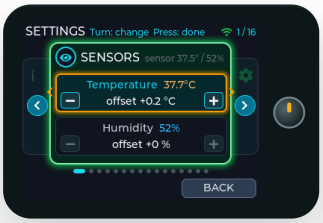
Hold about 1 second

Goes back one step: stops changing a value, then closes a card, then leaves the screen. Hold a few times to get back to the dashboard from anywhere.

What the colours mean



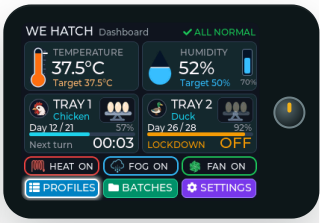
Cyan ring: the cursor. Press to choose this item.



Amber ring with ‹ ›: you are changing this value. Turn to change, press when done.



Green frame: this Settings card is open (selected).

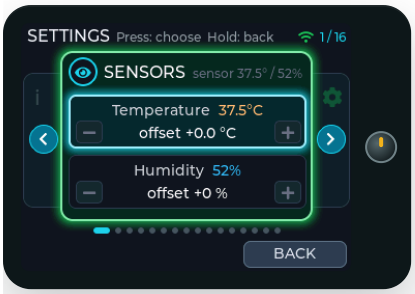


White ring: the cursor on a coloured button such as PROFILES or SAVE.

> **Read the top line**
>
> The top line of most screens tells you what the knob does right now, for example *Turn: browse Hold: back*, *Press: choose*, *Turn: change Press: done* or *Press: close the card*. If you are unsure, read it.

Example: change a value

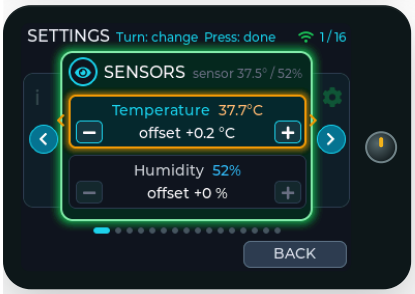
Raise the temperature offset by 0.2 °C in Settings > SENSORS:



1 Open the card

Press

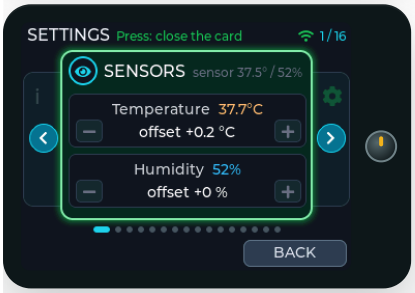
With the SENSORS card in front, press. The card turns green and the cursor goes to **Temperature**.



2 Change the value

Press then **Turn right ×2**

Press to start changing (amber), turn right twice: +0.1, +0.2. The reading above updates at once.



3 Finish and close

Press then **Turn right ×2** then **Press**

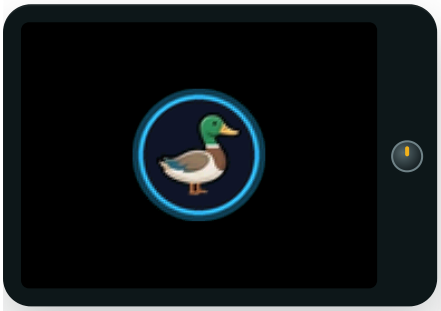
Press to finish. Turn until the cursor is on the card itself (the top line says *Press: close the card*) and press. Settings are saved by themselves within 2 seconds.

6 Start-up and the dashboard

The dashboard is the home screen. It shows the climate, both trays and the outputs at a glance, and leads to every other screen.

Start-up

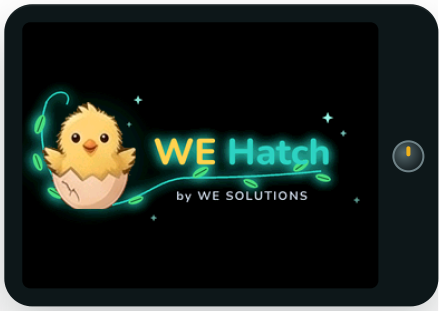
After switching on, a short animation plays: the bird avatars, the egg cracking and the WE Hatch logo. The temperature and humidity gauges sweep once, then show the live reading. Alerts are not raised during the animation.



Bird avatars

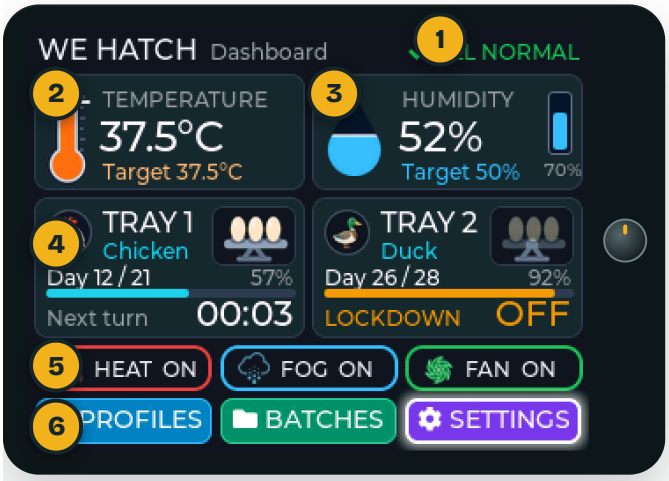


The egg cracks



WE Hatch logo

Reading the dashboard



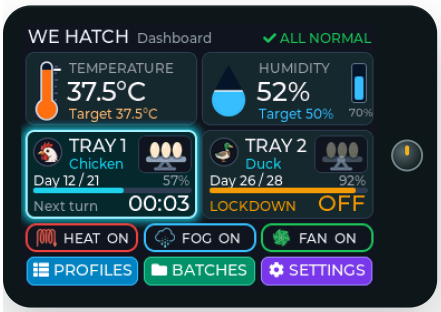
1. **Status, top right.** *ALL NORMAL* in green, or the most important alert, for example *TOO HOT +1* (one more alert waiting).
2. **TEMPERATURE card.** Live reading with the sensor offset added, the thermometer fill and the target of the active profile. The white tick follows the reading.
3. **HUMIDITY card.** Live humidity, the water drop fill, the target and, on the right, the water tank level.
4. **TRAY 1 and TRAY 2.** Bird, day of total days, progress bar, and the time to the next turn (hours:minutes). *LOCKDOWN* means turning has stopped for this tray. *Empty* means no eggs are set. The tray picture rocks while the motor turns.
5. **HEAT, FOG, FAN.** Show whether each output is on. FOG shows *REFILL* when the tank is low. A warning sign appears in the badge while a related alert is active.

6. **PROFILES, BATCHES, SETTINGS.** Open the other screens.

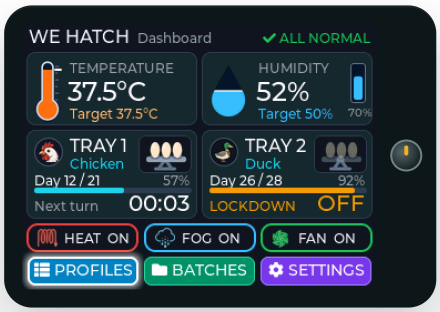
Moving around the dashboard

Turn the knob to move the cursor in this order: HUMIDITY card, TRAY 1, TRAY 2, PROFILES, BATCHES, SETTINGS. Press to open.

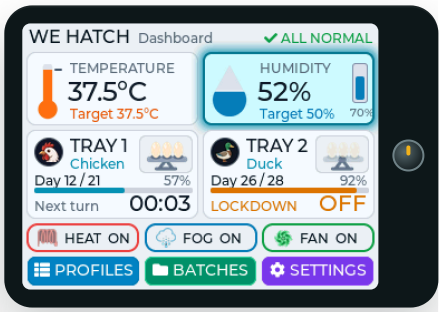
Cursor on	Press does
TRAY 1 or TRAY 2	Opens All Active Batches
PROFILES	Opens Egg Profiles
BATCHES	Opens All Active Batches
SETTINGS	Opens Settings
HUMIDITY card	Steps the water tank reading through 70, 45, 15 and 100 %. This is a test aid for units without a tank level sensor: it lets you see the REFILL alert work.



Cursor on TRAY 1



Cursor on PROFILES



Dashboard in the light theme

Egg profiles

A profile holds everything the incubator needs to know about one kind of bird. Applying a profile sets the temperature and humidity targets on the dashboard.



1 Open Egg Profiles

Press

On the dashboard, put the cursor on **PROFILES** and press. The bird in the middle is shown with its temperature, humidity, days, lockdown day and turning.



2 Browse the birds

Turn right

Turn right or left to slide to the next or previous bird. The counter at the top right shows the position, for example 2 / 9.



3 Select the bird

Press

Press. The card glows and the buttons below wake up. The cursor starts on EDIT.



4 Apply it

Turn right then **Press**

Turn to **APPLY** and press. The dashboard opens with the new targets.



5 Or go back

Turn right then **Press**

Turn to **BACK** and press, or hold the knob, to leave without changes.

Factory settings of the profiles

Bird	Temp °C	Humidity %	Days	Lockdown day	Turn every (min)	Motor on (min)
Chicken	37.5	50	21	18	120	1
Duck	37.2	55	28	25	120	1
Quail	37.7	45	17	14	60	1
Turkey	37.5	55	28	25	120	1
Goose	37.0	60	30	27	180	1
Pheasant	37.6	50	24	21	120	1
Peafowl	37.3	55	28	25	120	1
Ostrich	36.5	25	42	39	240	1
Custom	37.5	50	21	18	120	1

Applied profile and tray profile

The applied profile sets the climate targets of the cabinet. Each tray also remembers its own bird for its days and turning. If both trays hold different birds, apply the profile whose climate suits the eggs best.

Editing a profile

Change a bird's targets and turning to match your breed or your hatchery's practice. CUSTOM is free for your own settings.



1 Open the editor

Press then Press

In Egg Profiles, press to select the bird, then press EDIT. The values count up to the saved settings.



2 Pick a value

Turn right

Turn to move the cursor between the six values.



3 Change it

Press then Turn right ×2 then Press

Example: raise Chicken from 37.5 to 37.7 °C. Press (amber), turn right twice, press.



4 Turning interval

Interval (min) sets how often the trays turn. Steps are 5 minutes up to one hour, then 15 minutes.



5 Save

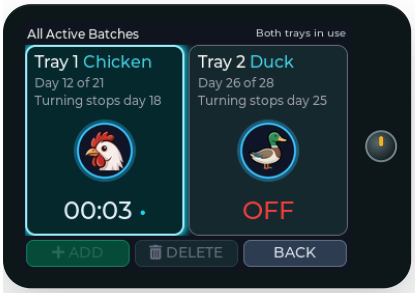
Turn right then Press

Turn to **SAVE** and press. Trays that use this bird and the dashboard update at once. **CANCEL** or holding the knob leaves without saving.

Value	Range	Step	What it controls
Temp (°C)	30.0 to 40.0	0.1	Target temperature shown on the dashboard
Humidity (%)	20 to 90	1	Target humidity
Total days	1 to 60	1	Days from setting to hatch
Motor on (min)	1 to 30	1	How long the motor runs for each turn
Interval (min)	5 to 720	5, then 15 above 1 h	Time between turns
Stop turn (day)	1 to 60	1	Lockdown: no turning from this day. Never later than Total days

Trays and batches

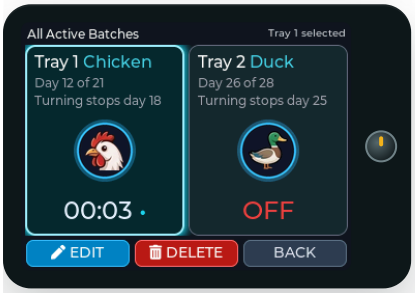
All Active Batches is where you start, correct and finish the eggs in each tray. Turning and day counting follow what you set here.



1 Open All Active Batches

Press

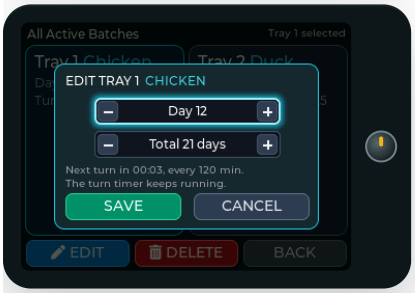
From the dashboard, press on **BATCHES** or on a tray card. Each tray shows its bird, day, lockdown day and the countdown to the next turn, or *OFF* when it does not turn.



2 Select a tray

Turn right then **Press**

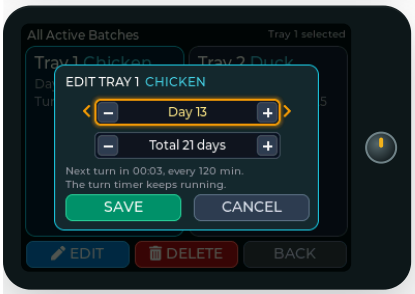
Turn to a tray and press. It stays lit and the top line says *Tray 1 selected*. The buttons become EDIT and DELETE. Press the tray again to deselect.



3 Edit the day

Turn right then **Press**

Turn to **EDIT** and press. The pop-up shows **Day** (today's day) and **Total** (hatch day).

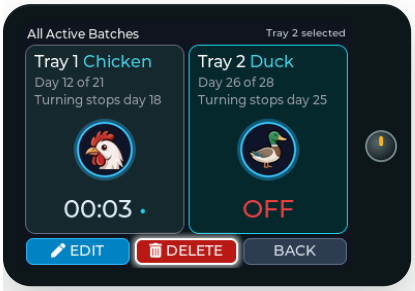


4 Change it

Press then **Turn right** then **Press**

Example: the eggs were set 12 days ago but the tray shows day 12 of a new count after a power cut. Press the Day box (amber), turn to the right day, press. Then turn to SAVE and press. The turn timer keeps running.

Finishing a tray and starting a new one



5 Delete the finished tray

Turn right then Press

Select the tray, turn to **DELETE** and press. The tray empties at once and its motor stops. There is no undo, so check the tray number first.



6 Add a tray

Turn right then Press

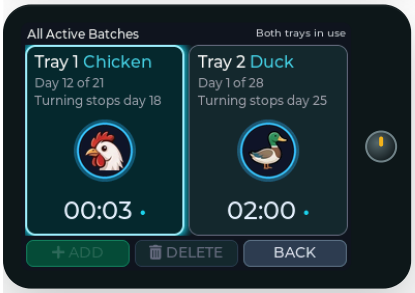
With a tray free, turn to **+ ADD** and press. Egg Profiles opens as *ADD TRAY 2*.



7 Choose the bird

Turn right then Press

Example: duck eggs in tray 2. Turn to DUCK and press. The button says *+ ADD TRAY*.



8 Confirm

Press

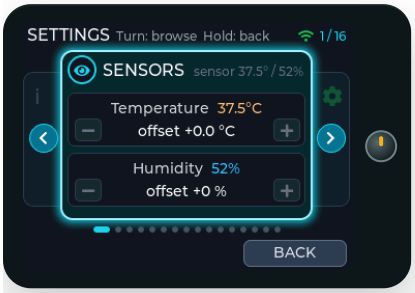
Press **+ ADD TRAY**. Tray 2 starts at day 1 with 28 days, lockdown on day 25 and the first turn in 120 minutes.

How turning works

- Every *Interval* minutes the tray's motor runs for *Motor on* minutes. The countdown on the dashboard shows the time left.
- From the *Stop turn* day the tray shows *LOCKDOWN* and does not turn any more.
- The day goes up by one every 24 hours that the incubator is switched on. On the hatch day the edit pop-up says so and asks whether the eggs have hatched.
- A tray whose motor is switched off in Settings > TRAYS shows *OFF* and does not turn.

10 Settings: finding your way

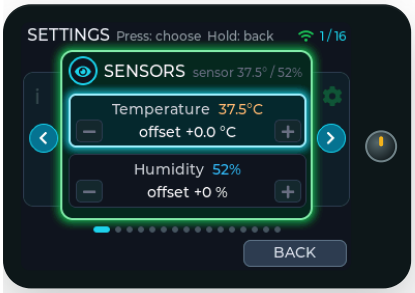
Settings holds 16 cards in a carousel. You browse the cards, open one, change what you need and close it again.



1 Browse the cards

Turn right

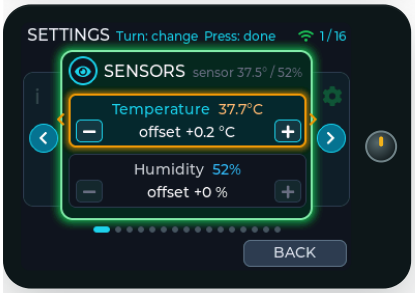
From the dashboard press SETTINGS. Turn to slide the cards; the counter at the top right shows which card you are on, for example 1 / 16. The card in front has the cyan cursor.



2 Open a card

Press

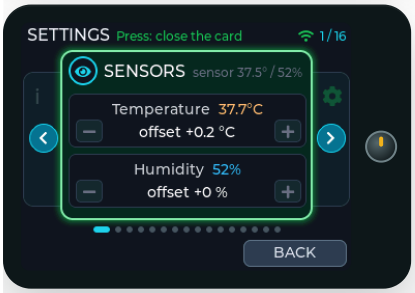
Press. The card turns green and the cursor moves to its first setting.



3 Change a setting

Press then **Turn right** then **Press**

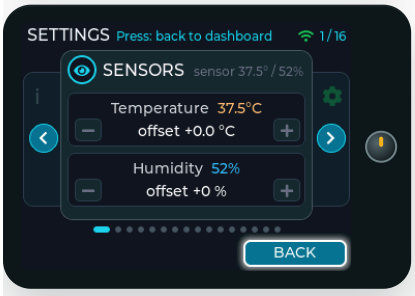
On a value with – and +: press, turn, press. On a tile or button: press to switch it.



4 Close the card

Turn right then **Press**

Turn until the cursor reaches the card itself. The top line says *Press: close the card*. Press, and you are browsing again.



5 Back to the dashboard

Turn left then **Press**

Turn past the first or last card: BACK lights up and the top line says *Press: back to dashboard*. Press. Holding the knob also goes back, from anywhere.

Every change is saved automatically within about 2 seconds. Nothing is lost when you switch the incubator off.

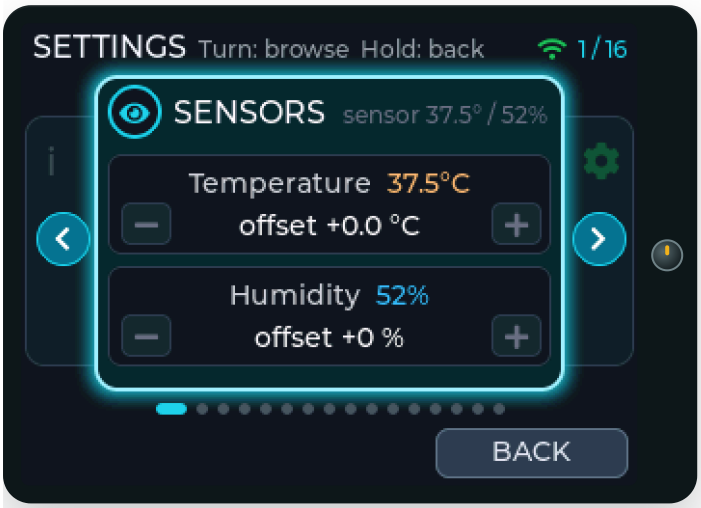
The 16 cards

#	Card	What you set there
1	SENSORS	Temperature and humidity offsets
2	HARDWARE	Fogger, fan, heater and buzzer on or off
3	TRAYS	Tray motors on or off, test turn
4	WATER TANK	Water level, refill alarm
5	TEMP ALARMS	Too hot and too cold limits
6	HUMIDITY ALARMS	Too humid and too dry limits
7	ALERTS	Which checks are on
8	ALERT SETUP	Check time, alarm sound repeat
9	DISPLAY	Theme, screen turn, brightness, dimming
10	WI-FI	Network, power save, Wi-Fi on or off
11	NETWORK	DHCP or static address
12	WEB APP	Phone and laptop access, PIN
13	FIRMWARE UPDATE	Installed version, updates
14	LANGUAGE	Menu language
15	FACTORY RESET	Back to factory settings
16	ABOUT	Version, network, uptime, memory

Settings, card by card

Every card with its settings, ranges and factory values. Open a card with a press, change with press, turn, press, and close it from the card itself.

1 SENSORS

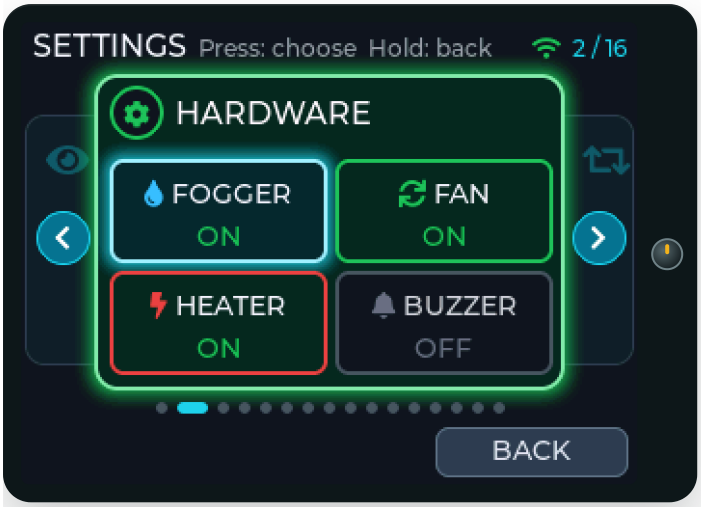


Corrects the sensor reading so the screen agrees with a trusted thermometer and hygrometer. The raw sensor value is shown at the top right of the card, for example *sensor 37.5° / 52%*.

Setting	Range	Step	Factory
Temperature offset	−5.0 to +5.0 °C	0.1	0.0
Humidity offset	−20 to +20 %	1	0

Example: your reference thermometer next to the eggs shows 37.7 °C while the screen shows 37.5 °C. Set the temperature offset to +0.2 °C.

2 HARDWARE



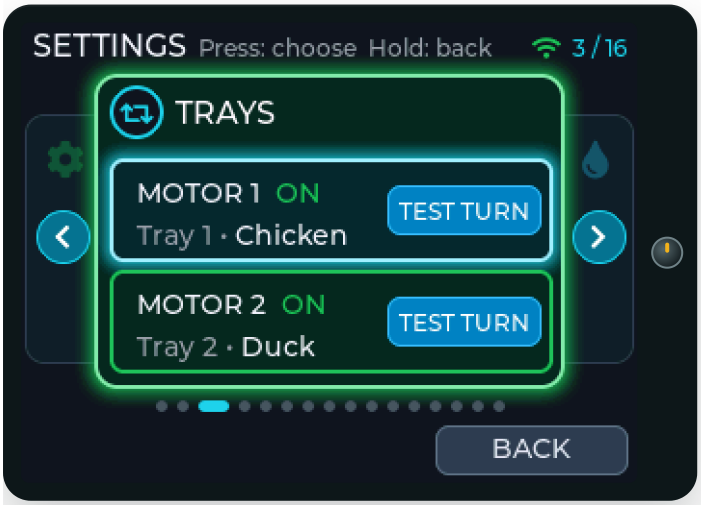


FOGGER switched off with one press

Switches the outputs by hand. Each tile shows ON in its colour or OFF in grey. Press a tile to switch it.

FOGGER shows *REFILL* when the water tank is below the refill alarm; the fogger does not run then.

3 TRAYS

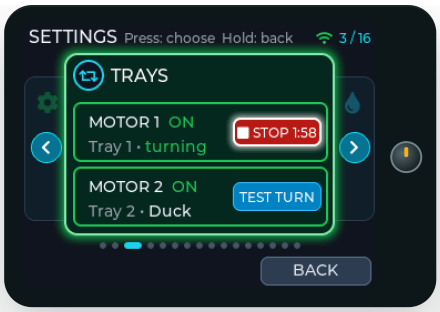


Turns each tray's motor on or off, and lets you test it.

- Press a **MOTOR** tile: ON (green) lets the tray turn on schedule; OFF stops all turning of that tray.
- Press **TEST TURN**: the motor starts and keeps running. The button turns red and counts down, for example *STOP 1:58*. Press again to stop.
- For the gearbox's safety a test stops by itself after 2 minutes, and when you leave the TRAYS card.
- While a scheduled turn runs, the button shows *TURNING…*



Cursor on TEST TURN



Test running: STOP 1:58



Stopped again

---

4 WATER TANK

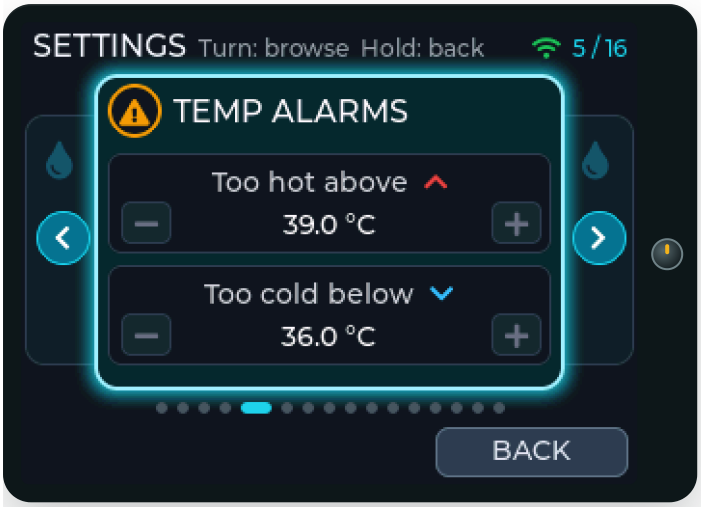


Shows the water level of the fogger tank and sets when to warn you.

Setting	Range	Step	Factory
Refill alarm below	5 to 50 %	5	20 %

Below this level the fogger stops, FOG shows REFILL on the dashboard and the REFILL WATER alert pops up.

5 TEMP ALARMS



Sets the temperatures that raise TOO HOT and TOO COLD.

Setting	Range	Step	Factory
Too hot above	37.0 to 42.0 °C	0.1	39.0 °C
Too cold below	33.0 to 37.5 °C	0.1	36.0 °C

6 HUMIDITY ALARMS



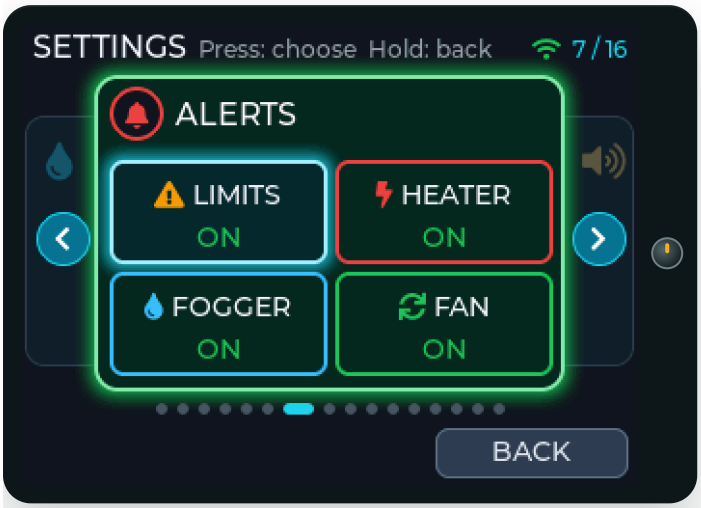
Sets the humidity that raises TOO HUMID and TOO DRY.

Setting	Range	Step	Factory
Too humid above	60 to 95 %	1	75 %
Too dry below	20 to 70 %	1	40 %

Example: for lockdown of duck eggs you raise humidity to 70 %. Set Too humid above to 80 % so the alert does not sound.

---

7 ALERTS



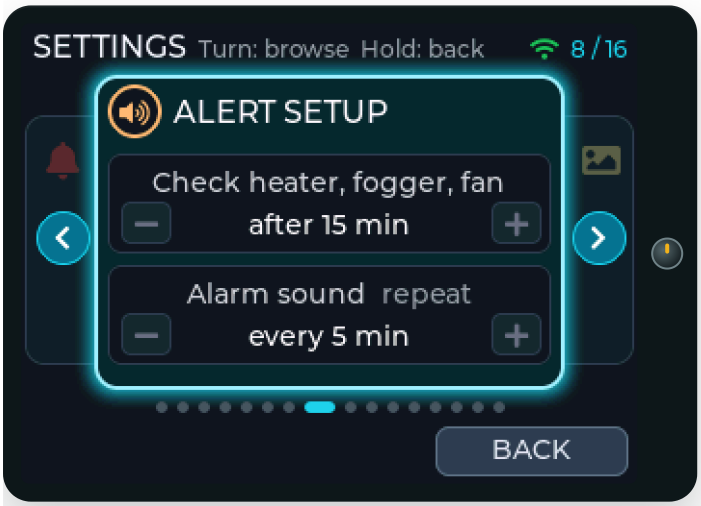
Switches groups of checks on or off. Press a tile to switch it.

- **LIMITS:** too hot, too cold, too humid, too dry.
- **HEATER:** heater on but the temperature does not rise.
- **FOGGER:** fogger on but humidity does not rise.
- **FAN:** fan on but nothing cools or dries.

A tile turns red while its alert is active. Switching a check off clears its alert at once. SENSOR NOT READING and REFILL WATER are always on.

---

8 ALERT SETUP



Sets how patient the checks are and how often the beep repeats.

Setting	Range	Step	Factory
Check heater, fogger, fan after	5 to 60 min	5	15 min
Alarm sound repeat every	OFF, 5 to 30 min	5	5 min

A heater, fogger or fan check fires only when nothing at all happens for the whole check time. With the alarm sound OFF, pop-ups still show but the buzzer stays quiet.

9 DISPLAY

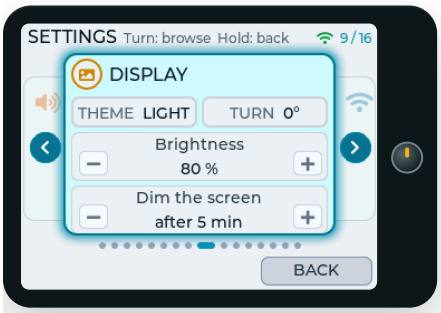


Adjusts the screen.

- **THEME:** press to switch between DARK and LIGHT.
- **TURN:** press to turn the picture 180°, for a unit mounted the other way up. Press again to undo.

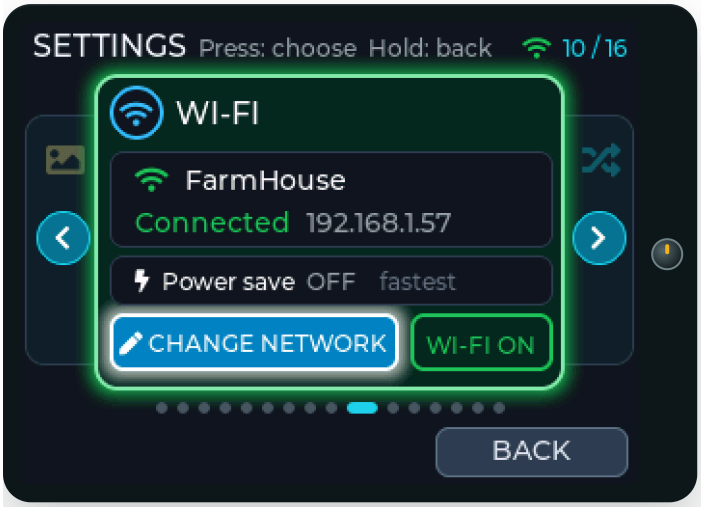
Setting	Range	Step	Factory
Brightness	10 to 100 %	10	80 %
Dim the screen after	never, 1 to 30 min	1	5 min

> **Brightness in firmware v1.0**
>
> Brightness and dimming are saved with your settings, but in firmware v1.0 the screen always runs at full brightness. They take effect with a later firmware update.



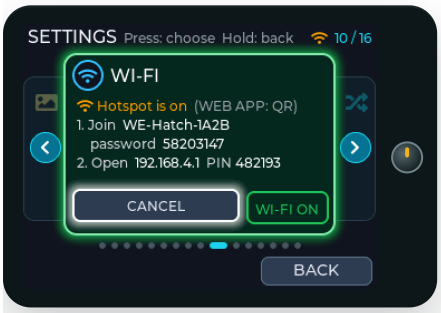
The light theme

10 WI-FI



Shows the network and connection, and sets up Wi-Fi.

- **Power save:** OFF keeps the radio awake for the fastest web page and laptop app. ON saves a little power but answers 0.1 to 0.3 s slower. The incubator runs on mains power, so OFF is recommended.
- **CHANGE NETWORK** (or **SET UP WI-FI**): opens the set-up hotspot, see Connecting to Wi-Fi.
- **WI-FI ON / OFF:** switches the radio. Off also switches off the web app.



Set-up hotspot running

11 NETWORK

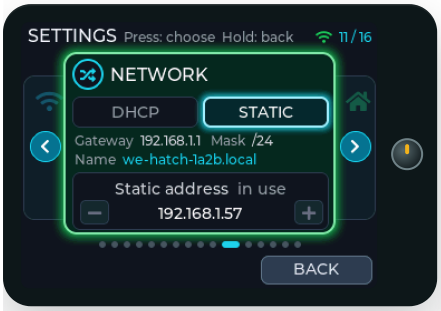


Chooses how the incubator gets its address on your network.

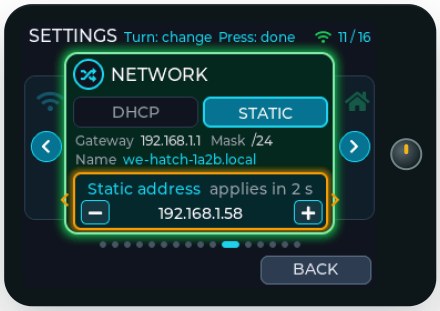
- **DHCP** (factory): the router gives the address. Shown with the gateway and the name, for example *we-hatch-1a2b.local*.
- **STATIC**: keeps the current address for good, so bookmarks and the laptop app always find it. Change the last number with – / +; it applies 2 seconds after your last turn and a message shows the new address.

Full static set-up

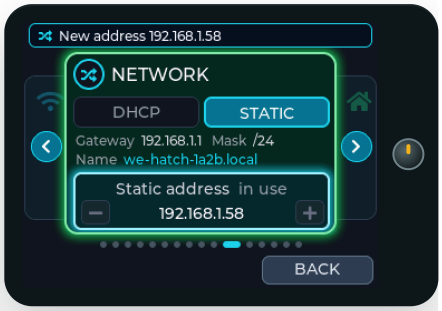
To set a different mask, gateway or DNS, use the web app, Network tab, IP ADDRESS.



STATIC chosen



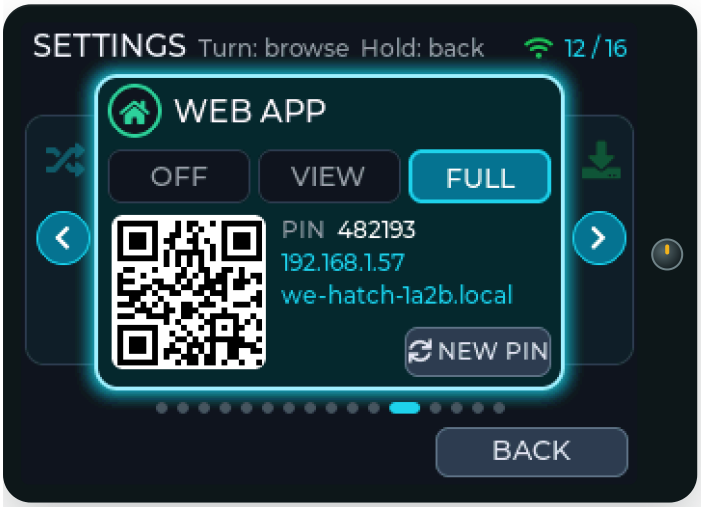
Changing the last number



New address applied

---

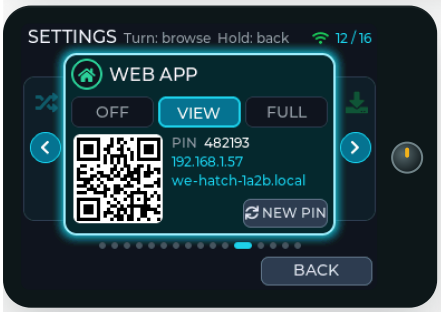
12 WEB APP



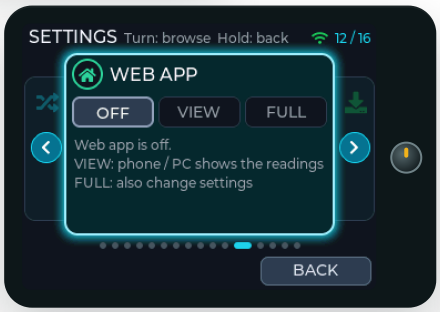
Lets a phone, tablet or PC on your network see and run the incubator in a browser.

- **OFF:** no web access.
- **VIEW:** readings only, nothing can be changed.
- **FULL** (factory): readings and every setting.

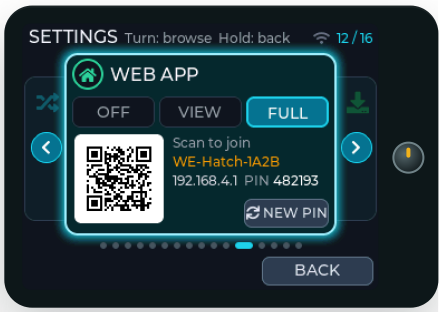
Scan the QR code with the phone camera to open the page. The 6-digit **PIN** is needed to log in. **NEW PIN** makes a new one and logs everybody out.



VIEW

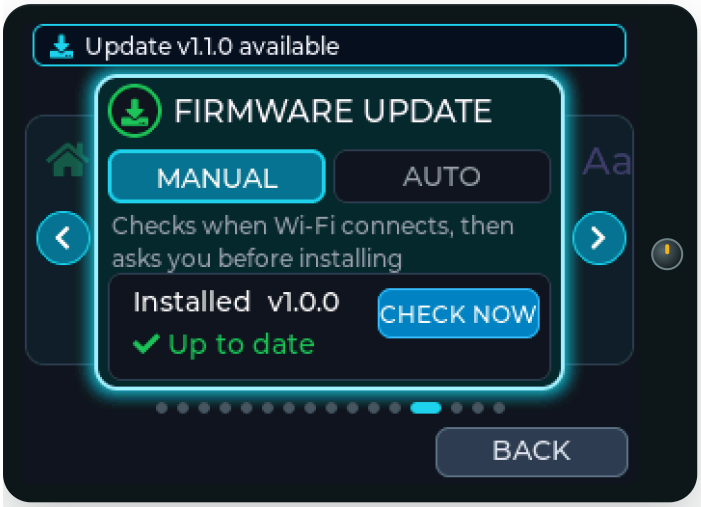


OFF



On the hotspot: scan to join

13 FIRMWARE UPDATE



Shows the installed version and the update state.

- **MANUAL:** checks when Wi-Fi connects, then asks before installing.
- **AUTO:** installs by itself when no tray is turning.
- **CHECK NOW / INSTALL:** look for, or install, a new version. A bar shows the download.

Installing an update today

Firmware v1.0 is updated from the web app (System, Upload & install) or the WE Hatch laptop app. Use the file *firmware.bin* you receive from WE Solutions. The incubator restarts when it is done; trays and settings are kept.

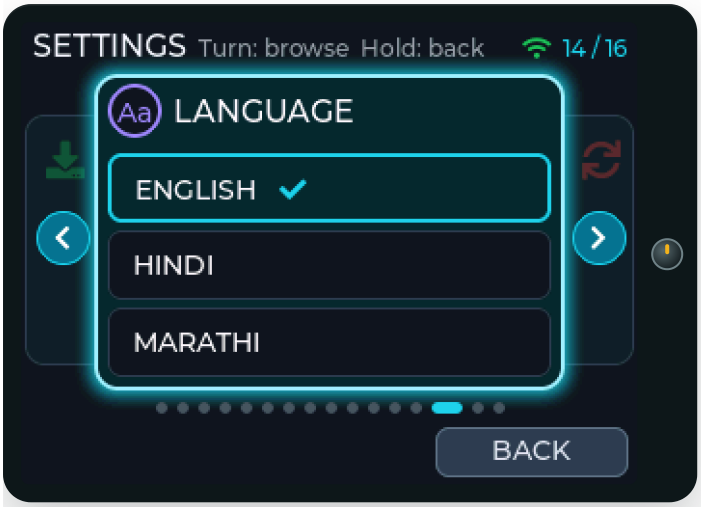


Update available



Downloading

14 LANGUAGE



Choose ENGLISH, HINDI or MARATHI: turn to the language and press. The tick moves to your choice and is saved. In firmware v1.0 the screens are shown in English.

15 FACTORY RESET



Restores the bird profiles, offsets, alarms, display and language to the factory settings. Running trays, the screen turn and the Wi-Fi network are kept.

Open the card and press: the button turns bright red and asks *PRESS AGAIN TO RESET*. Press again to reset, or hold the knob to cancel.

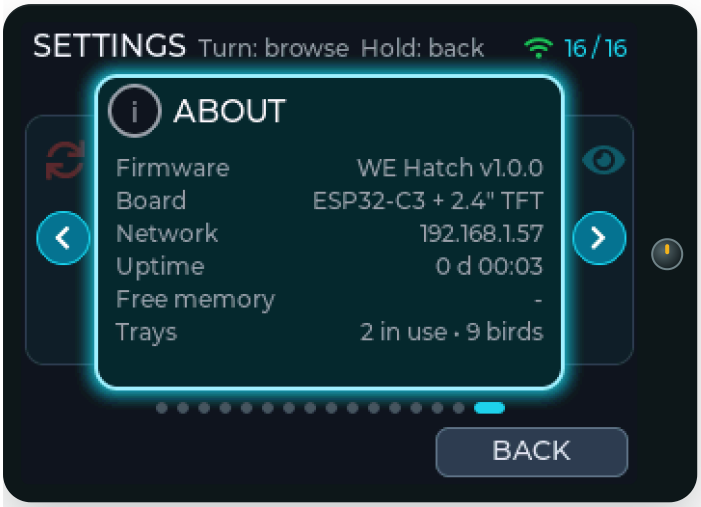


First press: PRESS AGAIN TO RESET



Second press: RESET DONE

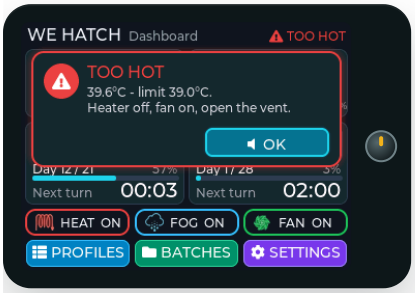
16 ABOUT



Firmware version, board, network address, uptime since switch-on, free memory and trays in use. Useful when you call for support.

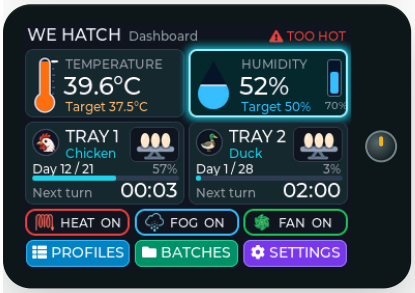
Alerts

When something needs you, a pop-up appears over any screen and the buzzer beeps. It says what is wrong, with the numbers, and what to check.



1 An alert pops up

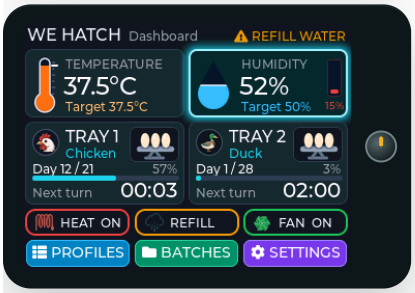
Title, reason in numbers and what to do. *+1 more alert* means another alert is waiting behind it.



2 Press OK

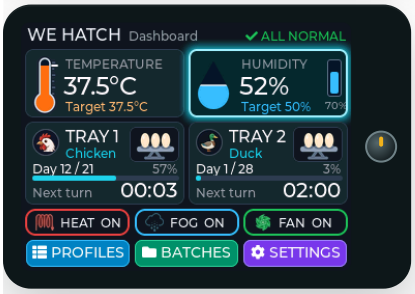
Press

A press (short or long) is OK and stops the beep. The next alert, if any, shows. Then the cursor goes back where it was.



3 It stays on the dashboard

Until the cause is gone, the top right shows the alert and the related badge shows a warning sign. While it stays active, the pop-up and beep come back every *Alarm sound* minutes.



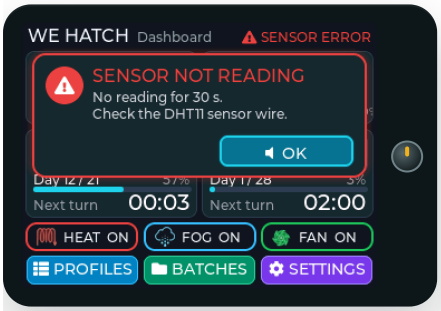
4 Fixed

When the reading is back inside its limits the alert clears by itself and the status shows *ALL NORMAL*.

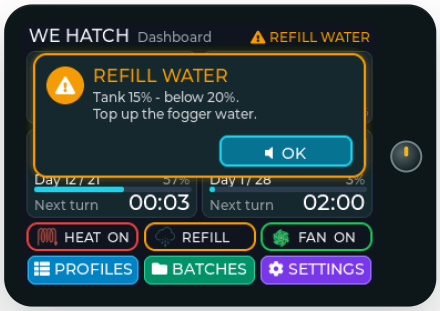
All alerts

Alert	Raised when	What to do
SENSOR NOT READING	No reading from the sensor for 30 s. Other checks pause.	Check the sensor cable and plug. Switch off and on.

Alert	Raised when	What to do
TOO HOT	Temperature above Too hot (39.0 °C).	Heater off, fan on, open the vent. Check the room.
TOO COLD	Temperature below Too cold (36.0 °C).	Check the heater and lamp, close the lid.
HEATER NOT HEATING	Heater on, below target, no 1.0 °C rise within the check time.	Check the lamp, its relay and wiring.
FAN NOT COOLING	Fan on while too warm or humid, no fall within the check time.	Check the fan and the air vents.
TOO HUMID	Humidity above Too humid (75 %).	Fogger off, fan on.
TOO DRY	Humidity below Too dry (40 %).	Check the fogger and the water.
FOGGER NOT WORKING	Fogger on, tank not low, no 3 % rise within the check time.	Check the fogger and its pipe.
REFILL WATER	Tank below the refill alarm (20 %).	Top up the fogger water.



SENSOR NOT READING



REFILL WATER

13 Phone, web and laptop

Connect the incubator to your Wi-Fi and you can watch and run it from a phone, tablet or PC on the same network.

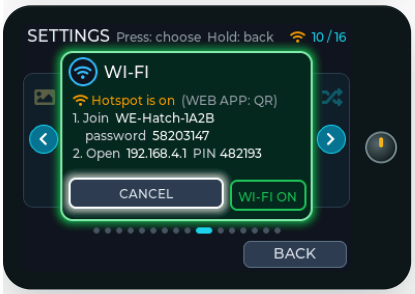
Connecting to Wi-Fi with your phone



1 Start the set-up

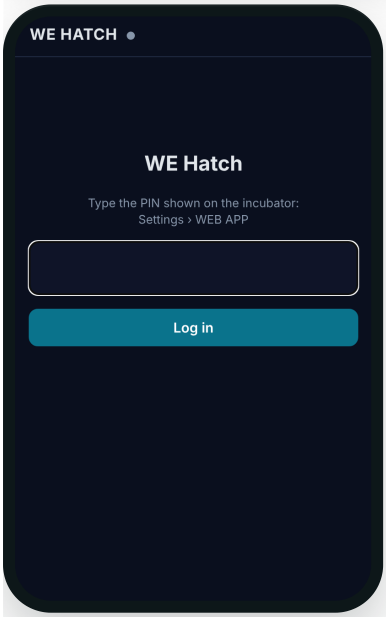
Press

Settings > WI-FI, open the card, press **CHANGE NETWORK** (or **SET UP WI-FI** on a new unit).



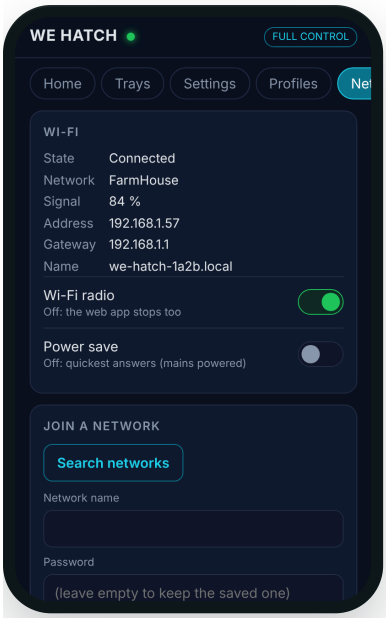
2 Join the hotspot

The card shows the hotspot name, for example *WE-Hatch-1A2B*, its 8-digit password, the address 192.168.4.1 and the PIN. On your phone, join that Wi-Fi network. In Settings > WEB APP you can also scan a QR code to join.



3 Open the page and log in

Most phones open the page by themselves. If not, open **192.168.4.1** in the browser. Type the PIN.



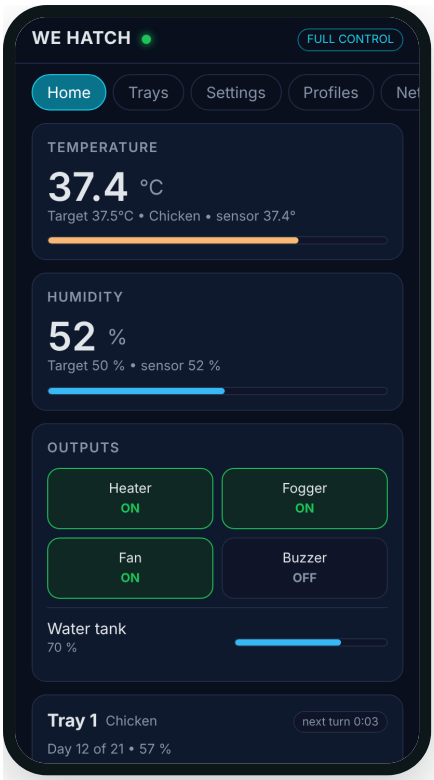
4 Choose your network

In the Network tab press **Search networks**, pick your Wi-Fi, type its password and press **Save & connect**. The WI-FI card turns *Connected* with the new address. The hotspot closes 60 s after your phone leaves it.

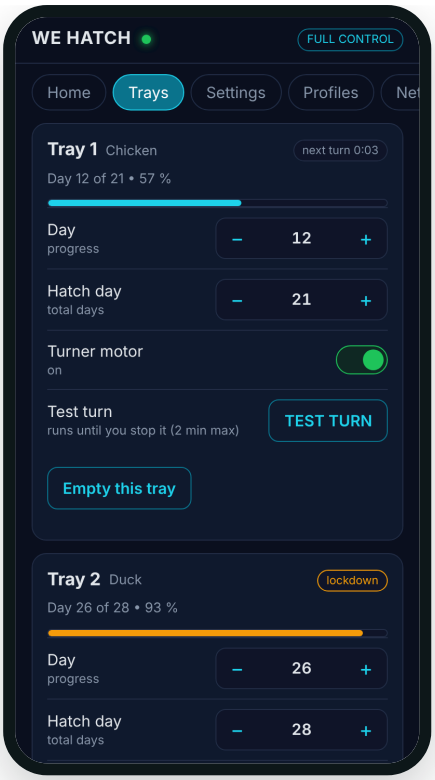
> **Good to know**
>
> - The incubator uses 2.4 GHz Wi-Fi. A 5 GHz-only network is not found.
> - If no network is saved, or the saved one is gone for 2 minutes, the hotspot opens by itself so you can always reach the incubator.

The web app

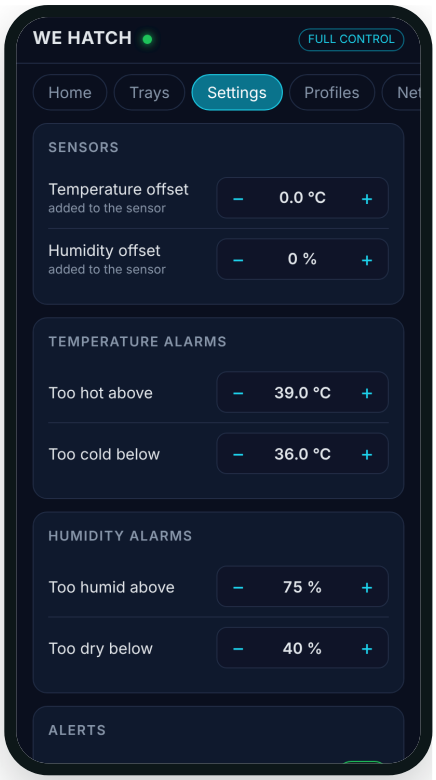
On the same network, open the address shown in Settings > WEB APP, for example **http://192.168.1.57**, or scan its QR code. On many PCs and iPhones the name **http://we-hatch-1a2b.local** also works. Log in with the PIN. Five wrong PINs lock the log-in for 60 seconds.



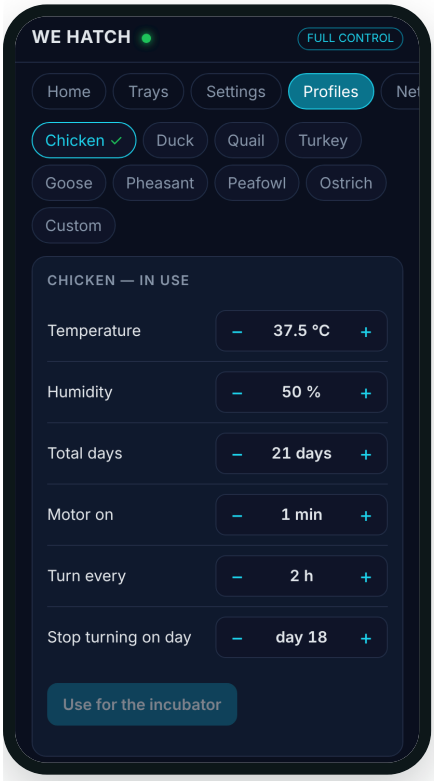
Home: climate, outputs, water and both trays.



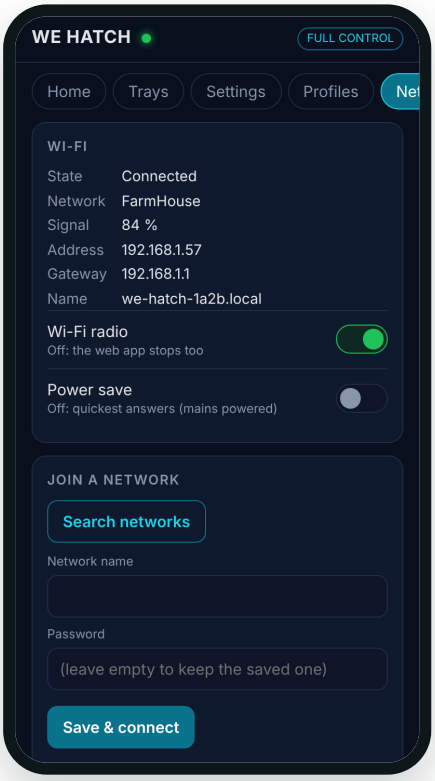
Trays: day, hatch day, turner motor, test turn, empty a tray.



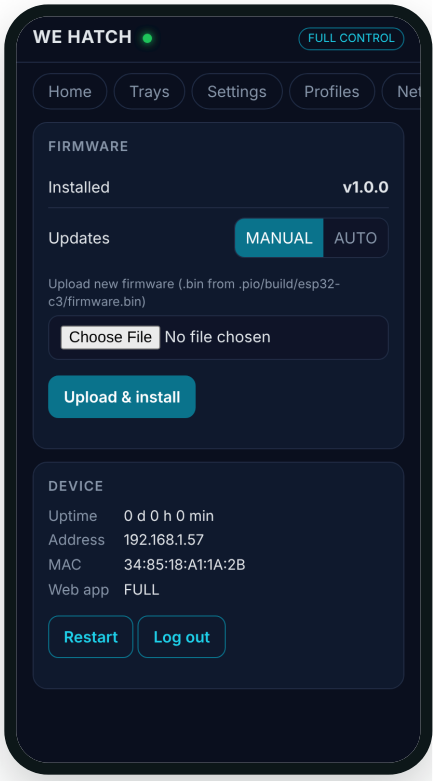
Settings: every Settings card value.



Profiles: edit the 9 birds, use one.



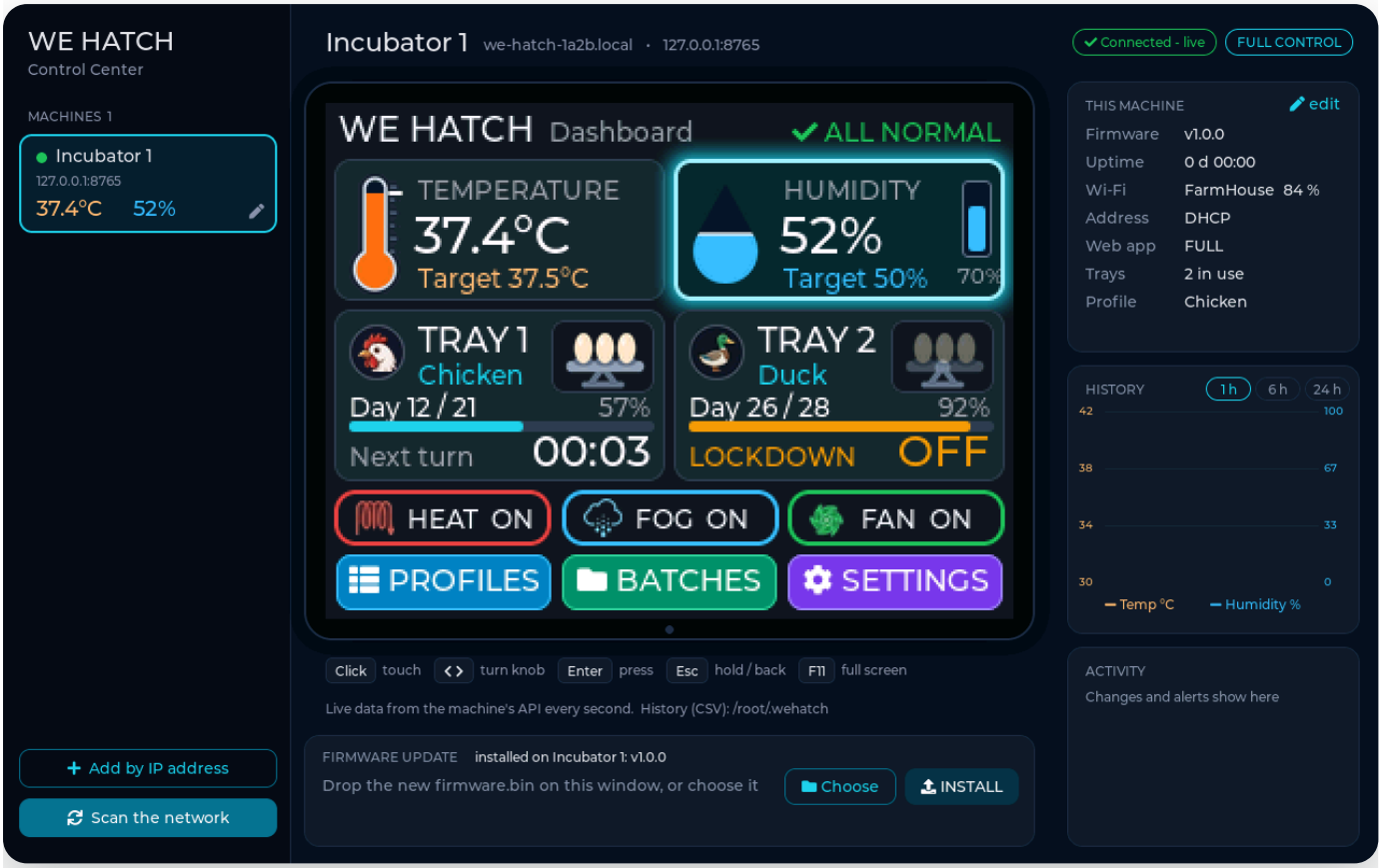
Network: Wi-Fi, power save, join a network, DHCP or static.



System: firmware upload, updates, restart.

Changes made in the web app act on the incubator at once, and the incubator shows a short message such as *Web: Theme LIGHT*. In VIEW mode the page shows the readings only.

The WE Hatch laptop app (Windows)



WE Hatch Control Center: your machines on the left, the incubator's own screen in the middle, details, history and activity on the right.

- **Scan the network** finds every WE Hatch on your Wi-Fi; **Add by IP address** adds one by its address.
- Type the PIN once. The app keeps it safely and logs in again by itself after the incubator restarts.
- Click on the screen to touch it; arrow keys turn the knob, Enter presses, Esc holds.
- History shows 1, 6 or 24 hours of temperature and humidity. **FIRMWARE UPDATE** installs a new firmware.bin.

14 Troubleshooting

Find the problem in the left column. Most issues are fixed in a minute from the knob.

Screen and knob

Problem	Likely cause	What to do
The screen stays dark	No power, or a display fault.	Check the plug and the power switch. If the incubator still beeps or the web app still answers, the display needs service: contact WE Solutions.
The picture is upside down	DISPLAY > TURN was pressed.	Open DISPLAY and press TURN again.
The knob does nothing	An alert pop-up is waiting for OK.	Press once to OK the alert.
I am stuck in a screen		Hold the knob for about 1 second, a few times, to get back to the dashboard.
A value does not change when I turn	You are not in change mode.	Press on the value first (amber ring), then turn.

Temperature and humidity

Problem	Likely cause	What to do
The reading differs from my thermometer	Sensor tolerance (DHT11: about ±2 °C, ±5 %).	Set an offset in SENSORS. Place your thermometer at egg level.
Temperature only changes in whole degrees	Some older DHT11 sensors send whole degrees only.	The firmware reads tenths (for example 37.5 °C) and averages the last 4 readings. If a sensor still shows whole degrees, fit a newer DHT11, or an SHT31 or AHT20 for better accuracy.

Problem	Likely cause	What to do
SENSOR NOT READING	Sensor cable loose or broken.	Check the plug and cable, switch off and on. If it stays, replace the sensor.
Temperature keeps rising	Heater left on, room too warm.	HARDWARE: heater off, fan on. Open the vent. Check TOO HOT is on in ALERTS.
Temperature does not reach the target	Heater off, lamp blown, lid open.	HARDWARE: heater on. Check the lamp. Close the lid. Watch for HEATER NOT HEATING.
Humidity too low	Fogger off, tank empty, fogger pipe blocked.	Fill the tank, switch the fogger on, clean the pipe.
Humidity too high	Fogger on too long, vents closed.	Switch the fogger off, the fan on, open the vents.

Trays and turning

Problem	Likely cause	What to do
A tray does not turn	Motor OFF, lockdown reached, or the turn is not due yet.	Settings > TRAYS: MOTOR ON. Check the countdown on the dashboard. From the stop day the tray shows LOCKDOWN on purpose.
TEST TURN does nothing	Motor tile is OFF, or wiring.	Switch the MOTOR tile ON first. If the motor still does not move, check its plug and wiring.
The day is wrong after a power cut	The day counts 24 h of running time; a power cut delays it.	BATCHES: select the tray, EDIT, correct the Day, SAVE.
+ ADD does nothing	Both trays are in use.	Delete a finished tray first.

Alerts and sound

Problem	Likely cause	What to do
It keeps beeping	An alert is still active.	Press OK, then fix the cause. The beep returns every *Alarm sound* minutes until then.
I do not want the beep at night		ALERT SETUP: Alarm sound OFF. Pop-ups still show. Remember to switch it back on.
HEATER / FOGGER / FAN check fires too soon	The check time is short for your cabinet.	ALERT SETUP: raise *Check heater, fogger, fan after*.
FOG shows REFILL and the fogger stops	Water below the refill alarm.	Top up the tank. Adjust the level in WATER TANK if needed.

Wi-Fi and web app

Problem	Likely cause	What to do
My Wi-Fi is not in the list	5 GHz network, or too far from the router.	Use a 2.4 GHz network. Move the router or the incubator closer.
Connecting… never ends	Wrong password.	Start CHANGE NETWORK again and type the password carefully.
The web page does not open	Phone on another network, web app OFF, address changed.	Join the same Wi-Fi. Check Settings > WEB APP is VIEW or FULL and use the address shown there. If the .local name fails (some Android phones), use the numbers.
Wrong PIN or locked	PIN changed, or 5 wrong tries.	Read the PIN in Settings > WEB APP. After 5 wrong tries wait 60 s.
Static address lost the connection	The address is used by another device.	NETWORK: press DHCP, then choose a free address.
Firmware upload refused	Wrong file, or a tray is turning.	Use *firmware.bin* (not firmware.factory.bin). Try again when no tray turns.

Wiring and outputs

Problem	Likely cause	What to do
Nothing lights up, no LED	No mains at AC MAIN, fuse or MCB off.	Check the plug, fuse and the L and N wires at AC MAIN.
A relay clicks but the load does not run	Load wired to NC, neutral missing, or the load is faulty.	Move the live to the NO hole. Check the load's neutral at the neutral block. Try the load on a socket.
A load runs all the time, even when OFF	Live wired to the NC hole.	Switch off the supply and move the wire to NO.
The fuse or MCB trips when an output switches	Load too big or a short in the load.	Each output carries at most 5 A. Check the load and its wiring.
The controller restarts when the fan or motor starts	Electrical noise from the motor.	Keep load wires away from the sensor end. A snubber (RC filter) across the motor helps.

General

Problem	Likely cause	What to do
Settings are a mess		FACTORY RESET restores profiles, offsets, alarms, display and language. Trays are kept.
I need help from support		Note the details in ABOUT (version, network, uptime) and the alert shown, and contact WE Solutions.

Care and quick reference

A short daily routine keeps the hatch on track. The tables below list the factory settings.

Every day

- [ ] Dashboard shows *ALL NORMAL*.
- [ ] Temperature and humidity near the targets.
- [ ] Water tank above the refill level.
- [ ] Each tray counts down to its next turn, or shows LOCKDOWN after its stop day.
- [ ] The day of each tray is right.

Between hatches

- [ ] Unplug, empty and clean the trays, tank and fogger.
- [ ] Wipe the sensor gently; do not wet it.
- [ ] Check the lamp, the fan and both tray motors (TRAYS > TEST TURN).
- [ ] Delete the finished trays in BATCHES.

Factory settings

Setting	Factory value	Card
Temperature / humidity offset	0.0 °C / 0 %	SENSORS
Refill alarm	below 20 %	WATER TANK
Too hot / too cold	39.0 / 36.0 °C	TEMP ALARMS
Too humid / too dry	75 / 40 %	HUMIDITY ALARMS
Checks	all on	ALERTS
Check time / alarm sound	15 min / every 5 min	ALERT SETUP
Theme / turn / brightness / dim	Dark / 0° / 80 % / 5 min	DISPLAY
Power save	OFF	WI-FI
Address	DHCP	NETWORK
Web app	FULL	WEB APP
Updates	MANUAL	FIRMWARE UPDATE
Language	English	LANGUAGE

Technical data

Item	Value
Controller	ESP32-C3
Screen	2.4 inch colour TFT, 320 × 240
Control	Rotary knob with push button
Sensor	DHT11 temperature and humidity, read every 2 s, behind the grille at the right end
Supply	230 V AC, 50 Hz, at AC MAIN L / N
Outputs	5 relay outputs, NO and NC, 5 A 250 V AC each: FOGGER, BULB, TRAY 1, TRAY 2 (front), FAN (back). Buzzer.
Display of readings	Temperature to 0.1 °C, humidity in whole %
Casing	Body 101.6 × 102 × 65.5 mm (83 mm with knob), base plate 131.6 × 102 mm, matte black
Mounting	4 corner holes and 2 keyhole slots in the base plate
Trays	2, each with its own bird, day count and turning
Profiles	9 (8 birds and Custom)
Wi-Fi	2.4 GHz; own WPA2 hotspot for set-up; web app with PIN; laptop app for Windows
Firmware	v1.0

WE Hatch user manual, edition 2, firmware v1.0. Screens shown are taken from the incubator's own firmware. WE Solutions.