# How to connect the gateway to Privox

Step-by-step guide. About 30 minutes. No programming needed.

> **What the gateway is.** A small box that connects an ordinary (analog) radio to Privox. Whatever is said into the radio is heard in the Privox app; whatever is said in the app is heard on the radio.

## What you need

- The gateway (box with a label on the bottom) and the radio cable (included).
- A radio with a headset jack (for example Quansheng UV-K5) and its antenna fitted.
- A 5 V power adapter (a phone charger is fine) and a **USB-A to USB-C** cable.
- Wi-Fi at home or in the office, **on 2.4 GHz**, with internet access.
- A computer or phone with an administrator account in Privox, and one more phone to set up the gateway.

## Part 1. Add the gateway in Privox (on a computer, 5 minutes)

### 1 Sign in to Privox as an administrator

Open the Privox site in a browser and sign in with your administrator login and password.

> **Example:** address `ptt.privox.tech` ; the menu on the left has Users, Groups, Gateways and others.

### 2 Create a “user” for the gateway

To Privox the gateway looks like one more group member. It needs a name (callsign).

On the left click **Users** → button **ADD** → fill in the fields.

> **Example:**
> Callsign: `GW-WAREHOUSE`
> Display name: `Warehouse gateway`
> Role: `USER`
> Password: make up any (the gateway does not use it, but the field is required)

Save.

### 3 Add this “user” to the right group

The radio will be heard **in the group the gateway belongs to**.

On the left **Groups** → open your group → add the member `GW-WAREHOUSE` .

## 4 Create the gateway itself

On the left **Gateways** → the **ADD GATEWAY** block:

> **Example:**
> Name: `Warehouse`
> Location: `Warehouse, 5 Main St`
> Gateway user: choose `GW-WAREHOUSE`

Press **CREATE**. The name is only for people, to tell gateways apart. It is not entered into the gateway.

## 5 Copy the setup code (the important step)

Right after creation a frame appears titled **“KEY FOR … : SHOWN ONCE”**. It contains the **Setup code**: a long line starting with `privox-gw:1:`, and a square QR code next to it. The code already holds everything needed: server address, gateway number (ID), key and group. There is nothing else to look up.

Press **COPY** next to the code and **send it to yourself right away** (notes, Telegram “Saved messages”, or email) so you can paste it on the gateway later. Then press **I SAVED IT**.

> **If the gateway's user is in several groups,** a list **GROUP THE GATEWAY SERVES** appears above the code: pick the group by name (for example “Warehouse”) and the code updates. If there are no groups, an orange message appears: go back to step 3, add the user to a group and press **NEW KEY**.

> **Note:** the code is shown **only once**. If you closed the window, do not worry: press **NEW KEY** in the gateway's card, a new code appears and the old one stops working. Do not show the code to anyone: with it someone could join your group.

**Where are the “ID and key”?** They are inside this code, no need to look for them. If you really want to enter the values one by one, expand the **Manual entry** line in the same frame: it has **Gateway ID**, **Key** and **Group ID**.

## Part 2. Set the gateway up on site (10 minutes, a phone is needed)

### 6 Connect the power

Plug the USB-A to USB-C cable into the 5 V adapter and into the gateway. The LED lights up.

### 7 Start setup mode

Find the **BOOT** button on the gateway (a small button on the board, reached through a hole in the case). **Press and hold for 3 seconds** until the LED starts **blinking blue**. Release.

> Setup mode lasts 10 minutes. If you were too slow, repeat.

### 8 Connect your phone to the gateway

On the phone: Settings → Wi-Fi → choose the network `Privox-GW-Setup`.

> **Network password:** `privoxsetup` (also printed on the label)

### 9 Tell the gateway which Wi-Fi to use

The setup page **opens by itself**. If not, open `192.168.4.1/setup` in the phone's browser.

> **Fill in:**
> Wi-Fi name (SSID): pick your network, for example `OfficeWiFi`
> Wi-Fi password: the password of that network
> Admin password: **make up a password for the gateway page**, for example `Warehouse-2026`, and write it on the label in the “password” line

Press **Save and reboot**. The gateway restarts (about 30 seconds). The phone returns to its normal network.

> Only **2.4 GHz Wi-Fi** works. If your network is 5 GHz, enable 2.4 GHz on the router.

### 10 Open the gateway page

The phone must be **on the same Wi-Fi network** as the gateway. In the browser open `http://privox-gw.local` (or scan the QR code on the label).

> **Sign in:** login `admin`, password from step 9.

**Does not open?** Open your router's settings, the list of connected devices, find “privox-gw” and open its address like `http://192.168.1.50`.

### 11 Paste the setup code

On the gateway page find **Privox connection**. Paste the code you copied in step 5 into **Setup code**. Press **Apply code**. The word **Saved** appears.

## 12 Make sure the gateway connected

After 10–20 seconds the **Gateway on board** line on the gateway page should say **connected**. In the Privox admin (**Gateways**) the gateway shows **online**.

> **If you see connected,** the gateway is linked to Privox. Only the radio is left.

## Part 3. Connect the radio (10 minutes)

### 13 Prepare the radio

- The radio is **off** and its **antenna is fitted** (transmitting without an antenna can damage the radio).
- In the radio menu set **power LOW**.
- Set the speaker volume to **about the middle**.

### 14 Connect the radio to the gateway with the cable

Plug the two plugs into the radio: the **wide 3.5 mm** and the **narrow 2.5 mm** (the radio's jack has a microphone and a headphone symbol; each plug fits only its own socket). Plug the white connector with six wires into the gateway's socket **from above** (through the window in the lid): **the microphone wire (3.5 mm ring) to mark 1**.

> **Solder by plug contact, not by wire colour** (colours differ between cables): pin 1 microphone = ring of the 3.5 mm plug; 2 transmit key (PTT) = sleeve of the 3.5 mm plug; 3 speaker = tip of the 2.5 mm plug; 4 common = sleeve of the 2.5 mm plug. Also printed on the label. If PTT and common are swapped, the radio will transmit continuously.

### 15 Test receiving (radio → Privox)

Switch the gateway's radio on. From **another radio** on the same frequency say a phrase, for example “radio check”.

> **Correct:** the gateway's LED turns **green**, and in the Privox app you hear the phrase in the group.

### 16 Allow transmitting to air and test it (Privox → radio)

In the Privox admin: **Gateways** → your gateway's card → switch on **transmit to air** (TX). It is off by default on purpose: you are responsible for radio emission.

Say a phrase from a phone into the group.

> **Correct:** the gateway's LED is **red** and the phrase is heard on the other radio.

## LED meanings

| Colour | Meaning |
|---|---|
| Red | The gateway is transmitting to the radio (someone speaks in the group) |
| Green | The gateway is receiving from the radio (someone speaks into the radio) |
| Dim blue | All good, waiting |
| Blinking blue | Setup mode is on (10 minutes) |

## If something is wrong

| What happened | What to do |
|---|---|
| No `Privox-GW-Setup` network | Hold BOOT for 3 seconds and wait for blinking blue. |
| `privox-gw.local` does not open | The phone must be on the same Wi-Fi. Or open the gateway's address from the router's device list. |
| Forgot the page password | Hold BOOT for **10 seconds**: Wi-Fi and password are reset, repeat from step 7. |
| No longer `connected` | Check the internet in that network. In the admin press **NEW KEY** and paste the new code (step 11). |
| Quiet or distorted sound | Adjust the radio volume and “Receive gain” on the gateway page (usually 20–25). |
| The radio transmits by itself or does not release | Check the cable and connector (microphone wire to mark 1) and that the radio is on power LOW. |

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