STEP-BY-STEP USER GUIDE | RASPBERRY PI 4 & PI 5 | RELEASE v3.1.24 (15.11.2026)

Conduit Hi-Fi Audio OS - User Installation & Setup Guide

Easy guide from flashing your SD card with Raspberry Pi Imager to connecting via Ethernet or Wi-Fi Hotspot, completing the 5-Step Guided Setup Wizard, and Room EQ.

Web Guide: https://www.conduit-audio.com/guide.html | App Address: http://conduit-hifi.local:3000

Chapter 1: What You Need & Getting Started

Supported Raspberry Pi models, audio DACs, and downloading the Conduit OS image.

1.1 What You Need

- Main Music Server: A Raspberry Pi 5 or Raspberry Pi 4 (4GB or 8GB RAM recommended). For the best speed and reliability, pair your Pi 5 with an internal M.2 NVMe SSD or your Pi 4 with an external USB 3.0 SSD.
- Extra Multi-Room Speakers (Optional): Add a Raspberry Pi Zero 2W, Pi 4, or Pi 5 in any extra room running the Conduit Room Node image so your whole home plays in perfect sync.
- Audio Output (DAC / Speakers): Connect any USB DAC (up to 192kHz / 32-bit Hi-Res audio), a plug-in Raspberry Pi Audio HAT (HiFiBerry, IQaudio, Allo), HDMI audio, or Bluetooth speakers.

1.2 Downloading the Conduit OS Image

Download the official Conduit Server image (ConduitServerOS-v3.1.24-arm64.img.xz) from https://www.conduit-audio.com/#download. You do not need to unzip the file-Raspberry Pi Imager reads it directly.

```
Main Server Image:     ConduitServerOS-v3.1.24-arm64.img.xz
Extra Room Node Image: ConduitNodeOS-v3.1.24-arm64.img.xz
Audio Engine:          Pure Sound
```

Chapter 2: Writing Conduit OS to Your SD Card or SSD

Simple 5-step guide using the free Raspberry Pi Imager app on Windows, Mac, or Linux.

2.1 Step-by-Step Flashing Guide

- Step 1 (Install Imager): Download and open the free Raspberry Pi Imager app from https://www.raspberrypi.com/software/.
- Step 2 (Choose Device): Click "CHOOSE DEVICE" and pick your board (Raspberry Pi 5 or Raspberry Pi 4).
- Step 3 (Choose OS -> Use Custom): Click "CHOOSE OS", scroll all the way to the bottom, click "Use custom", and select your downloaded ConduitServerOS-v3.1.24-arm64.img.xz file.
- Step 4 (Choose Storage): Insert a MicroSD card (16GB or larger) or USB SSD into your computer, click "CHOOSE STORAGE", and select it.
- Step 5 (Click "NO" on OS Customisation): When Raspberry Pi Imager asks "Would you like to apply OS customisation settings?", click "NO".

TIP: WHY CLICK "NO" ON OS CUSTOMISATION?

Conduit has its own built-in 5-Step Guided Setup Wizard that opens right in your web browser and sets up your Wi-Fi, device name, and audio output automatically. Clicking "NO" in Imager ensures everything starts cleanly.

Chapter 3: Turning On Your Pi & Opening Conduit

Connect with a network cable (conduit-hifi.local) or join the automatic Conduit-Setup Wi-Fi hotspot.

3.1 Option A: Connected with an Ethernet Cable (Easiest)

Insert the MicroSD card into your Raspberry Pi, plug an Ethernet network cable into your home router, and plug in the power cord. Wait about 60 seconds, then open any web browser on your phone, tablet, or computer. In v3.0.96+, you can open http://conduit-hifi.local directly without typing :3000 (while :3000 also continues to work). If you run more than one Conduit Server at home, give each a unique hostname in Step 1 such as conduit-hifi-rp5 -> http://conduit-hifi-rp5.local:

```
Open in your browser:   http://conduit-hifi.local  (or :3000)
Multi-Server Custom:    http://conduit-hifi-rp5.local  (or :3000)
Or by IP address:       http://<your-pi-ip>  (or :3000)
Android App (.apk):     Finds your Conduit Server on the Wi-Fi network automatically
```

3.2 Option B: Wireless Setup Without a Network Cable (Wi-Fi Hotspot)

If you turn on your Raspberry Pi without a network cable plugged in, Conduit automatically creates its own temporary Wi-Fi hotspot after 20 seconds so you can connect your Pi to your home Wi-Fi:

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1. On your phone or laptop, connect to Wi-Fi network:  Conduit-Setup
2. Open your web browser and go to:                    http://192.168.4.1  (or :3000)
3. The 5-Step Guided Setup Wizard opens so you can select your home Wi-Fi.
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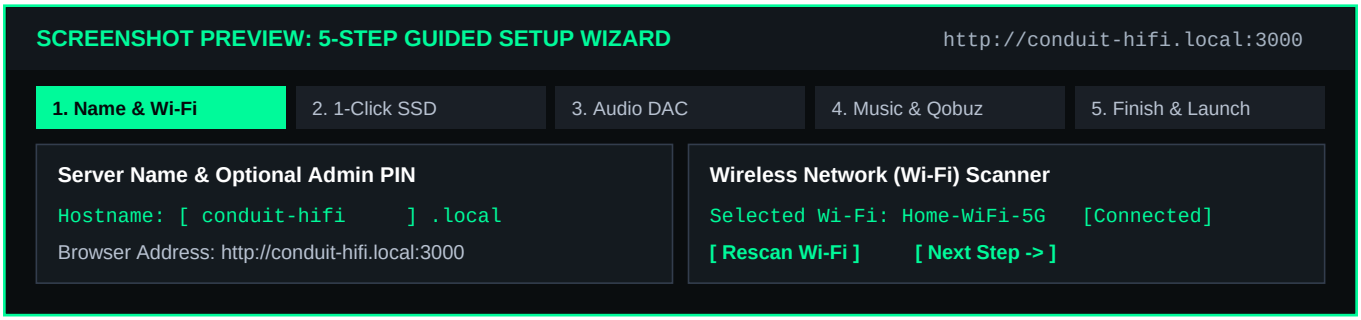
TIP: WHAT IF YOU ENTER THE WRONG WI-FI PASSWORD?

When you click "Connect Wi-Fi", your Raspberry Pi briefly turns off the Conduit-Setup hotspot to test your home Wi-Fi password and verify that http://conduit-hifi.local (or your custom .local name) is responding on your home network. If you accidentally typed the wrong Wi-Fi password, the wizard displays a red error alert and the Raspberry Pi automatically turns the Conduit-Setup hotspot (192.168.4.1) back on within a few seconds. If your phone or computer switched back to your home Wi-Fi while the hotspot cycled, simply open your Wi-Fi list, reconnect to Conduit-Setup, type the right password in http://192.168.4.1 (or http://192.168.4.1:3000), and tap Connect Wi-Fi again.

Chapter 4: The 5-Step Guided Setup Wizard

Set up your Wi-Fi, 1-Click SSD upgrade, Audio DAC, and Music Folders right in your browser.

The first time you open Conduit, the 5-Step Guided Setup Wizard greets you automatically. You can also re-open it anytime later under Settings -> System Setup -> Guided Setup Wizard.



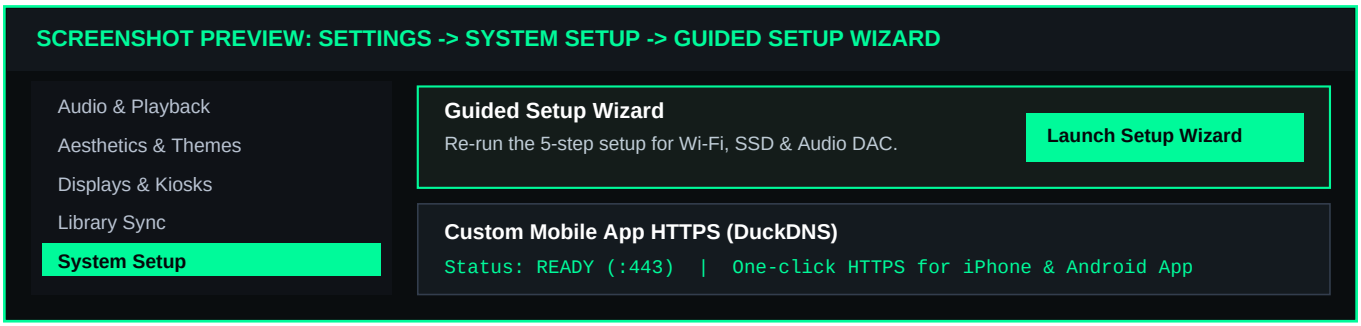
4.1 What Each Step Does

- Step 1 (Name, PIN & Wi-Fi): Name your server (default: conduit-hifi -> http://conduit-hifi.local or http://conduit-hifi.local:3000; if you run multiple Conduit servers at home, pick a unique name like conduit-hifi-rp5), optionally set a 4-8 digit Admin PIN, and pick your home Wi-Fi network. Conduit automatically verifies that your new .local address is reachable before redirecting from 192.168.4.1.
- Step 2 (1-Click SSD Upgrade): Move your system off the MicroSD card onto a fast, silent SSD in one click with a live 0%-100% progress bar. On Raspberry Pi 5, it clones everything to your PCIe Gen 3 NVMe SSD and configures the EEPROM boot order (BOOT_ORDER=0xf461) so you can use "Power Off Server" and remove the SD card completely. On Raspberry Pi 4, it moves your system and music library onto your external USB 3.0 SSD.
- Step 3 (Audio Output & DAC): Pick how your server plays sound-USB DAC, plug-in Hi-Fi Audio HAT (or 52Pi Mini Tower OLED + DAC), HDMI, Headphone jack, or Bluetooth. Selecting Bluetooth or a local DAC automatically activates the built-in Server Speaker Zone for Multi-Room grouping.
- Step 4 (Music Storage & Qobuz): Connect USB drives, internal SSD storage, or shared network folders (NAS), and optionally sign in to Qobuz for Hi-Res streaming.
- Step 5 (Review & Launch): Check your summary, optionally paste a Studio Pro license key, and click "Finish & Launch Conduit" to start scanning your music library.

Chapter 5: Settings Modal, Guided Setup Wizard & Sound Rack

An easy tour of the Settings screen, the Studio Sound Rack (EQ), and Multi-Room speakers.

Click the Settings gear icon on the Home screen (or inside Profile -> System Control) at any time to customize your sound, themes, storage, or re-run the Guided Setup Wizard.



5.1 Audio, Studio Sound Rack (EQ) & Multi-Room Zones

- Smart Crossfade: Smoothly blend the end of one song into the next (0 to 12 seconds).

- Studio Sound Rack (64-Bit Audio & Room EQ): Open the EQ Rack to adjust Bass, Presence, Brilliance, 6 built-in DSP signatures (including Vacuum Tube Warmth), or 5-Band Parametric EQ. Flip the rack to the Back Panel to upload custom Room Acoustic Correction (.wav) filters.
- Multi-Room Speakers & Live Telemetry: When you power on a Raspberry Pi running Conduit Room Node OS in another room, adopt it in one click, group or split rooms inside the Zones bar, and tap the green Activity pulse icon to inspect real-time CPU load, core temperature, and DAC status.

5.2 Themes, Kiosk Display, Liked Songs & Mobile App HTTPS

- Aesthetics, Analog VU Meters & Kiosk Screen: Pick from Modern Minimalist or Classic Solid framing, 4 studio accent themes (Conduit Green, Vacuum Tube Amber, Deep Ocean, Monochrome), 3 Analog VU Meter styles (Classic Warm Amber, Sapphire Blue Glass, Conduit Stealth Carbon), or launch the Ambient TV Kiosk (4.5s auto-hide).
- 1-Tap Liked Songs & Mini-Player Heart: Tap the Heart button on the floating Mini-Player to toggle any Local or Qobuz song in your personal "Liked Songs" playlist, or long-press (or Shift + Click) the Heart button to open the "Add to Playlist" picker.
- Listen on This Device: Stream synchronized music directly through your phone, tablet, or laptop speakers anywhere at home.
- System Setup (Guided Setup Wizard & Mobile HTTPS): Re-launch the Guided Setup Wizard anytime, or enter a free DuckDNS name and token to enable secure HTTPS so you can install Conduit as a home-screen app on iPhone and Android.
- Smart AI Auto-DJ, Sleep Timer & Wake Alarms: Let AI build a playlist for your mood, set a bedtime sleep timer, or wake up gently to your favorite music.

Chapter 6: Family Profiles, Admin PIN & 1-Click Updates

Personal music profiles for everyone at home, safe power-off, and Over-The-Air (OTA) software updates.

6.1 Personal Profiles for Everyone at Home

- Click the Profile button in the top corner to switch listeners or add a new family member with their own avatar color.
- Each person gets their own separate Recently Played list, Favorites, Saved Albums, Listening Stats, and visual theme.

6.2 Safe Server Power-Off, Send Debug Logs & 1-Click Updates (OTA)

- 1-Click Software Updates (OTA): Open Profile -> System Control to view your current version (v3.1.24), check system temperature and storage space, and click "Check for Updates" to install the latest improvements in one click.
- Power Off Conduit Server: Before unplugging power or removing the MicroSD card after an NVMe SSD clone, open Profile -> System Control -> Maintenance -> Power Off Server so your Raspberry Pi flushes all SSD/SD caches and halts cleanly.
- 1-Click Send Debug Logs & Built-In Guide: Click "Send Debug Logs" inside Profile -> System Control -> Maintenance to upload a sanitized diagnostic bundle, or open the built-in "How-To Guide" anytime.

Chapter 7: Unlocking Studio Pro & Recovering Your Key

100% offline lifetime activation with no cloud account or monthly subscription needed.

7.1 How to Activate Studio Pro (100% Offline)

- Step 1 (Find Your Device ID): Open Settings -> License in the Conduit app (or Step 5 of the Guided Setup Wizard) and copy your Device ID (formatted like CNDT-XXXX-XXXX-XXXX).
- Step 2 (Get Your Key): Visit https://www.conduit-audio.com/#buy, paste your Device ID, and complete checkout to receive your personal CNDT-PRO license key on screen and by email.
- Step 3 (Paste & Unlock): Paste your CNDT-PRO key into the Conduit app and click "Activate License". Your Raspberry Pi verifies the key 100% offline-no internet connection or cloud login required.

7.2 Lost Your Key? Instant Key Recovery

If you ever get a new SD card or SSD and need your license key again, simply visit https://www.conduit-audio.com/#verify and enter your purchase email address to view and copy your key immediately.