

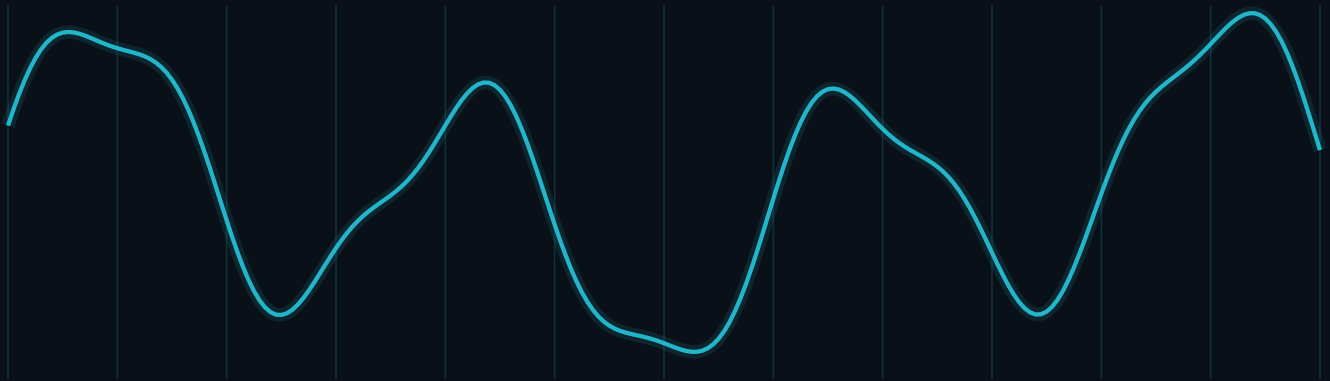
RigWorkZ

Always-on monitoring for your lighting network

ART-NET · sACN · RDM

Raspberry Pi 4 Installation Guide

From a blank SD card to a live dashboard — in about 20 minutes.



What RigWorkZ does

RigWorkZ turns a Raspberry Pi into an always-on monitor for your lighting network. It sits quietly on your show LAN and shows you — from any browser — every active universe, per-channel levels, refresh rates, source conflicts and more. It is **passive monitor-only by default**: it listens, it never transmits into your rig unless you explicitly unlock it.

This guide walks you through setting up RigWorkZ on a Raspberry Pi 4 — from a blank SD card to a live dashboard you can open on any phone, tablet or laptop.

Tip. Prefer it ready to run? Construct Ent also offers pre-configured RigWorkZ units — a Pi flashed, licensed and ready to plug into your rack. See <https://construct-ent.com>.

BEFORE YOU START

What you'll need

Raspberry Pi 4 Model B	2 GB RAM minimum, 4 GB recommended. A Raspberry Pi 5 works too.
microSD card	16 GB or larger, good quality (Class 10 / A1 or better).
USB-C power supply	The official Raspberry Pi 4 supply (5 V / 3 A) is strongly recommended — under-powered supplies cause hard-to-trace glitches.
Ethernet cable	RigWorkZ is wired-only. You'll patch the Pi into the same switch as your consoles and nodes. Wi-Fi is not used.
A computer	Mac, Windows or Linux — to flash the card and to view the dashboard.
HDMI screen (optional)	Plus a micro-HDMI cable — only if you want the Pi to drive its own full-screen display in the rack.

Note. RigWorkZ has to see your lighting traffic, so the Pi must sit on the same network segment (subnet / VLAN) as your Art-Net and sACN. Art-Net is broadcast and sACN is multicast, so a plain wired connection into the lighting switch is exactly what you want.

1 Flash Raspberry Pi OS onto the card

1. On your computer, download and install **Raspberry Pi Imager** from <https://www.raspberrypi.com/software>.
2. Insert your microSD card, open Imager, and set the three choices:
 - **CHOOSE DEVICE** — Raspberry Pi 4.
 - **CHOOSE OS** — Raspberry Pi OS (64-bit). The *Lite* version is ideal for an appliance; the *Desktop* version also works.
 - **CHOOSE STORAGE** — your SD card.
3. Click **Next**, then **Edit Settings**, and pre-configure the box (this is what lets it run headless, with no screen or keyboard):
 - **Hostname:** rigworkz
 - **Enable SSH** — use password authentication, and set a username and password you'll remember.
 - Set your **locale / time zone**. Leave Wi-Fi off — RigWorkZ runs wired.
4. Write the card. When it finishes, eject it.

Tip. The hostname you set here is how you'll reach the box: rigworkz. If you choose a different name, use that everywhere this guide says rigworkz.

2 First boot on the network

1. Put the card into the Pi.
2. Plug the Pi's Ethernet port into the same switch as your lighting network.
3. Connect power. The Pi boots in under a minute.

The Pi is now on your network, reachable as rigworkz.local.

3 Get RigWorkZ onto the Pi

Connect to the Pi over SSH, then download and unpack RigWorkZ — two commands.

1. From your computer's terminal, connect to the Pi (use the username you set in Imager):

```
ssh rigworkz@rigworkz.local
```

The first time, type yes to accept the key, then enter the password you set.

2. On the Pi, download the latest RigWorkZ and unpack it:

```
curl -L -o rigworkz.tar.gz \
https://github.com/Construct-Ent/rigworkz/releases/latest/download/RigWorkZ-pi.tar.gz
tar -xzf rigworkz.tar.gz
```

That gives you the app in `~/rigworkz`, ready to install.

Note. That link always points at the newest release, so it's the same command every time — nothing to look up. The current downloads are also listed at <https://construct-ent.com>.

4 Install

Still connected to the Pi, run the installer:

```
cd ~/rigworkz
sudo ./deploy/install.sh
```

That's it. The installer sets everything up and starts RigWorkZ automatically on every boot.

If you connected an HDMI screen and want the Pi to show the dashboard full-screen in the rack, install with the kiosk option instead, then reboot:

```
sudo ./deploy/install.sh --kiosk
```

Note. The installer builds RigWorkZ's environment, registers it as a background service, and enables it on boot. It's safe to re-run any time — for example after downloading an update.

5 Open the dashboard

On any phone, tablet or laptop on the same network, open a browser and go to:

```
http://rigworkz.local:8000
```

You'll see the live monitor. Patch RigWorkZ into your rig and your universes appear on screen as they start streaming.

Tip. If `rigworkz.local` doesn't resolve on your network, use the Pi's IP address instead — for example `http://10.0.0.42:8000`. Your router's client list shows the Pi's address.

6 Activate Pro (optional)

RigWorkZ is free to install and use. The **Free** tier is the live monitor — universes, levels, the 512-channel map, the per-channel oscilloscope and source-conflict detection. **Pro** adds who's-on-my-network discovery, RDM fixture health, network diagnostics, switch topology and a one-glance show-readiness check.

To activate Pro, from a phone or laptop on the same network open:

```
http://rigworkz.local:8000/activate
```

Enter your licence key. If the box has internet, it activates instantly. On an air-gapped show LAN you can paste an offline token or import it from a USB stick — the page walks you through it. **No keyboard on the Pi is ever required.**

ONCE IT'S RUNNING

Everyday use

- **View it** any time at `http://rigworkz.local:8000` from any browser on the network.
- **Leave it patched in.** The box runs by itself and starts automatically on boot — there's nothing to launch.
- **Restart it** (rarely needed) by connecting over SSH and running:

```
sudo systemctl restart rigworkz-web
```

- **Update it** by downloading the new version over the old (Step 3) and re-running the installer (Step 4).

Troubleshooting

I can't reach rigworkz.local

Some networks don't resolve `.local` names. Find the Pi's IP address in your router's client list and use it directly: `http://<pi-ip>:8000`.

No universes are showing

Check that the Pi is patched into the same switch / VLAN as your consoles and nodes. sACN is multicast — on a managed switch, make sure IGMP snooping isn't isolating it. Also check that a VPN on your console machine isn't capturing multicast before it reaches the network.

The Map or who's-on-the-network view is empty

Those are **Pro** features (see Step 6). The switch map additionally needs a managed switch that advertises LLDP.

The HDMI screen is blank

Make sure you installed with `--kiosk` (Step 4), then reboot the Pi.

Note. Questions or want a ready-to-run unit? Get in touch at <https://construct-ent.com>. RigWorkZ is passive monitor-only by default and never transmits into your rig unless you explicitly unlock it.

KEEPING IT CURRENT

Updating RigWorkZ

RigWorkZ checks for new releases and shows a note in the dashboard when one is ready. An update only replaces the app itself — it keeps your licence, universe names and imported fixture patch.

- **From the dashboard (easiest).** Open RigWorkZ, go to Settings and choose Check for updates, then Update now. The Pi downloads it, applies it and restarts itself in about a minute — nothing to reconnect.
- **Or re-install (always works).** Repeat Step 3 (download the latest over the old) and Step 4 (sudo ./deploy/install.sh). It's safe to re-run any time and keeps your data.

Note. Updating never changes your licence, universe names or imported patch — those live outside the app and are left untouched.

The version number doesn't change after updating

A box first set up before v1.2.13 can hold on to its original version through an in-place update. Re-installing from the current download (above) fixes it for good. To clear it right now without re-downloading, connect over SSH and run:

```
rm -f ~/rigworkz/rigworkz/_version.py
sudo systemctl restart rigworkz-web
```

After that, every future update applies in place — no wipe, no re-download.