

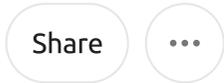
# Assembling Freedom #18 - High Signal in the Hashtub: Workshops, Open Source, and Hashrate Heat

POD256 • Episode 106



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*March 4, 2026 | For Tech Enthusiasts & Bitcoin Builders*

Fresh off the presses (literally recorded at the legendary Hashtub in Denver), this episode is a high-octane builder's debrief of **Heatpunk Summit 2026**(Feb 27–28). Hosts

[@econoalchemist](#), [@skot9000](#), and [@tylerkstevens](#) deliver zero-fluff, maximum-signal insights on turning Bitcoin mining waste heat into productive, decentralized home and business heating.

Listen now → [pod256.org](https://pod256.org)

## 1. Heatpunk Summit 2026: Where HVAC, Hydronics & Home Miners Collided

150+ builders converged at The Space in Denver's RiNo district for two days of live demos, hands-on workshops, and brutally honest engineering critiques. The star? The Hashtub itself — a cedar hot tub heated 100% by Bitcoin mining rigs.

### Key Summit Vibes:

- Over 20 different hashrate-heating systems on display and running live.
- Cross-industry collaboration: HVAC pros, hydronics engineers, and home-mining tinkerers.
- Evening hot-tub BBQs and networking that turned ideas into immediate prototypes.









**The Hashtub Tech Stack (Snorkel + Hashrate House collab):**

- Two S19J Pro miners (~8 kW) heat the tub from cold to 104 °F / 40 °C in under 4 hours.
- Open-source schemas & parts list available on GitHub (NakamotoHeating/HashTub).
- Models: “Pleb” (24 J/TH at 4,395 USD heating system, and “Pro” (16 J/TH, 5,895 USD).

## 2. Technical Deep Dive: Engineering Hashrate Heat Right

The episode spends serious time on real-world friction points and fixes. Here’s the breakdown:

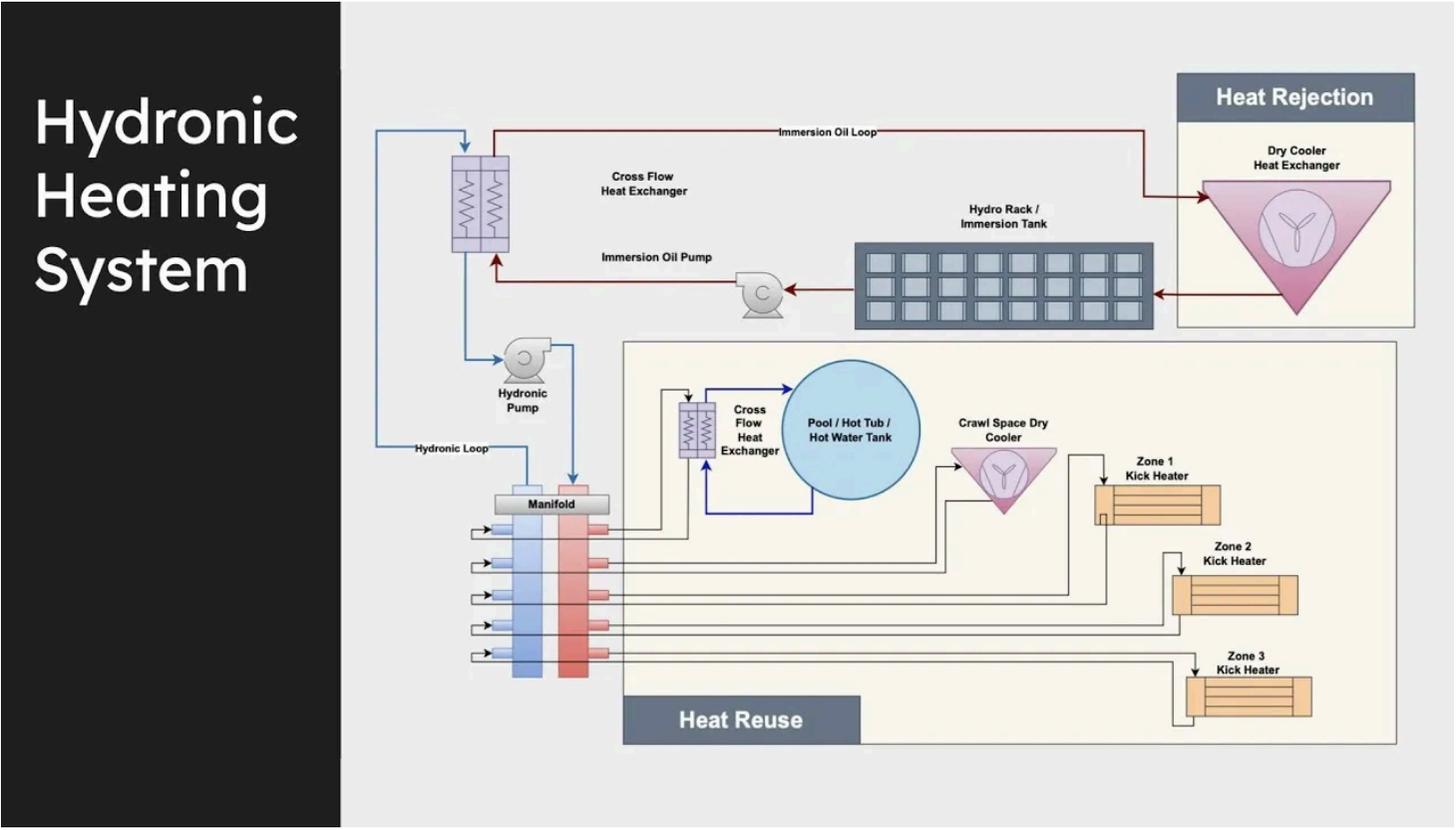
### Galvanic Corrosion Gotchas

Mixing metals in plumbing loops = rapid failure. Workshop consensus: dielectric unions, sacrificial anodes, and proper material matching are non-negotiable.

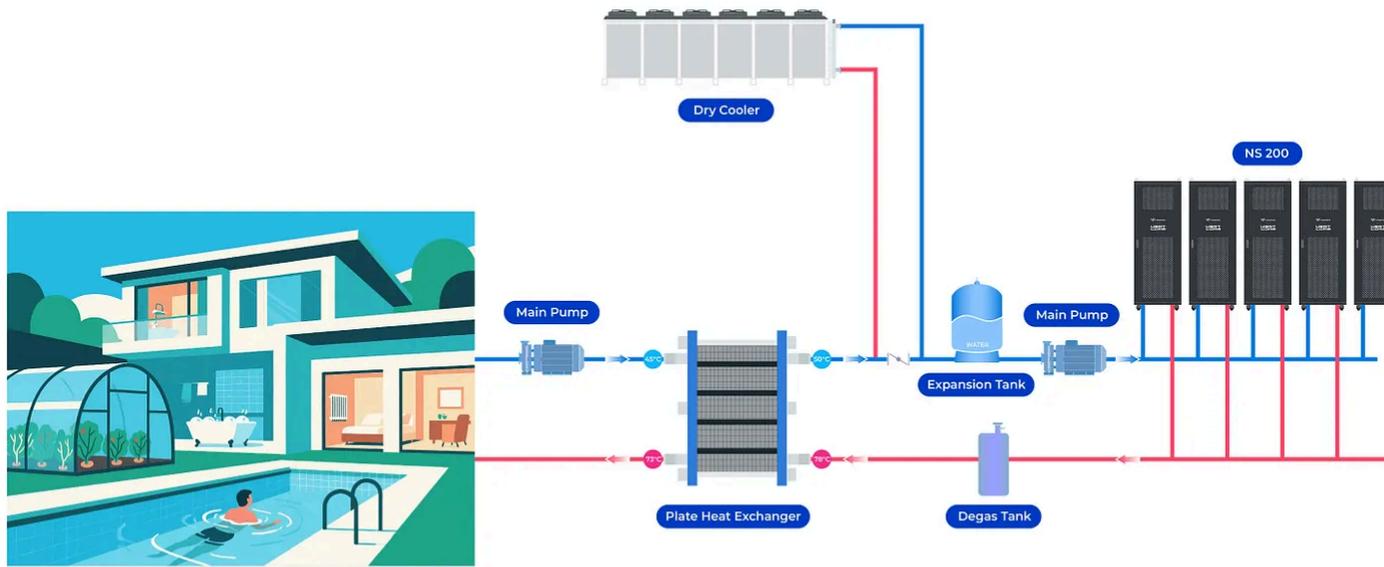
### Smarter System Design

Pro hydronics engineer tore apart the existing boiler setup on-site — live critique turned into live upgrades.

<b>Challenge</b>	<b>Workshop Solution</b>	<b>Why It Matters for Tech Enthusiasts</b>
Heat transfer inefficiency	Cross-flow heat exchangers + variable-speed pumps	90%+ capture of miner waste heat
System balancing	Manifolds + zone valves + Home Assistant automation	Precise temp control per room/tub
Noise & vibration	Isolation mounts + immersion-cooled options	Quiet enough for residential use
Scalability to businesses	Modular hydronic loops + dry coolers for rejection	Turn mining facilities into district heating







### 3. Canaan Goes All-In on Home Mining & Heat Reuse

Biggest announcement energy: Canaan (Avalon ASIC maker) attended, hosted “Builder Feedback with Canaan,” and signaled strong willingness to support the home-mining/heat-reuse market.

### What “Willing Partner” Means:

- Better docs & APIs for integration.
- Firmware tweaks for lower-power home use cases.
- Direct channel for builder feedback → faster iteration.

### Decentralization Impact:

A major manufacturer embracing small-scale, useful-heat miners accelerates the shift away from giant warehouse farms. More hashrate in homes = more censorship resistance + actual energy usefulness.





### Avalon Mini 3 Spotlight

37.5 TH/s @ 800 W — literally a space heater that mines Bitcoin and outputs usable heat. Quiet, plug-and-play, and now officially backed by the manufacturer for the heatpunk movement.

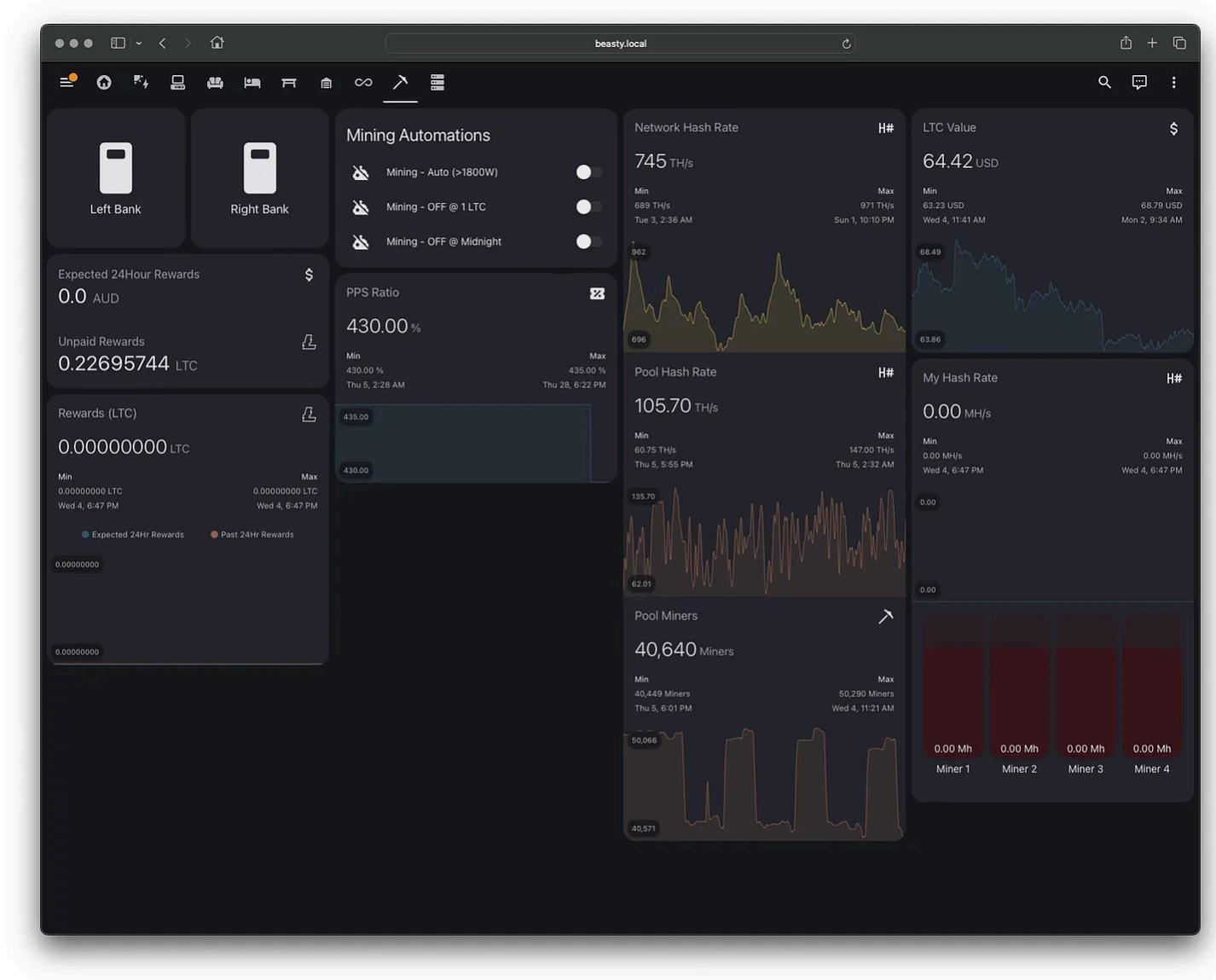
## 4. Workshop Highlights You Can Replicate Today

- **Home Assistant Control** — Full miner integration: power limiting, hashrate monitoring, temperature-based automations, and heat-pump coordination.
- **Open-Source Mining OS** — Discussions around Braiins OS-style stacks + custom forks for heat-priority tuning.
- **Regulatory & Insurance Track** — Real talk on homeowners insurance, zoning, and turning mining heat into a deductible “energy efficiency upgrade.”

The screenshot shows the Home Assistant web interface for a device named 'Antminer S9 (BOS)'. The interface is dark-themed and includes a sidebar on the left with navigation options like Overview, Energy, Map, Logbook, History, HACS, Media, Developer Tools, Settings, Notifications, and a user profile for 'admin'. The main content area is titled 'Antminer S9 (BOS)' and contains several panels:

- Device info:** Shows 'S9 (BOS) by Antminer'.
- Controls:** Contains a slider for 'miner1 PowerLimit' and a toggle switch for 'miner1 active'. Below these is an 'ADD TO DASHBOARD' button.
- Sensors:** Lists four sensors: 'miner1 Hashrate' (11.3), 'miner1 Miner Consumption' (1,131 W), 'miner1 Scaled Power Limit' (1,400 W), and 'miner1 Temperature' (100 °C). Below this list is another 'ADD TO DASHBOARD' button.
- Automations:** A panel with a '+' icon and text stating 'No automations have been added using this device yet. You can add one by clicking the + button above.'
- Scenes:** A panel with a '+' icon and text stating 'No scenes have been added using this device yet. You can add one by clicking the + button above.'
- Scripts:** A panel with a '+' icon and text stating 'No scripts have been added using this device yet. You can add one by clicking the + button above.'

The 'Controls' and 'Sensors' panels are highlighted with a red rectangular box.



**Pro Tip from the Episode:**

Start small — one Avalon Mini 3 + Home Assistant + a plate heat exchanger — and

you're already stacking sats while heating your office.

## Actionable Next Steps for Builders

1. Grab the Hashtub schema from GitHub and start prototyping.
2. Join the Hashrate Heatpunks community ([heatpunks.org](https://heatpunks.org)) for 2027 summit invites.
3. Experiment with Canaan's home miners and feed back via their summit session recordings.
4. Automate your first heat-reuse loop with Home Assistant — the episode calls it “the real unlock.”

## Related X Buzz from the Summit

Canaan Official ([@canaanio](https://twitter.com/canaanio)) – Feb 28, 2026

“Day 1 was pure heat + builders. 🔥 Leo on stage... home Miners setup... Miner-heated hot tub... first 3 who jumped in earned Canaan Heat Reuse Robes 🧥 #Heatpunk2026 #HeatReuse #HomeMining”

(With photos of the setup and happy miners in robes)

**Kevin Cahill (@CahillBit) – Feb 27, 2026**

“@herder1981 representing @canaanio at @HashHeatpunks Summit... Great discussion on Home Mining Hardware + ASICs for all! #avalonq #mini3 #canaan”

**Reckless Systems (@RecklessNode) – Mar 3, 2026**

“The Heatpunk Summit at the @SpaceDenver was exceptional... the incredible art gallery... really tied the event together!”

The movement is live, open-source, and heating up — literally.

### **Stay Sovereign**

This episode proves that the most powerful Bitcoin innovation right now isn't just more hash — it's *useful* hash. Turn waste heat into warmth, sats into soak time, and centralized mining into neighborhood resilience.

What's your first hashrate-heat project? Drop it in the replies or tag the hosts on X.

**Next week on POD256:** More freedom tech tangents from Bitcoin Park.

*Built with high signal • Zero hype • Maximum builder energy*



*(All visuals sourced from public summit coverage and product pages. Full episode audio contains even more granular timestamps and links — go listen!)*

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