APPLIANCE

START HERE

Write the card. Plug it in. Add your printers.

Everything is on the image: Bambuddy, the updater, the admin panel. Writing the card takes about ten minutes, and setting it up takes another five.

WHAT YOU NEED

You supply the computer; we supply everything that runs on it. Four parts, all of them stocked by every Raspberry Pi dealer.

PART	WHAT TO BUY
Computer	**Raspberry Pi 5** — 4 GB, or 8 GB for a large fleet
Power supply	The **official Raspberry Pi 27 W USB-C** supply
Cooling	The **official Raspberry Pi Active Cooler**
Memory card	microSD, **32 GB minimum**, 64 GB recommended

You will also want a card reader and a computer to write the image from. Nothing else — no monitor, no keyboard, not even an ethernet cable.

A Pi 5, not a Pi 4

The appliance keeps two copies of its operating system and switches between them, so an update that goes wrong can fall back to the one that worked. That layout needs the Pi 5's bootloader. On a Pi 4 the card may simply never start, with nothing on screen to explain why.

The official power supply and cooler

An underpowered Pi does not announce itself — it drops printer connections and corrupts the card, months later. The Active Cooler matters for the same reason: this box runs every hour of every day, and a throttled Pi looks exactly like slow software.

Why 32 GB is a floor rather than a suggestion

The two operating-system copies and their boot partitions claim 21 GB before anything of yours is stored, so a 16 GB card cannot hold the image at all. A 64 GB card leaves around 38 GB for prints, models and history. Buy an endurance-rated card if you can — they are made for exactly this kind of constant writing.

GET THE IMAGE

1 Download it, and check that it arrived whole

Your subscription includes the image and every update to it. The download link is in your purchase confirmation.

Two files arrive together: the image itself, whose name ends in `.img.xz`, and a short `SHA256SUMS` beside it.

> **Do not unpack the .img.xz**
>
> Raspberry Pi Imager reads the compressed file as it is. Unpacking it first costs you time and about 22 GB of disk, and gains you nothing.

Verify the download

A card written from a half-finished download boots to nothing in particular, and the failure looks like a hardware fault. One command rules it out. Run it in the folder holding both files.

```
# macOS and Linux
shasum -a 256 -c SHA256SUMS
```

```
# Windows, in PowerShell
Get-FileHash *.img.xz -Algorithm SHA256
```

On macOS and Linux you are looking for the word **OK**. On Windows, compare the hash it prints with the one inside `SHA256SUMS` — they should match character for character.

If it doesn't match

Download it again rather than trying to use it. A mismatch means the file is incomplete or corrupted, and neither Imager nor the Pi will tell you that is what went wrong — you will spend the evening suspecting the card.

Keep the file

It is around 1.2 GB and it is the same file every time. Writing a second card, or starting over after a bad experiment, is then a five-minute job instead of another download.

2 Seven screens in Raspberry Pi Imager

Free, official, and available for Windows, macOS and Linux at `raspberrypi.com/software`. Put the card in your reader before you start.

1. **Device — choose Raspberry Pi 5**
   This only filters the list on the next screen. It does not change what gets written.
2. **Operating system — scroll to the very bottom**
   Use custom is the last entry, below **Erase**. Almost everyone scrolls past it.
3. **Pick the .img.xz you downloaded**
   Select the compressed file itself. Imager handles the rest.
4. **Storage — choose your card**
   It shows the size and where the card is mounted. Read it before you continue.
5. **Write, then confirm the erase warning**
   Imager asks once, in red, and it means it. Everything on the card goes.
6. **Let it verify**
   It writes, then reads the card back to check every byte. There is a button offering to skip this. Don't.
7. **Write complete**
   The card is ejected for you. Take it out and put it in the Pi.

Customisation stays greyed out. That is correct.

Imager skips its own settings screen for a custom image, so it jumps straight from Storage to writing. Hostname, WiFi, password and time zone all belong to the appliance's own setup wizard — which you meet on page 7.

Check the storage device twice

Imager hides internal drives by default, but an external disk plugged into the same computer will appear in that list looking much like a card reader. The confirmation is the last thing standing between you and the wrong drive.

BEFORE YOU BEGIN

Two of these live on your printer, not on the appliance. Get them ready now and the rest takes minutes.

On your printer

- [ ] **Storage, inserted — if your model takes any**
  A microSD card on the X1 and P1 series; a USB stick on the H2 series. The A1 and A1 Mini have storage built in and need nothing. Without somewhere to put a file, a printer that takes storage cannot receive one.

- [ ] **LAN Only Mode, on**
  On the printer's touchscreen: Settings › Network.

- [ ] **Developer Mode, on**
  It appears once LAN Only Mode is on. Without it, Bambuddy can watch your printer but not control it.

- [ ] **Write down the Access Code**
  Eight characters, shown when you switch Developer Mode on. Also note the printer's **IP address** and **serial number**.

The access code changes

Every time you toggle LAN Only or Developer Mode off and on again, your printer generates a new access code. If Bambuddy stops connecting later, this is usually why.

Where to find all three

The **IP address** and **serial number** are on the printer's own screen, under Settings › Network and Settings › Device respectively. The **access code** appears the moment you switch Developer Mode on. Write down all three now and page 10 takes a minute.

POWER ON

3 Connect power, and wait

Put the card in the Pi and plug in the power supply. The first boot takes a couple of minutes while Bambuddy is unpacked from the card. Then pick whichever describes you.

An ethernet cable, if you have one

Not included, and not required — but plugging one in **before** you power on is simpler, faster, and skips the trickiest part of setup entirely.

With an ethernet cable

The appliance joins your network by itself. Open a browser on any computer or phone on that network and go to:

`http://bambuddy.local:8000`

Without ethernet

The appliance starts its own WiFi network so you can talk to it. Join it from a phone or laptop:

`Bambuddy-Setup`

Give it two to three minutes to appear. The appliance waits to see whether an ethernet cable turns up, then scans for nearby networks, before starting its own. Refresh your WiFi list.

The setup page usually opens by itself. If not, go to `http://bambuddy.local:8000`

If the name doesn't work

`bambuddy.local` relies on a discovery service some networks and browsers don't support. Find the appliance's IP address in your router's list of connected devices and use `http://<that-address>:8000` instead. It works the same.

4 Answer four questions

The wizard shows you one screen at a time. On ethernet, the WiFi screen is skipped — you are already connected.

SCREEN	WHAT IT ASKS
Welcome	Nothing. Press continue.
Connect to your WiFi	Pick your home network and enter its password. **Skipped on ethernet.**
Configure your appliance	Three settings — see below.
Set a password	Required, and the one that matters — see page 8.

"Configure your appliance" asks for three things

Device name. Becomes the address you type into your browser. Call it `workshop` and it answers at `http://workshop.local:8000`. Lowercase letters, digits and hyphens.

Time zone. So your print history has the right timestamps.

Language. For Bambuddy's interface.

All three are changeable later, from Bambuddy's settings.

Why the wizard pauses on the first screen

It waits for the clock. A Raspberry Pi has no battery to keep time while unplugged, and a wrong clock breaks every secure connection the appliance needs to make. This takes a few seconds, and only ever happens once.

SET YOUR PASSWORD

5 Give the appliance a password of your own

The last screen of the wizard, and the one that matters most. It is also the only one you cannot move past without answering.

There is no way past this screen, on purpose

On its first boot the appliance gave itself a password of its own, printed in `bambuddy-password.txt` on the card. Yours replaces it. Either way, one password unlocks three separate things:

- the appliance's admin page, as user **admin**
- the local console
- **SSH — a remote shell, reachable from every device on your network**

Typing a new password here replaces it in all three at once, and deletes the file from the card. Setup cannot be completed until you do. Eight characters minimum.

You can change it later at any time, from a terminal:

```
$ sudo bambuddy-appliance set-admin-password
```

Put it somewhere you will find it again

There is no "forgot password" link and no email to send one to — the appliance has no account with us and no way to reach you. A password manager, or wherever you keep your router's password.

If you forget it

The factory reset on page 11 clears this password along with your Bambuddy data, and the wizard that comes back asks you to set a new one. So a forgotten appliance password costs you your print history, but never the card.

THE NETWORK SWITCH

This is the only confusing part, and only if you set up over WiFi. Read it before you press the button.

6 Hand the appliance over to your network

If you set up over WiFi

1. **Press "Apply and switch networks"**
   The appliance shows its progress: loading Bambuddy, joining your WiFi, starting up.
2. **The Bambuddy-Setup network disappears**
   This is meant to happen. The appliance has stopped being a WiFi hotspot and joined your network instead.
3. **Your phone goes quiet — reconnect it to your normal WiFi**
   It will not do this on its own. Nothing is broken.
4. **Open the address the wizard showed you**
   Usually `http://bambuddy.local:8000`. Give it thirty to sixty seconds.

If you set up over ethernet

Press **Start Bambuddy**, wait thirty to sixty seconds, and open the address shown. Your network never changes, so nothing disconnects.

> **Mistyped the WiFi password?**
> The appliance notices it cannot join, and brings **Bambuddy-Setup** back. Rejoin that network, and the wizard is waiting where you left it. Try again.

7 Set up Bambuddy

The first time Bambuddy opens, it asks how you want to sign in. Create an account with a username and password, or choose to run without one on a trusted home network. You can change your mind later.

This account is **Bambuddy's**, and is separate from the appliance password you set in the wizard. They are different doors.

8 Add your printer

Go to the **Printers** page and press **Add Printer**. You need the three things you wrote down on page 5:

FIELD	WHERE IT COMES FROM
Name	Whatever you like — "Workshop X1C"
IP address	Your printer's screen, or your router
Access code	Eight characters, from Developer Mode
Serial number	Your printer's screen

Press save. The indicator turns green when the printer is connected, and temperatures start updating on their own.

Not turning green?

Nine times out of ten it is the access code — check it hasn't changed — or Developer Mode being off. Both live on the printer's touchscreen, not in Bambuddy.

EVERYDAY THINGS

Where everything lives

ADDRESS	WHAT YOU'LL FIND
`bambuddy.local:8000`	Bambuddy — your printers, queue and history
`bambuddy.local:8001`	The appliance's own admin page: health, logs, updates, network
`ssh pi@bambuddy.local`	A shell, for recovery

The admin page manages the **box**. Bambuddy's settings live inside Bambuddy. They are deliberately separate, so you can still fix the box when Bambuddy itself is down.

Factory reset

On the admin page, open **Dashboard** and press **Factory reset** — or run `sudo bambuddy-appliance factory-reset` over SSH. Your data is erased and the setup wizard returns. Use it when Bambuddy's own page is unreachable, when you've forgotten your Bambuddy account, or before passing the appliance on to someone else.

It clears the appliance password from page 8 as well, so the wizard that returns asks you to set a new one. To change it without wiping anything, use the command on that page.

> **No undo, no confirmation**
>
> Ten seconds of button and your print history is gone. It is the last resort, not the first.

EXTRA IPS, AND REACHING IT FROM ANYWHERE

Two things on the admin page's **Network** tab. Neither is needed for a normal setup. Reach for them when one address isn't enough, or when you aren't home.

Secondary IP aliases

A virtual printer impersonates a real one so your slicer can send straight to it — and each one needs an address of its own. Add one alias per virtual printer under **Network › Secondary IP aliases**:

```
$ bambuddy-appliance net-alias-add 192.168.1.50/24
$ bambuddy-appliance net-alias-remove 192.168.1.50/24
```

Aliases sit **alongside** the appliance's own DHCP address, never in place of it, so you cannot strand the box off its own network from here.

> **Pick an address your router won't hand out**
>
> Choose one outside the DHCP range, or your router will eventually lease the same address to something else and the two will fight over it.

Remote access (Tailscale)

Reach your printers from anywhere without opening a single port on your router. Tailscale builds a private link between your own devices; the account is free and takes about a minute.

1. **Network › Set up remote access**
   The appliance ships logged out, and stays that way until you do this.
2. **Scan the code with your phone**
   Sign up or log in, then approve the appliance. The page notices by itself.
3. **Use the name it gives you**
   Paste the MagicDNS name into your slicer's Add Printer dialog to reach your virtual printers from anywhere.

UPDATES AND BACKUPS

Two update lanes

Both live on the admin page under **Updates**, each showing what you have and what's available. Both stream their progress, and both survive you closing the tab.

LANE	WHAT HAPPENS
Bambuddy	Pulls the new version and waits for it to come up healthy. If it doesn't, the appliance puts the old one back by itself. Your data is never touched.
Operating system	A Debian upgrade. **No rollback**, may want a reboot, and refuses to start with under 1 GB free.

Back it up, before you need to

In Bambuddy: **Settings › Backup & Restore**. One file, holding your database and everything you have uploaded.

Keep it somewhere other than the appliance. A backup living on the card you are about to lose is not a backup.

What the backup does not hold

It is Bambuddy's backup, not the appliance's. Your appliance password, the Tailscale sign-in, your WiFi credentials and any IP aliases stay behind.

Restore onto a freshly flashed card and your printers, queue and history all come back. You redo the setup wizard by hand.

IF SOMETHING GOES WRONG

bambuddy.local doesn't resolve	Use the appliance's IP address from your router instead. Same page, same everything.
Stuck on the first wizard screen	It's waiting for the clock. Give it a minute with a working internet connection.
No Bambuddy-Setup network appears	Wait two minutes for the first boot. If an ethernet cable is plugged in, the appliance uses it and never starts its own WiFi — that's normal.
Bambuddy-Setup came back on its own	The WiFi password was wrong. Rejoin it and the wizard is waiting for you.
The printer won't connect	Check the access code hasn't changed, that Developer Mode is on, and that your printer's storage is in place.
The slicer can't find a virtual printer	It needs an address of its own. Add a secondary IP alias — page 12.
Slow, or printers keep dropping	Open the admin page and look for undervoltage warnings. This is almost always a power supply that is not the official 27 W one.
Forgot your Bambuddy account	A factory reset (admin page, or SSH). Your printers and history go with it, so restore a backup afterwards.
Forgot the appliance password	A factory reset clears it and the wizard asks for a new one — at the cost of your Bambuddy data. If SSH still works, the command on page 8 is the cheaper fix.

GETTING HELP

Nothing here is a dead end. There is a way back from every state this box can get itself into.

Send the support bundle

The admin page's **Diagnostics** tab packages every log the appliance keeps into a single download, with credentials stripped out. Attach it to any question and you will get a better answer, faster.

Ask a human

Questions, bug reports and ideas — the community and the maintainers are here.

GitHub Issues	`github.com/maziggy/bambuddy/issues`
Forum	`forum.bambuddy.cool`
Discord	`discord.gg/aFS3ZfScHM`

Before you ask

Three things turn a long thread into a short one: the appliance version, shown on the admin page's dashboard; the support bundle above; and what changed just before it broke — an update, a new printer, a router swapped out.

Your subscription includes support

The channel to use, and what you can expect back, are set out in your subscription confirmation. The links above stay open to everyone regardless — Bambuddy is free software and its community is not gated behind a purchase.

AT A GLANCE

ADDRESS	WHAT IT IS
`bambuddy.local:8000`	Bambuddy — printers, queue, history
`bambuddy.local:8001`	The appliance's admin page
`ssh pi@bambuddy.local`	A shell, for recovery

Substitute the device name you chose in the wizard. If the name does not resolve, the appliance's IP address works everywhere the name does.

The two commands worth keeping

```
$ sudo bambuddy-appliance set-admin-password
$ sudo bambuddy-appliance factory-reset
```

Everything else is online.

`wiki.bambuddy.cool/appliance`

The full manual, the command line reference, and an honest account of the three things your appliance reports back — a random identifier, its hardware model, and its version. Never your prints, and never your data.

Bambuddy is open-source software under the AGPL. Your appliance runs exactly the same Bambuddy anyone can download and run for free — what you bought is the card that maintains itself, and someone to ask.