PNK FAQ

What is a PNK?
An easy to assemble WiFi hotspot with a solar charger and battery backup.

Can you use it to get on the internet?
The PNK has two modes: “online” mode and offline or “island” mode.

What is the range?
Anywhere from one building in most basic form to up to a few city blocks with some additional routers.

How much does it cost?
This depends on how you customize it—there are different versions depending on needs.

- For $500 you can build a basic kit to cover one building or small public space. But a kit can cost up to $3000 for more advanced gear (with sufficient solar powered batteries to charge multiple devices)
- A kit also gets more expensive as you add routers. The more routers you daisy-chain together, the bigger the network scale.

What’s in the kit?

- Raspberry Pi - A tiny computer with web-based applications
- Downloadable or preloaded SD card preloaded with disk image to configure the Raspberry Pi as a local server
- Wi-Fi equipment (routers and repeaters) for wireless distribution and access points
- Battery Pack with a portable solar panel for charging
- Wiring (cables for data and power)

Do you need technical knowledge to use it?
Anyone with some computer skills and training should be able to use the kit. No coding (command line) involved. People who have been trained should be able to train others. There might be some tinkering with configuring the disk image, and some trial and error with naming and connecting the routers—we try to cover this in our materials and trainings.

What’s more important: creating shared social protocols about how to use it—what kinds of data it should collect, what kinds of services and files people should put on it, whose job it is to charge the batteries and when, etc. We recommend in person meetings to decide on these principles of sharing infrastructure.

When it’s in Offline (Island) mode (not connected to the Internet), what can it do?

Portable Network Kits have two modes: *online* and *offline*. When you have at least one connection to the Internet, such as a working Ethernet cable or mobile tower, the kit can spread out and share that connection so multiple people can use it in a local area. When you have no connection at all to the Internet, the kit can work in “island” mode..

In island mode you have a Wi-Fi network that only connects devices in a small area - anywhere from one building or public square to about a half square mile if you add or “mesh” additional Wi-Fi devices to create a wider range. However, you CAN’T reach the global Internet, so you can’t access Facebook, Gmail, Whatsapp, or other cloud-based services. You can only communicate with people in your local geographic area who are connected to the same network.

Instead, in “island mode” the services and information on the network live on a local server (the Raspberry Pi). You can see and connect to the network from your phone or computer, just like any other Wi-Fi network, to use the services and access information on the local server.

Imagine a radio station that only reaches your neighborhood -- except that instead of only broadcasting out from a central transmitter, everyone can both send and receive messages, files, and information using their phones or computers.

Things you CAN do in island mode:

- Chat instantly with friends and neighbors nearby
- Share emergency information and updates with people nearby (first aid resources, emergency updates)
- Create lists of requests or supplies exchanges (for example, you could create a shared list of needed supplies or medical needs)
- Share updated news and information - whenever someone is able to access outside information sources, they can post information on the local network
- Share and store photos or other documentation of conditions in your area
- Share resources such as how-to guides, wikis, or reference materials
- Share music, books, and other food for the soul

Internet (online) mode	**Island (offline) mode**
Needs: what’s in the kit + at least one working internet connection	Needs: just what’s in the kit
Functionality: multiple users can access the global internet using phones, computers,	Functionality: multiple users can use the wireless network in a local area. Services hosted locally include: chat, file sharing,

tablets; can access normal Internet websites and platforms, email, etc.	wordpress (webpage/blogging), collaborative documents
Limitation: speed and capacity of connection limited by amount of data/bandwidth available. Too many users or too much data (video streaming, for example) can slow down or interrupt connection	Limitation: will not get you onto the global internet, so no social media, email, news, etc. outside of the local area unless synched physically via a hard drive (sneakernet with non-digital segments)
Recommendation: a few designated users to be the voice of the community, protocols for what kinds of services to access	Recommendation: a few designated users & a plan of how to get info to and from outside and share it locally