Intro to Ham Radio

This presentation will explore ham radio basics, its origins, and some possible applications. We'll also discuss its limitations and potential alternatives.

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Power and Resilience Thru Experiential Education (PaRTEE)

What we do

We offer skillshares with the aim to provide resources to QTBIPOC activists (though not exclusively so).

https://partee4justice.org

Ham radio

Our focus is on creating an inclusive onboarding experience for newcomers to amateur radio.

SAVE THE SALMON: BUILD A SWIMWAY
JONES VALLEY RESORT
WWW.RUN4SALMON.ORG
FB + IG: @Run4Salmon

Ham Origin Story

Run4Salmon

In 2019, Run4Salmon used ham radio to coordinate disparate groups in an area not well served by cellular service

Three groups

Horse riders

Dugout canoe paddlers

Basecamp

Also see

Mauna Kea

Standing Rock

http://run4salmon.org/

Other reasons people become hams

Emergency Communications

When infrastructure fails, ham radio remains a reliable communication channel, crucial for disaster response.

Make friends around the world

Connect with people around the globe, explore different cultures, and broaden your horizons.

Geeking out

It's a great way to learn about radio theory, electronics, and gain practical experience with circuits and antennas.

Emergency Communications: A Closer Look

Reliability

Ham radio is a resilient communication system, often functioning even when other infrastructure is down.

ARES/RACES

Training programs like ARES and RACES prepare ham radio operators for disaster response and emergency communication. Works with gov. agencies.

https://www.arrl.org/news/ham-radio-operators-serving-during-california-firestorms

More reasons to get into ham radio

Making friends around the world

Call the space station

Contesting

Geeking out

Electronics

People make their own radios, antennae, build radio towers, and more.
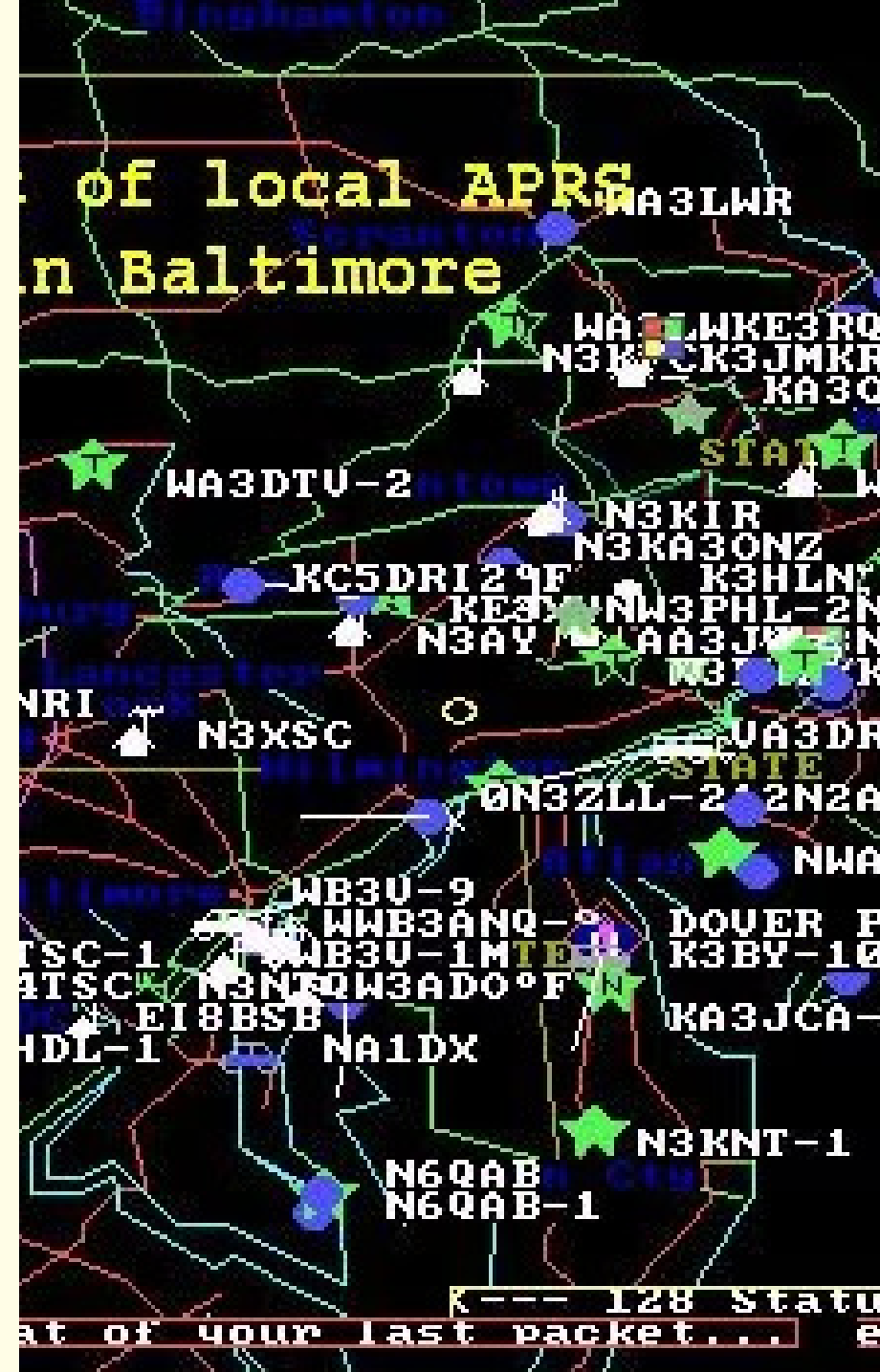
CW

Continuous wave, better known as morse code, is a skill that used to be required but no longer is

APRS

Automatic Packet Reporting System (APRS) allows for data transmission and location sharing.

Make up your own protocols!

You can make up your own protocols as long as you document them

Limitations

No Encryption

Strict Regulations

Community isn't very diverse

Alternatives to Ham Radio

Unlicensed spectrum

Lots of devices can be used in unlicensed spectrum (typically lower power).

LoRa / Meshtastic

LoRa changed the game by increasing range for low power devices. Open-source, license-free, and encryption capable.

Commercial Radio

Expensive but offers encryption options.

Followup sessions

Ham Cram

Virtual ham cram on zoom. Goal is to go through all test questions and the correct answers two times. Idea is that this will load up short-term memory enough to be able to pass the test (no guarantees though!). Can take test online or in-person.

Field exercises!

We'll be meeting up at Arrowhead Marsh to use radios together. This will cover basic settings, contacting each other directly (simplex), and talking through a repeater. If there's time and interest, we'll also show how to program radios using CHIRP from a computer.

Details on testing

1   **FRN Number**

Register for a Federal Registration Number (FRN) so you don't have to share your SSN on a form.

https://www.fcc.gov/wireless/support/knowledge-base/universal-licensing-system-uls-resources/getting-fcc-registration

2   **Note: Your FCC record is public!**

Your info will be public (anyone can look you up in the FCC database), so think ahead of time about the information you put on the form (e.g. what address you'll be using). You can use a work address or really any address that will receive mail for you.

3   **Schedule a test**

If you come to our virtual ham cram, we recommend making an appointment w/ a virtual examiner. In the past people have had great luck with **https://WM7X.net**

Alternatively, you can look for a ham cram and test at ARRL or HamStudy

https://www.arrl.org/find-an-amateur-radio-license-exam-session
https://hamstudy.org/sessions

4   **Come to our virtual ham cram!**

Getting started with radio is a bit of conundrum because it's easier to learn if you have a radio, but you can't use a radio until you've been licensed. The ham cram concept was invented to address this. It helps people get licensed quickly (as opposed to learn all the material). It works by getting a group together to read all the possible questions and correct answers (the actual test will be a subset of the possible questions). People who are able to read through the questions and correct answers twice have a pretty high chance of passing the test because of short-term memory. And if you fail, you can take the test again.

We are offering a virtual ham cram on zoom so that you can do the cram in the company of others in a COVID-safe environment (many other ham crams are in-person and indoors).

Learning resources

1 **hamstudy.org**

We'll be using this together during our virtual ham cram, but you can also use it on your own. If you want to learn ham cram-style, select the test you want (probably Technician), then select Read Questions, then click Hide Distractors. This should show the questions and the correct answer only.

2 **Books for learning ham radio**

Gordon West: **https://gordonwestradioschool.com/main/page_training_resources.html**

Gordon West audio books (not sure if this covers everything, but you can download them for free):
https://www.haminstructor.com/index.php/gordon-west-audio-cds

Fast Track to Your Ham Radio License: **https://fasttrackham.com**

3 **Bay Area radio clubs**

List of San Francisco Bay Area Ham Radio Clubs **https://w6aer.com/list-of-san-francisco-bay-area-ham-radio-clubs/**

Beginner radios

1 ## QRZ Jumpstart

QRZ & GigaParts have partnered for a beginner radio set at a discount. The discount is only available to people who get their technician license less than 6 months ago:

https://www.gigaparts.com/qrzjumpstart?srsltid=AfmBOoqm8RuvNuU967D6bhKiqk5RwzsxMHspMunzFcyOL4IuIoPA-G7A

2 ## Baofeng radios

Not necessarily highly respected, but they are inexpensive radios that work for a lot of people. When we went to Run4Salmon, we got a bunch of UV-5R radios and they worked fine. Some people prefer the UV-9R Pro, which is a more powerful radio and has a waterproof version.

3 ## Other radios

We suggest consulting with an experienced ham when choosing something more expensive that might last a few years. You can also get some info from stores, but we'd suggest comparison shopping and doing additional research.

Also, we suggest that whatever radio you get, make sure it's compatible with CHIRP (a computer program that you can use to program your radio). There's a list of compatible radios on their wiki: https://chirpmyradio.com/projects/chirp/wiki/Home

Keep in touch

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