Welcome



## Summits on the Air (SOTA): Adventure on the Airwaves

Presented by James Cizek, KIOKN

HAMCON Colorado

#### What is SOTA?



An international award program combining hiking and amateur radio.



Activators operate from mountain summits.



Chasers make contact from home, mobile stations, or other peaks.



Goal: encourage portable operations in the great outdoors.

## Why Participate in SOTA?

| Enjoy   | Challenge                                     | Earn  | Join   |
|---|---|---|--|
| Enjoy the outdoors<br>and radio at the<br>same time | Challenge yourself physically and technically | Earn points and awards for activations and chases | Join a worldwide<br>community of<br>amateur radio<br>adventurers |

# How the Points System Works

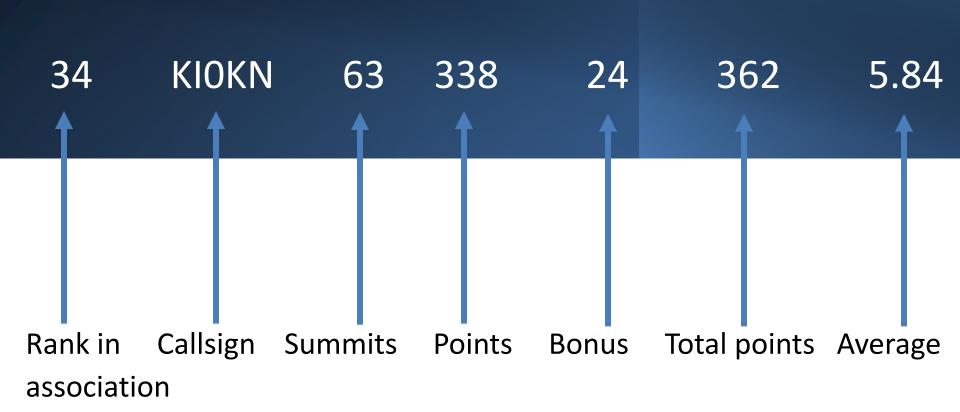
- Each summit has a point value (1–10)
- Bonus points may apply (e.g., winter in Colorado: +3, summer in Arizona +3)
- Only one activation per summit per UTC day per year counts
- Both activators and chasers earn points

#### **Activator Roll of Honour**

SOTA is not inherently a competitive activity, it's about individual aspirations and working towards a goal at your own pace. However, it can be fun to see how your progress compares with that of others, hence we publish our Honour Roll on the internet.

Please help us to keep this page up-to-date by regularly submitting your SOTA logs.

|          | W0C - USA - Colorado | ~       | - All Years - | -All Bands- ~ -All Modes- | Show         |         |
|----------|----------------------|---------|---------------|---------------------------|--------------|---------|
| Position | Activator Callsign   | Summits | Points        | Bonus Points              | Total Points | Average |
| 1        | <u>KX0R</u>          | 2289    | 8306          | 984                       | 9290         | 4.06    |
| 2        | <u>WV0X</u>          | 670     | 4796          | 597                       | 5393         | 8.05    |
| 3        | <u>K0MOS</u>         | 668     | 3799          | 480                       | 4279         | 6.41    |
| 4        | <u>WA6MM</u>         | 620     | 3598          | 423                       | 4021         | 6.49    |
| 5        | <u>K7PX</u>          | 574     | 2757          | 573                       | 3330         | 5.80    |
| 6        | WG0AT                | 738     | 2475          | 579                       | 3054         | 4.14    |
| 7        | <u>KD0YOB</u>        | 542     | 2217          | 57                        | 2274         | 4.20    |
| 8        | <u>W0CCA</u>         | 316     | 2144          | 84                        | 2228         | 7.05    |
| 9        | WOCP                 | 324     | 1898          | 186                       | 2084         | 6.43    |
| 10       | <u>K5SJC</u>         | 338     | 2073          | 9                         | 2082         | 6.16    |
| 11       | KONR                 | 353     | 1888          | 159                       | 2047         | 5.80    |
| 12       | <u>K5RHD</u>         | 236     | 1825          | 192                       | 2017         | 8.55    |
| 13       | NOTA                 | 368     | 1652          | 201                       | 1853         | 5.04    |
| 14       | KOJJW                | 306     | 1536          | 132                       | 1668         | 5.45    |
| 15       | WOERI                | 265     | 1599          | 9                         | 1608         | 6.07    |
| =15      | WOMNA                | 267     | 1599          | 9                         | 1608         | 6.02    |
| 17       | <u>W7UM</u>          | 325     | 1396          | 201                       | 1597         | 4.91    |
| 18       | <u>K0JQZ</u>         | 280     | 1298          | 213                       | 1511         | 5.40    |
| 19       | NOIPA                | 209     | 1234          | 186                       | 1420         | 6.79    |
| 20       | <u>N1SMB</u>         | 329     | 1283          | 135                       | 1418         | 4.31    |



#### **Activator Badges**



**CW** 06 Jul 2013



2013











Four **Kilometers** Up 04 Aug 2013













2013





**Activations** 06 Oct 2013



250

02 Nov

2013

Seasonal Bonus 28 Dec 2013



21 Jul 2013

DXCC 10 **American** 26 Jan 2014 Ρi 14 Mar



**Force** Sensitive 04 May 2014



500 18 Jul 2014



Kiloeiffel 19 Jul 2014

St Patrick's

Day

17 Mar

2017



Frood Activator 26 Oct 2014 Uniques 100

01 Nov 2014

#### **Activator Badges**



1000

13 Jun 2015



VHF 05 Aug 2017



Uniques 250 24 Oct 2017



**Dalton** 11 Sep 2015

Jedi

Master

04 May

2018

Kilokhalifa 07 Oct 2015

**SOTA** 

Complete -

100

21 Jun 2018





Mountain

**Explorer** 

**Bronze** 

06 Nov 2018





Groundhog Day 02 Feb 2019



2014

**Padawan** 04 May 2016



Shamrock 17 Mar 2019



2500 04 Mar 2017



04 May 2019



SSB 04 Mar 2017



DXCC 50 5k 11 Dec 13 Sep 2022 2019



Jedi 04 May 2017

Craic

17 Mar

2023







02 Feb 2025

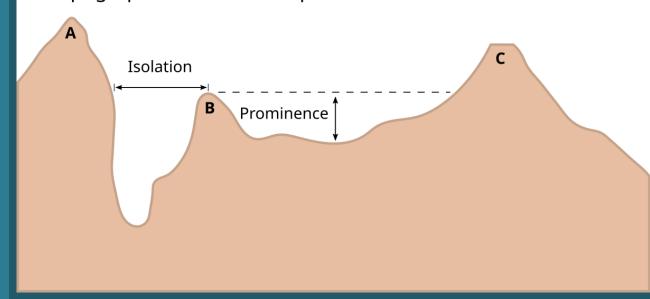
Source: https://www.sotadata.org.uk/en/



#### Prominence Explained

- Prominence measures how distinct a summit is from nearby peaks
- Defined as the height of a summit relative to the lowest contour line encircling it and no higher peak
- Used to ensure summits are independent

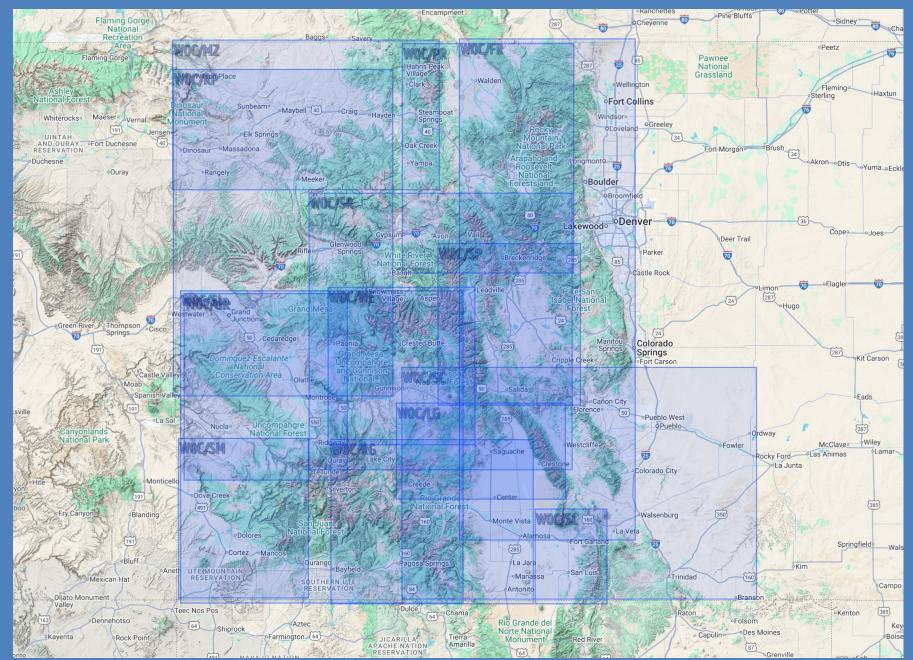
Topographic isolation and prominence of the summit "B"



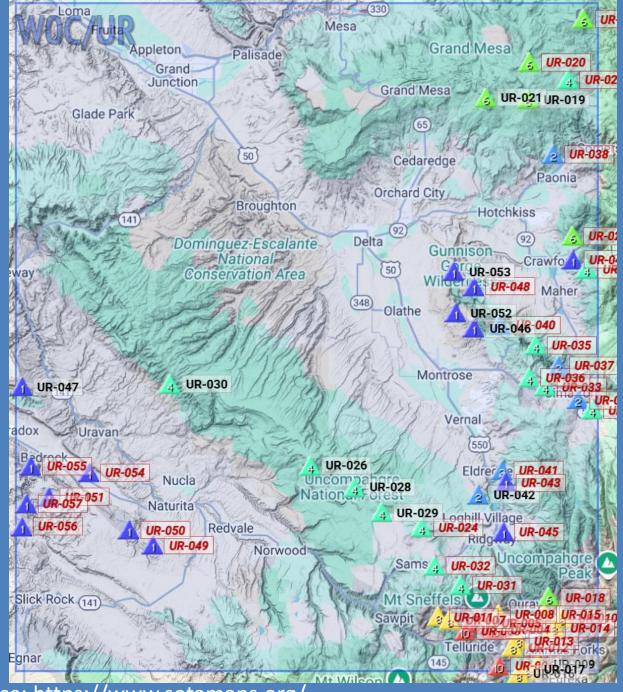
https://en.wikipedia.org/wiki/Topographic\_prominence

## SOTA Structure

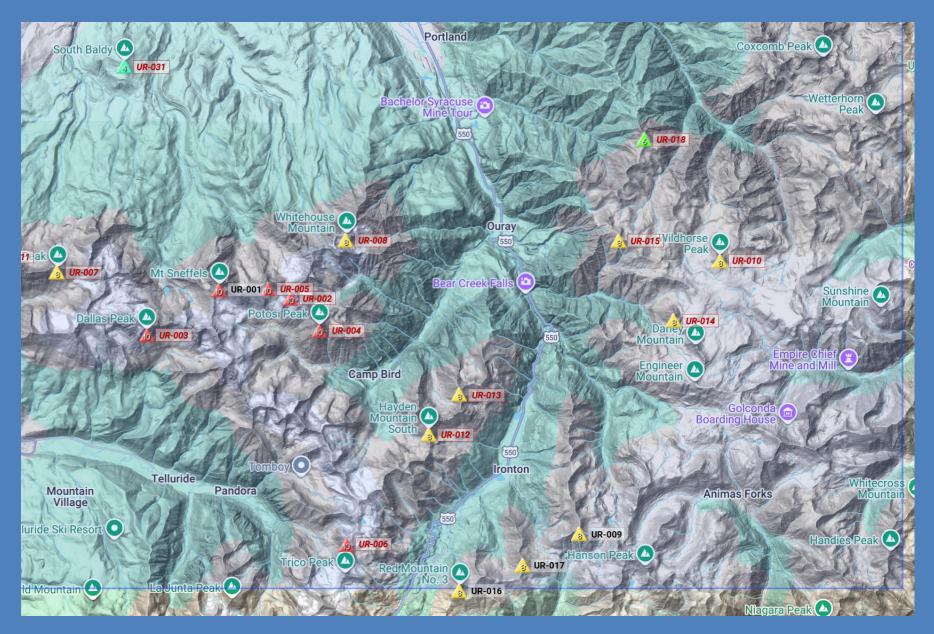
- World divided into Associations (e.g., W0C = Colorado)
- Each Association has Regions
- Regions contain individual Summits with assigned point values and bonuses (1pt, 2,4,6,8,10pt Seasonal bonus 3pt)



Source: https://www.sotamaps.org/



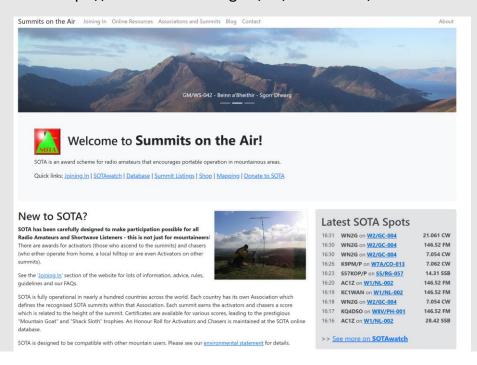
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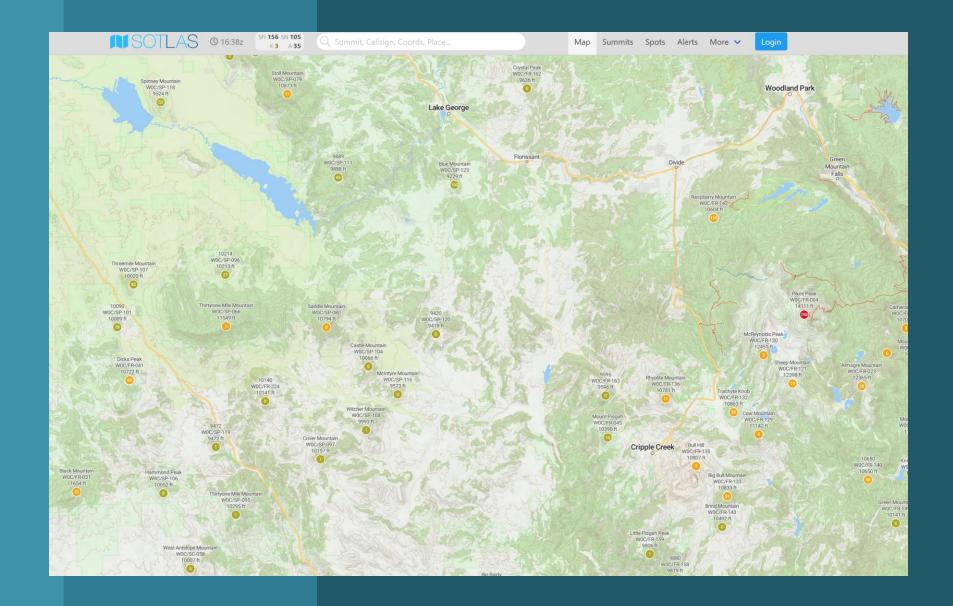
## Official SOTA Tools

- SOTAwatch spotting and alerts for activations
- SOTAMaps plan routes and view peaks
- SOTADATA upload logs and track awards
- ARM Association Reference Manual
  - Colorado's is here: https://www.sotadata.org.uk/en/association/W0C

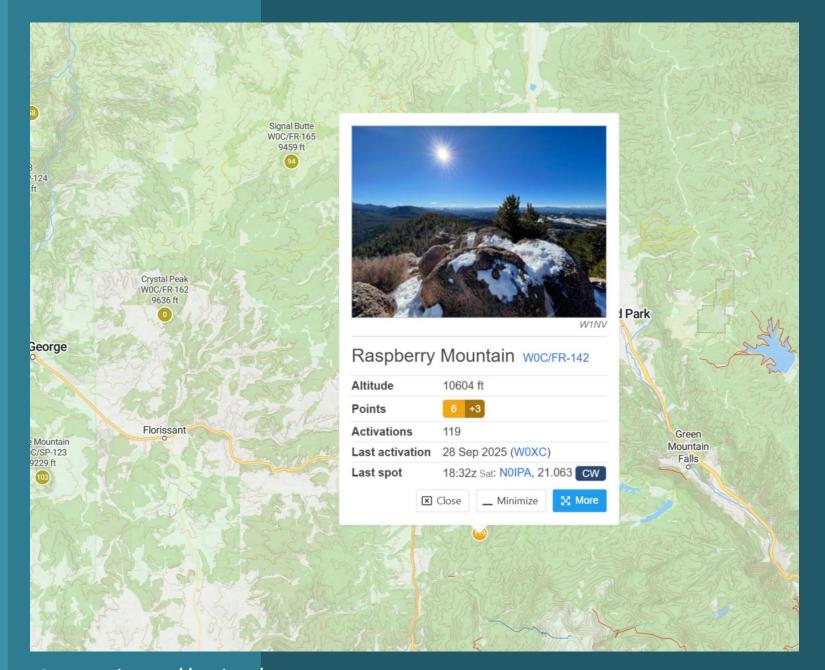


#### Community & Modern Tools

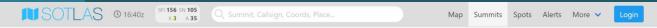
- sotl.as modern interface integrating spots, maps, and logs
- HAMRS simple portable logging for phones/tablets
- HAM2K / Polo Logger web-based, cloud-synced logging with auto-spotting
- Caltopo Excellent tool for planning route
- ONX Hunt Great for making sure you stay on public land (also excellent for slope angle)
- Alltrails Good for peaks with established trails
- ListsOfJohn Great info site for many peaks
- Gaia GPS Good planning tools for routes
- Activation.zone Great Activation zone mapping tool by N6ARA



Source: https://sotl.as/map



Source: https://sotl.as/map



#### Raspberry Mountain + Alert + Spot WOC/FR-142 | 10604 ft | 6 + 3 points | 💮 119 activations



Coordinates: 38.9071, -105.1244 Open v Copy

Locator: DM78kv

First activation: N6UHB (with KD0PNK) on 07 Dec 2011

Resources (+ Article | + Route)

- G Google: Raspberry Mountain
- Raspberry Mountain W0C/FR-142 (by KF0RIG on 19 Jan 2025)
- 99 Getting to the Trailhead (by KD8EQA on 18 Mar 2022)
- 99 Excellent SOTA hike (by KONR on 20 Jun 2021)



■ W0C USA - Colorado / FR CO-Front Range - 142

#### Recent spots

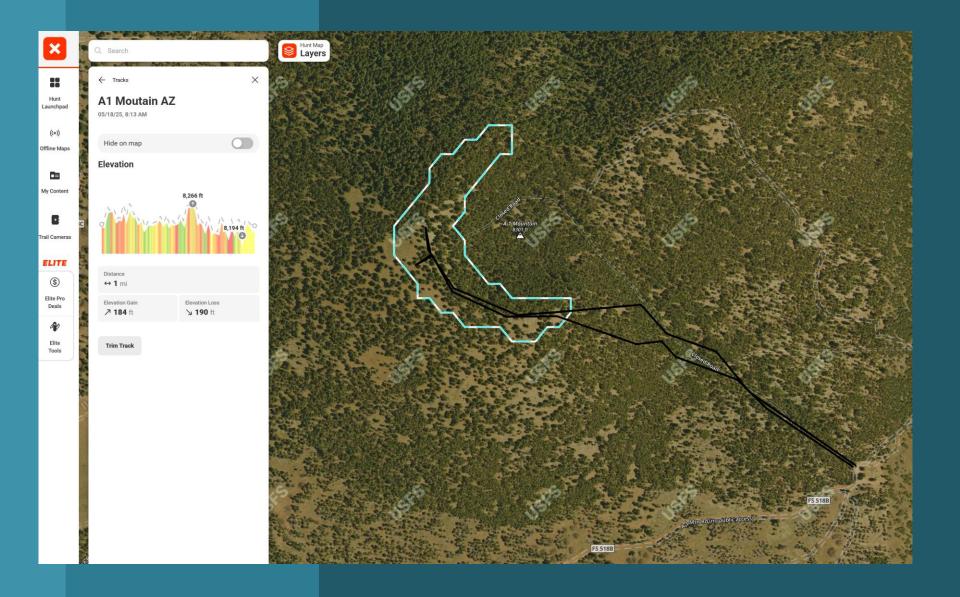
| Time ↓     | Callsign | Frequency | Mode | Posted By | Comments                            |
|------------|----------|-----------|------|-----------|-------------------------------------|
| 18:32z Sat | NOIPA    | 21.063    | [cw] | RBNHOLE   | [RBNHole] at KSTR 17 WPM 24 dB SNR  |
| 18:21z Sat | NOIPA    | 21.063    | CW   | NOIPA     |                                     |
| 18:19z Sat | NOIPA    | 21.063    | CW   | RBNHOLE   | [RBNHole] at KSTR 17 WPM 20 dB SNR  |
| 18:09z Sat | NOIPA    | 18.093    | CW   | NOIPA     |                                     |
| 18:05z Sat | NOIPA    | 14.066    | cw   | RBNHOLE   | [RBNHole] at W6YX 17 WPM 21 dB SNR  |
| 17:54z Sat | NOIPA    | 14.066    | [cw] | NOIPA     |                                     |
| 17:51z Sat | NOIPA    | 10.113    | CW   | RBNHOLE   | [RBNHole] at KW7MM 17 WPM 18 dB SNR |
| 17:38z Sat | NOIPA    | 10.113    | CW   | NOIPA     |                                     |
| 17:29z Sat | NOIPA    | 7.032     | (CW) | NOIPA     |                                     |

#### Routes

|   | Title                    | Ascent  | Descent | Distance |
|---|--------------------------|---------|---------|----------|
| > | Alternate Ascent Route 🔞 | 1296 ft | 479 ft  | 3.0 mi   |

#### **Photos**





Source: https://www.onxmaps.com/hunt/



Source: https://www.onxmaps.com/hunt/

#### Planning Your Activation

- Research summit access and permissions
- Check weather and trail conditions
- Plan gear (radio, antenna, power, logging)
- Alert other operators before heading out

•







MAKE AT LEAST 4 QSOS FOR A VALID ACTIVATION



USE EFFICIENT ANTENNAS AND POWER MANAGEMENT



BE COURTEOUS - SHARE FREQUENCIES AND MANAGE PILEUPS

#### **Ten Essentials**





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## After the Activation

- Sync with favorite logging program (If using paper logging)
  - (HAMRS or HAM2K for easy upload)
- Upload logs to SOTADATA
- Post a trip report or photos to the SOTA community

#### Awards & Recognition



Activator and Chaser certificates



Mountain Goat (activator) and Shack Sloth (chaser) awards



SOTA challenges and milestones

#### Awards & Recognition

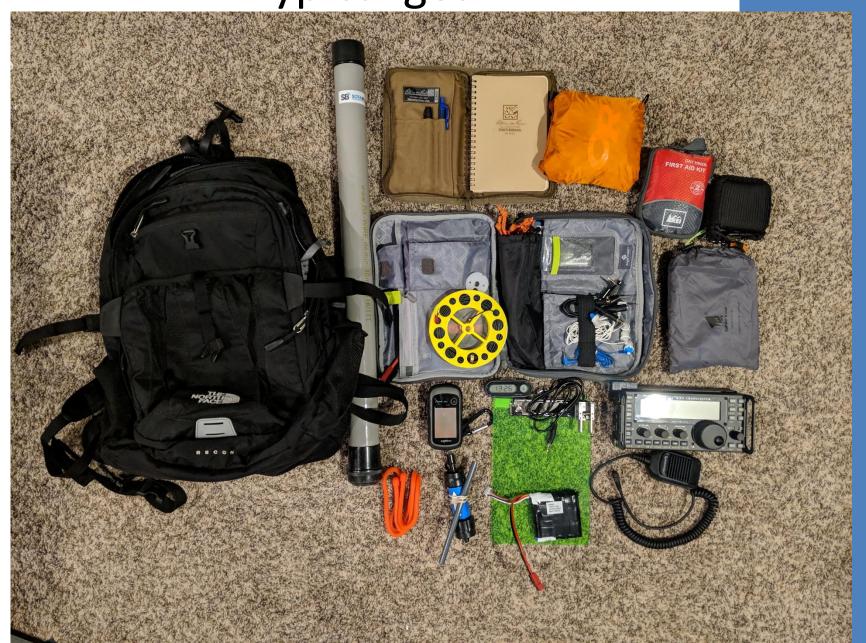


Source: https://www.sota.org.uk/Joining-In/Awards



Source: https://vk5pas.org/shack-sloth/

Typical gear



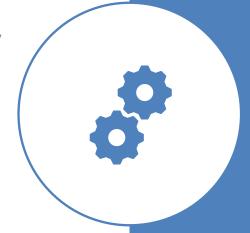
#### Popular gear choices

https://elecraft.com/products/kx2-ssb-cw-data-80-10-m-transceiver



https://www.lnrprecision.com/mountain-toppers/





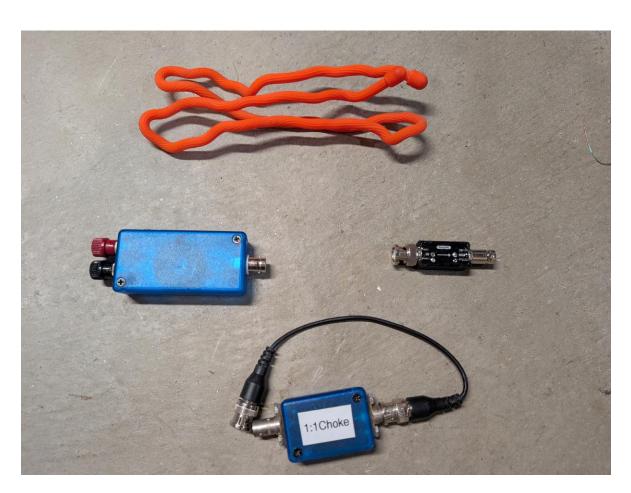
https://hamgadgets.com/cft1-by-km4cft.html

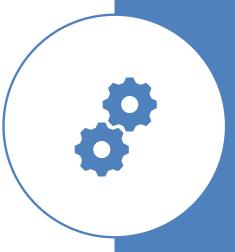


https://qrp-labs.com/qcxmini.html



#### Popular gear choices





#### Popular antenna choices

#### End fed halfwave

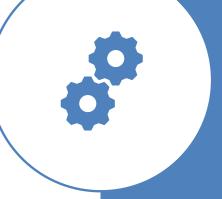
- Trapped
- Single band



https://www.sotabeams.co.uk/pico-traps-kit-pair/

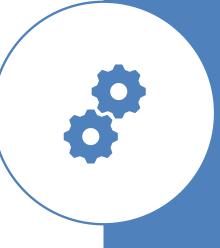






#### Popular mast choices





#### The SOTA Community



SOTA Reflector – official discussion forum

https://nasota.groups.io/g/main



Social media groups – Facebook, Discord

https://www.facebook.com/groups/37631909313



Local reflector - WOC activators

https://groups.io/g/w0c-sota/topics

#### Resources & Links

#### Official Sites:

- sota.org.uk
- sotawatch.sota.org.uk
- sotamaps.org
- sotadata.org.uk

#### Community Tools:

- sotl.as
- hamrs.app
- ham2k.org
- Schnizer.com (outdated but has a LOT of into for Colorado)
- kOnr.com (Tons of activation info and a lot on VHF/UHF/SHF)



#### Questions?

- Thank you for attending!
- See you on the next summit!
- 72/73 de KIOKN

