



SOTA-SUMMITS ON THE AIR

Ian Drummond VE6IXD
Calgary, April 8th, 2017

- ▶ Activators
 - ▶ Climb summits
 - ▶ Set up an amateur radio station
 - ▶ Contact other people
- ▶ Chasers
 - ▶ Communicate with activators

THE IDEA BEHIND SOTA

A decorative graphic consisting of several parallel white lines of varying lengths, slanted upwards from left to right, located in the bottom right corner of the slide.

- ▶ The journey is more important than the destination !!!
- ▶ Anyone can participate
- ▶ You don't become a member, you just do it!
 - ▶ If you wish, you can record your activities and claim awards, eventually.

- ▶ This presentation is about the journey
 - ▶ Resources for planning, operating
 - ▶ Individual ways of operating

AN AMATEUR RADIO AWARDS SCHEME

- ▶ <http://www.sota.org.uk/>
 - ▶ The main page with links to other sites
- ▶ <http://www.sotadata.org.uk/>
 - ▶ Who did What summit and When they did it. Participant notes.
 - ▶ Instantly updated
- ▶ <https://sotamaps.org/>
 - ▶ World-wide maps of summits, gps tracks, topo or satellite overlays
- ▶ <http://www.sotawatch.org/>
 - ▶ Alerting and spotting tool specifically for SOTA activations
- ▶ <http://reflector.sota.org.uk/>
 - ▶ A very active, fully searchable forum

FANTASTIC ON-LINE SUPPORT

Choose Association: Multi Single
 VE6 - Canada (Alberta)

Choose Region: Multi Single
 VE6/RA - Rae (97 SL)

Choose Summit: --- Please choose ---
 Sort Summits: By code

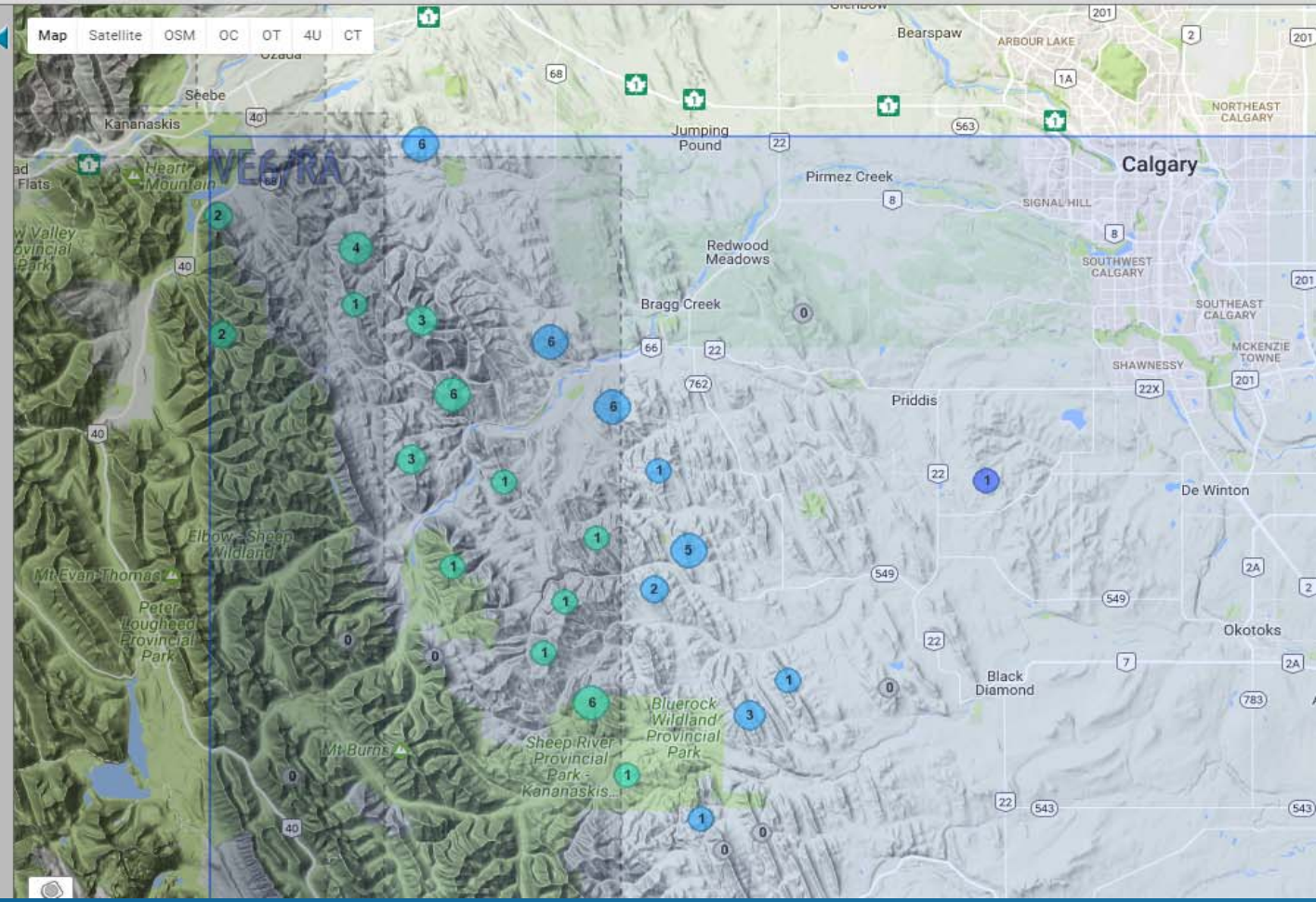
Chosen Summits Listing

Show in list: All summits in Region

Summit Code	Summit Name	Act.	Pts.
VE6/RA-014	Prairie Mountain ★	6	4
VE6/RA-023	Missinglink Mountain	6	4
VE6/RA-030	Ole Buck Mountain ★	6	2
VE6/RA-031	McLean Hill ★	6	2
VE6/RA-090	Ranger Summit ★	6	2
VE6/RA-032	Square Butte ★	5	2
VE6/RA-017	Cox Hill	4	4
VE6/RA-006	Moose Mountain ★	3	4
VE6/RA-015	Powderface Ridge	3	4
VE6/RA-076	Hailstone Butte	3	4
VE6/RA-094	GE69 ★	3	2
VE6/RA-008	East Wasootch Peak ★	2	4
VE6/RA-016	Mount Baldy	2	4
VE6/RA-033	Black Mountain ★	2	2
VE6/RA-092	HF59 ★	2	2
VE6/RA-011	Windy Peak ★	1	4
VE6/RA-012	Jumpingpound Mountain ★	1	4
VE6/RA-020	Volcano Ridge ★	1	4
VE6/RA-021	Allsmoke Mountain	1	4
VE6/RA-022	Myosotis Peak	1	4
VE6/RA-024	Mount Barwell	1	4
VE6/RA-025	Crowsnest Ridge ★	1	4

97 Summits ★ = Tracks available for summit

[Help...](#)
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GMWS-181 & GMWS-214 - Carn na Nathrach and Stob Mhic Bheathain by GM7PKT



Welcome to **Summits on the Air!**

SOTA is an award scheme for radio amateurs that encourages portable operation in mountainous areas.

Quick links: [SOTAwatch](#) | [Database](#) | [Summit Listings](#) | [Shop](#) | [Mapping](#)

New to SOTA?

SOTA has been carefully designed to make participation possible for all Radio Amateurs and Shortwave Listeners - this is not just for mountaineers! There are awards for activators (those who ascend to the summits) and chasers (who either operate from home, a local hilltop or are even Activators on other summits).

See the 'Joining In' section of the website for lots of information, advice, rules, guidelines and our FAQs.



SOTA is fully operational in nearly a hundred countries across the world. Each country has its own Association which defines the recognised SOTA summits within that Association. Each summit earns the activators and chasers a score which is related to the height of the summit. Certificates are available for various scores, leading to the prestigious "Mountain Goat" and "Shack Sloth" trophies. An Honour Roll for Activators and Chasers is maintained at the SOTA online database.

SOTA is designed to be compatible with other mountain users. Please see our [environmental statement](#) for details

Latest SOTA Spots

01:05	N7RR on W7W/WH-194	14.060 cw
00:37	N7RR on W7W/WH-194	14.061 cw
00:17	N7RR on W7W/WH-194	18.155 ssb
22:42	NS0TA on W7W/LC-058	18.096 cw
22:34	NS0TA on W7W/LC-058	7.046 cw
22:28	NS0TA on W7W/LC-058	7.046 CW
21:56	NS0TA on W7W/LC-058	14.062 cw
21:56	KB1RJC/P on W3/PO-032	14.345 ssb
21:52	K6HPX/P on W6/CD-005	10.112 cw
21:40	K6HPX/P on W6/CD-005	7.032 cw

>> See more on [SOTAwatch](#)

- ▶ An Introduction to Chasing by Roy, G4SSH
- ▶ An Introduction to Activating by John, G4YSS
- ▶ The Rules and Guidelines
- ▶ Our Environmental Statement
- ▶ And our Frequently Asked Questions

HOW TO GET STARTED INFO



- ▶ An Alert – What an activator intends to do
 - ▶ When, Where, frequency, mode
- ▶ A Spot – What an activator is actually doing
 - ▶ Can be very different from the Alert
 - ▶ Used for Band changes

- ▶ It can be very difficult to activate a peak without being spotted

ALERTS AND SPOTS

SOTAwatch2 Login: Callsign Password

[Home](#) | [Spots](#) | [Alerts](#) | [Reflector](#) | [Website](#) | [Summits](#) | [Recent Summit Info](#) | [Data](#)
[Video](#) | [Photos](#) | [Shop](#) | [Mapping](#) | [Facebook](#)

This page refreshes every 1 minute. Last updated **21:23:37 UTC**.

Latest Spots

[>> more spots](#)

Sat 21:21	K2JB on W4T/SU-055 559 TN; 5 watts (Posted by WX4ET)	14.062 CW
Sat 21:16	KT0A on W0D/BB-024 *[RBNHole] at VE6JY 23 WPM 20 dB SNR (Posted by RBNHOLE)	7.033 cw
Sat 21:10	K2JB on W4T/SU-055 Sri-40 had 59 QRN (Posted by K2JB)	14.062 CW
Sat 20:56	NM5S on W5N/PW-008 (Posted by W7RV)	7.033 cw
Sat 20:56	NM5S on W5N/PW-008 (Posted by K6HPX)	7.033 cw
Sat 20:55	K2JB on W4T/SU-055 (null) (Posted by K2JB)	7.032 CW

Upcoming Activations

[>> more alerts](#)

Sat 21:00	KT0A on W0D/BB-024 (Posted by KT0A)	10.112-cw, 14.062-cw, 18.072-cw
Sat 21:00	K2JB on W4T/SU-055 (null) (Posted by K2JB)	7.032-cw
Sat 21:30	KJ6WEG on W6/NC-190 Time approx +/- an hour, will try to be on APRS (Posted by KJ6WEG)	14.273-ssb, 7-ssb, 146.520-fm
Sat 21:30	W12W on W4V/SH-002 (null) (Posted by W12W)	7.033-cw, 14.063-cw
Sat 22:30	KB1KXL on W6/NC-516 Any 220MHz chasers in the bay area? (Posted by KB1KXL)	10.117-cw, 14-cw, 7-cw, 146.52-fm
Sat 23:00	VK2HRX on VK2/SW-027 +/- everything (Posted by VK2HRX)	7.090-ssb, 14.320-ssb, 144.200-ssb

[HTTP://WWW.SOTAWATCH.ORG/](http://www.sotawatch.org/)

Will discuss how Spots are posted later in the talk.

Note KT0A is not doing what he said he would!

Is there a better method to chase an activator?

W0D/BB-024, 4455 - 1358m, 4 Points

Quick links: [Back to W0D Association](#) | [Back to BB Region](#)

Association: USA - Dakotas **Region:** SD-Black Hills - Badlands


Latitude: 43.4504 , **Longitude:** -103.4262

QTH Locator: DN83gk

Today's Sunrise: 12:30 UTC , **Today's Sunset:** 01:23 UTC

[Google Map](#) | [Google Earth](#) | [OpenStreetMap](#) | [SOTA Map](#)

Resources

Feel free to add External Links  and Articles relating to this summit that activators a read the disclaimer notice at the bottom of the page.

[KT0A - Access Description](#) Submitted by [KT0A](#) on (24 Jul 2015)

HOVER AND CLICK

- Access to Peak Info
- Antenna aiming
 - Grid Square
 - Lat/Long
- Maps

Activator Information (if exists)

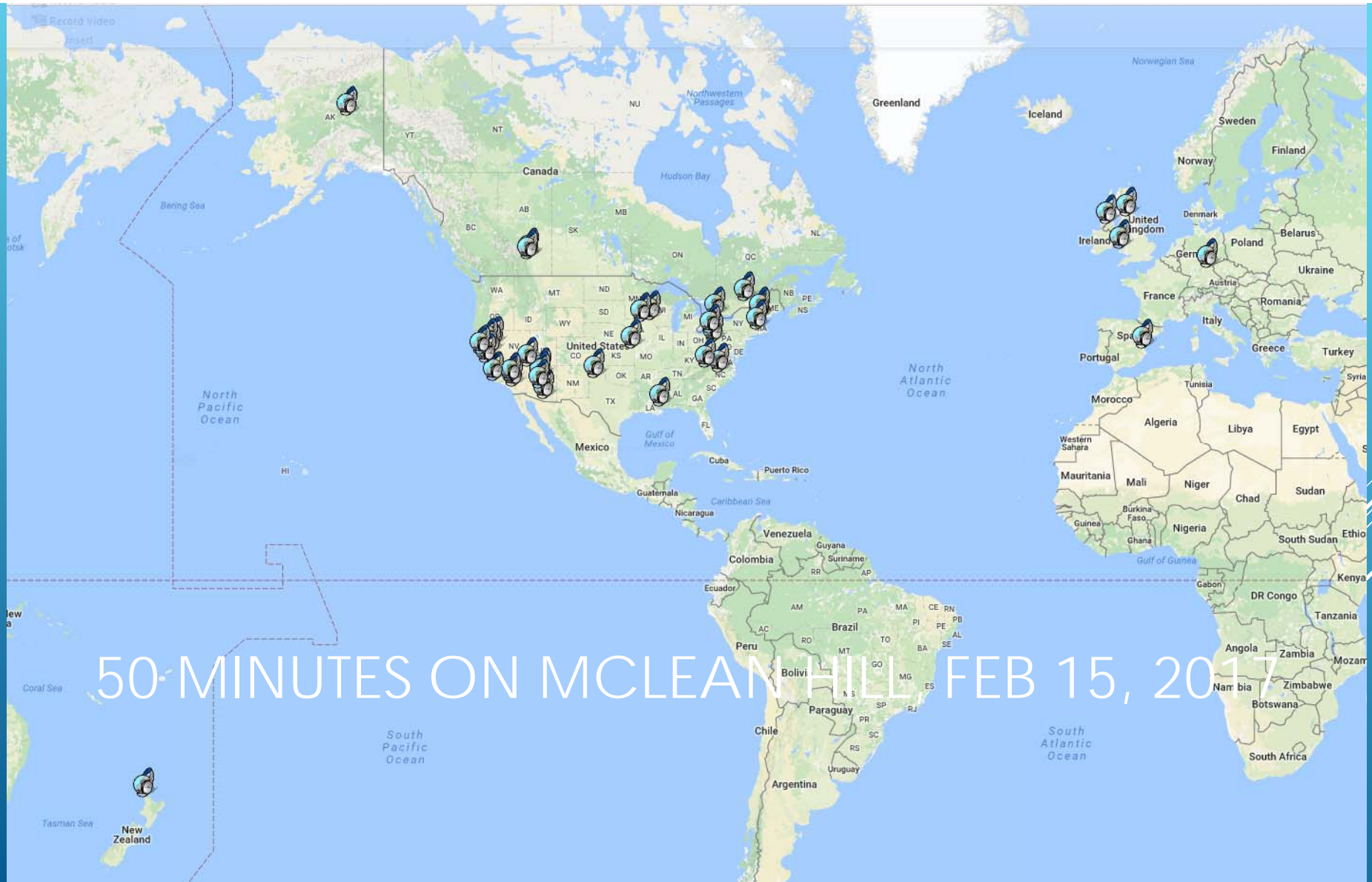
- ▶ Get notifications when a desired station appears on the Reverse Beacon Network, SOTAwatch or the DX cluster
 - ▶ Receive alerts via Email, Push notification to your phone or by SMS
 - ▶ Filter spots by
 - ▶ DXCC Callsign
 - ▶ SOTA summit reference
 - ▶ CQ zone
 - ▶ Continent
 - ▶ Band
 - ▶ Mode
- ▶ Free from Google Play

HAMALERT.ORG



- ▶ <http://www.on6zq.be/p/swf/#/spotfilter>
 - ▶ Provides an alert for filtered SOTA spots (for an internet connected computer)
- ▶ Other very useful software on this site
 - ▶ SOTA call checker
 - ▶ SOTA log to ADIF log converter (and vice-versa)
 - ▶ Log2map

WEB-BASED SPOT FILTER



50 MINUTES ON MCLEAN HILL FEB 15, 2017



- ▶ Resources on the summit
 - ▶ Antenna support
 - ▶ Work surface
 - ▶ Power
 - ▶ Shelter
- ▶ Operating procedure
 - ▶ Equipment has rough treatment
 - ▶ Important to check for proper operation
 - ▶ SWR (with external amplifier turned OFF)
 - ▶ Power out from FT817
 - ▶ Correct operation of indicator lights (Tx/Rx, bandpass filter, etc.)

ACTIVATOR'S VIEWPOINT



- ▶ All contacts must be simplex (except satellite contacts)
- ▶ Enter the Activation Zone under your own power
- ▶ The Activation Zone is down to 25m vertically below the summit
- ▶ On a drive-up summit the car cannot be used for the activation
 - ▶ Not for power, shelter, antenna support
- ▶ Summits can be activated once per calendar year for points
 - ▶ Need 1 contact to activate the peak, 4 contacts for points
- ▶ Must be a legal amateur radio operation
- ▶ No trespassing or entering closed areas
 - ▶ In Alberta, the closures for wildlife on Pidgeon Mountain, or for bears

KEY INFORMATION FOR ACTIVATORS

- ▶ Almost everyone starts using VHF from nearby peaks
 - ▶ 5 watt HT (2m FM), preferably with an antenna upgrade
 - ▶ After-market whip
 - ▶ Slim-Jim
 - ▶ Tape-measure Yagi
 - ▶ Improved battery will often double power
 - ▶ SLAB
 - ▶ Lithium battery

WHAT EQUIPMENT DO I NEED?

▶ What do you want to do?

- ▶ CW or Phone
- ▶ Hike to remote summits
- ▶ Digital modes
- ▶ SSTV
- ▶ Combine SOTA with contesting (VHF or HF)
- ▶ Chase SOTA Awards
 - ▶ Mountain Goat
 - ▶ Mountain Explorer
 - ▶ Summit-to-summit (S2S) award
 - ▶ Microwave Award (search the SOTA Reflector for information)

WHAT NEXT?

NORTH AMERICA TOTALS for Feb. 2017

- ▶ Total Activations: 462 by 144 activators
- ▶ Chaser QSOs recorded in the database: 6595 by 276 chasers

2m: 144 (2%)
6m: 0 (0%)
10m: 10 (0%)
12m: 1 (0%)
15m: 85 (1%)
17m: 388 (5%)
20m: 2997 (45%)
30m: 916 (13%)
40m: 2003 (30%)
60m: 39 (0%)
80m: 0 (0%)
160m: 5 (0%)
Unknown: 7

WHERE'S THE ACTION?

CW: 4646 (70%)

SSB: 1807 (27%)

FM: 140 (2%)

AM: 1 (0%)

Data: 0 (0%)

Other: 0 (0%)

Unknown: 7

- ▶ Around Calgary I would recommend the 20m band
 - ▶ Become aware of tools such as VOACAP to predict propagation
<http://www.voacap.com/p2p/index.html>

ACTIVATIONS BY MODE

- ▶ Radio – Yaesu FT817ND with TXCO option
- ▶ Amplifier – MX-P50M (equipped with a manual band-pass filter)
 - ▶ I run the amp at 25 watts by limiting the FT817 to 2.5 watts
- ▶ Co-ax cable – RG-174
- ▶ Antennas
 - ▶ Half-wave dipole rigged as an inverted V with 20' telescopic pole
 - ▶ Half-wave end-fed dipole with a 12' telescopic pole for support
- ▶ Antenna tuner - None
- ▶ Battery – 11.1 V, 5.0 Ah, 35C, 3S LiPo

MY EQUIPMENT FOR HF PHONE



HF PHONE OPERATIONS

- Radio
- Amplifier
- Coax cables
- Battery and monitor
- Smartphone
- Log book and pencil

- ▶ Half-wave Dipole rigged as an inverted V
 - ▶ 20' telescopic pole for centre support
 - ▶ Wire is 28 AWG stranded and Teflon insulated
 - ▶ Very consistent properties at different sites
 - ▶ Linked Dipole for operation on different bands
- ▶ Half-Wave End-Fed dipole has a small matching box
 - ▶ 12' pole will fit in luggage
 - ▶ Will cover 40m and 20m bands
 - ▶ Matched by tuning for maximum noise (SWR < 2:1)

ANTENNA DETAILS

- ▶ Directly on SOTAWatch on a smartphone
 - ▶ If you can get an Internet connection
- ▶ APRS text
 - ▶ If you can access an i-gated repeater
- ▶ SMS text message
 - ▶ Best option under marginal phone service conditions
 - ▶ Droidspot available from Google Play
 - ▶ Must register your phone to have text accepted

SELF-SPOTTING METHODS

- ▶ Tunnel Mountain near Banff
- ▶ Stoney Squaw near Mount Norquay ski hill
- ▶ Square (Mesa) Butte west of Millarville
- ▶ Buffalo Hill near Milo
- ▶ Ranger Summit West Bragg Creek

SUMMITS TO TRY FIRST

A decorative graphic consisting of several parallel white lines of varying lengths, slanted diagonally from the bottom right towards the top right, set against the blue background.



TUNNEL MOUNTAIN, VE6/HC-035

1.85 km distance, 133m climb

Must use HF bands because 2m range is very limited

Well marked, popular (busy) trail



STONEY SQUAW, VE6/HC-034

2.2 km distance, 230m climb

Must use HF bands because 2m range is very limited

Well marked trail leaves from Norquay parking lot

One of the easiest 4 point peaks near Calgary



SQUARE BUTTE VE6/RA-032

1.77km distance, 250m climb

Picnic table available!

2m into Calgary works well

Marked trail, described in Daffern, Vol 4, Route 64A



BUFFALO HILL, VE6/RA-100

0.72km distance, 50m climb

2m line of sight (100 km) into Calgary

Permission needed from Ducks Unlimited 780-489-2002

No trail, but a walk on short-grass prairie to a stone ring



RANGER SUMMIT VE6/RA--90

4.5km distance, 330m climb

Mountain bike accessible

2m into Calgary is great

Well sign-posted, clear and popular paths

Described in Daffern, vol. 2, Route 6A

- ▶ Kananaskis Country Trail Guide, by Gillean Daffern
4th Edition, 2012, Rocky Mountain Books
 - ▶ 5 volumes, available at Calgary Public Library
 - ▶ Routes marked on topo maps available on-line
<http://kananaskisblog.com/>
- ▶ Topo Maps for Android phones, usable off-line
 - ▶ Atlogis - available from Google Play free or \$13.95
 - ▶ Overlays GPS position on topo map
 - ▶ Covers all of Canada at 1:50,000

PLANNING & NAVIGATION TOOLS



NEW THINGS TO TRY

- Get a CEPT license and activate a peak in a different country
- CEPT licenses are \$20 from RAC for members, \$40 for non-members
- Near Land's End in the UK, operating 2m FM



INTERMOD ? WHAT'S THAT?

Just about any hill in the UK comes with a serious tower

I'm using a Radio Shack HTX-202 with narrow-band front end.

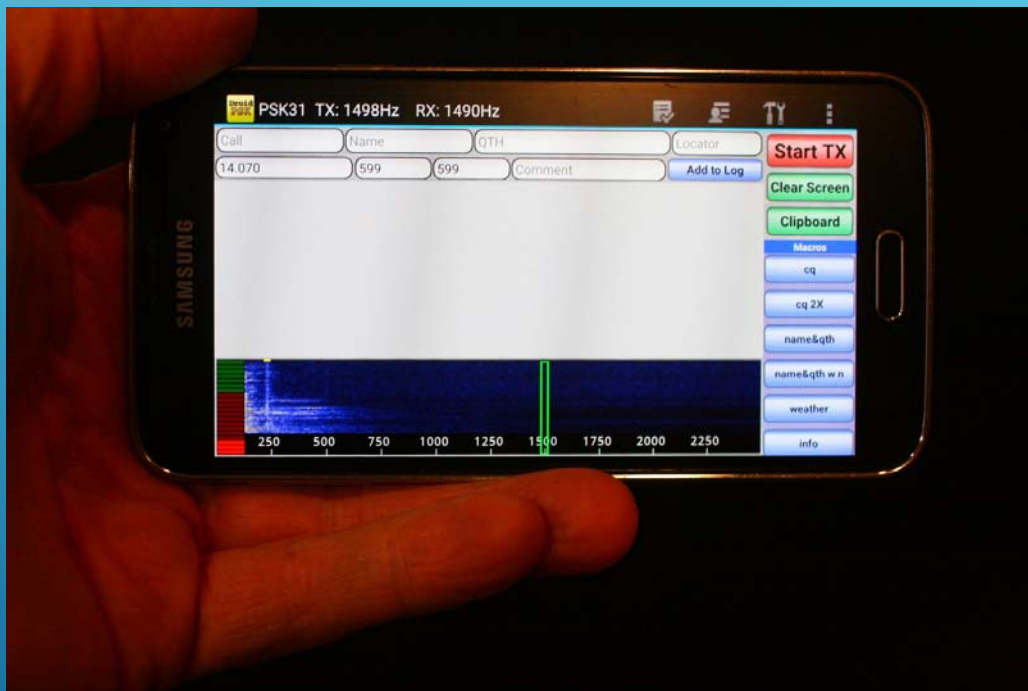
You may need a band-pass filter



TRY A KITE ANTENNA

Or maybe just a full-size 160m dipole

Or any antenna you don't have room for at home



PORTABLE DIGITAL MODES

Smartphone apps for digital modes

- DroidPSK

- APRSdroid

Interface between phone and radio

- Wolphilink

- Mobilinkd (Bluetooth)

Find

You can find someone on the air using Alerts and SOTA maps

Get

You can get the spot

Use

You can use a Club radio if you don't have one of your own.

CHASE
SOMEONE

Decorative white lines consisting of several parallel diagonal strokes in the bottom right corner of the slide.

Find

You can find a peak near
Calgary

Get

You can post an alert

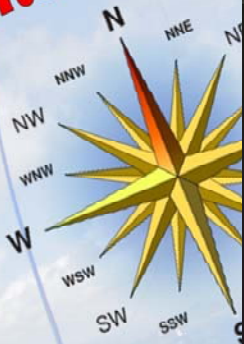
Use

You can use your own 2m radio

ACTIVATE
SOMETHING

Decorative white lines consisting of several parallel diagonal strokes on the right side of the slide.

Mountain Hunter



GET AN AWARD!

SOTA **Summits On The Air**
10/6m Challenge
 THIS CERTIFICATE IS AWARDED TO
Ian Drummond
VE6IXD
 In recognition of his achievement in the 10m/6m Challenge
Activator - First Place VE6
 Barry Horning GM4TOE
 Barry Horning Awards Manager
 Certificate number: 1-ACT-VE6



THIS CERTIFICATE IS AWARDED TO
Ian Drummond
VE6IXD

In recognition of his achievement
500 points in the Activator section

All SSB

Barry Horning GM4TOE
Barry Horning Awards Manager

Qualifying date: 11 Jan 2017
Certificate number: SA-500-102

Mountain Explorer



ME-B-053
13 Jun 2016

Ian Drummond
VE6IXD



GET YOUR
HEAD IN THE
CLOUDS