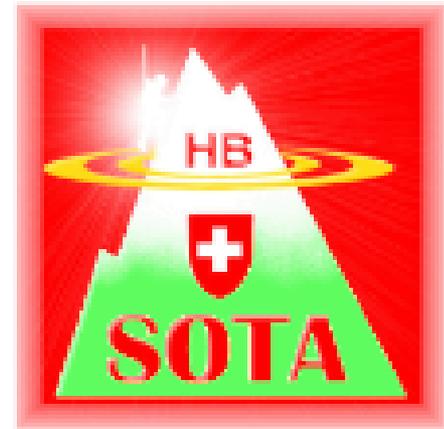


Ham Radio Friedrichshafen
June 26, 2015

My favorite SOTA antennas

Paul, HB9DST



For SOTA activations,
I use only one of two antennas:

*Below the tree line or
where mast mounts are readily available:*



**EndFedz EF-40/30
(end-fed halfwave antenna)**

LNR Precision
(www.lnrprecision.com)

Weight: 472 g (on wire winder,
with coax and extra cord)

Cost: \$75 (shipped within USA)

*Above the tree line and
where mast mounting is very inconvenient:*



AlexLoop Walkman

PY1AHD Alex

(www.alexloop.com)

Weight (including bag): 1480 g

Cost: \$399 shipped to USA, in
Germany from Wimo for €465

EndFedz



Very easy to set up. If there are trees nearby, you don't even need a mast.

I take my hiking pole and “shove” the antenna as high as I can get it. The antenna is pre-trimmed for a good SWR in this configuration.

EndFedz



EndFedz

Because it is end fed

- there is no need to have a center conductor that must be elevated
- there's only one leg to worry about supporting
- it need not be terribly high
(in a tree or even using an extended hiking pole as a support is sufficient)

EndFedz Pros:

- Light, compact, easy to carry in a backpack
- Easy set-up, especially if there are trees around
- Good performance
- Instant band switching between 30 and 40 m
- No ATU needed (if trimmed properly)

EndFedz Cons:

- My model is limited to two bands
(Note: there is a more lightweight model, the EFT-10/20/40 Trail-Friendly, but it lacks 30m)
- For supports, need trees or a handy place for a mast (generally not a major problem)
- Be careful of coax length – can affect tuning



AlexLoop

Fast set-up – in 3 or 4 minutes!

Good for places where it would be very difficult to set up a mast. Excellent example is HB/VS-110 Eggishorn, just a pile of large boulders where it's difficult to even walk.

AlexLoop Pros:

- Sets up quickly
- Can be set up *anywhere*, even on a hillside, no guy wires needed except in heavy wind
- Continuous coverage: 7 MHz - 28 MHz
- No ATU needed (but I do need a small SWR meter)

AlexLoop Cons (1):

- Extra weight of tripod along with antenna
- Not as compact as a wire antenna
- Performance not as good as EndFedz
(details at end of presentation)

AlexLoop Cons (2):

- Tuning very sensitive.

Also, you'll find it a stroke of luck to get 1.1 SWR, if I get 1.5 or better, I'm happy.

- They say you can tune the loop close enough by ear, but I find this very difficult
- To assist in tuning, I take along a small antenna analyzer (iPortable iP30z).

AlexLoop Cons (3):

- Very narrow bandwidth: must retune if you change even a few kHz (and, of course, when changing bands)
- High cost
- Limited to 10W

Comparative analysis

Subjective:

- With the EndFedz I typically get reports from 559 to 599
- With the Alex Loop I typically get reports from 339 to 559 (seldom better)
This makes it tougher to break through pileups and snag S2S contacts

RBN comparative analysis

Somewhat empirical:

Reverse Beacon Network

Oct 7, 2013: HB/AG-012

ATS-4 / 11.4V / 4.9W (40m), 4.5W (30m)

- **EndFedz**: Average 19.14 dB
(range 7 – 34 dB)

- **AlexLoop**: Average 13.1 dB
(range 4 – 31 dB)

The screenshot shows the Reverse Beacon Network website interface. At the top, there is a navigation menu with links: welcome, main, dx spots, skimmers, downloads, about, and contact us. Below the menu is a map of Europe with red lines indicating signal paths from various locations to France. The map is powered by Google and includes zoom controls and map style options (Map, Satellite, Hybrid). Below the map, there are options to show/hide filters and a section for 'my last filters' showing 'DX = HB9DST'. A table displays the following data:

de	dx	freq	cq/dx	snr	speed	time
F5VLY	HB9DST	10128.0	CW CQ	7 dB	22 wpm	1242z 07 Oct
ON5KQ	HB9DST	10128.1	CW CQ	24 dB	22 wpm	1242z 07 Oct
DQ8Z	HB9DST	10128.0	CW CQ	6 dB	22 wpm	1242z 07 Oct
DL8LAS	HB9DST	10128.0	CW CQ	13 dB	22 wpm	1242z 07 Oct
DL1EMY	HB9DST	10128.0	CW CQ	31 dB	22 wpm	1242z 07 Oct
HA1VHF	HB9DST	10128.1	CW CQ	18 dB	22 wpm	1242z 07 Oct
DF7GB	HB9DST	7037.7	CW CQ	13 dB	22 wpm	1238z 07 Oct
ON5KQ	HB9DST	7038.0	CW CQ	11 dB	22 wpm	1237z 07 Oct
DL2CC	HB9DST	7038.1	CW CQ	27 dB	22 wpm	1237z 07 Oct
DJ9IE	HB9DST	7038.0	CW CQ	10 dB	22 wpm	1237z 07 Oct
S65HH	HB9DST	10113.7	CW CQ	5 dB	22 wpm	1211z 07 Oct
OH2BBT	HB9DST	10113.7	CW CQ	9 dB	22 wpm	1211z 07 Oct
F5VLY	HB9DST	10113.7	CW CQ	4 dB	22 wpm	1210z 07 Oct
DL8LAS	HB9DST	10113.7	CW CQ	6 dB	22 wpm	1210z 07 Oct

RBN comparative analysis

June 13, 2015, HB/LU-011

	EndFedz	AlexLoop
40m	Average: 11.6 Range: 3 – 20	Average: 11.5 Range 7 – 12 Max value -8 dB compared to EndFedz
30m	Average: 8.6 Range: 5 – 12	Average: 4.6 Range: 1 – 7 Max value -5 dB compared to EndFedz
20m	Average: 12.3 Range: 8 – 21	Average: 13.2 Range: 5 – 21 Same max value for Loop and EndFedz

My conclusions:

- In most cases, the EndFedz is the preferred choice. However, the difference in performance shrink as frequency increases.
- In those few situations where you need the loop, it is extremely useful to have.
- If possible, I check Google Earth, pictures of the summit on the web, etc. to see what the situation is as regards trees and other mast supports.

Those with the necessary skills and tools can build either of these antennas themselves and save plenty of \$\$.



Looking forward to some SOTA
QSOs with you soon!