

VHF/UHF Contesting Primer

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Getting started on VHF/UHF used to be a major challenge, involving homebrewing or kit-building. Today all of the major amateur manufacturers offer radios for one or more VHF bands, many with HF coverage as well. Several MRRCCers have purchased such radios and have probably thought about operating one of the VHF/UHF contests.

This short overview is intended to help you get started in VHF/UHF contesting. I believe that one of the reasons more people don't go beyond their initial exposure to VHF/UHF is that they attempt it with setups (primarily antennas) which don't provide them with much enjoyment. We hope to help you be better prepared.

The most popular weak-signal VHF band is probably a tossup between 50 MHz and 144 MHz. The next most popular band is 432 MHz with a typical range that is probably close to 144 MHz under normal conditions. These are the bands typically covered with the current radios.

One of the main keys to enjoying VHF/UHF contesting is having more than one band to work. If you think people are aggressive moving between bands in HF contests like NAQP, you ain't seen nothing. In VHF/UHF contests, with relatively fewer participants, it's crucial to your score to make QSOs on every band possible. Try to get an antenna up for all the VHF/UHF bands your radio can work.

The first thing to consider in planning your VHF/UHF antenna setup are the height of the trees near your station. Trees are not much of a factor at 50 MHz, but will noticeably attenuate a 144 MHz signal with more degradation at 432 MHz. It will be worth the time and effort to get your VHF/UHF antennas above the trees in your immediate area.

The second consideration is feedline loss. Good quality RG-213 loses 1.75 dB/100' at 50 MHz, 3.2 dB/100' at 144 MHz and 6dB/100' at 432 MHz. Belden 9913 cuts these numbers almost in half, but hardline (even the CATV variety) is even better. Loss is proportional to length for all cables, so try to plan your antenna installation and station layout to minimize cable length.

Commercially manufactured VHF/UHF antennas come in all sizes—the main companies seem to be Cushcraft, M², and Directive Systems, but Force12 and HyGain/MFJ also have designs to offer. There is no reason why you can't build your own, but the higher you go in frequency dimensional accuracy and craftsmanship become more critical. On 50 MHz a simple 3L beam or 2L quad is easy to build, and perhaps could be built on the boom of an existing tri-bander or other HF beam. For Field Day, K8MR has used a wire 50 MHz dipole encased inside PVC tube for support. For 144 MHz, a quad or a N6NB quagi is small and not hard to build. For 432 MHz, I'd recommend sticking with published designs like the quagi rather than inventing your own.

There are three ARRL VHF contests each year: the Janu-

ary VHF Sweepstakes, the June VHF QSO Party and the September VHF QSO Party. CQ Magazine sponsors the CQWW VHF DX Contest in July for 50 and 144 MHz only. There is also a UHF QSO Party in August for the 222 MHz and above bands. The June ARRL contest is the favorite because the time of year offers the best opportunities for good condx (Es) on 50 MHz. Also, the January and September contests have an ARRL Affiliated Club Competition.

So let's say you have one of the typical new rigs with 100W on 50 MHz, 50W or more on 144 MHz and around 20W on 432 MHz. You've managed to put up a moderate-sized beam for each band which is clear of trees. What can you work? When 50 MHz is open, you can work all over the USA, but even when it's not you can work 3s, 8s, 9s and maybe a few 2s and 4s. Most of the time you can work these same guys on 144 MHz, but with some enhancement QSOs out to 1000 miles are possible. Expect less coverage on 432 MHz as compared to 144 MHz.

All of the VHF/UHF contests have similar contest periods, starting after lunch on Saturday and running until late Sunday evening local time. The serious competitors are QRV for the entire contest period, while casual activity fits into typical lifestyle patterns. Activity seems to be higher during the evenings, and Sunday mornings which typically offer enhanced propagation opportunities.

Since QSO rates in VHF contests are typically low, maximizing grid square multipliers is tremendously important. While you need to tune and look for mults, don't be afraid to call CQ - no QSOs are made if everybody listens and nobody calls. The beginning setup described above will bring in callers, particularly on 50 and 144 MHz. One operating tip to keep in mind; many VHF contesters call CQ with their antennas aimed like the minute hand of a clock (i.e., north on the hour, east as quarter past, etc. Try this yourself, but also focus on particular areas when they're likely to be aiming at you; for example, look for stations to your northwest between quarter after and half past the hour.

The ARRL September VHF QSO Party is the week after Findlay. It has an Affiliated Club Competition which MRRCC will enter. Come join K8CC, K8MR and other MRRCCers and put those new radios to good use.

Treasurer's Report

06/01/02	Balance:	\$ 956.15
	Deposits:	\$ 248.00
	Expenditures:	\$ 97.00
08/31/02	Balance:	\$1107.15

Memo: \$520 of the above balance is designated for OQP Plaques

Respectfully Submitted,

Buck Switzer, N8CQA

Treasurer

MRRC Members

Ohio QSO Party Soapbox

The big signal you heard from AD8J in JEFF was from KC3MR's new QTH at one of the highest points in the county. John, AD8J, and Mike, KC3MR actually operated from a "shack" on the property as construction hasn't started yet on the house. Two KW stations were set up using dipoles on 40 and 80 meters and a tribander for the higher bands. You can expect to hear more from KC3MR in future contests - **AD8J** Road construction made it impossible to stay on schedule, but with some short-cuts we managed to complete twenty-three counties as planned. All the equipment worked perfectly for a change and running the logging laptop off batteries fixed our receive noise problem. SSB operating from the mobile continues to be less productive each year as activity and QRM increase - **K8CC/m** Since I knew I'd be getting a late start in this one, I figured I'd handicap myself a little more by dropping to 5W. Even though the rates go down, it was still a lot of fun. It was a pleasure to hand-out the Holmes County multiplier - **K8GU** Another great time on the road. Conditions seemed crummy during the afternoon, although 15 was good to the west coast for the relatively few active guys there. Of the mobiles, I only heard K8CC and W1NN one time each, and worked neither. Coolest thing: shortly after driving into Lawrence, we zipped past a parked minivan with a mast attached to the back and some



The K8MR/m team happened upon K8RYU and this portable setup during their OhQP travels

open wire feedline and dipole. We turned around and went back, and met K8RYU, who was just finishing up from there. We managed QSOs on CW, SSB, and Eyeball - **K8MR/m** Occasionally contesters get into "hot water" at home for excessive operating. About 01Z Angela came into the shack and said "the hot water heater is making funny noises and leaking badly." Our hot water heater picked a great time to fail. Ended up costing me off time. W8CAR was still kicking my butt with his "secret weapon" on 20m SSB. Huge TNX to K8MR for coming out to the Lake County ARA meeting and making a presentation about OQP. We may have had TEN stations on the air. Activity plus sponsorship of a trophy. That's what I call a motivational program - **K8NZ** Great job by the Ohio guys !!! Good activity and lots of mobiles to chase around. It was interesting to do this contest after all my involvement in reviving it. The propagation is quite different in GA than OH...those mobile stations that were skipping over Ohio were sometimes 20 over on both 40M and 20M Saturday evening. But on the other hand it was a struggle at times to work guys on 40M during the day because I was maybe just a little

too far away - **KU8E** Activity was very good and I had pretty good runs on both 40 and 20. I only worked one mobile, W1NN, and could barely hear K8CC one other time. Had I known I would be the only Franklin County station on I would have prepared for CW. I promise that for next year I will dust off the Bencher and brush up on my code since I guess I am now in a rare county! I finished with two more QSOs than last year in about 1/2 of the time so activity was definitely up. Lot's of out of state activity which was appreciated - **KW8W** It sure was fun to operate at W8AV - many thanks to Goose for last minute accommodations for the contest. I decided to operate high power in order to make the most "noise" for OQP. However, Goose's shack is set up for multi-multi so band changing involved moving to a different operating position each time. I tried to subscribe to the suggested mode-times, but I also made a plan to not stay on any one band/mode for more than 15-20 minutes, unless it was just gloriously good. I figured that with the constantly changing band and mode times and the rovers switching counties quickly, it behooved me to stay flexible and move around a lot. However, I found that 40M was really difficult. I had a very hard time hearing the Ohio stations, especially mobiles. I think a wire or two would have helped, 1000 QSOs? some day - **W8AV (WX3M op.)** Had company for the weekend but this had been on calendar for months and so only had to eat dinner (30 minute break) with them. Semi weird condx - felt like I missed more mobile stations this year but at times the rate meter was above 100. The new second radio (TS-850) and R7 worked to move a few people but I should have done that more. Had lots of fun (and that's the point) and lots of guys especially on SSB 'gave me a point' and maybe had some fun. Surprised to have some mini runs on 20 SSB with the 'stealth' center fed wire (130 ft up 60 ft) allowing me to cover the country. Heard lots of high numbers at the end - **W8CAR**



Ken, W8MJ getting ready to start OhQP from K8CC/m in Lucas County

Mad River Radio Club

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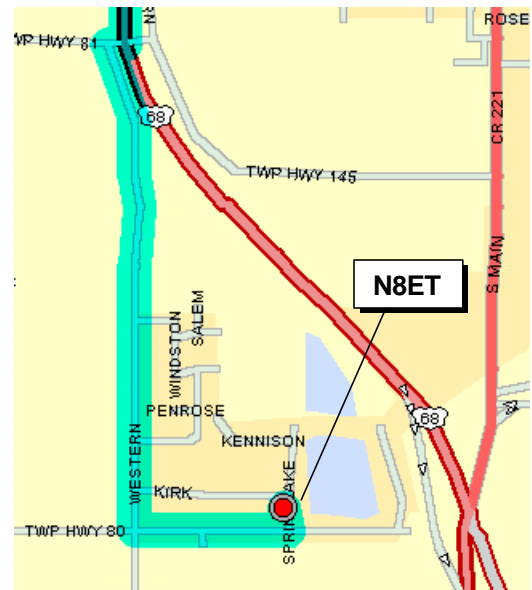
Findlay MRRC Meeting

The next MRRC meeting will be at noon, September 8, 2002 at the Findlay Hamfest. The meeting will be held in it's usual location in the chicken barn. The hamfest itself is held at the Hancock County Fairgrounds on SR568 on the SE side of Findlay. A map to the hamfest is available at:

<http://www.bright.net/~kanga/w8ft/hamfest.html>

While the NCJ CW Sprint is Saturday night before the hamfest Bill, N8ET has invited any MRRCers who will be in town that night to come to his QTH for some food and hospitality. If you intend to make it, please drop Bill a note at kanga@bright.net so that he can plan ahead.

A map to N8ET is shown at right. Highway 68 heads southeast out of Findlay towards Columbus. Get off Highway 68 at the stoplight at Twp Hwy 80, then head south on Western Avenue for about 3/4 mile. Turn left (east) on Township Highway 80 and N8ET will be on the left.



Club Resources

The Mad River Radio Club is an ARRL affiliated club of amateur radio contesting enthusiasts. The club is centered near Findlay, OH and serves Ohio and the surrounding States. Membership is open to anyone.

The **Flash** is the official newsletter of MRRC and is published six times per year. Submission of material for publication is welcome. It may be sent to the editor at the postal or e-mail address shown at right. The **Flash** may be reprinted in whole or in part provided proper credit is given.

Club dues are \$12 per year, payable after the 1st of May each year with a grace period thru 31st of July each year. Members of the same family living at the same address may elect to receive a single Flash for one set of dues. Fulltime students are eligible for dues at half price. Dues are to be paid to the treasurer at the address shown above. Please make checks payable to *Mad River Radio Club*.

The club roster appears annually in the October/November issue of the **Flash**.

The Mad River Net is held on Monday nights at 8:30 PM Eastern time on 3825 KHz.

The MRRC web site is <http://www.mrrc.net>.

Keep up with MRRC happenings by subscribing to the MRRC Internet Reflector. To join send an email to mrrc-re-quest@contesting.com. The body of the message should include "subscribe mrrc yourcall".

K8MAD is the club callsign of the Mad River Radio Club.

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