

# THE BLACK HOLE



Official Journal of The Society of Midwest Contesters  
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## How to Have Fun in the Indiana QSO Party

By Mel Crighton., KJ9C

### Make lots of contacts and score big....

OK, easier said than done. There are stations who struggle to make a dozen QSOs in 12 hours, and others that make almost a thousand. Why the difference? Here are a few hints (some are pretty obvious):

1. **Be LOUD !** If you are at home, run as much power as you can. Use those high antennas for long distance contacts. But for close-in QSOs (like across the state) a low dipole at 20 feet will usually be louder than one at 60 feet. Consider a temporary low dipole just for the QSO party to work those in-state multipliers. If you insist on QRP, spend time to improve your antennas to make your signal as loud as possible.
2. **Call CQ.** Get over that mike fright and make your presence known. On the other hand, you may have to search and pounce up and down the band to find a new multiplier. If you can operate CW, you can often make contacts more easily than with phone.
3. Use **phonetics** on phone. ALWAYS use standard phonetics (“K9DBM” can be copied a lot of ways). When you give your

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## Rock the QSO Parties

In an effort to increase SMC activity, we're encouraging everyone to actively participate in state QSO parties in 2009. A calendar listing the state QSO parties for 2009 has been posted on the SMC website. Let's make a concerted effort to rock the state QSO parties.

Minnesota QSO Party	1400Z-2400Z, Feb 7, 2009
Delaware QSO Party	1700Z, Feb 7 to 0500Z, Feb 8, 2009 1300Z, Feb 8 to 0100Z, Feb 9, 2009
Vermont QSO Party	0000Z, Feb 7 to 2400Z, Feb 8, 2009
New Mexico QSO Party	1700Z, Feb 7 to 2359Z Feb 8, 2009
Louisiana QSO Party	1500Z Feb. 14 - 0300Z Feb. 15, 2009
Mississippi QSO Party	1500Z, Feb 28 to 0300Z, Mar 1, 2009

## Adventures in SO2R Land

By Bill Axelrod ND9E

So there I was, one Saturday morning, running Europeans on 17 meter CW and thinking about the two pretty amplifiers sitting on my operating desk. And then wondering what I could do with the second amp or would do if Mr. Murphy came to visit my FT-1000MP Mark V transceiver.

My biggest fear was that Murphy would visit my transceiver knocking me off the air for awhile – maybe even a long while. So what did this dummy part of a dummy load do? You guessed it – yup - another radio. I bought a used FT-1000MP and put it on my desk. Sure did look pretty on my desktop. Now I did have a backup transceiver and amp and my anxiety lessened.

# The Black Hole



**The Black Hole** is published monthly, September through June, by The Society of Midwest Contesters. Permission for use of the materials is hereby granted on the sole condition that credit is given to the source of those materials.

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**k9qq@arrl.net**

Membership in **The Society of Midwest Contesters** is open to all persons with a bona-fied interest in amateur radio contesting. For more information contact one of the following officers:

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## SMC Dues

Dues are \$10 a year, but may be waived based on the fulfillment of participation requirements:

**In the SMC SS circle:** Make 100 total Sweepstakes QSOs over the two weekends and submit your score(s) for "Society of Midwest Contesters." In addition, submit one other score for an SMC club competition in one of the following contests: ARRL VHF, 160m, or 10m, NAQP, CQWW, ARRL DX, etc.

**Outside of the SMC SS circle:** Submit two scores per year for SMC club or team competition in any of the six NAQPS and four Sprints.

Qualifying scores are those submitted during the calendar year prior to January 1.

Donations are still accepted

You can make your payment two ways:

1. Send a check, money order, or cash to:

Zig Markowski - KM9M  
50 E. Eureka Drive  
Lemont, IL 60439-3970

2. Use Paypal and email your donation to [dues@w9smc.com](mailto:dues@w9smc.com).

# W9SMC

Callsign of Society of Midwest Contesters

SMC Web Page: <http://www.w9smc.com>

## SMC Stuff

To get your SMC stuff, see the last page of the newsletter or visit the SMC website, <http://www.w9smc.com/merchandise.htm>



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# 160 Flamethrower

By Scotty, KG9Z

The following antenna design is not my own, but a classic design for another frequency. The use of this antenna on 160 M was really by accident. During the beginning of the CQWW 160M DX contest, I made a last minute attempt to get on and to mainly give other SMC members a contact. The wire type antennas at this QTH are a quarter wave sloper on 80M sloping east, what I thought was an 80 M quarter wave sloper to the west and a Inverted-L with auto-transformer matching for 50 ohms.

I started trying each antenna using the tuner in the Yaesu FT-767 GX but could not get the SWR better than 3 to 1 on any of the three. Then I went to my Dentron Super Super Tuner (yes, that's the name). For those who are not familiar with that tuner it is a bare-bones 3KW 1.8 to 30 MHz unit the size of KW matchbox. I sill was unable to get the SWR down to an acceptable level, until I tried the west sloper! This antenna was never any good on 80 M with its' lowest SWR dip at about 5 to 1 but was cut for the 80M band. Just could never figure it out.

I ran a ground with No. 10 AWG from the coax shield to a 10 foot ground rod thinking the aluminum tower was not providing a good ground. Still no improvement on 80M. However, when I tried to tune it on 160M with the tuner...SWR 1.2 to 1! Bandwidth was not more than 25KHz but retuning was only a quick touch-up with the tuner. You say, what's the big deal? The deal is, any one with a little room can at least get on 160M and give it a try.

During the contest I ran 60 watts output into the flamethrower and was on only a couple of hours, making 100 contacts along with PJ9 and KP2. I had 23 states, too. I know this is no contest winner but I had fun and was on the air! By the way, the antenna is fed with 100 feet of RG-8X to a Heath Kit remote switch fed with 80 feet of hardline. Maybe that's the secret? Good luck if you try it.

*(Ed. The point of this article isn't to build this antenna, the point is to build any antenna. It shows that you don't have to spend a major contest weekend sitting idle just because you don't think you have the space or materials for a usable antenna.)*

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county, give the 3-4 letter abbreviation phonetically.

4. Be a rare **multiplier**. If your station is in Brown County they will find you. Or you can set up temporary operations a rarer county, or on a county line, where every QSO counts double. Going out as a mobile can achieve the same results. But you have to be calling CQ to make lots of QSOs, even with a QRP signal and a ham stick.
5. Work **both modes** (SSB and CW) to optimize the number of multipliers. Sure phone is fun, and it's easy to get a new ham or non-ham into the routine. But it takes a lot more power to be heard on phone than it does on CW. If you have a hard time sending CW, use a contest logging program that sends CQ, the other guy's call, and the contest exchange for you. You just need to be able to copy his information. If you send at a speed you can copy, a good CW operator will match your speed when he replies. Remember, CW points count more, and mobile stations often rely on CW to make their puny signals heard.
6. Use all the **available bands**. That means you can work the same stations over and over as you change bands (160 meters may not provide much action in May). If you use all six INQP bands, and work both modes, that's 12 points and TWO multipliers (one phone, one CW). If you make 12 contacts with your friend across town you will have 24 points in the log. Make one more QSO with the next county or state, and you have three multipliers and 13 QSOs for 39 points. Obviously the points rack up fast if you put more multipliers (states and counties) in the log.
7. Use available **propagation**. Use simple programs like W6EL-Prop to see which bands are best at different hours of the event. Don't forget 40 meters, which is always open and almost every mobile will try every hour. And don't forget to try 80 meters before sunset to catch those in-state multipliers that may not be workable after dark. Don't be fazed if the contacts are slow coming. Maybe a different band will be better.
8. Use a **logging program**. Once you are heard, and there's more than one station calling, you want to be able to log the first one and catch the second one before he gets bored and looks elsewhere for a QSO. If you spend two minutes writing things down the second guy won't be there when you finally finish. There are free logging programs out there (try N1MM) but they do require some practice, so don't load it onto your PC the day of the QSO Party.
9. Look for the **mobiles**. Let's say you have a big signal

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on phone and there's plenty of Ohio stations calling. You already have Ohio, but you don't have the weak mobile in a rare county who has been trying to get your attention for the last three CQs. If you don't stop the run often and ask "who's the mobile" you'll miss the multiplier. A mobile may have already worked you and your county, so he's doing you a favor by calling you... he has little to lose by passing you by.

10. Use of **packet** places you in the multi-operator category, but may help optimize multipliers and QSOs, packet helps. Even if you don't copy packet spots, it helps the mobiles if you spot them.
11. Participate in the **QSO party reflector** and study the planned activity map to know which stations will be active in which counties, and will help you to know the mobile's plans. Copy the list of counties and their abbreviations, so you can log them correctly.
12. Participate in **other events** the same day. Indiana QSO party overlaps with the county hunters QSO party, the 7 Area QSO Party, and the New England QSO Party. When you hear one of those folks calling CQ, work them! You may need to add a serial number to your exchange to make them happy, and they may give you information you don't need. For example, if you call W1X in NEQP, he gives you "59 CT New Haven" (you log 59 CT). If you send him "59 Indiana Lake" he will likely log only 59 IN... but he's now in your INQP log. If you set up your log to also record other states' counties, you can later separate the logs (many use Excel) to create logs for the other QSO parties as well.
13. Work the **special event** station for extra points. Most years it's W9UUU.

#### Look for Fun !!

1. Contact a new ham or tech class ham to **guest operate** at your fully tricked out HF station. Let them enjoy the QSO party while you supervise.
2. Enter as a **multi-operator station**. Not only do you share the operating chores, but you have somebody to repair antennas without taking a signal off the air, and you have somebody to fetch refreshments.
3. Use the QSO party as an opportunity for your club to shake down their **Field Day setup**. If you go to a rare county, so much the better. Be sure to take extra coax, rigs, antennas, etc. Something will break.
4. **Scout out the operating site**. If you are going portable, be sure you have a location with no line noise, is

not in a deep valley, and won't be bothered by guest operators from the sheriff's department. Get permission to set up, especially on private land or just across fence lines. Let the neighbors know what you are doing. Know where the nearest toilets are.

5. **Go mobile**. Although mobile signals are much weaker than those from fixed stations, the mobiles get LOTS of action because they often will be the only signals from some counties. However, it takes time to set up a mobile rig that won't be bothered by ignition noise or fuel pump RFI, has decent antennas for at least two bands, and is capable of SSB and CW operation on the move. A logging program on a PC interfaced to the rig is even more important for mobile, as it sends better CW than a hand key while driving a twisty gravel road, and is a lot less trouble than hand writing the log. Most mobiles will make 80 percent or more of their contacts on CW, since their puny signals can be copied better. However, mobile-to-mobile contacts are rare, especially across the state. It is also helpful to have a driver who knows the route and when/where to stop on those county lines. This means that your driving route should be worked out before you start driving, with plenty of slack time for traffic, bad roads, weather, pit stops, and unexpected pileups while operating on county lines. Don't commit to more counties than you can easily handle. Be sure to post your plans on the QSO Party reflector so folks can look for you.
6. **Compete as a club**. There is a prize for the Indiana club with the highest aggregate score from three or more members. Even if individual scores are not winners, their combined total may be.
7. Work the **1x1 stations**. You'll get a certificate if you can log N9I, N9N, N9Q, and N9P (spelling out "INQP").

#### TURN IN A LOG...

All that effort means little if you don't share your results. There are certificates and plaques for those who show significant effort. Even if you do not score as big as you hope, you can contribute to your club's aggregate score... and your log helps the log checkers. If you work enough different counties you can qualify for the Worked All Indiana award.

If you made contacts with stations active in other QSO parties, send them a log too.

It would be great if every Indiana County is well represented in the coming INQP. How well Indiana shows itself to the world is up to you.

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More information is at [www.hdxcc.org/inqp](http://www.hdxcc.org/inqp)

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But now what? I couldn't help but want to play with both radios and amps. Letting them sit there gathering dust just didn't seem right. So, when I wanted to use one or the other, I would move the antenna, key, serial, and headphone cables from one radio to the second. Unplug one amp and plug in the other. That was fun for an hour or two. But disconnecting and reconnecting the cables got real old, real quick. So, I researched and bought a SO2R control box (MicroHam MK2R+) to control both radios from my shack computer and a manual SO2R antenna switch (WX0B six pack) antenna switch to switch either radio to my antenna system.

In doing the foregoing I made my first big mistake in my evolution to SO2R. I never took the time to look at my station as a system. I did not do the first iota of systems engineering. Funny, since I made my living for years doing systems engineering and now have a company that focuses on systems engineering and integration. I never did an as-is station diagram. I never listed my requirements, decided what I wanted my station to be when it grew up, never drew a to-be diagram. Nothing, nada, zip. I completely forgot the 6-P mantra (Proper Prior Planning Prevents Poor Performance). Actually there's a seventh P which goes in-between Prevents and Poor but this IS a family newsletter.

Why is systems engineering important? After all, it is just a hobby.

For most of us, little pistol or big gun, the investment in our ham shacks is a big investment. There's the dollar investment and then there's the emotional investment. Big station, small station, we have plowed some part of our discretionary income into our ham shacks. This ham thing is just a hobby, but it is our hobby. The fact that you are a member of a contesting club reading this newsletter testifies to the notion that you care about radio-sport.

I don't know anyone well off enough to just throw money at his or her ham shack in the hopes of getting it right. I certainly begrudge the extra money I spent in my unplanned SO2R quest because I didn't spend some quality time thinking it out. So, if you're thinking about evolving to a SO2R station do some basic systems engineering. Spend some time thinking about what you want your new station to do, how you want it to work. What level of auto-

mation do you want? All manual controls with lots of switches to throw, fully automated, or a hybrid? What are your goals? Your requirements? Divide the requirements into "must haves" and "nice to haves".

You should think of all the sub systems that comprise your station, AC power availability both 110 and 220 VAC, the grounding both RF and power, antenna subsystem, radio subsystem, amplifier subsystems, computer and control subsystem, etc. More discussion of some of these subsystems to follow.

If you are building a new station from scratch you have the luxury of starting with a blank sheet of paper. If you are upgrading your current station you also have to think about legacy systems integration. How do you get from today's station to the desired SO2R contest winning station? Start with an as-is drawing. That sounds fancy but all it turns out to be is a detailed block diagram of the subsystems comprising your current station and how it is lashed together. Then draw a to-be drawing that illustrates your end goal. Doing that will give you a clear idea of what you will need and when. That's not so hard, now, or is it?

To be continued....

Preview... So there I was, one Saturday morning running Europeans on 20 meters using my second radio and amp when BLAM! Mr. Murphy returned and amidst the smell of burning components my used FT-1000MP bit the dust.....

## Time for Dues

If you're paying your SMC dues by check, PLEASE make the check out to **SMC or Society of Midwest Contesters and put your call somewhere on the check.**

MAIL your check to:

Society of Midwest Contesters or SMC  
c/o Zig Markowski - KM9M  
50 East Eureka Drive  
Lemont, IL 60439

**Using PayPal is always an option too.**





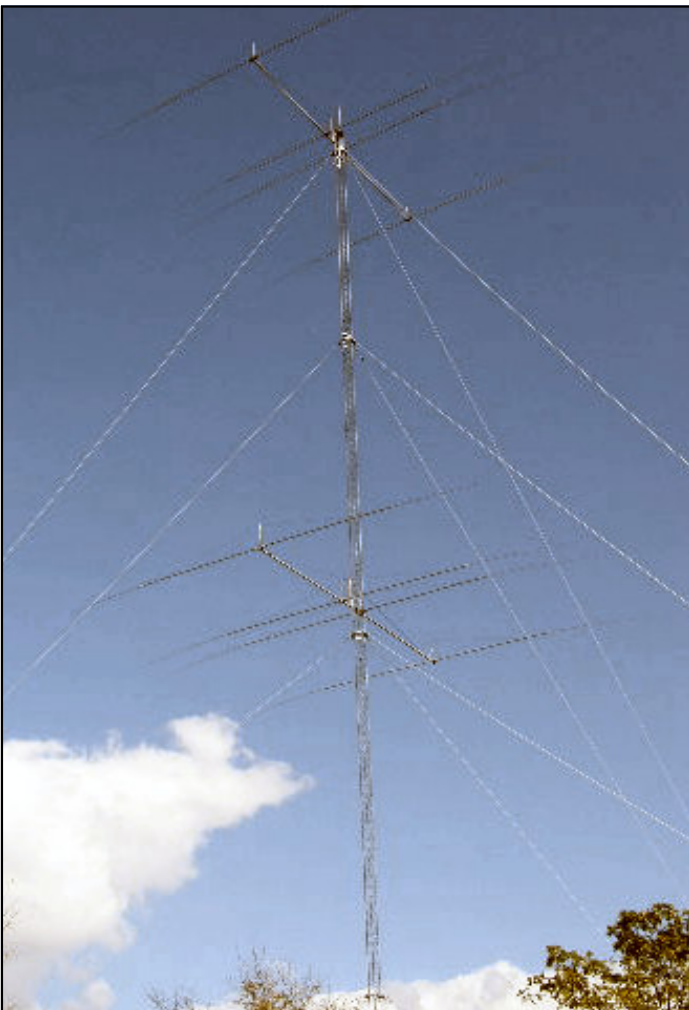
Here are some pictures of Mike's, W9RE, 195' rotating tower. It's Rohn 55 with stacked 4 element 40 meter OWA antennas, at 105' and 195'. Mike had a lot of help from John, N9FC for about 2 months, 3 to 5 days a week, on tower erection, antenna building, and antenna raising, and could never thank him enough.

**Left:** One of the 4 el, OWA 40 mtr yagis ready to go up.

**Bottom left:** The stack on 195' of rotating, Rohn 55 tower.

**Below:** The top 40 mtr yagi.

**Bottom right:** Looking up from the bottom of the tower.



# SMC Stuff

## SMC Clip-on Badge *by NV5A*

The SMC logo appears at the top-center of the badge in black and white. Your call sign, first name and city & state appear in dark blue. The SMC name badge as shown with the slot & strap with swivel alligator clip, but there are other choices.

Price: \$14.50 (includes s&h).



# KC9FD

**SOCIETY OF MIDWEST**

Club badges can be obtained by sending a check for \$5.50 to:

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6657 N. Sidney Place  
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Eric, K9GY, operated CQ WW CW 2008 from El Salvador. He made friends with the local Army and rural police who were patrolling the neighborhood. I guess there is more than one way to fend off someone trying to steal your frequency. ;-)

## Member/New Member Information/ Update Form

Name: \_\_\_\_\_

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## The Society of Midwest Contesters

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