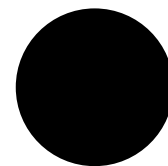


# The Black Hole



Official Journal of The Society of Midwest Contesters

Volume XIV Issue 3

October 2000

## Upcoming Activities

**Pennsylvania QSO Party**  
Oct 14-15

**Oceania CW DX Contest**  
Oct 14-15

**ARCI QRP Fall QSO Party CW**  
Oct 14-15

**JARTS WW RTTY Contest**  
Oct 21-22

**Illinois QSO Party**  
Oct 22-23

**CQWW DX SSB Contest**  
Oct 28-29

**ARRL CW Sweepstakes**  
Nov 4-6

**Japan International SSB DX Contest**  
Nov 10-12

**Worked All Europe RTTY Contest**  
Nov 11-12

**ARRL SSB Sweepstakes**  
Nov 18-20

**CQWW DX CW Contest**

## From the Prez

*by Paul Gentry, K9PG*

It's that time again! Contest Season is here! And what a start it was with a couple of great showings in the NAQPs! In the CW test, I personally worked 25 different SMCers, while 33 different SMCers showed up in my SSB log! There were quite a few W9 non-SMCers that I logged also...I'll see what I can do about getting some of them to join us! There were 6 complete teams for CW and 9 teams for SSB! Special thanks goes out to our new members, N9BOR, KG9PQ, W9HL, N9TK, N9REP and K9MI who all got on and handed out some Qs!

The Sprints just ended also! We had a good showing for CW and a better one for SSB. Not quite as good as the Feb contests, but there always seems to be more activity in the winter running. We sported one full team for CW and have a preliminary score of 116,257. And for SSB, we had three full teams. The full time people had a preliminary score of 127,651. Look for the claimed scores elsewhere in this issue! I'm sorry to report that the Southern Cal Contest Club appears to have us beat in both modes, but we still did very well. Not to worry, we always do much better in the February Sprints anyway, so we'll let this one slide.

We had a good time at the K9ZO picnic on Aug 12. It was good to see WS9V again after 10 years! Skip has rejoined us after a several year absence. And wouldn't you know it, as soon as he rejoins us, a microburst took down all of his towers and destroyed his station. The good news is that he and his home are okay. Hope you can rebuild fast Skip! It was also good to meet Jon - WO9S after working him a million times! Jon's XYL Joy

*(Continued on page 3)*

# The Black Hole



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## SMC Badges



# N9NW

Norman Wald

**SOCIETY OF MIDWEST CONTESTERS**

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

**Midwest Engraving**  
6920 W. North Ave.  
Milwaukee, WI 53213  
Phone (414) 258-8655 FAX (414) 258-8656

Be sure to note that it is for a "Black Hole" badge and please allow a couple weeks for delivery.

# W9SMC

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SMC Web Page: [www.w9smc.com](http://www.w9smc.com)  
Reflector: [smc@qth.com](mailto:smc@qth.com) (members only)

Articles and score rumors are welcome and needed for The Black Hole. We can accept material in any of the following formats.

- 1) MS-DOS disks in most popular word processing formats.
- 2) MS-DOS disks in ASCII format.
- 3) MS-PUBLISHER files
- 4) E-mail: [maves@aloha.net](mailto:maves@aloha.net)
- 5) Hard copy (preferably typed)

(Continued from page 1)

also made the trip down! Others in attendance include WX9U (who is actually QRV on the internet...can you believe it?!?! – say hello to Phil at wx9u@yahoo.com), N4TZ, WB9Z and his nemesis Kurt - WB9ZEZ, K9XD, K9NR and KI9A. WT9U was there also and he brought a new member. Welcome to Mike – K9MI! Another ex-member also showed up and rejoined us! Welcome back to Howard - AK9F. Special thanks goes out to K9ZO and his XYL of 24 years Connie! They were great hosts, just like they were the last time we had an SMC picnic there – 10 years ago! If it's ok with Ralph, we'll make this an annual event again!

As was mentioned in the last issue, the SMC came in first place in the Medium Category of the club competition in the 1999 Ten Meter Contest! We had lots of top tenners in that contest in several categories! W9RE got third in the High Power Mixed Mode category. WB9Z and K9HMB placed 5<sup>th</sup> and 8<sup>th</sup> High Power Phone Only. AG9A placed 5<sup>th</sup> High Power CW Only, K9QVB got 10<sup>th</sup> Low Power CW Only and W9OP got 10<sup>th</sup> place in the QRP CW Only category (Mark – where are my pix?). Other notable scores include that turned by Gary - W9XT. This is Gary's favorite contest and he always does very well! He just missed the top ten by a hundred Qs or so. I did my part by working him on both modes early on Friday night. The same goes for one of our newest members, N2BJ. Barry turned in another large score with over 2100 Qs narrowly missing out on the top ten! Quite an effort with a single tribander. N9PQU, K9ZO, WE9V all turned in scores over 1000 Qs! FB job by everyone in the top boxes! And just like in SS, there were a few non-SMCer W9s that made the top ten. KG9X is one of them...big surprise there. Fred is getting to be a regular in the top ten box! This time he got 2<sup>nd</sup> place Low Power Mixed Mode missing first place by just a few mults! He told me that he's been meaning to join us... I sure hope he does! KB9S was an SMCer at one time in the late 80s and early 90s. Mark got 10<sup>th</sup> place in the High Power CW Only category. Not an easy thing to do from the Eau Claire, WI area! N9NE made top ten in another QRP category just like he did in SS. Todd got 3<sup>rd</sup> place QRP CW Only.

Going through the 10m contest results, I count about 75 W9s that turned logs that are not SMCers, about 40 of them in IL alone. I wonder how many of those guys are within the circle? Just imagine what kind of a club score we could have had if each of them was an SMCer. If they knew that their scores helped the entire club, maybe they would have squeezed out another hundred Qs or so! Think what that could have done for the overall club score? All of those 10k, 25k and 50k scores add up pretty quickly! In IL alone, the non-SMCers account for over 4.1 million points!

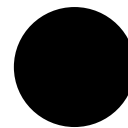
Here's an idea. I'd like everyone to take a few minutes

sometime during the month of September and/or October and go through some contest results. Any contest will do, SS, 10m, 160m, ARRL DX, CQWW... and/or some old contest logs and look for some W9 and eastern W0 calls that you recognize. Drop an email to them and invite them to join us! Or even if there's someone that you know that gets on and makes a few Qs here and there and never turns in a log, explain to them how the team competition and club competition works. One thing that I do is to take a few seconds out during the contest and ask the W9s that work me if they know about the SMC. I try to get their email address or ask them if I can call them after the contest. It's worked pretty well so far. I have personally gotten about a twenty new active members using these methods. And I've also put together a list of over 180 people, mostly W9s, that are within our circle and have turned in logs in various contests. I plan on getting in touch with most of them one way or another, but I sure could use some help. If you'd like the list, let me know. Maybe you can go through it and pull out some calls that you recognize and invite them to join us!

For the rest of the year 2000, the SMC is offering free membership for new members. The only stipulation to the free membership is that the new members have to try their best to get on for the rest of the ARRL contests in the year 2000 and turn in a log with the SMC as their club affiliation. Those contests are both modes of Sweepstakes, along with the 10 meter and 160 meter contests. So far, we've had about 7 people take advantage of this! Hopefully we'll add quite a few people before Sweepstakes comes around!

There will be a special edition Black Hole coming out about 10 days before SS CW. Watch your mailboxes and plan on operating both modes if you can!

Let's have a great showing this contest season!



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## Free SMC Membership!

For the rest of 2000, anyone can join the SMC for free. Talk with prospective members at your local club meetings and hamfests, or on the local repeater. Anyone interested in contesting and being part of the "Midwest's Best" is welcome. Have them contact Paul, K9PG, or Jon, NA9D.

# 160 Flamethrower

By KG9X

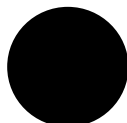
The following antenna design is not my own, but a classic design for another frequency. The use of this antenna on 160 M was really by accident. During the beginning of the CQWW 160M DX contest, I made a last minute attempt to get on and to mainly give other SMC members a contact. The wire type antennas 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. The antenna gurus would have a field day picking this design apart technically. It shows though, 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. If you're only getting on in the ARRL 160 Contest, as we know you will December 1-3, 2000, just to make make some points for the SMC Club entry, any antenna is a good antenna.)*



# Put Your KT34A on 40 Mtrs

By Mike Taylor, AC9C (Originally ran in Nov-Dec 90)

This summer the yearly ritual of taking all antennas down to erect new ones at the AC9C station took place. The newest rendition is a 50 foot freestanding tower with a KLM KT34A tribander on top. The KT34A was modified to act like a loaded 40 M dipole. This was done to minimize both interaction between antennas and windload.

First the ends to the driven element to my unused Cushcraft 40-2CD and secured them to the ends of the boom on the KT34A such that the total length of the boom plus the added 40 meter element is the same as the original length of the 40-2CD driven element. The KT34A elements are insulated from the boom, therefore I concluded that the boom should now be an electrical half wavelength on 40 meters. Because the boom is not split or insulated from the mast, the antenna is fed with a gamma match constructed out of a 10 foot piece of aluminum tubing and an air variable 250 pF capacitor. The capacitor was mounted in a box and bolted to the mast just below the KT34A. The aluminum tubing was suspended from the boom (like a gamma match on any HF monobander) with the gamma tap point at about 9 feet out from the center of the boom. The capacitor is connected in series with the coax center conductor and the gamma tube.

The antenna has proven to be a good performer in the recent NA Sprint contests. Other possibilities would be to do the same on a KT34XA but make the dipole full size.

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## 10 Years Ago in the SMC

- President Dave, WO0G, profiled Sam Effinger, K9SD, and his impressive station
- Dues went up to \$10 per year
- AA9A and K4VX graced the cover of the Sep and Oct 90 issues of CQ mag
- In CQWW, N0BSH (now K9NW) operated W0AIH to a # 5 USA finish and 9th district record on 28MHz; N9RD finished #5 USA on 14 MHz, and N9AW was #1 world with his 21 MHz, QRP effort
- Mike, AC9C, told us how to put a KT34A on 40 meters (See expanded article on this page)
- Japan was running out of JA1 calls and started issuing 7K1-7N1
- The SMC Club net was going strong Saturday evenings on 3.858MHz

## SMC Shirts Available

Thanks to KI9A we now have new SMC shirts available. They're short sleeve Polo shirts, available in two styles: white shirt with "SMC" in black and "name and call" in blue lettering as shown below, or red shirt with black lettering. The cost is \$20, including shipping. You can email your orders to



AD9P@aol.com (Al) or NOUXQ@aol.com (Sandy)

If you want something a little warmer, or just something a little different, you're in luck. They will do custom work on everything from sweatshirts, to

hats, to rig covers. Drop them an email with your request and they will provide you a price quote.

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## Contesting for the Little Gun

by Dave Pruett, K8CC (From MRRC "FLASH" and NCJ)

Many "little gun" stations and operators avoid making a serious effort in the DX contests. They may "fool around" and make a few hundred QSOs to do their bit for the club. However, these "fool around" efforts don't really cause the contester to learn or improve. What the little gun really needs to do is make a serious effort using all of his resources.

Now we must be realistic about this, because a tribander and wires in W8 is not the stuff a top ten finish is made of. With this in mind, what the little gun needs is a goal. In a way he is in a very flexible position because he can make the contest what he wants it to be. The K3LRs and N4ARs of this world are doomed to strive for spots in the top ten--the little gun's goal can be whatever he wants to shoot for with his available arsenal.

As an example, in the 1985 ARRL CW DX contest, I operated from the "real" K8CC QTH, with a 50' high tribander, a 40' 80/40 dipoles and no antenna on 160. I began quite casually, not getting on until 0043Z Friday night and sleeping through the first two hours of Europe Saturday morning. Saturday evening I took off two hours to run a pizza and watch some primetime TV. I got six hours of sleep Saturday night and went to church Sunday morning rather than run Europe (some things are more important than a "casual" effort).

What did I accomplish and what did I learn from this casual effort? I wound up with 556 QSOs and 204 multipliers for

340k points in 22 hours of operating time. I worked new countries and learned new things about DX propagation. I discovered that even a tribander can sometimes run stations from W8 on 20M. And I realized that in the afternoon low-sunspot doldrums, when the only things to work are KP4s and PYs, the size of your antenna doesn't really matter at all.

From this I realized the essential secret of doing a DX contest single-op: "There is so much stuff to do, DON'T SWEAT THE SMALL STUFF." This may seem an obvious statement but it isn't really. In a multi-op effort (particularly CQWW) you have to be everywhere at once, including the marginal openings. As a single-op, all you have to do is identify the best thing that your station could be doing at any given moment, AND GO DO IT!

Let's talk about planning for a serious little gun effort and you will begin to see what I mean. For starters, what a bout hardware? I'm not going to give a treatise on station design here, for the spirit of the little gun is to use what he has. A tribander and low band wires is perfectly adequate. A KW is a necessity, but even an SB 200 will do just fine. If you have an amplifier with 160, it will be worth the time to put up some sort of wire for that band fore extra multipliers. The usual contest aids (filters, preamps, etc.) and good station ergonomics are still important, but don't be afraid to jump in with less than optimum hardware.

The most important thing for a W8 DX contester to remember is to NEVER MISS A CHANCE TO RUN EUROPE. At this point in the sunspot cycle this means 20 and 15 in the mornings (Ed. At the top of the cycle you may want to check 20 early, but hit 15 and then 10 as they open.), 20 in late afternoon and (during CW contests) 40 in the later afternoon and early evenings. Also, don't miss European sunrise around 0600Z when it is possible to "search and pounce" Europeans at a good rate on 40, 80, and sometimes, 160 (if you're a big enough gun.)

Along these lines, the cardinal rule for little guns is to ACT LIKE A BIG GUN WHENEVER POSSIBLE. Try to recognize when conditions are good enough for the little gun to run Europe, and take advantage of it! But if the big guns are CQing and you can't, don't give up--keep up the S&P.

Similarly, the single-op should recognize the best times to catch some sleep, unless he is the rare individual who can stay awake AND ALERT for 48 hours. The best time to sleep is the middle of the night--try to stay up through European sunrise (07Z) and get up well before local sunrise to catch Pacific and Asia multipliers on the low bands. Another good time to sleep is the middle of the

(Continued on page 6)

## SMC Welcomes

WA0SXV - Mike  
K9BF - Ben  
W9YYG - Alan  
W9AN - Alan  
W9EM - John  
N9SQT - Allan  
KB9WXX - Drew  
KB9VHA - Mark  
N9LZ - Larry  
K9FE - Mike  
WA9DRE - Steve  
KU9Z - Adam  
WA9AQN - John  
KE0FT - John  
AD9P- Al Schneebeli  
WA0IYY- Ken Craig  
WE9A- Steve Sears  
W9BS - Gary  
WA9GON - Gerry  
NF9V - Rudy  
KF9YR - George  
KB9CYL - Jim  
KB9UWU - Matt  
N9NU - Tim  
AD4OS - Ken  
K0PG - Tim and xyl KB9WVL - Pat  
KC9FC - John and xyl KC9FD - Carol  
WA0JTL - Russ  
WQ9E - Rodger

*(Continued from page 5)*

afternoon (unless EU stays open!), but even then the single-op can make a diet of working KP4s, LUs, and PYs on 20, 15 and sometimes, 10 (Ed. Definitely 10 at this point in the cycle). But never, I repeat, NEVER, sleep through the morning opening to Europe.

By now, the modus operandi for the little gun is starting to emerge: Run Europe when you can, and S&P the rest of the time. If you think about it, this is essentially the same strategy that the big guns must accept during low sunspots. This becomes very clear when everyone is in the Central and South American pileups in the afternoon--we're all doing the same things at the same time and it's very satisfying to sneak past a big gun to a new multiplier!

Two more things--the little gun spends less time running so he generates fewer QSOs. Hence, his score depends very heavily on multipliers. An up-to-date all band multiplier checksheet (Ed. Time to download the latest .cty file or

## SMC Mini Contest

Last month a few SMCers, led by Chuck, KI9A, revived the SMC mini contest. Six or so members met on the bands one evening for 30 minutes of Sprint style operating. With some fairly simple rules for QSying, and a simple exchange, everyone had fun warming up for the September 2000 running of the NA Sprints. The initial running was a hit and everyone agreed we should do more.

We're looking for feedback from the membership on when and how often you would like to run this. Once a week might be too often, but every month seems about right. We could alternate between SSB and CW, but maybe you would rather do it once a month on each mode. Should it be a set day every month or should we vary it each time to maximize participation?

Send your ideas and suggestions to KI9A or K9PG.

edit the TR-Log country file) is an absolute must both, as an operating aid and as a psychological boost. After the first twelve hours or so, you have a pretty good idea who the serious DX stations are. Working these mults on all the open bands provides a challenge and a reminder which helps the score. Working the odd-ball multiplier is fun, but the big multiplier totals are built upon not missing anything easy on all bands. (Ed. After years of m/m and m/s operating I am still amazed at how many easy zones you don't work in the first 24 hours. Build a plan for the second 24 hours so you're on the right bands at the right times to find the easy ones you're missing or you'll hate yourself when it's all over. And don't be afraid to move people to fill in the holes--it's easier to move'em than to find'em.)

Lastly, set a goal for yourself. What might be reasonable goal? With decent operating skills, reasonable conditions, appropriate hardware and maybe 30 hours out of 48, 400k-500k is obtainable on either mode in ARRL or CQWW. With your goal in mind, if you need a break in the middle of the contest, go do it. DX contests are not as cut-and-dried as SS so you can take an occasional break and not hurt your score too badly. But decide to make a serious effort so that you'll come back to the radio after the rest and not just blow it off.

I have often said in the past that you had to be crazy to do a DX contest single-op all band. Now I realize that you don't have to be crazy, but just make the right moves.

*(Ed. Like any really useful article, this information is timeless. This originally ran in the May/June 1986 NCJ and was reprinted in the May 97 "Blackhole." His general observations and suggestions apply equally well here in most of the SMC area.)*

# Gentlemen Choose Your Weapons

by Mike Taylor, AC9C (Originally ran in Mar-Apr 91)

After years of living in apartments you have just taken possession of that dream house in the suburbs on a 1/3 acre lot. Immediately after the closing you set up a cot and a campstove for the family and start digging the holes for the 60 foot tower. You can see that new and improved TH8DXX tribander on that 97 foot boom sitting proudly atop the tower as you win every contest in sight.

Its now the first Saturday of November, 2100Z, and your are off! Time to blow the doors off all those hot shot contesters that have been sinning SS for all those years. 30 hours later the contest is over and your are 100 QSOs behind the leaders. What happened? You had the biggest antenna, biggest amplifier, and you are a better operator than that crusty old QCWA guy with a rusty Vibroplex who just beat you. What gives. Maybe the answer is station antenna engineering. The station antenna design must match the goals of the station owner to the resources available. While a competitive DX contest station may not be possible from a small suburban lot in the Midwest, a station competitive in domestic contests is.

Before the antenna systems can be designed, we first must consider the characteristics of the signals to be received in domestic contests. Some vital characteristics are arrival angle, direction, and polarization. The signals in the domestic contests are vastly different in Illinois than in Maine, Florida, or California. On any particular band, do the signals arrive at high or low angles? Do high angle and low angle signal arrive simultaneously.? Do signals generally arrive from only one general direction at a time, or from many different directions? Where are the population centers? Are the signals usually vertically or horizontally polarized, or both? Through experience I formed the following rules for propagation in domestic contests from the Midwest.

## 10 Meters

10 meters is usually not a big factor from the Midwest. Even during the sunspot maxima the only large population center the band is open to is the west coast. While the majority of 10 meters QSOs will be with the west coast, a large percentage of the QSOs will be with other stations in the central part of the USA. The propagation mode in this case is usually scatter while your antenna is pointed west. A single beam antenna will work fine for 10 meters.

## 15 Meters

During the sunspot maxima the 15 meter band can be open simultaneously to 2 population centers at the same time, namely the east coast and the west coast. Maximum QSO rates can only be attained with an antenna system able to cover both population centers simultaneously. this can be attained through the use of a tribander pointed at either the

east or west coast along with another secondary antenna. The secondary antenna can be a vertical or even another beam. If another is used, a short boom-length is desirable so that the horizontal beam width is as wide as possible to cover the east coast. Unfortunately it does no good to have two antennas if you can only transmit on one at a time. If a west coast station is tuning across your signal whether you are pointed at the east coast your signal may be 20dB down, which will probably result in a lost QSO. If however you are transmitting into the beam and a vertical simultaneously, then you will only be a few dB down compared to the beam alone pointed at the calling station.

During sunspot minima the band is usually only open to the west coast. In this case, a single beam will do the job.

## 20 Meters

During the sunspot maxima, the 20 meter band behaves much like a combination of the 40 and 15 meter bands. The band will be open to both the east coast and the west coast simultaneously during much of the day. In addition the band can become extremely short acting more like 40 meters during the day with signals from the Midwest arriving at extremely high angles. To most effectively take advantage of these conditions, I would choose a dipole over a single beam antenna. A few years ago I operated Sweepstakes portable for both modes using only dipoles on 80, 40, 20, and 15 meters and had excellent results. I had my highest CW and second highest SSB scores ever, and had better rates and total QSOs on 20 meters than ever before. The preferable antenna setup is a beam antenna (20 foot boom or so) up 50-60 feet, and a secondary dipole/vertical or small beam. When transmitting divide your transmit power between the two antenna to maximize your "illumination" of the population centers.

During the very bottom of the sunspot cycle the 20 meter band may not ever open to the east coast. In this case a single 20 meter beam is sufficient.

## 40 Meters

The 40 meter band must be analyzed as two different bands; one during the day, and another after sunset. During the day most signals arrive at high angles. During the evening signals arrive from all directions and over a wide range of vertical angles. In addition, the signals may tend to randomly be either vertically or horizontally polarized. I have listened to signals on 40 meters with both a dipole and a vertical and have seen a signal be 15 dB louder on the dipole and second later be 15 dB louder on the vertical.

From a small lot I prefer a 40 meter dipole at 50-60 feet, and a 40 meter vertical on the roof. I power divide between these two antennas. This antenna combination has proved to be quite successful during the hours of darkness as it has the effect of reducing the fading due to polariza-

tion differences and covers a wide range of vertical angles. During daylight hours when signals are also arriving at high angles the vertical can be replaced with a high angle antenna such as a low dipole or horizontal loop.

### **80 Meters**

80 meters acts much like 40 meters except that the daytime properties of 80 meters are not relevant due to lack of activity during daylight hours. I have power divided between a dipole at 60-90 feet and a vertical with good results. If I had to pick one antenna for 80 meters I would prefer a dipole at 80-100 feet broadside east-west. Unfortunately, this is usually not possible for a majority of city lot stations.

### **My Antenna System**

My goal was to construct an antenna system on a small city lot that would be competitive in domestic contests. I am restricted to a maximum antenna height of 55 feet. I have tried to implement the rules of the bands outlined above.

My tower is a 50 foot freestanding tower constructed of Rohn 25 inserted inside Rohn 45 with the 25 and 45 bolted together. I prefer a freestanding tower because it reduces the clutter of guy wires on a small lot.

The antenna system on 10, 15, and 20 meters consists of a KT34A at 50 feet. I prefer the KT34A over the TH7 or KT34XA because the boom length is smaller. This results in a wider horizontal beam width which is useful when trying to illuminate the entire east coast and smaller turning radius which is useful if I ever want to stack two beams and rotate the lower antenna under guy lines. I also use a variety of other antennas, usually a 20 meter sloping dipole which slopes to the east, which I can power divide into along with the beam. This summer the sloping dipole will be replaced either with another KT34A at 30 feet pointed at the east coast or a 10-20 meter vertical. This results in an overall antenna pattern that covers both the east and west coasts.

On 40 meters I use a 40 meter dipole at 50 feet. This is actually the boom of the KT34A which was extended and fed with a gamma match. I also have a pair of 40 meter verticals; one mounted on the roof and the other mounted on a 15 foot mast in the back yard. The verticals can be phased broadside east/west to effectively cover both the east and west coasts. When power is divided between the phased verticals and the dipole the results are fantastic! In receive I can select either the dipole or verticals to pull weak stations out of the QRM.

80 meters is the current weak link in my antenna system. On 80 meters I have an inverted vee at 45 feet whose performance is clearly inferior to dipoles at 75-100 feet. I also shunt feed my tower which at times seems to perform better than the dipole. the vertical is clearly superior to the dipole on longer paths such as to the west coast. Unfortunately I

have not had any success power dividing between the vertical and dipole due to the high coupling between the two antennas. I plan to construct a shortened 80 meter dipole and mount it above the tribander at 55 feet this summer in an attempt to improve the 80 meter antenna situation.

On 160 meters the tower is shunt fed against two elevated radials. I have an L-wire connected to the top of the tower through an 80 meter trap to electrically lengthen the tower which raises the feedpoint impedance. This antenna has proven to be quite effective both domestically and for DX Operation in the ARRL 160 contest resulted in over 400 QSOs and many contacts with European stations.

All of these antenna are on a small suburban lot. I may sound like I have a lot of antennas, but physically the antenna system consists of a 55 foot freestanding tower with one antenna on top. The only wires are an 80 meter dipole and the L wire of the tower. the tower is used on 80 and 160 meters with the radials elevated and hidden by the wooden fence going around my back yard. The radials for the roof mounted verticals lay on the roof, and the radials for the elevated 40 meter vertical in the back yard are also hidden by the fence.

### **Power Dividing**

As you can see I am a big believer in power dividing. On a small lot with limited tower height it is difficult to get one antenna to have all the characteristics needed. by adding another antenna just about any antenna pattern can be achieved. On a small lot it is important to reduce coupling between antennas which is why I use a vertical or sloping dipole along with the tribander. The coupling is greatly reduced when using a horizontal/vertical antenna combination rather than two horizontal or two vertical antennas. Always consider antenna coupling when planning on putting many antennas in a small area. It is especially important to reduce coupling between antennas on different bands if you plan to use different transceivers on each band (or even two transceivers).

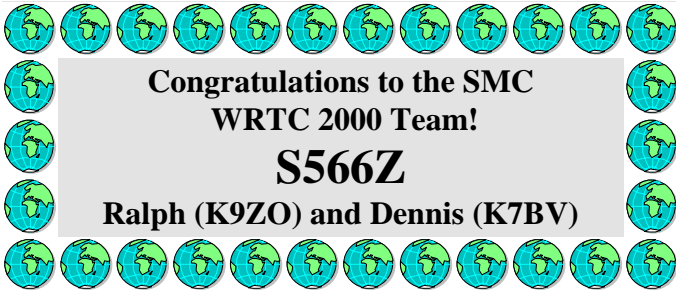
I use the power dividing scheme outlined by K8CC several years ago in his NCJ column. This consists of a three position antenna switch and several 1/4 wavelength pieces of 50 and 70 ohm coax which allows selection of both antennas or either one separately.

### **Results**

This antenna system has proven to be quite competitive in domestic contest such as Sweepstakes, Sprints, and the North American QSO Party. Results include several top 10 finishes in the NA Sprint contests. while winning or placing well in a contest is a great feeling, the feeling is even better when you beat multiple tower stations from your small one tower station on a city lot.



# SMC Score Rumors



**Congratulations to the SMC  
WRTC 2000 Team!**

**S566Z**

**Ralph (K9ZO) and Dennis (K7BV)**

## IARU Championship

### W/VE M/S

K9SD HP 770 1649 174 1,068,360 SMC  
(KI9A, K9SD, KW0A, KA0GGI, K9DD)

### W/VE SO CW

K9NW @K9UWA HP 1759 0 201 1,291,827  
N0AV HP 1240 0 139 682,073 SMC  
WT9U @K9WJU HP 1267 0 144 600,336 SMC  
KJ9C LP 554 0 117 221,364 SMC  
K9GY LP 370 0 99 116,226 SMC

### W/VE SO Mixed

NT1N HP 1175 909 230 1,731,900 YCCC  
K0OU HP 539 266 124 352,780 KCDXC  
K9PG LP 662 \* 132 269,280

### W/VE SO Phone

WB9Z HP 0 2136 207 1,840,644 Yes SMC  
W9RE HP 0 2064 212 1,706,600 Yes SMC  
W9LYN LP 0 152 85 46,580

## WRTC Results

Call	Points	(Claimed)	
KG9N	85	(87)	T-Shirt Winner
K9MMS	73	(75)	
N9RV	55	(55)	
K9PG	53	(56)	
K9NW	46	(47)	
W9RE	36	(36)	
KJ9C	36	(36)	
NO9Z	32	(33)	
K9QVB	28	(28)	
K0OU	27	(27)	
K9IG	25	(25)	
K9GY	25	(27)	
K9BG	25	(25)	
WT9U	17	(22)	

## NA QSO Pary CW (Aug 00)

### SO

WE9V (K9PG) 614 213 130,782 Yes 10 SMC#1  
N0AV 604 205 123,820 Yes 10 SMC#1  
K9IG 587 174 102,138 Yes 10 SMC#2  
K0OU 564 162 91,368 Yes 10 SMC #2  
WO9S 511 164 83,804 10 SMC  
K9XD (K9YO) 494 158 78,052 Yes SMC#1  
WT9U 479 152 72,808 9:45 SMC#2  
K9WX 274 110 30,140 8 SMC #5  
K9NW 70 34 2,380

## NA QSO Pary SSB (Aug 00)

### SO

WE9V (K9PG) 761 236 179,596 10 SMC  
N0AV 624 192 119,808 10 SMC#1  
K9PW @K9MOT 622 155 96,410 SMC #2  
WO9S 548 158 86,584 SMC  
KG9X 488 154 75,152 95  
KE9I 477 135 64,395 10 SMC#1  
K9NR 456 132 60,192 9 SMC  
WT9U 362 123 44,526 7.5 SMC#2  
K9NW @N8BJQ 352 112 39,312 7.5 MRRC  
K9WX 252 92 23,184 9 SMC #3  
NA9D 200 78 15,600 SMC#7

### Muli-op

N9KI @N9PQU 806 170 137,020 12 BAY AREA  
(K8IR, N9PQU)

N0XI @K0OU 604 139 83,956 12  
(N0XI, K0OU, KC0DEA, KC0DXK, KC0ELZ)

## Disclaimer!

I compile SMC score rumors from emails on the SMC Reflector, but mostly by scanning summaries posted on the CQ Contest Reflector. All rumors from CQ Contest are filtered using a complicated, cross referenced, 5D, relational database of the club roster which resides in my head, and is usually accomplished some time between midnight and 5 am. If your score doesn't appear here, send me a note and I'll include it in the next issue.

**K9QQ**

# SMC Score Rumors

## Sep 00 SSB Sprint

### SMC#1

W9RE 313 x 49 15,337  
K9AA 294 x 50 14,700  
KA9FOX 306 x 48 14,688  
K9IG 279 x 47 13,113  
WE9V 288 x 44 12,672  
K0OU 275 x 46 12,650  
KG9X 263 x 44 11,835  
KI9A 241 x 47 11,327  
K9NW 238 x 46 10,948  
K9PW 248 x 43 10,644

---

Total 127,914

### SMC#2

KE9R 214 x 42 8,988  
K9MMS 206 x 42 8,652  
K9VV 190 x 45 8,550  
WI9WI 170 x 40 6,800  
W0UY 158 x 40 6,320  
W9SMC 124 x 34 4,216 (KJ9C in disguise w/ his Barbie mic)  
K9SD 100 x 33 3,300  
W9YS 81 x 29 2,349  
K9LU 60 x 29 1,740  
KG9N 66 x 25 1,650

---

Total so far 48,349

### SMC #3

K9ZO 200 x 43 8,600 (on pain killers... what a trooper!)  
KX9X 167 x 43 7,181  
W9IU 172 x 41 7,052  
W9LYN 67 x 32 2,144  
AG9A 57 x 19 1,083  
NZ8C 54 x 28 1,512  
K9WX 28 x 16 448  
AE9D 24 x 11 264  
W9HL 7 x 3 21

---

Total 28,305

### No Team

N9VVV 232 x 44 10,208  
KI0MB 103 x 37 3,811  
K9CJ 82 x 36 2,952

K9  
32x  
512

[www.w9smc.com](http://www.w9smc.com)

BGL  
16

## Sep 00 CW Sprint

### SMC #1

N0NI 353 X 43 15,179  
W9RE 309 x 47 14,523  
K9NW 314 X 43 13,502  
K0OU 279 X 42 11,718  
K9AA 258 X 45 11,610 low power  
WT9U 249 x 43 10,707 low power  
KG9X 245 X 43 10,535  
K9MMS 243 X 43 10,449 low power  
K9IG 248 X 38 9,424  
WI9WI 210 x 41 8,610

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Total 116,257

### SMC #2

K9DX 276 x 43 11,868  
KJ9C 248 x 42 10,416 low power, pain killers, beer in hand  
K9PW 53 x 22 1,166

---

Total 23,450

### No Team

K9BGL 258 X 42 10,836

---

## WAE CW

K9GY @K3ZO HP 629 626 119 360,864 PVRC

---

## CQWW RTTY

AE9D: Multi Op, Single Xmitr (AE9D + Nick)

Band QSOs Pts QTH DX Zones

80 34 39 25 2 3

40 113 147 44 13 9

20 310 616 42 60 24

15 339 820 31 60 22

10 303 795 12 64 20

Total 1099 2417 154 199 78 Claimed Score: 1041727

K9JY: SOAB Asstd.

QSOs PointsZones DX: States Multipliers Score

80m: 9 13 2 2 8

40m: 46 70 11 12 28

20m: 111 270 17 41 22

15m: 347 892 25 71 31

10m: 298 825 24 72 14

Total: 811 2070 380 Claimed Score: 786600

# August 2000 SMC Picnic at K9ZO's

Thanks to AK9F for the



l to r: WS9V, K9ZO, K9YO, WB9Z, WX9U, K9PG, KI9A, K9XD, WB9ZEZ, K9NR, WT9U, AK9F



Chuck, KI9A (left) and Paul, K9PG (right) sporting the new SMC Polo Shirts and discussing strategy for the upcoming contest season.



Jerry, WB9Z (left) and Don, K9NR (right)—two of the reasons the SMC will be on top of the club competitions this contest season.



Member/New Member  
Information/Update  
Form

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

Call: \_\_\_\_\_

Address: \_\_\_\_\_

\_\_\_\_\_

Phone: \_\_\_\_\_

E-mail: \_\_\_\_\_

Please send updates to:

**Jon Ogden, NA9D**  
2 S 872 Wagner Road

**We need your input for the next 'Hole!!'**

- ⇒ Operating stories
- ⇒ Station construction
- ⇒ Operating accessories
- ⇒ Packet and computer hints
- ⇒ Product reviews
- ⇒ Plug your upcoming DXpedition
- ⇒ Your idea here

**Please consider putting an article  
together today!**

**Deadline for the Special SS issue is  
October 24<sup>th</sup>**



The Society of Midwest  
Contesters

*Brian Maves, K9QQ*  
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