THE BLACK HOLE

THE OFFICIAL JOURNAL OF THE SOCIETY OF MIDWEST CONTESTERS

Volume #1, Issue #4

December - January 1985/86

1985 TO 1986 OFFICERS:

President - Steve Dubberstein NA9D 812 Larsen Ave Streamwood IL 60103

Illinois Chairman - Ralph Bellas K9ZO RR4 Bloomington IL 61701

Indiana Chairman - Tom Poland N9NC RR1 Box 306 Rossville IN 46065

Wisconsin Chairman - Gary Sutcliffe W9X7 Rte 1 Box 196 Neosho W! 53059

Contest Activities Chairman - Ray Sokola K9RS 430 Hobblebush Dr Lake Zurich IL 60047

Awards Chairman - Dave Patton AH2U 520 Walnut Dr Streamwood IL 60103

Sprint Team Coordinator - Mike Taylor AC9C 1119 E. Illinois Wheaton II 60187

The Society meets every Saturday Morning at 10:30 A.M. local central lirne on 3858 KHZ +- 2 KHZ. Club dues are \$3.00 per year. Information on membership is available from any of the officers. Material from *The Black Hole* may be reproduced providing proper credit is given the author and *The Black Hole*.

FROM THE EDITOR

The first half of the contest season is over with plenty of activity heard and a few suprises. CQWW phone provided an unexpected trip back to the good propagation days, even to the extent of some openings to Europe on 10 meters. A fantastic 20 meter short skip opening on Saturday night of this year's SS phone was really wild, lasting until past midnight and providing hundreds of east coast contacts. At the end of the evening, midwest stations were on top and and if Sunday night would of been the same we may have seen the top 10 sprinkled with several midwest stations.

In our goal to submit 50 or more logs for SS club competition, I counted a little over 50 club members worked on both modes from NA9D. Did you send in your log? I hope so as I think we are going to be very close to making it with not alot to spare. Both Phone and CW had plenty of short skip, so our "Club skeds" were not really necessary although several people showed up for the CW sked. If we try this again or not will depend on feedback from you.

The club net has suffered from a severe lack activity due to super long skip on 75 at 7:00 at night. Several suggestions have rolled in regarding new frequencies/ times, and after some experiments by W9XT and myself we have decided to move the net to Saturday morning at 10:30 A.M. on the same frequency (3858 +- 2 KHZ). On major contest weekends the net may or may not meet, we'll see how things go. Try to show up and at least let everyone know how things went in the last contest. The Mad River group seems to have a lot of activity on their net following contests with everyone dropping in with their score so they can get an idea of how well the club did. Let's see if we can do the same.

This should arrive just as you are all gearing up for the CQ 160 contests. Our goal is to win this one - and we will need something from everyone to do it. When this goal was set, the winner of the 1984 club competition, the Yankee Clipper Contest Club, had about 1.2 megapoints. In 1985, they doubled their club score to just over 3 million. Get on and contribute what you can. An article in this newsletter by K9RS explains how you can be loud and hear well on 160 for minimal expense and effort. Even if you have to load up the cat for an antenna, please make some contacts for the society on both modes if possible. CQ accepts just about anything for log sheets and entry forms for this one. If we are going to build ourselves up to winning at least one major event a year, this will be it. Let's give it a super beginning.

The Black Hole had an article reprinted in the National Contest Journal, the 80 meter DX antenna by K9RS. Unfortunately, they turned Ray's last name from Sokola to "Sheffield." Maybe somebody wants to blast him with an Execot missile. In any case, they didn't give credit to the newsletter either, and that was sort of disappointing. The NCJ is proposing a new contest, the North American QSO Party. It is intended to replace the now defunct ARRL QSO party, and would be held on about the same dates. Exchange would consist of name and state, leaving out the virtually useless "RST." It's also nice to see they are not proposing a serial number, sometimes it is nice to do a contest without finding out you're getting blown away (unless you are blowing everyone away, of course). A letter from N6OP to the NCJ was quite interesting, he commented on "contest burnout" and the expanding number of contests. He proposes that activity be concentrated on a fixed number of contests. Something to think about.

The September Sprints found quite a few members on but we were a few people short of 10 on each team. A bigger problem came in the confusion of the team name, and our CW team ended up with only two guys listed on the team in the results! See the article by AC9C to clarify any future problems. But by far the biggest problem was not sending in logs - several of our top scores didn't even appear in the results for the CW sprint. We have to get logs in to get credit and not let the rest of the team down. To help with this, the calendar printed in each newsletter from now on will include dates logs must be submitted by in order to meet the deadline.

With this issue we welcome Dave Patton AH2U as our awards chairman. Dave, who used to be KJ9W as well as some other juicy calls, just returned from Guam. His latest excitement was having his TS-930 and some other stuff ripped off from his crate being shipped back with his personal belongings. His job of awards will come in to full swing as soon as results are published for the SS and CQWW.

March 9 is the date of this years' Wisconsin QSO Party. One of the best state QSO parties in the nation, this year's event promises to be bigger than ever with a commitment by the Greater Rice Lake Contest Club of northwest Wisconsin to activate all 72 counties in 7 hours time. Rumor has it that an official challenge now exists between the above mentioned group and the Kettle Moraine Radio Amateurs of the Milwaukee area. Tune in for 7 hours of war on March 9, 12:00 noon to 7:00 P.M. local central time.

I know you are all sick to death of hearing about packet radio, but after getting a TNC I have found the mode to be quite handy. Other contesters have discovered this too, including W9XT, N9NC, W9WI, WA1UJU, and W9ZRX. The main reasons it is so handy is the ability to link up to somebody through several "digipeaters" and leave them a message, even if the operator is not there. Several of the score rumors you see in this issue were left as messages on my packet station by W9XT. If you have a packet station, feel free to leave me or W9XT rumors or anything you would like to see in the newsletter. It also would be a great way get Gary information for *The Contest Roundtable*. We both leave our units on 145.01 MHZ 24 hours a day.

As we are now fairly well established and have 86 members, I would like to see some input on what direction you wish the club to take. When the SMC was founded, one of the goals was not to burden the members with paperwork or other responsibilities, and let those who want to put in the time keep the society running smoothly. I feel as if we need to do more, however; at least in

the form of in-person events. It would also be nice to see individual members take responsibility for some things like society QSL's, society tee-shirts and name badges, helping with a suite at Dayton and the like. I see a need for all these things, but as of late some of the officers are spending more time running the society than contesting! So we need some help from you. I propose that you as a member try and do one SMC "chore" per year. Some ideas for this are:

- * Respond to W9XT's Contest Roundtable at least once a year
- * Help with or hold a society social event
- * Be an officer
- * Write an article for The Black Hole
- * Handle society QSL's or something similar
- * Be on the club net consistantly
- * Just about anything else that would benefit the society

If we all do just one small thing for the club every year, once you multiply that by 86 members you get a lot done. Where would you like to see the club go? Would there be interest in a banquet once a year? More regular "Non-Official" meetings at people's homes or at a resturant? Let the officers know your feelings.

Is there anyone who has an idea for a suite at the Stouffers in Dayton? Maybe someone knows of a group that is looking for another group to go in with them on a suite. If you have never been to the suites at Dayton, they are the "Contester's social event of the year." Any ideas, let the officers know.

My favorite contest of the year is SS CW, and the keen competition in Illinois this year has really made it a blast. The top four stations were seperated by a spread of 20 QSO's after dupes, and 1 or 2 multipliers ended up determining who placed where. This kind of activity makes a contest real satisifying, even if you are number four (me).

We will be entering the ARRL DX competition as a club. If you are eligible for ARRL club competition (see the last newsletter) then please get on and make a few Q's for the society. A summary sheet and log sheet are included with this issue.

Gary W9XT is in the process of arranging with the ARRL for the society to sponser a plaque for the ARRL DX contest. The cost is \$40.00, and we should be able to sponser a plaque for this years' contest. Donations in the form of a buck or two towards this would be appreciated. At future meetings and social events we'll have some container to throw a buck in and then use that for the plaque. We'll supplement the rest with money from the treasury. I hope this method will give you a direct feeling in sponsoring a plaque, as opposed to the "suck it out of club funds" way it is usually done. Gary would also like to say you may want to catch the VHF column by WB2WIK in January CQ. It talks about VHF contesting, but has some interesting ideas that apply to other contests as well.

Nate W9GXR has a disk copy of the Super Duper program (as printed in QST). He has a disk with four programs for IBM dupe checks. If anyone wants a copy, send him a disk. He also has a hard copy printout (quite lengthy) which he could copy you. His address is Nate Williams, 6915 Prairie Dr, Middleton WI 53562.

I have heard rumors of two dx-peditions involving society members. K9RS should be teaming up with AA5B for a trip to XE for one of the ARRL DX tests, and K9GL,K9VV and others are planning a trip to new DXCC country Aruba for the ARRL DX CW event. Best of luck to both groups.

Life at NA9D has been quite interesting in the TVI department. I have just completed a round with the FCC in answering a complaint placed by one of my neighbors. In 1.5 years of living at my residence, I had one TVI complaint by a different neighbor which was corrected with a high pass filter on his TV. At that time I decided to visit several other neighbors and pass out a few filters to prevent any more problems, including the one who complained to the FCC. I explained contesting (short periods of lots of transmitting) and let them know I would help with any problems. I never heard from my neighbors again until I got a form TVI letter from the FCC. My advice? Don't try to fix it until somebody complains.

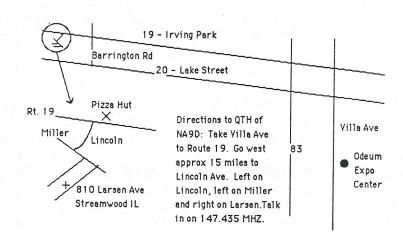
Last but not least, the beginning of February signals time for the Novice Roundup. Want to give a novice a real thrill? Let him operate your station for a day for the NR. Most contesters stations are beyond the comprehension of your average novice, and using one for the NR can hook him for life on contesting. In any case, get on and make some Q's for the novices. At least you can't make as much TVI without a KW.

73, Steve NA9D

WHEATON HAMFEST SOCIAL GATHERING

The next society social event will take place following the Wheaton Hamfest on Sunday, February 2; at the Odeum Exposition Center. This hamfest used to be at the Arlington Heights racetrack until it burned down, and is the next largest hamfest in the nation following Dayton, with attendance usually exceeding 10,000.

Starting at 1:00 P.M., the home of NA9D will be open for your entertainment.
Refreshements will be provided, as well as lots of contesters with stories of "that 160 contest the weekend before." Activities will hopefully extend into the evening. So please drop in, a few surprises are promised. There are plenty of fast and slow food resturants along route 19 if you wish to grab a bite between the hamfest and the society gathering.



REVIEW OF THE HEATH HD-1424 ACTIVE ANTENNA de W9XT

The high noise levels on 80 and 160 have led to the development of low noise receiving antennas such as the Beverage and various types of loops. While they do greatly reduce the amount of static picked up, they also reduce the strength of the desired signal.

I had just decided that the solution to this problem with my new short Beverage antennas was to build a pre-amp when the new Heathkit catalog arrived. It carried an announcement for the new HD-1424 Active Antenna. The HD-1424 was designed to be used with shortwave receivers that had poor sensitivity and/or antennas. It also looked like it would solve my problem.

The Active Antenna comes in a kit. It is quite simple to assemble, and the instructions are at the usual high Heathkit quality (naturally I only paid passing notice to them). It took about 2 hours to assemble, mostly wiring the small circuit board to all the external connectors and switches.

The only problem I had was a defective set screw for of the knobs. I took one off a knob in my junk box and was back in business. Despite my lack of attention to the assembly instructions, it worked the first time.

The HD-1424 covers 300 KHZ to 30 MHZ in 5 bands. Besides the band switch, the front panel cortains a gain control, tuning control, ON/OFF switch and a LED pilot light. It runs off a 9 volt battery or an external DC supply with an output of 6-14 volts at 45 ma. If you use a battery, I suggest you disconnect the LED because that draws about half of the power consumed.

I have been able to copy stations with the Active Antenna that were unreadable with my dipole, vertical, or Beverages without the pre-amp. It does have a few limitations though.

Care must be used when tuning the HD-1424. The calibration on the front panel is not all that accurate, and it is possible to tune onto frequencies other that the one desired. This causes a mess of intermod signals. The Active Antenna also has a tendency to go into oscillations if the gain is set to high. These limitations are not too serious as one quickly learns to avoid them.

The manual does not give any gain or noise figure specifications. There has always been more than enough gain for my purpose, and no one worries about noise figures at 1.8 MHZ.

The HD-1424 does not contain any provisions for switching with a transmitter, so you will have to provide that yourself. I used a coaxial relay from my junk box with some switch interlocks to prevent its accidental use as a dummy load.

It would certainly be possible to build better a better pre-amp that had better selectivity against out of band signals and better dynamic range. I think it would be difficult to build one as good and put it in a box for less than its price - \$50.

THE ULTIMATE PORTABLE 160 CONTEST MACHINE de K9RS

<u>Balloons and Beverages.</u> Sound like a party? It's also the way to be a 160 meter big gun! This system has been used at K9RS for a multi-op effort for the last several 160M CW contests. The machine consists of two parts - a helium balloon for transmitting and Beverage antennas for receiving. Combine this with a decent radio and a KW for 160 and you will have a top 10 capable setup.

Transmit - We use a Drake T4XC and a Dentron MLA-2500 amplifier to drive the balloon vertical. The vertical consists of 150 ft of #22 stranded insulated wire held up by a helium balloon filled to 3-4 ft in diameter. The wire is fed at the base against ground through a series 1000 pf air variable which conveniently matches it to 50 Ω . Wind usually keeps the wire from being vertical but that doesnt seem to hurt it's performance. ONE CAUTION -DON'T USE NEAR OVERHEAD POWER LINES! fortunately I don't have any!

Balloons are available from many party stores and even FAIR RADIO, also 6 ft balloons (these work very well filled to 3 or 4 ft in diameter) can be had by mail order from JERRYCO for \$6.50 each -their phone # is 312-475-8440 VISA and MASTER CARDS accepted. Welding supply shops and medical gas suppliers as well as party stores are good sources of helium. I rent a 110 cubic foot tank which easily is good for 5 or 6 fills for \$35.

Receive -A Drake R4C, Ameco preamp, five position switch, four pieces of RG-59 and some wire are all that's required for receiving. The RG-59 runs go to an adjacent field where Beverage antennas are formed by connecting the shields of the cables to a two foot ground rod and the center conductors are connected to various length wires (200-1000 ft). The wires are either left laying on the ground or stomped under snow to keep from being

pulled up by snowmobilers. No attempt is made to match or terminate the wires. The five position switch allows choosing any of four Beverage antennas or the transmit antenna for listening. The preamp is not absolutely necessary but does help boost the low levels on the Beverage antennas to the point that signals are closer in strength to the transmit antenna.

The system can be set up just about anywhere there is space. With the balloon transmit antenna and a KW, your biggest problem will be hearing everyone who calls you. If you have a remote antenna switch, you could use that instead of multiple coax runs for the beverages. Best of all, it's cheap and can be set up in less than two hours to make you one of the loudest signals on the band. It has worked here and can work for you too! Give it a try.

CALENDAR OF UPCOMING EVENTS

A "*" indicates an event involving direct Society of Midwest Contesters Participation All dates are "local time"

*Jan 24-26 Jan 24-26 Jan 25 - Feb 2	CQ 160 Meter Contest CW - logs due Feb 28 73 Magazine 15 and 20 meter SSB championships - logs due Feb 20 Novice Roundup
Jan 27	Last day to register with AC9C for SMC CW sprint team
*Feb 1	North American Sprint CW - logs due March 1
*Feb 2	Wheaton Hamfest and Society meeting at QTH of NA9D
Feb 3	Last day to register with AC9C for SMC Phone sprint team
*Feb 8	North American Sprint Phone - Logs due March 8
*Feb 14-16	ARRL DX Contest CW - logs due April 1
*Feb 21-23	CQWW 160 Meter Contest Phone - logs due March 31
*March 1-2	ARRL DX Contest Phone - logs due May 10
March 9	Wisconsin QSO Party
*March 29-30	CQ WPX Phone - logs due May 10
*May 23 - 25	CQ WPX CW - logs due July 10

THE FEBRUARY NCJ SPRINTS de AC9C

Address:

Our membership has grown to the point to where we should be able to field a full 10 man sprint team for each mode of the sprint this February. We were short a few stations for the September sprints, but did enter a team on cw and phone. A summary sheet and log sheet are included with this newsletter. Our sprint team name will be SOCIETY OF MIDWEST CONTESTERS - make sure to put this on your log so the society gets credit. But most important, make sure you send in your log!!! In order to do well we must have our entire team submit scores. Several logs were missing from the CW sprint results just published in the NCJ, including several of our top scores.

To register for a team, I must be informed by the dates below to submit our team roster before the contest for each mode. To register, do one of the following:

* Call AC9C at 312-260-9208 and register for one or both modes

* Register with AC9C or one of the officers on the Saturday morning net
* Send a QSL stating which mode(s) you will operate, well before the deadline.

Mike Taylor AC9C 1119 E. Illinois Wheaton IL 60187 pulled up by snowmobilers. No attempt is made to match or terminate the wires. The five position switch allows choosing any of four Beverage antennas or the transmit antenna for listening. The preamp is not absolutely necessary but does help boost the low levels on the Beverage antennas to the point that signals are closer in strength to the transmit antenna.

The system can be set up just about anywhere there is space. With the balloon transmit antenna and a KW, your biggest problem will be hearing everyone who calls you. If you have a remote antenna switch, you could use that instead of multiple coax runs for the beverages. Best of all, it's cheap and can be set up in less than two hours to make you one of the loudest signals on the band. It has worked here and can work for you too! Give it a try.

CALENDAR OF UPCOMING EVENTS

A "*" indicates an event involving direct Society of Midwest Contesters Participation All dates are "local time"

*Jan 24-26 Jan 24-26	CQ 160 Meter Contest CW - logs due Feb 28
Jan 25 - Feb 2	73 Magazine 15 and 20 meter SSB championships - logs due Feb 20 Novice Roundup
Jan 27	Last day to register with AC9C for SMC CW sprint team
*Feb 1	North American Sprint CW - logs due March 1
*Feb 2	Wheaton Hamfest and Society meeting at QTH of NA9D
Feb 3	Last day to register with AC9C for SMC Phone sprint team
*Feb 8	North American Sprint Phone - Logs due March 8
*Feb 14-16	ARRL DX Contest CW - logs due April 1
*Feb 21-23	CQWW 160 Meter Contest Phone - logs due March 31
*March 1-2	ARRL DX Contest Phone - logs due May 10
March 9	Wisconsin QSO Party
*March 29-30	CQ WPX Phone - logs due May 10
*May 23 - 25	CQ WPX CW - logs due July 10

THE FEBRUARY NCJ SPRINTS de AC9C

Our membership has grown to the point to where we should be able to field a full 10 man sprint team for each mode of the sprint this February. We were short a few stations for the September sprints, but did enter a team on cw and phone. A summary sheet and log sheet are included with this newsletter. Our sprint team name will be SOCIETY OF MIDWEST CONTESTERS - make sure to put this on your log so the society gets credit. But most important, make sure you send in your log!!! In order to do well we must have our entire team submit scores. Several logs were missing from the CW sprint results just published in the NCJ, including several of our top scores.

To register for a team, I must be informed by the dates below to submit our team roster before the contest for each mode. To register, do one of the following:

* Call AC9C at 312-260-9208 and register for one or both modes

* Register with AC9C or one of the officers on the Saturday morning net

* Send a QSL stating which mode(s) you will operate, well before the deadline. Address:

Mike Taylor AC9C 1119 E. Illinois Wheaton IL 60187 Contest dates and deadlines for registration:

CW Sprint - 0000 to 0359 Feb 2 UTC (Saturday Feb 1 local)
REGISTER FOR CW TEAM BY MONDAY, JANUARY 27
LOGS DUE MARCH 1

Phone Sprint - 0000 to 0359 Feb 9 UTC (Saturday Feb 8 local)
REGISTER FOR PHONE TEAM BY MONDAY, FEBRUARY 3
LOGS DUE MARCH 8

Remember, you may sign up for both the phone and cw team at the same time if you wish. If you have not done sprint before, get on and feel them out. They are intense contests - but then that's what makes them fun. Good luck!

NEW MEMBERS

The Society of Midwest Contesters welcomes the following new members:

Call	<u>Name</u>	Address	City State and Zip	Status
AH2U	Dave Patton	520 Walnut Dr	Streamwood IL 60103	LE
K9JU	Bob Loving	408 Audubon Rd	Streamwood IL 60103	LE
K9RR	Bill Graf	4120 N Victoria Dr	Hoffman Estates IL 60195	压
KA9SLM	Andy Walters	409 W Hillside Dr	Mundelein IL 60060	LE
KR9A	Bill Berg	17W050 Hawthorn	Bensenville IL 60106	LE
N9IA	Dave Patton	520 Walnut DR	Streamwood IL 60103	LE
N9EMC	Joe Herreweyers	1206 S Broadway	McHenry IL 60050	LE

Richard Sikora, ex W9GMV, is now NG9L.

SOCIETY OF MIDWEST CONTESTERS CONSTITUTION

The following is the official society constitution.

PREAMBLE: In the interest of promoting fellowship and activity in the art of amateur radio radiosporting in the midwest, the Society of Midwest Contesters is hereby founded and accept this constitution as our governing law. It shall be the purpose of this constitution to streamline club government and requirements to such a degree as to maximize participation of the club members and its officers in amateur radio contests.

MEMBERSHIP: All licensed amateurs shall be eligible for membership. Membership shall be by application, and acceptance of members outside of 175 miles of club center will be at the discretion of the club president.

OFFICERS: 1. Elected officers shall be: President, Illinois Chairman, Indiana Chariman, Wisconsin Chairman, Contest Activities Chairman, and Secretary/treasurer.

- 2. All terms of office shall be one year. Elections shall be held each spring, by mail secret ballot or a meeting if convenient. The offices of the state chairman shall be elected by membaers of their respective state, all other offices by the entire voting membership. In the case of a mail ballot the plurity vote shall be deemed the winner.
- 3. Nomination for office shall be by a member of the Society or by self nomination. Announcement for nominations shall be made at least one month before elections.

4. An officer may be removed from office by a 2/3 vote of membership, or by a 2/3 vote of a states membership in the case of state chairman.

DUTIES OF OFFICERS: 1. The president shall assume responsibility for general operation of the club, for delegating responsibility among officers and creation of additional posts if necessary, and at least one meeting per year. The president shall be responsible for maintaining ARRL club affiliation.

- 2. Each state chairman shall be responsible for operation of the society and general club spirit in his respective state, as well as one meeting per year each.
- 3. The secretary/treasurer shall assume responsibility for general recordkeeping of the membership and the treasury. He shall be responsible for publishing *The Black Hole* at least five times per year.
- 4. The contest activities chairman shall be responsible for club participation in amateur radio contests. He shall be responsible for formation of sprint teams, and other society-related contest activities.

MEETING: There shall be at least four in person meetings per year, in locations as to maximize participation by members in club competition in amateur radio contests. At least 1/3 membership must be present to conduct any official business requiring a vote.

DUES: Dues for the society shall be collected by the secretary/treasurer once per year from members. Dues shall be kept as small as possible while maintaining a balanced budget.

REVOCATION OF MEMBERSHIP: A member may be removed from the club roster by a unanimous vote of all elected club officers or 50 percent of the voting membership.

CHANGES: This constitution may be changed by a 2/3 vote of the total membership.

THE CONTEST ROUNDTABLE conducted by Gary Sutcliffe W9XT

I had expected a pretty big response to this month's question about station engineering as I has 5 or 6 requests for this topic. I guess with 4 major contests in 5 weeks you were all too busy because nobody bothered to reply (either that or nobody wants to give away their secrets!). Since nobody else is talking, I will give you a few of my thoughts on the subject.

Running a contest station is similar to running a factory assembly line. In both cases you want to produce something as effeciently as possible. The contester's product is QSO's. Both the factory manager and the station op wants to "make the rate" and hopefully to raise it. Neither wants an equipment failure to shut down the line, and if a failure occurs, it is important to get back up as quickly as possible.

One of the Industrial Engineer's tools for improving the efficiency of a worker and his job is a technique called Therblig analysis. A Therblig is a small, simple movement. Typical Therbligs include moving a hand over to the object to be worked on, grasping a tool, or one turn of the wrist. Each Therblig has a value, with the value increasing as the complexity or distance of the action increases. A simple task of picking up a wrench and tightening a bolt involves a large number of Therbligs. It is the Industrial Engineer's job to reduce the number of movements (Therbligs), or replace actions with those requiring less time.

Adding up the number of Therbligs in a Sweepstakes would be a formidable task. We can however spot some trends form a table of Therblig values (sometimes called MTM tables - motion time measurements.). In general we will reduce the number of Therbligs (and thus the time required) by doing the following:

* Keep the distances traveled by or hands or whatever as small as possible

* Use smooth curved motions as opposed to jerky motions

* Avoid repeated picking up and placing of tools (i.e. pencils)

* Use one hand for one task and the other for something else (use the feet also if possible)

* If a tool or something must be put down, put it down at the same place each time so it won't be necessary to search for it.

How does this apply to station layout? The first rule is to place the items used the most as close to each other as possible. For most contests this is the main tuning knob on the rig, and the dupe sheet (also the key in CW contests). They also should be placed so that it is a short, graceful movement between them. Less frequently used items such as the rotor and amplifier controls and antenna switches can be placed further away.

Try to use both hands as equally as possible. Some operators have learned to write or send code with both hands. I have the message select switches mounted on my keyer box. These switches are operated by my left hand. I can reach over with my left hand to send my exchange while continuing to write with my right hand. I also tune with my left hand.

Also include your feet if possible. I use a foot switch to operate the PTT. WB9EGZ has a special foot switch arrangement he uses to control his rotor, and I was involved in a field day operation that used foot switches to select one of four directional antennas.

Try to reduce the picking up and placing of objects. Learn to hold a pencil in your hand while sending CW. Infrequently used objects like erasers should always be placed in the same spot to eliminate time spent searching for them.

Placement of equipment that is not touched is also important. Your clock should be in your field of vision while you are writing in your log. Using a clock on the wall will slow you down and give you a sore neck to boot. My amplifier is off to my left, and therefore not in my normal field of vision. I keep a wattmeter near the center of things to monitor output power. How often do you hear about operator who for half an hour goes with no QSO's before discovering they had the wrong antenna connected? That is less likely to happen to me because I will notice a change in output power in my first call.

The suggestions given so far have had to do mostly with reducing wasted or tiring motions. The ergonomic considerations are important also. Lighting should be good and eliminate any shadows. Your chair should be at the correct height to avoid bending over to write. I keep several chairs (also headphones) nearby that I can switch from time to time. This helps to avoid getting a sore behind and a stiff back.

Your microphone should be on a boom or be of the headset type. If you use a hand microphone you will be wasting a hand that could be put to more constructive use. If it is on a boom, it should be mounted so that you will be right in front of it while writing, but it must not block the view of anything you must observe frequently.

I hope that you found these ideas interesting and perhaps may try some. A contest is rough on the equipment. By following some of these ideas hopefully it will be a bit less rough on you.

Since I didn't get any responses last time, I will rerun the question from the last issue: How do you have your station laid out? If I don't get any responses this time I will assume you are not interested in the type of column in *The Black Hole* and the space can be used for something else.

73, Gary W9XT

Questions for next month's column: How did you lay your station out? (Please include a simple drawing.) What would you like future columns to include?

Send comments to: Gary Sutcliffe W9XT Rte 1 Box 196 Neosho WI 53059

As Gary said earlier in his article, I think we were all busy contesting the last month or two. But in order for his column to succeed, input is needed from you. Try to submit comments for at least one topic a year and everyone will benefit - ed.

SCORE RUMORS AND HIGH CLAIMED SCORES

The scores listed below may be before or after dupes. Please forgive any errors that may accompany these "official rumors":

NCJ SPRINT CW:			NCJ SPRINT PI	HONE:			
K9ZO K9GL NA9D AC9C W9YT K2PLF K9KM NOBSH	274/? 227/35 185/37 183/34 183/33 142/27 141/33 65/21	op W9WI	K9ZO AC9C K9SD N0BSH NA9D KS9O	273/36 239/36 235/39 211/33 205/35 182/34			
SWEEPSTAKE	ESCW:						
K9KM K9RS AH2U NA9D AC9C W9XT K9ZO	924/74 E 906/74 E 904/73 E 913/72 E 884/73 E 847/72 E 800/74 E	3 24 3 24 3 24 3 24 3 24	K2PLF WB9JKI KG9Z WB9HRO W9LNQ N9AU N0BSH WA9YSD N9CWR	651/71 630/72 666/68 423/72 381/73 329/69 145/58 136/49 110/40	A A A A A A A A	23 24 23 24 15 15	
SWEEPSTAKE	ESPHONE:	*					
AC9C WB9HAD K9ZO AH2U NA9D WB9HRO W9XT	1476/74 B 1380/74 B 1291/74 B 1255/74 B 883/71 B 262/69 B 250/60 B	3 3 3 21 3 17 3 9	K2PLF KG9Z W9LNQ K1TMM K9RS WA9YSD N9CWR	1099/74 523/74 400/73 318/66 266/74 275/64 160/52	A A A A A A A	2424745	
CQWWPHONE:							
M/S: KM9L (160 47/9, 80 137/ 40 85/2; 20 332/3	/16 18/55 5/53 28/83 26/97 /15	KS9K AH2U W9XT NG9L WB9HRO N0BSH KR9R N9CIW WA9YSD	2069/140 579/256/2 352/73/16 279/46/12 239/42/92 225/22/78 56/22/46 22/14/18 18/9/17	107 52 20 2		M/S 40M

COWWCW:

M/S: K4VX (including AH2U) 160 34/14/31 80 202/26/70 40 458/35/94 20 949/33/100 15 215/27/85 10 9/7/8 Total 1867/142/388 2.72 Meg	M/S: K9ZO(+WB9JKI,KM9L,KG9N,K9MFI,ND9V) 160 35/10/19 80 120/21/45 40 210/32/69 20 510/33/80 15 125/24/71 10 5/4/5 Total 1005/124/288

WB9HRO W9XT NG9L	232/65/110 180/24/63 123/101/43	15M
WA9YSD	22/29/9	

ARRL 160 METER CONTEST:

N9MM K9RS WA1WU	1025/84 925/76 500/63	M/S + N9NC M/S + K9KM, NA9D
W9XT	200/52	
WA9YSD	192/41	

ARRL 10 METER CONTEST:

ARRL MIDNIGHT SPECIAL (January):

W9XT WA1WU	453/56 380/45	K9RS AC9C NA9D	231 206 105
N9EJL	220/38	1400	

OFFICIAL RESULTS: TOP 10, ILLINOIS QSO PARTY

Call	CW/Phone/Mult	Score
KS9O	83/234/60	24000
W9DY	112/34/48	12384
WB9EBE	127/0/46	11684
W9OA	96/15/54	11178
WD9GYX	109/8/43	9718
NF9W	62/38/46	7452
WB8RFB/9	51/37/44	6116
NA9D	48/13/37	4033
		4033 3906 3900

COMMENTS AND FEEDBACK:

This was my best SS phone ever using low power. 20 meters was unbelievable with short skip and back scatter the first night from 2300Z to 0500Z. 15 meters was also open most of sunday which I did not expect. Good thing it was because that is where I got my VE8. Contest was a great shakedown for my new TS940. The automatic antenna tuner made band hopping real easy. Thanks to all the guys who were really not seriously working the contest for their QSO's. 659 of my 1099 QSO's gave me a number under 100 - *K2PLF*, *SS phone*

Tremendous thrill working Michel, FT8XB, on 40 meters long path Sunday morning - KR9R, CQWWphone

Clean sweep. 800 QSO's. Poor runs on 80 - the slopers are good for DX but what good is it to be loud to K9DX/6 early in the afternoon when nobody else is on - K9ZO, SSCW

The use of several stations on 80M to help complete calls should be stopped (6 land/5's)!! - N9CIW, CQWW phone

I could not believe what I was working with this drainpipe. I worked just about everything I could hear, or about 100 contacts. But I only worked about 3 or 4 hours (my wife needs attention too.) Well, had fun just the same - N9CWR, ARRL 160 contest

Clean sweep, 1250 QSO's. Got pushed around on 20 and the score shows. Had good first few hours but made up for it later. Interrupted 100+ Q hours when guests stopped by - twice. Operated multop - one baby on each knee for awhile! - *K9ZO, SS phone*

Friday was the peak of the geminid meteor shower, and that gave most of the openings. Saturday was slow until 4:30 when it broke wide open until 11:30. sunday was a bit better for DX. I worked VR6JR (Pitcarin Island) for a new one!!! - W9XT, ARRL 10M contest

Managed to get in a few hours on the SS and did mention the club when turning in the summary sheet. Since retiring 2 years ago am just getting back into contesting and find am going to have to quit watching the Bears during contest period. - W9LNQ, SS CW

10 meters did not open. 15 was spotty - only a half dozen JA's. 20 was ok but no long runs. 40 was great - at 2 in the afternoon we were hearing strong Europeans but the Russians can't hear a bit! K9MFI managed to pull out UL7, UA9, UA0 and UZ8. 80 was very good but not much volume. KG9N managed to run 22 JA's saturday morning. 160 we didn't hear many of the caribbean DXpeditions on, but managed to work a few Europeans for the first time fron this QTH. The best was BY4AA on 20 - hearing HS0A on 40 - KL7 on 40 at 10 in the morning. K9MFI filmed 18 hours of the contest and will put together a show of the highlights. KM9L climbed the tower in the night to put new coax on the 20 and was able to draw arcs due to so much RF. ND9V got his feet wet in contesting - *K9ZO M/S, CQWW CW*