

P r o g r a m M e e t i n g

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Most likely discussion, preliminary report on the hamfest, and probably more on the lightning damage and the Red Cross. But no official word, but we do need a PRESIDENT and it appears a SECRETARY.....

Wednesday, August 28

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President N9ZND Jim Darling
Vice-Pres WB9SWD Curtis Sherwin
Secretary KB9RLT Jim Haynes
Treasurer WB9BRX Dave Dull
Director N9GKE Bruce Stewart
Hamfest WB9BRX David Dull
www.w9reg.org

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COMING EVENTS

- 25AUG02 SUN Vermilion County ARC Hamfest, @ their clubhouse,
Woodbury Hill Road, Danville, IL,
(KB9REE@YAHOO.COM)
- 28AUG02 WED 1930 Program Meeting,
- 6SEP02 FRI 1830 VEC Testing, @ EMA building on SR17, 2 mile north of
Logansport. Bring proper ID & proof of any elements
previously passed. For more info, contact N9EQT.
- 7SEP02 SAT 0800-1500 Owen County ARA & Bloomington ARC Hamfest at Owen
County Fairgrounds, free tailgating, forums, contests,
VE Sessions, Talk-in 146.985, \$3.00
(w9inl@yahoo.com; www.bloomingtonradio.org/hamfest)
- 8SEP02 SUN 0800-1500 Findlay (Ohio) RC Hamfest, Hancock County
Fairgrounds, Talk-in 147.15, \$5.00
- 10SEP02 TUE 1930 Business Meeting
- 13SEP02 FRI 1500-Dusk **New Date:** Peoria Superfest 2002
- 14SEP02 SAT 0700-Dusk Amateur Radio & Computer Show, Exposition Gardens
- 15SEP02 SUN 0700-1500 Fairgrounds, 1601 West Northmoor Road, Testing on
Sunday only, Talk-in 147.075+, \$7.00
- 15SEP02 SUN Hovercraft on the Wabash from Terre Haute to Lafayette
& stay overnight at the Fort
- 21SEP02 SAT Chicago FM Club Hamfest, Grayslake, Illinois A/ARRL
- 22SEP02 SUN (n9pa@aol.com)
- 25SEP02 WED 1930 Program Meeting,
- 05OCT02 SAT Feast of the Hunters' Moon
- 06OCT02 SUN Feast of the Hunters' Moon
- 06OCT02 SUN 0600 41st Hoosier Hills Hamfest, Lawrence County Fairgrounds
SW of Bedford, 2m Fox Hunt on grounds, on foot, prizes,
forums, APRS by K9APR, FCC License Testing at Noon with
registration at 11AM, FREE Bingo at Noon, Talk-in
146.73 (3 (3 (3 (PL 102.2), \$7.00
(www.hoosierhillshamfest.org)
- 08OCT02 TUE 1930 Business Meeting
- 23OCT02 WED 1930 Program Meeting,
- 1NOV02 FRI 1830 VEC Testing, @ EMA building on SR17, 2 mile north of
Logansport. Bring proper ID & proof of any elements
previously passed. For more info, contact N9EQT.
- 12NOV02 TUE 1930 Business Meeting
- 27NOV02 WED 1930 Program Meeting, due to Thanksgiving being the next
day, you may not see anyone else there

TARA Meeting August 13th, 2002

Vice President Curtis Sherwin called the meeting to order at 7:30 pm.

Secretary Jim read the minutes from last month. Vince Koser motioned to accept the minutes as read with John Welsh seconding. The motion passed

Treasurer Dave Dull gave us his report. Total income: \$0.17; Disbursements: \$624.01; Beginning Assets: \$8648.46; Ending Assets: \$8024.62. The CD matured and was put into the saving account pending the completion of antenna and station work.

Two thirds of the antenna committee gave us a preliminary report. They are assembling facts and figures for a final report. Vince presented a handout featuring Six-meter beams from Cushcraft, Diamond and M Squared, a 6-2-440 triband beam from Cushcraft and two tri-band verticals from Comet and Diamond. He mentions however, that recent experience may suggest avoiding the vertical antennas.

Steve Parker told us that recently QST magazine has been running articles on grounding and lightning protection. He presented a handout outlining what he has learned.

The four basic rules:

1. A common ground system
2. All lines entering the building must be protected.
3. Coax grounding kits on all feed lines.
4. The tower must be grounded properly to dissipate the energy from a lightning strike.

He went into a little more detail as to how to lessen the effects and lessen the probability of another lightening strike. He says the Red Cross will need to protect their property too. All the phone lines and AC lines will need to be checked. There is some good technical data on the Polyphaser web site, polyphaser.com. Steve says he will present us with prices for all this next month.

New Business

Curtis read a letter we received from the Red Cross. They are concerned with our attention toward the lightening events. The Red Cross spent \$3000 repairing the damage they suffered this spring. We were asked if we had any insurance to cover said damage.

Another unsuspecting soul was drawn to us for membership this month. Keith Hood, KC9CDQ provided proof that he could meet the financial obligation. Dave Dull motioned to accept Keith for membership. Steve VanFrank seconded and the motion passed. Bruce Stewart added that for only \$3000 more we could make Keith the new president. The offer was wisely declined.

Secretary Jim Haynes announced that due to a change in employment (the bum finally found a job) he would be working second shift by the next meeting. We will need someone to take the minutes for the next few months. It can't be too tough a job. If Jim could handle it anyone else should find it easy.

Old Business

The Hamfest is this (or, last) weekend August 18th. Setup will begin on Saturday from noon to 6pm. Dave Dull reports that preparations are proceeding positively. We will need tables. It seems this year we are worthy of only half the usual number of the handy horizontal helpers. We will be sharing the fairgrounds with the AGI computer show and of course our good friend Bob Rorhman and his circus. Major Sherwin et al. will be handling food for us again this year. Jeff Stewart has V.E. testing arranged at the Red Cross building providing it hasn't been obliterated in a blinding flash.

Jeff Stewart reminded us that the Wabash Valley Cycle Club Ride is coming up on August 24th. The ride will start at Southwestern Junior High School. Help with communication is needed. Jeff tells us that TEMA has been helping park cars at Purdue home football games. The brave folks are getting paid \$7.50 an hour. Jeff says this could be a good fundraiser for TARA. He suggests that we shouldn't use our radios in order to not raise a question of impropriety. The first home game is August 31st. Contact Jeff Stewart, or George Bittles, KB9YZT, for information.

Jeff also reminded us that the Feast of the Hunter's Moon is coming in October. This year the Historical Society hired someone to organize the event. As a result the usual notices were sent out late.

Tim Gardner reminded us about the hovercraft trip coming our way on September 15th. They will be staying at Fort Ouiatenon over night. The fifteenth is on Sunday this year. Tim and Dana have found seven or eight good spots, and several bad ones, along the river where various repeaters can be hit. They also found that it would be important to get an antenna up high at these spots. Tim figure we will need eight to ten people to cover our end of the river. Please let him know what equipment, time, and other capabilities you have if you would like to participate. We need to plan ahead a bit. Dana has GPS information, maps and directions to the lookout points.

The office of President is still open. Again, since there have been no volunteers we can have no vote. The year is eight months old now so four months as president shouldn't be too painful. If you want to try it, come to the next business meeting and we will vote you in.

The drawing this month was worth \$18. Unfortunately for Dan McDaniel, you must be present to win. Next month the jackpot grows to \$24.

The motion to adjourn was made by Bruce Stewart, seconded by Steve Parker. All agreed and the meeting was adjourned. I missed what time it was.

TIPPECANOE AMATEUR RADIO ASSOCIATION

Treasurer's Report

July 1, 2002 through July 31, 2002

Income Received:

Interest on Saving	7/31/02	\$.17
Total Income:		\$0.17

Disbursements:

Tippecanoe County Treasurer	7/17/02	\$600.00
Instant Copy	7/17/02	\$24.01
Total Disbursements:		\$624.01

Summary:


Beginning Value of CD	5/8/02	\$7572.10
Beginning Checking Account Balance	6/30/02	\$234.36
Beginning Saving Account Balance	6/30/02	\$816.00
Beginning Cash on Hand	6/30/02	\$26.00
Beginning Assets:		\$8648.46

Ending Value of CD (Mature: 8/8/02 @ 2.43%)	5/8/02	\$7572.10
Ending Checking Account Balance	7/31/02	\$336.35
Ending Saving Account Balance		\$116.17
Cash on hand		0
Ending Assets:		\$8024.62

- The club CD matured at \$7618.47 on 8/8/02 and was deposited into our saving account pending completion of antenna and station work.
- Outstanding debts will be paid at 8/13/02 business meeting or by mail:

J.B. Van Sickle, K9KRE	Tattler expenses	\$272.70
Jim Haynes, KB9RLT	Icom Transceiver repair	\$85.70
Mike Kantz, KB9VZD	Field Day supplies	\$22.41
Dave Dull, WB9BRX	Hamfest prizes	\$173.00
Dave Dull, WB9BRX	Hamfest stamped postcards	\$122.80

 (Thanks for your patience in allowing the CD to mature!)
- If there are additional field day or other outstanding debts, please inform the treasurer ASAP.


 David R. Dull WB9BRX
 Treasurer

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 Nothing pleased old Uriah Grump. One year when his apple crop was exceptionally fine, a neighbor was confident that this was one time old Grump wouldn't be complaining.
 "I'll bet you're happy about your apple crop," he said. "Just about every one is perfect."
 "Suppose they'll do," sighed Grump. "But where am I going to get rotten ones to feed the pigs?"

Lafayette Hamfest
a few early notes

August 13th, 2002

TARA Meeting Attendance

- 1. Jim Haynes KB9RLT
- 2. Major Sherwin N9ZFG
- 3. John Welsh KC9AFE
- 4. Keith Hood KC9CDQ *
- 5. Cheryl Runkle K9HER
- 6. Stephen Parker WR9A
- 7. Vincent Koser KC9BHH
- 8. R.Bruce Stewart N9GKE
- 9. Tom Kuespert K9KF
- 10. Jack Freeman KF9CT
- 11. Tim Gardner N9L F
- 12. Steve VanFrank W9TN
- 13. Jeff Stewart KF9UP
- 14. Curtis Sherwin WB9SWD
- 15. Tak Ryuzoji KC9AMT
- 16. Dana Hoggatt KB9SSS
- 17. Dave Dull WB9BRX

* new member

NEW MEMBER(S)

Keith Hood Tech KC9CDQ
 2566G Lexington Court
 Lafayette, Indiana 47905
 Home TX 765-447-4013
 Work TX 765-742-5008
 keith.hood@verizon.net

Mike Toler Tech N8WPO
 (no info yet)

CHANGES for current member(s)

Change E-mail?

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 If at first you don't succeed,
 then skydiving is NOT FOR YOU.
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 Good judgment comes from experi-
 ence, and a lot of that comes from
 bad judgment.

301 tickets sold
311 is the five-year average

270 tickets in the drum
286 is the five-year average

32 vendors, inside & outside
42 is the five-year average

What was different about the flea market is that before 11AM a few were pulling out, most were gone by shortly after noon, and by the time the final drawing took place there were none, a very few in attendance waiting for the drawing.

UNofficial prize winner list.....

W9GY	Jeff Stricker	Kokomo
K9LE	Leroy Eaton	Terre Haute
KB9ILQ	Will Holycross	Perrysville
N9ZIU	Richard Holycross	Perrysvl
K9YK	Steve Carey	Crawfordsvile
WD9JLN	Charles Bressler	Lafayette
KC9AMT	Takamasa Ryuzoji	West Laf
K9FN	David Bunte	West Lafayette
	Steve Ebacher	Richmond
	Paul Lefebvre	Greencastle
	A Krepererig	Delphi
WA9DDI	Dan Taylor	Lafayette

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 Blessed are the flexible for they shall not be bent out of shape.
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 Back yard chef to guests: "You have three choices. Well done, black, or Dante's Inferno."
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October Program Meeting
SET

Dana Hoggatt, KB9SSS, has a different idea, and as far as we know it will be the October program. It starts at 7:30pm, but prep will start at 6:00pm.

More details in the September &/or October issues.

Part Two

KB9SSS Goes "Solo" for Field Day
Dana Hoggatt, KB9SSS
June 28, 2002

Power conservation

I ran almost entirely off of battery power. My original power budget called for 281 amp-hours, however, when FD arrived I only had 200 amp-hours available. Faced with only 17-18 hours of operating time, I tried to conserve my power usage as much as possible to stretch out my operating time.

First, I operated my area lighting via dry cells and turned off all the meter lights I could. Ultimately, I have a project involving high intensity/efficiency LEDs that should provide area lighting in the long term.

Second, I closed the lid on my laptop whenever possible which reduces the laptop load by about 1-2 amps. I also tried to adjust the laptop's CPU speed and other settings to conserve more power, however, the laptop would only use those settings when it was solely on internal power. While on the inverter, the laptop still consumed full power.

Those steps should have extended my operating time out to about 20 hours, but I actually did much better than that.

I deduced that if the only way to get the laptop to operate in power conservation mode was to operate it on battery power, then that was what I would do. I'd operate for almost two hours on the internal battery and then operate for about 20 minutes on inverter power to recharge. I'm still working out the numbers on how much power I saved. I'm hoping to figure out how to change the laptop's full-power behavior as well (maybe N9LF has a few ideas).

Also, I over estimated the amount of power the transceiver would consume. I assumed a 20/2 amp ration of transmitting to receiving at a duty cycle of 3:1. That works out to an average load of 4 amps $((3*2 + 1*20)/4)$. That was based upon 13.6 VDC, but at my battery voltages, transmitting only draws about 17 amps. Likewise, S+P duty cycles are more like 10:1 than the value I assumed. That works out to about 3.3 amps $((10*2 + 1*17)/11)$. Furthermore, receive takes less power with headphones than with a speaker, but I have yet to measure that.

Finally, I've discovered that most good gel-cells are rated by their "minimum" available capacity; they often provide more, particularly in the earlier part of their lifespan.

In the long haul (and with these batteries, I do mean "haul") I'll either need to get a third battery for a total capacity of 300 Ah, or I need to generate supplemental power. I'm looking into both options.

Update

Another project for the long haul will have to be battery monitoring. I had no way in the field of gauging how much battery capacity I had left. Comparing the residual voltages on the batteries with their published power discharge curves show that I had used 50% and 60% of their capacities. At the temperature adjusted starting capacities, that comes out to a usage of 121

Ah. How can that be??? I had to use more power than that.

I have to go over everything very carefully again to see what's happening.

If you can hear them ...

"If you can hear them, you can work them.", at least, that's what I've always read. During FD, I could hear/distinguish/copy somewhere between 1000-2000 stations; but only 290 of them could hear me. My signal just wasn't strong enough to bust through the pile-ups.

.....CONTINUED ON PAGE 9

NEW DATE: September 13-14-15, 2002



Peoria Superfest

Amateur Radio & Computer Show



Featuring the ARRL Central Division
Convention Sept 14th only

**-Friday-
-Saturday-
-Sunday!**

**Exposition Gardens Fairgrounds
1601 W. Northmoor Rd,
off 6300 N. University, Peoria, IL**

**FREE
Parking**

**Reserved Outdoor Flea Market
Spaces \$5.00 (approx. 20'x20')
GOOD ALL WEEKEND!
Tailgate to the music of 'Night
Bandits' starting at 5PM Sat. (Free)**

**Double Stub Advance Tickets
JUST \$5.00! Under 12 free.
GOOD ALL WEEKEND!
(Single-stub Tickets \$7 at gate)**

HOURS

**FRIDAY: Flea Market Open 3pm to Dusk
SATURDAY: Flea Market 7am to Dusk
Indoor Commercial Exhibits: 8am-4:30pm
SUNDAY: Flea Market 7am to 3pm
Indoor Commercial Exhibits: 8am-3pm**

**GREAT Hourly Prizes Sat & Sun, starting 10am.
Unclaimed hourly prizes redrawn Sunday,
after Grand Prize drawing, at 3pm.
(Ticket holder need not be present for
Grand Prize drawing.)**

**FCC Testing:
SUNDAY ONLY
10am - 1pm**

**Forums: Saturday &
Sunday**

Talk-In on 147.075(-)

**Contact Us:
PEORIA SUPERFEST
PO Box 3508
Peoria, IL 61612-3508
InfoLine: 309-692-3378
Email: w9uvi@arri.net
<http://www.w9uvi.org>**

**INDOOR COMMERCIAL
EXHIBITOR INFORMATION:
Superfest Exhibits: P.O. Box 3508,
Peoria, IL 61612-3508**

ADVANCE TICKETS ORDER FORM

Orders for Advance Tickets @\$5.00 should contain an SASE for faster return, and must be received by Sept. 1, 2002.

Name: _____

Address: _____

City, State, ZIP: _____

QTY:	ITEM:	EACH:	EXTENDED:
___	Superfest Advance Tickets (\$7.00 at the gate)	\$5.00	\$ _____
___	Outdoor Flea Market Space (1 vehicle; approx. 20'x20')	\$5.00	\$ _____
			Total Enclosed \$ _____

Make checks payable to Peoria Superfest,
or order on the Internet at <http://www.w9uvi.org>

In fact, switching antennas had little effect upon reception. The receiver inside my IC-746 works too well; tantalizing me with signals I can't make contact with.

Switching to uncrowned bands (like 10m and 15m) verified that people could indeed hear me when there was no pile-up.

I tried a few times to turn this around and call CQ instead of doing S+P. My logic was, I seem to be able to hear everyone, but only a few people seem to be able to hear me. If I call CQ, then only people I can hear will answer; leading to more/faster contacts. It didn't work. Very few people could hear me, including new people who would come to my spot in the band and start calling CQ on top of me. I could never hold a frequency for long.

At the moment, I see only a few options for increasing my "punch" to get myself heard.

Increase power. I was transmitting at only about 50-60 watts. Increasing my supply voltage (and power consumption) would get me up to 100-110 watts. That 3db gain could make a big difference in a pile-up. In fact, maybe I could run my rig QRP like N9GKE keeps joking about ... QRP into his linear. Run an external amplifier at 149 watts to get my signal heard. Naw, the power requirements would be brutal.

Better feedline. I used a 100 ft section of RG-8/U for my feed. Pre-tuner SWR was typically below 2:1. Maybe I could do better, but not by a huge margin.

Better antenna. 3-6 db of gain from a beam antenna would help, but that vastly complicates setup and might not be practical. Of course, getting my antenna up higher and/or flatter would also have helped.

Preprocess my transmitted signal via frequency equalization and compression. I already do some of this, to great benefit. I'm not sure how much more can be done.

Actually, I do have another thought. I noticed that anytime a "YL" was detected, they immediately went to the top of the pile. I probably heard "Only the YL..." more than a hundred times while sitting in a pileup. If I used one of those voice changers to make myself sound like . . .

Antenna Performance

Besides the problem of not being heard through the pile ups, I had some matching problems with my DX-CC antenna.

It would not tune up on 80m, even though that's one of its design bands. I did not trim the wires for resonance when I hoisted the antenna, so I knew that the resonance would be a bit low. I assumed I could make up the difference with one of my antenna tuners. I was wrong.

I was also wrong about maybe tuning the antenna up on 160m, but that isn't really very surprising.

All the other bands (10m, 15m, 20m, 40m) worked just fine with SWR below 2:1 across their bands.

This wasn't just a problem with the rig's internal tuner, my external tuner wouldn't match it either. Both the rig and the tuner meter showed infinite SWR when using my external tuner. Like I mentioned above, I know the wires, as shipped, are a little long to allow for trimming, but this was WAY out of whack.

Curious, in that W9REG apparently had matching problems with their DX-CC antennas as well. (one with 15m and the other with 20m).

Fortunately, my little 12 ft vertical did tune up just fine and filled in adequately.

Comparing the 12 ft Outbacker to the 82ft DX-CC at 40ft was educational. 99% of the stations I could hear on the dipole were copyable on the short vertical, usually with no discernable drop in volume or quality. I expected a bigger difference, due to polarization if nothing else.

.....part three to come

