MIDWEST VHF-UHF SOCIETY

Vol. 18 No. 9 **www.mvus.org** **Nov/Dec 2004**

Club Memorial Call W8KSE

10 GHZ Beacon: 10368.750 KA8EDE EM89ap Xenia, OH, 50 mW, 16 slot wave guide at 89feet

MeetingS at the old country Buffet !

Our **November Meeting** is on **Fri. the 26th** at 7:30 PM (day after Thanksgiving)

The **X-mas Meeting** is on **Thur. 30th** of Dec

Both meetings are at the Old Country Buffet near SR 725 and Yankee Rd. in Centerville

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ARRL Frequency Measuring Test scheduled for Wednesday evening, **November 17.**
Location; N8UR QTH in Oakwood

More info: see "De N8ZM" on next page

Happy Thanksgiving & Merry Christmas and a Happy New Year

From the Editors Steve, K8UD & Gerd, WB8IFM

De N8ZM.

We are putting out Anom Prop a little early this month, as Gerd is heading off on another of his world tours. I suspect he will be promoting and operating amateur radio as much as he can during his travels, as well as picking up cultural tidbits to share with us when he returns. Have a wonderful and safe journey, Gerd.

As is typical for this time of year, this issue of the newsletter will be for both November and December. So with that in mind, here are some important bits of info for the coming months. At the last meeting, we agreed that the November meeting will be held the day after Thanksgiving, the 26th by my calculation. The meeting place will be the Old Country Buffet in Centerville (actually, Washington Township, near Lyons Road).

The date for the Holiday party was set for, December 30th, which is a Thursday, the day before New Years Eve. Good night to get some practice for the real thing. This will also be at the Old Country Buffet. Although we will probably chat some about MVUS stuff, this is really intended to be a family get together, so please bring the better half and the kids or grandkids if you'd like.

We did have a small SNAFU at the last meeting, in that I caused some confusion with the restaurant about names. In short, they hadn't matched up my name as being with the "radio club", as they call it, so our room wasn't ready for us when we arrived. I have fixed that, I believe, so we should be OK for at least a couple of months. The Olde Country folks were quite gracious about it all, and even gave us some free coupons for our next visit, which were raffled off. Anyway, no great harm was done, although I must apologize to Ed Garner, as he suffered the most for my part in the confusion, making two trips to the place that night. It probably helped some small amount that I had a rapport built up with the lady who works the front counter, as she is a Corvette owner like me.

As I write this, I have just returned from a 7-day trip to California for business, and am way behind on my personal e-mails account, and keeping up with those of you who are the active locals. So there may be developments that I am not aware of yet, but I will forge on anyway.

The last I heard, John Ackermann was planning to host a practice session for the FMT at his place in Oakwood on Sunday the 14th. John suggested a starting time of 4:00 PM, and would appreciate an RSVP via jra@febo.com. Even if you just want to watch, please let him know if you plan to attend on either date. There is limited bench space available in John's basement, so we'll need to know if an extra table is needed. Much like last year, it is a chance to set up your FMT gear and get familiar with its operation BEFORE the big night, which is **November 17th** at 9:45 PM. See the November QST or call me for the details. I covered much of this last month, so this is just a reminder. I may have to try to do it mobile again, if my travel schedule doesn't change for that day. I'll need more antenna, and a higher power inverter, I think, to pull it off. The last time, the car just made too much QRM, and I couldn't run the inverter without the engine running. Good Luck!

The 1296 beacon may be very close to going on the air, as the antenna work on the tower should be taking advantage of this terrific weather we have been having. Mike, WB8GXB, tells me that there has been a preliminary checkout of coaxes and antenna mounts, and that the we should have a 7/8" feedline for the beacon. He is working out connector details, and Mike KA8ABR, is finishing up the antenna. Making the climb date could be tight!!

73, Tom, N8ZM.

This and That 11-04

- **Minimum.** Something strange happened on the sun last week: all the sunspots vanished. This is a sign, say forecasters, that the solar minimum is coming sooner than expected. [NASA Science News for October 18, 2004]

- **Magnetism Confusion**. Due to an early lack of standardization in the science of magnetism, we have been plagued with no less than three complete systems of measurement for magnetic quantities. [Website explaining magnetic units of measurement]

- **Teaching Kids the Value of Money.** "In a consumer society, as ATMs bloom on every corner and wallets bulge wit credit cards, parents often find it hard to teach responsible money management." [Marilyn Gardner, CSM]

- **Anglo-Saxon Norman Heritage**. The Norman Conquest brought many new words derived from French into the English language. Those were often noble variations of the Anglo Saxon words. Examples; house---mansion, cow---beef, ****----excrement, dirt---soil.[Garrison Keiler]

- **Just Try It**. " You must do the thing you think you cannot do." [Eleanor Roosevelt]

- **Voice chips.** With the deployment of the third generation of wireless infrastructure and media gateways, voice processors are suddenly a hot commodity. Watch for companies, like Centillium, with more specialized parts to gain ground on traditional DSP vendors like TI. [Linley Qwennap]

- **Contest**. The Greek word for contest is "agon" from which our word agony is derived. [Gregory M. Lamb, CSM]

- **Hard Landing.** : "A giant parachute with a conical-shaped black 'top' was seen falling from the sky and landed through the roof of a villager's house in the Tianbeizi vegetable market area. The roof was completely destroyed, however, no one was injured or died. Experts who inspected the return capsule found it was not damaged at all. The landing technology of our country's satellites is very mature and the precision of the landing point is among the best in the world. Members of the public need not worry about this." [Chinese "Youth Daily" 10-18-04]]

- **Education, Education …** tell all parents the truth: throw out your kid's idiotic video game, shut off the TV, and get Johnny and Suzy to work, because there is a storm coming their way. [Thomas Friedman]

- **Kilowatt-minutes**. Ultra capacitors can now supply enough immediate power to permit a Diesel generator to get started to take over in a power outage. These "back-up" modules are rated in kW minutes. A 1.6 kWmin unit weighs 67 pounds, and contains 22 caps at 1,800 F ea. Cost is $7,500. This unit can supply 1 kW for 1.6 minutes. The capacitors are rated at 2 V, so a voltage converter in most cases needs to be employed. Charging the capacitor takes up to 15 minutes depending on the set up. [EE-times]

- **Hot Water**. 40 % of a home's heating oil is used for hot water, "People have multiple dishwashers, washing machines, Jacuzzis, his-and-her showers. We use a ton of hot water. [John Huber]

- **Super TV.** "I recently toured a $1.2 million home which had a $28,000 high-definition television that uses as much electricity as the furnace does." [Neal Elliott]

Magazines of US and European Sources of Interest to Microwave Hams.

By John Jaminet, W3HMS@aol.com

There are many magazines of interest to microwavers. I have subscriptions to the following, which are of interest to microwavers and ATVers. The opinions of content and importance to microwavers are entirely my own and yours may differ.

I am always on the lookout for the best magazines in the world on microwaving published in English or French, so please share your tips with me. I should add that nothing suggests that this is THE list as there may well be some great magazines unknown to me. The following are listed in alphabetical order for the convenience of readers; costs may vary.

B5+…published in French by ANTA, the French national ATV Association, 4 times per year. There are frequent microwave articles using DRO and Gunnplexor technology plus measuring equipment and antennas/feeds. Available from ANTA at 1, rue de Boulogne-37100, Tours, France. Cost is about 15 Euros per year.

Cheesebits… published by the Mt Airy VHF Club, the Packrats, of the Philadelphia area. There are twelve editions per year at a cost of $16 per year. The contact is Bob Fischer, W2SJ or their Web site. The editor is Rick, K1DS. It is devoted to 50 Mhz and above…good tech articles are common…available by EMAIL and/or paper.

CQ-TV…published 4 times per year by the BATC, the British ATV association. The cost is about 15 Pounds Sterling per year and it is available from the BATC Membership Secretary Dave Lawton at memsec@batc.org.uk. There are frequent articles on microwave ATV and related equipment and circuits.

DUBUS …published in Germany in English/German 4 times per year. Cost is about $30.00 per year. It is available in the US from Kyle Britain, KB5UBE. It is devoted to SHF. There are many worthwhile articles and it is the main source of DB6NT equipment articles. Articles archived are available at http://www.marsport.demon.co.uk/archive.htm

The North Texas Microwave Society, NTMS, publishes Feedpoint quarterly at a cost of $12 per year available from Wes Atchinson, WA5TKU at EMAIL wes.atchinson@afc.com. It covers microwaves exclusively and there are many fine technical articles published under the editorship of Kent Britain, WA5VJB

HYPER…published in French by a group of French microwavers in a voluntary cooperative. The editor is Alain, F5LWX. There are 12 editions per year. Subscriptions are available by mail. If interested, contact me and, as the HYPER Permanent American Correspondent, I will pass your message to the current Subscription Coordinator. The cost is about $33 per year payable in Euros and mailed via surface mail. This is a really first class magazine with lots of fine circuits and information from very active microwavers.

NEWSLETTER…..……published by the New England Weak Signal Group quarterly at a cost of $10.00 per year. Subscriptions are available from Fred Stefanik, N1DPM. NEWS is a small pub with usually one excellent technical article per edition, often by W1GHZ.

QEX…published in 4 editions per year by ARRL. Cost is about $20 per year. Some microwave articles….often excellent notes/ideas/circuits from Zack Lau, W1VT, inter alia.

Scatterpoint formerly MICROWAVE NEWS

published in England by the UK Microwave Group and edited by Peter Day, G3PHO. Ten issues per year and the cost is about $25/year, payable in UK Pounds Sterling. Details are available at the Group's Web site www.microwavers.org. It is excellent for MW news in UK, US, and Europe. More and more tech articles/ circuits are appearing.

Swiss ATV News …a French language magazine. . There are four editions per year published by the "Swiss ATV" society, Casse postale 301, Ecublens, CH-1024, Switzerland. The cost is 25 CHF or US$20.00 per year. There are excellent technical articles on ATV and often on microwave equipment.

VHF Communications…published in England from translations of an excellent German magazine. , UKW-Berichte. The cost is 20 Pounds Sterling per year from KM Publications, EMAIL andy@vhfcomm.co.uk or in the USA from Gene Harlan of ATVQ at 1-800-557-9469.
It has had excellent articles in the past but fewer and fewer microwave articles are now appearing.

Rover Operations with Safety and Peace of Mind

By John Jaminet, W3HMS

I had an accident coming home from the VHF/UHF/MW contest on 15 Sep 2003 and that rover van is no more. An amazing amount of damage…say 100%…can be caused when a dastardly telephone pole jumps out in the road and hits your van!!! We will not dwell on that but learn from it. Here are some tips.

1. Equipment and "things" not tied down will fly around the van. The big items like batteries could become airborne and crash into your head!! Solution: Rigidly mount batteries in a steel or heavy wood cage or behind the seat…or both. Mount your table and all equipments on it rigidly. Equipments mounts should be both rigid and yet easy for equipment removal…well, maybe not that easy but doable.

2. Drivers need sleep…. NEVER forget it!! . The best approach is to rover with a partner to share the driving and to keep each other awake. If you go alone, plan to take the next day off, relax in a motel, and have a nice breakfast then drive home. If you must work the next day, try to avoid negotiating the super contract, or briefing Mr. Big, or doing something at the level of a heart transplant!

3. Practice electrical safety or get a gross of fire extinguishers! Never forget the power of even 12 VDC to burn devices or start fires. Mark the positive terminals of each battery with bold RED by paint or tape and the negative terminal with black paint or tape. It seems simple and yes, I know, YOU would never do that. But, hams do it and spend big bucks for repair. Tape and paint are cheap…fires and rig repairs are not!! Oh, yes, practice the old trick of removing the negative, THEN the positive…. and replace them: positive, THEN negative. Otherwise be ready to answer the question: How much current does a crescent wrench shorted to the frame carry?

4. Be "squared away" as we say in the Navy. Yes, have a place for everything and have everything in its place. Yes, you might even begin to like this arrangement as you can then easily locate the myriad of things rover vans carry.

Summary: Think sleep, think electrical safety, and think proper stowage.

Have fun roving!

Next EME Conference 2006 is planned in Wuerzburg/Germany

Conference History (can anybody fill in the blanks?)

1st	? ? ?	? ? ?	1982
2nd	? ? ?	? ? ?	1984
3rd	Thorn	Netherlands	1988
4th	Trenton NJ	USA	1990
5th	Thorn	Netherlands	1992
6th	Gotenburg	Sweden	1994
7th	Bowie MD	USA	1996
8th	Paris	France	1998
9th	Rio de Janeiro	Brasil	2000
10th	Prague	Czech Rep.	2002
11th	Trenton NJ	USA	2004
12th	**Wuerzburg**	**Germany**	**2006**

An American Perspective on European Microwave Operations

John Jaminet,W3HMS

The obvious question is why not just asking stations in Europe? The answer is that sometimes the obvious escapes the natives of a region…just ask Europeans about hams in your region and you will often get some very new and surprising insights about your region.

I have been a subscriber to several European magazines for the last several years and I am in almost daily EMAIL exchange with hams in Europe, principally France, Belgium, Switzerland and England. My insights come from magazines like DUBUS, Repeater of Holland (now defunct), CQ-TV of the UK, Microwave News of England by G3PHO, Swiss ATV News, ANTA (ATV) of France, Belgian ATV News, and HYPER (Microwaves) of France.

As to personal contacts, I have attended the meetings of the Swiss and French ATV organizations and attended the French VHF/UHF/Microwave hamfests at Seigy in 1999 and 2002.

It is from this perspective that I have drawn the following personal conclusions though not necessarily in any specific order.

The general level of technical competence seems greater for most of the ham population though microwavers on each side of the ocean seem to be very creative and very competent.

Some European hams build their gear from scratch as do some Americans but I believe the scratch builders are much more common in Europe. The European microwave hams have taller mountains than we do. This of course varies by country as it does by US state. As I read the French Activity Days reports, I note that their operating heights in meters are often equal to our heights are in feet. Said another way, their mountains are 3 times higher than ours, HI!

European hams are far more apt to read English than American hams will read another language. This is most surely because of the preponderance of microwave information being published in English. It is thus a pay-off for their efforts in learning English. The same chaps might well tell you that they do not speak or write in English as those are other skills. I know several hams who read English but speak with me only in French.

The European hams seem to be more advanced in some areas. Their ATV operations have featured dual microwave bands and FM for years whereas ours have tended to be 70 cm AM in-band repeaters. Euro stations seem to be more progressive in searching out and using new solid state devices on the higher bands of 5.7 Ghz and up. I see far more circuit designs in European than in US publications.

The concept of activity days and periodic contests seems to be more pronounced in EU than in the US. I believe, however, that the notion of an activity day on the East coast at the first Saturday morning of each month is making US hams now more active than before. Euro hams seem to use larger dishes than do US hams for the same band. I was surprised to learn that the 47Ghz record holders in France used 1meter dishes on a windy, snowy, mountain! Perhaps they are more rugged, more physical or just crazier than us, HI!

These are my views. I can't help but observe that others on each side of the Atlantic may disagree with me…bravo democracy! 73, John, W3HMS@aol.com

Ed's Super Gun (10-25-04)

By Gerd, WB8IFM

We all like our wire antennas to be high above ground. This, of course requires some "supporting" structures. What better tall and almost totally "unregulated" ones are there than trees? The trouble is, climbing trees is not really a good idea, although some trees are real good "climbing" trees. I have a pine tree that is easily climbed and I use it to support one leg of a 40 m inverted V. Every few years I could move the wire higher and it is now almost 40 feet above ground. The center is higher still but not by much.

The preferred method, however, is to get a rope over the tree and pull up one side of a wire antenna that way. With a small tree you could try to tie a small weight to the rope and then hurl it over the tree. I have done this for temporary antennas out in the field. What you wind up with is a little better than the standard vertical mobile antenna mounted on your car. Traditional other methods involve a slingshot or a bow and arrow. Ed, WR8A, has tried those methods but wasn't happy with them. Instead, he built himself a simple but very effective air gun, which, according to his comments, is easily capable of shooting a thin line over a 100-foot tree with at least another 20 feet to spare. That would cover practically all the trees in our area.

Maurice, W8SEM, recently moved to a new QTH and needed some wire antennas raised. Very fortunate for him, his backyard has a line of 50 foot+ trees that offered the solution for the required supports.
So Ed comes to the rescue with his air cannon. This device consists of a small tank of compressed air (about 1 to 2 gallons) connected to a 10foot copper tube ¾" in diameter. A valve allows him to fill the tank with a portable electric pump to a maximum of approximately 35 pounds (per square inch). As projectile, he uses a 2-foot stick, which has its tip weighted with a steel bolt and is dragging a thin line behind.

After selecting a suitable tree, Ed gets into position. First enough of the thin line is laid out meandering on the ground to make it over the top of the tree, then Ed aims at a very steep angle. On my question, why so steep, he informs me, there is a house fairly close behind the dense bushes that grow under the tree. You see, it is good to know ballistics, it is somewhat like firing a mortar, at the angle it goes up it comes down also. Additionally Ed had reduced the pressure so the altitude was reduced also. Now Ed briefly opened a valve and the compressed air propelled the stick out with the attached rope. There was no big bang just a swish of rushing air. Unfortunately the stick became entangled in a branch and while attempting to loosen it Ed broke the rope and we were about to give up on that stick, which would hang in the tree for some time. But wait: I saw an object flying off to one side and down, so we started looking in the bushes and on the ground. And just about when we were ready to give up, Ed found it on the neighbor's lawn a good 30 feet away from the tree.

The next attempt to shoot the twine across the top of the tree was perfect. Ed now removed the stick and tied a stronger rope to the thin one, he made a loop where later the end of the antenna wire (or the insulator) could be fastened. Then he proceeded to pull the stronger rope all the way around the tree until he had a complete loop of the strong final rope. Now it was time to connect the antenna wire and pull it up along the rope loop. It helped to guide the antenna wire between the lower branches using a long stick. The 10foot "gun barrel" came in handy for this (hi). We had a system where a loop was going around the top of the tree with the antenna connected at one point. So in the future it would be easy to lower, raise, shorten, lengthen or even substitute the wire antennas from the ground.

The whole procedure was repeated with a second tree and again it went like clockwork. Some minor trimming of lower branches concluded the job