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www.mvus.org

June / July 2004

Club Memorial Call W8KSE

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

Another Meeting at the old contry Buffet !

Our **June Meeting** is on Fri.25th at 7:30 PM at the Old Country Buffet in Centerville, on how to find it read **De N8ZM** on the next page.

Discussion: New meeting place, upcoming picnic and other club projects

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Upcoming

Central States Conference on July 22-25, 2004 at Mississauga, Ontario (near Toronto) Sri, we had the wrong dates in the April newsletter

at the Delta Meadowvale Resort and Conference Centre : www.deltameadowvale.com

Rooms are Cdn \$115/night (currently about \$87 US), a rate which can be applied three days before and after the conference dates of July 22-23-24, 2004

You can reach the Delta Meadowvale directly at 1-800-422-8238 Mon - Fri, 8 a.m. to 6 p.m.

Our family program is not yet finalized but we are planning an excursion to the Niagara Falls on Friday and to the Toronto core on Saturday .

More information on the 2004 CSVHFS conference, including a registration form, will be at: www.csvhfs.org and at www.ovhfa.com

de N8ZM

Another epistle from Tom written late at night in a hotel room..

Lots to cover this month, so here goes...

Hamvention went very well for MVUS, and for DARA. Many thanks to all of you who helped out in the MVUS booth while Gerd and Steve and I were tied up with our "other" jobs at the big show. I especially want to thank John Human for his efforts on many fronts to make things come together, including the 10 GHz beacon at the HARA site. Thanks also to Brad Totten, K4EFD, for his part in making the beacon a reality as well. Several people made the effort to copy it while in the area, and posted signal reports on the microwave reflector. Brad tells me that he would like to do it again next year, and maybe add another band as well.

The schedule for the antenna installation at the 1296 beacon site has been delayed until fall, probably, so that takes some of the heat off of Mike Murphy and Rod Owen to get an antenna designed and built. It also gives us some time to work on the rest of the hardware. Maybe we can have a serious design discussion at the picnic, which I will cover shortly. A number of the details about the mounting and feedline still need to be resolved with the tower engineer, so we may need to have a face-to-face meeting with him to make sure we all are on the same page.

We sold off a bit more stuff in the Flea Market, to the tune of \$124 worth, which is a nice addition to the treasury. It mainly consisted of some of the old 800 MHz HT's that we missed when we sold the first batch. Now if we could just find a home for the 800 MHz mobile radios, Yeagley and I could get back on the good side of our respective better-halves with respect to occupied storage space. Well, maybe Daun will, but I still have a long way to go to do that!

The annual MVUS Picnic will again be at the home of Daun and Karen Yeagley, this time on Saturday, August 28th, starting late morning for the usual tent and equipment setup, with burnt offerings served at around 2 PM. Usual rules: MVUS provides the meat, drinks, and such, while you bring a salad or dessert or side dish, as well as the wife and kids as appropriate. Burgers flambé will once again be prepared by MVUS President, Fearless Flambeau himself .

Which brings to mind that we will also hold our annual mock election of MVUS officers at the picnic, so please think of poor Gerd, Steve, and Tom, and offer to take one of the officer positions for the coming year. Think of poor MVUS if we don't make a change in our leadership soon!

And finally, I want to remind you that the meeting this month (June 25th) will again be at the Olde Country Buffet on Washington Village Drive, near 725 and Yankee Street. The time is 7:30, but you can arrive as early as 7:00 and get started. See YOU there!

de N8ZM.

This and That 6-04

- **Too Many Choices.** With hundreds of deals and vacations beckoning, picking a trip is like choosing one apple in an orchard – you're never sure you got the best one. [Ellen Creager]
- **The 1077 New York Blackout** Con Edison officials said it was lightning. They hoped it was lightning. Lightning is easy to explain, and there is no one, on earth, to blame. [James Goodman]
- **Shopping** ... is well beyond being a matter of acquiring goods; it's a game. Let's face it: None of us needs anything. [Dale Dauten]
- **Super Sizing.** Personal discipline – declining to super-size, cooking actual food instead of microwaving lord knows what, deciding that one helping is better than two and so on – is essential if we are to stop becoming a people who find it easier to roll downhill than to walk. [Tom Teepen]
- **Clarity.** Cellular phones beat conventional analog phones in speech quality by a mile. This is because they are using the latest in speech processing and compression technique. At that, the ordinary digitized and compressed phone signal (in Europe) requires only 13 kbs. This can be reduced further without loss of readability to 4 kbs. Here, however, you lose some recognition of the speaker. [Markus, DF800]
- **Read, Read, Read.** Good advice to a 12 year old: "...Read for information, read for pleasure. Our libraries are filled with knowledge and joy, and it's all there – free for the taking. A person who does not read is no better off than the person who cannot read." [Jeanne Phillips/ Dear Abby]
- **Woodpecker.** A customer is looking for a parakeet. The salesman regrets that at the time they have none, but offered a woodpecker. The customer says "but this bird cannot talk" "Yes, says the salesman, but he can do 'Morse code'".
- **Suggestion Box.** "...You put up a Suggestion Box, and it is like telling people to leave their little newborns at the train station. So you end up with the babies no one really cares about. So the Suggestion Box is really the Ugly Baby Drop Box." [Dale Dauten]
- **Customer Service.** "Companies who pride themselves on customer service use automated systems in place of human respondents as a cost cutting measure, but they do nothing for their customers except increase frustration." [Jim Butterbaugh]
- **New Technology.** Cellular phones almost totally have replaced pagers; the popularity of e-mail meant we didn't often need a fax machine, and computers turned typewriters into quaint novelties. [Bill Husted]
- **Master Gardeners** ...may work at the Park at their convenience and should sign in and note what they did. Enough talk! Let's go play in the dirt. [Nancy, KC8GYW]
- **Classy Restaurant** ...I was dubious about the outing. I was in the habit of eating food, not cuisine... [Laura Kao]
- **Who are we?** 'The actual transition between the apes and humans, that's us.' [On a bronze plaque in the primate building of the Frankfurt zoo]
- **Freeway Driving**...is as if you were playing mouse-in-an-elephant-herd with a gazillion semis and another gazillion lane-hopping, other-driver-off cutting SUVs that are almost as big... [Leigh Allan]

The MVUS V/UHF Net.

Rod Owen, WG9F, Milan, Indiana. EM79ld

I was at the regular monthly MVUS meeting recently (at Old Country Buffet in Centerville) on 30th April. This restaurant turned out to be quite a nice location for MVUS as we had a room to ourselves. In the middle of our meeting a ham walked in, not known to any of us. He had heard someone in the chow line talking about a ham club meeting in the room and just stopped by to see what was happening. He asked quite a few questions about the society, and at one point he asked if we had a regular net. I was quite disappointed to hear the chorus of “no” from the general membership.

For about the past four and a half years there has been a net on Sunday morning, Eastern Time, founded by four MVUS members (W8JAQ, KA8ABR, N8EHA and myself) and invitations are freely handed out to anyone to join in. We have had several other MVUS members check in from time to time, and many non-members. Since the net was started, it has not missed a single week. Obviously there are weeks when one or another of us is absent due to vacations, family commitments etc, but the net always meets. This net operates in a rag-chew / round-table format, and is totally unstructured. The general topic is radio and operating, but the discussion can wander far and wide from this central theme. The net actually commences on an HF band (10 meters) for convenience (more later on this), but we always maintain a listening watch on 144.280 Mc, and we frequently QSY to that band after going for a while on 10 meters. We will QSY if someone calls us on 144.280 who does not have 10 meter capability. We frequently jump around the V/UHF bands as net participants wish to test antennas, pre-amps, power amps, new radios etc., while always continuing to listen on 10 meters and 2 meters.

At this point in my ramble I can practically hear folks shouting “OK Rod, just tell us the time and frequency !”. We meet on 28.960 Mc at 14:30 GMT. For the GMT-challenged (and you’d be surprised how many hams appear to be), that is 10:30 am in the summer and 9:30 am in the winter, Eastern time.

Last Sunday (9th May) the net started on 10 meters as usual, but went to 144.280 Mc after a while, as I was trying out a recently purchased used radio. We then QSYed to 432 Mc, then 222 Mc, then finally 50 Mc during the net for some antenna comparisons, different people were trying out different antennas on those other bands. All of this time we were able to maintain our listening watch on 28.960 Mc and 144.280 Mc for anyone who might care to join part way through. You will often hear someone giving someone else a steady carrier during the net while one of them is doing an antenna comparison, or swinging his antenna round to do a pattern check, etc and simultaneously talking back on another band. Often, any two participants may be having a full duplex conversation on two bands during the net. I frequently have three or four radios running simultaneously for this net, and so do several other net participants.

You may wonder why we start out on 10 Meters. As you jump higher in frequency from band to band, antennas tend to get sharper and pointing becomes more critical. We often have eight or more participants in our net, scattered over three or more states. On lower frequencies this is quite manageable, everyone hears everyone else most of the time, without too much antenna twisting. By the time we get up to 432 Mc it is almost impossible for everyone to hear everyone else all the time because of the geographic dispersal of QTHs, and there is a lot of antenna twisting going on. For example, my antenna on 432 Mc is a “boomer” many wavelengths long. There are 29 elements on a 23 ft boom, and the 3dB beamwidth is 20°. I only have to swing 10° off someone, and he is 3dB down, and strength falls off very rapidly after that. This is quite typical on UHF. On 10 meters however, most guys only run a couple of elements, some only use a simple dipole. Also, 10 meters gives us very good groundwave out to 150 miles or more, but more than that, there is almost always some scatter propagation on 10 meters, even when the band is otherwise “dead” as far as a dx’er would be concerned. We have a regular backscatter check-in from S. Carolina. Also, 10 meters makes a great “talkback” band when trying experiments on V/UHF.

We have also had a lot of fun on the 10 meter band for the three years around the sunspot peak. We initially chose the frequency of 28.960 Mc as it is way up in the band where hardly anyone normally operates SSB. (There is some AM on 29.000 Mc and above, and above the AM there is some FM operation). Those of you who have worked 10 meters will know that the SSB activity is mostly between 28.300 and 28.500 Mc. We thought 28.960 Mc would be quiet. Wrong ! It is amazing how many dx stations found us up there, and came back to talk to us week after week. The regular dx check-ins included Great Britain, Holland, Germany, Spain, Italy, Croatia and S. Africa. I have a friend in England who spoke with us most weeks. He is a keen V/UHF’er, and gradually a little net built up over there, with two or three G stations talking to us on 10 and amongst themselves on several V/UHF bands at the same time, while we were doing the same at this end. We have even patched in V/UHF-only folks to the 10 meter QSO. The guy from Croatia decided to patch us into his local 2 meter repeater to stir up some activity at his end. At times, you may even hear people exchanging Ten-Ten numbers on 10 and grid squares on V/UHF on this net.

Several of us also have higher capability than 432 Mc, or are “nearly” on those bands. To my knowledge some of the participants have 902, 1296 and 2304 Mc capability, and at least one has 10 GHz operational. (Some of us are “close” to being on 10 GHz, but you know how that goes).

Stop by and join us some Sunday morning when you have a chance, or anytime you want signal reports on a new piece of gear or antenna installation. We would be pleased to hear from you on the MVUS net ! 73, Rod

“Internet over Power Line” Discussion

Following is an excerpt from an article “**Power lines set to carry high speed Internet.**” in the Christian Science Monitor, April 26, by Brad Rosenberg

.....Other nations, however, have already made up their mind.

"It's a brilliant idea, but if you give it a **more technical, detailed look, it all falls apart,**" says Diethard Hansen, the external chairman of the advisory group on BPL to RegTP, Germany's FCC equivalent. "It suffers the enormous risk of uncontrolled interference to everyone."

During test trials of BPL in Britain and Japan, Mr. Hansen says, interference was so strong that **they pulled the plug on BPL.**

"In Manchester [England], they failed miserably in the shortwave frequency bands because the streetlights started working as antennas," he says. "In Japan, they had limited field trials in Osaka and Tokyo, and interference got out of control. They had to stop it." Ham-radio operators are concerned that BPL will cause the same problems in the US.

But proponents don't seem worried. "What was banned in Japan is very old technology," says Thomas.

In addition, Mr. Shark says that BPL didn't work in Europe because of an electrical grid that uses more voltage - and a political system overly influenced by would-be BPL competitors. "We can't learn as much from them."

Update 19th May 2004

MVUS V/UHF Net.

Rod Owen, WG9F, Milan, Indiana. EM79ld

Last Sunday (16th May 2004) there were four of us on the net previously described. The net started out on 10 meters as usual, with the listening watch on 144.280 Mc. After a while we moved to 222.100 Mc SSB, then to 432.100 Mc SSB, all the time listening on 28.960 Mc and 144.280 Mc. After that, one of the guys wanted to try FM on those bands as an experiment to compare strength and intelligibility with SSB. We moved up to 223.5 Mc FM and 446.0 Mc FM, still using our horizontally polarized antennas. Surprisingly, the signals were almost as good as when using SSB, though we had good paths between us. Finally, we moved to 144.280 Mc SSB for the remainder of the net. I had four bands running on four radios simultaneously during the net. It was a lot of fun. At one point, when we were running FM on 223.5 Mc, full duplex with 10 meters, another ham heard half of the QSO on 223.5 and couldn't understand what was going on. He could hear half of what was an obvious QSO on 223.5 Mc FM, but the carrier wasn't dropping out between questions and replies, and only one station appeared to be talking. When the net station on 223.5 dropped his carrier, the curious ham called in to enquire what we were doing. We told him about the net. Maybe we will have another participant in our net next week!

73, Rod

Rover at the Dayton Hamvention

By Lloyd Ellsworth NE8I, 17 May, 2004

Reading the note about the 10 GHz beacon, I brought 2 10 GHz portable stations and set them up in the flea market. The W8KSE/B EM79ut MVUS beacon was 20 over s9 in the parking lot. Put up a sign on my microwave rover station. Practical microwave demonstration. Had lots of hams stop by and ask questions. Amazing what hams know, and don't know. Lots of the VHF+ weak signal group stopped by and we had several good talks. Several took pictures of it. Noted lots of multi path and other effects on the signal. Went inside a couple times to the MVUS booth.

Friday late PM, N8YWG stopped by. He brought his 10 GHz station along in his car in the parking lot. We made a SSB QSO, his first. Good strong signals. I was only running 10 mW. We started on the beacon frequency, then moved down to .100. Whole bunch of hams were gathered around, and listening in.

Friday night, was the VHF banquet. Great time had by all. Thanks to all who made it possible, most notably WA8RJF and WA8WZG.

Saturday, with all the rain, made good use of it, rain scatter. Take advantage of the opportunity. It was really too close for a good demonstration, but did it anyway. When it was not raining, the signal was quite clean and stable. With the rain, on the sides of the signal, one could hear the rain scatter aurora like distortion. Changed with the rate of rain, size of drops, and antenna direction. Many braved the challenge of the flea market in the rain. Many of us had tents, and such.

POBox 2132, Dearborn Mi 48123-2132 USA
Grid EN82jm Beverly Hills Mi & Rover 160M - 47GHz
ne8i@hotmail.com

"A society that will trade a little liberty for a little order,
will lose both, and deserve neither." --Thomas Jefferson

120 W 2.3 GHz PA

There is a circuit board with a Motorola power brick available intended for the UMTS technique (Universal Mobile Telecommunications System) (3G) at 2.1 GHz.

An article in the CQ-DL (June-04) describes how a unit can be modified to work on 2.3 GHz and the power output increased considerably. A similar description is on the Internet at the SK0CT website. That Swedish club call belongs to the Amateur Radio Club of employees of Ericsson Radio AB. SK0CT ARC has more than 100 members, and is located in Kista 10 km NW of the center of Stockholm.

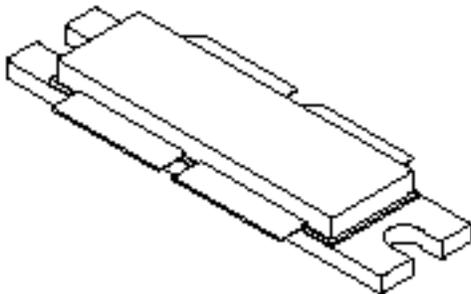
The modifications involve mainly changing the input and output match and providing a very good heat sink to accommodate the higher power. I will try to find out how to get these units; the price is in the order of \$ 75.

[Gerd, WB8IFM]

From the Data Sheet

MRF21120R6 Features

- W-CDMA Performance @ -45 dBc, 5 MHz Offset, 15 DTCH, 1 Perch
Output Power: 14 Watts Avg.
Power Gain: 11.5 dB
Efficiency: 16%
- Internally Matched, Controlled Q, for Ease of Use
- High Gain, High Efficiency, and High Linearity
- Integrated ESD Protection: Class 2 Human Body Model, Class M3 Machine Model
- Designed for Maximum Gain and Insertion Phase Flatness
- **Capable of Handling 10:1 VSWR, @ 28 Vdc, 2170 MHz, 120 Watts CW Output Power**
- Excellent Thermal Stability
- Characterized with Series Equivalent Large-Signal Impedance Parameters
- In Tape and Reel. R6 suffix = 150 Units per 56 mm, 13 inch Reel.



Typical data on 2,3GHz after modification:
Gain: 9-10dB, Output power 100-120W
Active device is Motorola MRF 21120
VDD 28V at 10A, bias +12V. [SK0CT]

The 2004 Dayton Hamvention

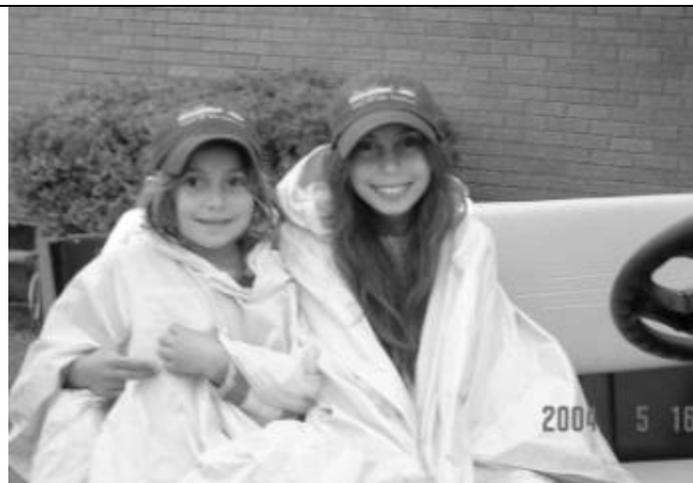
This year the three day event (14,15,16 May) reverted back to an almost 100% volunteer operation. From all indications and in spite of the bad weather on Saturday it was quite a success.



**Mike, John, and Clyde, MVUS Volunteers
Hard at Work**



2004 Hamvention from the Hara Arena



Our new Hams of the Future



Refreshments Anyone?

MVUS, your club, was heavily involved in the operation: Tom, N8ZM, was in charge of the huge flea market, Steve, K8UD, was the Webmaster, managed a volunteer exchange, and helped with on-line sales. John, N8VZW, Brad, K4EFD, and Clyde, KB8HV, managed our booth (others helped too), and finally Gerd, WB8IFM handled with the help of 9 volunteers the advanced ticket sales, stretching from February to right up to the event. During the Hamvention, Gerd spent most of his time at the box office, manning the "will call" window and attending to lost and found and helping to solve a bunch of other problems. Thanks to all the volunteers: You did a Great Job!

W2RG/Rover June 2004 VHF QSO Party results

The recent VHF QSO Party turned out to be a good one for W2RG/Rover after a somewhat shaky start. Not outstanding, but lots of fun.

On Saturday, W2RG (Rich) and K8CO (Rob Rogers) began the contest at 14:00 EDT near Maysville KY (EM88) by sitting out a thunderstorm for almost one hour. When the lightning had moved on and the wind and rain had subsided, we set up our gear:

50 MHz, M-squared half-wave loop, 100 W, up about 12 feet
432 MHz, M-squared 11-element yagi, 30 W, up about 10 feet
144 MHz, Cushcraft 4-element yagi, 50 W, up about 8 feet.

I held off setting up the 10-GHz (1 W, 60-cm dish) rig until we got some activity.

We heard nothing for the longest time. Finally, we called CQ (rovers aren't supposed to do that, are they???), and W4FVQ came back. We worked all three bands. Then worked K8LEE on 50 MHz.. Then got more silence.

Not wanting to fall too far behind our roving schedule, we pushed on to locations in EM78 and then EM79. Activity picked up steadily. 50 MHz opened up to the Gulf Coast, where we worked stations from south Florida across to Texas, and even ZF1DC in EK99 (Cayman Islands) and T49C in EL82 (Cuba). K9AYA provided two solid 10 GHz contacts while we were in EM78 and EM79. Hunger got the better of us at about 19:45, so we packed it in, even though 6 meters was still going strong.

On Sunday, W2RG went solo starting in EN70 at about 10:00 EDT. 50 MHz was still open to Florida, but the 10 GHz stuff proved to be the high point of the day. K9AYA provided 10 GHz contacts (and 144 and 432 MHz) while in EN70, EN80, and EM89; and N8VZW came in on 144 MHz and 10 GHz in EN80 and EM89. Then, while in EM89, K4EFD appeared from EM78 near Borden IN on 144 MHz and 10 GHz. This gave W2RG a new personal 10GHz longest path of 138 miles.

In addition, big contributors to the log for multiple grid squares and multiple bands were W4FVQ (Dennis), W8ULC (Red), and N8ZM (Tom). After a bleak, wet beginning, the weekend was a great time. (Everyone else, wish you were there!)

73

W2RG, Rich