MOUNT VERNON

C  Q

AMATEUR RADIO CLUB May 2005

MEETINGS: SECOND MONDAY OF THE MONTH AT THE BIG BROTHERS OUTER LIMITS 7:00 PM
REPEATER FREQUENCYS: 146.790 (-) K8EEN 444.750(+) KC8YED
SPEED DIAL #S 7770=AAA (Howard St. Garage) 7771=Sheriff 7773=Police 7776=Highway Patrol
7778=MV Fire 7779=Report Repeater Problem # to shut off Auto Patch

Letter from the Editor

I would like to thank Mike, KC8JEZ, for covering for me last month while I was in class. That class is finished so we should be able to attend club meetings again starting this month. The skywarn info, attendance and minutes below are all from Mike. Thanks again Mike.

Phil, N1GTZ

Skywarn Training

First on the agenda was the Skywarn training session with Brian Mitchell from the National Weather Office out of Cleveland... Starting @ 6:35 PM with 26 people in attendance, the meeting was informative covering many aspects of weather patterns and proper weather reporting procedures... Some highlights that were covered included:

1) Average thunderstorms are approximately 15 mile square in diameter with only 10% considered dangerous
2) The months of May and June are the most active tornado periods during the year
3) 5PM ~ 7PM seems to be the most active time of day for tornado activity, although they could appear anytime the conditions are favorable for the funnel cloud formations
4) The 3 downburst life-cycle periods during thunderstorm activity are known as:
   a) formation
   b) impact
   c) dissipation
5) The Thunderstorm Spectrum consist primarily of 4 classes...These are known as:
   a) single cell
   b) multicell cluster
   c) multicell line
   d) supercell
6) The north/east position in regards to an approaching thunderstorm looking south/west is usually the best location for a spotter to visually identify and locate funnel cloud activity, unfortunately this is often the path that the storm also is traveling so extreme caution needs to be considered while taking this position in relationship to the approaching storm cell
7) Most tornadoes form in or near a wall cloud that results from updrafts and are commonly measured using the Fujita Scale with the F0 ~ F5 categories, representing the minor to major damage potential from the severity of the wind speed generated
8) Shelf clouds may produce another type of wind known as "strait-line winds" which often produce a gust front capable of producing similar damage to that of a tornado, without the rotational pattern associated with tornado winds...

APRIL 11th , 2005 MONTHLY MEETING

ATTENDANCE

(name)	(callsign)	
1) Mike McCardel	KC8YLD	
2) Don Russell	WA8YRS	
3) Emily Bain	KC8YAE	
4) Jeff Butz	N8SMT	
5) Dick Huggins	WD8QHY	
6) Don Blizzard	W8UMH	
7) Bob Ready	KC8RTC	
8) Bob McBride Sr.	N8QPM	
9) Adam Burley	KC8QJR	
10) Ruben Clark	KB2SAI	
11) Don Bunner	KB8QPO	
12) Peggy Hockenberry	KB8QPP	
13) Michael Deane	KC8JEZ	
14) Dave Rankin	K4AWO	(Skywarn training only)
15) Shawn Probst	KD8ACA	(Skywarn training only)

MINUTES APRIL 11th, 2005 MONTHLY MEETING

Regular meeting was called to order @ 8:37 PM local time with no treasury report available to present to the attending membership, although Don (WA8YRS) did report that the repeater fund stood at $90.00.....

OLD BUSINESS:

Issue 1: Ruben, KB2SAI, has added simple spam blocking to the MVARC mail server. It should not block regular mail.(Ruben did discuss that he had done some more work on the website to improve it's performance) (ongoing)
Issue 2: It turns out both the Fox Hunt and tentative VE testing are scheduled for June 4th. The idea is to have the testing in the morning with the Fox Hunt scheduled in the afternoon. This way we should have a good turnout. (a discussion about next months demonstration on portable/mobile antenna building took place recognizing Barry (N8PPF) as the primary demonstrator...Jeff (N8SMT) was to follow-up with Barry concerning this...) (ongoing)
Issue 3: Sunday night net interference. This calls for a two stage response: First - add some extra equipment to our repeater. (a cavity and a filter) This may or may not help. Second - Contact the trustee of the 146.775 machine to see if specific individuals can lower their deviation. We'll need to check the individual calls of the worse offenders. (discussion followed with a general consensus that some improvements were made but will continue to be monitored) (ongoing)
Issue 4: Field Day is 25th and 26th of June this year. We're going to try to double last year's total. Set-up will be at the same place (the fairgrounds) as last year. Larry Hatton (EMA and SO) will be contacted and invited to attend. A vote was taken on whether we should hold the yearly picnic on Field Day. The vote was an overwhelming yes. Enough money exists in the field day fund for a Port-a-Potty. Field Day committee: Adam, KC8QJR, Ruben, KB2SAI, Mike, KC8YLD, Jeff, KC8WXL, Don, WA8YRS (to be added)
Issue 5: Tornado Drill is scheduled for Wednesday the 16th at 9:50am. (closed)
Issue 6: Two tickets for a Auto Show are being donated by Barry, N8PPF. First come - First served. (closed)
Issue 7: Relocating our 440 repeater to the 2 meter site was discussed. (pending future review and return of Barry (N8PPF)
Issue 8: Application for coordination of our 6 meter repeater is in. More and better 6 meter equipment is needed and the club is looking for donations. (ongoing, with the primary focus on the 440 repeater relocation, taking precedence)

NEW BUSINESS:

1) Bob McBride (N8QPM) request additional assistance with Skywarn Weather Reporting during off-the-air hours such as his work schedule or other times when unavailable... Daytime hours may need to be addressed to maintain proper reporting coverage.. Listed below are the Emergency Weather Skywarn Assistants for the Mt. Vernon Amateur Radio Club serving the Knox County area with Bob (N8QPM) serving as the Primary Emergency Weather Skywarn Coordinator:
1) Ruben Clark (KB2SAI) 2) Steve Dick (KC8YED)
3) Dan Crowthers (KB8TEX) 4) Jeff Hall (KC8WXL)
2) Weather Net Operation coverage during power loss was discussed... The first option frequency for simplex weather net operation will be the output frequency of the club repeater at (146.790 MHz.)... Second option for simplex weather net operation will be at (146.520 MHz.)... Mike (KC8YLD) suggested that the club have a practice drill for the simplex operation sometime in the future...
3) A General Study Group will be meeting on Tuesdays in room # 114 at the Knox County Career Center for any Technician Class License holder wanting to upgrade... Don (WA8YRS) and Mike (KC8YLD) along with Zack (KC8YLE) will be the session instructors. The classes will run from April 12th through the early part of June and will also be open for any potential "new ham" who would like to obtain their Technician Class entry level license...
4) It was discussed that we should set-up a booth or mobile operation during the July 16th Bicentennial Event helping to promote the hobby of Amateur Radio and the Mount Vernon Amateur Radio Club...Also mentioned was obtaining a temporary special call-sign for this event.... Mike (KC8YLD) will follow-up next month on this...

Jeff Butz (N8SMT) demonstrated an antenna design using the retractable steel measuring tape ribbon for elements... The design basically was a Yagi 3 element using PVC pipe along with fittings for the construction material used... The design is particularly attractive for "Fox Hunting" as the antenna collapses down nicely to store away while traveling in a vehicle... Thanks Jeff.....
MEETING ADJOURNED @ 9:15 PM by Dick Huggins (WD8QHY) with Bob McBride (N8QPM) seconding the motion..... < mike deane kc8jez >

REPEATERS AND STUFF
BY DON RUSSELL, WA8YRS

April was the third year anniversary of our Repeater. I am real proud of it. The only problem was the relay malfunction. It was kind of curious. The repeater would hang up once in a while and make the transmitter stay on until being Ker-Chunked several times. Maggorie, who makes our repeater, was good enough to supply a new relay even though the repeater was out of warranty when this problem became apparent. However, the new relay only lasted about six months before acting up again. I figured that the relay was too small for what it was doing and put a bigger one in. This seems to have solved the problem. I don't really know if it was a true problem with the repeater, or how the repeater controller is interfaced to the repeater. I have monitored the Maggorie e-mail list, and no one else seemed to have had this problem.

We do have a problem with the repeater antenna, or feedline, or somewhere in between. Sometimes the audio gets quite noisy. Other times some members who normally get into the repeater just fine, have a bit of noise on their signal. This seems to be a problem only when the wind is blowing really hard. We have plans to find the problem now that decent weather has arrived. Hopefully by the time members read this, the problem will be history.

That brings me to the interference issues that have arisen with the Mt. Gilead Repeater. As most members know, in the wisdom of the Ohio Repeater Council, and even though Mt. Gilead is within 25 miles of Mt. Vernon, a frequency of 146.775 Mhz. (-) was given to the Mt. Gilead Repeater. This means that a repeater within 25 miles operates within 15 KHz. of our repeater in Mt. Vernon.

Amateur Radio transceivers are generally designed for a spacing of 20 KHz. maximum. Even with the close spacing of 15 KHz., the two repeaters have coexisted for quite some time without problems.

During the last several months, users of our repeater have been complaining about the Mt. Gilead Repeater bleeding over into our 146.790 KHz. output channel causing problems for some local club members in hearing our repeater. Another problem is that some Mt. Gilead stations have such strong signals into Mt. Vernon (and perhaps are over deviating a bit) that they bleed over into our 146.190 Mhz. input channel causing our repeater to continually key up when these particular stations use the Mt. Gilead Repeater. This input interference is not often and is caused by only two or three stations. But it is annoying.

How do we solve this problem? I propose we draft a letter to the trustee of the Mt. Gilead Repeater requesting that he ask the users of his repeater to reduce their transmit power to a minimum when within local range of their Mt. Gilead repeater. Also, we should request that the certain stations causing interference to our input frequency to have the deviation checked on their radios. This should solve the input interference problem and maybe even help with the output interference. Unless their repeater transmitter is set to limit deviation to 5 KHz. or so, over deviation on the input frequency may very well carry over to the output frequency. We can site the FCC rule that minimum power should be used for the required communications. In other words, don't use 25 or 50 watts when 1 or 5 watts will do. This of course depends on the radio being used, as some radios have very few options for power level. For example, I run around mobile in Mt. Vernon with the radio set on the 10 watt option. Only when I get away from Mt. Vernon do I need to increase power. Same with my base. I usually run less than 5 watts. My base will do that, some will not.

I do not know if Mt. Gilead improved their repeater by installing new antennas, increasing power, or what. I do know that we have never had this amount of interference from them before.

The above suggestions do not relieve us of our responsibility in making sure our repeater is properly rejecting "out of channel" interference. Along that line, we have installed an extra cavity on the receiving end. This has helped a bit and is why I think the remaining problem is more one of overdeviation from the Mt. Gilead stations. However, I am going to go ahead and order the narrow band IF filter for our repeater receiver. If nothing else, it will assure everyone involved in the matter that we have done our part to fix the problem.

In light of what I have written above, let us all remember that this is ham radio and that no one actually owns a frequency or repeater pair. Lets not start a war over this. I don't know when the Mt. Gilead Repeater went on the air, but it has been there a long time and we have really had few problems until now. If the interference issue cannot be resolved, there are other things we can do to minimize the problem. For example, the biggest problem arises when both repeater groups start their respective nets. It just happens that both nets are on Sunday at 9 P.M. We could start our net at 8:00 or 8:30 P. M. instead of 9:00 P.M. I know I will get a lot of negative responses with this idea, but we need to be reasonable here and do what is best so that the people checking into our net can enjoy themselves rather than be frustrated by interference issues. Another solution would be to move our repeater up in frequency by 15 KHz. This would put us between the standard 146.790 and 146.820 repeater pairs. I don't remember who is on 146.820, but I do not think they are very close to us. This would put some distance between the two repeaters. I do not like this option. It would be just like the Repeater council to give 146.790 to another repeater within 25 miles of us. Oh, that was supposed to be a joke, but it wouldn't be if it really happened! Besides, our repeater has been on 146.790 MHz. since the early 70's when my brother Chuck (WA8ONN) and I put the first Mt. Vernon Repeater on the air. This pair was assigned to us by the Ohio Repeater Council back then.

I am sorry to say that the Technician Class did not go over too well. We had a no show for the first

class date. I suspected this was going to happen because I received absolutely no calls about the class after the newspaper article. So, we converted the class to a General upgrade class. Again, this did not go over too good. We have Mike (KC8JEZ) working on his code and studying the General Class license manual. He is doing real well and should be ready in time for our June testing session. Mike's friend John is working on his tech license. He is doing great too. So, as it turns out, we are running two classes at the same time. Problem is, we have more instructors than we have students!

We will try the Technician Class again this fall. Perhaps we will give another go at the General Upgrade class too. I have decided that Spring is not the time to run a class. I had such positive feedback on starting a class though that I felt sure it would work. My question is, where are all the people that were bugging me to get a class going? They apparently new a lot of people that wanted to get their license!

That is it for this month. Enjoy the nice weather. Remember, Field Day is just around the corner.

Vacuum Tube Daze

A tongue-in-cheek look at the days when tubes ruled.
By Phillip Buble, N1GTZ

Episode 10: My remote left to go shopping.

Please pass the remote. So do I mean the one for the TV, satellite, DVD, stereo, VCR, CD player or cable? Hard to believe these remotes are all a product of the transistor revolution, more specifically large scale integration. In the tube days none of them existed with the single exception of a TV remote that could just change the channel and, maybe, the volume. And those were prone to breakdown. In my day I've seen only one TV with the old style clunk, clunk, clunk remote, usually they had two legs instead. By the way this is not to mean that stereo's, VCR's, record players and cable didn't exist, just that they didn't have remotes.

The problem was in the tube days, and well into the 70's, tuning a TV or VCR was a mechanical process, not one of varying a voltage as it has now become. Different inductors, fine-tuning slugs and capacitors had to be physically moved into position in the tuner for the various channels 2 through 13. For channels above 13 a completely separate tuner was used with a separate lead-in and it used a special kind of vacuum tube called a "neuvistor" in most cases. Long a source of trouble through careful engineering both types of tuners became less so toward the end. For mono-band gear such as the home FM stereo the tuning process was much less complicated but it too remained a mechanical process for a long time; at least a capacitor rotor or slug had to be physically moved.

Enter large scale integration and surface mount technology and now VHF and UHF tuners have been combined into one and so shrunk down in size that two of those can fit inside a cigarette box. A single outboard crystal and a phase locked loop determines what voltage will be sent to the tuner and that depends only on the command frequency. All digital, no moving parts to wear out, no fuss, no bother and requiring only 200,000 transistors on a chip to accomplish. 200,000 tubes would be just a tad difficult to stuff into a cigarette box.

The End.

FISTS ACTIVITIES and CALLING FREQUENCIES

The club has many activities and membership in FISTS is not required to participate, just a love of Morse! All FISTS activities are designed to promote camaraderie among members of the club and help hams hone and improve their Morse skills.

CALLING FREQUENCIES

FISTS members can be found on or near any frequency ending in .x58 (.058, .158, .258, etc)

Here are recommended calling frequencies by band. REMEMBER, these are recommended CALLING frequencies and QSO's should be moved to another frequency.

2m	144.058 MHz
6m	50.058 MHz
10m*	28.058 MHz
12m	24.918 MHz
15m*	21.058 MHz
17m	18.085 MHz
20m*	14.058 MHz
30m	10.118 MHz
40m*	7.028 MHz -- All IARU Regions
40m	7.058 MHz – IARU Region 2
80m*	3.558 MHz
160m*	1.808 MHz

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* Note 1: The calling frequencies for 10m, 15m, 20m, 40m - All IARU regions, 80m, and 160m, are only 2 kHz. below QRP calling frequencies (7.030 MHz is the QRP calling frequency in Europe). Please only QSY *down* from these frequencies.

U.S. Novice sub-bands

10m	28.158 MHz
15m	21.158 MHz
40m	7.118 MHz
80m	3.708 MHz

Note 2: Please use the Novice sub-band calling frequencies as much as possible. It will benefit Novices, and also provide support for retaining the spectrum.

Weekly Nets

Sunday Century Award Net
1500 EST/2000 UTC
1500 EDT/1900 UTC 14.058
Sunday Slow Speed Chat
1700 UTC 21.158

Tuesday Slow Traffic Net
2100 EST/0200 UTC
2100 EDT/0100 UTC 3.682

Thursday Slow Traffic Net
2100 EST/0200 UTC
2100 EDT/0100 UTC 3.682

Saturday QSO Groups
2000 UTC 14.058
2300 UTC 7.058

NOTE: Daylight Savings Time (DT) runs from 0200 local time the first Sunday in April through 0200 local time the last Sunday in October

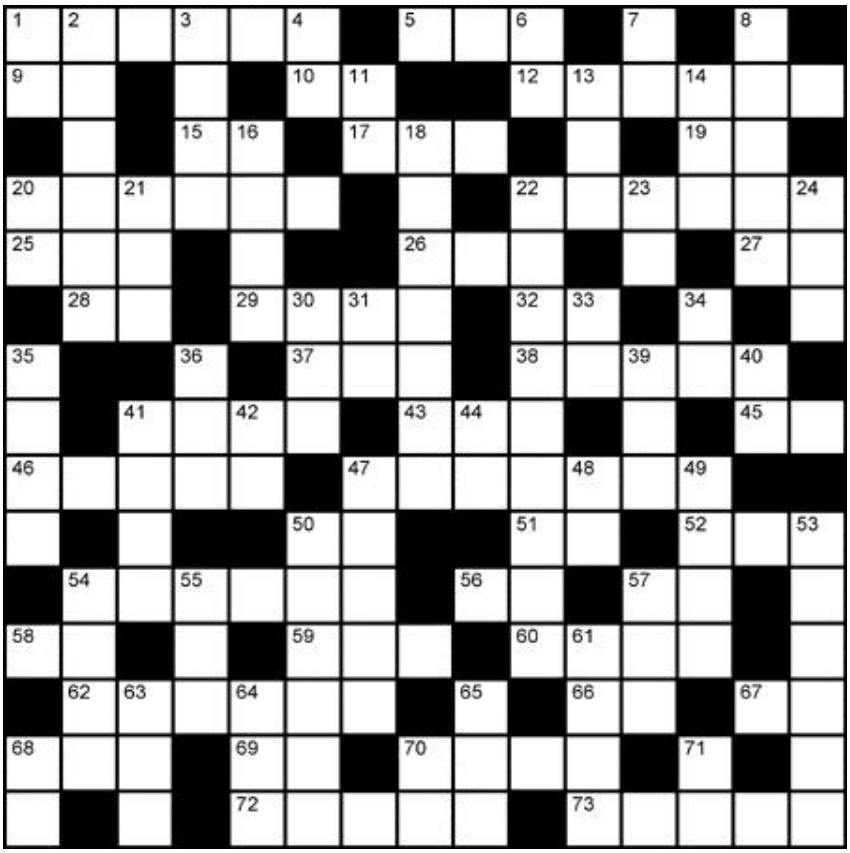
We now have four "SPRINTS" each year, on the second Saturday in February, May, July, and October . These events are a CW free-for-all, from 1700-2100 UTC. The first week in September we have a "Straight Key" Week. There is a "Code Buddies" program which matches up experienced operators with new ones that want to develop their skills. To volunteer contact the program manager "mail to: Nick, K3NY at K3NY@cablespeed.com

For more information, visit

<http://www.qsl.net/w9em/index.html> The Code Buddies Information Page. The club sponsors two awards. The "Century Award", awarded to those that earn 100 points by working FISTS stations around the world, and the FISTS WAS award. Check sheets are available to keep track of your contacts for these awards and are available for downloading on the Awards Page.

Thanks Doc, AA8WP, for sending this along. [ed]

Components of Success an d Failure"



By H. Ward Silver, N0AX April 26, 2005

Across

1. Detect smoke and fire
5. Components with no leads (abbr.)
9. Wire thickness (abbr.)
10. What a blown-up component is (abbr.)
12. Resistor type
15. To locate a transmitter (abbr.)
17. 1/10000th of a percent (abbr.)
19. Opposite of NS
20. Donut shaped core
22. Used to print designators on a PCB
25. A design that doesn't work
26. These deplete ozone (abbr.)
27. Output resistance (abbr.)
28. Add 'wrap' to get a popular fastener
29. Keeps solder on the pads
32. Lots of voltage (abbr.)
37. Country with the most prefixes
38. Hard resin used for PCBs
41. Sound a capacitor makes from too much voltage
43. What makes the works stop working
45. Resonant circuit (abbr.)
46. Makes components works, only seen when component stops working

Down

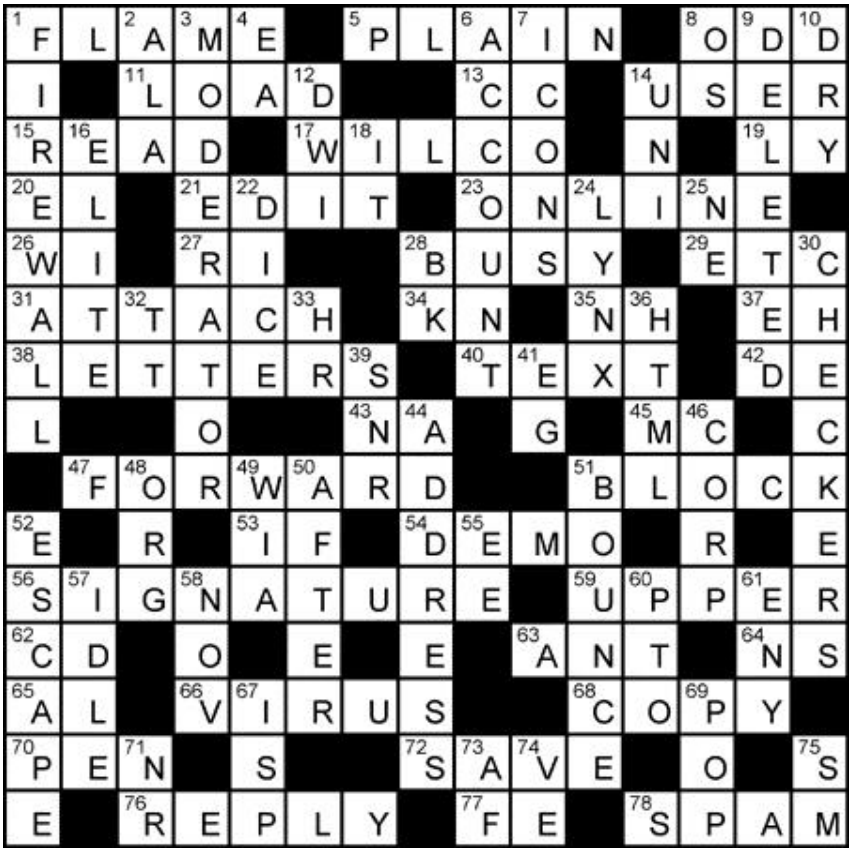
1. Used for low-resistance plating (chemical symbol)
2. Arrange components on a PCB
3. Try it again
4. One component of 62 Across (chemical symbol)
6. Change with temperature (abbr.)
7. Voltage drop
8. Dissipated energy
11. General purpose (abbr.)
13. Voltage breakdown
14. Invented the honeycomb
16. Plastic capacitor dielectric
18. The body of a component
20. Time delay (abbr.)
21. Ready (abbr.)
22. Drawing describing a circuit
23. Circuit that charges and discharges
24. Prefix indicating "not"
30. Last full month of summer (abbr.)
31. Non-rusting steel (abbr.)
33. Club position next to President (abbr.)
34. Distant station (abbr.)
35. Round type of capacitor
36. Signal sent to indicate error
39. JA electronics and printer manufacturer

47. Type of capacitor dielectric
50. To act
51. Has the northernmost European capital (prefix) (abbr.)
52. Used to dissipate heat in transformers
54. Picture that represents a component
56. Ratio of C to D
57. Not the PM
58. Multiply times kohm to get volts words)
59. Overheated plastic
60. Integrated circuit
62. What keeps stuff on the board
66. One of the two basic logic gates
67. Add 40 to get this popular toolbox item
68. Metric prefixes denote these powers
69. Country of Macchu Picchu (prefix)
70. Another word for inductor
72. Printed conductors on PCB
73. To place inside of#

40. Not enough of these in ham radio (abbr.)
41. A shock gives you an experience out of this
42. Division that's home to ARRL HQ
44. Your (CW abbr.)
47. These indicate component value
48. Old abbreviation for microfarad
49. Abbreviation for component
50. A good reference book gets to be this way (two
53. Parts with wires for connections
54. Send this with a QSL request (abbr.)
55. Height above sea level (abbr.)
57. Common dielectric of adjustable capacitors
61. Where a component wire goes on a PCB
63. Brown stripe on a resistor
64. Indicates a connection on 22 Down
65. The tale told when the circuit doesn't work
68. Good source of parts
70. Email copy
71. The other component of 62 Across (chemical symbol)#

When radio goes bad! **Thanks RonW8PMJ**

Solution to last month's puzzle



A Pause For Thought

"Scepticism is the chastity of the intellect, and it is shameful to surrender it too soon or to the first comer: there is nobility in preserving it coolly and proudly through long youth, until at last, in the ripeness of instinct and discretion, it can be safely exchanged for fidelity and happiness."

–George Santayana
Scepticism and Animal Faith, IX

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Membership Form

Club dues run from Jan. 1 until Dec. 31 and are collected during the last quarter of the year. You can mail in the dues to the address below or bring them to a meeting.

Dues Schedule:

$20 regular

$10 for second member in the same family

$10 for over 65 yrs. of age

$15 for those living outside Knox County

Mt. Vernon Amateur Radio Club
P.O. Box 372
Mt. Vernon, OH 43050

Name_____Call-Sign_____

Street_____

City_____State_____Zip Code_____

Phone Number_____License Class_____

ARRL Member (Y/N)_____E-Mail_____

Extra Donation (Optional)_____

Members are entitled to a free MVARC E-Mail address. Would you like one?
No_____Yes_____

If yes please enter password_____

Other Comments

Classifieds