



CHEESE BITS

W3CCX
CLUB MEMORIAL CALL

ARRL
Affiliated
Club



Volume LIV

April 2013

Number 4

PREZ SEZ:

We're starting to think about Spring which has theoretically been here for a few weeks, but only now has shown any physical evidence (weather) of being present. We all know what that means, antenna weather. What needs to be fixed? What new system will you be bringing on line? I know of some antenna parties already scheduled. Better get yours on the drawing board.

Last week a few of us locally put my 5 element 15 meter beam on it's perch at 70 feet and as an added bonus we installed the A4S tribander in a fixed direction at 40 feet. I got to try them out last week during the CQ WPX SSB contest; sure was fun pulling out those China, Malaysia, Indonesia, Philippines, Korea and other exotic signals.

More evidence of Spring is the Sprints which started early this year. Perhaps many thought that the April first date was a joke, but it wasn't and we did have a 144 Sprint, but everyone wasn't on the air.

The next Sprint is April 16 on 222 MHz, lets show up for this one in a big way. Following that, the 432 Sprint will be held on the 24th, then we're off until May 4th when the microwave Sprint will be held.

Sprints are a great way to enjoy a single band and see just how far you can work on that band.

During the Spring events you can coordinate using

methods that are not permitted during regular contests; working together to make contacts that's not ordinarily possible. This offers a wider range of long contact possibilities. **Come join the fun and push the limits of your station.**

Speaking of opportunities to have longer contacts, make sure that the June Contest at Camelback is on your calendar. Here is a great way to have fun for a whole weekend. We want as many members as possible to come to the mountain for as long as their schedule allows.

Four days in June that will surely tickle your weak signal fancy. Come join the fun. All of the arrangements have been made for you.

Four days in May is also just ahead, I have followed the Packrat caravan out to Dayton many times in the past; now I go out a day earlier for Contest University. There is quite a Packrat contingent that makes the annual trip and never regret the time spent.

While we are talking about opportunities, lets move to the conference circuit; some of you will venture to the Southern States VHF Conference this month just a week before many of us will travel north to the NEWS Conference in Hartford, CT. Consider AMTRAK as a possible means of travel. There are three of us planning that mode of travel so far. The "Vermont" leaves 30th Street at 9:59 and arrives Hartford at 14:10 leaving plenty of time to settle in, have dinner and make the hospitality event Friday

Pack Rats **CHEESE BITS** is a monthly publication of the **Mt. AIRY VHF RADIO CLUB, INC.** -Southampton, PA.

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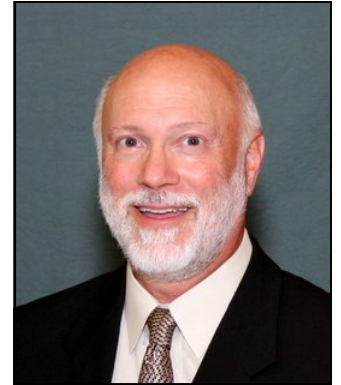
FM29jw Philadelphia, PA
50.080 144.284 222.064 432.286 903.072 1296.245 MHz
2304.043 3456.207 5763.196 10,368.062 MHz (as of 1/08)

MONDAY NIGHT NETS

<u>TIME</u>	<u>FREQUENCY</u>	<u>NET CONTROL</u>
7:30 PM	50.145 MHz	K3EOD FM29ll WA3QPX FM29di
8:00 PM	144.150 MHz	N3ITT FN20kl
8:30 PM	222.125 MHz	KB1JEY FN20je
8:30 PM	224.58R MHz	W3GXB FN20jm
9:00 PM	432.110 MHz	WB2RVX FM29mt
9:30 PM	1296.100 MHz	K3TUF FN10we
10:00 PM	903.100 MHz	WA3SRU FN20le

Visit the Mt Airy VHF Radio Club at: www.packratvhf.com or www.w3ccx.com

evening. The return trip starts at 9:40 Sunday morning, right after the 8:00 start of the flea market.



On the long range planning stage is Central States in July, once again there is an opportunity for train travel as the event is just outside of Chicago and regular travel is available from Philadelphia. I also can't miss putting the **Mid Atlantic Conference on the calendar; make sure you save the weekend of September 28 and 29 for our own Conference.**

What about all of these Constitutional Objectives? 55 years ago a group of Hams got together and developed these objectives that still have great relevance today, in fact, the objectives are what we are all about: Use very high frequency, get on the air during contests, help each other and observe the highest standards in engineering, techniques and design. I am thrilled to be a part of this group of folks who do just that.

Now get on the air and

**Lets work on lots of bands,
Phil K3TUF**

Phil K3TUF

Ladies Night 2013





Ladies



Night



Ladies

Night



Tnx to EI, K3JJZ for pix

Mt. Airy VHF Radio Club

January SS Previous Claimed Scores

	2013	2012	2011	2010	2009	2008	2007
K3TUF	272384	340091	229425	195295	236082	248663	226284
WB2RVX	199056	65892	119103	153360	109863	89352	9126
W3SZ	185725	83066	148821	55722	128392	155122	
WA3NUF	132496	147854	156604	142040	101970	158976	87756
WA2FGK	116242						
NN3Q/R	110228	42552	79900	51675			
K1DS/R	100548	136242	112320	157612	139656	143507	27222
WA3DRC	94400	73100	81004	83585	69207	80595	116857
N3RG	91000	106236	46588	8	24486	31680	3192
K3IPM	87480	111760	66276	77028	46004	49432	35075
WA3GFZ	68526	26049	16215	25434	468	48384	98032
WA2OMY	53392	57532	15171	20430	26048	35928	
W0RSJ	50544	43512	46000	44979	48380	65520	70422
WA3EHD	45980	52399	33372	8234	35828	37400	39324
K3GNC	34048						
WA3QPX	27840	247	31376	35642	31120	37840	21063
W3GAD	26688	19823	18040	45880	10626	35750	29375
N3ITT	26250	34560	36250	32615	18032	37996	32100
K1JT	25728	65940	111899	130509	105780	125391	102580
WA3SRU	24435	32376	12888				
KC2TN	15720	28832	5564				
W2SJ	15470	24	88764	125370	54126	55062	80808
K3MD	15433	11948					
W3KM	14523	4104	17388	31744	17591	6262	35711
W2BVH	14288	16014	13489	20460	8322	5508	440
K3JJZ	14245	22736	16212	15785	9579	6688	4301
W2MC/R	11988						
K3IUV/R	10920	7935	8257	9775	3615	1896	981
WA3RLT	8704	14872	8576	14352	9930	15120	22734
WA3YUE	8046	1650	8616	9656	14328	154	14883
W3ICC	6744	24300	19782	6994	5660	13896	
W3HMS	6688	10868					
KB1JEY	6279	9126	6510	4656	4318	2576	112

Mt. Airy VHF Radio Club

January SS Previous Claimed Scores

	2013	2012	2011	2010	2009	2008	2007
NE3I/R	5275	770	5037	5136	902		
KA3FQS	5140	5136	276	20007	10179	16400	17800
AA3JH	4437	10640	2325				
KB3XG	4075	2560					
KA3WXV	3819	7830	4746	1230	768		
K3VEQ	3630	6120	2736	2489	1708	2431	1001
K3IUV	3553	5170	3247	2716	7980	4920	6094
W3FEY	2352	1241	1344	3828	2240	2888	1830
KB3MTW	1960	795	1040	1920			
N3PLM	1920	3950	396	4025	2478	3335	3013
N3FTI	1862	931	3660	1026	3920	-	
KB3GJT	1296	2430	2490	488	2550	294	
W3RJW	1276	30674	86018	17480			
W3GXB	828	744	1275	1854	912	858	1394
WB2VLA	638	2262	705	1848	2040	1323	
K1DS	600	423	1176	133	486	693	576
W3VVP	559	208	736	760			
WA2DTW	441	3509	1710	2128			
K3EGE	328	84	913	408	576	60	
K3IB	203	18	360	756	1620	5002	
W3HJ	180						
K3BFS	140	913	880	432			
KB2AYU	90	315	15	45	90	162	
KB3HCL	68	1120	441	1298	2715	8092	10092
N1XKT	50	10040	1750	132	4232		
WA3WUL	48	16	24	8	32		
KA3MGB	30	4	12	15	5	24	
N3YMS	-	69286	33441				
N3NGE	591832	541722	541944	735885	575424	554710	572930
K3EOD	69192	143130	73429	110040	99900	123318	
WB3IGR	28560	26670	28535	27720	6720	6194	6786
W3CCX	2822						

Tnx K1DS & W3KM for the data!!

Converting your Motorola 300 Watt 903 MHz Amplifier for Amateur Use

By John Jaminet, W3HMS, Packrat.

In 2009, I got my amp and a suitable power supply and with it a Packrat Mod kit courtesy of Phil, K3TUF.

Because of QTH repairs and the other priorities ahead of it on the "Old Pri List", it sat on the shelf until Fall 2012. I was fortunate to have had the loan of the W3FEY 903 Mhz 300 w. amplifier modified by Phil, K3TUF, as my model, and the best article by KD5FZX on the VHF South Web site on the conversion. My copy of his article was complete except for a photo of a critical circuit and our editor, Lenny graciously supplied a reference to this Web site:

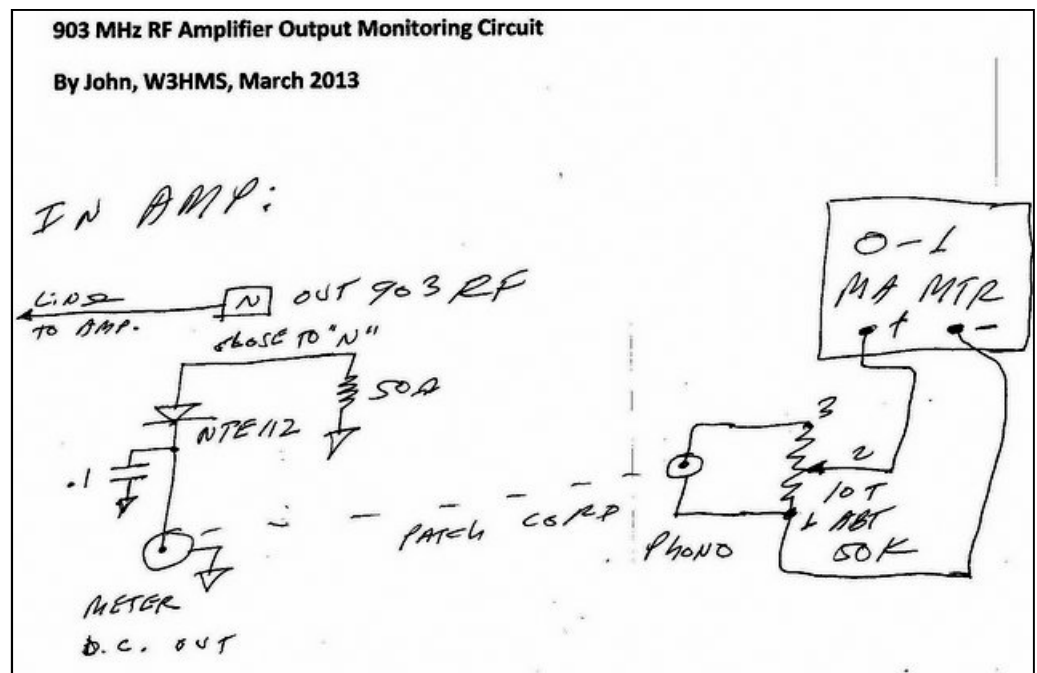
<http://www.qsl.net/n9zia/stf2520a/index.html> . At the bottom are additional references and the 3rd one is for the 300 w amplifier.

I installed most of the components on the sturdy metal plate in the conversion kit along with an extra phono jack for an RF sampler. The latter was not a part of the original conversion but I always like to see even a simple relative power meter so I know I have output at a quick glance.

There was no diagram for the keying circuit with transistor available and the model from George did not show me enough details so I just drew the schematic from the missing pictures supplied as above from Lenny. This author's method was to use a 5 VDC SPDT relay and I had just the perfect little relay in stock which is from Radio Shack, number 275-0240. Any other that will fit in the tight space should be just fine. The author chose to take the

relay DC voltage from a very small 5VDC regulator that was just too small, in my unit, for a connection. So, I found enough space on the back of the new plate for a 78L05C/7805 regulator which works perfectly. My supposedly good, (but actually bad), power supply was replaced by a new 28 VDC, 55 Amp PS.

The article suggested only 26 VDC should be applied to the final amplifier transistors while another reference said it can be 28 VDC as the onboard regulators will reduce it to 24 VDC. I chose a most conservative "belt and braces" solution and set the voltage at 26 VDC.



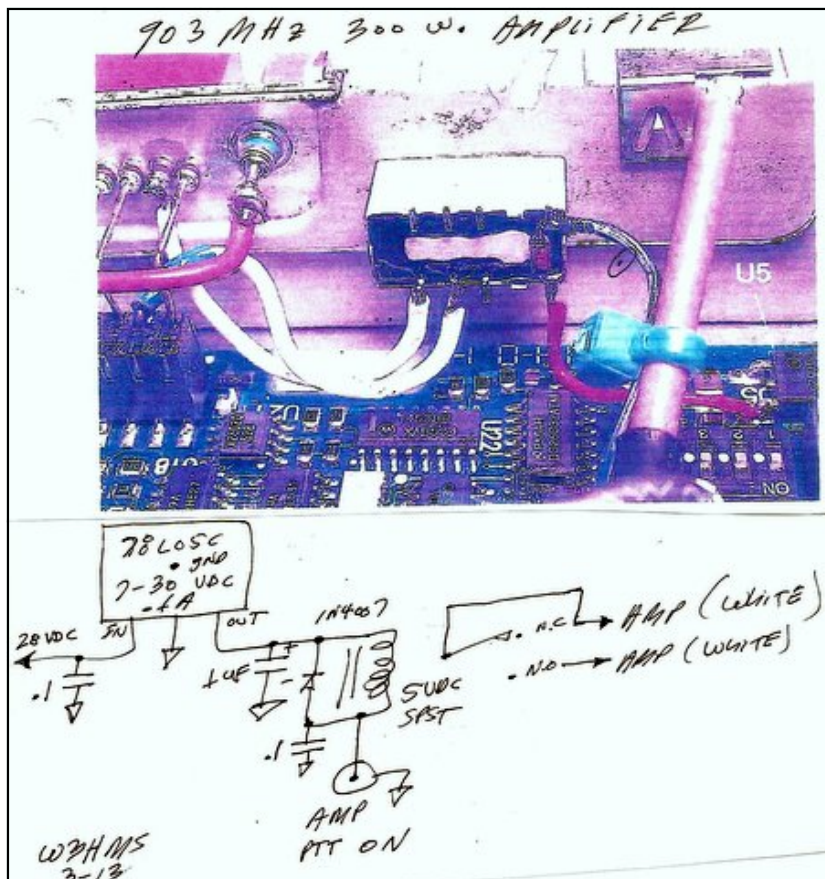
I used a NTE 112 UHF TV mixer diode from the parts box for a detector. There may be many other types equally usable. I used an external meter with small pot for level adjustment. This diode is in series with a 50 ohm resistor mounted to a RCA phono jack next to the output "N" connector. The coupling was just close proximity and the voltage, limited by a pot, drives an 0-1 ma meter from 0 key up to 1.0 key down.

The "smoke test" showed none. No fire and no noise!!!...just 200 watts on the Bird meter in key-down CW. Some hams reportedly get 225-300 watts out but again I chose to run a cool 200 watts and the amp worked very well in the January 2013 VHF and Up contest. I set my 903 amplifier drive level at 12 watts although the article suggests about 5 watts is enough. After I get a mast-mounted LNA in place, I may want to increase power but not before as only an alligator should desire to be one, HI!!

I use a CX520D antenna relay from RF Parts Company as, although pricey, it has the capacity for high power and low-loss on receive. The amp ran cool but even though it did I wanted to add a 28 VDC blower which is very quiet.

The cell phone industry has given us hams some great buys at 903 MHz for the same money would yield very little on 1296 MHz. This amplifier and a used EBAY high current power supply work very well with no noise or smoke. I look forward to working more Packrats on 903 or 902 MHz.

73, John, W3HMS



Editors note: If you back up a couple of levels from the URL shown in the article, you'll find a comprehensive well organized list of links to many interesting technical sites that are well worth exploring. While doing so, your editor also stumbled on a couple of links that can be described as racist and anti-semitic. Why they are in an otherwise fascinating site is anyone's guess. John and I thought you should be informed of this. Use caution if you go above the url given in the article.
—Lenny

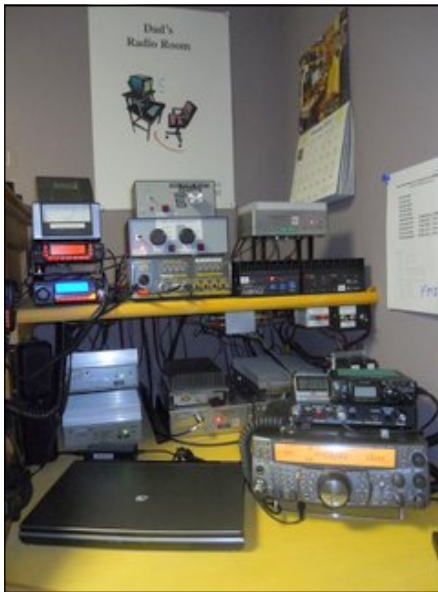
W2SJ January Contest Pix

My goal this year was to have W2SJ return to the air for the 2013 January contest after my move from Pennsauken over a year ago. Plans for a real tower and antennas are at least a year away at this point. I wanted to be on as many bands as possible to maximize points for the club. So, the TV mast with loops and discone was installed with brackets to the house. One hardline feeds the loops and the other feeds the discone. The system utilizes an SMA latching relay up top and 3 in the shack to sort everything out.

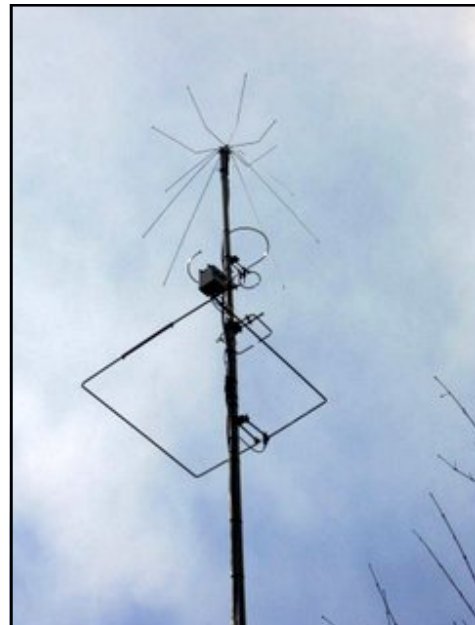
Many an eyebrow was raised as I explained the system to fellow Rats... **“No doubt SJ has lost his mind this time”**. So how did it work? 209 Q’s and 34 Grids for a score of 15,470 points. The **discone** was responsible for 33 Q’s and 9 grids total from 903-3456. The discone also made quite a few Q’s on the 3 FM bands. **Remember, never underestimate how important each and every operation is to the entire club score.**

Most memorable quotes during the contest: “Bob, you have given a new meaning to weak signal work”- N3NGE. “Don’t feel bad about the 15K score, you have set a new record for your new station” – WA3NUF.

73 es “listen for the weak ones” **Bob, W2SJ**



W2SJ temporary 8-band 50-3456 station built into a space 36” wide by 42” deep. Station started one month before the contest.



35 feet of TV mast with single loop antennas for 50-432 and a commercial discone antenna used for 903 -3456 and also 146, 223, & 446 FM.



Home brew switching box consisting of (4) SP4T SMA latching relays to route the antennas to the proper transceiver or transverter.

March Meeting: Homebrew Night



2 Meter Rig from the dark errrr Golden age of VHF Homebrewing :-)



Turning a commercial 222 amp into something a ham can put on the air



Thanks for the entertainment Rich!



Paul, innovator extraordinaire



Ray makes super Yagis with simple but accurate jigs



Ted's Keyboard / Paddle keyer with memories and type-ahead

Thanks to all participants. More pix than space. Sorry. Winners to be announced.

Tnx to EI, K3JJZ for pix

39th ANNUAL EASTERN VHF/UHF/ MICROWAVE CONFERENCE

Fri./Sat./Sun. April 26-27-28, 2013 at the BAYMONT INN & SUITES, 20 TAYLOR ST., MANCHESTER, CT 06042 (just a few miles northeast of Hartford, CT off I-84)

CONFERENCE REGISTRATION will be available soon at: www.newsvhf.com. The 3 day conference pre-registration is \$25 which includes a super Friday night hospitality suite & indoor table swap starting at 7pm, Saturday all day conference presentations, auctions, indoor vendors, and concurrent Laboratory test sessions conducted by Greg Bonaguide from Rhode & Schwartz, and the Sunday morning outdoor flea market and a copy of the CD of Conference Proceedings including additional VHF+ papers.

Registration.....\$25 in advance, \$30 at door

Newcomers Special Registration.....for those who have NOT been to any VHF+ Conference before.....\$10 in advance, \$15 at door

Saturday night Banquet.....(tentative \$28)

On-line registration will be open very soon!!

Special Discounted Rates!!!! Double \$69.00, Suites \$99.00 ----Available to reserve soon!
The suites are really SUPER and sure to sell out soon, (your YL will approve!)

Hotel has **FREE continental breakfast & FREE WiFi**---check out TripAdvisor great reviews!!

Friday, April 26 -- 7pm.....Super Indoor Hospitality & Indoor Swap

Saturday, April 27 -- 8am-Noon....Talks, Auctions, Test Lab, Indoor Vendors

 Noon-1pm..... Lunch on your own--plenty of nearby great eating spots!!
 (Rein's NY Style Deli, and others)

 1pm-5pm.... Talks, Auctions, Test Lab, Indoor Vendors

 7pm.....Banquet, Speaker & Door Prize Give-a-way

Sunday, April 28 -- 8am.....Tailgate in parking lot

Sponsored by: North East Weak Signal Group (NEWS)

Questions? Contact K1MAP, WZ1V, W1GHZ, or N1JFU

or Email to: map1@mapinternet.com

Check: www.newsvhf.com for updates--MORE TO COME!

If you interested in presenting a talk or preparing a paper for inclusion in the Conference Proceedings please contact Paul Wade, W1GHZ Conference Co-Chairman.

The Wayback Machine

Gleaned from the pages of
Cheese Bits, April 1963

(Vol. V1 Nr. 1)

(Authors comments in *italics*)

- Cover. Happy Birthday to Cheese Bits. 6th anniversary issue! Helen exchanged copies with clubs around the country. She included sample congratulations from 4 hams across the US.
- Two guest author columns; one described Easter, one described Passover. Also included congratulations to the West Oak Lane Jewish Community Center (*our club meeting place at the time*) on completing 13 years of community service. (*Headlined "Bar Mitzvah"*).
- Ladies night reminder. Tickets \$5.00 p/p. April 27, Roast Beef dinner, (*Michael take note*).
- Extract from the Philadelphia Evening Bulletin: A 23 year old Ham from Mt Holly was electrocuted while experimenting with a kite tethered with wire to his gear. He had been "experimenting" with antennas. He left behind a wife and small child. (*Helen added "Don't be a fool, follow the Safety First rule."*)
- Extract from "Microwaves", suggesting ways in which amateurs could be encouraged to explore more operations and experiments in the microwave bands (*took awhile, but we are sure doing it today!*).
- Article by EI, K3JJZ berating International Crystal for their efforts to get a Hobby Class of operator authorized by the FCC. Lengthy and well written, you can read all the details on our web site copy of this issue.
- East Coast VHF Society presented a certificate to the Packrats, proclaiming them "The Outstanding VHF Club in the East". (*Still true*).
- Report on a Ham group in the Midwest known as the Eyeball Network. They have a net each day to support "need" and "have" data between eye banks and surgeons. (*Of course overcome by modern communications methods, but an example of Hams public service at the time.*).
- Evening Bulletin again, reporting on an experimental transmission of Electrocardiograms using phone lines and a new Bell Tel device called a "Dataphone". (*Early "modem"?*). It was heralded as "the first step toward mass screening for early detection of coronary artery disease".
- June contest. Chairman Stan, K3IPM, busy with preparation. Soliciting members help to prepare the club station.
- Club meeting speaker in Feb was K2HAK, Ken Lockhart. Talking

about Computers. One comment was “they are fine time saving devices, but they still need the mind of man to feed them the information”. (*Pretty much still true*).

- Official Bulletin NR 889 from ARRL. ... the commission granted the league’s request to relax mobile logging requirements. Separate time entries no longer required for each log entry. (*Merely*) the start of operation time, and a list of stations worked, date, band, emission type, power level and time at end of operating interval would now be required. (*Contrast that with today’s requirements!*)
- New members voted in at the Feb meeting are listed. They are members 84 through 88, against the club limit of 90.
- Net call-in report for Monday, 3/4/63. 50.2: 37. 144.2: 15. 221.4: 15.

(As in previous editions, many “folksy” comments about members, their families, and activities were included in this Cheese Bits. If interested, visit www.W3CCX.COM and read the full issue posted there).

thirty, de K3IUV



Events

For inclusion, please direct event notices to the editor.

Sprints: 222 Meter Sprint— April 16, 2013 7-11 pm Local. See <https://sites.google.com/site/springvhfupsprints/2013-announcement-rules> for rules.

SVHFS Conference—April 19-20, 2013. Hilton, Cocoa Beach FL. See <http://www.svhfs.org> or email Chuck at k0vxmfl@gmail.com for further details.

Sprints: 432 Meter Sprint— April 24, 2013 7-11 pm Local. See <https://sites.google.com/site/springvhfupsprints/2013-announcement-rules> for rules.

39th Annual VHF/UHF/Microwave Conference— April 26-28, 2013. Baymont Inn, Manchester CT. <http://www.newsvhf.com/vhfconf.html> or p.12 for further info.

Sprints: Microwave (902+)— May 4, 2013 6am -1 pm Local. See <https://sites.google.com/site/springvhfupsprints/2013-announcement-rules> for rules.

Warminster Amateur Radio Club - Hamfest May 5, 2013. Middletown Grange Fair Grounds, 576 Penns Park Rd., Wrightstown (Bucks Co.) PA. \$5 per person (unlicensed spouses & kids under 13 free). Huge indoor facilities with electric available at all tables. VE testing / WAS field checking / Equipment check out table. See www.k3dn.org/hamfest.htm for additional details

Cherryville Repeater Assoc— Hamfest May 11, 2013. Clinton Twp, NJ. See <http://www.qsl.net/w2cra/> for details

Sprints: 6 Meter Sprint— May 11-12, 2013 2300Z—0300Z. See <https://sites.google.com/site/springvhfupsprints/2013-announcement-rules> for rules.

Dayton Hamvention - Hamfest (etc) May 17-19, 2013 Dayton OH. See www.hamvention.org/ for details.

OMARC Hamfest May 18, 2013. Wall Twp, NJ. See <http://www.n2mo.org/> for details.

ARRL June VHF QSO Party - Contest June 8-10, 2013. The annual Camelback trek. See <http://www.arrl.org/june-vhf> for details.

Valley Forge Hamfest - Hamfest July 7, 2013. 742 Pike Springs Road (Kimberton Fire Company grounds). Kimberton, PA. See <http://www.marc-radio.org/hamfest.htm> for details

CQWW VHF Contest - Contest July 20, 2012 1800Z to July 21, 2012 2100Z. See <http://www.cqww-vhf.com/> for details.

ARRL August UHF Contest - August 3-4, 2013. Details to follow.

10 GHz and Up (round 1) Contest - August 17-18, 2013. Details to follow.

September VHF QSO Party - Contest September 14-16, 2013. Details to follow.

10 GHz and Up (round 2) Contest - September 21-22, 2013. Details to follow.

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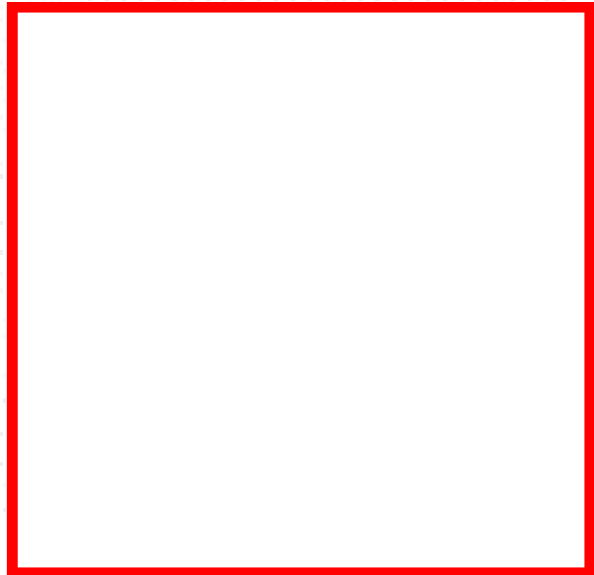
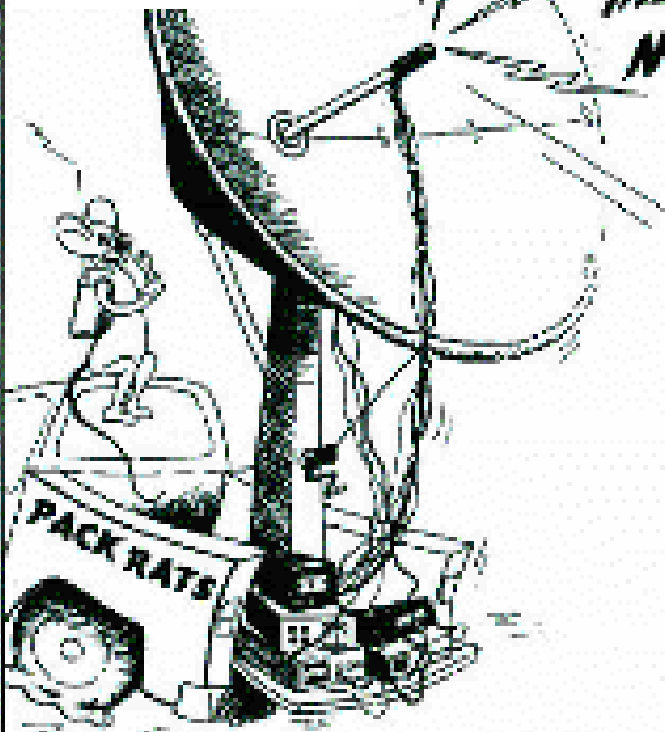
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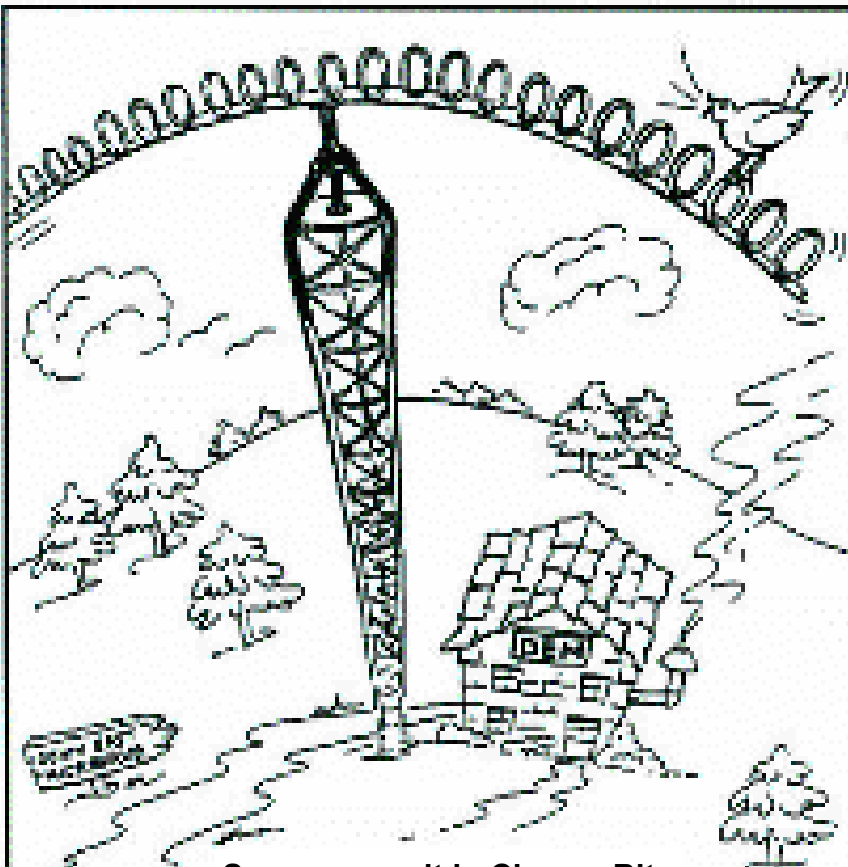
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