

Mt. AIRY V.H.F. RADIO CLUB, INC.



CQ VHF
Lads
and
Lassies,
CQ, CQ

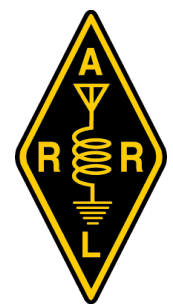
CHEESE BITS



W3CCX
CLUB MEMORIAL CALL



ARRL
Affiliated
Club



Volume XLV **March 2003** **Number 3**

PREZSEZ We have a lot to be proud of 61 logs sent in for the January contest and over 3.1 million points. Just because the contest is over, it doesn't mean we can't get on the air. So let's get on the air and make some noise. Our Crying Towel Meeting went very well with Steve N3FTI getting top honors, with Rick K1DS second and WALT K3BPP third. We have a building project coming up, It is a automatic band switching board which connects to your computer printer port and is supported by W3KM VHF-LOG. See info in this CheeseBits. We will need 25 people to sign-up for this project. The cost will be below \$75. for boards, relays and misc. parts. Thanks to Steve N3FTI for his design and help heading up this project. We hope to have more club building projects in the future, stay tuned. March Meeting will be HOME-BREW NIGHT bring your latest projects and share them with the club. Stay warm and dry see you in March. **73 Brian N3EXA**

Club dues are \$20/year.
Please submit yours now to our
treasurer, **Dave Mascaro, W3KM**
1603 Mink Road **Ottsville, PA 18942**

Total Logs: 61		January 2003 VHF Sweepstakes Contest										Total Club Score: 3,126,761									
Call	50Qs	GR	144Qs	GR	222Qs	GR	432Qs	GR	903	1.3	2.3	3.4	5.7+	ZQSs	Grids	TotScore					
AA2UK	285	69	225	29	89	27	103	25	44	13	62	17	28	9	17	5	23	7	876	201	374,262
WA3NUF	196	40	182	16	80	12	104	13	39	9	54	9	25	4	15	3	29	6	724	112	187,040
K1JT	184	39	202	42	80	19	107	19	31	7	37	6	18	4	5	2	664	138	167,808		
W3RJW	101	18	171	22	88	15	81	12	33	6	54	10	26	5	16	4	22	4	592	96	141,120
N3EXA	111	27	201	21	89	15	99	18	39	8	55	8	29	6	3	2	626	105	138,600		
AA3GN	108	14	160	22	72	13	82	14	35	6	35	5	31	6	19	6	25	5	567	91	132,496
WA3DRC	91	17	126	15	71	10	100	14	40	8	51	8	30	5	17	5	24	5	550	87	129,717
WA3GFZ	112	22	160	18	80	11	93	11	33	5	51	6	20	4	13	3	25	5	587	85	120,530
K1DS/R	73	13	93	9	65	7	100	10	31	4	42	4	23	3	18	3	45	16	490	69	101,844
N1XKT/R	79	12	117	10	71	7	103	10	22	4	38	4	20	3	15	3	39	16	504	69	94,944
K3IPM	261	53	192	20	56	8	72	12	15	3	25	3							621	99	86,031
W2SJ	114	24	95	12	63	8	59	6	31	3	38	5	23	4	13	2	21	4	457	68	80,580
W3OR	108	23	169	29	60	21	83	24	11	7	16	8	1	1	1	1	1	1	450	115	79,925
K2TXB			299	45			160	29			53	14							512	88	73,128
W3KJ	74	14	92	15	67	11	78	14			47	6	28	4	16	4			402	68	67,728
W3GAD	165	37	107	13	64	10	71	10	23	4	38	5							468	79	62,094
K3MFI	100	21	141	16	65	9	80	11	22	2	38	4	4	2					450	65	52,195
N3ITT	93	11	118	13	65	9	65	9	19	2	36	5	8	2			3	1	407	52	40,508
KB3XG	30	9	33	6	35	4	33	4	22	5	25	5	19	4	13	3	24	6	234	46	38,410
WA3EHD	110	24	102	13	50	6	45	5	9	2	13	2	10	2					339	54	30,780
W3KM	52	9	73	12	62	10	38	9	9	3	22	5	10	2	1	1	2	1	269	52	28,756
AA3RE	88	11	110	13	54	9	67	10	22	5	11	2							352	50	28,600
K3IUV	92	23	86	6	61	5	53	6			41	5							333	45	25,650
WA3RLT	87	18	78	11	41	6	50	6			22	6	4	2			1	1	283	50	23,750
K3TUF	142	26	88	9	25	5	45	10			8	4							308	54	21,708
KU3A	50	9	100	13	44	9	49	9			19	4							262	44	18,128
K3GNC			113	18			75	13			33	5							221	36	14,220
W3SZ			87	14	9	2	52	8			20	5	10	4					178	33	12,177
WA3YUE	47	16	46	9	14	1	41	4	7	2	17	2	4	1					176	35	11,585
KA3FQS	63	12	81	8	57	5	56	5											257	30	11,100
NE3I/R	43	6	77	6	39	5	49	7									7	5	215	29	10,208
N3PLM	64	8	57	5	38	3	35	4	12	1	17	2	3	1					226	24	9,768
KB3BBR	42	7	85	6	45	4	39	2			11	2	2	2			1	1	225	24	8,712
W3IIT	69	14	70	7	37	4	38	5											214	30	8,670
WA3U			87	13	41	8	54	10											182	31	8,587
K3IB	33	7	115	23	36		7												184	37	8,140
K3DMA	38	2	85	6	45	4	39	2			11	2							218	16	5,360

Continued and Multi-ops on p11

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

SUBSCRIPTION RATE: \$16.00 PER YEAR (USA)
 \$20.00 PER YEAR (CANADA)
 \$10 PDF only \$24.00 PER YEAR (ELSEWHERE)

We operate on a .PDF exchange basis with other non-commercial publica-
 tions. Anything that is printed in CHEESE BITS may be reprinted in a not
 for profit publication, unless stated otherwise, provided proper credit is
 given. Deadline for articles and swap-shop is the monthly meeting date.
 Non-commercial swap-shop items free of charge.

Pack Rat Web Site: <http://www.ij.net/packrats>

SUBSCRIPTION/ADVERTISING MANAGER:

Bob Fischer, W2SJ 7258 Walnut Avenue, Pennsauken, NJ 08110
 (856) 665-8488 bobw2sj@prodi.gy.net

EDITOR:

Rick Rosen, K1DS 206 Kimberton Drive Blue Bell, PA 19422
 (610)-270-8884 rick1ds@hotmail.com

CLUB TREASURER:

Dave Mascaro, W3KM 1603 Mink Road Ottsville, PA 18942
 (215)-795-2648 dmascaro@motorola.com

TRUSTEE OF CLUB CALL - W3CCX

Ron Whitsel, W3RJW
 (215) 355-5730 W3RJW@aol.com

PACKRAT 222 MHZ REPEATER - W3CCX/R

222.98/224.58 MHz, Churchville, PA

OFFICERS: 2001-02

PRESIDENT: N3EXA Brian Taylor n3exa@enter.net
 VICE PRES: WA3GFZ Paul Sokoloff dogfaces@home.com
 CORRESP. SEC: WA3EHD Jim Antonacci antonacci@worldnet.att.net
 REC. SEC: WA3AQA Walt Zumbach wzumbach@bellatlantic.net
 TREASURER: W3KM Dave Mascaro, dmascaro@motorola.com
 QUARTERMASTER: K3IUV, Bert Soltoff, soltoff@usc.com.com
 DIRECTORS:

K1JT (1 Yr) Joe Taylor joe@puppsr1.princeton.edu
 WA3NUF (1 yr) Phil Miguez
 WA3DRC (2 Yr) Ed Finn
 AA3GN (2 Yr) Joe Landis

COMMITTEE CHAIRMEN

January Contest AA2UK
 June Contest: N3ITT 610-847-5490
 HAMARAMA: WA3DRC
 VHF Conference: KB3XG 610-584-2489
 Awards Chairman WA3GFZ 215-884-3116

PACKRAT BEACONS - W3CCX/B

FM29w Philadelphia, PA
 50.080 144.284 222.065 432.295 903.071 1296.251 MHz
 2304.037 3456.220 5763.190 10,368.140 MHz (as of 3/1/01)

MONDAY NIGHT NETS

TIME	FREQUENCY	NET CONTROL
7:30 PM	50.150 MHz	WA3EHD/K3EOD
8:00 PM	144.150 MHz	N3ITT
8:30 PM	222.125 MHz	W2SJ/N3EXA
8:30 PM	224.58R MHz	W3GXB
9:00 PM	432.110 MHz	W3RJW FN20le
9:30 PM	1296.100 MHz	WA3NUF FN20le
10:00 PM	903.125 MHz	AA3GN FN20ig
10:30 PM	2304.085 MHz	W3KJ, & go to 3.4G & up after FN20hg

Editor's Column

I just got back from the Contest wrap-up at W2SJ, Bob's, where we saw for the first time the club success of the contest, simultaneously with the shuttle disaster. It was a sort of a somber morning. We did have confirmation of at least 51 logs that were being submitted, although there is evidence that there were 65 Packrats who were active during the contest. As usual, our host was a kind and generous provider, and the breakfast and lunch foods were enjoyed by a crowd of about 25 members. Dave, W3KM was there to do the computing, and Ben, WA3RLT got all the data to do the analysis.

Early feedback suggests that this rover team would have been better off heading south and west to the FN10,11, FM18,19, &28 grids—but we certainly had a great score from our route. Each contest will add a bit to the learning curve, and be controlled by the weather and propagation conditions.

The San Bernardino Microwave Society has introduced the First 2003 2GHz and up World Wide Club Contest for the weekend of March 15-16. (See the announcement on P9 and the reflectors) After a brief discussion with several of the club's microwave capable ops, there was some agreement on potential group participation, and it is essential that everyone who has 2GHZ and up equipment participate in order to have a reasonable activity. We also need to have some microwave rovers, otherwise, as Ron, W3RJW put it, "the contest will be over in an hour." The consensus locally is that the rules and timing selected for this activity make it impossible for northeast stations/clubs to actively compete, as most of the mountaintop locations are inaccessible until all the snow is gone, the ski season is completed and roads are repaired from winter conditions. This rover will be active for the Saturday portion, hopefully from grids FN10,11,21,20 and FM29, but a business trip starting early Sunday will limit operating time. Perhaps some of the more southern rovers (W3IY, ND3F, W3HMS) will take up the call, and some of the Rochester and NEWS gang will be active also. Perhaps we will also see a club score from some of the groups in the UK and EU or VK. The rules are similar to the 10GHz Cumulative, and skeds and station movement are encouraged. Contacts must be made over a minimum of 1Km, so that contacts between stations at the same location are not valid, unless they locate themselves 1000 meters apart. There are also power multipliers, so read over the entire rules carefully. Perhaps W3KM or one of the San Bernardino Microwave gang will come up with a software logging program for this unique activity. Let's all at least give it a try, and participate, then give feedback after the event.

I was excited to have a three page construction article from Steve, N3FTI. Be sure to take a close look at the great work he has done. If there is interest, I'm sure he can head up a group order for getting boards printed. And remember, you don't have to have all 10 bands to take advantage of this great interface.

The scores are posted, the Cryin' Towels have been awarded and folks are now thinking about upcoming contests, activity times and construction projects. The nominating committee will soon be active also, so make your officer plans known to the current officers and the committee members.

It was great to see so many newcomers and old-timers at the recent meetings. It adds some reality to our long membership list, and the reason we can continue to attract new members too.
 73, Rick, K1DS



Bob, W2SJ, neatly fits his shack into this modest space on the 2nd floor. Almost every band has its own rig

The Board of Directors on behalf of the club members, extend their sympathies to Al Sheppard N3ITT and family on the recent loss of Al's dad, ROCKY SHEPPARD KA3YVR

Important Dates and Events

Saturday, Mar 1	Microwave Activity Day 432 & up, use 144.260 coord	6AM-1PM
Monday, Mar 3	Microwave Activity Evening	7PM-11PM

Mondays, Mar 3, 20, 27, 24, 31	Net Nights	Start @7:30PM, see p2

Thursday, Mar 13, 8PM	Board of Directors	QTH of K1JT, Princeton, NJ

Saturday & Sunday March 15 & 16	2GHZ AND UP WORLD WIDE CLUB CONTEST SPONSORED BY THE SAN BERNARDINO MICROWAVE SOCIETY See P9 for full details	6AM local to Midnite local each of the dates

Thursday, Mar 20, 8PM	Club Meeting	Southampton Free Library

Visitors Welcome
Get your project ready for

Homebrew Night

This is your opportunity to bring a new or old homebrew project to show and describe to the club.

Judges will award recognition in various categories.

Saturday & Sunday, March 29 & 30	Timonium Hamfest and Computerfest more info at: http://www.gbhc.org/	Tailgating starts 6AM
-------------------------------------	---	--------------------------

2003 Spring VHF/UHF Sprint International Contest Sponsored by East Tennessee DX Association

ETDXA is pleased to announce the 2003 Spring VHF/UHF Sprints. Everyone is encouraged to participate, even if only in a small way. The rules have intentionally remained simple, and yes, they do encourage rover and microwave operation. The contest is intended for single operator, single transmitter entries, however if one wishes to introduce a newcomer to weak signal vhf/uhf operations, the sponsors of the contest reserve the right to allow such entries, if identified as such. We are continuing to refine the process, and we appreciate all the support, which has been shown. ETDXA Certificates from 2002 are in the process of being mailed now.

The official rules for 2003 will be found on the ETDXA Web-site: www.etsdx.org/vhf.htm

I wish you the very best of VHF! 73, Jeff Baker WU4O

The 144 MHz Sprint will be from 7 PM until 11 PM local time on Friday (April 4, 2003).

The 222 MHz Sprint will be from 7 PM until 11 PM local time on Saturday (April 12, 2003).

The 432 MHz Sprint will be from 7 PM until 11 PM local time on Saturday (April 19, 2003).

The Microwave Sprint (902+) will be on Saturday (May 3, 2003) from 6 AM until 1 PM local time. This includes all Amateur frequencies above 902 mhz. Please include band data in summaries and logs. NOTE: use of Liaison Frequency is encouraged.

The 50 MHz Sprint will be from 2300Z Saturday until 0300Z Sunday (May 10 & 11, 2003).

Count one point for each complete QSO. Multiplier: The total number of different grid squares worked. Final score: Multiply QSO points by multipliers. Each Sprint is scored separately.

Rovers score same, but please segregate logs by grid. Scoring for Rovers is cumulative, total # of grids worked from each grid activated multiplied by total # of stations worked in each grid activated.

Microwave Sprint scoring is cumulative, total # of grids worked from each band activated multiplied by total # of stations worked in each band activated

Logs (paper, ASCII, xls) must be submitted no later than four weeks after the closing of each event. Only submitted logs are eligible for awards.

Certificates for top three scores in each Sprint, Certificate for top three scores in Rover Category.

Submission of Logs: E-mail logs to: springsprints@etsdx.org

Paper Logs to: ETDXA / WU4O Jeff J Baker 8218 Foxworth Trail **Powell, TN 37849 USA** Questions ? Email springsprints@etsdx.org

Jan 2003 VHF SS Contest Reports

I think this year's January contest was hampered by the marked notice of a number of regular stations not being on the air. I am sure a lot of this was caused by the extreme weather conditions. Also a number of rover stations were not able to get to their planned rover sites and still a number did not venture out at all. I also noticed a number of northern stations were plagued by antenna damage caused by ice and wind which hampered their operations.

From my own station I noticed a marked decline in the number of stations to the northeast and south of me, thereby cutting down the number of grids I usually work. I also missed the great opening on 6 meters during the 3 hours of the football game. I feel the ARRL MUST RECOGNIZE this and make arrangements NOT TO HAVE A CONTEST when there is a high stakes game on TV, especially when 6 meter operators are more likely to have neighbors complaining about their radio activity, as was in my case.

My other problem was I had arranged my station for a 3 man operation and at the very last minute my third and relief operators decided not to come and operate, making it difficult to run the station as effectively had it been set up for a 2 man operation. I was able to avoid Murphy as all of the equipment operated almost flawlessly, with the exception of the 2 operators. Otherwise it was an interesting contest and one I will remember for a long time.

Respectfully **AI TEAM K3EOD**

Just wanted to let everyone know I was forced off the mountain during the contest by a generator failure. About 8PM my generator shut off, checked the fuel but there was plenty. Further inspection showed gross amounts of oil under the generator, filled it back up with oil. Started it, but saw oil running from the motor so I shut it down. The outside power outlet at the site is not capable of running my heaters, radios, amps, etc, and since it was 8 deg. F. I had to have the heaters running. Packed what I could and left the rest till morning, then headed home! This just was not my weekend! **73 Steve, N3FTI**

Rover team K1DS & N1XKT started in FM29. Was able to run all the bands with most of the contacts, but Leon didn't join me until a bit later, as he had work until 2PM. That was a point lead that I never lost during our own internal family competition. He gets to run up his QSO totals while I do the driving. One local visitor attracted by our van, showed up with his 2 band walkie and we worked him for a few contacts. We stopped at home for a quick dinner on the way to our new spot in FN20, which proved to be one of the best opportunities of the contest, since we were in prime operating position for the best part of the band activity hours. In addition, it was well clear of obstruction and traffic, and we were able to run all of gang on the microwaves from there also. It was cold, but we stayed in the van with the motor running and heat on for the entire time. Leon laid his head down for a while for a bit of a nap, and again, I added on the QSO points while he snoozed. We made it home for 1AM and slept til 7. (yeah, I know, we slept too long!)

After a quick breakfast we headed north to FN30, a great spot along the Palisades Parkway and spent a few hours there, but heard and worked few Packrats. We pushed further north to FN31, but again, not an ideal QTH for the microwaves, and rapidly headed up what looked like a very promising mountain ridge. As we climbed up the road, the vistas were great, and Leon kept making more QSOs without me, but we were unable to find a suitable parking place to pull off the road there. We'll be doing more map reading to find a spot there in the future.

Across to FN21, where we pulled off the NY Thruway into a shopping mall parking lot that had a good high vantage position. We completed several more QSOs with some of the grids we hadn't worked before in New England, and even added sev-

eral more microwave QSOs. Still, few Packrats, and never found WA2FGK for the FN21 multipliers on the micros. We did have a visitor to the van...an elderly woman came up and asked if us K-Mart was still open! We nested the antennas and were just about to get underway, when Leon was very quite with his head down, and said, "I don't think you want to move yet." I was wondering if he detected an electronic problem, a mechanical issue, or just wasn't feeling well. The he exploded into the mike, "K9...this is N1XKT/R" as 6 meters opened. Even with the 6m dipole nested close to the van, we rapidly added several new mid-west grids to each of our logs. He even worked one KD5 station three times as we crossed back from FN21 thru FN31 and into FN30 again.

We finished off back in the home grid, FN20, trying to catch all the 'rats that we still needed on several bands, making QSOs until the very last minute. We achieved our individual and cumulative best scores, and in addition, set one very novel record: not one stop or visit from the police or state troopers!

Well, this is the fun report—the scores will all be revealed and posted soon, and the 'Cryin' Towel' story will also be told. VHF SS 2003 for this rover team is now history. **73, Rick & Leon**



I know this sounds a little crazy, but I drove my van almost 7,000 miles (from California to the northeast and back) in the middle of a cold, snowy winter just to rove in Pack Rat country during the 2003 January VHF contest. My van-mounted radio station worked fine during and after the long drive, but almost nothing else went right. There were near-record cold temperatures during the contest. Several of the best sites I had in mind were snow-bound. I spent nearly half of the contest looking for sites that weren't snowed in. I missed easy multipliers by not being on the air when rovers were there. I even missed some nearby grids that had major activity all weekend long. I failed to tap the potential of bands like 903 and 1296. And I had no gear for any band above 1296. About the only part of the contest that went really well was the six-meter E-skip opening on Sunday afternoon. Luckily, as it turned out, my intended site in FN20, Sheep Hill near Boonton, NJ, was snowed in (I did make it to the top after the contest), so I operated at an overlook on I-80 near Hackettstown. That site is blocked in several directions, but it has a good shot to the west--something Sheep Hill lacks. I did okay for a rover with a 3-element Yagi during the band opening (I had 52 multipliers on six). I suppose that made up for some of the other scoring opportunities I missed, but my score won't set any records: I activated only five grids and compiled a score of only about 90K.

Several people asked about the station setup. I was using a Yaesu FT-736R on 144, 222, 432 and 1296 MHz, with an FT-100D on 6 meters and another FT-100 driving an older SSB Elec-

tronics transverter on 903 MHz. When the generator (a Honda EM-3000C) was running, I used vacuum tube amplifiers on 6, 2 and 222 (a pair of 3-500Zs on 6 with push-pull 4CX250Rs on 2 and 222). I had a 150-watt solid state amp on 432 and a DEM 70-watt amp on 1296 (built by Bill Olson, whom I first met at the Pack Rat picnic in 1977). Without the generator, I had two batteries online to run solid state amps on all bands. The antennas are all mounted on an aluminum mast that is hinged at the roof. You pull down on the bottom of the mast to raise the array. The mast tilts onto a G-800 rotor with one of its two brackets removed. When the second bracket is bolted in place, the entire system is ready to go. All antennas travel mounted on the mast except the six-meter Yagi, which rides in a cradle on the roof. It takes about five minutes to set this all up at each site--maybe a little longer if it's REALLY cold!



N6NB/R
Off I-80 near
Hackettstown,
NJ

VHF contest in the northeast during the 1970s, I said there was a real learning curve in this game. It took me several contests back then to figure out the basics of operating a VHF contest in the northeast. So I left a van in the east and flew back and forth for contests. Eventually I got the hang of it and won a couple of contests from eastern mountaintops. This time I didn't leave my van and fly home, but I definitely intend to try this again. The learning curve may be even longer today than it was in the 1970s (due to the grid square multiplier system and the advent of roving--and maybe due to my advancing age), but I intend to keep trying. Why? Because VHFing in the northeast is FUN. There's nothing like it any where else in North America, in my opinion. It was a pleasure to reconnect with old friends and make new ones during the January 2003 contest. It's nice to see the Pack Rats still going strong after nearly 50 years--and to reconnect with some of the guys I met and worked when I operated in Pack Rat country, visited some Mt. Airy activities, and was the speaker at a club meeting 20+ years ago.

73-Wayne Overbeck, N6NB

Given the limitations with my attic antennas and modest power, I decided to bring the grids closer to me by attempting a more determined rover effort this year. So, I pulled the DEM 1296 transverter and loop yagi from the attic and began constructing a mobile mast. Visiting the local Sears hardware store I obtained a 1&1/4 inch metal flange, 6 inch section of threaded pipe, a 3 foot section of 1 inch OD PVC and two 5 foot sections of 3/4 inch pvc. I cut the 5 foot sections in half and glued male and female pvc adapters to the ends so everything would screw together. The 3 foot section of 1 inch PVC fit loosely into the pipe. The pipe screwed into the flange which I mounted onto a board that I could drive over with the SUV. Theory is fine, but 3/4 PVC is too flexible. It bowed too much. So, I switched to two additional 3 foot sections of 1 inch PVC and added the adapters. Keep in mind that my antennas consist of short 3 element yagis on 2 & 432 and a 14 element looper on 1296. I constructed a "loaded" 6 meter dipole by wrapping 12 gauge insulated wire around a 4 foot wooded dowel and just stretched and trimmed it using an swr meter. My rig consisted of an IC 706, Alinco DJ 280 5w Ht with 3/4 mag whip for 220 and the DEM 1296 Xv ert er and Yaesu FT 290r for 1296. Unfortunately, I reversed the polarity when connecting the transv ert er to the battery and that eliminated 1296 in a "snap." (2n222 Transistor Q5 disintegrated). My plan was to start in FN11 for the first few hours, go over to FN21 for the activity hours, head to FN10 Sunday morning and then come down to FM29 and FN20 Sunday afternoon and evening. My initial locations were in the vicinity of Hazleton, Pa as all 4 grid squares meet there. I found a spot where "Old Airport Road" crosses the Nescopeck Mountain near St. John's just above the Interstate 80 and 81 interchange. There was a place I could pull off and I got set up by 2:30 PM. Unfortunately, I screwed all the masts together with the premounted antennas before I realized that I had not placed the board base under the tire. It's difficult to move the car while you are holding a 12 foot mast in your hands. I managed to find a tree to lean everything up against while I put down the base and moved the SUV. Of course, the ground was snow covered and the end connectors naturally couldn't wait to dip into that. Nonetheless, I managed to work 22 Qs over a 2 hour period including W3RJW, WA3NUF, W0RSJ and K1JT. Most of the grids were FN 11, 20 and 21 although I did catch K3EAR on 6 and 2. The site is not optimum. (When K1DS says something like "I think I have been there." It is a good indicator that a site may not be a memorable rover location.) I had also never been to the location before. This led to a short initial delay while I made some wrong turns. I next went to a nearby site in FN21. My wife and brother-in-law own land on a mountaintop just north of Hazleton in Pardeesville. Unfortunately, it had snowed in Hazleton a few weeks before and the driveway was still blocked by frozen plowed snow. (There seems to always be snow and pot holes in Hazleton.) This required improvisation as I could not get off the street with the base mount under the car. I improvised placing the mount on the snow bank next to the SUV and weighted it down with heavy folding chairs. 26 Qs in about 2 hours. (You will begin to notice a trend here in operating time versus physical exhaustion and mental frustration.) Any way, AA2UK, AA3GN, W0RSJ, W3GXB, WA3DRC and N3ITT got into the log. An interesting phenomenon occurred when two rovers passed through there region presumably on Interstate 81. (Apparently there is a variety of rover that consists of tag teams that operate on the move working each other and who ever is around as they cross into grid squares.) At about 8 PM one of the locals came by to interrogate me about what I was doing and at about 9 PM I finally got some dinner at a local restaurant and then went to bed. Sunday morning ops were from the Hazleton Penn State campus in the corner of FN10. K1DS told me where to check in with Security, which I did and the guard waved me by without a hitch. This is a good location. (Again, the more detail Rick relates about a given rover site, the more likely you are to find success.) 31 Qs in 2 hours including, W0RSJ, N3NGE N3ITT, WA3DRC, WA3NUF, K3IPM, K3IB, K2TXB, WA3GFZ and W3HMU. Here, is probably a good point to discuss the strategy of operating from the Hazleton

Cont'd on p10

A Universal LPT Interface for VHF Log

The ability to control my portable contest station from the logging computer keyboard has been a priority from the inception of the project. There are many contest logging programs that incorporate LPT BCD encoded outputs for band switching. These included CT, NA, VHF Log and many others. Although these are all fine programs none of them is designed specifically with the VHF contester in mind, except VHF Log.

VHF Log (www.qsl.net/w3km) is a full featured logging program created by fellow Pack Rat Dave Mascaro, W3KM. The program has many features that set it apart from other contest programs; such as a digital voice keyer, a Pack Rat activity hour reminder, and (my favorite) the ability to control an external band switch via the LPT port. While many other logging programs offer the ability to control an external band switch, Dave's program is geared toward VHF contests and provides BCD coded outputs for all bands from 50 MHz to 10GHz. Table 1 provides the logic of the outputs provided by the computer's LPT port, along with a pin out for the LPT port.

(Schematic on P8)

Table 1

Band (Mhz)	A	B	C	D	
50	0	0	0	0	
144	1	0	0	0	
222	0	1	0	0	1 = High (>3.6v)
432	1	1	0	0	0 = Low (<3.6v)
903	0	0	1	0	
1296	1	0	1	0	A = LPT Pin 2
2304	0	1	1	0	B = LPT Pin 7
3456	1	1	1	0	C = LPT Pin 8
5760	0	0	0	1	D = LPT Pin 9
10368	1	0	0	1	Common = LPT Pin 15

Although there may be more, I know of only one commercially made band switch, the Top Ten box. Although the Top Ten Box is a very well designed interface, it was designed with the HF station in mind. Among its shortfalls are its six-band limitation (I need to switch 10 bands!), the lack of "dry" relay closures, and the absence of buffered BCD outputs. My existing system required both NO, NC and isolated BCD outputs to control my existing equipment. After speaking with other amateurs; I realized that a more flexible interface would be a welcome addition.

This paper describes a universal interface that provides decoding of the BCD outputs to decimal DPDT c-form relays, along with buffered BCD outputs that are also DPDT c-form.

The circuit is very simple! ISO1 – ISO4 provide a level shift from the ~5v LPT output to the +12 (or 13.8V) used by the interface board. ISO1 – ISO4 could be four discrete devices, but a single PS2505-4 (which has four opto-isolators in a single 16 pin DIP package) does nicely! Transistors Q1- Q4 along with relays K1 - K4 provide the buffered BCD circuits to drive my microwave IF switch, while IC 1 provides BCD to decimal decoding. Transistors Q5-Q13 operate in emitter follower configuration, receiving decimal drive from IC 1 and provide voltage to drive K5-K13.

My pet peeve is any published amateur project that is not assembled on a printed circuit board! Although this circuit could be built on a perf-board, it is quicker to assemble it on a printed circuit board! The board for this project was auto-routed, tested for compliance and compiled with the help of the software program QCAD. QCAD is a commercial software package that auto routes multi-layer printed circuit boards from a CAD drawn schematic. Once the board is routed it can be printed on a standard printer or files can be generated for your favorite printed circuit manufacturer.

For the initial design, I had three printed circuit boards made from a prototype board house. I assembled two while I sent the third to Ed, WA3DCR. During the last Packrats meeting; Ed had mentioned to me that he would like to integrate the design into his station. Along with the board I sent schematics, parts layout and a complete parts list. In no time Ed had the board built and installed into his existing transverter switch box. No problems were encountered and Ed now enjoys control of his station via the keyboard.

The files for this board, including silk-screen parts placement, drill files, and solder mask are available at my website www.qsl.net/n3fti/vhfloginterface. If you have any questions or run into any problems please send me an email at

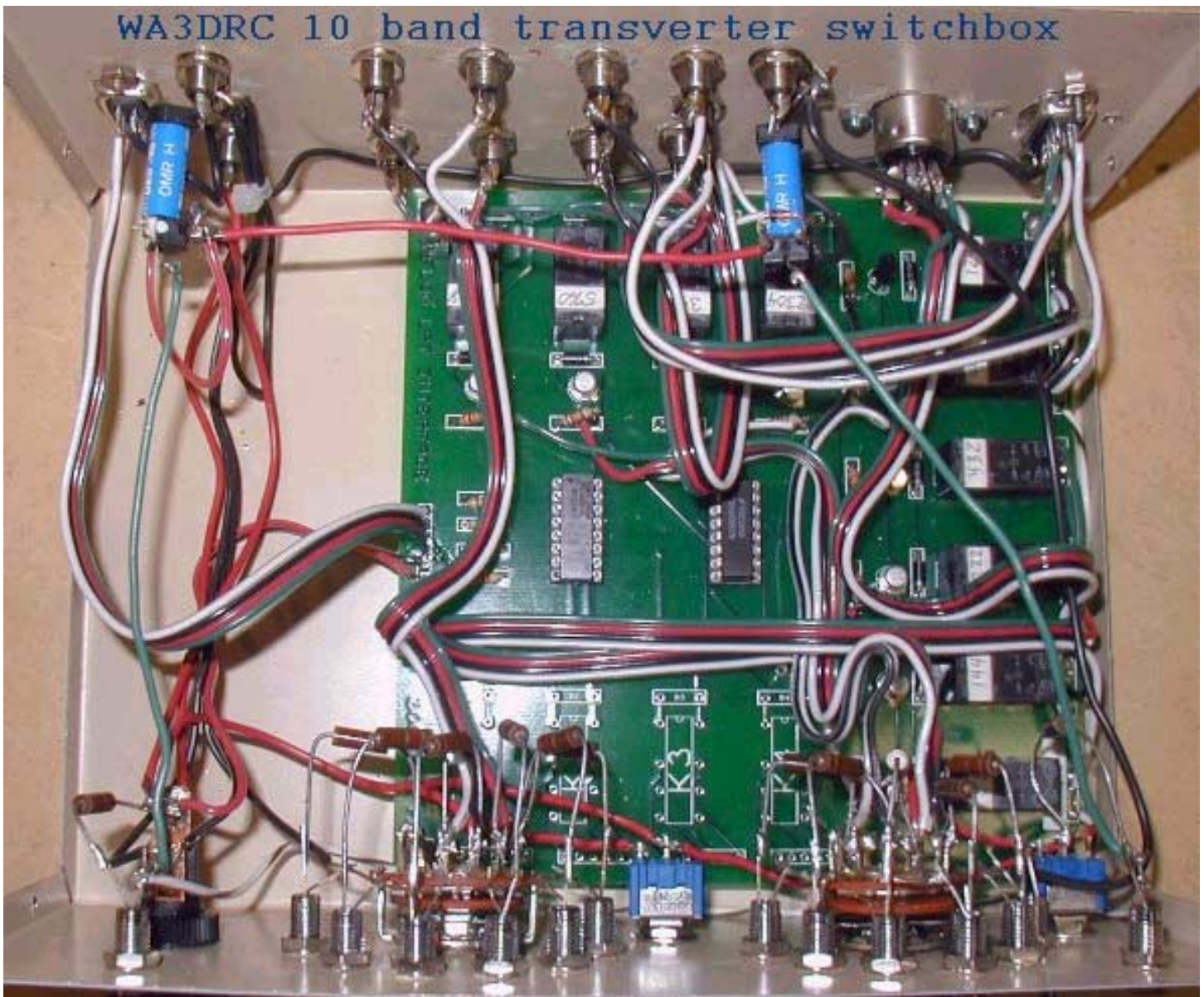
n3fti@yahoo.com.

73 Steven Kerns, N3FTI
(Schematic on P8)

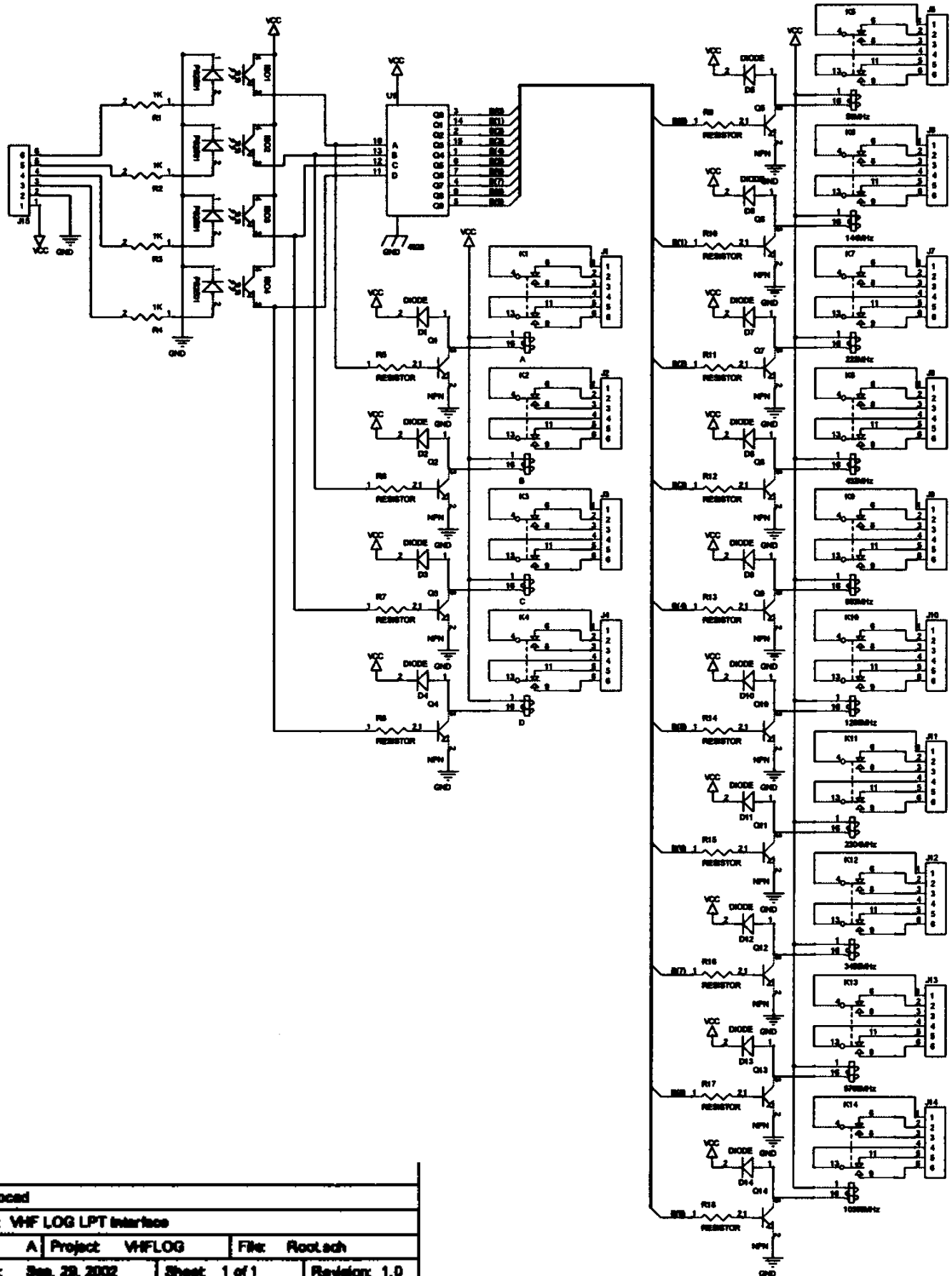
Parts Listing for VHFLOG LPT Interface

All parts are available from Mouser Electronics. Orders can be placed on-line at: www.mouser.com or via phone at 800-346-6873. There is no minimum order and they accept credit cards as payment.

Part	Quantity Needed	Mouser Part Number	Description	Price Each
Q1-Q14	14	610-2N2222A	2N2222A NPN Transistor	.39
D1-D14	14	625-1N4004	1N4004 Rectifier	.04
R1-R4	4	291-470	470ohm/1/4w Resistor	.70/ per10
R5-R18	14	291-22K	22Kohm/1/4w Resistor	1.40/ per 20
U1	1	512-CD4028CN	CD4028CN IC	.48
K1-K14	14	653-G5V-2-DC12	DPDT 12V Relay	2.82
ISO1 – ISO4	1	551-PS2505-4	PS2505-4 Opto Isolator	1.56
(ISO1-ISO4 is one device with 4 opto-isolators inside)				
Misc:				
IC Sockets	2	575-199316	16 Pin IC Socket (Schematic on P8)	.38



(Schematic on P8)



Microcad			
Title: VHF LOG LPT Interface			
Size: A	Project: VHFLOG	File: Root.sch	
Date: Sep. 29, 2002	Sheet: 1 of 1	Revision: 1.0	

New Contest for Microwavers!

For some time San Bernardino Microwave Society members have been mulling over a contest that would encourage activity and level some of the contest playing field. Thanks to N6RMJ and committee a contest has been designed that we hope does that. The contest would involve activity from 2ghz and up and center around club activity. Members tally up their scores and add them up with other member's scores to make up a club score. The final score is then submitted in one of three categories based on club size. Awards will be issued to clubs in the following three categories: Clubs with 2-10 members, 11-50 members, and 51 and above. Yes, you can make up a club of two and call yourselves whatever you like. (However, we don't encourage words in the club title that will have to be replaced with an * or @.) The intent is to give isolated stations, roving groups and others a chance to win in a special category. This is not meant to break up a large club into 25 small clubs. We had quite a discussion about this aspect and felt that we should leave it up to good sense and practice. For instance, several of our members have extensive roving stations on multiple bands. Should they enter as a separate club or part of SBMS? We felt that ordinarily if you are a member of an established club you should enter under that club. However, if you are not a current member of a club, either join one or start your own. Club size minimum is 2. Two good things could happen, you could start a club that would grow or you could all join some other club. (In the early days of radio it happened a lot.) However if you and several others want to go out roving as a separate club and call yourselves "The Microrovers Club" you can do that too. A minimum club is a contest submission from two operators who have separate stations.

This is the first time out for the event and we look forward to your comments to improve it. 73, Doug Millar K6JEY SBMS President

2GHZ AND UP WORLD WIDE CLUB CONTEST 2003 SPONSORED BY THE S.B.M.S. SAN BERNARDINO MICROWAVE SOCIETY

1. Object: Worldwide amateurs work as many amateur stations in as many different locations as possible in the world on bands from 2-GHz through Light.

2. Date and Contest Period: Third full weekend of **March**. The dates are **March 15-16, 2003** Operations may take place for 24 hours total on the contest weekend. The weekend begins at 6AM local Saturday though 12 midnight local Sunday. Listening times count as operating time. Times off must be clearly indicated in the log.

3. Entry Categories: CLUBS

3.1.0 CLUBS WILL BE DIVIDED INTO 3 CATEGORIES BY AMOUNT OF ACTIVE MEMBERS

3.1.1 SMALL = 2-10 / MEDIUM = 11-50 / LARGE = 51 AND MORE

4. Exchange: Six-character Maidenhead Locator (see April 1994 QST, p 86 or www.arrl.org/locate/gridinfo.html).

4.1.0 Signal report is optional.

5. Miscellaneous:

5.1.0 Scheduling contacts is both permissible and encouraged.

5.2.0 Stations are encouraged to operate from more than a single location. For purposes of the contest, a change of location is defined as a move of at least 16 km (10 miles). A station may be reworked on each band for additional credit by either end of the contact moving to a new location.

5.3.0 Contacts may not be duplicated on the second day (that is at least one end of the QSO must be from a different location).

5.4.0 Contacts must be made over a minimum distance of 1 km.
5.5.0 A transmitter used to contact one or more stations may not be used subsequently under any other call during the contest period. The intent of this rule is to prohibit "manufactured" contacts.

6. Scoring:

6.1.0 Distance points: The distance in km between stations for each successfully completed QSO is calculated.

Distance = distance in km.

6.2.0 In making the distance calculations, a string (or ruler) and map may be used. However, calculations by computer program are preferred. Several such programs are available in the commercial market, including a BASIC program listing in *The ARRL World Grid Locator Atlas*. For purposes of making calculations, stations are defined as being located in the center of the 6-character locator sub-square (most computer programs make this assumption).

6.3.0 There are multipliers. QRP= X-3 / MEDIUM= X-2 / UNLIMITED= X-1

6.3.1 QRP 0 500MW / MEDIUM 501MW - 5W / UNLIMITED 5W AND UP

6.3.2 You must decide what power level you are going to run on each band and stay with that on that band

You can have a different power level for each band, but can only use the multiplier for that bands QSO points

6.4.0 QSO points: Count 100 QSO points for each unique call sign worked per band. Portable indicators added to a call sign are not considered as making the call sign unique.

Scoring example: DISTANCE MULTIPLIER POINTS

N6CA works N6XQ on 2GHZ AT 20 WATTS AT 10KM 10 1 10

N6CA works N6XQ on 3GHZ AT 4.9 WATTS AT 10KM 10 2 20

N6CA works N6XQ on 5GHZ AT 5 WATTS AT 10KM 10 2 20

N6CA works N6XQ on 10GHZ AT 250MW AT 10KM 10 3 30

N6XQ UNIQUE CALL 100

DISTANCE X MULTIPLIER = POINTS

ADD ALL POINTS TOTAL = 180

ADD ALL CLUB MEMBERS TOTAL TO COME UP WITH THE TOTAL FOR THE CLUB COMPETITION

ALL SCORES WILL BE SUBMITTED TO THE SBMS AS A CLUB TOTAL NO INDIVIDUAL SCORES FOR THIS COMPETITION

SUBMIT LOGS TO PAT COKER N6RMJ

N6RMJ@DIRECWAY.COM OR MAIL GOOD IN ANY CALLBOOK SINCE 1988

ALL PACKRATS, Rovers and Microwave ops on the East Coast: We are planning to operate for this activity with a focus on Saturday, March 15th, from 8AM-2PM. Calling will be on 144.260, then move your station to another freq for microwave coordination. All logs will need to be coordinated thru W3KM for a club submission. You may do best using the 10GHZ+up logging program. Let's get on!!

Joel Knoblock W3RFC

www.therfc.com

The R.F.Connection

213 N. Frederick Ave. #11WWW

Gaithersburg, MD 20877 USA

World wide shipping via FED-EX or US Post OFFICE

Tech Line 301/840-5477

Order Line 800/783-2666 All major credit cards taken

Fax Line 301/869-3680

Hours: Monday-Friday 9:30am-5:30pm Eastern

(from p5) area where the 4 grids meet. It saves time in running between the grids. However, there are mountains in Hazleton and almost all of them seem to get in the way. This is exacerbated by the fact that when you tell the other guy what grid you are in they immediately point their antenna the wrong way. So, if you like a challenge, pick locations in grid corners. By this time, I was also getting pretty tired of screwing PVC sections together and taking them apart in the cold. So, on the way back down through FN20 I used the vertical antennas on the car. Nonetheless, in 45 minutes, I quickly worked 29 Qs from the point where 309 crosses the Appalachian Trail between Tamacqua and Allentown. En route I stopped for laser Qs with N3ITT, W3KM, and N3EXA. At this point, the NFL complicated matters. Of course, the Eagles were in the playoffs. Unfortunately special parties were planned at the golf club to hype and watch the game. My wife loves these social events. Naturally, I had been receiving cell phone calls beginning in the late afternoon on Saturday from "well wishing" friends, "Griff, exactly what is it that you are doing up there?" "How come you're not here?" "You're going to watch the game with us tomorrow, right?"I never got to FM29. After the game, I located at an old Nike site in FN20 about a mile from KB3XG. K1DS knows the location well. 90 Qs in about 3 hours. We wrapped up with laser Qs, with K1DS, N3XKT, KB3XG and one just under the wire with WA3GFZ. Final tally, 214 Qs, 350 points, and 29 grids including the 4 grids activated, unofficial total, 10,150. To sum up, this was an informative exercise. Next year I think that I will just mount the antennas on top of the SUV or use omni directional radiators. Additionally, I am sure that it would be better to start in FM29, run everybody there, do the Hazleton sites Sunday morning and then work my way back down through FN20 to run everyone again on Sunday night. Finally, I am a life long Eagles fan, but the old Eagles were more cooperative. "In the end, the credit belongs to the man who is actually in the arena. Who's face is marred by dust and sweat and blood. Who knows the great enthusiasm, the great devotion and spends himself in a worthy cause. Who in the end, at best, knows the triumph of high achievement and at worst, fails, while doing greatly. So that his face shall never be among those cold and timid souls who know neither victory, nor defeat." ... Theodore Roosevelt. **73, Griff, NE3I**



NE3I checks out his route with a stop at K1DS on Sat AM. 1296 loop is atop a 2/432 beam combo on a PVC mast onto a plywood drive-on base. Rig is on the passenger seat.

Tidbit on Using LMR 400

LMR 400 has a bad tendency to drift internally, meaning center pins pull back depending on how the cable is secured and supported. Don't leave it too loose like for a rover set up and secure your connections - especially at the bulkhead N connectors on your antennas if you use the 400 right to the antenna. Remember, the N bulkhead is NOT water secure, i.e. water will migrate via the bulkhead center pin channel right into the coax. LMR 400 does not have the micro bead foam and it loves to suck up water. So, figure out a way to keep water from getting into your antenna connector center pin channel (we, C3i, use a silicon sealant to seal our antenna bulkhead center pin channels, its not easy but worth the effort believe me). Good luck, this is great cable if used as intended. W3IY had to replace every one of his LMR 400 cables on his rover because he didn't insure water tightness. Expensive lesson. **73, Owen**

Pre-Contest Bits

With the help of WB2ONA and Mark we were able to put up the 4' side arm at 170'. The 5GHz. and 10GHz. stuff are now well above average terrain. I noticed immediate results both beacons increased more than 20db in signal strength. I easily worked Ed, WA3DRC and Paul, WA3GFZ. I had previously tried with Paul at the lower location and we could not work. Ed's contacts with me on both bands were initials for both of us. The 5GHz. Packr at beacon is almost meter pinning and the 10GHz beacon is now S9 plus up from S2 to 3 average. I now for the first time since I moved from my old QTH in 1998 am back solidly on all 10 bands. I also improved 3 GHz. with the addition of a 50 watt solid state amplifier and new feedline. I thought I might have a few watts on 24 GHz but that will have to wait until warmer weather and delivery of a new AST 12 vdc waveguide switch. The weather doesn't look promising but I would not let that deter any efforts we as a club have planned. The last phase of my project will take place tomorrow after I close on my new home. I will be installing the FM equipment in the shack. 6 through 440 FM all running about 100 watts 6 meters will feed a ground plane at 300'. 2 meters will feed a 4 dipole array at 285' on a 6' side arm, 223 will be a gain vertical at 185' and 446 will be a gain vertical at 300'. I anticipate making many FM contacts especially during the football game who knows someone on FM "only" may get interested in contesting. I just wanted to say good luck to all in the club and any other stations that subscribe to our reflector. In closing remember this 50 plus logs and the highest club score regardless of category is my goal for the club and I will do all I can to be a part of the overall score. **73 see you in the QRM. Bill AA2UK**

Heard you calling on 2m then talking with K3TV when I was on my way out to do tower work today. Sounds like you've made some good progress. I now have waveguide up the tower for 5760. Now to get it thru the wall into the shack! I'll cut a new hole in the wall if I have to. Got too cold to pull up the 10G guide. I couldn't feel my fingers when trying to bolt up the flange at the top. I don't have quite enough EW122 to reach the ground, but at least the transverter should be a little more accessible. Thanks to W3KM for the help in the snow and for putting up with the ice I was kicking loose from above. Well we have one more weekend. It will probably be colder. Sounds like a good work party was going on at N3EXA's today - more FAA amp fixups with W3OR (and others?) Good job. Interesting re the rover site and list. Tnx for info. Are we all ready yet? :) Still warming up... **73 Joe AA3GN**

Welcome New Club Members



Sarah Kelsall, KB3BBR

At the January meeting, three new members were inducted. Shown here are two of the members, and the third, who departed prior to picture-taking drive back to E|



Tom Frederiksen, KA3FQS

is Phil Theis, K3TUF. Welcome aboard!

10GHz DX Skeds Wanted

Trying to find some "active" 10 GHz and lower weak signal operators in the Pack Rats group. These could be folks with home stns setups for the microwave bands as well as anyone who likes to "hilltop" I would like to run skeds with them from various mtn tops during the summer and fall of 2003-preferably NON-CONTEST weekends or at "worst" during the UHF and or 10 GHZ cumulative weekends. If you know of someone that might be interested have them contact me at

bunkybotts@juno.com

I have run out of stations to work in the 250 mile range and am looking to improve my DX-ability on the microwaves. The shot up the Piedmont Carolinas from Mt. Mitchell, NC as well as other prominent QTHs to your area looks very promising--on paper anyway!!! Any info you can supply will be appreciated and shared with other microwave ops in this area. **73, Bunky, K4EJQ**

Continued from front page

W3GXB	28	7	47	10	15	1	19	2	6	1	9	2					124	23	4,669		
W3KKN			66	7	16	2	16	1	5	2	22	2	4	1			129	15	4,050		
KB3HCL	52	10	32	2	36	4	23	2									143	18	3,636		
N2CG	56	19	51	8													107	27	2,889		
W3HMU	48	9	31	6	32	2											111	17	2,431		
N3FTI	18	5	20	4	7	3	10	3			4	3	1	1			60	19	1,824		
N2DEQ			75	9	10	2	17	3									102	14	1,806		
KB3GJT	17	2	62	6	3	1	31	3									113	12	1,764		
WB2VLA	27	4	37	7	12	2	11	3									87	16	1,760		
K3EBZ	17	4	11	2	10	2	9	2	2	1	9	1					58	12	1,320		
K3JJZ			55	6	31	2											86	8	936		
WA2OMY	16	6	16	3	6	3	4	2									42	14	728		
KB3IB	21	5	5	1	4	1	5	2	6	1							41	10	680		
W2UR	9	5	18	7	6	2											33	14	546		
WC2K			31	10	3	3											34	13	481		
N3EVV/R			1	1	6	1								10	2		17	4	372		
K3BPP			33	11													33	11	363		
N3AOG	5	1	9	2	7	1	8	2									29	6	264		
KA3MGB			28	7													28	7	196		
WA3AQA			29	1	17	1											46	2	126		
K3VEQ			29	3													29	3	87		
N3NGE	343	58	311	39	92	20	127	24	34	6	53	8	23	5	14	4	22	7	1019	171	326,952
w/N3NGE, W2PED, N3EVV, K3AX, K3TUF & W2UR																					
W0RSJ	400	66	350	37	111	23	141	23	19	5	28	6	11	3	9	3			1069	166	265,932
w/W0RSJ, KB3CBO, W2IX, WB2ONA, W3DFM, WD5BRP																					
K3EOD	149	21	118	18	50	11	64	10	21	5	19	3	4	2					425	70	48,090
w/K3EOD & WR3P																					

Free to Packrats and Experimenters

I have about 200 lbs of WR137 wav eguide stuff for 5.7 gig. not many straight sections, but a lot of other things like E/H plane 90 degree bends, isolators, circulators, loads, flex sections etc. If you think you may ever want to play w/ this stuff ask now. I am tired of this stuff on my shop floor and I want to get rid of it all. WA3DRC edfnn1@comcast.net

Robert A. Griffiths
Attorney at Law

KLETT ROONEY LIEBER & SCHORLING
A PROFESSIONAL CORPORATION
12th Floor, Two Logan Square
Philadelphia, Pennsylvania 19103-2736
(215) 567-7857
FAX: (215) 567-2737
e-mail: ragriffiths@klettrooney.com

C3i[®]

**Top Quality, Performance, Durability, Cost
Others make claims, C3i[®] Delivers**

Call, FAX, or E-mail or Order from our Web Site

**Our K1FO and K1JX VHF and UHF Antennas are proven
Performers in Contest after Contest @ K8GP / FM08fq**

GO WITH THE WINNERS

VISIT OUR HOME PAGE TODAY FOR MORE DETAILED INFORMATION
<http://www.c3iusa.com>

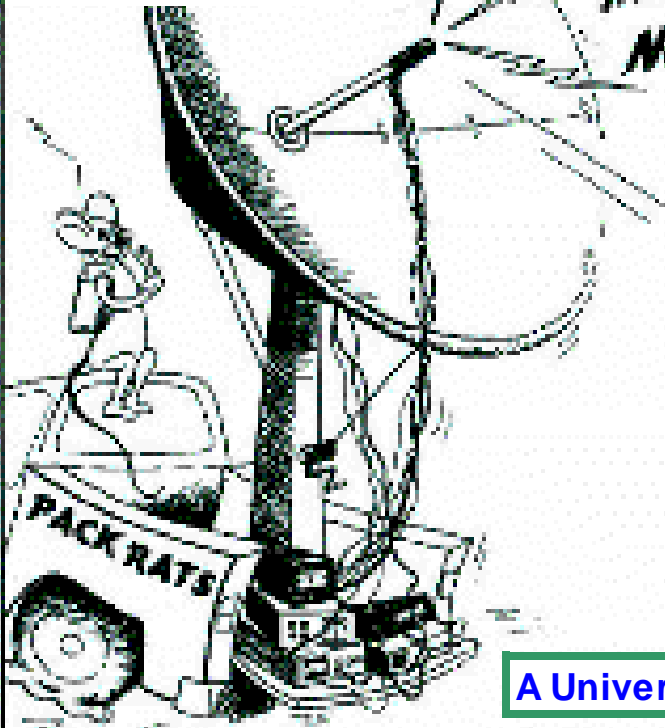
1-800-445-7747 Antennas

Owormser@c3iusa.com sruffin@c3iusa.com



CheeseBits
206 Kimberton Drive
Blue Bell, PA 19422

**MEETING
NOTICE**



March VHF Radio Madness

Saturday, Mar 1 and Monday,
Mar 3—Microwave Activity

Thursday, Mar 13, 8PM
Board of Directors Meeting

Saturday & Sunday March 15 &
16 Microwave Contest

Thursday, Mar 20, 8PM
Homebrew Night Club Meeting

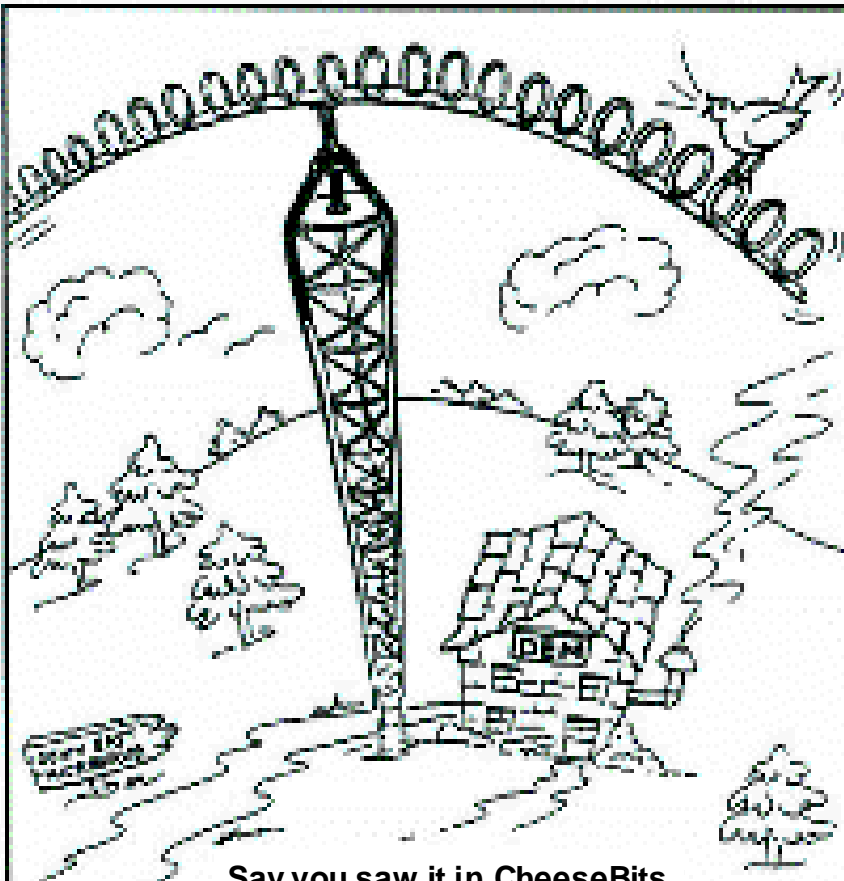
March 29 & 30
Timonium Hamfest

See inside P3 for details

A Universal LPT Interface for VHF Log see P6-7-8

FIRST CLASS

MT. AIRY VHF RADIO CLUB, INC.



Say you saw it in CheeseBits

DOWN EAST MICROWAVE

Manufacturers and Distributors
Of VHF/UHF/SHF Equipment and Parts
50 to 10,368 MHz

- Microwave Loop Yagis
- No-Tune Linear Transverters
- Linear Power Amplifiers
- Low Noise Preamps
- Coax Relays, Coax Cable, Connectors
- Crystals, Chip Capacitors, MMICs, Transistors, RF Modules

For All Equipment and Antennas:
Steve Kostro, N2CEI
954 Rt. 519
Frenchtown, NJ 08825
Tel. 908-996-3584
Fax. 908-996-3702

<http://www.downeastmicrowave.com>