

GMRA News

Green Mountain Repeater Association

Fall 2012/Winter 2013

GMRA Founding Father to Speak at Luncheon

Bill Kisse, WA3GJD, one of GMRA's founding fathers will be the featured guest speaker at this year's GMRA Annual Business Meeting and Luncheon. Bill will tell us about how GMRA got started.

Please make your reservations for the luncheon early this year.



2012 President's Letter

Oh my, how tempus fugits! It's time to put on my green eyeshade, clear my desk blotter, turn on my shaded desk lamp and take my Hewlett Packard quill in hand to write another President's letter.

It has been an interesting year. We survived a few very strong storms including one that was so bad they had to invent a fancy name for it, derecho or something to that effect. Why they couldn't just call it "big storm"? Anyway right after the storm about a million people (plus or minus a few but who's counting?) were without power, some for more than a week. It also turns out that in Northern Virginia several 911 call centers were down because Verizon's generators didn't start. Well mine did. Power went out at the .61 site. We have had standby batteries up there for a number of years. Because they were five years old we had already ordered but not received new standby batteries but happily the old ones lasted until the next day when I was able to muscle my generator into my wagon and meet Roy and Bruce up at the site. The repeater was still up and showing full output when we installed my generator. We weren't sure just how long it would run on a tank of gas but felt that a few hours at a time would be enough since the batteries would recharge while the generator was running. Happily the generator was still running when power came back up the next day. The local generator at the 88 site did start while the one at 61 did not but with the availability of the batteries and my generator BOTH of our repeaters provided 100% up-time during and after the storm.

The standby batteries at 61, totaling 540 ampere-hours, have been received and installed and Bruce Crabill, N3ZUY replaced all the other standby batteries which support the controllers and digital voice recorders at both sites.

We had complaints about apparent low-output from the 88 repeater. Bruce, at his own expense, bought a power monitor which would connect both at the output of the repeater itself and at the output of the duplexer and would connect to a laptop computer which Bruce left installed in the shack. Over a 48 hour period the computer, which logged every time the repeater came up, showed no anomalies in power output. That couldn't rule out the possibility of some power glitch sometime in the past but we have at least 48 hours of continuous monitoring with no power anomalies.

There have also been complaints of reduced sensitivity at 88. Again, with random, periodic checking the Tech Committee has not been able to isolate any problems with the repeater. Bruce and Roy, N3NGA, have made numerous trips to the site. One of the problems in sniffing out any problems with the repeater has been that the problem was intermittent and never showed when any of us was up there. We know the problem existed because Bruce, who lives out in the wilds of Bowie, was completely unable, on occasion, to bring up 88 with 50 watts and an outside antenna from home. One theory was that there was some interfering signal coming in on the input frequency which was desensitizing the repeater. I wish we could say that we found and isolated the problem but

- a) we haven't and
- b) the problem seems to have gone away

We did have to have Teltronic go up the tank and straighten the antenna at 88 which was knocked askew by the high winds of "big storm". While they were up there I asked them to examine the feedline and connectors to the existing antenna. They did so and pronounced all the connections clean and bright, free of any corrosion and they re-sealed all the connections. In any event, we have

procured a new Diamond antenna for the 88 repeater and will have it installed in the near future to rule out the possibility of a problem with the antenna.

We have a spare controller in case of failure of one of the two operating units. The problem was that the audio levels were not exactly the same at both repeaters so putting the spare in at one site or the other would require re-setting the audio levels in the controller to match that repeater. Bruce and Roy have gone to both repeater sites and re-set the audio levels the same at both repeaters to solve that problem. Bruce also redid the programming of all messages and other data for both repeaters into the spare controller so that it would not have to be re-programmed before being put into service at either location. We did seem to have a problem with one of our controllers which was quickly solved by installing the spare. Before returning the apparently defective unit to Link for repairs our intrepid tech duo found that the controller had just "lost its mind" and a master reset followed by reprogramming fixed the unit.

We have several projected tech projects on the horizon such as replacing the controllers with more modern units which will be easier to program and investigating the possibility of getting internet access at one or both repeater sites for possibly providing echo link connectivity. Please note that these are long-term projects and will not happen in the immediate future but they are under consideration. Shifting to internet control of the controllers would mean that we would probably lose the auto-patch function on one or both repeaters. Since on a busy month we average one or fewer auto-patch calls and with the proliferation of cell phones we do not see that as a big problem. When was the last time you used the auto-patch?

Our repeaters are probably 30 or more years old and we have absolutely no plans to replace them. They are both Motorola Micor units which have proven over the years to be almost "bullet proof". They soldier on and on and we have a bunch of spares in Roy's garage. There are nice shiny new repeaters on the market which are smaller and more compact with all kinds of nice whiz-bang features and which cost thousands of dollars. Let's see, what would they do for us? Well, they'd put out signals on 146.610 and 146.880 MHz. Golly, don't we have units that do that now and have been for years without failure? Hmmmmm.

GMRA announced a \$500 scholarship grant for this year by email several months back. The award will be made at the GMRA Annual Meeting and Luncheon which, as it has for many years now, will be held on the first Saturday in December at the same Knights of Columbus hall in College park. More on that elsewhere in the Newsletter. Also, election of officers will be held then, more on that elsewhere also.

73,

Paul Freirich W3HFA
President. GMRA

Repeater Power Level Map



In the above map, we show the test sites where a RF signal levels were measured recently to give us an idea of our repeater coverage. At each test site, an attempt was made to key up each of our repeaters and to record the signal level received. The signal level was measured using a Rigol DSA815 Spectrum Analyzer connected to a Diamond NR770HBNMO (1/2 wave 2M) antenna. The repeater controllers were programmed to issue a 15 second 1000 Hz tone via a special command. The date/time, GPS coordinates, description

of location, and the signal levels (in dBm) were recorded at each test site. In the map above, each test site is numbered and the following table gives the results for each site:

Num	Location	61	88	Num	Location	61	88
1	Laurel, Old Country Buffet 198/197	-80	-70	53	Rockville, Rt 355, Federal Plaza, Silver Diner	-87	-84
2	Outback, WSSC 198/95	-62	-54	54	Rockville, Montrose/270, Tower Oaks	-104	-98
3	Laurel, Bob Evans, 198/Parkway	-84	-64	55	Rockville, 270/Shady Grove, Shady Grove Plaza	-102	-92
4	Laurel, Dennys, Rt 1/Montgomery	-85	-72	56	Darnestown, Rt 28/124, Liberty Gas	-99	-102
5	Laurel, Main Street, Post Office	-85	-76	57	Kelley Farm Dr/Berryville Rd	-101	-93
6	North Laurel, Rt 1/Past 32, Cazabe Restaurant	-84	-75	58	Rt 190	-99	-91
7	North Laurel, Rt 1/175, Arbys	-91	-91	59	Rt 190/Riverwood	-105	-97
8	Laurel, Rt 1/Cherry, Lowes	-79	-66	60	Rt 189/MacArthur Blvd	-98	-89
9	Beltsville, Murkirk	-69	-57	61	MacArthur Blvd/Valves	NA	-120
10	Beltsville, Rt 1/Powder Mill, Marks Electronics	-65	-49	62	Glenn Echo Park	NA	NA
11	College Park, Rt 1/193, Pizza Hut	-56	-58	63	DC, Sibley Hospital	-97	-110
12	Greenbelt, Greenway Pl	-74	-40	64	DC, Livingston/42nd	-79	-85
13	Greenbelt, Water Tower	-59	-14	65	DC, Rt 29/Peabody	-78	-71
14	Crofton, Rt 3, Shoppers	-84	-86	66	Takoma Park, Cedar/Carol	-68	-74
15	Crofton, The Village, M&T Bank	-86	-84	67	Langley Park, Rt 193/650	-67	-77
16	Rt 97, Exit 10 Sign	-91	-108	68	Rt 650/495, Safeway	-74	-69
17	Rt 100, Just after merge	-97	-88	69	White Oak, Ruppert/Harper	-79	-76
18	Arundel Mills, Golden Corral	-98	-92	70	Rt 29/Mussgrove	-71	-68
19	Rt 193/450, Franks Nursery	-68	-80	71	Rt 29/Gorman	-94	-100
20	Bowie, 450/Race track Rd, Walgreens	-85	-80	72	Columbia, Columbia Mall	-93	-82
21	Bowie, Yorktown/Yeadon Ct	-88	-88	73	95/32	-95	-91
22	Bowie, 450/3, Mobil Air Pump	-98	-93	74	Rt 197/Old Laurel Bowie Rd	-97	-89
23	Bowie, Forest Dr	-87	-101	75	Odenton, Rt 175, Odenton Fire Dept	-99	-117
24	Bowie, Rt 3/Excalibur, Ruby Tuesday	-87	-92	76	Suitland, Rt 637/Stanton	-79	-119
25	Bowie, Rt 3/214, Pizza Hut	-81	-86	77	Fort Washington, 210/Fort Washington, Exxon	-107	NA
26	Rt 214/193, Sunoco	-80	-99	78	Marshall Hall, Boat Landing	-88	-101
27	Rt 214/Morgan Blvd, Hard Wood Carpet	-82	-94	79	Rt 223@10800	-101	-97
28	Palmer Park, Ray Lenord Ct	-57	-88	80	301/Rosaryville	-97	-110
29	Bladensburg, Rt 201/Lawrence St	-54	-81	81	Greenbelt, Greenway Shopping Center	-62	-60
30	Bladensburg, 56th Pl/Donovon Pl, Water Tower	-33	-66	82	Greenbelt, Breenbriar, Mandan/Hanover	-70	-56
31	Cheverly, Old Repeater Site	-40	-81	83	Greenbelt, 193/201, Nationwide	-58	-44
32	New Carrollton, 450/495, IHop	-69	-70	84	Greenbelt, Metro Kiss&Ride	-73	-40
33	Forestville, Rt 4/495, Marlow Sign	-73	-85	85	Beltsville, 201/Sunnyside	-84	-43
34	National Harbor	-88	-107	86	BARC, Beaver Dam/Sheep	-74	-45
35	Clinton, Rt 5/Kirby, 7-11	-84	-99	87	BARC, Beaver Dam/295	-79	-60
36	Brandywine, Rt 5/301	-91	-102	88	BARC, Soil Conservation	-71	-58
37	Waldorf, Palmetto Ct	-111	NA	89	DC, N Capitol/Evarts	-76	-94
38	Upper Marlboro, Rt 3/Marlboro, Arbys	-86	-109	90	DC, Capitol, Pennsylvania Parking Area	-75	-97
39	Davidsonville, Rt 214/Riva	NA	-103	91	DC, Georgetown, M/29th	-97	-100
40	Harwood, Rt 2/Harwood Rd	-89	-101	92	DC, Hains Pt	-74	-111
41	Parole, Old 450, Home Depot	-95	-94	93	Alexandria, 1/Duke	-89	-114
42	Crownsville, Rt 178/Haven, Lures Bar and Grill	-90	-99	94	Alexandria, 1/Belle View, Roy Rogers	-89	-102
43	Old 450/St. Stephen's Church Rd	NA	-104	95	Rose Hill, 6020 Rose Hill Dr, McD	-84	-94
44	Burtonsville, Rt 198/29, Cheeburger Cheeburger	-75	-71	96	Annandale, 236/617, CVS	-90	-97
45	Rt 650/Clifton Brook	-101	-86	97	Arlington, 2nd/Courthouse	-82	-100
46	Olney, Rt 108/Norwood, Olney Theater	-97	-100	98	Tysons Corner, 7/Chain Bridge, Microwave Tower	-84	-89
47	Bowie Mill Rd/Willow Hill	-97	-102	99	Wheaton, 97/Arcola	-91	-74
48	Montgomery Village, Centerway/124, Denny's	-109	-104	100	Spencerville, 28/Between Norwood and 650	-93	-82
49	Gaithersburg, Rt 355/Mont Fairgrounds, ToysRUs	NA	-105	101	Damascus, 108/124, M&T Bank	-99	-90
50	Gaithersburg, Rt 355, Presbyterian Church	-100	-95	102	Baltimore, Eastern/Harbor Magic, Pier 5 Hotel	-97	-95
51	Rockville, Rt 28/Monroe, Fleet Mgt Services	-83	-85	103	Baltimore, 40/Highland, McD	-101	-100
52	Rockville, Rt 355, Cong N Rockville Ale House	-103	-89				

Levels are in dBm and entries marked "NA" indicated that the given repeater could not be raised at the given site.

Antenna Work at 88 Site

On October 17th, we temporarily replaced the existing Decible 4-bay folded dipole antenna array, with a Diamond X510HDN. The goal of this exercise is to see if the reception issues that have been noted on the 88 site might be related to the existing antenna. Also, it was desired to see how an omnidirectional antenna would compare with the existing antenna's northern orientation.

The existing antenna was moved to an empty mount next to its original position. A Diamond D3000N Discone antenna was also installed to provide us with a receive antenna at the site that may be used to help track interfering signals. New coax was run to the old antenna and the discone.



Jim, WI3N and Mike, W3MC installing new antenna



Mike, W3MC installing discone



Jim, WI3N next to the old and new antennas

GMRA Membership List

October 2, 2012 245 Members

KZ3AB	Allen	N3FCA	Holly	K3JQ	Frank	KB3PRP	Dorson	WA3ULX	Francis
K3ACT	Arthur	KB3FNV	Joseph	KA4KEL	Ray	N3QDR	Leonard	N3USZ	Galen
N3ADF	Jim	KB8FOX	Darian	KB3KHL	James	N3QEP	Greg	N3UUP	Jesse
N3ADY	Gerald	N3FPO	Duane	KB3KIF	Sarah	N3QEQ	Brenda	N3UXY	Rita
N3AIL	Stuart	W3FUO	Hugh	W5KIM	John	W3QF	John	WA8UYD	James
K3AIN	Anthony	KJ4FUU	Thomas	N3KTW	Stephen	KB3QGI	Daniel	KF4VCA	David
KF4AJZ	Philip	N3FV	David	W3KVC	Clarence	KB3QMP	Adan	W1VCU	Nelson
WB3AOA	Alice	K3FZ	Albert	KD4KWY	Charles	N3QPG	Rey	KA3VNF	Debbie
K3ARC	Adon	KV3G	Chuck	WB3KXL	David	K3QX	Ed	KC3VO	Robert
W3BCB	Fred	NG3G	Freddie	AB3LD	Joseph	AK3R	John	KD3VR	Joseph
W3BCW	Brooks	W3GB	Grant	N3LES	Les	KB3RBE	Jonathan	W3VY	Mary Ellen
W3BE	John	KJ4GDL	Michele	N3LFM	Debbie	KB3RBF	James	KB3WDV	Philip
W3BEJ	Betty	N3GE	Anthony	N3LHD	Thomas	W3RBR	Richard	W3WFM	Bill
K3BEQ	Murray	WA3GJD	William	KB3LLA	Kenneth	K3RD	Donald	W4WHE	William
N3BTN	Vincent	KB3GJP	Henry	WB5LPN	Randy	K3REM	Bob	WB3WJI	Bill
K0BYJ	Jay	W3GN	Mark	KB3LVE	Alan	K3RFI	Mike	KB3WMH	Charles
K0BYM	Myles	KA3GSV	Myer	NB5M	James	W3RFQ	Ken	KB3WMI	David
NI3C	Johan	AA3GV	Ernest	N3MBW	Judith	KB3RSY	Albert	AA3WS	Charles
W3CAF	Neil	WA3GWS	George	W3MBZ	Tom	W3RTA	Bob	K3WS	Thomas
W3CAT	Ken	K3GXF	C.T.	W2MPD	Michael	WA3RTH	Richard	N3WSG	Jerry
KC2CAX	Kenneth	WB3GXW	John	KE6MVA	Tom	KB3RUZ	Katherine	KB3WTV	Jeffrey
W3CB	Clifford	N3HBO	Kathy	WX0N	Henry	N3RWG	Dorothy	W4XEN	Caleb
K3CCS	Paul	N3HBS	Tom	W13N	Jim	N3RWI	Sue	N3XFL	Pamela
KB3CCI	Rebecca	KA3HDO	Frank	AB3NA	Charles	WA3RWP	Walter	K3XIT	Will
KB3CFC	Tony	AB3HE	Mat	K3NCO	Marc	W3RYQ	Don	N3XKJ	Jim
N3CK	Nick	W3HFA	Paul	N3NGA	Roy	KB3SBF	Michael	N3XL	Bill
K3CON	Gerald	N3HFO	Charles	AB3NI	Benjamin	KB3SEL	Gloria	NG4Y	Carrol
N3CUO	Robert	N3HFT	Ed	KA3NJF	Warren	AA3SG	Walter	WN3Y	LaReintz
WV3D	Kevin	N3HG	Gene	KB3NJK	Pete	K3SGA	Lois	W4YEH	Howard
N3DC	William	KB3HGT	Chris	KB3NJP	Thomas	K3SGB	John	KB3YFQ	John
K3DMN	Darius	N3HI	Peter	KA3NJW	Patrick	KA3SKN	Kurt	WA3YTK	Richard
KK4DPX	Ray	K3HMX	Brian	N3NKW	Pamela	N3SNU	William	KB3YUX	Cordain
KM3DR	Lee	WA3HSC	David	AA3NN	Kenneth	KB3SOR	Jon	AJ4YZ	Mitch
WA3DVO	Everett	WB3IFS	Jesse	WA3NSI	Jim	NX3SS	Spence	KB3YZI	Charlotte
KB3DX	Jeffrey	KB3IIE	Kenneth	KA3NXW	Barry	N3STA	Alan	KB3YZJ	Mark
W0DXS	Robert	KB3IJF	Clifford	KB3NZC	Donald	N3TBZ	Dolores	KX3Z	Fred
N5DXZ	Alice	K3IMJ	Melvin	KI3O	Robert	K3TC	Thomas	KB3ZCO	Walter
W4EDF	Edward	W1ITV	Terry	KB3OBQ	Eugene	N3TFS	Edgar	K4ZDH	Riley
W4EE	Jim	AD6IU	Richard	KA3OHF	James	KB3THJ	Zachary	KB3ZFL	Joseph
WA3EEM	Mike	K4IWF	Joe	W3OJ	John	KB3TIN	Jakob	AA3ZK	Paul
K3EEZ	Gary	K4IWG	Patricia	WA3OLQ	George	K3TK	Thomas	N3ZMU	Mary
KG6EFT	James	KO3J	Warren	KC7OVS	David	WB2TNC	William	KA3ZPE	Morris
K9EIS	Dennis	N3JAA	Phyllis	KB3PBZ	Kevin	K3TND	Richard	N3ZQU	Gina
N3EMP	Gene	WA3JAL	John	N3PGI	Rex	W3TOM	Tom	W3ZRW	Joel
KD5ENP	Larry	N3JBX	William	KB3PJG	Holli	KD7TWE	Robert	N3ZUY	Bruce
W3EQ	Ken	N3JDY	John	KB3PMK	James	KA4TZC	David		
N5EV	Richard	KB3JHD	Karen	KB3POU	Bruce	K3UAL	Joe		
KI4EY	Victor	KB3JKO	David	KB3PQY	Adrian	K3UBI	Roy		
KB3EZQ	Jenny	WB3JOT	Ted	KB3PQZ	Eneida	N3UEZ	Mike		
WR3F	Richard	WB3JPB	Bruce	KB3PRB	Gerda	W3ULS	John		

Board of Directors

President: Paul Freirich, W3HFA
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146.610 Bladensburg: Everett Bollin, WA3DVO
 146.880 Greenbelt: Paul Freirich, W3HFA

Technical Committee

Head: Roy Ashlin, Jr., N3NGA
 Control Operator: Bruce Crabill, N3ZUY
 Control Operator: Bill Pimble, N3JBX

Annual Meeting and Luncheon

The 2012 Annual Meeting and Luncheon will be held at the Knights of Columbus, 9450 Cherry Hill Rd., College Park, MD 20740 on Saturday, Dec 1, 2012 at noon. **The cost of the lunch is \$21.00 (cash only) including Tax. Tips are not included.**

Our lunch will include Boneless Chicken Breast; Roast Beef; Rice; Steamed Mixed Vegetables; Green Beans with Almonds; Caesar Salad; Rolls and Buffer; Small Pastries; Vegetable Lasagna; Soft Drinks, Iced and Hot Tea, and Coffee.

RSVP by November 27, 2012 to gmra@live.com

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Please send inquiries to: gmra@live.com

GMRA operates two repeaters in the National Capitol area:

146.610 (-) K3GMR in Bladensburg, MD
146.880 (-) W3GMR in Greenbelt, MD

Web site: www.gmra-md.org

Raffle Prizes

Listed below are some of the raffle prizes that will be given away at this years Annual Business Meeting and Luncheon. Please remember that you must be present to win, and you must be a member and a licensed Amateur Radio operator holding at least a Technician license.

- Yaesu FT1900R Mobile Radios
- Puxing Px-777 Handheld Radios
- MFJ1721 Mag Mount Antennas
- ARRL Pocket Repeater Directories
- ARRL 2012 Handbook
- ARRL Antenna Book
- LED Flashlights
- 25ft Tape Measures

