

# CROSSTALK

Volume 55

Issue #06

Celebrating Our 55<sup>th</sup> Year

June 2014



## *President's Message*



What a great month, GCARC! Let's start with the clubhouse project. By now you might have heard that we received our certificate of occupancy. Great news! Final touch ups are underway in preparation for an open house and Grand Opening ceremony when she goes on public display for the first time during Field Day weekend later this month. It is due to the efforts of our relentlessly persevering Clubhouse Replacement Project Chairman Ray Martin (W2RM), his generous and hard-working assistant Bill Price (NJ2S), and you, the members of our club, for your unwavering sustained contributions and support to this project from the start, that we can now announce the completion of the replacement phase of this project, and the Grand Opening for our new Clubhouse! Everyone is invited to come on out for an open house on June 28, to take a tour, and celebrate with us in a Grand Opening ceremony, tentatively scheduled at the clubhouse for 7pm that evening.

For many, the highlight of June is nothing less than one of the most fun events that radio clubs all over North America participate in each year; Field Day! And your club is participating in a big way this year, with what looks to be at least 10 simultaneous stations on-air, plus the Boy Scouts of Troop 9 camping out and getting on-air with us this year. With portable generators operating in the field under less than ideal conditions, it's part emergency preparedness, part public relations, part educational, part contest, and a big part social event for you to share with your friends and fellow club members. If you've never been out to field day, this is the year. If you have before, then if not operating, I expect to see you stop by at least to say 'hi' for a little while this year! You can read more about it in this issue of Crosstalk, and on our web site [w2mmd.org](http://w2mmd.org). Field Day Co-Chairmen Mark (W2OCY) and Kyle (W2KBT) Townsend will be at our June 4 club meeting to answer your questions. Directions to our Field Day site are available from our web site, [w2mmd.org](http://w2mmd.org). Guests and visitors welcome!

On the topic of emergency preparedness and public service, I'd like to take this opportunity to thank Ed Champion (N2RO), and to all the ARES/RACES members who provided communications support to the WalkMS event at Washington Lake Park on May 4<sup>th</sup>, and who will be providing support to the local Tour de Pitman bike race on June 7. If you have not volunteered yet, and can help, many radio volunteers are still needed for the huge MS-150 weekend city-to-shore ride (Sept 27-28). Club members are encouraged to get involved with ARES/RACES to make a difference through emergency preparedness in our communities. The ARES/RACES group meets on our 2M repeater at 8pm each Sunday night.

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Of course, there is so much more going on. At our June meeting, we'll hear from club members who participated in the Williamstown Memorial Day parade, and ask those who traveled to Dayton about this year's Hamvention. We'll hear from our VEC Liaison about recent license testing, and get an update from our repeater technical committee on recent work performed on our repeater systems. Of course we'll get the latest updates on the upcoming Field Day (June 28-29), but we're also likely to get an update on some of the other fun on-air events coming up, like the June 7-8 Museum Ships weekend sponsored by the Battleship New Jersey Amateur Radio Station (recently visited by some of your club members), and the ARRL VHF contest (June 14-16). Hope to see you there!

Respectfully,  
Jim Wright, N2GXJ



**Down Jersey DXing  
By Bill Grim, W0MHK**

Better weather usually means more time for outside work and recreational activities and less time for "hamming". Not necessarily so! Field Day is right around the corner this month where you can combine all three - hamming, outside work and recreation! Also, there are no excuses for not having a 6 Meter antenna with shiny coaxial connections and the lowest loss coax feeding your aluminum/wire antenna as possible. It's 6 Meter Sporadic-E time!

Though DXpeditional excursions are always less frequent in the summer months, June and July do offer new grid and DX prospects on 6 Meters and frequencies above. Sporadic-E should make some qsos possible on 6M especially to the Caribbean and Northern South America. Europe and Western Africa are sometimes in the mix too.

The May edition of this year's CQ Magazine contains three articles that can be helpful to the potential 6M enthusiast or DX'er. Check out their monthly Propagation Report by NW7US, a solar cycle progression report by K9LA, and a general VHF/UHF primer article by KO0Z. Besides other details, you'll note that the best times to listen locally Down Jersey for 6M Sporadic-E openings will be 10AM to 2PM and 6PM to 10PM local time.

Do NOT wait until August to expect much 6 Meter activity as shown in recent years! It's just too late in the year. While some qsos are still possible as late summer approaches, I took the time to compile when I had the most success on 6 Meter DXing to Europe / W. Africa since moving here in 2000 with summer Sporadic-E. Briefly, the last two weeks in June and the first two weeks in July were the most productive weeks by far for qsos across the "pond". A check back into your own logs which might reach back even further may reveal a similar pattern. All my qsos were with 100-200 watts (depending upon which rig I was using) and fed into a 3 element 6M Cushcraft at 35' for a few years (blown down) and at 25' the last 6 years.

As usual, no GUARANTEES come with 6 Meter qsos, especially for DX. You have to spend time wisely on the band and watch DX clusters for alerts. Above all, be optimistic. As bad as 6 Meters has been as a DX producer in recent seasons Down Jersey, I know of two GCARC members that have already worked Chile for a new DXCC entity this season on 6M!

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With summer here, DX conditions should still be decent on the 40-10 Meters. It is pretty much accepted that we are going through a "second peak" in the present solar cycle which began this past fall. A look at your DX qsos for the past 8 months or so should reveal some significant DXCC successes for you on the bands as the SolarFlux increased with timely seasonal peaks and DXpedition activity. More is predicted to come, but it is not known for HOW LONG this second spike will be enhancing our HF DX chances.

Enjoy Field Day, and if you can't make it to W2MMD for the festivities try to work our ops on as many bands and modes possible! They'll appreciate your efforts.

There are not many choices in our DX picks for the month. Fill in those Caribbean entities listed below on different modes/bands and 6 Meters if possible:

CALL	DATES	HIGHLIGHTS	DIFFICULTY (5=MOST RARE)	ENTITY
OJ0W	06/02 - 06/07	HF/CW, SSB	2	Market Reef
ZA	06/05 - 06/15	10 Ops/80-6M/SSB, PSK, RTTY	1	Albania
J6	06/05 - 06/18	40-6M/SSB	1	Saint Lucia
V31	06/07 - 06/09	40-6M/SSB, RTTY, PSK, JT65	1	Belize
ARRL VHF Contest	06/14 - 06/16	Exchange Grids! Gauge Seasonal Propagation!		
C6ATT	06/07 - 06/21	40-6M	1	Bahamas
FS	06/08 - 06/27	160-10M	1	Saint Martin
J38DR	06/19 - 07/02	6M/50.115 Beacon/Breakable	1	Grenada
4K9Z	06/20 - 06/25	HF/By N6GO	2	Azerbaijan
V47JA	06/25 - 08/06	160-6M/HF & 6 EL 6M Yagi	1	Saint Kitts

**Credits : NG3K ADXO**



**Program Schedule - June and July 2014**  
By Cory Sickles, WA3UVV

June's program is one of our most popular – Pizza Party! Plus, you're invited to bring any radios, station accessories or shiny objects that you'd like to sell for a reasonable offer.



July's program will be centered around a Field Day Recap – as lead by Mark Townsend, K2OCY. Field Day can be a very enjoyable event – the first that let's us show off our new clubhouse! I hope you can find some time in your schedule to at least visit and see what's going on. Stay tuned, to find out what's in store for the rest of the year...



## W2YCs super station in Williamstown NJ as W1AW/2

As most of you know, W2YCs station was one of many in NJ that participated in the on-going W1AW/"state" event celebrating the 100th anniversary of the ARRL.

I was a small part of the operation at Dave's helping to put 17m SSB in the log of 240 stations during my short 2 hours of operating time. The pileups were huge but a lot of fun for me, especially since more times than not I prefer CW. I've operated from several foreign countries and the W1AW/NJ pile ups were as big or bigger than anything I've ever been involved with.

Here are the stats for Dave's operation which totaled around 30 or so hours on the air:

The combined log from both stations looks like this:

Band	QSOs
160	293
80	219
40	97
30	154
20	378
17	1,071
15	189
12	155
TOTAL	2,556 (plus 36 dupes)

Dave W2YC and Bill W0MKH did most of the operating. While I would have liked to spent more time, work keeps interfering with fun. Statewide, the week long operation from NJ resulted in a total QSO count of 56,366 which ranks very high for all of the states that have been on the air thus far. The next opportunity to catch a W1AW/NJ station is in August.

73 and see you in the pileups, Harry - AA2WN



**Silent Key**

**Marla Bozarth,  
N2DWR**

**Past President  
1992 and 1995**

**February 28, 1956 to  
May 24, 2014**

### ARRL 2013 Field Day Results for the Gloucester County Amateur Radio Club

	2013	Rank		Total #
Score	11,368	#27	out of	2,547
Category	11A	#1	out of	2
QSOs	2,937			
Power Mult	2	#21	out of	2,149
Section	SNJ	#2	out of	21
Division	AT	#4	out of	252
Participants	35			

### Maximilian Kolbe, SP3RN Patron Saint of Amateur Radio Operators



## **DMR: Another Digital Voice Technology to Explore - Now at a Lower Price**

**By Cory Sickles, WA3UVV**

I've mentioned before that there are five digital voice methodologies in use by hams – DMR, D-STAR, NXDN, P25 and System Fusion. While members of our club have shown great interest in System Fusion and D-STAR, many are not that familiar with the others.

DMR (Digital Migration Radio) is a bit unique when compared to the other methodologies in that it uses Time Division Multiple Access (TDMA) technology to make it possible to use one frequency for two simultaneous digital conversations. That means that one QSO can be taking place between local hams, while another is taking place on a networked link. Or they can both be local. In actuality, there are several possibilities.

So, if you are in an area where you have a lot of hams with different communications needs and desires, you can provide what's essentially two repeaters for the price of one. One repeater, one duplexer, one feedline and one antenna. You can quickly see why this is of great interest to commercial users and why it has been of great interest to hams.

How can you hold two (or four, in the case of "Tetra") discrete communications streams at the same time? Well, you actually "slice" or "split" the time. Much like the old days where timeshared computer systems worked on different tasks in little bits at a time, TDMA splits the two into slots, at a roughly 30ms rate. To you and me it seems simultaneous, but to a computer, it's a completely different matter.

To make it easier to manage, DMR users speak about slots, talk groups, color codes and other organizational tools. Being that DMR is another borrowed technology from the Part 90 world, the transceivers need to be programmed with software for whatever frequencies and all the above – before – you want to use them. There's no provision for ad-hoc programming or feature setup – from the radio itself. The synchronization signals come from the repeater being used. No repeater means no slots – or more to the point, one slot.

I know of some clubs, that when faced with an aging FM repeater needing yet another amplifier or other assembly replacement, opted to go with a new DMR repeater instead. Much like our DR-1 which handles "mixed-mode" (legacy FM and digital) operation, used DMR repeaters can be had for very attractive prices.

The radios are another matter, however. A single-band Motorola is much more than what we are used to paying for a new dual-band rig. Brands like Vertex-Standard, Hytera and others bring this a bit lower, but you can still find yourself paying \$400 for a UHF-only DMR portable. Until recently...

Connect Systems ( [www.connectsystems.com](http://www.connectsystems.com) ) is a name which some of you may recognize from their line of repeater-oriented products, is offering the CS700 - a UHF (CS701 for VHF) DMR/FM portable for \$180. That's quite a price breakthrough for a complete unit with display and DTMF keypad. Aside from using my first and last initials in the model number, it's a solidly-built radio with some nice features and has been selling like the proverbial "gang busters" since its introduction.



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As you've probably already guessed, I have one. From taking it out of the box, I've been impressed with the overall fit and finish of the product, plus the included accessories. The received audio quality is excellent and it "feels right" in my hand.

The only downside at the moment is that I have to head toward Atlantic City to use it – through the K2ACY repeater. As that also gives me an opportunity to use K2ACY's System Fusion and/or D-STAR repeaters, that's not so bad. Plus, there's a nice Mexican restaurant I get to visit, when I take the drive. The next closest, fully deployed DMR repeater I know of is in Allentown. While I also know of some attractive restaurants up there, it's not quite enticing enough for a drive, although I would be able to hit yet another System Fusion machine.

I understand that a UHF DMR repeater is on its way to being installed in Gloucester County, so I await its arrival with great anticipation. I'm not going to let the "cat out of the bag" any further, so you'll have to wait for upcoming details. Also, there's a strong rumor that Connect Systems will be offering some sort of mobile DMR radio by the end of the year.

More info on DMR and how some networks are set up can be found at [www.dmr-marc.net](http://www.dmr-marc.net), [www.trbo.info](http://www.trbo.info), and [www.va3xpr.net](http://www.va3xpr.net) - plus several others. In the meantime, consider the CS700 if you have a desire to try another digital methodology. Also, keep an eye on Connect Systems for another portable radio with exciting tri-mode possibilities – the CS7000...



**Congratulations to Chuck Lanard, KD2EIB for upgrading to the General Class License. Welcome to HF!**

***Fox News article: Ham radio: Old technology gets new respect***  
**<http://www.foxnews.com/tech/2014/05/19/ham-radio-old-technology-gets-new-respect>**

*Contributed by Ray Martin, W2RM*

### **Welcome New Club Member:**

Robert Demola, KD2GFL, who holds a Technician class license and lives in Mullica Hill, NJ.  
Alexander Calabrese, WA2ADS, who holds an Amateur Extra class license and lives in Buena, NJ.

We are glad to have you as members of the Club and hope to see you regularly at Club functions and meetings.

The logo for Gloucester County 4-H Fair Assoc. features the word "FAIR" in large, colorful letters (F is blue, A is yellow, I is green, R is orange) with "Gloucester County 4-H" above and "Assoc." below. To the right is a green 4-H clover logo.	<p><b>Gloucester County 4-H Fair and New Jersey Peach Festival</b> July 24 - 27, 2014 <a href="http://www.gc4hfair.com">www.gc4hfair.com</a></p>
<b>6</b>	



Named for American rocketry pioneer Dr. Robert H. Goddard, NASA's Goddard Space Flight Center was established on May 1, 1959, as NASA's first space flight complex. In the 1960s, when this image was taken, Goddard focused on the development of tracking and communication facilities and capabilities for both the scientific satellites and the manned space flight program. Goddard became the hub of the massive, international tracking and communications network that involved aircraft, supertankers converted into mobile communications units, and a wide diversity of ground stations. A duplicate mission control center was also built at Goddard in case the computers at the main control room at the Johnson Space Center in Houston, Texas failed for any reason.

*About Dr. Robert H. Goddard* [http://www.nasa.gov/centers/goddard/about/history/dr\\_goddard.html](http://www.nasa.gov/centers/goddard/about/history/dr_goddard.html)

**Image Credit: NASA**

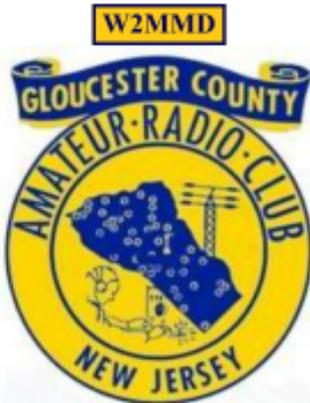
*Article contributed by Tom Gorman, KE2ES.*

**New England QSO Party - May 3-4, 2014**

Call: WB2P  
 Operator (s) : WB2P  
 Station: WB2P  
 Class: Single Op LP  
 QTH: NJ  
 Operating Time (hrs): 4:30

**Summary:**

Band	CW-Dig Qs	Ph Qs	
80:	0	2	
40:	0	37	
<b>Total:</b>	<b>0</b>	<b>37</b>	<b>Mults= 30</b>
<b>Total Score = 1,170</b>			



Celebrating Our 55th Year

22 miles from Philadelphia, PA  
28 miles from Wilmington, DE  
67 miles from Dover, DE  
77 miles from Reading, PA  
81 miles from Allentown, PA  
91 miles from Baltimore, MD  
107 miles from New York City, NY  
125 miles from Harrisburg, PA

South Jersey's Biggest Hamfest  
Sunday, September 14, 2014

# Hamfest 2014

Open to the public 8 am to 2 pm, rain or shine  
Gates open at 6 am for tailgaters and sellers

## GCARC 36th Annual Hamfest

\* Tailgaters and sellers of new, used and antique radio, computer and electronic equipment

**ADMISSION: \$8.00**

Non-Ham spouses and kids FREE



DXCC-VUCC-WAS Card checking 11:30 am



**ARRL VEC License Testing**

Testing begins at 9:00 am

Please bring a copy of your license and any CSEs

- ◆ Entry ticket is good for **Door Prize Drawings** throughout the day (Must be present to win)
- ◆ Tailgaters \$7.00 per space \*
- ◆ \$10.00 Pavilion tables or table space \*\*
- ◆ Some pavilion spaces have electric
- ◆ Space price does not include admission
- ◆ **Talk-In Repeater : 147.180+ PL 131.8**
- ◆ **GPS : 39.715607°, -75.211816°**



**Location : Gloucester County 4-H Fairgrounds**

*(Event will be held in Pavilion area)*

240 Bridgeton Pike (Rt 77) • Mullica Hill, NJ 08062

Off Exit 2 of the New Jersey Turnpike



\* Tailgating rules (open grassy areas only) : \$7.00 per vehicle space, up to 10 feet. No reserving or holding spaces for tailgaters not yet present. *First come, first serve.*  
\*\* Table rules (covered pavilions only) : \$10.00 per table (yours or ours), or table space up to 8 feet. Tailgating under pavilions will fall under "Table Rules" rates.

Contact : Cory Sickles, WA3UVV at [wa3uvv@arrl.net](mailto:wa3uvv@arrl.net) or (856)582-9146 • Club Website : [w2mmd.org](http://w2mmd.org)  
GCARC, PO Box 370, Pitman, NJ 08071

## DR-1 Repeater Update

By Cory Sickles, WA3UVV



The repeater continues to perform well. Since the squelch level needs to be set a bit higher than I'd like (in order to compensate for noise on the squelch tail) I added a pre-amplifier to compensate and give the machine a touch more sensitivity.

While that isn't going to perform any saintly miracles around Franklinville, it seems to be making a difference in some other less than optimum spots. Once the management software is available, I should be able to modify the attack time on the squelch, as well as some other tweaks.

As I've had occasion to travel some of the same routes with different opportunities to use both analog and digital communications, I've learned that digital is holding up better in many locations than analog FM does. What is interesting on the FTM-400DR is to operate digital on VFO-A, while observing the signal fluxuations on VFO-B, which is set for analog. Even with the rapid signal changes, the digital signal "hangs in there" with a noise and largely error-free reception quality.

In the past month, two new System Fusion repeaters have been added to our area. There's one in Roxborough, PA on 444.800MHz (+) and another in Runnemede, NJ on 147.225MHz (+). (I can work both of these with my FT1DR portable from home) The testing period is continuing and there have been additional requests, so it's possible that one in DE or MD may soon appear, as well. Check the System Fusion page on the club website for timely updates.

While at Dayton, Yaesu released pricing information on the production version of the repeater, now known as the DR-1X. MSRP is \$1,899 and street is currently \$1,699. That's a little less than I expected – a pleasant surprise. I understand HRO had some limited initial stock, which sold out almost immediately!

While the normal Automatic Mode Selection (AMS) configuration is "output = input", our DR-1 has been temporarily configured (since May 22<sup>nd</sup>) to output only analog FM, regardless of the input. While many of the advantages of digital operation are lost to digital users at the moment, it does give everyone an opportunity to hear what System Fusion digital audio sounds like. It is hoped that this will encourage more of you to upgrade and join the growing crowd.

The fixed output configuration will be changed back on Thursday, June 5<sup>th</sup>.



**ARRL National Centennial Convention**  
**July 17-19, 2014 - Connecticut Convention Center, Hartford, CT**  
**[www.arrl2014.org](http://www.arrl2014.org)**

## Dayton Recap

By Cory Sickles, WA3UVV

As mentioned elsewhere, there were some announcements at the Hamvention regarding Yaesu's DR-1X repeater.

Also, the newly-merged Ten Tec showed off the Patriot 507, an open source SSB/CW/Digital transceiver for 40 and 20 meters. An early review and some additional info can be found at <http://qrper.com/2014/05/the-ten-tec-patriot-an-open-source-ssbcwdigital-transceiver/>



ICOM was showing off their newest D-STAR transceiver, the ID-5100A. It's a serious update of the '2820, with a larger screen and the "Near Repeater" functionalities of the ID-31A and ID-51A portables. Also, the '5100A contains a database of analog FM repeaters, as well, so this very convenient feature can be used for "conventional" locations, too!

Some other companies were showing off D-STAR products, like the BabyStar and DadyStar points of presence. The idea of such things is to provide improved features and functions over the DVAP, at lower prices.

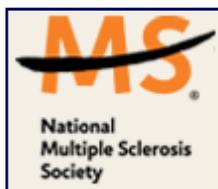
## Cycling Event Updates

By Cory Sickles, WA3UVV

The 4th annual Bob Riccio Memorial Tour de Pitman bike race will be held on Saturday June 7th. Consisting of multiple events through the morning, these are fast-paced, multi-lap races that run through the small town streets of Pitman.

Members of the GCARC and local ARES/RACES have assisted with this community event from the beginning. It's a great morning to come out and experience the thrill of high-speed professional cyclists, while assisting Pitman's Police, Fire and EMS Professionals.

Tour de Pitman is a high-profile opportunity for us to show how we can benefit our communities and the type of communications professionalism we offer when additional EMCOMM needs arise. Work is being done to possibly add a few enhancements and surprises, this year, so you may want to be a part of it – just that much more. If you haven't signed up yet, please email Ed Champion [N2RO <at> comcast <dot> net](mailto:N2RO@comcast.net).



Also, the MS-150 weekend cycling event is scheduled for September 27th and 28th. That date is closer than you may think. Also, it helps the MS Society's "sanity factor" if they have people volunteer early. There are many positions available on the route for Saturday, Sunday or both – and – your skills are greatly appreciated by all concerned.

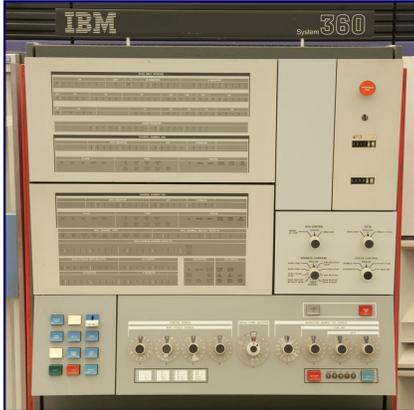
So whether you've participated in using ham radio to help ensure rider safety and support in the past, or you're looking to assist for the first time, please contact them and ask for additional information by sending an email to [N3MSS <at> mail <dot> com](mailto:N3MSS@mail.com).

The MS-150 is another high-profile opportunity for us to demonstrate the kind of professional-grade services we offer, plus it's unique in that the communications support involves a mix of ham radio, GMRS and CB. So, if you know someone who might want to help out in non-ham ways, then please share this info with them.

# The Computer That Defined IBM – and the Rest of the Industry

By Cory Sickles, WA3UVV

No, it wasn't the 5150 (PC). If you are a fan of the AMC series "Mad Men", you know that a recent addition to the firm was a computer system. As the series is set in the 1960's – it's a big computer system – the IBM System 360/30 (which was actually the entry-level model). Seeing it onscreen brought back memories of time I spent programming a 360/195.



Many have wondered if it's just a non-working prop, comprised of salvaged front panels and rack enclosures, all sitting in an iconic fishbowl. It's actually a working system, on loan from a California computer museum. Because of the way IBM leased, released and eventually destroyed such machines, having one intact is a serious accomplishment.

The concept behind the System 360 series was revolutionary for its time. Up to this point, there were computers designed for business applications, scientific applications and industrial process control, but no single system was created to handle all of these. Further, each new model and CPU upgrade required that the applications be re-written. Much like the video

game industry, there wasn't much concern about compatibility or portability of software. The 360 changed all that.

Here are 2 links with additional information, that may help you appreciate this dramatic change in computer technology, even if you don't follow the exploits of Don Draper and SC&P.

[www.nbcnews.com/tech/gadgets/5-reasons-love-mad-mens-new-star-ibm-360-n101716](http://www.nbcnews.com/tech/gadgets/5-reasons-love-mad-mens-new-star-ibm-360-n101716)

[www.computerhistory.org/core/media/pdf/core-2014.pdf](http://www.computerhistory.org/core/media/pdf/core-2014.pdf)

## Scenes from the May MSWalk event



## Third-Party Batteries

By Cory Sickles, WA3UVV

Almost every portable transceiver comes with some sort of rechargeable battery pack. Almost every accessory list has a higher-capacity battery. What is included, helps achieve a certain price point, with an acceptable profit margin.



Such things open the door for aftermarket vendors to offer high-capacity batteries – for less than what the OEM sells, many times with even better performance. Two popular online operations are found at [www.nicladonline.com](http://www.nicladonline.com) and [www.batteriesamerica.com](http://www.batteriesamerica.com). Over the years, I've found some good bargains for whatever Kenwood, Yaesu, ICOM or Motorola battery I needed. If you have an older case style that isn't available anymore, you may be able to find inserts and re-stuff the case yourself. Also, they sell empty cases for you to use alkaline AA cells – or maybe some other rechargeable cells of your choosing.

One nice thing I found during a recent search of Batteries America, was a spring-loaded belt clip – a decided upgrade from what Yaesu provides – for a very reasonable \$6.95. Of course, I ordered a few.

Batteries are one of those things where you want to know who you are dealing with and have a certain level of trust. There are unfortunately, more than a few sellers on EBay offering “fantastic” capacity batteries for “fantastically” low prices. Based on feedback of others, the reality doesn't always come close to expectations. Thus, caveat emptor...

## Happy Memorial Day from AIKEN, SC

By Bill Szkromiuk, W4WCS

Happy Memorial Day to all y'all Yankees:)

We celebrated the day with a visit to a memorial park and had Hamburgers, Hotdogs, Beer and Strawberry Daiquiris! Weather is a balmy 84 degrees will be 60 tonight.

Hope everyone had a great day.

Bill and Betty  
73



# The Fun of AM and FM Operation - Revisited

By Cory Sickles, WA3UVV

I noticed several of you in attendance taking notes during my presentation on HF AM and FM. This may help with any info you missed, plus reach out to those who couldn't make the May 7<sup>th</sup> meeting.

In the midst of the fun we all have with SSB, CW and digital modes on HF, it's easy to bypass AM and FM operation. Those little-used modes and oft-ignored switch settings can be a source of enjoyment however and are well worth exploring.

AM is the oldest voice mode we have. Most HF transceivers have an AM setting. If your rig is capable of 100W PEP on SSB, then it probably will produce 40W on AM. This may not sound like much, but it's more than you might think.

Before you light up your rig on AM or FM, be aware that the duty cycle of AM is higher than SSB, because of the constant carrier and FM's duty cycle is 100%. Best to dial back the power setting to 50%, as you would with RTTY. The same goes for your amplifier settings, if you have one.



If you like QRP, then you can try AM and FM with your **Yaesu FT-817ND**. **Small Wonder Labs** used to offer a **Retro-75** and **Retro-40** AM transceiver kit, so you may find one on the used market. Also, **DZ-Kits** ([www.dzkit.com](http://www.dzkit.com)) currently offers the **HT-7**, a hand-held AM rig.



On 75M (and 160M) you'll find lots of stations with retired broadcast transmitters running in the kilowatt range. Magazines like **Electric Radio** (print subscriptions or on the rack at HRO) often have articles on restoring such full-rack treasures from Collins and others, with a good compliment of large glowing tubes.



In addition to those, there are **Heathkit DX-100**, **Mohawk** and smaller transmitters like the **DX-60**, **40** and **35**. All of which use high-impedance microphones – think 10K~50K range. The numbers in the models, by the way, give some indication of expected output power.

Many AM enthusiasts swear by the “warmth” and “fullness” of tube technology. However, I suspect that if you use solid-state gear with a good, broadcast-quality microphone – and possibly a mixer/equalizer in circuit – most wouldn't be able to tell the difference, until you told them. Likewise, there's a certain *je ne sais quoi* about using a tube-based receiver.

AM certainly has better fidelity than SSB. The bandwidth is greater and there's less processing going on. For a better-sounding signal, ditching your hand mike for a nice **Heil**, **Sennheiser**, **Shure** or other broadcast-quality mike is worthwhile. Truthfully, the same goes for SSB or FM.



QSO's between just two hams are common, but don't be surprised if a roundtable ensues. It's a more laid-back and relaxing means of communicating, plus the fact that most of it occurs on or around specific “watering holes”, seems to make that inevitable.

Our “Top Band” has AM activity at **1885**, **1900**, **1945** and **1985 KHz** – but don't be afraid to tune above and below. On 75M, you'll generally find “channelized” activity on **3870**, **3875**, **3880** and **3895 KHz**.

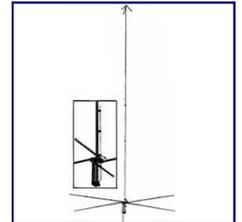
(Continued on page 14)

(Continued from page 13)

The extreme upper end of 40M is where AM fun can be located, either on **7290** or **7295 KHz**. Note that the latter is right against the band edge, so watch your accuracy and the signal width. Overdriving your transmitter (easy with a mal-adjusted mixer or equalizer) will result in distortion and “spatter” – making others around you question your parents’ marital status at the time of your birth.

While there is some activity on 20M, centered at **14.286 MHz**, as promoted by **SPAM** - the **Society Promoting AM** - there’s now significantly more digital voice activity around there - than AM. Better to stick to the lower bands or 10M.

In fact, 10M is a wonderful band for AM. Between **29.100** and **29.200 MHz**, you’ll find the majority of activity there. Some hams use converted CB rigs, thus “channel” spacing tends to be on the 5’s. With band openings, it’s amazing just how far a 5W radio can reach. With only 40W, I’ve talked to the four corners of the contiguous US, Canada and several stations in Europe. That’s with just using a dipole or my **Hy-Gain SPT-500 “Super Penetrator” vertical**.



Verticals work quite well on 12 and 10 meters, plus they are small enough to provide some gain, with a relatively small silhouette against the sky.

FM activity is also found on 10M. Most of us know there are repeaters on **29.62**, **29.64**, **29.66** and **29.68**, with inputs 100 KHz below. Simplex activity can be found on **29.5** and **29.6 MHz** – the latter being something of a national simplex or calling frequency.

Because of band openings, all 10M repeaters use CTCSS tones to access them. Review your repeater directory for tones as listed by call regions. It can be fun to talk through a repeater while holding an **FT-817ND** or on simplex with an old hand-held radio like a **Motorola HT-200** or **PT-300**.

Many long-time 10M FM’ers limit themselves to **29.5** and **29.6** for simplex. What they don’t know is that most of the international activity is taking place, elsewhere.

From **29.2** to **29.3**, you’ll find a great deal of international activity. Japanese and other Asian stations can be found between **29.3** and **29.5**, with some “deference” being shown around **29.450**, where **OSCAR 7** still shows up, when it’s in a “Mode A state of mind”.



I’ve worked a number of European stations while mobile on 10M FM. While band openings come and go, there is something known as “**Gray Line DX**” every day. At dawn and dusk, the transition between day and night causes tropo-ducting – still significant at **29 MHz** – and allows you to talk in a north-south direction, including over the poles!

That’s how you can get to Asia. The effect doesn’t last long, but it’s long enough. It’s a thrill when you can work some **JA**’s around **29.320 MHz** or so.

While listening is important, so is calling CQ. Yes, on HF it’s still cool to call CQ when operating FM. Many times, the band sounds dead, but it’s really open. A quick check on **27 MHz** and the “lovely” squealing sounds of heterodynes, echo chambers and other questionable sound effects on Channel 6 is a good indicator that 10M and 12M are open.

So if you hold a General class license or above - are looking for something new to play with - would like to hold some relaxed conversations with a bit more fidelity or always wondered what it would feel like to be on the air at an AM or FM station - give these modes a try!

## Field Day - June 28-29, 2014 - Band Chart

Band	Operator	Mode
<b>2 Meters</b>	<b>Bart Conrad, KC2WVP</b>	Phone
		CW
		Digital
<b>6 Meters</b>	<b>Al Arrison, KB2AYU</b>	Phone
		CW
		Digital
<b>10 Meters</b>	<b>Vinnie Sallustio, N4NYY</b>	Phone
		CW
		Digital
<b>15 Meters</b>	<b>John Zaruba, K2ZA</b>	Phone
		CW
		Digital
<b>20 Meters</b>	<b>Jim Wright, N2GXJ</b>	Phone
		CW
		Digital
<b>40 Meters</b>	<b>Kyle Townsend, W2KBT</b>	Phone
		CW
		Digital
<b>80 Meters</b>	<b>Kenny Denson, WB2P</b> <b>Wayne Wilson, WA2LET</b> <b>Tom Gorman, KE2ES</b> <b>Gene Wallace, N2IMK</b>	Phone
		CW
		Digital
<b>80 Meters</b>	<b>Jim Wright, N2GXJ</b>	Phone
		CW
		Digital
<b>Field Day Chairmen - Mark Townsend, W2OCY and Kyle Townsend, W2KBT</b> <b>w2ocy.snj@gmail.com</b>		



## Club House Update

By Ray Martin, W2RM

Well folks another month has gone by and the site replacement project is moving right along. The interior has had remarkable changes made to it and it looks pretty good. The furniture and other non useable items that had to be removed are gone.

The new furniture and chairs have been put in place. It's clean, orderly and secure. The bathroom now has it's towel rack and toilet paper holders installed.

The new five digit and four digit locks have been installed on the main door and the other two doors. The wall for the VHF room was built, sheet rocked, insulated and a portion of the paneling has been installed, and the it's got electricity receptacles and the light switch installed. The front door kick plate has been installed. A large amount of radio gear has been brought back and installed in both rooms. Antenna coax has been brought into the VHF & HF rooms and will be hooked up shortly. Wireless internet has been installed.



The burglar alarm is up and running perfectly with cameras doing what they are supposed to do. The six digit codes for all club members was installed last Friday. Whenever a member's code is entered it is printed out at the site and also sent to a wireless entry system.

Outside the extra cinder blocks that were under the trailer have been relocated to the west side of the shed and the old antenna parts have been put on top of them for storage. Commercial heavy insulation has been donated and delivered to put behind the skirting which was delivered. Top soil was delivered last week and will be used accordingly as needed.



A new ten meter to a hundred sixty meter fan trap dipole was installed. The center insulator is on top of the fifty four foot crank up fold over tower behind the trailer's east side. One end is attached to the VHF tower and the other end is attached to the telephone pole east of the trailer. Weights have been installed at both ends to protect it from wind shifting. The antenna is an Alpha-Delta DX-LB Plus which is a great wire antenna. It has been set up in an inverted "V" configuration. To go along with the HF antenna system a 1.5 KW antenna tuner has been donated to the club.

Again I want to thank all of you that have had the time to come out this month and help at the site. We are almost at a point where those of you who don't have a station at home will be able to come to the site and enjoy the hobby more.

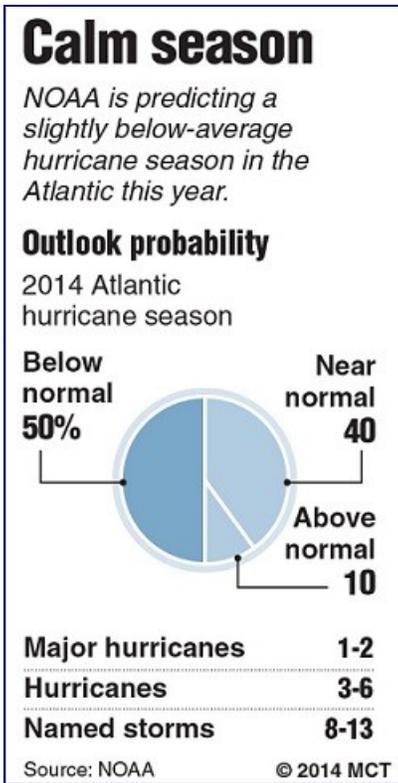
### *P.S.*

At the Warminster Hamfest two weeks ago I met a ham who stated that every time he comes to our hamfest the audio amplifier just doesn't put out enough. He donated a 65 watt Bogen amplifier and microphone to our club. It has 5 mic inputs which will help. He has been invited to our next club meeting. When he shows up we should all thank him.

He is: **Michael Weldon, KB2UMJ, Stratford, NJ**

# Forecasters Predict a Slow Hurricane Season

By: Jenny Staletovich, McClatchy News on May 23, 2014



The 2014 hurricane season is shaping up to be a slow one, federal forecasters said Thursday, which could make the launch of new storm surge maps predicting the location and severity of flooding less hectic.

Only eight to 13 tropical storms are projected, with three to six becoming hurricanes. Of those, no more than two are expected to become major storms.

Forecasters based the projection largely on the expectation that an El Niño weather pattern will form in Pacific waters, fueling winds and water temperatures that help stop storms in the Atlantic from strengthening. Near-average, cooler surface sea temperatures also reduce the risk, said National Oceanic and Atmospheric Administration Director Kathryn Sullivan.

The hurricane season starts June 1 and runs through Nov. 30. Since 1981, an average hurricane season has produced 12 named storms, with six hurricanes and three major storms packing winds of 111 mph or higher. But remarkably, in the past eight years, Florida, with its 1,260 miles of coastline, has had only one major hurricane — Wilma — come ashore. In 2012, Isaac sideswiped Palm Beach County, dumping between 10 and 13 inches of rain and causing major flooding.

At a news conference held Thursday in Brooklyn, Sullivan and emergency officials repeatedly warned that just one bad storm can wreak havoc, pointing to Superstorm Sandy that struck the Northeast in 2012 when a hurricane merged with a winter storm. Sandy caused more than \$50 billion in damage and spurred federal officials to rush completion of storm surge maps that will help pinpoint the path and depth of flooding during a storm.

“Sandy reminded us that loss of life and property during ... a storm doesn’t necessarily come about from wind and rain,” Sullivan said. “It comes from storm surge.”

NOAA scientists had been working on the maps before Sandy struck, but money from the Hurricane Sandy Relief Bill last year helped speed the work, she said. The maps will tell people in real time where water from a storm surge is expected to go and how high it will rise about 48 hours before winds kick in. The maps will show water levels in comparison to the ground, not sea level or mean sea level, which in the past led to confusion.

The National Hurricane Center, based in Miami, will update the maps every six hours as information from the storm is collected, said Holly Bamford, director of NOAA’s National Ocean Service.

“The tool is going to take in conditions of tide as well as surge, which is really important,” she said. “How high a tide is has major impact.”

The maps will also be linked to local evacuation plans, said Joseph Nimmich, of the Federal Emergency Management Agency, who urged people to learn the plans in advance.

*(Continued on page 18)*

*(Continued from page 17)*

“There is not one of us who can withstand the surge and protect their house when it is under attack by nature,” he said. “If you’re in your house when it’s being devastated and call 911, we are unable to help you.”

The Atlantic is in the midst of a busy hurricane cycle, or what forecasters call the Multidecadal Oscillation, which started in 1995, explained Gerry Bell, NOAA’s lead hurricane forecaster. Twelve of the past 20 seasons have been above average, he said. But this season, forecasters expect El Nino to cancel out the oscillation.



*A view of Hurricane Felix taken from the International Space Station in 2007. Photo courtesy of NASA*

“I think competing factors will win out rather than having the active season as we’ve seen in the last few years,” he said.

Last season, federal predictions, along with other forecast models, dramatically miscalculated the number of storms. Forecasters expected the Atlantic to churn out 13 to 20, with seven to 11 becoming hurricanes and three to six strengthening into major storms. The season ended as one of the quietest on record, with only two minor hurricanes.

In April, William Gray, founder of Colorado State University’s Tropical Meteorology Project, and colleague Philip Klotzbach, who issue a closely watched forecast every spring, blamed the “bust” on the weakening of a deep current that carries denser, saltier water from the earth’s polar oceans and fuels stronger storms. Last year’s collapse of the current, Gray said, was the biggest observed since 1950.

Forecast models have generally been more reliable in tracking the paths of storms while struggling to accurately predict their intensity. But Thursday, Nimmich said early testing of the NOAA forecast model this year shows a 10 percent improvement over last year’s modeling.

Forecasters have not been able to determine how climate change might figure into hurricane activity or affect the fluctuating El Nino cycle, Bell said.

“We need climate models that handle both global warming and year-to-year (changes), and we’re just not there yet,” he said.

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You may use or reference this story with attribution and a link to <http://www.emergencymgmt.com/disaster/Forecasters-Predict-Slow-2014-Hurricane-Season.html>

*Article suggested by Tom Gorman, KE2ES.*

## **New Jersey Motor Vehicle Law Update: July 28, 2013**

### **Cell Phone Use 39:4-97.3**

**Overview:** Use of a wireless phone or communication device is unlawful except when it is being utilized "hands free".

#### **Specifics:**

1. Can only be cited on public roads/highways.
2. **Does NOT include Amateur Radio or Citizen Band (CB) Radios.**
3. **Does NOT include Two-way Radios by commercial vehicle driver's or emergency vehicle.**
4. One handed use of a cell phone while steering can be utilized if:
  - a. The driver fears for his life/safety or believes a criminal act may be perpetrated against him or another.
  - b. The driver is reporting a fire, crash, serious road hazard, HazMat, or Medical emergency.
  - c. The driver is reporting another who is operating recklessly, carelessly, in an unsafe manner or DWI.

#### **Changes Made:**

1. Fine for 1st offense is changed to \$200 - \$400.
2. Fine for the 2nd offense is changed to \$400 - \$600.
3. Fine for the 3rd and subsequent offenses is changed to \$600 - \$800.
4. 3rd and subsequent offenses may be subject to a license suspension for 90-days and assessed 3 points on their MV history.

*Although signed into law, the changes will take effect on July 1, 2014.*

## **Regional Hamfest and Events**

June 4, 2014 : SkyWarn Class, 1900 Hours, Cumberland County Public Safety Center, 637 Bridgeton Avenue, Bridgeton, NJ - [larry.nierenberg@noaa.gov](mailto:larry.nierenberg@noaa.gov) (Registration not required)

June 7, 2014 : Monroe Township Music Festival, Owens Park, Tuckahoe Road, Williamstown, NJ  
[www.mtprnj.org](http://www.mtprnj.org)

June 7, 2014 : Tour de Pitman Bicycle Race, 0800 to 1200 Hours, Pitman, NJ  
June 7, 2014 : Uptown Pitman Music Festival, 1300 to 1900 Hours, Pitman, NJ  
[www.uptownpitman.com](http://www.uptownpitman.com)

June 14, 2014 : Bloomsburg Hamfest & Computer Show, 6405 4th Street, Lime Ridge PA  
Columbia\_Montour Amateur Radio Club - [www.qsl.net/cm-arc/hamfest.htm](http://www.qsl.net/cm-arc/hamfest.htm)

June 21, 2014 : W2QW Hamfest, Piscataway High School, 100 Behmer Road, Piscataway, NJ  
Raritan Valley Radio Club - [www.w2qw.org/2014Hamfest\\_Flyer.pdf](http://www.w2qw.org/2014Hamfest_Flyer.pdf)

June 26-28, 2014 : RadioActivity 2014, 9615 Deerco Road, Timonium, MD  
Mid-Atlantic Antique Radio Club - [www.maarc.org](http://www.maarc.org)

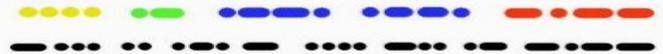
## W1AW Portable Centennial QSO Party Operations in June

CALL	DATES	LOCATION
W1AW/4	06/04 - 06/10	Alabama
W1AW/5	06/04 - 06/10	Louisiana
W1AW/5	06/11 - 06/17	Arkansas
W1AW/0	06/11 - 06/17	Minnesota
W1AW/7	06/18 - 06/24	Montana
W1AW/KL7	06/18 - 06/24	Alaska
W1AW/3	06/25 - 07/01	Maryland
W1AW/9	06/25 - 07/01	Illinois

## June Birthdays

Congratulations to these  
members celebrating birthdays this  
month

**Ken Denson WB2P**  
**Ken Newman N2CQ**  
**David Paster AC2IQ**  
**Ray Schnapp WB2NBJ**  
**Charles Sketchley K2PQD**  
**Kyle Townsend W2KBT**  
**James Wilson N2SVN**



**Museum Ships Weekend 2014**  
**0000Z June 7 through**  
**2359Z June 8, 2014**  
[www.nj2bb.org/museum/](http://www.nj2bb.org/museum/)



## Crosstalk Submissions

*This is your Club newsletter. Make use of it.*

Feel free to contribute general interest articles and ideas for articles.

All submissions, queries, comments and editorials should be addressed to  
Jeffrey Garth, KC2WCS at [jeff.garth <at> comcast.net](mailto:jeff.garth@comcast.net).

Submission deadline for the July issue: Saturday, June 21, 2014

Club Website <http://www.w2mmd.org>

Club E-Mail Reflector: [gcarc@mailman.qth.net](mailto:gcarc@mailman.qth.net)

## Contest Calendar

For more information on the contests, please go to the WA7BNM Contest Calendar website:  
<http://www.hornucopia.com/contestcal/>

### June 2014

+ ARS Spartan Sprint	0100Z-0300Z, Jun 3
+ CWops Mini-CWT Test	1300Z-1400Z, Jun 4 and 1900Z-2000Z, Jun 4 and 0300Z-0400Z, Jun 5
+ NRAU 10m Activity Contest	1700Z-1800Z, Jun 5 (CW) and 1800Z-1900Z, Jun 5 (SSB) and 1900Z-2000Z, Jun 5 (FM) and 2000Z-2100Z, Jun 5 (Dig)
+ NCCC Sprint Ladder	0230Z-0300Z, Jun 6
+ 10-10 Int. Open Season PSK Contest	0000Z, Jun 7 to 2400Z, Jun 8
+ DigiFest	0400Z-1200Z, Jun 7 and 2000Z, Jun 7 to 0400Z, Jun 8 and 1200Z-2000Z, Jun 8
+ VK Shires Contest	0600Z, Jun 7 to 0600Z, Jun 8
+ Wake-Up! QRP Sprint	0600Z-0629Z, Jun 7 and 0630Z-0659Z, Jun 7 and 0700Z-0729Z, Jun 7 and 0730Z-0800Z, Jun 7
+ SEANET Contest	1200Z, Jun 7 to 1200Z, Jun 8
+ UKSMG Summer Contest	1300Z, Jun 7 to 1300Z, Jun 8
+ RSGB National Field Day	1500Z, Jun 7 to 1500Z, Jun 8
+ IARU Region 1 Field Day, CW	1500Z, Jun 7 to 1459Z, Jun 8
+ Alabama QSO Party	1600Z, Jun 7 to 0400Z, Jun 8
+ NAQCC Straight Key/Bug Sprint	0030Z-0230Z, Jun 11
+ CWops Mini-CWT Test	1300Z-1400Z, Jun 11 and 1900Z-2000Z, Jun 11 and 0300Z-0400Z, Jun 12
+ DRCG WW RTTY Contest	0000Z-0759Z, Jun 14 and 1600Z-2359Z, Jun 14 and 0800Z-1559Z, Jun 15
+ Asia-Pacific Sprint, SSB	1100Z-1300Z, Jun 14
+ Portugal Day Contest	1200Z, Jun 14 to 1159Z, Jun 15
+ GACW WWSA CW DX Contest	1500Z, Jun 14 to 1500Z, Jun 15
+ REF DDFM 6m Contest	1600Z, Jun 14 to 1600Z, Jun 15
+ ARRL June VHF Contest	1800Z, Jun 14 to 0259Z, Jun 16
+ CWops Mini-CWT Test	1300Z-1400Z, Jun 18 and 1900Z-2000Z, Jun 18 and 0300Z-0400Z, Jun 19
+ NAQCC Straight Key/Bug Sprint	0030Z-0230Z, Jun 19
+ All Asian DX Contest, CW	0000Z, Jun 21 to 2400Z, Jun 22
+ AGCW VHF/UHF Contest	1400Z-1700Z, Jun 21 (144) and 1700Z-1800Z, Jun 21 (432)
+ Kid's Day Contest	1800Z-2359Z, Jun 21
+ CWops Mini-CWT Test	1300Z-1400Z, Jun 25 and 1900Z-2000Z, Jun 25 and 0300Z-0400Z, Jun 26
+ Ukrainian DX DIGI Contest	1200Z, Jun 28 to 1200Z, Jun 29
+ His Maj. King of Spain Contest, SSB	1200Z, Jun 28 to 1200Z, Jun 29
+ ARRL Field Day	1800Z, Jun 28 to 2100Z, Jun 29
+ 10-10 Int. Spirit of 76 QSO Party	0001Z, Jun 30 to 2400Z, Jul 6

## 2014 Club Officers - 1 year term

<b>President :</b>	<b>Jim Wright, N2GXJ</b>
<b>Vice President :</b>	<b>Cory Sickles, WA3UVV</b>
<b>Treasurer :</b>	<b>Al Arrison, KB2AYU</b>
<b>Recording Secretary :</b>	<b>Sheldon Parker, K2MEN</b>
<b>Corresponding Secretary :</b>	<b>Bart Conrad, KC2WVP</b>

### Board of Directors - 3 year term

<b>Chuck Colabrese, WA2TML</b>	<i>(2012-2014)</i>
<b>Dave MacDonald, WB3JOY</b>	<i>(2012-2014)</i>
<b>Jeffrey Garth, KC2WCS</b>	<i>(2013-2015)</i>
<b>Mark Townsend, W2OCY</b>	<i>(2013-2015)</i>
<b>Dan Tremolini, N2TXG</b>	<i>(2014-2016)</i>
<b>John Zaruba Jr, K2ZA</b>	<i>(2014-2016)</i>

### Trustees - 4 year term

<b>Ray Schnapp, WB2NBJ</b>	<i>(2011-2014)</i>
<b>Martin Wilt, W2ILT</b>	<i>(2012-2015)</i>
<b>Ray Martin, W2RM</b>	<i>(2014-2016)</i>
<b>Brian Jones, KD2BXD</b>	<i>(2014-2017)</i>

## Committee Chairs

<b>Awards and Contests</b>	<b>Kenny Denson, WB2P</b>
<b>Budget</b>	<b>Al Arrison, KB2AYU</b>
<b>Clubhouse Replacement Project</b>	<b>Ray Martin, W2RM</b>
<b>Clubhouse Site</b>	<b>Al Arrison, KB2AYU</b>
<b>Club License Trustee</b>	<b>Darrell Neron, AB2E</b>
<b>Club Publications</b>	<b>Jeffrey Garth, KC2WCS</b>
<b>Community Outreach</b>	<b>Cory Sickles, WA3UVV</b>
- Scout Liaison	<b>Frank Simila, KC2SJ</b>
<b>Constitution and By-Laws</b>	<b>Ron Block, NR2B</b>
<b>Database</b>	<b>Ken Newman, N2CQ</b>
<b>DX</b>	<b>Bill Grim, W0MHK</b>
<b>Emergency and Public Service</b>	<b>Joe Shevlin, KC2PHM</b>
- ARES/RACES	<b>Joe Shevlin, KC2PHM</b>
- CERT	<b>Martin Wilt, W2ILT</b>
<b>Field Day Co-Chairs</b>	<b>Mark Townsend, W2OCY and Kyle Townsend, W2KBT</b>
<b>Hamfest</b>	<b>Tom Gorman, KE2ES</b>
- Hamfest Contact	<b>Cory Sickles, WA3UVV</b>
<b>Health and Welfare</b>	<b>Ray Martin, W2RM</b>
<b>Historian</b>	<b>Jeffrey Garth, KC2WCS</b>
<b>Hospitality</b>	<b>Dave MacDonald, WB3JOY</b>
<b>Membership</b>	<b>Cory Sickles, WA3UVV and Ray Schnapp, WB2NBJ</b>
<b>Nominations</b>	<b>Jim Wright, N2GXJ</b>
<b>Programs</b>	<b>Cory Sickles, WA3UVV</b>
<b>Publicity</b>	<b>Cory Sickles, WA3UVV</b>
<b>Repeaters</b>	<b>Al Arrison, KB2AYU</b>
<b>Special Services</b>	<b>Darrell Neron, AB2E</b>
<b>Technical and TVI</b>	<b>Cory Sickles, WA3UVV</b>
<b>VEC Liaison and License Testing</b>	<b>Gary Reed, N2QEE</b>



### The W2MMD Repeaters

Output: 147.180 MHz  
Input: 147.780 MHz  
Offset: +600 KHz - PL: 131.8 Hz  
(Conventional FM plus C4FM Capability)

**Output: 442.100 MHz  
(Temporarily Out Of Service)**

Output: 1284.400 MHz  
Input: 1272.400 MHz  
Offset: -12.0 MHz  
PL Tone: None

The above 3 repeaters are all  
located in Pitman, NJ  
GPS: 39.728481°, -75.131088°

Output: 224.660 MHz  
Input: 223.060 MHz  
Offset: -1.6 MHz  
PL Tone: 131.8  
Location: Sewell, NJ  
GPS: 39.781382°, -75.099963°

### GCARC 2M Ragchew Net

Thursday, June 19, 2014  
20:00 Hrs  
147.180+ MHz (PL131.8Hz)

### ARES/RACES Net

Sunday 20:00 Hrs  
147.180 and 224.660 repeaters

### VE License Session

Thursday, June 12, 2014 @ 1900 Hrs  
Franklin Township Public Library  
Franklinville, NJ  
Gary Reed, N2QEE  
[glreed49 <at> verizon <dot> net](mailto:glreed49@verizon.net)

### GCARC Meetings

#### *General Membership*

19:30 Hrs, Wednesday, June 4, 2014  
Pfeiffer Community Center  
Williamstown, NJ

#### *Board of Directors*

19:00 Hrs, Wednesday, June 18, 2014  
GCARC Clubhouse  
Harrison Twp. 4-H Fairgrounds  
1 mile south of Mullica Hill on RT77

### Club Meeting Program

**Wednesday, June 4, 2014**

**Pizza Party and Swap Meet**

## **Field Day**

**June 28 - 29, 2014**

**GCARC 11:00 am Brunch**

**Every Friday @  
The Seven Star Diner  
1890 Hurffville Road, Sewell, NJ**