



www.marc-radio.org

PO BOX 2154  
SOUTHEASTERN, PA  
19399-2154

# REMARCS

September/October 2008

## VOX

Please welcome new MARC members **Scott Pilotti KB3RBU**, **David Lipow KA3RYS**, **Jason Lipow**, **Matthew Lipow KB3PNA**, **Edward Azemar KA3YGI** and **Robert Ross W3KFQ!** **Steve KD3WK** became a Volunteer Examiner.

**Norm WB2HVJ** is now **W2SPN** and, **Roger N3GHJ** is now **WD3W**. **Bob KB3FSQ** reports that he recently passed his Praxis certification for instruction.

Many thanks to **Mike KF3CD** and **ANRO Inc.** for once again printing our hamfest flyers and tickets!

**Dennis K3DS** installed a new 3 port controller earlier for our repeaters at the Paoli location. He also created the new MARC website. Thanks Dennis!

Solar Cycle 24 appears to be building momentum - finally!

## DAYTON HAMVENTION 2008

This issue of REMARCS has a special guest write-up about Dayton Hamvention 2008, by **Dennis KA3QOT**. See page 3.

MARC members that made it to the Dayton Hamvention back in May were.... **Dennis KA3QOT**, **Carter N3AO**, **Kay N3KN**, **Yak N3MQM**, **Dieter K3DK**, **Josy WQ3E** and **Lou WX3I**.

## - MARC BOARD FOR - 2008-2009

A number of changes have occurred regarding the MARC Board...

**Ray KB3NFE** and **Lori KB3PRF** stepped down earlier from their respective Board positions of Member-at-Large and Public Relations due to schedules and family issues. We were sorry to see them leave and thank them for their service. **Foster K3FXS** decided not run again for the Member-at-Large position, but stated that he wants to remain on the Board as webmaster for MARC. We thank Foster for his earlier service and look forward to his continued support as webmaster.

**Miguel KC2HMG** had expressed an interest in serving as Member-at-Large on the MARC Board earlier this summer when the position became available. After careful consideration, the Board nominated him to this position until September 2009.

**MARC** concluded its annual election at the general membership meeting that was held on September 16th and counted the voting ballots.

The 2-year position for Member-at-Large was contested by **Phil KB3MAW** and **Steve KD3WK**. Phil won the position until September 2010. Thanks to Steve for running and it was a close race. The other Board positions were uncontested.

### MARC BOARD MEMBERS:

**Dieter Hauer K3DK** – President

**Ed Oswald W3DUB** – Vice President

**Sam Mitchell WA3LGL** – Secretary

**Lou Ruh WX3I** – Treasurer

**Bob Palin N3JIZ** - Public Service Chairman

**Dennis Silage K3DS** – Technical Service Chairman

**Jim Biddle W3DCL** – Membership Services Chairman

**Miguel Ramirez KC2HMG** – Member-at-Large (1 yr.)

**Phil Cauffman KB3MAW** – Member-at-Large (2 yr.)

### UPCOMING MEMBERSHIP MEETINGS

**November 18th** – Foster K3FXS will do an interesting presentation on radio control for robots! Foster is an experienced Roboteer and will have the robots onsite.

**December 2nd** – No meeting, but we will hold our annual Holiday Party – stay tuned for details!

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## AMATEUR TEST SESSIONS

Our VE Coordinator, **Bob W3ZQN** reported that 2 Technician and 1 Extra class license were earned at the May 3rd test session. One MARC member took advantage of the test session and received a free test.

The following VE's assisted: **Bob W3ZQN, Ron W3ZV, Dick K3ITH, Dennis K3DS, Walter WA3PPW, Merrill KT3Z and Ed WT3X.**

A test session was also held on August 2nd and the following licenses were earned: 1 Technician, 1 General and 1 Extra.

The following VE's assisted: **Bob W3ZQN, Paul NX3Q, Dick K3ITH and Steve KD3WK.**

You must schedule with **Bob W3ZQN** if you want to take a test. He may be reached at [RJLees@AOL.com](mailto:RJLees@AOL.com) or at 610 265-6032.

## MARC PUBLIC SERVICE

Our Public Service Chairman **Bob N3JIZ** reported that **Foster K3FXS** and **Will K3WIL** assisted him earlier with radio communications for the [Multiple Sclerosis 5 K Run](#) back on April 27th at West Goshen Park. The event was a success and the event officials were glad to see MARC volunteers present and ready to serve.

**Bob N3JIZ** also reported that MARC volunteers provided communications for the [2008 Radnor Memorial Day Parade](#). **Dieter K3DK** drove his car in the parade as the MARC float. Some entries in the parade threw off the timing somewhat for the event, but MARC was able to communicate what was happening to parade officials so they could deal with the issues and plan to rearrange the placement of certain entries for next years parade. See the volunteers that assisted below.



**Radnor Memorial Day Parade Volunteers - (left to right) Ryan KB3MPX, Beth KA3GKI, Ned WQ3Z, Dennis KA3QOT, Dieter K3DK, Floyd KA3OXA, Bob W3ZQN, Alex KA2VLP and Bob N3JIZ.**

## LAST PUBLIC SERVICE EVENT FOR 2008!

The next public service event that MARC will be providing communications for is the annual **Vietnam Veterans 5 K Run**. This event will occur on November 16th at Norristown Farm Park and volunteers need to show up at 8:30 AM with their radios. If you can assist, please contact **Bob Palin N3JIZ** ASAP at 610 687-4587 or [n3jiz@marc-radio.org](mailto:n3jiz@marc-radio.org) . Please call to verify final date.

When we assist with public service events and charity events, there is a payoff' and amateur radio benefits from it when it is recognized as a valuable resource to the community. It has been stated before that most "non-hams" don't care about the amount of DX you've worked or the incredible antenna that you've assembled. However, when you assist with a public event and help things to run more smoothly and safely, then they will notice and remember.

## MARC INFO

[wb3joe@marc-radio.org](mailto:wb3joe@marc-radio.org)  
<http://www.marc-radio.org>

### MEMBERSHIP MEETINGS -

3rd Tuesdays, 7:30 PM  
Tredyffrin Twp. Bldg.  
Berwyn, PA – Guests Welcome  
Smoke Free, Handicapped-accessible.

### BOARD MEETINGS -

2nd Tuesdays of even months, 7:30 PM  
Paoli Hospital, Willistown Meeting Room  
Members may attend as observers.

**WB3JOE REPEATERS (CTCSS or PL = 131.8 hz) -**  
145.130 - / 147.060 + / 224.420 - / 445.675 -  
The 2 meter repeaters are linked.

### WEBMASTER -

Foster Schucker K3FXS  
[k3fxs@marc-radio.org](mailto:k3fxs@marc-radio.org) 302-363-7347  
Dennis Silage K3DS  
[k3ds@marc-radio.org](mailto:k3ds@marc-radio.org) 610-353-4829

### 2 METER NETS -

Club Net, Sunday, 8:30 PM  
Traffic Net, Monday and Wednesday, 8:30 PM  
Roundtable, Thursdays, 8:30 PM  
These nets occur on linked 145.13 - R / 147.06 + R

### 1.25 METER (220 MHz) NET –

Club Net, Sunday, 7:30 PM  
This net occurs on 224.420 - R

### NET MANAGER –

Sam Mitchell WA3LGL  
[wa3lgl@marc-radio.org](mailto:wa3lgl@marc-radio.org) 215-530-2151

### DUES -

\$15 Full (licensed Amateurs)  
\$5 Associate (unlicensed persons)  
Family rate \$5/ham - after first member  
pays full dues

### NEWSLETTER -

The REMARCS editor is Dieter K3DK  
610-489-1920 [k3dk@marc-radio.org](mailto:k3dk@marc-radio.org)  
Do you have anything for REMARCS?  
Please let me know.

## Hamming it Up in Dayton

Article & Photos by - Dennis DeMarco KA3QOT

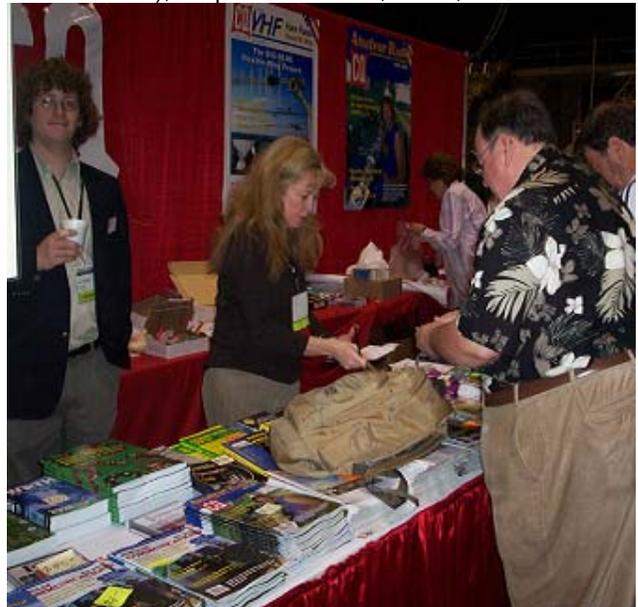
On Thursday May 15 at 9:15 AM, a somewhat sleepy Dieter K3DK, Josy WQ3E, Yak N3MQM, and Dennis KA3QOT boarded a chartered bus in Downingtown, joining 20 members or so of the North American DX Association and headed to Dayton, Ohio for the world-famous, annual Dayton Hamvention 2008 - at Hara Arena. Ham company not >>

withstanding, the ride itself was torturous; in fact, it began on a wrong note when our inexperienced driver headed east on the Pennsylvania Turnpike instead of West! Fortunately, he was able to make a U-Turn at the Valley Forge exit and continue rightly along. Additionally, Pennsylvania is a very large state – much larger than I ever thought – and it took many hours to reach the other end. Still, we were rewarded just west of Pittsburgh when we stopped for a “stretch-your-legs” break and lunched at a Cracker Barrel restaurant – lots of delicious food for a little bit of money. What more could a ham want?

With both bus and passengers appropriately fed an hour later, we resumed our journey. Anticipation and a bit of impatience took over at that point, until we arrived at our motel in Huber Heights – a Dayton suburb - around 8:00 PM. At this point most scattered to various dining establishments for a quick dinner, while Dieter, Yak, and I just ordered in a large pizza. Unfortunately, I'd rate the motel where we stayed one-quarter star at best, but since we all used it to crash, it was passable.

It is said that rain and the Dayton Hamvention go hand-in-hand, but this year the pundits were incorrect as we woke on Friday morning to clear, but crisp weather. After a not-so-great continental breakfast (“What, no orange juice?”), we boarded the bus at 7:30 AM for the 15-minute ride to Hara Arena.

Since the arena itself did not open for an hour, our first stop was the outdoor flea market in the parking lot, which seemed to go on forever. Surveying the various vendors revealed just about every type of ham and electronic gizmo under the sun. Especially of interest were beautiful Drake transmitters/receivers, a fair amount of Heathkit radios (which, I'm sure would make Bob WB3T envious), and various HF and VHF antennas (including the gorgeous SteppIR). Also on hand – as in many a hamfest - were the usual assortment of computers (both desktop and laptop, new and used), telephone batteries, DVDs, fake



Shoppers at Dayton 2008 Flea Market – by KA3QOT

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**Hamming it Up - continued from page 3**

surveillance cameras, Bluetooth headsets, even clothing – just about everything under the sun. I think we completed one full pass in an hour.

Though we enjoyed the various offerings, the cold was starting to get to us, and we were ready for the arena itself to open at 9:00 AM to check out the inside exhibits where the real action was.

Precisely on time, the Hara Arena main doors flew open, and a mass of hams of all ages, sexes and sizes rushed in. The arena is quite sprawling, with vendors and other amateur-radio concerns occupying just about every open floor space, as well as corridors and other public areas. It must be seen to be believed – hams for as far as the eyes could see! The floor was a collage of sight and sound, with HF radios, antennas, power supplies, salespeople, etc. from vendors such as Kenwood, Yaesu, and ICOM all competing for our attention. Their exhibitions were impressive, as was the amount of freebies (caps, buttons, totes) they distributed. I certainly collected as many as I could! Specifically, it was great to add another Yaesu cap to my collection.



**Main Vendor Display Floor at Dayton Hamvention**

In addition to vendors large and small, publications such as “CQ” and “World Radio” were either giving away free copies or selling them at a nominal price. Many vendors such as HRO and Heil Sound also had a special “Hamvention” price for their wares. There was something for everyone’s taste; items as low as a few dollars to the latest, state-of-the-art rig for \$14,000. Did I mention Christmas is only two months away?

With Hamvention being so large, it’s easy to build up an appetite with the required walking – I estimate I clocked in two miles per day! It offered plenty of good food (albeit expensive) and the concessions all seemed busy. My favorites were the Sloppy Joes (though they, of course, pale in comparison to Dieter’s) and hot dogs.

There is certainly more than enough looking/shopping to keep someone busy all 2 ½ days of the Hamvention, >>

but by early afternoon I needed to give my feet a rest. Fortunately, at Hamvention there are forums scheduled throughout the day. Forums cover a wide spectrum of topics of interest to the ham; they range in length from one to three hours and are moderated by well-known, seasoned hams and DXers. I attended several of them over the weekend, including “Ham Radio and the Law” (really interesting for someone in condo hell like me); “Contesting”; and “Techniques of Best Operators.” Most interesting and well worth the price of admission.

The ARRL holds its annual expo each year at Hamvention, and their 2008 exhibition was quite impressive and expansive. This year’s coordinator was ARRL Membership Manager Katie Breen, W1KRB. This position is new within the league, and Katie – who’s an energetic, wonderful ham radio ambassador – created and supervised a cornucopia of lively and interesting exhibits including DX Card Checking, Youth Activities, and even an “Internet Café” where you could check your email. A wide array of ARRL-branded merchandise such as clothing, books, and bumper stickers were also available for purchase. My favorite exhibit, though, was the “Movie Room,” which screened a collection of DXpedition videos all throughout Hamvention. Great job, Katie!” Sadly though,



**Katie Breen W1KRB at ARRL Booth**

Katie has since left the ARRL and moved on. As I was leaving the Expo I ran into Kay Craigie N3KN, one of my elmers. It was great seeing Kay after about a year and a half, or so.

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As she was quite busy greeting hams at the Expo, our conversation was brief but certainly enjoyable.



**Dieter K3DK standing next to Kay N3KN at ARRL booth**

By this time – circa 4:00 PM - I was plum tired and ready to return to the motel. I met up with the others on the bus and bid goodbye to Hamvention for the day. Dinner was at the Spaghetti Warehouse in downtown Dayton, which is a Hamvention tradition, and then off to sleep for the next day.

On Saturday – another precipitation-free, chilly day -- Dieter, Josy, Yak, and I went our own ways. I was thrilled to purchase a new Heil Pro 5 Headset (not that I can afford it!) as well as a nice ARRL windbreaker jacket. I resisted the temptation to buy a GRE scanner, though – maybe next year.

Dieter, Yak, and I were thrilled to see Carter Craigie N3AO (my other Elmer) doing some shopping. Carter looked wonderful and rested, plus it was his birthday! We spoke for about 10 minutes or so, before Carter headed to an ARES forum. He also attended our Hamfest in July, and we were glad to see him again.

The remainder of Saturday was devoted to a second glance at the vendors, as well as some we had missed in our initial go-round. In mid-morning, Josy saw Lou WX3I and Lynette W3GZZ walking the floor. Seems they had just been in the area storm chasing and decided to pay a visit. >>



**(left – right) Dennis KA3QOT, Carter N3AO, Dieter K3DK and Yak N3MQM**

At 5 PM, we boarded the bus again and returned to our “luxurious” accommodations, where Yak, Dieter and I went to the local “Steak and Shake” – kind of a retro, ‘50s style malt shop-like experience for some much-needed grub.

Since Sunday Hamvention ends around 1 PM, there were a lesser number of hams that day when we arrived at 9:00 AM. By this time, I was unfortunately spent financially and was ready for the trip home. We hung around after the exhibits closed for about an hour as the door prizes were announced since we had to be present to win. Sadly, none of our numbers were called and Dayton 2008 was now history.



**Josy WQ3E**

Our bus left the motel for Downingtown around 2:30 PM, and the conversation seemed to be minimal as everyone was exhausted and began the long trek home. Still, passengers perked up as we returned to the same Cracker Barrel for dinner outside of Pittsburgh. We finally pulled into Downingtown around 12:15 AM, most of us very sleepy.

I highly recommend that every ham travel to the Hamvention at least once in their lifetime. The sense of brotherhood and camaraderie is unforgettable. It was great seeing old friends and making new ones.

Can't wait til Hamvention 2009!

**- 73 Dennis KA3QOT**

## MARC HAMFEST 2008 – UPDATE

MARC concluded its annual Hamfest earlier on July 13th. We wish to thank the many volunteers that helped out with setup the day before hamfest and those that also helped out on the day of our hamfest. This is the only hamfest that is held in the western suburbs near the Philadelphia area and many hams look forward to it. As you know, the economy really tightened up prior to this event and gasoline was approximately \$4.00 per gallon! Inflation is here to stay – along with an ailing economy and increasing unemployment.

Consequently, we were not surprised to see that Hamfest profits were down by approximately 25% compared to the previous year. Please see the figures below that list our expenses and the final number regarding profit for MARC. The winner of the Grand Door prize was WA3NSP and he received a Yaesu FT-60R Dual-band HT.



**Bob W3ZQN – Our MARC 2008 Hamfest Announcer, drawing door prize ticket stubs and exercising that mellow broadcast-quality voice. Photo by Mike KF3CD**

### Hamfest Expenses:

1. Yaesu FT-60R Handie Talkie \$189.95
2. ARRL Gift Certificate \$50.00
3. PA System hookup \$120.00
4. Ice \$5.00
5. ARRL Antenna Book \$20.00
6. Drinks and Cleaning Supplies \$12.50
7. Rental of Kimberton Fire Co. Fairgrounds \$00.00 !

**Total Expenses: \$397.45**

### Hamfest Income:

1. From - ticket sales, tailgate spaces & table rentals \$2848.00
2. From – MARC Club Table member equipment sales (donated) \$11.50

**Total Income: \$2859.50**

**PROFIT = \$2462.05**

## KIMBERTON FAIR 2008

If you've had a chance to review our Hamfest results on the left, then you may have noticed that we paid NOTHING for the use of the Kimberton Fairgrounds.

This rent-free situation was made possible by numerous MARC volunteers and their friends and family members that generously gave their time to assist with ticket sales and parking duties for the 2008 Kimberton Fire Company Fair (also held in July). **Mike KF3CD** headed up this effort.

Some volunteers also worked more than one shift and this resulted in the fire company waiving the \$900 rental fee that it normally would charge for our use of the Fairgrounds for the MARC Hamfest.

This discount is especially important since operational costs for the club are increasing and our two-meter repeaters are quite old. The day will come, probably sooner than later, when one or both of the repeaters will need to be replaced. That will be expensive indeed.

Thanks to the following volunteers: **Phil KB3MAW, Miguel KC2HMG, Ned WQ3Z, Sam WA3LGL, Susan K3SUE, Dieter K3DK, Will K3WIL, Steve N3LJZ, Ray K3RIZ, Steve N1HDP, Maria Blatman (N1HDP's XYL), Jon N3VZG, Bob N3JIZ, Bob W3ZQN, Mike KF3CD, Dominic Pilotti Sr., Dominic Pilotti Jr., Anthony Pilotti (KF3CD's kin), Scott KB3RBU, Dana Pilotti (KB3RBU's daughter), Ron W3ZV, Floyd KA3OXA, Steve KD3WK, Alan AB3FN and Lou WX3I.**

## - 72 - Building the Small Wonder Labs SW Plus

“Getting There is Half the Fun”

By Bob Woish, WB3T



**The SW Plus for 30 Meters, left and 20 Meters, right**

In an earlier article I mentioned two of the HF QRP transceiver kits I will revisit here – the Ten Tec 1340 (for 40m) and the SW Plus 20. Since I began this series I have built both of these kits. One reason is that I needed a portable 40 meter station with good power and a reasonable amount of band coverage, and the other is that I just enjoy kit building. I have mentioned the wait for Ten Tec's line of QRP transceiver kits, but have heard many good things about the line's quality, completeness, and easy modification.

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So despite my previous experience (below) with the 30 meter version, I decided to wait it out for the 40m kit.

This article is not meant to be a review of the Ten Tec, but it is worth mentioning here that I did not enjoy the build, and that is rare for me to say. The errata section was several pages, and step one was to go through the documentation and enter the voluminous corrections into the parts list, schematic, and assembly instructions. This phase of the project took a couple of evenings. Additionally, the manual lacked page numbers in some places compounded by pages out of order, leaving the builder to reason together the page sequence according to context. There were also missing parts which I was able to replace with on-hand materials from the extensive stock of electronic components left over from my own radio kit marketing enterprise back in the 90's, and a few mechanical issues that involved redrilling holes in the correct places to mount the subassemblies into the cabinet. If the Ten Tec kits interest you, you may want to wait for release of the second generation. The manual alone more than warrants revision and until the documentation at least approaches reasonable condition, I wouldn't put myself through a second round of tedium. I will give it this much – after navigating all the difficulty I did end up with a great rig that I really like. If you prefer this kit and want it now, just make sure you are at least an intermediate kit builder with an extra helping of patience.

Having built the Small Wonder Labs SW Plus for 30m last year, as well as a Rockmite for 40 and a Freq-mite frequency enunciator from the same source in the past, I went back to the well and ordered the 20 meter SW Plus. SWL likewise has a backlog of orders and there is a wait time. However, Small Wonder does inform us of this in advance, unlike Ten Tec who failed to deliver my 30 meter kit in February 2007, while claiming “two weeks” in response to each call, until I finally gave up and canceled the order in May. SWL posts the order queue by customer on their website and you can check back to get a good idea of when your kit will really arrive.

The SW Plus is available online at [smallwonderlabs.com](http://smallwonderlabs.com) for \$55 shipped to the lower 48. You can also purchase the case, control, connector, and knob kit for \$42 additional. For both of mine, I chose to work up my own enclosures for a personal look and feel, see photos. The 20 meter version still needs labeling, that will be next. My 20 meter SW Plus delivers 1.66 Watts of output over 34 kHz of range as designed, but you can increase the QSY capabilities if you wish (more on this later). Transmit current is 348 mA at 12.7 Vdc yielding good efficiency; on receive the whole circuit draws a mere 22 mA. I get 2.25 Watts out at 15 Vdc input using an old laptop power pack for fixed station use. Spurious emissions, including harmonics, are down 40 dB, better than the advertised spec. The design features very nice QSK operation, smooth sidetone (I'm sure close to a sine wave although I felt no need to look), and an 800 Hz CW note at the center of the receive passband. It is a true superhet receiver with a three-pole crystal IF filter that delivers good selectivity without the strangled audio tone of some other kits. The kit does not include RIT, which doesn't interfere with making a QSO, but it does leave me wanting at times. I must be in the minority here because the RIT add-on kit has been discontinued due to low demand. Drat! Guess I could hack one up...

The SW Plus went together as easily as the other SWL kits I've built. The addendum totaled two items, indicating a well thought-out and refined manual. The PC board is a high-quality double-sided, silk-screened board with clearly marked locations for each component, which really helps speed construction. Half an evening and an afternoon did the job – 5 hours total for the PC board. I must have been building at a leisurely pace – the 30 meter kit had taken me only 4 hours. The manual is not step-by-step but section-by-section. With a bit of studying the construction tips, which provide good education for beginning kit builders, anyone can get one of these on the air successfully. Another nice feature of the manual is the Theory of Operation section. This will help you understand how transceivers function including signal flow in both transmit and receive modes, as well as how the radio switches between the two and mutes the audio in TX mode. This is a real neat short course in basic radio circuitry.

To build the SW Plus, begin by taking inventory of the parts. This will particularly help beginners become familiar with electronic components of various types. Take the time to read the assembly tips at the beginning of the manual. Take the time to read the assembly tips at the beginning of the manual. And in case I forgot to mention it, *take the time to read the assembly tips at the beginning of the manual!* There is nothing magical about assembly that kit designer Dave Benson does not describe in full detail in this section.

How to wind the toroids, diode polarity, orienting electrolytic capacitors, etc. are all explained. Some tips are specific to the kit - even the direction in which the resistors are mounted. Which side is up determines which circuit point you can measure easily from the top of the board, so no matter how experienced you may be, don't assume you can ignore *any* of the instructions.

Load the components following the sequence outlined in the manual. You'll start with the audio section and move on to the receiver front end, transmit mix section, bandpass filter, and RF amplifier and output filter. With a magnifier, recheck all your work section by section during assembly to make sure there are no solder bridges or unsoldered joints. In electronics manufacturing facilities, quality control inspectors perform this function under low-power microscopes to turn up even the smallest bridges, which conduct nonetheless. Take your time - for a beginner, the PC assembly should take a couple of evenings. For advanced builders, one evening should do it. In either case I think you'll have a pleasant experience building your own ham radio, with the real excitement still ahead.

I found that the secondary winding of T4 needed to be loosely coupled to the primary, or instability would result. Also, be sure to follow the alignment instructions carefully to avoid spurious emission. I hurried through the alignment section due to its simplicity, and found myself with a less than optimal alignment at first, due to overdriving the RF driver stage with too much coupling at potentiometer R24. Only because I checked on a spectrum analyzer did I realize I had unwanted oscillations, so especially if you don't have the luxury of such equipment, proceed carefully as instructed. Pay attention to the advice of advancing driver gain only to 1.5 Watts. If you exceed this and can't monitor signal purity, you may invite trouble.

Dave has backed off the emitter current in the driver a bit to stabilize this stage. Also, the 12 – 15 Volt input range is important. I tried an eight-cell AA battery case as a power source, but stability suffers once the batteries drop below 12 Volts. 10 Alkaline or 12 NiMH or NiCad AA cells in series would be a better choice. After setting frequency per the manual, transmit alignment involves two transformers; receiver alignment is as simple as peaking a single transformer for loudest receiver output.

After completing the kit, I paralleled a 39 pf NPO cap with varactor coupling cap C8 to increase the effect of the varactor on the oscillator frequency, tweaked L1 a bit to reset to the bottom of 20 meters, and now have access to the first 110 kHz of the 20 meter band. Excellent! Temperature stability did not suffer. It does become touchier to land exactly on a received signal with the proper CW note, but not terribly and I certainly enjoy the expanded frequency coverage. A check the next day confirmed the same range with no drift. Oscillator capacitors provided are NPO to keep warm-up time and temperature drift to a minimum. Well it worked; I see no drift from turn-on to 30 minutes. For these two reasons I can say this is truly an “instant-on” radio. I had an MFJ 20 meter transceiver a few years ago that ran all up and down the band no matter how long you warmed it up - even indoors in a temperature stable room. Almost every QSO yielded the comment “You’re drifting...” No such troubles here.

I also ordered the Freq-mite frequency enunciator add-on kit for \$20. What a cool little gizmo! Assembly took about 15 minutes and installation another 15. With this accessory, you simply push a button and the headphones report your transceiver’s frequency via Morse code. I have found in my SW Plus 30 and my Ten Tec 1340 that this feature is very important. In fact, I just ordered another Freq-mite for the Ten Tec. Here’s a hint for anyone with an older radio that could benefit from a crystal controlled frequency reference: I also have a Freq-mite in my Heath HW-8 despite the fact that it, unlike most low-cost single-band kit transceivers, has a calibrated frequency dial. The HW8 suffers from long-term frequency drift due to a mechanically unstable local oscillator coil, and the Freq-mite keeps the radio on target to 1 kHz accuracy.

So there it is, I’m off and running with my latest baby! My first SW Plus-20 contacts, at a time when the solar cycle is not favorable, were NC, KS, IL, TX, OK, Spain, and Venezuela with RST reports ranging from 439 to 599. K5DP in Oklahoma was also running the SW Plus, making for a fun 2-way QRP QSO, so I can tell you first-hand that it sounds great on the air. Oh, and since I have converted my SWL Rockmite to 30 meters and bumped it up to 2 Watts (and regularly contact Eastern Europe with that and a ground-mounted vertical), I also just ordered another for 40 to keep in the car with a portable, quick-deploy dipole for field use on a whim at any time of day or night. As builder of well over 100 kits across a 45-year time span, I am a fan of Dave Benson’s Small Wonder Labs. I am never disappointed with the fun of construction or the performance of the finished project. This is kit building as it should be.

72/73 Bob WB3T [radioWB3T@aol.com](mailto:radioWB3T@aol.com)

## MARC BOARD OF DIRECTORS 2008-2009

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Dieter Hauer K3DK  
[k3dk@marc-radio.org](mailto:k3dk@marc-radio.org) 610-489-1920
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[w3dub@marc-radio.org](mailto:w3dub@marc-radio.org) 267-241-9067
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[wa3lgl@marc-radio.org](mailto:wa3lgl@marc-radio.org) 215-530-2151
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Bob Palin N3JIZ  
[n3jiz@marc-radio.org](mailto:n3jiz@marc-radio.org) 610-687-4587
- TECHNICAL SERVICE**  
Dennis Silage K3DS  
[k3ds@marc-radio.org](mailto:k3ds@marc-radio.org) 610-353-4829
- MEMBERSHIP SERVICES CHAIRMAN**  
Jim Biddle W3DCL  
[w3dcl@marc-radio.org](mailto:w3dcl@marc-radio.org) 610 353-0880
- MEMBERS-AT-LARGE**  
To 9/30/2009 -  
Miguel Ramirez KC2HMG  
[kc2hmg@marc-radio.org](mailto:kc2hmg@marc-radio.org) 856 534-8120
- To 9/30/2010 -  
Phil Cauffman KB3MAW  
[kb3maw@marc-radio.org](mailto:kb3maw@marc-radio.org) 610 286-8961
- CALLSIGN TRUSTEES**  
- WB3JOE Dennis Silage K3DS  
[k3ds@marc-radio.org](mailto:k3ds@marc-radio.org) 610-353-4829
- W3NWA Dieter Hauer K3DK  
[k3dk@marc-radio.org](mailto:k3dk@marc-radio.org) 610-489-1920

## MARC BOARD MEETING HIGHLIGHTS

By Sam Mitchell WA3LGL

Below is a compilation of the past few MARC Board meetings.

April 8th attendance: Dieter K3DK, Sam WA3LGL, Lou WX3I, Bob N3JIZ, Dennis K3DS, Foster K3FXS, Ed W3DUB, and Jim W3DCL. No regular members present this month.

1. Dieter K3DK opened the meeting and discussed the club's responsibility list for each board member. Announced that there will not be a general meeting for the club in June because of field day preparations.

*Meeting Minutes continued on page 9*

Meeting Minutes continued from page 10

2. Dennis K3DS discussed the jammer problem. Stated that the 440 repeater will be off the air for some time until he can get it linked to the 2 meter repeaters for better net coverage. Also, we can keep that band more active. The 220 repeater is sometimes a problem. If it breaks down it may be removed from service.
3. Jim W3DCL talked about library books. He will report back to the board later.
4. Sam WA3LGL No additional comments. Ed W3DUB talked about the web site. Still under construction.
5. Lou WX3I gave a treasurers report. \$17,103.40 in the treasury.
6. Bob N3JIZ stated that there is the MS Walk at West Goshen Park on April 27.08 and the Radnor Memorial Day Parade on May 26,08.
7. Sam WA3LGL was assigned to be Net Control Manager for the Sunday night Net, Traffic Net, and Thursday night Round Table Net. Also, to continue the net on 220.
8. Field Day, Ham Fest, and Kimberton Fair - upcoming.

#### Meeting ended at 9:35 PM

June 10th meeting attendance: Dieter K3DK, Sam WA3LGL, Bob N3JIZ, Dennis K3DS, Foster K3FXS, Ed W3DUB, and Jim W3DCL. No regular members present this month.

Foster K3FXS distributed this months Agenda.

1. Sam WA3LGL read Aprils board meeting notes.
2. Sam WA3LGL highlighted April and Mays general meeting notes.
3. No new treasurers report.
4. Dennis K3DS reported that the 440 repeater is off the air.
  - The repeater jammer has stopped causing problems.
  - The 2 meter repeaters are working fine.
5. Our new WEB Site is working fine.
6. Jim W3DCL discussed the membership list. Also, talked about the problems getting emails thru Comcast. Our membership is down from last year.
7. Field Day is on June 28 – 29 and we need more help to set-up. Yak N3MQM will be helping with the food this year. KN3EUF was the safety officer but cannot do it this year. Bob N3JIZ will take over those duties in his place
8. The Hamfest will be on July 13. The door prizes will be some ARRL Books, Free membership to the club for one year, and Yeasu FT-60R.
9. May VE session was held and there were two new Techs & 1 Extra. Aug. 2, 2008 will be the next session.
10. Bob N3JIZ reported that he fixed our HT with new batteries and antenna. The MS walk had three volunteers K3FXS, K3WIL, and N3JIZ. The Radnor Memorial Day Parade had nine volunteers K3DK, WQ3Z, KA2VLP, W3ZQN, KA3QOT, KB3MPX, KA3GKI, KA3OXA, and N3JIZ.
11. KA3NIQ Bob Fox passed away. Acknowledgement and a moment of silence will be observed at the next membership meeting.
12. New Business. Ray and Lori Jones were voted off the board due to lack of attendance and for not renewing their membership. We were all sorry to see them go. The board suggested that Phil KB3MAW replace Ray KB3NFE on the board. >>

13. ED W3DUB will take over the PR position temporarily. Jim W3DCL will send out paper renewal forms to people who have not renewed yet.
14. The MARC Auction that was held earlier in April added \$41.60 to the club's Treasury.

#### Meeting ended at 9:05 PM

### FROM THE EDITOR'S SHACK

What happened?!! Several weeks ago many people looked at their 401K accounts, Mutual Funds and other investments and rightfully became alarmed at the significant losses that they had incurred. Many at my place of work lost \$50,000 or more and at least 5 people that I know of WERE going to retire but now they can't. Over 500 were laid off!

Apparently, the banksters, brokers and other Wall Street criminals were busy enriching themselves by generating "Market-to-Model" OTC Derivatives contracts and Credit Default Swaps that never could perform' and were thus destined to FAIL. But... they got their bonuses and commissions!

The amazing thing is that these mountains of toxic paper were amassed over the past 10 years because our wonderful politicians enabled a ridiculous loophole that allowed this criminal practice to take place. No regulations, No standards, No clearinghouse and about a dozen other things were wrong with these bad contracts. To add insult to injury, many of these contracts were leveraged as high as 40:1 and were based on the outcome (performance) of Sub-Prime Mortgages. Why would anyone loan money to a deadbeat?

This is what happens when standards and accountability are officially removed from the financial system. Will we survive this chaos? Time will tell.

In the amateur radio community, we have standards. We also have some very creative and gifted individuals. I'm convinced that these are some of the people that will help (in part) to keep the industry and development in our country rolling forward - in spite of those Wall Street crooks and our incompetent politicians.

For example, several months ago I had the pleasure of visiting a local ham that was self-employed. As soon as I entered the radio shack in his basement, my jaw dropped... In addition to a well equipped radio room, he also had a complete test lab that was customized for his research, and development that was a key part of his business. He showed me a 1,000 watt switching power supply that he had designed and built, complete with battery backup. He had assembled this bullet-proof power supply as part of an alarm system for a local company.

He was in the process of testing the battery backup portion of this sophisticated power supply and had a customized test jig and a monitor all set up and functioning. Incredible and very impressive, yet he was very low-key about the whole thing.

Will we survive? With the talented and giving people that I've met in this hobby called amateur radio... I think so.

- 73 Dieter K3DK

## MARC FIELD DAY – 2008

MARC hosted Field Day for its members and the visiting public this past June 28-29th at the Verizon training field in Audubon, PA. We ran a 2-Alpha configuration that consisted of 1 HF phone station, 1 HF CW station and, a VHF station that was focused on making contacts on the 6 meter band (a 'free' station is allowed on VHF).

The weather was typical warm and sunny as expected, but the humidity was low and we didn't encounter any rain storms as in previous Field Day events.

**Highlights:** **Bill Coffey** showed up from Verizon like clock-work with the trucks and worked with us to get things going. **Dieter K3DK** was Field Day captain and **Bob N3JIZ** was our co-captain and safety officer. Bob did a great job operating the Verizon bucket truck and he picked up gasoline later on to feed the hungry 5 KW generator that was active on the other truck. **Kurt KB3EJS** showed up with his sister and provided some cold refreshments and **Yak N3MQM** made some wonderful food on the BBQ grill for all to enjoy. **Alex KA2VLP** worked 6 Meters very intensely with his Yaesu rig and got amazing results (see scores on left). Our Junior operators that helped us to score bonus points were: **Aidan Montare, Jason Lipow** and **Matthew Lipow KB3PNA**.

Our antenna farm consisted of a 3 element tri-bander yagi for 10, 15 and 20 meters, a G5RV dipole, a half-wave 80 meter dipole and, a 4 element quad for 6 meters.

The following individuals helped out with Field Day setup: **Susan K3SUE, Ned WQ3Z, Steve KD3WK, Bob KA3QAJ, Josy WQ3E, Steve WA2EAJ, Yak N3MQM, Dieter K3DK, Lou WX3I, Charlie KB3CO, Sam WA3LGL, Alex KA2VLP, Dennis KA3QOT, Ron W3ZV, Bob N3JIZ** and **Phil KB3MAW**.



(left – right) Dennis KA3QOT and Steve WA2EAJ operate the HF Phone station for Field Day 2008 – photo by K3DK

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### W3NWA - FIELD DAY 2008 SCORE –

Below is our score. Better conditions existed, compared to last year, but the CW rig (old Kenwood TS-120S) had a problem with leaky' TX/RX switching diodes that affected operation, so we had limited CW activity on the upper HF bands.

### THANKS TO ALL THAT PARTICIPATED!

<u>BAND</u>	<u># Phone QSOs</u>	<u># CW QSOs</u>
80 M	59	80
40 M	9	74
20 M	41	11
15 M	6	17
10 M	5	6
6 M	144	0
<b>Totals =</b>	<b>264</b>	<b>188 (x2 CW multiplier)</b>

**Total QSO Points = (264 + 376) x2 (multiplier) = 1,280**

**Bonus Points = 710**

**FINAL SCORE = 710 + 1,280 = 1,990 Points for FD 2008**

**NOTE:** Our Field Day score for last year was 2,316 Points.

## Pennsylvania Becomes 27th State with PRB-1 Law on Books

From ARRL HQ -

On Wednesday, October 8, Pennsylvania Governor Edward G. Rendell (D) signed into law a bill that guarantees radio amateurs the right to erect antenna support structures up to 65 feet without the need for a Special Use Permit. The bill passed in the House with a vote of 196-1; it passed in the Senate with a vote of 49-1. The new law is scheduled to go into effect December 8, 60 days after signing.

[Senate Bill 884](#) (now Act 88), *An Act amending Title 53 (Municipalities Generally) of the Pennsylvania Consolidated Statutes, Restricting Municipalities from Regulating Amateur Radio Service Communications*, was first introduced on June 1, 2007 by Pennsylvania Senator Stewart J. Greenleaf (R) who represents portions of Bucks and Montgomery Counties. The bill requires local municipalities to "reasonably accommodate amateur radio service communications, and [to] impose only the minimum regulations necessary to accomplish the legitimate purpose of the municipality" and says that "[n]o ordinance, regulation, plan or any other action shall restrict amateur radio antenna height to less than 65 feet above ground level, [but a] municipality may impose necessary regulations to ensure the safety of amateur radio antenna structures, but must reasonably accommodate amateur service communications."

PRB1 continued on page 11

The driving force behind the bill's passage was George Brechmann, N3HBT, of Warminster. "We didn't have a PRB-1 law and I just got tired of people telling me it couldn't be done," he told the ARRL. "So I called up my senator's local office and told them what I wanted. They referred it to his Harrisburg office and a while later, I got a call from Senator Geenenleaf's executive assistant Eric Pauley wanting more information."

Brechmann said the bill was stuck in committee "for the longest time, with lots of back-and-forth. Fortunately, they were able to reach a compromise with the help of the League and its General Counsel Chris Imlay, W3KD. This act even encompasses the urban areas of Philadelphia and Pittsburgh." Brechmann, who has a 60 foot crank-up tower in his backyard, says he has no plans to get a taller antenna support structure.

Brechmann said he found out about the bill's passing in the most appropriate of ways -- on the radio. "I'm the trustee at the club station, K3DN, at our senior center; we have about 130 members there. I went over on Tuesday evening to unlock the doors and get the rigs going, when my wife Elaine, N3TMP, called me on the radio to tell me the bill had passed the House. Five minutes later, she called me again on the radio to tell me it had passed the Senate! And now the governor signed it as soon as it reached his desk."

Saying that getting this bill passed is his "little contribution to posterity," Brechmann said he is glad to be able to do something good for the amateur community "because they have been so very good to me. I'm blind, and Amateur Radio has been a very large part of my life." Brechmann stays active ragchewing on 15 meters "and 10 when it's open," as well as serving as Net Control and coordinating his township's public service events.

ARRL Eastern Pennsylvania Section Manager Eric Olena, WB3FPL, said he was "thrilled" with the bill's passage: "The Pennsylvania Legislature showed overwhelming support of Amateur Radio [by passing this bill]. This legislation was started by George and coordinated with Senator Greenleaf and Representative Kathy Watson (R). Pennsylvania hams made an outstanding effort contacting their senators and representatives. By seeking their support, they really helped with the success of this legislation. The effort by all hams throughout the country to foster Amateur Radio as an effective communications method in emergencies did much to highlight a valued reputation for Amateur Radio, and without a doubt, had an effect on these proceedings."

## FCC Responds to ARRL Petition Against Experimental License using 40 Meter Band

From ARRL HQ –

On Monday, October 20, the ARRL filed a "Petition for Modification or Cancellation of Experimental Authorization" ([Petition](#)) with the FCC with respect to WE2XRH. According to the FCC, this experimental license -- issued to Digital Aurora Radio Technologies (DART) >>

-- proposes to "test digital transmissions in 4.50-5.10 MHz, 7.10-7.60 MHz and 9.25-9.95 MHz for a terrestrial digital radio service to the citizens of Alaska." The League's protest was prompted by the certainty that high-power operation in the frequency range 7.10 to 7.30 MHz would cause unacceptable and harmful interference to the Amateur Radio Service in this part of the 40-meter band, which is an exclusive amateur allocation in ITU Region 2 (North and South America).

On October 24, the FCC responded by issuing an amended license that redefined one of the station's frequency ranges to eliminate conflict with the Amateur Radio Service. The amended license narrows the range to 7.30 to 7.60 MHz and gives as the reason for the change, "operation in the band 7.1-7.3 MHz will cause harmful interference to Amateur Radio Service licensees."

"We are delighted that the FCC acted so promptly to correct this error and are pleased that the matter has been resolved," said ARRL CEO David Sumner, K1ZZ.

WE2XRH will be using a 20 kHz bandwidth digital emission at a transmitter output power of 100 kW and an ERP of 660 kW within a radius of 1500 kilometers of Delta Junction, Alaska. According to the amended license, the transmissions will take place in the frequency ranges 4.4 to 5.1 MHz, 7.3 to 7.6 MHz and 9.25 to 9.95 MHz. --



(left - right) Bill KN3EUF and OSARC VP Stuart WB3JNH operate from the Absecon Lighthouse in Atlantic City, NJ on May 31st, 2008 – Photo by Dave W3QMR

Mid-Atlantic ARC  
P O Box 2154  
Southeastern, PA 19399-2154

