ARASWF Newsletter

Vol. MMXII No. 2 The Journal of the Amateur Radio Association of Southwest Florida
February 2012

In This Issue:

The next Club Meeting will be held February 28th 2012 at 7.00pm at the Red Cross, Naples.

From the President's Shack

Hi, everyone.

First of all, I want to thank everyone who came to January's meeting, I'm pretty confident in saying that it was very interesting and, I believe, a success! A special thanks goes out to Dave and Jeff from the League!

I know that usually this article is supposed to be what the Club President thinks or wants to say, but, I want to throw this out to you members…

I want to know what direction you see the club going for 2012… What would YOU like to see at meetings? What type of events? Who you would like to come in and speak? Things like this are a big help and completely necessary for full member satisfaction.

This club is nothing without its members.

With this being said, (oh, no, here it comes…) I've been told that I am REQUIRED to state this… Club Dues are – that's right- due. Please remember that even though we need your voices, the club is in need of monetary (just like the government) support. –Phew, that's over with!-

Now, on to the FUN part – the Oil Well Park Special Event is coming up Saturday, February 25th from 9 to 2. We want to see you of all there and participating.

The next meeting is on February 28th, so that will be a great time for feedback on this event and for you to tell the Board what awesome ideas you have for future events.

Bill N1MMQ

Meeting Minutes

Amateur Radio Association of Southwest Florida

Special Monthly Business Meeting held at the American Red Cross, Naples, Florida, on Friday, January 20th, 2012

Officers and Directors Present:	Bill Krauss, N1MMQ – President Bob Ostrin, WB2TGY – Vice President Ken Bills, W9KB – Secretary/Treasurer Uli Altvater, AGØX – Director Henrietta Horvay, KA1JVN– Director Harry Sevush, KD4JMV – Director
Absent:	George Tomlinson, AA4GT – Past President Frank Halas, W4RBW – Director

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MEETING MINUTES

Meeting Called To Order:
A quorum was present (20 members, 3 officers & 3 directors) and five guests in attendance, N1MMQ called the meeting to order at 7:03 pm with the Pledge of Allegiance

Introductions:
All attendees introduced themselves by name and call sign for the benefit of the members and guests in attendance. Special guests, ARRL District Director and Assistant Director, Dave Fowler - W4DFL and Jeff Beals - WA4WA were introduced by N1MMQ.

Reading & Approval of Previous Minutes:
Previous meeting minutes were dispensed, since they were published previously in the ARASWF Newsletter.

Treasurer's Report:
W9KB reported that as of December 31st, 2011, the club's bank balance was $4,122.36, after income of $1127.50 from dues and 50/50 income, less expenses of $64.63 (Field Day Food) and $184.66 (Christmas Party).

Officers' Reports:

Oil Well Special Event – K4ADR is chairing this annual on-the-air event. This special event will be held February 25th. Setup will commence around 8:00am. Please plan to visit the site and

improve your field day skills. Commemorative QSL cards have been printed for this event, so let your northern friends know, so they can work our WB2QLP 'Sunniland Oil Field' station.

K4ADR requested funding to support this project. KA1JVN moved that $200 be budgeted for this project, seconded by WB2TGY. Membership approved project funding.

Winter Field Day – AA4GT and K9KNW are hosting this year's club effort at Joe's 'Tiki Hut'. The contest starts January 28th 17:00 UTC and runs through January 29th 17:00 UTC. This is a all band (non WARC) any mode, work all you can contest. All club members are welcome and encouraged to drop over to the Tiki Hut and work some contacts.

Committee Reports:
None at this time.

Old Business:
Christmas Party Wrap-up All who attended this year's party had a great time at this event held at the beautiful Royal Woods Country Club. The food was very good and the atmosphere festive. There were many door prizes including ARRL books and a case of wine, raffled off and well as the famous 50/50.

New Business:
Wednesday Night 2 meter information net: Bill N1MMQ announced that the Wednesday night information net was reconsidered at the last board meeting and proposed it commence January 25th at 7:00pm.

KA1JVN moved that the membership accept this recommendation. It was seconded by N1MMQ. Membership carried this motion.

Please check in and help make this a successful means of club communication.

Special Program:
W4DFL and WA4WA presented a very informative look behind the scenes at the ARRL Headquarters in Newington, CT. W4DFL covered many of the league programs and priorities. The lively Q&A session that followed suggested the membership valued the presentation.

50/50:
The 50/50 raffle ($34) was won by N3YDL.

Adjournment:
There being no further business, WB2TGY moved to adjourn the meeting, seconded by KA1JVN. N1MMQ adjourned the meeting at 8:40 pm.

Respectfully Submitted,
Ken Bills – W9KB
Secretary

Amateur Radio Association of Southwest Florida

Executive Board Meeting held at Trimax Wireless, Naples, Florida, on Tuesday, January 10th, 2012.

Present: Bill Krauss, N1MMQ – President
Ken Bills, W9KB – Secretary/Treasurer
Uli Altvater, AG0X - Director
Frank Halas, W4RBW - Director
Henrietta Horvay, KA1JVN – Director
Harry Sevush, KD4JMV – Director

Absent: Robert Ostrin, WB2TGY – Vice President
George Tomlinson, AA4GT – Past President

MEETING MINUTES

Meeting called to order: The meeting was called to order at 1:00 pm.

Introductions: The new Board, formally meeting for the first time, introduced themselves and provided a brief explanation of their backgrounds.

Speakers/Agenda for next Membership Meeting: The Board discussed and set the agenda for the next membership meeting. It had been previously agreed (telephone/email) to change the meeting time, from the regularly scheduled 4th Tuesday of the month, to January 20th to accommodate Dave Fowler-W4DFL and Jeff Beals-WA4AW from the ARRL South Florida District so they could both provide a special presentation to our general membership.

Dave & Jeff also requested to meet with the board prior to the membership meeting, after discussion it was agreed to meet at 6:00pm at Bob Evan's for dinner.

Treasurer's Report – Ken Bills provided a treasurer's report commencing December 1st with a bank balance of $3244.14. The ending balance for January 2012 was $4,122.36 which included the club Christmas party expenses ($184.66) and dues deposits. Ken also provided a proposed budget ($1800) for the year that included all known operating and planned project expenses. It was agreed that the budget may be increased to accommodate additional projects and/or unseen expenses that are board approved.

Club Forward Direction – Bill Krauss outlined his vision of organizing the club along the lines of operating committees. Although, not formally named at this time, they

included: Repeater/Tech Committee, Public Service Committee, Field Day Committee, and County/EOC Investigative Committee. The board discussed each committee of club goals and desired outcomes. It was agreed that a club director or officer should be a member of each committee to provide feedback to the board.

2m Club Net – The history of the Wednesday night Club Net was discussed. Several operating procedure suggestions were made, and it was agreed to re-launch the net in February. The Board's intention is to keep the net interesting for all club members and area listeners, rather than provide just another 'check-in check-out no traffic' net. Bill Krauss & Harry Sevush agreed to chair this effort.

Specific assignments that were taken out of the meeting:

- Bill Krauss volunteered to call Peter Gaddy regarding the specific arrangements that have been made to house and finance the WB2QLP repeater.

- Harry Sevush agreed to contact K1PJ regarding a CW presentation for the February membership meeting.

- Frank Halas volunteered to contact Dan Summers, of Collier County EOC, to discuss a potential meeting, at Dan's convenience, with the Board.

- Ken Bills will mail all undelivered certificates of appreciation from last year's Field Day, as well as other archived certificates.

- Bill Krauss & Uli Altvater will meet and discuss the feasibility of providing a second receiver location for the WB2QLP repeater in downtown Naples.

Unfinished Business – Past Secretary, Bob Graf-W2HI provided a detailed work list of unfinished business for the new board to review. This list was briefly discussed. It will be systemically addressed as we move forward.

Next Board Meeting – Trimax Wireless, Tuesday February 21 @1:00 pm

Adjournment: The meeting was adjourned at 3:03 pm.

Respectfully submitted,
Ken Bills, W9KB
Secretary

New Members

None this month.

News Items

from Harry (KD4JMV)

LIGHTNING: WHAT IT IS AND HOW TO PROTECT OUR EQUIPMENT FROM IT .

How is it made, Where does it come from? Scientist currently have no unified theory. Some theories state that moving liquid and frozen water in clouds, collisions and movement of electrons cause massive charges to build with in clouds. Solar Wind is thought to contribute to the earth's atmospheric charges, also Gamma Rays. Currently we are simply not sure how it happens. Nature tends to balance voltage differentials.

Fun Facts

1. The voltage of a lightning bolt is related to its length top to bottom, this makes sense due to the voltage breakdown of air is relative to how much distance through the air we want to cover…. Spark plugs have about 1/10 of an inch of air to cross and require between 5K to 40K Volts to break down this air gap…

2. Lightning Bolts can have up to 1 billion volts of EMF.

3. Lightning's current can range between 10 K Amps to 200 K Amps

4. Average Current is about 30K Amps

5. Average Power is about 1 Terawatt of power lasting about 30 mS

6. **Heat Lightning** is a real thing, just with a misleading name. It should be called quiet/distant lightning. The thunder travels 25 miles maximum. Space Shuttle example…

7. Thunder is exploding Air due to lightning up to 36 K degrees Fahrenheit.

Why am I interested in this anyway?

It can destroy/damage your property and or life.

1. Damage / destroy down your home / office

2. Damage / destroy your Ham Radio Shack, Televisions, Computers, Etc.

No Math Physics.. What is Plasma, Impedance, Etc.

1. What is Lightning It is Plasma

2. What is Plasma? It is one of the 4 states of matter (solid liquid gas plasma) that is what happens when gas becomes excited in the presents of high voltages.

3. Lightning plasma contains RF, Infrared, visible, X-ray and gamma ray energy. Infrared is heat, visible light is what we see, red through blue, X-ray and gamma ray is higher frequency energy that ranges into the 10-19th Hertz, infrared ranges in frequency between 1-430 THz it is the heat from the lightning bolts plasma. All of these are forms of electromagnetic radiation … Like radio

4. Is lightning AC or DC current? This is an interesting question and it is actually both. When the stroke is discharging it will often rapidly start and stop and cause pulses of energy in the discharge exercise.

5. Why do we talk about impedance of grounds? Since there is an AC component to lightning we want to manage lightning with a low impedance path to earth to neutralize the voltage potential with great efficiency.

To Bond or Not to Bond (Bonding)?

Things we do to protect our structures (tower / home) and electronics gear.

1. One is to bond the chassis of the electronics, the center conductors and low voltage lines (when their voltage potential to ground rises to high) to a common earth ground.

2. You are already bonded to the wimpy earth grounds weather you did anything or not…. Your AC power's neutral sees ground at the distribution panel. Your coax transmission line sees your homes power neutral line (white power lead). On both the shield and often the center conductor too there are high impedance paths to ground.

3. What we want to do is provide a robust low impedance earth ground for all electrical / electronic / tower structure devices you would like to protect.

4. Insulate cabinets on concrete floors; bring cables in thought the top of cabinet.

Should I Ever Not Ground my Equipment? Misinformation

If it runs on batteries and connects to nothing …Possibly otherwise bond it. 8

Note that there is a trade off of costs of grounding bonding and surge protection vs. the benefit, the risk vs. cost benefit. We have to manage costs. There is the matter of National Electric Code and Building laws of your neighborhood / country you live in. This talk is not about helping you decide how to value any of these ideas. But I will say that at minimum you have a responsibility to protect yourself and other lives and their / your personal property.

1. Lightning protection used to be a guesswork project many years ago. Currently it has a well defined process of doing it right. All players are in agreement. No more debates about how is the right way.

2. There are too many persons that subscribe to bad Ideas based on hunches or another person's bad Ideas. There is common misinformation on the subject of bonding / grounding. Choose to use the ARRL handbook or NEC as you valued source for grounding.

3. Today lightning is a science; good valued data that tells us if we follow commonly accepted practice, we will en-joy maximum protection form lightning.

4. Bottom line bond and ground antennas and towers.

5. 95+ percentage improvement to making your property protected from lightning.

6. Not every strike can be protected from, some are just to massive.

How Do We Go About Creating a Ground

Where Do We Locate our Station Ground and Our Tower Ground?

1. You need a ground point near your antenna tower, or antenna system.

2. You need a ground point near where your cables enter the building; this is also NEC Law in the United States.

3. You need a Ground point at your commercial electrical power service panel

4. You need a ground point near you radio shack

5. In some cases it is ideal to combine all of these points together.

6. 5 ohms or less, South Florida is friendly to grounding resistance.

How Do We Go About Bonding?

🕐 Voltage Drop, Voltage differential means current flow in Your gear(This Is Bad)

🕐 What Conducts?

🕐 What Material Should I Use to Bond our Radio Stations?

Voltage Drop, Voltage Differential Means Current flow In Your Gear (This Is Bad)

1. We want to eliminate voltages / current from passing through your rigs, rotor controllers, computers, etc. We want to make your equipment not the path to ground. Voltage drops come from non-existing or to undersized high impedance bonding conductors and improper conductors to carry the surge.

2. Weather you ever wanted them to be or not, things like your telephone lines, DSL Lines, Cable internet lines, FPL Commercial Power, Etc. Can be the least path to ground in a lightning strike situation. This is why we must properly bond / ground our station gear.

3. I like # 4 stranded for many Ham applications. Don't solder copper strap or wire at the antenna tower, this can make a fusible link that will fail when carrying lightning current stick with a minimum of UL approved connecting devices (ground rod clamps, pipe ground clamps etc.

4. When bonding in your radio shack use low impedance bonding materials, UL Approved is ideal. Copper strap is better than Stranded Wire, High Strand Count is better than low strand count, and stranded is better than solid. Be-cause round cables have a skin effect they have inherent impedance. Because Strap is flat its inherent impedance is low.

5. Balance cost to return on investment when choosing grounding hardware.

What Material Should I Use to Bond our Radio Stations ? 9

Ideally we would use flat copper strap everywhere, unfortunately this material sometimes difficult to work, fitting are not always easy to pay for or come by. Strap material is not always loved by building inspectors used to seeing conventional sol-id or stranded cables for bonding. Know that is strap is best as its skin effect is least (lower impedance). Next is stranded copper then solid copper cable. Number # 4 gauge is the minimum size to use to ground antennas or towers. Number # 8 is acceptable for radio station gear. Polyphaser's is an amazing toy store for these products. Home Depot or an electrical Supply house Like CES is fine too.

Single Point Ground Strategy

- Is It Practical?
- Is It A Good Idea?
- How Do I Do It?

Is It Practical?

Single point means Commercial Power, Telephone, Cable TV/Internet, and any and all Coaxial Cables enter the building at a single point and are bonder and or surge protected at this point. Not usually practical.

Is it a good Idea?

Heck Yes and we can achieve some of the benefits by being intelligent about our strategy.

How Do I Do It?

Design your next ham Shack where you combine all the commercial power and low voltage entry ports to be in the same general space. Bond all the grounding points together using suitable conductors.

Surge Protectors

- **Coaxial**, MOV, capacity coupled, Spark Gap, ¼ Wave, or combination of these

🕐 **Power** 120 / 220 VAC, MOV

MOV

The common technology used with RF and low voltage circuits is MOV; these devices conduct when they"re not to exceed voltage is reached. They then short the conductors current to ground. These devices depend on a very very good (Low impedance) ground connection to work properly. If they aren't they can do as little as zero good for protecting your gear.

¼ wave Coaxial

Passes some RF energy below 1 MHz (where lightning energy lives in the AC mode) not considered best.

Cheap Tricks

🕐 Do this right or add problems not solutions….Coax 2 turns 6-8" in diameter.

No Sharp Bends In Any Bonding Conductors.

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WRITTEN BY: Mark Lavallee / AC4UV

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from Harry (KD4JMV) – with permission from WA4AW

This sound familiar ??

After talking on the local 10M SSB net with some fellow operators, the discussion led to how quiet the bands have been, especially our core new comer bands, 2m and 70cm For the die hard HF'ers this applies to you to. There are a load of repeaters out there that faithfully ID every 10 minutes with nothing being said on them all day. I have my Icom sitting on scan and around the same times, the same people get on and talk about the same things. Nothing wrong with it. There are too many times I've drove thousands of miles on road trip and I'm lucky to hear one person on the band, on the calling frequencies Why is that? Why do I say core bands for new comers? Two meters and 70cm are the easiest bands for newly minted radio amateurs to get on. They used to say that over 50% of new hams never get on the air, well I think it's closer to 75% or dreadfully higher. So to move this one, and generate some activity for the repeater builders to have their machines use, have another reason to modify to fix that radio that's been sitting for a while, or explore a new band such as 900MHz since Alinco came out

with the first ever amateur 220/900MHz radio. I implore that fellow amateurs whom are movers and shakers develop an Elmer Program to get the new amateurs on the air, and encourage them to use our beloved repeaters, and make some noise on the calling frequencies, whatever they may be. Be not afraid to exchange your name, call sign and phone numbers with a new-by to get them on your repeater and make some noise. I also recommend to those whom spend a lot of time in front of the TV, video games, and Facebook, to shift their activities to the radio room, position of the house, or even if it's just the car... like mine used to be. If it were not for a club and someone to Elmer me, I would not be here, 17 years later after receiving my ticket in the mail. Do something to activate our hobby today- Elmer, and get on the air. Let us use what we have!

Jeff Beals, WA4AW

ARRL Southern Florida Section Assistant Manager

Gold Coast District Emergency Coordinator

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from Harry (KD4JMV)

Some pictures taken during an antenna party at Harry's QTH

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From (Bob W2HI)

OIL WELL PARK SPECIAL EVENT

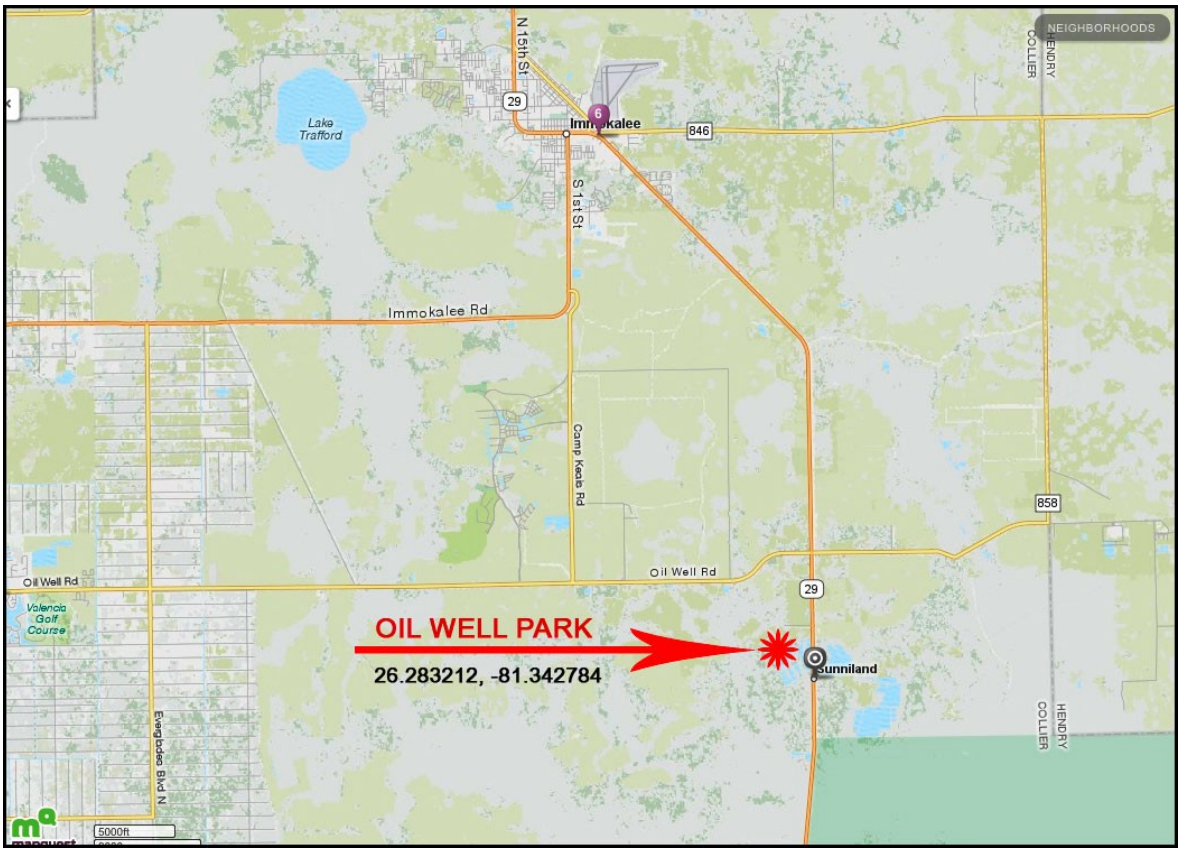
DATE: Saturday, February 25, 2012
TIME: 9 am to 2 pm
FOOD & DRINKS will be on hand until gone
BRING your own chair and table if needed
BRING your radio & antenna if you want, also a generator if you have one

Come on out and work the Bands and have some FUN!

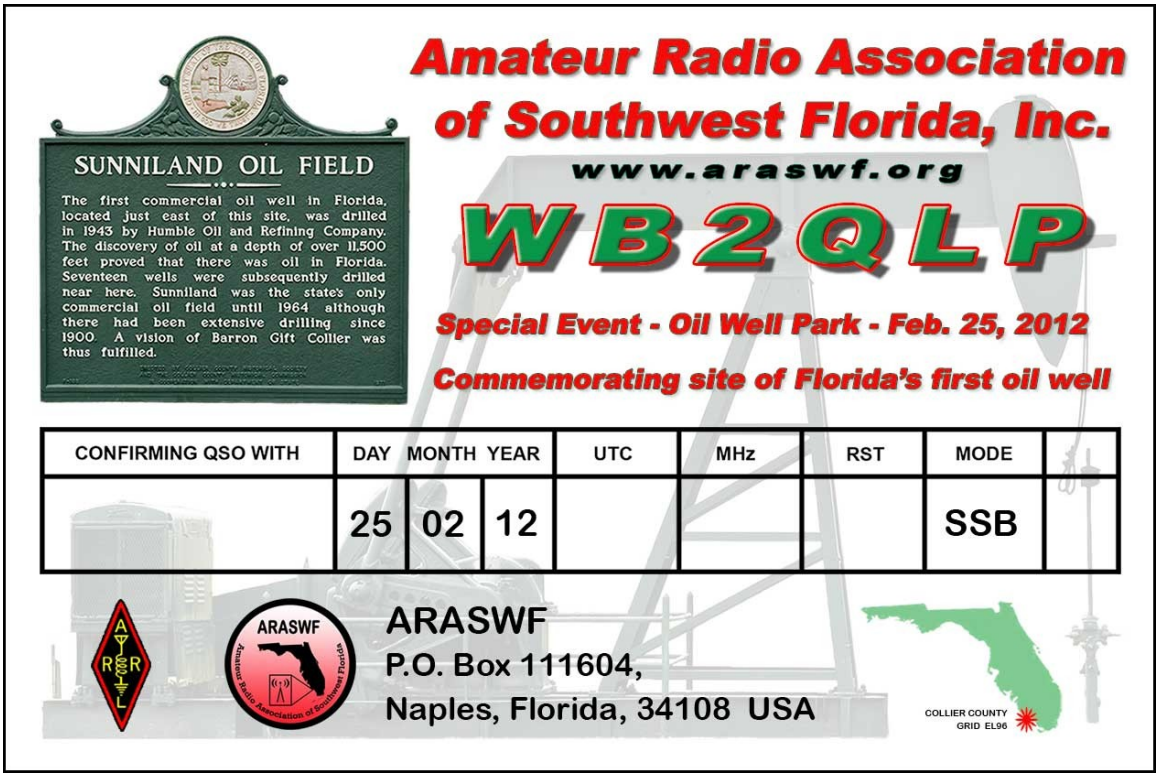
This is a small public park in Sunniland, which has Florida's first commercial oil derrick. Oil was discovered in 1943, and although oil did not pump from this exact location, the equipment was moved here as a public display.

If you have any questions, please contact A.D., K4ADR at k4adr@comcast.net .

Here is a map to the site, showing it to be off Route 29, just south of Oil Well Road.



A special QSL card has been prepared especially for this event – please see below:



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From (Bob W2HI)

WINTER FIELD DAY, JANUARY 28-29, 2012

Winter Field Day activities were conducted at the QTH of Joe, K9KNW, in East Naples. Club participation was underwhelming, so there was little need for crowd control or parking management. Some photos below.

Walt KU1Q, Henrietta KA1JVN, & Bob W2HI watch on as George AA4GT operates CW

Walt KU1Q & Henrietta KA1JVN are joined by Joe K9KNW to give George support

George AA4GT trying his best on 10 meters CW, with Joe K9KNW observing

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Trading Post

FOR SALE

I have an excellent GAP Challenger DX Vertical Antenna for sale with a quick mount for raising and lowering antenna. This Vertical antenna is 31.5 feet high tunes 75 meters, 40, 20, 15, 12, and 10 will tune 6 meters also. It will load up to 1500 watts PEP! Moving to a restricted HOA must remove from property because house is sold. Please help!! Name your price, within reason....

Frank W4RBW (fhalas@comcast.net)

FOR SALE

WE-800 and ground plane antenna in very good condition.

George W1VEM (ggallipeau@comcast.net)

FOR SALE

Vibroplex Bug 1954 Refurbished by Vibroplex $150.00

Vibroplex bug 1956 Refurbished by Vibroplex $150.00

8KW GENERATOR **$1000.00** USED ONE TIME IT WAS $1450.00 NEW WITH PUSH BUTTON START

George AA4GT 239-774-1759

Club Information

Meeting Info: 4th Tuesday @ 7:00pm

American Red Cross
2610 Northbrooke Plaza Drive
Naples FL

Club Repeater: WB2QLP
146.670 (-600) PL 136.5
EOC Repeater:WB2WPA
147.030 (+600)

Club Web Site:
http://www.araswf.org

President: N1MMQ
Bill
Vice President: WB2TGY
Bob
Secretary: W9KB
Ken
Treasurer: W9KB
Ken
Director: W4RBW
Frank
Director: AG0X
Uli
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