



# Squelch Tales



Newsletter from the Merrymeeting Amateur Radio Association for April 2009



## MARA Technician Class instruction underway



**TOPSHAM:** On the evening of March 9<sup>th</sup> at the Topsham Red Cross building the first Association sponsored Technician License preparation class got underway. The class was scheduled to start two weeks earlier but for those weeks every Monday evening there were snowstorms.

MARA President, Harry McNalley N1TTT, heads the class with instruction assistance from Steve Kerchel AA4AK, John Briggs KC6TVF and John Multon N1OIG. The class has four students that seemed to appreciate the information and instruction they were receiving from the instruction team. Harry said, "It looks like there will be four new hams in Maine in the near future."



## Tech Committee News

By W1ZE

In early March Bill "on the hill" Messier, K1MNW and I were discussing the condition of the Diamond F-781A collinear repeater antenna on the Associations 444.4 repeater. After years atop the tower with winds that reached or exceeded 90 MPH and the antenna being

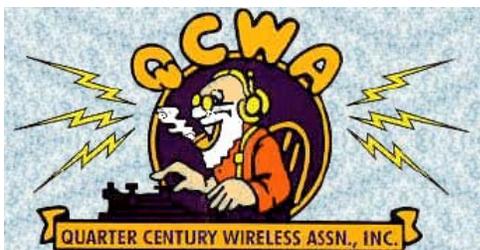
bent into the letter L more often than not, we were concerned that maybe the internal elements inside the tapered fiberglass whip may have seen better days. Bill said he had an eight-bay UHF folded dipole array that was in commercial services years ago. Knowing that they tend to exhibit a broad frequency bandwidth, why not see if we could use it. Bill ran a VSWR test on it and at 444.4 MHz the SWR was almost unreadable on his Telwave wattmeter.

On Saturday, March 7<sup>th</sup> Donnie Dauphin, WD1F, the tower climber guru, went up the tower and took down the Diamond antenna and placed the more rugged eight-bay dipole array in it's place. Well. Gain figures don't lie. The Diamond claimed an 11.5 dB where the dipole array claimed 6 dB and almost instantly we noted a drop in the coverage area and signal strength. We would have to put the Diamond back up.

Before the Diamond repeater antenna went back up, I opened it up and inspected the coaxial element and it's associated solder connections and found everything OK. I purchased three six foot long lengths of ¼-inch fiberglass rods (bike pendant whips) and attached them to the mid-span of the antennas whip and securing them with, tape, tie-wraps and shrink tubing. This stiffened the whip up considerably. We will see how it holds up atop the 90-foot tower in the high winds.

While atop the tower, Donnie checked the PL-259 connector on the two-meter Station Master and found it tight. We still think that it is time to lower it down and make an internal inspection. Over the last year he have experienced some snap-crackle-pop moments and suspect that maybe some internal connections may be degraded. We will keep everyone informed on that process. If we could afford it we would like to replace the stationmaster with a Super Stationmaster, a subject for a later date.

73, **Bruce WIZE** (KS1R trustee)



## QCWA award six Maine Hams with anniversary milestone Awards

The Quarter Century Wireless Association has awarded six Maine Hams with anniversary milestone awards.

- **Jerry Barns, K1GUP** from Carmel received a **50-year** certificate. Jerry has been to our meetings and presented a talks of Direction Finding.
- **Howard Feldman, W1HOW** of Auburn also received a **50-year** certificate.
- The MARA's own **Al Corderman, W3ZD** received a **55-years** in Han Radio certificate.

- **Norm Heoreux, W1SCM** of Lewiston was awarded a **60-year** certificate.

- **Carl Watson, W1NV** of East Boothbay was awarded a real milestone Award, **70-year**.

- **Richard "Dick" Baldwin, W1RU** of Damariscotta, and past President of the I.T.U. received a certificate for **75 years** in Ham Radio. These folks are real keepers of the flame.

The awards were presented to the recipients at the QCWA Maine Chapter meeting at the Maine State Convention in Lewiston on March 28<sup>th</sup>.

Unfortunately, Dick could not make the meeting and Carl Watson was not physically able to attend so arrangements are being made to present it to him at the nursing home is living in.

The MARAs Bill Messier, K1MNW and Peter Russell, K1MJP are not members of the QCWA but they both have been licensed Hams for 50-years. Next year (2010) Bruce, W1ZE will reach his 50-year in ham radio milestone.



## April brings Forty-Meter Band changes

On March 29<sup>th</sup> all foreign broadcast in the 7.1 to 7.2 MHz segment of the forty-meter band ceased. Now the rest of the world will have an additional 100 kHz of the band. Hams in regions one and three will not have access to the 7.2 to 7.3 MHz at this time because broadcasting will continue there.

With broadcasters going QRT in the 7.1 to 7.2 MHz portion of the band allowed for increased privileges for US hams by the FCC.

**Novice and Technician class** holders who previously only had CW privileges in the 7.100 to 7.150 portion now have CW privileges along with General and Advance class holders in the 7.025 to 7.100 MHz portion of the band.

**General class** holders in addition to the expanded CW/RTTY segment now have increased phone privileges from 7.175 to 7.3 MHz, a 50 kHz increase

**Extra and Advance class** holders now have increased phone privileges from 7.125 to 7.300 MHz a, 25 kHz increase.

With the absence of broadcasters in that 100 kHz segment of the band, that will allow for increased DX and continent wide phone communications during the evening and night hours. No longer will you need to find a narrow slot between the broadcast AM signal heterodynes to try and hold a phone QSO. Foreign (regains 1 & 3) hams will now be allowed to operate in the 7.1 to 7.2 MHz segment allowing for increased DX QSOs with hams in the Americas. Unfortunately the top 100 kHz will still be heterodyne alley but this change is a great advance for HF Ham Radio!



## Ham Radio Nostalgia, Part-2

By Bruce Randall, W1ZE

Last months issue of Squelch Tales showed the early ham shack of Bill “on the hill” Messier, K1MNW. Bill was tickled to see it in the newsletter and

asked if I had any old photos on my early shack. I said I did not have any from the early 60s but the mid 70s I had a few. He suggested that I put them in the next newsletter for the readers to see.



The above photo was taken of my second floor cubby-hole Huntington Beach, California shack in 1975 with my shiny new early Kenwood TS-511 200-watt HF transceiver with matching VFO and speaker/power supply.



RADIO SHACK of WA6MUP  
J. BRUCE RANDALL  
CHRISTMAS DAY 1977

The above snap-shot was taken Christmas day 1977. Same shack location but with new equipment and interior decorating. That HF station consisted of a Kenwood TS-520, matching VFO, speaker and digital frequency readout unit. Note the Kenwood two-meter all-mode transceiver on the top shelf so I could do SSB & CW on that band. Shortly after the photo was taken I added a Yaesu FL-2100B amplifier to the mix. During that period I loved the 15-meter band and put up a homebrew 15-meter Yagi.



BRUCE & ED (W6JI) WORKING ON  
BEAM DEC. 31, 1977

**Old Polaroid photo of W6JI and yours-truly  
(then WA6MUP) putting up the 15M Yagi**

It was fun looking at those old snapshots and remembering the fun I had back then.

*Editors Note: If any of you have old on new photos of you and/or you shack, why not send it along so we can feature your set-up in a future newsletter column.*

**73, Bruce**

## **VHF SSTV Net now meeting on KS1R/R 147.21 MHz repeater**

In early March, Jim McIrvin, N1IPA asked Bruce, W1ZE and Bill K1MNW if he and other hams in southern and central Maine could use the MARA's repeater for an hour a week to run a secondary Slow Scan Television (SSTV) net on the KS1R two meter repeater. The Original net is run on the KQ1L repeater link system every week but folks would like to expand airtime for VHF SSTV. Bruce and Bill wasted no time saying yes because it would increase usage of the 147.21 repeater and in the process maybe spark some interest in Fast-Scan TV (ATV) later on and possible add a few new club members.

The first net was held on Thursday evening, March 12<sup>th</sup> and there were several stations that checked in and exchanged quality pictures.

Jim advised that most of the participants us their soundcard interface units; the same used for PSK, MFSK, TTY and other digital modes. Most of them SSTV folks use the Free MMSSTV program invented by Mokoto Mori, JE3HHT, the same chap that developed the popular MMTTY program for RTTY.

If you want to download the free MMSSTV 1.11G program go to:

<http://mmhamsoft.amateur-radio.ca/mmsstv/>

If you just want to listen and watch the activities of the net, install the program onto your PC or laptop and feed the audio from your 2-meter FM rig to the Mic-in or Line-in jack (turn the volume down) on your soundcard.



## **DX NEWS FROM NEWINGTON**

### **HAMS TO ACTIVATE MIDWAY ATOLL AS K4M THIS OCTOBER**

Earlier this year, US Fish and Wildlife Service (USFWS) announced that they would open Midway Atoll to Amateur Radio operations for two weeks only, from October 5-19, 2009. Tom Harrell, N4XP, of Monroe, Georgia, and Dave Johnson, WB4JTT, of Aitkin, Minnesota, have put together a team of 19 OP's from all over the world to activate Midway Atoll for a 10 day period as **K4M**. This the first time that USFWS has allowed amateurs to operate from the wildlife refuge since 2002.

"Midway ranks as Number 24 worldwide and Number 13 in Europe on DX Magazine's Most Wanted List [<http://www.dxpub.com/>](http://www.dxpub.com/)," Harrell and Johnson said. "Activity will be on 6-160 meters with 5 to 6 stations. At least one station will be active on 20 meters around the clock for those who need it for a new country. Major efforts will be made to meet the demand to the most needed geographical areas, the low bands and RTTY." The team has posted a list of planned frequencies on their Web site [.<http://www.midway2009.com/kh4freqs.html>](http://www.midway2009.com/kh4freqs.html).

The co-leaders said that travel to the atoll is only allowed by chartered aircraft: "Because of the size of the aircraft, the team is presented with unique challenges. As such, the aircraft will only be able to carry the team, requiring the equipment to be shipped by boat some months ahead."

In January, the USFWS started a program to encourage visitors to experience Midway's wildlife, history and culture, as well as non-wildlife-dependent activities -- including Amateur Radio. To ensure the safety of the wildlife on the Refuge, Midway Atoll Refuge Manager Matt D. Brown said that Amateur Radio operations will be permitted for two weeks only, and only within a designated area on the north side of Sand Island. Brown also said that while portable generators will not be permitted, there is 120 V power available at the operation site; any modifications to the island power grid/infrastructure must be approved in advance and be paid for entirely by the Radio operators.

Brown said that the K4M team would also be required to attend a refuge orientation shortly

after their arrival designed to enhance visitor safety, wildlife protection and overall enjoyment of the wildlife refuge. "Although determined to be a wildlife-compatible activity," Brown said, "this [Amateur Radio] opportunity is being conducted on a trial basis." Brown has the authority to discontinue the activity at any time, based on wildlife protection and conservation goals.

Midway is located in the North Pacific Ocean (near the northwestern end of the Hawaiian archipelago) -- approximately 1250 miles northwest of Honolulu -- about one-third of the way between Honolulu and Tokyo. At less than 150 miles east of the International Dateline, Midway Atoll is truly "midway" around the world from the Greenwich meridian. The atoll is an unincorporated territory of the United States and is the only atoll/island in the Hawaiian archipelago not part of the State of Hawaii. Midway Atoll National Wildlife Refuge is owned and administered by the USFWS on behalf of the American people and has international significance for both its historic and natural resources.

In 1988, Midway became a National Wildlife Refuge, at the time subject to the primary jurisdiction of the Navy. In 1993, the Navy decided to close the Naval Air Facility after more than 50 years of continuous operation. On May 20, 1996, custody and accountability for Midway Atoll transferred from the Department of the Navy to the Department of the Interior. President Clinton signed Executive Order 13022 on October 31, 1996, effectively superseding earlier orders assigning responsibility for Midway to the Navy. A new code of regulations governing activities at Midway Atoll National Wildlife Refuge as published in the Federal Register on March 10, 1998.

When Midway became a national wildlife refuge, it joined a network of more than 500 separate units of the National Wildlife Refuge System, encompassing nearly 93 million acres, throughout all 50 states and several territories and possessions. Refuges represent the only Federal lands set aside and managed principally for the conservation of fish and wildlife.



# Greater Portland Hamfest.

**Saturday, April 18th**

**8 AM to Noon**

**At the Stewart Morrill American  
Legion Post #35,  
413 Broadway  
South Portland, ME**

## Featuring:

- All manner of electronics treasures
- Commercial Vendors
- Country Store (Consignment Table)
- Tailgating (limited space - weather permitting)
- Exams at 10:00 AM
- Prize Drawing at Noon

**Admission \$ 5.00 per person**

**Vendor Setup at 6:30 AM**

**Tables - \$ 10.00 each**

**Tailgating - \$ 5.00 per slot**

Contact: Bryce Rumery, K1GAX (207)  
799-1116 or e-mail to [k1gax@juno.com](mailto:k1gax@juno.com)  
for more information or to reserve tables

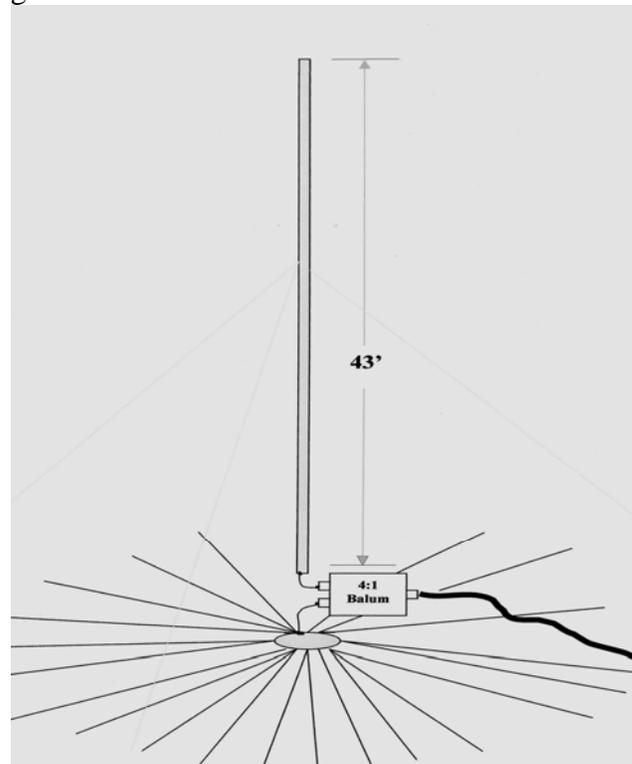


## All-Band Vertical Monopole on a budget

By Bruce Randall, W1ZE

If you have been reading your ham magazines or surfing the ham web sites you may have seen ads from DX Engineering and MFJ about a 42-foot all-band Monopole vertical antenna. The monopole is not a new antenna. It has been around since the early days of radio. In fact the US Navy uses them on their ships for HF communications since before WWII. As the name implies, it is a single vertical element working against a ground.

Both the DXE-MBVA-1 and the MFJ-2990 monopoles claim that they are all-band (160 through 10 meter) antennas and will handle 1.5 kW. You may be asking, how do they do that with without coils or traps, because 43-feet is far to short for 80 and 160 meters. Well they make it radiate a signal with the aid of a 4:1 balun and a good broad range antenna tuner (transmatch). With most ground-mounted verticals, the key to their success and performance is a good ground system. The more radial wires on (or in) the ground the better.



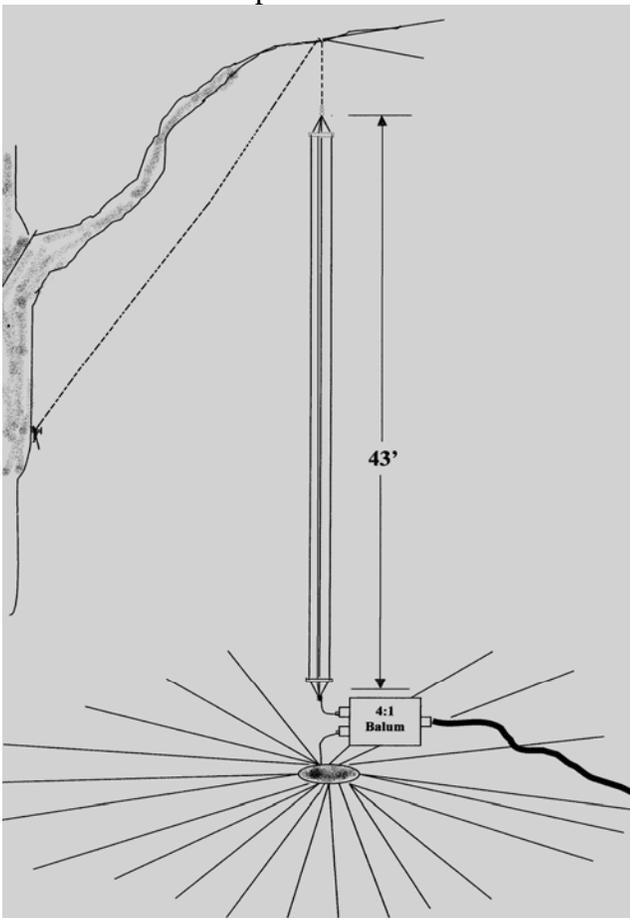
Both antennas are fabricated from aluminum tubing. The DXE uses tapered sections and both claim to be self-supporting. But if it were me, I would still guy it use some nylon line to steady it up a bit. Both models appear to be well made with an edge going to the DX-Engineering MBVA-1, which uses their popular radial termination plate and mount.

They may work well enough but neither DXE nor MFJ are giving them away. The basic models are in the \$300+ range. Old tightwad Bruce has built monopoles in the past with a few used at Field Day sites in W6-land with some success. I don't think that the monopole will be as effective as a full quarter-wave vertical or inverted "L" on 160 meters because those antennas need to be high and very long (+/- 130-feet).

You could build your own 43-foot monopole using two or three inch aluminum tubing but that stuff is not inexpensive either.

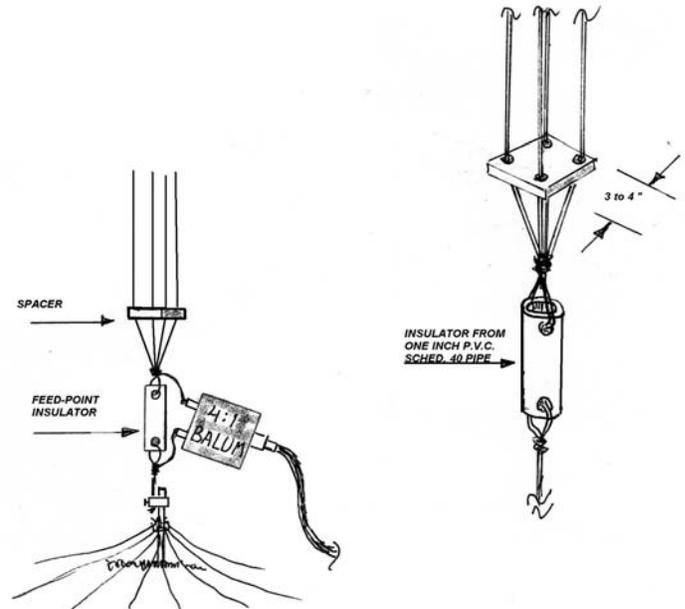
One of the reasons that help the antenna perform at such a short length is the fact the aluminum tubing has a large diameter than #14 wire. The larger the surface area of a radiating element the shorter the length required for a given frequency. It is common knowledge that making a large diameter radiating element can be done by running several common wires in parallel, which acts the same as a solid element of the same diameter or width.

OK, so how do you make it vertical? Thank goodness for tall trees with limbs sticking out about 45 to 50 feet above ground. A halyard line slung over a tree limb can support the top end of the wire monopole. The bottom end of the vertical element can be supported by a ground rod and attached to the element via an insulator. The balanced output of a 4:1 balun can be connected to the ground stake and the monopole element at the feed-point insulator.



The vertical element can be made with four each 43-foot long No. 14 or 12 stranded copper.

Solder the wire elements together at both ends. Before you solder the ends, make about six 4"x4" squares of 1/4-inch thick plywood. These will be used as separators. In each corner of the plywood spacer drill a 1/4-inch hole. Two of them will be used as end spacers and the remaining four will be spaced out along the element and secured by tie-wraps. This should help keep each wire about three inches apart.



The 4:1 Balun can be purchased commercially but as described in the February 09 issue of Squelch Tales, you could build a 4:1 kW balun from a kit, saving more money. 50-ohm coax connects the balun to your antenna tuner.

Radial ground: As indicated earlier, to make the monopole or any other ground mounted HF vertical operate efficiently one needs to have at least a minimum of eight but better yet 16 + radial wires. Don't worry about making them a 1/4-wave at some frequency because the ground de-tunes them. Just lay down as many as you can and as long as you can. It is better to have 32 twenty-foot long radials than four 100-foot radial counterpoise wires.

On 160-meters the antenna tuning will be very sharp without much bandwidth. You will need to retune if you move +/- 15 kHz. The other bands will show broader tuning. Have Fun this summer. Build something!

**73, Bruce W1ZE**