



# DELARA

Delaware Amateur Radio Association Newsletter



May 2011

Volume 30, Number 5

## DELARA Meetings

- 3<sup>rd</sup> Wednesday of every month
- Tri-Twp. Fire Dept.
- 7:30 PM

## DELARA On the Air

- Monday evening net
- 145.17 repeater
- 8 PM Call K8ES
- Volunteer for Net Control!

## DELARA Officers

- President:  
Tim Trombly K8TAT
- Vice President:  
Dave Le May WB2CWJ
- Sec/Treas:  
Ken Bird W8SMK

## In This Issue

- Shared Ground -pg 3
- OH ARES Seminar -pg 2
- Homebrew Balun -pg 7

## The Calendar

- May 5 ARES Net 145.19
- May 12 ARES Mtng
- May 18 DELARA
- May 19 Contest net 145.17 8:30PM



Well, it's that time of the month again, to hear the rambles of the officers of the club, and fellow amateur radio "ham" buddies.

This month I thought I would talk about my experience with one of the greatest hamfests around, which we here in central Ohio know as the Dayton Hamfest, happening May 19 - 22 this year. It's hosted almost in our backyards, just a short drive for most. I was just a new ham back in 2002 when I experienced Dayton for the first time. I didn't know what to expect except what I had read or heard from others. As a newbie to the hobby, I didn't go into this adventure blind - I had a shopping list of things I wanted to buy for the greatest hobby around, in my eyes. I just wish I could spend more time than I do on my hobby.

I already had purchased a mobile 2 meter FM transceiver and 2 meter magnetic mount for my car, which was a Realistic bought used from another ham. (I still have and use it today during the horse parades, operating off a gel cell battery.) But like all hams with a new spark in their eyes, I wanted more. I had to have a handy talkie, and equipment for a base station of sorts.

I took a day off work (Friday) to go because I heard the crowds were light and went with another ham so I would have some help or elemerring for my purchases that day. I bought my ticket when I got to Dayton, which wasn't bad, but if you plan on going try buying your ticket in advance. It helps a lot if you don't like to wait in lines like me. Now of course it rained that year, which made the outside flea market miserable, but walking thru the building was just very overwhelming for me, and exhausting too. I think I walked over 10 miles or so that day, maybe not, but sure seemed like it.

Well to make this story short, I did make many purchases that day, and planned on coming back the following year with A BIGGER SHOPPING LIST AND WALLET. So if you're new to this hobby or want a great ham radio shopping adventure, many bargains to be had, give Dayton a try. You won't regret it. I sure didn't and have been back numerous times since my first adventure! I know DELARA has tables in the flea market this year so please if you go, stop by to rest and/or chat with others.

Hope to see you all at the meeting this month, hope it stops raining, so I can cut my grass.

-Tim, K8TAT



## ARES Happenings

Stan, N8BHL



### The Amateur Radio Emergency Service is alive and kicking

...and may get a whole lot more interesting technically. ARES volunteers in Ohio alone provided over 43,000 hours of public service in 2010! That's what Ohio Section Manager Frank Piper, KI8GW, told a seminar for all Ohio Emergency Coordinators and above held in Mansfield on the 30<sup>th</sup>. Section Emergency Manager Jack Sovik, KB8WPZ, reviewed the state operating plan (with spirited discussion about how well it fits into the FEMA Incident Management concept.) We listened to experts including Scott Yonally, N8SY, and Official Observer Rick Swain, KK8O, addressing the need for professionalism in our operating and presenting ourselves to the agencies and general public. Nick Pittner, K8NAP, is the ARRL legal & legislative representative. Nick does yeoman work on our behalf at the Statehouse, even though a lot of his efforts are unseen. More details are in this edition of DELARA News.

The hit of the seminar was a presentation by Jeff Evans, KB8ZUN, EC of Lorain County and a key player in the major rampup of D-STAR in northeast Ohio. They have already put in place a statewide digital (Internet) network which includes the Columbus digital repeater. There are already nodes set aside by "NODIG," the Northern Ohio Digital Interconnect Group, specifically for emergencies, weather links, and other important functions. (Our own D-STAR radios are accepted into the Columbus system as N8DCA, and Gary, K8EHB, continues to polish up our ability to transfer files using D-RATS.)

NODIG is also looking toward organizing APRS within the D-STAR operation, and Echolink, PSK-31 and other digital modes. Gary repeated their concern that they augment present communications, providing more and newer tools for us to use. But the tools look really slick!

I have promised that I will not get our ARES involved in a program which ~requires~ anyone to run out and buy a radio, digital or otherwise. But the potential applications for D-STAR are growing significantly, and look pretty darned good. We made a good choice in getting the four rigs we now have! I have no hesitation in recommending that you (and I) consider a D-STAR radio, either used or new, as the next step in VHF/UHF Amateur Radio. For more, try <http://nodig.us> and learn what's coming!

My best reflection from this seminar was personal- it was really nice for this 'rookie' EC to put faces and people with the various names on our email lists. I must say, particularly with those counties we are partnered (Licking, Marion, Morrow & Franklin) these are some pretty classy guys! I'm going to have to step lively to keep up!

We're busy this year! Where none is listed, I would encourage you to sign up to be an event coordinator! I'll have signup sheets for many of the activities at the May meeting. As you remember after my bout of 'Old-timer's' disease, our **May** meeting is set with R.A.C.E. - a Delaware based search and rescue group which has been called into several high profile activities this past year. We meet the second Thursday of the month, usually at the county EOC, 7:30 PM.

The ARES Repeater is on the air, thanks to Ken, W8SMK! More is in his 'repeater report' in this edition. He's been working hard to shore up the receiver, and we're making improvements. That's what testing is all about!

### DELAWARE ARES ACTIVITIES

May 18	Kid's Safety Scene	KB8SIA
	6-8 needed	

#### NEWLY LISTED

<b>May 29</b>	<b>Memorial Day Parade</b>	<b>K8MP</b>
	8-10 needed	

June 11	Tour De Cure	? / ?
June 12	Wendy's Triathlon	
June 20	GOBA Day 1	N8BHL / ?
June 21	GOBA Day 2	N8BHL / ?
June 23	GOBA Day 3	N8BHL / ?
June 24-25-26	FIELD DAY	
June 26	Wendy's Triathlon	
July 4 (?)	Sunbury Parade	
July 16	Greenswell 1	
July 17	Greenswell 1	
Aug 6	Greenswell 2	
Aug 7	Greenswell 2	

~whew!~ **Thank you** for all your time and energy! You make this an active, respected ARES unit! ...And thanks for keeping me straight!

-Stan, N8BHL

## Operating events

- **CQWW WPX CW**  
0000z 5/28 – 2359z 5/29
- **ARRL June VHF Party**  
1800z 6/11 – 0259z 5/13
- **Stew Perry Topband Challenge**  
1500z 6/18 – 1500z 6/19

## Contribute!

We need your articles, comments and ads!

[Newsletter@k8es.org](mailto:Newsletter@k8es.org)

## Contact Us

[clubinfo@k8es.org](mailto:clubinfo@k8es.org)

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<http://www.k8es.org>

## “A Ground System is a terrible thing to Waste”



The ground system I’m referring to is the one under my 160-meter inverted-L. Some call it a radial system, others a counterpoise. Whatever you call it, its purpose in life is to lower the ground resistance under a vertical or an inverted-L or some other antenna you are “feeding against ground.”

I believe mine has been described in detail in previous Joe’s Place articles. Briefly, it mainly consists of about thirty 135-foot radials extending out from the antenna’s feed point like the spokes of a bicycle wheel. (Thanks to Don, KB8SIA, for all the wire). Experts will rightfully say that 30 are not enough but I have a secret weapon under my inverted-L: A wetland. (Or *swamp*, as we used to call them)

Besides the thirty quarter-wave wires, I threw every hunk of bare wire I could find in the water and even added a couple hundred feet of old rabbit fence. Heck, I even tied into the steel frame of the trampoline, the rabbit fence around the veggie garden, and the far end of one of the 135-foot radials is even connected to the 30-foot tower holding up my 40-meter ground-plane. Basically, I’m connected to anything that’s metal and within 135 feet of the inverted-L.

All that stuff comes together at a ground rod which serves as a tie point for the radiating wire and all those hunks of wire and fence. An SO-239 mounted on an aluminum plate which is clamped to the ground rod makes feeding the antenna with coax a breeze.

As I’ve mentioned in the past, the 160-meter inv-L is a great antenna. For DX, it really out performs my 300-foot center-fed zepp, because of its lower angle of radiation. For that reason, I have been thinking about putting up something vertically-polarized for 80.

One idea I had was to use my 40-meter ground plane and the tower it’s sitting on. Combined, they are close to a quarter-wave on 80. But then I’d need some kind of switching system that would isolate the 40-meter radiator from the tower when operating on 40 but connect them together for operating on 80. It would also have meant adding a radial system under the 30-foot tower and then running a second hunk of coax to some kind of shunt-feed or gamma match. These things were all doable but a lot of time and labor would have been involved.

### Brain Storm # 1

What about using my existing ground system and simply install an inverted-L for 80-meters close to the 160-meter one? That way, I could skip the manual labor of measuring, cutting, and laying down more radials.

I know what you’re thinking: The existing radials are too long for 80. In actuality, the 135-footers are extremely de-tuned because they’re laying right on the ground. Therefore, there’s no way they are resonant anywhere close to the 160-meter band anyway. For that reason, many Hams don’t even bother to measure radials when putting in a system. Some sources suggest that a lot of shorter ones are superior to a lesser number of quarter-wave ones.

OK, back to the brain storm: All I needed to do was put in the second inverted-L, run coax to it, and hook into the ground system and I’d be on 80 with a good DX antenna. But wait, it gets better...

### Brain Storm # 2

I remembered the old trick of feeding two or more half-wave dipoles all cut for different bands with one piece of coax. You can do that because the RF going out your 50-ohm coax will only "see" a low impedance on the dipole cut for whatever band you're operating. The other dipoles will be "invisible." I once fed dipoles for 80, 40, and 20 using that method. It worked great.

That same principal should allow me to feed two inverted-L's with one piece of coax. Or at least I hoped it would. I hadn't heard of someone trying it before but nuttin' ventured, nuttin' gained.

### Brain Storm # 3

I was thinking of ways to tie the two "L's" together so they'd be fed in parallel, like the multiple dipoles. One simple way would be to just strip away some of the insulation close to the feed point of the 160-L and attach the 80-meter one right there. But it could weaken the 160 wire. Plus, if I wanted to take one of them down, it would mean I'd probably have to unsolder that connection.

Then it hit me. Why not use a coaxial Tee fitting? One end of the Tee would go to the fore mentioned SO-239 for the 160-L, another would connect to the coax line from the shack, and I could use the third one's center conductor to add in the 80-meter radiator. I simply soldered the 12-gauge antenna wire into the center pin of a PL-259 and screwed it onto the third connector of the Tee-fitting. (Big thanks to John, W8SJV, for providing the Tee-fitting) The shield part of the PL-259 simply provides mechanical strength. By the way, before I connected everything, I recorded SWR readings on the 160-L. Nothing changed after adding the 80-L.

I took a few photos of the finished feed point. (Sorry I don't have a "before" shot to include) You can see one connector of the Tee fitting screwed to the SO-239 and the two others, one to the coax from the shack and the other to the 80-meter inv-L. The 80-L wire is the one coming out of the top of the Tee.



I suppose I should mention that there is a "Black box" in the coax line from the shack. It is a very handy device called an UN-UN and it is used to match two different unbalanced impedances (i.e. coax to coax, as opposed to a BAL-UN, which matches a BAL-anced line to an UN-balanced line, i.e. ladder line to coax)

My UNUN came from CWS Bytemark and is their Multi-UNUN, meaning it will match a variety of impedances to 50 ohm coax. The good news for me was that I didn't have to change anything on my UNUN to get a 1 to 1 match on the 80-meter L. In other words, the same tap that worked for 160 was also fine for 80.

For your viewing pleasure, I have also included a photo of the UNUN, in its native habitat, but sans its weather-proof cover. By the way, that fancy weather proof cover is just an upside-down gallon milk jug with the bottom cut off and the lid left on.



Well, I think I've over used my quota of space this month. I hope to see you all at the May meeting, but if not,

then at Joe's Place...

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## 20 / 10 Years Ago in DELARA

**May, 1991-** The 1991 Field Day was getting organized, with a poll of membership asking what ought to be included. The proposed DELARA club award program was outlined. (Do we still have that?)

**May, 2001-** President Bob talked about the ladies making a quilt for charity. Joe's Place was devoted to – you guessed it – Field Day planning. Discussion was held on proper operating to keep our signals within the band edge limits.



## DELARA FIELD DAY

As I write this article, we are 50 days away from Field Day! It's getting close, and I am getting excited. There's not been too much happening on the planning end of Field Day as we already have basics plans in the works.

As many of you know, at the Field Day planning meeting we had discussed purchasing an additional three (3) baluns, we got those ordered and they were delivered to my house in mid April. We also will be providing an operator sign up sheet as we have in the past. That will give folks the opportunity to 'sign up' for a set time and the radio will be available to them to use. We will have the sheets available at the Field Day planning meeting in June and possibly this months meeting (if I get moving!).

Also, as Gary and I drove through the Field Day site, the beautiful Scioto Park and Nature area, we noticed that it's going through a few changes. I will be contacting the Scioto Twp folks again next week to firm up our reservation, and find out a little more information on how we will be impacted (if at all) by the changes in the park.

As always club members are allowed to camp out at the Field Day site on Field Day weekend, we have 'special permission' from the Scioto Twp. Trustees to do this. What I ask is that before you park your camper, trailer, or pitch your tent, that you check with me or Gary, K8EHB to make sure you are in a spot that will not interfere with antennas, or placement of any of our stations. Also remember the park rules, no alcoholic beverages, and of course leave the park in the same condition that we find it in. That's never a problem for us, we have been fortunate to have use of this wonderful park since 2006. We are the *ONLY* group that is given permission to host a weekend long event at this park. We thank the Scioto Twp. Trustees for allowing us to do this.

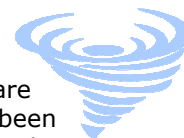
I will leave you thinking about food. Yes, I am talking about the picnic! As we discussed at the March meeting, we are doing something a little different this year; to show our appreciation for all they do, we will invite the Emergency Workers of Delaware County (i.e. Firefighters, Law Enforcement, and Dispatchers etc.) To join us for our picnic June 25, 2011, (Saturday) start time will be 5 pm. Barb (Bubbles) Sherman, N8BSS and Linda (the Penguin) Penzera, N8FES will be your picnic organizers extraordinaire and as usual they will be providing us with a fabulous menu for the picnic. They do ask for everyone to sign up to bring a dish to pass that will serve 9-12 people to help with this special 'appreciation picnic'.

Looking forward to seeing everyone at the next club meeting,

- Sandy, N8YS  
Field Day Coordinator



### Hams in action: ARRL HAM AID providing relief



We have witnessed a record-shattering month full of tornadoes, destruction and death across our southern states. Radio amateurs are still major communications resources. The ARRL's Ham Aid Fund has been tapped to aid Amateur Radio operations in Alabama. The ARRL has already shipped five cases to the state full of 2 meter, 440 MHz, and HF radios as well as two cases of handheld transceivers and batteries. The best way to help is by contributing \$25, \$10, or \$5 to Ham Aid, says ARRL Chief Development Officer Mary Hohart, K1MMH. "...this event may be just the beginning," she explained. "As hurricane season is on the horizon, we need to be prepared for those situations when all else fails. The easiest way to make your donation is on the ARRL website. DELARA eyes are also on record-breaking flooding along the Mississippi. Are you ready here at home when it's our turn?

- Information from "The ARRL Letter"

# “Ham Radio Helpful Hints”

Or

“What’s 40 feet, orange and can disconnect your neighbor’s power for fun”



Well, after last month’s fiasco, the editor thought best that I be relegated to the back page of this rag. I still smile, smugly to myself, whenever I think about it. My new goal is to win back the reader’s confidence by dedicating this space to “How to” topics we all love and enjoy. We may cover such categories as “Which brand of tonic goes best with Beefeater”, “How to blame the porn on the family’s pc on your father-in-law” and maybe even some ham radio tips.

This month we’ll discuss the inevitable and rather annoying subject of your lightweight “window” ladder line getting tangled in the branches of that maple near the pond. Excited yet?

Stretched across our pond, up about 45 feet, is a doublet called a “Cobra Dipole”. It’s a clever antenna which has interesting characteristics like sending and receiving radio frequency energy in the HF spectrum. It’s lightweight, strong, good multi-band performance and uses 81 feet of that stiff, black plastic, ladder line to a 4:1 (or should it be 1:4) balun. My antenna was built by K1JEK in New Hampshire; he does a very nice job. His website claims that Special Forces use it (I wear camo face paint whenever I’m on the air). Problem is, the ladder line must be 81 feet (which tells me, it must radiate on some bands) so routing it in the clear from the balun to antenna is tricky on a wooded lot.

As the wind blows from various compass points, the ladder line finds its way into the limbs of nearby trees and/or rose bushes, tangled elegantly like Charlie Brown’s kite. I have several options: cut the tree down; drop the antenna and tug, hoping it breaks free; put up another antenna someplace else; ignore it and hope the wife will get tired of looking at it and do the untangling, or, TaaDaa – use a lineman’s “hot stick”.



**What a tangled web we weave. This doesn’t affect the SWR**

You’ve seen these things used by utility crews. They’re usually bright orange or yellow, fiberglass, telescoping and have gizmos on the ends for working on crackling power lines. I was given one from a lineman for the county (I had to squeeze that in, sorry Glen) without the gizmos. Apparently, they fail inspection at times and must be discarded. This one seemed fine to me - stretches up to 40 feet and has an aluminum fitting on the end with a 1/2” threaded hole. I mounted about 10” of very stiff, thick, steel wire which can be bent into shapes befitting the job at hand.



This thing has become one of my favorite and indispensable tools for ham radio stuff and other odd jobs requiring the reach. I’ve even mounted a saw on it for limb trimming and used it to thread a new rope through a pulley at 35 feet. That job required my son with binoculars telling me how close I was to threading the needle. It took a while, but it worked. Also used it many-a-year, with numb fingers, stringing Christmas lights in trees – “Bah Humbug”.

We’ve also seen these down by the pits at NASCAR races holding aloft antennas to talk to Darryl and Jimmy screaming around the track. Someday, I plan on making a fitting for the Reese hitch on the rig to provide a simple antenna mast support. I’ve seen guys at Dayton with them. Speaking of Dayton, if you see one for sale, cheap, pick it up. Parts are readily available and they are handy.



**Next time, it's the chainsaw for you!**

After a few minutes of grunting, stretching and straining, the feedline is now free from the deadly grasp of the deciduous beast. Back on the air! Now if only to get that song out of my head:

"...and I drive the main road. Searchin' in the sun for another overload..."

- Craig, W8CR

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## Repeater News

The N8DCA 145.19 machine has been temporarily replaced with a GE Mastr-II repeater running 60W out. There has been much troubleshooting and hair pulling over a de-sense problem, we are making progress. The Motorola Micor repeater is in the process of reconfiguration into a smaller cabinet and will soon be put back into service on 145.19.

What does this mean to everyone? I now have a complete "spare" repeater that can be put into service at any time on either frequency should the need arise.

Stay tuned for further good news.

-Ken, W8SMK

## 6 Meters

As many of you know, 6 meters is my favorite band. I realize that I spend a lot of time listening to static but when it is open, watch out. It can be open to anywhere in the world. It is called "The Magic Band" because it can go from static to signals everywhere like Magic.

I have been on 6 meters for 44 years (I started out as a Technician) and got addicted to it. I have worked WAS (Worked All States) once and only need Hawaii to do it again. There have been some rare countries and some not so rare ones. If you like talking to the Florida, Texas or New England areas, when the band opens, it is usually to one of those places. As I am typing this, I am listening to Florida, Alabama and Colorado. My best country was about 2 years ago when I worked a station in Japan, 100 watts and antenna at 35 feet.

In the early 2000's, I remember coming home from work and talking to stations in Europe with my 8 watts and 3 element antenna. Ask Gary, K8EHB, how much fun we had.

The calling frequency is 50.125 Mhz and most SSB activity is above that to about 50.200 Mhz. If you like CW, just tune between 50.090 to 50.100 Mhz and when the band is open, you will probably find activity there. There is a little AM activity around 50.400 Mhz and FM activity at 52.525 Mhz.

Most antennas on this band are horizontally polarized for SSB and CW. I have known people who work 6 meters off their HF wire antennas, usually using a tuner. A dipole antenna for 6 meters is about 110 inches long from end to end. Easy to construct and put up.

Most modern HF radios also have the 6Meter band built in, so if you have the capabilities, give it a try. About this time of the year through mid-September there can be a lot of activity. If you listen to 10 meters and the distance on that band gets to about 400 miles, then is the time to listen on 6.

Remember, it can be discouraging at times but the thrill of working the rare Grid makes it all worthwhile. Speaking of Grids...reporting to stations you contact includes the signal report, the Grid (most of Central Ohio is EN80), your name and anything else you want to say. Because of conditions, the contact doesn't last very long. Try to avoid 50.125 Mhz if there is a lot of activity (the calling frequency). You might want to listen between about 50.105 and 50.115 for DX (out of the Country stations). They will appear there if the band is open far enough.

If you have any questions about the "Magic Band" you may ask me, Mike (K8ROX), or Gary (K8EHB).

-Bob-N8OB

## Stop the Presses!

### E-Skip season is upon us !!!

This morning I heard my first 10-meter beacon out of Florida since last summer.

-Joe, K8MP

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## DELARA Ham Exams

Colvet will be administering FCC Ham Radio license exams in Delaware Saturday, May 28. The exams will begin at 10 AM at the Tri-Twp Fire Department meeting room (location of DELARA meetings). The Fire Dept. is located at 495 Sunbury Rd, Delaware, OH 43015. There is no charge for the exams

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## Ham News & Calendar

5/20-22/2011 – **Dayton Hamvention**

5/28/2011 – DELARA Ham Exam

5/29/2011 – Bucyrus Ham Exam

## Amateur Radio Antenna Legislation in Ohio- on the docket again!

It almost worked last year - the Ohio Senate unanimously passed legislation enforcing the FCC's PRB-1 in Ohio. The house failed to vote on the companion bill before ending its session, so we start all over in 2011. This from ARRL legislative liaison Nick Pittner, K8NAP, who told a state ARES seminar that there are actually two house bills underway now, with a companion senate bill.

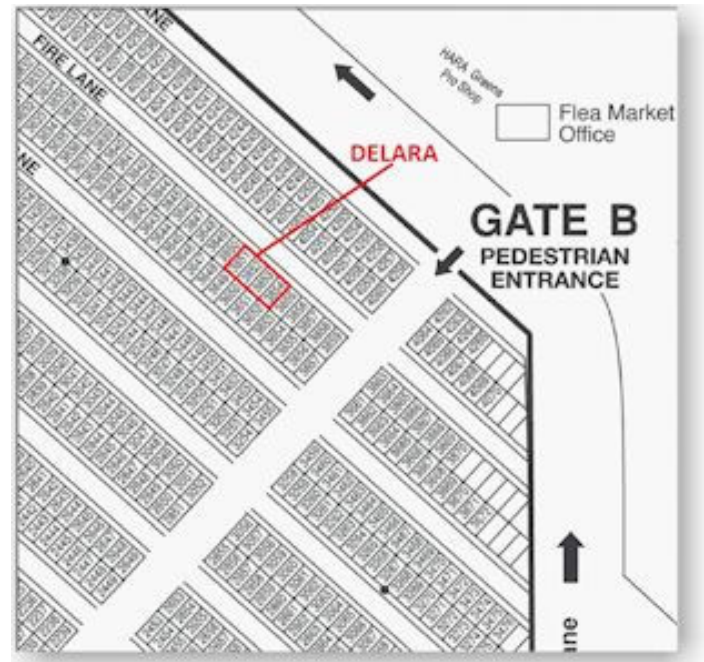
The bill of choice is H.B. 158 which is to "codify federal restrictions on local zoning of amateur station antenna structures thereby preserving amateur radio service communications as a Homeland Security resource..." The companion legislation is Senate Bill 93. We are all called upon to suggest our representatives approve these bills. Contact their office by phone, email, or written mail to urge the bills' passage.

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*From a DELARA member comes this reminder- make sure you check your drivers license expiration dates! Ohio has some stiff penalties if you exceed the renewal period! Your birthday is a great time to check your ham radio license renewal date as well!*

## DELARA at Dayton

This year DELARA has reserved four flea market spaces at the Dayton Hamfest May 20, 21 and 22. <http://www.hamvention.org> They are spaces FE3851 thru FE3854 near the southeast part of the flea market.



So... bring your treasures to sell and a lawn chair. There will be plenty to talk about. Stop by for an hour, a day or all three days. It should make a good home base to see the flea market from. We'll have a trailer there for storage at night. See ya there!

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## Hey! I know that guy!



Go to page 30 in the June QST, just out! Our own Bob Dixon, W8ERD, somehow managed to convince the publishers that his antenna mast article deserved to be featured in the magazine! We know why – it's a brilliantly written and illustrated article absolutely necessary to the successful completion of a Field Day or portable operation. But

now one of our operating secrets is out! We don't know if this is good news or bad- but we certainly congratulate Bob! Well done!

We remember Bob making his video for publication at last year's Field Day! We suspect that he may be convinced to provide an autograph at next week's meeting!



