



# WASHRAG

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TM

Volume 2 Issue 7

July 2000



N3SH  
WA3SH

Wireless Association of South Hills

## Field Day 2000

Well, Field Day Y2K is now in the log. We had an excellent, stupendous, marvelous, super, (get the idea?) Field Day! A rough count of the N3SH/2A Battery logs yielded approximately 610 QSO's, so a great time was had by all in attendance.

I wish to thank the following for their selfless donation of time: K3VX, KB3CPI, KB3EPC, KB3FBG, N3BSQ, N3KFD, N3QMV, N3RDV, N3RNX, N3SBF, N3UE, N3YQX, N3ZEL, N3ZNI, NØVLR, W3RJM, W3SRL, W3WH, WN3VAW, & Carol Danko.

Special mention goes to Richie, N3SBF and his wife Carol, who once again volunteered to be Food Gurus for our little shindig. And special mention goes to Kevin, N3KFD for arranging our Field Day publicity — the Public Service Announcements on WEAE-AM (ESPN Radio 1250) and the Saturday morning article in the Washington *Observer-Reporter*. Also those deserving special recognition are Steve W3SRL, Bill W3WH, and Ron WN3VAW for the extra efforts these gentlemen put forth.

Come to think of it, EVERYBODY who participated deserves special mention; without you there would have been no Field Day! Mark N3RDV has FD 2000 pins for those who participated and will be distributing them shortly. If your call is not listed above, please, please, please don't be offended; it's just that your name was not on the sign-in sheet. Let me know via KQ3DX@hotmail.com or KQ3DX@arrl.net.

Again thanks to all those who came for some fun-in-the-sun, and I hope to see everybody at Field Day 2001!

73, Greg Babin KQ3DX

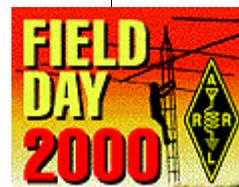
Field Day 2000 Coordinator

Wireless Association of South Hills, Inc. N3SH/WA3SH

**Photos: Top:** Larry K3VX running HF Station 2 Saturday Afternoon  
**Middle:** Swapping out W3RJM's battery on HF Station 1  
Pictured: (l-r) N3SBF, W3WH, N3BSQ  
**Bottom:** Bryan KB3FBG showing off the VHF Station to his son, the next generation...

**More Field Day Photos on Page 5**

All photos this page courtesy of & ©2000 Ron Notarius WN3VAW



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## Next Meeting: July 13<sup>th</sup>, 2000

The next monthly meeting of the Wireless Association of South Hills, Inc. will be Thursday, July 13<sup>th</sup>, at the John McMillan Presbyterian Church, 875 Clifton Road in Bethel Park, starting at 7:00. Talk-in on the 146.955 N3RNX/R Repeater.

We've got a summer picnic and other summer and fall activities to plan for.

All radio amateurs & interested guests are, of course, invited! See you there!

## Schedule of Events

# July 2000

- N3SH/WA3SH WASH Club Net, 9:00 PM ET Sunday Nights on the 146.955 & 443.650 Repeaters

## NCS Schedule:

- ⇒ July 2nd:
- ⇒ July 9th:
- ⇒ July 16th: TBD
- ⇒ July 23rd: TBD
- ⇒ July 29th: TBD

## LOOKING AHEAD:

- 
- **WASHFest 2001** February 25<sup>th</sup>, 2001

Sun	Mon	Tue	Wed	Thu	Fri	Sat
						<b>1</b> RA Erie VE Test WPA Hilltopper VE Exams NHARC Elmer Net
<b>2</b> Elwood City ARA Mtg	<b>3</b> GPVHFS Meeting Breezeshooters Net Beaver Co PS Net	<b>4th of July</b> <b>Picnics &amp; Fireworks!</b>	<b>5</b> PVGP Meeting Uniontown ARC Meeting Allegheny Co Skywarn Allegheny Co ARES Westmoreland Co ARES	<b>6</b> WACOM Meeting RA Erie Meeting	<b>7</b> Elco RS Meeting	<b>8</b> 2 Rivers ARC Ham'N'Eggs Skyview RS VE Exams NHARC Elmer Net Tri-Co. CW ARC VE Tests
<b>9</b> <b>North Hills Hamfest</b>	<b>10</b> Bum of the Month Lunch ARL Lawrence Co Meeting Breezeshooters Net Beaver Co PS Net	<b>11</b> Foothills ARC Meeting Nittany ARC Meeting Ft. Venango Mike & Key Punxsatawney Area	<b>12</b> North Hills ARC Meeting SCARC Social Night Allegheny Co ARES Westmoreland Co ARES	<b>13</b> <b>WASH Meeting</b> Horseshoe ARC Meeting BVARA Meeting	<b>14</b> PVGP Pre-Race Meeting	<b>15</b> <b>PVGP Race Weekend</b> NHARC Elmer Net
<b>16</b> <b>PVGP Race Weekend</b> Elk Co ARC Meeting WPA Repeater Council	<b>17</b> Breezeshooters Net Beaver Co PS Net	<b>18</b> Steel City ARC Meeting Skyview RS Meeting McKean Co ARC Meeting Juniata Valley ARC Mtng	<b>19</b> Allegheny Co Skywarn Allegheny Co ARES Westmoreland Co ARES	<b>20</b> <b>WASH VE Exams</b> Triple "A" ARA Meeting Somerset Co ARC Mtng	<b>21</b> 2 Rivers ARC Meeting	<b>22</b> NHARC Elmer Net
<b>23</b>	<b>24</b> Breezeshooters Net Beaver Co PS Net	<b>25</b> Mercer Co ARC Meeting Triangle ARC Meeting	<b>26</b> Allegheny Co ARES Westmoreland Co ARES SCARC Social Night	<b>27</b> WACOM Board Meeting	<b>28</b>	<b>29</b> NHARC Elmer Net
<b>30</b>	<b>31</b> Breezeshooters Net Beaver Co PS Net	<b>8/1</b> Butler County ARA Mtng Skyview RS Meeting SHBP&M Meeting	<b>8/2</b> Uniontown ARC Meeting Allegheny Co Skywarn Allegheny Co ARES Westmoreland Co ARES	<b>8/3</b> WACOM Meeting RA Erie Meeting	<b>8/4</b> Elco RS Meeting	<b>8/5</b> RA Erie VE Test NHARC Elmer Net

## WASH 2000 OFFICERS

**Executive Committee:**

President	Ron Notarius WN3VAW
VP/Secretary	Steve Lane W3SRL
VP/Treasurer	Mark Stabryla N3RDV

**And We Couldn't Do It Without:**

N3SH / WA3SH Trustee	Steve Lane W3SRL
VE Team Liaison	Bob Sanford AA3FI
Club Communications & Webmaster	Bob Sanford AA3FI
Club Quartermaster	Harold Rosenberger KB3CPI
Club Librarian	Paul Lusardi NOVLR
N3SH/WA3SH WASH Net Managers	
2 Meter FM	Greg Babin KQ3DX
10 Meter Digital	John Benitez KE3XB
South Hills Hamfest Co-Chairman	Steve Lane W3SRL
( <b>WASHfest 2001</b> )	Bill Hill W3VWH
Field Day 2001 Chairman	(open)
Ways & Means	Carol Danko

**Club-Affiliated Repeaters:**

Mt. Lebanon	N3RNX/R	146.955 -	PL 131.8
Mt. Lebanon	W3SRL/R	442.550 +	PL 131.8
Canonsburg	N3FFP/R	443.650 +	PL 131.8

**N3SH/WA3SH WASHNet**, the weekly on-air net of WASH, meets every Sunday Night, 9:00 PM ET, on the 146.955 repeater, usually followed by the 10 Meter SSB Informal Net on 28.469 MHz.

The **10 Meter Digital N3SH/WA3SH WASHNet** meets on 28.105 MHz at 9:30 PM ET, starting with RTTY. (Frequencies are +/- QRM). All radio amateurs, WASH members or not, are welcome to join in!

## THE LEGAL STUFF

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The **Wireless Association of South Hills, Inc.** was founded in 1993 as the original South Hills Amateur Radio Club, and operated under that name through 1998. WASH was also known briefly in late 1998 as the **N3SH Amateur Radio Club**. It is not in any way affiliated with the "South Hills Amateur Radio Club, Inc." and is not responsible for that group, its members, or its actions in any way shape or form.

As always, special thanks to the owners of both the N3RNX/R Repeater System and the N3FFP/R Repeater System for permitting the **Wireless Association of South Hills, Inc.** and its members to use their repeaters for club purposes.

## WASH Amateur Radio Club News Briefs

### Next WASH VE Test July 20<sup>th</sup>!

Our Next VE exam sessions will be **Thursday, July 20<sup>th</sup>, 2000**, at **7:00 PM**, at the *John McMillan Presbyterian Church*, 875 Clifton Road, Bethel Park, PA. Talk-in on 146.955 MHz. All examiners are ARRL VEC affiliated. Morse code exams are multiple-choice. Walk-ins are always welcome, but if you plan on attending the test session, please contact VE Team Liason Bob Sanford AA3FI, telephone (724)-356-4020 or E-Mail: sanfordb@access.hky.com

Please bring the following to your test session:  
 Picture ID or other suitable identification (2 forms of ID required)  
 Pen / Pencil / Calculator  
 Original FCC license plus a copy of license (if upgrading)  
 Original CSCE plus a copy of CSCE (if upgrading)  
 Check or Cash in the amount of \$6.65 (payable to: ARRL VEC)

### Shark Hunt?

A recent discussion on the repeater has led to an interesting proposal for a new club activity. A short (4 hour or so) WASH QSO party for sometime in early-to-mid January, currently dubbed the Shark Hunt after the very popular Field Day phonetics (N3 Shark Hunters).

The basic idea would be to have the Shark Hunt take place on a late January Saturday afternoon or early evening. It would be 2 Meter FM only, using the standard simplex channels. Everyone works everyone, with an exchange similar to the Breezeshooter's Groundwave contest — possibly even using the same grid squares and point system. Bonus points would be awarded for each WASH member or club call worked — W3WH has suggested making the bonus's 5 points each (on top of the value of the grid square worked) and call them "fins."

There would be two or three power categories (HT level, 10-25 watt, and possibly 35+ high power) with a 50 watt limit. Mobiles could be reworked whenever they change grids. A club aggregate competition similar to that of the PA QSO Party has been suggested. And there very possibly would be an intra-club competition in addition to the main contest.

Logs would be due in the beginning of February in order to give us time to complete log checking prior to WASHFest 2001, with winners to be announced presented there. Suggestions have been made to have a small prize awarded to the top scoring log(s), or to be awarded to a randomly selected log.

What do you think? Remember, nothing, not even the name, is cast in stone yet.

Ed N3ZNI has been given the task to determine if we should go ahead with this and if so, how we should run it. A final decision has to be made by September in order to have enough time to promote the event if we go ahead with it. So catch Ed on the repeater, at a meeting or at an upcoming event and let him know what your opinion on a Shark Hunt is!

**New N3SH Reflector:** As many of you know by now, we're in the process of abandoning the Listbot message list for our new Reflector over on eGroups. Why? Simple: ListBot wasn't timely. If you look back at the messages shooting back and forth just before the Breezeshooter's Hamfest, you'll notice delays of 12 hours to 2 days for messages to get around, and it caused a missed opportunity. The N3SH reflector, gives us not just message forwarding, but a calendar (in use), polls (in use), database functions (the Virtual Library is already there) and file space to store, say, Field Day photos that we couldn't squeeze into the newsletter (hint). You do not have to join eGroups to use the message forwarding, though you do to access the other functions (it's free). For more info on eGroups, go to [www.egroups.com](http://www.egroups.com).

**WASH at Breezeshooter's:** The club turnout for the Breezeshooter's Hamfest was impressive, and we had a great gathering at 11 for the picnic. If we'd been allowed to sell food, we could have made a small fortune, based on the number of people who kept asking us! The hex beam performed extremely well, perched on the back of KE3XB's jeep, and was not only an instant attraction but was used all day as a landmark ("meet me by the umbrella antenna!") And Kevin N3KFD won 6th prize of the day, an ICOM IC-2800A (which is now in Bill W3WH's hands... don't ask)! If you came, hope you had a great time. If not, you missed a good one!

**Wireless Association of SHARC?** Well, the good news is that we did get prominent mention in the Washington Observer-Reporter's article on Field Day 2000. What we didn't expect was a new nickname for the club! As they say, though, no publicity is bad coverage, and we do appreciate the article. We'll be in touch next year... as WASH. Just WASH. Honest. No, really.

**Errata:** In last month's issue, due to an editing error (OK, so the editor was dead tired), NØVLR was mistakenly identified in a photo caption as NØRNX. It has been suggested that we owe a huge apology to both N3RNX and NØRNX for this error...

**PA QSO Party 2000:** Barely July, and we're looking at an October contest already? Well, some of 1999's WA3SH/Clarion County team are already looking at some new Rover/ Mobile / Portable locations, and the HF4B Butterfly Beam is on it's way to N3SBF's cabin for use in the 2000 contest. So start giving some thought to joining the club effort, as part of one of the club calls, or as part of one of the teams that will be heading out. Now if we can just get our new Caribbean Outpost active in this year's contest... do they have a Hurricane Mobile category?

**Mt. Davis:** Bill W3WH is looking at organizing another Mt. Davis expedition before the end of the summer. If you're interested in spending a day at the highest point in PA, drop Bill a note or grab him on the repeater for more information.

**Next Month's Newsletter:** With a little luck, the August newsletter will arrive a week early. The editor's family is going on vacation at the end of July & he's been invited to join them... or else...

Receive your WASHRag via e-mail! Sign Up at [wa3sh-subscribe@egroups.com](mailto:wa3sh-subscribe@egroups.com)  
 Join the new WASH Reflector & stay up to date! [n3sh-subscribe@egroups.com](mailto:n3sh-subscribe@egroups.com)

## Minutes, June 11<sup>th</sup> 2000 Meeting

Steve Lane W3SRL Vice President/Secretary WASH

Meeting was called to order by WN3VAW at 19:20 local time. There were 16 members present and 1 guest.

Introductions were made, and then a moment of silence was observed for silent keys and other deserving parties.

The President motioned that we accept the minutes of the May meeting as published in the WASHrag. Seconded by N3SBF and carried.

Treasurer's report was read and approved.

Secretary: Nothing to report.

VE Team: Next Session on 20 July.

Repeaters: 146.61 took a lightning hit, the '955 was used as a backup for the SATERN net.

2 Meter Net: KQ3DX via WN3VAW: Usual pleas for NCS duties. Please volunteer since the same bunch of folks are doing the work every week.

Digital Net: Not running. KE3XB mentioned he is looking for new ideas via the reflectors, etc. Will be out of town for the next three weeks.

Contests: KQ3DX via WN3VAW – Greg give his thanks for the work done for him for the effort given for getting Field Day under way.

NEED TO SIGN UP FOR FIELD DAY, WHEN YOU ARE PLANNING TO APPEAR. IF YOU ARE NOT SURE, PLEASE SIGN IN ANYWAY!!! Need volunteers to coordinate the second HF station. Asking for a volunteer for publicity. N3RNX was volunteered for PIO duty. WN3VAW mentioned that club shirts are available, order now for FD. NØVLR mentioned that we should have some study materials available for display for the day. He is also willing to organize a class after FD.

W3SRL motioned that we buy 20 FD pins. Seconded by W3RJM and carried. N3RDV motioned that we appropriate \$250 for miscellaneous Field Day expenses and food. W3WH seconded and carried. N3KFD is now the publicity chair, assisted by N3RNX and NØVLR.

Newsletter: Cutting back, and sending the electronic version to most that formerly received a printed copy. It costs us \$40 per month just in postage, or \$500 per year to send out the printed newsletter.

President: We were a hit at the Breezeshooters' hamfest. Hex beam attracted a LOT of attention and worked VERY well. The cookout was nice too. Numerous positive comments. N3KFD won sixth prize, a dual-band mobile. W3WH offered to take it off his hands, and did so. WA3SH won third place in the Breezeshooters' Ground Wave contest (Club Category). Satellite contact went over very well, as did the APRS demo. We were the most visible club at the hamfest.

Old Business: None

New Business: N3SBF was out at AA3FI's QTH on Monday. AA3FI suggested that we get some tapes and courses from the W5YI group and donate them to the local library for use. W3RJM suggested that we look into the ARRL version.

Carol Danko suggested that we form a ways and means committee to explore some means of raising some funds for the social committee.

We could do this on a quarterly basis to help out with field day, parties, picnics, etc. W3WH suggested that we bring it up next next month, after giving it some thought. Motion was tabled until next month.

Good of the Order: NØVLR presented WN3VAW with a copy of "Ron's Rules of Commuting" Ron then bowed his bloodied head. KE3XB mentioned that he was interested in heading up a DXpedition to Mt.

Davis toward the end of July. He has also reserved a 1x1 call sign for the REAL turn of the millenium. N3RDV reminded all that the club gets a kickback from the ARRL if you renew through us. A brief rundown of the public service events for the summer was then read. N3RNX sent 73's from NP2JF at the new "REAL" Southern Outpost in the US Virgin Islands. The meeting was adjourned at 20:30 local time.

APRS demonstration by NØVLR and N3NHS followed.

## Hollow State Ramblings

Don Merz N3RHT

In an earlier column, I said that you can't just plug in your newfound boatanchor treasure. Before we get too much further, it might be helpful for you to have a "New Purchase Checkout Checklist" for bringing BA gear to life. I still hear of too many buyers who mail-order a used boat anchor, unpack it and plug it in. But, as you now know, this is inviting disaster.

Here's a basic checklist. There's a lot more that can be said. But this will help prevent unnecessary problems—and remind you of the safety issues! Keep notes of everything you do to get through the rest of this list. A year from now, you will be very glad you did.

1. Open box, unpack radio, check for obvious physical damage. Stupid question: Is it what you thought you were buying?
2. Read the manual. If manual is unavailable, put radio back into box until manual is available. As a substitute, you could use a Howard Sams service folder for some postwar radios. Prewar radios may have schematics and alignment directions in one of the Riders manuals. Consider other sources like magazine articles reviewing the radio, etc.
3. Check the power cord for aging or damage. Is it a 3-wire, grounded cord? If not, then replace it with one. If it is, is it wired correctly? Is it fused correctly? Grounded correctly? Is the switch in the right side of the line? Many old BAs were not fused at all. Some had those goofy fused plugs with different size fuses in each leg of the line. All of that junk should be replaced with a modern 3-wire line cord with the ground going to the chassis. The exception here is a portable AC-DC radio designed for AC and battery or mobile operation. Those have to be looked at much more carefully to see how ground is handled—the chassis may not be at ground potential. Make note of any changes you make or decide not to make, and why.
4. Remove the chassis from the cabinet. Check the chassis for obvious physical damage and loose parts. Double check the fuse wiring. Look for RF bypass caps going from one or both sides of the AC line to ground. If these are present, what type are they? If wax paper type, then remove and discard. Otherwise, it's your judgement call. These caps were designed to bypass RF to ground in high-RF environments? Do you need them? Only you can say for sure. Again, note changes and your

(Continued on page 6)

## WASH 2000 New & Returning Members

K3LIE	N3BSQ	N3UIW	W3RJM	Carol Danko
K3VX	N3CCC	N3VVL	W3SRL	Dan Mohr
KA3JZR	N3IDH	N3VWF	W3VFA	JoAnn Cottrill
KA3TWI	N3KEH	N3WPT	W3WH	Marilyn Nizinski
KA3WZO	N3KFD	N3XFE	WB3BPH	
KB3CPI	N3MJQ	N3XI	WN3BOJ	
KB3DCO	N3OBD	N3YPB	WN3VAW	
KB3DSB	N3QMV	N3YQY		
KB3DSD	N3RDV	N3ZEG		
KB3ECD	N3RHT	N3ZEH		
KB3FBG	N3RNX	N3ZEL		
KE3XB	N3SBF	N3ZNI		
KQ3DX	N3TBK	N4MIS		
NOVLR	N3TES	NP2JF		
N2QIV	N3UE	W3HND		
				2000 Annual Dues Paid Through June 30 <sup>th</sup>
				List compiled by Mark Stabryla N3RDV Vice President/Treasurer

# CQ CQ Field Day from November 3 Shark Hunters!



Pete N3RNX at the mike... check out the great hat from Hoss's Steakhouse!



What's Jessica N3YQX more afraid of, the HF rig or Ed N3ZNI?



Ed N3UE on the attack!



Harold KB3CPI looks like an old pro at this.



A typical pose for NØVLR?



W3WH demonstrates the Armstrong method



Richie N3SBF... the rock of Field Day 2K?



Ron WN3VAW observes as Ed N3ZNI works 20 Meters with a voice that breaks through the pileups



Sharing a few quiet moments off-air Sunday morning: Frank N3XI, Steve W3SRL, Mike N3BSQ

All photos this page courtesy of & ©2000 Ron Notarius WN3VAW

Isn't it a shame that, legally, we have to keep saying that?



OK, OK... THAT'S a typical pose for NØVLR!

(Continued from page 4)

- reasoning.
5. Short out large caps to avoid unpleasant surprises while poking around.
  6. Test all tubes. Weak tubes are okay for now. But make notes on any weak tubes. Make sure that the correct type of tube is used in each socket or that the substitute is a proper substitute. Do the same for dial lamps. I have seen replacement dial lamps of the wrong wattage overheat and nearly destroy the dials they were illuminating. And those dials are darn near irreplaceable today.
  7. Look for modifications. Lightly trace through wiring. Check for anything that looks unoriginal, added or removed. Make notes accordingly. Most radios have clear Power supply-RF-IF-AF sections that have all the components grouped together and tied to other sections and the power supply. Check for wiring that doesn't make sense or doesn't fit your expectations based on your reading of the schematic (and based on your previous experience).
  8. Gently test all controls for proper motion. Use tiny drops of light oil on wafer switch bearings to free them up. Extreme cases may require overnight treatment with a bolt-loosening chemical (from your local hardware store). Do not lubricate potentiometers or other controls. Do not arbitrarily spray things with WD-40. WD-40 is not a good lubricant—it was designed as a cleaner and it isn't really great for boatanchor use for anything. Use only Caig De-Ox-Id to clean switch contacts and potentiometers. Use nothing else. Throw all your other "contact cleaners" away.
  9. Check for obvious age-related or abuse-related damage including burnt components, leaking caps, smelly power transformer, darkened wiring and PCV board spots, and so forth. Make notes on potentially troublesome components in these areas like selenium rectifiers, dropping resistors and bathtub capacitors.
  10. If testing a transmitter, do an ohm meter test of cabinet interlocks. Make sure interlocks are working as designed. Check power supply caps for bleeders. If none are present, then you must remember to short them out before working inside the rig, even when it is unplugged.
  11. Ideally, at this point, you would put a scope and voltmeter across the DC B+ of the radio. Plug in an antenna and speaker. For a transmitter, use a dummy load that can handle the power. Don't just rely on headphones. Some radios require a speaker voice coil to load the audio output stage otherwise bad things start to happen.



- Less than ideally, I often skip the scope and voltmeter out of sheer laziness. I just watch the rig to see what it does and use its own internal indicators—dial lights and meters (if any).
12. Now, plug the radio into a variable voltage transformer (Varaic<sup>®</sup>) set to zero voltage, and bring the voltage up slowly to 30-40 volts. The dial lamp should glimmer weakly. Let it run like this for 30 minutes or more. BUT DON'T LEAVE THE AREA! You must be there to shut down if something goes wrong.
  13. Increase the voltage in 10-volt increments, waiting 10-20 minutes between each step up to 60-70 volts. At that point, if a relay is in the AC line, it will be chattering. If the unit has a scope tube or eye tube, the scope should have a weak trace and the eye tube should be glowing very weakly.
  14. Now shut down for a couple hours or overnight. Short the power supply cap(s) and feel around—anything getting overly warm? Power supply capacitor(s)? Transformer? Dropping resistor(s)? If so, then that indicates a problem that needs real troubleshooting outside the scope of this column.
  15. Returning to the rig, check all connections, make sure probes aren't shorting against one another or the chassis, apply power up to 60 volts. Wait 10 minutes. Increase voltage in 10-volt increments, waiting 10-20 minutes between each step, up to 120 volts. Assuming no smoke has shown itself, the rig should be doing something. At that point, you have successfully brought your BA to life. Now the real work of getting it RIGHT begins.

Next Month: Military Boatanchor Resources You Can Use. To get primed for that, here is some "Command Set" trivia to test your military BA awareness.

1. The radios that became the military "Command Sets" were designed in what year? At which company? By what two engineers?
2. The first "Command Set" model proposed to the military was the ...?
3. The U.S. military adopted the "command set" radios in a series of nomenclature designations. Name the five designations used for WWII and prior manufactured sets.
4. (Gimme question)The distinguishing physical appearance difference between the Army and Navy command sets is what?

# 15<sup>th</sup> Annual North Hills ARC Hamfest

Sunday, July 9<sup>th</sup> 2000, 8 AM – 3 PM, Northland Public Library, McCandless

## Main Prizes:

- 1<sup>st</sup> Prize: ICOM IC-706 MK II G  
2<sup>nd</sup> Prize: ICOM IC-T7H

3 PM Drawing -- Winner Need Not Be Present to Win

Plus Hourly Prizes — Must Be Present to Win

Check the NHARC Web Site  
[www.nharc.pgh.pa.us](http://www.nharc.pgh.pa.us)

**Free Admission — Free Parking**

**Paved Tailgating — First Space Free!**

Additional spaces \$5.00 Each

**Direction & Talk-In 147.09 W3EXW Repeater**

**For More Information, Contact**

Chairman: Keith Ostrom KB3ANK 412-821-4135  
305 Poplar Drive, Pittsburgh PA 15209

# HF Antennas on a Shoestring [Or, The Animated Ramblings of a Cheapskate Ham]

Steve Lane W3SRL

## Part VI: The Hamfest Vertical

First of all, I'd like to thank the individual who pointed out the glaring error in my article from last month about the Inverted 'L' antenna. If the Inverted 'L' is to be coax fed with 50-ohm feedline, then a 4:1 balun is NOT needed to make the antenna load up. In fact, what is needed is an RF choke, or a series of ferrite beads on the coax near where it meets the radiating element and the ground system. This is to keep the coax from radiating, and to keep stray RF at bay.

Second of all I'm going to deviate from my past practice of writing about cheap to assemble wire antennas to talk about another economical, yet effective HF antenna: The Hamfest Vertical. Now I know that verticals have been maligned, badmouthed, sworn at and sworn by all at the same time. In fact, if you want a nice safe topic to discuss in the company of hams, you'd be safer bringing up politics or FCC enforcement than the subject of the effectiveness of a vertical. Personally, I thrive on controversy, so here goes:

I had eyed up a clean-looking used Cushcraft R-5 at a hamfest several years ago, but the \$125 price tag was more than I wanted to shell out for an antenna that I didn't need. Oh, it was clean alright, with only a slight bit of oxidation. The seller said it had only been up about two years, and had little actual transmit time. The traps were good he said. I kept checking back, and as he was packing up to go home, I asked him what his rock-bottom price was. He said \$75 and I countered with \$60. He was insulted, but I took it home for \$65.

Well, the first lesson with any used aluminum antenna, is to find the documentation for it if it didn't come with it. Mine didn't, but I knew Cushcraft had all their antenna manuals on their web site. In less than five minutes I had a 'new' manual for my 'new' antenna. Next, completely disassemble a used antenna to the components listed in the manual. Don't get carried away and try to go further, you'll likely ruin an expensive part, or render an intricate part useless. I also used a sharp awl to scribe the weathered marks where the sections mated so I would have a reference point in case I needed it for reassembly.

The second lesson with a used aluminum antenna is to thoroughly clean EVERY part with a light abrasive pad such as a Scotchbrite in order to remove all traces of oxidation. Very fine (0000 grade) steel wool may be helpful as well, as will a small rifle-bore brush and a Dremel tool with a wire brush wheel on it. The idea here is not to make the antenna pretty, but to improve conductivity. Every place where one piece joins another is a potential problem area, so treat these places with extra care. I also chose to replace all the worm-type hose clamps with new ones. They are inexpensive, and easy to find.

The third lesson with a used aluminum antenna is to use an anti-oxidant such as Penetrox at each joint when reassembling as per the manual you just downloaded. This will insure that the joints don't get corroded and mess up the electrical properties of the antenna. Along with this lesson is the most obvious: READ THE BOOK!

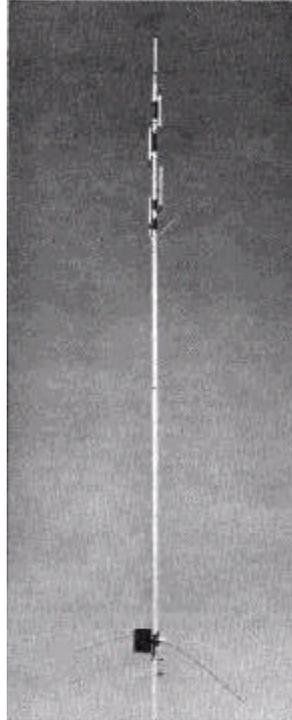
Carefully assemble the antenna per the instructions, paying close attention to the measurements provided. They are critical to performance.

Once I had my 'new' R-5 reassembled, I clamped a short piece of mast onto my porch rail and mounted the antenna onto it temporarily to take SWR measurements with my MFJ-259 antenna analyzer. An HF rig and an SWR meter will work as well. With no great surprise, the antenna was within factory specs, but a bit low in all bands. It was really better suited for CW than SSB operation when assembled by the book. This is when I realized how valuable those little scribe marks I made before

polishing the mast sections were; I shortened one of the mast sections at one of its joints by about 7/8 of an inch and used the scribe mark for a reference. Lo and behold, it loaded up better in the phone portion of nearly every band than it did in the CW portion! The lone exception here was 20m, where a minor tweek of the trap for that band did the trick. READ THE BOOK! At this point I chose to deviate from lesson #1 above, and to remove the cover from the matching unit box at the base of the antenna. It came off very easily, and confirmed my suspicions immediately when I found some corrosion on the components inside this box; It obviously had been leaking. A judicious application of some silicon-RTV sealant had the cover back in place, ready to be screwed into place.

After mounting the my 'new' R-5 on my new home's chimney, I rechecked the SWR on all bands and was rewarded with an excellent 2.0:1 bandwidth on all 5 bands. The R-5 is designed to cover 10, 12, 15, 17 and 20 meters. Just for grins I tried to load it up on 6 meters as well, and it actually did. It also showed an SWR on 2 meters of 1.5:1 at a 50-ohm impedance at 147.4 Mhz. Hmmm. Imagine the GAIN an HF antenna would have on 2 meters.....

The moral of the story here folks is this: A little judicious haggling at your local hamfest can pay tremendous rewards, IF you know what you are getting into, and IF you are willing to invest some elbow-grease into getting your new antennas into shape. My rule of thumb is this: If there are obvious parts missing, then pass on that antenna. Likewise for units whose manufacturers are no longer in business, as parts and manuals may no longer be available. Also, take into consideration the stated age of the antenna and the amount of oxidation present. If the antenna is a chalky dull-grey, then it is best left alone. If it is only slightly dull, and the hardware not rusted severely, then it may be a good candidate. And by all means, NEVER pay the asking price for a hamfest antenna! That much is absolutely SACRED!!! If the owner is unwilling to give you his name and call sign, then that may be an indicator as well. Being an informed buyer will pay the greatest dividends though. Know what you are buying, and what the pitfalls may be and you will be way ahead of most hamfest buyers out there. I personally just refuse to pay list price for ANYTHING



Look for **W3SRL/4 QRP** from the Outer Banks, NA067, starting July 9<sup>th</sup> for one week. A special QSL card will be available. Keep an eye 14.260, 14.285 and on the N3SH club reflector for exact times and frequencies!

## You Might Be a Lid If . . .

From the SCDXC BULLETIN (April 1991)  
courtesy of Gary "Renegade" Pesselt WB6PSY

- You think the Soviet/Russian Woodpecker is on the US Endangered Species List.
- You keep a weekly schedule with WA4D and/or WA4JTK.
- Your "Elmer" was run out of town on a rail by the local hams
- You never wear a call-sign badge to any Hamfest for fear of getting beat-up.
- Your coax has been cut into 1 foot chunks by a neighborhood committee.
- The FCC corresponds with you on a first name basis and K4ZDH has memorized your home telephone number.
- Several people have suggested that your life span would be extended if you changed your hobby to Stamp Collecting.
- You have to hire someone to install a PL-259.
- You don't know what a PL-259 is.
- You must call a friend to tune your amplifier.
- You are always greeted by "A H" when operating CW.
- You don't know what CW is.
- You are/were a close personal friend of ex-WB6JAC.
- You are positive that California is in (CQ) zone 6.
- You always report 5x9, California, in the CQ World Wide contest.
- When calling DX and hearing "UP-5, UP-5", you begin to call "QRZ the UP5 on frequency?"
- You see nothing wrong with transmitting outside the U.S. bands, as long as it's to call another ham an idiot.
- You always operate Upper-Side Band on 3.999 MHz.
- You have suggested to the Emergency Coordinator that the Net should QSY, since, the emergency traffic was causing QRM to your listening frequency.
- You know for a fact that there really is a National Tune-up Frequency — and where it is today.
- You always sign with your "last two".

The following additions to the original list contributed by K4HB:  
After spotting the DX on the cluster and not immediately hearing them after tuning to the spotted frequency, the true Lid asks one or more of these questions:

- "Is the frequency in use?"
- "Who's the DX?"
- "Where is he listening?"
- "What's his QSL manager and does he take green stamps?"
- And when the DX is calling by just numbers or QRZ to anyone, the true Lid gets on his transmit frequency and yells "SOOUUUTTTTHHHhhh AMERICA!"

## Silent Keys



Frank Sanns Sr., father of Frank Sanns Jr. N3XI and grandfather of Ashley Sanns KB3DSB, June 23<sup>rd</sup>  
Antenna Designer R. Louis Varney G5RV / CX5RV, June 28<sup>th</sup>

## DX News Briefs



The Association des Radio-Amateurs de Monaco is now hosting a special activity, combining resident Monaco amateurs and invited international team, working together toward a common goal. The highlight will be the special call sign **3A2K** participating the IARU Championship July 8<sup>th</sup> & 9<sup>th</sup> in the HQ category, activating several stations on several bands, SSB and CW, at the same time. Operation includes special authorization for the first ever Monaco activity on 6 meters through July 10<sup>th</sup>. Listen on 50.2 - 51.2 MHz. QSL 3A2K via 3A2ARM — N4GN

N3RNX will be visiting NP2JF from July 7<sup>th</sup> or 8<sup>th</sup> through the 15<sup>th</sup>. Look for **NP2/N3RNX** on the Maritime Mobile nets and at other times to be announced in the club reflector. QSL direct — N3RNX

**VP2MHX** (W4WX) will be QRV on RTTY, and **VP2MHS** (W1LR) on SSB, July 18<sup>th</sup> — 24<sup>th</sup>. QSL direct to the US calls — there is no bureau on Montserrat — W4WX, N1FOC

The ONLY DX QSLs managed by N2VW are: **VP5T** (1995 to 2000), **EI4ID**, and any Portable/N2VW call. This information has been posted on many sites several times and is on all QSL manager route sites that he can find. Any other QSL cards received that are not listed above, will be discarded — N2VW

**3B8FG** doesn't answer QSL cards — PY7ZZ  
**JW5DW** via the NRRL bureau — W8TTS

KA2UCA is joining her father **3DAØCF** and will be QRV as **3DAØEW** QSL both calls via K5LBU — K5LBU

**JW4LN** now QRV through July 11<sup>th</sup>, evenings on 40, 30 and 20 CW. QSL to LA4LN — ARRL DX Bulletin

K8WK apologizes for family matters delaying **H18/K8WK** QSL requests. He is working on the backlog — K8WK

JA2MNB is not the manager for **XW2A** & **XU7ABF** by JA2EZD. Hiko is returning all cards received to sender. — JA2MNB

K8MN has gone QRT as **5H3US** and is returning stateside. Dave's list of calls over the years include **K8MN/OH2**, **K8MN/OHØ**, **J52US**, **9L1US**, **A22MN**, **OH2/K8MN**, **OHØ/K8MN**, & **5H3US**. The NCDXF has supplied QSL cards with all of the calls, dates, and QTH's listed and those will come out as the single call QSL supplies are exhausted. QSL all of Dave's operations via WA8JOC — WA8JOC

There are 3 different QSL managers for **R1AND** operations: during the Winter 1999/2000 season via DL5EBE, before December 1999 via NT2X, or all direct to RW1AI — W8TTS, RA3SL

**4W6GH** will be home in August and will the reply to all QSL cards. All cards should be out by the end of September — CT1CSN

**4W6EB / CT1EEB** will be leaving Portugal on July 18<sup>th</sup>. He currently has a backlog of about 5000 requests. He asks for patience as this is not a DXpedition and he works on the cards when he is home in Portugal, not at work in Palestine. — CT1EEB



# Allegheny County

## ARES News Mark Stabryla

The 18th Annual Pittsburgh Vintage Grand Prix will be taking place the week of July 9th through 16th, culminating in Race Weekend on July 15th and 16th. Amateur Radio has been involved with the PVGP since the very first race (hams who were also members of the local SCCA helped organize the event) providing race course and other related event communications.

Once again, Allegheny County ARES members and amateurs from the surrounding counties and tri-state area are asked to donate some time during Race Weekend to help provide communications. Amateurs are needed at the corners to assist the Corner Captains and flag crews, on the wreckers and rope tows that retrieve cars that get stranded on the course for whatever reason, and to "shadow" the off-course race officials who help get the cars ready to race. If you have time to volunteer, contact either Mark Stabryla N3RDV, [cwlives@fyi.net](mailto:cwlives@fyi.net), or Allegheny County EC Corky Bennet N3MJP, telephone (412) 601-0856 or (724)850-7833, or email [freqy@aol.com](mailto:freqy@aol.com).



Photo © 2000 Ron Notarius WN3VAW

# FCC News

ARRL Letter courtesy American Radio Relay League

The FCC's Dale Hatfield, WØIFO, predicts a bright future for Amateur Radio. But the Office of Engineering and Technology chief says that amateurs "will be under a certain amount of pressure" to justify their free use of the radio spectrum. As a result, he said, it will be more important than ever that hams actually fulfill their service, good will and educational roles--not just talk about them.



Hatfield offered his observations as keynote speaker for AMRAD's 25th anniversary dinner June 17 in Virginia. Hatfield told the gathering, "the key issue for the amateur service is maintaining access to an adequate amount of spectrum." While emphasizing that he was not suggesting any immediate threat, Hatfield said hams will have to do a better job of justifying their current allocations.

Hatfield said hams should actually engage in experimentation to advance the state-of-the-art, provide communication and train operators for emergencies, encourage international cooperation and good will, and offer an important technical educational outlet. "Or, to use a bit of slang, it seems to me that it will be even more important for all segments of the amateur community to 'walk the walk' not just 'talk the talk'," he said.

Hatfield encouraged his audience to explore advanced techniques that conserve spectrum, especially digital techniques. As the rest of the telecommunications world transitions to digital techniques, Hatfield said, "the amateur service will look antiquated if it is not making progress in that direction as well."

Hatfield also said software defined radios could facilitate "a new era of amateur experimentation" and, in many ways, represent "a final merger" of radio communications and computers.

The text of Hatfield's prepared remarks is available on the FCC Web site at <http://www.fcc.gov/Speeches/misc/dnh061700.html>

## Museum Ships Special Event

Sponsored by the USS Salem Radio Club (K1USN), the following Museum Ships to be QRV from 1330Z July 15th through 1900Z July 16th. For more information on awards and certificates, check <http://www.ziplink.net/~rcal/salem/ops.html>, or email W1QWT at [recallahan@mediaone.net](mailto:recallahan@mediaone.net). More ships are expected to be announced:

### CRUISERS

- USS Salem Quincy, Ma. K1USN
- HMS Belfast London, England GB2RN
- USS Littlerock New York W2PE

### BATTLESHIPS

- USS Massachusetts Fall River, Ma. KN1EPL
- USS North Carolina North Carolina AC4RC
- USS Alabama Alabama KG4HDP
- USS Texas Texas W5RNF

### AIRCRAFT CARRIERS

- USS Yorktown South Carolina WA4USN
- USS Lexington Corpus Christi, Texas W5LEX
- USS Hornet California NB6GC

### DESTROYERS

- USS The Sullivans DD537 New York W2TU
- HMCS Haida Toronto, Canada VA3XF
- USS Kidd Louisiana W5KID
- USS Laffey DD 724 South Carolina WA4USN

USS Slater DE766 Albany, NewYork N2USN

HMS Smaland Sweden SK6SL

### SUBMARINES

- USS Pampanito California NJ6VT
- USS Torsk Baltimore, MD NK3ST
- USS Croaker New York WA2FKV
- USS Cod Ohio K8KRG

### USS Requin Pittsburgh, PA. NY3EC

- USS Cavalla Texas WØOOG
- USS Drum Alabama KG4HDP

### VICTORY SHIPS AND FREIGHTERS

- SS Red Oak California K6YVM
- MV Cap San Diego Hamburg, Germany DLØMFH
- MV Frieden Rostock, Germany DLØMCM
- SS W.G. Mather Ohio KC8EXL
- LIGHTSHIP
- MV Columbia Oregon W7BU
- STERNWHEELER
- SS Portland Portland, Oregon W7P (K7VV)

— Thanks N3DOK & KF2TI

## Separated at Birth?

While cleaning up the other day, my wife came across the June 2000 issue of WorldRadio magazine, with a sketch of Dayton Hamvention Amateur of the Year Martti Lane OH2BH on the cover. Julie looked at it kind of funny for a few moments, then asked me, "What's Elton John doing on the cover of one of your radio magazines?" — WN3VAW



FYI Networks, an Internet Service Provider in Pittsburgh and surrounding areas since 1995, is offering all members of WASH their Basic Internet account for only \$18/month. This includes one e-mail box, 3 MB of disk space, web page hosting, Telnet & FTP access. Call FYI toll-free at 1-877-FYI-4NET, or e-mail them at [sales@fyi.net](mailto:sales@fyi.net), for more details or to sign up. You must mention that you are a member of the Wireless Association of South Hills to get the discount rate.

Many thanks to FYI Networks for making this special offer available to us for the past two years!

## ***No Covenants, Building Permit in Hand, No Problem? — Think Again!***

Gerry Smith W6TER

Originally posted on eHam.net & used with the Author's Permission

Dream location. That was the goal, a piece of land big enough for two towers and beverages.

I began my search near Albuquerque in the spring of 1999. It is tough to find a location without covenants and without undue government restriction. You also have to consider your family need in terms of size and style of house, not next to a motorcycle muffler research shop, etc.

I found the house in late May in the East Mountain section of Albuquerque, NM. A five-acre piece, fenced, no trees and the closest neighbor was 400 feet away. The lot contained a 3,000 square foot, five-year-old house. It was just perfect.

I had the realtor and the title company run checks and, indeed, no covenants. Since the location is in an unincorporated area, I talked with officials of the Bernalillo County Building Department. I even bought their zoning and building code. The officials said there was no restriction on ham towers, not even a height restriction. My reading of the zoning code confirmed their advice. Still, I wanted another opinion about government restrictions. I asked an attorney to review the county code. He confirmed no restrictions.

I retained a professional engineer and had drawings made for two, 130 foot Rohn 45 towers. After closing on the house and land, I submitted the drawing with a building permit application in July 1999. On August 5, 1999, I was issued a permit for the towers.

I went about construction and buying materials. Then, on December 8, the Building Official, along with three associates (guess they were afraid of me) showed up, unannounced, and delivered a "Stop Work Notice." They said they issued the permit in error and that Amateur Radio towers and antennas are not allowed in any residential zone in the county. I immediately retained a land use knowledgeable attorney.

After two letters and 60 days, demanding to know the details of their position, the county said that in June 1999 an ordinance was passed permitting Amateur towers in two non-residential zones (I was not told of the ordinance when I met with the building officials prior to permit application nor was it in the zoning code package I purchased). Their logic is; if it is permitted in two non-residential zones, it is not permitted in residential zones (convoluted, right?).

A provision in the county code allows an administrative appeal of a Stop Work Notice to a county board of appeals and, on appeal, the Stop Work Notice is stayed until the appeal is heard. We appealed and continued construction. The county issued another Stop Work Notice; we appealed and continued construction. I also filed for a declaratory judgement in state district court asking the court to decide that Amateur Radio towers must be allowed in residential zone and any law or ordinance to the contrary is preempted by the FCC PRB-1 ruling.

The county filed for a restraining order in district court. I prevailed and continued construction.

I have made a motion for summary judgement in this matter with the court. It will be heard in late September. Meanwhile, the neighbors, some 30 of them, have intervened in my suit against the county, claiming nuisance and devaluation of property. The ARRL, through the offices of Chris Imlay, has written an amicus (friend of the court) brief in my support.

I expect to win this struggle, even if I have to appeal this matter to a higher court. I will not let Amateur Radio go down the tubes on such arrogant action on the part of a government. However, the legal bills are huge. No, you don't get it back on prevailing.

A lawyer friend, C. D. Carter, W5IP, who does not practice in land use, has set up a Tower Defense Fund to help defray my legal cost. If you don't mind helping, here is his address. Make your check payable to the "The Tower Defense Fund". Along with the fund, three trustees have been appointed to make sure any and all disbursements are proper. I promise; the money will only be used for legal costs in my situation. If there is money leftover (I doubt it) it will be retained for future hams having legal costs just to use their property for our hobby:

Tower Defense Fund, C. D. Carter, W5IP  
904 Four Hills Road SE, Albuquerque NM 87123

If you would like to contact me, please do. My Email is [w6ter@att.net](mailto:w6ter@att.net). My telephone is 505-281-2721.

### ***PRB-1 Dealt A Fatal Blow In WB4HZQ Tower Case?***

After a four year court fight, the United States Court of Appeals for the Eleventh Circuit (Southeast US) has upheld the District Court's ruling. This is the highest court in the Southeast US to have ever heard a PRB-1 case. The court found that the county staff had reviewed my request for an amateur radio tower and determined that it would be "detrimental to the character of the area and would not be consistent with the trends of development in the area or neighborhood". The Court agreed that this was a good reason to limit the tower to 35'. We presented expert testimony, which showed that a 35' tower would be totally ineffective. We also presented expert testimony showing that the tower would not change the neighborhood nor would property values be affected. Both our legal team and the ARRL expended great effort on this case. Both teams felt that we had a very good chance to win since it was such a straightforward case.

The bottom line is, if we could not win this case, it would show how weak PRB-1 really is. This case sends a clear message to other counties on how to limit amateur radio tower height. The counties are actually using PRB-1 against us in court and it is working!

— Lenard J. Persin WB4HZQ

Their logic?  
If Amateur  
Radio towers  
are permitted  
in two non-  
residential  
zones, then  
they must be  
prohibited in  
residential  
zones!





The WASHRag  
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## Inside This Issue:

- Field Day Photos! Get'em Here First!
  - Looking for Used Antenna Bargains at that next hamfest you go to?
  - You just got your dream boat anchor... now what do you do?
  - Pittsburgh Vintage Grand Prix this month!
  - Sad news on the antenna ordinance front.
  - Are you a lid? Take this simple test....
  - Shark Hunting in January in "da burgh"?
- All that and more... turn the page & enjoy!



"CQ Field Day from N3SH 2A WPA!"  
VHF Op Steve W3SRL getting assistance from 4  
year old twin visitors "Little" Billy and Eddie  
"Spaghetti" while working North Texas Section on  
6 Meters!

And how was YOUR Field Day?  
MORE N3SH Field Day 2000 Inside!

Photo courtesy of and ©Copyright 2000 Ron Notarius WN3VAW