

The *E-VOX*

The Official **On-Line**Newsletter of the



Lehigh Valley Amateur Radio Club - W30I / KB3SYV Allentown, Pennsylvania (Lehigh County) - USA

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LVARC Repeaters

146.34 / 146.94 (PL 71.9) 147.735/147.135 (PL 167.9) 447.775 (PL 71.9) Club Simplex Freq. - 147.420

LVARC/RACES/ARES Net

Every Monday at 7:30 (ET) 146.940 (PL 71.9)

D-Star

W3OI Dstar repeaters are now on W3OI at 147.165, W3EPE at 445.225 and W3OK at 145.110

Join us for a Mid-Atlantic regional net Tuesdays on the 147.165 port

To register for the Gateway or need information on setting up the radio, please visit http://www.epaares.org/dstar/

W3OI Home Page: http://www.w3oi.org

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LVARC E-VOX CHANGES COMING IN JUNE, 2012

Come June, 2012, the **EVOX will only be available electronically**. After June, 2012, I will not have access to a copy machine anymore and will **not** be sending the E-VOX via US mail to a select few, as I have in the past. Provided I have a viable email address for you, you will receive the EVOX via email in a pdf format or it will be available on the club's website as always. -- Mark (AK3M) ed.

> **Newsletter submissions can be sent to Mark** (AK3M) at AK3M@rcn.com

Your submissions can be text and/or graphics.



The March, 2012 LVARC meeting will be held on March 6, 2012 at the Tri Clover Fire Company at 7:30 pm.

LVARC / RACES NET

Don't forget to check into the Monday Night LC/LVARC/RACES Net on 146.94 (PL 71.9) with an alternate frequency of 147.735/147.135 (PL 167.9) The Net begins at 7:30 pm local time (ET).

> Many club announcements will be heard there!

Monday Night RACES/ARES Check-In Summary - 2012

Number of Number of **Month** Nets/Mondays Check-In's 113 January





REMEMBER:

Registration for the monthly test session, must be made NO LATER THAN THE SUNDAY BEFORE THE TEST!

Contact Mark (AK3M) at AK3M@rcn.com or call 610-865-9183

Minutes of the February, 2012 LVARC Meeting

de - Phil (KB3HMK)

The meeting was called to order by President Wolfe at 1933 Hrs, (EST / EDST).

The meeting opened with the Pledge of Allegiance, and then a moment of silence was observed for Silent Keys.

There were a total of 19 members in attendance, and the club was joined by 2 guests. The following Board Members were present at the meeting: Rod - N3XG, Brian - KW3K, Phil -KB3HMK, Brian - KB3QHA, Paul - NOKIA, Robin - KB3GZV, Dorian - KB3GZW, Jeff - KB3OCP and Gary - N3GRD.

John - N1SXB **Guests:**

Grandson of Keith - KA3WNT

Corrections additions to the minutes: None noted Approved by: Brian - KW3K

Second by: John - AB3LZ

Carried (Y/N) Y

Treasurer's Report (Brian - KB3QHA)

Starting Balance: \$4,074.11 Ending Balance: \$4,394.44 Approved by: Bruce - KA3TIU

Second by: Gary - W3GRD

Carried: (Y/N) Y

Committee Reports:

Repeater: Rod will consult Jeff (N3MFT) on which antenna to buy for the 147.135 repeater. Carl (AA3IX) will fax in the license renewal for the club repeater. This cannot be done through the internet.

Program: Tonight's program will be "Public Service Events - How to prepare & Participate". Paul (NOKIA) will be doing the program.

The hands on night this month will be the "Beast Feast". It will be February 21 at the Old Country Buffet in Whitehall. It starts at 6:30 PM. Members should get there a little early due to a possible line. There will also be a rummage sale to benefit the club.

The March program will be "Open Mic Night". It will be an open forum on how you got interested in amateur radio. Brian (KB3QHA) and Gary (W3GRD) will be doing the program.

The hands on for March will on APRS.

Volunteer Examiners: At the January 20, 2011 test session, one tested and one passed. CONGRATULATIONS to Rowland Carver who earned his Technician licensed. Rowland received his call, KB3YAI, on January 26, 2012.

The next test session will be February 17. If you would like to test or upgrade, please contact Mark (AK3M).

(Minutes cont. on page 5)

(Minutes cont. from page 4)

OLD Business: No old business to discuss

New Business: John Brewer (N1SXB) was accepted as a new member

The board met in January. Various items were discussed. Many new

things coming for this year.

Rod asked for a committee to review the current Constitution & Bylaws and recommend any changes. The committee consisted of Paul (NOKIA), Robin (KB3GZV) and Phil (KB3HMK). The recommended changes will posted for the members to read. The first reading will be at the March meeting and then read at the April Meeting and be voted on. The proposed changes are on the website.

Many fundraising ideas were discussed at the board meeting. We will do a hoagie sale again. The other idea was to do an HT Raffle. Rod found one for roughly \$45. We will sell tickets for \$1. The raffle will be held at the end of the year. We can sell tickets to other clubs and at events. Club members will also receive tickets for doing events during the year. Rod found a company that prints tickets for raffles (Gillespie Printing). Tickets are \$70 for 1000. Rod asked for a motion to purchase the tickets. Charlie (W3QXI) made the motion and Matt (KB3UZE) seconded the motion. The motion carries. We will also purchase additional units to sell to club members and people passing there amateur test. This will give them the opportunity to get on the air right away. Rod asked for a motion to purchase 15 HT's with a cap of \$500 with shipping. Bruce (KA3TIU) made the motion and Jeff (KB3OCP) seconded the motion. The motion carries.

It was asked if members will be able to purchase more vests. Rod will look into it and let the members know.

Good of the Order: The W3OK club will have a mini hamfest at there March meeting. Go to the website for more info.

There will be a 5k run at the Hanover Twp. Community Center (Northampton County) on April 28. Contact Charlie (N3WXO) for more info.

New member applicants: John - N1SXB Approve to Accept by: Bruce - KA3TIU

Second by: Walt - KE3SP

Carried (Y/N) Y

The LVARC Monthly Business Meeting Closed at 2015 hrs, EST.

Motion by: Brian - KW3K Second by: Ieff - KB3OCP

In favor: Y

Respectfully Submitted de KB3HMK, Secretary.



This Month In Ham Radio

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	
March 2012							
4	ARES RACES Net 7:30	LVARC Meeting Tri-Clover 7:30	Dist. 2 RACES Net - 7:30 147.255	8	9	10	
Deadline to schedule test Turn clocks ahead 1 hour	ARES RACES Net 7:30	13	Dist. 2 RACES Net - 7:30 147.255	15	LVARC Test Session 7:00 pm	St. Patrick's Day	
18	ARES RACES Net 7:30	LVARC Activity Night 7:30 First day of Spring	Dist. 2 RACES Net - 7:30 147.255	22	23	24	
25	ARES RACES Net 7:30	27	Dist. 2 RACES Net - 7:30 147.255	29	30	31	

LVARC Meeting - Tuesday March 6 - 7:30 - Tri - Clover FC

Test Session - Friday March 16 - 7:00 pm - Red Cross Building

LVARC Activities/Events Mark your Calendar **PRINT, CLIP and POST**



Monday March 5 --- LC RACES/ARES Net - 7:30 pm (146.94) Tuesday March 6 --- LVARC Meeting (7:30 - Tri Clover FC) **Sunday March 11 --- Deadline to schedule for license exam** Monday March 12 --- LC RACES/ARES Net - 7:30 pm (146.94) Friday March 16 --- LVARC test session (Registration required) Monday March 19 --- LC RACES/ARES Net - 7:30 pm (146.94) Tuesday March 20 --- LVARC Activity Night (7:30 - Tri Clover FC) Monday March 26 --- LC RACES/ARES Net - 7:30 pm (146.94)

There may be additions and deletions to the above dates. Listen to the Monday Night Net, the newsletter and announcements at meetings for changes.

LVARC Report

de Mark (AK3M)

At the January 20, 2011 test session, one tested and one passed.

CONGRATULATIONS to:

Rowland Carver who earned his Technician licensed.



VE's in attendance were Mark (AK3M) Frank (W3FTU) and Walt (KE3SP)

REMEMBER: The LVARC offers amateur radio testing. If you want to obtain your entry level license or if you wish to upgrade, the LVARC can help.

Test sessions are given the 3rd Friday of each month.

REGISTRATION IS REQUIRED!!! Registration must be made no later than the Sunday before the Friday test session.

To schedule a test or for more information, contact Mark (AK3M) at AK3M@rcn.com or call 610-865-9183.

Have an article, diagram or an opinion you would like to share with the LVARC members in this newsletter? Send it to Mark (AK3M). You can submit VOX material in any form. Send it via email (AK3M@rcn.com) or US mail (5508 Hale Ave - Bethlehem, PA 18017). You can send pictures, diagrams or text. The newsletter needs YOUR material to continue!

2012 LVARC/ARES Events

May, 2012 - St. Joseph the Worker 5K
May, 2012 - LVRR 1/2 Marathon
June 22-23, 2012 - Field Day
September, 2012 - LVHN/VIA Marathon
October, 2012 - Women's 5K Classic
December, 2012 - Operation Ho Ho



March, 2012 is the last month to renew your 2012 LVARC membership!



After March, if you have not paid your 2012 dues, you will be dropped from the LVARC membership roll and will have to reapply for membership.

If you want to US mail your dues, send to: Brian Snyder (KB3QHA)
PO BOX 3134
Easton, PA 18043





GROUNDHOG DAY 2012

On February 2, Phil **DID** see his shadow. Lore tells us that means six more weeks of winter. Phil has now seen his shadow 100 times and hasn't seen it just 16 times since 1886, according to the Punxsutawney Groundhog Club's Inner Circle, which runs the event. There are no records for the remaining years.



Ever wonder where 73 & 88 came from?

READER SUBMISSION

de John (AB3LZ)

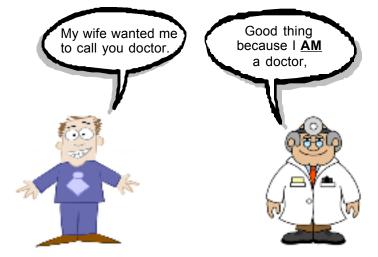
The old Western Union "92" codes, dating back to 1859 landline

telegraph, were used to save bandwidth by using codes for widely used phrases.

Here's some of them:

- 1 Wait a minute.
- 2 Very Important.
- 3 What time is it?
- 4 Where shall I go ahead?
- 5 Have you business for me?
- 6 I am ready.
- 7 Are you ready?
- 8 Close your key, stop breaking.
- 9 Priority business. Wire Chief's
- 10 Keep this circuit closed.
- 12 Do you understand?
- 13 I understand.
- 14 What is the weather?
- 15 For you and others to copy.
- 17 Lightning here.
- 18 What's the trouble?
- 19 Form 19 train order.
- 21 Stop for meal.
- 22 Wire test.
- 23 All stations copy.
- 24 Repeat this back.
- 25 Busy on another wire.
- 26 Put on ground wire.
- 27 Priority, very important.
- 28 Do you get my writing?.
- 29 Private, deliver in sealed envelope.
- 31 Form 31 train order.
- 30 No more the end.
- 33 Answer is paid.
- 34 Message for all officers.
- 35 You may use my signal to answer this.
- 37 Inform all interested.
- 39 Important, with priority on through wire.
- 44 Answer promptly by wire.
- 55 Important.
- 73 Best Regards.
- 77 I have a message for you.
- 88 Love and kisses.
- 91 Superintendent's signal.
- 92 Deliver Promptly.
- 134 Who is at the key?

Think punctuation isn't important? Think again!



The largest bill in circulation is \$100.

The government stopped making bills of up to \$10,000 in 1969



Need a freq? This site has it. READER SUBMISSION

de Larry (NR3R)



http://www.radioreference.com/apps/db/?ctid=2279



ARRL Globe Pin

This pin will symbolize your support of Amateur Radio and ARRL.

Order No. 1065 - \$5.00

Chevy Turns to Ham for Antenna Solution

READER SUBMISSION

de John (AB3LZ)

Camaro Convertible is On His Wavelength General Motors News Release

Detroit, MI, December 17th, 2010 – When spy shots surfaced of the pre-production version of the 2011 Chevrolet Camaro Convertible, an outcry went up among Camaro enthusiasts over the AM/FM whip antenna positioned on the rear deck lid. Quite simply, they hated it. Chevrolet was quick to respond, commissioning a self-described antenna freak named Don Hibbard W8DBH to find a way to fix it. "Antennas are a beautiful thing to me," says Hibbard, an antenna test performance engineer. Engineers working on Camaro are passionate to drive perfection into every aspect of the vehicle.

Hibbard and colleague Gregg Kittinger had to do what some thought was impossible: conceal the AM/FM antenna without sacrificing radio reception, while not putting it inside the Camaro's windows. The two, who share three other patents, happily accepted the challenge. "We weren't sure that it would be possible," said Kittinger. "Typically antennas are hidden in a vehicle's rear window, but with a retractable soft-top roof, that's not an option." So they came up with a novel approach – hide the antenna inside the rear spoiler. No one had tried that on a Chevrolet before because of the hit to radio reception. "We responded to a legitimate criticism from devoted Chevrolet Camaro enthusiasts and in 10 months found an innovative way to improve the overall aesthetics

of the vehicle without sacrificing performance and quality," said Kittinger.

While the shark fin antenna that transmits XM Satellite Radio, OnStar and cellular signals is still present on the car's deck lid, the built-in spoiler antenna eliminates the need for a longer, separate whip antenna to receive AM and FM radio signals. Hibbard, a lifelong Ham radio enthusiast, says the unorthodox placement of the antenna within the body of the vehicle created a number of technical challenges, such as balancing form by preserving the car's styling and function of unimpeded audio reception. "Where other automakers have tried and failed, Chevy succeeded," said Hibbard. "We hope to take what we've learned with the Camaro Convertible, build on it and apply it to future vehicles."



Digital radio A New Version???

READER SUBMISSION

de John (AB3LZ)

A Digital Communications Guide for Amateur Radio Operators

http://www.yaesu.com/indexVS.cfm?cmd=DisplayProducts&ProdCatID=111&enc ProdID=8B1A771611E9963B6AB769C0EC0F6B68&DivisionID=65&isArchived=0

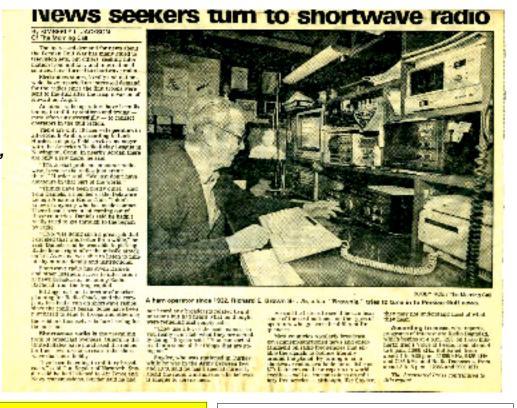
1991 - **This** article was printed in the Morning Call newspaper 1-19-91 *Eddy Petro N3HES saved this article.*

READER SUBMISSION

de Dave (N3GRH)

Richard Brown

"Brownie"



Spring Arrives this Month! The first day of Spring is

March 20!







2011 LVARC Programs In Review



In preparing the 2011 reports for the Testing and ARES programs, I **developed the following: ----** *de Mark (AK3M)*

2011 LVARC VE Program Review

- 1. The LVARC held 11 test sessions (no one scheduled to test in August, 2011)
- 1. The LVARC VE Program tested 40 people in 2011
- 2. The LVARC test sessions earned \$266.00 for the club in 2011

2011 LVARC ARES Review

The LVARC ARES team provided communications support for:

- 1. St. Joseph the Worker 5K May, 2011
- 2. Lehigh Valley Road Runner's 1/2 Marathon May, 2011
- 3. Lehigh Valley Hospital Network/Via Marathon September, 2011
- 4. Women's 5K Classic October, 2011
- 5. Although not an ARES activity, "Operation Ho Ho" was held at the Lehigh Valley Hospital Network's main building in December, 2011.



READER SUBMISSION

"How to Change a Light Bulb!" de Dave (N3GRH)

A MUST see vide (ed.)

www.liveleak.com/e/07b 1284580365



How would you like your own farm? I will show you how to have your very own farm at a very reasonable price. I am of course; talking about an Antenna Farm or ant farm as it has been called over the years.

In today's economy most things cost too much as is the case with antennas. This article is an attempt to help you build your own "ant farm" that will perform like the high priced commercial units and often a lot better at a reasonable price..

This is a large subject and cannot be covered in one newsletter column so I will break it up into several smaller articles. There will be no Math or Theory, just basic information to lead you to your goal.

Basics

To begin I will talk mainly about HF antennas although some of the information can be applied to VHF/UHF antennas also.

Usually HF antennas use wire for the radiating element, so; let's look at what wire can be used.

Copper wire is used in most cases. There is soft drawn copper, medium drawn and hard drawn copper in both solid and twisted lengths. Regular house wiring is soft drawn however it can be converted to hard or medium drawn simply by stretching it about 25%. I stretch this kind of wire by wrapping a turn or two around a tree or car bumper and stretch a length out, and walk back till wire is about 25% longer than when you started. If you want to use 14 gauge wire and are going to draw it, go one size larger to 12 gauge. While not as hard as commercial grade hard drawn it is very good for medium size antennas. I always buy twisted, plastic covered soft drawn electrical wire for my antennas. If you stretch this wire the insulation will often break exposing the copper, nothing to be concerned about (no the insulation on the wire will not affect performance.

Most antenna wire available today is a medium drawn, bare, stranded wire and is perhaps easiest to use and obtain. Radio Shack, Radio Works, the Wire man all sell this type of wire.

If you are building a wire antenna for 40 to 10 meters; wire stretch will not be too great of a concern. It is only when lengths get very long that wire stretch can be troublesome. If the wire stretches the resonant frequency of the antenna will change and this is something we do not want to happen.

There is also copper clad steel wire available, it is less expensive and works very well but has some problems. Copper clad wire is very difficult to bend or wrap especially in larger sizes, it has a memory and kinks and breaks at the kink if not handled carefully. Of course you do not want to kink any antenna wire but the steel is very brittle and will break at a kink every time.

Steel fence wire is also useful for antennas. It does not conduct as well as copper but you will never note the difference. It is however very difficult to solder and requires scraping the zinc coating off and fairly high heat to solder decently. But it is an option if you do not have copper.

Wire comes in many sizes, most popular size for HF antennas is 14 or 12 gauge. For years I used 18 gauge copper clad for all of my wire antennas with good results. In fact W3GYD needed an invisible antenna so we made one from 26 gauge phosphor bronze wire which was invisible at 20 feet or less and the antenna worked great. The feed line

The next item to be considered is how do we get power from our station to the antenna?

Most of us are familiar with coax cable and for many antennas this is a good choice. However there are several common choices of coax for the amateur.

Most popular is good old RG-8U a 50 ohm feed line that works well in most HF antennas. Most of us have heard about SWR (standing wave ratio) and line losses. At HF this is not so important until we get up to about 15 meters and higher,normal lengths of RG-8U will work fine for us at these frequencies. As we go higher in frequency (ie above 28 MHz) the construction of low cost RG-8U will indeed cause loss of power to the antenna and SWR will become more of a problem. At VHF and higher Lengths of over 20 or 30 feet can cause very high loss and the ability to receive signals will be affected and power output will be reduced by line loss.

Also available is RG-59 which is 75 ohm coax. It is indeed a mismatch for most of our gear, but in most low to medium power applications you will not be aware of any difference in transmitted or received signals.

For most VHF installations RG-8 or RG-213 coax is preferred, it is about a half inch diameter or twice the diameter of RG-8U with considerably lower loss.

There are coax lines called hard line which is coax with an outer shield of aluminum sheathing and losses are quite low. Special connectors are required for hard line and in some cases special flexible copper joints are needed to make bends in the cable.

Another type of line that has very low loss is open wire, the impedance of open wire line is usually from 280 to 600 ohms depending on type you choose. The major problem with open wire line is building a proper matching network for it. The loss of open wire is extremely low and if you have a very long run for your feed line it should be considered.

Odds & Ends

There are a few other items you will need for your antenna. And some tools. First we will need some kind of insulator for the ends and maybe center of our antenna. Plastic and ceramic insulators about 4 inches long and often called dog bone insulators are available at almost any radio store. It is possible to make insulators from pvc pipe, plexiglass and other plastics and if nothing else "wood" the wood must be treated and should be a hardwood. To treat wood, you should drill holes for the wire and either apply several coats of waterproofing or boil in paraffin to waterproof.

Good electrical tape, liquid electrical tape, duct seal and maybe some sturdy tie wraps are good to have on hand. For tools, get a good 6 or 8 inch side cutter pliers, a slip jaw pliers, A sharp pocket knife, or a hobby or box knife and a heavy duty soldering iron. You need at least a hundred watt iron, Best is the 250/100 watt dual power solder gun.

Also get yourself some solder, 60-40 is good, but I notice that it is not readily available any more but 70-30 is easily obtained and works well.

A tape measure is also needed. I suggest a 100 ft length as lengths for hf bands can be in excess of 100 feet depending on band i.e. 160 meter dipole is 135 ft per leg.

You may want some rope to support your antenna. "Harbor Freight" has a spool or ? inch by 600 ft woven nylon rope which I have found ideal for antenna support.

If you are going to install your antenna in a tree a good fishing rod with 15to 25 lb line and a half to one oz sinker will do the job. Of if you can safely do it use a bow and arrow to shoot line over tree limb. There is a slingshot rig that will put the antenna up a fair height but unless you make your own the cost is 90 to 100 bucks which is too high for a 10 dollar sling shot and 12 dollar fish reel.

A cheap vom is also a good item to have so you can check for shorts and open circuits. Harbor Freight sells one for about \$5.00.

An antenna analyzer is nice to have but not really necessary. You can borrow mine anytime and save the 300 bux!

Next Article

I will describe some simple but very good antennas for HF and maybe one or 2 VHF/UHF designs. All will be step by step how to do it so you can get started.

If you have any questions, you can contact me at n3ik2000@yahoo.com.





New Ham ---- CONGRATULATIONS to Rowland Carver who tested at the January 20, 2012 test session. Rowland received his call, **KB3YAI**, on January 26, 2012.







OSCAR was launched into space on December 12, 1961. (Source: QST, page 104 Feb. issue.)



IMPORTANT NOTICE TO ALL MEMBERS FROM N3XG



All Members please take time to review the proposed revisions to the Clubs Constitution and Bylaws.

Every so many years the LVARC takes the time to undergo a Constitution and Bylaw review. This process is sometimes arduous as it tackles not only current ideas, procedures and includes a grammatical review, but it is also very sensitive so that club history and foundations are not arbitrarily altered. This year our Board of Governors has assembled a Bylaw sub-committee and has brought forward some very important recommended changes. Although many of the changes are either grammatical or remove redundancy, there are are few that do not fit into either of those categories.

The process to effect change to the Club's Constitution and Bylaws is not easy, nor is it meant to be. After the proposed changes are published, they will be read and explained at a business meeting. The following business meeting they will be called and voted upon by the body. If the body requests a re-write of a proposed change, then the process for that particular item starts again. It is in this manner that we protect the integrity of our organization.

Please take the time to review the changes, and come to both the meetings in March and April to take part in the ratification process.

Members can find the current Document on the club's web site as well as the link to the proposed changes. Members can also navigate directly to the proposed changes here: http://www.w3oi.org/CONSTITUTION REV-7Draft.pdf

You will need a pdf document reader to view the proposal.

As President, I would also like to recognize the hard work of our dedicated members: Paul N0KIA, Robin KB3GZV, and Phil KB3HMK.





"March is a month of considerable frustration - it is so near spring and yet across a great deal of the country the weather is still so violent and changeable that outdoor activity in our yards seems light years away." - Thalassa Cruso