

DELAWARE LEHIGH AMATEUR RADIO CLUB Inc.
JULY 2015



W3OK

CORRAL

**Club Meeting July 9th, 7:30PM At the
Bethlehem Township Community Center**



DAVE / NB3R

“Electronic QSL, LoTW, eQSL, & CLUBLOG”

JULY MEETING PROGRAM

**“Every Day Engineering & Better Living For It”
George N3SQD**



MINUTES FROM THE JUNE MEETING

A general membership meeting of the Delaware-Lehigh Amateur Radio Club Inc. (the Club) was held on June 4, 2015, at the Bethlehem Township Community Center located in Bethlehem Township, Pennsylvania.

Call to Order: Jay / N3OW-President, called the meeting to order at 1934 hrs.

Pledge of Allegiance: Led by Jay / N3OW

Member Happenings: Dave / NB3R reported that the bands were not good for the WPX contest. Mark / W2MB related that he had put 6M FM back into his car and said it was working well as was the Club's 6M repeater. Several members said that they worked Azerbaijan on 20M CW.

Approval of the Minutes: Larry / AB3TY asked if there were any additions or corrections to the minutes as they appeared in the last newsletter. None were noted. Jay / N3OW asked for a motion to approve the minutes of the last meeting.

Motion: It was moved by Bill / NC3P. second by Steve / KC3CXV. **Motion carried.**

Membership Report: George / N3SQD announced Josephina Levine / KC3EZT, Justin Rau / KC3EZP, and Daniel Sist / W3ZGC. Jay / N3OW asked for a motion to accept the applicants.

Motion: It was moved by Dave / NB3R, second by Bob / KB3ULG. **Motion carried.**

Field Day: Stephanie / WX3K related that her aim is bringing non-Hams to Field Day to expose them to the hobby, emphasis on teenagers. Larry / AB3TY said that a contingent from Easton High School expressed interest in coming to Field Day. Doreen / K3PDL said the Girl Scouts were also interested. Bob / KE3AW said he had contact with the Boy Scouts, that several Troops expressed interest with regards to emergency preparedness but has had no further follow up.

Club Repeater: Dave / NB3R standing in for Barry / N3NVA announced that concerning the Easton receive site, emergency equipment will be moved closer. The antenna will be a Discone and a 440 receiver will be coming in the next few months. Bill / K3ANS explained if one is driving on RT. 22 and looks above College Hill, the pole seen is where the new antenna will be.

Website Report: No issues were reported.

Club Station: Dave / NB3R reported that 4 radios are up and running. In addition, He will not be available to open the Milkhouse on the next few Saturday mornings, but the Milkhouse will continue to be open Wednesday evenings.

Purchase OF New Club Radios: Al / W3CE related that the Club has 440 and 2M D-Star repeaters but no longer has access to a D-Star radio. The Club had been using a radio owned by Dave / NB3R who has since sold it. Since the loss of the D-Star radio, there is no digital link between the Milkhouse and the 911 Center. Communications between the Milkhouse and Eastern and Western PEMA could be accomplished with a digital tele-printer. The Club utilized text messaging between the Milkhouse and the 911 Center via 2M, but that system has been proven to be unreliable. Al also pointed out that the ICOM 706 being currently used at the Milkhouse cannot do DCS tones that the Club's W3OI backup repeater utilizes. Al made a motion to purchase two ID-5100 D-STAR radios at \$600 per radio. One will be used as a base station at the Milkhouse and one will be ready for a Go-To-Kit.

Motion: It was moved by Al / W3CE, seconded by Dave / NB3R. The motion was then opened to the floor for discussion. Pete / NL7XM asked that the motion be amended to include the sale of the IC-706.

Motion: To amend the first motion to buy the two ID-5100 to include the sale of the IC-706 was moved by Al / W3CE, second by Bob / NE2C. Jay / N3OW asked that the motion be carried. **Motion carried.**

Treasurer's Report: Mike / KB3LOD presented the Treasurer's Report for April. Jay / N3OW asked for a motion to accept the report as read.

Motion: It was moved by Pete / NL7XM, second by Barry / KU3X, **Motion carried.**

Estate Sale: Barry / KU3X presented to Mike / KB3LOD a check in the sum of \$1495 which was the total of the proceeds from selling amateur equipment donated to the Club by the family of long time member Alan Krensavage / WO4H.

QSO Corner: Pete / NL7XM presented to the Mike / KB3LOD cash in the amount of \$18 representing Club sale items from the May meeting and a check for \$50 from Redner's precipitating program..

Adjournment: There being no further business before the Club, Jay / N3OW adjourned the meeting at 2000 hrs.

Respectfully submitted by Larry / AB3TY, Secretary

JULY CONTESTING AT THE OK CORRAL

- July 4 & 5 – DL-DX RYYT Contest
- Original QRP Contest
- July 11 & 12 – IARU HF World Championship
- SKCC Weekend Sprintation
- July 18 & 19 – CQ World Wide VHF Contest
- RSGB Low Power Contest
- July 25 & 26 – RSGB IOTA Contest
- County Hunters CW Contest



JULY QUICK CHECK CALENDAR

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
			1 DLARC Net (KC3II)	2	3	4
5	6	7	8 DLARC Net (N3SQD)	9 DL ARC MEETING 7:30 PM	10 VE SESSION	11
12	13	14	15 DLARC Net (KB3CTX)	16	17	18
19	20	21	22 DLARC Net (K5PDL)	23 DLARC BOARD MEETING	24	25
26	27	28	29 DLARC Net (KB3WYJ)	30	31	

VE TEST SESSION

There will be a test session this month on July 10th at 7 PM at the Northampton County 911 center. Pretest registration is required. Contact George / N3SQD at george@bioserv.com or Al / W3CE at w3ce@arrl.net.

NEW MEMBERS

The DLARC is continuing to grow, so be sure to greet our new members, shake their hands, and give them a warm welcome to our club. The newest members are Josephina Levine / K2ONA, Justin Rau / KC3EZF and Daniel Sist / W3ZGC..

DLARC'S EQUIPMENT LOANER PLAN

Within the last few months the club's loaner program was updated and restructured. Here is some of the equipment that is available and the rules.

HF equipment:

Kenwood TS-440SAT package

The radio has a built in antenna tuner, also comes with a hand microphone, DC power supply and an Off Center Fed 40 meter antenna.

Kenwood TS-430S package

This radio comes with the matching external antenna tuner, power supply and a 20 meter dipole.

Yaesu FT-840

This radio comes with a hand microphone and power supply

MFJ-9040

This radio is a QRP CW only radio. It has the internal audio filter installed, comes with CW key and power supply.

There are two each MFJ antenna analyzers. Borrow time on the antenna analyzers is limited to a maximum time of one week.

The club also has a large selection of books to choose from in its library.

Rules:

1. Fill out the logbook with the following information when borrowing any piece(s) of equipment. Item(s) borrowed, name, call sign, date, email address and phone number.
2. You may borrow the equipment for up to 90 days. At the end of the 90 day period the equipment must be returned to the club's station. If there isn't anybody waiting to borrow the equipment you have just returned you may continue to borrow the equipment for another 90 days. You can repeat this cycle three times for a total borrow time of one year.
3. It is not the club's responsibility to call you for the return of the equipment, it is YOUR responsibility to return it ON TIME !
4. As mentioned above, the antenna analyzers are on the lender program and can be borrowed for no longer than one week. They are in high demand and for that reason the borrow time is very limited.

If you would like to borrow any of the above mentioned items, stop by the club's station, located in the Milk House, on the Gracedale complex any Wednesday evening.

Barry G. Kery, KU3X

W3OI 147.135 REPEATER UP DATE

This note is to inform you that the 147.135 repeater has been replaced with a Yaesu System Fusion repeater. The repeater is in the Auto/Auto mode. It will automatically receive and transmit in the FM analog mode as it always has. The DCS code of 315 is still required for FM analog. The repeater will automatically receive and transmit in the C4FM digital modes also. The CAT controller at this time is not in service at. A new interface cable is being fabricated. The repeater will only identify with morse code in the analog FM mode at this time.

The audio quality in FM analog is excellent. The digital modes also sound great. When keying up this repeater, please wait about two seconds before speaking. This allows the repeater sufficient time to switch to the appropriate mode.

ONCE AGAIN ABOUT A MAGNETIC LOOP ANTENNA

Igor Grigorov / RK3ZK

I made probably hundreds various magnetic loops (and on basis of hula- hoops, of course!) for work in ranges of frequencies from 136 kHz up to 148 MHz. And always I have got rather quite good results, as at work of these antennas on reception, and at their work on transfer. And I am certainly glad, that Jury too has engaged in magnetic loops antennas!

For those hams who want to engage in experiments with magnetic loops on basis of hula-hoops, I have made calculations of magnetic loops antennas made on basis of hula-hoops with diameter 77 cm and 100 cm. KI6GD

Magnetic Loop Antenna Calculator V.1.3 was used for this calculations.

This program rather well counts parameters of magnetic loops antennas, and I recommend for all hams to use it. **Table 1** and **Table 2** show data of this calculation/

I also calculated sizes for gamma matching and **Table 3** shows it. The sizes, of course, need to be corrected at a real antenna design.

I wish you good luck in experiments with magnetic loops antennas! The Gamma Match consists of from 1-mm OD (#18 AWG) placed at 50 mm above the Hula- Hoop

Download Free files for Mag Loop at :

<http://www.qsl.net/dl2kq/mmana/4-3-7.htm>

Table 1

Loop dimension: 77 cm OD, Aluminum tube 17 mm OD

Loop Property: Loop Area 1.5 meter, Inductance 2.282 µH

Frequency, MHz	3.6	7.03	10.1	14.06	18.1	21.1
Bandwidth, kHz	8.1	11.6	14.8	20.7	31	43.1
Capacitor Value, pF	849	217	101	48.6	26.3	17.4
Capacitor Voltage (at 5 Watts Power), V	300	600	700	800	900	900
Conductor Wavelength, λ	0.031	0.06	0.086	0.119	0.153	0.179
Efficiency, %	0.2	2.5	8.3	22.4	41	54.4
Inductive Reactance, Ohms	51.6	100.8	145	201.6	259	302.5
Loop Q, Qres	442	604	681	680	585	489.5
Radiation Resistance, Ohms	0.00	.0002	0.009	0.033	0.091	0.168
Resistance Loss	0.058	0.081	0.098	0.115	0.131	0.141

Table 2

Loop dimension: 100 cm OD, Aluminum tube 17 mm OD

Loop Property: Loop Area 2.6 meter, Inductance 2.287 µH

Frequency, MHz	3.6	7.03	10.1	14.06	18.1	21.1
Bandwidth, kHz	8.4	12.4	16.8	27.1	47.5	73.3
Capacitor Value, pF	671	169	77.3	36.4	17.7	10.6
Capacitor Voltage (at 5 Watts Power), V	400	600	700	800	800	700

Conductor Wavelength, λ	0.04	0.077	0.111	0.155	0.199	0.232
Efficiency, %	0.5	5.3	16.5	38.7	61	72.3
Inductive Reactance, Ohms	64.9	126.8	182.2	253.6	326.4	380.6
Loop Q, Qres	427	568	600	520	381	287
Radiation Resistance, Ohms	0.00	.0006	0.025	0.094	0.259	0.478
Resistance Loss	0.076	0.106	0.127	0.149	0.17	0.183

Table 3

Band, m 80 40 30 20 17 15

Hula- Hoop 500 300 250 200 180 200

100 cm OD

Hula- Hoop 600 350 300 250 200 180

77 cm OD

MONTHLY BRAIN TEASER

"A special prize awaits the first Club Member to submit the correct answer to this month's Brainteaser to the Pete / NL7XM, *only*, at nl7xm@arrl.net The winner must be present at the next Meeting to receive it, or it goes unrewarded. Officers, Board members, Newsletter staff, and Brain Teaser Authors are not eligible to win."

de Pete / NL7XM

JUNE BRAINTEASER ANSWER

Answer: 0.50

Winner – John / NT3P

By reading the June newsletter, and answering the Brainteaser, John received door prize tickets, one of which was the Dual band HT winner

JULY BRAINTEASER

Following are four groups of numbers

- A) 3, 8, 9, 10, 12
- B) 13, 16, 19, 30, 50
- C) 23, 28, 52, 68, 70
- D) 27, 37, 67, 72, 79

The numbers 4, 7, 11, 97 each belong to one of the groups. Where do they go?

JUNE PROGRAM REPORT

Electronic QSLing, the latest method of confirming amateur radio contacts, was this month's program subject presented by Dave / NB3R. The three main systems available to the hobby are, LoTW, eQSL and QRZ.com log. Each offers quick confirmation of your QSO.

LoTW is offered by the ARRL and has several million registered users. A members QSLs applicable to the various awards offered by the ARRL. LoTW is free to use whether or not you are a member of the ARRL. These confirmations are accepted by the ARRL towards various awards offered by them. However the awards themselves require a payment fee. Also the ARRL does not accept eQSL confirmations towards any of the awards.

eQSL it is a similar site, where you can get to the QSLs rapidly and the site also offers a system to print your incoming QSLs for your hard copy paper collection. eQSL is free if you use the basic QSL card. There are two additional levels which allow you to use more elaborate personal cards for a fee..

QRZ Log is similar to LoTW, and uses the same criteria as LoTW. Also these contacts are also accepted towards the various ARRL awards.

All three of these systems offer awards for the various achievements, such as DXCC, WAS etc.

The following are the sites to go to for more information.

www.eQSL.cc www.qrz.com/log www.arrl.org/LoTW

USNA APRS/PSK31 CUBESTATS OFFER SOMETHING ELSE

The APRS/PSK31-equipped US Naval Academy satellites appear to be operating, with one exception, according to Bob Bruninga, WB4APR. The CubeSats were launched on May 20 from Cape Canaveral. The launch included a pair of 1.5U CubeSats — the PSAT APRS/PSK31 satellite and BRICsat, a propulsion/PSK31 satellite — as well as a 3U CubeSat, USS Langley (Unix Space Server Langley). The launch also included **The Planetary Society's** LightSail-1.

PSAT, a student satellite project named in honor of USNA alum Bradford Parkinson, of GPS fame, contains an APRS transponder for relaying remote telemetry, sensor, and user data from remote users and Amateur Radio environmental experiments or other data sources back to Amateur Radio experimenters via a global network of Internet-linked ground stations.

Brno University transponders on PSAT and BRICsat support multi-user PSK31 text messaging (28.120 MHz uplink/435.350 MHz FM downlink). The PSK31 multi-user FDMA **transponder experiment** on PSAT and BRICsat allows text messaging among up to 30 modest ground stations simultaneously, Bruninga said. The BRICsat and PSAT PSK31 transponders operate on the same frequency, although one has PSK telemetry on 315 Hz, the other on 365 Hz.

Bruninga said the PSAT telemetry on 145.825 MHz (1200 baud AX.25) is working okay, but the digipeater is off at present, since the PSK31 transponder is the primary mission. The **APRS downlink page** has been capturing PSAT telemetry.

Bruninga said BRICsat's telemetry has been heard, but has been cycling off, due to low power. He said the BRICsat PSK31 downlink has been heard, but only barely. "BRICsat seems to have some kind of problem," he told ARRL. The USS Langley spacecraft has not been heard yet, he said.

BRICsat transmits 9600 baud telemetry on 437.975 MHz. The USS Langley satellite transmits 9600 baud telemetry on 437.475 MHz.

The LightSail-1 packet 9600 baud (FSK) AX.25 downlink is on 437.435 MHz. The Planetary Society's **Jason Davis** is asking radio amateurs to **e-mail** him any data they collect from LightSail, including any screenshots.

Bruninga has invited APRS radio amateurs worldwide to tune into the packet downlinks and upload IGate packets into the global APRS-IS system, so they will appear on the **APRS downlink page**, and also to try out the "exciting, new full-duplex PSK31 way of multi-user communication."

PSAT is one of five APRS-networked Amateur Radio satellites that will be in orbit during 2015, and all will appear on the live **APRS downlink page**. The others include **PCsat-1**, in orbit since 2001, **QIKcom-1**, set to launch in September, **QIKcom-2**, set to launch in December, and the **ARISS** packet radio system on board the International Space Station since 2007.

Bruninga said that receiving the PSAT and BRICsat 435.350 MHz FM downlink is as simple as placing your PC microphone (on a computer equipped with PSK31 decoding software) next to the speaker of your FM satellite UHF receiver and "just watching the waterfall."

"What you see is exactly what everyone else sees," he said in a posting to the AMSAT reflector. "There is no Doppler added to the tones, due to your station's position relative to the satellite. But you *do* have to retune at least three times during the pass (+5 kHz, 0, -5 kHz) to stay in the FM passband."

Bruninga said user uplinks will shift in the waterfall, according to each user's position relative to the satellite. "The shift can be as low as 1 Hz per second to as high as 6 Hz per second," he explained. "This is because the uplink is on 10 meters where the Doppler rate is only 1/15th of what it would be on UHF."

The *telemetry* channel at 315 Hz (PSAT) or 365 Hz (BRICsat) is *fixed* with no Doppler, since it is generated onboard into the FM downlink, Bruninga said. He notes that the UHF downlink signal is only 300 mW, and a beam antenna would be required to hear the signal.

Bruninga advised that those transmitting to the satellites use nothing more than a dipole or quarter-wave vertical, and no more than 25 W output power. He reminded prospective users that this is cross-band, full-duplex, "so you can see yourself in the downlink just like everyone else can see you. Act accordingly. And of course, do not transmit if you cannot see the waterfall."

DX AND CONTEST CONVENTION

The W4DXCC DX and Contest Convention located in Pigeon Forge, TN starts September 25th and 26th, that's in 110 days. This is our 11th year and it will be another great event.

The presentation schedule is full and packed with presentations. Our manufacturers are located in the lobby right outside of the conference hall allowing you easy access to all the gear. Come and have a one on one conversation with the manufacturers and twist the knobs.

This year for the first time we have the Ham Radio Bootcamp on Friday before the convention. The Ham Radio Bootcamp is an all day session that will help the new amateur learn how to build a station, build antennas, make QSOs and log them and after lunch learn how to DX, How to Contest and learn some tricks for DXing. This is the Elmer you never had to help you get started right This session is sure to be of use to every Ham.

We will conduct Amateur FCC License testing. It's a great time to upgrade or get your spouse or friends licensed.

Pigeon Forge is a wonderful place for the family too, bring the family and they can enjoy the local attractions while you enjoy the convention.

FCC ELIMINATES AMATEUR RADIO VANITY CALL SIGN REGULATORY FEE

The FCC is eliminating the regulatory fee to apply for an Amateur Radio vanity call sign. The change will not go into effect, however, until required congressional notice has been given. This will take at least 90 days. As the Commission explained in a Notice of Proposed Rulemaking, Report and Order, and Order (MD Docket 14-92 and others), released May 21, it's a matter of simple economics.

"The Commission spends more resources on processing the regulatory fees and issuing refunds than the amount of the regulatory fee payment," the FCC said. "As our costs now exceed the regulatory fee, we are eliminating this regulatory fee category. The current vanity call sign regulatory fee is \$21.40, the highest in several years. The FCC reported there were 11,500 "payment units" in FY 2014 and estimated that it would collect nearly \$246,100.

In its 2014 Notice of Proposed Rule Making (NPRM) regarding the assessment and collection of regulatory fees for FY 2014, the FCC had sought comment on eliminating several smaller regulatory fee categories, such as those for vanity call signs and GMRS. It concluded in the subsequent Report and Order (R&O) last summer, however, that it did not have "adequate support to determine whether the cost of recovery and burden on small entities outweighed the collected revenue or whether eliminating the fee would adversely affect the licensing process."

The FCC said it has since had an opportunity to obtain and analyze support concerning the collection of the regulatory fees for Amateur Vanity and GMRS, which the FCC said comprise, on average, more than 20,000 licenses that are newly obtained or renewed, every 10 and 5 years, respectively.

"The Commission often receives multiple applications for the same vanity call sign, but only one applicant can be issued that call sign," the FCC explained. "In such cases, the Commission issues refunds for all the remaining applicants. In addition to staff and computer time to process payments and issue refunds, there is an additional expense to issue checks for the applicants who cannot be refunded electronically."

The Commission said that after it provides the required congressional notification, Amateur Radio vanity program applicants "will no longer be financially burdened with such payments, and the Commission will no longer incur these administrative costs that exceed the fee payments. The revenue that the Commission would otherwise collect from these regulatory fee categories will be proportionally assessed on other wireless fee categories."

The FCC said it would not issue refunds to licensees who paid the regulatory fee prior to its official elimination.

A MESSAGE FROM ARRL PRESIDENT KAY CRAIGIE N3KN ON H.R. 1301

At the time I'm writing this, H.R. 1301 has 64 co-sponsors, with a few more expected by the end of the week. That's excellent, but we need more. A lot more.

Some of you have done e-mail bulletins encouraging members to meet with and write to their members of Congress. Thank you! Please repeat the message periodically. Although we don't want to spam members and irritate them, keeping the issue fresh in their minds is necessary. The ARRL's national media do stories about the bill, but the message needs reinforcement from someone whom members know personally. They know you.

Please mention the bill when you speak at conventions and club meetings, too. Do you carry information about the bill when you visit these events?

We have been told quite bluntly by some Congressional offices that they want letters from constituents, that they will be interested in what the ARRL has to say only if they know that voters care about this issue. Why should the Congressman care, they ask, if the voters don't? There are tens of thousands of ARRL members who have not written yet. You can do a lot to persuade them to write, because they know you.

The ideal way for members to contact their Congressmen is to write personalized, signed paper letters based on the sample letter on the ARRL web site at www.arrl.org/hr-1301 and send them c/o ARRL. The address is

ARRL

**Attn HR 1301 grassroots campaign
225 Main St
Newington CT 06111**

Why is this the best way? For one thing, we are able to keep track of how many communications are going to which Congressional districts. More importantly, when letters are hand-delivered to the Hill, there's an opportunity to speak with Congressional office staff people. The stack of letters is proof that voters care about the bill. We have to convince the staff people, so they'll advise the Representative to co-sponsor. That's how it works on Capitol Hill.

One more thing. When you see that a member of Congress in your Section has become a co-sponsor, urge your members to call or e-mail a message of appreciation. Good manners, good strategy.

The list of co-sponsors is updated regularly at www.arrl.org/hr-1301. This is the URL that gives members the information they need in order to be effective advocates.

We are working on having a companion bill introduced in the Senate, but there is nothing to report on that yet. Members often ask about this. Until we have a bill in the Senate, we do not need letters to members of that body.

I have a Twitter feed, @KayCraigieN3KN, which I use only for advocacy about this legislation with the hashtag #hr1301. I'm not doing this as an ego trip to develop a personal fan club but rather to get information, encouragement, and reminders out there rapidly. When there is an amateur radio news story that I can reasonably tie to the issue of antenna privileges, I tweet about it and use the phrase "Can't do it without antennas."

Please keep your Director well informed about your activities on behalf of the bill. This is a full-team effort.

Thanks for all you do.

73, Kay N3KN President, ARRL

CROSSBAND REPEATER ACTIVE ON SPACE STATION

G3HCI reports that one of the pieces of ham gear on the International Space Station has been set up to operate full time as a crossband repeater. The crew's Kenwood TM-D700 is retransmitting on VHF anything it hears on UHF. The uplink (input) frequency is 437.800 and the downlink (output) frequency is 145.800, no tones or burst required. According to Ian, a simple collinear antenna should be all you need to make contacts through the repeater. To see where the space station is located at any given time. You can check <http://science.nasa.gov/temp/StationLoc.html>

CHINA SET TO LAUNCH SEVERAL AMATEUR RADIO SATELLITES THIS SUMMER

CAMSAT has announced that the CAS-3 amateur satellite system is nearing completion, and six Chinese amateur satellites will be launched in mid-July.

"All six satellites are equipped with substantially the same Amateur Radio payloads, a U/V mode linear transponder, a CW telemetry beacon and an AX.25 19.2k/9.6k baud GMSK telemetry downlink," the CAMSAT announcement said. CAMSAT said that each Amateur Radio complement has the same technical characteristics, but will operate on different 70 centimeter uplink and 2 meter downlink frequencies.

CAMSAT said it has worked closely with DFH Satellite Co Ltd, a Chinese government aerospace contractor, to complete the project. "All the satellites are currently conducting final testing and inspection," CAMSAT added. Four of the satellites are described as "microsatellites," while three are listed as CubeSats.

CAMSAT said a Long March-6 rocket will carry the satellites into orbit. The launch will take place at Taiyuan Satellite Launch Center. CAS-3A will have sun-synchronous orbits of about 450 km, while the other satellites have sun-synchronous orbits of about 530 km.

"The launch will carry total of 20 satellites," CAMSAT said. "Three other satellites named as CAS-3G, CAS-3H, and CAS-3I involved in Amateur Radio from other agencies of China will share the same launch."

CAMSAT said it was assisting the Chinese government with frequency allocation and coordination and would announce additional details.

CAS-3A (microsatellite architecture)

Dimensions: 400×400×400 mm (20 kg)

Stabilization: Three-axis stabilization system with its +Y surface facing Earth

Antenna: Deployable antenna, one 0.25 λ monopole VHF antenna on +Z side and one 0.25 λ monopole UHF antenna on the -Z side, close to the each edge of satellite body

Call Sign: BJ1SB

CW Telemetry Beacon: 50mW, 22 WPM

U/V Mode Linear Transponder: 100 mW, 20 kHz bandwidth, inverting

AX.25 telemetry: 100 mW, 19.2k/9.6k baud GMSK

CAS-3B, CAS-3C and CAS-3D (microsatellite architecture)

Dimensions: 250×250×250 mm (9 kg)

Stabilization: Tree-axis stabilization system with its +Y surface facing Earth

Antenna: Deployable antenna, one 0.25 λ monopole VHF antenna on the +Z side and one 0.25 λ monopole UHF antenna on the -Z side, close to the each edge of satellite body

Call Signs: BJ1SC (CAS-3B), BJ1SD (CAS-3C), BJ1SE (CAS-3D)

CW Telemetry Beacon: 50 mW, 22 WPM

U/V Mode Linear Transponder: 100 mW, 20 kHz bandwidth, inverting

AX.25 telemetry: 100 mW, 19.2k/9.6k baud GMSK

CAS-3E and CAS-3F (CubeSat architecture)

Dimensions: 110×110×110 mm (1.5 kg)

Stabilization: Spinning stabilization using permanent magnet torquer

Antenna: Deployable antenna, one 0.25 λ monopole VHF antenna on the +Z side and one 0.25 λ monopole UHF antenna on the -Z side, close to the each edge of satellite body

Call Signs: BJ1SF (CAS-3E), BJ1SG (CAS-3F)

CW Telemetry Beacon: 50 mW, 22 WPM

U/V Mode Linear Transponder: 100 mW, 20 kHz bandwidth, inverting

AX.25 telemetry: 100 mW, 9.6k baud GMSK

Meanwhile, AMSAT News Service has reported [via Mineo Wakita](#), JE9PEL, that Beijing will be launching other satellites carrying Amateur Radio payloads in July. According to AMSAT-UK, the CAS-2A1 and CAS-2A2 satellites will be combined into a binary star system for Amateur Radio communication and education. "There will be a radio link between the two satellites when the satellites are in suitable positions in their orbits, so that Amateur Radio communication coverage can be extended," AMSAT-UK reported on its website.

CAS-2A1

Dimensions: 270×270×250 mm

2 meter CW telemetry beacon, 100 mW

2 meter AX.25 digital telemetry beacon, 500 mW

2 meter FM voice beacon, 500 mW

U/V mode linear transponder: 50 kHz bandwidth, 500 mW

L/S mode linear transponder: 200 kHz bandwidth, 320 mW

U/V mode APRS repeater

CAS-2A2

Dimensions: 270×270×250 mm
70 centimeter CW telemetry beacon, 100 mW
70 centimeter AX.25 digital telemetry beacon, 500 mW
13 centimeter CW telemetry beacon, 200 mW
3 centimeter CW telemetry beacon, 200 mW
V/U mode linear transponder, 500 mW

LilacSat-2 (Harbin Institute of Technology)

Dimensions: 20×20×20 cm (11 kg)
Uplink: 145.825, 145.875 MHz
Downlink: 437.200 MHz beacon, 437.225 MHz FM/APRS
Other spacecraft include Tiantuo-3 (TT-3), from the National University of Defense Technology, and ZDPS-2, a nanosatellite mission of the Microsat Research Center, Zhejiang University. — Thanks to CAMSAT, AMSAT News Service, Mineo Wakita, JE9PEL, and AMSAT-UK

NINTH ANNUAL - LEHIGH VALLEY

KNIFE SHOW - EASTON, PA

September 19 & 20, 2015 Saturday: 9 AM to 5 PM; Sunday: 9 AM to 3 PM

Buy, sell, trade, and display knives: New, antique, rusty, shiny, factory, custom, hunting, military, swords, bayonets, daggers, folders, Bowies, tomahawks, razors, sharpeners, books!

Charles Chrin Community Center of Palmer Township

4100 Green Pond Road, Easton, PA 18045-2594 [Along US-22]

Admission only \$6.00! Bring your supervised children. No charge if under 13. Show your family, children, and friends the beauty and fascination of quality knives!

Website: www.PAKnifeShow.com

Meals and snacks for sale in the Community Center. Many hotels and restaurants are nearby.

For information, call **Bill Goodman, CPA**, manager of Good Knives, LLC; **Cell: 484-241-6176**; CPA Office: 610-770-9236, Home: 610-258-5063, E-mail: GoodKnives@GoodmanCPA.com

Directions: Easton is on the Pennsylvania / New Jersey border, in the Lehigh Valley, 60 miles north of Philadelphia, 17 miles east of Allentown, and 75 miles west of New York City. The Charles Chrin Community Center is modern and beautiful, with ample free parking. It is visible along the north side of US-22. For easy access, exit US 22 at 25th Street, also known as Nazareth Road and PA-248. Beware; GPS often brings you in a different route which is blocked.

US-22 going west: Take US-22 to the 25th Street exit in Easton. At first traffic light (next to McDonald's Restaurant), cross 25th Street, continuing west on Sales Street, 0.1 mile to the next traffic light. Turn right onto Northampton Street. Go west, 0.5 mile to next traffic light. Turn right onto Greenwood Avenue. Go north, 0.2 mile to second left. Go west on Green Pond Road, 0.7 mile to entrance into Charles Chrin Community Center on left side at 4100 Green Pond Road.

US-22 going east: Take US-22 to the 25th Street exit in Easton. At first traffic light (next to Burger King Restaurant), turn left onto 25th Street. Go north, 0.2 mile to first traffic light. Turn left onto Northampton Street (next to Gulf Station). Go west, 0.6 mile to second traffic light. Turn right onto Greenwood Avenue. Go north, 0.2 mile to second left. Go west on Green Pond Road, 0.7 mile to entrance into Charles Chrin Community Center on left side at 4100 Green Pond Road.

I-78 and US-22 run parallel, east and west, through Easton. I-78 does *not* connect directly to 25th Street. US -22 does. I-78 connects to US-22 via PA-611 and PA-33 in Easton. I-80 also connects to PA-33 near Stroudsburg, which goes south to US-22 in Easton. I-476 (PA Turnpike), I-380, PA-611, PA-248, PA-115, PA-309, PA-209, PA-191, PA-222, PA-412, PA-212, PA-512, PA-413, PA-32, PA-378, NJ-29, NJ-94, NJ-57, and NJ-46 all lead toward Easton.

THE SPELL-CHECKER POEM

Eye halve a spelling chequer
It came with my pea sea
It plainly marques four my revue
Miss steaks eye kin knot sea.
Eye strike a key and type a word
And weight four it two say
Weather eye am wrong oar write
It shows me strait a weigh.
As soon as a mist ache is maid
It nose bee fore two long
And eye can put the error rite
Its rare lea ever wrong.
Eye have run this poem threw it
I am shore your pleased two no
Its letter perfect awl the weigh
My chequer tolled me sew.

F.Y.I.

The August Program will be "Intro To Contesting / DXCC In A Weekend" – Dave / NB3R

The D.L.A.R.C. meets the "FIRST" Thursday of each month. Membership, friends and interested persons meet at the Bethlehem Township Community Center, 2900 Farmersville Road, Bethlehem, Pa. 18020) at 7:30 PM. Committee reports and announcements of all present and future activities will be presented at that time. Followed by that month's program.

ARES, RACES AND DLARC NET

All Radio Amateurs are welcome to participate in the ARES, RACES and DLARC net. This net meets Wednesday at 1900 hours local time, on the W3OK Repeater 51.76, 146.70 and 444.90 (pl 151.4). With an alternate frequency of 147.370 (DCS 315) W3OI Repeater.

The EASTERN PENNSYLVANIA District 2 ARES Net meets every Wednesday at 1930 hours local time. (Just after the DLARC Net) On 147.255 (pl 162.2). And linked to 449.375 on Blue Mountain, 443.350 in Allentown and 147.180 in Berks County.

QCWA Chapter 17 holds a net Monday evenings at 8:30 PM on 3960 +/- depending on conditions.

Mid-Atlantic D-Star Net meets each Tuesday at 7:30 PM. The following repeaters Dstar repeaters are available in the Lehigh Valley. W3OK -145.11000MHz -0.600 Port C – W3OI -147.16500MHz +0.600 Port C, – W3OI - 445.02500MHz -5.000 Port B All repeaters on the net are linked through **Reflector 020 port A**, so all stations checking into the net should make sure that they have *their local repeater call sign followed by the letter "G" in the eight position of the RPT2 field*. Otherwise, you will only be heard locally and not over the Reflector. Dongle users wishing to check into the net should Log On by connecting directly to Reflector 20, port A, rather than through your local repeater in order to conserve local bandwidth.

The OK Corral is an organization publication for the purpose of informing members of the D.L.A.R.C. of educational and training opportunities, club events, relevant news articles and a monthly calendar of daily activities, meetings and dates.

The Clubhouse telephone number is 484-895-7038.

EXECUTIVE COMMITTEE 2014– 2015 OFFICERS

President – Jay Mason / N3OW ----- president@dlarc.org
Vice President – Dave Blankenship / N3EYT ----- vicepresident@dlarc.org
Secretary – Larry Kaplan / AB3TY ----- secretary@dlarc.org
Treasurer – Mike Gower / KB3LOD ----- treasurer@dlarc.org

BOARD of DIRECTORS

Gabe Lantos / KZ2A ----- gpl3639@gmail.com
Dick Schaeffer / KB3ALG ----- c1902s@rcn.com
Ron Hontz / K3BKT ----- k3bkt@rcn.com
Evelyn Uhler / W3DOY ----- evelynuhler@hotmail.com
Dave Mellman / KA3IWC ----- dbm073@gmail.com
Charlie / Lazarchak / W3OPA ----- w3opa@snycomp.com

PHONE NUMBERS FOR THE EXECUTIVE COMMITTEE OF THE DLARC CAN BE FOUND ON THE WEBSITE / MEMBERSHIP LISTING CLUB MEETINGS

All regular meetings of the D.L.A.R.C. Are held on the first Thursday of each month at 7:30 PM at the Bethlehem Township Community Center
TALK IN ON 146.700 (PL 151.4)

THE W3OK TRUSTEE --- Barry Vogt / N3NVA

**The W3OK Corral is published monthly and is the Official Publication of the
DELAWARE LEHIGH AMATEUR RADIO CLUB INC.**

**14 Gracedale Avenue
Nazareth, Pa. 18064-9211**

THE NEWSLETTER STAFF

Editor – Don Holmes / KC3II ----- editor@dlarc.org
Web Master – Brad Snyder / W3JXQ ----- w3jxq@dlarc.org
Circulation – Paul Morrison / N3YNT ----- n3ynt@aol.com