

AUGUST 2015

# HPARC NEWSLETTER

High Point  
Amateur Radio  
Club



## AUGUST MEETING

Hopefully we didn't miss anyone by changing the date for the July meeting. With the July 4th holiday behind us, maybe now we can get on a regular schedule. Our August meeting will be on our normal first Monday of the month.

Larry Frye, WA4EKD, will be the speaker at the August meeting. Larry plans on talking about the history of the High Point Amateur Radio Club – back in the days when the club had a clubhouse. I think Larry may also tell how being a Ham shaped his career.

For your viewing pleasure during your meal, Warren Gallemore, KA4LOQ, has prepared a video of Field Day events captured by camera and drone.

Mike Walker, KE4MOY, is now home after spending two weeks in the hospital after having a stroke. I know Mike would

appreciate your calls, cards and prayers during his recovery.

I may have already said it (or maybe not), but I feel I need to say it again: thanks to everyone for your part in Field Day whether small or large. We have conducted Field Day for so many years, it is easy to forget how far we have come from earlier years. We almost have this down to a science now and operate as a well-oiled machine. I was recovering from a severe sinus condition that had lasted weeks, so I felt "out of it" for Field Day. So blame any misdeeds I may have done on Field Day on heat exhaustion. I do want to extend my thanks to everyone for helping out for Field Day this year even if you felt you didn't do anything important. You did. Couldn't have done it without you. Thanks.

We are moving forward with

the club's tax-exempt status albeit somewhat slowly. Forms need to be sent to the state and hopefully that will be done in short order.

Haven't heard any more from the city about the removal of the HPARC signs welcoming visitors into the city. I really don't expect to hear anymore as I believe city council is hoping the issue will die a quiet death. Will keep you informed if anything happens.

Summer is in full swing with high temperatures and lots of projects to do. I know you are busy, but so is the HPARC. We still have a lot to do before the end of the year. Hope we can count on your continued support. We have been having good numbers at the meetings. Got to be that wonderful president we have (cough, cough).

Hope to see you at the meeting. Bring a friend.

## NEW HORIZONS PHONES HOME

NASA's New Horizons spacecraft made its historic rendezvous with Pluto this week. While there is no direct Amateur Radio involvement in the Pluto flyby, many Amateurs are curious about

how NASA communicates with New Horizons at a distance of nearly 3 billion miles.

At that vast distance, New Horizons' radio signal is extremely weak – so weak that

*New Horizons continued inside...*

**HPARC Meeting  
August 3, 2015**

**Rancho's,  
10463 North Main St,  
Archdale, NC**

Meal at 6:30 p.m.  
Business meeting at 7:00 p.m.

# ARRL DUES TO RISE TO 2016

The Board approved a \$10 increase in the League's annual dues rate, effective January 1, 2016. ARRL basic dues have been held at \$39 a year since 2001. ARRL CEO David Sumner, K1ZZ, said the League has done as much as it can to hold off a dues increase for more than a decade, but now it's a necessity, not an option.

"One of the most difficult decisions a membership organization faces is a dues increase," he said. "Over the past 14 years we have managed to hold the increase in expenses to just 19 percent, against a US inflation rate of 32 percent over the same period," he continued. "We have implemented operating

efficiencies that allowed reducing the staff by 15 percent while expanding the range of services to members and to Amateur Radio as a whole. We created a development program, offering to those members who have greater financial capacity an opportunity to support their national association at a higher level."

Enhanced membership services since 2001 include inauguration of Logbook of The World® (LoTW); a digital edition of QST at no additional cost; expanded QST and video product reviews; upgraded public service support including the Ham Aid program, Emergency Communications Training, and the ARES® E-Letter; the

Education & Technology program and Teachers Institutes on Wireless Technology, and the Amateur Radio on the International Space Station (ARISS) program. Sumner aid that advocacy on behalf of Amateur Radio has included relentless defense of Amateur Radio spectrum, the Amateur Radio Parity Act, and an increased awareness of the value of Amateur Radio on Capitol Hill.

The cost of a basic ARRL membership will rise to \$49 on January 1, 2016. An ARRL Life Membership, now \$975, will increase to \$1225.

—*The ARRL Letter*,  
July 23, 2015,

Rick Lindquist, WW1ME, Ed.

## POLITICIANS DO LISTEN, SAYS KAY CRAIGIE

ARRL President Kay Craigie, N3KN, said in the July ARRL Legislative Update Newsletter that Washington politicians are paying attention to League members who have contacted lawmakers to urge their cosponsorship of the Amateur Radio Parity Act of 2015. Essentially identical bills have been introduced in both the US House (H.R. 1301) and Senate (S. 1685). Both measures would direct the FCC to extend its rules relating to reasonable accommodation of Amateur Service communications to private land-use restrictions.

"Many visits have been made

to the offices of Senators and Congressmen on behalf of H.R. 1301 and S. 1685 by members of the ARRL Board and ARRL Headquarters staff," President Craigie said. "This is a full-team advocacy effort." To date, H.R. 1301 has attracted 86 cosponsors; the just-introduced Senate bill, S. 1685, has one original cosponsor.

The newsletter suggested several ways ARRL members can get involved in the Amateur Radio Parity Act grassroots effort. One idea is to have a "letter party" at your next club meeting.

Take pre-addressed copies of letters to all three of

your lawmakers – one in the House, two in the Senate – and have club members add their names, addresses, and signatures to letters for each Member of Congress.

Be courteous, make your points, and be brief. In all cases, thank lawmakers for considering your point of view.

"Grassroots politics is about you – the individual – making your voice heard," the July Legislative Update pointed out. "It requires a good deal of preparation and effort to achieve the end results."

—*The ARRL Letter*,  
July 16, 2015,

Rick Lindquist, WW1ME, Ed.

The HPARC Newsletter is published monthly by the High Point Amateur Radio Club (HPARC) for its members. The HPARC Newsletter serves as a source of information about Club activities, and general news items of interest to Amateur Radio. Opinions expressed herein are not necessarily those of the HPARC or its officers. Material in this newsletter may be reproduced provided the HPARC is properly credited.

Complimentary issues of the HPARC Newsletter are available by writing to the HPARC Newsletter at PO Box 4941, High Point, NC 27263 or emailing your request to w4ua@arrl.net. Subscriptions are available to non-members for \$12.00 a year. Contributions and letters/emails to the editor are welcome.

Membership is open in the HPARC to all licensed Amateur Radio operators. Membership is \$24.00 a year. Associate membership is also available to those who are interested in Amateur Radio but who do not currently hold a license. Associate membership is \$12.00 a year. Student membership is also available for \$12.00 a year.

The High Point Amateur Radio Club meets the first Monday of each month at 6:30 p.m. at a local restaurant announced in the newsletter. The business meeting starts around 7:00 p.m. followed by a short program of interest. Family and visitors are welcome to attend. For more information, please call or email one of the HPARC officers listed in this newsletter.

...*New Horizons continued from cover* only the Deep Space Network's largest 70 meter parabolic dish antennas and receivers are capable of detecting it. New Horizons downlink transmissions take place on an X-Band frequency of approximately 8.4 GHz (uplink is around 7.2 GHz). In terms of raw RF output, the traveling wave tube amplifiers (TWTAs) aboard the spacecraft supply only 12 W to its 2.1-meter high-gain antenna.

There are two TWTAs aboard New Horizons. Each is connected to a separate radiating element at the antenna. One element is configured for left-hand circular polarization and the other for right-hand circular polarization. The original intent for using two TWTAs was for redundancy.

As the spacecraft was on its way to Pluto, however, engineers discovered that they could use this cross-polarized configuration to transmit two signals simultaneously. At the Deep Space Network they designed a system to detect the separately polarized signals and combine them for substantially greater gain.

A stronger signal means New Horizons can transmit at a higher data rate – about 1.9 times the rate than with a single TWTAs. Unfortunately, New Horizons's nuclear-powered generator has decayed during its 10-year flight, and there is no longer enough power to run two TWTAs at the same time, unless the team shuts down another onboard system.

This is why it will take con-

siderable time to download the treasure trove of images and other information that New Horizons carries in its memory. At present, New Horizons is transmitting data at just 1 kilobit per second. A typical image produced by LORRI, the Long Range Reconnaissance Imager, is about 2.5 Megabits, even when compressed. At such a low transmitting data rate, it takes about 42 minutes for New Horizons to transmit a single image to Earth – and then there is the 4.5-hour trip at the speed of light! This is why mission scientists are warning an impatient public that it will be well into 2016 before all of the data arrives at Earth.

—*The ARRL Letter*,

July 16, 2015,

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## FCC ANNOUNCES ENFORCEMENT BUREAU FIELD OFFICE REORGANIZATION PLANS

Forced under political pressure to take a few steps back from its initial proposal to eliminate two-thirds of its Enforcement Bureau field offices, the FCC has announced its final, scaled-down plan to reorganize its field resources. In an Order released July 16, the Commission said it would close 11 of its 24 field offices and relocate three others to nearby FCC-owned sites. In slimming down its field resources and upgrading those that remain, the FCC said it was acting in the name of efficiency and economy as well as to modernize a system model adopted 2 decades ago.

“Since then, technological changes and increasingly limited resources have created the need to take a fresh look

at the [Enforcement] Bureau's field operations,” the FCC Order said. The FCC said it has completed “a full review” of the field organization and concluded that it needs to concentrate its field resources “in urban areas, where the need for them is greatest.”

The FCC is closing its field offices in or near Anchorage, Buffalo, Detroit, Houston, Kansas City, Norfolk, Philadelphia, San Diego, San Juan (Puerto Rico), Seattle, and Tampa. Enforcement Bureau field offices in or near Atlanta, San Francisco, and Columbia (Maryland) will relocate to FCC-owned sites nearby or in the same metropolitan areas. Columbia is where the FCC's HF Direction Finding (HFDF) facility is located.

The FCC said relocated offices as well as those remaining open in or near New York City, Miami, Dallas, Chicago, Boston, Denver, Honolulu, New Orleans, Portland (Oregon), and Los Angeles “will be staffed and equipped to maintain the Commission's Field program.” Rapid deployment teams will be stationed in Columbia and Denver to supplement enforcement efforts of other field offices as necessary and to “support high-priority enforcement actions nationwide,” the FCC said in a news release.

The FCC did not indicate how many employees were likely to be furloughed.

—*The ARRL Letter*,

July 23, 2015,

Rick Lindquist, WW1ME, Ed.



**High Point Amateur Radio Club**  
**PO Box 4941**  
**High Point, NC 27263**

## HPARC AUGUST CALENDAR

- 1 — Air Force Day
- 1-2 — ARRL UHF Contest
- 1 — Roanoke, VA Hamfest
- 3 — HPARC Club Meeting**
- 4 — Coast Guard Day
- 8 — CFARS Swapfest, Fayetteville, NC
- 14 — VJ Day (WWII Surrender of Japan 1945)
- 15-16 — ARRL 10-GHz Cumulative Contest
- 16 — ARRL Rookie Roundup - RTTY
- 23 — HPARC Newsletter deadline

### BIRTHDAYS

- Mike Walker — August 14
- Clyde Young — August 16
- Eddy Byerly — August 19
- John Starrett — August 22
- Mike Cumbo — August 23
- Warren Newton — August 26
- Warren Gallemore — August 27
- Scott Carmichael — August 28

### 2015 HPARC OFFICERS

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**Breakfast**  
**every Saturday**  
 —  
**8:00 a.m.**  
 —  
**Biscuitville,**  
**2709 S. Main St.**