

# DIRECT CURRENTS

The Official Publication of the Housatonic Amateur Radio Club, Vol XXV Issue IV

## MEETING INFO

Our annual formal meeting is held every Winter Field Day, and our informal meeting is held every Summer Field Day. Both meetings are held during set up time prior to the event start. Our next meeting (informal) is scheduled for Saturday June 27, 2020 during Summer Field day setup and will have a State of the Union (Club) Address. All members are urged to attend this meeting and event.

## COLD FUSION POWERS RIG

It has now been reported that Gary WE1M has made the very first contacts with a rig powered by cold fusion. When asked how he developed the power source Gary said, "No one could get any Watts out of a cold fusion system because all of the neutrons were accounted for. Then I had a revelation one evening. I switched to the metric system and could not account for all of the joules produced. That was the key, the metric system-cold fusion only works in the metric system!" Gary says that he will provide further details for the next April issue in 2021. – Poisson d'avril.

## NEW MEMBER KB1THM



The members of the Housatonic ARC would like to welcome our new member Brandon KB1THM, who accepted our membership invitation on March 13, 2020. When you see Brandon, please congratulate him on being in our club!

## ARRL DX SSB CONTEST

We operated the ARRL DX SSB contest on Saturday afternoon March 7, 2020 for about 6 hours. Dave KB1LTW and Ned KA1CVv arrived at WAS around 12:50 pm and began setting up. Gary WE1M arrived about 20 minutes later. Using the IC-7300 and the Ameritron we operated a single transmitter, multi operator, high power station running approximately 300 watts. (The Ameritron needs new tubes). At first the ICOM proved finicky, but after a total reset and replacement of a patch cable, things began to coalesce. We ran both the Vertical antenna and the OCF dipole and switched between them via a coax switch in the tuner. A short time later, Alex N1AK and Dan N3DAW arrived to join us. How did we do? As we noted, after 6 hours of operation, we had 60 contacts, with 40 multipliers. Each country worked is a multiplier. We worked 32 countries (USA does not count for points, as it is not DX). Here is a list of the countries: Brazil, Italy, Slovenia,



Croatia, Curacao, US Virgin Is., Argentina, France, French Guiana, Puerto Rico, Slovak Republic, St. Kitts & Nevis, St. Lucia, Aruba, Bahamas, Bonaire, Canary Is., Cape Verde, Cayman Is., Colombia, Costa Rica, Denmark, Federal Republic of Germany, Honduras, Hungary, Martinique, Panama, Saint Barthelemy, Serbia, Spain, Turks & Caicos Is. & United Nations HQ. A special thanks go out to WAS for the use of their facilities and to all who supported our first DX SSB contest effort. Below are some pictures of the event.



N1KT- Single Transmitter, multi-operator, high power station in ARRL DX SSB Contest.

Score Statistics	
Total Contacts	60
Total QSO Points	180
Total Multipliers	40
Total Score	7,200
QSOs / Hr (Last 20 min)	0
QSOs / Hr (Last 60 min)	0

Statistics from N3FJP software





**N1KT 2020 ARRL  
INTERNATIONAL DX SSB  
CONTEST**  
*Alex N1AK, Dan N3DAW, Ned  
KA1CVv, Dave KB1LTW and Ned.  
Gary WE1M not shown*





**USIP**

Students Anna, Katie, Xavier KC1MHZ and Rickey KC1MHY were chosen to display the USIP HAM robot in Washington DC. Here is a copy of the poster they showed in Washington.

**USIP** NASA Undergraduate Student Instrument Project High Altitude Robotics

**Advisors:**  
 Dr. Jani Macari Pallas  
 Dr. Seth Rodfield  
 Dr. Hisham Alnajjar

**Authors:**  
 Patricio Xavier Flores, Ricky He, Anna Hempowicz, Kathie Atkinson, Miguel Mazoni, Hunter Vanvor, Scott Dion

University of Bridgeport, Bridgeport, CT  
 Wesleyan University, Middletown, CT  
 University of Hartford, Hartford, CT

**Abstract**  
 Through funding awarded by NASA's Undergraduate Student Instrument Project (USIP) to NASA Connecticut Space Grant, three Connecticut universities (University of Bridgeport, University of Hartford, and Wesleyan University) partnered to develop a small robot capable of operating in Near Space on a High Altitude Balloon (HAB). Reminiscent of the early American space program, the robot is named HAM, after the chimpanzee that flew three months prior to Alan Shepard's 1961 Freedom 7 Mercury flight, and acronyms High Altitude Monkey. During flight, live video is transmitted as the robot orbits via gestures and speech with children in a science museum's Challenger Center "mission control". In addition to development of undergraduate student technical expertise, a key NASA requirement included development of student project management and leadership skills. Students followed a standard NASA design approach including technical reviews with NASA staff. The narrative design approach focused on capsule design, robotics, and programming sensors to read and transmit telemetry data. In October 2018, the robot paraded was successfully flown to 15,000 feet and recovered. Both the project's technical development and real-world student experience are presented.

**Introduction**  
 The USIP - High Altitude Robotics Project focused on the development of the next phase of a high altitude robotic jasper that will be used to engage younger students (K-12) in real time on Near Space balloon missions. One of the universities works with a local children's museum which has a Challenger Center with a "mission control". Currently, the center provides simulations of space flight. The two groups conduct ballooning, robotics and satellite projects together. Enhancements are being made to this simulation center to provide a real "mission control" experience, where pre-college students can assist in providing flight operations control and live video for high altitude balloon (HAB) and a future CubeSat satellite mission. However, unfortunately the view from a HAB may not enthrall a younger student for very long. The museum's planetarium director suggested, "What if the child had a little friend onboard the HAB that they could interact with?" The "friend" has become a robotic monkey (reminiscent of the early space flight days), and the robot is named after the actual chimpanzee that travelled into space, "HAM" which stands for "High Altitude Monkey". The project provides a rich K-12 educational curriculum in mission control, life sciences, Earth observation, remote sensing and history of space flight around HAM and the HAM HAB flights. After the USIP project's closure, HAM HAB flights will be conducted four times per year as an outreach activity through the museum. Delving into the possibilities of the period of HAB flight expanded a previously narrow view of application into something which could inspire. The effort was more challenging than expected due to the added complexity of remote collaboration. However, having an iterative design approach coupled with periodic in-person assessments of progress and quality mitigated this. Research of previous University of Bridgeport and University of Hartford HAB flights, procedures, and a variety of instrumentation in addition to advisory engineer knowledge were the technical building blocks with which the project grew. In having a main objective of showing young students the exciting possibilities of what STEM application holds, the team consequently learned how much goes into making such a research project possible and successful.

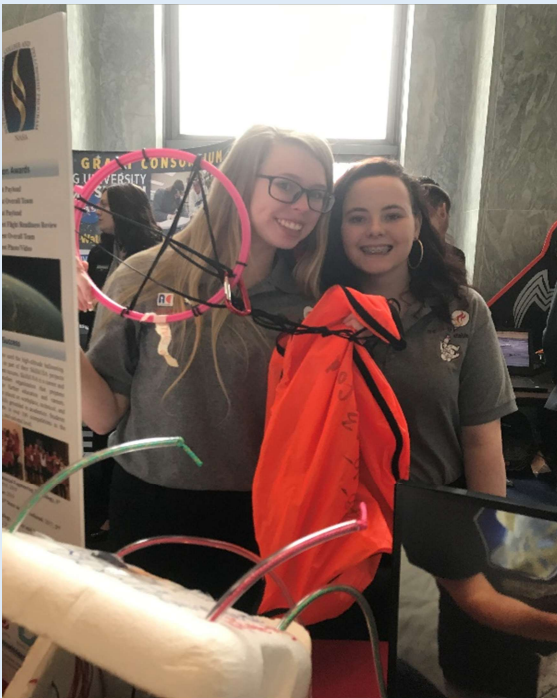
**System Overview**  
 Wireless System  
 Overall Connection Diagram

**Methodology: The key technical components of the project**

- Movement:** Account for dimensions and constraints of robotic monkey movement. Design robot for various degrees of rotation, ensuring proper rotation and positioning.
- Capsule Design:** Must be able to withstand in-terosse cold. Properly insulated capsules for water landings. Proper functionality even with decreased pressure and unbalanced forces. Must comply with FAA regulations and restrictions.
- Telemetry:** Record live updates on pressure, altitude, temperature, and location readings back to the ground station via radio transmission. Send live video from camera back to ground station with HAM cell sign via radio transmission.
- Electronics:** Reliable power supply and out off system. Radio communications system allows for long range operations and synchronization of data and commands. Proper voltages sent to the different electrical systems within the capsule.

The students and advisors of the USIP High Altitude Robotics team would like to thank NASA, .... and our mentors from the Discovery Museum David Mestre, Larry Reed and Gary Moyher...





Anna, Katie, Xavier KC1MHZ and Ricky KC1MHY in Washington, DC.



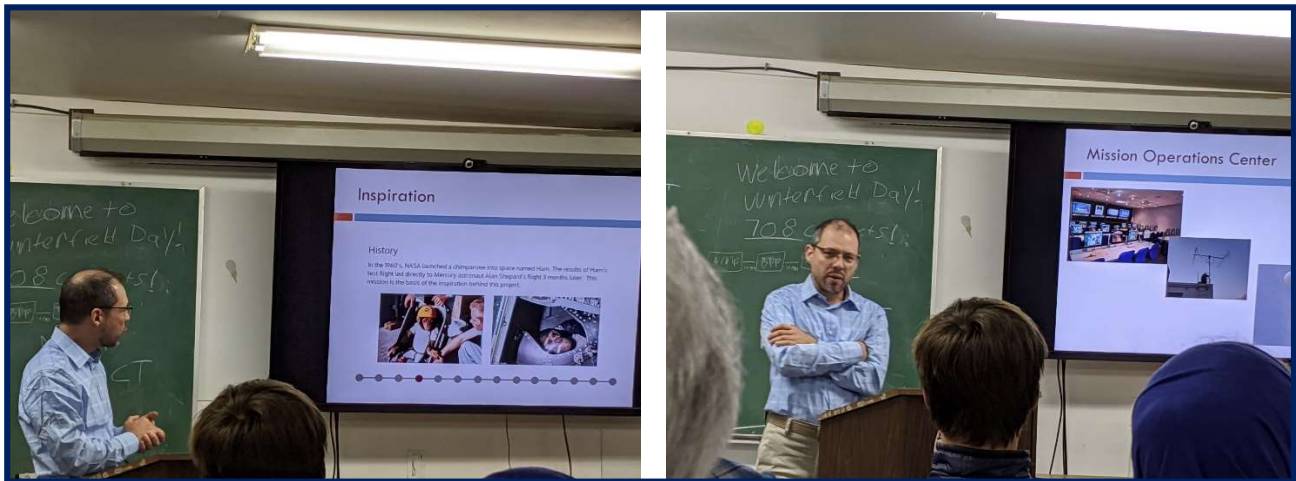
**HAM on display at the Discovery Museum.**



Left to Right: Ricky KC1MHY, Xavier KC1MHZ, Larry AB1JC, Dr. J. Pallis KC1MHU and Katie (no call).

**KB1YYJ PRESENTED TO WESTPORT ASTRONOMICAL SOCIETY**

Club member Dave KB1YYJ, Director of the Planetarium at the Discovery Museum, presented at the Westport Astronomical Society on the evening of Wednesday February 18, 2020. His topic was museum ballooning projects. Below are two pictures of event.



*Dave KB1YYJ presents slides on the USIP "HAM" project at WAS meeting.*



**MEMBERS VISIT CONNECTICUT AIR & SPACE CENTER**

On Saturday March 7, HARC members Ken NE1CU and Ned KA1CVv, along with their model aircraft flying club, visited the Connecticut Air and Space Center. This is located at 550 Main St, Stratford, CT 06615, in the old Avco/Textron building near Sikorsky Airport. Among the aircraft being restored is a WWII Vought Aircraft F4U Corsair and a working duplicate of Gustav Whitehead's Condor 21 aircraft he flew in 1901 (two years prior to the Wright Brother's). Ned's grandfather was an eyewitness to the flight! Thanks to Ken NE1CU for this information.



F4U Corsair engine & prop,  
Sikorsky 1960's helicopter, and  
Gustav Whiteheads Condor flyer.

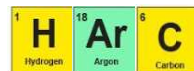




Pictures from Connecticut Air & Space Center can be found at

<https://www.flickr.com/photos/44231193@N06/sets/72157713415543082/with/49636517183/>





**SATURDAY MORNING BREAKFAST**

We have officially albeit temporarily canceled breakfasts until further notice.



*Breakfast at Chips in Fairfield February 22, 2020. L to R: Jeff KB1LZ, Sam W1SMF, Marilyn KB1YYO, Donna KB1TGW, Bill KB1IFY, Jim W1RAZ, Mike KA1EOU, Gary K1IC & Larry AB1JC. Gary WE1M was the shutterbug.*





**LEAP BREAKFAST February 29, 2020  
Circle Diner Fairfield**

Above left to right: Jeff KB1LZ, Jim KC1LJI,  
Gary K1IC, Mike KA1EOU & Emily N1DID.

Left: Larry AB1JC, Ned KA1CVv and Sam  
W1SMF. Jeff KB1LZ in background.  
Gary WE1M was the shutterbug.

Right:  
Mike KA1EOU,  
Emily N1DID,  
Ned KA1CVv and  
Sam W1SMF enjoy  
breakfast.



**BREAKFAST AT DUCHESS DINER STRATFORD MARCH 7, 2020**

*Left to Right: James W1RAZ, Gary K1IC, Larry AB1JC, Jeff KB1LZ, Brandon KB1THM's girlfriend, Brandon KB1THM, Emileigh N1DID, Larry W1LAG, Mike KA1EOU, Gary WE1M. Ken NE1CU was the shutterbug.*




HAMFESTS

- Southington, CT - March 29, 2020 – Canceled.

# Southington Amateur Radio Assoc. Flea Market

*Ham Radio Equipment, Electronics, Computers, and more..*  
**Sunday March 29th, 2020**  
**8:00 AM to 12 PM**  
**Southington High School**  
**720 Pleasant Street, Southington, CT**  
 OVER THIRTY FIVE YEARS OF HAMFESTS!!!




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**Exams for all classes available!**  
10AM

We ask you to register so we can get a head count - Email requested for confirmation and a guaranteed seat! Walk-ins are welcome! Good Luck!

- 6 foot of linear table space is \$15 in advance. Tables must be received before the day of the flea market. Day of the Fleamarket spaces are \$20.
- Bring your own tables to get \$5 off!
- Additional persons help pay \$5.00's general admission. (be fair)
- Children under 12 free!
- Doors open for vendors unloading - 6:15am.
- For further info contact Bruce WA1RR bsimpson@comcast.net
- John WA1WJ 860-439-8791
- Website info: [netbacon.com/sara.htm](http://netbacon.com/sara.htm)


**Admission \$5.00**



Portions of our gate go toward a Scholarship remembering our Club's SKs.

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**Talk-in**  
147.345  
444.200  
PL - 151.4hz



**Quicksilver Radio**  
**Radio Oasis**  
**KJI Electronics**





**TIP OF THE HAT**

- Gary WE1M for making the most ARRL DX SSB contacts.

**UPCOMING CONTESTS**

- Mar 28-29 CQ WPX SSB
- May 30-31 CQ WPX CW
- June 27-28 Summer Field Day
- July 11-12 IARU HF Championship
- Sept 12-14 VHF Contest
- Oct 24-25 CQ DX SSB Contest
- Nov 7-9 Sweepstakes CW
- Nov 21-23 Sweepstakes SSB
- Nov 28-29 CQ DX CW Contest
- Dec 4-6 ARRL 160 meter Contest
- Dec 12-13 ARRL 10 meter Contest

**OUR SKED**

- Mar 28-29 CQ WPX SSB
- June 27-28 Summer Field Day
- Nov 21-23 Sweepstakes SSB

**CONDOLENCES**

- Our condolences to Dave KB1LTW who lost his grandmother last month

**NECROLOGY IN HONORARIUM**

In Honorarium, we herewith list the names and call signs of those members and friends of HARC who are now Silent Keys.

- George Grosner – W1ASO SK
- Tony Vena – K1BUI SK
- Neil Lewbel – KA1PJQ SK
- Mark Orner, PhD - KA1RSE SK
- Thomas Wilson, PhD – WV1C SK
- Earl Dugan Sr. – KA1DCL SK
- Jay Albano – N1NRP SK
- Kevin Cellini – N1KGM SK



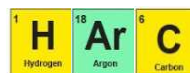


**IT'S TIME TO PARTY!  
2020 IS OUR CLUB'S 25<sup>TH</sup>  
(SILVER) ANNIVERSARY!**

Yes, it's that time. It's our club's Silver Anniversary in 2020. Let's have a party! We will be discussing options among our membership over the next 6 months looking at all the party options. If you have any ideas you wish to implement, let a club officer know and we can discuss it. However, all options are still on the table. So far, going to an expensive restaurant and taking our XYL's is winning in votes. Hold a large picnic and cookout is in second place. Cast your vote soon. Don't delay.

- Go to a Casino
- Buffet dinner
- Gigantic pizza party
- Take a trip to 2021 Dayton Hamvention (too late for 2020)
- Rent a party boat
- Go deep sea fishing
- Go to expensive restaurant (steak and lobster)
- Hold a large picnic and cookout
- Run a Special Event Station

We only have a few months to decide.







**HARC INFO**

The Housatonic Amateur Radio Club was formed in 1995 to foster the development of Amateur Radio and advanced Ham Radio operating techniques, both through theory and on the air practice. To provide a suitable environment of camaraderie and support within which members, spouses and their children can obtain a better understanding of amateur radio, gain a proficiency in the art of amateur radio, and to have some fun.

**Club Officers for 2020**

- President - Lawrence J. Reed, AB1JC
- Secretary Treasurer – Thomas W. Moyher ESQ, N1UNT
- Technical Officer – Michael J. Miciukiewicz, K1MJM
- Youth Coordinator – Jennifer L. Coderre, N1ZZY
- Director1 – Kenneth E. Johnson, NE1CU
- Director2 – David H. Schadlich, KB1LTW
- Webmaster – David H. Schadlich, KB1LTW
- Trustee – Gary T. Moyher, WE1M

Website [www.N1KT.org/](http://www.N1KT.org/)

The club call sign is N1KT. Our annual formal meeting is held on Winter Field Day, and an informal meeting is held on Summer Field Day. Both meetings are held during set up time prior to the event start.

Contact Information

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ITU Zone 8  
10-X 67120  
SKCC# 3980

The Housatonic Amateur Radio Club is an ARRL affiliated club.

QSL N1KT via WE1M, NE1CU or Bureau.

Send a QSL card and we will send our QSL card in return. We prefer an SASE, but it is not necessary. We QSL 100% returned.

“Direct Currents” is the official newsletter of the Housatonic Amateur Radio Club.

It is published monthly. Gary T. Moyher, WE1M Editor, Kenneth E. Johnson NE1CU Assistant Editor.

Contact the Editor at: [WE1M.radio@gmail.com](mailto:WE1M.radio@gmail.com)

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