

The OVH ARC Newsletter
OLE VIRGINIA HAMS" AMATEUR RADIO CLUB, INC.
Post Office Box 1255, Manassas, Va. 20108
OVH FM Repeaters - 146.970- & 224.660- & 442.200+ & 443.500+
OVH D-STAR Repeaters - W4OVH - 146.865- & 442.5125+ (temporarily - limited functionality)
Web Site at <http://w4ovh.net>

OLE VIRGINIA TIMES

September 2020

Next Meeting: September 15, 2020 online, details below.

PRESIDENT'S LETTER:

Greetings all,

Well the month of September has gotten off to a wet start; but its good to know fall and cooler weather are around the corner. Of course, with the weather in this area; it means two weeks later winter will be here.

If you didn't do it in the spring, fall is another great time to check your antenna. While summer brings us the risk of winds; I can tell you from personal experience that a build-up of ice will find that weak point in your transmission lines or wire antennas. Nothing is more disappointing than finding yourself with a snow day only to find your antenna is now on the ground! Of course the winter months and quieter conditions will make some prime operating on bands like 160m.

I'd like to thank "the other Ken"/KN4DD for helping the club donate some unneeded equipment, older laptop computers. During the spring, John/KG4NXT cleaned out our laptop collection and found several we were no longer needed. After some brief discussion, Ken was able to find a local charity that will distribute the laptops to local students. Thanks to John for "cleaning up shop" and to Ken for his foot-work and getting these in some hands that will do good.

John/KG4NXT has announced that Boy Scouts will be holding JOTA this year under its social distance regulations. A few OVH members are requested to sign up for shifts to help out. A post was made on the reflector. Contact John at kg4nxt@arrl.net to volunteer or for more information.

In about two weeks, on Sept 26th, the OVH will be supporting the Serve Our Willing Warriors bike ride event which has been coordinated by Andy / KJ4MTP.

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Ole Virginia Hams Amateur Radio Club, Inc.

Post Office Box 1255
Manassas, Virginia 20108

OFFICERS

President:	Jay Moore	NQ4T	571-316-4738
Vice Pres:	Jeff Fuller	WB6UIE	791-5916
Secretary:	John Heartney	KG4NXT	257-3566
Treasurer:	Don Meyerhoff	WA2SWX	597-3211

DIRECTORS

Don (Butch) Blasdell	W4HJL	369-2877
Arthur Whittum	W1CRO	791-4330
Charlie Dale	WA4YGI	361-3091
Bob Zaepfel	K4HJF	282-2451

WEEKLY FM REPEATER NET COORDINATOR

Thurs - 8:00 PM Local Time	JOHN / KG4NXT	257-3566
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HAMFEST 2020 - Chairman

Don	WA2SWX	597-3211
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FIELD DAY 2020

Byron	AK4XR	222-2095
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CLUB ROSTER / DATABASE

Arthur	W1CRO	791-4330
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EDUCATION

Mark	WA4KFZ	818-8033
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CLUB EMERGENCY COORDINATOR

Open

ARES - EMERGENCY COORDINATOR

David Lane	KG4GIY	703-628-3868
	email: KG4GIY@ARRL.NET	

Prince William County ARES website <http://pwcares.org>

FINANCE

Arthur	W1CRO	791-4330
Mark	WA4KFZ	818-8033
Don	WA2SWX	597-3211

GENERATORS

Steve	N4OGR	361-0008
Al	KB4BHB	368-4794

HISTORIAN

Theresa	KG4TVM	257-3566
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WEB COMMITTEE — W4OVH.NET

Kevin	KX4KU	540-445-5183
Andy	KJ4MTP	786-4651
John	KG4NXT	257-3566
Ken	KN4DD	622-2638

EMAIL REFLECTOR — w4ovh@googlegroups.com

David Lane	KG4GIY	628-3868
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JOTA - 2020

John	KG4NXT	257-3566
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LEGAL

Bob	K4HJF	282-2451
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MEMBERSHIP CHAIRMAN

Luther	WA3FMO	361-4885
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NEWSLETTER

Paul	W4ZB	754-0910
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NEWSLINE FOR THE WEEKLY NET

John.	KG4NXT	257-3566
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PROGRAMS

Jeff	WB6UIE	791-5916
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QUARTERMASTER

Steve	N4OGR	361-0008
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REPEATER CONTROLLERS

John	KG4NXT	257-3566
Ken	KE2N	753-8587
George	K4GVT	791-5956
Arthur	W1CRO	791-4330
Butch	W4HJL	369-2877
Steve	N4OGR	361-0008
David	KG4GIY	361-3042
Cat	KM4PBD	571-213-2179

W4OVH — TRUSTEE

Wayne	N7QLK	571-237-0520
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W4PVA — TRUSTEE

Arthur	W1CRO	791-4330
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SCHOLARSHIP

Sandy Knight	KM4JUS	901-4664
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SUNSHINE

Theresa	KG4TVM	257-3566
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TECHNICAL COMMITTEE

Ken	KE2N	753-8587
Andy	KJ4MTP	786-4651
George	K4GVT	791-5956
Arthur	W1CRO	791-4330
Butch	W4HJL	369-2877
Bob	K4HJF	335-1939
David	KG4GIY	628-3868

TWITTER & FACEBOOK ACCOUNT MODERATOR

Jeff	KM4FTK	830-4155
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All telephone numbers listed above are for Area Code 703 unless otherwise noted. This is the official monthly publication of the Ole Virginia Hams Amateur Radio Club, Inc., a §501(c)(3) organization, dedicated to the promotion and enhancement of Amateur Radio. Copyright © 2020 by the Ole Virginia Hams which holds its regular monthly meeting is at 7:30 p.m. every third Tuesday at the Buckhall Volunteer Fire Department Station, 7190 Yates Ford Road, Manassas, Virginia. Members, prospective members and other interested persons are invited to attend without obligation. Local information can also be obtained through the OVH's FM repeaters on 146.970-, 224.660-, 442.200+ and 443.500+ MHz. Up to date information about OVH activities and its meetings is also available during the OVH's nets on its FM Repeater each Thursday night at 8:00 p.m. or through the OVH's web site at <http://w4ovh.net>. Articles in this newsletter may be reprinted if credit is given to the OVH ARC and other source(s) noted. Proposed materials for publication, classified ads, notes about specific errors, complaints or the like are solicited. Forward such items to the Newsletter Editor: PAUL@W4ZB.COM. Approx. Circ.: 170. Last Rev: 20200310

This ride will be covering a large area of beautiful countryside and will need all the help we can get. If you haven't yet signed up, please consider doing so. The link to do so is: <https://www.bikereg.com/volunteers-warrior-ride>

If you're going through Hamfest withdrawal, the Culpeper Amateur Radio Association will be holding a "junk in the trunk" event on Oct 10th. Information about the event is on the OVH web site.

Our next regular OVH meeting will again be virtual this Tuesday, Sept 15 at 7:30 at <https://ovh.nq4t.com/meeting> - additional information can be found on the OVH web site or by contacting me directly at nq4t@arrl.net. I have been getting many questions about when we will be able to resume in-person meetings. I do not have any additional information other than Buckhall VFD has not yet reopened to groups. As soon as we are informed we can use the room, we will begin planning a return to in-person meetings.

I Hope to see those of you that can make it on Tuesday night. Also, don't forget about our weekly net every Thursday at 8pm.

73 Jay NQ4T

Sunshine Corner

Happy birthday to our club members celebrating another year this September - Gus / N4MLE, Al / KB4BHB, Maury / W4HYB, Ron / N4RDZ and Mark / WA4KFZ. Hope all of you are able to enjoy your end of summer birthdays!

Silent Key – Many of you know that Terry / WA5NTI passed away in August. I have reached out to his daughter and sent her thoughts from the club. She is working on putting together a service in Virginia and will let us know the details when she can. Kelley lives in upstate New York and it has been hard for her to get this organized. She will also need help with Terry's radio equipment and will reach out for assistance when she is ready. Please keep the family in your thoughts. As I receive information, I will put it on the reflector.

I did venture out over Labor Day weekend and delivered some VA QSO Certificates to some of our club members; it was great to see some different faces! In addition, if you are still looking for your 13 Colonies Certificates, the web site says they are still working on these and it could be after the end of September before they are finished sending them out.

So if you are tired of not being out and about like me, you might be interested in Winter Field Day – January 30th and 31st, 2021, it's really not that far away! John KG4NXT, Don WA2SWX, Edith (Don's xyl) and myself will be at a cabin in Shenandoah River State Park, Bentonville VA. This is only a little over an hour drive from our house. If you are interested in renting a cabin for this event, I would suggest you try to do it as soon as possible, the cabins there do not stay empty very long. Club members are invited to come by on Saturday or Sunday to operate and visit. Here is the URL link for the park is <https://www.dcr.virginia.gov/state-parks/shenandoah-river>

Best of luck to our back to school kids!

Remember to check in at 8 PM on the OVH's Thursday night VHF/UHF repeater net - details are on the OVH's web site: W4OVH.NET. Continue to send news or other items to me, email at kg4tvm@hotmail.com or telephone: 703-257-3566. !

73 Theresa KG4TVM

Minutes of the Ole Virginia Hams Amateur Radio Club Meeting held on August 18, 2020 Online:

The OVH regular meeting for August 2020 was held over the Internet using the Jitsi platform hosted by Jay / NQ4T at <https://ovh.nq4t.com/meeting>. The meeting began at 7:30 PM on August 18th and the Jitsi attendee counter counted 18 attendees. Because the meeting was being held virtually, OVH President Jay / NQ4T dispensed with the pledge and individual attendees saying their call signs.

The minutes of the July 2020 meeting were approved.

Mark / WA4KFZ gave the training report. He gave a report on his mentoring. One student was not ready for the OVH VE session and the other decided to go the GMRS route. Mark also mentioned that he will study VE automation, including remote administration.

John / KG4NXT gave a report on the recent OVH VE session at Nokesville and thanked all VEs that helped.

Don / WA2SWX gave the Treasurer's report which was approved.

Luther / WA3FMO gave the membership report. We voted in Scott / WB6EFW as a new OVH member. No new read ins this month.

ARES report. No report.

Don / WA2SWX gave the Hamfest report. The space at Manassas Park Community center has been secured for the weekend in June 2021. Don will have a Hamfest planning meeting in the near future.

Kevin / KX4KU gave the web committee report. Everything is working and all web committee members are contributing.

Theresa / KG4TVM gave the Sunshine report. Next month we need to decide if we are having the OVH holiday party this year.

Ken / KE2N, gave the repeater report. The 220 repeater is down and may require a site visit.

There were three items of new business:

1 John / KG4NXT floated the idea of getting rid of some old XP laptops which had been used in Field Day logging. These laptops typically have 40 GB hard drive, single core processor and 512 KB memory. There was some discussion which will be continued on the reflector.

2. Jay / NQ4T mentioned the Serve Our Willing Warriors event which needs operators. See the reflector for details.

3. Steve / N4OGR requested inventory information on recent Repeater equipment. Don / WA2SWX will send him the inventory list which was sent to the insurance company.

The meeting was adjourned.

Reminders about some upcoming events / calendar dates:

HAMFEST TYPE EVENTS:

The COVID pandemic, unfortunately, has killed off all nearby live hamfests for this summer season.

October 10, 2020, Saturday, 8:00 am - noon. "Junk in the Truck" event at the Culpeper Agricultural Enterprises, 10220 James Monroe Hwy, Culpeper Va. This will be a good opportunity to clean out and sell or give away some of your surplus ham radio parts, equipment, etc.; and for those of us (are there any?) who don't have enough of that stuff already, a great chance to acquire more.

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HAM RADIO OPERATING / CONTEST EVENTS:

The ARRL has a Contest web page at its web site, but a much more comprehensive, up-to-date, and long range planning contesting calendar with links to the rules for the various events is maintained at <http://www.hornucopia.com/contestcal> by WA7BNM. If you get the radio contesting bug or just want to find out what and how much is going on, that is a good place to look!

PUBLIC SERVICE / ARES EVENTS

September 26, 2020 - Willing Warriors - Bike Ride, Broad Run, Virginia and along the riding route - ham radio volunteers are needed along the route. Andy / KJ4MTP is again coordinating the ham radio part of this activity. Volunteers with handhelds are solicited. Contact Andy or go to the event web site: <https://www.bikereg.com/volunteers-warrior-ride> or <https://www.willingwarriors.org/bikeride> for more information.

October 17, 2020 (Saturday) - Boy Scout JOTA event at nearby Camp Snyder. COVID rules will be applied, but ham radio operators are needed for the ham radio station there. The OVH has supported this in the past. Contact OVH member Scout Leader, Rob / W4FSK or John / KG4NXT for more info.

Check the online Calendar on the OVH web site, W4OVH.NET for information about upcoming events.

Check the online Calendar by David / KG4GIY at <http://pwcared.org> for the latest PWC ARES updates. David maintains a comprehensive calendar for upcoming events at that web site. Complete direct contact information for David appears on page 2 of this Newsletter.

OVH Laptops will be used by shelter kids for classes - Ken / KN4DD

The year 2020 has been one strange year. There've been times when I thought "up" must be "down" and "left" must be "right".



This is the only way I ("The Other Ken" – KN4DD) could explain to myself how a mostly respiratory disease could cause toilet paper, frozen pizza and bread yeast shortages. And, as I would soon find out, laptop shortages.

When I received a broadcast email from John (KG4NXT) back on August 22, asking for ideas on what to do with newly retired XP laptops, I didn't think I could help. At first, all I could offer was this: maybe some recycler would offer money for the scrap.

And so, with the trap set, John sprung it. Would you look into this please?

Based on what turned out to be an outdated memory, I agreed. I had remembered a number of recycling facilities up and down Route 28. And so, I went to everybody's favorite search engine to begin my quest. It turned out however, that there was only one local recycler. All of the others were out-of-state.

Not fully believing this, I spent a good deal of last Saturday driving up and down Route 28, Liberia Avenue, and Sudley Road, all to no avail. The out-of-state recyclers all had one thing in common. They wanted me to ship the laptops and then after receiving them, would forward payment for them.

I did not believe I would receive payment, and indeed, would be in the hole for the shipping costs.

I honestly believed I would have a better chance finding someone to give me a couple of dollars for scrap recycling, then I would if I tried to donate these. Who, I wondered, would even want XP machines, when Microsoft no longer supports Vista or Windows 7, both of which are newer?

My church has a ministry (a charity, if you would rather) called Gracing Spaces

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VP's Corner

Jeff Fuller
WB6UIE



As we begin National Preparedness Month, Hurricane Laura has devastated portions of Louisiana and spawned systems of severe storms as it swept inland. Northern Virginia was fortunate to escape most of its wrath. We may not be so lucky next time. Now is a good time to check your emergency supplies. Do you have enough food and water for you and your family to last several days? You can find information about recommended emergency kit contents at <https://www.ready.gov>

Are your radios ready to go and programmed with local repeater frequencies? You can find this info along with the local ARES op plan and training schedule at <http://pwcares.org/>

In addition to the damage caused by their high winds and wind driven water, hurricanes often spawn tornadoes and systems of violent thunderstorms extending many miles inland from the eye. The resulting power outages can last for days. Do you have backup power for your radios and essential items? If you plan to rely on batteries, please be sure to charge and store them safely.



Does your station have proper grounding and lightning protection?



If you use a generator, it needs to be outdoors with proper ventilation.



Further reading:

1. Cadex Electronics: **Battery University**
<https://batteryuniversity.com/>

2. Jay: **Ham Radio Battery Review: How to Build an Emergency Backup Power Supply**
<https://dakotalithium.com/2019/11/15/ham-radio-battery-review-how-to-build-an-emergency-backup-power-supply/>

3. Silver (ARRL): **Grounding and Bonding for the Radio Amateur**
<http://www.arrl.org/shop/Grounding-and-Bonding-for-the-Radio-Amateur/>

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(<https://www.gracingspaces.com>) which provides basic housing necessities. From a single room, to whole house furnishing, they have helped 804 local families just last year.

I contacted them briefly about my task, and truthfully forgot about them, so focused was I on the recycling. So, I was quite surprised when they said they definitely wanted all the laptops I could provide. Somewhat dumb founded, I said sure, but asked how they could use these. I was told that they partner with Fairfax County social services and this is where the laptops could be used.



It turns out there is a bit of a laptop shortage, probably due to the “back-to-school” rush. What they intended to do, was donate any working laptop to social services. The children in these shelters have a difficult enough time getting laptops in normal times. However, in the age of COVID-19 (Novel Coronavirus), all classes are virtual classes. They will remain online classes for the foreseeable future. In this environment, any computer they can get to go on the Internet is sought after. Even our old XP machines.

This changed my task somewhat. I had intended to just drop off all 15 machines (two shopping carts full). Now I had to make sure the machines were usable. This means I had to boot them up, log in, remove any required credentials (login and password), remove any radio related software and files.

OVH was able to donate 11 laptops to Gracing Spaces, who in turn donated them to social services. At least 11 people will have an easier time this school year because of OVH.

What happened to the other four machines you ask? They will not just take up space in a landfill somewhere. They were donated to eAsset Solutions Computer and Electronics Recycling of Falls Church, Virginia.

Ken / KN4DD

Bouncing Signals off the International Space Station - Jay / NQ4T

What if I told you that even without any astronauts actively working a radio and making contacts, there was still a reason to point your antenna at the sky when the ISS passes over and throw some RF at it? Well, it's true, and it's no where near as difficult to accomplish as you might think; in fact the last two nights in a row I've successfully sent a radio signal up to the ISS and gotten one in return. How? I'll tell you!

There are a number of objects in orbit that we as amateur operators can actually transmit to. There are numerous of low-powered satellites of various modes you can talk through, but the ISS is the most well known of LEO (low earth orbit) objects for obvious reasons; just about everyone knows what it is! While being able to talk to an astronaut on the ISS is a very rare occasional reserved mostly for school activities, there is a payload on the ISS you can make use of; an APRS digipeater. Many of you may know what APRS is, maybe you have a radio with it and enjoy playing around with it as I do; for those that don't, the APRS website is a good resource for learning more about this packet-based digital communications mode.

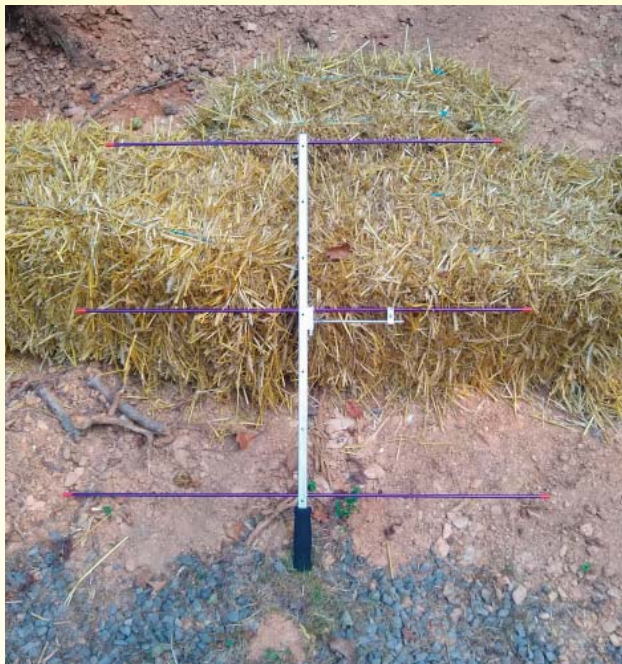
The basic idea is this: point your antenna at the ISS, transmit an APRS packet with maybe your location information and a short message, and wait for it to be returned. Unlike a normal repeater, an APRS digipeater is a “store and forward” system; it receives packets of data, then re-transmits them on the same frequency after doing any required modification. If you're fast enough, you can exchange short text messages with other hams. I know what you're thinking; this sounds complicated and difficult. While working APRS over the ISS has its own degree of difficulty, the equipment you need isn't very complex or expensive; in fact you can probably make your own APRS station for very little money.



You don't need a lot of power with the right antenna. In my case all I needed was a good yagi antenna and my Kenwood HT with all of its 5 watts of power. The Kenwood is one of a few HT's that have built in APRS support, making it easy and convenient. As you can see in this picture, I'm showing up on my radio's station list; and I never actually set the clock on my radio as it's still an hour behind. The neat thing about APRS is since it's a single frequency with store-and-forward; you will actually be able to get your packet back. This is handy on the ground if you want to make sure your packet made it from your radio to a wider area; but in this case, it instantly lets you know you were successful in hitting the thing as it screams across the sky above you. Just for extra confirmation; there are a number of ground-based stations that not only are listening for the ISS' digipeater, but they also upload that information to the internet. ariss.net provides a nice list that shows all the stations that have recently made contact with the ISS' APRS digipeater.

As you can see, just 3 minutes after hearing my packet bounced back to me and the ISS dipped below the trees; I checked my computer and there I was! I not only had my APRS packet been transmitted back to me, but to a ground-station that

uploaded it to the APRS-IS network. So what kind of antenna did it take to get 5 watts of RF in to the ISS?



I used this guy; an Arrow II handheld satellite yagi (image to the left). It's 3 elements on 2 meters is more than enough to send the 5 watts from your HT up to ISS. When you're right on track with the ISS, its digipeater is quite capable of opening your radio up to a full S9! Not bad for a five watt transmitter that's ultimately a few hundred miles away. Of course, with VHF line of sight is everything; and being 254 miles above the ground does tend to give you excellent line of sight coverage. I was even able to decode APRS packets from the ISS on the antenna on my car! The ARISS page does mention that with the radio acting as a digipeater; you might have better luck with FM Narrow. This is something I will have to try.

However working the ISS compared to an FM satellite does pose a challenge; it's harder to track the ISS. With a normal amateur radio satellite, there is usually enough activity

keeping it transmitting most of the time; in fact as any satellite operator will tell you, the satellites are full-duplex. But it's different with the APRS digipeater; it's only transmitting occasionally. This means there may be a large part of its 10 minute pass that it's silent. It feels like it's almost a guessing game and luck; you know about where it's supposed to be, but you don't know if you're right on it. The transmissions are also extremely short, just a couple of seconds long; adding to the difficulty. You almost have to be ready to send an APRS packet as soon as you see it open your radio's S-meter all the way. This lead me to make a small modification to my antenna to make it feel like less of a guessing game, as well as help me on my future endeavors of working satellites.

No, it doesn't look like much in this image (on the following page); it's just a piece of wood jammed in to the



bottom of the antenna with a magnet attached. But what it does is give me a few extra inches on the boom that I can place my phone, which has a metal plate on the back for a magnetic car mount, right on the antenna! This allows me to know exactly which direction I'm pointing the antenna as well as what elevation I'm pointing it at. I use the Android app W1ANT Satellite Tracker on the phone. All I have to do is pick which bird I want to talk through, and it will show me a screen that gives me real-time information about where I need to be pointing my antenna to hit the satellites. On my second night of attempting APRS off the ISS; I found it removed all the guesswork out of pointing the antenna. No more waving it around my back-yard like a maniac pushing the beacon button hoping I was on track. I was able to capture more packets and get mine up there a lot easier. The magnet holding the phone doesn't affect the phone's compass too much either; a few degrees difference but nothing you can't compensate for. The ISS' digipeater runs on 145.825MHz; whereas all the "normal" APRS activity is on a nationwide frequency of 144.390MHz.

But while I did it using an HT with built-in APRS and a professionally made antenna; you don't need any of that. In fact, with the right passes you may be able to get a packet up your HT's antenna! But the nice thing about a yagi, other than focusing most of your signal in the direction you're pointing it, is they are quite simple to make from cheap materials.

I built this back in the Spring of 2015, just a couple of weeks after getting licensed. It's a quick-and-dirty build of the tape measure yagi that has been circulating the internet for a while. Despite its looks, this 2m antenna had no problem getting me in to SO-50; though I didn't have much success ever hitting the ISS digipeater with it (mostly due to problems with aiming while working APRSDroid). But an antenna like this, that can be made for as little as a couple of dollars, should provide enough gain to get your signal out in to space. Notice the cell phone zip-tied to the back of the boom; the modification I made to my Arrow is far from a new idea.

Don't have an HT with APRS? That too can be gotten around! APRSDroid on Android and PulseModem on iOS both provide AFSK (audio frequency-shift-keying) output and input. All you have to do is tune your analog HT to the proper frequency and send audio between them. They even make Bluetooth based TNCs to make this even easier. In fact, all of my early APRS activity was done using a cable modified to connect between a Baofeng and my smartphone. Using the radio's VOX setting, I had no problem sending and receiving APRS packets. In fact, that was one of the driving reasons I upgraded to an HT with built-in APRS; and the reason my second HT also has APRS. In fact I run APRS quite a lot when I'm out and about; I think it's fun to see where I've gotten a packet out not just to see what my antenna is capable of, but sometimes you'll see you've gotten picked up hundreds of miles away when tropo-ducting is occurring. You can also use a website like aprs.fi to not just view your APRS activity, but view all the activity that's been sent to APRS-IS either directly or via RF gateways.

If you've ever wanted to try and bounce a radio signal off the ISS, right now the APRS beacon is the only thing that's always active. While it is nothing more than a beacon, the messaging ability gives the possibility for an actual QSO; provided you can type out your message fast enough while tracking.

Jay /NQ4T