PCARA Update

Sad news

"Calling K2BLB"… "Calling K2BLB"… "No Response Heard. Rest in Peace, SK."

It is with great sadness that we report the passing of **Barry L. Brown** on March 24, 2020. In addition to being a loving husband and devoted father, Barry had selflessly dedicated himself to a number of public service endeavors. He was a Deputy Chief of the Mohegan Volunteer Fire Association (MVFA) and the MVFA Volunteer Ambulance Corps. He was a former EMS Coordinator for Westchester County and a paramedic for many years. He was both a fire and emergency medical instructor, and was an adjunct faculty member of New York Medical College. Barry was a reservist in the US Coast Guard Auxiliary.

He was an active amateur radio operator whose call sign was K2BLB. He was a member of the Peekskill / Cortlandt Amateur Radio Association and the Westchester Emergency Communications Association. Barry was a very good friend to PCARA and received the *PCARA Radio Amateur Operator of the Year Award* in 2017 for his help in obtaining meeting space at the Mohegan Volunteer Fire Association's Headquarters on Route 6 in Yorktown, NY for PCARA workshops, and in obtaining a temporary site for the 448.725 MHz repeater when needed.

He had also worked in broadcast radio and had many amusing stories about fun times on the air. He had a wonderful sense of humor and a shining personality. Above all, Barry will be remembered for his courage in the face of adversity.

He will be missed. Please keep Barry and the Brown family in your thoughts and prayers. *[Obituary by KD2ITZ and KB2CQE.]*
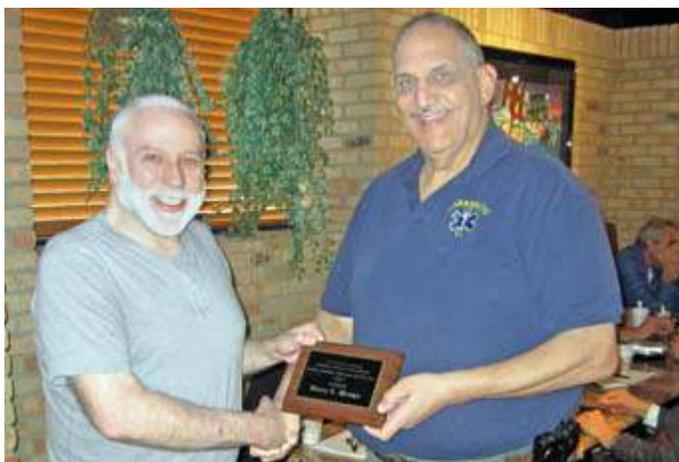
Greg KB2CQE presented Barry K2BLB with "Radio Amateur Operator of the Year" plaque for his efforts during 2017.

Marching on

Our March PCARA Membership Meeting was probably our last *vis-à-vis* meeting for the foreseeable future due to current COVID-19 concerns. We are investigating the possibly of having meetings using an online application called Zoom (http://www.zoom.com), which allows for teleconferences / meetings. Details to follow.

At the March 2020 Membership Meeting, Bob N2CBH reported new developments at the 146.670 MHz / 449.925 MHz repeater site where construction of the new tower is just about complete. Bob also suggested that we perform some upgrades at the site including new transmission lines, connectors, jumper cables, ground kits, bus-bar with Polyphaser, new VHF antenna and possibly a circulator. These renovations would be financed through the club treasury, with additional funds being raised via a special request for donations.

PCARA has enrolled in the **AmazonSmile** program in which 0.5% of the price of eligible purchases can be donated to the charitable organization of your choice. If you order anything through Amazon and would like to donate to PCARA, please go

The two towers [N2CBH pic].

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to http://smile.amazon.com, log into your Amazon account, and choose PCARA as the charitable organization you would like to support. Thank you!

PCARA Breakfasts and PCARA VE Test Sessions are canceled until further notice, **but** there is a NEW nightly Roundtable Net every evening at 7:30 pm on the 146.670 MHz (-) repeater. We've had fantastic participation, usually 10 to 12 folks checking in. If you have the chance please join us!

The May 9, 2020 PCARA Spring Foxhunt is somewhat tentative depending on developments with the COVID-19 progression. If things go well, Bob N2DVQ will be playing the role of the fox. Stay tuned.

Some good news for ARRL Field Day 2020 from the Lakeland Central School District that PCARA will have EXCLUSIVE use of the upper baseball field for the weekend of June 27 – 28, 2020. There will be discussions on planning for Field Day as the time approaches. [For ARRL's latest advice on "Coronavirus & Field Day 2020" see: http://www.arrl.org/news/field-day-2020-a-time-to-adapt and http://www.arrl.org/field-day . -*Ed.*]

Our next regularly scheduled **virtual** Membership Meeting should be on Sunday April 5, 2020 at 3:00 p.m. **online**. Please check your emails and the PCARA website for instructions, details, and further information.

To my Amateur Radio family, until we meet again — please be careful, keep your heads down, stay safe, and above all may God Bless. We are here should you need us. Excelsior! We shall prevail.

- 73 de Greg, KB2CQE

PCARA Board

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Net nights

In order to maintain communication during the COVID-19 emergency, the weekly PCARA net has been replaced by a **nightly roundtable** on the W2NYW 146.67 MHz repeater. Join the net every evening at **7:30 p.m.** for news and local information.

The Thursday evening Old Goats net that previously began at 8:00 p.m. has now been absorbed into the nightly Roundtable net, starting at 7:30 p.m.

Adventures in DXing
- N2KZ

Interesting Times

A novel virus has threatened our existence and stopped our world. A month ago we could not even dream where we stand today. Disappointment has matured into fear. Inconvenience has become inability.

By necessity, we have become distanced from one another. All of these things counter the modern lifestyle that we all know so well. We must be vigilant. We must be patient. We must remain alone. Who knows what the future will bring?

One way to find solace and calm is understanding what is going on all over the world. American media tend to be literally shortsighted. Our broadcasts' coverage often ends at our borders. The world is filled with other lifestyles and cultures that you can learn from. It's easy to discover what's going on out there if you know where to look.

Adventure is just a few clicks and keystrokes away. Being someone who has worked in broadcast news for the longest time, I have gained familiarity with journalistic resources worldwide. Let me share a bunch of my all-time favorites and welcome you to the world way out there!

You might be amazed at how much international content can be found in English on the Internet. I have produced a list of the English language major news sources around the world. *[See page 5 -Ed.]* It is not an exhaustive list; only a sample of the services I frequent. You can spend a lifetime watching all you can see via the Internet on your computer. Some of these news services can also be seen on Roku and other similar 'Smart TV' solutions.

Inside Out

Most fascinating is gaining an understanding of the perception of America in the eyes of those looking in. Anyone who doubts the pivotal nature of all that goes on in the United States will be reassured immediately. No other country seems to garner the same level of interest. For instance, a charismatic and influential leader like New Zealand Prime Minister Jacinda Ardern is rarely featured in the American press, yet events in the United States are quite often seen as lead stories no matter where you go.

Watching the foreign press provides a new and fresh perspective of how we are perceived abroad. It is nearly as startling as looking into a mirror for the first time or seeing yourself on a video. Our government

and way of life is scrutinized all over the planet. Similarly, you'll gain new objectivity towards other world leaders like Boris Johnson or Angela Merkel and simply everything else of note. It really is a whole new view.

Look North

You don't need to look far for alternative perspectives. Canada's national public broadcaster the *CBC* — Canadian Broadcasting Corporation – and *CTV* – Canada's dominant commercial network both produce admirable newscasts daily. CTV National News, a half-hour news summary, is hosted weekdays by veteran newscaster Lisa LaFlamme, and airs at 11:00 p.m. Eastern.

CTV News from Canada.

CBC's The National is an hour-long news magazine with quality and dignity (quite similar to our PBS Newshour) presented live on YouTube weeknights and Sundays at 9:00 p.m.

Watching Canadian news broadcasts is an educational experience. It is amazing how little most of us know about a place so close. Canada is remarkably similar to the United States in many ways, yet so many things up north are quite different and often refreshing. You should get to know our neighbors to the north. You could learn a lot!

Across the Pond

Travel across the Atlantic Ocean and you will find many new things to see and hear. The BBC offers a wonderful YouTube channel for TV news aficionados. BBC's Radio 5 is a 24 hour news-talk-sport service with a constant compilation of all that is new in the world with an authoritative flair. Look for it as part of the BBC Sounds suite at: https://www.bbc.co.uk/sounds.

For a more cable-like feel, tune in Sky News. Sky excels in immediate coverage of live events and long-form roundtable analysis in very large and very bright studios. Try Sky just to experience it!

Also look for Ireland's RTÉ television at: https://www.rte.ie/player/onnow. Find all of RTÉ's radio offerings at: https://www.rte.ie/radio/. Make sure you sample RTÉs entertainment programs especially 'The Late Late Show' with Ryan Tubridy. Enjoy Irish culture

and joy in all that RTÉ broadcasts each day.

Germany's international English channel continues the long tradition of their legacy shortwave service **Deutsche Welle**. This is a dignified and serious news service that serves up a very professional news presentation all day long combined with thoughtful long-form feature programs. DW broadcasts news and in-depth coverage of everything from business, science and politics to arts, culture and sports. It is available on-line and via Roku and other Smart TV appliances. Tune in and you will see it is 'made for minds.'

Deutsche Welle News from Germany.

The French have a different tune. Based in Paris, **France 24** is a multilingual teleproducer churning out four networks each in different languages: French, English, Spanish and Arabic. You'll notice that some of the presenters have distinct British accents and that the news is modular like a playlist packaged into 30 minute pods. This versatile format is sprinkled with a host of documentary style pieces. It is a charming and refreshing style that is like enjoying a fine wine. Very easy on the eyes!

France 24 News.

Down Under and Over

A world class source of fine journalism and comprehensive reporting, ABC News, produced by The Australian Broadcasting Corporation, provides a free web stream of their 24 hour news network. Serving as Australia's public broadcaster, ABC transmits a multi-channel bouquet of general entertainment programming

including specialty channels for comedy, kids, news, arts and more. It is incredibly popular around 'the land down under' and beyond.

Much like America's PBS and NPR, New Zealand has two predominant public broadcasters TVNZ and RNZ (pronounced **R - N - Zed**.) TVNZ is a multi-purpose television presenter with many programs from Australia, the United States, Britain and elsewhere blended with shows produced in New Zealand. Tune in in the evening and you might see The Simpsons, Coronation Street and Two and a Half Men. Three main television channels are seen nationwide: TVNZ 1 and 2 and the "male oriented" TVNZ Duke.


New Zealand's TVNZ with Melissa Stokes.

R-N-Zed radio has three distinct services: RNZ National is the full-service nationwide network heard nearly everywhere on North and South Island. RNZ Concert presents the music of New Zealand — classical, jazz and contemporary.

RNZ Pacific is a new iteration of the former Radio New Zealand International shortwave service. Since the demise of the once omnipresent Radio Australia shortwave service serving the Pacific in January 2017, RNZ Pacific has assumed the role of predominant broadcaster throughout all of Oceania. To get an inside look at RNZ, tune in daily to 'Checkpoint' on YouTube. You'll feel like you are sitting right in their studios... because you are!

Travel far north of New Zealand to Japan. There you will find one of the oldest and most innovative broadcasters in all of the world: NHK. When you find
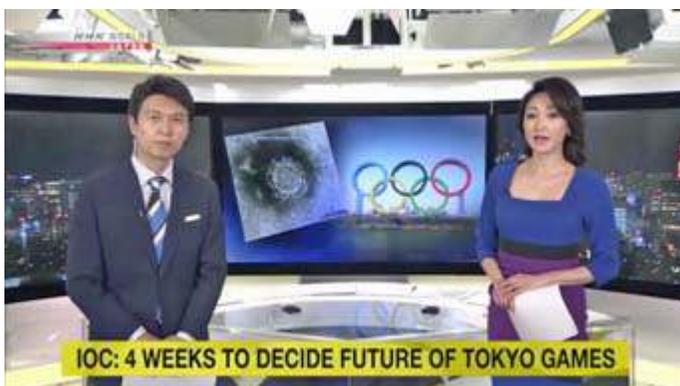
NHK Newsline brings news from Japan.

them for an online visit, you will see the level of sophistication and excellence they continue to this day. Their free continuous live broadcast in English, NHK World Japan, will bring you a taste of all aspects of Japanese culture and events along with news summaries and features at the top of every hour. NHK also offers simultaneous captions along with their live feed in seven other languages. You can even learn basic Japanese watching frequent short lessons throughout the day.

A Continent Away

There are hundreds and thousands of news organizations around the world. One network stands out in my mind as being individual, revelatory and simply fascinating. Euronews-Africanews is an outgrowth of the multi-national Euronews group serving all of Europe, North Africa and beyond. View Africanews to pull the curtains back on this entire continent with a viewpoint rarely seen in the Americas. It serves as a fine introduction to life in all of Africa and the current events that mold its future.

Africanews - French language program.

Are you ready to take a trip around the world? This is your big chance to literally travel beyond your borders. Tune in and learn all about the world. Now you know how to get there! Let's go!

Guess what story the entire world is talking about? Please stay safe. Stay inside. Be careful and be clean. Be well.

Join our nightly roundtable at 7:30 p.m. on the PCARA 2m repeater: 146.670 MHz - minus 600 kHz offset - 156.7 PL. 73 and dit dit de N2KZ.

News sources - N2KZ

All listed sources are in the clear and do not require subscriptions.

Africa:

Euronews-Africanews: (24 hr)
https://www.africanews.com/live/

Australia:

ABC: ABC News stream best seen via YouTube. Search 'ABC News Australia Live', also 'ABC NEWS Live Stream' at:
https://iview.abc.net.au/show/abc-news-24

Canada:

CTV: http://www.ctvnews.ca then 'video – latest videos – 'CTV National News' (daily 30 minute late evening newscast).

CBC: http://www.cbc.ca/news/thenational – then 'Watch the National' (daily one hour evening newscast)

CBC Radio: http://www.cbc.ca/listen/live-radio – Select Radio One (24 hour stream – news on the hour)

France:

France 24: (24 hour free news stream in English)
http://www.france24.com/en/live

Germany:

DW: DW News Livestream:
https://www.dw.com/en/media-center/live-tv/s-100825

Ireland:

RTÉ: Television: A la carte news at:
https://www.youtube.com/user/rte.

RTÉ Radio: News, talk and sport on Radio 1.
https://www.rte.ie/radio/

RTÉ Player app (for video) RTÉ Radio app (audio) – both apps: free to download. Full video newscasts several times a day. Hourly radio news on RTÉ Radio 1

Japan:

NHK: https://www3.nhk.or.jp/nhkworld/en/live/ (24 hour full-service variety of programs in English: 'NHK World.')
https://www3.nhk.or.jp/nhkworld/en/news/programs/

New Zealand:

Two public networks – television and radio…
TVNZ: Search on YouTube: (i.e.) "TVNZ One News Was Live At 6pm 21 03 2020"

Vary end date as necessary: day – month – year format
Daily: approximately 45 minute One News anchored by Melissa Stokes

RNZ: https://www.rnz.co.nz/news then 'Listen Live' or select video news items. Three radio networks on constant streaming. Daily long form video news – 'Checkpoint' – available on YouTube.

United Kingdom:

BBC Television News:
https://www.youtube.com/user/BBC

BBC Radio 5:
https://www.bbc.co.uk/sounds/play/live:bbc_radio_five_live
All BBC Radio networks via The BBC iPlayer Radio app (free)

Sky: (24 hour free news stream)
http://news.sky.com/watch-live or the Sky News app or Roku

United States of America:

ABC: ABC World News Tonight:
https://abcnews.go.com/WN then select show of your choice.
(daily newscast) – À la carte video features at
https://abcnews.go.com/

CBS: CBSN (24 hour free news stream)
https://www.cbsnews.com/live/
CBS Evening News available on CBSN or via YouTube (daily nightly newscast).
CBS News Radio (Radio newscasts) via the 'CBS News Radio' app or Radio.com

NBC: http://www.nbcnews.com (latest video clips) or YouTube, search 'NBC Nightly News' (daily evening newscast)

PBS: PBS Newshour: (daily one hour) Best viewed on YouTube – Search PBS Newshour full show and include the exact date.

Major US radio streaming apps:
(may require registering for accounts)

iHeart Radio – http://www.iheart.com or app.

Radio.com – http://radio.com app.

Tunein Radio – http://tunein.com or app.

- N2KZ

[Editor's note: You can watch "BBC World News America" over the air at 5:30 p.m. and 11:30 p.m. weekdays on WLIW-21. BBC World News America is also carried by WNYE-TV (25) at 5:30 p.m. — followed by DW News at 6:00 p.m.]

Winlink - KD2ITZ

Winlink Global Radio Email® is a worldwide messaging system that uses amateur radio frequencies to provide radio interconnection services that include email with attachments, position reporting, weather bulletins, emergency communications, and message relay. Using a personal computer for wireless data transfer is not a new phenomenon. In the early 1980's, amateurs made connections with a program called APlink for MS-DOS [AMTOR-Packet Link -*Ed*.]. The software was renamed Winlink when it was rewritten for the now ubiquitous operating system. Many readers have likely heard of Winlink and a few may have even tried it at their own stations. Winlink has provided vital communications during numerous disasters, including multiple Atlantic hurricanes.

Winlink provided vital communications after the 2017 Caribbean Hurricanes.

Suitable software

To get started with Winlink, a licensed amateur must install client software. There are several options, but **Winlink Express** (formerly RMS Express) supports all new system features. Winlink Express runs on Windows only, but there are workarounds for other operating systems. Hams can use client software to create a Winlink account and an email address (yourcall'at'winlink.org) will be assigned. More instructions are available at http://winlink.org. Winlink Express is available free of charge and is maintained by a team of volunteers at the **Amateur Radio Safety Foundation**, Inc. (ARSFI). Users are encouraged to donate funds and purchase an optional registration key for $24 to support "all ARSFI projects, the ongoing operations of the Winlink system, and the continuing development of new programs, radio modes, enhancements, and better performance."

Low, medium and high-cost hardware

Not only is Winlink free to use, there is no need for expensive hardware. The client software includes protocols that can be generated by sound cards, such as WINMOR and ARDOP for HF data. Sound cards are often **built in** to many modern transceivers or easily installed externally, such as the Tigertronics SignaLink™. Although PACTOR modes have higher data transfer speeds, the price of a required terminal node controller (TNC) can exceed $2000. Likewise, outside the HF bands, there is no need for TNC hardware when sending
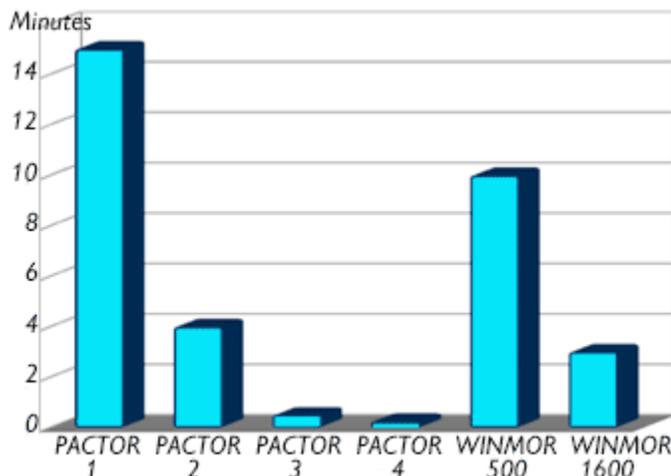
The Tigertronics SignaLink USB sound card–radio interface costs less than $150.

The DR-7803 PACTOR 4 modem from SCS costs over $2000. [SCS = Spezielle Communications Systeme GmbH & Co.]

AX.25 packet data. Winlink is compatible with software, such as Direwolf, that can emulate a TNC device.

Graph shows approximate air times needed to transfer a 4K message (after compression) for several modes of operation, under ideal conditions. Source - Winlink FAQ. [PACTOR 4 is not currently permitted on MF/HF amateur bands because of FCC symbol rate restrictions.]

Internet connection

Operators without access to the Internet can connect a Winlink client over the air to a **radio mail server** (RMS). An individual RMS may not support all modes of connection. Some are limited to either HF or VHF. Some HF stations are limited to a single data mode, such as PACTOR or WINMOR. The RMS commu-

nicates with other servers and allows users to exchange messages between Winlink and any email provider. It is important that messages to Winlink accounts, however, contain **//WL2K** at the front of the subject to authenticate that it is not spam. RMS stations are interconnected worldwide using the Internet and HF store-and-forward message transfer techniques. The system can function independently of the Internet should there be a world-wide outage. RMS stations are listed and mapped on the Winlink website: http://winlink.org/RMSChannels. They are also listed in Winlink Express, which includes software tools to predict the likelihood of a viable propagation path.

Radio Mail Server (RMS) stations are listed and mapped on the Winlink website, http://winlink.org/RMSChannels .

Amateurs should note the service code listed for a particular RMS. While those listed as PUBLIC are acceptable for routine use, others listed as EMCOMM or SHARES should be avoided. In situations where there is a need for stations to contact each other directly and a radio pathway exists between them, client software can create a peer-to-peer connection. This allows data exchange without the RMS in the middle.

Help with Winlink

At a recent PCARA meeting I asked if there was anyone who could assist me with Winlink. **Dan, NT2I** has been familiar with the software for many years. He helped me get started and assisted me in writing this article. Dan uses Winlink from both his home station and a mobile rig in his car. Installing Winlink Express was easy on my Dell Inspiron laptop. My Kenwood TS-590SG has a built-in sound card with USB interface. This hardware is supported with Windows drivers. As with any other digital mode, care should be taken to adjust the sound levels for minimal ALC readings. After creating my Winlink account, I was able to connect to a RMS at VE1YZ in Halifax, NS on 40 meters and send a

message to my Gmail inbox. Dan and I also arranged to connect directly to each other and we exchanged messages through a peer-to-peer connection on 10 meters. All licensed amateurs, even Novice and Technician classes, have access to frequencies between 28.0 and 28.5 MHz.

Heed the rules

The American Radio Relay League was founded in 1914 for amateur stations to facilitate the wireless exchange of written messages. Winlink keeps this tradition alive for the 21st century, but does invite controversy. FCC rules allow for message forwarding
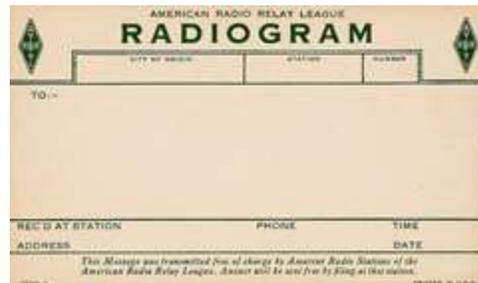
Historic postcard-sized ARRL Radiogram.

(§97.219), but prohibit communications in which the licensee has a pecuniary interest (§97.113). Winlink has been widely adopted by the sailing community and some have accused certain individuals of disregard for Part 97 rules. This is exacerbated by the fact that monitoring PACTOR transmissions for compliance can be difficult without proprietary hardware. Winlink has addressed these issues by creating a message viewer. It allows amateurs to view a database of messages sent to or from at least one US-licensed station on amateur radio frequencies within the last 21 days. Stations that deviate from the rules can be reported to a Winlink administrator.

Winlink, a vital communications tool for recreational mariners, was utilized on the ill-fated Tall Ship Bounty. *[USCG Photo]*

Recent years have seen an explosion of ham activity on digital modes. Many operators are quite familiar, therefore, with interfacing a transceiver to a PC. It should not be difficult for these hams to try Winlink from their own stations. Winlink is an asset to any amateur in a time of crisis. Of equal importance, it provides a fantastic demonstration of how the amateur radio service remains on the cutting edge of technology.

- Lou KD2ITZ

NY QSO Party results

Last year's New York State QSO Party took place on Saturday October 19, 2019. Members of Peekskill/ Cortlandt Amateur Radio Association were once again hosted by Joe, WA2MCR in his sun room, using 100W output, a ZS6BKW dipole and a Carolina Windom antenna. Operators included WA2MCR, Verle W2VJ, Nick KD2SKY, Lou KD2ITZ and NM9J. For full details, see the November 2019 issue of *PCARA Update*.

Verle W2VJ and Nick KD2SKY operate from Joe WA2MCR's sun room during the New York State QSO Party on October 19, 2019.

In the NYS QSO Party, phone contacts score 1 point, CW QSOs score 2 points and digital contacts score 3 points. For New York State entries, total score is calculated as:

(number of total QSO points) $\times$ *(number of multipliers, 121 max)*.

Operating from Westchester County with club call **W2NYW**, PCARA claimed the following score:

Year	QSOs	Points	Multipliers	Claimed total
2019	330	400	90	36,000

Full results and the list of NYQP award winners for 2019 were published on March 7, 2020 on the NYQP web site http://nyqp.org/wordpress/. Here is a list of the entrants in PCARA's Class, "Multi-one, low, mixed" meaning multiple operators with only a single trans- mitted signal at a time, 5-100 watts output, mixed mode. PCARA was listed in fourth place out of six.

Multi-One Low Mixed (NY State)

Station	QSOs	Mults	Score	Counties	Locn
KX2NY	619	95	93,765	52	DEL
W2ORC	430	86	60,286	44	ORL
N2PA	426	84	45,864	43	SCU
W2NYW	321	89	34,354	46	WES
W2N	156	66	16,896	37	CAY
AC2XC	198	64	12,736	36	WYO

The plaque sponsored by PCARA for NY Multi-One Low Power was won by **KX2NY**, Hudson Valley Sysops Association in Rosend- ale, NY with operators W2XL, NG2D and K4HA. Their score was 93,765 total.

In the 2018 NY QSO Party, PCARA was top of this same cate- gory with a total score of 36,040. In 2019, the leading stations above PCARA had higher

PCARA's plaque from the 2018 QSO Party for 1st place in "New York Multi-One, Low Power".

scores, mostly as a result of many more CW contacts. Joe has confirmed that stations listed above W2NYW in class 'New York Multi-One, Low Power' had concen- trated on CW to boost their scores.

The other plaque sponsored by the club — Non-NY SSB Low Power — was won by Josh, K8YLK of Akron, OH with a score of 3,948.

Joe also submitted the W2NYW score for inclusion in the Club Entry of the Hudson Valley Contesters and DXers group. Their combined club entry (including KX2NY) had a total of 3,941 QSOs for a total of 421,184 points. - NM9J

Household Recycling Day

A Spring **Household Recycling Drop Off Day** had been previously scheduled for Saturday April 4th at FDR State Park, Route 202, York- town. The event, organized by Westchester County, has now been canceled.

Show and tell

At the March 1st PCARA meeting, Lou KD2ITZ took the opportunity to show the latest pneumatic launcher acquired by Charles N2SO. The **CSV17** is a compact 17 inch long model with 3D-printed com- ponents, available as a kit or pre-assembled from Alan Biocca Engineering, http://www.akbeng.com/ .

Across the Pond - N2KZ

[The following article by Karl, N2KZ was written for *Communication*, monthly journal of the **British DX Club** (BDXC). – *Ed.*]

The Thousand Mile Circle

Sometimes the most obvious things are never said. All of us love to hear and read about miraculous DX catches and DXpeditions. We dream what might be heard if we had the chance to use enormous complex curtain arrays or 3000 foot Beverage antennas strung out over the cliffs as our skyhooks. Alas, most of us are not that fortunate! If you are *not* armed with sophisticated DSP radios that record the entire band for later analysis — or — thousand dollar home-brewed ferrite antennas to null the night away... what do *you* hear?

I have been listening to medium and shortwave broadcasts basically since birth. My first multi-band radio was gifted to me back in 1965. I have listened to radios all over the world and heard some amazing things. Starting with my very first two-transistor reflex AM radio (with built-in whip antenna!) I have filled many, many notebooks with loggings and wonder and memories. It is a great hobby, isn't it?

One rule-of-thumb always holds true: If you are just a casual listener using a competent household radio or a nice car radio, every night your medium wave reception may stretch out to about 1,000 miles (1,600 km) from home. You just need to know where to look! At my

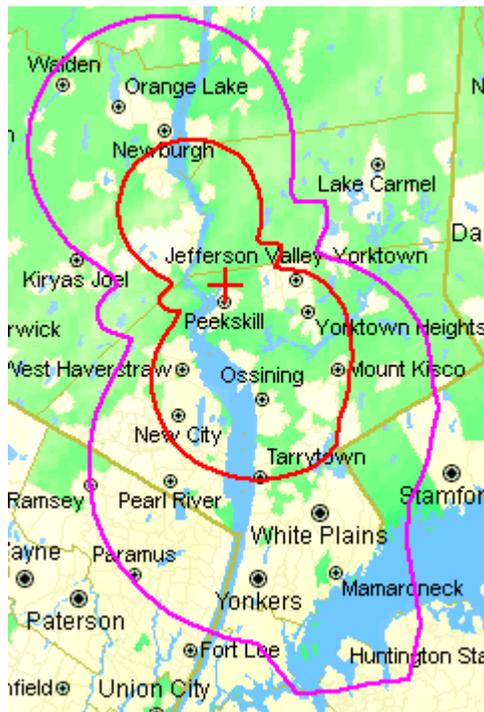*Aud-Ion vintage two-transistor AM radio. [N2KZ pic.]*

home north of New York City, my circle of pick-up begins down in central Florida, passes by New Orleans, St. Louis and Minneapolis. To the north, the arc encompasses all of Atlantic Canada, Quebec and Ontario. Anything past that grand circle of familiar stations becomes smile-on-your-face "good DX!"

Another constant as the Northern Star are the effects of SRS and SSS — Sun Rise Skip and Sun Set Skip. A lot of people call this 'the grey line effect.' This is that sporadic and wonderful turn of events that comes with the passing of daytime into darkness and vice versa when exciting and new stations fade in and out.

From my part of the world during sunrise and sunset, you will hear stations begin to float in from Northern Canada, Maine and New Hampshire. The wave later highlights New England and upstate New York and then passes down the Eastern Seaboard into Maryland, Virginia, the Carolinas and Georgia before total darkness occurs. The exact same pattern will repeat itself 12 hours later. This phenomenon can really fill-up a log book! Every day you'll have a couple of chances for all these lesser powered stations to break through a frequency to reach you!

Our licensing authorities in North America (America's FCC and the Canadian CRTC) try all sorts of schemes to squeeze as many stations as possible onto the airwaves. Remember, our standard is *10 kilohertz* spacing between channels using 119 frequencies from 530 kHz to 1710 kHz. Very sadly, there is no long-wave broadcasting here at all — unless European stations pop through. 198 kHz and 252 kHz come to mind!

To further maximize the amount of RF our medium waves can handle, radio stations sometimes switch between day and night antenna patterns, use tiny SRS and SSS power allocations and follow seasonal adjustments to adjust the length of their broadcast days.

Night-time pattern for AM station WLNA, 1420 kHz – 1000 W night, 5000 W day.

A station may be 5,000 watts non-directional during

1,000 mile circle around New York City shows reception range for broadcast AM.

the day, 1,000 watts directional at night switching back and forth at local sunrise and sunset rounded off to the nearest 15 minutes!

Adding to the complexity, the stations that are squeezed in as daytime only broadcasters often have very low power privileges during 'critical hours.' If your station is licensed as daytime only, you might be on the air from 5:45 in the morning until 9:00 at night during the height of the summer. If you were literally daytime only, your operating hours in the winter might shrink to 7:45 a.m. to 4:45 p.m. With such limited hours, it would be very difficult to keep a radio station in business for very long!

To compensate for this inconvenience, additional hours are added to daytime licenses hopefully keeping your radio signal alive at least into your main city of coverage. Imagine being 1,000 watts daytime, 22 watts during critical hours! You would be allowed to sign on at 6 am with 22 watts. When sunrise officially occurs, you can rise up to full power reverting back to 22 watts to finish out your day after legal sunset. Confusing? You bet!

In the last few years in America, low powered FM licenses have been issued to AM medium wave stations in need. Even the most dominating full-powered AMs now boast that they are finally on FM. In example, Baltimore's 50 kW WBAL 1090 now has a sister station W268BA 101.5 FM at 250 watts and also broadcasts via a digital HD Radio virtual channel WIYY-HD2 on 97.9 MHz. Got it? Our radio broadcast frequencies are like a disorganized garage. "I know it's in there somewhere! I just have to find it!" (Hint: Get your medium wave DX while you can. Many stations are reverting to FM or all-digital. They may soon be gone forever!)

In turn, DXing this mess can become a mathematical and scientific ultimate challenge. Let's see... I really want to log this station down in North Carolina that only operates with 250 watts daytime and 14 watts critical hours. Let me look at the sunrise / sunset charts for that station and all the other stations within a few hundred miles of my location and the target station. Then I'll check what their legal sign-on and sign-off times are using the FCC database on-line (web search 'FCC AM Query.') When these three closer stations sign off before the one in North Carolina and it's the right time of the year so that the times align correctly and the grey line reception is optimal, I should be able to

catch an ID straight up on the hour at 5:00 p.m. in the middle of October. Whew! It can get really crazy when you are a seasoned determined DXer looking for new stations!

Tune in on a typical night in North America and you will immediately see that nearly every frequency has a cacophony of multiple signals on all but the channels with very strong locals. In the New York City area, we have 'clear channel' 50 kW stations on 660, 770, 880 using omni-directional antennas broadcasting from sites with excellent ground conductivity. Directional 50 kW stations operate on 710, 1010, 1050, 1130 and 1560 kHz with varied results. The rest of the channels are 'up for grabs!' From 530 kHz to 1710 kHz, there are 119 channels in all!

Finding DX Heaven

Within the two medium wave clubs in North America, The **National Radio Club** (NRC) and **The International Radio Club of America** (IRCA) there are dozens and dozens of DXers that go to the ends of the Earth to log new and amazing stations. DX heaven is out there if you know where to go!

Where does the most amazing medium wave DX appear? Venture to the little village of Cappahayden south of St. John's in Newfoundland; the seashore along Cape Cod south of Boston or the cliffs along the Oregon Coast overlooking the Pacific Ocean. Here Beverage antennas are always welcomed. Often, these locations are selected to take advantage of cliffs that block signals from the continents that lie behind them. You

Cappahayden, NL DXpedition shows John Fisher, Jean Burnell and Bruce Conti in front of K9AY loop antenna.

want to enjoy the full potential of the signals arriving from overseas! It has been proven, time and time again, when you visit carefully selected seashores the entire world can find your radio if you have skill and great equipment. These locations are in the same league as Sheigra in Northwest Scotland and the outposts found in the most northern reaches of Scandinavia.

Fascinating tales from these legendary DXpeditions posted in the club journals surpass your wildest imagination. Loggings from deep Africa, India, the Far East and Oceania are duly heralded as great catches. Distant islands in the Pacific appear along with Korea, Japan, China, Australia and nearly everywhere you can think of. As I learned from my trip to Hawaii, oceans are truly free mileage for medium wave reception. Almost nothing stops these signals over deep water! Adventure is waiting for you!

New Technology for Medium Waves

Some very seasoned and talented DXers have been using clever loop antennas and miraculous and fascinating ferrite rod contraptions that have pushed medium wave DXing developmental technology into an entirely new era. A brilliant and inventive gentleman, Gary DeBock, has been traveling all over the Pacific Rim, Oceania and beyond using simply amazing homebrewed ferrite loop antennas made from Russian surplus ferrites and common-place white PVC pipe. His DX results are now legendary.

Gary DeBock is pictured on a DXpedition to Kona, Hawaii with "ferrite sleeve" antenna and C. Crane Skywave radio.

Adding to his break-throughs, Gary has gladly shared his designs and techniques with the DXers all around the world! Take a look at: https://dxer.ca/articles/92-gary-debock for a comprehensive overview. Maybe you have an additional idea that can further improve these devices. Want to know what you can hear in Samoa? Gary can tell you! Gary's continual documentation and pictures create ongoing sagas that read like a DXer's version of James A. Michener's *Tales of the South Pacific.* Always a thrilling read!

DXing North America

Getting back to casual DXing, the thousand mile ring proves true. I can rely on hearing these distant 'nice catch' stations night after night:

650	WSM	Nashville, Tennessee
750	WSB	Atlanta, Georgia
830	WCCO	Minneapolis, Minnesota
1040	WHO	Des Moines, Iowa

1120	KMOX	St.Louis, Missouri
1540	KXEL	Waterloo, Iowa

When the band goes especially deep — or auroral conditions appear (rarely) — you can stretch to these 'really nice catch!' stations...

610	WIOD	Miami, Florida
640	KFI	Los Angeles, California
820	WBAP	Dallas/Fort Worth, Texas
850	KOA	Denver, Colorado
870	WWL	New Orleans, Louisiana
1160	KSL	Salt Lake City, Utah
1200	WOAI	San Antonio, Texas

In the great beyond are a multitude of stations from Cuba (mostly at the bottom of the dial) and on rare occasions Venezuela, Mexico and places south.

One thing that has always fascinated me is the magic hour of half past two in the middle of the night. Some of my most amazing and exciting DX has been heard at that wee hour of the morning. I wonder why? The only times I have ever heard KFI 640 Los Angeles was just around 2:30 a.m.

I should also mention some heterodynes that are relatively easy to hear on this side of the pond. Right around our local dusk, especially in the height of

Saudi Arabia Radio.

*Moorside Edge transmitting site in northwest England radiates three services including talkSPORT on 1089 kHz with **400 kW.***

winter, (2200 to 2300 UTC or so) you will often hear Radio Riyadh in Duba, Saudi Arabia on 1521 sock a loud one kilohertz het upon reception of WWKB 1520 Buffalo, New York. Later in the evening, a similar situation happens with WBAL 1090 Baltimore when the British 1089 kHz talkSPORT carrier rides in with strength between midnight to 0500 UTC. These heterodynes can be heard nearly every night during the Winter months.

Additionally,

even during daytime hours you can sometime eke out signals out to 200 miles or more. In the Winter, from mid afternoon onward, I may be lucky and hear stations from the Chicago or Detroit area and many other places that are similar distances away.

A Matter of Perspective

When I talk to my friends in Michigan, I have to remind them once in a while that they have quite an advantageous position for DXing especially on medium wave. For one thing, the ground conductivity in Michigan and points west is much better than New England and New York. My neighborhood is built upon glacial rock and endless stones. This is not an optimal place to hear long distance AM radio stations! In places, the soil is only as deep as your finger!

Go try Kansas or Iowa! Mid-America really is the heartland. Soil is plentiful and so is ground moisture. Medium wave radio signals carry so much farther. Even in states like Utah, Colorado, Arizona and New Mexico, stations (especially at the low end of the band) will seemingly travel forever. It's a great experience.

Another advantage of being in the center of a continent is being completely surrounded by radio stations. Those of us in Scotland, England, Wales and Ireland are faced with having half of our potential pick-up area being under water. It's called the Atlantic Ocean! My part of North America is no different except my ocean water is off to the east and Europe's ocean water is to the west! Listeners in the middle of these continents can listen in both directions! Double the DX!

My curiosity is all about what *you* hear in the United Kingdom. What distant stations come in every night and which ones are good stretches for you? I have some experience from my visits to England, Ireland and France but I don't have the encyclopedic knowledge common to BDXC members. Listening to a variety of SDR radios over the web, I can see that your thousand mile radius reaches out to Portugal, Spain, Rome, Vienna, Berlin and the tip of Northern Africa. I would love to see your logbooks! On an average night, what can you hear from your car or home table top radios?

What an amazing and wonderful world it is! Best DX and 73 to you!

1000 mile circle from N. England.

— Across the pond, I remain, Karl, N2KZ.

Welcome to Marley - N2CBH

Molly checks out the Campbell Hausfeld CC2300 cordless air inflator that Bob found while both were on a walk.

walking my dog" where Bob N2CBH describes finding an abandoned portable compressor while walking family dog **Molly**. Bob went on to convert the cordless air inflator into a portable power supply for his Yaesu FT-817 transceiver – see p17.

The N2CBH family now has a new dog named **Marley**, and Bob introduces her below. *–Ed.]*

Marley is a mixed breed — we think Pug and Labrador Retriever. She is a rescue from — guess where? The Humane Society of Westchester at New Rochelle. She is 4½ years old, very well behaved and loves other dogs and people. We rescued Marley nearly three weeks ago — shortly afterward the animal shelters in Westchester were closed to the public and only shelter personnel had access — which means no walk-in adoptions or drop offs until the emergency measures have been lifted and shelters can be reopened. Diane and I feel very lucky to have gotten Marley when we did as just a few more days would have meant not making this precious connection.

The Humane Society is not easy to find without GPS! It is a very professionally run facility and the staff are very courteous and dedicated to their work. It was actually https://petfinder.com that paired us with Marley. You can specify your requirements and be placed on an email list.

Marley now accompanies Bob on neighborhood walks. [N2CBH pic]

The ham radio connection? I have taken to carrying my handheld during our doggy walks. More amateur radio and cardio-activity simultaneously!

- Bob N2CBH

More with less μBITX

You may remember a previous article (*PCARA Update* March 2020) where I described assembly of the **microBITX v6**, an inexpensive 7-band SSB/CW transceiver from India. I also described early experiences operating the radio — there were good features and a few problems. At that point I had an unmodified μBITX, running standard firmware v6.1, as supplied by HF Signals' Ashhar Farhan VU2ESE.


μBITX v6 seven-band QRP SSB/CW transceiver.

I reported several shortcomings that might be fixed by an update to the firmware. I'm pleased to say that I have now found a satisfactory update. Read on about my installation of a spare Arduino Nano and testing of alternative software.

Various ideas have been harvested from the BITX20 message board on Groups.io. Pay a visit to https://groups.io/g/BITX20 for helpful advice on the full range of BITX and μBITX products.

Hardware summary

For those who might not be familiar with the μBITX v6 hardware, here is a brief summary. The transceiver can produce 5-10 watts SSB/CW output on seven HF bands from 3.5 – 30 MHz using a double-conversion design. The three local oscillators are synthesized by a Silicon Labs Si5351A clock generator IC which is controlled by an **Arduino Nano**.
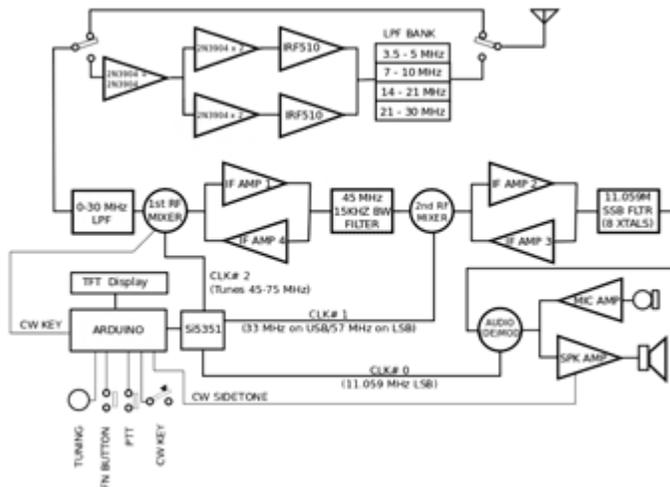
Block diagram of μBITX v6. [VU2ESE]

The Arduino Nano is a small circuit board which is based on the Atmel ATmega328P single-chip microcontroller, with a mini-B USB connector at one end. In the μBITX v6, the Arduino Nano plugs into a larger board containing the Si5351A synthesizer with additional connections to the touch-screen display mounted behind the front panel. HF Signals calls this assembly a 'Raduino'. In addition to controlling the three frequencies generated by the Si5351A, the Raduino provides TX/RX switching, LPF selection and a built-in Morse keyer.

Official Arduino Nano.

A few bugs

Some of the problems that I encountered with the original μBITX firmware v6.1 included:

- Re-setting the BFO frequency or re-setting the frequency calibration loses the previous setting.
- Frequency display does not keep up with the tuning control knob.
- Turning the tuning knob quickly causes an abrupt change to fast tuning steps.
- Upper sideband / Lower sideband switching via the touch-screen does not take effect until the tuning control is moved.
- When sending CW, the first dit or dah is partly cut off.
- When operating CW, there is a shift between receive frequency and transmit frequency.
- The display would sometimes hang, going to an all-white screen.

Cautious approach

Instructions are available online for overwriting the factory-installed firmware with a newer version. This involves connection of the μBITX v6 via its USB port to a suitable computer running the Arduino IDE (Integrated Development Environment). I was concerned that if anything went wrong with updating the firmware, I might end up with a μBITX that was no longer functional. Another concern was that even with a successful upgrade, if the new firmware was unsuitable, it might be impossible to revert to the original factory-installed version.

I followed a suggestion in the BITX20 group from Jerry KE7ER who said that when downloading firmware for the μBITX, it pays to have a few **spare Arduino Nanos** available. This allows experimentation without harming the code in the factory-programmed Nano. Jerry also recommended that spare Nanos should be ordered with the pins not yet soldered in place. This is because pins will need to be soldered on the "top" side of the Nano in order to fit the socket on the Raduino, and not on the bottom as in an "official" Arduino Nano.

KE7ER provided a link to a suitable product, "ELEGOO NANO V3.0 Controller Board 3Pcs". This package from China includes three Nano v3.0 controller boards along with three sets of mounting pins which can then be soldered on either side of the board. See: https://www.amazon.com/ELEGOO-Arduino-ATmega328P-Without-Compatible/dp/B0713XK923

Nanos are here

I ordered one of the recommended Nano packages along with a USB A-male to mini-B cable. (You might have a suitable cable already for a camera or cell phone.) The order arrived four days later.

The first task was to install two rows of 15-pin connectors as supplied with each Nano package. There is no need to install the 6-pin "In Circuit Serial Programming" (ICSP) connector as this is not used by the Raduino. Using a small soldering iron with a fine tip and taking care to install the pins standing upright on the "top" side of the board, I carefully soldered each of the 30 pins on the underside of the board. The top side of the board is the side with
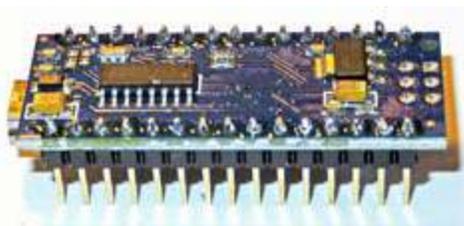
Elegoo 'substitute' Arduino Nano with 2 × 15 pins soldered on underside of board.

USB mini-B socket, reset button and ATmega382P microcontroller. If you get confused, just follow the pattern of the Nano supplied with the μBITX v6.

Programming time

The next job was to install the Arduino IDE software on my Windows notebook computer then configure it for the Arduino Nano. Fortunately, Ashhar Farhan, VU2ESE has published a YouTube video showing how to carry out all the steps of installing the software, downloading an Arduino "sketch" (microcontroller programs), followed by compiling and uploading to the Nano in the μBITX. See: https://youtu.be/3n_V3prSJ_E or go to: https://www.youtube.com, search for 'ubitx' and

choose the title: "Uploading to uBITX".

I recommend viewing VU2ESE's video, but as an aid to accomplishing the firmware update, here is an outline of the steps that you would need to carry out.

1. Download the Arduino IDE software from https://www.arduino.cc/en/Main/Software . There are versions available for Windows, Mac and Linux. Install the downloaded file on your computer and accept all the USB drivers that are offered.
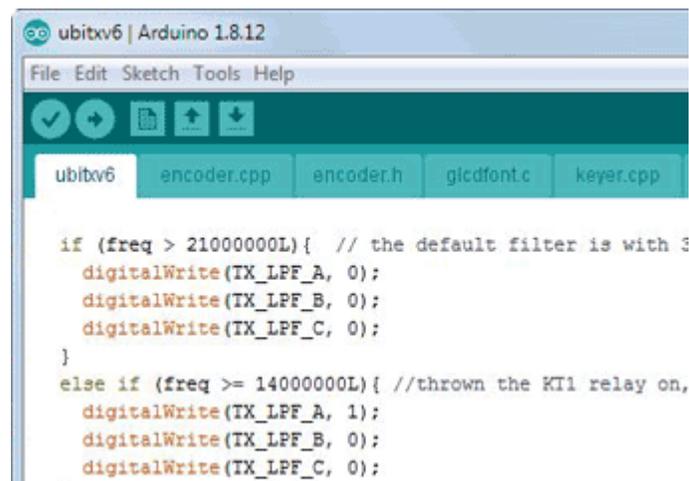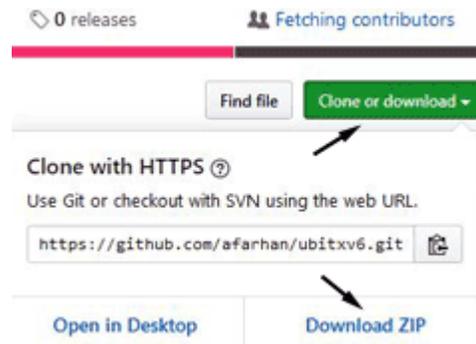

Partial screen shot of the Arduino IDE software as installed on notebook computer.

2. Connect the powered-up μBITX v6 — or a spare Nano — to the computer's USB port using a USB-A to mini-B cable. Start the Arduino IDE software and from the menu select Tools → Board → Arduino Nano. Then using Tools → Port, select the virtual COM port which the Nano is connected to — mine was on 'COM12'.

3. In your web browser, navigate to the location of the Arduino sketch that you want to try out. In the case of Ashhar Farhan's own code, the location is: https://github.com/afarhan/ubitxv6 . Click on the Github green button at top-right marked "Clone or download", then select "Download ZIP". This will bring a copy of all necessary files in a single Zip file to your computer's download folder, e.g. as "ubitxv6-master.zip".

Downloading code from Github.

4. Using the software on your computer for working with Zip files (e.g. WinZIP, 7-Zip), unzip the downloaded file to a folder in the Arduino **Sketchbook location**. You can find out where this folder is

located using File → Preferences in the Arduino IDE software. In my case the location was: C:\Users*xyzxyz*\Documents\Arduino. After telling WinZIP where to unzip to, the ZIP file should be automatically expanded into a new folder under 'Documents\Arduino', e.g. "ubitxv6-master."

5. The main file in the Arduino sketch folder has an extension of **.ino** (Ardu**ino** sketch file). It is important that the folder name agrees with the name of this .ino file. In my case, the file was named **ubitx_v6.1_code.ino** so I renamed the containing folder from 'ubitxv6-master' to **ubitx_v6.1_code**.

6. Verify and compile the sketch by clicking the "Check mark" ☑ icon on the tool bar. (You can also use the menu command: Sketch → Verify/Compile).

7. Upload the compiled code from your computer to the Nano using the 'Right Arrow'➲ icon on the tool-bar, or the menu command: Sketch → Upload.

First try

For my first attempt, I downloaded Ashhar Farhan's code "v6.3.1" dated 1/24/2020 from Github, unzipped to the folder as already described then compiled the code and uploaded the result to a shiny new Elegoo Nano that was simply plugged in at the end of the USB cable and powered from the computer.

Spare Elegoo Nano connected to the mini-B end of a USB-A to Mini-B cable.

When the upload was complete, I disconnected the spare Nano from its USB cable. With the µBITX v6 switched off, I removed the top cover then carefully eased the factory-supplied Nano out of its socket on the Raduino board. **Hint:** before removal, make a note of the Nano's position so you can plug the new Nano in the same way round, with all 30 pins correctly aligned.
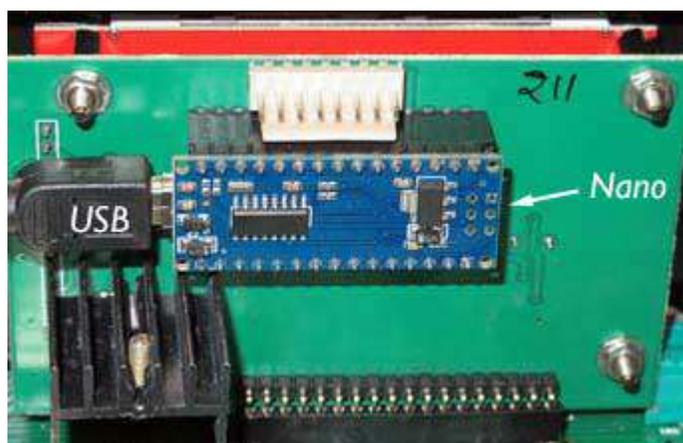
Close up of Raduino board mounted behind front panel of the µBITX v6. Factory-supplied 'Arduino' Nano is arrowed.

Switching the µBITX v6 back on, I was a little surprised to find the touch screen not working — then I remembered that all the previous calibration data was stored in the *old* Nano which had just been removed. I switched off then switched on again while pressing in the tune control. This started the routine for touch screen calibration, frequency and BFO setting.

After calibration, the µBITX v6 was working normally again. As far as I could tell, the downloaded software from Ashhar Farhan was identical to the factory-supplied firmware, right down to the "V6.1" displayed on the touch screen. While there was no improvement over the original firmware, the exercise proved the Elegoo Nano was compatible with my µBITX v6 and the procedure for uploading new software was working.

Switch to Reed

For my next test of updating the µBITX v6 firmware, I followed discussions in the BITX20 group on Groups.io where replacement code by 'Reed N' (KR7EED) was being tested and improved on. This led me to an Arduino sketch in the reedbn repository at https://github.com/reedbn/ubitxv6 . At the time, the latest change was dated Feb 5, 2020.

I downloaded ubitxv6-master.zip and unzipped into a new folder in the Arduino Sketchbook location. Since the Arduino file was named **ubitxv6.ino**, I renamed this folder to **ubitxv6** before opening in the Arduino IDE. The code compiled without errors, so I uploaded it directly to the 'spare' Nano which was already installed in the µBITX v6 using the USB cable connected to the mini-B USB port on the rear panel.

It's alive!

I disconnected the USB cable and restarted the µBITX v6. As before, I had to go through a calibration procedure for touch screen, local oscillator and BFO frequency, where I supplied the same values as before (178.500 Hz, 11.0558 MHz).

Once the calibration was complete, I was pleasantly surprised by all the improvements. The display was redrawing faster and the VFO frequency was keeping up with the tuning knob. In addition, the acceleration to fast tuning was smoother. There was a new button on the display labeled with a gear wheel
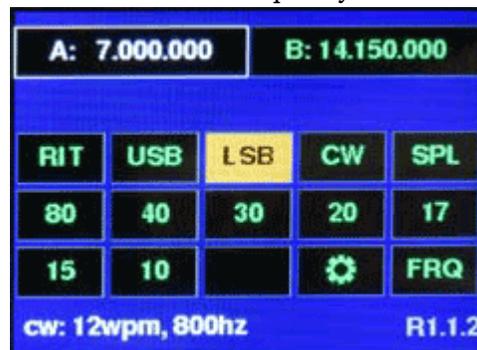
µBITX v6 color touch-screen after uploading Reedbn's code to the spare Nano.

which brings up the "Settings" menu — much more convenient than holding in the tuning knob for eight seconds. And there was a new "TX" indicator on the display which appears in red when the µBITX is transmitting. The firmware version displayed on-screen was now R1.1.2
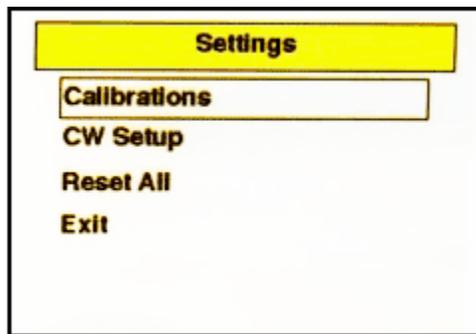
New settings menu on µBITX v6 with R1.1.2 firmware. (Colors reversed).

On CW, the problem of the first dit being truncated had been overcome. I changed the CW Setup's "Tx to Rx Delay" from default 50ms to 500ms to suit my semi-break-in keying preference. CW operation was fine with a straight key or with a paddle plugged in to take advantage of the built-in keyer. And best of all, the strange frequency offset with the original firmware on CW-transmit was completely cured — the µBITX now transmits and receives CW on the very same frequencies as a $1,000 radio.

USB/LSB switching takes place automatically as the radio is tuned above or below 10.000 MHz. The changeover after pressing the USB or LSB button on the touch screen is instantaneous — instead of having to wait for the tuning knob to be nudged.

There are a couple of other improvements — when using the "Calibrations" menu, the previous value of the Local Oscillator offset and the BFO frequency are not thrown away when you start adjusting. Instead the adjustment begins from the previously-saved setting. The display hanging on a white screen seems to have disappeared. And for the visually impaired it is possible to turn "Menu Audio" on so that menu choices are announced in Morse Code. (Be patient, it takes a while). Menu Audio can also be turned on and off from the main screen by holding in the tuning knob for eight seconds. Listen for $\overline{CT}$ – menu audio on, and $\overline{SK}$ – audio off.

Hardware improvements

I have been loath to make changes to the hardware — the standard µBITX v6 with improved software R1.1.2 is now a workable QRP transceiver. For beginners on a budget or amateurs in developing countries it could make all the difference between being on-the-air and being off-air. In the previous article I described fixes for the lack of filtering in the receiver front-end — use of an external antenna tuning unit or a bandpass filter.

I did try one more addition — an external audio filter. I had an old Radio Shack DSP40 'Digital Signal Processor' in the basement. This is an audio frequency noise reduction system with built-in speaker dating from 1993. It has narrow/ medium/wide settings for SSB and for CW. I found it to be most effective on CW where it can reduce the normal receiver audio bandwidth of 300-3000 Hz to roughly 600-900 Hz on the

Radio Shack DSP40 audio filter (top) is connected to the µBITX v6 audio output.

'narrow' setting. This allowed individual CW signals to be picked out from the mêlée of a crowded band.

Less is more

One of the attractions of the QRP movement as expressed by the late Rev George Dobbs, G3RJV is the simple enjoyment of your own efforts. A regenerative receiver may not perform as well as a superhet, but if you build it yourself, there is more involvement in both construction and operation. G3RJV believed that a home-built QRP transceiver could be low cost, effective and achievable. He would quote William of Occam — *'It is vain to do with more what can be done with less'.*

QRP/home-brew enthusiast Rev. George Dobbs, G3RJV (right) presents construction contest prize to Martin G3VC for his home-built GDO at Bury Radio Society in 1985.

In that spirit, the µBITX series definitely shows what can be done with less. Lift the cover and check the low component count. Even the microcontroller tips the scales on the "less" side. The Nano 3 has a clock speed of only 16 MHz, with 2 KB of SRAM, 32 KB of flash memory and 1 KB of EEPROM. So much capability squeezed into such a little space — and all courtesy of Ashhar Farhan VU2ESE and Reed KR7EED.

- NM9J

Maple sap and Amateur Radio - N2CBH

As some of you may know, one of my hobbies is **maple sugaring**. I have carried it out for three seasons and this year I managed to merge two of my favorite hobbies together. I had a small amount of sap to evaporate since my last boil-down two weeks earlier. You need approximately 50 gallons of sap to produce a gallon of maple syrup. I had about three gallons left to boil down so I produced very little but I didn't want to waste any. I obtained an additional 10 ounces of syrup for all my labor on Sunday. Maple sugaring is mostly about hanging around a fire and watching the sap boil down. It takes a long time and it can be boring if you don't have something else to do. Enter amateur radio.

Bob boiled down the last of his maple sap in late March.

I decided to set up my QRP field radio in the back yard. It was a beautiful day and I needed to spend a fair amount of time outside. My set up consists of a Yaesu FT-817 HF/VHF/UHF transceiver capable of 5 watts output. I had previously attached the rig to a discarded Campbell & Hausfeld portable compressor. Why a compressor? Well I found this item while walking our dog a while back and noticed it had a good sized 12V DC battery with 7 ampere-hour capacity. It also had a convenient handle to carry around. The compressor is designed to fill a car tire in a pinch and had no obvious purpose for amateur radio. But the

Campbell & Hausfeld compressor control panel. [All pics - N2CBH]

battery has enough capacity for several hours of receiving / transmitting.

Bob's FT-817 QRP transceiver bolted to the side of the Campbell & Hausfeld compressor case.

I had previously re-purposed a water sprinkling stand as a support for a Hamstick antenna. The sprinkler head broke some time ago and I decided there was a future for the stand as an antenna support. I placed the antenna mount in the back yard, strung out three radials cut for 40 meters and mounted the 40 meter Hamstick. I connected the antenna to the rig, powered up and the receiver came to life. About 90% of the time was listening but I did work a few of the Virginia QSO Party contestants, with S8 to S9 reports. I managed to work the Maine Bicentennial special event station W1H, with an S9+ signal report from up north.

Just before sundown, it was time to break it all down. It was easy enough to disconnect the antenna, roll up the radials and stow the gear. Set-up took about 15-20 minutes and break down about the same. I had to finish boiling down syrup in the kitchen and continued to work amateur radio into the activities. As darkness fell and I was down to the last 10-15 ounces of maple syrup, the nightly 2 meter roundtable net started — which I worked with my handheld from the kitchen. Multiple bands while carrying out the same activity!

Antenna stand had previously been a lawn sprinkler.

I have always viewed amateur radio as a companion and this weekend proved not to disappoint. What activities have you mixed with ham radio? Let me know — maybe there are some new hobbies in my future.   - 73 de Bob, N2CBH

Peekskill / Cortlandt Amateur Radio Association

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Archive: http://nm9j.com/pcara/newslett.htm

PCARA Information

PCARA is a **Non-Profit Community Service Organization**. PCARA meetings take place the first Sunday of each month* at 3:00 p.m. in Dining Room B of NewYork-Presbyterian/Hudson Valley Hospital, Rt. 202, Cortlandt Manor, NY 10567. Drive round behind the main hospital building and enter from the rear (look for the oxygen tanks). Talk-in is available on the 146.67 repeater. *Apart from holidays and July/August break.

PCARA Repeaters

W2NYW: 146.67 MHz -0.6, PL 156.7Hz
KB2CQE: 449.925MHz -5.0, PL 179.9Hz
N2CBH: 448.725MHz -5.0, PL 107.2Hz

PCARA Calendar

NOTE: In view of restrictions on activities as a result of the novel coronavirus (COVID-19) pandemic, many calendar events for April have been canceled. **Check before leaving!**

Canceled - Sun Apr 5: PCARA meeting, NewYork-Presbyterian /Hudson Valley Hospital, 3:00 p.m. **Watch for details** of possible **online meeting**.
Canceled - Sat Apr 18: PCARA Breakfast, Turco's, Yorktown Hts. 9:00 a.m.
Instead - **PCARA Nightly Roundtable net**. 7:30 p.m. 146.67 MHz -0.600, 156.7 PL.

Hamfests

Canceled - Sun Apr 19: Splitrock ARA North Jersey Hamfest, Roxbury Senior Center, 72 Eyland Ave, Succasunna, NJ. 8:00 a.m.
Postponed from Sun May 3 to Sun Oct 4: Orange County ARC Hamfest, Wallkill Community Center, 2 Wes Warren Dr., Middletown, NY. 8:00 a.m. *PCARA Club table*.

VE Test Sessions (**Check** with contact before leaving)

Apr 9: WECA, Westchester Co Fire Trg Center, 4 Dana Rd., Valhalla, NY. 7:00 p.m. S. Rothman, (914) 949-1463.
Apr 12: Yonkers ARC, Yonkers OEM, 789 Saw Mill River Rd, Yonkers NY. 11:30 a.m. Pre-reg. Walt, KD2D kd2d'at'arrl.net.
Apr 17: Orange County ARC, Munger Cottage, 183 Main Street, Cornwall NY. 6:00 p.m. Contact Joseph J. DeLorenzo (845) 534-3146.
Apr 20: Columbia Univ ARC, 531 Studebaker Bldg, 622 W 132nd St, New York. 6:30 pm, Alan Crosswell (212) 854-3754.
Apr 25: PEARL, Mahopac Public Library, 668 Route 6, Meeting Rm 3rd Floor, Mahopac NY. 10:00 a.m. Contact Michael F. Troy

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