



PCARA Update



Volume 25, Issue 12 Peekskill/Cortlandt Amateur Radio Association Inc. December 2024

Cue the holidays

The November 2024 PCARA Membership Meeting was held on Saturday November 2, 2024, at the Putnam Valley Free Library in Putnam Valley, NY. A presentation was given by Bob N2CBH entitled *Introduction to Vector Network Analysis* during which a professional quality VNA was used to examine filters and antennas. The presentation was recorded by Rob AC2DT and should soon be available on the PCARA YouTube channel, <https://www.youtube.com/@peekskillcortlandtamateur7670>.

Following Bob's talk was an appearance by Steve KD2OFD from Westchester County ARES / RACES (<https://www.weca.org/aresraces>) with an update on what has been going on in the County. An in-depth article can be found in this month's edition of the *PCARA Update*.

Also taking place at the November Meeting was the **Election of Board Members** for Vice President and Treasurer. Bob N2CBH and David KD2EVI were re-elected to their positions respectively. Congratulations!

On Saturday November 21, 2024 another **PCARA Breakfast** was held at Uncle Giuseppe's Marketplace in Yorktown Heights, NY with some eight members attending.

The **PCARA Annual Holiday Dinner** will be held on Sunday December 8, 2024 at 5:00 p.m. at the Cortlandt Colonial Restaurant in Cortlandt Manor, NY. The menu can be found in this month's issue of the *Update* and cost is \$50.00 per person (cash). RSVP to Malcolm

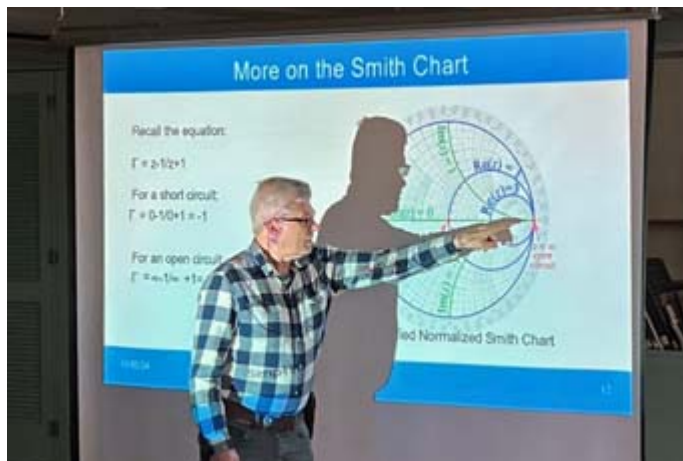


At the November meeting, Greg KB2CQE presented Steve KD2OFD with the certificate for first place in the Fall Fox-hunt.

NM9J with your headcount if you have not done so already. Please consider joining us to enjoy the most festive and joyous time of the year and to celebrate another year together!

Please mark your calendars with the following upcoming events:

- Sunday December 8, 2024, **PCARA Holiday Dinner**, 5:00 p.m. at Cortlandt Colonial Manor Restaurant.
- Saturday December 21, 2024 at 9:00 a.m.: **PCARA Breakfast** at Uncle Giuseppe's Marketplace in Yorktown Heights, NY.
- Saturday December 21, 2024 at 11:30 a.m.: **PCARA Laurel VE Test** Continued on page 2 ⇨



Bob N2CBH explained the Smith Chart during his presentation "An Introduction to Vector Network Analysis" at the November 2 meeting. [N2KZ pic.]

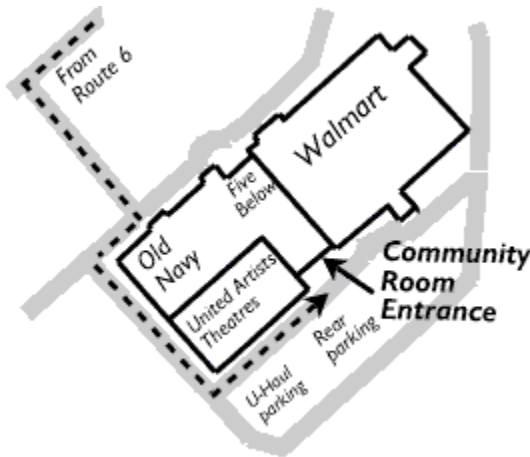
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Session at the Putnam Valley Free Library in Putnam Valley, NY. Candidates please contact Dave KF2BD at daveharper[at]vivaldi.net to register.

- Sunday January 5, 2025 at 3:00 p.m.: **PCARA Bring and Buy Auction** at the Cortlandt Town Center CUE Room. Bring along your no-longer-needed treasures!

The first PCARA Membership Meeting of 2025 will take place on Sunday January 5, 2025 at 3:00 p.m. at the Cortlandt Town Center CUE Room. I look forward to seeing each of you there.



- 73 de Greg, KB2CQE

PCARA Board

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Greg Appleyard, KB2CQE; kb2cq[et]arrl.net

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Vice President Emeritus: Joe Calabrese, WA2MCR.

Net night

Peekskill/Cortlandt Amateur Radio Association holds a roundtable net on Tuesday evenings at 8:00 p.m. and a directed 'Old Goats' net on Thursday evenings at 8:00 p.m. Both events take place on the 146.67 MHz W2NYW repeater, offset -0.600, PL 156.7 Hz.

Join the roundtable to find out what members have been doing or join the Old Goats with net control Karl N2KZ for news and neighborly information.

Note: There will be **no Old Goats net** on Thursday December 26, 2024 and Thursday January 2, 2025.

VE Test result

As reported in *PCARA Update* for November 2024, the VE Test Session of October 5, 2024 had a single candidate. **John Pokluda** of New Canaan, CT passed the Technician test and qualified for General — thanks to being previously licensed as WA2GMP in the 1960's.

There was a long wait for John's new call sign to appear on the FCC ULS web site. Mike W2IG reported: "There was a typographical error on his FCC application and we are still waiting for the FCC to dismiss his application so the ARRL can resubmit."

Finally, on November 9, the FCC granted John a General-Class license with new call sign **KC1VPP**. Well done!

November's VE. Test session, scheduled for the November 2 meeting at Putnam Valley Library did not have any candidates. PCARA's next session is scheduled for **Saturday December 21**, 11:30 a.m. at Putnam Valley Library, 30 Oscawana Lake Rd., Putnam Valley NY. This will be a Laurel VEC Test Session (no test fee) and candidates must contact Dave KF2BD beforehand using daveharper[at]vivaldi.net. A New Year ARRL-VEC session is scheduled for Saturday January 18 at the same location. Both sessions follow Breakfast, 9:00 a.m. at Uncle Giuseppe's.



Get your amateur radio license and discover...
Camaraderie – Community Service
Emergency Preparedness – Fun
Science – Technology

Laurel Volunteer Examiners – No Testing Fee
There are no Morse Code requirements
Must RSVP - daveharper[at]vivaldi.net 914-318-2264



Graphic courtesy of Lou, KD2ITZ.

Adventures in DXing

- N2KZ

Good things come to those who wait. Monday, November 11, 2024 was a historic day for amateur radio operators in southwestern Scotland. A dream was fulfilled. Through the work of three amateurs, a digital radio network was brilliantly installed and configured with keen expertise. Quite a breakthrough it was!

Previously, amateurs in the broad county of **Dumfries and Galloway** were stymied. For decades, an analogue repeater or two provided some coverage



Dumfries & Galloway unitary council.

but there was nothing that linked everyone in one unified place. The county spans about 90 miles from east to west. Many places feature varied terrain including lots of rocky nooks and crannies — quite a challenge for VHF or UHF signals to reach reliably. Some amateurs were getting on in age and no longer had the ability to own and operate complex equipment and outdoor aerials. Finally bringing everyone all together for a gathering became quite a quest!

The members of the Wigtownshire Amateur Radio Club were called upon to find a cure. After many months of contemplation, planning and self-education, an ambitious plan was set afoot. A viable solution was discovered! Why not link everyone with a digital DMR network? Those who could reach a DMR repeater could achieve an instant RF link with just an HT or mobile radio. Those who could not reach an over-the-air repeater could use an inexpensive hotspot to encode their signal onto the Internet for inclusion into the same DMR network. What could make it more attractive? Linking everyone together could be very inexpensive! There are many sources of used and retired commercial DMR gear that can be bought for a song! DMR networking: What an attainable dream it was!

To begin this ambitious project, Ed Beck M6EDB and John McIlwraith GM4ZTO both installed Motorola DR 3000 25



Ed M6EDB and John GM4ZTO. [N2KZ pics.]

watt DMR 70cm RF repeaters at their homes. The resulting coverage area across the county and beyond is simply vast. ‘Saint Allister’ Watson GM7RYR from Edinburgh devoted endless time and effort organizing the build and helping us configure our equipment — and — taught us to become self-sufficient and confident with our indoctrination into the world of DMR. With Allister’s skills of configuring and interlacing networks together, the WARC DMR network rapidly grew and grew.



Allister Watson GM7RYR with Lucy. [GM7RYR pic used with permission.]

Allister even created a new DMR talkgroup — ‘Solway Chat’ TG 234140 — for our use. Slowly but surely, seven of us came online. Those amateurs that did not yet have their own DMR equipment could easily listen into ‘Solway Chat’ using the online Brandmeister Hotline (<https://hose.brandmeister.network/>) using their computers, laptops and cell phones as a receiver.

Many club members also became quite proficient equipment configurators on their own! My QTH became an excellent example. Ed Beck sent me a Baofeng DM-1701 digital HT and a tiny DMR hotspot. This inexpensive and simplistic pair was all I needed for clear and reliable worldwide communication from New York. It was my instant passport to joining the group over DMR from over 3000 miles to the west! A small box arrived via post at my doorstep. It was my personal invitation and ticket to Scotland!



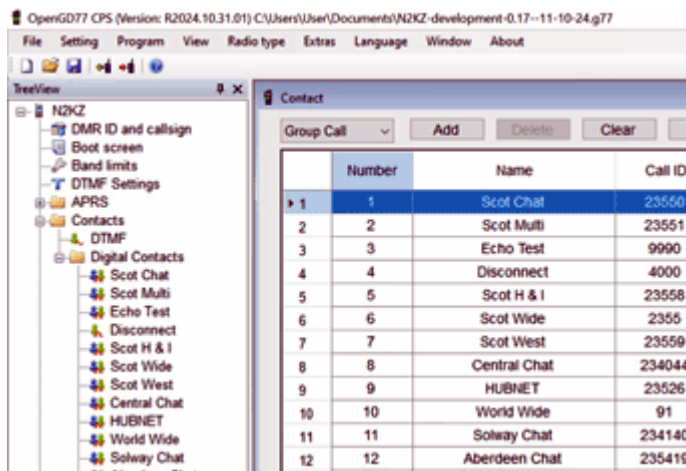
Baofeng DM-1701 dual-band DMR/FM HT. [N2KZ pic.]



MMDVM hotspot uses WPSD software and a Raspberry Pi-type single board computer. [N2KZ pic.]

Through the miracle of Teamviewer computer remote viewing, Allister guided me through my first configuration of the Baofeng digital HT and matching hotspot using the handy (and free) OpenGD77 CPS

software found at: <https://www.opengd77.com/viewforum.php?f=12>. OpenGD77 makes Baofeng programming intuitive, easy and painless!



Screenshot of OpenGD77 CPS (Customer Programming Software) used by Karl to configure the Baofeng DM-1701 FM/DMR handi-talkie.

Allister and I built my own personal codeplug to load our preferences into the Baofeng digital HT. Voilà! I was all set to chat on any of eight different Scottish digital talkgroups — and — I could hear a return of my transmissions on the Brandmeister Hoseline — and it only took just a few minutes. Brilliant!

My Baofeng DM-1701 and a MMDVM hotspot was immediately put into service!

I found the free-to-download configuration software for Baofengs to be very simple and straightforward even to beginners like myself. After I verified and tested my new basic codeplug, I spent another 90 minutes experimenting to see just what I could program into this nifty HT. After I was satisfied with reaching all of the Scottish DMR talkgroups, I added some American entries: our local analog PCARA and WECA 2 meter repeaters and the seven NOAA 162 MHz weather radio frequencies — all with admirable results.

The MMDVM 70cm hotspot operates with a powerful 10 milliwatts on 70cm. The Baofeng DM-1701 digital HT converses with the hotspot with a full-powered 50 milliwatts. These mini-transmissions are quite similar in the radiated power used for your household Wi-Fi communications. A very little RF power goes a long way when you are transmitting packets of digital data. Transmitting with the Baofeng on DMR at 50 milliwatts, the batteries seemed to last virtually forever. Versatile and efficient!

You might think that these power levels might produce only very localized results. Not so! During one chat night, I hopped in my car with the HT in hand just to see how much coverage I could appreciate. My hotspot sits quite conservatively snuggled inside a first-floor kitchen cabinet. The antenna is just a couple of inches long! Holding the HT inside a moving car with

the Baofeng's very modest rubber-duck antenna, I could easily connect with the hotspot and converse within several country blocks near my house. The solid signal range was easily about half a mile around my QTH. Not bad!

Not only was the DM-1701 impressive for DMR communications, it can also serve as a nice analog dual-band HT at a full 5 watts output. Reception was equally nice. This HT has very sensitive 'ears' when receiving local NOAA weather radio stations.

Some operating hints: When using DMR, you need to train yourself to take a good long pause after you press your 'push-to-talk' button to allow for digital processing delay. If you talk immediately after pressing PTT, the first word or two you utter might sound 'up-cut' to the receiving station. [Upcut = broadcasting term for chopping off the beginning of the audio or video of an item, so a small portion is lost. —Ed.]

DMR employs a fairly low bit rate when encoding audio. Hopefully, you will eventually get used to the unusual timbre of 'the DMR sound.' One thing for sure, you will never suffer from impulse interference, co-channel and adjacent channel QRM and other causes of noisy reception found on analog modes, especially HF voice. If your digital interlink suffers from a high bit error rate due to a weak connection, the resulting audio will sound 'blurry'. Very poor connections will 'lose lock' and all audio will be silenced.

This experience added an enjoyable third chapter to my indoctrination into the world of DMR chat. (To read the first two chapters, see the November 2020 and May 2024 editions of *PCARA Update*.) Amateurs scattered across the entire county of Dumfries and Galloway can now talk to each other with a minimum of equipment and effort.

My latest challenge is 'getting to know the DMR neighborhoods.' For instance: Should you just happen

to be awake at 5:00 a.m. on Sunday mornings (a much more civil 10:00 a.m. in Scotland) you can listen in to a weekly reading of the RSGB amateur radio news presented by Gordon Wil-



Gordon 2M0PIJ reads the GB2RS news, Sunday mornings at 10:00 a.m. UK time. [2M0PIJ pic used with permission.]

son, 2M0PIJ, in his charming and entertaining style. Look for Gordon on the 'Scot West' Brandmeister talkgroup at TG 23559. The Wigtownshire ARA

group gathers on Mondays on 'Solway Chat' at 3:00 p.m. Eastern — 8:00 p.m. UK Time — talkgroup TG 234140.



Wigtownshire Amateur Radio Club
 Join us Monday evenings at 8:00 pm
 Find us on the Solway Chat Group
 Brandmeister DMR TG 234140

Local Talk Groups

234140 - Solway Chat	23551 - Scot Multi
235419 - Aberdeen Chat	23557 - Scot East
2355 - Scot Wide	23558 - Scot N&E
23550 - Scot Chat	23559 - Scot West

RSGB News read by Gordon 2M0PLJ
 Sundays at 10:00 on Scot West TG 23529



Zello? Do you hear me?

Adventurous amateurs can also try finding their way onto digital voice using the interesting 'Zello' app. You can download Zello via the Apple App Store, the Google Play Store or Android App Store.

Zello turns your mobile phone into a virtual HT much like using other popular amateur radio apps like Echolink and AllStarLink. A British amateur radio club, cumbriaCQ, has just introduced a Zello link to their already diverse collection of available digital talk formats. See their impressive installation array and more at: <https://cumbriacq.com>. Load Zello and ask the club's Lee M0LLC



to be included into their digital network. (See

their web site for details.) You can be chatting with Scotland and the world with little effort and no cost. Just download the Zello app!

Listening and Watching

There is a lot to discover and listen to outside of our familiar amateur radio bands up and down the dials on HF. I have always wanted to contact India via amateur radio. Alas, I never have! In the meantime, I can easily hear broadcasting from India with big strong signals on HF shortwave daily. Akashvani (formerly known as All India Radio) is best heard during our midday around New York City from 11:00 a.m. to 3:30 p.m. on 9620 kHz. Their bold 250-kilowatt signal from Bengaluru, Karnataka, India is hard to miss.



Be aware that Akashvani's broadcasts alternate between different languages and types of music. Guaranteed that it will always sound exotic with 'far away' long fades to add to the experience!

Use an online SDR to listen to Akashvani on 9620

kHz if you do not have HF equipment. (Try the WB2EEE SDR in Highland Falls at: <http://67.243.55.205:8073>. — Thanks, Matt!) A handy carefully updated one-page schedule of all of the current Akashvani HF shortwave broadcasts can be found at: <https://www.qsl.net/vu2jos/sw/freq.htm>.

If you are still trying to recover from the removal of the WCBS Newsradio 88 format from New York airwaves, here are some suggestions to hold on to the past. Legacy top-of-the-hour CBS Radio News broadcasts can now be heard many times day and night over Bridgeport's WICC 600 AM and 95.9 FM and also on WBBR 1130 AM from New York City. Unfortunately, former WCBS anchor Brigitte Quinn's weekday talk show on WICC abruptly ended on Friday, November 15th after only six weeks on the air. No reason has been reported about her exit.

Some other watching and listening tips: If you want to listen to the early airing of the PBS Newshour, you can hear it on WLIW-FM (88.3 MHz) broadcasting on Eastern Long Island or streaming via the WLIW-FM app or the TuneIn or iHeart radio apps from 6:00 to 7:00 p.m. weekday evenings.

Other nationwide network TV newscasts are streamed as well as being available on-demand online. NBC Nightly News is on NBC News Now from 10 to 11 p.m. (runs twice,) ABC World News Tonight from 10 to 10:30 p.m. on ABC NewsLive and the CBS Evening News at midnight on the CBS News streaming channel. All three of these streaming channels can be viewed using Roku or Amazon Fire TV sticks and similar.

Also, Boston's WBZ NewsTalk Radio 1030 has finally been added to the TuneIn roster for audio streaming. This is a slick-sounding very professional station that is a pleasure to listen to.

Want more? Try 34... meters, that is. Besides being an avid amateur radio operator, teacher and host, I will forever be a shortwave listener. If you want to broaden your horizons, you can listen to many exotic stations and mysterious airborne signals from all around the world.

Try these: (all USB) U.S. Coast Guard HF Voice weather reports via station NWM on 8764 kHz from Chesapeake, Virginia — and — Shanwick AerRadio VOLMET weather on 8957 kHz from Shannon, Ireland. You can also listen to transcontinental aircraft inflight. Long distance North Atlantic air traffic (featuring Sel-Cal tone alerts) can be captured on 8846, 8891 and 8906 kHz.

Before I go... The latest CW slang: JBA — Just Barely Audible. Everyone loves a new acronym!

Have a wonderful holiday season — and — see you at the PCARA Holiday Dinner on Sunday evening, December 8th! 73 es dit dit de N2KZ.



Westchester ARES / RACES 2024 – KD2OFD

[Steve expands on the short presentation he gave at PCARA's monthly meeting on Saturday November 2nd. –Ed.]



Steve KD2OFD at the November meeting.

This article is to introduce myself as the new Westchester County **RACES - Radio Officer** and **ARES - Emergency Coordinator**. My name is Steve Pendzuk, KD2OFD. I have been an Amateur Radio operator since December 2013, attaining the General license in 2016. I was appointed to the RACES and ARES positions effective August 1, 2024.

I have been a member of Westchester Emergency Communications Association during that period and have presented training at the General Membership meetings on topics such as Chirp-next software, APRSDroid, EchoLink, and DMR among others. I am in the process of finishing a Chirp-next template of all of the Amateur Radio repeaters that are accessible from within Westchester County.

Prior to getting into Amateur Radio, I have been a 48-year Volunteer Firefighter with the Croton-on-Hudson, then Ossining Fire Departments. Currently I hold the rank of Second Lieutenant in Ossining Fire Police and Emergency Squad and had previously attained the rank of Captain in two of the OFD's Engine Companies.

ARES and RACES

To clarify any confusion about RACES and ARES, **RACES** (Radio Amateur Civil Emergency Service) is involved when a Government Agency activates Amateur Radio operators because of a need for auxiliary communications.

In order to participate in RACES, the FCC states:

“§ 97.407 Radio amateur civil emergency service.
“(a) No station may transmit in RACES unless it is an FCC-licensed primary, club, or military recreation station and it is certified by a civil defense organization as registered with that organization. No person may be the control operator of an amateur station transmitting in RACES unless that person holds a FCC-issued amateur operator license and is certified by a civil defense organization as enrolled in that organization.”

So, to be activated in a RACES mobilization, an Amateur Radio operator must first enroll as a RACES operator.

Westchester County holds an annual Volunteer Responder Drill at the Westchester County Fire Training Center to evaluate the capabilities of volunteer organizations, the primary organization being CERT (Civilian Emergency Response Team). Westchester RACES provides communications coordination during this event. Westchester County Department of Emergency Services personnel evaluate all the volunteer organizations that participate in this drill.



Westchester County Volunteer Responder Drill 2024 — Event briefing before deployment. [KD2OFD pic.]

ARES® (Amateur Radio Emergency Service) is a trademark of the ARRL. The ARES Mission Statement states:

“ARES strives to be an effective partner in emergency/disaster response, providing the citizenry and public service/safety partners with communications expertise, situational awareness, and capabilities of professional communicators.”

Typically, ARES (in Westchester County) has provided communications for non-governmental organizations such as walk-a-thons and bike-a-thons.

Simulated Emergency Test (SET)

Recently, Westchester ARES participated in the ARRL nationwide Simulated Emergency Test for the Eastern New York section. Three skill sets that we demonstrated for the fifteen County section (from Westchester/Rockland up to Washington/Warren Counties in the Lake George area) were to contact the New York State Emergency Operations Center in Albany.

This was accomplished utilizing three modes: HF voice, Winlink HF (both on 40 meters) and a two meter linked repeater system. The N2ACF linked repeater system consists of about twenty-one 2 meter and 70 cm repeaters all linked full-time. ARES members within Westchester County were able to access repeaters in Rockland County utilizing handi-talkies and were able to communicate with the New York State Emergency Operations Center. This “test” demonstrated the ability

to communicate with Albany utilizing just an HT from within Westchester.



Westchester County ARES members participating in the 2024 ENY Simulated Emergency Test from Grasslands in Valhalla. [KD2OFD pic.]

N2ACF repeater list (call sign search):

<https://www.repeaterbook.com/repeaters/callResult.php?call=n2acf&submit=RepeaterBook>.

In Westchester County any Amateur Radio operator who enrolls in ARES (or RACES) is automatically in the other organization.

Training

My goal for RACES and ARES in Westchester County is to be better trained and to utilize the pool of Amateur Radio operators in the county, regardless of what club or organization the Amateur Radio operator belongs to. RACES and ARES, in my opinion, are not specific to one club, it is the membership in RACES and ARES that demonstrates the effectiveness of the organization.

The first training I would like to mention is that ARRL is offering new EmComm on-line courses. These consist of:

1. Basic Emcomm,
2. Intermediate EmComm, and
3. Advanced Emcomm.

As Westchester County ARES Emergency Coordinator, I must attain Level 3 qualification. These courses are available at: <https://www.arrl.org/online-course-catalog>. Level 1 is relatively easy and is geared to Amateur Radio operators who are not in a leadership role. The prerequisites are obtaining the task book, joining an ARES group, and obtaining a Technician license as a minimum. There are five modules in this Level which cover the basics:

- History of ARES,
- ARES Mission,
- ARES Organizational Structure,
- Introduction to Amateur Radio and
- Introduction to the ARES Position.

Each module is two to eight pages long. I completed this level on a Saturday. Upon completion of all of the modules, there is a 25-question multiple choice test. It would be great if all Westchester ARES members were to attain this level, as it would demonstrate that members are trained to at least a minimum level of competence.

Level 2 is more intensive and: “this level shows mastery of a set of basic skills desired by ARES obtained through coursework and training.” Completion of ICS-100, 200, 700 and Skywarn Spotter Basic Training are some of the requirements for Level 2 certification.

Beyond what ARRL is offering, I would like to schedule **local** training. This could be — meeting at a location and setting up an HF radio as we did for the SET — or meeting to go over programming radios, whether it be front panel programming or using Chirp. Echolink, Winlink, DMR etc. can also be topics to be discussed/trained on. These could be described as “Elmer” sessions. The RACES Communications Truck and other Westchester County-owned RACES equipment could be topics to practice at. If members have a skill that they would like to demonstrate, this would be something we could do during training.

AREDN

My predecessor in RACES/ARES had started building an Amateur Radio Emergency Data Network for Westchester County.



“What is an AREDN™ Network?”

“An Amateur Radio Emergency Data Network (AREDN) is a high-speed data network built with Amateur Radio Operators and Emergency Communications Infrastructure in mind. AREDN is self-configuring and self-healing. Where possible, AREDN™ will establish connections with as many other AREDN compatible devices (nodes) as possible and form a redundant mesh like network.”

An Amateur Radio Emergency Data Network is a high-speed data network built with Amateur Radio Operators and Emergency Communications infrastructure in mind. AREDN is self-configuring and self-healing. Where possible, AREDN will establish connections with as many other AREDN compatible devices (nodes) as possible and form a redundant mesh-like network.

This network could provide licensed Amateur Radio operators with access to high-speed Internet. With this capability we could provide organizations (i.e. Public Safety) with communications utilizing IP telephones. This could be Amateur Radio’s contribution to assisting in emergencies, since typical Public Safety communications have become more robust, there may

not be a need for traditional auxiliary communications. AREDN may be the path for Amateur Radio to assist in emergencies.

We have AREDN equipment mounted on the Valhalla Grasslands tower, but that is the extent to where the project is at this time. A significant amount of equipment has been purchased for this project that can be utilized to build the network, it just needs the expertise to get it moving. If anyone is interested, please contact me using the email link below.

Sets of nets

NYS RACES has recently revived the RACES Statewide HF net every Sunday morning at 0900 hr local time on 7281 kHz LSB. The digital net follows on 7081.50 kHz USB – Olivia 8-500 / MSFK32 / Thor 22. See this link: <https://group1.io/g/NYSRACES> for the latest information. Reports are positive that operators from around New York State are logging into this net.

ARES – Eastern New York section has a monthly net on the fourth Tuesday at 2000 hr. Alternating months, it is on HF 3993 kHz LSB during odd-number months or on the N2ACF system during even-number months. Information about this net is available at <http://eny.arrl.org/ARES/FILES/Section.htm>. As mentioned above, the N2ACF system is accessible via HT from portions of Westchester County.

In conclusion, if anyone who would like to join or has questions about Westchester County RACES/ARES you can email me using: KD2OFD@WECA.org.



Grasslands tower in Valhalla.

- Steve KD2OFD

Potassium-ion

PCARA Update for November 2019 reported on the three Nobel Prize winners in Chemistry whose work led to the lithium-ion battery. One of those winners was John Goodenough —

“John Goodenough was born in Germany then moved to the USA where he was educated at Yale and the University of Chicago. He was part of a team at MIT that developed random access magnetic memory, then moved to Oxford University in the late 1970s. In 1980 his team established that cobalt oxide, CoO_2 intercalated with lithium ions (Lithium Cobalt Oxide, Li_xCoO_2) was a much better cathode material for a lithium-ion battery than Stanley Whittingham’s smelly titanium disulfide. His battery could

be charged after manufacture, then repeatedly charged and discharged. John Goodenough subsequently moved to the University of Texas at Austin where his group went on to identify Lithium Iron Phosphate (Li_xFePO_4) as a less-expensive non-toxic, safer cathode material. John Goodenough is still working at the University of Texas and at 97 is the oldest recipient of a Nobel Prize.” (PCUD Nov 2019, p10).

John Goodenough died in 2023, aged 100 but the technology he pioneered at Oxford and Austin continues to be developed. The engineered materials company **Group1** was founded in Austin, Texas in 2021 as a spin-out from Professor Goodenough’s laboratory, working on **potassium-ion** batteries. (“Group1” refers to Group I of the Periodic Table of Elements, including lithium, sodium and potassium.) Group1 co-founder and Chief Product Officer Dr Leigang Xue worked in Professor Goodenough’s laboratory where he discovered the cathode material **potassium Prussian white**.

As a cathode material, potassium Prussian white, $\text{K}_2\text{MnFe}(\text{CN})_6$ has several advantages over lithium cobalt oxide and lithium iron phosphate. Potassium is over 1,000 times more abundant in the earth than lithium and is significantly less expensive — even though the price of lithium has plunged in recent months as a result of falling electric vehicle sales and overcapacity in China. The material contains no scarce elements, such as nickel or cobalt, whose mining is associated with child labor. Charging rates can be higher and low-temperature performance can be better than for lithium-ion. Unlike cathode materials for sodium-ion cells which require a hard carbon (charcoal) anode, potassium Prussian white cathodes can be used with a graphite anode as employed in conventional lithium-ion batteries. Nominal cell voltage is a high 3.7-4.0V.

Energy densities are on a par with lithium iron phosphate, so applications are possible wherever LiFePO_4 has been acceptable.

In August 2024, Group1 announced the release of its first potassium-ion battery in cylindrical 18650 format.

18650-batteries measure 18mm in diameter by 65mm in length (0.7" × 2.5"). They are usually supplied in packs containing a battery management system and are employed in notebook computers, power tools, electric vehicles and bicycles. Group1 is supplying samples of the new cells to original equipment manufacturers and car makers.



Group1 potassium-ion batteries in 18650 format with potassium Prussian white cathode material. [Credit: Group1.]

Field Day Results 2024

Record year

Results from ARRL Field Day 2024 were published on November 8 by ARRL. QST for December 2024 reported that the number of participants had increased compared to 2023 and the total number of contacts increased by 4% to almost 1.3 million. Part of the increase was probably thanks to better conditions, on the run-up to solar maximum.

PCARA's Field Day entry on June 22-23rd took place for the third time at George Washington Elementary School in Mohegan Lake. In view of a stormy weather forecast, operation took place from under the school entrance canopy using all wire antennas. There were fewer operators than in 2023, perhaps as a result of the 90°F daytime temperatures. Conditions on the 10 and 15 meter bands were no better than average.



PCARA's 2024 Field Day entry took place under the entrance canopy of George Washington Elementary School.

There is a full report on PCARA's 2024 Field Day in *PCARA Update*, July 2024 pp 3-7. The results were transmitted to ARRL by Joe WA2MCR. Here is a summary of recent scores along with the 2024 claimed score.

Peekskill/Cortlandt ARA, W2NYW, Class 2A

	2002	2003	2004	2005	2007	2008	2009	2011	2012
QSO pts:	718	733	968	853	1019	1109	694	879	968
Power:	2 (<150W)								
Partcpts:	15	11	12	10	14	10	10	14	15
Tot scor:	2,096	2,328	2,996	2,798	2,906	3,460	2,746	2,602	2,920

	2013 (1A)	2014	2016	2017	2018	2019	2021	2022
QSO pts:	775	722	816	813	731	829	1366	712
Power:	2 (<150W)							
Particpts:	14	16	19	22	22	29	25	24
Tot scor:	2040	2460	3018	2734	2886	2764	3662	2234

	2023	2024
QSO points:	940	1060
Power:	100W	100W
Participants:	27	19
Total score:	2810	3090

A legacy from the COVID era is the ability for club members to operate from home (Class D or Class E) then have their scores aggregated with the main club entry score. No PCARA members took advantage of this provision in 2024, but here is a listing of neighboring clubs, including four who *did* aggregate their scores (with entries >1).

Club	Aggregate Score	Entries
Yonkers ARC	5400	1
Westch Em Comm Assn	4635	2
Hudson Valley Contesters	4402	2
Orange County ARC	4300*	3*
Peekskill/Cortlandt ARA	3090	1
Putnam Emerg ARL	2218	2
QSY Society	1401	1

* Estimate. In ARRL's listing of results, Orange County ARC of NY was mixed in with Orange County ARC of Indiana.

Congratulations to Yonkers ARC on their high score from a single entry, taking over top spot from WECA.

Here are the **non-aggregated** results for top-scoring stations in the **Eastern New York (ENY)** Section of the ARRL Hudson Division.

#	Call	Score	Cat.	QSOs	Club
1	K2AE	6,783	6A	1,547	Broughton Memorial FD Gp
2	K2CT	6,531	4A	1,409	Albany ARA
3	W2YRC	5,400	4A	1,229	Yonkers ARC
4	AA2BJ	4,654	1D	1,228	(Brian Fischer)
5	N2SF	4,415	4A	1,016	Westchester EmComm Assn
6	W2C	4,164	4F	845	Warren County (NY) RC
7	NQ2W	3,250	1E	300	Hudson Valley Contesters
8	W2NYW	3,090	2A	783	Peekskill / Cortlandt ARA
9	N2RC	3,078	2B2	715	(Michael Moran)
10	N2LL	2,914	5A	748	Overlook Mtn ARC
11	W2HO	2,450	5A	343	Orange County (NY) ARC

Analysis of ARRL's 'csv' file using Microsoft Excel reveals the following positions for PCARA in the various categories and sections.

In ARRL Field Day 2024 PCARA was...

- **First** out of two entries in Category 2A, ENY section.
- 8th out of 47 in all of ENY section.
- 4th out of 10 in Category 2A, Hudson Division.
- 24th out of 126 in the entire Hudson Division.
- 78th out of 289 in Category 2A nationwide.
- 530th out of 4319 total entries listed.

The only other club entry in Category 2A, ENY section was Sullivan County ARES, who scored 888 points.

- NM9J

Radar calling

Several book recommendations from Jared KD2HXZ revived my interest in World War II technology. Here are three titles that I obtained recently.

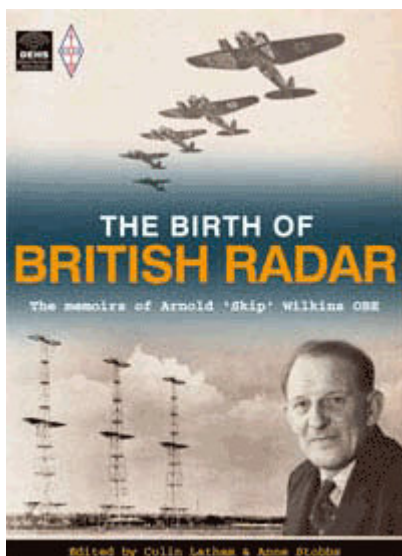
THE BIRTH OF BRITISH RADAR

The memoirs of Arnold 'Skip' Wilkins OBE

Edited by Colin Latham & Anne Stobbs

Radio Society of Great Britain 2011

Arnold Wilkins was born in 1907 in Chorlton, 30 miles south of Manchester, England. After graduating from the University of Manchester he obtained a degree in Physics from Cambridge University. In 1931 he began work as a Scientific Officer at the National Physical Laboratory's Radio Research Station at Ditton Park near Slough.



From 1933, Arnold Wilkins had been working on the angle of reception of HF signals as used on the transatlantic radiotelephone circuit from New York. He devised a system using two antennas, a phase shifter and an oscilloscope to measure this angle.

In 1935 Arnold Wilkins' boss, Robert Watson-Watt had been asked by the Air Ministry Director of Scientific Research whether it would be possible to generate a "death ray". This would be an electromagnetic beam with sufficient energy to heat anything in its path — such as the pilot of an enemy airplane — to the point of destruction. Watson-Watt passed the request to Arnold Wilkins who carried out the calculations and estimated that with the technology of the time (HF power of tens of kilowatts and antenna gain of 20dB) a "death ray" was impossible.

If the ray was impossible, Watson-Watt asked how else the Radio Research Station might help the Air Ministry. Arnold Wilkins replied that Post Office engineers had noticed disturbance to reception of their experimental 60 MHz VHF signals when aircraft flew nearby. Perhaps the effect could be used to detect enemy aircraft? Arnold Wilkins calculated the strength of radio waves reflected from an aircraft at 6 MHz and 43 MHz — they would be surprisingly strong.

Seeking proof of the theory, Wilkins arranged an experiment to monitor the BBC short wave transmission from its Daventry site, 10 miles west of Northamp-

ton. Station GSA operated with 10kW in the 49 meter band (6 MHz) using an array of horizontal dipoles. In February 1935, Wilkins and driver Dyer took a van with receiving equipment to a field south of Weedon, seven miles from the BBC site. Two half-wave dipole antennas were set up in the field with their feeders connected to two separate receivers, having a common local oscillator to preserve phase relationships.

A Heyford bomber flew along the line of the radio beam from Daventry. Wilkins, Watson-Watt and A.P. Rowe from the Air Ministry successfully observed 'beats' on the oscilloscope display caused by reflections from the aircraft interfering with direct radiation from the BBC transmitter.



"The First Step..." painting by Roy Huxley depicts the Daventry Experiment of February 1935 when reflections were first detected in a field at Weedon as a Heyford bomber flew through the beam of BBC short wave transmissions from Daventry (on the horizon).

From this small beginning, Robert Watson-Watt and Arnold Wilkins began work on an HF radar system suitable for detecting the height, bearing and distance of aircraft, first at Orfordness, a peninsula off the Suffolk coast in East England, then at nearby Bawdsey Manor. The result of their efforts was a functional radar station with transmit antennas consisting of dipole arrays slung between 350 foot steel towers and receive antennas consisting of crossed dipoles mounted on a 240 foot high wooden tower. (See *PCARA Update*, January 2023, pp 12-15, "Beaming up".)

By the outbreak of World War II in 1939, twenty of these stations, known as "Chain Home" (CH), had been constructed along the eastern and southern coasts of England. Skilled operators would send reports of incoming aircraft by telephone to Fighter Command who could then filter the results and direct fighter squadrons by radio to engage with enemy aircraft. This system was key to winning the 1940 air war with the Luftwaffe known as "The Battle of Britain".



Chain Home radar station at Poling Sussex, with three 350 ft steel towers for transmit antennas and four 240 ft wooden towers for receive antennas. [RAF photo.]

Arnold Wilkins wrote his own memoir of these events in 1976 and left it with the Churchill College Library in Cambridge. In the version published by the Radio Society of Great Britain with the Defence Electronics History Society, there are additional sections by Colin Latham and Anne Stobbs explaining the background to the memoir plus notes on the CH radar chain, post-war commemorations and a 1983 interview with Arnold Wilkins.

The book can be ordered from the Radio Society of Great Britain (<https://www.rsgbshop.org/>) or from Amazon.

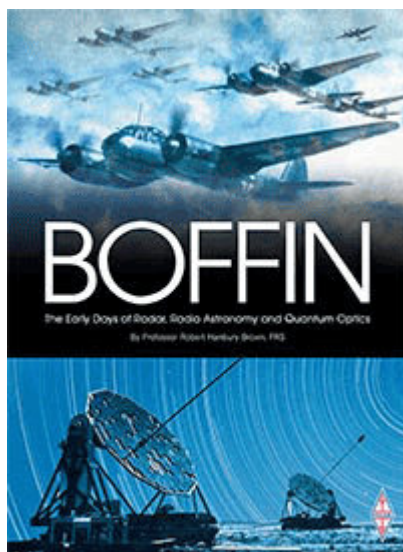
BOFFIN

The Early Days of Radar, Radio Astronomy and Quantum Optics

Professor Robert Hanbury Brown FRS

Radio Society of Great Britain 2016

Robert Hanbury Brown was born in 1916 in South India. He was brought up in southeast England, graduating at age 19 with an external degree in Electrical Engineering from the University of London. In 1935-36 he was about to start a PhD at Imperial College, London when he was persuaded by the Rector, Sir Henry Tizard, to join a secret project at NPL's Radio Research Station near Slough, headed by Robert Watson-Watt. He was told to report to Bawdsey Manor in August 1936 where he joined the team working on a system of detecting



enemy aircraft as they approached the coast.

Radar development had begun using a wavelength of 50 meters (6 MHz) on the grounds that an airplane would act as a half-wave reflector at that frequency.

Work moved on to a shorter wavelength of 26 meters (12 MHz) to avoid short wave interference, then to 13 meters (22 MHz and above). The transmitter was generating 20 microsecond pulses of RF with a peak power of 25-100 kW, transmitting a beam from an array of dipoles. Robert Hanbury Brown was working on the receive antennas — consisting of crossed dipoles and goniometer (phase shifter) — as well as the receiver. Describing the lack of test equipment, he wrote:

“All we had in the receiver hut was a Cossor double-beam oscilloscope, an Avometer, and a wavemeter which would have been more at home in a science museum. There was no signal generator! As for books, the only one I can remember seeing is a copy of the Radio Amateur’s Handbook which belonged, as far as I can remember, to my colleague Donald Preist who was a devoted radio ham.”

Robert Hanbury Brown also commented on the complete lack of experienced radio engineers in the group.

“In the receiver group our boss had some knowledge of radio, but I wouldn’t have described him as a radio engineer, while Donald Preist and myself were straight out of college. Admittedly I had attended a formal course in electrical engineering and my head was full of the mathematical theory of things like filters and antennas, but this was of limited use at Orfordness; what we needed was practical experience. Fortunately both Donald and I had been radio amateurs and had built our own equipment; without that experience we would have been lost.”

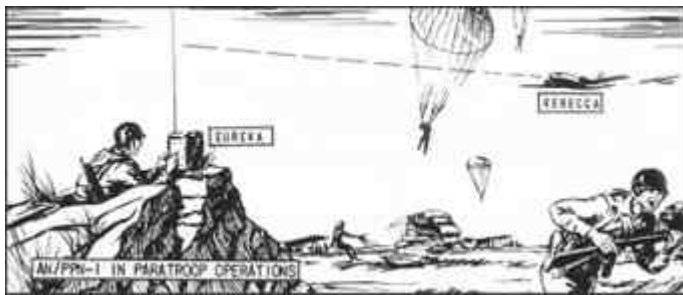
By 1937 the design of a working 13-meter radar system had been completed at Bawdsey and Orfordness and Robert Hanbury Brown moved on to one of the first of a chain of stations at Dunkirk in Kent, climbing the tall towers to install and adjust antennas. He was then assigned a new project — development of an airborne radar to detect enemy airplanes and ships at sea.



Map shows locations in southeast England and northern France mentioned in the three books.

Experimental systems producing up to 2 kW peak on 1.5 meters (200 MHz) were tested on the ground then in flight. Trials at various locations and introduction of the equipment to operational squadrons followed. Early versions were unreliable, but a later version combined with better training of air crew and ground controllers led to successful night-time interception of enemy bombers.

Another wartime pursuit for Robert Hanbury Brown and colleagues was a transponder beacon for ground drops from aircraft over enemy territory. They fitted the airplane with an interrogator named “Rebecca” (Recognition of Beacons) transmitting pulses on 214 MHz. A beacon on the ground named “Eureka” received the pulses and re-transmitted on 217 MHz. The different response frequency avoided the problem of echoes from the ground confusing the airborne receiver. In 1942 Robert Hanbury Brown took the idea to the USA and helped to develop an American version. The equipment was successfully used for airdrops of parachute forces in Operation Overlord, the D-Day landings in Normandy, France.



USA version of Rebecca/Eureka.

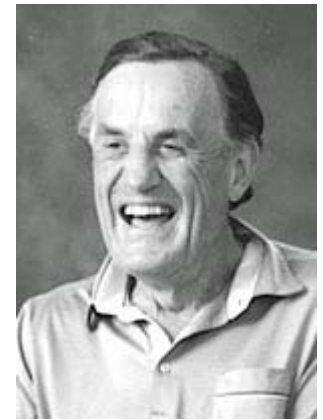
After the war, Robert Hanbury Brown had a spell as a consultant, then in 1949 he joined Sir Bernard Lovell’s group at Manchester University. At the University’s Jodrell Bank site in Cheshire, Bernard Lovell’s team had constructed a 218 foot diameter wire paraboloid to study radar echoes from cosmic rays and radio emissions from the sky — as first detected by Grote Reber W9GFZ. It was Hanbury Brown who soldered the coaxial cable to the 160 MHz antenna feed at the top of the 126 foot tower. His work with the wire paraboloid led to construction of the 250 foot steerable dish at Jodrell Bank, completed in 1957, and capable of operation on the 21 cm hydrogen line at 1420.4 MHz. (See *PCARA Update* January 2023 pp 12-15.)

Another problem occupying Robert Hanbury Brown at Jodrell Bank was measurement of the size of radio sources using an “intensity interferometer”. He investigated the theory with Richard Twiss then designed a radio interferometer consisting of two receivers with their own antennas on 125 MHz. One station was mobile with output connected to the other by radio link. The results produced by his students showed that the sizes of radio sources Cygnus A and Cassiopeia

A were too large to be conventional stars.

Hanbury Brown wondered whether the intensity interferometer could be applied to measure the size of visible stars. Working with Richard Twiss, he split an incoherent light beam from a mercury vapor lamp and compared the output from two photodetectors electronically. Photon detections in the two separate beams were correlated. Hanbury-Brown and Twiss suggested this could be used to infer the angular size of distant stars and the phenomenon is now known as the Hanbury Brown-Twiss effect. The principle was demonstrated using two Army searchlights equipped with photodetectors to measure the size of Sirius, the Dog Star. Robert Hanbury Brown wanted to build a larger-scale optical interferometer to measure the size of stars — but he had to move to Australia to complete the project.

“Boffin” describes all these adventures in Robert Hanbury Brown’s own words. It can be ordered from the Radio Society of Great Britain, <https://www.rsgbshop.org/>.



Robert Hanbury Brown.

CHURCHILL’S SHADOW RAIDERS

The Race to Develop Radar, WWII’s Invisible Secret Weapon

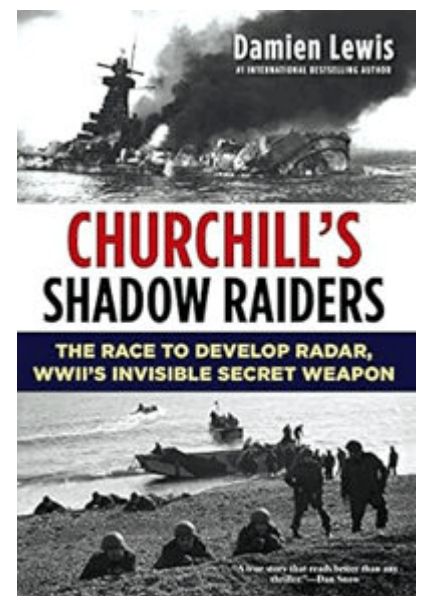
Damien Lewis

Citadel Press 2019

“Operation Biting” was a British raid by air and sea on a German radar station during World War II.

Best-selling author Damien Lewis was attracted to the story when he obtained access to the archive of TRE (Telecommunications Research Establishment), the successor organization to Robert Watson-Watts’ team that developed radar at Bawdsey Manor.

Damien Lewis begins his account with “Operation Colossus”, the first raid by British airborne troops on an enemy location during World War



II. In the aftermath of the 1940 Dunkirk evacuation Prime Minister Winston Churchill ordered formation of a battalion of airborne commandos to harass the enemy. Their first assignment in early 1941 was to destroy an aqueduct in Southern Italy, interrupting the fresh water supply to ports used by the military.

“11 Special Air Service Battalion” learned parachute jumping at Ringway near Manchester. In February 1941 they set off from Malta in a fleet of eight Whitley aircraft to be dropped by parachute on their target near Calitri, Italy. Much of their explosives and a force of demolition experts went astray. The remaining troops were still able to destroy a supporting pier of the aqueduct, then set out over mountainous terrain to the coast where they should have been met by submarine. Unfortunately, a photo-reconnaissance flight appeared to show that the aqueduct was still intact and the submarine was canceled by senior officers. All the paratroopers were then captured or killed.

Operation Colossus was initially viewed as a failure, until reports from prisoners in Italy began to filter back and one of the raiders escaped to provide an eyewitness account. As a result, planning, training and equipment for airborne operations were all substantially improved.

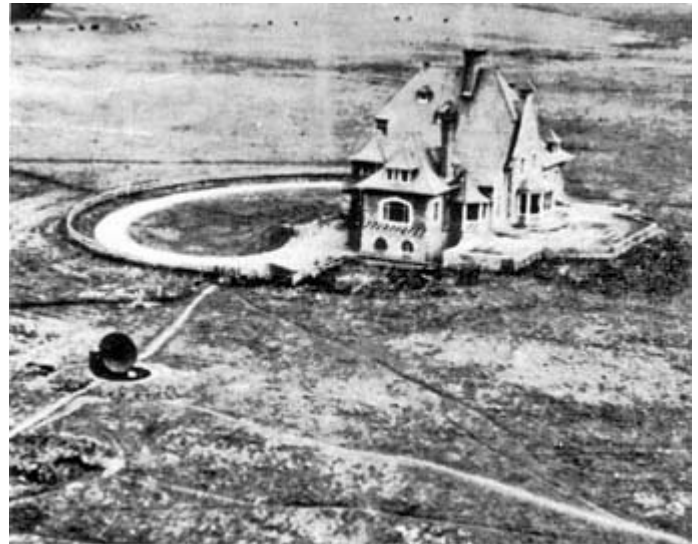
During this period, Intelligence personnel in London were becoming concerned about the number of British bombers being brought down as they crossed the English Channel into occupied Europe. Perhaps Germany also had a radar system — though there was no sign of the huge “Chain Home” towers that protected the coastline of Britain from enemy aircraft.

Through Enigma-decoded radio messages, leaked documents and overheard prisoner conversations, Scientific Intelligence specialist R.V. Jones became aware of a “Freya Gerät” (Freya apparatus) on the French coast. Photo-reconnaissance in 1941 suggested a *rotatable* antenna array at Auderville, near Cherbourg. Monitoring from the south coast revealed pulse transmissions on 120 MHz from the Cherbourg area.



Photo reconnaissance picture of Freya radars at Auderville, near Cherbourg, France. [RAF]

There were additional hints about a second German radar named “Würzburg” with a paraboloid dish operating on a shorter wavelength. Monitoring from England found pulsed signals around 550 MHz. Photo reconnaissance of additional Freya sites revealed first a tiny dot, then a 10 ft diameter dish at a site north of Le Havre near the village of Bruneval.



Low-level photo reconnaissance showed a 10 foot diameter dish close to the Château at Bruneval, France. [RAF]

R.V. Jones believed that while the Freya radar was a long-range early-warning system, the Würzburg radar was shorter range with greater precision, allowing German fighters to be directed accurately toward incoming British bombers. He suggested a raid on the Bruneval station to steal the Würzburg equipment for analysis at TRE.

The radar site was atop a 400 ft high cliff, with heavily-defended coastline below. Direct attack from the sea would be suicidal, so a two-pronged plan was devised. Airborne troops would be parachuted onto the site to overcome German defenses and capture the radar. Paratroopers would transport the stolen equipment down to an evacuation point on the beach where they would be met by additional troops in landing craft.

The mission was led by Major John Frost — who would go on to the Battle of Arnhem, made famous by the movie *A Bridge Too Far*. (See *PCARA Update*, April 2016, pp 4-10.) On a cold moonlit night in February 1942, Major Frost parachuted into Bruneval with 120 trained raiders. Despite enemy fire his team captured and dismantled the radar, then transported it down to the beach, where most of his men escaped back to Britain in landing craft and Navy ships.

Damien Lewis describes the preparation and actual raid in great detail, including the awesome obstacles encountered by Major Frost and his men. Two radar experts were taken on Operation Biting for on-site analysis and to supervise dismantling. Sergeant Bill Cox was

a radar mechanic at the Isle of Wight 'Chain Home' station who was parachuted in. He examined the Würzburg, making notes of the precision Telefunken equipment and extracting the transmitter while still under fire.

The other expert — Donald Preist — has already been mentioned as Robert Hanbury Brown's radio amateur colleague at Bawdsey Manor. Preist was on board one of the assault craft with a radio receiver tuned to 550 MHz to monitor the Würzburg transmissions — and their sudden end during the cliff-top raid. Landing at the beach under fire, he assisted Cox with loading radar equipment onto the boat for return to Britain. They noted that the German equipment was beautifully engineered and that Germany might be ahead of Britain in developing ground-to-air radar.

The equipment was re-assembled and analyzed by TRE, allowing the development of countermeasures. Half-wavelength strips of aluminum foil known as "Window" could be dropped from aircraft to cause strong radar reflections and confuse enemy radar.

A footnote about Donald Preist — after his work with TRE on radar, he went to the combined research group at the Naval Research Laboratory in Washington, DC from 1943-45. After a short spell with the British Ministry of Supply he moved back to the USA in 1946, joining the staff of Eitel-McCullough Inc., a company formed in 1932 by radio amateurs Jack McCullough W6CHE and Bill Eitel W6UF. There he worked on Eimac high-power external anode klystrons for early warning radar and UHF TV transmitters. He retired from successor company Varian in 1992 but continued consulting work until his death in 2002.

"Churchill's Shadow Raiders" by Damien Lewis is available from bookstores and Amazon.

[Further reading: MOST SECRET WAR, British Scientific Intelligence 1939-1945, R.V. Jones (1978).]

- NM9J



Donald Preist with dipole feed and reflector from the Würzburg radar.

Holiday Dinner

PCARA's 2024 Holiday Dinner has been organized for the same location as in previous years — the Cortlandt Colonial Manor Restaurant. The event begins at 5:00 p.m. on **Sunday December 8th**.



Cortlandt Colonial Manor Restaurant

The restaurant is located at 714 Old Albany Post Road in Cortlandt Manor. Take the Bear Mountain Parkway to the Highland Avenue exit, then proceed north down Highland Avenue and across the bridge. The restaurant and parking lot are immediately on the left.



The dinner menu is as follows:

Soup and Salad
Soda, iced tea and soft drinks (unlimited)
choice of:
Prime Ribs of Beef
Grilled New York Strip Steak
Grilled Pork Chops
Jumbo Shrimp with crabmeat stuffing
Chicken Marsala
Penne ala Vodka - traditional or w/grilled chicken
Custom cake

Cost will be approximately \$50.00 per head including service but not including alcoholic drinks. (Our Treasurer requests cash be brought to the event.) All are welcome — family participation is encouraged. Please let the Editor know if you will be attending by e-mailing your head-count to: nm9j@arrl.net

146.52 from NY to Florida – KD2EVI

In late October, I drove to Florida to visit family members in the Daytona Beach area, taking two days to travel to Florida on I-95, stopping in Rocky Mount, NC for the night. Travel time was approximately nine hours and the second day took over ten hours to reach Daytona, thanks to traffic congestion in the Jacksonville, Florida area. I used my TYT TH-8600 dual-band radio in its Go-Box, as previously described in the *PCARA Update*.



Go-box as described by David KD2EVI in *PCARA Update*, September 2023. Lower left: 4.5 Ah LiFePO₄ battery with AC charger. Lower right: TYT TH-8600 VHF/UHF transceiver inside the ammo box. [KD2EVI pic.]

Because I do not have programming software for the TH-8600, I did not program repeaters located near I-95.

What did I hear? Very little as it turned out. There were some conversations heard on 146.52 simplex as I passed through northern New Jersey, but the signals were not strong enough to attempt a QSO. After that, nothing was heard other than some repeaters IDs, (I have several repeaters located in this area programmed and let the radio scan its memory as the output frequencies of repeaters located along I-95 are common in some cases) — but no QSOs were heard. I tried



I-95 runs from the Maine border to Miami, Florida. [Base map Wikimedia CC0.]

throwing my call out from time to time, but got no response.

The other issue I discovered was that the 4.5 amp-hour LiFePO₄ battery in my Go-Box only powers the radio for 12 hours. The radio powered off about 3 hours after I left Rocky Mount. I recharged the battery at my hotel in Daytona and nightly on my return journey.

After my arrival in Daytona on October 22, I was busy visiting family and did not have much time for amateur radio, other than briefly listening to Daytona-area repeaters on an HT, which do have activity.

Northbound on Saturday October 26, I managed two contacts after I crossed from Florida into Georgia. The first was a motorist heading south to Florida, but as we were traveling in opposite directions, was short. A little later a trucker heading north in a Peterbilt, who was utilizing a mag mount antenna, returned my call and we spoke for several minutes. That was the last QSO of my trip.

What did I learn? I learned that there is little amateur radio used on I-95, very similar to traveling on the NYS Thruway. Second, that my Go-Box has a 12 hour battery life, also, I need to make sure that I am using the full 20-25 watt output of the TYT 8600 when mobile on simplex, and I suspect that had I taken the time to program repeaters located along my route, I likely would have made more contacts.

- David KD2EVI

NY club helps local police with Pumpkin Patrol

Every Halloween, the New York State Police monitor overpasses throughout western New York for objects being thrown on the vehicles below, which has led to the creation of Pumpkin Patrol — an annual occurrence that involves police getting assistance from the Fort Herkimer Amateur Radio Association (FHARA), W2FHA, with monitoring reports and coordinating efforts to maintain safety.

This year, FHARA set up their DART trailer at Schuyler Travel Plaza at mile marker 227 Westbound to coordinate with New York State Police Troop T for Pumpkin Patrol. The entirety of the NY I-90 highway is patrolled each year, with FHARA monitoring the portion in Herkimer County.

- Dan Patterson, KD2ILO

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Peekskill / Cortlandt Amateur Radio Association

Mail: PCARA, PO Box 146, Crompond, NY 10517

E-Mail: mail 'at' pcara.org

Web site: <http://www.pcara.org>

PCARA on Facebook: <https://www.facebook.com/pcararadio>

YouTube Channel: <https://www.youtube.com/@peekskillcortlandtamateur7670>

PCARA Update Editor: Malcolm Pritchard, NM9J

E-mail: NM9J 'at' arrl.net

Newsletter contributions are always very welcome!

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

PCARA Information

PCARA is a **Non-Profit Community Service**

Organization. PCARA meetings take place every month (apart from July/August break). See <http://www.pcara.org> for current details.

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

Sun Dec 8: PCARA Holiday Dinner, 5:00 p.m., Cortlandt Colonial Restaurant, 714 Old Albany Post Rd, Cortlandt Manor.

Sat Dec 21: PCARA Breakfast, 9:00 a.m., Uncle Giuseppe's, 327 Downing Dr. Yorktown Heights, NY.

Sat Dec 21: VE Test Session, 11:30 a.m., Putnam Valley Library, 30 Oscawana Lake Rd., Putnam Valley, NY. See below.

Sun Jan 5 2025: PCARA Bring & Buy Auction, 3:00 p.m. Cortlandt Town Center CUE Room.

Hamfests

Check with organizers before leaving.

Sat Jan 4, 2025: Ham Radio University, LIU/Post, 720 Northern Boulevard, Brookville, NY. See: <https://hamradiouniversity.org/>

VE Test Sessions

Check with the contact before leaving.

Dec 7, 14, 21, 28: NYC-Westchester ARC, 43 Hart Ave, Yonkers NY. 12:00 noon. Must contact VE, k2ltm'at'aol.com.

Dec 12: WECA, Westch Cnty Fire Trg Center, 4 Dana Rd Valhalla NY. 7:00 p.m. Contact VE, N2gdy'at'weca.org

Dec 21: PCARA, Putnam Valley Library, 30 Oscawana Lake Rd., Putnam Valley, NY. Must contact VE, Dave KF2BD, daveharper'at'vivaldi.net.



Peekskill / Cortlandt Amateur Radio Association Inc.
PO Box 146
Crompond, NY 10517