Results of the Group Mentoring Experiment

Topic:

Group mentoring (Elmering?) to fill the need

Presenter: Bruce MacAlister, W4BRU

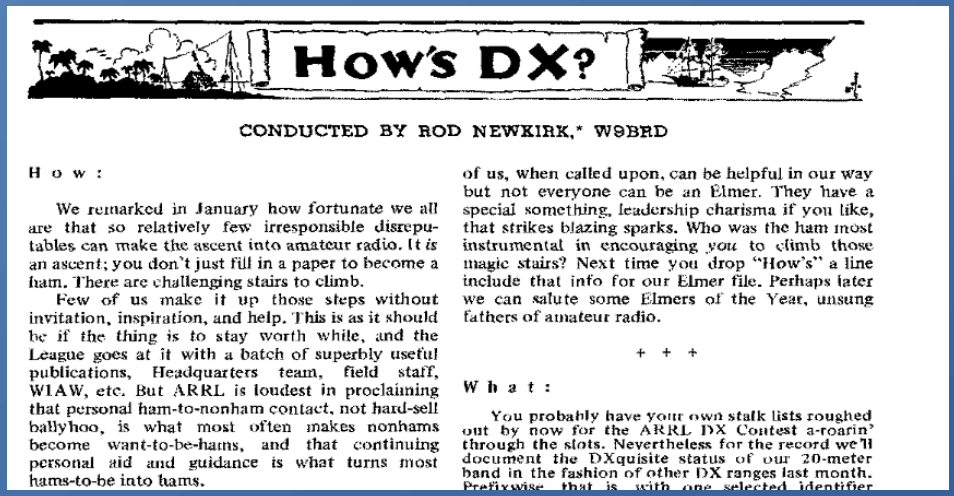
“I feel like I just passed the written driver’s test but all I know about a car is a picture of the steering wheel”

Looking for 2 or 3

- Group mentoring looks like the practical choice
- We need 2 or 3 members to be group mentors
- New General graduates in April
- New Tech graduates in May

Elmer or Mentor?

- Elmer is the “we’re hams, we’re unique” term for Mentor.
- Special terms and abbreviations came from CW heritage, CQ instead of Seek You
- Mentor is the better term



How's DX?

CONDUCTED BY ROD NEWKIRK,* W9BRD

H o w :

We remarked in January how fortunate we all are that so relatively few irresponsible disreputables can make the ascent into amateur radio. It *is* an ascent; you don't just fill in a paper to become a ham. There are challenging stairs to climb.

Few of us make it up those steps without invitation, inspiration, and help. This is as it should be if the thing is to stay worth while, and the League goes at it with a batch of superbly useful publications, Headquarters team, field staff, WIAW, etc. But ARRL is loudest in proclaiming that personal ham-to-nonham contact, not hard-sell ballyhoo, is what most often makes nonhams become want-to-be-hams, and that continuing personal aid and guidance is what turns most hams-to-be into hams.

of us, when called upon, can be helpful in our way but not everyone can be an Elmer. They have a special something, leadership charisma if you like, that strikes blazing sparks. Who was the ham most instrumental in encouraging *you* to climb those magic stairs? Next time you drop "How's" a line include that info for our Elmer file. Perhaps later we can salute some Elmers of the Year, unsung fathers of amateur radio.

+ + +

W h a t :

You probably have your own stalk lists roughed out by now for the ARRL DX Contest a-roarin' through the slots. Nevertheless for the record we'll document the DXquisite status of our 20-meter band in the fashion of other DX ranges last month. Prefixwise, that is, with one selected identifier

Winter-Spring 2025 Experiment

- I was not teaching an exam prep class for the first time in 10 or 15 years
- We (the club) have been mumbling about the need to find mentors for new “graduates”
- Mentoring has been hit-or-miss
- As a substitute for hanging out in bars, I decided to take it on

What do you need?

1. Ken Leidner researched and built a list of newly minted Techs and Generals
2. I sent a note to them: “What do you need.”
3. Emily Boots, now WB4EMY, said there were 5 women who had bonded and needed a mentor
4. Informal interviewing gave a starter list of what they needed

First	Last	Call	pl
Allison	Andrews	KM4TWH	(8
Emily	Boots	WB4EMY	(8
Lynne	Davidson	KQ4YLD	(8
Nora	Pozzi	KQ4YLE	(8
Sandra-Marie	Valenti	student	(8

New Ham Needs

- What radio should I buy?
- Who do I buy it from?
- How do I set it to listen and talk, repeaters, etc
- How can I keep from sounding like a fool on the air?
- What can I do with a Tech license?

The List for New Techs

- Small, inexpensive VHF-UHF hand-held (HT), under $70
- Later: a heavier-duty dual-band HT with your preferred of digital mode

The List for New Techs

- Better-than-a-rubber-duckie add-on antenna
- Vehicle antenna, magnetic mount to start
- Vehicle power adapter for the transceiver
- One or more ham radio friends with radio programming software (Chirp or RT Systems) to load the frequencies in your radio.

Nice Additions

- Roll-up J-Pole antenna for vacations and as a starter antenna for the home.
- External antenna for your house; so many different houses, so many different choices. You will need a mentor who knows your situation.

Digital – an Upgrade

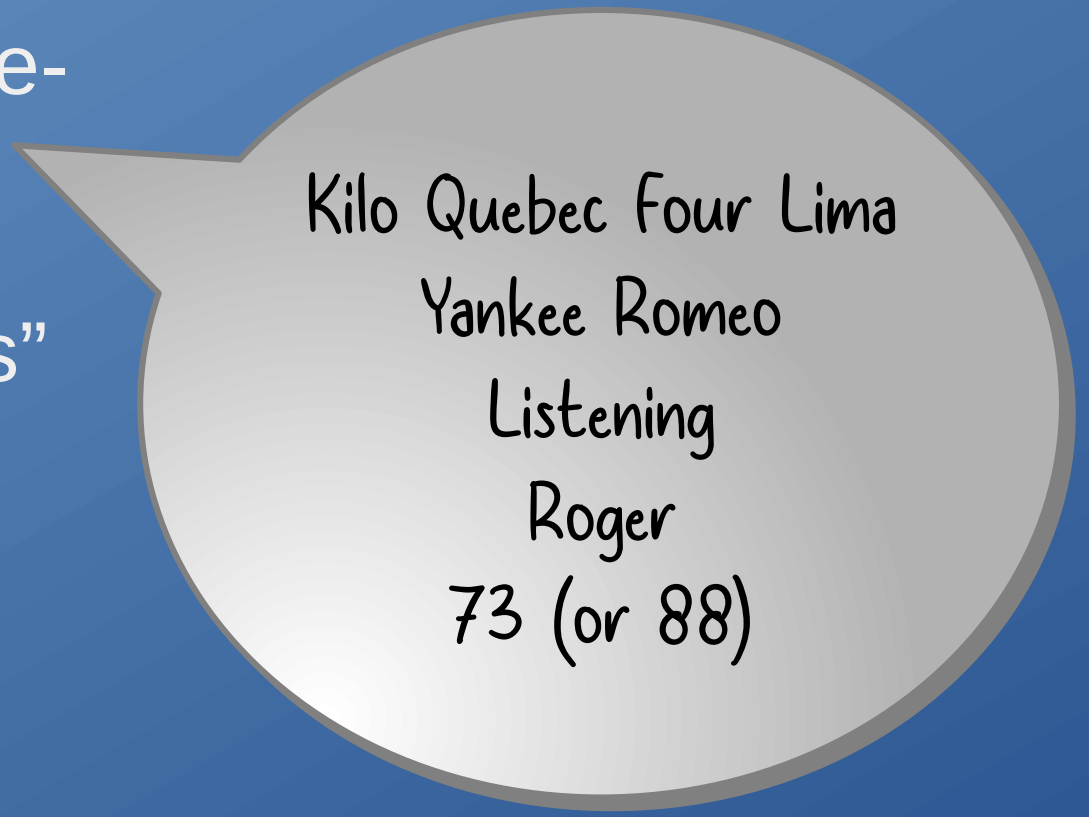
- A digital hot spot to try all the digital modes
- Basis to buy a heavier-duty dual-band HT with your preferred of digital mode

Session #1 – Classroom

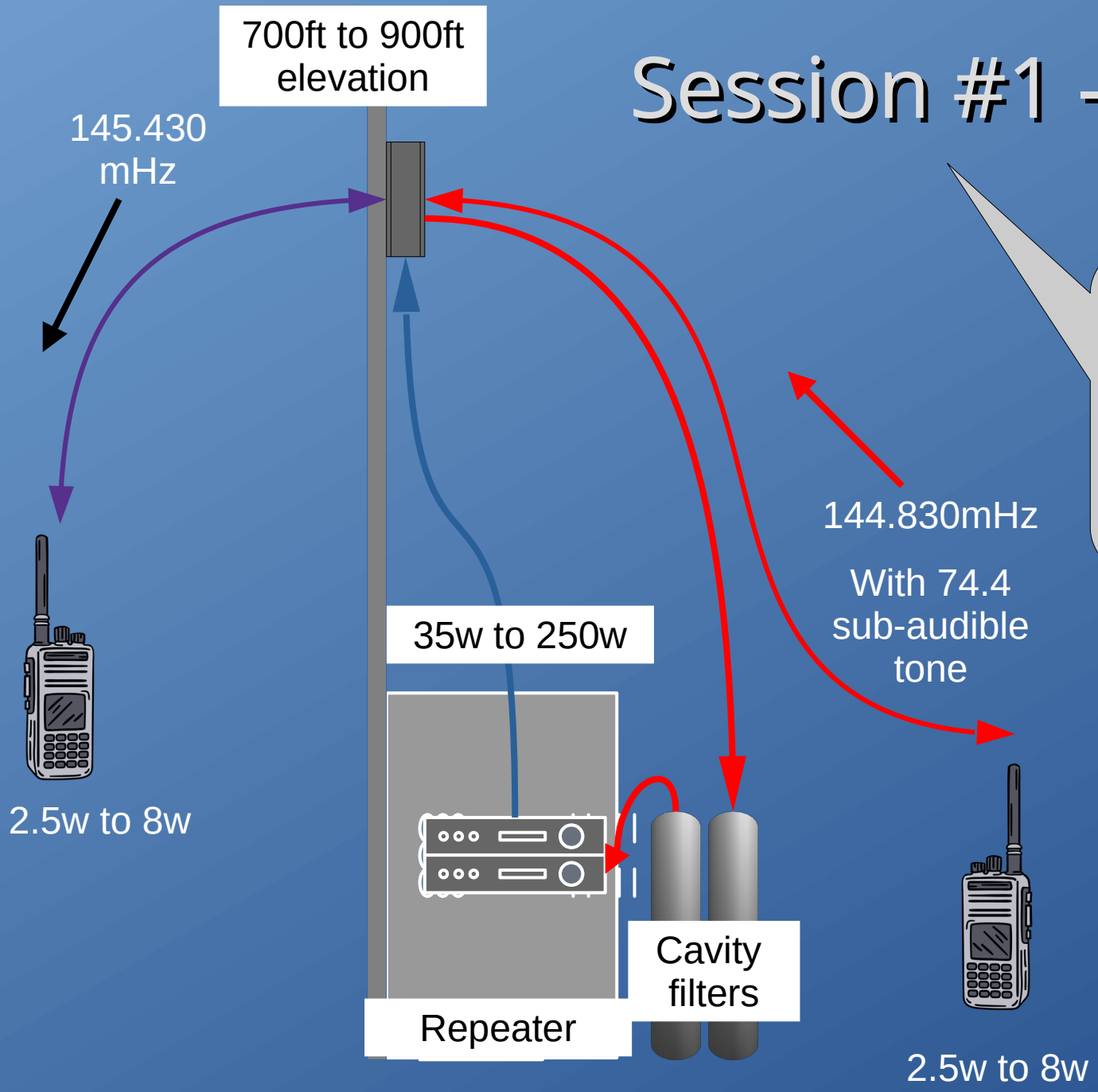
- Introductions, backgrounds
- Set up club’s loaner radios
- On-the-air simplex net with club’s loaner radios

Session #1 – Classroom

- Discussion of on-the-air terms, jargon, expectations, how to not say “stupid things” on the air, etc
- Introduction to repeaters



Session #1 – Repeaters



Tom Flippin arranged Tuesday night New Hams Net on 145.43

Session #2 – Programming HTs

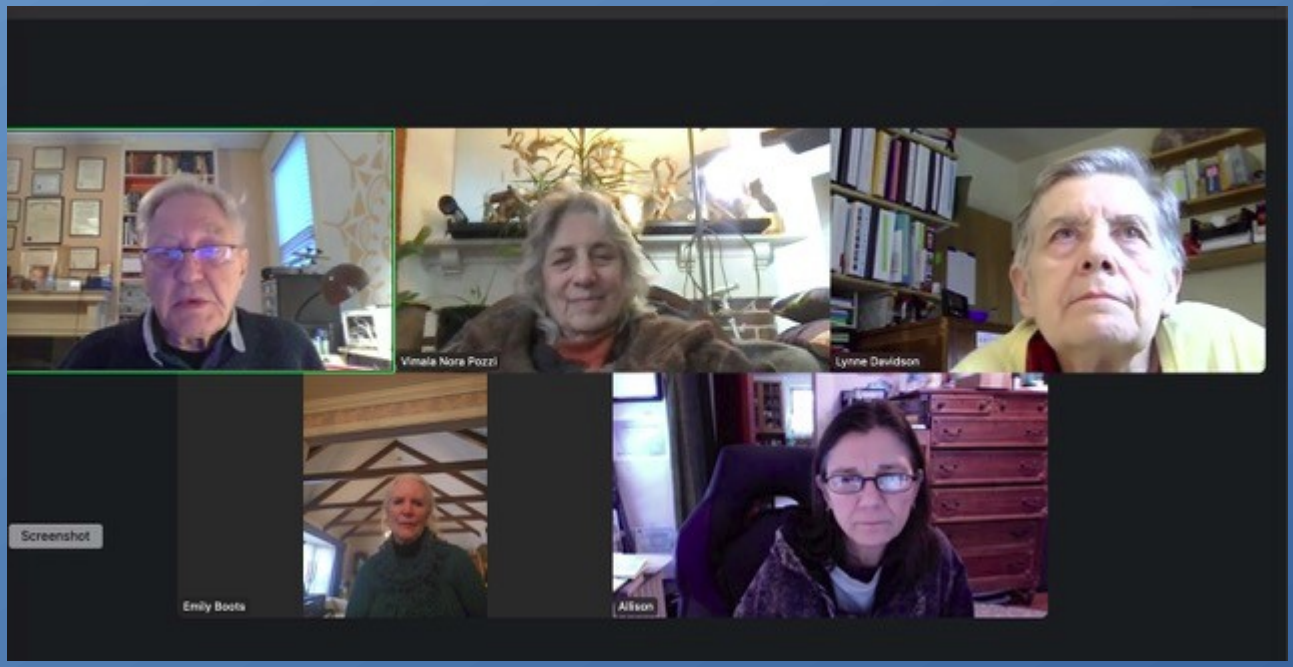
	Frequency	Name	Tone Mode	Tone
0	146.010000	NAT146		
1	146.520000	NAT146		
2	147.060000	BEAVER	Tone	74.4
3	145.410000	BILLBU	Tone	88.5
4	146.760000	BILLSB	Tone	118.8
5	145.310000	CHESTE	Tone	127.3
6	147.270000	GUMSPR	Tone	203.5
7	145.110000	HANOVR	Tone	74.4
8	147.105000	HOPEWE	Tone	118.8
9	147.360000	CHESTR		
10	147.135000	KC4VDZ	Tone	107.2
11	147.090000	HOPEWEL		
12	145.430000	MRA-14	Tone	74.4
13	146.940000	KN4SKI	Tone	74.4
14	224.420000	MRA-22	Tone	74.4
15	147.315000	N4POW	Tone	74.4
16	146.520000	NAT146		
17	145.170000	PALMYR	Tone	151.4
18	147.390000	PETERS	Tone	74.4
19	146.985000	PETRSB		
20	146.880000	RATS-V	Tone	74.4
21	146.445000	S1464		
22	146.475000	S1464		

- Tricky because HTs vary greatly in programmability
- Programming cables have issues
- Sequence of connection, power on-off, etc. troublesome

HT Programming Hints

- Create an RVA repeater list and load it into the software
- Make sure programming cables are FTDI *not* Prolific
- Find out the brand *and model* of each radio
- Check Chirp or RT list to make sure your copy covers their brand a model
- If possible practice down/up-loading before session

Session #3 – Zoom Q&A



- A little practice using HTs via a repeater
- Info on Tuesday night Newcomers Net, the idea of a “controlled net”

Session #3 – Zoom Q&A

- Discussion of types of radios and radio mode choices for Tech license holders
- Illustrate “programming” radios with frequencies using Chirp and spreadsheets
- Demonstrate programming with Chirp
- Examine antennas and discuss choices

Session #3 – Zoom Q&A

File Edit View Radio Help

RVA-ALBERML-areas-140-220-440-Sept2025.csv

Memories

	Frequency	Name	Tone Mode	Tone	T Squ	Mode	Duplex	Offset	Mode	Tuning Step
0	146.010000	NAT146							FM	5.0
1	146.520000	NAT146							FM	5.0
2	147.060000	BEAVER	Tone	74.4			+	0.600000	FM	5.0
3	145.410000	BILLBU	Tone	88.5			-	0.600000	FM	5.0
4	146.760000	BILLSB	Tone	118.8			-	0.600000	FM	5.0
5	145.310000	CHESTE	Tone	127.3			-	0.600000	FM	5.0
6	147.270000	GUMSPR	Tone	203.5			+	0.600000	FM	5.0
7	145.110000	HANOVR	Tone	74.4			-	0.600000	FM	5.0
8	147.105000	HOPEWE	Tone	118.8			+	0.600000	FM	5.0
9	147.360000	CHESTR					+	0.600000	FM	5.0
10	147.135000	KC4VDZ	Tone	107.2			+	0.600000	FM	5.0

- Illustrate “programming” radios with frequencies using Chirp and spreadsheets
- Demonstrate programming with Chirp

New Hams Net

- For new hams, some shyness
- Face to face use of the repeater works fine
- Too many old-timers spewing ham jargon is intimidating
- When the 145.43 repeater got a wounded transmission line, new hams net wasn’t practical
- No other repeater seemed to have the geographic reach for HTs

Typical Mentor Schedule

1. Two hour classroom session: assemble loaner radios, use simplex in the classroom, pick radios to buy
2. Two hour session in a classroom or your radio shack: program radios, practice with repeaters
3. Thirty minutes a week on the new hams repeater net
4. As needed Zoom or in person meetings to cover questions, practice on the air

Need Group Mentors

- Need volunteers to mentor a group of May 2025 Techs
- Need volunteers to mentor a group of April 2025 Generals
- Instructors need names of new mentors before their classes are ended

Zoom & Classrooms

- Call me or Tom Flippin to get a classroom scheduled
- Contact Ken Leidner or me to have a Zoom sessions scheduled
- You can have a series of Zoom sessions scheduled if needed

Mentor Resources for Tech

New Hams Workshop – Experimental Version

Initial meeting February 5, 2025, Bon Air United Methodist Church, room 202.

Starters

- Small, inexpensive (under $70) VHF-UHF (“dual band”) hand-held (HT) transceiver for using local repeaters in analog mode for fun and emergencies. It normally comes with a mains (115volt AC) charger.
- Better-than-a-rubber-duckie add-on antenna to get your signal out of the house.
- Vehicle antenna, usually magnetic mount, wire run in through a slightly opened window.
- Vehicle power adapter for the transceiver, usually plugs into the “cigarette lighter” outlet in the car.
- Several antenna adapters because, like USB cables, every manufacturer has its favorite.
- Roll-up antenna for vacations and as a starter antenna for the home.
- Optional: an external antenna for your house; so many different houses, so many different choices. You will need a mentor who knows your situation.
- One or more ham radio friends with radio programming software (Chirp or RT Systems) to load the frequencies in your radio.

Sources:

Radios, a good review: https://radiofidelity.com/best-handheld-ham-radio-usa/

Better portable add-on antennas: Nagoya and HYS brands have been pretty good reliability, about $20 to $40. This is a little tricky since every radio brand has a preferred connector.

Vehicle antennas: reliable brands are Comet, MFJ (although they are going out of business), Diamond, and Larson, costing $30 to $70. Many of us started with cheap, no-name $20 antennas that lasted a year of two until we mounted something permanent on the car. It will need an antenna connector adapter, see below.

Antenna connector adapters: one or two foot length of coaxial cable with a connector on each end like fSMA to PL-259, etc, $5 to $15. Sometimes called “pigtail” antenna adapters.

Vehicle power adapter: usually need one from the radio manufacturer, typically $10.

Roll-up dual band (2M - 70CM) antenna, about $35, https://n9taxlabs.com/shop/ols/products/dual-band-slim-jim-antenna-with-10-or-16-foot-cable.

If you want your own radio programming software, Chirp at $0 plus FTDI programming cable, $9 to $22; or RT Systems at about $50 plus $25 for programming cable. https://chirpmyradio.com/projects/chirp/wiki/Home or https://www.rtsystemsinc.com/.

Digital Long Distance

Digital modes such as DStar, DMR, or C4FM (aka, Fusion, with Wires-X) allow a hand-held transceiver to talk around the world via internet linked repeaters. The transceivers are exclusive DStar or DMR or C4FM-Fusion.

A good 2016 comparison of digital modes: https://www.mikemyers.me/home/2016/2/19/d-star-dmr-fusion-which-is-right-for-you.

All digital transceivers are also excellent standard VHF-UHF analog units so they are an upgrade of your first inexpensive radio. Your first inexpensive HT then becomes your backup unit.

A good try-them-all-first choice is using a “hot spot,” $100 to $170.

Digital hot spot: a tiny personal “repeater” that you connect to your computer for internet access. You transmit to it from your nearby HT and it does the digital translations and sends it to the DStar, DMR, or C4FM-Fusion node. Most can be configured to do all of these modes but only one at a time. It’s a useful way to try a digital mode before investing the $200 to $600 in a digital transceiver. It is an economical long term choice if you want to be able to join nets on all three from your home.

Once you decide on one digital mode to be your focus, it is best to shop for a portable or vehicle (mobile) digital transceiver with the guidance of the local group using that mode. They can also help you “program” it. You are lucky in Richmond because there are friendly local groups who support these mode. DStar transceivers are $350 to $900. DMR range from $300 to $500. C4FM-Fusion run $180 to $800.

HF for Technicians using the RARC remote station

Members of the Richmond Amateur Radio Club have access to a remotely controlled station that does VHF and UHF and HF. It’s done via a Windows computer or an Android phone or tablet. As a Tech license holder you can use certain portions of the 6-meter and 10-meter bands. Local and sometimes continental ranges are possible on 6-meters. Europe and beyond is often available on 10-meters.

Mentor Resources for Tech

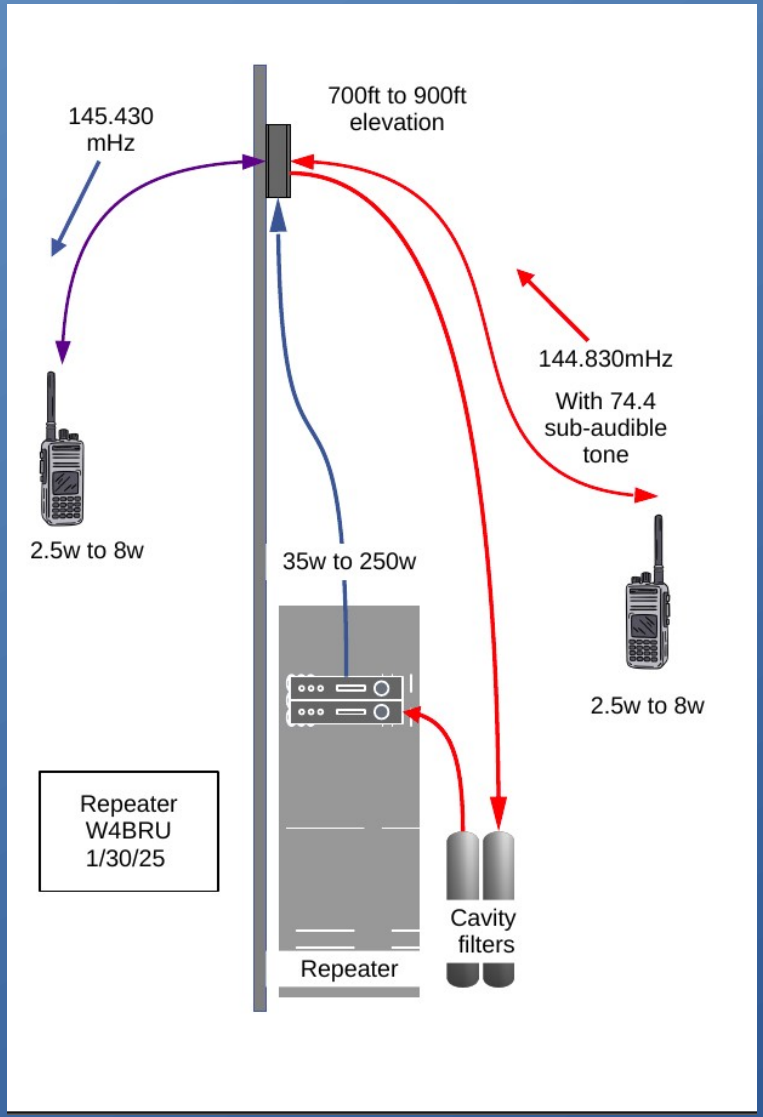
Draft plan Ham Radio Chicks meeting Feb 5

- Introductions, backgrounds, radio interests, children, pets, spousal units, etc
- Set up club's loaner radios
- On-the-air simplex net with club's loaner radios
- Discussion of on-the-air terms, jargon, expectations, how to not say "stupid things" on the air, etc
- Introduction to repeaters – aka duplex – vs radio-to-radio – aka simplex
- On-the-air net via a repeater
- Repeater lists, show Repeaterbook.com, understanding frequencies, offsets, PL-tones
- Info on Tuesday night Newcomers Net, the idea of a "controlled net"
- Discussion of types of radios and radio mode choices for Tech license holders
- Illustrate "programming" radios with frequencies using Chirp and spreadsheets
- Demonstrate programming with Chirp
- Examine antennas and discuss choices
- Agree on next meeting via Zoom
- Take group selfie

HAM RADIO CHICKS Group *(1/31/25)*

#	First Name	Last Name	Call Sign
1	Allison	Andrews	KM4TWH
2	Bruce	MacAlister	W4BRU
3	Emily	Boots	WB4EMY
4	Lynne	Davidson	KQ4YLD
5	Nora	Pozzi	KQ4YLE
6	Sandra Marie	Valenti	not yet

Mentor Resources for Tech



Mentor Resources for Tech

Ham Radio Chicks meeting Feb 19

1. Get the new radios programmed
2. Test the radios on the 145.43 and 146.88 repeaters
3. Cover other questions, look up antennas, etc
4. Demonstration 10-meter HF on club's remotely controlled station
5. Demonstrate DMR digital world-wide (if I get it working in time)
6. Show my messy radio room and the HF rig
7. Show a hot-spot if I can find mine and get it running

As usual we probably won't get all that done.

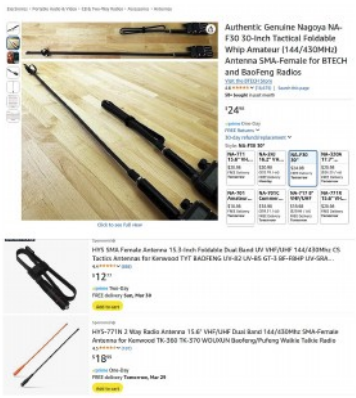
Mentor Resources for Tech

Selected Antennas for New Hams

By Bruce MacAlister for the Ham Radio Chicks, March 2025

I lack Consumer Reports labs so these recommendations are from personal experience, ham radio colleagues who tried some of these antennas, and from https://www.eham.net/reviews.

Better-than-rubber-ducky antenna



- Nagoya and HYS brands have been pretty good and reliable, about $20 to $40.
- Up to a point, a longer antenna has a better "reach" so long as it does not become unwieldy for you to use. I have a shorter length for taking on a plane or train and longer for hikes and marathon duty.
- The correct connector is critical. Almost all radios now use SMA connectors, an abbreviation of SubMiniature version A.
- To see what your radio has, remove the antenna and look down at its connector. Is it a male or female? You need its opposite for the antenna you buy. Most Baofeng radios have SMA male connectors so you want to buy SMA female antennas. Most Icom and Kenwood radios have SMA female connectors so you want SMA male for your antenna.

Roll-up antenna

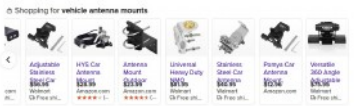
You hang these on a porch or in a window. They are based on an excellent design called a J-Pole. They are my choice for vacations and business trips where I hang it from the hotel curtain rod. It is also a good as a starter antenna for the home.

- Roll-up dual band (2M - 70CM) antenna recommended by Bob Harris, W4RTH, about $35 at https://n9taxlabs.com/shop
- A smaller version for 2-meters only is available at the same site.

- Remember to specify the connector type you need, SMA female or SMA male.
- It you are going to be moving the antenna around, getting a non-metal hanger is useful. It is a option at the website or you can make your own.
- I have enjoyed building my own. There are plenty of plans using either the smaller 300ohm TV antenna transmission line or the larger 450ohm used by hams. Look up "rollup j pole antenna" and you will find treats like https://www.youtube.com/watch?v=cid6yycOfqA
- An alternative is a magnetic mount (mag mount) vehicle antenna on a steel cookie sheet.

Vehicle antenna

- For starters a cheap magnetic mount antenna with the wire run in through a slightly opened window.
- You will want a vehicle power adapter for the transceiver. It usually plugs into the "cigarette lighter" outlet in the car.
- If you find you are using your radio a lot in your vehicle and you are driving some distance from the repeaters, you will want a longer and better antenna with a better mount. Trunk "lip" mounts work well on sedans. SUV hatches need a more complex (and more costly) 3-axis mount.



- You should to talk to some hams and see their antenna mounts to figure out what you want.

Looking for 2 or 3

- Group mentoring looks like the practical choice
- We need 2 or 3 members to be group mentors
- New General graduates in April
- New Tech graduates in May
- 2 to 4 two-hour meetings, in person and/or Zoom
- Periodic phone calls or text messages over a month or two

RARC Group Mentoring