



Next Meeting:

Tuesday, **July 15**, 6pm.

At Bullock's BBQ

Business Meeting starts at 7pm
(Not the usual first Tuesday, as
Bullock's is closed then on
vacation.)

Program:

**Sharing 2025 Field Day
Experiences!**

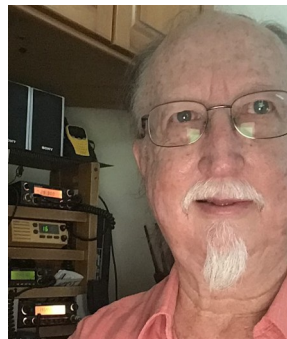
By: **All of us!**

President's Korner

Hello DFMA!

Welcome to Summer! I hope everyone who participated in Field Day had a wonderful time. If it was your first time doing so then I hope you learned some useful things.

Summer storms seem to pop up out of nowhere and can deal a dose of havoc. Such a storm did so in Apex a week ago (at time of writing) and my son was out of power for about 12 hours. A tree had fallen in the storm and broke two power poles. Don't wait till a Hurricane is coming before you have your preps ready.



Did you know that there is a repeater that takes and broadcasts Skywarn spotter reports along with National Weather Service alerts and warnings? You can hear it on 145.210. It's on the WRAL tower and has excellent coverage.

Hope to hear you on the net and see you at the meeting at Bullock's on the **15th!**

Bob Cook
W4FK
President of DFMA
73

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Saying goodbye to the MCU!!

On Sunday June 29th, Field Day, at about 1:30pm, the MCU (Mobile Communications Unit) departed Wilson's property for it's next life.



Here are some links to photos of the MCU taken in the past.

This link is when DFMA obtained the MCU.

Early Days of the MCU (courtesy of KB4TYE)

<https://www.flickr.com/photos/clubjuggler/albums/72157603208254132/>

This link was after conversion to our needs, and when used.

MCU Work session (courtesy of KU4GC)

<https://www.flickr.com/photos/14790531@N08/albums/72157623666812512/with/5705771458>

Here is a link to photos as the MCU left:

<https://flic.kr/s/aHBqjCm8zU>

LIFE STORY OF THE DFMA MCU by NC4CD

I have been on a mission to write something for the LINK each month. The July topic was eluding me until Tim sent me his plans for an article on the departure of the DFMA's Mobile Communications Unit (MCU). The highlights of my notes through the years are summarized below.

The MCU project goes further back in time than I remembered. DFMA wanted to purchase a vehicle to use for emergency communications and PR functions for amateur radio. The vehicle we found was a 1977 Gerstenlager "bookmobile". After its life as a bookmobile, it was converted to a command / communications unit by the Athens, Tennessee Fire Department. After its time there, it was sold to the Athens, TN amateur radio club. The Athens ARC sold it to the DFMA in July 2004. My notes did not reflect the cost of the vehicle.

Several DFMA members drove to Athens and inspected the vehicle thoroughly from top to bottom and bumper to bumper. We bought it, and they drove it to its new home in Durham. I was not present, but I was told that driving a bookmobile from Tennessee to Durham was quite an adventure!

As Tim's photos show, the vehicle was a very dull gray color. The inside still had shelves from the bookmobile days. Obviously, a paint job was required. After much discussion, white paint with red and blue lettering was selected. It looked great after the job was done.

The next step was the procurement and installation of radios and antennas. Most of the radios were donated to the MCU project. Three main operating positions were equipped. The first position had a Yaesu FT-897 for 80 through 10 meters and a Yaesu FT-4700 duo-band two meter/440 radio. The second position had a Kenwood

TS-430 for 80-10 meters and a Yaesu FT-4700 duo-band two meter/440 radio. The third position had a Motorola 800 MHz. trunking radio for Durham Public Service channels, a marine band radio, and a citizens band radio. This was our 2004 version of interoperability. A Kenwood TM-271 duo-band radio was installed on the console for use by the driver or navigator.

The MCU came to us with numerous antenna mounts on the roof for mobile whip antennas. We added a Tarheel screwdriver antenna for 10-80 meters with a motorized tilt-over device to reduce the already tall vehicle height.

The MCU came equipped with an AC generator and air conditioning. We added several large 12 volt batteries and an Astron power supply for the radios.

The MCU was used many years for field day. The CW operators claimed the MCU, possibly because of the air conditioning. They brought Elecraft radios and made many, many CW contacts each year. The MCU was also displayed in parades and shows at schools.

One problem we never solved was finding a permanent indoor parking space for the MCU. For many years it was parked outside the Parkwood Volunteer Fire Department with an extension cord from the building to keep the batteries charged. It spent its final years with DFMA in the yard of Wilson, W4BOH.

Much of the initial work on the MCU was done by Dave Love, W4UBH and Randy McCray, KE4UCM -SK. Lowell, KK4PH, Wilson, W4BOH, and Dan, KR4UB, spent many hours keeping the MCU in working condition.

Over the last few years many of our members who worked on the MCU moved away or aged out. Since the MCU was approaching 50 years old, major expensive maintenance was required. Insurance was an expense every year. The decision was finally made to retire the MCU. The buyer put it on a roll-back on Sunday, June 29 after field day, and it went to its final destination.

73 MCU! Thanks for the memories and years of service.

Interesting Items:D-Star Launch

D-Star 147.210 and the reflector XLX525B

<http://xlx525.webhop.net/>

Here is some information on how to set up the RPT1 (or R1) and RPT2 (or R2) on the DStar radios so that repeater users can access the repeater's gateway and therefore communicate through the reflector. Participants who are checking in via the reflector won't be able to hear repeater users who aren't doing this.

RPT1 is the repeater designation and RPT2 is the gateway designation. Our repeater's callsign is AA4RV C, with C indicating it is a 2 meter repeater. RPT1 is AA4RV C, separated with spaces and with the C in the 8th position

RPT2 is AA4RV G, separated with spaces and with G in the 8th position

Here is a link to a YouTube video about this new D-Star repeater:

<https://youtu.be/NCtozHdlOg4?si=4qxz9EsDDz3WXiQk>

CFARS Swap Fest

Sponsored by the Cape Fear Amateur Radio

Society - www.cfarsnc.org

Saturday August 9, 2025

See their flyer near the bottom of The Link.

If you are unfamiliar with FAA tower registration,
the FAA now has a video!

<https://oeaaa.faa.gov/oeaaa/oe3a/main/#/home>

Click on the video and it lasts 4 m 2 s

Fred Hopengarten, Esq. K1VR

Reminder: RF Evaluation:

The FCC regulations were recently updated to require every amateur station, including mobile and portable stations, to perform a routine RF environmental evaluation to ensure that people are not exposed to electromagnetic energy greater than the maximum permissible exposure (MPE) limits. Hand-held transceivers sold before May 3, 2021 are exempt from performing a routine station evaluation.

Buy – Sell – Trade**Box of Cat.6 LAN cable.**

I have a near full, I think, box of Cat.6 LAN cable.

This stuff is \$125+ at Amazon, so \$50 seems reasonable for this one.

Estate stuff, money goes to DFMA.

Wilson, W4BOH

Contact: infomet@embarqmail.com

ICOM PW-1 Solid State Amplifier.

Selling for friend, good shape.

Price \$2,000.00.

Wilson, W4BOH

Contact: infomet@embarqmail.com

Icom Microphones IC-HM9 and IC-HM14

NEW in boxes

HM9 has two pin plug, for handhelds. \$20

HM14 has 8 pin plug and 16 key keypad. \$30

Pick up in Hillsborough OR I will mail for \$10 each.

Wilson W4BOH

Contact: infomet@embarqmail.com

Alliance HD-73-1 Rotator Controller SK Stuff

Untested, no rotator available, so returnable.

Two Speed, six wire controller.

Picture available.

\$50, in Hillsborough.

Wilson W4BOH

Contact: infomet@embarqmail.com

Crossrock Stack able 6U Case

Strong Molded PE exterior with heavy duty hardware. Good as a large Go-Box.

Twist latches and 2 handles. Standard 19" rack space, with gasket sealed.

Removable front and rear cover with 2 front rails for rack-mount.

For 6-unit rack (10.5") and 19.25" rack depth.

With Two 2U Server Rack Shelves included

Selling for \$80, like new

TimKC1TWR@gmail.com

Do you have something that you need or something you want to get rid of? There's this spot in The Link set aside just for you. Just email the appropriate info to TimKC1TWR@gmail.com and it will be included with the next issue. Make sure to include contact info and feel free to include a picture (that is yours – please no copyrighted stuff from the web).

73, Tim, KC1TWR

Some Bits of Humor:

"I paid a lot of good money on my radios, I'm going to squeeze all the electrons out of them I can!" - anonymous

In 2020, two men made an "Earth Sandwich" One was in New Zealand and the other in Spain. At the exact same time, they each placed a slice of bread at precisely opposite points on the globe. They used latitude and longitude coordinates to make sure the locations were perfectly aligned, placing one slice of bread at each point. This created an Earth Sandwich — with 12,724 kilometers of planet Earth stuffed between the two slices of bread!!!

TECHNOLOGY TRIVIA FUN - from Marc - W4OVT

Name the most enduring consumer electronics product released in the late '70s that you can walk into a Best Buy and purchase today essentially unchanged?

Answer: The HEWLETT-PACKARD 12C Financial Calculator - other than the change from 3x357 batteries to the 1xCR2032 single, flat battery and price reduction from \$110 to today's \$60, the HP-12C has retained its original design from a great company.

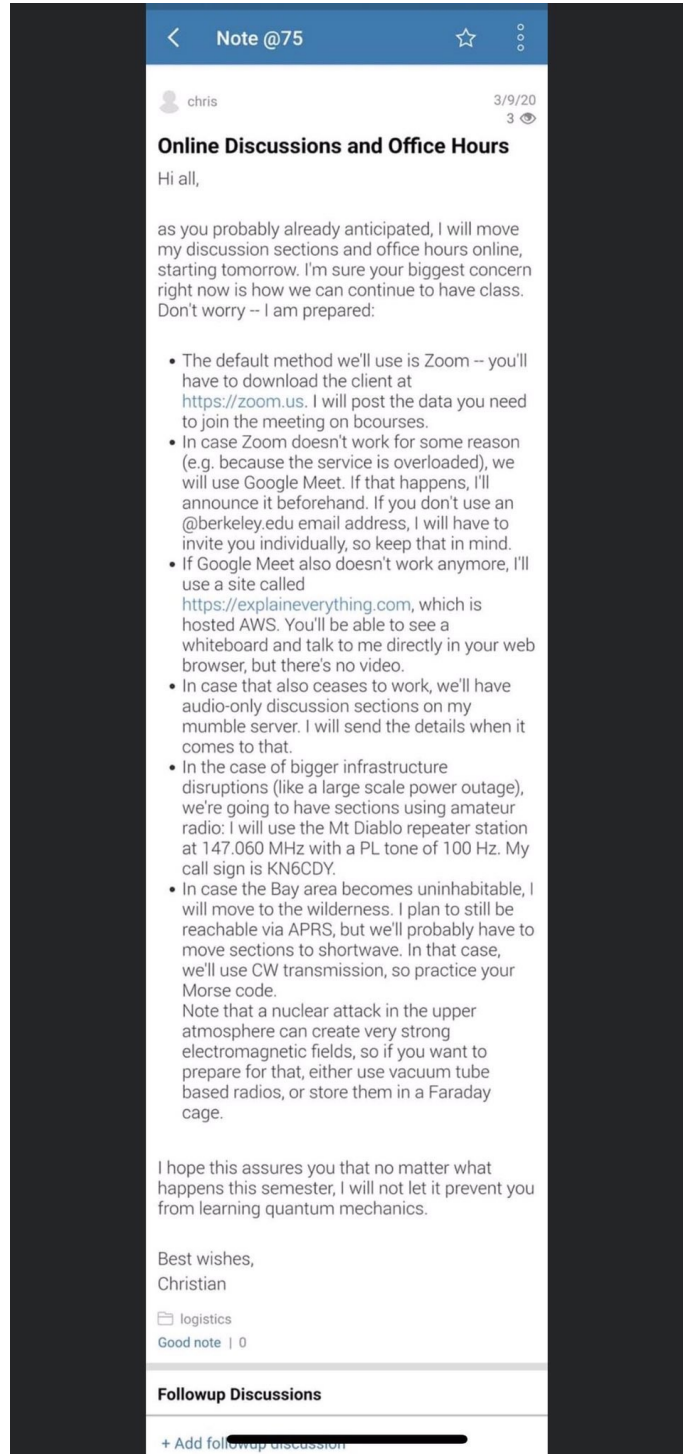
Spot Car Traffic on Weather Radar!

Story from FB 2025-06-12

Meteorologist Christopher Pipkin in Arkansas Excuse the extra nerdy post here, but this is too cool! 📡 🚗 We were able to spot traffic on radar earlier this morning. What is happening here is called "ducting," which is rare.

This occurs when a temperature inversion traps the radar beam close to the surface, bending it lower than normal. In this case, it bent just enough to pick up motion along I-40 near Carlisle, and yep, those are likely cars showing up on radar! 🚗 📡

Weather radar detected speeds in the 75–85 mph range, which makes total sense for overnight interstate traffic. While it's not directly "seeing" each car, the beam is hitting just the right layer of the atmosphere to reflect motion at ground level, which is often wind or, in rare cases like this, vehicles. Pretty amazing what our atmosphere can do!





Some Random Thoughts:

If you have read this far, bravo to you and your patience with my putting together and editing The Link recently.

I have come to the conclusion that I am kludging together The Link each month, without a format of which bit goes here or there. In the coming months I will endeavor to bring some order to this chaos to make The Link more readable.

Thanks to Wilson W4BOH for sending this comic to me, along with the suggested edit!

(See meeting minutes and crossword puzzle on the following pages.)

Just Ahead in Radiosport from ARRL:

July 12 - 13 IARU HF World Championship (CW, phone)

July 14 -- 4 States QRP Group Second Sunday Sprint (CW, phone)

July 15 -- ICWC Medium Speed Test (CW)

July 16 -- RSGB 80 Meter Club Championship, SSB (phone)

July 18 -- NCCC FT4 Sprint (digital)

July 18 -- Weekly RTTY Sprint (digital)

**Durham FM Association (DFMA)
Member Meeting Minutes,
June 3, 2025**

Held at Bullock’s BBQ, Durham NC

The meeting was called to order at 7:00 pm.

Attending Members:

Chip KF4WBK, Karen KD4YJZ, Dave W4SAR, Dave NA4VY, Dan KR4UB, Pat KO4QLU, Paul N2XZF, Ted KQ4AAP, Banks W4OFZ, Michael AA4YH, Robert KD8FQM, Pam KO4YAR, Wilson W4BOH, Tim KC1TWR, Bob W4FK, Bill WW1H, Dan KQ4GOB, Chris KY4OU, Dave K4DJW, JR N4JQR, Sam KJ4VWG, Chris KQ4TNF, Charlie NC4CD, Paul N0US, and Tom KR4BTP.

Also attending were Doug Griffin KF4NGF, Tim Thurber WX4TIM, Matthew Stafford KQ4ZYW, Charles Harris KQ4TNF, Jerry Northington KR4DTD, Janice Howell KQ4ZGL, James Fields Jr. KQ4QYX, and Thomas Rush.

OFFICER REPORTS

President - Bob W4FK

The DFMA July Meeting will be on July 15th instead of July 1st as Bullock’s is closed for their summer break.

Vice President -Chris KY4OU – Nothing to report.

Acting Secretary Pam KO4YAR - nothing to report.

Treasurer - Wilson W4BOH - \$250 collected from sale of old MCU, which will be picked up tomorrow. Also, there was a \$100 donation accepted.

Repeater Manager - Charlie NC4CD
Durham is building a new EOC. Charlie met with the EOC Emergency Management Coordinator to review AUXCOMM needs for the new building. Charlie asked for, among other things, two 4” conduits from the radio room to the antenna tower.

Website – Tim KC1TWR

Tim stated he is working on improving and reorganizing the club’s website. He is looking for assistance from anyone interested in helping.

Old Business – Elections

Paul N2XZF and Pat KO4QLU were re-elected for two-year terms as Members At Large.

Bob W4RK was re-elected as President and Wilson W4BOH was re-elected as Treasurer.

Tim KC1TWR was elected as Secretary. Matthew Stafford KQ4ZYW was elected as Vice President.

New Business: None

The door prize drawing was held with the winners being Chris KQ4TNF, Tim WX4TIM, and Robert KD8FQM.

The meeting concluded at 7:40 pm.

Presentation: 2025 Field Day presented by David Snyder W4SAR.

Minutes taken by:

Secretary Tim Rodgers KC1TWR

**Durham FM Association (DFMA)
Board Meeting, June 17, 2025
Held virtually on Zoom**

The meeting was called to order at 7:04 pm.

Attending Members:

Bob Cook W4FK (Pres), Matthew Stafford KQ4ZYW (VP), Wilson Lamb W4BOH (Treas), Tim Rodgers KC1TWR (Sec), and Members-at-Large: Paul Robertson N2XZF, Pat Connelly KO4QLU, and Dan Eddleman KR4UB. Also, Charlie Durst NC4CD (Repeater Mgr.) and Pam Miller KO4YAR (Past Sec).

Old Business:

Bylaws: Tim has incorporated all feedback on the first draft of the bylaws. He will send out the revised draft, which can then be brought to the membership at the next Regular Members Meeting.

New Business:

Next Meeting: Bob stated Bullock’s Bar-B-Cue will be closed at our regular meeting in July, so our meeting

will be rescheduled for Tuesday July 15th.

Field Day:

Dan representing OCRA (Orange County Radio Amateurs) obtained the certificate of liability insurance rider for Field Day activities at Wilson's, and his son Chris's, properties. Wilson will contact Dee Ramm KU4GC to get the DFMA insurance contact information to obtain similar riders.

A Port-o-Potty will be obtained for the event for \$300, which cost will be split between DFMA and OCRA.

Some discussion was had concerning the timing of helping Wilson prepare his property for the event, and where stations would be located.

The meeting concluded at 7:26 pm.

Minutes taken by:

Secretary Tim Rodgers KC1TWR

(See the Crossword Puzzle on the next page.)

Web Site: dfma.org

Upcoming Events (dfma.org for details)

- 07/14 OCRA Meeting, Efland Baha'i Center, 7:30pm**
- 07/*15* DFMA Meeting, Bullock's BBQ, 6pm**
- 07/19 52st Annual Cary Mid-Summer SWAPFEST**
- 08/09 Cape Fear Amateur Radio Swapfest in Fayetteville, NC**
- 08/16 VE Test Session, Efland Baha'i Center, 10am**
- 08/19 DFMA Board Meeting, 7pm on Zoom**

73 - Tim KC1TWR, Newsletter Editor

Send copy to TimKc1twr@gmail.com

Deadline: one week before the Club Meeting

(Images and copy: KC1TWR or as credited)

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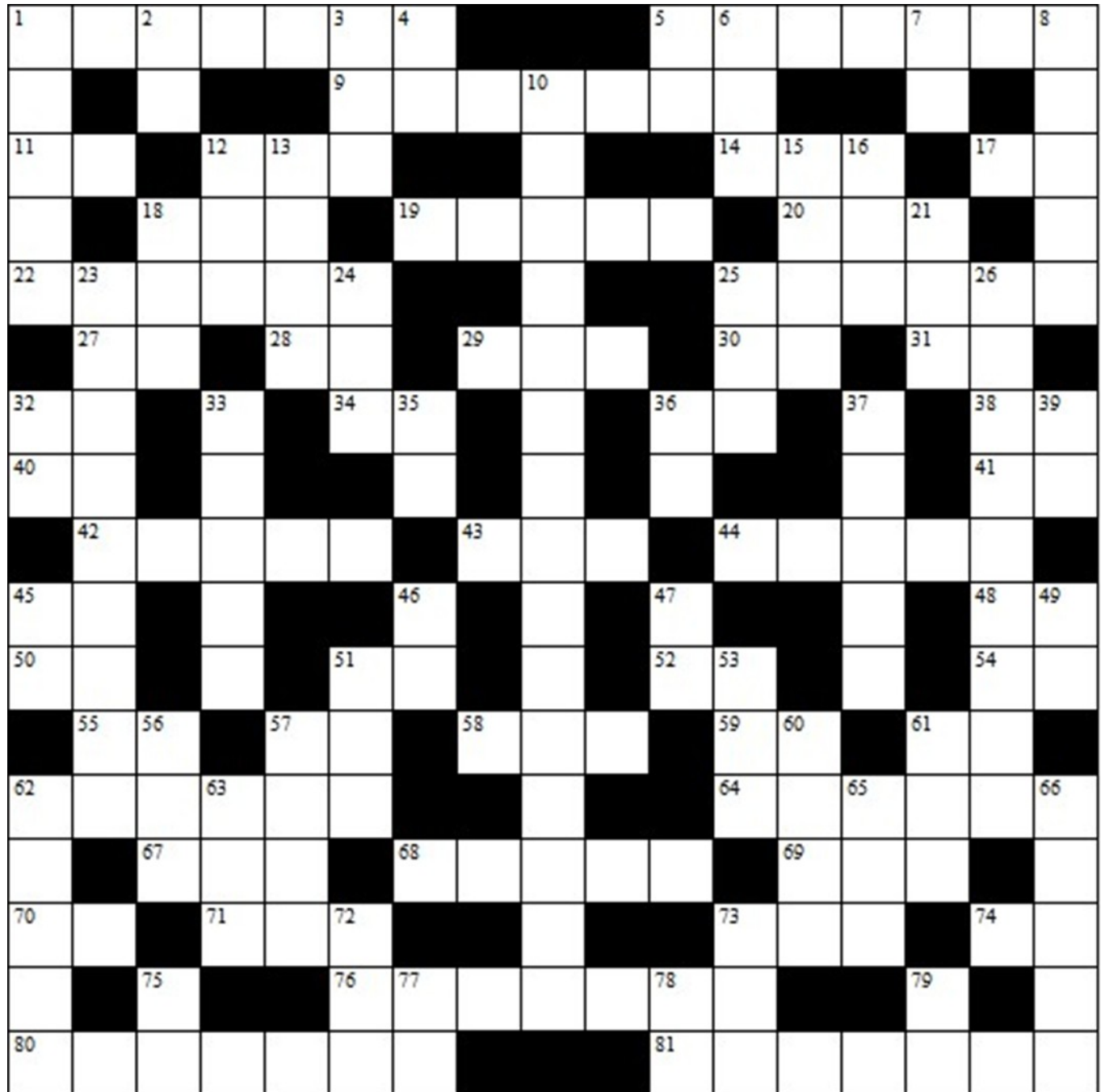
The DFMA Mailing Address

This is actually a mail service which costs less than a post office box and provides some extra services.

Please address any mail you have for the club to:

**Durham FM Association
9169 W State St #644
Garden City ID 83714**

Crossword puzzle from: The Link of December 2018



A

-->> Across <--<

1. * Next level of Amateur Radio license after Technician
5. * The 'A' in ARRL
9. Circular mounting hardware (pl.)
11. Unit for 1,000,000 watt-seconds (abbr.)
12. Measure of source / load mismatch (abbr.)
14. * Mechanical device for sending Morse Code
17. 1E6 nanoseconds
18. Electromagnetic interference (abbr.)
19. Heat-resistant glass type
20. A common RS-232 serial bus command (abbr.)
22. Web's most popular radio frequency engineering site (2 ltrs. + 1 wd.)
25. Quantum of vibrational energy
27. Local Oscillator (abbr.)
28. One port of an amplifier
29. Science of assuring operation amid dense EM background noise (abbr.)
30. Chemical symbol for holmium
31. Type of flip-flop
32. Chemical symbol for gallium
34. Logarithmic ratio (abbr.)
36. Opposite of O.D.
38. Centimeter (abbr.)
40. PC follower
41. One port of an amplifier
42. Coder/decoder (abbr.)
43. * Ham's code for "Is my transmission being interfered with?"
44. International phonetic alphabet letter "H"
45. Intel x86 command for " jump if above"
48. 30 kHz to 300 kHz
50. Chemical symbol for antimony
51. Sound frequency in the human hearing range (abbr.)
52. "Calling any amateur radio station"
54. Modulation type (abbr.)
55. Chemical symbol for lanthanum
57. Unit of liquid measure (abbr.)
58. Electronic component package type (abbr.)
59. Unit of time (abbr.)
61. PC follower
62. * The 'L' in ARRL
64. Configured a switch to break electrical contact
67. A common battery cell size
68. * Hiram Percy _____, founder of the ARRL
69. Logic family
70. Boob tube (abbr.)
71. Synchronous Digital Hierarchy
73. * Ham's code for "Are you busy?"
74. 1/000 of an amp (abbr.)
76. Aircraft bulkhead (pl.)
80. * Type of Morse Code key (pl.)
81. Akin to dynamics, with no movement

-->> Down <--<

1. Software role playing type
2. Chemical symbol for neon
3. The Microwave Office software company (abbr.)
4. Chemical symbol for lanthanum
5. Chemical symbol for argon
6. Minimal Shift Keying (abbr.)
7. Chemical symbol for europium
8. The stuff in the solder core
10. * Founder of the ARRL (3 wds.)
12. Miniature threaded RF connector
13. Refers to the IEEE802.11 networks (abbr.)
15. Name for a reflected radar signal
16. Elemental compound used for microwave frequency reference oscillators (abbr.)
18. Engineering Change Order (abbr.)
21. Signal-to-noise ratio (abbr.)
23. Conductor type for parallel buse interconnections (2 wds.)
24. Last statement in a BASIC program
25. It can follow an MS
26. Generate a periodic signal
32. Chemical symbol for gallium
33. * The "R" in ARRL
35. Chemical symbol for bromine
36. Band between RF and BB
37. * Next level of Amateur Radio license after General
39. Chemical symbol for manganese
45. JavaScript (abbr.)
46. 300 kHz to 3 MHz
47. A BPF specification (abbr.)
49. Type of modulation (abbr.)
51. Automated Test Equipment (abbr.)
53. * Ham's code for "Station is leaving the net."
56. A common battery cell size
57. Type of antenna with four-sided loops
60. Longitudinal shape-forming structural element
61. Antenna (abbr.)
62. Period of reduced production
63. One state of matter
65. High-speed logic family
66. Trigger diode that conducts current only after its breakdown voltage has been exceeded momentarily (pl.)
72. RF & microwaves magazine founded by Gary Breed, now Summit Technical Media (abbr.)
73. * ARRL's magazine

(Solution at the bottom of The Link)

25th Anniversary Edition

CFARS SwapFest

Sponsored by the Cape Fear Amateur Radio Society

www.cfarsnc.org

Fayetteville, North Carolina

Saturday August 9, 2025

8:00am to 12:00 noon

**Cumberland County Shrine Club
7040 Ramsey St (US Hwy 401 N)**

**No Admission!! No Fee for Tables!!!
Please help us keep this event free
by placing a monetary contribution in
the donation box so we can cover the rent
on the building!!!**

Talk-in: K4MN Repeater 146.910 (-) CTCSS 100Hz

Information and Table Reservations:

David KI4W davidki4w@gmail.com

910-624-1394

VE Test Session Walk-ins Only Registration 9:00am Testing 9:30am

ARRL VE Testing: Jim K4BUC jbuccieri@twc.com

910-309-5218

**Set-up begins at 6:30am. Only vendors inside before 8:00am. If you
need tables please call or email in advance. On the morning of the
Swapfest see David KI4W for tables.**

Table Reservations recommended.

Tail Gating available - - also FREE!!!

An ARRL Sanctioned Event

G	E	N	E	R	A	L			A	M	A	T	E	U	R	
A		E			W	A	S	H	E	R	S		U		E	
M	J		S	W	R			I			K	E	Y		M	S
E		E	M	I		P	Y	R	E	X		C	T	S		I
R	F	C	A	F	E			A			P	H	O	N	O	N
	L	O		I	N		E	M	C		H	O		R	S	
G	A		R		D	B		P		I	D		E		C	M
A	T		A			R		E	F			X			I	N
	C	O	D	E	C		Q	R	M		H	O	T	E	L	
J	A		I			M		C		F			R		L	F
S	B		O		A	F		Y		C	Q		A		A	M
	L	A		Q	T		S	M	D		N	S		A	T	
L	E	A	G	U	E			A			O	P	E	N	E	D
E		A	A	A		M	A	X	I	M		A	C	T		I
T	V		S	D	H			I			Q	R	L		M	A
U		G			F	O	R	M	E	R	S			H		C
P	A	D	D	L	E	S				S	T	A	T	I	C	S