



Monthly Newsletter
April 19, 2023

❖ What's New ?

Website – Notes From The Shack.

Our News Blog has become a bit cluttered. We found it was challenging for our readers to know where they should look for the many forms of information that we offer.

Last month we introduced a new title for the News Blog – **News – Top Stories**.

This month, your web site administrator has created a page that contains all the Notes From The Shack articles. He is knee deep in the slow process of editing the blog posting taxonomy to improve our chances of the news reaching its intended audience and reducing competition from other postings that may benefit a different audience.. If you hold your breath waiting for results you will turn blue. BREATHE !!!

News – Top Stories and **Notes From The Shack** are the place for breaking news, timely topics, as well has **here today, gone tomorrow** subjects. In contrast, our Know How Resources page is where to find topics that are likely to survive the test of time and bear fruit for years to come.

❖ On-The-Air Events

April 2023

- Michigan QSO Party 15th
- Ontario QSO Party 15th-16th
- Quebec QSO Party 16th
- Florida QSO Party 29th-30th

May 2023

- Indiana QSO Party 6th
- 7th Call Area QSO Party 6th-7th
- Delaware QSO Party 6th-7th
- New England QSO Party 6th-7th
- SKCC Weekend Sprint-a-Thon 13th-14th
- Canadian Prairies QP 13th
- Arkansas QSO Party 20th
- CQ WPX CW Contest 26th-28th

Check the dates. Some contests begin at 0000Z which is Saturday morning UTC, but late Friday night local time.

❖ License Plate Puzzle



You know what to do.
No explanation is necessary.
Answer on Page 4.
Good Luck.

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groups.io/g/RadioClub-CARC

www.facebook.com/K3IEC
www.twitter.com/K3IECcarc

❖ SWR Troubleshooting Techniques **from Frankford Radio Club groups.io**

A group on the GoFRC groups.io site was helping solve an antenna SWR problem for one of their members

The issue is SWR climbs while operating using 70 watts or more. Below 70 watts SWR is 1.2:1 and does not change. At 70 watts or more, the SWR will climb past 5:1 during the FT8 15 second transmission sequence. Also happens when operating CW. The issue has been right from the beginning. In other words, it didn't happen after days after the install.

Here are some of the techniques performed and suggestions contributed

Antenna elements are pre-drilled so no way to mess up measurements, however everything was rechecked.

Tried different runs of coax. One being brand new from DXE and another taken from an HF antenna that operates fine.

Tried different ports on radio. FT-5000D LTE. Since the antenna was just installed we are ruling out water in coax or connectors.

If there is a barrel connector in the coax, check the pressure on the center conductor. Some low cost barrels are just junk.

Some right angle adapters are made with a spring inside that can cause odd behavior above HF.

Make sure the feed point is mechanically sound.

Was (there) a ferrite balun at the feed point? If so, replace it with a direct connection to the driven element.

If there is a coax switch, low pass filter, wattmeter, etc. in the coax, remove it.

I've heard of an issue once where the ferrite in the radio's LPF (Low Pass Filter) board burned up on 10 meters FM so maybe worth a visual check of the filter board in the radio. If you have a temperature probe (Harbor Freight sells them) you can check for heating inside the radio.

My first suggestion is to put a dummy load on the end of the coax in place of the antenna where the coax connects to the antenna. Transmit high power. Everything ok? Now you know where the problem is.

Still have high SWR, Start moving the dummy load closer to the station, one connection at a time.

If you had a fault with any power level, this would be where Time Domain Reflectometer (TDR) comes into play.

My 40 meter beam showed super high SWR. Ran TDR and it showed the fault was 81 feet from the station. That's at the base of the tower. Sure enough, bad barrel connector right at the base of the tower on the 40 meter coax run.

Dummy loads and running TDR at the two best tools for trouble shooting coax runs.

I would start with the dummy load at the TX to make sure it is not a rig or tuner problem.

I want to thank everyone for their suggestions.
... will run the tests when he returns.
I will let you know what he finds out.

❖ What is a Linked Dipole ?

I love it when people get up, go out, and do something with their ham radio hobby. Here is an example.

There is some activity taking place involving what is called a Linked Dipole.

When I first heard that term I knew the meaning of only the second half – dipole. Since that time, I have learned that a linked dipole is a wire antenna designed in a way that permits the station owner to easily customize the length of the in-use portions to suit the band on which operations are desired.

If you are like me, the following photographs may be worth a thousand words.

Photo 1 shows a Linked Dipole that I defined on the www.sotamaps.org/extras web page. My design specified five bands - 80, 40, 20, 15, and 10 meters. The corresponding frequencies I used are: 3500 KHz, 7000 KHz, 14000 KHz, 21000.KHz, and 28000 KHz. Turn to Page 10 where Photo 3 is housed.

Photo 1 shows each of the antenna segments using a color code. The highest frequency antenna segment is closest to the center support pole. The lowest frequency antenna segment is farthest from the center support pole.

Photo 2 shows a typical linking point.

If you have good eyesight you might be able to see the RED segment closest to the center support pole. This segment alone is used when operating on 10 meters.

When i wish to operate on 15 meters I close the circuit so that RF flows through both the RED and ORANGE segments, but not into the YELLOW segment. The combined length of the RED and ORANGE segments gives a resonant antenna on or about 21000 KHz.

The gizmo shown in Photo 2 illustrates one way of opening or closing the connection between segments. This design uses Bullet Connectors which can be found almost anywhere except where I looked. I ended up shopping online at the Advance Auto Parts site and they shipped the connectors to me.

At the tail-end of the linked dipole you may see a purple segment which is used when operating on 80 meters. The RF flows through all the segments – RED, ORANGE, YELLOW, GREEN, and PURPLE. The result is a dipole resonant on or near the 3500 KHz design frequency. The jumper wire between the RED and ORANGE segment is closed. The jumper wire between the ORANGE and YELLOW segment is closed. The jumper wire between the YELLOW and GREEN segment is closed. And, the jumper wire between the GREEN and PURPLE segment is closed.

Photo 1 shows a center support pole. This is where the feedline connects with the antenna. The photo shows only one side of the dipole. Please visualize the absent other side of the dipole to the left of the center support. It would be an exact mirror image of what you see in Photo1.

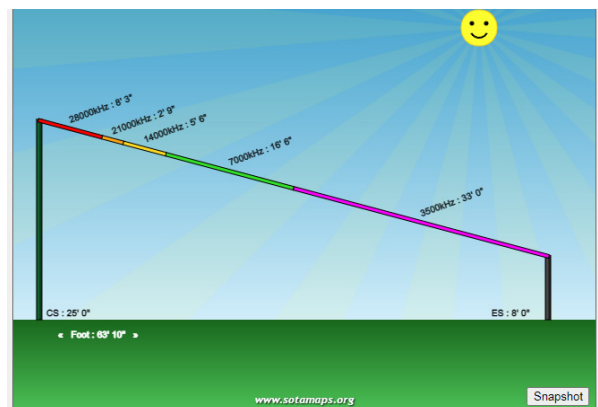


Photo 1 ↑



Photo 2 ↑

❖ **General Interest and Calendar Items April 2023, and later**

Club Website Event Calendar	www.RadioClub-CARC.com/calendar/ We have a pretty good Event Calendar plug-in on our website. If you are looking for events, this might be the right place. If you know of worthy events that we should list in our Calendar please share the <i>Who, What, Where, and When</i> information with AF3I@RadioClub-CARC.com
Ham Radio License Exam Testing Part 1	Harrisburg Radio Amateur Club (HRAC) test dates are 3rd Saturdays, Even Numbered Months, starting at 9 a.m. <i>Location: Vietnam Veterans of America, 8000 Derry Street, Harrisburg, PA</i> <i>Laurel VEC = No Fee! Pre-Registration, including your FCC FRN, is required.</i> HRAC VE Testing Dates appear on our EVENTS CALENDAR: Additional information at their web page: www.w3uu.org Look for the link: License Exams.
Ham Radio License Exam Testing Part 2	South Mountain Radio Amateurs (SMRA) conducts license testing at the Public Safety Center off Claremont Road, Carlisle, PA. Exam sessions are scheduled monthly at 6 p.m. on the third Tuesday of the month. Preregistration is required. Our readers are encouraged to perform their own due diligence to validate any exam session in which they have an interest. Contact: n3tw@arrl.net or smraham@gmail.com There is a modest fee for this testing service. Additional details at their web page. http://n3tw.org/links/getting-licensed/smra-testing-policies/
Ham Radio License Exam Testing	Look for LICENSE EXAM on our website THINGS-TO-DO Calendar View. We have entries for SMRA, Keystone VHF, Cross-Keys Village, HRAC
License Exam Training Class	SMRA announced they will be conducting a Ham Radio License Exam Training Class over the course of five Saturday afternoons beginning February 04, 2023. The classes will take place at the Bosler Library in Carlisle from 2:00 p.m. to 4:00 p.m.
License Exam Training Class	Ralph Brandt, K3HQL offers license exam training classes
License Exam Training Class	The Nashua Area Radio Society (Nashua, NH) offers license exam training classes on a frequent basis. Some are online. Others are conducted in-person. Check their website for current information. www.n1fd.org
License Exam Training Class	If you know of any upcoming License Exam Training classes please let AF3I know so that they can be listed here. The ARRL website has a search tool. The classes I found were listed behind the keyword "online". http://www.arrl.org/find-an-amateur-radio-license-class
Ham Radio Lunch	The last Thursday of each month. Informal lunchtime gathering at the Hibachi Grill and Buffet. 5080 Jonestown Road -- Route 22, Harrisburg, PA Best guess – Noon. to 1:30 p.m.
CARC Weekly Coffee Time	Every Thursday at 10:00 a.m. Location: Sometimes at Caffe 101 in Boiling Springs, PA. On the corner, across from the clock-tower and diagonally across from the Boiling Springs Tavern. Sometimes conducted as a Zoom Meeting. Check with Richard Johnson N3EPY for info.

If you have Calendar items that you would like to share with your fellow CARC Members please send them to the Newsletter Editor – Andrew Forsyth AF3I. He can be reached by eMail sent to: AF3I@RadioClub-CARC.com

❖ Cumberland Amateur Radio Club Nets

<p>CARC Two Meter VHF Digital Net</p>	<p>Every Sunday evening at 6:00 p.m. local time. 146.490 MHz. Most likely we will be using OpMode Domino EX 22.</p> <p>If you have experience using Sound Card Digital Modes you will feel at home with this digital net. Mostly informal in terms of conversation topics.</p> <p>If you have not yet experienced the pleasure of using Sound Card Digital Modes you are invited to seek assistance. CARC Members have all kinds of skills tucked away in remote corners of their universe. Some of these members maintain a low profile. However, if you ask they will come out and share their experiences with you. You could send an eMail message to ELMER@RadioClub-CARC.com and one of us will crawl out of our den to help you.</p>
<p>CARC Two Meter Phone Net</p>	<p>Every Sunday at 7 p.m. local time. 2 meter band. 146.490 MHz FM Simplex. Also available through EchoLink Node 259045 or search for station AF3I-L. EchoLink is great for those who have no transceiver and/or no antenna, but who do have a PC and an Internet connection. EchoLink is equally great for anyone who resides or travels outside our local area and wishes to stay in touch. Visit www.echolink.org as a starting point.</p>
<p>CARC Ten Meter Phone Net</p>	<p>Every Wednesday* at 8 p.m. local time. 10 meter band. 28.400 MHz USB *Except Monthly Meeting Night. on the third Wednesday of the month.</p>

❖ Answers to the Puzzles

Answer to the License Plate Puzzle that appeared on Page 1



My notes are so old, they do not attribute this contribution to anyone. I bet it was Frank Mellott. Frank proposes this plate contains a reference to hiking the Appalachian Trail in 1983. He's Good!

Words of Wisdom...

If you cannot
do great things,

do small things
in a great way.

Words of Wisdom...

It is a whole lot easier
to get your breakfast
from a chicken
than from a pig.