# The LongPath

September 2021 — Volume 45 Issue 9 A North Alabama DX Club Publication

Contents:



Contributors:
AI4U
K8KI
KE4PT
KF4BOG
KI4KWR
N4NM
NG3K

## From the President

By Bob DePierre, K8KI

I hope exciting times never end. We've got one for you again this month. We won't have to worry about restaurants kicking us out any more. From now on, we'll meet at the Museum of Information Explosion, which is really a radio museum. Here's a photo of it from Google Maps. It's located at 1806 University, which is about ¼ mile east of the Parkway.

Museum of Information Explosion

HARC has been meeting here for about a month. With a ton of work from a volunteer staff (hint, hint) the museum may be able to open to the public by next summer. I started my first day as a volunteer last week, and worked/played there every day. If you haven't been here yet, you'll gasp when you first walk in. I'd estimate there are 800 vintage radios here now, each being museum quality. There aren't any junkers on display.

This is a museum; there is no food service in the building. We'll have to eat somewhere else before the meeting. If we bring food into the building, there will soon be a mess to clean up. If there are any volunteers to work on mess cleanup detail, maybe we can talk about eating there.

Since we'll have to eat elsewhere, we'll have to move the schedule back a little. I'll open the doors at 6pm, and start the meeting at 6:30pm.

There was a hamfest and a DX Banquet a couple of weeks ago. Of course, I overdid it, and I'm still recovering. I'm anxious to hear all your stories, and what you may have found there. My experiences at the hamfest were just fabulous! Thanks to Mark, N4BCD, and his crew.

We'll be starting our year-end activities in a month. We need to talk about the club picnic, the election of officers, the DXer-of-the-year vote, and the Christmas party. I sorta like the end of the year! I'll appoint an election committee at the meeting.

Chuck Lewis/N4NM will do the presentation this month. Chuck can

## From the President (continued)

weave a yarn better than anybody, and it's even better when it's all true. He hasn't titled it yet, so I'll make up a title: Using modern test equipment on vintage radios. His insights will help you marvel at the genius of engineers working 100 years ago, and make you wonder how they ever figured things out way back then. This will be a multi-part sequence, with Chuck covering crystal, regenerative, tuned RF, and superhet radios.

So, let's have the next NADXC club meeting on Tuesday, September 14, at the Museum of Information Explosion on University. The Zoom sign-on will be exactly the same as in the past. I'll send members the Zoom invitation on Sunday just before the meeting. You can get dinner at any of a number of locations near the museum. The meeting will start at 6:30, and the program a little before 6:45.

## Pi-Star: The Ultimate in Radio Communications

By Mike Werner, KF4BOG

When it comes to chasing DX what do you think of? You think of the big radio with lots of power. But there is a new device in town that is getting very popular. It works with a little black box called Pi-Star. At this year's hamfest my dad bought me the newest Pi-Star which has a large color display. The Pi-Star allows you to connect your digital radio to nearly any worldwide network without being in range of a repeater. The Pi-Star connects to the internet with WiFi and is configured with your web browser.


Large color display on KF4BOG's new Pi-Star

As you see in the picture, the display is large and bright so even at night you can see the stations that are on the air. It also has an online dashboard where you can actually watch the stations as they come on the air. Just like the average DXer, I like to chase the stations not just for the countries but also for the call signs associated with them. I worked a lot of countries just by using this little box. So yes, you don't have to be an extra class licensee to operate DX. Most people think of these little black boxes just as what it is, a small hotspot. They also think that these hotspots are not really ham radio. That's where you're wrong. These hotspots can do a lot of modes including the following: DMR, D-star and Yaesu System Fusion just to name a few. In the pictures you see the device in action. The first one is of the Pi-Star itself and the second one shows the dashboard and the stations that are currently online. I first started out with a hotspot that had a very small display and was difficult to read. This newer hotspot is much easier on the eyes and easier to read. So, if you're looking for a hotspot to just chase DX without a big rig the Pi-Star is the answer. If you have any questions about the Pi-Star or if you just want to learn more just send me an email or give me a call and I can tell you more. So, get a Pi-Star and start doing some DX chasing today. You won't go wrong and, on a side note, you use a simplex frequency for the device to work. Not bad for a little box.

Here are some of the most common questions asked about the hotspot:

Q: What frequency can you run the hotspot on?

A: The hotspot can be run on most frequencies in the 70cm band. I use 446.100 MHz.

Q: How much power does the hotspot put out?

A: The hotspot puts out very little power so it has a short range that will cover most of your home.

Q: How does the hotspot work?

## Pi-Star: The Ultimate in Radio Communications (continued)

A: The hotspot works via Internet connection. It uses the Internet to connect to all the repeaters within the network. It uses the 2G connection of your Internet. Note, 5G Internet connection is not recommended as these hotspots put out very little data.

Q: How can I build my own hotspot?

A: There are several articles in many of the ham radio magazines that show you how to build a hotspot. QST magazine has recently been publishing articles on how to build hotspots.

Q: Is the hotspot easy to use?

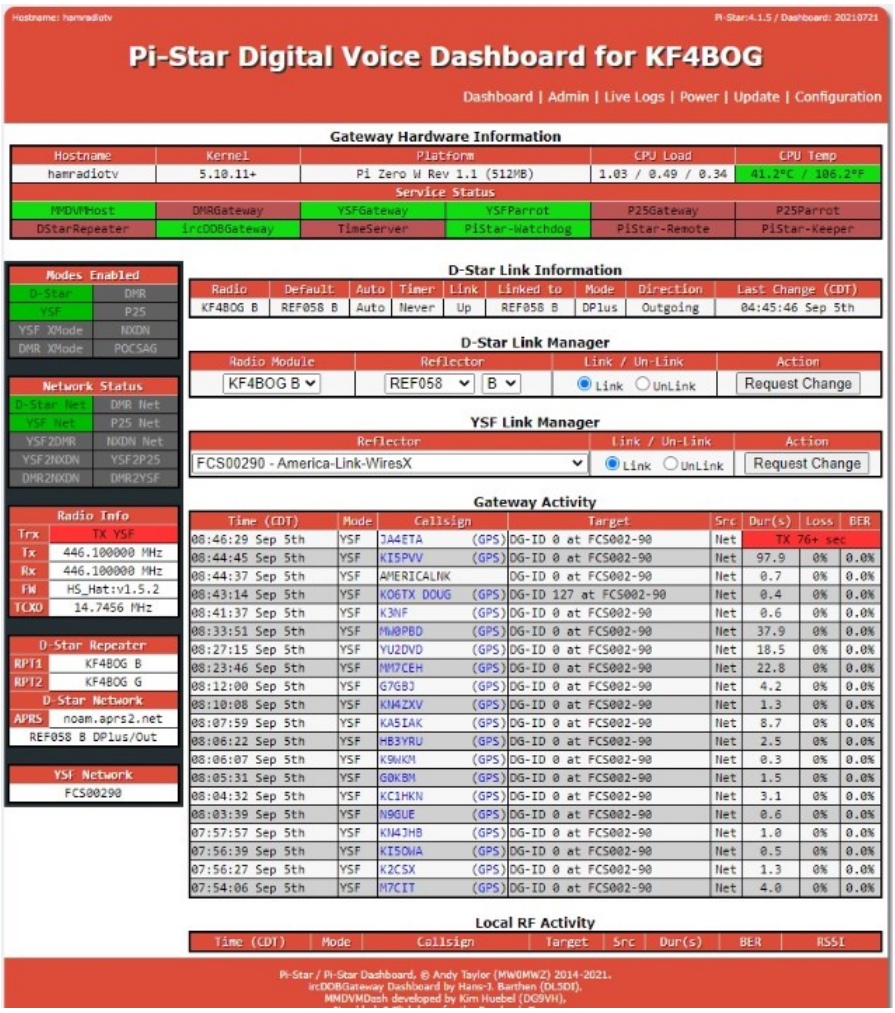
A: It has a little bit of a learning curve, but once you get to know the web interface it isn't as hard.

Q: How do I set up my hotspot?

A: There are many videos on YouTube that show you how to set up your hotspot. Find the video that is easy for you to understand and follow it. Some of them get pretty technical.

Q: Where can I buy a hotspot?

A: You can buy a hotspot from both Ham Radio Outlet and Gigaparts. There are several different DVMega models to choose from. Prices range from $100 to $450. I would start with looking local and if you can't find it there, then try other places such as HRO. You can also find them online. Another alternative is to build one or have a friend build one for you. A friend that I know builds and sells hotspots. His name is Tim and his call is KK5H. He builds and sells them at the hamfest every year here in Huntsville. I always buy things from him because he has such good quality products. Give him my name and call sign and you'll get a good deal. If you would like to learn more about his hotspots you can email him at tim.kk5h@gmail.com




KF4BOG's Pi-Star administration page. Reflectors and nodes can be easily selected. Active users in the current gateway are also shown at the bottom.

Q: What's it like on the Pi-Star admin dashboard?

A: As you can see in the picture the Pi-Star admin dashboard is easy to understand and follow. You can easily select reflectors and nodes just at the click of your mouse.

In conclusion these hotspots are a must have if you're like me and live out in the country and don't have any repeaters near you like D-Star or Fusion. But remember buy the one that fits your needs and keep in mind what you plan on using it for.

# MPE Compliance Distances for Small HF Loop Antennas

By "Kai" Siwiak, KE4PT

Here is some new information about the maximum permissible exposure (MPE) compliance distances for small HF loop antennas operating with 5 to 1500 W average power over 3.5 to 29.7 MHz. The small gap-resonated HF loop is often implemented as a circular main loop, approximately one meter in diameter, that is resonated by a wide-range capacitor to continuously cover the amateur bands between 7 MHz and 29.7 MHz [1]. An example loop conductor is on the order of 8.4 mm in diameter and is the main source of loop losses. Two-turn loops and larger loops can cover the 80 m band. Power can be supplied by a shunt feed, or more commonly, by a smaller secondary feeding loop, which acts as a wide-band match [2]. Shunt-fed loops may have asymmetrical far-field radiation patterns, whereas loop-fed loop patterns are symmetrical and bi-directional in the far field. The main and feeding loops, along with the variable capacitor form a very high-*Q* resonant circuit where the "beneficial" loss is the main loop radiation resistance. The high Q results in exceptionally high reactive fields that remain substantial to several loop diameters.

The apparent physical simplicity of the small HF loop belies the complexity of its near-field analysis. According to derivations in [1], a two-term approximation to the loop current $I(\phi)$ around the circumference $\phi$ of the electrically small loop is,

$$I(\phi) = I_0\left(1 - 2C_\lambda^2\cos(\phi)\right) \qquad (1)$$

where $I_0$ depends on power supplied to the loop, and $C_\lambda$ (valid up to about $C_\lambda = 0.40$) is the loop circumference in wavelengths. The near fields of the loop are sketched in **Figure 1**.

The **(Left)** solenoidal magnetic fields on the loop surface ($H_{surface}$) and in the center ($H_{0,0}$) are easily determined [1]. The $\phi$ dependent current term in (1) is crucial to consider, because it gives rise to the entire electric near-field structure of the small loop antenna. **Figure 1 (Right)** shows the electric fields at the center ($E_{0,0}$), the gap ($E_{gap}$) and opposite the gap ($E$=0). They are easy to determine, see [1]. The ratio of the electric to magnetic near fields yields the exact solution to the wave impedance for the current in (1). At the loop center the wave impedance is,

$$Z_{0,0} = -j376.7C_\lambda \qquad (2)$$

where $Z_{0,0}$ along with $E_{0,0}$ and $H_{0,0}$, are useful quantities to validate numerical (moment method) fields calculations. An example of the wave impedance magnitude in the plane of the loop is seen in **Figure 2**. It shows that the electric field near the loop gap (on the capacitor side of the antenna) may be of more concern than the magnetic field. The electric field energy exceeds the magnetic field energy when the field impedance normalized to the free space intrinsic impedance exceeds 1 (solid contours).

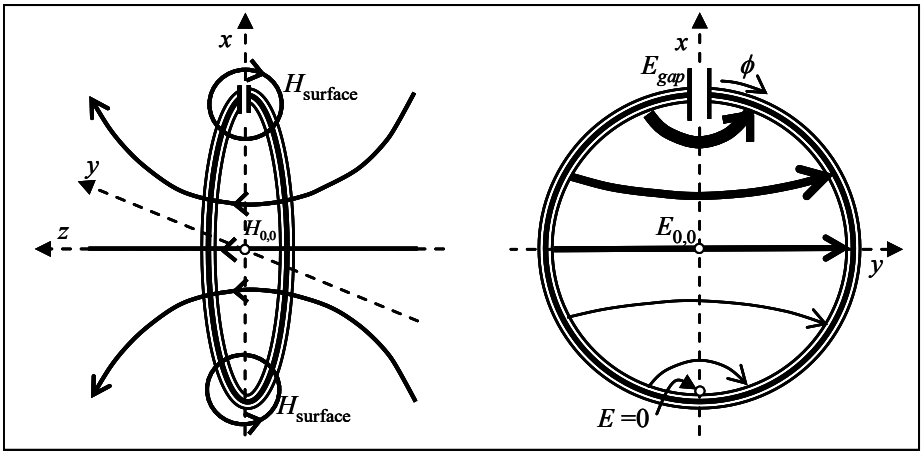



**Figure 1** – The **(Left)** toroidal magnetic fields, and the **(Right)** electric fields close to the loop.

In most cases the magnetic field perpendicular to the loop plane (what becomes the far-field null) will define the compliance distance. However, there are combinations of power and frequency wherein the compliance distance falls inside the solid contour region of **Figure 2**. Compliance is then based on the electric field. *It is important to comp-*

## MPE Compliance Distances for Small HF Loop Antennas (continued)

*are both the electric and magnetic fields against the Maximum Permissible Exposure (MPE) standard*.

The loop has no null in its near field. An inspection of **Figure 2** reveals that all of the magnetic energy which eventually appears in the far field is first concentrated in a radial magnetic field that passes through the plane of the loop. To find the compliance distance, compare the $E_{total}$ and $H_{total}$ fields against the MPE standard along all the three axes of the loop, that is, along ± *x*, *y* and *z* axes of **Figure 2**. The compliance contour of the small loop can be described as a lop-sided sphere, so compliance distances apply in all directions from the center of the loop antenna.

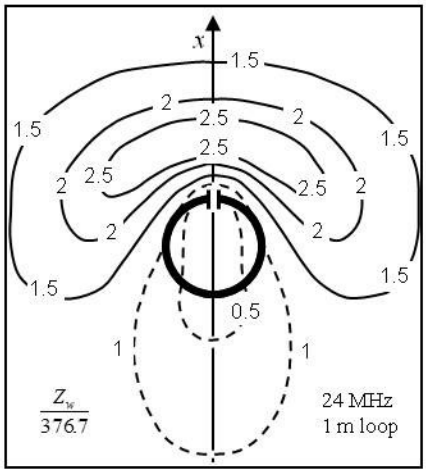
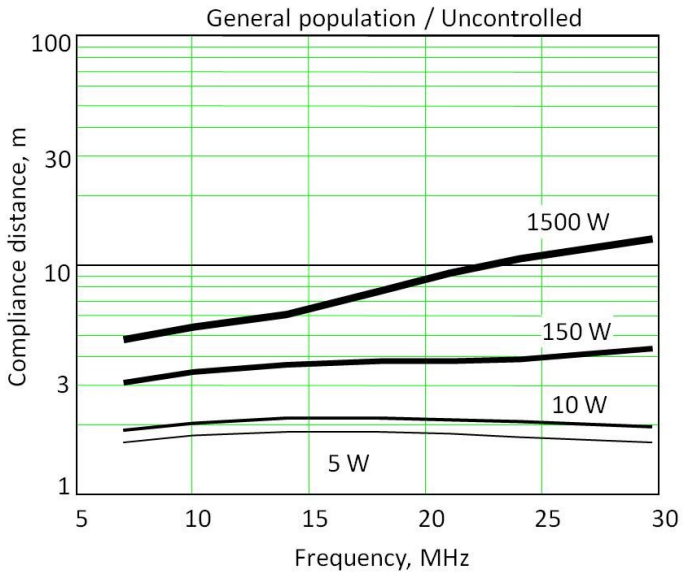



**Figure 2** – The electric field energy exceeds the magnetic field energy when the field impedance $Z_w/376.7$ exceeds 1 (solid contours).

Examples of the minimum compliance distances, measured from the center of a 1-meter diameter loop with applied average RF power of 5, 10, 150, and 1500 W, across 7 to 29.7 MHz, are shown in **Figure 3 [Left]** for General population / Uncontrolled MPE limits, and **Figure 3 [Right]** Occupational / Controlled MPE limits. The power levels are averaged over 30 minutes for General population / Uncontrolled MPE limits, and 6 minutes for Occupational / Controlled MPE limits.

In most cases the compliance distance was set by the magnetic fields perpendicular to the loop plane – what becomes the null direction in the far field. In some cases the compliance distance was set by the electric field on the axis containing the resonating capacitor. In all cases the applied power was multiplied by $1.6^2 = 2.56$ to approximate the effect of an average constructive field reflection. The computations were carried out with the exact electromagnetic fields solution described in **[1]**, or can be carried out using NEC (numerical electromagnetic code) with the example code **[1]**.



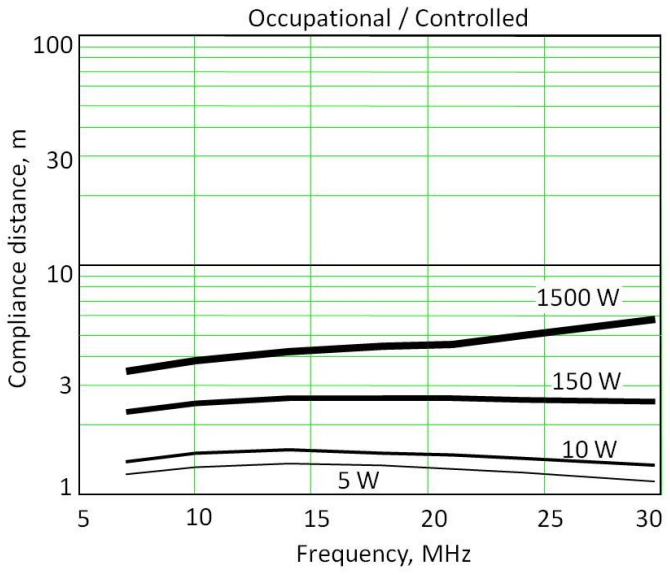




**Figure 3** – Minimum compliance distance of a 1 m diameter loop antenna of 8.4 mm diameter copper conductor for **(Left)** General population / Uncontrolled MPE limits and for **(Right)** Occupational / Controlled MPE limits. The calculations include a ground reflection factor.

## MPE Compliance Distances for Small HF Loop Antennas (continued)

An example calculation for a 2 m diameter loop made from 5 cm diameter copper tubing and fed by 1500 W at 3.5 MHz resulted in a Controlled minimum compliance distance of 5.2 m, and an Uncontrolled minimum compliance distance of 7.0 m. These results indicate that caution must be used, especially, when operating portable with small loops, even at QRP power levels.

### References


[1] K. Siwiak, KE4PT, and R. Quick, W4RQ, "Small Gap-resonated HF Loop Antenna Fed by a Secondary Loop", *QEX*, July/Aug. 2018, pp 12-17.

[2] K. Siwiak, KE4PT, and R. Quick, W4RQ, "Small Gap-resonated HF Loop Antenna", *QST*, Sep. 2018, pp 30-33.


## The 2021 Huntsville Hamfest According to Bob

By Bob De Pierre, K8KI

I had almost forgotten all the preparation that goes into our hamfest. But if I had, it quickly came back to me when I drove into the VBC to set up my table and get ready for the work details. I was greeted by a large number of smiley volunteers at the entry tables, who were all set to hand me my work packets. Many faces I hadn't seen in two years...I quickly remembered them all. I was ready to have fun!

For the first time I needed help setting up my table (my left hand had been injured). The volunteers had my table set up in a minute. Throughout the day, I came across one vendor after another trying to empty their trucks alone – they didn't realize we ran the world's friendliest hamfest. So, I found help for them as I found them, one after another. And they were all ecstatic about getting the help, which in turn made me pretty happy.

Throughout Friday I had the opportunity to rekindle relationships with every ham I could find, whether they were volunteers or vendors. I enjoyed the food the Hamfest Committee had provided for us. What a fine touch! I noticed that a lot more space was made available to us, and the aisles were a lot wider. There must have been a cost for doing that.

I had a house guest for the weekend, a fellow I had met over 40 years ago when I was stationed in Germany with the Air Force. He's now the ARRL Section Manager for North Texas. While he was here, we had an early rise and late bedtime each day. And I got to hear a number of ARRL stories that made me more appreciate the help we get from the folks in Newington.

The big fun started on Saturday morning. Since I had a table, I could get in early. I brought a pile of treasures I could do without, and stacked them on my table. To my surprise, I didn't bring anything home on Sunday. My closet looks a lot cleaner now. I abandoned my table for hours on end, and hoped someone would sorta watch it. My mind was racing so fast I just couldn't sit still.

When I was younger, I just couldn't resist inspecting every single treasure I could find. I had to know how they worked. If I had to buy them to find out, then I did, only to re-sell them the following year. A lot of tiny radios have come out recently. But curiously I didn't buy any of them this year. I think I was more concerned with how many solar cycles were still left in me.

Mid-day came and it was time for me to do a presentation. I'm guilty of going to engineering school a lifetime ago. I love talking about how radios work, and the troubles earlier folks went through to bring these little marvels to us. The science and history of it all keep colliding inside of me.

I had been preparing for the DX Banquet since February. It was a lot harder this year due to the pandemic and the labor shortages at the hotels. We first negotiated a contract, and signed it, only to find the banquets manager quit the next

## The 2021 Huntsville Hamfest According to Bob (continued)

day. Then it happened again. It was July before I could get my mitts on the manager who eventually stayed. I don't know if she got much help from the downsized hotel staff, but it worked out pretty well in the end. The costs for the banquet did go up over the previous event, and the pandemic played a major hit on the attendance (which must have moved +/-20 in the final week). But I think we still came out in the black.

I was pleasantly surprised with the ARRL attendance at the event. Their employees must work a lot of weekends. I think I had a conversation with every single one of them.

We had a great speaker for the banquet. Adrian Ciuperca/KO8SCA, has officially been on 15 big DXpeditions, from Bhutan to Cocos Keeling. It turns out he was born and raised in northern Romania, and was living there as a school child while I was assigned to NATO in Turkey in the late '80's. Romania being behind the Iron Curtain, we had targets where he was at. Pretty sobering thought. Adrian plans to go DX'ing with our AG4W at Swain's Island as soon as the pandemic will let them travel.

Sunday of hamfest weekend is always a sad time. We timed out as I watched the tables get torn down. I shed a tear, then packed up Adrian and headed for the airport.

## Huntsville Hamfest from the Dealer Perspective

By Steve Molo, KI4KWR

The 2021 Huntsville Hamfest was a huge success not only for the Show but the Dealers. The first large show for the US and though some may have expected higher attendance I was pleased with everything. If you did not stop by and walk thru GigaParts you missed out on allot of weekend deals and one being the 3D printers that moved quicker than I could get more.

Customers reaction to the show were all positive with very few with negative comments. Those with any were COVID related and fully expected but then like one Vendor said...go home then; plain and simple. If I am running out of show inventory guess I did something right.

NADXC Banquet

We have raised the bar.....plain and simple. A few I spoke with after the Banquet and Sunday said we need a bigger space which we know is more $$$ and harder to find so we need to stay where we are unless a miracle is found.


**Steve Molo KI4KWR of Gigaparts presented a Yaesu FT-891 to Warren Davis AB4GE of Macclenny, FL. Yaesu and Gigaparts graciously donated the radio, the top raffle prize at the NADXC Banquet.**

### Upcoming NADXC meeting:

Tuesday, September 14th, 2021

6:00 PM Doors Open

6:30 PM Meeting

Location: Museum of Information Explosion and via Zoom

No food permitted at this time

## Upcoming DX Contests

By Chuck Lewis, N4NM

Worked All Europe (WAE) DX Contest **(SSB)** 80 -10M

Sept 11, 0000Z to Sept 12, 2359Z

Exchange: RST plus Serial No.

See page 70, Sept. QST and

www.darc.de/der-club/referate/conteste

Scandinavian Activity Contest, **(CW)**, 80 – 10M

Sept. 18, 1200Z to Sept. 19, 1200Z

Exchange: RST plus Serial #

See page 70, Sept. QST and
www.sactest.net/blog/rules

CQ WW RTTY Contest, **(DIG)**, 80 – 10M

Sept 25, 0000Z to Sept 26, 2359Z

Exchange: RST, State/Province, and CQ zone; DX sends RST and CQ zone

See page 70, Sept. QST and
www.cqwwrtty.com

OTHERS:

***Don't forget our Alabama QSO Party: Oct 11, 1500Z to Oct 12, 0300Z***

Note: Beware, dates & times often change or are misprinted in the journals.



### NADXC Officers and Directors

| | |
|---|---|
| President | Bob De Pierre, K8KI |
| Vice-President | Steve Molo, KI4KWR |
| Secretary/ Treasurer | Chris Reed, AI4U |
| At-Large | Kevin Hibbs, KG4TEI |
| Directors: | Tom Duncan, KG4CUY (SK) |
| (Ex-Officio) | Steve Werner, AG4W |

***How to Join***

Come to a club meeting or send in an application by mail (form on www.NADXC.org)

**This edition of The LongPath published by: Fred Kepner, K3FRK**

# DXpeditions in September 2021

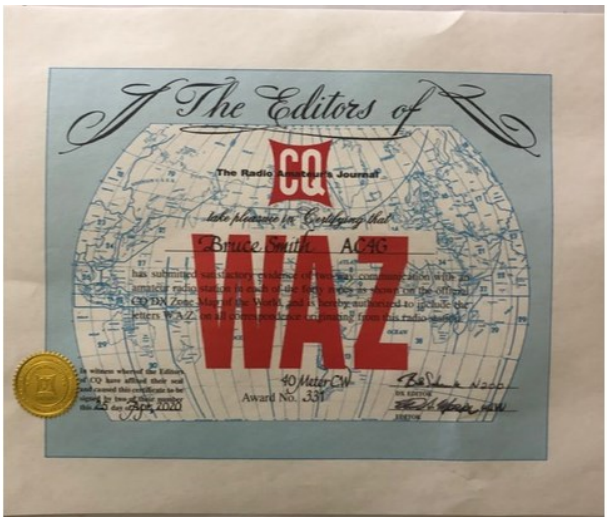
Reprinted by permission of Bill Feidt, NG3K

| Start Date | End Date | DXCC Entity | Call | QSL via | Reported by | Info |
|---|---|---|---|---|---|---|
| 2021 | | | | | | |
| August | | | | | | |
| 2021 Aug06 | 2021 Sep14 | Corsica | TK [spots] | LoTW | 425DXN 20210730 | By DJ0TP as TK/DJ0TP; HF; QSL DJ0TP direct |
| 2021 Aug21 | 2021 Sep30 | St Lucia | J68HZ [spots] | LoTW | TDDX 20200716 | By K9HZ fm Soufriere; HF; mainly FT8 CW SSB; QSL via K9HZ direct w/ SASE or eQSL; operation to continue until Nov 8 |
| 2021 Aug23 | 2021 Oct31 | Tonga | A35JP [spots] | LoTW | JA0RQV 20210802 | By JA0RQV fm Nuku'alofa, Tongatapu I (IOTA OC-049); 80-6m; CW SSB FT8; 100w; QSL via Club Log OQRS, JA0RQV Buro |
| September | | | | | | |
| 2021 Sep04 | 2021 Sep16 | Dodecanese | SV5 [spots] | LoTW | DXW.Net 20210811 | By HB9OAU as SV5/HB9OAU fm Karpathos I (IOTA EU-001); 80-10m; SSB RTTY FT8; holiday style operation; QSL via HB9OAU (B/d) |
| 2021 Sep05 | 2021 Sep19 | Dodecanese | SV5 [spots] | DL2AAZ (B/d) | TDDX 20210814 | By DL2AAZ as SV5/DL2AAZ fm Rhodes (IOTA EU-001); 40-10m + QO-100 satellite; SSB CW; 300w; ground planes; holiday style operation |
| 2021 Sep05 | 2021 Sep28 | Liechtenstein | HB0 [spots] | DARC Buro | TDDX 20210811 | By DL5YM as HB0/DL5YM and DL5YL as HB0/DL5YL; 160-6m, focus on 20, 30m for Asia and Oceania |
| 2021 Sep10 | 2021 Sep13 | Kosovo | Z68XX | DL2JRM | DL2JRM 20210730 | By DL2JRM; HF; mainly CW; QRV for WAE SSB |
| 2021 Sep11 | 2021 Oct22 | Niger | NEW 5UAIHM | F4IHM | 425DXN 20210905 | By F4IHM; 40 20m; CW; spare time operation; QSL B/d |
| 2021 Sep13 | 2021 Sep28 | Rwanda | 9X2AW | M0OXO | DXW.Net 20210720 | By DF2WO; 160-10m; CW SSB + digital |
| 2021 Sep17 | 2021 Sep20 | Faroe Is | OY | LoTW | DXNews 20210709 | By LB5SH as OY/LB5SH; 160-6m; SSB FT8 CW; QRV for SAC CW |
| 2021 Sep17 | 2021 Sep29 | Tanzania | 5H1IP | Club Log OQRS | DXNews 20210819 | By HA3JB fm Unguja I, Zanzibar (IOTA AF-033); 160-6m; CW SSB RTTY FT8; QRV for CQWW DX RTTY; QSL via HA3JB |
| 2021 Sep17 | 2021 Oct01 | Conway Reef | NEW 3D2CR | LoTW | TDDX 20210907 | By 3Z9DX; 160-10m; CW SSB FT8; dates approximate |
| 2021 Sep19 | 2021 Sep24 | Crete | SV9 | IK2DUW | TDDX 20210830 | By IW2NEF as SV9/IW2NEF fm IOTA EU-025; 40-10m; SSB FT8; 100w; spare time operation |
| 2021 Sep20 | 2021 Sep30 | Tanzania | 5H1IP | ClubLog OQRS | DXNews 20210227 | By HA3JB fm Zanzibar (IOTA AF-032); 160-6m; CW SSB RTTY FT8; QRV for CQWW DX RTTY; QSL via HA3JB |
| CQ WW DX Contest, RTTY (Sep 25-26, 2021) Check here for pericontest activity too. | | | | | | |
| 2021 Sep25 | 2021 Nov20 | Tanzania | 5H3MB | LoTW | DXW.Net 20201027 | By IK2GZU; HF; SSB CW RTTY FT8; dipoles, ground plane; QSL via IK2GZU (B/d), Club Log OQRS |
| 2021 Sep29 | 2021 Oct13 | Maldives | 8Q7CQ | M0OXO | DXW.Net 20201025 | By G0VJG fm Reethi Faru, Filsaidhoo I (IOTA AS-013); 80-10m, incl 60m; SSB + digital, some CW; 300w; vertical dipole; QSL OK via Club Log OQRS; license pending |


# Club Business and Member Highlights

## Worked All Zones Award

Congratulations to Bruce Smith, AC4G! Bruce received his hard-earned CQ WAZ Award. The award is given for making confirmed contacts with stations in all 40 CQ zones. Bruce managed to work all 40 zones on 40m using CW. Award rules and zone maps can be found on the CQ Magazine website.




## August CQ Magazine

Don't miss Steve Werner, AG4W's article in last month's issue of CQ magazine! Steve's article spotlights his homebrew conversion of an old SB-220 amp to operate on 6m. The article begins on page 24 of the August 2021 issue.


AG4W shares the story of how converting his old SB-220 HF amplifier to 6 meters turned into a group project and learning experience.

Converting a Heathkit SB-220 Amplifier to 6 Meters

BY STEPHEN WERNER,* AG4W

I started this Heathkit SB-220 amplifier conversion project because I was frustrated that I could hear more than I could work with low power on 6 meters. I decided to change that by converting my old SB-220 to a 6-meter-only amplifier. The main thing I didn't like about my SB-220 was that it didn't have 160 or 6 meters. It is funny how things sometimes work out. I now use an Ameritron AL-1200 for 160-10 meters.

Even though this amplifier dates back to 1974, it has had plenty of improvement modifications over the years. I put in Harbach modifications[1] for the rectifier board, electrolytic capacitors, soft start, soft keying, meters, and parasitic reduction (*Photo A*). All these modifications made it into a more reliable and

Photo A. Perfectly good SB-220 with Harbach modifications

## Meeting Minutes and Financial Report

April 2021 Meeting Minutes

K8KI called the virtual meeting of the North Alabama DX Club to order on Zoom on Tuesday April 13th, 2021 at 6 pm. Chris, AI4U updated the group that we have a venue for the DX banquet. It will be held at the Springhill Suites behind the Von Braun Center and Embassy. Ticket prices will stay the same at $38 apiece. Bob, K8KI advised that he has applied on behalf of the club, an ARRL commemorative brick. A replica will be presented to Janet, A few brief announcements were made then Bob updated everyone on which DX entities would be on the air. The meeting was adjourned. Bob, K8KI presented the program "Extending the range of your 80m antenna". The next scheduled virtual meeting is scheduled for 6 p.m. Tuesday, May 11th on Zoom. Information will be sent prior to the meeting.

May 2021 Meeting Minutes

Chris, AI4U called the meeting to order at 637p on May 11th, 2021. This was the first in-person meeting since Covid 19 caused the restrictions. The announcement was made regarding Bob's unexpected triple bypass surgery. Chris, AI4U explained that Bob had asked him to chair the meeting in person. Bob joined the group through a brief Zoom call from the hospital. Fred, K3FRK was given a round of applause for his work on the Longpath for the past months. Mark, N4BCD provided an update on the Huntsville Hamfest. All is going well and we are on track to have one of the largest and best hamfests in the country. Tickets for the DX Banquet are a hot item. Most of the tickets purchased are from out of area. Chris, AI4U reminded the members to purchase their tickets soon. The meeting was adjourned at 6:54p. Bruce Smith, AC4G delivered a presentation "Emergency backup power system". The next meeting of the North Alabama DX Club is scheduled for 6pm Tuesday, June 8th, 2021 at Newks restaurant on University Drive.

## Meeting Minutes and Financial Report (continued)

June 2021 Meeting Minutes

The June 10th meeting of the North Alabama DX Club was called to order at 6:23 pm by VP Steve Molo, KI4KWR at Newk's and via Zoom. President Bob Depierre was in attendance. He is recovering from the recent bypass surgery. KN4CNY, Laura Morgan and Kyle, were voted in as new members. Steve made a few brief announcements then turned it to Chris for the Membership and Financial reports. Having no further business the meeting was adjourned at 6:40 pm.VP Steve Molo, KI4KWR presented the program on Messi and Paloni coax. The next scheduled meeting will be July 12th, 2021 at 6pm with the Zoom session opening a few minutes before the meeting for informal social activity.

July 2021 Meeting Minutes

The July meeting of the North Alabama DX Club was called to order at 6:03 pm by President Bob Diperre, K8KI at Newk's restaurant and via Zoom. Bob, K8KI had recovered from recent surgery and is doing well. Bob made a few brief announcements then turned it over to Chris, AI4U for the Banquet and Financial reports. We have 90 tickets sold for the banquet and almost sold out. Bob, K8KI adjourned the meeting at 6:13 pm. and turned it over to Tim Duffy, K3LR via zoom for his program on Antennas.

The next scheduled meeting will be August 12th, 2021 at 6pm with the meeting beginning at 6:30 pm.

May 2021 Meeting Minutes

The August 12th meeting of the NADXC was cancelled at 5:30 pm by Bob, K8KI. Newk's restaurant had closed due to Covid and staffing shortages. An informal dinner meeting was held at Gyro's with 12 people in attendance. Fellowship and discussion on the upcoming Huntsville Hamfest was the main topics. No formal meeting took place and there wasn't a program.

The next scheduled meeting will be September 14th, 2021 at 6pm. Stay tuned in on the restaurant location.

Financial Report

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| PayPal balance | $4,156.25 |
| Other payments received | $198.00 |
| Checking balance | $4386.97 |
| **Total Balance** | **$8,741.22** |

## Thank You to the 2021 Hamfest Volunteers


A big thanks is due to Mark N4BCD, Kevin KG4TEI, and the other volunteers who planned, coordinated, and executed Hamfest. Thank you Mark, Kevin, and all of the club members who made Hamfest possible! Your dedicated service to the hobby, and to those of us who attended and enjoyed Hamfest, is greatly appreciated.