

# Northwest Indiana DX CLUB

Volume 8, Issue 11

November 2020

## President's Corner

Hello everyone,

Finished my antenna work.  
Now hope they stay up all  
winter.

Did you get yours done?

Work some DX!  
Bands have been better lately.

Please be safe and stay well.

73

John W3ML

Good DXing!

## "Working the World from the Black Hole"

NWI DX Club Website

<http://nwidxclub.weebly.com/>



Don't forget Steve is our new QSL Card  
Checker.

DXCC Card Checking is available by  
appointment and may be available at  
meetings. E-Mail [kd9hl@arrl.net](mailto:kd9hl@arrl.net) for an  
appointment or to make other  
arrangements.

## INSIDE THIS ISSUE

- 1 President Speaks
- 2- Member News/DX News

**Reminder, the NWIDX Club has a club call W9NWI.**

The call is available to members for use during contests, special events, Field Day, etc. To schedule dates for its use, contact the trustee, Steve Mollman – KD9HL. [kd9hl@arrl.net](mailto:kd9hl@arrl.net)

QSL cards are available.

## **Notice:**

**Articles in the Northwest Indiana DX Club Newsletter (except for those separately copyrighted) may be reprinted, provided proper credit is given.**

---

**“Working the World from the Black Hole”**

---

## **Corrections & Amplifications**

In the September 2020 issue of the Newsletter we published a picture of a “Morse Code” face mask (A Face Mask for a Rabid CW Fan). Members have inquired as to where they could purchase a similar item. While we could not find a source for that particular mask we did locate two other Morse Code face masks that are available on-line:

[https://www.zazzle.com/funny\\_ham\\_radio\\_morse\\_code\\_facemask\\_black\\_cotton\\_face\\_mask-256451946249544491?rf=238325217724821676&zbar=1&tc=](https://www.zazzle.com/funny_ham_radio_morse_code_facemask_black_cotton_face_mask-256451946249544491?rf=238325217724821676&zbar=1&tc=)

<https://www.teepublic.com/mask/4791489-morse-code-if-you-can-read-this-say-hi>

---

***Member DXCC Scorecard***  
***A Reminder***

---

We will be listing the membership's ARRL DXCC standings in the January issue of the newsletter. If you have worked any new entities since the last listing and haven't yet submitted them to the ARRL please do so before December 24, 2020.

**QSL Cards**-Steve Mollman, KD9HL is our Official ARRL DXCC Card Checker. Contact Steve for card checking. You may email him at KD9HL@arrl.net for details on how to mail your cards to him, if you desire to go that route.

**Logbook of the World**-To submit LOTW credits on-line, click the **Award** tab, and in the Your **LoTW ARRL DXCC Accounts** section on the left side of the Logbook **Awards** page, select the **DXCC Award** Account for which you intend to **submit** an application. Select the **Award Account Menu** on the left side and then select **Application**.



---

## ***Handy Hint***

***By Steve Mollman-KD9HL***

### ***Silent Night***

As the mass proliferation of electronic devices continues to expand exponentially our bands have got noisier. By a “seat of the pants” evaluation it seems that the noise level has increased at least 100 fold over the past twenty years. This is in spite of FCC regulations limiting spurious emissions. Some of this noise can be attributed to the sheer mass of devices in use today and some to illegal and shoddily built devices that seem to be imported from China. They may say that they meet FCC standards but it is doubtful that they have ever been subject to the lab tests of real approved equipment.

The next time you lose power from your ever reliable electric utility company, try this little experiment:

Power up your receiver from an alternate source such as an automobile or even a garden tractor battery. Assuming that the utility hasn't had a failure from an electrical storm (which are notoriously loud static producers), you will be surprised as to how quiet the bands are. All of that hash being generated by television receivers, “pole pig” transformers, microwave ovens, computers, grow lights, furnaces, air conditioners, etc. will be GONE!

Because the extraneous noise has disappeared you now may be hearing an amazing range of weak but readable signals. What was down in the “mud” is now swimming in crystal clear water!

Can you accomplish the same by shutting off your own power to run the test?

No, that won't work. You would only be silencing the noise in your own household. When NIPSCO, Kankakee Valley or AEP drops a line the entire neighborhood goes silent and along with it, all of the noise generators in the area. The more widespread the outage the quieter the radio spectrum becomes!

Unfortunately, this quiet bliss won't last because even the worst electric utility will eventually restore its lines and the cacophony returns.

◀73's and Good DX▶

*Do you have a Handy Hint that you would like to share? Contact Steve Mollman at [KD9HL@ARRL.net](mailto:KD9HL@ARRL.net)*

---

**ARRL DX LISTINGS For NOVEMBER 2020**

**BY**  
**Jerry Hess, W9KTP**

This week's bulletin was made possible with information provided by The Daily DX, the OPDX Bulletin, 425 DX News, DXNL, Contest Corral from QST and the ARRL Contest Calendar and WA7BNM web sites. Thanks to all.

**TURKEY, TA.** Special call sign TC35FSF will be active from November 9 to 11 to celebrate the 35th anniversary of the Free Software Foundation, formed in 1985 in order to promote open-source software. Look for activity on 20 and 15 meters using SSB, PSK31 and Olivia 8/250. QSL via TA2OZQ and LoTW.

**MALDIVES, 8Q.** Remo, HB9SHD plans to be active as 8Q7RM from Kandolhu Island (AS-013) from November 2 to 29. Activity will be holiday style on various HF bands using CW, SSB and digital modes. QSL via HB9SHD.

**BELIZE, V3.** Bob, W0YBS will be active as V31CO from Cay Caulker until November 13. Activity will be on 80 to 10 meters including 30, 17 and 12 meters, using CW, SSB, FT8 and RTTY. QSL via W0YBS and LoTW.

**NEW ZEALAND, ZM4.** Operators Ark, ZL/EI9KC, Michael, ZL2MY, Holger, ZL3IO, Wes, ZL3TE (W3SE), Xenia, ZL4YL and possibly Gary, ZL2IFB will be active as ZM4T during the CQWW DX CW Contest as a Multi-2 entry. QSL via LoTW, ClubLog's OQRS or direct to ZL3IO.

**AFGHANISTAN, T6.** Robert, S53R plans to remain in the capital city working in his spare time as T6AA until mid-December.

**CHILE, CE.** CB500AM, operated by members of El Grupo Magallanes DX, will celebrate the 500th anniversary of the discovery of the Strait of Magellan on November 1 on 3685, 7138, 14230, 21330 and 28445 kHz. Operators are Pedro, CE8PVT, Walter, CE8MGZ, Alfonso, CE8APC, Carlos, CD8CKV, Ricardo, CD8RFU, and Giovanni, CD8GOO. QSL via CE8PVT.

**MOROCCO, CN.** CN45MS from Oujda commemorates the 45th anniversary of the Green March, from November 1 to 7. QSL via RW6HS.

**SPAIN, EA.** The URE section San Fernando (EA7URF) joins the Strait of Magellan celebrations with the call sign AM500ETS until November 8. They are QRV on HF on SSB, CW and digital modes. QSL via EA7URF, direct or via the bureau, LoTW, eQSL.

**FRANCE, F.** Members of the Radio Club Vendeen (F6KUF) will be active with the call sign TM9VG from November 1 to 15 celebrating the 9th

Vendee Globe, a single-handed non-stop yacht race around the world. QSL via F6KUF to the bureau or F50EV direct. Also, TM50CDG operated by Michel, F8GGZ, will be QRV from November 9 to 22 to mark 130 years since the birth of Charles de Gaulle, who died 50 years ago. Michel plans to be on 160 to 20 meters using SSB and CW. He plans a bureau card blast for all the QSOs.

**ENGLAND, G.** Members of the Rotary International Fellowship are currently operating as GB0RPP to promote World Polio Day and raise awareness of the Polio Plus organization. They will be QRV until November 7. All QSOs will be confirmed automatically with a bureau QSL. Cards are managed by G3LUW and G3SZF.

**ECUADOR, HD.** The Azuay Radio Club celebrates the 200th anniversary of the city Cuenca from October 31 to November 3 with the call sign HD200C. Also, members of the HC DX Group plan to operate as HD1X from October 31 to November 3 from a tropical rain forest in the Choco region. They will be QRV on HF using SSB, SSTV, FT8 and FT4. QSL via EC5R direct.

**ITALY, I.** The ARI Fidenza Club (IQ4FE) puts a number of special event call signs on the air during 2020 to commemorate the life and achievements of Guglielmo Marconi. During November, II4RVT commemorates the beginnings of Radio Vatican in 1931. QSL via IQ4FE.

**BELGIUM, ON.** Special event station OP20FENIKS honors the memory of the women and men who were involved in the reconstruction efforts in and around Westhoek after the end of World War I. Look for them on HF on SSB, CW and digital modes. QSL to ON5YL direct or via the bureau.

**NETHERLANDS, PA.** Frank, PF1SCT honors the memory of rock guitarist Eddie Han Halen (1955-2020) with the call sign PA5150EVH, until January 31, 2021. QSL via the bureau to PF1SCT. Also, look for Ray, PA5DX and Wim, PD8DX to be activating PA20XMAS, PD20SANTA and PD20HNY during the 2020 Christmas Holiday Season. There will be no QSLs but an award will be offered.

**POLAND, SP.** The club station SP6PRT in Wroclaw celebrates its 60th anniversary with the call sign SP60PRT until the end of 2020. QSL via SP6PRT.

**CANADA, VE.** Michael, VE3NOO celebrates the founding of the Hudson Bay Company 350 years ago with the call sign XM3B. He will be QRV through November. QSL via VE3NOO, direct or via the bureau.

**FINLAND, OH.** Members of the Market Reef Christmas DX Association (OH9A gang) will be operating special event station OG1XMAS on all bands and modes from November 29 to December 26. QSL via LoTW and Club Log.

**HAWAII, KH6.** Jim, N6TJ will travel to the KH7M station on the Big Island for the CQWW DX CW Contest. He plans to be a single op, all band entry. QSL via KH6ZM.

**SOUTH SHETLAND ISLANDS, DT8.** Lee, DS4NMJ plans to be active again from the King Se-Jong Korean Antarctic Base on King George Island as DT8A sometime in 2021. Activity will be on various HF bands using CW, SSB and FT8, with 100 watts. QSL via DS5TOS.

**THIS WEEKEND ON THE RADIO.** The Zombie Shuffle CW, Russian WW MultiMode Contest, UK/EI DX Contest, North American SSB Sprint, Silent Key Memorial Contest CW and Classic Exchange CW are all on

tap for this weekend. Please see October QST, page 69, the ARRL Contest Calendar and WA7BNM Contest websites for details.

**BIG NEWS:** Since propagation predictions are looking really good I decided to include a portion of the ARRL propagation predictions.

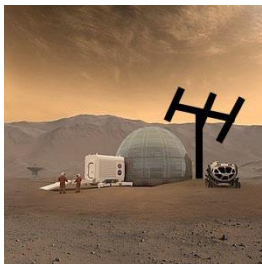
“Tad Cook, K7RA, Seattle, reports: Our sun is finally waking up. The average daily sunspot number rose from 15 to 17, which is nothing remarkable, but the reporting week ended on Wednesday with a daily sunspot number of 36. Average daily solar flux rose from 74.5 to 76.9. Predicted solar flux is 88 on October 29 - 31, which *is* remarkable.”

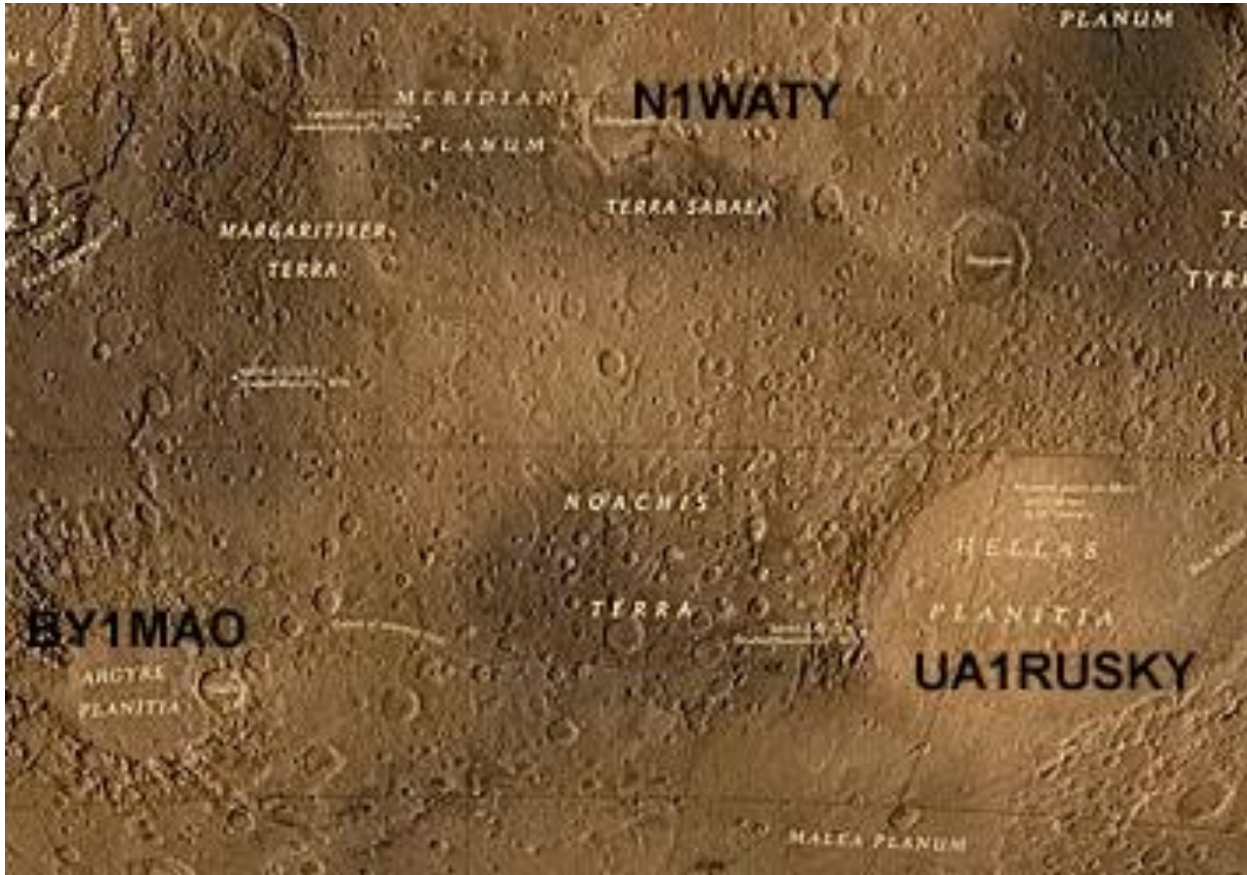
---

## **DXing on Mars Revisited**

**By**  
**Jerry Hess, W9KTP**

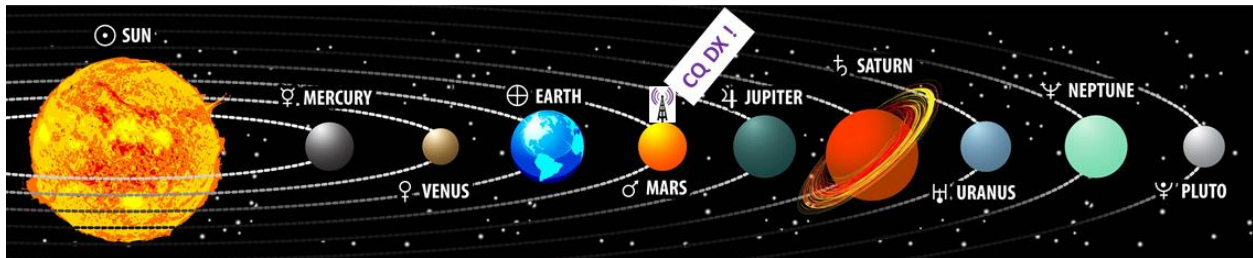
Recently I came across an article by Carl Luetzelschwab, K9LA, describing propagation conditions on Mars. That struck a chord with me since I really enjoyed the book and movie, “The Martian.” If you only saw the movie, you really need to read the book. The technical details glossed over in the movie are amazing and confirmed to be accurate by NASA. The main character, Mark Watney, was a botanist and succeeded in blowing up the Hab with his potato plantation. Way to go, Mark! Well, let’s retrain him and send him back with a ham license in hand, perhaps as N1WATY. By the time we get him there, the Russians, UA1RUSKY, and Chinese, BY1MAO, probably will already be there. Let’s put Mark at Schiaparelli Crater where he blasted back Earth last time. Also, let’s put the Russians at Hellas Planitia about 3200 kilometers away and the Chinese at Argyre Planitia about 3800 kilometers. How well does Watney do with his latest model Elecraft transceiver and a tribander? What does Carl say about this?





## DXing on Mars

Carl Luetzelschwab K9LA February 2017



One of these days humans will go to Mars. At first it will be for scientific reasons, but eventually we'll likely colonize Mars with permanent settlements. More than likely there will be Amateur Radio operators participating in the colonization. How will DXing be on Mars?

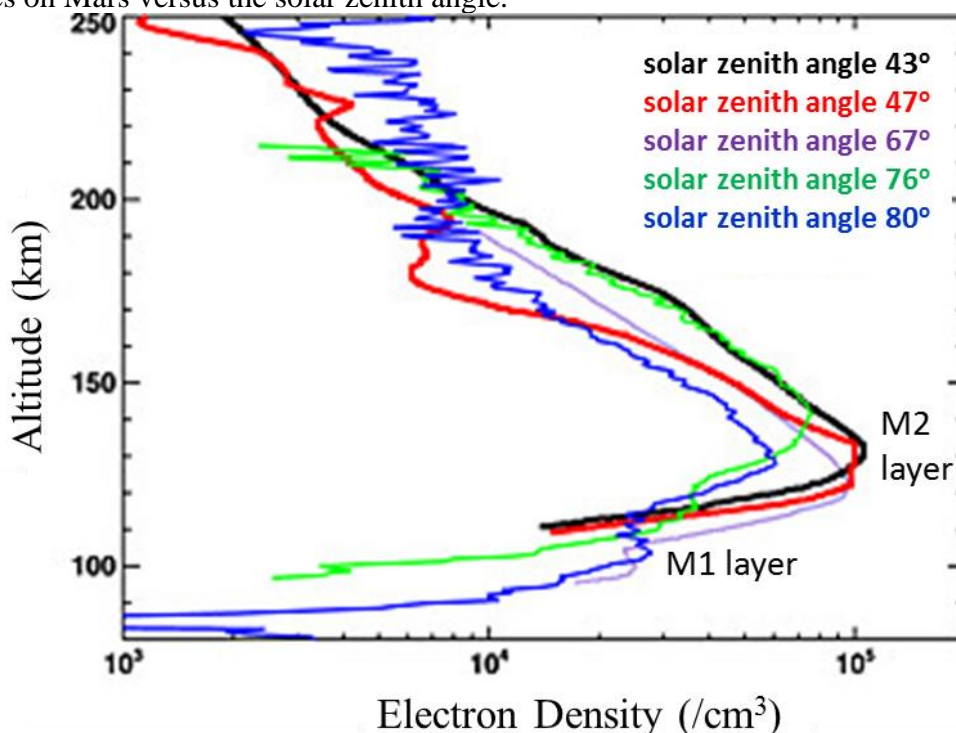
Let's start with some comments about noise. Initially the man-made noise environment will be quiet since there won't be that many humans on Mars. But if there's a population explosion on Mars, we'll have man-

made noise levels similar to Earth. I don't think we'll have atmospheric noise (QRN) problems as I'm not aware of any thunderstorms on Mars. But perhaps dust storms could create QRN.

Now let's look at HF propagation. To do this we need to know what the ionosphere of Mars looks like. I guess the first question is "does Mars have an ionosphere?" The answer to that is "Yes". And we've already sent enough probes to Mars to have a decent idea what the atmosphere and the ionosphere of Mars look like. The following table compares the neutral species (non-ionized atmospheric constituents) in the atmosphere of Mars to the neutral species in the atmosphere of Earth.

Mars	Earth
Carbon dioxide 95.32%	Nitrogen 78.1%
Nitrogen 2.7%	Oxygen 20.9%
Argon 1.6%	Other 1.0%
Oxygen 0.13%	
Other 0.25%	

With CO<sub>2</sub> leading the pack on Mars, the Mars ionosphere is formed by photoionization of carbon dioxide (CO<sub>2</sub>) by solar flux at EUV wavelengths. The resulting electron density profile features a main peak that is typically located around 120-130 km altitude. This main peak is analogous to the F1 layer on Earth and is frequently called the M2 layer. There appears to be an intermittent underlying layer, called the M1 layer, at around 100 km, with a density about one fourth as much. The following plot (reference 1) shows typical electron densities on Mars versus the solar zenith angle.



Remember that a solar zenith angle of 0 degrees means the Sun is overhead. A solar zenith angle of 90 degrees means the Sun is on the horizon.



From the electron density plot above, the largest M2 layer peak density is around  $1 \times 10^5$  electrons per cubic centimeter, which translates to  $1 \times 10^{11}$  electrons per cubic meter. This gives an M2 layer critical frequency of 2.8 MHz. Applying spherical geometry to this scenario gives a maximum useable frequency (MUF) of around 14 MHz for low elevation angles with an M2 peak height of 120-130 km. In a similar manner, the MUF for the M1 layer at low elevation angles is around 7.6 MHz.

Thus there should be some good 20-Meter openings – if the frequency allocations on Mars parallel those on Earth. On the downside, the M1 layer (if present – note that it’s not seen at all solar zenith angles) could block low elevation angles from getting to the greater electron density (higher MUF) of the M2 layer. As for hop distances, the 120-130 peak height of the M2 region should give us 2500 km hops – not as far as the 4000 km or so F2 region hops on Earth, but we’ll have to take what we get.

The data in the plot is from September 2015, which had a smoothed sunspot number of 40 (this is in terms of the “old” sunspot numbers, not the “new” sunspot numbers – remember the April 2016 Monthly Feature?). This results in pretty low solar activity and suggests that the electron density of the ionosphere of Mars could be much greater at the peak of a solar cycle. So 17-Meters and higher could be viable for DXing efforts. What about nighttime DXing? The above electron density plot only goes to a solar zenith angle of  $80^\circ$ , which says the Sun is still above the horizon. Note that the peak electron density decreases as the solar zenith angle increases. After sunset, photoionization essentially stops, and it is believed that the electron density will decrease significantly because Mars does not have a magnetic field as does Earth. On Earth at night, residual F2 region electrons are trapped in the magnetic field, and do not escape into space. It is believed that early in its life Mars had a magnetic field similar to Earth. But it switched off long ago when the molten core cooled and solidified. All that’s left are patches of remnant magnetism spread across the surface – these are called crustal fields (reference 2). At best, the nighttime ionosphere of Mars may be patchy thanks to Mars crustal fields.

Might there be something similar to Earth’s sporadic E? With Mars crustal fields influencing the ionosphere, the dayside ionosphere may also be patchy. This could be thought of as sporadic M2 or sporadic M1. What about auroral issues similar to Earth’s auroral issues? Interestingly, large portions of the southern hemisphere of Mars (and to a lesser degree in the northern hemisphere) remain magnetized to some degree. These crustal fields appear to be strong enough to drive features in the upper atmosphere of Mars akin to auroral displays seen on Earth. So maybe VHFers will enjoy Mars, too.

In summary, HF propagation on Mars is certainly possible for DXing endeavors. Our understanding of the ionosphere of Mars is fundamental at best, so what was presented here is rudimentary. The only way we’ll get a deeper understanding of our neighbor’s ionosphere is to do in situ measurements (for example, with ionosondes when we colonize Mars).

Two final thoughts: I hope there won’t be any HOAs (Home Owner Associations) to restrict antennas in the colonies on Mars and I wonder what the call sign structure will be for Amateur Radio operators on Mars. 😊

#### References:

1. Marissa F. Vogt, et al; MAVEN Observations of Dayside Peak Electron Densities in the Ionosphere of Mars; Journal of Geophysical Research – Space Physics; 2016; doi 10.1002/2016JA023473
2. <http://sci.esa.int/mars-express/58554-mars-ionosphere-shaped-by-crustal-magnetic-fields/>

Well, doesn't sound so good for frequent QSO's for Watney but who knows, maybe an advanced FT8 or a solar orbiting satellite between Earth and Mars will add a few new ones to DXCC and keep Mark from getting lonely.

In any case, many thanks to Carl for his article. Hopefully we will see more of his vast archive of articles in the future.

73's,  
Jerry, W9KTP

---

Some links from W8FIB, who by the way has moved to southern Indiana. He will have a long commute if we get to have face-to-face meetings again.

Amateur Radio License Map <https://haminfo.tetranz.com/map/>

---

Gigaparts advertisement: One of the things that caught my eye was the HF Clock. It's not a wall clock as you want to be to use the touch screen capabilities. Just watch the movie.

If you go to the second clock thumbnail (for the Tiger Maple version), there is a video from KJ4YZI. Interesting.

Sorry for the long URL:

[https://www.gigaparts.com/nsearch/?q=vshf&trk\\_msg=07S49KQH8384F7HMT3ABSQ9KOS&trk\\_contact=AUACRJ8BA8FN8RM0MDTM4VS8VS&trk\\_module=new&trk\\_sid=43DQE78LKLN4E0TTITK31HCTH0&utm\\_source=litrak&utm\\_medium=email&utm\\_term=https%3a%2f%2fwww.gigaparts.com%2fnsearch%2f%3fq%3dvshf&utm\\_campaign=2021023Email&utm\\_content=2021023Email](https://www.gigaparts.com/nsearch/?q=vshf&trk_msg=07S49KQH8384F7HMT3ABSQ9KOS&trk_contact=AUACRJ8BA8FN8RM0MDTM4VS8VS&trk_module=new&trk_sid=43DQE78LKLN4E0TTITK31HCTH0&utm_source=litrak&utm_medium=email&utm_term=https%3a%2f%2fwww.gigaparts.com%2fnsearch%2f%3fq%3dvshf&utm_campaign=2021023Email&utm_content=2021023Email)

Yes, it's a bit expensive, but if you are a DXer, there is a lot of info that is displayed that might cut down the number of PC screens you have to display.

ARRL logbooks are back in stock. <http://www.arrl.org/shop/Station-Resources/>

**Veterans and Gold Star Families Will Soon Have Free Admission to All National Parks | Military.com** [https://www.military.com/daily-news/2020/10/28/veterans-and-gold-star-families-will-soon-have-free-admission-all-national-parks.html?ESRC=eb\\_201030.nl](https://www.military.com/daily-news/2020/10/28/veterans-and-gold-star-families-will-soon-have-free-admission-all-national-parks.html?ESRC=eb_201030.nl)

**You can get one at the Dunes Station on Highway 49 for 5 or 10 bucks if you are not a Veteran and are over 65.**

---

From Dave – K9FN

I have decided to sell my remote antenna tuner. This is NOT an automatic tuner. It currently sits at the base of my vertical controlled by a box sitting on my desk.

The tuner is a Model AT-615U, made by Hamware.de in Germany. I bought mine from Array Solutions in 2016. My total investment is about \$2800, including 125 feet of control cable.

Here is a link to the manual:

<http://www.hamware.de/hardware/tuner615U/short%20form%20manual%20615U-E.pdf>

As an unbalanced tuner, this can be used to feed a long wire, a vertical, inverted L etc. It could be used to feed an open wire fed loop or dipole with a balun at the output of the tuner. The tuner has both a coax output, and a single wire output.

I confirmed more than 85 countries on 160 meters, with just a 30' vertical after putting this tuner into service.

I would prefer to not ship the unit but can do so at additional cost. My guess is that packing and shipping will total \$50 to \$75.

I will gladly answer any questions I can and would be very happy to demonstrate the unit here at my home in West Lafayette.

---

I am asking \$1200 and, being a ham, will certainly entertain SERIOUS offers.

Thanks, de Dave – K9FN  
765-714-7618

You may call, but if I don't recognize your number I may not answer. If interested email first and we can arrange to talk on the phone if appropriate.

Please email me directly: [dpbunte@gmail.com](mailto:dpbunte@gmail.com)

---

## **Daylight Savings Time**

Countries that observe Daylight Saving Time (DST), which began this year on Sunday, March 10th, are going to move their "local clocks" backward 1 hour on Sunday, November 1st, from 2:00 AM local time to 1:00 AM.

In 2021, Daylight Saving Time (DST) will again go into effect on Sunday, March 14th, 2021, at 2:00 AM local time.

Hopefully, all amateur radio operators know NOT to change their GMT/UTC/ZULU clocks. However, since many operator's computers are set to local time, some may have to change their settings on "some" ham radio software (ex. logging, propagation, DXTelnet, etc..) programs.



*Daylight Savings Time Countries of the World*

Remember, Spring –forward; Fall-back.



---

## **KD9HL RETURNS**

**By Jerry Hess-W9KTP**

On October 9<sup>th</sup>, Steve Mollman, KD9HL, returned to the air with the raising of his new DX killer antenna. Steve's operations had been restricted for almost a year after his tower, rotor and beam antenna were severely damaged. With the aid of some friends and a lot of work he has a new Hygain TH11DX antenna now in the air atop his crank-up tower. In addition, he has a new 5 element six meter antenna, new rotor and cable.

The TH11DX is a five band (10-12-15-17-20 meters) 11 element log periodic antenna that measures 24' X 31' and weighs about 87 pounds.

The crew of Steve, Jerry Hess (W9KTP), Jüergen Nittner (N9RD), John Poindexter (W3ML) and Earl Gumm (WA9JNO), after two hour's work, successfully got the monster in the air. The boom lift from Kabelin's Ace Hardware in Michigan City, helped make the job go smoothly without damage or injury. Not cheap but worth the extra margin of safety and convenience.



*(WA9JNO) (N9RD) (KD9HL in the bucket)*

*Toasting a successful job (WA9JNO) (W3ML) (KD9HL) (N9RD)*

73's and lots of DX to Steve and the whole gang.



## **Take Care Tom, W8FIB**

### **Tom and his Brother**

The 1549 shirt that I wore when I was in the security police squadron at Keesler. Instructor badge. Air Training Command, Keesler Air Force Base Biloxi, Mississippi 3390th Instructor Squadron. At the time this photo was taken, there were numerous B-52s being shot down Over Hanoi December 1973. My brother retired from the Coast Guard reserves after 27 years. I think he was active duty for seven years. He was commissioned after he finished his electrical engineering degree. He did a lot of flying over the Gulf of Mexico as an avionics technician in support of drug interdiction flights.



**I am sure Tom will still be sending in items for the Newsletter. 73 My Friend.**

---

If you have ham items for sale, email me a list along with prices and contact information. I will put it in the next newsletter.

I want to thank those that have been sending in articles for the newsletter. All items are appreciated.



Until Next Time,

73

*John*

W3ML

<http://nwidclub.weebly.com/>



**DX**

