click here to go to web site

JANUARY CLUB HAPPENINGS

NUT NET
3.985mhz
Monday-Saturday
8:15am CT
NUT NET
Breakfast
8:30am fourth
Tuesday
of the month

Milwaukee-Florida Net
Every Day on 14.290 Mhz
7:00AM - 9:15AM ET
6:00AM - 8:00AM CT

Sunshine Committee
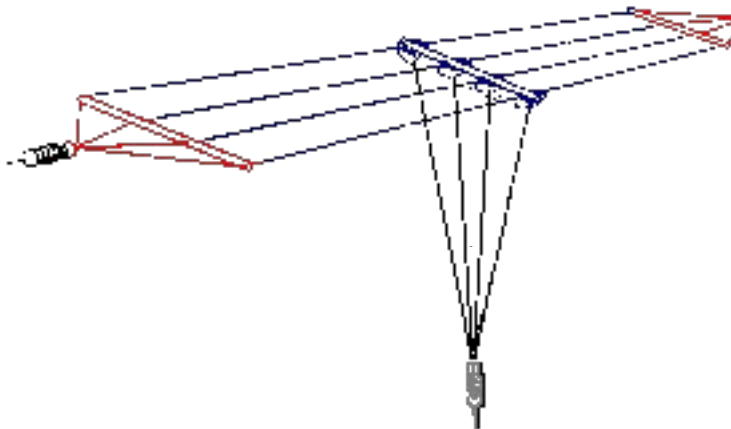If you know of a member who could use a bit of cheer or support,
Barb Garnier (KD9HPS) is now the Sunshine Committee Chair.
Contact her: 414-529-3536 or barbsewsblue@gmail.com.

Virtual Club Meeting
January 12, 2021 7pm
Using Zoom

Program
630 Meter Band:
Is It Practical for Amateur Use?
A recorded presentation by Dave Johnston, WD8DAS
Followed by
Personal 630M Experiences by Dave Garnier, WB9OWN
Virtual meeting coordinated by Chuck Dellis, W9WLX
Zoom Meeting
Meeting ID: **647 484 5588** - Password: **warac**

https://zoom.us/j/6474845588?pwd=WjRRQ3E5bHVlbDY5aGNhazNwZlh0dz09

Zoom phone in info on page 13

Zoom Board Meeting January 26,2021 7:00 pm
Use same Zoom info as member meeting above

WARAC 2-meter net
Every Wednesday at 8pm
SEWFARS W9TJK Repeater 146.820
standard (-) offset 127.3 Hz CTCSS
if repeater down try 146.55 simplex

Index

This is a 630 meter vertical antenna. It just has a very large cap hat.

My morning nut net breakfast shack HI HI

The Presidents Shack

A New Year is here. Hopefully we will see many positive changes. It seems the digital modes are really giving us new and different operating modes. Seems every couple weeks a change or new mode comes out. Very exciting to say the least! It will be fun to see how this all sorts out!

Now I'm at the other end, I'm working on my CW skills. I did pass my General by being able to copy at 13 wpm (I believe that was the speed) so at one time I had some skill. That doesn't seem to be a skill that stays without using it.

I have been attending our Monday night slow speed practice. It is working well so far but it is still evolving as we learn what is needed and what is working. We are slowly gaining hams who want to learn and practice. We keep it short, 15 minutes to maybe a half hour. We are using a repeater (more details on page 13) so we can have voice instructions. The CW is done on Hf ten meter 28.060 MHZ. So far I have gained enough confidence to have one contact on straight key night. There may have been more but other things also kept me busy!

That's it for now, enjoy the Hamtrix!

73
Frank KA9FZR

From the Editor
No editorial due to being occupied by the President's Shack

WARAC Club Meeting Minutes
December 8, 2020

Due to the nature of the COVID-19 crisis and Governor Tony Evers "Emergency Order #12 Safer At Home Order", Chuck W9WLX hosted the Zoom Meeting.

The club meeting was called to order 7:08 pm by Frank KA9FZR.

Approximately 13 virtual club members were identified by the Secretary Dave WB9OWN. There were no visitors.

Club Presentation: Frank KA9FZR began the meeting by asking the membership "What are you doing these days?"
Howard WA9AXQ is working on morse-code trainer based upon STM's "Blue Pill" a 32 bit ARM, a tiny microcontroller board the size of USB flash stick. (Yes, I had to look this up.) Howard described the bits and the modes it can operate. Paul W9PCS told about his K3 repair Odyssey with Elecraft. "I'm here to tell you Elecraft does treat the customer right!" Barb KD9HPS joined us and described her Skywarn HF contest experience. Al WA9BZW has been working FT8 big-time using JT-DX (a derivative of WSJTx.) Al states the JT-DX decodes almost double number of stations than the official WSJTX program does. Al culls the calling stations with (it's evil) JT-Alert; it works well. Al is rapidly earning multi-band WAS awards with this setup. Chuck described the "Single Operator Two Radio" (SO2R) mode with the Flex transceiver. By creating multiple slice receivers, he uses CW Skimmer and NN1M logger to snag and remember multiple callers. This is Chuck's 10 meter contest secret weapon. Frank KA9FZR and Mike WO9B have been practicing CW between themselves at night and have announced "Come join us." Dave WB9OWN (the secretary) decided not talk about his "getting the attic ready for mold/mildew abatement" because nobody really wanted to hear about that. ;-)

November minutes were approved.

General meeting was adjourned about 8:18 pm.

Respectfully submitted,
David Garnier WB9OWN
Secretary WARAC, December 8, 2020   • —• —••

NOTE: Please check attendance sheet for errors or omissions!

West Allis Radio Amateur Club – Sign In Sheet
12/08/20 Zoom Log-on Listing

1 Frank Humpal KA9FZR
2 Chuck Dellis W9WLX
3 Steve Dryja NO9B
4 David Garnier WB9OWN
5 Barb Garnier KD9HPS
6 Al Hovey WA9BZW
7 Mike Johnson WO9B
8 Tom Macon K9BTQ
9 Bill Reed N9KPH
10 Paul Sperbeck W9PCS
11 Lee Todd K9HCW
12 Phil Tollefson WA9AQL
13 Howard Smith WA9AXQ   • —• —••

ANNOUNCING THE RETURN OF THE
ANNUAL WARAC DEC 10 METER CONTEST

THE CHASE CHUCK COMPETITION

DEC 12, 0000Z TO 2400Z DEC 13

The first running of The Chase Chuck Competition (CCC) is in the bag. After two years of solar minimum's putting the kibosh on our club's annual 10 Meter end of year friendly event, Solar Cycle 25 revved up just in time. Benefiting from more than enough sunspots to go around, 10 meters flashed us a look at propagation to come. To those that participated, a big thank you. And for those that couldn't make it happen this year, you missed a good time.

Though we are calling our little soiree the CCC, the rest of ham world knows it as the ARRL 10 Meter Contest. When the starting bell rang on Friday evening, the band was not looking good with only local stations to work. For those that stuck around, against all common sense, an hour later 10 meters came alive. Big time. The entire east coast and Texas came booming in until 11:00 PM or so. Unfortunately on Saturday, the band reverted back to solar minimum form with mostly sporadic-E contacts. Not terribly exciting, but some very short skip was provided to MN, IA, IL and MI. On Sunday 10 meters once more came back strong. The band was mostly wide open throughout the day with signals coming in from all over the eastern US, Canada and South America. Overall, 10 meters lived up to its promise and delivered a fun weekend of contesting.

Which brings us to the Chase Chuck Competition results. 10 WARAC club members submitted entries with the goal to ace out our own Chuck Dellis, W9WLX the past chairman of this contest. Chasing Chuck, though nicely alliterative, has proven to be tougher than anticipated. As you can see in the table below, despite taking it easy on us, W9WLX racked up an impressive score. Since we want to give away some WARAC coffee cups, the decision was made to change the rules on the fly. New goal: Beat 10% of Chuck's score which draws the line at a score of 3300. With that resolved,we've got some winners!!! Congratulations. Cups are a few weeks away.

CALL	PH QSO'S	CW QSO'S	POINTS TOTAL	MULTIPLIERS	FINAL SCORE
WO9B*	27	233	986	56	55,216
W9WLX*	58	121	600	55	33,000
K9BTQ*	42	90	444	43	19,092
WA9BZW*	238	0	476	39	18,564
KA9JCP*	131	0	262	33	8,646
KA9WXN	64	0	128	19	2,432
AA9RK	0	20	80	12	960
N9KPH	24	0	48	14	672
W9NAW	18	0	36	9	324
KA9FZR	8	0	16	6	96

* Coffee Cup Winner

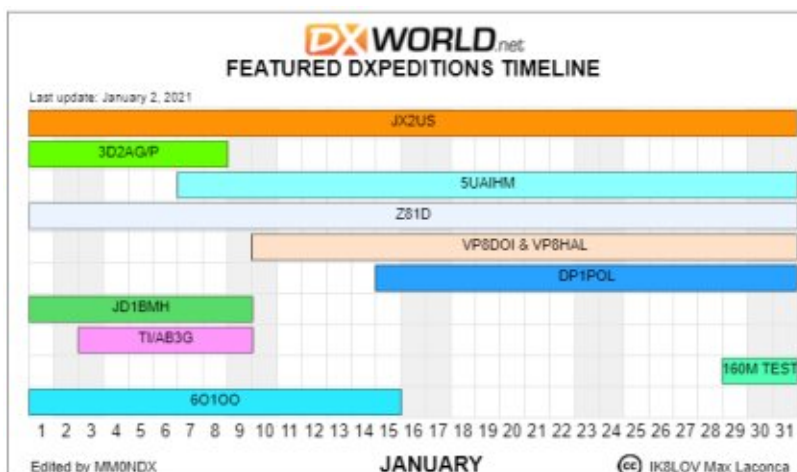# DXing and Contesting - January 2021

DX UPDATE:

JX2US: Jan Mayen Island continues thru Mar 21

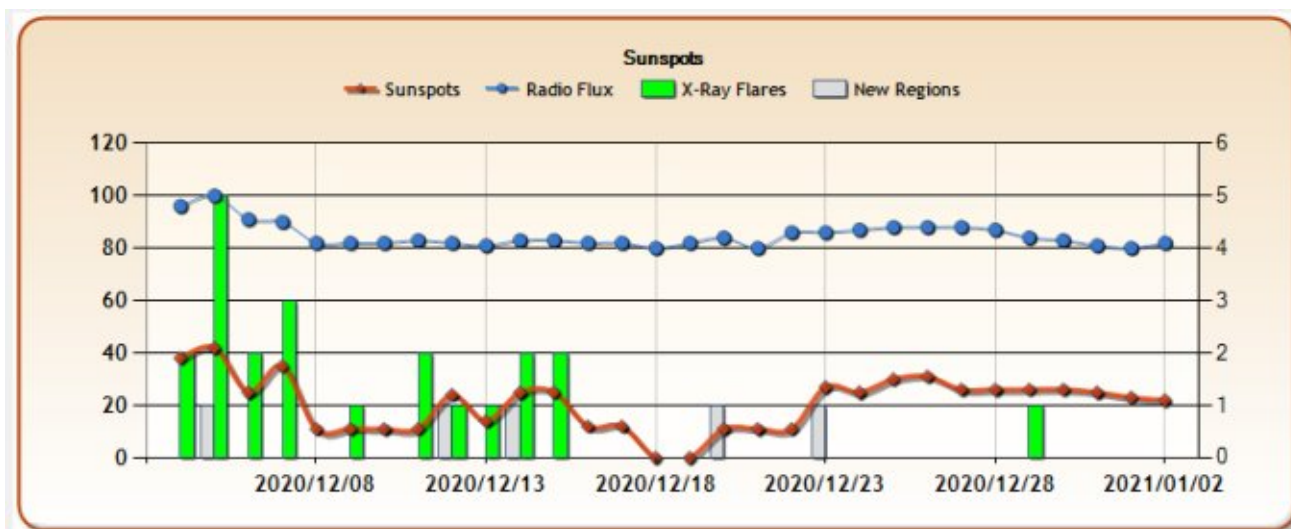6O1OO: Somalia, on-going, all bands & FT8

3D2AG/P: Rotuma, active including 160 mtrs

DP1POL, VP8DOI & VP8HAL: Antarctica, active

African Countries: Sudan, Niger are active

Solar: Cycle 25 is one year old. Predictions for Jan are fairly steady to existing conditions. Sunspot numbers will remain in the 20's with SFI in the 80's range. A & K to remain fairly constant as well. Perhaps a month of consolidation, but you never know. Solar storms, CME's and other events can happen at any time. Expectation is that conditions will keep improving throughout the year.

CONTEST UPDATE:

January contesting is a bit slower than the busy fall slate of events. The contests are also a bit more laid back type events. Shorter and friendlier. Feb however kicks off the start of the State QSO Parties with MN, VT and BC coming up on Feb 6. If you have interest in the State QSO Party Challenge Feb 6th starts the cycle for 2021. Also, a brand new contest starts on Feb 6th: EurAsia HF Championship. This just might cause some issues with the competing St QSO Parties. Gues we will have to wait and see.
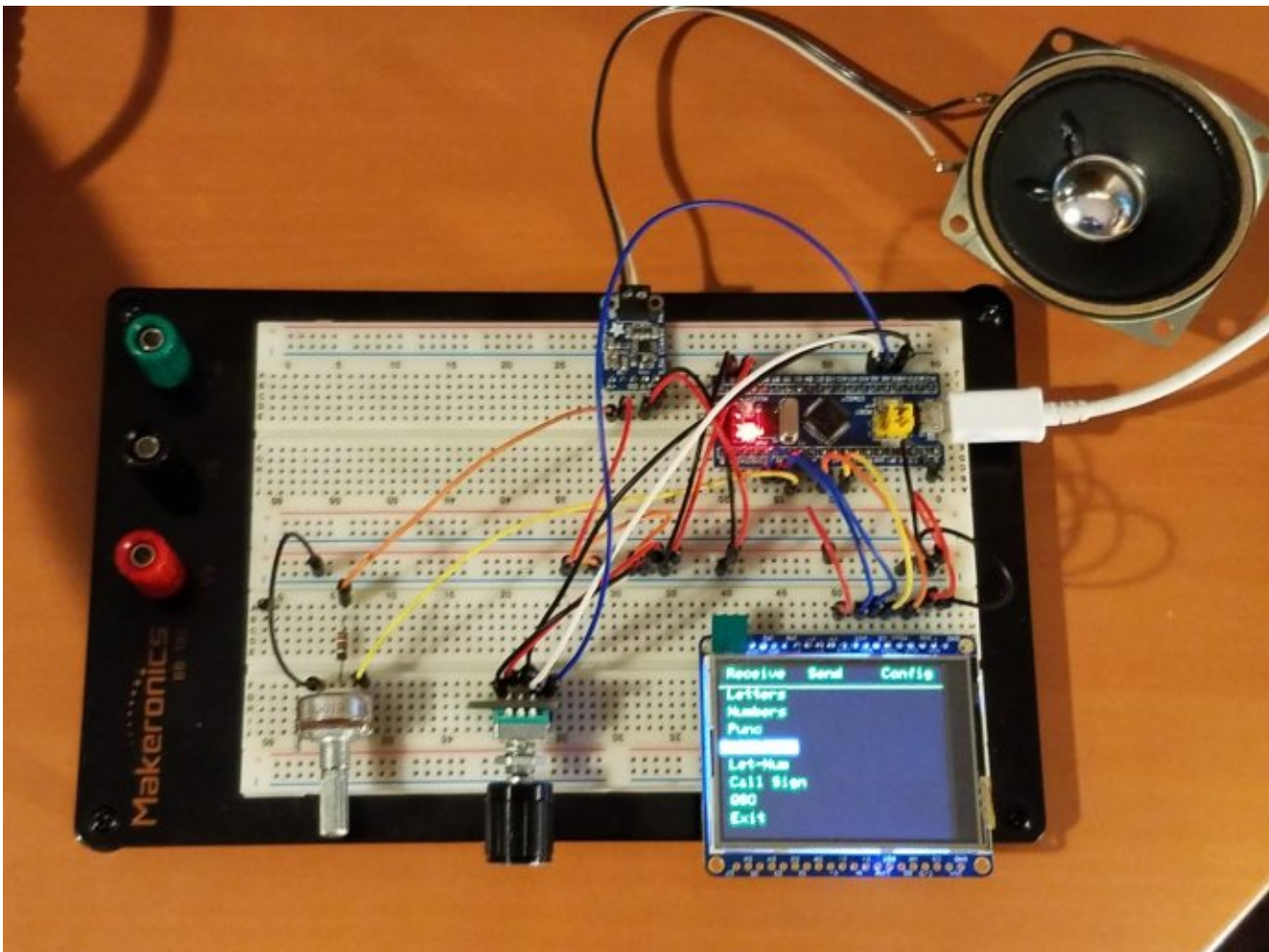
- North American QSO Party, CW: Jan 9-10th
- North American QSO Party, SSB: Jan 16-17th
- CQ 160 Meter Contest, CW: Jan 30th
- Winter Field Day: Jan 30-31st
- MN, VT, BC QSO Parties: Feb 6th
- EurAsia HF Championship: Feb 6-7th • —• —••

The Morse Code Tutor Update

This update reflects on my journey to completing the Morse Code Tutor project from the book "Microcontroller Projects for Amateur Radio" by Jack Purdum, W8TEE, and Albert Peter, AC8GY.

Most of the parts have been ordered, and they have arrived. I also purchased a double breadboard to be able to connect the various parts with jumper wires. See the picture at the end of this article to see what this looks like.

The first challenge was to get the bootloader that is used by the Arduino IDE programmed into the Blue Pill (BP). This is done by using the ST-Link V2.0 hardware device which uses the JTAG port on the BP, and a programming app downloaded from the ST Microsystems website. The programming process was fairly simple, and it was successful after a couple of tries. The Arduino IDE uses a USB connection to the BP to download a sketch. This required specific drivers for the USB device to be loaded onto the PC. Once I found the drivers, and understood that there was a batch file to do the work, the drivers were installed without further problems. I then found the 'Blinky' sketch, and downloaded it to the BP. And, almost like magic, the LED on the BP was blinking at a 1 second on and 1 second off rate. This is the equivalent of the infamous "Hello World" test. The Arduino IDE and the BP were now all ready for the Morse Code Tutor sketch to be loaded.

The second challenge was getting it wired. I soldered the pin strips to the BP and the TFT Display. It really helped to plug the strips into the breadboard, and use that to hold the parts while soldering. I then plugged them into the breadboard and wired the BP and the TFT display. I then loaded the Morse Code Tutor sketch into the Arduino IDE, and compiled it. I had just one error, but it had to do with an Adafruit

library for the SPI. SPI is used to talk to the TFT display, so I needed to get this fixed.

I decided to investigate why the error was happening. It was a call to a library function that did not exist in the library. When I looked at why the call was being made, I found that I could make a small change to the library code, and the missing function would not be needed. Because other people had also had reported this problem, I decided to submit my suggested change to Adafruit for them to update the library. That was a whole new adventure because the library had to be accessed using Git, a source management system. I learned just enough about Git, and 8 tries later, Adafruit accepted my change, and updated their library.

Now I could load the sketch and see if the display would actually light up and show the menu items at the top. Success! The display showed "Receive Send Config" on the top line.

The third challenge was the Incremental Encoder. This is used to move between menu items, and its Push Button is used to select an item from the menu. I wired it up, and it did not seem to work. Then it did, and then it stopped. I spent a lot of time only to decide that some of the wires that I was using much have had some plastic, or maybe oxidation on the pins, causing poor connections. I also learned that there were pull resistors on the PCB that held the encoder, so the +5 pin did have to be connected for the encoder to work properly. And I am still trying to get the encoder to be robust. Sometimes I would get a counter clockwise indication even when the encoder was being rotated in a clockwise direction, so the menu selection would go backwards. I am still working on this issue. It is a lot better now, but I think it could be better.

Finally adding the audio amp and the speaker went without any problems, and now I can listen to the CW characters.

I have to add the jack for the keyer paddle, and then try to get it all into an actual project box. More on how that worked out next time.

Howard, WA9AXQ

Hamtrix Sales Corner

I have 20 years of QST (1998-2018) that is free to anyone who wants them
Contact info: Scott Hinks W9MRI email: rshinks@gmail.com Phone: 262-424-1265

Same book mentioned in Howards WA9AXQ artcle "The Morse Code Tutor Update"

Microcontroller Projects for Amateur Radio

All the information you need to build fascinating projects using the Arduino, STM32 ("Blue Pill"), ESP32, and Teensy 4.0 micro-controllers.

Unfamiliar with C or C++ programming? No problem. Microcontroller Projects for Amateur Radio provides all the introduction you need to build projects such as a programmable power supply, a signal generator, a DSP mic processor, and more!

Some of the practical hands-on projects featured:
  • The Morse Code Tutor - learn and practice sending and receiving methods, with or without Farnworth encoding.
  •The CW Messenger allows you to send up to 50 "canned" CW messages, that are completely changeable in the field without a PC.
  •The Mini Dummy Load is small enough to fit in a shirt pocket, can handle up to 30W, includes an OLED display that shows RF power, yet can be built for around $20!
  •The Double-Double Magnetic Loop antenna sets a new standard for small (3' diameter), multi-band operation and includes remote tuning.
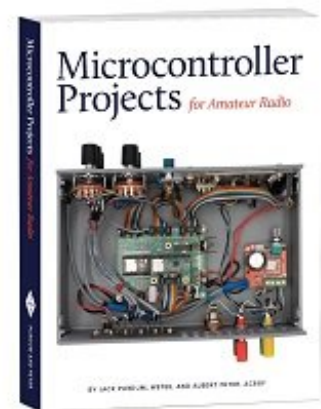
Special Member Price! Only $34.95 (regular $39.95)

Product Details
Softcover: 400 pages

One Copy
New
Price $25.00
Donated to club by
 Howard WA9AXQ
Call or email Frank
KA9FZR
KA9FZR@gmail.com
414-425-0794

HAMTRIX Sale Corner

We are helping a Milwaukee family to sell radio equipment of a SK operator.
Listed is a variety of items of interest for your operation.

Note: photos are on next page

Vibroplex keyer, s/n 267173, dusty but in VG condition. (Photo #1)

G4ZPY paddle, VG condition, (Photo #2)

K8ra.com single lever P-6 keyer, VG condition, (Photo #3)

Bogall paddle, S/N 473, VG condition, (Photo #4)

CT single lever paddle, S/N 016 (2000), VG condition, (Photo #5)

MFJ 906 6M antenna tuner, new in box (NIB)

Oak Bay LP-50, low pass filter, VG condition

Bencher YA-1, low pass filter, good condition

Yaesu FT-7800R Dual band FM Transciever, complete, NIB

Icom IC-38A 220 MHz FM transceiver, mike and manual in original box, VG condition

Autek Research QF-1A SSB/CW/AM filter, good condition

Heathkit HW-9 CW HF transmitter, with power cord, good condition

Quantics W9GR DSP II filter, good condition

West Mountain RIGblaster pro, very good condition

West Mountain RIGblaster Plus II USB, NIB

Heil Pro-Set Plus headset, good condition, (Photo #6)

For more information on the above items, please call Annie Espinoza at (414) 687-1945.
Please leave a message with your name, phone number and which item(s)
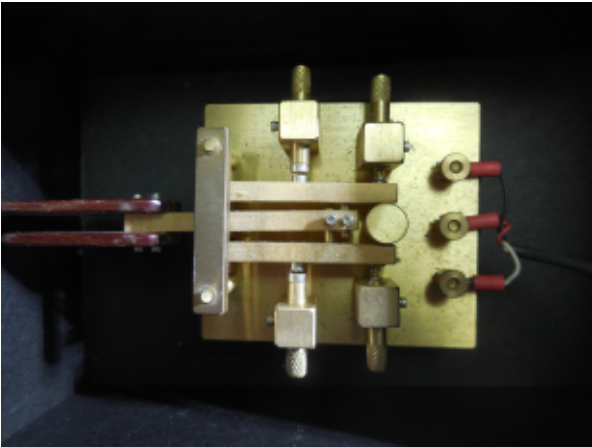you would like to inquire about/purchase. She will call you back.

Photo #1

Photo #2
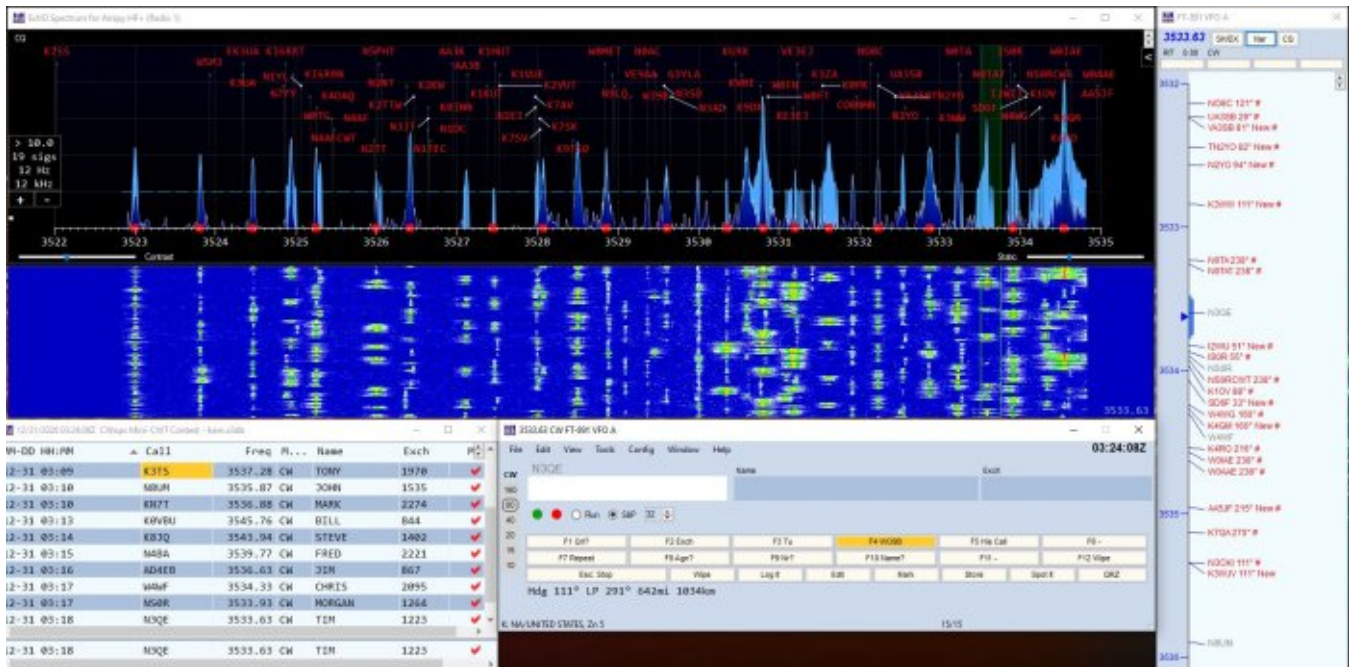
Photo #3

Photo #4

Photo #5

Photo #6
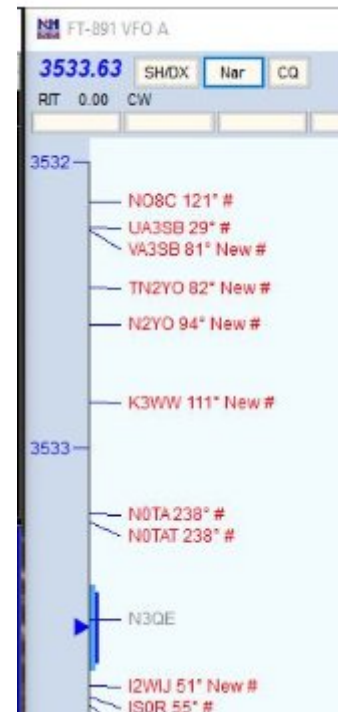
CW Contesting with N1MM

By Michael Johnson, WO9B

If you are interested in upping your game for CW contesting, N1MM has a few features to help you do just that. The picture below is my preferred N1MM setup for CW contesting.

Note that my station consists of a simple Yaesu FT-891, AirSpy SDR and a doublet antenna. If my station can do this, anyone's can. The screen is divided into 4 rectangular windows: Spectrum Display (large dark blue area), Bandmap (right side rectangle), Log (bottom left) and the Entry Pane. This article is going to focus on the Band Map and the Spectrum Display windows.
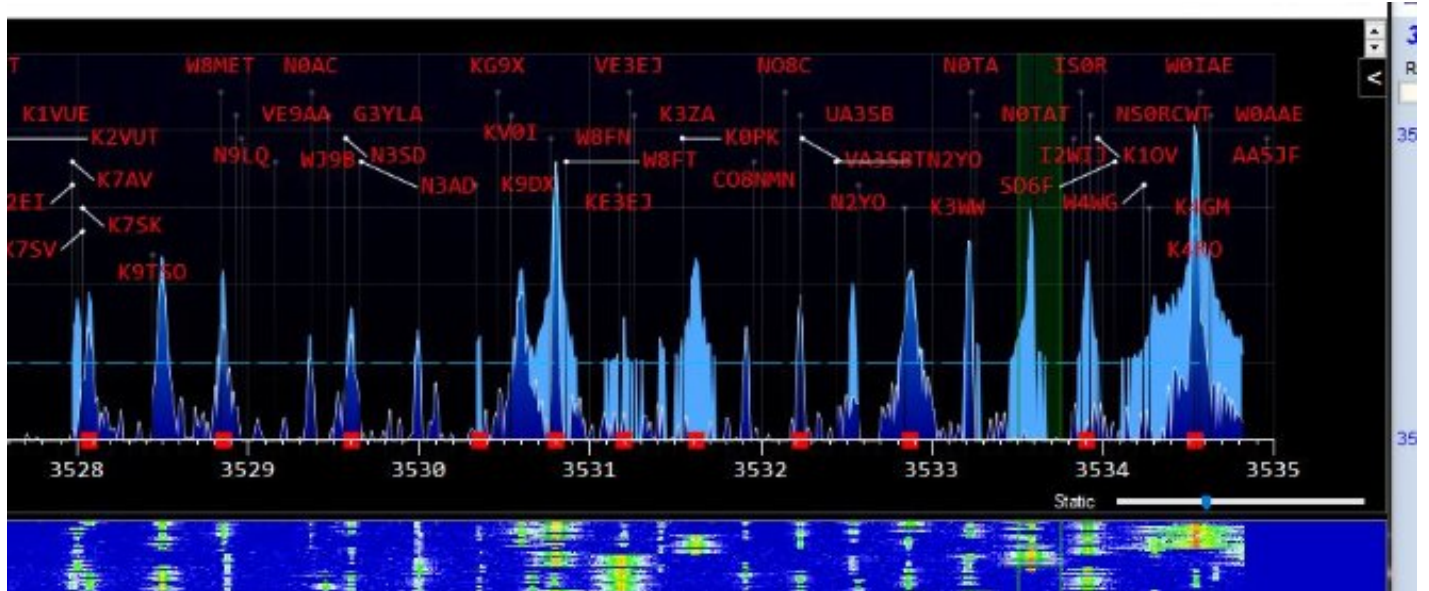
Band Map

This window displays the various stations spotted by the Telnet DX Cluster within the N1MM program and/or a CW Skimmer. It gives a vertical readout of all those spots organized from low frequency on the top to higher frequency as you move down. There are several options for setting this up, but in general new multipliers are shown in Red, New Contacts are shown in Blue (sorry, the photo has no Blue ones) and Dupes are shown in Grey. In the picture, N3QE is a Dupe. Your radio's frequency is indicated by the little blue bar and arrow on the left side. The Band Map, in addition to showing a picture of activity, also lets you jump from station to station either by clicking on one of the calls or you can sequentially jump from spot to spot via the keyboard Control-Up Arrow or Control-Down Arrow. The keyboard method will automatically skip Dupes. My preferred method is to use the keyboard technique so that I can literally skip up and down the band working stations as I go without touching the VFO knob on the radio. It also allows me to work stations that I only copy a partial call sign of. In search and pounce mode, using the band map can result in QSO rates of 70, 80 and even more than 100 per hour. It will also allow you to focus on working more multipliers as you can prioritize those quite easily.

The Band Map has a couple of drawbacks. First, not every spotted station can be heard. In the above picture, IS0R and I2WIJ are both spotted, but no way can I actually hear them. Secondly, in a busy contest false spots will show up all the time. Someone may spot a station and copy the call wrong. The Band Map is not a perfect tool, but it sure can help.

Spectrum Display

This display works much the same as the Band Map, only the information shown is derived from either your radio's IF Band Pass or, in my case, a separate SDR. The station call signs are carried over from either the DX Cluster or perhaps a CW Skimmer program.

For the most part, this is just a specialized spectrum scope with a waterfall. The N1MM twist is the addition of the red dots shown at the base of the spectrum display and the horizontal light blue line just a bit above those red dots. Those red dots indicate stations that have a signal strength greater than the blue line. If you look carefully, you will notice that several signals are above the blue line, but have no red dot associated with them. As my Spectrum Display is set up, red dots are only for strong enough stations that are not dupes. To navigate this display, the keyboard command Shift-Up Arrow and Shift-Down Arrow are used which will jump your radio from red dot to red dot. This is a lot faster than spinning the VFO knob and you have good certainty that you can actually work the station you land on. The Spectrum Display is not without its problems however. Parsing the amount of data for this display will generate false positives. Also, the red dot duping system is nowhere near perfect particularly in a crowded band situation. It is, however, very helpful in contests where you need to cover 50+ khz of band width and activity is fairly low, such as State QSO Parties or certain lower activity DX contests.

The combination of these two operating aids within N1MM are really game changers for casual contesters such as myself. If you are plugging along at QSO rates of 20, 30 or 40 per hour, incorporating these aides will easily double your rate and that works for me. **. _. _..**

CW Practice

One of the best and maybe the only way to get better at CW is practice. Having someone else who also wants to practice also helps. Just makes it more fun.

The West Allis Radio Club is going to try to help. We are running a CW practice net on Monday at 8pm The repeater is 147.135+ 141.35 the CW portion is on HF 28.060 MHZ

Mike WO9B has been joining me and setting up some practice but we are open for suggestions on where to go with this. Come join us.

• —• —••

WARAC Members:

The club's new fiscal year began November 1st, which means that dues for the 2020 to 2021 year are payable now.

Since we are not holding physical meetings due to the COVID 19 virus, we are asking that you handle your membership in one of the following ways:

Life Members

·   Please mail the club (PO Box 511381, New Berlin, WI 53151) a completed application so that we can update our membership records.

Other Members

·   The preferred method of payment would be via PayPal using the "Friends and Family" option. By using this option, the club does not incur the usual   PayPal transfer fee. Use this address: waracpp@warac.org.
·   Mail a check payable to WARAC at PO Box 511381, New Berlin, WI 53151.
·   If you prefer, you can mail a cash payment to this address as well. A receipt will be emailed to you at your address of record
·   **Whichever option you choose, we would appreciate having a completed application mailed to us so that we can ensure that our membership records are up to date.**

And please, please, please try to take care of your dues payment by the end of December. We will be publishing a new electronic membership directory early next year, and if we haven't received your dues by this date, your name will not be included in the directory.

Thanks in advance for your help! • —• —••

West Allis Radio Amateur Club, Inc.
MEMBERSHIP APPLICATION

Name		Cell	Handle

Address

City		State	Zip

Phone	Email Address

Spouse's Name	Wedding Ann.	Birthday

License Class	Expiration	Licensed Since

Membership In ☐ ARRL   ☐ Amsat   ☐ Other

Operational Station ☐ Fixed   ☐ Mobile   Bands:

Would You Be Willing To Serve ☐ On A Committee?   ☐ As An Officer?

Club Activities You Would Like To Participate In

☐ Field Day   ☐ Programs   ☐ Swapfest   ☐ Hamfrtx

☐ Elmer   ☐ Sunshine   ☐ Education   ☐ Community Service

☐ Public Relations   ☐ Scholarship   ☐ QSO Party

Class Of Membership: ☐ Full   ☐ Associate   ☐ New   ☐ Renewal

Dues Paid: ☐ Full $15.00   ☐ Associate $10.00

☐ Family $18.00   ☐ Student $10.00

☐ Retired $10.00

I hereby apply for membership in the West Allis Radio Amateur Club, Inc. In the membership class indicated above. I agree to abide by the Constitution and By-Laws of the club and any rules or conditions that may be set forth in accordance with the Constitution and By-Laws.

Applicant		Date
Secretary		Date
Treasurer		Date
	Accepted for Membership	Date

Meetings on the 2nd Tuesday of the month at:
New Berlin Community Center
14750 W Cleveland Avenue

Bring your completed application to a club meeting or mail with dues payment to this address:
West Allis Radio Amateur Club, Inc.
P. O. Box 511361
New Berlin, WI 53151-1361

Elephant cage antenna

----Zoom Telephone info----

Dial by your location

    +1 646 558 8656 US (New York)

    +1 669 900 9128 US (San Jose)

    +1 253 215 8782 US (Tacoma)

    +1 301 715 8592 US (Germantown)

    +1 312 626 6799 US (Chicago)

    +1 346 248 7799 US (Houston)

Meeting ID: 647 484 5588

Passcode: 434973   • —• —••

Officers and Board
President
 Frank Humpal KA9FZR

Vice President
 Steve Dryja, NO9B

Secretary
Dave Garnier WB9OWN

Treasurer
 Bill Reed N9KPH

Directors
Tom Macon K9BTQ

Phil Tollefson, WA9AQL

Newsletter Editor
 Frank Humpal, KA9FZR
 fhump@milwpc.com

Webmaster past president
 Mike Johnson WO9B

West Allis Radio Amateur Club
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