



MARC Beacon

Volume 10, Issue 6

The Morongo Basin Amateur Radio Club Newsletter

JUNE 2021

Hello Amateur Radio Operators!

On Saturday 15 May, we set up a 10' x 10' communications canopy at the Yucca Valley Walmart parking lot from 9AM to 1PM to support the high desert Humanitarian Emergency Lifeline Project (HELP). It was very successful, but the strong winds hit us in the afternoon. A big thank you to all the HAM radio operators who stopped by to show their support. A lesson learned was to make sure to bring anchors for the canopy legs and weights to hold down paper documents.

Our 3-state vacation was canceled because Judy got food poisoning the first night at dinner. But we did visit Death Valley for the first time and it was very exciting to stand at 282 feet below sea level, the lowest point in North America.

At 1800 Thursday 27 June, we will hold our first physical meeting at the Church of the Nazarene, 56248 Buena Vista Dr, Yucca Valley since the pandemic started almost 1.5 years ago. Please join us, and if you cannot attend then join the Zoom meeting we will be setting up at the church.

It is Field Day month! I will be at the Yucca Mesa Community Center from Friday afternoon 25 June to Sunday afternoon 27 June. Please stop in to make an HF call or to see we set things up. I will be using a Yaesu FT-857 radio running on a 12 volt battery in a covered utility trailer.

I would love to hear about any Arduino projects you may have in your mind. Keith N6GKB gave me the idea of creating a red LED clock. I am working on that now and should have an article on it for next month's news letter.

Please schedule time to check in on the 7 PM Tuesday net and if you can, please join us on the "Cawfee Tawk" net every morning at 10 AM. You'll never know who may be on the other end of the microphone. It could be someone famous.

Take care of yourself and enjoy each day. If you're not having fun, then you're doing something wrong.

This is WO4ROB, Rob from Joshua Tree.

Rob Cloutier
WO4ROB

Joshua tree
Club President
(760)401-6666

rob_cloutier@hotmail.com



Linked Repeaters

Yucca Valley, W6BA

146.790 MHz (- shift = 146.190 MHz) 136.5 Hz PL/CTCSS

Twentynine Palms, W6BA

147.060 MHz (+ shift = 147.660 MHz) 136.5 Hz PL/CTCSS

Landers, WB6CDF

447.580 MHz (- shift = 442.580 MHz) 173.8 Hz PL/CTCSS

OTHER AREA REPEATERS

IRLP Node KD6DIQ 145.770 pl 67.0

ONYX Peak N6LXX 446.880 (-) pl 110.9

San Jacinto TRAM one 145.480 (-) pl 107.2

Snow Peak 445.160 (-) pl 67.0

ALLSTAR NODE on the mesa 147.705 pl 146.2

**29 PALMS rpt linked to KELLER peak
448.580 pl 146.2**

Nets

Amateur Radio Emergency Service (ARES)

Mon @ 1915

Morongo Basin Amateur Radio Club (MARC)

Tue @ 1900

MARC Daily unformal Kawfee Talk

1000-1100 DAILY

Social Media,

Club web page: <http://www.w6ba.net>

Facebook:

<https://www.facebook.com/MorongoBasinAmateurRadioClub>

Club Meeting

**Every 3rd Thursday of the month at 6 PM. At
the church of the Nazarene in Yucca Valley at
56248 Buena Vista Dr**



WEATHER UNDERGROUND

The weather station on Paxton Hill at the W6BA repeater site is working great. It will show accurate wind speed and direction measurements for the top of the mountain .

<https://www.wunderground.com/personal-weather-station/dashboard?!ID=KCAYUCCA57>

Glenn N6GIW

I also have A weather station by the high school in Yucca Valley N6GKB. Showing the temps and wind speeds in the center of Town.

https://www.wunderground.com/dashboard/pws/KCAYUCCA35?cm_ven=localwx_pwsdash

Keith N6GKB

THERE IS A SEPARATE NEWSLETTER FOR FIELD DAY INFO, IF YOU WANT TO BE ADDED TO THE FIELD DAY NEWSLETTER CONTACT KEITH N6GKB.

N6gkb@live.com

JUNE 25,26,27 2021

FIELD DAY WILL BE LOCATED AT

**Yucca Mesa Community Center
3133 Balsa Ave.
Yucca Valley, California 92284**

OUR MONTHLY CLUB MEETING WILL NOW INCLUDE ON THE REGULAR THIRD THURSDAY OF THE MONTH A ZOOM ONLINE MEETING STARTING AT 6:PM

(THIS WILL BE FIRST TIME TRIED)

CONTACT GLENN N6GIW TO BE PUT ON THE EMAIL LIST .

OUR APRIL ZOOM MEETING WAS GREAT HAD ABOUT 9 PEOPLE SHOW, WE ALL HAD A GREAT TIME SEEING AND TALKING WITH THE CLUB MEMBERS

WO4ROB Binary Thermometer

I've always wanted to know what the temperature was around me, no matter if I was outside in a car, in my house, or any other place I may be. I needed something inexpensive, portable, adjustable, and not an actual fragile thermometer filled with liquid.

You can purchase a ThermoPro TP49 Digital Thermometer and Humidity Meter at Amazon for \$7, but I wanted to make my own. For a bout \$7, I made one out of a small IC chip, a thermistor, a resistor, and 8 LEDs, connected to a USB plug.

When plugged into a USB port, my Binary Thermometer displays the 0-255 degree Fahrenheit temperature by lighting up the appropriate 8 LEDs depending on the surrounding temperature. If all 8 are lit then the temperature is 255. If none are lit then it is 0 degrees. From top to bottom, the value of each LED is 128, 64, 32, 16, 8, 4, 2, 1. If the temperature is 70-80 degrees, then the LEDs will be green. If the temperature is less than 70 degrees, then the LEDs will be blue. If the temperature is more than 80 degrees, then the LEDs will be red.

Parts List

NTC Thermistor 100K Temperature Sensor, \$.50
ATtiny85 microcontroller, \$3
8 pin socket, \$.10
100k ohm resistor, \$.05
WS2812 5050 RGB 8 LEDs, \$1.50
Printed Circuit Board, \$.40
USB Type A Male Connector, \$.70
Total = \$6.25

Arduino code without comments

```
#include <Adafruit_NeoPixel.h>
Adafruit_NeoPixel pixels(8, 1, NEO_GRB +
NEO_KHZ800);
int ThermistorPin = 3;
byte BRT = 10;
int Vo;
float R1 = 10500;
float R2;
float logR2;
float Tk;
float Tc;
float Tf;
float PixColor;
byte DegF;
float c1 = 1.009249522e-03;
```



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```
float c2 = 2.378405444e-04;
float c3 = 2.019202697e-07;
void setup() {pixels.begin();}

void loop()
{
  Vo = analogRead(ThermistorPin);
  R2 = R1 * (1023.0 / (float)Vo - 1.0);
  logR2 = log(R2);
  Tk = (1.0 / (c1 + c2*logR2 +
c3*logR2*logR2*logR2));
  Tc = Tk - 273.15;
  Tf = (Tc * 9.0) / 5.0 + 32.0;

  DegF = round(Tf);
  PixColor = pixels.Color(0,BRT,0);
  if (DegF > 80) PixColor =
pixels.Color(BRT,0,0);
  if (DegF < 70) PixColor =
pixels.Color(0,0,BRT);

  if (DegF >= 128)
{pixels.setPixelColor(7,PixColor);
  DegF = (DegF - 128);}
  else pixels.setPixelColor(7,0,0,0);
  pixels.show();

  if (DegF >= 64)
{pixels.setPixelColor(6,PixColor);
  DegF = (DegF - 64);}
  else pixels.setPixelColor(6,0,0,0);
  pixels.show();

  if (DegF >= 32)
{pixels.setPixelColor(5,PixColor);
  DegF = (DegF - 32);}
  else pixels.setPixelColor(5,0,0,0);
  pixels.show();

  if (DegF >= 16)
{pixels.setPixelColor(4,PixColor);
  DegF = (DegF - 16);}
  else pixels.setPixelColor(4,0,0,0);
  pixels.show();

  if (DegF >= 8)
{pixels.setPixelColor(3,PixColor);
  DegF = (DegF - 8);}
  else pixels.setPixelColor(3,0,0,0);
  pixels.show();

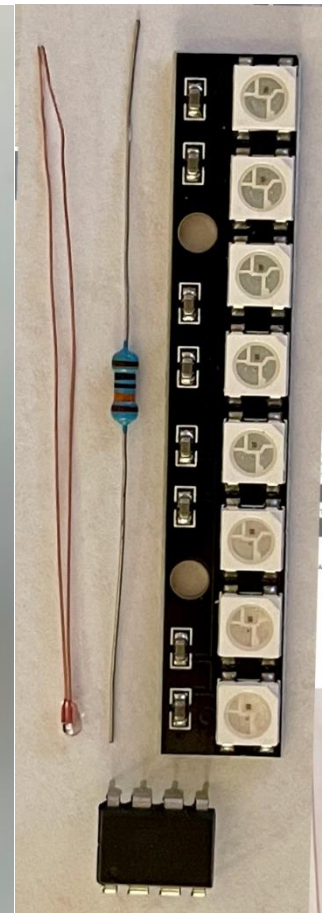
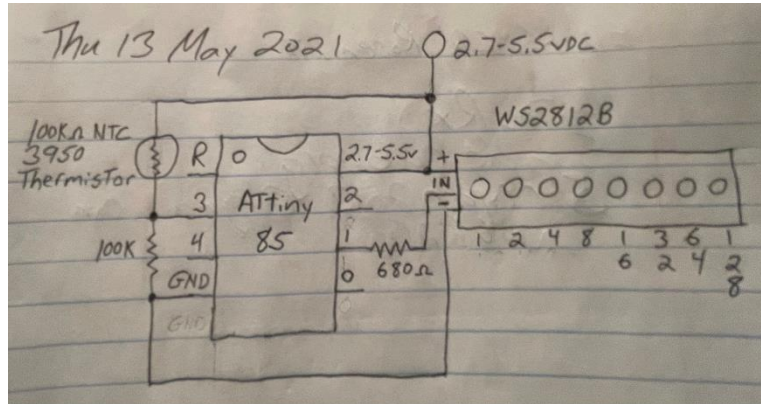
  if (DegF >= 4)
{pixels.setPixelColor(2,PixColor);
  DegF = (DegF - 4);}
  else pixels.setPixelColor(2,0,0,0);
  pixels.show();

  if (DegF >= 2)
{pixels.setPixelColor(1,PixColor);
```

```
DegF = (DegF - 2);}
else pixels.setPixelColor(1,0,0,0);
pixels.show();

if (DegF >= 1)
{pixels.setPixelColor(0,PixColor);
  DegF = (DegF - 1);}
else pixels.setPixelColor(0,0,0,0);
pixels.show();

delay(1000);
}
```





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Amateur Radio Gearing Up for Another Active Atlantic Hurricane Season

The Atlantic Hurricane Season, which starts on June 1, promises to be a busy time for amateur radio volunteers on the Hurricane Watch Net ([HWN](#)) to report ground-level storm conditions in real time for use by National Hurricane Center ([NHC](#)) forecasters, and for [SKYWARN](#) volunteers, many of whom are hams. The National Oceanographic



and

Atmospheric Administration (NOAA) [has forecast](#) a likely range of 13 to 20 named storms (winds of 39 MPH or greater), of which six to ten could become hurricanes (winds of 74 MPH or greater), including three to five major hurricanes (Category 3, 4, or 5, with winds of 111 MPH or greater) expected. NOAA projects these ranges with a 70% confidence level.

"2021 is looking to be another active season," said HWN Manager Bobby Graves, KB5HAV. "We can only hope we don't have a repeat of 2005 or 2020. The sea surface temperatures throughout the normal areas of tropical cyclone activity are already near or just above 80 °F, just what storms like. The current forecast for 2021 is on the high side. The adjusted average is 14 named storms, with seven hurricanes and three of those at Category 3 or stronger."

When active, the HWN operates on 14.325 MHz during daylight hours and on 7.268 MHz after dark.

The net's primary mission is to disseminate tropical cyclone advisory information to island communities in the Caribbean, Central America, along the US Atlantic seaboard, and throughout Gulf of Mexico coastal areas. It collects observed or measured weather data from participating radio amateurs in storm-affected areas as well as any post-storm damage reports and passes that information along to forecasters at the NHC via its amateur radio station, [WX4NHC](#). The HWN typically activates whenever a storm system has achieved hurricane status and is within 300 statute miles of a populated landmass.



Radio Amateur's Vintage Film Footage Sheds Light on Hindenburg Disaster

Vintage film footage provided by New Jersey radio amateur Bob Schenck, N2OO, was the highlight of a PBS documentary about the *Hindenburg* disaster. The film, shot by his uncle, Harold Schenck, may provide clues as to what initiated the disastrous 1937 fire that destroyed the airship *Hindenburg* and claimed 35 lives as the German zeppelin was landing at Lakehurst,



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New



Jersey. Harold Schenck tried to interest government investigators in his film, shot from a different angle than newsreel footage that begins only after the fire was well under way, but it was largely overlooked. "Nobody ever asked for it," Bob Schenck explains in the documentary.

The Schenck film is the highlight of a PBS NOVA documentary, [Hindenburg: The New Evidence](#), that investigates the issue in considerable depth in an effort to unlock the secrets of the cold case. The program aired on May 19 and remains available for streaming.

"My dad had bought this nifty Kodak camera -- a wind-up movie camera, 8 millimeters -- and he couldn't come [to the *Hindenburg* landing] because he worked," Bob Schenck recounted during the documentary. "So, he asked my uncle and my mom if they would take some shots and see the *Hindenburg* land."

Bob Schenck approached Dan Grossman, an expert on airships, including *Hindenburg*, in 2012 during a commemoration of the disaster that forever memorialized radio reporter Herbert



Morrison's plaintive on-air reaction, "Oh, the humanity!" The NOVA documentary not only shares Schenck's footage, which provided new clues to re-examine the

cause of the explosion, it also reviews scientific experiments that helped investigators come to a fresh understanding of what set off the fire.

The original investigation only concluded that the fire resulted from leaking hydrogen ignited by a spark, but it was never determined what caused the spark. Witness accounts suggested the fire started near the airship's tail, but supporting evidence was hard to find until the Schenck footage was examined.

"The *Hindenburg* remains vivid in our collective memories all these years later because of the searing images and film of the explosion," said NOVA co-executive producer Chris Schmidt in a [Manchester Patch article](#). "We feel honored to share this new footage with the world and to bring the NOVA audience behind the scenes of this pivotal new investigation into the crash." -- *Some information from Manchester Patch; thanks to Pete Varounis, NL7XM*



The San Francisco Amateur Radio Club (SFARC) will activate a sailboat on San Francisco Bay as the inaugural event in Boats on the Air

(BOTA). The event is set for Saturday, June 5, 1 - 4 PM PDT. Inspired by the success of programs like SOTA, POTA, and IOTA, BOTA will feed into the passions of amateur radio and boating. The sailing vessel *Auriah* is a 37-foot-



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long Beneteau Oceanis with a home port of Sausalito, California. "The main rule of BOTA is that the boat must be under way during the activation. No anchoring, mooring, or tying to a dock is allowed," said Kent Carter, AJ6NI. "The plan is for us to be moving 100% under sail power during that time. In addition to being a fun activity, it is hoped that BOTA will further emergency preparedness and experimentation with amateur radio." Activation frequencies are 7.115 MHz (CW); 14.325 MHz (SSB); 18.100 MHz (FT8), and 146.52 MHz (FM simplex). For more information or to post your own activation, [contact](#) BOTA.

The FCC is seeking comment on the impact of the continuing global shortage of semiconductors.

The FCC's May 11 [Public Notice](#) stated its concern is focused on the impact the shortage could have on the communications industry, agency initiatives, and the nation's continued advancement in next-generation technologies. FCC Acting Chairwoman Jessica Rosenworcel commented: "The communications sector is one of the fastest-growing segments of the semiconductor industry. These tiny pieces of technology are the basic building blocks of modern communications -- including 5G, Wi-Fi, satellites, and more. That is why we are seeking to better understand the current shortage, its consequences for the communications sector, and steps we can take to ensure that FCC priorities and initiatives remain on track." Interested parties may file comments online using the FCC's Electronic Comment Filing System. Initial comments are due on June 10, and reply comments are due on June 25.



The 2021 SEA-PAC virtual Convention is June 5 2021. The QSO party is on 5 & 6 June. Due to the continuing Pandemic restrictions there will be no live face-to-face activities at the Seaside Convention Center but rather will consist of one day of live and prerecorded video presentations and a two-day multiband QSO party.

This year SEA-PAC is proud to offer a series of FREE presentations and seminars. To join the SEA-PAC experience and view the presentations you need to register in advance [CLICK HERE](#). After registering, you will receive a confirmation email containing information about joining the webinar. Admission is no charge but you must register as an attendee to the Zoom Webinar to actually view the program.

The scheduled presentations are listed on the "Schedule" page to the left. [CLICK HERE](#) to see the list of presenters and a picture and biography about each one.

The SEA-PAC committee thanks everyone that made the effort to support SEA-PAC with your generous donations. SEA-PAC has expenses with or without an in-person convention and Webinar. To show our gratitude we will be sending Thank You gifts for your donations. A \$50 to \$99 donation will get you a 2021 SEA-PAC collector's pin. A donation of \$100 or more will get you a 2021 SEA-PAC T-shirt and a 2021 collector's pin. For those who already donated in those amounts, we will contact you to arrange for your "Thank You" gift. If you wish to donate to SEA-PAC, you can donate [HERE](#) online or send your donation in any amount to SEA-PAC, PO Box 7263, Aloha, OR 97007-0963. SEA-PAC is a 501(c)(3) non-profit and donations may be tax deductible.

2021 SEA-PAC T-shirts are available directly from Hip Ham Shirts at <https://www.hiphamshirts.com/collections/sea-pac-convention>.

To order a 2021 SEA-PAC pin only, send a check or money order for \$6.00, payable to: SEA-PAC, PO



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Box 7263, Aloha, OR 97007-0963. Pins for 2020, 2021 and some earlier years will be available at the next live event at the registration desk as usual.

The 2021 SEA-PAC convention booklet will be emailed to the SEA-PAC email list by June 2nd.



HUNTSVILLE HAMFEST IS A GO !

August 21 & 22, 2021

**We are GO for Launch at Von Braun
Center South Hall**

**700 Monroe St SW, Huntsville, AL
35801**

**Hours: Saturday 9 AM — 4:30
PM, Sunday 9 AM — 3 PM
*Late-breaking News & Info***

<https://hamfest.org/>

**THIS IS GREAT TO SEE FOR ALL HAMS
NATIONWIDE.**

MORE ON WSJT-X

WSJT-X implements communication protocols or "modes" called **FST4**, **FST4W**, **FT4**, **FT8**, **JT4**, **JT9**, **JT65**, **Q65**, **MSK144**, and **WSPR**, as well as one called **Echo** for detecting and measuring your own radio signals reflected from the Moon. These modes were all designed for making reliable, confirmed QSOs under extreme weak-signal conditions.

WSJT-X 2.4.0 Achieves General Availability!
Here's part of the announcement from Joe, K1JT: "We are pleased to announce the General Availability (GA) release of *WSJT-X* version 2.4.0, which includes the new digital mode Q65. Q65 is designed for two-way QSOs over especially difficult propagation paths, including ionospheric scatter, troposcatter, rain scatter, TEP, EME, and other types of fast-fading signals. Details and recommendations concerning the Q65 sub-modes are provided in the "Quick-Start Guide to Q65", available [here](#)." For the complete announcement, see the [WSJT-X website](#).

JT4, **JT9**, and **JT65** use nearly identical message structure and source encoding (the efficient compression of standard messages used for minimal QSOs). They use timed 60-second T/R sequences synchronized with UTC. **JT4** and **JT65** were designed for EME ("moonbounce") on the VHF/UHF/microwave bands. **JT9** is optimized for the MF, and HF bands. It is about 2 dB more sensitive than **JT65** while using less than 10% of the bandwidth. **Q65** offers submodes with a wide range of T/R sequence lengths and tone spacings.

FT4 and **FT8** are operationally similar but use T/R cycles only 7.5 and 15 s long, respectively. **MSK144** is designed for Meteor Scatter on the VHF bands. These modes offer enhanced message formats with support for nonstandard callsigns and some popular contests.

FST4 and **FST4W** are designed particularly for the LF and MF bands. On these bands their fundamental sensitivities are better than other WSJT-X modes with the same sequence lengths, approaching the theoretical limits for their rates of information throughput. **FST4** is optimized for two-way QSOs, while **FST4W** is for quasi-beacon transmissions of **WSPR**-style messages. **FST4** and **FST4W** do not require the strict, independent time synchronization and phase locking of modes like EbNaut.



As described more fully on [its own page](#), **WSPR** mode implements a protocol designed for probing potential propagation paths with low-power transmissions. **WSPR** is fully implemented within *WSJT-X*, including programmable "band-hopping".

<https://physics.princeton.edu/pulsar/k1jt/wsjsx.html>

INFO FROM N3FJP

Scott, N3FJP, announces the availability of *Amateur Contact Log 7.0*, with the following features/improvements:

- Easy, direct, integration with *WSJT-X*
- Support for the 13 Colonies annual event
- States lookup for DX spotting (and *WSJT-X*)
- Support for the free HamDB Callbook Lookup service (which includes USA, Canada and a few other countries)
- Grid is now returned with the free callbook lookup service (grid is already provided in most other callbook lookup options)
- Right-clicking on the main form's Spot Last button provides the opportunity to add a comment

Other N3FJP programs have also been updated:

- *ARRL RTTY Roundup 3.9* (which also supports FT Roundup)
- *CQ WPX 4.9* (not *WSJT-X* applicable, but you can enjoy the rest of the enhancements in next week's CQ WPX CW contest)
- *Field Day Log 6.6*
- *VHF Log 6.6*
- *World Wide Digi DX 1.2*

For more information, see the [announcement](#), or visit the [N3FJP website](#).

HAM.BAND

Ham.band, the easy to remember site that shows you the US amateur radio band plan!

Check out ham.band ... Easy to read on desktop and mobile! Just type ham.band into your browser!

Aaron C. KM6IAU

KEN HENDRICKSON, W6BZY



Some helpful you tube videos from Ken W6BZY about Linux and raspberry Pi.



Search **W6BZY** on YouTube.

OUR CLUB MEETINGS!!!!

IN THE MONTH OF JUNE OUR LOCAL CLUB MEETINGS WILL BE BACK.

6:00 P.M. JUNE 17TH

AT church of the Nazarene in Yucca Valley at
56248 Buena Vista Dr




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JUNE 2021

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Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
		1	2	3	4	5
	KAFEE TAWK 10AM DAILY CLUB REPEATER	MARC Net 7:00 pm NCS LARRY		ARES Meeting 6:00 pm NOT YET		
6	7	8	9	10	11	12
	ARES Net 7:15 pm	MARC Net 7:00 pm NCS FRED				
13	14	15	16	17	18	19
	FLAG DAY! ARES Net 7:15 pm	MARC Net 7:00 pm NCS KEITH		CLUB MEETINGS BEGIN TODAY!! 6PM		
20	21	22	23	24	25	26
	ARES Net 7:15 pm	MARC Net 7:00 pm NCS JESSE				
27	28	29	30			
	ARES Net 7:15 pm	MARC Net 7:00 pm NCS ROB				