



MARC Beacon

Volume 10, Issue 1

The Morongo Basin Amateur Radio Club Newsletter

JANUARY 2021

President Message 20210101

Happy New Year Morongo Basin HAM Radio Operators! I sure hope this year it better than the last.

The following MARC officers and board members will maintain their title for 2021.

President: Rob Cloutier, WO4ROB
Vice President: Keith Board, N6GKB
Treasurer: Glenn Miller, N6GIW
Secretary: Paul Edwards, AA6SM
Board member: Judy Cloutier, KK6NWX
Board member: Manuel Borges, AE6SG

My 1st granddaughter was born on 17 December. She is so precious, just like all grandchildren. Find time to share life with your family because children grow up so fast and we don't know when any of us will expire. Create moments that will be cherished.

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.

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

Nets

Amateur Radio Emergency Service (ARES)
Mon @ 1915
Morongo Basin Amateur Radio Club (MARC)
Tue @ 1900

Social Media,

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

Facebook:

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

Club Meeting

(Cancelled Until Further Notice)

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



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TOM MEDLIN W5KUB WEEKLY WEBCAST 1HAM RELATED. TUESDAY NIGHTS AT 8PM

<http://tmedlin.com/> OR <http://w5kub.com>



HAMNATION IS A WEEKLY HAM RADIO RELATED TV SHOW WITH FAMOUS HOSTS SOME OF YOU MAY KNOW LIKE, GORDON WEST, BOB HEIL AND OTHERS. WEDNESDAY NIGHTS AT 6PM

<https://twit.tv/shows/ham-nation>



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



We are having an informal DAILY net, that started Monday March 30th. Join us with your own cup!

For right now it's called the "**CAWFEE TAWK**" net at 10:00 am till 11:00. It's just a way for any and all hams to check in, say good morning and see what everyone is up to. With all the things going on in this world we would just like to stay connected and be sure our local community of hams are ok. A little meet and greet with your coffee and donuts in the morning is a great start.

More like ice coffee now that it has warmed up!



These Vehicle magnets are still available from Rob, WO4ROB. They 12" long. I believe they are \$10 each. Contact him with your order.



ROBS PROJECTS CORNER

BY Rob WO4ROB

Arduino Mini

Arduino is an open-source electronics platform based on easy-to-use hardware and software. Arduino boards are able to read inputs and turn it into an output. You can tell your board what to do by sending a set of instructions to the microcontroller on the board using the Arduino programming language and the Integrated Development Environment (IDE) software located at www.arduino.cc

The first Arduino board was introduced in 2005 and the most popular boards are the Arduino Uno and the Arduino Nano. If you want to shrink your electronic projects then the ATtiny84 and ATtiny85 Integrated Circuits (ICs) are available. The ATtiny84 is a 14 pin IC with 12 input/output (I/O) pins, and the ATtiny85 is an 8 pin IC with 6 I/O pins. Both ICs require 2-5 volts DC.

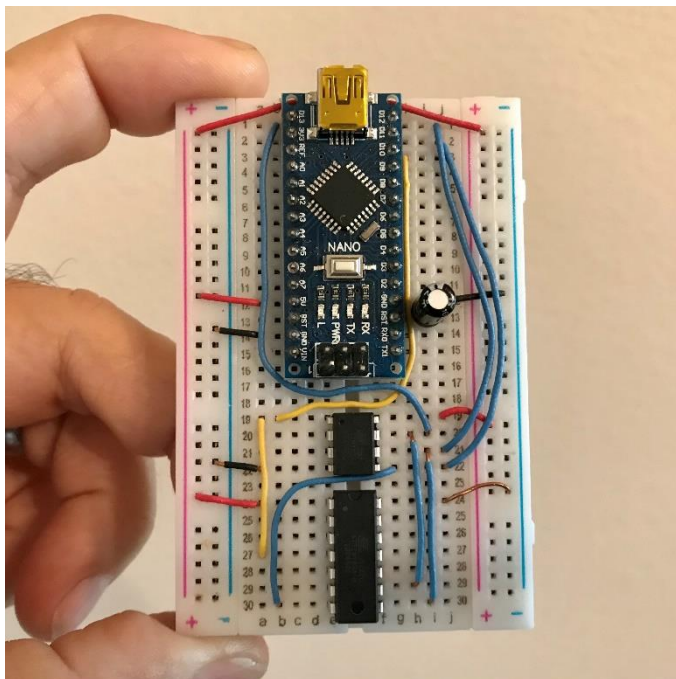
There are a number of ways to program the ATtiny but I use an Arduino Nano configured as an In-System Programmer (ISP) connected to the ATtiny pins as shown in the following chart.

Nano ATtiny84 ATtiny85 Connection

- D12 8 6 MISO (Master In Slave Out)
- 5v 1 8 VCC (+5 volts)
- D13 9 7 SCK (Serial Clock)
- D11 7 5 MOSI (Master Out Slave In)
- GND 14 4 GND (Ground)
- D10 4 1 CS/SS (Chip Select/Slave Select)

I connect a 22uF capacitor across the Nano reset (RST) & ground (GND) pins to prevent the Nano from resetting itself.

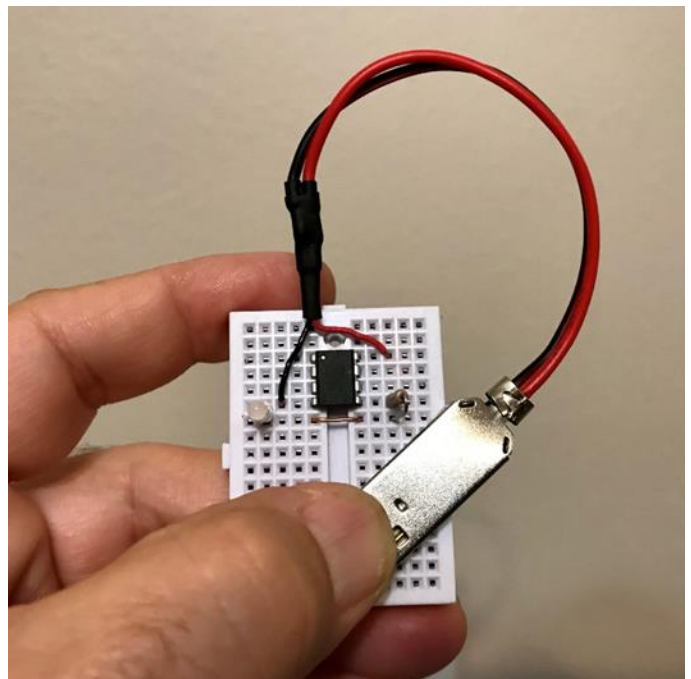
The attached photo shows an Arduino Nano on a breadboard with an ATtiny85 and ATtiny84 below it. I connect the Nano to a computer with a USB cable to program either the ATtiny84 or ATtiny85. Only one of the ATtiny ICs can be programmed at a time.



Below is an example of an Arduino program called "Blink", it turns an LED, connected to I/O pin zero, on and off at what ever rate you set it as. For example, delay(500) equals 1/2 second.

```
// Beginning of Program
byte LED = 0;
void setup( )
{pinMode(LED, OUTPUT);}
void loop( )
{digitalWrite(LED, HIGH); delay(500);
digitalWrite(LED, LOW); delay(500);}
// End of Program
```

The second photo is the hardware for the above program using an ATtiny85, a resistor, an LED, and a USB connector for 5 volt power.



Contact me for more details on creating Arduino projects. I plan on creating a talking thermometer in the near future, as well as other electronic devices that talk.

WO4ROB
Rob from Joshua Tree



WSJT-X 2.4.0 Introduces New Digital Protocol Q65

12/31/2020

WSJT-X version 2.4.0 has introduced a new digital protocol called Q65, which is designed for “minimal two-way QSOs over especially difficult propagation paths,” the [Quick Start Guide](#) says.

“On paths with Doppler spread more than a few hertz, the weak-signal performance of Q65 is the best among all WSJT-X modes. Q65 is particularly effective for tropospheric scatter, ionospheric scatter, and EME on VHF and higher bands, as well as other types of fast-fading signals.”

The new protocol uses 65-tone frequency-shift keying and builds on the demonstrated weak-signal strengths of QRA64, introduced in 2016. User messages and sequencing are identical to those in FT4, FT8, FST4, and MSK144. Q65 employs a “unique tone” to sync time and frequency. “As with JT65, this ‘sync tone’ is readily visible on the waterfall spectral display,” the *Guide* said. “Unlike JT65, synchronization and decoding are effective even when meteor pings or other short signal enhancements are present.

Transmit/receive sequence lengths of 15, 30, 60, 120, and 300 seconds are available. According to the *Guide*, “Q65 will enable stations with a modest Yagi and 100 W or more and to work one another on 6 meters at distances up to ~1600 kilometers at most times, in dead band conditions.”

FCC to Require Email Address on Applications Starting on June 29, 2021

12/31/2020

Effective on June 29, 2021, amateur radio licensees and candidates must provide the FCC with an email address on all applications. If no email address is included, the FCC may dismiss the application as “defective.”

On September 16, the FCC adopted a *Report and Order (R&O)* in WT Docket 19-212 on “Completing the

Transition to Electronic Filing, Licenses and Authorizations, and Correspondence in the Wireless Radio Services.” The *R&O* was **published** on December 29 in the *Federal Register*. The FCC has already begun strongly encouraging applicants to provide an email address. Once an email address is provided, the FCC will email a link to an official electronic copy of the license grant. An official copy will also be available at any time by accessing the licensee’s password-protected Universal Licensing System (ULS) account.

Licensees can log into the ULS **License Manager System** with their FRN and password at any time and update anything in their FCC license record, including adding an email address. For questions or password issues, call the CORES/FRN Help Line, (877) 480-3201 (Monday – Friday, 1300 – 2300 UTC) or **reset the password** on the FCC website.

The only way to refrain from providing an email address on an application would be to submit a request to waive the new rule, providing justification for the request. (The FCC would not be obliged to grant such a request.)

Under Section 97.21 of the new rules, a person holding a valid amateur radio station license “must apply to the FCC for a modification of the license grant as necessary to show the correct mailing and email address, licensee name, club name, license trustee name, or license custodian name.” For a club or military recreation station license, the application must be presented in document form to a club station call sign administrator who must submit the information to the FCC in an electronic batch file.

Under new Section 97.23, each license must show the grantee’s correct name, mailing address, and email address. “The email address must be an address where the grantee can receive electronic correspondence,” the amended rule will state. “Revocation of the station license or suspension of the operator license may result when correspondence from the FCC is returned as undeliverable because the grantee failed to provide the correct email address.”

FCC Reduces Proposed Amateur Radio Application Fee to \$35

12/30/2020

The FCC has agreed with ARRL and other commenters that its proposed \$50 fee for certain amateur radio applications was “too high to account for the minimal staff involvement in these applications.” In a *Report and Order (R&O)*, released



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on December 29, the FCC scaled back to \$35 the fee for a new license application, a special temporary authority (STA) request, a rule waiver request, a license renewal application, and a vanity call sign application. All fees are per application. There will be no fee for administrative updates, such as a change of mailing or email address.

This fall, ARRL filed comments in firm opposition to the FCC proposal to impose a \$50 fee on amateur radio license and application fees and **urged its members** to follow suit.

As the FCC noted in its *R&O*, although some commenters supported the proposed \$50 fee as reasonable and fair, “ARRL and many individual commenters argued that there was no cost-based justification for application fees in the Amateur Radio Service.” The fee proposal was contained in a *Notice of Proposed Rulemaking (NPRM)* in MD Docket 20-270, which was adopted to implement portions of the “Repack Airwaves Yielding Better Access for Users of Modern Services Act” of 2018 — the so-called “**Ray Baum’s Act**.”

“After reviewing the record, including the extensive comments filed by amateur radio licensees and based on our revised analysis of the cost of processing mostly automated processes discussed in our methodology section, we adopt a \$35 application fee, a lower application fee than the Commission proposed in the *NPRM* for personal licenses, in recognition of the fact that the application process is mostly automated,” the FCC said in the *R&O*. “We adopt the proposal from the *NPRM* to assess no additional application fee for minor modifications or administrative updates, which also are highly automated.”

The FCC said it received more than 197,000 personal license applications in 2019, which includes not only ham radio license applications but commercial radio operator licenses and General Mobile Radio Service (GMRS) licenses.

The FCC turned away the arguments of some commenters that the FCC should exempt amateur radio licensees. The FCC stated that it has no authority to create an exemption “where none presently exists.”

The FCC also disagreed with those who argued that amateur radio licensees should be exempt from fees because of their public service contribution during emergencies and disasters.

“[W]e are very much aware of these laudable and important services amateur radio licensees provide to the American public,” the FCC said, but noted that

specific exemptions provided under Section 8 of the so-called “Ray Baum’s Act” requiring the FCC to assess the fees do not apply to amateur radio personal licenses. “Emergency communications, for example, are voluntary and are not required by our rules,” the FCC noted. “As we have noted previously, [w]hile the value of the amateur service to the public as a voluntary noncommercial communications service, particularly with respect to providing emergency communications, is one of the underlying principles of the amateur service, the amateur service is not an emergency radio service.”

The Act requires that the FCC switch from a Congressionally-mandated fee structure to a cost-based system of assessment. The FCC proposed application fees for a broad range of services that use the FCC’s Universal Licensing System (ULS), including the Amateur Radio Service, which had been excluded previously. The 2018 statute excludes the Amateur Service from annual *regulatory* fees, but not from *application* fees.

“While the Ray Baum’s Act amended Section 9 and retained the regulatory fee exemption for amateur radio station licensees, Congress did not include a comparable exemption among the amendments it made to Section 8 of the Act,” the FCC *R&O* explained.

The effective date of the fee schedule has not been established, but it will be announced at least 30 days in advance. The FCC has directed the Office of Managing Director, in consultation with relevant offices and bureaus, to draft a notice for publication in the *Federal Register* announcing when rule change(s) will become effective, “once the relevant databases, guides, and internal procedures have been updated.”

The K7RA Solar Update

01/01/2021

Tad Cook, K7RA, Seattle, reports: Solar Ccle 25 is progressing normally, and with the new year, my outlook is optimistic. Solar minimum occurred just over a year ago (December 2019), and now we see very few days with no sunspots.

Both of the current sunspot groups (2794 and 2795) are about to slip across the sun’s western horizon.

Average daily sunspot number this past week was 27.1, up from 10.3 the previous week. Average daily solar flux rose from 82.8 to 86.4.



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Predicted solar flux over the next 30 days is 81 and 80 on January 1 – 2; 79 on January 3 – 4; 78 on January 5 – 8; 84 on January 9 – 14; 85, 86, and 87 on January 15 – 17; 88 on January 18 – 28; 87 on January 29, and 86 on January 30. It then dips to 84 on February 1 – 10.

Predicted planetary A index is 5 on January 1 – 2; 8 and 5 on January 3 – 4; 8 on January 5 – 7; 5 on January 8 – 17; 10 on January 18 – 20; 8 on January 21; 5 on January 22 – 24; 10 on January 25, and 5 on January 26 – 30.

When I check the [STEREO website](#) any possible coming activity, I don't see anything obvious, but do not be surprised if new activity appears soon — perhaps before mid-January — along with the predicted higher flux values.

Here's the geomagnetic forecast from J.K. Janda, OK1HH, of the Czech Propagation Interest Group for January 1 – 26, 2021. The geomagnetic field will be:

- quiet on January 1, 3, 13 – 14
- quiet to unsettled on January 2, 4, 8, 10, 12, 15 – 16, 21, 25 – 26
- quiet to active on January 5 – 7, 9, 11, 17, 22 – 23
- unsettled to active January 20, 24
- active to disturbed January 18 – 19
- Solar wind will intensify on January (1-3, 7-9, 19-20,) 21-22, (23, 25-26)

Notes:

Parentheses mean lower probability of activity enhancement.

The predictability of changes is lower again, as there are ambiguous and changing indications.

Wishing a Happy New Year, positive thinking, and negative tests!



QUARTZFEST is now "QUARTZ-PAUSE" 2021

YES, Quartzfest is now Quartz-PAUSE 2021, same BLM place, same station, same excitement, *Sunday January 17 through Saturday January 23rd, 2021.*

"NOTHING WILL BE ORGANIZED"just like the first 4 years of Quartzfest 25 years ago! WHO IS IN CHARGE???.....NO ONE IS IN CHARGE!! We are all ON OUR OWN!!

Covid-19 precautions preclude our regular tent gatherings, tent registrations, packed seminars, and the like. Social physical distancing and masks will keep us on-point to avoid any virus during this pandemic

Quartz-PAUSE will continue to be radio ACTIVE. Talk in on 146.550 simplex. Park ANYWHERE you want and leave more room to spare. Announcements in the morning and evening on 146.550.

YES, the Main Fire Ring will be the focal point where there will be no close gatherings, per management.... oh....there is NO management this year.....

YES, Frank is thinking about planning a day of guided and narrated 4-wheel. No visitors in the caravan vehicles, suggested, unless family.



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YES, one day will be a yard sale, socially distanced, and handle inspections of gear with gloves. (some ham gear, we do that anyway!)

Yes, Gary will have lots of ATV topics to see and hear in your own unit's cable ready TV. Socially distanced HOOTENANNY, ...we got the whole desert, in our (sanitized) hands, ...Bring your gut-buckets and kazooos.

GOLD in them thar hills, you say? Lots of room to separate and do some rock hounding....we got the whole mountains nearby..... Have you been to Quartz Hill, about a half hour away? the BIG WHITE TENTS are coming to town, the full week, so mask-up and explore the RV show with no time limit to get back to Mile 99.



11/30/2020

RadioShack® is back as an online retailer of electronics, offering some parts in its inventory that largely consists of radios, batteries, telephone gear, drones, computer accessories, and even cameras. The iconic company was recently purchased from General Wireless by Retail Ecommerce Ventures (REV).

No plans are in place to reopen RadioShack-owned stores, although some 400 brick-and-mortar outlets not affiliated with REV are operated by franchisees.

During its heyday, RadioShack had some 8,000 retail outlets and once offered some amateur radio equipment, including some popular handheld transceivers and a 10-meter transceiver. RadioShack came out of its second bankruptcy in January 2018 with 400 dealers, an online retail presence, and a distribution center.



Registration Is Open for Online Ham Radio University on January 9TH.

12/23/2020

With COVID-19 restrictions precluding an in-person gathering, the 22nd annual Ham Radio University (HRU) educational conference will be held as a virtual event on Saturday, January 9, 2021, from 8 AM to 4 PM EST (1300 – 2100 UTC) as a GoToWebinar online video conference.

Individual registration is now open for HRU's 14 **informational presentations** covering a broad range of amateur radio activities. Topics include amateur radio emergency communications; the basics of HF operating; communicating through amateur radio Earth satellites; remote station operating over the internet; software defined radios; HF and UHF digital communications, and using Raspberry Pi computers in amateur radio.

HRU 2021 will also serve as the online convention of the ARRL NYC-Long Island Section. Participation in HRU 2021 will be free, with a suggested donation of \$5. Advance registration is required for each presentation.

WANTED

Either or both

I am looking for a straight key or paddle.

I am wanting to try my go at doing morse Code, I remember there were a few of the at our last auction and if you have an extra key, contact me please. Thank you

Keith Board N6GKB

N6gkb@live.com

760-401-5124



W6BZY 's Ham Shack

My station's HF antenna is a 32 foot flagpole. I made it myself and it consists of two aluminum sections separated about 6 inches and held together by a fiberglass section. It functions like an unbalanced dipole. At the base I have an external tuner.

The HF radio in the picture is an IC-7200 and is filling in for my IC-7300 which is not working at the moment. On top of it is the remote tuner control box and on top of that is an SDR Play radio which I can use as a pan adapter when I am hunting signals. Also sitting there is a Winkey USB which I have yet to put to use.

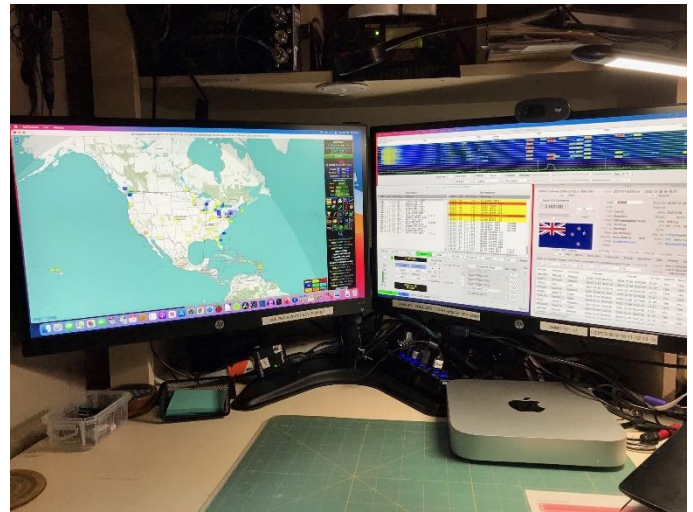
The dual monitors are being run from a Dell Precision T7730 with a XEON processors and 32 GB of Ram.

In the picture I am operating the WSJT-X program for Ft-8 on 15 meters. I am logging to Log4OM and on the left screen is a program called GridTracker. It shows grid squares that I have worked around the world and shows stations that are heard communicating on the band. I have worked 75 countries and have over 4,000 contacts in the logbook, almost all are on ft-8.

On the desktop below the screens is a new M1 Mac Mini (early Xmas present) with a Raspberry Pi 4 on top of it. Both can connect to the monitors and radio. On the far left is my Alinco DJ-MD5 DMR radio and above the monitors are my 2 meter radios with a power supply on their right. The power supply was purchased at one of the clubs sales.

Not in the picture are a Raspberry Pi 3 which is connected to my mesh network antenna on the roof and a Raspberry Pi which runs a hot-spot for my DMR radio.

As you can see I have incorporated my Ham Radio hobby with my other hobby of computers.



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Ken Hendrickson

JANUARY 2021

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
					1	2
STAY HEALTHY STAY IN TOUCH			KAFEE TAWK 10AM DAILY CLUB REPEATER			
3	4	5	6	7	8	9
	ARES Net 7:15 pm	MARC Net 7:00 pm NCS JESSE		ARES Meeting 6:00 pm		
10	11	12	13	14	15	16
	ARES Net 7:15 pm	MARC Net 7:00 pm NCS GLENN				
17	18	19	20	21	22	23
	ARES Net 7:15 pm	MARC Net 7:00 pm NCS TBD		NO MEETING		
24	25	26	27	28	29	30
	ARES Net 7:15 pm	MARC Net 7:00 pm NCS TBD				
31						