
Flying Pigs QRP Club

Bacon Bits Quarterly



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FPQRP membership is open to all licensed QRP operators who reside within 12,000 nautical miles of Cincinnati, Ohio.



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From the Editor

Welcome to the April 2024 issue of the *Bacon Bits Quarterly Newsletter!*
This will be my second issue of the BBQ as your Editor. At this time I want to thank everyone who contributed to this issue. Your input and support is greatly appreciated. Please send your contributions to editor@fpqrp.org

Cover Photo Spotlight

Izzy, KT4WA FP#-4606, graciously provided the cover photo for this month's issue of the BBQ. Thanks for a great picture Izzy!

Wanted

If you have something that you are looking for and can't find it, please send a brief description of what you are looking for to the Editor and I will add it to this column in the next issue of the BBQ.

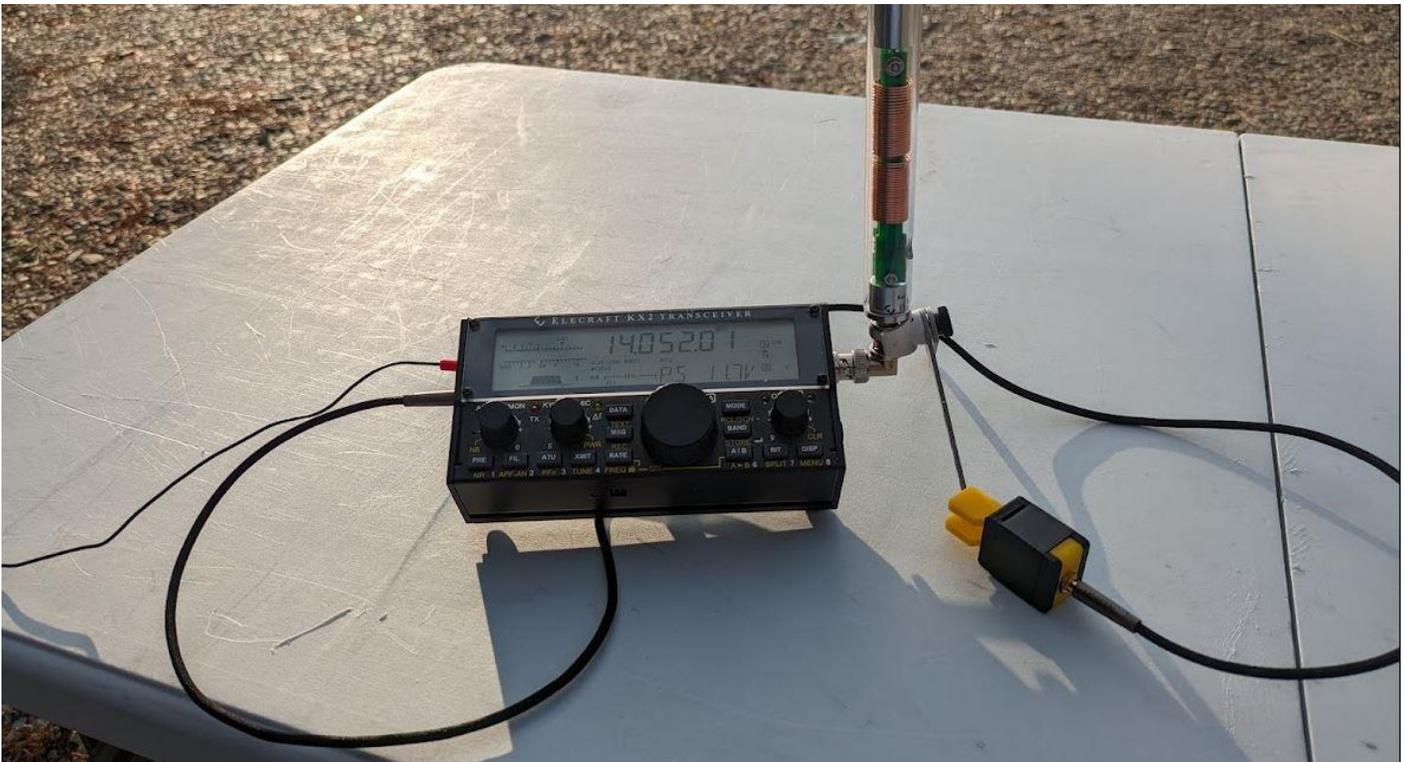


Flying Pig Does POTA

Brian Murrey KB9BVN

FP#-57

I feel like I am off to a good start so far this year. I just completed my 3rd park activation for the year. All three have been at Atterbury Fish and Wildlife Area in central Indiana, just north of Camp Atterbury. My first trip this month was on February 11th when we had a day of unseasonal weather, meaning it was warm and sunny! I was able to set up the KX2 and the AX-1 antenna and I made 18 contacts, with four of them being Park to Park contacts. This was set up at Parking Area 11A down by Stone Arch Lake, and it was a beautiful Sunday afternoon. I got started at about 1PM and pulled stakes and headed back home at about 2PM, as the temperature was starting to drop again. I was even visited by a flock of grouses, that started drumming and startled me pretty good!



KX-2 and AX1

My second activation at this location was on February 22, I ran down to the park when I got off work at 4PM. By 5PM I was set up and operating, same setup using the KX2 and the AX-1 antenna. I was able to work 24 stations in about 30 minutes, before it started getting dark. Best DX was Iggy EA2BD calling me from Pamplona Spain!! He gave me a 449 for the report and I was happy to log that one! This was a quick run, down and a quick run back home. Didn't see another person the whole time I was down there. It's still chilly and too cold to go fishing, at least for now. My next activation at Atterbury was February 23rd, this evening. Once again, I headed down right after work.

This time I decided to try a new spot, new this year anyway, and I set up at Beaver Bottom Lake. I was also happy to see the Indiana DNR had already dropped the Porta Potty at this location! I was

in position in the parking lot, with the KX-2 and the AX-1 antenna once again. The AX-1 Antenna works on 17m and 20m. I have been using it pretty much only on 20m the last few outings. I still like to use my hitch mounted Eagle One vertical but when in a hurry the AX-1 can't be beat for ultra quick set up and tear down.



The Beaver Bottom Rules!



Beaver Bottom Lake



The docks at Beaver Bottom Lake

So tonight, I operated from about 4:40PM to about 5:10PM, the going was much slower than the day before, best DX was Utah and Arizona. The best contact was with Jay AJ4AY. I met Jay almost 25 years ago, at a Flying Pigs QRP Club Field Day event at Caesar Creek State Park in Ohio. He drove all the way up from Mobile Alabama to hang out with the Flying Pigs that weekend.



We had the best time, and I've QSO'd with Jay a few times over the years. It was great to hear his fist, and knowing we were both still above ground, and walking around. One of the coolest things about amateur radio is you never know who you will bump into. Thanks for working me Jay! I loved it!

Anyway, that about wraps it up, I ended up with 14 contacts, and the breeze blowing off that lake was cold, so I packed it up until next time. I am shooting for 30 activations this year, will try to do Atterbury one more time before March. Once DST comes back on the 10th of March, I'll have more daylight to work with, and will start going out further to some other parks.

My birthday, 100th point and a first activation of W7A/MS-023

Tobias Feltus KK7BCO FP#-4785

When I woke on March 12th, it was my 45th birthday and I had 99 SOTA points. My wife Lauren presented me with some fancy Revolution Race hiking clothes. We had breakfast, jumped in our 1994 Isuzu Trooper (license plate Arizona KK7BCO) and hit the road.



The trailhead for Saddle Mountain (W7A/MS-023) is 75 miles (120 km) from our house, and

a short drive off pavement on public (BLM) land. It is not far from the I-10 which links Arizona and California; this time of year the area is still reasonably busy with RV snowbirds who live out in the desert on public land when it is snowing further north. It was warm, and due to recent rains, the wildflowers were starting to carpet the landscape in flows of color. A quick check with the man with a dog who had camped the night before alerted me to the fact that the Saddle Mountain area is rich in agate, and he showed me a piece.



The trail to the top is about a mile and a half (2.4 km), and the first half mile is relatively flat and easy. As soon as the gradient picks up, the pretty stones start to appear, and I became very distracted by agate and wildflowers. Lauren struggled with heat exhaustion on the way up, which kept our pace down (and meant that I collected more pretty pebbles).



The third quarter of the climb is the hardest, with steep gradients and some zig-zagging up a talus wash, followed by a little scramble and some scree. The terrain encountered really reminded us of hillwalking in Scotland with the addition of saguaro and cholla cacti.





Comparing it to other local SOTA climbs, it felt equivalent to Camelback (both sides as one hike), but where you are the only person there. Exposure is limited, there is not much scrambling and the views are incredible all the way up.

The top quarter is on the top of the outcrop. The walking is pretty easy, with more vegetation, including a lot of grass and agave. The summit is right on the edge of a precipice, and marked with three geodetic markers, two from 1945 and one from 1947, and a logbook in an old biscuit tin (complete with first aid kit).



As I started to set up my station, I heard “CQ SOTA” come across on my HT from KA9JDE/7 who was 82 miles away on Pass Mountain W7A/MN-063: I think this is my longest distance QSO on a 5w HT (Yaesu VX7R, with the multiband Yaesu Q3000174 antenna). I set up a 10m dipole which ended up oriented NW/SE in the hope of hitting Europe. I plugged the FT-817nd in, found a clear spot on the band, spotted myself and the first contact was with F4WBN in France, about 5500 miles (9000 km) away, 5w SSB and a homebuilt wire antenna.

I only operated on 2 m and 10 m, earned my 100th point and gave the summit its first activation--a hell of a 45th birthday.





Happy Birthday Tobias!

The walk down is a little more hazardous, since scree is magically more slippery on a descent. The landscape had changed in little time as the light shifted and new wildflowers opened. We got back to the truck and headed into Tonopah for street tacos at one of the excellent taco shacks.



The hike is 2.9 miles (4.75 km) round trip, 1750 feet (540 m) of ascent. I made 13 contacts in half an hour.

KK7BCO/2M0TFF

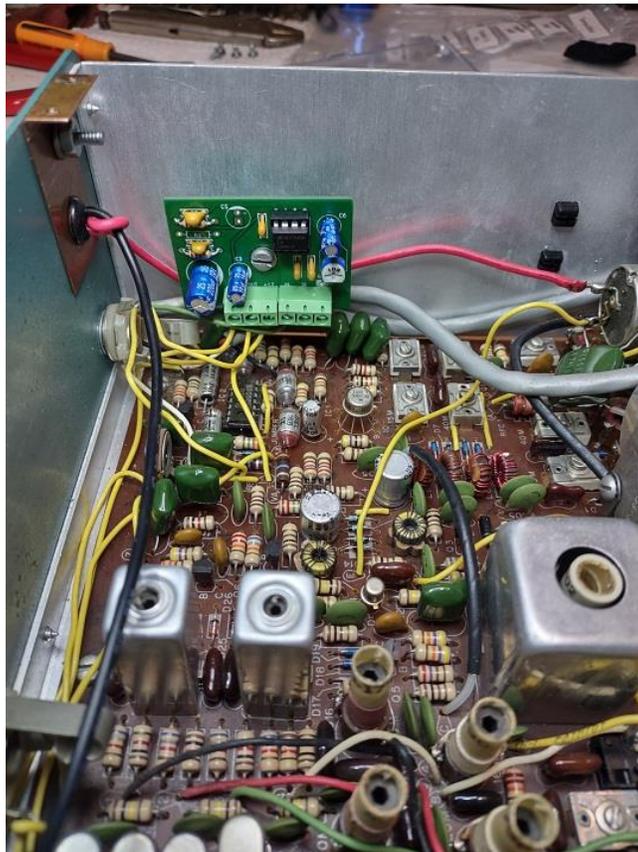
Heathkit HW-8 upgrades

Dan, N8IE, FP# 6

Not too long ago I had bought a nice Heathkit HW-8 QRP transceiver off everyone's favorite internet marketplace. It was a very nice radio with the exception of the power plug was broken, this was an easy fix. The radio was in great working condition with the only issue being the band dial was out of calibration, another easy fix.

I was looking around the web at other HW-8's to see what was being done with them these days, I was very surprised at the products by KC9ON. On his web page (kc9on.com) he offers many kits and accessories for QRP gear, what caught my attention were three items for the HW-8, a replacement audio board that allows the use of 8ohm speakers and headphones, an electrical relay to replace the mechanical relay, and a set of LED lights to illuminate the band dial and the meter. Each of these kits are very reasonable and very well made. The relay and audio boards you assemble yourself. The kits are low part count and can be put together in less than an hour by an average builder.

First I built was the audio board, there's really not much to mention on either kit about building, it's a couple components and you're done! Installation was straight forward and very clearly documented. The end result is just as described, good clean audio output at 8ohms.



Next I assembled the relay board, this is another nice upgrade for the HW-8. These old rigs are getting a bit old now and mechanical parts are as rare as hen's teeth. Build time was about the same as the audio board and just as easy. Installation was fairly simple and it worked first try. It is nice to not have the clacking sound of the old relay.



Finally I had the LED light kit for the band dial and meter. There's no assembly per say, but there is a bit of wiring to do. It's not difficult you just want to do a nice job and follow the guide. The end result is amazing, if you buy only 1 thing for your HW-8, its get the light kit.





Here she is! All fixed up and I hope ready for another 50 years or more of CW fun!

The cost for the three kits is around \$32 plus shipping, a great investment for your Heathkit HW-8!

72, 00
Dan, N8IE
FP#-6

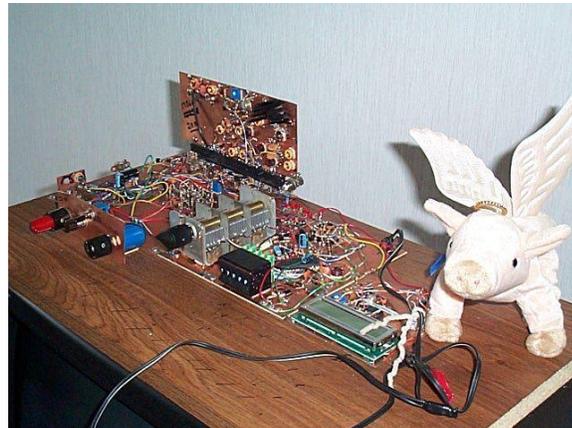
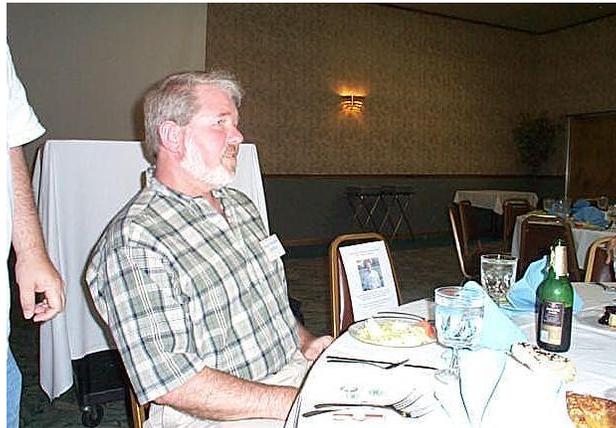


Dieter "Diz" Gentzow W8DIZ FP#-1 became a silent key on March 3, 2024 after a long battle with illness.

I first met Diz in 2000, at the Flying Pigs Field Day event held at Caesar Creek State Park in Ohio. I was the new guy, and Diz and the rest of the guys there made me feel at home. Diz was a generous guy, always willing to help with a project, giving out sage advice, or simply handing out a handful of helpful parts. His parts business "kitsandparts.com" provided kits and parts to hams all over the world. He liked to think of himself as the "Toroid King".

Diz was a great Elmer and was a veteran of the United States Coast Guard, he and his beloved wife Nancy had recently celebrated their 50th wedding anniversary.

In 2001 the Flying Pigs QRP Club descended on FDIM, at the old stinky Ramada Inn. Here are a few pictures from that. Diz brought the Flying Pigs to the Hoosier Hills Hamfest in Bedford Indiana numerous times, camping in the back of his pickup truck. We ran a QRP Forum at this Hamfest for several years in the early 2000's with many of the Flying Pigs leading the show-n-tell with homebrew projects.





We lost a great Elmer, a good friend, and a very smart radio amateur.

De KB9BVN Brian Murrey FP#-57

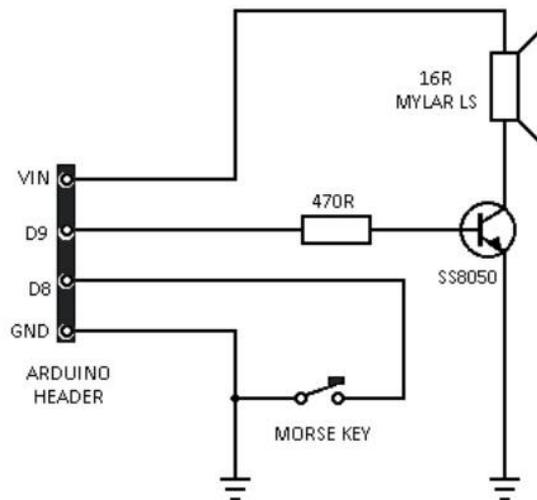
Code Practice Oscillator using an Arduino NANO

By: Jim Sheldon, W0EB, FP#-616

While browsing for ham radio related computer programs a while back, I came across a very simple application to use an Arduino NANO (one of the cheapest of the Arduino micro controller boards that sell for around four to five dollars or so and are very easy to program using Arduino's free "IDE" programming application and a serial USB cable with a "Mini-B" connector to match the input connector on the NANO.

The article and program was written by T. K. Hareendran who obviously was not a "ham" but wrote the program and came up with the original circuit for someone who was learning the Morse Code for whatever reason at the time.

The original schematic and program worked, but had no tone control – the tone was fixed in the programming at 440 Hz (way too low for most people), but for me, it was something I could easily modify and improve on to create a fairly decent practice oscillator that new hams or even old guys wanting to learn or improve their CW sending skills could build and use fairly quickly and easily without a lot of investment. I'm not going into pricing of parts in this short article, merely showing the basics of what I did and how it can be done by almost anyone needing a practice oscillator that won't break the bank and is easily modified to suit his/her needs.



T. K. Hareendran's original schematic.

As you can see, there were not a lot of parts in the original. Especially absent was an adjustable tone control and as I stated earlier the tone frequency was fixed in the original program at 440 Hz (way too low for most ears) where most people like it set between 600-750 Hz so the first modification I made was to add a tone control and re-write the program to accommodate it.

The original program as published on the internet:

```

/* Morse Code Oscillator v1Another
Simple, Adaptable, Arduino Project
Authored By T.K.Hareendran/2019
Published By codrey.com
*/
int morseKey=8; // Morse Key Input D8
int sounder=9; // Key Tone Output D9
int val=0;
int keyTone=440; // Key Tone Frequency 440Hz

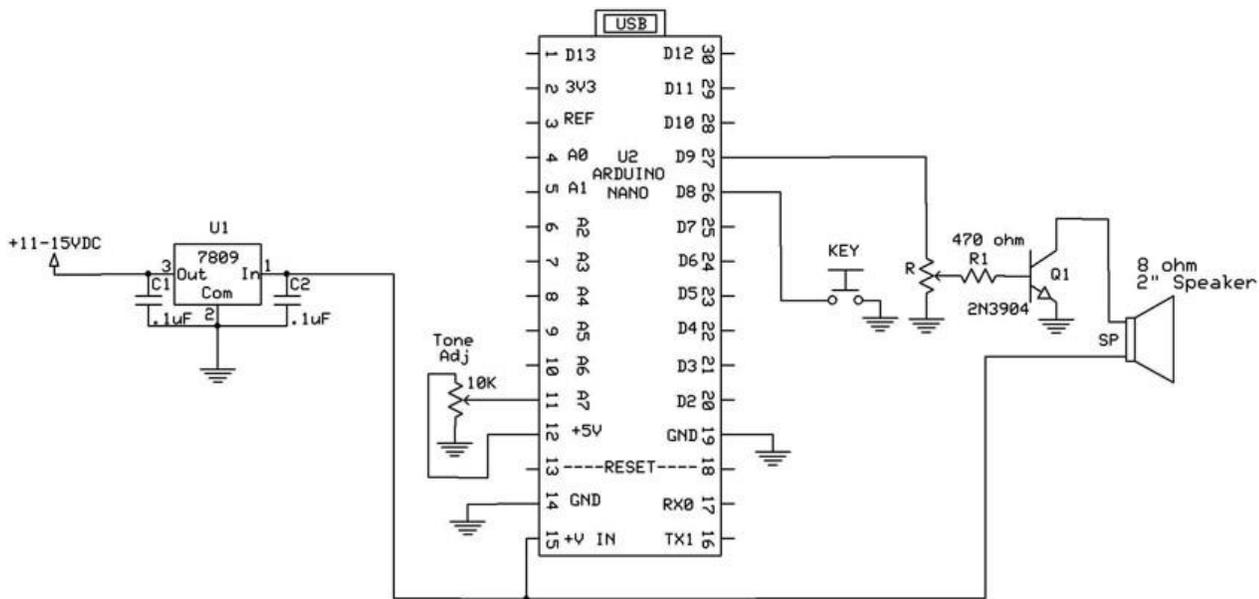
void setup() {
pinMode(morseKey, INPUT);
pinMode(sounder,OUTPUT);
digitalWrite(morseKey,HIGH); // Weak Internal Pull-up Enabled
}
void loop() {
val=digitalRead(morseKey);
if (val) noTone(sounder);
if (!val) tone(sounder,keyTone);
}

```

And that's all there was to the original program. The original circuit and program worked just fine and if that's all one wanted to do, nothing wrong with it at all. The tone could be easily changed to whatever the user wanted by changing the program line that reads -
int keyTone=440; to int keyTone=750; or whatever frequency value you wanted.

Personally I don't always like to listen to the same tone every time I'm on CW so I wanted a variable tone control. My first modification was to add the tone control and modify the program so it could be read which led to a few more refinements such as the addition of bypass capacitors at the critical points and the addition of an on-board voltage regulator so it could be powered by the shack power supply. The schematic of Version 2 is shown below.

Morse Code Practice Oscillator Using an Arduino NANO Microcontroller



I changed the program a bit to set the tone limits from 100-1000Hz and to read the value of the tone control by changing the line `keyTone=440` to `int keyTone=600` for the initial setting and in the main program loop I added 3 lines immediately after the `void loop() {` line which read `keyTone=analogRead(A7)` which reads the tone adjust pot connected to analog input A7 on the NANO, and a couple of limits to the tone which read:

```

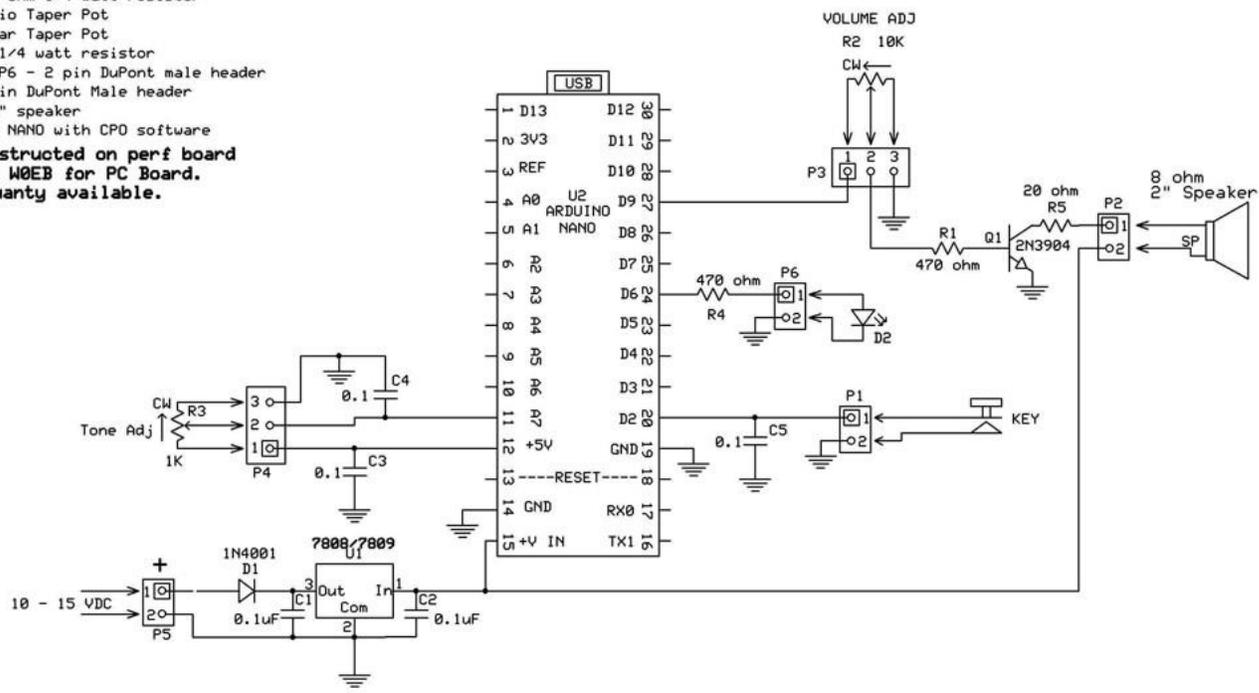
if (keyTone < 100) keyTone=100;
if(keyTone > 1000) keyTone=1000; -- These lines set the lower & upper limit of the tone control.

```

After that, I collaborated with my friend Jim Giammanco, N5IB who is a really good PC board layout guy and has an account with a PCB manufacturing firm. We got together and he did a small PCB layout for me and tacked a few onto an order he was making for one of his own projects so I wound up with a nice little board – he took the liberty of modifying the circuit a bit further to add pin connectors and other things as well as the ability to add an LED that would blink with the keying (cute touch, not really needed IMO, but cute anyway so I did implement it in the final version and the schematic for that comes next, along with the source code of the final program version.

- Parts List:**
 C1 - C5, 0.1uF either C0G or SMD size 1206
 D1 - 1 amp Diode 1N4001 or 1N5819
 Q1 - 2N2222 or 2N3904 transistor
 R1, R4 - 470 ohm 1/4 watt resistor
 R2 - 10K Audio Taper Pot
 R3 - 1K Linear Taper Pot
 R5 - 20 ohm 1/4 watt resistor
 P1, P2, P5, P6 - 2 pin DuPont male header
 P3, P4 - 3 pin DuPont Male header
 SP - 8 ohm 2" speaker
 U1 - Arduino NANO with CPD software
May be constructed on perf board or contact W0EB for PC Board. Limited quantity available.

Morse Code Practice Oscillator Using an Arduino NANO Microcontroller



As you can see, bypass capacitors were added to all the input connections to the NANO and to the 5 volt output pin of the NANO to keep RF out and also to keep the tone being generated when the key input was active from modulating the power supply voltage and causing distortion in the output. Since the output is actually a square wave, it's left up to the speaker to smooth it out so it is not raspy.

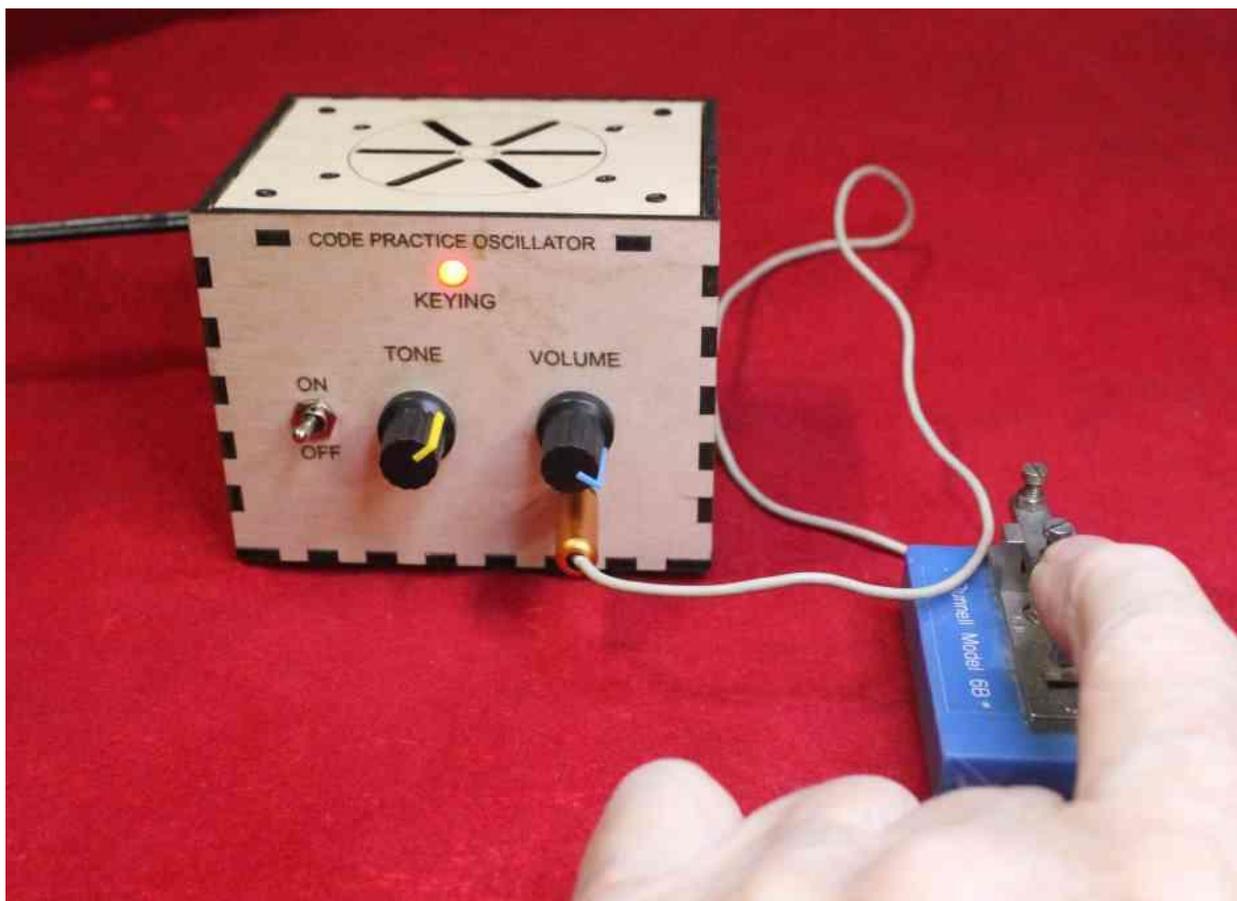
This has been a fun project for me and even though I don't personally need a CPO, we do have some new hams in our local group here in Kansas that ARE actively learning CW and I've made up a couple of these to hand out to those who need them.

As an aside, I'm also into working with a laser engraving/cutting machine and made a nice little wood case for the CPO's that make them look nice on the operating desk.

As typical for hams, what started out as a super simple practice oscillator, turned into something a bit more complex, but as it turns out, a more elegant approach to learning how to send CW.

Final program for the practice oscillator:

```
NANO_CPO_With_TonePot_BlinkLED.ino
1  /*
2  Morse Code Oscillator v1
3  Another Simple, Adaptable, Arduino Project
4  Authored By T.K.Hareendran/2019
5  Published By codrey.com.
6  Tone Adjust code added 2/26/2024 by Jim Sheldon, W0EB.
7  For Tone adjust, connect a 1K pot between +5 and ground.
8  with the wiper connected to NANO pin A7.
9  LED Blink code added 3/21/2024 by Jim Sheldon, W0EB.
10 For LED blinking in time with keying, Add 470 ohm resistor
11 from NANO pin D6 to the Anode of an LED with the LED Cathode
12 connected to ground.
13 */
14 //Define pins and initial variables
15 int morseKey=2; // Morse Key Input D8
16 int sounder=9; // Key Tone Output D9
17 int LED=6; //LED Output D6 (blinks with keying)
18 int val=0;
19 int keyTone=600; //Initialize Tone Frequency to 600Hz
20 //Setup and initialize I/O
21 void setup() {
22 pinMode(morseKey, INPUT);
23 pinMode(sounder,OUTPUT);
24 pinMode(LED, OUTPUT);
25 digitalWrite(morseKey,HIGH); // Weak Internal Pull-up Enabled
26 }
27 //Main Program
28 void loop() {
29 keyTone=analogRead(A7); //Read the tone adjust pot and set frequency 0-1024 Hz.
30 if (keyTone < 100) keyTone=100;
31 if (keyTone > 1000) keyTone=1000;
32 val=digitalRead(morseKey);
33 if (val) noTone(sounder);
34 if (val) digitalWrite(LED, LOW); //LED is off
35 if (!val) tone(sounder,keyTone);
36 if (!val) digitalWrite(LED, HIGH); //LED is ON
37 }
```



CPO as built and in it's nice Laser Cut wooden case.

Final comments, shown in the picture above, is a little Bunnell Model 6b hand key that was originally one of 4 on an old Western Electric telegraph/telephone line test set. These were offered for sale a few years ago but have since disappeared from the market. I made a nice base for mine and even though I can't send worth a hoot using a J-38 or other standard hand key, I can send decent and surprisingly almost effortless CW with this little key. The 6b has become my favorite hand key. My normal operating key is a Vibroplex Original bug I bought when first licensed way back in 1963. I also have a Begali Stradivarius dual lever paddle for the keyer in my Elecraft K3s.

Hope you enjoyed my ramblings and find the article useful.

73/72/OO (Oink Oink)

Jim Sheldon, W0EB

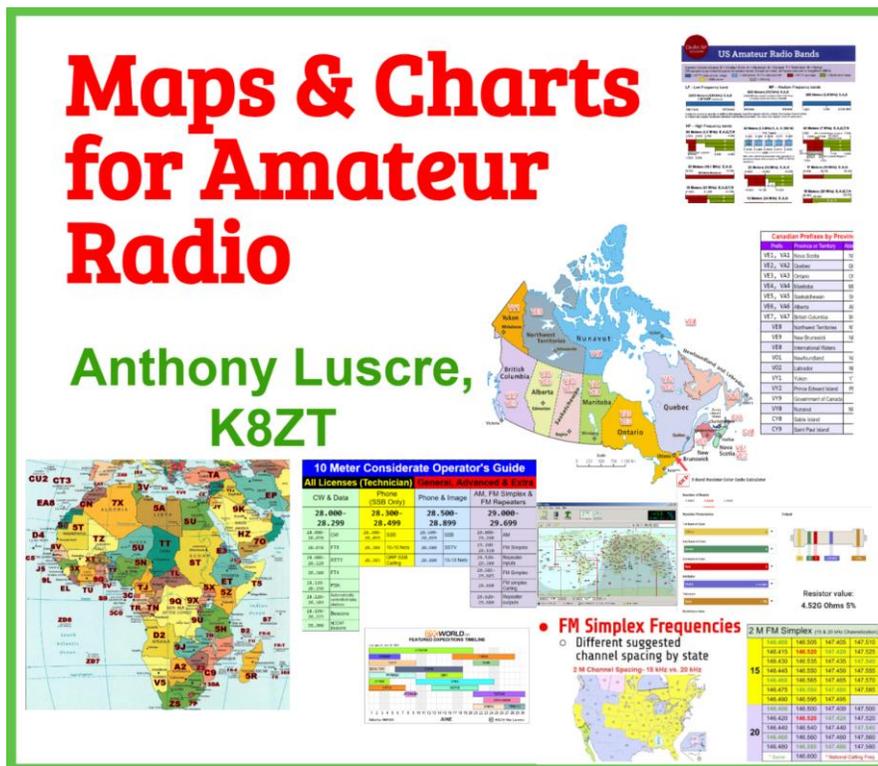
FP#-616

Membership and Website Admin

Flying Pigs QRP Club, International

Maps & Charts for Amateur Radio

Anthony Luscre, K8ZT FP#-254



Here is a list of topics included

Categories

Band Plan Charts

Frequency Allocation Charts

Amateur Radio Maps

Maps- Interactive

Maps- Grid Squares

Logging Mapping Tools

Software & Apps

Radio Cheat Sheets &

Mini-manuals

Operating Aids

Technical Charts & Resources

Please take a look and download at your pleasure. If you notice I am missing a resource that you know about, send me an email with suggestions, and I will consider adding it to the slideshow. The slideshow link will always reflect the latest version, so new materials will continue to be added.

If you are looking for other presentations, visit my list at tiny.cc/k8zt-p. If your local club is interested in a live presentation via Zoom or other online service, I would be happy to lead one for your group.

Anthony Luscre, K8ZT

FP#-254

Email- k8zt73@gmail.com

Website- www.k8zt.com



From Contest Admin Secret HQ:
Brian Murrey KB9BVN
FP#-57

Calling all Flying Pigs!! Calling all Flying Pigs!!

Gang, the monthly Run for the Bacon Sprint is so much fun, and the band conditions are PERFECT for QRP, so why not join the flock and have a blast with us? It's easy!

Here is a listing of upcoming events through June 2024.

- April 21st - Run for the Bacon CW Sprint (2 Hours) 23:00Z to 01:00Z – Use the Auto logger.
- May 19th - Run for the Bacon CW Sprint (2 Hours) 23:00Z to 01:00Z – Use the Auto logger.
- June 16th - Run for the Bacon CW Sprint (2 Hours) 23:00Z to 01:00Z – Use the Auto logger.

RFTB Autologger is at <https://qrptest.com/pigrun/>

ALSO...for you Flying Pigs new to CW, or old to CW and want to participate in a slow code sprint event, we have the 40m Walk for the Bacon Slow Code CW Sprint. The WFTB sprints are 1 hour each night.

40m WFTB runs on the first Wednesday and Thursday of every month. The Wednesday night sprint begins at 00:00Z Wednesday evening for 1 hour from 00:00Z to 01:00Z, then it continues Thursday night from 02:00Z to 03:00Z. All logging is done on the autologger.

Evening of Wednesday April 3rd at 00:00Z to 01:00Z on 40m 7050 Khz to 7065 Khz.
Evening of Thursday April 4th at 02:00Z to 03:00Z on 40m 7050 Khz to 7065 Khz.

Evening of Wednesday May 1st at 00:00Z to 01:00Z on 40m 7050 Khz to 7065 Khz.
Evening of Thursday May 2nd at 02:00Z to 03:00Z on 40m 7050 Khz to 7065 Khz.

Evening of Wednesday June 5th at 00:00Z to 01:00Z on 40m 7050 Khz to 7065 Khz.
Evening of Thursday June 6th at 02:00Z to 03:00Z on 40m 7050 Khz to 7065 Khz.

WFTB 40m logger is at: <https://qrptest.com/pigwalk40/>

20m WFTB runs on the third Wednesday and Thursday of every month. The Wednesday night sprint begins at 00:00Z Wednesday evening for 1 hour from 00:00Z to 01:00Z, then it continues Thursday night from 02:00Z to 03:00Z. All logging is done on the autologger.

Evening of Wednesday April 17th at 00:00Z to 01:00Z on 20m 14061 Khz to 14065 Khz.
Evening of Thursday April 18th at 02:00Z to 03:00Z on 20m 14061Khz to 14065 Khz.

Evening of Wednesday May 15th at 00:00Z to 01:00Z on 20m 14061 Khz to 14065 Khz.
Evening of Thursday May 16th at 02:00Z to 03:00Z on 20m 14061 Khz to 14065 Khz.

Evening of Wednesday June 19th at 00:00Z to 01:00Z on 20m 14061 Khz to 14065 Khz.
Evening of Thursday June 20th at 02:00Z to 03:00Z on 20m 14061 Khz to 14065 Khz.

WFTB Autologger is at: <https://qrptest.com/pigwalk20/>

Good luck and we hope to hear from everyone on the air!!

Sprint Statistics for January, February, and March 2024

| DATE | EVENT | LOGS SUBMITTED | TOP SCORE | TOP FLYING PIG |
|----------|---------|----------------|-----------|----------------|
| 01/21/24 | RFTB | 9 | 119 | WB9HFK - Mark |
| 02/18/24 | RFTB | 6 | 32 | AA2YO - Gene |
| 03/17/24 | RFTB | 22 | 528 | NQ2W - Will |
| | | | | |
| 01/03/24 | WFTB 40 | 10 | 27 | WB9HFK - Mark |
| 02/07/24 | WFTB 40 | 6 | 22 | WB9HFK - Mark |
| 03/06/24 | WFTB40 | 6 | 17 | AA2YO - Gene |
| | | | | |
| 01/17/24 | WFTB20 | 5 | 6 | N3AZB - Dennis |
| 02/21/24 | WFTB20 | 10 | 15 | AA2YO - Gene |
| 03/20/24 | WFTB20 | 17 | 38 | WB9HFK - Mark |

ARTICLE SUBMISSIONS:

We welcome any and all contributions to the *Bacon Bits Quarterly Newsletter*. Prior publication is not an issue, provided the original publisher allows such. Send all submissions to: editor@fpqrp.org. Suggested topics are: QRP, home-brewing, antennas, public interest stories such as Hamfests, SOTA, POTA, club meetings, group builds, contesting, and general interest.

OUR MISSION:

- 1: Have Fun.
- 2: No rules.
- 3: Be a friendly group which enjoys ham radio and sharing skills with their fellow hams.

CLUB MEMBERSHIP:

To join The Flying Pigs QRP Club, visit <https://fpqrp.org/join.php>

CLUB EMAIL REFLECTOR:

To subscribe to the club email reflector, send a message to fpqrp+subscribe@groups.io with the subject "subscribe" or go to the Flying Pigs groups.io page at <https://groups.io/g/fpqrp> and click on the "Join" button.

CLUB DISCORD SERVER:

<https://discord.gg/RAEwTFmF>

CLUB E-MAIL POLICY:

These are not rules, just common sense. Club email is not moderated, as we are not a stuffy group. You can send off topic messages about most subjects, but please keep it clean and in good taste.

We do like good-natured ribbing and joking with each other, but we will not tolerate flaming other members or spamming the group. We will remove offenders who abuse our open policy. The word **eBay** is allowed.

CLUB WEB PAGE:

The club web page is our forum for sharing projects, and information about us. You are encouraged to submit your ideas and projects to be added to the web page. <https://fpqrp.org/>

CONTEST RESOURCES:

<https://qrpcontest.com/>

<http://qrspots.com/>

FPQRP OFFICIAL FREQUENCIES:

| | | | |
|-----------------|---------------------------------------|-----------------|-----------------|
| 160m – 1.814MHz | 80m – 3.564MHz | 40m – 7.044MHz | 30m – 10.110MHz |
| 20m - 14.062MHz | 17m – 18.100MHz | 15m – 21.064MHz | 12m – 24.910MHz |
| 10m – 28.064MHz | 2m Hamfest Frequency – 145.72 Simplex | | |

PROBLEM REPORTING:

If you are having problems with email, the web pages, or a fellow club member, please report this to either:

Dan, N8IE at dann8ie@gmail.com

Jim, W0EB at W0EB@cox.net

