Issue 4

In this Issue

Club News and Events

QRP Adventures

Contest, Nets and More

Letter from the Editor

Hello fellow QRP'ers! Summer is just around the corner and our club events are starting to pick up. I hope you have the chance to join us this coming Saturday June 8th at Hummel Park for "Donuts in the Park". This is the event that really started it all for the Fireflies QRP club 3 years ago and we have done it every year since.

One of my greatest "in the park" moments was when I got to watch Jermaine KD9GZJ FF #6 make his first CW QSO with the help of Ivin W9ILF FF #1. Jermaine sure has turned into a CW machine since that first QSO. Come out and join us this Saturday and maybe you can make your first CW QSO as well. We will be hosting several in the park events throughout the summer season.

The photo to the right was taken this past weekend at Hummel Park in Plainfield. I was operating CW on my RS-918 SDR QRP radio using a portable paddle from American Morse. If you look closely behind me, you will see my 40m hamstick ground-mounted antenna system designed by W9ILF FF #1. I made a handful of QSO's while chasing Museum Ships on the air. The weather was perfect and I had a blast.

Our membership has more than doubled in the month of May. We now have 76 members in 26 states and 5 countries. I am so excited to see the enthusiasm you all have for our hobby.

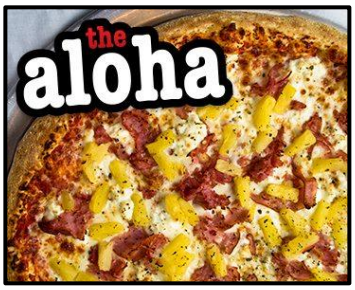
If there is anything I can do to help, please feel free to reach out to me anytime.

72 de Mike NR9R

Fireflies QRP Club Events

QRPizza Monthly Gathering

Our QRP club does not have formal meetings. Instead we choose to meet on the first Wednesday night of each month at a local restaurant to swap stories about recent QRP adventures, show off our latest creations, and plan future events. Early on, these gatherings often happened at local pizzerias and the name "QRPizza" was created.



Our next QRPizza Monthly Gathering will be **Wednesday July 3, 2019 at 5:55pm**.
The location is: **Hot Box Pizza on 8530 Castleton Corner Drive** Indianapolis, Indiana 46250

QRP "In the Park"

Why wait until Field Day to have fun operating outdoors? We do it every month here and we invite everyone to come out and join us.

Our next QRP "In the Park" event will be **Saturday June 8th at 7:55am** at **Hummel Park in Plainfield**.

National Donut Day is on Friday June 7, 2019, so we plan to extend the celebration into the weekend… "National Donut Weekend".

We will be on the West Side of Hummel Park, across from the Law Enforcement Academy in Plainfield.

Come out and join us for coffee, donuts and QRP in the park. Talk in will be available on the KO9F repeater 147.165 +600 No PL tone required.

Fireflies QRP 72 Sprint

It's the final countdown until our very first "Sprint Event"

Our very first Fireflies QRP 72 Sprint is less than a month away. This will be an annual event hosted by the Fireflies QRP Club. The purpose of this event is to promote QRP amateur radio and to demonstrate how much fun it is to do more with less.

All licensed amateur radio operators are encouraged to participate. Membership is not required, but if you would like to be assigned a FF # please email us at firefliesqrp@gmail.com and include your callsign.

The Sprint well be held every July 2nd (or as we like to call it, "QRP Day") from 00:00 – 02:00 Zulu time (That is July 1st 8pm-10pm EDT)

Scoring

Working a Firefly Station – 3 points
Working a non-Firefly, but QRP station – 2 points
Working any other Station – 1 point

Mode

CW or SSB

Power

5 watts max output for CW or SSB

Multipliers

x1 your total score for each S/P/C worked (S/P/C only count once, no matter how many bands you work)

Note

"S/P/C" refers to your "State" (US), "Province" (Canada), or "Country" (DX).

Suggested Call

Call "CQ FF" on CW or "CQ Fireflies" on SSB

Exchange

Firefly Stations: RST, S/P/C, Firefly number
Non-Firefly Stations: RST, S/P/C, Output power

Suggested frequencies:
The QRP "Watering Holes"

For CW

80 Meters ~ 3.560 MHz
40 Meters ~ 7.040 and 7.030 MHz - also consider using from 7.114 to 7.122 MHz for a "slower" speed CW area. We want to have everyone involved!
20 Meters ~ 14.060 MHz
15 Meters ~ 21.060 MHz
10 Meters ~ 28.060 MHz

For SSB

80 Meters ~ 3.985 MHz
40 Meters ~ 7.285 MHz
20 Meters ~ 14.285 MHz
15 Meters ~ 21.385 MHz
10 Meters ~ 28.885 MHz, and for those Technicians wanting to try a little SSB QRP - try hanging around 28.385 MHz.

These are suggested starting points, of course. Feel free to spread out.

Log summaries, photos (Lots and lots of photos, please!) and soapbox comments should be sent to firefliesqrp@gmail.com no later than **5** days after the event. Please include your name and callsign with your log entry.

Awards will be issued to the top scorers for the Sprint. Please help us spread the word.

“Old” QRP Radios I have known

Written by KB9BVN Brian Firefly #4

In 1976 I was sixteen years old, I was interested in two things, my car and my girl. I paid almost no attention to the things going on around me in the world of ham radio, almost. I was a subscriber to a magazine called “Elementary Electronics” and another one called “Radio Electronics”, both gave up the ghost a long time ago, but they had captured my attention and they are probably what got me the most interested in electronics and technology.

Also, in 1976 a guy named Doug DeMaw, then W1CER, had just published an amazing and mind-blowing story in the QST magazine he called “The Tuna Tin II”. This was a HF transmitter that a person could build in a tuna can. Keep in mind cheap plentiful semiconductors had just really started to trickle down to the hobbyist. If you are an ARRL member you can go online and read the original article in the May 1976 QST.

In his article Doug made it clear that we radio hobbyists could build working HF transmitters with inexpensive parts, and NO TUBES. This snippet is from the May 1976 QST article.

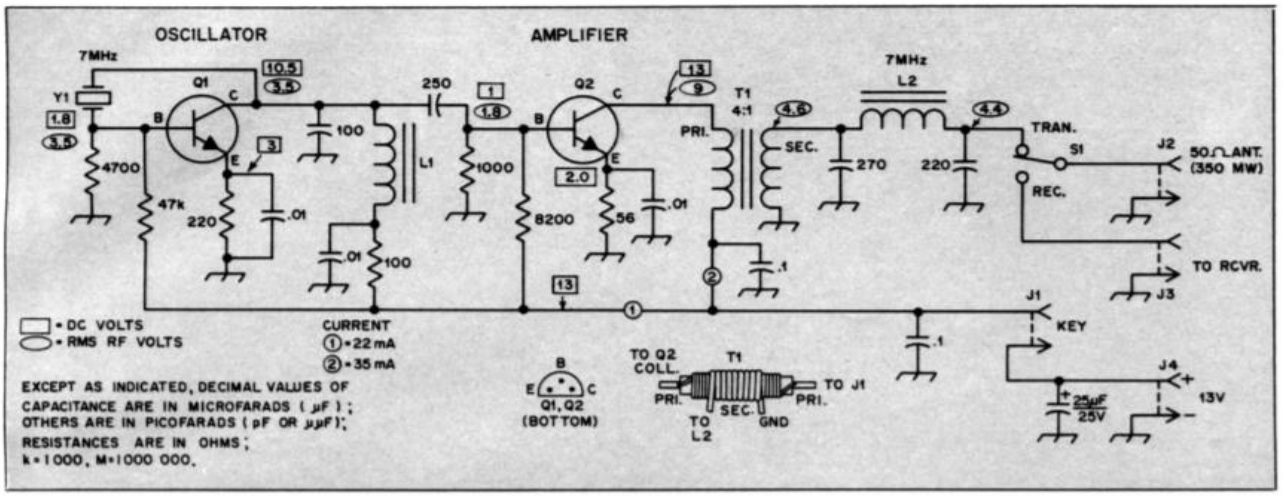


Fig. 1 — Schematic diagram of the two-transistor QRP rig. Capacitors are disk ceramic. Resistors are 1/2-watt composition. The polarized capacitor is electrolytic. See parts list for data on other components.

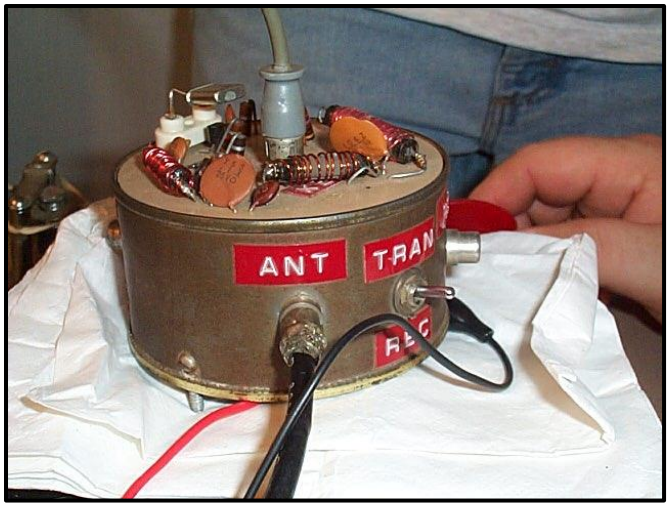
J1 — Single-hole-mount phone jack. Must be insulated from ground. Mount on tuna tin (Archer 274-346).
J2, J3, J4 — Single-hole-mount phono jack (mount on tuna tin).
L1 — Modified Archer 273-101 rf choke (see text).
L2 — Modified Archer 273-101 rf choke (see text).
Q1, Q2 — Archer 276-1617 npn silicon transistor. Equivalent to 2N2222A type.
S1 — Antenna changeover switch. Miniature spdt toggle (see text).
T1 — 4:1 broadband transformer. Modified Archer 273-102 100-µH rf choke. Primary has 50 turns, secondary has 25 turns (see text).
Y1 — Fundamental crystal, 7 MHz (International Crystal Co. type GP or equiv.).

Coupled with a HF receiver of any kind, a budding builder could get his ticket and be on the air with his Tuna Tin 2 transmitter. It was kind of earth shaking. The original Tuna Tin 2 transmitter could be tweaked to output as much as 400 mW…usually they were found to be operating in the 250-325 mW range.

So, in May 2001 I was headed off to Four Days in May in Ohio, to attend the best FDIM event I have ever been part of. Oh yeah, there was a hamfest down the road too. Dayton something or other.

That year I was rooming with Mikey WB8ICN again, we had met at FDIM in 2000. Also there were about 100 Flying Pigs in attendance and the atmosphere was "electric" to say the least. That Thursday was the QRP Symposium, and Friday was the day we all went to the Hamvention and looked for treasures. During the day, several of us sat in on the QRP forum that was being put on by Ed Hare W1RFI of the ARRL lab. With him, he had the original Tuna Tin 2 transmitter that Dou DeMaw K1FB (SK) had built with his own two hands.

Ed Hare W1RFI 2001 at FDIM

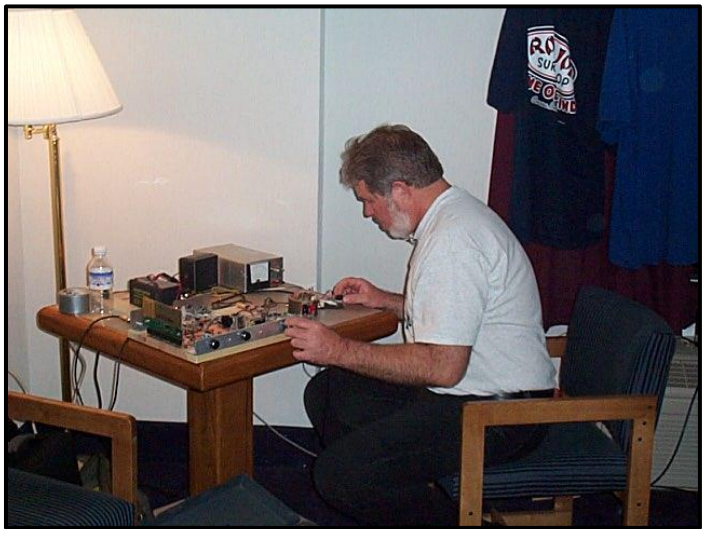


Tuna Tin 2 at FDIM 2001

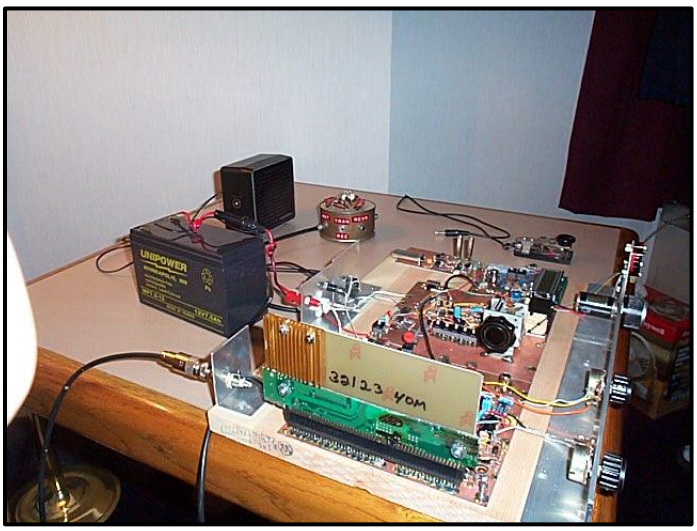
It had been recently rescued from a New England hamfest and returned to working condition by Bruce Muscolino W6TOY (SK) and then given to the ARRL for the museum. There was Ed just holding it in his hands. We were totally awestruck…and we jabbered and yammered and pointed at Ed and gasped and just basically stood there wide eyed and almost speechless. Ed saw we were turning blue and asked us one simple question…. " Why don't you guys take this and make some contacts?" If memory serves me correctly, Rick WB6JBM, Dan N8IE, Diz W8DIZ, Mike WB8ICN, and I were standing there, and we could not believe our luck.

Ed handed us the rig in a small cardboard box, and we headed back to the hotel almost immediately.

Back at the Ramada Inn we had an antenna strung up outside our window, running over to a tree I think, and it was connected to a W8DIZ designed radio we called the Multi-Pig. We were going to use the Multi-Pig as the receiver for the Tuna Tin 2 transmitter. In the picture below you see Diz Gentzow W8DIZ operating the Tuna Tin 2 and the Multi-Pig.



W8DIZ working the Tuna Tin 2



The W8DIZ Multi-Pig Rig with the Tuna Tin 2

We were on the air for a couple of hours and if memory serves me correctly, we made 13 contacts using that 250 mW transmitter, a wire in the tree and Diz's homebrew Multi-Pig rig. The one contact that sticks out in my mind the most, is when I worked W6TOY on the thing. He was in Massachusetts and he gave us a 449. W6TOY is the guy that took the orphaned rig and put it back into working order for the ARRL museum. It was a night to remember.

This is a much younger KB9BVN, getting his turn at operating the crown jewel of QRP-dom at the time. It was incredible to get to use the radio that was built by Doug DeMaw W1FB and made famous in that May 1976 QST magazine article.

It was incredible and one of my best memories of my ham radio experiences. The next day we very carefully built a box to place the Tuna Tin 2 in for return to Ed hare W1RFI. It was an experience I will never forget.

Here's a shot of the Multi-Pig rig that Mike WB9ICN built.

Here's a shot of my home brew contest entry…I won "Best Attempt at Bribing Judges with Food"

This was a kit the NORCAL QRP Club had designed and sold, it was called the SMK-1 and they did this to prove that home builders COULD build projects using surface mount parts. This little circuit was a combination of the Tuna Tin 2 transmitter, and the MMR 40 direct conversion receiver that had been put out by the Columbus Ohio QRP Club back in the late 90's. I forget who re-engineered this design but I made about 20 contacts on it at 300 mW to the attic dipole. Then I put it away.

I hope you enjoyed this article.

72 de KB9BVN

Show the world some QRP pride ! $1.00 (new batch is slightly smaller - really QRP!) via snail mail to my QRZ address or by Paypal to w2lj@arrl.net and one of these puppies can be yours!

Homebrew 20 meter CW QRP Build

Written by WA7GIL Ron Firefly #59

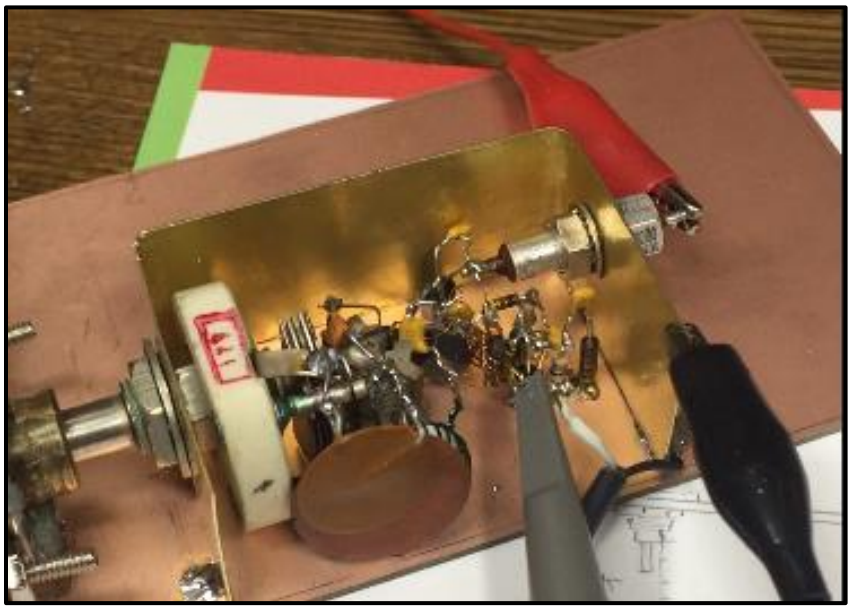
A couple years ago I set out to build from scratch a 20 Meter CW QRP transceiver. I looked at other units, checked the books, looked at my notes from previous projects and decided on a single conversion superhet design for both the receiver and transmitter. Next came the schematic diagram to get a starting point to work from. I also wanted to make it small and field ready.

I had a pile of 10 MHz crystals so decided on a 10 MHz IF for which I could build a fairly narrow crystal filter. I decided on the Cohn filter design as it is simplest to build and could easily be made to work at around 300 Hz bandwidth without ringing.

Knowing the basic design and the IF frequency, the next step was to design and build the VFO. I chose an analog VFO design and selected a Hartley oscillator as I had had good luck with stability using this circuit. The radio would need to tune in the vicinity of 14 MHz and being analog, the VFO would prefer to be a low frequency design for Improved stability, so I designed it to operate at roughly 4 MHz. I used a small value tuning capacitor with higher value temperature stable (NP0) capacitors in parallel. To that capacitor I added a 7:1 reduction drive and set it all up to tune only the basic CW portion of the band. I was shooting for 14.0 – 14.06 but ended up with 14.0 – 14.08 MHz (VFO at 4.0 – 4.08) with 3½ revolutions of the tuning knob; close enough.

Before building the VFO I decided on a size for the rig which was partly determined by the pieces of single sided copperclad board I had on hand. I laid out the various circuit blocks with pencil on paper and decided it would all fit, sometimes using some three – dimensional thoughts on parts locations.

The VFO was built in its own shielded enclosure using 1” wide brass strap with a feed thru capacitor for DC and coaxial output to isolate it from the rest of the circuitry. Here is a photo of the VFO partially completed and under test.



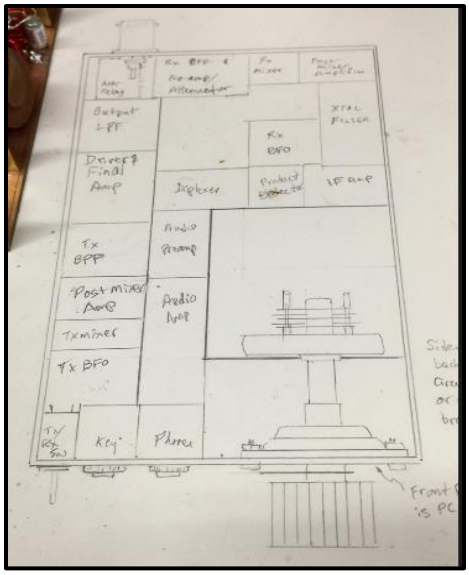
You can see that the VFO alone takes up a significant portion of the main board, but this piece is the most critical one to get right.

At this point I might discuss test equipment required for homebrewing. Decent oscilloscopes used to be cost prohibitive, but today you can get one brand new with adequate bandwidth for HF and low VHF work for less than $300. It will be a digital scope and will include math functions like FFT which can be used as a poor man's spectrum analyzer. While not being as accurate or easy to use as a real spectrum analyzer, it can give you a rough idea of your signal purity. If you are into Digital modes and have a PSK-31 program or any one with a “Waterfall” display, you can tune your stable commercial rig to the VFO frequency and watch your carrier on the waterfall and see if it is drifting by how straight the carrier line remains on the screen. I also used this test setup with a crystal oscillator to match the IF filter crystals as closely as I could. It didn't matter exactly what frequency they oscillate at but how close they are to each other. My PSK program reads out the decoded audio frequency down to 0.1 Hz, so I could get the relative difference frequency between crystals very simply using that method and didn't need an expensive frequency counter.

Finally, a temperature controlled soldering iron (as low as $30) and some hand tools will get your going. Oh and don't forget the most important item; a digital volt meter.

You also should have some of the most basic parts on hand like resistors, capacitors, transistors (BJT, FET, MOSFET, etc) because it's especially aggravating to have to order all the parts for one project then find you need to change your design slightly or move something to a different spot and destroy it in the process.

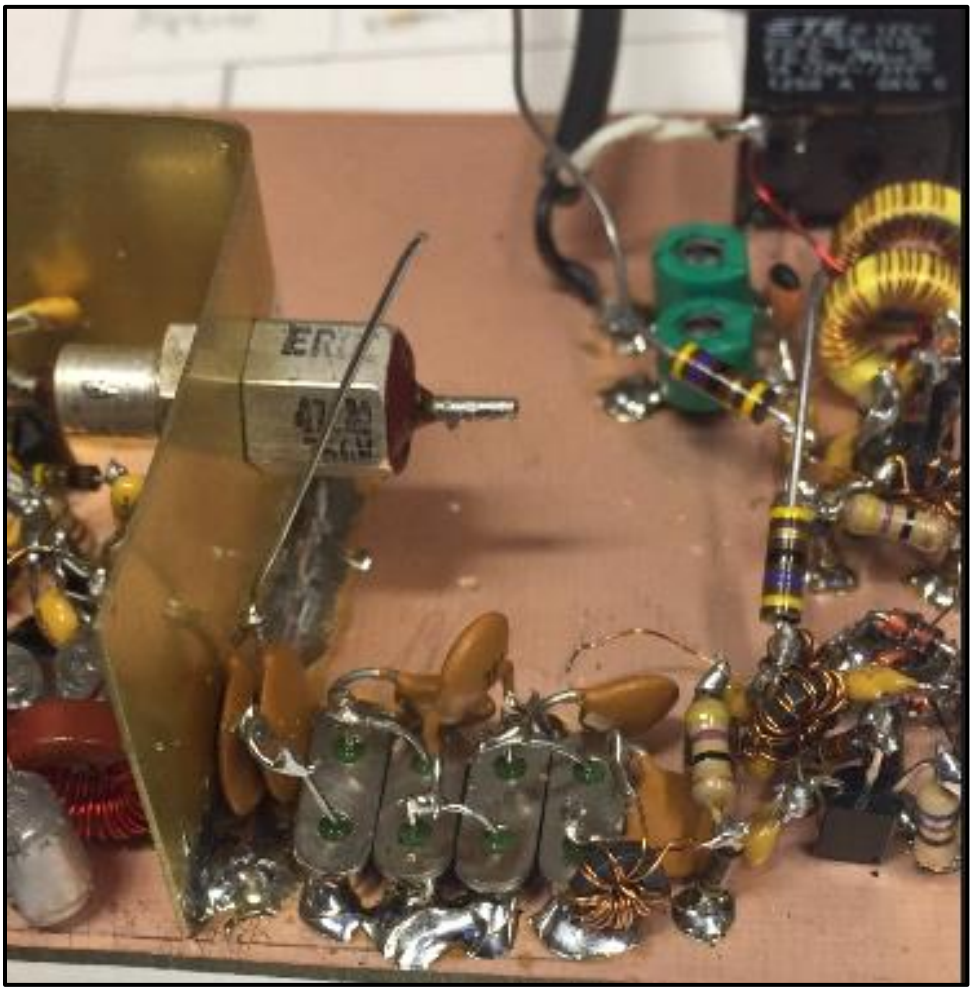
Enough said on that subject. Homebrewing techniques are a good subject for a book. Speaking of books, I highly recommend “Experimental Methods in RF Design” (referred to by builders as “EMRFD”) by Hayward, Campbell and Larkin as one of the best go-to sources of information for the homebrewer. Several circuits in my transceiver came from this book.



Once the VFO was operating, stable and tuned to the right band segment, I proceeded to building the receiver section. First came the front end. It started in the upper left hand corner of this drawing with the antenna relay and proceeded to the right with the receiver bandpass filter, RF amplifier, receive mixer and post mixer amplifier. Here's a closeup photo of some of that being constructed:

This construction style is referred to as “Dead Bug” or “Ugly” construction which I have found to be the fastest and easiest way to built RF circuitry and it provides reliable and stable operation, due mainly to the continuous ground plane under everything. In the very left hand side of the above photo is part of the bandpass filter followed by the RF amplifier, and the receiver mixer. The trifilar (a group of three wires) wound ferrite toroids in the double balanced diode mixer are approximately 5/32” diameter. As each section was built, it was also tested. With the above sections completed, I connected an antenna and fed the output of the post mixer amplifier to the input of my FT-817 transceiver which was tuned to 10 MHz and I was able to hear 20 meter CW signals by tuning the homebrew rig's tuning knob.

Here's a view of the next part after the post-mixer amplifier. The crystal filter defines the bandwidth, selectivity, and overall sound and usefulness of the receiver. This one is made up of four 10 MHz crystals. I got a bag of 50 of them on eBay for about $7 and was able to get several sets of closely matched ones out of that batch.

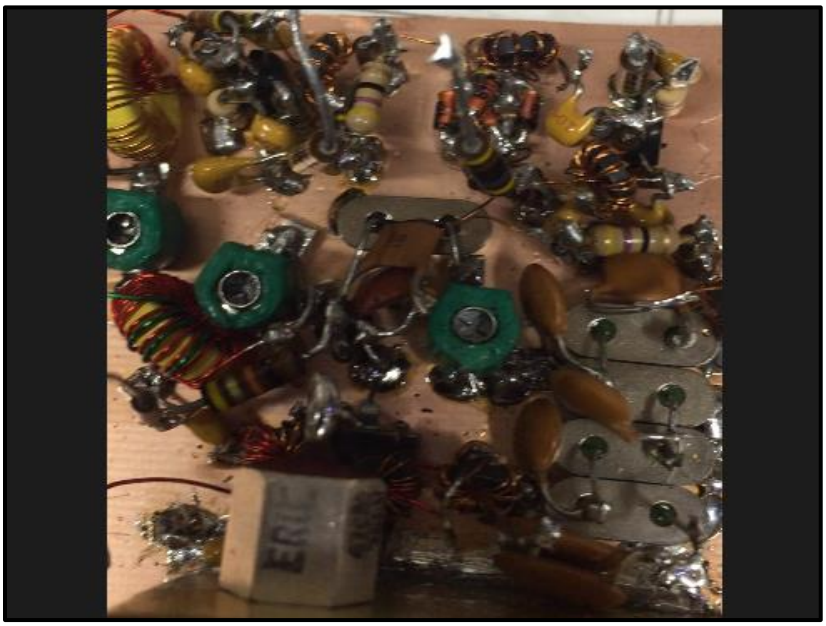


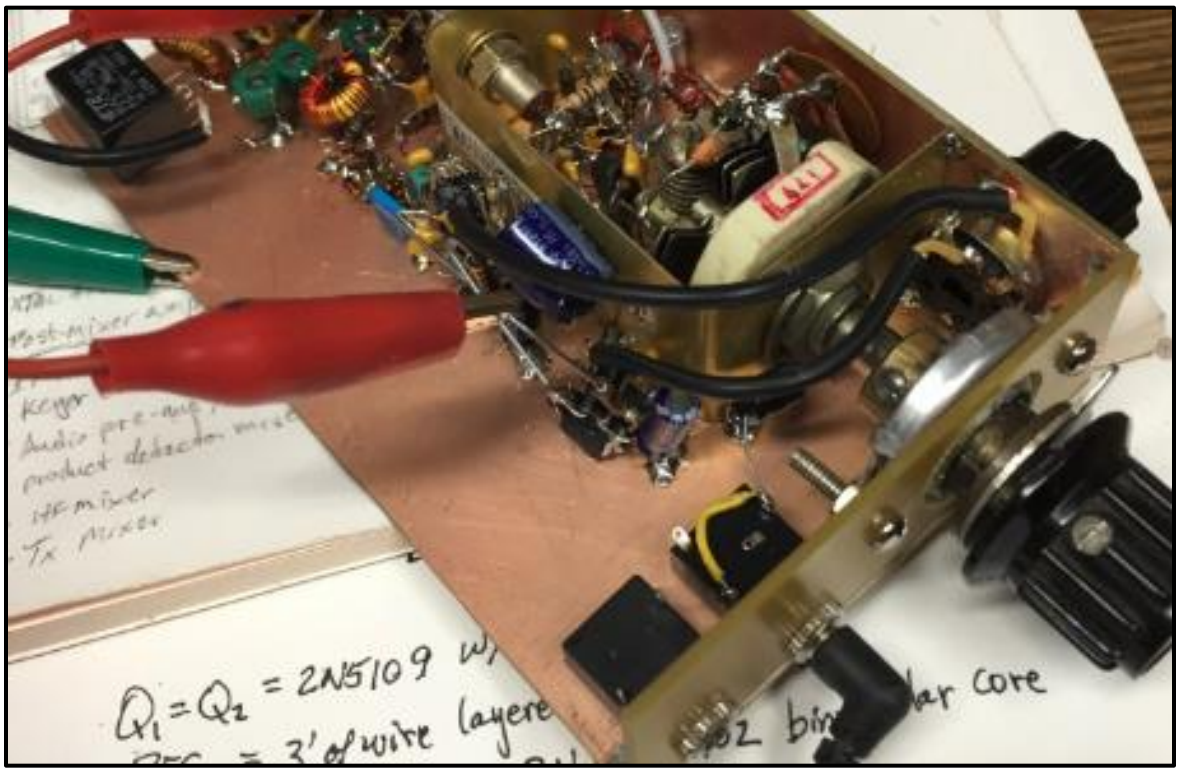
All sub sections of the transceiver were designed for 50 ohms input and output, mainly for ease in testing the various pieces. This then involved a lot of impedance matching between stages. Note the small toroidal transformers in the amplifier stage to the right and on the crystal filter.

The next stage is the IF amplifier. This can be built in many ways, but since I did not have the luxury of a lot of room on the board for this item, I chose to use a common IC for that. The MC1350P is easy to use, has good gain and AGC capability (which I did not use in this rig). Here is a photo of the area of the board with the IF amp chip (8 pin DIP) mounted “belly up” in true Dead Bug fashion with its various external components around it.

Next after the IF amplifier is the product detector (another mixer) and BFO to convert the 10 MHz IF down to audio. The mixer is again a double balanced diode mixer design. The BFO is a 10 MHz crystal oscillator in the center of the photo with variable capacitance added to the crystal to slightly adjust its frequency to get the CW note properly placed inside the crystal filter passband.

At this point an outboard audio amplifier was attached and the receiver tested listening to CW signals on 20 meters. All that is left of the receiver is an audio stage. Here I used a circuit I had used successfully in a previous project. It consisted of a low noise preamplifier using a common operational amplifier IC, followed by the ubiquitous LM-386 power amplifier IC. This photo shows those two stages running along the outside edge of the VFO shield. Note the larger capacitors required for audio frequencies. In this sense, RF circuitry occupies much smaller spaces than does audio circuitry.





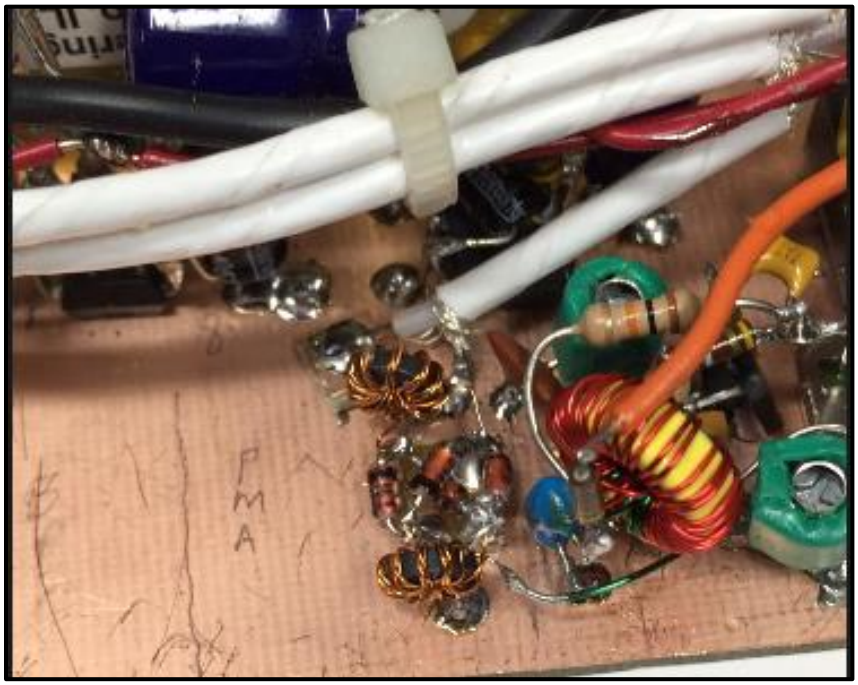
I ran out of front panel room so the volume control had to be mounted on the right side panel. So that panel was installed to complete the receiver. Note the only remaining space along the left side of the rig. This will be where the entire transmitter section will go.

The transmitter is also a superhet design. This means that a signal is generated at one frequency, then converted to the final operating frequency band. Since I want to use the same VFO for both transmit and receive so that I'm always transmitting on the same frequency I'm receiving on, the carrier is generated at approximately 10 MHz then mixed with the VFO frequency using a third double balanced diode mixer. The sum of the two frequencies is filtered with a bandpass filter exactly like the one in the receiver front end and then amplified in a few stages, then low pass filtered to supress harmonics and finally ends up at the transmit side of the antenna relay.

I used a RF amplifier design from “EMRFD” in all RF amplifier stages right up to and including the RF preamplifier after the transmitter bandpass filter. Then I used a RF power amplifier circuit designed by Steve Weber KD1JV and used in his “Weber Tri-bander” kit available from Pacific Antenna. They offer several other very nice QRP kits designed by Steve. This amplifier uses a 5 volt logic gate to square up the RF signal out of the amplifier. It feels odd at first doing this since the entire aim of the design so far was to keep things clean and sinusoidal. The square wave signal from the logic gate is used to turn on and off the gates of three parallel MOSFET transistors. These are tiny TO-92 size plastic transistors that

don't need heat sinks in this circuit. Their output is low pass filtered to remove the miriad harmonics generated when squaring the waveform earlier. This is basically a class D amplifier.

Here is a photo of the transmitter 10 MHz oscillator stage followed by the transmitter mixer:



Next we have the bandpass filter that selects the 14 MHz mixer component followed by the RF preamplifier:

Finally we reach the end of the section with the logic gate and three MOSFET final transistors and lowpass out put filter connected to the antenna relay.

The last side panel was added and final tests made before closing it up. Note the homebrew paddles made from relay contacts and brass strap.

A keyer chip was added. It had to be squeezed in under the 7:1 dial reduction drive as the only spot remaining. Brass nuts were soldered to the inside corners of the housing walls and the top panel screwed down to them.

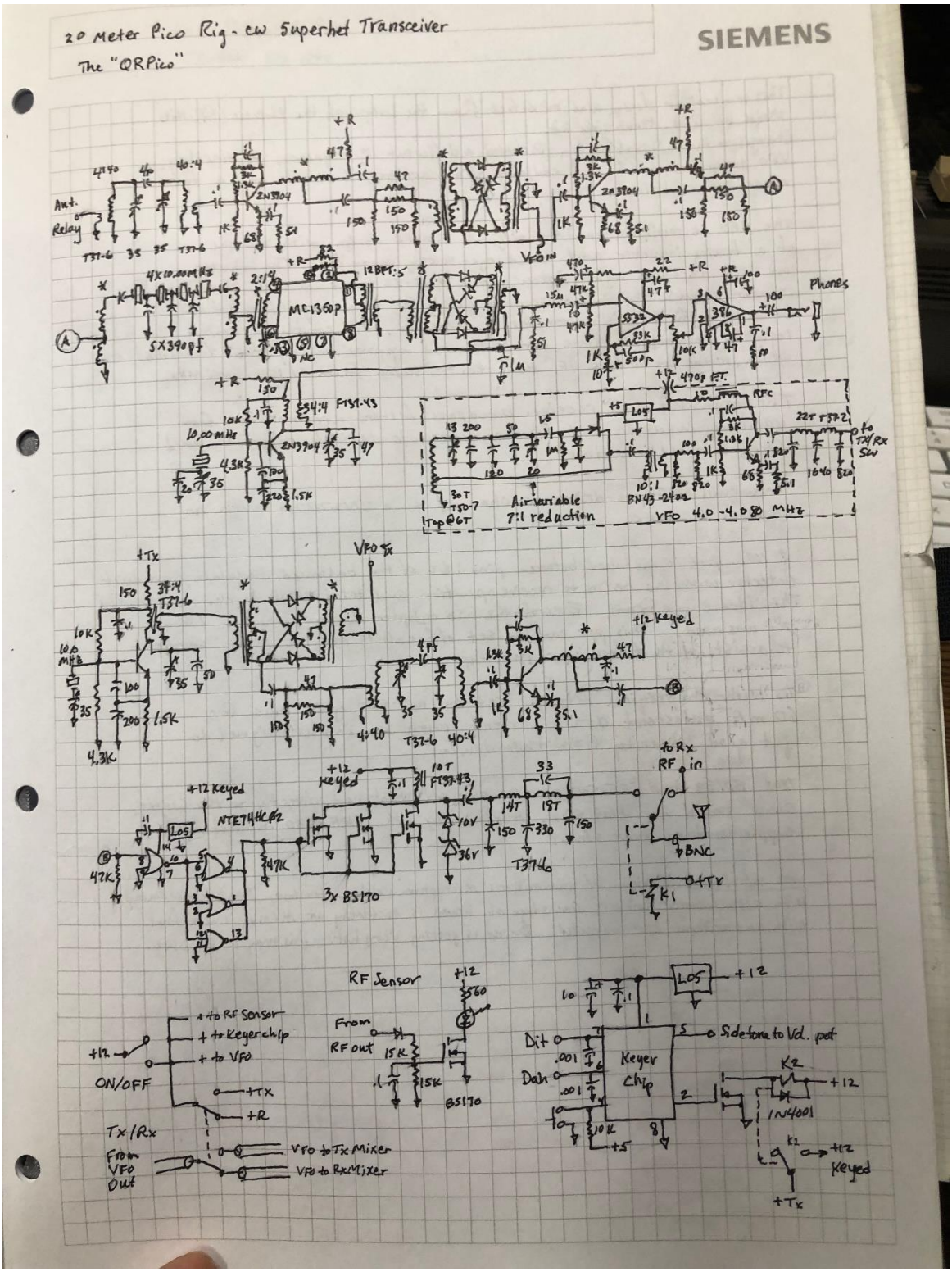
I made a very short video about this project for HamNation right after it was completed. That video is available on YouTube at https://www.youtube.com/watch?v=vFORaLcOLKU

I have some corrections to make since posting the video. I called the final Class E instead of Class D. Class E amplifiers require the addition of a resonator circuit that is not part of this unit. Also my first output measurements were in error. It did not make 8 watts for long. A few transistors later and a modification of the driver circuit fixed an issue but lowered the power output to more like 3 watts. Despite this I've had many satisfying QSOs with this rig. It's easy to use. The analog tuning is much more satisfying than digital tuning requiring step changes in frequency. The received note is clean and easy to listen to for long periods. And the passband is very sharp and easily separates signals from each other even in Field Day QRM situations. The little micro paddles in the above photo are mounted on a standard 2.5 mm three terminal plug and plugged into the front panel key jack. I actually use my Bencher paddles for any extended operating, but the little ones will do in a pinch.

The last page of this write up is the final schematic of this rig. I apologize for the lack of clarity in the hand drawn circuit. As stated above most of the circuits in it were derived from the work of others. I take no credit for original circuit design from those who did the really hard work. Not all were mentioned. Some circuits were found published on the internet and it's not possible to give them credit as I've lost the original references.

I hope this inspires some to take up the fun of homebrewing, or to continue your existing homebrewing activities and challenge yourself. If you have any questions, please feel free to contact me at wa7gil@gmail.com

73 …. Ron


20 Meter Pico Rig - cw Superhet Transceiver
The "QRPico"
SIEMENS
Ant. Relay
MC1350P
Phones
Air variable 7:1 reduction
VFO 4.0 - 4.080 MHz
3x BS170
NTE74HC02
RF Sensor
From RF out
Keyer Chip
Dit
Dah
Sidetone to Vol. pot
ON/OFF
Tx/Rx
From VFO Out
VFO to Tx Mixer
VFO to Rx Mixer
to RF Sensor
to Keyer chip
to VFO
to Rx RF in
BNC
+12 Keyed

Review of the HT-1A QRP Transceiver

Written by KH2SR James Ron Firefly #76

The HT-1A is a compact 20/40m dual band CW QRP transceiver from CRKITS that comes in either kit form or fully assembled. I received the fully assembled model, so this review won't cover the kit building process. Even though I didn't build this one, I did take a peek inside. SMD components are used, but not to worry. All the SMD parts are pre-mounted, and you will only have to solder through hole components.

Measuring 4.33" x 4.09" x 2.32" and weighing in at only 400 grams (14.12 oz), the HT-1A is a great option for hams that enjoy portable operating in the great outdoors. It'd be a good fit for SOTA & POTA activations or even quick LTOTA deployments (Lunch Time On The Air).

It has a transmit range of 7.0-7.2 MHz and 14.0-14.35 MHz. Even though this rig only transmits CW, it does have the ability to listen to SSB signals. It also has an extended receive range, which covers

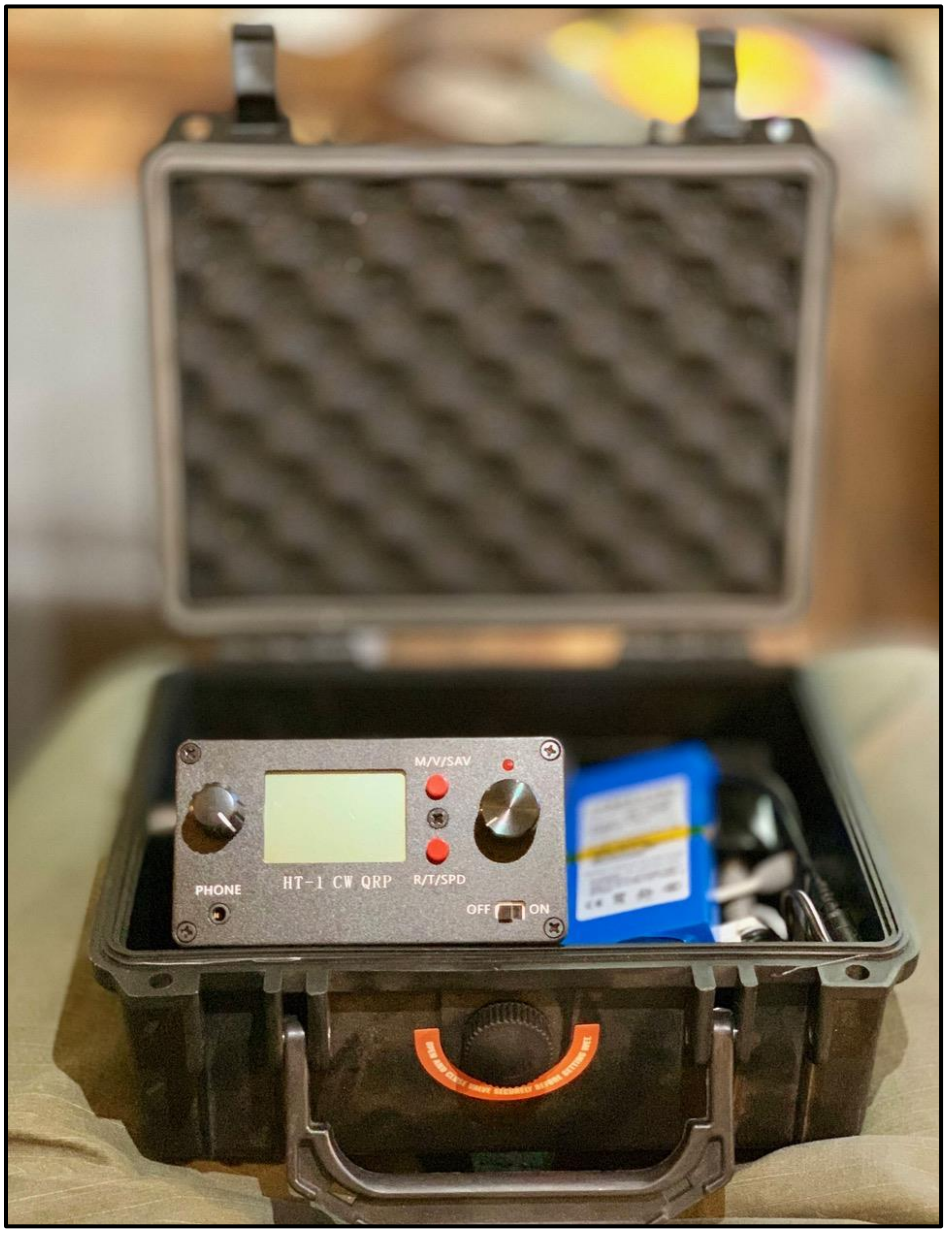
everything between 5.9-16 MHz which means shortwave broadcast reception while in SSB mode. Filter bandwidth is set at about 300 Hz for CW and 1.8 KHz for SSB. Spurious suppression is no worse than -50 dBc. I was impressed that the receiver is surprisingly sensitive considering the size and price of the radio. Using simple base loaded MFJ single band telescopic whip antennas with no counterpose and no grounding, I was able to copy quite a few QSOs on 20m and 40m.

RF power output is 5 watts with 12 volts input power, but it can handle up to 15 volts. However, the transceiver can be powered off a 9 volt battery in a pinch if needed. Speaking of batteries, this little guy even has room to install an internal lithium ion battery pack! Current consumption during receive is about 60 milliamps with the display backlight on and only about 45 milliamps when the backlight is off. During transmit, the HT-1A draws 1 amp.

No internal speaker is provided with the HT-1A, however there is plenty of room inside the enclosure to install a small speaker and audio amplifier. I used a tiny external LiPo powered amplified speaker and a set of headphones to keep things simple.

The HT-1A has some great features for such a small and affordable QRP transceiver. These include: 16 user programmable memory channels, built-in keyer for iambic paddles, full break-in QSK, RIT, XIT, AGC, S-meter, and even side tone selection. The HT-1A can even automatically detect whether you are using paddles or a straight key. The built-in keyer is adjustable from 5-40 words per minutes and is set at 15 WPM by default.

I was able to easily fit it into a small rugged waterproof case along with a couple single band telescopic whips for 20m/40m, a small 12v LiPo battery, headphones, a MK-11 Pocket Spy Micro Straight Key, and a bulldog BD6 Mini Iambic Key.



I had a blast with this compact QRP rig. It's just so easy and fun to use! With an interface consisting of only 2 buttons, 2 knobs and an on/off switch, you can learn to operate the HT-1A in just a couple minutes and without ever reading the user manual. I think this ease of use makes it a great option for preppers who typically want a compact affordable emergency backup transceiver. Plus, you don't have to take much time to relearn the interface if you haven't used it in a long time.

The HT-1A from CRKITS should appeal to a wide demographic of ham enthusiasts, builders, beginners, preppers, SOTA, and especially the budget savvy ham crowd. If you fit into any of these categories, then I highly recommend you take a close look at this great little dual band 20m/40m CW transceiver.

Kit Price: $150 USD
Fully Assembled Price: $175 USD

Available for purchase at the following links:
http://crkits.com
https://qrvtronics.com/CatHAM_Radio/Products/HT-1_CW.htm

Technical Specifications:

Chassis Dimensions: 110 x 59 x 104 mm (not including protruding parts like knobs)
Weight: About 400 grams
Power supply: 9-15 V DC
Current consumption:
During RX: About 60 mA when backlight is on and about 45 mA when backlight is off
During TX: About 0.8 A (@ 12 V)
Local oscillator: DDS, reference frequency 54 MHz
Display: LCD
RF output power: About 5 W (@ 12V)
RX: 5.9-16 MHz continuous (peak sensitivity only in 40 m and 20 m bands)
TX: 7.0-7.2MHz and 14.0-14.35MHz
Side tone: 600 Hz
Keyer: Built-in, 5-40 wpm adjustable
Memory: 16 memories, user programmable
RX mode: CW, SSB (LSB only if it is below 10 MHz, and USB only if it is equal or above 10MHz)
AGC: Audio derived AGC with S-meter to show relative strength just for reference
QSK: Full break-in
Spurious Suppression: no worse than -50 dBc
Filter bandwidth: about 300 Hz for CW and 1.8 KHz for SSB
Antenna Connector: BNC
Audio Connector: 3.5mm
Key Connector: 3.5mm

73, James Hannibal KH2SR

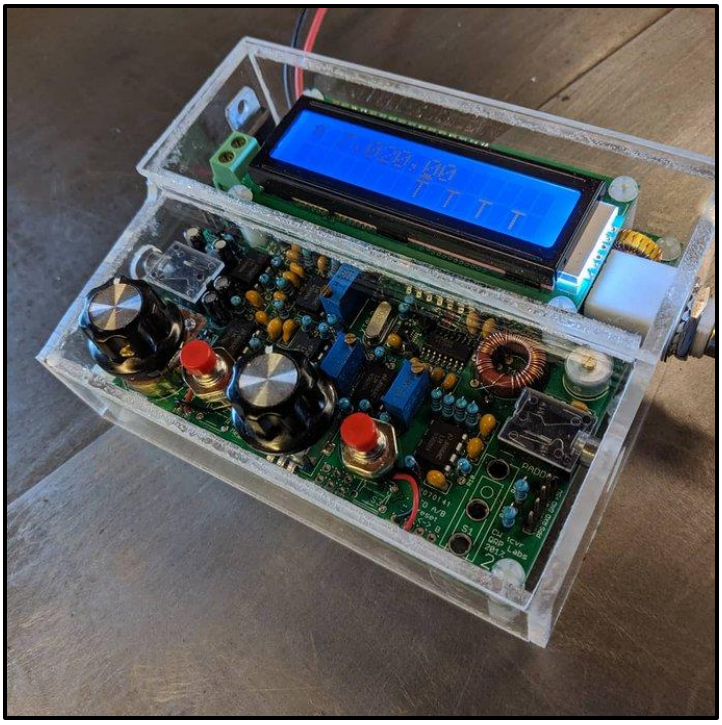
Fireflies QRP Photos

K0EAP FF #22 "Lunch Time on the Air" |

W9ILF FF#1 "QRP ARCI Sprint"

QRPizza @ Monicals Pizza
(left) Freddy the Firefly
(right) Show and Tell

wG0AT FF #30 operating "Summits On The Air" SOTA



KC9SQW FF #38 "QRP in the Park" | K6ARK FF #75 builds a QRP Labs QCX

QRP Sprints and Contest

Fireflies 72 Sprint

This annual QRP sprint occurs on July 2nd, or 7/2… better known as QRP day. July 2nd 00:00-02:00 Zulu (July 1st 8pm-10pm EDT)

4 State QRP Club Second Sunday Sprint

This QRP sprint occurs monthly on the second Sunday of each month from 8pm-10pm
For more information visit www.4sqrp.com

NAQCC Monthly QRP Sprint

This QRP sprint occurs monthly on the third Wednesday during the months of Jan, Mar, May, Jul, Sep & Nov and the second Tuesday during the months of Feb, Apr, Jun, Aug, Oct & Dec from 8:30pm-10:30pm
For more information visit www.naqcc.info

Flying Pigs QRP Run for the Bacon

This QRP sprint occurs monthly on the third Sunday of each month from 9pm-11pm
For more information visit www.fpqrp.org

All times given are local for Indiana.

If you have a contest or sprint you would like to add to our list, please email the information to us at firefliesqrp@gmail.com

Thank you for reading!

Email Reflector/Group

We have an email reflector/group setup with groups.io …simply do a search for "FirefliesQRP" or email us at firefliesqrp@gmail.com for an invitation to join.

Follow us on Twitter

Are you a tweeter? ☺ Follow us on Twitter @firefliesQRP

Weekly QRP Net

Please join us every Sunday night at 7:55pm as we host the Fireflies QRP and Roundtable net. We hold the net on the KO9F 147.165 +600 kHz repeater, no PL tone needed.

Share your adventure

Do you have a QRP related story to share in our newsletter? Please send all stories to firefliesqrp@gmail.com and don't forget to include lots of photos.

Subscribe/Unsubscribe

If you would like to subscribe or unsubscribe to this monthly email newsletter simply email us at firefliesqrp@gmail.com and include the word subscribe or unsubscribe in the body of your email.

Until next month, 72…