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

### CONTACTS:

<table>
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<tr>
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<td>Dan, N8IE</td>
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### NETS:

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### CLUB FREQS.

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<td>28,064 kHz</td>
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ALL FPqrp frequencies are UP 4 kHz from the standard qrp frequencies except for 20 meters.

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### In this issue:

- **Ramblings**
- **A Homebrew case** By Dan, N8IE  Page 2
- **CLANDESTINE OPS** By Arnold, KA0TPZ  Page 3
- **And now, a word or two from Joel** By Joel, KE1LA  Page 4
- **Stu Rockafellow ARC** By Chuck Mabbot, AA8VS  Page 4
- **The miniPIG the multiPIG and the “UGLY”** By Diz, W8DIZ  Page 5
- **You Who QRP** By Arnold, KA0TPZ  Page 6
- **Websight Spotlight** By Dan, N8IE  Page 6
- **Member Spotlight: Kent, KB9VZS**  Page 7
- **Tales from the Workbench** By Kent, KB9VZS  Page 8
- **As seen on our reflector: A Viking’s Story!**  Page 9
- **Good Advise!** By Phil WB8ABE  Page 10
- **Oink-Oink** By Bob, WB8UOJ  Page 10
- **Info about the Flying Pigs**  Page 10
--- Ramblings ---

Hello and let me start by saying WOW! 2001 is getting off to a great start, we have tee-shirts in the works (thanks to Brian, KB9BVN), and a new 20 meter project. (thanks to Diz, W8DIZ) Stay tuned right here for more info!

Also, let’s start thinking about FDIM! The Flying Pigs will make a good showing at FDIM and a table at the flea market area during Hamvention. Look for us there!

72, oo
Dan, N8IE Ω

--- A home brew case! ---

By Dan, N8IE

This project is very easy to build and only requires simple tools, I used a Dremmel tool, sanding block, flat file, and a hot (60 watt) soldering iron. Total time to construct was around 5 hours including adding the keyer parts to the case.

The material for the case itself is regular double sided PCB material, (you can use single sided) available at most Radio Shacks, electronic, and surplus stores.

Let’s start.

First I laid out a sketch of the size and shape of the case I wanted, I had another K1EL keyer kit laying around so I decided to use it. With the sketch done I laid out the dimensions on the PCB.

--- ODE TO ARNOLD TIMM ---

By Arnold CW Timm
(c) 2001 All Rights Reserved

Who is this ( here ) Common Ham, ( handle ) Arnold Timm; why should we give a damn, bout essays/poems from him?

Nineteen O seventy ought, our eleven meter swell; his grass root CB fought, " Quit skip and QSL!"

Magazine " one minute " fame, long & short waved better; enjoying radio hobby game, Radio Archives ( his ) newsletter!

Manual type ( write ) written plain, crystal set / low power ; CoCo 2 word process -- chain, quarter wave no tower!

Some 30 years of ditdahdit, low power pledge & pride; humble handshake ( tube ) Heathkit, " Let's Save CB! " he cried!

KA0TPZ
wdx0awt@juno.com

Next, using the Dremmel tool I cut out the pieces. One rule of thumb here, use the old carpenters method of " give the line". This means when you cut the pieces out, make sure you leave the lines you drew on the PCB intact, this will help you later to square up the pieces. After cutting out all the pieces, start squaring them up. For this I used a scrap piece of wood with a good straight edge and #100 sandpaper.

Assembly.

Start with the bottom, and the sides. Take your time and keep test fitting the pieces together. When you have them right, go ahead and solder the sides to the bottom making sure the sides are at a right angle to the bottom.

A good method for soldering them together is start at one end, apply a small amount of solder, then check to make sure everything is square, then solder the other end. After you have the two pieces "tacked" in place, solder the rest of the way down the piece.

Next square off the rear and front pieces, solder them in place. The slanted piece is done the same way as the others except you will want to sand an angle on the edge where it meets the front piece, this will give the case a nice clean look. Solder it in place
when you’re finished. The top piece will also have an angle sanded where it meets the top of the slanted piece.

To secure the top to the case, cut four scrap pieces, and solder them to the inside of the case at the corners. Place the top onto the case, and drill holes through the top, and the corner pieces, use small self tapping screws to secure the top to the case, sand all edges smooth, and your done!

72, oo
Dan, N8IE Ω

CLANDESTINE OPS
By Arnold, KA0TPZ

[From Radio Archives Vol. 4 No 1 Oct 1986]
While hunting the local bookstore, I bought at discount ($5) the interesting book, CLANDESTINE OPERATIONS By Pierre Lorain and David Kahn. A 185 page report on the French Resistance 1941 - 1944. Chapter 3 --- Communications and Secret Radio, entails excellent diagrams and electronic circuits of each tube lit regen, superhet, and telegraphy transceiver taken into German occupied France. As the reproduction shows, simplicity and portability were most primary. British " home station " antenna arrays and Ultra ops is displayed towards the end of text. You can imagine the regen giving off oscillations alerting the German direction finding trucks. The author used English amateur radio station, G3ZWH, to conduct tests on these different war radios. After 25 years in museum, each unit operated.

View of the Paraset in operation. With the box open, the AC supply cord is connected and the headset, antenna and ground wires, tubes, and crystal are plugged in. The operator is transmitting a message encrypted. The initial tuning is extremely easy: After plugging in the tubes and headset,
selecting the right crystal, and connecting the power pack, the op tunes the receiver to the home station freq. using the calibration curve pasted under the lid. He then switches to "transmit" and depresses the key, and simultaneously turns the tank tuning and antenna tuning knobs until both bulbs glow at their brightest. The set is then properly tuned and ready for operations.

For maximum sensitivity and selectivity during reception, the operator has to turn the regen control up until a hissing sound can be heard through the headphones.

KA0TPZ, wdx0awt@juno.com

And now, a word or two from Joel

Fly home little Piglet
Fly across the pond
Fly to the earth's end
Circle the earth, again and again

Fly High
Fly Proud
maybe even give a toot
But Please, Please don't Poop...

May ur signals cross the horizon's horizon
and visit many worlds
pass the word,
ever is hamming so fine
as when u work
a flying swine...

Ke1la Joel in Maine
lost it.... in Maine ω

Stu Rockafellow Amateur Radio Society Summer Activity: Plymouth, Michigan

By Chuck Mabbot, AA8VS

There has a lot that I have read lately about the term HAM and where it came from. I found HAM was also a name for a LID, a poor operator, a 'plug.' In addition, I heard all kinds of politically correct nice sounding things. Frankly I think they missed the point, based on my experience it comes from one basic fact, food. Go to any swap, field day, or any time when Hams are involved. I am willing to bet that food is not far away.

Now that we have that established that I would like to let everyone know something about what the Stu Rocks do. We have a couple of special event stations that run every year. They also had a great write up in January's CQ magazine, pages 89, 90 and 91.

One special event station commemorates Jimmy Dolittle's bomber raid on Japan is done by club members. All the details will be in May's QST magazine. You will find them on April 21st and 22nd transmitting N8Dooolittle for the special event.

The next special event station remembers the sinking of the Edmund Fitzgerald on Lake Superior. That will be November 10, 11 and 12. Again look for details in October QST. There will be station setup at the lighthouse at Whitefish Point, Michigan and the call will be N8Fitzgerald.

As you can see the club is active, but now we'll get to my favorite event. The 'Dogs in the Park'.

This runs twice a year and the main reason is just to get together on a summer day in one of the local parks here in Plymouth, MI. There are a large number of hot dogs, brats, or what ever is easy to grill. This is a mid week break, from work. Besides you need to relax a little before the Saturday morning breakfast get together HI HI.

This was started informally a couple of years ago and the first time turned into a competition between some local clubs on setting up radios, antennas, running on batteries and making some contacts. There were various methods used to get antennas into the trees such as sling shots, weights on the end of wires, but the parents started watching out for the kids when the folks with the bow and arrows showed up. All in all it was great fun, who won, what was the score ...... not sure but the hot dogs and pot of beans with a mustard flavor were great!

Another year we had some QRP rigs setup, one of the fellows brought some WW II radio gear and setup a station. Another station was set up and several folks checked into the local CW traffic net. I lucked out and managed a contact in Belgium but the QRO rigs buried me. Used a loop antenna, HW 8 running 3.5 watts on 20 meters. There were a lot of large brats, hot dogs, and a pot of BBQ beans that were great!

This year we had hot dogs, brats, and the fellow in charge Keith K3ETH made a pasta and meat dish that was tremendous.
Another ham and I agreed that the pasta and chocolate chip cookies were the hit this time. A fellow had a 2-Meter HT with an adapter to run CW. This seems to have gotten several fellows interested. Rich W8VS had an FT100 running into a vertical antenna. Dave KB8RAP had a fine looking Harley Davidson there to.

So you see, we are not just radio only type of people! We had members from Stu Rock club, Garden City club, Novi club, Milford club, Livonia club, and the [GM] Firebird club.

In conclusion, it is not complicated to put one of these things together, but it takes someone to do some work coordinating it. The club usually authorizes budget of $50.00. You need someone who is willing to oversee it and Keith K3ETH did a fine job. A donation cup is set out for anyone who wishes to contribute. You need some people willing to cook, allow them to sample as they cook which seems to work.

So get out there have fun invite the other clubs in the area, and if there are non-hams that stop by with questions offer them food and talk to them. This year we have two scheduled for June 14th and September 13th but as schedules go things can change. If you're in the area of Plymouth, Michigan around this time, the talk in is 145.17 or 224.94.

72, oo Chuck AA8VS, FP# -113 Ω

The miniPIG the multiPIG and the “UGLY”
By Diz, W8DIZ

PART 5 – Freq. Display, and PLL.
The frequency display for the multiPIG is a freq. counter with a user-configurable offset. The offset is the IF frequency of the multiPIG. 3 pots control the offset to within 10-hertz resolution. You can either add or subtract the offset from the freq. counter input to display the transceiver frequencies.

The input on C1 could be switched between the PLL output and a general-purpose input to measure other frequencies. This can be accomplished by defeating the offset with S1.

Calibration is easy. Connect the freq. counter to a known source, defeat the offset, and adjust C6 for the correct display count.

U2 is used a signal amplifier and turns the input to square waves for the PIP controller to process.

This has to be one of the simplest and easy to use freq. counter around. The compete kits are available at http://www.aade.com
The MultiPIG PLL is modeled after the PLL used in the Elecraft K2.
The K2 used a serially programmed PLL chip while the MP used the parallel input version. The purpose of the PLL is to generate a MIXING frequency for the MP, enabling the MP to transceiver from 0 thru 30 MHz. The PLL frequency is determined by two controls; The reference frequency generated by crystals X1 and X2 and also the divider switches, set by S1 and S2. The Reference frequency is either 8.192 or 10.24 MHz and divided by 2048 within the PLL chip to give us a base frequency of 5 kHz. Also, the voltage controlled oscillator (Q2) is fed to the PLL and frequency divided to generate a 4 or 5 kHz signal. These two frequencies are compared within the PLL and then the PLL generates an output that represents an error signal. This error signal is integrated in op-amp U2 to provide an error correction voltage, which is applied to the varactors (D3-6) in the VCO.

The VCO tuning circuit is comprised of the varactors and L4. The output of the VCO is amplified and buffered by U4, a nifty video amplifier. It's output is then delivered to the Freq. counter, one of the transceiver’s mixers, and the PLL itself. The output is also connected to Q3 and Q4, which act as an AGC circuit to stabilize the VCO output voltage at different freqs.

Switched S1 and S2 are cheap DIP switches. These could be replaced with octal or hex switches if available. I know of a source that sells decimal rotary switches that could be used as octal switches and at 25 cents each, the price is right.

Output of the PLL/VFO is about 10-20 milliwatts, enough to be a qrp transmitter in it's own right. An important note about this circuit concerns C25, the large variable capacitor. This cap is susceptible to microphonics. The new versions of the MP will replace C25 with switched fixed capacitors paralleled with a trimmer cap.

The fine-tuning is done with the reference oscillator, controlled by X1 and X2 crystals. These crystal frequencies up "pulled" so as to provide a 5 MHz to 40 kHz range per S1/S2 switch setting. In other words, at the low end of the spectrum, you have a 5 kHz tune range and at 10 meters the tune range is about 40 kHz. Not bad for a crystal reference.

72, oo Diz, W8DIZ Ω
Hello everyone and welcome to another trip into the World Wide Web!

This month we will look at sights that can help you identify those long forgotten parts stashed away in the bottom of your junk box. Ever wonder just what that 16 pin chip is, or what that transistor crosses over to? Well, with a bit of luck, and these links you just might find out!

A good place to start is with known parts, but forgotten specs:

Semiconductor Datasheets offers on-line PDF files of common parts:
http://www.farnell.com/france/support/datasheets.html

These next links are varied in nature, but buried in them is a cache of knowledge!

Philips cross-reference
http://www-us.semiconductors.philips.com/products/xref/

NTE cross-reference
http://www.nteinc.com/

EGC cross-reference
http://www.ecgproducts.com/

Hobart transformer cross-reference
http://db.yescorp.com/HEcatalog/xref.html

Analog Devices cross-reference
http://www.analog.com/

SK cross-reference at Inland
http://www.inland-electronics.com/skcross/skcross.htm

Dantona battery cross-reference
http://www.batterycrossref.com/

RelayCenter.com relay cross-reference
http://www.relaycenter.com/cgi-bin/index.pl?sesid=E31179031217E11711&relocate=

There is a very large selection of companies that have cross-references on-line, try this search at Dog Pile.

Until next month, 72, oo
Dan, N8IE FP #-6 Ω
Thanks to slow winter business and lack of disposable income I needed an inexpensive hobby, so one night in late December '99, I remembered an early attempt to construct a crystal radio (a dismal failure) and found that a wealth of info was available online. I was soon on my way to radio shack to get some 1N34 diodes and some wire. After some success, I became interested in the early history of radio and read about regenerative receivers. From the NorCal site I found Rick Weber's site of a beautiful reproduction of an early station. I sent Rick an e-mail congratulating him on the remarkable work and that I was thinking about getting back into the hobby.

Rick generously offered to loan me some study materials (the novice/tech and general study guides from the ARRL) and a random code generator. I had forgotten all the code except CQ de wd9evm.

On March 3rd 2000 I passed the elements required for a Tech+, after 20 long days the FCC issued KB9VZS.

I ordered and built a SW40+, and after some initial troubles and the addition of an ATU to the shack, was again on the air. In my novice days I had wanted to eventually get an extra class license and build my equipment. So this time around it is my focus. I picked up a Vectronics 20 meter xcvr kit, a TT2, later a Heathkit HW-7, with which I used to haunt 15 meters and get a taste for DX.

Among some of the club members I am known as Kentenstein 'Destroyer of Rigs', I personally favor Kentzilla, but in any event the SW40+ and HW-7 are presently not working. The Vectronics is too annoying bother with so I am presently QRT. Not for long though, and I am glad that I didn't send my SW40+ to Diz. He generously offered to try to fix the thing. But now I need the ft 37-43 toroid that is on it, for a TX i hope to finish by the time y'all read this, and maybe a few other parts from the board. In time I will endeavor to bring the rigs back to life.

I have recently enjoyed the taste of success in 'ugly' construction and have a Direct Conversion receiver kludged together from a few different circuits and it works. So I am very close to realizing one of my original goals in ham radio-RX ex TX r Homebrew. as I have just begun to understand the nuts and bolts of radio construction I will attempt to help others that have similar desires in a column called 'From the Workbench' that may debut this issue.

I am unmarried (the love of my life won't have me back-yet), have no children (unless I count myself or the business), play the Bass Guitar in a Rock band. I like to play on the wood lathe and put together my computers. If a repair costs more than the tools required, I buy the tools and learn the repair. The best job I ever had was working in a small bakery making bread and pastries. To anyone who has made it this far, you well know, by now, that I am also a windbag.

Thank you Rick W9QZ, for the early help and inspiration, Dan, for the bits, Diz, for the club etc. Mac for some encouragement and just for being one of the nicest guys around, Brian, for the yucks, and the rest of you fine oinkers for putting up with my gab. I would like to extend my gratitude to Ian VK2TIP and Wes W7ZOI for the access to their wonderful expertise, online, and in the wonderful book "Solid State Design for the radio amateur".

73 es s'oooo'ies T U Ω

---

**Tales from the Workbench!**

By Kent, KB9VZS

Hello all, The intent of this and hopefully more articles to follow is to help the individual who is interested in the fine art of homebrew achieve success as I myself have only recently experienced. It has always been my intention to operate a station of my own construction, and if my studies prevail, one of my own design. What follows will be an attempt to share my experience as I attempt to build and operate equipment.

First off I am not an EE, nor do I have any technical degrees, I just like to make stuff and learn new things. As of two weeks ago I had only been successful with one project-so If you are still struggling, I feel your pain. I have recently rendered my two rigs useless-which means I know enough to be considered armed and dangerous. Fortunately I have just finished a Homebrew receiver and have the parts set aside for a Transmitter which I will start working on as soon as I am done with this installment. These projects will be documented next month complete with photos.


There are other good ones out from what I have heard: "QRP Classics" arrl Paul Harden NASN has a book I feel I need to get my hands on, from what I understand the man has a wonderful knack with the pen.

These qrp clubs have excellent publications devoted to homebrew among other things. QRP ARCI has a magazine called "Qrp Quarterly" NorCal QRP Club has a publication called "QRPp" that is well regarded The GQRP club publishes a journal called "sprat"

If you can get your hands on any or all of these publications, I can guarantee that it will shorten your learning curve. Also consider joining the qrp-l mailing list and the GQRP mailing list-you will have access to some of the finest minds in the game.
If I am having difficulty learning something I find that having(7,99),(988,982) many different ways of looking at a problem is beneficial to my future understanding of that subject. I have been carrying the handbook and the 2 DeMaw books mentioned above and reading them for the last six months, and have only recently begun to understand some of the nuts and bolts of radio. Kits are a wonderful way to get your feet wet and get familiar with the tools and components used in our hobby, and offer a pretty good chance of success.

Below are a few links to pages with some good homebrew information and circuits. I was once baffled by the information on some of these sites but just keep looking and one day the stuff will make sense to you as some of it has for me.

http://www.fix.net/~jparker/norcal.html
NorCal Qrp Club homepage

http://www.electronics-tutorials.com/
From Ian Purdie VK2TIP, the address explains the content

http://www.fix.net/dans.html
Dans small parts, a good place to find some of the more obscure parts needed for some project.

Peter Parkers project Page, where I got the circuit for my first successful project.

Another VK2TIP page, Some good projects listed on this page.

http://hem.passagen.se/sm0vpo/
Harry's Homebrew Page, this one is linked to from just about every homebrew page on the net.

One last thing- I find it helpful to download the page that has a project I am interested in to the local machine so I can check it out anytime I want, and save bandwidth to boot, though Harry doesn’t agree with this tactic.

Anyhow I hope the above makes some kind of sense and look forward to having more information that may be of use to you next time as we will discuss the Signal Generator for Peter Parkers page, The HedgeHog-the bolt-together-modules DC receiver I have recently managed to get working, and also a description of the TX that should be working after I get it finished.

If you have any questions and or suggestions, do not hesitate to send me mail, hecklings or flames to kentb@bloomington.in.us, and I will do my best to answer.

Until next time (I'll have pictures I promise)

72/73 de Kent KB9VZS Ω

I like this idea even better! I can just picture all 200 of us running around with a Norse style foil hat (with horns) with a 40 meter J-pole at the crown.

Oh NORSE style?? Well, why didn’t you say so? I think I would look pretty happening with a Viking helmet loaded up for the 15 cw sub band...I’m barely big enough to be a Viking (6’ 210lbs). I can see it now.....dreamy waves dreamy waves:: there i am! With my 15 meter Viking war helmet! Swinging my sharpened Outbacker at the pileup as I prepare for battle!! I stand on the bow of my Dragon Ship! (88 Ford Escort GT)...i dent the hood of said dragon ship but i plod forth!! My Battle Dress flowing in the North Atlantic wind...(i.e. my Flying Pigs shirt flapping about in the Las Vegas blow dryer)...I LEAP from the bow of my sturdy ship as the unmistakable plunk of sheetmetal returning to its original state reports behind me....i quickly turn to see if i remembered to set the Mighty Dragon Warships parking brake on...whew<...OK!! Where was I???? I attack with a furious swipe of my mighty sword!! oops...wait, I’m still loaded up for 40 from last night...there...OK!! I hack away at the mighty pileup before me...the battle is fierce! But i am a radio berserker!! I MUST claim my prize!! I am struck across the head with a huge slash from a kW defender...my headphones are smoking and i am disoriented...but i battle on!! After many hours of battle I finally hear my warriors name repeated to me through the fray of the Donnybrook....I AM VICTORIOUS!! I will collect my plunder of qsl's and return to my Mighty warship...hmm, what’s that puddle of fluid under my warship? Oh well I’ll check it out later....YES!! i stand proudly above the defeated enemy warriors!! I HAVE DEFEATED YOU EVIL KW MONSTERS!! WHOS YOUR DADDY?? SAY IT!! WHOS YOUR DADDY!! .....SAY IT!!

DADDY!!
DADDY!!
....daddy...

"Hey daddy!"

(huh? wha?)
"DADDY!!" (opening one eye to see a small child playing with my nose and holding an economy sized jar of peanut butter...toys strewn about the kitchen in strange patterns...and one of my shoes...filled with little Fischer-Price people as some sort of shrine in the center of it all)

"Daddy? I’m hungry.....hahahaha...you have slobber on your face"

Wow! I must have fallen asleep at the keys. (I lift my head up, my small boy laughing and pointing at the nice keyboard pattern imprinted on one whole side of my head)

.....i can only imagine what 200 of us doing this would be like!

73...Adam, N7YA SOC 143  Flying Pig #86 Ω
Warning - - - To all PIGS that are cutting PCB for the making of circuits.

Remember to wear breathing protection when cutting the PCB.

That stuff between the copper is fiberglass. It rots the lungs. !!!!!!!! Bad stuff. I forgot for one piece. Went and got a heavy duty breathing mask.

I mean the kind you must spend $15 or $20 for. I worked around the stuff many years. I am surprised I forgot. That little paper mask is better than nothing, but be good to yourself, love yourself get a real good mask. One that makes you sweat while you wear it. You know one for bio-hazard.

Breathing air born fiberglass makes smoking like a romp in fresh air. Fiberglass once inside does not come out. Ever Little cysts are formed over each particle in the lungs. If you quit smoking after a while you get a little better. This stuff just stays and stays and stays forever.

WB8ABE, FP #61
Direct vom Schreibtisch des Fliegenden Schwein del escritorio del cerdo volador Spanish dalla scrittura del maiale volante Italian z bivrko do nystania swince Polish du bureau du cochon volant French

40°1'1" N 83°3'58" W EN80la Ω

Oink-Oink

By Bob, WB8UOJ

Found the following in the Cleveland Plain Dealer 1-31-01, thought it might make a decent spot in the Bacon Bits newsletter. The following is put in as printed in the paper.

Bacon Bits
"Oink-Oink" in Other Languages

1. In French - "groin groin"
2. In Japanese - "buubuu"
3. In Korean - "kkool kkool"
4. In Swedish - "noff noff"
5. In Mandarin Chinese - "hu-lu hu-lu"
6. In Croatian - "rok rok"
7. In Thai "ood ood"

Source: "The Complete Pig" as printed in the Plain Dealer

72, "OO"

Bob WB8UOJ FPQRP #82 QRP-L #2019
Grafton, Oh GRID EN81xg Ω