



## Potomac Valley Radio Club Newsletter

October 2006

Visit us on the web at [www.pvrc.org](http://www.pvrc.org)  
and [www.pvrcnc.org](http://www.pvrcnc.org)

# SPECIAL SWEEPSTAKES ISSUE

Read K3MM's Sweepstakes Secrets Beginning on Page 3

### Editor's Note

By [Pete Smith, N4ZR](#)

This issue is coming out a few days early because I will be traveling on the normal publication date (October 1). With CW Sweepstakes coming up November 4, and the air starting to turn cool, it's time to put those low antennas back up and start thinking about contributing to the club effort to regain the Sweepstakes gavel. This issue also includes the second half of K3ZO's Thai adventures (continued from the June issue), and columns from our faithful scribes K3WA and K4ZA, as well as an article on rolling your own AC line filter by W4MDL, formerly known as W0YR. Also, don't miss the antenna installation pictures in our [Extended Content](#) section, courtesy of NI1N and WX3B. Enjoy!

---

### From the President

By [Jim Nitzberg, WX3B](#)

Have you been tuning the bands lately? I have!

As we enter the fall equinox with the sun directly over the equator, DXing gets better and better. The European openings are getting louder on 20, and are lasting a few minutes longer on 15. Conditions on 40, 80 and 160 seem to be improving, too. During the WAE SSB contest, 20 meters was the band that never stopped!

Frank, W3LPL tells us that this is the season to expect 20 meter openings to Asia (JT and JA) at 8:00pm local time. I love these bottom of the sunspot cycle openings!

We're not the only ones experiencing the swing back to better band conditions. On Saturday morning, September 16<sup>th</sup>, AA1K spotted a DU9 on 160 meters! That would have been a new one for me if my 160 antenna was "up". Needless to say, it went back up the very next day.

After sunset the very next day, I heard Bryan, N3ST, working YB1A on 40 meter CW. Of course the path to YB1 on 40 was 170 degrees (Thanks Bryan). Jeff, N8II told me these types of openings are common, and warned me that there are 4 possible paths to work VKs on 40 meters at this time of year!

Preparation for the CQ Worldwide Contests -- unbelievably only one month away -- is in full swing. The following PVRC members plan on making QSOs from these exotic DX locations:

1. N3OC, W2BZR and WX3B join team V26B in **Antigua**

2. K3LP is traveling to **Jamaica** to join team 6Y1V (a new station!)
3. W2GJ and K3IXD are traveling to the **Bahamas** and will operate as C6APR.
4. K8OQL and W8HC are traveling to Israel to operate at 4X0WV
5. W3ARS, K1RH, N3VOP and W3ADX are operating as FS/WY3P
6. WA4PGM operates at Team PJ4E

As the summer came to an end, we re-started our evening Maryland and Virginia Central meetings. Ty, K3MM continues to create excellent guidelines, tips and instructions on maximizing your Sweepstakes contribution. Bill, K3WA added his expertise on maximizing your Sweepstakes score from a modest station with an excellent article in September's PVRC newsletter. Read it, as well as his follow-up this month, and join the PVRC Sweepstakes effort!

Speaking of participating in the PVRC Sweepstakes push... don't be surprised if you receive a phone call encouraging you to get on the air for the November Sweepstakes! The chapter leaders have discussed contacting their members directly, and a small group of Central and Northwest volunteer members will be calling PVRC members in their respective regions to ask - cajole, coerce, convince - them to plan on participating, at any level, in the club competition. These should start in early October.

As we get closer to the Sweepstakes. I'll post a list of PVRCers who expect to be active during Sweepstakes to the PVRC email reflector.

The timing of this PVRC newsletter marks another exciting event – the first club competition in the CQ Worldwide RTTY contest! The PVRC is sponsoring the plaque for the winning club, and my hope is that we, the sponsor, will win our own plaque. Thanks to Mike, K4GMH, and Bud, W3LL for the championing and public relations associated with this new club event.

The results of the PVRC Hot Operator Award poll are in, and I am delighted to say that it has almost universal support from those that responded. Voting members were split on the question of motivation – with about half saying that these awards would increase their participation in contests. Several members suggested the NAQP and Sprints be added to the club competition for the Hot Operator Awards.

The PVRC Hot Operator Awards are completely separate from the 5m program and you automatically accumulate scores toward both programs. You can review the rules and awards of this exiting new program at:

<http://pvrc.org/PVRCHOTOperatorAwards.htm>

Highlights of this new award program:

1. It starts fresh at the beginning of each year – it is not “cumulative”
2. There are multiple classes which reflect a wider variety of operating categories
3. There are participation and activity awards that are NOT just based on raw scores
4. There is a greater ability to easily add more contests to THIS program – since it is new, and being “tested” for the first time.

Thanks to K4ZW, WR3L, W3DQ, WM3T, NI1N (our new awards director), N4AF and N4ZR for helping with this new program.

Finally, mark your calendar for the 2006 PVRC Holiday Dinner, which will be held at **P.J. Skidoos** in Fairfax, VA. on **Monday, December 4<sup>th</sup>**. Last year's our event was attended by 85 PVRC members and guests. More details to follow in the next newsletter. Thanks to Jack, K4VV and Dave, WR3L for agreeing to organize and handle the finances for this event. We hope to see you there!

I am truly looking forward to the start of the upcoming contest season. In a month, it will seem that there's a good

contest every weekend – and that’s because...there IS!

73,

Jim Nitzberg WX3B

---

## **GO PVRC! GO Sweepstakes!**

**By Tyler Stewart, K3MM**

It’s time to circle the wagons for Sweepstakes! We need every member to do their part this time in an all-out effort to take back the Unlimited gavel. SMC and NCCC will be out for blood and we will need a substantially larger score than last year’s best to take it back. This means we need EVERYONE’s participation. We’d like to encourage you to make Sweepstakes the first two priorities for the contest season. We have asked all the Regional Chairmen to arrange to contact all members in their region to get the word out and help our members get on the air for SS. If you need assistance of any kind, please contact them and ask for it. If you can’t operate your station or want to do an “HMO”, ask them to find someone who would like to use it. If you need a station, ask them to help you find one. Make good use of the PVRC email reflector if you have any questions or needs for SS.

PVRC has put together a very nice package of awards just for Sweepstakes to provide extra incentive to our members. In addition, PVRC 5 Million Award points will be doubled this time. All this is geared towards improving our participation numbers and time served. The way sweepstakes is scored, with the limited number of multipliers, score progression is relatively linear in relation to the amount of time you operate. So do the time and you will be rewarded. No matter how good or bad your station or operating skills are, the more time you put in, the more you’ll help yourself and PVRC. In fact, my favorite club award for this contest is the one that rewards operating time. No matter what your score is, all we can ask is that you do your best by putting in the time to do your best.

Following are some specific suggestions to think about. First, from the club perspective:

1. Do the time! Try to set a higher personal goal for operating time or score level in each mode that will boost the PVRC club score.
2. Encourage single-op operation. Single-ops with any meager station should be able to generate more score individually than as part of a multi-op group. SS is a great time to wean the novice contest operator. Multi-op stations might be broken up into several stations and/or used in an HMO rotation.
3. Encourage HMO (“Highly Motivated Operator” – one operator switches to an alternate transmitter, location, and callsign halfway through the contest to increase overall score) entry if you want to have more fun and/or increase club score at the possible expense of your individual recognition by ARRL. I suspect PVRC will have a special award for the highest HMO scores. Those interested in this category should contact WX3B or your regional chairman for help coordinating efforts with another op.
4. Encourage the use of high power to maximize overall club score.
5. Having a club activity sked or skeds is fine, but I typically don’t find them very productive. I won’t participate in them unless I have a second radio to spare.
6. Discourage the practice of selective calling, i.e., just going around selectively working other club members. I don’t think it’s very ethical and the time is better spent working everyone you can at a high rate and sending in a log for PVRC! However, I do encourage everyone to work stations on the shortest skip band possible (usually the lowest frequency band with any activity). This automatically tends to keep all the points closer to home, i.e., in PVRC territory rather than in NCCC territory.
7. Make sure you send in the log on time!
8. Spot other PVRC members early and often! (thanks, K3WA!)
9. Find new members or local clubs to join into the SS fun with PVRC.

Operating strategies:

1. Time: Operate the start of the contest until approximately 2-3 AM local time without a break. Don’t give up too early. Things will be extremely slow on Sunday afternoon, so save plenty of off time for then. Get

back on early, perhaps even as early as 5AM local. 40 meters on Sunday morning is usually very productive. Take off ½ hour increments Sunday afternoon, using up most or all of the rest of your off time. Sunday evening is usually much more productive than Sunday afternoon, especially on phone. For those with limited time and especially low power, K3WA suggests waiting until Sunday to get on. By Sunday afternoon all the serious guys are getting desperate for new stations to work. It's almost a guaranteed pileup! Get spotted and you'll have to fight them off with a big stick!

2. Get on at least 15 to 30 minutes before the contest to assess the band conditions, warm up the keyboard fingers and Morse code decoder, or your golden CQ voice. Use this period to decide your beginning strategies such as CQ or S&P, which band or bands, etc.
3. SS is ALL ABOUT QSO RATE! Keep an eye on your rate meter at all times and do not continue doing anything that makes it go down.
4. Do not chase multipliers! If you do go S&P, don't just look for VY1JA, work everything you can find that is new. If you put in a decent effort, you will work just about all of them without trying, so don't sacrifice rate for a multiplier.
5. Always call CQ on at least 1 radio! This is especially important late in the contest if you are full time. By then, S&P will be like looking for a needle in the haystack. Many part-timers will not call CQ and if you aren't calling CQ, you won't work them.
6. If you choose to S&P exclusively, only do it at the beginning of the contest when EVERYONE is a new QSO or perhaps on Sunday afternoon for very short periods of time if things are very slow. It's impossible to justify S&P as a single radio operator. SO2Rs can spare a radio to do this searching, but even they will often find that 2-radio alternate CQing is more productive.
7. BE ACCURATE! The SS exchange is very long and time consuming. If you don't get a piece of it correct, you lose the whole thing. Get repeats if needed. This is the reason for my next rule:
8. Do not call or answer stations that are hard to copy while rates are good. You will waste a lot of time on repeats while you could have been working 3 other guys with good signals. You may not even complete the QSO. Remember you only need 1 QSO with each station sometime during the contest period. Chances are you will be able to work the weak station later with a much better signal and in a much shorter period of time.
9. Get to the next hot band early, especially on phone weekend. Short skip is very important from the East Coast. There is a huge population density in the Northeast and you need to be able to work it all. This means getting on 40 before it is open to the Midwest and certainly before its open to California. Same on 80. Not only will you easily work up and down the coast, but it gives you a good opportunity to acquire a prime run frequency before the hoards descend! I've always found 80 meters and particularly 75 meter phone to be particularly hot near the bottom of the sunspot cycle. It's a bottomless pit of both contesters and local "noncontesters" that will give you a QSO if you talk them through it.
10. Play to your station's strengths! You only need one contact per station and it makes no difference if that band is 10 or 80. If you have a good antenna on 80 and trap vertical dummy load on 40, just hammer away on 80! Don't worry about band distribution of QSOs. It means nothing in SS. I've had some of my best scores with way more than half of my QSOs on 75 phone.
11. Operate the contest on YOUR terms. It's easy to get disheartened when you listen to the endless runs produced by the big-gun western or southern stations on the high bands. My advice: IGNORE them! Avoid them! Don't TRY to work them! All those big guns will be around for the entire contest and will be much easier to work later...they may even come looking for you later. Play hard to get... Concentrate on working the east coast on short skip on the lower bands or working the little guys by calling CQ. Remember you need to worry about working the part time guys more than the serious contesters. The part-timers will only be there for a short period of time...get 'em now or lose 'em.
12. Remain flexible. Don't be afraid to change your strategy at any time if what you're doing doesn't seem to be working well. Keep an eye on the high bands for short skip/ backscatter openings. When these occur, these otherwise lackluster bands can produce huge runs because you can work both short and long at the same time, giving you good geographic coverage. Flexibility is a lot easier when you have a second receiver. You can use it to gauge which band or even frequency to be on, find your next run frequency, search for NWT, etc., with minimal or no effect on your primary radio performance.
13. PACKET: If you use packet (Unlimited class), use it very sparingly. Frankly I think it's of very limited value in SS other than for discovering general band conditions or for finding the last couple of multipliers.

If you do enter this class, be very careful that you don't let it diminish your rate. It's better suited for SO2R operators...single ops cannot afford to stop calling CQ and possibly lose a run frequency. Even then, I usually won't chase spots until Sunday. When calling a spot, if you can't get them the first time you call, wait 10 minutes or so and then try again once the pileup diminishes. I will often jump to the oldest spots first to avoid pileup delays.

Station strategies:

1. Low, efficient antennas generally work best. Wires should be at least  $\frac{1}{4}$  wavelength off the ground at the feed point. Antennas this low generally benefit from a ground reflector wire to increase efficiency and produce more high-elevation radiation for very short skip openings.  $\frac{3}{8}$  wavelength height is probably better for overall coverage. Antennas this low are usually fairly omnidirectional, so don't worry too much about orientation. Dipoles are generally the most efficient, but inverted V's and slopers also work well, although they tend to be noisier. On the lower bands, dipoles, inverted V's, and especially slopers should typically be oriented broadside to the east coast if possible. Slopers should, of course, slope to the west or northwest. On the higher bands a little more height usually helps since the angles that work are generally lower. Something closer to  $\frac{1}{2}$  wavelength is probably preferable. Here again, you only need ONE good antenna for longer paths and ONE good antenna for the real short stuff for a complete SS package. The primary goal is to be able to get a good signal into every corner of the US at some time during the contest on any one band. It's generally better if you can cover more angles with one antenna at the same time, since you are being heard over a larger area at the same time, but early in the contest I think this is less important.
2. If your 80M antenna(s) are particularly noisy, it's especially important to put up one good RX antenna, such as a EWE or loop. They are fairly broad, so if you only have one, point it West or Northwest. Having another pointed northeast can certainly help under some conditions. Make certain you can switch back and forth between it and the TX antenna with a simple flick of a switch or button.
3. Be comfortable. Have everything within reach of your headphone cord and preferable from your chair. Relieve yourself just before the contest and try not to drink too much before and during. Keep an empty jar handy just in case ;) Eat light, high protein, low carb snacks during the contest. I also try to avoid aspartame (NutraSweet) and tea, which are diuretics as well as caffeine until very late in the contest if necessary. I always keep some Excedrin nearby or whatever works for you on headaches, etc. There is nothing worse than trying to work a contest with a splitting headache, whatever the cause.

I'm sure I've missed or forgotten a few tips, so feel free to add your own to this list! Also surf some other contest sites for other ideas about SS.

HAVE FUN AND GO PVRC!

---

**PVRC Contest and Event Calendar (PVRC Events in boldface — all dates and times are Zulu except as noted)**

Pennsylvania QSO Party 1600Z, Oct 14 to 0500Z, Oct 15 and 1300Z-2200Z, Oct 15

**Tower safety presentation at U.S. Tower Service, Frederick MD, 0800-1000 local**

North American Sprint, RTTY 0000Z-0400Z, Oct 15

**CQ Worldwide DX Contest, SSB 0000Z, Oct 28 to 2400Z, Oct 29**

**ARRL Sweepstakes Contest, CW 2100Z, Nov 4 to 0300Z, Nov 6**

**WAE DX Contest, RTTY 0000Z, Nov 11 to 2359Z, Nov 12**

**ARRL Sweepstakes, Phone 2100Z, Nov 18 to 0300Z, Nov 20**

**CQ Worldwide DX Contest, CW 0000Z, November 25 to 2400Z, November 26**

**ARRL 160-Meter Contest 2200Z, December 1 to 1600Z, December 3**

**PVRC Holiday Dinner, P.J. Skiddoos, Fairfax VA, December 4**

**ARRL 10-Meter Contest 0000Z, December 9 to 2400Z, December 10**

---

### **Ammunition for Little Pistols**

By **Bill Axelrod, K3WA**

Welcome back, fellow little pistols. At least to the 1 or 2 of you who still read this column. That most likely means it's time for you to get a life. Or to get on the air and into more contests.

Our 2006 contest season has started now and its time for us to get serious. Summer is officially over, cool nights have returned, DX is back on 80 and 160, and the 2006 Sweepstakes are now looming in the headlights.

Last month I waxed eloquent (or maybe just blew a lot of hot air) on the subject of how we little pistols were critical to achieving the PVRC goal of being the number 1 contest club in this years Sweepstakes. The club just can't get there from here without a major effort on OUR part. So here's some more thoughts.

1. Every entry counts. Whether you make 10 QSOs, 100, or 1000 you are putting points on the board. And PVRC needs every one of them there points. If you're at home during the SS weekend(s) please get on the air. If only one hour, get on the air. Make some Qs, and submit your log. Yep, submit your log. You can do it.
2. Not comfortable with your skills? Practice. Join the on-the-air practice on Thursday evenings before the SS. Have a little fun. Yes, the SS exchange is long and not exactly easy to copy in any mode, but it does get easier with practice.
3. Set up your logging program in advance. Test it thoroughly. Not only does that prove out your set up, it also works as practice.
4. A phone operator are you? Well, maybe this is a chance to try out a little CW anyhow. The conventional wisdom is pretty much right in this case – go high up in the band and call CQ at your comfortable speed. You will NOT be the only slow CW op on the band. There are a lot of folks who would love to make a slow speed CW contact in the Sweepstakes. Re-read item #1. Give it a shot Jeez, you just might learn to like it.
5. A CW operator are you (he said, staring at himself in the mirror)? Well, maybe this is a chance to try out a little SSB anyhow. Just like CW testers, it's real hard to get a SSB operator to slow down well enough for me to copy. Go high up in the band and call CQ at your comfortable speed. You will NOT be the only slow SSB op on the band. There are a lot of folks who would love to make a slow speed SSB contact in the Sweepstakes. Re-read item #1. Give it a shot Jeez, you just might learn to like it. I'm still working on that last little bit.
6. Maybe the real reason you don't play in the Sweepstakes is because domestic contests bore you. Or maybe the repetition bores you. Well, just fantasize that you're at Burger King where you can get it your way. The SS is the Burger King of contests. OK, that's going a bit too far. But the Sweepstakes gives you opportunity to tailor your operation to something that's fun for you if you don't care for the basic contest. Huh? Yeah, build your own contest – set your own goals and see if you can meet them in the context of the Sweepstakes. For years my SS goal each year was to work the maximum number of sections with the minimum number of QSOs. So, for me, the best possible score would be 80 sections in 80 QSOs. Why? Because it was fun for me to see how close I could come while running my paltry 100W and a vertical antenna. Never quite got there but I did get awful darn close. Sure, I'd rather see each of us maximize our QSO counts and turn in the largest possible score for the club. But if it takes something like that to get you on the air, go for it.
7. Re-read item #1. Get in on the sweeps, have fun, and help the club out.

Enough already.

OK. This quasi-Little Pistol tried a new contest recently. I got on the CW NA Sprint. Wow! What a burger! Oops I meant contest. That was about the most lively non-stop 4 hours of contesting I ever experienced in my 50 years of hamming. I can't quite figure out how I let this one slip by me before. It sure is different since no one is allowed to park on a frequency and run for 4 straight hours. It forces everyone to S&P, to call and be called. It forces all participants, even the big guns, to seek out every station they can and call them! For a Little Pistol it sure is nice to be called. I don't think I could keep up the pace in a SSB Sprint but WOW! What a contest.

So fellow Little Pistols, once again, consider your selves exhorted to get on the air for the Sweepstakes and help PVRC bring home the bacon. You'll be glad you did.

More next month.

73 and CU in the 'tests... Bill

---

## The Toolbox

By **Don Daso, K4ZA**

Traditionally, digging in the dirt has been a pejorative term—that if you fail at everything else, you'll end up digging ditches. By hand. Slowly, painfully, and mindlessly. Punishing labor. So it sometimes seems with tower bases and guy anchor holes in the ground. The site is too restrictive for powered tools, for instance. Or the owner cannot afford their rental fees. Something, whatever it is, means those holes must be dug by hand. Here are some tools to increase the speed, ease the pain, and make it less frustrating.

For the larger hole, the tower base, the traditional shovel and pickax can be used in combination. But many folks are surprised to learn that various versions of the most basic dirt-moving tools exist. Specifically, the trenching shovel or spade, which is very similar to the round point shovel (which most of us know), only it's very narrow, typically only four-inches wide. It's used to remove loose dirt from the bottom of trenches dug by a machine or for digging holes and trenches in soft soil. Get one with a long handle and you can easily expand the sides of holes, and so on. And while on the subject of expanding holes, let me suggest a clever solution to "squaring up" dirt. (A mass of square concrete is more resistant to movement than rounded off lumps poured in the ground. Yet the traditional round point shovel leaves exactly that—rounded off cuts.) A simple six-inch steel floor scraper will work wonders (especially in Carolina clay) in squaring up the sides of holes, allowing you to put a precise corner or edge in a tower base hole. I'm pretty sure N6CY is still wondering how I was able to make a perfectly square hole in the soil of his backyard (the tower base was inaccessible to backhoes or Bobcats). The scraper allowed me to create perfectly square corners (I laid a framing square against them as I went) and edges.

Again, most everyone knows the pickax. But consider, instead, the mattock. A mattock is a cross between a pick and a shovel. It has a narrow blade on one side (somewhat like a trenching shovel, only smaller), with a pickax point on the other side. You use it like an ax. I use a mattock for digging short trenches and removing rocks. With a mattock blade on one side and a pick on the other, a mattock will dig twice as fast and twice as easily as a shovel.

Another indispensable tool is the tamper or digging bar, which is simply a heavy steel bar about five feet long. A tamper bar has a head on it similar to a huge nail-head that's used to compact soil. The digging bar part has a wide, flattened point like a large chisel on the other end.. Don't struggle with rocks and debris, when the tamper/digger/pry bar will move them easily.

Now, the true test of the dedicated dirt mover, the main tool in the arsenal—the post hole digger. Again, many folks know and have used or use the standard two-handle model. But not too many know (or have used) an auger model. The auger is faster (in my opinion) and makes a cleaner hole. (It's sometimes difficult to plunge the two-handle model perfectly straight down, repeatedly, especially when you're tired. And, if the base hole is large enough, you can continue to dig with the shovel, but will find it difficult to remove the dirt. The two-handle digger can be used like giant chopsticks to lift out the dirt your shovel has loosened.) But, the real benefit of the auger model is that you can change the depth of your hole by simply changing the length of



A Seymour Auger

the handle. For instance, by adding a 3-ft pipe nipple between the auger and the existing handle, you're now digging a six-foot-deep hole, by hand, to set those elevated guy post anchors. Take it off, and you're back to the standard 3-foot deep hole suitable for fence posts and clothesline poles.

In my Ohio farm boy youth, I simply hated the post hole auger. I'm amazed to find I've searched out and own one (Seymour makes the best auger, in my opinion). Yet I find myself grinning when I successfully dig what some clients thought was going to be impossible or impractical holes in the ground.

What's in your toolbox?

---

## Computer Line Noise Filter

### Simple and Effective

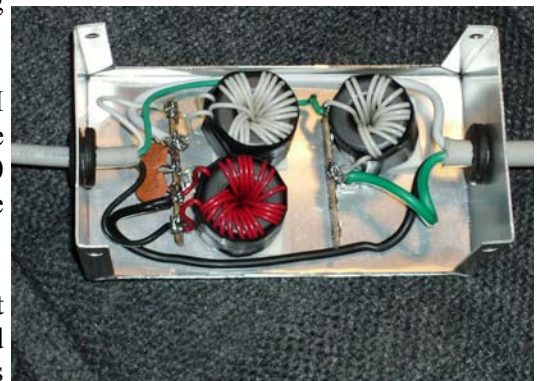
By [Mike Lonneke, W4MDL](#)

When a friend upgraded his computer and gave me his old one, little did I suspect that the freebie PC would bring with it, all kinds of noises, gurgles and whines, spaced across the HF spectrum. I became exasperated and began trying to suppress bothersome birdies.

Despite carefully connecting the PC to my station ground, winding all leads into and out of the PC onto ferrite cores, the noise persisted. One birdie, 14.013 MHz, was S4. The 17-Meter band had a couple of birdies that made life there miserable. It was obvious that the garbage was being distributed through the power line. With the parts on hand, it took me about ninety minutes to mark and drill a Radio Shack aluminum project box, then, to mount and solder the components. Now the birdies are eliminated and I can hear the weak ones on those frequencies formerly denied to me.

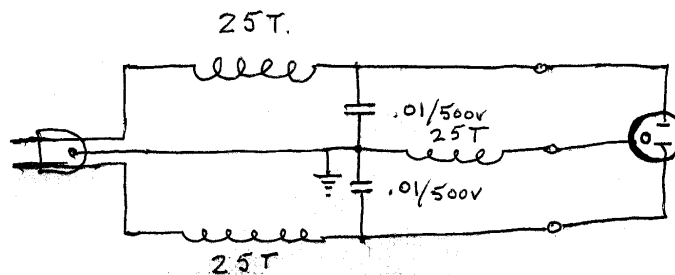
The only parts you can't just go out and buy are the #43-mix toroid cores. I had some on hand, but you can get them quickly and inexpensively from Amidon or Palomar Labs. Be sure the ferrite mix is for the HF range or the filter won't work. The terminal strips and .01 mfd, 500 volt disc capacitors are in the bins at Radio Shack and so are the terminal strips. Don't forget to get some nice, big grommets to protect the line cords at each end of the project box.

Layout is simple and the photo shows how to fit everything in. I used double-sided Scotch sticky pads to hold the ferrite cores to the aluminum box. Some constructors may want to use enamel #20 AWG wire, but this requires wrapping the cores with Teflon tape and I opted to the use of insulated wire I had on hand.



Parts Layout

[Editor's note—a very similar filter is available from Corcom, built into a computer power supply input connector—see Mouser and other catalogs. The big advantage of Mike's approach is that it's cheaper and won't void your PC's warranty, if that is a concern. You can also use this design as an inexpensive and effective interference filter for virtually anything that causes or receives HF RFI]



Schematic



## **My Ham Radio Life Abroad—Thailand 1968** **By Fred Laun, K3ZO [continued from the June Newsletter]**

So we suggested to Chankij and the other Thai hams in STAR that the system be changed so that it would not be possible for anyone to guess what their callsign should be. We proposed that non-Thai hams be issued three-letter suffixes in strict alphabetical order, and that only Thai nationals would remain with two-letter suffixes. Furthermore, we proposed that prefixes be determined by Thailand's nine police districts rather than Thailand's four Army regions as was the case at the time. Lt. Chankij, being a policeman, particularly liked this idea. It would also give prefix hunters more HS prefixes to hunt for.

The STAR Board of Directors agreed with our proposal and set January 1, 1970 as the date on which the change should be effected. During the RAST Christmas party a few days before the changeover, those of us who already had Thai calls drew suffixes out of a hat to determine what our new call signs would be. I drew ABD and with the prefix re-alignment became HS5ABD. Don got HS4ABM. Once this system was in place, Chankij's informal prohibition on the use of CW also disappeared.

Don and I were not really happy with the informal nature of the Amateur Radio situation in Thailand and we kept working to improve the situation to the extent that we could. We decided that were STAR to be granted membership in IARU Region 3 the international recognition would enhance STAR's status in the eyes of Thai officials and we had learned that IARU official Michael Owen, VK3KI would be overnighing in Bangkok's Narai Hotel as a transit stop during his IARU travels. We arranged a meeting with him and presented him with STAR's application. Not long afterward STAR was granted IARU Region 3 membership.

HS1SS was willing to sign a reciprocal operating agreement with the USA and having been through the process in Santo Domingo I was familiar with how the process worked. The Thai PTD accepted the Department of State's suggested wording word-for-word. Unfortunately the Thai Ministry of Communications had to agree before such an agreement was forwarded to the Thai Foreign Ministry for signature. At the time Thailand had a military government and virtually all ministerial positions were held by senior military officers. The Minister of Communications was Air Chief Marshal Dawee Chullasapya and he rejected the PTD proposal.

My big boss, the USIS Chief in Thailand, Lew Schmidt, agreed to go to see Marshall Dawee, who he knew, to plead our case. Lew reported back that Dawee had taken off his glasses, knocked them against his desk a couple of times, and said: "We know your people are on the air and we know who they are. Nobody has done anything to shut them down, have they?" In other words, go ahead and keep operating, but don't try to get us to put anything about it in writing.

During my stay in Thailand I went on the one and only DXpedition I have ever been on in my life. It was during the CQWW Phone Contest in October 1969. We had just about managed to get ourselves off the ITU's banned list but it hadn't happened yet so Don and I decided to go operate with a multi-single group being set up by PVRC member Dick Price, W3DBT, who was then operating as XW8CS in Vientiane, Laos. The Laotian Government at the time was non-Communist and ham radio was completely legal. A number of American Embassy people there were on the air.

My boss in Chiang Mai, Jim Carrigan, had been reprimanded for crossing into Laos informally while on field trips along the Mekong River separating Laos from Thailand, so I was determined to do everything "by the book" on my trip. It started in Bangkok following a STAR meeting. Don had arranged for us to be transported to Udorn Thani near the Laotian border by a USAF C-130 but by the time we looked at our watches after a leisurely day downing a few too many tall cool ones, there was some doubt that we could get to the airport in time to make our flight. Don hailed a cab and told the taxi driver: "If you get us to the airport in time for us to make our flight I'll double your fare."

This was the type of challenge that a Thai cab driver could not refuse. His manhood was on the line! The result was that I spent the ride on the floor of the cab's back seat not daring to look out while Don thought the whole thing was hilarious. We got to the airport in plenty of time and a proud cab driver, smiling ear to ear, gladly ac-

cepted his double fare.

After we got to Udorn Thani Don made his own way to Laos while I insisted on doing things "by the book". I hired a taxi to Sri Chiangmai, the town right across the Mekong River from Laos' capital city Vientiane, and entered the Thai Government's District Office in order to have my departure from Thailand properly recorded and my passport stamped. It was a holiday and the Thai District Chief was having a very liquid party in a back room. He popped his head out the door briefly and said: "Can't you see that everyone else is just going right across? I don't need to see you. Just go ahead."

But I had been chastened by my boss's reprimand so I insisted, saying that if he refused to process me I would be required to make a full report to my office in Bangkok. So he grudgingly opened the massive record book, had me fill out the proper line, and stamped my passport. As I went to get on the boat which was to take me to the other side I could see that the District Officer had been right, people walked up to the boat from all directions and just got on. On the Laotian side I was the only one who bothered to step into the small immigration booth before heading on into town. Fortunately the booth was manned but the two officers were amazed that someone was actually asking to have their passport stamped. They obliged but their first attempt with a stamp that had been vastly overinked for the occasion resulted in a blotch which made that page of my passport unreadable. Their second attempt on another page was successful. They ended up being pleased that I had stopped in, however, because while I was there an American who spoke no Lao or Thai (the languages are very similar) dropped in to ask what he needed to do to go to the other side for a few hours. "Just come back before dark" was the answer I relayed, and the man went off happily to Thailand, no paperwork required.

Then I got a taxi and, using the directions given to me by W3DBT, arrived at the XW8CS QTH without problems. Those who have operated from the tropics know that the evening hours are the most productive, and the late mornings are the worst time to be on. One of our other operators, PVRcer Doug Woolley, K4EZL (XW8CR) took me on a spin around downtown Vientiane a little before noon when the bands were almost dead, and I got to see the outside of some of Vientiane's legendary nightspots such as Lulu's, but in the evening when such places were open, so were the bands, and, after all, I had come to Vientiane to contest.

Once we were off the banned list Dick Price accepted my offer to come to Chiang Mai and operate the 1970 CQ WPX SSB Contest at HS5ABD with me. Shortly before his visit I had been complaining on the air about getting "bit" by RF on my D-104 mike, and I still clearly remember the sight of Dick getting off the plane from Vientiane handcarrying an eight-foot copper ground rod. The first thing we did was pound it in the ground at my QTH and connect it to my station ground, and the RF problems were a thing of the past. Another vision stored in my memory is that of Dick pushing my bedroom curtains out of his face while logging a contest pileup with his other hand. I have never liked air conditioning so I operated with all the windows wide open to get a breeze from outside, and Dick was unlucky enough to be in a pile-up when a storm blew in.

After reading through this account, the reader might get the impression that the U. S. taxpayer paid me to go out to Southeast Asia and have fun operating ham radio. The reality is that the nature of my job had me traveling for days at a time to the most remote villages in Northern Thailand. Chiang Mai is perhaps best-known as the biggest city in the so-called "Golden Triangle" where Burma, Laos and Thailand come together along the Mekong River valley. When I arrived in Chiang Mai I felt like I was at the end of the Earth. Just North of the Golden Triangle is China, in those days hermetically sealed in the aftermath of Mao Tse-tung's disastrous Cultural Revolution. At that time the Golden Triangle was an area of porous borders populated by a wide variety of ethnic groups including remnants of Chiang-Kai-shek's Kuomintang forces which had fled China in the aftermath of the Communist takeover of China, and largely unassimilated tribal groups such as the Karen and Hmong. None of the latter paid much attention to the borders of nation-states which sliced through the areas they had inhabited for centuries. Because the tribal peoples were looked down on and discriminated against by the Thais, the Chinese Communists felt with some justification that tribal areas would serve as a logical beachhead for the struggle to bring a Communist revolution to Thailand in line with Mao Tse-tung's theorems. The areas of Thailand inhabited by these tribal groups were also geographically the areas physically closest to China. Finally, the Maoists were upset that remnants of the Kuomintang Army remained in the area and longed to wipe them out once and for all.

For our part U.S. policymakers tended to take the most apocalyptic view of the future. They thought that the Soviets, Chinese and Vietnamese were bonded together in an unbreakable union to bring the entire world under Communist domination. Occasional reports of disagreements and disputes between the Communist powers were pretty much discounted. Our view was called the "Domino Theory" and we were working to try to assure that the Thai domino would never fall to Communism.

There was in fact an active insurgency in Thailand funded by the Maoists. Every evening one could listen on 1190 KHz to a program from a 500 KW transmitter located near Kunming, China which called itself "The Voice of the Thai People". In the Thai language and the various tribal languages the station stridently urged an uprising. Guerrillas regularly engaged Thai forces in remote mountain areas.

The designated role of the U.S. Information Service for which I worked was to produce materials which would urge the Thai people to support their government against the Communist efforts to bring it down. In Bangkok we had a film unit headed by a professional American film-maker, and we enlisted some of Thailand's most popular young movie stars as actors. The story line in general was that the village's most eligible young bachelor, despite entreaties by his beautiful girl friend, is lured away by the Communists to join the insurgents. After spending some time with the insurgents he becomes disillusioned by their dictatorial and inhuman methods and returns to the village a chastened young man, marries beautiful girl friend and all live happily ever after.

Our job out in the provinces was to show these films in the remotest areas we could reach. Our four-wheel-drive jeeps were equipped with winches and a cable with a hook on one end suitable for wrapping around a tree, and we used this apparatus frequently to pull ourselves through muddy stretches of forest on our way to show movies to people who had never seen a picture show in their lives. Some of these villages were on mountaintops and we had to park our jeeps down below and walk to the village with our projectors (always a spare "just in case") and generator. It was a source of some embarrassment for yours truly when, as I huffed and puffed my way up a mountainside, twelve-year-old village boys carrying our generator, one on each corner, would whiz past me in joyful anticipation of the show they were about to see that evening.

Some mountains did have roads but they tended to be one-lane gravel roads hugging the mountainside with the other side a sheer drop-off without a guard rail of any kind. Thailand drives on the left side of the road just like the British. One day when coming around a blind curve on a mountain I was surprised by a vehicle coming toward me. In my surprise I reacted the way I would have were I driving in the states, while the other driver made the correct adjustment for Thailand, but fortunately we were able to stop in time. My traveling companion that day, Peter Whitlock of Radio Australia, commented: "Almost made a Yank move there, didn't ya mate?" After a road trip of several days we would be greeted back at the office with cries of "hua dang", Thai language for "redhead", covered as we were from head to foot in red dust from the provincial roads we had used.

In some of the less remote villages we had competition from soap companies -- really!! -- who would carry three-reel soap operas through the countryside. You could see the first two reels for free but if you wanted to get back in for the final reel you had to buy some soap first. The fact that our shows were free from beginning to end made us somewhat popular by comparison.

In Chiang Mai we had two American officers including myself and a Thai staff of seven. Five of our Thai staff were on the road almost constantly showing these films and handing out propaganda leaflets. They had been doing the work for some time and knew all of the Thai government officials in the provinces in which we worked. My area of primary responsibility was Nan Province which shares a long border with an area of Laos then controlled by the insurgents. My frequent travelling companion was Mana Smithapindhu, our Thai staffer who was responsible for Nan Province. A graduate of Silliman University in the Phillipines, his wife Letty was a Filipina, and as we bonded I became a frequent dinner guest in their home and they in mine.

Toward the end of my tour we began to wind down our work in the provinces due to program changes mandated by Washington. Mana and two of our other Thai staffers were making their final film tour of Nan Province when their vehicle was ambushed by the insurgents and all three were killed. I had been scheduled to join them on the trip but my boss assigned me other duties at the last moment. Never in my career did I have a more difficult duty

to perform than to inform the wife of a good friend that her husband had been killed. Being shot and kidnapped in Argentina didn't even come close! I only got about half-way through my planned sentence when I broke down in tears. Letty and I held each other and just cried for about half an hour.

Letty had always had longing eyes for the cute VW Karmann Ghia that I drove while in Chiang Mai. I had purchased it used from another diplomat so "nationalizing" the car to make a Thai citizen eligible to own it was a bit of a bureaucratic nightmare. I paid a substantial amount to a Thai go-between to fly to Bangkok and invite all of the relevant officials in the Customs Department to a substantial repast as the necessary paperwork was passed around and signed by all present. It was the least I could do to return the friendship of a fine man and one of my "teachers" in the ways of Thailand.

---

## Briefly Noted

### Recreational Tree Climbing Course

Have you ever wondered if the techniques that professional arborists use to climb trees might have uses in amateur radio? I recently took a recreational tree-climbing course at Blue Ridge Tree Climbing. The owner and instructor Bob Wray is a true gentleman, an excellent teacher and a ham as well. He owns a 35 acre tract of woods surrounding his home on the Blue Ridge Parkway in Meadows of Dan, VA. This is near the North Carolina border. The class starts when you get there on Friday and continues till Sunday afternoon.

You will learn the knots and methods that the pros use to climb trees as well as some refinements that the recreational climbers have developed. You will spend a lot of time up in the trees and you will have more fun than you thought possible. You will be secured to the tree at all times with ropes and a harness. The maximum class size is two so you will have plenty of instructor time.

Bob has trained with experts in several different disciplines of vertical rope work and has incorporated the best of each into his course. I found it an excellent way to get more at ease with working at heights. There is primitive camping available on site and there is lodging nearby as well. The cost is currently \$300 per person. I had a great time and would recommend it to anyone.

For more information see [www.blueridgetreeclimbing.com](http://www.blueridgetreeclimbing.com)

73 Glenn N3HUV

---

## Around the Club News from the Chapters

---

PVRC President Jim, WX3B, announced recently that Jose Castillo, N4BAA is assuming the leadership role for the **Tidewater**, VA Chapter. Don, W4ZYT, the outgoing Chairman, was nice enough to provide this background on Jose:

N4BAA is the current president of the Virginia DX Century Club, and is an enthusiastic DXer and contester. He was first licensed in 1977, and achieved DXCC as a novice. He is the only member of this club to have qualified for the full 200-zone 5 band WAZ. Jose is an energetic designer and builder of big stations, a keen proponent of computer applications in ham radio, and an avid operator, with over 280 countries confirmed and impressive scores recorded in a number of recent major contests.

WX3B was also happy to have learned a bit more about Don, W4ZYT in this process. In addition to Don's interesting hobby (contesting) - he has a busy academic surgical practice! Don has been licensed since 1959, and he became the Tidewater point of contact in 1996, when Rich, KE3Q spearheaded an expansion of PVRC to take in new areas beyond the immediate DC/NOVA/MD region. Don recently qualified for the 5M Award. Congratulations, Don and thank you for over a decade of PVRC leadership!

The **Central Region** met September 11 on the Maryland side at Topolino's. Thanks to Mark, KD4D, for organizing the meeting at what IS one of the best Italian buffets I've had in a long time. In attendance: K3ZO, KI3O, NN3W, KD4D, K3MM, WR3L, WM3T, WX3B.

Topolino's continues to be one of my favorite restaurants - nice selection at a reasonable price - and on Monday night - they are EMPTY So our rag chewing is not QRMed by other folks nearby. Dave, WR3L and WX3B had a brief discussion of some additional expenses we will incur with our new awards program and our proposed 2007 contesting seminar. Please consider a donation to our club as we run entirely on voluntary contributions.

KD4D was fresh with WAE stories from N3HBX/Poolseville. He was the die-hard 40 meter operator, and gave WX3B some lessons on what a good 40 meter rate is all about. It was also rumored that Mark found a great new way to reduce noise by using a short piece of Coax as a diversity receive antenna for 40 meters. Mark is planning on doing some sweepstakes work from N3HBX this year.

NN3W as also at N3HBX this weekend and admitted to enjoying the huge European run that actually started at 5 AM Saturday morning. Rich is planning to run Sweepstakes from the Jack, N4RV's impressive station. WM3T, Anthony was in town on a business trip and we were lucky to have him join us. Anthony has been secretly building a big station. I believe two new "toys" that have flown below the radar (until now) include a 2 element 40 meter mono-bander, and a brand new Ameritron AL-1200 1.5kw amplifier! Now WM3T has a BIG signal on the bands. Wait, was that WM3T, or KM3T?

K3ZO and I had a brief discussion about his recent experience on 80 meters, and he is delighted with the performance of his 3 element Yagi! On a separate topic, Fred was also (of course) able to identify, by call sign, the net control (JA) operator who runs the Southeast Asian DX net on 20m in the morning, and the Vietnamese (JA ops) that run the XV3AA station. What I can't understand, however, is how that JA net control operator was LOUDER than all the JAs in the All Asia contest that weekend.

KI3O discussed his building-top Sweepstakes operation and lamented the fact that he has a limitation not many of us face: he is "kicked off his operating position" (the roof!) by 11:00pm at night, JUST when things get interesting on 75 meters.

K3MM is our tactical leader for the Sweepstakes ground troop mobilization effort and showed up with a new, improved (revised) action plan to maximize our Sweepstakes efforts. Although he thought he was preaching to the choir, it turned out a lot of us learned something. We learned that the (U)nlimited mode can be fun, as long as you don't get distracted. I learned that it is normal to CQ on two bands at once (not at the same time of course).

WX3B described the plans to contact PVRC members. He thanked Tyler for leading the charge again this year on advising folks the best ways to operate and maximize their score. Jim also explained that the PVRC chapter leaders have been contacted and each one of them is willing to contact their own members and help in getting folks on the air. Jim also explained that a group of about 6 - 8 folks (mostly identified) in the Central and North West regions are going to call active and inactive PVRC members and encourage them to get on the air. We will also be taking a list of folks that need help, or need a place to operate. When the "PVRC Solicitor" calls, please be polite - we really aren't selling anything other than Sweepstakes!

The next PVRC central meeting is being held at the Olive Garden in Vienna, VA on Monday October 9th. The topic may be familiar to some: why, it's the 2006 Sweepstakes. If you think you know everything there is to know - come anyway, you might be surprised....

73, Jim Nitzberg WX3B

---

**PVRCNC-EAST's** regularly scheduled gathering took place on Thursday, September 7th. Those in attendance were W4KAZ, Keith; NX9T, Jeff; W0UCE, Jack; KE4GY, Frank; K2AV, Guy; AD4L, Pete; N4TL, Tom; W4MY, Marty; N4YDU, Nate; N4PY, Carl; AL4T, Brad; NT4D, Jay; N4GU, Mike; K4CIA, Bill; and K1ZW,

Larry.

Due to K4QPL's trip to Europe, NX9T and W0UCE quickly found out what it takes to maintain order of such a "ruly" bunch. A couple members reported working Jim during a short burst of HF operating while in "G" land. A few general announcements were made, specifically relating to the excitement of the new Hot Operator Award, and we quickly moved on to member reports:

KE4GY, Frank described how he has been using a code key device that translates his keyer-sent code into key strokes on the computer keyboard. He uses this at work daily. Frank is also currently using a Delta Loop at home and is working on a beverage. K2AV, Guy has been busy replacing his shack computer. He advised that he is "finally" switching over to N1MM and has reconfigured some of the wiring in the shack.

W0UCE, Jack, now sporting the moniker "Rod" has been driving in massive numbers of ground rods in hopes of fending off future lightening strikes. He offered sage advice about renting tools from larger home supply retailers...watch out! He rented a hammer drill but after determining the rods were not driving in properly discovered that what they gave him for his rental was actually a standard drill. Much wasted time and energy!

N4TL, Tom bagged a few new DXCC countries recently. He also has just returned from a trip to New York where he attended an antique radio show. Since returning home, Tom has reconfigured his VHF antenna feedlines. W4KAZ, Keith traveled to Louisiana and operated a little during the NAQP. He has also finished up a K9AY loop. N4YDU, Nate operated in the IOTA contest in July to the tune of 550 Q's and commented on how strong Asia was coming in on 20m. He is a high school teacher and is starting a ham radio club!

N4PY, Carl has recently moved to the mountains of North Carolina (big gain for N4YDU as he took over Dad's former QTH and well equipped antenna farm). He has antennas up and a new observatory in operation now. AL4T, Brad has been very busy with projects. In addition to "filtering up" his MP, he has been working on an 80m vertical with 32 elevated radials and a K9AY loop. NT4D, Jay was active in the NAQP (both modes) as well as WAECW. He mused about how he totally enjoyed the WAECW outing. Jay is working on numerous projects and station repairs.

N4GU, Mike made his first official meeting with the NC-East gang. He's a 10 year veteran of PVRC and has taken up residence in eastern Wake County. Welcome Mike! We're glad to have you with us. AD4L, Pete advised that he has a complete Rohn 45 tower system for sale (80 feet). Although he has missed the recent contests, he remains hopeful for the future. He is quite busy these days pursuing a PhD. in mathematics. Pete is heading up a special PVRCNC 10 year anniversary program for November, slipped from the original October target.. A plea: In preparation for the anniversary meeting, please forward any fond memories, experiences, or observations involving N4AF to Jack, W0UCE. Contact Jack directly for more information.

W4MY, Marty has been off the air lately but has grown his tower now to 73'. He has an XM-240 and C3 ready to go on top soon. Marty is also in the process of installing a new HF mobile set up. NX9T, Jeff operated during the NAQP (SSB) and enjoyed being back on the air after a period of radio silence for most of the summer. He is preparing to finish up his new 160m Inverted L. K4CIA, Bill's big news involved his WIN in the ARRL DX SSB contest in the QRP category. Great job Bill! K1ZW, Larry has a second tower up now which is sporting 13 element 2m and 23 element 432 yagis. He recently replaced his main rotor.

This month's Paper Contest involved solving an antenna installation problem. NT4D came up with the highest scoring solution and took home the prize, a 3-wire circuit analyzer. W0UCE led the group in reading over a list of suggestions and techniques to "Combat Fatigue." Many useful ideas surfaced from the handout and ensuing discussion.

73, Jeff NX9T

As is now a common occurrence, the (hungry) **Downtown** bunch gathered at the Capitol City Brewing Company for our monthly gathering on September 13. Newcomers W3IDT and W3UR joined the regular group of W3DQ, NN3W, K3ZO, WV4V, NS3T, N3KHK for a noisy conversation. In addition to K3ZO's distribution of QSLs and a preview of the October QST (thanks, Fred!), there were lots of conversations about (urban wire) antennas, operating and life in general.

Our next gathering dates are on the following Wednesdays: October 11th, November 8th, and December 6th. Feel free to join us!

73, Eric W3DQ

**Carroll County** PVRC BBQ & WX3B Open House, September 16— In attendance: N3ST, K3SWZ, K3NDE, K3DB, K3DB/Carol, N8II, K1RH, K3DTH, (+ Robert, Matthew, Nicholas & Douglas), NI1N, W3RAR, W3RAR/XYL, K3KWO, K3KWO/XYL,N3VOP, AK3Z, KA2BKG, KA2BKG/22 month old Son, KC3VO, N3SB, W3ADC, W3ADX, WA3G. If I missed anyone, please let me know. Thanks to all that made this a GREAT event.

It rained for hours in the morning, and cleared up about 2 hours BEFORE the scheduled WX3B Antenna Party/BBQ.K1RH's 9 year old Son Robert worked a RARE DX station on one call, also tended the BBQ with Mike, N3VOP as relief BBQ experts to help WX3B. Everyone brought food & supplies and we had some awesome homemade treats! The Triplets (K1HR & K3TDH's children) Robert, Matthew Douglas and Nicholas stole the show.

The gathering covered the backyard, living room and basement simultaneously. The party wound down to about 6 folks by 11:00pm then became 3 until 4:00am. There was some sideline conversations going on about the upcoming CQWW and ARRL November Sweepstakes competitions!

Good company, great food and great time was had by all. Special thanks to W3ADC, W3ADX, N3ST and N3SB for cranking my 40m tower up another 5 feet and helping put the 160 inverted L back in service (Now I'm ready for that DU9 spotted by AA1K).

73, Jim WX3B

**5M Scores**

By **Anthony Brooks WM3T**

**WAE CW**

Call	Class/Status/Band	QSO's	Mults	Score	Call	Class/Status/Band	QSO's	Mults	Score
					WM3T	SOHP	244	97	116,160
					K1KO	SOLP	301	145	43,645
					W4MYA	SOHP	129	69	42,217
					K3ZQ	SOHP			32,550
					OP W9GE				
KD4D	DX VY2/KD4D	1662	181	1,574,577	W8OHT	SO (TS) HP	110	54	32,264
NN3W	SOHP	1321	431	1,137,840	NT4D	SOLP	110	142	28,400
@N3HBX					W4EE	SO (TS) LP	153	159	24,327
N4AF	SOHP	1216	442	1,067,872	N3UA	SOLP	68	103	14,008
OP NY4A					ND3D	SOHP 40M	140	99	13,860
K3DI	MS	874	138	596,160	@ WX3B				
N6ZO	MS	878	122	535,806	K3STX	SOLP	71	92	12,604
W3BP	SOHP	808	280	446,880					
OP KM4M					Total Logs:		23		
N4ZR	SOHP	676	112	382,616	Total Club Score:		7,343,809		
AJ3G	SOHP	884	283	280,172					
N8II	SOHP	459	104	235,812	MultiOp Operators				
K4GMH	SOHP	465	91	217,329					
K3WA	SOHP	798	221	176,358	K3DI	W3UL, K3DI			
N3KS	SOHP	401	216	172,152	N6ZO	N6ZO, N4BAA			
N4CW	N4CW/1	452	178	160,200					

## The Reference Page Has Moved

Because it changes so little from month to month, we've decided to move the reference page to [www.pvrc.org/refe.htm](http://www.pvrc.org/refe.htm). That should be more convenient for most readers because there are many links in that page pointing to e-mail addresses, etc.

## Advertise in the Newsletter — It Works!

Contact Dave, WR3L  
([dave@wr3l.net](mailto:dave@wr3l.net)) for details

### Tower Works

Specializing in Rohn guyed towers

Don Daso

515 Withershinn Drive

Charlotte, NC 28262

704-594-9853 704-408-7948 (cell)

E-mail: [k4za@juno.com](mailto:k4za@juno.com)

*Call or e-mail for rates and availability*



### THE R. F. CONNECTION

"Specialists in RF  
Connectors and Coax"

213 North Frederick Avenue  
Suite 11-F  
Gaithersburg, MD 20877

**Tech Support:  
301-840-5477**

**24-hour Fax:  
301-869-3680**

**Order line:  
800-783 -2666**

Email: [rfc@therfc.com](mailto:rfc@therfc.com)

Please visit us at:  
[Http://www.therfc.com](http://www.therfc.com)

Our catalog includes:

UHF Series, N Series, BNC Series, Adapters, F Series, DIN Plugs, Portable Radio Power, DIN Plugs, Hardline Connectors, Audio Connectors, Microphone Connectors, FME Series, SMA Series, Reverse Thread SMA Connectors, MCX Series, MMCX Series, Adapter Kits, Reverse Polarity (TNC, N, SMA), 39 coax types and 5 balanced lines



**12 STORE BUYING POWER**



# HAM RADIO OUTLET

WORLDWIDE DISTRIBUTION

## KANTRONICS



### KAM '98

- Single port VHF or HF
- RTTY, CW, Packet, GTOR, AMTOR, WEFAX
- GPS, NMEA-0183 compatible
- 6-16 VDC, DB-9 connector port

**\*\*Limited Supplies\*\***



### KAM XL

- DSP modem offers great performance on Packet 300/1200, G-tor, Pactor, Amtor, PSK-31
- RTTY, Navtex, ASCII, Wefax, CW, GPS NMEA-0183 and more!

**Call Now For Special Pricing!**



### KPC-3 Plus/KPC-9612 Plus

High-performance, low power TNC.  
Great for packet, and APRS compatible.

**Call For Special Low Price!**



Detailed illuminated map shows time, time zone, sun position and day of the week at a glance for any place in the world. Continuously moving - areas of day and night change as you watch.  
• Mounts easily on wall. Size: 34 1/2" x 22 1/2".  
**Reg \$1595. SALE \$1099.95**

## ICOM

### IC-R20 Wide Band Receiver

- Wide RX: 150-3304 MHz\*
- SSB, CW, AM, FM, WFM
- 32mb digital recorder
- 1,000 memories
- VSC • 100 ch/sec. scanning



### IC-R5 Wide Band Receiver

- Wide RX: 150-3309 MHz\*
- 1250 memories
- Alphanumeric labels
- DMS scan
- AM, FM, WFM

### IC-R3 Wide Band Receiver

- 500 kHz - 2.45 GHz\*
- 450 Alphanumeric Memories
- CTCSS w/Tone Scan
- 4 Level Attenuator
- Telescoping Antenna w/BNC Connector
- Lithium Ion Battery
- 2" Color TFT Display
- Audio/Video Output
- Four Way Action Joystick
- PC Programmable w/Optional Cable & Software

\*cell bands blocked  
\*615-901.995 MHz blocked, unblocked versions available to FCC approved users.  
FM video range for the IC-R3 is 900-1300 MHz & 2250-2450 MHz

## US1 TOWER

### MA-40

40' Tubular Tower

**Call For Latest Pricing!**

### MA-550

55' Tubular Tower

Handles 10 sq.ft. at 50mph  
Pleases neighbors with tubular streamlined look

**Call For Latest Pricing!**

### TX-455

55' Freestanding Crank-Up  
Handles 18 sq. ft. @ 50 mph  
No guying required  
Extra-strength const. Can add raising and motor drive access.

Towers Rated to EIA Specifications  
Other Models at Great Prices!

Shown with Optional Rotor Base



All US Towers shipped by truck, freight charges additional

**ANAHEIM, CA**  
(Near Disneyland)  
933 N. Euclid St., 92801  
(714) 533-7373  
**(800) 854-6046**  
Janet, KL7MF, Mgr.  
anaheim@hamradio.com

**BURBANK, CA**  
1525 W. Magnolia Blvd, 91506  
(818) 842-1786  
**(800) 854-6046**  
Eric, KA6IHT, Mgr.  
Magnolia between  
S. Victory & Buena Vista  
burbank@hamradio.com

**OAKLAND, CA**  
2210 Livingston St., 94606  
(510) 534-5757  
**(800) 854-6046**  
Mark, W17YN, Mgr.  
I-880 at 23rd Ave. ramp  
oakland@hamradio.com

**SAN DIEGO, CA**  
5375 Kearny Villa Rd., 92123  
(858) 560-4900  
**(800) 854-6046**  
Tom, KM6K, Mgr.  
Hwy. 163 & Claremont Mesa  
sandiego@hamradio.com

**SUNNYVALE, CA**  
510 Lawrence Exp. #102, 94085  
(408) 736-9496  
**(800) 854-6046**  
Dan K6DN, Co-Mgr.  
Howard, W6HOC, Co-Mgr.  
So. from Hwy. 101  
sunnyvale@hamradio.com

**NEW CASTLE, DE**  
(Near Philadelphia)  
1509 N. Dupont Hwy., 19720  
(302) 322-7092  
**(800) 644-4476**  
Rick, K3TL, Mgr.  
RT.13 1/4 mi., So. I-295  
newcastle@hamradio.com

**PORTLAND, OR**  
11705 S.W. Pacific Hwy.  
97223  
(503) 598-0555  
**(800) 854-6046**  
Leon, W7AD, Mgr.  
Tigard-99W exit  
from Hwy. 5 & 217  
portland@hamradio.com

**DENVER, CO**  
8400 E. Iliff Ave. #9, 80231  
(303) 745-7373  
**(800) 444-9476**  
Joe, KD0GA, Co-Mgr.  
John, N5EHP, Co-Mgr.  
denver@hamradio.com

**PHOENIX, AZ**  
1939 W. Dunlap Ave., 85021  
(602) 242-3515  
**(800) 444-9476**  
Gary, N7GJ, Mgr.  
1 mi. east of I-17  
phoenix@hamradio.com

**ATLANTA, GA**  
6071 Buford Hwy., 30340  
(770) 263-0700  
**(800) 444-7927**  
Mark, KJ4VO, Mgr.  
Doraville, 1 mi. no. of I-285  
atlanta@hamradio.com

**WOODBRIE, VA**  
(Near Washington D.C.)  
14803 Build America Dr. 22191  
(703) 643-1063  
**(800) 444-4799**  
Steve, W4SHG, Mgr.  
Exit 161, I-95, So. to US 1  
woodbridge@hamradio.com

**SALEM, NH**  
(Near Boston)  
224 N. Broadway, 03079  
(603) 898-3750  
**(800) 444-0047**  
Chuck, N1UC, Mgr.  
sales@hamradio.com  
Exit 1, I-93;  
28 mi. No. of Boston  
saalem@hamradio.com

## CALL TOLL FREE

Phone Hours: 9:30 AM - 5:30 PM  
Store Hours: 10:00 AM - 5:30 PM  
Closed Sun.

Toll free, incl. Hawaii, Alaska, Canada; call routed to nearest store; all HRO 800 lines can assist you; if the first line you call is busy, you may call another.

West.....800-854-6046  
Mountain.....800-444-9476  
Southeast.....800-444-7927  
Mid-Atlantic...800-444-4799  
Northeast.....800-644-4476  
New England...800-444-0047

Look for the  
HRO Home Page  
on the  
World Wide Web  
http://www.hamradio.com

AZ, CA, CO, GA,  
VA residents add  
sales tax. Prices,  
specifications,  
descriptions,  
subject to change  
without notice.