

PVRC Newsletter *June 2012*

President's Letter – Rich NN3W

Greetings to everybody in PVRC land.

It's Memorial Day weekend, and the bands are buzzing. I've taken a couple hours off between work and the CQ WPX CW contest (which by the way was pretty amazing last night on 15, 20 and 40), to get down to business on this month's President's column. We're wrapping up what has been a tremendous year for the Potomac Valley Radio Club. Indeed, at the Downtown lunch bunch meeting on May 16th, I was handed a fistful of Club trophy gavels which were awarded based on PVRC's victories in 2011. They include the 2011 ARRL 10 Meter contest, the 2011 ARRL 160 Meter contest, and (saving the best for last) the 2011 November Sweepstakes contests. Well done all! These wonderful awards will be handed out to contributing PVRCers during the holiday season.

We're winding down the 2011-2012 contest season – with only two more “5 Million Award” events left – this week's running of the CQ WPX CW and the June VHF QSO

party. However, that doesn't mean that PVRC is heading out of town for the summer. No sir! Indeed, the contest and event calendar is absolutely packed, and include the following:

June 2-4 – PVRC on-the-air reunion
June 9-11 – ARRL VHF QSO Party
June 16 – W3LPL open house
June 23-24 – ARRL Field Day
July 14-15 – IARU HF (non 5M event)
Aug. 4-5 – NAQP CW (non 5M event)
Aug. 10-12 WAE CW contest
Aug. 18 – PVRC Fowlfest
Aug. 18-19 NAQP SSB (non 5M event)

See, lots of stuff to do while you're dodging thunderstorms, mosquitoes, heat indices above 100, and tropical storms.

A couple of events to highlight: the two eyeball QSO opportunities at W3LPL and at W3NRJ.

As has been the case every year for the past umpteen years, we'll be gathering at W3LPL's antenna farm in Glenwood, MD. This is a terrific event and draws in crowds

from all around including contesters, DXers, QSL sorters, and everyday hams who which to make the pilgrimage to Maryland's #1 antenna farm. As always, there should be a food wagon there with plenty of yummy BBQ available for purchase, and plenty of drinks and snacks.

As we've done in the past, we'll convene a (hopefully) *brief* business meeting which is followed by several focus group meetings items like PVRC's and CARA's joint Field Day, a ARRL 3rd district QSL bureau sorters meeting, and likely a NCDXA meeting. I've also got a couple new events that I'm discussing with the other board members and then with W3LPL to add a little "something" to the event. Stay tuned to this station for additional information.

In August, we'll be reconvening at W3NRJ's QTH in Darnestown, MD for all the chicken you guys can stuff into your maws. Jim has

been working hard to uphold this long-standing PVRC tradition which he took over from W3YOZ and it has been a great event. Jim sent out his first notice invitation a few days ago and I encourage all of you to RSVP for Fowlfest.

If you can't make it to either of the in-person events, please consider joining us for the annual PVRC on-the-air reunion which will be held next weekend – June 2-4. This draws members from all over the country and is a great opportunity to hook up with calls that you don't see in the "Region" - especially since "once a member, always a member."

OK, I've taken off enough off time. Back to the brass.

73, Rich NN3W

<u>PVRC Officers:</u>	<u>Trustees:</u>
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PVRC Website: <http://www.pvrc.org>

PVRC On The Air Reunion, June 2-4 – Jack W3TMZ, 2012 Reunion Chair

The PVRC On-the-Air Reunion is a great way to keep in touch with old friends and members. Now that the club membership has grown so much, plus so many meeting places, it may be difficult to stay connected with everyone. The rules are posted on the [club web site](#) and will not be repeated here. This year RTTY has been added. N4ZR and N4AF have agreed to do the after the event scoring.

A bit of history, the first reunion was held as a “pow wow” in June 1964 and probably dreamed up by the committee of W4KFC, W4ZM, W3GRF and W4GF. There were 70 members who participated. The scoring was done in two categories, one for away stations (not considered to be in the DC region) and the local area. W4YE was the out of area winner with 84 QSO's and W3MSR (later to be W3GN) the local with 125. A total of 14 multipliers were available. I happened to be working in CA and had an opportunity to participate from there. It was quite interesting to hear what our big guns of PVRC sounded like on the West Coast as opposed to local backscatter.

Considering the club membership today we certainly could have a lot of fun, it might even be like a small state QSO party. So, please try to get on for as much time as you can spare in the prime operating periods, remember the BIC theory. Get on the air on June 2nd through 4th and send your score in to [N4AF](#)..

W3LPL Annual Open House – June 16th

PVRC members, guests and family are welcome to attend the 27th annual W3LPL Open House on Saturday June 16th at noon, rain or shine. BBQ lunch from CJ's will be available from noon to 2 pm. Frank's QRZ.com [address](#) is good for mapping to get directions.

Membership News – Bud W3LL

No new members were added since the last newsletter, but it's looking bright for future inductees into PVRC with 19 guests attending PVRC meetings over the past month.

Chapter leaders please remember to complete the [Meeting Attendance Report](#).

Pacificon Antenna Presentation by N6BT – Jim WX3B

The more you learn about antennas, the more you realize just how much you really don't know about antennas. This humorous and detail oriented presentation is quite excellent especially for folks that are relatively new to station building (that includes yours truly).

Tom, N6BT has his own antenna company and some of you might remember he was the original creator and owner of Force 12 Antennas prior to selling it to Mark. I picked up a few good reminders and new tidbits about debugging a station in the material [here](#).

Adding an IF Output to a K3 Sub Receiver – Mark N2QT

Using an LP-PAN on the IF output of my K3 to add a band display was a real eye opener for me. This won't come as a surprise to anyone who's used an ICOM 756 Pro or any of the other rigs that have this facility built in. However it seemed like there was an opportunity to expand on this by using the K3's sub receiver as well. When using VE3NEA's CWSkimmer <http://dxatlas.com/CwSkimmer/> this allows easy identification of where stations are calling in a DX pileup, or for scanning a second band for contacts if you use the AUX Antenna input on the K3 for the SubRx.

The Internet is your friend

Luckily a search online found that W3SZ had shared his solution in emails on the Elecraft reflector. What follows is my implementation of his approach.

The heart of the modification is the a Z1000 buffer amp kit from Clifton Labs. http://www.cliftonlaboratories.com/z10000_buffer_amp.htm This module provides a modest amount of gain, but more importantly isolates the rig from the leakthrough that many of the simple SDRs (like the Softrock from Tony [KB9YIG](#)) exhibit.

When building the Z1000 you determine the gain of the amp by selecting the appropriate resistor value. I suggest building it for 10db as this seemed to work best for me. (If you are using an LP-Pan with its own built in preamp, I would suggest building the buffer with less gain so as to not overload your soundcard.)

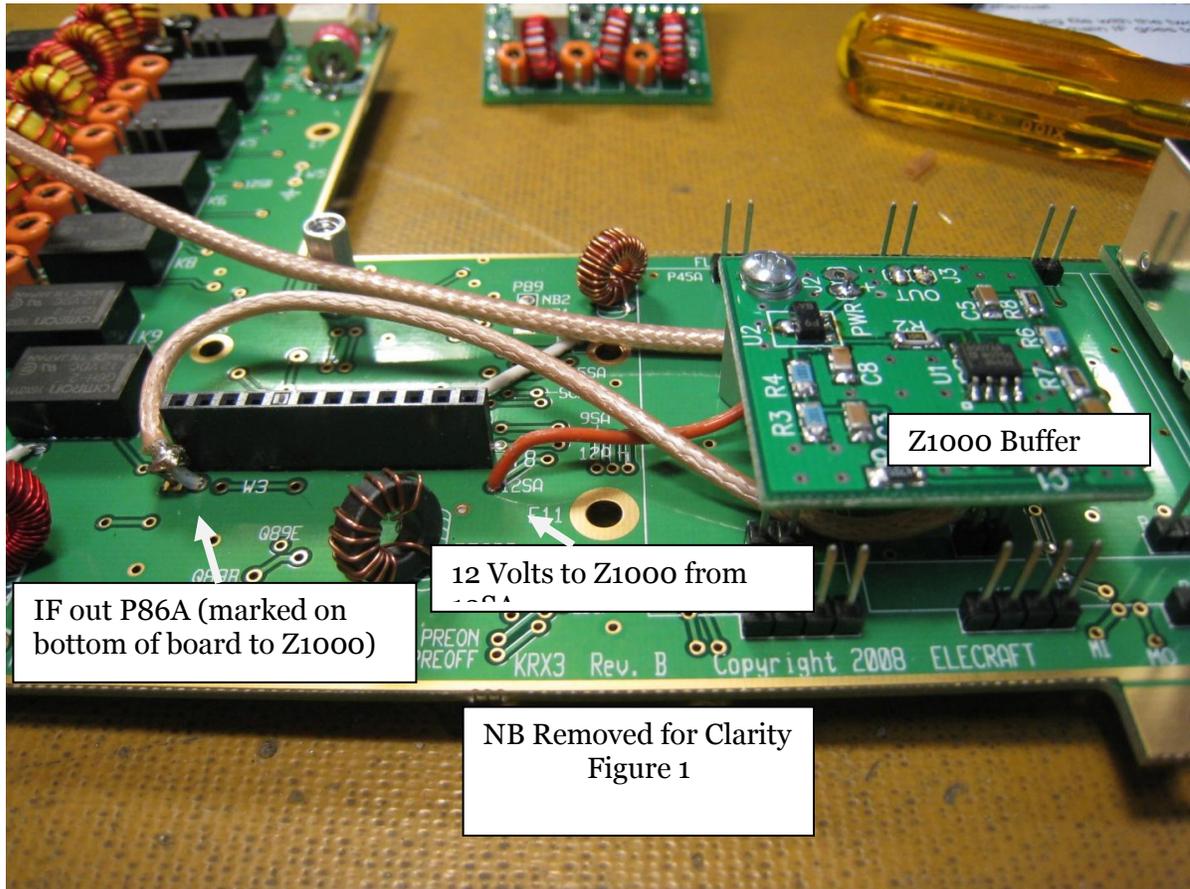
Refer to the K3 manual and remove the KRX3 from the K3 (or better yet do this as you are building the K3). Use good ESD practices.

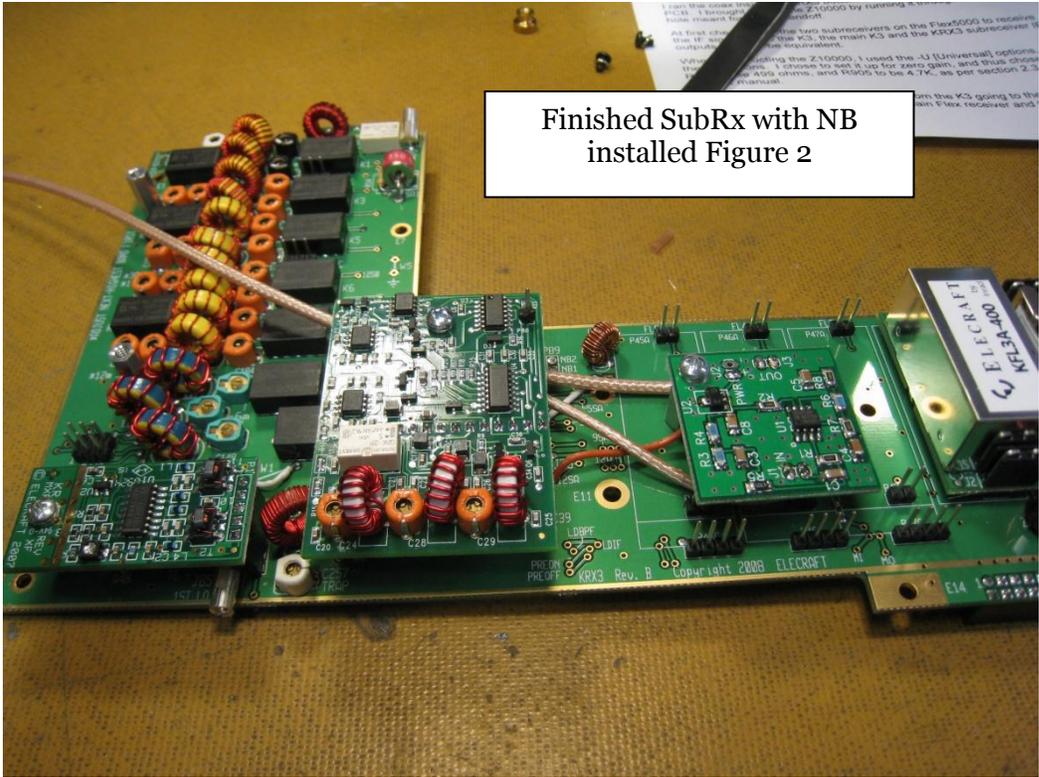
Remove the NB board from the KRX3 as all connections are made on the part of the receiver it covers. The IF out is from P86A (marked on bottom of KRX3 board, refer to Fig.1) and is connected with a short length of small diameter coax to the input of Z1000. Making this as short as possible helps minimize the leakage of IF energy. That is also a good reason to use high quality double shielded coax for all of these connections. Find 12v from the nearby 12SA pad on the KRX3 and connect to Vin on the Z1000. The ground return is through the mounting post and the shield on the coax, although you can certainly run a separate wire if you chose. A coax cable then connects the Z1000 output to a female SMA connector so it can be routed through the mouse hole on the back left of the KRX3 shield. All connections are made to the bottom of the Z1000. You will need to remove the left side panel of K3 to route the cable to the hole in the back panel intended for REF input. (The SMA connector I used required washers to fit the hole). Secure the cable with a TY-wrap as indicated in Figure 3.

The Z1000 itself, mounts in an unused FL position using a .5 inch 4-40 standoff. This still leaves room for filters in the first three positions. (Two are shown installed in the pictured KRX3).

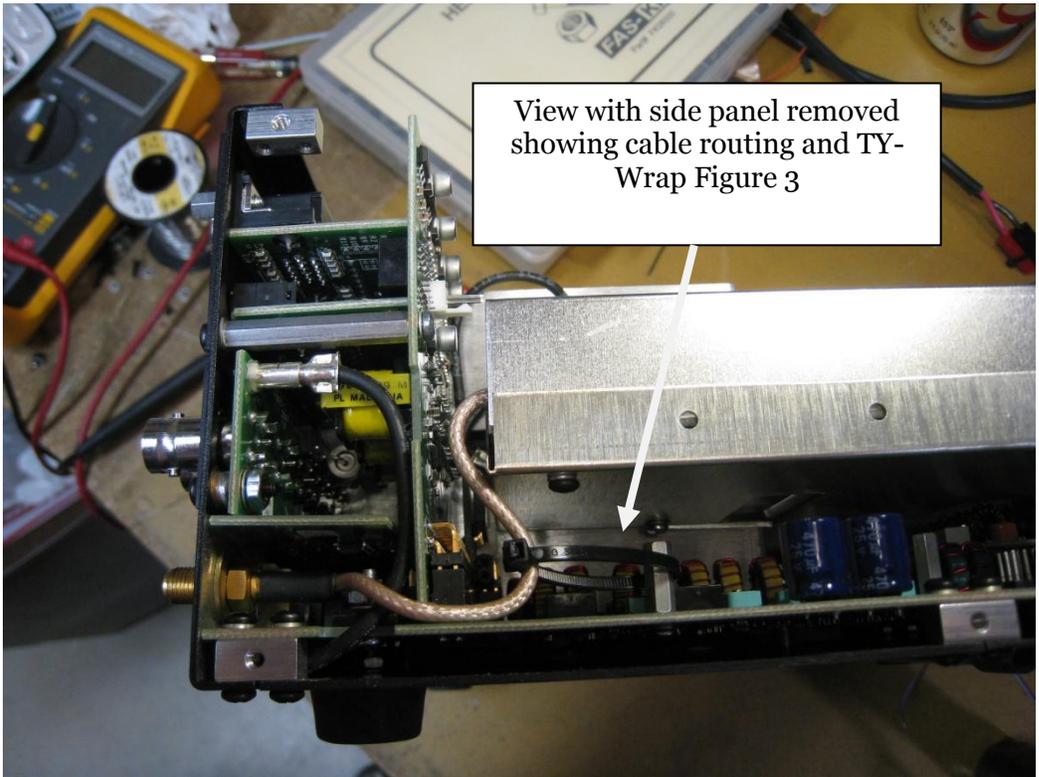
W3SZ used a more flexible coax and his alternate cable routing may be easier as it avoids routing the cable around the BPF toroids on the top side of the KRX3 like my method.

W3SZ - "I ran the coax inside the KRX3 bottom shell, beneath the main KRX3 PCB. I brought it up to the Z10000 by running it through an unused hole meant for an FL standoff."





Finished SubRx with NB installed Figure 2



View with side panel removed showing cable routing and TY-Wrap Figure 3

After a good visual inspection, it's still a good idea to verify correct operation before installing the covers. A received tuned to the IF frequency is an easy way to ensure things are ok.

Software Setup and Operation

You can now connect the LP-Pan, Softrock or other SDR to the SubRx output. For CWSkimmer to be most useful you will need to make a new OmniRig file that substitutes control of the SubRx frequency for the normal control of the main VFO. My version of this file was made by making a copy of the normal K3.ini file provided with OmniRig and renaming the file k3sub.ini. Now in this new file edit the frequency setting commands by swapping the FB command for the FA command in the frequency set and status portions of the file. This “fools” the skimmer into controlling and reading the frequency from VFO B. The key portions of the file to change are shown below with a ← next to each line that is changed. The complete file is also available on the K3 Yahoo Groups File page.

```
-----  
;  
; set frequency  
-----  
[pmFreqB] ←  
Command=(FA.....);  
Value=2|11|vfText|1|0  
ReplyLength=0  
  
[pmFreqA] ←  
Command=(FB.....);  
Value=2|11|vfText|1|0  
ReplyLength=0
```

And

```
-----  
;  
; read status  
-----  
[STATUS1]  
Command=(IF;)  
ReplyEnd=(;)  
Validate=(IF.....);  
Value1=18|5|vfText|1|0|pmRitOffset  
Value2=2|11|vfText|1|0|pmFreq  
Flag1=(.....0.....)|pmRitOff  
Flag2=(.....1.....)|pmRitOn  
Flag3=(.....0.....)|pmXitOff  
Flag4=(.....1.....)|pmXitOn  
Flag5=(.....0.....)|pmRx  
Flag6=(.....1.....)|pmTx  
Flag7=(.....1.....)|pmSSB_L  
Flag8=(.....2.....)|pmSSB_U  
Flag9=(.....3.....)|pmCW_L  
Flag10=(.....4.....)|pmFM  
Flag11=(.....5.....)|pmAM  
Flag12=(.....6.....)|pmDIG_L  
Flag13=(.....7.....)|pmC_U
```

```

Flag14=(.....9.....)|pmDIG_U
Flag15=(.....0.0.....)|pmVfoAA
Flag16=(.....1.0.....)|pmVfoBB
Flag17=(.....0.0.1.....)|pmVfoAB
Flag18=(.....0.1.1.....)|pmVfoBA
Flag19=(.....1.0.1.....)|pmVfoBA ←
Flag20=(.....1.1.1.....)|pmVfoAB ←
Flag21=(.....1.....)|pmSplitOn
Flag21=(.....0.....)|pmSplitOff

```

```

[STATUS2]
Command=(FA;)
ReplyEnd=(;)
Validate=(FA.....;)
Value1=2|11|vfText|1|0|pmFreqB ←

```

```

[STATUS3]
Command=(FB;)
ReplyEnd=(;)
Validate=(FB.....;)
Value1=2|11|vfText|1|0|pmFreqA ←

```

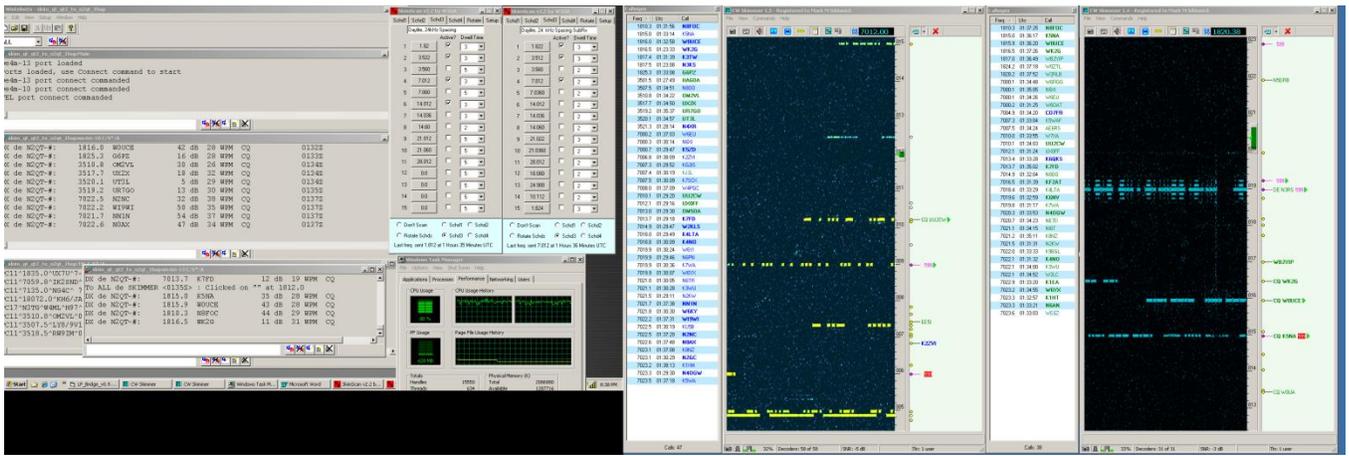
The rest of the file should be unchanged. Install the new K3sub.ini in the OmnRig Rigs folder and you can now select Elecraft K3Sub in the CAT tab in Skimmer.

While this works ok, it does not correctly support sending the announcement message when a callsign is clicked in skimmer. Applications that are looking for this will be affected. A description of this from the Skimmer help file is:

"When the operator clicks on the callsign on the Band map, in the Callsign List dialog or in the Received Text panel, the server sends an announcement message to all connected clients"

This hasn't been a problem in usage, and it's mentioned only to save others some head scratching if it shows up.

Since there is only one serial port on the K3, it will be necessary to use an application like LP-Bridge <http://www.telepostinc.com/> to create two (or more) virtual serial ports to allow two instances of CWSkimmer to connect to the K3. Install a second copy of CWSkimmer and be be sure to select a different telnet for each. You can then send spots to the Reverse Beacon Network with Spot Aggregator or you can use WinTelnetx <http://www.k1ttt.net/software.html#wintelnetx> to combine both sets of skimmer created spots for your logging program or local packet cluster.



Above is a dual monitor screen shot, showing two CW Skimmers, Wintelnetx and SkimScan all working on a somewhat underpowered PC (dual core 1.6Ghz, 2G RAM).

Upcoming Contests and Log Due Dates

Contests This Month

- June 2 – PVRC Reunion
- June 2 – SEANET
- June 9 – GACW WWSA CW
- June 16 – All Asian CW
- June 23 – Field Day

Logs Due This Month

- June 10 – EA CW
- June 12 - CQ M
- June 30 – VOLTA RTTY

See WA7BNM's [Contest Calendar](#) for more detail and the latest information.

An Inexpensive System for Power Line Noise Hunting - George, N4UA

Last year, I borrowed an MFJ-856 from Bill, KC4D, in an effort to localize an annoying case of line noise at my Central Virginia QTH. The '856 is a 135 MHz AM receiver that is integrated with a 3-element Yagi and, while it worked just fine for the application, I eventually had to return it to its owner. My particular noise would appear and then disappear for weeks at a time, leading me to conclude that I needed a tool like the MFJ in my personal test-equipment arsenal.

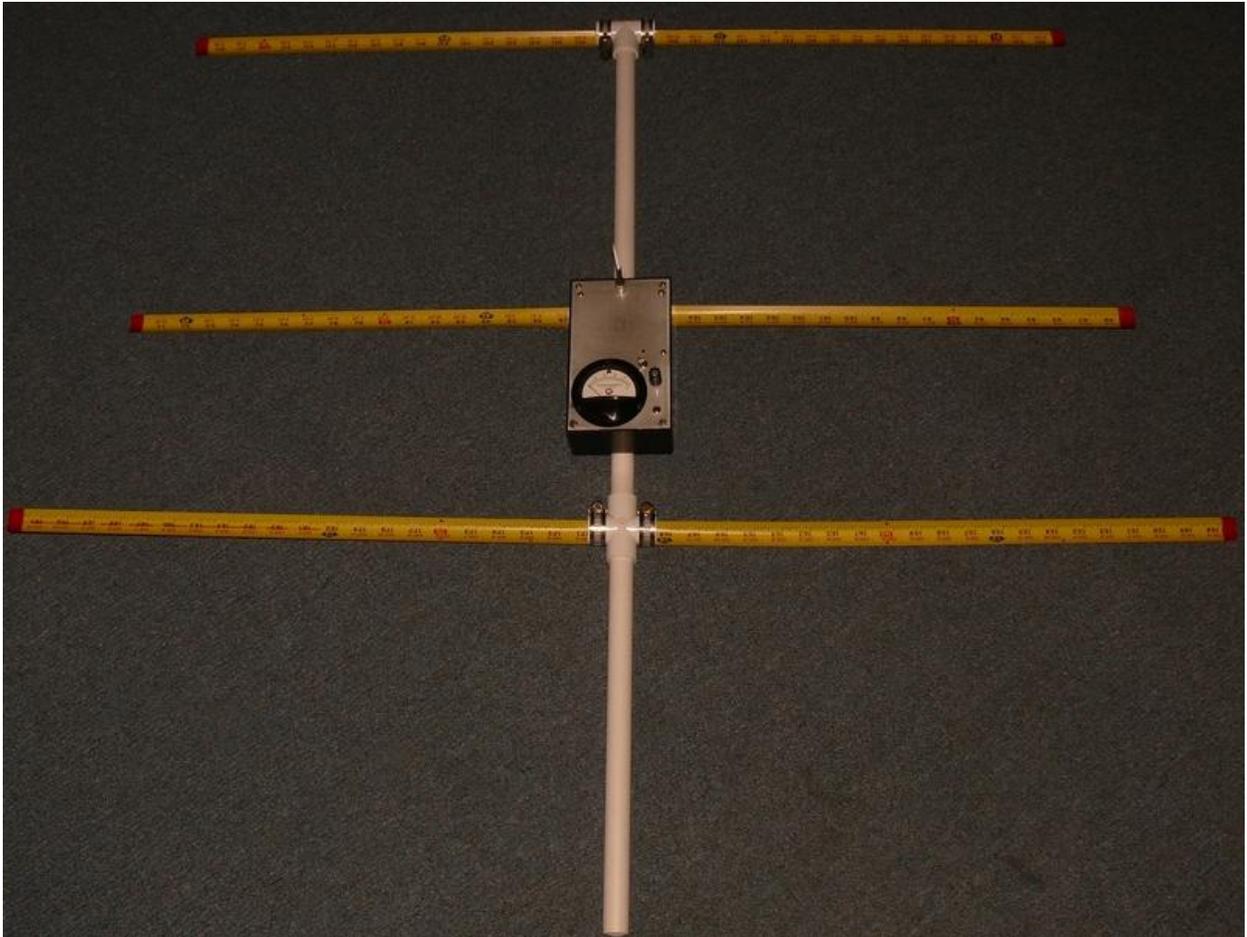
The MFJ-856 is not outrageously priced at \$160, but that was more than I thought a limited-use tool like this was worth to me. Plus, the MFJ had one glaring liability – it wasn't exactly easy to transport! Smaller and cheaper became the design goals.

I started with the antenna described in May 2007 QST, p28, "Adapting a Three Element Tape Measure Beam for Power Line Noise Hunting", by James T. Hanson, W1TRC. Following a trip to Harbor Freight for a \$3 tape measure and to Lowe's for a few PVC plumbing bits, I had my (cheap) 135 MHz antenna.

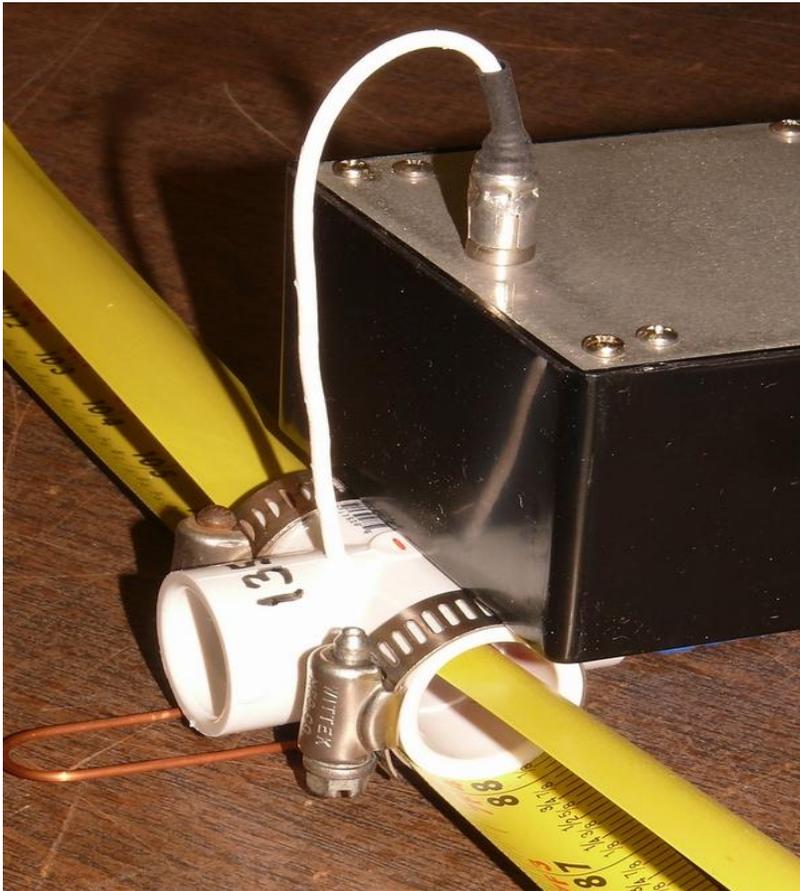
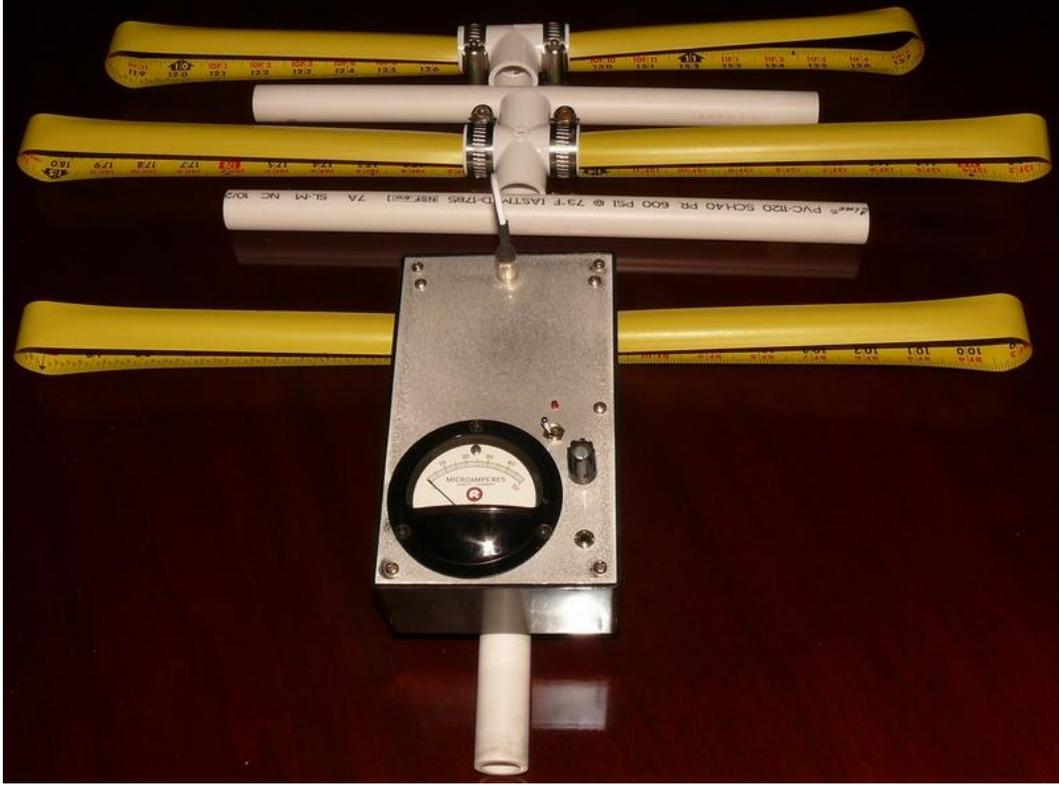
I downloaded the manual for the MFJ-856 receiver, studied the schematic, and actually considered breadboarding a copy. The breakthrough came, however, when I saw a

Vectronics ad for their VEC-131K airband receiver. I looked at the schematic in *its* manual and, lo and behold, there was the MFJ circuit (almost) staring back at me – and for \$30!

The Vectronics receiver actually has more stuff than you need to mimic the MFJ. It's tunable, so I left out the varactor, biasing resistor and tuning pot, and soldered in a fixed capacitor to put it on 135 MHz. I didn't need the additional audio output stage, so I left that out to save current. I inserted a small-signal diode and a junk-box meter in the AGC line (just like the MFJ), mounted everything in a old Radio Shack plastic box, attached the box to the "boom" of my Yagi, and there ya' go.



My adaptation of the receiver resulted in a larger box than the MFJ, but this was driven mainly by my choice of meter; I just didn't have a miniature one on hand. This makes my assembly a little heavier than the MFJ, with a definite shift of CG to the reflector end. I find it most comfortable to use the box as the handle, rather than using a separate pvc handle behind the reflector, as shown in the picture. Since the boom/receiver is only permanently attached to the driven element, the whole kit knocks down into a little pile. The element halves can be folded back on themselves and tucked into the PVC tees for transport (the red stuff on the element tips is Plastisol dip – an attempt to make them a little safer).



A really cool and really unanticipated benefit of this whole construction approach is that, if you grab just the RX/DE section and fold the element halves into the transport position, you have a reduced-sensitivity RFI sniffer that can be used up close and personal with all your household noise sources. Try **that** with the MFJ!



The Editor's Last Word – John K3TN

I managed to finagle a business trip to Columbus OH right before Dayton weekend, so I was able to go to the Hamvention. No exploding sewer systems this year but an equally odd sight: Kenwood's new top of the line transceiver, was on display in a plexiglass box and was the size of a microwave oven with more buttons and knobs than the original Boeing 747 cockpit. I dunno – I go for weeks at a time without touching more than 4 controls on my K3.

I ran into Dave Sumner K1ZZ and got to remind him that as a 17 year old ham in 1974 with a brand new driver's license, I dragged my girlfriend along for the 150 mile pilgrimage from Long Island, NY to Newington CT and a young K1ZND gave us a tour of HQ. Boy, if you look back at QST from those days, we all look just a bit different – not quite as many scooters at hamfests back then...

Many FB contributions to the newsletter this month, and a few that will run next month. Thanks to Mark N2QT and George N4UA, for submissions for this month's newsletter. If you have any post-contest write-ups, embarrassing pictures or soapbox items, drop me a line [here](#). – 73 John K3TN.

Eyeball QSO Directions

The latest info on local club meetings and get together will always be sent out on the [PVRC reflector](#) and posted on the PVRC [web site](#).

NW Region:

Meetings are generally held on the third Tuesday of each month at the City Buffet, 1306 W. Patrick Street, Frederick, MD. (301) 360-9666. It's in a small shopping center. Most arrive about 6 PM for dinner and informal discussions. The meeting begins at 7:00 PM.

From W. Patrick Street, turn up McCain Dr. (the Mountain View Diner is on the corner), then turn right into the shopping center, then turn left and search for a parking place. The City Buffet is tucked back in the left corner of the shopping center behind the Mountain View Diner. You can't see the City Buffet from W. Patrick Street.

Contact: Jim [WX3B](#)

Central Region

Meets monthly the second Monday of each month, except June, July & August). The location alternates between the below MD and VA locations. Pre-meeting dinners start at 6:00 pm and meetings start at 7:30 pm.

VA LOCATION: Anita's, 521 E. Maple Ave, Vienna, VA. Tel: 703-255-1001. Meets at this location during the months of February, April and October.

Contact: Rich [NN3W](#)

MD LOCATION: Max's Café. 2319 University Blvd W, Wheaton MD 20902. Tel: 301-949-6297
People usually begin arriving at the restaurant around 6:30. Meets at this location during the months of January, March, May, September and November.

Contact: Art [K3KU](#)

The Laurel, MD Region: Bill N3XL

The PVRC get together is held at the first LARC meeting each quarter at the clubhouse.

The Annapolis Crew : Dan K2YWE

Meetings are held on the 4th Wednesday of each month at Broadneck Grill in Annapolis. We gather at about 5:30 PM and order dinner about 6. We break up usually before 8 PM. E-Mail [K2YWE](#) to be put on the e-mail reminder list.

PVRC-NC

The PVRC NC-East chapter meetings are held at [Manchester's Bar and Grill](#) on the 9100 block of Leesville Rd. in North Raleigh, with "QRM" beginning at 6:00pm and the dinner meeting following shortly thereafter. The meeting is held monthly on the 1st Thursday of most months, cancellations or changes usually announced on the [PVRC-NC website](#).

[The PVRC NC-West Chapter](#) holds its meetings on the 4th Monday of each month at [the Mellow Mushroom](#), 314 W. 4th St., Winston-Salem, NC. Ragchew at 7:00pm, dinner meeting starts at 7:30pm. All contesters and interested guests are invited!

Central Virginia Contest Club: Ed NW4V

Meets the first Tuesday of the month at St. Martins Church, 9000 St. Martin Lane, Richmond VA, (between W. Broad St. and N. Parham Road). Our meeting begins at 7PM.

Over the Hill Bunch:

The group meets for lunch at noon alternately in Maryland at the College PARK Holiday Hotel Route 1 and the Beltway or in Virginia at the Parkview Marriot near route 50 and the Beltway. Meetings generally are held on the last Wednesday of the month and are subject to change. Meetings are announced by E-Mail.

All PVRC members, non-members interested in membership and guests are welcome. For information contact Roger Stephens, K5VRX, 703-658-3991 for Virginia meetings; or Cliff Bedore W3CB or get on 147.00 for Maryland meetings.

Downtown Lunch Group

Meets on the 3rd Wednesday or Thursday of the month in the downtown area of Washington, DC. Locations occasionally change, but are always Metro accessible. Details are sent out on the PVRC reflector. Feel free to contact Eric W3DQ or Brian WV4V for details and directions.

Southwest VA Chapter:

The Southwest VA group meets each Wednesday at about 8:30 AM at Hardees at 20265 Timberlake Road in Lynchburg, VA. This is an informal gathering, but normally about 10-12 attendees. Contact Mark Sihlanick N2QT, Tel: 434-525-2921

SOMD Region Kickoff Meeting:

The Southern Maryland PVRC Chapter is starting (or re-starting, as you please) meetings in St. Mary's county. At this initial meeting we'll be discussing future meeting dates, times, and locations. A short presentation about PVRC for potential members will also be made.

This Chapter primarily serves the needs of the Hams in St. Mary's, Calvert, and Charles counties. Of course, meetings are open to all PVRC members.

When: Tuesday, April 3rd, 2012. From 6:30PM until 8:00 PM.
(We have the meeting room starting at 5:30 if you'd like to drop in earlier for an eyeball ragchew)

Where: St. Mary's County - Charlotte Hall Library - 37600 New Market Road,
Charlotte Hall, MD 20622 (NW Corner of Rt. 6 and Rt. 5/235)
GPS: 38.473358, -76.777733

Wayne Rogers (N1WR) will be the chapter chair. For more information contact Wayne (n1wr@chesapeake.net) or Tom, AB3IC (GL1800Winger@verizon.net).

If you'd like to add or correct a listing, contact K3TN for inclusion in the Newsletter!

Now a Word From Our Sponsors

PVRC doesn't ask for dues, but the Club does have expenses. Please send PayPal donations via DAVE@WR3L.NET or by snail mail to Dave's address at QRZ.com. You can also support the Club by buying from the firms listed who advertise in the newsletter, or by getting your company to sponsor the newsletter!

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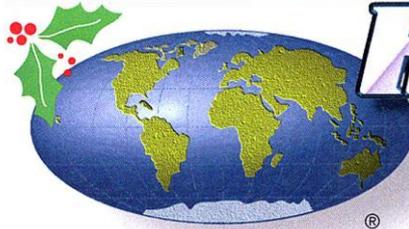
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