PCARA Update

Volume 17, Issue 6 Peekskill/Cortlandt Amateur Radio Association Inc. June 2016

Out in the field

We have had one of the busiest months in PCARA history – a PCARA Foxhunt, a community service event for the Church of the Holy Spirit 50th Anniversary Golden Jubilee, and the PCARA Simplex Challenge.

The May 14th **PCARA Foxhunt** was a success for the Fox! Nobody found Mike N2EAB who was secreted away in the environs of the Franklin D. Roosevelt State Park in Yorktown. I guess that Mike gets to play the role of the Fox **again.** Maybe a bit TOO foxy!

Thanks to David KD2EVI, Al K2DMV, Lovji N2CKD, and Malcolm NM9J, parking for the Church of the Holy Spirit **50th Anniversary Golden Jubilee Mass and Fair** went smoothly. We had to contend with cars, buses, and pedestrians. NM9J and KD2EVI started their day at Walter Panas High School on Croton Avenue in Cortlandt Manor, ensuring that those who wished to attend the Mass found their way to the buses, while N2CKD and K2DMV kept vehicular order on the grounds of the church. The event wound down around 5:00 p.m. and seemed to be a total success! Communication between the two locations was on the 449.925 MHz repeater.

N2KZ's **PCARA FM Simplex Challenge** was a hit. Details can be found in this month's issue of the *Update*. This was an excellent exercise to help us know our limits in our service area, in the event that we ever need to operate without the benefit of our association's repeaters. Thanks Karl for helping to organize the event, and to all those who participated.

Our biggest event of the year is quickly approaching on June 25-26, 2016. **Field Day 2016** for PCARA is going to be held at Walter Panas High School at 300 Croton Avenue in Cortlandt Manor, NY. This year we will have a panel/box truck to use for moving supplies as well as acting as a shelter from the weather, should it turn inhospitable. We **really need people** for the overnight session; it gets awfully lonely for one or two people to hold down the fort in the wee hours of the night. If you are interested in participating in Field Day this year, please let us know at mail'at'pcara.org. Field Day 2016 planning will be the highlight of our June 2016 meeting. Please join us!

Bob N2CBH (left) makes a sale while tail-gating at the BARA Hamfest on Saturday May 28.

The next hamfest in our area is the Mount Beacon Amateur Radio Club Spring Hamfest on Sunday June 5, 2016. Please visit: http://wr2abb.org/home/ for details.

Our next regularly scheduled meeting will be on June 5, 2016 at 3:00 p.m. at New York-Presbyterian / Hudson Valley Hospital in Cortlandt Manor, NY. I look forward to seeing each of you there.

- 73 de Greg, KB2CQE

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Net night

Peekskill/Cortlandt Amateur Radio Association holds a weekly net on the 146.67 MHz W2NYW repeater on Thursdays at 8:00 p.m. Join net control Karl, N2KZ for news and neighborly information.

Adventures in DXing

-N2KZ

It's Simple

Simple things are often the best. The first PCARA Simplex Challenge certainly was! We discovered just how far we could be heard on 2 meter FM without the aid of a repeater. The answer? A long way! Eleven of us were positioned all over PCARA-land and beyond. It was amazing how well we could all communicate unaided!

Simplex Challenge.

Mission central consisted of myself (Karl N2KZ) and Malcolm NM9J perched high atop Bear Mountain. We camped at the same site used for Field Day several years ago. It is a nice and quiet picnic area accessible by turning up the hill right before the main parking lot at the top of Perkins Drive. Although it was an overcast day, the temperature was perfect and flying insects were elsewhere.

Malcolm and I made use of his trusty Radio Shack HTX-242 two meter mobile transceiver operating with five watts into a Larsen NLA-150 5/8th wave mag mount antenna on the roof of his Honda SUV. I brought along my Icom IC-T7H transceiver to monitor the PCARA repeater for coordination during the event. As 2 pm approached, on Saturday afternoon May 21st, we were all ready to go.

Karl N2KZ operating in the PCARA Simplex Challenge from the top of Bear Mountain.

Malcolm and I were immediately reminded just how commanding this mountaintop QTH could be. Upon turning on Malcolm's HTX-242 to the simplex frequency of 146.565 MHz, the two of us almost immediately heard conversations going on around us. Some were obviously off our frequency. We heard the voice of K2LEG, Dennis, in nearby Cold Spring, New York although we never could make contact with him. Other traffic could be heard, as well. Bear Mountain's peak is said to be 1283 feet above sea level. You didn't have to convince us that this was an excellent QTH for operating!

The Simplex Challenge began with a check-in period very much like our weekly Old Goat's Net. Over the PCARA two meter repeater (146.67 MHz -600 offset and 156.7 PL) we called out to see who would answer. Eleven of our friends, scattered all over Westchester, Putnam and Dutchess counties, chimed in to join our experiment. After Malcolm and I scribbled down the roll call, we moved to 146.565 MHz simplex and the real fun began! One thing for sure: Overall, we were just amazed how strong everyone's signal could be heard from the summit at Bear Mountain!

The diversity of equipment, antennas and locations were fun to hear. First in line was Lovji, N2CKD reporting in from a spot near St. Mary's Convent in Peekskill. This is roughly up the hill where Main Street and Route 9 meet above the Hudson River. For all intents and purpose, Lovji had a line-of-sight view of Bear Mountain and an open vista of the river. With an HT at five watts, attached to a skillfully built home-brewed Slim Jim antenna, Malcolm and I could hear him with full quieting.

Lovji, N2CKD was operating from St Mary's Convent in Peekskill. [N2KD pic.]

Mike, N2EAB, was perched on Jacob's Hill in Peekskill, just slightly northwest and up the hill from the intersection of Route 6 and the Bear Mountain Parkway. Mike was running 4 watts into the same antenna he used the week before when he served as the fox during our PCARA

Lovji's Slim Jim. [N2CKD pic.]

fox hunt. The only difference was that his ¼ wave antenna was now vertical instead of horizontal. You should see Mike's nifty tripod he uses to mount his antennas. FB OM!

Our next call was from Al, K2DMV, hailing from Indian Hill slightly northeast of the Taconic State Parkway and Route 6, adjacent to Donald J. Trump Park. Al's Yaesu FT-857D transceiver was connected to a J-Pole antenna using an 18 foot mast. Needless to say, the high mast really made a big difference in his signal. Al could be heard!

Al K2DMV reached Indian Hill and erected his J-pole antenna on a telescopic mast. [K2DMV pic.]

Lou, KD2ITZ, was one of our more distant participants. Lou was up on his roof in Yorktown Heights, near where Routes 100 and 118 cross, using a BaoFeng UV5R HT with 4 watts. Lou mentioned that his location was about 500 feet above sea level. Even with just a modest mag-mount whip antenna and the side panel of a computer as a ground plane (cool!), Lou kept up with the rest of us throughout the event. Thanks for joining us!

A couple of surprises followed: Malcolm and I heard from Obert, KD2HLE up 700 feet in Garrison, along the Hudson River just across the river from the West Point Military Academy using a 8 watt HT and a whip antenna. We also heard from Darwin, KC2CMQ up in Wappingers Falls with 50 watts into a co-linear antenna. We were really pleased to hear from two enthusiastic newcomers. This really added to the fun.

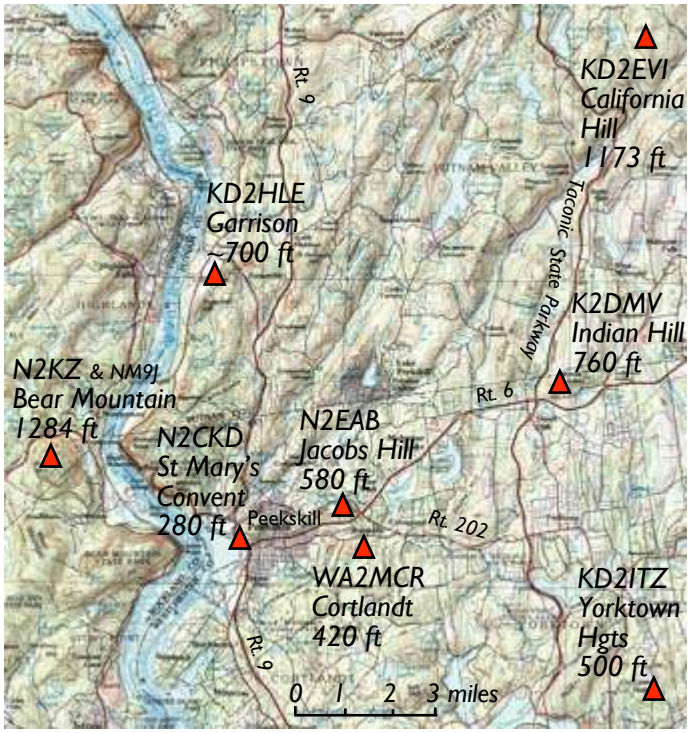
Smiles always come from greeting old friends. Joe, WA2MCR, joined in using a Yaesu FT-60R transceiver at mid-power (about 2 watts) standing behind his house. We could hear him, too! Finally, David, KD2EVI, put in an impressive entry from California Hill west-northwest of Carmel in the Town of Kent. His QTH was also up about 1200 feet, directly west and within eyeshot of Mount Ninham. Bear Mountain was about 15 miles away.

David told us about his long hike up the hillside to his site and the magnificent view he had: *"I found an open knoll on top of the hill. To access it, after parking at the entrance, I had to walk up an old road for 4/10 of a mile to where the road ended at a long abandoned farm (elevation 840'), and then turn west and go uphill a quarter mile through the woods to the hilltop."*

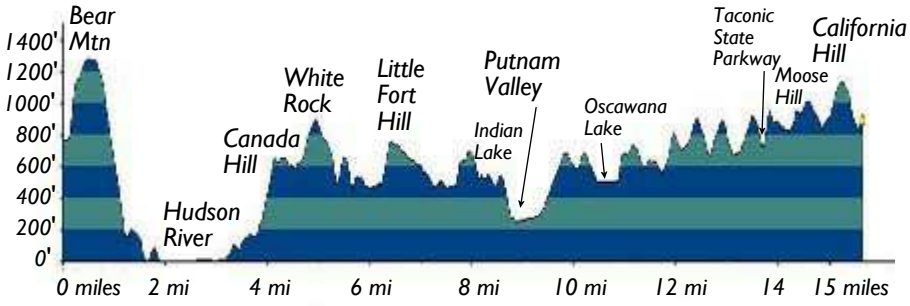
"The Slim Jim antenna worked very well, much better than the 17" Nagoya whip on the HT. With the Slim Jim, I was in contact with the Danbury station (Jay, N1NRP,) also about 15 miles from the hilltop. Changing to the whip while preparing to leave, I lost contact with that station. The terrain probably blocked me from hearing Obert, KD2HLE, in Garrison. Maybe if I had located on Ninham Mountain, the extra height would have made the difference." David's signal was still strong and authoritative throughout the event!

David KD2EVI walked to the summit of California Hill with his backpack and this BaoFeng UV-5R handi-talkie. [KD2EVI pic.]

David's little BaoFeng UV-5R HT attached to a Slim-Jim antenna hanging from a tree did a magnifi-



Relief map with location of the main participants – Δ during PCARA's Simplex Challenge of May 21, 2016.



Cross-section of the 15 mile path from Bear Mountain to David KD2EVI's location at California Hill, WNW of Carmel. Vertical scale is greatly magnified.

cent job! Later in our event, David made a mighty contact no one else could achieve. He was in just the right location to touch base with Jay, N1NRP, in Danbury expanding the event roster to a second state beyond New York. Thanks, David! Your climb was really worth it!

The first round through our list was patient and methodical testing between all attendees in every way possible. Everyone had their turn at bat as we tested to see who could reach who and with what quality of signal strength. A great majority of tries were quite successful. There were some surprises where terrain and changing conditions caused quizzical results. For example, Lovji up by St. Mary's Convent could hear Mike on Jacobs Hill, but Mike could not hear Lovji. Again, Malcolm and I could hear everyone, with few exceptions, throughout the trials. It really proved the adage 'Height is everything!'

Our results were quite excellent, so we tried a second go-round with everyone switching to their lowest possible power to make contacts. Yes, when operating at levels of 2 watts, one watt or even half a watt, the resulting signals were a bit lower but, in most cases, everyone was able to contact nearly everyone else. We quickly resolved that our next Simplex Challenge would be limited to more complex antennas combined with QRPp power levels down around one watt or less (whatever might be practical) to see just how far we could push the limit. But the fun had just begun!

Karl grabs some extra height for a QRP contact with N2CKD on 446.000 MHz.

For our finale, Lovji suggested that we try going to 70 cm simplex, at 446.000 MHz, and experiment with very low power. My Icom IC-T7H transceiver operates with about 300 milliwatts on its lowest power setting on 70 cm. Holding my HT in my hand using just my stock Icom six inch long rubber duck antenna, I had no problem at all reaching Lovji way across the water in Peekskill at QRPp power. Lovji experimented with one of his Moxon antennas that served him well during the fox hunt. What terrific results! We all gathered after the event to discuss all we had experienced. In the parking lot, Lovji showed us his version of a Slim Jim* antenna with all his fine copper piping and soldering skills. Good results brought great smiles. What an amazing afternoon!

L to R: Al K2DMV and Karl N2KZ admire Lovji's home-brew Slim Jim antenna for two meters. Lovji, N2CKD is holding his Moxon beam antenna for 440 MHz.

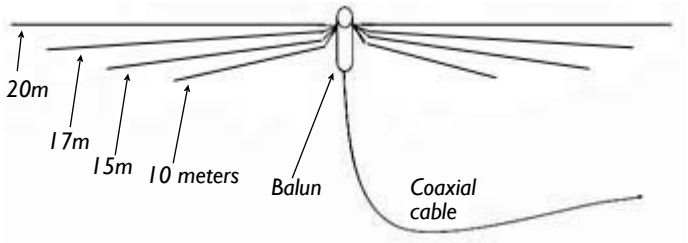
Our first PCARA Simplex Challenge was a great success measured by all the happiness it produced! Next time, I hope we'll try milliwatt QRP and really see how little power we need to communicate. Small and humble signals can be heard a very long way! If nothing else, I hope this event will inspire us to consider all the possibilities of VHF and UHF amateur radio. How about trying your luck during the June 11 - 13 ARRL VHF/UHF Contest? (See http://www.arrl.org/june-vhf for details!) You can do so much with that HT or mobile rig of yours. We proved it!

Have a wonderful month and enjoy Field Day! Thanks to one and all for participating in our Simplex Challenge! Don't forget our Thursday night Old Goats Net at 8 pm on our 2 meter repeater: (146.67 MHz -600 offset and 156.7 PL). 73 and dit dit de N2KZ 'The Old Goat.'

*[*For more information on the Slim Jim antenna see PCARA Update, Oct 2007, p 10. -Ed.]*

Clamp your attic antenna -N2CKD

Hams have constructed and suspended HF/VHF/UHF dipole wire antennas in attics in the past. Many years ago I constructed an excellent fan dipole for 10, 15, 17 and 20 meters in my attic and nailed down the eight dipole ends on the attic rafters. I regularly made good DX contacts with this antenna.



Fan dipole antenna for 14, 18, 21 and 28 MHz has separate half-wave wire dipoles for each of the four bands, all connected to a common feed point. (Note: wire lengths for resonance can be affected by proximity to the other dipoles.)

While many novel ways have been devised to suspend and secure the dipoles, a common method has been to nail the dipole ends to the attic rafters. When you find the perfect (or compromised) compass direction for pointing the dipole, you nail the ends down. However, at a later date, if you decide to reorient the dipole to a new direction then you need to drive new nails into different rafters or other attic spots. Many times it is difficult to secure antenna ends by nailing, depending on accessibility of your attic.

I would like to suggest a different approach to securing the antenna by using **plastic clamps** attached to the end of the dipoles. In my attic, I have experienced that re-orienting dipoles by clamping and de-clamping dipole ends takes a matter of mere seconds using plastic clamps. The clamps are very inexpensive and readily available in dollar stores, Home Depot, Harbor Freight or at hamfests.

4½" plastic spring clamp

Plastic woodworking clamp.

The plastic clamp itself is a good insulator so the dipole wire ends can be attached directly to it. But I suggest you use an appropriate insulator at the end of the dipole and attach the insulator to the plastic clamp via a short piece of string. This method ensures that you are not likely to damage the plastic clamps when running 100 watts of RF power, since we know maximum voltage is present at the ends of dipoles.

Dipole end is supported using a ceramic insulator, string and a plastic clamp in Lovji's attic. [N2CKD pic.]

In my experience, I find that clamping the dipole ends on different rafters (16" apart) gives me the ability to point my fan dipole antenna to my favorite DX location in mere seconds and I work "new DX" with relative ease. Each 16" rafter spacing provides a few azimuthal degrees deviation on the compass bearing.

Center insulator and coiled-coax balun for Lovji's multi-band dipole antenna are suspended in the attic. [N2CKD pic.]

At my QTH I can work the West, NW, SW USA or Central North America or South America and the Caribbean by clamping/de-clamping on different attic rafters so as to change the broadside orientation of the attic dipole. It's like using a rotating dipole. I can also move the two dipole ends in *different* directions to give coverage in different azimuthal bearings.

I hope the next time you are constructing or need to move your attic antenna you will consider using clamps instead of nails. Good DXing!

- Lovji, N2CKD

[Attic antennas can have advantages over outdoor antennas including less need for waterproofing and reduced exposure to wind and snow. But be careful about increased RF exposure for those living below and proximity to electrical wiring or other equipment. Thermal roof insulation lined with aluminum foil may prevent **any** *use of an attic for antennas. - Ed.]*

IC-2800H repair

Previous pages of the *PCARA Update* have mentioned the **Icom IC-2800H** transceiver. An article in the November 2010 issue, "IC-2800H - a late review", describes a second-hand IC-2800H that came into my hands at the BARA Hamfest.

Icom IC-2800H VHF/UHF transceiver has a large color display on the control unit.

The IC-2800H is a dual band FM transceiver covering 2 meters and 440 MHz. It went on sale in 1999 with the distinguishing feature of a large 3 inch LCD **color** display on the separate control head.

That IC-2800H from BARA has given several years of good service, but a couple of problems have been concerning me recently. Here is how I went about fixing them.

Intermittent power-up

In the radio room, my IC-2800H is connected to an Astron RS-20M 12 volt power supply. The first problem was that the IC-2800H was **not** always powering up reliably when fed with 12 volts DC from the Astron power supply. No matter how many times the green 'power' button on the control head was pressed, the Icom radio stayed off, with the display failing to light up.

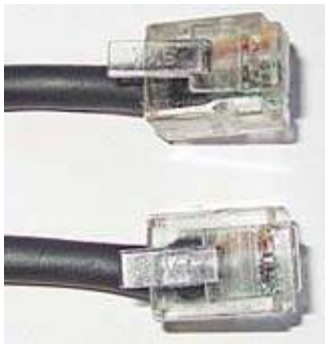
I suspected the multi-way cable which connects the remote control head to the transceiver's main unit. I cleaned the RJ-11 connectors at both ends, but the fault persisted. Then I noticed that the radio could be persuaded to power up on occasion by *flexing* the end of the multi-way cable — which is wrapped around a ferrite core.

Icom's multi-way cable from IC-2800H main unit to the control head has a ferrite core and six-way RJ-11 jack at the controller end.

I tried searching for a replacement controller cable, Icom part number OPC-837, but could not find one. My next thought was that an intermittent connection within one of the RJ11 six-way modular connectors might be to blame, so I re-crimped both of them using my Klein Tools modular crimper. This brought about a temporary solution — which lasted all of three months — then the old problem returned.

Klein Tools modular crimper/stripper includes three dies for RJ45, RJ11/RJ12 and RJ22 modular connectors.

The final fix was to make up a *new* cable. The original OPC-837 cable is 11 feet long, intended for connecting a dash-mount control head to a main unit in the trunk. I chose a shorter cable length of 3 feet to suit the radio room. Careful inspection of the old cable revealed that wiring of the 6-conductor cable to the RJ11 connectors is **straight-through** — i.e. pin 1 at the controller end is connected to pin 1 at the main body, pin 2 is connected to pin 2 and so on.



Original OPC-837 cable is wired straight-through.

Unfortunately the only suitable multi-way cable I had was a reel of "Cat 3 Riser Cable", colored **pink**. Ugh. Icom's original cables have a black sheath.

I cut a length of the pink cable then crimped two new RJ11 6P6C connectors on the ends — 6P6C means 6 position, 6 conductor. The good news is that despite the color clash, the new cable has fixed the intermittent problem and the transceiver now powers up reliably whenever 12 volts DC is applied.

Hint: If you are in the market for an RJ modular crimper, don't be a cheapskate. Choose the best quality you can afford, with solid metal dies. Nothing less will be capable of making reliable connections. And practice a few times at making up cables, then test the continuity.

New, pink cable on the right connects IC-2800H main unit to the control head.

Lazy display

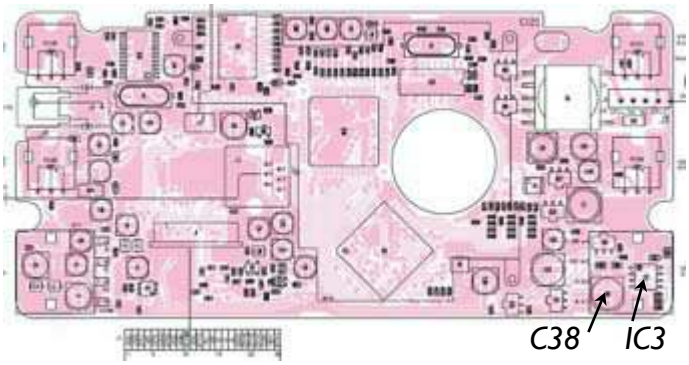
As soon as one problem had been fixed, another appeared. The large liquid crystal display on the remote control head was taking a *very* long time to function correctly. The radio would power up and the CFL backlight would illuminate the LCD, but for several minutes there was *nothing* to see on the display — just a plain white screen with no characters.

The IC-2800H control head would light up, but nothing would appear on the liquid crystal display.

At this point, the radio was still functioning — it could transmit, receive and change channels, but it was difficult to tell what frequency was actually in use with nothing to see on the display.

I checked online and found one reference to changing **C38** (47µF) on the controller board as a possible fix — however there was no explanation and no picture to assist in identifying the part. So I started a little research of my own.

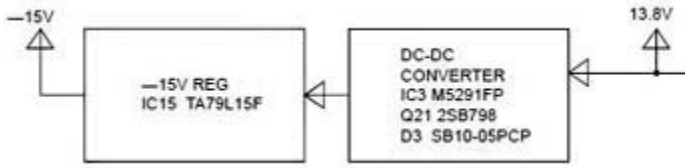
The first place I checked was the Service Manual for the IC-2800H. This is available online as a PDF from web sites such as http://www.manualslib.com and http://www.n7tgb.net/pages/radio/icom_manuals.htm . On page 9-2 of the Service Manual there is a board layout for 'Control Unit - Bottom View' showing the position of C38 at bottom right of the circuit board, between IC3 and D3. This part of the board is located *behind* the VHF-side tuning dial control (S12), which is on the left when viewed from the front of the control head.



'Control Unit - Bottom View' shows the position of C38 and IC3 (arrowed) on the back of the circuit board.

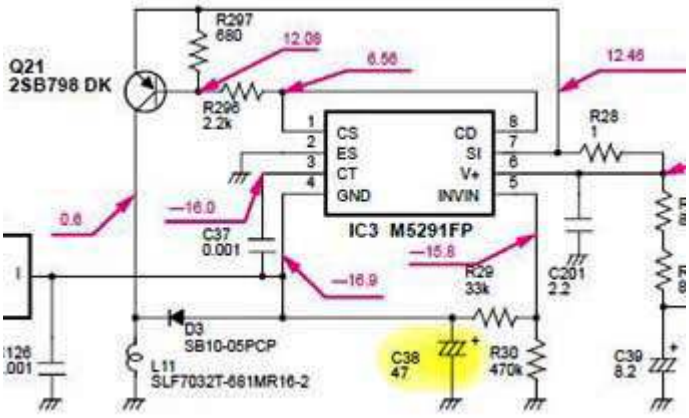
What's going on?

I was curious about the function of C38, so I investigated further. On page 10-1 of the Service Manual there is a Block Diagram of the Control Unit. This shows that IC3 and D3 are part of a DC-to-DC converter which transforms the standard +13.8 volts positive to a voltage suitable for IC15, a -15V regulator. That regulated -15 volt supply is required to power the TFT Color LCD and its accompanying circuitry.



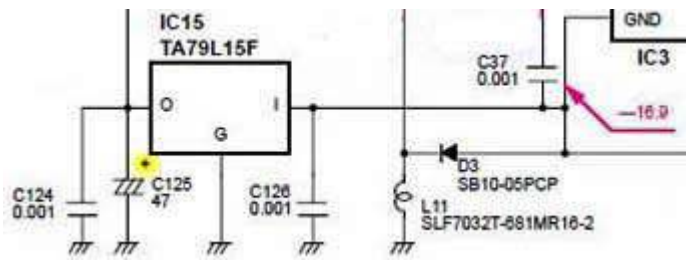
Block diagram shows function of IC3, the DC-DC converter and IC15 the negative 15 volt regulator.

On the large "Voltage Diagram" of the Control Unit, a schematic of the DC-to-DC converter (IC3) and accompanying -15V regulator (IC15) are visible. IC3 is a Mitsubishi M5291FP DC-DC converter, which the data sheet reveals is wired as an "Inverse Polarity Circuit with Transistor" — in other words, IC3 acts as a controlled pulse-width oscillator driving external transistor Q21. The ~50 kHz pulse output from the collector of Q21 is rectified by diode D3, with its anode connected to filter capacitor C38 in order to charge the capacitor to a suitable *negative* voltage. Voltage divider R29 (33k) and R30 (470k) then feeds a portion of this voltage back into IC3 for voltage control, resulting in a regulated output of approx. -17V DC.



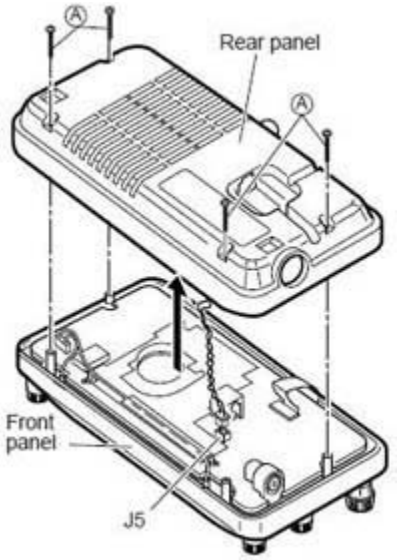
Circuitry of the IC-2800 DC-to-DC converter, with voltage measurement points arrowed. Yellow highight shows C38.

The DC-to-DC converter then supplies IC15, a Toshiba TA79L15F voltage regulator for negative -15 volts. Note that polarity of the two filter capacitors C38 and C125 is shown *incorrectly* on the circuit schematic for a *negative* regulated voltage!



Under control

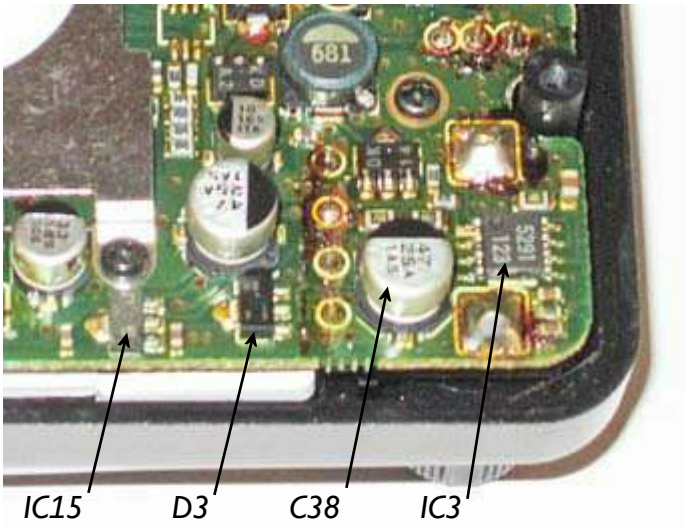
I removed the rear cover of the Control Head, following disassembly instructions in the Service Manual. You only need to unplug the RJ-11 control cable, remove four Philips screws, then unplug J5 (speaker connection) to completely separate the rear panel. This reveals the back of the printed circuit board, where **C38** and other components of the negative 15V supply are easily visible, lower right.



Control head disassembly.

Control head with rear cover removed.

Before attempting the suggested repair I checked the voltage appearing on the negative terminal of smoothing capacitor C38 immediately after the radio was switched on, while the display was still blank. The voltage was around -12 volts DC instead of -17 volts. With such a low negative voltage, the -15 volt regulator IC15 was unlikely to be operating correctly.



Close-up of the controller board, with components of the -15V regulator and DC-to-DC converter arrowed.

I guessed that C38 must have gone low capacity, or leaky or both. A subsequent meter check on this component showed that I was right on both counts. But first I had to remove the capacitor, which is a surface mount type soldered to lands directly underneath the capacitor body. Using a soldering iron with a very small tip, I was able to heat the protruding edge of one of the connections sufficiently to remove one leg of the capacitor, then the other. This revealed that C38 was a radial-lead wire-ended component with connecting wires passed through a black plastic terminal plate then bent out underneath. Polarity is indicated by a black stripe on top of the can (negative side) and by the plastic terminal plate having two corners cut away on the positive side. The number in Icom's parts list shows this to be a Panasonic SMD aluminum electrolytic.

C38 after removal. It is a Panasonic SMD 47µF 25V electrolytic.

With the old capacitor out of the way, I took the opportunity to clean up the surrounding circuit board, using a Q-Tip soaked in isopropyl alcohol (rubbing alcohol). It's quite possible that electrolyte had leaked out of C38 and contaminated nearby connections.

Close-up of the controller board after removal of C38 (position arrowed).

New capacitor

I have had problems with small electrolytic capacitors in the past — see *PCARA Update* for November 2003, "A tale of two Cs", where capacitor failure affected an HP printer. I used a similar solution this time, replacing the old electrolytic capacitor with a more rugged tantalum electrolytic which is more likely to stand up to elevated temperatures inside the control head. I could not find an exact replacement for C38, originally specified as 47µF, 25V DC working, but I did find a 33µF 35V tantalum bead in my capacitor supplies. I carefully cut and bent over the wire leads

C38 was replaced by a green-colored 33µF tantalum capacitor (arrowed).

to fit the circuit board solder pads then soldered the new component into place, taking care to observe correct polarity.

(There is a description of how electrolytic capacitors function in the March 2014 issue of *PCARA Update*. See the article "Memory loss and a super solution".)

It's alive

With some concern, I reconnected 12 volt DC power and switched on. Success! The LCD display lit up and *immediately* showed the Icom startup screen, followed by the usual display of VHF and UHF operating frequencies. Until this repair, the frequency display had not been appearing until several minutes after switch-on. A quick voltage check showed that -17 volts was now being developed across the new filter capacitor, C38 and -15 volts was being supplied from IC15, the 79L15 voltage regulator IC.

Success! After C38 was replaced, the IC-2800H color display now appears immediately after switch-on.

I reassembled the control head — fortunately there was just sufficient space for the taller tantalum capacitor in the C38 position. With the control head fastened into its mounting bracket on the radio room shelf, operation was still satisfactory. Using the 'DISP' soft key, I was able to lower display brightness then increase contrast for optimum effect. I have a feeling that the control head is now running at a lower temperature than before — which should be good for long term life of the unit.

Repair or recycle?

There are many more tales around the Internet of small surface mount electrolytic capacitors failing in LCD displays, TV sets and mobile radios. So — if you have an "oldie but goodie" radio showing similar signs of failure, it may be possible to fix the problem with a simple repair. Not only do you save the price of a new radio, but you also prevent a piece of valued equipment from going into the recycling shed at Roa Hook Road.

- NM9J

Foxhunt 2016

PCARA's 2016 Foxhunt took place on Saturday May 14, which was also *CQ Magazine* Foxhunting Weekend. NOAA's weather forecast was threatening rain for the afternoon, but fortunately the bad weather held off until later that evening.

Hunters began arriving at the Beach Shopping Center in Peekskill from around 2:30 p.m. Contestants included Karl N2KZ, Al K2DMV with Michelle, Lovji N2CKD, David KD2EVI and NM9J with Joe WA2MCR.

Participants in the 2016 Foxhunt prepare their antennas at the Beach Shopping Center. L to R: Karl N2KZ, Al K2DMV, Lovji N2CKD, David KD2EVI and NM9J. [Pic by WA2MCR].

Various directional antennas were on view. In addition to the usual Yagis made of aluminum tubing or tape-measure steel, Lovji had constructed a diminutive Moxon beam for 440 MHz, based on the famous design originated by Les Moxon, G6XN.

Lovji demonstrates his 440 MHz Moxon beam antenna, based on a squeegee handle.

They're off

This year's fox was played by **Mike**, N2EAB. At 3:00 p.m. Mike's first transmission appeared on the 146.565 MHz simplex channel. Directional antennas swung around, indicating an initial direction that was roughly ESE from the Beach Shopping Center.

The rules state that the first transmission should last five minutes and competitors may not leave the starting point until the end of that first transmission. No matter which way you leave the Beach Shopping Center, there is at least one traffic signal to cause a delay — so you cannot travel very far before the next transmission at 3:10 p.m. Your editor left the Beach behind Karl N2KZ, then turned east onto Route 202.

Karl went first to Walter Panas High School then on to the Field Home in Catherine Street where he encountered Lovji. Karl was asked by one of the residents who he was trying to contact with his large antenna! "It's a radio thing" came the reply.

Lovji's offset active attenuator and tape measure Yagi.

Lovji was using his 4 MHz offset active attenuator as described in the *PCARA Update* for July 2014, p 8. Unfortunately, the 9 volt battery connector had come loose, so the initial transmission from the fox was only heard just in time. Lovji followed the easterly direction along Route 202 and Croton Avenue to Walter Panas High School, then on to the Field Home. Your editor and Joe also bumped into Lovji at the Field Home — great minds think alike!

Direction for the fox's next transmission was still eastward from the Field Home. Karl proceeded to explore the streets along Hunter Brook Road, William Court and White Hill Road. Lovji and NM9J/WA2MCR ended up at Wilkens Fruit and Fir Farm. This is in a commanding location, 580 feet above sea level, with a terrific view west toward Bear Mountain. By now the fox was a strong signal — but there was no sign of N2EAB anywhere around the farm.

Time had been ticking by and the end of the hunt was approaching. Your editor made a final dash down the Taconic State Parkway to the Mohansic Golf Club, reaching the car park in time for the 4:20 p.m. transmission. The Golf Club is at another high spot, 580 feet high, shared with one of Westchester County's communication towers. This time the direction to the fox had swung around to north-northeast and we heard the fox mention "Park" and a height of 520 feet. This suggested a location in FDR State Park, on the other side of the Taconic Parkway. Unfortunately, there was insufficient time to cross the Parkway and enter the park, so we sat tight until the final transmission at 4:30 p.m.

Refreshment time

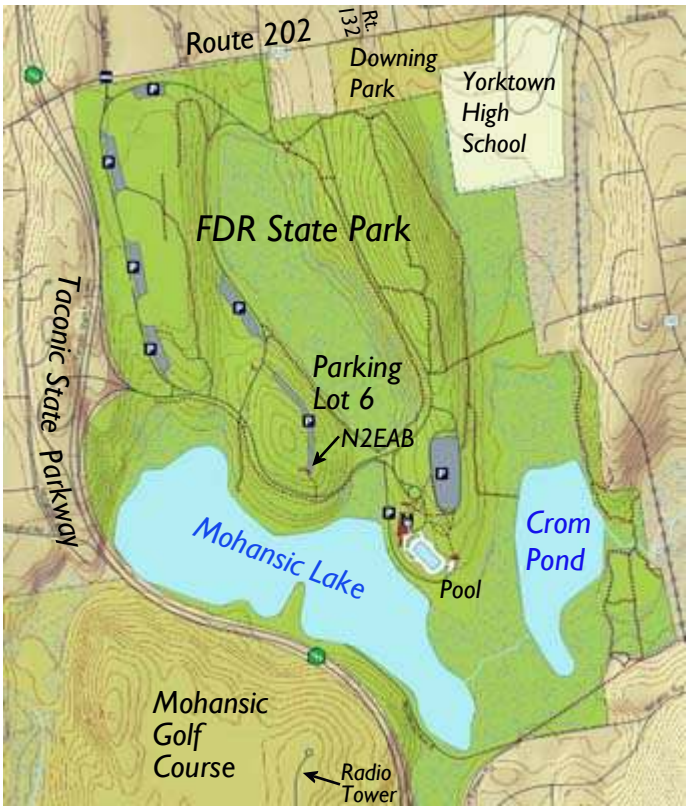
On the last transmission, Mike N2EAB revealed the location of the "place of refreshment" using both the simplex frequency and 146.67 MHz repeater. Venue was to be the **Mohegan Diner**, on Route 6 in Mohegan Lake. There we found all the other hunters apart from David KD2EVI, who had been unable to obtain a good bearing to the fox and had stayed in the area of the Bear Mountain State Parkway and Route 202.

Fox and Hunters pictured at the Mohegan Diner — L to R: Lovji N2CKD, Mike N2EAB, Karl N2KZ, Al K2DMV with Michelle, Marylyn KC2NKU and Ray W2CH.

A similar fate had befallen Al, K2DMV who had headed down the Bear Mountain Parkway to Locust Avenue and then found a bearing of west instead of east. This may have been a reflection off higher ground — possibly off Jacobs Hill. Ray W2CH and Marylyn

Streets and locations that played a part in the 2016 PCARA Foxhunt.

KC2NKU had not taken part in the hunt but were able to join in the *après la chasse* activities.



Location of the fox, played by N2EAB, overlaid on a contour Trail Map of Franklin D. Roosevelt State Park.

At the restaurant Mike, N2EAB revealed that not one of the hunters had been able to find his actual location, which was within **Franklin D. Roosevelt State Park** in Yorktown Heights, at **Parking Lot 6**. Mike's vehicle was at the far end of the lot, which is alongside a 540 foot high knoll near Mohansic Lake. Your editor was concerned that by mid-May the Park would be charging an entry fee for vehicles, but Mike had checked and the $8.00 vehicle fee did not apply until after May 20.

(The 2016 schedule for entry payment at FDR State Park is: Weekends, May 21 – June 12 plus Sept

Fox vehicle is pictured in Parking Lot 6 at FDR State Park. Horizontal dipole antenna is visible at right. [N2EAB pic.]

Parking Lot 6 in FDR State Park was the location of the fox. [N2EAB pic.]

10 – Oct 16. Daily, June 13 – Sept 5. For residents of Yorktown, the trails in FDR park may also be reached from the parking lot of **Downing Park**, which is near the intersection of Route 202 and Route 132.)

Mike's location at FDR State Park was only just within the distance limit imposed by the Foxhunt Rules. One half mile further east and Mike would have been over 5 miles from the starting point.

Mike's equipment during the hunt was an Icom IC-2GAT transceiver, KLM PA 2-25B amplifier, feeding a homebrew horizontally polarized dipole, 5' 8" above ground. Power supply was an Interstate Mega-Tron II lead-acid battery.

Since nobody found the fox this year, there were no framed certificates to present to the winner and runner-up. In addition, there is nobody new to assume the role of fox for the next event. Instead, Mike N2EAB will be invited to reprise his role. Let's hope the fox is closer to home next time, and more of the hunters are successful in discovering his hidey-hole.

Despite failing to locate the Fox, Lovji N2CKD declared himself much happier with his own equipment and performance — since he had come much closer than in previous years.

Facts and figures

If you are interested in statistics, PCARA's very first foxhunt took place on May 10, 2003. This recent event in May 2016 was PCARA's **16th Foxhunt**. It is also the **third** time that any hunter has failed to find the fox. The previous occasions were in June 2004 when Mike N2EAB and Bob N2CBH were ducking down in the parking lot of Staples Plaza and in November 2007 when Sharon KC2LLC (standing in for Wires, KC2FYY) was hiding in the bushes off Lakeland Avenue, overlooking the Cortlandt Town Center.

Congratulations to all those extra-cunning foxes who successfully evaded the hunters and lived to fight another day.

- NM9J

Church Jubilee

The Church of the Holy Spirit is located on Route 202 in Cortlandt Manor. Following a request from George N2LJO and his XYL Kathy, **PCARA** has been providing support for events during the Church's **50th Jubilee Year**. The first event was the Jubilee Concert which took place in June 2015. This was followed by parking support for the Christmas Eve Mass in December 2015 and for Easter Sunday services in March.

The latest event in the Jubilee Year has been the Holy Spirit 50th Anniversary Jubilee Mass and Festival which took place on Sunday May 15th.

Plan ahead

Greg KB2CQE and NM9J were invited to a planning meeting on April 22nd where the arrangements were explained. The Church car parks would be fully occupied by a large tent for the Jubilee service and by multiple vendors selling food. Car parking would be moved off-site to Walter Panas High School, with a fleet of chartered buses bringing people from the school to the Church.

The only vehicles permitted to park on Church grounds would be for visiting VIPs, vendors, entertainers and key volunteers. PCARA's main task would be to control the site entrance, making sure that only authorized vehicles were allowed in before being safely parked. In addition, co-ordination of parking and bus departures at Walter Panas High School would be helpful. Church volunteers would be reachable on their FRS radios, to be supplied by N2LJO.

This large tent was erected in the main car park of Church of the Holy Spirit, in Cortlandt Manor, with seating for 800 people.

Big Top

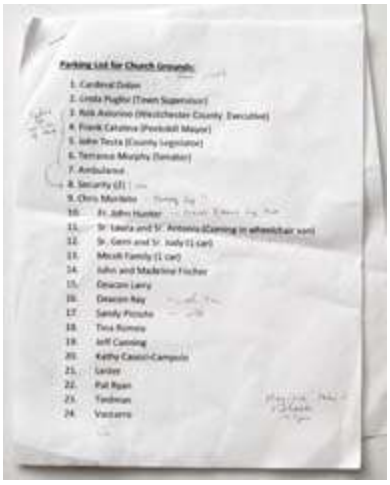
Two days before the event, during the May 13th rehearsal, Greg and Malcolm paid another visit to the Church to check the physical arrangements. The tent was already erected, with four central supports and multiple tie downs around the perimeter, staked into the asphalt surface of the car park. Seating for 800 people had been laid out inside the large tent.

Big day

Sunday May 15 started cold and cloudy. Greg KB2CQE was first to arrive on-site for a pre-briefing. He was joined by Al K2DMV, David KD2EVI, Lovji N2CKD and NM9J around 10:30 a.m.

L to R: Greg KB2CQE, Lovji N2CKD, Al K2DMV and David KD2EVI defend the line of cones at the Church entrance.

Church trustee Art walked us around the site to explain the parking arrangements and handed out a printed list of personnel allowed entry to the grounds. The VIP list began with Cardinal Dolan, who would be conducting the 2:00 p.m. mass — followed by visiting politicians, ambulance and security personnel, church volunteers, vendors, visiting clergy, all the way down to the News 12 video truck and official photographers.



Two-page list of VIPs and dignitaries allowed to park in the Church Grounds.

Greg, Al and Lovji decided to stay at the site while David and your editor set out for Walter Panas High School, 2½ miles away. The weather at Panas, 560 feet above sea level, was cold and wet, so we were glad of our

coats. Four vehicles from Hudson Valley Buses arrived and the first, small bus departed with parishioners for the church at 11:34 a.m.

Communication around the church grounds was perfectly adequate using 146.565 MHz simplex, but signals were not reaching the High School. A link from the school was established using the KB2CQE 440 repeater on 449.925 MHz — this proved quite satisfactory using low power from our dual-band handi-talkies.

David KD2EVI guides people parking at Walter Panas High School onto the chartered shuttle buses.

We continued directing people to buses (or to girls' soccer) then reported the departures to Greg at the church until the very last bus had left the parking lot at 1:30 p.m. By that time there were roughly 70 vehicles parked in the school grounds. This did not seem sufficient to fill the 800 seats in the tent, but we would soon find out that other factors were in play.

Jubilee central

When I returned to the church, Greg had moved the line of orange traffic cones nearer to the main entrance. This provided sufficient space for buses and other vehicles to drop off and turn around, while restricting the approach to the church. Only vehicles carrying dignitaries and VIPs would be allowed in, then directed to the appropriate parking lot by Al and Lovji. Various police vehicles were parked nearby, lending an air of authority to the proceedings.

Lovji N2CKD and Westchester County Police officer.

By 1:45 p.m., the tent was almost completely full of people, waiting for the service to start at 2:00 p.m. Where had they all come from? Only a small fraction had parked at Walter Panas High School. Greg reported that a number of people had arrived by taxi or been dropped off by friends, while the majority had parked at nearby doctors' offices or in the Hospital parking lot, then walked over to the church.

At 2:00 p.m. various dignitaries, including Cardinal Dolan, processed from the church building to the tent and the Jubilee Mass began.

Knights of Columbus lead the procession from the Church of the Holy Spirit to the tent.

Al took photographs then decided with Lovji that it was time to warm up. With most of the excitement over, they could safely leave the site.

After the service ended, Greg and your editor continued manning the line of cones, permitting entry and exit as appropriate. As the unseasonably cold weather continued (55°F tops) and with fewer vendors than expected, the number of parishioners on-site dwindled during the afternoon. By 4:00 p.m. the chartered buses began transporting chilly visitors back to their cars at Walter Panas. Greg and I were finally stood down at 5:00 p.m. — at which point we went to Dunkin' Donuts for a welcome warm-up drink.

Cardinal Timothy Dolan, Archbishop of New York, proceeds from the Church to the tent. [K2DMV pic.]

- NM9J

Peekskill / Cortlandt Amateur Radio Association

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Archive: http://home.lanline.com/~pcara/newslett.htm

PCARA Information

PCARA is a **Non-Profit Community Service Organization**. PCARA meetings take place the first Sunday of each month* at 3:00 p.m. in Dining Room B of NewYork-Presbyterian/Hudson Valley Hospital, Rt. 202, Cortlandt Manor, NY 10567. Drive round behind the main hospital building and enter from the rear (look for the oxygen tanks). Talk-in is available on the 146.67 repeater. *Apart from holidays and July/August break.

PCARA Repeaters

W2NYW: 146.67 MHz -0.6, PL 156.7Hz
KB2CQE: 449.925MHz -5.0, PL 179.9Hz
N2CBH: 448.725MHz -5.0, PL 107.2Hz

PCARA Calendar

Sun Jun 5: PCARA Meeting, Hudson Valley Hospital, 3:00 p.m.
Sat-Sun Jun 25-26: PCARA Field Day, Walter Panas High School, Cortlandt Manor. (Subject to approval).

Hamfests

Sun Jun 5: Mt. Beacon ARC Spring Hamfest, Employee Rec Cntr, 83 Red Schoolhouse Rd., Fishkill NY. 8:00 a.m.
Sun Jun 5: LIMARC Hamfest, Briarcliffe College, 1055 Stewart Ave., Bethpage, NY. 9:00 a.m.
Sat Jun 18: Raritan Valley Radio Club, W2QW Hamfest, Piscataway High School, Piscataway NJ. 8:00 a.m.
Sun Jul 17: Sussex Co ARC Hamfest, Sussex Co Showgrounds, 37 Plains Rd, Augusta NJ. 8:00 a.m.

VE Test Sessions

Jun 4, 11, 18, 25: Westchester ARC Radio Barn, 4 Ledgewood Pl, Armonk, NY. 12:00. Pre-reg M. Rapp, (914) 907-6482.
Jun 5: Mt Beacon ARC Hamfest, 83 Red Schoolhouse Rd, Fishkill, NY, 9:00 a.m. Andrew Schmidt (845) 462-7539.
Jun 9: WECA, Westchester Co Fire Trg Cen, 4 Dana Rd., Valhalla, NY. 7:00 p.m. S. Rothman, (914) 949-1463.
Jun 12: Yonkers ARC, Will Lib, 1500 Central Pk Ave, Yonkers NY, 1 p.m. Pre-reg John Costa, WB2AUL (914) 969-6548.
Jun 20: Columbia Univ VE Team ARC, 531 Studebaker Bldg, 622 W 132nd St, New York. 6:30 pm, Alan Crosswell (212) 854-3754.
Jun 25: Orange County ARC, Algonquin PM Pk, Powder Mill Rd & Rt 52, Newburgh NY 11:00 am. Joseph DeLorenzo (845) 534-3146.

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