



# PCARA Update



Volume 9, Issue 1

Peekskill / Cortlandt Amateur Radio Association Inc.

January 2008

## New Year, new gear

The 2007 PCARA Annual Holiday Dinner held at *At the Reef* on Annsville Circle, December 2, 2007 was well attended and enjoyed by all. **Much thanks** to Marylyn, KC2NKG and Ray, N2CH for organizing the affair, and for making a very generous donation to our treasury!



*PCARA members gathered with their families for an enjoyable holiday dinner at "At the Reef" restaurant, December 2.*

The *PCARA Update* Editor-in-Chief, Malcolm, NM9J has brought to my attention that the *Update* is beginning Volume 9 with this month's publication! It's hard to believe that we're entering our 9<sup>th</sup> year of newsletters. All of our members are encouraged to submit articles of interest for the *Update*. Why not give it a try?

Now remember that we're trying something new at the January meeting. A "Bring and Buy Auction" will be held at the January 6<sup>th</sup> meeting at Hudson Valley Hospital Center. Bring any equipment that you're interested in selling to the meeting, and maybe go home with some new acquisitions of your own. It's a great way of recycling gear to other members, and you just might find something you may like for yourself.

As in years past, I ask that you bring your ideas and suggestions for the year ahead to the January 6<sup>th</sup> meeting at 3:00 PM at Hudson Valley Hospital Center. I look forward to seeing each of you there.

To each of you, your families, and loved ones, I wish a very Happy, Healthy, and Joyous New Year!



*Bring and buy auction.*

- 73 de Greg, KB2CQE

## New net night

Peekskill/Cortlandt Amateur Radio Association holds a weekly net on the 146.67 MHz W2NYW repeater. Please note that our net control Karl, N2KZ has changed net night from Wednesdays to **Thursdays** at 8:00 p.m.

## PCARA Officers

President:

Greg Appleyard, KB2CQE, kb2cqe at arrl.net

Vice President:

Joe Calabrese, WA2MCR; wa2mcr at arrl.net

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# Adventures in DXing

- N2KZ

## Happy New Year

Every year starts with my all-time favorite amateur radio event: ARRL's Straight Key Night. It really should be called Straight Key 24 Hours! Starting at 7 pm on Monday night, December 31, ham radio operators will be firing up vintage tube gear and dusting off their straight keys for the greatest show on earth. It may not be a circus, but it is just as much fun!

You'll hear a delightful kind of music as you tune across the bands. It's the sound of dozens and dozens of CW operators using just their fists to send New Year's messages to the world. The object of the event is not to work as many stations as you can. All we want to do is have as much fun as possible rag chewing away while pounding ancient brass!

Straight Key Night is a wonderful opportunity to put your toes into the sea of CW. Everyone will be sending slowly so, if you are not secure in your Morse speed, this would be a perfect time to jump back into the water! If nothing else, have a listen! The Morse frequency allocations will suddenly sound like they did before the advent of electronic keyers. You'll hear how a human fist can send out symphonies of text. It's 7pm Monday night, December 31 through 7pm New Year's Day. Don't miss the fun!

## Granny Coupon Day

January 1, 2008 is also the day when the federal government will begin accepting requests for DTV "Granny" coupons. With the full transition to digital television only about 13 months away, you will need a digital to analog converter to continue to watch your old analog TV set. Soon, the only thing you might see with an analog TV, fitted with rabbit ears, will be digital "funny snow." It will be as if someone had turned off the big switch to all of television as we currently know it.

To offset the cost of the necessary converters, each household can apply for two \$40 voucher coupons redeemable only toward converter boxes. These vouchers have been nicknamed "granny coupons" since, allegedly, only ancient people, (like me,) still watch over-the-air analog TV. How popular these coupons will become remains to be seen, but it certainly will be a memorable event in the history of television.

Don't be too anxious to apply for your vouchers. These coupons will only be valid for 90 days after issuance. I have yet to see any converters reach the retail market. Wait until there is something in the stores to buy! They are expected to be delivered to retail

stores as early as mid-January. Only three major manufacturers, RCA, LG, and Philips, have announced they will be producing these units. The LG boxes will be marketed as Zenith model DTT900. Philips (marketed as Philco) will also offer a converter to compete with the RCA and Zenith boxes. Details and pictures of the Philco converter have yet to be seen. All of these converters will be sold for around \$60 each. Keep an eye on the government's official web site, <http://www.ntia.doc.gov/dtvcoupon/index.html>, for the latest "granny coupon" news!



*Zenith DTT900 digital TV converter by LG includes RF and video analog outputs, plus a remote control and A/V cables.*

## Kaboom!

It's the kind of thing that gives chief engineers nightmares. At about 7:00 am on Sunday morning, December 16th, an 823 foot tower, covered in thick ice, came crashing to the ground on Penobscot Mountain in Western Pennsylvania. The tower belonged to TV channel 16, WNEP, an ABC affiliate serving the Wilkes-Barre/Scranton market. Tower sections fell upon their transmitter building devastating the facility beyond repair. Miraculously, no one was injured in the fall. As the tower came down, it also snapped off the top of



*The 800 foot WNEP television tower on Penobscot Mountain (2100 ft), near Wilkes-Barre PA collapsed on December 16.*

another nearby tower hosting WVIA, the local PBS affiliate on channel 44 and its FM sister station. The powerful storm also wreaked havoc on the local CBS affiliate due to power line failures and ice. The Fox TV

station's tower lost a guy wire, but their tower still stands. Several FM stations were off the air, as well.

The digital transition has come early for WNEP. Their DTV antenna is mounted on a different tower and their DTV transmitter is still on the air. Channel 16 is also distributing its signal directly to cable companies and streaming their programming on the Internet at <http://www.wnep.com>. Will WNEP ever return as an analog TV station? There has been talk about mounting a temporary antenna for analog transmission, but with only about one year of analog operation left, I think full rebuilding is not likely. WNEP now claims their analog signal may be on the air before New Year's. Check their web site: [www.wnep.com](http://www.wnep.com) for the latest news and an unusual continuous relay of their on-air programming including a full schedule of shows from the ABC Television Network.

### Coming soon?

It isn't easy getting a new AM radio station on the air these days. Three years ago, on December 16, 2004, Alexander Broadcasting, Incorporated, (the current owner of WRCR 1300 AM Spring Valley, New York,)



requested a special waiver from the FCC. Their goal was to establish a new radio station in Rockland County on 1700 kHz with 10 kilowatts daytime power and one kilowatt at night. 1700 kHz is at the very top of the AM "expanded" broadcast band.

The expanded band, from 1610 to 1700 kHz, was allocated and populated by new stations years ago. All the available slots were long accounted for.

Using a clever ploy, Alexander Broadcasting claimed that their current operation on 1300 kHz did not adequately cover all of Rockland County, and, in turn, could not properly notify the county's populace should a disaster occur at the Indian Point nuclear power facility across the Hudson River in Buchanan, New York. The FCC actually bought the argument, but the application phase was not going to be easy.

Alexander Broadcasting hoped for a simple move of frequency from 1300 to 1700 kHz. Not so fast! The FCC allowed other applicants to apply for the frequency. So far, three other parties have tossed their hats in the ring. Rockland's other AM broadcaster, WRKL on 910 kHz in New City, has applied. Zev Brenner, a well-known radio host in the Jewish community, wants to establish the station in Monsey to serve the large Hasidic community there. Gary Smithwick's S&B Communications seeks to place the station in Stony Point.

The FCC will soon review all the applicants and decide if their proposals will meet the strict criteria they have devised for the new station. The applicants who pass this first test will then become participants in a lottery for the allocation. Lotteries have broken many an applicant in the past. AM frequencies are rare, especially near the New York City area. This will be an expensive proposition! We can only wonder who will be the winner, but it will be quite a race!

### Miracle Walkman

The world isn't entirely digital yet! Internet reflector groups have been abuzz with comments regarding a very inexpensive analog Walkman radio: The Sony model SRF-59. This tiny AM/FM radio has been heralded as the best buy of the decade by some. AM broadcast DXers, on both coasts, have claimed to hear stations across the Atlantic and Pacific oceans using these modest handheld radios. The unit retails with a list price of about \$15 complete with headphones!



Several Internet sites have been established displaying comments and modifications of the SRF-59. A great place to start is: <http://www.fixup.net/tips/srf49/srf49.htm>. This page is part of a site dedicated to "ultralight" portable radios that can be used and modified for serious DXing. I previously owned an older version of the SRF-59 and found it to be just an average inexpensive radio. In about a year's heavy use, I managed to wear out the plastic sheets that insulated the tuning capacitor's plates making the radio short out under 900 kilohertz on AM.

*Sony SRF-59 Walkman stereo radio covers 530-1710kHz AM and 87.5-108MHz FM.*

A new Sony design seems to have made the SRF-59 quite a hot rod in sensitivity and selectivity. I have just received the latest version. My seatbelts have been fastened! So far, I can see that the AM receiver is very "hot" and selective. I am already amazed with its performance. Read all about my findings in the February edition of PCARA Update.

### Messages Sent From Above!

If you didn't get one for Christmas, you can now buy your own Morse code tie. Without a doubt, your wife or girlfriend will roll her eyes seeing this one! The entire alphabet is portrayed on a black tie that will go with everything! See it for yourself at: <http://www.djengineering.co.uk/clivedon/prodclivedon.asp?ProdID=3529>. For those receiving

divine CW messages from above, have we got a T-shirt for you! How about a cotton top proclaiming "Jesus Saves" in dark black dots and dashes? The message is also available on baby bibs, tote bags, mouse pads, pillows, aprons and teddy bears! Check out this URL for details: <http://www.teesed.com/store/frankdeloach.183278129>. Certainly a conversation starter, these items may bring you the greatest DX of all!



### Resolutions

Make sure you add one resolution to your new year's list: Join us on the air every Thursday night for The Old Goats Net! Just tune in at 8:00 pm on the two meter PCARA repeater: 146.67 MHz with a -600 offset and a 156.7 PL. Our weekly net has attracted attention far and wide. One of our regulars, Jeff, WA2RAS, chimes in from Long Island's south shore in Island Park, New York. It's a festival of fun and it's free! Join us this week and see!

Until next month, happy New Year and happy trails!

73 de N2KZ "The Old Goat."



## Farewell to tungsten?

On December 18, Congress approved an Energy Bill that should improve vehicle fuel economy by 40% and increase production of biofuels. The bill, which was signed by President Bush on December 19, calls for cars and trucks to average 35 miles per gallon by 2020. It will also boost ethanol production, reducing dependency on imported fossil fuels.

Other measures in the bill include efficiency standards for appliances such as dishwashers and washing machines. A less-noticed measure calls for new lamps to be more efficient over the next 13 years and could lead to a phase-out of standard incandescent light bulbs. This part of the legislation seems to have been written for the benefit of Philips, GE and Sylvania — it is likely to favor those company's more expensive products including halogen bulbs, compact fluorescent lamps and LED lights.

Under the lighting measure, all light bulbs offered

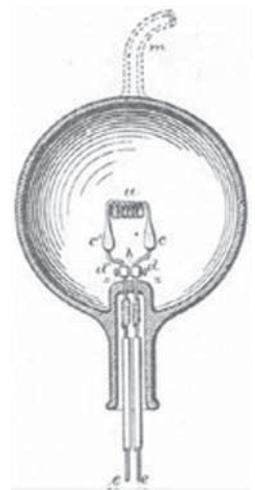
for sale must use 25% to 30% less energy than today's incandescent lamps by 2012-2014. The phase-in will start with 100-watt bulbs in January 2012 and end with 40-watt bulbs in January 2014. By 2020, most new bulbs must be 70 percent more efficient. Modified incandescents such as Philips' halogen bulbs can already offer the 30% efficiency improvement, but as of now, only compact fluorescent bulbs will be able to meet the 70% improvement required by 2020.



*Halogen bulbs can already show a 30% efficiency improvement over conventional incandescent lamps.*

### Essential<sub>2</sub> lighting

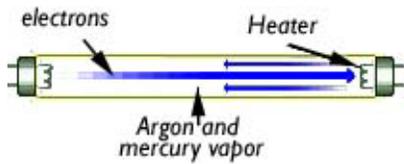
The commercial incandescent light was *the* great invention of Thomas Edison and his team at Menlo Park, NJ. After testing thousands of materials, Edison applied for a patent in 1879 for an electric lamp using a carbon filament connected to platinum contact wires. Joseph Swan had developed a similar lamp in England about the same time. Bulbs with carbon filaments suspended in a vacuum became a commercial success until developments in the early 1900s showed that a metallic **tungsten** filament in an inert gas would give a brighter light and longer life. Improvements continued over the following years with the frosted bulb and the coiled-coil filament, but the standard incandescent lamp we use today is still based on technology that is over 100 years old.



*Edison's incandescent lamp, patented in 1880.*

Incandescent bulbs have proved their worth over the years and have many advantages... they are small, they do not cause radio frequency interference, they come up to full brightness rapidly and represent a purely resistive load to the power supply (power factor 1.0). Their main disadvantages are the limited filament life, sensitivity to voltage variations and poor light efficiency. 90-95% of the electrical energy fed to a standard bulb is converted to heat, rather than visible light. This means the bulb and associated electrical fittings run hot, and in summer there is an additional load on the air conditioning.

The great hope for replacing incandescent bulbs is



Fluorescent tube contains argon gas and mercury vapor at low pressure. When an arc is struck across the tube, electrons flowing through the plasma excite mercury atoms to emit UV.

Electrodes at each end, filled with the noble (inert) gas argon or xenon at low pressure. There is also a small amount of metallic mercury in the lamp. The electrodes are similar to a directly-heated cathode in an electron tube, consisting of a tungsten filament coated with material that readily emits electrons, e.g. barium/strontium/calcium oxides. When the fluorescent lamp is switched on, external circuitry powers the heaters, promoting electron emission, which begins to ionize the inert gas and the mercury vapor. The external circuitry then applies a high voltage across the length of the tube, striking an arc, which produces even more ionization. Electrons flowing through the plasma excite electrons in the atoms of vaporized mercury, then as the mercury electrons return to their normal state, large amounts of ultraviolet radiation are produced. Invisible ultraviolet radiation is not what we need (unless we want scary Halloween effects), so the inside of the glass tube is coated with materials that *fluoresce* when excited with ultraviolet radiation. These *phosphors* absorb ultraviolet radiation then re-radiate on a lower frequency, producing visible light.

The color of light from a fluorescent lamp depends on the mixture of phosphors used to coat the glass tube. Typical phosphors include lanthanum phosphate doped

the “Compact Fluorescent Lamp” or **CFL**.

Fluorescent lamps have been around since the 1930s. The type we are most familiar with is the fluorescent tube, a glass tube with elec-

with the rare earths cerium and terbium (green), and yttrium oxide doped with europium (red light).

Conventional fluorescent tubes employ a “ballast” coil that limits current through the tube and provides an inductive high voltage spike at switch-on to start the discharge. This inductance has to be substantial to provide



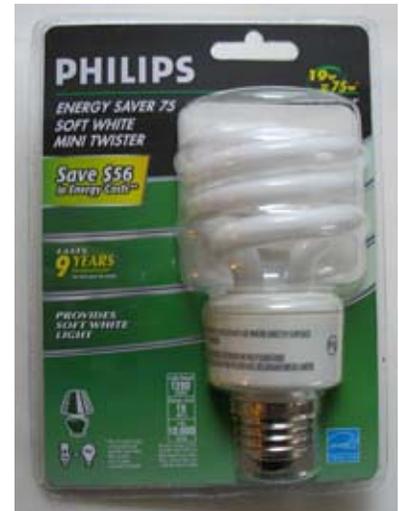
Philips ‘Circline’ circular fluorescent lamp with magnetic ballast in center.

a sufficiently large impedance at 50 or 60 Hz — it usually takes the form of a heavy, iron-cored choke which may hum when running. Some of the early

compact fluorescent lamps also employ a magnetic ballast – you could tell them apart because of their weight!

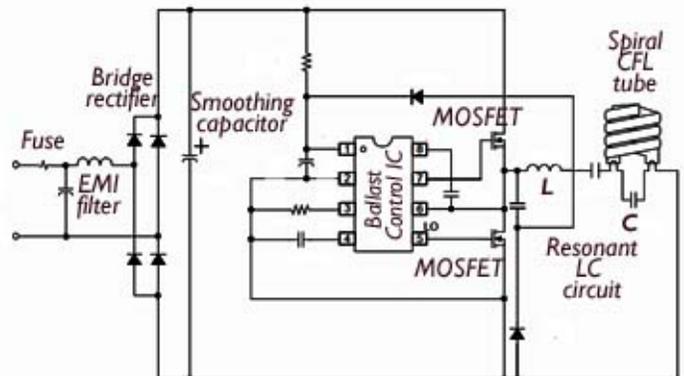
Fluorescent lamps with magnetic ballasts have one advantage for radio amateurs — they do not generate a lot of radio frequency interference. Compact fluorescents with magnetic ballasts have almost disappeared, but the “Circline” design of circular fluorescent tube with a magnetic ballast is still available and represents a good choice for radio-quiet areas. Unfortunately, the size of the iron-core ballast prevents these lamps from fitting in the confined space of some standard Edison-screw fittings.

A major advance in the design of compact fluorescent lamps came with introduction of the *electronic ballast*. Instead of a heavy iron choke to warm the heaters, strike the arc and limit the current through the discharge tube, these functions are performed by electronic components that weigh much less and generate little heat. The basic design is similar to a switch-mode power supply: the incoming 120



Philips compact fluorescent lamp produces as much light as a 75 watt incandescent bulb, while consuming only 19 watts, a 75% improvement.

volts AC is converted to 150 volts DC, or voltage doubled to 300 volts DC using a bridge rectifier and smoothing capacitors. The resulting DC supply is switched at a “high frequency” of 50-60 kHz by power MOSFETS. Instead of applying the



Circuit of a simple CFL power supply. AC power at left is rectified and filtered, then fed to spiral CFL tube via MOSFET half-bridge switching stage and resonant LC circuit. Ballast control IC regulates drive to the MOSFET switches.

switched output to a high frequency transformer and rectifier as in a switched mode power supply, the high frequency output is fed via a resonant LC circuit to the fluorescent tube and its heaters. The resonant inductor can be small and efficient because of the high operating frequency. An integrated circuit controls the frequency and duty cycle of the MOSFET switch during starting and running.

When a fluorescent tube is operated at these higher frequencies of 50-60 kHz, the light output is greater than at the power-line frequency of 60 Hz. This is good for overall efficiency, but bad for radio frequency interference. We know that switch mode power supplies cause problems even when they are mounted in a metal case, with well-filtered power leads. Now imagine that same circuitry housed in the plastic base of a compact fluorescent lamp, with minimal filtering, connected to the 120 volt line on the input side and to conductive plasma inside a coiled glass tube on the high frequency output side. As you might expect, there can be a lot of interference on the fundamental switching frequency and on its harmonics, stretching up into the AM broadcast band. There is also wideband 'noise' interference on all frequencies in the MF and HF

spectrum. It's always a bad sign when a lamp includes the following warning:

"This device complies with part 18 of the FCC Rules. If interference occurs, move this product away from the device or plug into a different outlet. The product may cause interference to radio equipment and should not be installed near maritime safety communications equipment or other critical navigation or communication equipment operating between 0.45 – 30 MHz."

As explained in the PCARA Update for April 2005, "The FCC sets limits for lighting applications in Title 47 CFR, Part 18 (Industrial, Scientific and Medical Equipment), subpart C for

conducted frequencies from 450 kHz to 30 MHz and for radiated frequencies from 30 MHz to 1 GHz. The limits for consumer equipment are lower than for non-consumer equipment. Despite these rules, lamps on sale today can cause plenty of interference to AM radio, to reception of WWVB atomic clock signals on 60 kHz and to infrared controls as well as to amateur radio."

Things have not improved since those words were written in 2005. If anything, the situation has worsened because the newly-arrived AM HD Radio is very susceptible to low levels of interference.

An informal test with some modern CFL lamps from GE and Philips shows that they produce just as much radio frequency noise as the earlier designs. The worry is that in a few years time, CFL lamps may be the only type that is readily available in the stores, and our homes will fill up with these efficient but noisy devices.

There is another concern about CFLs – in common with conventional fluorescent lamps, each bulb contains a small amount of metallic mercury inside the glass tube. If the tube breaks, toxic mercury is released as vapor or droplets. The EnergyStar web site (<http://energystar.gov/>) recommends that if a fluorescent lamp breaks, you should open the window and leave the room for 15 minutes or more, then scoop up fragments and powder with stiff paper or cardboard and place in a sealed plastic bag. Using disposable rubber gloves, the area should be wiped clean with damp paper towels or wet wipes and the debris placed in a plastic bag. If a fluorescent bulb should break on a rug or carpet, visible material should first be removed, then sticky tape should be used to pick up small pieces and powder. Do not use a vacuum or broom to clean up the broken bulb, as this will spread the mercury around.

A couple more problems with CFLs — they are *not* recommended for locations where they will only be switched on for a short time. Examples include stairways and closets. Some lamps take a minute or more to warm up to full brightness, and general advice is to leave CFLs switched on for at least 15 minutes to avoid shortening their overall life. Another problem is that standard CFLs can be destroyed by SCR dimmers, and may react badly to solid-state timers using SCRs. A third difficulty is that lamps hanging downward in a badly ventilated fitting can cook the electronic ballast. Let's hope that lamps based on LED technology will begin filling these performance gaps as their output increases and the price comes down to more reasonable levels.

My own advice to energy savers would be to substitute tubular fluorescent fittings and Circline fluorescent lamps with magnetic ballasts wherever you can. Hold on to your incandescent lamps for other places and keep a small stock of conventional bulbs for use where CFLs would be too noisy or too inappropriate. - NM9J



Testing compact fluorescent lamps for RF interference on low, medium and high frequencies. This GE 'Energy Smart' lamp had no RFI warning on the package, but was just as noisy as some earlier models that did have the warning.

# Kenwood TM-V71A review

My trusty old Icom IC-3230 mobile FM transceiver kept announcing the callsign of the N2CBH repeater **very loudly** at *full volume* every ten minutes. The IC-3230 is quite elderly — it came from KJI at one of the WECA Hamfests held in Yonkers Raceway, over 13 years ago. I had repaired the volume control before — I think the reliability problem is caused by incandescent lamps behind the radio's front panel that heat up the circuit board. Sadly, my third attempt at repair silenced the IC-3230 for good.

So it was time to think about a new dual band mobile radio for use in the shack. If you want a basic “two bands at once” transceiver, there are only a few models to choose from: the Icom-2820, the Yaesu FT-8800R — an older but well-seasoned design — and a new offering from Kenwood, the TM-V71A. I have had lots of success with Icom mobile radios, but the new Icom-2820H is **\$650**, more than the cost of some HF trans-



*Kenwood TM-V71A dual-band transceiver with amber backlight selected.*

ceivers! So I decided to try Kenwood's latest VHF/UHF radio, the TM-V71A.

Taking the radio out of its packaging, it seemed to be a solidly-engineered design. The removable front panel is held to the main body by a single latch and is the same height as the body, so it can be used as a compact single-unit in the shack. The lower half of the chassis is a solid casting, with a sheet metal cover over the top, containing the speaker grille. A new feature is that the body can be inverted behind the front panel so the speaker aims downward if desired.

First impressions were of a clear liquid crystal display with “left hand” and “right hand” frequencies both shown. The display brightness can be varied through the menu system, and the backlight color can be changed from amber to green. The eleven buttons on the front panel are nicely backlit, also in green or amber. There are separate volume/squelch controls for

the left hand and right hand receivers, (good!) but only a single “frequency dial” (not so good). This was similar to my old IC-3230, though more modern VHF/UHF radios have separate tuning dials for the two receivers.

Changing the tuning dial from controlling the “left hand” A receiver to the “right hand” B receiver is accomplished by pushing in the appropriate volume control. The tuning control can also be pushed in — this is the way to dial up MHz digits. The other buttons on the front panel have different actions depending on whether you give a short push or a long one — and a third layer of functionality is obtained by pressing the “F” button beforehand.

Pressing any control results in a loud “beep” from the loudspeaker. The volume of the beep can be modified in the menu, or you can turn it off completely — I would recommend something quieter than the default ‘5’ setting.

The first thing to try was entering some repeater frequencies, offsets and PL tones, then storing the settings in memory. This is quite straightforward — and unlike Icom, you do not need to use the menu system to select PL frequencies. It did not take too long to enter all my favorite channels in memory. One point worth noting is the memory scheme, which is different from the IC-3230 but similar to more modern dual-band radios such as the Icom-2720. There is only *one* set of memory channels, which can be used on both the left hand and right hand receivers. This is a bit of a shock when you are used to channels 1-15 on the left being for VHF and channels 1-15 on the right being for UHF channels only. On the TM-V71 it is quite possible to monitor one VHF and one UHF channel on the two receivers, or two VHF channels, or two UHFs together if you like.

Hint — if you would like to scan VHF memories *only* or UHF *only*, use separate memory groups for VHF (e.g. memory 0-99) and UHF (e.g. 100-199), then press the tuning control for 1 second to initiate a group scan. There is also a menu setting, “RECALL” that can restrict memory channels to the current band.

The TM-V71A has two external speaker jacks — they can be used separately for the left hand and right hand receivers, or you can plug a single speaker into either jack. For the best quality, I would always recommend large, external speakers over the tiny built-in speaker, especially if you are operating in a noisy environment.

Just above the speaker jacks, there are two mini-DIN connectors on the rear of the TM-V71A. The 6-pin mini-DIN is intended for packet radio and has the standard audio in, audio out, squelch and PTT lines for connecting to a TNC. This same mini-DIN can also be used for voice-over-IP applications such as EchoLink and IRLP. Kenwood includes a special “EchoLink Sysop” mode in the TM-V71A's capabilities which routes the

squelch and PTT lines via the serial connection. Kenwood also provides an optional set of cables for connection to a PC's serial port and sound card.

The second, 8-pin mini-DIN on the rear panel is for the serial connection. As well as Echolink use, this is intended for connection to a PC's COM port to allow memory programming with Kenwood's free MCP-2A software. At the time of writing, the programming cable



*Inside view of the TM-V71A with top cover removed. At bottom-right, there is an empty connector and space to install the optional VGS-1 Voice Guide and Storage unit.*

I ordered had not arrived, so I cannot tell you about that experience yet.

Kenwood's MC-59 DTMF hand microphone is a solid unit with a circular mounting clip, in place of the usual Icom hook. The large press-to-talk button sticks out a long way and requires a firm push. It looks a little 'retro' but works very well. The RJ-45 mic connector plugs into the side of the main transceiver body, rather than into the front panel. The sixteen control buttons on the DTMF microphone are nicely backlit in amber – and no, this does not change to match the front panel's backlight color.

There are lots of other things to report about the TM-V71... output power levels are 5W, 10W or 50W on both VHF and UHF... crossband repeat is possible, with your call sign stored in the unit for ID... APRS operation is not included in the TM-V71, but Kenwood sells the RC-D710 APRS/TNC upgrade unit which can replace the TM-V71's control panel, enabling all the features of the TM-D710A. The upgrade costs \$360, so if you really need APRS, you might have been better off buying a TM-D710A in the first place.

So far, the radio seems to be performing well. For a simple dual-band FM transceiver, it has a *lot* more features than its 14-year old predecessor.

- NM9J

## FiOS TV arrives

Previous editions of *PCARA Update* have described Verizon's progress with installation of its FiOS **Fiber Optic Service** to individual homes. (See *PCARA Update* for February 2006 and November 2006.) Until recently, Verizon could only offer Internet and phone service over fiber in our area, but there have been some recent developments in availability of FiOS-TV.



On August 14, at the Cortlandt Town Board meeting, the town authorized a video franchise agreement with Verizon. This was followed on September 21 by approval from the State of New York Public Service Commission – with several provisos, followed by a September 27 PSC correction. On September 25, Verizon announced that it was taking orders for FiOS TV in parts of Cortlandt, New Rochelle, and in the Rockland County villages of Haverstraw and Suffern.

On September 10, Peekskill's Common Council granted a video franchise to Verizon. This was followed by the NYS Public Service Commission issuing its agreement on October 18. On October 22, Verizon declared that it was taking orders for FiOS TV in parts of Peekskill, in the Rockland County village of Hillburn and in the Long Island village of Head of the Harbor.

One of my colleagues who lives nearby in Cortlandt Manor reports that Verizon recently spent a whole December day installing the triple package of fiber optic phone, Internet and FiOS-TV at her home. The initial review was very positive, with lots of TV channels available in excellent quality.

The playing field between Cablevision and Verizon is now much more level, with both organizations offering the triple package of voice, Internet and video. It will be interesting to see whether Verizon can win back its huge investment in the FiOS infrastructure by taking customers away from cable. The only gotcha so far seems to be that some very local channels on Cablevision are not available on Verizon's FiOS-TV.

## 24 Hour World Time

In my continuing hunt for clocks suitable for the amateur radio shack, I came across the following model at the "Sharper Image" store at Woodbury Common Outlet Mall in Central Valley.

The "PM450 5 Time Zone Atomic Clock" has a large analog-style clock face with minute and hour hands for "home time", plus four separate LCD digital panels that can be set to show the time at your choice

of four different cities around the world. Fifty cities are available, from Anchorage, Alaska to Zurich, Switzerland.



Sharper Image "5 Time Zone Atomic Clock" features a rotary dial plus four digital LCD clocks.

clocks must solve is — how does the clock's processor know where the hands are positioned? Some clocks have a contact which is only closed when each hand is at the "12 o'clock" position. The Sharper Image clock takes a different approach. Underneath the "3 o'clock" position are two LEDs and two photodetectors, which are illuminated when the minute hand or hour hand are directly overhead and reflecting radiation. As the four AA batteries are inserted and the clock is first powered up, both hands move to the "3 o'clock" position, then wait until the 60 kHz atomic clock signal has been received from WWVB in Fort Collins, Colorado. The hands then turn — quite slowly — until the correct local time is shown on the main clock face. Meanwhile, you can set the four LCD panels to your choice of world time cities. My displays are currently set to show "New York", "London", "Chicago" and "Paris".

Original list price for the PM450 clock was \$59.95, but the model was reduced to \$19.95 when I was in the store. One significant disadvantage is that there is no second hand, and no seconds display on the LCD panels. Another point worth mentioning is that the hour hand became confused about daylight saving time at one point and the clock had to be resynchronized with WWVB.

Since one of the available cities is London, and 24 hour display is an option, it is relatively straightforward to set up one of the four LCD panels to display Greenwich Mean Time. The default setting is to have daylight saving time *off*, so make sure to leave it that way for the London panel, for year-round GMT display.

One problem that designers of analog-style atomic

## Auction time

Last-minute reminder! PCARA will hold its first "Bring and Buy Auction" at the January meeting, scheduled for 3:00 p.m. at Hudson Valley Hospital Center on Sunday January 6.

This is the time of year when there is a scarcity of local hamfests. The first attraction of the 2008 season does not take place until Mount Beacon ARC's event in April.

So... take a look around your shack and storage area for equipment you might not have used in a while. Anything you have not touched in the past year probably won't be missed.

Dust it off, plug it in, check that it works, then bring it along to Sunday's "Bring and Buy". Make sure you mark your name or call sign on the item so ownership is clear.

If you need a rough idea of the second hand value of your boat anchor, you can always check on eBay. But remember — auctions with real equipment to touch and real-life people to bid against are always more exciting!



Going... going... gone!

## Holiday Dinner

Here's another photo from the holiday dinner, where Ray W2CH and Marylyn KC2NKG made a generous donation to PCARA's treasury. PCARA's Vice President Joe WA2MCR and Bob N2CBH received the check.



- NM9J

# Peekskill / Cortlandt Amateur Radio Association

**Mail:** PCARA, PO Box 146, Crompond, NY 10517

**E-Mail:** w2nyw@arrl.net

**Web site:** <http://www.pcara.org>

**PCARA Update Editor:** Malcolm Pritchard, NM9J

E-mail: NM9J @ arrl.net

*Newsletter contributions are always very welcome!*

Archive: <http://home.computer.net/~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 the Hudson Valley Hospital Center, Route 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.

## PCARA Repeaters

**W2NYW:** 146.67 MHz -0.6, PL 156.7Hz

**KB2CQE:** 449.925MHz -5.0, PL 179.9Hz

(IRLP node: **4214**)

**N2CBH:** 448.725MHz -5.0, PL 107.2Hz

## PCARA Calendar

**Jan 6, 2008:** PCARA New Year bring and buy auction, Hudson Valley Hospital Center, 3:00 p.m.

## Hamfests

**Sun Jan 13 2008:** ARRL NYC-LI Section Convention, Ham Radio University, Briarcliffe College, 1055 Stewart Ave., Bethpage, NY. Forums begin 9:00 a.m.

**Sun Feb 24 2008:** LIMARC Indoor Hamfair, Levittown Hall, 201 Levittown Parkway, Hicksville, NY. 9:00 a.m.

**Sun Apr 13 2008:** Mt Beacon ARC Hamfest, Tymor Park, LaGrangeville NY.

## VE Test Sessions (*No more code tests!*)

**Jan 6:** Yonkers ARC, Yonkers PD, 1st Precinct, E Grassy Sprain Rd, 8:30 a.m. Contact D. Calabrese, (914) 667-0587.

**Jan 28:** Columbia Univ ARC, 2960 Broadway, 115 Havemeyer Hall, New York, NY 10027. 6:30 PM. Contact: Alan Crosswell, (212) 854-3754.



Peekskill / Cortlandt Amateur Radio Association Inc.  
PO Box 146  
Crompond, NY 10517