Time Warner Broadband Tier Pricing Halted

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The Greensboro Amateur Radio Association

Feed Line

Providing Amateur Radio news for the Triad

Volume 18, No. 4 | April, 2009

Editor: Tom Forrest, N4GVK | Web Site: www.w4gso.org | E-mail: info@w4gso.org

Today's Broadcast Radio Sure Isn't Your Dad's Anymore

by Tom Forrest, N4GVK
Feed Line Editor

Today's broadcast radio isn't your Dad's anymore. To say this is probably an understatement. When the first transistor radio came out in the early 50's, everyone thought this was the most important thing since the light bulb. It was a radio that could be carried with you as a portable. It was small, ran on batteries and had no heat from tubes.

Sliding through time to today, now it's HD Radio™ broadcasting. Much hype has been placed on DTV over the past few months, but little attention has been awarded to HD Radio broadcasting. It's free and you can receive it with a simple inexpensive table-top or car receiver. There are many stations in the Triad area transmitting digital channels. All have excellent quality and easy reception. Just tune around and they will pop up as digital signals on the receiver.

What is HD Radio ™ broadcasting? Let's look at it.

HD Radio technology is a system used by AM and FM radio stations to digitally transmit audio and data in conjunction with their analog signals. This system enables AM and FM radio stations to simulcast both digital and analog audio within the same channel (a hybridized digital-analog signal) as well as add new FM channels and text information.

Although HD Radio broadcasting's content is subscription-free, listeners must purchase new receivers in order to receive the digital portion of the signal. As of March 2009, 1,879 stations covering approximately 84% of the United States are broadcasting with this technology. More than 1,000 HD2/3 multicast channels are on the air.

A contrast of time is illustrated here with a 1950's vintage transistor radio and an old ad is pictured with a today's modern digital HD Radio™ technology receiver. The display of the digital radio shows a local Triad station with choices of digital channels.

(Photo illustration by Tom Forrest)

The HD Radio system, the only digital system approved by the FCC for digital AM/FM broadcasts in the United States, is officially known as NRSC-5, with the latest version being NRSC-5B. The FCC has not indicated any intent to phase out analog radio broadcasts as it has with analog television broadcasts. Thus, there is no deadline by which consumers must buy an HD Radio receiver.

HD Radio technology offers a digital upgrade path to broadcasters in the Medium Wave Amplitude Modulated (MW-AM) at 1530 – 1710 KHz and Very High Frequency-Frequency Modulated (VHF-FM) at 88 – 108 MHz broadcasting bands. By employing an In-Band On-Channel (IBOC) approach, broadcasters are able to transmit digital signals along with analog signals in the existing allocated spectrum. Figures 1 and 2 represent, respectively, the MF and VHF HD Radio waveforms for hybrid operation (where digital and analog signals are broadcast together).

If digital signal reception is lost, the HD Radio receiver will revert to the analog signal, thereby providing seamless operation between the newer and older transmission methods.

Continued on Page 2 >

NEXT MEETING – April 27

The next meeting of the Greensboro Amateur Radio Assoc. will be April 27, at the Golden Corral Steak House, 4404 Landview Dr, Greensboro, NC 27407, off Wendover Ave. near Sam's Club. The program will be presented by Dan Yemiola, AI8O, on The Maidenhead Locator System (otherwise known as Grid Squares) and its use in Ham Radio

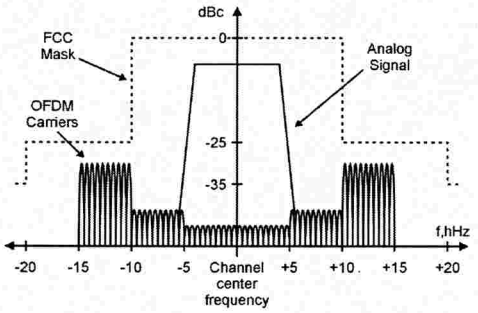


Figure 1 – HD Radio MF waveform

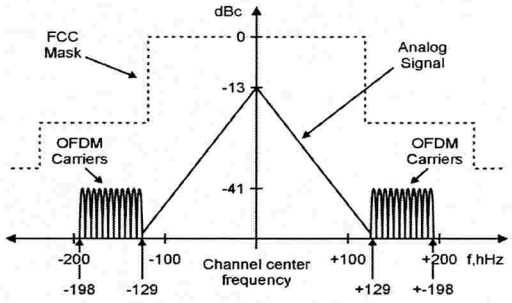


Figure 2 – HD Radio VHF waveform

A. The advantages of this approach include:

1) No additional spectrum for digital radio conversion,

2) The ability to support new digital receivers while remaining backward compatible with existing analog receivers,

3) Affordable conversions that utilize much of a radio station's existing equipment and infrastructure,

4) Retention of brand equity and dial position,

5) A conversion path that is gradual for radio stations and seamless to listeners, and

6) A potential migration to all-digital services when conditions are favorable (e.g. when digital receiver penetration is sufficient). Figures 3 and 4 represent, respectively, the MW-AM and VHF-FM HD Radio waveforms for the "all digital" operation. A specific spectrum mapping chart is included to demonstrate the amount of kb/s available per mode of operation.

B. HD Radio Technology: Benefits

HD Radio technology offers broadcasters dramatically increased audio quality. It utilizes HDC®, a state-of-the-art audio codec designed and optimized for use with the HD Radio system. At a throughput of 48 kb/s, the VHF HD Radio system produces audio quality that has proven to be almost indistinguishable from FM Stereo and at 96 kb/s CD-like in subjective testing. The MW-AM HD Radio system produces audio that is FM stereo-like quality with a 15 kHz frequency response at only 32 kb/s. Both systems are also resistant to interference and channel impairments such as multipath interference and impulse noise. These enhancements serve to increase audio quality and improve the listener experience. HD Radio technology is also compatible with several existing surround sound technologies.

C. HD Radio Technology: Multicasting

The VHF HD Radio system also allows audio to be divided into multiple, discrete audio channels. This "multicasting" feature enables broadcasters to offer additional programming to listeners with HD Radio-compatible receivers without the need for additional frequency allocations.

D: HD Radio Technology: Program Service Data (PSD) and Data capability

The ability to broadcast program-associated data, including song/program title, artist, genre, etc., similar to RDS but with a higher throughput, is supported for the primary audio channels in the MW-AM and VHF-FM systems and all multicast audio channels in the VHF system. Other types of "tunneled" data are also supported in the MW-AM and VHF-FM systems. A practical application of tunneled data is real-time traffic information (flow rates, accidents/events, road closures, etc.).

"HD Radio" is the trademark for iBiquity's in-band on-channel (IBOC) technology, which was selected by the Federal Communications Commission (FCC) in 2002 as a digital audio broadcasting method for the United States. According to iBiquity's website, the "HD" is simply a brand name and has no meaning . There is no connection with high-definition television (HDTV), except in the sense that both HDTV and HD Radio are digital formats.

Ok, now that you have the basic info, you can sit back and listen. If you'd like more information you can visit various web sites, including www.hdradio.com and www. ibiquity.com.

If you don't have a radio, you can find many places that sell receivers. The radio featured in the photo can be found at the following URL: http://tinyurl.com/djxx6j Others are available from various stores and mail order houses. A search of Google can reveal a number of such sources.

Thanks to Vicki Stearn, of iBiquity, for for information provided in this story.

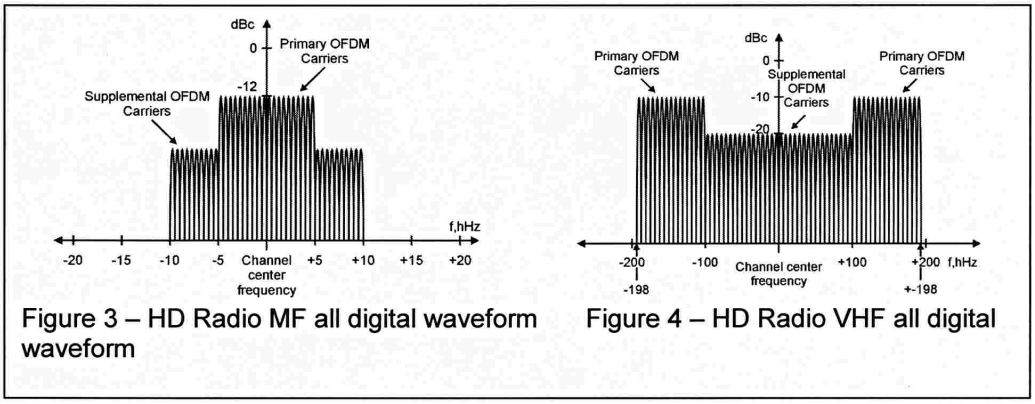


Figure 3 – HD Radio MF all digital waveform waveform

Figure 4 – HD Radio VHF all digital

GARA Meeting Minutes

Regular Meeting Minutes
March 23, 2009

The Greensboro Amateur Radio Association held its monthly meeting on March 23, 2009 at the Golden Corral restaurant just off Wendover Ave. and I-40.

Will Ravenel, AI4VE, who presided over the meeting for Chris Thompson, K4HC, who had a prior commitment called the meeting to order at 7:15 PM.

We had our usual round of everyone identifying themselves.

The minutes from the last meetings were approved.

Roy Smith, N4BYU, asked that everyone try to help Tom Forrest, N4GVK, with articles or ideas for the Feed Line. You can reach Tom by e-mail at n4gvk@bellsouth.net

Will said that Carl Fenske, KC4WGA, who teaches at Greensboro day school has gotten several of his students interested in amateur radio, and there are about six that have been licensed so far. These Hamsters, as Carl calls them, can be heard on the repeater quite often and conduct themselves very good. Will said that we should see about trying to attract them to GARA.There will be a discussion about it at an upcoming board meeting.

Alan Bradley, KD4IUN, spoke about the Wrangler soccer tournament coming up on May 23&24. Allen needs volunteers for both days. You can reach Allen at allen@bradleydata.com.

Roger Stou,t N4RWS, said that the balloon launch experiment by Robert Krasowski, KB2PNM, has been on hold due to weather and he hopes to launch soon.

Ernie Wall, NC4EW, said the treasury is better than expected because the repeater repair bill has not come in yet and income has been better.

Al Allred, K4ZKQ said the forecast is looking good and income is ahead of schedule.

Jesse Lindley, N4BFD said that he would swap out the repeaters soon because there has been some noise heard when receiving weaker signals.

The gateway for the D-star repeater is almost done and Arch, KT4AT, plans to debut it at Dayton. Eccolink is working well and is getting some use on the two meter machine.

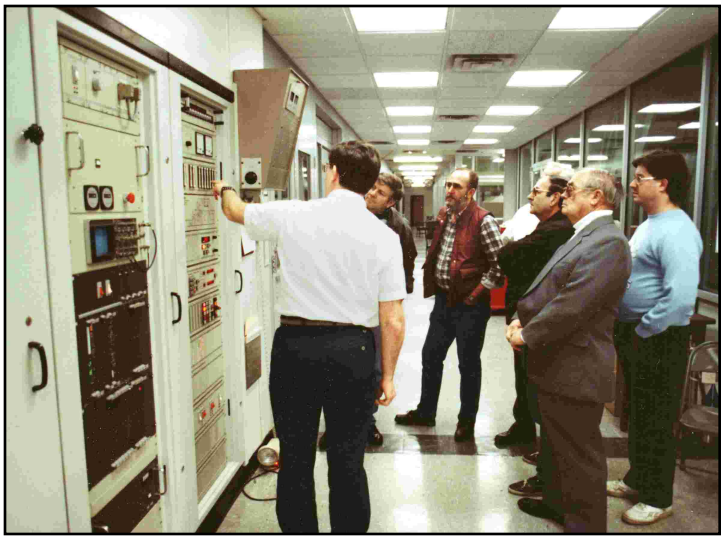
Will, AI4VE, gave a great presentation about antenna modeling.

The meeting closed at 8:30PM.
Respectfully submitted by:
Greg Spencer, KG4UQV, Secretary

There was no board meeting in April.

Back in the 90's

This photo shows the control room of Site "C" that was decommissioned in the mid 90's and donated to Pitt County and East Carolina University. The Brightleaf Amateur Radio Club uses a rear portion of the old facilty for a club station, and still allowed access to some of the old antenna arrays that have remained at the site.



These photos were made circa 1993 in Greenville, NC at the Voice of America Site during a field trip by members of GARA. Recoginize anyone? Macon Dail, WB4PMQ, (back to camera) then an engineer with the VOA (now an assistant station manager) talks about the equipment.

When Vandals Strike Infrastructure, Hams Operators Assist

(ARRL-Apr 15, 2009) -- In the early morning, just after midnight on April 9, someone climbed down four manholes in the San Jose, California area and cut underground fiber optic cables. The sabotage led to widespread disruption of phone service -- including tens of thousands of land lines, an undetermined number of cell phones, Internet access and 911 emergency service -- in southern Santa Clara County, as well as in Santa Cruz and San Benito counties. San Jose is the county seat of Santa Clara County. With the infrastructure disabled, local Emergency Management officials called on ham radio operators in their communities to provide back-up communications. According to the San Jose Mercury News, Santa Clara County called a local state of emergency, "but worst-case scenarios were successfully avoided through use of ham radios, door-to-door checks and extra-vigilant patrols."

In Santa Cruz County, just over the Santa Cruz Mountains from San Jose, Santa Cruz County District Emergency Coordinator Cap Pennell, KE6AFE, was awoken that Thursday morning just after 5 AM by uniformed police at his door. Sent by Dominican Hospital President Nanette Mickiewicz, the police officers escorted Pennell to the hospital for a brief on this situation: The fiber optic lines that had been cut in San Jose had affected the Santa Cruz hospital's communications infrastructure, cutting off communications from the hospital to the outside world. Santa Cruz is located on the northern edge of the Monterey Bay, about 72 miles south of San Francisco.

ARRL Graphic

"While I was meeting with hospital department heads, Bob Wolbert, K6XX, had started our ARES Resource Net on the W6WLS/W6MOW linked repeaters," Pennell told the ARRL. "During the briefing, the hospital determined to implement HICS/SEMS for this emergency. There hadn't been telephones or Internet anywhere since about 2:30 AM. The hospital's phone system did work, but only within the hospital. Their internal computer local area network wasn't working either, so they were instantly on a 'paper system.'"

By 6:15, Pennell said they had established tactical radio links on the K6BJ/KI6EH linked repeaters between the Dominican Hospital Emergency Operations Center in Santa Cruz and the Watsonville Community Hospital emergency room; Watsonville is about 15 miles south of Santa Cruz via the Pacific Coast Highway. "We established HEARNET 155.385 simplex between both hospital ERs and County 911; HEARNET is the Hospital Emergency Administrative Radio Network. Once HEARNET (ER staff) and K6BJ repeater (hams) were staffed and operating at both hospitals, I left the hospital to become our initial ham operator at the County Emergency Operations Center and operated as ARES/ACS shift supervisor from there for the rest of the day," Pennell reported.

Throughout the day, Pennell said hams -- including some in Monterey County who had been working telephones -- helped dispatch ambulances, conferred with the Poison Center on a children's poisoning case, ordered replacement blood supplies for two hospitals from San Jose Red Cross, relayed a complex major "whole hospital" day's food order to the supplier out of county, tracked down various doctors for emergency consultations and shared status updates from our area. "We did all this while in unity with the County government, public safety agencies and California Emergency Management Agency's Coastal Region," he said. "Greg Smith of Cal-EMA spent the day in the Santa Cruz EOC with us." All service was restored by 12:15 AM on Friday, April 10.

NETCOM, the dispatch center for most police and fire agencies in Santa Cruz County, was able to receive 911 calls placed from land lines, but could not receive calls placed from cell phones, said Santa Cruz County Senior Dispatcher Stephanie Zube. "Because the only phone number many land line phone owners could call was 911", she said the center received "countless calls" regarding the blackout: "At least several people attempted to call 911 before driving themselves to the emergency room. A lady in Gilroy fled her home when a robber broke in, and couldn't call 911 before fleeing to a nearby firehouse."

Vandalism Takes Out System

San Jose and San Carlos police are joined

Continued on next page >

The Greensboro Amateur Radio Association

President Chris Thompson, K4HC
Vice-President Willl Ravenel, AI4VE
Treasurer Ernie Wall, NC4EW
Secretary Greg Spencer, KG4UQV
Financial Al Allred, K4ZKQ
Engineering Chairman Jesse Lindley, N4BFD
Operations Roy Smith, N4BYU
Member at Large Clark Doggett, KG4HOM
Member at Large Dave Touvell, KN4ZO
Appointed Positions:
News letter editor and Webmaster:
Tom Forrest, N4GVK

in their investigation of the cut fiber optic cables -- now considered by authorities to be a coordinated act of sabotage -- by the Santa Clara County Sheriff's Office and the FBI. The investigation also includes members of AT&T's security force, a handful of trained investigators working for the company. Authorities said on April 10 that evidence collection was complete, but would not elaborate on what exactly they are examining or whether new security measures are in place to prevent similar acts of destruction.

San Jose police reported receiving about 10 tips concerning the sabotage; San Carlos police told the San Jose Mercury News that they are examining video surveillance of a major intersection near one of the four locations where AT&T's underground fiber-optic cables were sliced early Thursday morning.

On April 11, AT&T issued a $100,000 reward for information, but bumped up the reward to $250,000 the next day when it discovered that the damage was more serious than originally thought. According to the Daily Tech, some banks in the area were forced to temporarily close, while all service was disabled and hand-written receipts were offered to customers. Many businesses also were forced to either accept cash or close for a few hours, since credit card and ATM transactions were unavailable.

Authorities say the communications sabotage occurred in two separate incidents, one at 1:30 AM in south San Jose and the other two hours later in San Carlos. Several companies, such as Verizon, "piggy back" on the AT&T-owned cables. AT&T spokesman John Britton told the Mercury News that it appears vandals opened a manhole and climbed down at least 8 feet to cut four or five fiber optic cables along Monterey Road just north of the Blossom Hill Road exit. The second vandalism was along Old County Road near Bing Street in San Carlos. San Jose police spokesman Sergeant Ronnie Lopez said the manhole covers are heavy and would take quite an effort to lift, perhaps even requiring a tool. Investigators do not have a suspect yet, he said, but have learned "to expect the unexpected. We have some obvious clues and can assume some things," but a motive remains elusive.

Gilroy, the southernmost city in Santa Clara County, was also affected. City Administrator/Director of Emergency Services Thomas J. Haglund expressed his thanks to the Amateur Radio operators who assisted with communications support, saying, "This particular emergency situation underscores that our reliance on technology should be balanced with maintaining the very types of capabilities that you provided to us. Communication is an obvious key to adequately responding to any emergency and the efforts of the Mutual Aid Communicators and the Gilroy Police VIP's provided the necessary communication and public visibility in this instance and demonstrated just how important your training and skill is to our community. Thank you very much for your dedication and expertise."

Gilroy Police Chief Denise Turner echoed Haglund's comments: "We truly appreciated all of your help during this challenging event! Each of you played a key role in a successful operation. I feel better knowing we have dedicated volunteers like you that will come to our aid in time of need! Thank you!" -- Some information provided by The San Jose Mercury News and The Daily Tech

Danny Hampton, K4ITL Is Dayton "Amateur Of The Year"

The Dayton Hamfest has selected NC's Danny Hampton, K4ITL, as "Amateur of the Year". Danny is the architect of the Piedmont Coastal Repeater Network, established in the early 1970s, which today sports more than 40 machines in North Carolina.

The system is heavily used for public service work. Hampton has enhanced the network's utility with custom audio processing boards and RF components.

The North Carolina Office of Emergency Management and SKYWARN have recognized the network's vital role in emergency communications.

Recently, Danny helped coordinate the development of the "CARES" system - a local hospital-based Amateur Radio emergency repeater system that ties 10 facilities together.

Danny Hampton, K4ITL

A ham since 1958, Danny is the Southeastern Repeater Association (SERA) technical committee chairman as well as the ARRL North Carolina Section Technical Coordinator.

(Photo Courtesy Tom Babb, WW4TLB)

State ARES Earthquake Drill Set for June 23-24

North Carolina ARES members are being asked to participate in a state emergency management drill on Tuesday, June 23 and Wednesday, June 24. The drill will involve a large earthquake in the Buncombe County area and the resulting damage will affect structures and communications facilities that are not "earthquake resistant" with a special emphasis on cellphone facilities/towers. The focus of this exercise is on communications and interoperability and the scenario depicts massive communications infrastructure failure from damage and circuit overload. NC Emergency Management expects Amateur Radio to play a key role in this exercise.

We'll have more detail later, but we know we will need operators in Bumcombe and the surrounding counties, at the NCEM warehouse in Badin, at the western branch EOC in Conover and at the state EOC in Raleigh. Please contact your local EC with your availability for this exercise.

Time Warner Broadband Tier Plan Hit Customer's Hot Button

by Tom Forrest, N4GVK
Feed Line Editor

A storm of protest against TimeWarner Cable has prompted the cable giant to re-think its new tier pricing for internet service, placing it on hold for now until they "can educate the public." The new metered cable price plan to bill-by-the-byte could cost businesses and heavy online users up to $150 per month for high speed broadband service.

Recently, Time Warner Cable added two additional tiers to the original metered pricing plan - a budget plan allowing 1 GB of data use for $15 per month, and a "super-tier" allowing up to 100 GB of usage per month for $75. Each 1 GB over the specified amount would cost $1 per GB in overage fees, with a maximum overage cap of $75 per month. The original tiers are 10, 20, 40 and 60 GB of data transfer.

Users of the TWC cable high speed internet service said they realize the battle is not over. The company can come back "when the dust settles" and after brushing users aside, to try something later when no one is looking. However, after this last outcry from users, this is not likely to happen. Users in the Triad and in Rochester, NY make up the "test" markets identified by Time Warner. Other test markets were planned and included San Antonio and Austin, TX.

TWC's new rate imposition relates to expected heavy downloading of movies to computers or to new TV sets that have the capability. Time Warner has cited concerns that an escalating level of heavy download activity would reduce the operating speed of the system. The company suggests that the new pricing approach would place the cost burden with those heavier users.

However, the many irate customers point quickly to greed as the company's motivation. They express serious concerns that the new structure would place a crippling burden on small and new businesses during a period of serious economic stress - something akin to "kicking'em when they're down."

The controversy has gained both national and local political attention. President Obama recently announced funds would be made availablable from his recent stimulus package to provide broadband service to rural America.

Backlash was so great in Rochester that it prompted a congressional response from a pair of New York legislators. U.S. Senator Kay Hagan (D-N.C.) has spoken in opposition to TWC's pricing plan, pointing out that "Access to affordable Internet and bandwidth is vital to the growth of small businesses, which are integral to North Carolina's economy and the Greensboro community."

Photo by Tom Forrest, N4GVK

Protesters picket aganst tier pricing outside the Time Warner offices on Spring Garden Street, April 18.

Here in the Triad, Greensboro Mayor Yvonne Johnson said in a recent published report, "I'm not a happy camper." Comments from other county officials echoed Mayor Johnson's feelings. It has prompted city representatives to investigate other possible sources for high speed broadband service that could be brought into the area.

In Greensboro, picketers assembled in front of the Time Warner offices on Spring Garden St. Saturday to express their feeling toward the broadband povider. A similar protest was also scheduled in Rochester at the same time. There have been other protests in San Antonio and Austin, as well.

Time Warner said there is no date set to resume the trials and the company would reconsider implementing a test program that charges varying rates for internet usage after renewed efforts to educate customers.

Protesters warn that vigilence is needed. Jonathan Hall, an organizer of the Greensboro protest, advises that, " We need to make it clear to them that we don't need to be educated about this plan. We understand what they're doing, and as customers,we disagree with it."

In the Ham radio hobby, many repeaters now use broadband technology to interconnect D-Star, EchoLink and IRLP repeaters. This could have an impact on clubs and owners on a limited budget, causing some services to be lessened. Hopefully it will not deter the hobby.

Laserdisk Video Format Discontinued

The last three models of laserdisk players produced by Pioneer have been discontinued ending the era of the analog laserdisk. It was a good performer.

This is certainly bad news for those who own laserdisk players and still enjoy their library. This was once the choice format of videophiles. In reality, the demise of the laserdisk came when DVDs pushed them off store shelves.

They produced a great NTSC picture but HDTV is said to have dealt the final blow because Laserdisk just couldn't compete.

Be sure to check your e-mail for a separate PDF file containing the 2009 official membership roster of GARA. The roster is also available in the Member Section of www.w4gso.org.

For Sale

Power, Supply & Meter
Antenna, dual band, power meter and Astron RS-20M power supply - $65; Icom IC208 dual-bander - $75; Comet CMX-3RS in-line UHF/VHF SWR and power meter - $75. Call Fred Blackman, W4FB, at 336-841-4338.

Heath HW-101 $150.00
This is the classic, top-selling Heathkit transceiver. Complete with matching power supply, microphone, and speaker, along with the original instruction manual and extra tubes. (I last used this rig approximately 25 years ago. To make this classic transceiver operational, electrolytic capacitors should be replaced.) Contact Pete, W8LOG, at 336-852-8791 or at pkauber@triad.rr.com

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Alinco 5watt vhf/uhf with high capacity battery, remote mike/speaker/controller; charger, 1/4 wave mag mount, and vox operated head set. It is in good condition (enclosed .jpg). My interests lie elsewhere than ham radio. $130 K4CJZ, Chuck, 887-9023

VE Testing Results For April

Amateur radio VE testing results for April 2009 as follows:

Marilyn (Lyn) E. Koonce - Technician - KJ4LCB

Eddie W Norris - Upgrade to General - KI4SNB

GARA Members Speak At UNC-G Class

Al Allred, K4ZKQ and Roy Smith, N4BYU, spoke at a University of North Carolina at Greensboro Class April 8.

The course is named "History of Radio: Media Culture" within the Broadcast and Cinema area, taught by Jack Bonney.

As it covers the history of radio, it focuses on the numerous special interest groups such as ham radio, pirate radio, etc. It is listed in the UNCG course catalog as BCN 323, open to all registered students across all majors. The class will accommodate up to 30 students, with 20 currently enrolled. Seventeen were present on the day of the presentation.

The presentation was to provide first hand, "grass roots" information from participants in their branch of the technology. It lasted about forty minutes, followed by about twenty minutes of relevant questions from the class.

Thanks to Roy and Al for representing Ham Radio and GARA.

Guilford County ARES has created a list of standard VHF/UHF Freqs.

The 8800 Yaesu at the Guilford County EOC Comm Center has been programed with these. We hope that all ARES members will set their radios the same, so in an emergency we will be standardized.

1. 145.15 - 600 tone 100 Hz. tone
2. 145.25 - 600 tone 88.5 Hz. Tone
3. 147.555 Simplex
4. 145.150 Simplex no tone
5. 146.52 Simplex no tone
6. 147.255 +600 82.5 Hz. tone

These six are. hopefully for all. The next four will just about cover the State and are in the Comm Center Radio..

7. 146.88 - 600 Raleigh no tone (east)
8. 442.15 + 600 Chapel Hill 131.8 Hz tone (north east)
9. 145.35 - 600 Charlotte (Southwest)
10. 145.47 -600 Sauratown Mtn. 100 Hz. tone (Northwest)

The Comm center can talk from past Charlotte to almost the beach.

Get Well ...

Tom Hatley, KF4JZD, was reported admitted to Moses Cone Hospital after he passed out. No further information is available at this time.

Continuing get well wishes are offered for **GARA member Charles Lyons, NT1J.** Charles has returned home and will continue stroke rehab. Reports say Charles is making good progress.

Bill Mauldin, WG4R, recently had knee replacement surgery and is doing quite well. He'll be out walking the Corgis soon.

Pioneer & VISIO To Stop Making Plasma Screen TV Sets

Pioneer has announced that they are no longer manufacturing plasma screen TV sets. Further, they will drop manufacturing of all their TV sets in 2010. Pioneer was a leader in high performance plasma DTV sets of the top of the line up to the $5,000 price range. These sets had exceptional contrast with shadow detail of high depth realism.

Many videophiles will be disappointed over Pioneer's decision in this matter. Pioneer will continue in producing top A/V receivers for home theater systems, including Blu-Ray players. Pioneer believed that if they manufactured a high quality high performance set, that consumers would pay a high price to get them. Now they have realized this belief was in error. Their TV business has been falling off since 2004.

Visio's concept was to produce a value product, which they did. They blame the fact that plasma screen brightness in TV stores is somewhat poorer in store lighting levels than other types of displays, thus, customers passed them up in favor of something else. Visio plans to put emphasis now on LCD sets that will have higher contrast ratios because of LED dynamic backlighting control. The first of the new Visio models will be on the market in July, 09. Sales of sets with such backlighting control were up 10.8% in 2008 and are expected to increase by 2.9% in 2009.

Panasonic, LG and Samsung are the remaining producers of plasma screen TV sets.

Area Activities

FOURTH MONDAY – at 6:30 PM, the Greensboro Amateur Radio Association have their regular monthly meeting at the Golden Corral, 4404 Landview Dr, Greensboro, NC 27407, off Wendover Ave, near Sam's Club. Please plan to gather at 6:30 PM for dinner. The meeting is scheduled to start at 7:15 PM

CLUB NETS:

SUNDAYS – weekly at 9 PM, the **GARA News and Information Net.** This net features NewsLine and is on the 145.150, W4GSO repeater. Roy Smith, N4BYU is always looking for net controls. Contact him if you would like to help.

THURSDAYS – The **Guilford County ARES Net** meets on the 145.150 repeater (100 Hz. tone) at 9 PM.

TUESDAYS – at 8 PM, the **2 Meter SSB Net** meets on 144.225 Mhz. USB. Chris Thompson, K4HC is the net control station. (Not operational present time)

WEDNESDAYS – **The Guilford Amateur Society** holds their weekly net on the 145.250, W4GG repeater with an 88.5 Hz. tone. Jim Hightower, W4JLH is the net control.

TUESDAYS – at 8:30 PM **The Triad SkyWarn Net** meets on the 147.225, K4ITL repeater, no tone required.

OTHER ACTIVITIES :

FIRST MONDAY – **The Guilford County A.R.E.S.** monthly meeting is held at 1002 Meadowood St. off W. Wendover Ave, in the EMS building, beginning at 7 PM.

THIRD MONDAY – at 6:15 PM **The Guilford Amateur Society** holds their monthly meeting at Tex & Shirley's Restaurant in Fiendly Shopping Center. Eat at 6:15 PM and the business meeting begins at 7 PM.

THURSDAY – at 11:15 AM, Greensboro Hams get together for lunch. Thursday lunch group is meeting at the K&W Cafeteria, 300 Forum VI Mall at Friendly Shopping Center. Talk-in is on the 145. 150, W4GSO repeater with a 100 Hz. tone.

EVERY FRIDAY – at 8 PM (approximately) Greensboro Hams get together for coffee at Guilford College (summer location till Daylight Savings time changes)

Technical Forum Sundays at 7:30 - 145.15 repeater

The W4VEC Testing Schedule May to Dec. 2009

May	9, 2009
June	13, 2009
July	11, 2009
August	8, 2009
September	12, 2009
October	10, 2009
November	14, 2009
December	12, 2009

Location: #3 Centerview Dr, Hickory Building, Greensboro, NC 27407

Time: 9:00 A.M.

Contact: Glenda Nicholson
Phone: 336-674-3810
E-mail: ag4nc@bellsouth.net

Save The Date

The annual Doggett cook-out will be Sept. 26, 2009. Save the date and plan to attend for some yummy BBQ More information to come.

GARA REPEATERS

145.150 Mhz - minus offset
100 Hz. Tone

442.8625 Mhz. + offset
Digital D-Star

A BIG THANK YOU!

To all renewing members of GARA.

Greensboro Amateur Radio Association
P.O. Box 7054
Greensboro, NC 27417

Web:
www.w4gso.org

FIRST CLASS MAIL