



The Greensboro Amateur Radio Association

Feed Line

Providing Amateur Radio news for the Triad



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GARA Logo by CNC

By Gerald Donnelly, N4PAX

At the May, 2011 GARA meeting, a wooden rendition of the GARA logo was placed on the front of the Association's lecternette. The Logo was crafted from a single wooden panel by Gerald Donnelly (N4PAX) using a 3-axis CNC woodworking router (called "blackToe" since woodworkers are always stubbing their toes in their workshops) which he recently built from a kit which he obtained from www.BuildYourCNC.com. An excellent time-lapse of assembling this CNC can be viewed here: www.youtube.com/watch?v=S59GJB-uy3o

If you've never heard of a CNC machine, here's the scoop: "CNC" stands for Computer Numerical Control and refers to any number of machines that are controlled by computer code. Gerald's CNC is really a moveable router that interfaces to a computer to control its movements in three axes (x, y, z) similar to a robot, but this machine has a specific function. It cuts or shapes things with this control. In essence, a computer precisely controls a cutting tool, like a router for instance, to cut materials such as wood, plastic or metals into shapes only bounded by your imagination. Gerald's CNC router can accommodate wood 2'

wide by 4' long by 5 7/8" deep.

Gerald feels that he is part of a revolution taking place among hobbyists. Not long ago CNC machines were so expensive that only large companies could own them. But he sees us in the middle of a full-fledged CNC revolution, reaching all the way down to the grassroots level. Now a dedicated average Joe (or Gerald) can whip up a precise fabricating tool with little more than some plans, basic tools, software,



NEXT MEETING Monday, July 25

The next meeting of the Greensboro Amateur Radio Association will be Monday, July 25th, at the Golden Corral Steak House, 4404 Landview Dr, Greensboro, NC 27407, off Wendover Ave. near Sam's Club.

and a PC. Here's an article on the revolution he is referring to: www.wired.com/magazine/2010/01/ff_newrevolution/3/

To elaborate, each axis of the CNC machine is moved by a stepper motor which permits very small, precise movements of the router's "bit" or "end mill". Each of the three stepper motors is, in turn, controlled

see **CNC**, page 10

The History of GYSA & GARA .. continued

By Allen Bradley, KD4IUN

Last month we learned about the early history of the relationship between GYSA and GARA. There is one clarification: The author did not mean to imply Bob Mays, KD4MOW has been licensed for 31 years. Bob has actually been one of the most active members with the soccer tournaments since he got his licence.

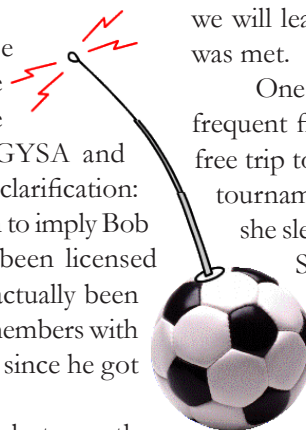
We left our story last month when Elizabeth House moved to Hawaii, leaving the tournament without their best tie-breaker. Now

we will learn how this new challenge was met.

One of the members had a lot of frequent flyer miles so he provided a free trip to get Elizabeth back for the tournament. She was so jet-lagged she slept most of the day Saturday.

She and Teri spent the entire night preparing the match reports for Sunday. This is how it had always been done without computers.

It usually took from the time the last score was reported on Saturday

see **History**, page 3

GARA Meeting Minutes

Regular Meeting Minutes June 27, 2011

The Greensboro Amateur Radio Association held their monthly meeting on June 27, 2011, at the Golden Corral Restaurant located near the intersection of Wendover Avenue and I-40.

Chris Thompson, K4HC, called the meeting together at 7:15pm. Chris then asked that everyone identify themselves. There was a good turnout with 45 members and 5 visitors present.

The minutes of last months meetings were approved as published.

Ernie Wall, NC4EW, said that there has been a reduction in the equipment insurance premium since we updated the inventory list on file with the insurance company. Ernie also said that we have 104 members at this time.

Al Allred, K4ZKQ, said that our income is still ahead of forecast and expenses are less than forecast.

David Macchiarolo, AJ4TF, said

that there is nothing going on with the repeater as far as he knows. He said that he monitors it pretty often and it seems to be working well. Please let him know if you hear a problem with it. David also said that it is important to keep good relations with the City of Greensboro.

Roy Smith, N4BYU, said that the score for field day was 1500 points. GARA cosponsored field day with Guilford ARES.

Todd Smith, AK4TS, reminded everyone that he represents the membership to the board and please notify him if you have any issues that the board needs to be aware of. Todd said that he just received a D-Star radio; he will send a check to Ernie this week to help with the D-Star internet cost; and he challenges all D-Star users to do the same, if they have not already done so. Todd also thanked everyone that has worked to keep our repeaters on the air.

Bob Mays, KE4MOW, spoke about the Open House that is coming up on the first Saturday in October. Please let the board know if you have any ideas for the Open House or ideas to help advertise the Open House.

Betty Williams, KC2BFN, said that the membership drive is progressing, and it would be hard to get all of the members in this room. Chris added that its getting that way now, and we should be actively searching for a new meeting location that can better accommodate a group this large. If anyone knows of a location please let a board member know, and they will investigate.

Chris added that the Firecracker

Hamfest is coming up in Salisbury on July 9th.

Chris said that he has earned DXCC, and he gave a description of it.

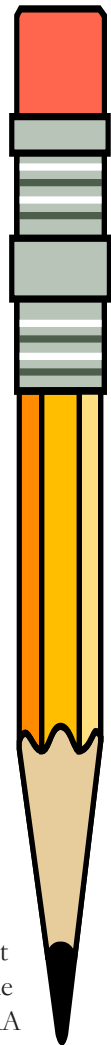
Brian Wilson, KJ4LKY, said that Foy Flowers, W4FOY, fell down a flight of stairs and broke his shoulder and hip. Brian said that he is undergoing surgery at Wesley Long hospital and he is in room 1620.

Dub Bridges, N4DUB, noted that it is a good policy to look closely at the tower associated with the club repeater after anyone has been on it doing any type of work, because they may damage the club's equipment.

Greg Spencer, KG4UQV, said that the Field Day event went good, and there was no one needing to talk to a GARA representative.

Gerald Donnelly, N4PAX, discussed some program topics coming up. He then introduced our program for the evening; Mark Robertson, KG4STP; Nathan Jackson, K4NWJ; and Dub Bridges, N4DUB; who gave a great program on scanners, tips for good scanning and trunked radio basics.

Respectfully submitted by Greg Spencer, KG4UQV, GARA Secretary.



The Greensboro Amateur Radio Association

President Chris Thompson, K4HC
Vice-President Gerald Donnelly, N4PAX
Treasurer Ernie Wall, NC4EW
Secretary Greg Spencer, KG4UQV
Financial Al Allred, K4ZKQ
Engineering Chair David Macchiarolo, AJ4TF
Operations Bob Mays, KE4MOW
Member-at-Large Todd Smith, AK4TS
Member-at-Large Betty Williams, KC2BFN
Appointed Positions:
Webmaster Tom Forrest, N4GVK
Newsletter Editor Brian Wilson, NX4U

The Feed Line is ©2011 by the Greensboro Amateur Radio Association and published monthly. Our address is P.O. Box 7054, Greensboro, NC 27417. The purpose of the newsletter is to provide the club and prospective members information about the club and amateur radio in general. Material and information should reach the editor by the 2nd Friday of the month for the next edition of the newsletter. Opinions expressed in "The Feed Line" do not necessarily represent the views of the officers, directors, editor or members of the Greensboro Amateur Radio Association. Material may be reproduced, provided proper credit is given to GARA.

Board Meeting Minutes July 11, 2011

The GARA board of directors held their monthly meeting on July 11, 2011, at the Benjamin Branch Library. The meeting started at 7:18pm with Al Allred, K4ZKQ; Ernie Wall, NC4EW; Bob Mays, KE4MOW; David Macchiarolo, AJ4TF; Chris Thompson, K4HC; Roy Smith, N4BYU; and Greg Spencer, KG4UQV; present. Todd Smith, AK4TS, joined us late due to work obligations.

Chris said that Gerald Donnelly, N4PAX, had resigned from the board due to personal reasons. Chris said that he wanted to thank Gerald for his service. The board discussed appointing a replacement Vice President and detail regarding future programs. Roy also discussed some program ideas that he had received.

Ernie gave the treasury report stating that all major bills are paid, the checkbook is balanced and money is in the bank. Ernie also said that we are up to 106 members at this time.

Al said that we have received \$208 more in dues so far this year than forecast, D-Star subsidies so far are \$190 and expenditures are less than expected.

David said that he has been keeping an eye on the cabinet temperature in the repeater cabinets, and he has installed an additional vent in the D-Star cabinet to promote better cooling. David also said that he has been in contact with the city radio shop supervisor, and he plans to go over and visit with him soon.

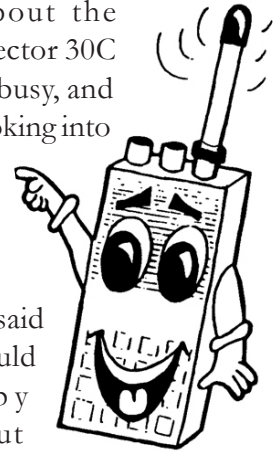
David said that John Strandberg, W4DX, mentioned

to him about the D-Star reflector 30C being very busy, and David is looking into connecting it up daily from 4pm until 7pm.

Todd said that he would be happy to help out with the Open House. We also discussed making some club T-shirts.

Roy made a motion to end the meeting and David provided the second. The meeting ended at 8:24pm.

Respectfully submitted by Greg Spencer, KG4UQV, GARA Secretary.



History

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until nearly sunrise on Sunday to get the match reports ready for the radio operators to pick up at 7:00 AM.

Elizabeth spent every spare minute on Sunday convincing Allen that he should write a computer program to handle scoring, tie-breaking and advancements. While Allen knew almost nothing about soccer other than what he had learned as a radio operator, he took notes of everything she said. Allen spent a lot of evenings that winter writing a program to do exactly what Elizabeth said. It was a single user database written in Microsoft Visual

Basic. Team scheduling was done by "drag and drop" and score entry was fast and easy. It did the tie-breaking, figured out the advancements and didn't have to be shut down to print results.

Early in March of 1996, Allen demonstrated GoalNet to Teri Barton and Pat Webber, GYSA's Executive Director. They didn't say a word through the entire presentation. They just watched. When it was over, Allen thought to himself, "Well, that was a big waste of time."

Then Pat looked at Teri and said, "I love it!"

Teri replied, "Me too!"

This was the first Wrangler

without Elizabeth and everyone was apprehensive. She was the fastest and most accurate tie-breaker they had. Could the computer do it? Teri finished up the match reports around midnight Saturday. She looked around in surprise that there was nothing left to prepare for Sunday. So she went home. Yes! This was the first Wrangler where Teri didn't have to spend all night Saturday preparing for Sunday. The ham radio operators' computer did it!

Another challenge: George Blosser, N4CPV had been net control for 10 years and decided that was long enough. Nobody could replace George.

see GYSA, page 9

From the President's Shack

I regret to inform you that due to personal constraints, our Vice-President, Gerald, N4PAX has tendered his resignation to the board of directors. Gerald brought an enthusiasm for learning that was highlighted by his selection of a broad variety of presentations given at our monthly club meetings. He will be sorely missed, and I want to personally thank Gerald for his significant contributions to the club.

It is also rapidly approaching time to consider the annual election of officers – the Annual Meeting in November will be here before you know it. I need a few people to step forward and form a nominating committee – and if I don't get



GREENSBORO AMATEUR RADIO ASSOCIATION

volunteers by the August membership meeting at the latest, I will take a lesson from Will, AI4VE and appoint a committee. The job is to seek out members who will agree to serve in the various board positions; President, Vice-President, Treasurer, Financial

Planning, Engineering, Operations, Secretary and two Members-at-Large. Currently anticipated vacancies are for President, Vice-President, and Treasurer; however as I write this I'm not 100 percent certain that the remaining board members are agreeable to continue serving in their current positions. This is a chance for you to help shape the future of GARA. Please consider giving some time and energies back to the club by either participating in the nominating committee or serving on the board.

I guess that's it for now – until next month, keep havin' fun!

73,

Chris, K4HC

Silent Key: Dick Genaille, Sr; W4UW

I regret to inform you that Dick Genaille, Sr W4UW passed away Monday night June 20th. Dick was a member of the Forsyth Amateur Radio Club.

A list of Dick Genaille's accomplishments would take some time to produce. W4UW was a member of the DXCC Honor Roll and a prolific author of ham articles in *QST* and *CQ*, and even held a certificate of "Knighthood" from JY1 King Hussein of Jordan. He worked for the USAF during WW2, and for Western Electric after WW2. Dick retired from Western Electric. Much of his work was related to classified military systems, but among other projects he was deeply involved in world-wide submarine monitoring

networks. Dick also served as an early engineer to the Kwajalein Radio station WXLG. Dick was very proud of his family's accomplishments - one little known fact was that his uncle was a jewelry designer for the renowned French jeweler and watchmaker Cartier, one of only a very few Cartier designers whose initials appeared on their work. His son, Richard Genaille, Jr is Director

of Policy, Office of the Deputy Under Secretary of the Air Force for International Affairs. Dick was active on the air even recently as he had an antenna and his Ten-Tec Omni at Creekside Terrace where he lived for the last year. He was a long-time active member of the Forsyth Amateur Radio Club and he will be deeply missed.

Congratulations to Roy Smith, N4BYU

In the August issue of *QST* there is a current DXCC Honor Roll listing. You have to have 329 current entities worked to be on DXCC Honor Roll. On page 73 under 332 current entities worked is 'N4BYU/341'. 341 represents total entities worked by this station. Congratulations to GARA's own N4BYU!

This info was noticed and provided by John Strandberg, W4DX.

Congratulations! You Passed!

Every month on the second Saturday, except in March when it is the third Saturday, W4VEC holds a testing session for those who live in the area. This provides an opportunity for individuals to be able to test for their amateur radio license or upgrade. Thanks to Glenda

Nicholson, AG4NC, and a group of volunteers, each month there are new or upgraded hams in our area.

In June, we had 4 individuals who passed their test(s) and earn either their Technician, General or Extra class license.

Next month's testing session will

be on August 13th at #3 Centerview Dr, Hickory Building, Greensboro, NC 27407 at 9:00am. While walk-ins are welcome contacting the lead VE is preferred. Please contact Glenda Nicholson at (336) 674-3810 or by email at ag4nc@bellsouth.net



*Alexander (Sasha) Varlamov -
AK4KL, Upgrade to Extra*



*Dennis R Rhein - KK4DAZ,
Passed Tech and General*



*Rhonda L Davis - KK4DAY,
Passed Tech*



*Stephen R Beal - KK4DAX,
Passed Tech*



During the testing session the Volunteer Examiners watch while the participants work to answer the questions correctly.

All Photos Courtesy of Todd Smith, AK4TS

Engineering Update for July, 2011

From David Macchiarolo, AJ4TF

I hope the weather is hot enough for you! We are fortunate to have your club's repeaters located in an air-conditioned space, however during the summer, I am concerned about keeping your repeater equipment cool. At a previous site visit (back in April) we installed a small digital thermometer in the VHF repeater cabinet. On a recent site visit (July 1st) I noticed that in the VHF cabinet, after the repeater radio had been transmitting almost continuously, the temperature was at 105 degrees F, which is not bad. However, the UHF cabinet which contains the D-Star repeater, was much hotter inside, at least by my uncalibrated hand. Since the D-Star machine consists mainly of digital equipment (computers) I was concerned enough about the temperature that I have modified the cabinet slightly to increase the ventilation airflow from bottom to top. I moved the thermometer to the UHF cabinet, and, after a period where the D-Star repeater had been transmitting almost continuously for more than half an hour, the cabinet temperature had just barely reached 90 degrees. I'll continue to monitor this but I am feeling better about the UHF cabinet now. I hope to soon have a remote monitoring capability installed, but more about that later.

Speaking of the D-Star repeater, John (W4DX) alerted me to a D-Star reflector (REF030C) that is based in Atlanta, and has

quite a bit of drive-time traffic on it, including some employees of the Ham Radio Outlet store there. I programmed the linking command into my mobile D-Star radio, and I have enjoyed several QSOs with the group by linking W4GSO to that reflector. I plan to soon set up our D-Star repeater to automatically link to reflector 30C during drive time, so listen for that!

A couple of weeks ago, I had the D-Star repeater linked to reflector 1, and had a nice QSO with a fellow in Trinidad (9Y4SRR),

all while I was tooling down I-40, and without any noise, static, or any of the other ills of HF. To his knowledge, he is the only amateur operator in Trinidad that has any D-Star capability.

If you want to know more about the D-Star system, and how you can get involved with it, please contact me, (AJ4TF), Chris (K4HC), John (W4DX), or any of the many other D-Star users in the club.

73,
AJ4TF

W4GSO D-STAR
442.8625 Mhz. DIGITAL

For Sale

Contact Tom Forrest, N4GVK,
n4gvk@bellsouth.net or call 336-202-8650

HEATHKIT 1 KW LINEAR AMP. SB-200 w/ Manual

Was purchased a while back. Never used it as I don't have the antenna system to do it justice. It was suppose to be in good working order when I purchased it. This is a 1 KW on CW and 1200 on SSB using 2 - 572-B tubes - wired for 110, but can be wired for 220 Volts. Asking \$300 (they have been advertised on QRZ for \$400) - sold as-is, no warranty. No shipping, pick-up only. Over all it's very clean. More information: www.rigreference.com/rig/5254-Heathkit_SB_200

KENWOOD TM-D710 DUAL BAND RADIO

This is the best dual-bander made by Kenwood. 50W output - 3 power levels. It was purchased new a couple of years ago and has never been mobile and in a clean environment. Mint Condition. Used very little. This radio is capable of packet and has built in modem, APRS and Echolink ready - computer programmable with free software from Kenwood. Programming (PG-5G) cable not included. Asking \$385 - All manuals and original box - sells for \$539 when you can get a coupon from HRO.

More information:

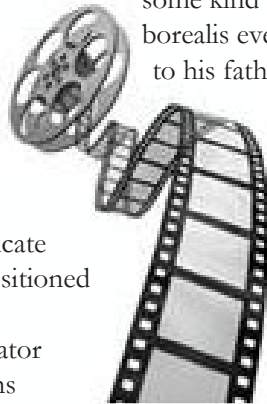
www.kenwoodusa.com/Communications/Amateur_Radio/Mobiles/TM-D710A

Amateur Radio in TV, Film, and Broadcast

by Terrell Brown, K4TLB

For most of the last century, amateur radio has been displayed on the public stage for our entertainment. Some of these displays have been brief mentions, honorable mentions, for historically accurate, or for a more prominent role within a plot. Sometimes hams are made out to be good samaritans, concerned citizens, or just plain helpful. Some may think that display or role is downright insulting which is often more likely to be a friendly joke.

One instance of the concerned citizen is the ham radio operator from the British film based on a true story, *The Bank Job* (2008). The so called protagonists, a band of clever thieves burglarizing a bank by mining under it, are using two-way-radios to communicate with their lookout that is positioned on the roof of an adjacent building. A ham radio operator picks up the communications on his radio, takes some notes, records the conversations, and alerts the bobbies - police that is. The operator is displayed long enough and prominently for historical reasons and to praise, maybe, the general good will of amateur radio operators. The bank thieves in the film use some kind of handhelds, general consensus are some model of Pye portable radios. The ham radio operator is using a clean and apparently brand spanking new



For those who missed Terrell Brown's presentation at the May, 2011, GARA club meeting, here is the presentation in written form. Of course, you don't have the opportunity to see or hear the examples mentioned in this article.

Yaesu FT-101. Considering that the FT-101's production run started in 1971 and the true story and plot took place in 1971. If either of these radios were actually the ones used in the real 1971 case, who knows.

The next film is one with a bit of science fiction silliness. Can you guess this one? If you guessed *Frequency* (1999), you're right. A grown man, whose fire-fighter father died 30 years ago in the line of duty, finds his dad's old ham radio equipment but of course it doesn't work right and it doesn't even look like he managed to hook it up to an antenna and the main character isn't even licensed. Yet, due to some kind of overly strange aurora borealis event, he manages to speak to his father on the radio, through time. Any respectable person should stop watching at this point, but no one is perfect and it isn't a terrible movie. Heathkit is the star radio of this film with an SB-301 receiver displayed. The only problem here is

that it apparently is the only piece of equipment shown sitting on the desk. I see a microphone, what is it plugged into? Dennis Quaid's character, the father of the main character uses the callsign W2QYV. The trailers for this film ask; "What if?" If I could talk to someone in the past, well, pecuniary interests and saving lives would probably be the least of everyone's concerns.

On a less silly note but still very



much science fiction, the film *Contact* (1997) pays tribute to youth and amateur radio. The main character, Ellie, as a child (Jena Malone) is being coached by her father in making contacts on HF. Using the callsign W9GFO, she is seen in the film calling CQ to anyone. She is eventually picked up by K4WLD, her furthest contact yet. Later, she is seen jumping on the radio again at night and tries to pick up a contact unsuccessfully. She then quips "I'm going to need a bigger antenna." The next seen shows the grown character (Jodie Foster), now a scientist for SETI, smiling at one of the world's largest radio telescopes, the Arecibo Observatory in Puerto Rico. The radio that the young Ellie uses in the film looks like one of a Collins design.

The most ham radio filled production that I have ever seen is the film *Making Waves* (2001, released internationally in 2004). This story is about a group of friends that get together on HF and chat. You have a priest, mechanic, conspiracy theorist, a cosmonaut stuck on Mir, and a classic movies store owner. One day, they are joined by a woman using her ex-boyfriend's radio equipment. She stumbles across the wacky

see **On the Air**, page 8

On the Air

continued from page 8

group and listens in on the rag-chew. Without thought, she breaks into the conversation and ends up using either a made up callsign or the one her boyfriend used, G0KUU. She (a dental hygienist) meets G4NKM (the film store owner), they both show romantic interest, and then they lie to each other about their backgrounds. At one point, one of the young lady's friends ask her if she fell in love with a disc jockey but she informs her friend that it's a guy on ham radio. For a low budget romantic comedy, the film isn't bad at all, it is surprisingly funny, and there is a lot of radio use. With some mild language and no violence, most may enjoy it.

The Twilight Zone, in its finest years, had a knack for picking on ham radio operators; perhaps as a tribute to amateur radio and its contributions to the modern world of radio broadcast, something Rod Serling was passionate about. Of course, Serling is the creator of *The Twilight Zone* and on at least two occasions gave ham radio honorable mentions, albeit ribbing the hobby in a comedic way. In episode 22 of season 1, airing in 1960 "The Monsters Are Due On Maple Street", a power outage in a neighborhood makes the residents suspicious of each other. Several concerned citizens question one man in the group about working all hours of the night on some kind of radio

set. One of the more alpha-dog neighbors steps it up and accuses this radio-set-tinkerer of being a monster, alien, and just downright dangerous. Morale of this story for the general public: "Beware of the Ham Radio Operator." In episode 18, season 5, airing in 1964, "The Black Leather Jackets", a husband and wife are enjoying some television when the power in the house starts



acting up and the TV's reception deteriorates. Beating on the TV does not work and an inspection of the aerial wire outside revealed one of the strangest directional antennas ever created. The husband think it's ham radio operators

and after the couple's daughter informs them that she heard strange voices over her broadcast radio, her father is certain that it is indeed ham radio operators and he is going to go make sure they have a license! Well, turns out their just a group of rebel looking aliens trying to make a phone call home and they don't have a license.

A few other television shows come to mind. *ALF*, which ran mostly in the late 1980's centered primarily around an alien following the radio signal of a ham, K726XAA, back to Earth and landing on the garage where the radio equipment was located. *ALF* prominently displayed the radio equipment throughout the show but it was seldom used as it was

in the pilot episode. *The Munsters* features Herman Munster using the callsign W6XRL4 (where do they get these callsigns?). Herman seems interested in calling CQ to Mars but is fooled by a little boy on an HT. After leaving his radio when the boy is found out, martians can be heard returning Herman's call. Another program which was a radio broadcast, *War of the Worlds* (1938) performed by Orson Welles' Mercury Theatre on the Air, feature a couple of ham radio operators. After the initial martian assault, 2X2L is heard calling CQ and makes contact with 8X3R. Later, 2X2L is heard again but no one returns his call. Another alien themed film, *Independence Day* (1996), gives amateurs along with those lurking shortwave listeners a mention as keeping an ear on what is going on around the world and apparently keeping in contact with the news agencies still operating disseminating information.

And that's it, if you know of more references to amateur radio in TV, film, and broadcast, the rest of us would like to know. There are more and they all can't be mentioned easily so please share. Provided are a few links to check out to help learn more about how our hobby makes it into the public eye, sometimes subliminally and sometimes quite obviously. Most of the time, it is of a friendly or good-hearted nature and not a downright assault. *The Simpson's* episode where school Principal's mother gets on his radio and calls ham radio operators losers, I believe was a joke and not meant to be taken seriously.

see More Info, page 11

GYSA

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He was unflappable. He was the best. Ann, KD4IUM, now N4AIG and husband Raymond Gibson, K4RHG, now silent key, took over and they were just as good as George.

The tournament is not without its funny stories. Carl Fenske, KC4WGA was operating at Gibson Park



when some boys found two small snakes, less than 18 inches long, in the woods near the soccer fields. Carl reported the snakes to Soccer Control and that was the end of it... or so the hams all thought. By the time the teams showed up at Bryan Park for the championship game, rumors were ripe with reports that the game had to stop while 12 and 14 foot long snakes were removed from the field. It is truly amazing how quickly snakes can grow in the Piedmont!

The World Wide Web was still in its infancy so GARA had to make do without it. For years, the advancements had been printed out and hand carried to the host hotel and to Bryan Park where they were posted so the teams would know their schedules. Jeff Clouse, N4CAP, wrote a packet radio program that linked two mirrored copies of GoalNet together. Scores were entered in the office on Lendew St. and results were printed at Bryan Park. It still had its challenges. While John Matlock, KD4IAM, operated

his packet station in a tent, his printer would not work in the rain. Ryan Bradley, KD4TMD, dried the printer paper under the hand dryer in the men's room so it would work in the printer.

There have been a lot of changes since then; some good, some not so good. More fields were built at Bryan Park which further reduced the number of radio operators needed. The old K4SNI repeater was retired and the new W4GSO repeater went on the air on 145.15 MHz. The new repeater provides HT coverage over most of the county, making it easier to work a tournament right from the soccer field. Richard Love, KD4TB became a silent key after working the first 26 consecutive Wranglers. He always liked to work Hester Park near his home until they stopped using it. He then switched to UNCG.

Cell phones brought more change. The original "bag phone" was big, ugly and heavy. Greensboro Soccer wanted a way they could talk privately to their people without having to use an open radio that everyone could hear. They borrowed phones from a local company and gave one to each radio operator. The battery life was so short they were kept off most of the time. Net control would call a radio operator and tell him to turn the phone on if someone needed to make a call. Now nearly everyone has their own cell phone so the hams handle very little traffic unrelated to scores.

The Greensboro News-Record provided a telephone message service.

Teams could call the automated message system that prompted them the press 1 for boys, 2 for girls, then enter the age group, etc.. It would then play a prerecorded message which would explain the Sunday schedule for that division. The parents liked it but that meant GARA volunteers had to record 35 to 40 messages at 11:00 PM Saturday.

GoalNet was abandoned in 2008 in favor of a web-based program hosted by SoccerInCollege.com. This enables anyone with web access to see the results of any game as soon as the scores are entered. Being web based, Soccer In College is much slower than GoalNet but it does offer several advantages. College coaches can research players from all over the country on one web site. This gives Greensboro Soccer members an even opportunity for scholarships with athletes from other parts of the country.

Today GARA is providing radio

support for three soccer tournaments each year: The Wrangler Jeans / McDonald's Youth Soccer Classic on Memorial Day weekend,



The Labor Day Shootout on Labor Day weekend, and the Challenge Clash on the weekend before Thanksgiving. Soccer Control and Scoring have become one station in the new Greensboro Youth Soccer office at Bryan Park. This is because there was so little traffic for Soccer Control that Ann, N4AIG stopped working the

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CNC

continued from page 1

by a “driver”—an electronic controller box that provides voltage and codes to the motors to move forward or reverse as well as control their rotation speed. The three drivers get their signals from a breakout

box that is connected to his PC by means of a parallel cable. So, his CNC machine offers 3-axis functionality driven by roller chain and sprocket for the x and y axes and lead screw for the z-axis.

To render the GARA logo in wood, he first took an electronic version of the logo, originally created by Tom Forest (N4GVK), and converted it to

a file format that could be imported into his CAD (computer assisted design) program called “Aspire”.

There, he had the software convert the file from bit-mapped graphics to vector format, the standard file format for CAD programs. In turn, the CAD program created a g-code file which was used by his PC to finally guide the CNC through its 3-axis movements.

This is the CAM (Computer Assisted Manufacturing) part of the process. For this process, he uses Mach3 which takes the g-code and outputs electronic signals which is sent by the parallel cable to the breakout box to the drivers, and finally, to the stepper motors.

To see a good demonstration of CNC in action crafting a guitar

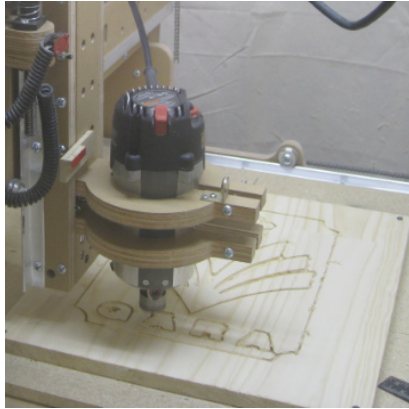
go here: www.youtube.com/watch?v=xlGu51uqNgQ

Gerald reports that constructing the CNC router combined many of his interest. It involved electronics, computers, mechanics, design, and woodworking.

His next CNC project is to create a pendulum clock entirely from wood.

If you're interested in seeing Gerald's CNC in action, get in touch with him N4PAX@arrl.net.

The GARA logo plaque will be displayed at many GARA meetings and available for other events.



GARA & GYSA

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tournaments.

Madeline, KD4SVJ has been Scoring since 1993 and Soccer Control since Ann retired. She helps Teri prepare the match reports Saturday evening so they can finish by 10:00 PM, or even earlier on the smaller tournaments. Madeline also prepares the match reports on Sunday after receiving the scores from the semi-finals and the teams playing in the championships have been determined. She also helps Teri with many routine tasks around the office during the tournament.



GARA's biggest responsibility is the accurate transmittal of scores. The parents of the winning team can get a little testy when they read that their team lost! This is why the

match report is so important. There are typically 1 to 12 scores that have to be corrected during every tournament.

In the 19 Wranglers that Madeline has been Scoring control, every score that has been posted has agreed with the written match report. That is a perfect record for her and all of the radio operators who volunteer their weekends.

Allen and Madeline have announced their retirement after the 2011 Wrangler. But wait! Not so fast. Teri has asked them to continue for the other two tournaments this year. They have agreed. We need to train new talent to fill their position. Thomas Fleming, KJ4YDP, is new to ham radio, new to GARA and new to the tournaments. As of this year's Wrangler, he was the only one who volunteered for training. Terrell Brown, K4TLB also volunteered for training after the June meeting. GARA needs more people who can take over this important post. GARA is looking for at least one more operator who works well with others, handles stress well,

see United, page 11

Field Day 2011

Photos by Terrell Brown, K4TLB



Summerfield Mayor Mark Brown, left and John Standberg, W4DX



United

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is accurate and detail oriented and doesn't mind working longer hours than anyone else.

Earlier this year, Greensboro Youth Soccer and Guilford United Futbol Club merged to form a new club called Greensboro United Soccer Association. There could be a lot of changes. Will the new club continue to use Amateur Radio for the tournaments? Can we prove ourselves once again? Time will tell.

GARA has a lot to offer Greensboro United. Over the years a lot of very capable people have left the tournaments, both from GARA and from GYSA, and someone has always stepped in to do an even better job. We can continue to be nearly indispensable to successful tournament operation if we all work together as we have in the past. We will prove ourselves once again to the new organization.

More Info

continued from page 8

Ham Radio TV Cartoon
References: www.ql.net/kb9mwr/files/ham/cartoon/cartoon.html

Internet Movie Radio Database:
www.imrdb.org

Extremely simple web page
dedicated to 2X2L from *War of the Worlds*: www.2x2l.com

War of the World's Broadcast:
www.earthstation1.com/wotw.html

AC6V's Amateur Radio in
Popular Culture: www.earthstation1.com/wotw.html

Making Waves – British Film
Council: film.britishcouncil.org/making-waves

Area Happenings

FOURTH MONDAY – at 6:30pm, 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 6:30pm for dinner. The meeting is scheduled to start at 7:15pm

CLUB NETS:

SUNDAYS – at 7:30pm, the **Technical Forum** on the 145.150;

- at 9pm, 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.

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

TUESDAYS – at 9pm, the **D-STAR Net** meets on 442.8625 (W4GSO B and Reflector 17C)

WEDNESDAYS – at 8:30pm, **The Guilford Amateur Society Rag Chew Net** holds their weekly net on the 145.250, W4GG repeater with an 88.5 Hz. tone. Jim Hightower, W4JLH is the net control.

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

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 7pm.

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

THURSDAY – at 11:15am, 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 8pm (approximately) Greensboro Hams get together for coffee at Starbucks at Edney Ridge Rd.

The W4VEC Testing Schedule August to Dec. 2011

August 13, 2011

September 10, 2011

October 8, 2011

November 12, 2011

December 10, 2011

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

Time: 9:00am

Contact: Glenda Nicholson

Phone: (336) 674-3810

E-mail: ag4nc@bellsouth.net

GARA REPEATERS

145.150 MHz - offset, 100 Hz. tone

442.8625 MHz. + offset, Digital D-Star



Greensboro Amateur Radio Association

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Greensboro, NC 27417

www.w4gso.org

FIRST CLASS MAIL

The Official Publication of GARA