



Forsyth Amateur Radio Club, Inc.

Newsletter



Founded December 30, 1930

July, 2005



June Hamfest Highlights

Wow! Best Hamfest we have had in some time. Attendance was up, more dealers attended and everyone had fun. We even had a visit from both the Patterson "twins" Bill, KD4RGB and Steve, WA3RTC. Most everyone moved outside to

take advantage of the beautiful weather. Wayne Ashworth, W4HG, shown at the right with Melissa, W4RXG, was glad he came since he won the main prize, a 2 meter handheld donated by dBj Electronics (see their ad on page3).



Field Day Highlights

Double wow! Thanks to the culinary efforts of Cliff ("Licensed to Grill") Pranke we had the yummiest Field Day ever. Cliff brought out his locomotive-sized grill and

provided bar-b-que'd pork, beef brisket, beans, slaw and other goodies. The food must be the key, since we also had the QSO count and the highest points score in memory. Another first was Tim, AG4RZ, and his ATV equipped airplane.



Pfafftown Hamfest, October 8, 2005

Yes, we are having another hamfest. This time at the West Central Community Center. This is a beautiful place to hold a hamfest. This will be similar to our January event in terms of setup, etc. More details next month!

Club Meeting, Monday, July 11, 2005

We will meet, as usual, on the 2nd Monday of the month at 690 Coliseum Drive in the Red Cross Building at 7:30 PM sharp in Room 09, but come early, say, 7:00-ish, to "hob-nob" with your fellow hams. Program will be on digital TV.

LICENSE EXAMS, Saturday, August 6, details inside.

Forsyth Amateur Radio Club, Inc is a non-profit (IRS 501(c)3) North Carolina corporation for the promotion of Amateur Radio, and for the education and training of hams and the general public primarily in Forsyth County, North Carolina.

FARC was originally incorporated as the Winston-Salem Radio Club on December 31, 1930 and has been in operation ever since. We currently maintain a state-of-the-art ham station in the basement of the Red Cross, 690 Coliseum Dr., Winston-Salem, NC and also maintain two 2-meter repeaters, 146.64 (100 Hz tone) and 145.47 (100 Hz tone).

FARC has a general membership meeting with a program on the 2nd Monday of every month at the Red Cross building, 690 Coliseum Drive in Winston-Salem. The club conducts its main business meeting (sometimes called the Board Meeting) on the 3rd Monday generally at the same location. This is where most of the club's business is conducted and all attending members have a vote. All club members are strongly encouraged to attend the business meeting. For more information about FARC mail us at FARC, Inc., PO Box 11361, Winston-Salem, NC, 27116; call 336-723-7388; or visit our web site at www.w4nc.com. Club email is to w4nc@triad.rr.com.

Officers for 2005 are:

President: Tom Gallagher, N4IOZ
tomgallagher@triad.rr.com

Vice-President: Melissa Hall, W4RXG
mhall@triad.rr.com

Secretary: Robert Whitaker, KG4NEP
kg4nep@yahoo.com

Treasurer: Henry Heidtmann, W2DZO
henry@summitschool.com

Newsletter Editor: Don Edwards, WS4NC
ws4nc@arrl.net

To join our list server send a blank email to
w4nc-subscribe@yahoogroups.com

All content is Copyright 2005 by Forsyth Amateur Radio Club, Inc, unless otherwise noted. Permission is given to reproduce for non-commercial purposes provided proper credit is given. If you would like to help support the newsletter with an ad, please contact Don Edwards (email: ws4nc@arrl.net). Ad deadlines are 7 days before the end of the month. Rates are \$50 for 12 months. *Cheap!*

We trade newsletters with other clubs, and many local clubs are on our mailing list. If your club has a newsletter and would like to trade please send us a copy.

Mileposts from FARC Members:

Raja Chatterjee, KB6MTH

Raja made it home from Kuwait for some R&R just before Field Day, so he, Alice and Amy were able to join us at Field Day. While Raja has to go back soon, the good news is that he expects that his overseas tour will be over soon. Let's hope so!



From Raymond, KL7UHF:

HI all. If its anything you do in life, you have got to come to Alaska and see it for your self. I have been hiking in an area called Portage near a town called Whittier. I took this awesome picture last night at 10 PM. By the way sun set was around 1130 last night. I am putting a book together of a photo essay and maybe a video as well. I'll let you all know when that may be done.

Raymond Taber, KL7UHF
336-202-6108
boredcat@cdeg.net



UPCOMING HAMFESTS & OTHER HAM DATES

August 27-28, 2005

West Virginia State ARRL Convention
West Virginia State Amateur Radio Council Weston, WV West
Virginia Convention Center, Jacksons Mill Route 1, Box 210
E-mail: w8xf@arrl.net

September 3-4, 2005

Shelby Hamfest
Shelby Amateur Radio Club
Shelby, NC
Cleveland County Fairgrounds
1751 Marion Street
<http://www.shelbyhamfest.org>

September 17-18, 2005

ARRL Roanoke Division Convention
Virginia Beach Hamfest and Electronics Flea Market Tidewater
Radio
Conventions Virginia Wesleyan College
1584 Western Drive
<http://www.vahamfest.com>

October 8, 2005
Pfafftown Hamfest

October 29, 2005
South Carolina State ARRL Convention
Grand Strand Amateur Radio Club
Conway National Guard Armory
1621 16th Ave
Conway, SC
<http://www.w4gs.org>

December 17, 2005

W4NC 75th Anniversary Special Event Station
1300z to 2100Z (8:00 AM-4:00 PM EDT)
Look for updates and more details in a future Newsletter.

W4NC 75th Anniversary

Thanks to the effort of Ed, KU4BP, Henry, W2DZO and Gary, WA4IAM we will be celebrating the 75th Birthday of the Forsyth Amateur Radio Club with a Special Event Station on December 17, 2005. Time will be 1200Z to 2200Z. We will be on the following modes using vintage stations:

Mode	Frequencies (+/- 20 kHz)
SSB	21.320 14.270 7.250
CW	21.050 14.050 7.050
AM	7.285 - 7.295

More details at:

<http://home.triad.rr.com/ku4bp/main.html>

W4NC Field Day Results

Call Used: W4NC GOTA Station Call: W4WS ARRL/RAC Section: NC; Class: 2A; Participants: 48; Club/Group Name: FORSYTH AMATEUR RADIO CLUB; Power Source(s): Generator; Power Multiplier: 2X; Bonus Points: 100% Emergency power 200, Media Publicity 100, Set-up in Public Place 100, Information Booth 100, W1AW Field Day Message 100, Site Visit by invited elected official 100, Site Visit by invited served agency official 100, Youth participation 100; Youth operators=8; Youth participants=12; GOTA station 100 QSOs achieved (tot=153) 100; Submitted via the Web 50; Non traditional mode: APRS 100; Non traditional mode: ATV 100; Total Bonus Points 1,250

List of GOTA Operators:

KE4CPO, KG4ECI, KI4KNM, KI4KNS

Score Summary: CW Digital Phone Total; Total QSOs 192 1 1446; Total Points 384 2 1446 1832; Claimed Score = 3,664 + 1250 bonus = **4914 points; (THIS REPRESENTS AN ALL TIME HIGH QSO COUNT AND FINAL SCORE FOR W4NC- WAY TO GO EVERYONE!!!)**

License Exams

The Forsyth Amateur Radio Club will offer license exam sessions on Saturday, August 6 at 9 AM at the American Red Cross Chapter House, 690 Coliseum Drive, in Winston Salem. This is across the parking lot from the Arts Council Theater ("Little Theater"). Please call 336-723-7388 and leave a message that you are planning to attend. If no one calls, by Friday night before, the session may be canceled. Examinees need: Photo ID, ORIGINAL and COPY of all documents (License, CSCEs, anything else submitted for exam credit), Social Security Number, and fee of \$12. Registration begins at 8:30 AM. Exams begin at 9:00. Please arrive before 9:00 because if you aren't there we might leave!



DBJ Radio & Electronics, LLC
BOB AUSTIN

404 Edwards Place
Jamestown, NC 27282

www.dbjre.com
bob@dbjre.com
cell: 336-688-2257

ARES Net

Please be planning to help out with the Tour-to-Tanglewood, September 24 and 25. This is our largest ARES event during the year. Also the recent storms caused by the remains of Hurricane Cindy point out the need for us to be ever ready to respond.

Please join us on the Forsyth County Ares Net Thursday evenings at 8:30 p.m. on the W4NC repeater, frequency 145.47 MHZ.

*73, John, N0KTY
Forsyth Emergency Coordinator*

FCAN Report - June 9, 2005

Net started at 8:30 PM. Net Control station - N4PAA.

Check-ins: 10. Stations were KG4ECI Dan, NA4P Fred, NW4O Jack, KG4FGC Ken, WF4DD WFU Club Station, N0KTY John, KF4PLQ Woody, AG4RZ Tim, KC4WSK Van and N4PAA Carl.

One piece of Traffic. Traffic was passed from NA4P to WF4DD. KF4PLQ Woody reminded us of the Hamfest this weekend for an announcement.

N0KTY conducted the ARES meeting. Keep the weekend of September 24 - 25 free for the Tour to Tanglewood. There are a few new events this year which will make it more interesting to provide full communications coverage. We will need all the operators we can get this year. John also reminded us of the Hamfest this Saturday.

Formal session - 17 minutes. Informal session - 6 minutes. Total time - 23 minutes.

73, N4PAA, Carl

FCAN Report - May 26, 2005

Net started at 8:30 PM. Net Control station - N4PAA.

Check-ins: 8. Stations were KG4ECI Dan, KF4EOD Mike, NA4P Fred, NW4O Jack, KG4FGC Ken, WF4DD WFU Club Station, WB4QXG Fred and N4PAA Carl.

One piece of Traffic. No Announcements. Traffic was passed from NA4P to KG4FGC.

No EC was available for the ARES meeting. Discussion was held on the traffic that was passed. Traffic contained ARL messages and the correct use of these was covered.

Formal session - 15 minutes. Informal session - 5 minutes. Total time - 20 minutes.

73, N4PAA, Carl

Calls Heard (@ the June Meeting)

What a crowd! The curious and inquisitive turned out the Monday after the hamfest to learn the outcome of the Saturday event, and to discover the plans afoot for the annual Field Day. Among those craning their

necks for better views were Melissa, W4RXG; John, N0KTY; Benny, REACT; Dan, KG4ECI; Fred, NA4P; Dick, W4UW; Brad, K4BLR; Robert, KG4NEP; Jack, NW4O; Ed, KU4BP; Jeff, AC4YN; Van, KC4WSK; Tim, AG4RZ; Austin, KI4KNS; Megan, KI4KNM; Woody, KF4PLQ; Tink, W4DCW; Ed, AF4XC; Ric, KE4ERK; Dale, WB9SZL; Steven, KG4JWU; Henry, W2DZO; David, N5WNB; Don, WS4NC, and Tom, N4IOZ. Hope to all these and MORE in JULY!

73, Tom, N4IOZ

Let's Build Stuff - LM-386 Amplifier Kits

Seven FARC members picked up an amplifier kit at the last Club meeting. Those were Ed, AF4XC; Tim, AG4RZ; Dave, N5WNB; Dick, W4UW; Ric, KE4ERK; Steven, KG4JWU; and Kip, N0KTY.

Tim dropped me the following email about his experience building the amplifier kit:

“Just wanted to drop you a line and say it works well...30 mins from start to finish, no problems at all with the construction. Your directions are great, well laid out and easy to follow...I feel like everyone will have success with this project. If you would like..I will send you a picture to add to the newsletter...maybe a collage of the finished amps everyone has built? That might spur some others to join in on the fun...”

73, Tim, AG4RZ



AG4RZ's version of the LM-386 amplifier kit.

A Crystal Receiver for the LM-386

When I started this I had something a little more sophisticated in mind than a crystal receiver. But, just for giggles I “whipped-up” a little crystal receiver to see how it worked with the amplifier. I was totally blown away by the performance. Not that this is going to become anyone main receiver but I didn't expect performance quite like this. I hooked a good quality speaker to the amplifier and then

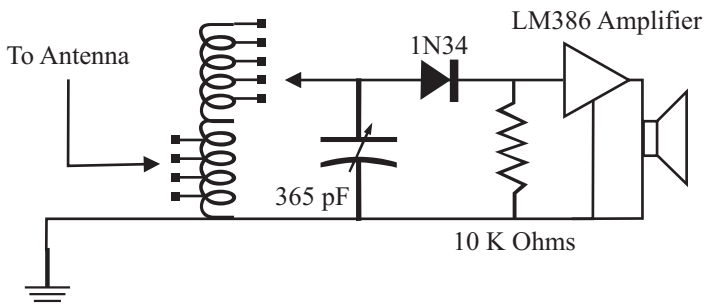
listened to Radio Japan sign on, later the same night I listened to Radio China and finally I Listened to the BBC for about an hour beaming South America with a jazz program (in Spanish). **All this from across the room with good volume and excellent quality.** Yes there were a few problems, like fading because this receiver has no AGC and the selectivity isn't the best - but selectivity was better than I expected. Yes you will need an antenna - mine was just about 30-feet of wire ran along the top of my fence and I used my equipment ground for a ground.

So with that in mind this month I put together a few crystal receiver kits. They will have a 1N34 diode, the coil form (already drilled), the standoffs for the coil, the wooden board, wire and the Fahnstock clips and hardware and a drilling template for the board. I had a problem finding one item, at least at a decent price - that was the 365-pf tuning capacitor. The prices I could find on a capacitor was from \$10 to \$22. I know a lot of people have these in the junk box or can scrounge one from a friend's junk box, so I will leave you on your own for the capacitor. A weekend or two going to yard sales will probably net you an old parts radio for less than the mail-order price of a capacitor.

I did find out that there is still one American manufacturer of tuning capacitors. If there is enough interest I'll look into ordering a batch - but I doubt I'd have enough orders for a minimum order.

The circuit is very simple. About 100 turns of 24-gauge wire on a 2-inch form, with taps at 1, 2, 4, 6, 10, 12, 25, 50, 80 and 100 turns. The taps aren't all that critical. The inductance has been calculated to resonate a little below the broadcast band for use with various tuning capacitors. A 365-pf capacitor will tune a little below 600 kHz at the 80 turn tap. Of course "your milage may vary."

I didn't bother with a volume control and there is enough gain here to really need one for the broadcast band. But an easy work around is just to change the antenna tap to couple a little less into the receiver.



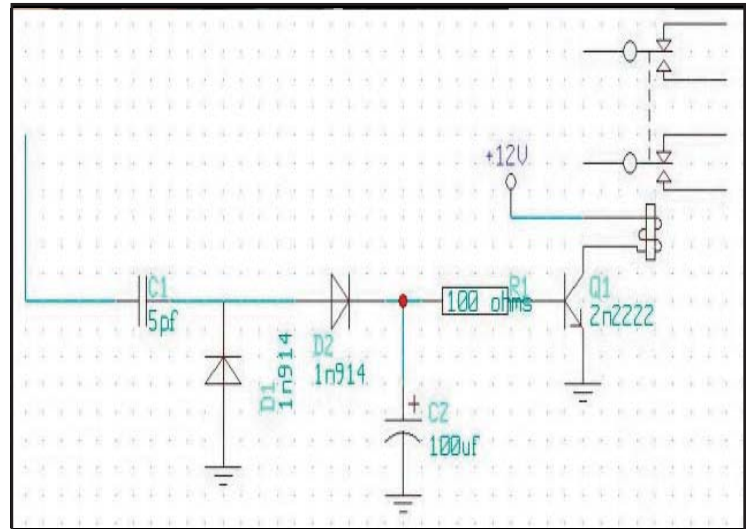
An RF sensing switch

By Tim King, AG4RZ

This started as many of my projects do... with the discovery of something "I just had to have" at a hamfest. This time, it was a 2 meter preamp for sale at the Winston Salem Hamfest last month. Having just recently picked up another 2 meter all-mode rig, as well as a suitable rf amplifier, I decided I needed a preamp as well, and the price was right for this one: \$5.00!

This particular preamp is an older Hamtronics kit, assembled in 1979!! The previous owner had already mounted it in a nice enclosure, and included an antenna switching relay for T/R switching. It was originally set up to work with a Yaesu FT-221, and the relay was switched by voltage from the accessory socket during transmit. Since all of my 2 meter all-mode rigs are Icom, and I didn't want to switch a lot of connectors around for each rig, I needed a different solution.

What I needed was an rf activated switch, so the only connection to change between rigs is the antenna. After a bit of brainstorming, I came up with the following circuit:



Tim's (AG4RZ) RF Amplifier Switch.

The lead from the 5pF cap can be soldered to the antenna jack (inside the radio of course), or simply wrapped around the lead going to the center pin of the antenna connector.

The output of this circuit can be used to supply a ground to any thing, so long as you watch the current the transistor has to sink.

C2 can be changed to suit the "hold time" you need, IE: if you run SSB or CW, then use 100uf or more to keep the transistor saturated. If you run FM or AM, then you can reduce the value, since you will have RF continuously while you are transmitting, whereas with SSB or CW, you

only have RF when the key is down, or when you are talking.

I have used this circuit as it sits from 1 watt to 10 watts without problems. If you run higher power, then you need to change R1 to somewhere between 1k to 10k.

With powers below 1 watt, it may be necessary to forward bias the transistor. Since I don't see this being popular, I will omit these details....

You can use this circuit for anything, to switch a preamp in and out, to turn on an "ON AIR" light, to switch on a cooling fan for you finals, etc, etc. I hope you find this little project useful and enjoyable!

73, Tim, AG4RZ

July Meeting Program

July 13, 2005

The Program this month will be by Charles Layno, W4CL. Charles will be presenting on Digital TV and will be providing a demo.

*73s, Melissa Leonard Hall W4RXG
Vice President*

The Newsletter Hamfest:

Audio Amplifiers Kits: I still have a few kits available for the LM-386 amplifiers. It's not too late to join us in building some goodies this year.

Chanel Master Rotor: Does anyone have a Three wire antenna rotator controller, or the schematic for one? I have a channel master tv antenna rotor that I need a controller for. Alternatively, if anyone has the schematic for one, that would work as well....

Tim, AG4RZ

Did anyone catch the name/call of fellow who had the SB-220 at the hamfest this morning? He told me that he would let me have it cheap if I paid cash, but he took off all of a sudden.

Tom, N4IOZ

Silent Keys

Jim Williamson, NQ4T

HIGH POINT - Jimmy Lee Williamson Sr., 69, of High Point, a loving husband, father and grandfather, died June 24, 2005, at High Point Regional Hospital.

He was born Feb. 14, 1936, in Davidson County, to the Rev. W.D. Williamson and Mary Hill Williamson. He was a U.S. Army veteran and was retired from Delaware and Hudson Railroad. He enjoyed amateur radio and was chief officer of W4VEC Amateur Radio. He was a member of the Numa F. Reid Masonic Lodge and was past master of Acacia Masonic Lodge. On Sept. 16, 1960, he was married to the former Freida Echols, who survives of the residence.

Also surviving are a daughter, Kathy Baker and husband John of Raleigh; a son, Jimmy Lee Williamson Jr; two granddaughters, Abby Baker and Lindsay Baker, both of Raleigh; two sisters, Betty Allen and husband Jimmy of Greensboro, and Brenda Wilson and husband Willie of Winston-Salem; and a brother, Leon Williamson and wife, Pat of Winston-Salem.

The funeral will be held at 3 p.m. Sunday at the Chapel of Cumby Family Funeral Service in High Point by the Rev. Eric Peacock. Interment will be in Floral Garden Memorial Park. A visitation will be held from 7 until 8:30 tonight at the funeral home.

Online condolences may be made through www.cumbyfuneral.com.

Reprinted from the June 25 High Point Enterprise

Jim Williamson, NQ4T passed away earlier today (Friday, 24 June 2005). He had been in declining health for some time, but remained active in Amateur Radio as he was able.

Though many of us have never met Jim, he has had a direct part in what we all share as Radio Amateurs: our official license. The W4VEC Volunteer Examiner Coordinator office is actually a small room in Jim and Freida's home on Stonehurst Drive in High Point.

Jim embraced the Volunteer Examiner Program early on, soon after the FCC turned the task of license examining over to the amateur community in the early 1980's. Beginning with the TEARC VEC and then the W4VEC, Jim insisted on the highest standards among his VEs and session managers.

Even with all the turmoil that occasionally surrounds the VE program as a whole, the integrity of the system under Jim's purview was always above reproach. A point of pride for Jim was the fact that, of all the VECs currently operating in the US, the W4VEC team is the ONLY one trusted by the FCC to conduct sessions in territory of Puerto Rico. The contribution from NQ4T to the amateur community will be sorely missed.

I'm sure that the FARC, along with the amateur community as a whole, extend their consonances to Freida and the family in this sad time.

Tom, N4IOZ

Albert Kahn,

founder of Electro-Voice, Ten-Tec

The Baltimore Sun of Friday, June 24, had an obituary on Albert R. Kahn, age 98, who died June 15 in Michigan. Kahn co-founded the Electro-Voice company that developed, manufactured and sold microphones and other audio products. Among other things, the company developed noise cancelling microphones, the shotgun microphone, and the magnetic stereo record cartridge.

The noise cancelling microphone was developed in 1940, and it was significant in World War II because it enabled communications from high-noise environments such as tanks and aircraft.

In 1970, he co-founded Ten-Tec, Inc. in Sevierville, Tennessee, and remained involved with the company until his death.

Jack Kirby, W9GTY

Some people may have missed the article on IC inventor Jack Kilby who passed away Wednesday, June 20, 2005. He was 81. He had held the call letters W9GTY for part of his life. The Winston-Salem Journal published an Associated Press article about him in the June 22 issue, Page A2.

Continued on page 7

Jack Kilby's patent on interconnecting components on a semiconductor substrate was issued before Bob Noyce applied for his patent on a different method for interconnecting components on a semiconductor substrate. Reference: *Revolution In Miniature*, Braun & MacDonald, Cambridge University Press 1978.

He and Robert Noyce jointly received a Nobel prize for their joint work and agreement to allow wide use of their patents on the methods for interconnecting logic components on/in the "surface" of semiconductor wafers.

A personal aside: the widely used logic element called a FLIP-FLOP had two input pins, which were always labeled J and K. No one has ever contested my suggestion that these pins are named after Jack Kilby!

73, John, W4IRE

Hester Clark, WA4PAE

Many of you will remember Vic Clark, W4KFC and his wife Hester, WA4PAE. I just learned from one of Vic's son's Kenneth Clark, W4KFC (ex K4OKZ) that his mother had passed away in Simpsonville, SC at age 84 on June 1, 2005. Hester was so supportive of Vic in his endeavors. The Clark QTH was very near me when I lived in Centreville, VA. Hester always had a glass of fresh lemonade for guests! A kind and gentle lady who did a great deal of volunteer work with 4-H and also volunteer work with Clifton Elementary School.

73, Buddy, W4YE

And . . . in other news . . .

Shelby Hamfest, back on track . . .

Just to make sure the word is out: Shelby Hamfest will be held as scheduled at the Cleveland County Fairgrounds, just like always.

Hurricane Season is here!

Just in case you missed it - the remains of Hurricane Cindy came through north of Winston-Salem leaving a wide swatch of damage. Hurricane Dennis is gathering strength and is heading toward landfall. Make sure you have a "go" kit of necessities should it be required. Fresh batteries, a flashlight, a handheld are among the goodies that may be highly valuable.

1. W4IRE and I exchanged several emails about the names of the JK flip-flop. I remember asking (a long, long, long time ago) why JK? No one had an answer. But based upon an email with from Ed Burns, W3EKT who was aware of Kirby's contribution to the IC's in general and JK flip-flops in particular this seems very likely.

Wireless Humor

After digging to a depth of 100 meters last year, Russian scientists found traces of copper wire dating back 1000 years, and came to the conclusion that their ancestors already had a telephone network 1000 years ago.

So not to be outdone, in the weeks that followed, American scientists dug 200 meters and headlines in the US papers read: "US scientists have found traces of 2000 year old optical fibers, and concluded that their ancestors already had advanced high-tech digital telephone 1000 years earlier than the Russians."

One week later, the South African newspapers reported the following:

"After digging as deep as 500 meters, South African scientists have found absolutely nothing. They have concluded that 5000 years ago, their ancestors were already using wireless."

Check out the "Ham Band"

<http://www.af4k.com/video.htm>

Not your typical ham video!

The video features Andrew Huddleston (G3WZZ) and his wife Lissa. They were at Dayton about 8 years ago selling their CD "Seek You," by the Ham Band. The CD includes a lot of the Top 40 hits that we all know, such as "On the Monday Evening Greyline," "The Radio Widow" and "Rotuma Bound." The inside jacket includes a photo of Andrew dressed in his tux holding onto the tower with one hand and a glass of champagne in the other.

Also check out www.hamband.com for more.

Editor's Corner

For information to make it into the Newsletter, I need submissions no later than the morning of the 4th Monday of the month. Email me at ws4nc@arrl.net with any submissions. Just plain text is all that's required, most formatting will be redone to match the Newsletter's form anyway. Pictures can be most any form, but jpg's are probably best. Pictures need to be of the highest resolution possible.



Megan, KI4ANM and Austin, KI4KNS, two of our newest club members running the GOTA station at Field Day.

73, Don, WS4NC

Forsyth Amateur Radio Club, Inc.
c/o Don Edwards, PE
1245 E Sprague St.
Winston-Salem, NC 27107

Moment of Zen

This is your Newsletter editor's baby picture. Explains a lot, doesn't it? Hey, it's not my fault - I was born this way. Next month we will have a couple of biker chicks for a cover photo. Wearing nothing but a leather jacket and a head scarf. It will be taseful - I promise.

73, Don, WS4NC

