



eNEWS June 2011

www.nfarl.org

eNEWS is "what's happening" in **North Fulton!** Check the headlines of each item and mark your calendar. Go to arrl.org or eHAM.net for the national news, but here is this month's **North Fulton ARL eNEWS.**



Summary of Upcoming Events and Dates

- **Every Wednesday – Hungry Hams Lunch Bunch – 11:30 AM** at Slopes BBQ
- **Every Sunday – NFARES net – 8:30 PM – 147.06 MHz (PL 100)**
- **Every Monday – Tech Net – 8:30 PM – 145.47 MHz (PL 100) –** Check website for "how to" " (on summer hiatus – to resume in fall)
- **Every Friday – Youth Net – 5:00 PM – 145.47 MHz (PL 100) –** Join Edward Doyle KJ4NRN and others
- **Second Tuesday – NFARES meeting – 7:00 PM** at the Sandy Springs city office complex
- **Third Tuesday – Club Meeting – 7:30 PM** on June 21 – Ian Kahn, AK4IK – preparations for Field Day
- **Mid-Month Madness – Field Day –** at Waller Park Extension Roswell – June 25-26
- **Radio Merit Badge Course –** at Waller Park Extension Roswell during Field Day – 8:00 AM for 5 hours. Course taught by registered Merit Badge Counselors
- **VE Testing Session –** June 25 – 10:00 AM at Alpharetta Adult Activity Center
- **Monday, June 20 – Amateur Radio Week Proclamation – 7:00 PM** at the Roswell City Hall. We need a large turnout of NFARL Club members. See everyone there.

Program Update / John Kludt K7SYS



June finds NFARL in its annual efforts for ARRL Field Day. Please join us as Field Day Chairman Ian Kahn, AK4IK, as he shares with us the details of our plans for 2011. We will be again at the Waller Park extension in Roswell. In addition to two SSB stations, the CW station, and a GOTA station, we will be hosting a VHF/UHF station and a digital station. We have traditionally accomplished two goals during Field Day. In addition to a respectable score we have also given many new hams an opportunity to get on the air during the premier ARRL

event of the summer. Please join us as Ian presents our plans and explains the many roles to be filled by NFARL members as we pursue another successful Field Day.

July Program

We have a very well qualified speaker on QRP for our July meeting. No, although he fits the bill, it is not Jim, W4QO. Come and learn something new about the world of QRP.

Mid-Month Madness

MMM for June happened on June 4th and was well attended by NFARL members – the ARC Hamfest in Jim Miller Park. This is the 100th anniversary for the Atlanta Radio Club and truly a major milestone for their club. Thank you to all NFARL members to helped meet and greet at our booth as well as those who came to the hamfest in support of our colleagues at ARC.

Pre-meeting

We have sensed that most folks like the opportunity to just meet and talk before the meeting so we are going to suspend formal pre-meeting activities for a while and see how that goes. There are always a few spare tables that can be set up, so if you have some small items to sell, lets us know in advance and I am sure we can accommodate you (k7sys@arrl.net). Just remember this is not a full-blown swap meet so we need to keep this activity low key – a NFARL meeting is not the place to sell those ten boat anchors you have sitting in the “warehouse” and would like to part with!

July Midmonth Madness

We figure everyone will be worn out from Field Day and the summer heat so there is no formal MMM for July. Enjoy your favorite summer activities which hopefully include a fair amount of Ham Radio operating or maybe some time at the workbench finishing that project you have been putting off all summer because there was just too much to do.

President's Corner for May

“Take It to The Field” – Just as CQ magazine has devoted its June issue to this topic, NFARL will focus our June efforts on a celebration of “Field Day 2011”. Field Day is an excellent opportunity to demonstrate Amateur Radio to local elected community leaders, key individuals with the organizations that Amateur Radio might serve in an emergency, as well as the general public.

Most of all, however, Field Day is FUN. We encourage every NFARL member to participate in Field Day. Come join us at Waller Park Extension on June 25 – 26 and take advantage of the opportunity to “GOTA” (Get On The Air) and operate on stations set up for multi-band and multi-mode activity. For those who are newly licensed or if you have friends interested in amateur radio, this is a great opportunity to experience the thrill of a QSO and watch ham radio in action.



Also, the fellowship and great food can't be beat.

Ian Kahn, AK4IK, our Field Day Chairman will be coordinating the club's largest annual activity. Ian will present the program for our June meeting when he will provide a review of our Field Day planning and scheduled activities. Please reference Ian's article in this issue to see more details on how you can participate and be a part of this event

I would like to thank Bob Ross, WA2EXZ and Ron Howe, KB4RQM on their unique presentation at the May meeting.



The show and tell aspect was fascinating as well as the integration of remote control flying with amateur radio. I hope to have the opportunity to join Bob and Ron one day soon on the field.

73 - I look forward to seeing you at the meeting on June 21st and especially to seeing you at Field Day!!!

John N4TOL

Field Day is Coming!! / Ian Kahn AK4IK

It's that time of year once again! Time for swimming pools and cold drinks? No. Time for cookouts and weekend parties with friends? No. Time for trips to the beach? No. It's time, of course, for Field Day! And once again, your Field Day team has been hard at work since February planning an event that everyone is sure to enjoy.

First, I'd like to offer a few special thanks to everyone on the Field Day team. Without your hard work, this event wouldn't be as successful as it is. Thank you to Pat (K9TXI) and Len (W4COR)

Corley and Joel (W4JNM) and Camille Myer for the use of their campers/mobile homes for our operating positions this year. Thank you to Tom Koch (W4UOC) and the NFARES team, who procured the North American Mission Board's mobile command and communications center as operating positions for our V/UHF and digital stations. And thank you to all you, the membership, for participating in Field Day and making it the successful event that it is.



We're doing a couple of new things this year. As you may have noticed from above, all our operating positions, except for GOTA, will be in air conditioned environments. This should help make Field Day a more comfortable and pleasurable experience for everyone. Also new this year, we'll have a digital station. Neil Foster, N4FN, is running this station for us, and we hope to complete a lot of QSOs on this new station. If you're into digital and have felt left out, or want to try digital, please contact Neil (n4fn@arrl.net) and sign up to work this station for a while. It will be a lot of fun, and a great new Field Day experience.

Of course, we haven't forgotten all the old standbys. Several of the captains have put requests on the club reflector for operators. If you haven't already signed up to operate, please contact John (johnnykludt@earthlink.net) or Mack (w4ax@nfarl.org) to sign up for 40m SSB, Chuck (ae4cw@att.net) or Dave (dabrockett@comcast.net) to sign up for 20m SSB, Mike (w5jr@bellsouth.net) to sign up for CW, or Hal Hubschman (halhubschman@help4yourpc.com) to sign up for V/UHF. And remember, you don't have to sign up to operate. If you show up at the event and decide you want to operate, we **will** get you in somewhere!

For those who are GOTA (**Get On The Air**) eligible, Jim Stafford will run that station for us again this year. As always, Jim plans an outstanding station where anyone licensed in the last 12 months, anyone without a license, or anyone who has not been on HF in the last three years, can experience the thrill of making the HF contact under the watchful eyes of an experienced Elmer. If you are eligible for this station, or have questions about it, please contact Jim at w4go@nfarl.org. And Jon Wittlin, K4WIT, will run the Boy Scout Radio Merit Badge clinic. We look forward again to extensive participation by the Boy Scouts in the local area.

Also, don't forget our usual annual club picnic, held every year at Field Day. Lynn, KJ4DYH, sent out a note on the reflector asking people to RSVP for the picnic and let her know what side item or dessert you'll bring. As usual, the club will provide the barbecue, hamburgers, hot dogs, and drinks. So please contact Lynn at kj4dyh@nfarl.org on or before **June 19** to RSVP for the picnic.

Finally, we're holding the Third Annual NFARL Field Day Photo Contest this year. The photo contest has been quite a success in years past, and we want to continue that tradition. There will be a monetary-equivalent prize (probably an HRO gift certificate) and the winner's photo will be submitted to QST for possible publication in their Field Day photo recap. So, all you shutterbugs bring your cameras and let's get some really great memories of this year's Field Day activity!

So, mark your calendars for June 25 and 26 and come see us at Waller Park Extension. As is tradition, the June club meeting is the Field Day overview, where most of your most burning questions will be answered. If you have any questions you'd like answered before then, please contact Ian (ak4ik@nfarl.org) and he'll get back to you as soon as possible.

DXCC Quest Continues / Dave Higdon KD4ICT

Just an update on our efforts. We are now in the all users phase of our quest for club DXCC. The gates are open to all members. We are almost a quarter of the way there as of this morning.

I would like to encourage everyone to make a contact or two and submit the details to award@nfarl.org and we will add it to the log.

Checking the website <http://www.lotw-online.com/> first should make it easier to achieve our goal. This is a spotting page for known LOTW users!

As a reminder, use NF4GA, stay within the limits of your license, submit your log and receive your certificate when we achieve this award.

Don't forget, everyone who is able to contribute will get a copy of the DXCC award. So, send your adif logs or the contact info to award@nfarl.org and check out info on the website <http://www.nfarl.org/clubDXCC/clubDXCC.html>. Have Fun!

NFARL Membership

We currently have **250** active members as of the writing of this newsletter. The following members have joined since June 2011.

Callsign	First NM	Last NM	Mbr Since	lic_class
WD4FGB	Joe	Grimes	2011-05	Extra
KK4CKH	Lance	Henderson	2011-06	General
	Spencer	Kahn	2011-05	Not Licensed

Please greet our newest members and welcome them to the organization the next time you see them.

Congratulations to Keith Plossl KK4BTA and Bill Weathers KK4BCQ for getting their licenses in April and upgrading to General in June.

Public Service



Atlanta Radio Club Hamfest, Saturday, June 4 was a club success thanks to the number of NFARL club members that participated. Thanks Dave Brackett AK4CL for organizing, coordinating and leading this effort.

Chattahoochee Nature Center Possum Trot 10K, Saturday, June 18. Ham volunteers will work with Charles Turner K0CZR, CNC Coordinator. Contact Charles for more details and/or to volunteer at either k0czt@bellsouth.net or 770-943-7686. Let Charles know if you need a 2-meter HT or a CNC Radio Volunteer badge and your shirt size.



NFARES Update / Jim Paine N4SEC



North Fulton Amateur Radio Emergency Services (NFARES) meeting on May 10 concentrated on two areas of service to the community:

North American Mission Board

The North American Mission Board (based in Alpharetta) participation in a National Emergency Simulated Exercise May 17 through May 19. The simulated emergency was a major earthquake along the New Madrid fault line in the central United States. The drill used only satellite phone and amateur radio for communications the first 24 hours. NFARES members and other interested experienced amateur radio operators staffed the stations at the Mission Headquarters in Alpharetta. Tom Koch W4UOC led the NFARES volunteer team.

NFARL Field Day June 25 and 26

NFARES will be involved with NFARL's Field Day by providing the North American Mission Board's Disaster Relief Command Post trailer for use by the 2-meter, UHF and 6-meter stations. NFARES will receive ARRL bulletins, provide space for the digital operating station and will use Winmor, Winlink and D-Rats for D-Star. There will also be a display and literature featuring MARS. This will be first combined exercise and everyone is excited about the prospects of demonstrating our emergency communications resources and skills.

Additional Information:

- Weekly NFARES Net is every Sunday night at 8:30 PM. ARES uses the NFARL repeater on 147.06 - P/L 100. All ARES members from other groups, as well as non-ARES amateurs are encouraged to check in.
- NFARES meets on the second Tuesday of each month at 7:00 PM. The location is usually the [City of Sandy Springs Council Chambers](#). Meeting participants frequently gather for a pre-meeting dinner at 5:45 PM at [Tijuana Joe's](#) restaurant (between Sandy Springs City Hall and QuikTrip).
- Check out the NFARES website at: nfares.nfarl.org for additional information

Need a Name Badge?

Go to the [NFARL Mart](#) and order one of these magnetic badges!



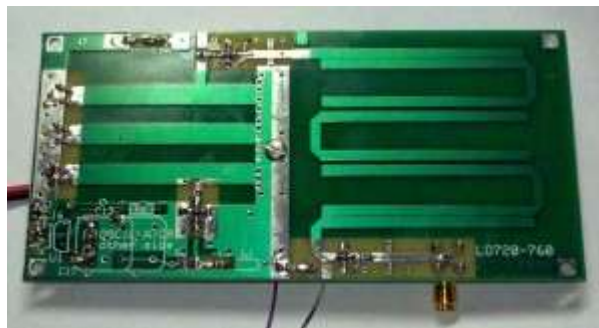
W1GHZ 902/3 Transverter Measurements and Build Notes /

[Chase Turner W4TI](#)

My 33cm W1GHZ transverter is assembled! However, it isn't a fully functional transverter because I do not yet have a complete sequencing system in place. That said, the transverter and LO boards are assembled and plumbed. I am continually on the hunt for the right kind of enclosure to use for the entire bit of kit and hope to have something soon.

Recently, with the kind help of Charles, K4CSO, I was able to have the device tested and get its measurements checked. I don't have the ability to check anything as I have no test equipment, and so I am very thankful for Charles to take time out of his day to lend a hand and expertise. I was surprised by the results- mainly that they worked at all! I don't have a great deal of experience with surface mount soldering and often was concerned that I had cooked some part or other. Turns out everything works fine!

Considering the cost of these kits, one is getting a new band for not a lot of money. I secured the transverter boards and parts for \$48. With connectors, switch, sequencer, power parts and eventually some sort of enclosure, I imagine the entire project will cost me \$100. The same sort of thing (recognizing that there are significant differences between the two and that I'd rather have the [DEMI](#) if I could afford it) from DEMI would cost over \$200 for the kit, and closer to \$300. The next comparable 902/3 transverter kit is from W7BAS and is currently [\\$199 plus \\$6 for shipping](#). So, like I said, you are getting on a new band for not a lot of money- but how well does it work?

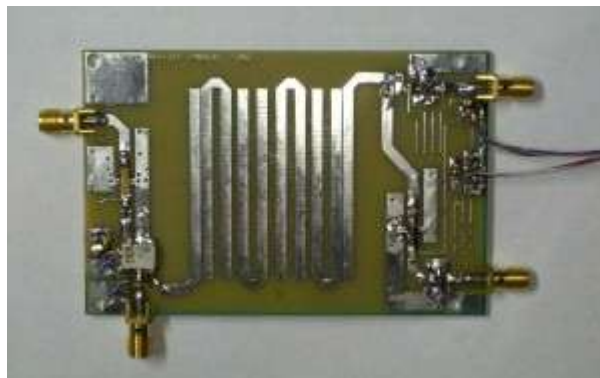


I put the LO board together first. I decided that the best way to approach this would be to solder all the capacitors and resistors in place and then move on to the more delicate MMICs, crystal oscillator and voltage regulator. This worked very well; if I had it to do again (and I will for my 1296 board), the only difference would be that I would solder the PCB to SMA (coax connector) first. It appeared to take a lot of heat to get the connector warmed up and as a result it transferred a lot of heat to the board. If you put this connector on first, you won't run the risk of cooking the nearby MMIC. And speaking of MMICs, I used the MAR-6 and MAR-1 from Minicircuits as was listed in the parts sheet by [Paul Wade](#).

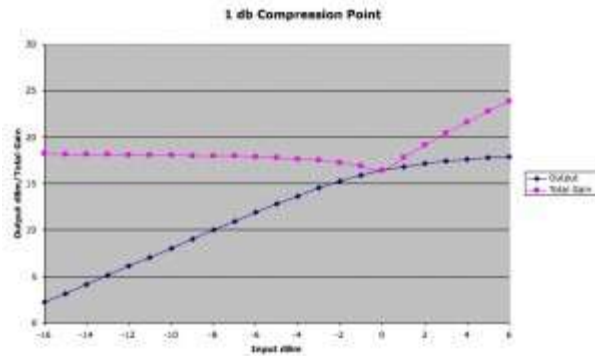


After applying some power (the +12 → +8 volt power plant was built using an LM7808 bolted to the ground plane), the current limiter said that the board drew 82 milliamperes. Not a lot of current! The LO output was +6.68 dBm, right where it should be for the +7dBm mixer on the transverter board (which had to be jumpered to reach the LO; I used a small piece of brass stock you can get from most hardware stores to jump the trace). What was odd, however, was the frequency itself was not as close as I would have liked- the LO's output is 755.985 MHz, off by 15 kHz from the goal of 756 MHz. Doing a mild heat test of the crystal revealed that with an increase in temperature (unmeasured; used a heat gun), the crystal drifted another 10 kHz and landed at 755.975 MHz. A better crystal oscillator would be closer to the desired frequency, as the [Cardinal](#) one that was supplied had a stability rating of +/- 100 ppm- they make them down to +/- 5 ppm in this particular form factor. Eventually, even the hobbyist will have some sort of [synthesizer](#) to do the heavy frequency (timing) lifting that was once the domain of the crystal oscillator (you should really check out Andy's, [G4JNT](#), website for some synthesizer projects).

The transverter board itself was fairly easy to put together. I would warn other folks to mind where you are putting the power supply capacitors for the T/R circuits, as you will want to drape some off the edge, so to speak, and make sure that the wire you want to use is in the right place and soldered down before you put in all the caps. Alternatively, you may want to place them on the bottom of the board. Here again, it is better to think of the major parts (plumbing and power) that have to fit somewhere first and then worry about where the little stuff is going to go.



I was pleased that the transverter put out +15.25 dBm (or, approximately 32 mW). The TX side of the circuit took 187 milliamperes and the RX side of the circuit 120 milliamperes. The [1 db compression point](#) (or more formally, P1db) was at -2 dBm. So, at least for my transverter, I need to attenuate my radio to -2 dBm output drive in order to avoid saturating the circuit. Here, I used the following MMICs: A1=SGA3586Z, A2=MAR-6SM and A3=ERA-5SM.



The weak spot in this transverter board design, other than no consideration for built in power on any board that uses +12V input like most do, are the filters. PCB filters aren't nearly as tight as something one might otherwise procure from [Mouser](#), but certainly will be at a higher cost than using the hairpin PCB filter. Here again, we are confronted with price versus performance. For what I am trying to do, I'll be able to get by- but for those who like to hack around and make something more than what is given, I believe there are 900 MHz bandpass filters to be had that could tighten up the transverter without doing too much looking.

At the end of things, I'm pleased with the boards. If you want to try to add a band cheaply, but not expect perfection from your price, I think you have found the right kind of kit. I can only think of two improvements I would like to make: (1) at some point I'm definitely going to insulate the crystal with some Styrofoam and (2) may even build some shielding over the PCB hairpin filters. With these two ends tied up, I should have a fairly decent way by which to get on 33cm!

NFARL Supports Christmas Island DXpedition 2011 – T32C / Wes Lamboley W3WL

NFARL is a proud sponsor of the DXpedition to T32, operating September 28 to October 26 (see www.t32c.com for more information). This Expedition will be making it easy to work them for any hams that are interested, and one of their stated goals is to work as many newcomers to DX as possible. In keeping with that theme, the NFARL will offer a HamCram for the General class license in early September, and then help the new Generals enjoy the thrill of talking half way around the world using the HF frequencies. Also, the goal is to help not only new Generals, but anyone interested in HF communications to find out for themselves' how easy it is to "work DX".

In keeping with the HF and DX theme, the program for September will include tips on how to operate as a DX chaser, and will provide a list of NFARL members that will invite you to their shack and coach you in chasing DX using your own call sign. Here's hoping that this opportunity will build some enthusiasm to upgrade to General and explore another facet of our wonderful hobby!

73, Wes – W3WL, DX Chaser



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Don't Forget About Mentoring

NFARL prides itself on helping members - both young and old - enjoy ham radio to the fullest. Check out this [link](#) for information on Hams who will help **YOU**. If you have an area that you need help with that is not in this list, please send an e-mail to Wes, W3WL at mentor@nfarl.org. DO NOT BE SHY. If you need help with an area not listed, others probably do as well. And here is the deal. If you think you have something to offer in an area that is not mentioned, don't be shy. Everyone has a certain amount of expertise in something. Send us a note and say you want to be added to our list or mentors.

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Club Repeaters

145.470 (-) EchoLink Node 560686 NF4GA-R	100 Hz	Sweat Mountain
147.060 (+) Primary ARES repeater	100 Hz	Roswell WaterTower
224.620 (-) Joint Venture with the MATPARC club	100 Hz	Sweat Mountain
443.150 (+)	No Tone	Roswell WaterTower
444.475(+)	100 Hz	Sweat Mountain
927.0125(-)	146.2 Hz	Sweat Mountain