

# Homebrewing a 23 cm Earth-Moon-Earth (EME) station

Marc Franco, N2UO, of Summerfield, North Carolina, will be presenting the story behind his 100% homemade 23 cm EME station, including the fundamentals of EME, radio equipment characteristics, as well as details on the construction of his 20-foot parabolic reflector and feedhorn. The presentation will also include audio recordings of signals reflected off the moon.

Check out Marc's website at http://www.qsl.net/n2uo/

Marc has been licensed since 1982, at age 16, and has been continuously active since then. He has always built his own radios, and operates CW, unless forced to do otherwise. He operates 23 cm EME year round and takes part in all major contests. His HF activity (mostly 160, 80 and 40 m) is concentrated in the winter months while he is more active on 6 meters in the summer. Professionally, he is an RF integrated

# **OCTOBER MEETING**

The general meeting of the Forsyth Amateur Radio Club will be (as almost always) on the second Monday of the month, **October 8**, at the NW NC Red Cross Building on Coliseum Drive. The meeting starts at 7:30 PM but plan on arriving early, say 7 PM to get a good seat and to chat with fellow hams. Ham Exams start at 6:30 PM and require pre-registration. This month's program will be Homebrewing an EME station by Marc N2UO.

circuit designer for a major semiconductor company in Greensboro, NC, and holds a PhD degree in electrical engineering from Drexel University, Philadelphia. He has published numerous peer-reviewed papers, holds two US patents, and is co-author of the book "Switchmode RF and Microwave Power Amplifiers".

## Winston-Salem Fall Swapfest 2012

The Winston-Salem Fall Swapfest, An Official ARRL Sanctioned Event! **Saturday, October 13, 2012** - 7AM - Noon, \$5 admission Inside Area Opens to the Public at 8:00 AM, Summit School Dining Area, 2100 Reynolda Road, Winston-Salem

# 2112 ARRL INTERNATIONAL Earth, Moon, Earth (EME) Competition

by Doc WB4QIZ

I'm hoping to get some FARC interest in EME communications. I have not tried it but I believe that we can be successful. Really big stations are on the air during the EME contest so we don't have to have a massive antenna on our end to make a contact. Our best chance will be on 144 MHz..

Three weekends of activity and fun! Oct 6-7: 2.3+GHz, Nov. 3-4: 50-1296 MHZ, Dec. 1-2: 50-1296 MHZ. Becoming active in Earth Moon Earth(EME) has never been easier! Many stations are working DX on 2 meters and up with only 100 watts and a single long boom Yagi. Using CW or digital modes, you too can bounce your signal off the lunar surface and work DX! (250,000 miles) Certificates awarded to all stations that submit a log. Complete rules may be found at www.arrl.org/contests

Contact WB4QIZ, Doc, if you are interested 336-420-0170 mobile dholliday@triad.rr.com

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) & 444.275 (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 336-245-5740; or visit out web site at www.w4nc.com. Club email is to info -at w4nc.com.

Officers for 2012 are:

President: Tim King AG4RZ

Vice-President: Jerry Minor K4GW

Secretary: Don Edwards WS4NC

Treasurer: Henry Heidtmann W2DZO

Newsletter Editor: Don Edwards, WS4NC

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

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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.

# **KJ4IC Lives!**

I received an email from Bob just after the last Newsletter went out:

Thanks for the newsletter.

During a recent EME contest (I don't remember which one), I was successful copying a few calls using my Yaesu FT-817nd, an 11-element 2-meter beam and the WSJT7 software.

I mounted the beam horizontally on a tripod, and using a hurricane fence top rail t-connector, was able to manually adjust the elevation of the beam as well as the azimuth. Luckily the moon does not move (relatively) very fast, so a good eyeball seems to be good enough for manual adjustment periodically.

The software is easy to use and there are a number of articles and websites for how-to's. There was a good article in the February 2011 CQ about EME on a budget, and the K1JT website has the free software download and user guide at http://physics.princeton.edu/pulsar/K1JT/wsjt.ht ml.

It was fun to play with. I have not tried to transmit yet, but may set up the FT-847, which puts out 50 watts. next time.

Have fun with it.

73, Bob KJ4IC



## **FCC Testing**

by Dale, WB9SAL

#### **Last Testing Session:**

Congratulations the on your new

Amateur licenses, and Amateur License upgrade:

WILLIAM W STARKEY KK4LNM MARK A HOLDER KK4LNN

Bill, Mark, allow me to offer all of you a hearty congratulations the on your New Amateur licenses, and Amateur License upgrade. I look forward to chatting with each you on the air.

New FCC Testing: Amateur radio testing for new applicants as well as upgrades will be given the 2nd Monday of every month, except December, prior to the FARC regular meeting. All test participants are invited to attend the meeting. The time is 6:30 PM and the place is the Red Cross building on Coliseum Drive in Winston-Salem. << Pre-registration is required via e-mail >>, listing the elements you wish to take and your phone number. You may pre-register or get additional information via e-mail to info -at- w4nc.org, attention Dale Mierisch WB9SZL. Replace -at- with the usual symbol. Other dates/times will be published as we schedule them.

Dale Mierisch WB9SZL FARC VEC Session Manager 1-336-766-9675

## **Monday Nights**

The FARC main Club meeting is always on the second Monday of the month at the Red Cross except in December. The FARC business meeting is open to all and is on the third Monday of the month and is held at Old Staley's restaurant at 2000 Reynolda Rd at 7-ish PM.

Business meeting: The business meeting is held on the third Monday night at Staley's on Reynolda Road. The meeting starts at 7-ish and usually runs about an hour and a half. We have tried holding it at the Red Cross but the overwhelming choice of those who are present is that they would prefer somewhere where we can have food and drinks. The attendance at the third Monday business meeting is anywhere from about 6 to as many 15

people. All are invited - we would love to have to move to a dedicated meeting room.

The contesting group generally meets on the fourth Monday of the month and that is also held at Old Staley's. All are welcome at any of the Monday night meetings. Old Staley's has a connection to FARC. Owner Bill Mowery is the nephew of W4ISH Clarence Mowery one of the prime founders of FARC.

# Forsyth County ARES Net Reports

by Dan KG4ECII

#### **ARES Net Report for 27Sep2012**

Net Control Station: WS4FC (op KG4FGC)

Check-ins: WA4NOT, KG4ECI, AK4D, NA4P, WF4DD, WB4QXG, WA4ZKI, KC4WSK, KG4JWU, N4EY, KF4EOD.

Topics: WA4NOT informed us that Don WS4NC sent photos of our participation in the Tour to Tanglewood to the SERA Repeater Journal; ARES area 9 EC Dal Williams has organized a monthly Skype meeting for all his EC's; Simulated Emergency Test upcoming in October; FEMA Earthquake Drill scheduled for Oct 18.

Training: None.

Traffic: None.

Net time: 20:30-20:57.

#### ARES Net Report for 20Sep2012

Net Control Station: WS4FC (op WA4NOT)

Check-ins: KG4ECI, AK4D, KF4EOD, KK4KJJ, WB9SZL, N4PAA, AF4XC, WA4ZKI, KC4AIY, KF4JZD, WB4QXG, KC4WSK, KG4JWU, KE4ZFN.

Topics: WA4NOT held an after-action meeting for the Tour to Tanglewood including a commentary period from those checked-in.

Training: None.

Traffic: None.

Net time: 20:30-21:18.

#### ARES Net Report for 13Sep2012

Net Control Station: WS4FC (op KG4ECI)

Check-ins: WA4NOT, WB4QIZ, KG4JWU, KG4FGC, WF4DD, KJ4ENM, KF4EOD, AK4D, KF4HHG, KK4KJJ, WB9SZL, NA4P, N4PAA, WA4ZKI, KE4ZFN, KJ4VGT, WK4CW, WB4QXG, KJ4TGY.

Topics: Final arrangements for Tour to Tanglewood; a brief discussion of Tactical nets.

Training: None.

Traffic: None.

Net time: 20:30-21:07.

#### ARES Net Report for 06Sep2012

Net Control Station: WS4FC (op KG4ECI)

Check-ins: WA4NOT, WX5AAA, AK4D, KF4EOD, WA8IHW, WB9SZL, WA4ZKI, KE4ZFN, AF4XC, KC4WSK, KJ4ENM, KG4FGC, KG4JWU, KJ4VSM, KK4KJJ.

Topics: WA4NOT talked about Tour to Tanglewood plans now being finalized - still looking for about 4 more hands.

Training: The role of communicators during ARES activations.
Traffic: None.

Net time: 20:30-20:59.

FALL 2012 ARES SETs

The following comes from NC Section Emergency Coordinator (SEC) Tom Brown, N4TAB. This year's SET exercises will focus on digital communications, and specifically Winlink, which mimics email and handles most attachments, thus becoming a reliable form of error free sending, receiving, tracking and documenting vital emergency communications. With the release of Winmor, the sound card version of Winlink, many more operators have a chance to participate. If you're using PSK31 or similar soundcard-based protocols, Winlink is an easy step. The Winlink organization has authored and provides at no cost, a couple of client (user) programs - RMS Express and Paclink - that can be downloaded from ftp://autoupdate.winlink.org/User Programs/(RMS Express Setup 1-2-5-0.zip and Paclink setup 4-3-3-0.zip). Winlink, email via HF radio, serves a central role in radio business conducted by ARES/RACES/AUXCOMM

operators in support of North Carolina Emergency Management (NCEM) and many counties. Winlink has been installed at NCEM facilities since 2008 and also at a number of County facilities. Winlink can be utilized by almost any HF-capable operator.

First SET Event - October 13, 2012, 0900 HRS DST. This will be a tune-up event intended to have operators learn/prepare to use the Winlink radio-to-email system. Each County will identify one or more operators that have Winlink HF capability using Pactor or Winmor (soundcard) protocols and using either RMS Express, Paclink or Airmail clients. Simple tactical messages will be sent via local means (VHF/UHF, cellphone, landline) to the County WL2K station who will put that traffic into Winlink email messages and send those messages to a specified email address.

Second SET Event - November 10, 2012, 0900 HRS EST. This event will focus on using Winlink to send formal traffic in ICS-213 format from Counties to specified email addresses. Individual messages may originate from numerous operators who will route them to the designated Winlink-equipped stations. The Winlink-equipped stations will forward the messages to specified email addresses using Winlink HF. We will also provide a specific message and a small attachment to each County and those must be sent as part of the exercise.

If there is enough demand, or additional training is required, a third SET may be scheduled in December. Frequencies for local traffic can be VHF/UHF, repeater or simplex, FRS, cellphone, etc. Frequencies for Winlink will be those as proposed by the Winlink user client (RMS Express, for example). If your organization has MARS operators available, they can use MARS Winlink frequencies. Similarly, Counties that have MARS Agency licenses can use the MARS Winlink frequencies.

Additional information on the SET will be posted on the section website at www.ncarrl.org

#### Moment of Zen

Actually I'm feeling very little Zen right now. The flu bug got me this past week. Hope I'm better by Monday night! 73, Don WS4NC