



The Amplifier

Tar River Amateur Radio Club

February 2004

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WEB SITE: www.tarriverarc.com

Next Meeting

The November meeting of the Tar River Amateur Radio Club will be held Monday, February 2, at BODDIE NOELL ENTERPRISES, located at 1021 Noell Lane in Rocky Mount. The meeting will start at 7:00 p.m. Please enter the building through the main entrance. Parking is available in front of the building or in the parking lot. The February program will be "Repeater Basics".

Please bring the following items when attending a testing session:

- Photo identification (drivers license)
- Social Security Number
- Original amateur radio license
- Copy of amateur radio license
- Original certificate(s) of successful completion
- Copy of certificate(s) of successful completion
- Test fee of \$12 payable to ARRL/VEC (checks preferred)

2004 VE Exam Schedule

Bill, N2BT

The Tar River Amateur Radio Club, Rocky Mount, NC, will hold ARRL/VEC Amateur Radio Exams in 2004 as follows:

February 7	August 7
April 3	October 2
June 5	December 4

Exams will start at 9 a.m. and will be held at:

The Braswell Memorial Library
727 N. Grace Street (corner of Grace and
Peachtree Streets)
Rocky Mount, NC 27804

For further information visit our club web site at www.TarRiverARC.com or contact:

Bill Thomas N2BT
VE Team Coordinator
Rocky Mount, NC
(252)-442-6131
Email: N2BT@arrl.net

2004 Club Dues

The Tar River Amateur Radio Club dues will be due in January. Full Membership is \$15 and Family Full is \$6 each. Associate Membership dues are \$10 and are for Non-licensed persons only.

Please make check payable to the TRARC, and bring to the February meeting or mail to Fred Winner, the club's treasurer.

Weekly ARES Net

The Northern Coastal Plain ARES net, covering Nash, Edgecombe, Halifax, and Wilson counties, meets Tuesday nights at 8:30 p.m. on 145.290 MHz, 146.805 MHz, 146.745 MHz, 224.220 MHz, 444.500 MHz, 444.700 MHz, 442.125 MHz and 443.700 MHz repeaters. Check into the net, participate in ARES training, and enjoy the informal rag-chew afterwards.

Upcoming Hamfests

February 7 – Charleston, SC
 February 22 – Richmond, VA
 February 29 – Vienna, VA
 March 13-14 – Charlotte, NC
 March 20 – Charleston, WV
 March 21 – Kinston, NC

Contests

January 31-February 9 – Six Club WSJT Mileage Marathon
 Feb. 1 – North American Sprint, CW
 Feb. 7-8 – Ten-Ten International Winter Phone QSO Party
 Feb. 7-8 – XE International RTTY Contest
 Feb. 8 – North American Sprint, SSB
 Feb. 9-14 – School Club Roundup
 Feb. 14-15 – CQ World Wide RTTY WPX Contest
 Feb. 14 – FISTS CW Winter Sprint
 Feb. 21-22 – ARRL International DX Contest
 Feb. 21-22 – YL International QSO Party, CW
 Feb. 28-29 – CQ WW 160-meter SSB Contest
 Feb. 29-Mar. 1 – North Carolina QSO Party

ARRL Licensing Proposal

NEWINGTON, CT, Jan 19, 2004--The ARRL will ask

the FCC to create a new entry-level Amateur Radio license that would include HF phone privileges without requiring a Morse code test. The League also will propose consolidating all current licensees into three classes, retaining the Element 1 Morse requirement--now 5 WPM--only for the highest class. The ARRL Board of Directors overwhelmingly approved the plan January 16 during its Annual Meeting in Windsor, Connecticut. The proposals--developed by the ARRL Executive Committee following a Board instruction last July--are in response to changes made in Article 25 of the international Radio Regulations at World Radiocommunication Conference 2003 (WRC-03). They would continue a process of streamlining the amateur licensing structure that the FCC began more than five years ago but left unfinished in the Amateur Service license restructuring Report and Order (WT 98-143) that went into effect April 15, 2000.

"Change in the Amateur Radio Service in the US, especially license requirements and even more so when Morse is involved, has always been emotional," said ARRL First Vice President Joel Harrison, W5ZN, in presenting the Executive Committee's recommendations. "In fact, without a doubt, Morse is Amateur Radio's 'religious debate.'" The plan adopted by the Board departs only slightly from the Executive Committee's recommendations.

The "New" Novice

The entry-level license class--being called "Novice" for now--would require a 25-question written exam. It would offer limited HF CW/data and phone/image privileges on 80, 40, 15 and 10 meters as well as VHF and UHF privileges on 6 and 2 meters and on 222-225 and 430-450 MHz. Power output would be restricted to 100 W on 80, 40, and 15 meters and to 50 W on 10 meters and up, thus avoiding the need for the more complex RF safety questions in the Novice question pool.

"The Board sought to achieve balance in giving new Novice licensees the opportunity to sample a wider range of Amateur Radio activity than is available to current Technicians while retaining a motivation to upgrade," said ARRL CEO David Sumner, K1ZZ. "It was also seen as important to limit the scope of privileges so the exam would not have to include material that is inappropriate at the entry level."

As an introduction to Amateur Radio, the Novice license served successfully for most of its 50-year history. The FCC has not issued new Novice licenses since the 2000 license restructuring, however. Under the ARRL plan, current Novice licensees--now

the smallest and least active group of radio amateurs--would be grand-fathered to the new entry-level class without further testing.

Anticipating assertions that the new plan would "dumb down" Amateur Radio licensing, Harrison said those currently holding a ticket often perceive the level of complexity to have been greater when they were first licensed than it actually was. "Quite frankly," he said, "if you review the questions presented in our license manuals throughout the years, you will be surprised how they compare to those of today."

Technicians and Generals

The middle group of licensees--Technician, Tech Plus (Technician with Element 1 credit) and General--would be consolidated into a new General license that no longer would require a Morse examination. Current Technician and Tech Plus license holders automatically would gain current General class privileges without additional testing. The current Element 3 General examination would remain in place for new applicants. ARRL already has proposed additional phone privileges for Generals in its "Novice re-farming" petition, RM-10413, but the FCC has not yet acted on that petition.

Morse Code Testing Retained for Extra

At the top rung, the Board indicated that it saw no compelling reason to change the Amateur Extra class license requirements. The ARRL plan calls on the FCC to combine the current Advanced and Amateur Extra class licensees into Amateur Extra, because the technical level of the exams passed by these licensees is very similar. New applicants for Extra would have to pass a 5 WPM Morse code examination, but the written exam would stay the same. The League's plan calls for current Novice, Tech Plus and General class licensees to receive lifetime Element 1 (5 WPM Morse) credit.

"This structure provides a true entry-level license with HF privileges to promote growth in the Amateur Service," Harrison said. "It also simplifies the FCC database by conforming to the current Universal Licensing System (ULS) structure and does not mandate any modifications to it."

Sumner concurred. "The Board started out by recognizing that three license classes was the right number when looking down the road 10 or 15 years," he said. "We need a new entry-level license."

"On the other hand, there's nothing particularly wrong with the existing Extra class license," he continued. "The change in the international regulations notwithstanding, the Board felt that the highest level of accomplishment in the FCC's amateur licensing structure should include basic Morse capability."

Sumner and Harrison say the current Technician entry-level ticket provides little opportunity to experience facets of ham radio beyond repeater operation. "The quality of that experience," Sumner said, "often depends on the operator's location."

Among other advantages, Sumner said the plan would allow new Novices to participate in HF SSB emergency nets on 75 and 40 meters as well as on the top 100 kHz of 15 meters. The new license also could get another name, Sumner said. "We're trying to recapture the magic of the old Novice license, but in a manner that's appropriate for the 21st century."

Proposal Includes "Novice Re-farming" Band Plan

The overall proposed ARRL license restructuring plan would more smoothly integrate HF spectrum privileges across the three license classes and would incorporate the "Novice re-farming" plan the League put forth nearly two years ago in a Petition for Rule Making (RM-10413). The FCC has not yet acted on the ARRL plan, which would alter the current HF subbands. The Novice re-farming proposal would eliminate the 80, 40 and 15-meter Novice/Technician Plus CW subbands as such and reuse that spectrum in part to expand phone/image subbands on 80 and 40 meters.

The ARRL license restructuring design calls for no changes in privileges for Extra and General class licensees on 160, 60, 30, 20, 17 or 12 meters. Novice licensees would have no access to those bands.

Proposed Phone/Image HF Subbands (Includes Novice Refarming Proposal)

80 Meters

Extra: 3.725-4.000 MHz (gain of 25 kHz)
General: 3.800-4.000 MHz (gain of 50 kHz)
Novice: 3.900-4.000 MHz (new)

40 meters

Extra: 7.125-7.300 MHz (gain of 25 kHz)
General: 7.175-7.300 MHz (gain of 50 kHz)
Novice: 7.200-7.300 MHz (new)

15 meters

Extra: 21.200-21.450 MHz (no change)
General: 21.275-21.450 MHz (gain of 25 kHz)
Novice: 21.350-21.450 MHz (new)

10 meters

Extra and General: 28.300-29.700 MHz (no change)
Novice: 28.300-28.500 MHz (no change)

Proposed CW/Data-Exclusive HF Subbands (Includes Novice Refarming Proposal)

80 meters

Extra: 3.500-3.725 MHz
General: 3.525-3.725 MHz
Novice: 3.550-3.700 MHz

40 meters

Extra: 7.000-7.125 MHz

General: 7.025-7.125 MHz

Novice: 7.050-7.125 MHz

15 meters

Extra: 21.000-21.200 MHz

General: 21.025-21.200 MHz

Novice: 21.050-21.200 MHz

10 meters

Extra/General: 28.000-28.300 MHz

Novice: 28.050-28.300 MHz

PAR Omniangle Antenna

Les, K14BYV

The PAR Omniangle Antennas are horizontally polarized, omni-directional antennas manufactured by PAR Electronics in Glenville, NC. I installed the Six Meter version at my QTH in mid-October. It is an unusual looking antenna, but it works!



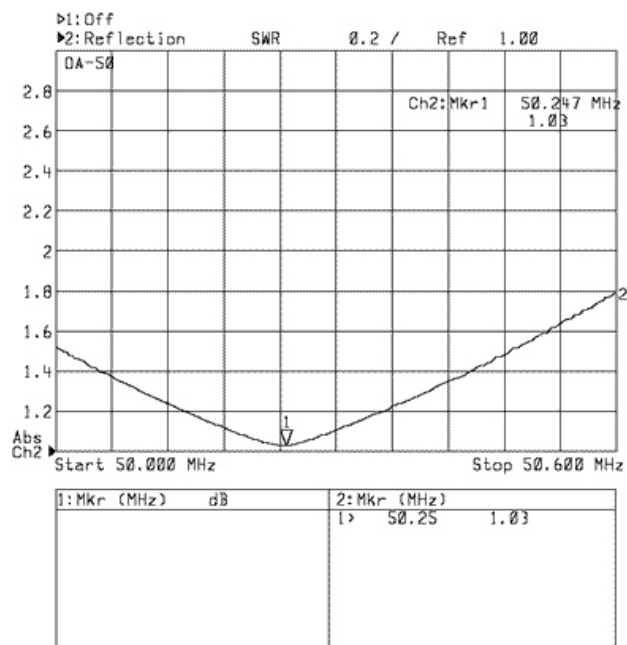
From the PAR documentation, this is how it works:

“Halo or loop antennas attempt to achieve an omni pattern by shortening a half-wave dipole and forming it into a loop. Resonance is restored by capacity loading the far ends of the loop. The intent is to equally distribute current throughout the length of the antenna. Still, the current diminishes towards the end, resulting in an egg-shaped pattern. The other side effect of shortening is a severe reduction in usable bandwidth and a susceptibility to detuning with rain.

“The Omniangle antennas are approximately 30% longer than a half wave. It is this electrical length, in combination with the isosceles triangle shape, that yields a near perfect omnidirectional pattern, much wider bandwidth, and considerably less rain detuning. Independent anechoic chamber testing confirms this antenna to have superior pattern and gain over traditional square and round loops.

“Because the antenna is longer than a half wave, it is no longer resonant. The matchbox efficiently converts the feedpoint impedance (approximately $10+j90$ Ohms) to 50 Ohms resistive. Finally, a teflon current mode balun ensures equal current to both sides of the antenna.”

The antenna is constructed of 6061-T6 Aluminum and fiberglass, weighs 1.5 pounds, is 41" by 44" in size and will handle 160W. The VSWR Bandwidth is shown below.



Assembly is simple and performance meets or exceeds the manufacturer's claims. Mine is located on a TV mast at about 20 feet, just below a dual-band vertical. As a practical measure of performance, I have worked 19 states, 2 Canadian provinces, Bermuda and Bahamas on 6 meter SSB since mid-October.

The antenna is available from AES for \$69.99. I would recommend this antenna to anyone looking for a quick way to get on 6 meters. The Omniangle is also available for 10 meters, 2 meters, 220, and 440. Stacking harnesses are also available.

ARRL Dues

When you receive your dues notice from ARRL, pay your dues through the club so the club gets credit. Make the check to: Tar River Amateur Radio Club and send it to Fred, KE4LXW, or give it to him at a meeting.