



SARA Newsletter

November 2006

Shreveport Amateur Radio Association

Meeting:

First Thursday of each month at 6:30 P.M. in the Bossier Main Library History Center

Local Amateur Information

Available at:

www.K5SAR.com

or

www.qsl.net/nw1arn/

SARA Repeaters:

145.050 - K5SAR

DX Packet Cluster

145.110 - N5FJ

146.700 - K5KDO

146.820 - K5SL

440.900 - N5FJ

SARA

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Shreveport, LA

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2006 Club Officers

President – [Richard Lee, N5PFZ](#)

Vice President – [Paul Blankenship, KD5RUI](#)

Treasurer – [John Stewart, AA5KV](#)

Secretary – [Ellen Dupuy, K5LND](#)

SARA Elections

Thursday, November 2, 2006

Be There to Vote

Red Cross Background Checks?

ARRL President Joel Harrison, W5ZN, is urging Amateur Radio Emergency Service (ARES) and other ham radio volunteers to tread cautiously when submitting information for background checks the American Red Cross (ARC) now requires. The ARC that volunteers and staff members must submit to criminal background checks by October 31. Harrison says the requirement extends to ARES volunteers who support Red Cross disaster relief efforts. In a statement, Harrison said the League recommends that anyone submitting personal information for a background check very carefully read what they are giving the ARC permission to collect.

"The Red Cross is requiring volunteers to grant permission for more than just a criminal background check," Harrison asserted. "They are also requiring permission to draw a consumer and/or investigative consumer report on the volunteer." Harrison said that could also include credit and mode-of-living checks.

"The Red Cross has stated that they will not use credit reports," he noted. "Requiring that volunteers authorize the procurement of a credit report is inconsistent with this assurance."

The Red Cross says its new policy is aimed at safeguarding clients, volunteers and employees alike. "Unfortunately, in this day and age it is critical that the American Red Cross and other agencies, employers and organizations perform due diligence in researching the people who will represent them," the ARC said in a statement supplied to ARRL.

ARRL Field and Educational Services Manager Dave Patton, NN1N -- whose department supports the ARRL Field Organization -- is among those who believes the Red Cross stands to lose a fair number of volunteers because of the requirement -- and not necessarily just ARES volunteers.

"ARES members who are providing communications for ARC are working for ARC," Patton maintained, "and, as such, will follow their guidelines." He said the decision to go along with the new Red Cross policy is up to individual volunteers.

Contact the Red Cross (toll-free 800-507-3960) with any questions regarding the background check program.

Digital TV Ops from Space

Plans to deploy an HF transceiver and a digital TV system in space were among the highlights of the Amateur Radio on the International Space Station (ARISS) 2006 International Delegates Meeting October 9-10 near San Francisco. The session also marked ARISS's 10th anniversary. In November 1996, delegates from eight countries met in Houston, Texas, to lay the foundation for the joint educational outreach program and map plans to establish a permanent ham radio presence in space. ARISS International Chairman Frank Bauer, KA3HDO, called the

establishment of ARISS "unprecedented, especially for a volunteer effort."

"You all should be proud of what you've accomplished in the last 10 years," Bauer told this year's ARISS gathering. The ARISS goal in 1996, he noted, was "to consolidate all those ham radio voices into one voice." By making it possible for youngsters around the world to speak with the ISS crew via ham radio, he said, the program now touches some 15,000 students each year.

At this year's gathering, ARISS delegates discussed expanding the complement of ham radio hardware and the operational capability of the two Amateur Radio stations on the ISS. On the near horizon are plans to launch and install a Yaesu FT-817ND transceiver on the ISS to permit operation on some HF bands from the ARISS Phase 2 station. That setup now features a modified Kenwood TM-D700E for VHF and UHF work, including school contacts, digipeating and slow-scan television (SSTV). An HF antenna already is in place on the space station. The FT-817ND runs up to 5 W and covers VHF and UHF too.

ARISS also wants an ISS crew to install an Ericsson 70 cm FM transceiver, already onboard. It would go in the ISS Zvezda Service Module -- the crew's living quarters and site of the ARISS Phase 2 station. An Ericsson 2 meter FM transceiver has been in use since 2000 at the ARISS Phase 1 station in the Zarya Functional Cargo Block or FGB.

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The Z-Match Tuner: How to Get Rid of the Balun

John Stewart, AA5KV

Suggestions

1. Use the largest capacitor you can find for C1. You might also consider using one or more silver-mica capacitors in parallel with C1. Make all capacitance switch-able, as shown in the schematic. Remember, you'll need low capacitance for some bands, so don't hardwire the sections together. Use a switch. See Figure 4 at the end of the article.
2. Get "broadcast quality" capacitors if you're likely to run more than 100 watts. Look for big capacitors at hamfests.
3. Consider a vernier for C2. You can live without it, but C2 can be touchy.
4. If you can't get a match on one or more bands, change the length of the feed line. Add about 1/8 wavelength for the problem band to the existing feed line and try again. Don't be afraid to splice ladder line or twin lead. After adding feed line, you may change settings on other frequencies. You might also consider changing the number of turns for the high and low impedance links. It might take a while to achieve good results on all frequencies.
5. If you're a shortwave listener, consider a bypass switch for the tuner. The z-match acts as a mighty good pre-selector (a good thing, ordinarily, but not for shortwave listening). For example, if I tune the z-match for 40 meters, I can just about hear KEEL on 710 kHz, which ordinarily comes in 40 db over S9.
6. Consider adding a second PL-259 for output with a switch for unbalanced line. You may need to tune a coaxially fed antenna some day. The z-match handles both balanced and unbalanced antennas.
7. Consider building an air coil version of the z-match. This should be easy with a little calculation and experimentation. The full primary of the toroid is a little over 5 μ H. This should be easy to achieve in a coil, but beware that the diameter to length ratio of the coil is a factor.
8. Experiment with this tuner and report your findings to the club.

Conclusions and Final Thoughts:

This is a good little tuner. It cost me about \$60 to build, which is a little expensive for a small tuner. However, it got me reading about tuners and gave me building experience, which counts for something. If you calculate the number of dollars per hour of fun I've had building and testing this tuner, it's the best buy in town.

Do some reading about tuners and I think you'll find they are much more complicated than you think. For a glimpse at the mathematics of ATU's, read Dr. Cebik's series of articles on link-coupled tuners on his website (5).

All tuners have problems with some load conditions. I've put the little z-match through its paces over the past few months and I must admit that I like it. I plan a series of measurements and tests on the z-match. I'm in the process of building another version.

Have fun and 73.

Readings

1. Lew McCoy, "Lew McCoy on Antennas", CQ Communications, Hicksville, NY, 2002, pp. 58.
2. Press Jones, "The Wirebook IV", The Wireman, Inc., Landrum, SC, 2002, pp. 6.2.
3. Jim Parise: QST Reviews Five High-Power Antenna Tuners, QST Magazine, pp. 69-75, Feb 2003.
4. L.B. Cebik, "10 Frequency Asked Questions about the All-Band Doublet", <http://www.cebik.com/wire/abd.html>
5. L. B. Cebik: "Link-Coupled Antenna Tuners: A Tutorial", Parts 1-5, <http://www.cebik.com/link/link0.html>
6. Charlie Lofgren, "The Z-Match Tuner: An Update", <http://www.seboldt.net/k0jd/z-match.html>
7. Phil Salas, "A Compact 100 W Z-Match Antenna Tuner", QST Magazine, Jan 2003, pg. 28-30.
8. Lloyd Butler, "Output Balance on the Z-Match", <http://www4.tpgi.com.au/ldbutter/Zbalance.htm>

John Stewart was first licensed in 1961 as WV2VUL. He retired from LSU Medical Center in 2005 after 28 years of teaching and research. John is currently treasurer of the Shreveport Amateur Radio Association (SARA) and secretary/treasurer of the Ark LaTex Chapter of the Quarter Century Wireless Association (QCWA). John enjoys working CW on the 40 and 80 meter bands, and PSK on 20 meters. His email address is aa5kv@yahoo.com.

Space TV Continued

A bit farther down the road, ARISS envisions installing a digital Amateur Radio TV (DATV) system aboard the ISS Columbus module. A contribution of the European Space Agency, the Columbus module is awaiting launch at Kennedy Space Center. Delegate Graham Shirville, G3VZV, speaking on behalf of ARISS-Europe, outlined plans for a mode L/S transponder aboard Columbus as well as a DATV downlink on S1 band (2.4 GHz). ARISS-Europe hopes to fabricate the necessary antennas by year's end.

NASA ISS Expedition 12 Commander Bill McArthur, KC5ACR -- a guest at the ARISS International Delegates Meeting and keynote speaker for the AMSAT Space Symposium and Annual Meeting banquet a few days earlier -- said the ISS crew members "very quickly get used to living on camera." He said the impact of ARISS school events on the crew's schedule has been fairly minimal. Bauer concurred. "Where we're developing hardware, we need to make it simple," he said. "Crews can't afford lengthy setup times."

The SSTV system already aboard the ISS also came in for some discussion following a presentation by its development coordinator, Miles Mann, WF1F. After some successful initial testing, the SSTV has been off the air, ARISS-Russia delegate Sergei Samburov, RV3DR, explained. "We had had some challenging issues with the SSTV," he said. "We will be working to resolve these soon."

The possibility of having the ISS crew launch university-built CubeSats from the space station during space walks was another discussion topic. ARISS delegates will explore opportunities to work with schools constructing CubeSat projects with an eye toward enhancing the educational value of these tiny spacecraft and to entice the younger generation to consider Amateur Radio.

As ARISS International Secretary-Treasurer and ARRL ARISS Liaison Rosalie White, K1STO, reminded the gathering: "The ARISS Team has always stressed that ARISS equals education."

Looking for DX

- SENEGAL, 6W. Look for 6W1RY to be QRV in the CQ WW SSB contest as a Single Op/All Band entry. QSL via F5VHJ.
- ALGERIA, 7X. OK1CDJ will be QRV as 7W2W in the CQ WW SSB contest as a Single Op/All Band entry. QSL to home call.
- WEST MALAYSIA, 9M2. Rich, G4ZFE is QRV as 9M2CNC until October 31. He will be a Single Op/All Band/High Power entry in the CQ WW SSB contest. Before and after the contest he is active using CW, SSB and RTTY. QSL to home call.
- OMAN, A4. Alex, YO9HP will be QRV as A45WD as a Single Band/Low Power entry on 20 meters in the CQ WW SSB contest. QSL to home call.
- MOROCCO, CN. Dick, W7ZR will be QRV as CN2ZR as a Single Op/Single Band entry on 20 meters in the CQ WW SSB contest. QSL direct to home call. In addition, a group of Italian operators will be QRV as CN3A in the Contest. QSL via I2WIJ.
- TAJIKISTAN, EY. EY7AF will be a Single Band/High Power entry on 40 meters in the CQ WW SSB contest.

MARTINIQUE, FM. Mike, K9NW is QRV as FM/K9NW until October 30 and will be a Single Op/All Band entry in the CQ WW SSB contest. QSL to home call.

FRENCH GUIANA, FY. A group of operators will be QRV as FY5KE as a Multi/Single entry in the CQ WW SSB contest. QSL via bureau.

COLOMBIA, HK. Siso, HK3SGP will be QRV as a Single Band/Low Power entry on 80 meters in the CQ WW SSB contest.

THAILAND, HS. Don, HS0ZEE is QRV in Chiang Mai and is QRV using SSB and digital modes on the Temporary Thailand Allocation frequency of 3525 kHz during contest weekends. He also plans to be active in the CQ WW SSB contest. In addition, a large group of operators will be QRV as HS0AC as a Multi/Single entry in the Contest. QSL via HS0ZFZ.

GRENADA, J3. A large group of operators will be QRV as J3A as a Multi/Multi entry in the CQ WW SSB contest. J37T will be a Single Op entry in the contest as well. They will also be active outside the contest using various callsigns. QSL J3A via WA1S and J37T via VE3EBN.

MONGOLIA, JT. Harry, WX8C will be QRV as JT1/WX8C in the CQ WW SSB contest as a Single Op/All Band entry. QSL to home call.

PUERTO RICO, KP4. Members of the Trujillo Alto Contest Club will be QRV as WP4BH as a Multi/Multi entry in the CQ WW SSB contest. QSL via WP4BH.

ARGENTINA, LU. A large group of operators will be QRV as LR2F in the CQ WW SSB contest as a Multi/Single entry. QSL via LU2FA.

ALAND ISLANDS, OH0. Pekka, OH2TA will be QRV as OH0X in the CQ WW SSB contest as a Single Op/All Band entry. QSL to home call.

GREECE, SV. A large group of operators will be QRV as J48RT from Astris, Thassos Island, IOTA EU-174, as a Multi/Single entry in the CQ WW SSB contest. QSL via HA6NL.

SAN MARINO, T7. Look for T70A to be a Multi/Single entry in the CQ WW SSB contest. QSL via bureau.

NAMIBIA, V5. Klaus, DJ4SO will be QRV as V5/DJ4SO as a Single Op/Single Band/Low Power entry on 20 meters in the CQ WW SSB contest. QSL to home call.

MICRONESIA, V6. Operators JA1KJW, JA1JQY, JI1FOP and JA8VE will be QRV as V63JQ, V63JY, V63OP and V63VE, respectively, from Kosrae Island, IOTA OC-059, from November 1 to 7. QSL to home calls. COCOS-KEELING ISLANDS, VK9C. N0KV and W0YG will be QRV as VK9CGG from October 30 to November 20. QSL direct to W0YG. In addition, Bernd, VK2IA will be QRV as VK9AA in the CQ WW SSB contest. QSL via DL8YR.

LAOS, XW. Larry, XW1A will be QRV as either a Single Op/All Band or Single Band entry in the CQ WW SSB contest. QSL via E21EIC.

MACAO, XX9. A large group of operators will be QRV as XX9C as a Multi/Multi entry in the CQ WW SSB contest. Before the contest, XE1KK plans to be QRV as XX9TKK from Taipa Island, IOTA AS-075, as time permits. QSL XX9C via BA4EG and XX9TKK via XE1KK.

INDONESIA, YB. A large group of operators will be QRV as YE0X from Jakarta as a Multi/Single entry in the CQ WW SSB contest. QSL via YB0ZZ.
