

CAARA Newsletter



AN ARRL AFFILIATED CLUB

JANUARY ISSUE-2012



President's Corner

by Stan-W4HIX

Just got back from a week in Florida. My father-inlaw's neighbor is a ham, and on a walk with my daughter I notice a house with two towers with several beams stacked. I have to admit that I didn't get on the air—too busy reading the Steve Job's biography (highly recommended).

December is a great month for looking forward. I started putting together the CAARA calendar for 2012 and with just our usual activities, it is quite crowded. I'm adding in the public service events, contests, cookouts, breakfasts, etc. etc.—it will be a one-page format so you can plan out your whole year in ham radio.

Our proposal has been summited to the City of Gloucester for renewal of CAARA's lease. It will be opened on January 3rd at 11:00 AM, so we'll see what happens from there. There were a couple of sticking points that I think we've addressed. Our obligation will be to do at least \$1,000's worth of maintenance on the building each in return for reducing our rent to \$1/year.

We shifted our membership dues collection to PayPal this year and so far it has gone very well. I hope the convenience factor increases our collections, and makes it easier for our members. If you want to make a donation to the operation of the club, you can do that too.

So far, we've collected over \$750 for the CAARA scholarship fund, which means we'll be giving at least three scholarships this year. I'm very proud of the CAARA membership for supporting this program. Sometime in the future I'd like to start

interfacing with the O'Maley Middle School and see if we can add amateur radio to their science curriculum. If anyone is interested in doing this, let me know.

I hope that everyone had a Merry Christmas/ Hanukkah and a Happy and Prosperous New Year.

CAARA Clerk's Corner by Dean-KB1PGH

The Cape Ann Amateur Radio Association is sponsoring a Morse Code training class. This class is

open to all amateur radio operators and is available for all levels of CW experience from beginner to expert. The classes will start on Saturday, January 14, 2012 from 9:30 AM to 12.30 PM and the course will run through April 2012.



This class will be run by CAARA member Rick Maybury- WZ1B and he will be using morse code training equipment which was awarded to CAARA by a grant furnished by the ARRL. This course will be held at the CAARA Clubhouse located at 6 Stanwood Street in Gloucester, MA. Space is limited so please sign up by e-mailing Rick at maybury@ppg-i.com ahead of time.

Directions to the clubhouse can be found on the clubs website at www.caara.net .



Straight Key Night

Every day is a good day to send CW, but January 1 is reserved for Straight Key Night. Enjoy CW as it has been sent

and enjoyed since the earliest days of Amateur Radio. See ARRL.ORG for details if you want to participate!

CAARA Newsletter Cape Ann Amateur Radio Association 6 Stanwood Street Gloucester, MA 01930

CAARA Newsletter is a monthly publication of the Cape Ann Amateur Radio Association (CAARA). It is the policy of the editor to publish all material submitted by the membership provided such material is in good taste, relevant to amateur radio and of interest to CAARA members, and space is available. Material is accepted on a first come, first serve basis. Articles and other materials may be submitted by internet to Jon at kltp@arrl.net. If possible, material should be in Word format.Material may also be submitted as hard copy to Jon-K1TP or any Club Officer.

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Jon Cunningham-Editor K1TP

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Welcome to CAARA:

CAARA, an ARRL affiliated club, operates the 2 meter W1GLO repeater on 145.130 MHz with antennas located on the Cingular tower in the Blackburn Industrial Complex in Gloucester Massachusetts. It has an average effective radius of 60 miles, and serves Eastern Massachusetts, Cape Cod, Rhode Island, Southern New Hampshire, and maritime mobile stations. CAARA also operates the W1GLO repeater on 224.900. The former W1RK 443.700 repeater with antennas located in Magnolia is now located at the CAARA clubhouse and has a very limited range.

The Association is one of the few amateur radio clubs that has its own clubhouse. Located at 6 Stanwood Street in Gloucester, it includes a permanent HF station with rotating beam and vertical antenna along with a 2 meter packet station and 2 meter voice and 220 MHz transceivers.

Amateur radio exams are held on the second Sunday of each month at 10:00AM at the CAARA clubhouse. Anyone who is considering a new license or an upgrade, is welcome to test with us. There is no pre-registration necessary. Contact the head of our VE team Bob Quinn if you have any questions about monthly testing.

Monthly member meetings are held on the first wednesday of each month at 7:30 PM except for July and August.

Each Sunday evening at 9:00pm, the club operates a 2 meter net on 145.130. This is an open and informal net which disseminates club news and prepares operators for emergency communications work. All are invited to check into the net as club membership is not a requirement.

Wintertime Battery Charging tipsby Dean KB1PGH

As you know I like to operate Portable HF due to my home location and electrical noise, (See September 2010 Issue).

Well since its wintertime now I have to take care of my two batteries that I use as my power source. I paid over \$100 each for my two Exide Nautilus Marine Deep Cycle 105 Ah Model NG-27 lead acid batteries and I want to keep them fully charged in case the

power goes out and for emergency communications. I think we all know what happens when you don't use a battery and you let it sit there. It loses it charge fast. Especially if its in a car in storage, nonetheless all by itself. One of the biggest enemies to batteries is non use. They need to be discharged and recharged on a constant basis in order to prolong their charge life. Now it's one thing for me to simply charge my deep cycles after a few hours of operating to full capacity but they will

lose their ability to hold a charge if I just left them from November to April. As you see in the first picture

I have my two batteries in cases. That's the first thing you must buy.Just in case any acid does spill even those the chance is low due to the fact that these batteries are sealed. I could have bought AGM or Gel Cells to minimumize that risk but the price is double. You can see that I have two maintenance chargers on top of the batteries.In the second picture you can see the battery maintainer doing its job. I have purchased

two Schumacher Fully Automatic 1.5 Amp Battery
Maintainer/Float Chargers Model # SEM-1562A .This

Schumacher Battery maintianer is microprocessor controlled to keep my batteries fully charged at all times without any risk of overcharging and cooking the battery like a regular battery charger will do,especially the older type. You see if you are storing batteries for along time and you let them sit a process called "Sulfation" occurs. What happens is the lead from one of the plates in the battery bonds to the sulfate on the other plate next to it and hardens it and thus the battery will not be able to hold a



charge.Battery Sulfation is the cause of 80% of battery failure.Now weh I talk about "Maintianing" my batteries I'm not leaving them on a constant trickle charge.What the

Schumacher or "Smart Charger" is doing is actually letting the battery slightly dishcharge and then

recharge on a constant basis and the computer inside is constantly monitoring the voltage and amperage levels to make sure they are correct.I always see a 12.6 Volt max charge when I start to operate HF Portable and I never let the volts go below 11 during use as not to overdischarge the battery which can



cause damage. The other thing is to not to keep stored batteries outside during the winter months without a

battery maintainer as we all know the plates can freeze and warp as they lose their charge. As you can see I am keeping my batteries in the basement just to play it safe. As we all know lead acid batteries can slightly emit hydrogen gas when charging. I've never seen a battery explode yet but it has happened so don't keep charging batteries in super tight quarters. The Schumcher Battery Maintainer is \$30.00 and can be found at Consumer Auto Parts or online. With a simple \$30 investment and care my batteries will be all set to go when I go to operate HF Portable next spring! 73's

Dean Burgess KB1PGH



DONUTS at CAARA!!!

So have you ever wondered what fuels CAARA's amateur radio operators during the all the contests and 10 meters openings?

It's Dunkin Donuts! There's no better combination than ham radio and donuts during Sunday morning coffee at the clubhouse!

To all CAARA members,

As you may know the Cape Ann Amateur Radio Associations Emergency Communications Group has close ties with the city of Gloucesters CERT Team. CERT is short for Community Emergency Response Team and it is a nationwide civilian organization under the Federal Governments Citizencorp group. CAARA has couple of members that have gone through CERT training and has participated along with CERT under

Gloucesters Emergency Management director. The first course graduated about 30 members and now Gloucester is waiting on Federal Funding for another CERT course to begin. There is another CERT course scheduled to begin sometime in late February to early March 2012. If you are from Gloucester and are interested in signing up please go to city of Gloucesters website at www.gloucester-ma.gov. Then click on the "Residents" link. Then you will see the CERT link and the application will be at the bottom of the CERT page. To find out more about what CERT is and does the link is www.citizencorp.gov/cert. 73's

Dean Burgess KB1PGH -Gloucester CERT Team



DIY Magic of Amateur Radio on YouTube:

The new video "The DIY Magic of Amateur Radio" we spent the last 14 months putting together is now available for viewing on YouTube abs on the ARRL Website.

My personal thanks to everyone involved in its production for making it reality. You are all listed in the credits (and I pray I didn't forget anyone). Special thanks to our Director Dave Bell, W6AQ; our Writer Henry Feinberg, K2SSQ and our Principal Cameraman Dave Booth, KC6WFS who freely donated their time and creative talent to this project. We sincerely hope that all of you will enjoy it. de Bill Pasternak, WA6ITF

Producer

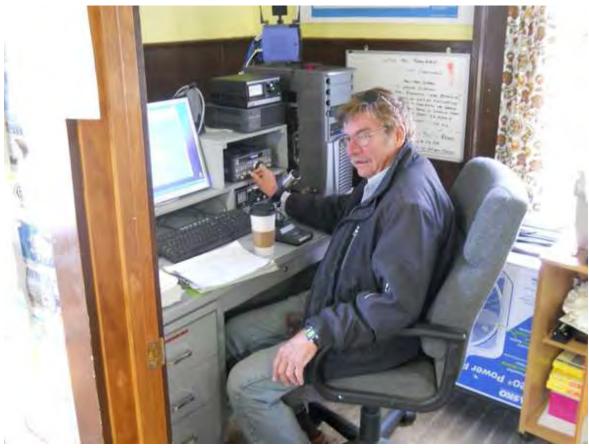
The direct links are:

ARRL Web Site: http://www.arrl.org/diy

W1GLO works CQ WW CW Contest !!!!



Robert Chadbourne K1LJO and Rick Maybury WZ1B working the 20 meter band on Sunday morning. Ken Ekstrom KA1OH tuning around the 10 meter making several overseas contacts with of the clubs 10-20 meter beam.



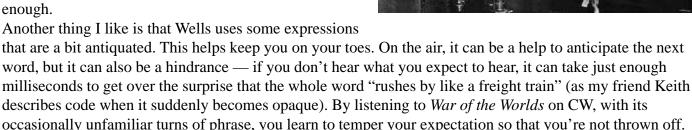
War of the Worlds, CW Edition

For some time now I've been nibbling away at H. G. Wells' book, *War of the Worlds* — in CW! It is available along with several other books at the SKCC CW Learning Page. What a blast! It's an effective way to improve

your code speed, and it is so captivating that you want to keep coming back to it to find out what happens next. Somehow the story is all the more gripping as it unfolds slowly, letter by letter, giving you ample time to imagine the scenes that Wells describes.

Each chapter is one word-per-minute faster than the last one. So while it starts at a mere 10 WPM, if you finish the book you'll be copying 36 WPM!

A couple other features are helpful, too. For one thing it has punctuation marks that I've never learned before. It's not everyday that you hear hyphens on the air, and the first time you hear an apostrophe or quotation-mark it will throw you for a loop. But you learn them quickly enough.



All in all it's a great way to hone your skills, and it's way more enjoyable than the dry practice tapes I listened to 'way back when!

Thank you to SKCC and especially to John Dunlap, KF7BYU, for making this book available!

Update: One ham has asked me for help on this.
Currently the only way to listen to the files at http://www.skccgroup.com/learn/learn.php is to click on them one at a time, either listening to them one at a time online or right-clicking each one and saving them one at a time to put together in a playlist on your computer (That's what I did, and it was a bit tedious.). If you would like to download a zipped file of the whole book, send me an email at MOIP@arrl.net and I'll give you the link for as long as I can spare the disk space to keep the zipped file online.

http://www.skccgroup.com/learn/learn.php



Caara would like to thank club member Marianne Brinker KB1TEO for all her hard work cooking breakfast during December's Scholarship Benefit Breakfast during Sunday morning at the clubhouse. The Board of Directors would like to thank all the members who attend these breakfasts and who have donated toward the good cause of financially assisting those high school students who go to higher learning. We are well on our way to awarding 3 Scholarships of \$250.00 each on Cape Ann coming up in 2012. This is just another way the Cape Ann Amateur Radio



Association,a 501 (c) 3 non profit charitable organization gives back to the community. If you ar interested in making a donation toward our Scholarship fund and can't make it down to our breakfasts you can still do so by going to our club website at www.caara.net and clicking on the Scholarship link. You can now pay by Paypal or your credit card. All donations are fully tax dedeuctable.



Electrolytic that failed in the 4000 volt power supply section of the HF Amplifier.



My Ameritron AL1500 was running fine. I was talking to a ham in the midwest on twenty meters when I started to hear an arcing sound with a sharp crack every 15-20 seconds. I shut down the amp, unplugged it from the 220 volt outlet, took off the cabinet. After I grounded the power supply capacitors, I discovered a little puddle of brownish oil under one of the electrolytics. Luckily the capacitors are screw type caps that are replacable without any soldering. A call to Amertiron and the replacment is in the mail......Jon-K1TP

CAARA CLUB ACTIVITIES



New CAARA member Robert Claypool- KB1WJC takes advantage of his 10 Meter Technician Class license privileges as he operates single sideband during the ARRL 10 Meter Contest on Sunday morning at the clubhouse. So for all those new hams out there don't forget that you do have access to the HF bands and 10 Meters has been open during the rising sunspot cycle in 2011!



CAARA member Ruth Hodsdon- WW1N brought her brothers over to see the Clubhouse on Sunday morning. On the right is CAARA member Craig Hodsdon WE2Q from Collingsworth, New Jersey. Craig checks into CAARA 2 meter NET occasionally through Echolink. On the left is Ruth's brother, Robert Hodsdon.

DECEMBER MEMBERS MEETING!!

On Wednesday, December 7th the club held its monthly member's meeting. For this meeting we had a guest speaker,Mr Steve Tesley N1BDA. Steve is the middlesx county ARES Distric Emergency Coordinator. Steve came by the clubhouse to give a presentation on two topics. The first topic covered was amateur radios National Traffic System. Steve went into great detail of how foraml message traffic is sent and the do's and don'ts of how to get important formal messages across clearly during emergency situations. On the second half of his presentation he covered how to build your own emergency go kits for those amateur radio operators who get deployed for emergency communicaions situations for 24 to as much as 72 hours in duration. The meeting was well attended and ran until almost 10 o'clock as Steve did a great job informing the members of these two topics. CAARA would like to thank Steve for coming by the club and giving a great presentataion! Courtesy Dean- KB1PGH



Left: CAARA President Stan Stone - W4HIX presents Steve Tesley- N1BDA to the members

Below left: Steve Tesley- N1BDA shows the Caara members all of the contents of the emergency go kits that he has put togther for deployment.

Below right: N1BDA talkes about the do's and don't of how to pass formal message traffic to the members





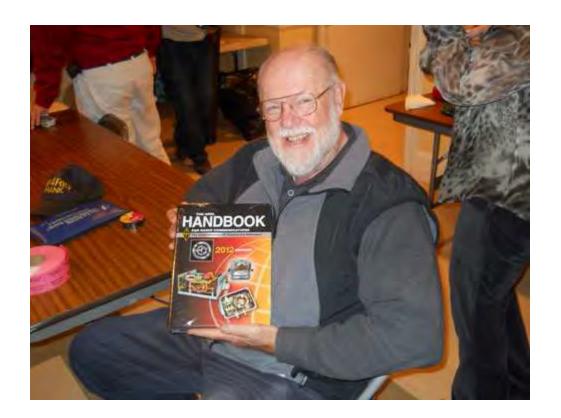
CAARA 2011 CHRISTMAS PARTY













CAARA and SPAR Winter Field Day 2012!!

The Cape Ann Amateur Radio Association will once again be participating in the annual SPAR Winter Field Day competition. This will be the fifth annual event for the Society to Preserve Amateur Radio. This event will begin on noontime local time on Saturday January 28th and will run 24hrs until noontime the following sunday. So stop by the clubhouse during the last weekend in January and have some fun making contacts in this relaxed competition. For more information about SPAR and the rules for field day please go to www.spar-hams.org .

KB1VST BUILDS AN EMERGENCY RADIO KIT FOR EmComm USE





This is the Kit I made for EmComm use. It took about four weeks to build but it was a fun and neat project to do. I got the idea from KH7O

(www.hawaiirepeaters.net) and North **Brevard Emergency Communications** (www.northbrevardarc.org). I wanted to make the kit simple to use but also make it effective. The case is a Pelican 1450 and the kit includes a Icom IC-2200H and a Astron SS-18 switching power supply. I took the fuse holder from a old case similar to this project. I also took the AC outlet out of a old computer power supply and bought the switch, fan and other items from various sources. The antenna that goes with the kit is a roll up ladderline slim jim antenna. I'm very happy with the way the EmComm Kit turned out and it should do the job whatever it maybe.

73, Nate (KB1VST)

Go-Kit Contents

This list of recommendations is separated into three groups: Day, 24-Hour, and 72-Hour. It is a suggested list of items an operator might need under various circumstances when deployed for emergency and public service activities.

Material in this list was consolidated from material produced by "Field Forum", published by the ARRL with attribution C. Edward Harris, KE4SKY, AEC Fairfax County VA ARES; Lake County Radio Amateur Civil Emergency Service, Inc.; Arlington County, Virginia ACS-RACES, personal equipment checklist-12 Hrs; Northern Virginia Regional Emergency Response Team, Pre-Deployment Check List for Out-Of-Area Mutual Aid; Greg Sarratt, W4OZK; Harry Lewis, W7JWJ; Dan O'Connor, KE7LHR; Frank O'Laughlin, WQ1), Cape Cod ARES DEC; Tom Hillery, KG4EDY, Personal_Go_Kits@yahoogroups.com. If I missed anyone, my sincere apologies.

Especially recommended are the following from KE7LHR:

http://www.armymars.net/ArmyMARS/MCU/KE7LHR%20Go%20Kits%20Long%20Version.pdf http://www.armymars.net/ArmyMARS/MCU/KE7HLR%20Go%20Kits.ppt

From EMCOMMWEST "Comprehensive" Equipment and Personal Gear Checklist, 2004:

This is a COMPREHENSIVE list of equipment, supplies, and personal gear for ARES and other EMCOMM personnel to carry during emergency or public service activities. Use it as a guide from which to pick and choose and make your own list(s) based upon your own requirements.

..

Not everyone on a team needs to carry "one of everything". In "true team fashion" a coordinated team may assign certain individuals to ALWAYS bring a certain item. For example not everyone has, nor should bring, a generator; when only one may be needed to support a field EMCOMM station. Someone else might be assigned to bring a portable shelter (sunshade, tent, etc.). But this only works if you have team members that you can depend on!

Let me emphasize that there are hundreds of such lists on the internet. No single list can cover all situations, locales, weather conditions, etc. Being part of a search team for a lost person in winter blizzard conditions clearly requires different equipment than supporting a Fourth of July parade or staffing an EOC. You must adapt and personalize any such lists for your specific operational area and needs. Common sense is key.

Day Kit:

Radio Gear

- 1. Dual-band HT in padded belt case
- 2. "Tiger tail" HT range extender 144/440 Mhz or extendable antenna
- 3. Extra high-capacity (1000 mah) NiMH, or backup AA battery case for HT
- 4. DC adapter & cigarette plug cord for HT
- 5. Two extra 2A fuses, for HT cord
- 6. Earphone and/or speaker mike
- 7. SO-239 to male-BNC adapter to fit HT to mobile antenna coax and female BNC to SO-239 to fit HT gain antenna to jumper
- 8. 6 ft. RG8-X jumper w/BHC male and female connectors to extend HT antenna with suction cups or auto window clip
- 9. Barrel connectors

- 10. Plastic bags for good and bad batteries
- 11. Cell phone and 12v charger
- 12.25' AC extension cord with multiple tap

Personal Gear

- 1. Spare eye glasses, reading glasses
- 2. Sun glasses
- 3. Prescription medications
- 4. Basic first aid kit
- 5. Latex examination gloves
- 6. Extra socks in plastic bag
- 7. Fleece vest or other layering clothes depending on weather
- 8. Plastic freezer bags, zip-lock (pint, quart, ½ gallon, 1 gallon)
- 9. Moist towelettes
- 10. Alcohol hand cleaner
- 11. Sunscreen (even in winter)
- 12. Insect repellent
- 13. Hat, sun/rain
- 14. Rain gear
- 15. Pocket sewing kit including buttons, safety pins, extra shoe laces
- 16. Aluminum "space" blanket
- 17. Matches

Documents

- 1. Picture ID
- 2. Personal emergency contacts, ICE information
- 3. Copy of current FCC Operating License.
- 4. RACES/ARES/SKYWARN Identification Card.
- 5. Name tag
- 6. RACES/ARES/SKYWARN phone and frequency reference card
- 7. Forms: message, ICS-213, ICS-205, etc. depending upon assignment
- 8. Repeater Directory
- 9. Operating reference cards and manuals for radios
- 10. Local street atlas
- 11. Local telephone numbers

Tools

- 1. Swiss Army pocket knife or equivalent
- 2. "Leatherman" multi-purpose tool
- 3. Mini-Mag-Lite, extra bulb and spare batteries or high-intensity LED light, extra batteries
- 4. Headlamp, extra batteries
- 5. Small pocket compass
- 6. Duct tape
- 7. Electrical tape
- 8. Jumper Cables
- 9. Highway Flares

Miscellaneous

- 1. Emergency gas / phone money (\$10 in small bills, several dollars in quarters and dimes)
- 2. Pencils and pocket notepad

- 3. Alarm clock
- 4. Water, 2 pints minimum, more in hot weather
- 5. Snacks
- 6. Portable chair
- 7. Safety gear: hard hat, goggles (ANSI Z87.1.1989 or equiv.), dust mask, N95 masks, hearing protection, safety reflective vest (ANSI Type II or equiv.), work gloves
- 8. Whistle
- 9. Camera, extra batteries

A general note on battery-operated devices and batteries: If possible, select devices that use AA cells. These are usually readily available at retail stores and are part of government caches. Don't forget GPS, portable am-fm radios, HTs, clocks, cameras, and flashlights. If you do have items that use special cells, especially lithium, carry several spares.

24-Hour Kit:

Contents of Day Kit for 24-hour period plus:

Radio Gear

- 1. Second 2-meter HT. (battery packs and accessories should interchange with the dual-bander
- 2. Spare NiMH and AA-battery pack, ear phone and speaker-mike for second HT
- 3. Fused 10' DC extension cords, 10 AWG, fused 15-20A, for brick amplifier and HTs
- 4. Compact, rugged, 25-50w 2 meter or dual-band brick amplifier
- 5. Gain antennas for both HTs: (e.g., telescoping half-wave Larsen and flexible dual-band Comet CH-72, 1/4-wave VHF, 5/8-wave UHF)
- 6. Dual band mag mount or NMO/PL259 mobile antenna with clamp mount, ground-independent (Comet SBB-5SBB-5NMO or equivalent)
- 7. 2m-70cm diplexer
- 8. J-pole antennas for 2m and 440MHz
- 9. HT nicad/NiMH, and 12V gel cell wall chargers
- 10. Four NP2-12 (7-12aH) gel cell batteries to power small brick amp at 10w @ 25% duty cycle / 8 hrs.
- 11. Refills of AA Alkaline batteries for HT
- 12.12A (minimum) 13.8v switching power supply with Anderson PowerPole connectors
- 13. Multiple Anderson PowerPole adapters (Molex, lighter plug, lighter socket, alligator clips, etc.)
- 14. Power strips and extension cords
- 15.3-prong to 2-prong AC adapters
- 16. RG8-X jumpers with soldered PL-259s, two 3 ft., one, 6 ft., one 10 ft. and one 25 ft. with double-female connectors to combine all
 - a. BNC-male+BNC female to SO-239
 - b. BNC-male+BNC female to PL-259
 - c. NMO to SO-239 adapters
 - d. Adapters including PL259, SO239, N, BNC, SMA
- 11. Cable ties, large and small, 6 each
- 12. Crimp connectors
- 13. Male and female cigarette lighter connectors and cables
- 14. Two sets of spare fuses (2A, 10A, 15A, 20A) for HT cords, mobile radio or brick amplifier.
- 15.FRS radios
- 16. SWR Bridge

17. VOM/DVM

Personal Gear

- 1. Prescription medication for 24-hours plus
- 2. Extra clothes, complete change including underwear and footwear
- 3. Blanket/sleeping bag
- 4. Small tent/emergency shelter
- 5. Sanitation gear
- 6. Credit card(s)

Documents

- 1. Operating manuals for HT's
- 2. Pencil sharpener, gum eraser, note pad, permanent marker
- 3. ARES Field Resource Manual
- 4. Local telephone directory

Tools

- 1. Rugged, reliable flashlight with extra bulb and batteries
- Wire cutter
- 3. Wire stripper
- 4. Cable ties, large and small
- 5. Adjustable open-end wrench, 6"x 0-5/8"
- 6. Folding hex key set
- 7. Pliers with crimper
- 8. Pliers, side cutters (lineman)
- 9. Needle nose pliers
- 10. Channel locks or Vise-Grip pliers
- 11. Screwdrivers, std. & Phillips
- 12. Screwdrivers, miniature
- 13. Hammer
- 14. Tweezers
- 15. Scissors
- 16. Duct tape
- 17. Electrical tape
- 18. Rope, small nylon cord and poly "clothesline"
- 19. DC soldering iron or butane iron
- 20. Siphon
- 21. Extra Gas/Diesel & Oil
- 22. Fire extinguisher, dry chem. ABC

Miscellaneous

- 1. Neck-lanyard pocket with spare car keys, \$20 emergency cash, credit card, long-distance calling card and photo Ids
- 2. Clip-on mini strobes/blinkers with extra batteries
- 3. Snow shoes, mosquito netting, other seasonal items
- 4. Small fan, preferably 12V
- 5. GPS
- 6. Small cooler
- 7. Thermos

- 8. Snacks, high protein and energy bars, dried fruit, nuts, etc. Note that some sites may bar peanuts and peanut products like Snickers and some energy bars.
- 9. Water, minimum 1 gallon
- 10. Food for 3-4 meals
- 11. Additional change for vending machines
- 12. 12 VDC and 110 VAC chargers for cell phone, other batteries
- 13. Writing Gear
 - a. Clipboard
 - b. Message Forms
 - c. Log Book
 - d. Post-It notes

72-Hour Kit:

Contents of Day Kit and 24-Hour Kit for 72-hour period plus:

Radio Gear

- 1. Dual-band or 2-meter mag mount antenna, with portable ground plane
- 2. MS-44 mast kit, tripod adapter, dual-band base antenna and 100 ft. of 9913F coax on reel.
- 3. AC charger for HT nicads/NiMH and small gel cells
- 4. BCI Group 27, 95 ah AGM battery and 1.5 amp charger (48 hrs. power for HT brick amp or mobile rig on
- 5. 20A+, 13.8v switching power supply
- 6. Small, mobile-type SWR/power meter
- 7. Antenna Mast, rotor, guys, antenna for HF & other bands
- 8. Headsets with splitter
- 9. 12VDC to 110VAC inverter, 300 watts
- 10. Scanner with antenna, coax, power supply, batteries, etc.
- 11. AM/FM battery or crank radio with earphone
- 12. NOAA weather alert receiver, battery or crank
- 13. HF rig, Packet system, etc. with all needed accessories, cables, antennas, etc.
- 14. Programming cables for all rigs
- 15. Extra 110V extension cords (at least one with GFI) and power strips, 2 wire-3 wire adapters
- 16. Assorted connectors / adapters including no-solder BNC and UHF for emergency repairs
- 17. Insulated wire (10-14 ga., 100-200 ft)
- 18. Generator, oil, etc.
- 19. Polarity tester

Personal Gear

- 1. Leather work glove shells
- 2. Wool fingerless liners
- 3. Warm hat
- 4. Wind/rain suit
- 5. Sweater
- 6. Insulated rubber safety boots
- 7. Extra dry socks
- 8. Change of underwear
- 9. Loose "lounging" clothes (e.g., sweat suit) and casual footwear
- 10. Tarp or poncho
- 11. Wool blanket or insulated poncho liner

- 12. Additional medications with prescriptions, list of doctors and dentists
- 13. Personal hygiene toilet kit
- 14. Towel
- 15. Wash cloth
- 16. Sanitation supplies (toilet paper)
- 17. Sleeping bag, mattress pad, pillow
- 18. Mechanical Alarm Clock
- 19. Additional masks, gloves, etc.

Documents

- 3-ring binder with RACES/ARES Handbooks, Skywarn Net Control Operations Manual, MEMA Manuals
- 2. Area street and topographical maps
- 3. Operating manuals for all rigs
- 4. Additional frequency lists (HF, Packet, etc.)
- 5. Scanner frequencies

Tools

- Weller Pyropen soldering torch with 2 cans of propane fuel, 63/37 eutectic solder and flux. or equivalent
- 2. Cable ties, large and small
- 3. Pulleys
- 4. Rope
- 5. Silicon Grease
- 6. Hose Clamps (assorted sizes 1"-4")
- 7. Wrenches, socket
- 8. Wrenches, open/box end
- 9. 120 volt Soldering Iron
- 10. Solder
- 11. Hatchet/Axe
- 12. Saw
- 13. Pick
- 14. Shovel

Miscellaneous

- 1. 12-volt fluorescent drop-light with alligator clips for attaching to auto or gel cell battery, with spare bulb.
- 2. Small desk lamp with 60W bulb Two message pads, two pencils, grease pencil, two sheet protectors, 12 push pins
- 3. Small fan, 12V or 110V
- 4. Heat lamp, 120 VAC with holder
- Cooler w/ 72 Hour supply of bottled water and nonperishable food (which can be eaten cold*), mess kit and utensils including cups. Note that some sites may bar peanuts and peanut products like Snickers and some energy bars.
- 6. Small camp stove and fuel
- 7. Hydration pack
- 8. Personal water filter (e.g., Katadyn HIKER), purification tablets
- 9. Lantern
- 10. Waterproof matches, lighters
- 11. Candles

- 12. Tent
- 13. Tarp
- 14. Bungee cords, assorted
- 15. Clothes pins
- 16. Books, playing cards, MP3 player, etc.
- 17. Laptop computer with power supply, mouse, optional router/hub, serial-usb adapter, CAT-5 cable, programming software, thumb drive, etc.
- 18. Binoculars
- 19. Heavy-duty containers (e.g., rolling tool boxes, Rubbermaid, paint pails with lids) to hold gear at fixed location
- 20. SAR / CERT pack with technical rescue gear, if that is your assignment
- 21. Rucksack, MOLLE or lumbar pack for daily carry during an operational period
 - * "1 gallon of water per person/day, is needed for drinking and washing. Good are canned soup, beans, tuna, juices, fruits, veggies which can be eaten cold, or warmed without further preparation; also peanut butter, cheese spread or jam in plastic jars, lots of hard candy, instant coffee [there are some available in individual "tea" bags], tea, dried fruit, crackers. Sterno is best for warming. Military MRE's are light weight and convenient, but some find them both expensive and boring. You get better variety, more appetizingly and cheaply at the grocery store, if weight is not a problem."

"Food for three days. "MREs" are OK but expensive. Carefully chosen grocery store items are just as good. Consider cracker and cookie "snack-packs", serving-size canned tuna/chicken/Vienna sausages/potted meat/SPAM, pudding, fruit, bag of "GORP" or other trail mix. Jerky is good (if your teeth are also good). And there is no better food value for 10¢...than an egg! If time permits, boil a few and stow them in your pack. Condiment packets, (salt, pepper mustard, mayo, catsup, honey, etc.) are FREE at fast-food joints. (You probably should buy

NVIS Short Wave technology in Afghanistan

ISAF report that a Virginia National Guardsman has found a new use for Near Vertical Incidence Skywave (NVIS) short wave radio in Afghanistan.

The song "video killed the radio star" was the first video played on MTV in 1981 and launched a music revolution. Soldiers of the Virginia Army National Guard's 116th Infantry Brigade Combat Team are deploying technology in a revolutionary way in Afghanistan using a short wave radio transmitter that can reach almost every radio in Zabul province.

This is the first time a province-wide transmitter has been used in Afghanistan. The transmitter allows the Zabul provincial and district government to send messages to rural Afghan homes.

"No other unit in the International Security Assistance Force has ever done this at any level," said Master Sgt. Joel E. Fix of Fort Belvoir, Va. speaking of the novel application of the technology. "We have the ability to target the signal toward specific districts or the whole province."

Radio and word of mouth are the primary means of spreading news and information in rural Afghanistan. Listening to the radio – thousands of which were distributed by NATO-ISAF - is a cultural norm for Afghans, many of whom follow both the BBC and Voice of America.

Fix, a 14-year veteran of the Guard on his third overseas deployment, came up with the transmitter solution in response to a problem raised in discussions with Afghan officials: "How could the Government of the Islamic

Republic of Afghanistan communicate to their people in remote areas?"

It was a particularly timely dilemma. As GIRoA expanded its influence into every district, GIRoA's continued legitimacy rested on the ability to reliably reach and involve ordinary Afghans in their parliamentary democracy. Specifically, the district governors of Mizan and Day Chopan in Zabul province each wanted to invite the elders of their districts to grand shuras in September 2011.

Day Chopan has the highest elevations of Zabul province with deep valleys unreceptive to radio signals. The 116th "Stonewall Brigade", in partnership with Romanian troops and Soldiers of the Alaska-based 1st Battalion, 24th Infantry Regiment, all members of Combined Team Zabul, came together to brainstorm a solution. Traditional options raised by CTZ such as leaflet drops, broadcasting radio transmissions from aircraft and even flying aircraft with loudspeakers attached were all denied.

"The government was looking for ways to communicate with people on a greater scale, but there were gaps in the coverage. Short wave radio is the solution we came up with," said Fix.

Short wave radio is known in the U.S. as ham radio which allows two way communications. The Zabul transmitter is one way. Most radios used by Afghans are receive-only.

"I was soliciting for bids for a transmitter and was referred to Don Butler to assist with the project," said Maj. William R. O'Neal a Smithfield, Va. native with the 116th.

Butler, an Air Force veteran from the '60's, is a ham radio enthusiast from Gun Barrel City, Texas who provided design help for the transmitter. Butler's call sign is N4UJW.

"Ham radio is two way communications over short wave. Our transmitter is one way," said Fix. "With this configuration, no matter where they are, there's no reason the Afghan's can't get a signal. The frequency is close to but not the same as the one for the BBC. That makes it easy to find and remember," he added.

The transmitter owes its success to a technique called NVIS – Near Vertical Incidence Skywave – which involves bouncing radio signals off the ionosphere – a layer of the atmosphere. Two NVIS antennas are placed horizontal to the ground unlike a traditional vertical transmitter. The second part of the NVIS antenna is called a ground wire and helps to boost the signal by forcing it to go straight up instead of outward and limited by the curve of the earth.

"In a traditional short wave broadcast, you get your antennas up as high as you can go," said Fix. "It bounces off the F2 layer of the ionosphere but gives you limited coverage with 'skip points'. Using NVIS and our reflector wire, the signal goes up at a very steep angle and straight back down which can penetrate deeper into mountain valleys. When we were looking at this system, it was a no brainer," he added.

The transmitter is operated and maintained by coalition forces including the U.S. and Romanian soldiers and broadcasts content from the local government. At first glance it doesn't seem very impressive: two antennas, the ever-useful 550 cord, and some wire that feeds into a box with one port and an on/off switch.

"Our goal is to transfer the transmitter to the provincial government as part of the transition," said O'Neal.

Unlike some new technologies developed and used as part of Operation Enduring Freedom, this transmitter is inexpensive and effective.

"It has resulted in a savings of around 3,100%," said Fix. "It would take 30-32 FM systems to cover the same area.



What your radio station shouldn't look like!

Mexican drug cartels build own radio system

The Mexican army and marines have begun attacking the system, seizing hundreds of pieces of communications equipment in at least three operations since September that offer a firsthand look at a surprisingly far-ranging and sophisticated infrastructure.

Current and former U.S. law-enforcement officials say the equipment was part of a single network that until recently extended from the U.S. border down eastern Mexico's Gulf coast and into Guatemala.

The network allowed Zetas operatives to conduct encrypted conversations without depending on the official cell phone network, which is relatively easy for authorities to tap into, and in many cases does not reach deep into the Mexican countryside.

"They're doing what any sensible military unit would do," said Robert Killebrew, a retired U.S. Army colonel who has studied the Mexican drug cartels for the Center for a New American Security, a Washington think tank. "They're branching out into as many forms of communications as possible."

The Mexican army said on Dec. 4 that it had seized a total of at least 167 antennas, 155 repeaters, 166 power sources, 71 pieces of computer equipment and 1,446 radios. The equipment has been taken down in several cities in the Gulf coast state of Veracruz and the northern states of Nuevo León, Coahuila, San Luis Potosí and Tamaulipas.

The network was built around 2006 by the Gulf cartel, a narcotics-trafficking gang that employed a group of enforcers known as the Zetas, who had defected from Mexican army special forces. The Zetas split from the Gulf cartel in 2010 and have since become one of the nation's most dominant drug cartels, with profitable sidelines in kidnapping, extortion and human trafficking.

The network's mastermind was Jose Luis Del Toro Estrada, a communications expert known as Técnico who pleaded guilty to conspiracy to distribute cocaine in federal court in Houston, Texas, two years ago.

Using millions of dollars worth of legally available equipment, Del Toro established the system in most of Mexico's 31 states and parts of northern Guatemala under the orders of the top leaders in the Gulf cartel and the Zetas. The Gulf cartel boss in each drugsmuggling territory, or plaza, was responsible for buying towers and repeaters as well as equipping his underlings with radios, according to Del Toro's plea agreement.

Del Toro employed communications specialists to maintain and run the system and research new technology, according to the agreement.

Mexican authorities, however, presented a different picture of the cartel radio infrastructure, saying it was less monolithic than the one described by U.S. authorities. A Mexican military official denied that the army and navy have been targeting one network that covered the entire Gulf coast. The operations had been focused on a series of smaller, local systems that were not connected to each other due to technical limitations, he said.

"It's not a single network," the official told The Associated Press on condition of anonymity due to the sensitivity of the topic. "They use it to act locally."

In recent years, reporters traveling with the Mexican military have heard cartels using radio equipment to broadcast threats on soldiers' frequencies. The military official told the AP that the signals are now encrypted, but cartels are still trying to break in.

At least until recently, the cartel's system was controlled by computers that enabled complex control of

the radio signals, allowing the cartel to direct its communications to specific radios while bypassing others, according to Grupo Savant, an intelligence and security consulting firm in Washington that has first-hand knowledge of Mexico's cartel operations.

The radio system appears to be a "low-cost, highly extendable and maintainable network" that shows the Zetas' sophistication, said Gordon Housworth, managing director of Intellectual Capital Group, LLC, a risk-and technology-consulting firm that has studied the structure and operations of Mexican cartels and criminal groups.

Other Mexican criminal organizations maintain similar radio networks, including the Sinaloa cartel, based in the Pacific coast state of the same name, and the Barrios Azteca street gang, which operates in Ciudad Juárez, across from El Paso, Texas, a U.S. law-enforcement official said. The Zetas' system is the largest, however, the official said, speaking on condition of anonymity because of the sensitivity of the topic.

The Mexican raids are "a deliberate attempt to disrupt the business cycle of the cartels," said one former lawenforcement official with direct knowledge of the network. "By going after command and communications you disrupt control."

Law-enforcement officials and independent analysts described the operations against the Zetas' communications system as significant short-term victories in the fight against the cartel.

"The seizures show that the organization is scrambling," said Steven Dudley, co-director of InSight, a group that analyzes and investigates organized crime in Latin America.

The longer-term impact is unclear. The cartel has had little difficulty in replacing radio gear and other equipment seized in smaller operations in recent years. And contacts among the highest-ranking Zetas operatives tend to take place in highly encrypted communications over the Internet, according to Grupo Savant.

Certainly, cartel radio equipment is a near-ubiquitous presence for Mexicans living along the front lines of the drug war. In the state of Tamaulipas, across the border from eastern Texas, many antennas are concealed in the foliage of the rockrose, an invasive shrub that has spread across much of the state's open land.

Even from a few feet (meters) away it's nearly impossible to see the towers or their power cables.

In Nuevo Laredo, the Zetas' first stronghold, antennas sprout from rooftops and empty lots. One soldier told the AP that even when authorities took down an antenna there, it was swiftly replaced.



NEW YEARS RESOLUTIONS:

Attend a CAARA Monthly Meeting

Attend a Sunday Morning coffee social

Make a contact using the club HF station

Pay my dues!

Build one homebrew accessory for the home shack

Participate in Field Day this summer

Try portable HF this summer

Get someone interested in ham radio

Be an Elmer to a new ham.....

CHANGING TIMES - ARMY MARS PHASING OUT WINLINK The Department of the Army has announced that it has begun to take steps to phase out the use of the WINLINK System. This is because of possible security breaches that might be incurred in the Internet aspect of transmissions using the mode. Amateur Radio Newsline's Bruce Tennant, K6PZW, has more: — According to the December 21st ARRL ARES E-Letter, the military chain of command that governs Army MARS feels that the Internet portion of WINLKINK leaves the system significantly open to the possibility of intrusion. To deal with this it plans to replace WINLINK with a newer military e-mail system that has extensive protection against any form of hacking or any other form of incursion. To accomplish this, Army MARS will be expanding on the concept of a national network that is voice, RTTY and PACTOR capable under MIL-STD 110A. It says that PACTOR will become even more important as the new areas of focus will be peer to peer and keyboard to keyboard PACTOR based communications. Amateur modes such as MT-63, OLIVIA, and WINMOR, which cannot be used by the military, will be eventually phased out as well. The ultimate goal of this change will be to help Army MARS return to what it is really supposed to be. That of a radio- only system to relay long haul traffic as it has done very successfully in the past. For the Amateur Radio Newsline, I'm Bruce Tennant, K6PZW, in Los Angeles. — While these changes will affect Army MARS nationally, it is not abandoning state and local served agencies. Army MARS says that it is moving away from providing them a winlink.org e-mail address. (ARRL ARES E-Letter)

KIDS DAY OPERATING EVENT: JAN. 8 2012

The first of two Kids Day operating events for 2012 takes place on Sunday January 8th. Kids Day is a twice yearly on- the-air happening to encourage young people, licensed or not, to learn about our wonderful world of amateur radio and the fun it has to offer. Kids Day is not a contest. Rather, it is a way to tell young people worldwide about the magic and mystery of two way hobby radio communications. To accomplish this, amateur radio stations are being asked to devote this short time window to promote both terrestrial and satellite operations to youngsters by providing a place to make contacts with other Kids Day stations around the world. More information about Kids Day is on-line at www.arrl.org/kids-day. And many of us from

Amateur Radio Newsline hope to be on the air to assist in making this first Kids Day of 2012 as big of a success as is possible. We hope to talk to you and the kids at your stations, during the event. (Various)

HAM RADIO BUSINESS: YAESU MUSEN NAME TO BE REACTIVATED JAN. 1 Yaesu will soon be Yaesu once again. In a letter from Vertex-Standard president Jun Hasegawa dated January 27th, it was announced that that after four years of operating as a joint venture with Motorola, it has been decided to transfer the Vertex Standard Land Mobile Radio business to Motorola and for his company to focus on amateur, marine and air-band communications gear. In his letter, Mr. Hasegawa says that the company name will revert to Yaesu Musen. This he says is a name business partners have been familiar with for over 50 years. He goes on to say that he believes that the amateur radio community will be delighted to once again see this famous name active. There will be no staff or operational changes at the United States based facilities located in Cypress, California. The effective date for this reorganization will be January 1, 2012. (Yaesu)

THE DIY MAGIC OF AMATEUR RADIO ON HAM NATION JAN 3 And a reminder the producer, director and writher of the new ARRL motivational video titled "The DIY Magic of Amateur Radio" will be guests of Bob Heil, K9EID, and Gordon West, WB6NOA, on the January 3rd edition of the netcast Ham Nation. Bill Pasternak, WA6ITF, Dave Bell, W6AQ, and Henry Feinberg, K2SSQ, will be there live to host a screening of the video as well as to give you a behind the scenes look at how it was conceived and put together. Ham Nation airs live every Tuesday night at 9 P.M. Eastern, 6 P.M. Pacific on Leo LaPorte's TWIT dot TV Internet network. To tune in just take your web browser to live.twit.tv. If you miss the live show, it will be available for download or screening about 24 hours later at twit.tv/HN. The video is also available right now for on-line screening on YouTube at tinyurl.com/arrl-diy-movie. You can also watch it or download it at www.arrl.org/DIY. (ARNewslineT)

HAM RADIO IN SPACE: STUDENT CUBESATS SET FOR VEGA LAUNCH The first student built amateur radio CubeSats to be sponsored by European Space Agency's Education Office have passed their Final Acceptance Review and have been deemed space

worthy. The seven tiny birds have been declared ready for launch on board the maiden flight of the new ESA Vega launch vehicle. The university-built picosats, each weighing only 1 kilogram, have already been integrated with Poly- Picosatellite Orbital Deployer devices that will carry them during launch. The single-unit CubeSats, whose development represented a unique hands-on learning experience for the university students that were involved, were developed by teams from 6 different European countries. The launch window for this first Vega lift-off opens on January 26th and ends in the first week of February, 2012. (ESA)

AM Heavy Metal Rally - December 30, 2011

Last night, just after 9:30PM EST, on a small peninsula on the Maine coast, a Collins 30K-1 amateur transmitter, serial number 32, glowed to life for another contact. Little did the guys and gals building this rig back in 1947 ever think that it would still be operational nearly 65 years later! This was no simple resurrection, but the culmination of a long journey that started over half a century ago. The journey began in 1947 when serial number 32 left the Collins factory at Cedar Rapids, Iowa, and traveled to the station of Walter Jahries, W7MGA, in Salt Lake City, Utah. It saw service at W7MGA until sometime

in the late 1950s. After the passing of W7MGA the unit was put into storage. In 1991 it traveled westward to Los Gatos, California and the home of Peter K6DGH.

Peter, busy with other projects and his Hallicraters HT-4 station, never got around to unpacking the transmitter and getting it on the air. So there it sat, in heated storage, for 15 years, until September 2006, when it headed for the east coast and to my home at Woolwich, Maine, some 59 years after it first rolled off the factory floor.

But it was not just the transmitter that survived the half-century of storage and travel, amazingly the complete station, sans antenna, survived intact! For included in the package was the matching Collins 75A-1 receiver, Collins 270G-1 speaker, Collins 310A exciter to the drive the big 30K-1, W7MGA's manuals, extensive spare parts, a homebrew coil holder and Shure microphone. In other words, the complete 1940's era station of W7MGA had been transported through time and space to arrive here, the coastal station of W1UJR.

And work it did, we had contacts stretching across the country, from New England to Minnesota. From Kentucky to Ohio and onto Colorado. The 75A1 receiver even pulled out a station from Washington state, but he was busy and signed off before I could call him.

There is nothing like working older gear, the glow of the filaments, the odor of the hot tubes burning off dust, the loud "kerchunk" of the contactor pulling down to close the plate circuit, the hum of the transformers, and the soft "talkback" as you modulate, watching the meter swing. Far more than just radios, they are in fact time machines, that's what they really are, linking us to our radio brethren from the past.

73 Bruce W1UJR

www.W1UJR.net



Nicholas P. Guarrasi-K1LKY

December 26, 2011

GLOUCESTER: Nicholas P. Guarrasi, 87, formerly of Ellery Street, died Monday, December 26, 2011 in the Seacoast Nursing and Rehabilitation Center. He was the husband of Joan C. (Low) Guarrasi.Born in Favignana, Italy on September 9, 1924, he was the son of the late Antonio and Anna (Mineo) Guarrasi. Having immigrated to the United States at the age of thirteen, he had first resided in Trenton, New Jersey and then moved to Gloucester to reside with his cousin, John Mercurio, and his family on Church Street. He attended Gloucester public schools and was the recipient of the Sawyer Medal Award. A U.S. Navy veteran of World War II, Nick served aboard the USS Gillespie, which participated in many battles in the Pacific, including the battles of Iwo Jima and Okinawa. Nick was awarded seven bronze stars for acts of bravery and merit; and the ship earned nine battle stars for being attacked by two Japanese Kamikazes. He was honorably discharged at the rank of radioman second class in January of 1946. Nick was the owner and operator of the former Atlantic Gas Station on Railroad Avenue for twenty years. He also worked as the foreman at Gloucester Engineering for many years. Nick was a former president of the C.A. Amateur Ham Radio Operators, a longtime member of the WWII Memorial Committee and the First Baptist Church. In addition to his wife, he is survived by his children, Carol Parisi, Rosemarie Guarrasi and Anthony, husband of Janet Guarrasi; five grandchildren, Nikki Parisi, Anthony Parisi, fiancé of René Carraba, Peter Parisi, Joanna, wife of Mario Brancaleone and Christina Lewis; three greatgrandchildren; and many dear friends. He was also predeceased by his sister and brother-in-law, Mary and Joseph Bertolino and his brother and sister-in-law, Vincent and Rose Guarrasi. His services will be held on Tuesday, January 3rd in the Pike-Grondin Funeral Home, 61 Middle Street, Gloucester at 10 a.m. Visiting hours will be held on Monday evening from 5 - 7 p.m. Relatives and friends are cordially invited to attend. Interment will be held in the Dolliver Memorial Cemetery.

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world of amateur radio and the fun it has to offer. Kids Day is not a contest. Rather, it is a way to tell young people worldwide about the magic and mystery of two way hobby radio communications. To accomplish this, amateur radio stations are being asked to devote this short time window to promote both terrestrial and satellite operations to youngsters by providing a place to make contacts with other Kids Day stations around the world. More information about Kids Day is on-line at www.arrl.org/kids-day. And many of us from Amateur Radio Newsline hope to be on the air to assist in making this first Kids Day of 2012 as big of a success as is possible. We hope to talk to you and the kids at your stations, during the event. (Various)

TECHNOLOGY ASSISTANCE: DISABILITY.GOV NOW ON LINE

www.disability.gov is the new federal government website for comprehensive information on disability programs and services in communities nationwide. The site links to more than 14,000 resources from federal, state and local government agencies; academic institutions; and nonprofit organizations.

In the Technology section, can be found information on assistive and accessible technologies, emergency communications systems; the accessibility features of new technologies like smart phones; and guidelines and standards related to technology accessibility for people with disabilities. Information is by State using the drop-down menu located on the left side of any page on Disability.gov, to find local resources that can help you pay for your assistive technology needs.

Disability.gov is managed by the U.S. Department of Labor's Office of Disability Employment Policy in collaboration with 21 federal agency partners, including the FCC. (FCC)

ARRL seeks feedback for 60m band plan

The ARRL is requesting input for a proposed 60-meter band plan.

Read the posting at:

http://www.arrl.org/news/arrl-requests-feedback-for-60-meter-band-plan

