



K4NAB News



Serving Aiken County and Surrounding Areas



FCC Calls on Amateur Radio Service for Assistance with Digital TV Conversion

The ARRL received a request from the FCC asking that ARRL members provide technical educational assistance to their communities concerning the FCC-mandated digital television (DTV) conversion scheduled for February 17, 2009.

According to ARRL M & PR Manager Allen Pitts, W1AGP, Amateur Radio clubs are being asked to develop and implement plans to provide information throughout January and February about the DTV conversion in their areas. The FCC is leaving it up to the clubs to decide how to do this, as local groups understand the communities in ways that the FCC does not. Plans carried out by the clubs will vary from community to community.

The request is only to distribute technical information and FCC materials. He commented: "As we all know, some folks just never get the message until too late. Materials for presentations, education and many other activities are available [online](#). Beginning early January, FCC staff will contact Section Managers and leaders of interested clubs and, where possible, arrange to meet to share even more information, audio, visual and printed materials, as well as training aids, with the clubs involved in this effort. We know the time is short, but your aid in this will be appreciated."

In early January, FCC staff will then make contact with groups, learn their plans and provide them with the media, brochures or other materials groups may need in this effort. Materials also can be downloaded from the [DTV Conversion Web site](#). FCC regional staff members may come and visit larger groups.

"I appreciate the willingness of the ARRL to actively participate in helping Americans with the transition to DTV and your helpful suggestions," said George Dillon, FCC Deputy Bureau Chief for Field Operations. "The DTV transition will be an historic moment in the evolution of TV. Broadcast television stations can offer viewers improved picture and sound quality and new programming choices. All-digital broadcasting also will allow us to significantly improve public safety communications and will be a new era of advanced wireless services. Our goal is to engage the amateur community on a cooperative basis to help with the DTV outreach and to educate consumers."

Dillon said that local Amateur Radio clubs might consider offering technical advice to consumers via telephone to those consumers who may encounter difficulty with the installation and setting up of their converter box. "Any assistance...will greatly help in the efforts of the FCC to ensure a smooth transition to DTV on February 17, 2009."

Pitts advises interested groups to keep in mind that they are to provide technical educational help only: "At no time should the hams enter someone else's home or install equipment. They should not broker or sell conversion boxes in any way. Clubs can provide such things as a call-in telephone number for technical help, make presentations at meetings, do demonstrations at malls or give talks to other groups -- whatever works in their community."

Help With Reception Problems

If you are experiencing reception problems, the following information and tips may help improve your reception for digital broadcasts.

Adjust Your Antenna

Small adjustments to an antenna can make a big difference in the number of digital channels you can receive. If you have an indoor antenna, try elevating and moving it closer to an exterior wall of your home. After adjusting the antenna, perform another channel scan to see if reception is improved. When adjusting an antenna, it may be

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helpful to access the "signal strength meter" on your digital-to-analog converter box or digital television to determine whether your adjustments are improving the signals' strength. Refer to the owner's manual of your device for instructions on how to access its signal strength meter. Remember to do another channel scan after you have adjusted your antenna.

It is also important to know that television stations broadcasting in digital use both the VHF band (channels 2-13) and UHF band (channels 14-51). Many indoor antennas use "rabbit ears" for the VHF band and a "loop" or "bow-tie" antenna for the UHF band. Make sure you are using an antenna that covers both the VHF and UHF bands and have connected it properly.

If You are Still Having Difficulty

Until February 17, 2009, some stations will be operating at reduced power levels. If you are not receiving certain digital TV stations, this does not mean there is a problem with your antenna or digital-to-analog converter box or digital television. Check with the TV station to find out if they are planning changes that will improve reception.

When an analog TV signal is weak or receives interference, static, snow, and distortion will often appear on the screen. Digital broadcasting will provide a clear picture; however, if the signal falls below a certain minimum strength, the picture can disappear. This "cliff effect" means that if you watch analog TV stations that have static and distortion, you may have to adjust or upgrade your antenna system.

Simple indoor antennas provide minimal performance that may not be suitable for your location. If you are unable to obtain satisfactory reception with your current indoor antenna, you may wish to obtain an indoor antenna that includes features for better reception of UHF signals and/or an amplifier to boost the received signal (often referred to as an active indoor antenna).

Generally, an outdoor antenna will get better reception than an indoor antenna. However, the performance of outdoor antennas can degrade over time due to exposure to the weather. If you are having problems, check for loose or corroded wiring, broken antenna elements and that the antenna is pointed in the right direction.

If you decide to replace or upgrade your indoor or outdoor antenna, many types are available from electronics retail stores at a variety of prices. Websites such as www.antennaweb.org provide information on the locations of broadcast towers and the types of outdoor antennas appropriate for the stations you wish to receive. If you need assistance with upgrading your antenna system, check with a local antenna retailer or antenna installer. For more tips that may help to improve your reception for digital broadcasts, go to www.fcc.gov/cgb/consumerfacts/dtvantennas.html.

For more information about the DTV transition, go to www.dtv.gov or contact the FCC by e-mailing dtvinfo@fcc.gov; calling 1-888-CALL-FCC (1-888-225-5322) or by TTY at 1-888-TELL-FCC (1-888-835-5322).

When you join or renew your ARRL Membership the club can benefit!

ARRL Affiliated Clubs receive a commission for every new ARRL membership and renewal they submit to ARRL Headquarters.

- Clubs retain a portion of dues for each regular or senior membership sent to ARRL Headquarters:
- Clubs retain \$15 for each new membership OR lapsed membership (of two years or more). A NEW MEMBER is defined as any individual who has never been a member of ARRL or any individual who has not retained a membership for two or more calendar years prior to the application submission.
- Clubs retain \$2 for each renewal. A RENEWING MEMBER can renew at anytime, even before their current membership term expires.



Didn't get what you wanted for Christmas?

Carl (AJ4AU)

Well Now is the time to start planning to get it! The new hamfest season is coming up and there will be the bargains, parts, supplies and generally all the stuff you didn't get for Xmas. Start with a list (the thing I hate the most, according to my XYL) of what you would like to have at the end of this year. You can start with sticky notes or just small scraps of paper to write down each item you want. Why do this? It helps in prioritizing how you get everything you want. Just like crossword puzzles and Sudoku (9x9 number game), there may be only one way to get it all together. Once you have prioritized your notes - write a clean page listing the items you want to get.

What do you really want? A new transceiver? tuner? antenna? handheld? coax? station accessories or maybe some books to read. Do you plan to get into Amateur TV, packet, D-Star, mobile, QRP, Em-Com, MARS, APRS, CW, Contesting, DX or just operating more often? Need a new transceiver, amplifier, antenna(s), test equipment, computer, coax or a whole new Ham-Shack?

Are you buying it new, used or swapping for it? Buying a radio off eBay can be either a bargain or a rip-off and I think it's killing the Hamfests. Have you got something for sale? It can be listed here until it sells. Looking for something? Let someone know, post your wanted list here. After you have put a lot of thought (or not), take your list and add to it where (hamfest list pg 5) you might get what is on the list. Now for the big one. How much will it cost and how are you going to pay for it? You have to write it down for your list to be of much use.

Well, my list is made and it is not an "Iron Clad" blueprint for the this year. Rather it is just my tool to plan and budget for adding to the ham-shack, And if I'm lucky, my XYL might surprise me with a gift from my list. Let's see, now there is Fathers' Day, Wedding Anniversary, Birthday and Christmas. Hmmm...

Morse Out

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Vintage Equipment Tips

Where do I start? Take a picture - in fact a lot of pictures! The digital camera makes it so easy to document your equipment it is a crime not to take photos from every angle and distance. REMEMBER - "A picture is worth a thousand words!" Enough said! Actually, no. Take a photo every time you remove, replace or clean a part of the equipment. Load them onto your computer and then burn a CD or DVD of all of the photos for future reference. Add any scans of manuals, schematics or notes you made to the disc as well.

Electrolytic capacitors in vintage equipment including computer grade caps, which have not been used for any length of time need to be slowly brought up to working voltage. The need to first reform the oxide layer may be greater than the need to test the equipment.

Some equipment cannot withstand operating at a lower-than-designed voltage. Circuit designs for power regulation, amplifiers and others, may actually go into a self-destruction mode of operation when under-powered. So where does this leave me? Pulling the caps and testing them for leakage at the rated voltage is a start. Limiting the short circuit current to 10 ma (ten Milli-amps) or less is best when testing or reforming the oxide layer. Remember $E=IR$ and conversely $R=E/I$? 100 volts (your capacitors operating voltage) divided by 10ma (desired maximum current) equals 10,000 ohms and this would be the series resistor for the test circuit. Each cap being tested/ Charged / reformed should have it's own current limiting resistor.

Reforming the oxide layer can restore old caps while you restore your vintage equipment without any cap blow-ups. If you just want to operate your equipment, then invest in new caps right away. Save your self a headache and potential failure point. You can gut the old cap and hide the new one in the old shell.

Searching the Internet will yield lots of material on your "Boat Anchor" and most will be helpful but remember to always review that information for errors and downright bad mistakes.

A few web sites to look at: <http://www.virhistory.com/ham/> <http://www.virhistory.com/ham/rwab.faq.htm>
http://www.virhistory.com/ham/rwab/more_links.htm <http://www.mrca.ar88.net/> **The Military Radio Collectors Association,**

Amateur Radio Quiz: Puzzled at Times

By H. Ward Silver, N0AX - Contributing Editor n0ax@arrl.org

While watching the lighted ball slowly drop down the pole high above Times Square, counting the last of 2008 away "Ten, nine, eight...!" do you ever ponder the nature of time? Why does that last second matter more than others? Why is a second as long as it is? Here's a quiz you'll want to complete instantly, so start without delay!

1. What is the length of a day measured by the position of distant stars?
a) Solar b) Sidereal c) Lunar d) Standard
2. What was added by the world's standard timekeepers on December 31, 2008?
a) A leap second b) Two leap seconds c) A new definition of the second d) A time zone
3. How many time zones are recognized? a) 12 b) 24 c) 36 d) 40
4. Name the largest country with a single time zone? a) Brazil b) Canada c) China d) India
5. How far does light travel in free-space during one femtosecond?
a) 1 nanometer b) 3 nanometers c) 300 nanometers d) 1 micrometer
6. Which country spans the most time zones? a) Brazil b) Canada c) Indonesia d) Russia
7. Which is longer: a millennium or an eon?
8. How long does it take a radio signal to travel all the way around the Earth?
a) 7 msec b) 100 msec c) 1/7th of a second d) 7 seconds
9. How long does it take an EME signal to make the trip from the Earth to the Moon and back again?
a) 1/7th of a second b) 1 second c) 1.35 seconds d) 2.7 seconds
10. How far does your 80 meter signal travel during the time it takes the direction of electromagnetic fields to make one complete oscillation as determined by an observer traveling with the wave?
a) 1 meter b) 40 meters c) 80 meters d) Infinity

Bonus: What astronomical phenomena were used around the world to determine standard time before reliable chronometers were available?



Upcoming hamfests and events.

10 Jan 2009

Greenwood Hamfest

Greenwood Amateur Radio Society

<http://www.w4gwd.org>

Talk-In: 147.165+ (no tone)

Contact:

Darrell Manning, KI4BST

PO Box 2404

Greenwood, SC 29646

Phone: 864-418-8969

Email: dbmanning@wctel.net

10 Jan 2009

TechFest

Gwinnett Amateur Radio Society (GARS)

<http://www.gars.org>

Talk-In: 147.075+ (PL 82.5)

Contact:

Norman Schklar, WA4ZXV

480 North Peachtree Street

Norcross, GA 30071

Phone: 770-840-9664

Fax: 770-755-5411

Email: norman@schklar.com

7 Feb 2009

South Carolina State Convention (Charleston Hamfest & Computer Show)

Charleston Amateur Radio Society

<http://www.wa4usn.org>

Talk-In: 145.250 (PL 103.5) - linked repeater system

Contact:

Jenny M. Myers, WA4USN

2630 Dellwood Avenue

North Charleston, SC 29405

Phone: 843-747-2324

Email: brycemyers@aol.com

February 21, 2009

ARCA Winter Swap Meet

Pendleton King Park

Augusta, GA

<http://www.w4dv.org/>

28 Feb 2009

Hamfest #27

Dalton ARC

<http://www.w4drc.com>

Talk-In: 145.230(-) no tone

Contact:

Harold Jones, N4BD

PO Box 211

Rocky Face, GA 30740

Phone: 706-673-2291

Email: n4bd@windstream.net

21 Mar 2009

Kennehoochee Amateur Radio Club

<http://www.w4bti.org>

Talk-In: 146.880 - offset (PL100)

Contact:

Don V. Heppe, W5LGK

1425 Ridgeway Drive

Acworth, GA 30102

Phone: 404-630-1249

Email: W5LGK@bellsouth.net

May 9, 2009

Spring picnic & swap meet

Pendleton King Park

Augusta, GA

May 15-17, 2009 (Fri thru Sun) - Dayton, OH Hamvention

<http://www.hamvention.org>

Hara Arena

Talk in on 146.94-

Field Day June 27 & 28, 2009

Answers to Amateur Radio Quiz: Puzzled at Times

1. b (see http://en.wikipedia.org/wiki/Sidereal_day)
2. a (see <http://www.timeanddate.com/time/leapseconds.html>)
3. d (see http://en.wikipedia.org/wiki/Time_zones)
4. c -- although China could span five time zones, its official time uses a single time zone
5. c -- $3 \times 10^8 \text{ m/sec times } 1 \times 10^{-15} = 3 \times 10^{-7} \text{ m} = 300 \times 10^{-9} \text{ m} = 300 \text{ nm}$
6. d
7. A millennium is one thousand years and an eon is one billion years
8. c
9. d
10. d – to an observer traveling with the wave (at the speed of light), the direction of the fields do not change!
Bonus: Occultations of the moons of Jupiter were observed through a telescope and compared to standard time tables prepared by observatories (<http://www.topogs.org/jupiter.htm>).



6 Meter Freq.	PL:	Callsign	QTH
☉ 53.030-		W4WTA	Augusta
2 Meter			
144.390		KR4XN-2	Augusta digi-
peater			
☉ 145.110-		KK4HL	Augusta
☉ 145.130-		W4JAK	Greenwood
☉ 145.170-		KY4S	Aiken
☉ 145.290- (100.0)		W4DV	Augusta Echo-
link node: KI4NFJ-R Node #325847			
☉ 145.350- (100.0)		N2ZZ	Aiken
c 145.370		AA4UA	Augusta
☉ 145.410-		K4KNS	Augusta
CCARC			
c 145.450-(123.0)		W4ZKM	Sav. River Site
☉ 145.490-		W4DV	Augusta
(Skywarn)			
☉ 146.730-		K4NAB	N. Augusta
(Solar)			
c 146.775-		KB4NA	Wrens
x 146.835-		KC4GSS	Thomson
c 146.940-		KT4N	Augusta
☉ 146.985-(100.0)		K4KNS	Evans
CCARC			
c 147.120+		KT4N	Wrens
c 147.180+		N4BMA	Augusta
☉ 147.285+		N4ADM	Aiken

1.5 Meter NOAA Alerts

162.400	WXJ20	Columbia, SC	1000 Watts
162.425	WXM88	Waynesboro, GA	375 Watts
162.450	WNG62	Aiken, SC	300 Watts
162.475	WXM93	Cross, SC	100 Watts
162.500	KHC29	Barnwell, SC	1000 Watts
162.525	KHA35	Orangeburg, SC	300 Watts
162.550	WXK54	Augusta, GA	1000 Watts

1.25 Meter

x 224.200-		Augusta
c 224.940-	WB4KXO	Augusta
x 224.960		Aiken

70 Centimeter

c 443.400+(107.2)	AC4WW	Aiken
x 444.400+		Augusta
c 444.800+	KE4RAP	North Augusta
☉ 444.900+(100.0?)	W4QK	CCARC
(closed system)		
c 444.950+(T162.2)	W4DV	Trenton ARCA

x = not coordinated with SERA c = coordinated with SERA
☉ = Full member of SERA
SERAs = South-Eastern Repeater Association

NETS

Nightly Net	Daily @ 8:00 PM on 145.490 repeater
Carolina State Line Net	Sunday @ 9:00 PM on 146.730 repeater
Emergency Traffic VHF Net	Sunday @ 4:00 PM EST (5:00 PM DST) on 145.490 repeater
ARCA 10 meter Net	Sunday @ 8:45 PM on 28.368mhz
Newcomers Net -	Thursday @ 9:00 PM on 145.490 repeater
ARCA CW Net	Monday @ 9:00 PM on 28.170mhz
CSRA ARES Net	Wednesday @ 8:30 PM on 146.985mhz

2009

- Jan 19-20th ARRL January VHF Sweepstakes
- Feb 19-20th ARRL International DX Contest (CW)
- Mar 1st-2nd ARRL International DX Contest (Phone)
- June ARRL June VHF QSO Party
- June ARRL Field Day
- July IARU HF World Championships
- Aug ARRL UHF Contest
- Aug ARRL 10 GHz and Up Contest
- Sep ARRL September VHF QSO Party
- Sep ARRL 10 GHz and Up Contest
- Sep ARRL International EME Competition
- Oct ARRL International EME Competition

Please send additions/ corrections to AJ4AU@ARRL.NET

The Morse-alphabet Quote is attributed to Saint Francis of Assisi.



W1AW 2009 Winter Operating Schedule

SB QST @ ARL \$ARLB001
ARLB001 W1AW 2009 Winter Operating Schedule

ZCZC AG01
QST de W1AW
ARRL Bulletin 1 ARLB001
From ARRL Headquarters
Newington CT January 5, 2009
To all radio amateurs

SB QST ARL ARLB001

ARLB001 W1AW 2009 Winter Operating Schedule

Morning Schedule:

Time	Mode	Days
1400 UTC (9 AM EST)	CWs	Wed, Fri
1400 UTC (9 AM EST)	CWf	Tue, Thu

Daily Visitor Operating Hours:

1500 UTC to 1700 UTC - (10 AM to 12 PM EST)
1800 UTC to 2045 UTC - (1 PM to 3:45 PM EST)

(Station closed 1700 to 1800 UTC (12 PM to 1 PM EST))

Afternoon/Evening Schedule:

2100 UTC (4 PM EST)	CWf	Mon, Wed, Fri
2100 " "	CWs	Tue, Thu
2200 " (5 PM EST)	CWb	Daily
2300 " (6 PM EST)	RTTY	Daily
0000 " (7 PM EST)	CWs	Mon, Wed, Fri
0000 " "	CWf	Tue, Thu
0100 " (8 PM EST)	CWb	Daily
0200 " (9 PM EST)	RTTY	Daily
0245 " (9:45 PM EST)	VOICE	Daily
0300 " (10 PM EST)	CWf	Mon, Wed, Fri
0300 " "	CWs	Tue, Thu
0400 " (11 PM EST)	CWb	Daily

Frequencies (MHz)

	1.8175	3.5815	7.0475	14.0475	18.0975	21.0675	28.0675	147.555
CW:	1.8175	3.5815	7.0475	14.0475	18.0975	21.0675	28.0675	147.555
RTTY:	-	3.5975	7.095	14.095	18.1025	21.095	28.095	147.555
VOICE:	1.855	3.990	7.290	14.290	18.160	21.390	28.590	147.555



Notes:

CWs = Morse Code practice (slow) = 5, 7.5, 10, 13 and 15 WPM
CWf = Morse Code practice (fast) = 35, 30, 25, 20, 15, 13 and 10 WPM
CWb = Morse Code Bulletins = 18 WPM

CW frequencies include code practices, Qualifying Runs and CW bulletins.

RTTY = Teleprinter Bulletins = BAUDOT (45.45 baud) and AMTOR-FEC (100 Baud). ASCII (110 Baud) is sent only as time allows.

Code practice texts are from QST, and the source of each practice is given at the beginning of each practice and at the beginning of alternate speeds.

On Tuesdays and Fridays at 2330 UTC (6:30 PM EST), Keplerian Elements for active amateur satellites are sent on the regular teleprinter frequencies.

A DX bulletin replaces or is added to the regular bulletins between 0100 UTC (8 PM EST) Thursdays and 0100 UTC (8 PM EST) Fridays.

In a communications emergency, monitor W1AW for special bulletins as follows: Voice on the hour, Teleprinter at 15 minutes past the hour, and CW on the half hour.

All licensed amateurs may operate the station from 1500 UTC to 1700 UTC (10 AM to 12 PM EST), and then from 1800 UTC to 2045 UTC (1 PM to 3:45 PM EST) Monday through Friday. Be sure to bring your current FCC amateur radio license or a photocopy.

The W1AW Operating Schedule may also be found on page 100 in the January 2009 issue of QST or on the web at, <http://www.arrl.org/wlaw.html>.

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