

THE eQRM



April showers bring... well, lightning

photo from
Yahoo images

April 2015

THE eQRM

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CHECK IN TO THE NETS

Wednesday 2 Meter

Wednesday 10 Meter

8:30PM on 145.310 MHz

9:00PM on 28.470 MHz

The eQRM is a publication of the Beaver Valley Amateur Radio Association (BVARA) and is Copyright 2010 - 2015. All material presented in this publication is not necessarily the views of the American Radio Relay League (ARRL), BVARA, or members of the said organizations. If you would like to contact the editor of the eQRM, please email David at kc3bxc.73@gmail.com. Please visit us online at www.W3SGJ.org. To subscribe to our newsletter, please visit W3SGJ.org/newsletter.php

Hamfest/Convention this month

04/11/2015 | MCARC HAMFEST
 Location: Morgantown, WV
 Type: ARRL Hamfest
 Sponsor: Mon County Amateur Radio Club
 Website: <http://www.qsl.net/k8mcr>

Mon County Amateur Radio Club
 "Morgantown's Elite Radio Club"
"HAMFEST"
 APRIL 11, 2015



St. Mary's Church Social Hall
 Star City, (Morgantown) West Virginia
 8:00 AM until 1:00 PM
 Information: - Pre-Registration: 1-304-319-0412

GENERAL ADMISSION \$5.00
 "Come Spend Your Dime; Rain OR Shine"
 TAILGATING & TABLE RENTALS \$10.00+ GENERAL ADMISSION
 50/50 Drawing- Door Prizes- FREE Parking Available
 Refreshment - Serving Our "Famous" P.U.L.L. PORK BBQ
 VE Testing Starting at 11:00 AM
 *Talk In & Direction Provided on 147.075MHz (+) Tone 103.5
www.QSL.net/k8mcr






43rd ANNUAL HAMFEST Sunday April 12, 2015 8 am – 2 pm

Our 12th Year at: The Spectrum – 6001 Smithfield St. – Boston, PA 15135
 GPS Coordinates: 40.3175128, -79.8146132
 (Location: Pittsburgh/McKeesport, PA Southern Suburbs)
 Talk In: 146.73 MHz Repeater – Mobile Check In: 146.52 MHz

8 ft. Vendor Tables \$10.00 each
Reservations Phone: 412-203-2015-Email: "wi3r@comcast.net"

Admission \$5.00

(Children under 12 free when accompanied by an adult)

Amateur Exam Testing Available – 48 Hour Pre-Registration Requested.
 Registration: 412-751-9657 – Email: "veteam@trarc.net"

MAIN PRIZES

ALINCO DX-SR8T HF Transceiver (160m-10m) CW/SSB/FM
 TYT TH-9800 QUAD BAND 29/52/146/440 FM Transceiver
 YAESU FT-7900R 2m/70cm (144/430) Dual Band FM Transceiver

Door Prizes, 50/50 (Must Be Present)

Mobile Check In Prize

Prizes are subject to change due to availability

Hot Breakfast & Hot Lunch Available

04/12/2015 | Two Rivers ARC Hamfest
 Location: Boston (Elizabeth Twp), PA
 Type: ARRL Hamfest
 Sponsor: Two Rivers ARC of McKeesport, PA
 Website: <http://www.trarc.net>

Bulletins Hamfests & General Announcements



Tri-State Radio Fest Sunday May 3, 2015

Center Stage Banquet Hall



11th Annual Antique Radio Flea Market and Auction
Vintage TV, Amateur Radio, Audio & Phonograph

Welcome

-no computer

Vendor set-up at 6:30am-8:30am

- 6 foot tables are \$20.00 each

-Additional tables \$10.00

-entrance included for 2 vendors

Sponsored by:

Pittsburgh Antique Radio Society (PARS)

The Buckeye Antique Radio & Phonograph Club (BARPC)

For more details:

Visit: <http://pittantiqueradios.org/>

Open to buyers from 8:30am-12:00 noon

-entrance fee \$5.00

-Children under 12 free

Or call:

Chris Wells (724) 942-1113

Andy Manko (412) 884-6194

Tom Dixon (412) 343-5326

Door prizes-drawn throughout morning

Check-in for auction items 9:00 am-11:00 am

Auction to begin at 11:00 am

Auctioneer: Richard Estes – www.estesAuctions.com

Featured: contest – Atwater-Kent Radios

Raffle Prize drawn at 11:00 am– restored Atwater-Kent
206 radio

Center Stage Banquet Hall

1495 Brodhead Road, Monaca, Pennsylvania 15061

I-376 Exit 39, Route 18 North

-Near Pennsylvania and Ohio border

-Near the Beaver Valley Mall, food and

lodging close-by

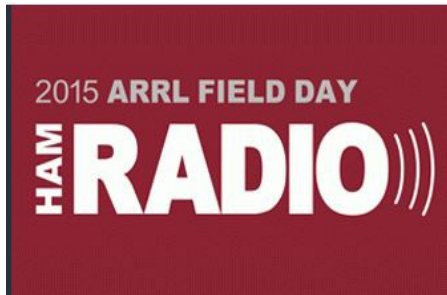
-Look for TSRF signs leading the way



Bulletins

Hamfests & General Announcements

Dayton Hamvention is around the corner too!
May 15 - 17 2015



ARRL Field Day is June 27-28, 2015



Our Field Day space in Economy Park has been reserved. It's time to get organized. What radios will Club members be bringing? Time to decide questions like: Who will bring generator power and solar power. Will you be bringing a tent or an Ez-up canopy? Who will operate in the night time hours?

What about a cooler with something cold to drink?
Some snacks?

Bring you favorite main dish to share?



This Month

This month's feature presentation:

Speaker:

Rich Soltesz

K3SOM

Topic:

Seven Deadly Sins in Ham Radio



Including:

Continuing with our BVARA Presentation Series this year, our topic this month takes a thought-provoking turn to examine the impact of the 'Seven Deadly Sins' within ham radio. The traditional seven deadly sins are lust, pride, greed, gluttony, envy, anger, and sloth. No tables, complicated graphs, or heavy math this month – just plenty of examples of the impact of these characteristics on DXing (an easy target!), equipment, attitudes, interactions with other hams, and other controversial activities. Some over-the-air recordings of specific behaviors will make you want to laugh, cry, shake your head, or maybe even stir up some emotions. How has our hobby changed over the last 100 years, or has it? But wait, there's more: we'll also look at the traditional virtues that can counteract these faults. Some club veterans will be along to provide their anecdotal experiences as well. Get out of your 'comfort zone' and join us because this is one exciting presentation you won't want to miss!

Rich's Background:

Extra Class Ham, Licensed since 1962, VE,

B.S. Electrical Engineering

More this Month

VE TEST SESSION

Beaver County Emergency Services Center
351 14th Street
Ambridge, PA 15003

Tests begin 5PM Thursday, April 9th (walk-ins allowed).
All classes of amateur radio license tests will be administered.

ALL candidates MUST bring ALL of the following:

1. 2 forms of I.D. - one MUST be a photo I.D.
2. A pencil AND a pen with blue or black ink.
3. The original AND a photocopy of any valid ham license.
4. The original AND a photocopy of any C.S.C.E.
5. The test fee of \$15 - cash, check, or money order.

For more information,
contact: Richard Soltesz, K3SOM
(724) 847-0610
k3som@arrl.net

WEEKLY

Thursday Morning Breakfast

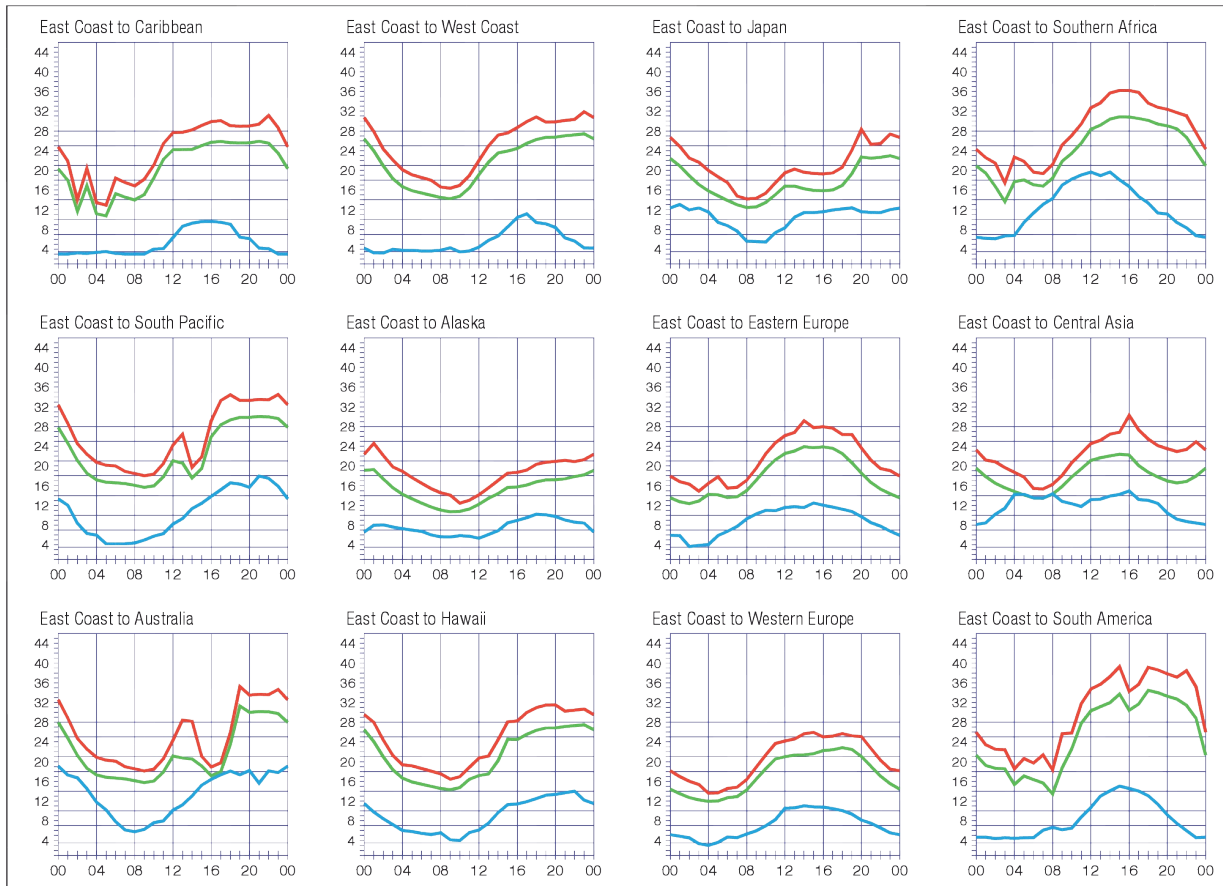
The BVARA meets every Thursday at Steak n Shake in Center Township, by the Beaver Valley Mall, at 10:00 AM. All area amateurs are encouraged to come join us at our Thursday morning breakfast.



See you at Steak n Shake!

Propagation Charts

From the ARRL



When are the bands open? These charts, generated using CAPman, show probabilities for average HF propagation in the month of April for the paths indicated. The horizontal axes show Coordinated Universal Time (UTC), and the vertical axes frequency in MHz. On 10% of the days of this period, the highest frequencies propagated will be at least as high as the upper red curves (HPF, highest possible frequency) and on 50% of the days they will be at least as high as the green curves (MUF, classical maximum usable frequency). The blue curves show the lowest usable frequency (LUF) for a 1500-W CW transmitter. For SSB or a lower transmitter power, the LUF will be somewhat higher than the blue curves indicate. See Oct 1994 QST, pp 27-30, and Feb 1995 QST, pp 34-36, for more details. The predictions assume an observed 2800-MHz solar flux value of 124. This is a **High** level of solar activity. See the detailed propagation tables on *The ARRL Antenna Book* CD-ROM.

PROPAGATION

The East Coast propagation chart listed above is for April 2015. If you would like more information on how to read these charts, or for more information on propagation in general, please visit <http://arrl.org/propagation>

RACES / ARES

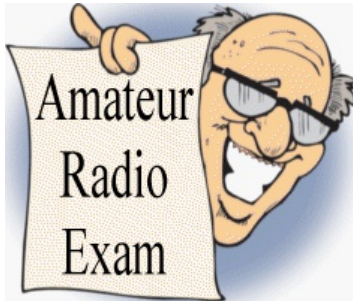
eQRM Urges All County Hams to Participate

As a matter of editorial opinion, the eQRM urges all Beaver County licensed amateurs to participate in the County's RACES and ARES programs.

Any Beaver County Amateur that is interested in participating in the RACES/ARES programs can do so by checking into the Beaver County Public Service Net which meets every Monday evening at 8:30 PM local time on the N3TN 146.850 MHz repeater (131.8 PL)



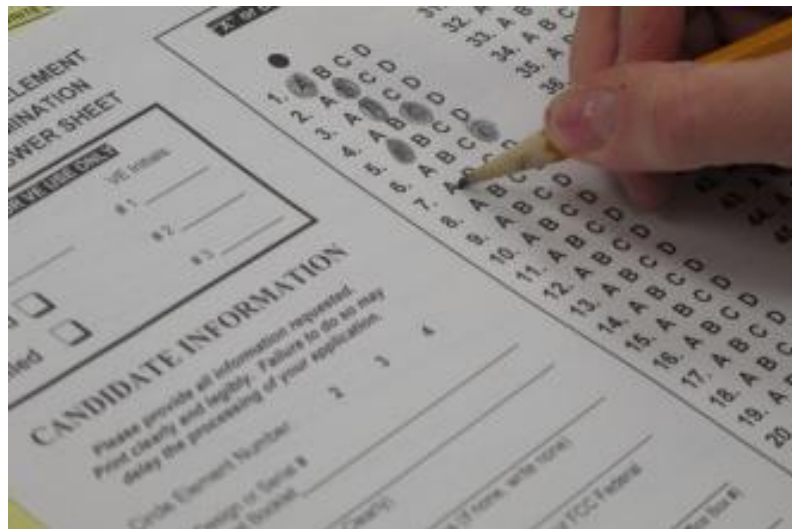
New License and Upgrades BVARA VE Testing



The BVARA would like to acknowledge :

Dennis Whalen - KC3EJA from New Brighton, PA who upgraded to General Class

Rick Foust - KF3EB from Renfrew, PA who upgraded to Extra Class



Who We Are

Membership Information and Club Officers



2015 BVARA OFFICERS

President: Jack Spencer, KZ3Z
Vice President: Dick Hanna, K3VYY
2nd Vice Pres.: Rob Miller, N3OJL
Treasurer: Pam Spencer, W3PMS
Secretary: Norm Trunick, K3NJT
Director: Bob Winkle, N3AZZ
Director: Jeff Waite, K3SLK
Trustee: Rich Soltesz, K3SOM

MONTHLY MEETINGS

E-Board meetings are now held the Saturday before the monthly club meeting.
VE testing begins at 5:00.
Regular meetings are at 6:30.

All meetings are held at
Beaver County
Emergency Services Center
351 14th Street
Ambridge, PA 15003
on the second Thursday of every month
(unless otherwise stated).

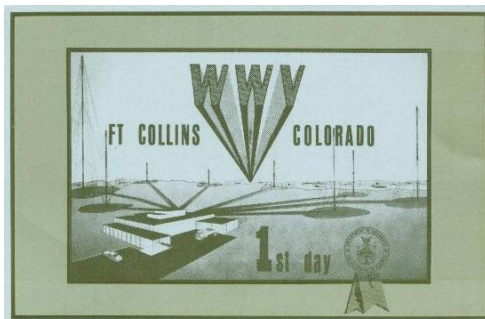
MEETING DATES 2015

April 9
May 14
June 11
July 9
Aug 15 Corn Roast no meeting
Sept 10
Oct 8
Nov 12
Dec TBA Christmas Party no meeting



WWV has a long and storied history that dates back to the very beginning of radio broadcasting. The call letters WWV were assigned to NIST (then called the National Bureau of Standards) in October 1919. Although the call letters WWV are now synonymous with the broadcasting of time signals, it is unknown why those particular call letters were chosen or assigned. Testing of the station began from Washington, D.C. in May 1920, with the broadcast of Friday evening music concerts that lasted from 8:30 to 11 p.m. The 50 W transmissions used a wavelength of 500 m (about 600 kHz, or near the low end of today's commercial AM broadcast band), and could be heard out to about 40 kilometers [25 miles]. A news release dated May 28, 1920 hinted at the significance of this event:

This means that music can be performed at any place, radiated into the air by means of an ordinary radio set, and received at any other place even though hundreds of miles away. The music received can be made as loud as desired by suitable operation of the receiving apparatus. Such concerts are sometimes sent out by the radio laboratory of the Bureau of Standards in connection with trials of experimental apparatus.



This music can be heard by anyone in the states near the District of Columbia having a simple amateur receiving outfit. The pleasant evenings which have been experienced by persons at a number of such receiving stations suggest interesting possibilities of the future.

Interesting possibilities, indeed! Keep in mind that *KDKA of Pittsburgh*, generally acknowledged as the first commercial broadcast station, did not go on the air until November 2, 1920.

On December 15, 1920 the station began assisting the Department of Agriculture in the distribution of market news to farm bureaus and agricultural organizations. A 2 kW spark transmitter was used to broadcast 500 word reports, called the Daily Market Marketgram, on 750 kHz. The operating radius was about 300 kilometers [180 miles] out of Washington. These broadcasts continued until April 15, 1921.

By December 1922, it was decided that the station's purpose would be the

transmission of standard frequency signals. The first tests were conducted on January 29th and 30th of 1923, and included the broadcast of frequencies from 200 to 545 kHz. By May of 1923, WWV was broadcasting frequencies from 75 to 2000 kHz on a weekly schedule. The accuracy of the transmitted frequency was quoted as being "better than three-tenths of one per cent." The output power of the station was 1 kW.

There were numerous changes in both the broadcast schedule, format, and frequency of WWV throughout the 1920's. In January 1931, the station was moved from Washington to the nearby city of College Park, Maryland. A 150 W transmitter operating at 5 MHz was initially used, but the power was changed back to 1 kW by the following year. A new device, the quartz oscillator, made it possible to dramatically improve the output frequency of WWV. Quartz oscillators were first used at WWV in 1927, and by 1932 allowed the transmitted frequency to be controlled to less than 2 parts in 10E+07 .

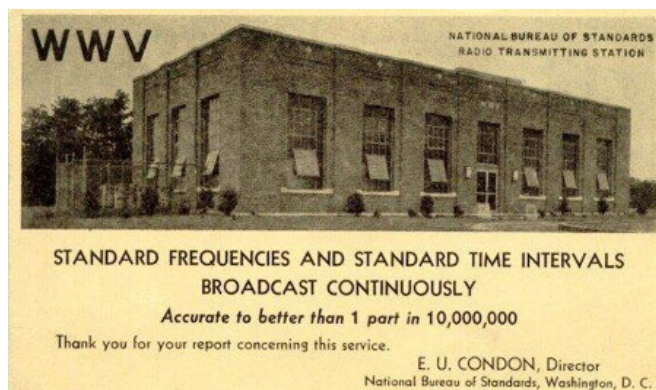
The station moved again in December 1932, this time to a

On Air

10 hectare (25 acre) Department of Agriculture site near Beltsville, Maryland. By April of 1933, the station was broadcasting 30 kW on 5 MHz, and subsequently 10 and 15 MHz broadcasts (20 kW output power) were added in 1935. The 5 MHz frequency was chosen for several reasons, including “its wide coverage, its relative freedom from previously assigned stations, and its convenient integral relation with most frequency standards.” The 10 and 15 MHz frequencies were chosen as harmonics, or multiples of 5 MHz. WWV continues to use all of these frequencies today, as well as another harmonic (20 MHz), and a sub-harmonic (2.5 MHz).

The Beltsville area was the home of WWV until December 1966 (although the location name for the broadcast was changed to Greenbelt, Maryland in 1961). During the years in Beltsville, many interesting developments took place. A fire destroyed the station in November 1940, but the standard frequency equipment was salvaged and the station returned to the air just 5 days later using an adjacent building. An act of Congress in July 1941 provided \$230,000 for the construction of a new station, which was built 5 kilometers south of the former site and went on the air in January 1943. The 2.5 MHz broadcasts began in February 1944, and are still used as a convenient way to reach the population nearest the radio station. Transmission on 20, 25, 30, and 35 MHz began in December 1946. The 30 and 35 MHz broadcasts were discontinued in January 1953 and the **25 MHz broadcast was stopped in 1977**. With the exception of an almost 2-year interruption (1977-78), the 20 MHz broadcasts have continued to this day.

Much of the current broadcast format also took shape during the Beltsville years. The 440 Hz tone (A above middle C) was added to the broadcast in August 1936, at the request of several music organizations. The



second pulses were added in June 1937, and the geophysical alert messages began in July 1957. And as quartz oscillator technology improved, so did the frequency control of the broadcast. The transmitted frequency was routinely kept within 2 parts in $10E+10$ of the national standard by 1958.

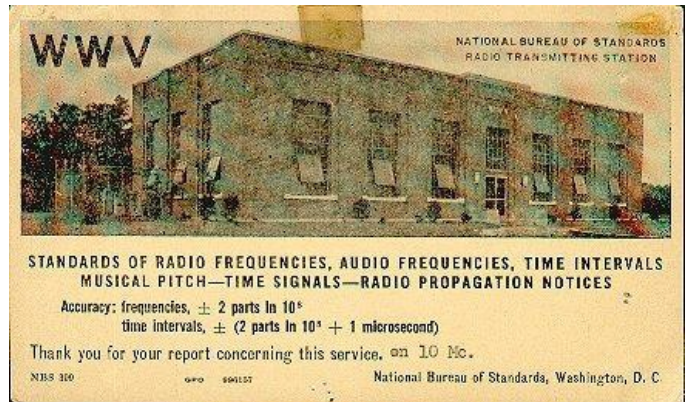
WWV's most well known feature, the announcement of time, also began during the Beltsville years. A standard time announcement in telegraphic code was added in October 1945, and voice announcements of time began on January 1, 1950. The original voice announcements were at 5-minute intervals. It is interesting to note that WWV continued to broadcast local time at the transmitter site until 1967.

In 1966, the decision was made to move WWV to its current location, near Fort Collins, Colorado. The LF station WWVB went on the air in July 1963 near Fort Collins, and it was decided that WWV would share the same 158 hectare (390 acre) site. The new site was about 80 kilometers from the Boulder laboratories where the national standards of time and frequency were kept. The proximity to Boulder and the use of atomic oscillators at the transmitter site would make it possible to control the transmitted frequency to

On Air

within 2 parts in $10E+11$, a factor of ten improvement. Today, the station's frequency is controlled to within 1 part in $10E+13$.

At 0000 UTC on December 1, 1966 the Greenbelt, Maryland broadcast was turned off and the new transmitter at Fort Collins was turned on. In April 1967 the station began broadcasting Greenwich Mean Time (GMT) instead of local time, and began its current format of using Coordinated Universal Time (UTC) in December 1968. The time announcements were made every minute, instead of every 5 minutes, beginning in July 1971.



Many new features and programming changes have been added to the WWV broadcast over the past few decades, and the current station schedule is described on this web site:

<http://www.nist.gov/pml/div688/grp40/wwv.cfm>

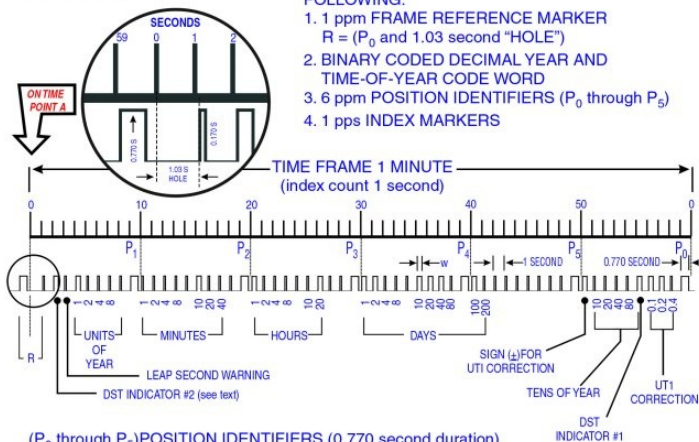
Questions? Send mail to: nist.radio@boulder.nist.gov

Did you notice that WWV is back on the air on 25Mhz? It has been heard and according to the NIST website it is back on on a experimental basis, having been taken off the air years ago. WWV on 25 Mhz is running just 1000 watts to a broadband monopole antenna. When I heard it recently it was 20 over 9! At one time WWV also had stations on 30 and 35Mhz!.

If you hear it drop the nist an email at wwv@nist.gov, and while at it mention it is a great propagation tool and it would be nice if it could be kept on the air!

On Air

WWV and WWVH TIME CODE FORMAT



MODIFIED IRIG H FORMAT IS COMPOSED OF THE FOLLOWING:

- 1 ppm FRAME REFERENCE MARKER
R = (P_0 and 1.03 second "HOLE")
- BINARY CODED DECIMAL YEAR AND TIME-OF-YEAR CODE WORD
- 6 ppm POSITION IDENTIFIERS (P_0 through P_5)
- 1 pps INDEX MARKERS

(P_0 through P_5) POSITION IDENTIFIERS (0.770 second duration)

W WEIGHTED CODE DIGIT (0.470 second duration)

DURATION OF INDEX MARKERS, UNWEIGHTED CODE, AND UNWEIGHTED CONTROL ELEMENTS = 0.170 SECONDS

NOTE: BEGINNING OF PULSE IS REPRESENTED BY POSITIVE-GOING EDGE.

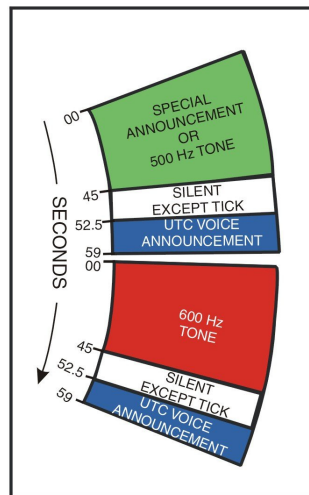
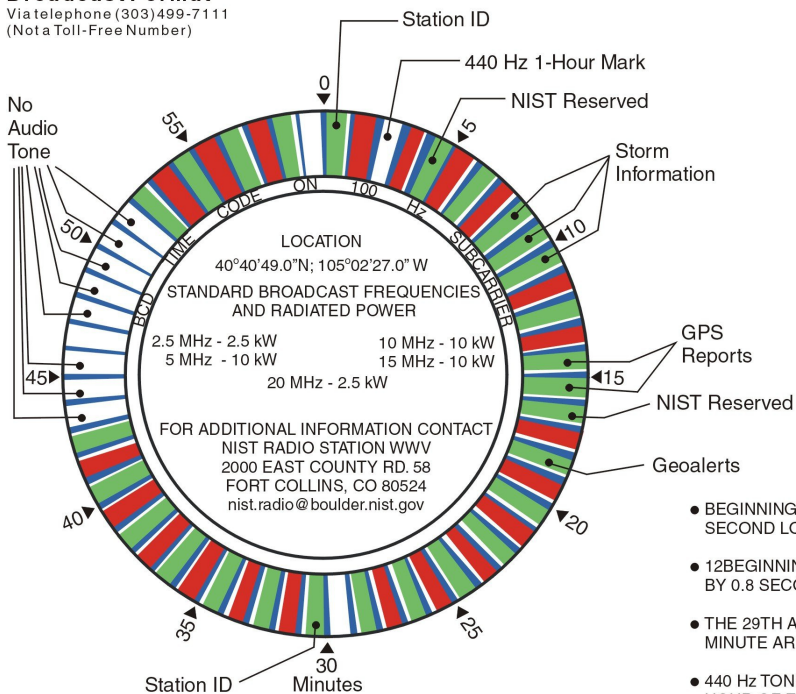
UTC AT POINT A = 2001, 173 DAYS, 21 HOURS, 10 MINUTES

UT1 AT POINT A = 2001, 173 DAYS, 21 HOURS, 10 MINUTES, 0.3 SECONDS

WWV

Broadcast Format

Via telephone (303) 499-7111
(Not a Toll-Free Number)



- BEGINNING OF EACH HOUR IS IDENTIFIED BY 0.8 SECOND LONG, 1500 Hz TONE.
- BEGINNING OF EACH MINUTE IDENTIFIED BY 0.8 SECOND LONG, 1000 Hz TONE.
- THE 29TH AND 59TH SECOND PULSES OF EACH MINUTE ARE OMITTED.
- 440 Hz TONE IS OMITTED DURING FIRST HOUR OF EACH DAY.

WWV Information from

Dick Hanna K3VYY

Bits and Pieces



April is here!

April Showers bring May flowers...and, bring lightening here to Western Pennsylvania too.



Safety! Safety! Safety!

Proper shack grounding is critical. Safety. When was the last time you inspected & cleaned all your ground connections and put a little conductive grease on them? Safety. Disconnecting all antennas from your radio when not in use is a good way to protect your equipment from lightning. Safety. This is a good time to install lightning arresters between your radio and antennas if you haven't already. Safety. Now is a good time to inspect all your radio connections, wires and coax.



photos from
Yahoo images

- Rookie Roundup Notice -

The Rookie Roundup returns to SSB on Sunday, April 19, 1800 UTC through 2359 UTC. This is a great opportunity for new operators to get on the air and learn the skills of contesting.

"Old Timers" should also take note of this event. Consider opening your station up to a rookie (or two) and become an elmer. Remember, the more operators are on the air, the more fun the Rookie Roundup will be for everyone.

Be sure to read the rules before the event. It is also helpful to be familiar with the logging and submission processes ahead of time. Please browse the ARRL web site for information and tips on operating the Rookie Roundup. We hope to hear you on the air!



About

Rookie Roundup is a contest aimed at Amateurs licensed for three years or less. This six-hour event is held three times per year (April, August and December). Rookies can contact anybody, while "Old Timers" make contact with only Rookies. Mentoring is a big part of this event!

For more information go to the ARRL web site with the Keywords: "contest calendar"

<http://www.arrl.org/contest-calendar>

For those of you who remember *73 Magazine*, (and those of you who don't) you now have free access to every one of the *magazines* published.

Wayne Green, W2NSD (Never Say Die) published the first issue of *73 Magazine* in October of 1960.

It continued publication until 2003. Wayne was known for his long editorials, sometimes (well quite often really!) taking on the hallowed ARRL, and anyone else he thought was over regulating the amateur radio hobby. *73* had a lot of construction articles and was very popular with the growth of FM and repeaters, having a lot of reviews on the new commercial equipment available. *73* was also one of the first magazines to introduce the transistor as a tool for Hams. New technology was always a strength for Wayne. Wayne was famous for his "kits" which became available for many of the construction articles in the *Magazine*. They were very reasonably priced and allowed to build the device without having to shop in several places.

Wayne was at one time editor of *CQ Magazine*, and after he left there, not only started *73*, but several other magazines for the up and coming computer industry. One of the favorites was *80 Micro*, supporting the long list of RadioShack computers from the Color Computer to the advanced Model 4 and 4P. (Can you say "TRSDOS" ??)

Wayne cited financial reasons for discontinuing *73 Magazine* due to advertising revenues, and when he passed away, his wish was to make all issues of the *73 Magazine* available to Hams, free of charge. You can read or download in .PDF format any of the *73 Magazines* by going to <https://archive.org/details/73-Magazine>. The magazines will give you a "different" look at ham radio in the era, and you will be able to see one of the periods of great growth in the hobby, You might even find some little "shack accessory" or antenna project to build.



Courtesy of
Dick Hanna K3VYY

Some Interesting Links

Ham Radio Propagation Videos	http://youtu.be/ySh1A12kMZw https://www.youtube.com/watch?v=ySh1A12kMZw&noredirect=1
Ham Stuff and Educational Test Help	http://dcasler.com/ham-radio/
Practice Ham Tests	http://aa9pw.com/
Ham Interest	http://www.eham.net/
American Radio Relay League (ARRL)	http://www.arrl.org/home
Dr. Tamitha Skov Space Weather for Radio Amateurs	http://spaceweather.tv/category/amateur-radio-resources/

The Amateur's Code

CONSIDERATE ...never knowingly operates in such a way as to lessen the pleasure of others.

LOYAL ...offers loyalty, encouragement and support to other amateurs, local clubs, and the American Radio Relay League, through which Amateur Radio in the United States is represented nationally and internationally.

PROGRESSIVE ...with knowledge abreast of science, a well-built and efficient station and operation above reproach.

FRIENDLY ...slow and patient operating when requested; friendly advice and counsel to the beginner; kindly assistance, cooperation and consideration for the interests of others. These are the hallmarks of the amateur spirit.

BALANCED ...radio is an avocation, never interfering with duties owed to family, job, school or community.

PATRIOTIC ...station and skill always ready for service to country and community.

For Sale

The Beaver Valley Amateur Radio Association has ham equipment for sale.

The following equipment is for sale as an entire package:

FT-767 GX Transceiver, S/N 1J470108, AM, CW, SSB, NBFM
with integrated 117 VAC power supply, owner's manual, schematic, etc.
with 600 Hz CW Crystal Filter Installed

MD-1-C8 Desk dynamic microphone, manual

SP-767 External speaker with passive HP and LP audio filters, manual

FEX-767-6 6-meter plug-in module, manual (all plug-ins)

FEX-767-2 2-meter plug-in module

FEX-767-7 70-cm (440) plug-in module

FIF-232C Cat system interface, manual (one cable missing)

MH1-B8 Hand microphone

FTS-8 CTCSS Tone PC board

MFJ-815B Peak reading SWR/Wattmeter, 1.8-60 MHz

MFJ-564 Deluxe iambic paddle

CATY by N3HGW (software) for the FT-767 GX (floppy and CD)

Entire package price \$1100 (price firm) plus shipping and insurance, unless you can pick up.

For sale in the lower 48 states only with the buyer to pay packing, shipping, and
insurance charges.

Point of contact is : Rich - K3SOM@ARRL.net

Photos of equipment on next page

For Sale

