

RADIOWAVES



MARCI Newsletter

SPECIAL NOTICE TO ALL MEMBERS: THERE WILL NOT BE A JULY MEETING SINCE IT FALLS ON JULY 4. THERE WILL BE AN AUGUST MEETING IN ITS PLACE ON AUGUST 1ST AT THE BRADENTON BAPTIST CHURCH ON 57TH STREET EAST AT 7PM.

FROM THE PRESIDENT: As some of you may know , July will be the peak of the 50 MHz Es season in North America. Most of us have low band radios that include the 6 meter band. Tune in on 50.125 and you might be surprised at some of the DX that you might be able to hear and work if you have a simple 6 meter antenna. 73, George K4AWA

FROM THE EDITOR: This year we are going to have an extra issue of Radiowaves. Because the July meeting was cancelled due to a conflict with July 4th, and replaced by having an August meeting on August 1st I decided to put out 12 issues for 2017. One of the reasons is to get out the info on the cancellation of the July meeting.

RADIO SHACK OF THE MONTH



Here is a new entrant in the Radio Shack of the Month: Phil, N8IPS tells me this is as cleaned up as it gets.

CONELRAD

by Steve Tripp, K1IIG

Ever wonder what the CD marking on the radios of the 50's was about?



CONELRAD (Control of Electromagnetic Radiation) is a former method of emergency broadcasting to the public of the United States in the event of enemy attack during the Cold War. It was intended to allow continuous broadcast of civil defense information to the public using radio or TV stations, while rapidly switching the transmitter stations to make the broadcasts unsuitable for Soviet bombers that might attempt to home in on the signals (as was done during World War II, when German radio stations, based in or near cities, were used as beacons by pilots of bombers).

U.S. president Harry S. Truman established CONELRAD in 1951. After the development of intercontinental ballistic missiles reduced the likelihood of a bomber attack, CONELRAD was replaced by the **Emergency Broadcast System (EBS)** on August 5, 1963, which was later replaced with the **Emergency Alert System (EAS)** on January 1, 1997; all have been administered by the Federal Communications Commission (FCC).

Unlike the EBS and EAS, CONELRAD was never intended to be used for local civil emergencies such as severe weather.

"CD Mark" symbols (usually simple white triangles) were on the dials of most radios sold in the US during the 50's at CONELRAD's **640** and **1240 kHz** frequencies.



Prior to 1951, there was no systematic way for the U.S. government to communicate with citizens during an emergency. However, broadcasters would typically interrupt normal

programming to issue emergency bulletins, as happened during the attack on Pearl Harbor on December 7, 1941 and the first successful tornado warning in 1948. Such bulletins were the forerunner to CONELRAD.

The CONELRAD concept was originally known as the Key Station System. According to an FCC document created during the "Informal Government?Industry Technical Conference" on March 26, 1951:

"The primary plan for alerting broadcast stations that is currently being considered by the FCC Study Group is known as the Key Station System. The arrangement requires certain telephone circuits (private wire or direct line to Toll Board) between the Air Defense Control Centers (A.D.C.C.) and specified radio stations to be known as "Basic Key Stations". Additional telephone circuits (direct line to Toll Board) will be required in certain cases, between "Basic Key Stations" and other stations to be known as "Relay Key Stations". Each "Basic Key Station" receiving an alert or warning signal from the A.D.C.C. shall, if so directed, proceed to broadcast a predetermined message and also relay the message by telephone to all "Relay Key Stations" under his control as specified." CONELRAD was officially introduced on December 10, 1951.

CONELRAD had a simple system for alerting the public and other "downstream" stations, consisting of a sequence of shutting the station off for five seconds, returning to the air for five seconds, again shutting down for five seconds, returning to the air again (for 5 seconds), and then transmitting a 1 kHz tone for 15 seconds. Key stations would be alerted directly. All other broadcast stations would monitor a designated station in their area.

In the event of an emergency, all United States television and FM radio stations were required to stop broadcasting. Upon alert, most AM medium-wave stations shut down. The stations that stayed on the air would transmit on either 640 or 1240 kHz. They would transmit for several minutes and then go off the air, and another station would take over on the same frequency in a "round robin" chain. This was to confuse enemy aircraft who might be navigating using radio direction finding. By law, radio sets manufactured between 1953 and 1963 had these two frequencies marked by the triangle-in-circle ("CD Mark") symbol of Civil Defense.

Although the system by which the CONELRAD process was initiated (switching the transmitter on and off) was simple, it was prone to numerous false alarms, especially during lightning storms. Transmitters could be damaged by the quick cycling. The switching later became known informally as the "EBS Stress Test" (due to many transmitters failing during tests) and was eventually discontinued when broadcast technology advanced enough to make it unnecessary.

Beginning January 2, 1957, U.S. amateur radio came under CONELRAD rules and amateur stations were also required to stop transmitting if commercial radio stations went off the air due to an alert. Several companies marketed special receivers that monitored local broadcast stations, sounding an alarm and automatically deactivating the amateur's transmitter when the broadcast station went off the air.

In a Time magazine article featured in the November 14, 1960 issue, the author details why the warning system consisting of localized Civil defense sirens and the CONELRAD radio-alert system was “basically unsound”. The author’s alternative was to advocate for the National Emergency Alarm Repeater as a supplement, which did not need a radio or television to be switched on to warn citizens, nor a large CD siren to be in their vicinity.

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Cold war era Poster



An old car radio with the CONELRAD markings in red. Note AM only radio.

First commercial transistor radio, with small red dial markings

ZULU TIME WHAT THE HECK IS THAT?

by
Geoff Haines, N1GY

One of the aspects of amateur radio that is a major source of enjoyment is talking to other hams halfway around the world. Whether you are a contester or a rag chewer is of little consequence, the contact is fun either way. Often, QSL cards will be sent by both operators to verify the contact. Herein lies the problem with time. Both operators must specify the same, correct, time to identify the contact in each others logs. If one or the other applies for an operating award based on that and other contacts, the log checker will invalidate the contact if the time and/or other data on the log entry do not match. For this reason most hams specify the time of the contact in Greenwich Mean Time. This is abbreviated to G.M.T. or "Zulu" Time.

Zulu time is the same all over the world. No matter if you are in Zolfo Springs or Zimbabwe, 0200Z is 0200Z. Now known by it's modern name, Universal Coordinated Time or UTC for short, it is the accepted standard for time around the globe. By the way, it is referred to as UTC instead of UCT because the original was in the French language. I have no idea why! The time is based on the time at the prime meridian or 0 degrees Longitude which passes through Greenwich England, hence "Greenwich Mean Time". All of this basically is because in the late 19th century, when all of this was decided, the British Admiralty and Commercial shipping interests were the biggest dog on the block, and therefore had the loudest bark when deciding where to put the Prime Meridian.

All of this serves only to put a little perspective on UTC or Zulu Time. The big question for the average ham remains "OK but what time is it at my shack?" The answer follows. To convert from local time to Zulu time a factor is added or subtracted depending upon where your QTH is, and what time zone you are currently in. Here in West Central Florida, we have only two time zones that affect us, Eastern Standard Time and Eastern Daylight Time. Twice a year, in the spring and the fall, we switch from one to the other. We have all heard the old saying about "spring ahead, fall back". This is an easy way to set our clocks to the correct Local Time. One hour ahead when we do it in the spring and one hour back when we do it in the fall. The important thing to remember is that this only affects Local Time, not UTC or Zulu Time. It stays the same all year round.

Thus during Eastern Standard time, we have to ADD 5 hours to Local Time to convert to UTC. During Eastern Daylight time we add only 4 hours to make the conversion. Remember that you also have to account for the DATE as well when doing the conversion. This net starts at 9:00pm Local time on Thursday evening. Converting to UTC makes it 0200 Z but on Friday morning, not Thursday. Notice that UTC or Zulu Time is always expressed in the 24 hour format, no AM or PM. Most countries in the world do this with their local time as well. 1300 is always one hour after noon while 1:00 could be AM or PM.

You say "stop, my brain is reeling, how do I make this simple?" OK, some hams solve the problem by having 2 clocks in the radio room. One set to Local Time and one set to UTC. MFJ sells a variety of clocks that can do this for you, either by having 2 clocks side by side or one clock that can be easily switched from one display to the other. Other retailers offer similar timepieces. Setting the correct time is as close as your computer. Just go to ["time.is"](http://time.is) or ["nist.gov"](http://nist.gov) and select the appropriate time zone. Place this site in your "favorites" file and every time you go back to it, it will show you the dead-on correct time in your time zone. You can easily change the time zone to show UTC as well. You can use the time shown to update the clock in your PC or Mac as well as reset your other timepieces too. In order to assure that the time you write on a QSL card or your Station Log is correct and verifiable, most ham radio publications suggest recording all of the time notations in UTC. This is vital for QSL cards and your log book since these may be used to apply for awards or to verify others applications for awards.

Remember to assign the correct date as well. When the time goes from 2400 Z to 0001 Z, the date also changes.

To sum up, During Eastern Standard Time, add 5 hours to obtain UTC. During Eastern Daylight Time, add 4 hours.

Well, that is enough about Greenwich Mean Time (GMT) or Zulu Time for now, even my head is hurting.

73

SWAP / TRADE / SELL

If anyone has gear they wish to sell or donate, please send the particulars to the editor for inclusion in the next issue. **BRING YOUR FOR SALE GEAR TO FIELD DAY AND OFFER IT FOR SALE THERE AS WELL BRING YOUR OWN TABLES PLEASE!!**

VHF and UHF Antennas: Made with 3/32" welding rod and SO-239 connector easy to assemble and mount on 3/4" PVC pipe. \$10.00 each Call Geoff at 941-447-8579

PowerPole Power Distribution Blocks in 4+1, 6+1, and 8+1 sizes \$15, \$20, \$25 each respectively Can custom build to suit. Call Geoff at 941-447-8579

Foot operated PTT switches brand new from MPJA wired with 3.5mm mono plug on 6' cable. \$10 Call Geoff at 941-447-8579

FOR SALE: Icom IC 706 MK Two, 160 to 2 meter 100 watt transceiver. Purchased new in 2001 but never used. \$350.00, Contact George, K4AWAYaesu FTM-3200 DR VHF Digital- Analog two meter transceiver, new in box, \$125.00, Contact George, K4AWA

TYT 440 MHz 45 watt transceiver, \$70.00. Contact George, K\$AWA

FOR SALE: Fitbit Flex wireless wristband. New in box, never used. \$50.00. Contact George, K4AWA

Contact George, K4AWA, 941-807-5475 or E Mail K4AWA @aol.com

KENWOOD TM-261 two meter radio with low/medium/high power (50/10/5 watts) also has air band receive and auto power turn off, auto repeater offset, and CTCSS tone encode features. The radio is in excellent to mint condition. Asking \$60. Contact Mike Ryan (mryan001@tampabay.rr.com)

From Burch K4QXX

Dentron 2k antenna tuner. \$150

Yaesu FT-857D Radio with separation kit \$550

Ameritron AL-811H 800 watt amp. The tubes are a little soft but I have a brand new set of tubes that I will include with the Amp. \$500 including the new tubes. Amp is wired for 110 but can be wired for 220.

Or I will sell all of the above (Tuner, Radio, Amp and tubes) for \$1000 as a package deal.

I also have a 700watt 70cm amp that I will sell for \$600. Amp is wired for 220.

I have a 1296 150watt amp that I will sell for \$200 Amp is wired for 110.

Contact Burch, K4QXX via **Email: burchakin@verizon.net**

Club Meetings

Monthly Meeting August 1, 2017 Bible Baptist Church 2113 Morgan Johnson Rd. 34208

Monthly Board Meeting July 18, 2017 TBA 7 PM

Monthly ARES Meeting June 25, 2017 Manatee County EOC 7 PM

Sad News about Fiona's Restaurant.

Apparently Fiona's Restaurant has closed it's doors. Thus, the usual third Saturday breakfast get-together that used to be held there will have to move. **One suggestion made is to move to the Popi's IV Restaurant on Rt. 301 in Ellenton (3911 US Rt 301 Ellenton, Fl. 1.2 miles west of I-75 on south side of street)** which will be the meeting site for the July Breakfast Get-Together. You the members will have the final say. Other options and suggestions are welcomed. Please contact Chuck, KJ4DHJ at 941-776-7028 or via email at globalchuck@aol.com