WEST VIRGINIA SPLATTER

OCTOBER 2025

THE INTERNATIONAL DX ASSOCIATION

The International DX Association (INDEXA) is an amateur radio organization dedicated to working DX and making DX possible. The IDEXA is a non-profit organization and has been managed by volunteers since 1983. In its years of service to the DX community it has sponsored hundreds of DXpeditions to rare and semi-rare countries.

INDEXA:

- Promotes and supports DX operations in countries that have limited or no amateur radio activity. Support is usually to DXpeditions to rare DXCC entities.
- Provides a quarterly newsletter via E-mail for INDEXA members.
- Promotes goodwill among amateur radio operators of the world.
- Supports and abides by amateur radio rules and regulations set forth by the FCC and other governing bodies.
- Promotes DX operations by amateur radio operators on an equal basis, regardless of their class of license.
- Promotes good amateur radio operating practices.

INDEXA has been granted tax exempt status under section 501(c)(3) of the Internal Revenue Code. For U.S. tax payers this means that your donations to INDEXA are now tax deductible to the extent permitted by law.

In every instance, INDEXA exists to promote the future welfare of amateur radio and the DX community. INDEXA is here for you! For more information on INDEXA or to join INDEXA go to www.indexa.com. You may also find them on Facebook.

Dan Hall, KF8BKS thinks his new radio has fallen in love with him!

It hasn't said anything but he's been picking up a lot of signals.

CW

In 1836 Samuel Morse built the first working telegraph. He also created a code that allowed telegraph operators to exchange information. The Morse Code is still used by telegraph, radio and signal light operators around the world. I know of at least one case of it being used to cheat at cards. I'm not going to list the code here. Mainly because I can't type that well.

To learn the code for CW (Continuous Wave) it helps to think of it as sounds instead of dots and dashes or light flashes of different lengths. Dots are “dit”. Dashes are “dah”. Therefore, “A” is “dit dah” or “didah”.

A code practice oscillator makes it easier to learn the code. ARRL has a variety of materials to help beginners learn code and become proficient with it. “The CW Way of Life: Learning, Living, and Loving Morse Code (in a Digital World” by Chris Rutkowski is another book I have had reccommended to get me started.

TRUNKED RADIO SYSTEMS

I have recently heard several mentions of *Trunked Radio Systems* used in Emergency Communications. Since I wasn't familiar with the term I decided to do some research. This is a compilation of what I learned.

A Trunked Radio System (TRS) is a two-way radio system that uses a control channel to automatically assign frequency channels to groups of user radios. In a traditional radio system a group of users communicate over a single shared radio channel. Only one person can talk at a time. In these systems channels are selected manually. Before getting on the air, the group has to select which channels or frequencys to use, and program or set all the radios to those channels and frequencys. This is an inefficient use of frequency resources because the group needs exclusive use of those channels regardless of their actual usage.

A trunked radio system on the other hand allows the channel selection process to be done automatically by a computer, and avoids channel conflict and maintains frequency efficiency. Trunking provides the benefits of less user intervention to operate the radio and greater efficiency with large numbers of users. Instead of assigning a radio channel to one user group at a time, users are instead assigned to a logical talkgroup. When any user in that group wishes to talk with another user in the talkgroup, an idle radio channel is automatically assigned by the system. Many unrelated conversations can occur on a channel, making use of the idle time between conversations. Each radio transceiver contains a microprocessor that handles the channel selection process. A control channel coordinates all the activity of the radios in the system. The control channel computer sends packets of data which let one talkgroup to talk together, regardless of frequency.

A conventional radio system uses a dedicated channel (frequency) for each group of users. A trunked radio systems on the other hand, use a pool of channels which are available for a great many different groups of users. Trunked radio systems take advantage of the probability that with any number of users, not everyone will need channel access at the same time. Therefore fewer radio channels are required. From another perspective, with a given number of radio channels, a much greater number of user groups can be accommodated.

Also, since the talk groups are constantly transmitting on different frequencies, trunked radio systems make it more difficult for a scanner listener without a programmed trunk tracking scanner to keep up with the conversation.

In essence, a trunked system is a packet switching computer network. Users' radios send data packets to a computer, operating on a dedicated frequency (a control channel) to request communication on a specific talkgroup. The controller sends a signal to all radios monitoring that talkgroup, instructing the radios to switch to the frequency indicated to monitor the transmission. After the user is done speaking, the users' radios return to monitoring the control channel.

This arrangement allows multiple talk groups to share a set of radio frequencies without hearing each other's conversations. Unlike a conventional radio which assigns users a frequency, a trunk system uses a number of frequencies allocated to the entire system. The control channel coordinates the system so talkgroups can share these frequencies seamlessly. This dramatically increases system capacity with optimal use of frequencies. Many radios today treat talkgroups as if they were frequencies, since they act like them.

Each system is built with a number of system talkgroups identified as required by the planned user agencies, to which new talkgroups can easily be added as the system matures and new agencies or new requirements are identified. A dispatch operator can actually 'patch' two talkgroups together making a new 'virtual' talkgroup that allows users from different agencies to communicate without having to switch channels.

The primary advantage of a trunked system is efficiency. More users can communicate over only a few frequencies. Another benefit of trunking is how easy it can alloe radio interoperability and add user groups to the system post-implementation.

I hope this brief discussion helps others understand what trunk systems are all about.

THE PARKERSBURG/WOOD COUNTY AREA HAMFEST

This Hamfest will be held at the Wood County 4H Camp on Butcher Bend Road, Mineral Wells, WV 26120 on Saturday, October 11, 2025. For more information visit the Wood County Em. Comm. website at: http://wc8ec.org or call Ken Harris, WA8LLM at (304-679-3470) or wa8llm@yahoo.com.

SHORT PATH, LONG PATH AND THE GREAT CIRCLE ROUTE

During a WVDXA breakfast at Bob Evans one Tuesday the discussion turned to aiming beam antennas. I knew the DX location being discussed was located about 38 degrees north, the same as West Virginia. I assumed the antenna would be pointed nearly west. I was wrong. I had forgotten the first axiom of navigation – Mercator projections are only good for short range navigation.

I don't remember what the target being discussed was; but I have found an easy way to find the short path to any location in the world. And, it doesn't involve direct use of trigonometry. All you need to know (or look up) is the latitude and longitude of your QTH (location) and that of the target. For this example I am using Flatwoods, WV since it is nearly the center of the state. As a target I chose Bujumbura, Burandi since an upcoming DXpedition is headed to that country. I don;t know exactly were in Burundi they will be operating so I chose to use the capitol city.

Flatwoods, WV is located at 38º 43' 17" North latitude and 80º 39' 11" West longitude. Bujumbura is located at 3° 21' 40" S and 29° 20' 52" E. It was easy to look up these locations with Google.

With this basic information I went to www.anycalculator.com/navigationcalculator.html and plugged in the information. It quickly spit out the short path or great circle route from Flatwoods to Bujumbura as 79.69º and the distance as 7442 statute miles. In this case the shortest path between these two points requires you to aim your antenna slightly north of east to reach a point in the southern hemisphere. Because this is a great circle route the "return" path is 309.65º not 259.69º (79.69 + 180). Also, since it is a "circle" route the heading changes constantly, the final heading before reaching Bujumbura will be 129.65º. Planes flying directly from one to the other would establish waypoints along the route, maybe every thousdand miles, and change course at them. Your radio signal can't do that, but it doesn't need to either.

By using the latitude and longitude of your home base and the precise location of the DXpedition's location you can get a more precise direction to aim your beam antenna and the distance to it.

73, Good luck and good hunting.

SAVE THIS DATE!!!!

Sunday, November 2, 2025-Kanawha Amateur Radio Club Tailgate Hamfest at the clubhouse parking lot in Coonskin Park. No table fees or admission cost or prizes. Just a chance to buy or sell stuff and meet other hams!

WEST VIRGINIA SPLATTER

The West Virginia Amateur Radio Club has posted all issues of WV SPLATTER on their website at www.wv8ar.com . WV Nets and WV Clubs listings will be sent as separate documents once a quarter rather than each month to reduce the volume sent out. Corrections and updates to those items will be held until the next quarter.

I continually need more and different types of articles for WV SPLATTER. Especially short fillers. If you know of an event coming up, have an idea for an article you want to write, or something you want me to research and write about, then drop me an email at the address below. I also need photos and artwork each month. Use the same address to submit email addresses for anyone you think might be interested in being on the WV SPLATTER Distribution List. They don't have to be in West Virginia, they don't even have to be a ham.

I was recently asked about including advertisements for ham gear in WV SPLATTER. Ads for ham radio equipment, tools, and related items are welcome. Get them to me by the fifteenth of the month and I'll include them in the next months WV SPLATTER.

73 and thanks to all.

Jim Hudson, KE8PNY
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