

Northwest Indiana DX CLUB

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April 2015

President's Corner

CQWW WPX SSB Contest is this weekend, the 28-29th. Should be a lot of countries on for you to get a new one or fill band slots.

The CQWW WPX CW Contest is May 30-31st.

We had a nice meeting on **March 14th** at the Viking Chili Bowl in Valparaiso. Jerry Hess, W9KTP, talked about the new Band Plans and presented his version for 80 meters.

Several DXpeditions are coming up soon. Hopefully, there will be one you need.

We have a lot of information in this issue, a big 14 page edition. Enjoy!

73
John, W3ML

Happy DXing!

Don't Forget

DXCC CARD CHECKING

Doctor Richard Lochner, K9CIV has been appointed an Official ARRL DXCC Card Checker. Contact Rich to schedule an appointment for card checking.

You may email him at k9civ@arrl.net for details on how to mail your cards to him, if you desire to go that route.



INSIDE THIS ISSUE

- 1 President Speaks
- 2- Member News/DX News

NWI DX Club Website

<http://nwidxclub.weebly.com/>

Member News

If you have any news to tell, please send it to me so I can send it to the group.

Unusual Propagation on 10-Meters

Carl Luetzelschwab K9LA

In a personal e-mail, Steve KD9HL told of his experiences (mostly on 10-Meters) from late October thru mid December. His observations (using his TH6-DXX at 55 feet) were:

1. On many occasions in the mornings the New England stations had their beams pointed toward Europe. By pointing my beam short path toward Europe the New England station was strongest. When they turned their beams towards the Midwest they would fade and often disappear but sometimes they could work the West Coast. Pointing my beam west had no effect – nil signals.

2. Once in a while, when a New England station would point West their signal was still readable but now had an “echo” or flutter on the signal. To me this suggested some multi-path occurrence. It sometimes sounded similar to aurora. I never heard this from the Southwest USA stations but did hear it once from a Puerto Rico ham.

3. For stations in New England, Florida and the Southwest, their signal would often be strongest when my beam was pointed 45 to 130 degrees off of the short path – a skewed path. The skew to the New England stations was to the southeast.

4. The Southwestern stations (mainly located in Texas) would often be working Japan in the late afternoon. My strongest reception of their signals was to point my beam towards Japan (northwest). Occasionally I had to point my antenna due west. I was successful in making a number of contacts by pointing these ways.

There could be several mechanisms going on here, so let's try to sort them out. The solar conditions during the reported period indicate that the highest monthly median MUF (maximum usable frequency) for the KD9HL-to-New England path (around 1325 km) at the best time of the day (2000 UTC) was about 18 MHz. This is far enough away from 10-Meters to conclude that Steve's observations did not involve normal F2 propagation via short path. Sporadic E is also unlikely, especially in October and November.

What this leaves is scatter paths and skewed paths. A scatter path implies additional loss due to the scattering process, and can be classified as back-scatter, side-scatter or forward-scatter depending on where the

scattering region is in relation to the stations. A skewed path means a reflection with little additional loss (at least in my mind). Using these definitions, let's continue.

Figure 1 shows my best-guess scenario for Steve's first observation.



Figure 1 – New England station with antenna pointed to Europe

The red dot with the antenna is a New England station. The yellow dot is KD9HL. The gray irregular-shaped object just below Greenland is a scattering region. The two solid white lines indicate radiation from the New England station on a general heading to Europe. Although we don't know the antenna pattern of the New England station, we can assume its azimuth pattern has a sufficiently wide beam width to illuminate the ionosphere on each side of the true great circle path to Europe. The dashed white line from the gray scatter region to KD9HL denotes the back-scattered signal into KD9HL.

It's tough to pin down exactly where the scattering region is, but it is likely to be somewhere to the northeast of the New England station and perhaps off to one side of the path to Europe. Being in the morning during daylight, I doubt if the auroral oval was involved.

Figure 2 is my best-guess scenario for Steve's second observation.



Figure 2 – New England station with antenna pointed west

The red dot with the antenna is a New England station, the yellow dot is KD9HL, the gray irregular-shaped object between the New England station and KD9HL is a scattering region and the white solid line indicates radiation from the New England station on a general heading to the West Coast. In Figure 2, the blue line from the gray scatter region to KD9HL denotes the forward-scattered or side-scattered signal into KD9HL.

Again, it's tough to pin down exactly where the scattering region is, but it is likely between the New England station and KD9HL. It could have been back-scatter from a scatter region to the West of both stations, but I don't know if the signal under this condition was stronger with KD9HL's antenna pointed towards New England or pointed to the west.

As for the report of echoes in the second observation, a true echo would be the result of two paths arriving at KD9HL at near the same time. It's possible that two scatter paths were arriving because the New England station's RF is sprayed over a wide arc. It's also possible that the scattering process caused flutter, which could sound similar to an echo.

The third observation is similar to other skewed paths that I've experienced or written about. For example, I've taken advantage of the southeast path to Europe on 10-Meters when the true short path to the northeast wasn't available. And I've taken advantage of the southwest path to Japan on 10-Meters when the true short path to the northwest wasn't available. I've also written about the southeast path to Europe on 160-Meters when auroral activity shut down the true short path to the northeast. And more recently I wrote about 10-Meter skewed paths from the US to FT5ZM in the southern Indian Ocean.

The fourth observation is similar to the first observation, where a scatter region to the west or northwest of KD9HL was the likely enabling mechanism via back-scatter. It is likely that the true great circle path from KD9HL to Texas wasn't available due to low MUFs.

In summary, scatter paths and skewed paths are there more than we think. We need to remember that the ionosphere is not homogeneous and just sitting there nice and quiet. It is very dynamic, with blobs of ionization here and there and pockets of depleted ionization. I believe the ARRL Centennial activity gave us more opportunity to experience these paths. The bottom line is it can be tough to fully explain these modes, but it is easy to turn your antenna to see if they're occurring – you may make a QSO that others miss.

HISTORY OF THE CAR RADIO

Submitted by Tom, W8FIB

Seems like cars have always had radios, but they didn't.
Here's the story:

One evening, in 1929, two young men named William Lear and Elmer Wavering drove their girlfriends to a lookout point high above the Mississippi River town of Quincy, Illinois, to watch the sunset.

It was a romantic night to be sure, but one of the women observed that it would be even nicer if they could listen to music in the car.

Lear and Wavering liked the idea. Both men had tinkered with radios (Lear served as a radio operator in the U.S. Navy during World War I) and it wasn't long before they were taking apart a home radio and trying to get it to work in a car.

But it wasn't easy: automobiles have ignition switches, generators, spark plugs, and other electrical equipment that generate noisy static interference, making it nearly impossible to listen to the radio when the engine was running.

One by one, Lear and Wavering identified and eliminated each source of electrical interference. When they finally got their radio to work, they took it to a radio convention in Chicago.

There they met Paul Galvin, owner of Galvin Manufacturing Corporation.

He made a product called a "battery eliminator", a device that allowed battery-powered radios to run on household AC current.

But as more homes were wired for electricity, more radio manufacturers made AC-powered radios.

Galvin needed a new product to manufacture. When he met Lear and Wavering at the radio convention, he found it. He believed that mass-produced, affordable car radios had the potential to become a huge business.

Lear and Wavering set up shop in Galvin's factory, and when they perfected their first radio, they installed it in his Studebaker.

Then Galvin went to a local banker to apply for a loan. Thinking it might sweeten the deal, he had his men install a radio in the banker's Packard.

Good idea, but it didn't work.

Half an hour after the installation, the banker's Packard caught on fire. (They didn't get the loan.)

Galvin didn't give up.

He drove his Studebaker nearly 800 miles to Atlantic City to show off the radio at the 1930 Radio Manufacturers Association convention.

Too broke to afford a booth, he parked the car outside the convention hall and cranked up the radio so that passing conventioners could hear it.

That idea worked -- He got enough orders to put the radio into production.

WHAT'S IN A NAME

That first production model was called the 5T71.

Galvin decided he needed to come up with something a little catchier.

In those days many companies in the phonograph and radio businesses used the suffix "ola" for their names - *Radiola*, *Columbiola*, and *Victrola* were three of the biggest.

Galvin decided to do the same thing, and since his radio was intended for use in a motor vehicle, he decided to call it the *Motorola*.

But even with the name change, the radio still had problems: When Motorola went on sale in 1930, it cost about \$110 uninstalled, at a time when you could buy a brand-new car for \$650, and the country was sliding into the Great Depression. (By that measure, a radio for a new car would cost about \$3,000 today.)

In 1930, it took two men several days to put in a car radio -- The dashboard had to be taken apart so that the receiver and a single speaker could be installed, and the ceiling had to be cut open to install the antenna.

These early radios ran on their own batteries, not on the car battery, so holes had to be cut into the floorboard to accommodate them.

The installation manual had eight complete diagrams and 28 pages of instructions. Selling complicated car radios that cost 20 percent of the price of a brand-new car wouldn't have been easy in the best of times, let alone during the Great Depression .

Galvin lost money in 1930 and struggled for a couple of years after that. But things picked up in 1933 when Ford began offering Motorola's pre-installed at the factory.

In 1934 they got another boost when **Galvin** struck a deal with B.F. Goodrich tire company to sell and install them in its chain of tire stores.

By then the price of the radio, with installation included, had dropped to \$55. The Motorola car radio was off and running.

(The name of the company would be officially changed from **Galvin** Manufacturing to "Motorola" in 1947.)

In the meantime, **Galvin** continued to develop new uses for car radios.

In 1936, the same year that it introduced push-button tuning, it also introduced the Motorola Police Cruiser, a standard car radio that was factory preset to a single frequency to pick up police broadcasts.

In 1940 he developed the first handheld two-way radio -- The Handy-Talkie for the U. S. Army.

A lot of the communications technologies that we take for granted today were born in Motorola labs in the years that followed World War II.

In 1947 they came out with the first television for under \$200.

In 1956 the company introduced the world's first pager; in 1969 came the radio and television equipment that was used to televise Neil Armstrong's first steps on the Moon.

In 1973 it invented the world's first handheld cellular phone.

Today Motorola is one of the largest cell phone manufacturers in the world.

And it all started with the car radio.

WHATEVER HAPPENED TO the two men who installed the first radio in Paul Galvin's car? Elmer Wavering and William Lear, ended up taking very different paths in life. Wavering stayed with Motorola. In the 1950's he helped change the automobile experience again when he developed the first automotive alternator, replacing inefficient and unreliable generators. The invention lead to such luxuries as power windows, power seats, and, eventually, air-conditioning.

Lear also continued inventing.

He holds more than 150 patents. Remember eight-track tape players? Lear invented that. But what he's really famous for are his contributions to the field of aviation. He invented radio direction finders for planes, aided in the invention of the autopilot, designed the first fully automatic aircraft landing system, Wavering stayed with Motorola. In the 1950's he helped change the automobile experience again when he developed the first automotive alternator, replacing inefficient and unreliable generators. The invention lead to such luxuries as power windows, power seats, and, eventually, air-conditioning.

Lear also continued inventing. He holds more than 150 patents. Remember eight-track tape players? Lear invented that. But what he's really famous for are his contributions to the field of aviation. He invented radio direction finders for planes, aided in the invention of the autopilot, designed the first fully automatic aircraft landing system, and in 1963 introduced his most famous invention of all, the Lear Jet, the world's first mass-produced, affordable business jet.

(Not bad for a guy who dropped out of school after the eighth grade.)

Sometimes it is fun to find out how some of the many things that we take for granted actually came into being!

AND

It all started with a woman's suggestion!!

Abbott and Costello....real hams!

You have to be old enough to remember Abbott and Costello, and too old to REALLY understand computers, to fully appreciate this. For those of us who sometimes get flustered by our computers, please read on...

If Bud Abbott and Lou Costello were alive today, their infamous sketch, 'Who's on First?' might have turned out something like this:

COSTELLO CALLS TO BUY A COMPUTER FROM ABBOTT

ABBOTT: Super Duper computer store. Can I help you?

COSTELLO: Thanks I'm setting up an office in my den and I'm thinking about buying a computer.

ABBOTT: Mac?

COSTELLO: No, the name's Lou.

ABBOTT: Your computer?

COSTELLO: I don't own a computer. I want to buy one.

ABBOTT: Mac?

COSTELLO: I told you, my name's Lou.

ABBOTT: What about Windows?

COSTELLO: Why? Will it get stuffy in here?

ABBOTT: Do you want a computer with Windows?

COSTELLO: I don't know. What will I see when I look at the windows?

ABBOTT: Wallpaper.

COSTELLO: Never mind the windows.. I need a computer and software.

ABBOTT: Software for Windows?

COSTELLO: No. On the computer! I need something I can use to write proposals, track expenses and run my business. What do you have?

ABBOTT: Office.

COSTELLO: Yeah, for my office. Can you recommend anything?

ABBOTT: I just did.

COSTELLO: You just did what?

ABBOTT: Recommend something.

COSTELLO: You recommended something?

ABBOTT: Yes.

COSTELLO: For my office?

ABBOTT: Yes.

COSTELLO: OK, what did you recommend for my office?

ABBOTT: Office.

COSTELLO: Yes, for my office!

ABBOTT: I recommend Office with Windows..

COSTELLO: I already have an office with windows! OK, let's just say I'm sitting at my computer and I want to type a proposal. What do I need?

ABBOTT: Word.

COSTELLO: What word?

ABBOTT: Word in Office.

COSTELLO: The only word in office is office.

ABBOTT: The Word in Office for Windows.

COSTELLO: Which word in office for windows?

ABBOTT: The Word you get when you click the blue 'W'.

COSTELLO: I'm going to click your blue 'w' if you don't start with some straight answers. What about financial bookkeeping? You have anything I can track my money with?

ABBOTT: Money.

COSTELLO: That's right. What do you have?

ABBOTT: Money.

COSTELLO: I need money to track my money?

ABBOTT: It comes bundled with your computer.

COSTELLO: What's bundled with my computer?

ABBOTT: Money.

COSTELLO: Money comes with my computer?

ABBOTT: Yes. No extra charge.

COSTELLO: I get a bundle of money with my computer? How much?

ABBOTT: One copy.

COSTELLO: Isn't it illegal to copy money?

ABBOTT: Microsoft gave us a license to copy Money.

COSTELLO: They can give you a license to copy money?

ABBOTT: Why not? THEY OWN IT!

(A few days later)

ABBOTT: Super Duper computer store. Can I help you?

COSTELLO: How do I turn my computer off?

ABBOTT: Click on 'START'.....

(Author unknown)

Member Profile

Chuck Hill-KC9OYE

By Steve Mollman-KD9HL

Chuck Hill, KC9OYE, as a 16 year old high school student, was first licensed in 1960 as KN9YPC.



Learning CW was a unique experience that most of us would envy. His father worked at the GTW Railroad depot in Valparaiso and was able to prevail on the station Agent-Operator to teach him the use of a telegraph key. Those old time railroad telegraphers were renowned for their ability to send and receive high-speed code, often while carrying on a side conversation.

After high school, he enlisted in the Air Force and was stationed in communications squadrons at Lowry AFB, Colorado and Chicksands AFB near Bedford, England. Leaving the Air Force he joined Bethlehem Steel at Burns Harbor, IN from where he retired.

Unfortunately, the license lapsed while in the Air Force but he re-licensed as an Extra Class in 2009. About a year and a half ago his home was heavily damaged by a fire that started in a faulty wall outlet. Destroyed in the fire was his entire ham radio setup. Since then he has been recovering from that disaster. The setup now is a Yaesu DX-3000 transceiver with a LDG 1000 Pro II tuner.

Logging/Operating software is the N3FJB program. He is also experimenting with the Ham Radio Deluxe Suite.

The antenna is a 135-foot long Buckmaster OCF Dipole that will tune on 6 thru 80 meters. Tom Ruggles, W8FIB, used his "Spud Gun" to shoot the wire up into the trees so that it now stretches from tree to tree at about 45 feet. The antenna was scored new on E-Bay for a very nominal price!

He is an avid DXer having achieved DXCC. SSB is preferred, but there is an E.F. Johnson straight key in the shack. The favorite bands are "wherever the DX is".

Feeling the frustrations of trying to crack a pile-up with 100 watts and a wire, there might be an amplifier and a beam in the future. The shack is still in the rebuild stage from the fire.

Each year Chuck participates with the NA9U Field Day group at Shelby, IN. This is a serious Field Day group whose hard work has resulted in some very high scores.

If you are going to take a licensing test in Valparaiso, Chuck will likely be one of the Volunteer Examiners.

Besides enjoying Ham Radio, DX and the NWIDXC Luncheons, he's an avid bicyclist. A few years ago he crossed Indiana following US 40 from Terre Haute to Richmond in 10 hours 27 minutes. There are also two completions of the Chicago Marathon under his sneakers.

Other avocations include bee keeping and collecting antique clocks. In the shack there is a beautiful schoolhouse style pendulum clock that he constructed. His wife Cheri is an accomplished ceramic artist selling her works at art shows. Chuck is also known to dabble with the ceramics having several of his pieces gracing the shack décor.

“THE NEW DXER’S HANDBOOK” ©

SECOND EDITION

Written by: **BRYCE K. ANDERSON, K7UA**

January 10, 2015

CHAPTER - 2

DX Cluster basics When I started DXing, there was no Internet or DX clusters. Friends called each other on the telephone or on local 2M frequencies to get the word out when a rare DX station was on. Today DX clusters are an infinitely better solution for knowing what is on the air. The clusters have become so important that every serious DXer needs to have Internet access and know how to properly use a DX Cluster.

How it works: There are many DX clusters throughout the world. They are all connected via the Internet. Consequently data that is submitted to any one of them gets instantly routed to all of them worldwide. The data is called a “spot.” The spot shows the call of a DX station, the frequency and mode that it is operating on, the time, and identifies who submitted the spot. Various software filters at the cluster or on your own computer can pass through spots that are relevant to you and screen out ones that are not. There are local DX clusters in most places. Many use web browser connections. Others may use either telnet or even local VHF packet connections. In addition to filters there are search functions to review past spot data. If you want to see if a particular rare DX station has been active and at what times and frequencies, you can just search for their call. Obviously that will help you know when and where to look for him.

Great. I now am connected and I see spots for stations that I want to contact. It is working. Here is a more advanced concept. While all of the clusters get sent pretty much the same data there are reasons to monitor more than one. The mother of all DX clusters is in Finland and operated by Radio Arcala OH8X. It can be accessed at <http://www.dxsummit.fi/> . It is a very sophisticated site and has several valuable tools available including propagation prediction. More on that in a later chapter.

Sometimes it can be useful to see the stations that are being spotted in other parts of the world. This can give you a feel for propagation conditions or to find out if that new DXpedition actually went on the air when they said that they would. You might even see yourself spotted from another continent.

Some cluster manners: It is considered poor form and very much frowned upon to spot yourself. The idea is to spot DX stations. While it is possible to send messages via this system, it is not Instant Messenger and should not be used as such. It isn't Twitter either. No one wants to hear your “tweets.” Not every DX station

warrants being spotted. Don't clutter up the cluster with spots from really common places. No one cares about them. If you are fortunate enough to be the first to discover a great DX station consider whether to spot him or not. Or spot him a little later. If you and a couple of other guys found the DX at the same time and you got through first, hold off spotting. Give the other discoverers a chance to work him. They have earned that right by finding the DX on their own too. Once you send that spot an instant dog pile is likely. The height of stupidity is to show the world how clever you are by spotting some really rare DX before you have worked it yourself. It is comical to see a spot and then hear the guy who sent it trying to make it through the chaos that he just created. Also, don't spot a station that has already drawn a big crowd. He already has all that he can handle. Did you just work a guy calling CQ and now he is CQing again? Give him a boost with a spot. Some DX stations will ask you to spot them. Don't duplicate spots that are already posted. Always be **VERY** careful what you enter. If you meant to enter PZ5XX on 20M CW and you mistype it as P5XX you will infuriate the entire planet! Tens of thousands of alarms will go off. Everybody needs North Korea on CW and you will instantly become extremely unpopular! If you see a spot for a good one and you can hear him, listen to be sure that the call sign of the spot was posted correctly. Mistakes are made. A call may have actually been HH3AA (Haiti), but some guy can't count dits and posted it as 5H3AA (Tanzania). Then everyone after him assumes that they worked a 5H, when actually they did not. Always double check the facts. One final thought. Just because you see a good spot does not mean that you can hear him. Don't just pile in and start calling without first listening to see if you can actually hear him well enough for a QSO. If you can't hear him, leave him to the guys who can. That goes double if the DX station is running simplex.

Editor Note: I will run a chapter a month.

Announced DX Operations

<http://www.ng3k.com/Misc/adxo.html>

NORTHWEST INDIANA DX CLUB



Radio	Confirming QSO				PSE QSL <input type="checkbox"/> TNX QSL <input type="checkbox"/>		
	DAY	MONTH	YEAR	UTC	RST	MHz	MODE

www.cheapqsls.com

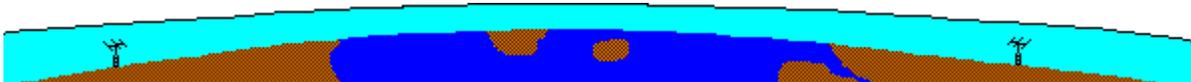
MEMBERS Attending the March Meeting

Chuck, KC9OYE and XYL; Jerry, W9KTP; Jurgen, N9RD; Steve, KD9HL; Tom, W8FIB; Mike, N9AFV; Earl, WA9JNO; Carl, K9LA; Rich, K9CIV and XYL and Son; John, W3ML and XYL.

Mike won the door prize that Steve donated. A MFJ dual Clock.

I want to thank those that have been sending in articles for the newsletter. All items are appreciated.

Don't forget to send in any information you would like to share with the Club members.



Until Next Time,

73

John

W3ML

