



Episode 288 - Guy Lemieux – VE2BWL

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Eric 4Z1UG:

QSO Today episode 288, Guy Lemieux, VE2BWL.

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Welcome to the QSO Today Podcast. I'm Eric Guth, 4Z1UG, your host.

Eric 4Z1UG:

Last week in my email message to my dear listeners, I wrote that I was inspired by my guest, Fred Schramm, K2HA, to finally pull the trigger on creating a QSO Today tour of Israel that would be like a tour bus DXpedition. Fred has already started to arrange his tour next year.

Eric 4Z1UG:

If you have an interest in coming to Israel as part of a 10-day tour in and around May 2021 with other hams that could include but not limited to some ham radio operations and beautiful parts of the country, as well as lectures, workshops, barbecue with Israeli hams, et cetera. While touring Israel, please fill out the form by clicking on the show notes banner called QSO today Israel tour 2021. As we progress, I'll keep you up to date.

Eric 4Z1UG:

Guy Lemieux, VE2BWL, had a chance to build his dream contest station in a rural area of Southern Quebec while attempting to relax in the evenings and weekends from a stressful career. His project was to build his own 110-foot self-supporting tower from a pile of new metal stock delivered to his barn. Guy shares this project and the stories behind his seven-tower contest station in this QSO Today. VE2BWL, this is Eric, 4Z1UG. Are you there, Guy?

Guy VE2BWL:

Yes, I am, 4Z1UG. This is Victor Echo 2 Bravo Whiskey Lima. Good morning.

Eric 4Z1UG:

Good morning, Guy. Thanks for joining me on the QSO Today Podcast. Can we start at the beginning of your ham radio story? When and how did it start for you?

Guy VE2BWL:

Okay, very good. Well, I was born in Lac-Mégantic, a small town in southern Quebec near the US border, the state of Maine actually. And unfortunately, Lac-Mégantic got known because, in 2013, there was a train wreck that killed 47 people and then destroyed the center of town. And that's where I was born. And that's where I spent my youth. Now, Lac-Mégantic was a small town of about 6,000 people. And the main industries, there were wood processing, cutting trees and doing planks and plywood, and that thing.

Guy VE2BWL:

But there were two places in the town that were of interest to me. One was the telegraph office at the train station. And then, the other one was the airport where they had the weather station and an air radio and a low-frequency beacon. And they were operating around the clock. In term of technology, that was it. About the age of eight, we had an AM radio, which had the broadcast, the shortwave broadcast bands. And I started listening to that for long hours, trying to identify stations in various countries. And I only spoke French then. So, I was missing a good part of what was happening.

Guy VE2BWL:

But at age 11, I met an operator at the airport that spoke French and he was a ham. So, that was my first interaction with amateur radio. His name was Richard Lafleche. His call was Victor Echo 2 Lima Yankee. And he had a boarding room at my grandparents' house. And in his room was a DX20 and a trio receiver and a long wire in the yard.

Guy VE2BWL:

And I was just fascinated when he operated this station in CW. And then, I started to learn Morse code and I spent many weekends as much as I could at the airport. And within a few years, I was fairly fluent in English, learned basic electronics, weather observations, and basic air traffic control.

Eric 4Z1UG:

And how did the people at the airport, how did they respond to an 11-year-old kid who hung around the airport?

Guy VE2BWL:

Well, it was a very small airport, one of those airports that were built during the war every 60 miles or so. So that plants that were fairing from Western Canada could stop by in case of emergency. So, it wasn't a big airport, but the operators were always very kind in term of their time. They started teaching me all things. So, first in French, and then after that, with other operators that were mostly English speaking. So, I started learning basic electronics from them, weather observations and that thing.

Guy VE2BWL:

And about that same time, my father brought for me a hand key and a sounder and two large batteries on a very nice piece of wood, all very well laid out. So, I started doing CW with a sounder, a telegraph sounder, but fairly soon thereafter, I got an oscillator with one tube and I started learning it the right way for ham radio. Now, when I was about 13, Richard got transferred. And then, an English-speaking operator. And by then, I was okay with that. He was a ham and became my second Elmer. His name was John Kennedy.

Guy VE2BWL:

Now, he was also transferred within a year and left by myself basically to prepare for the exam. And you needed to be 15 years old to get your ticket in Canada. So, anyway, within a few months after turning 15, my father drove me 70 miles to the nearest DOT office, Department of Transport in those days, and the basic exam consisted of sending it, receiving 15 words per minute, drawing five schematics, doing electronic, or answering questions on electronic theory and regulations. And there were no multiple choices exams then.

Guy VE2BWL:

So, I passed a code exam, the theory exam but didn't that explain the schematics well enough. And the examiner was called an inspector then sent me back home and told me to return in a year. And that was a tough approach, could have been discouraging, although he was technically right to do that. I still needed to learn. And there were no clubs in this little town. And other than the couple of hams that I've met, that was it.

Eric 4Z1UG:

What year was this?

Guy VE2BWL:

That would've been in 1960.

Eric 4Z1UG:

Did your library have any resources like EARL books or other electronic books?

Guy VE2BWL:

Yes. In fact, not the library itself, but Richard gave me a handbook, Circa 1958, I think something like that. So, that was my basis for learning. But again, I didn't have any guidance and I did not understand everything properly and so on, so forth. So, anyway. It took me a little while to get back to pass an exam. And I was in college in Quebec City and then at the University of Sherbrooke where the same DOT office was easier to reach. So, at that point, in 1965, I got my basic ticket, CW only on HF at age 20, and then the advanced ticket a year later. And that was 55 years ago.

Eric 4Z1UG:

Now, what was your call sign, your first call sign? Do you remember?

Guy VE2BWL:

Victor Echo 2 Bravo Whiskey Lima. I've been holding this for 55 years.

Eric 4Z1UG:

Wow. Okay. And then, the upgrade also didn't change the call sign. Just the privileges.

Guy VE2BWL:

No, we did not have the novice-type approach where you had an end in your call and then changed when you changed class.

Eric 4Z1UG:

So, as a basic ticket in Canada in 1965, were you able to use all bands but CW only?

Guy VE2BWL:

Yes. That's correct. That gave you HF privileges. And in fact, it gave you VHF as well and UHF, but there were really no repeaters in those times.

Eric 4Z1UG:

And you had voice privileges above 140 megahertz.

Guy VE2BWL:

No, indeed, with the basic ticket, you could do that indeed.

Eric 4Z1UG:

Okay. So, you get your first license age 20, you're in college. What was the first rig?

Guy VE2BWL:

My first rig was an AR-3 receiver, which I built, but I soon replaced it with a national NC-190 when I got the license. And the transmitter was a Canadian army 19 set, brand new

out of the box. There was lots of surplus equipment then. So, I had that for probably a year and a half and then upgraded to a more complete station.

Eric 4Z1UG:

Now, was that 19 set, was that multi-band?

Guy VE2BWL:

No, no, that was, if I recall was 80 meters or maybe 80 and 40, but it was a low band per se.

Eric 4Z1UG:

Like the arc radios of the time.

Guy VE2BWL:

Yes.

Eric 4Z1UG:

These are all World War II surplus.

Guy VE2BWL:

Absolutely. And since they were available throughout, I guess, many surplus stores, that's where I got mine and it was next to nothing in term of purchasing that. So, that was a good radio to start with. But as soon as you got more active with many bands, I guess, had to upgrade.

Eric 4Z1UG:

Now, you're in college already. Was this interest in electronics and radio instrumental in the choices that you made for your education and career?

Guy VE2BWL:

Oh, yes. Very much so. I wanted to be an engineer and I did two years of a five years program at the University of Sherbrooke, but then I found out that engineering was not for me. I graduated three years later in 1970 in business administrations from Laval University in Quebec City. However, all my summer jobs were in technology and I spent my career mostly in telecom. Now, I was a bit of an oddball in a graduating class of over 180 people in business administration.

Guy VE2BWL:

All of my colleagues went to accounting, marketing, stockbrokers jobs, that thing. But I started with a degree as a central office foreman with Bell Canada. And my telecom road map after that was that I did long-distance line carriers, microwave maintenance,

switching, step-by-step cross-bar, 5ESS, that things. I went into marketing and sales, staff support, long-term planning, new systems, introduction, that thing.

Guy VE2BWL:

I worked for as well, Northern Telecom in manufacturing, analog and digital transmission systems, fiber optics, sales to major accounts. So, the career was basically started with radio. And I finished this in 2001 as the CEO of Bell mobility radio, a Bell Canada enterprise company, catering to police, fire, ambulances, large government, land mobile networks in Quebec and Ontario.

Eric 4Z1UG:

You're a telephone guy through and through.

Guy VE2BWL:

Oh, absolutely. Started with, the wire is connected to a, I guess, to a box right up to the introduction of digital technology and new protocols and all new advances. So, I really did managing of technical people, technicians, engineers, and so on throughout. And I guess the various departments I worked with, of course, allowed me to eventually become a CEO of one of their company. And ending up in the radio was really closing the whole circle.

Eric 4Z1UG:

Well, that's an amazing story. One of the things that, maybe this is a tangent in the side is that I think that every once in a while, it's nice to appreciate that the end user equipment that comes from telephone companies, the telephone, the industry has made an extraordinary effort to make sure that it's always backwards compatible. As you mentioned earlier, you go from Strowger to cross-bar, to number 5ESS, all the stuff. The staff at the end of the copper wire still works regardless of the change of technology in the central office.

Guy VE2BWL:

Oh, absolutely. In those days, they had all concepts about, well, if you're making a call from New York to San Francisco, the levels have got to be the right one. And there were a lot of analog systems tweaking in those days in order to make sure that the levels were right. This got a bit less complicated using digital technology because then I guess you're processing signals and then sending data streams across the network.

Guy VE2BWL:

But, for sure, there was a great attention given to being able to retrofit your equipment as you went along. And the speed at which changes were occurring was pretty startling. Within a few years you had new equipment, more sophisticated, faster, and so on and so forth. And I think that the same thing is continuing to happen today.

Eric 4Z1UG:

And now this message from ICOM America. Get outside and be active with ICOM's new IC-705 HF to UHF portable transceiver, and its optional multi-function backpack. This is ICOM's perfect solution for soda and parks on the air. The ICOM IC-705 is your perfect QRP companion with its base station features and functionality at the tips of your fingers in a portable package covering HF six meters, two meters, and 70 centimeters. This compact rig weighs in at one kilogram or 2.2 pounds.

Eric 4Z1UG:

This beautiful new rig has RF direct sampling for most of the HF band and IF sampling for frequencies above 25 megahertz and includes a large 4.3-inch color touch screen with a live band scope and waterfall display. Unbelievable. The radio is five Watts with its internal battery and 10 Watts with an external 13.8 fold power supply. This full featured radio operates on single side band CW AM, FM as well as full D-STAR functions.

Eric 4Z1UG:

Included in this package is a micro USB connector, Bluetooth to support linking to your smartphone or Bluetooth headset, built-in Wi-Fi, integrated GPS with antenna and GPS logger, micro SD card slot, and the HM-243 speaker microphone, which is standard equipment. The perfect accessory for the IC-705 is the optional backpack. The LC-192 with a special compartment for your IC-705 with plenty of room for antennas, cables, and other gear to get you on the air from the mountaintop or the local park.

Eric 4Z1UG:

There is a link to this amazing new rig on the QSO Today Podcast website for this episode. And when you order your new ICOM IC-705 from your favorite ham radio dealer, be sure to tell them that you heard about it here on QSO Today. My thanks to ICOM America for their continued support of the QSO Today Podcast. And now back to our QSO Today.

Eric 4Z1UG:

Was Bell Canada part of the Bell system in America? And so, therefore, did they have the resources of the bell laboratories as their source of technology?

Guy VE2BWL:

Oh, absolutely. As a young manager, then I went on several courses in Morristown, New Jersey, and I don't remember all the places, but I probably attended about 10 different courses in various cities. So, we were very much part of the Bell systems and needed to be in North America to be compatible with the numbering systems and interfacing with the similar technology and so on and so forth. So, that was a big thing that the Bell system did, which was basically making sure that the system would work, continent-wise and worldwide.

Eric 4Z1UG:

Are you retired now?

Guy VE2BWL:

I am. Yes. I am sort of. After leaving Bell, I went on to manage two startup companies, one in telemetry and one in semiconductors. And in 2008, after selling the last company, I started doing coaching for CEOs in technology companies. And I've been doing that pretty well since. Now, I don't work as much as I did at the beginning. I used to have up to 12 companies that I was coaching. And coaching the CEO means sometimes coaching as well the executive team, and sometimes certain departments.

Guy VE2BWL:

But now, I still have a couple of companies located here in the area. And I've been finding that CEOs today, just the way I was back then need pretty well the same type of support that I wish I had then. Now, coaching is better organized in this area, at least and I guess throughout the US and Canada.

Eric 4Z1UG:

I think that there's also an attitude perhaps now, maybe it's the self-help attitude that may not have been around at the time that you were becoming a new CEO. But I think that CEOs now are willing to admit that they actually need some help.

Guy VE2BWL:

Yes, you're right.

Eric 4Z1UG:

It makes an opportunity for a seasoned, retired CEO to be a coach.

Guy VE2BWL:

Absolutely. And coaching basically is... Nothing has changed really. It's slowly at the top. You've got responsibilities that sometimes you cannot share with others, maybe with your wife even. When you have somebody to talk to, and that's basically what I'm doing, asking questions, making sure that whatever you have as a plan in your head, that when you start articulating this that it's going to make sense.

Guy VE2BWL:

And sometimes just the fact that you're doing that as a CEO or, and as a president or whatever, I guess, going to help you present it in a better fashion, sell it in a better fashion, and then organize your company also in a more optimized fashion.

Eric 4Z1UG:

So, that means that you're still busy.

Guy VE2BWL:

I am still busy, yes. Between the hobby, getting calls and visiting companies and that thing. Yes, I'm still doing that.

Eric 4Z1UG:

Now, you sent me a message in preparation for this QSO that you had always had a modest station from the mid-'60s through 1990. What stations did you have in those days?

Guy VE2BWL:

Well, if I look at the list of rigs that I had, other than the heat kit at the beginning, like the SB 300 and SB 400, then I got an FT1... I basically changed rigs every eight to 10 years. So, I got an FT101 and then an ICOM that was Yaesu and an ICOM-701a with a tuner. And then, I got a Kenwood, a TS-950SD. And then, in 1992, things changed a bit because I started building this huge station. But up to then, I had basically city lots. I was changing jobs, quite often, changing cities, changing parts of city as I lived in the Montreal area and in three different places.

Guy VE2BWL:

So, that constrains me to a little space for antenna, and I never had the time to really settle down and build a tower. So, I suppose that the more you are constrained like this, then the pent-up demand for directional antennas increases. And that's why having small station, low power, that thing. Then at some point in time, I really wanted to have something bigger.

Eric 4Z1UG:

So, what changed after 1990? Because you mentioned that something shifted. What was that shift?

Guy VE2BWL:

Okay. So, in 1992, as I became the CEO of Bell mobility radio, that lasted nine years by the way, I bought a 56-acre piece of land on top of a hill with the idea of putting up a tower at last with a multi-band beam. And I visited Noel, Victor Echo 2 Hotel Quebec, very well-known contester. And he had built from a Rohn design three, 100-foot self-supporting towers, and some very sturdy Mono-banders, including three elements, huge 80-meter beam. So, here I am with a large piece of land, with a separate workshop, a barn where I could store tower parts, so I can build my own towers.

Guy VE2BWL:

Now, I never had any metal working experience. And I said to myself, "Why not learn that?" So, I bought a large press drill, a metal rotary saw, motorized chain blocks. I just avoided going into buying soldering equipment because that was a different skill anyway. So, I decided to build my, just a tower like Noel had done. So, I ordered 3.5 tons of angle bars and pipes delivered in front of my garage. And I brought everything inside, buy one bar at a time, and spent parts of weekends and vacations building that tower.

Guy VE2BWL:

After a year, I only had the base of 20-foot section done, which was weighing 1800 pounds. Now, that was crazy by then. I said, "I'll never finish this." But I'm not a quitter. And I wanted to see a finished product anyway. Now, during that time, I was turning the company that I inherited around. It was quite tough. So, doing this project took, it took my mind away from problems during weekends and vacations.

Guy VE2BWL:

And altogether, it took three years, and it got more encouraging as the sections were getting smaller. And I heard some help along the way to, mostly to do painting. I did paint this thing with free code, well, one primer code and then two codes of epoxy paint.

Eric 4Z1UG:

Can we be clear for a second? What you're talking about is you are actually building by hand your own self-supporting 100-foot towers, right?

Guy VE2BWL:

Oh, yes.

Eric 4Z1UG:

Okay. So, you had mentioned Rohn a little bit earlier when you mentioned Noel, but you had the raw material delivered to your barn and you decided that you were going to build one or three towers?

Guy VE2BWL:

Well, at the onset, I thought I could do tree towers, but no. In fact, I wanted to have two of them. So, the first one I did build by myself in those three years. And then, the second one I built, I did buy from Noel and repainted it, and then put up the second one.

Eric 4Z1UG:

But to build 100-foot self-supporting meant that the base of that tower was actually quite large.

Guy VE2BWL:

Yeah. That was 13 feet across roughly on the triangle.

Eric 4Z1UG:

Right. This isn't Rohn 45. This is a big project.

Guy VE2BWL:

Oh yes, absolutely. This was a commercial tower, just assembling this created all challenges because I was working mostly alone. So, it required pulleys and winches, and things like that just to hold these bars on top and of course, ladders to hold things and so on. So, I learn precision in terms of boring holes, installing it. And then, of course, the theory of vectors is always helping when you do things like that because sometimes you feel that you should raise a certain part and no, you should lower it, and that thing. So, anyway.

Eric 4Z1UG:

I'm going to interrupt you again, because you just said also earlier that you weren't soldering where I come from, I think you meant welding. That means that this whole tower was nuts and bolts and holes?

Guy VE2BWL:

That is correct.

Eric 4Z1UG:

Right. There was nothing welded here. You were assembling this like an Erector Set.

Guy VE2BWL:

Basically, yes. The welding that needed to be done was the end of the sections and also some of the attachment plates to bolt those bars. So, I would be bringing that, basically those tower sides to a welding shop, and then they'd do it for me.

Eric 4Z1UG:

It took you three years to put this tower up?

Guy VE2BWL:

That is correct. So, on the one morning, I got a 35-ton crane to come up the hill and I just set up alongside the tower. And then, we raised it, put it on the... I had already put it on its base, that 20, the first 20-foot section. And then, we put the last 100 feet on it, including of course the rotor, and the rotors on these were prop pitches, and the mass was 4.5 feet, I'm sorry, 4.5 inches diameter. So it was a big project, but it was exciting to see the end result.

Eric 4Z1UG:

So, the tower could survive the winter. What about the other hardware? Because when I think of Quebec, I think of the snow storms I've been in there. What else did you put on the tower in order to survive the winter?

Guy VE2BWL:

Basically nothing else. The towers did stand, I guess the 20 years, well, 15 years that I was there. The paint, one of them needed to be repainted after about, well, 12 years, which I did during the summer with the help of somebody that did start from the top and came down. It took about maybe a couple of weeks to do altogether. But other than that, once it was sitting on its pods, there was a little, very little maintenance. The best way to do this would've been to galvanize the tower, but I did not do that at the time.

Eric 4Z1UG:

Let me take a quick break here to tell you about my favorite amateur radio audio podcast. The Ham Radio Workbench Podcast with George KJ6VU and Jeremy KF7IJZ, where they pursued topics, technology, and projects on their ham radio work benches every two weeks. George and Jeremy document their projects and make circuit boards available for sale to their listeners. They have interesting guests and going deep.

Eric 4Z1UG:

Even if you're a seasoned ham radio builder, or just getting started, be sure to join George and Jeremy for the Ham Radio Workbench Podcast. Use the link on this week's show notes page by clicking on the image. And now back to our QSO Today. Okay. So, now you have 100, and what, 120-foot tower in your yard. It seems to me that probably this was going to be used for something more than rag-chewing, but what happened after that?

Guy VE2BWL:

Well, first of all, I needed some antennas to put on this. So, on the first hour, first hour was in 1997. The second one happened in 1999. But on that first hour, I did install a six-element Mono-bander on 20 meters with a 46-foot boom. That was at 100, roughly 120 feet. And then, on top of that, I did put a six-element Mono-bander, 15 meters on a 46-foot boom at 130 feet. And then, I started building a couple of smaller towers. In fact, I assembled them. I didn't build them per se. I purchased them.

Guy VE2BWL:

So, I did buy a 72-footer to hold a six-element Mono-bander on 17 meters on a 36-foot boom, and then a five-element Mono-bander on 12 meters on a 26-foot boom at 52 feet. And then, a five-element Mono-bander on 10 meters on the 24-foot boom at 52 feet. And finally, before doing, so that was between 1998, 1999. So, I did add a three-element Mono-bander on 30 meters on a 36-foot boom at 72 feet.

Guy VE2BWL:

So, by then, I basically had a pretty good station except that I was still missing 40 meters. So, that other tower that I had purchased from Noel, I did bill, or assemble a three-element Mono-bander on 40 meters on the 52-foot boom. And that was at 120 feet. In addition to that, these were the Monobanders. Then I had an 80-meter full-size loop at 110 feet, 160 meter inverted V at 110 feet, a 160-meter slope to Europe at 110 feet. And a couple of beverages, two wavelengths along on 160 meters. These were 1150 feet.

Guy VE2BWL:

So, I had basically built in 2000 a full DX station. And I was operating only with 200 Watts. I had L-4 amplifier for a period of about two months. I turned it on about two, three times, never used it. And I broke pile-ups throughout the world. Mind you, we were at the top of the cycle then. So, I really did not need any more power than 200 Watts. And it was just a great station to work on DX. And in that period of time, I basically did my DXCC on pretty well all of the bands, got the Honor Roll as well. Anyway, it was an absolutely great experience.

Eric 4Z1UG:

Well, it sounds great. What comes to mind is you're talking about this project because I see how these projects go for me. I've never done anything that large because I don't have the space, but what occurs to me, I grew up in a garage with a father who worked on cars. And so, we'd start a car project in the garage and you'd get to a point where all of a sudden you don't have the right tool. And so, I'm imagining you're this guy that has this barn and all this property, and you have all of this raw stock delivered to you.

Eric 4Z1UG:

Did your need for equipment and tools to be able to handle this stuff, did that evolve over time or did you have a list of all the stuff that you needed even before you started so that you were ready to handle massive tower sections and things like this?

Guy VE2BWL:

Eric, I did not know what I was getting into. And as a result, I knew I needed a couple of pieces of equipment like a metal saw, but as you continue your project and you face new challenges, I guess then you start equipping yourself. Now, I was quite fortunate that I had one metal shop, not very far from my place, my country place then, that was able to help me with certain needs as I was going along. And then, of course, maintaining all this equipment requires some special equipment. So, I did build a winch that was capable of raising up to about a 10.5. My antennas, the 40-meter beam did away about 450 pounds.

Guy VE2BWL:

So, the winch would bring a 40-meter beam up the tower in about half an hour. And you had to, of course, the rigor had to follow it along. So, I had a guy that stayed for me and he still works with me now. And he's a professional rigor. He started over 25 years ago with me at that site and still now climbs my tower, and some of our friends' towers as well. So, he became pretty adept in avoiding mechanical problems that we had because of high wind, because of ice, because of all things like that.

Eric 4Z1UG:

So, in this particular case, in this project, it's good to have mentors and friends to help you along for a number of reasons, one, to ensure the project success, but also to ensure that you're not harmed in any way.

Guy VE2BWL:

Oh yes. Very much so. And so, that's why, Noel, first of all, because he had done this by himself was very helpful to give me some of the tools, suggestions to avoid errors that he had made. And of course, I got to know a good deal of people that were specialized in, well, pouring concrete and building bases and forms and things like that. So, there was definitely a need to draw on people.

Guy VE2BWL:

And I had also engineers that were billing professional systems. And so, once in a while, I was having discussions with them. They were working for me at the time, but they would give me some good pointers as to what to do in order to optimize my efforts.

Eric 4Z1UG:

Now, you said in correspondence to me that contesting was a life-changing drug. How did you get into contesting and how was it like a drug?

Guy VE2BWL:

Well, I started contesting a bit when I was at that last site. I called it bunker because it was on Bunker Hill, not very far from where I live now. My first attempts after doing DX of contesting were very interesting because I discovered a program called... it was a more trainer program done by a Canadian, actually, V3. I just have a blank now, but it will come back to me. And so, I started doing a bit of contesting with that station, but on bunker, I did not have any automation. I just had the remote antenna switches and the whole layout, because I had basically from the house, the first field, which was up the hill. There was about 150 feet.

Guy VE2BWL:

And then, going up to the top of the hill, I had about 400 feet of feed line. And the feed line basically were dedicated to the field. So, I had one for the first field and one for the second field. And then, I had the antenna switches at the end of this to switch six antennas

in each field. So, that was not very conducive to doing contesting. I did it, but just for fun. So, when we decided to leave the place and I tried to sell it to hams, but I didn't have any takers. So, I had to dismantle most of it. I just left one tower there, which was bought by internet provider.

Guy VE2BWL:

So, I started building a station where I am, and I could not put 120-foot tower there. So, I have a more modest station from that standpoint, but I needed to now automate this more. So, I had two radios actually, a Yaesu FTDX5000 and an Elecraft K3. And I did start buying equipment in order to allow you to transmit on different frequencies without interfering with one of the radio. And I started, so I bought a microHAM, MK2R plus for doing SO2R and then the associated filters and the band switching, automatic band switching.

Guy VE2BWL:

All of this was put into a console where there is a screen in the middle, a radio on the right, radio on the left, and then you start operating SO2R. Meaning, basically a single operator and two radio. And so, you put radio, the right radio on your right here, and then the left radio on your left here and your headphones. And then, when you run in one radio, but when things become a bit... how can I say, slow, then you start say chasing for QSOs on a different band. And now, you try to work the one on the left side while trying to run on the right side and so on, so forth.

Guy VE2BWL:

And I found this difficult. I don't know if it's because of the way my brain is done or how it has to do anything with age. I don't know. But in spite of the fact that there are some very good videos on this, Randy, K5ZD, did the three fantastic videos on this and they're available on YouTube. Well, I couldn't really get it right, but at the same time, I started doing some, one contest actually as a multi-single station, meaning that you've got multi operators and one radio.

Guy VE2BWL:

And I did this with Mario, VA2 Echo Kilo, who is a local ham, local friend, and then other local hams came Pierre, Victor Alpha 2 Charlie Zulu. He's a super-CW operator. Chris, Victor Echo 2 Charlie Alpha Quebec, is a superb phone operator. And Donald, Victor Echo 2 India Radio, IR, had never contested, but he is a very good CW operator. So, I started inviting them and we started getting into all the major contents, the CQ World Wide, and the WPX, and the WWE, and all the major ones.

Guy VE2BWL:

And they started learning. And I learned quite a bit as well how to manage this. And then, the first thing we know after a year and a half of doing this, things got a bit more serious.

We were doing it for fun at the beginning. Winning was not that important. Mind you, you cannot with a station, like I have compete with K3LR and some of the major stations around either here or in Europe, because I could have possibly done that with the former station I had, but not now.

Guy VE2BWL:

So, we started winning sections like Quebec and then Canada, and then getting fairly high scores in North America, but never in the world. But being more serious at it, more competitive meant spending more time in front of the radio, not wasting time, getting better operators, and so on, so forth.

Eric 4Z1UG:

Can we go back to SO2R for just a second?

Guy VE2BWL:

Sure.

Eric 4Z1UG:

You mentioned that you couldn't master it. I just had a recent conversation with Ward Silver, N0AX. In fact, a few episodes ago, I even replayed his original interview where he talked about SO2R. And what struck me at the time that Ward said it and then listening to you is that you actually had two different radios that you're running SO2R in, right? You're running the Yaesu FTDX5000 and Elecraft K3.

Eric 4Z1UG:

What Ward said to me is that he actually used two radios that were identical because for some reason, he felt that if he was working on identical radios, he was able to go from one to the other without having to think about how to tune the radio or which buttons to push, because they were both the same on each one. Do you think that might have made a difference in terms of your SO2R operation?

Guy VE2BWL:

Well, I think Ward is right about that, but I don't think it would've made a big difference in my case. I think it has to do with how you think, how you... There are certain people that are very good at drumming and they can have independent movements with their arms and so on. My feeling is that even if I would've worked a lot on it, I guess I would've become better, but certainly not as good as some of the people that have been doing this for many, many years.

Guy VE2BWL:

But the thing that is important here I think is not necessarily that point, but the fact that I got diverted with operators that just enjoyed doing multi-single at this station and were willing to come every major contests and help improve the whole station at the same time.

Eric 4Z1UG:

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Eric 4Z1UG:

So then, I saw a thread in online forum where you were talking about converting from SO2R to M2. Is that what we're talking about here? M2 is like multi-operator, two stations or multi-operator, M1 is multi-operator, one station?

Guy VE2BWL:

Well, one station, and if you operate one station, in major contest, you can actually operate a second radio with several operators, but for a period of time, just chasing multipliers. So, in other word, if you have a second radio that is working independently from the first one on a different antenna, for example, then you can work those mals that you would normally not being able to work, just because you're, let's say working 20 meters running. So, it takes another operator to do that while as SO2R, you're trying to do this by yourself with two radios. You see the difference?

Eric 4Z1UG:

Yeah, I do see the difference, but it also sounds to me like it's a lot more fun. The fact that you can invite people into, keep the station going through the entire contest gives you a little bit of a break along the way, but it's also much more social and teamwork.

Guy VE2BWL:

Absolutely. I got it to a point where at the last CQ World Wide, SSB, my friend, John, K90L, came from Chicago just for the weekend. And then, Rob, DL7VOA came from Berlin, Germany just for the weekend. And Brian, K1LI, who lives about an hour from me in Northern Vermont, along with four local operators came by and we did this pretty well, well, something similar in CW month later, where George, W1EBI, came from the Boston area and Brian again from Northern Vermont, and PRV2CZ, and Donald, VE2IR.

Guy VE2BWL:

And we have been improving our scores year over year in spite of the fact that the conditions have been the worst and worst every year. So, there's a few reasons for this. The fact that we're together as a team certainly helps. The operator skills did improve. We made some station improvements as well. Antennas, layout, preparation for each contest. I call it on-the-job training at the beginning, particularly when I'm with some, and we've also joined the Yankee Clipper Contest Club in Boston.

Guy VE2BWL:

And we are now a Canadian area of YCCC because we're within the circle of the club. And just going down to meetings of YCCC has been in education for all of us. And those guys have been helping our tenure as well in contest. So, basically, in the last six months, I went from an SO2R station to a M2 station. What I need now is more operators that can operate running and then, of course, chasing multipliers with the second station. We're working on that.

Eric 4Z1UG:

So, for a weekend contest, like a CQ World Wide, for example, how many operators could you use in your station with two operating positions?

Guy VE2BWL:

Basically, I would need at least six and the better would be eight so that you could cover... During the night, there's not as much of necessity for that, but I would say that with eight operators, you can pretty well cover the whole contest and basically be fresh when you sit down in front of a radio for an hour or two. And then, of course, you take your turns and at the end, I guess, year score tends to remain, or at least your performance tends to remain at a certain optimum during the 24 hours or 48 hours.

Eric 4Z1UG:

I saw on your QRZ page that you mentioned that you have an Apex loop receiving array and you state that it's the best antenna that you've ever had. Can you describe what that antenna is and why you think it's so good?

Guy VE2BWL:

Well, I had beverages before and beverages are fairly simple to build, except that you need the space. And I had the acreage for that before. So, the Apex loop is a great concept that actually, it's being sold by a fairly large supplier here in North America. And it has basically four quadrants and an amplifier at the base of the antenna. And you can actually switch the direction, the receiving direction of your antenna into eight different position. So, north, northeast, east, southeast, and that thing. And you can actually flip it as well.

Guy VE2BWL:

So, here in North America, if I'm working Europe, which is northeast and somebody is calling, and by the way, I use it mostly on 160, a bit on 80, because on 80, I have a pair of phased arrays that gives me northeast to southwest. But on 160, it allows me to listen to Europe. But then, if I hear a faint single from the US or maybe the Pacific, then I just flip it in a, just a touch of a button. And then, I can copy better on that side. And this is hooked to the Rx antenna of the radio.

Guy VE2BWL:

So, it works absolutely great. It minimizes the noise. It gives you directivity that you don't have with a one or even a double beverage that works on both sides. And it is a great tool to improve scores and communications, just chatting for example on 160 meters. So, it's a great addition to this station.

Eric 4Z1UG:

Guy, you've been a regular listener to the QSO Today Podcast for at least a few years now. I'm just wondering, I've often mentioned on the QSO Today Podcast that sometimes we say that the solar cycle is at its bottom. And so, therefore there's just no way to make contacts, but it seems to me that every contest weekend, there are people making contacts. Do you see this is true and that in fact, maybe the effect of the solar cycle, not saying that there isn't an effect, and there's obviously a large effect, but that the solar cycle being at the bottom shouldn't keep people from operating?

Guy VE2BWL:

Oh, absolutely. The advantage of contest weekends is that I guess there's more people on the air and when a band opens up, well, then you notice it fairly rapidly if you're monitoring DX Summit or DX8 or whatever. But the one proof of that is the introduction of FT8 and now FT4. Certainly, you cannot hear any CW signals on 10 meters, and yet there are contacts being done there. And when you've got propagation on six meters is the same thing. So, if people were calling more, I guess we'd make more contacts.

Guy VE2BWL:

People tend to listen more than they transmit, of course, but the concentration of the stations during a contest weekend, of course, makes the band, or at least seem to be

more open, but yet during regular days, unless there is a solar storm or something like that, I guess the propagation is there, and QSOs can be done.

Eric 4Z1UG:

I found an article in French. So, everyone who is a French speaker, forgive my French. Online from radio amateur, du Quebec, that showed pictures of your ham shack, your antenna farm, and the battery backup system, and what looked like a rack of automation. Can you describe what you have in the basement or in the garage that's actually backup powering the system that you have and how much automation you may have involved in it?

Guy VE2BWL:

Okay. At the current site where I am, it's pretty well the same thing that I had before. So, I have two large, let's talk first of all about powering the computers and the radios on AC. So, I have currently three UPS system that do provide power for the FTDX5000 and the three computers that I'm using right now. Then I've got plenty of 12-volt equipment around like station masters or some of the filters and so on that are powered by 12-volt. So, I have two 50 amps linear power supplies that are feeding batteries, very large batteries. They weigh about 100 pounds each. These are batteries that are used in computer centers.

Guy VE2BWL:

And I have switching systems on them that whenever there is a power failure, the batteries come on automatically and without any break-in in voltage. And then, I just keep being operational whenever there is a power failure. In addition to that, I did add a generator, a 14,000 Watts generator that starts at about 10 to 13-second intervals.

Guy VE2BWL:

So, as soon as there is a power of failure, I just have to wait a bit, nothing goes off except the amplifier. The amplifiers, I did not put on emergency power for that short period of time. But as soon as January kicks in, then I am totally operational.

Eric 4Z1UG:

So, in other words, all the electronics is on the back end of the UPS. The UPSs are taking commercial power, generator power, and the big batteries are floating across the UPS. Is that right?

Guy VE2BWL:

The big batteries are floating, from the power supplies to the batteries and then to the 12-volt distribution in the station. Okay. So, the UPS are just to power the computers, which are not being powered by 12 volts.

Eric 4Z1UG:

So, they have a dual duty and are using UPS to do the charging of those batteries at the same time, or do you actually have-

Guy VE2BWL:

No, I have chargers for that. They get charged. They get floated all the time by the 50 amp supplies.

Eric 4Z1UG:

Do you find that with those batteries, are those lead acid batteries?

Guy VE2BWL:

Yes, they are.

Eric 4Z1UG:

Do you cycle them just to make sure that they actually have a chance to discharge a bit and then recharge so that they actually will last a little bit longer?

Guy VE2BWL:

Yes. I've been doing that, not as often as required. I think I'm probably living a bit dangerously as far as that goes, but I do that maybe twice a year.

Eric 4Z1UG:

What do you think the greatest challenge is facing amateur radio now?

Guy VE2BWL:

Well, I guess there's the imminent disappearance of older operators and need to recruit new ones. I guess we're doing our modest part to get more people to operate in contest. For example, last year I got called by an army officer that wanted to have a bit of help to prepare for inter-army, friendly armies that is US, Canada, Europe, New Zealand, Australia, and so on. And they wanted to improve their score. And when I gave them a few tips as to how to build their antennas, they did that and came number three in their category as opposed to being at the end of the pack.

Guy VE2BWL:

And when I visited them during that 36-hour exercise, which looked like a field day, all with great generators and tents and so on and so forth, they wanted to know if we could help them in getting their ticket. So, we finally graduated nine army recruits last year, and three came to operate in contests, and six are learning CW. So, when I hear that people are not getting into the hobby because of CW, well, now that's not the case, of course, but

you got more people learning CW. And of course, the exercise was so interesting for the armed forces that they decided to do it again.

Guy VE2BWL:

And last week, we graduated another six operators with full HF privilege. So, these will be operators of the, and they have already started operating here and they will. The new breed of operators will also do that. So, I think that there's a need to do that. And I listened to one of your recent podcasts with Fred, AB1OC, which was absolutely great, the way that they've been doing this in the Nashua area. I'll have to talk to Fred at some point in time, because they have some great tips about recruiting and retaining new ops and the like.

Guy VE2BWL:

There are all ways to improve the recruitment. But there's certainly one thing that is, that I've seen that is common whenever we start talking about recruiting. And we've got to get back to some basics, and I know that somebody talked lately about getting older radios back on the air and that thing. That's a great way. But also, the fact that you actually transferred signal from your antenna to Japan and make a contact, whether it is an FT4 or FT8 or a CW or voice doesn't matter.

Guy VE2BWL:

You've made a contact one-to-one, and that's one thing that we've got to keep explaining and repeating. So, certainly, that's one of the concerns, but I'm quite confident that technology, the way it improves, the fact that, of course, this coming cycle is going to be quite exciting for many that have never experienced that. That's going to improve things a bit, not to take anything away from what the US has done, for example, with Homeland Security and natural disasters and so on.

Eric 4Z1UG:

But they still rely on hams a lot of times to be able to actually make that last connection. I still say perhaps that amateur radio, we can make a contact from here to Japan without a trillion-dollars worth of infrastructure that supports these smartphones and the internet and everything else. I just read this week that SpaceX has put up another 24 satellites. That's supposed to be a constellation of 24,000 satellites when they're all done, in order to do that conversation from Japan to America.

Eric 4Z1UG:

So, I guess as ham radio operators, we can point to SpaceX and say, well, we don't need a constellation of 24,000 satellites. We can just do it with a piece of wire hanging out the window and make that contact around the world. Well, what was interesting about what you were saying about the army, though, is that one of the things that maybe we don't do enough of is to show people, frankly, how practical amateur radio is in terms of being able

to solve problems or maybe to put us in the mindset of solving problems. What do you think about that?

Guy VE2BWL:

Well, I did meet with, with the higher-ups that are in charge of that regimen. And they told me that what we brought as ham operators to that group of specialists in army communications is exactly that, the fact that they can use some of our tools to configure antennas or at least design antennas, simulation of antennas, and so on, even new ways of soldering plugs in the coax, understanding a bit more how things are working. And then, of course, getting different skills in contest.

Guy VE2BWL:

Army contests are basically on a channel. So, it's the people that, or at least the station that has the most power that takes the frequency. In this case here, we've got to contend with all interference, QRM and so on, on the band. So, there is definitely a number of new ways and new areas that are being offered to people that are basically doing the same thing but on different channels.

Eric 4Z1UG:

In different services. What excites you the most about what's happening in ham radio now?

Guy VE2BWL:

Well, basically, a number of things, I guess the fact that there is more contesters in spite of worst propagation, conditions on HF. Just the fact that we're just about to turn this whole thing around. At least, the sun's going to allow us to turn things around, just imagine the growing opportunities in the next eight to 10 years for DXing and rag-chewing and contesting. What I find exciting, although I'm not necessarily inclined to do that, I've done it a bit, but it doesn't interest me that much to do FD8 than FT4. But what was invented here is certainly something that's going to help.

Guy VE2BWL:

And I'm very optimistic about the fact that new technology, better radios. The new ways of doing things will keep the hobby or at least the amount of people and the hobby active. I think that one of the problems we've got is that many hams are not active anymore. And we're starting to get to them in our little region here. And we're going to try to get them on the air more.

Guy VE2BWL:

I can understand that somebody that hasn't been on the air for 10, 15, 20 years, doesn't have a radio won't get on the air tomorrow morning, but they can certainly operate here in contest or just rag-chewing an afternoon on 20 meters. And that's the thing that we

have to do. So, it's not only up to them to start. We've got to bring them back into the hobby, get them on the air.

Eric 4Z1UG:

Oh, I think you're so right. In my little town of Efrat here, just south of Jerusalem, I can think of at least eight licensed ham radio operators that doesn't include me and 4X1TQ, but I can think of eight others that are off the air and have been off the air for some time. And I bet everybody can think of hams in their neighborhood or in their area that have been off the air for a while. And wouldn't that be amazing if we could just bring those all back on?

Guy VE2BWL:

Exactly.

Eric 4Z1UG:

What advice would you give to new returning hams to the hobby?

Guy VE2BWL:

Well, again, get on the air of course, but find an Elmer. I have not found a single guy around here that's been operating with us, and we've got monthly dinners on Friday night, that thing, but we're not an organized club. Sometimes I'm thinking, well, I should do that but I've been into larger clubs. And right now, we have some people that have the same community of interest. So, we've got all starters and people that dedicate themselves to either contesting or VHF, DMR, that thing.

Guy VE2BWL:

But if you're by yourself, and I had an opportunity to do that lately. Somebody called, he immigrated to Canada from Belgium, got his ticket here, but got both of them because he had the background, electrical engineering, to pass the test. But he called just to say, Well, I don't know what to do now. I guess, how do I get on the air? How do I initiate QSOs and that thing? And his name is Patrick. And his call letters is VA2 Papa Hotel Kilo. And Patrick came here for about three and a half hours the first time, and then repeated that another time.

Guy VE2BWL:

And first thing you know, he's on the air and he's doing contacts. So, you either get Elmer to help you, or we as Elmers ought to go and do that. And all my friends around here that have stations, operating stations, have been doing that. And if we can do this in a less populated area, imagine what you can do in major cities.

Eric 4Z1UG:

That is absolutely true. Guy Lemieux, VE2BWL, I want to thank you so much for agreeing to come on the QSO Today Podcast. What a pleasure it's been. I'm astonished actually by your 120-foot tower project, but it doesn't surprise me. I'm just so happy that you were able to meet with me today and have this QSO.

Guy VE2BWL:

Well, thank you very much, Eric, for this opportunity to talk, and thank you for the many thinkers and leaders for whom you provided a chance to express themselves and share their vision. I truly appreciate it.

Eric 4Z1UG:

Thanks so much, Guy, 73.

Guy VE2BWL:

Seventy-three, Eric.

Eric 4Z1UG:

That concludes this episode of QSO Today. I hope that you enjoyed this QSO with Guy. Please be sure to check out the show notes that include links and information about the topics that we discussed. Go to www.qsotoday.com and put in VE2BWL in the search box at the top of the page. My thanks to both ICOM America and QRP Labs for their support of a QSO Today Podcast. Please show your support for these fine sponsors by clicking on their links in the show notes pages, or by using QSO Today in the coupon box at the checkout.

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Eric 4Z1UG:

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