

WEST SIDE SIGNAL

Official Bulletin of Toronto's Oldest Amateur Radio Club

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Club Historian

Position vacant

Meetings

Meetings held at 7:30pm on the third Tuesday of each month, at the home of David VE3RER 1043 Royal York Rd between Bloor and Dundas at Kingsgrove Ave. No meetings in July or August. Visitors always welcome.

Club Nets

FM Net

Wednesday 8:00pm
VE3SKY repeater 146.985 Mhz

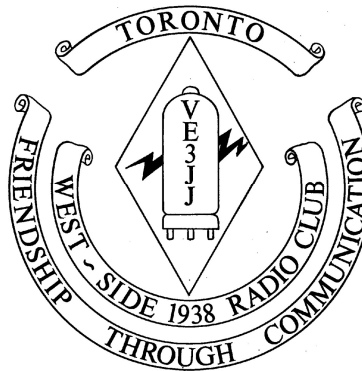
CW Net

Sunday 10:00am 3.567 Mhz

SSB Net

Sunday 11:00am 7.075 Mhz

Issue No.143 Sep 2011



Next Meeting

The Karecki Residence
1043 Royal York Rd at Kingsgrove
Etobicoke

Tue Sep 20th 2011

Tue Oct 18th 2011

Tue Nov 15th 2011

Tue Dec 20th 2011

CLUB NEWS

Hope you all had a very nice summer and are ready for a new club season. It is unlikely I will be attending any club meetings again this year, I find it a little too daunting to drive in to Toronto at night, I guess old age is catching up with me as it does with everybody eventually. The luncheons at the Imperial Buffet are a different matter Hi, I can manage the daytime driving with no problem especially with the prospect of a very nice lunch

at the end of the road and a chance to meet old friends. The Wednesday evening net on the SKY repeater has been a wash-out for me for a long time now, I just can't hit the repeater at all and only hear snatches of conversation at times. To make matters worse, the Sunday morning net on 80M CW has also been a washout for the past two weeks. I could hear Dave VE3SB just fine and Bill VE3PA weakly but couldn't make myself heard in Toronto at all. Recently we have seen a little more positive activity from the sun which has resulted in the Solar Flux climbing up to over 120 which we can only hope continues to rise and give us some decent propagation on the HF bands for a change, it would certainly make winter a little more bearable Hi. Just checked the solar figures for today (15th) and see the solar flux is at 140 that's as high as it's been for ages and there are 144 sunspots doing their thing for us. So I checked out 10 and 12 meters and lo and behold found some activity there so joined the fun for a little while but QSB started to settle in and screwed things up but at least I managed a few contacts on 10 and 12 for a change lets hope it continues to improve.

THE GREEN THING

VE3IHM

In the line at the store, the cashier told the older woman that she should bring her own grocery bag because plastic bags weren't good for the environment.

The woman apologized to him and explained, "**We didn't have the green thing back in my day.**"

The clerk responded, "That's our problem today. The former generation did not care enough to save our environment."

He was right, that generation didn't have the green thing in its day.

Back then, they returned their milk bottles, soda bottles and beer bottles to the store. The store sent them back to the plant to be washed and sterilized and refilled, so it could use the same bottles over and over. So they really were recycled.

But they didn't have the green thing back in that customer's day.

In her day, they walked up stairs, because they didn't have an escalator in every store and office building. They walked to the grocery store and didn't climb into a 300-horsepower machine every time they had to go two blocks.

But she was right. They didn't have the green thing in her day.

Back then, they washed the baby's diapers because they didn't have the throw-away kind. They dried clothes on a line, not in an energy gobbling machine burning up 220 volts - wind and solar power really did dry the clothes. Kids got hand-me-down clothes from their brothers or sisters, not always brand-new clothing.

But that old lady is right, **They didn't have the green thing back in her day.**

Back then, they had one TV, or radio, in the house - not a TV in every room. And the TV had a small screen the size of a handkerchief, not a screen the size of the state of Montana. In the kitchen, they blended and stirred by hand because they didn't have electric machines to do everything for you.

When they packaged a fragile item to send in the mail, they used a wadded up old newspaper to cushion it, not Styrofoam or plastic bubble wrap.

Back then, they didn't fire up an engine and burn gasoline just to cut the lawn. They used a push mower that ran on human power. They exercised by working so they didn't need to go to a health club to run on treadmills that operate on electricity.

But she's right, they didn't have the green thing back then.

They drank from a fountain when they were thirsty instead of using a cup or a plastic bottle every time they had a drink of water. They refilled their writing pens with ink instead of buying a new pen, and they replaced the razor blades in a razor instead of throwing away the whole razor just because the blade got dull.

But they didn't have the green thing back then.

Back then, people took the streetcar or a bus and kids rode their bikes to school or rode the school bus instead of turning their moms into a 24-hour taxi service. They had one electrical outlet in a room, not an entire bank of sockets to power a dozen appliances. And they didn't need a computerized gadget to receive a signal beamed from satellites 2,000 miles out in space in order to find the nearest pizza joint.

But isn't it sad the current generation laments how wasteful the old folks were just because **They didn't have the green thing back then?**

Antenna Restrictions? Lose The Mic!

By Ray Soifer, W2RS

As we know, far too many hams are affected by antenna restrictions: CC&Rs, zoning problems, rental properties, etc. Possible solutions vary with the specifics of the situation, some being more "solvable" than

others.

What about hams who find themselves in the "less solvable" category but still want to operate HF? Unfortunately, there's a pattern that I've seen repeated all too frequently. The ham (we'll call him Sam) puts up a "stealth" antenna of some sort, buys a transceiver, and goes on SSB because it's the only mode he feels comfortable with. Besides, his buddy Fred, you know, the one who lives on a farm with a 100-foot tower, has so much fun yakking with his friends all over the world on 20 meters.

When conditions are right, Sam has a blast. Unfortunately, however, that doesn't occur very often, especially with sunspots being as rare as they are. In fact, Sam is getting increasingly frustrated. Why can't anybody hear him? When he does work someone, he has trouble getting his name and call across with a 3x3 report, let alone carry on a conversation. Sam now finds himself going on the air less and less. Before long, he'll probably sell the radio and go back on 2-meter FM, or even give up hamming entirely. I've seen it happen many, many times.

Does Sam's predicament sound like yours? There may be things you can do about it, even if you cannot improve your antenna situation. Here's one of the simplest: lose the mic, or put it away for use only on the local net. Switch to CW, or if that's not your thing, learn to use PSK or RTTY.

Don't get me wrong. I'm not anti-SSB. I've been on it since 1958, when I built a Central Electronics 20A phasing exciter. It's just that the laws of physics are what they are, and SSB is so inefficient compared with CW and digital modes that for those unable to have a good antenna, the latter will be far more effective.

How much more effective? Let's begin by looking at bandwidth. A CW transmission, at 25 words per minute, has a baud rate (bits per second) of 20. Typical keying and HF fading characteristics combine to produce an effective noise bandwidth at the receiver of up to 100 Hz. PSK31 has a baud rate of 31, by definition, and the typical effective noise bandwidth is also approximately 100 Hz. RTTY, with a baud rate of 45 and 170 Hz shift, has a typical effective noise bandwidth of around 250 Hz. The effective noise bandwidth of an SSB signal can be up to 3 kHz, but we'll use 2.4 kHz for our analysis. All of these figures are approximations, but they are close enough for our purposes.

CW, PSK31 and RTTY are all "key down" modes. When the transmitter is keyed, average power equals peak power. Not so for SSB. Without speech processing, average power is typically a small fraction of peak power (PEP), depending on voice characteristics. For our analysis, however, let's assume that the processing and ALC are turned up pretty far, so that average power is 50% of peak.

Now, we can put these figures together to determine relative effectiveness, as measured by the signal-to-noise ratio (SNR). As compared with SSB, the noise bandwidths of CW and PSK31 are about 24 times narrower, so the noise level is approximately 14 dB lower. Factoring in SSB's 50% average power results in the SNR for CW and PSK31 being approximately 17 dB greater than that of SSB. A similar analysis for RTTY produces an SNR advantage over SSB of approximately 13 dB.

What do these SNR figures mean for you? If you are running 100 watts (PEP) to a dipole, switching from SSB to CW or PSK31 would be equivalent to adding a 1 kW amplifier and a 3-element beam (at the same height as your dipole). If you then switch from CW to RTTY, that would be equivalent to turning that 1 kW amplifier down to 400 watts, but that's still 20 times more effective, in SNR terms, than 100 watts to a dipole.

Looking at it another way, let's say that you are running 100 watts to a "stealth" antenna on CW or PSK31. Switching to SSB would be equivalent, in SNR terms, to reducing your power output to just 2 watts. No wonder Sam has so much difficulty being heard!

For ham radio to be fun, you have to have a signal good enough for the receiving operator to understand you easily. That usually requires a reasonable antenna -- for example, a dipole, in the clear, at least half a

wavelength above ground. The performance of many "stealth" antennas is often several "S" units below that. If you've already done all you can to improve your antenna, why not put the 13-17 dB advantage of CW and digital modes over SSB to work for you?

I DON'T CARE

Written by a housewife in New Brunswick , to her local newspaper. This is one ticked off lady.

'Are we fighting a war on terror or aren't we? Was it or was it not started by Islamic people who brought it to our shores on September 11, 2001 and have continually threatened to do so since?

Were people from all over the world, not brutally murdered that day, in downtown Manhattan , across the Potomac from the capitol of the USA and in a field in Pennsylvania ?

Did nearly three thousand men, women and children die a horrible, burning or crushing death that day, or didn't they?

And I'm supposed to care that a few Taliban were claiming to be tortured by a justice system of the nation they come from and are fighting against in a brutal insurgency.

I'll start caring when Osama bin Laden turns himself in and repents for incinerating all those innocent people on 9/11. I'll care about the Koran when the fanatics in the Middle East start caring about the Holy Bible, the mere belief of which is a crime punishable by beheading in Afghanistan .. I'll care when these thugs tell the world they are sorry for hacking off Nick Berg's head while Berg screamed through his gurgling slashed throat. I'll care when the cowardly so-called 'insurgents' in Afghanistan come out and fight like men instead of disrespecting their own religion by hiding in mosques and behind women and children. I'll care when the mindless zealots who blow themselves up in search of nirvana care about the innocent children within range of their suicide bombs.

I'll care when the Canadian media stops pretending that their freedom of speech on stories is more important than the lives of the soldiers on the ground or their families waiting at home to hear about them when something happens. In the meantime, when I hear a story about a CANADIAN soldier roughing up an Insurgent terrorist to obtain information, know this:

I don't care.

When I see a wounded terrorist get shot in the head when he is told not to move because he might be booby -trapped, you can take it to the bank:

I don't care.

When I hear that a prisoner, who was issued a Koran and a prayer mat, and 'fed special' food that is paid for by my tax dollars, is complaining that his holy book is being 'mishandled,' you can absolutely believe in your heart of hearts:

I don't care.

And oh, by the way, I've noticed that sometimes it's spelled 'Koran' and other times 'Quran.' Well, Jimmy Crack Corn you guessed it,

I don't care!!

Dead Band? Try Calling CQ!

Alan Vega (WA6MOW)

The sun spot activity that was promised may not materialize for years down the road. The bands have been noisy. Finding a QSO has been very difficult at times. Like all good hams I do a lot of listening.

Just recently it dawned on me that if everyone is listening the bands will continue to be dead!

I was on 80 meter cw a few nights ago running 5 watts with my trusty K2. The band was stone dead. Out of boredom I called a few CQ's. A ZL returned my call and we had a great QSO. 80 meters with summer time

conditions!

Early this morning I was on 20 meters. The band was really dead with not a signal to be heard. I fired up my big rig (75 watts) and called CQ. Probably a waste of time but if I don't call CQ, who will? An HL returned my call giving me a nice report. I then jumped to 30 meters which also sounded really dead. Again, no one home! What the heck!

Another CQ and a ZS responds providing we with a 599 signal report. Of course I am running high power (75 watts) to my 105ft center fed Zepp at 40 feet or so. A minimalist station at best.

If we can all call CQ on a dead band the band will no longer be dead. Sounds reasonable doesn't it?

Listening is fine when band conditions are good and there is lots of activity. Crummy conditions require desperate measures. Call CQ, be patient, and you might be surprised as to who responds to your CQ. Ham radio is a lot like fishing. If you never put a line in the water you are guaranteed to never catch a fish!

NEW ELEMENT DISCOVERED

To be included in the Periodic Table:

The Nuclear Physics Department of the Australian National University has discovered the heaviest element yet known to science. The new element, Governmentium (Gv), has one neutron, 25 assistant neutrons, 88 deputy neutrons, and 198 assistant deputy neutrons, giving it an atomic mass of 312.

These 312 particles are held together by forces called morons, which are surrounded by vast quantities of lepton-like particles called peons. Since Governmentium has no electrons, it is inert; however, it can be detected, because it impedes every reaction with which it comes into contact. A tiny amount of Governmentium can cause a reaction that would normally take less than a second, to take from 4 days to 4 years to complete.

Governmentium has a normal half-life of 2 - 6 years. It does not decay, but instead undergoes a reorganization in which a portion of the assistant neutrons and deputy neutrons exchange places. In fact, Governmentium's mass will actually increase over time, since each re-organization will cause more morons to become neutrons, forming isodopes. This characteristic of moron promotion leads some scientists to believe that Governmentium is formed whenever morons reach a critical concentration.

This hypothetical quantity is referred to as critical morass.

When catalyzed with money, Governmentium becomes Administratium, an element that radiates just as much energy as Governmentium since it has half as many peons but twice as many morons.

ELECTRICAL TAPE TIPS

by KØFF

1. Did you ever notice that electrical tape, like a hammer, comes with no instructions? Perhaps the makers figure that everyone automatically knows all the "tricks of the trade". Read on, you may pick up a new wrinkle.

Vinyl electrical tape has been around since 1945, but for a long time after it was introduced, black cotton friction tape was still used for most applications, partly because of the cost difference, partly because of tradition. I remember tearing long strips of half-inch friction tape into quarter-inch wide strips as a cost savings. A unique feature of the adhesive on the friction tape is that it gives off an eerie blue light when the tape is peeled from the roll. It is bright enough to be easily seen in a darkened room. Aside from that trivial fact today's friction tape is used for special applications only as a topcoat for delicate rubber tape as used on high voltage cable splices. Modern materials are superior in every respect. The first vinyl tape I ever saw on

the job was gray in color, not black, I suppose it was a telephone company spec.

Today I recommend using only Scotch 33+ tape for all ham radio uses, except as noted at the end, as it has predictable characteristics and is good for every indoor/outdoor application. The temperature range is zero F to 220 F.

Make sure to get the type with the + sign, as there is also a plain type 33.

3M also makes product called Temflex, but again type 33+ is suitable for every application, especially outdoors.

When taping over coax connectors, or coax splice kits, it is helpful to first wrap the connector with a self-amalgamating Silicone Tape product. The 3M version is Type 70, and Radio Shack also sells it in small rolls under the part number 64-2336.

This is NOT the same product as the coax-seal, or Radio Shack #278-1645 "sealant for RF connectors". I do not care for that sticky material, dum-dum, or any other putty type material that is hard to remove later. The silicone-tape peels off cleanly and easily, so easily in fact that it needs to be covered with a topcoat of Type 33+ to protect it. This two layer approach, when applied as explained below will give a waterproof seal that is weather resistant, and stays flexible for years, but can easily be removed if changes need to be done to the system.

Any time you wrap tape on a threaded component, make sure you wrap it in the direction that tends to tighten the screw threads, not the other way. That means if you are taping a splice, for example two PL-259's screwed into a double barrel female (PL-258/83-1J) you must tape each connector from the cable end to the barrel center.

Always run the tape "uphill" that is from the smaller diameter to the larger diameter.

Start at the smallest end, make several tight turns of one-quarter lap for a good seal, then run the tape in one-half laps to the center, with moderate stretch so the diameter of the 33+ is reduced to about five-eighths of it's original width. On the last few turns reduce the stretch tension until it is zero at the last turn, to prevent flagging. Use a scissors to cut the tape end square, as a knife or ripping will add stretch to the last lap and cause it to come loose. Repeat the same strategy from the other side, and meet in the center (if it is a splice kit), overlap the left hand side tape with the right hand side tape. If the connection is to be removed at a relatively short timeframe, fold the last lap so it does not stick. If the tape job is permanent, simply lay the last lap down flush. Now for the best-kept secret, spray the entire assembly with clear coat enamel or other dielectric spray. I use Krylon Crystal Clear. The over-spray absolutely seals the joint and keeps the ends flat.

Non-electrical uses for electrical tape.

For taping cables to tower legs and other such jobs, consider using the Temflex or straight Type 33 as they both are less expensive and have a slightly higher breaking strength. The superior conformal qualities of the 33+ are not needed in these applications.

One of the most common non electrical uses of vinyl tape is to secure rolls of wire, bundles of tubing, cables to rungs, and many other odd jobs that use the material for other than it's weatherproof or electrical qualities. To tie up a roll of cable, the cheapest grade of black vinyl tape is adequate, except that it leaves a gooey mess behind when removed. The secret here is to make the first full two turns with the sticky side OUT. Then simply twist the tape around on itself and continue making a few more turns with the sticky side IN. This same trick can be used with cellophane tape to secure hardware store bundles of conduit, pipe etc, so that it removes cleanly. Wish I had a nickel for every minute wasted trying to get that sticky mess off copper water pipe before soldering!

Another slick idea Scotch came up with is the color-coded vinyl tape. I've tried many schemes over the

years of using red, blue, green white and other color tapes to identify certain cables, for example coax cables in a bundle run up the tower. After toughly confusing myself, I decided to simply use the white tape, and mark the ID on it with a Sharpie permanent marker. Foolproof, and lasts for years.

A final note, the better tapes like 33+ have a shelf life rating of 5 years, but still be careful of "surplus finds", as the age and storage conditions are unsure. Best to buy fresh tape from a known, trusted source.

Where is the Spirit of Amateur Radio?

K8NDS

Richard Kusinski

I have been licensed in Amateur Radio for 47 years now. The hobby has undergone some drastic changes both good and bad. The good are the many new aspects of radio merged with the aid of computer technology, which offer many interesting avenues to the technically inclined. There are so many modes and choices available that even the younger generation can find something of interest.

Many new Radio Amateurs do not have a clue of the amount of technological advancements in communications were contributed by amateur radio experimenters over the ages. It is sad to see that there is not much of that existing today. It seems that the largest percentage of Radio Amateurs are just operators which can't even carry on an intelligent technical discussion. I guess I will call them appliance operators. Most just buy equipment, antennas and large towers, which anyone with the cash can do.

The world is a very different place then back in the 60's & 70's when it was hard to find someone on the bands that I couldn't learn something from. Forgive me but "5/9 (even when the S- meter reads S4), 73 & see you down the log" does not in the least interest many others and me. It is a real shame this is what Ham radio has turned into. Many of us have migrated to the 30, 17 & 12-meter bands just to get away from the 5/9 & 73 mentality.

For years I have enjoyed the 17-meter band just to enjoy some rag chewing and technical discussion while removing myself from the chaos. Lately it seems that 20 meters isn't satisfying enough for the appliance operators, they are now migrating to 17 meters. One of my pet peeves is spit frequency operation on 17 meters. This band is already too small when conditions are good. Did anyone ever think of the consequences of operating spit on the 17-meter phone band? Operating split takes up 17 kHz of space on the small 157 kHz phone section; that equates to 11% of the band for one pile up. Just in case of argument this figure includes 3 kHz space on either side of the mess, 3 kHz for the listening frequency, 5 kHz for the offset plus 3 kHz for the transmitting station. I have had many rude operators come on and ask me if I would move off frequency when I happened to be holding a QSO for at least ½ hour somewhere in between this mess way before it started; excuse me for utilizing only 3 kHz instead of 17 kHz.

Hopefully the ARRL will never justify contesting on these bands, that will be the day that I sell all my equipment and turn the hobby over to the CBer's. The Hams that are left which carry on the true spirit of the hobby need to police these situations, don't let these rude & crude appliance operators chase of off the only sanctuary that is left on the HF bands.

HAVE YOU SEEN THESE ?

Guelph Bulletin

There are a couple of interesting videos that some of our members might like to see. The first is on solar flares and the magnitude of these compared to the size of the earth. It can be found at this URL <http://www.youtube.com/user/WorldScott#p/u/4/015cnqMt2i8>.

The second on is a lecture on standing waves with some very interesting visualizations of waves and interference patterns. The lecture was given in 1959 by Dr. J.N. Shive, a Bell Labs researcher who invented the wave machine that is used in the lecture. This video can be found on the ITT website at this URL <http://techchannel.att.com/play-video.cfm/2011/3/7/AT&T-Archives-Similarities-of-Wave-Behavior>

CHANGING OF THE GUARD: UK COLOSSUS COMPUTER DESIGNER TONY SALE - SK

The Radio Society of Great Britain has announced the passing of Tony Sale, the man behind the Bletchley Park Colossus computer rebuild project. During his rather illustrious career, Sale was the British intelligence agency's principal scientific officer and later worked at the Science Museum. He helped create the Computer Conservation Society and, more recently, the National Museum of Computing at Bletchley Park, where his Colossus remains today. Considered to be a remarkable and skilled individual, Sale had a long history in engineering that encompassed robotics, radar and computing. In January 2008 Tony Sale and Colossus were featured on the cover of the RSGB's RadCom magazine. (GB2RS)

EMERGING TECHNOLOGY: NEW HIGH EFFICIENCY SOLAR CELL

A photovoltaic cell that reaches record-breaking efficiency could make solar energy competitive with fossil fuels according to the company that created the cell. Alta Devices of Santa Clara, California presented research at the 37th IEEE Photovoltaic Specialist Conference that claims its thin-film gallium-arsenide cell can convert 27.6 percent of the sunlight striking the cell into electricity, under standardized conditions. Since the paper was submitted, the company says it has upped the efficiency to 28.2 percent. That beats the previous record of 26.4 percent for a solar cell with a single p-n junction, which was the first improvement in years over 26.1 percent. Both numbers, according to Alta, were independently confirmed by the National Renewable Energy Laboratory. (Photo Voltaics)

OUR NATIONAL PARKS NOW 100 YEARS OLD

Canadian special event station CJ3A will be active during the entire month of October 2011 to celebrate the Centennial of Parks in Canada. Operations will be on all High Frequency bands. QSL via VE3LA.