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P.O. Box 127, Indian Rocks Beach, FL., 33785-0127

MARIJUANA

CANNABIS, ALSO KNOWN AS "MARIJUANA." IT CONTAINS THC THE PSYCHOACTIVE CONSTITUENT THAT PRODUCES EUPOHORIA, RELAXATION & INCREASED APPETITE.

History. Evidence of the inhalation of cannabis smoke can be found in the 3rd millennium BC as indicated by charred cannabis seeds found in a ritual brazier at an ancient burial site in present day Romania.

Cannabis was criminalized in various countries beginning in the early 20th century. In the US the first restrictions for sale came in 1906 in the District of Columbia. It was outlawed in South Africa in 1911, in Jamaica in 1913 and in the UK and New Zealand in the 1920s. Canada criminalized it in 1923. In the US in 1937 the Marihuana Tax Act was passed and prohibited the production of hemp in addition to cannabis.

There are about 750,000 marijuana arrests every year—nearly half of all drug arrests. The costs to society of trying to police marijuana use, and to individuals who get jailed for it, are both wildly out of proportion. These arrests can affect one's lives forever.

Over time, legalization may prove to be a mistake—or it may not. Either way, is it an experiment worth conducting?

In December 2012, the state of Washington became the first state to officially legalize cannabis in a state law with the state of Colorado following. The California Supreme Court decided in May 2013, that local governments can ban medical marijuana dispensaries despite a state law in California that permits the use of cannabis for medical purposes. At least 180 cities across the state have enacted bans in recent years. Now Alaska, Oregon and California will consider fully legalizing pot this year. In December 2013, Uruguay became the first country to legalize growing sale and use of cannabis. According to a Gallup pole, 58% of Americans favor legalizing marijuana.

Unwanted side effects include a decrease in short-term memory, dry mouth, impaired motor skills, reddening of the eyes and feelings of paranoia or anxiety. In 2004, the UN estimated that global consumption of cannabis indicated that about 4% of the adult world population used cannabis annually and that about .6% used it daily.

Cannabis has been used to reduce nausea and vomiting in chemotherapy and people with AIDS, to increase appetite, to treat pain and muscle spasticity and reduce eye pressures in glaucoma. Safety concerns include the increased risk of developing schizophrenia with adolescent use, impairments in memory and cognition, accidental pediatric ingestions and lack of safety packaging for medical cannabis formulations.

Gateway drug hypothesis: Since the 1950s, U.S. drug policy has been guided by the assertion that cannabis use increases the probability of trying "harder" drugs and these implications have been hotly debated. At present there is no proof that this is true however, almost two-thirds of the poly drug users in a 2010 study used cannabis. Utilizing this argument some studies have shown that alcohol and tobacco may additionally be regarded as gateway drugs.

Safety: Fatal overdoses associated with cannabis use have not been reported as of 2010. There has been too little research to determine



THE "MONEY TREE"™

LATE BREAKING NEWS

The Ham population was increased by the addition of 29,000 new Hams last year, the highest number since 2009. The majority of these were Tech class. However, the number of license upgrades has been down the last few years. ARRL membership exceeded 162,200 members, about 2,000 more than last year.

Dayton is right around the corner, May 16-18, ticket prices \$20 in advance, \$25 at the door. General inquiry: Dayton Hamvention, 937 276 6930, P.O. Box 964, Dayton, OH 45401, www.hamvention.org.

A little excitement occurred on March 11th when a hot wire came through the internet which read, "I hope you get this on time. I made a trip to the Ukraine and had my bag stolen from me with my passport and personal effects therein. The embassy has just issued me a temporary passport but I have to pay for a ticket and settle my hotel bills. I will need \$1,950 US Dollars." from Jeff K6JW, "I think Warren has been spoofed. The e-mail ostensibly from him is likely to be a scam. Don't respond!" **Bob RLC** wrote, "Either you are fighting the Commies in the Ukraine...or your AOL account has been hacked. Either way, fight back!" Chip N5RTF aired in from New Orleans, "I thought we had sponsored a DXpedition."

Yes, it was a scam and the News Editor (Warren, Baron Munchausen by Proxy) hopes no one sent the creeps any money!

WRITE TO US!
 We welcome your comments.
 Mail to Marco, P.O. Box 127,
 Indian Rocks, FL,
 33785. Email to
 wahrenbrown@aol.com
 Letters may be edited for
 brevity & clarity.

MARCO NET SCHEDULE

<u>DAY</u>	<u>EASTERN</u>	<u>FREQ.</u>	<u>NET CONTROLS</u>
Any Day	On the Hour	14.342	Hailing Frequency
Sunday	10:30 a.m. Eastern	14.140	CW Net, Chip, N5RTF
Sunday	11 a.m. Eastern	14.342	Warren, KD4GUA

(Alternate confidential Grand Rounds frequency—
 on or about 14.344 or as announced on the air.)

**MARCO'S CW
 NET IS NOW
 CALLED THE
 "Bob Morgan
 Memorial
 Net"
 Sundays, 10:30 am,
 14.140 MHz**

Page 2

MARCO Grand Rounds is held Sunday at 11 a.m. Eastern Time; 10 a.m. Central; 9 a.m. Mountain, and 8 a.m. Pacific Coast time on 14.342. You qualify for one hour Category II CME credit with your check-in.

whether cannabis users die at a higher rate as compared to the general population. It varies in color from black to golden brown depending upon purity and variety of cultivation it was obtained from. It can be consumed orally or smoked.

Tincture: Cannabinoids can be extracted from cannabis plant matter using high-proof spirits (*often grain alcohol*) to create a tincture, often referred to as *Green Dragon*, though some studies suggest that fatal motor vehicle accidents and death from respiratory and brain cancers may be more frequent among heavy cannabis users. It is not clear whether cannabis use affects the rate of suicide.

THC, the principal psychoactive constituent of the cannabis plant has low toxicity, and human deaths from overdoses are extremely rare.

Cannabis smoke contains thousands of organic and inorganic chemical compounds. The tar is chemically similar to that found in tobacco smoke and over 50 known carcinogens have been identified in cannabis smoke.

There is serious suspicion among cardiologists that cannabis has the potential to contribute to CV disease. It is believed to be an aggravating factor in rare cases of arteritis, a serious condition that in some cases leads to amputation. Because 97% of users also smoked tobacco and used other drugs such as cocaine and alcohol, a formal association with cannabis could not be made.

Cannabis indica may have a CBD (*cannabidiol*):THC (*tetrahydrocannabinol*) ratio 4-5 times that of *Cannabis sativa*. Cannabis strains with relatively high CBD:THC ratios are less likely to induce anxiety than vice versa. This likely means the high concentrations of CBD found in *Cannabis indica* mitigate the antigenic effect of THC significantly. The effects of *sativa* are well known for its cerebral high, hence ***used daytime*** as medical cannabis, while *indica* are well known for its sedative effects and preferred ***night time*** as medical cannabis.

According to the UN, "*the amount of THC present in a cannabis sample is generally used as a measure of cannabis potency.*" The three main forms of cannabis products are the flower, resin (*hashish*) and oil (*hash oil*). Cannabis, the flower, often contains 5% THC resin, the hashish, can contain up to 20% and Cannabis oil may contain more than 60% THC content.

A study in 2000 found that the potency (*THC content*) rose from about 3.3% in 1983 to 4.47% in 1997. In other words, the THC content of marijuana is rising, thought to be due to additives added in the growing phase.

Buds (flowers) of the female cannabis plant contain the highest concentrations of THC, followed by the leaves. The stalks and seeds have much lower THC levels. The UN states that leaves can contain 10 X ***less*** THC than the buds (flowers) and the stalks one hundred times ***less*** THC.

The terms *cannabis* or *marijuana* generally refer to the dried flowers and subtending leaves and stems of the female cannabis plant. This is the most widely consumed form, containing 3% to 22% THC. In contrast, cannabis varieties used to produce industrial hemp contain less than 1% THC and are thus not valued for recreational use.

This is the stock material from which all other preparations are derived. It is noted that cannabis or its extracts ***must be sufficiently heated*** or dehydrated to cause decarboxylation of its most abundant cannabinoid, tetrahydrocannabinolic acid (THCA) into psychoactive THC.

Preparations of Marijuana: "Kief" is a powder which can be sifted from the leaves and flowers of cannabis plants and either consumed in powder form or compressed to produce cakes of hashish. The word "kif derives from Arabic meaning well-being or pleasure.

Hashish is a concentrated resin cake or ball produced from pressed kief, the fine material that fell off of Cannabis flowers and leaves

Hash Oil is obtained from the cannabis plant by solvent extraction, and contains the cannabinoids present in the natural oils of cannabis flowers and leaves. The solvents are evaporated to leave behind a very concentrated oil. Hemp oils is very different from both Hemp seed oil and Cannabis flower essential oil. Owing to its purity, these products are consumed by smoking, vaporizing, eating or applied topically.

Infusions... There are many varieties of cannabis infusions owing to the variety of non-volatile solvents used. The plant material is mixed with the solvent and then pressed and filtered to express the oils of the plant into the solvent. Examples of solvents used in this process are cocoa butter, dairy butter, cooking oil, glycerin and skin moisturizers. Depending on the solvent these may be used in cannabis foods or applied topically.

Adulterated cannabis. Contaminants may be found in hashish. The dried flowers of the plant may be contaminated by the plant taking up heavy metal and other toxins from its growing environment, or by the addition of toxic substances to alter the taste. In the Netherlands, chalk has been used to make cannabis appear to be higher quality. Increasing the weight of hashish products in Germany with lead caused lead intoxication in at least 29 users.

Methods of consumption Cannabis is consumed in many different ways:

Smoking, which typically involves inhaling vaporized cannabinoids ("*smoke*") from small pipes, bongs (*portable version of hookah with water chamber*), paper-wrapped joints or tobacco-leaf-wrapped blunts, roach clips and other items.

Vaporizer which heats herbal cannabis to 330-375 degrees F, causing the active ingredients to evaporate into a vapor without burning the plant material.

Cannabis tea which contains relatively small concentrations of THC because THC is an oil and is only slightly water-soluble. Cannabis tea is made by first adding a saturated fat to hot water (*cream or any milk except skim*) with a small amount of cannabis.

Edibles, where cannabis is added as an ingredient to one of a variety of foods.

Mechanism of action... The high lipid-solubility of cannabinoids results in their persisting in the body for ***long*** periods of time. Even after a single administration of THC, detectable levels of THC can be found for weeks or longer depending on the amount used. This suggests that this is an important factor in marijuana's effects, perhaps because cannabinoids may accumulate in the body, particularly in the lipid membranes of neurons.

Detection of consumption. THC and its major (inactive) metabolite, THC-COOH, can be measured in blood, urine, hair, oral fluid or sweat using chromatographic techniques as part of a drug testing program.

Production. It is claimed by growers and breeders that advances in cultivation techniques have increased the potency of cannabis since the late 1960s when THC was first discovered and understood. Because THC production drops off once pollination occurs, the male plants (which produce little THC themselves) are eliminated before they shed pollen to prevent pollination. Advanced cultivation techniques such as hydroponics, cloning, high-intensity artificial lighting are frequently employed as a response to prohibition enforcement efforts that make outdoor cultivation more risky.

Price. In the U.S., cannabis is overall the #4 value crop and is #1 or #2 in California, New York and Florida averaging \$3,000/lb.

Q. What is "Charlotte's Web?" A. A strain of marijuana that is low in THC & noneuphoric that is used to prevent epileptic seizures.

SYNTHETIC DRUGS—Uppers & Downers !

Schedule 1 drugs as of July 9, 2012

“Downers”

CANNABINOIDS are a class of diverse chemical compounds that activate cannabinoid receptors on cells that repress neurotransmitter release in the brain. These receptor proteins include the endocannabinoids (*produced naturally in the body by humans and animals*), the phytocannabinoids (*found in cannabis and other plants*), and synthetic cannabinoids (*manufactured chemically*).

Synthetic cannabinoids encompass a variety of distinct chemical classes: the classical cannabinoids structurally related to THC (Marijuana), & the neoclassical cannabinoids (cannabinimimetics).

Medications containing natural or synthetic cannabinoids:

Dronabinol (Marinol), used as an appetite stimulant, anti-emetic, and analgesic.

Nabilone (Cesamet), a synthetic cannabinoid and an analog of Marinol. It is Schedule II unlike Marinol, which is Schedule III.

Sativex, a cannabinoid extract oral spray containing THC used for neuropathic pain and spasticity in 22 countries.

Rimonabant, an anti-obesity drug under the name Acomplia. Also used for smoking cessation.

Other synthetics include: **“EZ” or “Spice,” “7H”** (*supposedly gives negative blood test for Pot—bad hangover with nausea.*).

Another is **Cheese**, heroin based whereas water is added to heroin (*then called “monkey juice”*) and Tylenol PM is added then the water is removed and the powder is snorted. **Krokodil**, a derivative of morphine only 8-10X more potent. Codeine, iodine, lighter fluid, cleaning oil are mixed and it turns the skin scaly like an alligator—the skin rots. It is reported that Russia alone has one million addicts.

“Uppers”

CATHINONES are found in the shrub *Catha edulis (KHAT)* and is chemically similar to ***ephedrine*** and other ***amphetamines***. Cathinone induces the release of ***Dopamine***. Cathinone is a Schedule I drug under the Controlled Substances Act’s Schedule I. The sale of “khat” is legal in some jurisdictions, but illegal in others. Substituted cathinones were also often used as the key ingredient of recreational drug mixes commonly known as ***“bath salts”*** in the U.S.

Reports of severe intoxication and dangerous health effects associated with use of bath salts have made these drugs a serious and growing public health and safety issue. The synthetic cathinones in bath salts can produce euphoria and increased sociability and sex drive, but some users experience paranoia, agitation, and hallucinatory delirium; some even display psychotic and violent behavior, and deaths have been reported.

(The synthetic cathinone products marketed as “bath salts” to evade detection by authorities should not be confused with products such as Epsom salts that are sold to improve the experience of bathing. The latter have no psychoactive drug-like properties.)

Bath salts typically take the form of a white or brown crystalline powder and are sold in small plastic or foil packages labeled *“not for human consumption.”* Sometimes also marketed as *“plant food”* or *“jewelry cleaner”*. They are sold online and in drug paraphernalia stores under a variety of brand names such as *“Ivory Wave,” “Bloom,” “Cloud Nine,” “Lunar Wave,” “Vanilla Sky,” “White Lightning,”* and *“Scarface.”*

Bath salts are typically taken orally, inhaled, or injected, with the worst outcomes being associated with snorting or needle injection.

Common synthetic cathinones found in bath salts include MDPV, Mephedrone (*Drone, Meph, or Meow Meow*), and methylone. They are similar to amphetamines as well as to **MDMA (ecstasy)**.

The energizing and often agitating effects reported in people who have taken bath salts are consistent with other drugs like amphetamines and cocaine that raise the level of the neurotransmitter dopamine in brain circuits regulating reward and movement. A surge in dopamine in these circuits causes feelings of euphoria and increased activity. A similar surge of the transmitter norepinephrine can raise heart rate and blood pressure.

Bath salts have been marketed as cheap substitutes for other stimulants. A recent study found that MDPV—the most common synthetic cathinone found in the blood and urine of patients admitted to ERs after bath salt ingestion—raises brain dopamine in the same manner as cocaine but is at least 10 times more potent.

3



The hallucinatory effects often reported are consistent with other drugs such as **MDMA (ecstasy)** or **LSD** that raise levels of another neurotransmitter, serotonin.

MDMA (Ecstasy, “E”, “X” or “XTC” “Molly”) associated with dance parties (*raves*) and electronic dance music. It may have some medical benefits, for example in Post Traumatic Stress Syndrome. It is often used with other drugs. Problems with this drug are the purity and dosage of the oral pills.

OTHERS (Hallucinogens)

Dragonfly is a hallucinogen less potent than LSD but of longer duration and is termed *“A ride to the moon.”*

CRUNK a drink that contains soda + cough syrup + crushed pain killers—causes blackouts.

LSD an hallucinogen

POT’S MONEY PROBLEM

Excerpts from Alex Altman’s article in Time Magazine, Jan. 27, 2014

These are heady days in Colorado, which on Jan. 1 became the first state in the world to legalize the sale of recreational pot to anyone over 21. State officials spent more than a year building a market that regulates weed from seed to sale. So far, the selling is going just fine. The state’s retail pot shops raked in more than \$1 million on their first day in business, and demand has barely dwindled since.

The problem is the proceeds. Federal law classifies cannabis as a drug on a par with heroin and ecstasy, which has prevented more than half of Colorado’s legal pot merchants from using bank accounts or credit cards. That forces multimillion dollar businesses to operate in cash which is not just difficult but also dangerous.

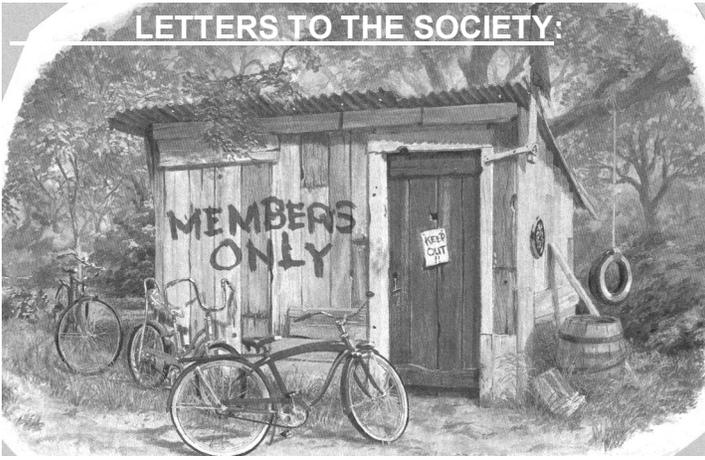
As a result, Denver’s marijuana moguls sometimes look more like criminals than capitalists. They lease secret off-site warehouses to store their money and pay employees with cash-stuffed envelopes. Some outfit their homes with false walls and safes bolted to the floors. They tote tens of thousands of dollars around and foot five figure tax bills with thick wads of 20s. To avert robberies, stores often stagger delivery schedules, hire decoy drivers and employ armed guards to monitor dozens of on-site surveillance cameras. And the spotlight has only made banks more skittish.

Long business relationships often end without warning. A co-owner of medical marijuana dispensary Denver Relief, maintained an account for four years at the Alabama based BBVA Compass as well as one with a merchant processing company, which allowed customers to use credit cards. In May, a notice was received that the bank was closing the account. A replacement bank allowed Denver Relief to transact through a shell company.

“The lack of access to banking,” says Betty Aldworth, former deputy director of the National Cannabis Industry Association, **“is hands down the single most dangerous aspect of legal marijuana.”**

Colorado officials are eager to find a solution. The Department of Justice, which has said it will not interfere with states that pass more-permissive pot laws, is aware of the contradictory banking rules but—the feds have always said this industry is going to cause crime. It’s almost like they’re trying to make that come true.

LETTERS TO THE SOCIETY:



Kudos from :

From **Dave Justis MD PhD, KN0S** in Virginia...”Here are a few notes on the latest street drugs I mentioned on the air yesterday. Not much changes as history repeats itself today (*from the days of the Boxer Rebellion in China when the War Lords drove the British into Hong Kong for free-trading Heroin for tea*) since the Drug Cartels are against legalization of drugs since the profit margin is switched to taxation. Note the similarity between amphetamine and some of the cathenones. (*Bath Salts*). I am sorry I can only listen in but often have the radio going while seeing patients at the Urgent Care on Sundays.

From **Arnold Kalan, WB6OJB**, Pacific Palisades, CA., “Heard N5AN, Bud, in Louisiana discussing cataracts. I had surgery a little over a year ago and all of a sudden I could see color, Hi, Hi. My next DxHoliday will be the last week of August ’14th from Belene Mozambique. I’ll be using the same equipment that I used from Botswana last year when I made 3,250 QSO’s in 6 days. I’ll be using a Yaesu FT 3000, Expert 1K Solid State amp, and a Tennadyne T-6 antennae. My call sign has not been assigned as yet and I’ll announce it when I receive it.

From the **Westbrooks, Maria, KI4WAX and David KJ4IZW**, Aiken, SC, a Valentine card from their infant son, “Warren” who wishes “Warren” KD4gua, a “*super Valentine Day*.” Little Warren was at the Marco Meeting in Myrtle Beach.

From **Howard Kosolo**, Georgia...*Please enter your new password.* “Cabbage.” *Sorry, the password must be more than 8 characters.* “boiled cabbage.” *Sorry, the password must contain 1 numerical character.* “1 boiled cabbage.” *Sorry, the password cannot have blank spaces.* “50bloodyboiledcabbages.” *Sorry, the password must contain at least one upper case character.* “50BLOODYboiledcabbages.” *Sorry, the password cannot use more than one upper case character consecutively.* “50BloodyBoiledCabbagesShovedUpYourBackside, IFYouDon’tGiveMeAccessnow.” *Sorry, the password cannot contain punctuation.*

“ReallyMessedUpBloodyBoiledCabbagesShovedUpYourBacksideIfYuDontGiveMeAccessnow.” **Sorry, that password is already in use.**

Jeff Wolf K6JW, (k6jw@arrl.net) writes: “My second book was published this past week. It’s called *Zendoscopy*, and is a coming of age story told in discrete episodes, some humorous and some not. Here’s a link to the book on the publisher’s website: http://inkwater.com/books/index.php?route=product/product&product_id=1116. It is available on Amazon Kindle, Barnes & Noble etc.”

From **Bob Conder K4RLC**, (bobbie@usit.net): “Echolink is a great alternative source for the Marco net. We have used it for conference with club members when our shack is closed due to football games. I was not aware that you could have up to 100 in conference. A great option is that you can have a smartphone app that runs Echolink over an Iphone or Droid phone. It would seem a great alternative for our members especially those limited by propagation or in retirement homes or whatever.”

Hams can download echolink at WWW.Echolink.Org



EDITOR’S NOTE: Walter Winchell began broadcasting in 1933 to an audience of 25 million people. The Winchell style was unmistakable. He talked rapidly at 197 words per minute..the voice was high-pitched and not pleasant to the ear; but it was distinctive. The staccato quality made every item compelling. He claimed he talked so fast because if he talked more slowly people would find out what he was saying...he began his radio program with a series of dots and dashes operating the key himself. Telegraphers throughout the country complained that what Winchell tapped out made no sense. He realized he hadn’t the faintest knowledge of Morse code but he refused to have an experienced telegrapher provide the sound effects for him. He wrote like a man honking in a traffic jam.



Secret to success...A recent study at Yale University revealed that success in life depends on three things: 1. A feeling of insecurity. 2. A feeling of exceptional ability. 3. The ability to delay reward. The later is determined by what is called the “*marshmallow test*,” i.e., the offering of children a marshmallow and telling them if they delayed eating it for 15 minutes they would be rewarded with a second marshmallow. The findings ruled out any differences in success by race or religion, they were all the same.

Is cognitive decline a myth? Many older people can be slower to recall facts or learn new information because their brains are so stuffed with accumulated knowledge, (*their brain-hard drive is filled*)—not because of inevitable cognitive decline. That’s the conclusion of a new study by German researchers challenging the idea that otherwise healthy adults are bound to experience deteriorating brain function. “*The brains of older people do not get weak, they simply know more.*” People with less information in their memory banks retrieved requested data more quickly, mirroring young adults, while the models packed with information were slower in line with the performance of older ones. (*Then do only the smart ones get Alzheimer?*”)

The secret of the Ouija board...In 1891, the first ads started appearing: “*Ouija*, (French “oui” and German “ja” for yes) *the Wonderful Talking Board*” the magical device that answered questions “about the past,



present, and future with marvelous accuracy.” The Ouija board had actually been “proven” to work at the Patent Office before its patent was allowed to proceed, and today even psychologists believe that it may offer a link between the known and the unknown. **Ouija boards work on a principle known as the “ideomotor effect”** (*such as subconscious oriented crying in reaction to a sad film*). This effect can generate a very strong impression that the movement is being caused by some outside agency, but it’s not. With Ouija boards one gives up some conscious control to participate—so it can’t be me—people think the answers must be coming from an otherworldly source. The board then becomes somehow mystical or magical.

Evidence of the dangers of testosterone supplements continues to mount. Heart attacks double for men 65+ within 90 days of therapy.

Preparing for the ARRL Centennial has provided an opportunity to review and reflect upon a century of accumulated experience with the introduction, adoption, and adaptation of wave after wave of advances in telecommunications technology. At the dawn of the 20th Century the telegraph was well established as a tool of commerce but was too costly for casual use to send personal messages. Residential telephones were rare except in -to-do urban household and long-distance calls, if available at all, were prohibitively expensive. Personal news traveled at the speed of the US Post Office. In retrospect it's no wonder that wireless communication captured the public imagination.



Years before they were first licensed in 1912 and before the ARRL's creation 2 years later there were thousands of radio amateurs using everything from simple spark transmitters and passive receivers to communicate a few blocks to high-powered rigs rivaling—and even surpassing—official stations. What we now call WW I brought a temporary halt to Amateur Radio but it soon blossomed forth again.

The pace of postwar technological advancement must have seemed dizzying at the time. In the space of just a few years vacuum tubes and "continuous wave" (CW) transmissions took over and the era of spark came to an end. Vast numbers of spark enthusiasts either couldn't or wouldn't make the transition and were left behind. The discovery that the "short waves" could support transcontinental and intercontinental communication—even in the daytime!—rendered their gear obsolete and they eventually faded away.

Some technologies are, like CW, so disruptive of the status quo that they cause older ways of doing things to disappear. Others simply expand the scope of what we can do, adding to the range of alternatives. As an example of the latter, amateur experimentation with television began in the 1920s and continues right up to the present day as the province of a small but healthy community of enthusiasts. They have had the satisfaction of seeing their work put to good use in public service communications supplementing voice descriptions from the scene of an event with live video.

Sometimes the arguments for incorporating new technologies in our Amateur Radio activity are strong, but unpopular. It may seem strange now, but for a time the ARRL had to actively encourage the use of VHF and UHF for local communication instead of the crowded HF bands. Many amateurs didn't want to incur the expense and bother of acquiring additional equipment. In the '50s and '60s the transition from double sideband, full carrier AM to single sideband was widely resisted until affordable SSB transceivers with reasonable voice quality became available. If you think your favorite HF band is crowded now, imagine what it would sound like without these important developments.

At other times there are compelling reasons for us to change our ways. The advent of FM repeaters offered powerful incentives; not only could you communicate reliably from your car, you could even make phone calls. In that regard, 40 years ago amateurs were in a class by themselves. A decade later we were able to exchange error-free text messages by packet radio long before the general public acquired the capability.

Technology often opens new doors but leaves it up to us whether to enter. Software defined radios can give us more information about what's going on in the radio spectrum than our poor brains can possibly process, but we're free to limit ourselves to what vintage equipment delivers to our own ears. Today there are boundless opportunities to explore digital protocols for any communications application we might think of, yet we are not obliged to do so; we can stick to what we enjoy.

What about the future of Amateur Radio in the broader context of telecommunications technology? It is sobering to contrast the environment of today with that of 100, 30, or even 10 years ago. While it is still true that radio amateurs are exceptional in being able to communicate any time from almost anywhere, we must acknowledge that personal mobile communication is commonplace today even in developing countries. Of course, this also means that people miss it all the more when it is not available.

If you thought the polar vortex was bad, get a load of a new climate phenomenon that just might be coming our way. Scientists say we could be headed for another "Little Ice Age" given how eerily calm the sun has been in recent years.

Background: The sun goes through cycles that last roughly 11 years, marked by the ebb and flow of sunspots on its surface. At peak sunspot activity, the so-called "solar maximum" the sun sports lots of sunspots and is steadily unleashing solar flares and coronal mass ejections. Since our current solar cycle, Number 24, kicked off in 2008, the number of sunspots observed has been half of what heliophysicists expected.

"I've never seen anything quite like this," Dr. Richard Harrison, head of space physics at Rutherford Appleton Laboratory in England told the BBC. "If you want to go back to see when the sun was this inactive in terms of the minimum we've just had and the peak that we have now, you've got to go back about 100 years, being in a solar lull doesn't mean the sun is completely dormant."

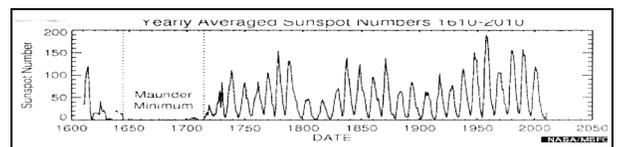
"The sun is most definitely not asleep," Dr. C. Alex Young, solar astrophysicist in the Heliophysics Science Division of NASA's Goddard Space Center, said...in fact, on January 7th, 2014, NASA observed a massive solar flare burst from a sunspot group measured to be "some seven Earth's across."

But a relatively quiet sun could cause problems. Some say that this period of weak solar activity may mirror what happened before the so-called "Maunder Minimum of 1645 to 1715—a period named after solar astronomers Annie and E. Walter Maunder, who studied sunspots and helped identify the sun's strange activity in the latter part of the 17th Century. That time period saw only 30 sunspots (one one-thousandth of what would be expected) and coincided with a "Little Ice Age" in Europe, during which the Thames River and the Baltic Sea froze over. Another expert says we have up to a one-in-five chance of being in Maunder Minimum conditions 40 years from now.

While scientists have not proven that low sunspot activity directly caused the "Little Ice Age," and say other factors may have been involved in plunging Europe into the frigid period, they do believe that fewer sunspots may mean less solar energy reaches Earth, and this in turn could lead to global cooling.

So if the sun did enter another extended period of low activity, how likely is it we'd enter into our own "Little Ice Age?"

"A new Maunder Minimum will not necessarily affect the Earth in the same way it did during the 17th Century," Guiliana de Toma of the National Center for Atmospheric Research's High Altitude Observatory told the writer. "Volcanic eruptions (that have a short-term cooling effect) also played a role in the cold weather observed during the 17th century. Plus we are starting from a warmer Earth."



Maybe not something as dramatic as an ice age would happen, but wait, if we're trying to combat global warming, could a little cooling action from the sun actually help turn down the heat on Earth?

Maybe, but it wouldn't do much, and not for very long. Experts used a computer model to predict the effect of a future grand solar minimum on Earth's climate from 2020 to 2070. The model suggested the minimum might slow down the process by 20-30%, causing a temporary cooling, but within a few decades afterward, the temperatures would go right back to where they would have been anyway.

WHY NOT SEND A HAM FRIEND A MEMBERSHIP IN MARCO, \$15.

NOT RESTRICTED TO MEDICS. ANY HAM WHO IS A POTENTIAL PATIENT IS ELIGIBLE.

Keep MARCO vibrating.

MACHINES WILL SOON BE AS SMART AS WE ARE.



The engineering director of Google Inc., Ray Kurzweil argues that as computers get smaller and more powerful, we won't face a scientific nightmare. Instead, these machine will help us expand our capabilities. He predicts the computer brain will reach and surpass the human brain by 2029. At that time you won't be able to tell the difference between "artificial intelligence (AI)" and the human brain. That point is called "singularity."

Presently, we are integrating with this technology. He explains, "When I was at MIT, the computer was across campus. It took up a floor of a building. Now we carry it in our pocket.. They're moving onto our eyes and our ears. Some people have them in their brains, like Parkinson's patients. A Parkinson's patient can actually download new software to the computer connected into their brain from outside the patient. It's pea-sized, so it requires minimally invasive surgery."

Kurzweil continues, "Another exponential trend is the shrinking of technology. We'll have millions, billions of blood-cell sized computers in our bloodstream in the 2030s, keeping us healthy, augmenting our immune system and also going into the brain, putting our neocortex on the cloud. In 2035, if I see somebody approaching me and want to impress them, and I need to think of something clever, I've got two seconds. The 300 million pattern recognizers in my neocortex aren't going to cut it. Just the way today, I can access 10,000 computers in the cloud, I'll be able to access additional neocortex and think of something really clever very fast."

"And we will expand our neocortex. Two million years ago, humanoids came on the scene. We had this frontal cortex, which is where we do our high-level thinking. That was the enabling factor for us to invent language, art and science.

We're going to expand the quantity again by basically expanding our neocortex into the cloud. And that will be another quantitative expansion, which will lead to another qualitative leap.

If you go out to 2045, we will have expanded our unenhanced intelligence a billion fold. That's such a profound expansion that we borrow this metaphor from physics and call it a singularity."

So what does the singularity produce? "We're smarter, more productive, more effective because of the brain expanders we have. My view is that this is not creating competing machines, it's not going to be us versus them; we are expanding our own capability. That's why we created these tools. We couldn't reach that fruit 2000 years ago, so we created a tool that extended our reach, and we're going to continue to do that. We're going to **integrate** with these technologies."

Before we get to the year 2045 or 2029, let's look at some of the advances that we can expect to refine and develop over the next 10 years.

"One is that we're transforming medicine from kind of a hit-or-miss affair to where we can actually reprogram our biology as software. We have 23,000 little software programs inside us called genes. They are strings of data. They evolved when conditions were very different. Somewhere between 10 and 15 years from now, we're going to see a very profound transformation in our ability to reprogram biology away from cancer, heart disease and diseases in general and aging—medicine will have turned another corner of advancement that will stymie the imagination."

(Information for the above was taken from the Wall Street Journal of Feb. 11, 2014, entitled, "*The New, Improved You.*")

TUBE vs. SOLID STATE AMPLIFIERS

Excerpts from Joel Hallas W1ZR's fine article in Mar. 2014 QST submitted by Marco's Bill Otten KC9CS

In terms of the impact to your station the solid state amplifier has a number of advantages.

Perhaps the biggest advantage is that transmitting tubes are getting more and more expensive and it is getting harder to find replacement tubes of good quality. While properly operated transmit tubes should last 10 years or more, we do make mistakes, and the rest of the amplifier should last much longer, meaning we will need to find replacement tubes some years ahead. While tube amplifiers may be somewhat less expensive to start with, they may not be in the long run.

All current tube amplifiers that I know of are manually tuned. That means that each time you change frequency, or change antenna, you will need to retune. This takes time and also has the potential for over stressing tubes reducing their useful life.

While solid state amplifiers do dissipate heat, they tend to generate less because they don't have filaments. They also tend to dissipate heat with heat sinks and if they do have fans they tend to be quieter, although they don't have to be. **My tube amplifier sounds a lot like a vacuum cleaner.**

Solid state amplifiers don't require a warm-up period. This, in combination with no tuning required, means that if you want to increase power, you can do so instantly. This is a very handy operational feature.

Many solid state amplifiers use switching power supplies that are compact and much lighter in weight. Tube amplifiers typically operate with plate voltages of 1000 V or higher. This is lethal territory and implies some risk while performing maintenance or troubleshooting. On the other hand, power supplies for solid state amps have the capability to perform unanticipated arc welding, although burns tend to be less permanent than electrocutions.

I do run my 500 W linear on 240V ac, but many can work from 120V. Be careful to check the current requirements, though—many will take up most of the usual 15 A circuit, so make sure you know what else will be sharing the available 15 A circuit, and how much it will draw. Having a dedicated circuit for the amp is a great idea.

NEWS FROM THE DENTAL WORLD

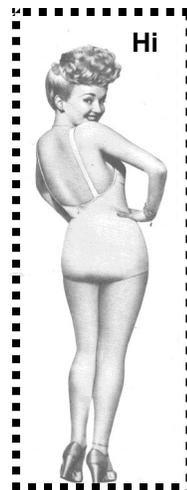
Submitted by Doug Sanders W3FYA

Good oral hygiene may be associated with lower dementia. Elderly who brush their teeth at least once a day may be at a lower risk of developing dementia according to a study published online in the Journal of the American Geriatrics Society. In data from 5,000 patients aged 52-105 examined over 18 years it revealed a 65% greater chance of **not** developing dementia in those brushing at least once a day.

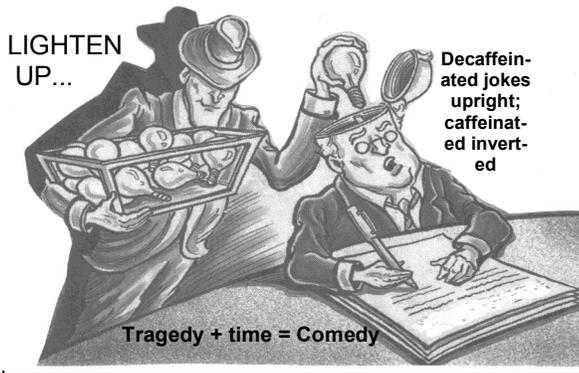
Cancer biomarkers found in saliva...Pancreatic cancer biomarkers can be found in saliva according to Dr. Wong at the UCLA School of Dentistry. He found tumor-derived extracellular RNA molecules are transported through organelles called exosome vesicles that originate at the source of the tumor and are reprocessed into saliva as biomarkers. A new test for a deadly disease?

(We have missed Doug on the net ...he reports he has had some bad luck lately...fell down the stairs twice, a tree fell onto his house; a tornado knocked down an antenna and ice storms have destroyed his remaining antennas twice. He says he hasn't had any workable transceivers but has been able to work a deal and purchase a demo but he hasn't had time or the energy to put up the wiring but he is just feeling fine and hope to get back on the air soon.)

Doug, an oral surgeon, lives in the Baltimore area and has been a long time ham and Marco member.



A 2000 Watt+ Solid State Amp.

LIGHTEN
UP...

THE TAILOR...Old Abraham was a poor tailor whose shop was next door to an upmarket French restaurant. Every day at lunch time, he would go to the back of his shop and eat his black bread and herring while smelling the wonderful odors coming from the restaurant's kitchen. One day, Abe was surprised to receive an invoice from the restaurant for "enjoyment of food." So he went to the restaurant to point out that he had not bought anything from them. The manager said, "You're enjoying our food, so you should pay us for it." Abe refused to pay and the restaurant sued him. At the hearing, the judge asked the restaurant to present their side of the case. The manager said, "Every day, this man comes and sits outside our kitchen and smells our food while eating his. It is clear that we are providing added value to his poor food and we deserve to be recompensed for it." The judge turns to Abe and says, "What do you have to say to that?" Abe didn't say anything but stuck his hand in his pocket and rattled the few coins he had inside. The judge asked him, "What is the meaning of that?" Abe replied, "I'm paying for the smell of his food with the sound of my money."

New medical students were made to take an extremely difficult class in physics. One day the lecturer was discussing a particularly difficult concept. A student rudely interrupted to ask, "Why do we need to learn this stuff?" "To save lives," the lecturer responded quickly and continued. A few minutes later the same student spoke up again, "So how does physics save lives?" he persisted. "It keeps idiots like you from graduating."

...**Norwegian text to his wife...**"Lena, I'm having one more beer wit Sven if I M not home in 2 hours read dis message again."

POWER OUTAGE...this week & my laptop, TV and iPad shut down. So I talked to my wife for a few hours, she seems like a nice person.

THE WIFE FROM HELL...A police officer pulls over a speeding car. The officer says, "I clocked you at 80 mph, sir." the driver says, "Gee, officer, I had it on cruise control at 60; perhaps your radar gun needs calibrating." Not looking up from her knitting the wife says: "Now don't be silly dear—you know that this car doesn't have cruise control." As the officer writes out the ticket the driver looks over at his wife and growls, "Can't you please keep your mouth shut for once!?" The wife smiles demurely and says, "Well dear you should be thankful your radar detector went off when it did or your speed would have been higher." As the officer makes out the second ticket for the illegal radar detector unit, the man glowers at his wife and says through clenched teeth, "Woman can't you keep your mouth shut?" The officer frowns and say, "And I notice that you're not wearing your seat belt sir, that's an automatic \$75 fine." The driver says "Yeah, well, you see, officer, I had it on but I took it off when you pulled me over so that I could get my license out of my back pocket." The wife says, "Now, dear, you know very well that you didn't have your seat belt on. You never wear your seat belt when you're driving." And as the police officer is writing the third ticket the driver turns to his wife and barks, "Will you please shut up?" The officer looks over at the woman and asks, "Does your husband always talk to you this way, Ma'am?? She replies, "Only when he's been drinking."

Time exists in order that everything doesn't happen all at once...and space exists so that it doesn't all happen to you.

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HISTORY OF THE MEDICAL AMATEUR RADIO COUNCIL

In the fall of 1965, at the Astor Hotel in New York City, Dr. William L. Sprague WA0CRN, held a meeting of physicians and dentists interested in exploring the formation of a medically oriented amateur radio operators organization. A group of 95 members was organized. The organization was formalized at a meeting in New York on April 16, 1966. M.A.R.C.O. was chartered as a Corporation in the State of New York.

Marco is basically interested in medical and technical education and help to the less fortunate using our MediShare division. We offer one hour of category II CME for check-ins to our weekly Sunday "

I'm reaching out on behalf of a friend of mine who needs some help OHM wishes to remain anonymous. His wife told him to go out and get some of those pills that would help him get an arousal. When he came back, he handed her diet pills. He now needs help.





MEMORIES OF YEARS AGO IN

MARCO

Our History Book

Bruce Small, K2L2

Marco Webmaster

TWENTY FIVE YEARS AGO IN MARCO

The February 1989 MARCO Newsletter led with the story that MARCO was to be featured in an article in Diversion Magazine. Although this was exciting news at the time, in the event, we received only about a paragraph.

Attendees at the annual meeting held in early April in Williamsburg, VA., endured severe rain. A lengthy description of the business meeting concluded that there were no "earth shattering" decisions made. Among the non-deciders were Ed WA3TVG, Bill WA6CRN, Alfred WA2CBA, Christine WB2YBA, Ira W3HEF, Polycarp WB4LPC, Dick W8QP, Dick WA3AJC, Anson K4EK, Ernie N2CDK, Doug N9IGB and Don K2TNY.

We welcomed new members Jack KB4LRJ, Tom KC9LZ, Dennis KA3SCC, Barry PP8ZFM, Bill C6AFE, Osamu JA2VUP, Richard N5EV and Doug N9IGB

TWENTY YEARS AGO IN MARCO

The April 1994 issue headlined the upcoming installation of Polycarp Gadegbeku WB4LPC as Marco President at the upcoming meeting in Dayton.

Newsletter Editor Ed WA3TVG commented on the favorable reception of the redesigned 7" x 1/2" publication, and also described his recent 28-day hospitalization due to an assortment of vascular problems.

Smitty W67JZU described "MediShare Part B" involving personal service, and listed several possible collaborators of those who wished to donate their time. These included Mexican Medical Ministries, World Medical Mission, Medial Group Missions and Direct Relief International. There was also an opinion piece by A. D. Carroll K3GNK of the Reading Radio Club on the possible health hazards of exposure to RF energy. This is a subject of endless fascination for those of us who try to make electrons do tricks for us.

FIFTEEN YEARS AGO IN MARCO

Apparently nothing happened fifteen years ago. There is a gap in my collection of Marco Newsletters between the Jan/Feb edition (edited by Ed WA3TVG) and the July/Aug issue (edited by Gene WB3FTJ). I do recall that Ed had been trying to retire from the position, and it took a few months for the transition to be completed.

TEN YEARS AGO IN MARCO

The April 2004 MARCO Newsletter discussed "Water—Too Much of a Good thing, or Not Enough?" The well-known recommendation to drink eight glasses of water daily has little basis in scientific fact. The article discussed over hydration, hyponatremia, compulsive water drinking and answered several questions about bottled water.

Medicare Director Gene N3HG reported on projects in Honduras, Zambia and Afghanistan.

MARCO Grand Rounds on March 7, 2004 discussed aspirin resistance and the medications then in use to circumvent it. The talk was reprinted in this issue of the Newsletter.

Part 2 of Smitty W6JZU's retelling of the Jonestown saga detailed communications between the colony and the US on the amateur radio bands, and the rejected application to join Marco made by the colony's physician.

TALKING DOG DEVICE READY ...Scandinavian scientists are working to develop a headset that could soon allow your dog to speak his mind. It works by distinguishing canine thought patterns and then issuing them as short sentences via a speaker. It uses EEG (electroencephalography) sensing, micro computing and special (brain-computer interface) software. Sample sentences like "I'm hungry," "I don't like this," or "I'm curious who that is?" will be programmed into the device and emitted through a loudspeaker. The scientists are working on a reverse headset for humans to bark their way into the hearts of their canine buddies. The units will sell for \$300 through the Nordic Society for Invention and Discovery and is called "No More Woof."

BOB CURRIER MARCO GRAND ROUNDS OF THE AIR

14.342, Sundays, 11 a.m. Eastern, One Hour Cat. II CME

CALL HRS NAME QTH

Because of poor propagation we may have missed you—please correct by sending to warenbrown@aol.com

KD4GUA	10	Warren	Largo, FL
W1BEW	10	Bobbie	Tennessee
N6DMV	10	Paul	Torrance, CA
WB5BHB	10	John	Vanceleave, MS
KK1Y	10	Art	Seminole, FL
KC9CS	9	Bill	Largo, FL
NU4DO	9	Norm	Largo, FL
KM2L	9	Bruce	Clarence, NY
WB6OJB	9	Arnold	Pacific Pal., CA
K4JWA	9	Jim	W. Virginia
N4TSC	9	Jerry	Boca Raton, FL
N5RTF	9	Chip	New Orleans, LA
WB1FFI	9	Barry	Syracuse, NY
N4MKT	9	Larry	St. Petersburg, FL
KD8IPW	9	Mary	W. Virginia
WA9HIR	9	Bill	Berwyn, ILL
KG6DQF	8	Glen	Palo Alto, CA
N2JBA	8	Ed	Amenia, NY
KN0S	8	Dave	Virginia
K9CIV	8	Rich	Knox, IN
W4DAN	8	Danny	Cleveland, TN
N9YZM	8	Mike	Crystal Lake, IL
WA3QWA	8	Mark	Chesapeake, VA
K0FS	8	Fred	St. Louis, MO
K3IK	8	Ian	Shavertown, PA
WA1EXE	7	Mark	Cape Cod, Mass.
AE4BX	7	Mary	Myrtle Beach, SC
KD5QHV	7	Bernie	El Paso, TX
K6JW	7	Jeff	Palos Verdes, CA
N5AN	7	Bud	Lafayette, LA
KE5SZA	6	John	Marietta, OK
N2OJD	6	Mark	Sidney, Ohio
N4DOV	6	David	Ft. Lauderdale, FL
W1RDJ	6	Doug	Cape Cod, Mass
KB5FLA	6	Rich	Arkansas
K4RLC	5	Bob	Raleigh, NC
W4MEA	5	Max	Hixson, TN
N9GJ	5	Greg	Cleveland, TN
W8LJZ	5	Jim	Detroit, MI
W9JPN	4	Wally	Champaign, IL
N9RIV	4	Bill	Illinois
WB9EDP	4	Harry	Chicago, IL
W6NYJ	3	Art	Beverly Hills, CA
W2PAT	3	Marvin	South Carolina.
KG6JLE	3	Paul	Atherton, CA
W4TX	3	Doc	Mississippi

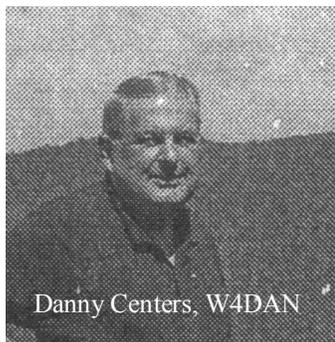
Those with 2-check-ins: KE8GA, W0RPH, W3DRB, WB2MXJ, W1HGY, KK4ROL, KK4WDM, K06MD, KC8RBR

YEAR	TOTAL CHECK-INS	AVERAGE PER SUNDAY
1998	694	14.46
1999	766	15.95
2000	1,035	20.29
2001	1153	22.60
2002	1383	26.15
2003	1489	28.63
2004	1534	29.50
2005	1517	29.17
2006	1531 (one extra Sunday)	28.89
2007	1591 (one extra Sunday)	30.02
2008	1524 (Only 46 nets)	33.14
2009	1533 (46 nets)	33.32
2010	1591 (44 nets)	36.22
2011	1514 (44 nets)	34.41
2012	1602 (44 nets)	36.41
2013*	1400 (44 nets) (New Freq)	31.82 (Year of Terrorist)
2014	405 (10)	40.50

Record number of stations checked-in was 51, on Feb. 24, 2013

*This was the year we had to change frequency due to the terrorist, thus losing a lot of stations in the freq. shift.

It seems that almost every time a major solar flare occurs, we hear a few hams bemoaning the poor band conditions. It is usually cries of how bad the forty meter band is. Sometimes they are complaining about all the bands from eighty to twenty meters. Yes, disturbances on the sun cause the lower frequencies to sound noisy and appear to be nearly void of signals. Usually, shortly after a solar flare occurs followed by dead and/or noisy band conditions for approximately twenty four hours the higher frequencies really come alive with above average skip conditions, or at least allowing good communications on upper HF bands that were previously dead.



Danny Centers, W4DAN

I have been hearing comments concerning the bad conditions on forty meters lately. When this happens, much of the time we can expect ten through seventeen meters to be open with good conditions. Even though ten and twelve meters have been open lately for long hours stateside and various times worldwide, fifteen, seventeen, and twenty meters have been very good for both stateside and worldwide contacts. The seventeen meter band, in particular, is sometimes amazing with the wide latitude of login and short skip conditions during the same hours.

On the evening of Feb. 24, 2014, a sunspot exploded into an X-5 class flare. X-class flares are of the most powerful type. These are the flares we hear of that can cause interference to satellites, power grids, and communication in general if they erupt directly toward the earth. The Feb. 24th flare was, fortunately perpendicular to the direction of the earth, and was the most powerful flare of 2014. The active region of the sun from which this flare emanated has shown increased activity from its first rotation around the sun to this third appearance when the X-5 event occurred.

As stated in my previous article, sun spots and resulting flares, are caused by the sun's magnetic field activity. The sun's magnetic fields seem to be advancing with momentum after the long coming of the recent reversal of the fields. This activity has the space weather predictors admitting that there may be an increase in sun spot activity throughout 2014. They still don't seem to agree that their prediction of peak activity two years ago didn't really pan out. To cover for these possible miscalculations, they are calling the latest increase in activity the second of a "double peak." It appears that this is based more on historic time frame data than the actual time of the sun's magnetic polarity shift, and the related magnetic activity. Personally, I call this THE PEAK instead of the second peak of cycle 24. Conditions have been generally good, and should remain so for at least the next twelve months.

Now for the proverbial "moral of the story." Solar activity is constantly changing. It appears that the length of solar cycles can change as well as the intensity. Because of the increased MUF (maximum usable frequency) during higher sun spot activity, propagation on the upper HF frequencies improves and the lower frequencies suffer. During low sunspot activity, the MUF is lowered and better propagation can be expected on the lower HF frequencies with the higher frequency bands going "dead." This is a very general statement and exceptions are inevitable. Theoretically, frequencies just below the MUF propagate better with longer skip than those farther down the spectrum.

The lower sunspot activity of cycle 24 has possibly caused lower MUF during this cycle. This could account for less long distance propagation on ten meters lately than was experienced in previous cycles. Regardless, ten meters has been very active for the last several months, and with very good propagation since the beginning of 2014. You may recall the excellent propagation on forty and twenty meters a few months ago before the MUF rose above ten meters. Of course, these statements are only for general reference, and are for the purpose of illustrating varied changes in conditions.

We are fortunate to have so many bands from which to choose. Your enjoyment of the hobby can be increased by checking each band as often as possible and taking advantage of the ones that are open and active. You will discover how propagation on each band varies from hour to hour and from day to day. One thing that can be counted on is that you can't count on the conditions

No comment this issue
See you in Dayton



THE LOST U.S. STATE OF "FRANKLIN."

They called the new state "Franklin," but the gentleman from Philadelphia for whom it was named declined to visit. And because of its shaky currency, officials were paid in hides. Yet Franklin survived—albeit precariously—for four years before it disappeared from the ever-changing map that traced the nation's growing pains.

As early as 1673, explorers had traveled over the Appalachian Mountains to what is now eastern Tennessee. A ragtag assortment of colonists later moved west from Virginia and North Carolina to the banks of the Watauga and Nolichucky rivers, where they eked out an existence by growing corn and hunting wild game. But they met opposition from rival claimants to the territory: the Cherokee Indians, the governor of North Carolina and the British Crown.

A royal proclamation issued in 1763 forbade settlements west of the mountains and reserved for the Crown the right to make treaties with the Indians. But the frontiersmen—who soon numbered in the thousands—refused to abandon their outposts. In 1772 they banded together in the Watauga Association, which established courts of justice and militia to fend off the Indians. One Tory leader called the Wataugans "*backwater men...the dregs of mankind*," a later historian referred to their Articles of Association as a declaration of "*the divine right of the frontier*."

The Revolution found many Wataugans eager to fight the British, especially when Lord Cornwallis sent troops in the direction of the western lands. In a showdown at King's Mountain, SC, mounted Watauga militiamen yelled savage war cries as they took expert aim with their trusty long rifles, and the British were defeated. The victory made heroes of the settlers particularly John "Nolichucky Jack" Sevier. After independence, however, the "*over mountainmen*" got little support from their parent state, North Carolina. As under the British they were "grievously taxed without enjoying the blessings of it."

The 14th State? Then in 1784, North Carolina offered to cede its Tennessee lands to the central government. Feeling abandoned, the Wataugans held a convention and voted to found Franklin. They adopted a state constitution, elected legislators and a governor—John Sevier—and petitioned for recognition as the 14th state. Thomas Jefferson, who had drawn up a plan for carving new states out of the western territories, backed their request. But the support of 9 of the original 13 states was required, and only 7 voted for approval. Meanwhile, the north Carolina government reclaimed its western lands and tried Sevier as a traitor. The state survived until North Carolina relented, forgave the settlers' back taxes and pardoned Sevier.

Franklin became part of the Tennessee Territory, and when that state was admitted to the Union in 1796 the citizens elected Sevier as their first governor. Today's Franklin, Tennessee was yesterday's potential capital of the state of Franklin, USA.

being the same from one day until the next. The sun is constantly changing and so are conditions. It is time for us to exercise our ability, and privilege to change bands and explore frequencies that you may not have used before. Amateur radio offers a world of hands on adventure and exploration without leaving our seats at the operating position.

In case you are wondering what the title of this article has to do with sunspots...well, I guess it really doesn't. It is just a catchy title stolen from the song of the same name recorded by Gerry and the Pacemakers circa 1964.

Tinnitus (*from the Latin, meaning "ringing"*) is the perception of sound within the ear when no actual sound is present. Despite the origin of the name, "ringing" is only one of many sounds the person may perceive.

Tinnitus is **not a disease**, but a **condition** that can result from a wide range of underlying causes. The most common cause is noise-induced hearing loss. Other causes include: neurological damage (*multiple sclerosis*), ear infections, oxidative stress, emotional stress, foreign objects in the ear, nasal allergies that prevent (or induce) fluid drain, wax build-up, and exposure to loud sounds. Withdrawal from benzodiazepines may cause tinnitus. Tinnitus may be an accompaniment of sensorineural hearing loss or congenital hearing loss, or it may be observed as a side effect of certain medications such as aspirin.

Tinnitus is usually a **subjective** phenomenon, such that it cannot be objectively measured. The condition is often rated clinically on a simple scale from "slight" to "catastrophic" according to the difficulties it imposes, such as interference with sleep, quiet activities and normal daily activities

If there is an underlying cause, treating it may lead to improvements. Otherwise typically management involves talk therapy. As of 2014, there are no effective medications. It is common affecting about 15% of people. Most however tolerate it well with it being only a significant problem in 2% of people.

Tinnitus can be perceived in one or both ears or in the head. It is usually described as a ringing noise, but some say it is a high-pitched whining, electric buzzing, hissing, humming, roaring, sizzling sounds that slightly resemble human voices or even a pure steady tone like that heard during a hearing test, and in some cases, pressure changes from the interior ear. It has also been described as a "whossing" sound because of acute muscle spasm, as of wind or waves. Tinnitus can be intermittent, or it can be continuous, in which case it can be the cause of great distress. In some the intensity can be changed by shoulder, head, tongue, jaw, or eye movements.

Most people with tinnitus have some degree of hearing loss, in that they are often unable to hear clearly external sounds that occur within the same range of frequencies.

Causes: Objective tinnitus...In some cases, others can perceive an actual sound (bruit) coming from the persons ears. This is called objective tinnitus. This can arise from muscle spasm that cause clicks or crackling around the middle ear. Some experience a sound that beats in time with the pulse. Rarely, pulsatile tinnitus may be a symptom of potentially life-threatening conditions such as carotid artery aneurysm or carotid artery dissection. It may also indicate vasculitis or more specifically, giant cell arteritis.

Subjective tinnitus...This most commonly results from otologic disorders—the same conditions that cause hearing loss. The most common cause is noise-induced hearing loss, resulting from exposure to excessive or loud noises. Tinnitus, along with sudden onset hearing loss, may have no obvious external cause. Ototoxic drugs can cause subjective tinnitus either secondary to hearing loss or without hearing loss and may increase the damage done by exposure to loud noise, even at doses that are not in themselves ototoxic.

Subjective tinnitus can be caused by medicines such as aspirin, quinine, quinidine. Over 260 medicines have been reported to cause tinnitus as a side effect. It is also present in benzodiazepine withdrawal.

Pathophysiology...One of the possible mechanisms relies on otoacoustic emissions. The inner ear contains thousands of minute inner hair cells with stereocilia which vibrate in response to sound waves, and outer hair cells which convert aural signals into tension on the vibrating basement membrane. The sensing cells are connected with the vibratory cells through a neural feedback loop, which gain is regulated by the brain. This loop is normally adjusted just below onset of self-oscillation, which gives the ear spectacular sensitivity and selectivity. If something changes, it is easy for the delicate adjustment to cross the barrier of oscillation and tinnitus results. Exposure to excessive sound kills hair cells, and studies have shown as hair cells are lost, different neurons are activated, activating auditory parts of the brain and giving the perception of sound.

Prevention...Tinnitus and hearing loss can be permanent conditions.

Ask Americans which constitutional right they most treasure, and the chances are that voting for president will be high on the list. *In fact, the Constitution gives no such right.*

Although Ben Franklin and a few others favored popular election of the chief executive, most of the framers of the Constitution feared that less educated Americans might elect corrupt or incompetent men to the powerful office, and so they decided that the president and vice president would be chosen by a special body of electors. The Electoral College would, they felt, exercise superior judgment. The Constitution allotted each state as many electors as it has senators and representatives, and left the manner of their selection to the states.

In the early years the electors were usually appointed by the state legislatures. But by 1832 the choosing of electors by popular vote had become the rule except in South Carolina. With the steady growth of population, and hence the number of electors, the lists of individual electors became long and unwieldy, and in 1892 a trend began to group the electors by political party, requiring only a single vote.

The names of the presidential candidates did not begin to appear on ballots along with those of the electoral candidates until 1897. The voting machines introduced a few years later lacked space for long ballots and so Iowa and Nebraska began to list only the names of the presidential and vice presidential candidates, dropping the names of the electors altogether. A vote for a party's candidate was taken as a vote for the electors of that party. Gradually the rest of the states followed suit and adopted the short ballot.

Despite the directive of the ballot, and despite party loyalty oaths, electors are constitutionally free to vote as their judgment dictates when they meet in their state capitals in December. In the elections of 1948, 1956, and 1960, **several electors ignored the voters' wishes.**

Traditionally, the electors of a state vote as a bloc for the candidate receiving the most votes in that states. As a result of this strange practice, two presidents—Rutherford B. Hayes in 1876 and Benjamin Harrison in 1888—won with a majority of the Electoral College while losing the popular vote to their opponents.

VOTING FOR SENATOR

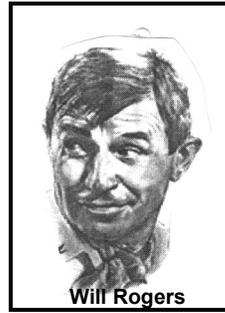
Because the Founding Fathers created the Senate to represent the states rather than the people, the Constitution stimulated that senators would be **elected by state legislatures**, not by popular vote. It was not until 1913, when the 17th Amendment was ratified (*after nearly a century of pressure*), that citizens were granted the right to vote for senators.

Prolonged exposure to sound or noise levels as low as 70dB can result in damage to hearing. Ear plugs can help with prevention along with avoidance of ototoxic drugs such as Amino glycoside antibiotics, aspirin, quinidine and some chemotherapeutic drugs such as cisplatin
Management...Primary treatment is talk therapy and sound therapy. Counseling also helps. There are no medicines that are effective. The use of sound therapy by either hearing aids or tinnitus maskers help the brain ignore the specific tinnitus frequency. Most people with tinnitus get used to it. Hearing aids seem to help in 50% of cases.

Acute unilateral hearing loss with tinnitus may indicate an acoustic neuroma. Acute unilateral hearing loss and vertigo may suggest a perilymphatic fistula. Episodic tinnitus, fullness in the ear, severe vertigo and fluctuating or permanent hearing loss in the same ear suggest Meniere's disease. Bruit or venous hum on auscultation of the neck suggests a vascular etiology.

This is a very common complaint and the only therapy we have are sound blankers, hearing aids, counseling, and preventive measures to keep the condition from getting worse such as avoiding loud noises and trauma.

Often tinnitus is the the first sign of sensorineural loss. Drugs used are vaso dilators such as niacin and anticonvulsants and valium. Sound masking devices or a hearing aid can be used to mask the sounds



BACKGROUND: At the recent Marco meeting in Myrtle Beach, SC., Wayne Rosenfield, K1WDR came to the Aether News Editor with a wonderful story of the heroism by a ham operator named Capt. Kurt Carlsen W2ZXM of the “*Flying Enterprise*,” a ship caught in a hurricane in the North Atlantic in 1951. Ironically, the News Editor, at the time, was a Navy medical officer aboard the USNS General Leroy Eltinge that stood by to possibly rescue passengers aboard that very ship. On top of that, the News Editor’s “Elmer” was a South African ham, Olliver Pierce WU4i, who at that time was corresponding by radio with Carlsen. Below, is this wonderful story, “*Simple Courage*,” written by Frank Delaney, ISBN 1-4000-6524-0, available at Amazon.com

In late December 1951, Capt. Kurt Carlsen, 37, had run into a hurricane off the South English coast aboard his cargo vessel *Flying Enterprise*. The Captain ordered “abandon ship” and a line was passed from a rescue lifeboat and passengers and crew were ordered to jump into the raging waters with lifelines attached, but the Captain remained on board. Prior, by the time she was ready to return to New York from Hamburg, *Flying Enterprise* was loaded with consignments of which have contributed to the half century of questions hanging over her—just why did *Flying Enterprise* become a mystery ship and why did her Captain refuse to leave his ship. The ship left Hamburg on Dec. 21, 1950 for New York and the unexpected. Just who was Carlsen?

Generally, the Skipper, Capt. Henrik Kurt Carlsen, of the *Flying Enterprise* had a grave personality, with the dry and dark humor that marks the Danes. Imbued with the gift of focus, he looked straight ahead and stared down the tunnel of any task facing him. Men who get pitched against abnormal physical odds or who take on fierce challenges seem to share a concentration found on the borders of autism; they home in on the job at hand and use every cell in their bodies to clinch the thing.

He had what one called a real Danish personality; he had humor but he could leave humor aside and become very serious. The amateur-radio boom had come into its own during his lifetime at sea; he embraced it totally and became an expert “*ham*”—a perfect pastime for a man of tight rein, this intimate yet distant medium. And he used it well. On one level it simply brought him friendship—all over the world. In Hamburg, for instance, just before he weighed anchor in December 1951, a local ham, knowing that W2ZXM/mm had come into port, called to see him at the dockside. Their visit would have a noticeable and quirky reverberation in the events that followed.

He also used shortwave in his personal life. Ben Stevenson, Carlsen’s oldest surviving friend, lives in Colonia, NJ, his memory still fresh at the age of ninety-four. Early in their friendship, Carlsen asked Mr. Stevenson, who had nothing to do with the sea and ships, if they could speak by radio every day. In the course of these conversations, from everywhere on the globe to New Jersey, Carlsen would ask Ben to forward a message to the pregnant wife of a sailor, or the ailing mother of a passenger. Above all, by means of Ben’s patching the shortwave calls ingeniously went through to the family telephone, Carlsen spoke to his own wife and daughters every day, no matter how far away he was. And when this greatest crisis arrived, his fellow radio hams all over the world tracked his fortunes.

He came from the village of Bagsvaerd, near Copenhagen. This used to be feudal country, terraced with small houses of rural folk who worked the land. These people were natural Calvinists; they adhered to creeds that set limits to sensuality and leisure, because they believed work and its products crucial to life and to answering a great practical question: How can such a small country, with such minute holdings of land, make its living? They answered by setting standards. For example, Danish farming became famous for its milking parlors of pristine hygiene. From their curds and whey, they didn’t make mere cheese; they spun gold.

With a father who did local odd jobs, no silver spoons had appeared at his birth. After schooling, Carlsen could go in one of three basic directions. He could work for local farmers, who were numerous and industrious. But ever since the 18th century divisions of land in Denmark, the farms had been too small to provide significant labor income, and most farm work would at best prove merely seasonal. He could also move to a city and toil in the black mills of industry. But Carlsen had formed open-air tastes in childhood. So even though Bagsvaerd lies inland (if

“inland” can ever apply to Denmark), he therefore took the third main option; he went to sea.

His father liked to tell a story of Kurt at age 13, walking along the dock at Elsinore, near Hamlet’s castle, looking up at the moored ships. A sailor on watch asked the boy to take over for a few moments, and thus was Kurt Carlsen hooked. Not that he needed such direct initiation; many of those Danish village boys dreamed of mastering an oceangoing vessel. A sea captain had a lofty status in that society and still does. When Carlsen received his master’s ticket, he became a local hero, even though it soon took him away from Denmark—to the United States, under whose flag, he would sail for most of his life.

After his apprenticeship, Carlsen joined the Danish navy and got his AB docket before he was 18—young for an able seaman. Six months later he enlisted as a cadet in the Danish Merchant Marine Academy in Copenhagen, a training school with one of the most demanding sets of academic standards on the northern European seaboard. Cadets seeking the highest qualifications of master mariner needed to speak and read fluently in at least two international languages, have a first-class grasp of the finer principles of navigation, understand and prove competent to operate all steamship machinery and become at least familiar with some of the Laws of the Sea.

Out of this education and out of further experience on ships, Carlsen was awarded a Danish master’s license in October 1936, at the age of 23, and an American master’s license in May 1947 at the age of 33—young tickets in any seas. By then, his seamanship had the soundest and most comprehensive foundations. He excelled in radio communications; he knew how sail powered a ship; and he had triumphed as a student of steam. In practical terms, he knew how to do almost every job aboard. From the moment he received his Danish ticket he won commissions and began to sail the world.

When discussing Carlsen’s character, those who knew this even-tempered man with iron in his frame, this serious man with the dazzling smile, those who worked alongside him, who sailed with him who lived with and loved him—they all seem to reach for the same phrase book. They begin with such words as “*determined*” and “*forceful*” and then they hesitate. Each one knows that Carlsen had those properties in abundance—but they also know that such words cannot tell the full story.

Carlsen specialized in finding or improvising good solutions—he took stock of a situation and used his instincts to back up his experience. As a prime example of how the two worked together in him, consider his old motorbike, manufactured 12 years earlier, a *Zundapp*. No matter who hooted at it, Carlsen sang this bike’s praises. He took it with him on his voyages because it got him around a lot faster and easily; he couldn’t bear to wait on the dockside for a cab to take him to a consulate. And if his radio batteries failed, he could power his shortwave off the bike engine. (*He also owed a much more impressive Harley-Davidson.*)

Men who crewed with Carlsen often heard him say, “*When you have lived all your life at sea you can’t have fear for the seas. You have a profound respect for the elements, you learn to respect them because you know what they can do. But you can’t fear them. If you do, the you can’t go to sea.*”

On Christmas eve, after he had finished speaking to his wife and children, Carlsen returned to the bridge. The sea had come up with the wind that blew away the fog.

“*In the English Channel, heavy weather was first encountered on 24 December,*” says the Coast Guard report. It came from the southwest, “*generally Beaufort force 6 or 7, probably reaching 8 at times. Became westerly force 5 or 6 near midnight on the passage of a cold front. Weather—mainly fair or cloudy at first with drizzle and rain spreading from the west later. Cloud breaking about 2100 GMT and then fair conditions with an occasional shower.*”

Plotting the waters not far from Carlsen that day, a British cargo ship, *S.S. War Hawk*, made the following entry in her deck log: “*Day overcast with squalls about 11 am...heavy and rough confused seas from W’ly to NW’ly. Winds increasing to force 7. Vessel rolling and pitching heavily at times. All deck and cargo hatches secure.*”

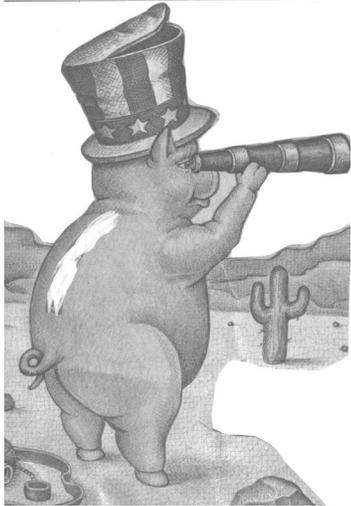
On Carlsen’s ship, Force 6 proved highest that day, the comparatively milder weather described as “*fair or cloudy with showers.*”

(Continued next Edition.)



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