HAM DATES:

INDIAN RIVER CO.

October 3, 10, 17, 24, 31, 2021
Treasure Coast Ragchew / Traders Net 8:00pm 146.775 (-) (107.2)

October 4, 11, 18, 25, 2021
Emergency Net 7:30pm 146.640 (-) (107.2)

October 5, 12, 19, 26, 2021
Indian River Co. ARES NET 7:30pm, 145.130 (-) (107.2)

October 14, 2021
Vero Beach ARC Meeting7:30pm Indian River Emergency Services 4225 43rd Ave, Vero Beach

October 28, 2021
Indian River Co. ARES meeting 7:00pm 145.130 (-) (107.2)

ST LUCIE CO.

October 5, 12, 19, 26, 2021
Ft. Pierce ARC Rag chew, Tech, Traders NET 8pm, 147.345 (+) (107.2), Echolink: 2004 (W4AKH-R)

October 6, 2021
St. Lucie Co. ARES NET, 7:30pm, 147.240 MHz (+) (107.2)

October 7, 14, 21, 28, 2021
Port St. Lucie ARA Weekly net 7:30pm, 146.955 (-) (107.2)

October 13, 2021
Ft. Pierce ARC Meeting, 7:30pm, IRSC, Building R, Room 130

October 20, 2021
St. Lucie Co. ARES, 7:30 pm SLC EOC, 15305 Midway Rd, Ft. Pierce.

October 27, 2021
Port St. Lucie ARA meeting 7:30pm (ZOOM Meeting) (request login)

MARTIN CO.

October 4, 11, 18, 25, 2021
MCARA Rag chew net 8:00pm, 145.150 MHz (-) (107.2)

October 14, 2021
MCARA ARES, 7:00pm MC EOC 800 SE Monterey Rd, Stuart

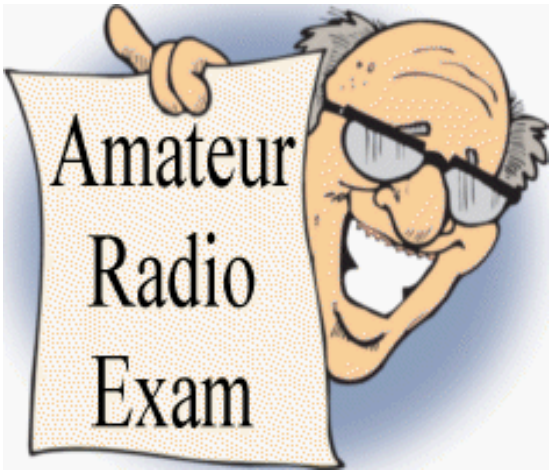
October 28, 2021
MCARA Meeting, 7:00pm, Stuart PD, 830 SE Martin Luther King Jr Blvd, Stuart

(Blue underlined text are links to club / organization websites)

Treasure Coast Ham News

VOLUME 2, ISSUE 10 OCTOBER 2021

PASSED



Now What?

For those hams recently licensed, congratulations. Inside this month's newsletter are a number of articles intended to help you get started in the hobby. Veteran hams, don't despair, there is also interesting content for you.

INSIDE THIS ISSUE:

From the Publishers

Remember when you passed your first amateur radio license exam? It was hard work learning new electronic terms, radio theory and FCC part 97 rules and regulations. And after being told by the FCC examiner or VE that you passed, how quickly did that feeling of excitement get replaced by what type of radio to buy, antenna to use or how to set up a ham shack or mobile installation?

If your father, uncle, brother, neighbor or friend was a ham, you were lucky. If not, maybe you searched for help from a ham radio club, school or public library.

As VEs we sometimes get asked those questions when teaching a class or after an exam session. Without fail we always recommend contacting their county, city or town amateur radio club. Our Treasure Coast Ham Radio Clubs offer a wealth of expertise to get the new ham started.

Today more than ever a new ham has resources available, including the web. There is also plenty of ham radio information on YouTube, the ARRL website, in ham radio books, and ham's personal Internet websites.

TCHamNews goes out to over 250 hams. We know that the newsletter is forwarded to many more hams not on the Treasure Coast. We encourage and support this redistribution.

In this issue of Treasure Coast Ham News we include articles and information to help new hams. In future TCHamNews issues this will be a reoccurring feature. If you have questions and can't find answers please let us know. We will do our best to get your questions answered or put you in touch with a ham who can help.

We hope you enjoy the October newsletter. As always let us know how you feel about the publication and how we can make it better for Treasure Coast hams.

73, TCHamNews (contact us: tchamnews@gmail.com)

The Amateur Radio Emergency Service (ARES) is an ARRL public service program.

Flagler Co. Emergency Management trains with old-school methodology for communications backup during disasters.

It goes without saying that open lines of communication with residents is especially critical during disasters and emergencies. But what is lesser known is that Flagler County Emergency Management trains regularly with seemingly old-school methodology for cutting-edge results.

"Staff is working with volunteers, amateur radio operators, neighboring Emergency Management agencies (currently St. Johns, Volusia, Marion, and Putnam), and the Florida Division of Emergency Management to test multiple backup communication tools," said Emergency Management Director Jonathan Lord. "These will be used when traditional communication tools, like the phone and the Internet, are down because of an emergency or disaster."

Flagler's backup communications toolbox includes resources, such as:

Shared Resources High Frequency Radio, a federal government program for national security and emergency preparedness agencies to communicate when landline and cellular communications are unavailable.

Statewide Law Enforcement Radio System, a unified statewide digital radio network for radio voice communications between certain emergency response agencies.

General Mobile Radio Service, publicly available FCC licensed radio service widely used by families and volunteer organizations, with the most common use of the channels being for short-distance, two-way voice communications using handheld radios, mobile radios and repeater systems.

Amateur Radio, also known as ham radio, has been around since 1890, and is capable of bringing people together to talk across town, around the world, and even into space – all without the Internet or phones.

Flagler staff also tested and trained using satellite phones, email, and standard telephone systems.

Julie Murphy Flagler Co. Public Information Officer

Treasure Coast ARES Emergency Coordinators

Martin County
Steve Marshall, WW4RX

St Lucie County
Paul Horner, W4ISZ

Indian River County
Bud Holman, WA4ASJ

Get involved, volunteer, and be a part of your county ARES.

VE License Testing Update

If your club is testing, please let us know the location, date and examination results

No Sessions Scheduled, but "On Demand" Testing Available

The Port Saint Lucie Amateur Radio Association and Fort Pierce Amateur Radio Club do not have any VE License Examination Sessions scheduled at the present time.

However, The Vero Beach Amateur Radio Club is offering license exams on an "as needed" basis at this time. Email ve@w4ot.com for information.

Port Saint Lucie is hoping to schedule a session later this fall, possible in late November or early December. Watch your email box for an announcement when arrangements have been finalized. Also be sure to check next month's ***Treasure Coast Ham News*** for further updates.

Meanwhile, if you know someone looking to take an exam, please notify one of the local contacts listed below.

Local License Exam Contacts

Vero Beach ARC
Bud L. Holman
(772) 559-3342
budholman@earthlink.net

Ft. Pierce ARC
Jess Porter
w4dns@arrl.net

Port St. Lucie ARA
Robert Brown
(772) 201-5485
brownpsl@comcast.net

Looking for a Venue

If you know of a location in Port Saint Lucie willing to host monthly Saturday morning exam sessions please send an email to: brownpsl@comcast.net.

$35 FCC Processing Fee on Hold

As of this date, the fee to take a license exam remains at $15. The $35 processing fee for new and upgraded licenses announced earlier this year by the FCC remains on hold. A recent announcement by the ARRL VEC indicates the effective date for the new fee will be sometime in 2022.

Recent FCC Rule Changes

Email address required. Effective June 29, 2021, all applications filed with the FCC by current licensees or new license candidates must include an email address where the applicant can receive FCC correspondence. More info is available on this ARRL webpage.

FCC Registration Number required. As of May 20, 2021, all license exam candidates are required to include an FCC Registration Number (FRN) on the license application form 605. Social Security numbers will no longer be accepted.

Important - You must obtain your FRN prior to arriving at an examination session.

An FCC video provides instructions on obtaining an FRN. You can view it here.

Technician Exam Question Pool

The current technician exam question pool expires on June 30, 2022. A new question pool will become effective on July 1, 2022.

Attention Club VE Teams

Please keep us updated on your VE activities. Notify us when your club schedules a session, and keep us apprised of the results of your sessions. Send your information to tchamnews@gmail.com.

Understanding Those Pesky SMA Connectors

[It seems to me Chinese and Japanese ham radio vendors have done a poor job describing the SMA connectors used on their amateur and commercial radios. Hopefully, the following guide will take some of the mystery out which connector your radio uses and which antenna you need. Remember, trust counts, but always verify before purchasing.]

Determining SMA Connector Polarity

Before describing the specifics of **SMA-F**emale and **SMA-M**ale, please note that polarity is determined by the center pin. Generally, the SMA connector with a center pin is **Male**. The SMA connector without a center pin is **Female**. The key to male or female is the presence or absence of a center pin. A cause of confusion for people is that they expect the one with threads on the outside to be **SMA-M**ale, but it is actually **SMA-F**emale.

SMA-Female radio antenna connectors were very rarely seen until about 2014. That is when many Chinese manufacturers began building inexpensive radios capable of operating on amateur radio frequencies. Since that time Yaesu, Icom, and Kenwood have adopted the **SMA-F**emale connector. These radios require **SMA-M**ale antennas. With today's proliferation of radios many other Chinese brands also use some type of SMA connector, including Wouxun & Baofeng.

SMA-Male radio connectors are used by many of the more "traditional" amateur radio manufacturers, including Motorola, Vertex, and others.

Amateur Handheld Portable Radios

SMA-Female (radio)

SMA-Male (antenna)

SMA-Male (radio)

SMA-Female (antenna)

Commercial Radios (not complete)
(Motorola/Vertex Standard)

SMA-Female (radio)

SMA-Male (antenna)

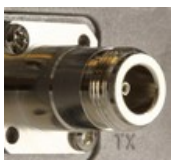
SMA-Male (radio)

SMA-Female (antenna)

J Female

J Male

You should already know these:



Got My License, Now What?

It seems that when people are studying for their ham radio Technician license exam, they understandably get very focused on learning the material and passing the FCC exam. Suddenly, the Volunteer Examiner tells them "you passed" and the thrill of success bursts forth!

This is sometimes followed by the question: *I got my license, now what?* The most general answer to this question is "find something you are interested in doing and do it." For many new hams, this is easy — they just need to think about what got them interested in ham radio and follow that path. But other folks have this basic idea that they "want to do ham radio" but may not be sure how to actually get started. This article intends to give you some ideas on what to do, assuming you have a Technician license and some basic 2m or 70 cm radio equipment.

Field Day Operating with ARES

If you haven't already connected with some local radio hams, give that a try. Having someone to talk to about various ham radio activities can really help. If you have a radio club in the area, be sure to connect with them and attend a meeting. (See the ARRL listing of ham radio clubs.) Following are some other ideas for radio activity to help get you started (in no particular order).

Public Service

Often people get interested in amateur radio to provide a service to the community. There are many opportunities to get involved by helping out with events such as walkathons, marathons, bike races, etc. Communications support may be provided by a ham radio club or, more likely, the local Amateur Radio Emergency Service (ARES) group. The Radio Amateur Civil Emergency Service (RACES) is another public service organization, normally associated with a governmental agency such as the county sheriffs department. Sometimes ARES and RACES are combined into one group. The ARRL has a web page that compares the two organizations. Most ARES and RACES groups have some kind of "registration database" for you to sign up. However, it usually works best to reach out and find the local hams in charge of these groups and let them know you are interested. Find out when they hold their meetings and on-the-air nets and join in. Make yourself visible and available.

Emergency Communications

Often I hear new hams say they are interested in emergency communications or as the ARRL says *When All Else Fails*. They've heard about or experienced landlines and mobile phones getting overloaded during blizzards, hurricanes and wildfires and want to have alternative communications. The prepper community refers to this as SHTF.

Being prepared for emergencies boils down to two basic questions: 1) What are the conditions that you are preparing for, and 2) Who do you want to communicate with? Most likely, you need to be ready for a power outage of some duration, implying the use of battery backup or a generator to power your radio equipment. Who you want to communicate with varies from just your immediate family over short distances to being able to contact other hams much further away. Thinking through the answers to these two questions will get you started on creating the desired communication capability.

Find A VHF/UHF Repeater

A "Ham Shack In Your Hand." Another way to connect with the local amateur radio community is via VHF/UHF repeaters. Repeaters are the *utility mode* for communicating locally. Take a look at How to Choose a Repeater for some tips on finding a repeater that works for you. Introduction to VHF/UHF Repeaters provides an excellent overview of how repeaters work.

Develop Your Home Station

Many hams start out with a VHF/UHF Handheld Transceiver (HT), which gets them on the air quickly.

Got My License, Now What? (cont'd)

This really is a "*Ham shack in your hand*," which is useful for many activities. By itself, the HT has limited range, so many hams are interested in extending its range. One thing you can do is attach an external antenna to the HT to give it greater radio coverage (see Considering a VHF/UHF Antenna for Your Home?) This will increase your simplex range and allow you to hit more distant repeaters. Another thing to consider is establishing a VHF/UHF home base station (see A VHF FM Station at Home), which provides more output power to increase coverage.

Single Sideband on VHF

While the majority of VHF operating is using FM, there is a whole *'nuther* world out there in the weak-signal operating modes. We call it "weak signal" because we are often pulling signals out of the noise to make a contact. Signal Sideband (SSB) is the preferred voice mode when signals are weak since FM performs poorly when the signal level drops. You'll also find quite a bit of Morse Code (aka Continuous Wave (CW) communication) used since it is even better than SSB when the signals are weak.

To play with SSB, you need an all-mode transceiver that operates on VHF such as the Yaesu FT-857D or FT-817ND. You'll also need to get a suitable antenna that is horizontally polarized, probably a yagi antenna with gain. See Getting Started on 2-Meter SSB.

The 6m band is known as *The Magic Band* because it can suddenly come alive with signals bouncing off sporadic-e clouds in the ionosphere. On most days, 6 meters acts like any other VHF band with mostly local propagation. But when the sporadic-e hits (very common in the summer months) you can talk across North America. When the normal sunspot cycle is strong, we can also get F2 propagation, which allows contacts to be made into Europe, South America and Asia.

Space Contacts

Another great use of the 2m and 70 cm bands is to contact outer space. The International Space Station (ISS) has a ham radio station on board and most of the astronauts have amateur radio licenses (see ARISS). The primary use of this station is for contacts with schools as part of NASA education outreach mission. However, the astronauts sometimes decide to make contacts on their own time. It really depends on the interests of the astronaut and a few of them have really gotten into making random ham radio contacts. Also, very often there is a packet radio station transmitting from the ISS such that you can "digipeat" through the station to contact other hams on earth. It is even a fun exercise to see if you can successfully track the ISS and then hear the packet station transmitting. The ISS is in *low earth orbit* (LEO), so it is usually overhead for only 10 minutes or so, depending on the pass.

K0NR operating OSCAR

Another type of space operation is OSCAR (Orbiting Satellite Carrying Amateur Radio). These satellites are basically repeaters in the sky. They are also in LEO, so you can repeat through them to contact other hams while you both have the satellite within range. Some of these satellites use FM, so you can work through them using just a dual-band (2m/70cm) HT and a small yagi antenna. It takes a bit of study and practice to track the satellites, figure out the right frequency, point the antenna and adjust for doppler shift. But that is what makes it a fun learning experience and radio challenge. See the AMSAT web site for more information.

Work the High Frequency Bands

I've mostly given examples of VHF/UHF operating, but a Technician license does give you some useful operating privileges on the High Frequency (HF) bands. In particular, Techs have voice privileges on 10 meters (28.3 to 28.5 MHz). When the sunspots are active, 10m is an awesome worldwide DX band. You literally can talk around the world. To work 10 meters you'll need a transceiver capable of SSB on the 10m band and a suitable antenna. The antenna does not have to be exotic — a simple dipole or 1/4-wave vertical can do well.

If you get hooked on the fun of HF DX, then you'll want to start working on your General Class License. But that is a topic for another day.

73, Bob KØNR

(This article was first posted in The Basics on August 5, 2014 by Bob Witte.)

Upcoming Hamfests

FLORIDA

10/8-9/2021 - 56th Annual Melbourne Hamfest
Location: Melbourne, FL
Sponsor: Platinum Coast Amateur Radio Society (PCARS)

12/04/2021— Treasure Coast Hamfest
Location: Indian River Fairgrounds
Sponsor: Vero Beach ARC
Website: https://www.treasurecoasthamfest.com/

12/10/2021 - Tampa Bay Hamfest, ARRL West Central Florida Section Convention
Location: Plant City, FL
Type: ARRL Convention
Sponsor: Florida Gulf Coast Amateur Radio Council
Website: http://www.fgcarc.org/

Don't forget Hamcation 2022
https://www.hamcation.com

OCTOBER 8-9, 2021
56th Annual Melbourne Hamfest
and
2021 ARRL Florida State Convention

Melbourne City Auditorium, 625 East Hibiscus Blvd.

Hamfest Hours: Friday, 1pm-7pm and Saturday, 9am-3pm. Setup for Vendors and Tailgaters: Friday, 9am-1pm, Saturday 7am-9am.

Tickets: Adult Admission is $10 for both days. No charge for children 12 and under. ***We recommend that you purchase tickets on-line. They will not be mailed.*** Tickets will be available at the "WILL CALL" window at the Hamfest beginning at 1 pm on Friday, and 9 am on Saturday. Tickets may be purchased at the Hamfest. To purchase advance tickets for Admission, Booths, and Tailgating fill out the requested forms and remit to PCARS. You will be directed to Paypal for payment and confirmation. Or, you can mail in the completed form along with a check.

Tailgating: $15 per space. This year you can reserve a particular parking spot. The parking area layout is linked from the tailgate reservation form. Otherwise, you will be assigned a parking place at arrival. Note that admission tickets are also required.

Contact Us
Email: mailto:hamfest@pcars.org
Postal Mail: PCARS Hamfest, P.O. Box 1004, Melbourne, FL 32902-1004

Ham Radio Trivia

Answer to last month's question:

Last month we continued our summer travel theme by asking a question (actually we asked two questions) that combined knowledge of amateur call sign prefixes and geography. Let's find out how well you did.

September Trivia Question

Question:
Per the ARRL DXCC program, which of the following amateur radio license prefixes is not located in Africa.

A. 5N
B. EA9
C. 8P
D. ZS

The correct answer is C - 8P, which is Barbados.

We also challenged you to identify the countries owning the other prefixes. The owners are:
5N - Nigeria
EA9 - Cueta & Melilla
ZS - South Africa

* * * * *

October Trivia Question

Autumn is here and schools are back in session. So it's time to hit the books. Here's a question from the current Technician License Exam that many candidates tend to answer incorrectly. Let's see how you do with it.

Question:
What is the amount of change, measured in decibels (dB), of a power increase from 20 watts to 200 watts?

A. 10 dB
B. 12 dB
C. 18 dB
D. 28 dB

(We will reveal the answer next month.)

(Have a good trivia question? Send it to us at: tchamnews@gmail.com.)

"Brush up on your radio knowledge, skills and trivia."

Tuning an Antenna

The most common way to check the tuning of your antenna is by a Standing Wave Ratio (SWR) measurement. I have noticed for several years there may be some confusion of how to properly obtain this measurement from the modern radios. Some of this confusion is due to not understanding what **"Mode Of Transmission"** means. This can be even more confusing when most of the radios are all mode units. Most likely you have LSB, USB, AM, CW, FM and FSK or RTTY. Boy, that is a lot of modes. Which one do you use to check SWR?

If your radio has a SWR meter built into it, then this will be the reading preferred. An outboard meter is fine, but the one in the radio is what the radio is going to use. If the SWR in the radio is high it will reduce your output power. Power reduction can easily be 50 to 90 percent. What is the best way to confirm this? This is where knowing what mode to use is important.

USB and LSB modes do not produce RF energy unless you talk or make noise into the microphone. If you key the mic and all is quiet, there is no power out. I have had the humorous experience of operators saying the SWR is 1:1. However they were on USB or LSB and all was quiet. The meter reads nothing because there is no power out.

Many hams realize this. Their solution is to moan and groan or whistle into the mic. This puts power out, but the reading jumps around so much it is hard to get an accurate measurement.

Some have put the radio into CW mode. They key the mic and are happy to see a 1:1 SWR. However, they have not realized that their radio does not put power out on CW from the mic switch. A code key is needed for many radio models.

Now there are the AM, FM and FSK modes. AM is OK, but it does not put full power out. Initially you want to check SWR at low power anyway, so AM is okay. The mic button will activate the radio. When you have your SWR acceptable, you will want to confirm that the radio will put the full power out. You can not do this on AM.

What about FM or FSK? Some are hesitant to switch to these modes because they are not in the portion of the band where it is allowed. On FM, if you do not make any noise into the mic, it only produces a carrier. This is legal. On FSK or RTTY, it also only produces a carrier. These are the easiest modes to use to check SWR.

Start at low power (5 watts). Using the internal SWR meter, check SWR and make the necessary adjustments to the antenna. Once acceptable, bring up the power. Use the "Relative Power Meter" in your radio. If you can get it to go full scale, you are ready to operate.

Your questions are welcome. I will try and answer them in future articles. Email me at wd0eja@isotronantennas.com.

73, Ralph WD0EJA
Bilal Company
137 Manchester Dr. Florissant, Co. 80816 U.S.A
PH/FX: 719/687-0650

Treasure Coast Ham News continues to receive emails from hams around the region asking about the 2x4 DX Group and when meetings might resume.

If you recall, the group suffered a "double-whammy." In early 2020 they lost use of the facility where they held meetings. And then a month later the COVID-19 pandemic forced suspension of all public gatherings to protect against spread of the COVID virus.

The group is now ready to restart the meetings. Unfortunately, the old meeting facility no longer available, so the group is looking for a new location where they can meet on a monthly basis? If you know of a location where the group can meet, please let us know. We are also interested in your opinion as to the best time and day of week to hold in-person meetings? Share your ideas, thoughts and opinions about reinvigorating the 2X4 DX Group by emailing us at tchamnews@gmail.com.

Help us get the 2x4 DX Group reactivated! Please consider joining the group. All are always welcome. No one is ever considered a visitor.

With Solar Cycle 25 starting to come alive, DXing excitement is building. Watch these pages for further announcements.

Port St. Lucie Amateur Radio Association - Club Elections

Many South Florida ham radio clubs are returning to more normal operations including in-person meetings and elections after COVID-19.

PSLARA has a membership of over 80 hams. Many of the PSLARA Board members have served multiple terms and desire to step down after the November elections so other club members can serve. All Board officer and director positions are open.

RADIO CLUB PRESIDENT

A Radio Club President has a natural ability to facilitate a club vision and help set goals. They motivate club officers, directors and membership thru active engagement. A club president knows it is not about him or her. A club president does not do things unilaterally. The radio club president's emphasis is the club, the club members and the work the club does.

If you are a PSLARA member in good standing for a year and would like to run for club president please contact Bruce, WA3RHW.

* * * * * *

RADIO CLUB BOARD

Board members know trust is not implied, it must be earned. They work actively to achieve it.

Board members listen, communicate and engage with the club membership.

Board members know the best decisions are made only when everyone can express their views.

Board members strive to build and maintain relationships with all club members.

Board members recognize when members become disinterested and seize the opportunity to implement changes. Board members understand that building confidence in club members by recognizing their contributions and accomplishments is important.

Board members ask for help from club members on critical matters that affect the club.

Board members show and verbalize excitement about the club, the members, projects, and activities. Board members use positive words and show positive actions. Board members promote the club and find opportunities to enhance member participation. Board members create an environment that is fun for the members.

If you are a PSLARA member in good standing for 6 months and would like to run for vice-president, secretary, treasurer or a director position please contact Bruce, WA3RHW.

13 Colonies Special Event - 2021 Commemorative Certificate

How to Reduce Electromagnetic Interference in Solar Cell Systems

[Recently solar cell companies have been trolling my neighborhood looking for customers. They make an effort at Return on Investment (ROI), but when I mention that I am ham radio operator and do not want increased noise interference, the rubber meets the road. I say come back when you have a solution I can verify with my equipment. I know one of these days someone will…]

This information is principally aimed at reducing or eliminating electronic noise and interference in photovoltaic and other DC powered systems.

Electromagnetic Interference (EMI)
Includes non-radiated interference, such as line noise coming in from power or control lines. EMI can come from many sources. Almost everything in your home emits some EMI, including fluorescent lights, TV's, cordless phones, electric tools, etc. In solar and DC systems you often have additional sources, such as switching power supplies, charge controllers, DC light ballasts, and inverters (especially modified sine wave types). Digital devices in use nowadays - especially power circuits - can emit more EMI than AC.

FCC Part B
One of the major problems with solar and DC power equipment is that almost none of it meets the standards for FCC Section 15, Part B. Nearly all appliances and electronic equipment sold today for consumer use in homes must comply with FCC part B, which regulates the maximum amount of EMI that devices (such as TV's) can radiate. That is why you don't get a lot of noise from your microwave and coffee grinder. But nearly all DC and solar equipment are exempt from Part B. <u>This means that they can put out a LOT more EMI and still be legal.</u> *[No wonder my noise levels have increased lately!]*

Main Sources of Noise
Nearly all electronic equipment is now digital. The most common problems are charge controllers, DC lights, and some modified sine wave inverters. Nearly all charge controllers send pulses instead of a steady voltage/current to the batteries. High power digital pulses are one of the worst EMI sources.

How to Get Rid of EMI
The most common ways to reduce noise are shielding, cancellation, filtering and suppression.

Shielding
Almost any metal will offer some shielding. A shield basically blocks the noise, just as the name implies. Metal enclosures are common for inverters and some other equipment. But metal conduit will also act as a shield. Shielding is effective but is not always possible. And it doesn't do much to stop noise carried on the wiring.

Cancellation
Cancellation is pretty simple, just a matter of twisted wire pairs. Noise in twisted pairs tends to cancel itself out at each twist. It does not work in all cases, but is simple, cheap and usually easy to do, so that is often the first method to try.

Filtering
Filtering has been around since electronics were invented. The most common method is to use capacitors across a signal line or wire to get rid of the noise. Inductors are sometimes used also, but they have some frequency limits and can also get pretty bulky and expensive. One limitation of using capacitor filters is that you usually must have a good ground nearby for one side of the capacitor. If you have long leads between the device you are filtering and ground, you could even make the problem worse.

Suppression
This is a relatively new method and often the most effective. The most common method uses Ferrite chokes, cores, and beads. Ferrites are molded metal powders cast into various shapes and sizes. Ferrites are actually a type of molded ceramic. They are usually made of powdered Iron Oxide (Fe2O3), along with Zinc, Copper, Zinc, and other metal oxides. The EMI portion of the filtered spectrum is converted to heat within the ferrite core and dissipated. You can also try snap-on chokes, which can be simply opened up and snapped around the wires or cables. You can stack as many as you need and stack different types if you have severe problems. You don't need one for each wire; they work just as well if snapped onto a pair or bundle of wires. They are non-conductive and can be used anywhere, including on 115-volt power lines and on battery or inverter cables. *73, TCHN*

The Frugal Ham Radio Operator

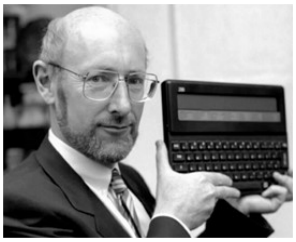
My parents were depression era kids. Money was hard to come by. Almost everyone was frugal. I grew up solidly middle class, but my parents always made it a rule, save for what you really wanted. No exceptions, usually.

As a young teenager I became enamored with computers and convinced my parents I had to have one for Christmas. While I hoped for a MITS Altair, what I received was an Allied Radio computer kit that consisted of wires, nuts & bolts and perfboard discs. The manual said it could predict weather. Other than the discs swelling up when water spilled on them, I never got it to do much.

In the 70s I bought the RCA COSMAC Elf computer kit. Worked better than my perfboard computer, but entering mnemonic code via a keypad to turn on an LED or play a few notes of music got very old. Gave up on computers for a time until the Sinclair ZX-81 kit became available. Knew I had to have one and looked at my piggy bank. The cash was there, so off went my order. The kit went together well and in no time I had a fully functioning Z-80 computer that programmed with BASIC. Loved that computer - not the keyboard mind you, that was the pits, but what it could do via BASIC was truly amazing. I did build a replacement keyboard, added RAM and bought a small printer. Made that ZX-81 computer really hum.

Recently, I heard the creator of the Sinclair computer, Sir Clive Sinclair had passed. He was 81.

Before his ZX computers he designed a series of small and lightweight calculators to fit a shirt pocket. At the time most calculators were mechanical and very large. His daughter said, "He wanted to make things small and cheap *(a true frugalist!)* so people could access them." It was the ideas and challenges that he found exciting. He'd come up with an idea and say, "There's no point in asking if someone wants it, because they can't imagine it." Surprisingly, Sinclair never used his inventions including the pocket calculator, preferring instead to use a slide rule.



Sinclair's first computer, the ZX80 made history with early computer enthusiasts. The ZX80 cost less than other home computers at the time. He sold many thousands.

Next up was the much improved ZX81. Sinclair was able to reduce the cost considerably. He sold over 250,000 ZX81s. Made a lot of us happy.

In 1982, he released the ZX Spectrum 48K. The ZX Spectrum became much sought after by early computer developers and gamers. It is coveted today by collectors as an excellent example of early personal computers. **R.I.P.**

73, The Frugal Ham

Short Takes

Homeowner Association forces Amateur to shut down his equipment alleging interference with insulin pump. YouTube video: Insulin pump interference

For the builder: Nuts & Volt Project Kits – Let's Build Something

A useful reference site: K8ZT Amateur Radio Resources

Here's an important tool for amateur radio stations: RF Exposure Calculator

Protect against electromagnetic pulse Ham Radio EMP Kit, The Tactical Trash Can

Test a tactical trash can How to test an EMP proof container with a TinySA

Repairing a CDE/Hy-Gain/MFJ Rotator http://www.hayseed.net/~jpk5lad/Rotors/RotatorRepair.htm

Here's a list of ham radio terms from Icom: Ham Radio Terms

Convert text to CW Morse Code Generator

More than you ever wanted to know about antenna performance and propagation is discussed by VE3MGY. The antenna discussion is located deep down on the Biography tab. Read it here.

See an interesting web site? Share it. Send link to tchamnews@ gmail.com.

October 2 & 3 2021 ARRL Simulated Emergency Test (SET)

The SET is ARRL's primary national emergency exercise, designed to assess the skills and preparedness of Amateur Radio Emergency Service (ARES) volunteers, as well as those affiliated with other organizations involved in emergency and disaster response. The SET offers volunteers an opportunity to test equipment, modes, and skills under simulated emergency conditions and scenarios.

Contact your county ARES EC for details and to participate.

Treasure Coast Ham Doctors

FT8 - Double-Click Problem

Question: I'm a newcomer to the digital world. I operate using WSJT-X. My question concerns FT8. Occasionally I see a station in the left-side Band Activity window that I want to QSO with, but that station is already in a QSO with another station. I wait for the station of interest to send his 73 or RR73, then I double-click on the 73 message.

In most instances when I do this the message transfers over to the right-side window and my rig switches to transmit mode and sends the Tx1 message. Occasionally, however, when I double-click nothing happens. Why? I would like to understand the reason because this has caused me to miss out on some good DX opportunities.

Answer: We've seen similar occurrences. We observed that when this happen the station in question has a non-standard call sign. Something about the call sign causes the software to not be happy. Perhaps it is the length of the call sign, or maybe the call's letter-number combination and sequence. Another possibility is that you clicked on a message where the call sign is enclosed in < >.

This problem you describe only seems to occur when double-clicking on a message other than a CQ call. CQ calls always seem to process correctly when double-clicked. There could be more conditions that cause this unexpected behavior. So keep your eyes open and let us know if you encounter any other causes. 73, *The Doctors*

BOUVET ISLAND DXPEDITION UPDATES

We are happy to announce that Northern California DX Foundation has voted to grant $100,000 to the upcoming 3Y0J DXpedition to Bouvet. This is an all-time high donation, matching the previous donation given to Bouvet projects. The 3Y0J team is grateful and honored in the trust NCDXF has shown by supporting our project.

The DXpedition will be carried out by ***Amateur Radio DXpeditions***, a Norwegian non-profit created for the purpose of conducting DXpeditions. With an overall budget of $650,000 this will be the most expensive DXpedition ever. With the NCDXF donation we hope to succeed in the fundraising as our first payment milestone is approaching. By end October we must pay 30% of the vessel contract. And by that time we must have gained confidence we can succeed financially. We critically need upfront donations to make it. While we have a solid plan, a "young and strong team", a dedicated crew and vessel ***Marama,*** we need your upfront support to get there and make 120,000 QSOs from Cape Fie at Bouvet.

Donations to the 3Y0J project can be made through PayPal on our website or by bank wire transfer.

We must recognize and thank the Northern California DX Foundation. Without their support operations to the world's rarest entities would be difficult.

Follow our plans: http://www.3y0j.no and https://www.facebook.com/s/309398384072612 9
Thank you: Ken Opskar LA7GIA, Leaderne Oye LA7THA and Erwann Merrien LB1QI, Co-Leaders

FT8 / WSJT-X Operating Tip

CQ Calls Displayed in Multiple Colors

To a beginning user of WSJT-X, the multiple colors associated with the display of CQ calls in the Band Activity (left) window can easily become quit confusing.

When you run WSJT-X for the very first time every CQ call looks the same. But after a few successfully QSOs and a couple of DX contacts things quickly change. CQ calls are now are displayed in a variety of different colors, which can be confusing and even intimidating to the rookie operator. We will discuss green CQs today and save the other colors for a later discussion.

As WSJT-X decodes each signal, every CQ call is checked against WSJT's LOG.TXT file, which is where every QSO that you complete and log gets recorded.

The color used to display the CQ signal depends on whether or not the call is found in LOG.TXT. If a log entry is found for the call on the current band, the CQ signal will be displayed in green. If displayed in any other color if means the CQ is a new call or a repeat call but on a different band. You should try to respond to any CQ calls other than green. Don't bother with green calls. They are already logged.
Send your questions or tips to tchamnews@gmail.com.

Ramblings of an Antenna Alchemist

There are no shortage of HF antennas to build, buy, and use. Those hams fortunate enough will buy a YAGI, spider beam, etc. along with a tower. HOA hams most likely will go the attic route. Others with an agreeable HOA may use a multiband vertical. Those with no HOA and trees should try wire antennas. They are worth the effort.

Wire antennas like dipoles, end feds, G5RVs, horizontal loops, etc. work as long as you can get them up in the air. *(If you want to know more about antenna height, check out W8HW's TCHN antenna articles.)* So let's assume you have mature hard wood or pine trees in your back or front yard. Having those trees is a step in the right direction, but how do you get your wire high up in the trees?

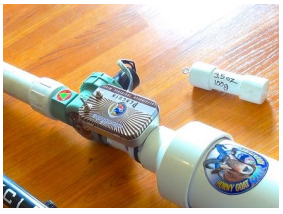
Before we get started let me warn you. All the devices mentioned in the article should be used with extreme caution. Anytime you send something up into or over trees there is risk as to where it comes down. Unless you have experience, please exercise extreme caution using this equipment.

Some of the first tools repurposed for shooting wire high up into trees were the bow and arrow and slingshot.

Personally, I would never use a bow and arrow in an urban setting. Using a slingshot also has issues, but hams have successfully used them. Most of the devises discussed in this article require a one or two ounce lead sinker as the projectile. Once again you need to be extra careful. Lead sinkers will do considerable damage to windows, cars, animals, and human beings.

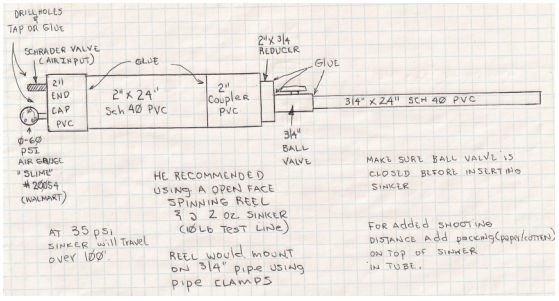
Thanks to the spud gunner's use of PVC pipe, compressed air and sprinkler valves, enterprising hams have a starting platform for experimentation. (See The K4ICY Antenna Launcher.)

Basic compressed air launchers use Schedule 40 or 80 pipe, a hand turned ball style valve, pressure gauge, and a Schrader air valve. Most of these style launchers do not have very accurate aiming. Some hams have added 45 degree angle pistol style grips. Of course a fishing reel is a must. These are usually pipe clamped to the forward tube.



The first thing I would do is change out the hand turned ball valve for a battery powered sprinkler valve. The Internet has plans.

You may notice that the above PVC launcher uses a projectile made of Schedule 40 pipe. That type of projectile is very durable, but what I have found is that glue sticks from the dollar stores are perfect to slip inside a 3/4" PVC forward tube. What I did was to insert the lead sinker(s) deep inside the glue stick and super glue the cap. Then I drilled a 1/16" hole thru the bottom part of the glue stick and attached my fishing line. I have shot these glue sticks into and over trees without too much trouble. Lost a few, but found spray painting the sticks a bright color helps in finding them.



The above is my very basic launcher. It is an Air Boss style. Zoom to enlarge.

73, The Antenna Alchemist

LAUNCHER EXAMPLES

How about Steampunk?

* * * *

Not sure how well tennis balls work unless shooting over trees

* * * *

This is probably the easiest launcher to build.

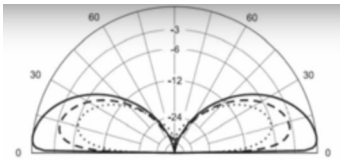
* * * *

Ok, this takes wire launching to an extreme!

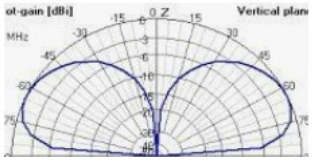
DXing: The Science, Art and Mystery of HF... by Bruce, W8HW

[Editor's note: This is part 8 of a series by Bruce, W8HW, our DXpert. This month Bruce will explore HOW to control your Vertical Antennas "vertical angle of radiation." Previous articles in the series can be found in the newsletter archives located on the PSLARA web site. Look in the Ham Newsletters section.]

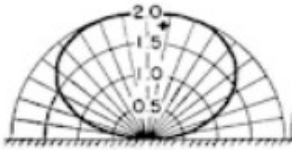
In the last two articles (Part 6 – 7) we focused on vertical angle of radiation and explained why…



You want this



or this



but NOT this

Last issue we focused on controlling your vertical angle of radiation with horizontal antennas. Now what about vertical antennas? The approach is totally different with vertical antennas, creating a great advantage for you. Remember (from last article) that if you can't go high enough with a horizontal antenna, then a vertical antenna can be a great alternative answer for consistent long range communications.

Both antennas are great antennas. It becomes a question of what best fits your limitations and needs. Last month we provided a chart to help you determine if you can go high enough with your horizontal antennas for improved range. That chart and article are great tools to help you decide if a vertical or horizontal antenna would be your best choice.

This month we will explore how to control your vertical antennas ***vertical angle of radiation***. We will show you both the electrical (theory) and the mechanical (hands on). Upon accomplishing this simple task, the world will open up to you.

Remember, if you purchase a commercial vertical antenna often you have little or no control of this important factor (vertical angle of radiation). However, with home brew vertical antennas you can have control. We will show you how to be in control and show you how to homebrew your antennas for best possible performance based on your needs, land restrictions and pocket book.

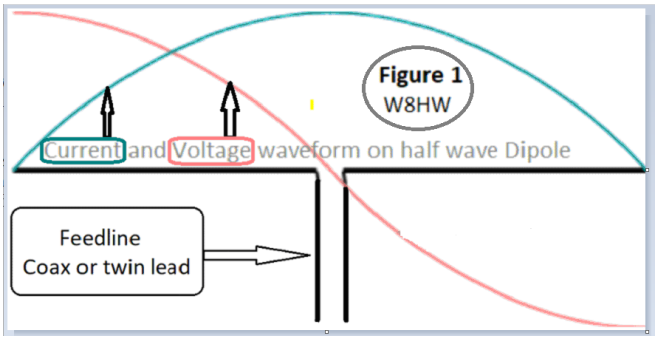
Warning, if you already own a vertical antenna I recommend you wait until you finish reading this article before you make the decision to modify your existing antenna or home brewing a new from scratch.

Let's be clear, even on the lower "low bands" (160-30 Meters) we find controversy over which is better, a horizontal or vertical antenna. The controversy mostly comes from confusion and / or combining two separate topics.

It is true that polarization on sky wave bands is skewed most of the time. This is covered in depth in other articles. That point is that it does not matter if you use a vertical or horizontal antenna. On sky wave, your signal arrives at the other station not vertical or horizontal. It actually arrives elliptical. While this statement is true and needs to be understood, today's focus is not on that point. Instead, it is on polarization as a means to control take off angle also called *vertical angle of radiation*.

What does it take to control your home-brew vertical and how do we do it? In this article we will try to supply you with this free knowledge that can last you a lifetime. The pride, joy and knowledge that you get from home brewing a vertical antenna will last you a lifetime and save you money. And an added bonus will be improved performance. Let's jump into vertical antennas now.

I am sure that many of you have seen charts in books similar to figure 1 below.



You may be thinking this sketch has little or no value in understanding your antenna's performance. Just the opposite. It has everything to do with your antenna performance.

(continued on page 16)

DXing: The Science, Art and Mystery of HF *(continued from page 15)*

It is not your fault if you weren't aware of this fact, as I find that many clubs have not covered topics such as antenna efficiency and that is unfortunate. The simple science of this is perhaps the most important consideration in improving both your antennas efficiency as well as today's topic of "vertical angle of radiation."

Hams who do not understand the principles we are covering today will have an antenna that will only be an average performer, if not a poor performer. Please view figure 1 as we explain the value of it.

To best understand how conditions can affect your vertical antenna, let's first understand how they affect your horizontal antenna. Note in figure 1 that the high current (low voltage) point is at the center of the half wave dipole antenna. It is the high current point of the antenna that does most of the radiating. The ends of a half wave dipole do very little radiating. ***Read these last 2 sentences again. They are important.***

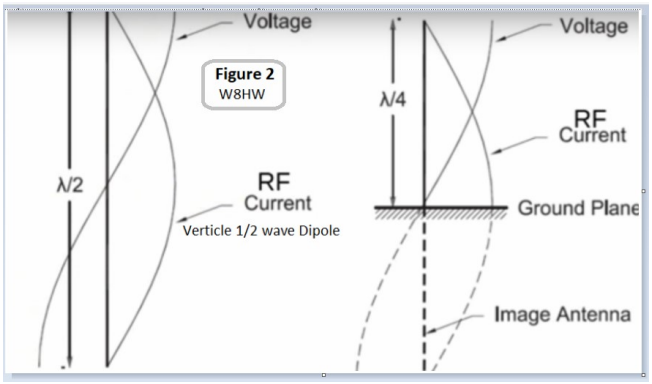
A tip: If your dipole is not at a consistent height, then try to make sure the high current point is mounted as high and in the clear as possible. Look over your existing antennas and determine if you can make improvements in this area. Now let's re-focus. What implications does this have on vertical antennas?

Vertical antennas operate opposite of horizontal antennas; and, that brings us to the good news. Vertical angle of radiation is not controlled by height of the antenna, (as it is with a horizontal antenna). Rather is controlled by the high current point relationship to ground or counterpoise. (We will simplify this shortly).

The good news is that vertical antennas are different and allow you to obtain low angle of radiation even if you can't mount antenna high above ground. How cool? This can be a huge plus for many hams with land, height or other restrictions. How so?

Figure 2, at the top of the next column, shows current and voltage distribution on vertical antennas.

Figure 2 is looking at two vertical antennas. The one on the left is a ½ wave that does not require ground radials. The one on the right is a ¼ wave that does require RF grounding. You ask… What is the difference?



Putting you in control requires you to understand and be in control of the high current points**.** As an example, the ¼ wave antenna on the right has its high current point at the worst possible place, near the ground. While it is still a vast improvement over a horizontal dipole that is mounted only ¼ wave above ground, we can still do better.

Note the ½ wave antenna (a vertical dipole) on the left has the high current point in the center. Thus, its vertical angle of radiation will be lower to the horizon, for even more improved performance.

I am sure you have guessed that the antenna on the left could be a center-fed or off-center-fed vertical dipole. Guess what, we can still do better.

There are many different ways for you to control your vertical angle of radiation. For example, a ¾ wave length is another way to raise your high current points on your antenna. Why? A ¾ wave length antenna now has three high current points equally distributed along its height, each high current spot is a ¼ wave length apart. See "**Two trivia questions**" later in this article for more on this.

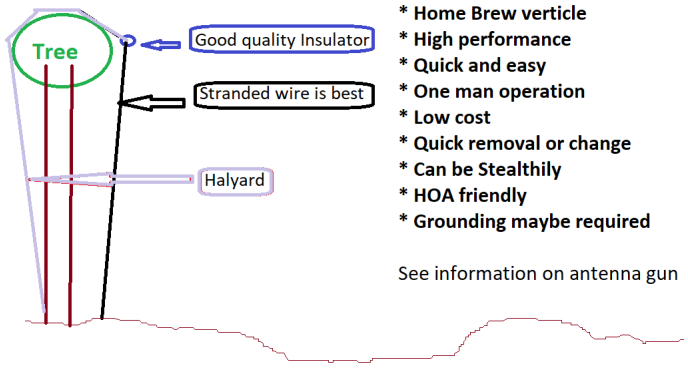
While it is true a vertical may be too long for you on 160 to 40 meters, it might be possible for you on 6-20 meters. We will show you how.

Remember a vertical antenna does not have to be a pole or rod. It can be a wire running from ground to the top of a tree. Acceptable wire could be 18-12 Ga. stranded wire purchased locally from Lowe's (see figure 3 at top of next page).

(continued on page 17)

DXing: The Science, Art and Mystery of HF *(continued from page 16)*

Figure 3 - W8HW



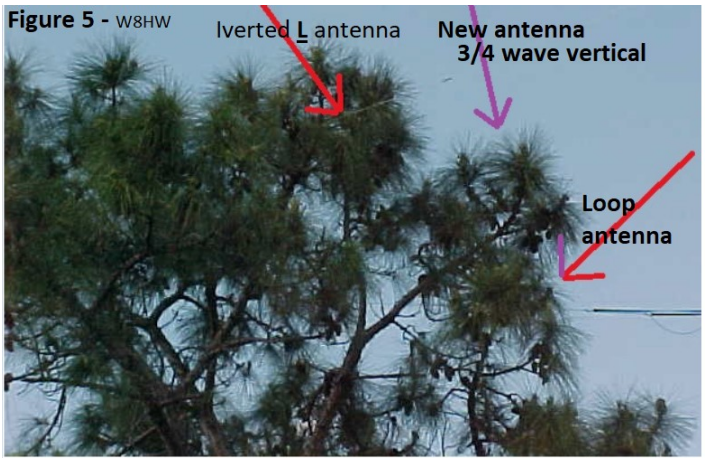
Multiple band or fan verticals are often constructed by hams. Note that ¼ and ¾ wave antennas require ground radials, either above or below ground. There are more ways still to raise or control your high current point, but that will be a topic for another day.

How can I get a Halyard to the top of a tree? This job becomes easy with the use of my antenna gun, shown in figure 4 below. It is electrically fired to provide less jerking. Thus it provides greater accuracy. The projectile is reusable and fly's a true path. It is so accurate that I was able to mount three separate antennas in the same tree and still have room for more.

Once your halyard is installed the gun is no longer needed for antenna modifications or repairs. Just lower the antenna via lowering the halyard and later raise it back up after modification or repair. This becomes an easy and quick "one man show."

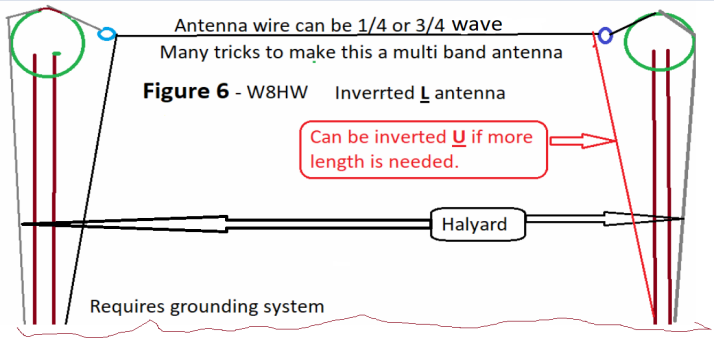
How accurate is it? Figure 5 at the top of the next column includes three antennas (Inverted L, new vertical and Horizontal Loop). The two red arrows show existing antennas and the purple arrow is where the next shot must go. Not only was it necessary to hit the correct branch, but I had to "thread the needle" through two existing airborne wire antennas. This was no problem and took only one shot.

This "antenna gun" would be a great club project for all members to build and use. I strongly encourage this as a fun club project. Using a tool like this could improve club member antennas by several folds and also save them lots of money. Bring it up at your next meeting.



I change my antennas on a regular basis. The reason for the changing is to change the focus of my signal to different parts of the world, more on that below in "**Trick and Tip"** in a later paragraph.

***Sidebar**: a wire cut for 7.050 MHz (40m) will also work on 21 MHz (15m) giving you dual band with only one wire. Do NOT cut the antenna for frequencies higher than 7.050 MHz because above that frequency the 15 meter band (third harmonic) operation will suffer and perhaps fail. This is true for both vertical and horizontal dipoles. If done properly this antenna will be powerful and will work the entire 40 and 15 meter bands, providing both daytime and nighttime performance. How cool!*



What to do if your tree is not tall enough for your antenna? One answer is a ¼ wave "Inverted L" antenna, (see figure 6 above). Because the high current is in the vertical part of antenna, the radiation is mostly vertical (but not totally), and mostly follows the rules outlined for vertical antennas. This is true even if the horizontal part

(continued on page 18)

DXing: The Science, Art and Mystery of HF *(continued from page 17)*

is as much as 2/3 of the antenna total length. Note that Inverted "L" antennas require ground radials, either above or below ground.

Raising the high current point in an inverted L (figure 6) can be done. To understand this involves understanding what SWR is and what it is not. How to use SWR as your friend and not your enemy is clearly a long topic for another day. For now, just remember that antennas do not have SWR, only feed-line has SWR.

Hams living in Port Saint Lucie are often land restricted and are forced to know and use all manner of possibilities. Some of these solutions offered today should help solve your antenna needs. The more you work with your antenna knowledge, the more ideas you will get and the craftier you will become.

Computing the length of your antenna… Using the chart below always remember to add a small amount as it is better to be long and be able to cut (slowly) rather than be too short and say "darn it" in three "3" different languages (tongue in cheek).

¼ wave	*length in feet=234 / Frequency in MHz*
½ wave or dipole	*length in feet=468 / Frequency in MHz*
¾ wave	*length in feet=702 / Frequency in MHz*
Resonate Loop	*length in feet=1005 / Frequency in MHz*

Example*: What is the length for ¼ wave at 7.050 MHZ? Answer: 234 / 7.050 MHz = 33.2 Feet.*

Here are two trivia questions that will shed light on today's points. I am sure most of you have seen a 5/8 wave antenna for VHF-UHF.

Question 1) So what is a 5/8 wave antenna? **Answer**: It is electrically a ¾ wave that has been made shorter (using a coil or folding top) so that the tip of the antenna is now 5/8 wave above the ground plane.

Question 2) WHY and WHAT does this do for us? The answer is embedded in the last three articles. Clue: it is all about angle of radiation and where you put the power that your transmitter produced. It has nothing to do with SWR. There is a trick that can be used on all bands.

Trick and Tip: Use your halyard as a tool to control your current and angle of radiation so you can focus your signal to various distances thus various countries.

What's that you say? *The Halyard is a non-conductor used to hold the Antenna in place. How can it affect antenna current and radiation angle?*

It sounds impossible, but it is true. The trick I use is that I have several wire antenna lengths (tuned, cut, labeled and coiled for storage) ready to use. Not just for different bands, but also for the same band with different angles of radiation as previously explained. This allows me to quickly change antennas on a rotational basis. This is a most powerful tip.

Each is designed for different "high current" points, thus different angle of radiation. The value of the different "cuts" come from the information contained in this article and the last three articles. The job is done in minutes, not hours, and is a one man job. I can use the Halyard to lower and change the antenna wire, thus changing the angle of radiation by 15-30 degrees. That creates a huge change in performance and changes the spot on this earth where my signal goes.

Because we have a typical PSL small lot, I can't have lots of antennas up at the same time, so I rotate the usage of them. This focuses my signal to different distances thus different DX countries. The cost of wire is cheap as I buy large spools from Lowe's. Coiling each wire antenna for easy storage allows all of these antennas to be stored in a small cardboard box. While cost and storage is small, performance is huge. The control of your signal is now **YOU** and **NOT** random.

Emergency Communications. The science of HF requires us to make important decisions. Example: if a band fades out for a specific distance, you will need to know what band to shift to, when to shift and what antenna to use. As a skilled operator it is your job to be able to make good antenna and band choices. This puts a demand on you to understand propagation and control it by making good antenna and band choices.

How do you learn this? By competing in the pile-ups. Chasing DX and Contesting are two great tools to help you gain knowledge as well as improve your propagation instincts and antenna skills. If your ideas about antennas are incomplete or wrong, the pile-ups will let you know.

(continued on page 19)

DXing: The Science, Art and Mystery of HF *(continued from page 18)*

The best antenna for your situation depends on many considerations, such as
. What are your needs?
. How much land does it take up?
. Trees or other mounting assets.
. How high do you need to place the antenna?
. Is the appearance acceptable at your location? Can it be made stealthy?
. Difficulties involved in making adjustments or repairs.
. Ease of construction.
. Will construction or adjustments be a "one man show" or will much help be required?
. If repair is needed, will it be a "one man show" or will you have to wait for many friends to have the same day available to help you?
. Halyard style antennas can be "one man shows."
. Is the cost reasonable?
. Is it suitable for multiband operations?
. Does the antenna require excessive space or height?
. Local and quick parts availability.

I leave you with this motivation and tribute to Larry Cook, W4QH (SK). Your only limitation to accomplishment is your imagination and knowledge - and that is only controlled by YOU. Larry had these qualities and that is why he was a leader in ham radio. He was a good friend to us all. Follow his lead by being both an Elmer and a student. Being a student is important, because the best Elmer's are still learning. These are the lessons that Larry taught us all. May the Lord be with you Larry.

It has been my pleasure to be with you during this series of articles. I hope you have enjoyed them and perhaps put some of the ideas to use. I also hope to see you on the HF bands and modes. C-U-L & 73. Remember: **HF is both a science and an art.** You can learn the science but you must experience the art.

Please let me know if you have learned something from this series of articles. An email from you would be appreciated. God Bless and may you enjoy this gift of HF propagation that God has given us. My email is W8HW@comcast.net.

73, Bruce, W8HW

You can contact Bruce directly at w8hw@comcast.net.

Comments about this series? Send to: tchamnews@gmail.com.

I will listen, and listen, and then listen again before calling.

I will only call if I can copy the DX station properly.

I will not trust the DX cluster and will be sure of the **DX** station's call sign before calling.

I will not interfere with the DX station nor anyone calling and will never tune up on the DX frequency or in the QSX slot.

I will wait for the DX station to end a contact before I call.

I will always send my full call sign.

I will call and then listen for a reasonable interval. I will not call continuously.

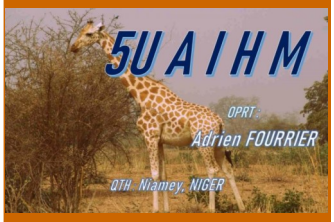
I will not transmit when the DX operator calls another call sign, not mine.

I will not transmit when the DX operator queries a call sign not like mine.

I will not transmit when the DX station requests geographic areas other than mine.
When the DX operator calls me, I will not repeat my call sign unless I think he has copied it incorrectly.

I will be thankful if and when I do make a contact.

I will respect my fellow hams and conduct myself so as to earn their respect.



From the weekly ***ARRL DX Bulletin*** and other sources. (**bulletin archive**)

DX OPPORTUNITIES

JAN MAYEN, JX. Operators LA7GIA, RA9USU, DL5EBE, LB1QI and EA3HSO are QRV as JX0X from Kvalrossbukta, IOTA EU-022, until October 5. Activity is on the HF, using all bands and modes and with four stations active. QSL direct to UA3DX.

TANZANIA, 5H. Maurizio, IK2GZU is QRV as 5H3MB until November 20. Activity is on the HF bands using CW, SSB and various digital modes. QSL to home call.

ANGOLA, D2. Mikalai, UT6UY is QRV as D2UY from Cabinda for a few months. Activity is on 20, 15, and 10 meters using mostly CW, generally between 1600 to 2300z. QSL via operator's instructions.

DODECANES, SV5. A group of operators will be QRV as SV5/HB9COG from Rhodes, IOTA EU-001, from September 28 to October 5. Activity is EME on 70, 23, 13, 9, 6, and 3 centimeters at various times, using JT65C, Q65C, Q65D, and CW. QSL direct to HB9Q.

TONGA, A3. Masa, JA0RQV is active as A35JP from Nuku'alofa, Tongatapu Island (OC-049) until early November. Activity is on 80 to 6 meters using CW, SSB and FT8. QSL via LoTW and ClubLog, direct or via the bureau to his home call.

NIGER, 5U. Adrian, F4IHM will be QRV as 5UAIHM from Niamey from September 11 to October 22. Activity will be on 40 and 20 meters using CW and SSB. QSL to home call.

MALDIVES, 8Q. Nobby, G0VJG plans to be QRV as 8Q7CQ from Innahura Island, IOTA AS-013, from September 28 to October 13. Activity will be on 80 to 10 meters, including 60 meters, using SSB and various digital modes. QSL via M0OXO.

SEYCHELLES, S7. Fred, DH5FS is QRV as S79/DH5FS from La Digue and Praslin Islands, IOTA AF-024. Activity is in his spare time on the HF bands using CW and FT8. QSL to home call.

UK SOVEREIGN BASE AREAS ON CYPRUS, ZC4. Garry, 2M1DHG is QRV as ZC4GR until December 31. Activity is on the HF bands using SSB and various digital modes. QSL via EB7DX.

GUINEA-BISSAU, J5. The Italian DXpedition Team will be QRV from October 9 to 22, using the call signs J5T on CW, SSB and RTTY and call sign J5HKT on FT8. Activity will be on 160 to 10 meters. QSL via I2YSB direct, OQRS or LoTW.

GUINEA, 3X. Jean Philippe, F1TMY will sign 3X2021 during his upcoming visit, starting in mid-September. He will be on 160 to 6 meters and the QO-100 satellite. He will also be portable from Los Islands, IOTA AF-051. QSL through Club Log.

ST. LUCIA, J6. Bill, K9HZ will be QRV as J68HZ from August 21 to November 8. Activity will be on the HF bands using CW, SSB and FT8. QSL direct to home call.

DX SPECIAL EVENT STATIONS

POLAND, SP. Special event station 3Z20UR is QRV until October 15 to celebrate 20 years of the University of Rzeszow. QSL via SP8POP.

BULGARIA, LZ. Special event station LZ1340BG is QRV until the end of 2021 to support the Thracian Rose Club and the TRC DX Contest. QSL via LZ2VP.

POLAND, SP. Members of club station SP4PZM are QRV with special event call sign SO39SYBIR until February 2022 to mark the opening of the Sybir Memorial Museum in Bialystok. Activity on HF bands using CW, SSB, and digital modes. QSL via SP4PZM

(Know of a coming DX station or Special Event? Send info to: tchamnews@gmail.com)

Special Event Stations

Mickey Mantle Day

Oct 22-Oct 24
0000Z-2300Z

W5M, Spavinaw, OK. Mayes County Amateur Radio Club. 3.850, 7.240, 14.285. QSL: Mayes County ARC, PO Box 1195, Pryor, OK 74361.

Sixth Annual Mickey Mantle Day. Honoring the birth of baseball legend Mickey Mantle from his birthplace, Spavinaw, Oklahoma. **www.qrz.com/db/w5m** or **www.mcarc.me**

(From ***ARRL*** and other sources.)

130 YEAR ANNIVERSARY OF THE FIRST K.U.K. TELEGRAPHY COURSE

Sep 1-Oct 30, 0000Z-2359Z, OE130KUK, Kirchberg am Wagram, Austria Europe. ADL 305 Tulln-Stockerau. 160 through 10 meters, CW SSB FT8. QSL: See website for information. www.qrz.com/db/oe130kuk

LESTER DENT - DOC SAVAGE SPECIAL EVENT

Oct 2-Oct 3, 1500Z-2359Z, W0D, Macon, MO. Macon County Amateur Radio Club. 14.250, 7.200. Certificate: Dale Bagley, 1402 Eastern Dr., Macon, MO 63552. Will operate the Doc Savage Special Event W0D, in Macon, MO. A colorful certificate will be provided to those who contact the Special Event Station and send a QSL including a #10 SASE to the Macon County Amateur Radio Club, PO Box 13, Macon, MO 63552. dbagley@cvalley.net

2021 YANKEE STEAM-UP

Oct 3, 1300Z-2000Z, N1EPJ, East Greenwich, RI. Massie Wireless Club. 3.825, 7.25, 14.258, 14.058. QSL: send SASE to Massie Wireless Club N1EPJ, P.O. Box 883, East Greenwich, RI 02818. Special Event: Sunday, October 3, 2021, New England Wireless & Steam Museum Yankee Steam-Up. Suggested CW frequencies: 3.558, 7.058, and 14.058. Suggested SSB frequencies: 3.825, 7.25, and 14.258. Operating from morning to late afternoon (13:00 - 20:00 UTC). Check the museum website NEWSM.ORG & QRZ.

SENATOR BARRY M. GOLDWATER MEMORIAL

Oct 4-Oct 9, 1500Z-2100Z, K7UGA, Chandler, AZ. Central Arizona DX Association. All bands, all modes. QSL: Bob Davies, K7BHM, 1623 N. Los Altos Ct., Chandler, AZ 85224. Five-day Special Event leading up to AZQP. www.cadxa.org

200TH ANNIVERSARY SANTA FE TRAIL

Oct 9, 1500Z-2000Z, KS0KS, Olathe, KS. Sant Fe Trail Amateur Radio Club. 7.280, 10.118, 14.280, 18.080. QSL: SFTARC, P.O. Box 3144, Olathe, KS 66063. Operating from Lone Elm Park, site of the original Campground that served travelers on the Santa Fe, California and Oregon Trails in the 1800s. sftarc.org

GET YOUR PARK ON! CELBRATING EARTH SCIENCE WEEK

Oct 9-Oct 17, 0000Z-2359Z, many 1x1s worldwide. US Affiliate (KFF), Worldwide Flora and Fauna. All bands, all modes. Certificate & QSL: See QRZ.com for information. Check WWFF website for a list of participating calls, including N2G, N4G, K5G, N5G, N6G, N9G, K8P, N0M. QRZ.com or www.wwff.us

US NAVY BIRTHDAY

Oct 9, 1600Z-2300Z, NI6IW, San Diego, CA. USS Midway (CV-41) Museum Ship. 14.320, 7.250 PSK and CW on various HF bands. DSTAR on various reflectors. QSL: USS Midway Museum Ship COMEDTRA, 910 N Harbor Drive, San Diego, CA 92101. check spotting networks to find us on HF. Consult www.dstarusers.org to find our call sign NI6IW and see what reflector we're using. Typical QSL turn-around time is 4 to 6 weeks after receiving request with SASE. www.qrz.com/db/ni6iw

WWI CODE TALKER EVENT

Oct 9-Oct 11, 1400Z-0200Z, W5D, Tuskahoma, OK. Vm Okla Nan Ola ARC. PSK31: 7.070, 14.070, 21.070; LSB: 7.218; USB: 21.318, 14.318. Certificate: WI5ND, Attn: Holly Sharrock KG5SSJ, 12715 N 410 Road, Hulbert, OK 74441. https://www.facebook.com/Vm-Okla-Nan-Ola-1042208782921 84/ or https://www.qrz.com/db/wi5nd

YORKTOWN SURRENDER DAY

Oct 16, 1400Z-2000Z, K4RC, Williamsburg, VA. Williamsburg Area Amateur Radio Club. 14.265, 7.265. Certificate & QSL: QSL Manager, P.O. Box 1470, Williamsburg, VA 23187. 240th anniversary of the British surrender. K4RC.net

Readers: Tell us about your special event QSOs. We will publish in a future edition. Please submit info to: tchamnews@gmail.com).

Ham Humor

The Ultimate Transceiver for Serious Contesting

This all-in-one beauty for serious operators features:

1200W microwave 2.3 cu ft refrigerator
10 cup coffee maker 200W HF transceiver

(from ae1n's qrz.com web page)

Top Ten Ways You Know You Are Married To a Ham

10) His favorite superheroes are Marconi and Tesla.
9) His sense of well being is tied to the sunspot cycle.
8) His electric shaver has a backup diesel generator.
7) He shows you his PL-259 connector.
6) For a romantic honeymoon, he chooses Dayton over Tahiti.
5) He rates your love making in S units.
4) He buys you an HT for your anniversary.
3) He attaches a mag mount antenna to the baby's stroller.
2) When whispering sweet nothings in your ear, he ID's every few minutes.
1) When the moment is right, he is on the radio.

More Q-Codes that Did Not Make the List

QFH - This frequency is mine! - go elsewhere.
QFH? - Is this frequency hogged?
QOF Yes, I am an old fart.
QOF? Are you an old fart?
QWC? - Who cares?
QWC - I don't care

The Futuristic FT8 Transceiver / Watch Combo

(from ae1n's qrz.com web page)

TREASURE COAST HAM NEWS

The editors like to reserve the last couple pages of ***Treasure Coast Ham News*** for you, the readers. With your help these pages will include:

For Sale Section – Have something to sell or trade? Send us a description and/or picture to have it listed in this section. Looking to buy something? Provide a description and we will print it.

QSL Card Section – Many hams enjoy viewing QSL cards, especially those with colorful pictures. Send us scans of your favorite QSL cards. Maybe the first card you ever received. Or perhaps your favorite card, or your personal card. We will include some in each issue as space permits.

The last few newsletter pages are yours. Help make them a success by submitting your photos, For Sale listings and QSL cards to tchamnews@gmail.com.

Want to be published? Treasure Coast Ham News invites you to write about your ham radio activities, kit building, DX operations, or any other amateur radio subject. You don't need to be a polished writer, or a writer at all for that matter. We will help you edit your work. While we don't pay for articles, you will receive a full byline. Please contact us at: tchamnews@gmail.com.

Coming in Future Newsletters

Articles planned for coming issues of *Treasure Coast Ham News* include:

- *Hurricane season update*
- *More information for new hams*
- *The ham's holiday shopping list*
- *FT-8 DXing with Hamstick style mobile antennas*
- *The return of Ham Radio History*
- *Ferrite Cores—what and how to use*

Area Club News

Port St. Lucie Amateur Radio Association
Membership is open to all who have interest in amateur radio. You do not need to be a licensed amateur operator. An application form is available at pslara.com under the "***Contact Us***" tab. The club meets on the fourth Wednesday of each month at 7:30 p.m. Presently, meetings are held via ZOOM. See web site for details.

The club's October and November meetings are important and all members are urged to participate. Nominations for officers and directors for 2022 will be presented at the October meeting. The election will take place at the November meeting. All members are urged to volunteer as a nominee for one of the open positions.

Fort Pierce Amateur Radio Club
FPARC is a general purpose club involved in all aspects of amateur radio. The club meets on the 2nd Wednesday of the month on the Main Campus of Indian River State College in Fort Pierce. See the club's web site for details.

Vero Beach Amateur Radio Club
VBARC was formed November 1st, 1961 with just a handful of local hams. Today, it includes all of Indian River County, numbers over 100 members and continues to grow. From the beginning the club has worked with local government in emergency situations, and also with the Red Cross.

In April 2017, VBARC was awarded the designation as an ARRL SPECIAL SERVICES CLUB, which is awarded to a club that goes above and beyond for their communities and for Amateur Radio. The Vero club truly defines what amateur radio is all about!

Martin County Amateur Radio Association
MCARA serves the Martin County, Fl amateur radio community. They support county ECOMM through ARES. Activities include weekly Rag Chew Nets, ARES Nets and meetings, and monthly association meetings. The association sponsors the yearly Stuart Hamfest.

Setting the Record Straight
At the FPARC Hamfest in August ARRL saluted the Fort Pierce Amateur Radio Club with a 60 Year Service Award. Last month we incorrectly reported the award as a 50 Year Service Award. We apologize for the mistake. Way to go Fort Pierce!

Repeaters and Club Nets
The Treasure Coast is blessed with a multitude of repeaters. The best way to locate them is to check the various club web sites.

Each club holds a weekly rag chew net on one or more of their repeaters. Schedules for the nets are available on the club web sites. There is at least one net every weekday evening. Get on the air and participate!

HAM RADIO EQUIPMENT FOR SALE

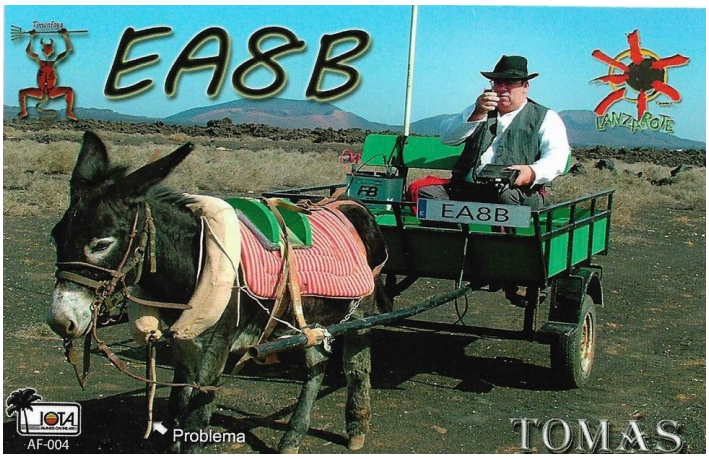
BY ORIGINAL OWNER - Create Extra Heavy Duty Antenna Rotator – Model RC5A-3 and preset control box. Includes mounting hardware and factory manual. Rated for antenna up to 20 sq. ft. Test/Demo cable included. See EHAM.NET Reviews for info. $495.00 or Best Offer.

ORIGINAL NON-SMOKING OWNER - YAESU FT1000 HF XCVR 160-10M. 200 WATTS with factory options (DVS-2 voice keyer, MHI-B8 hand microphone) and service manual. Has factory shipping box. $795.00 or Best Offer. **Yaesu FT-1000 Specifications & Manual**

Contact BOB, W7MAE, (772) 444-5845, or email w7mae@aol.com

QSL Cards

TCHamNews enjoys publishing QSL cards received by our local amateur radio community. If you have an interesting QSL card to share with your fellow hams, please send a scanned image (jpeg) to TCHamNews@gmail.com and we will include it in an upcoming issue. *(If you send us a paper card, we will scan it and send the original back to you.)*



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