HAM DATES:

INDIAN RIVER CO.

March 2, 9, 16, 23, 30, 2021
Indian River Co. ARES NET 7:30pm, 145.130 (107.2) repeater

March 6, 2021
Digital University, 9am-12pm (Suspended due to COVID-19)

March 7, 14, 21, 28, 2021
Treasure Coast Ragchew/Traders Net 8:00pm 146.775 repeater

March 11, 2021
Vero Beach ARC Meeting, 7:30pm Italian American Civic Associates

March 25, 2021
Indian River Co. ARES, meeting 7:00pm 145.130 repeater

ST LUCIE CO.

March 2, 9, 16, 23, 30, 2021
Ft. Pierce ARC Rag chew, Tech, Traders NET 8pm, 147.345 Repeater (107.2), Echolink: 2004 (W4AKH-R)

March 3, 2021
St. Lucie Co. ARES NET, 7:30pm, 147.240 MHz (107.2) repeater

March 4, 11, 18, 25, 2021
Port St. Lucie ARA Rag chew, Traders, Tech NET 7:30pm, 146.955 MHz (107.2)

March 10, 2021
Ft. Pierce ARC Meeting, 7:30pm, ZOOM (https://fparc.org for details)

March 17, 2021
St. Lucie Co. ARES, 7:30 pm, Meets on the air, 147.240 repeater (107.2)

March 24, 2021
Port St Lucie Amateur Radio Assoc. ZOOM meeting (request login)

MARTIN CO.

March 1, 8, 15, 22, 29, 2021
Rag chew net 7:30pm, 145.150 MHz (107.2)

March 11, 2021
MCARA ARES, 8:00pm MC EOC 800 SE Monterey Rd, Stuart

March 25, 2021
MCARA Meeting, 7:00pm Stuart Police Dept., 830 SE Martin Luther King Blvd, Stuart

Treasure Coast Ham News

VOLUME 2, ISSUE 3 MARCH 2021

TREASURE COAST HAM FEST

(Photo by Craig Jerome)

Did you attend? Hundreds of people attended the First Annual Treasure Coast Outdoor Hamfest at the Indian River County Fairgrounds. The weather cooperated by keeping the rain away and the February temperatures were enjoyable. For more pictures of Hamfest activities and attendees, please check inside.

INSIDE THIS ISSUE:

B&B PUBLISHING PARTNERS TCHAMNEWS@GMAIL.COM

From the Publishers

In 1912 the US Department of Commerce began issuing First and Second grade Amateur Radio Licenses. An essay-type written examination and Morse code test were required for First Grade licenses.

In 1951 the FCC created named amateur radio license classes. They were Novice, Technician, General, and Advanced. The Extra First Grade class license was created in 1923. Exams and code tests were progressively more difficult for each license class. The goal being as your radio and operating knowledge, skill and ability increased, you could (and in the case of the Novice class had to) advance up the licensing ladder to gain more operating privileges. The FCC periodically updated Amateur Radio License exams as radio art advanced and Part 97 was amended. Today, 14 Volunteer Examiner Coordinators (VEC) oversee the license examination process.

Amateur Radio is unique in that unlike FCC commercial licenses required for those who install, repair, and maintain commercial radio technology, amateurs come from all walks of life, many having nothing to do with radios, electronics or anything technical. Most would be amateurs have a strong desire to help in natural and manmade disaster response. Others want to use radio to communicate domestically and internationally using various operating modes to achieve awards. Still others enjoy tinkering and experimenting with radio and related technology. We are a very diverse group of individuals. Where amateur radio takes us is only limited by how much we desire to learn, experiment, communicate and enjoy our art.

I received my first amateur radio license in 1967. In those days questions and answers were not published. Rather, you bought the ARRL or other license study manual along with other radio books and maybe had an Elmer to help explain the hard stuff. If you were lucky enough to pass (most did) your Novice license arrived in the mail a few weeks later from the Gettysburg FCC Office. After that your other license exams were given by the FCC at one of their field offices. If too far to travel another procedure was used and you were issued a Provisional license. The FCC (and the ARRL) mindset was that if you wanted to be a "ham", you would continue your learning process. Many clubs and groups taught radio theory and still do today, subscribing to the premise that building a solid radio foundation is important for the future of ham radio.

So how do we as a licensed service insure that we continue to build our knowledge and keep current with emerging radio technology? That's a question that needs answering. One approach often considered is to require Continuing Education Credits (CEUs) as part of licensing renewals. Can continuing education be provided by clubs and at hamfests? Maybe, but is that sufficient?

Please share your thoughts with us at tchamnews@gmail.com.
73, TC Ham News

The Amateur Radio Emergency Service (ARES) is a public service communication program of the ARRL. Over many years and following many natural disasters, ARES volunteers stepped up and provided valuable community services.

The ***ARES Emergency Communicator Individual Task Book*** is a working document for ARES communicators in the ARRL approved training plan. Use it to track and document your training plan elements as they are completed towards the various levels of increasing proficiency.

The Task Book should contain all training plan items, completion dates and sign-offs as the ARES communicator transitions through the three skill levels. Communicators are responsible for maintaining his/her Task Book and having it with him/her during training and assignments. The Task Book also contains sections with definitions of the communicator levels, as well as common responsibilities. Recommendations of minimum proficiencies and skills per level are listed. ECs, at their discretion, can add or substitute skills that they consider important. Prior known experience may be substituted for some listed tasks. It is suggested that items in the proficiency/skills section be presented in training sessions or at meetings and events presentations.

For more information please see the ARES February 2021 Newsletter.

Treasure Coast ARES Coordinators

Martin County:
Emergency Coordinator
Steve Marshall, WW4RX

St Lucie County:
Emergency Coordinator
Paul Horner, W4ISZ

Indian River County:
Emergency Coordinator
Bud Holman, WA4ASJ

Get involved and be a part of ARES.

VE License Testing Update

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

Port Saint Lucie held a license examination session on February 20, 2021.

Seven candidates participated in the session, which was held at the Buffalo Chophouse restaurant located at 918 SW Gatlin Blvd , Port St. Lucie.

As we go to press, the exam paperwork has not yet been processed by the VEC and FCC. As a result, call signs are not available at this time.

Three candidates took and passed the Technician exam, earning their amateur license. Congratulations to:

Olivier Gerbald,
Port Saint Lucie

Jeffrey Lane,
Port Saint Lucie

Kraig Malstrom,
Port Saint Lucie

One candidate took and passed the General exam, earning a license upgrade to General Class. Congratulations to:

Michael Neville, KN4TGC
Port Saint Lucie

Another candidate, who previously held a general class license that expired a number of years ago, took the exam to apply for a new license. In conjunction with taking and passing the Technician exam and by providing proof of his previous license, FCC rules allow award of a new General Class license. Our congratulations to:

Allan Ramsay,
Port Saint Lucie

And finally, one candidate took and successfully passed the Extra Class examination. Our congratulations to:

Michael Ciardi, W4PPM
Port Saint Lucie

We had one unsuccessful candidate participate in the exam session. He tells us he plans to try again at a later date.

Future License Exam Sessions

Port Saint Lucie tentatively plans to hold its next license exam session in the late April to early May timeframe. Watch for announcements by email and at club events.

Changes Are Coming

Don't forget, effective June 29, 2021 all amateur radio license related applications submitted to the FCC must include a valid email address where the applicant can receive correspondence. Failure to include an email address can result in the application being dismissed as defective.

Also, remember that the FCC will begin imposing a $35 processing fee for amateur license applications in the near future, at a date still to be determined. This fee is in addition to the $15 service fee charged by the ARRL VEC organization to administer the Volunteer Examiner (VE) program.

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

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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.

QSO TODAY EXPO - March 13-14, 2021

The QSO Today Virtual Ham Expo will take place on March 13-14, 2021. The first QSO Today Expo was a great success with over 16,000 attendees, and the March 2021 event is anticipated to be even larger. The QSO Today team has been working hard to make this upcoming Expo even better with new speakers, panel discussions, kit building workshops, and much more.

Anyone can attend from their home or office. Early Bird Tickets are just $10 (to help cover the cost of this event), and $12.50 at the "door," Tickets include entry for the live 2-day period as well as the 30-day post event on-demand period. Registration info can be found at www.qsotodayhamexpo.com.

The Expo team has put together a world-class line-up of 60+ speakers to address this conference from the virtual Expo's auditorium. ARRL, the National Association for Amateur Radio® in the United States, is a QSO Today Expo Partner. FlexRadio is the Expo's Platinum sponsor, and Gold sponsors as of this time include Elecraft, RFinder, and CSI.

At the Expo, amateur radio operators will be able to learn from renowned ham radio speakers such as Bob Allphin, K4UEE, on "My Favorite DXpeditions to DXCC Top 10 Most Wanted," Michael Foerster, W0IH, on "Using the Arduino In Your Shack" and Ron Jones, K7RJ, on "3D Printer Basics."

Attendees can take part in Live virtual kit building workshops. Kits will be available for purchase and delivered to you in time for the Expo so you can participate and build from the convenience of your home.

Walk through the virtual exhibit hall filled with popular amateur radio suppliers. Watch live product demos of the latest equipment. New video technology will be used to provide a better experience for attendees to engage with exhibitors.

Prior to the Expo, you can take advantage of speaker calendar technology to download speaker times in your local time zones into your Google or Outlook calendar. You'll then have a complete schedule of the sessions you want to join.

Return over the next 30 days to listen to speakers you missed during the Live period, explore, and re-engage exhibitor offerings.

While attendance is expected from traditional in-person convention "goers" not traveling due to COVID, a Virtual Expo is a great opportunity for those who don't typically attend in person events, which includes the vast majority of amateur radio operators.

For more information, go to www.qsotodayhamexpo.com

Fort Pierce ARC attends the Treasure Coast Outdoor Hamfest

The FPARC attended the Treasure Coast Outdoor Hamfest held in Vero Beach at the fairgrounds. The club had 2 tables. Members sold donated radio equipment.

Nearby was a table explaining Winlink and the local Florida Winlink Net. Winlink is one of modes hams use to message by VHF/HF. The mode is often used by EMCOM and ARES groups in emergencies. For the weekend there were 273 Winlink check-ins from all over the US. The Winlink managers for the net are John KK4SHF and Jim KM4UFN. Information, reports, and operators are mapped here: https://johnsails.com/RADIO/w4akhnet/

33 prizes were awarded using a new system developed by John, KK4SHF. No paper tickets were used. Rather, KK4SHF's software "***Plum Tickets for Hamfests***" was employed for attendee entrance and prize drawing tickets. There was no handling of paper tickets. A QR code was scanned on a smart phone or entered manually into the website at the Hamfest's entrance. The ticket software knew the ham's contact info from FCC records. Winning tickets were randomly selected and recorded by the computer. The software kept track of sales and winners. Time was saved by all since you did not need to fill in each ticket purchased. All was done automatically.

Reported by John, KK4SHF

Upcoming 2021 Florida Hamfests

03/06/2021 - Charlotte County Hamfest
Location: Punta Gorda, FL
Sponsor: Peace River Radio Association
Website: http://www.peaceriverradio.com

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

08/14/2021 (tentative)
Ft Pierce Hamfest
Location: Indian River State College 3209 Virginia Avenue Fort Pierce, FL 34945
Sponsor: Ft. Pierce Amateur Radio Club
Website: https://fparc.org

Field Day Rule Waivers from 2020 are extended; Added Class D and E Power Limits

It's never too early to start preparing for Field Day scheduled for June 26-27. The ARRL has extended the COVID-19 rules from 2020. Power limits have also been added for Classes D (Home Station) and E (Emergency Power). According to ARRL Contest Program Manager Paul Bourque, N1SFE, "This early decision should alleviate any hesitancy that radio clubs and individual Field Day participants may have with their planning for the event."

Class D stations may work *all other* Field Day stations, including other Class D stations, for points. This year, however, Class D and Class E stations will be limited to 150 W PEP output. For Field Day 2021, an *aggregate* club score will be published -- just as it was done last year. The aggregate score will be a sum of all individual entries that attributed their score to that of a specific club. ARRL Field Day is one of the biggest events on the amateur radio calendar. Last summer, a record 10,213 entries were received. "With the greater flexibility afforded by the rules waivers, individuals and groups will be able to participate in Field Day, while still staying within any public health recommendations and/or requirements," Bourque said.

The ARRL Field Day web page contains complete rules and entry forms, as well as updated information as it becomes available. Join the ARRL Field Day Facebook group. Read expanded rules here.

Ham Radio Trivia

Answer to last month's question:

Last month's trivia question featured a little known tidbit about an amateur radio operator's former day job.

Question:
Stephen Aug, W3DEF, was the former business correspondent for what TV show?

A. CBS This Morning
B. Shark Tank
C. Good Morning America
D. Fox News Primetime

The correct answer is:

C. Good morning America

For several years Stephen Aug was a regular personality on the famous television news show. He provided on air reports of the latest business and economic news to millions of Americans.

(Question from funtrivia.com.)

March Trivia Question

Let's stick with the category of famous personalities who held an amateur radio license. Try your luck with this one:

Question:
This late Hollywood super star once held amateur call sign KE6PZH. Who was it? Hint: He is known for once using his Oscar as a doorstop.

A. Jimmy Stewart
B. Marlon Brando
C. Richard Burton
D. John Wayne

The answer will appear in next month's newsletter.

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

"Brush up on your radio knowledge and skills."

In 2002, Fab (Fabrice VE7FBN) launched his printing company BF Technic Arts Ltd. in Vancouver, British Columbia. He worked hard printing business cards, flyers, brochures, and other products his clients needed for promoting their businesses.

QSL Concept QSL Cards Printing for Less

In 2010, Fab met Laurent (F5MUX) who introduced him to the incredible world of amateur radio. Fab created QSL Concept, and put together a full range of printed products dedicated to the ham radio hobby. Soon Fab was also offering his products in North America and Europe from local printing facilities. Fab's mission with QSL Concept is to help amateur radio operators create amazing QSL cards that will stand out from the crowd. The quality of a QSL Card shows just how much involvement and passion operators put into their hobby. QSL Concept wants to empower that passion, and make that dedication noticed. QSL Concept also helps clubs with their promotional tools for marketing their upcoming hamfests and events, by providing high quality printed documentation and signage.

Check www.qslconcept.com/usa. You can order directly from the website. They offer free layout design and free shipping. Fab is also a professional photographer. He can review and edit your photos at no extra charge and make sure they look amazing for printing. Commercial custom printed products are also available online. Check the Canadian website at www.bftechnicarts.com. Just ask and Fab will get back to you with a quote in U.S. dollars.

QSL Cards and printed products they deliver in the United States ship from one of their printing facilities in the U.S. Turnaround time with design, printing and delivery can be as short as one week.

Contact Fab at fbertron@bftechnicarts.com or info@qslconcept.com with any questions. Fab is offering 10% off to TCHamNews readers. See details on the QSL Page.

Technician Licensees: Why Not Try Low Power HF CW

Would you like to contact hams around the world using a simple antenna and a radio that isn't much larger or more costly than a VHF/UHF handheld? If you're willing to invest a modest amount of time to develop some new skills, consider using low power HF CW. What follows will prepare you for a successful introduction into this exciting facet of ham radio.

Why Learn CW?

Simply put, CW is a highly effective, engaging and elegantly simple mode. Relative to phone (SSB), CW can provide a 12-17 dB advantage - that's 2-3 S-units! This means that a 5 watt CW radio can be as effective as a 100 watt SSB radio. While some digital modes (e.g. PSK31, JT65) are even more effective, a computer must handle encoding, transmission and decoding. This adds some cost and complexity, and removes you a bit from the action. With CW, you handle the encoding and decoding, enhancing your sense of accomplishment. Plus, CW is conversational like phone and you're likely to enjoy the camaraderie that CW operators share.

CW's unique and rewarding user experience has resulted in its continued popularity. A quick tune across the bands will confirm this. Or, take a look at contest statistics. During a recent Field Day, CW provided 42% of the total QSOs. Phone was 54% and digital 4%. Similarly, during a recent Sweepstakes there were 500,739 CW QSOs and about 575,000 phone QSOs. Conclusion: CW is popular.

Is CW Difficult to Learn?

To find out if it would be difficult for you, spend an hour or two using one of the excellent, free training programs. These programs can be found on lcwo.net, justlearnmorsecode.com, G4FON.net, and other websites. If you enjoy the first few lessons, continue. Even if you find it a bit tough, keep one thing in mind. Some hams who struggled learning CW or even hated it initially now love it and use it almost exclusively.

Will Learning CW Require a Lot of Time?

The time you'll need to become sufficiently proficient to get on the air will likely be somewhere between 40 and 60 hours. This is probably just a small fraction of the time you spend on the hobby over the course of a year.

What's the Best Method for Learning CW?

The Koch method in combination with Farnsworth timing, which is incorporated into the training programs mentioned above, is a widely accepted approach.

To begin, try to practice about a half-hour every day. You'll learn one character at a time. Your initial character speed should be no less than 15 WPM. You can set the Farnsworth timing to increase your character and word spacing, thus reducing your effective speed to perhaps initially 6-8 WPM. This approach forces your brain to focus on the sound of each character rather than individual dits and dahs while providing you time to recognize and record each character.

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When you achieve 90% accuracy with a new character, start adjusting the Farnsworth timing to increase your effective speed. You can begin practicing sending at any time.

Does Low Power (QRP) Offer Significant Benefits?

While QRP (5 watts or less) won't appeal to everyone, an eHam survey (7/6/2007) indicated that about 50% of hams use QRP at least part of the time. You may want to consider using it for one or more of the following reasons:

1. It can substantially reduce the cost of your station.

A new entry level 100 watt HF multi-band, multi-mode transceiver with power supply will cost at least $700 to $1,000 (e.g. Icom 718, Yaesu FT-857), while a decent used radio and power supply will cost at least $400. QRP single-band crystal controlled transceiver kits start as low as $40 (e.g. RockMite - qrpme.com) or around $100 for a single band radio kit that is tunable (e.g. MFJ 9340K, TenTec 1340). A new, assembled single band QRP radio will cost $150 (e.g. MFJ 9340W) or $200 for a multi-band radio (e.g. TenTec 506 Rebel). A small power supply or set of rechargeable batteries with charger will run about $40.

You'll also need to spend about $70 for coax, wire, rope, connectors, and homemade insulators to build a simple antenna like a dipole. Some portable antennas will cost a lot less because little or no coax is needed. In addition, you'll need a paddle or straight key that will cost another $30 to $50. See electronicsusa.com and vizkey.com. Or, you can build your own key. For example, my almost no-cost "paddles" consist of two momentary tactile switches mounted on my handheld radio and a prototype board.

You can find many other equipment choices and learn about their strengths and weaknesses in the eHam product reviews.

2. It facilitates operating portable.

QRP is quite popular for portable operation because the equipment is very small, light and energy efficient. In fact, many hams use QRP just for these reasons. For example, I use my homebrew 1-watt 20 meter handheld radio with an 8 foot whip antenna at my favorite beach in Florida (see my qrz.com page for details: click here). This past winter, I operated about 45 to 60 minutes per day on 82 days. I had 222 QSOs with 34 states and 47 countries, including Australia 7 times.

3. It may provide a more thrilling experience.

This is the key factor that may drive your interest in QRP. After using typical 100 watt radios for 28 years, I needed a new challenge and decided to homebrew a radio. I built a very simple 2-watt, 40 meter QRP transceiver that I used with a dipole up 50 feet. My initial low expectations quickly vanished as I casually worked all states and 86 countries while having many fine rag chews. I almost always made a contact within 15 minutes of turning the radio on.

QRP brought back the magic of radio for me and made operating exciting again. Now, 18 years later, it still amazes me that I can often communicate over thousands of miles with a simple antenna and a radio that fits in my pocket or hand. Every QSO feels special, especially when I'm using a radio I built. This feeling is magnified when I operate portable, work a rare station in a pile-up, have a great rag chew, or work other QRPers.

So if you really enjoy developing your skills and seeing what you can accomplish with minimal gear, QRP may be for you.

Can a Beginner be Successful with Low Power?

Many hams, including QRP enthusiasts will tell you "No". The concern is that a beginner will have difficulty making contacts and quickly become frustrated. However, this will not occur if you adopt the right attitude and approach. AK4YH discusses his approach and success in his eHam article: *Starting Ham Radio, The Road Less Taken (2/22/2014)* - click here. It is interesting to note that entry level HF licensees are required to use low power (10-watts) in some countries, including England, Japan, and Australia. Here are some suggestions that will help ensure your success.

Adopt Reasonable Expectations.

Be mindful that your QRP signal will be at least 13 dB (about 2 S-units) weaker than many. This means:
- You will not be able to contact every station that you hear.
- Your CQs will not usually be answered quickly.
- You will need to be very patient and may not always be successful when trying to work a rare station in a pile-up.
- When conditions are poor or a particular propagation path is marginal, a contact may only be possible with a more capable station and trained ears on the other end.

Use 40 or 20 Meters and Operate when Conditions are Most Favorable.

The most popular bands for QRP are 40 and 20 meters because they have the most activity, good propagation throughout the solar cycle, and reasonable antenna size. To operate on 20 meters, you'll need to

(continued on page 8)

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upgrade to General, which only requires about 20 hours of study time (Source: hamradiolicenseexam.com). This is well worth the time because 20 meters is great for day-time DX and portable operation. Also, a 20-meter antenna can be half the size of a 40-meter antenna and be equally effective at half the height. The upgrade will also give you access to other bands that are good for QRP. It's best to operate when there is plenty of activity on the band and when propagation can best support a QRP signal. I've had good success on both 40- and 20-meters during late afternoon and early evening and on 40-meters well into the night.

You'll need to determine what times work best for you in your area. Use reversebeacon.net to find out where and how well you're being heard at any time. Even with very low power (< 1 watt), you'll often be heard at least by one distant reverse beacon location.

Put Up a Good Antenna At Home or Go Portable?

A simple center fed dipole probably offers the biggest bang for the buck if you can support it reasonably high, preferably 35 feet or more for 40-meters. Other options include an end fed half-wave dipole, a random wire with a tuner, or a vertical with a good set of radials, just to mention a few. Some options may cost a bit more but offer multi-band capability. If you can't put up a decent antenna at home, try operating portable. Ideally, select a nice electrically quiet location like a beach, park or mountain top. See the Summits on the Air program - click here.

At these locations, QRPers have good success using a shortened vertical with a counterpoise, or a random wire or other end fed antenna thrown up in a tree or supported with a collapsible fishing pole.

Search and Pounce or Call CQ?

The quickest way to make a contact is to search for stations calling CQ or that are just ending a QSO. As you tune, listen for stations with loud signals and minimal fading as they will likely hear you best. Also, listen for weaker, low power stations near the QRP frequencies (e.g. 7.030 MHz, 7.040 MHz, 14.060 MHz) that are likely to hear you.

Search and pounce will work best if you can copy stations at their speed - typically, 15 - 20 WPM. If you can't, when you respond to a CQ ask the station to please slow down (PSE QRS) as follows using your call sign (e.g. W3XYZ): PSE QRS DE W3XYZ W3XYZ K. You will recognize that a QSO is ending if you can copy a common ending phrase like 73, cuagn (see you again), or cul (see you later). Then try to copy at least the station's prefix (e.g., W5, KA3, etc.) and call as follows: KA3? KA3? DE W3XYZ W3XYZ PSE QRS K.

If your speed is initially much slower than most stations, or if you're using a crystal controlled radio, you will need to rely more heavily on calling CQ. This works fine, but it may sometimes takes longer, perhaps 30 minutes or more, to make a contact. Using a keyer that can send CQ automatically can reduce the effort. Try operating on or near the QRP frequencies. Listen for activity first and then send QRL to make sure the frequency isn't in use before calling CQ.

Ask for Help When Needed.

You can receive helpful guidance and encouragement and get questions answered on various QRP-related forums located on eHam, and QRP-L (click here) as well as from QRP organizations such as QRP ARCI, Four State QRP Group, NorCal QRP Club, and others. There are also a variety of helpful CW-oriented clubs including the Straight Key Century Club, Fists CW Club, CW Operators Club, and many others.

Local ham club members and the hams you contact on the air can also provide assistance. Ideally, try to find a mentor in your area who can show you that operating QRP isn't difficult and can help you get your station on the air.

Conclusion

If you can be patient while developing your operating skills, low power HF CW can provide a very rewarding experience. You may be amazed to discover what can be accomplished with very simple gear. Low power CW can provide a low-cost entry into HF for Technician licensees and can be enjoyed by others as well.

So are you ready to begin your low power HF CW adventure?

Ron Stone, KA3J

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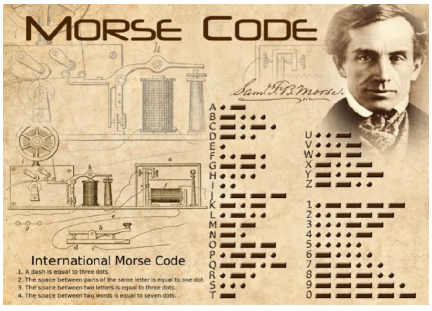
MORSE RESOURCE - Tools to help learn or improve your Morse code skills.

MORSE CODE NINJA - Resources for Learning.

MorseFree - Free Morse Code Training Course for Beginners.



TREASURE COAST HAM FEST

Pictures above—Craig Jerome
Pictures below—John Franke

It's a Wrap - Well Done Vero Beach Radio Club!

The Frugal Ham Radio Operator

Frugal hams are members of an ancient rite of amateur radio operators. The order reaches back to the beginning of amateur radio.

Early on being frugal was a necessity. There were no ham radio manufacturers and building anything more than a crystal radio could be very expensive.

Times are different now. Hundreds of domestic and international companies produce radios and related accessories.

Radio magazines and the Internet are a source for articles about building. Out of print publications like Ham Radio and 73 are available from archive.org and YouTube has a never ending supply of ham info.

Technology is a huge motivator of buy rather than the build. With our increased disposable income, Asian marketplace and aging ham population, it is sometimes just easier to buy rather than repurpose. Many hams can not imagine an older transceiver working just as well as today's SDR transceivers. But that's not always so.

Are you or can you be a ham radio frudgalist? Sure, it's easy. Most of us have a little frugality in our genes.

So don't be afraid to build, or find some used article at a hamfest that you can repurpose into a needed accessory. Think outside the box or better yet build your own box.

Okay, so can you figure

out what we can do with the above threaded brass couplers?

We can thank Phil Salas, AD5X another ham radio frudgalist for showing us the utility of these brass couplers.

The top internal side of the coupler is our standard 3/8" X24" thread that many mobile antennas like Hamsticks use. The external bottom thread screws nicely into a PVC 1/2" x 1" coupler. Assembled, the brass/PVC couplers can be used for an antenna center mount.

Or how about an "X" beam or Quad center connector?

73, The Frugal Ham

Short Takes

Morse Code Used in Phishing Attack

A novel phishing method was recently identified that attempts to attack a user's computing device by embedding Morse code into an email attachment. Shockingly, email filters and anti-virus tools failed to spot the corrupt code. www.itsecurityguru.org/2021/02/08/novel-technique-used-for-phishing-attacks; or https://forums.qrz.com/index.php?threads/morse-code-used-in-phishing-attack.748757/.

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Who's There?

Think you know all the hams living in your neighborhood?

You may be surprised to find some lurkers out there. Check out GridMapper at qrz.com. Click "Clear" on the map and then navigate to your neighborhood and click on a nearby street. The map will display all amateur licensees in your 6 character grid square. Try it. You may be surprised at who you find. https://www.qrz.com/gridmapper

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Get ready for hurricane season. Take it Outside Portable Generator Safety

* * * * *

Own an IC-7300? Richard, K0PIR, has posted over 50 how-to videos about the rig. IC-7300 videos.

(If you see an article that may be of interest to other hams, please share it. Send the URL to: tchamnews@gmail.com.)

Treasure Coast Ham Doctors

ADIF Log Error

The popular WSJT-X software used most often for FT8 QSOs maintains three logs, all of which update in real time. A new FT8 operator asked a question about one of those logs.

Question: Every time I start WSJT-X an error window pops up indicating "Error Scanning ADIF Log" and "Invalid ADIF header."

The log file appears to be okay and the application seems to be running normally. When I complete a QSO the contact appears to get written properly into the log.

I don't understand why I am getting this error. Can you offer any suggestion as to how I can resolve it?

Answer: The WSJT-X software maintains three logs when you are operating.

The first, **"ALL.TXT"** maintains a record of every signal decoded and displayed in the Receive (left) window of the main operating screen.

The other two logs are named **"wsjtx.log"** and **"wsjtx_log.adi."** Both files come into play upon completion of a QSO.

When you complete a QSO by either receiving or sending a "73" or "RR73" message a small Log window opens.

Clicking on the Log button in this window causes the just completed QSO to be written to both the **"wsjtx.log"** and **"wsjtx_log.adi"** files.

The error message you are seeing indicates a problem with the **"wsjtx_log.adi"** file. The cause is a bug in some versions of WSJT-X that do not write the file header correctly when creating the file.

The **"wsjtx_log.adi"** file is typically created only one time, that being the first time you fire up WSJT-X.

Should you in the future delete **"wsjtx_log.adi"** a new file will automatically be created the next time you fire up WSJT-X.

Correcting the error you reported is easy. With WSJT-X not running perform the following steps.

1. Use File Explorer and navigate to the folder where the **"wsjtx_log.adi"** file is located.

2. Use Notepad to edit the file. Find the header text string that ends with <eh> and insert the lower case letter "o" so the string now reads <eoh>.

3. Save the file.

You should no longer see the error when you open WSJT-X.

Thanks for the question.

Dick, K4NJ would still like to talk on the telephone with someone who really knows a lot about the ZUMspot and it's programming. Should the image on the SD card and the information on VyStar become corrupted, Dick wants to know how to recover them.

Please reach out to Dick and offer assistance. langbertr@gmail.com

Please help!

If you have a ham problem, please email tchamnews@gmail.com.

FT8 Operating Tip

When using WSJT-X, you will want to pay close attention to the "**Call 1st**" check box on the main screen.

When you are calling CQ, having this box checked allows WSJT-X to automatically initiate the signal report and 73 sequence when someone responds to your CQ call.

Should the "**Call 1st**" box not be checked, you must manually initiate the response sequence when a station responds to your CQ call.

Pay close attention to the "**Call 1st**" setting. We have seen instances where it unchecks on its own for no apparent reason. If this happens, you will keep sending CQ calls even when a station is replying to you. Check this setting often when operating.

Have an Operating Tip to share with the ham community? Send it to tchamnews@gmail.com.

Ramblings of an Antenna Alchemist

We hope our readers will participate in this column by submitting their practical experiences with antenna alchemy.

Over the last several issues of Treasure Coast Ham News we have discussed VHF/UHF antennas, modes, and modeling.

I hope some of our readers ventured into modeling with Radio Mobile. You can really learn a lot about propagation using a modeling application.

While I am mostly a high frequency antenna ham, I do experiment with building VHF/UHF antennas.

One of issues I have here on the east side of St Lucie County is reaching repeaters that are not nearby with my 5 watt handheld. There are exceptions of course. The FPARC repeaters on the Indian River State College tower are reachable from almost anywhere on the Treasure Coast. The PSLARA 2 meter repeater is less than 5 miles away, but not always reachable with my handheld based on where I stand in my yard. The SCL EOC repeater is hit or miss from my location, again based on where I am located. That should be of great concern for ARES communicators using handhelds, especially when positioned inside schools and hospitals.

The SLC EC, Paul W4ISZ and SLC Information Systems Manager, Craig, KK4CID recognized this problem and have worked to insure each available ARES Go-Kit has a high power analog/digital mobile radio.

Some repeaters in Indian River and Martin Counties are a challenge from my location using a handheld or sometimes even a mobile rig unless I use a better performing antenna. As previously noted location and antenna type play a big role in performance.

Although antenna physics apply to both HF and VHF/UHF, the VHF/UHF bands are much wider and as such wire antennas are not used as much. Instead aluminum or copper tubing serves as a better radiating source. Coaxial cable loss can be significant, therefore a better grade should be used.

There is plenty of literature published in books and on the Internet about building VHF/UHF antennas. An interesting book I found years ago about VHF antennas is *Practical Antenna Design* by Elpidio Latorilla. This book not only teaches the reader about antennas, it also shows how to construct them using copious graphics, material lists and diagrams. VHF/UHF antennas included are 1/4w groundplanes, J-Feds, halfwave, quadloops, dipoles, 5/8 wavelengths, collinears, Yagis, and even discones.

Another book I use quite often is Joe Carr's, KI4PV, (SK) *Practical Antenna Handbook*. You can find a PDF version of the book on the Internet, but I bought a paperback copy as I use it regularly. Joe wrote other antenna books. His book on loops is also a worthy read.

* * * * * *

For some time now I have been using FT8 for worldwide communication. I am always amazed what this mode can do using low power. The antennas I typically use are a vertical dipole for 40 and 20 meters and a Hamstick vertical antenna for 17 meters. The Hamstick also resonates very nicely on 20 meters.

I have the Hamstick mounted on my workshop's metal roof using a modified Comet mobile mount. The metal roof is acting as a ground plane and actually does a fairly good job. While I could have tuned the whip portion of the antenna better for 17 meters, I left it a little long. Surprisingly, the antenna also resonates very good on 20 meters. I have worked a lot of DX to far away lands.

The 40/20 meter vertical dipole is from MFJ. After discussions with Harold, N3UY, I modified the tuning spokes. It propagates very well netting me many countries from Asia, the Pacific, Europe, and even Kuwait.

To those of you thinking you need a Stepper, or huge antenna, you may find that with a little ingenuity your results can be better than expected.

73, The Antenna Alchemist

DXING WITH BRUCE, W8HW

Question: Why Bother with QSO Conformation?

The answers are varied - A few include proof of contact for award recognition, contest challenges, or simply fun and personal satisfaction.

In years past many hams have spent $10,000 or more on paper QSL. It is my goal to help you reduce this expense to only a few hundred dollars - or even less - and make QSLing simple and fun.

Avoid a Common Mistake

A big mistake new DXers make is working the same entity over and over again. For example, you work Australia 1,000 times on 20-meter SSB. Great! But it only counts as one (1) DXCC credit.

Always look for new Entity/Band combinations or Modes, meaning something you have not worked previously. You would be amazed how many DXers hit a snag and do not progress because of this error.

Best is always a NEW Entity. After that, a NEW Entity/Band, then a NEW Entity/Mode. Serious DXers don't waste time working the same entity/band over and over. They keep moving forward.

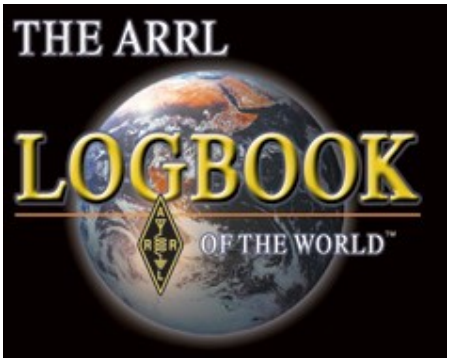
Four Ways to QSL

There are numerous ways to QSL. We will briefly discuss the most common ones.

1. LoTW. It is low cost and quick, but only 30% of hams worldwide use LoTW.
2. ARRL QSL Bureau. Low cost, but can take from 6 moths to many years. To utilize it, you must set up accounts with both ARRL incoming QSL service, http://www.arrl.org/incoming-qsl-service, and ARRL Outgoing QSL service, http://www.arrl.org/outgoing-qsl-service.
3. Direct Paper QSL. This is the most costly. But sometimes it is the only choice.
4. OQRS. This is QSLing done online. I will explaine it later.

Logbook of The World (LoTW)

The big money saver is LoTW. It is fast and efficient; and at little to no cost to you. Also, it avoids the card checker step, which is explained later.



The problem with LoTW is that only about 30% of the hams worldwide use it, so paper QSL is not going away any time soon. LoTW numbers are slowly growing, but don't expect them to get much higher in the near term.

I enrolled in LoTW the very first day it started. It was the best thing I ever did. But as mentioned previously it has a big limitation, which is that only about 30% of active hams use it.

Getting Started with LoTW

Two steps are required to set up a LoTW account. I will provide links to videos that will take you through this process in a quick and easy way. (There is also a step 3 video. Don't bother with it at this time. It is intended for advanced direct log use.)

Step 1. Download the LoTW client program and request a key. https://www.youtube.com/watch?v=HNH0dosMhnM
Step 2. After getting the LoTW key finish the enrollment process. https://www.youtube.com/watch?v=ludkkqAXl_M.

Direct Paper QSLs

Even LoTW users still need paper QSLs. My goal today is to help you avoid the many pit falls associated with paper QSL, thereby reducing your costs and speeding up the process.

If you are interested in participating in any of ARRL's DXCC award programs, there are a number of steps required before the ARRL will credit any DX activity.

If you do not follow these simple steps, the ARRL will not acknowledge your DX accomplishments.

First, work the station. Then, get confirmation either on LoTW or by paper QSL.

Next, if the confirmation is by paper QSL, a Card Checker must review the card. Then an application will need to be submitted for the card. Most card checkers will do this for you. If they don't, you must do it yourself.

With LoTW QSL confirmations are automatic without the need to find and involve a Card Checker.

(continued on next page)

DXING WITH BRUCE, W8HW

(continued from previous page)

Earn an Award

Finally, once you accumulate the necessary LoTW and certified paper QSLs you can apply for awards through the ARRL LoTW Program.

Awards include DXCC (for 100 confirmed countries/entities) and WAS (Worked All States) for confirmed QSLs with all fifty states. Endorsements are available for various bands and modes.

Awards take time to achieve. Be patient and the QSLs will come.

Tips to Help with Paper QSLs

Here are a few tips to help with your paper QSLs by reducing costs and speeding up the process as well as increasing the return rate.

Direct QSL should by your last choice. Use this method only when no other method exists.

Overseas hams who only QSL direct almost always require a self addressed envelope along with 2-3 US dollars CASH to defray their postage costs. They often refer to the cash as "Green Stamps."

Other stations suggest a deposit to their PayPal account instead of mailing cash. This is a safe option because it can be tracked. Just be sure to include your call sign and the QSO date/time and other details in the memo section of the PayPal payment.

Each station is different. Check the DX web page or QRZ.com page for details.

If You Must Send Money

If you send money, it must be cash and not a check. Hide the cash well inside the envelope.

Do not put the addressee's call sign on the outside of the envelope. This is a giveaway to mail handlers that money is likely enclosed. The money will be stolen and the other contents thrown away.

I can tell you war stories from other hams about this, but by following my guidelines you should be safe.

About DXpeditions

DXpeditions are groups of hams going to a remote DX Entity that has few or no hams. They typically stay for a limited amount of time, often just a week or two. Once they leave, it could be another 5 years or even more before another ham visits the entity.

Here's a tip for working rare DX stations. When you see a rare DX entity on the air, work them hard and often while they are operating. Try to work them on as many bands and modes as possible. One DXpedition can give you an opportunity for a lot of DXCC credits.

Here's another useful tip. When you see the SFI (Solar Flux Index) go above 125 many big and rare DXpeditions will appear again. If you happen to already have the DX entity, then focus on the bands and modes that you still need. This could pay off big for you.

The current SFI is around 78. My guess is that it will be another 7 months or so for solar conditions to improve to a level conducive to great DX. So that's how much time you have to improve your station and antennas and get ready for some great DX opportunities. Don't wait; get started today.

DXCC Program Reminders

Never forget… ARRL requires all contacts for QSL credit be direct antenna to antenna. No repeater or internet QSOs are allowed to be included in your award application to ARRL.

For DX awards you are not restricted to Florida, but must be transmitting from within the 48 contiguous United States, thus allowing operation from other homes, etc.

Under a special rule, remote stations are allowed provided they are located in the 48 states. I have used remote operations since the early 2000's. I found them to be of little help in getting the DX. You would think otherwise, but that is not the case.

Remote operations may be good for getting the garden verity DX, but not the rare or new DX.

In Summary

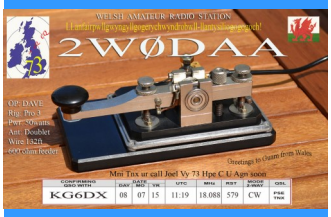
LoTW is almost free, so it should be your first choice for confirming QSOs. The QSL Bureau and Direct QSL are much less desirable. OQRS is another option. I will explain it in the next newsletter.

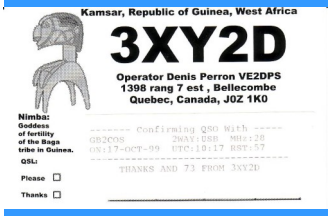
Also watch for some more time and money saving DX tips in the next issue.

That's all for now. Happy DXing!

73, Bruce, W8HW

DX News





From the weekly ***ARRL DX Newsletter*** and other sources.)

DX OPPORTUNITIES

WAKE ISLAND, KH9. NL7RR/KH9; HF, SSB; start date unclear (Feb 15-28, 2021); operation to continue for 90 days. QSL via AL7JX.

SINT MAARTEN, PJ7. AA9A from IOTA NA-105 AS PJ7AA; 80-10m; CW SSB FT8; LOTW, QSL also okay via AA9A direct & Club Log OQRS. Feb 27-Mar 27, 2021

BEAR ISLAND, JW. Erling, JW/LB2PG active again from Bear Island, IOTA EU - 027. He will operate on 80 - 20m. Feb-Jun 1, 2021.

JAN MAYEN ISLAND, JX2. Erik, LA2US active as JX2US from Jan Mayen Island, IOTA EU - 022. Operate on HF Bands, CW, FT8. Oct 2020 - Mar 2021.

BENIN, TY. Johannes, ZS6JSI is QRV as ZS6JSI/TY until June 2021. Activity is mobile on 80, 40 and 20 meters using SSB and FT8. QSL to home call.

COCOS (KEELING) ISLANDS, VK9C. DXpedition using VK9CE, March 16 to March 23. Activity on 80 through 10m (possibly 6 as well), with two radios operating on FT8, CW and SSB. Uploading to eQSL, ClubLog, QRZ.com and LoTW. Paper QSL manager EB7DX.

SOUTH SUDAN, Z8. IZ0EGB, Massimo is on the air as Z81B operating mostly 20 SSB. QSL direct to IZ0EGA. Also ClubLog, eQSL and LoTW.

CAMBODIA, XU. Tad, JA1DFK, is active as XU7AKU, usually CW. 80-6M possible. QSL via JA1DXA.

MOZAMBIQUE, C9. Look for Bruno, CS7AMN, to be on the air any day now as C91BVA. He plans operation on 80, 40, 20, 15 and 10M, SSB and digital. QSL via the bureau to CS7AMN, or use Club Log, LoTW or eQSL.

DX SPECIAL EVENTS

AUSTRALIA, VK. Members of the Pride Radio Group are QRV as VI2021PRIDE until March 7 during Sydney Mardi Gras. QSL direct to VK3FUR.

75TH ANNIVERSARY OF THE ISWL, GB75 The Special Event station GB75ISWL will operate from Walton on the Naze, in Essex, Herbie G6XOU. (WAB Square - TM22 - England, IOTA EU-005, WLOTA 1841). Commemorating the 75th Anniversary of the formation of the "International Short Wave League" in 1946. The QSL Manager is Herbie G6XOU (QTHR). Direct QSL's are welcome via the Bureau, or via eQSL.cc. Further details are on http://iswl.org.uk, or https://www.QRZCQ.com/call/GB75ISWL. Throughout 2021.

CROATIA, 9A. Members of the Croatian Flora Fauna ARC are QRV with special event call 9A10FF during all of 2021 to celebrate the club's 10th anniversary. QSL via 9A2MF.

200 YEARS FROM GREEK WAR OF INDEPENDENCE, SX. Nine multi-operator special event stations - namely SX1A, SX2A, SX3A, SX4A, SX5A (Dodecanese), SX6A, SX7A, SX8A & SX9A (Crete) will be active during the countdown to the 200th anniversary of the "Agonas" (the Struggle), the Greek Revolution of 1821 which led to the formation of modern Greece.

The countdown will start at -99 days to the actual celebration day (25 March 2021). A serial # is appended to each special call sign.

25 Jan - 03 Feb
SX5A/59 to SX5A/50;

04 Feb - 13 Feb
SX4A/49 to SX4A/40;

14 Feb - 23 Feb
SX3A/39 to SX3A/30;

24 Feb - 05 Mar
SX2A/29 to SX2A/20; etc.

The serial numbers will be dropped only on 25 March.

QSL via LoTW, ClubLog's OQRS, eQSL or direct to SV2GWY. An award will be available. For details see QRZ.com page for any of the special calls.

Special Event Stations

DOMESTIC

Copper dog 150 Dog-sled race

Feb 25-Mar 2, 0000Z-0000Z, K9C, Calumet, MI. Keweenaw County Repeater Assn.. 7.300. QSL. Jeffrey Stricker W9GY, 59624 Dextrom Rd, Calumet, MI 49913. https://kcra-mi.net.

1845 Florida Statehood Special Event

Feb 27-Mar 7, 1000Z-0300Z, W4F, Winter Springs, FL. Lake Monroe Amateur Radio Society. 7038 CW 7238 SSB Phone 7074 FT8 7040 RTTY. Certificate. 1845 Florida Statehood Special Event C/O Orlando Amateur Radio Club, PO Box 574962, Orlando, FL 32857. 1845Florida.org.

Battleship Texas Birthday

Mar 11-Mar 14, 0000Z-0000Z, W5T, Cleburne, TX. Club KC5NX. 14.255 14.045 7.240 7.235 . QSL. Club KC5NX, 9200 Summit Ct W , Cleburne, TX 76033-8212. Club KC5NX back on the air for the celebration of the 107th birthday of the Battleship TEXAS. jay.n.violet@gmail.com or check here to find us: https://www.qrz.com/db/kc5nx.

USS Midway Museum Ship Special Event: Launching of USS Midway

Mar 13, 1700Z-2359Z, NI6IW, San Diego, CA. USS Midway (CV-41) Museum Ship. 7.250 14.320 14.070 (PSK31) DSTAR vis PapaSystem repeaters. QSL. USS Midway CV-41 COMEDTRA NI6IW, 910 N Harbor Drive, San Diego, CA 92101. SASE please. www.qrz.com/db/ni6iw.

PI Day - David Sarnoff Radio Club, Princeton, NJ

Mar 14, 0000Z-2359Z, N2RE, Princeton, NJ. David Sarnoff Radio Club. 14.250 14.050 7.200 7.050. QSL. Bob Uhrik, 104 Knoll Way, Rocky Hill, NJ 08553. Famous Princetonian Albert Einstein was born on PI Day. n2re.org.

Arrows from the Air

Mar 20-Mar 21, 1800Z-0300Z, K7SWI, Middleton, ID. South West Idaho Amateur Radio Club. 28.427 14.227 7.227 3.827. Certificate & QSL. South West Idaho Amateur Radio Club, 332 West Dewey Ave, Nampa, ID 83686. What Are Those Giant Arrows Dotting the American Landscape? The arrows were part of a federal project to speed up communication across great distances. Transcontinental airmail service began in 1920, but even with this advancement over ground travel, service was slow. Pilots had no sophisticated instruments, so they couldn't fly at night or in poor weather. The government built a path of 70-foot-long concrete arrows every few miles from coast to coast, each painted yellow and topped with a 51-foot steel tower that had a rotating beacon. Using the path, an airmail pilot needed only half the time to deliver a letter from New York to San Francisco. The SOUTH WEST IDAHO ARC will operate 14.327, 7.227, 3827 plus or minus traffic/qrm. K7SWI will issue a Certificate and QSL to all requested. Please include SASE for QSL only and SASE with one green stamp for QSL and Certificate. Reply to address of K7SWI, 332 West Dewey Ave, Nampa, ID 83686. nq6s@att.net.

Woronoko Heights Outdoor Adventure

Mar 20, 1300Z-1900Z, W1M, Russell, MA. Western MA Council of BSA. 7.190 10.115 14.060 14.290. QSL: Tom Barker, 329 Faraway Road, Whitefield, NH 03598.

Honoring World War II Gunners at Buckingham Airfield

Mar 23-Mar 25, 1400Z-2100Z, W4LX, Fort Myers, FL. Fort Myers Amateur Radio Club. 28.360 21.360 14.270 146.685. Certificate: W4LX Fort Myers Amateur Radio Club, PO Box 61183, Fort Myers, FL 33906. www.fmarc.net.

DX EVENTS

The 80th Anniversary of Kashiwazaki City

Until March 31st, 8J0K, All bands and modes. QSL via the JARL Bureau

55th Anniversary of Reconstructed Central Tower of Tsuruga-jo (Tsuruga) Castle, Fukushima Pref., Honshu (LH-2376). Mar 31, 8J755T.

All bands and mode. QSL via the JARL Bureau.

Celebrating the 10th Anniversary of Cabinet Order Designated City Sagamihara. Mar 31, 8N1S.

All bands and modes. QSL via the JARL Bureau.

The 750th Anniversary of the Birth of Queen Saint Isabel from Coimbra, Portugal. All of 2021, CQ750RSI.

All bands/mode. QSL via the information on QRZ.com.

165th Birthday of Nikola Tesla. All of 2021, DR165TESLA.

All bands and modes. QSL via DK8ZZ.

(Know of a Special Event? Please submit info to: tchamnews@gmail.com)

Ham Humor

The Elmer

A new young ham visits an elderly ham in his shack. As he sits at the radio console he notices a large bowl of peanuts on the table. "Mind if I have a few" he asks?

"Not at all" the elder ham replied. They chat for an hour and as the young ham stands to leave, he realizes that instead of eating just a few peanuts, he emptied most of the bowl.

"I'm totally sorry for eating all your peanuts, I only meant to eat a few."

"Oh that's okay," the old ham says. "Ever since I lost my teeth, all I can do is suck the chocolate off of them."

* * * * *

Q: How do you greet a ham radio operator?

A: With a short wave.

You're a Radio Nut When ...

You spend thousands of dollars on a new rig, and then haggle at the hamfest booth selling those $7 embroidered call sign hats pondering "I wonder if they will take $6."

Junk Yard Cat?

The image below is a pile of electrical junk. Hidden somewhere in the picture is an image is a cat. See if you can spot it.

(Answer next month.)

TREASURE COAST HAM NEWS

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

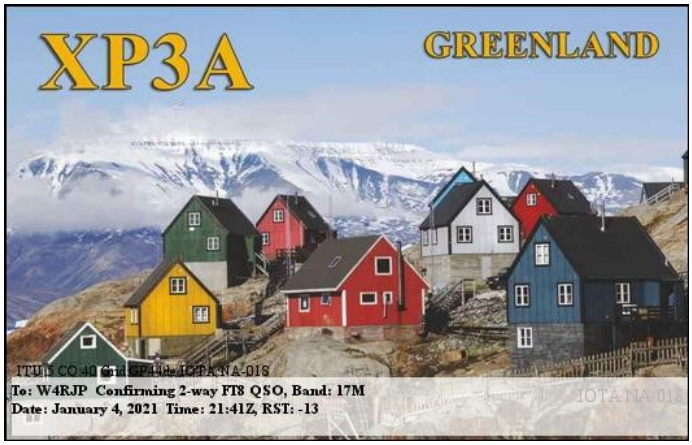
For Sale Section – Have something to sell or trade? Send us a description and/or picture to have it listed in this section. Looking to buy something? Provide a description and we will print it.

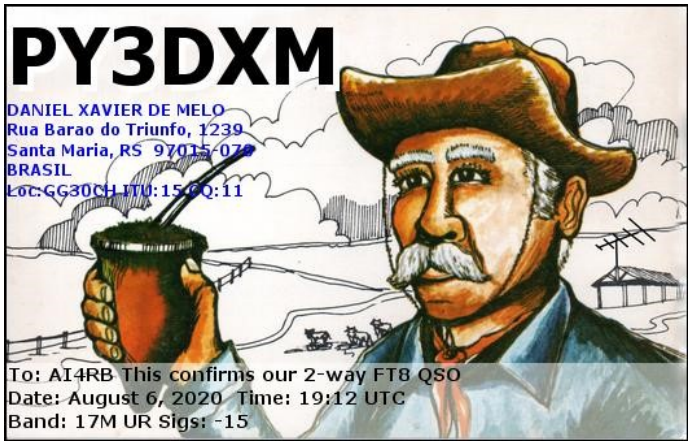
QSL Card Section – Many hams enjoy viewing QSL cards, especially those with colorful pictures. Send us scans of your favorite QSL cards. Maybe the first card you ever received. Or perhaps your favorite card, or your personal card. We will include some in each issue as space permits.

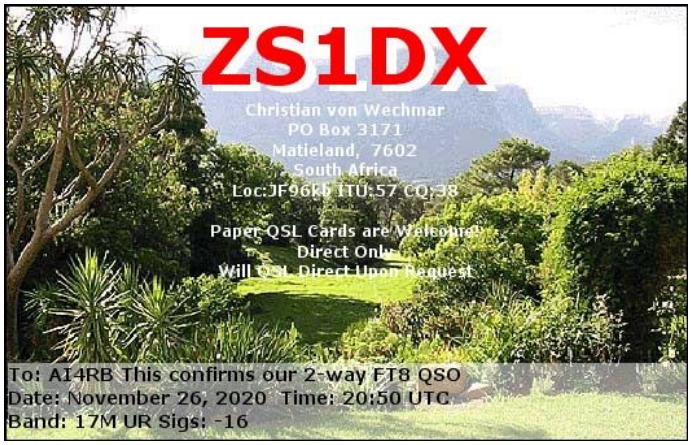
The last few newsletter pages are yours. Help make them a success by submitting your photos, For Sale listings and QSL cards to tchamnews@gmail.com.

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. 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.

The QSL cards below show what can be done with minimal antennas and low power on CW, SSB or FT8. Don't let your radio and antenna situation be an impediment. Get on the air and enjoy the hobby!







If you are considering QSL cards or need to refresh your old card, please discuss with Fabrice at QSL Concept. Email: info@qslconcept.com, or Fabrice directly at fbertron@bftechnicarts.com. Phone 604-729-6454.

TCHamNews wants to publish 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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