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RX/TX

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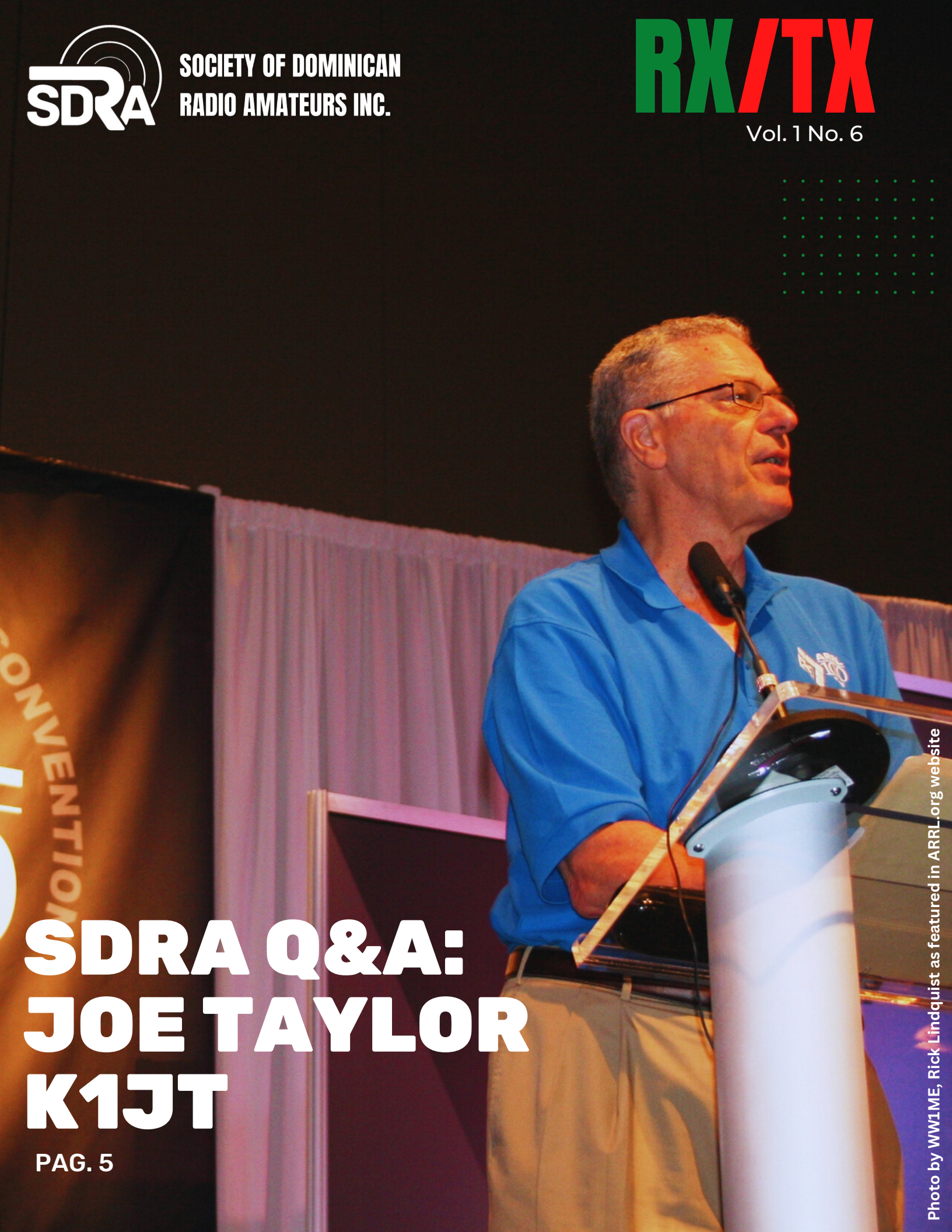


SDRA Q&A: JOE TAYLOR K1JT

PAG. 5

Photo by WW1ME, Rick Lindquist as featured in ARRL.org website

CONTENT

EDITORIAL

BY HI8O

HOW EMERGING TECHNOLOGIES ARE SHAPING THE FUTURE OF AMATEUR RADIO

In the world of Amateur Radio, throughout history, tradition always meets innovation. In essence, Amateur Radio has always been a reliable and timeless means of communication that spans the globe, yet it is no stranger to change; on the contrary, it has been a driver of change. With technological advances affecting every facet of our lives, Amateur Radio has also seen remarkable changes, particularly with the rise of software defined radio (SDR), the arrival of digital modes, the integration of the Internet, the increasing accessibility of satellite communication, and the seamless interface of radios and computers.

Software Defined Radio (SDR): a new era of flexibility

Traditional radio components, such as mixers, filters and amplifiers, are physical parts of a classic radio setup. Software defined radio (SDR) revolutionizes this concept by implementing these functions through software, offering an unprecedented level of versatility. With SDR, a device can transmit and receive a wide range of frequencies and modes. By tuning to different frequencies, operators can decode satellite weather data, listen to international broadcasts or even explore the intriguing world of radio astronomy. For hams, this flexibility opens up countless opportunities to dive deeper into the hobby, fostering an environment of learning and experimentation.

Digital Modes

The rise of digital modes such as FT8, FT4, WSPR and DMR, among others, has caused a huge change in amateur radio operations. These modes, which offer improved performance in weak signal conditions, facilitate faster and more efficient communication. FT8, for example, has gained significant popularity for its ability to make contacts even in difficult band conditions. Digital modes offer a modern twist on traditional operations, attracting a new generation of operators to the hobby. We must recognize that digital modes may require a learning curve, but the benefits of increased contact quantity and more efficient communication are well worth it.

It is not for nothing that the most recognized major expeditions and contests are incorporating these modes into their operations.

Internet integration

As the Internet becomes more native with our daily lives, naturally this is going to include Amateur Radio. Online platforms for logging and confirming contacts such as Logbook of The World (LoTW), Club Log and eQSL have made contact confirmations easier and more accessible. The same can be said of platforms such as QRZ.com, which offer immediate and constant information that adds a new dimension to contacts, that

continue on next page

often allow convergence points to be found during contacts.

Remote station operation has also become increasingly prevalent (refer to Vols 3 and 4 of this newsletter for articles on this topic), allowing hams to communicate worldwide, even when propagation conditions are unfavorable. The introduction of Internet-assisted modes such as EchoLink and D-STAR enables a hybrid experience, combining RF and Internet for communication. This integration changes the nature of amateur radio, broadening the scope of the hobby and expanding the possibilities for operators around the world.

Satellite communications, getting easier

Originally, making contacts via satellite was considered an activity reserved for the most committed amateur radio operators with the most complex installations. However, with the increasing accessibility of amateur satellites (AMSAT) and the growing number of CubeSats in orbit, more and more operators are now able to use this mode. With a simple setup and using the right techniques, one can bounce signals from satellites orbiting the Earth, making contacts over huge distances. And it must be recognized that this is an important element in attracting new radio amateurs.

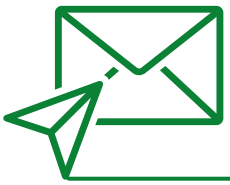
Radios and computers intergrations

Seamless integration between radios and computers has significantly simplified amateur radio operations. Using various software applications, operators can manage their logbooks, digital modes, control their rotors and antennas, and even automate certain aspects of their stations. With a sound card interface or a modern transceiver with a built-in interface, operators can decode digital signals, send CW with a keypad, or operate remotely. This convergence has made ham radio a more efficient and rewarding hobby, as operators can focus more on communication and less on manual logging and control.

In essence, these advances in Amateur Radio technology confirm that we are dealing with a dynamic hobby. While maintaining its primary purpose, communication, the amateur radio world is constantly evolving, incorporating technological advances into its environment. These developments are not replacing the fundamentals of ham radio, nor is it killing the hobby, but rather they are expanding its capabilities and enhancing its usefulness.

In this synergy between tradition and innovation, we are witnessing the exciting future of Amateur Radio. A future that will allow us to bring the hobby to a younger and wider audience.

73, Santiago HI8O



Starting with the next edition we will have a new section to share messages, comments and opinions from our readers. So come on in and express your opinions by sending them to info@sdra.do.

The opinions expressed in this Editorial are the sole responsibility of the author.

SPECIAL GUEST

SDRA Q&A WITH JOE TAYLOR K1JT

The Developer behind the WSJT software that has revolutionized meteor scatter and moonbounce communications shares a Q&A with SDRA.

Photo by WW1ME, Rick Lindquist as featured in ARRL.org website

The Man Behind FT8 and Weak Signal Modes in Ham Radio

If you are an active ham radio operator you are very likely to know who Joe Taylor, K1JT is.
You could either love (like I do) or hate FT8 but you cannot argue against the impact it has had on the current state of ham radio worldwide. Millions of Qso's are made day in and day out using the weak signals modes developed by K1JT. Thousands of amateur radio operator has either returned or entered into the hobby because of the existence of Weak Signal Modes and it had given young hams the opportunity to experience technology and ham radio at it best.
We are honored and grateful with Joe K1JT, for sharing his time with us and agreeing to do this Q&A with our readers.

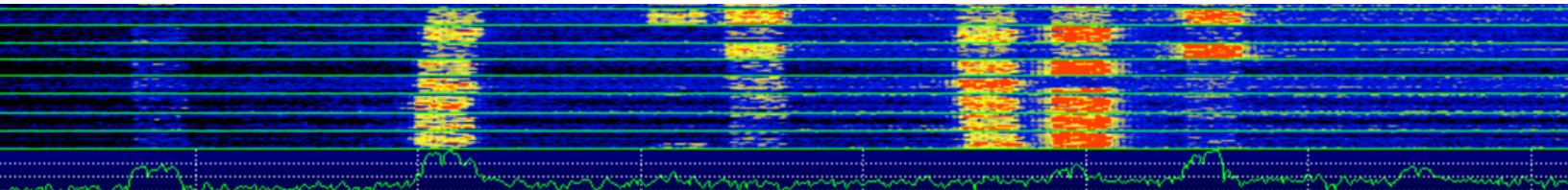
Joe Taylor, K1JT, is a prominent figure in the field of amateur radio and digital communications. Born in 1941, Taylor's passion for radio began at an early age and had continued throughout his life. He earned a Ph.D. in astronomy from Harvard University and made significant contributions to the field of pulsar research. However, his true impact came with the development of the popular digital communication protocols known as WSJT (Weak Signal Communication, by K1JT). These protocols revolutionized amateur radio by enabling reliable communication under challenging conditions. Taylor's work earned him numerous accolades, including the Nobel Prize in Physics in 1993. Today, he continues to inspire and innovate in the world of amateur radio.

Q: What inspired you to develop Weak Signal Communication mode, and what were the key challenges you faced during its development?

JT: I have long been fascinated by the technical challenges of extracting useful information from extremely weak signals -- first as a teen-aged ham radio enthusiast, and later as a professional radio astronomer. The relevant years spanned a time when digital computer technology was advancing very rapidly. Around the year 2000 it became clear that digital signal processing techniques I was using and developing for astrophysics research could be applied also to ham radio weak-signal communication.

Q: Certainly, Weak Signal Communication mode revolutionized amateur radio. Did you envision that kind of impact when you were developing it?

JT: In the early years of WSJT development I was narrowly focused on a few special kinds of ham communication on VHF and higher bands, such as meteor scatter and EME("moonbounce"). I was aware that useful weak-signal protocols could be developed especially for the HF bands, but that application was not originally a strong motivation. I did not then foresee the world-wide impact that FT8 has had, since 2017, on the HF bands.



> ***In our school years, Hal and I filled most of the third floor with working ham-radio transmitters and receivers.***
>
> ***Our rigs were mostly built from a mixture of post-war surplus equipment and junk television sets. We learned by experience that when you need high voltage, the power company's 6,000-to-120-volt transformers work admirably in reverse; and that most amplifiers will oscillate, especially if you don't want them to.***
>
> *(Excerpt from Joe Taylor's autobiography written at the time of receiving the Nobel Prize in Physics in 1993)*

Q: Could you explain the fundamental principles behind Weak Signal Communication?

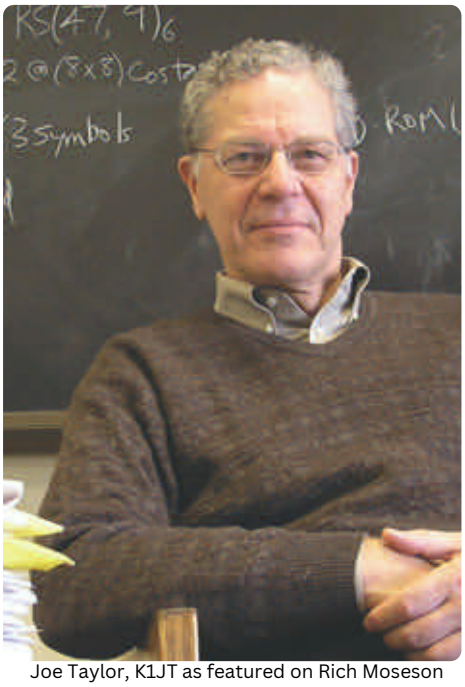
JT: The kinds of communication we're talking about uses information impressed on a radio frequency carrier by some form of modulation. Modulation gives the signal some finite bandwidth, and at the receiving end the signal-to-noise ratio (SNR) is optimized by detecting the signal within that bandwidth. Noise has an essentially flat spectrum across any reasonable receiver bandwidth, so minimizing noise power (thus maximizing SNR) means minimizing the detection bandwidth. Small signal bandwidth requires slow modulation and thus low rate of information transfer. Low SNR means that error-control will also be important. Together, these principles establish many of the criteria used to specify the communication protocols used in WSJT-X.

Q: How has the amateur radio community embraced Weak Signal Communications?

JT: Something like 40,000 hams around the world are regularly using the weak-signal protocols developed in WSJT-X. Millions of station-to-station contacts are made, every day, using FT8. Of course, FT8 QSOs exchange minimal information -- usually callsigns, locators, and signal reports -- and that format is not for everyone, or for all purposes. FT8 and other WSJT-X modes today account for a large fraction of ham-radio QSOs, but at the same time they constitute only a small part of our overall ham-radio hobby.

Q: We know you are an active amateur radio operator and many of us have had the privilege to work you on FT8, but do you operate SSB and CW also? What's your favorite band and mode?

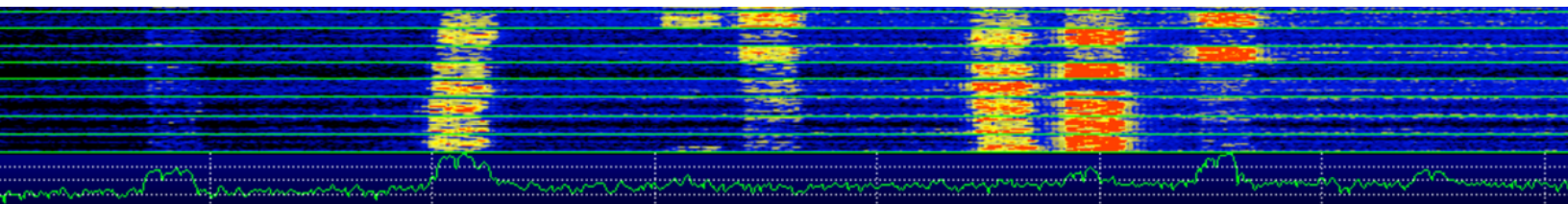
JT: Yes, at one time or another I use nearly all modes available to ham radio operators. Six meters has always been one of my favorite bands. I love operating in CW contests, especially on 160 m.



Joe Taylor, K1JT as featured on Rich Moseson (W2VU) editorial for CQ Amateur Radio "The Genius of Joe Taylor

Q: As a Nobel Prize winner, what advice would you give to young operators who are interested in exploring amateur radio and pushing the boundaries of technology in this field?

JT: My best advice to students is to "follow your interests". In that way you will spend time on pursuits that inspire you, and your efforts will be rewarded.



SDRA NEWS

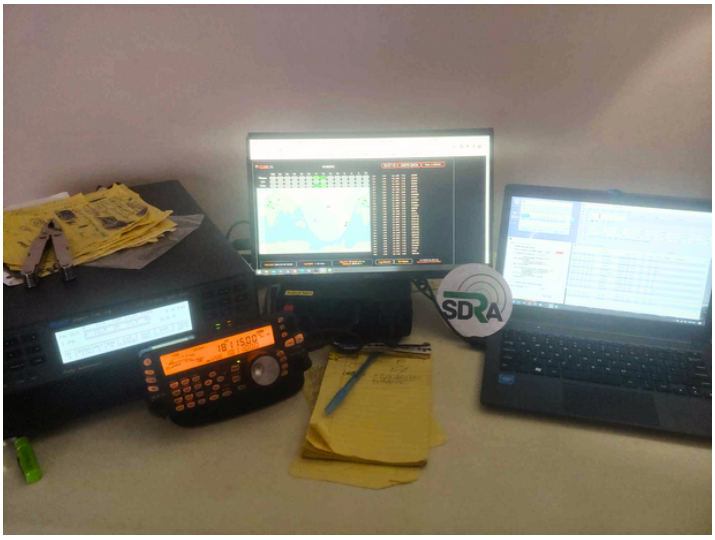
We thank Skyview Radio Society for inviting us to give a talk on POTA in the Dominican Republic on July 25.

SKYVIEW Radio Society

K3MJW

EXPEDITIONS
KH8RRC

Our friend James KB2FMH was operating from American Samoa with Hal W8HC and Yuri N3QQ this past July, as KH8RRC and W1AW/KH8. Many stations in the Dominican Republic were able to contact this expedition in different modes and bands. The expedition took place from Pota K-0053, American Samoa National Park.



EVENTS

Exhibition on RC aircrafts, model airplanes and amateur radio

Last July 22nd, SDRA was invited to participate as part of the exhibitors at the International RC Event on San Isidro 2023, an air show of remote control aircraft, model airplanes and much more. We had the privilege of installing and exhibiting amateur radio antennas, equipment and accessories and talk with the participants about our hobby, answer questions and share experiences, with the purpose of promoting amateur radio and motivate the new generation of radio amateurs. We would like to share with you some pictures of the exhibition.

07/22/2023

BY HI8O

FROM THE SHACK

TAKING ADVANTAGE OF WEAK SIGNALS: FT8 AND BEYOND

For the vast majority of hams, one of the most satisfying experiences is making successful contacts in difficult conditions. While traditional modes such as SSB and CW remain popular, the advent of digital modes, specifically those designed for weak signal conditions, have revolutionized the Amateur Radio landscape. Among these, FT8 stands out as a mode that has gained substantial popularity for its robust performance and ease of use.

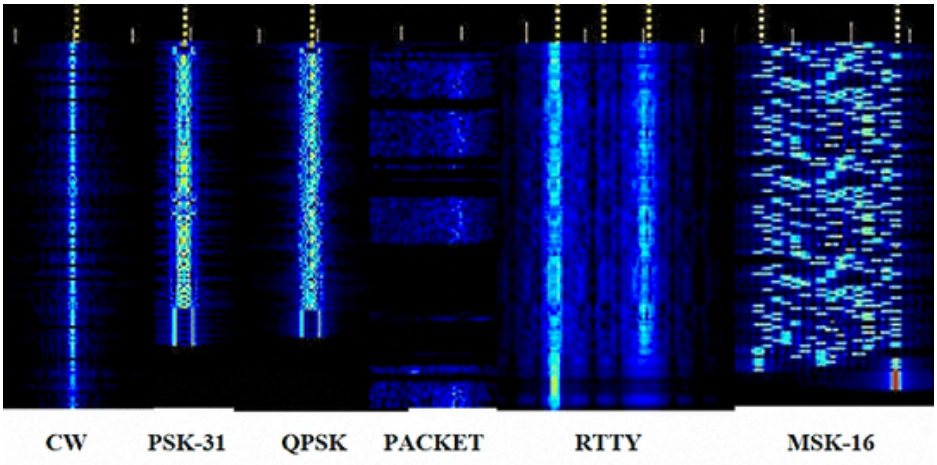
As a passionate dxist and an ardent fan of FT8 and other weak-signal modes, I must admit that it was the JT65 that allowed me to return to the hobby in a productive way. It was that mode that gave me the opportunity to make contacts again, in limited operating conditions, while I could get a full station again.

Rank	Prefix	Entity Name
1.	P5	DPRK (NORTH KOREA)
2.	BS7H	SCARBOROUGH REEF
3.	CE0X	SAN FELIX ISLANDS
4.	BV9P	PRATAS ISLAND
5.	KH7K	KURE ISLAND
6.	KH3	JOHNSTON ISLAND
7.	FT/G	GLORIOSO ISLAND
8.	3Y/P	PETER 1 ISLAND
9.	FT5/X	KERGUELEN ISLAND
10.	YV0	AVES ISLAND
11.	3Y/B	BOUVET ISLAND
12.	ZS8	PRINCE EDWARD & MARION ISLANDS
13.	KH4	MIDWAY ISLAND
14.	VK0M	MACQUARIE ISLAND
15.	PY0S	SAINT PETER AND PAUL ROCKS

Most Wanted List on Club Log

Evolution of digital modes

Getting to the current state of digital modes has been an evolutionary process. Modes such as RTTY and PSK31 paved the way for digital communication in the amateur radio world. These modes converted text to audio tones that could be sent over the air, similar to how dial-up Internet access worked. As technology improved, we saw the emergence of more advanced modes, such as JT65, which were specifically designed for working well in weak signal conditions. However, these modes were relatively slow, which led to the development of FT8, a faster, but still highly sensitive mode.



Digital Modes signals on a waterfall

BY HI8O

FROM THE SHACK

TAKING ADVANTAGE OF WEAK SIGNALS: FT8 AND BEYOND

Understanding FT8

FT8, which stands for "Franke-Taylor design, 8-FSK modulation," was introduced in 2017 by Joe Taylor (K1JT) and Steve Franke (K9AN). FT8 is characterized by its short transmission cycles (15 seconds) and its ability to perform well in weak signal conditions, even when signals are below the noise floor and inaudible to the human ear. This makes it a very efficient way to make contacts, especially when band conditions are poor.

The protocol is designed to exchange the minimum information necessary for a valid contact which are call signs, gridsquare and signal report. This minimal exchange, combined with the robustness of the mode, has made FT8 one of the most popular digital modes today.

HI8O´s Yaesu FT-1200 and Yaesu SCU-17

Preparing for FT8

Getting on the air with FT8 requires a modern transceiver with a sound card interface (either built-in or external), a computer and the WSJT-X software, or some of its variations. There are even radio control programs, which already have this digital mode natively integrated, without the need for additional software (as is the case with SmartSDR for iOS).

The first step in the setup is to connect your transceiver to your computer. This can be done using an interface cable that connects to your computer's USB port and to the data/audio connector on your transceiver. Once your radio is connected to your computer, you will need to install and configure the WSJT-X software (or whatever you are using). The software is responsible for encoding and decoding FT8 transmissions. In the configuration, you will need to specify your call sign, square grid and audio input/output settings. It is also crucial to ensure that your computer's clock is accurate, as FT8 relies heavily on accurate timing. For the settings of the various FT8 programs there are many videos and tutorials on the internet, especially on YouTube. To keep your computers clock synchronization there are also several application options, in my particular case I use Dimension 4 and so far I have never had any synchronization problems.

BY HI8O

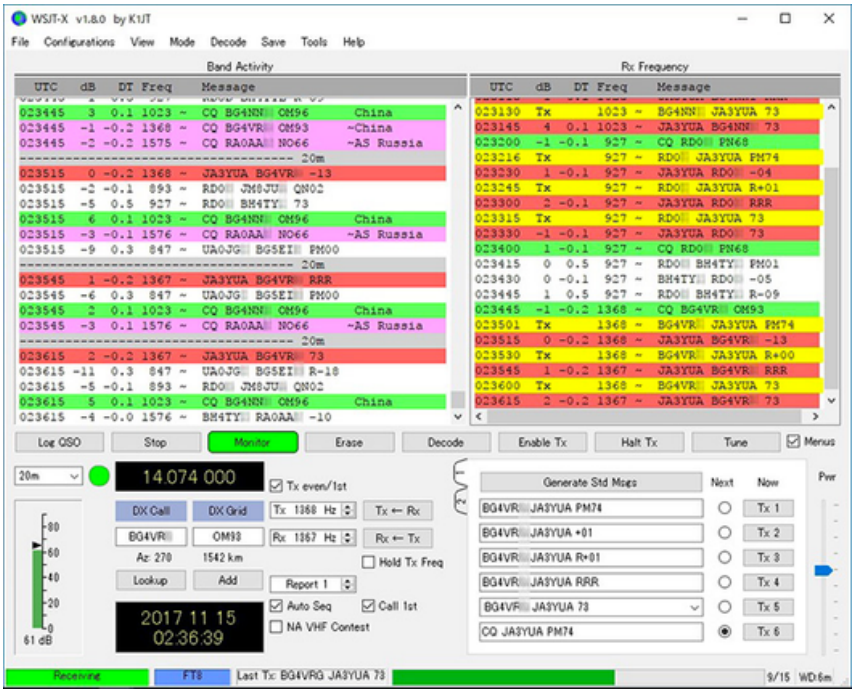
FROM THE SHACK

TAKING ADVANTAGE OF WEAK SIGNALS: FT8 AND BEYOND

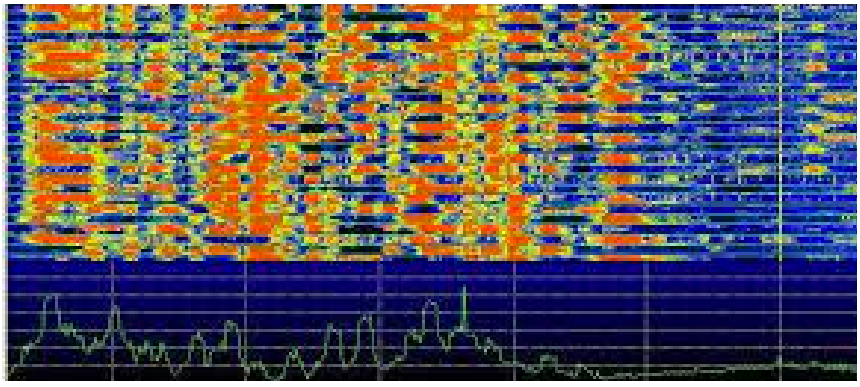
Operating FT8

The operation of the FT8 is different from traditional modes. Rather than a conversation, the contacts are an exchange of essential information. You select a frequency and the software decodes incoming signals every 15 seconds, displaying them on your screen.

If you see a call sign you want to contact, simply click on it. The software takes care of the rest: it transmits your call sign, gridsquare and signal report. If the other station hears you, they will respond with their information. Once the exchange is complete, both stations can confirm the contact (QSO) with a simple '73' message.



WSJTX



WSJTX waterfall

Weak Signal Communication

One of the most remarkable aspects of FT8 is its ability to work with weak signals. Even when propagation conditions are poor, it is often possible to make contacts using FT8. This is due to the combination of the mode's robust error correction and the software's ability to decode signals even when they are weaker than the surrounding noise.

This has made FT8 a favorite mode for DXers and those working for awards such as Worked All States or DX Century Club, as it allows contacts to be made in almost any condition.

BY HI8O

FROM THE SHACK

TAKING ADVANTAGE OF WEAK SIGNALS: FT8 AND BEYOND

Beyond FT8

While FT8 is certainly the best known weak-signal mode, it is not the only one out there. Joe Taylor's suite of weak signal modes also includes JT65, JT9 and the latest addition: FT4.

JT65 and JT9 are slower than FT8, but are even more sensitive, capable of decoding signals that are even weaker. These modes can be useful for specific applications, such as Earth-Moon-Earth-Earth (EME) contacts or very long distance HF propagation.

FT4, on the other hand, is faster than FT8, with a transmission cycle of only 7.5 seconds. However, this speed comes at the cost of sensitivity, and FT4 is not as capable as FT8 in weak signal conditions. Despite this, FT4 has found a niche in situations where speed is important, such as contests.

In conclusion, the emergence of weak-signal modes such as FT8 has breathed new life into Amateur Radio, allowing operators to continue making contacts even in the most difficult conditions. The thrill of seeing a distant call sign appear on your screen, even when the bands seem dead, is a testament to the potential of these modes.

AS WE LOOK TO THE FUTURE, IT IS EXCITING TO IMAGINE WHAT NEW DEVELOPMENTS LIE AHEAD IN THE EVER-EVOLVING WORLD OF AMATEUR RADIO.

BY HI8AN

YL ON THE AIR

PROMOTING WOMEN PARTICIPATION ON AMATEUR RADIO

Why go into amateur radio?

Freedom. Amateur radio is one of the hobbies, at this time, with the greatest dedication to service, imagine that you can be providing assistance to people who need to communicate just in the most critical moments of an emergency or disaster. Or, as in my case, I was very motivated to be part of a very special community.

It encouraged me to have contact with people who are not part of your direct circle, who are in your country or outside your country, a lot of radio amateurs with different cultures, different languages, but that through ham radio have created a community, which I call family, a family that is united through the common interest to communicate with their own means, to experiment and expand beyond its borders.

I like that in this hobby everyone can venture into different modes, forms, programs, depending on their own particular interests. For me, the initial click came through the Parks on the Air program, which has allowed me to combine my two passions:

1. Getting to know and visiting protected areas or sites with a cultural historical significance, as well as documenting them through photographs and videos.

My first activation with US Tech License at park K-6301 in 70cm, 1.25m, 2m y 10m.

Diane KO4FHS, was one of the first people who motivated me to take the exam and one of the most active YLs in POTA. Also pictured are David HI8D (My OM) and John KO4SWS (Diane's OM).

Pictured here with Sandra KE8UTX, David HI8D and KE8QJV at Dayton Hamcation 2023.

"AMATEUR RADIO IS ONE OF THE HOBBIES, AT THIS TIME, WITH THE GREATEST DEDICATION TO SERVICE".

"WHO SAYS THAT WOMEN CAN'T VENTURE INTO FIELDS THAT ARE TRADITIONALLY DOMINATED BY MEN? SINCE THE BEGINNINGS OF AMATEUR RADIO, WOMEN HAVE PLAYED AN IMPORTANT ROLE, MAYBE NOT MANY, BUT THEY HAVE LEFT THEIR MARK".

2. On the other hand, making relationships. I really enjoy communicating and talking to people, I think that is something common among us women, there is nothing like a good conversation. That is why since I took the microphone as a Third Party Operator, which is allowed in the United States using my husband's callsign (OM), I was hooked. Just on that occasion my first contact was with Tobi AD2CD, one of the leaders as a hunter in the Parks on the Air program, to whom I have great admiration and respect.

Who says that women can't venture into fields that are traditionally dominated by men? Since the beginnings of amateur radio, women have played an important role, maybe not many, but they have left their mark. I will tell you about them in our next edition, but for the time being, do you want to get involved in amateur radio?

If you want to know more about my story I invite you to watch the interview that Kevin Thomas did with me, in his channel W1DED In Maine, to whom I thank for the opportunity to share it.

CLICK HERE

RADIO AMATEUR

WHAT IT IS AND WHY YOU SHOULD BE INTERESTED

Amateur radio is a popular hobby and service that brings people together with electronics and communications. By being a ham you can communicate to other locations, cities, other continents and even space, without requiring internet or cellular services. Amateur radio is fun, social, educational and can become a vital service in times of emergency.

Anyone can be a ham, male, female, professional, student, teacher, celebrity, youth, adult, civilian, official, all united by an interest in wireless communications and technology.

BUILD GLOBAL CONTACTS

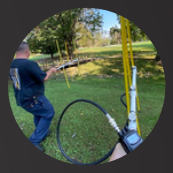
Meet great people from all over the world, from every profession and every generation.
More than 2 million intelligent and inspiring people are on the airwaves and are eager to talk to you.

GET INVOLVED IN PUBLIC SERVICE

Community events, such as parades, marches, road races, require radio communications along their routes for logistical support, scoring and first aid.

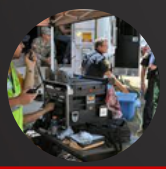
EXPLORE TECHNOLOGY

Discover how radio and other equipment works by building projects and experimenting. Build a simple radio receiver and a wire antenna for distant signals.



RELEASE YOUR COMPETITIVE SPIRIT

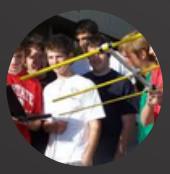
From "fox hunting" for radio signals on the air to winning prizes, amateur radio offers many fun ways to compete.



MAKE THE DIFFERENCE

When cell phones, the Internet and other systems are down, amateur radio keeps the messages coming.

It is a vital service that can save lives when the usual communication systems fail.



ENLARGE YOUR WORLD

Talk to other countries through satellites and even astronauts aboard the International Space Station.

The sky is no longer the limit.

ENCOURAGE YOUR CREATIVITY

Design, build and test your equipment, or antenna, either from scratch or through a kit. Challenge yourself to create an unique electronic project.

DEVELOP NEW SKILLS

Don't be afraid to try new things and learn new skills. Through amateur radio, you can develop communication skills to improve your career, your friendships and your life.

Powered by

SDRA

LEARN MORE

Visit our website www.sdra.do or write to us at info@sdra.do to learn more about amateur radio and get more information on the steps necessary to obtain your amateur radio license.

Courtesy of

ARRL The National Association for Amateur Radio®

SDRA es una asociación de radioaficionados comprometida con la evolución, desarrollo y crecimiento de la radio afición dominicana.

CQ POTA

BY HI8D/NK4Q

Parks on the Air® (POTA) is an amateur radio program that promotes the development of amateur radio skills, fosters community, and demonstrates the hobby to the public from protected areas and national monuments.

POTA-101

First steps with POTA

Parks on the Air® (POTA) began in early 2017 when ARRL's special National Parks on the Air® (POTA) event ended. A group of volunteers wanted to continue the fun beyond the one-year event, and POTA was born.

General information about the program is available at parksontheair.com, so we highly recommend checking out the information there. You can also to the POTA Facebook group, where you can easily interact with the online POTA community.

Once you're ready to get started, remember that the golden rules of POTA are to have fun and keep it simple. We want to give you as much flexibility as possible, so you can have fun your way.

Getting started with POTA can be done in two ways: as an "activator" going out into the parks or as a "hunter" trying to contact someone in a park. The easiest way to participate in POTA is as a hunter, so we'll start there.

How to start for hunters

Hunters are the individuals located anywhere, who contact the activators in the park. As a hunter, the rules are few and simple.

Follow the law.
Follow the DX Code of Conduct.
Follow the Golden Rule.

The first place to start as a hunter is to go to https://pota.app. The home page you will land on will be the spotting page, which lets you know who is on the air, what parks they are in, and what frequencies and modes they are currently operating on. Turn the dial and answer their call, if you can hear them. If you manage to establish contact, you've officially started at POTA! That's it.

While you are at https://pota.app, click on the "sign up" button to create an account

HI-0103 Jardin Botanico Dr. Rafael Ma. Moscoso. HI8D y HI8ESF

HI-0104 Mirador Del Sur Joaquín Balaguer. HI8D y HI8GSP

which will allow you to see your progress towards certificates and awards based on the records that the triggers you contacted submit. POTA is on the honor system, based solely on activator records, so as a hunter, you don't have to lift a finger (other than the one that touches your key or PTT!).

parksontheairinc
parksontheair_dominicanrep

CQ POTA

BY HI8D/NK4Q

Parks on the Air® (POTA) is an amateur radio program that promotes the development of amateur radio skills, fosters community, and demonstrates the hobby to the public from protected areas and national monuments.

First steps for Activators

After hunting around a bit, you might want to try activating. Activators are the people who take their portable equipment and head to a park to set up a station. The rules for activators are still pretty simple:

Follow the law.
Follow the DX Code of Conduct.
Follow the Golden Rule
Leave no trace in the park
Follow the instructions of any park rangers you encounter.
Be courteous to the public space you are using.

Once you are familiar with the rules, head to the map https://pota.app/#/map. Allow the location services to quickly zoom in to your location, or use the drop-downs to choose an entity and location. The yellow dots are approximate locations of parks in your area. Check official sources (park websites, etc.) and make sure you are within park boundaries.

You must have a registered account at https://pota.app. You and all of your equipment must be within the park(s) boundaries. Upon completion of your activation you must present an ADIF registration. Follow the detailed rules here (docs.pota.app).

Once you have chosen a location in the park, set up your equipment, find a frequency that is not busy and start calling CQ POTA. While making your first CQ POTA calls, go to https://pota.app and click the button to add a spot. Once you've located yourself, the hunters will come fast and furious, so get ready to start logging your QSOs!

HI-0021 Humedales del Ozama

HI-0071 Saltos de Jima

You can use any registration method that generates a valid ADIF file. See the registration requirements section of the rules for required fields. After generating your ADIF file, go to the "My Log Uploads" section of the website (found under your callsign in the menu) and use the file dialog to upload your logs. You will see your stats in a few hours, and the awards earned will start to appear. At this point, you can sit back and congratulate yourself on joining the ranks as an Activator.

The POTA program is not considered a competition. The type of operation can be from a mobile station or by setting up with several fixed antennas, it makes no difference. Both ways are valid since the most important requirement is that all equipment (antenna, radio and operator) are within the boundaries of the reference being activated.

It is likely that within the area of the reference, there is a private property, business or hotel. Activating from these locations, even if they are within the reference, automatically invalidates the activation.

You must find a public point within the reference to activate.

BY HI8T

IT´S GOOD TO KNOW

VIRTUES OF DIGITAL MODES

Like life itself, amateur radio has been through changes, some people assume those changes and experiment with new technologies, others however prefer not to assume them, because they do not agree with the introduction of new technological tools in the hobby, either for lack of knowledge, for the feeling of not being in control, or any other reason. But the truth is that digital modes and especially those of the WSJT suite have their charm.

Let's mention some advantages that these modes have, which have made them so popular:

- Being narrow bandwidth is much more sensitive than traditional modes such as phone or CW, this for JT65 and WSPR.
- With a bandwidth of only 6 Hz, WSPR mode can be used for propagation experiments, antennas, etc. with powers of 200mW or less. WSPR mode is not communicational but only for one-way reporting. There is a web page that stores all the information related to this mode, called WSPRnet, where you can analyze all the data accumulated for 2 weeks.
- All FT8 and FT4 activity is captive on a single frequency within a band, i.e., if there is activity it will be, e.g., on 20m on 14.074.
- It allows amateurs with limited facilities to communicate and make long distance contacts, many amateurs currently living in apartment buildings have limitations to install antennas, yet it is possible to put a magnetic loop on the balcony and work the world.
- A very high percentage of the amateurs who do digital modes confirm electronically, either by QRZ, LotW, eQSL, Clublog, etc. The same is not true for phone only hams, they mostly carry their log on paper and the confirmation must be by physical mail.

BY HI8T

IT´S GOOD TO KNOW

VIRTUES OF DIGITAL MODES

- With these modes, it is possible to operate the station from another location, through remote desktop programs, a very common case to leave the PC at home on and check the band activity from work.
- There is a tool called PSKreporter which reports all activity. How does it work? An amateur calls CQ and then can (in a few minutes) see where his signal was received. This can be useful for determining propagation conditions or for adjusting antenna and/or radio parameters. It also provides a scientific archive of reception records that is used for ionospheric research purposes.
- Digital modes such as FT8 and FT4 have allowed many to achieve their DXCC quickly and inexpensively.
- Modes such as Q65 work very well on VHF, especially in long distance contacts using Transequatorial propagation and the MSK144 mode is widely used in VHF contacts via Meteoric Dispersion.
- Due to the higher sensitivity advantage of digital modes, with JT65 or QRA64 it is possible to moonbounce using smaller antennas and lower transmit power, this has allowed many more hams to engage in these activities.
- The activations of non-common DXCC entities use the Fox/Hound format in FT8, thus making communication efficient, since the expedition can work 4 or more stations concurrently.
- The use of the 6-digit Grid Square Locator gives additional information about the position of the station, this practice was common in VHF but started to be used in HF.

Undoubtedly, digital modes have been criticized by people who do not know its benefits, once they know it, they change their mind and even become promoters of the mode.

If you have not yet experienced digital modes, give yourself the opportunity to know and explore them, you will be surprised. The most important thing is that it keeps ham radio alive and increasingly generates more enthusiasm in the community.

QSY

For more details and events visit our Calendar at www.sdra.do

INDEXA TURNS 40

Congratulations to our friends at INDEXA, who will be celebrating their 40th anniversary this September. Four decades supporting DX and the most important amateur radio expeditions. Congratulations!!!

SDRA HELPDESK

As part of our contribution to amateur radio we have opened a help desk to assist people with their amateur radio license, whether it is renewal, change of category, new license, HI portability, among others.

To contact us just visit our web page www.sdra.do and look for the Help Desk section.

Feb 13rd to 20th 2024

Board

2022-2024 Board

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