Newsletter of the
Twin City DX Association
www.tcdxa.org

December, 2025

Inside this issue:

Gray Line Staff
WAØMHJ
WØJMP
WØZF
AJ8B

Note from the President

Bert Benjaminson, WB0N, President

Happy Holidays to all. I hope you all get what you want i.e. new radio and antennas. Or an ATNO, or new band modes. Whatever you are looking for, I hope you get.

Ok now for TCDXA Business: We are at election time again and guess what? So far no one new has stepped up! Thankfully AB0J, Tom, K0JM, Mark, W0VTT, Mike, and K0PX, Doug, are all in the running again. As for me, I am sure that 5 years is a long time and you all should be bored with me by now. However, if no one steps up I will do 1 more year, but I would really need all the help I could get booking speakers as I am all “speakered” out . (time to switch to headphones?)

So how has DX been for you all? Just a few new band modes and #311 here, so not too much. I hope you all have been rocking the DX. Also, I hope all are getting in their 2026 donations as we need funds to be ready for hot DXPeditions!

The first part of the contest season is almost over. I hope you all got to have some fun chasing DX. We need to make all the use of our sunspots that we can while they are here!

Thanks to the editorial crew for all the work they do putting this great newsletter together and for making some sense out of my senseless ramblings!

Most of all **Thank You All** for being members of The Twin City DX Association!

Enough for maybe the last time?

73

all ES GD DX Bert WB0N

Join TCDXA

Our mission is to raise *Dollars for DX*, used to help fund qualified DXPeditions.

Our funds come from annual member contributions (dues) and other donations.

TCDXA is a non-profit organization, as described in Section 501 (c) (3) of the Internal Revenue Code. All contributions from U.S. residents are tax-deductible.

Becoming a member is easy. Go to http://tcdxa.org/ and follow the instructions on the home page.

All contributions (including annual dues) may now be paid on our secure site, using PayPal or credit card.

Club Calendar
(Let me know if I should add something)

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December 2025
- 5-7 ARRL 160M CW
- 13-14 ARRL 10M
- 15 TCDXA Meeting
- 27-28 Stew Perry 160M CW

January 2026
- 3-4 ARRL RTTY Roundup
- 18-19 ARRL January VHF
- 19 TCDXA Meeting
- 23-25 CQWW 160M CW

February 2026
- 7— Minnesota QSO Party
- 14-15 CQWW WPX RTTY
- 16 TCDXA Meeting
- 21-22 ARRL DX CW
- 20-22 CQWW 160M SSB

March 2026
- 7-8 ARRL DX SSB
- 16 TCDXA Meeting
- 28-29 CQWW WPX SSB

April 2026
- 18-19 CQMM DX Contest
- 20 TCDXA Meeting

May 2026
- 15 SWODXA DX Dinner
- 15-17 Dayton Hamvention
- 18 TCDXA Meeting
- 30-31 CQWW WPX CW

June 2026
- 6— 7 ARRL INTL Digital Test
- 11 TCDXA Meeting
- 13— 14 ARRL VHF
- 20-21 All Asian CW
- 27-28 ARRL Field Day

July 2026
- 11-12 IARU HF Championship
- 20 TCDXA Meeting

August 2026
- 8-9 WAE DX CW
- 17 TCDXA Meeting

September 2026
- 5-6 All Asian DX SSB Contest
- 12— 14 ARRL Sept. VHF Test
- 12-13 WAE DX SSB Contest
- 21 TCDXA Meeting
- 26-27 CQWW RTTY

October 2026
- 10 ARRL MN State Convention
- 19 TCDXA Meeting
- 24-25 CQWW DX SSB

November 2026
- 7-9 ARRL SS CW
- 16 TCDXA Meeting
- 28-29 CQWW CW

Grayline History

Newsletters can be found at
https://tcdxa.org/gray-line-report-newsletter/

5 Years Ago in the Grayline

- The 5-Band WAS and Triple Play by W0JMP, Dan
- Hello 160! by W0JMP, Dan
- Antenna Restoration by W0PR, Larry
- Member Profile— K0JM, Mark Johns

10 Years Ago in the Grayline

- The 2015 PZ5W CQWW CW Contest from PZ— K0AD, Al
- An Intro to Amateur Radio for Myanmar Scouts by NY0V, Tom
- Member Profile— K0UU— Jeff Strandberg
- 2015 CQWW DX SSB from VP5S by K0MD, Dr. Scott Wright

Grayline History

15 Years Ago in the Grayline

- K0IR Handles the Big Pileups in Saba at PJ6A
- The K0JUH 160 Meter Monopole Project
- Member Profile— K4IU— Fred Regennitter
- 2010 CQWW RTTY Contest at K0IR by K0RC, Bob
- A New Tower at K0MD by K0MD, Scott, and AI0M, Stan

20 Years Ago in the Grayline

- The 160 Meter Mystery by ON4UN, John
- Member Profile-W0WG— Mike Warren
- 2005 CQWW SSB Contest from TF/N0HJZ
- Romeo, I Hardly Knew Ye by KX9X, Sean

Thank You from PJ6Y

TCDXA Members,

On behalf of the PJ6Y DXpedition team, I wish to express our sincere appreciation for your recent support. I am pleased to report that the trip was a resounding success. Our multi-national on-island team of nine young operators experienced excellent propagation conditions and amazing pileups throughout the course of our time on Saba. Each team member was actively involved in multiple phases of the effort, including planning, equipment setup and tear-down, scheduling, station configuration, as well as diagnosing and resolving a variety of technical challenges ranging from radio malfunctions to antenna issues, one such issue requiring an overhaul of our tri-band Yagi, including rebuilding each of the six traps.

Throughout the course of our adventure, it was rewarding to watch each of the young ops as they became more comfortable working the pileups while improving their skill sets.

Our young team also mounted a serious effort in CQWW SSB, resulting in a raw score of over 13m points, finishing not too far behind some of the best North American stations.

In addition, our off-island team consisted of approximately twenty-five operators, who collectively logged roughly 20,000 QSOs representing nearly one-third of our total contact count, and were instrumental in our overall success. We look forward to some of the off-island team joining us as an on-island team member on an upcoming trip.

We are grateful for your continued support of our projects that advance amateur radio and foster the development of the next generation of DXPeditioners.

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Gregg W6IZT

Dollars for DX

Mike Cizek WØVTT— mgcizek@gmail.com
DX Grant Manager

To paraphrase a popular Minnesota radio personality, it's been a quiet quarter in the DX grant office. After a flurry of activity over the summer, we only received one request this quarter. A small team led by K5WE will activate the Marquesas Islands as TX9W. Although Marquesas ranks in the top 100 of most needed countries, it has seen regular activity over the past several years, including a few major DXpeditions. Because of this, your committee felt our DXpedition money would be better spent elsewhere so we did not recommend a donation.

Bouvet looms on the horizon, and it will be interesting to see what results they produce this time. Hopefully, they have learned from their mistakes of 3Y0J and will be more successful on this trip. Personally, I think they will be quite successful.

In other news, the DX Advisory Committee has been working on a comprehensive review of the DXCC rules and will send a report to the ARRL Board of Directors next month.

Thank you.
Mike Cizek WØVTT
TCDXA DX Grant Manager

By Yuris, YL2GM, reprinted with permission of dx-world.net

The expedition had originally been planned for April of last year, but since an opportunity arose for ZS8W, it had to be postponed. The license was issued for one month only, so a new one had to be arranged.

There was no clarity about transport to Annobón Island. We had planned to wait for the ferry, but its schedule was not available. However, it turned out that air service had been restored once a week, so we bought tickets for September 6th outbound and September 29th return. We spent a week at Hotel Kolytero. (Below)

The plane departed on time, and by 1 PM we were already in Annobón. According to the license conditions, our equipment and antennas had to be inspected by an ORTEL representative before transmission, and a fee for this was included. We had planned to set up the antennas and equipment, and then the representative would fly in the following Friday, inspect everything within two hours, and return to Malabo the same day. There were no facilities for him to stay overnight, and there are no hotels on the island.

At the airport, we were met by Ernesto, who took us to the house where we planned to set up the station. It was the same house used in our previous expeditions in 2017 and 2018. In the meantime, a beautiful hotel had been built on the island (right), but it has not been opened for operation and cannot accommodate guests.

Afterwards, we went to the police station to register. We presented our licenses, visas, and all documents. Then the police commissioner, Silvestre, ordered us to bring all our luggage and display everything openly in detail. After lengthy discussions, he said that we did not have an entry permit from the Ministry of Security, and all our luggage had to remain at the police station. They had to verify whether we were even allowed to be on the island.

The next day was Sunday, so naturally, nothing happened, and we could only wait. The following days were the same— no answers. By Tuesday, we realized that nothing would be resolved, so we rescheduled our return flight to Malabo for Friday, September 12th.

On Wednesday morning, the commissioner informed us that there was a flight to Malabo that day, and we would be sent back. The plane departed in the afternoon and arrived in Malabo in the evening. Our escorting policeman told us that a hotel had been arranged for us, and we would be taken there. However, we were escorted out of the airport grounds and handed over to another police unit, which brought us to the main gendarmerie station in Malabo.

We spent the night in this “hotel.” The next afternoon, the ORTEL representative arrived with documents— our licenses and the equipment list. In the presence of the police, the equipment was checked and found to be in order. Afterwards, in the main commissioner’s office, our violation was reviewed. Only one issue was mentioned: we had arrived in Annobón without the ORTEL representative, who was supposed to check our equipment. Our explanations were not taken into account. Any attempt to clarify or prove otherwise was pointless.

At 6 PM that evening, we were told that we could fly out that day with Lufthansa, but we had tickets with Air France, which departed the next day. We were allowed to spend the night at Hotel Kolytero.

This was my fourth trip to Equatorial Guinea. There will not be a fifth.

Thank God, we have returned home safe and sound.

A52G, a Great Experience

By Gerben, PG5M

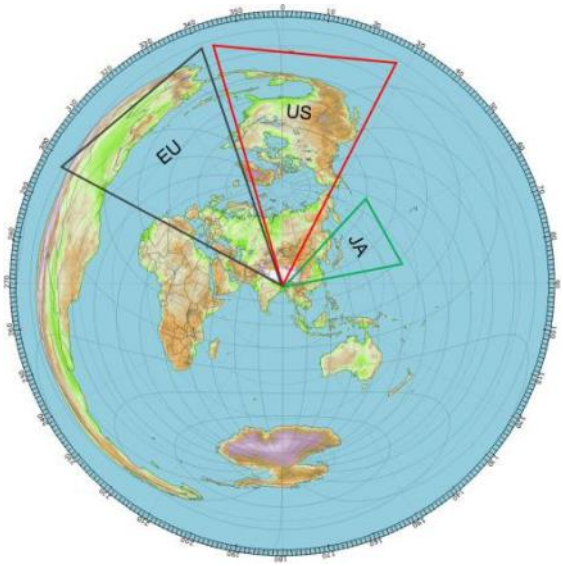
In the late 1970s, I had a QSO with Pradhan (A51PN), which initiated a series of written correspondences in the absence of email or internet. My interest in Bhutan, with its rich culture yet relative inaccessibility to tourists, began at this time. However, it was not until forty-five years later that I was able to visit Bhutan in person.

Mode	EU	US	US-East	US-West
CW	95	28	32	33
SSB	120	47	55	50
Digi	134	62	65	69

Figure 1 - Noth America high in the Most Wanted List

To prepare for my DXPedition, I consulted Yanusz (SP9FIH),who had previously undertaken radio operations in Bhutan. He generously provided practical information regarding his stay and additional recommendations. With this insight, I worked closely with a travel agent to finalize arrangements. Once the timeframe was established, I collaborated with Ugyen from Uhidey Bhutan Tours & Treks, who efficiently coordinated visa procurement, hotel reservations, flights, and the radio license.

The selected hotel was situated near the Dochula Pass, 3,100 meters above sea level, offering optimal transmission conditions across the Himalayan range to North America and Europe, and permitting unrestricted antenna installation. Visitors to Bhutan are subject to a USD 100 daily sustainable development fee and must be accompanied by a guide, including arrangements for transportation. All visa and license formalities were completed without difficulty.



My journey commenced with a flight from Amsterdam to Dubai, followed by Drukair from Dubai to Paro. Landing at Paro Airport is renowned for its challenging approach between mountains, navigable only by specially trained pilots— a process well-documented on YouTube. Upon arrival, I purchased a local SIM card, ensuring consistent internet connectivity throughout my stay given concerns about hotel Wi-Fi reliability.

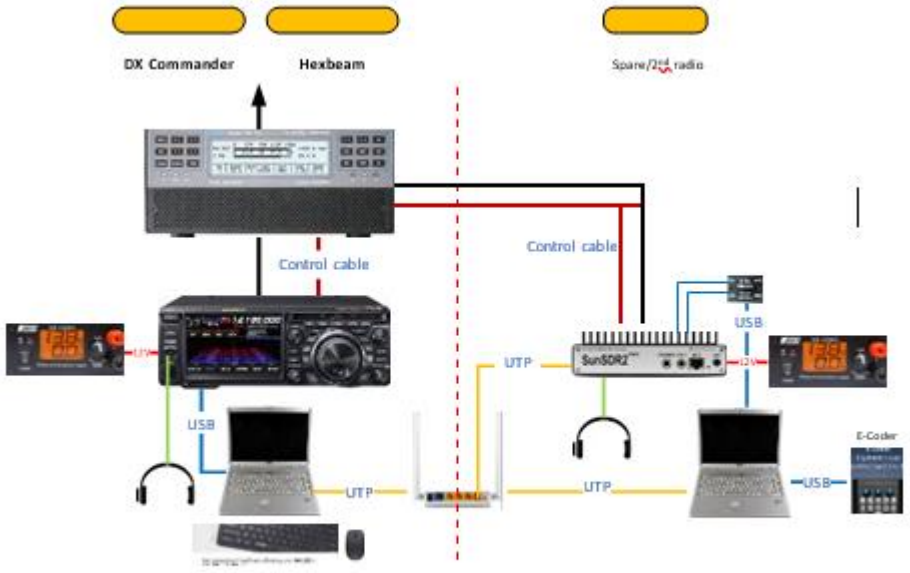


Figure 3 - Station setup, now with my new FTDX10

Preparation for antenna installation involved extensive communication with Ugyen regarding suitable mast materials for the Hexbeam antenna. Though initial options were inadequate in diameter, we sourced a compatible tube at a hardware shop in Thimphu during our transit from the airport. Upon reaching the hotel, site limitations necessitated use of only the terrace at the hotel front for antenna setup due to ongoing construction.

Assembly of the DX Commander antenna proceeded smoothly prior to nightfall, allowing for immediate operation. The station was established in my room, where sufficient workspace existed. Despite fatigue from travel, I commenced operations after sundown, making my first QSO with 9A2DS on 30m on September 30 at 17:29 UTC.

The following morning, I assembled the Hexbeam antenna with substantial support from Ugyen, especially in mounting and securing the mast. Outdoor setup concluded, I shifted focus to radio operations. Propagation conditions were initially poor, but improved over subsequent days, resulting in successful pileups particularly with Japanese stations.

Contact with the East Coast of the United States was challenging due to the trans-polar path, with opportunities typically arising around 06:00 local time on 20 meters. Signals exhibited characteristic flutter, with openings lasting approximately 1 1.5 hours. The expedition concluded with extended activity into Europe on 10 meters. While I operated without geographic preference, the majority of QSOs were with European stations. The final QSO occurred with RZ3DJ on October 8 at 11:19 UTC on 10 meters.

Figure 5 - My comfortable operating position

During my stay, the hotel was undergoing complete renovation, and I was the sole guest. Meals were served on a set schedule, and I negotiated menu options with the staff. Beverage availability was limited; however, coffee and tea facilities were provided in-room. Due to the hotel's isolation, procuring additional supplies was impractical. Heating was traditionally via wood stoves, though electric heating was available in my room.

On October 3, I visited Thimphu with Ugyen, coinciding with the annual Thimphu Tshechu festival at Tashichho Dzong. This cultural event, attended by thousands in traditional attire, was a highlight of the trip. During my visit to Punakha, I toured the historic Punakha Dzong also known as Pungthang Dewa chhenbi Phodrang (meaning "the palace of great happiness or bliss"), constructed between 1637 and 1638 and second oldest and second largest dzong of Bhutan. The Punakha Dzong is depicted on my QSL card.


Figure 6 - The Tshechu festival on the Tashichho Dzong square

Figure 7 - Tshering A51DX in his shack at Paro

On October 7, I met Tshering Tashi (A51DX), an enthusiastic amateur operator recently licensed and eager to expand into HF bands and CW. Our discussion was engaging and productive. That day, Ugyen departed due to a family bereavement, and Sonam assumed guiding responsibilities.

Anticipating rain, I began dismantling antennas on October 8 to avoid damage. Equipment was systematically packed, and, on October 9, we travelled to Paro for sightseeing. In the afternoon I was picked up by Tsering to visit his house in the mountains. We discussed how he could install an antenna for the HF bands. I gave him my 30 meters long ExtraFlex bury 7 coax, to be used for his future HF antenna and gave him also a small multimeter.

I'm currently preparing a 10/(15)/20/40 EndFed antenna for him which I will mail to him in the coming days. With that he should be able to make his entry into our Ham world. Tsering is also interested to establish a kind of club station that can be used by other interested Bhutanese radio enthusiasts.

After an overnight stay in Paro and a smooth check-out process, I departed Bhutan via Dubai, returning to Amsterdam following an eleven-hour layover.

Figure 8 - My guides Ugyen and Sonam

Results

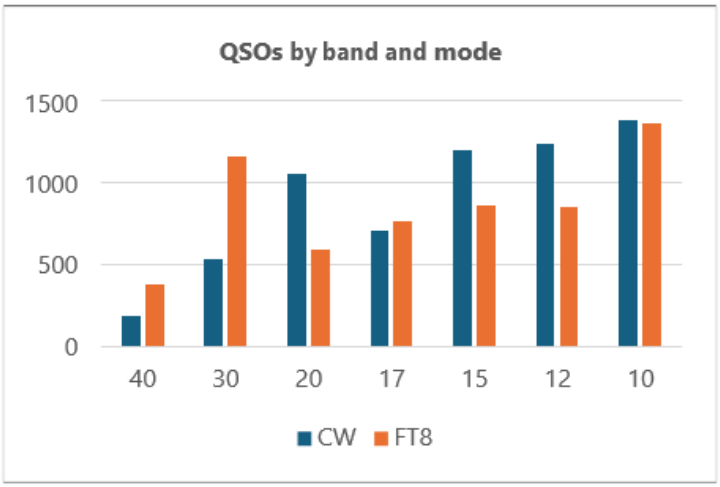
Operations covered 40–10 meters using CW and FT8 modes. Because both antennas were close together on the terrace, which prevented running two radios simultaneously. The noise level was extremely low which allowed me to work pile ups with very low signal strength, sometimes just about the noise level.

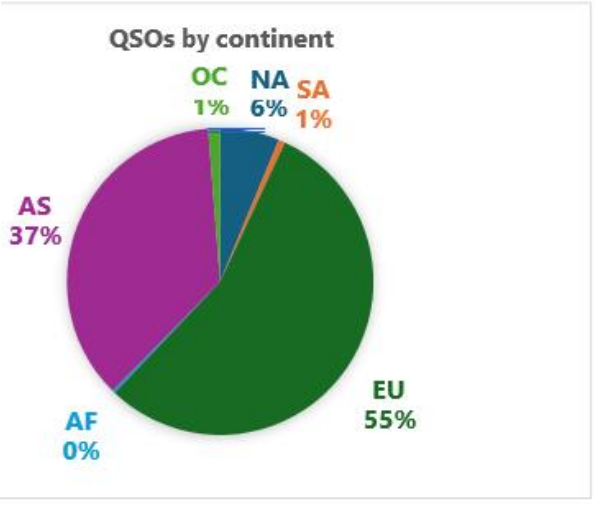
Despite variable propagation and early inclement weather, I logged 12,278 QSOs, exceeding my target of 10,000. Later in the expedition, both propagation and weather conditions improved, providing clear views of the Himalayas, having good weather conditions during my trips to Thimphu, Punakha and Paro and great operating conditions.

I sincerely thank my sponsors for once again supporting me. With their commitment and help I can recover part of the costs.

Furthermore, I like to thank the individuals who made their donations upfront.

My QSL Manager is again Charles M0OXO. Please request your QSL via https://www.m0oxo.com/oqrs/.





V73WW— Marshall Islands— 2025

- The Next Generation— by the V73WW Team

Preface

V73WW was a DXPedition to the Marshall Islands in February 2025 where the team spent 14 days on island making 103,864 QSOs in CW, SSB, RTTY and FT8. The Marshall Islands were ranked #96 in the DXCC Most Wanted list according to Clublog (Clublog: July 2025). The team was made up of 6 young and ambitious operators with an average age of 28 years, from 4 countries in Europe. How did we do it? Let's find out …

Introduction

The Marshall Islands is a small island nation in the Pacific Ocean, located roughly halfway between Hawaii and Australia. It consists of over 1,000 islands and atolls spread across a vast area. Situated just 7° north of the equator, the islands enjoy a tropical climate year-round.

Known for their crystal-clear waters, coral reefs, and rich cultural heritage, the Marshall Islands are also one of the rarer DXCC entities, with very few resident amateur radio operators.

The Marshall Islands offered our team a comfortable home for two weeks while we enjoyed our shared passion – putting this remote Pacific entity on the map for thousands of radio amateurs worldwide.

Why Marshall Islands?

The Marshall Islands first caught the team's interest after discussions between Philipp DK6SP, Sven DJ2MX, and local radio friends following the success of the 8R7X – Guyana 2024 DXPedition. Looking to continue their DX journey, the team checked Clublog's Most Wanted list and quickly noticed V7 ranking among the rarer entities.

With rising solar activity and promising propagation into the Pacific, the timing felt right. Though remote, the Marshall Islands are relatively reachable with connections via the U.S. The team met in Honolulu, Hawaii, before flying to Majuro and taking a short boat ride to their private island QTH.

Ranked within the TOP #100 on Clublog, the Marshall Islands offered the perfect mix of rarity, accessibility, and Pacific adventure - making it the ideal choice for the team's next DXPedition.

The Team

Our operating team consisted of six young radio hams who have a love for amateur radio and traveling. We have a combined average age of 28 years old and have shared various experiences through the hobby. We have all been fortunate enough to experience DXPeditions as part of experienced teams or organize trips ourselves which have given us a huge advantage in taking on this challenge. Our team is as follows;

Philipp Springer - DK6SP— (Team Lead)

Philipp, a 27-year-old from Erding, Germany, developed an interest in amateur radio in 2008 after attending a soldering course at his local radio club with some friends. It was through this club that he was introduced to the world of radio and began making QSOs as DN5KID. Philipp received his novice class license, DO6PS, in 2011 and gained full privileges in 2013 with the callsign DK6SP. During these formative years, he rapidly advanced his operating skills, learning Morse Code (CW) and how to manage pileups. Philipp has since participated in numerous DXPeditions and has competed in many contests, including representing a youth team at the World Radiosport Team Championship (WRTC) on two occasions.

Sven Lovrić - DJ4MX— (Co-Lead + QSL Manager)

Sven, aged 22 from Munich, Germany is currently studying mechatronics and got interested in amateur radio through his father Mario, DJ2MX, for Sven first started operating under the training callsign DN5MX in 2015. Most of the time he is operating CW, SSB, or RTTY contests from his small home station in Munich, but in the past, he was also operating from stations like E7DX, M6T, ED1R, NP4Z, 8R7X, etc.

Tomi Varrò - HA8RT— (Website + Team Member)

Tomi, aged 26 was born in Szeged Hungary where he studied IT engineering and currently living in Helsinki, Finland. Tomi was first licensed at age 14 and is now a seasoned amateur radio contester as part of the HG6N team. Tomi has operated in many places around the world such as 8R7X, OH5Z, K3LR, ES9C, 9A1A, and C4HQ. Tomi is proficient in CW as his preferred mode and has participated in HST (High-Speed Telegraphy) events on multiple occasions.

Jamie Williams - MØSDV— (Team Member)

Jamie, 24 years old from Staffordshire in England has an extensive history in amateur radio dating back only 10 years to 2015 where he has been involved in contesting and DXPeditioning including with some world-renowned teams. Jamie started traveling in 2017 where he met Philipp - DK6SP in Munich who he would travel the world with for many years to come. Jamie has been QRV with such callsigns as PJ2/MØSDV, PJ4V, 5V7EI, 3B8M, 8R7X and M6T. Jamie was also part of Youth Team #2 at WRTC 2023 in Bologna, Italy, where he operated as I47B with teammate DK6SP. Jamie is a proficient SSB and CW operator with good experience in pileup management. His favorite mode to operate is CW.

Yannick Hariga - DK1YH— (Team Member)

Yannick, is a 21-year-old ham from Mettmann, Germany. Passionate about CW, SSB, FT8, and RTTY, he brings strong all-mode skills to the team. As the youngest team member, Yannick proudly represents the next generation of DXPeditioners. V73WW is his first major DXPedition, where he supports planning and logistics while gaining valuable experience and learning from the rest of the team.

Emir Braco Memić - E77DX— (Team Member)

Braco, is a 50-year-old experienced contester and DXer originally from Bosnia and Herzegovina, now living in Vienna, Austria, where he runs his amateur radio business EMS. He has operated from numerous DXCC entities over the years and is well known for his strong presence in major contests and DXPeditions.

As part of the V73WW team, Braco brings calm expertise, operating skill, and valuable technical insight to the project.

Individual Supporters

Our operating team has also been supported by many fellow radio amateurs and friends. While it's impossible to name everyone individually, we would like to express our deepest gratitude to a few key contributors. Most notably, we thank Sherwood Tibon and his family, who served as our generous hosts on the island. Their unwavering support, warm hospitality, and vital help with local infrastructure and communications with the telecommunications authority were instrumental in making this DXPedition a success.

We would also like to recognize the significant contributions of Uschi Schindler, DJ2UR (SK), and her partner Markus Grundner, DG8MG. Uschi and Markus generously provided their home and land as the main preparation location and logistics HQ for our team. Uschi's unwavering support of our projects over the years, including this endeavor to the Pacific, meant the world to us. Sadly, Uschi passed away just weeks before our departure, and her absence was deeply felt. We will always carry her name and memory with us as we continue our work.

We are also sincerely thankful to Gerrit Herzig, DH8GHH, for creating the distinctive V73WW logo, and to Martina Kašpárková, OK2YLQ, for designing our beautiful QSL card. Their creative talents gave our project a strong and professional visual identity that reflects the spirit of the team.

Lastly, we want to thank all the local helpers who contributed to the preparation of this project, whether through hands-on work during setup or behind the scenes in planning and logistics. This DXPedition wouldn't have been possible without the collective effort of this incredible support network.

Planning Phase including Sponsors

As with any major DXPedition, the planning and execution of V73WW required substantial financial resources. Recognizing the high cost of traveling to and operating from the Marshall Islands, the team reached out to various DX foundations, clubs, and commercial sponsors for support. Once again, the Northern California DX Foundation (NCDXF) stepped forward as the largest and most significant contributor to our project. Their trust in our team was evident from the start – they not only provided early funding that allowed us to prepay a large portion of the upfront costs, but also generously covered the flight costs for the three youngest team members: Sven DJ4MX, Yannick DK1YH, and Jamie MØSDV. Their continued commitment, after already supporting us during 8R7X, was vital in making V73WW a reality.

Beyond NCDXF, several other DX foundations, amateur radio clubs, and individual donors supported our efforts with grants and personal contributions. On the commercial side, we were fortunate to be backed by generous sponsors who helped equip our expedition with top-tier gear. Among the biggest contributors were ***SSB-Electronic, DXEngineering, Spiderbeam, Ham-Parts.shop, ACOM and Mastrant***, alongside others who provided equipment, accessories, or technical support. Their contributions significantly enhanced our operational capabilities while reducing financial pressure.

Locally, Sherwood Tibon and his family played a key role in supporting the team. From helping us navigate infrastructure challenges to serving as our local connection to the telecommunications authorities, their efforts were invaluable to our success on Majuro Atoll.

With funding secured and logistics in place, the team began assembling everything needed for the trip: masts, poles, wire, ropes, antennas, and radios. A good portion of the equipment came from the team's own inventory; missing or specialized items were sourced through sponsorships, loans, or new purchases. The spirit of collaboration across foundations, individuals, and sponsors once again showcased the best of the global amateur radio community – without whom this expedition would not have been possible.

V73WW Team Lead DK6SP together with NCDXF Vice President K9CT at Dayton Hamvention 2023

Detailed Preparations

After the successful 8R7X DXPedition, planning for V73WW began immediately - with the Pacific as the new and more remote target. The team wanted to build on its experience while improving efficiency and autonomy. Once again, the goal was to rely primarily on personal and team-owned equipment, supported by key sponsors and collaborators. Early outreach to companies and individuals led to an encouraging wave of support: from donated items to discounted gear and helpful advice, the amateur radio spirit was in full force.

Preparations took place primarily at the logistics HQ provided by DG8MG and DJ2UR (SK), who supported the team with space, infrastructure, and experience. Two main team preparation weekends were held at this location, where most of the heavy lifting took place - testing radios and amplifiers, assembling antennas, and organizing the complete station layout. Beyond those weekends, countless individual days were spent preparing smaller but equally important parts of the setup: cutting and labeling cables, updating logging software, prepping headset adapters, sorting power distribution systems, and packing backup items. At some point, we stopped counting the man hours - because when you love what you do, it really doesn't matter!

No aluminum towers with multiband Yagi setups were used this time. Instead, the team focused on a lightweight and ocean-friendly approach. Several monoband 2-element VDAs (Vertical Dipole Arrays) for 10m through 20m were designed, built, and tuned for maximum efficiency over saltwater. In addition, dedicated vertical antennas for 30m and 40m as well as a multiband vertical for 10m through 40m were tested. For the low bands, a full-size quarter-wave vertical for 80m and a T-antenna for 160m were calculated, modeled, and field-tested. To further improve our receive capabilities on the low bands, RX systems generously donated by **HamParts.shop** were set-up and deployed on the island.

With our antennas designed for oceanfront deployment, a new system using heavy-duty sandbags was introduced - serving as guying anchors and stabilizers against waves and tides. These were evaluated for holding capacity, ease of transport, and reliability under salt-heavy, remote-island conditions.

The shack setup was also thoroughly tested and refined. Existing laptops were updated with the latest logging software and tested with all radios. Amplifier and radio combinations were adjusted and reconfigured for reliable 110V usage, which matched the on-island power system. CAT control, footswitch setups, headset adapters, and power distribution across all stations were tested in full-station simulations to ensure seamless field operation.

Every piece of gear - from coax and guying kits to chargers, switches, and backup accessories - was checked, weighed, and packed into reinforced hard-shell Samsonite cases. Bubble wrap, foam, and strategic packing reduced the risk of transport damage. In total, roughly 400 kg of gear was sorted and prepared for long-distance air travel. Customs paperwork was again completed in Germany for smooth temporary export and re-import.

Testing the Setup of a VDA in advance of the V73WW DXPedition.

In parallel with the equipment side, ongoing communication with our local host Sherwood Tibon helped with general logistics, access planning, and local coordination. Thanks to his support, we were able to plan around the 110 V/60 Hz grid and prepare multiple protected circuits - one for each station - well in advance.

By the time departure neared, every antenna had been tested, every connector sealed, and every detail checked — the final step before the team met in Honolulu for the final prep phase and their onward journey to Majuro for V73WW.

Targets

The team aimed to achieve over 60,000 QSOs across modes such as CW, SSB, RTTY, and FT8, with a specific goal of making more than 2,000 of these in RTTY. The focus was on addressing the latest Clublog Most Wanted Ranking, ensuring various parts of the world would benefit from the operation. Priority was also given to low band operations, taking advantage of the expected lower noise level at the rural QTH. Participation in the ARRL CW 2025 contest as a Multi Operator / Two Transmitter (M/2) entry was planned. The team intended to upload QSOs to Clublog and LOTW as frequently as possible, and a Clublog livestream was anticipated, provided the internet connection was stable enough.

Location

The V73WW QTH was located on Bokanbotin Island within the Majuro Atoll, in locator RJ57pc. The team has booked this accommodation via AirBnB. The site was only a few meters from the shoreline, providing excellent saltwater take-off towards Europe, Japan and North America. We received warm and enthusiastic support from the local hosts. They welcomed our antenna plans and provided us with access to their property and resources without hesitation. This cooperative environment played a vital role in the smooth execution of our operation, especially in a remote Pacific context where logistics can be complex and time-consuming. Power-wise the location offered a 65 kVA Generator on site, which was more than enough to handle our planned station setup. This local support and infrastructure readiness were critical to our success, allowing us to focus on the radio operation without major technical or logistical setbacks.

The V73WW QTH, Bokanbotin Island, Majuro Atoll, Marshall Islands.

The V73WW Setup

The V73WW DXPedition station on Majuro Atoll was the result of careful preparation and thoughtful engineering, designed to deliver strong performance across all HF bands under the constraints of a remote island environment. With a six-operator international team, our goal was to maximize efficiency, reliability, and coverage while adapting to the limited physical footprint available at our seaside QTH.

The radio lineup included three Yaesu FT-DX10 transceivers, an Elecraft K3S, an ICOM IC-7300, and an ICOM IC-705. The Amplifiers were two Expert 1.3K-FA units, one Expert 1.5K-FA, one Juma PA1000, and one ACOM 500S, delivering consistent signal strength.

Antennas were strategically deployed as close to the saltwater as possible to ensure effective take-off angles towards the major DX regions. For the high bands, we used monoband 2-element vertical dipole arrays (VDAs) for 20, 17, 15, 12, and 10 meters, complemented by a light-weight 4-element Yagi for 10 meters at about wavelength above ground. To maximize the effectiveness of our 10-meter operations, we used a StackMatch to switch between or combine the Yagi and VDA. This configuration allowed direct comparison during openings, and interestingly, the VDA consistently outperformed the Yagi under the conditions we experienced. Additionally, a DXCommander vertical covering 10 through 40 meters was set up and available.

The low-band setup included a vertical dipole for 30 meters, a vertical with elevated radials for 40 meters, a quarter wave vertical for 80 meters, and a T-antenna for 160 meters.

All antennas benefited from the location's proximity to the ocean, which significantly enhanced performance. To improve reception on the low bands, we experimented with several dedicated receive antennas, a nearly 170m long beverage, two triangle loop antennas and a DHDL.

Logging was managed using networked laptops running DXLog, which worked flawlessly during the whole DXPedition.

2ele VDA antenna for 15m Band placed within the ocean on Majuro Atoll.

Travel

Traveling to the Marshall Islands from Europe is a long and complex journey with no direct connections and multiple transfers. For the V73WW DXPedition, the team faced the logistical challenge of not only getting themselves to Majuro, but also transporting over 400 kg of equipment.

The main group – DK6SP, DJ4MX, HA8RT, DK1YH, and E77DX – departed from Munich, Germany, on Sunday, February 9th, flying to San Francisco before continuing to Honolulu. Their layover in San Francisco was extremely tight, with only two hours scheduled between flights. Unfortunately, they spent approximately 1.5 hours waiting in the immigration queue, leaving very little time to clear U.S. customs, reclaim and re-check luggage, and reach the connecting gate. It was a tense transfer, but they managed to board the onward flight just in time.

Jamie traveled separately from the UK, flying from London Heathrow via Vancouver and arriving in Hawaii a day earlier, on Saturday, February 8th. He spent the extra day exploring O'ahu.

The full team reunited in Honolulu on the morning of Monday, February 10th, for their final leg to Majuro on the 0700 am United Airlines flight.

In total, the group traveled with 14 checked bags, 6 carry-on items, and 6 personal items – amounting to over 400 kg of equipment. This included multiple long and fragile bags containing antennas, masts, and other critical gear. Managing this volume of equipment through several airport transfers was a logistical challenge, particularly in the U.S., where all luggage had to be collected and re-checked.

Thankfully, all baggage arrived intact and on time.

The team landed at MAJ airport on February 11th at 1030 am local time, after catching a rare glimpse of KH3 - Johnston Atoll about halfway into the flight from Hawaii, and crossing the International Date Line. Customs clearance was quick and efficient. After a stop in Majuro to stock up on food, water, and other supplies, the team loaded their gear onto a boat for the short transfer to Bokanbotin Island, located just a 15-minute ride from the main island. They arrived on Bokanbotin at around 0400 pm, ready to begin setup and launch the V73WW operation.

Operations

Once the team arrived at the QTH, some members immediately scouted the area, compared the antenna deployment plans to the actual available space, and made necessary adjustments. Meanwhile, others began unpacking and preparing the first antennas, as well as building and wiring the shack. Wiring the shack included bringing European Schuko connectors to directly wire the available circuit to our needs. This allowed the entire station to operate using the European Schuko standard without relying on unnecessary US-to-EU adapters.

The first QSOs were logged only a few hours after the arrival on the island. Within the next day all antennas except 80m and 160m were standing. Throughout this process, smaller transportation damages were fixed on-site as well. In total, setting up took around 3 days, but from day 1 we ensured having at least two operators on the radio, while the others built the antennas. The first contact was established directly after arrival on Tuesday, February 11th, 2025 at 2153 UTC.

V73WW running the tremendous Pileups 24/7 for two weeks straight.

Operating took place 24/7 whenever radios were available, with operators always alert for openings to maximize band conditions. To fulfill our goal of emphasizing the low bands, we made sure to be active on 80m and 160m every night. All operators were proficient in all modes, allowing us maximum flexibility to switch bands and modes as needed. This adaptability ensured efficient use of propagation and smooth operation, with shifts only interrupted by essential daily chores like cooking, station maintenance, and antenna upkeep.

We anticipated that there would be big pileups but nothing can prepare you for being behind the radio when the calls start rolling in. Being in the pacific the pileups were not always loud, but always big and from all parts of the world. We were running pileups in multiple modes at a very fast rate, putting over 13,000 QSOs in the log within the first 2 days.

ARRL CW Contest

During our expedition, we participated in the ARRL CW contest. It was a critical component of our expedition, primarily because it served as a platform for WRTC qualification and an opportunity to set new records. After the contest, the publication of claimed scores suggested promising results that could potentially enhance our standings. Operating in the M/2 High Power category, we demonstrated excellent team performance, effectively managing pileups and maximizing our score.

Exploring Majuro

Although the primary focus of the DXPedition was operating from Bokanbotin, the team made regular trips back to Majuro Atoll throughout the stay - mainly for grocery runs, as there were no food supplies available on the island itself. These shopping trips became an essential part of the expedition logistics, with different team members rotating in and out to restock on essentials like fresh produce, drinking water, and other necessities.

Each visit to Majuro also provided a welcome opportunity to explore the atoll beyond the radios. Thanks to the help of local guides, the operators were able to discover more of the island's character during these excursions. Whether it was walking along the oceanfront, visiting local shops and markets, or chatting with residents, the short trips turned into moments of cultural connection and brief but refreshing changes of pace from the operating schedule.

Toward the end of the DXPedition, the entire team made one final trip into Majuro for a special occasion: a group dinner at a local Chinese restaurant. It was a relaxed evening with good food and shared stories, providing a memorable close to the more social side of the DXPedition and a chance to reflect on the experience before the focus returned to teardown and departure.

Packing Away and Returning Home

Jamie, MØSDV, unfortunately had to leave the team three days early due to work obligations back in the UK and was already back home when the team concluded their operations.

The V73WW DXPedition came to a close on February 25th, 2025, at 0938 UTC, marking the successful end of a demanding yet rewarding operation. Dismantling and packing the station took approximately 1.5 days, as most antennas had been installed directly on sharp, wet coral stone banks that were only reachable during low tide. The weather also turned on the team, with the final two days marked by heavy rain, strong winds, and overall wet conditions. Despite these challenges, all equipment was carefully organized and repacked into 14 pieces of checked luggage.

Waiting for Departure at Majuro Airport after a very successful DXPedition to the Pacific.

After a 15-minute boat ride from Bokanbotin Island to Majuro Atoll, the team transferred the gear via a small truck to the airport. Check-in went smoothly, though each team member had to pay the standard $20 airport departure fee.

The team arrived in Honolulu (HNL) after a 6-hour flight and spent a few days recovering and relaxing at the home of Alex, KH6YY. This downtime was a welcome break after the intense operating schedule. During their stay, the team had a great time exploring the island of O'ahu, enjoying Hawaiian culture, nature, and some well-earned rest.

On the evening of March 3rd, the team flew from Honolulu to San Francisco, landing on March 4th at 0630 am local time. With a 7-hour layover, they met with Denny, KX7M. The group enjoyed breakfast together, followed by a quick tour of San Francisco, including a visit to the Golden Gate Bridge and a short drive through the city's iconic landmarks.

The team then boarded their final flight back to Munich, arriving on March 5th at 1000 am local time. All team members and their equipment arrived safely and cleared German customs, officially concluding the V73WW DXPedition.

This DXPedition not only achieved its on-air goals, but also strengthened international friendships, created countless memories, and helped promote amateur radio across borders and cultures.

Conclusion of the V73WW DXPedition

As we reflect on the success of the V73WW DXPedition, we do so with immense satisfaction and gratitude. This operation was not only a significant technical achievement but also a fulfilling experience for the entire team, as we provided valuable contacts to operators from around the world. It was incredibly rewarding to assist stations worldwide securing an ATNO (All Time New One) and new band slots, helping extend the reach of the Marshall Islands on the amateur radio bands.

Operating across 6m through 160m (excluding 60m due to licensing restrictions), the team closely monitored band openings and used each one to make as many contacts as possible. The conditions throughout our stay were very favorable, with the bands often calm and clear, making for excellent operating conditions. We experienced only a few days with poor weather, which brought a slight increase in noise levels, but on the whole, the bands were quiet and free from significant interference. Even during these brief challenging periods, we continued to make successful contacts.

One of the highlights of the operation was the small but exciting 6m openings we were able to enjoy, which provided opportunities to connect with operators from VK, ZL, JA, BY, VR, VK9N, HL, and BV. These openings were a pleasant surprise and allowed us to make rare contacts on the 6m band, adding to the success of the DXPedition.

A significant accomplishment of this DXPedition was the smooth operation despite the challenges we faced. There were no power issues, and we did not require backup generators. The equipment and power setup worked flawlessly, ensuring uninterrupted operations. However, operating in such a remote location was not without its difficulties. The weather posed a particular challenge, especially when it came to building, maintaining, and dismantling antennas in the harsh conditions. Despite these hurdles, our team handled the situation with determination and professionalism, ensuring that all tasks were completed effectively.

Another aspect that contributed to the success of the operation was the team's daily commitment to logistics. We cooked all our meals, managed inventory, and kept everything organized, from cleaning to ensuring all equipment was in top condition. These tasks may have been demanding, but they were all part of ensuring the DXPedition ran smoothly and efficiently.

While we encountered challenges, such as limited internet access and the complexities of managing the live log and daily free-of-charge LoTW uploads, these were handled professionally and promptly by our team. Having a backup is not always a guarantee of success — internet availability on the island had been confirmed upfront by our host, which led us to decide against bringing a Starlink device in order to save space and weight. Unfortunately, internet was not available at our planned shack location but only at the sleeping quarters area. Upon arrival, we attempted to obtain several local SIM cards for use with our backup router, but none were available. In the end we relied on a promptly organized Starlink device that was stationed on Majuro Atoll to establish a working internet connection. Despite these complications, we managed to keep our logs accurate and up-to-date, ensuring that every contact was properly recorded and verified.

Our success wouldn't have been possible without the tremendous support we received from our sponsors, helpers, and local supporters in the Marshall Islands. Their hospitality, assistance, and contributions made the DXPedition a success. We also owe a huge thank you to all those who trusted us with their time and energy, as well as those who provided vital logistical support.

In addition to achieving our goals, one of the most fulfilling aspects of the V73WW DXPedition was our ability to inspire the next generation of DXPeditioners. We are on a great path to share our knowledge with the global DX community, and it was a privilege to mentor and pass on our experiences to both young and seasoned operators alike. By doing so, we hope to inspire more people worldwide - young and old - to take part in future DXPeditions and continue the spirit of exploration and collaboration within the amateur radio community.

L-R: Philipp DK6SP, Yannick, DK1YH, Tomi HA8RT, Sven DJ4MX, Braco E77DX and Landlord Sherwood.

This DXPedition was a true celebration of the spirit of amateur radio, demonstrating the power of collaboration and global connections. It was an honor to help operators from around the world work a rare DXCC entity and strengthen their connections with the amateur radio community.

We look forward to the future, and we are already thinking about our next adventure. For more photos and updates from the DXPedition, feel free to visit our website at www.next-generation-dx.com.

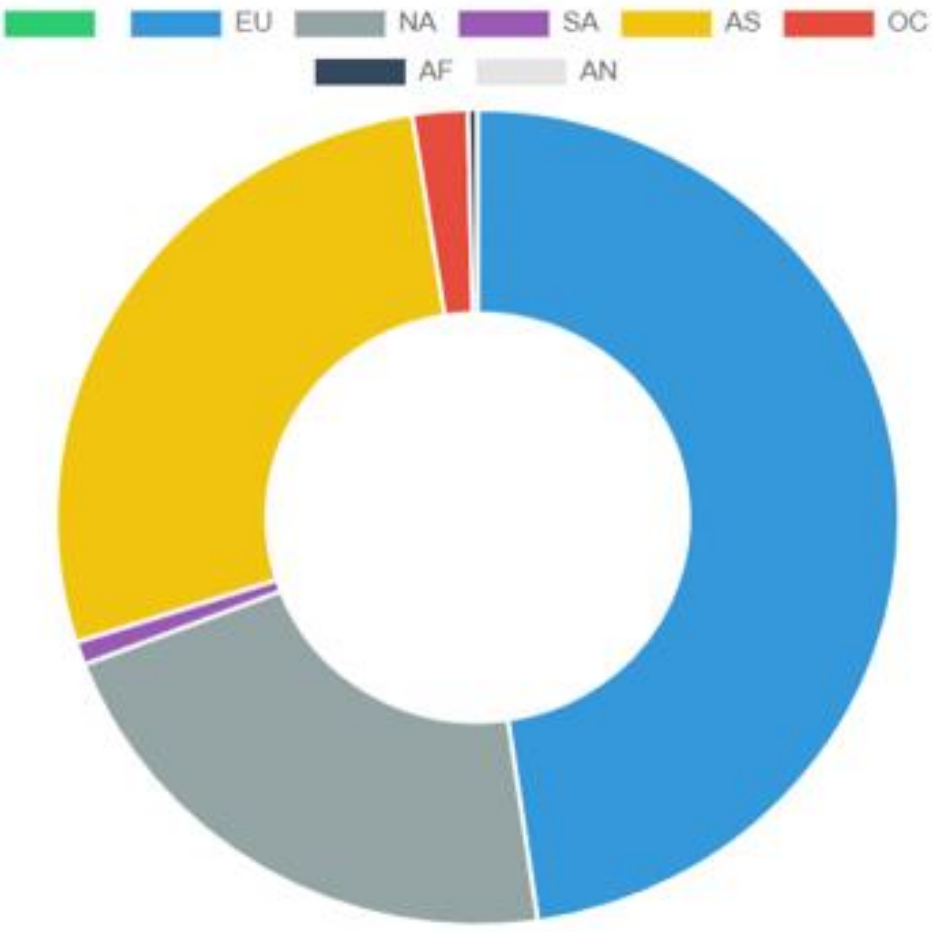
And of course, the question remains:

"Where do we go next?"

Sunset at the V73WW QTH on Bokanbotin Island.

Breakdown by Continent

Continent	Total QSOs	%
	14	0.0
Africa	368	0.4
Antarctica	7	0.0
Asia	28529	27.5
Europe	49550	47.7
North America	22240	21.4
Oceania	2205	2.1
South America	951	0.9
Totals	**103864**	**100.0**



TWIN CITY DX ASSOCIATION (TCDXA)

CLUB FACT SHEET

Who We Are:
The Twin City DX Association (TCDXA) is a 501(c) (3) non-profit amateur radio organization, whose members have an interest in DXing and in supporting the club mission: ***Dollars for DX***. Bylaws and Articles of Incorporation govern the club's operation.

Club Mission:
The club mission supports major DXpeditions with financial donations. The source of operating income for this activity is an annual contribution (dues) of $25 from each member.

DX Donation Policy:
The policy supports major DXpeditions that meet our requirements for financial sponsorship. All requests must be approved by the Board of Directors. Final approval is by vote of the full membership. Over 70 DXpeditions have been sponsored since 1997. Details are available on the website at: http://www.tcdxa.org/sponsoreddxpedtions.html

Club History:
The club was formed in the early 1970s by a small group of DXers from the Twin City area. Over the years, the club has changed; most notably by opening its doors to anyone interested in DXing - from the casual to the very serious operator. Our membership now resides in numerous states and several countries.

Requirements for Membership
We welcome all hams who have an interest in DXing and hold a valid FCC Amateur Radio License. It doesn't matter whether you're a newcomer, or an old-timer to DXing; everyone is welcome!

Meetings:
The club meets on the third Monday of each month (except July & August) at PUB 42 Restaurant in New Hope, MN. Members gather early in the bar for Happy Hour, and move into a private room at 5:00pm for dinner and a short business agenda, followed by a program. If you enjoy a night out on the town with friends, you'll enjoy this get together. Meeting attendance is NOT a requirement for membership.

Club Officers:
Four officers, plus one additional member make up the Board of Directors; currently: Bert Benjaminson, WBØN, President & Director, *wb0n@yahoo.com* , Vice President & Director, Tom Weigel, AB0J, Secretary/Treasurer & Director, Pat Cain, *k0pc@arrl.net*, Mike Cizek, WØVTT, Director & DX Grant Manager and John Rusciano, NG0Z, Director.

Website:
We maintain a website at www.TCDXA.org that provides information about a variety of subjects related to the club and DXing, The site is maintained by our webmaster Pat Cain, KØPC.

Newsletter:
The ***Gray Line Report*** is the club newsletter, which is published on a quarterly basis. We're proud of the fact that 99% of the content is "homegrown" – written by our members. Past issues are on the website at: http://www.tcdxa.org/newsletter.html.

How to Become a Member:
An application for membership can be completed and submitted online, or printed and mailed in. (See http://www.tcdxa.org/Application.html) Contributions may be made by check or via the PayPal link on the homepage at www.TCDXA.org.

Visit us at a Meeting:
You are most welcome to attend a meeting, and look us over, before joining. Meetings are held at the PUB 42 Restaurant at 7600 Avenue North in New Hope (http://pub42.com/). Join us for happy hour at 4:00pm with dinner at 5:30pm, followed by the meeting at 6:30pm.

VKØIR	K5D	AHØ/NØAT	3W2DK	K4M	XU7MWA
ZL9CI	VK9DWX	5X8C	FT4TA	TX3A	S21EA
A52A	FT5GA	K9W	VK9MT	KMØO/9M6	J2ØRR
T33C	3D2ØCR	XRØZR	VK9DLX	YS4U	J2ØMM
3B9C	E4X	T3ØD	VU4KV	YI9PSE	BS7H
TX9	CYØ/NØTG	3W3O	EP6T	ZL8X	N8S
CP6CW	VP8ORK	3W2DK	VP8STI	4W6A	3B7SP
3YØX	VU4PB	FT4TA	VP8SGI	T32C	3B7C
K7C	STØR	VK9MT	TX3X	HKØNA	5JØA
5A7A	3D2C	VK9DLX	VP6DX	7O6T	K5P
VU4AN	3CØE	VU4KV	TX5C	NH8S	FT4JA
VU7RG	TT8TT	EP6T	9XØR	PTØS	PZ5W
VK9DWX	9M4SLL	3GØZC	9U4U	FT5ZM	ZL9A
S9OK	3DA0RRU	7P8RU	VU4W	CY0S	ZL7/K5WE
TN8K	3B7M	FT8WW	TX5S	VU7W	3Y0J
					CY9C

TCDXA DX DONATION POLICY

The mission of TCDXA is to support DXing and major DXPeditions by providing funding. Annual contributions (dues) from members are the major source of funding.

A funding request from the organizers of a planned DXPedition should be directed to the DX Donation Manager, Mike Cizek, WØVTT. He and the TCDXA Board of Directors will judge how well the DXPedition plans meet key considerations (see below).

If the Board of Directors deems the DXPedition to be worthy of support, a recommended funding amount is presented to the membership for their vote. If approved, the TCDXA Treasurer will process the funding..

Key Considerations for a DXPedition Funding Request

DXPedition destination
Ranking on *Most Wanted Survey*
Most wanted ranking by TCDXA Members
Logistics and transportation costs
Number of operators and their credentials
Number of stations on the air
Bands, modes and duration of operation
Equipment: antennas, radios, amps, etc.
Stateside and/or foreign QSL manager
Website with logos of club sponsors
QSLs with logos of club sponsors
Online logs and pilot stations
Up front cost to each operator
Support by NCDXF & other clubs
LoTW log submissions
Previous operations by same group
Valid license and DXCC approval
Donation address: USA and/or foreign

To join TCDXA, go to http://tcdxa.org/