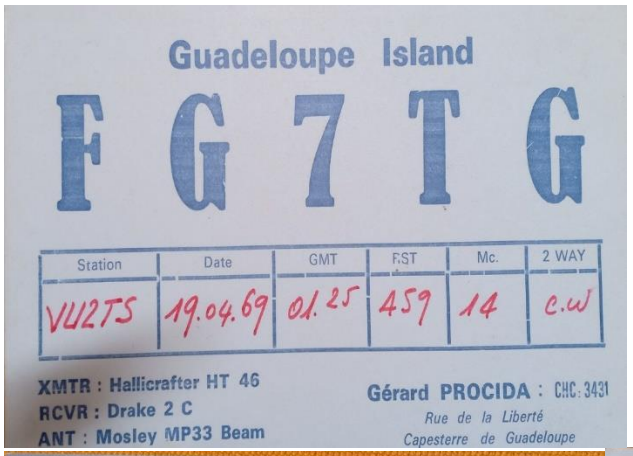
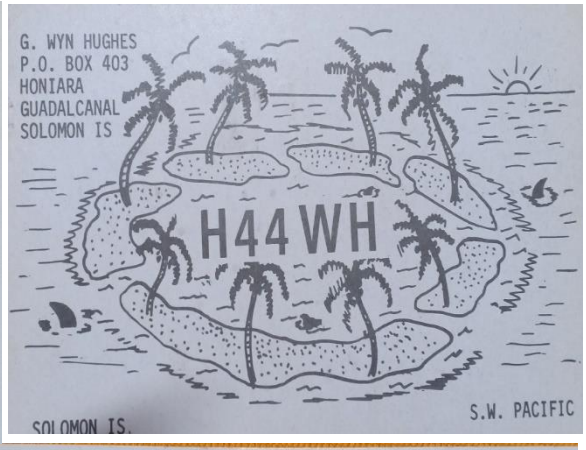
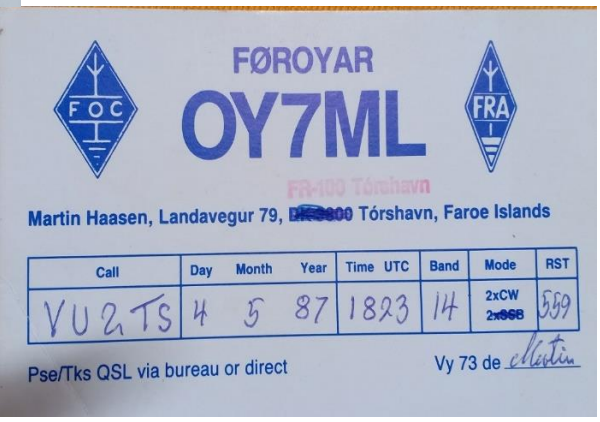
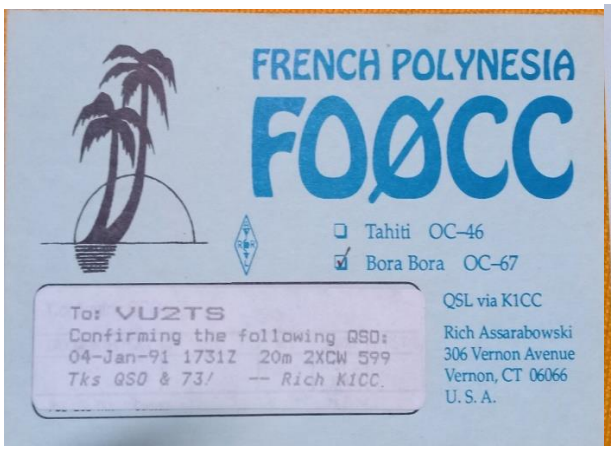
Ham RADIO News

Newsletter of the Amateur Radio Society of India - VU2ZH
(Indian Affiliate of IARU)
July 2022 Issue









IOTA QSL CARDS collection from VU2TS

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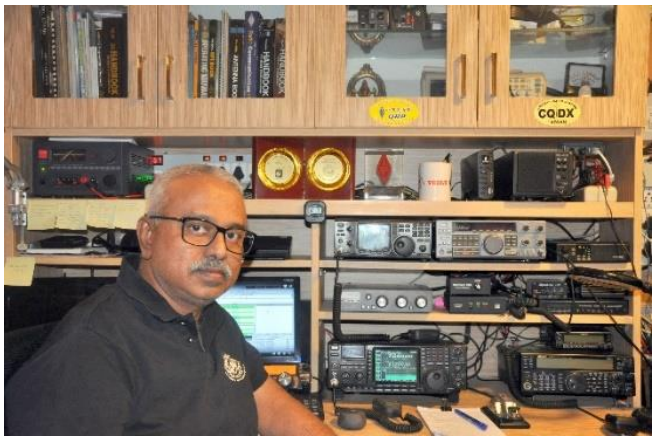
President's Message



IARU Diamond Award for VU2GMN - Gopal Madhavan

Let us join hands in congratulating our ARSI Chairman Gopal Madhavan VU2GMN on receiving the IARU Diamond Award for 2021.

IARU Diamond Award for 2021 has been conferred upon Gopal Madhavan VU2GMN/M0GDB, and Ken Yamamoto JA1CJP, for their long record of exemplary service to the IARU and their respective member-societies.

VU2GMN with the IARU Diamond Award Plaque

Gopal Madhavan VU2GMN has served as Director at IARU-R3 for 4 terms (2006-09, 2009-12, 2012-15 & 2015-18) of which the last two terms he served as the Chairman of Directors. VU2GMN has served as the President of ARSI from 2005-19.

73, de Ramesh Kumar, VU2LU

FROM THE EDITOR'S DESK

Congratulations to Gopal VU2GMN – immediate past president and now Chairman of the ARSI – on receipt of the **IARU Diamond Award Plaque for 2021.**

The World Ham Radio Day was celebrated in April; reports from some of the Clubs are included in this issue.

Solar activity is increasing with the sunspot number hovering around the sixties and eighties resulting in some band openings on 20 and 15 meters.

73 de Ganesh VU2TS

THE IARU HF Championship: 2022

My experience as Portable Op for ARSI's special call AT1HQ

Kiran VU2XE

"Opportunities uncovers itself for the seeker" – may sound philosophical, however its true to many of my recent radio endeavors too. I was in search for quiet locations around Bangalore for HF contests where terrain looked positive for low angle long range communications. In last few years, I have done many activations near Mangalore-Udupi coastline predominantly with vertical and had good amount success. Though much simple as it looks, I learnt many facets of vertical antennas near the salt water and inlands. Effects of elevated radials, parasitic phasing designs such as VDA and spit fire were also in the mix of some experiments. For enthusiastic learner, contests provided ideal test ground.

It was becoming important to find alternate locations near my home QTH of Bangalore for quick tests and weekend trips. In the plains of Deccan plateau, good outdoor QTH search means hills with slopes in required directions, less visitor footfalls, steady power supply, place to stay overnight, RF quietness etc. I had done a group contest last year with VU3SPD and couple of other friends on the coast near town of Mulki. SPD had mentioned few potential spots around the Nandi Hills range. I thought it is better to test the site before CQWW season this year.

By this is time, I saw email notification from ARSI Contest Manager VU2IBI on IARU HF participation with special call AT1HQ. It was no brainer for me to just latch onto this opportunity and have my objectives also met with contribution to national team. As the goal is set and knowing that team members can be spread around the country, demand for collective travel and logistics would not be there.

Now I had to just confirm one room in a dormitory on the hilltop and plan for other aspects of operating. I was cautioned of high winds from the valley below the hills. Being one person operation, thought of selecting

simple but effective antenna for 40m and up. As the building I was to stay was on the ridge with sloping grounds (couple of hundred feet) from west, north to southeast, even dipole at low height placed on terrace would boost gain from the terrains. Typical ground gain for half wavelength high dipole is around 6dB and at this location it would be few dBs higher. I also did ARRL HFTA software analysis for the location and found those assumptions right. The second challenge in planning was the support system for the high dipole as there are no trees found on top. Anyways, I started packing my TS590, homebrewed W6PQL Amp, Tools, Coax cables and a spider pole. I decided it would be better to try End Fed Half Wave (EFHW) which in the 4NEC2 models looked much better option and unlike dipole the feed point can just be at one side making it simpler. I had homebrewed couple of QRP and low power 49:1 transformer in the past, but for this QRO operation got premade 40m to 10m EFHW from VU3GEK on time.

IARU contest is of 24-hourduration from Saturday local time 5:30 PM to Sunday 5:29 PM. It is ideal for me as I will have ample amount of time on Saturday morning to put-up EFHW. Once on location at 9:30 AM local, I saw a JCB digging and leveling ground space I had planned to put spider pole support mast in the east side. The dormitory building is on the west ridge running North South. Unexpected happens always! Seeing this new development in action, I decided to play it safe and orient EFHW North South, knowing that where nulls in antenna radiation patter will be. I had modelled the 40 -10 m EFHW on various bands beforehand (refer to diagrams) and knew it would not be bad on 20-15 and 10m as there would be additional lobes with increasing gains. In fact, 40m band was mostly for local comms at quarter wave height and I wanted to operate 20 to 10 anyways.

One challenge after other, couple of staff who had agreed to help me earlier got busy with a pooja function. So, I was lone soul now on the flat terrace to negotiate the high wind situation. I gathered few wooden poles to support one side of the EFHW at around 18 feet above terrace. Second one was tied to spider pole at same height on the south side of the terrace. I wanted to keep the wire as much parallel to ground as possible to get the patterns I had seen in the models. I had not imagined simple antenna becomes challenging to erect. I had two sections of RG 213 of about 7 to

8 meters. I placed in line choke at the joint of the coax and measured SWR. On 40m it was around 2, 20m 1.6, 15m band 1.35 and 10 meter it was above 2 again. Fine tuning with counterpoises and wirelengths is for some other day I thought. For 40m and 10m, I decided to operate low power with built in tuner.

Post lunch, I started arranging the shack. I normally carry heavy duty extension power junction box with 5 to 10meter power cable, which came handy as the Coax dropped from terrace just reached few feet from the west side window and power sockets for the room were in the east side which might be around 15 feet away. Arranged existing Teapoy temporarily to place all equipment and later borrowed couple of tables and chair from their kitchen.

It was all done and ready for powerup testing at around 4:30 PM (1 hour to go for Contest start), and I sensed leakage current in the terminals and chassis of Amp. Safety is important aspect of any operation, especially when one is at remote location with unknown conditions. Powerline grounding is typically poor at many locations I had operated in the past too. I had carried few small aluminum stakes for guying spider pole. I made a quick run of 20 feet wire to outside rain saturated ground and connected earth. While this seemed to reduce the leakage, there was another issue in the wiring. Line and neutral were swapped on the room's wall socket wiring. It took some time to figure this out, I opened my extension junction box plugs and sockets to fix wiring reversal from myside. It was the best thing I could do to continue, but this took first 1:30hrs from my contest operation schedule.

Now at around 7PM, my operation started much slow on 20-meter band. Outdoor LED lights (typical streetlight with array of LEDs) normally found to be generators of broadband hash noise were switched off. Continued to build pace on 15m band and closed for day at 11:30 PM local with 152 QSOs in the log.

Wind blowing from the glass window gaps kept making loud noise throughout the night interrupting my sleep. Stray dogs in the area kept making resonating sounds as if they love the wind chill. Nighttime view from top of the hill was astounding with lights sparkling from farther away

villages. I felt proud moments to operate at a location which had sight of Muddenahalli – birthplace of greatest engineer Sir M Vishveshwarayya.

My next operating schedule was starting at 6AM local. Other remote teammates were already up and running. I started on 40m with few QSOs and QSYed to 20m for few SSB QSOs and then to 15meter band CW till Breakfast break at 8AM. My next op started at 10AM and I could hear few W land stations at that time. These stations may be coming over Northeast short path or Southwest long path in the morning times. But in both cases I think my EFHW had lobes listening for them!

I continued gradual build up on 15m till 2PM local with couple of power outages in between. I had few more hours to go, and another power cut at 2:15 PM stalled my operation. Wait continued till 3:30PM for possible power return but had to call off ops at that time. There were total of 342 QSOs in my log when it all got over. Later found that there was major power line work going on down the hill. Anyways unlike setting up which took few hours, packing back took merely an hour. I made final pure O2 breeze inhale saying goodbye to the awesome views.

As most of the time when we depart from things we love, it creates void and hang over of the sweat memories to mellow on. It is obviously tiresome and there is feeling of never again as well. Whether I come out of field days, Contests or DX-peditions, along with joy of operating, the learnings we make and thrill of DX keeps me going back. When we travel in groups there are other hams to talk about, but here it was just me and a long drive back home😊

Above all, the magic of HF and the call of ionosphere is irresistible!

What do you think? have you experienced the magic of HF yet?

73

Kiran

AT1HQ - INDIA - Amateur Radio Society of India [ARSI]

The following radio amateurs participated in the event held from 9th to 10th July 2022.

A Roster was created and operations were carried on CW and Phone on 10m, 15m, 20m and 40m bands. A total of 722 QSO's were recorded during the Contest.

1. VU2IBI - Prakash Srinivasan
2. VU2XE - Kiran Padiyar
3. VU3GDS - Girish Gopal
4. VU2DED - Ajaya Gupta
5. VU3DCY - Dinesh Cyanam

VU2XE Kiran

VU2GDS Girish

VU2IBI Kash

WORLD HAM RADIO DAY

The Word Ham Radio Day was on April 18 and several clubs celebrated the event,

PUNE, MAHARASHTRA

The **World Ham Radio Day** was celebrated by Pune Hams VU2RCP on 12th April 2022 instead of 18th April due to the University Exams being held on the same day. The event was celebrated at the E & TC Department of the GS Moze College of Engineering, Balewadi - Pune - 411045.

The event started with tracking the International Space Station. OM Ajit Karnik VU2AMK explained about the SSTV transmissions from the ISS that were received by amateurs. He tried to catch the ISS pass that morning with a Yagi in open space with the students. Ajit shared the recorded audio files of the ISS broadcast to be viewed using Robot 36 application; the students enjoyed viewing the SSTV images on mobile phones,

The next event - The Fox Hunt by 5 teams of students using home brewed Yagi Antenna in the open area of the college campus was most exciting. All the Yagi antennas were made by the students under the guidance of Commodore OM Ashish Saxena VU2ANM in a workshop the previous week.

The “Fox” was designed and made by OM Mangesh Patil VU2OOM using Raspberry Pie which was radiating 25 mw on 144.100 MHz using a vertical antenna. The event was flagged off by the College Principal around 9:30 AM. The students started the Fox Hunt and got confused due to reflected signals. Finally, Vishnu’s team succeeded in locating the Fox

after a struggle of nearly 40 minutes. Pune Hams VU2RCP congratulate the winning team for successful f Fox hunting.

Photo on the right: Vishnu Sankpal, the team leader; Adinath Kadam, Akshay Patil, Swapnali Rabade, Komal More, Siddharth Biradar Mansi Chavariya, Divya Patil

VU2VPR Vilas & VU3YEJ Kunal gave Presentations on (A): What is Ham Radio; (B): Understanding Dipole antennas using VNA nano Vector Network Analyser. The program ended with the prize distribution to the winning team.

Thanks to Dr Sushma Patwardhan HOD of E&TC and the staff for wonderful arrangements. The event was partly supported by IETE Pune Local centre.

SUNDAY TECH-TALK

Pune Hams in association with IEI PLC & IETE organised the Sunday Tech Talk & Eyeball QSO on 5th June 2022 at 10:30 AM onward with attendance of more than 20 Hams & SWLs.

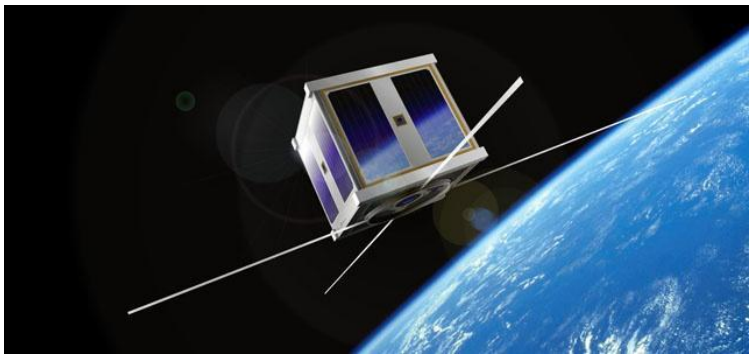
The meeting started with introductions over High Tea. OM Vilas Rabde VU2VPR welcomed the participants on behalf of IEI PLC & IETE Pune. The subject of the Sunday Tech Talk was “Field strength Meter” and the Speaker was Com. Ashish Saxena VU2ANM. The Venue was Institution Engineers Firodia Hall at Shivaji Nagar Pune.

The speaker gave an enclosed Power Point presentation and explained the importance of FSM in Radio communication.

A team from College of Engineering, Pune (COEP) attended the eyeball QSO and shared their latest plan for Student Satellite launch.

Atharva Marathe explained - The Satellite Initiative (CSAT) was established in the year 2008 at COEP, with the aim of designing and fabricating small satellites.

Swayam, the first mission undertaken by CSAT, was launched on 22 nd June 2016 and has completed its lifetime by successfully achieving all the mission objectives.



The COEP Satellite Initiative's second project is aimed at demonstrating a novel technique of propulsion using solar sails in space. The activity Started in 2016, the project revolves around the challenging prospect of building a satellite designed to initially orbit the Earth at an altitudet of 600–700 km and characterize the charged particle environment while raising the orbit up to the desired altitude.

OM Ajit Karnik VU2AMK, ex Director C-Dac interacted in details with the students and Pune Hams (VU2RCP) agreed to extend active support to

COEP project. The guest of honour was a Russian Ham - Slavko Kobal, (S57MAP) with call sign YU3DLO. He shared information on his activity and his efforts for obtaining a reciprocal call sign in India.

Pune Hams celebrated **World Telecommunication & Information society Day** on 17th May 2022 at the Institution of Engineers Pune Local Centre's Firodia Hall. This day is celebrated annually to help raise awareness of the possibilities that the use of the Internet and other information and communication technologies (ICT) can bring to societies and economies, as well as of ways to bridge the digital divide.

https://www.un.org/en/observances/telecommunication-day

This year's theme for World Telecommunication and Information Society Day was **"Digital technologies for Older Persons and Healthy Ageing".**

Mr Vineet Mathur, Deputy Director General (Retd), Telecom Enforcement & Resources Monitoring Cell, Department of Telecommunications, Ministry of Communications & I Government of India. He gave a presentation on **Trends in Telecommunication Engineering**. It was a well-studied and in-depth presentation providing a lot of demographic data.

OM Mangesh Patil VU2OOM gave an introduction to Ham Radio as a Hobby for the benefit of E & TC students along with presentation & Demo of FT8 mode in HF Radio Communication. Pune Hams created a very special and compact set up using G5RV all Band Antenna with IC 7300 rig. Several dx Radio contacts using FT8 mode were made during the demo.

73, Vilas Rabde VU2VPR
Pune Hams VU2RCP
9822502078

RECENT ACTIVITY OF PHARC – PUNE HAMS CLUB

Following is a small synopsis of the recent activities carried out by PHARC, Pune Hams Club. Post pandemic, a lot of club members were anxiously waiting to get out of the shacks, in the field and test the mobile setups. The plan was to have a VHF as well as HF field day and start various activities like testing new antenna types and other amateur radio gear.

We planned to have a VHF field day with maximum stations participating and have the event coinciding with the ARSI Field Day and Hill Topping activity on March 13, 2022. We had 14 teams operating from 5 hill tops across Pune city.

Other than radio sports, the teams indulged in roaming through nature from Forts to Ghats and forest reserves.

We had a great participation from SWL's and especially small kids who were super excited to see radio live in action with so many stations active on the bands. New Hams who had recently received their licences were super excited to see live action for the first time.

We wanted to try something different, and we activated 10Mts and 6Mts band on FM using car rooftop mounted vertical antennas.

With the VHF field day over and the team all excited and reverberating "Yeh Dil Mage More" (We want more activities) a Sprint HF field day was planned on Sunday April 3rd 2022 by PHARC club Pune. The plan was to have at least 2 stations quickly operational on 40 mts band and participate in the morning Nets. We were able to test uSDx, Buddy pole antenna, standard dipole and End-fed type of antenna

The location selected was a beautiful and scenic Taljai hill located in the heart of Pune, that has been designated as a wildlife reserve. The road to this hill passes through the Shivaji Maratha College campus with a picturesque mountain path, with sharp turns. Near the entrance of the forest is a temple to the hill's namesake Taljai; a Hindu goddess.

The reserve attracts migratory birds and is home to peacocks. The location is therefore popular with amateur bird watchers and ornithologists. The field day helped the club members with a lot of learning. The new hams were able to understand practically how various antennas work, the importance of QRP and other aspects of Amateur Radio. Lot of onlookers and passers-by were also very keen to knowing more about this hobby.

73 de Ajay Kashikar

Amateur (Ham) Radio Workshop conducted by VU2EXP Rajesh

Full featured Two Days' Amateur (Ham) Radio Workshop was conducted by Rajesh Vagadia VU2EXP (Regional Coordinator, AMSAT-INDIA) on 5th & 6th April 2022 at renowned PDEU University (Gandhinagar – Gujarat) INDIA. Highly interested 40 Students of EC & ICT (plus faculties) dived in the fascinating World of Amateur Radio for two days. Total 8 hours of packed program was scheduled, on day 1 from 1330 to 1730 & for day 2 0900 to 1300 (all IST time).

On day 1 (5th April 2022), step by step I covered History & Introduction of Amateur Radio, Operating procedure, Modulations, Bands & Frequency allocations, Morse Code, RST Systems, Phonetic, Q-Codes, License Grades, Procedure to obtain Ham License etc.

I tried to convey the real image of Ham operator's life - how Ham Radio is involved in our daily life; I introduced students to some Ham Jargon and the abbreviations we use in our communication.

A good collection of Radio gear was carefully displayed for the benefit of students, which included, HTs, VHF/HF Base, PSU, Cables, Connectors, Adaptors, SWR / Power Meter, Frequency meter, L/C meter, NanoVNA, Dummy Load, Sound Card Interface, RTL-SDR Dongle, CPO, Morse Key, Electronic Keyer, Paddle, Fox hunt tape measure Antenna, GP Antenna, Telescopic Antenna, Dual Band Yagi Antenna, IOio Antenna, Attenuator, Offset Attenuator, Cube Satellite Model etc. Also displayed was my IC-705 SDR QRP Rig with LiFePO4 Power pack for various Demos! All EC

& ICT students really enjoyed & learnt the feature/functioning of most of the displayed stuff by trying it themselves. Additionally, hundreds of my QSL cards, Log Book, Call book, various Awards, Ham Radio study books and interesting articles were kept on display which was thoroughly observed by students. They were amazed to see NASA QSL for Juno flyby experiment, Japan & German research center's QSL from Antarctica, Awards for ARISS SSTV event and many more from IOTA, FD etc activation. I explained how we can send and receive paper QSL Cards very economically via QSL Bureau worldwide. Highlighted our ARSI's QSL Bureau services from India.

I received excellent support from my family ham members VU3EXP Sakshi Vagadia & VU3GLY Priyesh Vagadia who accompanied me from my QTH Rajkot.

On day 2 (6th April 2022) we started our workshop at 0900. We had planned a series of practical demonstrations on this day. Initially I presented roles & objectives of various Ham organizations like AMSAT, ARISS & ARRL and informed how giant efforts are made by these organizations to promote Amateur Radio Satellite Activities, Encourage School Students towards STEM, and offering the ultimate knowledge base for radio hams. Also highlighted AMSAT-INDIA's activities and its contribution of two Satellites VO-52 & AISAT. We gave an idea on how ARSI represents the interests of Indian Hams before national & international regulatory. GIAR Club was also recognized for their excellent

Emergency Communication support to the State Government during natural calamities.

We had the gracious presence of GIAR ham members includig VU3IKI Ke Ke, VU3DVA Dipakbhai, VU3VDC Vitthhalbhai & VU3HXS Dhirenbhai at the workshop.

I presented how students can be engaged with ARISS ISS SSTV Events by receiving SSTV ImageS with simple RTL-SDR Dongle & small homebrewed Yagi antenna. We gave a live demo of the student's SSTV Image transmission & reception with the help of two stations installed in the venue. Participants were amazed to see the Picture being transmitted in audio format & received/converted back to Student image.

Thereafter Morse code demo was carried out which was equally interesting for Students.

For the Digital Communication demo, I invited students & faculties to send me a few messages. I converted those text messages into PSK31 audio signals & transmitted from station one, second station received & decoded each message mentioned with students' name. It was fun to view student messages/ feedback projected on a big screen. Also briefed on various digital modes Ham operator uses.

Students then very well understood why Ham Radio is also known as the oldest Social Media, by seeing all such techniques we use since decades, that too without any mobile network or internet!!

Our Satellite Communication Demo was scheduled at 1047 (IST) with AO-91 Cube-Sat. The reason to choose this bird was suitable pass time & very good elevation of 63 degree, two days back we already checked this bird & it was functional. I already requested a few VU Hams to respond & support our Sat Demo. All students & faculties get assembled at Rooftop by 1030. I used a pair of HT, IOio Dual Band Antenna and Tracking app in my simple setup. I explained various terms of satellite & basic procedure of operation to the group. All the students were very curious to see how a tiny cube-sat of 1.3 kg extend long distance communication within its footprint. I connected a wired (Bluetooth) speaker with a bit of a long cable so the group can hear Reception.

But as some of us have experienced, Murphy strikes at the last moment and my speaker failed just before appearing of AO-91 !!! There was no time for troubleshooting, I immediately used my headphone to avoid the audio loop, as it was my full duplex configuration. Two minutes later I could hear a strong signal of VU2LBW Lucky, I copied him 59, exchanged reports and established a successful Sat QSO. Lucky was really loud & clear with his decent setup. I was willing to let faculty/student experience this live contact, I ask Lucky to address & respond again and I handed Headphone & Mic to Prof. Jigar Shah, Lucky patiently talked with him conveyed his Callsign, Handle & QTH Bangalore (MK82TV), Prof. enjoyed the live demo and responded well. We also gave a chance to one more student girl; meanwhile I was continuously tracking the satellite & aiming the antenna towards it. Before LOS I heard another good Station VU2UUU Kaustav Saha from Gurgaon (ML88NK), I worked with him too with 59 reports. So it was a semi successful Satellite Demo as I could not allow all students to listen to ongoing (Rx) conversation. But participants were very happy to learn the complete procedure; they were thrilled to witness the potential of amateur radio satellites. Later on Lucky VU2LBW favoured me by sharing our Sat QSO recording, which was circulated amongst all students for reference & memory!

At 1100 there was short tea break, participants were so enthusiastic that even in leisure time they been to radio stuff exhibition area to have closer look and learn more on devices like Nano VNA, CubeSat (model), Morse

Keyer/Paddle, Signalink USB, RTL-SDR dongle, Icom IC-705 etc, I enjoyed interaction and satisfying their queries.

We were towards the ending session. I presented what are the interesting events radio amateurs enjoy & carry out globally, which includes Sp. Callsign Activation (highlighted my activated call AT1JCB), Field Day, Contests, Light House operation, IOTA (illustrated AT2SL), JOTA, Hill Top, Fox Hunting (ARDF), High Altitude Balloon Deployment & Tracking, EME, ARISS SSTV & Student outreach Program, SatCom, Satellite Telemetry decoding, Radio Astronomy, Meteor Scatter, Ham Fest etc. I conveyed objectives & brief procedures of all these events into which Radio Hams love to be engaged. Participants learnt that Amateur Radio is much more than a communication device! I always promote Ham Radio as an experimenting platform which has something for every genre.

At the end, students were asked to split into four groups to enjoy VHF Demo, students learnt how to operate a HT, started giving calls to other groups, responding to the caller, giving feedback & comments over radio! Our fellow hams incl. VU3EXP, VU3IKI, VU3HXS, VU3VDC, VU3DVA and VU3GLY nicely assisted each group. Faculties' incl. program coordinator Prof. Jigar Shah & HoD ICT Prof. Gangaprasad Pandey Sir conveyed Vote of Thanks over Radio. On behalf of our Ham team Sakshi Vagadia VU3EXP thanks to all participants & PDPU University for organizing this memorable workshop.

At 1300 our workshop concluded. Was nice to see students come out with learning something new & exciting, many showed their interest to be Radio Ham & enjoy this fascinating and unique hobby. Everybody liked our slogan 'One World One Language'. There were huge efforts collectively made for this workshop and I wish to get some shining radio amateurs in the future.

I would like to specially thank VU2LBW Lucky & VU2UUU Kaustav for his valuable support during Satellite Demo, I understand they had devoted time on busy working day, after all that's the spirit of Radio Amateurs.

I thank PDEU University, Program Coordinator Prof Jigar Shah & HoD ICT Prof Gangaprasad Pandey Sir for extending excellent support & hospitality for our team and for making this workshop fruitful.

I have uploaded all Workshop Photos in YouTube please find it's link to view it:

https://youtu.be/lFf4g4Ubm1k

A special note I would like to make - I read & learnt about Ham Radio 35 years back in one well-known Gujarati science magazine named 'Scope', brilliantly written by Shri Nagendra Vijay Sir. After completing my workshop, during the return journey at Ahmedabad (Bopal), I got the opportunity to meet & take the blessing of Shri Nagendra Vijay Sir. What a brilliant personality, highly knowledgeable, but very low profile gentleman I ever met. I was inspired to begin my Ham journey by reading all his Article & dedicated 'Ham Radio' Book! To meet my mentor was a great moment for me; I hereby dedicate all my accomplishment to my knowledge guru (teacher) Shri Nagendra Vijay Sir. He still continues to

inspire thousands of readers with his science magazine named 'Safari'. I felt without giving credit to this author, my article is not complete.

Thanks & 73

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The fox hunt where I was the fox – *by Rishab VU3IWN*

In the time when people would be travelling distances to convey messages and waiting for days to get replies for posts, could we imaging that at one day we could speak to people at one end of the world sitting in the other? This made it possible for us to sit in one corner and transmit our voice over the radio waves to another corner. Amateur Radio or the ham radio is the gift of the same invention.

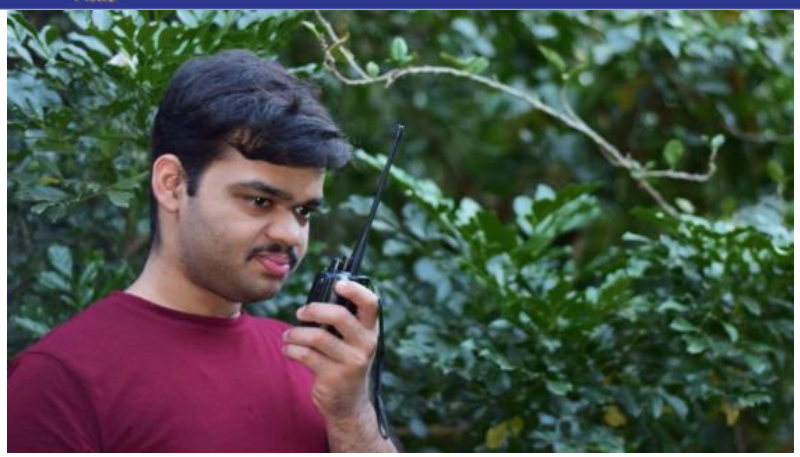
I got to know about the existence of this beautiful hobby from VU2RVW (Rajeevan K V) who is the system analyst at my alma mater. I came to know about this in the year 2017 and I started my research on the same. Finally, in the year 2020, the year of Covid crisis and lockdowns when I was trying to search on ways to apply for a license exam, I reached the website of SIARS (South India Amateur Radio Society) where I found detailed instructions on how to apply for the exam along with the link to Saral Sanchaar, Bharat Kosh and other websites associated with acquiring the golden ticket to the world of radios. I immediately applied and started my wait for the exam. In the due course, I had to learn the morse code but I didn't have an oscillator to practice. Again, I started my search to either purchase or home brew an oscillator for my practice but could not find one. The dates of the exam were finally announced and there was one more challenge on the path. The date of the radio license exam and my college semester end exam clashed and I had to reapply for the exam but this was not that big a challenge to stop me. The urge to get the license was so strong that I reapplied and continued my wait and

the search for an oscillator. I home brewed one using the 555 timer IC but I was not happy with it.

Once again, SIARS came to help by sending me a kit to build an oscillator using an LM386 IC and this was the one I used to begin my practice. On the 2nd of September, I got the hall ticket for the exam. Time was ticking but I knew nothing much on the morse the exam was in the next 13 days, I had the training sessions from my company going on from 9 to 6 followed by assignments. I decided to appear for a restricted grade exam and try for the general grade in a future date. On the day of exam, I met a few other aspirants who had arrived for the exam outside the wireless monitoring station, Mangalore and was excited to meet them on the air soon. The paper went great and was positive that I will be clearing the exam.

On the 29th of September, the results were finally declared and I cleared the restricted grade and my call sign was VU3IWN. This was one of my happiest moments. I immediately applied for a license. The wait was long. It was on the 24th of November that my wait for a license since the past 4 years finally ended. Now, it was time to get myself a radio. I found many different ones on Amazon and other ecommerce websites but which one is the best? Which one is easy to learn for a beginner? I was full of questions. The only name came to my mind was VU2RVW. I sent him an email asking for help and he suggested me to contact VU2SBJ (Srikanth Bhat).

VU2SBJ guided me on the types of radios available and the ones suitable for my use. He is a mentor to me for all my queries and help related to radios and antennas. The day I asked him for help, he offered to send his Alinco DJ-VX50 so that I could get on air the day I got my license. He explained me on how the radio works, how the repeater works, the types of signals and mainly the protocols that we need to follow when we communicate on the frequency. During the evening net on the VU2NIW repeater, was the learning stages for me. I eagerly would participate in the net every day and listen how others speak, the protocols they follow and try to implement the same.



This is myself with my ALINCO DJ-VX50

I was bored of using the radio just to participate in the evening net. I wanted to move a step ahead. This was the time VU2SBJ, my mentor came to my help. He told me about the ¼ wave ground plane antenna and ½ wave dipole antenna. Which I started to work on soon after. On the 10th of January something amazing happened.

The regular repeater, VU2NIW was not working due to some issues so we switched to an alternate repeater on a frequency 100kHz less than the regular repeater. I tried to switch to the other frequency but I was unable to set up the lower shift and hence I was only listening and was not able to transmit. I was on the terrace since I get a better signal there. I was listening on a higher volume and strolling on the back side of the terrace and there is an apartment behind my house. When the net was going on, VU2NYK mentioned he was hearing the net even when he had his rig turned off. He mentioned even his XYL and harmonic too heard the net. He mentioned his QTH and I was positive that it was from my VHF handy. I very badly wanted to say that it is me but was unable to transmit. VU2ABU and VU2SBJ mentioned that in the QTH he mentioned then it must be VU3IWN (Myself, Rishabh) VU2NYK came up to his window and he saw me standing with the VHF handy. He told he would be flashing a torch and waving his hand and I had to wave back to acknowledge. Upon this action, it was confirmed that it is me.

We decided to switch to 145.500 MHz on simplex I immediately switched to the frequency and confirmed that it was me. VU2NYK, VU2ABU and myself had a QSO and confirmed that it is me. I again tried to reset the offset frequency for the alternate repeater. Finally, after some hustle, I was

successful in programming the radio to the alternate repeater. VU2NYK, VU2SBJ, VU2ABU and myself had a QSO and all of us were happy after the fox hunt. I was really happy knowing that I have a ham at such a close proximity, i.e., just behind my house.

This was my first experience of working on simplex mode in contrary to the normal duplex mode using the repeater. Programming the radio, speaking on simplex and all of this was both, a new experience and also a learning means for me. Upon researching what went wrong and why I could not transmit, I found that in a hurry I had changed the offset frequency to 10.000MHz and that on a negative shift went below the ham radio frequency and hence I was not able to transmit. One small accidental mistake and we all had great fun. Everybody in finding out who is the person listening to the net nearby VU2NYK's residence and me trying to alter the settings and tell that it is me.

It was great fun. Speaking on the radio frequency, catching signals from aircrafts and ATC towers at the airport, catching the signals from the International Space Station, EME communication, communication using the QO-100 satellite, fox hunt are some of the activities that developed in me an interest towards the ham radio. Surprisingly when I had been to VU2SBJ's place he too explained me the working of FT8 frequency, the Single Side Band, QO-100 based communication, communication using directional antennas and many more concepts related to HF signals. This has enhanced my urge to get the general grade license as soon as possible.

73 De Rishabh Baliga (VU3IWN)

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