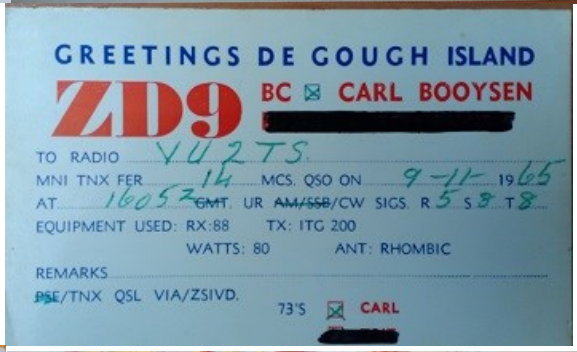
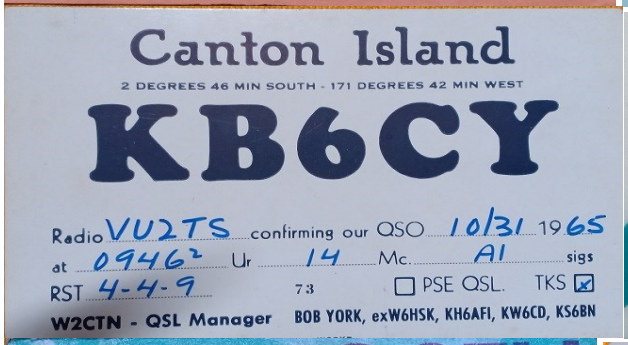
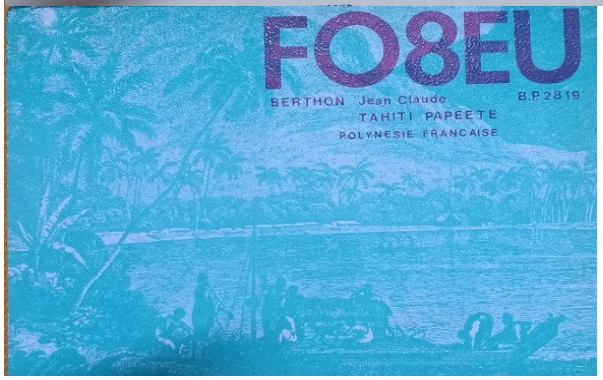
Ham RADIO News

Newsletter of the Amateur Radio Society of India (Indian Affiliate of IARU)

October 2020 Issue







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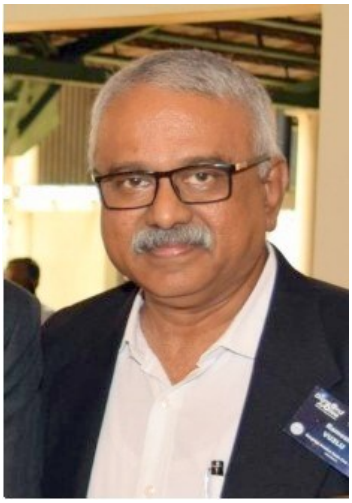


Using Open Source Software for Amateur Radio

When we talk about Open Source Software, the first thing that comes to our mind is the Linux Operating System. Initially developed by Linux Torvalds, a Finnish student, in 1991 as an alternative Unix-like OS to host free and OSS applications, the developer shared the source code of this OS for further development. Linux which took its name after its principal developer has now grown into a robust, secure and a versatile platform not only to host database, application, mail and web servers but also to be used in personal desktops and laptops. Today Linux powers most of the web, many embedded devices and every one of the top 500 supercomputers.

When All Else Fails—Amateur Radio, the Original Open-Source Project Prevails

In 2003, ARRL used "**When All Else Fails - Amateur Radio"** as a motto to promote their Field Day and demonstrate that Amateur Radio and the operators are usually the first to respond in an emergency. In essence, this is the definition of open source. When something is missing in the commercial system, we look towards open source for solutions. Offering free training to a group of budding hams, sharing technical knowledge and equipment building ideas, lending a hand to put up an antenna, volunteering to operate during communication failure in natural disasters are the foundations of the Amateur Radio and Open Source culture.

Let us explore if we can set up and run our shacks completely with "non-proprietary"software and fully integrate our great hobby with the Open Source Software movement.

73, de Ramesh Kumar VU2LU

From the Editor's Desk

This is the age of Webinars. We hear of webinars on a regular basis; not a week passes without an invitation from someone requesting me to join a webinar on some subject or the other. A webinar is an online seminar that turns a presentation into a real-time conversation from anywhere in the world; it allows several participants to engage in online discussions or training events and share audio, documents or slides – no matter where you are located. All you need is an internet connection.

Apparently the pandemic is here to stay. Following safety precautions, all meetings, ham-get-togethers conventions, and several DXpeditions are cancelled, so clubs are organizing weekly webinars on subjects related to electronics and amateur radio. However, while it may be convenient for the participants, webinars can never replace the personal meetings of the pre-Covid period. It's something else when you meet other hams 'in person' and exchange news and information. Let's hope those days return soon.

The new solar cycle #25 started off in December 2019, the solar minimum continues. Predictions are that it may improve by the year 2025. Solar activity has been low since 2017 – and as I am writing this, the sun is blank for about 20 days. This is the deepest solar minimum in a century.

Two-hour 'sprints' are organized by your contest manager, the next one on October 2nd – a public holiday. Participation is low because of poor band conditions; I am sure it will improve in future years.

73 – Stay home and stay safe! Get on the air!

Ganesh VU2TS

VU Amateurs assist authorities in fighting the war against COVID-19

During the last week of March 2020, the Chief Minister of Karnataka set up a COVID 19 WAR ROOM in his office – to create awareness and to mitigate the situation of enormous crisis in the state. He involved the civil defence and ham radio for assistance in this endeavour.

A large team consisting of over 260 hams of The Indian Institute of Hams (VU2IIH), led by Sathyapal VU2FI ensured a seamless flow of information by: (a) Keeping vigil on those infected and ensuring that it does not spread; (b) Collecting information on all arriving from abroad and keeping track of them. (c) Keeping track of those on the 14-day home quarantine by contacting them every day (d) Collecting data on areas affected, families residing there and (e) Using the format provided by the World Health Organization, the ham ops mapped the the regions affected, recorded the measures taken, and monitored the status of implementation.

A special callsign AT2GOK was issued by the WPC for this operation.

L to R: Dr. P.R.S. Chetan, Commander - Civil Defence and Corona Warriors' team, Shri. B.S.Yediyurappa, Hon'ble Chief Minister of Karnataka State, Dr. S.Sathyapal VU2FI, Director – Indian Institute of Hams, Shri. Gautam Shantappa VU3NOU & Shri. Girish Mathenevar, Leading Head Corona warrior team.

The Indian Postal Department, Karnataka Circle deputed OM Aruna, VU3EUD System administer to assist Ham Operations.

The Indian Space Research Organisation (ISRO) deputed OM Mani, VU2WMY to assist the team.

Excellent publicity was given in the Media – newspapers, TV channels and FM Radio stations.

Pune, Maharashtra

Pune Hams' Sunday *TechTalks* on You Tube Live & VU2ETD-R Echolink and VHF Repeater VU2ETD 144.800 Mhz with 600 KHz negative shift*. VU3OUM Mangesh Patil created the tech talks on "U Tube Live" for SWLs.

5th July - Balasubramaniam VU3TBR spoke on 'Digital Modes'

12th July - SWL Aniruddha Kulkarni spoke on 'Long Range Pulse Radar with Antenna Arrays and it's Screen Interpretation'

2nd August - Shanmugham VU2CSM spoke on Popularizing Science using Ham Radio in Schools.

9th August - Sampath VU2YZ spoke on the First 2 meter Repeater in India - VU2RSB of the Repeater Society of Bangalore.

23rd August - Jayu VU2JAU gave a presentation and talk on The Role of Ham Radioin Disaster Communications.

6th Sept - Balasubramanian VU3TBR gave a presentation and demo on 'The next step to Digital Mode – BlueDV (Direct Mode using Digital Dongle with BlueDV)

20th Sept - Joshi VU2BRJ spoke on the History of Belgaum Net

All the programmes were well received by hams and SWLs.

Calling “Sugar Peter”

By Anuj Dutt VU3TQE

I was seven years old. The town was Cooch Behar in West Bengal and it was a Sunday evening.

My father was playing his weekly game of tennis at the local tennis club. I sat on the sidelines and watched. After some time, I got bored and walked towards his white Ambassador – the penultimate symbol for a Government Officer for years to come.

My father’s bodyguard, Gholey, stood near the car and I went and sat in the front seat usually occupied by him. For various reasons I was not allowed to sit in the front. The wireless set (called RT; by the local Police) was on and every two or three minutes there would be some conversation in Bengali and then it would abruptly end.

I looked at Gholey and asked him if I could “pretend play” and hold the handpiece in my hand. He smiled and said “ok” as he had seen me do this many a times before.

I never pressed the PTT button when I played. I picked it up this time and unknowingly (or was it knowingly) pressed the PPT button. I had heard my father speak many a time and he always started by saying, “Sugar Peter here” with **S**ugar **P**eter being his call sign for **S**uperintendent of **P**olice. I started the same way! Immediately there was a response from the other side and Gholey nearly jumped out of his skin. He took the handpiece and quickly asked the voice on the other end to ignore what I had said. The voice on the other end must have been cursing his luck for being on duty on Sunday (I assumed) so he asked Gholey to let me speak! For the next ten minutes I was on the airways courtesy West Bengal Police and was happily answering questions on the school I went to, the food I liked to eat and what I was doing sitting in the car.

This was the early 80s and police forces across the world and in India I assume were heavily dependent on the wireless sets. As my father toured the district and if I was lucky to get an off day from school I would go with him. From crime scenes he would send reports via the RT and it was only some weeks later I sat puzzled watching a constable transmit a short report rapid fire in the form of ‘dots and dashes’. Today, as I sit preparing for the ASOC exam and trying my level best to reach the magic 8WPM – those childhood memories come rushing back convincing me that what I saw then must have been at least 60WPM!

My friendship with the radio continued but in a different avatar when we moved to New Delhi. My grandfather had retired from the Indian Air Force and while in service he had been posted in remote places and his best friend then was his

'Philips Radio'. He would tune into Radio Ceylon or to hear the Binaca Geet Mala program. If I happened to be around I would be given the task of locating the station even though he knew all frequencies by heart! There was no FM then and the Medium Wave transmission was music for all of us. I would laugh when he would extend the aerial and try to get the best position on his bed and the best angle to get the best transmission! I found the whole thing very funny!

My 12th birthday was approaching and my father had an overseas trip coming up. He asked me what I wanted and I requested for a pair of walkie talkies. He was very clear that he would comply with all laws of India and not get any pair which had a forbidden range or frequency. The movie Ghostbusters had just been released and after a few weeks I became the proud owner of a pair of Ghostbuster themed walkie talkies with a princely range of 25 meters. If you lost sight of the other person holding the other walkie talkie you lost the signal as well! Despite all that I was thrilled to bits and became the envy of all neighbourhood children. The fact that the sets ran on 9Volt batteries did put a bit of financial strain on the pocket money as each 9Volt then cost Rs. 20/- per piece!

The fax machine, the pager and the mobile phone age arrived! I was sure my beloved RT of West Bengal changing to Wireless in Delhi would not be able to stand the onslaught. My father was at a field posting in Tripura. His car had a wireless set and his call sign was Sierra 7. The mystery of how the call signs were assigned always puzzled me. Till the mystery was solved for me by the Inspector in Charge of the Wireless wing. He explained that usually the challenge only emerged for visiting dignitaries as officials permanently in an area had call signs allocated on a permanent basis. For visiting dignitaries any fact known about them would contribute in selecting a call sign for them. Hence for a dignitary from Allahabad- was given the call sign "Sangam 1", an officer with preference for a particular brand of tipple was given the call sign "Black Dog" and so on!

Years later while preparing for the ASOC exam and being told VU2 and VU3 and letters following that are randomly allocated took away all my dreams of being called 007, Bahubhali etc over the airways!

From Cooch Behar, many decades ago, to now, it's been a long walk for that little boy who became "Sugar Peter" for all of 5 minutes many years ago.

Here's to a magical hobby and my best wishes to all fellow HAMS! May our tribe grow and prosper!

About the author:

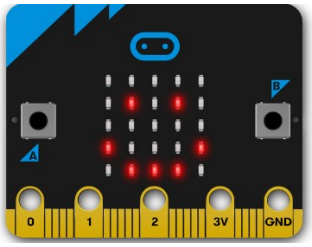
Anuj Dutt is a HR professional. He is a life member of ARSI. He appeared for the ASOC exam in February 2019 (in Bangalore) and on "passing" was allocated the call sign VU3TQE.

JAMBOREE ON THE AIR 2020

Jamboree-on-the-Air, or JOTA, is the largest Scouting event in the world. It is held annually during the third full weekend in October. JOTA uses amateur radio to link Scouts and hams around the world, around the nation, and in your own community. This jamboree requires no travel, other than to a nearby amateur radio operator's ham shack. Many times you can find the hams will come to you by setting up a station at your school or scout camp, or any such convenient place.

This year, the JOTA is on 17th and 18th October but because of the Covid-19 safety precautions to be adhered to, the event may be 'low key'. I invite reports and photos from stations who are QRV.

Convert MICRO BIT to a QRP CW Transceiver



The Micro Bit *(also referred to as BBC Micro Bit)* is an open source hardware ARM-based embedded system designed by the BBC for use in computer education in the UK, available on Amazon.in. There is a video by Stephen G7VFY showing how to convert this into a QRP CW transceiver. Here is the link:

https://youtu.be/aiiqsJZU4Y8

ARISS to celebrate 20 Years of Ham Radio on the International Space Station

NASA is commemorating the milestone with a newly produced infographic highlighting the educational contacts via amateur radio between astronaut crew members aboard the ISS and students. Over its 20 years, ARISS has supported nearly 1,400 scheduled ham radio contacts with schools, student groups, and other organizations.

The FCC issued ham radio call sign NA1SS for ISS operations in 1999. After Expedition 1 arrived on station, some initial tests with ARISS ham radio ground stations and individual hams confirmed the ham gear was working properly. The first ARISS school contact was made with students at Luther Burbank Elementary School in Illinois on December 21, 2000, with Shepherd at the helm of NA1SS on the ISS, and ARISS operations team mentor Charlie Sufana, AJ9N, guiding the operation-on-the-ground.

Read the full story: Amateur Radio on the International Space Station https://www.nasa.gov/mission_pages/station/research/news/iss-20-years-ham-radio-infographic

NASA video of students talking with astronaut Chris Cassidy, KF5KDR in May 2020
https://www.youtube.com/watch?v=1clACXLdDhs

Repeater on the International Space Station

A cross band FM amateur radio repeater with an uplink on 145.990 MHz and downlink on 437.800 MHz was activated on the International Space Station in September. System activation was first observed at 01:02 UTC on September 2. Special operations will continue to be announced. Important to note that the uplink requires a CTCSS tone of 67 Hz.

ARISS is run almost entirely by volunteers, and with the help of generous contributions from ARISS sponsors and individuals. Donations to the ARISS program for next generation hardware developments, operations, education, and administration are welcome — please go to

https://www.ariss.org/donate.html

to contribute to these efforts.

There is a You Tube video describing the repeater:

https://www.youtube.com/watch?v=O4XG_zIeA3A

The cross-band voice repeater aboard the International Space Station was set up in 2017 by the Russian team to help get telemetry from their satellites, activated for amateur use in Sept. 2020

CW Net on 40 meters

The CW net on 7015 KHz has been QRV since a long time. Till end of 1999 it was run by Baby/VU2KJB and others, and since then it is being run by Rajan VU2RJN. Whatever the propagation, you can always hear VU2RJN calling CW ops on 7015 promptly at 7:45 AM and patiently continues till 8:15 AM.

Sad to note that CW is losing its charm these days; as there are not many check-ins on the net. Furthermore, the propagation is poor for the last couple of years, so the attendance is really very poor.

Rajan says "With assistance from Guru VU2GUR (SK), Vittal VU2VIT, Gopi VU2UWP and Ganesh VU2TS et.al, I have been able to carry on all these years".

The CW net is a very useful activity for beginners; they can get practice of actually contacting a CW station and exchanging reports and information. Rajan is always courteous to new comers and adjusts his sending speed to accommodate them. One can improve CW sending/receiving by checking in the net regularly and listening to the other stations. Remember: during an emergency, even SSB and FM may not work well sometimes, but nothing can deter CW traffic! So don't underestimate CW, Hi

There are only two kinds of people in the world: Those who know CW and those who don't.

The Uncertain Future of Ham Radio

In July this year, there was an article in the IEEE Spectrum stating that Software-defined radio and cheap hardware are shaking up our hobby - long associated with engineering, experimenting and communications.

Some of my friends – *non-hams* – visiting my shack have asked me *"What's the big deal? We can communicate with the rest of the world using a smart-phone these days"*. What they don't realize is, with your smartphone, you cannot call a stranger and talk to him and get acquainted with him, learn about just everything under the Sun, exchange QSL cards, and so on. Well, you cannot describe the taste of an apple to someone.

In the early days of ham radio in VU – *during the 'fifties'* – amateurs built their own rigs. Building a superhet receiver was dicey, but there were plenty WWII surplus available, most of them in good working condition, so we were required to build only the transmitters. When I got my ticket, with no electronics background I built my transmitter with a crystal on 7013 KHz and when I didn't hear the signal on my receiver, I found out that it was on 7130 KHz – the band edge was 7100 those days - but that story is for some other day Hi. There were just two or three old timers who had their entire station 'home brewed' – bless them.

Most amateurs were *obliged to* get on the air so that they can talk to others and learn stuff. There was no 'social media' with which one could swap information with others. In fact, just by listening to some of the old timers, we could learn a thing or two about propagation, antennas, and so on.

In fact, ham-radio was not for communications alone, but for learning all aspects of radio-communication, experimentation in electronics and wave propagation, not forgetting science, geography, nature, languages, and cultures of the world, the list goes on.

Look at it this way: if you build a transmitter, how do you know that it is working? You need to make a QSO so that the other guy will give you a report and tell you if there is any distortion in your audio or key-clicks or hum on your CW tone. Needless to mention, one QSO will not do – you need reports from several others from different directions and distances to ensure that all is well with your transmission. This is how we get to 'talking' to people all over the world.

When I contacted another station for the first time – *dx or local* – after exchanging signal reports and name, QTH etc. it was always *"rig here runs 100 watts to a pair*

of 6146 finals, the receiver is a BC348 and the skywire is a half wave dipole about 10 meters high". There was no SSB – it was all on AM or CW - and so the guys on 'phone' used to add stuff like *"the microphone is dynamic" or "I am using a 'Shure' microphone".* The 'Shure' microphone was the Rolls Royce of microphones – so if you were using one, you needed to mention it - like you were making a statement, Hi.

Quite often we heard *"Thanks for the 5 by 7 – if you can standby one, I shall switch to antenna No.2 – please let me know if there is any improvement – QRX one".* This is the kind of experimenting one would expect with old timers. The average 'rapid' QSO lasted ten minutes or so - the shortest QSO those days.

Those days, we could update our stations only by communicating with others as we didn't have fancy measuring instruments, antenna tuners or SWR meters. To use an aviation term – *we used to manage our shacks by the seat of our pants.*

Rag-chewing was common. I can never forget the thousands of rag-chews I had with stations from ZS, 5R, VK, ZL, and from Europe and USA. My favourite mode has always been CW – and the longest QSO I had was with Denver 4S7DA on 40 meters on Sunday morning – the rag-chew lasted for about 90 minutes. I used to chew-the-rag with a station from W5 call area – I forget the callsign but I remember the name – 'Rod'. Every day by about 1230Z he was there on 14005 looking for me as I got back from work. He even nominated me as 'godfather' to his son! And then there was PY2CQ who was a regular on 20 meters eager for a rag chew. I can tell you hundreds of stories. They were glorious days!

The only time I resorted to the '599, 73' style of QSOs was when there was a 'pile up'. You see, when you know there are a hundred stations calling you, you do not chew the rag with one station; it's not fair! Because even today VU is kinda rare for the average U.S. and South American amateurs mainly because there are not many CW ops QRV. If you contact ten stateside stations today, chances are, one of them will tell you that you are his "first VU QSO". So when conditions were good *(that was quite often those days)* I heard a sound like bees buzzing in response to my CQ call. All they want is a contact with a VU station. There were times when I work 500 to 600 stations in a night! That's what is known as 'red-eye' Dxing. On 80 meters once, I was on 3505 and guys were calling me all over the band, up to 3525 so all I had to do was to twirl the tuning knob and pick a station.

Just imagine – if the exchange of information and the discussions – technical and theoretical – that is carried on these days using 'Whattsapp' and other message apps by ham-radio groups were on 40 meters, how awesome it would be! Well, it

used to be that way in the olden days. On Sunday mornings, the 40 meter band used to be 'full house' from 7 to 7.1000 till about 10 AM.

As an old timer *(VU2TS since 1965)* I find it strange that guys take the trouble to obtain a ham licence and then get on 'whattsapp' to communicate with other hams!! Ah!

Furthermore, these days, guys don't need to build or purchase a rig or put up an antenna. Once a callsign is obtained, 'Echolink' on the mobile phone permits one to have QSOs with the rest of the world, or else there is 'Ham sphere' - for working DX any time of the day or night. Seriously, just where are we heading?

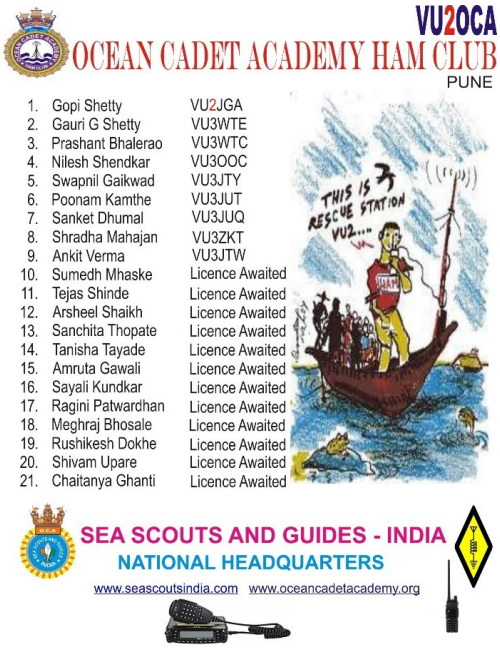
This is like a mountain-climber telling his friends "Let's use a helicopter to get to the top of the mountain"

Ganesh/VU2TS

Sea Scouts India

Sea Scouts are members of the international Scouts movement, with a particular emphasis on boating and water-based activities. These activities can be on the sea, rivers or lakes. Sea Scouts provide a chance to sail, cruise on boats, learn navigation, learn how to work on engines and compete in regattas.

Sea Scouts India runs a club in Pune – **The Ocean Cadet Academy Ham Club.** Congratulations to the members on having obtained a callsign **VU2OCA.**



HS1ØA – King of Thailand

Thailand is reported to be the country with the world's third largest population of radio amateurs — a total of 101,763 as of last February, (slightly fewer than California's 106,000 Amateur Radio licensees). Only the US and Japan outrank Thailand in terms of the number of radio amateurs.

Thailand's late King, Bhumibol Adulyadej, was **HS1A**, and was the patron of the Royal Amateur Society of Thailand, and inspired Amateur Radio activity in his nation. He became SK in 2016.

The present king and patron, **His Majesty King Vajiralongkorn** recently received his callsign **HS1ØA**

Photo shows Thailand's communications regulator, the NBTC Secretariat, represented by General Sukit Khamasundara, and the Radio Amateur Society of Thailand (RAST) under the Royal Patronage of His Majesty the King (RAST), led by its President, Jakkree Hantongkom **HS1FVL** and accompanied by committee members of the society, at the ceremony to present an advanced class amateur radio licence and the callsign HS10A to His Majesty at Dusit Palace, Bangkok on September 24, 2020.

OFFICE BEARERS

PRESIDENT

Ramesh Kumar K G VU2LU
Care of Linux Learning Centre Pvt. Ltd.
635, 6th Main, Hanumanthanagar
Bengaluru KA 560019
e-mail: president@arsi.info

VICE PRESIDENT

Saravana G VU2ETS
364. 6th Cross / Kamakshi Hospital Road
Kuvempunagar, Mysuru KA 570009
e-mail : vicepresident@arsi.info

SECRETARY

Govind Girimaji VU2GGM
36, Sneha Colony
Chikkallasandra, Bengaluru KA 560061
e-mail: secretary@arsi.info

TREASURER

Krishna Kumar R VU3UNO
466, 19th Main / 36th Cross
4-T Block Jayanagar
Bengaluru KA 560041
e-mail: treasurer@arsi.info

EDITOR

Ganesh T S VU2TS
Watapi, B R Hills
Karnataka KA 561441
e-mail: editor@arsi.info

QSL MANAGER

Ramesh Kumar K G VU2LU
Care of Linux Learning Centre Pvt. Ltd.
635, 6th Main, Hanumanthanagar
Bengaluru KA 560019
e-mail: qslburo@arsi.info

Monitoring Systems Co-Ordinator

Sanil M.Deep VU2SIO
"Daylight" 23/1862, Kannanchery Road,
Kozhikode KE 673003

Contests and Awards Manager

Prakash (Kash) Srinivas VU2IBI
"Vauhini" 61, 11th Cross Indiranagar,
Bengaluru, KA 560038

The address of the Society to which all correspondence is to be mailed:

Ramesh Kumar K G VU2LU
Care of Linux Learning Centre Pvt. Ltd.
635, 6th Main, Hanumanthanagar
Bengaluru KA 560019