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## DISASTER COMMUNICATION



From Left to right VU2HRJ, VU2OHM, VU2BNP District Collector Mr. Gagandeep Singh Bedi I.A.S., VU2GDX Mr. Yadev I.A.S VUWMY VU2RMZ



SWL VU2RMZ VU2WMY VU2BNP VU2GDX VU2OHM



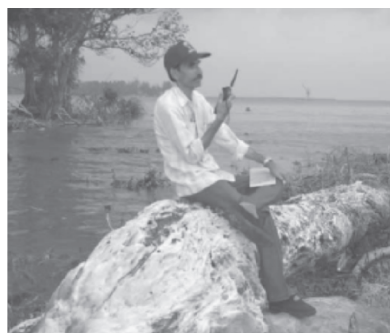
VU2ARC



Shri Pravin Valera, Mission Leader



GIAR TEAM



K.K.Patel - VU3IKK, Operating form Jetty



Mr.S.Ram Mohan, VU2MYH operating Amateur Radio station at Mus Jetty, Carnicobar Mr.D.V.R.K.Murthy, VU2DVO is also seen.



VU3RSB,

VU3DVS

VU2RBI

VU2DBP

VU2MYH

VU3RSB OPERATING VU4NRO



Mrs. Bharathi VU2RBI operating from lawn outside Hotel Sinclairs for emergency communications.



Satish & Vimal

Kalpakkam

VU2INA

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HAM

# RADIO

NEWS

Jan - March 2005

Vol. XI No. 1

The Journal of Amateur Radio Society of India (Member of IARU)

Price: Re.1

"AMATEUR RADIO - A NATIONAL RESOURCE"



HAM RADIO

To The Rescue

VU4 Dxpedition

Unity Is The Motto





EYEBALL MEET  
IN MAHABALIPURAM



EYEBALL MEET  
IN MAHABALIPURAM



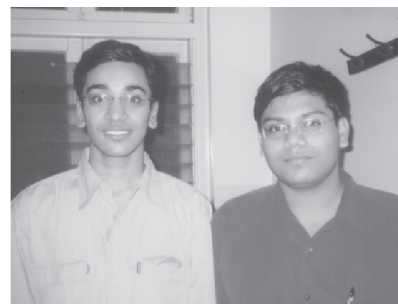
HAMFEST - MUMBAI



VU2SNM, VU2RCR, VU2SWS



HAMS FROM BANGLADESH WITH  
VU2BOO & VU3BAO



SWLS from IIT, KANPUR



HAMFEST ORGANISERS



DISASTER MANAGEMENT MEETING  
WITH MINISTRY OF HOME AFFAIRS



QUIZ CONTEST

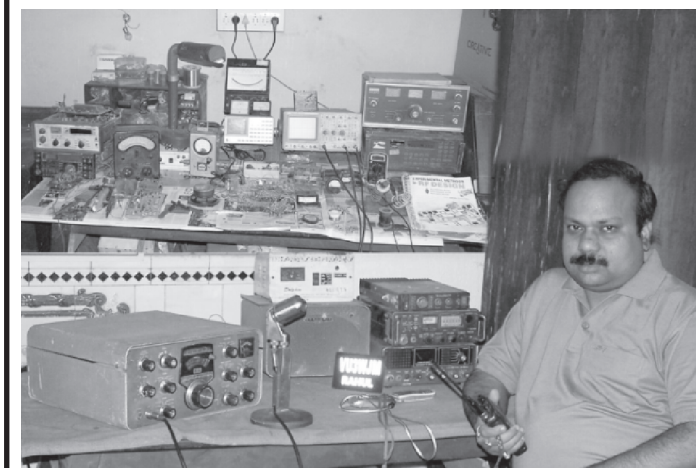
## IIT KANPUR HAMFEST



VU2BGI briefing Foxhunt



VU3FUN / VU2UKR / VU3WJM / VU2BGI



VU3WJM IN HIS SHACK



SAGAR ISLAND EXPEDITION

## FOXHUNT IN PUNE



VU2MUE AT BHIMTAL



HAMS IN GOA

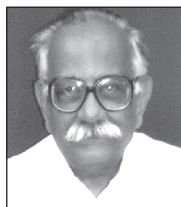


# HAM

# The Journal of Amateur Radio Society of India (Member of IARU)

[illegible]

## PRESIDENT'S REPORT



Dear All,

I have great pleasure in announcing that ARSI is going through a change in priority of its activities. Many decisions have been taken at the AGM. Only call sign holders will be entitled for membership. This decision does not apply to existing non-call sign members and patrons. This is as per the amendments approved in the AGM. The idea behind this is to encourage student and associate members to patronize the local clubs, who are in much better position to conduct classes and arrange for examinations etc. We are also requesting all amateur clubs to affiliate with ARSI.

ARSI should and will concentrate on liaison with WPC, Government and International agencies. Activities to be taken up in near future are- ARSI sponsored DX expedition to Lakshadweep (negotiations already initiated). ARSI has requested some MPs sympathetic to amateur radio to take up our case in the parliament, requesting the government to simplify the rules and regulations governing amateur radio operations so that it will be easier to get the license.

We are also planning to setup an ARSI club station in Bangalore. This should be operational within this year.

By nominating Arasu (VU2UR) as coordinator, awards, we plan to reactivate old awards and where possible to initiate new ones.

By nominating Ajoy (VU2JHM) as disaster communication coordinator, we will be actively involved in these activities. OM Ajoy, has already represented ARSI at the disaster communication committee organized by the Ministry of Home Affairs, Govt. of India, on 6<sup>th</sup> of December 2004. Development in this subject will be actively pursued. Negotiations also begun with Indian Red Cross Society for coordination with them for disaster communication, as it happens in other countries.

In the Mumbai Hamfest, the need for ARSI to take up the role of a parent body was recognized and various suggestions were made by all present. We plan to work on all the suggestions and take measures to make ARSI a strong body.

I wish all of you Happy Hamming,73

Chandru

## THE EDITOR SPEAKS:



I hope the beginning of 2005 was good for you inspite of the Tsunami wreaking havoc in south India. Once again Hamradio was in the forefront and in the news for being a great communication tool during emergencies. Hams suddenly became the darlings of the media and made all take notice, including the government. I would term it as a "ripple effect", that the central government is pulling all the stops to have a disaster management team organized which includes hams as well. ARSI hopes that the effort is sincere and bears fruit.

The Hamfest which took place during Christmas in Mumbai didn't have the participation expected, but nevertheless provided ARSI a platform to interact with its members. Many suggestions were made and hopefully, the governing council will act on them.

Band conditions have been very erratic with the lower bands being the only dependent ones for some action. A few days ago I worked a station in Somalia who told me that very soon there will be YL station from Somalia on air!!! This is excellent news mainly because it is a result of determination on the part of the YLs coming from a society which doesn't allow women any status.

The YLRL meeting is scheduled for August in the USA and I hope to attend as I am a member. Come June, I will be qsyng to the USA to be with my harmonic and his xyl in Texas. Once again I shall spend time with the hams in USA and Canada and it will be good to meet old friends again.

This issue contains many reports of the wonderful role played by hams during the earthquake and Tsunami. ARSI salutes this yeoman service and all the unsung heroes. The expedition to VU4 by the NIAR led by VU2RBI, put India back on the favourite list of countries to be worked and many hams felt that they could now die in peace, as they have worked the most elusive dx! I hope after this our government makes restricted areas in our country more accessible.

Wishing all of you a very pleasant time in the oncoming summer, and till we meet again, have a great time in the band!!!

73

Sarla

### IMPORT DUTY ON AMATEUR RADIO EQUIPMENTS AS PER NEW BUDGET

As per new budget, following are the Import duty structure on Amateur Radio Equipments effective 01.03.2005 Classification No. 85252016

Description : Amateur Radio Equipment

Customs duty : NIL - as per Customs Notification No.24/01.03.2005

CVD : 16% EDU.CESS(Central excise) : 2% on 16% ( 0.320) EDU.CESS(Customs): 2% on 16% + 2% (16.320) TOTAL : 16.646%

According to above, a ham need not obtain a WPC permit or exemption certificate. There is no need to produce your Amateur Radio Operators licence while clearance at Customs Clearance HOWEVER; The earlier system of obtaining an Import permit from WPC is also in existence. According to Customs Notification No.21/2002 Sl.No.283 List.35 condition No.60 the rate of duty will be CUSTOMS DUTY 5% CVD 16% + 2% edu CESS & + 2% EDUCESS ON OVER ALL DUTY - this is confusing and contradictory. Condition No.60 says that: 1. Obtain WPC permit.2. Total CIF Value Import should not exceed Rs.75,000/= under this notification. 3. Import of parts should not exceed Rs.1000/=



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**The current address of the society is**

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### PAYMENT INSTRUCTIONS

All payments to be made by draft in the name of ARSI payable in Bangalore. Money Order can be sent to the above address. No payments by cheques please.

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Please send any submissions to arsimail@vsnl.net  
73 Raj VU2ZAP Moderator ARSI newsgroup

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**Ph. : 011-23355441. Fax : 011-2371 6111**

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Membership	Admission	Annual
Category	Fees(Rs)	Fees(Rs)
Patron	15000	Nil
Life* (For existing		
Corporate member)	2250	Nil
Life *	2450	Nil
Corporate (Individual with		
Valid Amateur Licence)	50	150
Corporate (Club, Society		
or Institution with Licence)	100	200
Associate (Individual, no		
Licence required)	50	75
Associate (Club, Society or		
Institution without Licence)	100	200
Student Member	20	30

\*Senior citizens ,i.e, those above 65 yrs, can become life members by paying Rs.1000 only, instead of 2250(1200/-for NEW senior non members instead of 2450/-)YLs will be entitled to this reduced rate after they reach 60 yrs.

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## COVER STORY

VU4 Dxpediton 2004 A Challenging activity - By S.Ram Mohan, VU2MYH

Promoting Amateur Radio activity in India is a challenging task for even the most experienced and influential people who worked for this cause for generations. Repeated attempts were made by several hams in India and abroad for permission to operate from Andaman and Nicobar Islands since the last of such activity in 1987. We are proud that NIAR could achieve this goal with repeated success. Mr. S.Suri, VU2MY, Founder and Chairman National Institute of Amateur Radio had the leadership skills and courage to pull off an unrealistic and impossible task of securing permission from Government of India for a team of 5 hams with Mrs. Bharati VU2RBI as team leader to operate from Andaman and Nicobar islands. "Anything is possible and Everything is Impossible" in India, these words of Mr. S.Suri VU2MY echo in every office briefings. His words were so true as obtaining a permission for conducting any dxpedition activity in VU4 was an impossible task until the moment it arrived. Mrs. Bharathi VU2RBI used every possible influence to convince decision-making authorities to get an approval on her application supported by NIAR and over 200 individuals and institutions worldwide, sending letters to Government of India recommending her dxpedition activity. Support given by the Department of Information Technology, Government of India to NIAR through a project to establish 10 Amateur Radio centers all over the country earlier during the year provided us with the latest state of the art transceivers, power supply units, antennas, Laptop, computers and other accessories that helped us to mount the VU4 dxpedition within short notice, in all modes and help in the subsequent Earthquake/Tsunami relief operations. We were supported in this impossible task by Mrs. Sonia Gandhi, VU2SON, Chairperson United Progressive Alliance, Mr. Dayanidhi Maran VU2DMK Hon'ble Minister for Communications and Information Technology, Mr. Shakeel Ahmed, Hon'ble Minister of State for Communication and Information Technology, Mr. Shivraj Patil, Hon'ble Minister of Home, Mr. Pranab Mukharjee, Hon'ble Minister of Defense, Mr. Brijesh Kumar, Secretary Department of Information Technology, Govt. of India and Mr. P.K.Garg, Wireless Advisor to Govt. of India

When the official intimation from Ministry of Communication and Information arrived, we too were pleasantly surprised! Pure joy was boundless that Mrs. Bharathi VU2RBI (as Team Leader), Mr. D.N.Prasad VU2DBP, Mr.D.Varun Sastry VU3DVS, Mr.R.Sarath Babu, VU3RSB and Mr. S.Ram Mohan, VU2MYH were issued permission to conduct the Dxpediton from 3rd to 31st December 2004.. Now the shocking reality, was that there was just 2 weeks to prepare for an expedition which was on the top of the most wanted list! Immediately we prepared the plan of operation, listed necessary equipment, Antennas, Computers and associated Ham gear required. NIAR's disaster communication kits with fully functional HF, VHF, Power Supply unit and DC cord readily packed, came in very handy. We brought down the 4el 3band Yagi at NIAR for 20,15 and 10 meter bands, Inverted 'V' for 40,20 meters, 2 nos. of Hi gain Vertical antennas for 40,20,15,10 Meter bands, Inverted 'V' for

12, 17 Meter Bands and separate antennas for 160 and 80 Meter bands, including 4 Linear Amplifiers were packed and Bharathi brought her own 7 element 5 band Beam for her station. It took 8 persons and 5 days to test each and every equipment, pack the same in appropriate boxes and suitcases, the entire equipment weighing 660 Kilos. Second and most important task was finding economical hotels in good locations and since 17 years had passed since the last expedition, we had no clue! After making several phone calls and searching the internet, we decided on Hotel Sinclairs for Bharathi and her family, the rest decided to take rental accommodation for a month and operate the station from Dr.B.R.Ambedkar Polytechnic in Port Blair. A friend Mr. Ellyas, and his family members living in Port Blair, helped us in identifying a rental house and other information about food, local culture, local travel and topography of the Islands. He informed us that it would be difficult even to visit Nicobars Islands without valid 'Tribal Pass' and proper travel permit from the local administration. As we found it difficult to seek these permissions given the time limit of our operation, the idea to operate from Nicobars Islands was abandoned. Pooling Funds was tough task as NIAR had already committed program running for a year for other projects. I shelled out my saving for the year, though it could only count for one way ticket by train from Hyderabad to Port Blair by train/sea for 4 members of our team. NIAR sponsored the return tickets, logistics, Local travel and other incidentals. Our Santa Claus, Dr. Charles Harpole, K4VUD gave us ideas/ information and assured us that other Dx associations would like to be sponsors. He did an excellent job scouting on our behalf, which helped us bring Bharathi and her family by air just in time for launching the operation.

### NIAR sponsored equipment YAESU Transceivers:

FT 757 GX - II - HF Transceiver, FP 757 HD - Power Supply, FL7000 - Linear Amplifier, FT 411 E Handheld, FC-757 AT - Antenna Tuner, FC 700 -Antenna Tuner ICOM Antennas: Icom AH-4 Antenna Tuner, AH-2B Mobile Antenna ICOM Transceivers: ICOM 706 MK-IIIG - HF/VHF/UHF Transceiver, ICOM 208H - VHF/UHF Base Station Transceiver, ICOM T90A - VHF/UHF Handheld Transceiver, Icom PS55 - Power Supply, Linear Power Supply (30 A / 12 V) Indian Make Antennas donated by Mr.Frank, DL4KQ : Cushcraft - A3 WS, A 103, SteppIR Yagi 5 Band Create - 318 Jr Tri Band Beam (14/21/28), Create 7 Element Five Band Beam (14/18/21/24/28), Create CY 153 Mono Band Beam (21), Inverted V - All Band Antennas, Telex Hygain 14AVQ/WB-S-Vertical Antenna (10 through 40 meters), VHF/UHF Ground Plane, VHF Magmount + 50 Mhz, 1500 Meters of Coaxial Cables, other essentials like HI-MOUND PADDLE KEY/STRAIGHT KEY, CW Software, Quick Charges -YAESU NC 37, Slow Charger-ICOM BC 110 Digital Equipment: Laptops - Compaq Pressario, NIAR Digital Interface, MFJ 1275 - Digital Interface, Panasonic Digital Camera, Creative Digital Web Camera, Computer Printer Epson Colour Plus C41SX, Iomega



External CD Writer. The entire luggage traveled along with us by sea to Port Blair. It was just the grace of God and his decision that the Dxpediton team embarked on the Ship M.V.Akbar leaving shores of Chennai on 29 th December that reached Port Blair on 2 st December 2004 afternoon. Loading and Unloading of material at different places, managing the right kind of transport at each location just in time to reach the next destination was an act of jugglery, tense moments, physical and mental strain. I enjoyed complete support and cooperation from team members in the entire operation. Once on the board ship, we slept for hours to recoup our energies for upcoming Dxpediton. It gave us enough time for us to study the experiences of other successful dxpeditons and read tips from the experts, we jotted plans on initial frequencies and suitably unpacked the equipment at appropriate location. We were particularly impressed with "T33C Banaba Island Dx-pediton" details made available by Frank DL4KQ. Surprisingly, we found Mr. Raju, Radio officer onboard was a Ham enthusiast waiting for license, showed us his office and shared his experiences. Jose VU2JOS did an excellent job packing entire material in each box, every package was marked and name tagged for each operator. We prepared short notes on whose station will be installed first and hours of operation, frequency band and modes. Mr. Prasad VU2DBP arrived just in time to welcome us with a Military truck to carry the entire luggage. Mr. N.Dhilleswar Rao, Chief Port Administrator made arrangements for handling our equipment.

**A Dream becomes Reality:** After meeting the Chief Secretary, Andaman and Nicobar and the Principal Mr Sharma of the Polytechnic, which took much of our time, we could only manage to erect an Inverted 'V' antenna in pitch darkness on top of a workshop building. A table and a chair, and electrical point was arranged under the shade of a parking lot in an open area adjoining the road, just in time before midnight and this was Sarath's location for operation. He was on the air and we were thrilled by the response as he gave out a call 'CQ CQ CQ DE VU4NRO VU4NRO VU4NRO'. The reply was instantaneous and the first contact was made with Mr. Suri VU2MY, Chairman, NIAR, after which I made a contact with my mother VU2MYL and our club station VU2NRO/VU2JOS who were waiting eagerly for us on the band for the launch. A memorable moment in life and a sense of accomplishment as we made our first contact. There was huge pileup on the band in seconds. I handed over the control and station to Sarath, who operated non stop the next 10 hours! Mrs. Bharathi VU4RBI began her marathon of radio contacts as the clock struck 00:01 am on 3 rd December and went on and on. Mr. Prasad VU2DBP and young Varun VU3DVS stood by in support and had to wait till Bharathi exhausted her energies. She was glued to the station right from the word GO...even breakfast, lunch, dinners were served to her there! Incidentally, I may mention here that our armed forces were very keen to help this Dxpediton. Even Lt.Gen. Devender Kumar, Chief of Signals branch of Army HQ is a keen Amateur enthusiast and wished the team all success. The Military provided Bharathi an excellent mast for her 7 el. beam antenna and two of their officers in support of her operations. Mr. Prasad had done an excellent job of assembling and Bharathi made over 18,000 contacts with the same antenna in the next 23 days

of her operations. Sarath Babu VU3RSB operated the station VU4NRO. We raised a Verticle antenna for Prasad & Varun and another Inverted 'V' with an Antenna Tuner coupled to a FT 757 GX-II transceiver at Science Centre for their operation. The 6 band SteppIR antenna donated by Mr. Frank, DL4KQ was also erected at the same location later. The youngest ham in our group, was Bharathi's son Varun Satry VU3DVS, 15 years, studying in Std XI.

Sarath operated first two days and nights from the shade of a parking lot braving extreme temperatures and we had to take him to doctor on the third day. After examining and finding nothing serious and with proper medication for couple of days he was back on air. In the meanwhile, college authorities had provided a room on the 3rd floor of the Boys hostel. The real challenge was putting an antenna on top of Hostel building. A WARC band antenna and Inverted 'V' for 20,40,15,12 meter band were erected for Sarath at his location. I operated with Inverted V for 80 M, Vertical for 40 M band mostly during night time, Tri band beam for 20,15,10 M bands on PSK, CW and Voice modes.

Visiting Friends reassured the team. Charles Harpole K4VUD visited us during our dxpediton as a visitor to the islands took several Photographs, Video of dxpediton. He gave some valuable tips to Sarath on radio operation and modified Bharathi's beam antenna which immediately improved the performance levels and logged more contacts than usual. Mr. Suri VU2MY, Chairman, NIAR visited the Islands to reassure his support, his visit gave us an excellent opportunity to conduct lecture cum demonstrations on Ham Radio at Science Centre, All India Radio etc. During the occasion, local print and electronic media highlighted these events along with our dxpediton details on front page.

Though we had to switch to emergency mode and stop the expedition activity after the Tsunami and earthquake struck the Andamans, we hope to once again activate VU4 and complete the unfinished task from these Islands soon. The dxpediton team would like to return to these Islands once again to complete the unfinished task and also look for new avenues to operate from Lakshadweep Islands too, which tops in the list of most wanted dxpediton stations. I thank all Hams who have sent their contributions particularly the DERA, NCDX foundation, International DX Association, German DX foundation, Danish DX Group, GM DX Group UK, Swiss DX group, EU DX Club, CDXC UK, Charles Harpole K4VUD, Dr. Markus Dornach DL9RCF, Mr. Bob Rylatt G3VXJ, Mr. Gerald J Chouinard K5YAA, Mr. Frank, DL4KQ, Mr. Lester ZL4PO NZDXF, Mr. Austin Condon VK5WO, Mr. Fernando Fernandez Martin EA8AK, Member EU Parliament and several others. Your support has ensured our stay in Port Blair beyond 15 th December and made VU4 2004 Dxpediton a successful activity. My special thanks to Frank DL4KQ who provided us very good antennas (SteppIR and Cushcraft A3WS, A103) shipped all the way from USA. I may have missed to quote many others that is un-intentional. We thank every individual for his or her valuable contribution in support of Amateur Radio activity.



## HOME BREW : Fractal Antennas Characteristics And Design Techniques

by- Abhinav Agarwal, Vibhor Jain VU2IIT, Ham Club, IIT Kanpur  
<http://students.iitk.ac.in/hamclub/>

Antenna construction is one of the biggest challenges for an amateur ham. A home brewer can easily understand the intricacies involved in designing a robust and accurate antenna. The construction of the massive antenna and its supporting structure always pose a brain tickling problem. To reduce the size of antenna, fractal approach is now being used to great success. We have also come up with a fractal based design of an antenna which can be used in ham radio applications owing to its characteristic properties.

### What is a fractal?

A typical definition of a fractal goes as follows. It is a geometric object which can be divided into parts, each of which is similar to the original object. Fractals are said to possess infinite detail, and are generally self-similar and independent of scale. In many cases a fractal can be generated by a repeating pattern, typically a recursive or iterative process.

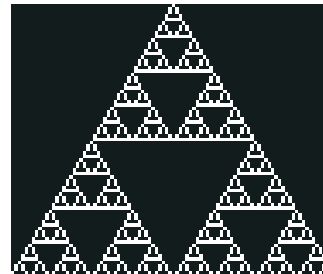


Fig 1:  
A typical  
Fractal Shape

### Applications of Fractals

Fractals of many kinds were originally studied as mathematical objects. However in recent times they have found uses in varied fields. They describe many situations which cannot be explained easily by classical geometry, and have often been applied in science, technology, and computer-generated art. Texture Approximation, where real life surfaces are approximated by fractal geometries is also a major area. So it is but natural that fractals would be applied to the design of antennas too. One of the main advantages of having a fractal antenna is that the size of the antenna gets highly compressed.

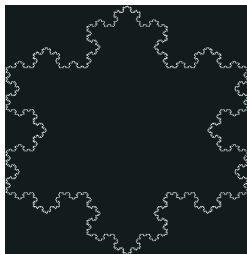


Fig 2: Koch Fractal

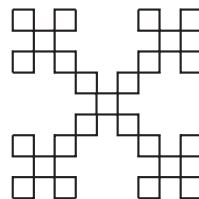


Fig 3:  
Minkowski Fractal

### Various Types of Fractal Antennas

The two popular types of Fractal antennas are: Koch and Minkowski Fractal. However the construction of Koch Fractal is quite complex and is only suited for Printed Circuit Board fabrication. Minkowski, on the other hand has other problems. There are a number of isolated loops in the structure which lead to shorting between the segments.

### Proposed Antenna Design Modified Minkowski

As can be seen above, through a minor modification in the generator element the problem of small loops has been removed. This design also has the advantage of much easier construction

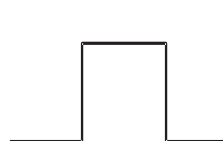


Fig 4.1: I Generator  
element

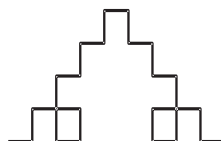


Fig 4.2: II Generator  
of Minkowski

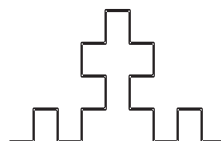


Fig 4.3: II Generator of  
Modified Minkowski

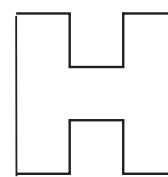


Fig 5.1: I Gen  
Modified  
Minkowski

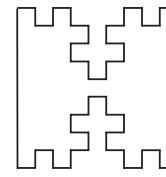


Fig 5.2: II Gen  
Modified  
Minkowski

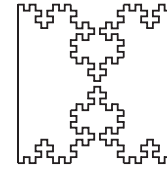


Fig 5.3: III Gen  
Modified  
Minkowski

### Simulated characteristics of the Proposed II generation Mod Minkowski Antenna

☞ Straight Side Length = 35.4 cms	☞ Resonant Frequency = 145 Mhz
☞ Radiation Resistance = 27.21 ohms	☞ Gain of Antenna = 2.69 db
☞ SWR = 1.84	☞ Reflection Coefficient = -10.6 db

### **Fabrication Setup**

Here we describe the procedure followed by us in the construction of II generation Modified Minkowski Fractal Antenna for VHF band, resonant at 145 MHz.

**Step 1 :** We made a solid frame for our antenna on a plywood. First we made an actual size drawing of the antenna on paper and stuck this drawing onto the plywood.

**Step 2 :** Next we drove nails at each corner of the drawing so that the wires could be easily wound about them. Care was taken to account for the wire and nail thickness, as even a few mm difference can add up to shift the resonant frequency by 2-3 MHz !

**Step 3 :** Now the wire was wound onto the frame. Special attention was paid while winding around corners, so that the wire had the right curvature.

**Step 4 :** Next the wire was removed carefully from the frame and mounted on a suitable structure. For our testing purposes, we used Styrofoam.

### **Simulation Software NEC2**

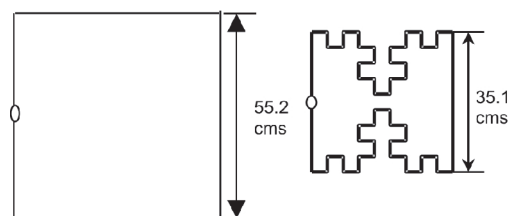
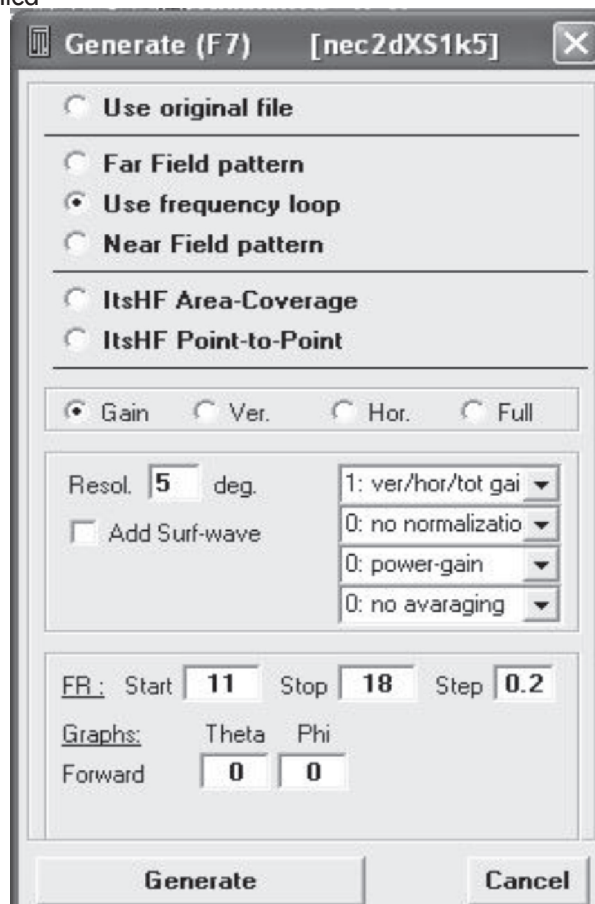
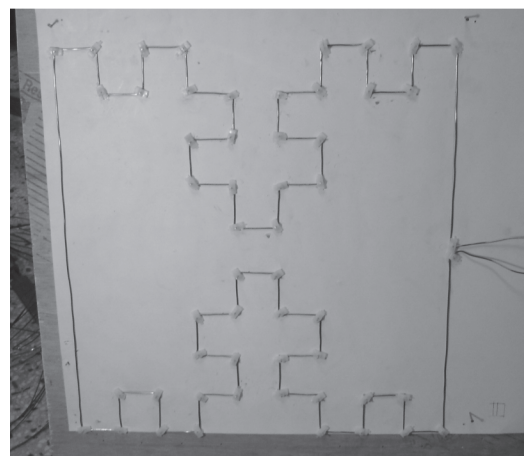
For simulating the design of our antenna, we used the Method of Moments simulation software Numerical Electromagnetics Code (NEC2). The major advantage of this software is the ease with which one can understand and use it. The software is completely GUI based and doesn't expect one to have any prior programming skills. It is a free ware available at the website

[http://www.si-list.org/NEC\\_Archives/swindex.html](http://www.si-list.org/NEC_Archives/swindex.html) from where one can download the file "4nec2v42.zip". NEC2 software uses Numerical Methods for generating the radiation characteristics of any antenna and the simulated results are in close proximity to the theoretical results. One can use the software to study the radiation pattern, gain, resonant frequency etc of almost any antenna design. One can also simulate the effect of nearby trees and roof tops on the properties of the antenna.

Now some details of the software. When we click on the "Generate NEC2 output" option, we get a window as shown in Figure 6. This window displays options like Far field Pattern and Use Frequency Loop etc. Far field pattern is used to find the radiation pattern of the antenna in the far field. Mathematically, a point in space can be called in far field with respect to the antenna if  $r \gg \lambda$ . We have the options like calculating the far field pattern for the horizontal or the vertical direction and also for a specified value of phi and theta angles. "Use Frequency Loop" option is used to study the input impedance, gain and SWR of the given antenna. In this option we can set the frequency range for which we need to observe the characteristics of the antenna.

### **Simulated and Measured Results**

Using the NEC2 software, we simulated our design of Reduced Modified Minkowski for resonance at around 145MHz. A comparison of sizes and geometries of the two antennas can be seen from figure 7. As the figure shows, the area occupied by the fractal loop is 60% less compared to the standard square loop. In figure 8, we show the radiation pattern details of the fractal and the standard square loop antennas. As can be observed from the figure, the simulated and the measured values of the radiation intensity of the fractal antenna match closely those of the standard quad loop. Similarly in Figure 9, we show the input reactance and the input resistance curves as a function of frequency. As can be observed from the graphs, the input resistance of the standard loop is about five times that of the square loop but the reactance plot is quite similar. As for the simulated and the measured values of the fractal loop, they show close similarity in their values.



**Fig 7: Relative sizes of the two loops**



### Finally we summarize the results of our findings:

Fractal Antenna is much smaller in size as compared to a standard square loop (40% in area) Input Impedance of the fractal is about 20% as compared to standard square loop Radiation patterns and the gains of the two loops are almost similar Fractal loop has a smaller Bandwidth as compared to square loop.

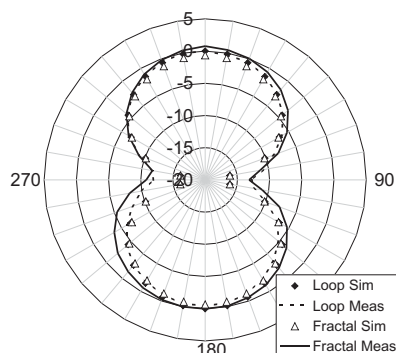


Fig 8: Radiation patterns of standard and fractal loop antennas

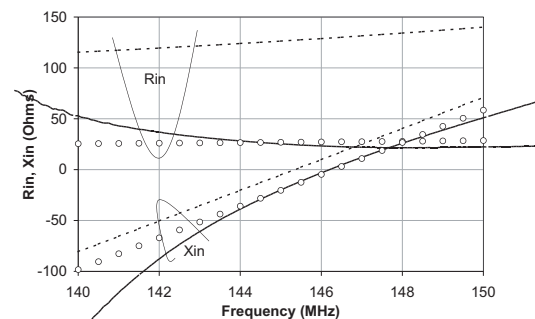


Fig 9: Input resistance and reactance of standard loop antenna (simulated: ---) and fractal antenna (simulated: o o o o, measured: —)

## INTERNATIONAL NEWS

**SOUTH AFRICA GOES CODE FREE :** Big changes have taken place in the ham radio licensing structure in South Africa: South Africa has gone entry level code free. This, with an announcement that as of February 4th passing a Morse exam is no longer a requirement for a full Zed-S license. According to a press release from the South African Radio League, a technical examination following the South African HARC Syllabus has become the basic requirement for entry to the hobby. Successful candidates are now given a call sign with a Zed-R prefix along with limited High Frequency privileges. Zed-R license holders have full access to the 160, 80 and 40 meter bands and limited use of frequencies on 20, 15 and 10 meters. Also included is full access to all South African VHF and UHF ham radio spectrum. To upgrade to a full Zed-S licence, the Zed-R license holder has to achieve one of a number of electives. The decision to go no code makes South Africa the latest nation to do away with mandatory Morse testing for access to the High Frequency bands. Hans van de Groenendaal ZS6AKV told WIANews these new regulations, which came in force on 4 February, have significantly changed the amateur radio landscape. :a)20 metres 14 070 14 099 kHz, 14,225 14 250 kHz.b)15 metres 21,070 21 120 and 21 300 21 450 kHz. C)10 metres 28 050 28 150 and 28 300 28 500 kHz. The permitted power as measured at the antenna terminals is 20dBw (100 watts). Previously ZR licensees had no access to HF. To upgrade to a full ZS licence, the ZR licensees has to achieve one of the following: 1)Operating Achievement. Confirmed contacts with 100 separate stations on any combination of bands or modes. Note that the requirement of 100 separate stations means that each station can only be counted once, even if it is contacted on many bands or modes. 2)Electronics Construction: The candidate must construct and demonstrate one of the following: A working direct conversion or superheterodyne radio receiver that can receive and demodulate transmissions on any frequency allocated to the amateur service in any mode used by the amateur service. A working crystal-controlled transmitter that can transmit modulated signals with a power of at least 1 watt on a frequency allocated to the amateur service using any modulation method used by the amateur service. 3)Public Service and Emergency Communications. The candidate must provide proof that he or she has spent at least 50 hours providing communications services for one or more public service events. 4)Recognition of professional qualifications. The candidate must provide proof that he or she has been awarded any of the following qualifications: a)A nationally recognized tertiary degree, diploma or trade certificate in electronics or radio that would ordinarily require at least two years of study to complete; b)Morse Code Proficiency. The candidate must demonstrate the ability to send by hand and receive by ear Morse code at a speed of not less than 5 words per minute. SARL President Graham Hartlett ZS6GJH said that the new license structure heralds a new era for amateur radio in South Africa. "Morse code became a major stumbling block to grow the base, particularly in attracting the younger generation," he said. "We however have managed to convince the regulator to keep Morse code as one of the options, albeit it is at only 5 words per minute." The ZS license gives full access to all amateur bands with a power limit of 26 dBw (400) watts measured at the antenna terminals. South Africa also has a novice license carrying the prefix ZU. ZU licensees have very limited access to HF. Full details of the South African licenses can be found on [www.sarl.org.za](http://www.sarl.org.za). (Hans van de Groenendaal ZS6AKV/SARL/ARNNewsLine)?

### Kudos Corner

VU2RM OM Rao, is the proud recipient of 1)ARRL's VHF/UHF Century Club (VUCC) awards. He is the first recipient of this award. 2)VUCC 50 MHz (S.No. 1416). 3) VUCC Satellite (S.No. 140) .4)The Northern Kyushu Dx Club Inc's NKDXC Award(Japan) on Satellite(S.No. 1).5)JARL "AJD" Award for "First Oversea through Satellite(CW)

VU2UR OM Arasu, is the proud recipient of 1) Italian ARI's 2004 CW Contest Award Certificate for India. 2)The Ukrainian Islands Award-UIA (S.No. 150) 3)The All Croatian Island Award. S.No. 12 from Croatia.4)The Russian Arctic Stations award.5)The Franz Josef Land award. 6)The Russian Robinson Award.7) The Worked Antarctic Call Areas Award and The Worked Antarctic Districts Award from The Worldwide Antarctic Programme from Italy.8)Award no. VU 003 from RNARS. "Royal Naval Amateur Radio Society's Mercury Award." of UK. The earlier recipients were VU2GG, OM Roy Gauntlett, who was a British National and now lives in the UK and VU2MD, OM Dady, who is silent key.

Bharati Prasad, VU2RBI has been named recipient of the 2nd Annual Lynch Memorial Award, given by the Tokyo International Amateur Radio Association and the prestigious Dayton Hamvention Special Achievement Award for 2005.

## CLUB NEWS

The third **Mahabalipuram Eye Ball** on 12th and 13th of Feb. 2005, christened by some as a "Grand Eyeball Meet" total attendance of 90, with 20 SWLs and 70 HAMs from Kerala, Karnataka and Andhra Pradesh, many of whom traveled from long distances. The distinguishing feature of this event is that no delegate fee is collected and participants meet their own expenses. Already enthusiastic suggestions are pouring in to ensure even better performance in the coming years. Being the resident of the host town the brunt of the work was shouldered by VU2INA, Om Ina along with his lieutenants namely, Vimal & Satish Rajendran.

**The Calcutta VHF Amateur Radio Society** Repeater VU2CVH is QRV since 30th January, 2005, a red letter day for all Kolkata hams. Since 1993, hams in Kolkata have made untiring efforts to put Kolkata in the repeater map of India and were partially successful. Finally the Mobile Operations Team (M.O.T.) of CVARS has succeeded in installing a home brewed repeater. The repeater RX and TX are Punwire and Webel Telecommunications India (WTI) base stations procured from the junk market, repaired and PLL reprogrammed to VU2CVH repeater frequencies which are 145.050 MHz (Repeater RX) and 145.650 MHz (Repeater TX). The interface has also been homebrewed using optocouplers and timer ICs available at the local market. The heart of the repeater system is the Telewave TPRD-1454 four cavity duplexers that the American Radio Relay League (ARRL) has been extremely kind enough to gift to CVARS. The TX power of the repeater is 10 watts at present but will later be increased to 25 watt and the repeater interface has a 2 minute timer exceeding which the repeater times out for another 2 minutes. The same has been installed at a 10 storeyed building in South Kolkata with a VHF collinear antenna at around 45 metres AGL. Regular contacts are being made with VU3SJR from Kakdwip which is around 90 Kms from Kolkata. The repeater has been interfaced to Echolink through a homebrewed interface via a 256 kbps broadband connection (VU2CVH-R Node No.: 231511) and is QRV on Echolink on weekdays from 2100 IST - 2400 IST and throughout the day on Sundays. All hams are invited / requested to check into the Kolkata repeater VU2CVH-R via Echolink. Please feel free to give a CQ call whenever you log on to the net and to Echolink.

At the initiative of **VU2IIT (Ham Radio Club IIT Kanpur)** a Hamfest was organized from February 4 - 6, 2005, at Kanpur IIT campus which coincided with International Conference & Exposition on Communications & Computing. During this event seminars and practical workshop on Ham Radio communications and Foxhunt was held under the leadership of OM Rahul Srivastava VU3WJM who was assisted by VU2UKR OM Sunil, VU3FUN OM Rajesh Bakshi and OM Jyoti Chakravartty VU3BGI in various capacities. During the Fest, the first VUQRP core group met and several important decisions were made to promote VUQRP group and qrp activities in Indian subcontinent. Lectures on Ham Radio Communications were well attended by the students as well as few staffers. A practical workshop and hands on event was held where a low

cost 25 Pixel transceiver was assembled by the participants in three hours with all 25 of them working. Several participants took a keen interest to appear in the ASOC exam and several students had already appeared and were awaiting their results. Mr. Abhinav Agarwal, Co ordinator VU2IIT did an excellent job in arranging this event.

**Kerala Amateur Radio League(KARL)** and Bishop Benzigar Hospital Quilon, jointly conducted a community health service in the coastal side of Quilon, focusing on drinking water conditions and on contagious diseases on Sunday the 27th. Feb 2005. 12 hams participated in this survey and a stretch of 8Kms was covered in 4 hours time with a detailed logging of all reports at the control station which was on the terrace of Bishop Benzigar hospital. The KARL also set up a pavillion in the Rotary Centenary Exhibition at Quilon From April 18 to May 31 providing live demo of VHF and HF Rigs installing full fledged antennae for the complete 44 days giving amateur radio knowledge to general public. On Feb 20th a seminar on Disaster & Accident Communication Management was jointly organised by the KARL and Rotary Club of Quilon, at the Rotary Community Centre, Quilon. The chief guest of the of the Seminar was the District Collector, who in his talk emphasised the need for more hams in the country as they are the wealth of the nation.

The Bangalore Amateur Radio Club (BARC) informs that the first ticket has arrived for the classes taken last year at the bharat scouts HQ.

**Vigyan Prasara**, organized a Ham Radio demonstration /awareness programme during the workshop on "Science & Technology for Development of Uttaranchal" organized jointly by the Directorate of Higher Education, Uttaranchal and Jan Sikshan Santhan, Bhimtal on February 18 & 19, 2005 at Bhimtal sponsored by the Department of Science & Technology, New Delhi. The delegates to the workshops (numbered around 100) comprised mostly of college/school teachers and coordinators of science clubs/NGOs who came from different parts of Uttaranchal. Dr. Hemant Joshi (IIMC, New Delhi) chaired the Ham Radio Session. A 40m antenna was installed at the site of the workshop and communication was established from Bhimtal with Vigyan Prasara Club Station VU2NCT in New Delhi. Shri Kapil Tripathi, VU2POF operated the club station delivering on-the-air lectures and interacting with the participants. The importance of Ham Radio as a means of communication when all else fails, specially during large scale calamities was explained. A very good radio contact (59+) was established with VU2NCT on the 40m (7.050 MHz) operated by Shri Kapil Tripathi, VU3POF. It was also conveyed to the participants that Vigyan Prasara would help them establishing a network of ham radio stations in the Uttaranchal for disaster communication and that Vigyan Prasara thus is looking for people who are motivated to take ham radio licences in Uttaranchal and who can be trained. The college/school teachers from different parts of Uttaranchal expressed their willingness to establish ham club stations. 5 copies of the guidebook on ham radio (A Guide to Ham Radio-brought out by Vigyan Prasara) along with the WPC



rules & regulations/application forms were given to some of the participants who showed interest in ham radio. Study materials were also provided. It is felt that Vigyan Prasar is successful in creating a general awareness about ham radio in Uttaranchal through this programme on the basis of which further follow-up can be carried out.

Hamfest India 2004 was organized by **the Mumbai Amateur Radio Society** on the 24th, 25th & 26th December 2004. It was attended by 250 delegates from all over India and Dx Hams like DL2GAC/VU2BMS, S21RB, 21SR, S21Q, S21RA & S21V. A presentation on the role of amateur radio in disaster communication, VHF Repeaters and Ham Radio Awareness was presented by VU2NLF, Nilesh. New technological products were presented by VU2JJJ. VU2SWS, YL Sarla made an audio visual presentation of the International YL Meet which was held in Korea in October 2004. SWLs Abhinav, Vibhor, Rishi and Ravi from IIT Kanpur, discussed Fractal antennas. The ARSI had an informal discussion with all present about its role as member of the IARU. An interesting quiz contest was conducted and participants had a good time. VU2NXM, Basappa was adjudged as the best Dxer of 2004 and VU2SWS, Sarla was adjudged the best Ham radio Operator of 2004. IIT Kanpur received the best presentation award. A Lifetime Achievement award was given to VU2SVS, Shri Sudhir Shah, for his role as teacher to most old timer hams of Mumbai. A variety entertainment programme was held on the 25th. An excursion trip to Elephanta Island was organized and all outstation Hams participated. There were many stalls put up by commercial radio manufacturers. The latest Call book was given as a souvenir for the event to all delegates. There were no bidders for the next Hamfest.

**A foxhunt** was conducted by the Mumbai amateur radio society on the 26th and 27th of Feb. 2005, in the city of Pune. The organizers were Zyros Zend-VU2ZRS, Farooq Irani VU2WET, Ivor Pereira-VU2IVO and Nilesh Rathod VU2NLF. In all 19 Members participated.

**Thodupuzha Amateur Radio Club(VU2TTA)** conducted a field day on 21/1/05 at Elaveezhapoonchira, located 1000 feet above sea level. They could contact distant stations through VHF. Hams like VU2EGM, VU2PJR, VU2MRB and so many SWLs participated.

**The Adoor Amateur Radio Club** conducted a Ham Expo in December 2004 which was inaugurated by VU2YFS, OM Santhanam who praised the Kerala hams for organizing such

events and promoting home brewing activities. VU2LV, OM Sharma in his presidential address gave a brief account of his experiences in the field of hamradio. He expressed, with a philosophical approach, his desire to see the better side of fellow hams, their good qualities and keep the friendship for ever. VU2GUR, OM Guru Raj gave a speech on digital communication and the working of satellites. VU2RO, OM Soma and VU2JKR also spoke on the occasion. Prizes were distributed to the winners of the phone contest. Many stalls were arranged for the buying and selling of Ham equipment.

A lecture cum demonstration of Ham radio was held at the **Demphe College in Panaji, Goa**, to celebrate the Year of Physics. Hams present were Om Cyril Martin VU2CY, Om Ronny VU2ROE, Om Shinde VU2SMS, Om Didi VU2DM and SWL Sandeep. Cyril Martin spoke about Amateur Radio "A Fascinating Hobby", Ronny spoke about digital communications with lots of live Satellite pictures and in various modes which really sparked off a lot of interest in the young minds, and the oldies alike. A field day of visiting AIR and FM Radio station in Goa was organized. The quality of transmission on FM Radio was found to be excellent, in spite of the outdated equipment.

**Quilon Amateur Radio League**, will hold HAM FAIR - 2005 at Jaladarshini Auditorium, Thevally, Kollam on 17th April 2005. The QARL IX Kerala VHF Fox Hunt will take place 30 kms around Kollam Railway Station, Fox howl on 145.600.

A brainstorming session was organized on December 6th, 2004 by **National Disaster Management Division of the Ministry of Home Affairs** to explore the possible ways for promoting Amateur (Ham) Radio in the Country and developing a National roadmap for promotion of Amateur Radio in the country, which can be used as an effective mode of communication during emergency response. This half-day brainstorming session was attended by the representatives from WPC Wing (DOT), Dept. of IT (MCIT), Dept. of Space, Dept. of Secondary and Higher Education (MoHRD), Ministry of Youth Affairs & Sports, Indian Army, Civil Defence (MHA), Directorate of Coordination and Police Wireless (MHA), Vigyan Prasar (DST), Govt. of Delhi, Govt. of Orissa, Govt. of Andhra Pradesh, Govt. of Uttaranchal, Confederation of Indian Industries, Amateur Radio Society of India, National Institute of Amateur Radio, Mumbai Amateur Radio Society and Gujarat Institute of Amateur Radio, National Institute of Disaster Management and MHA.

#### **CW CONTEST 2004**

The CW operations were revived last year with telling effect as a result of a contest held in 2003.

The encouraging results impelled us to continue the effort by announcing another contest for the year 2004 during December for a shorter duration under the leadership of VU2RJN, Om Rajan from Shoranur who is conducting regularly the CW net on 7015 KHz all thorough the year. This year's winners were:

**First : VU2PHD, OM MATHEWS      Second : VU2TMP, OM THAMPI**  
**Third : VU2JOS, OM JOSE JACOB      Runner up : VU2ATB, OM SUNIL**

Consolation prize: VU2VVK, Om Venkat; VU2PAL, Om Paul, VU2PNS, Om Sharma, VU2MOK, Om Murthy, VU2RM, Om Rao was given a memento for consistent support given. Certificates for VU2DX, VU2JN, VU2HEG, VU2VK, VU2EN, VU2LX, VU2UWP Regularity throughout the year VU3KET, VU2GOI Thanks are due to many anonymous donors. Prizes were distributed at Mahabalipuram Ham meet Held on 12<sup>th</sup> and 13<sup>th</sup> Feb'05.

## COVER STORY

### Report On Tsunami Relief Activities

#### - By V. Vijayapradeep (VU2PEB)

While I was conducting the Charminar Net on 26 DEC 2004, I heard about the occurrence of an underwater earthquake in Indonesia. It was announced that as a result of this quake, giant waves had struck the coastal regions of Sumatra. At that time it was not known that these waves were Tsunami waves. Being totally ignorant about the concept of Tsunami waves I was not aware of its destructive capability. The waves hit the coast of Tamilnadu by 0745 hours. After 0800 hours, I myself announced emergency traffic on 7050 MHz.

One of our DX expedition teams in Andamans lead by VU2RBI gave us information about the situation of lot of families in Andamans. But unfortunately we could not establish contacts with the Hams in Maldives. But I managed to get the Hotline number of Maldives. I gave this number to those who had contacted me for the information from Maldives. News channels flashed my contact number in their bulletins and I received many enquiries over the telephone, most of which I was able to pass on. One of the fascinating facts about this is that I was able to pass direct communication from Mr. Jose (VU2JOS) in Andamans to these channels. Jose gave a brief description in Malayalam about the present situation in Andamans. Indonesia Hams were operating in 14 MHz. I requested them to work at Emergency Traffic Frequency, but they were not able to deliver the messages because Landlines were not working in Indonesia. In Srilanka too the landlines were out of order, hence we could not pass the information in some areas.

I had dedicated myself fully for the relief work even without attending my office for about one week. I had also made a lot of telephone calls from my own pocket for the relief work. I had done this only for my self-satisfaction & not for any fiscal benefits. In future if there is any natural calamity of such epic proportions, I am totally prepared to dedicate my services for the relief work. Apart from myself, I would like to remember the call signs of certain Hams who had sincerely worked for the disaster communication. VU2POP and the group from Bangalore, VU2GMN, VU2PKK, VU2RO, VU2DX, VU3BGK, VU2INA. At this juncture, it would not be appropriate to leave the names of certain friends of mine who have helped me selflessly in this endeavor. VU2TNA, VU2TSP, VU2JAW, VU2SEW, VU2EGM, VU2MTP, VU2PPL

#### QARL in Tsunami Relief Work

Members of Quilon Amteur Radio League were there to assist the authorities and the affected people at the time of Tsunami disaster. We shared the sleepless nights of the victims and the district administration by providing sufficient communication support as well as physical presence. Our people were there in Eravipuram, Thangasseri, Thirumullavaram and Karunagappally. OM Vaidyan, VU2VAT along with VU2GRP, VU3SJE etc. went to Srayikkattu (the worst affected area where more than 100 casualties reported) with ambulances of Red Cross Society and VHF equipments and helped to bring the victims to various hospitals and relief camps. OM Vaidyan is the Executive Committee member and most of the QARL members

are life members of Indian Red Cross, Kerala State Committee. OM Rajendran, VU3SOP was very active in HF bands to pass messages from distant places.

#### Operation Tsunami at Cuddalore

##### - by S. Arulmozhi VU2OHM

The sun rose on that Sunday the 26th December 2004 and was shining, till the Tsunami occurred at 8:50AM and it became a black Sunday for the people of Cuddalore and all the sea shore villages of Tamilnadu. It was all over before any one could realize what had happened, which lead to loss of life in ways never heard of before. People started crying and running helter skelter and roads were jammed in every part of the town as humans and vehicles were desperate to get out. The Tsunami-never heard of before swept away the coast in just seconds.

Communications?!!!! All the land line networks and cell phones were out of gear, communication between the district administration in the district headquarters and the staff of various departments located in far-off destinations were disrupted making any kind of action/rescue operation at this crucial point of time very difficult.

But they themselves overcame this crisis and things returned slowly to normal. To review the situation the headquarters had to send its officials to the calamity struck areas. What was left were mere broken walls or desolate villages where cattle, bodies and boats were scattered indiscriminately and local administrative authorities did their best to restore rescue operation with out the telecom link.

At headquarters, me, Arulmozhi (VU2OHM) District informatics officer along with the Collector of this district were looking for alternative communication network. At this time we found light in the horizon, in the form of hams of Bangalore and Tamilnadu who approached us with the idea of providing communication. I introduced them to the District collector and explained their technical competence and skills for emergency communications. He appreciated my effort and he felt much excited and gave a green signal immediately. Within a day as per collectors requirement we were able to establish emergency network in Tsunami affected areas of this Cuddalore district

We used VHF connectivity for communication, with HF as a backup. All the stations were 50watts base stations. A station at collectors camp office, one mobile station in his vehicle with a Ham, one at the Tsunami control room was set up in Cuddalore town, Portonova and Killai were 30Km and 40 Km away from Cuddalore on aerial distance which forced us to establish five element and two element yagi antenna in the above places. At Headquarters we could use only dual band mobile antenna which was performing very well and was also useful for repeater operation.. Whenever District Collector on mobile, the nearest possible base station was made as repeater thus enabling him to get in touch with his operational area. Hams with mobiles assisted the officials who were in rescue operations in the remote areas. The information flow was so quick and clear, which impressed the district administration to a great extent, as it was beyond their imagination. This network served as the backbone



for their rescue and relief work. The services provided by the Hams was highly appreciated and placed on record by the district collector. The whole operation was from 29-12-2004 to 13-01-2005 Four 50wattVHF/UHF base stations.7 VHF/UHF handy and Three.HF stations were operated by the Hams of NIC-Cuddalore, NLC(Neyveli LigniteCorporation), ISRO,BARC,MARS. They are VU2OHM, VU2WMY, VU2GDX, VU2RMZ, VU2BNP, VU2KLS, VU2CMR, VU2DH, VU2GFF, VU3SXE, VU3NOI, VU3JBA, VU3VTK, VU3HRJ. Thus Cuddalore district experienced a new phase of VHF /UHF Ham operations for the first time. We restored the communication but not the lost lives

#### **Tsunami in Kalpakkam Township - by VU2INA**

On 26/12/2004, around 9 am the power supply failed in the whole D.A.E township, and simultaneously the telephone and cell phone (BSNL) services were completely dead. People were shouting and running here and there and I realized that the sea water had entered the township houses. I went to seashore and saw that the seawater had come inside to about 300metre. After 10 -15 min the level of water started rising very fast and came towards the shore with force. The height of waves was about 25 feet and I ran towards the higher level. Later I shifted my family to the safer place faraway from the sea. After one hour the water was again coming towards the township near about 300m from the shore. My house is at distance of 500m from the sea shore. Around 1000 houses were fully damaged with the water and sea sand entering through windows and doors. All the household things were totally damaged totally and washed away.

To establish communication I didn't get a 12 volts battery supply, but luckily two SWLs came to my house with a 12 volt car battery. My place was not safe so I went to Aunpuram Township located 5km far away from sea. Nearly 25000 people had fled Kalpakkam to this town.. Around 1400hrs, with the help of Satish, Ram and Vimal Lakshman(VU3CPE), I set up my radio station and communicated with others around 16:30hrs in 40m band. I made many qsos with other hams helping in the relief effort.

On 27 Dec I travelled 20km and enquired about the situation. I gave the information about Kalpakkam township situation. The township was back to normal, having supply and telephone. The repairing and cleaning process had begun. On 29 Dec I came back home with my radio station and my family back to Kalpakkam. On 30 Dec around 11 am the sea water rose in some areas. I received the information from VU2FBI. Even though in Kalpakkam there was not such sea water level rise, the township management gave the warning to be alert. Some of them vacated the house and went to a safer place. In Kalpakkam 38 people died in which 32 are dependent and 6 are govt employees. Few people are still missing. On all these days I spent all my time by the radio, passing information about missing persons and uniting missing persons with their families or sad information of people passing away in this tragedy.

#### **Lion Ajoy - VU2JHM, Disaster Manager & Custodian, Lions Clubs International - Ham Radio Station - VU2LCI**

I was enjoying myself with a group going to Elephanta Caves Island off Mumbai. It was the last day of Hamfest India 2005 where nearly 250 participants, mostly hams from all over India

(and Bangladesh), had gathered when this news came in thru the VHF Band of the Amateur (Ham) Radio, then messages began pouring in on the HF as our cell phones started to ring. The first call was a ham from Chennai whose parents were with our team, asking if everything was OK at Mumbai. I, being involved with various organisations started activating the First Responders team 1000 kms from my hometown. First we activated the one person Mr. Pratap - VU2POP to be our command control centre, similar to ENCS (Emergency Net Control Station) to begin gathering reports of the disaster from locations including Sri Lanka and Maldives, mainly on 40 m and 20 m bands.

With my return journey reservation on crowded train leaving that evening on 26th Dec, I could gather the details of Earthquake and Tsunami reports from the internet and pass it on to various agencies before boarding the train from an internet kiosk. Meantime at Bangalore a few teams organized themselves to leave with medical teams to Andaman and Cuddalore District of Tamil Nadu. Clubs organized, such as the \*Bangalore Amateur Radio Club - VU2ARC\*, \*Upagraha Amateur Radio Club - VU2URC\* and \*Lions Clubs International Ham Radio Station\* - \*VU2LCI\*, in order to pool the available HF, VHF equipment. Individual donations covered the expenses of petrol and other logistics for the team's deployment to provide Emergency Communication.

This Tsunami Disaster did not affect the Telephones, Cellphones. The Electricity was shutdown in parts of Tamilnadu because of a precautionary shutdown of Power Generating Station temporarily, due to the heavy casualties of villages near the seashore, especially fishermen, and the Law and Order situation. The coastline was evacuated by the Police and Army, with very few people assisting in Search and Rescue/Medical Relief. The worst was rumors of more aftershocks and further Tsunami Waves which did disturb the coastline assistance at crucial hours after the incident.

Since, the Amateur (Ham) Radio is quite active in South India, the second line of communication was established without much problem by volunteer hams that moved from their hometown to affected areas where the assistance was required. The VHF equipment came to be very handy, especially by the District Administrators who utilized the services of Ham Volunteers for the distribution of relief materials which started pouring in from various parts of India and abroad. The lists of what is needed came first and then came the list of what is not needed. Example: Old cloths came in truck loads with no takers causing heaps.

Only on the 28th Morning, I resumed handling computers at Echolink - Voice over Internet Protocol where our amateur radio repeaters are interlinked, answering emails and being online chats on MSN and Yahoo Messenger plus the Yahoo groups with many people all over the world waiting for more information. I could handle messages from ROAR - Rotarians on Amateur Radio, WIA - Wireless Institute of Australia who have made telephone calls to record the actual Emergency Communication and put it as MP3 file on their homepage. Got added to tsunamireliefnet.com conference group. Co-ordinated with Ham and Red Cross Teams coming from USA and England to Sri Lanka to provide relief. The reports from various Ham Radio volunteers from different parts of our country are being received for compilation and soon a consolidated report would be put up.

### **Disaster Communication By VU2DH Om Das**

Upon hearing the news on the 26th December, at 1030 hrs I proceeded to MARINA BEACH to assess the situation and communicate to HAMS and help General Public. My efforts to gain an entry to MARINA at 6 locations (by showing WPC license) failed as the Police personnel manning the entry refused to accept the assistance offered by HAMS and said that they are capable with all sorts of communication equipments. On Monday 27th December I approached the District Collector, Chennai Sri.V. Kannuchamy IAS, and volunteered our services and requested to pass information to the field officers to make use of our services for which he also said that they do not require any services from HAMS. In fact many hams like VU2DRK etc also tried and failed in their efforts in offering services. With this, few hams were handling traffic from their respective QTH with HF 20m/40m, VHF & Echolink. I handled traffic from my QTH on HF, Echolink for many DX stations to trace their loved ones.

When I heard that HAMS from Bangalore & Neyveli are into action in helping the Local Administration at Pondicherry, Cuddalore & Nagapattinam, a few of us from Chennai moved to Cuddalore to relieve our Ham friends from Bangalore, who had been working there continuously for 3 or 4 days, and activated our stations with our equipments. Thus I had an opportunity to serve the public and the Collectorate of Cuddalore from 04/01 to 08/01.

### **Tsunami Relief Operations by VU4NRO & VU4RBI - by VU2MYH, Ram Mohan,**

member. Tremors were experienced around 6:30 AM on 26th December 2005, rattling sound of cracking window panes. Standing on our own two feet was becoming difficult and we ran for safety. Wide cracks were visible on the walls a terrible sight of broken articles, shattered glass and tiles on the wall. In seconds, a beautiful guest house was torn apart, rubble and dust filled the corridors and lobby.

My first thought was to find out about the welfare of other team members, we were operating from 4 different locations. Mrs. Bharathi Prasad was staying alone in the fifth floor of Hotel Sinclars, walls were damaged but the hotel structure was intact. She was safe, another American ham staying in the adjacent room was safe, we received information of other team members being safe.

There was no damage to amateur radio equipment. We requested the hotel management to run the generator and we made contact with the outside world. We instantly got hams from Chennai, Thailand and other areas on the band. Many felt tremors and were trying to know more information about the intensity of the Earthquake. We immediately reported to the Office of the Chief Secretary, Andaman and Nicobar Administration. We informed them that, our teams are fully equipped to provide any communication support for the administration, but, we got a cold response initially. The officers were busy assessing the situation and were expecting everything to be under control. There was no fore warning on huge Tsunami waves that were about to hit the Islands. Intensity of the Quake was learned to be 8.5 Richter scale with epicenter near Sumatra Island.

We went by bike (the road goes along the sea coast), to find out about the damages of equipment installed at Science Centre, Port Blair, just 2 Kms from Hotel Sinclairs all along the sea coast. We

could see the sea water rising and within seconds, water rose by 10 to 12 meters. We luckily reached high ground before sea water engulfed low lying areas and damaged few houses with cars being thrown to a distance of 30 meters away from the road. We packed the equipment safely into a suitcase and turned back to reach hotel. The route was inundated with water, road was not clearly visible and we waited till water receded and crossed on finding a safe passage. Nature's fury was such that destruction seen all along

the road. Seriousness of the disaster was becoming evident as we heard reports from hams in neighboring countries. We immediately took a decision not to conduct expedition activity and the radio was operational only for emergency communication. We passed several welfare messages of hotel inmates and staff to their families and friends in the mainland. We got a call from the Dy. Commissioners office on 27th evening requesting for Amateur Radio communication support from other Islands and we immediately setup one station in his office. A team of two operators were airlifted on 28th Dec'04 to Carnicobar, Myself and Mr. D.V.R.K.Murthy VU2DVO volunteered, and ham station was operation by afternoon. We passed initial damage reports, requirements of relief material and several hundreds of welfare messages. As there was no official to help trace-missing people, we went to nearby localities for find those individuals and passed their welfare messages. Amateur Radio communication network was expanded to one more location at Mus Jetty in Carnicobar, Hut Bay in Little Andaman. Three stations were established in Port Blair to handle emergency traffic at Dy. Commissioners office, Dr. B.R. Ambedkar Govt. Polytechnic College, Andaman Public Works Department. Additional teams from NIAR with more amateur radio equipment arrived in Port Blair and took position at different locations. Another team of operators from Gujarat setup stations at Campbel bay Island and Terasa Island. The emergency communication was provided for next 15 days and the last batch of ham teams left the Andaman Islands on 13th January 2005. Mr. R.Sarat Babu VU3RSB operated from Andaman and Nicobar Islands. Mr.S.Ram Mohan, VU2MYH operating Amateur Radio station at Mus Jetty, Carnicobar for providing emergency communication.

NIAR Hyderabad and Delhi centre were also acting as relay stations and were also supporting the emergency operations. Mr. Raja Kartikeya, NIAR member, who served people during Gujarat Earthquake landed directly in Carnicobar and worked alongside Indian Military and Paramilitary forces for Search and Rescue operations, disbursement of relief at various camps, construction of new roads and helipads. It was proved once again, beyond doubt, relevance and potential of Amateur Radio, even with the existence of facilities like Satellite Phones and other technologies. It was sheer coincidence that a team of hams were present in these Islands to support the Andaman and Nicobar administration for their immediate communication needs, additional support could be arranged because of preparation and working for a cause in the last 10 months.

Radio Amateurs and well-wishers all over the world prayed to God for our well being, which was truly heard. There was no damage done to men or material when the disaster took place.



We thank hams world-wide for encouraging us during the expedition and supporting Earthquake/Tsunami relief operations. I joined NIAR RACES wing as a volunteer at the age of 15, providing disaster communications in many Natural, Man-made disaster over the years. This remains as first instance in my life to have experienced a severe disaster and also work for disaster communications, which will remain in the memory for a lifetime.

### The Gujarat Institute of Amateur Radio

In response to the massive earthquake followed by deadly waves of devastations on 26 th of December 2004, Government of Gujarat, considering its moral responsibility, decided to assist the relief work in the affected areas. The careful selection of equipments, expertise of the members and committed moral of the team allowed no delay in establishing the emergency communication link on the sparsely scattered islands. Amongst the major achievements of the mission, the team was able to assist not only the local administration, but also helped the Naval Air Base to restore their communication. Displaying intelligent decision making ability, the team divided itself into three groups and carefully distributed the equipments in such an efficient manner, that when all the individual groups started functioning in the remote places, they not only provided local emergency communication on VHF, but also provided long distance communication links amongst the islands and the other distant stations located all through the country. They were able to locate 60 missing people successfully by matching their profiles in their database. Their efforts ultimately provided strong evidence of effectiveness of Ham Radio not just as a hobby but also as a dependable alternative emergency communication system.

The team consisted of VU2CPV- P C Valera, SWL- V R Tolia, VU3HRO- H R Trivedi, VU3DJT- D J Trivedi, VU3KMI- K M Patel, VU3IKK- K K Patel, VU3APY- A N Patel, VU3KPH- S H Kahar, VU3DVC- V K Ajmera, VU3UTG- P G Purohit. An HF Stations was set up in Campbell Bay and Teresa Island. Another station at Government Circuit House helped the administration in mobilizing relief and rescue work at relief camps as well as surrounding islands. GIAR team members were moved around the relief camps with VHF handhelds which provided internal communication links for the officers that were involved in relief and rescue operations. On 8th January when the Prime Minister Mr. Manmohansingh visited the Campbell-Bay Island, GIAR team was invited to meet him by the local administration and NGOs. The Prime Minister expressed his thanks to the team. After a week of working on the field, when normal communication links were restored, Ham Radio stations were recalled from Port-Blair. This mission proved that GIAR is capable of providing dependable emergency communication service with no additional external help even on very short notice. The cooperation from local people was found to be satisfactory. They considered, amateur radio communication an important service, and used it to locate their missing family members. The team received nearly 200 such queries, and was able to successfully locate 60 missing persons. Some of them were even able to talk to their family members over amateur radio.

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### SEANET CONTEST 2005

The organizers of the SEANET Convention 2005 invite all radio amateurs and Short Wave Listeners (SWL's) to participate in the SEANET 2005 Contest. This contest is associated with the 31st Annual SEANET Convention to be held in Bangalore, India , at Gateway Hotel , Bangalore, India from October 7<sup>th</sup> to 9<sup>th</sup> 2005. The aim of the contest is to promote two-way amateur radio communication within the SEANET Region and between the SEANET region and the rest of the world using various modes. Dates:1200 GMT 16th July 2005, to 1200 GMT 17th July 2005(24 hours). Logs should be sent to VU2UR, Manohar, not later than 30<sup>th</sup> August 2005. The winners of each category will be awarded a trophy, plaque or souvenir of the SEANET Convention, provided at least three entries are received in the category and the winner has made at least 10 valid contacts.

The top three entries in each category will receive a certificate, providing more than three entries are received, otherwise a certificate will be awarded to the winner only. All entries should be in the form of written or computerized logs and summary sheets showing claimed scores band by band plus the total score claimed must be signed by the person responsible for the entry. More details in the next issue of HRN. . Details on [www.seanet2005.com](http://www.seanet2005.com).

#### FIRST DXcluster in India

The Node is running at dxcluster.in. The domain will be [www.dxcluster.in](http://www.dxcluster.in) (Website not hosted yet !) The DX Cluster of India is now connected to international node already and soon will be connected to AR clusters. VU3SPQ, OM Sridhar (Sunny)-the man who made it happen!!

Congratulations to OM Raman VU3DJQ, life member of ARSI, on winning IARU HF world championship. He has been declared country and zone winner in single operator phone only low power.



"No Greg went to the ham auction this afternoon, to get rid of a couple old radios that were cluttering up the place ...Oh I think I hear him pulling in now!"

## HOME BREW

**STABLE VFO FOR RM 96 TRANSCEIVER - by VU3NSH, N.S. Harisankar**

This is a modified VFO circuit meant for RM96 Transceiver. The Frequency instability in VFO stage is a common problem in RM96. This usually occurs in VFOs due to low "Q" of the tank circuit, capacitors real value, power supply regulation and over feed back levels etc. I hope this simple modification of RM96 VFO is very useful for more than 200 plus RM96 users in VU through HAM Radio News (HRN).

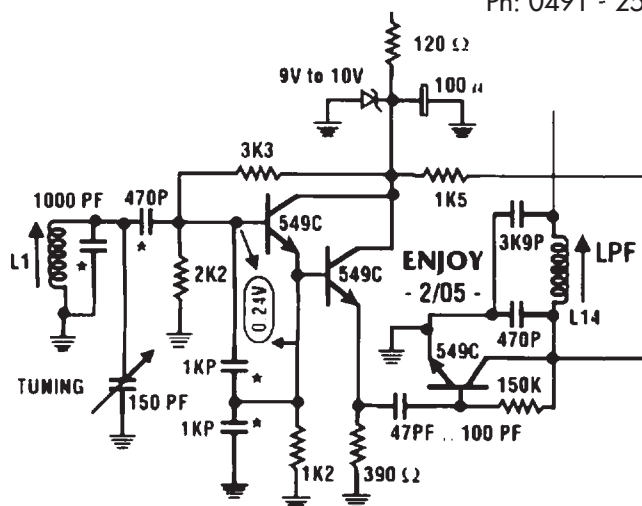
I started my 7MHz. AM/SSB/CW RX project due to heavy compulsion from HAM's and SWL's. I started designing on September 2004, with the aim to release the circuits and the PCB on Adoor Ham 'XPO 2004 on 21st November. I started the proper designing strictly for the benefit of new license holders and SWL's to get practice about systematic receiver assembling. Meanwhile I also started the RM96 VFO redesign work.

I began with the bi-polar transistor VFO. I got very good performance in the following modified design. You can follow the component change in the tank, i.e. L1 has only 19 turns, the parallel capacitor is 1000 PF Styroflex and the tuning gang is 150 PF. I tested with Chinese Radio FM gang, model no. WP-24012. If you are using 2J gang, connect a series capacitor to reduce the total gang capacitance to get proper spread. So this modification will give excellent stability for long duration operation. Another beauty of this design is that you don't want to use any shielding. The important tip for the stability in a VFO is that the emitter base voltage of the first transistor should keep A+ve volt. If it is zero or negative then the frequency may drift or create many harmonics. The negative voltage occurs when the feed back level is too high.

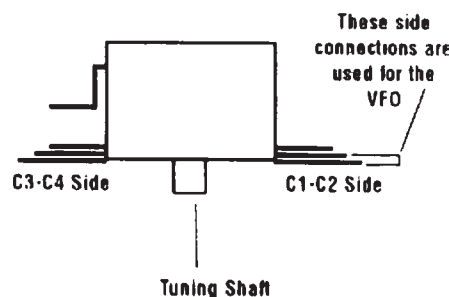
Any doubt about this article can be clarified by the Author.

N.S.Harisanker VU3NSH, Sankar Nilayam, Ambikapuram, Palakkad - 678 011. Kerala

Ph: 0491 - 2576102



**MODIFIED V.F.O. CIRCUIT FOR RM 96 BY VU3NSH - HARI**



**Chinese Gang WP 24012**

**AS-140-Bhola Island.** Dave El3IO and Manju S21AM operated from NL52JE - Kulsum Bag, Charfasson, Char Dakhin Shahbazpur (eighth most wanted IOTA reference in Asia), from the 4 - 7 February 2005. Bhola Island is located in the Bay of Bengal in southern



Bangladesh within the Meghna River delta and the Shahbazpur Channel; an area of 3403.48 sq km. CW and SSB were used, Manju S21AM operated on SSB and Dave EI3IO operated CW and SSB. Half slopers were successfully used on 160, 80 and 40m. Dipoles were used on 30m, 20m, 17m and 15m.

**SAGAR (AS-153) IOTA 2005 :** The Calcutta VHF Amateur Radio Society upon request from the District Administration, Govt. of West Bengal sent a 15 member team to Sagar on 10.01.2005. A VHF station was set up at Kachuberia island as well as Lot-8 and the rest of the team headed for the Sagar Mela grounds at Sagar Beach which is around an hours journey by

bus from the cross over point. The Sagar operations are very tough and are a test of character and tenacity. Accommodation and sanitation was'nt exactly five star. However the Hoglas (make shift thatchments made out of the leaves of the hoqla tree) with beds made out of

straw provide lots of fun and the spirit of adventure. Our primary job at Sagar was establishing and maintaining an emergency Amateur Radio link at all the cross over points from the mainland and the island. The links are also utilised for locating missing persons and reuniting families scattered across various points. We assisted NGO's such as the Indian Red Cross, St. John's ambulance, Civil Defense etc by linking their various camps at the various outposts and we also handled missing person's traffic originating from the various outposts on the mainland as well as the island. On such occasions where the crowd could be ranging between half to

## Ragchew with VU3WJM, Rahul

Born into a family of engineers, radio was nothing new to me. My uncles were good friends of OTs like VU2EG OM Sax, VU2CPJ OM Joshi, Sardar Majithia and many others. One of my early memories of playing with radio component evolves around a large ganged capacitor. Only later did I come to know that it came from an old HRO Rx. As I grew I always dreamt of having a call sign of my own. A part of my childhood was spent in Orissa near Rourkela. Unknown to me another person was also preparing for his ticket here, who later became a regular ragchew partner VU2DAD Dev now residing at Bilaspur.

My first hands on experience on a real Tx (mid 80s) was in the shack of my college professor at Lucknow Christian College WB8QWS / VU2QWS OM Bill. The Heathkit SB 102 that he had assembled in 70s was indeed Collins for us then. I looked up and visited other Lucknow HAMs namely VU2UR Arasu, VU2VDM Varun, VU3DCS now VU2DCT Pandit, the family of VU2GYK / A45YT Tariq and Shama VU2SYL / A45XYT, VU2WX Sharma and a grand OT VU2SR Rana. Except for Arasu no station was on air mainly due to lack of equipment. In the process I learnt much from our talks alone. I bought an old TRIO 9R59DS Rx from a friend at Delhi, out of my savings (student savings! big sum). This became my window to the world of Amateur Radio. Delhi being nearer I was a frequent visitor and here I met now SK VU2HV Om Haveli Ram. I visited his shack many times and we often worked on ideas to improve the equipment situation in VU, but for my forecaster: Ganesha had something else in store for me. On one of my visit to the capital I had a chance encounter with an avid homebrewer, scientist, designer veteran VU2IF Dr Ashutosh Singh, in the lanes of Lajpat Rai Market and I ventured out on the path of homebrewing with his fingers in my firm grip. My Delhi visits became frequent, my knowledge of radio technology multiplying in company of technical minds at the club station VU2ARD and IIT Delhi friends. The day remains clearly etched in my mind when VU2SR first gave a call on the prototype of transceiver now known as ATS 1. All of its 2W signal ushered an

era of fine homebrew VU transceivers. Soon many stations came on air in 1991 from Lucknow using a 2 board version PCB done by me. The article later came out in print and PCBs were provided to a number of homebrewers. The activity got a further boost when Xtal controlled Desi Katta VHF rig designed by VU2WVX Deepak caught the fancy of VU hams. Somewhere along I had cleared my ASOC and awaited my ticket, a wait of almost 3 years. "Indian Radio Amateur" magazines gifted by Rana and Arasu and my trusted TRIO Rx played a major role in keeping the interest alive. My elmer and Prof VU2QWS Bill had to leave for W land. He gave us his Heath (nonfunctional) Having a sentimental value I restored it with expert advice from my friends of that era and use it even today. My quest for some basic radio equipments for my friends took me to Agra. Here I had some good friends in VU2TRI Anil, VU2MCC Mukesh, VU2BX Sandeep and VU2RNC Raman and few others. We managed to salvage and modify many disposal radios and a number of my friends came on VHF, not only at Lucknow but Delhi, Mumbai, Bihar and other places.

Digivu was a start to bring technology of some basic equipments not manufactured in our country. Among the later and current ones is BITX-20 PCB designed by me and available for download from BITX20 Yahoo groups file section. Many other projects are lined up and or underway even now.

I am blessed with two boys aged 7 & 5, a supportive XYL and my appreciative parents, who give me their understanding and support. These days I hear very few new call signs on bands but I feel things are much more simpler, procedures eased, more awareness and access to equipment in plenty, second hand or new. A bit of patience and dedication is all that's required. I regret I never did much of DXing cause I was busy homebrewing a lot of stuff. This alone kept me busy and happy but then again HAM radio is a very diversified hobby. Not an avid DXer but a ragchewer yes, you can find me on 20mts in evening hours chatting with one and all who would care to join. Usually I can be also found on 14.130 chatting with VU2DAD Dev and my friend who deserves special mention VU2DK Zal. Topic can be anything from a leaky water tap to current technology. As for myself I continue to enjoy this KING OF HOBBIES. 73.

(IOTA News - Cont. from page 15)

one million, gathering and taking a dip at the confluence of the river and the sea, getting lost or losing one's loved ones is easy. The HF IOTA station from Ganga Sagar Mela Grounds at Sagar island was QRV from 11.01.2005 - 15.01.2005. It was operated by VU2DPM (Deepak), VU2HFR (Horey), VU2SKD (Skid) and VU2EWS (Som) who used their personal call signs. The QSL manager for Sagar 2005 is Fred Stenger, N6AWD, 600 Hesketh Dr, Bakersfield, CA 93309. QSLs being sponsored by IREF. The HF equipment used for Sagar IOTA 2005 was as follows: FT100D HF/VHF/UHF Transceiver MFJ4245 PSU / MFJ941B ATU 40/10M Fan dipole for 40/15/10M / 20M dipole for 20M. 94 feet dipole with 300 ohm balanced feedline (TV Ribbon cable) for 40-10M. Dipole elevations around 30ft AGL. CW operation with straight key. 4 nos 24AH maintenance free batteries.

Propagation conditions were extremely poor with only the 15M band opening in the afternoon local time 0600Z - 1000Z for 3-4 hours. 10M was absolutely dead and so was 20M. 40M was open at around midnight local time (1830Z). Poor band condition combined with the QRM created by the diesel generators and halogen lamps in the evening made QSOs virtually impossible in the evenings. Due to the Tsunami operations from 26th December till 9th January (opened a control station at Kolkata and relayed messages and handled hundreds of welfare messages). In spite of all shortcomings we managed around 675 QSOs during our stay. This was thanks to good old CW (Around 40% of our QSOs were on CW) which enabled us to initiate the pileups on 15M.

In Sagar 2006 we hope to have VHF packet radio networks and all points could be connected for smoother information transfer, since the amount of missing persons traffic (particularly children and elderly women coming from the remotest corners of the country) is enormous. Sagar is an IOTA which allows hams to experiment with their radio gear, have lots of adventure and above all serve an endless sea of humanity which throng the island in great multitude. Its an IOTA operation that helps save lives and maintain the best tradition of Ham Radio - CVARS would like to express sincere thanks for the cooperation and support extended by VU2UR (OM Arasu) and Roger Balister, G3KMA (RSGB IOTA manager) and finally to the Island Radio Expedition Foundation (IREF) for sponsoring Sagar IOTA 2002 and 2005 without whose help AS-153 would not have been a reality.



## Minutes of the 50<sup>th</sup> AGM of ARSI

Sunday 27<sup>th</sup> February 2005 at the Maharaja Restaurant,  
Koramangala, Bangalore

### Present:

President : R Ramachandra VU2RCR

Secretary : Govind Girmaji VU2GGM

Treasurer : R. Ravindran VU2RC

President : R Ramachandra VU2RCR

Secretary : Govind Girmaji VU2GGM

Treasurer : R. Ravindran VU2RC

The attendance listed in alphabetical order is as follows:

- |            |            |            |
|------------|------------|------------|
| 1) VU2AMR  | 2) VU2CAW  | 3) VU2FF   |
| 4) VU2GGM  | 5) VU2GMN  | 6) VU2GUR  |
| 7) VU2HSM  | 8) VU2JHM  | 9) VU2KKZ  |
| 10) VU2LX  | 11) VU2MKP | 12) VU2POP |
| 13) VU2RC  | 14) VU2RCR | 15) VU2RMS |
| 16) VU2RO  | 17) VU2UJE | 18) VU2UR  |
| 19) VU2ZUB | 20) VU3IRH | 21) VU3NOI |
| 22) VU3SRE | 23) VU3VOC |            |

The resident Called the meeting to order at 1745 hours, when it was found that the required quorum of 21 members were not present. The meeting was adjourned by 30 minutes and reconvened at 1815 hours when the quorum was formed.

1) The President VU2RCR welcomed the gathering

2) The meeting observed a minutes silence for those members who had become silent keys in the year just completed

3) VU2GGM read the Secretary's report. It was proposed by VU2RC and seconded by VU2RO that the report be adopted. This was carried unanimously.

4) VU2RC read the Treasurer's report. The many problems faced by the GC in getting accurate details of previous years transactions were high lighted

A budget has been provided, which takes into account the current status of funds, and what is expected in terms of expenses. It takes into account secretarial help at both Bangalore and Mumbai where the HRN is being produced. The budget shows a deficit of Rs.46,000, which needs to be bridged by 1) Advertisements for the HRN to make it self sufficient and 2) a massive recruitment drive to bring in more members. The bulk of the expenses were in producing the HRN and in postal expenses, and also in the subscription of US\$ 0.75 per member payable to IARU.

It was proposed by VU2GMN and seconded by VU2HSM that the Treasurer's report and the budget be adopted. This was carried unanimously

5) It was also pointed out that no audited accounts were available due the non receipt of such reports from previous office bearers

6) It was proposed by VU2RCR and seconded by VU2GMN that J. Srinivasan and Co. is appointed auditors of ARSI on a remuneration of Rs. 1000.00 per year. VU2CAW, OM Kris, representing the audit firm, who was present, accepted this appointment. He also kindly agreed to reconstruct the accounts from the current balances, and provide an audited statement for presentation at the next AGM. The meeting thanked him for his kind offer.

7) It was suggested by VU2GMN, that in view of the very low returns from bank FD's which did not give sufficient returns to run the organisation, that perhaps we could think in terms of buying a

suitable office space, one portion of which could be rented out to give a suitable return. It was also suggested that we try and get some accommodation from Government sources allotted to us to house the permanent secretariat/ HRN operation/ QSL Bureau. A discussion took place about the practicality of the proposal and it was finally proposed by VU2RO and seconded by VU2GUR that the idea be looked into further and reported back to the GC for further action. It was also clarified that in the event the HQ of the association moved from Bangalore, the property could still be a source of income and the increase in capital would always stand the society in good stead.

8) The President then gave a report on events that were going to take place in India in the forthcoming periods:

a) The IARU conference in 2006 in Bangalore

b) The Seanet Convention during October 2005 in Bangalore

c) A DXpedition to Lakshwadeep, for which permissions were already being sought

9) VU2UR requested that applications be made for use of the 10 meter and 6 meter bands again. VU2JHM suggested an emergency frequency be nominated, but it was pointed out that this may be difficult.

10) VU3IRH suggested that a representative from each city be appointed to coordinate between ARSI and local clubs and hams. The idea was well taken. As he was willing to represent Pollachi, he was appointed as representative. ARSI to get in touch with other cities/clubs for representative this would essentially help in disaster management.

11) A detailed discussion took place on the proposed changes in the constitution of ARSI. The reasoning for each amendment was discussed and the amendments passed with any changes that were found necessary. The amended constitution, with all the amendments, will be made available in soft and hard copy.

Board of trustees to be informed individually about the amendments with thanking letter.

12) There being no other business, the meeting was closed with a vote of thanks to the chair.

### CW Operator's Award by VU2AJ OM Dutt.

CW operators who have taken part in world wide contests in the calendar years 2003 and 2004 may please submit all details including the log. Dead line is 30th April 2005. Address for sending the details is: Awards Manager, VU2UR, either to his home QTH or to PO Box 6073 in Bangalore 560060. For all details kindly refer HRN Vol IX No.1 (Jan-Mar 2003 issue, Page 4)

### SILENT KEYS

VU2BEJ, OM Derrick, qth mumbai, became a silent key on 25th January 2005. Derrick was a regular on 14.150 every morning and will be sorely missed. "Bajikaka" VU2 BAJ died of brain haemorage on 3<sup>rd</sup> January 2005. He was a guiding force to many and is a great loss to the ham fraternity.