



HAM NEWS

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Amateur Radio Museum, Knowledge & Awareness Center inaugurated on April 18, 2010



Amateur Radio Museum, Knowledge & Awareness Center inaugurated on April 18, 2010
Inauguration and release of Amateur Radio Brochure by the Chief Guest Dr. K.S. Rao, Hon'ble MP(Middle), L -R: Shri. Ajeer Vidya, IAS(Retd), Shri.B.M.Baveja, Sr.Director, DIT,Gol, Shri.K.R. Suresh Reddy, Former Speaker, AP Legislative Assembly, Shri.S. Suri, VU2MY,Chairman, NIAR and Dr.R. Prabhakar Rao, IPS (Retd).

Mrs. D. Bharathi, VU2RBI presents a testimony in Commonwealth Observance Day on 8th March 2010, London



Mrs. D. Bharathi, VU2RBI with Her Majesty the Queen of England, Right: Bharathi reading the Testimony

Mrs. D. Bharathi Prasad, VU2RBI, the Chief Coordinator of NIAR presented a testimony in the presence of Her Majesty Queen of England, Prince of Edinburgh, Prince Charles, High Commissioners of Commonwealth Countries and a group of school children etc., on the eve of the Commonwealth Observance Day, 8th March 2010 at the West Minster Abbey, London by the Royal Commonwealth Society.



**Mr. S. Suri, VU2MY visit to
2nd International China Ham Expo 2010**

The 2nd International China Ham Expo 2010 was organized during 3-5th April 2010 by the Shanghai Radio Administration Bureau (SRAB), SRSA, Chinese Wireless Association - MTTI Of P.R.CHINA and Shanghai Tarsus Hope Exhibition Co., Ltd.,

Left: Mr. S. Suri, VU2MY, Chairman & CEO, NIAR addressing the gathering.



The Amateur Radio Museum, Knowledge & Awareness Center was inaugurated by the Chief Guest, Hon'ble Member of Parliament (LS), Dr. Kavuri Samba Siva Rao, at the National Institute of Amateur Radio (NIAR). On April 18, 2010. The museum was opened as part of the celebrations of the World Amateur Radio Day and is the first of its kind in India. The MP, accompanied by Shri. K.R. Suresh Reddy, Former Speaker, Legislative Assembly, Government of Andhra Pradesh and other dignitaries such as Shri. B M Baveja, VU2BMB, Sr.

Director & HOD, DIT, GOI, Dr. R. Prabhakar Rao, IPS, DGP (Retd.), Govt. of AP and Shri. Ajeer Vidya, IAS, Joint Secretary (Retd.), Gol, was given a guided tour of the exhibits by the Chairman of NIAR, Mr. S. Suri. On this occasion, the chief guest Dr. K. S. Rao observed that "The bureaucrats and political leadership should work together for the larger benefits of the HAM fraternity. He pledged his full support to NIAR for its committed and path breaking work for the development and promotion of amateur radio in India."

The world amateur radio day is observed on 18th April every year by amateur radio clubs / institutions / hams all over the world. Each year a unique theme is chosen to conduct, propagate and popularize the activity to the general public. The theme for year 2010 is "Amateur Radio: Combining communication experience with modern digital techniques." Coinciding with the theme this year, NIAR is implementing a major project titled Amateur Radio Advanced Digital Communications Network in the country over a period of twenty four months. This is supported by Department of Information Technology, Government of India.

The Museum is devoted to collecting, preserving and exhibiting the history of the Amateur Wireless Technology from the roots of inventions / experiments and today's scenario.

The museum houses an impressive display of a wide range of HF/VHF/UHF amateur radio wireless communication equipment and accessories from popular manufacturers like YAESU, ICOM, KENWOOD etc., ranging from the 1950s to the latest equipment of the day, and also antenna systems of SteplR, Hi-gain, Create, Force-12 etc. The accessories included power supplies, antenna tuners, antenna rotators, towers.

Several homebrewed devices and accessories including HF transceivers, antennas, baluns, direction finding devices used for hunting hidden transmitter in the game of 'Fox Hunt' etc. are also on display.



Educational institutions / NGO's / Disaster Management organizations are invited

The Amateur Radio Museum at the National Institute of Amateur Radio (NIAR) is open to public w.e.f 18th April 2010. The Museum will be open from Monday through Saturday. The entry is free. Educational institutions / NGO's / Disaster Management organizations may contact Ms. S. Yamini, VU2YAM, Admin. Officer, NIAR for a special awareness program / workshop on Amateur Radio Communication technologies.

For amendments in Amateur Radio Rules, Kindly visit www.niar.org

GLIMPSES OF AMATEUR RADIO MUSEUM



Museum Entrance



Ham equipment used by Shri. Rajiv Gandhi, VU2RG



Display of Fox Hunt Receivers & Morse Keys



Display of Signal Generators & test instruments



Dr. K. S. Rao, Hon'ble MP speaking on the occasion



Shri K. Suresh Reddy, Former speaker, Legislative Assembly, GoAP



Mrs. D. Bharati, VU2RBI briefing the history of transceivers



Shri. B. M. Baveja, VU2BMB, Sr. Director, DIT Gol speaking on the occasion



Dr. K. S. Rao, Hon'ble MP presenting memento to Shri B. M. Baveja, VU2BMB, Sr. Director, DIT, Gol.



Shri. K. Suresh Reddy presenting memento to the chief guest



Dr. K.S. Rao with media



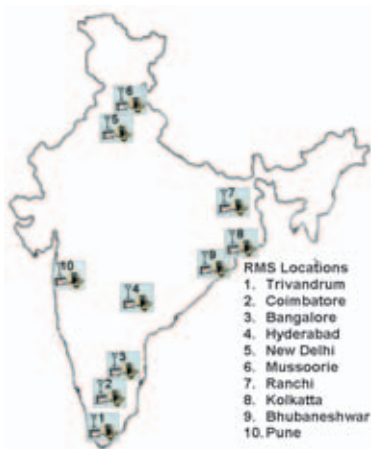
Shri. Suresh Reddy with media



Ms. S. Yamini, VU2YAM with media

Amateur Radio Advanced Digital Communications Network Supported By Department Of Information Technology, MCIT, Government of India

We take the pleasure in informing that the National Institute of Amateur Radio (NIAR), Hyderabad is implementing a project on Amateur Radio Advanced Digital Communication Network, that mixes Internet technologies and appropriate amateur radio technology that bridges any distance to deliver advantages of reliable, secure transparent system for last mile connectivity. The project envisages building a nation wide auxiliary amateur radio based advanced digital communication network provide radio e-mail messaging system. Project duration Feb 2010 – Feb 2012. Awareness Programs / seminars / demonstrations will be organized in various centres like educational institutions, NGO's, Disaster Mitigation centres etc.,



The system provides email capabilities with attachments, position reporting, graphic and text weather bulletins, and robust emergency communications between internet users and the amateur radio communities.

The system also has capabilities attractive for emergency communications where local or regional internet and wireline services are disrupted, overloaded, or down. It is especially useful where accuracy is essential, where information quantity makes voice communications inefficient, and where accurate records of the information sent and received are important. This system is also critical email emergency communications with the government and civil agencies they serve.

The network system containing Radio Message Server is tied together with the common servers at the hub. Traffic goes in and out between the Internet email recipient, and between radio users through the Radio Message Server gateways. In any single message, multiple radio-to-radio addresses may be mixed with radio-to-internet e-mail addresses, allowing complete flexibility.

It provides radio users and Internet users seamless, transparent email with attachments of reasonable size without any additional stress or learning curve. This allows any mobile or portable operation to connect with the Internet e-mail system from literally anywhere in the world.

It is proposed to have a network of Radio Message Servers placed at strategic locations so as to cover major geographical area of the country on high frequency (HF) bands. The basic requirements are HF radio with optional scanning and antenna switching as given below:

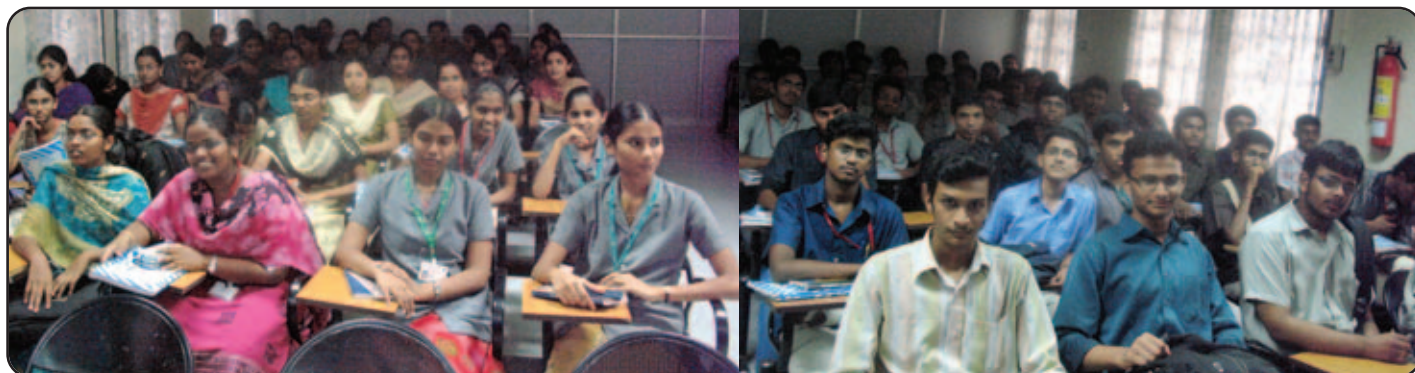
- HF - Pactor TNC (Radio Modem)
- VHF/UHF - 1200/9600 baud packet radio TNC (Radio Modem)
- Internet - Telnet connection (any internet connection)
- The client system will have a familiar mail interface to connect anytime, anywhere.
- HF - Pactor
- Pactor 1, Pactor 2 and Pactor 3
- VHF/UHF - Packet Radio
- 1200/9600 baud AX.25 packet



Messages transmitted via these digital modes are guaranteed to be received without error if proved to be reliable. This will be quickly adopted within the amateur community. The digital modes ensure that text processed by the TNC was guaranteed to be transferred without error between the two communicating stations.

Demonstration on Amateur Radio Advanced Digital Communication Network

Kumaraguru College of Technology, Coimbatore on 22nd April 2010



Vikasa Bharathi School Nagole

An awareness program was organized at Vikasa Bharathi School, Nagole by Ms. M. Bhanumathy, VU2BL on 13th March 2010. Over 100 students attended the program. Ms. Lissy, VU3LMS and Mrs. Jaya, VU2JMA assisted the program.

Demonstration at NIT, Warangal



Mr. S. Ram Mohan, VU2MYH gave a demonstration / awareness program to the students of NIT, Warangal on "Amateur Radio Advanced Digital Communications Network" on March 13, 2010 at NIT, Warangal.

ASOC Exam held at NIAR



ASOC examination was held on 31st March 2010 at NIAR Campus. Over 23 candidates appeared for the exam.



Demonstration at LSS Club

An awareness program on "Amateur Radio Advanced Digital Communications Network" was organized coinciding with International Woman's Day on 8th March 2010 at LSS club of Maitri by Ms. M. Bhanumathy, VU2BL and assisted by Mrs. Lissy, VU3LMS. Over 50 participants attended the same.

Testimony speech of Mrs. D. Bharathi, VU2RBI on the eve of Commonwealth Observance Day, 8th March 2010

Communication is one of the most general needs of the society and the way we fulfil it has varied from smoke signals to telephones to satellite communications, but our main aims have always been the same -- that is to "say what we want" and "to hear when we wish to". Though these may seem simple, but to achieve them when required has been one of the most important challenges of communication technology.

I have 30 years of experience in Amateur Radio communication, which I adopted in 1980 under my guru Mr. S. Suri, VU2MY, Founder and Chairman of National Institute of Amateur radio, supported by Ministry of Information Technology, Govt. of India. I believed in promoting this subject by conducting training classes and demonstrations and introducing to youngsters to inculcate scientific thinking in their minds. Besides being a scientific hobby, Amateur Radio communication provides one with discipline and interaction between fellow amateurs and scope to serve the society in the hour of need. To mention one such opportunity I intercepted an SOS sent out by a team of four foreigners in distress in the Bay of Bengal and alerted the Navy who saved their lives.

I have closely associated my self with emergency communication through Amateur Radio during different disasters including the 2004 Tsunami in Andaman & Nicobar Islands, Orissa super cyclone in 1999 and Gujarat earth quake in 2001.

I have been fortunate to have practiced all modes of communications covering voice, telegraphy, digital and satellite through Amateur radio during my career. Even in 2010, it's a fact that telecommunication is still a very rare service in many parts of the world including Commonwealth Nations which has lead to a great divide between nations or even within nations themselves. It is also a fact that billions of dollars are being spent for development of telecommunications by various countries but the simple technologies such as Amateur Radio communications have been put on the back burner. I believe it is critical to promote Amateur Radio as a second line of communication, as it is a time tested means in case of emergencies and a scientific hobby.

WORLD AMATEUR RADIO DAY CELEBRATED IN THE WORLD

Each year on 18 April, radio amateurs celebrate World Amateur Radio Day. On that day in 1925 the International Amateur Radio Union (IARU) was founded. In 2010, the theme of the event is "Amateur Radio: Combining communication experience with modern digital techniques."

Amateur radio has truly entered the 21st Century. In less than 100 years amateur radio communications has evolved from crude spark-gap technology to digital signal processing and software-defined radios. The amateur's HF choice between voice and CW has been expanded to a broad range of communication choices from television to spread spectrum.

QUILON AMATEUR RADIO LEAGUE CONDUCTED HAM FAIR 2010 ON 18TH APRIL 2010



Quilon Amateur Radio League conducted Ham Fair 2010 on 18th April 2010 at Kollam. Mr. Jose Jacob, VU2JOS, Assist. Director, NIAR gave Presentation on Amateur (Ham) Radio Digital Communication Network. Ms. Lissy VU3LMS also participated in the programme.

On the dias (L-R) : Mr. Vijayan, VU2WDP, Mr. Jose VU2JOS, Mr. Nadarajan VU2KGN, Dr. Jayakumar VU2JKR and Mr. Gopal Madhavan VU2GMN.



73 de

AMATEUR RADIO STATION
PE1RAH

CONFIRMING QSO WITH

DATE	UTC	FREQ./MODE	R S T

☐ PSE QSL RIG: _____ PWR: _____

☐ TXI QSL ANT.: _____

Graphic design by SV9VIM

About HAMSAT

In 2003 the India Space Research Organisation (ISRO) started a project called "HAMSAT". The HAMSAT satellite would create a communication platform for radio amateurs in the south-east Asia region. This region is often affected by calamities like floods, earthquakes etc. and ISRO is looking for a way to get HAMs more involved in these emergency communications, and to get young people more interested in space technology. For satellite communication VHF, UHF or higher frequencies are preferred. However, in the south-east Asia region this kind of equipment is not widely available, so HAMSAT will give them a reason to upgrade their stations. The LED orbit is not the best orbit for long duration emergency communications. However, it is a "cheap" solution that gives HAMs in the region a platform to get started and eventually gain valuable experience on satellite communications. The next step will be a more powerful and longer available satellite. However, such a satellite is very expensive and will only return its value when there are enough ground-stations with communication experience to use it effectively.

HAMSAT-1 features:

63 cm x 63 cm x 15 cm Cubesat - 42kg - Onstar Polar LED orbit - Passive temp. control - 4 RPM Spin stabilisation, magnetic torque controlled - GaAs solar - Li-ion battery - UHF/VHF omnidirectional antenna - 2 x linear transponder - 30dBm PEP output.

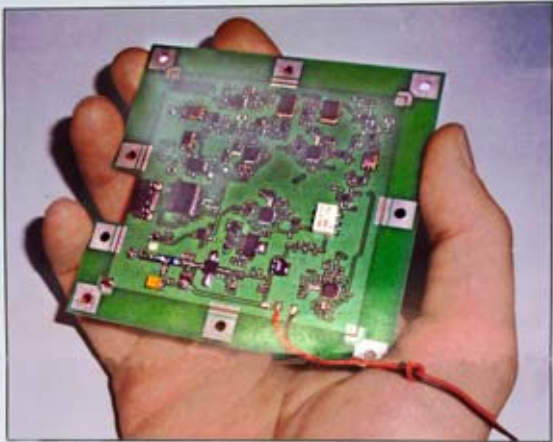
Transponders:

Indian: Made by ISRO - Linear Mode - UV - 60kHz BW - 30dBm PEP power - Unmodulated beacon
Dutch: Made by PE1RAH - Linear Mode - UV - 50kHz BW - 30dBm PEP power - Morse beacon - 14 cm x 10 cm x 3 cm - Mass: 1kg - private project.

Op.: William Leijenaar
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e-mail: pe1rah@hotmail.com

Mr. Leijenaar designed 1st Hamsat-India launched by ISRO successfully in the year 2005. He was a student of Engineering then. Now he runs a private company by name Leijenaar Electronics. He has brought to the China Ham Expo 2010, the working models of Transponders and explained their operation using a balloon or a kite. Chinese people are likely to take his ideas seriously and may bring in a revolution in teaching students with practical assembly, test and use. This will enthuse lot of youth into space science and communications.

LE005-R2
Mode-UV Linear Transponder



FEATURES 特点

Input Freq 接收频率: 70cm (SSB/CW/FM)	Supply 电源: 3.6V - 4.0Vdc
Output Freq 发射频率: 2m (SSB/CW/FM)	Size 外型尺寸小: 90mm x 90mm x 5mm
RF Power 输出功率: +23dBm PEP	Weight 重量轻: <30g 少于 30 克
Bandwidth 带宽: 30kHz	
Protection 保护: Low voltage switch off 低电压开关断电保护 High current switch off 板载保险丝	Current 工作电流: 650mA standby 650mA 待机模式 760mA peak 760mA 高能量的传输

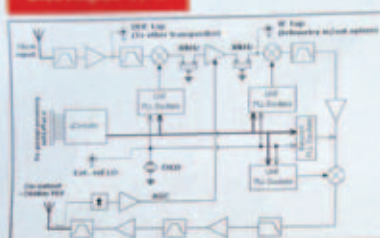
- CW Beacon onboard
- All PLL oscillators software programmable
- Optional 可选:
 - Tap available at 70cm LNA
 - Tap available in 1st IF path (to modem)
 - Ext. Ref Osc. Connection

集成无线电信标莫尔斯电码信息
所有频率均可软件编程

70cm输入放大器后可连接
第一中频可连接(到调制解调器)
可外部连接参考振荡器

Design: William Leijenaar, PE1RAH

Block Diagram 电路框图



Size of Transponder 尺寸



Power Source 供电电源



3.7V cell-phone battery
支持 3.7V 手机电池

Flexible 灵活



- Fits CubeSat structure
适合 CubeSat 结构
- Light weight: < 30g
重量轻: 少于 30 克

Small size 体积小



Extensive Board 板载丰富



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Mr. William Leijenaar, PE1RAH, Member of AMSAT-NA, Netherlands working as RF Development Engineer, NXP Semiconductors, CATV Hybride module designer, designs linear transponders for AMSAT community.



CHINA HAM 2010

Mr. S. Suri, on the invitation of the organizers have participated in 2nd International China Ham Expo & Conference during 3-5 April 2010 held in Shanghai, China organized by the Shanghai Radio Administration Bureau (SRAB), SRSA, Chinese Wireless Association –MTTI of P.R. CHINA and Shanghai Tarsus Hope Exhibition Co. Ltd.

2nd International China Ham Expo



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