



HAM NEWS

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Government of India plans to establish Amateur Radio Centres throughout the country.



Left to Right: Shri S.Ram Mohan, Shri Ajeer Vaidya, Shri R.K.Arora, Shri B.M.Baveja & Shri S.Suri

Senior officers representing Department of Information Technology, Ministry of Home Affairs, Indian Airlines and ISRO met at National Institute of Amateur Radio Hyderabad to review the progress made by NIAR in establishing 10 Amateur Radio centers covering 6 States in the country.

The meeting was attended by :-

Shri R.K.Arora, Group Coordinator, Department of Information Technology (DIT), Shri Ajeer Vaidya, I.A.S, Joint Secretary to Govt. of India, Dept. of Information Technology, Shri S.K.Jha, I.A.S, Dy. Secretary (Disaster Management), National Disaster Management Division, Ministry of Home Affairs. Shri B.M.Baveja, Director, Dept. of Information Technology, Shri Raju Sagi, Head, PRCD SCG, ISRO Satellite Centre and Shri P.K.Sansi, Chief Manager, Indian Airlines.

The Chairman and Director, NIAR Shri S.Suri, VU2MY welcomed the Progress Review and Steering Group members of Govt. of India and explained the progress made by NIAR in establishing 10 Amateur Radio centers with latest communication technologies.

Shri R.K.Arora who chaired the meeting said the DIT would consider the extension of the pilot project to another 20 locations apart from the 10 locations taken up this year in a phased manner all over the country.

NIAR announces "VU2RG Awards"



Year long celebrations in commemoration of Shri Rajiv Gandhi, VU2RG is announced by NIAR.

The awards will be presented to any National / International individual Ham / Ham Association / Amateur Radio Organisations for their Excellence in Social work / Emergency Services / Awareness / Training / Homebrew / Forums.

The work carried on between 20th August, 2004 to 31st July, 2005 will be considered for these awards.

These awards will be given at an appropriate function on Shri Rajiv Gandhi's 61st Birthday on 20th August, 2005.

Further details will follow in next Ham News.



Shri K.B.Krishna Murthy, VU3VIP, M.P (R.S) speaking over a Walkie - Talkie to Mr.Peter, VK8PDG via echolink during his visit to NIAR on 3rd July, 2004



Shri Ajeer Vaidya, I.A.S, Financial Advisor, D.I.T suggested that NIAR should come up with a road map for creating a massive human resource of 1,00,000 hams throughout the country. He also stated that the DIT would support 30 centers with latest technologies of Voice/Digital/Visual/Satellite communication capabilities over a period of next 3 years.



Shri S.K.Jha, I.A.S stated that even in the recent floods in Bihar, it was hams who responded voluntarily and provided essential and vital communication links. He said that the initiatives taken up by DIT to promote Amateur Radio in the country are laudable and that more needs to be done by involving many other agencies like Ministry of Human Resource development, Rural Development, North East Council, Science and Technology so that various schemes formulated by these ministries to encourage youth for nation building activities may include promotion of Amateur (HAM) Radio as essential element to achieve the target of 1,00,000 hams soon. He also stated that Schools/Colleges under the Kendirya Vidyalaya Sanghathan may be asked to take up Ham Radio.



Shri P.K.Sansi, Chief Manager, Indian Airlines and some senior members of NIAR stated that the regulatory agency, Wireless Planning & Coordination wing of Ministry of Communication and IT, on Amateur Radio in the country should make suitable changes in the procedure that would enable achieve high targets of increasing population of HAMs in the country. Shri S.K.Jha at this point said that he would put a strong case with in the Ministry of Home Affairs to expedite the issue of clearances from his department for issue of HAM licenses. He has also proposed to take up this issue on Ham licenses in his department reviews.



Shri Raju Sagi, representing ISRO stated that the 1st Indian Amateur Radio Satellite 'HAMSAT' will be launched by ISRO soon. He had

explained the members with the lively debate on working of the satellite and its utilities.

Shri S.Suri, VU2MY Chairman NIAR stated that, NIAR has infrastructure, technical and operational capabilities to carry forward the vision of late Shri Rajiv Gandhi, VU2RG in promoting Amateur Radio all over the country, also that Smt. Sonia Gandhi, VU2SON took up active interest by giving away awards to best Hams in the country providing excellent service to the country. He also thanked all the ministries for their vision of increasing HAM population to 1,00,000 in the country. He stated that NIAR with all the other Amateur Radio centers now being established in the country would work to achieve this target.

Shri.Suri, VU2MY also said that Shri Y.S.Rajasekhar Reddy, Chief Minister of Andhra Pradesh & other ministers are interested in promoting Amateur Radio in a big way to take forward Rajiv Gandhi's vision.

Shri Er. G.L.Rao, VU2GL, Secretary General, Federation of Engineering Institutions of South and Central Asia (FEISCA), former President Institution of Engineers (India), explained that NIAR is the unique organization in India carrying out the vision of Late Shri Rajiv Gandhi, VU2RG for the last 2 decades under the able leadership of Shri S.Suri, VU2MY, and assured that the program initiated by the Govt. of India support will be great success.

Shri J.Shankar, VU2DET former Mayor Vijayawada expressed great satisfaction that efforts of Mr. S.Suri, VU2MY were well recognized by the local government and Shri Rajashekar Reddy's interest in promoting Ham Radio and supporting NIAR.



Shri Charanjeet Singh, VU2LKB, Shri J.Surynarana, VU2JJS, Ms. M.Bhanimathi, VU2BL, Shri S.B.Ram, VU2LIC, Shri S.Ram Mohan, VU2MYH, Shri R.Sarat Babu, VU3RSB spoke on the occasion.

Vote of thanks was proposed by the convenor of the meeting Shri B.M.Baveja, Director, Dept. of Information Technology, Govt of India.

Exclusive for NAR publication by Larry KS4NB... Copyrighted material.

THE WELLINGTON RADIO CLUB'S LOW BAND FIELD DAY ANTENNA

THE K4WRC VEE BEAM

Field Day in the USA is a national emergency communications exercise with a competitive nature. The antenna described here was used at the Wellington Emergency Operations Center during FD2004.

One goal was to have low band antennas providing both low and high angles of radiation. A multiband, trapped inverted vee served as the high takeoff angle antenna.

For low to medium RF takeoff angles, the Vee Beam was selected because of its simple design, ease of erection, high gain, low cost and the particular space available. Another goal was NOT to use manual antenna tuners to enable multiband operation. That permits inexperienced operators to use the radios without fear of damaging them!

Using EZNEC modeling software, we designed a V with 302.5 foot legs... 9/2 wavelengths on 40 meters and 5/2 wavelengths on 80m. (A free demo version of EZNEC is at www.ez NEC.com). ODD half wave long, centered antennas have low impedance feedpoints. Automatic impedance matching was accomplished with a series matching section.

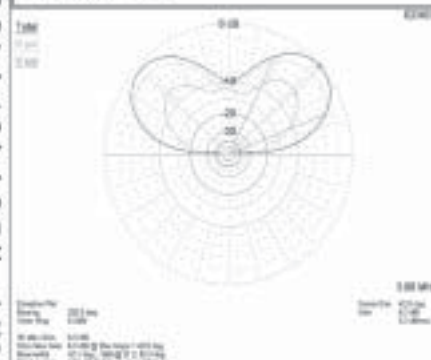
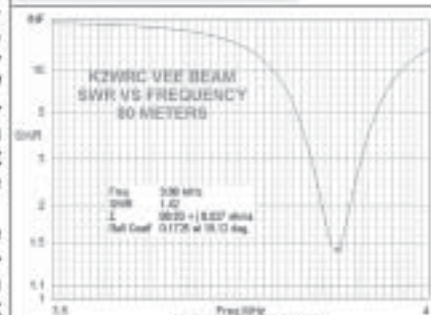
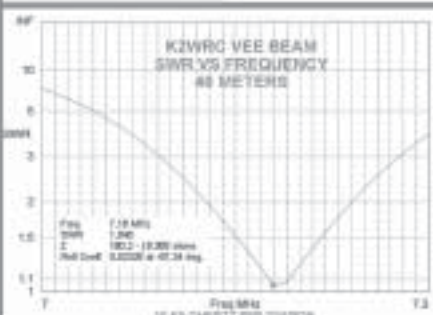
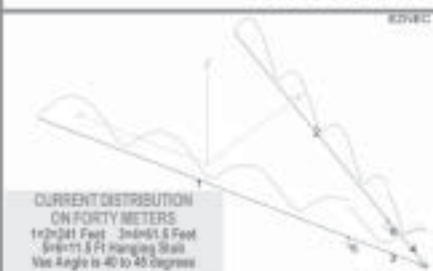
The chart below has the technical information to fabricate matching sections using main feedlines of either 54 or 75 ohm coax and 300 ohm twinlead.

Single wire vertical stubs were used to adjust resonances so they fell near the center of 40m and the top of 80m. When placed at high current points they have little effect on the antenna, but at low current/high voltage points, they act to lengthen the antenna.

Tuning antenna sections 1 and 2 affects both bands while adjusting the stub lengths primarily affects 80m. First adjust the antenna for your desired 40 meter frequency and then the stubs for 80m. On 40M, our antenna tuning changed about 40KHz per foot.

A narrow Vee angle was chosen to avoid a large metal roofed building, but for maximum gain use an angle of 60 to 80 degrees. The dimensions are shown in the top left plot. They will vary depending upon height, soil and nearby objects. Our V was at an average height of about 40 feet.

Larry KS4NB would be happy to answer questions about this project. Contact him at Echolink repeater node K4WRC-R, IRLP Node 7830 or email at: larry33414@aol.com



ABOVE LEFT & RIGHT: Plots from EZNEC show expected performance. SWRs and resonances were very close to predicted. They were easily handled by the built in tuners of the IC746 & IC756 radios. Patterns were broad enough to cover most of the USA from Florida.

BELOW: The "Series Matching Section" used to raise the line impedance.



ZoF, to match the antenna feedpoint resistance, Zin, of about 180 ohms on 40M. The values for two matching systems are shown depending on whether 50 or 75 ohm coax lines are used. The transformer resonance is very broadband and the 300 ohm section has little effect on 80m where it is less than 0.02 wavelengths long.

MAIN FEEDLINE FROM RADIO ZoF	300 OHM TWINLEAD v _f =0.82 Zo	SAME TYPE AS MAIN FEEDLINE ZoF
RG-58 v _f =0.66 54 OHM COAX	4.311 Feet 1.314 Meters	6.93 Feet 2.112 Meters
RG-59 v _f =0.66 75 OHM COAX	4.371 Feet 1.332 Meters	7.844 Feet 2.391 Meters

TIMES CITY

Ham operators gear up to deal with calamities

By Ch Sushil Rao
Times News Network

Hyderabad: Help will reach much sooner during times of natural disasters in the country as plans are afoot to train ham radio operators at various places.

Conventional communication systems collapse during natural disasters like floods and earthquakes. The first 10 hours after a natural disaster strikes are most crucial. Information about crisis needs to be gathered and sent immediately so that help is mobilised to the affected grounds.

And since communication during such calamities is possible only through ham radio, the central government has focussed its attention on putting trained amateur ham radio operators at different locations.

A central team will be in Hyderabad on Thursday for a mid-term review of a pilot project that has been undertaken by the city-based National Institute of Amateur Radio (NIAR) here to train ham radio operators in various parts of the country.

At the instance of the Planning Commission, the Ministry of Communications and Information Technology is funding the pilot project under which ham radio operators are to be trained at places like Vuyyuru in Andhra Pradesh, Bhuvaneshwar, Lucknow, Uttar Kashi, Bhub, Ahmedabad, Jamnagar, Puri, New Delhi and Hyderabad.

RADIO HELP

- Conventional communication systems collapse during natural disasters like floods and earthquakes
- Communication during such calamities is possible only through ham radio
- The central government has focussed its attention on putting trained amateur ham radio operators at different locations

As many as 300 amateur radio operators, more popularly known as 'ham', will be trained during the one-year pilot project ending March 31 next year.

"Amateur radio operators are volunteers who are always at hand to render help during natural disasters. We picked people from NGOs, educational institutions and community-based organisations to train," NIAR director S Suri told *The Times of India* here.

After getting a license, amateur radio operators with the necessary equipment will be able to rush to a natural disaster site from the nearest place.

The NIAR, which is an NGO, got a fillip when Rajiv Gandhi took interest in ham radio in 1981.

During the Orissa Superquake of October 1999, and the Gujarat earthquake, it was ham radio operators who first got into the act and mobilised help.

భక్తంప కే కుడరతి ఆశ్రితానా సమయే ఊమ రేడియోనా వపరాశతీ స్వయంసేవకో బనీ శకశే

అమెరికా, యూరప్, ఆసియా, ఆఫ్రికా, ఆస్ట్రేలియా, ఆంటార్టికా వంటి ప్రపంచంలోని అన్ని ప్రాంతాలలోనూ హామ్ రేడియో ఆపరేటర్లు ఉన్నారు. వీరిని కలిపి 'హామ్' అంటారు. వీరికి ప్రత్యేకంగా కేటాయించిన ఫ్రీక్వెన్సీలు ఉంటాయి. వీరిని ఉపయోగించి ప్రపంచంలోని అన్ని ప్రాంతాలలోనూ సమాచారం, సహాయం, సేవలు అందించవచ్చు. వీరిని ఉపయోగించి ప్రపంచంలోని అన్ని ప్రాంతాలలోనూ సమాచారం, సహాయం, సేవలు అందించవచ్చు. వీరిని ఉపయోగించి ప్రపంచంలోని అన్ని ప్రాంతాలలోనూ సమాచారం, సహాయం, సేవలు అందించవచ్చు.

గురువారం 8, జూలై 2004 ఆంధ్రప్రదేశ్ 'హ్యామ్ రేడియో వైజ్ఞానిక వ్యాపకం'

ఉయ్యూరు, జూలై 7 (ఆంధ్రప్రదేశ్): హ్యామ్ రేడియో ద్వారా ప్రపంచంలోని అన్ని ప్రాంతాలలోనూ సమాచారం, సహాయం, సేవలు అందించవచ్చు. వీరిని ఉపయోగించి ప్రపంచంలోని అన్ని ప్రాంతాలలోనూ సమాచారం, సహాయం, సేవలు అందించవచ్చు. వీరిని ఉపయోగించి ప్రపంచంలోని అన్ని ప్రాంతాలలోనూ సమాచారం, సహాయం, సేవలు అందించవచ్చు.

ఊమ రేడియో విని ఎవరైతే ఇలా చేయాలి?

హామ్ రేడియోను ఉపయోగించి సమాచారం, సహాయం, సేవలు అందించవచ్చు. వీరిని ఉపయోగించి ప్రపంచంలోని అన్ని ప్రాంతాలలోనూ సమాచారం, సహాయం, సేవలు అందించవచ్చు. వీరిని ఉపయోగించి ప్రపంచంలోని అన్ని ప్రాంతాలలోనూ సమాచారం, సహాయం, సేవలు అందించవచ్చు.

జూలై 8 గురువారం 2004 మానవాళికి మేలు చేస్తున్న హ్యామ్ రేడియో

ఉయ్యూరు, జూలై 7 (ఆంధ్రప్రదేశ్): హ్యామ్ రేడియో ద్వారా ప్రపంచంలోని అన్ని ప్రాంతాలలోనూ సమాచారం, సహాయం, సేవలు అందించవచ్చు. వీరిని ఉపయోగించి ప్రపంచంలోని అన్ని ప్రాంతాలలోనూ సమాచారం, సహాయం, సేవలు అందించవచ్చు.

AMSAT-Echo (AO-51) Opens to Users on 30 July 2004



AO-51 (AMSAT-Echo) was turned on for general use in FM repeat mode on 30 July 2004 at about 0215 UTC. This will be for a trial period of about three weeks during which the command stations will be watching the power budget and adjusting the UHF transmitter B power as needed for good manage-

ment of the battery. Initially, the transmitter will be running at about 1W. If power allows, it will be slowly increased during the trial period. We will also be adjusting settings on the satellite, so if the signal changes slightly from time to time, do not be alarmed. The TXB transmitter will be on 435.300 MHz, which is also a trial frequency. The original frequency of 435.225 MHz is now in regular use by GO-32, so the alternate is being tested to see if it can be used long term.

To work Echo in this mode you need the following information:

Uplink: 145.920 MHz FM voice with 67 Hz PL.

Downlink: 435.300 MHz FM voice.

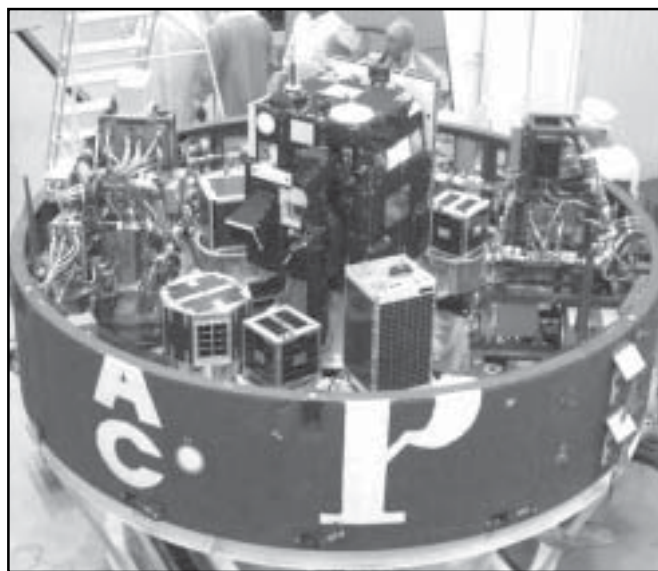
The downlink transmitter will come on when it hears an uplink signal with a 67 Hz PL tone for about 1 second. It stays on for 10 seconds after that signal goes away.

This operation is just like a terrestrial FM repeater with a 1 second kerchunk filter and a 10 second hang time.

The command stations will be watching the AMSAT-BB email reflector for report of how Echo is working. Please post your results there. We are most interested in hearing about how well Echo hears you and how well you hear it.

Note that Echo is still wobbling a great deal and the polarization sense of the downlink will vary. The B UHF TX is nominally RHCP in the northern hemisphere but this will change over the duration of a pass due to wobble and orientation relative to the ground station.

Transmitter A will generally continue to operate on 435.150 but may be at reduced power at times, or may be at about 1W only when the command stations are gathering Whole Orbit Data (WOD) telemetry. We will be analyzing the WOD for information about how much TX B is on and how the power system is behaving. Please note that the digital transponder and the store and forward BBS, are NOT yet open for general use. TX A may also switch to 38k4 from time to time to facilitate downloading large files.



We expect Echo will be heavily used in these first few days. Many stations will be trying to make a contact through Echo. It is good amateur practice and common courtesy to let everyone have a chance. Echo will hear you as well as or better than any previous amateur FM repeater satellite. With the downlink transmitter at 1W you will need a small directional antenna to hear it. Especially in these first few days, always listen first. Even though the downlink will only come on when it hears an uplink signal, with hundreds of stations trying it out we expect the transmitter to be on continuously when over populated areas. So again, listen first, and be courteous to let everyone have a chance at making a contact via AO-51.

And a reminder, this is a trial period of the FM voice repeat function. The digital portion of Echo is NOT yet open for use.

Echo Command Team

Jim White, WD0E

Mike Kingery, KE4AZN

MUMBAI HAMS RESPOND TO SOS FROM BIHAR FLOODS

Hams from Mumbai Amateur Radio Society responded to the request of Mr.Saroj Kumar Jha, IAS, Dy.Secretary (Disaster Management) & Dy. National Program Director, National Disaster Risk Management Program, Ministry of Home Affairs and swung into action on 15th July, 2004 and established contact on 16th July, 2004 from Sachivalaya (Patna) to Sheohar and Sitamarhi.

NIAR compliments the MARS for the excellent work done during recent floods in Bihar.

For more details.. Visit www.mumbai-hams.org

Sunday Times, August 8, 2004

Dutch touch to ham satellite

TIMES NEWS NETWORK

Hyderabad: A Dutch student has helped India put its first amateur radio satellite in orbit. Willian Lijenaar, who has graduated as an electronics engineer, has provided a transponder to the satellite. The transponder is said to weigh less than a kilo.

Raju Sagi, who represented the Indian Space Research Organisation (Isro) at a National Institute of Amateur Radio (NIAR) meeting recently in Hyderabad, said HamSat would be launched in four or five months.

The launching of HamSat should come as good news for the more than 15,000 amateur radio operators for the footprint of the satellite will cover specifically the country and also the whole of South East Asia. "This will make communication better," NIAR director S Suri told the *Sunday*



Arindam

Times of India.

Nagesh Upadhyaya of Isro, who is also the coordinator of Ham-sat-India, had asked Lijenaar to design and provide the transponder. His prototype was accepted by Isro.

As far back in 1989 itself, the NIAR had sought to collaborate

with the University of Surrey in the UK in making the launch of an amateur radio satellite possible. Though the plan did not materialise due to some subsequent developments, Isro got into the act and decided to put the country's first amateur radio satellite in orbit.

Along with Lijenaar's transponder, an Indian transponder will also be part of HamSat.

When HamSat is put in orbit, India will be in a position to react to natural calamities in a much faster way thanks to HamSat.

THE HINDU, Saturday, July 31, 2004 ANDHRA PRADESH 'More ham radio operators soon'

By Our Staff Reporter

HYDERABAD, JULY 30. The service amateur radio operators rendered in times of floods and other natural calamities over the past few decades was remembered by senior officers from different agencies who met in Hyderabad recently.

The meeting reviewed the progress of the National Institute of Amateur Radio (NAIR) in establishing 10 new amateur radio centres in six States in the country. Participants expressed confidence that the target of one lakh more ham radio operators would be achieved soon. They said schools and colleges run by the Kendriya Vidyalaya Sangathan would be asked to take to ham radios.

Among those present were the Group Coordinator, Department of Information Technology (DIT), R. K. Arora, the Joint Secretary, DIT, Ajeer Vaidya and the Deputy Secretary, Disaster Manager, Ministry of Home Affairs and Chairman of NIAR, S. K. Jha.

In the Ham Spirit Shri Deepak-Joshi Shantilal, VU3DSJ

Shri Deepak Joshi, VU3DSJ an active Amateur Radio operator from Gandhinagar, Gujarat assisted NIAR teams visiting various institutions in Ahmedabad, Bhuj and Jamnagar in Gujarat State

NIAR thanks Shri Deepak Joshi for spending his valuable time and travelling with NIAR team members to various places in Gujarat and participating in Awareness activities.

Shri Deepak Joshi, VU3DSJ is currently busy with relief work in South Gujarat area.



Mr.R.Sarath Babu, VU3RSB explaining about Dxing over Walkie Talkie / VHF Base Station using Echolink during awareness program at VITS

Amateur Radio Awareness Program was given at Vignan Institute of Technology & Science, Deshmukhi, Nalgonda on 20 July 2004. Mr.S.Suri, VU2MY gave a slide presentation, Ham a Global Friend - A film by NIAR was shown and there was also a live demonstration of Echolink by

Mr.S.B.Ram, VU2LIC apart of HF/ VHF by Mr.R.Sarath Babu, VU3RSB, SWL K.Pruthivi and SWL Prasanth also co-ordinated the program.

Hyderabad Doordarshan also recorded the program. Interactive session by Doordarshan Team with the Students. Thanks to the Shri K.Vizayakumar, Director and Head of Electronics Dept. and his team for arranging such a program.



Left to Right: Presentation / Ham a Global Friend film, Shri S.Suri, VU2MY, Founder, Chairman & Director, NIAR & Shri K.Vizayakumar, Director, VITS, and other Lecturers / Students

Amateur Radio demonstration was conducted during the 77th Birth Anniversary celebrations of Pujya Shri Parthasathi Rajagopalachariji, spiritual head and head of the mission, Shri Rama Chandra Mission, Sri Parthasarathi Nagar, Thumukunta, Hyderabad from 20th to 27th July, 2004. Several participants India and abroad gathered during the celebrations. The following hams participated during demonstrations Mr.G.L.Rao, VU2GL, Mr.Satya Kumar, VU3KUM, Mr.S.B.Ram, VU2LIC, Mr.Jose Jacob, VU2JOS, Mr.P.A.Charles, VU2ACC and Mr.P.J.Ajan, VU3AJU and SWLs K.Pruthivi and M.Leela Krishna.

On 16 July 2004 Amateur Radio Demonstration was given at Delhi Public School, New Delhi by Chief Coordinator Mrs.D.Bharathi Prasad, VU2RBI and team. Classes for Amateur Radio have started there for the students from 28 July 2004.

ASOL exam was conducted at NIAR on July 14, 2004 by officials of Hyderabad Monitoring Station. 28 candidates appeared in the exam.

On 20 July 2004, Doordarshan Kendra, Hyderabad recorded an interview with Mr.S.Suri, VU2MY, Chairman & Director of NIAR which was later telecast in their programs.

CHANGE OF LOCATION

Jamnagar Under DIT Project

It was decided in the PRSG Meeting held at NIAR, Hyderabad on 29th July, 2004 to shift the proposed Amateur Radio Centre at Jamnagar to North East India. The exact location will be decided soon.



Mr.S.Ram Mohan, VU2MYH, Chief Investigator, Addl. Director, NIAR interacting students at ASOL Training in Bhuj.



Mr.S.Ram Mohan, VU2MYH, Chief Investigator, Addl Director at PRSG Meet



Mr.G.Gumang Singh, Engineer conducting ASOL Training Program at OSDMA, Bhubaneswar.



Ms. Itishree Devi conducting ASOL Training Program at Biju Patnaik National Steel Institute, Puri, Orissa.



Mr. S.B. Ram, VU2LIC addressing the students of Zilla Parishad High School during an Amateur Radio Awareness Program at Vuyyuru, Krishna District, A.P.



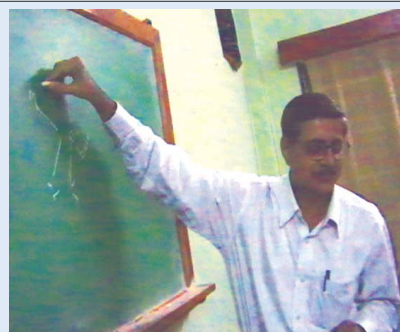
PETER GILES - VK8PDG, Northern Territory, Australia

Peter Giles, VK8PDG is very active and popular ham from Australia and works in all Digital Modes like Winlink / Ax25 / Telpac/ Echolink and other modes of communication

We thank Mr. Peter Giles, VK8PDG for taking part in many Demonstrations conducted by National Institute of Amateur Radio, VU2NRO and interacting with Technical Wing, NIAR.



Shri Parthasaradhi, M.L.A., Vuyyuru, Krishna Dist (AP) visited NIAR, inspired by the awareness Program conducted in his constituency and study the latest technologies in Amateur Radio. He also released Ham News (June-July, 2004) during his visit to NIAR



Shri R.R. Vasani, I.A.S., VU2SVZ, Collector, Kheda Dist, Gujarat visited NIAR on 30/7/2004. He explained to the NIAR members how Amateur Radio communication helped administration during a severe cyclone / flood relief operation in Gujarat

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