Amateur RADIO Society News

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# President's message

Dear members:

Since writing to you in the last issue, ARSI organized a Dxpedition to the Andaman Islands.

The planning actually started early 2010 for a visit in August 2010, but with all things with our administration, things got delayed and we had to postpone from the originally scheduled date to March 2011. All permissions were in hand only in January 2011 and from then on it was a very hectic activity to get everything sorted out Sixteen of our members opted to join us and as before it was done by taking contributions from all operators to defray costs. Everyone operated with one call sign VU4PB.

We have an article from Deepak VU2CDP in this issue where he narrates the excitement of working from a rare location and when the pileups are phenomenal.

My sincere thanks go out to all those who made the operation a great success- we made around 33,000 QSO's in the two weeks of operation.

We have finally a totally new look webpage thanks to Sanjay VU2SJD. It has interactive areas where you can log in and access certain information. More work is required, but as Sanjay was part of VU4PB operation he and Prasad VU2PTT have had their hands full cleaning up the log files etc.

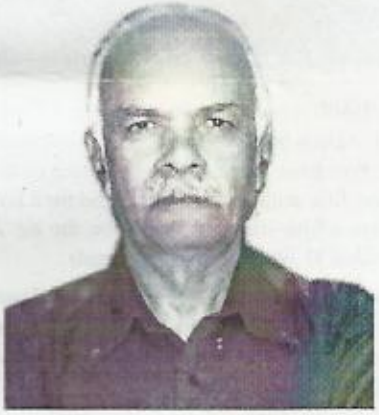
Thank you Sanjay for the webpage effort, incidentally Sanjay also hosts the webpage free of cost to ARSI.

The webpage also was great source of information on ourVU4 event and we recommend you take a look at the guest book and other areas to get a feel of what the DX community felt about our operation. To remind you our webpage is www.arsi.info

I wish you all a very enjoyable summer vacation.

*Gopal, VU2GMN*

# From the Editor's desk



The first issue is out, everyone has appreciated the efforts, thanks.

We can make this a very interesting and educative e-zine if members

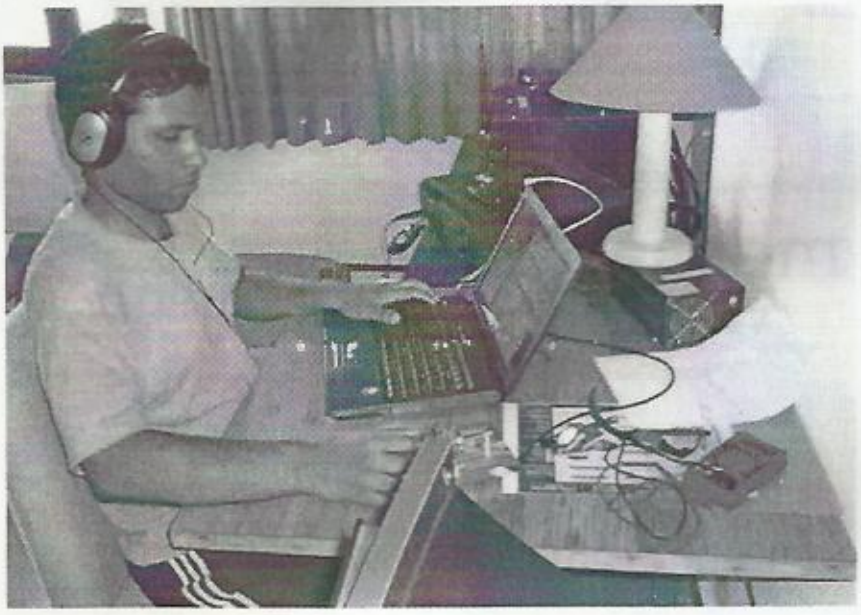
contribute articles and photos. Surely, the clubs around the country are involved in some activity or the other – no matter how small the events are, do send in a report – with photos where available – for publication. Of course articles from individuals are always welcome.

As usual, all other news and information that requires immediate attention are being posted by me on the ARSI reflector.

*Ganesh VU2TS*

# AN UNFORGETTABLE DXPEDITION

*Deepak Pathak VU2CDP*



(VU4PB was operated between the 15th and 31st March 2011 by 16 operators who went to Port Blair in small batches. Most of the time four stations were active and for a few days a fifth station was also on the air. A total of 33,000 QSO's were logged)

The following, though a narration of true events, might sound like a work of fiction because the author feels it was too good to be true!

Most hams who operate on the HF bands, usually encounter DX at some point during their operating lifetime. Some choose to ignore if called in by a DX station; some fall out of their chairs in disbelief; some are polite enough to engage the DX in routine conversation and then move on. This article is not about them. It's about the station who came across all such instances while operating from the 29th Most Wanted DX Entity* in the world - VU4 - Andaman & Nicobar Islands. He was the DX.

This goes back to a cool Saturday evening in the month of January in Delhi. Winter was not over and I was upset at myself for not having fixed the antennas after CQWW ended in November. The South Orkneys would go on air the following week as VP8ORK and my dipoles had broken and blown away in the wind. I lived in a rented apartment block so dipoles were my only hope. Tough times lay ahead. I was wondering what to do when I received a surprise phone call from Ananth Pai, VU2PAI. He asked me, "You want to come to VU4? We are looking for ops". Now, I would normally act maturely in my everyday life and not give impulsive answers to any question thrown at me. But DX is different and a chance to be DX even more so. "Yes, absolutely, yes. When?" was my instantaneous response. Pai informed me that we would be on sometime in March but I would need to confirm my presence quickly. Papers had finally moved at the Ministry after many months of trying and there was a certainty of the permission being received. If it arrived, the associated further paperwork of obtaining approvals for individual operators would take some time. We had to act quickly.

I applied for my annual vacation leave at work and got working on the formalities. There was so much to do and so little time. The excitement was already starting to build in as I started filling out the preliminaries. The dates soon got confirmed and we had permission to operate from 15th March to 31st March. That was just the first step. Anybody who has been on a DXpedition would know the massive challenge it can be in terms of logistics especially when you have only 40-45 days to arrange everything. And this one was by no means going to be a small expedition. VU4 was certainly up there amongst the rare ones so the expectations from the DX community would be quite high.

The team, headed by ARSI's President, Gopal Madhavan VU2GMN, got cracking. Having previously led another bunch of VU hams to VU7, this was certainly not unfamiliar territory for him. But time constraints meant, his and everyone else's tasks were well cut out. Making arrangements required being up late nights and phone calls and emails by the minute on most days. Besides, all the equipment was being pooled together by the team members and there was nothing being taken on loan from anyone overseas. Every single item to be used in VU4 would be from somebody's shack, including antennas. That can give you a fair idea of the difficulties involved in arranging equipment in one place for shipping and the expenses involved. Nonetheless, everyone including some hams who couldn't be a part of the expedition, chipped in with whatever they could. Day after day, and hour after hour, the project was finally falling into place.

A small party initially had identified possible locations for stations. These would be three normal tourist resorts- 2 of which had seen amateur radio activity earlier. The plan was to arrive a few days earlier and set up the stations. While 17 operators had confirmed their participation, not all of them could be together from the beginning due to various personal reasons. A team of

9 landed in Port Blair via Chennai on the morning of 12th March. Most of the heavy equipment had already been sent over sea a few weeks back and had been lying in storage in Port Blair. First task at hand was to check in into the hotels that would be converted into shacks for the coming 2 weeks. Post check-in, some of us team members set out to get the equipment sorted out. But Mother Nature had different ideas! By the time evening fell, the skies had darkened considerably and drops of rain had started to fall. Soon enough, thunder and lightning with a howling wind relegated everyone to the closed confines of their hotel rooms.

The following days saw equally fickle weather. But whenever the heavens held up a little, it meant we would be out trying to complete antenna installations and station setups. Not that everything was going smoothly. Murphy had started to make its presence felt and 15th midnight (14th March, 1830z) was fast approaching. The time when VU4PB was expected to hit the airwaves. We had 2 stations up and expected to start proceedings on 20m and 40m CW. I had been asked to kick off on 20m while Basappa, VU2NXM would run 40. Up until 5 minutes before start i.e. 1825z I was trying to fix some issue or the other. The latest one had been N1MM configuration and the frequent hang-ups while keying the FT-950 via WinKey. The keying had been intermittent and panic had set in. What if we are unable to get going on 20? What an embarrassment that would have been! Fate, it seems, was only playing around with us. Nothing can explain how suddenly the keyer came to life and the rig started to key the amp. A nervous glance at the watch and oh boy! 2 minutes to go.

I took a sip of water to calm my nerves. Nice try but no luck, excitement had reached a crescendo. As my watch ticked past 1830z (0000 IST), I sent out "QRL?" on 14024KHz. Nothing for a few seconds and another "QRL?" later, I slowly went "CQ CQ CQ de VU4PB VU4PB pse k"(seemed slow though it was a fairly decent 30wpm). The FT 950 keyed the Ameritron AL-811 which put out the CQ at 400 watts in to the ether through the 3-element SteppIR. UX1AA came back to the call immediately and I typed in his call, hit enter and heard "R GE U R 5nn 5nn TU de UX1AA". I sent "TU DE VU4PB QRZ?". I don't recall who called next as it was like a wave that hit me. One station after the other called, and it was sheer chaos. Something I had never experienced before. Here was your average Joe Ham, who lives in an apartment block in a big city and has had a lone inverted vee for an antenna over the years; who has never operated QRO, and rarely ever QRO using a beam antenna. And more so, never really been DX. There he was, sitting behind the rig and working stations from a rare DX location. Talk about baptism by fire!

In the days that followed, the daily schedule was pretty much defined by operating and helping out with antenna installations. I was put up with Murthy, VU2MTT and between us we had an excellent station. The 3 element Yagi was put up on the roof of the hotel (the roof itself was sloping on all sides and installation was rather tricky but that's a different story altogether), more than 7 storeys high and with the sea on 3 sides, it was a fantastic site. No wonder we would be spotted as being loud on most occasions. In fact, we were surprised ourselves with how well the beam played as signals were reported to be loud in NA too, one of the toughest places to each from VU4. The station also had an 80m sloper dipole with one leg in the sea!

The operating experience was something that I will never forget for the rest of my life. What else do you expect from a 'wet behind the ears' op who is still getting his feet wet in contesting and DX-ing and is asked to fill in vacant positions on a rare DXpedition?! There are numerous instances which I can cite from memory but will share a few memorable ones.

The most memorable one was the evening on 17mts on 18th March. I had started my evening shift and was expected to remain in the chair until Murthy came back from the other site where he was helping with antenna setup in the fickle weather. I fired up on 17 and knew I had to work everyone I heard. There had been pretty strong feedback on the clusters and privately over emails after I had called "CQ NA" for a tad too long the previous evening on 20. Lot of our EU friends had expressed their displeasure over this as I had kept them waiting for too long while I continued to work NA. Additionally, I had been instructed to keep the rate going since it was early days in the expedition and we had to make QSOs since the other 2 stations were not fully functional (equipment failure too had compounded our misery). The run was pretty fine to begin with. I had by now gotten accustomed to generating pileups and not sweating in nervousness in the process. While most of the pileup was well behaved, there were a few who continued to derive pleasure out of making me hear their carrier strengths and keyer's capabilities. Soon enough, the band opened into NA. I decided to continue running irrespective of who called. Cranked up the keyer speed and entered 'mental zone' where I became oblivious to my surroundings. I could hear the whole world calling and I was responding to their calls at a fairly reasonable rate.

The noise, the sheer size of the pileup, and the rate, just got my adrenaline pumping. I tried every possible trick I knew. I would listen at the edges or keep moving a few Hz after working someone but somehow the QRMmers were getting the better of me. "Persistence, lad" I told myself and continued to knock off contacts. I spread the pile far too wide than I would have liked but the roar of the calling hordes was something to be believed. And I had to work them, no matter what. I would jump a few Hz to a few KHz on occasions knowing it was making quite a few grown up boys groan in misery! But the rate meter was hovering around the 150 mark and that was heartening enough to keep going. Some famous call-signs got in my log, especially the FOCers, whom I have only heard on air and been in awe of their skills. It is not every day that kids like me run towering pileups and are called in by the likes of G3TXF, A65BP, SM6CNN, K4UEE & Co. By the time Murthy got back, it was already dinner time and I had been in the chair for close to 5 hours. Oh to have a pile like that again!

There were many moments that I can recall which shall remain in memory for a long, long time. And that pretty much sums up what a wonderful time I had. It was a very satisfying experience and can't thank enough those who thought I was good enough to come along on an expedition like this. I certainly look forward to doing more!

*Deepak VU2CDP*

# The first batch of VU4PB:


# The second batch..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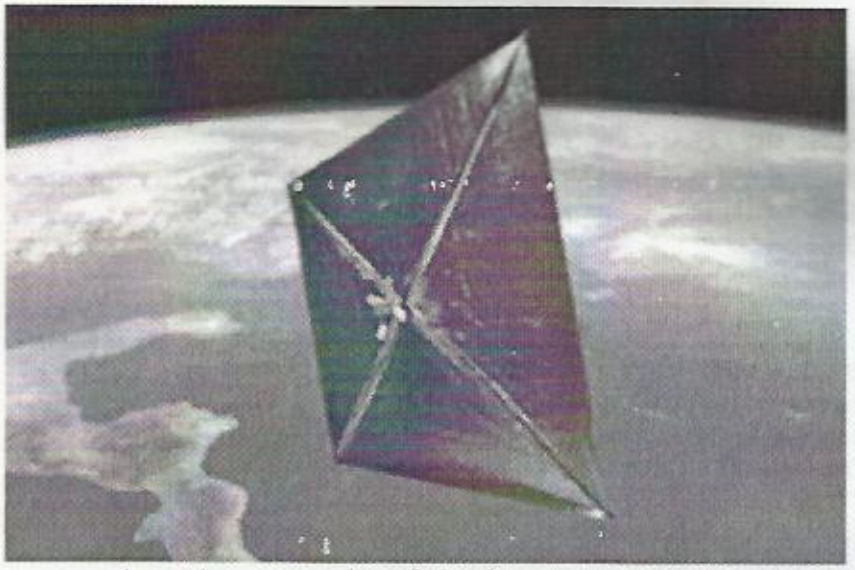
# Amateur Radio in Space: NASA's Nanosatellite Heard by Hams

[Tnx: ARRL]



*An artist's conception of NanoSail-D. [Image courtesy of NASA]*

When NASA's nanosatellite -- NanoSail-D -- ejected unexpectedly on January 17 from the Fast Affordable Scientific and Technology Satellite (FASTSAT), the agency called upon Amateur Radio operators to help track it. NASA asked radio amateurs to listen on 437.270 MHz for the signal and verify that NanoSail-D was operating. NASA received almost 470 telemetry packets from 11 countries.

The NanoSail-D beacon sent an AX.25 packet every 10 seconds; the packet contained data about the spacecraft's systems operation.

Once the NanoSail-D team received confirmation that the nanosatellite did indeed eject, NanoSail-D principal investigator Dean Alhorn quickly enlisted Alan Sieg, WB5RMG, and Stan Sims, N4PMF, to try to pick up NanoSail-D's radio beacon. Both hams work at the Marshall Space Flight Center in Huntsville, Alabama.

"The timing could not have been better," Sieg said. "NanoSail-D was going to track right over Huntsville, and the chance to be the first ones to hear and decode the signal was irresistible." Right before 2300 UTC on January 17, they heard a faint signal. As the spacecraft soared overhead, the signal grew stronger and the operators were able to decode the first packet: NanoSail-D was alive and well. "You could have scraped Dean off the ceiling. He was bouncing around like a new father," Sieg recalled.

According to NASA, the nanosatellite was last heard at 1354 UTC on January 21. Telemetry indicates that the sail deployed on schedule and the satellite is now believed to be out of power, which NASA said was to be expected. NASA is now asking for visual tracking and sighting reports of NanoSail-D, which is about 650 km above the Earth. According to the agency, when the nanosatellite's sail reflects off the Sun, it could be up to 10 times as bright as the planet Venus -- especially later in the mission when the sail descends to lower orbits. You can track NanoSail-D on the web or on your smart phone. NASA estimates that NanoSail-D will remain in low Earth orbit (LEO) between 70 and 120 days, depending on atmospheric conditions.

## A COLLECTOR'S ITEM

A PDF of the first issue of Practical Wireless, published over 78 years ago, is available on the web.

Practical Wireless number 1 published 24 September 1932 is at http://www.wikiradio.org.uk/wiki/images/3/35/Practical_Wireless_Issue_01.pdf

It is 9 MB in size

## DID YOU KNOW....

When Samuel Morse established the first commercial telegraph in 1844, he dramatically changed our expectations about the pace of life.

One of the first telegraph messages came from that year's Democratic National Convention in Baltimore, where the delegates had picked Senator Silas Wright as their vice-presidential nominee.

The president of the convention telegraphed Wright in Washington, D.C., to see if he would accept. Wright immediately wired back: "No".

Incredulous that a message could fly almost instantly down a wire, the delegates adjourned and sent a flesh-and-blood committee by train to confirm Wright's response which was, of course, the same.

From such beginnings came today's high-speed, networked society.

# SPECIAL EVENT STATIONS DURING 2011

**ENGLAND - 65YRS FOR ISWL CLUB - GB65ISWL -**

The International Short Wave League (ISWL) will be celebrating 65 years of service to Licensed Amateurs and Short Wave Listeners during 2011. The callsign GB65ISWL will be active from several locations throughout the year. The QSL Manager is Herbie G6XOU. QSL Cards will be returned on a QSLR basis. All logs will automatically be uploaded to eQSL.cc. GB65ISWL will be QRV on 1st and 2nd of January, on 80, 40, 30, and 20m, both SSB and PSK. Also on the higher bands if they are open. Herbie is a keen PSK Operator and GB65ISWL is EPC number: #12810. ISWL info at: www.iswl.org.uk/ . This callsign can be claimed for the ISWL Monitor award. More information from Pete's-DX-Newsdesk shortly. www.dx-newsdesk.co.uk/ [Pete's-DX-Newsdesk]

**ENGLAND - DERBY WIRELESS CENTENARY - GB1ØØD -**

GB1ØØD, Golf Bravo 1 Oscar Oscar Delta, has been issued for the year 2011 by Ofcom as a Special event callsign. It will be used through out the year to celebrate the centenary of the Derby Wireless Club, the oldest continually active local wireless club, now incorporated within Derby and District Amateur Radio Society. Until 25 March the station will be operating from the Silk Mill Museum located in the City Centre of Derby alongside the River Derwent. The station will have restricted operation due to the museum's opening hours and so will be on the air mostly on weekends.

QSL information is on QRZ.com. [GB2RS]

*FYI: Ofcom is an Independent regulator and competition authority for the UK communications industries*

**HUNGARY - FRANZ LISZT EVENT - HG2ØØLST -**

From 1st of January, 2011 till 31st of December, 2011 a group of Hungarian radioamateurs from Jánoshalma, Hungary, will use the special callsign HG200LST. This special event is to commemorate the 200th anniversary of birth of the genius composer, virtuoso pianist, piano teacher Liszt Ferenc (Franz Liszt) (1811-1886). QSL via HA5GY. [HA0HW]

**ITALY – 150 YEARS OF ITALIAN NAVY - IA7MM -**

Special station IA7MM will be active throughout 2011 to celebrate the 150th anniversary of the Italian Navy. QSL via IZ7AUH. Further information at: ia7mm.iz7auh.net/ [425 DX News]

**ITALY – 65 YEARS OF ARI TORINO - II1TO -**

Celebrating the club's 65th anniversary, as well as the 150th anniversary of the unification of Italy, operators from ARI Torino will use the special callsign II1TO during the entire year 2011. QSL via the bureau. [425 DX News]

**ITALY - UNIFICATION OF ITALY - VARIOUS -**

Celebrating the 150th anniversary of the Unification of Italy, three special callsigns will be used throughout 2011 by members of ARI Torino (II1ITA), ARI Firenze (II5ITA) and ARI Rome (II0ITA). All of the QSOs will be confirmed automatically via the bureau. Details on the event and the special edition of the Diploma dell'Unità d'Italia (Italian Unification Award) can be found at: www.dui150.it/ [425 DX News]

**JAPAN - NATIONAL CULTURAL FESTIVAL - 8N3K, 8N3U -**

Special event stations 8N3K and 8N3U will be active between 1 January and 6 November 2011 to celebrate the 2011 National Cultural Festival (or Kokumin Bunka Sai) in Kyoto City (JCC 2201), Kansai region, Kyoto prefecture, island of Honshu (IOTA AS-007, WLOTA 2376), Japan. QSLs will automatically be sent via the bureau to all contacts made. [JJ1WTL/AC6IM]

**ANTARCTICA.**

Lars, SM4TUV is QRV as 3Y8XSA from the Troll station on Dronning Maud Land, IOTA AN-016, until the end of 2011. QSLs to home call. [ARRL News]

*FYI: Dronning Maud Land is a 2.5 million-square-kilometer*

*sector of Antarctica claimed as a dependent territory by Norway.*

*The land lies between 20° west, bordering the British Antarctic*

*Territory, and 44°38' east, bordering the Australian Antarctic*

*Territory. The northern and southern borders span from the*

*South Pole to 60° south: most of the territory is covered by*

*the Antarctic ice sheet. The annual mean temperature is −25 °C*

*with the warmer summer temperature able to reach about 0 °C*

*and the lowest during the winter at −50 °C.*

# Radio Signals From Jupiter

Jupiter is a source of powerful bursts of natural radio waves that can produce exotic sounds when picked up on Earth using simple antennas and shortwave receivers.

When first heard, it probably sounded like E.T. but the radio signals from Jupiter aren't a sign of extraterrestrial intelligence. The emissions are generated naturally by plasma instabilities in Jupiter's magnetosphere.

Space physicists say that ionized gas in the upper atmosphere above Jupiter's magnetic poles sometimes behaves like a powerful radio laser or maser. The radiation can be so intense that Jupiter frequently outshines the Sun as a source of radio energy at ham radio wavelengths.

Where does the radio laser get so much power? It starts on Jupiter's volcanic moon Io.

Tidal forces from Jupiter and its other large satellites superheat the interior of the moon Io and make it the most volcanic body in the Solar System. Volcanic materials are thrown far above Io's surface. Much of that enters orbit around Jupiter, forming a huge gaseous donut around the giant planet.

With a diameter the size of Io's orbit itself, the electrically conducting "Io torus," as it's known, spans 525,000 miles and has an important impact on Jupiter's magnetic environment.

As Io's orbital motion carries it through this magnetized ring of ionized gas, a huge electrical current flows between Io and Jupiter. Carrying about two trillion watts of power, it's the biggest DC electrical circuit in the Solar System.

Unlike the ordinary kind of DC circuit we know, the current in the Io-Jupiter system is carried by a type of magnetic plasma wave called Alfven waves. However it works, this awesome current is the power source for plasma waves that give rise to the laser radio signals that travel away from Jupiter's magnetic poles in cone-shaped beams.

The beams rotate with the giant planet every 9 hours and 55 minutes (a day on Jupiter) making Jupiter something like a slow-spinning pulsar. When the beams sweep past our planet Earth, listeners here can pick up the Jovian radio bursts in the shortwave bands between 15 and 40 MHz.

Thanks to a NASA project known as Radio JOVE, the pleasure of listening to Jupiter's broadcast of exotic sounds is no longer reserved for professional astronomers. Amateur astronomers, ham radio enthusiasts, shortwave listeners and students in middle schools, high schools and colleges can tune in, too.

NASA scientists at the Goddard Space Flight Center in Maryland, along with others at the University of Florida, are helping the public tune in and inspiring thousands to look up and listen to the biggest planet in the Solar System.

NASA has come up with a $115 radio-telescope kit that a school science class or other interested observers can put together. The kit includes all of the parts required to construct a 20 MHz radio receiver.

It comes with the necessary transmission cables and wire for the two dipole antennas. Each antenna is about 20 feet long, for mounting 20 feet apart.

The kit doesn't include the PVC pipe recommended for mounting the wires. However, PVC is inexpensive at local hardware stores. Alternatively, wood could be used for mounting the antennas. http://radiojove.gsfc.nasa.gov/

The kit makes a radio-telescope capable of detecting the giant planet millions of miles away from Earth.

Once they build their own radio-telescopes, the new amateur astronomers make observations, which help scientists monitor activity in Jupiter's enormous magnetosphere. According to NASA, the sound outclasses woodpeckers and ocean waves!

There are two types of Jovian radio bursts:

The "L-burst" sounds like ocean waves crashing on a distant beach. The "L" stands for long. If a recording is slowed down dramatically, the S-burst sound like eerie drifting whistlers.

The "S-burst" produces a staccato of rapid popping sound with a beat that reminds some of woodpeckers. The "S" stands for short.

## I.T.U. ZONES AND REGIONS