Amateur RADIO Society News

Newsletter of The Amateur Radio Society of India (Member of IARU)
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July - Sept. 2009

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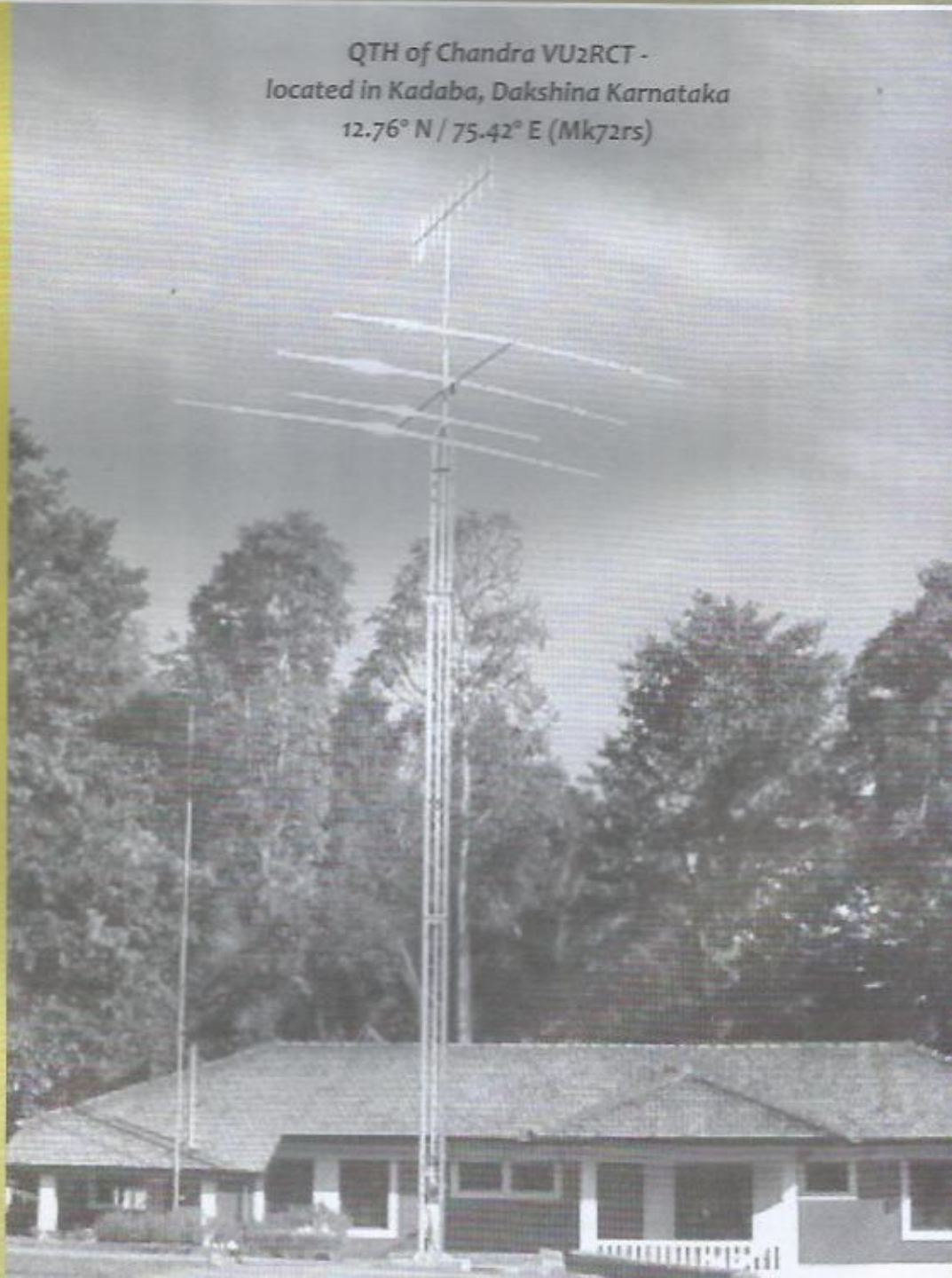

QTH of Chandra VU2RCT -
located in Kadaba, Dakshina Karnataka
12.76° N / 75.42° E (Mk72rs)

Hammenings

NEW BANDS GALORE!

Ireland

First 5 MHz licences issued to EI stations

Good news at last. After a long process of contacts between the military authorities and Ireland's regulator ComReg, the first of the 5 MHz licences were issued to EI stations on Friday, October 17th.

Three 3 kHz channels with centre frequencies of 5280, 5400 and 5405 kHz.

Tks Southgate ARC.

Spain

4 meter band authorised in EA 70.150-70.200 MHZ.

TNX Xavier Pérez & EB3TC / EA3DGI JN01XL/JN01SU

CONGRATULATIONS

Sunil VU2ATB

For receiving the DXCC #42,207 in August 2008

T.K.Viswanathan
SWL-VU0020

For receiving the following awards:

- SHERLOCK HOLMES award SHA-200 Sl.No.84 from IPARC
- DX-LH award from ARLHS
- WORKED ALL SQUARES award WASA-HF-1000-CW Sl.No.2 from JARL
- RUSSIAN DISTRICTS award RDA-250-CW Sl.No.544

W5NDS comes calling to India

Accepting an invitation from Swami Sandip Chaitanaya of Thiruvananthapuram - Kerala, for a lecture, W5NDS was in India last August.

It was during one of the daily VHF daily nets, Sharan/VU2NB announced Dr. Rodney's presence in New Delhi and that he was a good friend of VU2DS Daljit Singh – a veteran ham active in New Delhi. Daljit then narrated his QSOs with Rod from 12 years, not forgetting the latter's love for Indian Roti and Mint Chutney.

He says "I met Dr.Rod on the morning of 20th August 2008. I was really amazed when I heard him speak flawlessly in Hindi! During the half hour meeting Dr. Rod shared is life-long experiences with the hobby and teaching Indian languages."

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BOB-VU2MKP Silent Key

It is with deep regret I record the passing away of our good friend Bob VU2MKP on July 09, 2009 in Bangalore. For those of us fortunate enough to have known Bob, he was a truly remarkable individual who in spite of his disabilities, managed to do many things we would probably not attempt. He was a living example of what can be done in spite of such severe handicaps.

Being paralyzed from the neck down, he could only use his mouth to control his motorized wheel chair and it was a common sight to see him ride around the streets of Bangalore, visiting friends and shopping for radio components. "My wheelchair is interactive," Bob used to joke.

He was a keen radio amateur, controlling the radio and associated equipment with only a plastic rod held in his mouth. He operated the computer also in this fashion and even made drawings on antenna designs etc. which he shared with friends - several satellite antennas were built and are in use, from the drawings he made.

An avid DXer, he was active on HF and Satellites, and had friends all over the world. When AO-40 and AO-13 were operational he made several hundreds of contacts.

Bob was a Life member of ARSI and took an active part in all activities. He attended several ham fests and knew many, many hams all over VU and the rest of the world.

I knew Bob since 1979 when he was deputed by his Swiss employers -Contraves - to The Bharat Electronics Ltd., Bangalore for carrying out final inspection of the Radar units they were importing.

Ham radio has lost a great operator who guided many hams and was a source of inspiration to all of us. *R.I.P. Bob*

Editor

President's message

Dear Members

The ARSI AGM was held in Coimbatore on Sunday the 20th September 2009. We have a tradition of rotating the venue so more members can participate.

It was a good gathering and several new members also enrolled on that day. The meeting was followed by fellowship and lunch and gave a very good opportunity for members to have an eyeball contact.

The office bearers for the ensuing two years are:

- VU2GMN Gopal Madhavan -President (CHENNAI)
- VU2VP Ved Prakash Sandlas -Vice President (NEW DELHI)
- VU2KKZ K.N.Rajaram -Secretary (BANGALORE)
- VU2GGM Govind Girimaji -Treasurer (BANGALORE)
- VU2RCR R Ramchandra -GC Member (BANGALORE)
- VU2ETS Saravanan G -GC Member (MYSORE)
- VU2POP Pratap Kumar -GC Member (BANGALORE)
- VU2DPD Dipti Dey -GC Member (KOLKATTA)
- VU2LU Ramesh Kumar K G -GC Member (BANGALORE)
- VU2RDQ Rohit Rao GC Member (MANGALORE)
- VU2JAU Jayant Bhide -GC Member (GWALIOR)
- VU2DH K Devadas was co-opted as GC member in place of VU2DPD who as QSL Manager automatically became a GC Member

VU2TS T S Ganesh was re-appointed HRN Editor

The posts of Monitoring Coordinator, Contests Manager and Disaster Communications Coordinator would be filled later after checking availability and suitability of members.

Regional Coordinators would also be appointed later

The past year has been a rather quiet one with not much activity other than a number of contests organized by VU2UR OM Arasu. This has helped to keep on-air activity at a higher level, which is so important for us to retain our frequencies.

Elsewhere in this issue I have dwelt on how our precious frequencies are protected from the many new services that use the radio spectrum and who are looking at areas from which it can grab a slice.

ARSI needs Regional Coordinators to promote the hobby and also promote ARSI, which in turn subsidizes the IARU- a vital element in our use of radio spectrum. Please write to me (gopal.madhavan@gmail.com) if you can assist us.

At this juncture I would like to thank all those who served on our Governing Council, the editor of HRN, the QSL Manager and the emergency communications coordinator.

I wish the incoming office bearers all the best and a successful term in office.

VU2GMN Gopal Madhavan

From the Editor's desk

It's amazing how much you can accomplish when it doesn't matter who gets the credit.

This is the essence of teamwork. Arasu/VU2UR has put together TEAM INDIA to participate in the various contests. The inaugural was the COMMONWEALTH CONTEST 2009 (previously known as BERU Contest) between 14 & 15 March 2009. This was followed by the IARU HF WORLD CHAMPIONSHIP 2009 held between 11th and 12th July.

In spite of the very poor band conditions TEAM INDIA has done reasonably well - but what is important is, we participated. I hope we get to participate in all the major contests in the coming years.

It has been a dream for many of us to install a repeater on Doddabetta - the highest peak in South India at ~9000 ft above m.s.l. and the time has come. Thanks to the efforts by the Anamalai Amateur Radio Club, we shall soon be able to cover most of South India on VHF. Simple math shows the horizon is ~300 kms so if all goes well, this repeater would have an awesome coverage. Trials by VU3GPF, VU3IRH, VU2NJX, VU3UKK, VU2TPP, and others are promising.

Another much awaited project has seen the light of day - ARSI's Club Station at the Red Cross Headquarters in Bangalore - that was inaugurated by the H.E.Governer of Karnataka on the 12th of August. A full fledged HF and VHF station, this will be very useful during emergencies.

Ganesh VU2TS

Inauguration of Amateur Radio Station for Emergency Communications

His excellency the Governor of Karnataka Shri Hans Raj Bhardwaj inaugurated the Amateur Radio Society of India (ARSI) radio station with the call sign VU2ZH on Wednesday the 12th August 2009 at 0900 HRS at the HQ of the Red Cross Society, Karnataka Branch

Indian Red Cross Society
No.26, Red Cross Bhavan,
1st Floor, Race Course Road,
Bangalore -560 001.

Amateur Radio has proved, time and time again, that it is the only reliable means of communication during disasters and emergencies when normal means of communication fail, either due to infrastructure failure or severe overload of existing facilities. Amateur radio, which can work on battery power, is able to provide that vital link till other communication links are restored.

With qualified radio operators available all over India and the world, amateur radio operators, or hams as they are popularly known, have always volunteered to provide communications during disasters and emergencies of all types.

Amateur radio operators in India provided communications during the Indian Ocean Tsunami, Latur earthquake, Koyna dam disaster, and numerous floods and hurricanes, when normal communications were disrupted.

Recognizing this, the Red Cross Society and the ARSI signed a protocol to set up a radio station at the premises of the Red Cross Society which can be used to provide communications during emergencies. High Frequency (HF) and Very High Frequency (VHF) radios and antennae have been installed for long distance and local communications.

Similar stations are expected to come up all over India to ensure that emergency communication facilities are available at any time

Amateur Radio Society of India (ARSI) is the official society representing radio amateurs in India and is affiliated to the International Amateur Radio Union (IARU) which is mandated under the United Nations. It has members all over India.

Diamonds in the Sky

Try this high performance omnidirectional antenna for 2 meters.

-From QST - August 2009

Down here in the "low country" (meaning flat as a pancake!) of South Carolina we've been encouraging digital ragcheqing on 2 meter FM using the DominoEx 8 mode. We do it by running an informal net that covers almost the entire state on simplex using horizontally polarized antennas. (See WB81MY's "Eclectic Technology"column in the March 2009 QST.')

As the Net Control Station (NCS) I needed a relatively high-gain, omnidirectional antenna that could cover a wide area. In our DominoEX net, all stations point their beams at the NCS and the NCS relays every transmission so that no one is left out of the conversation. The farther away a station is, the more antenna gain he will need to hear (and be heard) by the NCS. This means that while the net participants can use directional antennas, the NCS must always use an omnidirectional antenna in order to hear from any direction.

Thanks to the fellows at Google, several solutions finally turned up on the Internet and among those were the Big Wheel, various turnstiles and stretched rectangle antennas, and an old design called the skeleton-slot.

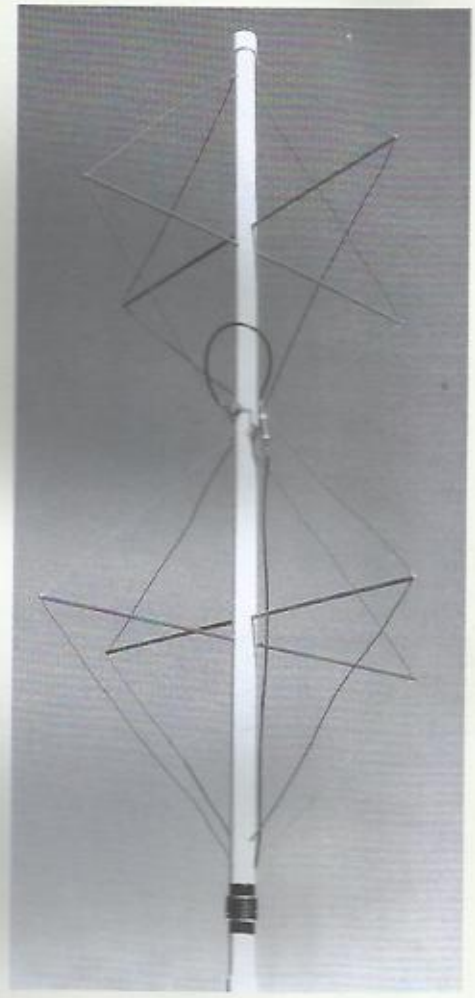
After extensive testing I ultimately settled on a stretched – rectangle derivative that was inexpensive, simple to build, has moderately high gain with horizontal polarization and a wide beam width. I call this design the DDT, or Double Diamond Turnstile.

The DDT antenna has a noble pedigree. It is based on designs variously described and published by Peter Dodd, G3LDO; B. Skyes, G2HCG; David Jefferies, G6GPR; Dan Handelsman, N2DT; Paul Carr, N4PC, and Brain Beezley, K6STI. They found that by stretching a square quad loop in height they could increase the gain by as much as 2 dB, while at the same time lowering the input impedance from 125 _____ for a square down to 50 ____ for an individual loop – a perfect transceiver match.

The square quad loop, fed at the bottom, may be thought of as a pair of ¼ wavelength horizontal dipoles connected by vertical ¼ wavelength phasing lines. G3LDO found that stretched quad loops could be stacked and fed in parallel without using separate phasing lines and L.B. Cebik noted his QST article on the 6 meter turnstile antenna that a diamond shaped loop, fed at the bottom, is equivalent to the square quad loop (also fed at the bottom) and results in horizontal polarization. In contrast, feeding a quad loop on the side results in vertical polarization.

It was a simple matter to experiment with stacked diamond-shaped loops for 2 meters and the result is a horizontally polarized, bi-directional, antenna with good gain over a wide beam width (the azimuth pattern is the same as a dipole, since the diamonds are equivalent to stacked dipoles). Using EZNEC antenna modeling software, I sized the two diamonds to produce as much gain as possible with a 75 Ω feed impedance at their junctions. This would let me "turnstile" two 75 Ω double – diamonds, faced 90° from each other, and achieve 360° coverage. Because the antennas are at 90° to each other they can (and should) share the same mast. The two double-diamond antennas are effectively in parallel, connected by a phasing line to combine their individual bidirectional patterns into a single omnidirectional pattern as shown in Figure 1.

The DDT can be constructed from materials commonly available at any hardware or home improvement store. The materials needed are a 6 foot length of $1^{1/4}$ inch Schedule 40 PVC pipe, 32 feet of # 14 insulated , stranded, copper house wiring,



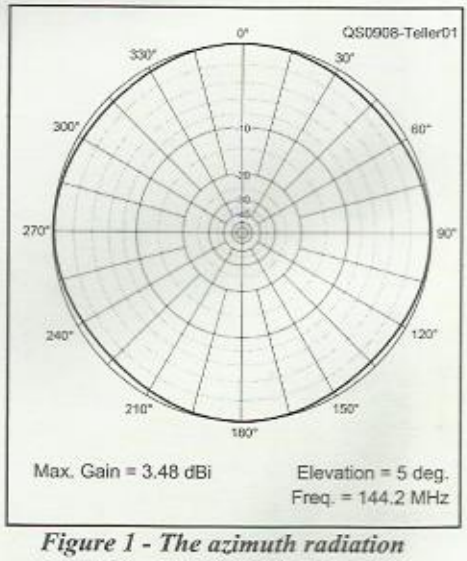


Figure 1 - The azimuth radiation pattern of the DDT antenna.

four fiber glass 5/16 inch diameter rods (sold as driveway markers) for spreaders, one or two 1 1/4 inch PVC caps, four 6-32 x 2 inch machine screws with star washers and nuts, and two SO-239 connectors from your local Radio Shack store or junk box. Fiberglass tubing ¼ inches in diameter or greater can also be used for the mast and would withstand wind forces better when mounted to a mast or tower instead of being hung in a tree.

Building the DDT

Begin construction by drawing a reference line along the full length of the pipe, making sure the line is as much along the center of the pipe as possible. This is very important in order to keep the spreaders at the right angles to each other. To do this, I placed the pipe, which is used as the mast for the antenna, on a flat tabletop and clamped it down at both ends so it would not move. I then cut a small block of wood, about 1 inch high, held a pencil tightly on top of the wood and, holding the center of the pipe down so it did not bow, scribed a line the length of the pipe to use as a reference for drilling the necessary holes (see Figures 2 and 3).

Figure 2 - Clamping the mast to a table keeps it stable as you are marking hole locations.

In order to help insure that the spreaders pass through the mast at right angles, I found it most successful not to drill a spreader hole all the way through the mast to the other side. Instead, I made a paper template to mark the entrance and exit holes for all the spreaders, wire, and connector mounting holes exactly 180° apart and perpendicular to the pipe. You can do the same by cutting a strip of paper 1 1/2 inches in width. Wrap it around the mast and trim the strip until the ends just meet. Now fold the paper in half and in half again, to form creases in the paper at 90°, 180° and 270° with reference to the scribed line at 0°. Use this template to mark the holes in the mast for the wires, spreaders, connectors and mounting screws.

- Starting at one end of the mast, draw short lines across the scribed line at 2, 3 1/2 16 1/4, 17 3/4, 30 1/2, 32, 44 3/4, 46 1/4, 59 and 60 1/2 inches.
- Place the template at the 2 inch mark on the line, making sure it lines up perfectly at the edges and the edge bisecting the 2 inch mark. Mark holes at 90 and 2700 and label these B.
- Move the template to the 16 ¼ inch mark, mark for holes at 00a and 1800 and label these B.
- Move the template to the 16 1/4 inch mark, mark for holes at 900 and 2700 and label these C.
- Move the template to the 17 3/4 inch mark, mark holes at 00 and 1800 and label these D.
- Move the template to the 30 1/2 inch mark, mark holes at 00 and 1800 and label these E,
- Move the template to the 32 inch mark, mark holes at 900 and 2700 and label these F.
- Move the template to the 44 3/4 inch mark, mark holes at 900 and 2700 and label these G.
- Move the template to the 46 1/4 inch mark, mark holes at 00 and 1800 and label these H.
- Move the template to the 59 inch mark, mark holes at 900 and 2700 and label these I.
- Move the template to the 60 1/2 inch mark, mark holes at 00 and 1800 and label these J.

Figure 3 - Scribing a straight reference line along the mast is critical.

Before drilling the holes, re-check the locations carefully. When you're satisfied that every mark is correct , drill all the marked holes with a 5/32 inch bit. These will serve as wire holes and also as pilot holes for later enlargement.

Expand the holes at C,D,G and H to 5/16 inch diameter. If necessary, move the frill around a little to slightly enlarge the hole for the 5/16 inch diameter fiber glass spreaders.

Look at holes E and F. choose two of these holes to mount your SO-239 connectors. Make sure to select holes that will position the connectors at right angles to each other on the mast. Widen you chosen holes to 5/8 inches in diameter, insert the connectors and use them as templates to drill four mounting and use them as templates to drill four mounting holes (two for each connector) parallel to the scribed line. When drilling the holes the bit must go through the mast and out the other side. Each hole must be large enough to accommodate 6-32 machine screws.

For each of the four spreader rods, cut to a length of 32 inches and drill parallel 5/32 inch wire holes ¼ inch from the end of each spreader.

Wiring the Antenna Frame

The two antennas will be wired separately. Follow the diagram in Figure 4.

Begin wiring the first antenna by cutting off a 16 foot length of wire, stripping 2 inches of insulation off the end, tinning the end ¼ inch. Feed the tinned end through hole F opposite the hole for the SO-239 connector. Solder to the center pin of the S0 – 239 connector. Place the connector in the $^{5/8}$ inch hole and mount it to the PVC with two 6-32 machine screws, securing them in place on the other side of the mast with star washers and nuts.

Push a spreader through the C holes and center the spreader on the mast. Do the same for the lower spreader using the G holes. You can use epoxy glue or other strong adhesive to keep the spreaders in place, although he wire tension itself may be adequate to hold them in position.

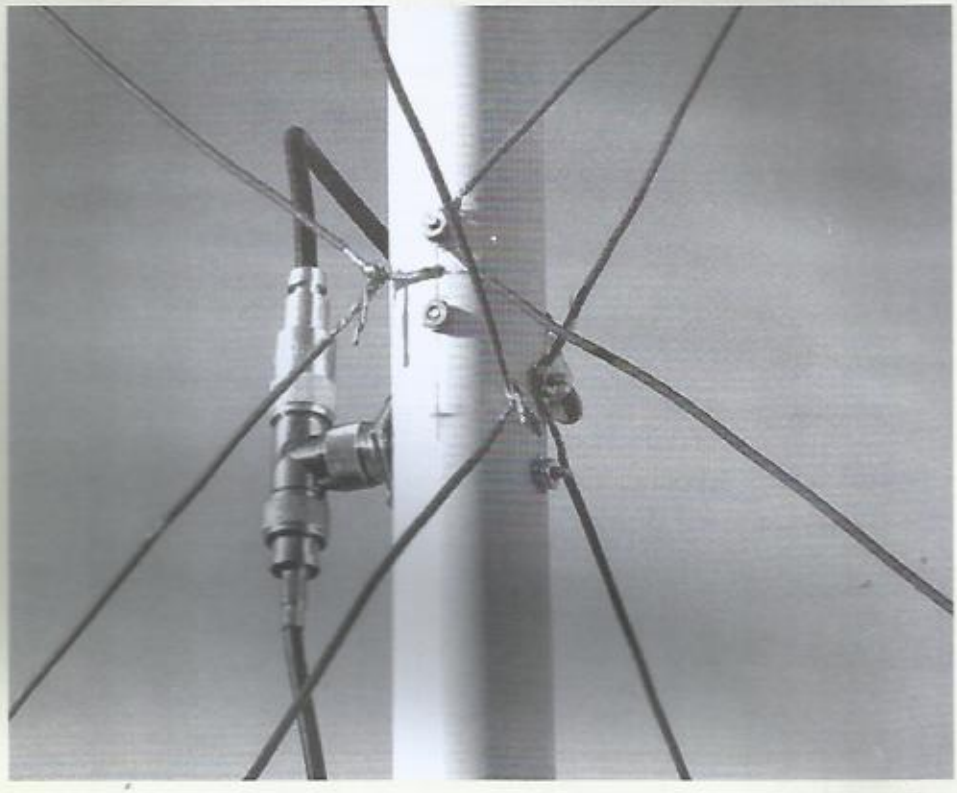
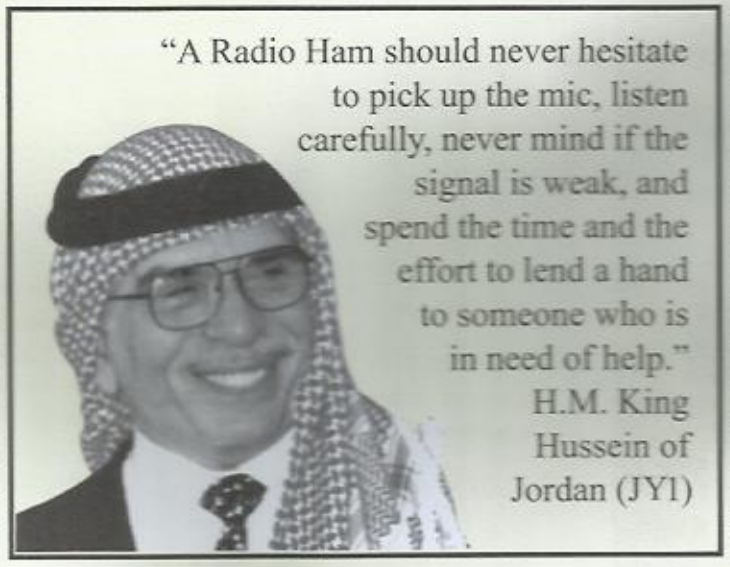


Figure 5 - A close-up view of the phasing line and wire terminations with the T adapter visible

Looking at the wire coming out the back side of the mast (from the center pin of the SO-239 connector), lead it up and to the left, feeding the free end of the wire through the hole in the spreader, through the A holes and out the other side of the mast. Continue feeding the wire through the right side of the top spreader and back down to top set of nuts and washers opposite the SO-239 connector. Strip off about ½ inch of insulation, loosen the top mounting screw, (wrap the wire around the screw between the mast, star washer and nut and tighten the nut).

Continue feeding the same wire down and to the right, going through the lower spreader's hole. Continue downward and through the I holes, out the other side of the mast, up through the left-hand out the other side of the mast, up through the left-hand spreader hole and cover to the connector. Pull the wire taut, cut it 2 inches longer than needed to reach the connector and strip 3 inches. Tin the end ¼ inch to keep the wire from unraveling. Then, wrap the wire from unraveling. Then, wrap the wire a few times around the wire coming out of the hole F behind the S0-239 connector center pin and solder. This completes the wiring the of the "upper" antenna.



Rotate the mast 90° about its axis and repeat the procedure using the remaining holes for the "lower" antenna group. Be sure to lead the wire to the left and up to the first spreader. Both wires attached to the connector center pins must lead to the left and up in order for the phasing to be correct. As you thread the wire it will cross at the connector, but instead continue down the same side for the lower diamond.

The Phasing Line

The two antennas are connected by a length of RG- 59 coaxial cable that will combine the patterns of the antennas and produce an omnidirectional, horizontally polarized pattern. It is critical to use RG – 59 and not some other type of coax as the impedance of the phasing line must be as close to 75 Ω as possible. I assembled a phasing line from RG – 59 coax with PL - 259 connectors on each end, measuring $16^{1/2}$ inches from the tip of on PL -259 to the tip of the other PL-259.

Viewing the antenna with the connectors toward the floor, mount a PL – 259 T adapter (Radio Shack 278-198) to the lower SO -239 connector. Screw one end of the

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World Flora Fauna Foundation

Started in 2008 by the WFF Team and the RRC (Russian Robinson crew) World Flora Fauna has taken off in a big way.

The WFF Programme is about conservation and is aimed at National Parks, Nature Reserves and Coastlines. Indeed, the WFF website proclaims "saving the green planet" - a topic dear to millions around the globe.

WFF doesn't seem to be like most other programmes in that this one has taken off quickly with more and more people chasing the numbers, both by claiming the awards available and also by activating the areas.

With IOTA, DCI and WAB all now well established progammes, and during this time of continued low solar activity - with perhaps many operators becoming disillusioned with band conditions - WFF could very well be the next big awards program you seek.

The primary goal of WFF Fund is a technical and financial support of radio-expeditions to national parks and the reserves of the world, included in the list of WFF program.

Membership in Foundation.

Any radioamateur or SWL (physical person) from the different countries of the world and also any organisation (legal body) from the different countries of the world which support the purposes and problems of the WFF international award program can become a Member of the International WFF Foundation.

The World Flora Fauna international award program includes international ecologically - educational, humanitarian and nature protection action on support rendering to especially protected natural territories, created for the purpose of attraction of attention of the world community to problems to especially protected natural territories, rendering of the real and practical help by it, awakenings in consciousness of inhabitants of a planet the Earth of a pride for natural and a cultural heritage, visitings of national parks and nature reserves of the world and an establishment with them sessions of radio communications.

Membership in International WFF Foundation has several statuses:

1. Membership/M - annual membership dues/20$
2. Life Membership/LM (life membership) – one time membership dues/100$ (special number on a choice!)
3. Allied Member/AM (Associated member) – annual membership dues/100$

Payment for WFF donation (details through via RW3GW, Valery Sushkov): rw3gw@yandex.ru

Each member of the International WFF Foundation has the right to offer a large sum which will be publicly specified in the list of International WFF Foundation members. The International WFF Foundation Member certificate is sent to each member in acknowledgment.

Lighthouses on the Air

The Amateur Radio Lighthouse Society (ARLHS, located in New Jersey, USA) is devoted to maritime communications, amateur radio, lighthouses, and lightships.

Its members frequently travel to lighthouses around the world where they operate amateur radio equipment at or near the light. Collecting lighthouse QSLs is popular for many amateur radio operators.

ARLHS is a membership organization with over 1575 members worldwide as of July 2008. Its benefits include a newsletter, email reflector, extensive awards program, lighthouse expedition sponsorship, certificates, embroidered shoulder patch, the world's most complete list of every known light beacon in the world capable of supporting a ham station (over 14,900 entries at last count).

World List of Lights

To facilitate efficient information exchange between amateur radio operators when communicating from lighthouses, the ARLHS maintains a catalog of lighthouses called The World List of Lights (WLOL). Its main feature is a short, unique and easily transmitted identification number for each lighthouse. The WLOL lists any lighthouse that is or was an Aid to Navigation (ATN) and can reasonably accommodate an amateur radio operation.

Lights that are no longer in existence, but were once an ATN, also show up on the list, designated as historical. With over 14,000 entries, the WLOL is one of the most complete lighthouse catalogs in existence.

In the U.S. August 7th is National Lighthouse Day, and many lights across the nation will be celebrating with tours, demonstrations, and open houses.

World Lighthouse on the Air Award

The "World Lighthouse On The Air" (WLOTA™), is the brain-child of F5SKJ and F5OGG, both of whom appreciate and recognize the overall importance of lighthouses. This award has been set up as a tribute to lighthouse keepers, either in mid-ocean or isolated islands. Since the automation of most of these lighthouses, lighthouse keepers are, in the main, no longer required, but their long-standing contribution cannot be denied. With this in mind, WLOTA™ has been developed to encourage amateur radio operation from these remote locations.

The WLOTA™ (World Lighthouse On The Air) was set up by F5OGG, F5SKJ, F6DGT, F 17511. It is an internationally-based award giving recognition to radio amateur contacts from these locations, with effect from 01 July 1997.

The WLOTA™ Award is intended to complement existing internationally recognised awards (such as DXCC, IOTA, WPX, WAZ etc.). From the beginning, the founders were faced with a world-wide list of over 15000 lighthouses. An award of this kind, with such a huge number of lighthouses, would not be practical. Bearing in mind the need to acknowledge lighthouse keepers it was decided to retain a limited number of isolated, manned lighthouses representative of the function they perform in the marine environment, and selected according to the criteria defined in the following paragraphs. The award programme should present a new

and interesting challenge, as much for activators as for lighthouse hunters.

Where ever you are located, you will find a friendly Radio Amateur calling CQ WLOTA, as you turn the VFO on your receiver! .

There are over 14000 possible Lighthouses to contact around the world so you can imagine that's an awful lot of potential contacts to make and I doubt that all of the Worlds Lighthouses have been activated by Radio Amateurs from all over the Globe. Activity around 3.600-3.800 LSB, 7.40-7.100 LSB and 14.110-14.350 Upper Side Band USB..

For full information & rules: http://www.wlota.com/rulea.htm

Lighthouses of India

There are over 150 lighthouses on the Indian coast, the following are the ones In the WLOTA / ARLHS list:

Cannanore Lighthouse

Dolphin Lighthouse- Mumbai

Chennai Lighthouse,

Prong's Lighthouse - Mumbai

Sunk Rock Lighthouse - Mumbai

Island Lighthouses

LAKSHADWEEP

Androth Island	10°48,8N 073°42,1E
Kavaratti Island	10°33,7N 072°38,9E
Kadmat Island	11°15,4N 072°47,4E
Kalpeni Island	10°04,9N 073°38,9E
Grandi Island	15°21,1N 073°45,8E
Agatti Island	10°52,5N 072°13,3E
Minicoy Island	08°16,0N 073°01,6E

ANDAMAN & NICOBAR

Cinque Island - North Island
11°19,6N 092°43,4E

South Andaman Island
11°42,2N 092°45,4E

Bompoka Island
08°13,5N 093°14,3E

Kabra Island
07°17,3N 093°50,3E

Car Nicobar Island
09°15,4N 092°46,5E

Mingalakyun
14°11,0N 093°22,4E

Sir Hugh Rose Island
11°46,9N 093°05,6E

East Island
13°37,8N 093°03,5E

Little Andaman
10°30,8N 092°30,2E

Others

Vengurla Rocks
15°53,4N 073°27,7E Maharashtra

Kanhoji Angre Island
18°42,1N 072°48,8E Mumbai Harbour

Prongs Reef
18°52,7N 072°48,0E Colaba Point, Mumbai

Devgadgudda Island
14°49,2N 074°03,7E Karwar

St. Mary Isles (North Isle)
13°20,7N 074°41,E Udupi

Sagar Island
21°39,4N 088°02,9E West Bengal

Piram Island
21°36'0N 072°20'60 E Maharashtra

SPECIAL EVENT STATION

Special Callsign AT8LHC was issued to VU2UR and team for operating from The Kadalur Point Lighthouse, Calicut - Kerala from 7th to 16th August 2009 on the occasion of International Lighthouse and Lightship Week coinciding with the centenary of this lighthouse.

Lions Club of Bangalore North - District 324-D6 - through the Lions Clubs International Amateur (Ham) Radio Club provided HF equipment and accessories. This was also part of Bangalore Amateur Radio Club's Golden Jubilee and Hamfest India 2009 activity.

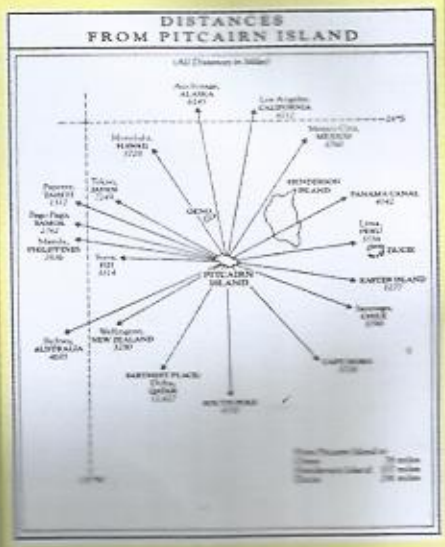
AT8LHC logged more than 600 QSOs from 50 countries. The Operators were VU2OJ, VU2LX, VU2UR and VU2JHM.

The International Lighthouse and Lightship Week of www.arlhs.com has added VU2 to their list of participants.

Congrats!

Ganesh VU2TS

Pitcairn Island



Long before the coming of the Internet, and even well before telephone was available, Pitcairn Island's contact with the outside world was only via amateur radio.

The history of Amateur Radio in Pitcairn goes back to 1921 when Captain Hemming, Master of the New Zealand Shipping Company's vessel HMS Rimutaka gave Fred Christian, Pitcairn's magistrate (Fletcher Christian's descendent), a card bearing the dits and dahs of Morse Code. That led to contact with passing ships using simple crystal sets, and later to the use of ham radio rigs by Pitcairners which could reach around the world.

At one time or another there has probably been a higher per capita use of ham radio by Pitcairners than any other place in the world. Even today, with both telephone and e-mail available, ham radio continues to be a popular communication form on Pitcairn Island.

There are some 15 licenced amateurs on Pitcairn, and a club station VP6PAC. Tom and Betty Christian, VP6TC and VP6YL, are without any doubt the two best known

Pitcairn hams. Tom Christian is the great-great-great-grandson of Fletcher Christian who led the mutiny.

Although they both share the VP6 prefix, Dulcie Island and Pitcairn Island are separate DX entities.

-Ed

The World Below 600 Meters

I bet you thought I was talking about some underground stuff. No, I'm talking about wavelength. It'd ring a bell if I said 500 Kilohertz.

Since early in the 20th century, the radio frequency of 500 kHz has been an international calling and distress frequency for maritime stations. This frequency was monitored on a 24 hour basis, by highly skilled radio operators. Many SOS calls and medical emergencies at sea were handled until the late 1980s.

However, because of the near disappearance of the commercial use of Morse code, this frequency is now hardly used. In particular, emergency traffic on 500 kHz has been almost completely replaced by the Global Maritime Distress Safety System (GMDSS); beginning in the late 1990s, most nations ended monitoring of transmissions on 500 kHz. The nearby frequencies of 518 kHz and 490 kHz are used for the Navtex (weather broadcast), part of GMDSS.

There have been proposals to allocate frequencies at or near 500 kHz to amateur radio use and the U.S. Federal Communications Commission (FCC) granted the American Radio Relay League an experimental license to explore such uses in September 2006. (QST, 12/06. p. 62) Subsequently, England started issuing Special Research Permits for amateurs to use 501-504 kHz.

Amateurs in the U.S., UK and Europe have started a movement to SAVE this band from being allotted to other uses:

Save 500 kHz!

500 kHz was the international maritime Morse Code radio distress frequency for most of the 20th century.

Ever listened to Morse Code signals in a movie with a marine theme? There is a very good chance that those Morse signals would have been sent on 500 kHz

500 kHz was the frequency used by the Titanic to send her plaintive cries for help that April night in 1912.

It was the frequency used by thousands of merchant ships to signal their plight in times of peace and war.

More often than not, 500 kHz was witness to a ship's Radio Officer's last moments. Many Radio Officers literally died at their key as their ship fell victim to enemy action or was overwhelmed by the forces of nature.

We must not let the sacrifices of those brave men and women be forgotten!

500 kHz was replaced in 1999 by the Global Maritime Distress and Safety System (GMDSS), which uses a combination of automated terrestrial and satellite communications.

Morse Code at sea is no more.

Whilst official operation on 500 kHz has been discontinued since 1999, the frequency is still designated as a distress channel in the International Radio Regulations. It is likely that this status will remain for some time.

The distress and safety status of 500 kHz will eventually be removed from the International Radio Regulations. The frequency will then be 'up for grabs' by other interests, perhaps not even maritime related.

500 kHz has been instrumental in saving tens of thousands of lives in the last 100-odd years.

It is fitting that 500 kHz be preserved as a 'radio spectrum national park' to commemorate those who paid the supreme sacrifice in its use.

We must not let Governments auction the frequency off to commercial interests - 500 kHz must be preserved for use by historic marine radio stations.

Amateur radio operators have expressed an interest in seeking a new frequency allocation in the vicinity of 500 kHz - this should be encouraged, however it is fitting that the actual frequency of 500 kHz (i.e. the band 499-501 kHz) be preserved for historic maritime stations.

Perhaps a way forward is to preserve 499-501 kHz for maritime historic stations, with the surrounding band (say 495-499 and 501-505 kHz) used by amateurs.

The US based Maritime Radio Historical Society have done a superb job in keeping the spirit of 500 kHz alive with their operation from the restored marine coast radio stations KPH and KSM.

Staff from the society were recently interviewed in the 'Radio World' online magazine.

The German Association of Maritime Radio Operators have also recently issued a public letter calling for the retention of 500 kHz as a museum frequency.

The Radio Society of Great Britain (RSGB) have published their submission to the UK radio licencing authorities for an amateur allocation near 500 kHz.

The UK based Radio Officers Association have developed a proposal for the preservation of 500 kHz as a Heritage frequency. The proposal does not include scope for sharing of the band with amateur stations.

The Australian National Amateur Radio organisation, the Wireless Institute of Australia, have applied to their regulator for an amateur allocation from 505-515 kHz.

On July 28, 2009, the FCC granted the ARRL a modified license for WD2XSH. This modified license allows the experiment to operate with 45 stations across the continental USA, Alaska, and Hawaii.

In the quarterly report for the period ending May 2009, Experiment Coordinator Fritz Raab, W1FR, reported that 21 stations are currently active. The FCC's Office of Engineering and Technology had granted the WD2XSH experimental license to the ARRL in September 2006. In this quarter, the FCC only issued one new experimental license for 500 kHz, WF2XAU to Roy Croston, AB4OM. The FCC renewed WD2XGI to Mike Reid, WEØH.

This website has been specifically established to encourage preservation of 500 kHz for use by maritime stations.

Full details, reports : http://www.500kc.com/

Ganesh VU2TS

RADIO ARCALA, OH8X AN UNIQUE CLUB STATION

Arcala Radio, OH8X, located in the Far North at the Arctic Circle under the Aurora Belt, was born out of the imagination of a team of Finnish radio operators gathering around a fire with their thinking-caps.

Ilkka, OH1WZ
Martti, OH2BH
Pasi, OH2IW
Ville, OH2MM
Toni, OH2UA
Marko, OH4JFN
Antti, OH7EA
Veijo, OH6KN
Juha, OH8NC

The idea was mooted in 1991, and after much scouting and checking out more than 50 potential sites, the present site was selected in 2003 - the shack and the first antenna was up by end of the year.

Arcala Station is situated on a lot 40 Acers, about 40 km to the East of the City of Oulu in Northern Finland. The object was not only to change the order of North and South in competitive amateur radio but also to assist in making sure that the stream of radio contacts would keep coming in regardless of our aging brotherhood. And thinking is what they did; in the wee small hours of the morning they came up with the Mission of Arcala Extremes to convey a message throughout the world and to invite all in their ranks to join and share in the thinking of that bright Northern Night.

Here the Older Types felt a need to pay back something that had enriched their lives spiritually and professionally, and they reached out to a group of Younger Types to set targets and create a new language. They forced themselves to do the impossible, breaking old barriers and competing for the souls of today's smart youth. We challenged

Truly, a CLUB STATION that any country can only dream of!!

Arcala Extremes to do the impossible, not only swapping North and South, but also seeking others to join in the fun and approaching young on their own terms, encouraging the competitive urge of youngsters to make the impossible possible in the course of their own lives through radio communication experience and related exciting theories.

Arcala Extremes is headquartered in Finland while operating in a European context. The message is global, and the experience is for us to share. Read about the Arcala Mission and let your imagination fly to do your share of impossible. When we meet over the airwaves, we will then have something valuable to share and be proud of. The world is at our fingertips.

The station is built for single-operator contesting, but allows to operate some multi-operations as well. Inside the ham shack there are operating positions equipped with Yaesu FT1000MP MarkV radios and OM Power amplifiers and SO2R system with Win-Test logging software and micro Ham MK2R SO2R device. A 3-el full size 160m Yagi and a 5-el full-size 80m Yagi at 90m are the highlights.

There are seven towers all together. In addition, there are GPs and beverages for 80 and 160 meters. The ham shack is located quite in the middle of the lot minimizing the cabling to the towers.

Radiosport on Extreme Level

The station automation is integration of micro Ham RF-matrix and "home made" automation. micro Ham RF matrix takes care of selecting the correct antennas, filter etc. according to frequency information from radios and our own part of station automation controls the power splitters and switching the correct antennas at the towers.

Mission Statement

Providing an alternative way to promote amateur radio activity among young people by launching a team of skillful participants targeting and conducting competitive activities at extreme level as their way of self-education and self-satisfaction to boost interest among those who seek and value competitive amateur radio as an option.

Target Audience

.• young people seeking a meaningful passion • related interest groups • competing radio stations/operators, current general amateur radio operators • sponsors, media • the society at large

A presentation is available in pdf format for download at:

http://www.radioarcala.com/Portals/3/ARCALA_CCF2009.pdf

Truly, a CLUB STATION that any country can only dream of!!

Ganesh VU2TS

Protecting our amateur radio frequencies

Have you ever thought of who is responsible to allocate the frequencies we all use as radio amateurs to communicate with each other?

It is the International Telecommunications Union (ITU) who is custodian of this very vital resource and on which there is an ever increasing demand, as more and more services using wireless technology are introduced. The allocations are included in the ITU rules which can be viewed from their webpage: http://www.itu.int/net/home/index.aspx

The agreements on frequencies are usually worked out at World Radio Telecommunication Conferences (WRC) held once in four years; the last WRC-07 was in 2007 in Geneva and the next will be in 2012 (postponed from the scheduled 2011)

The process of obtaining permission to use a particular frequency is a long one and many agencies are involved in the deliberations which influence the final vote at the conferences.

Radio frequencies are parceled out in segments for every service, whether it is the armed forces, aviation, commercial shipping, taxi services or amateur radio. As different frequencies are effective at varying times of the day due to ionospheric influences, most services have a slot in the different bands so that they could have almost 24x7 communications. Amateur radio has also band plans which vary from country to country.

The process starts in each country that requires a frequency or frequencies, for a particular application. In the Asia region it starts with Asia Pacific Telecommunity (APT). Resolutions are prepared and submitted and then the serious canvassing of support is done with representatives of the various countries. Representatives from all services are also present doing their bit to get their requirements, usually at the cost of other services as there is only so much to distribute. As many of them are commercial in nature they have massive funding to use to influence their requirements.

Amateur radio frequencies are protected by the International Amateur Radio Union (IARU). IARU is divided into three regions which are roughly geographical. India comes under Region 3. The map can be viewed here: http://www4.plala.or.jp/nomrax/ITU_Reg.htm

The IARU is funded solely by contributions from member societies that pay a per- member subscription. India is represented by the Amateur Radio Society of India (ARSI). The subscription is on a sliding scale and from India we pay US$ 0.17 per member. Naturally the bigger societies pay a larger quantum. It is the nominated members of IARU, with the requisite experience and knowledge, who attend the various meetings, prepare resolutions, canvass for support and try and influence the final outcome. It is their efforts that give us our frequencies and which resulted in amateurs getting the use of the so-called WRC bands which we use now.

The process is costly as for almost the entire period between WRC meetings, some consultative meetings are being held and IARU has to be represented. Sometimes there are some members of other organisations who are also radio amateurs and so they get to attend and also assist IARU.

This is the reason that it is important for the majority of licensed amateurs in any country to be members of their national society (in this case ARSI) so that their subscriptions can fund the ongoing process of protecting our bands and allowing all of us to continue using frequencies allocated to us and also getting additional frequencies allocated for experimentation and use. In many countries every licensee is a member of the national society and naturally they contribute in greater measure to IARU and eventually towards the privileges that we enjoy.

A recent achievement has been the allocation of the segment from 7.1 to 7.2 MHz for radio amateurs. This segment was occupied by commercial broadcasters and a deadline of March 29th 2009 was given for them to vacate the segment and revert it to radio amateurs. The process is not complete but ARSI is putting pressure on WPC to assist in vacating the few radio stations that are still there.

It is therefore vitally important for all licensed amateurs to be members of ARSI and contribute to the background process of protecting our frequencies. Visit the ARSI webpage http://www.arsi.info/ for information on how to join. As a member you can help by getting one new member each- an application form is printed in this issue and please use it to bring in more members. It is vital if you wish to continue enjoying the frequencies we have now.

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Hammenings

W5NDS Dr. Rodney Frank Moag is visually impaired. Born in 1951 in the rural area of New York State, he lost his eyesight at the age of 7 years. A chance tuning in to an QSO on the radio at home got Rod interested in the hobby, and with his dad's encouragement and support of his school club, he got his ticket at the age of 14 with the call sign W2KUV. 4U_ITU, ITU HQ. Gerald Lander, HB9AJU, reports that the call sign. 4U1ITU will be put on the air only very seldom in the upcoming future.

The restricted activities are the result of a general assembly of the Inter- national Amateur Radio Clubs (IARC) in May. Several reasons led to this decision including increased security levels at the ITU headquarters, a changed recognition of amateur radio in international communication and last but not least, 4U1ITU does not belonging to the most wanted countries list anymore.

The IARC decided to focus their activities on special modes or conference delegates and to limit all overnight and weekend activities as much as possible.

Finally the new antennas were installed on top of the Varembe building."

You can see them at: http://public.fotki.com/sparky73/any/ham_radio/4u1itu-2009-antenna/

Ducie Island DXPEDITION, VP6DX: Breaking several records

The VP6DX team consisted of 13 operators:

DL3DXX	Dietmar	Head of Low Bands
DL6FBL	Ben	Team Member
DL6LAU	Carsten	Team Leader, Initiator
DL8LAS	Andy	Team Member
ES5TV	Tonno	Team Member
K3NA	Eric	Co-Leader, Propagation Specialist
N5IA	Milt	Team Member
RA3AUU	Harry	Team Member
SP3DOI	Les	Team Member
SP5XVY	Robert	Team Member
SV1JG	Cliff	Team Member
UA3AB	Andy	Team Member
WA6CDR	Robin	Team Member

The DXpedition was between 11th and 27th February 2008, and after working round the clock for 17 days, they made 183,686 QSOs! This broke the record held since February 2001 by The Five Star DX Association's DXpedition to the Comoros Island, D68C. In addition, they have broken several other DXpedition records:

The largest number of RTTY contacts, previously held by the Swains Island DXpedition - N8S in April 2007.

The largest number of SSB contacts, previously held by the Comoros Island DXpedition -D68C.

The largest number of contacts on 40 meters, previously held by the Libya DXpedition - 5A7A in November 2006.

The largest number of contacts on 30 meters, previously held by the St Brandon Island DXpedition - 3B7C in September 2007.

The largest number of contacts on 17 meters, previously held by the Swains Island DXpedition - N8S.

The largest number of contacts with North America, previously held by the Comoros Island DXpedition D68C.

The largest number of contacts with South America, previously held by the Peter I Island DXpedition - 3Y0X in February 2006.

The largest number of contacts with Africa, previously held by the Rodrigues Island DXpedition - 3B9C in March-April 2004.

Source: http://ducie2008.dl1mgb.com/

Hmmmm. Who says CW is dead? VP6DX made a total of 87,294 contacts on CW as against 86,140 on SSB and 10,252 on RTTY.

When I heard about Ducie Island, the first thing that came to my mind was H.M.S. Bounty - of the Mutiny on the Bounty fame.

Located 4,000 miles northeast of New Zealand, Ducie is tiny. And un-inhabited. This volcanic speck in the South Pacific is surely one of the most isolated places on Earth. The nearest and barely settled place is Pitcairn Island, some 300 miles away.

Ganesh, VU2TS

Contd. from page 7

Diamonds in the Sky

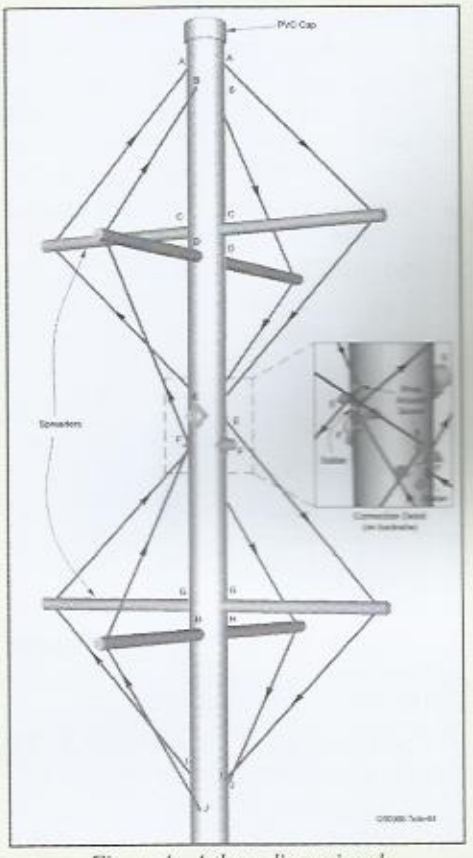


Figure 4 - A three dimensional wiring diagram of the DDT.

phasing line into the upper SO – 239 connector and the other into one end of the coax T adapter. The Coax feed line is then screwed into the other end of the T adapter as shown in Figure 5.

It is good idea to create a choke balun to keep currents on the outside of the coax feed line from disturbing the omnidirectional pattern of the antenna. This can be done by winding five turns of the RG – 58 feed line coax around the mast. Tape the choke in place with electrical tape and weather proof all connectors and connections.

When completed, the antenna should have an SWR of about 1.3:1 from 144 to 145MHz since it is designed to be used in the "weak signal" portion of the 2 meter band where horizontal polarization is the convention.

The antenna can be hung from a tree or used as a "topper" for a mast or tower. No rotator is needed, of course, as the antenna is omni directional. If you choose to hang the DDT from a tree, drill a hole in the top cap before gluing it on and mount an "eye" bolt to hold the rope. Glue another cap to the bottom and tape the feed line in place on the lower part of the mast for a strain relief. If it is used as a "topper" for a mast or tower, use the thicker1 1/4 inch PVC pipe, insert a wood dowel into the PVC as far as it can go to strengthen it against bending and breaking, glue on the top cap and spray with paint for UV protection.

References

B. Beezley, K6STI,"A Gain Antenna for 28 MHz,"QST,Jul 1994,p70.

P. Carr, N4PC, "The H-Double Bay Antenna," CQ, Sept 1995, p28. This is an SDR for30 meters that is horizontally polarized and fed at the lower end-wire.

L. B. Cebik, W4RNL,"A-meter Quad Turnstile," QST, May 2002, p42.

D. Handelsman, N2DT, "The Double Rectangle," Three variations on a rectangular theme, Communications quarterly, Spring 1999, p 67.

Photos by the author.

Howard ("Skip") Teller, KH6TY, is an ARRL member and was first licensed in 1954. He received his commercial First Class Radiotelephonic license in 1959 and worked his way through college as chief engineer of several radio stations. He holds a BS degree in electrical engineering from the University of South Carolina and is retired from running a factory in Taiwan, where he manufactured the weather alert radio the he originated in 1974 and is still sold by Radio Shack and many other companies, Skip enjoys developing digital software, such as DigiPan and NBEMS, designing 2 meter transceivers and antennas, He is currently studying the potential of working 2 meter transceivers and antennas. He is currently studying the potential of working 2 meter DX on FM using digital modes. You can contact Skip at 335 Plantation View Ln, Mt Pleasant. SC 29464; **kh6ty@comcast.net**

Skip Teller, KH6TY

Four letter suffixes in Australia

It is still only little known that there are also call signs issued with a four letter suffix in "down under". These call signs have been issued to Foundation License Holders since 2005. All Foundation class suffixes begin with an "F" plus three more letters. Raj,VK4FRAJ, the son of Eddie,VK4AN, is probably the only OP with such a call operating also in CW. It is not very easy to describe this call sign in CW. Raj is allowed to work with a maximum of 10 watts in CW and SSB on 80m/40m/15m/10m.

DO YOU KNOW?

The J-pole antenna was originally known as the Zepp' antenna (short for Zeppelin). It was invented by the Germans for use on their Airships or Zeppelins also called Blimps.

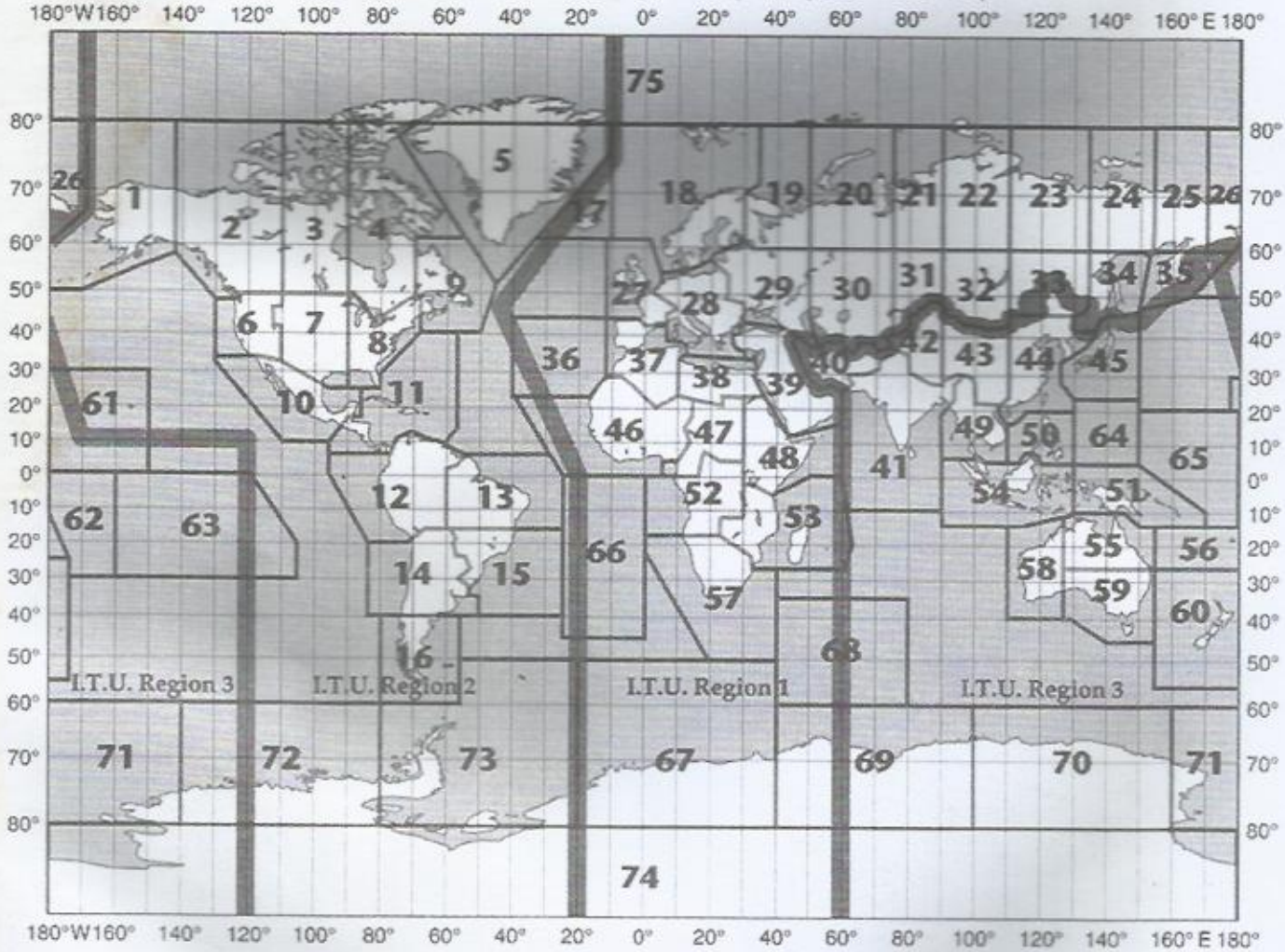
It railed behind the airship and it consisted of a single element, half a wavelength long. This was later modified into the present J-Pole configuration.

A well known variation of the J-pole is the "Slim Jim", invented by Fred C. Judd (G2BCX). The name was derived from its slim construction and the J type matching stub (J Integrated Matching).

•••••

There are at present 337 DXCC entities. There are only three FIVE BAND DXCC awardees in India. They are: VU2GDG/Gopal, VU2CVP/Chitra and VU2DVP/Vidy

I.T.U. ZONES AND REGIONS



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