

## A visit to AIR Cuttack & others

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Cuttack is the old capital of Orissa State located in East Coast of India. It is 22 kms North of the present capital Bhubaneswar where I was stationed for some weeks in Feb/Mar 2008 to conduct Amateur Radio training for the local people by National Institute of Amateur Radio. In fact they are twin cities.

I had visited AIR Cuttack some years back but visited them again during my latest trip by prior appointment to know about the latest developments there.

One afternoon, I went by bus from Bhubaneswar and it took only about 45 minutes to reach central Cuttack by crossing the Mahanadi River. From there, the AIR studios and offices are about 4 kms away and I continued by an auto rickshaw.

AIR is located in 4.6 acres of land in Dr. Prana Krushna Parija Marg earlier known as Cantonment Road, opposite the Barabati Stadium, Cuttack. There are security persons with rifles guarding the station at the entrance. The river Mahanadi flows behind the station.

I met the Asst. Station Engineer who was nice enough to give me a guided tour of his station. I had sent a reception report to the station some days before my visit. Compared to my previous visit, the studios and offices have a fresh look now as it was recently painted for their 60<sup>th</sup> anniversary celebrations.

AIR Cuttack is the main station in Orissa state and was inaugurated on 28 January 1948. At first they operated from a temporary studio at Madhapur House with a 1 kW transmitter at Killa Fort. Later they moved to the nearby present location. On 25 December 1977, a Type IV Studio complex consisting of one Talk, one Drama, one Music, two Dubbing and three Playback studios was commissioned. Additional studio facilities were added later on. Now they use a blend of new technologies using computers coupled with the old reel to reel tapes.

Two transmitter sites are in use by AIR Cuttack now and a third one is being added.

The studios and two transmitters are located in the ground floor of a four story building. A 1 kW BEL MMB 103 transmitter (Sl.no.8) is housed in a separate room which was running at about 800 watts when I visited them. It is known as the B Channel and carries the Vividh Bharati, Commercial Broadcasting Service on 1314 kHz. This transmitter was commissioned 33 years back on 23 June 1975. They use a 38.7 Meter high Lingo type antenna. Presently, this channel is not heard well in nearby Bhubaneswar where I stayed. I was told that this was because of the present antenna orientation which got disturbed in the aftermath of the super cyclone which hit the area on 29 October 1999. Besides the locally originated programs, several programs are relayed from AIR Mumbai received via satellite. The Vividh Bharati Service actually started on 19 August 1962 with another RCA transmitter also of 1 kW which was replaced in 1975 by the transmitter presently in use. It was converted to a Commercial Broadcasting Service (CBS) on 1 May 1975. From 1962 to November 22, 1978 they were using 1350 kHz.



In another room there is the FM transmitter consisting of 2 nos. of 3 kW BEL HVB 164/A transmitters operating in stereo on 101.4 MHz. Its serial number is 006 which was made in 1988. It was installed around 1995 and was inaugurated on 3 March 1996. Now it is running only at 2 kW as some of its Power Amplifiers are not working. At present they have only one transmission consisting of 4.05 hrs of the Rainbow FM program from 5.55 pm to 10.00 pm. This transmitter is to be repaired and shifted shortly to the nearby TV station site, about 2 kms away. The programs consist of music programs with 2 minute News head lines in Oriya at top of the hour.

These FM transmitters have an interesting story to tell. In 1994 these transmitters were installed at the new AIR station in Baripada, about 250 kms away. When the transmitters came on air on 102.9 MHz, it was found that they did not have many listeners due to lack of FM receivers. So it was decided to shift it to Cuttack while a Medium Wave transmitter of 1 kW was installed at the Baripada station. The irony is that last year an FM transmitter of 5 kW was again installed at Baripada station with the same old frequency of 102.9 MHz now that FM receivers have become popular.

The Radio Network Satellite Uplink equipment of AIR Cuttack (via INSAT 3 satellite located at 74 degrees East) is DE 112115 A1 (SI.No.006) made by Indian Telephone Industries, Bangalore. The Regional Networking for stations in the state is on analog S Band, 3C S1

transponder using 2556.300 MHz. The DTH Service is in digital on C Band, 3C C11 transponder. Its power is 80 watts.

In one room there is the Direct to Home (DTH) transmission studio for transmissions via Satellite heard all over India and neighboring countries. This is a separate channel started in 2006 and is available through the Ku Band on DTH platform of Prasar Bharati. It operates at 6.00 am to 11.00 pm.

The main High Power Transmitter carrying the A Channel programs is located about 17 kms away from the studios at Fakirpara in 33 acres of land. At present they are using a 300 kW Thomcast S7HP transmitter operating on 972 kHz. This transmitter was commissioned on 11 November 2002. Their old 100 kW BEL HMB 104 transmitter installed on 10 October 1983 is now used as standby with 15 kW. Earlier they had a 20 kW Brown Boweri transmitter in use here from 24 May 1958. From 1958 to 1976 they were using 965 kHz. Then in 1977 it changed to 970 kHz and in the MW frequency reshuffle on November 23, 1978 to 972 kHz. They use a Self Radiating Mast Antenna 150 Meters high. When I mentioned to them of VOA's Radio Aap Ki Duniya using the same frequency, I was told that it is not affecting their primary target area.

During the super cyclone which hit the area on 29 October 1999, their main tower fell down and transmissions were interrupted for a few days until contingency arrangements were made. For some time from 14 November 1999 programs were broadcast using a 10 kW mobile transmitter from the Fakirpara transmitter site. I had seen the fallen tower when I visited that area then for providing emergency communications via Ham Radio. When I visited them an year later, they were using the 100 kW transmitter at 50 kW only which was later increased to 75 kW.

On this A channel songs in as many as 19 local languages / tribal dialects like Ho, Kui, Orang etc. are used. As it is the main station, lot of its programs are relayed by all other AIR stations in the state.

The Studio to Transmitter Link (STL) is via UHF link operating on 1440 MHz made by Meltron which was installed in October 1994. Its tower is 69.3 meters high and on the same tower the FM antenna is also there.

At present there are 197 staff members working at this station. I have received several qsl letters from the station.

Their postal address is: All India Radio, Dr. Prana Krushna Parija Marg, Cuttack 751001, Orissa. Tel: 91-671-2301498. Till recently, they had a website [www.airctc.com](http://www.airctc.com) which is not working now.



*The FM /STL Tower at AIR Cuttack Studio*

About two kms away from the AIR Studios is the Doordarshan TV transmitter site at a place called Tulsipur. I went there in a cycle rickshaw.



Doordarshan is having the following 2 transmitters here.

1. NEC PCN 1610SSPH/1 transmitter of 10 kW on Channel 8 whose range is 70 kms. It operates from 5.28 am to around 12.30 am. Besides the National channel DD1, the Regional Service in Oriya DD6 is also telecast which is relayed via UHF from the Doordarshan studios at Bhubaneswar.
2. Harris HTEL 1000 HS transmitter of 1 kW on Channel 5 whose range is 40 kms. This channel operates from 6.00 am to 12.30 am carrying DD News which is completely relayed from Delhi via Satellite. The 1 kW transmitter was running at 983 watts when I visited them.

This TV station was also hit by the Super cyclone in 1999 and was off the air for two weeks. This TV station covers Bhubaneswar, the capital also.



*Entrance of Doordarshan TV, Cuttack*

In another building, away from the TV transmitters, is the FM Radio site. Here 3 private FM transmitters are installed in a hall, in separate rooms next to each other, like we find them on the FM bands.

On the left side room while entering is the transmitter of Big 92.7 FM owned by Adlabs Films Ltd. of Reliance Group. Their transmitter is a Harris Z5CD of 5 kW. There is a standby Harris ZX1000 transmitter next to it. This station started tests on April 14, 2007 and was inaugurated on May 17, 2007.

In the opposite room is the S FM transmitter operating on 93.5 MHz owned by Kal Radio Ltd of Sun Network Ltd. Its transmitter is BE FM 5 C made by Broadcast Electronics, India of 5 kW. When I visited them, their power meter was showing as 5.22 kW. It started test broadcasts in second week of May 2007 and was inaugurated on June 28, 2007.



*Big 92.7 FM advertisement on auto rickshaw*

In the next room after Big 92.7 FM, on the left side is the transmitter of Radio Choklate which operates on 104.0 MHz owned by Eastern Media Ltd. of Sampand Newspaper. They use Rhode & Schwartz Model 3 transmitter of 5 kW. In fact there are 2 nos of S4 800 FM exciters out of which one is used at a time and one is standby. It started around 5 May 2007. Occasionally there are very short broadcasts by BBC on this channel.

There were several technical staff on duty at these stations, but it looked as if they did not have any work as most of it is automated.

These 3 private FM stations operate round the clock with lot of music, phone in programs, advertisements, traffic and weather info and is very popular. We can see people listening to them in many places. Their advertisements are seen on hoardings, umbrellas, auto rickshaws etc.



*Radio Choklate hoarding opposite Bhubaneswar Railway station*

In another hall next to the private FM transmitters, installation is in progress of 2 FM transmitters, one for AIR and another 10 kW one for Gyan Vani, the Educational FM Channel of India operated by Indira Gandhi National Open University (IGNOU). The frequency of AIR transmitter will be 101.4 MHz presently operating from the AIR studio while the Gyan Vani frequency is publicized as 91.9 MHz.

The FM bands there are now monopolized by the 3 private FM stations which operate round the clock. AIR is broadcasting of FM only for 4 hrs. per day with a faulty transmitter. When they start transmissions from the TV tower shortly, things may change.



*The TV Tower at Cuttack also used by private broadcasters*

Bhubaneswar is the capital of Orissa State. It is a Temple city. In this city we can see cycle tracks on either side of some roads which is not common in India. Though it is the state capital, there are no radio stations here. All the AIR and private FM transmitters are installed in its twin city and the old capital Cuttack. However, the 3 private FM stations are advertising themselves as from Bhubaneswar. The private broadcasters have only their studios in Bhubaneswar. AIR is also maintaining an auxiliary studio here from 27<sup>th</sup> January 1976 to facilitate recordings of State Ministers and other dignitaries. The AIR studio is located on the main road at Sachivalaya Road. This studio is open only on Tuesdays now when staff from AIR Cuttack visit here. The recordings made here are broadcast from AIR Cuttack. There is a multi purpose studio and a recording room using reel to reel tapes along with a control room. When I visited them at first it was closed and there were only Security staff on duty there. On my next visit on a Tuesday, a talk was being recorded there.



*Author in front of AIR studio, Bhubaneswar*

Gyan Vani, the educational FM station has announced a station for Bhubaneswar using 106.0 MHz but there are no signs of its installation any where.

In Bhubaneswar AIR & DD is having a Regional Staff Training Institute (Technical), RSTI, which was started on 17 July 2000.



There are studios, MW and TV transmitter etc. here used for training purposes of their staff. These transmitters are connected only to dummy loads, not to any real antennas. It is located near OMFED Chowk, Chandrasekharpur. In fact we conducted one ham radio training batch here staying in their hostel.



*Author teaching Morse code to Students at RSTI, AIR, Bhubaneswar*



*Author (extreme left) inside AIR Studios, RSTI, Bhubaneswar*



*Author is just taller than the BEL 1 KW MW transmitter, RSTI, AIR, Bhubaneswar*



*100 watts GCEL121-2 TV Transmitter, RSTI, AIR & DD, Bhubaneswar*

I also visited the Doordarshan TV studios in Bhubaneswar. It is located at Acharya Vihar. The programs from here are sent via UHF to the transmitting station in Cuttack and also up linked to satellite for relay by all the TV stations in the state.



*Entrance of Doordarshan Kendra, Bhubaneswar*

Another DD Satellite TV channel called DD Oriya which is telecast round the clock satellite in Oriya language also originates here. Launched in 1994, DD Oriya broadcasts serials, cultural programs, news and current affairs etc. There is a low power TV transmitter in Bhubaneswar carrying DD News channel.



*Tower at Doordarshan, Bhubaneswar*

Bhubaneswar is good place for VHF Dxing. From here, I have monitored far way FM broadcast stations from far away places like Kolkata, Visakhapatnam, Chennai, and even Dhaka and Sri Lanka.

**For more information:**

QSL card: [www.qsl.net/vu2jos/qsls/cuttack\\_1314.jpg](http://www.qsl.net/vu2jos/qsls/cuttack_1314.jpg)

AIR Cuttack recording:

[www.intervalsignals.net/countries/India-air.htm](http://www.intervalsignals.net/countries/India-air.htm)

Staff Training Institute, AIR & DD : [www.rstibbsr.org/](http://www.rstibbsr.org/)

Radio Choklate : [www.radiochoklate.com/area.htm](http://www.radiochoklate.com/area.htm)

Big 92.7: [www.big927fm.com](http://www.big927fm.com)

Harris Z5CD Transmitter:

[www.broadcast.harris.com/product\\_portfolio/prod\\_media/z5%20data%20sheet%5B1%5D.pdf](http://www.broadcast.harris.com/product_portfolio/prod_media/z5%20data%20sheet%5B1%5D.pdf)

S FM: [www.sunnetwork.org/fm](http://www.sunnetwork.org/fm)

BEFM5C Transmitter:

[www.bdcast.com/hierarchy/product.php?maj=104&sec=205&cls=309&prod=435](http://www.bdcast.com/hierarchy/product.php?maj=104&sec=205&cls=309&prod=435)

Harris TV Transmitter:

[www.broadcast.harris.com/product\\_portfolio/prod\\_media/HTEL%20Series%20Data%20Sheet.pdf](http://www.broadcast.harris.com/product_portfolio/prod_media/HTEL%20Series%20Data%20Sheet.pdf)

About Cuttack: <http://cuttack.nic.in/>

About Bhubaneswar:

[www.orissatourism.gov.in/bbsr.html](http://www.orissatourism.gov.in/bbsr.html)

## ALL INDIA RADIO: CUTTACK

### Broadcast schedule:

#### **Cuttack A 972 kHz, 100 kW**

5.55 am – 10.06 am (Sat 10.30 am)

12.30 pm – 3.30 pm

4.55 pm – 11.05 pm

#### **Cuttack B 1314 kHz, 1 kW (Vividh Bharati)**

5.55 am – 11.00 am

12.00 pm – 5.30 pm

6.15 pm – 11.00 pm

FM Rainbow 101.4 MHz, 2 kW

5.55 pm – 10.00 pm

**DTH:** 6.00 am to 11.00 pm

### Transmitter history:

#### **Cuttack A:**

28 Jan 1948 1 kW 1350 kHz

24 May 1958 20 kW 965 kHz, BBC (970 kHz from 1977)

23 Nov 1978 970 kHz changed to 972 kHz

10 Oct 1983 100 kW 972 kHz BEL HMB 140

14 Nov 1999 10 kW 972 kHz BEL Mobile

11 Nov 2000 300 kW 972 kHz Thomcast S7HP

#### **Cuttack B:**

19 Aug 1962 1 kW RCA 1350 kHz

23 June 1975 1 KW BEL MMB 103 1350 kHz

23 Nov 78 1350 kHz changed to 1314 kHz

#### **FM Rainbow:**

1995 : 2x3 kW BEL HVB 164/A 101.4 MHz Stereo

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