ANDEX INTERNATIONAL

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MAIL OR NO MAIL

There continues to be problems with the postal system here in Ecuador as many of you WELL KNOW! The only thing I can say is that HCJB is continuing to work and struggle with the problem.

If you do not receive something you ordered . . . a T-shirt, ANDEX patch, or rubber stamp . . . or if your ANDEX bulletins have a hard time reaching your mailbox, please write me in care of our Florida office. (The address is listed on the back page of this bulletin.) If I do not answer you, write again and again. When my mail doesn't reach you and your mail doesn't reach me, we do have a real problem of communication and understanding and tempers get a bit frayed. Please don't think that I am taking all your money, but not ordering the ANDEX items for you. If I hear from you, I answer you. Therefore, if you aren't hearing, it means letters aren't getting through.

Remember, however, to add a couple of weeks to the time you think it should take for a letter to reach its destination. As well as the problem of non-delivery of mail, we also struggle with the problem of SLOW delivery!

Work with me, my ANDEX friends. I would appreciate hearing about mail delivery problems, the length of delivery time, the condition of the mail when it arrives, the number of missing issues. All of these complaints will then be turned over to the people who are trying to solve the mail problem here.

GABON QSL

Erik Hansson, ANDEX No. 4131, Bryggaregatan 13, S-240 17 Södra Sandby, Sweden, wrote to tell us about his most-prized QSL card.

"It is a QSL from Africa No. 1, Gabon. It took me nearly eight months to obtain the card. When I first tuned in to the station, I wrote a usual reception report. I read in the **World Radio TV Handbook** that reports for Africa No. 1 should be sent to Radio France International, Paris. So I did, but after a couple of months the report came back from Paris with a small letter saying that R.F.I. didn't verify Africa No. 1's broadcasts any longer.

So I sent the report to Gabon and after five or six months, the tri-colored QSL card came."

LOCAL TIME

Since the introduction, in 1980, of "summer time" in Germany as well as in other European countries, there arose the need among hams and SWLers to find a general term for "winter-CET" and "summer-CET" (CEST being Central European Summer Time). In North America, there is the similar problem with daylight savings time.

To take care of this problem, we use the term "local time." According to the definition of the term, local time refers to the meridian (longitude) of a place. Only places on the same longitude have the same local time (e.g. London in the United Kingdom and Castellon in Spain).

However, to use it in any other instance causes a false use of the term. For instance, one degree of longitude means a time displacement of four minutes. In our latitudes, for every 300 metres in the east-west direction, we have a time difference of one second.

The Central European Time refers to the 15th degree of longitude. That is the meridian on which the East German town of Goerlitz is located. The difference between Berlin and Goerlitz runs to minus 6 minutes. So at 1200 CET, the local time of Berlin is really 1154, in Erfurt (located in Thuringia) it is 1144 and in Warsaw, Poland, it is already 1222. You can see the problems that would arise when hams would try to note their local time.

To add to the confusion, the real sun reaches her orbit zenith on November 4, 16.4 minutes before 1200 local time and on February 12, reaches her zenith 14.3 minutes later than 1200 local time. 1200 local time is supposed to be defined as that time when the sun has reached her highest point in the sky. But the sun doesn't pay any attention to that.

So to avoid all this confusion, we SWLers and hams should always note our times in UTC in order to avoid possible mistakes. Universal Coordinated Time means the local time of the meridian running through Greenwich, whose time has been equalized to the unsymmetrical rotation speed of the earth. By the way, UTC and GMT mean the same thing . . . GMT only means the local time of Greenwich. (Actually, UTC and GMT are not **exactly** identical. They can vary by almost a second. This will be the subject of a future ANDEX article.-ED.)

By André Tatter, Ginsterweg 6, 4500 Dessau 8, District of Halle, East Germany

FEARLESS FORECAST: SPECIAL FREQUENCIES

By John Stanley

For every DXer there are certain frequencies that are special. Perhaps it is the frequency of your favorite DX program or of the rare station you logged or just that place on your dial that you keep coming back to. All of us have frequencies that mean something special to us.

Nature has special frequencies also. Knowing some of these can add interest to your shortwave listening. For example, the planet Jupiter sometimes emits noise bursts that center around 21 MHz. Or, as another example, many frequencies in the microwave region occur in the universe due to resonance of certain atoms and molecules and produce nulls or peaks in the general background noise produced by the cosmos.

There are certain frequencies related to ionospheric propagation that are also of special interest. I would like to mention some of these and their importance to the DXer.

The range of frequencies over which the F-Layer forms an impenetrable shield above the earth's surface varies from 2 to 17 MHz. That lower limit, 2 MHz, will be reached only during a winter night at the bottom of the solar cycle and at high latitudes. Usually, the shielding effect will be complete up to 3 or 4 MHz. What is the implication of this fact?

If you want your radio transmission to be safe from interception by UFO's traveling outside the earth's ionosphere, you should always use frequencies below 2 MHz. Or more seriously, to avoid the problem of a skip zone, caused by signals penetrating the ionosphere instead of bouncing back, frequencies below 2 MHz should be used.

More and more for the next few years, hams on the 3.5 MHz band will find local nets bothered by signals "skipping out" during late night and pre-sunrise net schedules. The only solution, ham friends, is to use 160 meters, where there will never be a skip zone.

Similarly, users of the tropical bands for short range service (this assumes that you live in the tropics, as I do) will find 60 meters less reliable for late night and pre-sunrise times and will be well advised to listen to the 90 meter band. 90 meters is above 2 MHz, to be sure, but since we are referring to the tropics, minimum frequencies that can show "skip" are higher.

The highest frequency mentioned above, 17 MHz, is the frequency to stay above if you **want** your signal to go into space, or if you are listening for signals from space. Above this frequency, a signal sent straight up will always pass through the ionosphere and on into space. Only signals sent at a low angle will be returned to earth. Hence, there is always a skip zone above 17 MHz. Actually, there is usually a skip zone above 10 MHz, but 17 MHz represents that extreme case (winter around noon, in the tropics, high solar activity) where penetration of the F-Layer is not possible.

Next, we might ask, what is the highest frequency that the F-Layer can reflect, even when signals strike it at a low angle? This is the same as asking "What is the highest known F2 MUF?"

Well, during the last peak, signals crossed the Atlantic on 70 MHz so the number we are looking for must be that high. My personal guess is that the highest ever true F2 MUF was below 80 MHz. This would occur during a sunspot maximum, just before local noon, in November or October. Thus any DX you hear above 80 MHz can be confidentially attributed to other than the F-Layer. The most likely possibility would be sporatic E.

Speaking of the E-Layer, we might ask some similar questions. What is the highest frequency reflected by the E-Layer? It would be about 20 MHz, at noon, in the tropics, with high solar activity.

What is the highest frequency that the E-Layer can block on a straight-up transmission? It would be about 4 MHz, under the conditions just mentioned. In both cases, we are ignoring sporatic E which is an unpredictable type of spotty reflection from the E-Layer. The maximum frequencies supported by sporatic E are not known, but are in the UHF range.

So there we are. Those are frequencies that nature has made special. Note that they bracket the shortwave range (3-30 MHz). That is why shortwave is the most exciting part of the radio spectrum.

Below are some other special frequencies. How many can you identify? Where do they fit into the above listing of minimum and maximum frequencies reflected from the E-Layer and F-Layer? Does that give you a hint as to how they would behave? The answers will be in the next issue of ANDEX!

WHAT ARE THESE SPECIAL FREQUENCIES?

1. 2182	8. 21,390
2. 3220	9. 21,840
3. 7335	10. 26,020
4. 7400	11. 27,185
5. 15,070	12. 27,255
6. 15,335	13. 29,450
7. 20,000	

(All are in kHz.)

SPECIAL DXer FROM THE USA AND SPECIAL DXer FROM ECUADOR

Our Special DXer this month is, at the same time, the Special DXer from the USA and the Special DXer from Ecuador. His name is Bill Wright and he is ANDEX No. 4392, having joined in August of 1982. He is the Special DXer from the USA because his roots are there, in Peoria, Illinois, and he is the Special DXer from Ecuador because since January, 1982, he has been on the staff of Radio Station HCJB. His address now is the same as the station, Casilla 691, Quito, Ecuador. Bill is a power engineer and has responsibilities in several power-related areas of the station.

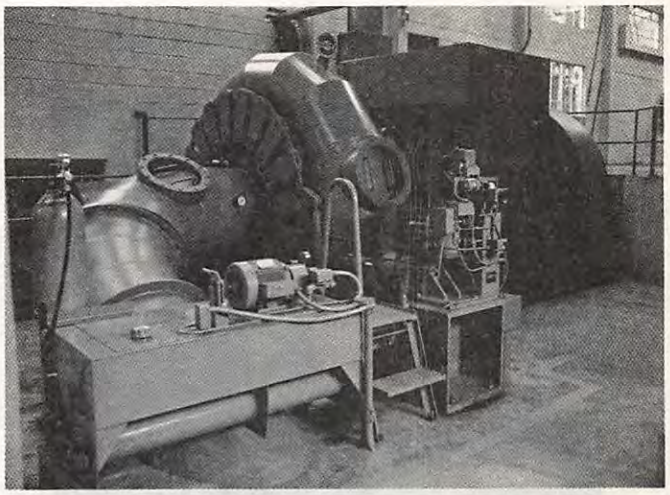
I thought it would be good to feature Bill this month as our Special DXer because he does spend quite a bit of time listening to shortwave programs. However, he doesn't have to tune in carefully and listen to the squeaks, whistles and fades as you do. As he works, he listens to the monitor that we have here in the transmitting building. (In fact, I am listening to it as I write this article!) At night, he simply turns up the monitor in his house. He lives in one of the six staff houses that are located here on the compound along with the transmitting building and the antennas of HCJB. We get to hear the program before it has to face all that interference on its worldwide journey!

He doesn't turn in many reception reports on paper, but may holler from time to time as he passes my office . . . "Hey, I heard a good program last night on the toaster." On his TOASTER!? Oh, well, you have to live here in Pifo to understand how the signals work their way into our lives, our rain gutters, our window panes, and our toasters!!

The second reason I chose Bill is that he and his expertise allows you all to listen to HCJB's shortwave programs. He is one member on the team with a job to do and if he doesn't do his part, the programs don't go out. Bill helped with the recent installation of the new hydroelectric plant in Papallacta which produces the power to run the radio station.

Let's hear what he has to say about the plant . . . "Radio Station HCJB in Ecuador operates and maintains two hydroelectric power plants with a combined capacity of 6.0 MW. The electrical power is transmitted from the site of the two hydroelectric plants situated on the Papallacta River high in the Andes Mountains to the HCJB shortwave transmitter site in Pifo by means of a 29 kilometer, 3 phase, overhead power line. HCJB engineers have recently completed the installation of the 4.2 MW hydroelectric plant which was manufactured in Norway.

Even though the installation and commissioning of the plant is complete, some problems relating to the design and the coupling between the Francis style turbine and generator remain. We are attempting to resolve these remaining problems with the turbine manufacturer who is requiring us to perform some tests on the turbine at overspeed conditions.



Because of the recent addition of the 4.2 MW plant, we are in the process of upgrading our power transmission line from 23 KV line-to-line voltage level to 46 KV line-to-line. This project encompasses re-designing both substations in Papallacta and Pifo for additional transformers and circuit breakers. Also, since the power transmission line is now 20 years old, it will require some repairs, replacement of insulators, and adding some additional insulators to accommodate the higher voltage."

So that tells us a bit of what Bill is involved in here. He has a wife, Jackie, and three children, a son, Brent, and twin daughters, Kari and Janelle. In his off-work hours, Bill talks on his ham radio (WB9BMZ/HC1WD), works on his old Land Rover, and builds sandboxes for Brent.

By the way, Bill does own a shortwave receiver. It is a Sony 2001 and has been in pieces for the last four weeks on the desk of Fearless Forecaster, John Stanley. The situation looks hopeless. When you write Bill to congratulate him on being Special DXer for April-May, 1984, ask him what happened to cause the 2001 to be in such a condition. It is an interesting story!

NEW STAFF MEMBER

If you have been an ANDEX member since the beginning of 1977, you will have already met the person I am about to introduce to you. Doris Hastings was introduced to the membership in February of 1977 as the ANDEX membership secretary. She held that job for about a year. In the March 1977 issue of ANDEX, Doris wrote about the handling of the ANDEX mail. Since this contact with ANDEX way back in 1977, it is too bad we had to wait six years to get Doris involved once again with our club.

Last May, Doris and her husband, Don, saw the last of their three children graduate from high school. This meant that they did not need to remain living in the big city of Quito anymore so they moved out to the country, here to Pifo. Don had been making the 45-minute drive out to Pifo for 10 years to work with the transmitters and antennas so he was glad to make the move and stop driving!

During the summer, Doris covered the ANDEX desk for me while the Stanley family enjoyed some time in the States and when we returned, Doris and Don went to the States for several months to see their children and get their youngest son settled into college.

Returning in January, Doris reported to the ANDEX office and now she and I try to see if we can handle all the details connected with this 1000-member club.

Doris was born in the Oneonta area of New York, has lived on Long Island and in Los Angeles, but has called Ecuador home since 1974.

When she is not working with ANDEX matters or studying via correspondence for her Master's Degree in Social Science from Azusa Pacific University, Azusa, California, USA, she enjoys reading and any and all sports.

Welcome, Doris Hastings, to our ANDEX family.

FOR FREE

ANDEX is continuing to try to find ways that will make it easier for the members to pay their annual subscription dues. We have set up payment procedures in several countries and are working on several more. However, in spite of our endeavors, we still have some members who cannot get money out of their country to pay us and we cannot set up a local office in their country to receive the money there. These countries include East Germany, Poland, USSR, Hungary, Yugoslavia, Romania and Cuba.

In addition, there are countries like Guyana, India, and Ghana who have strict international rules which prohibit the sending of any currency out of the country due to economic reasons.

So, for a variety of reasons, we have accepted some members on a scholarship basis. The last time I counted, we had 60 members on our membership list who receive the ANDEX bulletin without cost. In order for our budget to stand the strain of these non-paying members, I have had to rely on the generosity of many of you who continue to send that extra bit of money everytime you renew for the Friendship Pool.

I am sure that I speak for our scholarship members, as well as for those of us here at the ANDEX office, when I say a deep and warm "Thank You" to these concerned givers.

How To Have A Fruitful Garden

1. Plant five rows of PEAS:
   - Presence
   - Promptness
   - Preparation
   - Perseverance
   - Prayer

2. Plant three rows of SQUASH:
   - Squash gossip
   - Squash criticism
   - Squash indifference

3. Plant five rows of LETTUCE:
   - Let us be unselfish and loyal
   - Let us be true to our obligations
   - Let us obey Him
   - Let us be faithful to duty
   - Let us love one another

4. Finally, no garden is complete without TURNIPS:
   - Turn up for meetings
   - Turn up with new ideas
   - Turn up with a smile
   - Turn up with love for God
   - Turn up with the determination to make everything count for Christ.

RADIO DIARIO DE IBIZA

By Torsti Kylämaa,
Kivimäentie 42,
SF-00670 Helsinki 67,
Finland

"Last June, 1983, I spent two weeks of my summer holidays on the island of Ibiza. If you don't know where that island is, I can tell you that it is the second biggest island of Balearic and lies off the coast of Spain in the Mediterranean Sea.

Before my trip there I thought that there was only one radio station in Ibiza called Radio Popular and I planned to visit it. But very soon after my arrival in Ibiza, I found a quite new radio station on my transistor radio on the FM band so I started out immediately to find out where the station was located.

The station announced their address as only 'Apartado Publicidad' so that did not tell me anything. But, finally, a bartender told me one day the street address of Radio Diario and so I went to visit them.

The station was only six months old in June when I was there and the building in which the station was located was so new that it was still unfinished. I found it only after a long time of looking and asking the local people.

There was a live broadcast in progress when I stepped into the house. At the same time there resounded in the fairly big hall, familiar commercial spots which I had heard many times on my radio so I knew that I was in the right place.

Next I saw that there was a man looking out at me from the little window of the studio so I walked up to him and introduced myself. I told him that I was from Finland and that I would be very interested to see a little more of their station because I am interested in all kinds of radio operation.

The man was very kind to me and showed me their studios, although he had to stop from time to time to continue with the live broadcast in between playing records. He told me, for example, that Radio Diario is really six months old and broadcasts only on FM, on the frequency 102.8 MHz in stereo. There are 14 people working at Radio Diario on three floors of the building.

Their programme style is unusual. The same programme titles are repeated every day, but the content is, of course, always different. The daily repeated programmes are, for example, at 0700 a.m. 'Música para Madrugadores,' at 0800 'Radio Mañana,' at 1200 'El Show de las Mil Pesetas,' at 1300 a daily news bulletin. That programme included international news and local news. The local news was very interesting because it was very detailed. It would be because the island of Ibiza is only 40 kilometers long and under 20 kilometers wide.

At 1400 through 1900, there were various types of musical programmes. At 2000, a sports review called 'Radio Deportes' came on and finally, a night programme 'Radio Noche' at 2300. I listened almost every day during my two-week stay and I must say I really liked the whole programming style.

On the last night of my stay in Ibiza, Radio Diario had a very interesting experimental programme called 'Alerta Ovni.' They had announced that programme dozens of times during the two weeks I was there. It was a programme on UFO's (unidentified flying objects). It was four hours long and included sending messages to people or 'humanoids' somewhere in space and after that message they asked the people on the islands of Ibiza and Formentera to look into the sky to see if something would come down or if there would be a signal of some sort.

Naturally, I went out on my balcony, too, and looked up, but I saw only some rubbish of maybe USSR's or USA's satellites coming down and besides that, a really pretty moon, but nothing more. And so ended my holidays in Ibiza."

DX TIPS

Many members of ANDEX have throughout the past few years written me to ask, demand or plead for the inclusion of some DX tips in the ANDEX bulletin. I guess my thinking on the subject is that Clayt Howard on DX PARTY LINE gives several DX tips on the program and there are, as well, many other DX publications on the market which list page after page of listening tips.

However, I am not opposed to printing a few tips from time to time when they are sent in by some of the members. With that in mind, let me list some recent tips.

Gary Hickerson, ANDEX No. 4661, P.O. Box 3135, Ft. Smith, Arkansas 72913, USA, made a recent test with a Kenwood TS-430. Perhaps you would like to try for some of the loggings he made.

He heard Botswana on 3356 at 0347 UTC. He heard Nepal on 9590 at 1147 UTC. He heard Laos on 6130 at 1200 UTC. He heard Mauritius on 9709.4 at 1115 UTC.

Randy Wright, ANDEX No. 4261, Box 371-N, Ferndale, California 95536, USA, says that the Voice of Nigeria has been coming in strong at 0500 UTC on 7255 kHz and at 2100 UTC on 15,120 kHz. He has also heard Radio Portugal at 0300 UTC on 11,925 kHz. Also, try for Radio KFBS in Saipan on the Marianas Islands. They have been testing their new high gain antenna with 100 KW of power. Listen for them at 2100 till 2400 on 15,125 kHz.

By the way, since Randy has a new Realistic DX400, he says that if anyone needs parts from a Hammerlund HQ 129-X, other than the capacitors and resistors which are burnt out, to write to him.

If anybody else has some logging they would like to share, let me know. However, keep in mind that it will be several months from the time you send me the tips until the time that they appear in the ANDEX bulletin . . . so make your suggestions of listening frequencies be of the long-lived variety!

"I'd like to return this tape . . ."

PEN PALS INTERNATIONAL

RYAN NELSON is ANDEX No. 4664. His address is Pembroke, Tobago, West Indies. He would like especially to correspond with a member of ANDEX who is living in Australia, preferably a male. Ryan is in his mid-twenties and is a pastor.

RICHARD SILENSKI is next on our list. He lives at 41 Williams Street, Bellows Falls, Vermont 05101, USA. Richard is 32 years old, single, a turret lathe operator, and a student of machine tool technology. He has served with the USA Navy on cruises to the Mediterranean, Scandinavia, and Cuba. DXing, bicycle touring and woodchuck hunting are his hobbies and he is ANDEX No. 4775.

BRUCE DE SHAZO of 1710 Whitman, Memphis, Tennessee 38116, USA, is ANDEX No. 4470. Bruce is 36 years old and unemployed. He enjoys music, reading, movies and writing to friends. He wants to correspond with anyone from different countries, any age group, male or female.

FRANCIS GRANT GBORMITTAH lives in Ghana and enjoys an ANDEX Club Membership with others at his school, ANDEX 4851. Francis likes to play table tennis and to exchange cassettes of music from all over the world, as well as cassettes of FM broadcasts. You can write him in care of Mr. C.J. Nyamadi, Sogakope Secondary School, P.M.B., Sogakope, U/R, GHANA, West Africa.

ROBERT PASTRICK, ANDEX No. 4506, of 973 Third Street, Baden, Pennsylvania 15005, USA, is looking for ANDEX members in North America who want to try tapesponding by cassette tape. Robert enjoys DXing, CB, SSB radio, fishing, UFO's and history.

JEROME HADEN of 2401 Houma, Apt. 336, Metairie, Louisiana 7001, USA, is another ANDEX member (No. 4271) who would like to exchange cassette tape recordings. Jerome would like to exchange cassettes with members outside the USA. He would like the recordings to be of local radio stations and even non-English stations are welcome.

STEVEN PHIPPS lives at 4229 Botanical Avenue, St. Louis, Missouri 63110, USA. He is ANDEX No. 4794. He also would like to exchange cassette tapes of USA domestic stations for cassette tapes of domestic (NOT international shortwave stations) in countries outside of North America.

ANDEX International

HCJB

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