

ANDEX



INTERNATIONAL

Vol. 10, No. 2

April-May, 1983

A VISIT



On April 16, the Stanley family will board one of the colorful Ecuatoriana airplanes and fly to the United States. We plan to be in the States until August 7 and then will return to Ecuador for another term of service with Radio Station HCJB.

A few departing remarks from me....please be patient while I am gone. Doris Hastings will be handling the ANDEX desk while I am in the States. Although we spent many hours together during the last month going over the operation of ANDEX, there are bound to be a few problems that come up. So, relax a bit, all of you, and no doubt, everything will eventually be taken care of.

John (Fearless Forecaster) and I plan to attend the ANARC Convention this year in Washington D.C., July 15 to 17. Perhaps we will see some of you there. We hope so.

If there is something really urgent, our mission office in Florida will be able to contact us. Otherwise, we will be visiting our supporting churches, enjoying our family and friends and listening to shortwave radio. And this time we will be able to listen to some of our favorite stations without receiving the constant interference from Radio Station HCJB that we get here in Ecuador since the transmitters and antennas are only 100 meters from our back door!

ADDRESS CHANGE

Please be advised that the address of the New Zealand office has been changed from what was printed in the last ANDEX bulletin. The current address is HCJB, P.O. Box 27-172, Auckland 4, New Zealand. Those of you living in New Zealand take note of this when you handle renewals through the New Zealand office.

PROGRAMME LISTING

THE ENGLISH SERVICE HAS A LISTING OF ALL PROGRAMMES TRANSMITTED ON A REGULAR BASIS BY THE ENGLISH SERVICE OF RADIO STATION HCJB FROM QUITO, ECUADOR.

WRITE TO THE ENGLISH SERVICE IF YOU WOULD LIKE A COPY OR ADD A NOTE TO YOUR REGULAR RECEPTION REPORTS.

QSL CARDS

A memo from Andrew Steele, HCJB's Director of the English Service, says the following...

"You may be aware that we have had some problems with the printing of the 1983 QSL cards. Because of this the issue of January/February cards for 1983 was delayed. To save a backlog of letters requiring cards, we have been issuing the November/December 1982 cards for all reports for the first couple of months for this year. If ANDEX members wish to receive the correct card for the first two months of 1983, they should return the previously issued QSL cards to me and I will endeavor to insure that they receive the correct card. Letters should be marked to my attention."

Andrew also told me that the supply of old QSL cards is almost gone. If you have been collecting these old cards and wish to have a few more, get your requests in NOW. Since the supply is so depleted, the English Service is not issuing a list of what is left, so perhaps you could just request any old card or, if you would list what cards you already have, they might be able to pick out one that you are still missing. But, remember, do it soon!

FEARLESS FORECAST : THE D-LAYER

The lowest layer of the ionosphere is called the D-Layer. (The letters A and B and C are reserved for layers that might be discovered in the future.) The D-Layer is about 80-100 km above the earth's surface where the air is denser than at E or F Layer heights.

This higher density has two important implications. The first is that the ions are short-lived. When solar radiation strikes a molecule and breaks it into a positive ion plus a free electron, the charged particles begin to fly around seeking an oppositely charged particle with which to unite.

The air density at 80 km altitude is such that, on average, the particles are bumping other particles every few millimeters of travel, and so they soon find a suitable partner and join up to form an un-ionized molecule again.

By contrast, in the very thin atmosphere higher up, the F-Layer ionization dies slowly since ions must travel many miles to find a mate. While F-Layer ionization lasts through the night, the D-Layer disappears seconds after sundown.

A second related effect is also due to high density and shorter mean free path (the average distance molecules travel before hitting another molecule). When a radio wave passes through an ionized layer, it causes the ions to vibrate at the frequency of the wave. If the vibrating ions hit air molecules, they transfer energy to them like a cue ball hitting other balls on a pool table. This heats the air and results in a loss of energy in the radio wave. Thus, waves passing through the dense D-Layer are weakened or attenuated.

Lower frequencies cause the ions to move larger distances since they reverse direction less frequently. This causes more collisions and greater loss of signal. A high frequency makes the ions wiggle back and forth in one place and fewer collisions result. Hence, the loss in the D-Layer decreases in proportion to the square of the frequency.

Higher sun spot activity increases the level of ionization and increases loss also. A sun spot number of 100 produces about 30% more attenuation (in dB) than does a SSN of 10.

What does it all mean to DXers? It means that the low frequencies (below 10 MHz) are night-time bands for DX, since daylight produces too much attenuation in the D-Layer to allow the signal to travel far. 5-10 MHz signals can be useful out to one hop during the day, but will be weaker than night-time signals.

In the tropics, these frequencies are used for local service during the daytime when strong international signals are blocked out by the D-Layer.

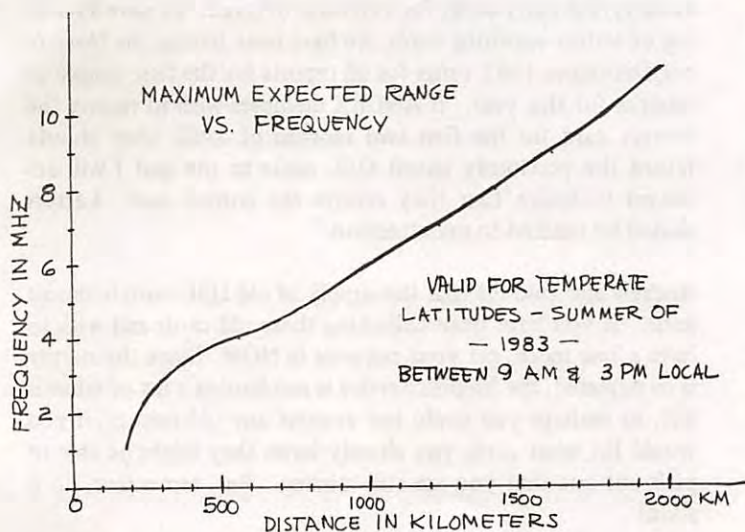
In Ecuador and many other tropical countries, small stations can be heard on 60 and 49 meters during the day. HCJB uses 25 KW on 6050 kHz to provide a Spanish service to all of Ecuador during the day.

It is unfortunate that the 49 and 31 meter bands are not used for domestic broadcasting in North America as is the case in Europe. Canada has used several low power transmitters on 49 meters, but the USA does not allow domestic service broadcasts on this band.

SWLers tuning the 5-10 MHz spectrum during daylight will hear plenty of hams, point to point and other stuff. The distances will not be great, but the catches can be interesting.

By John Stanley

Figure 1 gives the approximate maximum distance covered during mid-day on the various frequencies from 3.5-10 MHz. Signals from greater distances will be heard only if the transmitter is very powerful or the receiver very sensitive.



WHERE TO HEAR:	(ALL IN MHZ)
AMATEURS	3.5-4.0; 7.0-7.3
TIME SIGNALS	3.17; 3.33; 5.0; 7.335; 7.5; 8.0; 10.0
WEATHER REPORTS	5.5-5.65; 8.8-9.0
SHIPS	4.1-4.4; 6.2-6.6; 8.2-8.4
AIRCRAFT	6.5-6.7; 8.8-9.0; 10.0-10.1
2-WAY FIXED	5.0-5.45; 7.3-8.0
EMERGENCIES	3.023; 4.384; 5.68; 7.48; 8.364; 10.003

SPECIAL DXer FROM NEW ZEALAND



Malcolm Williams lives on R.D. 10 in Frankton, New Zealand. He used to live in the town of Hamilton, but has moved within the last year to his new home in Frankton. However, Hamilton was an interesting place to live as it is New Zealand's dairy centre having the most cows per acre in the world. Also, half of New Zealand's population is within 100 miles of Hamilton.

Malcolm is ANDEX No. 3072, having joined in 1978. However, his listening to shortwave goes back into the early 1950's. He likes to listen two or three hours a day, usually from 1930 to 2200.

When he is not listening, he likes to talk on his amateur ham radio set and has, in fact, made contact with my husband and me a time or two. Malcolm has a whole array of radios that he either has used or is presently using. They include: an Army No. 38 set, two transistor superregenerative receiver, an FT200, a 3 valve home-made set, a Stewart eight transistor, and currently, I think, a TS120S!

Malcolm works in Hamilton in the transmission section of the New Zealand Post Office as a Senior Technician. He has been working for the post office for over 20 years.

He lists his interests as, first of all, his wife and four children (Good for you, Malcolm!), his sheep and his cattle, and then, building antennas and receivers.

In addition to ANDEX, Malcolm is a member of "Hams for Christ", and is active in the Amateur Radio Missionary Service Net.

And, as the picture shows, he is teaching his son, David, to follow in his footsteps. Congratulations, Malcolm Williams.

By the way, if any of you New Zealand members have problems with your ANDEX subscriptions, Malcolm is the man to contact.

SPECIAL DXer FROM THE USA

Biddeford, Maine is the home of our Special DXer for this issue of ANDEX. Edouard S. Provencher lives at 145 Summer Street in this state of the USA which is located way up north!

Edouard is in his early 60's and has been a shortwave enthusiast for the last 12 years. He is a member of ANDEX, No. 3840, and also belongs to the American Shortwave Listeners Club and the Friends of the French language transmissions of Radio Nederland.

His receiver is a YAESU FRG-7 with a home-made folded dipole antenna. His shack is his desk! However, a special desk it is....a Scandinavian teak roll top desk with his set fitting neatly in a large pigeonhole!

Edouard has quite a few QSL cards....around 450, he says.... all of which are displayed in ten, red, ring-binder albums. Among his prized loggings are Guam, Tahiti and Argentine Annie.

Also as part of his equipment, he has a Seth Thomas twin time quartz clock. This contains two independent timepieces, one with a 12-hour display with an hesitation sweep second hand set to WWV with the other being a 24-hour display set at GMT.

Edouard is employed as a shipper at a tannery in Saco, Maine. A bachelor, he lives with his two sisters and, as he says, every evening you will find him at his shack scanning the bands for an exotic, far away island.

Don't ever close that roll top, Edouard! It sounds like a wonderful place to be. Congratulations and continued good listening to Edouard Provencher.



A DXING IDEA

Rob Harrington, P.O. Box 3434, Littleton, Colorado, 80161, USA, wrote to tell what he likes to do.

I've got a friend of mine in Pueblo, Colorado, and we get together once or twice a month, go into the mountains and string antennas....two of them. One of them is for shortwave. It is 150 feet long and the other one is for BCB/MW. It is usually 2000 feet long in one direction, usually N/W or S/E. We DX from (Local Time) 1600 to 2330 and 0450 to 1200 or from 1600 to 2200 and 0345 to 1100. We like to get four or five hours of sleep, if possible, then back to our site.

We do not DX from the motel/hotel. Our DXing site is usually two to six miles away from the city, in a flat area, if possible. But sometimes we can't find a flat area so we string our antennas out, going down or up hill. We use four reels of wire, number 18 and 20, hook up wire, speaker wire and bell wire.

It is fun....the DXing....not stringing the antenna out!

SAVING COINS

Bill Annis, 2367 Yeager Road, No. 102, of West Lafayette, Indiana, 47906, wrote with this hint of how to save enough money for your ANDEX membership dues.

"I have a way of saving a little money over a year's time. This might help those ANDEX members who feel that they can't afford the \$4.00 membership, due to economic pressures at home. My secret....I SAVE CHANGE. I started out saving all the pennies that I brought home every night in change. Later I found that a nickel or two didn't hurt. This progressed to dimes, then quarters. Now all of my change is stuck into a box in my dresser. You have to forget it's there. Last year, I saved enough doing it this way, to buy a plane ticket to Mexico. If you can't put a few pennies in every day, that is okay, but it doesn't take long to accumulate. This seems to work for me, maybe it'll work for other members too."



I had the meanest mother in the whole world. While other kids ate candy for breakfast, I had to have cereal, eggs, or toast. When others had cokes and candy for lunch, I had to eat a sandwich. As you would guess, my supper was different from the other kids' too.

But at least I wasn't alone in my sufferings. My sister and two brothers had the same mean mother as I did.

My mother insisted upon knowing where we were at all times. You'd think we were on a chain gang. She had to know who our friends were and what we were doing. She insisted if we said we'd be gone an hour that we be gone one hour or less.... not one hour and one minute. I am nearly ashamed to admit it, but she actually struck us. Not once, but each time we did as we pleased. Can you imagine someone actually hitting a child just because he disobeyed? Now you can begin to see how mean she really was.

The worst is yet to come. We had to be in bed by nine each night and up early the next morning. We couldn't sleep till noon like our friends. So while they slept my mother actually had the nerve to break the child-labor law. She made us work. We had to wash dishes, make beds, learn to cook, and all sorts of cruel things. I believe she laid awake at night thinking up mean things to do to us.

She always insisted upon our telling the truth, the whole truth and nothing but the truth, even if it killed us....and it nearly did.

By the time we were teenagers, she was much wiser, and our life became even more unbearable. None of this tooting the horn of a car for us to come running. She embarrassed us to no end by making our dates and friends come to the door to get us. I forgot to mention, while my friends were dating at the mature age of 12 and 13, my old-fashioned mother refused to let me date until the age of 15 and 18.

Fifteen, that is, if you dated only to go to school functions. And that was maybe twice a year. My mother was a complete failure as a mother. None of us has ever been arrested. Each of my brothers served his time in the service of his country. And whom do we have to blame for the terrible way we turned out? You're right, our mean mother. Look at all the things we missed. We never got to march in a protest parade, nor to take part in a riot, burn draft cards, and a million and one things that our friends did. She forced us to grow up into God-fearing, educated, honest adults.

Using this as a background, I am trying to raise my children. I stand a little taller and I am filled with pride when my children call me mean.

Because, you see, I thank God. He gave me the meanest mother in the whole world.

HAPPY MOTHER'S DAY (May 8) to all of our ANDEX members who are mothers and to the mothers of all of our ANDEX members!

RADIO AUSTRALIA *By Don Rhodes*

I recently had the opportunity to visit the city of Shepparton in Victoria, Australia, and as many ANDEX members will know, it is here that the Radio Australia transmitter site is located so I decided to visit the station and take some photographs.

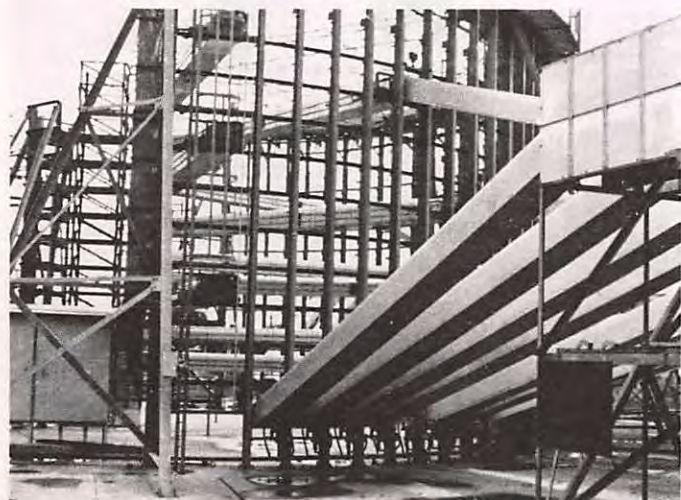
Obtaining the telephone number, I rang the duty engineer and I was invited to call round. The station is located just on the outskirts of Shepparton and is easily located by the tall, steel, red and white lattice masts of the antennas.

Visitors are first shown the frequency control room from where the operating frequency of all the ten transmitters is determined. Then it's up to a special viewing room which gives a panoramic view of the transmitter hall. From here the six 100 KW and three 50 KW transmitters can be seen. Also, the control room is just below where the duty controller is watching the oscilloscope.

Then I was taken down to the floor of the transmitter hall and took some photos of the transmitters in close up and the antenna control console which has a layout of the antenna field, and controls the giant switch matrix outside.

There are 36 antenna arrays here on a 583-acre site and the transmitters are switched to the antennas by means of a giant antenna switching matrix. This is located a short walk from the hall and is as high as a two-story house. It was designed and built by the staff of Telecom Australia who operate the station for Radio Australia.

It can switch any of the ten transmitters to any of the 36 antenna arrays which beam programs to Europe, North America, South Africa, South East Asia, Japan and the Pacific. My guide asks an engineer in the transmitter hall to operate the switch and I see it in operation and take some photos of this. Large arms on the inside move laterally and make contact with arms on the outside which move vertically. Contact is made by means of studs. The switch is controlled remotely from the console in the hall.



I have a full set of slides of the whole transmitting facility which I will loan to any DX club having a convention, provided an officer of the club contacts me. The slides must also be returned to me after the showing. Don lives at 7 Yarraview Road, Yarra Glen, Victoria, 3775, Australia.

AM TO SW

ANDEX has received a letter from Randy Wright, ANDEX No. 4261, of Box 715, Birding Street, Ferndale, California, 95536, USA, telling about how he receives shortwave on a regular AM receiver. He has heard many stations including some that could be called real DX on this lash-up which he calls "the poor man's shortwave set-up".

Some other ANDEX members might want to try it. Be warned, however, that on AC (mains) operated radios there may be a danger of electric shock and that even on a battery radio, you may damage the set. However, if you use an old AM battery radio that you don't mind risking, you might have some fun and learn something in the process.

You will need a good outdoor antenna. You may want to make a dipole antenna cut to the meter band of greatest interest. It should be a half-wave length long. (For example, 12-1/2 meters long for the 25 meters band.) Coax should feed the dipole in its center.

Take off the back of your radio and find the ferrite rod antenna. This will be a grey cylinder of hard ceramic-like material which will have many turns of wire around it. Connect the coax from the outdoor antenna to the wires that come from the rod antenna and tune for shortwave signals. You may find several wires coming from the rod antenna in which case you may try connecting in different ways to see what works best.

Another approach would be to use a step-up antenna coil designed for the shortwave bands. Connect your coax to the primary of the antenna coil and the secondary across the rod antenna. Or, if you prefer, and don't mind modifying your AM set, remove about 70% of the turns from the rod antenna and re-connect it. Then use a five turn loop on the rod to couple in your dipole or other external antenna. Willingness to experiment is the key to success.

HOW DOES IT WORK? An AM set has an oscillator that is set to 455 kHz above the frequency to be received. This mixes with the incoming signal to produce a signal at 455 kHz which is then received by the IF and audio stages.

The oscillator has harmonics that are multiples of its main frequency. These fall in the shortwave bands. The antenna coil normally rejects signals outside the MW band, but by doing any of the above modifications, its ability to reject shortwave signals is destroyed. These signals then pass into the set and mix with harmonics of the oscillator to produce signals on 455 kHz. These are detected as if they were ordinary AM signals.

PEN PALS INTERNATIONAL

Our first Pen Pal is BRUCE DE SHAZO, 1710 Whitman Road, Memphis, Tennessee, 38116, USA. Bruce is ANDEX No. 4470 and, of course, he lists his top hobby as shortwave listening and collecting QSL cards. He also likes good music, reading and going to movies. Bruce would like to correspond with other DXers around the world about what they like most about DXing. Bruce is 35 years old, unemployed and single.

DON ENGLERT lives on 54 Harmony Avenue in Hamilton, Ontario, Canada, L8H 4X4. Don wants to find some pen pals who enjoy exchanging stamps from different countries. Besides DXing and stamp collecting, Don likes to work on radio and TV sets and he also likes to be lazy, but says he doesn't get the time! Don is ANDEX No. 4489.

ANDEX member No. 4493 is THOMAS ADAMO. He lives at P.O. Box 83 in Blue Island, Illinois, 60406, USA. Thomas says he would like to receive letters from other members to share news about SWL as well as to learn about life in other countries. He would especially like to hear from Great Britain, Canada, Australia and other Commonwealth countries. Thomas also says that since he is a fairly busy person, immediate replies may not always be possible, but he WILL answer all letters from these countries, provided, of course, that they are written in English.

WOLFGANG KAMMEL, ANDEX No. 4350, is from E. Thalmann-Strasse 17, DDR 8401 Pulsen, German Democratic Republic. He is 28 years old and is employed as a metallurgist. His interests are many: DXing, photography, bicycling, stamps, postcards, pop and folk music. Write to him in either German or English.

Another fellow from the USA is ERIK E. GRAVELLE. He lives at 1535 Springbrook Drive, Elkhart, Indiana, 46514. Erik is ANDEX No. 4469, is 21 years old and a full-time university student. He says he is into SWL, DXing and QSLing with other interests being political science, electronics, anything military and a special interest in Africa. He also enjoys camping, guitar playing and knife collecting.

TAPE PALS SECTION

BILLY COUCH of Route 3, GW 74, Greenwood, Arizona, 72936, USA, has been sending tapes to people for 12 years. He is 26 years old and likes to spend his evenings engaged in DXing and SWLing mostly on shortwave, although he enjoys MW, FM and TV DXing also. He would like to exchange cassette tapes with anyone who can speak English from any continent in the world. He would especially like to hear from members in Australia and New Zealand. As Billy says, "Anyone who wants to talk radios, just send me a tape." He is ANDEX No. 4460.

ROB HARRINGTON, P.O. Box 3434, Littleton, Colorado, 80161, USA, is ANDEX No. 40. He is looking for DXers or SWLers who want to correspond by cassette tape. He says that he would be glad to supply the tape. Just let him know.

CHAP

The Canadian Handicapped Aid Program exists to help the disabled Canadians enjoy our wonderful hobby of DXing. As we all know, SWLing provides a most pleasurable way to pass the hours, but for the disabled person who is unable to get out of the house, or cannot participate in many other activities, shortwave can provide the needed escape from the problems of being disabled.

For those not already in the hobby, CHAP will provide help and advice to aid the newcomer in purchasing and setting up equipment. Advice is available on which equipment will best suit persons with certain handicaps, and generally, help is available to solve most problems related to DXing by the disabled.

For those disabled persons already in the hobby, CHAP can provide advice and assistance to help that person stay in the hobby. Additionally, CHAP members are able to borrow tapes from our audio library, as well as some other reference materials from the library, and they can avail themselves of our other services.

If you would like to become a CHAP volunteer or if you are disabled and would like to become a member of CHAP, please write James R. Hay, The Canadian Handicapped Aid Program, Box 1143, Pointe Claire, P.Q., Canada, H9S 4H9.

As most of you probably know, there is a similar program in the USA called HAP...Handicapped Aid Program. Both Hap and Chap members are able to join ANDEX on a discount system. The person to write about HAP is Ruth Vollrath, 432 North Lyon Street, Marshall, Missouri, 65340, USA.

ANDEX International -

is the official publication of Andes DXers International, a DX Club operated in conjunction with DX Party Line broadcast over Radio Station HCJB and sponsored by the World Radio Missionary Fellowship, Inc. It is mailed bimonthly to all members.



International Program Director - David Manney
English Program Director - Andrew Steele
DX Party Line Host - Clayton Howard
ANDEX - Ruth Stanley

ADDRESS MAIL (WITH FUNDS) TO:
HCJB

P.O. Box 3000
Opa Locka, Florida 33055
United States of America

ADDRESS MAIL (WITH NO FUNDS) TO:
ANDEX International
Casilla 691

Quito, Ecuador
South America
Printed in Ecuador, S.A. by Imprenta Vozandes