

ANDEX



INTERNATIONAL

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A SIMPLE THANK YOU

My mailbox was a very busy place during the month of December as Christmas cards and notes from so very many of you arrived to say MERRY CHRISTMAS and HAPPY NEW YEAR in a variety of languages!

I probably could, with some thought, manage a THANK YOU in German and in Dutch. Certainly I could in Spanish . . . MUCHAS GRACIAS. In Hindustani I can say it, but not write it so I guess I will stick with a simple response in English . . . THANK YOU, MY ANDEX FRIENDS. I hope that your Christmas was happy and that the year 1984 will be kind to you.

WHAT TO GIVE UP IN LENT

- Give up grumbling . . . instead in everything give thanks.
- Give up 10 to 15 minutes in bed . . . instead use that time in prayer.
- Give up looking at people's worst points . . . instead concentrate on their best ones.
- Give up speaking unkindly . . . instead let your speech be generous and understanding.
- Give up your worries . . . instead trust God with them.
- Give up hatred or dislike of anyone . . . instead learn to love.
- Give up concentrating on Sunday newspapers . . . instead study your Bible.
- Give up TV one evening a week . . . instead visit some lonely or sick person.
- Give up buying anything but essentials for yourself . . . instead give the money to God's work.
- Give up the fear which prevents Christian witness . . . instead seek courage to speak to others.
- Give up judging by appearances and the standards of the world . . . instead learn to give up yourself to God.

NEW BOOK

Miller Publishing, located at 424 West Jefferson Street, Media, Pennsylvania 19063, USA, says this about a recent book they have published.

TUNE IN THE WORLD: THE LISTENER'S GUIDE TO ISW LISTENING truly is the listener's guide to international short-wave radio. With profiles of over 60 shortwave stations, it is

packed with information that every SWL . . . new and old . . . wants and needs.

In addition to station profiles, there are articles on station histories, music, news, drama and sports as well as pictures of station personalities, facilities, transmitters and antennae. This book really does have it all!

Sounds good, doesn't it? And the author of this book . . . none other than one of our own members. Author Kenneth D. MacHarg is a teacher, broadcaster, journalist, ordained minister and ANDEX member number 24.

"HEAR ANYTHING?"

On a blustery, bitterly cold day in December 1901, a Newfoundland fisherman peered through the frosted glass of his cottage window at three men attempting to fly a kite. "Must be them barmy Americans," he decided.

The fisherman was wrong. One of the men was an Italian scientist, Guglielmo Marconi. The other two were his English assistants, G. S. Kemp and P. W. Paget. They were conducting an experiment that, if successful, they knew would revolutionize communication. Attached to the kite was an aerial that, it was hoped, would pick up signals from the other side of the Atlantic.

Marconi had previously arranged with his staff at his laboratory in Cornwall, England, to transmit for three specified hours on three consecutive days the Morse Code signal for the letter S — three dots.

On December 12, the kite was successfully flown and reached a height of 400 feet. A battery-powered telephone receiver was hooked up to the aerial. Marconi put the instrument to his ear and his eyes saucered. He passed the receiver to Kemp and asked, "Hear anything?"

"Indeed I do," responded Kemp, "and distinctly." "I heard it too," grinned the elated Marconi, "dot . . . dot . . . dot!"

Sound had traveled 2,000 miles without the use of wires. Radio, which hitherto had been regarded merely as an interesting phenomenon and gadget, had suddenly become the most exciting technical advance of the age.

— Derek L. Gill
Modern Maturity October-November 1980

FEARLESS FORECAST :

By John Stanley

LOW SUNSPOT NUMBERS FOR NEXT FIVE YEARS

On November 20, 1983, the solar disk was completely spotless for the first time since July, 1977. The solar flux on that day fell to a value of 82, the lowest since August, 1977. Of course, daily values of both sunspot numbers (SSN) and solar flux differ greatly from average values, and it is the average value that tends to determine shortwave reception conditions. However, as is already obvious to anyone who has been listening above 20 MHz, the loss of our high frequencies is already happening. A few years ago, MUFs were going over 50 MHz during November, but this year even 28 MHz was not reliable. The low part of the cycle has begun.

By a curious twist of nature, a sunspot number of 50 represents the value above which the SSN spends 50 percent of its time. This implies that it is also below 50 half of the time, so get set for about five and a half years of below 50 sunspot numbers.

Contrary to some opinions, low sunspot numbers are not all bad . . . perhaps 80 percent bad, but not ALL BAD. Let's be optimistic and look at the good aspects of the bottom of the sunspot cycle.

1. **Daytime absorption is lower.** The limiting factor to signal strength on short daytime paths is absorption in the D-layer. For example, at noon, the signal strengths on 6 or 9 MHz at a distance of 1000 kilometers will be about 3 dB stronger with a SSN of 10 than with a number of 150. That means that in 1986, a 50 KW station can be as strong as a 100 KW was in 1979. At 4 MHz, the difference can be as much as 6 dB or 4 times stronger.

2. **E-layer cut-off is less of a problem.** The E-layer limits long distance transmission on daytime paths below 10 MHz since it prevents signals from reaching the higher F-layer and being reflected to earth at a more distant point. (You may wish to review the discussion of the E-layer in June-July, 1982, ANDEX.) With less ionization in the E-layer, the maximum daytime range at 3.5 MHz will be doubled during the bottom of the cycle and the range at 6 MHz increased by 20 percent. Since the area covered is the square of the maximum distance, hams on 80 meters should find four times more prospective contacts during mid-day operation.

3. **Solar storms are much less frequent.** As reported in the August-September, 82, ANDEX, 18 major flares affected shortwave reception in June of 1982. In contrast, during the bottom of the cycle, only rarely will even one flare-produced shortwave fadeout occur per month. Since flares tend also to occur on the descending leg of the SSN curve, full advantage of this freedom from flares will be delayed for a few more years.

4. **Day to day variations in conditions are much more predictable.** This is based on the 27-day rotation period of the sun. Short-term prediction of which days will give better or poorer than average reception are made by assuming that what occurred 27 days previous will tend to recur. This system breaks down during solar maxima, but is quite useful during solar minima. A future issue of the ANDEX bulletin will discuss this method in more detail.

5. **Noise levels are reduced.** Especially in winter, a fair bit of the noise heard on shortwave comes from the sun. When the sun calms down, its noise generators are subdued. The 10cm solar flux, a measure of solar noise output at that wavelength, is one-third as much at low SSN as at high. At longer wavelengths, the average solar noise output is also reduced, and noise bursts are less frequent.

6. Due to a combination of the above factors, the lower frequencies become more useful during the bottom of the sunspot cycle. During the last solar minimum, I made two-way contacts from HC1JX with both Europe and Asia on 1.8 and 3.5 MHz and worked hundreds of USA stations on both bands. I also logged many interesting signals on the tropical bands and utility frequencies between 1.6 and 3.5 MHz.

7. Even on the higher bands, low SSN can sometimes work to your advantage. For example, the high levels of QRM on 13 meters will greatly thin out during the next few years as average MUFs drop and stations return to lower frequencies. On days of unusually high MUFs, the few remaining stations will be strong with little interference. Among them you may find a rare station that was before covered by powerful interference.

So there you are. In DX, as in life, success comes to those who work in harmony with God's natural laws, rather than against them and who take advantage of the good in life, rather than sulking about the bad. Merry DXing and a prosperous bottom of the sunspot cycle!

E-LAYER CUT OFF

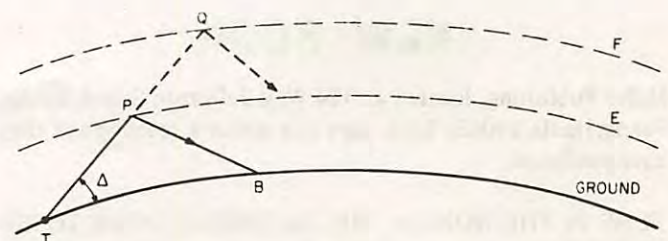


Figure 1

SPECIAL DXer FROM THE USA



Somewhere in this pile is a receiver tuned to HCJB! The pile belongs to Kevin Morrison, ANDEX No. 4404, and includes: a Realistic DX150B receiver, VHF receiver, Hallicrafters HT-37 transmitter, Johnson Viking Challenger transmitter, antenna polarizer and switching array. (A Hammarlund receiver is currently in the shop.)

Kevin is a clinical/cardiovascular engineer from Lynn, Massachusetts, and has been a ham/SWL enthusiast for fifteen years.

His antennas include: Lazy "8", vertical multiband trap, cubicle quad and three monopoles. For transmitting, Kevin uses an eight element beam and vertical trap multiband. All antennas are between 60 and 200 feet high.

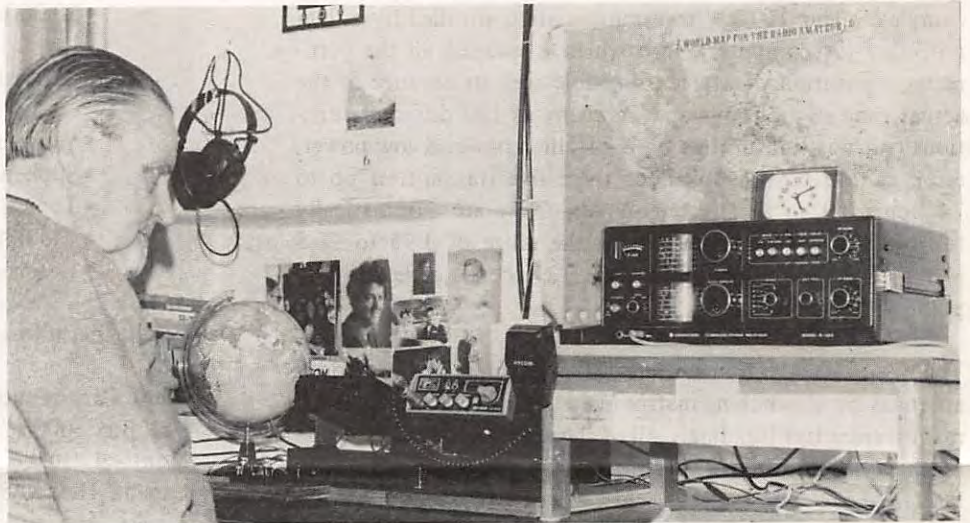
His location is 18 miles N/NE of Boston at latitude 42°30', longitude 70°57'.

When Kevin is not engaged with his pile of receivers, he enjoys gardening and out-of-doors activities.

If you'd like to write, his address is 320 Lynnfield Street, Lynn, Massachusetts, 01904, USA.

Congratulations, Kevin, and continued good listening in 1984.

SPECIAL DXer FROM HOLLAND



Our DXer for this issue is a busy man, but one who says that he is thankful that he is busy. Part of the reason that he is so busy is that he has found the wonderful world of radio!

H. C. van Opzeeland is our Special DXer from Graalstraat 20, 1813 EP Alkmaar, the Netherlands. ANDEX member number 4028, H. C., or Henk, as he uses on the air, joined ANDEX in June of 1981. He is in his early 70's and is a retired railway employee.

He began DXing in 1979 with his Kenwood R300 and a 20 meter antenna, and now has QSL cards from north, south, east and west.

Henk listens on the 2 meterband between 144 and 146 MHz which reaches all Dutch amateurs via the repeater system.

He uses his Senfor Skyline SM2010 CB transmitter-receiver to work all his CB friends on 11 meters and on his Hycom 10 meter receiver, he listens to ham radio amateurs all over the world. With various antennas for each type of receiver, he has quite a system of wires at his listening post.

He does have some other hobbies also. He writes that he enjoys drawing and oil painting. Maybe he does some of that while he is listening to the radio! Henk spends from three to five hours every day listening to his favorite stations.

Since my grandfather came from the Netherlands, I have a special place in my heart for the Dutch people and am glad to congratulate H. C. van Opzeeland for being chosen as one of the Special DXers for this issue.

RADIO CANADA INTERNATIONAL

The technical facilities of Radio Canada International are located in Montreal, Quebec; Sackville, New Brunswick; and Stittsville, Ontario.

Radio Canada International's production centre in Montreal was designed specifically to meet the needs of shortwave broadcasting. The studios are connected to the transmitting facilities in Sackville by microwave through the master control centre of the Maison de Radio-Canada, the headquarters of the French Services Division of the Canadian Broadcasting Corporation (in Montreal).

The shortwave transmitter plant located at Sackville on Canada's Atlantic coast is situated in a marshland, with the type of soil that provides an excellent reflective base for the effective transmission of shortwave signals.

Five (5) modern 250 kilowatt transmitters, supplemented by three (3) lower powered transmitters make up the Sackville complex. The 250 kW transmitters are controlled by a data processor (or computer), into which is entered all the pertinent information of a given schedule well in advance of the actual time of transmission. As many as 100 different functions (such as transmitters on & off; high power & low power, etc.), can be pre-scheduled for these five transmitters up to 24 hours before the time required. They are automatically tunable to any frequency within the range of 3.95 to 26.5 MHz. The tuning operation takes 12 seconds or less to any point within this operating range.

The five 250 kW transmitters are connected to the various antennas by a switching matrix in a building separate from the main transmitter building. All of the antennas at Sackville are of the type known as "curtain arrays", suspended from steel masts.

This type of antenna can be used to transmit in either of two directions, 180 degrees apart, by means of a simple switching operation. The current antennas are on beams to Africa, Europe (both reversible to North America), South America, the Caribbean, North America and Northern Canada.

The programs produced in Montreal are sent to Sackville over special microwave circuits some 1,000 kilometers (600 miles).

The receiving station at Stittsville, near Ottawa, plays a vital role in the daily operations of RCI. The station's primary function is the monitoring of shortwave transmissions directed to North America by other broadcasters, who reciprocate by monitoring RCI's broadcasts abroad. These monitoring reports are the basis for the evaluation of the effectiveness of service in target areas.

The receiving station is also used as a back-up for direct off-air pick-up of BBC World Service programs when the regular trans-atlantic satellite circuit linking the BBC in London and RCI in Montreal is not available. Direct off-air pick-up of Deutsche Welle German programs destined for a North American audience is also a responsibility. These programs of the BBC and Deutsche Welle are fed to Sackville, New Brunswick for retransmission to North America as part of an exchange agreement. These two broadcast organizations relay RCI programs destined for Eastern Europe from bases in Daventry, England and Sines, Portugal.

Other pickups of international broadcasters are fed to RCI newsrooms in Ottawa and Montreal as well as to the central newsrooms of the English and French domestic radio and television networks of the Canadian Broadcasting Corporation.

PROGRAM SERVICE

Shortwave

- 11 languages: English, French, Russian, Ukrainian, Polish, Spanish, Portuguese, Czech, Slovak, Hungarian, German
- 160 hours per week
- 10 million listeners per week
- 50,000 letters yearly

Recorded Programs

- Canadian Music
- Spoken Word - English, French, Spanish
- Topical - English, French, Spanish, Japanese
- 145,000 recordings shipped
- Reaches audiences of 1,400 foreign broadcasters

For further information, please write to:

Radio Canada International
P.O. Box 6000
Montreal, Quebec
Canada H3C 3A8

KENCRAFT

Paul Wilson is a recent member of ANDEX, No. 4762. When he filled out his application blank, he wrote that he listened on a Kencraft radio, Model QR-666. But, he added, nobody has heard of this brand of receiver. He purchased it from a friend, who didn't have the manual for it or the schematic or specifications. If any of you ANDEX members can help with an address of a distributor of Kencraft equipment or any other information, write Paul at

10720-99th Ave. (103)
Ft. St. John, BC,
Canada, V1J 1V8

Q CODES

People frequently write to ask about the different codes that they hear on the air. The most commonly used of these so-called Q codes are listed below. These will be heard on the ham bands on both voice and Morse Code and are commonly used on the ship-to-shore bands on code. With more and more SWLs using code readers to listen in, these will be frequently heard.

CODE MEANING

QRA	What is the name of your vessel or station?
QRM	Is my transmission being interfered with?
QRN	Are you troubled by static?
QRP	Shall I decrease transmitter power?
QRT	Shall I stop sending?
QRU	Have you anything for me?
QRV	Are you ready?
QRX	When will you call me again? or Wait.
QRZ	Who is calling me?
QSA	What is my signal strength?
QSL	Can you acknowledge receipt?
QSO	Can you communicate with . . . ?
QTH	What is your position or location?

Have you heard some others that are used often? Let us know and we will add them to the list.

SWL

During our travels in the USA last summer, I was given a book by ANDEX member No. 4494, Jack Richardson. It is called **DIRECTORY OF WORLD BAND RADIO** put out by the Sony Corporation of America, New York, New York, 10019.

I am impressed by this little book and I thought you would like to know about it. Let me quote from its prologue . . . "The Sony Directory of World Band Radio was created to inform the average consumer of the enjoyment of listening to shortwave and how shortwave differs from domestic broadcasting. Although this guide is geared towards apprising the general public of the benefits derived from listening to shortwave, the format can also be enjoyed by both shortwave hobbyists and Ham operators alike. . . Now, the Sony Directory of World Band Radio presents you with a convenient and easily accessible index of available program formats. You can choose from a master schedule of shortwave programs by day, time of day, language or topics."

If you see it in the bookstore, take time to glance through it and, maybe, buy it. If you don't see it around, write the company and ask them about it.

GUYANA MEDIA

Maurice Boodram, ANDEX No. 3792, 115 Uitvlugt Pasture, West Coast Demerara, Republic of Guyana, South America, has written to tell us of two interesting booklets that are available. The first booklet is **THE NEW INFORMATION AND COMMUNICATION ORDER-A CARIBBEAN PERSPECTIVE** written by a former Minister of Information in the Guyanian Government. The second booklet is **THOUGHTS ON THE MEDIA IN GUYANA** derived from statements made by Frank Campbell, Minister of State for Information, and Kester Alves, former Special Political Assistant to the president.

The first publication is available to members in Europe and in the Americas for 3 IRC's, and to members in Asia for 4 IRC's. The second publication is available to members in Europe and in the Americas for 4 IRC's, and to members in Asia for 5 IRC's. This is necessary for covering the postage cost only. No profit intended on the part of Mr. Boodram.

If you are interested in getting one or both of these booklets, send the necessary IRC's to Maurice.



"I'd say he doesn't know much about grounding equipment."

One of the attributes of Murphy's Law is that as soon as I have collected new ANDEX forms from our print shop with a new list of the ANDEX local offices, an address changes!!! The address change this time is for our WEST GERMAN ANDEX members. The new address is Arbeitsgemeinschaft Radio HCJB e.V., Postscheckkonto 2074 15-675 (Sonderkonto), Ludwigshafen am Rhein. The amount continues to be DM 10 (mit Vermerk ANDEX).

PEN PALS INTERNATIONAL

SILVIO KOHRING lives at Str. de. Jugend 4, DDR-8503 Demitz-Thumitz, Dresden, East Germany, PSF07/066. He is ANDEX No. 4485. Silvio is 18 years old and he has two hobbies besides DXing. He likes to collect postcards and he enjoys writing letters.

LAURI KANGAS is 38 years old, married and works for a TV concern. He is ANDEX No. 4703 and would like to have pen pals in South America, Africa and Australia. His hobbies are DXing, stamp collecting, astronomy and playing with his computer. Lauri lives at Kuusitie 9 A 27, 00270 Helsinki 27, Finland.

BILL RITCHIE's address is Box 452, North Lewisburg, Ohio, 43060, USA. Bill is 19 years old and enjoys DXing, SWL, stamp collecting and electronics. He would like to hear from some people in England, Africa and India. He is ANDEX No. 4468.

PHIL CLINARD lives at 7212 Birch Bark Drive in Nashville, Tennessee, 37221, USA. Phil would like friends in Italy, Iraq, Spain and Ireland and can correspond in English, Spanish, Italian and Arabic. He enjoys DXing, SWL and guitar playing, is 21 years old and a student of grocery merchandising. Phil is ANDEX No. 3258.

Come on, folks, make 1984 a good year by starting up a friendship with some new people. Send me some information about yourself and I will put your name and address in PEN PALS INTERNATIONAL.

SPECIAL RECIPE

Mrs. Helen Shubert of Peekskill, New York, (ANDEX No. 4526), mentioned not too long ago that she would like to have some recipes included in an ANDEX bulletin. Cooking is not my favorite occupation, Helen, but how about trying the following recipe?

Here is a cake recipe, but in order to make it, you will have to look up the ingredients in the Bible (King James Version). Let me know how it turns out.

1/2 cup Genesis 18:8 word 4
 1 Cup Isaiah 7:15 word 3
 2 _____ Job 39:14 word 4
 2 cups I Samuel 28:24 word 19
 2 tsp. I Kings 19:6 word 10 plus Matthew 21:44 word 22
 1 tsp. Exodus 30:23 word 17
 1/4 tsp. Luke 14:34 word 1
 3/4 cup II Samuel 16:1 word 40
 1/2 cup Genesis 43:11 word 44 chopped
 Judges 5:25 word 12

In large bowl, soften and cream Genesis 18. Slowly add Isaiah 7. In small bowl beat Job 39 well. Add to creamed mixture. Sift together I Samuel 28, I Kings 19, Exodus 30 and Luke 14. Add in creamed mixture and mix well. Fold in II Samuel 16 and Genesis 32.

Grease a nine-inch tube pan with Judges 5. Line with waxed paper. Pour batter in pan. Bake 30 minutes at 350 degrees. Lower oven to 325 degrees and bake for 15-20 minutes longer until cake is golden brown and tests done. Cool in pan on rack for 15 minutes. Invert unto plate, remove waxed paper and cool completely.

REMEMBER THESE ANDEX OFFERS....(Prices listed in USA dollars.)

ANDEX patch for use on blazer, jacket or cap.....\$1.25
 ANDEX rubber stamp
 with ANDEX logo only.....\$2.00
 with ANDEX logo and your ANDEX number.....\$3.00
 with ANDEX logo, your ANDEX number and your name.....\$4.00
 ANDEX T-shirt, light blue with black logo
 in the Americas.....\$6.50
 in other countries.....\$7.60
 (Specify small, medium, large or extra large size.)



ANDEX International

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DX Party Line Host — Clayton Howard
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 Opa Locka (Miami), Florida, 33055-0401, USA

ANDEX Executive Director — Ruth Stanley
 ADDRESS MAIL (NO funds) to: ANDEX International,
 Casilla 691, Quito, Ecuador

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