ANDEX

INTERNATIONAL

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ARE YOU LONELY?

Often we think of loneliness as a sign that others do not care about us. But as odd as it may sound, our loneliness is often a sign that we have not cared enough about others. We may be lonely because we have not been honest enough to risk exposing who we are to others and have not put their problems and needs above our own.

The Christian gospel is a compelling story of faith, hope, and love taking the initiative. We are called to sense another's need and act to meet it. No stronger antidote exists for loneliness and fragmentedness. Someone has to plunge in first without measuring the cost.

Every time we do this . . . sacrifice ourselves emotionally and compassionately . . . we reestablish the only ground for true friendship and take a step toward conquering our own loneliness.

Self-giving love is the best antidote for loneliness. "Let love be genuine." Romans 12:9

WHO INVENTED RADIO?

If someone asked you who was the real inventor of the radio, what would be your answer? Most people would probably say it was Guglielmo Marconi. Certainly he should receive a great deal of credit for his early experimentation and discoveries. In one way or another several other men also qualify. Among the names that would have to be considered are Popov, Loomis, Butterfield, Lodge, Hertz, and Tesla. In all probability there will never be total agreement on the question of who actually should receive the honor.

Before deciding who was the actual discoverer of radio there needs to be agreement on just what is meant by the term "radio". Does the first radio mean the first two-way wireless communication? Or would a minor laboratory experiment and a patent establish the precedency of the inventor?

A name that has never really been considered among those of the possible candidates for the honor of having discovered radio is that of Thomas Alva Edison. However, history now shows that Edison, in addition to the many important inventions for which he has rightfully received credit, may actually have invented radio as well. A simple language difficulty may have cost Edison the credit for first using radio as a means of communication. He announced the discovery of "etheric force" when Marconi was only a year old and while Tesla was still attending school. In 1885, two years before Hertz announced the discovery of electromagnetic waves, Edison applied for a patent on a complete wireless system. With his patent application were drawings of radio towers, and antennas between the masts of ships!

During the evening of November 22, 1875, Edison was studying the action of a magnetic vibrator. He noticed a tiny spark between the armature and core of the vibrator as the armature approached the core. He suspected faulty insulation, but checking, found everything in order. Edison reported, "If we touched any part of the vibrator we got the spark. The larger the body of iron touched to the vibrator, the larger the spark." If a wire was connected between the vibrator and a gas jet on the wall, a spark could be drawn from the gas pipes anywhere in the room.

Edison then performed the experiment that Hertz was to do seventeen years later. He found that "if you turn the wire round on itself and let the point of the wire touch any part of itself, you get a spark. This is simply wonderful and a good proof that the cause of the spark is an unknown force." Edison constructed a demonstration apparatus and revealed his new "etheric force" to the Polyclinic Club of the American Institute. He said, "The cumbersome appliances of transmitting ordinary electricity, such as telegraph poles, insulating knobs, cable sheathings, and so on, may be left out of the problem of quick and easy telegraphic transmission, and a great saving of time and labor accomplished." A "black box" used by Edison to demonstrate "etheric force" was sent to Paris where Edison's assistant, Charles Batchelor, lectured on the phenomenon. This was virtually identical to the apparatus used by Heinrich Hertz a number of years later.

The only commercial use Edison made of his discovery was the grasshopper telegraph. This was a system of sending messages from moving trains to the telegraph wires alongside the tracks. This was a distance that could easily be covered by electromagnetic induction. Historians, who believe that radio communication started with Tesla, Lodge, and Marconi, assumed that this was the case. However, Edison, in explaining the grasshopper telegraph to a reporter, said, "The system works by electrostatic induction." Unquestionably, Edison had stumbled onto radiowave transmission. Perhaps he didn't realize it because the fact that energy could be progagated through the atmosphere, and not via wires, was alien to all of his telegraphy experiments. Thomas Alva Edison's long list of achievements should have included among them the discovery of radio waves, even though he gave them a different name!

FEARLESS FORECAST: THOSE SUNSPOTS

By John Stanley

In the August-September ANDEX bulletin, I predicted sunspot numbers of 120-130 for October-November, 1981. It now appears that the numbers will be about 140 for those months. Indeed, conditions on 6 meters were as good, possibly better, this past fall than in the fall of 1980. Some VHF users are even hoping for a second peak in the cycle, but this is unlikely. However, it does appear that we leveled off during 1980 and held constant for a year, giving VHF DXers an extended chance to get rare DX. I now predict, however, that 1982 will see resumption of the downward trend normal for this part of the cycle (See Figure1). However, as history has proven many times, the sun will not be bound by earthly predictions!

One member called into question my predictions for October-November, mentioning that a daily SSN of over 300 was seen in October. This convinced me of the usefulness of reviewing how sunspot numbers are arrived at, thereby resolving such discrepancies.

For many years, Professor M. Waldmeier of the Zurich Observatory furnished a daily count of spots observed on the sun using a standardized counting system. This daily count was averaged for the month and the monthly values were averaged for a year to provide a 12 month "smoothed" average. This averaging is done to remove the very extreme raggedness from the curves which make them hard to interpret. Also, the averaged values are more useful in predicting ionospheric behavior than are the daily fluctuations. Broadcasters plan schedules ahead for six months or more, so long term trends are their chief concern. When SSN values are mentioned, they usually are the 12 month averages unless it is stated that they are "daily" or "monthly" values. Thus, while it is true that "daily" values of SSN in October went as high as 380, the average for the month was 161.2 and the 12 month average will be close to 140. (We won't know the final value until April.)

Since January, 1981, the Zurich numbers are no longer used, having been replaced by "International sunspot numbers" which are derived by the Space Environment Services Center from observations done by the AAVSO (American Association of Variable Star Observers). Also, the Sunspot Index Data Center in Brussels supplies data. Both numbers should be equivalent to Zurich numbers.

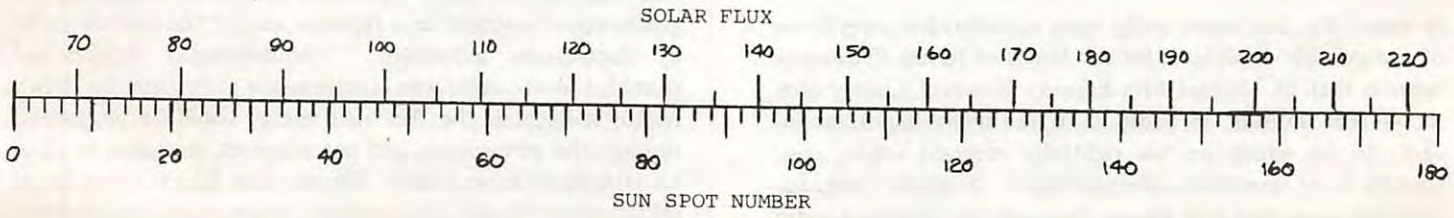
Of equal, or greater, usefulness are the numbers for "solar flux" which are measured directly each day in Ottawa, Canada. This flux is a measurement of energy given off by the sun at a wavelength of 10.7 cm (2800 MHz). These are averaged as with sunspots. Flux values probably are more useful than sunspots for predicting radio conditions, but since we have a much longer record of sunspots, both systems will be used for years to come. The rule below can be used to convert between SSN and flux equivalent values. Remember, however, that both SSN and flux show strong random variations and it is their **average** values that show correlation, more than their daily values.

The solar flux is a useful index of day to day radio conditions. On days when the solar flux is high or has been high and is just beginning to fall, the MUFs should be higher than average. These are the days to check the higher frequencies for rare DX. The values of solar flux are announced at 18 minutes after the hour on WWV (Fort Collins, Colorado, USA), heard on 5, 10, 15, and 20 MHz. The K index is also announced over WWV. It varies from 0 to 9 and is a measure of disturbances in the earth's magnetic field, in response to solar storms. When the K index is 2 or less, the high latitude radio paths are best (Europe to North America, and North America to Japan). When the K index is 3 or more, trans-equatorial paths are best (Europe to South Africa, North America to South America, and Japan to Australia).

Predicted MUFs for this spring will indicate that times of openings are not the same as they were in the fall. Try to listen when the MUF is at its daily peak. Generally, spring MUFs peak later in the day than do fall MUFs. Since many TV stations commence operations in the afternoon, March-April will be the best time to try to log TV DX.

As a special challenge this spring, I want ANDEX members to monitor the lowest TV channels your country has. It may be possible for Europeans to see North American channel 2 and for North Americans to see South American channel 2, etc. We will publish in the ANDEX bulletin any photographs of intercontinental TV reception that are clear enough to be identified.

Photos of TV Channel 2 in Quito, Ecuador are shown in this issue for help in IDing it. It can be received on a standard USA TV receiver if the MUFs get as high as they might. Also, North American listeners should be able to hear BBC TV on 41.5 MHz (sound only) and Rose Alice Akers, ANDEX member No. 2749, of Urbana, Illinois, USA, wants help in identifying the French TV signal on 41.25 MHz. Most North American listeners should be able to hear these signals this spring on days when MUFs are high.



DXer OF THE MONTH-USA

The DXer of the month from the USA for this issue is John Megna. John lives at 7825 S.W. 148th Street in Miami, Florida, 33158 and is a high school student.

John began DXing in April of 1979 with a three transistor regenerative receiver bought as a kit. He also erected a 28 meter long wire antenna which he still uses with his present equipment. With this first combination, he received 30 stations including HCJB. Then he decided to go on to bigger things.

In September of 1979, John purchased a Realistic DX-160 and started hearing the more difficult stations of Africa, Asia, and Latin America, hearing over 70 stations in 60 countries. Most of the reception contacts have been verified by QSL cards. John has several prized QSL cards and these come from Radio Uganda, Radio Kuwait, Radio Belize, Radio Tashkent and the Voice of Vietnam.

ANDEX is not the only club John belongs to . . . he also holds membership in the clubs operated by Radio Polonia, Radio Berlin International, Radio Prague, Radio Budapest, Radio Bucharest, Radio Kiev, Radio Moscow, and the Belgian Radio and Television club. Listening to the radio takes an hour or two from his day, usually between the hours of 0000 GMT to 0400 GMT.

John had plans, when he wrote his entry, to purchase a new receiver. He wanted to get a Realistic DX-302 with digital frequency readout. Have you been able to do that, John? We hope so.

John also finds time to be an amateur radio operator with the call sign of KA4NRQ and uses a 100 watt SSB/CW transceiver built from a kit and a multi-band vertical antenna.

With all his radio contacts, both SWL and SSB, you might think John keeps busy enough, but he says that he also enjoys stamp and coin collecting.

Congratulations, John, ANDEX member No. 3648, and continued successful radio operation.

DXer OF THE MONTH - HUNGARY

Kovacs Janos has the distinction of being the only ANDEX member that we have in the country of Hungary. I had to get out my atlas to see if I remembered where Hungary was. (I did!) If you haven't had your atlas out in a long time, get it out and you will find that Hungary is a landlocked country in central Europe, being bordered by Czechoslovakia, Austria, Yugoslavia, Romania and the USSR. The capitol of Hungary is Budapest.

Kovacs lives in the city of Mako which is located near the Romanian border. His address, for those of you who like to write the DXer of the Month is: Kovacs Janos, 22, Magyar utca, H-6900 Mako, Hungary, Europe.

Kovacs joined ANDEX in March of 1981 so will soon have been a member for one year. He has been interested in shortwave for only a short time also, compared with some of our ANDEX members. He started listening about three years ago and first heard HCJB in 1978. He tries to listen to the radio every day either early in the morning or late at night.

His equipment consists of a RB 4602 – Standard AM/FM, ML 213/12 tubes with long wire and dipole as antennas. He has a large World Amateur Radio Map over his receivers so that he can easily spot the countries he is hearing. He also uses some TV DX equipment with a mastpole 15 meters in height with a motor turning arrangment on it to catch TV stations.

Besides SWL, FM and TV DXing, and receiving QSL cards, Kovacs likes DXing contests. Maybe we can have some contests in ANDEX soon.

Kovacs is 27 years old and works as a mechanic. He has a special hobby of photography.

Congratulations, Kovacs Janos, ANDEX member No. 3978, for being DXer of the Month.

PHOTOGRAPHS

On our membership application, it says, "If you would like to enter our 'DXer of the Month' contest, enclose a black-and-white, glossy print of yourself with your receiving equipment".

Gary Spires, recently joined ANDEX member No. 4189, asked, "Why black-and-white? Nobody I know shoots black-and-white anymore. It's all colored now."

Well, Gary, black-and-white, glossy prints are what we need to be able to have a half-tone made so that the picture can be printed, along with the ANDEX bulletin, on the printing press here in Ecuador.

But, since John and I do photography as a hobby and happen to have some photo paper, at present, that allows us to make a black-and-white print from a color negative, everyone who doesn't have access to a black-and-white photo can now send their color photo **and its negative** to ANDEX for their entry for DXer of the Month.

By the way, you've noticed that there are two DXers featured in this issue. We'll be doing this from now on . . . choosing one DXer of the Month from the United States of America because over half of ANDEX's membership is located there and then, choosing another DXer of the Month from a place other than the USA.

Thanks to all of you who wrote suggesting this improvement to the new format of the ANDEX bulletin.

BEGINNING DXers

I have received many letters from people who are just getting started in SWL or DXing and they all say the same thing. Please have something in ANDEX about getting started in DXing; or please have something for us beginners who don't know all the ins and outs of SWL.

Well, I thought I would like to have a few articles to help these members, but who would know better what advice to give to the beginner than some of you old-timers in the business. So, how about it? Why not write a short article or a series of hints that you would tell a beginning DXer if he was there in your house asking you for a start in radio. Write about that special advice that you received that really made SWL and DXing more enjoyable for you. I'll look forward to hearing from you.

FAILURE IN MATH

In the October-November issue of ANDEX, there was an article about ordering ANDEX T-shirts. I said that the price of the T-shirt was $5.75 and that postage for members living in the Americas was $.75 making the cost $6.60.

Well, my friends, that comes to $6.50! Therefore, I am sending to those of you who overpaid, an Ecuadorian banknote which is worth approximately one thin dime.

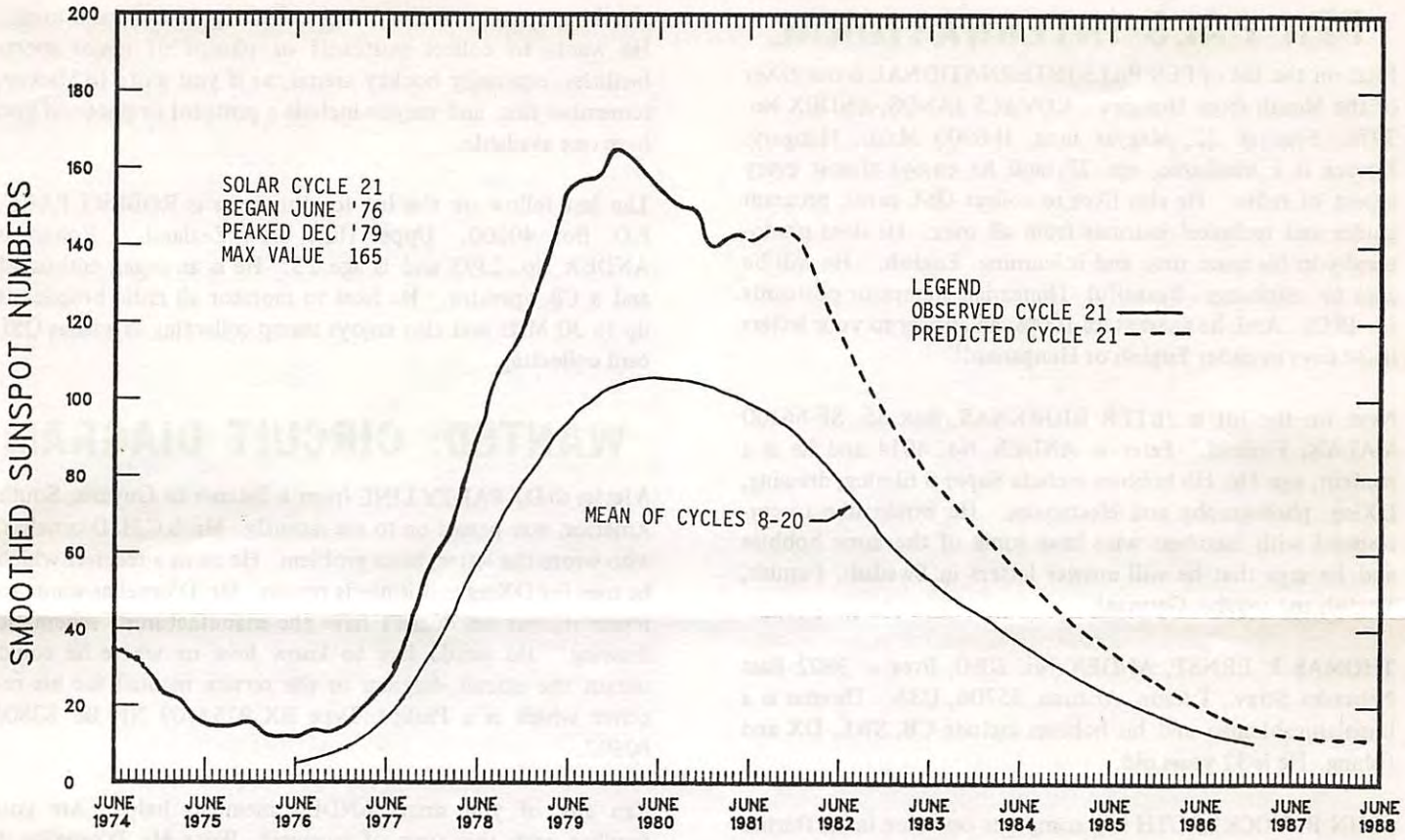
To those of you, in the Americas, who order a T-shirt in the future, take heed, consider your addition and send only $6.50!

ANDEX WORK CREW

My son, Andy Stanley

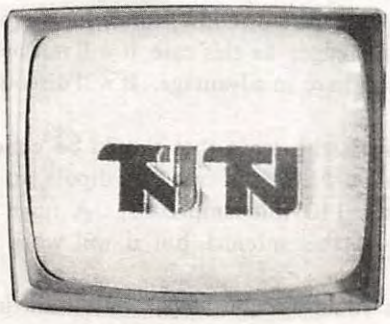
and friend, Kim Spragg

The ANDEX work crew, Fearless Forecaster John and their boss, me, say THANK YOU to you kind people who remembered ANDEX with Christmas and New Year greetings. It is quite a feeling to be in a "family" that is 50 countries big with more than 1000 "brothers and sisters"!



MUF IN MHZ FOR MARCH, 1982

TIME IN GMT	00	02	04	06	08	10	12	14	16	18	20	22
North America to Europe	18	18	15	14	16	17	21	30	34	34	26	18
North America to South America	40	30	26	22	19	18	23	40	43	45	44	43
North America to Australia	43	40	34	24	22	21	19	22	28	26	34	43
North America to Asia	38	36	32	20	17	17	15	17	26	22	24	38
Europe to Asia	18	16	18	30	38	40	44	40	35	26	20	18
Europe to South Africa	32	24	18	28	38	45	42	43	42	42	40	36
Europe to South America	23	22	20	18	19	42	38	42	42	41	34	28
South America to Australia	40	38	38	34	30	24	24	22	20	22	34	40
Australia to Asia	44	38	34	47	42	38	38	38	33	24	24	29



NOTE: As many of you have discovered by now, the DARKNESS DETECTOR CURVES in the last issue did not match up exactly with the map. They are close enough to be of some usefulness and will be re-produced in a future issue. Sorry!

LEFT PHOTO: The ID for Channel 2 in Quito. It is TN, TELENACIONAL.

ABOVE: Often seen on this channel after the ID..gives name, date, hour and other bits of information.

PEN PALS INTERNATIONAL

First on the list of PEN PALS INTERNATIONAL is our DXer of the Month from Hungary. KOVACS JANOS, ANDEX No. 3978, lives at 22, Magyar utca, H-6900 Mako, Hungary. Kovacs is a mechanic, age 27, and he enjoys almost every aspect of radio. He also likes to collect QSL cards, program guides and technical journals from all over. He does photography in his spare time and is learning English. He will be glad to exchange beautiful Hungarian stamps or postcards for IRCs. And, he guarantees 100%, an answer to your letters in 30 days in either English or Hungarian!!

Next on the list is PETER BJORKNAS, Box 35, SF-66100 MALAX, Finland. Peter is ANDEX No. 4014 and he is a student, age 16. His hobbies include Super 8 filming, drawing, DXing, photography and electronics. He would like to correspond with members who have some of the same hobbies and he says that he will answer letters in Swedish, Finnish, English and maybe, German!

THOMAS J. ERNST, ANDEX No. 2090, lives at 3802 East Nebraska Strav., Tucson, Arizona, 85706, USA. Thomas is a lineman/cableman and his hobbies include CB, SWL, DX and fishing. He is 32 years old.

JOHN B. VOCKEROTH is a computer operator in his thirties and lives at 10 Murrary Hill Drive, Atco, New Jersey, 08004, United States of America. John is ANDEX No. 126, having joined way back in 1973. Besides all his radio activities, John likes to collect stamps and postcards.

The next fellow is from Canada. MICKEY DELMAGE, ANDEX No. 83, lives at 2522 Richmond Avenue, Brandon, Manitoba, Canada, R7B 0T6. He is a salesman and is 24 years old. Mickey's interests include DXing, SW and MW listening, watching sports, traveling, coin collecting, records and music. He wants to collect postcards or photos of major sports facilities, especially hockey arenas, so if you write to Mickey, remember this, and maybe include a postcard or photo, if you have one available.

The last fellow on the list for this issue is ROBERT PARK, P.O. Box 40200, Upper Hutt, New Zealand. Robert is ANDEX No. 2393 and is age 25. He is an organ enthusiast and a CB operator. He likes to monitor all radio broadcasts up to 30 MHz and also enjoys stamp collecting as well as QSL card collecting.

ANDEX International –

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HCJB

ANDEX

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WANTED: CIRCUIT DIAGRAM

A letter to DX PARTY LINE from a listener in Guyana, South America, was passed on to me recently. Mr. S.C.H. D'ornellas, who wrote the letter, has a problem. He owns a receiver which he uses for DXing and it needs repairs. Mr. D'ornellas wants to repair it, but he doesn't have the manufacturer's schematic drawing. He would like to know how or where he could obtain the circuit diagram or the service manual for his receiver which is a Philips, Type BX 925A/09 NR BC 8380/80502.

Can any of you smart ANDEX members help? Are you familiar with this type of receiver? Write Mr. D'ornellas if you have any suggestions for him. His address is: Mr. S.C.H. D'ornellas, 110 Barrack Street, Georgetown, Guyana, South America.

THE ANTENNA CORNER

APARTMENT DWELLERS: Another idea for you. Burglar alarm tape is a very thin, metalic tape meant to be stuck to windows so that breaking the window also breaks the tape, sounding an alarm. This self-sticking tape can be applied to walls and ceilings and painted over, and it will provide an invisible antenna.

Several variations are possible. A dipole could be run along a wall or ceiling or a loop could be run around the entire room just below the ceiling moulding. A yagi could be laid out on the ceiling (if it is smooth) for directional reception. If you have a picture window, run a loop around it a few inches from the edge. In this case, it will not be invisible, but its presence will have an advantage. It will discourage burglars!

The tape comes with leads that should be connected to TV 300 ohm ribbon or, in the case of a dipole, to 75 ohm twin lead (or plastic 110 volt lamp cord). A tuner will improve performance of this antenna, but it will work without one.

This antenna could also be used for transmitting on the CB band or the higher ham bands, but it won't get out like an outdoor antenna. As with all indoor antennas, the performance will depend on how much steel is in the frame of your building. If you plan to redecorate or paint any time soon, you should first put up your antennas, then paint or wallpaper to make them disappear!