ANDEX INTERNATIONAL

Vol. 9, No. 4 August-September, 1982

HELP, PLEASE

In one of the issues of ANDEX, I said that I get discouraged if I have to put anyone's number in the inactive file. I reported that in August of 1981, I had sent out 1007 mailings. This past mailing that I sent out had 1030 envelopes so we are making a small gain of new members and I am happy to report that renewals are doing a steady business and I don't have to put as many members in the inactive file as I did before.

However, due to economic pressures around the world, I am beginning to receive some letters from members who say, "I'm sorry to not renew my ANDEX membership, but I am out of work and can not afford the membership fee." or "I've been sick and we need to watch all our payments." I feel sad when I read that and in some cases I have personally paid the renewal fee for a needy member. But I can't do that for everyone so I am very glad when a letter comes in the mail saying, "Here is 5 pounds, or 10 USA dollars, or 20 Australian dollars. Please use it to pay my membership in ANDEX for the coming year and then use the rest of the money as a gift to the ANDEX budget." This means that ANDEX can then afford to extend membership privileges to someone who cannot afford to pay.

We also have another type of financial problem at ANDEX. There are members in some countries who CAN afford the membership fee, but cannot send currency out of the country because their government prohibits it.

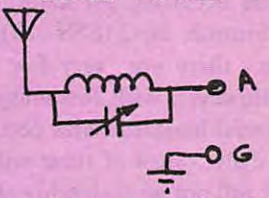
I would like to encourage a "friendship pool". If some of you can afford to give an extra bit of money with your renewal fee, do so and indicate that this should be used for those members who cannot pay. This will really make us like a family, helping one another.

And to you members who can afford the membership fee, but have no way to send money out of the country, when you write to me, include some stamps or postcards of your country. Then I can include these friendly tokens in the envelopes of those members who have given the extra bit of money to ANDEX.

While we are speaking of money, let me just add the word that I am working on a new payment system whereby most of you will be able to renew your membership by sending the fee to the regional office of HCJB located in your country thus avoiding costly IRCs or possible check loss or difficulty in check cashing here. I will let you know as soon as all arrangments are made. In the meantime, keep smiling!!

We are glad to know that we have such intelligent members in our Club!!

Mark Anderson, Greenfield, Indiana, wrote to say that there was a mistake in the second schematic given for making a band stop filter in the June-July ANDEX. You are so right, Mark. Below is the correct drawing.



Raymond Forward, Cornwall, England, wrote to say "something odd has been happening to the numbering of the ANDEX bulletins." Well, Raymond, I was hoping you wouldn't notice! When I took over this job, I did not pay much attention to the numbering, but later I realized that I was increasing the Volume Number too rapidly so with the February-March issue, I put the number back to what it was supposed to be... that is, representing the number of years that ANDEX has been in operation. Hope it didn't make too big a jolt in your neat arrangement of issues.

Erik Hansson, Sandby, Sweden, found that the Darkness Detector Curves did not quite match up. Along with this issue, you will find an extra sheet on which is printed the world map and two sets of Darkness Detector Curves. In the ANDEX bulletin itself you will find the last set of curves. So keep all of this information in a convenient place to help with your shortwave listening.

St. Paul writes to the church at Colossae, "Be tolerant with one another and forgive one another whenever any of you has a complaint against someone else. You must forgive just as the Lord has forgiven you."

FEARLESS FORECAST: SOLAR FLARES

By John Stanley

I had been planning for some time to discuss solar flares in this issue of ANDEX. During the first half of June the sun cooperated with my plans by producing the largest sunspot group seen in 25 years as well as the highest flare activity of this solar cycle. I will include in this issue a summary of flare related shortwave fadeouts. Perhaps this list will help explain some of the strange effects you logged in June. (You do keep a log, don't you? Every serious DXer should!)

Solar flares are bursts of light occurring on the sun's surface near sunspots. Only occasionally can they be observed in white light. Normally, special filters are used to make them visible. X-ray telescopes are very useful in observing flares also and at present, flares are classified as to "brightness" in both X-rays and red light. The length of the "flash" is variable from 20 minutes to an hour, and the brightness can vary by a factor of more than 100. The brighter the flare, the more rare it is.

The number of flares occurring per month can be estimated by the following formula N=2 (SSN–10). This formula indicates that when there are very few sunspots, hardly any flares occur. However, with the sunspot number above 100 as it is now, several hundred flares occur every month or half a dozen or so daily. Most of these will be so small that shortwave reception will not be noticeably affected. However, several times a week, shortwave fadeouts will occur. This past June, shortwave fadeouts were an almost daily occurrence due to the unusually high flare activity already mentioned.

Incidentally, flares tend to occur somewhat more during the declining phase of the sunspot cycle so the formula above will give numbers on the low side for the next few years.

Figure 1 is a summary of the effects of a solar flare. Note that some effects are delayed. The immediate effects are those associated with electromagnetic waves which travel at the speed of light (X-rays, light, radio waves). The X-rays produce excessive absorption in the D-layer and thus cause shortwave signals to weaken. This is the SWF or shortwave fadeout. Note that it can only occur in the daytime since X-rays cannot penetrate the earth so as to reach the D-layer on the dark side. As you compare your logs to the list of SWFs in List A, remember that only those occurring during daylight could have affected you. Of course, daylight can mean daylight at your location or at the location of the station. (Your Darkness Detector can help you here. We are reprinting it in this issue for those of you who have joined ANDEX since it was last printed.)

SWFs are sudden and dramatic. For a severe one, you will note a very sudden, sharp drop in the signal you are monitoring followed by a gradual (ten minutes to two hours) return of the signal. Stations above 20 MHz may not be affected, nor will nearby stations not coming to you via the ionosphere.

The longer term effects of a flare are more of a threat to good SWLing although usually not as dramatic as a sudden SWF. A strong flare can produce ionospheric storms that more or less spoil reception for several days. The high frequencies may be useless and lower frequencies also weakened and spoiled by auroral effects which produce a strange, fluttery signal.

When auroral effects are severe, go outside and look toward the north or south poles. You may see beautiful colors in the night sky. There is nothing like a good auroral display to remind you of the words of Psalm 19.

Since June produced so much fireworks on the sun, we must expect that above normal flare activity will continue now for several months. The sun rotates on its axis every 27 days and so sunspot groups and active regions on the sun turn toward the earth on a regular basis. Often, these solar regions last for many months. Radio disturbances tend to recur on a 27-day interval. By adding 27 days and its multiples (54 days, 81 days) to the dates listed in List A, you might be successful in predicting when another SWF might occur! Of course, the exact time of day would probably not repeat. But don't be surprised if on or around September 2 or September 29, some afternoon your radio suddenly seems to go dead.

SHORTWAVE FADEOUTS
caused by solar flares (June, 1982)

DATE (June, 1982)	TIME (UTC)	MAX. FREQ. AFFECTED	S=SEVERE FADE M=MODERATE FADE	DATE (June, 1982)	TIME (UTC)	MAX. FREQ. AFFECTED	S=SEVERE FADE M=MODERATE FADE
2	1525	22MHz	M	11	1455	15	S
3	0818	22	S	12	0509	18	S
3	1138	22	S	12	1110	22	M
3	1503	16	S	13	0942	18	S
4	0501	15	S	13	1814	15	S
4	1311	22	M	13	2145	15	S
4	1911	16	S	22	0527	9	M
5	0612	18	M	22	1423	18	S
5	1456	21	S	23	0626	18	S
5	1526	15	S	23	1018	22	S
5	1719	15	S	23	1153	18	S
5	1944	15	S	23	1837	15	M
6	1422	15	S	24	0518	15	M
7	1607	15	M	25	2129	15	S
8	1959	15	S	26	0938	15	S
9	1124	22	S	26	1908	22	S
10	1133	18	M	27	1019	15	S

LIST A

DXer OF THE MONTH-ITALY

Salvatore Placanica, ANDEX No. 3276, is our special DXer from Italy for this issue.

This member is one of our older DXers. He is 72 years old, a former executive in a chemical company where he worked for 40 years before retiring.

Salvatore began DXing in 1978 and as he says, "I didn't know anything on the matter when I started." However, now he has about 150 verified stations from 90 countries. He uses a Grundig Satellite 3400 receiver with an incorporated 1440 mm long style antenna. He also has as part of his equipment setup two tape recorders, a Revox and a National Panasonic.

The digital frequency on his receiver is very useful when he listens to German and French broadcasts. Since his knowledge of those languages is rather poor, he fixes the frequency, turns on his tape recorder and listens to the program over and over again at his leisure.

Salvatore first listened to HCJB when he took part in a competition organized by a German DX Club. He was so excited to hear our station from such a long distance away that he has tuned in to us ever since. He has received 168 QSL cards from HCJB in the last four years. (That must be a record! If anyone else has more, let me know.)

Although Salvatore enjoys his DXing, he also likes to take time for his other hobby, listening to classical and opera music.

Our congratulations, Salvatore Placanica, Via Borreani 22-C.P. 48, I-17014 Cairo Montenotte, Italia. We wish you years more of listening to both your hobbies.

DXer OF THE MONTH-USA

Charles H. Miele, ANDEX No. 3929, 9249 Carlton Oaks, Santee, California, 92071, is our DXer of the month-USA for this issue of ANDEX.

Charles has been interested in shortwave listening since 1936 so he has many years of experience and has an excellent SWL set-up as shown by his photo.

His main receiver is a Realistic DX-302. It has a quartz-synthesized tuner with digital readout for precise tuning, but he also still uses his old Hallicrafters WR-3000. Charles sometimes uses both receivers at the same time. He tunes in the same program on two different frequencies which don't often fade out at the same moment. He then feeds the two signals simultaneously to a tape recorder with automatic level control. This has produced good results where single frequency reception failed to remain intelligible.

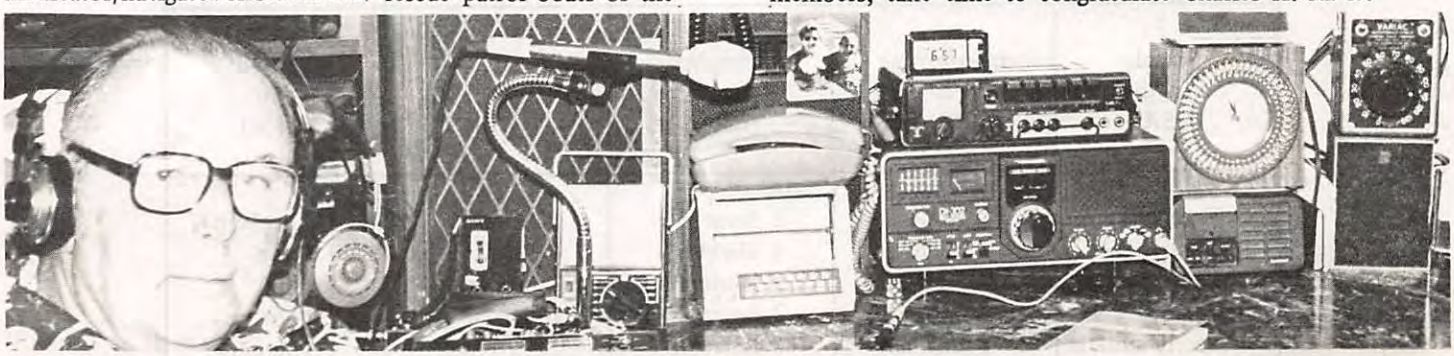
Charles not only uses the radio for SWL, but also as communicator/navigator on search and rescue patrol boats of the US Coast Guard Auxiliary, a volunteer service to the US Government by private citizens.

Charles has some very interesting hobbies . . . one of which is to correspond with people by audiotape cassettes. He and his friends exchange 45 or 90 minute programs of music, commentary and interviews.

He is also interested in photography, a hobby he has enjoyed since he was nine years old. He processes his own color slides and prints.

Charles says that he would like to get acquainted with some interesting people and could correspond either by letter or tape in English, Dutch or German. His favorite subjects to discuss are paleontology, the solar system, archaeological expeditions, explorations or any timely and significant subject in science, politics, or philosophy.

It sounds so interesting I might write him myself! ANDEX members, take time to congratulate Charles H. Miele.



REPORTING CODES

At HCJB we receive many questions from our listeners. One of the questions most frequently asked concerns reception reports and how to use the SINPO or SIO reporting codes. For this reason we have included a chart of the SINPO code in this issue of ANDEX International and trust that many of our members will find it to be useful.

The SINPO code is by far the most widely used reporting method and every DXer should be familiar with it. Many shortwave broadcast stations request that their listeners and monitors report to them in this code. It is simple and comprehensive. The SIO code is a simplified version and omits the N and P.

When sending a reception report to a station be sure to be very honest in evaluating the reception of the station. Some DXers prefer to ignore the 1 and 5 ratings. For a station to rate S-5, it must be equal in strength to the local medium-wave stations. Obviously, this is rarely the case. If a station is actually S-1, it is too weak to be definitely identified. Don't report a station as S-5 or S-4 unless it really is that strong. An untruthful report is of less value to a station than no report at all!

A typical report to a station being heard with good signal level, slight interference, slight static level, and moderate fading would be SINPO 44434. Give your report in that form. Do not mix the letters and numbers . . . S4 I4 N4 P3 O4 . . . as this will only confuse the person who reads your report. Another typical example: A station heard with a fair signal strength, moderate interference, moderate static, and severe fading would be SINPO 33322.

There is no way to correlate a certain signal strength report with a definite S-meter reading on your radio. There is too great a variation in receivers and antennas used by DXers. Each DXer must get well acquainted with his particular receiving setup and learn how to evaluate the signals he receives. With experience this becomes quite easy. At an ANARC Convention a few years ago, several typical signals were played to the DXers present. They were asked to evaluate each in the SINPO code. You'd be surprised how much even the experts differed in their answers to this quiz!

A PUZZLE

And out of the files comes an ELECTRONI-CROSTIC sent in a long time ago by an ANDEX member who is now inactive. See if you can work it out. The answer will be in the next issue of ANDEX.

How about working out another electroni-crostic or a DX crossword puzzle that we can include in a future issue of ANDEX? We'd be glad to receive your contribution.

Semiconductor amplifier — 5 32 1 51 17 36 17 20 39 48

Kind of switch — 45 39 15 28 19 9

___ voltage; produced by a generator — 6 37 40 47 11 33 40

Audio or power — 38 10 24 14 17 7 39 22 ___ 16 31

Variable resistor — 42 12 50 39 17 25 13 35

Dipole — 18 23 52 3 34 27 24

Plate, cathode or grid — 21 19 43 46 5 2 39 40 33

Integrated _____, as in a calculator (2 words) — 4 8 49 29 30 26 25 44 12 41 ___

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17

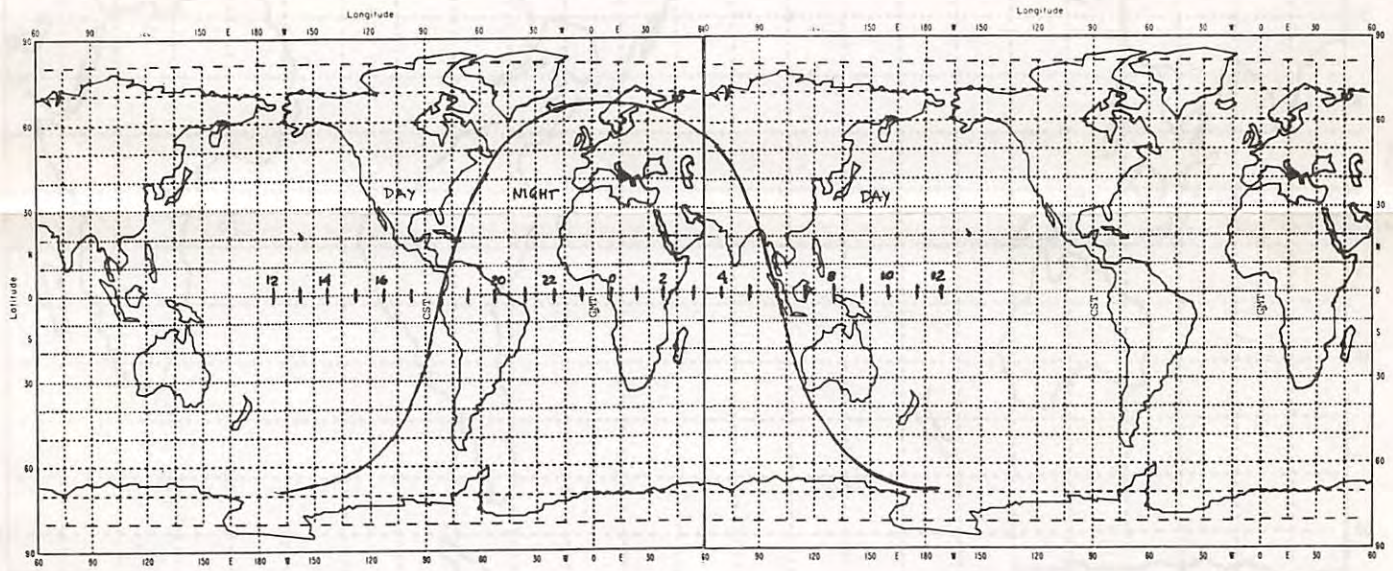
18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35

36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52

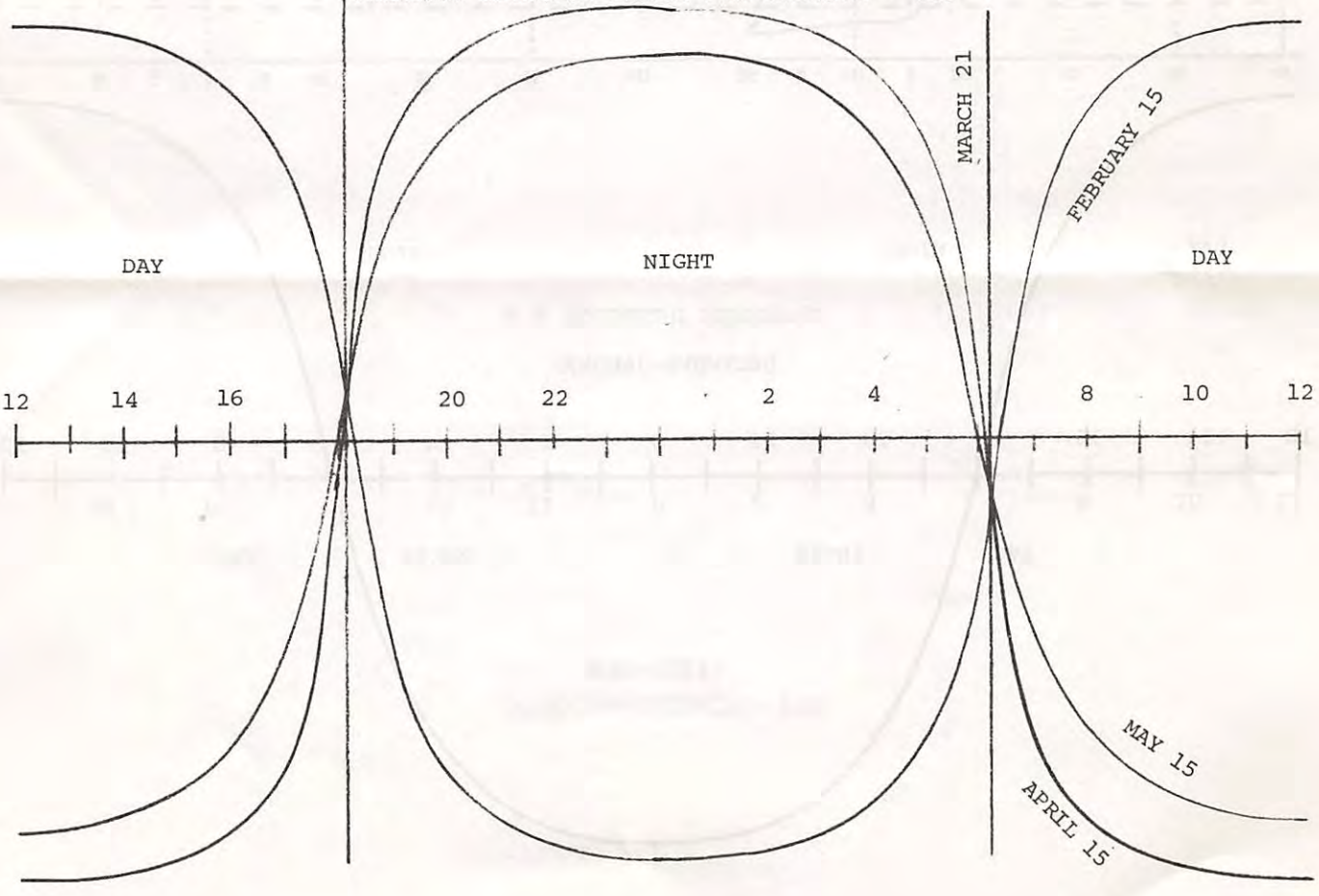
S	I	N	P	O
Signal Strength (QSA)	Interference (QRM)	Atmospheric Noise (QRN)	Propagation Disturbance (QSB)	Overall Merit (QRK)
5 Excellent 4 Good 3 Fair 2 Poor 1 Barely audible	5 None 4 Slight 3 Moderate 2 Severe 1 Extreme	5 None 4 Slight 3 Moderate 2 Severe 1 Extreme	5 None 4 Slight 3 Moderate 2 Severe 1 Extreme	5 Excellent 4 Good 3 Fair 2 Poor 1 Unusable

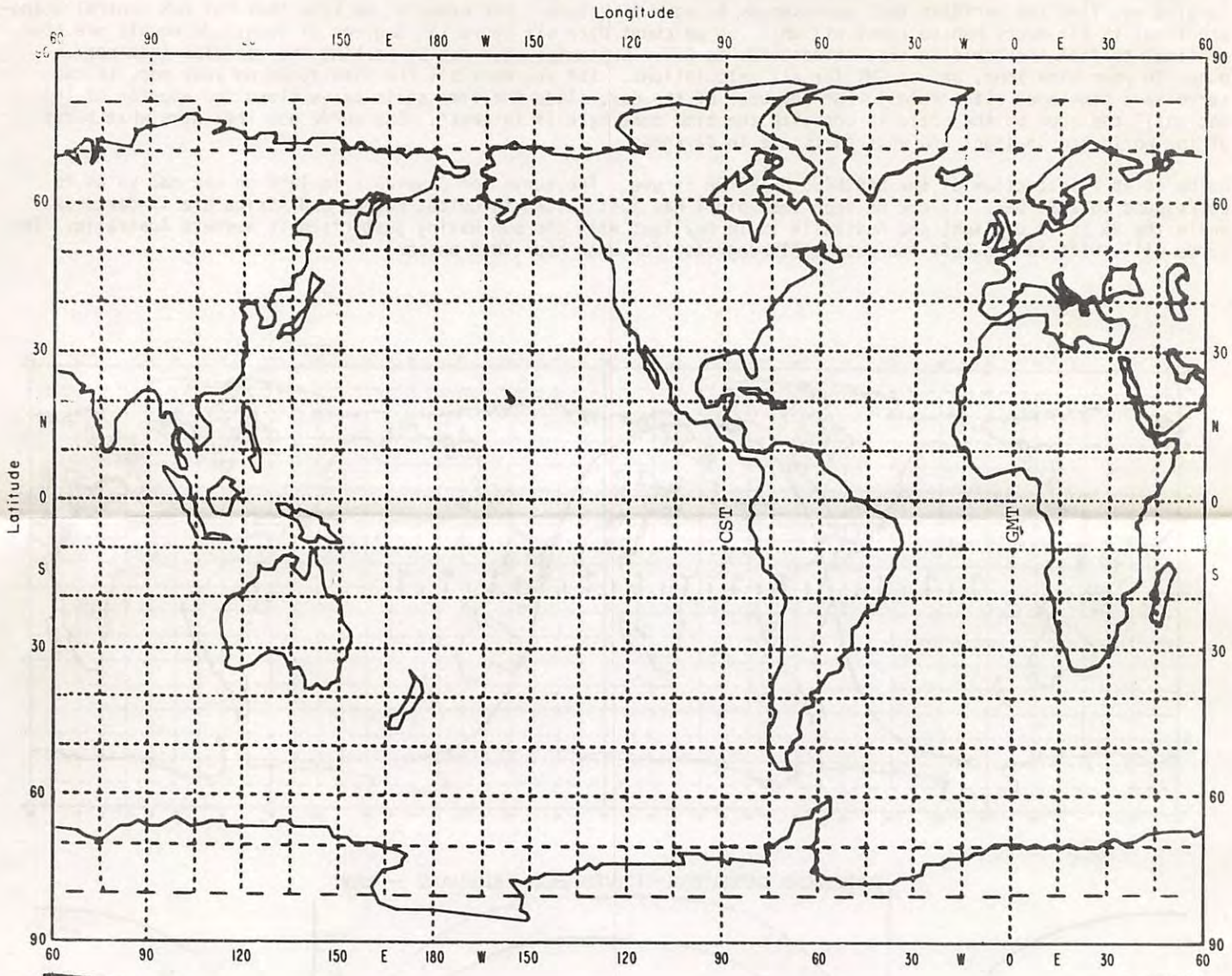
For best results, copy the map two times on a copy machine. Join these two maps in the east-west direction. On a sheet of plastic or semi-transparent paper, copy the time scale and curve for the month of interest. To use local time, find the meridian that corresponds to your time zone. For example, we know that CST (US Central Standard Time) is six hours behind (west of) GMT. So we count over six hours (15 degrees of longitude equals one hour of time) to find the meridian that corresponds to CST. Customize your map by marking the meridian that corresponds to your time zone, or use GMT for all calculations. (If you mark all the time zones on your map, it can serve as a time zone slide rule!) For any hour of the day, slide the time scale curve along the equator of the map until the hour on the scale is opposite the time zone mark of interest. The curve now indicates what parts of the world are in light and what parts are in darkness.

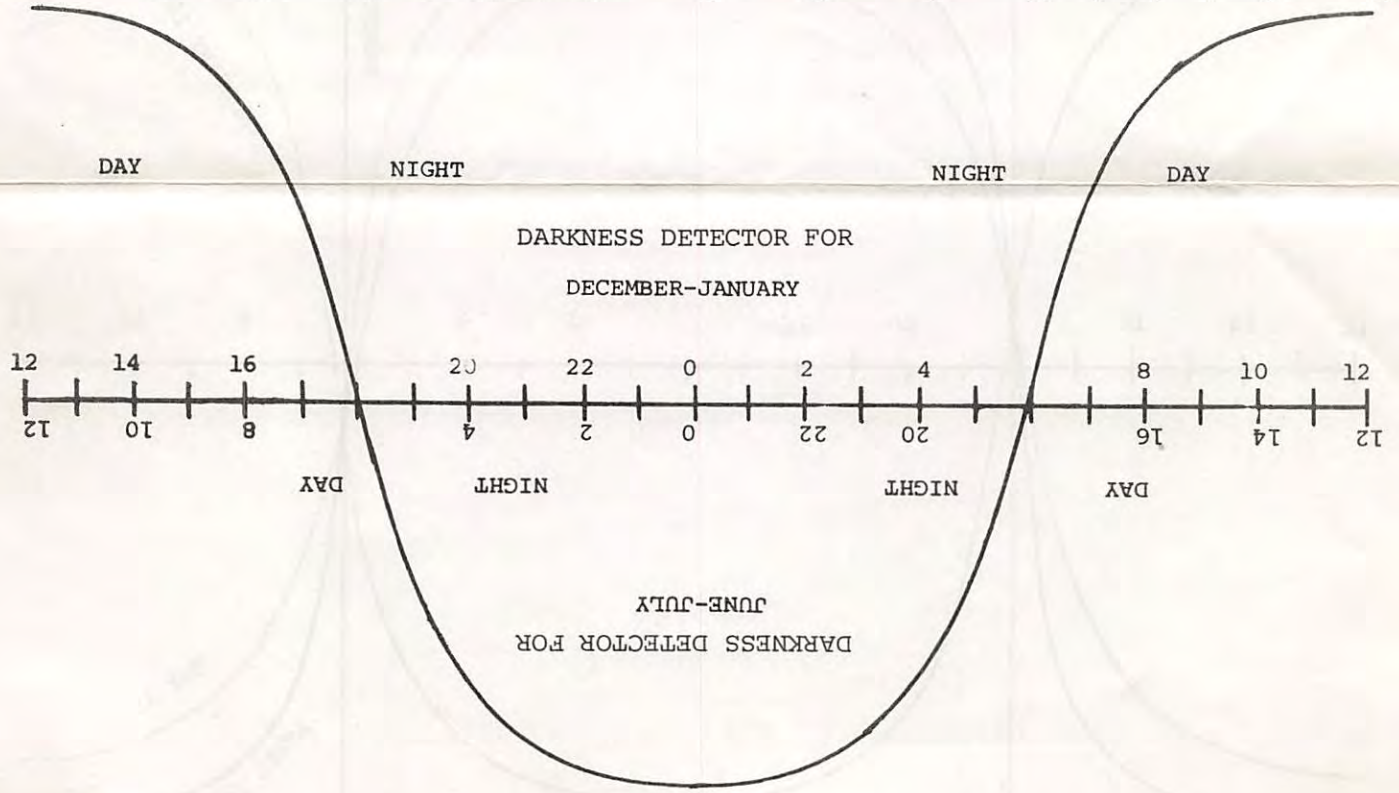
Below is an illustration of the DARKNESS DETECTOR in use. The curve for June-July is laid on the map so as to correspond to 2320 GMT. It can be seen that night has just fallen in Quito; Europe and Africa are in darkness while the US is in daylight and Australia is in daylight with the sun having just risen in Western Australia. The curve will shift to the left one square (15 degrees) for each hour that passes.



DARKNESS DETECTOR CURVES FOR FEBRUARY - MAY







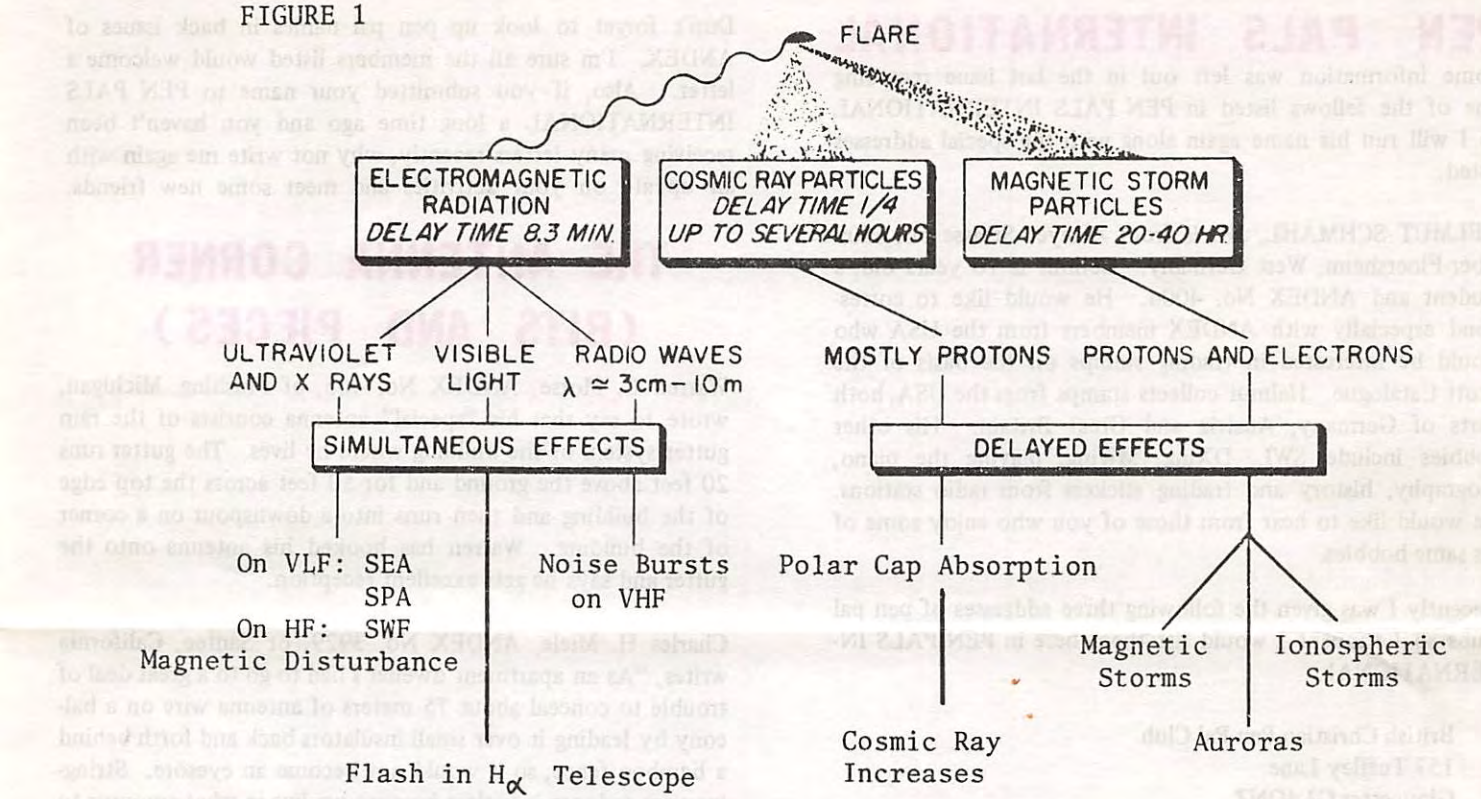
DARKNESS DETECTOR FOR

DECEMBER-JANUARY

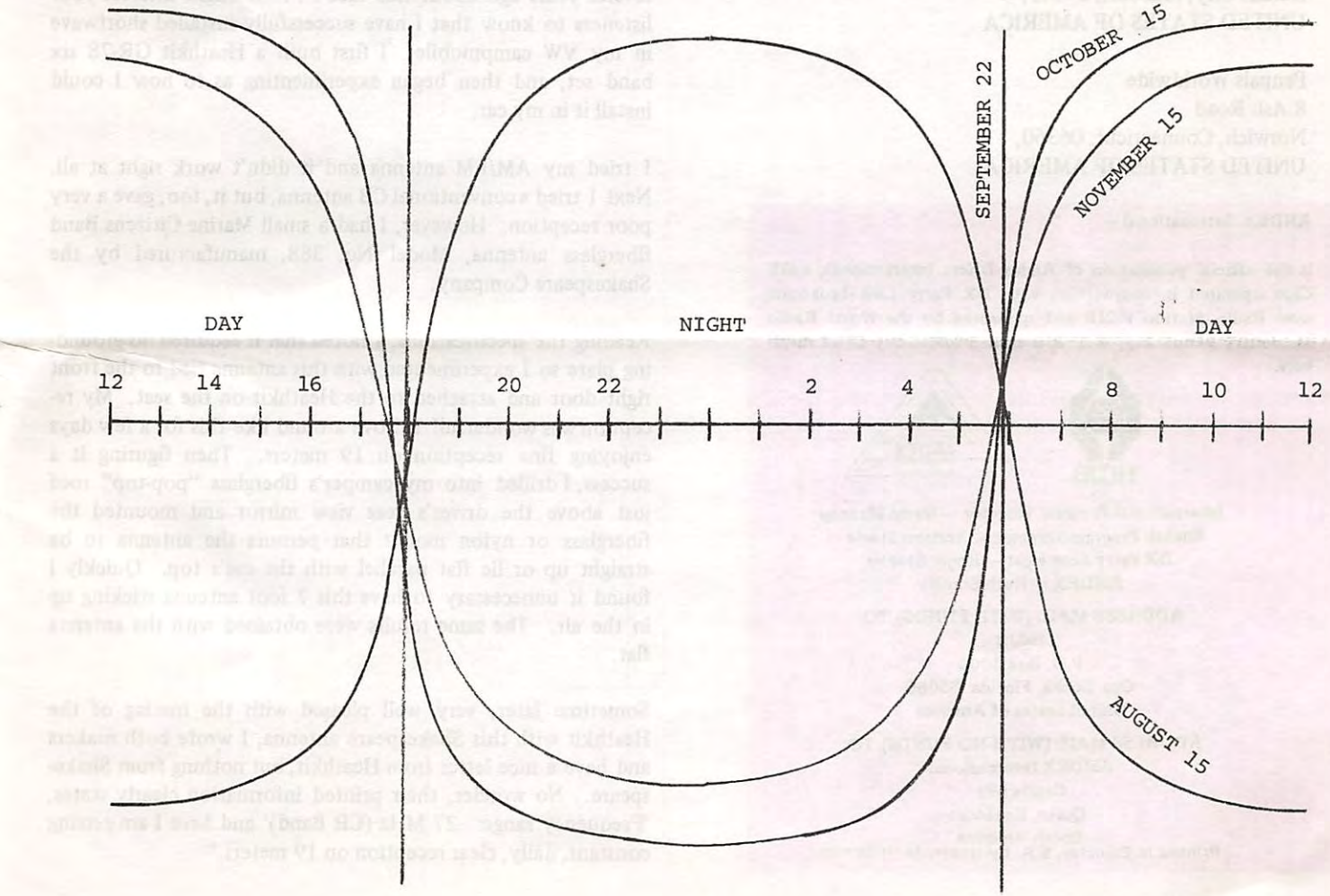
DARKNESS DETECTOR FOR

JUNE-JULY

FIGURE 1



DARKNESS DETECTOR CURVES FOR AUGUST - NOVEMBER



PEN PALS INTERNATIONAL

Some information was left out in the last issue regarding one of the fellows listed in PEN PALS INTERNATIONAL so I will run his name again along with the special addresses listed.

HELMUT SCHMAHL, JR. is from Alzeyer Strasse 56, 6509 Ober-Floersheim, West Germany. Helmut is 16 years old, a student and ANDEX No. 4004. He would like to correspond especially with ANDEX members from the USA who would be interested in trading stamps on the basis of the Scott Catalogue. Helmut collects stamps from the USA, both parts of Germany, Austria and Great Britain. His other hobbies include SWL, DXing, MWing, playing the piano, geography, history and trading stickers from radio stations. He would like to hear from those of you who enjoy some of his same hobbies.

Recently I was given the following three addresses of pen pal clubs so I thought I would list them here in PEN PALS INTERNATIONAL.

British Christian Pen Pal Club
157 Tuffley Lane
Gloucester GL4ONZ
ENGLAND

People-to-People
2401 Grand Avenue
Kansas City, Missouri, 64141,
UNITED STATES OF AMERICA

Penpals Worldwide
8 Ash Road
Norwich, Connecticut, 06360,
UNITED STATES OF AMERICA

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HCJB

ANDEX INTERNATIONAL

International Program Director – David Manney
English Program Director – Andrew Steele
DX Party Line Host – Roger Stubbe
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

Don't forget to look up pen pal names in back issues of ANDEX. I'm sure all the members listed would welcome a letter. Also, if you submitted your name to PEN PALS INTERNATIONAL a long time ago and you haven't been receiving many letters recently, why not write me again with an update on your activities and meet some new friends.

THE ANTENNA CORNER (BITS AND PIECES)

Warren C. Morse, ANDEX No. 465, of Flushing, Michigan, wrote to say that his "special" antenna consists of the rain gutter system of the building where he lives. The gutter runs 20 feet above the ground and for 50 feet across the top edge of the building and then runs into a downspout on a corner of the building. Warren has hooked his antenna onto the gutter and says he gets excellent reception.

Charles H. Miele, ANDEX No. 3929, of Santee, California writes, "As an apartment dweller I had to go to a great deal of trouble to conceal about 75 meters of antenna wire on a balcony by leading it over small insulators back and forth behind a bamboo fence, so it would not become an eyesore. Stringing wire indoors is useless because we live in what amounts to a Faraday cage . . . wiremesh reinforces the concrete walls of our building."

Robert C. Ewing, a listener in the Netherlands Antilles, wrote several years ago about this idea . . . "It might interest your listeners to know that I have successfully installed shortwave in my VW campmobile. I first built a Heathkit GR-78 six band set, and then began experimenting as to how I could install it in my car.

I tried my AM/FM antenna and it didn't work right at all. Next I tried a conventional CB antenna, but it, too, gave a very poor reception. However, I had a small Marine Citizens Band fiberglass antenna, Model No. 388, manufactured by the Shakespeare Company.

Reading the specifications, I noted that it required no grounding plate so I experimented with this antenna tied to the front right door and attached to the Heathkit on the seat. My reception was wonderful! I drove around like this for a few days enjoying fine reception on 19 meters. Then figuring it a success, I drilled into my camper's fiberglass "pop-top" roof just above the driver's rear view mirror and mounted the fiberglass or nylon mount that permits the antenna to be straight up or lie flat parallel with the car's top. Quickly I found it unnecessary to have this 7 foot antenna sticking up in the air. The same results were obtained with the antenna flat.

Sometime later, very well pleased with the mating of the Heathkit with this Shakespeare antenna, I wrote both makers and have a nice letter from Heathkit, but nothing from Shakespeare. No wonder, their printed information clearly states, 'Frequency range: 27 MHz (CB Band)' and here I am getting constant, daily, clear reception on 19 meters."