

ANDEX



INTERNATIONAL

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MEDIUM WAVE LOOP ANTENNA

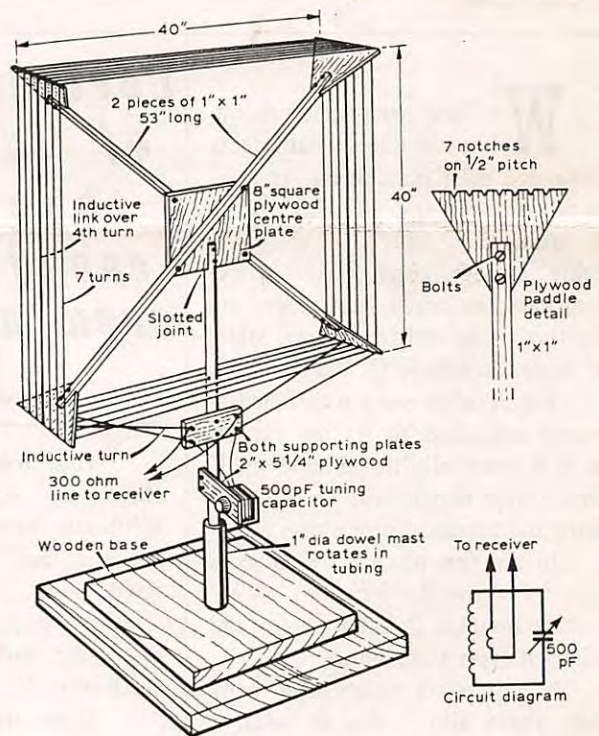
Several ANDEX members have written asking about a good antenna design for mediumwave reception. We found a plan in *ELECTRONICS AUSTRALIA* and are reprinting it here for our members.

About 100 feet of plastic-covered wire (about 22swg) should be used for the main winding and this should be wound to a whole number of turns; seven for the MW band or six to include 160 meters ham band.

Seventy-ohm coaxial cable can be used instead of 300-ohm balanced feeder to the receiver, but aim at making the windings and general construction as symmetrical as possible since the depth of the rejection null depends on the electrical balance.

Tune in signals on the receiver, peaking the antenna tuning control and adjusting direction of loop for maximum pick-up or for maximum rejection of interference.

Good listening!



ANDEXING

ANY MORE 11-METER TRANSMITTER OFFERS? In the October ANDEX, we told of the need for another transmitter that HCJB could use on 26,020 kHz—our 11-meter frequency. The old transmitter is broken beyond repair. We have received some offers from ANDEX members and will be responding to you soon when a final decision is made as to which transmitter will serve us best.

If any other members have a transmitter to donate, but haven't written us about it, please do so in the near future.

NEW RECEPTION REPORT FORMS have been designed by the English Language Service. We will include a new form when we put your QSL cards in your ANDEX envelope. After working with the new form, let us know what you think of it.

RADIO JAMAHERIYA NEEDS YOUR HELP. In a recent letter, the director of Radio Jamaheriya, Mohammed Sweidan, requested more reports on their radio signal. They presently transmit two broadcasts on the shortwave band. One is on

11.815 kHz between 2230 hours and 2400 hours UTC. The African service of Radio Jamaheriya broadcasts on 15.450 kHz between 1800 hours and 1900 hours UTC. They particularly wish reports on the 11.815 frequency.

They would like to receive technical information, such as the SINPO rating, and remarks as regards modulations, interference (if any) and signal strength, but they would also welcome comments or suggestions on the contents of their programs. Any reports received will be QSLed. Program schedules and other information are available on request.

The address is RADIO JAMAHERIYA, P.O. Box 17, Hamrun, Malta, Europe.

TO DISPLAY QSLs if you don't want them to get dirty or have pinholes, put them in a plastic sandwich bag and fold over the top. Leave an inch or so above the card. Tack the bag to the bulletin board. It works! To make it smooth looking, tack the bag with the flap toward the wall.

— Anita Crouch, ANDEX 4645, Temple City, California, USA

THE TOKYO ATU does work well with the ICF2001.

— Alfred G. Brimming, ANDEX 4595, Bristol, England.

FEARLESS FORECAST: 27 - DAY RECURRENCE PATTERNS

By John Stanley



We have been seeing in the last two issues what effects short-range solar phenomena have on shortwave reception. By short range we mean day-to-day or, at most, weekly average conditions. These conditions, as noted previously, are solar flux (noise emitted at 2800 MHz) and magnetic indices (K and A index).

The A index was not sufficiently covered last time so let me explain that it is essentially the same as the K index except that it involves different scaling and averaging procedures.

In the first place the K index is given for a specific location. WWV gives the Boulder, Colorado, index and updates it every three hours.

K indices are recorded at many other places also. The K index is based on a logarithmic scale from 1 to 9.

The A index is a summary of the K indices of an entire day from a mid-latitude location. It is based on a linear scale which can go up to 400.

Thus the K index gives an approximate "real-time" indication of what is actually happening, while the A index gives an average for the whole previous day.

The sun takes 27 days to turn on its axis so that the same face is towards the earth. That means that certain patterns of sunspots, if they last long enough, will be seen again every 27 days.

Some sunspot groups do last for months and their passage across the solar disk can be seen several times. Since solar flares and other emissions are associated with certain observable features on the solar surface, often shortwave disturbances are repeated on a 27-day cycle.

Certain patterns of sunspots, if they last long enough, will be seen again every 27 days

This phenomenon can be visualized by considering a rotating lighthouse beacon that appears as a periodic flash when viewed from a fixed point. In a similar way, a "beam" of particles from the rotating solar surface will intersect the earth every 27 days.

There are three things that can be plotted if one hopes to anticipate what radio conditions will be 27 days in the future:



1) the solar flux which tends to rise or fall rather slowly, being emitted by the entire solar hemisphere facing the earth;

2) the A index, related to small areas of the sun giving off solar particles in a narrow beam (the lighthouse effect mentioned above);

3) actual radio conditions observed by the listener. This is perhaps the most important.

For example, suppose that on February 5 you record a high flux number, an A index that has been low for several days, and you hear 11-meter signals on high-latitude paths (Europe to North America). You can perhaps then amaze your friends by correctly predicting that 11 meters will again be heard on March 4 or thereabout (27 days later).

Of course, seasonal patterns will also add their effects and these must be considered.

Incidentally, for those living in high latitudes, 27-day patterns are prominent in auroral displays and can provide a means of impressing your non-SWL friends with your powers as a psychic seer.

Remember that some factors that affect shortwave reception are not solar related. Local QRN from summer thundershowers, for example, does not follow the 27-day cycle. Solar noise storms, on the other hand, do.

Solar noise can be distinguished from lightning produced static by its more-or-less constant level of hiss as opposed to the "crashes" of lightning produced noise.

So, there you are, ANDEX friends, a look into some of the mysteries of short-term propagation prediction.

THE SW LOG - A DXER'S DIARY

by John Stanley

Every serious DXer should keep one.

Sooner or later most DXers decide to keep a record of exciting things they hear. Perhaps it begins when the listener jots down the frequency of a favorite station so that he can find it again. Perhaps he writes down the date he first heard a rare station. Eventually, if he decides to write for a QSL card, he takes down the date, time, frequency and program details so as to make a detailed report. As he gets more involved, he may keep a detailed "diary" of his hobby. This kind of **written** record of your **audible** hobby is called a **log**. Every serious DXer should keep one.

In this issue of ANDEX we are enclosing a DXer's log sheet—a form you can use as is or adapt as needed. If you have a log sheet you like better, send us a sample sheet. We will publish any of special interest.

Each part of the log is important. On my log I list the most important things first:

FREQUENCY — This is the most important thing to know about a station. If "on channel," I list to the nearest kHz—15115, for example. If off a standard channel I list to the nearest tenth, the resolution of my receiver. This can help in positively identifying a station. Also I note USB or LSB, for single sideband stations, in the space.

TIME — I do my log in UTC. Local time can be used at your option, but when asking for QSL's or reporting to DX clubs, always use UTC. In any case, use 24-hour format.

STATION ID — Leave blank until you get a positive ID. Don't guess and have to erase. A false logging will make your log less useful. I write guesses in the comment column with a question mark. Use standard abbreviations or invent your own to enter station name in this small space.

SINPO — Believe it or not, many years ago I invented my own code to describe reception, never having heard of the SINPO code. Here you record the strength, interference level, noise level, propagation disturbance (fading, etc.), and overall quality of reception. Use a scale from

It may only seem like you waited six months for a prized card!

0 to 5 with 5 always being best reception—strong, no noise, no fading and no interference. This is obviously subjective, but try to be honest. Reporting 55555 to a weak station may get you a QSL or it may just get you a bad reputation!

LL — This is where I note the language in use. Use standard abbreviations such as EE for English, SS for Spanish, etc. Or put a question mark

if it is something far out. After a few years of DXing you will be able to **identify** dozens of languages, even though you don't understand a word. This is very helpful in finding rare stations.

COMMENTS — Here is the space in which you put everything else—program notes, more details of QRM problems, guesses as to language, station, or location, always with a "?".

Finally, it is good to have a place to record the date you sent and received a QSL. It may only seem like you waited six months for a prized card! It is better to keep a record.

And where, asks someone, do you put the date??? Isn't that important? It is and so it goes on a whole line in my log.

I normally DX in batches. I log a dozen or so stations in one session, so I use an entire line of the log to record the date and day of the week. Some stations, including HCJB, vary their schedule on certain days. Now, if I want to add just a few loggings a day later, I just mark a single heavy line and continue logging. Below is a sample portion of my log with actual loggings.

Tear off the back sheet of this bulletin so you can make your own log by taking that sheet to a printer or a copy machine. This design is not copyrighted so use it as you please, personalizing it if you like. And remember—if you have some good log ideas, write me.

FREQ	TIME	STATION	S	I	N	P	O	MISC. COMMENTS	LL	QSL-sent	QSL-rcvd
* 27 NOV	1984	R7A $\phi = 85$		K	=	2		(TUESDAY) (DIPOLEANT)			
21590	1211Z	MOSCOW?	3	5	5	4	4	TO AFRICA?			
25790	1222Z	RSA?	S ₂					QRN too weak to ID	2		
*21550	1149	BBC	2	4	4	1	2	HEAVY ECHO	EE		
15325	1229	FEBA	1	2	2	3	1	"What a Friend" POS ID	EE	2 Dec 84	
11895	1232	AIR	3	2	3	3	3	NEWS - Jamming RFE?	EE		
3915	2345		1	3	3	3	2	BBC SINGAPORE?	EE		

SPECIAL DXERS



Terry De Santis

It would be hard to find a more enthusiastic SW DXer than Terry De Santis. Terry started listening back in 1983 when she dug out from the cellar an old Hallicrafter tube receiver and tuned in to see what she could hear. She says, "At first all I heard was static, but I kept listening and heard The Voice of Germany and WYFR, and finally HCJB." Since then Terry has retired the old receiver and now uses a GE World Monitor 7-2990, with a 78-foot longwire antenna. She has collected 39 QSLs, her favorite being one from The Voice of Greece.

One of her favorite HCJB programs is MUSICAL MAIL-BAG. She recently called during one of HCJB's special call-in programs and talked with Ken Mac Harg, Brian Seeley, Glen Volkhardt, and John Beck while the world listened in.

Here's a tip for you ANDEX members who are students: for one of her high school classes Terry did a term paper on HCJB. The teacher became interested in HCJB; it was an enjoyable project for Terry, and she got a high grade on the paper! While doing the paper her physics homework suffered, but she stuck with the physics and found that many of her questions about radio waves and sound were answered.

Terry lives at 3 Cherry Street, Oneonta, New York 13820. The picturesque city of Oneonta is nestled in the beautiful foothills of the Catskill mountains.

We who work in ANDEX, and you who are ANDEX members, do not often meet in person. For this reason both Terry and Doris Hastings were happily surprised to meet in Oneonta last year while Doris was visiting relatives there.

Terry is becoming interested in amateur radio. Bicycling, clarinet playing, and writing letters take up her spare time. She plans to attend Houghton College next September.

Let's join in congratulating Special DXer Terry De Santis, ANDEX member 4747.

"Friends call me Max," began Massimo Russo as he wrote to ANDEX about himself. "I'm 21 years old and I began listening on shortwave four years ago. Now I'm a university student studying for a degree in electronics power applications. I hold an upper school certificate in telecommunications, and this is because I began listening to shortwave."

Special DXer Massimo lives in Italy and you can write to him at the following address: Via Roma 116, 36070 Castelgomberto VI, Italy.

He listens to shortwave with a Kenwood R-1000 receiver and receives RTTY with a video converter. Using a longwire and a telescopic antenna he has heard as many as 35 countries and received QSLs from 31.

Max is also an amateur radio operator (1W3EYF) with a special license for VHF - UHF - SHF and is studying to obtain his full license. Other hobbies are reading, walking, and "do-it-yourself" projects. Paralleling his fascination with radio and electronics is his interest in a fellow countryman, the "father of radio" who helped usher in the electronic age, Guglielmo Marconi.

Max says he is happy to be a member of the ANDEX family. It is our privilege, Max, to have you as member 5173 and Special DXer for this issue of ANDEX International.

Massimo Russo



PEN PALS INTERNATIONAL

JURGEN SCHALLER – Kathe-Kollwitz, Str. 16, DDR 7400 Altenburg, German Democratic Republic – ANDEX 5153 – 33 years old – a mechanic – interested in DXing, postcards and electronics.

JIM GILLERT – Star Route 173, Webster, Wisconsin 54893, USA – ANDEX 4779 – 15 years old – a student and has a special interest in the BBC science fiction program DOCTOR WHO.

VINCE LAGATTUTA – 5443 Russo Drive, San Jose, California 95118, USA – ANDEX 4987 – 39 years old – likes to DX, read, and collect stamps and postcards – wife Sandy would also like to write to people.

ALBERT J. GIESBRECHT – 2505 E. Georgia Street, Vancouver, B.C., Canada, V5K 2J6 – ANDEX 5044 – 20 years old – hobbies are radio, reading, music (live concerts), and watching movies being shot – is a volunteer at a community radio station.

DENVILLE WHYTE – Axe and Adze, P.A. Hanover, Jamaica, West Indies – ANDEX 5154 – 20 years old – interested in music, swimming, Bible study, sports, and DXing.

JOHN H. DEMMITT – Box A K0848, Bellefonte, PA 16823, USA – ANDEX 3498 – would enjoy corresponding with others worldwide including the United States – Interests are SWL, cryptography, writing, editing, postcards, customs, and people.

A Word From Ruth



A MILLION THANKS FROM THE ANDEX STAFF for all the wonderful Christmas greetings we received from so many of you. To know we have friends all over the world is a Christmas gift that lasts all year.

In our Stanley family, we celebrated my birthday on December 24, Christmas on December 25, and our wedding anniversary on December 27. By the time we get to January 1, we have had our share of celebrations. So instead we like to sing a hymn that we sang at our wedding 16 years ago. May it be your prayer for 1985.

God of our life, through all the circling years,
We trust in Thee;
In all the past, through all our hopes and fears,
Thy hand we see.

With each new day, when morning lifts the veil,
We own Thy mercies, Lord, which never fail.

God of the past, our times are in Thy hand;
With us abide.
Lead us by faith to hope's true Promised Land;
Be Thou our guide.
With Thee to bless, the darkness shines as light,
And faith's fair vision changes into sight.

God of the coming years, through paths unknown
We follow Thee;
When we are strong, Lord, leave us not alone;
Our refuge be.
Be Thou for us in life our Daily Bread,
Our heart's true Home when all our years have sped.



ANDEX International

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