

UDXA DX UNIVERSITY

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November 12, 2011



Listening and finding DX!



It is not rocket science!



Before we get to the main subject - First a little pep talk....



It **does** take skill and some basic equipment to work DX, but **you can do it!**

- If you don't have the skill now, you can learn it.
- Your current HF station, whatever it is, is good enough to get started.

So lets go.....



Now hear this---

- This ain't life and death, trainee.
- If you ain't having **fun** then you are doing it wrong!



!



There are lots of different aspects of ham radio.

- I spent the first ten years that I was licensed involved with most of them. I was not a Dxer.
- **ARES/Civil Defense/MARS/RTTY**
- **Traffic nets**
- **Satellites**
- **Phone patches for missionaries overseas**
- **Clubs**
- **VHF Mountain Topping**
- **First legal 2 M repeater in USA. (AM phone)**
- **And on and on.....**

I stumbled onto some DX during that time. I probably had something like **20-30** countries worked in 10 years. ☹



K7SAI/K7SAJ Station- 1964



JA
~
CQ
HAM
Radio
Oct.
1964

K7SAI: 21Mcでは私が(1LZR)最初のJAだそうです。14cwにも出ているようで又彼の父もK7SAJです。彼は15才RigはTXが Knight-150. RXはNC-300, Ant. は 2ele です (提供 1LZR)

your
age

A W2GHK - DXpedition of the Month Special

SAN ANDRES ISLA, COLOMBIA

H K Ø A I

SOUTH AMERICA, ZONE 9

Greetings Om Victor H. Abrahams

is very pleased to confirm QSO of
7-12-65 2123 GMT on 14 Mcs. K7SAI

your report is 599 on AM 2XSSB

We also hope that this may be a new country confirmed for you.

QSO verified by John "99"

WORLD WIDE QSL VIA
JOHN R. LEARY, W9WHM
438 Hamilton Street
FORTVILLE, INDIANA

HOME PRINT

HL9KT KOREA

RADIO K7SAI QSO of 26 Dec 63

AT 2143 GMT EST UR 14 MC.

CW AM-SSB SIGS RST 569

XMTR: DX-40 25WTS OUT
2L SPECIAL

RCVR: MOSLEY CM-1

73 Bryce - Thx
for QSO & QSL
PSED TO BE UR FIRST
HL9. 73, Dave

Pfc DAVID E. HARJALA

F08AA TAHITI

RADIO CLUB OCEANIE

BOX 374 - PAPEETE

CFM QSO RADIO K7SAI

on 25-1- 196 4

at 1612 gmt

on 14 Mc-cw ANTZ

Rst 589 Opr: Phil - many thanks for QSO
QSL de Bryce - Botluis - chevo. Thx

QSL Tnx. 73

THEN I CAUGHT THE DX BUG.....



AND FOUND THAT

ANY STATION CAN WORK DX!

- You may be a **BIG GUN.....**
- a **LITTLE PISTOL.....**
- Or even something **LESS THAN THAT!**

THE BIG GUN.....

“THE USS MISSOURI”



THE BIG GUN.....

RADIO ARCALA - OH8X



The “little pistol”



The little pistol....

the average ham.



Or perhaps **something even less**
the “Flipper Class Station”



Something even less....
the “flipper class” station.



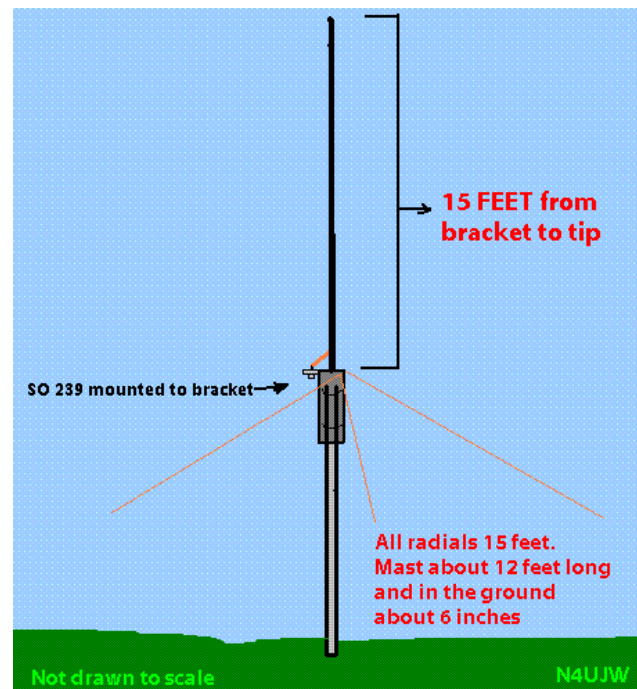
In 1971 K7SAI *started* to become a DXer.

My radio was a National NCX-3
80-40-20 M 100 watt transceiver



My antenna was a 20 M Ground Plane using 16 ft of conduit with a Coke bottle for an insulator. It was roof mounted with wire radials. The base was about 10 ft high sitting directly on the flat roof of my crummy student apartment.

Sort of like this:

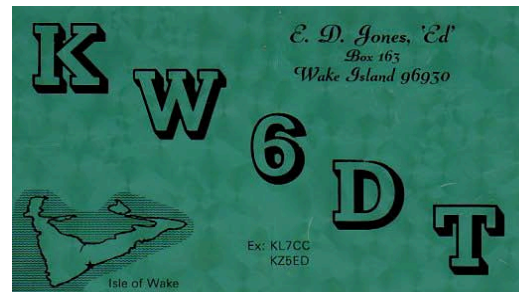


Working into Europe was no longer a fluke!



I even started to work some semi-rare ones.

Wake Island



Johnston Island



Midway Island



SO WHAT CHANGED FROM PRIOR YEARS?

Because.....I started to listen for DX.

Before that I only bumped into it by accident even though I had a pretty good Yagi and a higher power transmitter.

Now even with a much **smaller** setup my Dxing became much better.

GO AHEAD THE AERONAUTICAL MOBILE....

After college I spent a lot of time in things like this running RTTY for the Army. The van had a 400 watt synthesized HF radio and a 15 ft whip antenna. Sometimes I would tune the ham bands and try to work DX. The thing was very noisy inside. One time a ZS heard all of the background noise picked up by the mic as I was calling and thought that I was **in an airplane**.

ANY STATION CAN WORK DX!

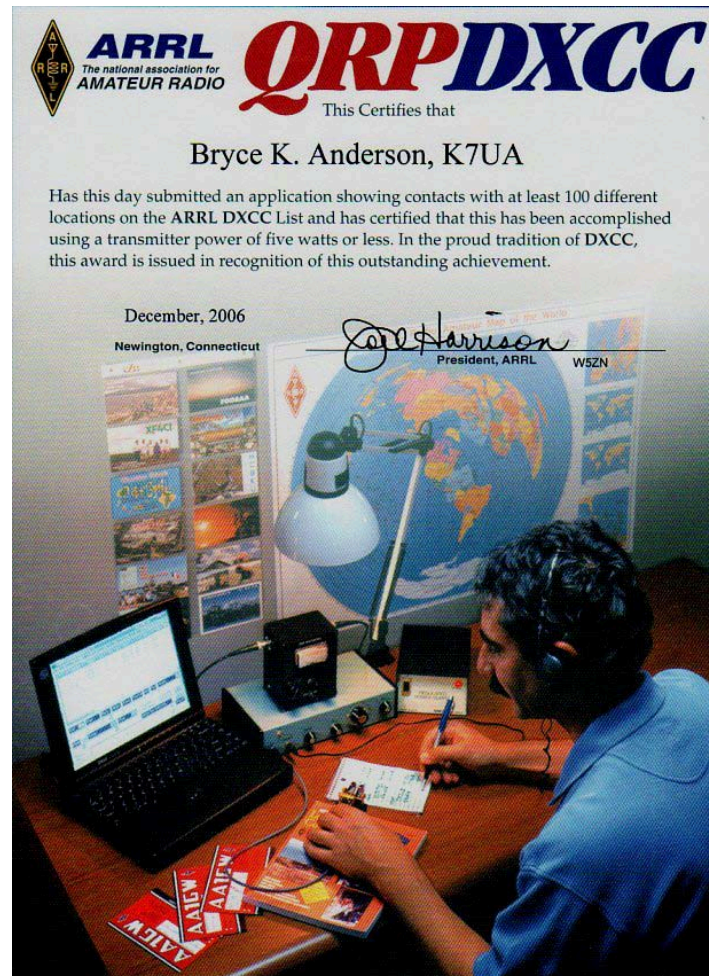
Not exactly an aeronautical mobile.



Dispelling Dxing myths!!

I can't work DX because I don't have an amplifier. Boo hoo.... 😞

Yes, you can. My QRP (5 watts) DXCC count for the past 5 years is at **206**. Over half of them were worked with a **vertical**.



**I CAN'T WORK DX
BECAUSE.....**

**I DON'T HAVE A BIG TOWER
AND BEAM. ☹️**

YES, YOU CAN!

- I'VE WORKED OVER 200 COUNTRIES ON A VERTICAL.
- AND WHILE WE ARE AT IT.....
- I CAN'T WORK DX BECAUSE I LIVE RIGHT AGAINST A MOUNTAIN. ☹️
- YES YOU CAN!
- I WORKED OVER 225 COUNTRIES FROM RIGHT AGAINST THE FOOTHILLS OF MT. TIMPANOGOS WITH A 2 ELEMENT BEAM.

I'm just a regular guy...

- And I've never had a tower over 42 ft tall.
- **If I can do it, so can you.**



NO MORE EXCUSES!!

- I'm not going to tell you that these factors don't matter, because they do. They **do not**, however, keep you from working DX.
- So lets get on with the key to working DX.
- **LISTENING.**

The humble student approached the Zen master,
bowing and slowly gaining the courage to ask:



Master..... What is the secret of
working DX?



The master smiled and simply replied:
“Listen. Always listen,
Grasshopper.



Listen? Why? Listen for what?

- **Dxer's are hunters!** Great hunters know what they are hunting, what it looks like, what it sounds like, and where it is likely to be found. We are looking for big game! In our case **we find it by hearing it.**



Why do we listen?

- We are trying to find the rare weak ones from far away.



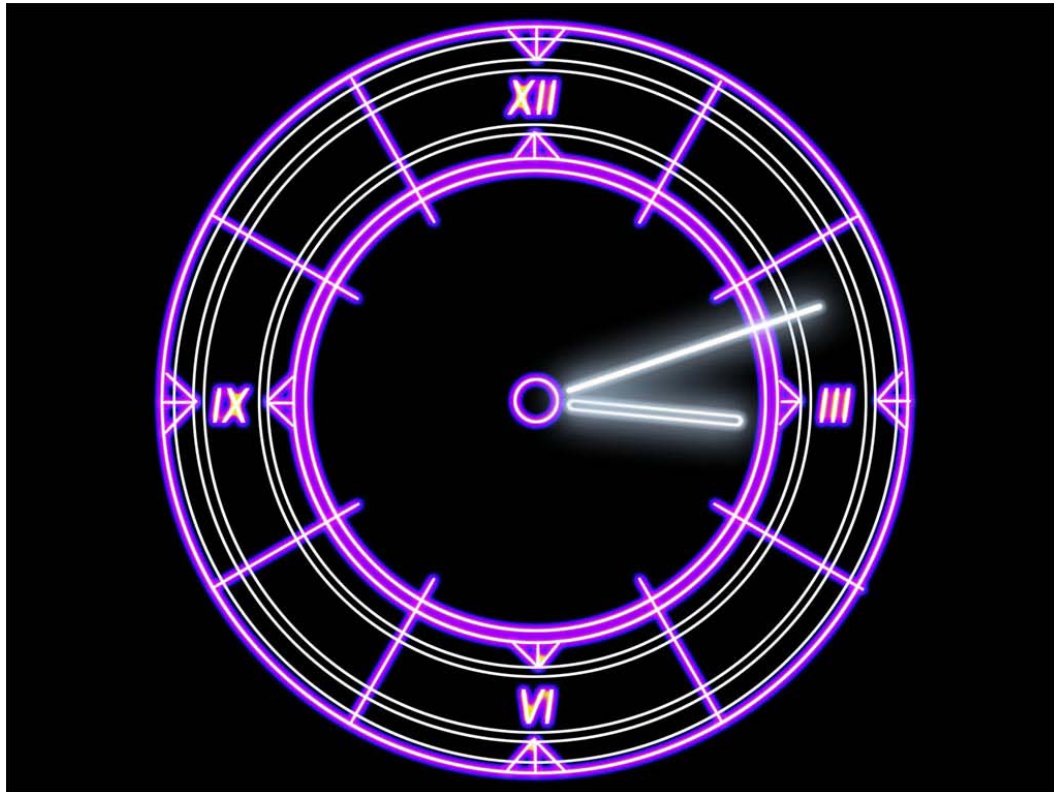
Remember this:

- If you find a **real gem** before anyone else does, then you can easily pick it up.
- You won't have any competition to stop you!



Don't forget that you may be the only one hearing him.

- Propagation can be very selective and may last for only a few minutes.



Keep listening!

- You might be surprised what you find!



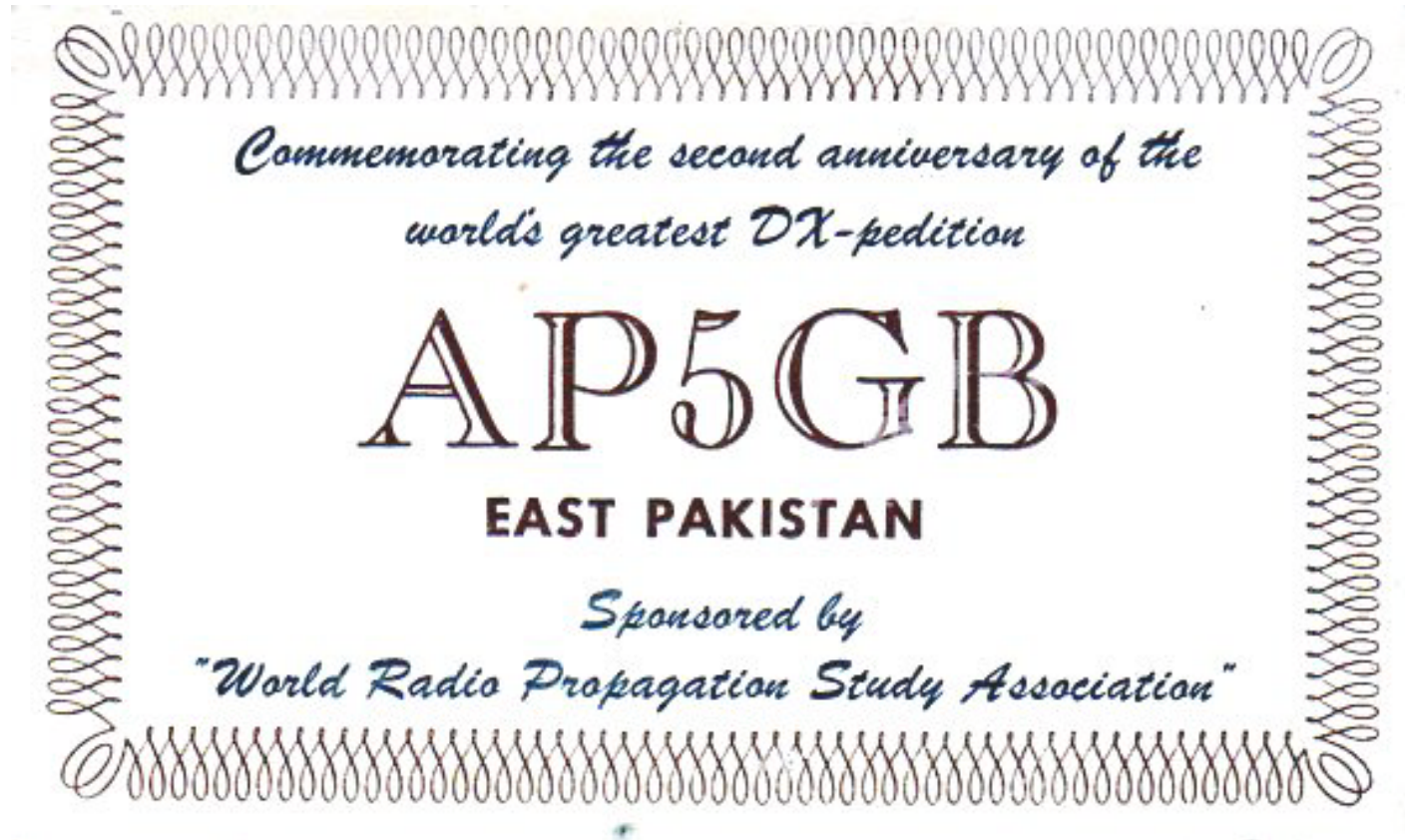
It is late at night in 1964 and K7SAI
is tuning up and down on a “dead”
20 M band.



NC300

Well look what I found!

He was the only signal on the
band and was calling CQ!



THAT IS WHY WE LISTEN!!!



K5LR

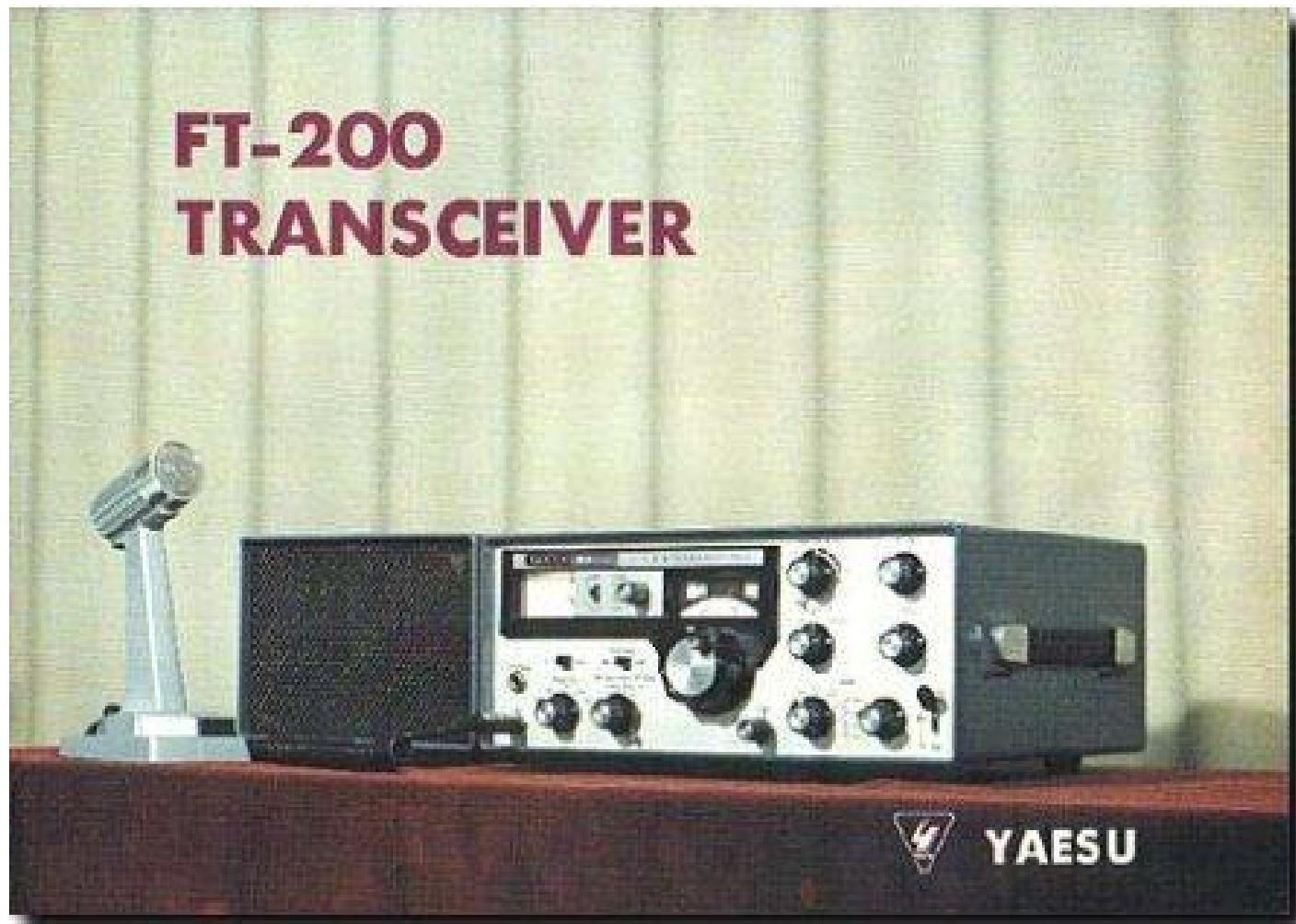
You will hear better with headphones!

- They will allow you to concentrate better.
- They will block out noises.
- They will keep the rest of the house from being bothered by your late night escapades.
- **TRUST ME ON THAT!**



It is now 1973 and K7SAI is a Dxer.

My shack includes one of these:



One of these:



And these:

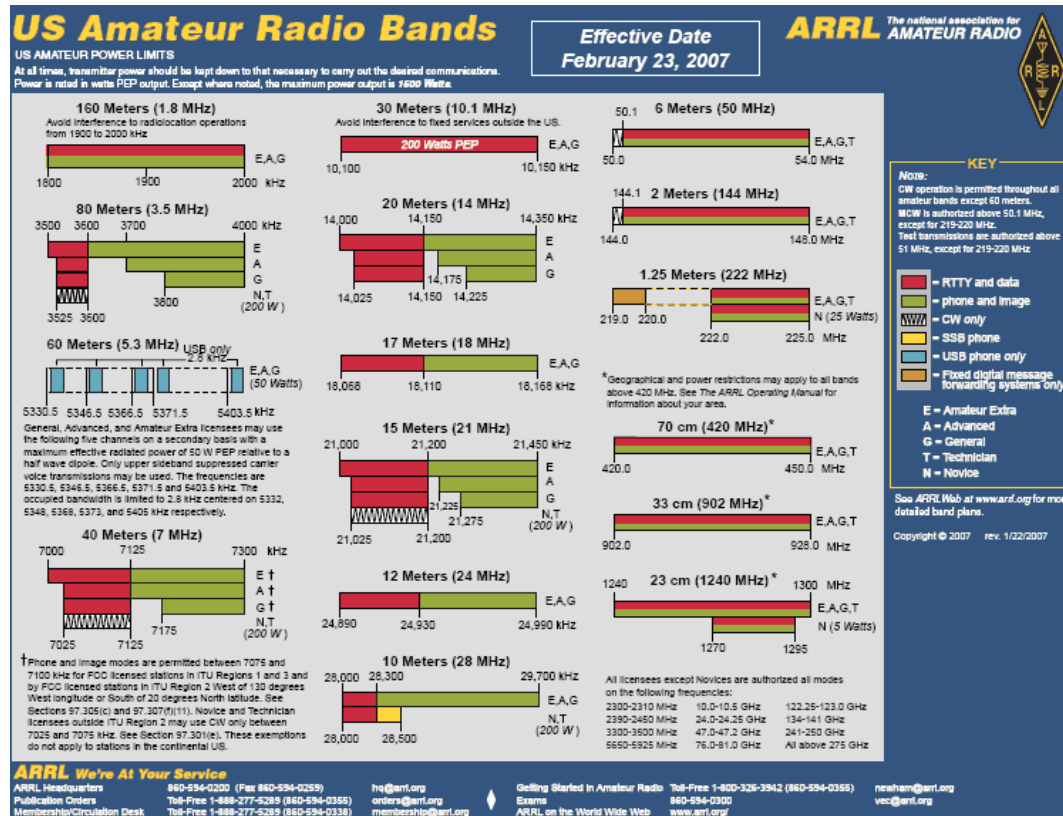


So I really needed some of these:

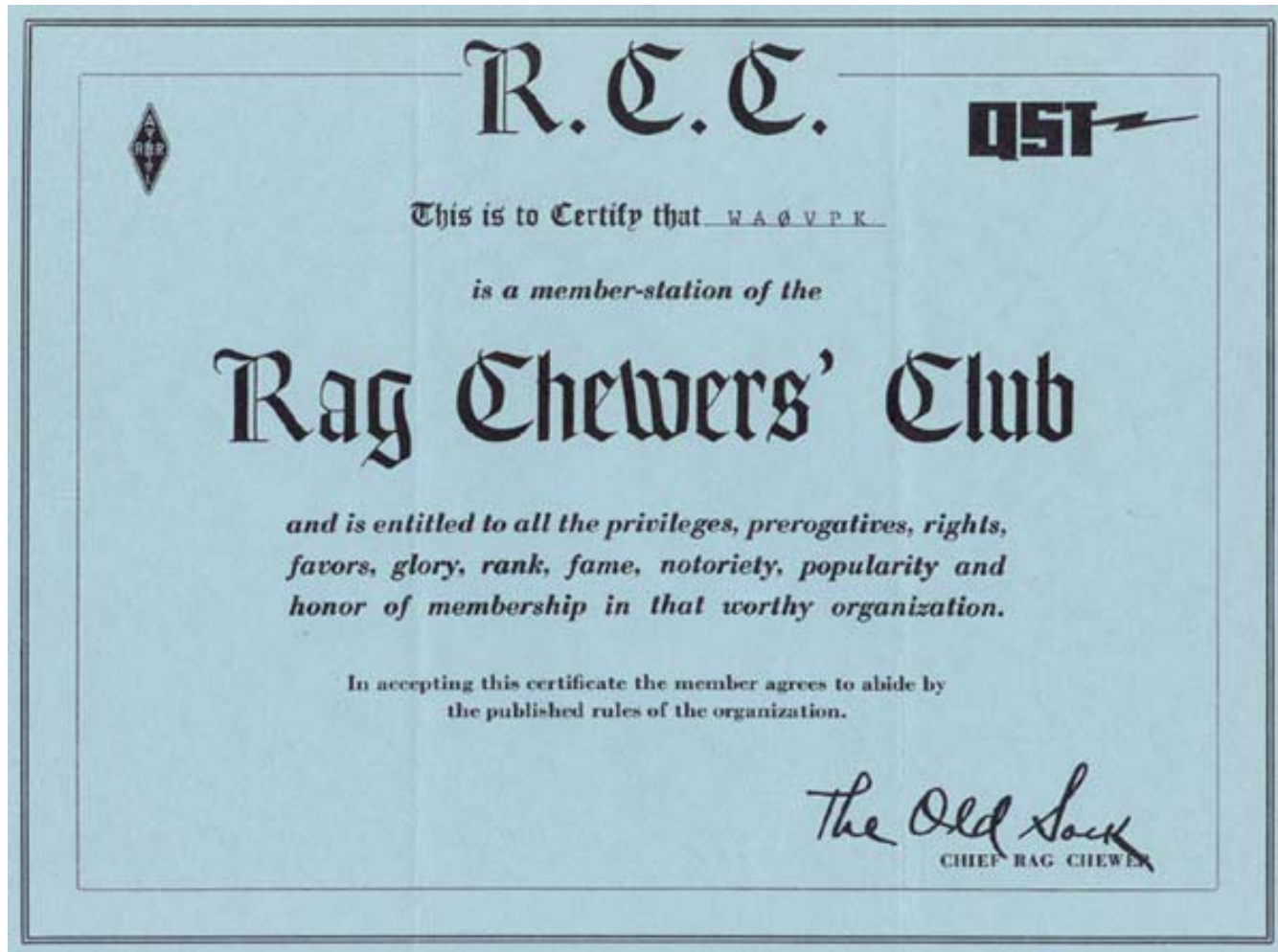


How to listen:

- Start at one edge of the band and slowly tune your VFO up or down the band listening to each station for a few seconds. Pay special attention to the DX portions of the band. The DX portion is usually on the bottom end of each sub-band, on both phone and CW.



You can skip over mundane stuff
like rag chews...



Pay special attention to weak
signals...



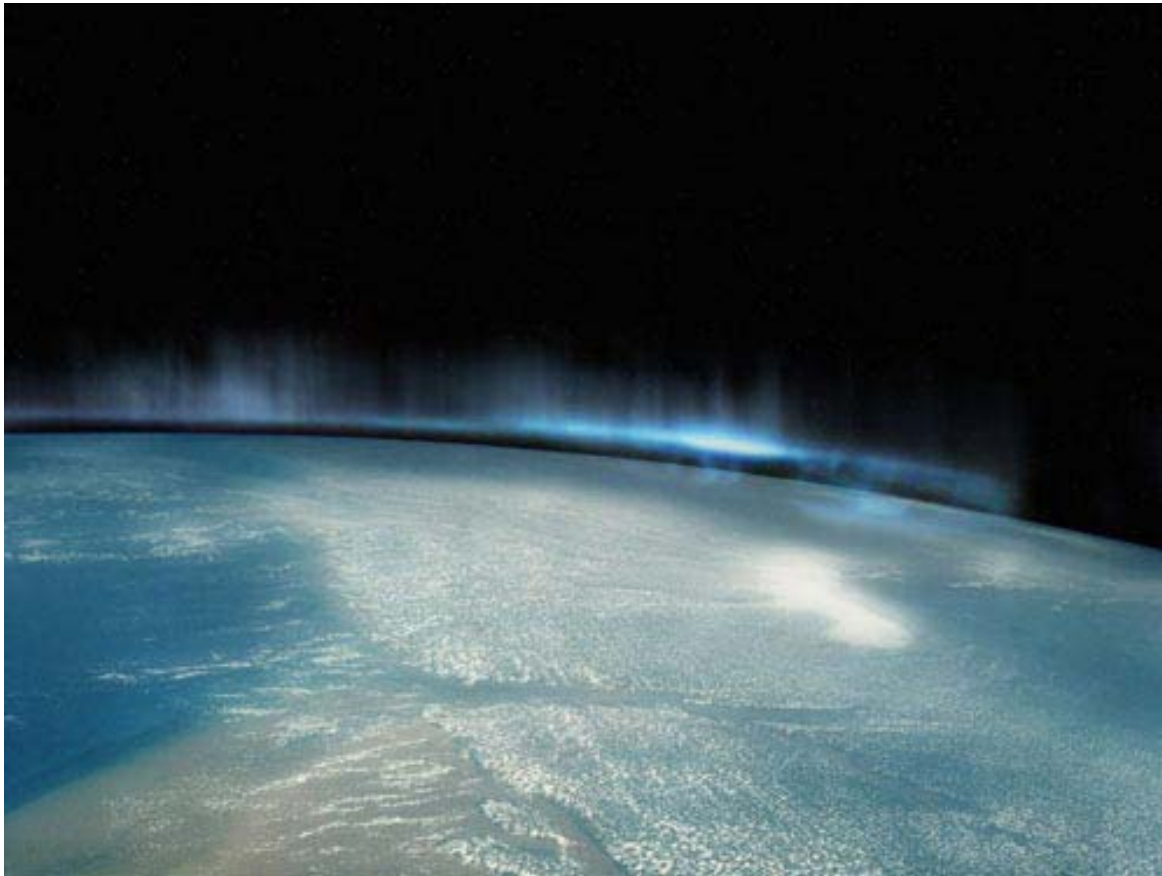
Pick out call letters....

They are the obvious way to tell if a station is DX.



Pay special attention to funny sounding signals.....

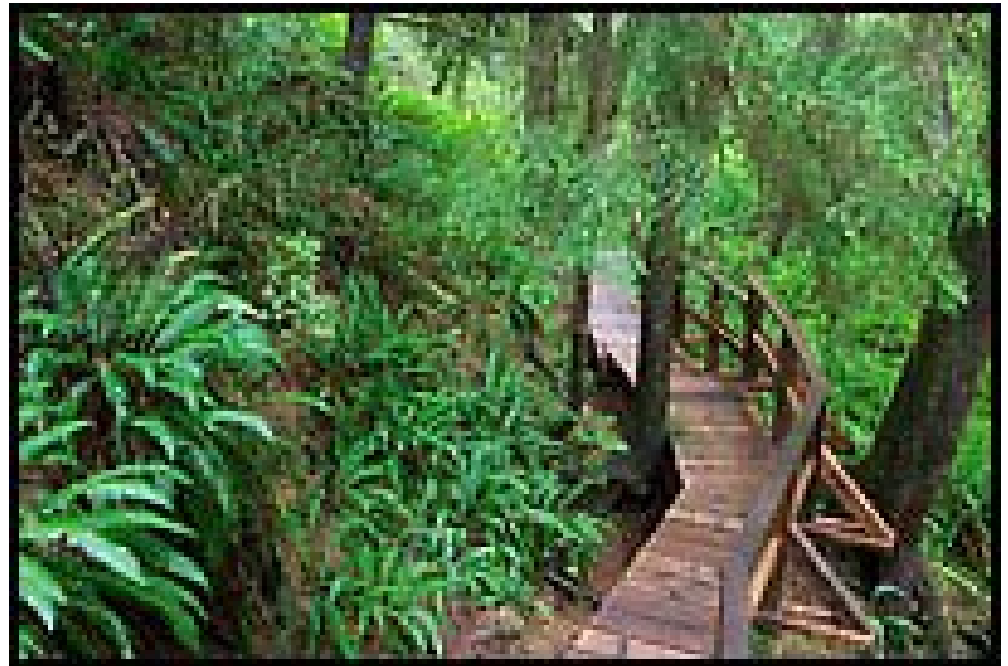
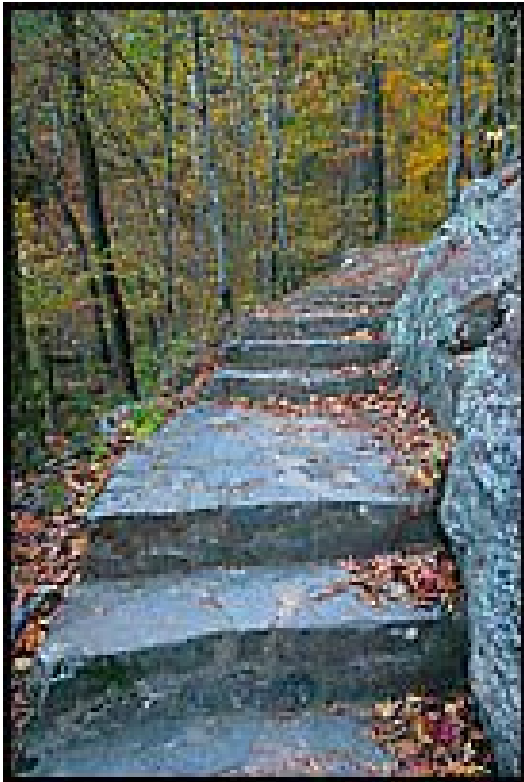
- By funny I mean having a fluttery sound caused by the aurora that is always present at the poles. It is called Arctic flutter.



**Aurora as
seen from
space.**

Or with an echo.....

- Caused by their signal arriving at your location via multiple paths.



Or with a poor CW note.
Chirp, chirp.



Or phone operators speaking in a
foreign language or with
accents.....

HP1AC



HZ1HZ

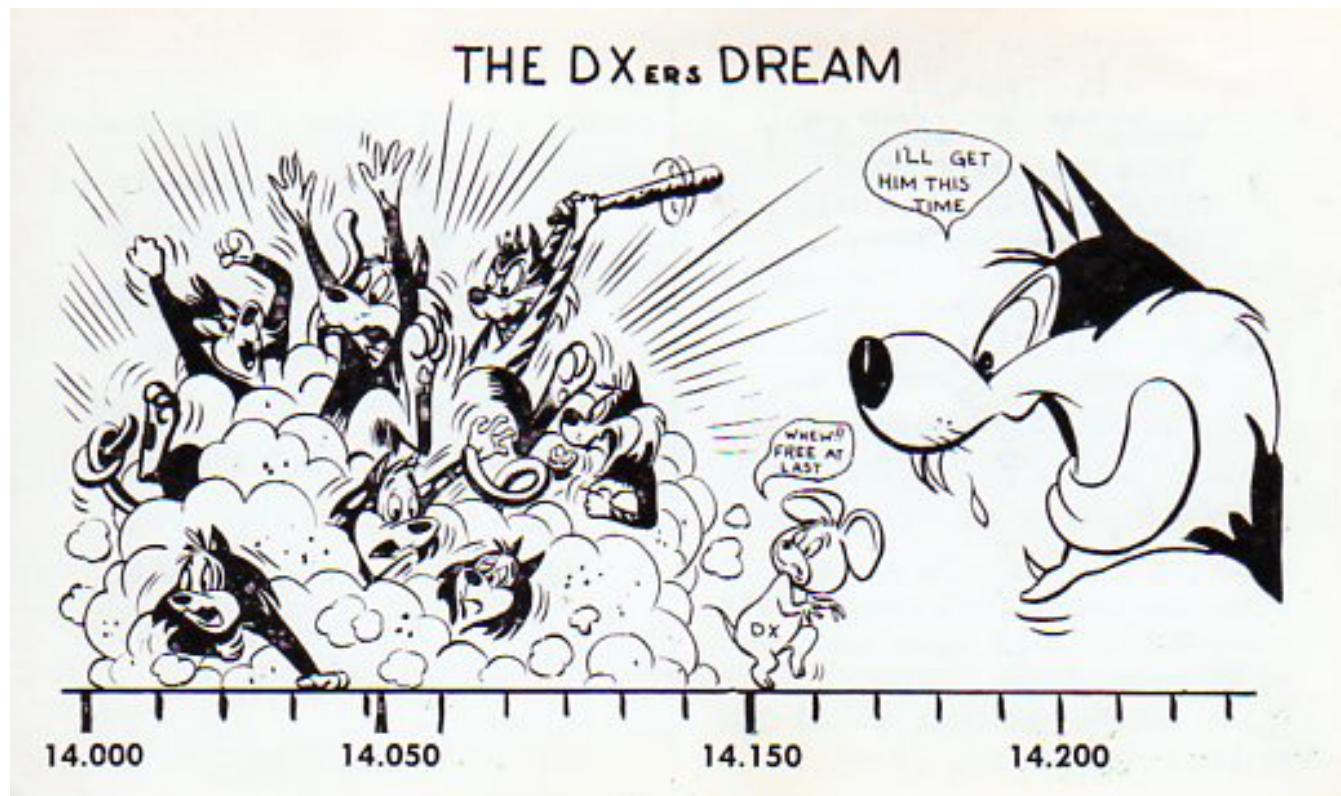


Or stations ripping off QSO's as fast
as they can go.....



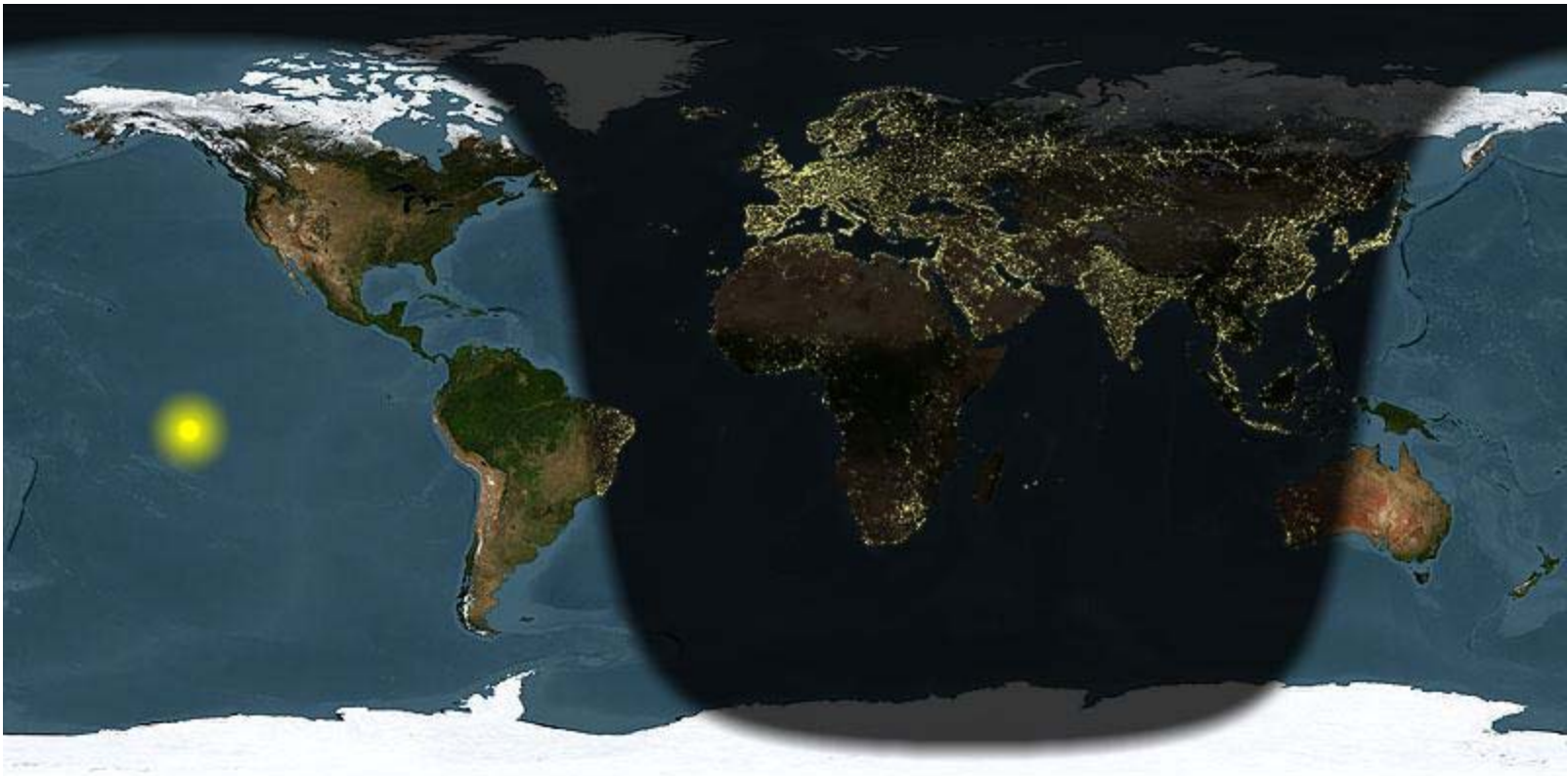
3Y0X

Of course when you tune upon a huge pileup you know that something of interest is on!

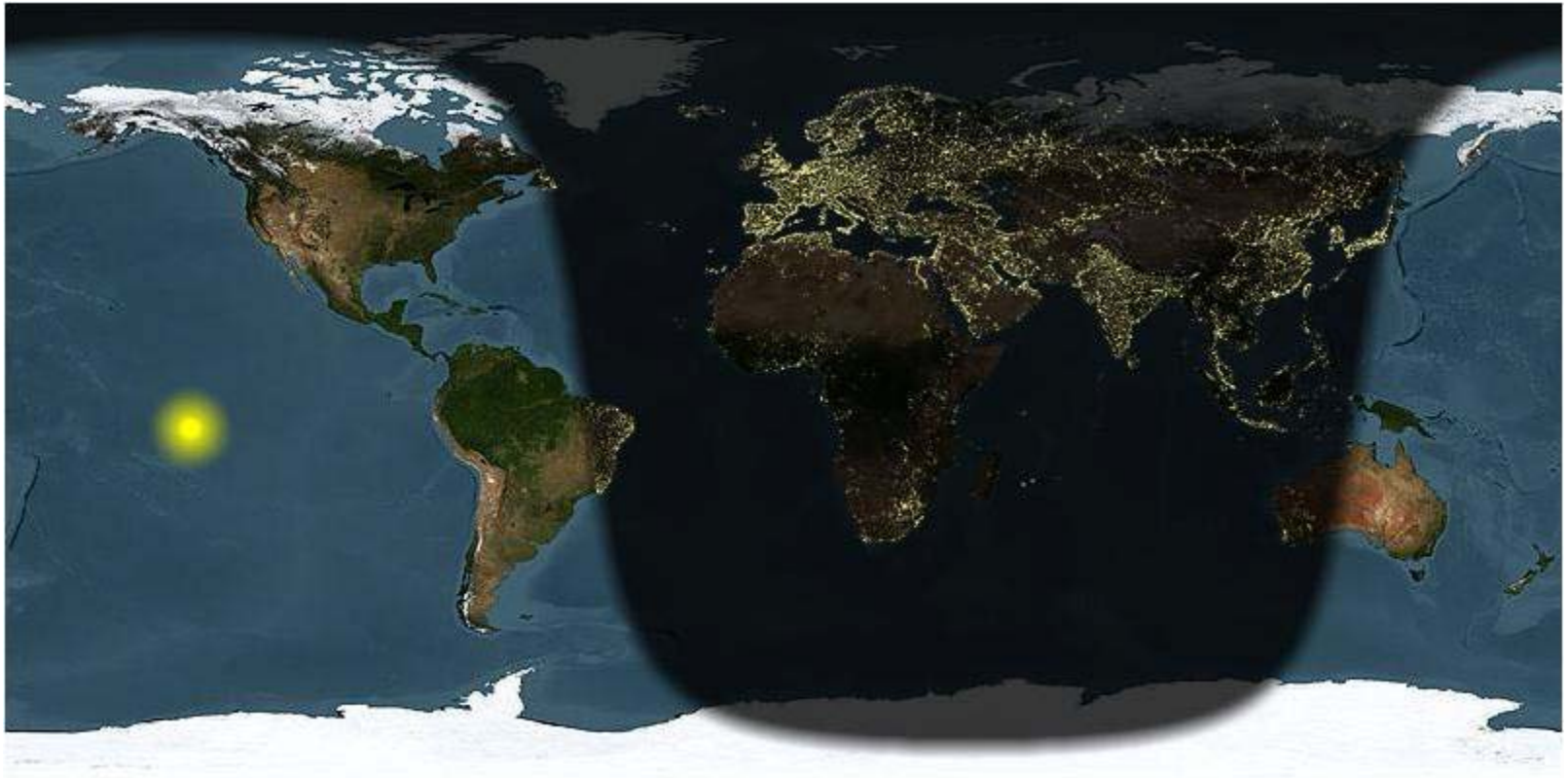


When should I listen?

- Pretty much anytime! Just remember the low bands are better in the dark and the higher bands are usually better in the day time.



Note the **line** between daylight and darkness on this map.



In astronomy that line is called the terminator.

- In ham radio propagation it is called the “gray line.”
- Enhanced propagation occurs along the gray line. Listen for it!

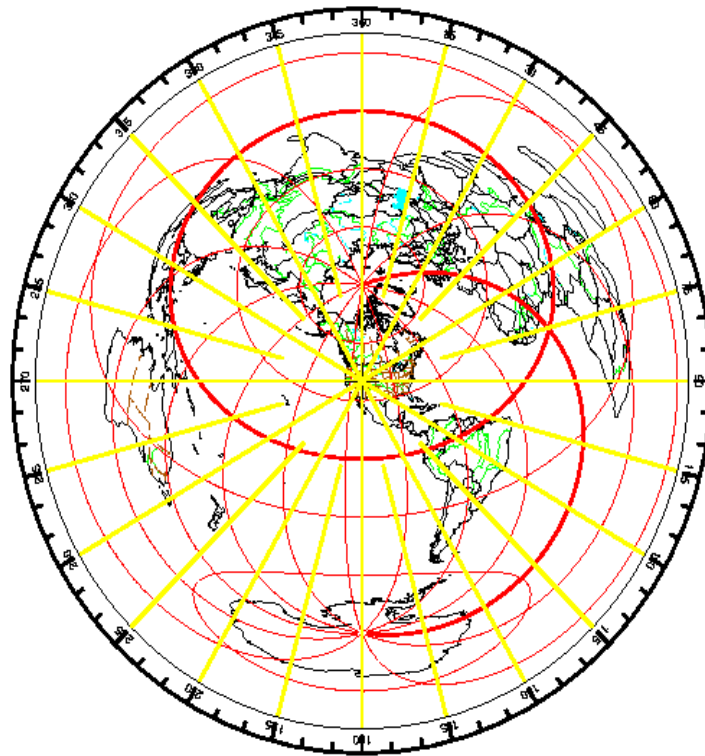
The world does not look like this.

- Mercator projections give you an incorrect idea of where to point a beam.



Use an azimuth map to point your beam for effective listening.

Test Map from Az_Proj Server



Azimuthal Equidistant Projection
From K7UA, American Fork, UT.
Radial scale: 2500km/cm

AZ_PROJ v1.1.6, Dec 2010, (C) 1994-2002,2010 Joseph Mack NAST, Michael Katzmann NV3Z
<http://www.wm7d.net/azproj.shtml>

I've found some DX! Now what?

- Great! Hold your horses just a little bit and don't just dive in!



Listen to the DX station for a little while!

- **He may be giving out instructions:**
- Like “EU (Europe) only!” So wait your turn!
- “Listening up 5.” He is working split.
- “The W7 only.” Don’t call unless you are a W7.
- **The DX station should always be in charge of the pile up. Listen** to how he wants to handle it.

OK. Now what?

- Listen some more. **Try to figure out the operator's pattern.** Your call will be much more effective if you time it well and call where the DX is actually listening.



I have a couple of small receiver tricks to teach you that will improve your listening ability.

- For maximum sensitivity, turn your **RF gain DOWN**. It is counterintuitive, but it works by disabling the automatic gain control in your receiver. AGC is intended to keep you from having your ears blasted out by strong signals. AGC will decrease the gain on even moderate strength signals if you let it.



And be careful with the noise blanker too.

- The NB can degrade the dynamic range of your receiver significantly in some radios, making a crowded band sound like a mish mash of garbage.



Are we there yet?

- Almost. I have one more golden nugget of knowledge and an interesting (I hope) DXing war story to tell you.



The second most valuable secret of DXing

- It has been said that “you can’t work them if you can’t hear them.” True.
- I’ve found this to be true too:
- “You can’t work them if you are not there!”



At times we all feel like this.

K7UA with a 200 watt transceiver and a vertical
vs. the **Hordes of Asia**. They are standing
between me and **BS7H**. I want that QSL!



Persist. You might just make it!



A DXing war story.

- Truth is stranger than fiction.



It's 1977 and K7UA is a pretty serious Dxer by now.

- I have one of these:



And one of these:



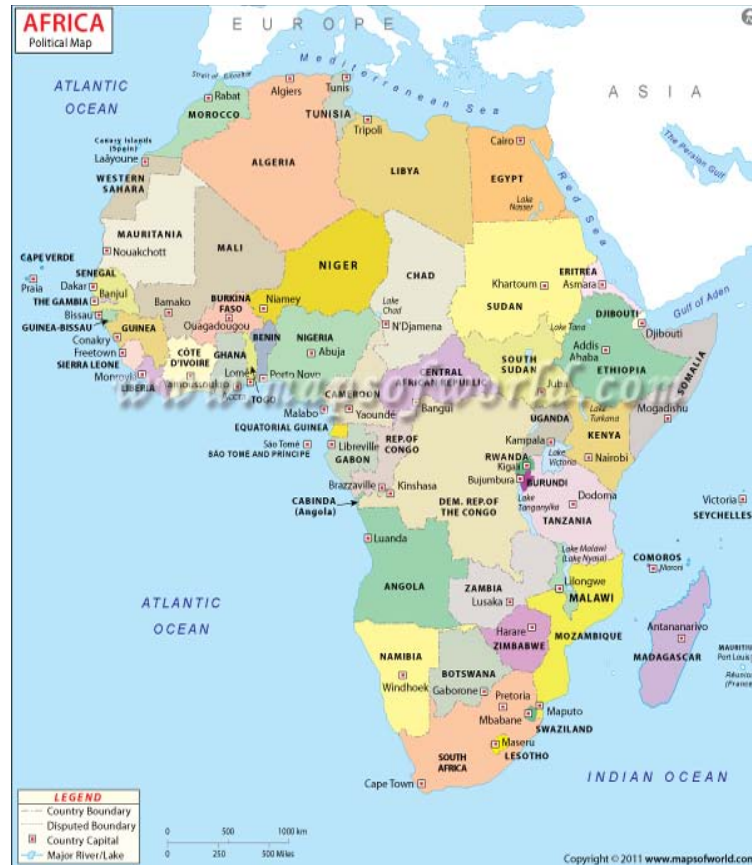
And a couple of these:



I'm in a dog fight on 15 M phone trying to work a new one in Africa.

- And I'm trying to tend a baby at the same time. ☹

Lesson: You can't pick the time when DX is available!



I'm calling and calling...

- And I'm not getting through, but
my **son did.**

Suddenly the DX Operator says: **I HEAR A BABY!**

- Embarrassing, but he got me through.



“THE NEW DXER’S HANDBOOK”

Written by: **BRYCE K. ANDERSON, K7UA**

April 27, 2011



Available free of charge!!!

at www.udxa.org under the “New Dxr’s Handbook” tab or at
www.qrz.com **search call sign K7UA.**

Any questions?



73 de K7UA

