



# *“Chasing DX”*

*"It's thrilling and it's exciting!!*

**Scott Long, K8SM**

**CQ DX CQ DX CQ DX DE K8SM K8SM KS8M**



**CHASING DX MAY BE  
HAZARDOUS TO YOUR  
HEALTH. IT HAS BEEN  
KNOWN TO BE VERY  
ADDICTING. THE SIDE  
EFFECTS ARE UNKNOWN  
AT THIS TIME.**

# Who is K8SM?

- ☐ Born and raised in Newark Ohio.
  - ☐ Have been licensed since 1977.
  - ☐ Married (Teresa KD8EIJ); two daughters, Lindsay (KD8EIP) 19, Sydney, 16.
  - ☐ Other calls: WD8NSD (Novice & General) & AA8SM (Advanced & Extra)
- 
- ☐ Chasing DX since 1978 (30+ years)
  - ☐ Have worked every country (338+9 deleted) on the DXCC list.
  - ☐ Currently have DXCC Mixed, SSB, CW, RTTY, 5BDXCC
  - ☐ Worked All Zones (WAZ) & Worked All Continents (WAC)
  - ☐ Mainly operate CW – 99.99% (*BEST MODE EVER!*)
  - ☐ Use RTTY & PSK & enjoy RTTY contesting



## *Who is K8SM? (cont'd)*

- ❑ 160M / 174 countries (Inv-L)
- ❑ 80M / 241 countries (Dipole)
- ❑ 40M / 285 countries (Dipole)
- ❑ 30M / 174 countries (Vertical)
- ❑ 20M/17/15M/12 & 10 (Mosley CL-33 & Mosley Pro-57B)

# Chasing DX.....

- What does the term “DX” mean?
- Awards: CQ & ARRL (DXCC, 5BDXCC, WAZ, WAC)
- QSL Cards: Sending & Receiving (Direct, Bureau, LoTW, eQSL)
- Bands & Modes
- DXCC Country List (338 Countries)
- DXpeditions – What are they?
- Operating (Working) Split (TX / RX)
- Set your alarm clock!
- What is *greyline*?
- DX Spotting (Packet Radio Nodes, DX Clusters, Telnets)
- DX Bulletins & Clubs (ARRL, QRZ DX, The Daily DX, OPDX, 425 DX News)

# What does "***DX***" mean?

The term "***DX***" is an acronym for long distance or, foreign contacts. Any contact off the continental United States is considered DX.





**ARRL**  
The national association for  
**AMATEUR RADIO**

<http://www.arrl.org>

# DX Awards

## DXCC

One of the most prestigious of ham radio awards is the ***DX Century Club (DXCC)*** award. This is a very difficult award to achieve, and in most cases, requires several years to attain. For one to be issued this award, undisputed proof must be submitted to A.R.R.L. headquarters in Newington, CT. Verifications are made to assure that all requirements for a valid contact are met and there are no alterations made to the original "proof" documentation.

At least **100** countries must be "confirmed" in order for the DXCC award to be issued.



# 5-BAND DXCC (5BDXCC)

Following the achievement of working DXCC there is an even more difficult award, *5-BAND DXCC*. One must supply proof of contact with at least 100 different countries on each of the 5 major amateur bands in order to qualify for this award and there is a nominal fee for the very nice plaque provided by the A.R.R.L.

# Separate Mode Awards

Even after that, one may *chase* DX with the goal in mind of confirming 100 countries strictly by using voice (SSB or AM), CW (International Morse Code), RTTY (radio Teletype), and other modes of communications. The Mixed award is a combination of any of the modes.



# Separate Band Awards

And it doesn't end with DXCC and 5BDXCC.....

After you have done all of that you can start tallying up all of those countries for Separate Band Awards to see how many you have worked on 160, 80, 40, etc. Some of course you more than likely have already worked to achieve DXCC.

Again you will need to confirm 100 countries for each of these bands. You can do this on any of the modes that we've already talked about, SSB/AM, CW, RTTY, etc. strictly by using voice (SSB or AM), CW (International Morse Code), RTTY (radio Teletype), and other modes of communications.

<http://www.arrl.org/awards/dxcc/>



# DXCC Country List

<http://www.arrl.org/awards/dxcc/rules.html>

- There are currently 338 entities (countries) on the DXCC list.
- To earn DXCC Honor Roll award you would need 329 countries.
- To earn the #1 Honor Roll award you would need 338 countries, this is many years down the road, this award does not come over night.

<http://www.arrl.org/awards/dxcc/dxcclist.txt>

**There are presently 338 places on the globe that have "country" status so far as ham radio is concerned.**

**Maybe 100 of them wouldn't sound like countries to non-hams but do qualify as countries to the hundreds of thousands of ham radio operators around the world.**

**A big part of the ham radio hobby is trying to establish contact with all 338 of them. That's the good news.**

**The bad news is that no one lives in some of those "countries". No one. Even when the country is inhabited, there may be no one with a ham license living there. On top of that, many of these countries are isolated and difficult to get to, or the current government doesn't allow its citizens to have a Ham radio.**



**Since many dedicated hams worldwide (called Dxers) want to accumulate contacts with as many countries as possible, it's necessary that a few hardy souls journey to these places, laden down with ham gear, tents, food and so forth in order to (briefly) put these countries "on the air" so other hams can get credit for contacting them.**

**Credit to Bob, K4UEE**

**<http://www.k4uee.com/>**

The American Radio Relay League, Inc.

# DX CENTURY CLUB

This Certifies that

Has this day submitted evidence to the American Radio Relay League showing two-way communication with other amateur stations in at least one hundred different countries. This certificate recognizes outstanding performance and attests to membership in the DX Century Club.





1

ARRL • DXCC  
HONOR ROLL



The American Radio Relay League

ARRL  
**DXCC**



**HONOR  
ROLL**

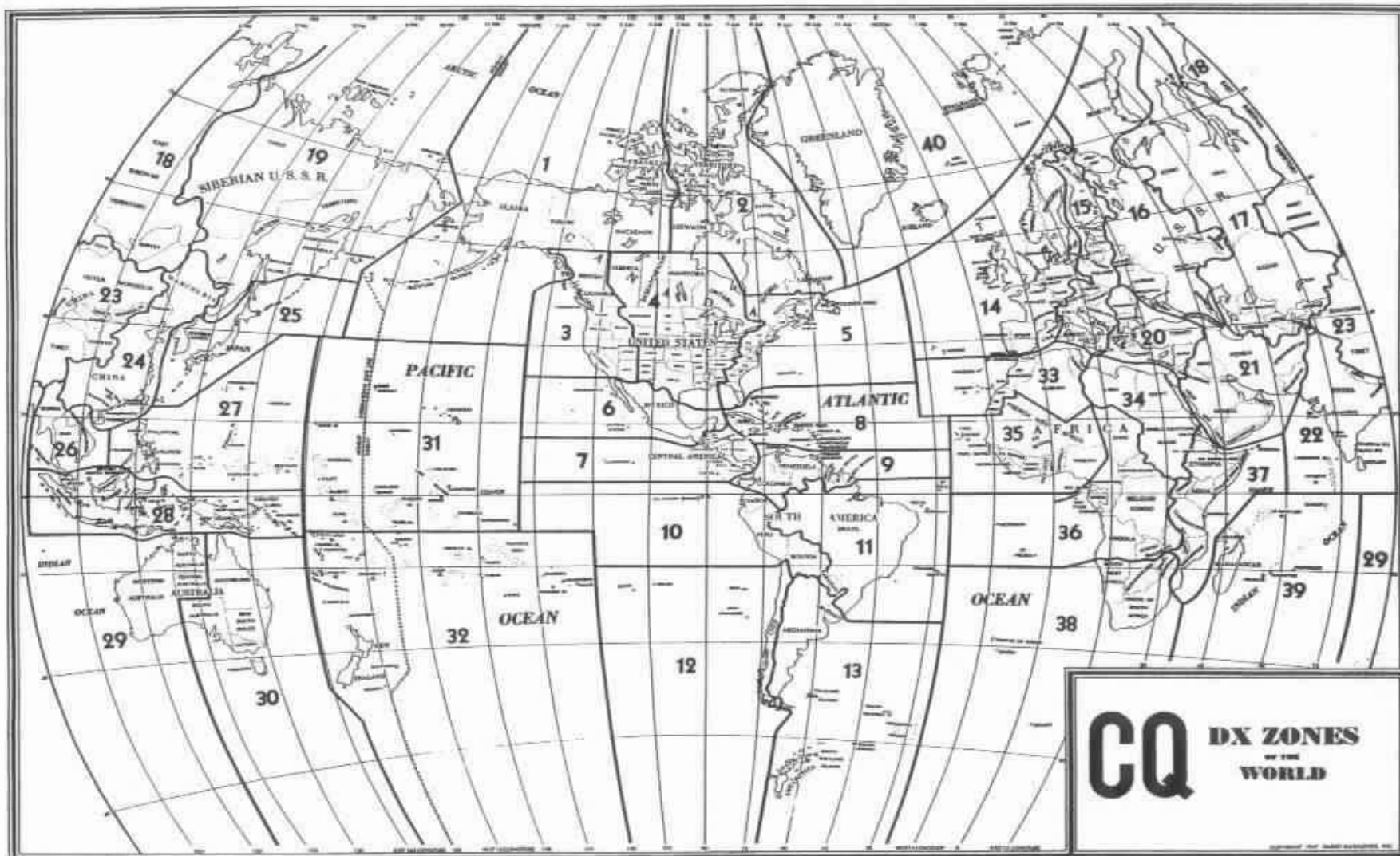




<http://www.cq-amateur-radio.com/>

# CQ Magazine

- Has a DX program similar to the ARRL's.
- Cards must be presented for these awards as well.
- Another award that they have is the Worked All Zones award.
- The world is sectioned into 40 different zones.



NOTE: This map is a reproduction of the official 1947 CQ WAZ map, and is intended to be used for general reference only. Over the years numerous adjustments have been made to Zone boundaries for various reasons. Always consult the latest CQ WAZ Rules for the most up-to-date Zone delineations.

<http://www.cq-amateur-radio.com/wazrules.html>



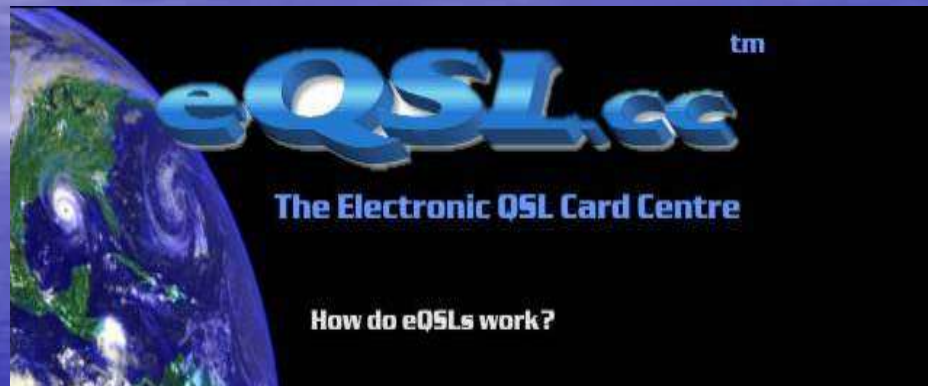
## QSL Cards – Confirmation of your contact (QSO)

- **QSL** cards, as they are called, are the most used method of proving valid contacts to the League, or the DX program that you are involved with. At times, it takes over a year for a ham in a foreign country to respond and get a QSL card back to the requesting ham. Add to that the cost of postage to send a card overseas, multiply times 100 and you can easily see how cost can become prohibitive; especially for teens and senior citizens on a fixed income.
- You can receive QSL cards direct, via a QSL bureau, ARRL Logbook of The World (LoTW) and eQSL. LoTW and eQSL of course is via the Internet.

# QSLing Resources.....



<http://www.arrl.org/lotw>



<http://www.eQSL.net>



Incoming &  
Outgoing  
QSL Bureau

<http://www.arrl.org/qs/qslin.html>

<http://www.arrl.org/qs/qsout.html>

Direct QSLing (addresses)

<http://www.qrz.com>





# HF Bands / Frequencies (Mhz.) / Modes

- 160M (1.800-2.000)
- 80M (3.500-4.000)
- 40M (7.000-7.350)
  
- 30M (10.100-10.150)
- 20M (14.000-14.350)
- 17M (18.068-18.168)
- 15M (21.000-21.450)
- 12M (24.890-24.990)
- 10M (28.000-29.700)
  
- SSB / AM (Phone)
- CW (International Morse Code)
- Digital (RTTY, PSK, etc...)
- Satellite
- EME (Moonbounce)

**ARRL Band Plan:**

**<http://www.arrl.org/FandES/field/regulations/bandplan.html>**



# Working the DX station.....

- Radio's today have dual VFO's
- VFO A (RX) & VFO B (TX)
- The DX station calls on his transmit (TX), *i.e.* 14.195.  
frequency (QRG) and he/she will announce where they are listening (RX), most of the time you will find them listening UP.
- You may hear the operator say *UP 5*, or even *DOWN 5*.
- Keep in mind that the DX station can't just listen UP 5 for everyone, so most of the time they will start with UP 5 and also listen up higher to try and spread out the calling stations, also known as the PILE-UP.
- Listen, listen, listen and listen again before your transmit (TX), it will save you a lot of wasted time, and a lot of persuasive words to get you to shut up from the FREQUENCY COPS!
- Who are the FREQUENCY COPS? Is it the FCC? ARRL?
- No, it's just everyone that's annoyed by someone transmitting on top of the DX station. They want you to listen and move.

# DX Spotting.....

- Packet Radio Nodes (Radio & Antenna)
- Telnets (Internet)
- VE9DX (<http://ve9dx.weblink.nbtel.net/telnet/sites.html>)
- DX Summit (Not live spots, it updates every few minutes)  
<http://www.dxsummit.fi/DxSpots.aspx>
- All of these are a resource or way for us to find the DX station, just by checking the spots on the packet clusters.



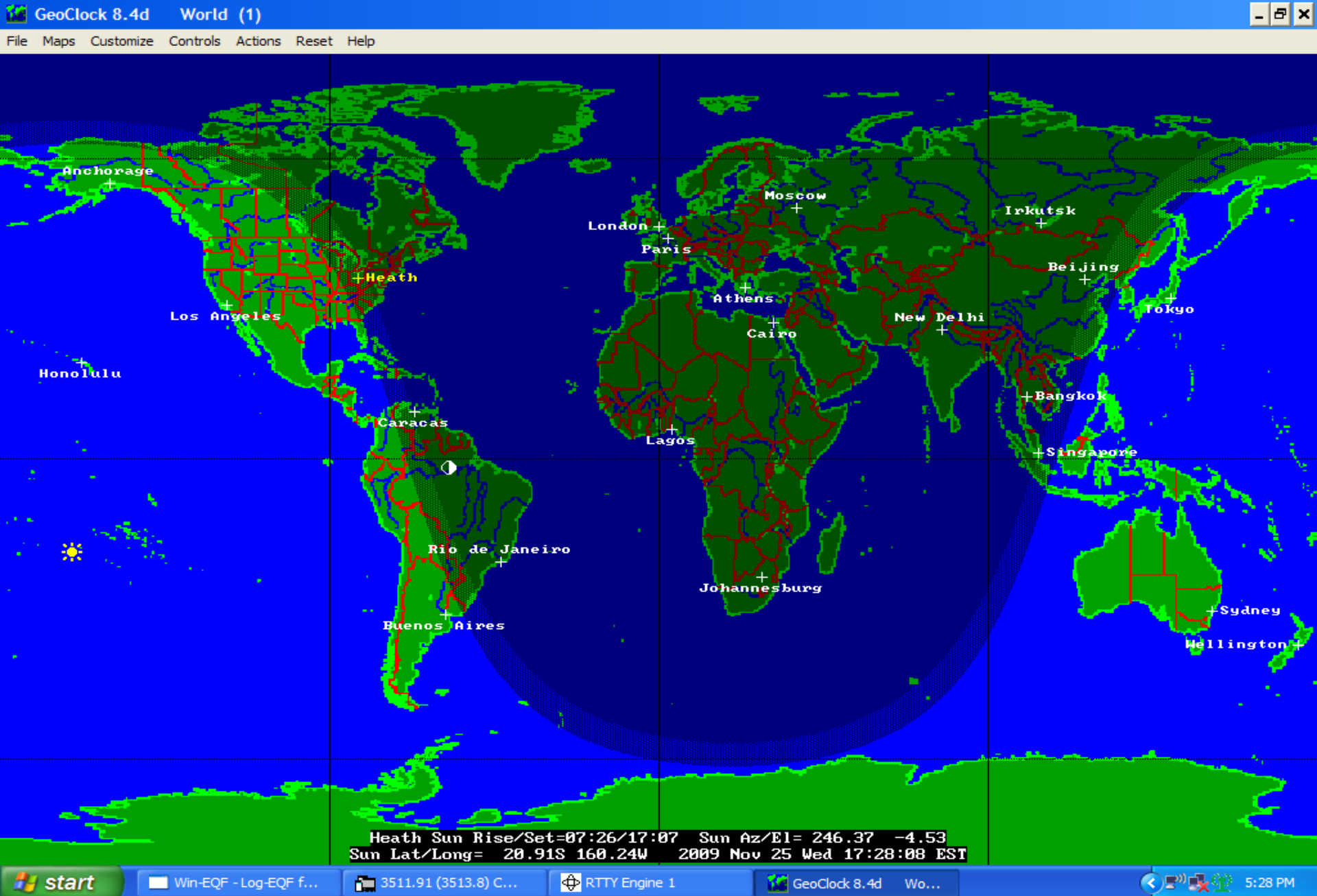
```
Win-EQF - Log-EQF for Windows V1.94
Telnet Connection: ka5eyh.drhnet.com 12-19-09 20:20:16
DX de OK1DVM: 3602.0 OL6X cq OK RTTY for JA 2016Z
DX de IK4XCL: 7052.1 IZ4JMA OK RTTY 2016Z
DX de AF4MI: 14195.0 ZS8TV sri call corr 2016Z
DX de K6III: 14034.0 VE3KP 2017Z
DX de SJ2W: 3513.7 9A800VZ 2017Z
DX de F8CRS: 7056.8 K4GMH 2017Z
DX de EA8ZM: 21305.0 ZR1ADI GOOD S/8 2017Z
DX de JA0RUG: 3501.5 XU7KOH cq 2016Z
DX de IK2QEB: 3592.6 HA8AL RTTY 2018Z
DX de PY3IT: 14195.0 ZS8TV Data not found on QRZ.com 2018Z
DX de UT2XQ: 3510.8 UT7XX 2018Z
DX de G4OJB: 3776.2 GM0KPK 2018Z
DX de F4DPT: 14088.1 P40YL 2018Z
DX de UA4LU: 3557.0 E73ESP 9A 2018Z
DX de K300: 7020.6 OH6M 2018Z
DX de 9A5X: 7012.1 YU1UN 2016Z
DX de K4TD-1: 14028.9 VE4MG 2018Z
DX de DB7GE: 7035.0 UE3XFF rff-147..tnx f psk-31 qso 2018Z
DX de K6III: 14036.0 VE2XAA 2018Z
DX de LZ1NK: 7022.5 CT7/LZ3ND 9A jesj 2018Z
DX de RN9AA: 3501.3 XU7KOH cq DX 2019Z
DX de K6III: 14026.1 N4PN 2019Z
DX de 9A5X: 7009.0 UP7A 2017Z
DX de LZ2DF: 1823.7 F5VIH 2019Z
DX de EA1AUS: 3588.9 C31CT RTTY TEST 2018Z
DX de NS2X-7: 21026.3 VG7W RAC - BC 2019Z
F1 AC F2 Print F3 Download F4 Upload F5-F10 Macro PgUp Scroll Esc
sh/ham kj8n
sh/ham w7ci
sh/www
```



## What does “*grey line*” mean to DX chasers?

- Grey line means a lot to us!
- It's a very important window of time and it's a prime time to work DX.
- The “*grey line*” is a band around the Earth that separates daylight from darkness.
- Propagation along the grey line is very efficient. Ham radio operators and shortwave listeners can optimize long distance communications to various areas of the world by monitoring this band as it moves around the globe.

<http://dx.qsl.net/propagation/greyline.html>



<http://geoclock.home.att.net/geo84d.zip>

# Here is another look at the "grey line" from Space

GeoClock 8.4d Space - N America (2501)

File Maps Customize Controls Actions Reset Help

Heath  
Sun Rise/Set  
07:26/17:07  
Sun Az/EI  
249.86 -8.60  
  
Sun Lat/Long  
20.91S 165.96W



2009 Nov 25 Wed 17:51:01 EST



# Propagation (prediction) program by W6EL (freeware)

W6ELProp

## W6ELProp Path Information

**K8SM (A) to Christmas Island (B)**  
**11/25/2009**

### TERMINAL A

Latitude 40.00 N  
Longitude 82.37 W

**Sunrise** 1229 UTC  
Gray line 27/207 deg

**Sunset** 2204 UTC  
Gray line 333/153 deg

### TERMINAL B

Latitude 10.50 S  
Longitude 105.67 E

**Sunrise** 2229 UTC  
Gray line 21/201 deg

**Sunset** 1101 UTC  
Gray line 339/159 deg

### Bearings

#### A to B

#### B to A

Short path 344.2 deg  
Long path 164.2 deg

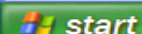
12.2 deg  
192.2 deg

|                          |          |           |                 |         |
|--------------------------|----------|-----------|-----------------|---------|
| <b>Short-path Length</b> | 16641 km | 8985 nmi  | 10340 mi (U.S.) | (Polar) |
| <b>Long-path Length</b>  | 23391 km | 12630 nmi | 14534 mi (U.S.) | (Polar) |

<http://www.qsl.net/w6elprop/>

Click the button to view the prediction

Prediction ready



Win-EQF - Log-EQF f...

GeoClock 8.4d

Wo...

Chasing DX Presenta...

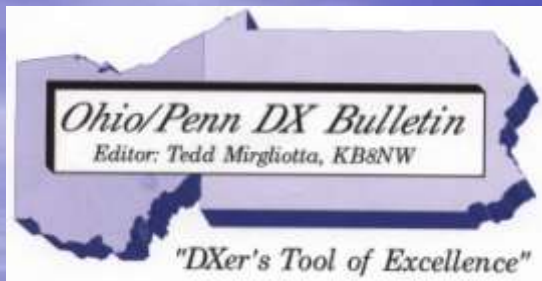
Microsoft PowerPoint...

Prediction Ready

There are several DX organizations that support DXpeditions and supply us with details and information about DXpeditions.

- International DX Association (INDEXA) (<http://indexa.org/>)
- **INDEXA has a daily net on 14.236 at 2330z about DX news and QSL routes**
- Northern California DX Foundation (NXDXF)  
<http://www.ncdxf.org/>
- Ohio/Pennsylvania DX Association (OPDX)  
[www.papays.com/opdx.html](http://www.papays.com/opdx.html)
- American Radio Relay League (ARRL DX Bulletins)  
<http://www.arrl.org/w1aw/dx/>
- QRZ DX / The DX Magazine (<http://www.dxpub.com/>)
- The Daily DX (<http://www.dailydx.com/>)
- 425 DX News (<http://www.425dxn.org/>)
- Lowband Monitor (<http://www.lowbandmonitor.com/>)



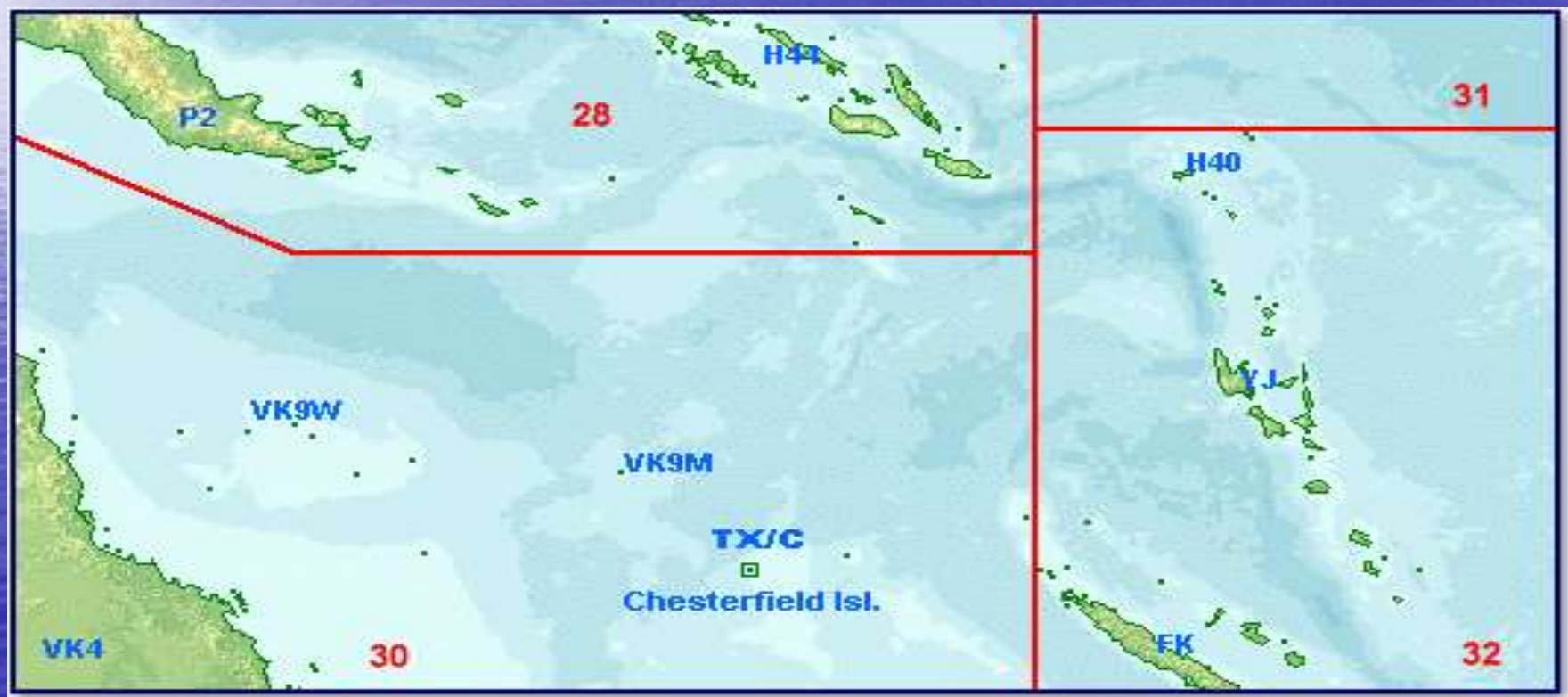




First DXpedition to Chesterfield Island  
was in 2000. The island was approved and added to the  
ARRL DXCC country list March 23, 2000.



<http://www.n4gn.com/tx0dx/>





# Scarborough Reef (Vietnam & China)

# BS7H

黃岩島  
SCARBOROUGH REEF  
2007













- The YI9PSE DXpedition team plans to visit Kurdistan-IRAQ in the Spring of 2010. We will work all HF bands/modes. We will make every effort to work the low bands (160/80/40) as well as to provide YI to the US West Coast, KH6, ZL, VK and JA amateur community.

**YI9PSE Team**

<http://www.yi9pse.com/>



Newark Amateur Radio Association (NARA)

<http://nara.eqth.info/>

73's

Happy DXing!!

Scott, K8SM