

# DX College

(Introduction to DXing)



<http://599dxa.org>

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Slides by K2FF and W5UE

# Why are we here ????

*“Give a man a fish, and you’ll feed him for a day.  
Teach a man to fish, and you’ve fed him for a lifetime.”*  
- Chinese Proverb



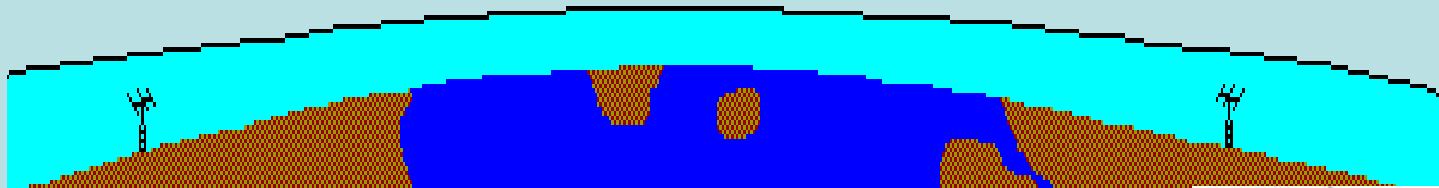
A fishing (DX) lesson

# Topics

- DX IS ????
- Location, Location, Location
- Recent/Ongoing Top10 DXpeditions
- Bands, Frequencies, Modes
- Basic Station Equipment
- Administrative Tools
- Sounds of DX
- QSLs & Awards
- Contests
- DX Tips
- QSL Tips
- References
- Questions

# DX IS ????

- DX = Distance Communications
  - **Generically** – Making contacts with stations outside of the country, usually over long distances such as Europe, Asia, Australia, Africa, etc



- **Relative** – 2000+ miles on HF, 200 miles on VHF/UHF, 20 miles on microwave
- **Adventure** – Allows to travel around the globe without leaving our chairs
- **Infectious** – DXers don't have normal sleep patterns...some don't sleep at all
- **Exciting** – Working an all time new one can be like bagging that 10-point buck

# Location, Location, Location

- **Countries** can be traditional (Canada, Spain, France, Japan, etc) or geographical/political “entities”, i.e. Clipperton Island, Scarborough Reef, United Nations Building, etc



There are currently 340 “entities” on the ARRL DXCC List



Scarborough Reef

# Recent/Ongoing TOP-10 DXpeditions



# Bands, Frequencies, Modes

- On the HF (High-Frequency) bands, you'll find DX signals on all modes including SSB, CW, digital (RITTY, Pactor, Amtor, Packet), SSTV(Slow Scan TV) and ATV(Amateur TV), and even FM (but rarely).
- Band Characteristics
  - 160 Late evening/night; best in winter 1820-1850 kHz. (CQWW 160m CW Contest Now!)
  - 80/75 Late evening/night, early morning; best in winter CW: 3500-3530; SSB: 3.795
  - 40 Early evening until early morning; Fall through Spring CW: 7000-7030; SSB: 7.125-7.200
  - 30 Sometimes like 40, sometimes like 20. Try it! CW and digital only; mixed anywhere
  - 20 Open ABOUT 24 hours, just about year round CW: 14.000-14.040; SSB: 14.150-14.250
  - 17 Sometimes like 20, sometimes like 15. Days/Eve. CW: 18.068-18.100; SSB: 18.110-18.168
  - 15 AM to Noon: EU/AF; Midday to Evening: JA/AS CW: 21.000-21.050; SSB: 21.150-21.350
  - 12 Sometimes like 15, Sometimes like 10. Try it! CW: 24.090-24.930; SSB: 24.930-24.990
  - 10 Lots of surprises! Dawn & Dusk...follow the sun! CW: 28.000-28.100; SSB: 28.300 & up
  - 6 Much like a fire alarm...tends to catch you off guard. CW/SSB: 50.100 – 50.250

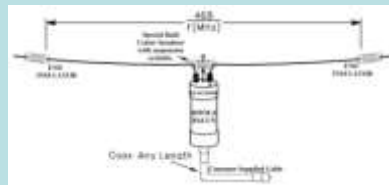
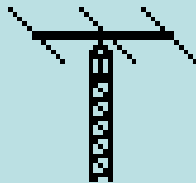
A good DXer is a good Short Wave Listener FIRST.  
Listen, Listen, Listen! Tune, Tune, Tune!

# Basic Station Equipment

- License with HF privileges
  - All levels have SOME HF privileges, but General Class or higher is better
- An HF Transceiver, Microphone, CW Key, and/or Digital Interface



- An Antenna or 2 or 3 or .....



Does NOT need to be elaborate  
Simple wire antennas will work

- The Desire
  - The “intangible”... can’t be bought... something (perhaps defective) inside us
- A Network of like minded friends and mentors (ELMERS).....



# Big Gun or Little Pistol

- Big Gun
  - W0AIH - <http://www.qth.com/w0aih/towerlist.php>
- Little Pistols

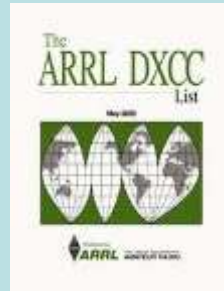
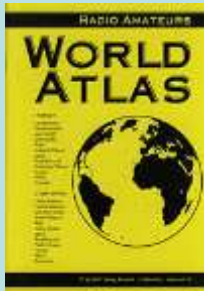
**Folks like you and  
me, for the most part!!!**

**The single most important  
station element is YOU,  
The Operator**

# Administrative Tools

- Basic Toolbag

- World Maps/Entity Lists



- DX Cluster

- Available via 2M (in most areas) or Internet (telnet/web)
- Most logging software contains built-in packet cluster window
- <http://www.ve7cc.net/>
- <http://www.dxsummit.fi/>
- <http://www.dxwatch.com>

- Daily/Weekly Bulletins

- QRZ DX (\$25/year): <http://www.dxpub.com/QRZ-DX.html>
- Daily DX Bulletin (\$49/year): <http://www.dailydx.com/>
- 425 DX Bulletin (FREE): <http://www.425dxn.org/>
- Ohio/Penn DX Bulletin (FREE): <http://www.papays.com/opdx.html>
- ARRL DX Bulletin (FREE): <http://www.arrl.org/w1aw-bulletins-archive-dx>

# Administrative Tools

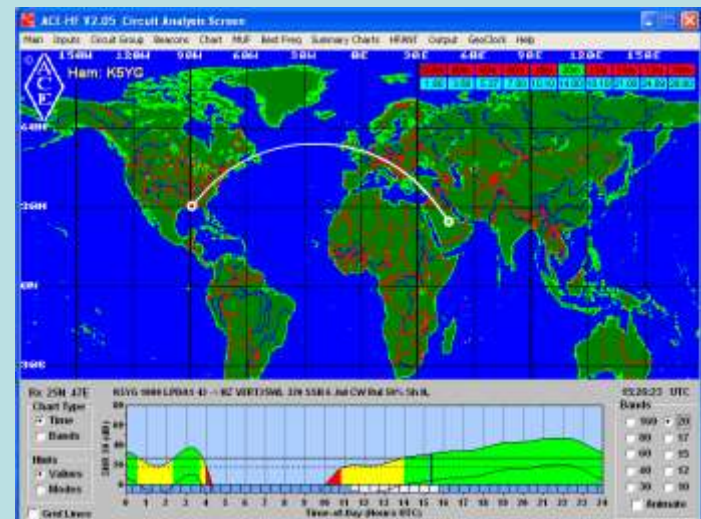
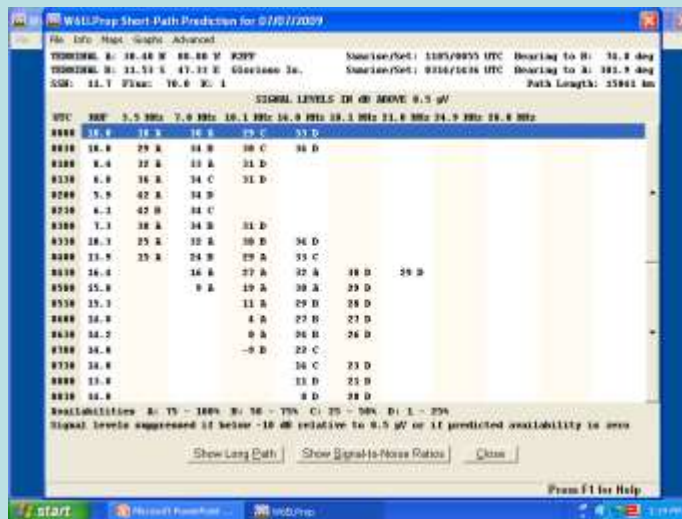
- Basic Toolbag
  - Logging Software
    - **General Logging**
    - XMLog <http://www.xmlog.com>
    - Ham Radio Deluxe <http://www.ham-radio-deluxe.com/>
    - Easy Log <http://www.easylog.com/eng/index.htm>
    - LOGic <http://www.hosenose.com/radio/>
    - Win-EQF <http://www.eqf-software.com/>
    - WriteLog <http://www.writelog.com/>
    - DX4Win <http://www.dx4win.com/>
    - DXbase <http://www.dxbase.com/>
    - DX Labs Suite <http://www.dxlabsuite.com/>
    - **Contest Logging**
    - N3FJP's Amateur Radio Software <http://www.n3fjp.com/>
    - N1MM+ Logger <http://n1mm.hamdocs.com/>
    - Win-Test <http://www.win-test.com/>
    - CT <http://www.k1ea.com/>

# Administrative Tools

- Basic Toolbag

  - Propagation

    - The W6ELProp <http://www.qsl.net/w6elprop/>
    - ACE-HF Pro <http://hfradio.org/ace-hf/>
    - Dynamic collection of propagation information <http://dx.qsl.net/propagation/>
    - NW7US propagation information website [http://hfradio.org/lastminute\\_propagation.html](http://hfradio.org/lastminute_propagation.html)
    - NCDXF/IARU Beacon Transmission Schedule <http://ncdxf.org/beacon/beaconschedule.html>



# Administrative Tools

- Basic Toolbag
  - Tracking Tools

## DXCC Tracking

The image shows a page from the ARRL DXCC List. It is a grid with columns for call signs and rows for countries. The countries listed include Alaska, Canada, United States, Mexico, Central America, Caribbean, South America, Europe, Africa, Asia, and Oceania. The call signs are listed in columns, with some countries having multiple columns of call signs. The page is labeled 'DXCC LIST' at the top and 'Page 1' at the bottom.

## DXPedition Tracking

Dxpedition XYZ (1-10 July)			
Band	CW	SSB	RTTY
160m	0600z/7July		
80m	0433z/6July		
40m		1045z/4July	
30m			
20m			
17m	1815z/3July		
15m			2123z/1July
12m			
10m			

Either commercial tools such ARRL's DXCC List or home grown spreadsheets, databases, etc

# Sounds of DX

- Calling CQ - S53IV
  - <http://www.youtube.com/watch?v=5BuRjhXkRcQ>
- CW Contest - TM6A
  - <http://f6irf.blogspot.com/2007/11/cqww-cw-contest-tm6a-audio-clips.html>
- Collection of 2012 Sound Bites
  - <http://hamgallery.com/dx2012/>

# Memories (QSL Cards)

- **QSL Cards** – Written confirmation from the station you contacted verifying that you had a successful QSO. Confirmation is required for award submissions



# QSLing – Methods and Tips

- **Direct:** Traditional method of obtaining paper QSLs
  - PROs – Written confirmation, attractive wallpaper, more personal, good for ANY award
  - CONs – Can be slow, expensive, can become an administrative burden
  - Either direct to DX station or their QSL manager (if he/she has one)
- **ARRL Bureau:** ARRL provides incoming/outgoing bulk QSL service
  - PROs – More economical than direct, suitable for non-critical QSLs
  - CONs – SLOOOOW, not 100% reliable, not all hams use
  - Incoming service free to all (you have to send SASEs to bureau manger)
  - Outgoing fee based to ARRL Members
- **Electronic:** Growing in acceptance/use
  - PROs – Quick, reliable, economical
  - CONs – Impersonal, not accepted for all awards, not all hams use
  - Examples: LoTW, eQSL, GlobalQSL
- **Tips:** Do your homework!!!
  - W5UE - <http://w5ue.net/qsI-slide1.html>
  - AC6V - <http://www.ac6v.com/qsItips.htm>
  - **ALWAYS** check station info on QRZ.COM, web site, newsletters, etc for specific instructions – not all stations exchange QSLs the same or by all of the above methods



# Rewards of DXing (Wallpaper)

- **Operating Awards** – ARRL DX Century Club (DXCC), CQ DX Award. etc – for awards, you must also obtain confirmation of the contact (QSL cards and/or electronic)



# Contests...A DXer's Friend

- More than a competition
- Opportunities exist to achieve:

## 100 Entities In 48 Hours

W5UE - CQWW CW 2011				
Band/Mode	Worked	Confirmed	Cards	LoTW
Mixed	119	100	10	96
CW	119	100	10	96
160	0	0	0	0
80	37	29	6	23
40	77	59	6	56
20	66	44	2	42
15	86	69	3	66
10	88	72	7	68
Bands/Countries	354	273	24	255

## 50 States in 24 Hours

W5UE - ARRL SS 2012			
Band/Mode	Worked	Confirmed	LoTW
Mixed	50	45	45
CW	50	45	45
160	0	0	0
80	19	16	16
40	40	32	32
20	36	30	30
15	29	24	24
10	9	6	6
Bands/States	133	108	108

- Note QSL success rate using LoTW

# Contests Calendars

- **ARRL**
  - <http://www.arrl.org/contest-calendar>
- **CQ**
  - [http://www.cq-amateur-radio.com/cq\\_contests/cq\\_annual\\_contest\\_calendar/cq\\_annual\\_contest\\_calendar.html](http://www.cq-amateur-radio.com/cq_contests/cq_annual_contest_calendar/cq_annual_contest_calendar.html)
- **WA7BMN Contest Calendar**
  - <http://www.hornucopia.com/contestcal/contestcal.html>

Don't fear contests, we all start somewhere!!!  
QSO Parties are a great place to get your feet wet,  
MSQP first weekend in April  
ALQP first weekend in June

# A Few DX Tips That Work

- **Goals:** Always have at least one current goal...measurable/trackable
- **Listen:** Spend at least twice as much time listening vs transmitting
- **Study:** DX stations have operating habits...use DX Summit search
- **Tune:** Spin that dial...go shopping...DX stations like to call CQ
- **Catfish:** Check the bottom 5 kHz of each band for bottom feeders
- **Volume:** Weak signals are often better at low volume...less QRM/N
- **Dual Receive:** There are two sides to every story...and split QSO
- **3-2-1 Go:** Delay your transmit a second or two during DX pileups
- **Recorders:** Memory keyers/voice recorders outlast most humans
- **WARC Bands:** 17 SSB by day and 30 CW by night...elbow room
- **Learn CW:** It's not going away and 3B8CF operates 99.9% CW
- **Low SWR:** Use antennas that are resonant...every watt counts
- **NEWS:** North, East, West, South...use beam headings/check LP
- **Contests:** Enter ones where MS is multiplier...you will be popular

# References

- Some Basic DX Resources
  - ARRL DXCC Page <http://www.arrl.org/awards/dxcc/>
  - ARRL QSL Service <http://www.arrl.org/qsl-service>
  - Logbook of the World (LoTW) <http://www.arrl.org/logbook-of-the-world>
  - DX Code of Conduct <http://dx-code.org/>
  - AC6V DX 101 <http://ac6v.com/DXSAMPLE.htm>
  - DX Scape (web cluster) <http://www.dxscape.com/>
  - NG3K Announced DX Operations <http://www.ng3k.com/Misc/adxo.html>
  - eQSL <http://www.eqsl.cc/qslcard/Index.cfm>
  - GlobalQSL <http://www.globalqsl.com/>
  - Intro to HF Propagation  
<http://www.ips.gov.au/Category/Educational/Other%20Topics/Radio%20Communication/Intro%20to%20HF%20Radio.pdf>

# References

- Content sources
  - <http://www.dslreports.com/faq/15690>
  - <http://www.qsl.net/crosscarc/pdf/DXing101.PDF>
- Clipart
  - <http://www.amateurradio.bz/clipart/index.html>

# QUESTIONS & THANK YOU

If you are viewing this outside of our live presentation  
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Slides by K2FF and W5UE