

DX BEST PRACTICES

BARA 2013

NIKO, AA2NI

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DX BARA Standings

Show of Hands

How many have ALL?

How many have Over 300 DXCC awards?

How many have over 200 DXCC awards?

How many have over 100 DXCC awards?

How many want to learn about DX?

DX & BARA Members

- The BARA club is fortunate to have some of the top DX'ers in the country
- We have quite a few members with over 300 confirmed DXCC
- We have few who are missing only one to a few to have the complete sweep
- Talk to them and learn from the best in the field

DX CC– SOME FACTS

- DX- DISTANT EXCHANGE
- CURRENT DX ENTITY COUNT – 340
- DXPEDITION – SINGLE OPERATOR OR A GROUP, OPERATING FROM A RARE LOCATION
- Typical AWARDS –
 - DXCC (100) , 5 BAND DXCC
 - Work All Zones
 - MODES – PHONE, RTTY, CW

DX CC– CRITERA

From the ARRL Site

- 1. Political Entities
 - 196 Countries
 - 193 Recognized by the UN
- 2. Geographical Entities
 - Islands separated by more than 350 KM from parent
 - Malpelo island
 - Scarborough Reef
- 3. Special Areas
 - Vatican City
 - UN HQ
- 4. Ineligible Areas
- 5. Deletion Criteria

ARRL DXCC List

Current Count 340

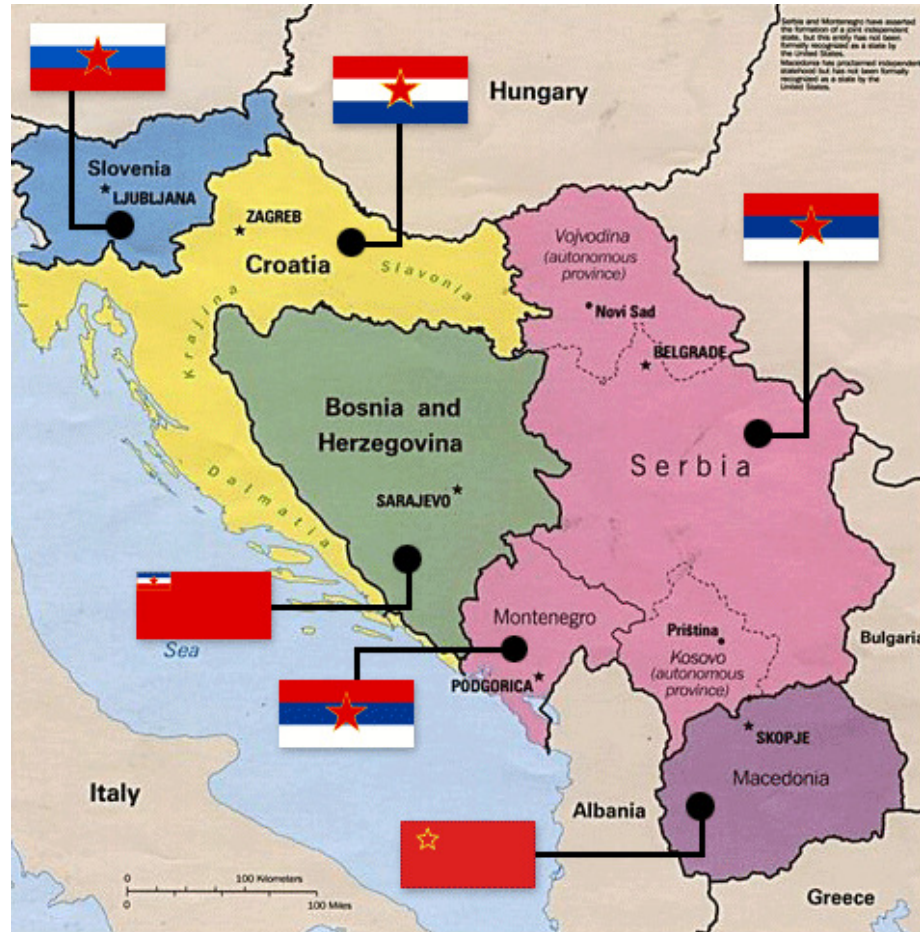
How Did We Get So Many
DXCC Entities?

DX ENTITIES – ENGLAND & Neighbors

1. England
2. Guernsey
3. Ireland
4. Isle of Man
5. Jersey
6. Northern Ireland
7. Scotland
8. Wales

DX ENTITIES – Former Yugoslavia

1. Bosnia – Herzegovina
2. Croatia
3. Macedonia
4. Montenegro
5. Serbia
6. Slovenia
7. Kosovo



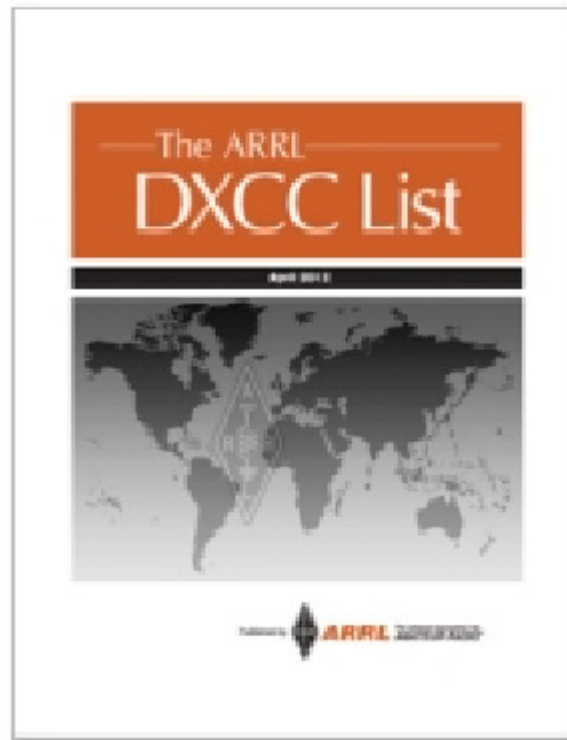
DX ENTITIES

Scarborough Reef



ARRL DXCC List - Booklet

Current list, Deleted list, Which countries do not participate. Etc.



DX CODE OF CONDUCT

- I will listen, and listen, and then listen again before calling.
- I will only call if I can copy the DX station properly.
- I will not trust the DX cluster and will be sure of the DX station's call sign before calling.
- I will not interfere with the DX station nor anyone calling and will never tune up on the DX frequency or in the QSY slot.
- I will wait for the DX station to end a contact before I call.
- I will always send my full call sign.
- I will call and then listen for a reasonable interval. I will not call continuously.
- I will not transmit when the DX operator calls another call sign, not mine.
- I will not transmit when the DX operator queries a call sign not like mine.
- I will not transmit when the DX station requests geographic areas other than mine.
- When the DX operator calls me, I will not repeat my call sign unless I think he has copied it incorrectly.
- I will be thankful if and when I do make a contact.
- I will respect my fellow hams and conduct myself so as to earn their respect.

DX REQUIREMENTS

You need to “Hear” the DX Station

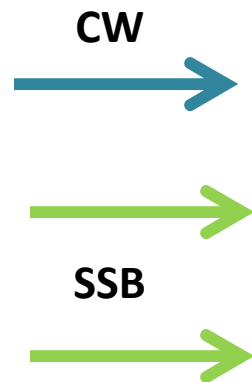
The DX Station needs to “Hear” you

And the QSO need to be **confirmed**

DX- REQUIREMENTS

Received Signal Strength

S-points for frequencies below 30 MHz:



Signal strength	Relative intensity	Received voltage		Received power ($Z_c = 50 \text{ Ohm}$)	
S1	-48 dB	0.20 μV	-14 dBuV	790 aW	-121 dBm
S2	-42 dB	0.40 μV	-8 dBuV	3.2 fW	-115 dBm
S3	-36 dB	0.79 μV	-2 dBuV	13 fW	-109 dBm
S4	-30 dB	1.6 μV	4 dBuV	50 fW	-103 dBm
S5	-24 dB	3.2 μV	10 dBuV	200 fW	-97 dBm
S6	-18 dB	6.3 μV	16 dBuV	790 fW	-91 dBm
S7	-12 dB	13 μV	22 dBuV	3.2 pW	-85 dBm
S8	-6 dB	25 μV	28 dBuV	13 pW	-79 dBm
S9	0 dB	50 μV	34 dBuV	50 pW	-73 dBm

DX- REQUIREMENTS

Ways to Improve Signal Strength

- Directional Antenna
 - Improves signal strength & noise - typically 3 DB
 - Improves both RX and TX
- Multiple Dipoles in **Different** Direction
- Receive Pre Selector (RF Receive amplifier)
 - Can be internal or external
- RF Amplifier
 - Even a 400 Watt amplifier will result in a 6 DB gain
 - Works only on TX and may help break a pileup

DX- REQUIREMENTS

Directional Antenna

W2QO Antenna



DX- REQUIREMENTS

Directional Antenna

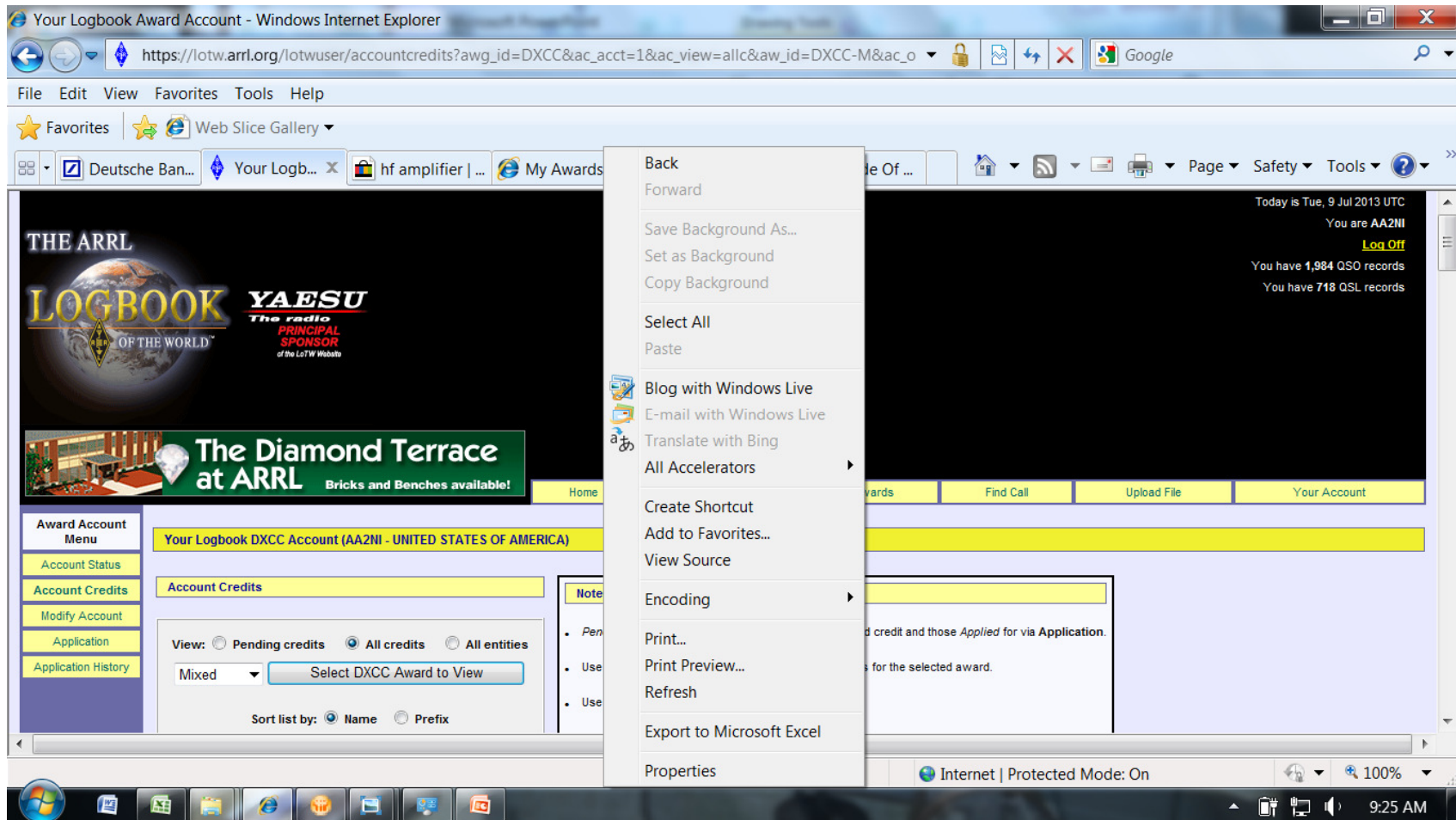
AA2NI Antenna



QSO CONFIRMATION (ARRL)

- MAKE THE QSO
 - RECORD THE DATE, TIME (UTC), FREQUENCY (BAND), REPORT AND MODE
- CONFIRMATION
 - ELECTRONICALLY – LOTW, if the other side posts and there is a match it is automatic
 - QSL CARD EXCHANGE
 - BUREAU
 - DIRECT

DX CONFIRMATION - LOTW



LOTW

Recent Confirmed QSO's

25 Records Shown (1-25)
Sorted by QSL Date (0.001380 seconds elapsed)

	Call sign	Worked	Date/Time	Band	Mode	Freq	QSL
Details	AA2NI	KH0XH	2013-03-12 22:18:39	15M	SSB	21.260000	MARIANA ISLANDS
Details	AA2NI	OL13VBD	2013-06-09 17:33:01	15M	SSB	21.311100	CZECH REPUBLIC
Details	AA2NI	EA7IPP	2013-03-23 17:23:28	17M	RTTY	18.106300	SPAIN
Details	AA2NI	WA0GUD	2013-04-21 03:18:43	20M	PSK31	14.070000	UNITED STATES OF AMERICA
Details	AA2NI	N7UVH	2013-04-07 13:11:07	20M	PSK31	14.070000	UNITED STATES OF AMERICA
Details	AA2NI	4Z5OZ	2013-04-20 00:50:54	20M	RTTY	14.080900	ISRAEL
Details	AA2NI	4A8DMR	2013-04-21 03:28:36	40M	RTTY	7.040000	MEXICO
Details	AA2NI	W1TG	2013-04-21 11:28:09	40M	PSK31	7.035000	UNITED STATES OF AMERICA
Details	AA2NI	NU4C	2013-05-05 14:00:40	20M	PSK31	14.070000	UNITED STATES OF AMERICA
Details	AA2NI	AJ4GR	2013-04-21 03:32:29	40M	PSK31	7.035000	UNITED STATES OF AMERICA
Details	AA2NI	YV5OIE	2013-05-26 13:07:26	20M	PSK31	14.070000	VENEZUELA
Details	AA2NI	FY5PO	2013-05-10 01:21:13	20M	PSK31	14.070000	FRENCH GUIANA
Details	AA2NI	EA5HRE	2013-05-24 01:24:54	20M	PSK31	14.070000	SPAIN
Details	AA2NI	CE4SFG	2013-05-10 01:28:21	20M	PSK31	14.070000	CHILE
Details	AA2NI	OZ1BZJ	2013-06-15 23:18:18	20M	PSK31	14.070000	DENMARK
Details	AA2NI	CT3MD	2013-06-16 21:02:25	15M	SSB	21.285000	MADEIRA ISLANDS
Details	AA2NI	EU7A	2013-06-17 23:56:58	15M	SSB	21.280000	BELARUS
Details	AA2NI	F6IGS	2013-06-17 23:59:11	15M	SSB	21.246000	FRANCE
Details	AA2NI	CE1VIL	2013-03-22 21:36:55	20M	SSB	14.195000	CHILE
Details	AA2NI	AC0MW	2013-03-19 21:51:42	20M	PSK31	14.070000	UNITED STATES OF AMERICA
Details	AA2NI	GM1BSG	2012-02-26 20:27:37	20M	PSK31	14.070000	SCOTLAND
Details	AA2NI	VU7KV	2013-05-05 01:08:46	20M	SSB	14.174000	LAKSHADWEEP ISLANDS
Details	AA2NI	I8QJU	2012-09-22 18:55:33	15M	SSB	21.283500	ITALY
Details	AA2NI	5B4AJC	2011-07-05 22:08:27	20M	SSB	14.171000	CYPRUS

[Next](#)

LOTW - Summary Screen

Account Status				
Award	Selected	Applied	Awarded	Total / Current
Mixed *	4	0	201	205 / 204
CW	0	0	1	1 / 1
Phone *	5	0	181	186 / 186
Digital	2	0	81	83 / 82
80M	0	0	8	8 / 8
40M	1	0	43	44 / 44
30M	0	0	4	4 / 4
20M *	5	0	150	155 / 154
17M	1	0	35	36 / 36
15M	4	0	60	64 / 64
12M	0	0	19	19 / 19
10M	0	0	33	33 / 33
6M	0	0	1	1 / 1
Challenge	11	0	352	— / 363
* = Award has been issued				

QSL CARD EXCHANGE - BUREAU

- **BUREAU OUTGOING**

- COMPLETE YOUR QSL CARDS
- SORT THEM ALPHABETICALLY
- SEND THEM TO THE LEAGUE WITH FEES
- GIVE THEM TO THE CLUB QSL MANAGER - Free

- **BUREAU INCOMING**

- SET AN ACCOUNT WITH THE NJDXA GROUP
- WAIT

QSL CARD EXCHANGE

Incoming BUREAU Process

- Cards arrive in ARRL Headquarters from all over the world
- ARRL sorts & sends the cards to each district
- Number 2 district is handled by the NJDXA group
- Typically 100 to 200 pounds of cards monthly
- Cards are divided and given to about 15 primary sorters
- Primary sorters sort the cards by 26 letters from A to Z
- Letter managers sort the cards from the primary sorters and mail to individual Hams



QSL CARD EXCHANGE - DIRECT

- FILL A QSL CARD
- CHECK RECEIPT INSTRUCTIONS on QRZ.com
- MAIL WITH RETURN ENVELOPE AND FEES
- **AA2NI** [USA](#)
NISSIM GERSHON, AA2NI
48 Lylewood Drive
Tenafly, NJ 07670
USA
- **QSL:** LOTW, EQSL, BUREAU, DIRECT, QRZ
- SASE Domestic, 2 Green stamps international

QSL CARD EXCHANGE - OQRS

Club Log: Expedition Charts - OJ0V - Windows Internet Explorer

http://www.clublog.org/charts/?c=OJ0V

File Edit View Favorites Tools Help

★ Favorites | ★ Web Slice Gallery ▾

Deutsch... Your Lo... hf ampli... My Awa... http://w... DX Cod... AA2NI -... Club ... x

AA2NI has worked OJ0V on 2 out of 22 band slots

Propagation suggestions for OJ0V from **UNITED STATES OF AMERICA (Z5)** or from CQ zone **5**

Leaderboard stations in CQ zone **5** or **UNITED STATES OF AMERICA (Z5)** or in **NA** or in Club: **NJDXA - North Jersey DX Association**

	6m	10m	12m	15m	17m	20m	30m	40m	80m
CW									
PH					✓	✓			
PSK									
RTTY									
PSK63F									

[Request QSL](#)

[Embed this tool in your site](#)

15833 searches . Completed your search in 0.147s.

Internet | Protected Mode: On 125%

9:41 AM

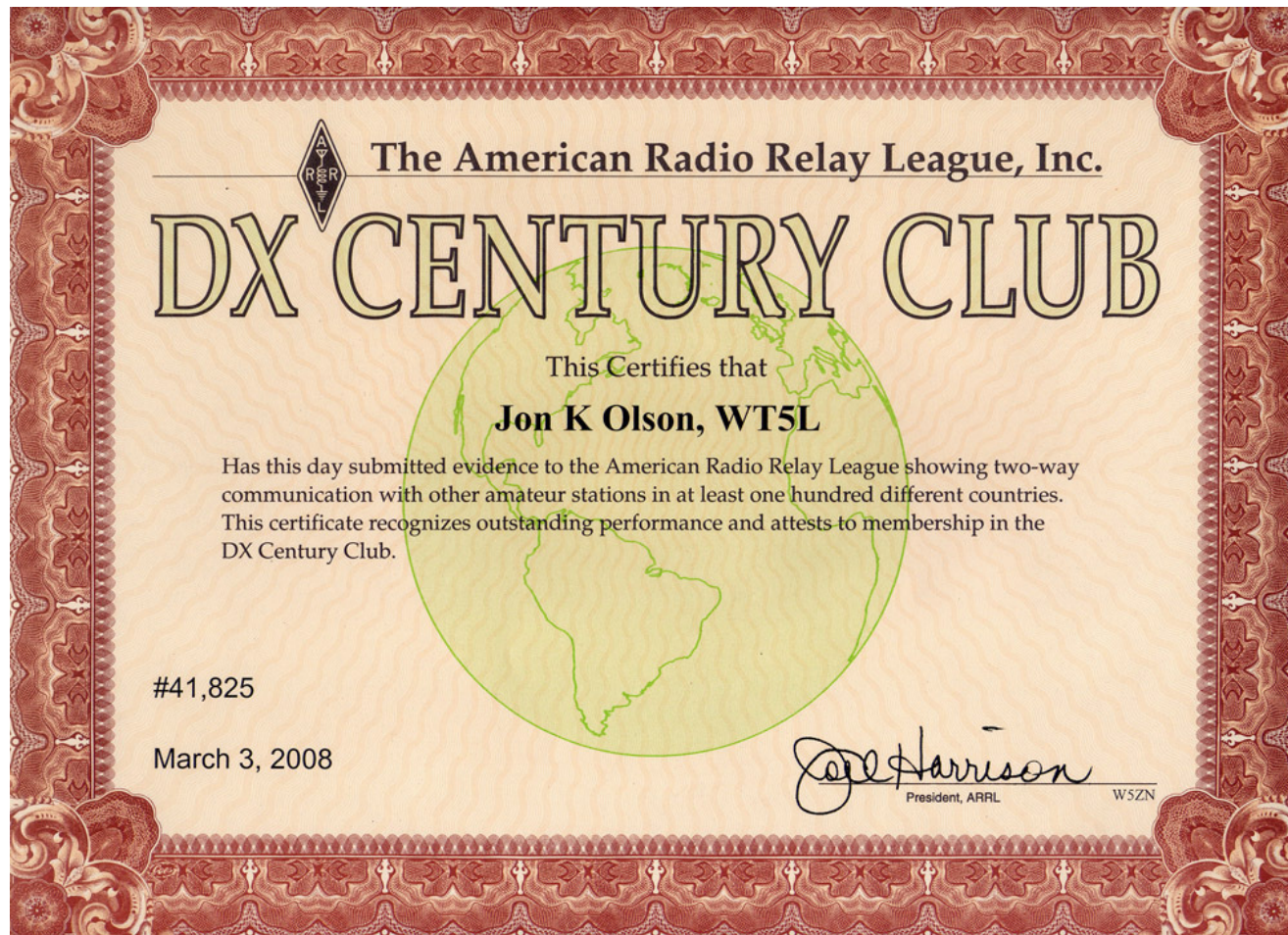
QSL CARD EXCHANGE

The Collection



QSL CARD EXCHANGE

The Certificate



DX TOOLS - DXEPEDITIONS

Announced DX Operations - Windows Internet Explorer

http://www.ng3k.com/misc/adxo.html

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Deutsch... Your Lo... hf ampli... My Awa... http://w... DX Cod... AA2NI -... Anno... X

Page Safety Tools

2013 Jul27	2013 Aug03	Antigua	V29SH	LotW	OPDX 20130624	By VE6SH fm Jumbo Bay 1 (VA-100); HF, KX3 + amp; Buddipole, holiday style operation; QSL also OK via VE6SH, Buro or direct
2013 Jul29	2013 Aug09	Faroe Is	OY	DL3UB	DL3UB 20130624	By DL3UB as OY/DL3UB; focus on WARC bands; CW; holiday style operation
August						
2013 Aug02	2013 Aug10	Malta	9H1N NEW	JJ2NYT	OPDX 20130708	By JJ2NYT; 40-10m; CW SSB
2013 Aug02	2013 Aug09	Jersey	GJ	ON8ZL	VA3RJ 20130411	By ON8ZZ ON8ZL ON5NQ as MJ/OT9Z fm La Moye (IN89ve); 160-6m; SSB CW PSK RTTY; QSL OK via Buro or direct
2013 Aug03	2013 Aug04	Reunion	TO1PF	FR1GZ	OPDX 20130211	By FR team fm Piton de la Fournaise (AF-016, DIFO FR-001, WWFF FFF-011, WLOTA 1812) at 2,632 meters; HF; all modes
2013 Aug03	2013 Aug23	Hawaii	KH6	F0GAZ	F4GHS 20130608	By F4GHS as KH6/F4GHS fm OC-019; 80-10m; SSB; G5RV; holiday style operation
2013 Aug12	2013 Aug21	Crete	SV9	ON6DSL	ON6DSL 20130616	By ON6DSL as SV9/ON6DSL/p fm EU-015; 40-15m; SSB; QRP; multiband dipole; holiday style operation; QSL via Buro preferred
2013 Aug16	2013 Aug20	Greenland	OX5YL	PA5YL	DXW.Net 20130211	By JR3MVF HL1KDW LA6RHA WA0WOF SM6KAT fm Kangerlussuaq; 160-6m
2013 Aug21	2013 Aug26	Malta	9H3	LotW	KE1B 20130418	By KE1B as 9H3MMM and W6NN as 9H3NN fm Gozo I; 40-10m; all modes; 100w; Buddipoles; holiday style operation
September						





























Internet | Protected Mode: On 125% 9:45 AM

DX TOOLS - DXWATCH

de cq zone: 5 - eastern zone of NA / band: 80m,40m,30m,20m,17m,15m,12m,10m

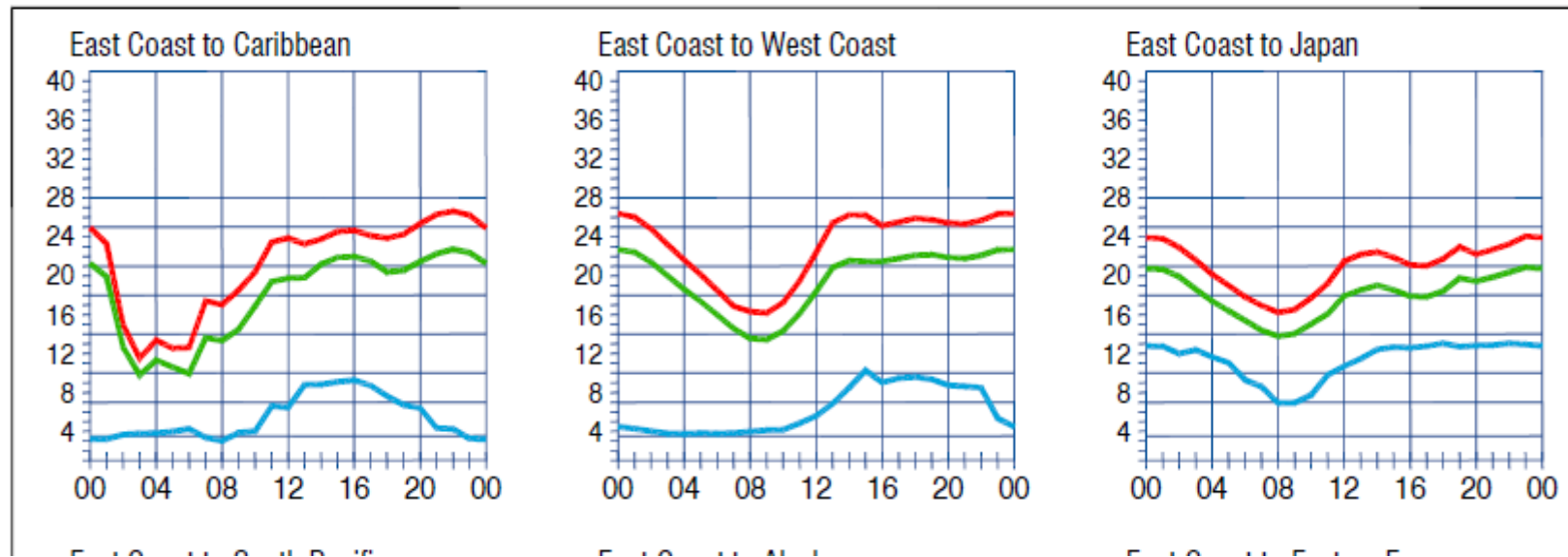
rows to show: 30

cancel filter selection / send a spot / search spot by callsign

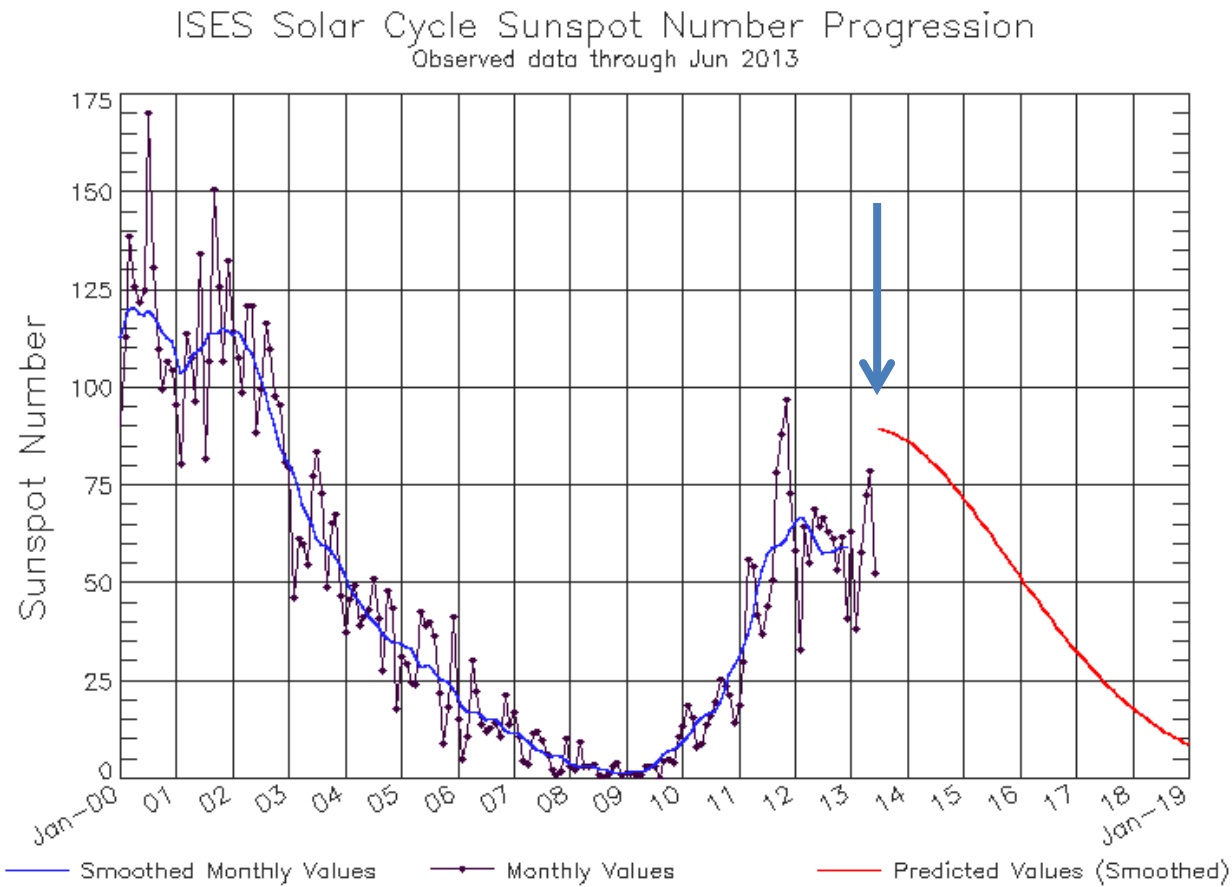
de	dx	freq	obs	time
VVA1BXY	 ZD8LP	18150.0	[AF-003] weak but workable	1926z 09 Jul
VVB2ZAB	 GV6UOI	18142.0	PEDESTRIAN MOBILE 58 IN MD	1925z 09 Jul
N3TD	 HH5/KC0VV	21288.0	UP 3 TO 6	1924z 09 Jul
VV1DQ	 ZP6CVV	24897.5	[LoTW] tnx	1914z 09 Jul
K0TF	 ZP6CVV	24898.0	[LoTW]	1906z 09 Jul
VVA3GM	 OE8XBC	18080.0	Nice QSO Chris Tnx 73	1903z 09 Jul
VV3LPL	 HB0/PC5A	21022.0	[LoTW] Heard in MD	1903z 09 Jul
K2BGJ	 MV6GTU	18069.5	cq	1902z 09 Jul
K1VVN	 GV4AC S	14267.0	calling cq	1900z 09 Jul
VV4VQ	 LY80M	18078.0		1857z 09 Jul
N4NQ	 9A282TN	18071.7		1857z 09 Jul
K1VMT	 RU27ON	14022.9	[LoTW]	1856z 09 Jul
VVA3GM	 OV1CDX	18090.0	CQ CQ Loud in EPA	1852z 09 Jul
VVA3GM	 9A282TN	18071.7	CQ CQ	1848z 09 Jul
VV3LPL	 FY8PE	14003.0	[LoTW] Heard in VA	1843z 09 Jul
VV3LPL	 ZP6CVV	24898.0	[LoTW] Heard in NC	1835z 09 Jul
VV3LPL	 OX3XR	18072.6	[LoTW] Heard in PA	1831z 09 Jul
VV4VQ	 5Q2T	24895.0	[LoTW] [EU-029] EU-029	1828z 09 Jul
AB4JK	 EA2DT	24957.0	Good Sigs From Manuel. 73	1827z 09 Jul
VV2ARP	 CN8KD	24902.0	[LoTW]	1823z 09 Jul
N3ZV	 7X4RJ	24966.0		1816z 09 Jul
VV3LPL	 FG8NY	21018.0	Heard in NC	1816z 09 Jul
VV3LPL	 CN8KD	24902.1	[LoTW] Heard in MD	1811z 09 Jul
VV2ARP	 Z4UA4VWHX	21001.0		1810z 09 Jul
N3ZV	 ZB2JK/P	21245.0		1809z 09 Jul
N4VMB	 9A288DX	21270.0		1805z 09 Jul
VV3LPL	 Z4UA4VWHX	21001.0	Heard in NC	1802z 09 Jul
VV3LPL	 FG5FR	21014.0	Heard in NC	1802z 09 Jul

DX TOOLS – PROPAGATION

From the ARRL site



DX TOOLS – Solar Cycle 24



Updated 2013 Jul 8

NOAA/SWPC Boulder, CO USA

DX TOOLS – Most Wanted List

WORLD-WIDE results of the 2010 survey
are shown for comparison.

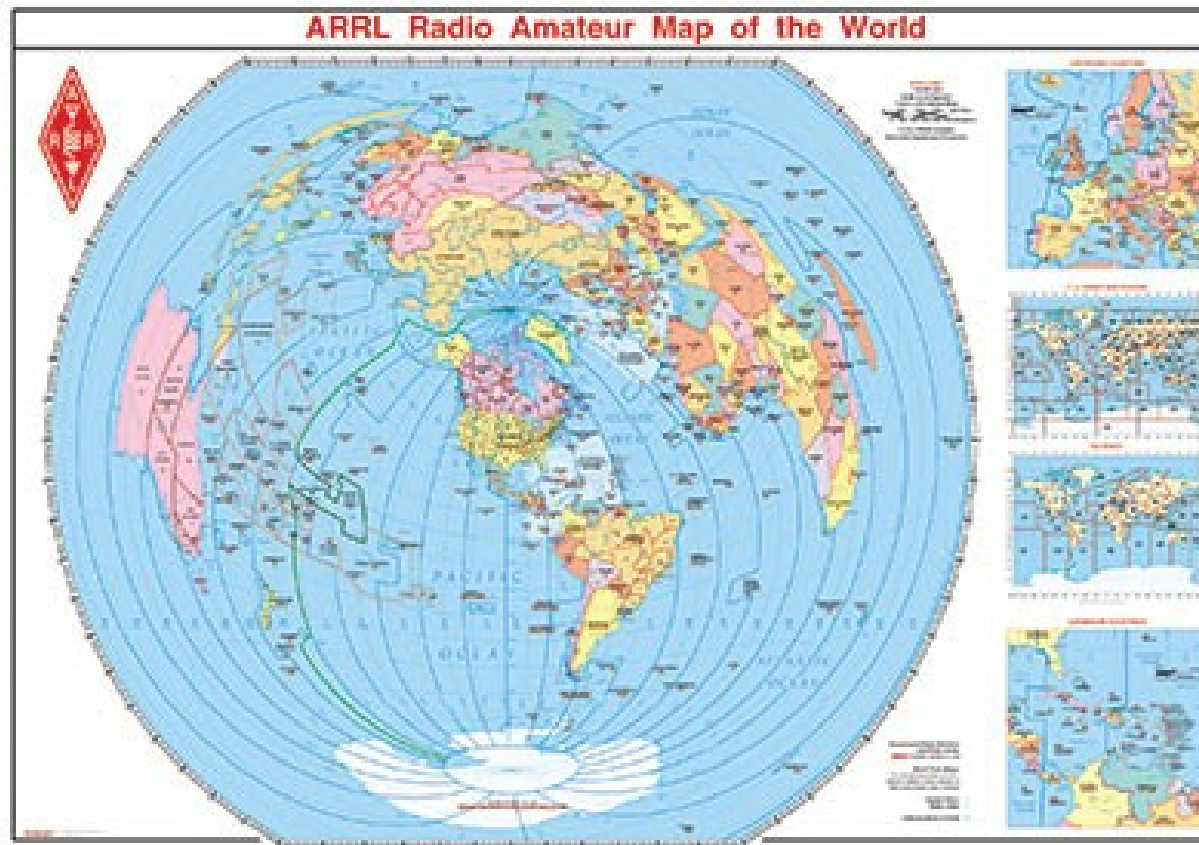
2011			2010	2011			2010
#	PREFIX	COUNTRY	#	#	PREFIX	COUNTRY	#
1	P5	NORTH KOREA	1	51	A5	BHUTAN	68
2	KP1	NAVASSA	2	52	TI9	COCOS ISLAND	67
3	3Y/B	BOUVET	3	53	YK	SYRIA	80
4	VKØ/H	HEARD ISLAND	5	54	FO, TX/M	MARQUESAS	58
5	7O	YEMEN	4	55	C2	NAURU	45
6	FT/Z	AMSTERDAM	6	56	S2	BANGLADESH	38
7	FT/W	CROZET	9	57	ZK3	TOKELAU	77
8	BS7	SCARBOROUGH	10	58	VU4	ANDAMAN	29
9	VP8/S	SOUTH SANDWICH	8	59	3C	EQUATORIAL GUINEA	57
10	ZS8	MARION ISLAND	7	60	E5/N	NORTH COOK	66
11	VKØ/M	MACQUARIE	13	61	KH4	MIDWAY	88
12	HKØ/M	MALPELO	12	62	PYØT	TRINIDADE	53
13	FT/T, TO	TROMELIN	15	63	4W	TIMOR LESTE	46
14	SV/A	MT ATHOS	14	64	CEØ/Z	JUAN FERNANDEZ ISLAND	81
15	ZL9	AUCKLAND & CAMPBELL	16	65	T2	TUVALU	75
16	PYØS	ST PETER & ST PAUL	18	66	T31	CENTRAL KIRIBATI	28
17	KH5	PALMYRA	19	67	ZD9	TRISTAN DE CUNHA	31
18	KH5K	KINGMAN REEF	17	68	D6	COMOROS	69
19	KH9	WAKE ISLAND	22	69	PJ5 ,/6	ST. EUSTATIUS/SABA	*
20	FT/J, E, TO	JUAN DE NOVA EUROPA	20	70	YA , T6	AFGHANISTAN	63
21	BV9P	PRATAS	23	71	VK9/X	CHRISTMAS ISLAND	83
22	VP8/G	SOUTH GEORGIA	21	72	VP8/O	SOUTH ORKNEY	11
23	KH3	JOHNSTON ISLAND	24	73	VK9/C	COCOS KEELING	76
24	E3	ERITREA	25	74	FO, TO/A	AUSTRAL	87
25	KH1	BAKER & HOWLAND	26	75	FW	WALLIS & FUTUNA	90
26	CEØ/X	SAN FELIX	27	76	TT	CHAD	82
27	KH7K	KURE	30	77	VK9/W	WILLIS ISLAND	*
28	XY, XZ	MYANMAR	36	78	XX9	MACAU	71
29	1S	SPRATLY	32	79	1A	SOV.MIL. ORDER-MALTA	61
30	FT/X	KERGUELEN	33	80	XW	LAOS	96
31	KH8/S	SWAINS ISLAND	34	81	5A	LIBYA	*

DX TOOLS – Beam Heading

From NJDXA Site

The North Jersey DX Association Presents Your Personalized DXCC Countries List & Beam Headings								
Beam headings prepared for, Niko Gershon, AA2ni Headings centered on , - Your Latitude 0.00 Your Longitude 0.00								
Prefix	Country	Short Path	Long Path	Miles	Lati- tude	Longi- tude	Cont- inent	CQ Zone
1A	SMOM	13	193	2,994	41.9	-12.4	EU	15
1S	Spratly Is.	81	261	7,707	8.8	-111.9	AS	26
3A	Monaco	8	188	3,073	44.0	-7.5	EU	14
3B7	Agalega/St. Brandon	102	282	3,907	-10.0	-56.0	AF	39
3B8	Mauritius	114	294	4,124	-20.3	-57.5	AF	39
3B9	Rodriguez Is.	112	292	4,492	-19.7	-63.4	AF	39
3C	Equatorial Guinea	80	260	701	1.8	-10.0	AF	36
3C0	Annobon	76	256	383	1.3	-5.4	AF	36
3D2	Fiji	173	353	11,246	-17.0	-178.0	OC	32
3D2/C	Conway Reef	168	348	10,872	-22.0	-175.0	OC	32
3D2/R	Rotuma Island	166	346	11,574	-12.0	-177.0	OC	32
3DA	Swaziland	134	314	2,800	-27.0	-31.5	AF	38
3V	Tunisia	13	193	2,623	36.8	-10.2	AF	33
3W/XV	Vietnam	79	259	7,346	10.8	-106.7	AS	26
3X	Guinea	308	128	1,129	10.0	13.0	AF	35
3Y	Bouvet Island	178	358	3,733	-54.0	-3.4	AF	38
3Y/P	Peter 1st Island	202	22	6,227	-68.0	90.5	AN	12
4J	Azerbaijan	42	222	4,194	40.5	-50.0	AS	21
4L	Georgia	39	219	4,006	41.5	-45.0	AS	21
4O	Montenegro	20	200	3,155	42.3	-19.2	EU	15
4S	Sri Lanka	83	263	5,522	7.0	-79.9	AS	22
4U/I	ITU Geneva	6	186	3,212	46.2	-6.2	EU	14

DX TOOLS – USA, Azimuth Map



DX TOOLS – Working Split

- Split is when the DX station transmits on one frequency and receives on another
- Listen to the DX station or look in the cluster for Split instructions.
- Most common Split is 5KHz Up.
 - Some radios will set this split automatically
- Make sure you know how to operate your radio in a split mode **ahead of time**

DX TOOLS – Working Split Range

- If the DX station announces a Split Range
- Saying “working 5 to 10 up”
- Example – DX transmits on 14.235 and listens 5 to 10 up. That means that you have to listen on 14.235 and transmit between 14.240 and 14.245
- Listen on the reverse frequency
 - Try to recognize the DX pattern.
 - Does he/she pick from the edges (which one)
 - Or does he/she pick from the range.

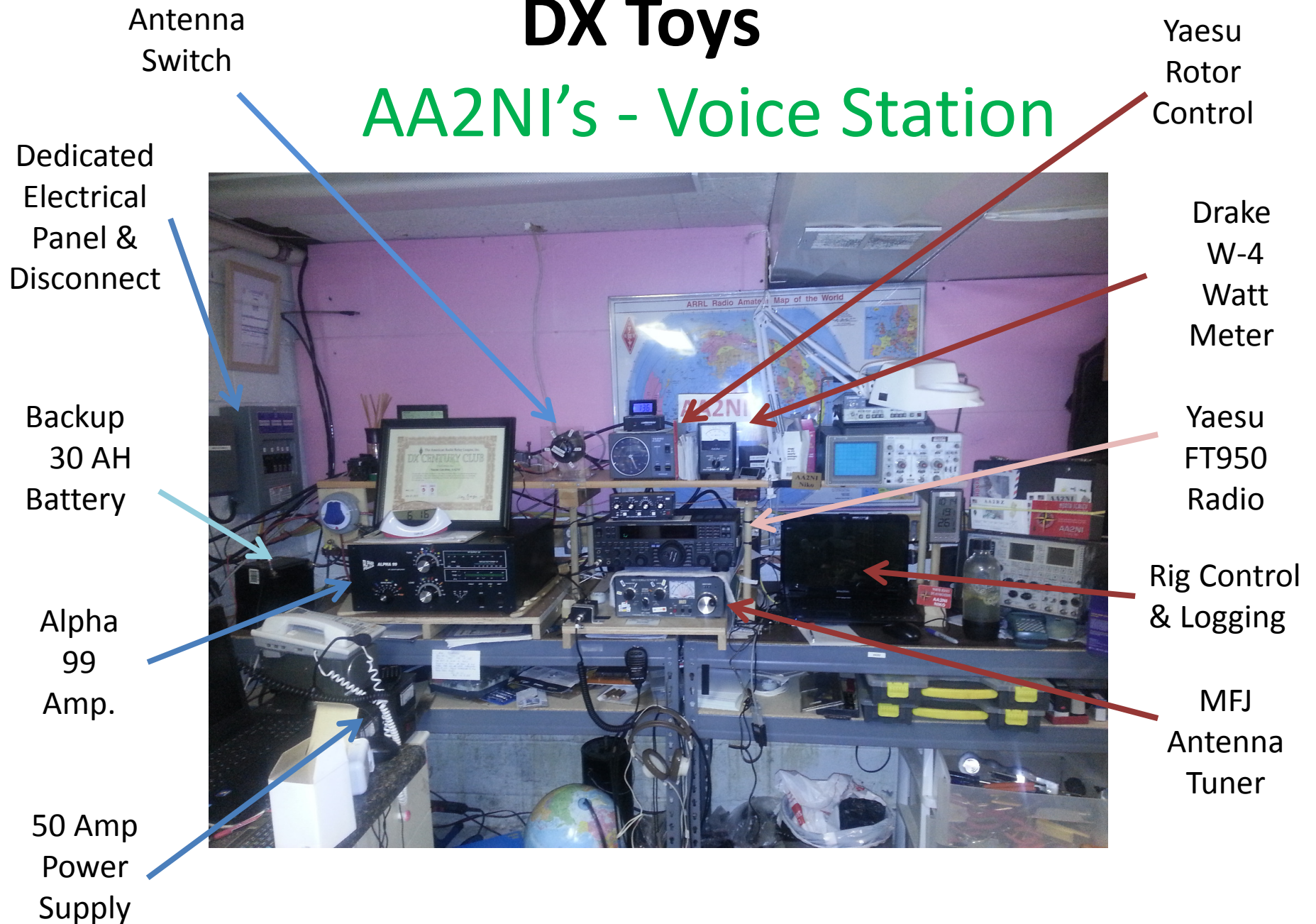
DX TOOLS – Nice to Have

TOYS

- Directional Antenna and Rotor
- Azimuth Map or Beam Heading List
- Multiple Antennas at different angles
- Pre Selector and Filters
- Amplifier – 400 W to 1.5 KW
- Radio Control and Logging Software
- Radio with dual receive - to listen to split frequencies

DX Toys

AA2NI's - Voice Station



DX PRACTICES

QUESTIONS?

DX PRACTICES

GOOD LUCK DXing

END