Ham Radio Contesting

Alan Clark, N5PA

Intro

- **Started Contesting in the 1970's**

- **Started building my own contest station with a 115 foot tower, used tribander and wires**

- **Different setups over the years because of moves.**

- **Now own 4 towers that will be put up at our farm in Meadville upon retirement.**

Intro

- **Active in many Contest/DXpeditions to Bahamas, Jamaica, Grenada, Brazil, Argentina, Germany, Austria, Poland, Hungary, Russia, Ukraine, Czechoslovakia, Czech Republic, Slovak Republic, South Africa, Tanzania, Mozambique, Malawi, Zambia, Zimbabwe, Botswana, Lesotho, Cape Verde Islands, and across the U.S., Canada, and Mexico.**

Intro

- **Check out http://www.n5pa.com/**
  - **Ham Radio Information and links**
  - **Comprehensive Weather Site**
  - **Astronomy Site**
  - **DXing**
  - **Contesting**
  - **VHF/UHF Weak Signal**

Outline

- **What is contesting?**

- **Why contest?**

- **What is and isn't required.**

- **Types of operators and contests.**

- **Components of the sport.**

- **Resources – where to find more info.**

- **List of links.**

What is contesting?

- "An Amateur Radio contest is an operating event, held over a predefined time period where the goal is…to enjoy yourself." — The ARRL Operating Manual, 6th Edition.

- Contests are what YOU make them.

- When was the first contest? (answer later)

Why Contest?

- **Fun**
  - **Excitement of the chase**
  - **Start fresh every weekend with deadline**
    - **Once you get DXCC, WAS, where do you go?**
    - **Contesters start with a clean slate every weekend.**
  - **Variety of events**
    - **Every contest is unique**
    - **Even year to year contests change**

Why Contest?

- **Fulfillment**
  - **Accomplishment of beating yourself or others**
  - **Reaching a goal**
  - **Learning and improving capabilities of yourself and your station**
  - **Other awards, WAC, DXCC, WAZ, WAS, all possible in a weekend.**
  - **IOTA, WPX, County Hunters have their own contests.**
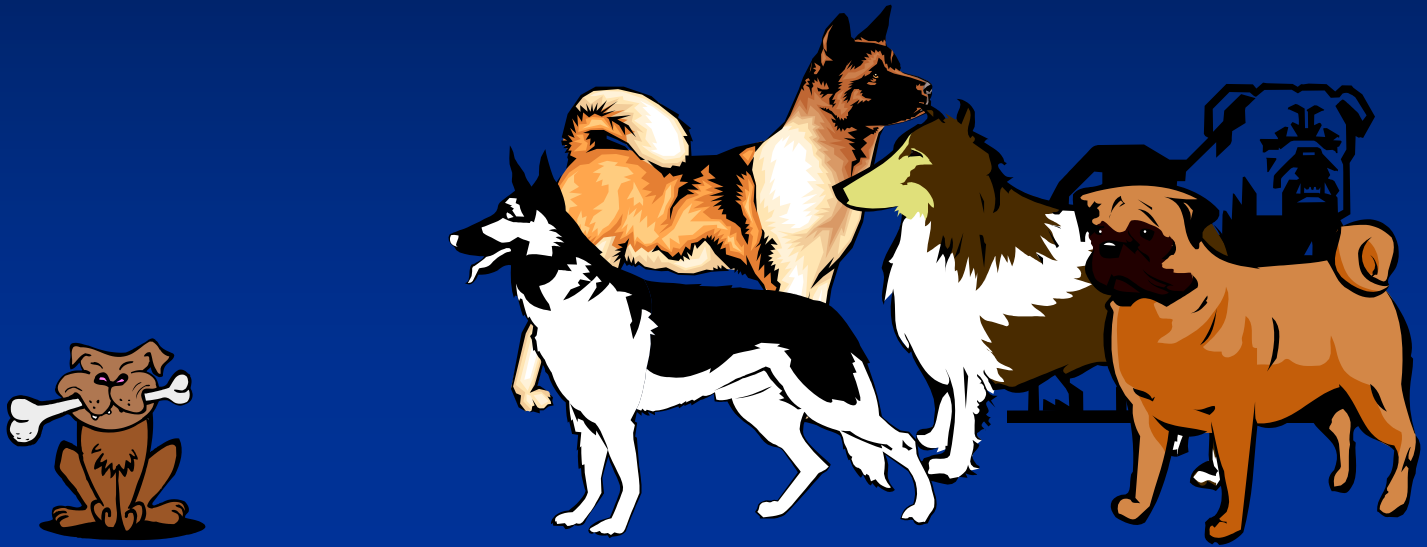 - **Helping Amateur radio – "Use it or lose it"**

Why Contest?

- **Friends**
  - **Regular contesters make friends world wide**
  - **Common lingo and interests**
  - **World wide gatherings at big conventions**

2008 Dayton CONTEST DINNER
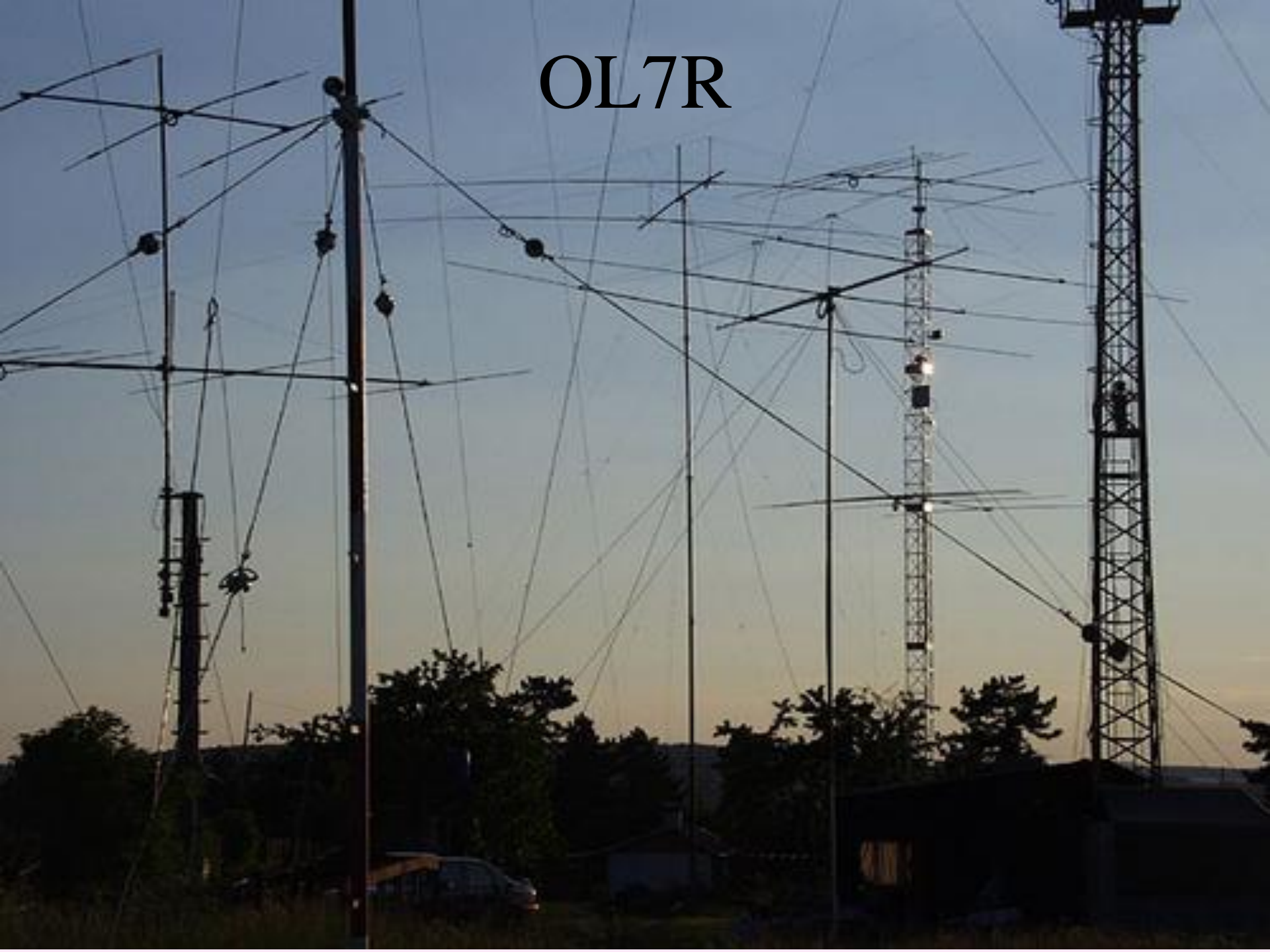**K3EST, K3LR, K5ZD, I2UIY, K1AR**

Even though you may be just a Pup, you can still have fun contesting with the Big Dawgs!

What is Required?

- **Get on the air**
- **Make contacts**
- **Send proper exchange**

OL7R

What is NOT Required!

- **Super Station**
  - **Lots of small stations in contests**
  - **Mobiles in state QSO parties and VHF/UHF**
  - **Mobiles in DX contests**

What is NOT Required!

- **Log**
  - **Only 1 exception I know of where entrants don't get credit unless the other log is submitted.**
  - **But:**
    - **Good to send log in to help log checkers**
    - **Lets sponsors know of activity**
    - **Gets you in results**
    - **You may win!**

What is NOT Required!

- **QSL Cards**
  - **Cards not required to enter contest or confirm contest QSO's for scoring.**
  - **LOTW is good alternative to cards**
  - **eQSL is useless**
  - **ARRL Outgoing QSL Bureau**
  - **Other mass QSL services**

Types of operators

- **Competitors**
  - **Strive to improve**
  - **Study scores and plan strategies**
  - **Take care in selecting equipment**
  - **Use technology where appropriate**
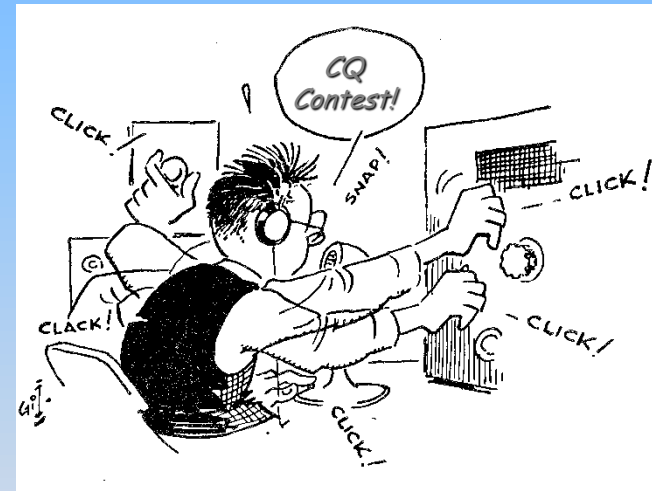
Types of operators

- **Casual**
  - **Everyone else**
  - **Chasing other awards**
  - **Just happened to turn on their radio**
  - **Without casual ops contests would be boring for competitors**
  - **Just handing out points**
  - **Sometimes convert to competitors**

Types of operators

- **Contest Haters**
  - **Dang, another contest.**
  - **I am going to turn on my 50 KW amp to talk over those contesters!**
- **Standard Answers**
  - **No WARC band contests**
  - **Change mode, usually only one big mode per weekend**
  - **Change band to one with no contest propagation**

Types of contests

- **Sponsored by Magazines, Organizations, Clubs**
    - **ARRL, RAC, RSGB, DARC, etc**
    - **CQ Magazine.**
    - **Clubs or other groups.**

A Contest for All Seasons/Tastes

Beginner to Expert →

Jan

Dec

ARRL SKN

ARRL VHF

ARRL RTTY

NAQP

ARRL DX

NEQP

Sprint

CQ WPX

ARRL Field Day

ARRL VHF

State QSO Parties (Many)

IARU HF World Championships

ARRL UHF

NAQP

Sprint

CQ WW DX

ARRL Sweepstakes

ARRL 10

ARRL 160
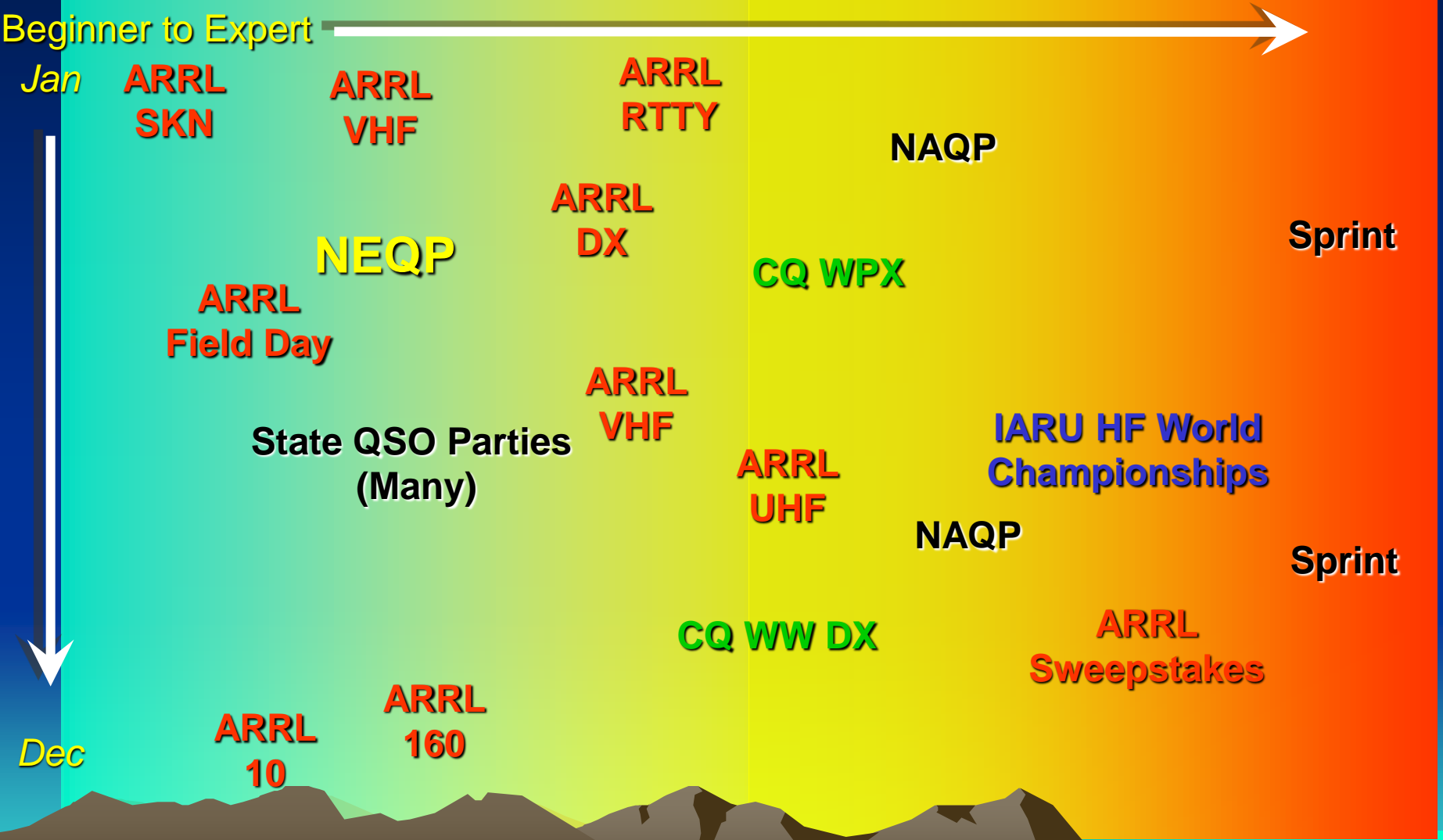
Types of contests

- **Contest for just about any interest**
  - **Multiple Bands: HF, VHF, UHF**
  - **Single Band: 160m, 10m, 10Ghz**
  - **By Mode: CW, SSB, RTTY, PSK, SSTV**
  - **By Propagation: EME**
  - **By Locale: Postal Codes, County, State/Province, Islands, Region, Country, Continent, World**
  - **Individual or groups**

Types of contests

- **Field Day???**
  - **"Not a contest"**

Types of contests

- **Contests within contests**
  - **Team competition in NAQP**
    - **Groups of 5 Single operator stations add up scores**
  - **Club Competition**
    - **Various size definitions for categories, large/medium/small**
    - **Big rivalries between large clubs (YCCC, PVRC, FRC, NCCC, SMC, ACC)**
    - **Local rivalries**

Types of contests

- **World Radiosport Team Championship (WRTC)**
  - **Only contest with qualification criteria**
  - **Run in conjunction with IARU, next in 2014 in New England, United States.**
  - **One of only a few 'On-Site' contests**
  - **2 person teams**

Game or Sport

- **Lingo**
- **Rules**
- **Technical stuff**
- **Technique**
- **Strategy**
- **Results**
- **Awards**

The Lingo of the Game

- **QSO – A completed contact**
- **Rate – number of QSOs in a given period, usually an hour. Sometimes called "Q-Rate".**
- **NIL – Not In Log**
- **Unique – A call that only shows in one entrant's log**
- **Bust – A bad call in a log, either not issued, or matched up with a QSO in a log from a station with a similar call. You log N5PS but it matches a QSO with you in N5PA's log.**
- **Dupe – A duplicate QSO**
- **UBN Report – Unique, Busted, NIL Report. A report generated by some sponsors after checking your log.**
- **LCR - Log Check Report. Another name for a UBN Report.**
- **10 minute, 6 band change rules. In some contests some entry classes are limited in how many band changes they can make either by a minimum time they have to stay on a band or how many band changes in an hour they can make.**
- **CQ'ing – Soliciting contacts by staying on a frequency and calling CQ. Running a Frequency!**
- **S&P'ing – Searching and Pouncing, tuning around looking for stations calling CQ in a contest.**
- **Split – Transmitting on one frequency, receiving on another. Used to control pileup size or allow contacts between countries where band allocations don't overlap. Mostly on 40m and 80m SSB in contests, though starting to be used less with recent band allocation changes.**
- **Cabrillo – A standard that specifies the format of a text file submitted to contest sponsors with your log information.**
- **SO2R – Single Operator 2 Radio (Not really an entry classification)**

Rules of the Game

- **Published by sponsor in magazine or web site.**

- **Short summaries in other magazines, good enough for casual ops.**

- **Competitors have to study the full rules for the details.**
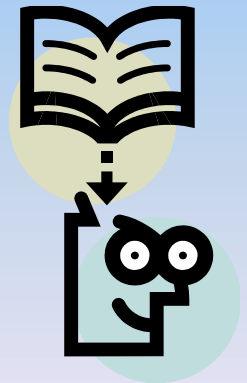
What is in the Rules

- **Times**
  - **Start and end times. Mostly on weekends, some weekdays, some holidays**
  - **.5 hours to 48 hours**
  - **Some spread over multiple weekends (ARRL 10GHz, EME)**
  - **Usually specified in GMT or Zulu time.**
  - **Operating Time Limits**
    - **Usually applies only to single operators, but not always**
    - **So many ON hours during contest period**
    - **Adds to strategy, when to sleep, when to operate**
  - **On Time**
    - **Listening counts as operating time**
  - **Off Time**
    - **Usually some minimum time, 30 minutes common**
    - **Some odd rules about max number of off times**

What is in the Rules

- **Operator And Radio Classifications**
    - **SO – Single Operator**
    - **MS – Multi-Operator Single Transmitter**
    - **M2 – Multi-Operator 2 Transmitter**
    - **MM – Multi-Operator Multi-Transmitter**
    - **SOA or SO(A) – Single Operator Assisted (Use of DX Spotting Network: DX Cluster, Skimmers, Reverse Beacon Network)**

What is in the Rules

- **Power Classifications**
  - **HP – High Power = Usually 1500w or your country/license limit, whichever is lower.**
  - **LP – Low Power = 100w, 150w, 200w, depends on contest.**
  - **QRP – Really Low Power = 5w most common.**

What is in the Rules

- **Band Classifications**
  - **SOAB – Single Operator All Band**
  - **SOSB – Single Operator Single Band, it is often possible to operate multiple single band entries in the same contest, or to operate all bands for club competition but only score a single band for personal entry.**

- **Mode Classifications**
  - **Which mode(s), many single mode contests, many contests with separate weekends for each mode, some mixed CW/SSB, some CW/SSB/RTTY.**
  - **In contests with multiple modes during same time period you can often pick one mode or mixed mode entry classes.**

What is in the Rules

- **Exchange**
  - The required information to be sent between stations in a contest.
  - You can't get in a competitors log without the right information.
  - Spelled out in rules, or ask first station you contact. If they want your points they will explain what they need.
  - Multiple contests in a weekend can keep you guessing.

What is in the Rules

- **Typical Exchanges**
  - **Simple**
    - **RS(T) + Zone (CQ Zone = 4, IARU Zone = 7*)**
    - **RS(T) + State or ARRL/CRRL Section (MS for Both)**
    - **Grid (SW MS in EM41)**
  - **Medium**
    - **Name + State**
    - **RS(T) + Power**
    - **Serial numbers**
  - **Hard**
    - **Serial Number + Entry Class + Call + Year Licensed + Section**
    - **Rotating exchanges**
    - **Other multiple part combinations**

* West of 90 degrees West is IARU (ITU) Zone 7, East is Zone 8.

What is in the Rules

- **Exchange Quirks**
  - **Serial numbers by band or station**
  - **Asymmetric exchanges**
    - **Send RS(T)+State, receive RS(T)+Power**
    - **Send RS(T)+Section, receive RS(T)+Prefix**
    - **Send RS(T)+Serial Number, receive RS(T)+Postal Code**
  - **Receive different exchanges from different stations**
    - **Receive RS(T)+State from stateside, RS(T)7+Serial Number from DX.**

What is in the Rules

- **Scoring**
  - **Points**
    - Constant or Variable by band, mode, distance, country, continent
      - CW or RTTY > SSB
      - Low bands > High bands (HF)
      - High bands > low bands (VHF/UHF)
      - Specific country or region > rest of world
    - Do you get points for the same station contacted on different bands or modes?
    - Zero point contacts
      - Sometimes you need them!
      - Listen for directed CQ
      - Ask
      - Check rules
      - Some operators will log, others won't

What is in the Rules

- **Scoring**
  - **Multipliers**
    - **Many types, grid, field, continent, country, state/province, county, island, zones, prefix, special stations**
    - **Do you get multipliers on each band, or just once in the contest?**

What is in the Rules

- **Scoring**
  - **Total**
    - **Usually sum of points * sum of multipliers**
    - **VHF/UHF Rovers sum total by grids**
    - **Some odd combinations**
    - **Read the rules or let the computer do the work.**

What is in the Rules

- **Scoring**
  - **Penalties**
    - **Busted calls**
    - **Not in log**
    - **Incorrect copy of exchange**
  - **NOT FOR**
    - **Dupes (LOG THE DUPES!)**
    - **Unique calls**
    - **Running past allowed time (just truncate log)**

What is in the Rules

- **Scoring**
  - **Where to find scores**
    - **Real time website (http://www.getscores.org)**
    - **3830 on the air or email list (http://www.contesting.com)**
    - **Claimed scores from sponsor, usually on their web site.**
    - **Final scores from sponsor in magazines and/or web site. Some mail to all entrants.**

How to make a QSO

- (them) "CQ Contest, this is Norway Five Papa Alpha"
- (you) "Norway Five Zulu Norway Tango"
- (them) "Norway Five Zulu Norway Tango 59 OK"
- (you) "Thanks, 59 MS"
- (them) "QSL, Norway Five Papa Alpha, Contest"
- Lather, rinse, repeat

How to make a QSO

- **Key Points**
  - Keep it short, no extra chit chat
  - Send call once (maybe twice), exchange once
  - Remove extraneous 'please copy', 'my number is', etc.
  - If the station you call says your call correctly then don't say it again
  - Proper phonetics
  - CW cut numbers can be ugly, use for static data only
  - RTTY not that different from CW
  - Don't use 'last 2', give complete calls

Technical Stuff - Hardware

- **Radios**
  - **More buttons not always better. Think about how you will see the buttons at 2am.**
  - **Computer interface really helps. Sending band and frequency to logging computer prevents lots of mistakes.**
  - **Filters! Filters! Filters! Contests cause crowded bands with lots of big signals, good filters really help.**

Technical Stuff - Hardware

- **Antennas**
  - **More is better. A contester can never have too many antennas to pick from.**
  - **Size does matter. "Big antennas high in the sky work better than small antennas near the ground"**
  - **NO WARC Bands! Makes selection a bit simpler anyway.**
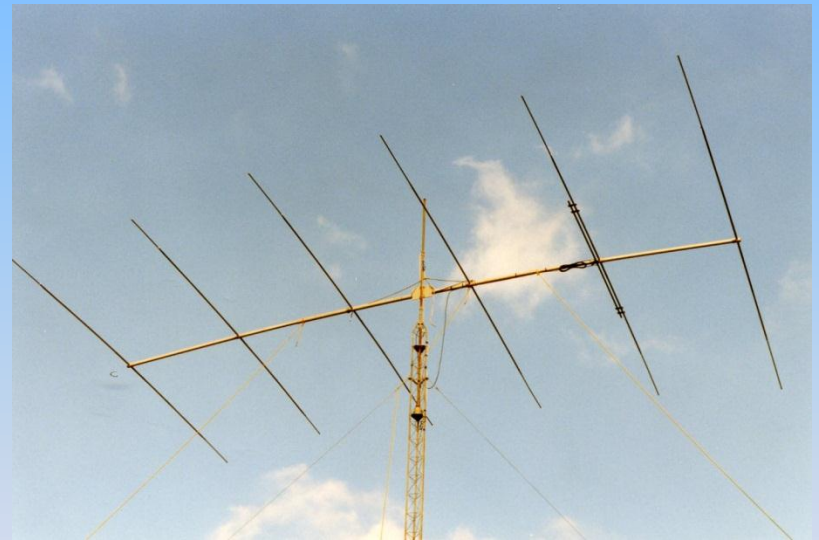
Technical Stuff - Hardware

- **Amps**
  - **Reliability over raw power.**
  - **More Filters! Especially if you have neighbors without cable or satellite TV.**

Technical Stuff - Hardware

- **Accessories**
  - **Headset with boom mic and foot switch!**
  - **CW Keyer, Voice Keyer, both can be done from a computer.**
  - **Antenna switches and rotors.**

Complex Antenna Switching
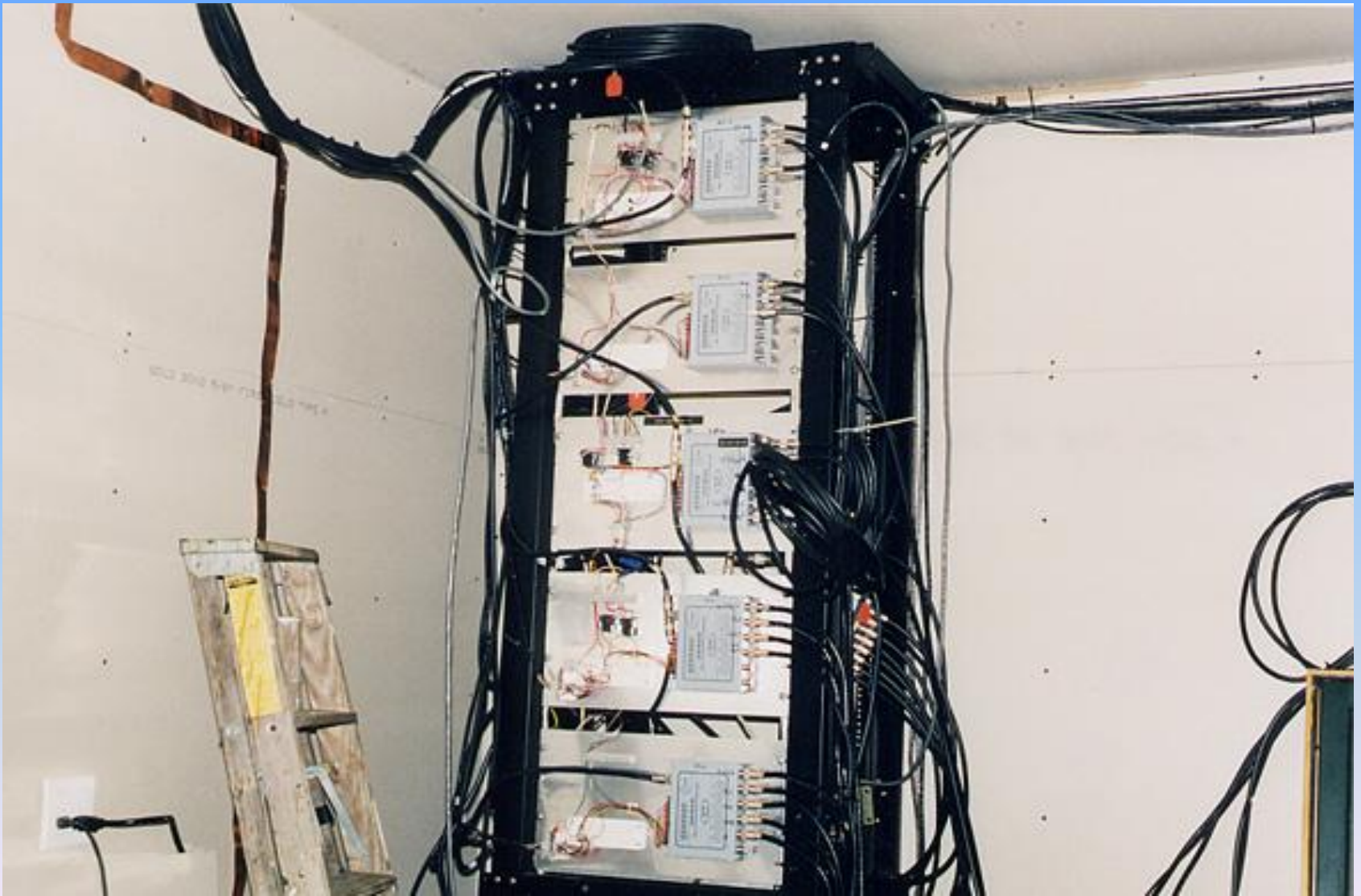
Simple Antenna Switching
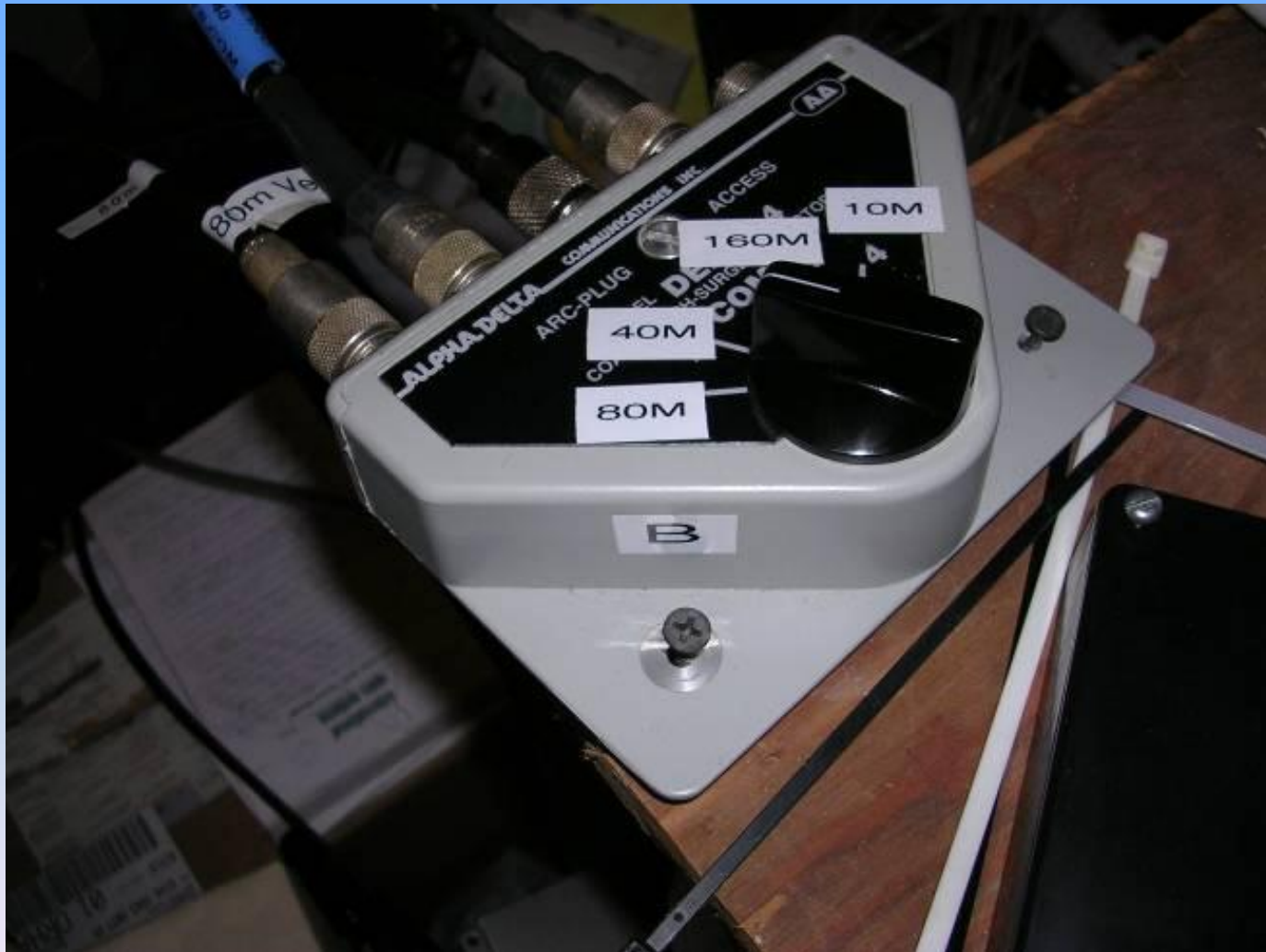
Technical Stuff - Hardware

- **Computer**
  - **From old DOS boxes to latest Windows and even Linux, there is still software for all.**
  - **Computer interface, RigBlasters, MicroKeyer, others… common homebrew item.**
  - **Sound cards are extremely flexible.**

Check Country

```
          160
2172   80 0520 LU1FZR        13
 329   40 0629 AY1I          13
3299   20 2357 LU5FCI        13
1197   15 1553 LU1FZR        13
1460   10 1749 LU6ETB        13
      Argentina:  LU    Zone: 13
      169 deg    sr/ss 0849/2310
```

PacketCluster(R)

```
1505 ZS6ME
1500 C31UA
1500 EW3EE
1359 SO8HW
1402 YI0EB
1353 EU1DX
1351 UY2LA            14012.0 *
1341 UT1EK            14183.5 *
1322 OX3UUT           14226.0 #
1321 EW3EE            14012.3 *
```

Rates

```
Last 10  QSO Rate = 27.0
Last 100 QSO Rate = 35.6
   Mult worth 9.5 minutes
     Rates for all bands
  Time  ON: 44.5 hours
  Time OFF:  3.4 hours
```

Radio 1   10:10:16

```
3292   20 2343 VG6SV        59 04
3293   20 2347 XE1L         59 06
3294   20 2350 ZP5CSM       59 11
3295   20 2351 LU1YY        59 13
3296   20 2353 LU1UM        59 13
3297   20 2355 L37N         59 13
3298   20 2356 LU1NF        59 13
3299   20 2357 LU5FCI       59 13
3300   20                   59
```

QSO's Needed All Bands

	Q	Z	C	D
160	46	10	42	1
80	339	21	85	4
40	176	28	88	2
20	1475	40	156	2
15	1167	30	140	34
10	53	17	46	0
ALL	3256	146	557	43

```
    CQWW Score: 6,625,072
        Running Station
      QSO's per Mult: 4.6
```

Current Up: KC1XX

CT Version 9.26 by K1EA

sscw2010.wl - WriteLog

File Edit View Entry Radio Bands Setup Tools Contest Window Help

Score: 173,440		
	QSO	Sec
80	249	8
40	328	11
20	440	54
15	67	7
Total	1084	80

0/hr last 0 min
0/hr last 0 min
All bands
Time On 22:43
Time Off: 9866:12
MultWorth

W5KFT	W5FIT	W5TMC	W5UTR
W5TA	W5GT	W5TSP	W5WT
W5ALT	W5MT	W5TT	W5WTN
W5AT	W5NUT	W5TTE	W5ZT
W5CPT	W5RTA	W5TTW	WA5TRX
W5DET	W5TCX	W5TTY	WA5TYJ
W5DJT	W5TDY	W5TV	WA5ZTD
W5DNT	W5THT	W5TVW	WB5STU
W5ETJ	W5TM	W5TX	WB5TEQ

SEQ	DATE	TIME	FREQ	NR	P	CALL	CK	SECT	M	ML	TIME-OFF	r
1136	2010-11-08	0243	7031	348	U	WB0N	67	MN	0			2
1137		0245	7031	150	U	K6VAR	09	SV	0			2
1138		0246	7031	46	Q	KC9SNC	10	WI	0			2
1139		0247	7031	263	A	VE3ZT	70	ON	0			2
1140		0248	7031	47	A	KC8GTX	97	MI	0			2
1141		0249	7031	62	Q	KT9T	67	MN	0			2
1142		0250	7031	208	Q	W6GL	69	SB	0			2
1143		0251	7031	441	A	N8EA	57	MI	0			2
1144		0252	7031	58	A	N3KRS	91	VA	0			2
1145		0253	7031	093	M	NR0L	61	MN	0			2
1146		0256	7031	116	A	NS7T	08	ID	0			2
1147		0257	3520	1494	B	WD0A	77	SD	0			1
1148		0258	7031	206	U	NF9V	82	WI	0			2
1149		0259	7031	018	A	WA3EAE	66	MDC	0			2

Radio

SEQ NR P CALL CK SECT

3529 kHz CW L 1150 _____ _ W5T_____ __ ____

7040 kHz CW R _____ _ ___ _ _ ___ ___ __ ___ _

WriteLog for Windows   32 WPM 28 WPM   ARRL November Sweepstakes

IC-706MKIIG VFO A

21038.65 [SH/DX] [Nar]
CW

W4RX 299°	
K3CR 299°	
GM5A 331°	
K3WW 299°	
N2RM 299°	
SM2KAL 46°	
21015	
21020	K1RM 299°
21025	N4XRK 299°
	ZC4LI 113°
21030	EI/SP4Z 296°
	8Q7DV 101°
	W8AV 299°
	K3LR 299°
	RA1ARI 65°
	RA1RC 65°
21035	N2LT 299°
	IO/N6CY 135°
	K5GO 299°
	ZY7C 220°
	VE3EJ 297°
21040	W2RE 299°
	K3OO 299°
	W2FU 299°
21045	5U5Z 177°
	VP2MZM 259°
	VY2NT 297°
21050	K8JM 299°
	LN8W 32°
21055	NA2U 299°
	P40A 263°
	NY3A 299°
	K1RU 299°
21060	N4RV 299°
	K8GL 299°
	TU2XZ 186°
	K5ZD 299°
	RF3A 65°

21038.65 CW IC-706MKIIG VFO A

File Edit View Tools Config Window Help

VE3EJ Snt Rcv Zone

SP [Wipe] [Log It] [Edit] [Mark] [Store] [Spot It] [Buck]

[Esc: Stop] [F1 G3VGR] [F2 5NN A4] [F3 Nr?] [F4 G3VGR]

[F5 5nn A4] [F6 de me] [F7 ?] [F8 Agn]

☐ Running   [25 ↕]

Bearing = 297°, 3520 mi, 5664 km, LP = 117°

VE - Canada, Zone 5, NA | 49/33/21 | 5,562

Check - Mul: 160 80 40 20 15 10

VU2WAP

IC-706MKIIG VFO B

14022.10 [SH/DX] [Nar]
CW

14000	
	GM5A 331°
	VK1AA 67°
14005	
	IK4ZGO 135°
14010	ZL6QH 17°
	K8AZ 299°
	JI1NJC/TF 326°
	HA1VE 102°
	K2Z 299°
	RX3RXX 65°
	K2LE 299°
	CN2KM 200°
	HG3M 102°
	VU2WAP 84°
	RG9A 52°
14025	A61AJ 103°
	9A5W 115°
	GU4CHY 221°
14030	9N7BCC 76°
	4M5X 259°
	SP9NLK 80°
	4M9X 259°
14035	
14040	RN6FA 65°
14045	SU8BHI 121° NEW
	SU8DHI 121°
14050	

27/11/2004 13:46:26Z CQ WW CW - ham.

TS	Call								
27/11/2004 13:01:45	K8AZ								
27/11/2004 13:02:46	IK4ZGO								
27/11/2004 13:05:04	KC1XX								
27/11/2004 13:06:16	K1IR								
27/11/2004 13:07:23	KB1H								
27/11/2004 13:08:44	NY4A								
27/11/2004 13:25:30	A45XR	21000.06	599	599	Yes	21	Yes	A4	3
27/11/2004 13:31:51	W3RJ	21001.27	599	599	No	5	No	K	3
27/11/2004 13:36:35	K0TV	21006.47	599	599	No	5	No	K	3
27/11/2004 13:40:56	RA1ARI	21031.51	599	599	Yes	17	Yes	UA	1
27/11/2004 13:43:26	K3LR	21030.08	599	599	No	5	No	K	3
27/11/2004 13:44:21	K5GO	21035.19	599	599	Yes	4	No	K	3

14022.10 CW IC-706MKIIG VFO B

File Edit View Tools Config Window Help

VU2WAP Snt Rcv Zone

VU2WAP

SP ● Bearing = 84°, 4615 mi, 7427 km, LP = 264°   F4 G3VGR

Mul: 160 80 40 20 15 10

Info - G3VGR - Exch: 599 A4

VU2WAP - 14022.10 [OH2BN @ -34 min]

VU - India, Zone 22, AS, Bearing = 84°, 4615 mi, 7427 km,

Sunrise: 00:59Z   Sunset: 11:55Z   Local std time: 19:46

WWV de JA3QGI <12Z> :   SFI=111, A=16, K=2, R= 61 Nc

Rates - 1 mult = 0.9 Q's

	Last 10	Last 100	Since 12:44	Since 13:00
	16	20	20	14

G3VGR

[Import Goals] [Goal = 20]

Available

Mults		Qs
0	[160]	0
7	[80]	11
11	[40]	15
10	[20]	17
28	[15]	68
42	[10]	57

14044.5	SU8BHI
21110.5	LX1NO
21180.0	EC8ADU
21047.5	VY2NT
21104.6	CW2A
21138.0	LO2F
14025.0	A61AJ
21101.7	8R1K

Score - 5,562 Points

Band	QSOs	Pts	Cty	ZN
14	33	63	25	12
21	16	40	8	9
Total	49	103	33	21

Telnet Win... | .com/showthread.php?t=23234   Internet

New QSO ... (CQRLOG for Linux)

File   Statistics   Grayline   TRX control   DXCluster   Band map   Help

	QSODATE	TIME_ON	CALL	FREQ	MODE	RST_S	RST_R	NAME	QTH	QSL_S	QSL_R	QSL_V
	2008-03-16	15:59	J28JA	18.0749	CW	599	599	Jean		MB	Q	F5JFU
	2008-03-24	18:43	J28JA	14.0249	CW	599	599	Jean	Djibouti	MB		F5JFU
▶	2008-10-12	13:01	J28JA	21.0250	CW	599	599	Jean	Djibouti	MB		F5JFU

QSO nr. 5   QSL needed !!

Call: **Frequency:**   **Mode:**   **His RST:**   **My RST:**
J28JA   10.1039 ∨   CW   ∨   599   599

Name: **QTH:**   **GRID**   **PWR**   **QSL_S**   **QSL_R**
Jean   Djibouti   100 W   SME ∨   ∨

ITU   **WAZ**   **IOTA**   **County**   **State**   **Award**
48   37   ∨

DXCC ref.   **Comment for QSO:**   **QSL VIA**
J2   ...   F5JFU   ...

                    Comment for callsign: QSL manager found!

☐ Offline

Date: **Start time:** **End time:**
2008-12-21   18:45   18:45

DXCC info
Country: Djibouti

WAZ: 37   Cont: Af
ITU: 48   DXCC: J2
LAT: 11.60N   LONG: 43.14E
DIST.:   5023 km   AZIM: 139
2008-12-21 21:45   GE

QTH Profile
14-JO70GG;Neratovice;TS-93 ∨

Callbook (qrz.com)
Jean-Claude

Djibouti,
DJIBOUTI
Lookups: 89682
QSL VIA: F5JFU

[Save QSO [enter]]   [Quit program]

DXCC stat.

	160	80	40	30	20	17	15	12	10	6m	2m	
SSB			Q				Q					
CW			X	X	X	Q	X		Q			
DIG:												

My grid (to change press CTRL+L) JO70GG   Ref. call (to change press CTRL+R) J28JA   Ver. 0.6.0

Technical Stuff - Propagation

- **Contesting is the best way to learn propagation**
  - Daily openings and closings, follow the sun
  - Grey line
  - Sporadic E
  - Aurora
  - Flares
  - Skew paths
- **Learn when to give up or when to change bands**
- **Amazing how much a big contest improves propagation**

- **Go to the source: http://www.swpc.noaa.gov/today.html**

Technical Stuff - Geography

- **Population Distribution**
- **Bands may be open to somewhere, but if no one is there it doesn't matter.**

- **If your signal falls in the forest and no one is there to receive it, does it make a QSO?**
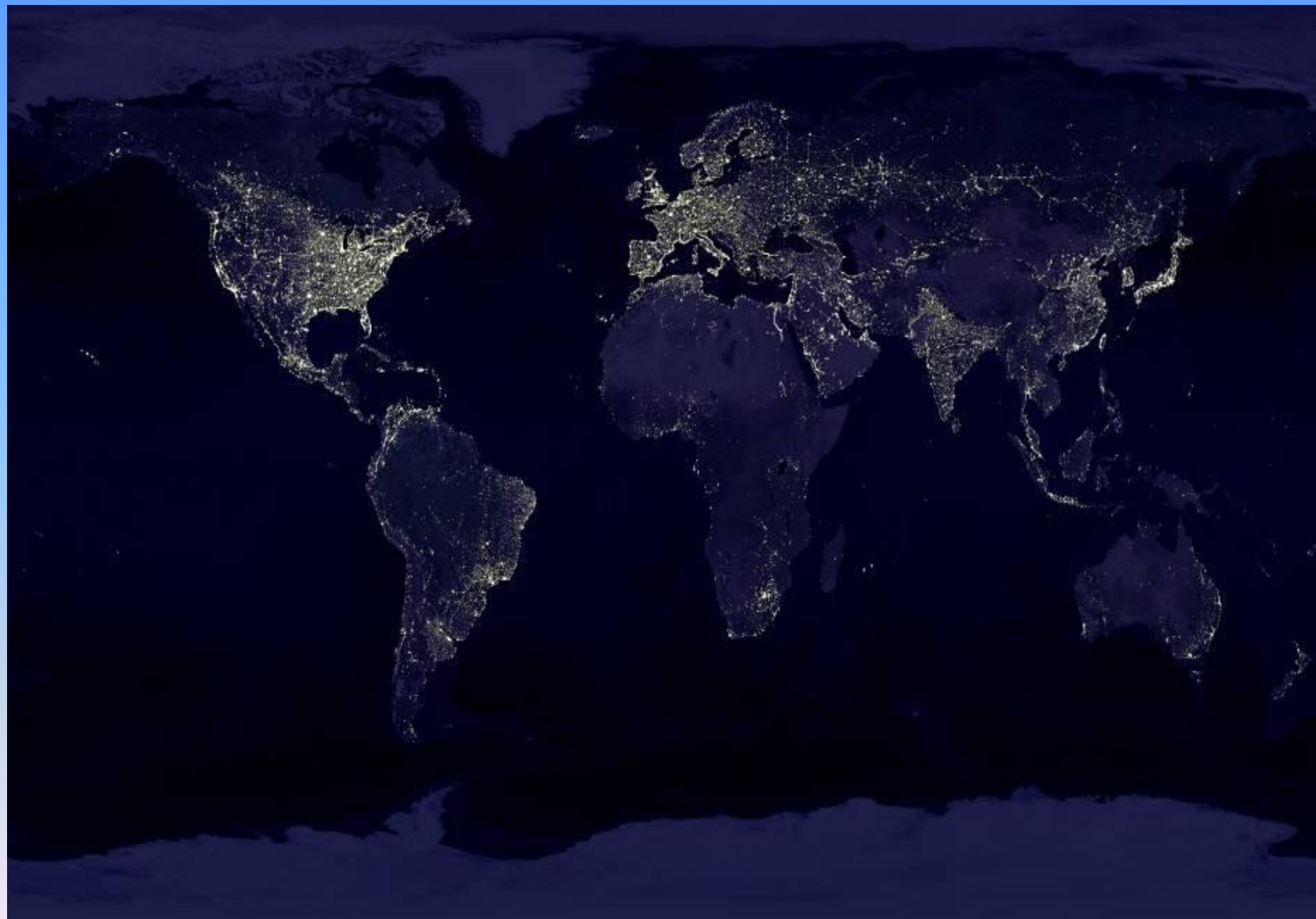
Perspiration

- **Building and maintaining station**
  - **Towers – GET HELP!**
  - **Antennas – ability to withstand hurricane force winds a big issue in Southern Mississippi!**
  - **Ergonomics**
    - **Chair(s), Keyboard, Screen need to be comfortable and easy to reach.**
    - **Radio needs to be easy to reach, but not necessarily right in front of you.**
    - **Rotor and antenna switches can be off to the side.**
    - **Amp should be out of the way, but close enough to tune easily if needed.**
    - **Remove distractions like TV, Kids, Wife, Pets, etc.**

Learn your Body

- **Sleep**
  - **90 minute cycles**
  - **A Sleep Strategy for DX Contests:**

    http://www.contesting.com/articles/37
- **Food**
  - **Beware of the sugar crash**
  - **Carbs and protein for endurance**
- **Drink**
  - **Caffeine, yes or no, and when?**
  - **Sugar! Low sugar and very little caffeine until day 2**
  - **Dehydration vs. Bathroom breaks!**

Technique

- **Smooth Running**
  - **Listen and type at the same time**
  - **Using automatic keyers for voice or CW gives you more time to type, drink, eat.**
  - **No extra delays, dead air invites intruders and leaves the other guy wondering.**
  - **Keep frequency occupied, if they don't hear you they won't work you.**
  - **Don't keep changing pace while its working, if things slow down then try variations on CQ.**

Technique

- **Short**
  - **No extra words**
  - **Only send call or exchange once**
  - **Send repeats once**
  - **Don't repeat your call with exchange unless there was an error**
  - **Some contests and/ or bands do need longer and more repetitious CQ's and exchanges.**

Technique

- **Simple**
  - **Remember the language barriers.**
  - **Basic English. While many DX stations can handle numbers and phonetics they may not understand questions or other chat.**
  - **Standard Phonetics (except replies?)**
  - **Other languages. Be careful! Using a phrase or two of another language may get you a long conversation in reply.**

Logging

- **Paper still used but not as fun**
- **Computer logging nice**
  - **Accurate time.**
  - **Track mode/band changes.**
  - **On/Off time calculated automatically.**
  - **Duping and scoring real time.**
  - **TX from keyboard (SSB, CW, RTTY)**
  - **Takes some practice to log direct to the computer.**
  - **Rotor control? Some loggers do this, but it can be annoying with constant movement in contest.**
  - **Some sponsors only accept computer generated logs, some provide web sites to enter logs.**
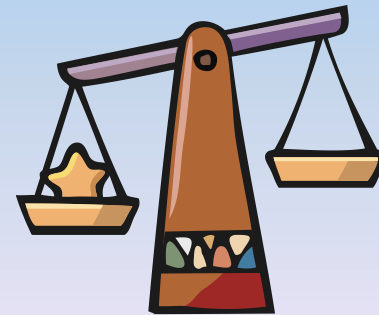
Strategy

- **Frequency Selection**
  - **Be on the right band at right time**
  - **High in band vs Low**
  - **Advanced/Extra segments, sometimes good, sometimes bad.**
  - **Some contests have recommended frequencies**
  - **Bandmaps on loggers can be a big help if you are using the spotting network.**

Strategy

- **Points vs Multipliers**
  - **You need both in most contests!**
  - **Balance results in highest scores**
  - How long to spend calling a multiplier

Strategy

- **When to run, when to S&P**
    - **CQ all the time**
    - **Only S&P when not getting answers**
    - **Dual VFO's are a big help, CQ on one, search the band with the other.**
    - **SO2R is ultimate in Single Operator, takes practice and even more filters. Run on 2 bands at once!**
    - **You can't work them if you aren't transmitting**
    - **Many multipliers call you**
    - **Casual operators will call you but may never CQ themselves**

Strategy

- **Spotting networks**
  - **Don't spot yourself or your own station!**
  - **Using them can change your entry class in many contests or you may be DQ'd!**
  - **Can be a distraction.**
  - **Nice to help find multipliers for casual operators.**
  - **Good for new QSO's late in contest.**

Strategy

- **Highest rates**
  - **Usually stay on band with highest rate of points.**
  - **Follow the sun is common way to plan band selection and watch for openings.**
  - **Not always highest QSO rate.**
  - **For time limited contests take breaks when rates are low.**

Awards and Rewards

- **Wallpaper**
- **Plaques, trophies, pins, plates**
- **Other things. Lobster, Wine, Salmon, etc.**
- **Personal satisfaction**

ARRL RTTY Roundup

N5PA
2004
Delta Division
Single Operator High Score
Sponsor: Great Lakes DX/Contest Club, K9PXV

Resources

- **Other Contesters**
  - **Contest Club Web Sites**
- **Web – List of links at end**
- **Email discussion lists – good way to get answers from the experts.**
- **Magazines**
  - **QST**
  - **NCJ**
  - **CQ**
  - **Others…**

Summary

- **Contesting is Fun.**
- **Its more fun when you know more about it.**

- **And now the answer to the question you have been holding your breath for……..**

Summary

- **When was that first contest???**

- **When the 3rd ham got on the air of course.**

Links for more info

- **Calendars**
  - **WA7BNM – several variations, weekly, annual, perpetual, state QSO parties.**
    http://www.hornucopia.com/contestcal/index.html
  - **ARRL specific contests**
    http://www.arrl.org/contests/calendar.html
  - **ARRL/NCJ monthly listing with links to sponsors**
    http://www.arrl.org/contests/#corral
  - **My Contest Calendar**
    http://www.n5pa.com/contests.php

Links for more info

- **General Info**
  - ARRL Contest web site http://www.arrl.org/contests
  - ARRL Contest Update Newsletter (bi-weekly on web or via email) http://www.arrl.org/contests/update
  - National Contest Journal (NCJ) http://www.ncjweb.com/
  - Contesting.com Web site info plus email reflectors and other links http://www.contesting.com (CQ-Contest email reflector is good resource)
  - N5PA Contest Web Site: http://www.n5pa.com/contests.php
  - Wikipedia http://en.wikipedia.org/wiki/Contesting
  - Radio-Sport http://www.radio-sport.net

Links for more info

- **Results**
  - **Real time scoreboard http://www.getscores.org/**
  - **Pre submission claimed score web site form http://www.hornucopia.com/3830score/**
  - **Pre log submission claimed scores on 3830 email list with summaries on CQ-Contest email list from http://www.contesting.com**
  - **Final results usually on sponsor's web sites.**

Links for more info

- **Loggers**
  - **N1MM (Free, Windows only) http://pages.cthome.net/n1mm/**
  - **CT (Free, DOS or Windows) http://www.k1ea.com/**
  - **Writelog (Windows) http://www.writelog.com/**
  - **TRLog (DOS) http://www.trlog.com/**
  - **N3FJP (Windows) http://www.n3fjp.com/**
  - **SD Super Duper (Free, Windows or Linux/Wine) http://www.ei5di.com/**
  - **Win-Test (Windows) http://www.win-test.com/**
  - **NA (DOS) http://www.datomonline.com/**

Links for more info

- **Other Software**
  - **RUFZ-XP (CW Practice)
    http://www.rufzxp.net/**
  - **Morse Runner (CW Practice)
    http://www.dxatlas.com/MorseRunner/**
  - **DX Atlas (World atlas, greyline)
    http://www.dxatlas.com/DxAtlas/**