RADIO SPORT

Ham Radio HF Contesting

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What is Contesting?

In the 1920s and 1930s competitions were formed to challenge stations to make as many contacts as possible with amateur radio stations in other countries.

Contests provide opportunities for amateur radio operators to practice their message handling skills, used for routine or emergency communications across long distances.

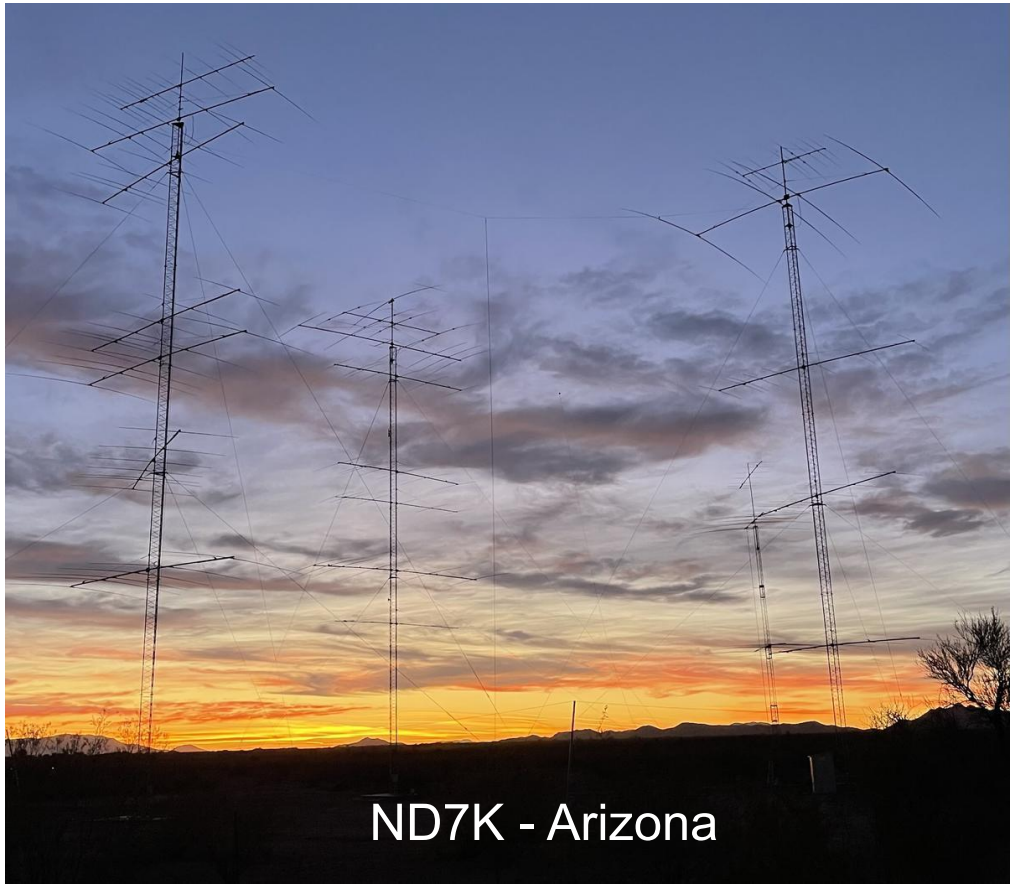
Familiarize yourself with your station and propagation / conditions.

Basically, contact as many other amateur radio stations as possible in a given period of time, and exchange some sort of information.

Why Contest?

- Improve your operating skills
  - Get comfortable on the air
  - Become proficient in efficiently passing information
- Learn your station
  - Are you using all that your radio has to offer effectively?
    - Mic gain, compression, Rx bandwidth, RF gain, filters, etc.
    - Wall-to-wall signals will force you to get good at this
  - Is your antenna lacking in some band / direction?
  - No better way to learn the +/- of you station than the compressed activity of a contest
- Propagation / Bands
  - Where can you reach, at what time, and on which bands
- Work on your DXCC
  - Do you need Morocco/Cayman Islands/Madeira/etc… they are on the air and can hear you!
- The bands are packed, and it’s FUN!

Contest-Specific Stations That You Can Work



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Big Contests

CQ Wide Wide - October / November

ARRL DX - February / March

CQ Worked all Prefixes - March / May

IARU Championship - July

CA QSO Party - October

Worked all Europe / All Asia DX, Sweepstakes, etc.

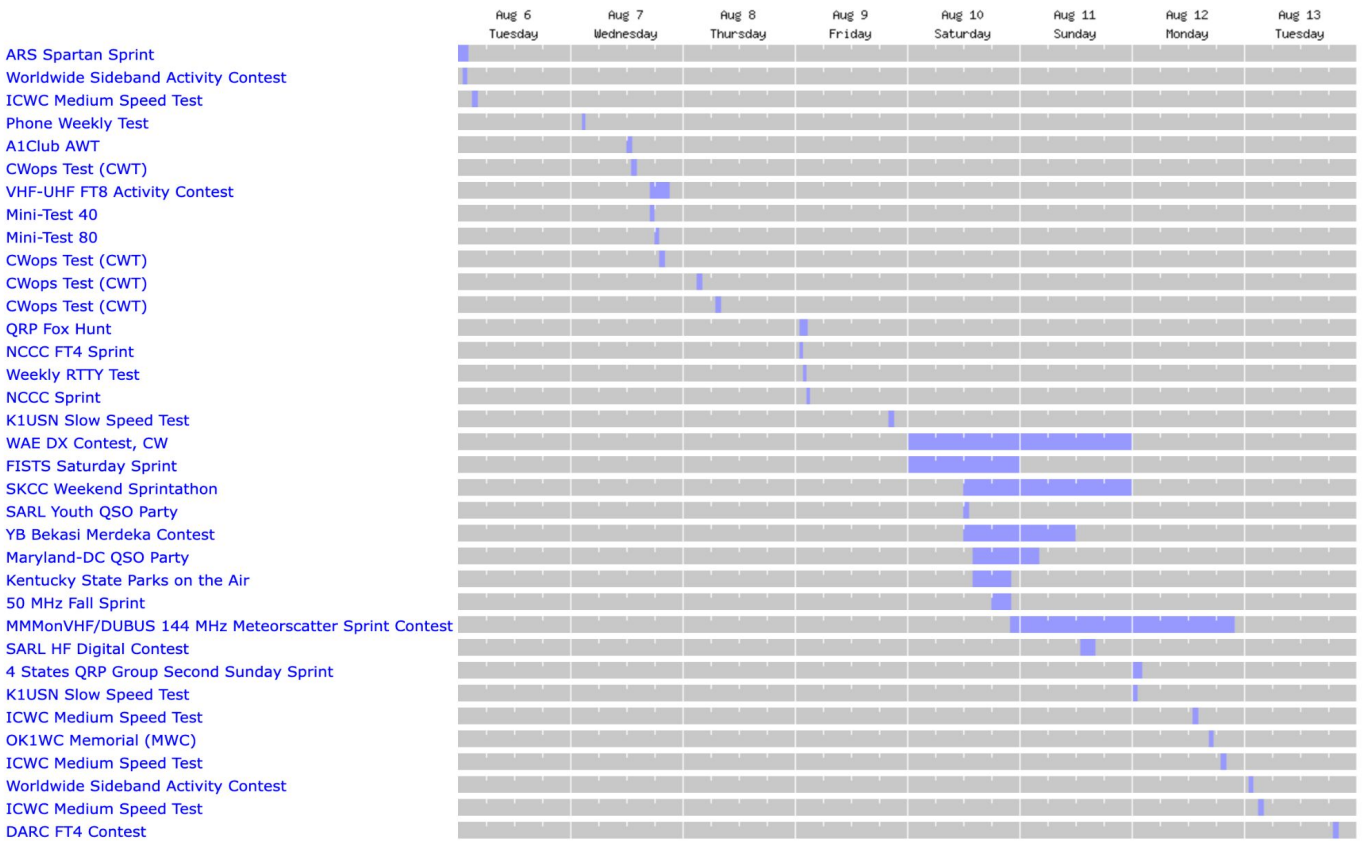
Many smaller contests every week…

Weekly Contests

WA7BNM

Contest

Calendar



Anyone Can Learn to Contest!

- ARRL DX SSB
  - 2023 - 65 QSOs
  - 2024 - DNE
- CQ WPX SSB
  - 2023 - 31 QSOs
  - 2024 - 460 QSOs
- IARU Champ
  - 2023 - 113 QSOs
  - 2024 - 400 QSOs
- CA QSO Party
  - 2023 - 300 QSOs
  - 2024 - ??
- CQ WW SSB
  - 2023 - 121 QSOs
  - 2024 - ?
- CQ WW CW
  - 2023 - 130 QSOs
  - 2024 - ??

- With practice anyone can improve
- Each contest you learn your station, propagation, and improve operating skills
- Compete against yourself, always try to make at least one improvement for the next contest

Best So Far:

2024 CQ WPX CW
609 QSOs - 346 Mults - 430,078 points
1st Place Rookie - W6 / USA / NA

HF Contesting For Technicians

The best way to enjoy HF contesting as a Technician is to upgrade. But…

You get a ***big*** slice of 10m!

- Most of the SSB contest activity on 10m is below 28.500 MHz
  - CQing stations want the most callers possible, that means they have to be in a part of the band with Technicians available to call them
- 10m seems to be better during contest season: Fall to Spring

Considering learning CW

- Opens up contesting on 80m, 40m, 15m, and 10m

What Do You Need To Contest?

- HF Radio
  - With a microphone / key / paddle
- Antenna
  - With a decent feedline

- That’s it!

- Things that make it easier:
  - Computer logging
  - Headset mic / footswitch

Set Goals

1. Have fun!

   This should always be your #1 goal

2. Contact some new DX entities

   Not everyone cares about DXCC, but it's always fun to contact a station in a new country

3. Beat previous QSO total / score / hours / etc.

   Make this goal realistic, and make changes to help you achieve

4. Compete in your entry class

   Once you become more proficient, try to compete in whatever class you enter

Where to Start

- Read The Rules
  - Start and End time of the contest
    - Bigger contest are 48 hours long, some have time restrictions
  - Entry Categories
    - Important if you are trying to compete
  - Exchange
    - Each contest has a different ***required*** exchange, make sure you know what it is
  - Points
    - Important to know if you are trying to compete
      - CQ WW Same country contacts = 0 points
      - IARU Same country contacts = Up to 3 points
      - CQ WPX 160m, 80m, 40m contacts are worth double if on different continent
  - Multipliers
    - Vital to know what the multipliers are
      - Zone / Prefix / State / etc.

Entry Categories 1

Single Operator / Single Operator Assisted

High Power / Low Power / QRP

One transmitted signal at a time, no band change restrictions

* Allows for “Single Op 2 Radio” - SO2R *

When in doubt, read the rules

Entry Categories 2

Multi-Single - Multiple Operators One Signal

High Power / Low Power

One transmitted signal at a time on one band, complicated band change restrictions

Usually means one radio will be running on a band, while a second radio will be used to work in-band multipliers in between the run station transmitting

When in doubt, read the rules

Entry Categories 3

Multi-Two - Multiple Operators Two Signals

High Power Only

Maximum two transmitted signals at a time on *separate* bands

A ‘Run’ station and an ‘S&P’ station on one band, the same setup on a second band

When in doubt, read the rules

Entry Categories 4

Multi-Multi - Multiple Operators and Radios

High Power Only

All six bands can be active simultaneously

One transmitted signal per band - allows for a ‘Run’ and ‘S&P’ station on *each* band. Twelve radios on air at a time.

This is what most of the Super Stations enter as

When in doubt, read the rules

Overlay Categories

1. Classic

   One radio, no assistance, usually only 24 hours of operating

2. TB - Wires (CQ WPX)

   Single tribander for 20/15/10, single element antennas for 160/80/40

3. Rookie

   Licensed less than three years before start of contest

4. Youth

   25 years old or younger at start of contest

5. CA QSO Party

   Expedition / One Day Expedition / County Line / Mobile / YL

When in doubt, read the rules

Scoring

QSO points depend on the contest

ARRL DX	3 points per QSO with DX station
CQ WW	Different continent QSO 3 points
	Same continent different country 1 point
IARU	Same ITU Zone 1 point
	Same continent different ITU Zone 3 points
	Different continent different ITU Zone 5 points

Total QSO Points x Multipliers = Score

When in doubt, read the rules

Multipliers

Total QSO Points x Multipliers = Score

Multipliers make a huge difference in your score!

Exchanges

Contest exchanges are, for the most part, very simple!

They consist of a signal report and some sort of number exchange:

ARRL DX - 59 and State / 59 and Power

CQ WW - 59 and CQ Zone (3)

IARU - 59 and ITU Zone (6)

CQ WPX - 59 and Serial Number starting at 1

CA QSO Party - Serial Number and County (VENT)

Rate, Rate, Rate

For the serious contesters, the biggest concern is Rate

QSOs per hour

This means they are looking for the exchange, and that's it

Unless the exchange requires it, they don't need your name, what radio / antenna you are using, your city, the weather, etc.

If you are used to the Monday Night Net, it may seem rude to be so short. But,the nicest thing you can do to help a CQing station keep up their rate is be as terse possible.

Example of Exchanges & Rate

- Dan N6MJ operating at ND7K in Arizona during the 2024 ARRL DX SSB contest
- Exchange is **59 - State** for US stations, and **59 - Power** for DX stations
- Dan is deliberate, enunciates, doesn't yell, and *keeps things moving*

4,196 QSOs 431 Mults 5,400,861 points 44 hours

Right click and open the following links below in a new tab to listen

http://www.k6mep.org/media/n6mj_nd7k_arrl_dx_ssb_2024.mp3

http://www.k6mep.org/media/2016-arrl-sweepstakes.mp3

Tips and Tricks

Speak normally - don’t rush or yell

Keep words to a minimum - no rag chewing

Use “European Phonetics” if necessary

- I will sometimes use Kilo-Norway-Six-Victor-Queen
- Be careful, don’t get too wild. No “Kansas-Nancy-Six-Very-Quiet”

After the Contest

Submit Log

- Not necessary to participate
- You can submit as a “Check Log” or submit no log at all
- Submitting something helps the organizers with log checking, so I recommend it even if you didn’t participate to compete

Upcoming Contests

Worked All Europe SSB - This weekend!

Interesting contest because of QTCs

CA QSO Party - October 5 - 6

Encourage everyone to participate, and call CQ!

CQ WW SSB - October 26

CQ WW CW - November 23