



# How to Operate on the Amateur HF Bands

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# Choosing a Band

- ◆ 80 Meters – Best at night
- ◆ 40 Meters – Best near Dawn/Dusk
- ◆ 20 Meters – Best during the day
- ◆ 15 Meters – Best during the day during higher part of sunspot cycle
- ◆ 10 Meters – Best during the day during higher part of sunspot cycle

# Sub bands

- ◆ License class restrictions
  - Extras get it all
  - Generals only some.
  - Some of the best DX is in the Extra sub bands; a good reason to upgrade.
  - Stay 3KHz away from Band Edges
- ◆ Mode Restrictions
  - Can't operate phone or SSTV in a CW subband.
  - Can't operate digital (PSK31, RTTY, et.) in a phone subband.

# Equipment

- ◆ Transceiver
  - Borrow one to start.
  - Go with knobs instead of layers of menus to start.
- ◆ Antenna
  - Multiband Dipole (Alpha Delta, etc) easiest to start with as it's a close 50 ohm match to transceiver.
- ◆ Antenna tuner
  - Autotuners - ones by LDG are easiest to start with.

# Logging

- ◆ Not required, but you'll want to do it.
- ◆ You'll need it to apply for awards.
- ◆ Paper log is OK to start.
- ◆ Computer logging
  - Helps keep track of progress towards Awards.
  - Logger32 and other free ones are fine.
  - Can integrate with Internet DX Cluster spots to find rare countries on the air.

# Signal Reports

- ◆ RST – Readability, Strength, Tone
  - 599 on CW & Digital is best
  - 59 on Phone is best (Tone doesn't apply)
- ◆ QSB – fading
- ◆ QRM – adjacent station interference
- ◆ QRN – atmospheric or local noise
- ◆ Never tell anyone they're "full quieting" unless you're working FM
- ◆ In a contest, everyone is 59 or 599!

# Major Amateur HF Activities (other than just rag chewing)

- ◆ DXing – Collecting Countries
  - About 337 radio “countries” are possible
- ◆ Awards
  - Worked All Continents (WAC)
  - Worked All States (WAS)
  - DX Century Club (DXCC) – 100 countries
  - Islands on the Air (IOTA) – 100 islands
  - County Hunters – try to work all 3000 US counties

# Major Amateur HF Activities

(other than just rag chewing)

- ◆ Traffic Handling – NJ Phone Net 3950 LSB every night at 6PM.
- ◆ Special Events – Offer special QSL cards or certificates for working someone at a fair or public gathering



# Major Amateur HF Activities (other than just rag chewing)

- ◆ Contesting – Rapid fire contacts
  - Even if you aren't into competition, contest weekends are a great way to work rare countries or states for awards.
  - Rules are online and vary.
  - Learn the “exchange”, which may be your state, section (SNJ) or a contest contact serial number (start with 001).

# Answering a Contact

- ◆ Listen for someone calling CQ.
- ◆ When he stops, say your call – “K2GW”
- ◆ Record your signal report and his name
- ◆ When he says “Over” or “back to you”, give him his signal report, your name and location and “Over”.
- ◆ Have a conversation if he continues, but don’t be surprised if non-English speakers politely end the conversation with “best wishes to you and your family” at that point. The little English they know is probably more than the Croatian you speak.
- ◆ End your contact by giving your call sign.

# Initiating a contact

- ◆ Look for a open frequency that you're allowed to transmit on. Avoid Band and sub-band edges.
- ◆ Listen!
- ◆ Ask "Is the frequency in use?"
- ◆ Listen!
- ◆ Say CQ six times and your callsign three times.
  - "CQ CQ CQ, CQ CQ CQ, This K2GW, Kilo Two Golf Whiskey, K2GW calling CQ and standing by"
- ◆ Listen!

# Working Split

- ◆ A DX station in a pile-up may be working "split"; listening on one frequency and transmitting on another.
- ◆ Listen first. If you don't hear anyone calling him but he's answering folks that's a clue
- ◆ Things like "Up 5-10" or "Listening 205-210" are clues.
- ◆ Make sure the transmit frequency is one you can use and that your tuner is tuned for that.

# Idiots and abuse

- ◆ Real simple – Just QSY (change frequency) and don't respond.
- ◆ Don't be a band cop.
- ◆ It's a hobby.
- ◆ Have fun!

# QSL'ing

- ◆ Needed for many awards
- ◆ Use free QSL Maker software to print yours on card stock to start before buying lots of printed cards.
- ◆ Use Pathfinder on the web to find where to send them. Sometimes they go to a QSL manager, not the station itself.
- ◆ Direct - enclose SASE or \$2 if overseas.
- ◆ Buro – send ten dollars to the second area incoming buro to get cards for you from overseas.

# Electronic QSLing

- ◆ Easy if you use a computer logbook.
- ◆ ARRL Logbook of the World (LOTW) acceptable for DXCC and WAS.
- ◆ eQSL is somewhat meaningless as it doesn't count for most awards.

# Summary

- ◆ It's magic talking around the world!
- ◆ Buy a copy of the ARRL Operating Manual. It will answer most of your questions.
- ◆ Try different things when you get bored or frustrated.
- ◆ Have fun!