

Amateur Radio Service (ARS)

Recommended Don'ts

By Larry E. Gugle K4RFE, RF Design, Manufacture, Test & Service Engineer (Retired)

1. **Don't transmit on any frequency, before first determining that the frequency you want to use is clear and not in use, as well as the adjacent frequencies plus and minus (+/-) the regulated Band Width (BW) of the emission mode you are going to use.**
 - a. Example of an appropriate procedure:
 - i. If you want to use the carrier frequency of 7.150 MHz for a Single Side Band Suppressed Carrier - Amplitude Modulation (SSBSC-AM) Radiotelephony operation (emission designator 2K70J3E), vary your VFO up to the frequency of 7.153 MHz (+3 kHz) and down to the frequency of 7.147 MHz (-3 kHz) to see whether those frequencies are in use by other operators in a conversation.
 - ii. Then before transmitting on 7.150 MHz, listen for a short time to see whether it is being used or not. If nothing is heard and it seems to be clear, ensure that it is, by transmitting the question "Is this frequency in use, is 7.150 MHz in use, this is (Your Station Call Sign)"? Ask this question at least twice before calling a CQ or calling a specific station.
 1. Never assume a frequency is clear even if you can not hear anybody transmitting at the time you have been listening. There may be operators that are using the frequency standing by, awaiting the return of another operator who has stepped away for a short time to get a refreshment, use the toilet, answer a telephone call, read an email sent to them by one of the other individuals on frequency or answer a question from a family member.
 - iii. This procedure should be followed so that your Single Side Band Transmissions, 3rd Order IMD Band Width on 7.150 MHz, does not interfere with other conversations on adjacent frequencies above and below the carrier frequency. If there are operators within +/- 3 kHz, your 3rd Order IMD will be within their Receiver's Band Pass Filter (BPF) Pass Band (PB) and interfere with them.
2. **Don't transmit closer to a 1) 'Entire Band Edge', 2) 'Emission Mode - Band Segment Edge', 3) 'Operator Class - Band Segment Edge' or 4) 'Another Ongoing Conversation' than:**
 - a. **'100 Hz'** using Emission Designator **'100HA1A'** ('ON' and 'OFF' keying Continuous Wave (CW) Radiotelegraphy)

- b. **'2.7 KHz'** using Emission Designator **'2K70J3E'** (Single Side Band Suppressed Carrier - Amplitude Modulation (SSBSC-AM) Radiotelephony)
 - c. **'6 KHz'** using Emission Designator **'6K00A3E'** (Double Side Band Full Carrier - Amplitude Modulation (DSBFC-AM) Radiotelephony)
 - d. **'16 KHz'** using Emission Designator **'16K0F3E'** (Frequency Modulation (FM) Radiotelephony)
 - e. **'16 kHz'** using Emission Designator **'16K0G3E'**, (Phase Modulation (PM) Radiotelephony)
3. **Don't interrupt an ongoing 'Private Conversation', on Radiotelephony (Voice) or Radiotelegraphy (Continuous Wave = CW) unless you have politely requested permission to join the conversation.**
- a. If you are not a part of a conversation between individuals currently using the frequency and would like to join, just give your **"call sign"** between their transmissions and wait to be recognized.
 - b. If one of the operators using the frequency recognizes your transmission, it doesn't mean that they have invited you to join the conversation, it only means that they have heard you and recognized your transmission. Don't just start talking once you're recognized, be courteous and ask if you may join the 'Private Conversation'. And by-the-way it is a 'Private Conversation' even though it is being conducted in a public forum.
 - i. Interrupting an ongoing 'Private Conversation', is extremely rude, whether you do it 'In-Person' or 'Over-The-Air by Radio Transmission'.
 - c. If you are invited to join the conversation ensure your comments have something to contribute to the current topic being discussed. It is especially rude to make a transmission and change the subject.
4. **Don't interrupt an ongoing 'Private Conversation' on Radiotelephony (Voice) or Radiotelegraphy (Continuous Wave = CW), with any "Unsolicited Comment" about the topic being discussed, either with a legal identified or illegal unidentified transmission.**
- a. Interrupting an ongoing 'Private Conversation' with any 'Unsolicited Comment', is extremely rude, whether you do it 'In-Person' or 'Over-The-Air' by Radio transmission.
 - b. If you make any 'Unsolicited Comment', without identifying your Primary Station Call Sign, either at the end of your transmission or within 10 minutes after your transmission, fits into the category of an "illegal" transmission.

5. **Don't interrupt or ask to join an ongoing 'Private Conversation' on Radiotelephony (Voice) or Radiotelegraphy (Continuous Wave = CW) unless you can hear the majority if not all of the participants.**
 - a. The reason you should do this is because, it is discourteous and unfair to the individuals currently involved in the conversation, who will not be able to hear your comments.
 - b. The best procedure to determine whether you can hear all individuals involved in the conversation, is to listen for a few minutes and write down the Call Signs of the Stations currently on frequency.
6. **Don't use the words "break" or "contact" when wanting to join an ongoing 'Private Conversation' on Radiotelephony (Voice).**
 - a. If you are not a part of the conversation between the individuals currently using the frequency and would like to join, give your "call sign" between their transmissions and wait to be recognized.
 - b. Don't use the words *"break"*, which when used as a verb means, "interrupt", it does not mean, "I want to join the conversation".
 - c. Don't use the word *"contact"*, which when used as a verb means "communicate with", it does not mean, "I want to join the conversation".
 - d. If however you have an "Emergency" or other "Urgent" situation, use the words "break-break" to "interrupt".
7. **Don't use Radiotelegraphy (Continuous Wave = CW) 'Q-Signals', such as QRT, QRZ, QSL, QSY, QTH and 'Numbers' such as 73 or 88 using Radiotelephony (Voice) Communications.**
 - a. Use normal 'Plain Language Words' or Radiotelephony 'Prowords'.
 - i. 'Q-Signals' and 'Numerical' abbreviations were developed for 'brevity' reasons and are appropriate when using the International Morse Code Radiotelegraphy 'On and Off' Keying Continuous Wave (CW) mode operations.
 - ii. They were not developed and are not appropriate using Radiotelephony (Voice) mode operations such as Dual Side Band Full Carrier - Amplitude Modulation (DSBFC-AM), Single Side Band Suppressed Carrier - Amplitude Modulation (SSBSC-AM), or Frequency Modulation (FM).
 - b. Some examples of 'Q-Signals' not appropriate to use are listed as follows;

- i. Don't say by voice the CW Q-Signal "QRT?" in interrogative form which means: "Shall I stop sending?" or in declarative form which means: "Stop sending."
 - ii. Don't say by voice the CW Q-Signal "QRZ?" in interrogative form which means: "Who is calling me?" or in declarative form which means: "You are being called by ____."
 - iii. Don't say by voice the CW Q-Signal "QSL?" in interrogative form which means: "I acknowledge receipt" or in declarative form which means: "Can you acknowledge receipt?".
 - iv. Don't say by voice the CW Q-Signal "QSY?" in interrogative form which means: "Shall I change to another frequency?" in declarative form which means: "Change to another frequency."
 - v. Don't say by voice the CW Q-Signal "QTH?" in interrogative form which means: "What is your location?" or in declarative form which means: "My location is ____."
 - vi. Don't say by voice the CW Number Code "73" in declarative form which means: "Best Regards".
 - vii. Don't say by voice the CW Number Code "88" in declarative form which means: "Hugs and Kisses".
8. **Don't use an Active Load to 'Tune and Load' 'Over-The-Air' any Transmitter with an 'Electron Tube RF Power Amplifier (RFP) Stage', or any 'Inline External Electron Tube RF Power Amplifier (RFP)' placed inline after the Transmitter.**
- a. Use a 50-Ohm 'Dummy Load' to 'Tune and Load' any Transmitter and/or Inline External RFP which use Electron Tubes, and have a "Pi" or "Pi-L" configured Output Coupling Low Pass Filter (LPF) Network.
 - b. Once the Transmitter and if used any Inline External RFP tuning is completed using a Dummy Load, place any Inline External RFP in 'standby' mode.
 - c. Use an Impedance Matching Network (IMN) placed inline after the Transmitter and/or after the Inline External RFP, and tune with the lowest output power possible, for a Impedance (Z) match between the IMN input Impedance (Z) of 50 ohms to the 'Complex' Impedance (Z) of the Active Antenna RF Feed Line connected at the IMN output.
 - i. *An IMN is also referred to as an 'Antenna Coupler', 'Antenna System Coupler', 'Antenna Tuner', 'Antenna System Tuner', 'Transmatch' or just 'Tuner'.*
 - ii. When matching the Impedance (Z) that is connected to an IMN output, use the lowest output power available from the Transmitter.

- d. Once the appropriate IMN Impedance (Z) matching is completed, increase the Transmitters output power to the desired level and turn on any Inline External RFPA if used and switch to the Active Load for communications.
9. **Don't knowingly interfere with an ongoing Conversation on Radiotelephony (Voice) or Radiotelegraphy (Continuous Wave = CW) just because you are working a 'DX Station' or 'Operating in a Contest', especially using split frequencies. (Note: Refer to numbers 1 and 2 above)!**
10. **Don't operate in any fashion that is not in keeping with Good Amateur Practice.**

Amateur Radio Service (ARS)

Recommended Do's

1. **Develop good operating practices. Set an example for other operators and you will be doing your part in helping insure the continuance of our long and proud tradition of self-regulation.**
 - a. A good operating guide to follow is "The Amateur Radio Service Operator's Code" written in 1928 by W9EEA Paul M. Segal.
 - b. **If you are a repeater user, here is a URL of a professional sounding radio announcer (Mr. Bill Hamilton) giving a narration of good repeater operating practices / procedures. Information courtesy of W8RXX John Perone.**
<http://www.repeater-builder.com/repeaterisms/repeaterisms.html>
2. **Set a good example especially for Short Wave Listeners (SWL) who may be thinking about becoming an Amateur Radio Service Operator.**
3. **Try to keep track of everyone involved in the Conversation on Radiotelephony (Voice) or Radiotelegraphy (Continuous Wave = CW).**
 - a. **Hopefully someone has assumed the role of "traffic director" to make sure everyone has a chance to contribute to the discussion. If not, don't hesitate to do it yourself.**
4. **When involved in a 'round-table' style Conversation on Radiotelephony (Voice) or Radiotelegraphy (Continuous Wave = CW), make it clear at the end of each transmission which station is expected to transmit next.**
5. **Always be polite regardless of the circumstances.**
 - a. **If not, avoid transmitting.**

6. **Look for opportunities to "Mentor" newly licensed or upgraded license class Amateur Radio Service Operators when you hear them on the radio frequency bands.**
 - a. **Welcome them, solicit their questions and give them pointers on good operating practices.**
7. **Be a good listener. It will help you better organize your thoughts before transmitting.**
8. **Reply to a CQ call, or call CQ yourself. It helps keep alive the magic of Amateur Radio.**
9. **Make a conscious effort to identify your Primary Station Call Sign at the end of your transmission or every 10 minutes throughout a conversation, whichever comes first.**
10. **Speak clearly and slowly, especially when giving your call sign to someone you have never worked before.**
 - a. **For clarity use the International Phonetic Alphabet to spell out your call sign for the first contact with a new station.**
11. **Promote friendship and goodwill to DX contacts.**
 - a. **Look for ways to get to know each other rather than simply exchanging names, signal reports, locations and equipment being used!**
12. **Operate on frequencies that are in whole KHz (i.e. use 7.070 MHz versus using 7.070.5 MHz).**
 - a. **This alleviates ambiguity and makes it easier for everyone to be on the same frequency.**
13. **Openly praise other Amateur Radio Service Operators when you observe them doing something that you feel deserves special recognition, such as demonstrating Amateur Radio to a group of Boy Scouts or setting an example with good operating practices.**
14. **Always be ready to quickly and calmly respond to emergency situations.**
 - a. **Rehearse what you would do if presented with various scenarios.**
15. **Make a point to try operating on many different bands.**
16. **Remember that no one country can proclaim to be the leader of the Amateur Radio world.**
 - a. **Likewise, no one country's foreign policy is any more right or wrong than that of another country.**