

RADIO PROTOCOLS FOR DUMMIES

© by M. Siconolfi

- Two-way radio antennas will give best performance if placed in a vertical position,
- Turn towards the person who is to receive your signal so that your body does not absorb most of the radio energy from the antenna
- Most batteries are Nickel Cadmium or Nickel Metal Hydride. These batteries fail abruptly when they reach the end of their charge.
- To avoid rapid discharge of the battery:
 - Keep the volume below MAX
 - Limit the duration of your transmissions
 - Keep the battery as warm as possible
- Clean battery contacts by using a pencil eraser to remove oils and residue from the battery connectors in humid conditions.
- Two-way radios are not "full-duplex" like a telephone. Because only one person can talk at a time, it is more important to LISTEN on a 2-way radio than to talk!
- All radios idle in the *receive* mode. So do not speak immediately when you press the PTT button, but wait a beat until you are transmitting
 - Most two-way radios take 100 to 300 milliseconds to change from receive to transmit; if you speak as soon you "key up," the radio "clips" the first syllable of your first word, making it harder to understand.
- The frequencies used by most radios at regattas are *public* air waves. Public means anyone with a radio or, more likely, a *scanner* can listen in. Prudence suggests keeping things decorous and avoiding sensitive items
 - You can presume at every regatta that someone other than officials has access to your channel. It is also not unknown for an unattended radio to be near a public address system. . . .
- A basic insight into the physics of these radios is that shouting into them will NOT improve your range and intelligibility. Never shout -- increasing your voice level will only cause distortion of your voice by the microphone.
 - The volume control affects only the volume of the speaker and not the sensitivity of the mic.
- Louder, faster, or higher pitched speech is counter-productive to intelligibility. It doesn't help to talk louder on the radio in a noisy environment, even though it may seem natural.
 - Understand that it in general it is *consonants* and not vowels that carry meaning; you will lose no points or intelligibility by over-stressing consonants.
 - The only way to overcome loud ambient noise is to shield the microphone from the wind, point it away from the source of noise, or wait until the noise passes
 - Remember that a simple message such "Go" may be heard as "No" so try to use unambiguous phrases that will reproduce without ambiguity especially in an emergency.
- Before transmitting, ensure that you are not interrupting someone else's communications. Listen first to be sure channel is clear!
- **Microphone:** The most important factor in your outgoing transmission quality is the relative position of your mouth to the radio's built-in microphone. Know where it is (not always the obvious choice) and speak directly into it at a distance of about 1 inch. Speak at a moderate pace, neither too slow or too fast, avoid slurring your words.
 - Speak ACROSS the microphone rather than into it because plosive sounds reduce intelligibility.
 - In colder weather speak at a slightly sharper angle to the unit so that condensation does not freeze on the small microphone
- **To call someone, say the name of the person you want to call first, followed by the words "THIS IS," then say your name and "OVER."** *For example:* "START, THIS IS THE FINISH LINE, OVER"; "MARTHA, THIS IS GEORGE, OVER;"
 - When Martha hears her name, it gets her attention. She may not know George's voice, so when she hears the words "THIS IS," it alerts her to pay attention to who is calling her. When she hears "OVER," she knows that it is her turn.
 - Basic "radio etiquette" establishes contact first and makes sure that you have the

other person's attention before you just babble away. If you hear someone calling you, acknowledge his or her call by saying, "FINISH LINE, THIS IS THE START, GO AHEAD, OVER." This lets the caller know that you heard them, and that you are ready to listen.

- It's always best to speak in short simple phrases on the radio and toss the conversation back and forth like a tennis ball with the word "OVER."
- **Do's:**
 - Be brief and to the point. Do not confuse your radio with a open mic at a comedy club....
 - **Listen** before you begin your transmission, and always wait a split-second before you speak after keying the push-to-talk button.
 - Indicate your location; your audience needs to know where you are:
 - Acknowledge the receipt of all messages directed to you regardless of how trivial
 - The word "OVER" leaves no doubt about whose turn it is to talk and avoids any confusion which results in two people speaking at once and nobody hearing anybody. When your business is finished, the person who started the conversation should end it by saying his name and the word "OUT," which leaves no doubt that contact has ended.
 - Always release the push-to-talk (PTT) button whenever you stop talking. If you forget and keep it pushed down when trying to think of something to say, the radio continues to transmit a carrier, making your battery run down faster and making for "dead air" so that nobody else can speak or be heard.

- **Don'ts:**
 - Turn your squelch too high—you may wonder why everyone is so quiet at the regatta; don't change your channel.
 - Turn up the volume to the max. This will drain the battery and cause distortion. Furthermore, it has no effect on outgoing transmission whatsoever.
 - Talk too much. Only speak when absolutely necessary. Safety information must take priority.

- Use "Over and Out." (It's like a novice cox saying "stroke")! You can be either expecting a reply ("Over") or finished and clear of the channel ("Out"), not both simultaneously.
- Swear. Good advice in general, but common sense on an open radio channel.
- Get the radio wet: use a shower cap from motel if all else fails.
- Make negative comments about officials, coaches, or the quality of rowing you see. You will regret it.

<u>RADIO PHRASE</u>	<u>INSTEAD OF</u>	<u>MEANING</u>
NEGATIVE	Nope	No
THAT IS CORRECT	Yup	Yes, Confirm
AFFIRMATIVE	Yup	Yes, Confirm
ROGER	Yup	Yes, Confirm
ACKNOWLEDGE	Eh? (Canada)	Confirm that you understand my message
SAY AGAIN	Hunh? (USA)	Repeat last message
GO AHEAD	Yeah, what?	Listening, proceed with your message
CORRECTION	Oops...	I made a mistake, correct version is...
DO YOU READ	Are ya there?	Called you once or more, reply please
STAND-BY	Wait a sec...	Busy, please pause for a moment
WILCO	Okey Dokey...	Message understood, will comply
OUT	...	My message ended, no reply expected
OVER	Huh, Eh	Message completed, reply expected
CHECK	Got it	Understood
CONFIRM	Is that right eh?	My version is...Is that correct?