

Radio Voice Procedures

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INTRODUCTION

Station to station radio communication procedures vary with the severity of the incident at hand. They range from simple and straightforward to intense and complex. At one extreme (e.g., in an exchange between hams about a minor incident), the protocol may be nearly (but not quite) as informal as in ordinary conversation. At the other extreme (e.g., among teams from several agencies responding to a major incident) the protocol may be nearly (but not quite) as formal as in a military operation.

This reference is intended to guide your on-air communications as circumstances dictate. This is by no means definitive, nor a set of unbreakable rules. The intent is to get a message sent from one person to another, as quickly and as accurately as possible. Do what you have to do to make that happen.

RADIO JARGON

“Jargon” are special words or expressions that are used by professions or groups, and are difficult for others to understand. Radio operators are no exception to this, with an old and well established jargon. This reference outlines the two most common protocols in use, but by no means all of them. You may be working with a newly licensed Amateur Radio operator, or a long time “rag chewer”, neither of whom are familiar with these protocols. So knowing your receiving station, being flexible, and having patience are critical.

Procedure Words (Prowords)

A basic skill for all radio communications is the use of procedure words (or prowords). Radio operators use procedure words in place of long sentences to keep voice transmission as short and clear as possible,. These are words or phrases which convey information in a condensed standard verbal format. The use of prowords is the primary focus of this guide.

Prowords are voice versions of the much older prosigns for Morse code first developed in the 1860s for Morse telegraphy, and their meaning is identical. A fairly complete list is included in Appendix 1, and referenced throughout this guide.

The U.S. military communications manual [ACP-125](#) is the most formal and perhaps earliest modern definition of procedure words, but its definitions have been replicated by many other organizations, including Amateur Radio. The [ARES Field Resource Manual](#) has a basic list as well. Chapter 5 of [The ARRL Emergency Communication Handbook](#), “Basic Communication Skills”, is an excellent primer.

Q-Signals

Q-signals are a system of radio shorthand as old as wireless and developed from even older telegraphy codes. They consist of 3 letter groups (all starting with a “Q”, hence the name), conveying common information that save time and allow communication between Amateur Radio operators, especially those who don’t speak a common language. Modern amateur radio uses them extensively. Q-signals take the form of questions only when they are sent followed by a question mark. Most of them have an equivalent proword, but not all.

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The table in Appendix 2 lists the most common Q-signals used by amateur radio operators. While Q-signals were originally developed for use by telegraph operators, and later used in CW, their use is common on voice. "QRZed?" is someone asking "Who is calling me?"; "I'm hearing some QRM" from an operator receiving some interference. Or "Let's QSY to 146.58" as two operators change from a repeater frequency to a nearby simplex communications frequency. "QST" is frequently used. These **will** be used by amateur radio operators during emergency communications, so it's best for you to be familiar with them.

GENERAL RADIO OPERATING PROCEDURES

These are basic operating procedures for any mission that you volunteer to go on:

- When deployed, maintain a constant radio watch unless specific instruction or permission has been received to the contrary. Ensure that the correct frequency is in use and that at least one person is assigned to monitor the radio, regardless of the circumstances.
- Answer all calls as promptly as possible. Radio procedures presume that stations can respond to a call.
- Listen carefully before transmitting to ensure that the frequency is clear and to accommodate troubled stations.
- Learn to use your equipment effectively, using good operating techniques.
- Use correct speech technique, described below under "Speech Techniques".
- Initiate radio contact using the assigned callsigns of the station you aim to reach and yourself. Use tactical callsigns, if they have been assigned (see "Tactical Callsigns").
- Strive to send messages accurately. Use callsigns and recognizable abbreviations or codes when referring to personnel or locations. Spelling words, numbers, and abbreviations is essential, as discussed under "Aids To Accuracy".
- Keep messages clear, orderly, and concise, brief and to-the-point. Do not lose your temper or use profanity.
- Clearly state your intention and the information you wish to convey. Insofar as possible, plan the message ahead. Written notes reduce the risk of error.
- Use the primary channel only for urgent substantive communication or to establish contact before shifting to a secondary channel. Keep primary channels as free as possible.
- Standard procedure words (prowords) may be used in place of whole sentences. Prowords are easily used and recognized words or phrases with a specific predetermined meaning. (See Appendix 1 for common prowords). For example:

ROGER = "I have received your last transmission satisfactorily."

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OUT = "This is the end of my transmission to you, and no answer is required or expected"

- End each transmission by saying the proword "OVER," and end radio contact by saying the proword "OUT."

RADIO OPERATING TECHNIQUES

Radios are a reliable means of communications, but they have definite limits. They are not "smart" phones, where connectivity and reliability are provided by an extensive infrastructure. Radio communications, especially during an emergency, requires you, the radio operator, to know those limits, and use good operating techniques to maintain effective communications

- In transmission, position the microphone close to the mouth, and speak across it.
- Release the push-to-talk (PTT) switch promptly and ensure that the radio returns to the receive condition.
- For reception, particularly in noisy or difficult conditions, use headsets or earbuds instead of loudspeakers.
- Know the difference between simplex and repeater operations. Simplex radio signals from a handheld radio can travel a few hundred feet and up to 15 miles, depending on conditions. Repeater operations can extend that range up to several hundred miles (excluding "dead spots"), depending on the repeater location, and how it is configured. Base station or mobile radios can range even further, if set up properly.
- Know where you are, and what's between you and the station you want to contact. Buildings, power lines, mountains, and other obstacles can degrade or block a radio signal. Weather can as well. This includes your own body.
- When using a handheld radio with the built in antenna, face in the direction of the station or repeater you are contacting. If practical, use an external antenna as high off the ground as possible. Raising the antenna can increase your range significantly.
- Find and avoid "dead spots", where radio frequency signals are poor to non-existent. Find and know "sweet spots", where you can get a reliable signal.

SPEECH TECHNIQUES

The key words to remember are Rhythm, Speed, Volume and Pitch (RSVP).

- **Rhythm.** Use short sentences divided into sensible phrases (vs. pauses after each word) that maintain a natural rhythm. When pausing, release the PTT to minimize transmission time and to permit stations to break in as necessary.
- **Speed.** Speak slightly slower than for normal conversation. Slow down by increasing the length of pauses between phrases, especially if a message is to be written down by the recipients or if conditions are difficult. (Altering the gaps between words will create

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an unnatural, halted rhythm that is difficult to understand.) Never speak faster than the station experiencing the worst reception conditions can be expected to copy.

- **Volume.** Speak at a volume as for normal conversation. Shouting causes distortion.
- **Pitch.** To improve clarity, pitch the voice slightly higher than for normal conversation.

AIDS TO ACCURACY

Relevant prowords

- SPELL, I SPELL.
- FIGURES, NUMBERS,
- INITIALS.
- POINT; DOT.

Rules for spelling

- Use the International Phonetic Alphabet (see Table 1) to spell out words or acronyms that may not transmit clearly.
- The International Phonetic Alphabet may not always be used by other Amateur Radio operators. For example, they may use "KILOWATT" instead of "KILO". Be flexible, and ask for a repeat as necessary.
- Callsigns and coordinates should always be spelled out phonetically.

Table 1: International Phonetic Alphabet

A - Alpha	K - Kilo	U - Uniform	0 - ZEE-row
B - Bravo	L - Lima	V - Victor	1 - Wun
C- Charlie	M - Mike	W - Whiskey	2 - TOOO
D - Delta	N - November	X - X-Ray	3 - THUH-ree
E - Echo	O - Oscar	Y - Yankee	4 - FOH-war
F - Foxtrot	P - Papa	Z - Zulu	5 - FY-ive or FIFE
G - Golf	Q - Quebec		6 - Sicks
H - Hotel	R - Romeo		7 - SEV-vin
I - India	S - Sierra		8 - ATE
J- Juliett	T - Tango		9 - NINE-er

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- Spelling out may also be necessary to communicate obscure or unpronounceable words or abbreviations. They may be spelled out after the proword, "I SPELL." If the word is pronounceable, say it before and after spelling it out. In difficult conditions it may more effective to use full words than to risk having to spell out an abbreviation.

Rules for figures

Figures in the text of a message may be spoken as in normal speech, but when conditions are difficult or when misunderstanding is likely or dangerous, figures should be spoken digit-by-digit, preceded by the proword "FIGURES" or "NUMBERS". This proword warns that figures follow immediately, to help distinguish them from other similarly pronounced words. Use POINT or DOT to identify a decimal. Do not send commas (e.g., for "12,341", send "Wun TOOO THUH-ree FOH-war Wun")

TACTICAL CALLSIGNS

Concept

When used properly by well-trained and practiced operators, tactical callsigns can prevent confusion, save a great amount of time, and aid in making a net or operation run smoothly and efficiently. When used improperly, or with poorly-trained and inexperienced operators, they will usually cause delays and confusion.

Tactical callsigns are used to identify a specific location or a function. They are especially helpful when multiple operators are being rotated (in shifts) at assigned stations. This may be a shelter, a net control station, or for a certain job/position (e.g., logistics). The assigned station can be at fixed location, or a mobile unit.

Tactical callsigns can be very helpful if mutual aid has been invoked, and operators with unfamiliar callsigns deploy to an affected area. For example, the tactical callsign "EOC" is immediately understood as to what it is by all operators. Likewise, other stations do not need the FCC callsign of the operator on shift in the EOC to call that location.

Guidelines

- Don't use FCC callsigns as tactical callsigns. An operator may be at one location one day, and at a different one on the next.
- Operators must continue to identify with their FCC callsign every ten minutes during a contact, and at the end of a transmission (see FCC part 97.119).
- In any ARES net or mission, every station will have a unique tactical callsign, assigned by the Emergency Coordinator or Net Manager.
- Tactical callsigns will be descriptive such as a location ("Corner 6"), a function ("Incident Commander"), or both ("Command Post").
- A tactical callsign remains the same for a given station and does not change with the time, shift, day or with an operator change. It remains the same until the net or incident is over.

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- Do not combine tactical and FCC callsigns (e.g., "EOC KJ6ERK"). This is unnecessary , and defeats the whole purpose of having a tactical sign.

RADIO CHECKS, SIGNAL STRENGTH AND READABILITY

Whenever using a radio for the first time or when there is doubt about its performance, the simplest check that can be done is what is known as a "radio check." Radio checks should be carried out periodically during periods of low traffic.

Relevant prowords

- THIS IS.
- RADIO CHECK (SIGNAL REPORT, HOW IS MY SIGNAL?).
- ROGER.
- Prowords in Tables 2a/2b, or Table 3.

Initiating a radio or signal check

The person initiating a radio check should say:

- The callsign of the station being called.
- The words "THIS IS."
- The callsign of the station calling.
- The prowords "RADIO CHECK" (meaning, "What is my signal strength and readability? How do you hear me?").
- This is sometimes expressed as "SIGNAL REPORT" or "HOW IS MY SIGNAL?". The equivalent Q-Signal is QRM (see Appendix 2), and may be used by Amateur Radio operators in a similar manner. For example, "How is my QRM?", or "I'm hearing a little QRM."

There are two commonly used systems for signal reporting, focusing on signal strength and readability. The first is the "Signal Report", and uses prowords to describe those two qualities. The second is from Amateur Radio, what's known as the "Readability - Signal Strength - Tone" or R-S-T report, and uses numbers to describe these qualities.

Signal Reporting

Upon hearing the proword "RADIO CHECK" (sometimes spoken as "How is my signal?"), you should answer:

- "ROGER" (meaning "I have received your last transmission satisfactorily.") Strength of signals and readability need not be exchanged unless one station cannot clearly hear another. So, the omission of comment on signal strength and readability is understood

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to mean that reception is "LOUD and CLEAR". Inexperienced operators may not understand this omission, and providing a response of "LOUD and CLEAR" for reassurance is acceptable.

- If reception is other than "LOUD and CLEAR", it must be described with prowords for signal strength and readability, as listed in Tables 2a and 2b for signal strength and reception, separated by "AND" or "BUT".

Table 2a: Signal Strength Prowords

LOUD	Your signal is strong.
GOOD	Your signal is plainly audible.
WEAK	I can hear you, but with difficulty.
FADING	At times your signal fades so much that continuous reception is not dependable.
NOTHING HEARD	I cannot hear you at all. May be sent as one report.

Table 2b: Signal Reception Prowords

CLEAR	Excellent quality.
READABLE	Good quality; no difficulty in reading you.
DISTORTED	Having problems reading you due to distortion.
WITH INTERFERENCE	Having trouble reading you due to interference.
INTERMITTENT	Having trouble reading you because your signal is intermittent.
NOT READABLE	I can hear that you are transmitting but cannot read you at all.

Examples:

"GOOD and CLEAR"

"FAINT and CLEAR"

"WEAK but READABLE"

"GOOD but DISTORTED"

"NOTHING HEARD"

"FADING and NOT READABLE"

R-S-T system (ARRL FD 220)

This is included because you may receive a signal report in this format. R-S-T was originally developed for CW (Morse Code) communications on high frequency radio, hence the inclusion of "Tone". For voice operations, "Tone" is omitted, for an "R by S" report.

R-S-T is similar to the signal report above, but with different content. READABILITY is a number from 1 to 5, SIGNAL STRENGTH from 1 to 9. Low numbers are bad, high numbers are good, as shown in Table 3. See the ARRL form FD220 for a complete set of R-S-T reporting components.

A typical radio check using the R-S-T system can go like this:

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- "ROGER": A signal report readability and strength is not exchanged unless one station cannot clearly hear another. Sending "ROGER", and omitting any comment on readability and signal strength means that reception is "FIVE by NINE", similar to "LOUD and CLEAR". Inexperienced operators may not understand this omission, and providing a response of "FIVE by NINE" for reassurance is acceptable.
- If reception is other than "FIVE by NINE", it must be described with numbers for signal strength and readability, using 2 numbers for "READABILITY by SIGNAL STRENGTH".

Table 3: RST System report (READABILITY x SIGNAL STRENGTH)

Readability		Signal Strength	
1	Unreadable	1	Faint signals, barely perceptible.
2	Barely readable, occasional words distinguishable.	2	Very weak signals.
3	Readable with considerable difficulty.	3	Weak signals.
4	Readable with practically no difficulty.	4	Fair signals.
5	Perfectly readable.	5	Fairly good signals.
-	_____	6	Good signals.
-	_____	7	Moderately strong signals.
-	_____	8	Strong signals.
-	_____	9	Extremely strong signals.

TRANSMITTING A MESSAGE

Relevant prowords

- WORDS TWICE.
- READ BACK; I READ BACK.
- RELAY; RELAY TO; RELAY THROUGH [callsign]; RELAY THROUGH ME.
- SAY AGAIN; I SAY AGAIN.
- ALL BEFORE; ALL AFTER; FROM; TO; WORD BEFORE; WORD AFTER.
- CORRECTION.
- DISREGARD.
- READ BACK; I READ BACK.
- MORE TO FOLLOW.
- ROGER; WILCO.

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- MESSAGE; MESSAGE FOLLOWS; MESSAGE PASSED TO; INFORMATION; DO NOT ANSWER.
- OUT; OVER; CLEAR; OUT TO YOU.
- REPEAT; I REPEAT.
- SEND; SEND YOUR MESSAGE.
- GROUPS; GROUP NO COUNT.

General Procedures

- When communication reception is satisfactory, message parts may be transmitted only once.
- When communication is difficult, callsigns should be transmitted twice. (Phrases, words, or groups may be transmitted twice after use of the proword WORDS TWICE. Reception may be verified by use of the proword READ BACK.)
- If you are asked to send a message with content that you don't understand, remember that you are the communicator, not the addressee. Messages can contain abbreviations, coordinates, or names that you may not be familiar with. Just be sure that it is legible, and that you can read it well enough to send it accurately.
- A good practice is to write the message as you transmit it over the radio. This paces your transmission slow enough for the receiving station to write it down.
- Refer to "Aids For Accuracy" and "Speech Techniques" for more procedures.

Relaying a message

- The proword RELAY used alone indicates that the station called is to redirect the message to all addressees.
- The proword RELAY TO followed by an address designator indicates that the station called is to relay the message to the stations indicated. When more than one station is called, the callsign of the station designated to perform the relay will precede the proword RELAY TO.
- The proword RELAY THROUGH allows a station to indicate a third station that can relay a message.
- The proword THROUGH ME allows a third station to indicate that it is in contact with the required station and able to relay the message.
- In all cases – whether the originating station can or cannot hear the relaying station – the relaying station must inform the originating station if it has not been able to relay the message.

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Repetitions in case of unclear transmission

- Before receiving a message that is unclear, stations should request repetitions. For this purpose, the proword SAY AGAIN may be used alone or in conjunction with prowords that identify the portion of the message that is unclear (e.g., ALL BEFORE, ALL AFTER, FROM, TO, WORD BEFORE, WORD AFTER). In complying with requests for repetitions, the transmitting station must identify the portion that is being repeated.
- When it is necessary to ask for repetitions after a message has been received, identify the message being queried as well as the portion required.

Corrections of a error in transmission

- When an operator makes an error while transmitting a message, he/she should use the proword CORRECTION, followed by the last word or phrase correctly transmitted. Then continue transmission.
- If an operator discovers an error in a message after it has been received, he/she should send an abbreviated service message, identifying the message and the portion to be corrected.

Cancelling transmissions

- During the transmission of a message (anytime up to the ending proword OVER or OUT), the message may be cancelled by use of the prowords: DISREGARD THIS TRANSMISSION – OUT.
- A message that has been completely transmitted can only be cancelled by another message.

Reading Back a message

- To ensure that a message has been accurately received, the originating station may request that all or part of the message be read back, using the proword READ BACK and identifying the segment (e.g., READ BACK TIME, READ BACK GRID, READ BACK TEXT, etc.)
- Specify which stations are to read back by saying their callsign before the proword READ BACK. Remaining stations should keep silent. When callsigns do not precede the proword READ BACK, all recipients are to read back.
- If the station reading back does so incorrectly, the originating station will call attention to the error by using the proword WRONG, followed by the correct version.

Receipt of message

- Receipt confirms that a message has been delivered. A receipt may be effected as follows:

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- In abbreviated procedures, if no confusion is likely to arise, a simple return transmission may be considered a receipt.
- To avoid confusion, after each message or string of messages, the receiving station transmits proword ROGER.
- In the case of a message requiring acknowledgment, the use of the proword WILCO constitutes a receipt. (The meaning of WILCO includes that of ROGER.)
- To increase the speed of handling collective calls, one (and only one) station in the net may be directed to receipt for the message. Other stations may still request repetition.
- Either the originating or receiving station may indicate a wish to add another transmission with the proword MORE TO FOLLOW in the message ending or receipt.

ACKNOWLEDGMENT OF MESSAGES

- The originator may request an ACKNOWLEDGMENT to a message from any or all addressees of that message.
- An acknowledgment should not be confused with a reply or receipt. Acknowledgement is similar to requesting a delivery receipt when sending a letter, or tracking a package to delivery.
- The request for acknowledgment of a message normally is included in the text of that message.
- If the message has been transmitted, the request for acknowledgment will constitute a new message.
- Acknowledgments are originated only by the addressee to whom the request for acknowledgment was made.
- A prompt reply referring to the message may serve in lieu of an acknowledgment.

VERIFICATIONS

Relevant prowords

- VERIFY; I VERIFY.

Procedures

- Verification is the confirmation that an entire message (or portion indicated) with the originator is correct, and sending the correct version if needed. The entire message may need to be resent.
- This is used only at the discretion of or by the addressee to which the questioned message was sent. When requested, the originating station will verify with the originator and send the correct version.

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- When a message to a number of addressees is queried by one station and found to be incorrect, the corrected version must be sent to all addressees.

BREAK-IN PROCEDURE

Relevant prowords

- BREAK.

Procedures

- A station having a message of higher precedence than the transmission in progress may break in and thus suspend that transmission in the following manner:
 - FLASH — Break in at once and transmit the message.
 - IMMEDIATE — May break in at once and pass the message. If necessary, a preliminary call may be made before transmitting the message.
 - PRIORITY — As for IMMEDIATE except that only long ROUTINE messages should be interrupted
 - ROUTINE — Message traffic justifying transmission by rapid means, but not of sufficient urgency to require higher precedence. Deliver in the order received and after all messages of higher precedence, as soon as traffic flow allows.
- When spoken three times, these prowords, mean, "Cease transmissions immediately. Silence will be maintained until the station breaking in has passed the message."

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APPENDIX 1: COMMON PROWORDS

Proword	Meaning / instructions
ACKNOWLEDGE	Confirm that you have received my message and will comply (respond with WILCO).
BREAK	I have priority or emergency traffic. All stations will immediately cease transmission. (Used for emergency traffic only. Do <u>NOT</u> use in lieu of WAIT or STAND-BY.)
Precedence (use with BREAK)	
FLASH	Break in at once and transmit the message.
IMMEDIATE	May break in at once and pass the message. If necessary, a preliminary call may be made before transmitting the message.
PRIORITY	As for IMMEDIATE except that only long ROUTINE messages should be interrupted
ROUTINE	Message traffic justifying transmission by rapid means, but not of sufficient urgency to require higher precedence. Deliver in the order received and after all messages of higher precedence, as soon as traffic flow allows.
AFFIRMATIVE	Yes/Correct.
NEGATIVE	No/Incorrect.
RADIO CHECK	The other station is being asked to give a signal report for the calling station. (Use strength and reception prowords or RST system.)
Signal Strength (use with RADIO CHECK)	
LOUD	Your signal is strong.
GOOD	Your signal is plainly audible.
WEAK	I can hear you, but with difficulty.
FADING	At times your signal fades so much that continuous reception is not dependable.
NOTHING HEARD	I cannot hear you at all. (May be sent as one report, no reception needed.)
Signal Reception (use with RADIO CHECK)	
CLEAR	Excellent quality.
READABLE	Good quality; no difficulty in copying you.
DISTORTED	Having problems copying you due to distortion.
WITH INTERFERENCE	Having trouble copying you due to interference.
INTERMITTENT	Having trouble copying you because your signal is intermittent.
NOT READABLE	I can hear that you are transmitting but cannot copy you at all.
ROGER	Message received satisfactorily. This does NOT indicate agreement and is NOT a replacement for the word YES or CORRECT.
ROGER?	Have you received this part of my message satisfactorily?

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Proword	Meaning / instructions
ROGER SO FAR?	Have you received this part of my message satisfactorily?
WILCO	I have received and understood your message and will comply (WILCO). (Used only by the addressee.)
CORRECT	You are correct. Same as YES, comes through clearly in bad conditions
CORRECTION	An error has been made in last transmission. Correction transmission follows.
WRONG	Your last transmission was incorrect; the correct version is . . .
DISREGARD	This transmission is in error. Disregard it.
I SPELL	I shall spell the next word phonetically
FIGURES or NUMBERS	A group of one or more numerals. The numbers are said by each numeral. 12 is not twelve, but FIGURES ONE TWO.
INITIALS	A group of one or more characters, consisting of letters and/or numbers, follows. (Includes acronyms, initials of names, or any grouping of letters and numbers that is not a word.)
CALLSIGN	The group that follows is a callsign.
MESSAGE	I have an informal message for you.
MESSAGE FOLLOWS	I have a formal message which should be recorded (e.g. written down).
MESSAGE PASSED TO . . .	Your message has been passed to . . .
MORE TO FOLLOW	Transmitting station has additional traffic for the receiving station.
NOTHING HEARD	The station called did not respond.
DO NOT ANSWER	Stations called are not to answer this call, receipt for this message, or otherwise to transmit in connection with this transmission. When this PROWORD is employed, end with "OUT".
INFORMATION	The addresses immediately following are addressed for information.
OUT	No reply is expected, and communications has ended between the stations. (Note: OVER and OUT are never used together.)
OVER	Used at the end of a voice transmission when a reply is expected from another station.
CLEAR	No reply is expected, and communications have ended between the stations.
OUT TO YOU	I have nothing more for you. No reply is expected.
POINT or DOT	Decimal point.
READ BACK	Read back the following message to me exactly as received.
I READ BACK	The following is my reply to your request to read back.
REPEAT	Use this to ask a station to repeat last transmission.
I REPEAT	Use this to tell a station that you are repeating your last transmission.
SAY AGAIN or SAY AGAIN ALL	Use this to ask a station to repeat last transmission.

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Proword	Meaning / instructions
I SAY AGAIN	Use this to tell a station that you are repeating your last transmission.
ALL AFTER . . .	Everything that you (I) transmitted after . . .
ALL BEFORE . . .	Everything that you (I) transmitted before . . .
WORD AFTER . . .	The word of the message to which I refer follows . . .
WORD BEFORE . . .	The word of the message to which I refer precedes . . .
WORDS TWICE	Communication is difficult, so transmit each word, group, or phrase twice (Used as an order, request, or notice.)
RELAY THROUGH . . .	Send this message by way of callsign _____ to _____.
RELAY TO . . .	Transmit the following message to all addressees or to the address immediately following.
RELAY THROUGH ME	I am in contact with the station you are calling. I can act as a relay station.
SEND, SEND YOUR MESSAGE.	Go ahead with your transmission; I am ready to copy
SPEAK SLOWER SPEAK FASTER	Adjust the speed of your transmission
UNKNOWN STATION	The identity of the station calling or with whom I am attempting to establish communication is unknown.
VERIFY	Verify entire message (or portion indicated) with the originator and send correct version if needed. (Used only at discretion of or by the addressee to which the questioned message was sent.)
I VERIFY	That which follows has been verified at your request and is repeated. (Used only as a reply to VERIFY).
GROUPS	This message contains the number of groups indicated by the numeral following. If omitted, assume GROUP NO COUNT
GROUP NO COUNT	The groups in this message have not been counted.
STAND-BY	This is used for a short pause between transmissions.
WAIT	I must pause between transmissions for a few seconds.
WAIT OUT	I must pause longer than some seconds and will call you again when ready.

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APPENDIX 2: Q-SIGNAL DEFINITIONS

Abbr.	Meaning (Question or statement)
QRG	Your exact frequency (or that of _____) is _____ kHz. Will you tell me my exact frequency (or that of _____)?
QRL	I am busy (or I am busy with _____). Are you busy? [Usually used to see if a frequency is busy.]
QRM	Your transmission is being interfered with _____ [1. Nil; 2. Slightly; 3. Moderately; 4. Severely; 5. Extremely.] Is my transmission being interfered with?
QRN	I am troubled by static _____. (1 to 5 as under QRM.) Are you troubled by static?
QRO	Increase power. Shall I increase power?
QRP	Decrease power. Shall I decrease power? [Also refers to low power (less than 10 watts) operation]
QRQ	Send faster (_____ wpm). Shall I send faster?
QRS	Send more slowly (_____ wpm). Shall I send more slowly?
QRT	Stop sending. Shall I stop sending?
QRU	I have nothing for you. Have you anything for me?
QRV	I am ready. Are you ready?
QRX	I will call you again at _____ hours (on _____ kHz). When will you call me again? Minutes are usually implied rather than hours.
QRZ	You are being called by _____ (on _____ kHz). Who is calling me?
QSB	Your signals are fading. Are my signals fading?
QSK	I can hear you between signals; break in on my transmission. Can you hear me between your signals and if so can I break in on your transmission?
QSL	I am acknowledging receipt. Can you acknowledge receipt (of a message or transmission)?
QSO	I can communicate with _____ direct (or relay through _____). Can you communicate with _____ direct or by relay?
QSP	I will relay to _____. Will you relay to _____?
QST	General call preceding a message addressed to all amateurs and ARRL members. This is in effect "CQ ARRL."
QSX	I am listening to _____ on _____ kHz. Will you listen to _____ on _____ kHz?

Radio Voice Procedures

Abbr.	Meaning (Question or statement)
QSY	Change to transmission on another frequency (or on _____kHz). Shall I change to transmission on another frequency (or on _____kHz)?
QTC	I have _____ messages for you (or for _____). How many messages have you to send?
QTH	My location is _____. What is your location?
QTR	The time is _____. What is the correct time?