

when all else fails . . .

A GUIDE TO AMATEUR RADIO OPERATION IN HAWAII COUNTY

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In a communications emergency:

- ▶ Monitor all appropriate primary frequencies.
- ▶ Check into your local net.
- ▶ Initiate a local net if none already exists.
- ▶ Report your status and operational capability to your local emergency coordinator as soon as possible.
- ▶ Your district emergency coordinator can help to keep you informed about the active operational frequencies and the availability of relay and hub stations in your area.

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ham radio

WEATHER REPORTS

When activated, report to ACS following the SITREP format. If Skywarn Ham is activated, an additional report is needed on their designated frequency. Include the time observed and location. Reporting on the following types of events is especially important:

- Thunder and intense lightning.
- Heavy rain for at least 15 minutes.
- Flooding that blocks roads or causes damage.
- Surf that is unusually high or damaging
- Wind strong enough to cause property damage
- Earthquake. (When people fall and structures receive damage.)
- Funnel cloud whether or not it touches the ground.

EMCOMM NETIQUETTE & TIPS:

Network operation is terse by design. The goal is to achieve clear, concise, accurate communications as rapidly as possible. Keep transmissions short.

1) **Check in.** 2) **Monitor.** 3) **Check out.**

Listen carefully to get a feel for the Net Control Operator's style. Once checked in, follow the instructions of the Net Control Station. Stay off the air unless you have something to contribute or are the most qualified person to handle a task requested by the Net Control Station. Never leave the Net Control Station wondering what happened to you. If you need to be away from the radio for any reason, check out, and check in again upon your return.

Prepare in advance. Make sure your equipment is working properly and extra batteries are charged.

- Printout forms in advance. (ICS-213, 309, SitRep, RFA, etc.)
- Use prowords and break tags.
- Plan your message to minimize airtime.
- Log messages sent & received. (309)
- Listen: Wait for clear freq. before transmitting.
- Participate in drills and exercises. Complete the free on-line ICS courses at training.fema.gov

HF Operations: During the day, 40 meters usually works better for regional communications than 80 meters does and vice versa.

SIGNAL REPORTS

Ask for and provide signal reports to gauge effectiveness and make adjustments. Transmit your callsign followed by the proword "Radio Check." A possible response might be "Loud and Clear."

STRENGTH

Loud | Good | Weak

READABILITY

Clear | Readable | Unreadable

PROWORDS

The use of prowords improves communication efficiency by eliminating ambiguity.

OVER	This is the end of my transmission; a reply is expected.
OUT	This is the end of my transmission; a reply is not required.
BREAK	I have something important and timely to say
ROGER	I copied your last transmission.
SAY AGAIN	Repeat your last transmission
AFFIRMATIVE	Yes
NEGATIVE	No
RADIO CHECK	What is my signal strength and readability?
SPEAK SLOWER	Talk more slowly.
RELAY	I hear both of you and can relay information between your stations.
I Spell	Used to indicate you are about to spell the next word.

BREAK TAGS

Break tags are tools that enhance network operation by reducing the amount of airtime needed to communicate specific ideas. They are used instead of the proword BREAK. Use break tags wisely.

Question	Indicates that you have a question which requires an immediate answer, e.g., when the Mayor is standing next to you seeking information.
Answer	Indicates you know the answer to the issue currently being discussed.

ADDITIONAL BREAK TAGS:

Information	Indicates you have information that the members of the net need to know.
Medical	Indicates you want to report a non-life threatening medical incident.
Emergency	To report an event that is life threatening or dangerous damage.
Priority	Used when reporting a significant event, but not a matter of life or death.
Your Callsign	Indicates you have traffic for the net and you want to be put in the queue

COMMONLY USED FREQUENCIES

7.090 kHz, LSB, Indiv. Stations, Multiple Amateur Nets.
7.095 kHz, USB, Statewide Mixed Mode, Hi. Isl. Relay
7.190 kHz, LSB, ACS 40-Meter (Primary)
3.895 kHz, LSB, ACS 80-Meter (Backup)
146.400 MHz Waimea-Hamakua-Hilo Relay
146.460 MHz Simplex, On-Scene, Tactical
146.520 MHz, Simplex, Calling Frequency
146.760 MHz, (-) Tone 100. Hilo/Puna Repeater
146.820 MHz, (-) Tone 123.0, Maunakea, Hi. Isl.
[Emergency Activation by Civil Def.]
146.880 MHz, (-) Tone 100, Pepeekeo Repeater
146.940 MHz, (-) Tone 110.9, Haleakala Repeater.
147.480 MHz, Simplex, On-Scene, Tactical, CERT
446.000, 446.200 MHz, Simplex, On-Scene, Tactical

Note: Frequencies are shared, not assigned. Net Control may move a net to an alternate frequency as needed. See [FCC§97.101](#).

PHONETICS

Use standardized words for each letter of the alphabet when spelling to ensure clarity and avoid confusion.

A	ALFA	N	NOVEMBER
B	BRAVO	O	OSCAR
C	CHARLIE	P	PAPA
D	DELTA	Q	QUEBEC
E	ECHO	R	ROMEO
F	FOXTROT	S	SIERRA
G	GOLF	T	TANGO
H	HOTEL	U	UNIFORM
I	INDIA	V	VICTOR
J	JULIETT	W	WHISKEY
K	KILO	X	XRAY
L	LIMA	Y	YANKEE
M	MIKE	Z	ZULU

OPERATING TIPS

- Never monopolize a frequency. Experienced operators listen more than they transmit.
- Keep transmissions short—emergencies do not wait for monologues to finish.
- Pause before transmitting—wait 2 seconds or so before resuming so another station can break in if necessary.
- Don't call CQ on FM—When the frequency is available, transmit an appropriate proword or break tag and/or your callsign. Wait to be recognized by net control.
- When using a linked repeater, wait 2 seconds after pressing your PTT button before you speak—the repeaters need time to turn on; otherwise the first few words you speak may not be heard.
- Use the correct repeater—don't use a state-wide repeater for conversations within the county; don't use the countywide repeater for conversations within your local area; and don't use the local area repeater to talk across the street
- When the frequency is busy, for immediate EMERGENCY assistance, transmit a DTMF zero for about 5 seconds—this attention getting device alerts other stations of an emergency. Use only when truly necessary.
- Watch what you say—do not make thoughtless or off color remarks that might offend others or damage the reputation of amateur radio.
- Transmit only essential elements of information.
- Information conveyed during disaster radio operation is only for the intended personnel. Do not share with inappropriate parties.

SITREP

- Informing other stations when a hazardous situation is observed is a good practice. When the County activates radio ops for an emergency, a situation report consists of the following elements.
- Inform Net Control whether or not you have reported to Police, Fire, or EMS.
 - Include your name and precise location.
 - State the situation as briefly as possible.
 - If people are injured, state the number and estimate the extent of their injuries.

- If there is a fire, estimate the size and scope.
- If there is physical damage, estimate the extent and severity.
- State any other information you feel is pertinent to the situation such as traffic conditions, weather, and so on.
- Use the reference documents at HawaiiCERT.org. (Look under Resources)
- Use good judgment. At the beginning of a weather related activation, frequencies may not be busy. It is generally appropriate to provide more frequent SITREPs, even when the weather is not extreme. When frequencies are busy, allow more important traffic to take priority, such as severe weather and damage reports.
- Ask if there is any additional information you can provide before leaving the scene

REQUEST FOR ASSISTANCE (RFA)

(Only available if ACS is Activated)
[RFA to Police/Fire/EMS]

- Use 911 first. If no phone service is available, attempt to relay to another amateur radio operator in an area with phone service.
- **Use other options:** Landlines may work when cell service is out, text messaging satellite services may be workable.
- A message path directed towards County Dispatch is the fastest method.
- Use ACS for a Police/Fire/EMS RFA only when a direct communications path to dispatch is not feasible.
- Contact Auxiliary Communications Service (ACS) directly, or use a hub or relay station when needed.
- State needed assistance. Provide a phone number even when phones are not working.
- Provide the name or description of the person needing assistance, the address, and a cross street or landmark.
- Provide your name and callsign.
- Include the time observed, and a brief description of the situation.
- Stay on the air to answer any follow up questions that may come back and provide details when requested.