Formal Radio Telecommunications (RATEL)

This document is a guide for infantrymen on the correct procedures when using long range radios. This will cover everything from initiating the communication, to transmitting your message, to closing. Everything you will learn is focused on being clear, concise and effective over the radio to ensure that the message you are trying to send is quickly and fully understood.

What is RATEL?

RATEL (Radio Telecommunications) is a set of procedures used by infantry and air to keep radio communication short and to the point. As a JTAC or an NCO, you must also be able to communicate at short ranges and long ranges between sections, the platoon and air assets. RATEL is an essential skill and crucial to success in leadership at any level.

Useful Phraseology / Pro Words

PHRASE	**MEANING**
Roger	Your message was received and understood.
Say Again	Please repeat your previous radio transmission.
Wilco	I will comply with your previous order.
Break Break Break	Interrupt another conversation with urgent information in an emergency.
Nothing Heard	An entire transmission was missed or not received.
Over	My transmission is complete and your response is expected.
Out	Our radio conversation is complete and no response is expected.
Wait	A several-second pause will follow, and I will continue after.

Wait Out	A significant pause will follow, so I will hail you again later to follow up.
More to Follow	Works similarly to wait or wait out.

Anatomy of a Transmission

Knowing the basic structure of a transmission is the first, most fundamental skill you must have when operating a radio. A transmission starts when you key your radio and begin talking, and it ends when you release the radio key. Transmissions consist of four major parts; recipient, sender, message, and close.

1. The callsign of the **RECIPIENT** (who you're directing this transmission to)
2. The callsign of the **SENDER** (announce who you are)
3. The **MESSAGE** (flexible; could be a request to converse, an acknowledgement, or an entire report)
4. The **CLOSE** (usually either *over* OR *out* - obviously, never both - but sometimes *wait* or *wait out*)

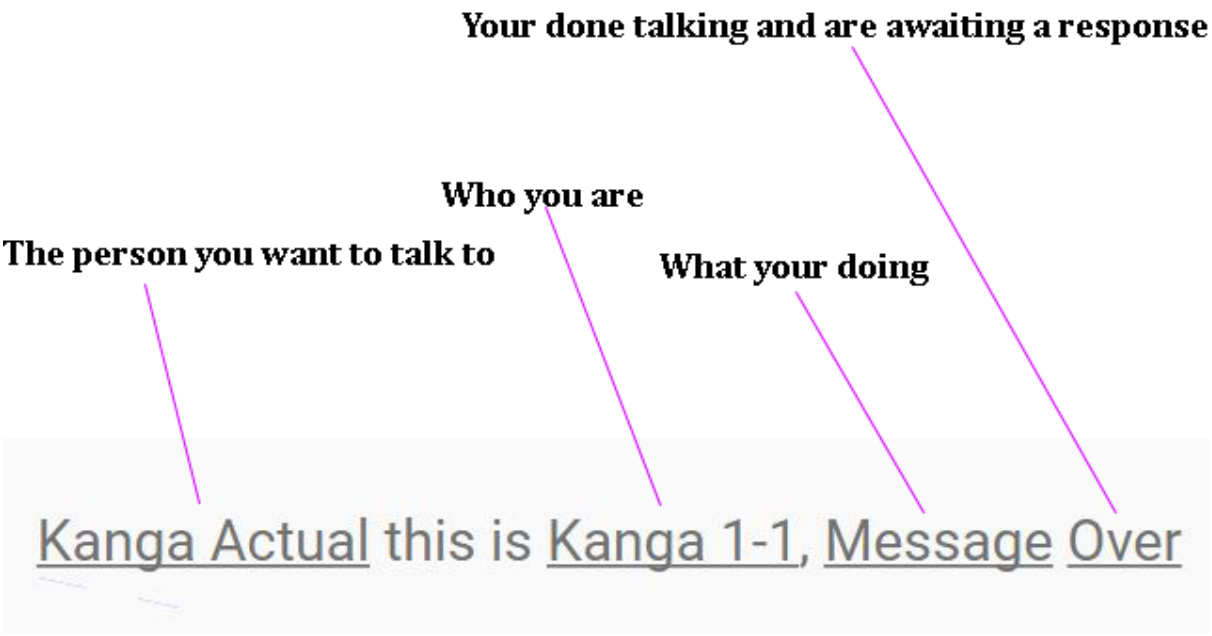
This format is used every time you key your radio; some contextual examples of its usage can be found below.

Anatomy of a Conversation

The Wave

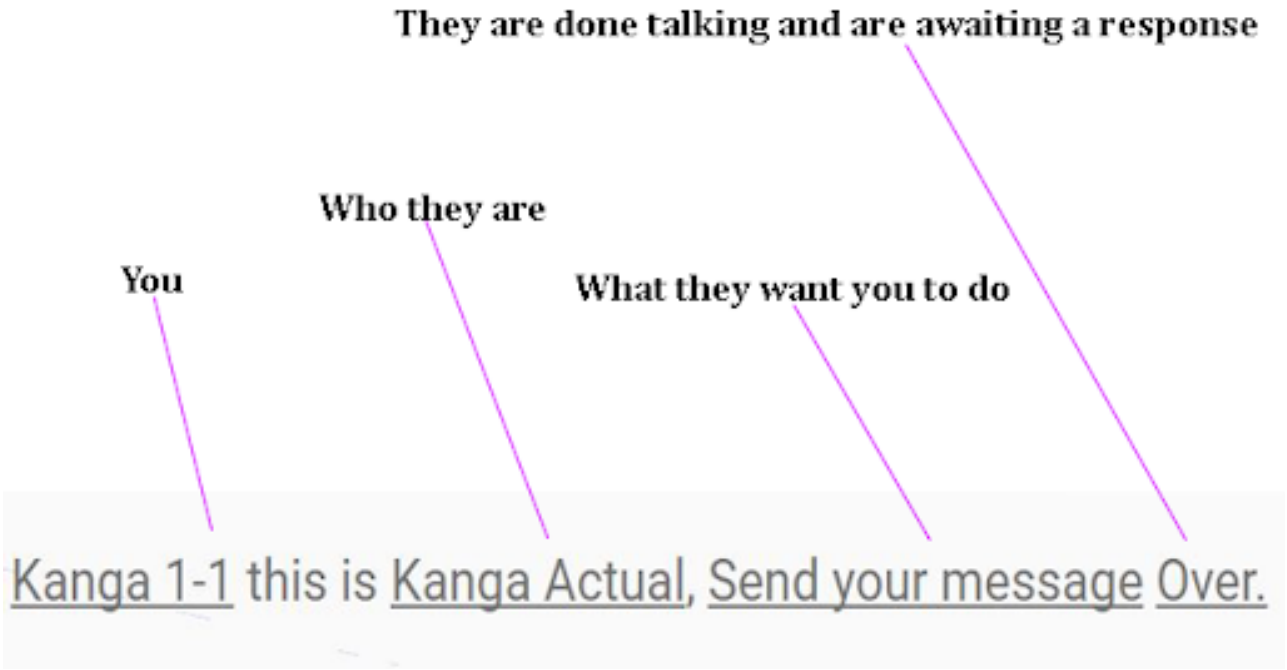
A conversation is an exchange of multiple transmissions between two elements on the same frequency. A conversation opens with a *wave* - wherein the sender signals the recipient and indicates a request to converse. The wave is important to establish that both the sender and recipient are ready to continue; the demands of the operation at hand frequently dictate limits on when officers can dedicate attention to a conversation.

In a high-pressure situation, the sender might have to repeat their wave after a short time to get the recipient's attention. Once you've waved another element three times with no response, you should assume they are uncontactable for the time being and close your conversation with "nothing heard, out," opening up the radio for other elements to use once more.



The Response

The recipient returns a *response*, confirming unambiguously that they, the recipient, are ready to carry out the conversation and you should proceed with your next transmission.



The Rest

After the sender has received the response, they can send another transmission containing a message - an order, an interrogative, a request, or something else. The recipient replies as

appropriate, and each goes back and forth following the close of the other's last transmission. It is the initial sender's responsibility to terminate the conversation; once they have what they need, they must close their final transmission with the pro-word "out" to indicate that the conversation is done and other elements can then use the net.

It's important to think through what you want to converse about before you ever send a wave - you and your recipient will almost never be the only two elements on the frequency, and one frequency will only support one conversation at a time, so to keep information flowing it's important to be concise.

The Readback

An important part of radio communication is the readback. This is the part where - especially when receiving orders or important information - you re-summarize what you've heard and state any figures or specifics, to ensure that you've received the correct details.

It's important to grant the opportunity for the sender to re-transmit their message and correct any mistaken communication; especially, for example, where a single missed grid digit might result in a CAS run missing the enemy force (or hitting your own instead!).

Example: Contact Report

1-2: "1-1, this is 1-2. Contact report, over."

1-1: "1-2, this is 1-1, send your contact report, over."

1-2: "1-1, this is 1-2, we're in contact from grid, wait..."

A short pause, as indicated by the pro-word "wait".

1-2: "Grid zero five seven eight, two six five five. Say again my last, over."

"*Say again my last" is a way to specifically request a readback from the recipient.*

1-1: "1-2, this is 1-1. I copy grid 0578,2645, over."

1-2: "1-1, this is 1-2, wrong grid. I repeat: 0578,2655, over."

1-1: "1-2, this is 1-1. Grid 0578,2655, over."

1-2: "1-1, this is 1-2. Good copy. Contact from that grid consisted of indirect machine gun fire and mortars, over."

1-1: "1-2, this is 1-1. Acknowledged, machine guns and mortar fire, over."

1-2: "1-2 out."

Example: Orders

1-1: "All teams, this is 1-1. Check in, new orders, over."

When addressing multiple recipients, the recipients should respond in order of command seniority.

1-2: "1-1, this is 1-2, ready for orders, over."

1-3: "1-1, this is 1-3, send orders, over."

1-1: "All teams, this is 1-1, new orders are to form a section base line and progress from the 1-A mark to the 1-B mark. 1-2 is to take the left wing and 1-3 the right wing. I repeat: Section base line from 1-A to 1-B. How copy, over?"

1-1 uses "how copy" to request a readback from all teams to ensure they have interpreted the orders correctly.

1-2: "1-1, this is 1-2, forming section base line facing 1-B mark, we've got the left wing, over."

1-3: "1-1, this is 1-3, section base line, we're on the right, moving to 1-B mark, over."

1-1: "All teams, this is 1-1, begin your movement. Out."

SITREP (Situation Report)

Now that we have covered the basic structure of a radio message, we will now cover some more advanced radio procedures that as a radio operator you will find yourself having to complete.

The first basic procedure we will cover is the proper format of a SITREP, or a Situation Report. The situation report is used by a commander to establish the overall picture of what each element is currently doing, what they need, and what they are planning to do next. During briefing your commander may choose to set SITREP intervals - for example, establishing a SITREP every 5 minutes. SITREPs are usually provided by section elements to HQ, but a section leader might request SITREPs from their fire teams.

You should include 5 pieces of information when providing a situation report:

1. **LOCATION / OBSERVATION** (where you are, and what you see)
2. **CURRENT ACTION** (what you are doing right now)
3. **PREVIOUS ACTIONS** (what you have done / have been doing)
4. **CURRENT PLAN** (what you're planning on doing / where you're planning on going)
5. **ISSUES / REQUIREMENTS** (short on ammo/medical, or need support?)

Step 5 can be omitted if you're on track with your objective and have no requirements or obstacles at the current time, but you still may wish to mention that (e.g. "*No additional assistance required at this time.*").

Example: Situation Report

Sunray: "1st Section, this is Sunray, SITREP, over."

1st Section: "Sunray, this is 1st, we're at grid 1234,5678, moving from here to grid 4321,8765, more to follow."

"*More to follow*" *works like* "*wait*" *or* "*wait out*"*; 1st Section doesn't need to re-open the transmission.*

1st Section: "We've just cleared the town of Staszow at grid 1233,1332 - we plan to move to Hanover at grid 6666,7777 and clear it out, more to follow."

1st Section: "We'll require air support to weaken the fortifications around the town, over."

Sunray: "1st Section, this is Sunray, acknowledged your last, we'll arrange the air support, out."

ACE Report

When your section has been in contact and there is a lull in the battle, it is always a good idea to conduct an ACE (Ammunition, Casualties and Equipment) report. ACE reports have four different levels.

	Ammunition	**Casualties**	**Equipment**
Green	Plenty of ammo.	No injuries.	No equipment used.
Yellow	Down to half ammo.	Minor injuries.	Half equipment used.
Red	Dangerously low ammo.	Casualties, major injuries.	Low on equipment.
Black	No ammo.	Mass casualty.	No equipment remaining.

When providing an ACE report, you should include each category and the appropriate colour. You can provide an ACE report at your discretion, or when asked to by your commanding officer. ACE reports are essential for painting a clear picture to commanders as to your current situation. Fire team leaders can give ACE reports to section leaders, who can give ACE reports to HQ, so all commanders up the chain are fully aware of the state of their constituent elements.

Example: ACE Report

1st Section: "Sunray, this is 1st, SITREP for you, over."

Sunray: "1st, this is Sunray, send your SITREP, over."

1st Section: "Sunray, 1st. Ammunition: red, need resupply urgently. Casualties: yellow, minor injuries from prior contact. Equipment: black, used all our AT, need urgent resupply. 1st section is not currently combat effective, over."

Sunray: "1st, this is Sunray, acknowledged, sit tight, I will contact you again later to arrange supply drop, over."

1st Section: "Sunray, 1st, we will await supply drop, out."

IN CLOSING

This document has covered the phraseology, concepts, and skills required to engage in formal radio communications over long range nets, such as between sections and HQ, or to HQ assets such as aircraft. You should be familiar with how each transmission should be structured, as well as how a conversation should begin, carry out, and end; additionally, you should know how several frequently-used report structures are utilised.

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