

# Aerospace-Craft Communications Protocols

The purpose of establishing uniform communications procedures is to limit unnecessary or uncommunicative messages being passed in the relatively high-risk, high-stress environment of fighter and small-craft operations. Particularly in combat or other threat environment situations, intentions and actions need to be communicated swiftly and accurately to avoid confusion which could give rise to surrendering the tactical advantage or even create a blue-on-blue situation.

## Networks and Channels

Depending on the size and make-up of the particular group of small-craft operating together, there can be a variety of different networks and channels set up for the purpose of communication and information sharing. The basic concept is that every operational unit will have its own network, from a wing-wide channel, to a squadron-wide channel, to dedicated wingmen channels. Information broadcast on specific channels should be sent keeping in mind all of the parties who will be hearing it. For instance, squadron-specific instructions do not need to be broadcast over a wing-wide network. In all cases, communications should be brief and precise to avoid confusion and to prevent the networks from being clogged with unnecessary traffic. The exceptions to this are intra-wingmen channels and private channels; off-topic and more casual communication is permissible here, with the provision that it not interfere with operations.

## Message Protocol

The standard message contains several key components. The first is the designation of the calling station and the intended receiving stations. This can be given in several formats, including:

“[receiving station], [calling station]” “[receiving station], this is [calling station]” “this is [calling station], calling [receiving station]”

Then follows the message traffic. The body of the message ought to be as short as possible. Leaving out unnecessary grammatical features is acceptable, even preferable, as long as the meaning of the message remains clear. Particularly long message out to include a pause, in the event that other critical traffic can be heard across the network. This pause is signaled by saying, “break,” followed by dead air before the message is resumed. Finally, the end of the communication ought to indicate the intention of future communication. If the calling station expects a response or thinks that a response is likely, the communication should be finished with “over.” For messages bearing critical or complex instructions that require concrete confirmation, the phrase “confirm copy” can be given before “over,” with the expected response being “I copy all,” “solid copy,” or some other form of confirmation. If the calling station is concluding an exchange or is given some general information that will not require or likely elicit a response, the communication should be finished with “out.”

## Numbers and Letters

To avoid confusion with other words or codes, numbers and letters have to be stated far more clearly than they would in plain speech. For instance the letters AYN, referred to as ey-why-en, would be pronounced Alpha-Yankee-November. The number 150.3, usually read one-hundred-fifty-point-three, would be read One-Five-Zero-Decimal-Three.

## Call Signs

In the military world of unit names, nicknames, numeric designations, etc. how exactly to refer to a calling or receiving station can be problematic. As such, the simple expedient of pre-arranged call signs helps simplify and specify origins and intended recipients of communications. Call signs can be selected and distributed in any number of ways, but the key element is that they are universally acknowledged and consistently used. In this case, call signs do not refer to the nicknames given to pilots. This nicknames can be appropriate to use in confined or private settings, such as a private or wingman channel; their use on larger networks would only be confusing, particularly if dealing with units unfamiliar with each other and their respective pilots' nicknames.

Generally, the smallest coherent tactical unit, typically a specific squadron or flight, will receive the call sign. Units below that element may receive numeric suffixes to that call sign. Command elements above the squadron or flight level will have their own call signs, as well as numeric designations for staff elements. Carriers or other bases, while “mother” to those units call them home, will likely have different callsigns, as will other fleet or ground assets that have comms with aerospace units.

As an example, take the case of a squadron known as the “Royal Maces.” Their call sign could be anything from a plain designation like “bravo” to a nonsensical codeword like “blue knife” to a more creatively titled call sign like “basher,” playing off of the mace in the squadron's nickname. The squadron may have sixteen fighters, split into eight wings with two four wing elements. Orders or information passed to “Basher” or “all Basher elements” would be interpreted as applying to every member of the squadron. Messages to “Basher Actual” would be to the commander of the squadron. The two elements might also be given designations, as “Basher-1” and “Basher-2,” with “actual” again referring to the commander of the respective element. There could be designations within the elements as well, with “Basher-1-6” referring to the sixth unit in the first element of the squadron.

## Codes and Phrases Glossary

### A

- AAA - Anti-Aerospace Artillery
- Abort – call to cease all action and any attacks, events, or missions
- Active – an emitter that is radiating
- Angels – denoting altitude (angels three being 30,000 feet)

- As fragged – the unit or element will be behaving precisely as tasked
- Authenticate – to request or provide a response for a coded challenge

## B

- Bandit – an identified enemy, without necessarily indicating clearance to engage
- Bingo – power state needed for recovery
- Bird – friendly surface- or ship-launched anti-aerospace missile
- Blue on blue – friendly fire
- Bogey – a contact whose identify is unknown
- Break [direction] – a maximum performance turn in the indicated direction
- Bruiser – friendly fighter- or bomber-launch anti-ship missile
- Bugout – separation from a particular engagement/attack/operation with no intention to re-engage
- Bulldog – friendly surface- or ship-launched anti-ship missile
- Buster – fly at maximum continuous speed
- Buzzer – electronic communications jamming

## C

- Cease fire – do not open fire or discontinue firing, complete intercept if weapons are in flight
- Check fire – do not open fire or discontinue firing, send self-destruct codes to weapons in flight
- Clean – no contacts of interest
- Cleared – requested action is authorized
- Cleared hot – ordnance release is authorized
- Closing – decreasing in range
- Cold – aspect pointed away from anticipated threats
- Commit/committed – fighter intent to engage/intercept
- Contact – sensor contact at stated position
- Contact bearing [information] – more specific location description given as degrees of bearing on the horizontal plane (from 1 to 360 degrees), degrees of bearing on the vertical plane (from 1 to 90 degrees high and from 270 to 359 degrees low), and range
- Continue – continue present maneuver
- Continue dry – ordnance release not authorized

## D

- Dash [number] – aerospace craft position in a flight if call sign unknown
- Data – data of some sort is being sent to accompany the message
- Defensive/Defending – aerospace-craft is in a defensive position and is maneuvering in with reference to the stated condition
- Deploy – maneuver to briefed position
- Divert – proceed to alternate mission, ship, or base
- Driver – a pilot
- Duck – a fighter launched decoy or the launching thereof

## E

- Element – a group of friendly fighters, based on briefed assignments
- Emitter – a source of detectable sensor emissions
- Engaged – maneuvering with intent to kill
- Extend – short term maneuver to gain energy, distance, or separation with an intent to re-engage

## F

- Father – Tactical Aerospace Navigation (TACAN) station
- Fox [number] – launch of weapons
  1. ONE – semi-active guidance
  2. TWO – infrared/passive guidance
  3. THREE – active guidance
  4. FOUR – guns
- Float – expand the formation laterally within visual limits. Used commonly to initiate a “bracket” or to force a commit from a trailing bandit.
- Friendly – positively identified friendly contact
- Furball – a turning fight involving multiple craft with friendlies and bandits mixed

## G

- Gate – fly as quickly as possible, with afterburners/maximum power
- Gorilla – large force of indeterminate numbers and formation
- Grand slam – all hostile aircraft of a designated track or targets of a mission tasking are shot down
- Greyhound – friendly ground-attack weapon
- Guns – alternative to FOX FOUR

## H

- Hard [direction] – high-g, energy sustaining turn in designated direction
- Hard deck – an established minimum altitude (sometimes referring to the point of re-entry for a large body in space)
- Heavy – a group or package known to contain three or more entities
- High – target altitude at 30,000 feet MSL
- High warble – Unduly annoyed or provoked, indicating the state of a friendly or a target
- Holding hands – craft together in a coordinated visual formation
- Hot – aspect pointed toward anticipated threats

## I

- ID – directive to identify a target
- In [direction] – turn to a hot aspect

- Intercept – move to within range of a target
- Interrogate – similar to ID

## J

- Joker – power state above BINGO at which separation/bugout/event termination should begin
- Jock – A pilot

## K

- Kill – clearance to fire
- Klick – representing a kilometre (*“Bogey sighted, one o'clock low, **100 klicks** of your position ”*)

## L

- Laser on – designate a target
- Leaker(s) – threats have passed through a defensive layer
- Locked – targeting system have acquisition of the target
- Lost contact – sensor contact lost with target
- Lost lock – targeting system has lost acquisition of the target
- Lost the bubble – loss of situational awareness or forgot whats happening; usually a request for status update
- Low – target altitude below 10,000 feet MSL

## M

- Master-Arm - or master safety (set to on infers weapons are now live)
- Merge/merged – friendlies and targets are arriving in the same area
- Monitor – maintain awareness of or assume responsibility for a specific target or targets
- Mother – parent ship or base
- Mud - emission warning receiver indication of surface threat
- Music – electronic sensor jamming

## N

- Nails – emission warning receiver indication of threat scans in search mode
- Naked – no emission warning receiver indications
- New picture – new tactical picture, supersedes all earlier instructions
- No factor – not a threat
- No joy – no confirmation of a contact

## O

- Off [direction] - attack is terminated with maneuvering in the indicated direction
- On station - arrival at the assigned station
- Opening - increasing in range
- Out [direction] - turn to a cold aspect

## P

- Package - isolated collection of groups/contacts/formations
- Painted - recognised under IFF, usually denoting that you've been spotted or scanned
- Picture - tactical situation status pertinent to mission
- Pan, pan, pan - Announcing a state of urgency but no immediate danger, usually followed by an announcement. Generally used as an international emergency radio communication, indicating an emergency has been encountered but not dead and that additional surveillance capabilities or backup may be necessary.
- Ping - paying special attention or scrutiny to someone or something
- Playmate - cooperating craft or ship
- Playtime - amount of time unit can remain on station
- Popup - contact that has suddenly appeared within a certain range, usually a defensive layer
- Post attack - direction to maneuver after completing an interception/engagement
- Press - continue the attack, calling station will support
- Push [channel] - go to designated frequency/channel/network
- Pushing - leaving designated position

## R

- Resume - resume last formation/station/mission ordered
- Retrograde - withdraw from present position or area of operation in response to a threat
- Rider - a bogey conforming to safe passage routing/course/speed procedures
- RTB - Returning to base.

## S

- SAM [direction] - confirmed hostile or unidentified ship- or surface-launched anti-aerospace missile
- Saunter - fly at best endurance
- Scram - emergency egress for defensive or survival reasons
- Scramble - takeoff as quickly as possible
- Separate - leave a specified engagement
- Shadow - follow indicated target
- Shooter - unit designated to deploy ordnance
- Shotgun - weapons state at which separation/bugout/event termination should begin
- Single - Marked unit is a single target, not a group
- Skate - execute launch and leave tactics

- Skosh – out of or unable to employ missiles
- Spike – emission warning receiver indication of threat scans in track, launch, or unknown mode
- Splash – target destroyed or weapons impact
- Split – flight member is leaving formation to engage a threat
- Strip – individual fighter/element is leaving to pursue separate attacks
- Sweet – up and working/functioning as expected

## T

- Tally – confirmation of a contact
- Terminate – cease local engagement without affecting overall situation
- Threat – untargeted hostile/bandit/bogey within pre-briefed range/aspect of a friendly
- Tiger – enough power and ordnance to commit
- Tracking – stabilized gun solution
- Trashed – missile(s) have been defeated
- Trail – a formation of two or more craft following each other
- Trailer – specifically the last unit in a formation or trail
- Trespass – flight is entering the threat ring of a specific system

## U

- Unable – cannot comply as requested/directed

## V

- Vampire – hostile anti-ship missile

## W

- Warm Fuzzy – denoting confidence is high (that the quality of intelligence or situational awareness is good) or that there's a sense of security. For example, when an AWAC is on station.
- Warning [color] – hostile attack
  1. RED – imminent or in progress
  2. YELLOW – probable
  3. WHITE – improbable
- Weeds – low altitude flying, often beneath the hard-deck
- Weapons [state] – ordnance release conditions
  1. FREE – fire at targets not identified as friendly within ROE
  2. TIGHT – fire at targets positively identified as hostile
  3. SAFE – do not fire
- Wilco – will comply
- Winchester – no ordnance remaining
- Working – executing electronic identification of targets

**X**

**Y**

**Z**

- Zoom bag – common slang for flight-suit

**OOC**

Codes and phrases taken or adapted from [http://en.wikipedia.org/wiki/Brevity\\_code](http://en.wikipedia.org/wiki/Brevity_code).

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