

PHANTOM OPERATIVES

PILOT TRAINING LOG #1



Ronograd Island, Bering Sea

CNATRA P-430 (Rev 10-23)



PHANTOM OPERATIVES

CHIEF OF AIR TRAINING
250 LEXINGTON BLVD SUITE 179
CORPUS CHRISTI TX 78419-5041

CNATRA P-430 (Rev 10-23)

1. The Phantom Operatives Training Log is issued for information, standardization of instruction, and guidance to all flight instructors and student military aviators within the Air Training Command.
2. This publication is an explanatory aid to the Helicopter curriculum and shall be the authority for the execution of all flight procedures and maneuvers herein contained.
3. Recommendations for changes shall be submitted via the electronic Training Change Request (TCR) form located on the Phantom Operatives discord.

TABLE OF CONTENT

CHAPTER ONE - FORMATION COMMUNICATIONS	1-1
100. INTRODUCTION	1-1
101. COMMUNICATIONS	1-1
102. LOOKOUT COMMUNICATIONS.....	1-6

CHAPTER TWO - FORMATION FLIGHT	1-1
200. INTRODUCTION	1-1
201. C, S-U FORMATION	1-2
CHAPTER THREE - ARMORY AND DRESS CODE.....	1-1
300. INTRODUCTION	1-1
301. DR & ARMORY	1-1

CHAPTER ONE

FORMATIONS AND COMMUNICATIONS

100. INTRODUCTION

This chapter introduces the student to the basic fundamentals of communications within a formation of aircraft. The procedures contained herein are intended to provide a foundation for communication which will meet most mission requirements.

101. COMMUNICATIONS 1.

Application In any combat situation, command and control is critical. Good communications are essential to winning on the modern battlefield. The enemy will employ various methods to disrupt communications. To the aviator, this means effective use of the radios. Even when the enemy is not using jamming, they might be monitoring aviation nets for intelligence. Improper radio discipline could cost lives. Tactical situations dictate prudent use of all available communications. Clear and concise communication is essential for effective aircraft employment. Communication brevity is used to alleviate confusion and provide a common knowledge of critical information during tactical operations. Standard brevity terms are an essential element because it reduces the time required to transfer information and enhances understanding without reducing the quality of information in the transmission. Communication cadence is also essential as it assigns each member of the flight a priority for communications depending on the phase of the mission. However, each member of the flight is allowed to talk by exception to increase the flight's overall Situational Awareness (SA). A critical point of comm brevity and comm cadence is that it not only tells aircrew when to talk, but also, and more importantly, when to listen. Standardized radio procedures will significantly reduce unneeded radio transmissions, thus denying the enemy valuable information. Detailed communication planning is also essential. During the planning phase, do not rely on electronic communications. Anticipate the need for visual signals, brevity codes, and ground reference points to aid in communication. Plan the mission from

beginning to end in detail emphasizing simplicity. A thorough mission brief is the start of your communication plan. When little to no verbal communication is used, each aircrew member must be thoroughly familiar with the mission and its execution. This familiarity must be such that if the lead aircraft is compromised, any member of the flight may complete the mission. Great care should be taken in the brief presentation. The bulk of the brief should be spent on the execution portion, specifically the actions in the objective area. Administrative matters should be covered but should not be the focus of the brief.

FORMATION COMMUNICATIONS 1-1

CHAPTER ONE

FORMATION HELICOPTER ADVANCED PHASE TH-57 1-2

With time for questions at the end of the briefing will ensure each individual fully understands the mission and their role.

2. External Communication Procedures

External communications are those done with agencies or individuals outside your section. All external radio communications will utilize an external call sign, which will be your Section Lead's call sign. Initial communication with an external agency will require the external call sign followed by how large the flight is. For example: "Approach, Eightball 123, flight of two, request." Subsequent communication transmissions with the same external agency can replace "flight of 2" with "and flight."

3. Internal Communication Procedures

Internal communications are those done between the aircraft in the section. Usually in the fleet, your external call sign is your internal call sign. In the training command, each section is allowed to come up with their own internal call sign. This call sign should be two syllables and shall be professional. The Section Lead reserves the right to veto any inappropriate or unsuitable internal call sign. The internal call sign alleviates confusion over common frequencies when multiple sections may be established in the training area. If the internal call sign is "Rooster," Lead will be "Rooster 1" and Wing will be "Rooster 2." Wing position will use "Rooster 2" throughout the conduct of the flight. Rogering up the maneuvers in the working area or at the OLF. All pilots should know and practice sound communication brevity and cadence. This means listening and responding appropriately to only those transmissions affecting them. The following standard communication procedures will be utilized during the formation phase of training.

a.

Radio Check-in Procedures. The Section Lead will check the flight in at the beginning of the flight or following a frequency change to ensure everyone in the flight is up on the desired frequency. This is accomplished by calling "check radio" alongside their call sign

1-2 FORMATION COMMUNICATIONS

FORMATION HELICOPTER ADVANCED PHASE TH-57

CHAPTER ONE

Example:

Lead - "Rooster flight, check Uniform/Victor"

Wing - "Rooster 2"

b.

Frequency Changes. There are two basic ways to accomplish a frequency change. These are:

i.

Positive Switch. Under this method, the flight is directed to make a frequency change. This direction comes in the form of a radio call. This direction may come from someone within the section or an agency external to the flight (e.g., Clearance Delivery, Ground, Tower, or Approach Control).

Example:

Lead - "Rooster flight, push ground"

Wing - "Rooster 2"

(All aircraft now switch to ground)

Lead - "South Ground, (aircraft call sign), flight of two, taxi..."

Utilization of the positive control method ensures all aircrew hear and comply. This will also ensure no one gets lost among the frequency changes.

ii.

Automatic Switch. Under this type of frequency change, the flight will change frequencies as specified in the brief. This could be a specific time or over a predesignated visual check point. This method depends on each aircrew member taking detailed notes in the brief and paying very close attention during the flight.

Example:

Lead - "South Ground, (aircraft call sign), flight of two, taxi..."

Ground - "Roger, (aircraft call sign) and flight, you're cleared to taxi..."

Lead - "(Aircraft call sign) and flight, Roger"

(The flight taxis as instructed, and all aircraft automatically switch to tower frequency when Lead is 200 feet from the hold short).

CHAPTER ONE FORMATION HELICOPTER ADVANCED PHASE TH-57

102. LOOKOUT COMMUNICATIONS

In the modern battlefield, survival is intrinsically linked with finding and recognizing the enemy first. The helicopter's primary defensive weapon is avoidance of the threat. It is imperative each crewmember has an assigned lookout sector and each aircraft in a flight has a primary area of responsibility.

Pilots shall assign each crewmember a sector of lookout responsibility. Within the limitations of aircraft configuration, the combination of all such sectors shall provide 360° of lookout around the aircraft. Horizontal lookout sectors shall be overlapping per Figure 1-2 and designated by a clock code with 12 o'clock oriented on the nose of the aircraft. Vertical sectors shall be designated with reference to the aircraft's perceived horizontal reference plane: HIGH is a position above the aircraft, LOW to a position below the aircraft, and LEVEL is a position level with the aircraft.

Figure 1-2 Lookout Responsibilities

Individual lookout sectors and responsibilities shall not be modified or relaxed when a helicopter is operating as a flight. Safety of the flight depends on the concept of several sets of eyes scanning the same or overlapping sectors to provide a better chance for timely attack warning than would be the case if each aircraft or aircrew were assigned a separate lookout sector. Clock code references for a flight shall be referenced from Lead's 12 o'clock position. Any crewmember that observes another aircraft, must immediately inform the pilot of the location and type. The pilot will then alert the flight with a response from all flight members.

Example:

Lead - "Rooster flight, fixed-wing, five o'clock high"

Wing - "Rooster 2, visual"

a.

Visual - refers to sighting of a friendly aircraft or ground position. Opposite of BLIND.

b.

Blind - No visual contact with FRIENDLY aircraft/ground position. Opposite of VISUAL.

c.

Contact - Acknowledges sighting of a specified reference point (either visually or via sensor)

FORMATION COMMUNICATIONS 1-7

SPACE LEFT BLANK INTENTIONALLY

CHAPTER TWO

FORMATION FLIGHT

200. INTRODUCTION

This chapter introduces the student to the basic fundamentals of formation flying. The procedures and positions contained herein are intended to provide a foundation for formation flying which will meet most mission requirements.

201. FORMATION FLIGHT

1. Application

It is essential that the basic fundamentals of formation flying be practiced in preparation for combat readiness. The number of formation aircraft required to accomplish a mission varies. A section will consist of two aircraft, a light division will consist of three, and a division will consist of four (two sections). Five or more aircraft constitute a flight. Within any formation flight, there are certain terms used to designate aircraft within the flight as well as leadership designations or “chain of command” within the flight. The aircraft commander designated as the Flight Lead is ultimately responsible for mission accomplishment, and provides guidance for the conduct of the flight via a thorough mission brief and in-flight instructions. The other aircraft are considered the wingmen who are responsible for maintaining flight integrity and complying with the Section Lead’s directions. These designations are made prior to the mission, identified on the flight schedule, and adhered to rigidly unless Lead becomes compromised or otherwise unable to carry out the leadership responsibilities. “Lead” is a term used to indicate the first aircraft in a formation, and the term “Wing” applies to the other aircraft in the flight. The lead aircraft does not necessarily have to be Lead. For example, a Section Lead can be flying as a wingman in the flight. Regardless of position in the flight, the Lead is ultimately responsible for the overall success or failure of the mission. All discussions in this manual assume a section unless otherwise noted. Two of the basic types of formations are parade and cruise. Parade is used primarily when there is a requirement for aircraft to fly a fixed bearing position in close proximity to each other, and maximum maneuverability is not essential. It is most frequently employed during arrival at or departure from ships or airfields, or during flight demonstrations. Power is varied to maintain position. Cruise is used to afford Lead more freedom to maneuver the flight while minimizing wingman workload, and allowing Wing more fuel conservation. Lead must be able to use the formation as an integral unit and still be free to turn, climb, or dive the formation with few restrictions. The cruise formations outlined herein afford that flexibility. Wing will use a varied radius of turn rather than power to maintain position.

2. Relative Motion

Essentially, formation flying is nothing more than controlling the relative motion between aircraft. To maintain a fixed position the relative motion must be stopped. To maneuver safely in relation to another aircraft, the direction and rate of motion must be controlled. Lead is considered “fixed” and any movement between aircraft is considered as movement of Wing in relation to Lead. In formation flying, Lead becomes the primary reference, therefore, it is important for Lead to be as stable as possible.

3. Lead and Wing Responsibilities

- a. Lead provides a stable platform.
- b. Wing ensures proper separation from Lead.
- c. Lead makes all applicable external radio calls for the section.
- d. Lead ensures safe navigation for the flight.
- e. Wing backs up Lead on all external radio communications and navigation.
- f. Wingman PAC initiates all maneuvers during CNATRA formation training.
- g. Lead “rogers” all maneuvers during CNATRA formation training.
- h. Both aircraft ensure the section is clear from obstacles.

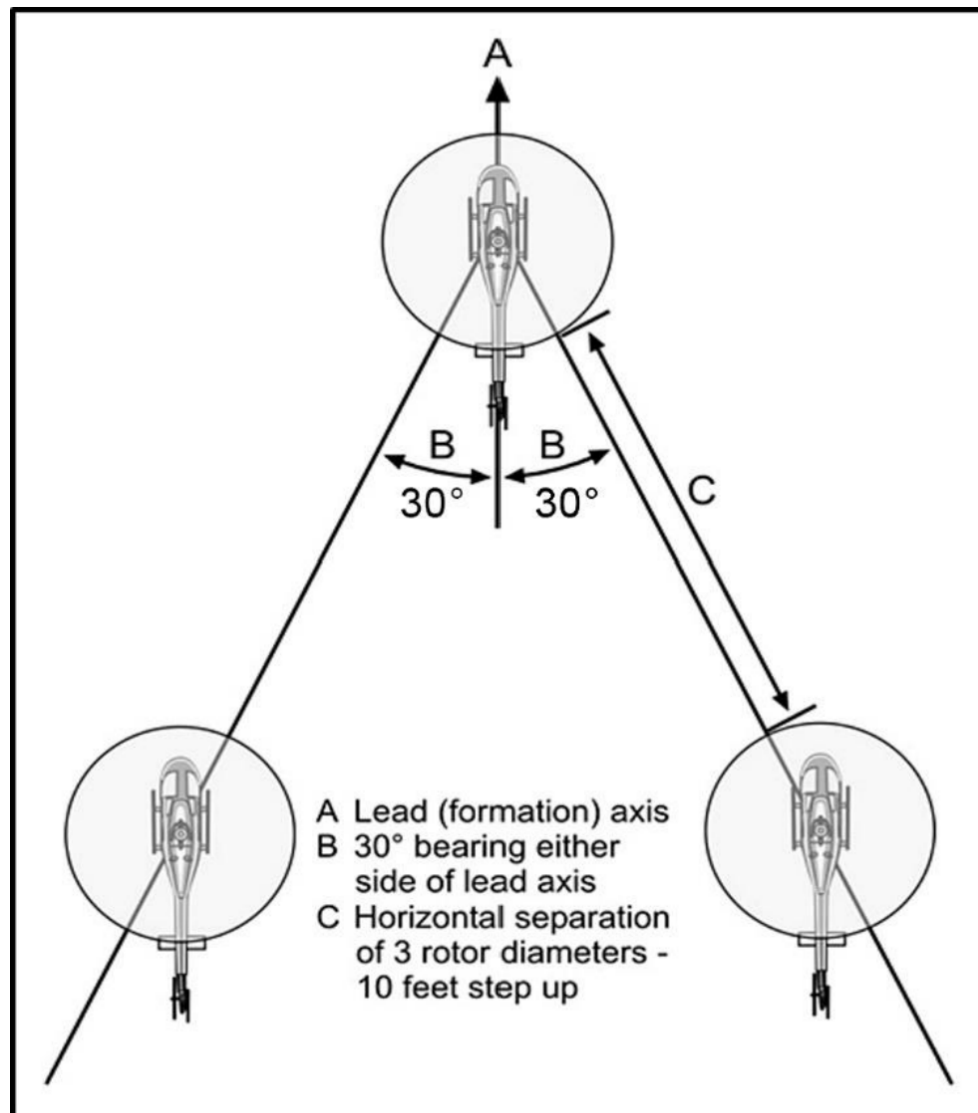


Figure 2-1 Cruise Formation

4. Formation Positions

a. The Cruise Position

Description

i.

Cruise is used en route when maneuverability and navigation by all aircraft are the primary considerations. Wing maintains position through radius of turn with

minimal power adjustments when Lead turns. Using radius of turn vice large power adjustments to maintain position allows Wing to approximately match Lead's fuel consumption, enabling both aircraft to arrive at the operating area with enough fuel on board to complete the assigned mission. If the radius of turn concept is not employed by Wing, Wing may have insufficient fuel to complete the mission. Cruise formation may be flown at any airspeed, but for training purposes it shall be flown at 80 KIAS when practicing maneuvers, and at 100 KIAS while transiting to and from the designated operating area.

ii.

The cruise position is defined as ten feet of step-up, on the 30° bearing line, and at three rotor diameters of longitudinal separation measured from blade tip to blade tip (See Figure 2-1). Wing is free to slide to either side of Lead. Wing should stay out of the trail position.

iii.

Ten feet of step-up can be maintained by placing Lead's rotor hub just below the horizon.

SPACE LEFT BLANK INTENTIONALLY

CHAPTER THREE

GENERAL INFORMATION TH-57

300. INTRODUCTION

This chapter introduces the student to the Dress Code as well as the armory necessary.

301. DRESS CODE & ARMORY

i. Dress Code

UNIFORM: Flight Suit / Pilot

HELMET: HGU-56/P, AN/AVS-9 is optional but better, no mouth cover,

VEST: SPARTAN II, middle top flag of choice

BELT: Removed

HOLSTER: Drop-Leg black



ii.

PRIMARY: Default M16A1, no attachments, black. Pilots will not require a rifle.

SECONDARY: G17, no attachments.



CHAPTER FOUR

TRAINING, CS AND HIU

401. Call Signs

APOLLO, COMA, IRIS, RAPTOR, KASPER, WIFI, and so on.

Alongside Call Signs are also Flight Codes which are used by the pilot to identify their aircraft to Air Traffic Controllers and Tower Controllers. It will be authorized and you will be in short given the permission to land at Pad 1 (Closest to the entrance at the Command Centre), Pad 2 (To the the right of Pad 1), Pad 3 (Above Pad 1) or the two hostage center Helipads (HP-1, HP-2). The flight code should be sent for authorization before arrival, as by then the FOB will detect you as a possible threat, making you vulnerable to AA.

As of game sense this obviously does not exist, but you will always have to pretend and follow through.

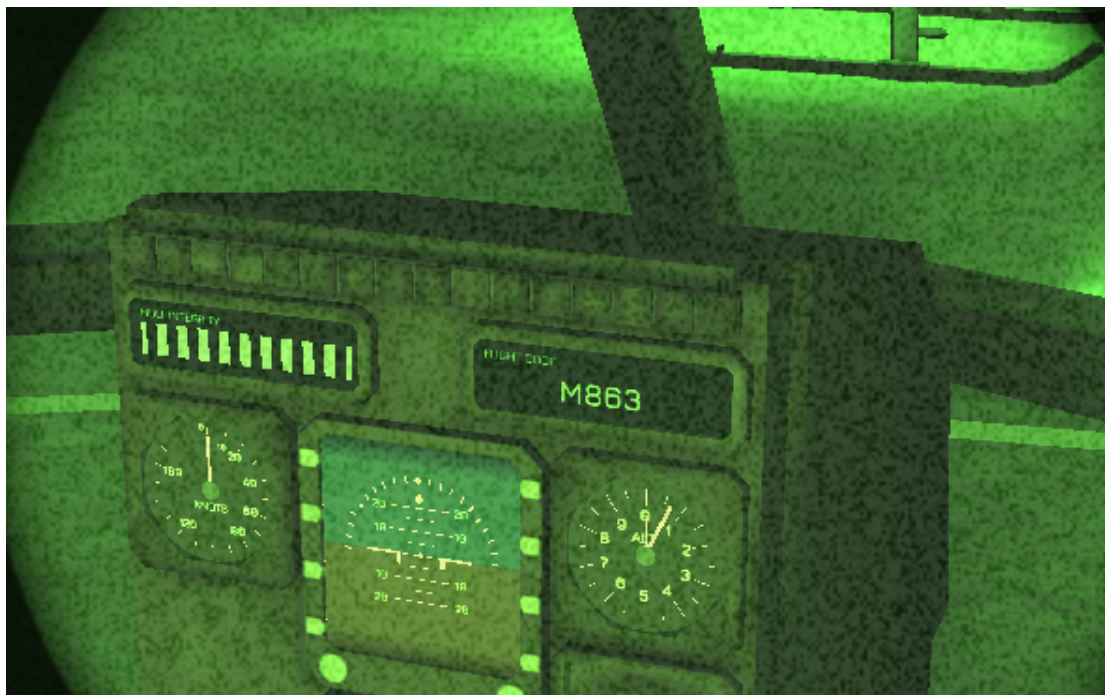
Example:

Lead - “ (Callsign), requesting authorization of (Flight Code) and for landing. “

ATC - “ Copy (Callsign), Flight code is registered and authorized, you are clear to land at (Pad) “

Lead - “(Callsign) copies, landing at (Pad), over. “

Below is where you may find your flight code. It is often found in the Dashboard in the middle of your helicopter.



402. Helicopters in Usage

UH-60 BLACKHAWK: Often in use for night or quick deployments. In some cases used for MedEvac



CH-53 SEA STALLION: Used if a large number of units have to be deployed. Also used for hostage rescue missions.



CH-47 CHINOOK: Used if a large number of units have to be deployed. Also used for hostage rescue missions.



NH90 TTH: Used only for MedEvac.



MH-6 LITTLE BIRD: Used for quick operations with a small group.



TRAINING, CS, HIU
ONE

CHAPTER

403. Pilot Training Plan

SPACE LEFT BLANK INTENTIONALLY

i. TRAINING PLAN #FORMATIONS:

Cruise

Echelon Left

Echelon Right

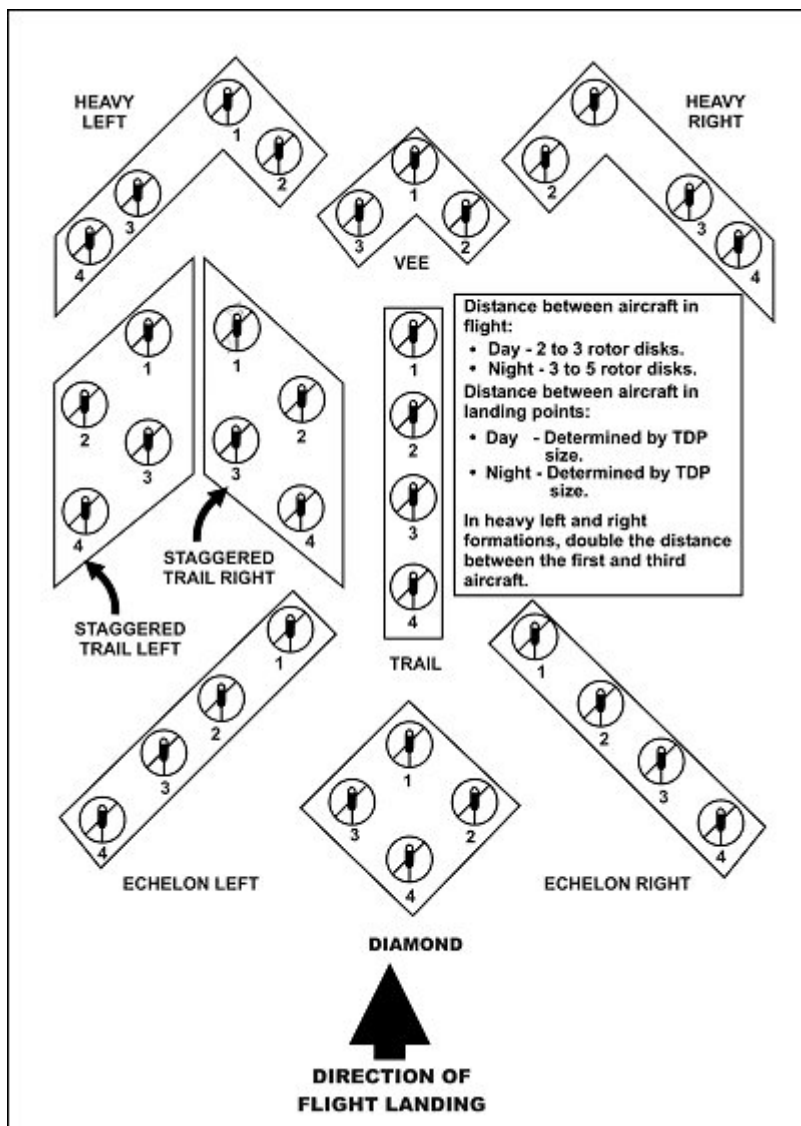
Diamond (4 Participants are required)

Trail

Vee

Heavy Right

Heavy Left



ii. TRAINING PLAN #GENERAL:

- Learning how to use the Helicopter Camera
- Learning how to position the helicopter. [GUNNER + PILOTS]
- Learning how to land smoothly.
- Learning Military Code (RTB, ETA, BANDIT, BOOGEY, BINGO)
- Learning how to rappel in units and perform parachute droppings. (AVP)
- Learning how to MedEvac someone
- Learning how to perfectly start a deployment in night
- Learning how to deploy units in a hot zone/Exfil units from a hot zone
- Learning how to act as air support or overwatch [GUNNER + PILOTS]
- Learning how to begin a Search and Rescue [MEDICS + PILOTS]