

Phraseology

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Introduction

Effective communication between pilots and air traffic controllers (ATC) is essential for flight safety and efficiency. Standardized phraseology ensures **clarity, uniformity, and minimizes ambiguity** in radiotelephony (RTF) communication.

The phraseology outlined here is based on **ICAO Doc 4444, 16th edition (Nov 2016)** and must be used in conjunction with proper call signs.

What is Phraseology?

Phraseology refers to the **structured communication** used between pilots and ATC. It ensures **clear and precise** transmissions to reduce misunderstandings.

- Standard phraseology applies to **routine and emergency communications**.
- When standard phrases do not cover a situation, pilots and controllers should use **plain language** that is **clear, concise, and direct**.
- Pilots must **read back all clearances and instructions** they receive from ATC, except in emergency situations or in cases of radio failure.

Basic Rules of Communication

- ATC must **start all transmissions with the aircraft's call sign**.
- Pilots should **end their readback with their call sign**.
- When contacting ATC for the first time, a pilot should **state both the ATC unit and their own call sign**.
- Some abbreviations, such as **ILS, QNH, and RVR**, may be spoken as individual letters rather than using the full phonetic alphabet.

Omitted Words in Transmissions

To keep transmissions concise, the following words may be omitted **if no confusion arises**:

- **"Surface"** (in relation to wind direction and speed).
- **"Degrees"** (when giving radar headings).
- **"Visibility," "Clouds," and "Height"** (in meteorological reports).
- **"Hectopascal"** (when providing pressure settings).

Use of Conditional Instructions

Conditional instructions (e.g., "**Behind landing aircraft, line up and wait**") must follow a strict format to avoid confusion.

Format for Conditional Instructions:

1. **Identification** – Aircraft receiving the instruction.
2. **Condition** – The reference traffic or event (e.g., "Behind the landing Airbus A320").
3. **Clearance** – The specific instruction given (e.g., "Line up and wait").

Example:

☐ ATC: "SAS947, behind landing DC9, line up and wait Runway 12."

☐ Pilot: "Behind landing DC9, line up and wait Runway 12, SAS947."

⚡ **Important:** Conditional phrases **must not be used for runway movements** unless the controller and pilot have a **clear visual of the aircraft or vehicle in question**.

Transmitting Techniques

To ensure **clear and understandable communication**, ATC and pilots should:

1. **Listen before transmitting** to avoid interference.
2. **Use a normal tone** and speak **clearly and distinctly**.
3. **Maintain a steady speaking volume** throughout the transmission.
4. **Pause slightly before and after numbers** for better comprehension.
5. **Avoid hesitation sounds** like "er" or "um."
6. **Keep a consistent distance from the microphone** for clear audio.
7. **Depress the transmit button fully before speaking** and release it only after completing the message.

Readback Procedures

Pilots **must read back** all **safety-critical** clearances and instructions. This ensures that **ATC clearances are received correctly and executed as intended**.

Readback is mandatory for:

- ATC **route clearances**.
- **Runway instructions**, including:
 - Entering, landing on, taking off from, or holding short of a runway.
 - Crossing or backtracking on a runway.
- **Runway-in-use** information.

- **Altimeter settings.**
- **SSR codes** (Squawk assignments).
- **Level, heading, and speed instructions.**
- **Transition level assignments.**

Example Readbacks:

☐ ATC: "DEHBA, taxi to holding point Runway 01."

☐ Pilot: "Taxi to holding point Runway 01, DEHBA."

☐ ATC: "DEHBA, squawk 4525."

☐ Pilot: "Squawk 4525, DEHBA."

Additional Guidelines for Effective Communication

- **The word "IMMEDIATELY" should only be used when immediate action is required for safety reasons.**
- **Avoid unnecessary courtesies** like "please" or "thank you" in radio transmissions.
- **Do not use redundant words** such as "this is," "over," or similar terms unless needed for clarity.

General

Description of Level

ATC instructions or clearances may contain a specific **level** to comply with.

Levels are transmitted using the following formats:

- **FLIGHT LEVEL (Number)**
- **(Number) METRES**
- **(Number) FEET**

This **(level)** description will be used throughout this document.

Examples:

- **FLIGHT LEVEL 90**
- **FLIGHT LEVEL 340**
- **300 METRES**
- **8500 FEET**

Speed Control

ATC Speed Instructions:

- **REPORT SPEED**
- **MAINTAIN (Number) KILOMETRES PER HOUR (or KNOTS) [OR GREATER (or OR LESS)] [UNTIL (Significant Point)]**
- **DO NOT EXCEED (Number) KILOMETRES PER HOUR (or KNOTS)**
- **MAINTAIN PRESENT SPEED**
- **INCREASE (or REDUCE) SPEED TO (Number) KILOMETRES PER HOUR (or KNOTS) [OR GREATER (or OR LESS)]**
- **INCREASE (or REDUCE) SPEED BY (Number) KILOMETRES PER HOUR (or KNOTS)**
- **RESUME NORMAL SPEED**
- **REDUCE TO MINIMUM APPROACH SPEED**
- **REDUCE TO MINIMUM CLEAN SPEED**
- **RESUME PUBLISHED SPEED**

Canceling Speed Restrictions:

- **NO [ATC] SPEED RESTRICTIONS**

Pilot Response to Speed Queries:

- **SPEED (Number) KILOMETRES PER HOUR (or KNOTS)**

Level Changes, Reports, and Rate

Climb Instructions:

- **CLIMB TO (Level)**
- **CLIMB TO AND MAINTAIN BLOCK (Level) TO (Level)**
- **CLIMB TO REACH (Level) AT (Time or Significant Point)**
- **CLIMB TO (Level), REPORT LEAVING/REACHING/PASSING (Level)**
- **CLIMB AT (Number) FEET PER MINUTE [OR GREATER/LESS]**
- **CLIMB AT (Number) METRES PER SECOND [OR GREATER/LESS]**
- **REPORT STARTING ACCELERATION (or DECELERATION).** *(only for supersonic jets)*

Descent Instructions:

- **DESCEND TO (Level)**
- **DESCEND TO AND MAINTAIN BLOCK (Level) TO (Level)**
- **DESCEND TO REACH (Level) AT (or BY) (Time or Significant Point)**
- **DESCEND REPORT LEAVING (or REACHING, or PASSING) (Level)**
- **DESCEND AT (Number) FEET PER MINUTE [OR GREATER/LESS]**
- **DESCEND AT (Number) METRES PER SECOND [OR GREATER/LESS]**
- **REPORT STARTING ACCELERATION/DECELERATION.** *(only for supersonic jets)*

Climb and Descent Adjustments:

- **MAINTAIN AT LEAST (Number) METRES (or FEET) ABOVE (or BELOW) (Aircraft Call Sign)**
- **STOP CLIMB (or DESCENT) AT (Level)**
- **CONTINUE CLIMB (or DESCENT) TO (Level)**
- **EXPEDITE CLIMB (or DESCENT) [UNTIL PASSING (Level)]**
- **WHEN READY CLIMB (or DESCEND) TO (Level)**
- **EXPECT CLIMB (or DESCENT) AT (Time or Significant Point)**

Adding Restrictions to Climb/Descent:

- **CROSS (Significant Point) AT (or ABOVE, or BELOW) (Level)**
- **CROSS (Significant Point) AT (Time) OR LATER (or BEFORE) AT (Level)**
- **CRUISE CLIMB BETWEEN (Levels) (or ABOVE (Level))**
- **CROSS (Distance) MILES, (GNSS or DME) [(Direction)] OF (Name of DME Station) OR (Distance) [(Direction)] OF (Significant Point) AT (or ABOVE or BELOW) (Level)**

Altimeter Settings and Level Confirmation:

- **CHECK ALTIMETER SETTING AND CONFIRM (Level)**
- **CONFIRM (Level)**

Pilot Requests for Flight Level Change:

- **REQUEST LEVEL (or FLIGHT LEVEL or ALTITUDE)**
- **REQUEST DESCENT AT (Time)**

ATC Instructions for Immediate or Conditional Actions:

- **IMMEDIATELY**
- **AFTER PASSING (Significant Point)**
- **AT (Time or Significant Point)**

ATC Instruction for Action When Convenient:

- **WHEN READY (Instruction)**

ATC Instruction for Own Separation in VMC:

- **MAINTAIN OWN SEPARATION AND VMC [FROM (Level)] [TO (Level)]**
- **MAINTAIN OWN SEPARATION AND VMC ABOVE (or BELOW, or TO) (Level)**

Handling Compliance Uncertainty:

- **IF UNABLE (Alternative Instructions) AND ADVISE**

Pilot Response When Unable to Comply:

- **UNABLE**

TCAS Alert Management

Pilot and ATC Exchange During TCAS RA (Resolution Advisory):

- **Pilot:** *"TCAS RA."*
- **ATC:** *"ROGER."*

After Resolving the TCAS RA and Returning to ATC Clearance:

- **Pilot:** *"CLEAR OF CONFLICT, RETURNING TO (Assigned Clearance)."*
- **ATC:** *"ROGER (or Alternative Instructions)."*

After Resolving TCAS RA and Resuming Assigned ATC Clearance:

- **Pilot:** *"CLEAR OF CONFLICT, (Assigned Clearance) RESUMED."*
- **ATC:** *"ROGER (or Alternative Instructions)."*

If ATC Issues a Contradictory Instruction During an RA Event:

- **Pilot:** *"UNABLE, TCAS RA."*

- **ATC:** "ROGER."

Maneuver Instructions

ATC Instructions for Specific Maneuvers:

- **MAKE A THREE SIXTY TURN LEFT (or RIGHT) [Reason]**
- **ORBIT LEFT (or RIGHT) [Reason]**
- **MAKE ALL TURNS RATE ONE (or RATE HALF, or (Number) DEGREES PER SECOND)**
START AND STOP ALL TURNS ON THE COMMAND "NOW"
- **TURN LEFT (or RIGHT) NOW**
- **STOP TURN NOW**

Reasons for Vectoring or Maneuvers:

- **DUE TRAFFIC**
- **FOR SPACING**
- **FOR DELAY**
- **FOR DOWNWIND (or BASE, or FINAL)**

Transfer of Control and Frequency Changes

ATC Transfer Instructions:

- **CONTACT (Unit Call Sign) (Frequency) [NOW]**
- **WHEN READY CONTACT (Unit Call Sign) (Frequency)**
- **REMAIN THIS FREQUENCY**

Pilot Request for Frequency Change:

- **REQUEST CHANGE TO (Frequency)**
- **ATC:** "FREQUENCY CHANGE APPROVED."

ATC Instruction to Stand By:

- **STAND BY FOR (Unit Call Sign) (Frequency)**

ATC Instruction to Monitor a Frequency:

- **MONITOR (Unit Call Sign) (Frequency)**
 - *Example:* "MONITOR UNICOM 122.8."

Entering Airspace Clearance

ATC Instructions for Entering/Leaving Controlled Airspace:

- **ENTER CONTROLLED AIRSPACE (or CONTROL ZONE) [VIA (Significant Point or Route)] AT (Level) [AT (Time)]**
- **LEAVE CONTROLLED AIRSPACE (or CONTROL ZONE) [VIA (Significant Point or Route)] AT (Level) (or CLIMBING, or DESCENDING)**

ATC Instruction for Specific Route with Restrictions:

- **JOIN (Specify) AT (Significant Point) AT (Level) [AT (Time)]**

Termination of Radar Service

ATC Instructions for Ending Radar Services:

- **RADAR SERVICE (or IDENTIFICATION) TERMINATED [DUE (Reason)] (Instructions)**
- **WILL SHORTLY LOSE IDENTIFICATION (Appropriate Instructions or Information)**
- **IDENTIFICATION LOST [Reasons] (Instructions)**

Change of Call Sign

When an ATC unit has two aircraft with similar call signs that could cause confusion, the controller may instruct one aircraft to change its call sign.

Example of Conflicting Call Signs:

- **AFR145 and AFR945**

ATC Instructions for Call Sign Change:

- **CHANGE YOUR CALL SIGN TO (New Call Sign) [UNTIL FURTHER ADVISED]**
- **REVERT TO FLIGHT PLAN CALL SIGN (Call Sign) [AT (Significant Point)]**

Traffic Information

ATC Instructions for Providing Traffic Information:

- **TRAFFIC (Information)**
- **TRAFFIC (Number) O'CLOCK (Distance) (Direction of Flight) [Any Other Pertinent Information]**

Additional Descriptors for Traffic Reports:

- **UNKNOWN**
- **SLOW MOVING**
- **FAST MOVING**
- **CLOSING**
- **OPPOSITE (or SAME) DIRECTION**

- **OVERTAKING**
- **CROSSING LEFT TO RIGHT (or RIGHT TO LEFT)**
- **(Aircraft Type)**
- **(Level)**
- **CLIMBING (or DESCENDING)**

ATC Notification for No Reported Traffic:

- **NO REPORTED TRAFFIC**

ATC Guidance for Avoiding Action:

- **DO YOU WANT VECTORS?**

Pilot Requests for Avoiding Action Vectors:

- **REQUEST VECTORS**

ATC Instructions for Immediate Avoidance:

- **TURN LEFT (or RIGHT) IMMEDIATELY HEADING (Three Digits) TO AVOID [UNIDENTIFIED] TRAFFIC (Bearing by Clock-Reference and Distance)**
- **TURN LEFT (or RIGHT) (Number of Degrees) DEGREES IMMEDIATELY TO AVOID [UNIDENTIFIED] TRAFFIC AT (Bearing by Clock-Reference and Distance)**

ATC Notification for No More Traffic Threats:

- **CLEAR OF TRAFFIC [Appropriate Instructions]**

Pilot Acknowledgement of Traffic Information:

- **LOOKING OUT**
- **TRAFFIC IN SIGHT**
- **NEGATIVE CONTACT [Reasons]**
- **[ADDITIONAL] TRAFFIC (Direction) BOUND (Type of Aircraft) (Level) ESTIMATED (or OVER) (Significant Point) AT (Time)**
- **TRAFFIC IS (Classification) UNMANNED FREE BALLOON(S) WAS [or ESTIMATED] OVER (Place) AT (Time) REPORTED (Level(s)) [or LEVEL UNKNOWN] MOVING (Direction) (Other Pertinent Information, If Any)**

Meteorological Conditions

ATC Wind Information:

- **[SURFACE] WIND (Number) DEGREES (Speed) (Units)**
- **WIND AT (Level) (Number) DEGREES (Number) KILOMETRES PER HOUR (or KNOTS)**

- *Note: Wind is always expressed by giving the mean direction and speed and any significant variations thereof.*

ATC Runway Visual Range (RVR) Information:

- **RUNWAY VISUAL RANGE (or RVR) [RUNWAY (Number)] (Distance) (Units)**
- **RUNWAY VISUAL RANGE (or RVR) RUNWAY (Number) NOT AVAILABLE (or NOT REPORTED)**

Multiple RVR Observations:

- **RUNWAY VISUAL RANGE (or RVR) [RUNWAY (Number)] (First Position) (Distance) (Units), (Second Position) (Distance) (Units), (Third Position) (Distance) (Units)**
 - *Note 1: Multiple RVR observations represent the touchdown zone, midpoint, and roll-out/stop end zone, respectively.*
 - *Note 2: When reports for all three locations are given, the location names may be omitted if passed in this order.*

ATC RVR Information When One Position is Unavailable:

- **RUNWAY VISUAL RANGE (or RVR) [RUNWAY (Number)] (First Position) (Distance) (Units), (Second Position) NOT AVAILABLE, (Third Position) (Distance) (Units)**

Other Weather Information Provided by ATC:

- **PRESENT WEATHER (Details)**
- **CLOUD (Amount, [(Type)] and Height of Base) (Units)**
- **SKY CLEAR**
- **CAVOK** (*Pronounced CAV-O-KAY*)
- **TEMPERATURE [MINUS] (Number) (and/or DEWPOINT [MINUS] (Number))**
- **QNH (Number) [Units]**
- **QFE (Number) [(Units)]**
- **(Aircraft Type) REPORTED (Description) ICING (or TURBULENCE) [IN CLOUD] (Area) (Time)**
- **REPORT FLIGHT CONDITIONS**

Position Reporting

ATC Instructions for Position Reporting:

- **REPORT PASSING (Significant Point)**
- **NEXT REPORT AT (Significant Point)**

ATC Instruction to Omit Position Reports Until a Certain Point:

- **OMIT POSITION REPORTS [UNTIL (Specify)]**

ATC Instruction to Resume Position Reporting:

- **RESUME POSITION REPORTING**

ATC Instruction to Request a Report at a Specific Location or Distance:

- **REPORT (Distance) MILES (GNSS or DME) FROM (Name of DME Station) (or Significant Point)**

ATC Instruction to Report Position Using VOR Radial:

- **REPORT PASSING (Three Digits) RADIAL (Name of VOR) VOR**

ATC Instruction to Request a Report of Present Position:

- **REPORT (GNSS or DME) DISTANCE FROM (Significant Point) or (Name of DME Station)**

Typical Pilot Position Report:

- **(Distance) MILES (GNSS or DME) FROM (Name of DME Station) (or Significant Point)**
- **(Coordinates North/South) and (Coordinates East/West)**

Aerodrome Information

ATC Instructions Regarding Aerodrome Conditions:

- **[(Location)] RUNWAY SURFACE CONDITION RUNWAY (Number) (Condition)**
- **[(Location)] RUNWAY SURFACE CONDITION RUNWAY (Number) NOT CURRENT**
- **LANDING SURFACE (Condition)**
- **CAUTION CONSTRUCTION WORK (Location)**
- **CAUTION (Specify Reasons) RIGHT (or LEFT), (or BOTH SIDES) OF RUNWAY [Number]**
- **CAUTION WORK IN PROGRESS (or OBSTRUCTION) (Position and Any Necessary Advice)**

Runway Surface Reports and Braking Action:

- **RUNWAY REPORT AT (Observation Time) RUNWAY (Number) (Type of Precipitant) UP TO (Depth of Deposit) MILLIMETRES. ESTIMATED SURFACE FRICTION GOOD (or MEDIUM TO GOOD, or MEDIUM, or MEDIUM TO POOR, or POOR)**
- **BRAKING ACTION REPORTED BY (Aircraft Type) AT (Time) GOOD (or MEDIUM TO GOOD, or MEDIUM, or MEDIUM TO POOR, or POOR)**

Additional Runway or Taxiway Conditions:

- **RUNWAY (or TAXIWAY) (Number) WET [or STANDING WATER, or SNOW REMOVED (Length and Width as Applicable), or TREATED, or COVERED WITH PATCHES OF DRY SNOW (or WET SNOW, or COMPACTED SNOW, or SLUSH, or FROZEN SLUSH, or ICE, or WET ICE, or ICE UNDERNEATH, or ICE AND SNOW, or SNOWDRIFTS, or FROZEN RUTS AND RIDGES)]**

Additional Observations:

- **TOWER OBSERVES (Weather Information)**
- **PILOT REPORTS (Weather Information)**

Issuance of Clearance

ATC Clearance Given to the Pilot:

- **(Aircraft Call Sign) CLEARED TO (or FOR) (Clearance)**
 - **Example:** *N52515, Runway 10, cleared to land.*
 - **Example:** *N11444, Runway 33R, cleared for take-off.*

Reporting ATC Clearance Given by Another ATC Unit:

- **(Name of Unit) CLEARS (Aircraft Call Sign) TO (Clearance)**

Modified Clearance Given by ATC:

- **RECLEARED (Amended Clearance Details) [REST OF CLEARANCE UNCHANGED]**
- **RECLEARED (Amended Route Portion) TO (Significant Point of Original Route) [REST OF CLEARANCE UNCHANGED]**

Types of Clearance:

- **Departure Clearance**
- **Arrival Clearance**
- **Crossing Zone Clearance**
- **Flight Plan Change Clearance**

Indicating Route and Clearance Limit:

- **FROM (Location) TO (Location)**
- **TO (Location)**
- **TO (Location), DIRECT**
- **TO (Location), VIA (Route and/or Significant Points)**
- **TO (Location), FLIGHT PLANNED ROUTE**
- **TO (Location), VIA (Distance) DME ARC (Direction) OF (Name of DME Station)**

When Clearance Cannot Be Issued or Followed:

- **(Route) NOT AVAILABLE DUE (Reason) ALTERNATIVE(S) IS/ARE (Routes) ADVISE.**
- **CANNOT BE ISSUED**
- **UNABLE, TRAFFIC (Direction) BOUND (Type of Aircraft) (Level)**
- **ESTIMATED (or OVER) (Significant Point) AT (Time) CALL SIGN**
- **(Call Sign) ADVISE INTENTIONS.**

Transponder Mode and Code

ATC Instructions to Change or Check the Transponder Mode and/or Code:

- **RESET SQUAWK [(Mode)] (Code)**
- **CONFIRM SQUAWK (Code)**

Pilot Readback for Transponder Instructions:

- **RESETTING [(Mode)] (Code)**
- **SQUAWKING (Code)**

ATC Instruction for Squawking IDENT Procedure:

- **SQUAWK [(Code)] [AND] IDENT**

ATC Request for Suspension of Transponder Operation (Standby Mode):

- **SQUAWK STANDBY**

ATC Request for Emergency Code (MAYDAY) Setting:

- **SQUAWK MAYDAY [CODE SEVEN-SEVEN-ZERO-ZERO]**

ATC Request for Transmission of Pressure Altitude:

- **SQUAWK CHARLIE**
- **TRANSMIT ADS-B ALTITUDE**

Aerodrome

Initial IFR Clearance Request

Every flight under Instrument Flight Rules (IFR) must receive an initial IFR clearance. This clearance approves the flight plan and allows the flight to proceed.

Clearances Shall Contain:

1. Aircraft identification
2. Clearance limit
3. Designator of the assigned SID (if applicable)
4. Cleared level(s)
5. Allocated SSR code (squawk/transponder code)
6. Any other necessary instructions or information not contained in the SID description (e.g., non-standard departure route, change of frequency instructions)

Example IFR Clearances:

- **CLEARED TO** (destination airfield) **VIA** (departure SID identifier) **DEPARTURE**, [**RUNWAY** (departure runway)], **FLIGHT PLANNED ROUTE**, **CLIMB** (initial level), **SQUAWK** (squawk number).
- **CLEARED TO** (destination airfield), **FLIGHT PLANNED ROUTE**, **CLIMB** (initial level), **AFTER DEPARTURE** (description of the clearance to follow - omnidirectional or non-standard clearance), **SQUAWK** (squawk number).

Example of a Vectored Departure:

Pilot Requests Permission to Start:

Scandinavian 845: CLEARED TO Stockholm-Arlanda VIA ROC1H departure, RUNWAY 14, CLIMB 4000 feet, SQUAWK 3456

Scandinavian 509: CLEARED to Stockholm Arlanda, CLIMB altitude 4000 feet, SQUAWK 3737, AFTER DEPARTURE maintain runway track, when passing 3000ft turn left direct Nicky VOR.

Starting Procedures

Example Requests:

- **[Aircraft location] REQUEST START UP**
- **[Aircraft location] REQUEST START UP, INFORMATION (ATIS identification)**

- **START UP APPROVED**
- **START UP AT (time)**
- **EXPECT START UP AT (time)**
- **START UP AT OWN DISCRETION**
- **EXPECT DEPARTURE (time), START UP AT OWN DISCRETION**

In some countries, starting procedures do not oblige the pilot to start engines immediately. It grants permission to initiate the complex starting process.

Pushback Procedures

Pilot Requests a Pushback:

- **[Aircraft location] REQUEST PUSHBACK**
- **PUSHBACK APPROVED**
- **STAND BY**
- **PUSHBACK AT OWN DISCRETION**
- **EXPECT (number) MINUTES DELAY DUE TO (reason).**

At some airports, pushback authorization must be obtained from the control tower.

Towing Procedure:

- **REQUEST TOWING FROM (Aircraft location) TO (location)**
- **TOW APPROVED VIA (specific routing to be followed)**
- **HOLD POSITION**
- **STAND BY**

Requesting Departure Information

Pilot Requests Departure Information (If No ATIS Broadcast Is Available or Information Is Outdated)

- **REQUEST DEPARTURE INFORMATION**

ATC Reply:

- **RUNWAY** (number), **WIND** (direction and speed) (units), **QNH** (or **QFE**) (number) [(units)], **TEMPERATURE** [MINUS] (number), [**VISIBILITY** (distance) (units) (or **RUNWAY VISUAL RANGE (RVR)** (distance) (units))], **TIME** (time)

Taxi Procedures

Pilot Requests Taxi to Assigned Runway (Given in Clearance)

- **[Aircraft type] [wake turbulence category if "heavy"] [Aircraft location] REQUEST TAXI [intentions]**
- **[Aircraft type] [wake turbulence category if "heavy"] [Aircraft location] (flight rules) TO (destination aerodrome) REQUEST TAXI [intentions]**

ATC Taxi Instructions:

- **TAXI TO HOLDING POINT [number] [RUNWAY (number)] [HOLD SHORT OF RUNWAY (number) (or CROSS RUNWAY (number))] [TIME (time)]**
- **TAXI TO HOLDING POINT [number] [RUNWAY (number)] VIA (specific route) [HOLD SHORT OF RUNWAY (number) (or CROSS RUNWAY (number))] [TIME (time)]**
- **[Aircraft type] [wake turbulence category if "heavy"] REQUEST DETAILED TAXI INSTRUCTIONS**
- **TAXI TO HOLDING POINT [number] [RUNWAY (number)] VIA (specific route) [TIME (time)] [HOLD SHORT OF RUNWAY (number) (or CROSS RUNWAY (number))]**

Other Taxi Instructions:

- **TAKE (or TURN) FIRST (or SECOND) LEFT (or RIGHT)**
- **TAXI VIA (identification of taxiway)**
- **TAXI STRAIGHT AHEAD**
- **TAXI TO TERMINAL [STAND (number)]**
- **TAXI TO GENERAL AVIATION AREA**
- **TAXI TO (other location)**
- **TAXI VIA RUNWAY (number)**

Helicopter Taxi Procedures

Pilot Requests Movement:

- **REQUEST AIR-TAXIING FROM (or VIA) TO (location or routing as appropriate)**

ATC Reply:

- **AIR-TAXI TO (or VIA) (location or routing as appropriate) [CAUTION (dust, blowing snow, loose debris, taxiing light aircraft, personnel, etc.)]**
- **AIR-TAXI VIA (direct, as requested, or specified route) TO (location, heliport, operating or movement area, active or inactive runway). AVOID (aircraft or vehicles or personnel)**

Runway Operations

Pilot Requests Backtracking:

- **REQUEST BACKTRACK**
- **BACKTRACK APPROVED**
- **BACKTRACK RUNWAY (number)**

ATC Instructions for Taxiing Aircraft with Traffic:

- **TAXI WITH CAUTION**
- **GIVE WAY TO (description and position of other aircraft)**
- **GIVING WAY TO (traffic)**
- **TRAFFIC (or type of aircraft) IN SIGHT**
- **TAXI INTO HOLDING BAY**
- **FOLLOW (description of other aircraft or vehicle)**
- **VACATE RUNWAY**
- **EXPEDITE TAXI [(reason)]**
- **[CAUTION] TAXI SLOWER [reason]**
- **RUNWAY VACATED**
- **EXPEDITING**
- **SLOWING DOWN**

Holding on the Ground

ATC Instructions:

- **HOLD (direction) OF (position, runway number, etc.)**
- **HOLD POSITION**
- **HOLD (distance) FROM (position)**
- **HOLD SHORT OF (position)**

Pilot Replies:

- **HOLDING**
- **HOLDING SHORT**

The procedure words "ROGER" and "WILCO" are not sufficient acknowledgements for **HOLD**, **HOLD POSITION**, or **HOLD SHORT OF** instructions. Pilots must explicitly respond with **HOLDING** or **HOLDING SHORT** as appropriate.

Crossing Runway

Pilot Requests a Runway Cross:

- **REQUEST CROSS RUNWAY (number)**

If the control tower cannot see the crossing aircraft (e.g., at night, in low visibility), the instruction must be accompanied by a request to report when the aircraft has vacated the runway.

ATC Replies:

- **CROSS RUNWAY (number) [REPORT VACATED]**
- **EXPEDITE CROSSING RUNWAY (number) TRAFFIC (aircraft type) (distance) KILOMETRES (or MILES) FINAL**
- **TAXI TO HOLDING POINT [number] [RUNWAY (number)] VIA (specific route), [HOLD SHORT OF RUNWAY (number)] or [CROSS RUNWAY (number)]**

Pilots must report "RUNWAY VACATED" when the entire aircraft has cleared the relevant runway-holding position.

Reporting Runway Vacation

Pilot Reports After Runway Vacated:

- **RUNWAY VACATED**

Preparation for Take-Off

ATC Checks If Pilot Is Ready for Departure:

- **REPORT WHEN READY [FOR DEPARTURE]**
- **ARE YOU READY [FOR DEPARTURE]?**
- **ARE YOU READY FOR IMMEDIATE DEPARTURE?**

Pilot Replies:

- **READY**

ATC Instructions to Line Up:

- **LINE UP [AND WAIT]**
- **LINE UP RUNWAY (number)**
- **LINE UP. BE READY FOR IMMEDIATE DEPARTURE**
- **LINE UP AND WAIT RUNWAY (number), INTERSECTION (name of intersection), (essential traffic information)**

ATC Conditional Clearance:

- **(Condition) LINE UP RUNWAY (number) (brief reiteration of the condition)**
- **(Condition) LINING UP RUNWAY (number) (brief reiteration of the condition)**

Pilot Acknowledges Conditional Clearance:

- **[THAT IS] CORRECT**
- **(NEGATIVE) [I SAY AGAIN] (Instruction as appropriate)**

Pilot Requests Departure Instructions:

- **REQUEST DEPARTURE INSTRUCTIONS**

ATC Replies:

- **AFTER DEPARTURE TURN RIGHT (or LEFT, or CLIMB) (instructions as appropriate)**

Take-off Clearance

ATC Clearance for Take-off:

- **RUNWAY (number) CLEARED FOR TAKE-OFF [REPORT AIRBORNE]**
- **(Traffic information) RUNWAY (number) CLEARED FOR TAKE-OFF**
- **TAKE OFF IMMEDIATELY OR VACATE RUNWAY**
- **TAKE OFF IMMEDIATELY OR HOLD SHORT OF RUNWAY**

ATC Instructions When Take-off Clearance Is Not Complied With:

- **HOLD POSITION, CANCEL TAKE-OFF I SAY AGAIN CANCEL TAKE-OFF (reason)**
- **HOLDING**

ATC Instruction to Stop a Take-off After an Aircraft Has Started the Take-off Roll:

- **STOP IMMEDIATELY [(repeat aircraft call sign) STOP IMMEDIATELY]**
- **STOPPING**

ATC Clearance for Helicopter Take-off:

- **CLEARED FOR TAKE-OFF [FROM (location)] (present position, taxiway, final approach and take-off area, runway and number)**

After Take-off

Pilot Requests Turn After Departure (VFR):

- **REQUEST RIGHT (or LEFT) TURN**

ATC Replies:

- **RIGHT (or LEFT) TURN APPROVED**

- **WILL ADVISE LATER FOR RIGHT (or LEFT) TURN**

ATC Instruction to Report Airborne:

- **REPORT AIRBORNE**
- **AIRBORNE (time)**

The phraseology "Airborne" is used based on local regulations. Some airports require it, others reserve it for military use, and some forbid it entirely.

ATC Instructions with Level Constraints:

- **AFTER PASSING (level), (instructions)**

ATC Instructions on Heading or Track:

- **CONTINUE RUNWAY HEADING (instructions)**
- **TRACK EXTENDED CENTRE LINE (instructions)**
- **CLIMB STRAIGHT AHEAD (instructions)**

Entering the Aerodrome Traffic Circuit (VFR)

Pilot Requests Clearance to Enter the Zone for Landing:

- **[Aircraft type] (position) (level) INFORMATION (ATIS identification) FOR LANDING**
- **[Aircraft type] (position) (level) FOR LANDING**

ATC Replies:

- **JOIN [(direction of circuit)] (position in circuit) (runway number) [SURFACE] WIND (direction and speed) (units)**
- **JOIN (position in circuit) [RUNWAY (number)] QNH (or QFE) (number) [(units)] [TRAFFIC (detail)]**
- **MAKE STRAIGHT-IN APPROACH, RUNWAY (number) [SURFACE] WIND (direction and speed) (units) [TEMPERATURE [MINUS] (number)] QNH (or QFE) (number) [(units)] [TRAFFIC (detail)]**

Pilot Reports Position Inside the Circuit:

- **(position in circuit, e.g., DOWNWIND/FINAL), RUNWAY (number)**

ATC Instructions for Traffic Sequence:

- **NUMBER (number) FOLLOW (aircraft type and position) [additional instructions if required]**

Final Approach Instructions (VFR)

ATC Instructions:

- **MAKE SHORT APPROACH RUNWAY (number)**
- **MAKE LONG APPROACH RUNWAY (number)**
- **REPORT FINAL (or LONG FINAL) RUNWAY (number)**
- **REPORT BASE RUNWAY (number)**
- **CONTINUE APPROACH [PREPARE FOR POSSIBLE GO AROUND]**
- **EXTEND DOWNWIND RUNWAY (number)**
- **FINAL RUNWAY (number)**

The report "FINAL" is required when the aircraft is less than 7 km (4 NM) from touchdown.

The report "LONG FINAL" applies when an aircraft turns onto final at more than 7 km (4 NM) or when an aircraft on a straight-in approach is 15 km (8 NM) from touchdown.

Landing Clearance

ATC Issues Landing Clearance:

- **RUNWAY (number) CLEARED TO LAND**
- **(Traffic information), RUNWAY (number) CLEARED TO LAND**

In all landing clearances, the term "CLEARED" is mandatory. The phrase "RUNWAY" followed by the runway number is also required.

Special Landing Operations:

- **CLEARED TOUCH AND GO**
- **MAKE A FULL STOP**

Special Aerodrome Operations

Pilot Requests a Low Approach:

- **REQUEST LOW APPROACH (reason)**
- **CLEARED LOW APPROACH [RUNWAY (number)] [(altitude restriction if required) (go-around instructions)]**

Pilot Requests a Low Pass:

- **REQUEST LOW PASS (reason)**
- **CLEARED LOW PASS APPROACH [RUNWAY (number)] [(altitude restriction if required) (go-around instructions)]**

Pilot Requests a Straight-in or Circling Approach:

- **REQUEST STRAIGHT-IN (or CIRCLING APPROACH, LEFT (or RIGHT) TURN TO (location))**
- **MAKE STRAIGHT-IN (or CIRCLING APPROACH, LEFT (or RIGHT) TURN TO (location, runway, taxiway, final approach and take-off area)) [ARRIVAL (or ARRIVAL ROUTE) (number, name, or code)]. [HOLD SHORT OF (active runway, extended runway centre line, other)].**

Delaying VFR Aircraft

ATC Instructions to Delay Landing:

- **CIRCLE THE AERODROME**
- **ORBIT (RIGHT, or LEFT) [FROM PRESENT POSITION]**
- **MAKE ANOTHER CIRCUIT**

Missed Approach

ATC Instructs Aircraft to Go Around:

- **GO AROUND**

Pilot Replies:

- **GOING AROUND**

Special Aerodrome Operations

ATC Instruction for Visual Inspection of Landing Gear (During a Low Pass):

- **LANDING GEAR APPEARS DOWN**
- **RIGHT (or LEFT, or NOSE) WHEEL APPEARS UP (or DOWN)**
- **WHEELS APPEAR UP**
- **RIGHT (or LEFT, or NOSE) WHEEL DOES NOT APPEAR UP (or DOWN)**

ATC Instruction for Wake Turbulence and Jet Blast Warnings:

- **CAUTION WAKE TURBULENCE [FROM ARRIVING (or DEPARTING) (type of aircraft)] [additional information as required]**
- **CAUTION JET BLAST**

- **CAUTION SLIPSTREAM**

Runway Vacating and Post-Landing Communication

ATC Instructions After Landing:

- **CONTACT GROUND (frequency)**
- **WHEN VACATED CONTACT GROUND (frequency)**
- **EXPEDITE VACATING**
- **TAKE (or TURN) FIRST (or SECOND, or CONVENIENT) LEFT (or RIGHT) AND CONTACT GROUND (frequency)**
- **YOUR STAND (or GATE) (designation)**

Helicopter Post-Landing Instructions:

- **AIR-TAXI TO HELICOPTER STAND (or) HELICOPTER PARKING POSITION (area)**
- **AIR-TAXI TO (or VIA) (location or routing as appropriate) [CAUTION (dust, blowing snow, loose debris, taxiing light aircraft, personnel, etc.)]**
- **AIR-TAXI VIA (direct, as requested, or specified route) TO (location, heliport, operating or movement area, active or inactive runway). AVOID (aircraft or vehicles or personnel)**

Approach

Departure Instructions

ATC Departure Instructions:

- **[AFTER DEPARTURE] TURN RIGHT (or LEFT) HEADING (three digits) (or CONTINUE RUNWAY HEADING) (or TRACK EXTENDED CENTRE LINE) TO (level or significant point) [(other instructions as required)]**
- **AFTER REACHING (or PASSING) (level or significant point) (instructions)**
- **TURN RIGHT (or LEFT) HEADING (three digits) TO (level) [TO INTERCEPT (track, route, airway, etc.)]**
- **(Standard departure name and number) DEPARTURE**
- **TRACK (three digits) DEGREES [MAGNETIC (or TRUE)] TO (or FROM) (significant point) UNTIL (time, or REACHING (fix or significant point or level)) [BEFORE PROCEEDING ON COURSE]**
- **CLEARED (designation) DEPARTURE**

ATC Instruction to Proceed Direct with Advance Notice to Rejoin SID:

- **CLEARED DIRECT (waypoint), CLIMB TO (level), EXPECT TO REJOIN SID [(SID designator)] [AT (waypoint)], then REJOIN SID [(SID designator)] [AT (waypoint)]**
- **CLEARED DIRECT (waypoint), CLIMB TO (level), then REJOIN SID (SID designator) AT (waypoint)**

Climb via SID

ATC Clearance to Climb on a SID:

- **CLIMB VIA SID TO (level).**

Cancelling Level or Speed Restrictions on a SID:

- **[CLIMB VIA SID TO (level)], CANCEL LEVEL RESTRICTION(S)**
- **[CLIMB VIA SID TO (level)], CANCEL LEVEL RESTRICTION(S) AT (point(s))**
- **[CLIMB VIA SID TO (level)], CANCEL SPEED RESTRICTION(S)**
- **[CLIMB VIA SID TO (level)], CANCEL SPEED RESTRICTION(S) AT (point(s))**
- **CLIMB UNRESTRICTED TO (level) (or) CLIMB TO (level), CANCEL LEVEL AND SPEED RESTRICTIONS**

Vectoring Instructions

General Vectoring Instructions:

- **FLY HEADING (three digits);**
- **TURN LEFT (or RIGHT) HEADING (three digits) [reason];**
- **TURN LEFT (or RIGHT) (number of degrees) DEGREES [reason];**

Additional ATC Vectoring Instructions:

- **LEAVE (significant point) HEADING (three digits);**
- **CONTINUE HEADING (three digits);**
- **CONTINUE PRESENT HEADING;**
- **STOP TURN HEADING (three digits);**
- **FLY HEADING (three digits), WHEN ABLE PROCEED DIRECT (name) (significant point);**
- **HEADING IS GOOD.**

Terminating Vectoring:

- **RESUME OWN NAVIGATION (position of aircraft) (specific instructions);**
- **RESUME OWN NAVIGATION [DIRECT] (significant point) [MAGNETIC TRACK (three digits) DISTANCE (number) KILOMETRES (or MILES)].**

Vectoring Reasons:

- **DUE TRAFFIC**
- **FOR SPACING**
- **FOR DELAY**
- **FOR DOWNWIND (or BASE, or FINAL)**

ATC Instruction for Avoiding Action:

- **DO YOU WANT VECTORS?**

Pilot Requests Vectoring:

- **REQUEST VECTORS**

Descent via STAR

ATC STAR Arrival Instructions:

- **DESCEND VIA STAR TO (level)**

Cancelling Level or Speed Restrictions on STAR:

- **[DESCEND VIA STAR TO (level)], CANCEL LEVEL RESTRICTION(S)**
- **[DESCEND VIA STAR TO (level)], CANCEL LEVEL RESTRICTION(S) AT (point(s))**
- **[DESCEND VIA STAR TO (level)], CANCEL SPEED RESTRICTION(S)**

- **[DESCEND VIA STAR TO (level)], CANCEL SPEED RESTRICTION(S) AT (point(s))**
- **DESCEND UNRESTRICTED TO (level) or DESCEND TO (level), CANCEL LEVEL AND SPEED RESTRICTIONS**

Holding Clearance

ATC Clearance for Holding:

- **CLEARED (or PROCEED) TO (significant point, name of facility or fix) [MAINTAIN (or CLIMB or DESCEND TO) (level)] HOLD [(direction)] AS PUBLISHED EXPECT APPROACH CLEARANCE (or FURTHER CLEARANCE) AT (time)**

Pilot Requests Holding Instructions:

- **REQUEST HOLDING INSTRUCTIONS**

ATC Clearance for a Detailed Holding Pattern:

- **CLEARED (or PROCEED) TO (significant point, name of facility or fix) [MAINTAIN (or CLIMB or DESCEND TO) (level)] HOLD [(direction)] [(specified) RADIAL, COURSE, INBOUND TRACK (three digits) DEGREES] [RIGHT (or LEFT) HAND PATTERN] [OUTBOUND TIME (number) MINUTES] EXPECT APPROACH CLEARANCE (or FURTHER CLEARANCE) AT (time) (additional instructions, if necessary)**
- **CLEARED TO THE (three digits) RADIAL OF THE (name) VOR AT (distance) DME FIX [MAINTAIN (or CLIMB or DESCEND TO) (level)] HOLD [(direction)] [RIGHT (or LEFT) HAND PATTERN] [OUTBOUND TIME (number) MINUTES] EXPECT APPROACH CLEARANCE (or FURTHER CLEARANCE) AT (time) (additional instructions, if necessary)**
- **CLEARED TO THE (three digits) RADIAL OF THE (name) VOR AT (distance) DME FIX [MAINTAIN (or CLIMB or DESCEND TO) (level)] HOLD BETWEEN (distance) AND (distance) DME [RIGHT (or LEFT) HAND PATTERN] EXPECT APPROACH CLEARANCE (or FURTHER CLEARANCE) AT (time) (additional instructions, if necessary)**

ATC Instruction for Visual Holding:

- **HOLD VISUAL [OVER] (position), (or BETWEEN (two prominent landmarks))**

Expected Approach Time

ATC Expected Approach Time Instructions:

- **EXPECTED APPROACH TIME (time)**
- **REVISED EXPECTED APPROACH TIME (time)**
- **DELAY NOT DETERMINED (reasons)**
- **NO DELAY EXPECTED**

Approach Instructions

ATC Clearance for STAR or Arrival Procedure:

- **CLEARED (designation) ARRIVAL**
- **CLEARED TO (clearance limit) (designation)**
- **CLEARED (or PROCEED) (details of route to be followed)**

ATC Clearance to Proceed Direct with Advance Notice to Rejoin STAR:

- **CLEARED DIRECT (waypoint), DESCEND TO (level), EXPECT TO REJOIN STAR [(STAR designator)] AT (waypoint), then REJOIN STAR [(STAR designator)] [AT (waypoint)]**
- **CLEARED DIRECT (waypoint), DESCEND TO (level), then REJOIN STAR (STAR designator) AT (waypoint)**

ATC Vectoring for Approach

ATC Instructions for Vectoring to Final:

- **VECTORIZING FOR (type of pilot-interpreted aid) APPROACH RUNWAY (number)**
- **VECTORIZING FOR VISUAL APPROACH RUNWAY (number) REPORT FIELD (or RUNWAY) IN SIGHT**
- **VECTORIZING FOR (positioning in the circuit)**
- **VECTORIZING FOR SURVEILLANCE RADAR APPROACH RUNWAY (number)**
- **VECTORIZING FOR PRECISION APPROACH RUNWAY (number)**

Pilot Requests for a Specific Approach

- **REQUEST (type of approach) APPROACH [RUNWAY (number)]**
- **REQUEST (MLS/RNAV plain-language designator)**
- **REQUEST STRAIGHT-IN [(type of approach)] APPROACH [RUNWAY (number)]**
- **REQUEST VISUAL APPROACH**

ATC Answers to Pilot Approach Requests

- **CLEARED VISUAL APPROACH RUNWAY (number)**
- **(type) APPROACH NOT AVAILABLE DUE (reason) (alternative instructions).**

ATC Instructions for Tracking and Interception

- **INTERCEPT (localizer course or radio aid) [REPORT ESTABLISHED]**

- **YOU WILL INTERCEPT (radio aid or track) (distance) FROM (significant point or TOUCHDOWN)**
- **EXPECT VECTOR ACROSS (localizer course or radio aid) (reason)**
- **THIS TURN WILL TAKE YOU THROUGH (localizer course or radio aid) [reason]**
- **TAKING YOU THROUGH (localizer course or radio aid) [reason]**
- **MAINTAIN (altitude) UNTIL GLIDE PATH INTERCEPTION**

ATC Clearance for IFR Approach

- **CLEARED (type of approach) APPROACH [RUNWAY (number)]**
- **CLEARED (type of approach) RUNWAY (number) FOLLOWED BY CIRCLING TO RUNWAY (number)**
- **CLEARED APPROACH [RUNWAY (number)]**
- **COMMENCE APPROACH AT (time)**
- **CLEARED STRAIGHT-IN [(type of approach)] APPROACH [RUNWAY (number)]**
- **CLEARED (MLS/RNAV plain-language designator)**

ATC Position Reporting Instructions

- **REPORT RUNWAY [LIGHTS] IN SIGHT**
- **REPORT (significant point) [OUTBOUND, or INBOUND]**
- **REPORT COMMENCING PROCEDURE TURN**
- **REPORT ESTABLISHED ON [ILS] LOCALIZER (or ON GBAS/SBAS/MLS APPROACH COURSE)**
- **REPORT ESTABLISHED ON GLIDE PATH**

ATC Instructions for Visual Approach

- **ADVISE ABLE TO ACCEPT VISUAL APPROACH RUNWAY (number)**
- **CLEARED VISUAL APPROACH RUNWAY (number), MAINTAIN OWN SEPARATION FROM PRECEDING (aircraft type and wake turbulence category as appropriate) [CAUTION WAKE TURBULENCE]**

ATC Instructions for Visual Separation

- **MAINTAIN OWN SEPARATION**
- **MAINTAIN VMC**
- **REPORT VISUAL**

ATC Instructions to Verify Pilot Familiarity with Procedures

- **ARE YOU FAMILIAR WITH (name) APPROACH PROCEDURE**

Pilot Requests for Special Approach Conditions

- **REQUEST VMC DESCENT**
- **REQUEST (distance) FINAL**

ATC Instructions for Parallel Approach and Avoidance Action

- **CLEARED FOR (type of approach) APPROACH RUNWAY (number) LEFT (or RIGHT)**
- **YOU HAVE CROSSED THE LOCALIZER (or GBAS/SBAS/MLS FINAL APPROACH COURSE). TURN LEFT (or RIGHT) IMMEDIATELY AND RETURN TO THE LOCALIZER (or GBAS/SBAS/MLS FINAL APPROACH COURSE)**
- **ILS (or MLS) RUNWAY (number) LEFT (or RIGHT) LOCALIZER (or MLS) FREQUENCY IS (frequency)**

ATC Instructions for Avoidance Action in NTZ (No Transgression Zone)

- **TURN LEFT (or RIGHT) (number) DEGREES (or HEADING) (three digits) IMMEDIATELY TO AVOID TRAFFIC [DEVIATING FROM ADJACENT APPROACH], CLIMB TO (altitude)**

ATC Instructions for Avoidance Action Below 120m (400ft) on PAOAS Criteria

- **CLIMB TO (altitude) IMMEDIATELY TO AVOID TRAFFIC [DEVIATING FROM ADJACENT APPROACH] (further instructions)**

ATC Instructions for Approach Corrections and Off-Track Adjustments

- **COMMENCE DESCENT NOW [TO MAINTAIN A (number) DEGREE GLIDE PATH]**
- **(distance) FROM TOUCHDOWN ALTITUDE (or HEIGHT) SHOULD BE (numbers and units)**

ATC Instructions for Completion of an Approach

- **REPORT VISUAL**
- **REPORT RUNWAY [LIGHTS] IN SIGHT**
- **APPROACH COMPLETED [CONTACT (unit)]**

En-route

Altitude Management to Maintain Separation

ATC Instructions to Maintain a Level Before Any Change:

- **MAINTAIN (level) [TO (significant point)]**
- **MAINTAIN (level) UNTIL PASSING (significant point)**
- **MAINTAIN (level) UNTIL (minutes) AFTER PASSING (significant point)**
- **MAINTAIN (level) UNTIL (time)**
- **MAINTAIN (level) UNTIL ADVISED BY (name of ATC unit)**
- **MAINTAIN (level) UNTIL FURTHER ADVISED**
- **MAINTAIN (level) WHILE IN CONTROLLED AIRSPACE**
- **MAINTAIN BLOCK (level) TO (level).**

“ **Note:** The term "**MAINTAIN**" shall not be used in lieu of "**DESCEND**" or "**CLIMB**" when instructing an aircraft to change level.

Separation Instructions

ATC Instructions to Overfly a Significant Point at a Specific Time:

- **CROSS (significant point) AT (time) [OR LATER (or OR BEFORE)]**
- **ADVISE IF ABLE TO CROSS (significant point) AT (time or level)**

ATC Instructions for Speed Restrictions During Cruise:

- **MAINTAIN MACH (number) [OR GREATER (or OR LESS)] [UNTIL (significant point)]**
- **DO NOT EXCEED MACH (number)**

ATC Instructions for Specific Track to Maintain Separation:

- **MAINTAIN TRACK BETWEEN (significant point) AND (significant point). REPORT ESTABLISHED ON THE TRACK**
- **CONFIRM ESTABLISHED ON THE TRACK BETWEEN (significant point) AND (significant point) [WITH ZERO OFFSET]**

Pilot Responses:

- **ESTABLISHED ON THE TRACK BETWEEN (significant point) AND (significant point) [WITH ZERO OFFSET]**
- **ESTABLISHED ON THE TRACK**

“ Used when lateral VOR/GNSS separation confirmation of zero offset is required:

- **CONFIRM ZERO OFFSET**
- **AFFIRM ZERO OFFSET**

Track Parallel to the Cleared Route

ATC Instructions for Parallel Track Offsets:

- **ADVISE IF ABLE TO PROCEED PARALLEL OFFSET**
- **PROCEED OFFSET (distance) RIGHT/LEFT OF (route) (track) [CENTRE LINE] [AT (significant point or time)] [UNTIL (significant point or time)]**
- **CANCEL OFFSET (instructions to rejoin cleared flight route or other information)**

Vectoring Instructions

ATC Instructions for Vectoring:

- **FLY HEADING (three digits)**
- **TURN LEFT (or RIGHT) HEADING (three digits) [reason]**
- **TURN LEFT (or RIGHT) (number of degrees) DEGREES [reason]**

Other ATC Instructions in Vectoring Procedures:

- **LEAVE (significant point) HEADING (three digits)**
- **CONTINUE HEADING (three digits)**
- **CONTINUE PRESENT HEADING**
- **STOP TURN HEADING (three digits)**
- **FLY HEADING (three digits), WHEN ABLE PROCEED DIRECT (name) (significant point)**
- **HEADING IS GOOD**

ATC Instructions to Terminate Vectoring Procedure:

- **RESUME OWN NAVIGATION (position of aircraft) (specific instructions)**
- **RESUME OWN NAVIGATION [DIRECT] (significant point) [MAGNETIC TRACK (three digits) DISTANCE (number) KILOMETRES (or MILES)]**

ATC Phraseology to Specify Reason for Vectoring:

- **DUE TRAFFIC**
- **FOR SPACING**
- **FOR DELAY**
- **FOR DOWNWIND (or BASE, or FINAL)**

ATC Instructions for Avoiding Action:

- **DO YOU WANT VECTORS?**

Pilot Response for Vectoring Guidance:

- **REQUEST VECTORS**

Holding Clearance

ATC Clearance for Holding Procedures:

- **CLEARED (or PROCEED) TO (significant point, name of facility or fix) [MAINTAIN (or CLIMB or DESCEND TO) (level)] HOLD [(direction)] AS PUBLISHED EXPECT APPROACH CLEARANCE (or FURTHER CLEARANCE) AT (time)**

Pilot Request for Holding Instructions (If No Published Parameters Exist):

- **REQUEST HOLDING INSTRUCTIONS**

ATC Clearance for IFR Holding Procedure (Detailed Clearance Required):

- **CLEARED (or PROCEED) TO (significant point, name of facility or fix) [MAINTAIN (or CLIMB or DESCEND TO) (level)] HOLD [(direction)] [(specified) RADIAL, COURSE, INBOUND TRACK (three digits) DEGREES] [RIGHT (or LEFT) HAND PATTERN] [OUTBOUND TIME (number) MINUTES] EXPECT APPROACH CLEARANCE (or FURTHER CLEARANCE) AT (time) (additional instructions, if necessary)**
- **CLEARED TO THE (three digits) RADIAL OF THE (name) VOR AT (distance) DME FIX [MAINTAIN (or CLIMB or DESCEND TO) (level)] HOLD [(direction)] [RIGHT (or LEFT) HAND PATTERN] [OUTBOUND TIME (number) MINUTES] EXPECT APPROACH CLEARANCE (or FURTHER CLEARANCE) AT (time) (additional instructions, if necessary)**
- **CLEARED TO THE (three digits) RADIAL OF THE (name) VOR AT (distance) DME FIX [MAINTAIN (or CLIMB or DESCEND TO) (level)] HOLD BETWEEN (distance) AND (distance) DME [RIGHT (or LEFT) HAND PATTERN] EXPECT APPROACH CLEARANCE (or FURTHER CLEARANCE) AT (time) (additional instructions, if necessary)**

Emergency

Minimum Fuel

Pilot and ATC Message Exchange on Fuel Procedure:

- **Pilot:** MINIMUM FUEL
- **ATC:** ROGER [NO DELAY EXPECTED or EXPECT (delay information)].

Degradation of Aircraft

Pilot Should Advise ATC of Aircraft Degradation When Performing Procedures or Maneuvers:

- **NAVIGATION PERFORMANCE UNABLE RNP (specify type) (or RNAV) [DUE TO (reason, e.g., LOSS OF RAIM or RAIM ALERT)]**
- **BASIC GNSS (or SBAS, or GBAS) UNAVAILABLE FOR (specify operation) [FROM (time) TO (time) (or UNTIL FURTHER NOTICE)]**
- **BASIC GNSS UNAVAILABLE [DUE TO (reason, e.g., LOSS OF RAIM or RAIM ALERT)]**
- **NAVIGATION PERFORMANCE UNABLE (navigation aid type)**

Emergency Descent

Pilot Shall Warn ATC When Performing an Emergency Descent (Mandatory):

- **EMERGENCY DESCENT (intentions)**

ATC Shall Broadcast Information on Air When One or Several Aircraft Are Involved in an Emergency Descent:

- **ATTENTION ALL AIRCRAFT IN THE VICINITY OF [or AT] (significant point or location) EMERGENCY DESCENT IN PROGRESS FROM (level) (followed as necessary by specific instructions, clearances, traffic information, etc.)**

Loss of Communication

ATC Instruction to an Aircraft Before Losing Communication:

- **[IF] RADIO CONTACT LOST (instructions)**

- **IF NO TRANSMISSIONS RECEIVED FOR (number) MINUTES (or SECONDS)**
(instructions)
- **REPLY NOT RECEIVED (instructions)**

ATC Instruction When Suspecting a Loss of Communication From an Aircraft:

- **IF YOU READ [manoeuvre instructions or SQUAWK (code or IDENT)]**
- **(manoeuvre, SQUAWK or IDENT) OBSERVED. POSITION (position of aircraft).**
[(instructions)]

Coordination

Estimates and Revisions

ATC Coordination for Exchange of Estimate Information:

- **ESTIMATE** [direction of flight] (aircraft call sign) [SQUAWKING (SSR code)] (type) **ESTIMATED** (significant point) (time) (level) (or **DESCENDING FROM** (level) **TO** (level)) [SPEED (filed TAS)] (route) [REMARKS]
- **ESTIMATE** (significant point) **ON** (aircraft call sign)

ATC Instructions for Receiving Unit Reply When Flight Plan Details Are **Not Available**:

- **NO DETAILS**

ATC Instructions for Receiving Unit Reply When Flight Plan Details **Are Available**:

- (aircraft type) (destination) **Instruction sending unit reply** [SQUAWKING (SSR code)] [ESTIMATED] (significant point) (time) **AT** (level)

ATC Estimate for Unmanned Free Balloon(s):

- **ESTIMATE UNMANNED FREE BALLOON(S)** (identification and classification) **ESTIMATED OVER** (place) **AT** (time) **REPORTED FLIGHT LEVEL(S)** (figure or figures) [or **FLIGHT LEVEL UNKNOWN**] **MOVING** (direction) **ESTIMATED GROUND SPEED** (figure) (other pertinent information, if any)

ATC Revision to an Estimate:

- **REVISION** (aircraft call sign) (details as necessary)

Transfer of Control

ATC Instructions for Handing Over an Aircraft to Another ATC Unit:

- **REQUEST RELEASE OF** (aircraft call sign)
- (aircraft call sign) **RELEASED** [AT (time)] [conditions/restrictions]
- **IS** (aircraft call sign) **RELEASED** [FOR CLIMB (or DESCENT)]
- (aircraft call sign) **NOT RELEASED** [UNTIL (time or significant point)]
- **UNABLE** (aircraft call sign) [TRAFFIC IS (details)]

Change of Clearance

ATC Request to Modify a Clearance:

- **MAY WE CHANGE CLEARANCE OF (aircraft call sign) TO (details of alteration proposed)**

ATC Coordination for Clearance Agreement:

- **AGREED TO (alteration of clearance) OF (aircraft call sign)**

ATC Response When Clearance Change Is Not Possible:

- **UNABLE (aircraft call sign)**
- **UNABLE (desired route, level, etc.) [FOR (aircraft call sign)] [DUE (reason)] (alternative clearance proposed)**

Approval Request

ATC Request for Approval of an Aircraft Departure:

- **APPROVAL REQUEST (aircraft call sign) ESTIMATED DEPARTURE FROM (significant point) AT (time)**

ATC Response to Approval Request:

- **(aircraft call sign) REQUEST APPROVED [(restriction if any)]**
- **(aircraft call sign) UNABLE (alternative instructions)**

Inbound Release

ATC Definition of Release Point During Handover Procedure:

- **[INBOUND RELEASE] (aircraft call sign) [SQUAWKING (SSR code)] (type) FROM (departure point) RELEASED AT (significant point, or time, or level) CLEARED TO AND ESTIMATING (clearance limit) (time) AT (level) [EXPECTED APPROACH TIME or NO DELAY EXPECTED] CONTACT AT (time)**

Handover

ATC Request for a Handover Procedure:

- **HANDOVER (aircraft call sign) [SQUAWKING (SSR code)] POSITION (aircraft position) (level)**

Expedition of Clearance

ATC Request for Expedited Clearance:

- **EXPEDITE CLEARANCE (aircraft call sign) EXPECTED DEPARTURE FROM (place) AT (time)**
- **EXPEDITE CLEARANCE (aircraft call sign) [ESTIMATED] OVER (place) AT (time) REQUESTS (level or route, etc.)**

Reduced Vertical Separation (RVSM)

ATC Communication Stating an Aircraft Is Unable to Perform RVSM:

- **NEGATIVE RVSM [(supplementary information, e.g. State aircraft)]**

ATC Communication Stating an Aircraft Cannot Conduct RVSM Due to Turbulence, Equipment Failure, or Severe Meteorological Phenomena:

- **UNABLE RVSM DUE TURBULENCE (or EQUIPMENT, as applicable)**

IFR example

In this document, we use the following convention:

- IFR Pilot call sign is DAH1234.
- This is a flight from Paris Charles de Gaulle (LFPG) to Algiers Houari Boumediene (DAAG).
- The sign ✈ before the text means: this is the aircraft pilot transmission. (□□ for VFR, ✈ for IFR)
- The sign □□ before the text means: this is the helicopter pilot transmission.
- The sign □□ before the text means: this is the follow me car transmission.
- The sign □□ before the text means: this is the air traffic controller unit (ATC unit) transmission.

The ATC is the one that may start using the short call sign. Only thereafter the pilot shall use it as well.

IFR Departure

Departure information

Where no ATIS is provided, the pilot may ask for current aerodrome information before requesting start up (of course if there is an active ATC nearby your position).

- ✈ De Gaulle delivery hello, DAH1234, request departure information
- □□ DAH1234, departure runway 26R, wind 290 degrees 6knots, QNH1000, temperature 14, dew point 3, visibility 8000m, clouds broken 030.

IFR departure clearance

The aircraft shall read (or listen to) the complete ATIS before contacting the ATC. By saying the information letter, ATC will understand that the pilot has taken the ATIS information on board.

- ✈ De Gaulle delivery, DAH1234, stand B9, request start-up, information BRAVO
- □□ DAH1234, cleared to Algiers via ERIXU6K departure, runway 26R, climb flight level 120, squawk 5256.
- ✈ Cleared to Algiers via ERIXU 6K departure, runway 26R, climb flight level 120, squawk 5256, DAH1234
- □□ DAH1234, Correct, contact apron 121,650 when ready for push back
- ✈ When ready for push back, contact apron 121,650, DAH1234

If the pilot does not read back correctly, ATC shall correct the wrong parameter using the "Negative" word:

- ✈ Cleared to Algiers via ERIXU 6K departure, runway 26R, climb flight level 120, squawk 5652, DAH1234
- ☐☐ DAH1234, **Negative**, climb flight level 120, squawk 5256
- ✈ Flight level 100, squawk 5256, DAH1234

If the start-up is delayed by ATC, ATC must give the minutes or event including reasons why the departure is delayed with the clearance:

- ✈ De Gaulle apron, DAH1234, stand B9, request start-up, information BRAVO
- ☐☐ DAH1234, cleared to Algiers via ERIXU6K departure, runway 26R, climb flight level 120, squawk 5256, expect departure not before 35 due to 8 aircraft waiting at the holding point
- ✈ Cleared to Algiers via ERIXU 6K departure, runway 26R, climb flight level 120, squawk 5256, expect departure not before 35, DAH1234

Here, the start-up is delayed, ATC does not know the expected time for departure. ATC will delay the clearance:

- ✈ De Gaulle apron, DAH1234, stand B9, request start-up, information BRAVO
- ☐☐ DAH1234, expect start-up after 35 due to traffic on taxiway Alpha immobilized.
- ✈ Roger, DAH1234

Push back operation

- ✈ De Gaulle apron, DAH1234, Stand B9, request pushback.
- ☐☐ DAH1234, pushback approved
- ✈ Push back approved, DAH1234

If the pushback is not free or will not be free due to traffic taxiing, the ATC can delay the pushback:

- ✈ De Gaulle apron, DAH1234, Stand B9, request pushback.
- ☐☐ DAH1234, stand by, expect 2 minutes delay due B747 taxiing behind
- ✈ Stand by, DAH1234
- (after a while)
- ☐☐ DAH1234, pushback approved
- ✈ Push back approved, DAH1234

Taxi Clearances

- ✈ De Gaulle apron, DAH1234, request taxi
- ☐☐ DAH1234, taxi to holding point runway 26R, via taxiway Golf, Foxtrot and Romeo.
- ✈ Taxi to holding point runway 26R, via taxiway Golf, Foxtrot and Romeo, DAH1234

As a pilot, you can ask another holding point or taxiway, the ATC can accept:

- ✈ Request taxi via Echo, DAH1234
- ☐☐ DAH1234, taxi to holding point runway 26R, via taxiway Echo

The ATC can refuse:

- [] DAH1234, negative, continue taxi via Golf
- ➔ Continue taxi via Golf, DAH1234

The ATC can propose an alternative solution:

- [] DAH1234, negative, taxi to holding point runway 26R, via Echo and Golf
- ➔ Continue taxi via Echo and Golf, DAH1234

In case of multiple ground frequencies, the ATC can clear the aircraft to an initial taxiway before contacting the next ATC :

- ➔ De Gaulle apron, DAH1234, request taxi
- [] DAH1234, taxi to G3, report approaching
- ➔ Taxi to G3, report approaching, DAH1234
- (after a while)
- ➔ G3, request further taxi, DAH1234
- [] DAH1234, contact De Gaulle Ground 126,780
- ➔ Contact De Gaulle Ground 126,780 DAH1234 On 126,780 :
- ➔ De Gaulle Ground, DAH1234, G3 request taxi
- [] DAH1234, taxi to holding point runway 26R, via taxiway Golf, Foxtrot and Romeo
- ➔ Taxi to holding point runway 26R, via taxiway Golf, Foxtrot and Romeo, DAH1234

Taxi to holding point, requiring a runway crossing:

- ➔ DAH1234 approaching holding point, request cross runway 26L
- [] DAH1234, maintain holding point runway 26L, traffic on short final
- ➔ Maintain holding point, DAH1234
- [] DAH1234, cross runway 26L, report vacated
- ➔ Crossing runway 26L, DAH1234
- (after a while)
- ➔ Runway 26L vacated, DAH1234
- [] DAH1234, roger, continue taxi via Delta

Sometimes taxis are faced with some traffic moving or waiting; the ATC can stop the traffic:

- [] DAH1234, maintain position, give way to B747 passing left to right
- ➔ Maintain position, B747 in sight DAH1234
- (after a while)
- [] DAH1234, continue taxi via Echo to holding point runway 26R.

Sometimes taxis are faced with some traffic moving or waiting; the ATC can let the aircraft organize its separation with the traffic:

- [] DAH1234, give way to B747 passing left to right, taxi to holding point runway 26R
- ➔ Give way to B747 in sight and taxi holding point runway 26R, DAH1234

At busy aerodromes with separate GROUND and TOWER functions, aircraft are usually transferred to the TOWER at, or when approaching, the runway-holding position.

- [P] DAH1234, Contact De Gaulle Tower, 118,650
- ➔ Contact Tower 118,650 DAH1234

Conditional line-up clearance

If both ATC and Pilot have traffic in sight, conditional line-up clearances can be issued :

- [P] DAH1234, report AirFrance Airbus 340 short final 26R in sight.
- ➔ AirFrance Airbus A340 in sight, DAH1234
- [P] DAH1234, behind the AirFrance Airbus 340 landing runway 26R, line-up runway 26R and wait, behind
- ➔ Behind the landing AirFrance Airbus 340 landing 25R, line-up runway 26R and wait, behind, DAH1234

In case of poor visibility, as a result of which the pilot at the holding point cannot see the traffic, ATC shall not give any conditional clearance:

- [P] DAH1234, report AirFrance Airbus 340 short final 26R in sight.
- ➔ No traffic in sight, DAH1234
- [P] DAH1234, maintain holding point runway 26R
- ➔ Maintaining holding point runway 26R, DAH1234

Take-off procedure

Some aircraft may be required to carry out checks prior to departure and are not always ready for take-off when they reach the holding point:

- [P] DAH1234, report ready for departure
- ➔ Wilco, DAH1234
(after a while)
- ➔ Ready for departure, DAH1234
- [P] DAH1234, line-up runway 26R and wait.
- ➔ Line-up runway 26R and wait, DAH1234

The take-off clearance shall be given to aircraft after lining-up, or at the holding point when necessary:

- ➔ DAH1234, runway 26R cleared for take-off, wind 290 degrees 10 knots gust 25
- [P] Runway 26R cleared for take-off, DAH1234

When approaching a holding point, an aircraft can anticipate the call to the ATC in order to avoid a full stop at the holding point:

- ➔ DAH1234 approaching holding point runway 26R

- □□ DAH1234, line-up runway 26R and wait
- ➔ Line-up runway 26R and wait, DAH1234

A normal taking off clearance usually has two phases: lining-up and take-off. As ATC, you can provide two separate clearances:

- □□ DAH1234, line up runway 26R and wait
- ➔ Lining up runway 26R and wait, DAH1234
- (after a while)
- □□ DAH1234, runway 26R cleared for take-off, wind 290 degrees 10 knots
- ➔ Runway 26R cleared for take-off, DAH1234

Or, ATC can provide only one clearance with both instructions:

- □□ DAH1234, line up runway 26R, cleared for take-off, wind 290 degrees 10 knots
- ➔ Line up runway 26R, cleared for take-off, DAH1234

In some particular procedures, the ATC unit may request the pilot to report when airborne:

- □□ DAH1234, runway 26R cleared for take-off, wind 290 degrees 10 knots, report airborne
- ➔ Runway 26R, cleared for take-off, report airborne, DAH1234
- (After take-off)
- ➔ DAH1234, airborne

Special take-off operation

Departure instructions may be given with the take-off clearance. Such instructions are normally given to ensure separation between aircraft operating in the vicinity of the aerodrome.

- □□ DAH1234, climb straight ahead until 2000ft before turning right, runway 26R cleared for take-off, wind 290 degrees 10 knots
- ➔ Climb straight ahead 2000ft before turning right, runway 26R cleared for take-off, DAH1234.

Due to unexpected traffic developments, it is occasionally necessary to cancel the take-off clearance or quickly free the runway for landing traffic.

- □□ DAH1234, hold position, cancel take-off, I say again, DAH1234, cancel take-off aircraft on the runway.
- ➔ Holding position, DAH1234

Take-off cancellation when aircraft is rolling:

- □□ DAH1234, stop immediately, DAH1234, stop immediately.
- ➔ Stopping, DAH1234

An aircraft on the runway and the runway needs to be evacuated immediately:

- [P] DAH1234, take-off immediately or vacate the runway.
- ➔ Taking off, DAH1234

An aircraft on the holding point and the take-off shall be very quick in order to vacate the runway as soon as possible:

- [P] DAH1234, take-off immediately or hold short of runway
- ➔ Holding short, DAH1234

The ATC can give the immediate take-off in a different manner:

- [P] DAH1234, B737 at 6NM final, are you ready for immediate departure?
- ➔ Ready for immediate departure, DAH1234
- [P] DAH1234, runway 26R, cleared for take-off immediately, wind 290 degrees 10 knots
- ➔ Runway 26R, cleared for take-off immediately, DAH1234

An aircraft can abandon a take-off manoeuvre (for a technical problem for example) before the speed V1; the control tower should be informed as soon as possible:

- ➔ DAH1234, stopping
- [P] DAH1234, roger.
- (after a while, when aircraft speed is controlled)
- ➔ DAH1234, request return to ramp
- [P] DAH1234, take next right, contact ground 121,780
- ➔ Taking next right, contact ground 121,780 DAH1234

IFR Cruise

IFR initial climb

After take-off, an IFR flight shall be transferred to the next ATC:

- [P] DAH1234, contact De Gaulle Departure 131,200
- ➔ Contact De Gaulle departure 131,200 DAH1234

During the first contact with the aircraft, the ATC shall identify the aircraft:

- ➔ De Gaulle Departure, DAH1234
- [P] DAH1234, identified

Usually with the identification message, the ATC sends the departure procedure received and the initial level (which can be the first level given during the clearance or new expected level):

- ➔ De Gaulle Departure, DAH1234
- [P] DAH1234, identified, climb via SID to FL140
- ➔ Climb via SID to FL140, DAH1234

In addition to the ATC route clearance, a departing IFR flight may be given additional departure instructions in order to provide for separation.

- ✈ De Gaulle Departure, DAH1234
- ☐ DAH1234, identified, turn right heading 040 until passing FL070 then direct LGL VOR
- ✈ Turn right heading 040 until passing FL070 then direct LGL VOR, DAH1234
- ☐ DAH1234, report passing FL070
- ✈ DAH1234, WILCO
- (after a while)
- ✈ DAH1234, passing FL070, (LGL VOR at 1456)
- ☐ DAH1234, contact Paris control 128,100
- ✈ Contact Paris control 128,100 DAH1234

Level instructions

Level instructions may be reported as altitude, height or flight levels according to the phase of flight and the altimeter setting.

- ☐ DAH1234, report passing FL080
- ✈ DAH1234, Wilco
- (after a while)
- ✈ DAH1234, passing FL080
- ☐ DAH1234, climb to FL230
- ✈ Climbing to FL230, DAH1234

Through the following clearance, ATC wants the pilot to reach the new level with the highest rate of climb until an intermediate level:

- ☐ DAH1234, climb to FL240 expedite until passing FL180
- ✈ Climbing to FL240 expediting until passing FL180, DAH1234

As a pilot if you are unable to follow the expedite clearance you shall report that to ATC:

- ✈ Unable to expedite, DAH1234
- ☐ DAH1234, Roger, continue climb FL330
- ✈ Climbing to FL330, DAH1234

Clearance can be issued to maintain an altitude (often used at first contact) :

- ☐ DAH1234, maintain FL330
- ✈ Maintaining FL330, DAH1234

ATC may request the pilot to report when ready to begin his descent :

- ☐ DAH1234, Report ready to descent
- ✈ Roger, DAH1234
- (When the pilot approaches the Top Of Descent)

- ✈ DAH1234, Request descent
- ☐☐ DAH1234, descend to FL110
- ✈ Descending to FL110, DAH1234

Or the ATC can let the pilot manage his descent :

- ☐☐ DAH1234, when ready descent to FL110
- ✈ When ready descending to FL110, DAH1234

Once having been given an instruction to climb or descend, a further overriding instruction may be given to a pilot:

- ☐☐ DAH1234, stop descent at FL150
- ✈ Stopping descent at FL150, DAH1234

Level change using conditional clearance:

- ☐☐ DAH1234, after passing SMR NDB, descend to FL070
- ✈ After SMR NDB, descend to FL070, DAH1234

Occasionally, for traffic reasons, a higher than normal rate of descent (or climb) may be required in order to free flight level left.

- ☐☐ DAH1234, maintain at least 1500 feet per minute to FL080
- ✈ Maintaining at least 1500 feet per minute to FL080, DAH1234

The ATC unit shall transmit the QNH value or Altimeter setting value when it instructs an aircraft to descend and cross the transition level:

- ☐☐ DAH1234, descend altitude 4000 feet, QNH 1023
- ✈ Descending altitude 4000 feet, QNH 1023, DAH1234

Now an example with altimeter setting (inHg) used mainly in North America (**FAA phraseology**):

- ☐☐ DAH1234, descend and maintain 4000, altimeter 2998
- ✈ Descend and maintain 4000, altimeter 2998, DAH1234

ATS surveillance service

When an aircraft enters a controlled area, the ATC unit equipped with radar shall identify each aircraft:

- ✈ Paris Control, DAH1234
- ☐☐ DAH1234, identified.

When an aircraft leaves a controlled zone and no ATC unit is present in the next area, the ATC unit equipped with radar gives the following message:

- [] DAH1234, radar control terminated.
- ➔ Roger, DAH1234

In VATSIM, you can include UNICOM in your message; the UNiversal COMmunications frequency for auto-information:

- [] DAH1234, radar control terminated, monitor UNICOM 122.8
- ➔ UNICOM 122.8, DAH1234

When an aircraft leaves a controlled zone and an ATC unit is present in the next area, the current controller must transfer the aircraft:

- [] DAH1234, contact Algiers Control 127,300
- ➔ Contacting Algiers Control on 127,300 DAH1234

ATC shall advice pilots if identification is established or lost:

- [] DAH1234, identified 20 miles north west of Algiers
- [] DAH1234, identification lost due to radar failure, remain this frequency.
- ➔ Roger, remain this frequency, DAH1234

Aircraft may be given specific vectors to fly in order to establish separation:

- [] DAH1234, turn left heading 050 for separation.
- ➔ Left heading 050, DAH1234
- [] DAH1234, fly heading 050
- ➔ Heading 050, DAH1234

Aircraft may be given instruction to maintain its present heading to maintain separation:

- [] DAH1234, report heading
- ➔ Heading 090, DAH1234
- [] DAH1234, roger, continue heading 090
- ➔ Continue heading 90, DAH1234

When vectoring is completed, pilots shall be instructed to resume their own navigation if necessary:

- [] DAH1234, resume own navigation.
- ➔ Wilco, DAH1234

The ATC unit shall give specific instructions in addition to the previous message:

- [] DAH1234, resume own navigation direct SAU VOR.

- ➤ Direct SAU VOR, DAH1234

Occasionally, an aircraft may be instructed to make a complete turn known as 360° turn (orbit for VFR) for delaying purposes:

- □□ DAH1234, make a three sixty turn left for sequencing.
- ➤ Three sixty turn left, DAH1234

Traffic information and avoiding action

Whenever practicable, information regarding traffic on a conflicting path should be given in the following form:

- □□ DAH1234, unknown traffic, 1 o'clock 3 miles opposite direction fast moving
- ➤ Negative contact, DAH1234
- (after some time)
- ➤ DAH1234, Traffic in sight

Example of traffic information with all details:

- □□ DAH1234, traffic 11 o'clock, 10 miles, southbound, Boeing 737, flight level 230.

When the ATC unit does not know some parameter, it can use the term like "unknown", "unverified". Example:

- □□ DAH1234, traffic 1 o'clock, 5 miles, from left to right, slow moving, type and altitude unknown

Radar instruction

Examples :

- □□ DAH1234, squawk 4112
- ➤ Squawk 4112, DAH1234
- □□ DAH1234, check altimeter setting and confirm flight level
- ➤ DAH1234, altimeter 1013, flight level 080

Manage aircraft with radio communication failure

There are several methods to identify an aircraft which faces a radio communication failure and is able to receive but not transmit messages. Identify with heading change:

- □□ DAH1234, reply not received if you read Algiers Approach, turn left heading 040
- (the pilot turns to 040 degrees)
- □□ DAH1234, turn observed 5 miles south of ZEM VOR, will continue radar control

Identify with squawk IDENT feature:

- [P] DAH1234, reply not received if you read Algiers Approach, squawk IDENT.
- (the pilot presses on squawk IDENT button)
- [P] DAH1234, squawk observed 5 miles south of ZEM VOR, will continue radar control

Alerting phraseologies

In the event that a minimum safe altitude is not respected by the pilot, the ATC unit will inform the pilot and issue appropriate instructions.

- [P] DAH1234, low altitude warning, check your altitude immediately, QNH is 1009, and minimum flight altitude is 6200 feet.

When the ATC unit considers that an imminent risk of collision will exist if action is not taken immediately, an avoiding action to be taken by the pilot is given.

- [P] DAH1234, turn right immediately heading 110 to avoid traffic 11 o'clock 4 miles.
- ➔ Right heading 110, DAH1234
- (after a while)
- [P] DAH1234, clear of traffic, resume own navigation
- ➔ Roger, DAH1234

IFR Arrival

IFR Initial Approach

The approach controller will normally advise, on initial contact, the type of approach to be expected:

- ➔ Algiers Approach, DAH1234, FL080, information Delta.
- [P] DAH1234, descend altitude 4000 feet QNH 1004, transition level 050, expect ILS approach runway 27L
- ➔ Descending altitude 4000 feet QNH 1004, transition level 050, expecting ILS approach runway 27L, DAH1234

During the first contact, a pilot can include the arrival procedure cleared or performed in the message to the ATC unit.

- ➔ Algiers Approach, DAH1234, FL120, KOVAK9W arrival, information Delta.
- [P] DAH1234, descend via STAR to FL70, expect ILS approach runway 27L
- ➔ Descending via STAR to FL70, expecting ILS approach runway 27L, DAH1234

When performing a complex STAR, the approach controller can give a direct to an intermediate fix or initial approach fix for regulation:

- [P] DAH1234, direct LIMON
- ➔ Direct LIMON, DAH1234

Holding procedures

If the ATC unit wants to delay the aircraft approach, it must send to the pilot the new expected approach time (EAT). The aircraft will perform a holding pattern on a specific point in this situation:

- ☐ DAH1234, revised approach time 48 (minute 48 of the current hour)
- ➔ Revised approach time 48, DAH1234

Normally, a holding procedure should be published. The ATC unit gives only the fix or navigation aid to hold at and the pilot-in-command will follow the holding pattern description published on charts (IAC and/or ARR charts):

- ☐ DAH1234, hold over ALR hold as published
- ➔ Holding over ALR as published, DAH1234

If the ATC unit wants to give a non-published holding procedure, it must describe its components to the pilot:

- ☐ DAH1234, hold on the 265 radial of ALR VOR between 25 miles and 30 miles DME, FL100, inbound track 085, right hand pattern, expected approach time 1545
- ➔ Holding on the 265 radial of ALR VOR between 25 miles and 30 miles DME, FL100, inbound track 085, right hand pattern, expected approach time 1545, DAH1234

The ATC unit can give a holding procedure, but an aircraft can ask for a holding procedure in order to descend if the pilot-in-command knows that the aircraft has too high altitude for beginning an approach procedure or if the pilot-in-command needs time to prepare his aircraft for final approach:

- ➔ DAH1234, request holding procedure
- ☐ DAH1234, hold at LIMON, FL070
- ➔ hold at LIMON, FL070, DAH1234

However, when the pilot requires a detailed description of the holding procedure based on a facility, the following phraseology should be used:

- ☐ DAH1234, hold at MAR
- ➔ Request holding instructions, DAH1234
- ☐ DAH1234, hold at MAR VOR, inbound track 250 degrees, left hand pattern, outbound time 1 minute.
- ➔ Holding at NCR NDB, inbound track 250 degrees, left hand, outbound 1 minute, DAH1234

IFR final approach

Then, after this first contact, the ATC unit will give the descent instruction to the aircraft in order to reach the final approach altitude and can also give the approach clearance in a different or in the same communication:

- [P] DAH1234, descent 2000ft, cleared ILS approach runway 23, report ILS established
- ✈ Descending 2000 feet, cleared ILS approach runway 23, Wilco, DAH1234
- (after a while)
- ✈ DAH1234, established ILS runway 23
- [P] DAH1234, contact tower 118,700
- ✈ 118,700 DAH1234

If an IFR aircraft wants a visual approach, ATC must check that the aircraft will maintain the visual reference to the terrain before giving the clearance:

- ✈ DAH1234, 2000ft, runway in sight, request visual approach
- [P] DAH1234, cleared visual approach runway 23
- ✈ Cleared visual approach runway 23, DAH1234

In order to speed up the arrival and approach procedure or to regulate traffic between arriving aircraft, vectors can be given by the ATC unit to arriving flights to position them onto a pilot-interpreted final approach aid, or to a point from which a visual approach can be made.

Example of vectors to final approach using ILS aid with restriction which can be used or not by ATC unit:

- ✈ DAH1234, approaching LIMON, FL060
- [P] DAH1234, vectoring for ILS approach runway 23, QNH 1008
- ✈ ILS approach runway 23, QNH 1008, DAH1234
- [P] DAH1234, leave Zemmouri VOR heading 090
- ✈ Leaving Zemmouri VOR heading 090, DAH1234
- [P] DAH1234, report speed
- ✈ DAH1234, speed 250 knots
- [P] DAH1234, for separation reduce minimum clean speed
- ✈ Reducing speed 205 knots, DAH1234
- [P] DAH1234, descend altitude 2500 feet QNH 1008, transition level 050, number 4 for the approach
- ✈ Leaving FL060, Descending altitude 2500 feet QNH 1008, transition level 050, DAH1234
- [P] DAH1234, Turn left heading 340
- ✈ Left heading 340, DAH1234
- [P] DAH1234, 12 miles from touchdown, reduce to minimum approach speed, turn left heading 300, cleared ILS approach runway 23, report established
- ✈ Reducing minimum approach speed, left heading 300, cleared ILS approach runway 23, report established, DAH1234
- (after a while)
- ✈ DAH1234, established ILS 23
- [P] DAH1234, no ATC speed restriction, contact tower 118,700
- ✈ Contacting tower 118,800 DAH1234

Final approach and landing

- ✈ Algiers Tower, DAH1234, final runway 23

- ☐ DAH1234, runway 23, cleared to land, wind 250 degrees 22knots
- ➔ Runway 23, cleared to land, DAH1234

If the runway is not free, and the aircraft makes a position report on final, the ATC shall invite the pilot in command to continue his current approach:

- ➔ DAH1234, long final runway 23
- ☐ DAH1234, continue approach runway 23, wind 260 degrees 20knots.
- ➔ DAH1234, continue approach runway 23

For training purposes, a pilot may request permission to make an approach along, or parallel to the runway, without landing:

- ➔ DAH1234, request low approach runway 23 for training.
- ☐ DAH1234, cleared low approach runway 23, not below 250feet.
- ➔ DAH1234, cleared low approach runway 23, not below 250 feet.

Go around procedure

ATC request a go around:

- ☐ DAH1234, go around, wind 270 degrees 10 knots, aircraft on the runway.
- ➔ Going around, DAH1234

Pilot initiates a go around:

- ➔ Going around, DAH1234
- ☐ DAH1234, Roger, wind 270 degrees 10 knots, contact Algiers Approach 121,400
- ➔ Contacting Algiers Approach 121,400 DAH1234

After landing

- ☐ DAH1234, Take first right, when vacated contact ground 121,800
- ➔ Taking first right, and contact ground 121,800 DAH1234

After vacating, the pilot in command shall ask a taxi clearance to continue:

- ➔ Algiers Ground, DAH1234, runway vacated via Delta 4
- ☐ DAH1234, Taxi to Stand W7 via taxiway Alpha 5, Alpha 9.
- ➔ Stand W7 via taxiway Alpha 5, Alpha 9, DAH1234

VFR example

In this document, we use the following convention:

- VFR Pilot call sign is F-GLRA.
- This is a VFR flight from Jersey (EGJJ) to Rennes (LFRN).
- The sign [P] before the text means: this is the aircraft pilot transmission. ([P] for VFR, ✈ for IFR)
- The sign [H] before the text means: this is the helicopter pilot transmission.
- The sign [C] before the text means: this is the follow me car transmission.
- The sign [A] before the text means: this is the air traffic controller unit (ATC unit) transmission.

The ATC is the one that may start using the short call sign. Only thereafter the pilot shall use it as well.

VFR departure

VFR Initial Clearance

Outbound flight with no restrictions:

- [P] F-GLRA, Cessna C172, at the general aviation apron, with information Delta, request taxi for VFR flight destination Rennes
- [P] F-RA, squawk 7006, taxi holding point runway 08 via taxiway Alpha
- [P] Squawk 7006, taxiing holding point runway 08 via taxiway Alpha, F-RA

Outbound flight with a VFR departure published:

- [P] F-GLRA, Cessna C172, at the general aviation apron, with information Delta, request taxi for VFR flight destination Rennes
- [P] F-RA, exit via SE3 departure, squawk 7006, taxi holding point runway 08 via taxiway Alpha
- [P] Exit via SE3 departure, squawk 7006, taxiing holding point runway 08 via taxiway Alpha, F-RA

Flight for aerodrome circuit pattern :

- [P] F-RA, Cessna C172, at the general aviation apron, with information Delta, request taxi for circuit patterns
- [P] F-RA, squawk 7006, taxi holding point runway 08 via taxiway Alpha
- [P] Squawk 7006, taxiing holding point runway 08 via taxiway Alpha, F-RA

ATC can give the circuit parameters in the clearance :

- ☐☐ F-RA, right hand pattern, 1400 feet, squawk 7006, taxi holding point runway 08
- ☐☐ Right hand pattern, 1400 feet, squawk 7006, taxi holding point runway 08, F-RA

VFR Take off

When the VFR pilot approaches the holding point of the active runway:

- ☐☐ Holding point runway 08, ready for departure F-RA
- ☐☐ F-RA, contact Jersey Tower, 121,6
- ☐☐ Contacting Jersey Tower on 118.3 F-RA

Take-off after a line up :

- ☐☐ F-RA, Jersey Tower, holding point runway 08, ready for departure
- ☐☐ F-RA, line-up runway 08 and wait.
- ☐☐ Line-up runway 08 and wait, F-RA
- (after a moment)
- ☐☐ F-RA runway 08, cleared for take-off, wind 110 degrees 8 knots
- ☐☐ Runway 08, cleared for take-off, F-RA

Direct take-off with a report over VFR point:

- ☐☐ F-RA, Jersey Tower, holding point runway 08, ready for departure
- ☐☐ F-RA, report over SE, runway 08, cleared for take-off, wind 110 degrees 8 knots
- ☐☐ Runway 08, cleared for take-off, report over SE, F-RA

Direct take-off with a report in circuit pattern:

- ☐☐ F-RA, Jersey Tower, holding point runway 08, ready for departure
- ☐☐ F-RA, report left hand downwind, runway 08, cleared for take-off, wind 110 degrees 8 knots
- ☐☐ Runway 08, cleared for take-off, report left hand downwind, F-RA

Direct take-off with a report over airfield for an exercise:

- ☐☐ F-RA, Jersey Tower, holding point runway 08, ready for departure
- ☐☐ F-RA, report over airfield altitude 2000ft, runway 08, cleared for take-off, wind 110 degrees 8 knots
- ☐☐ Runway 08, cleared for take-off, report over airfield altitude 2000ft, F-RA

VFR Cruise

VFR Initial climb

When leaving the sector :

- [] F-RA, passing the control boundary
- [] F-RA, Contact Jersey Information 125.525
- [] Contacting Jersey Information, 125.525, F-RA

Or on VATSIM:

- [] F-RA, passing the control boundary
- [] F-RA, Frequency change approved, monitor UNICOM 122.8
- [] Unicom 122.8, F-RA

Special VFR will be cleared to leave the control zone in accordance with established procedures:

- [] F-RA, Leave control zone special VFR via route Whiskey, 3000 feet or below, report W1
- [] Leave control zone special VFR, via route Whiskey, 3000ft or below, will report W1, F-RA
- (When reaching W1)
- [] Reaching W1, F-RA,
- [] F-RA, Contact Jersey Information 125.525
- [] Contacting Jersey Information, 125.525, F-RA

VFR Altitude

Level change:

- [] F-RA, climb altitude 2000 feet
- [] Climbing altitude 2000 feet, F-RA

Reported flight level requested by ATC:

- [] F-RA, report passing 1500 feet
- [] Will report passing 1500 feet, F-RA
- (after some time)
- [] F-RA, passing 1500 feet

Level change using conditional clearance:

- [] F-RA, after passing JSY VOR, climb altitude 3000 feet
- [] After passing JSY VOR, climbing altitude 3000 feet, F-RA

Once having been given an instruction to climb or descend, a further overriding instruction may be given to a pilot:

- [] F-RA, continue climb to altitude 4000 feet
- [] Climbing to altitude 4000 feet, F-RA

Usually at first contact in cruise, ATC can request pilot to maintain current altitude:

- [] F-RA, maintain altitude 4000 feet
- [] Maintaining altitude 4000 feet, F-RA

Occasionally, for traffic reasons, a higher than normal rate of descent (or climb) may be required in order to free the higher flight level left:

- [] F-RA, expedite descent to altitude 1000 feet
- [] Expediting descent to altitude 1000 feet, F-RA

As a pilot if you are unable to follow the expedite clearance you shall report that to ATC:

- [] Unable to expedite, F-RA

Once having been given an instruction to climb or descend, a further overriding instruction may be given to a pilot:

- [] F-RA, Stop descent altitude 2000 feet
- [] Stop descent altitude 2000 feet, F-RA

VFR Transit

The aircraft has now been transferred to Dinard Tower to transit via the class D CTR:

- [] Dinard Tower, F-GLRA, a Cessna C172 from Jersey to Rennes, Mike information, 2000ft, 1 minute over SE, requesting to transit via SE
- [] F-RA, transit approved altitude 2000 feet via SE, SA, over airfield then WA, report over airfield
- [] Will transit at altitude 2000 feet via SE, SA, over airfield, WA, and will report over airfield, F-RA

When pilot is over airfield:

- [] Over airfield, F-RA
- [] F-RA, traffic Cessna 208 at 1 o'clock 1 miles from left to right 1400feet, report WA
- [] Cessna 208 in sight, will report over WA, F-RA

VFR Arrival

VFR Arrival in terminal area (APP)

- [] Rennes approach, F-GLRA
- [] F-GLRA, Rennes approach, hello
- [] F-GLRA, C172 VFR from Jersey to Rennes, 2000ft, over NW, information Golf
- [] F-RA, cleared to Rennes VFR QNH 1012, traffic southbound Cherokee 2000 feet, 4 miles, 2 o'clock
- [] Cleared to Rennes VFR QNH 1012, traffic in sight, F-RA

- [] F-RA, report airport in sight
- [] Will report airport in sight, F-RA
- (after a while)
- [] F-RA, airport in sight
- [] F-RA, contact Rennes Tower 118.5
- [] Contacting Rennes Tower on 118.5, F-RA

VFR Arrival in aerodrome circuit (TWR)

Join VFR point from another at the request of ATC:

- [] Rennes Tower, F-GLRA Cessna C172, over NW, 2000 feet, information Golf, for landing
- [] F-RA, report over N
- [] Will report over N, F-RA

Join aerodrome circuit from VFR entry point:

- [] Rennes Tower, F-GLRA, over N
- [] F-RA, join right hand downwind runway 28, wind 330 degrees 10knots, QNH 1012
- [] Will join right hand downwind runway 28 QNH 1012, F-RA

VFR straight-in approach:

- [] Rennes Tower, F-GLRA Cessna C172, over NW, 2000 feet, information Golf, for landing
- [] F-RA, make straight-in approach runway 28, wind 330 degree 10 knots, QNH 1012
- [] Will make straight-in runway 28 QNH 1012, F-RA

VFR in aerodrome circuit

Join final from end of downwind:

- [] End of Downwind runway 28, F-RA
- [] F-RA, report on final runway 28, number 1
- [] Will report on final runway 28, number 1, F- RA

Traffic information when performing pattern:

- [] Downwind runway 28, F-RA
- [] F-RA, number 2, behind Cessna 172 on right hand base leg, report end of downwind runway 28
- [] Number 2, Cessna 172 in sight, will report end of downwind runway 28

Traffic information with integration number and final report:

- [] Downwind runway 28, F-RA
- [] F-RA, number 2, follow Cherokee on base
- [] Number 2, traffic in sight, F-RA
- [] F-RA, report final runway 28

Traffic information with incoming traffic on final:

- [] Downwind runway 28, F-RA
- [] F-RA, B737 4NM final runway 28, report in sight
- [] B737 in sight, F-RA
- [] F-RA, number 2, behind B737, report on final runway 28
- [] Number 2, behind 737, will report on final runway 28

In case of effluence or runway occupation, ATC can request pilot to extend his downwind:

- [] Downwind runway 28, F-RA
- [] F-RA, extend downwind, number 2, follow Cherokee 4 miles final runway 28
- [] Will extend downwind, number 2, Cherokee in sight, F-RA
- [] F-RA, report final runway 28
- [] Will report final runway 28, F-RA

ATC can also issue a holding clearance (orbit in VFR):

- [] F-RA, orbit right due traffic on the runway
- [] Orbiting right, F-RA

VFR Landing

Full stop landing:

- [] Final runway 28, F-RA
- [] F-RA, Runway 28, cleared to land, wind 270 degrees, 10 knots
- [] Cleared to land Runway 28 F-RA

Touch and go:

- [] Final runway 28 for touch and go, F-RA
- [] F-RA, Runway 28, cleared touch and go, wind 270 degrees, 10 knots
- [] Cleared touch and go runway 28 F-RA

Low pass:

- [] Final runway 28 for a low pass, F-RA
- [] F-RA, Runway 28, cleared low pass, wind 270 degrees, 10 knots
- [] Cleared low pass runway 28 F-RA

Stop and go:

- [] Final runway 28 for stop and go, F-RA
- [] F-RA, Runway 28, cleared stop and go, wind 270 degrees, 10 knots
- [] Cleared to land runway 28 F-RA
- (After the traffic is immobilized on the runway)

- ☐ F-RA, report ready for departure
- ☐ Will report ready for departure, F-RA

VFR Go around procedure

ATC requests a go around:

- ☐ F-RA, go around runway 28, wind 270 degrees 10 knots, aircraft on the runway
- ☐ Going around runway 28 F-RA

Pilot performs a go around:

- ☐ Going around, F-RA
- ☐ F-RA, Roger, wind 270 degrees, 10 knots, report downwind
- ☐ Will report downwind, F-RA

After landing

Hand-Off with Ground Controller:

- ☐ Runway 28 vacated, F-RA
- ☐ Contact Rennes Ground, 121.725
- ☐ Contacting Rennes Ground, 121.725

After vacating, the pilot in command shall ask a taxi clearance to continue:

- ☐ Rennes Ground, runway 28 vacated on Delta, F-RA
- ☐ F-RA, taxi to general aviation apron
- ☐ Taxiing to general aviation apron, F-RA

Usually, the VFR pilot monitors the ATC frequency during taxi and quit.

If the pilot wants to give an acknowledgement to ATC, just do it like this:

- ☐ Ground, leaving frequency, F-RA
- ☐ F-RA, good day