



COORDINATION – APC LEVEL

1. Introduction

The purpose of the coordination is the direct communication between two different air traffic controllers with sending and receiving flight data or air traffic controller information.

The coordination is used to:

- Inform adjacent air traffic controllers about the activation or deactivation of your area of responsibility
- Negotiate the transfer of any traffic which is under your zone of responsibility to another zone
- Negotiate a clearance or control instruction for any traffic in your area of responsibility when the instruction needs approval by adjacent air traffic controller.
- Realize adequate regulation inside your area of responsibility without generating any problem for adjacent air traffic controller.
- Integrate incoming traffic in your area of responsibility without generating any loss of separation.

2. Coordination tools

The coordination can be:

- A direct communication between air traffic controllers
- An indirect communication using IvAc software functions

2.1. Specific IVAO rules

The use of guard frequency 121.500 MHz is forbidden for coordination tasks between air traffic controllers. This frequency is reserved only for managing emergencies in some specific cases.

The use of Unicom frequency 122.800 MHz shall not be used for coordination tasks between air traffic controllers. This frequency is reserved only to all pilots to ensure self-information in non-controlled areas.

2.2. Direct communication using the IvAc chat window

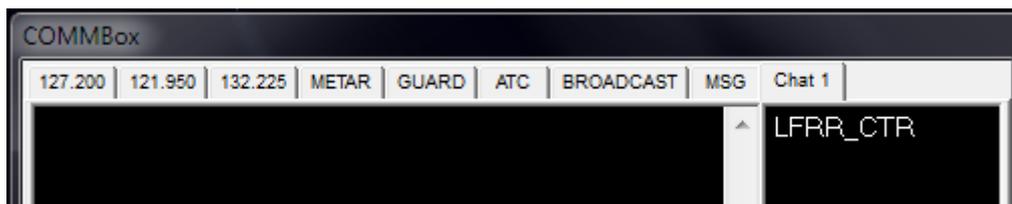
The chat window is the best choice for coordination between air traffic controllers. The direct communication is necessary when all other solutions described below are not suitable for traffic handling.

You can open it using:

- The command “.chat CONT_POS” in the scratch pad in the COMMBox window (CONT_POS is the controller position that you want to chat with)
- The right click of the mouse on the air traffic controller call sign chosen in the ATCBox window

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After the opening of a new tab in the COMMBBox window, you can chat directly with the chosen air traffic position when selecting the chat tab wanted.



Example of new tab after command `.chat LFRR_CTR`

You can add/remove other participants in this channel using the followed commands:

- Command: `.A SGBE_TWR` (A=add, SGBE_TWR is the call sign wanted).
- Command: `.R KIKK_TWR` (R=remove, KIKK_TWR is the call sign wanted).

2.3. Direct communication using Intercom

The IVAO Intercom is a web-based application and it uses Skype communication software. It makes coordination easier with your neighbour controller as you can call and communicate by voice with your neighbouring air traffic controllers.

You should have a valid Skype-Account and be registered with Intercom. This can be used only between two registered controllers using Skype and their IVAO profiles updated with their Skype account. This service is free and every controller can participate

Intercom is the alternative of the direct communication using the IvAc chat window. The text based communication is replaced by vocal communication using Skype.

2.4. Global communication using the ATC tab channel

The ATC tab channel is the best choice for broadcasting general information to all controllers and observers using IvAc.

This channel is a global channel for all ATC, and you must use English as chat language.

This channel is not suitable for coordination between two air traffic positions handling their own traffic. All other controllers connected are not concerned with specific coordination tasks between two air traffic controllers far from their position.

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2.5. Transparent communication using labels

Labels are used to minimize the transmission of the clearance parameters by chat message between air traffic controllers.

Assuming a target will enable the controller to amend the label inputs. These labels can be read by all other air traffic controllers or observers in the network if the target is located inside their display range.

The following variables can be manipulated in the label using the IvAc software:

- Cleared flight level label
- Cleared waypoint label
- Cleared speed label
- Control assuming position
- Text or voice mode used



Example of target with labels attached

Each aircraft is one unique target on screen.

2.6. Predefined agreements using letter of agreement (LoA)

The letters of agreement named LoA in IVAO are documents that define agreed procedures between two or several controlled positions in order to facilitate traffic handling and exchange.

They are created to simplify coordination procedures in some predefined conditions in order to minimize the coordination chats. They are created when needed (example between two divisions for traffic exchange or two large control areas with multiple routes).

3. Generic coordination between air traffic controllers

3.1. Coordination between controllers when opening the position

When you open a position, you must communicate that to adjacent air traffic controllers.

These tasks are applicable:

- Give information about your position opening and ready to operate.
- Ask for the transfer of traffic that should be under your responsibility
- Speak about the status of each aircraft with giving details in order to help traffic management

Do not force act with IvAc the traffic assumed by another controller.
Ask the controller to transfer this traffic, this is coordination!

3.2. Coordination between controllers when closing the position

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When you close a position, you must communicate that to adjacent air traffic controllers.

These tasks are applicable:

- Give information about your position closing time
- Transfer all your traffic under your responsibility to the next suitable air traffic controller
- If there is no suitable air traffic controller who can take the traffic, release the traffic to UNICOM
- Speak about the status of each aircraft with giving details in order to help traffic management

Before closing a position, all traffic under your control shall be transferred to the next suitable air traffic controller or shall be released to the UNICOM 122.800 frequency.

3.3. Coordination between controllers due to events

The goal is to communicate the major events in your area of responsibility that affects the neighbour air traffic controllers.

Situations which require communication can be any of the following:

- Switching air traffic controller person
- Your sector split in sub-sectors
- Your sector combination with another sector
- Overloaded sector that neighbour sector shall take over
- Emergency handling
- Information about any airfield (active runways, arrival procedures, weather forecast, ATC workload at the airfield...)
- Information about any air traffic controllers activity under your area of responsibility on request
- Information about IVAO network activity and events

3.4. Coordination for traffic handling

The goal is to coordinate a clearance with another air traffic controller before transmission to an aircraft, if and when it becomes effective within another unit's area of responsibility.

The receiving controller shall, if necessary, inform the transferring controller of:

- the pertinent details to be included in the combined clearance; and
- the time period during which the clearance may be issued.

The flight data sent in a coordination message can include parameters like:

- Aircraft identification.
- Type of aircraft.
- Speed (filed true airspeed in knots, Mach-number, actual ground speed, cleared speed).
- SSR code assignment.
- Point of departure
- Remaining portion of the route of flight as specified in the original or amended clearance
- Destination.
- Estimated time and altitude over the last fix within the control area or other point agreed to by the units involved.

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- Altitude of entry into the adjacent unit's area if different from the altitude over the last fix.
- Estimated time of arrival as specified in the flight plan if requested.
- Clearance information, such as clearance limit if other than the destination airport or special instructions if issued.
- The fact that an aircraft is a diversion, if this is the case.
- Altitude requested if different from the assigned altitude.
- Other information if appropriate; example: minimum fuel or an emergency

Using IvAc, some flight data are easy to find, and air traffic controllers cannot give evident information when traffic is identified by all concerned controllers.

3.5. Coordination using IvAc labels

IvAc offers the option to amend many different variables which can be entered into a label of each specific target.

- Cleared flight level
- Cleared waypoint
- Cleared speed
- Control assuming position
- Text or voice mode used

The variables in the label provide information about clearances for each specific target to other controllers without direct communication.

3.5.1. Flight level, speed and waypoint label

The variables are only presented in the label for each target when they are filled out:



All variables can be manipulated by every controller position (IvAc does not limit your ability to manipulate label inputs). However the following are most common for each position:

- A delivery controller can add IFR clearance given to the pilot
- A ground controller can add IFR clearance given to the pilot
- A tower controller can add IFR clearance, VFR exit point and cleared altitude or speed
- An approach or departure controller can add IFR cleared fix and altitude, cleared speed or approach type selection
- An area controller can add IFR cleared fix and cleared altitude, cleared speed or approach type selection

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3.5.2. Control assuming position

This label is a letter code located on each target when an air traffic controller fills them:



This label is showing the air traffic controller who assumes this aircraft. With this label, you do not need to communicate that you assume the aircraft.

It is important to assume any traffic under your control using IvAc in order to notify to neighbour controllers that you take this traffic under your active control.
Do not force-act traffic which is assumed by an active controller

Definition is:

- C = CTR
- A = APP
- D = DEP
- T = TWR
- G = GND
- L = DEL
- U =Unicom

Be aware that information can be false if a previous distant controller has not released the traffic and cleared the labels.

3.6. Traffic hand-off

When a change of frequency is required, instruct the aircraft to contact or monitor:

- a specified air traffic controller
- on a specified frequency
- at a specified time, over a specified fix.

CONTACT/MONITOR (unit/function/agency) ON (frequency) NOW/AT (time)/AT/OVER (location/fix).

Transfer radio communications immediately prior to an aircraft entering the receiving controller's area of responsibility unless otherwise coordinated.

Coordination procedures for radio communication transfer may be outlined in unit directives or agreements.

If an aircraft is unable to maintain a listening watch on the controller frequency, resolve all conflicts with the aircraft.

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4. Coordination at departure position (_DEP)

A controller acting a departure position is responsible of the IFR departure traffic and he shall ensure adequate separation with all other traffic according to the local regulations in the TMA zone.

The departure position is a sub sector of the approach position.

The approach position is separated between the departure position and the arrival position.

Only the biggest airfields have a separate departure position. In other airfields, the approach position handles both arriving and departing traffic.

A departure position should be opened only when the approach position and one tower position are opened.

4.1. Coordination with APP position

- Negotiate the handoff point of go-around traffic for stating a new approach procedure.
- Negotiate route and climbing clearance for traffic to ensure enough separation between arrival and departure and avoid climbing stop.
- Notify any emergency declaration

4.2. Coordination with CTR position

- Negotiate the route and climbing clearance for traffic to ensure enough separation between en-route and departure traffic
- Notify specific information about departure before transfer.

5. Coordination at approach/arrival position (_APP)

A controller acting an approach position is responsible of the IFR arrival (and departure if there is no departure position active) and VFR transit traffic and he shall ensure adequate separation with all traffic according to the local regulations in the TMA zone.

The approach controller is responsible to choose transition flight level.

5.1. Coordination with DEL or GND position

- Give the transition flight level in order to complete ATIS
- Receive the clearance needs from ground and delivery positions and give adequate clearance in function of traffic expected
- Give adequate initial flight level needed

This coordination is needed to be done with TWR position if there is no GND/DEL position.

5.2. Coordination with TWR position

- Give the transition flight level in order to complete ATIS
- Negotiate a transfer point after take-off when necessary for IFR or VFR traffic
- Give any information about the approach sequence in order to let the tower controller anticipate the traffic flow
- Negotiate any visual approach request
- Notify emergency declaration

This coordination is not needed when the TWR position is merged with the APP position.

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5.3. Coordination with DEP position

- Negotiate the handoff point of go-around traffic for stating a new approach procedure.
- Negotiate route and climbing clearance for traffic to ensure enough separation between arrival and departure traffic
- Notify any emergency declaration

This coordination is not needed when the DEP position is merged with the APP position.

5.4. Coordination with CTR position

- Negotiate the handoff point for departure and altitude.
- Negotiate route, descending flight level and clearance for traffic to ensure enough separation between transit and arrival aircraft
- Negotiate traffic flow and arrival regulation
- Notify emergency declarations which have impact on the area controller

5.5. Coordination with APP position of a close airfield

- Negotiate the handoff point between the two positions for each route
- Notify emergency declarations which have impact on the nearby approach controller
- Negotiate route, hand-off points, flight level and clearance for traffic to ensure enough separation between the two positions

6. Specific coordination

We can have specific coordination procedures in large airports with multiple runways:

- Several ground controllers (each takes one sector of ground)
- Several tower controllers handling their own runway(s) (more than one controller to control a runway is forbidden)
- Several arrival controllers (division based on geographical zone in function of runway, or initial, intermediate or final approach controller, or a combination of the different solutions!)
- Several en-route controllers (division based on geographical zone or altitude layers)

This document will not present the coordination point for these configurations due to the complexity and the procedure must be adapted to the airfield specific situation.

Contact your ATC coordinator of your division or HQ to have tips to handle such situations.

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