



COORDINATION – TWR 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 sing 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 by 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 following 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 profile updated with the 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.

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.

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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 which 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 aircraft, this is coordination!

3.2. Coordination between controllers when closing the position

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 this traffic, release this 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 UNICOM 122.800 frequency.

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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.
- 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.

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3.5. Coordination using IvAc labels

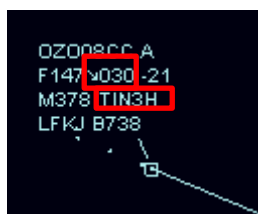
IvAc offers the option to amend many different variables which can be entered into a label of each specific target:

- 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

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.

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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 while remaining on the ATC frequency, resolve all conflicts with the aircraft.

4. Coordination at delivery position (_DEL)

A controller acting a delivery position gives only initial IFR departure clearance.

This position is present only in a few numbers of airfields and can be cumulated with GND controller. This position is used only on the busiest airfields with much traffic.

4.1. Coordination with GND position

- Do not force act with IvAc the traffic assumed by another controller
- Manage departure time (SLOT) if the airport ground is crowded.

This coordination is not needed when DEL position is merged with GND position.

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4.2. Coordination with APP position

DEL controller is not close to APP controller but, in particular cases, he must negotiate clearance with him, since the APP controller is responsible of departure routes.

- Ask for a special departure clearance outside the published or pre-coordinated routes.
- Ask an aircraft to change the departure route given in the initial clearance
- Ask for an initial flight level in function of departure if they are not published

This coordination is not needed when DEL position is merged with APP position.
Be aware that the en-route (CTR) controller is in charge of APP position if this position is not opened.

5. Coordination at ground position (_GND)

A controller acting a ground position is responsible of any traffic movements on all aprons and taxiways. He ensures all ground security except on runways.

This position is present in many airfields and can be cumulated with TWR controller. This position may not exist in small airfields.

5.1. Coordination with DEL position

- Manage the departure time (SLOT) if the airport ground is crowded.

This coordination is not needed when DEL position is merged with GND position.

5.2. Coordination with TWR position

Any clearance that needs a runway crossing or taxiing must be coordinated with the TWR position.
Any runways backtrack for a line up shall be handled by the TWR controller.
Any taxiing on an active runway shall be handled by the TWR controller:

- Give any relevant information about taxiing traffic that can help the traffic management
- Negotiate runway crossing if the traffic remains on GND position frequency
- Negotiate non operative runway taxiing if the traffic remains on GND position frequency
- Give traffic intentions before a temporary transfer in order to use a runway
- Give feedback about the runway vacation or not if the traffic remains on GND position frequency
- Notify as soon as possible any incidents that have an high impact on TWR management (i.e. exit taxiway unusable, taxiway crowded, aircraft blocking an holding point, bad exit of an aircraft, aircraft takes a wrong taxiway that needs unexpected backtrack, taxi or crossing using a runway).

This coordination is not needed when TWR position is merged with GND position.
Be aware that APP position is in charge of TWR position if this position is not opened.

5.3. Coordination with APP position

In addition to the initial coordination, an aircraft could want to modify his departure clearance during taxiing.

- Ask an aircraft to change the departure route given in the initial clearance
- Negotiate VFR special or night VFR clearance (depending of your national regulation)

This coordination is not needed when GND position is merged with APP position.
Be aware that the en-route (CTR) controller is in charge of APP position if this position is not opened.

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6. Coordination at tower position (_TWR)

A controller acting a tower position is responsible of any traffic movements on all runways and in the vicinity of the airfield in the CTR zone or any airfield traffic circuit.

The air traffic controller handling a TWR position is responsible of all runways on his airfield. He decides which runways are used for take-off and landing.

Be aware that any change of runway configuration will take time for other controllers to handle such a decision. Ground taxi flow and traffic regulation on approach cannot be changed in one minute!

6.1. Coordination with GND position

- Give the runway in use
- Notify any runway configuration change (change landing and/or take off runways, close runway...)
- Notify the arriving aircraft of their potential exit point in order to help the ground controller managing the exit taxiways (optional and used in high flow of aircraft)
- Notify all incidents on runways (aircraft failure on runway, hard landing)
- Notify emergency landing in order to vacate the holding point, exit taxiways when possible
- Give information about go-around

This coordination is not needed when TWR position is merged with GND position.

6.2. Coordination with APP position

- Give the runway in use
- Notify any runway configuration change (change landing and/or take off runways, close runway...)
- Negotiate handoff point and altitude for IFR and VFR traffic if different from the usual management
- Notify the departure sequence planned in order to let the approach controller make regulation in function of it
- Notify VFR traffic which may be impacted by the approach regulation
- Notify all incidents on runways (aircraft failure on runway, hard landing) that can have an impact by the approach regulation
- Notify emergency landing in order to vacate traffic away from the runway
- Notify Pan aircraft

Be aware that the en-route (CTR) controller is in charge of the APP position if this position is not opened.

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6.3. Coordination with DEP position

- Give the runway in use
- Notify any runway configuration changes (change of landing and/or take off runways, close runway...)
- Notify all go around that DEP position must handle
- Notify the departure sequence planned

Be aware that the APP controller is in charge of the DEP position if this position is not opened.

7. Specific coordination

We can have some specific coordination procedures in some 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 geographic zone in function of runway, or initial, intermediate or final approach controller, or combination of the different solutions!)
- Several en-route controllers (division based on geographic 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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