

# APP/ACC

## Upstream and Downstream Sectors

- **Upstream Sector:** The sector an aircraft is coming **from** before entering the current sector.
- **Downstream Sector:** The sector an aircraft is heading **to** after leaving the current sector.

### Example

If an aircraft transitions through **Sector A → B → C**:

- From **Sector B's perspective**:
  - **Sector A is the upstream sector** (where the aircraft is coming from).
  - **Sector C is the downstream sector** (where the aircraft is going).

## Coordination Point (COP)

A **Coordination Point (COP)** is a designated waypoint near a sector boundary where aircraft are handed off between controllers.

Common COP types:

- **COPN (Entry COP)** – The point where an aircraft enters the sector.
- **COPX (Exit COP)** – The point where an aircraft leaves the sector.

Controllers should use **well-known waypoints, VORs, or major aerodromes** when coordinating handoffs. In VATSIM, specifying the **exact location** of an aircraft is useful since pre-planned coordination is less structured than in real-world operations.

## Transfer of Control

The **transfer of control** occurs when responsibility for issuing flight instructions (altitude, heading, speed) moves from one controller to another.

Unless otherwise specified in a **Letter of Agreement (LoA)** or verbal coordination, control is transferred **when the aircraft enters the new sector** and has reached **half of the required minimum separation distance** from the boundary.

### Example

- If the required separation is **3 NM**, control is considered transferred once the aircraft is **1.5 NM into the receiving sector**.

This ensures that both sectors **maintain full separation** without additional coordination.

## Silent Transfer of Control

In some cases, an **LoA allows for silent transfer of control**, meaning an aircraft can be handed off without requiring additional verbal coordination.

This applies when:

- The aircraft meets pre-agreed conditions.
- The receiving controller is **already aware of the aircraft**.
- The route, level, and conditions do not require coordination.

Certain **routes, levels, and airspace** have predefined silent coordination agreements, eliminating the need for verbal coordination. However, restrictions may still apply, preventing changes close to sector boundaries.

## Handoffs

A **handoff** occurs when control of an aircraft is transferred between controllers.

Once a receiving controller accepts a handoff, they can:

- **Turn the aircraft up to 45 degrees left or right** without further coordination.
- **Climb or descend the aircraft** to any level without additional coordination.

## Handoff Restrictions

- **Do not hand off an aircraft** if a **turn of more than 45 degrees or a level change** will cause a conflict.
- If needed, apply **restrictions before the handoff** to ensure separation.

## Full Control After Handoff

- Once the aircraft is **within half the applicable lateral standard (2.5 NM for ENR, 1.5 NM for TWR/APP)**, the receiving controller **can issue unrestricted turns and level changes**.
- If a **turn greater than 45 degrees** is needed earlier, **coordination is required**.

## Transfer of Communication

A **transfer of communication** happens when an aircraft is instructed to switch to a new ATC frequency.

- **This does not always mean control has been transferred.**
- Communication and control transfers can **happen separately** based on operational needs.

For example, a controller may hand off communication early while still **retaining control** of the aircraft for sequencing or separation purposes.

## Controller Initials in Coordination

In real-world ATC, controllers are identified by **unique initials** (formed from their first and last names).

During **verbal coordination**, initials are exchanged as a **confirmation that both controllers agree on the handover**.

- The conversation is **not complete** until both controllers **state their initials**.

## Approval Request

When a controller needs approval from another sector for a specific action, an **Approval Request** is used.

This is common for:

1. **Direct Routing Requests**
2. **Climbing or Descending Across a Sector Boundary**
3. **Deviations from Agreed Flight Levels**

Each type of request follows a **standard format** to ensure clarity and efficiency in coordination.

### Direct Routing Request (Downstream Coordination)

Granting a **direct-to waypoint** clearance can improve efficiency, accommodate pilot requests, or resolve conflicts. Within a controller's **own sector**, this can be done without coordination. However, if the waypoint is in an **adjacent sector**, approval from the downstream controller is required.

This request can be made using **Euroscope coordination functions** or **verbally**.

### Format for Verbal Coordination

“ **APPROVAL REQUEST <COP/position> <call sign>**  
**DCT <waypoint>** ”

## Procedure

1. Contact the receiving sector and wait for their **"Go ahead"** response.
2. This allows the receiving controller to check the aircraft's position and potential conflicts.
3. Once permission is granted, the request is either **approved or denied**.

## Climbing/Descending at Sector Boundaries

By default, aircraft should be **level** when crossing a sector boundary unless an **LoA (Letter of Agreement)** states otherwise.

- **Any climb or descent at or near a boundary must be coordinated.**
- Coordination is required **if vertical movement occurs within half of the minimum separation distance** before the aircraft enters the next sector.
- This type of coordination must be done **verbally**, as Euroscope does not handle altitude change requests automatically.

### Format for Verbal Coordination

**// APPROVAL REQUEST <COP/position> <call sign>  
CLIMBING <level> / DESCENDING <level>**

## Deviation from Agreed Flight Level

If an aircraft must cross a sector boundary at a **different level than agreed** in the LoA, coordination is required. This can be done using:

- **Euroscope functions**
- **Verbal coordination**

## Clearing Through a Third-Party Sector

If an aircraft requires clearance through a sector that is **not normally involved**, additional coordination is needed.

- Standard **Coordination Points (COPs)** **do not apply**, as the aircraft is not expected to enter the third-party sector.
- The **affected sector does not have flight details** in Euroscope and does not consider the aircraft as relevant traffic.

### Format for Verbal Coordination

**// APPROVAL REQUEST FOR AIRSPACE CROSSING <call sign> <position>  
CLIMB UP TO FLxxx (routing) / DESCEND DOWN TO FLxxx (routing)**

This is often **mistaken for a release**, but it is strictly an approval request. Releases are discussed in a separate section.

If the previously uninvolved sector **assumes full control** of the aircraft or **takes over** from the originally planned downstream sector, an additional request format is used:

“ **APPROVAL REQUEST FOR ADDITIONAL TRAFFIC AIRBORNE MARRAKECH**  
<call sign>  
**DCT SLK FL300**

This shifts the responsibility of further downstream coordination to the accepting sector.

## Boundary Coordination

Boundary coordination is required when an aircraft is expected to **deviate within half of the required separation** for another sector's airspace.

This applies if an aircraft is within:

- **500 ft vertically**
- **2.5 NM laterally (enroute sectors)**
- **1.5 NM laterally (approach/tower sectors)**

Boundary coordination informs the adjacent sector about the aircraft and allows them to impose restrictions if necessary.

### Format for Verbal Coordination

- **Controlling Sector → Boundary Sector:**

“ For Ident, (Position), (Callsign), (Details as required)

- **Boundary Sector → Controlling Sector:**

“ (Callsign), (Restriction)

### Example Phraseology

**SOU → NOR:** "For Ident, overhead SAK, RAM12, do you have any restrictions on descent?"

**NOR → SOU:** "RAM12, No restrictions on descent."

If the boundary sector has **no restrictions**, they may **omit the restriction** and simply read back the callsign. This confirms that no vertical or lateral restrictions apply.

## Example Phraseology with Omission

**WES → EAS:** "For Ident, west of RAVMA, AB123"

**EAS → WES:** "AB123"

# Spacing Below Standard Separation

Silent transfers of control typically requires **10 NM separation** at the **same speed**. The following rules apply when transferring aircraft at the **same flight level**:

Condition	Required Separation
Leading aircraft is at the <b>same speed or faster</b>	<b>10 NM</b>
Trailing aircraft is <b>up to 20 knots / M0.05 faster</b>	<b>20 NM</b>
Trailing aircraft is <b>up to 40 knots / M0.10 faster</b>	<b>30 NM</b>

## Example Scenario

Two aircraft are transferred with **15 NM separation**, but the trailing aircraft is **30 knots faster**.

- Since **none of the above conditions are met**, either:
  - **Speed control must be applied** to match speeds, or
  - **Coordination is required** before transfer.

## Format for Coordination

**“ APPROVAL REQUEST <COP/position> <call sign>  
<distance> <speed difference>**

# Release Coordination

A **release** allows the receiving sector to issue instructions **before** an aircraft **crosses the sector boundary and control is officially transferred**.

- If the receiving controller wants to issue a **turn, climb, or descent before transfer**, they must **request a release**.
- Without a release, the aircraft **must continue as planned until control is formally transferred**.

## Types of Releases

Type of Release	Purpose
<b>Turn Release</b>	Allows a turn up to <b>45 degrees left or right</b> before control transfer.
<b>Climb Release</b>	Allows the receiving sector to <b>issue a climb</b> before control transfer.
<b>Descent Release</b>	Allows the receiving sector to <b>issue a descent</b> before control transfer.
<b>Full Release</b>	Grants <b>full control</b> (turns, climbs, and descents) before transfer.

## Requesting a Release

A release can be **sent with the handoff via Euroscope** (TopSky plug-in), but if this is **not done**, the receiving sector must request the release **verbally**.

### Format for Verbal Request

“ REQUEST RELEASE <callsign>

### Example Phraseology

**NOR → SOU:**

“ "REQUEST RELEASE (FOR (RIGHT/LEFT) TURNS / FOR CLIMB / FOR DESCENT)  
RAM123"

**SOU → NOR:**

“ "RAM123 RELEASED (FOR (RIGHT/LEFT) TURNS / FOR CLIMB / FOR DESCENT)  
<initials>"

**NOR → SOU:**

“ "<initials>"

A **Coordination Point (COP)** is **not required** in this communication.

# Release Subject to Discretion (SYD)

A **Release Subject Your Discretion (SYD)** is used when the releasing sector has other aircraft that may impact the release.

- The **aircraft is released**, but the **receiving sector is responsible** for ensuring separation from specified traffic.
- The releasing sector provides **traffic details**, and the receiving controller must **maintain separation** accordingly.

## Example of SYD Release

**NOR → SOU:**

“REQUEST RELEASE RAM123”

**SOU → NOR:**

“RAM123 RELEASED SYD RYR123 overhead FOBAC on R722, FL290 <initials>”

**NOR → SOU:**

“<initials>”

## Explanation

- NOR wants to **climb RAM123**, but SOU has **RYR123 crossing at FL290 on R722**.
- With this **SYD release**, NOR can **initially climb RAM123 to FL280**.
- Once lateral separation is ensured, NOR can allow further climb.

The key to **SYD releases** is ensuring both controllers **clearly understand who is responsible for separation**.

# Heads-Up Coordination

Heads-up coordination is used to **notify the next sector** about an incoming aircraft.

## Format for Verbal Coordination

- **Controlling Sector → Receiving Sector:**

|



**(Position), (Callsign)**

• **Receiving Sector → Controlling Sector:**

**// (Callsign), (Level)**

## Example Phraseology

### **NOR → SOU:**

**// "Via SLK, RAM1234"**

### **SOU → NOR:**

**// "RAM1234, F350"**

If the assigned level **at transfer of jurisdiction** is different from the **current CFL**, the controlling sector must specify:

**// "Will be assigned (level)."**

If the receiving sector needs a different level, they will **respond with the amendment**.

## Example Phraseology with Level Change

### **NOR → SOU:**

**// "Via SLK, RAM1234"**

### **SOU → NOR:**

**// "RAM1234, F300 due traffic"**

## NOR → SOU:

“F300, RAM1234”

Once coordination is completed, the aircraft's **level and route are locked in**.  
Any further changes **must be re-coordinated**.

## Best Practice

- The best time to conduct **Heads-Up Coordination** is when the aircraft **first checks in**.
- **Do not delay coordination** until just before the transfer.

# Reference Calls

When an action **does not fit an Approval Request or Release**, a **Reference Call** is used.

## Primary Use Case

- A **request to the upstream sector** when an aircraft needs to **enter a sector in a non-standard manner**.

## Example Reference Call

### SOU → NOR:

“REFERENCE SLK RAM123”  
“REFERENCE 20 MILES WEST OF SLK RAM123”

### NOR → SOU:

“Go ahead”

### SOU → NOR:

“REQUEST HIM DIRECT MABAP”  
“REQUEST HIM DCT MAK, DESCENDING FL90”  
“REQUEST HIM AT FL200”  
“REQUEST HIM AT SPEED 250 KNOTS”

## NOR → SOU:

“ "CONSIDER <initials>"  
"WILCO <initials>"  
"UNABLE <initials>"

## SOU → NOR:

“ "<initials>"

## Reference Call Responses

- **WILCO** = Request **accepted**.
- **UNABLE** = Request **denied** or **renegotiation needed**.

## Using Reference Calls for Requests

A **Reference Call** can also be used instead of an **Approval Request** for **open-ended** coordination.

## Format for Verbal Coordination

“ **REFERENCE <COP/position> <callsign>**  
**REQUEST HIGHER/LOWER LEVEL**

## Common Uses

- **Transitioning between Approach (APP) and Center (CTR)**
- **Moving between Lower Center and Upper Center (or vice versa)**
- **Ensuring climb/descent clearance before handoff**

If an aircraft has not yet **completed a crossing**, a **Reference Call** allows controllers to **coordinate a higher/lower level** for smoother sequencing.

## Departure Release Requirements

At certain airports, a **Departure Release** must be obtained from the radar sector before each IFR departure.

- The **radar sector (APP/ACC)** ensures **separation between IFR arrivals and departures**.

- Whether a departure **requires a release** is determined by the **airport's Tower SOP**.

## Departure Release Coordination

If a release is required, coordination follows this structure:

### Format for Verbal Coordination

#### TWR → Radar (APP/ACC):

// "REQUEST RELEASE RAM123"

#### Radar (APP/ACC) → TWR:

// "RAM123 RELEASED <initials>"  
"RAM123 RELEASED AFTER LANDING RYR123 <initials>"  
"RAM123 RELEASED, CLEARANCE EXPIRES AT 1530 <initials>"  
"RAM123 RELEASED AT 1520 <initials>"  
"UNABLE, CALL YOU BACK <initials>"

#### TWR → Radar (APP/ACC):

// "<initials>"

If a **release is denied**, the radar controller will call back when the departure is **approved**.

## Next Coordination

Departure release coordination is conducted between **TWR and APP/ACC** controllers to determine the **next aircraft to depart**.

- **All IFR departures require Next Coordination** unless the airport has **Auto Release** in place.
- **Auto Release** can be **canceled** at any time by mutual agreement between TWR and APP controllers.

### Format for Verbal Coordination

#### TWR → APP:

|

"Next, (Callsign), (Runway)"

**APP → TWR:**

“(Callsign), (Runway), (Lateral and/or Vertical Instructions)”

## Departure Instructions

Instruction	Meaning
<b>Left/Right Turn</b>	Make a visual left/right turn to establish on the planned outbound track.
<b>Left 180</b>	At the SID turn height (or safe altitude for visual departures), fly heading 180.
<b>Left 180 Visual</b>	Same as above, but the pilot must maintain visual separation from terrain.
<b>Extended Runway Centerline</b>	Track the extended runway centerline (accounting for drift).

- An **amended level** may be assigned.
- The term **"unrestricted"** may be used to indicate **no vertical restrictions** apply.

“**Note:** "Unrestricted" is **not a readback item**.”

## Example Phraseology

### Visual Departure Example (LAM departing from GMAD)

**TWR → APP:**

“Next, LAM, runway 27”

**APP → TWR:**

“LAM, runway 27, left turn, unrestricted”

**TWR → APP:**

"Left turn, LAM"

### Procedural SID Example (EZY342 from GMAD, Auto Release cancelled)

**TWR → APP:**

“Next, EZY342, runway 27”

**APP → TWR:**

“EZY342, unrestricted”

## Airways Clearance Coordination

At some aerodromes, **TWR must coordinate with APP/ACC before issuing an airways clearance** for certain aircraft.

- This allows the **APP/ACC controller** to evaluate **current and projected traffic levels**, position staffing, and overall airspace workload before approving clearance.
- Coordination ensures **seamless integration** of departing aircraft into enroute traffic.

### Format for Verbal Coordination

**TWR → ACC:**

“ (Callsign) requests clearance to (Destination), (Any Other Relevant Details)”

**ACC → TWR:**

“ (Callsign), clearance approved”

### Example Phraseology

**TWR → ACC:**

"AB213 requests clearance to Fez"

ACC → TWR:

“ "AB213, clearance approved"

If a **level change or route adjustment** is required, APP/ACC will **provide the update** during the exchange.

## Important Considerations

- **This coordination is a negotiation**—you can reject or renegotiate clearance requests based on airspace conditions.
- If a restriction is needed, **it is best to take the aircraft on frequency** before issuing clearance.

## Types of Departure Clearance Responses

Response Type	Meaning
<b>Approved Without Restriction</b>	Immediate clearance is granted.
<b>Approved With Restriction</b>	Clearance is conditional (e.g., after an arrival lands or before a set time).
<b>Denied</b>	The departure is not possible at the moment; APP/ACC will call back when clearance is available.

Clear understanding of **these responses** ensures **smooth coordination and efficient traffic flow**.

# Estimate Coordination (Not Relevant for VATSIM)

In real-world ATC, an **Estimate Call** is used to exchange an aircraft's:

- **Squawk**
- **Handover level**
- **Estimated entry time** into the next sector

Most estimates are **automatically exchanged** through flight data systems, but in **case of system failures or special circumstances**, verbal coordination is required.

Example Scenario: Casablanca (GMMN) to Paris (LFPG)

If the automated system is **unavailable**, controllers must **verbally coordinate all estimates**.

1. **Tower reports the departure time to APP.**
2. **APP calculates the estimated time at the COP (Coordination Point) between APP and ACC.**
3. **APP transmits the estimate to ACC.**

## Format for Verbal Coordination

**APP → ACC:**

“ESTIMATE TOLSI AFR123”

**ACC → APP:**

“A320 to LFPG”

**APP → ACC:**

“SQUAWKING 6032, ESTIMATED TOLSI 1509, CLIMBING FL150 <initials>”

**ACC → APP:**

“<initials>”

By confirming the **aircraft type and destination**, both controllers ensure they are referencing the same flight.

## Estimate - No Details

A variation of an **Estimate Call** is used when the receiving sector **has no prior flight plan data** for an aircraft.

- This is common in **bad weather diversions** or **unexpected reroutes**.
- Additional flight details must be exchanged to **fill in missing information**.

## Additional Details Exchanged



- Aircraft type
- Speed
- Requested level
- Departure airport
- Destination airport
- Route

**Estimates are not required on VATSIM, as Euroscope automatically exchanges flight data**

# Expedite Clearance & Revisions

## Expedite Clearance

An **Expedite Clearance** is a short-term coordination request, similar to an **Approval Request**.

- Used when an aircraft is **approaching a sector boundary faster than expected**.
- **Replaces a standard Estimate** when coordination time is limited.

## When to Use an Expedite Clearance

- The aircraft is reaching the sector boundary **sooner than specified** in agreements.
- The receiving sector **needs to be informed immediately** to adjust sequencing or separation.

## Revisions

A **Revision** is issued when there is a **change in the aircraft's estimated boundary crossing parameters** before reaching the sector boundary.

## Common Revisions

- **Updated estimated crossing time**
- **Change in flight level**
- **Routing adjustments**

**Revisions are generally unnecessary on VATSIM, as Euroscope automatically updates estimates.**

Controllers can **monitor changes in real-time** without requiring verbal coordination.