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IVAO ATC Operations

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Zurich Arrival – Departure

Information Contact: ch-aoc@ivao.aero

Revision list

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1. Objective

The aim of this document is to illustrate a better segmentation for Zurich Arrival on IVAO. The new setup offers a more realistic service that is based on traffic flows and congestions. As outcome Zurich Arrival in its different configurations is able to accommodate a higher amount of traffic without a decrease in safety and quality of control.

Each configuration has its own setup regarding internal and external agreements.

This document is part of IVAO Switzerland Rules and approved by CH-HQ. Each configuration must be respected in terms of agreements, callsigns and frequencies used. Any change and amendments will be approved by CH-HQ, FIR Chiefs and Swiss ATC Department. Amendments will be communicated via virtual NOTAM or newer version of this document.



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2. Operating Standards

ATIS

The ATIS must be prepared based on the standard as published on IVAO Switzerland division's website at the link: <http://www.iviao.ch/controller/atis>

It should always include the station name that is Zurich Arrival. The name of the Final sector is Zurich Final.

METAR Station is LSZH.

Take-off is 28 SEC 16. In case of different configuration insert main runway and secondary as 32 SEC 34. It is pilots' job to report if unable with the current runway in use, not ATC's. Thus any reference to report unable to a specific runway is not correct.

Landing is 14 ILS. Always include the available approach procedure. In case of inactive ILS this will read 14 VORDME or 14 RNAV or 14 LOC/RNAV.

Transition Level is based on QNH and reported as FL 75 (i.e. without the first zero).

Transition Altitude is always 7000 ft.

Remarks to be left empty unless relevant information regarding the airport and its safety are required. If the station controls EDNY and LSZR arrivals it is recommended but not mandatory to insert active runways written as EDNY 24 ILS / LSZR 10 ILS.

Separation

Inside Zurich TMA the radar separation minima is reduced from 5 NM to 3 NM. Vertical separation is unchanged.

This reduced minimum can be applied provided that:

- the average runway occupancy time of landing aircraft is proven, by means such as data collection and statistical analysis and methods based on a theoretical model, not to exceed 50 seconds (an example of Runway Occupancy Time calculations at Frankfurt Main is set out in Annex 3, Attachment E);
- braking action is reported as good and runway occupancy times are not adversely affected by runway contaminants such as slush, snow or ice;
- a radar system with appropriate azimuth and range resolution and an update rate of 5 seconds or less is used in combination with suitable radar displays; and
- the aerodrome controller is able to observe, visually or by means of surface movement radar (SMR) or a surface movement guidance and control system (SMGCS), the runway-in-use and associated exit and entry taxiways;

Separation is further reduced to 2.5 NM for "succeeding aircrafts which are established on the same final approach track within 10NM of the landing threshold", subjected to listed restrictions.

Guidelines For The Application of The ECAC Radar Separation Minima – Paragraph 6.3 - Eurocontrol



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- wake turbulence radar separation minima as per ICAO Doc 4444, 7.4.4 or as may be prescribed by the appropriate ATS authority (e.g. for specific aircraft types), do not apply;
- aircraft approach speeds are closely monitored by the controller and when necessary adjusted so as to ensure that separation is not reduced below the minimum;
- aircraft operators and pilots have been made fully aware of the need to exit the runway in an expeditious manner whenever the reduced separation minimum on final approach is applied; and
- procedures concerning the application of the reduced minimum are published in Aeronautical Information Publication.

3. Zurich Arrival

Zurich Arrival – LSZH_W_APP

The West sector of Zurich Arrival is in charge of all traffic inbound Zurich via GIPOL. It takes traffic from FL120 down to IAF altitude or 4'000ft whatever is higher.

It receives traffic from Swiss Radar, usually cleared for FL130 and arrival STAR.

If Final sector is offline, it is in charge to direct traffics from GIPOL to establishment of respective approach procedure (most common is ILS). Once established traffic is transferred to Zurich Tower. Separation on the final sequence is Arrival's duty as such the transfer will be acted only in separation condition satisfied.

If Final sector is online, it is in charge to direct traffics from GIPOL to downwind or base leg. Arrival will transfer traffic to Final at IAF altitude or 4'000ft, whatever is higher, with a maximum speed of 180kts IAS.

The position operates in continuous coordination with East Arrival and Final, when open.

The position is responsible for civil (only) traffic inbound and outbound Emmen AB (LSME).

Zurich Arrival – LSZH_E_APP

The East sector of Zurich Arrival is in charge of all traffic inbound Zurich via AMIKI. It takes traffic from FL120 down to IAF altitude or 4'000ft whatever is higher.

It receives traffic from Swiss Radar, usually cleared for FL130 and arrival STAR.

If Final sector is offline, it is in charge to direct traffics from AMIKI to establishment of respective approach procedure (most common is ILS). Once established traffic is transferred to Zurich Tower. Separation on the final sequence is Arrival's duty as such the transfer will be acted only in separation condition satisfied.



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If Final sector is online, it is in charge to direct traffics from AMIKI to downwind or base leg. Arrival will transfer traffic to Final at IAF altitude or 4'000ft, whatever is higher, with a maximum speed of 180kts IAS.

The position operates in continuous coordination with West Arrival and Final, when open.

The position is responsible for civil (only) traffic inbound and outbound Dübendorf AB (LSMD). In addition it is fully responsible for Friedrichshafen (EDNY) and St. Gallen–Altenrhein (LSZR)

Zurich Final – LSZH_F_APP

Final sector is opened only during high traffic loads with the facility turned on and off according to requirements.

It receives traffic from West and East Arrival at IAF altitude or 4'000ft, whatever is higher, on a downwind or base leg at maximum speed of 180kts IAS. It provides the final turn into arrival procedure, usually ILS. Once established the traffic is transferred to Zurich Tower.

Separation on the final sequence is Final's duty as such the transfer will be acted only in separation condition satisfied.

4. Zurich Departure

Zurich Departure – LSZH_DEP

The Departure position is in charge of all departing aircrafts.

It received traffic from Tower once airborne while performing their SID. It provides separation between different departures as well as traffic inbound Zurich on their descend profile.

When traffic reaches sector limit, FL120, Departure transfers them to Swiss Radar.

Please note, on IVAO, Zurich Departure can be opened only if Zurich Arrival and Zurich Tower are online.



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5. Configurations

To ease understanding and speed up the learning process, each configuration is described with key details.

Conf. 1 Arrival

This is the standard configuration. The position is not subjected to traffic flow or other controllers online.

Callsign	Frequency	Arrival Stacks Responsibility	Role Delegation	Airports of Responsibility
LSZH_W_APP	118.000	GIPOL + AMIKI	APP - DEP	LSZH - EDNY - LSZR - LSME

Conf. 2 Arrivals

Two controllers take care of Zurich TMA arrivals.

Mandatory Requirements:

- TWR connected all the time;
- LSZH_W_APP connected all the time;
- at least 10 inbound traffics for Zurich TMA (LSZH/ZR/ME/EDNY) in a time frame of 60 minutes as shown by Webeye or alternative traffic tracking software.

If either TWR controller disconnects or LSZH W APP disconnects or the traffic count falls below 10 per 60 minutes for longer than 45 minutes, the second controller has to re-connect in a different position immediately.

It is suggested, but not mandatory, that the two controllers keep a direct communication (like Skype call) to coordinate at its best the approach sequencing.

Callsign	Frequency	Arrival Stacks Responsibility	Role Delegation	Airports of Responsibility
LSZH_W_APP	118.000	GIPOL	APP - DEP	LSZH - LSME
LSZH_E_APP	135.225	AMIKI	APP	LSZH - EDNY - LSZR



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Conf. 2 Arrivals + Final

Two controllers take care of Zurich TMA arrivals. One controller acts as Final.

Mandatory Requirements:

- TWR connected all the time;
- LSZH_W_APP connected all the time;
- LSZH_E_APP connected all the time;
- at least 20 inbound traffics for Zurich TMA (LSZH/ZR/ME/EDNY) in a time frame of 60 minutes as shown by Webeye or alternative traffic tracking software.

If either TWR controller disconnects or LSZH W APP disconnects or LSZH E APP disconnects or the traffic count falls below 20 per 60 minutes for longer than 45 minutes, the third controller has to re-connect in a different position immediately.

It is suggested, but not mandatory, that the two controllers keep a direct communication (like Skype call) to coordinate at its best the approach sequencing.

Callsign	Frequency	Arrival Stacks Responsibility	Role Delegation	Airports of Responsibility
LSZH_W_APP	118.000	GIPOLE	APP - DEP	LSZH - LSME
LSZH_E_APP	135.225	AMIKI	APP	LSZH - EDNY - LSZR
LSZH_F_APP	125.325	-	FINAL	LSZH



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6. LoAs

Paragraphs using the wording “**shall**” represent a **mandatory** procedure.

Paragraphs using the wording “**should**” represent a **recommended** procedure.

Paragraphs using the wording “**may**” represent an **optional** procedure.

6.1 Coordination standards (as requested by IVAO Germany)

For coordination with adjacent units the phrases described below shall be used:

Approval Request: Request from an ATS unit to the ATS unit concerned for an approval to deviate from agreed procedures. For example:

- Coordination of a direct routing
- Approval request to cross/use an airspace of a unit not involved in the normal flight profile of the mentioned aircraft (“airspace crossing”)
- Transfer of an aircraft not at agreed level
- Transfer of an aircraft in vertical movement

Phraseology example: “approval request to cross your airspace, *callsign*, *position*, *level*, to proceed direct *waypoint*, descending *level*” - “approved / approved, not below *level* / not approved”

Release: An authorisation by the transferring unit to the accepting unit to climb/descend/turn/control speed (of) a specific aircraft before the point of transfer of control.

Phraseology example: “request release (for climb/turn/...) *callsign*” - “released (for climb/turn/for left turns only/...)”

Request: A specific request by the accepting unit to the transferring unit regarding an aircraft.

Phraseology example: “request *callsign* direct *waypoint*/heading *heading*/climbing *level*/descending *level*/speed *speed*”

Controllers may also coordinate general approvals/releases deviating from agreed procedures.



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From an idea of Dan Gianera CH-ADIR/CH-AOC/CH-TAC
With the collaboration of the entire Swiss Staff Team