International Virtual Aviation Organisation

SWITZERLAND Division

Documentation

Operation Manual

Geneva - LSGG

REVISION LIST

DATE	UPDATED BY	UPDATE DESCRIPTION
08.05.15	LSAZ-CH	Document creation
21.05.15	CH-DIR/LSAG-CH	Procedures Update
08.06.15	CH-ADIR	Layout; Addition of rules for Geneva Final
31.07.17	LSAG-CH	Traffic Management LFLL/LFBL/LFLS
18.10.17	LSAG-CH	Modified: New Position DELIVERY
31.10.17	CH-AOC	Document Revision, Phraseology Update, Change Flightplan integrity

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Contents

1. Overview

Name: **LSGG / GVA**

Coordinates: **N 046° 14' 18" E 006° 06' 30"**

Elevation: **1411 ft / 430 m (AMSL)**

Radio communication language: **English / Français**

Website:

IVAO CH Website:

2. Operation Standards

ATC Facilities

Callsign	Frequency	Name	Notes
LSGG_DEL	121.675	Geneva Delivery	All clearance delivery
LSGG_A_GND	121.850	Geneva Apron	Ground movement on the south apron and Geneva Ground duties if offline
LSGG_TWR	118.700	Geneva Tower	
LSGG_DEP	119.525	Geneva Departure	*Opened only after APP and TWR*
LSGG_APP	136.250	Geneva Arrival	
LSGG_F_APP	120.300	Geneva Final	*Opened only when conditions satisfied as per paragraph 8.*

ATIS

The ATIS must be prepared based on the standard as published on IVAO Switzerland division's website at the link: Runways configuration is dictated by Geneva Tower controller.

It should always include the station name that is Geneva Tower.

METAR Station is LSGG.

Take-off is 23. 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 23 ILS. Always include the available approach procedure. In case of inactive ILS this will read 23 VORDME.

Transition Level is based on QNH and reported as FL 80 (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 like GRASS RWY CLSD. When Datalink clearance is active (suggested) it should be reported as DATALINK ACTV.

Datalink

One of the innovation of modern aviation is the distribution of IFR clearances via ACARS (Aircraft Communications Addressing and Reporting System). This means an IFR clearance can be received as written communication by the airplane crew. Delivery controller receives a

clearance request on ATC's system and replies with all the relevant information. The readback is not necessary as the pilot accept via ACARS.

IVAO implemented the ACARS technology for clearances through a webpage based tool that can be reached at the link:

The system automatically recognizes if you are connected as ATC or Pilot. As ATC you can activate the datalink and pilots will be able to see the airport as available to deliver clearances via datalink. Remember to not close the webpage as well as to check it from time to time as some browsers stop the alert sound that the page generate when a clearance is requested.

Basic rules for the use of the Datalink in Switzerland:

- Use of Datalink is not mandatory! However it is HIGHLY suggested to implement Datalink clearances all the time. It is at pilot's discretion to request clearance via Datalink or Voice, the controller cannot deny a voice clearance even if Datalink is offered.
- The "next frequency" box on the Datalink page will be populated with the respective Apron frequency where the pilot will receive start-up and push back instructions. However the pilot will report ready to push and start to the delivery that will communicate the switch.

Geneva Airport

FRAs

Facility	Position	Time		Rating
LSGG	DEL	0 :00	0 :00	
LSGG	A_GND	0 :00	0 :00	
LSGG	TWR	0 :00	0 :00	
LSGG	DEP	0 :00	0 :00	
LSGG	APP	0 :00	0 :00	
LSGG	F_APP	0 :00	0 :00	

Language

English, French is accepted if both, pilot and controller, use the same language.

Runways

Runway	Heading	Dimension	Elevation	Surface
05	045°	12,795 ft X 164 ft TKOF 3,900m LDG 3,570m x 50 m	1,407 ft	Concrete
05 Grass	045°	2,700 ft X 98 ft 823 m X 30 m	1,407 ft	Grass
23	225°	12,795 ft X 164 ft TKOF 3,900m LDG 3,900m X 50 m	1365 ft	Concrete
23 Grass	225°	2,700 ft X 98 ft 823m X 30m	1365 ft	Grass

Navigation Aids

Name	ID	Frequency	Course
St. Prex VOR	SPR	113.900	
Geneva VOR	GVA	115.750	
Passeiry VOR	PAS	116.600	
Gland NDB	GLA	375	
ILS 05	INE	110.900	045°
ILS 23	ISW	109.900	225°

3. Geneva Delivery – LSGG_DEL

Callsign	Frequency	Station Name
LSGG_DEL	121.675	Geneva Delivery

Geneva Ground is responsible for clearance delivery.

Standard Instrument Departure (SID)

MEDAM 4B / 4P: in case of low temperature and/or low QNH, the true altitude of the aircraft will be lower than indicated on the altimeters of the aircrafts, hence, more margin has to be considered. Use these "non-standard" departure for these cases. A precise indication of “low temperature” and “low QNH” will be provided in the future.

MOLUS / KONIL 4J: when runway 23 is in use the MOLUS departure should not be used and the KONIL 4J departure should be assigned instead. The reason behind this is the time required to traffic via MOLUS to clear the inbound axis of runway 23 compared to KONIL departure.

Flight Plan Integrity

This is the most important and somehow complex task for a Delivery controller. In real life Flight Plans are checked by European and Swiss planning offices that together accept or deny a plan based on route, aircraft, requested flight level and time of the day.

On the IVAO simulation the traffic flow is much less complex so there is less stringent rules in order to accept a flight plan; however the check is performed by Delivery instead of a dedicated office.

There are 6 items to be checked all the times (FEDDRR):

1. Flight Rule:
    - IFR should have I
    - IFR-to-VFR should have Y
2. Equipment:
    - If flying an RNAV route the aircraft must have RNP equipment marked as R in the equipment list. This requires the item PBN/ in the remark section too with A1 (RNAV 10), B1 (RNAV 5), C1 (RNAV 2), D1 (RNAV 1) and S1 depending on accuracy of RNAV equipment. Some instrument departure like DEGES 2S requires P-RNAV or RNAV 1
    - In order to fly inside RVSM airspace (FL290 to FL410) the aircraft has to be equipped with RVMS approved altimeters and report W in the equipment list. Please note all the liners (e.g. A320, B737, etc.) are RVSM equipped, all the time even if they fly outside RVSM
3. Departing aerodrome
    - Check LSGG is rightly spelled
4. Departure time
    - Expected Time of Departure should be at least 10 minutes in the future from connection
5. Requested Flight Level
    - It does NOT need to be checked for correctness.
6. Route
    - The first fix of the route must be a valid SID point. In addition the available SID to the fix should be consistent with the equipment of the aircraft: NON-RNAV plane cannot fly a RNAV SID

Traffic Flow Management

A basic role of Delivery is to set the pace of outbound flow. The major target is to reduce waiting time and fuel consumption. In real airport operators have developed proprietary

software that based on complex algorithms are able to dictate times for the outbound stream based on 5 or 6 parameters at the same time.

IVAO has the luxury of a lower traffic amount, excluding during peak events. As such those complex algorithms won't have much use in our virtual world. However there is still one situation in which Delivery should intervene. In case of two or more aircraft leaving on the same Standard Instrument Departure (SID) the delivery should either alternate the common SID with a different one by sorting departures in a different order or basically delaying the second departure on the same SID by 5 minutes. This will allow a good separation to be maintained. When assigning a planned delay during a clearance, as shown in the "phraseology" paragraph, the Calculated Take Off Time (CTOT) should be reported to the aircraft crew.

One another situation in which CTOT should be used is when there is a long queue, defined as 6 or more, aircraft at the holding point ready to depart.

Lastly, CTOT must be used to inform aircraft of their expected departure time when the airport is affected by an emergency that required the temporary reduction of traffic.

However be careful with CTOT because it has a tolerance of -5 to +10 minutes once assigned.

Phraseology

Below some basic phraseology essential to the Delivery position.

LSGG_DEL: Swiss 324, Geneva Ground hello, [check Information PAPA] cleared to Heathrow, via DIPIR 5A departure, initial climb FL 090, squawk 5701

The clearance is made by a Standard Instrument Departure (SID) and a squawk code. Usually there is no mention to initial climb; it might be good idea on IVAO though.

The clearance is given only if the aircraft is ready for push back and start-up. If the aircraft is not ready the instruction should be “expect xxx departure out of runway xx, report ready”. Once the aircraft is ready, the full clearance is given.

After the read back:

LSGG_DEL: QNH 1013, contact Apron on 121.850 for start-up

True Altitude Correction

Based on temperature and QNH, the true altitude will vary.

At FL140 the true altitude will be lower with low temperature and/or low QNH. When the margin is below minimum (1,000ft / 2,000ft depending on the altitude), ATC has to provide more margin to guarantee safety.

For departures there are different SIDs depending on the situation and they are identified with a different letter as designator: 4A, 4B and 4C

For arrivals the ATC has to add 1,000 ft, equivalent to 4B, or 2,000 ft, equivalent of 4C, on all published minima.

Minimum Flight Levels Required on Departures

D9 PAS

ROCCA 4	A	B	C
MIN FL	090	100	110

D16 PAS

MEDAM 4	A	B	C
MIN FL	110	120	130

ODIKI

ROCCA 4	A	B	C
MIN FL	140	150	160

ESAPI

MEDAM 4	A	B	C
MIN FL	140	150	160

ESAPI

MEDAM 4	A	B	C
MIN FL	140	150	160

D33 PAS

ROCCA 4	A	B	C
MIN FL	180	190	200

See Appendix 1.

Squawk

The assignment of squawk codes is an ongoing evolving subject. The introduction of ADB-S transponders removed the requirement of unique SSR codes because the signal transmitted by the transponder includes aircraft identification. This explains why a squawk 1000 became very common in the recent months, years. However this is not applicable to all traffics.

By and large the rule is:

- 1000 if destination is France, Germany and Benelux
- 5701 to 5757 for all other destinations

Please note this is an approximation of real operations for which assignment of squawk codes is still under testing and evolution.

	International Departure	National Departures (substituted by Sierra Transponder)	VFR	Sierra Transponder
CODE	5701-5757	4501-4537	7040-7057	1000

4. Geneva Apron – LSGG_A_GND

Callsign	Frequency	Station Name
LSGG_A_GND	121.850	Geneva Apron

Geneva Apron gives start-up, pushback and taxi clearance.

Taxi instructions are given once the aircraft is ready. In case of high traffic load, Apron is responsible for sequencing the aircrafts in terms of weight categories and departures with the help of Geneva Ground. Better delay a start-up clearance (no engine running) than to have 10 aircrafts waiting for departure at the holding point with engines running.

The goal is to have some blocks of same categories (all medium, then all heavy) and to avoid two (or more) similar departures as the sequencing will have to be done later by another controller. For two aircrafts having the same departure, let the fastest go first, or delay the second departure of at least 3 min.

Regarding voice frequency management, the priority must be given to aircrafts vacating the runway; better delay a clearance than leaving an aircraft on the runway.

Runway 23

All stands (excluding 127, 121, 34, 31, 44) taxi via INNER, LINK 5 to holding point runway 23.

For the other stands it is based on the traffic vacating runway 23. As written in the briefing notes of Geneva (2.4.1), traffic should vacate runway 23 via taxiway D or E but not C (as it would block the outer). Thus Apron should expect traffic vacating at D. This will mean, for example, an outbound from gate 127 will taxi via OUTER, LINK 1, INNER, LINK 5 (common practice when an aircraft is expected to come from the runway at D). However, for gates 127, 34 and 44, if traffic allows, the standard instruction is Turn Right into OUTER (at minimum power) to holding point 23.

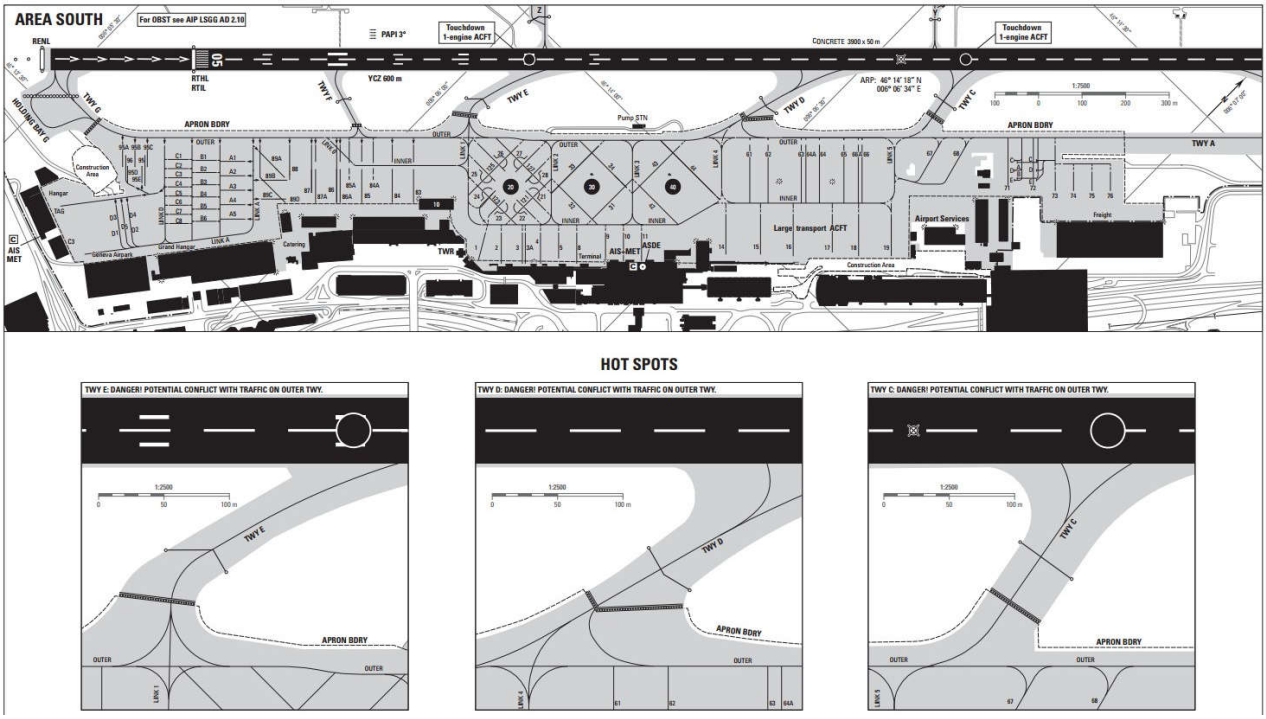
Runway 05

No particular procedure. The usual direction of the OUTER is towards the holding point runway 05 (east to west) while INNER is used for inbound traffic to the Apron (east to west).

Gate Assignment

These are the main gate assignment rules, however, it cannot be very strict as an aircraft can come from a Schengen country and leave to a non-Schengen country, and passengers would be brought to the aircraft by bus.

- 1 to 12: Schengen (10 and 11 To/From France only (French Sector in GVA airport).
- 14 to 19: A330 and heavy category.
- Satellite 20: Schengen. 121, 123, 125 and 127 are for jets while the others are for prop. aircrafts.
- Satellite 30: non-Schengen (Usually UK).
- Satellite 40: non-Schengen.
- 61 to 66: boarding by bus, all companies. Often used when "normal stands" are busy.
- 83, 84, 85, 86, 89A/B/C/D are usually for aircrafts requiring maintenance in the following night (mostly used by GVA based airlines: EZS and directed by follow me cars).
- Gates A, B and C: corporate jets (directed by follow me cars).



Apron – Tower Handoffs

Apron to Tower. As soon as there is no conflict, based on Apron controller judgement:

- RWY 23 when passing C latest (sometimes when passing E on the OUTER).
- RWY 05 when passing F or E latest.

Tower to Apron. When the aircraft is vacating the runway; early enough to avoid the aircrafts to stop.

5. Geneva Tower – LSGG_TWR

Callsign	Frequency	Station Name
LSGG_TWR	118.700	Geneva Tower

Geneva Tower takes the usual responsibility of Tower controller with full control of the Geneva CTR (VFR traffic) and runways movement.

VFR Management

Although in practice in Geneva VFR are highly limited, there is no limit on the IVAO network applied to VFR traffic, with the exception of events or controller requirement during high traffic congestion.

The traffic pattern is Right hand when runway 23 in use; Left hand when runway 05 in use.

The assigned transponder code will be 7040.

The entry and exit routes are November - Echo - Sierra and Whisky.

Consult VFR charts here

Coordinated Separation

If two aircrafts have similar departures and they are one behind another, it is accepted that Tower gives a 30° deviation from runway heading to create separation.

In case of high traffic load Tower may request speed reduction towards 180kts / 160kts or final approach speed either to make sure preceding aircraft will have time to vacate on time or to create space to put a departing traffic in the between.

Departing traffic must be separated according to standard wake turbulence separation minima.

Tower – Departure Handoffs

Tower to Departure. Around 3,000 ft and 4’000 ft climbing.

6. Geneva Departure – LSGG_DEP

Callsign	Frequency	Station Name
LSGG_DEP	119.525	Geneva Departure

Geneva Departure is responsible for all IFR traffic climbing out of Geneva.

The controller identifies the aircraft, and gives a clearance to FL150 (or FL190 for DEPUL departures), or the highest available based on current traffic situation if climbing straight to FL150/190 is blocked. Maximum care must be taken in case of converging traffic arriving in GVA, LYS, or Chambéry.

The controller is in constant coordination with Arrival controller.

Direct to Shortcuts

All changes to route and SID that will end in a different sector (Swiss Radar) must be coordinated, always, with the ATC that will receive the traffic next and it will be affected by the shortcut provided.

- ARBOS, DIPIR. If traffic allows and if Swiss Radar release the traffic for the direct (i.e. Swiss Radar is ok with the decision): when passing 6,000 ft direct to ARBOS or DIPIR.
- MEDAM, BALSI. If traffic allows and if Swiss Radar release the traffic for the direct (i.e. Swiss Radar is ok with the decision): when passing 6,000 ft direct to ESAPI or RUMIL.
- DEPUL. If traffic allows and if Swiss Radar release the traffic for the direct (i.e. Swiss Radar is ok with the decision): when passing 6,000 ft direct to PAS or DEPUL.

Departure – Swiss Radar Handoffs

Traffic is transferred to Swiss Radar when around FL100 climbing without any conflict, to allow a continuous climb. Normal jets may have a rate of climb of 4,000 ft or more, hence plan the handover accordingly.

Departure – Marseille Control Handoffs

When traffic is on DEPUL and BALSI departures the handover is done directly to Marseille instead of Swiss Radar.

Traffic is cleared to FL190 when DEPUL and BALSI departures. The handover to Marseille can be done when the aircraft is over PAS on a DEPUL departure out of runway 05, it will be at about FL100, when there is no conflict or expected conflict.

7. Geneva Arrival – LSGG_APP

Callsign	Frequency	Station Name
LSGG_APP	136.250	Geneva Arrival

Geneva Arrival is responsible for all IFR traffic with destination Geneva as well as traffic crossing Geneva TMA.

If Final sector is offline, it is in charge to direct traffics to establishment of respective approach procedure (most common is ILS). Once established traffic is transferred to Geneva 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 to downwind or base leg. Arrival will transfer traffic to Final at IAF altitude with a maximum speed of 180kts IAS.

The sector, and its functionalities, are highly affected by the mountains around the airport, including Europe's highest mountain, the Mont Blanc 4,810 m (15,781 ft).

Separation

Inside Geneva 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

> 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

- 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;
- 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.

Speed and Descend Management

Keep in mind that a liner has limited ability to slowdown and descend at the same time. The topographic region limits the vertical space available for descend in case of shortcut. Please be always focused on distance from approach and aircraft altitude to plan a continuous descend in full safety.

In case of high traffic load the usual speeds to allow smooth flow of traffic are minimum clean speed (minimum speed with no flaps), 180kts to maintain 6NM final and 160kts to 4NM final.

In case of low traffic load there is no need to give speed reduction as traffic should be able to manage its own speed. However it may be necessary an ATC intervention in case the traffic would be too fast to perform what it is cleared for.

When providing substantial shortcuts, please give the number of "track miles" you are expecting the aircraft to run so that the pilot knows what to expect, and hence, is able to plan the descent accordingly.

Optimal Approach

Runway 23. Interception should occur at PETAL 4,000 ft or between PETAL and SPR. Use the interception at SPR and further only when you cannot give shortcuts.

Runway 05. Interception should occur at BELKA at 6,000 ft. Direct INDIS can be given for BELUS arrivals only.

If condition allows, Arrival may clear aircrafts for visual approaches. In this case the standard phraseology should be: "Cleared visual approach runway 23 (05) to be established by PETAL (PAS VOR)".

If traffic load allows, you should give as many shortcuts as possible. STAR should be flown only to help you to sequence traffic.

Arrivals

AKITO and LUSAR arrivals.

This is an open STAR. As such at the end of the downwind legs (GG514 and GG503) the aircrafts are not cleared to turn into base but they must continue straight ahead. However, to avoid confusion, a heading instruction can be given to make sure that no turn will occur.

- RWY 23: based on traffic flow, AKITO to SPR for FL 80 with high speed approved. Then vectors to PETAL. To handle the traffic load, small shortcuts to DINIG, SOVAD or GG507 can be provided. Attention shall be given to departing traffic from GVA going northbound and coordination with Departure is required.
- RWY 05: if traffic allows, AKITO to GG503 for FL 80 with high speed approved. Then vectors to BELKA at 6,000 ft. Attention shall be given to departing traffic from GVA going northbound and coordination with Departure is required.

BANKO and KINES arrivals.

Based on traffic flow, SPR or GG502 direct. Maximum care with terrain must be taken, check MRVA charts if unsure. Based on MRVA, FL140, FL110, FL90 and 7'000ft are usual clearances.

The usual pattern is: FL220 over BANKO, after BANKO cleared to FL190 (MRVA is 18'000ft with the Mt Blanc). Approximately 8nm before GOLEB, cleared to FL160 and handover to Arrival. Attention shall be given to departing traffic from GVA going southbound and coordination with Departure is required.

BELUS arrival.

Traffic is transferred by Marseille directly to Geneva Arrival and that should be done before BELUS with aircraft cleared to FL200 if runway 23 in use or FL160 if runway 05 in use. Usually, the STAR is given by Geneva Arrival.

- RWY 23: based on traffic flows, direct to GG512 then vectors to PETAL.
- RWY 05: based on traffic flows, direct to INDIS at 7,000 ft to intercept the ILS. Full arrival BELUS 2N is almost never flown (unless high traffic load). Expect BELUS at FL160 or above and CBY at FL100 or above. In normal conditions aircrafts will be above optimal descend path. Hence provide them descend rate restrictions.

BENOT and ULMES arrivals.

- RWY 23: BENOT1R and ULMES1R are the preferred arrival.
- RWY 05: BENOT1P and ULMES1P are the preferred arrival. Attention shall be given to departing traffic from GVA going southbound and coordination with Departure is required.

Transit Traffic

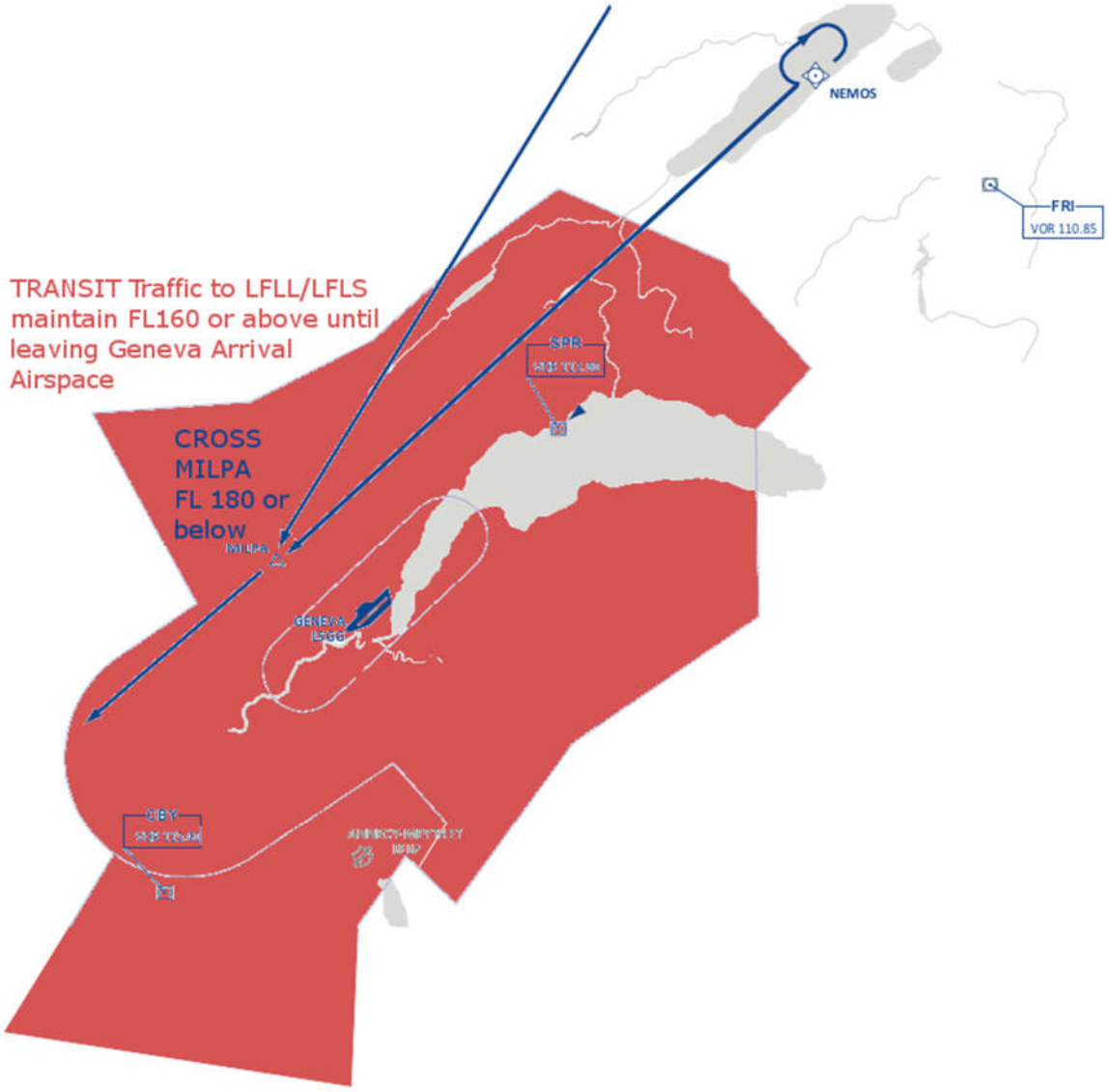
In contrast to what the standard applies in IVAO, Geneva Arrival does not control traffic inbound Lyon, Grenoble, Chambery or Annecy that is managed by Swiss Radar. Swiss Radar shall coordinate transit traffic as far as applicable with Geneva Arrival

LFLL/LFLS **(LYON/GRENOBLE)**

Inbound traffic to LFLL/LFLS is controlled by Swiss Radar. If Swiss Radar is not online, LSGG_APP has to ensure that the traffic is maintaining min. FL 160

MILPA ***STARs*** ***(MILPA5N/5S)***

Lyon Arrivals from Zurich, Reims or Paris shall cross MILPA FL180 or below but maintain FL160 until leaving LSGG_APP Airspace for MILPA5N/5S Arrival (Arrivals shall be coordinated with LFLL_APP as far as applicable.)



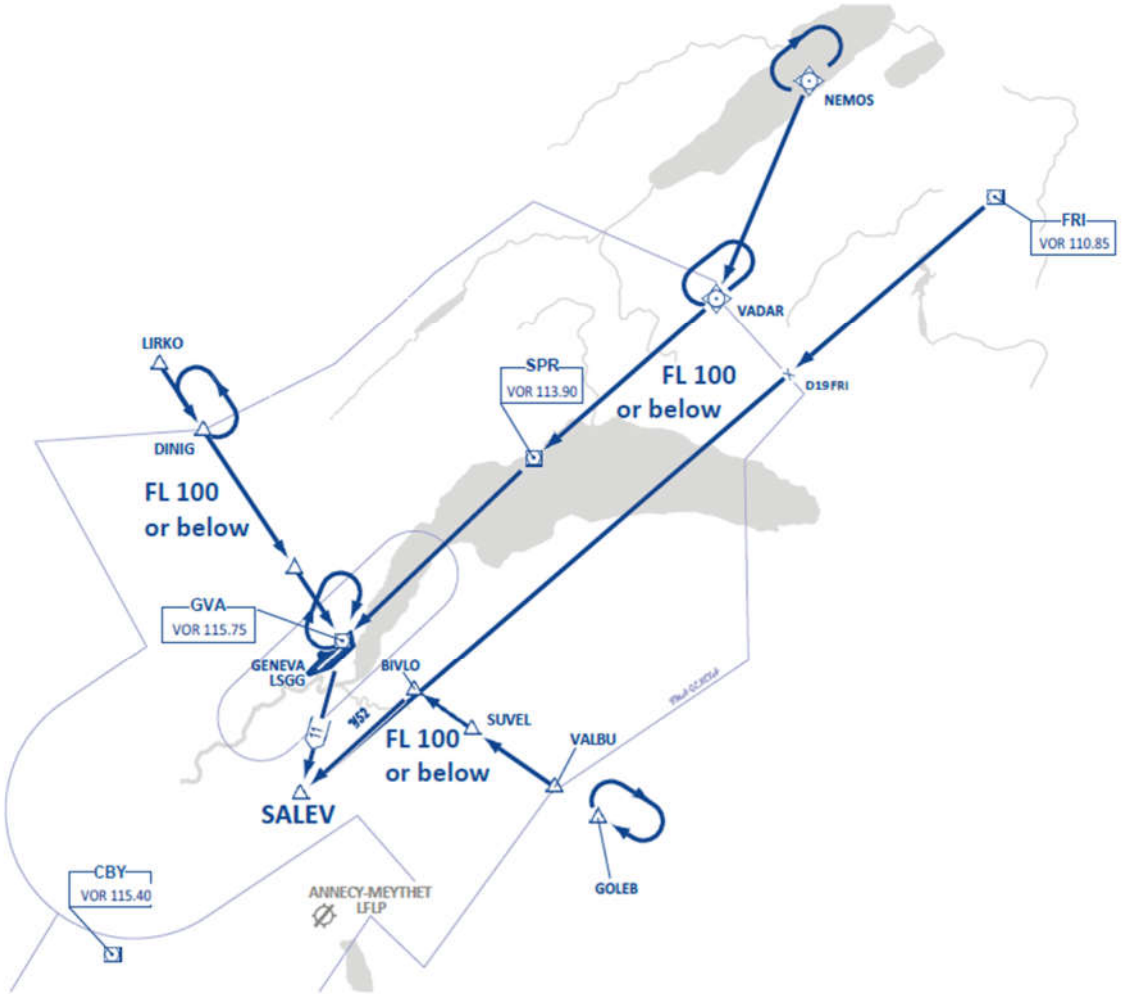
LFLB/LFLP **(CHAMBÉRY-SAVOIE/ANNECY)**

Chambery and Annecy Arrivals on Airways to SALEV (E.g. Y58 (BENOT-NEMOS-VADAR-SPR-GVA-SALEV) shall be transferred from Swiss Radar to Geneva Arrival prior passing FL160 in descent.

Geneva Arrival is responsible for traffic below FL 160.

SALEV *STARs :*

All crossing traffic for SALEV Arriving STAR's to Chambéry or Annecy shall maintain FL100 or below, subject to coordination with Geneva Arrival and its RWY Concept in use.



8. Geneva Final – LSGG_F_APP

Callsign	Frequency	Station Name
LSGG_F_APP	120.300	Geneva Final

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

It receives traffic from Geneva Arrival at IAF altitude, 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 Geneva Tower.

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

Mandatory Requirements for the opening of Geneva Final:

- TWR connected all the time;
- LSGG_APP connected all the time;
- at least 20 inbound traffics for Geneva in a time frame of 60 minutes as shown by Webeye or alternative traffic tracking software.

If either TWR controller disconnects or LSGG_APP disconnects or the traffic count falls below 20 per 60 minutes for longer than 45 minutes, the Final 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.

Appendix 1.

True Altitude table based on Flight Level – Temp – QNH

14000	-30	-25	-20	-15	-10	-5	0	5	10	15	20	25	30
970	11159	11439	11719	11999	12279	12559	12839	13119	13399	13679	13959	14239	14519
971	11186	11466	11746	12026	12306	12586	12866	13146	13426	13706	13986	14266	14546
972	11213	11493	11773	12053	12333	12613	12893	13173	13453	13733	14013	14293	14573
973	11240	11520	11800	12080	12360	12640	12920	13200	13480	13760	14040	14320	14600
974	11267	11547	11827	12107	12387	12667	12947	13227	13507	13787	14067	14347	14627
975	11294	11574	11854	12134	12414	12694	12974	13254	13534	13814	14094	14374	14654
976	11321	11601	11881	12161	12441	12721	13001	13281	13561	13841	14121	14401	14681
977	11348	11628	11908	12188	12468	12748	13028	13308	13588	13868	14148	14428	14708
978	11375	11655	11935	12215	12495	12775	13055	13335	13615	13895	14175	14455	14735
979	11402	11682	11962	12242	12522	12802	13082	13362	13642	13922	14202	14482	14762
980	11429	11709	11989	12269	12549	12829	13109	13389	13669	13949	14229	14509	14789
981	11456	11736	12016	12296	12576	12856	13136	13416	13696	13976	14256	14536	14816
982	11483	11763	12043	12323	12603	12883	13163	13443	13723	14003	14283	14563	14843
983	11510	11790	12070	12350	12630	12910	13190	13470	13750	14030	14310	14590	14870
984	11537	11817	12097	12377	12657	12937	13217	13497	13777	14057	14337	14617	14897
985	11564	11844	12124	12404	12684	12964	13244	13524	13804	14084	14364	14644	14924
986	11591	11871	12151	12431	12711	12991	13271	13551	13831	14111	14391	14671	14951
987	11618	11898	12178	12458	12738	13018	13298	13578	13858	14138	14418	14698	14978
988	11645	11925	12205	12485	12765	13045	13325	13605	13885	14165	14445	14725	15005
989	11672	11952	12232	12512	12792	13072	13352	13632	13912	14192	14472	14752	15032
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991	11726	12006	12286	12566	12846	13126	13406	13686	13966	14246	14526	14806	15086
992	11753	12033	12313	12593	12873	13153	13433	13713	13993	14273	14553	14833	15113
993	11780	12060	12340	12620	12900	13180	13460	13740	14020	14300	14580	14860	15140
994	11807	12087	12367	12647	12927	13207	13487	13767	14047	14327	14607	14887	15167
995	11834	12114	12394	12674	12954	13234	13514	13794	14074	14354	14634	14914	15194
996	11861	12141	12421	12701	12981	13261	13541	13821	14101	14381	14661	14941	15221
997	11888	12168	12448	12728	13008	13288	13568	13848	14128	14408	14688	14968	15248
998	11915	12195	12475	12755	13035	13315	13595	13875	14155	14435	14715	14995	15275
999	11942	12222	12502	12782	13062	13342	13622	13902	14182	14462	14742	15022	15302
1000	11969	12249	12529	12809	13089	13369	13649	13929	14209	14489	14769	15049	15329
1001	11996	12276	12556	12836	13116	13396	13676	13956	14236	14516	14796	15076	15356
1002	12023	12303	12583	12863	13143	13423	13703	13983	14263	14543	14823	15103	15383
1003	12050	12330	12610	12890	13170	13450	13730	14010	14290	14570	14850	15130	15410
1004	12077	12357	12637	12917	13197	13477	13757	14037	14317	14597	14877	15157	15437
1005	12104	12384	12664	12944	13224	13504	13784	14064	14344	14624	14904	15184	15464
1006	12131	12411	12691	12971	13251	13531	13811	14091	14371	14651	14931	15211	15491
1007	12158	12438	12718	12998	13278	13558	13838	14118	14398	14678	14958	15238	15518
1008	12185	12465	12745	13025	13305	13585	13865	14145	14425	14705	14985	15265	15545
1009	12212	12492	12772	13052	13332	13612	13892	14172	14452	14732	15012	15292	15572
1010	12239	12519	12799	13079	13359	13639	13919	14199	14479	14759	15039	15319	15599
1011	12266	12546	12826	13106	13386	13666	13946	14226	14506	14786	15066	15346	15626
1012	12293	12573	12853	13133	13413	13693	13973	14253	14533	14813	15093	15373	15653
1013	12320	12600	12880	13160	13440	13720	14000	14280	14560	14840	15120	15400	15680
1014	12347	12627	12907	13187	13467	13747	14027	14307	14587	14867	15147	15427	15707
1015	12374	12654	12934	13214	13494	13774	14054	14334	14614	14894	15174	15454	15734
1016	12401	12681	12961	13241	13521	13801	14081	14361	14641	14921	15201	15481	15761
1017	12428	12708	12988	13268	13548	13828	14108	14388	14668	14948	15228	15508	15788
1018	12455	12735	13015	13295	13575	13855	14135	14415	14695	14975	15255	15535	15815
1019	12482	12762	13042	13322	13602	13882	14162	14442	14722	15002	15282	15562	15842
1020	12509	12789	13069	13349	13629	13909	14189	14469	14749	15029	15309	15589	15869
1021	12536	12816	13096	13376	13656	13936	14216	14496	14776	15056	15336	15616	15896
1022	12563	12843	13123	13403	13683	13963	14243	14523	14803	15083	15363	15643	15923
1023	12590	12870	13150	13430	13710	13990	14270	14550	14830	15110	15390	15670	15950
1024	12617	12897	13177	13457	13737	14017	14297	14577	14857	15137	15417	15697	15977
1025	12644	12924	13204	13484	13764	14044	14324	14604	14884	15164	15444	15724	16004
1026	12671	12951	13231	13511	13791	14071	14351	14631	14911	15191	15471	15751	16031
1027	12698	12978	13258	13538	13818	14098	14378	14658	14938	15218	15498	15778	16058
1028	12725	13005	13285	13565	13845	14125	14405	14685	14965	15245	15525	15805	16085
1029	12752	13032	13312	13592	13872	14152	14432	14712	14992	15272	15552	15832	16112
1030	12779	13059	13339	13619	13899	14179	14459	14739	15019	15299	15579	15859	16139
1031	12806	13086	13366	13646	13926	14206	14486	14766	15046	15326	15606	15886	16166
1032	12833	13113	13393	13673	13953	14233	14513	14793	15073	15353	15633	15913	16193
1033	12860	13140	13420	13700	13980	14260	14540	14820	15100	15380	15660	15940	16220
1034	12887	13167	13447	13727	14007	14287	14567	14847	15127	15407	15687	15967	16247
1035	12914	13194	13474	13754	14034	14314	14594	14874	15154	15434	15714	15994	16274
1036	12941	13221	13501	13781	14061	14341	14621	14901	15181	15461	15741	16021	16301
1037	12968	13248	13528	13808	14088	14368	14648	14928	15208	15488	15768	16048	16328
1038	12995	13275	13555	13835	14115	14395	14675	14955	15235	15515	15795	16075	16355
1039	13022	13302	13582	13862	14142	14422	14702	14982	15262	15542	15822	16102	16382
1040	13049	13329	13609	13889	14169	14449	14729	15009	15289	15569	15849	16129	16409

On Behalf of the ATC Departement