

## ENR 1.3 INSTRUMENT FLIGHT RULES

### 1. Turns with MNM Bank Angle

Several IFR procedures in the Swiss airspace contain turns with bank angle restrictions (e.g. MNM BANK ANGLE 25°). Such turns shall be performed either at or above the specified bank angle, or at the bank angle corresponding to the standard rate of turn of 3°/s, whichever is the lesser.

MIL ACFT FLTs are subject to special regulations.

### 2. Procedures for RVSM flights

Where an ACFT's **altitude reporting system displayed level (Transponder mode C/S ADS\_B)** differs from the reported FL by 200 ft or more, the controller shall inform the pilot accordingly and the pilot shall be requested to check the pressure setting and confirm the ACFT's level.

### 3. Special procedures for IFR flights (Z and Y) within FIR Switzerland (LSAS)

#### 3.1 Departures

Flight plans must be submitted in accordance with [ENR 1.10](#) FLIGHT PLANNING.

Z FLT wishing to change flight rules from VFR to IFR within FIR Switzerland, departing from a Swiss AD or with an EET of less than 10 MIN to the FIR Switzerland BDRY, should be notified before DEP (earliest 15 MIN prior to EOBT) by TEL to:

- ACC Zurich (when wishing to change from VFR to IFR within CTA Zurich),  
TEL +41 (0) 43 931 69 65;
- ACC Geneva (when wishing to change from VFR to IFR within CTA Geneva),  
TEL +41 (0) 22 747 13 91.

Advance notification by TEL supports the above mentioned services in pre-planning and coordinating the FLT and relevant information (e.g. SSR code or ATC FREQ to obtain ATC clearance) may be exchanged.

Due to ATFM measures, reception of Slot Allocation Message (SAM) for Z FLT is possible. Adherence to issued DEP slot (CTOT) is compulsory.

Z FLT departing from an uncontrolled AD, shall activate FPL via AIM services or request activation of the FPL on initial contact with the appropriate ATS unit.

Failure to comply may delay the reception of ATC clearance to change to IFR or to enter controlled airspace. For local procedures, contact the relevant AD authority.

#### 3.2 General procedures for Z/Y FLTs from and to LSZL

FPL concerning Z/Y flights from and/or to LSZL shall additionally be addressed to LSZAZTZX.

Whenever active, LSZL ATC will carry out the coordination for Z flights described in ENR 1.3.3.2.1, providing the flight crew with a transponder code and the frequency for the IFR joining, in addition to other relevant information.

##### 3.2.1 Southbound Z FLTs departing from LSZL

Southbound FLTs may join IFR either over LUGAN or a WPT within the AoR (Area of Responsibility) of MILANO.

Departures intending to join a LSZA SID are coordinated either by Locarno TWR or by Locarno AD authority (outside ATS service hours) with Lugano TWR/APP, when active. After departure, flights shall proceed under VFR towards LUGAN and hold outside CTR, until contact with Lugano TWR/APP is established.

Departures intending to join IFR within MILANO AoR (not LUGAN), or if Lugano TWR/APP is not active, are coordinated by Locarno TWR or by Locarno AD authority (outside ATS service hours) with MILANO FIC.

##### 3.2.2 Northbound Z FLTs departing from LSZL

Northbound FLTs should climb under VFR towards the north, to join IFR within the airway system. Coordination procedures with ACC Zurich according to ENR 1.3.3.2.1 apply.

If the meteorological conditions do not permit the above-mentioned procedure, the FLT may join a LSZA SID towards the north, according to the procedure described in ENR 1.3.3.2.1.

### 3.2.3 Y FLTs to LSZL

Such FLTs should preferably file "PINIK" or any other WPT within TMA Milano or CTA Zurich, as the WPT at which the change from IFR flight to VFR flight may be executed.

After their change from IFR to VFR, such FLTs may expect to cross CTR Lugano either via MEZZO or via W-Luino.

If continuation of the FLT under VFR is not possible, Lugano TWR/APP may issue an IFR APCH CLR to land at LSZA.

## 4. Clearance to fly maintaining own separation in VMC (VMC climb/descent)

When so requested by an ACFT, a controlled FLT operating in VMC may be cleared to climb or descend, subject to maintaining its own separation from other ACFT and remaining in VMC, provided the following conditions are fulfilled:

- a. the VMC climb/descent clearance may be delivered O/R only if the FLT crew of the other ACFT agrees to the use of the procedure;
- b. the VMC climb/descent clearance may be delivered during the HR of daylight only;
- c. essential traffic information will be given by ATC to the ACFT concerned.

## 5. Expected Approach Time (EAT)

An EAT is transmitted to an ACFT only O/R of the pilot, or if it is likely that the delay will be 10 MIN or more. The EAT will only be revised if the transmitted time is likely to change by more than 5 MIN.

## 6. Reduced reporting procedures

Radiotelephony procedures employed by pilots of IFR FLTs within Swiss area of jurisdiction:

- a. The initial call after a change of radio FREQ will only contain ACFT IDENT and actual FL, indicating the cleared FL for ACFT in climb or descent;
- b. Any PSN report, if required subsequently, will only contain ACFT IDENT, PSN and time over;
- c. If assigned a speed requirement, the FLT crew shall report this in the initial call.

## 7. Rate of climb/descent

Should a pilot for any reason not be able to comply with the ROC/ROD cleared by ATC, he shall inform the controller immediately.

Depending on the phase of FLT, the procedures specified below are applicable to all ACFT whose PER data allows these procedures to be met:

- level changes ENR:  
during descent, a rate of between 1000-2500 ft/min is expected and should be complied with (except within the last 1000 ft to the cleared FL, the rate should not exceed 1000 ft/min) and similarly, ACFT CMB the cleared FL, the ROC within the last 1000 ft should not exceed 1000 ft/min either;
- level changes in HLDG patterns:  
a ROD of 1000 ft/min or less is expected and should be complied with;
- descent on STAR's:  
a rate of between 1500-2500 ft/min is expected and should be complied with;
- LVE IAF under radar vectors:  
unless otherwise specified by ATC, the ROD is at pilot's discretion.
- any DEV from the above mentioned rates, if deemed necessary by the pilot, shall be communicated to ATC immediately.

## **8. RNAV applications**

### **8.1 Fixed RNAV routes**

These are permanently published ATS routes which shall be flight-planned. They are identified by route designators in accordance with ICAO Annex 11.

#### **8.1.1 RNAV 5 routes**

RNAV 5 routes are designed within Swiss Airspace in accordance with ICAO Doc 8168 Vol II Procedures for Air Navigation Services - Aircraft Operations.

#### **8.1.2 RNP 0.3 routes for helicopter**

RNP 0.3 routes (KYxyz) and associated routes (KQxyz) are designed for helicopter operation within Swiss Airspace in accordance with ICAO Doc 8168 Vol II Procedures for Air Navigation Services - Aircraft Operations.

## **8.2 Free Route Airspace – General procedures**

### **8.2.1 Definitions**

#### **8.2.1.1 FRA**

A specified airspace within which users may freely plan a route between a defined entry point and a defined exit point, with the possibility to route via intermediate (published or unpublished) waypoints, without reference to the ATS route network, subject to airspace availability. Within this airspace, flights remain subject to air traffic control.

#### **8.2.1.2 FRA significant points**

##### **FRA horizontal entry point (E)**

A published significant point on the horizontal boundary of the Free Route Airspace from which FRA operations are allowed. The FRA relevance of such points is included in ENR 4.1/4.4 columns as (E).

##### **FRA horizontal exit point (X)**

A published significant point on the horizontal boundary of the Free Route Airspace to which FRA operations are allowed. The FRA relevance of such points is included in ENR 4.1/4.4 columns as (X).

##### **FRA horizontal intermediate point (I)**

A published significant point or unpublished point, defined by geographical coordinates or by bearing and distance via which FRA operations are allowed. Intermediate points may be used to connect FRA operations to ATS route network. If published, the FRA relevance of such points is included in ENR 4.1/4.4 columns as (I).

##### **FRA arrival connecting point (A)**

A published significant point to which FRA operations are allowed for arriving traffic to specific aerodromes. The FRA relevance of such points is included in ENR 4.1/4.4 columns as (A).

##### **FRA departure connecting point (D)**

A published significant point from which FRA operations are allowed for departing traffic from specific aerodromes. The FRA relevance of such points is included in ENR 4.1/4.4 columns as (D).

### **8.2.2 Area of application**

Skyguide provides ATS in areas above Switzerland and in delegated areas above Austria, Germany, Italy and France. These combined areas comprise Skyguide's Area of Responsibility (AoR).

LSASFRA is a Free Route Airspace area created within the entire lateral limits of Skyguide's AoR. FRA procedures are available H24 above FL195 up to FL660 within LSASFRA Part 1 and up to FL245 within LSASFRA Part 2 as detailed in ENR 2.2 and ENR Charts.

Italian Free Route Airspace volume "FRAIT" as described in AIP Italy ENR 2.2 extends over Swiss territory. Flights within FRAIT shall comply with the flight planning requirements defined in AIP Italy ENR 1.10.

French Free Route Airspace volume "LFFRAE" as described in AIP France ENR 2.2 extends over Swiss territory. Flights within LFFRAE shall comply with the flight planning requirements defined in AIP France ENR 1.10.

## **8.2.3 FRA procedures**

### **8.2.3.1 General**

Within FRA flights may be planned DCT between significant points and/or radio navigation aids published in ENR 4.1/4.4. There is no restriction on the maximum DCT distance.

The use of unpublished points defined by geographical coordinates or by bearing and distance is not allowed.

### **8.2.3.2 Overflying traffic**

Within LSASFRA aircraft operators can freely plan a route between a defined FRA Horizontal Entry Point (E) and a defined FRA Horizontal Exit Point (X), with the possibility to route via FRA Intermediate Points (I), without a reference to the ATS route network, subject to airspace availability.

### **8.2.3.3 Access to/from terminal airspace**

Vertical entry and exit to/from the LSASFRA is made possible via the connection of ATS route segments connected to FRA significant points mentioned above. These ATS route segments are in turn connected to the SIDs or STARs of the various aerodromes. The available FRA connections between significant points and/or radio navigation aids to the ATS route network are published in the Route Availability Document (RAD).

### **8.2.3.4 Cross-border application**

#### **8.2.3.4.1 FRA Germany**

Cross border FRA application is available between LSASFRA and DFS FRA Cells EDUU East, EDUU West and EDMM South. Flights between these areas are not required to file a FRA horizontal entry or exit point (E, X), rather the use of a FRA intermediate point (I), that is situated near the boundary and published in ENR 4.1 or ENR 4.4 is possible. It is not allowed to plan from a FRA significant point inside LSASFRA to a location described by geographical coordinates inside DFS FRA and vice versa. Only significant points as published in AIP ENR 4.1 or ENR 4.4 are permitted. Specific restrictions on the use of the FRA intermediate points (I) between the FRA areas are defined in the RAD if necessary.

#### **8.2.3.4.2 FRA France**

Cross border FRA application is available between LSASFRA and French FRA Cells LFFRAC, LFFRAE and LFFRANE. Flights between these areas are not required to file a FRA horizontal entry or exit point (E, X), rather the use of a FRA intermediate point (I), that is situated near the boundary and published in ENR 4.1 or ENR 4.4 is possible. It is not allowed to plan from a FRA significant point inside LSASFRA to a location described by geographical coordinates inside LFFRAE and vice versa. Only significant points as published in AIP ENR 4.1 or ENR 4.4 are permitted. Specific restrictions on the use of the FRA intermediate points (I) between the FRA areas are defined in the RAD if necessary.

### **8.2.3.5 Airspace reservation – special areas**

In general, aircraft operators will plan their trajectory around reserved or segregated airspace, when not available for civil operations, by using the relevant FRA intermediate points (I) published for this purpose in ENR 4.4.

Flights may be planned through AMC-manageable restricted airspaces (RSAs) according to the European Airspace Use Plan/ European Updated Airspace Use Plan (EAUP/EUUP); subject to the rules that are specified in RAD Annex 2C.

## **8.3 RNAV Instrument departure, arrival, approach and holding procedures**

RNAV procedures for departure (SID), arrival (STAR), holding pattern and instrument approach (initial, intermediate, final approach and missed approach segments) are designed in accordance with the ICAO Doc 8168 PANS-OPS criteria, or the ICAO Doc 9905 RNP AR Procedure Design Manual for procedures based on the RNP AR navigation specification. To navigate these procedures all aircraft and aircrew shall comply with the requirements of the prescribed navigation specification notified to users by the way of the aeronautical information publication indicated on the charts in the relevant AD sections. The published RNAV procedure can require that the performance of the RNAV system is realized by means of specific sensors (e.g.: GNSS or DME/DME).

## **8.4 Other applications of RNAV**

There are specific direct routings assigned by ATC at tactical level or on pilots' requests.