

**GEN 1.5 AIRCRAFT INSTRUMENTS, EQUIPMENT AND FLIGHT DOCUMENTS****1. General**

Commercial air transport ACFT operating in Switzerland must adhere to the provisions of the ICAO Annex 6 "Operation of Aircraft", Part I - International Commercial Air Transport - Aeroplanes, Chapter 6 (Aeroplane instruments, equipment and flight documents) and Chapter 7 (Aeroplane communication and navigation equipment).

See Titles of the Swiss Legislation in this matter (Fr, Ge, It). REF: [GEN-1.6](#)

**2. Minimum required communications, navigation and surveillance equipment for IFR flights**

For IFR FLTs within Swiss airspace, ACFT shall be equipped with at least the following systems:

COM:

- 2 VHF TRANS/receivers

Requirements for 2 VHF TRANS/receivers:

FREQ range: 118.000 - 136.975 MHz

CH spacing: 8.33 kHz

Non-8.33 kHz equipped ACFT will not be allowed to operate within controlled airspace in Switzerland. Flight plans will be rejected if not 8.33 kHz compliant.

Exemptions from mandatory carriage of VHF 8.33/25 kHz aircraft radio equipment are described in [ENR-1.8](#).

The European regional supplementary procedures are applied in accordance with ICAO SUPPS Doc 7030/5-EUR.

NAV:

- 2 VOR receivers;
- 1 ILS LOC receiver;
- 1 ILS GP receiver;
- 1 DME interrogator;
- 1 ADF - Mandatory carriage of an ADF is limited to ACFT not equipped with a certified RNAV EQPT with a current database and to ACFT which are used for ADF-based FLT procedures. Special operational regulations (e.g. JAR-OPS 1 Subpart L) remain valid;
- 1 Marker receiver (75 MHz) - Mandatory carriage of a Marker receiver is limited to ACFT flying APCH procedures which require the carriage of a Marker receiver;
- 1 RNAV EQPT certified for B-RNAV or RNAV 5 Operations where applicable; REF: [ENR-3.3](#)
- 1 RNAV EQPT certified for P-RNAV or RNAV 1 Operations where applicable;
- 1 RNAV EQPT certified for RNP APCH Operations where applicable.

Aircraft, other than State aircraft, operating en-route under Instrument Flight Rules (IFR) within the FIR/UIR Switzerland shall be equipped with, as a minimum, RNAV equipment compliant to the RNAV 5 navigation specification (EASA CS-ACNS / ICAO DOC 9613).

Aircraft, other than State aircraft, operating on certain SIDs and STARs within the FIR Switzerland shall be equipped with RNAV equipment compliant to the RNAV 1 or RNP 1 navigation specification. This requirement is indicated on the charts in the relevant AD sections.

Aircraft operators shall ensure that the navigation equipment fulfils the requirements of the flight-planned routing.

Note: for RNAV EQPT and Operations refer to [ENR-1.1](#), [ENR-1.3](#) and [ENR-1.8](#).

Appropriate FREQs and CHs must be AVBL.

All installed ILS LOC and VOR receivers must comply with FM immunity PER SARPS (ICAO Annex 10, Volume I).

Surveillance:

- 1 SSR Mode S Transponder, level 2 with Surveillance Identifier (SI) Code and Elementary Surveillance (ELS) functionality as a MNM. Compliant with ICAO Annex 10 AMDT 85.

ACAS:

- ACAS II with collision avoidance logic version 7.1 is required to be carried and operated by all
  - fixed-wing turbine powered ACFT having a Maximum certified Take off Mass (MCTOM) exceeding 5700 kg or
  - aeroplanes authorised to carry more than 19 passengers.
- All aircraft not referred under point a), but which are equipped with ACAS II on a voluntary basis shall have collision avoidance logic version 7.1.
- From the requirement above excluded are unmanned aircraft systems.

For Swiss registered ACFT the detailed requirements are set out in an instruction (CT-I No. F 02.050-10) which can be obtained from the:

Post: Federal Office of Civil Aviation,  
Section Standardisation, Enforcement and Registry (STSS)  
CH-3003 Berne,  
Switzerland

### **3. Reduced Vertical Separation Minimum (RVSM)**

Only RVSM APV ACFT and non-RVSM APV State ACFT shall be permitted to operate within the Swiss RVSM airspace.

RVSM APV ACFT are those ACFT for which the operator has obtained an RVSM APV, either from the State in which the operator is based, or from the State in which the ACFT is registered.

Guidance material on the airworthiness, CONT airworthiness and the operational practices and procedures for the EUR RVSM airspace is provided in the JAA TGL No. 6, Revision 1 and the ICAO Regional Supplementary Procedures (Doc 7030/4 - EUR).

Except for State ACFT, RVSM APV is required for ACFT to operate in the RVSM airspace within the FIR/UIR Switzerland, as described in [ENR-2.2](#).