OPERATIONS IN AIRSPACE CLASS E IN GERMANY BELOW FL100

RECOMMENDED BEST PRACTICES FOR COMMERCIAL OPERATORS

The following best practices have been developed by flight safety officers and experts to enhance the safety of operations in airspace Class E below FL100 to prevent collisions between controlled and uncontrolled aircraft in a mixed traffic environment.

Recommendations for training departments and pilots

- IMPROVE AIRSPACE AWARENESS

  Train pilots to be aware of shortfalls in the existing airspace structure – annual training and NOT only by bulletin using two components:
  - Generic briefing on airspace Class E in Germany
  - Dedicated airport briefing documents
  - Include risk and threats in unprotected airspace in individual departure and arrival briefing

- OPERATING RECOMMENDATIONS

  - FLY DEFENSIVELY!
  - Maintain Minimum Clean Airspeed or as slow as reasonable
  - Request to use protected airspace – minimise time in airspace Class E and refuse shortcuts if necessary. Most standard departures and approaches/transitions will facilitate this.
  - Descend according to airspace structure on arrival. Steep/expedited climb through airspace Class E on departure.
  - Consider airspace structure for engine out procedures
  - Consider delaying take-off if conflict with other aircraft is anticipated

- USE OF AUTOMATION IN AIRSPACE CLASS ECHO

  - Minimise visual approaches – they require additional attention and increase flight time in unprotected airspace
  - Maximise lookout capacity through use of automation (FMS/task sharing)

- SEE AND AVOID

  - Maximise lookout – expect gliders directly below convective clouds
  - No briefings and sterile cockpit below FL100
  - Train right-of-way rules – traffic avoidance in airspace Class E may be contradictory to ATC clearance!
  - VFR traffic may operate up to FL100 (FL130 in the Alps region) without transponder

- TCAS

  - Consider additional mitigation if TCAS inoperative: restrict flights into concerned airports and advise ATC

- MAXIMUM DISPLAY OF LIGHTS

Recommendations for airline management

- Participate at an airline level in appropriate activities, such as aircraft proximity evaluation groups (e.g. German APEG) and airspace coordination committees (e.g. German "Luftraumabstimmungsgespräch"), industry and regulating authority meetings

- Maximise reporting through internal process optimisation and pilot awareness. Forward all reports via below reporting channels:

  For German operators or international operators reporting events in German airspace:
  www.aviationreporting.eu or mail directly to occurrence@lba.de

  For accidents and serious incidents:
  online reporting form https://onl-meldung.bfu-web.de/onlmeldung/index.php
  or alternatively by phone +49 (0)531 35480 or box@bfu-web.de

  NOTE: TCAS/AIRPROX events will not be forwarded to the Aircraft Proximity Evaluation Group (APEG) and an additional report has to be filed! Please use the form published in NfL 1-915-16 or follow this link https://www.baf.bund.de/SharedDocs/Downloads/DE/Publikationen_Ander e/AIRPROX_Meldeformular.pdf?__blob=publicationFile&v=2
  More information is available at the BAF website: https://www.baf.bund.de/DE/Themen/Flugsicherungsorga/Meldesystem/Me ldesystem_node.html

Operations in airspace Class E in Germany below FL100 – recommended best practices for commercial operators, Version 25 March 2021.

Aerologic – Condor – Eurowings – Germanwings – Malta Air – NetJets Europe –
Lufthansa – Lufthansa Cityline – Ryanair – Sun Express – Sundair – Swiss – Vereinigung Cockpit

HOTSPOT MAP OF GERMAN AIRPORTS

Airspace hotspot map as of 25 March 2021 - for guidance only. Check the current airspace structure in the AIP.

Airspace class E below FL100 until reaching protected airspace is not upgraded with a TMZ. **Increased risk of AIRPROX with VFR traffic!**

Airspace class E below FL100 until reaching protected airspace is upgraded with a TMZ**. Increased risk of AIRPROX with VFR traffic!**

Airspace class C or D below FL100 until reaching the airport's CTR. **Low risk of AIRPROX with VFR traffic.**