PREVENT AIRSPACE INFRINGEMENTS

Airspace Infringements Leaflet – edition 1, spring 2016
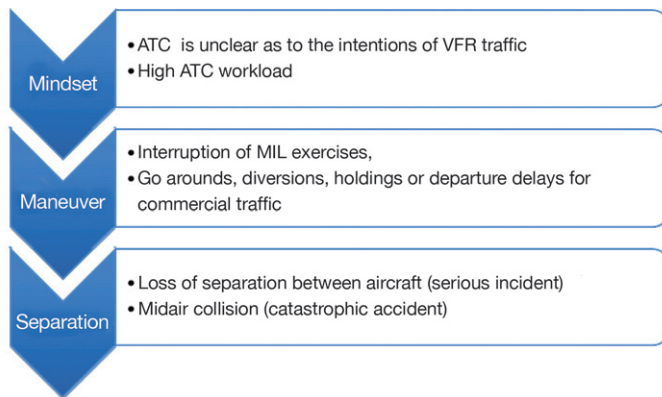
What is an airspace infringement?

Airspace infringements are incidents in which an aircraft enters a controlled airspace without permission. They primarily occur in the vicinity of the control areas of Amsterdam, Eindhoven and Maastricht airports and in areas where restrictions apply.

Causes of airspace infringements:
- Incorrect interpretation of the airspace / chart / location,
- Insufficient pilot awareness,
- Distraction,
- Complexity of the airspace / chart / region,
- Insufficient flight preparation,
- Incorrect interpretation or use of navigational aids.

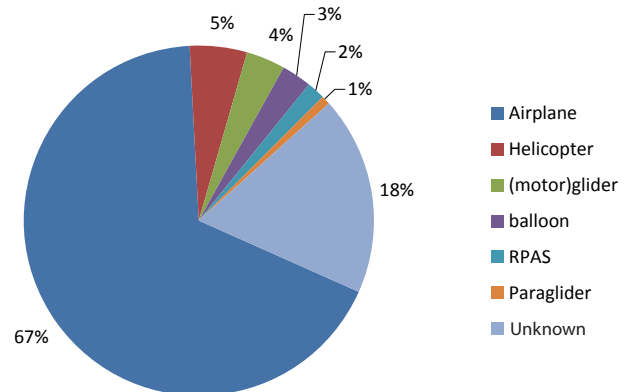## What is the importance of preventing airspace infringements?

The effects of an infringement can be quite diverse, and in the worst of cases lead to a midair collision. Possible effects, increasing in magnitude, are:

Mindset
- ATC is unclear as to the intentions of VFR traffic
- High ATC workload

Maneuver
- Interruption of MIL exercises,
- Go arounds, diversions, holdings or departure delays for commercial traffic

Separation
- Loss of separation between aircraft (serious incident)
- Midair collision (catastrophic accident)

Who causes the majority of infringements?

General aviation traffic is responsible for over 87% of airspace infringements. This is usually traffic operating visually in uncontrolled airspace (class G). Radio communications are not mandatory in this class of airspace, which increases the odds of unintentional penetration of controlled or restricted airspace. The graph below shows the division of the number of infringements by type of aircraft for the year 2015. It shows that powered aircraft, helicopters, (powered) gliders, free balloons and drones (RPAS) are responsible for the majority of infringements

Infringements per 2015 per aircraft type

Legend:
- Airplane
- Helicopter
- (motor)glider
- balloon
- RPAS
- Paraglider
- Unknown

(5%, 4%, 3%, 2%, 1%, 18%, 67%)

Where do the majority of infringements occur?

Most infringements take place inside a Terminal Manoeuvring Area (TMA, 42%), followed by a Control Zone surrounding an airport (CTR, 38%).
The remainder largely consists of special use airspace such as Restricted, Danger or Prohibited Areas.

The vast majority of infringements in the Netherlands take place around the Amsterdam, Eindhoven and Maastricht-Aachen airports.
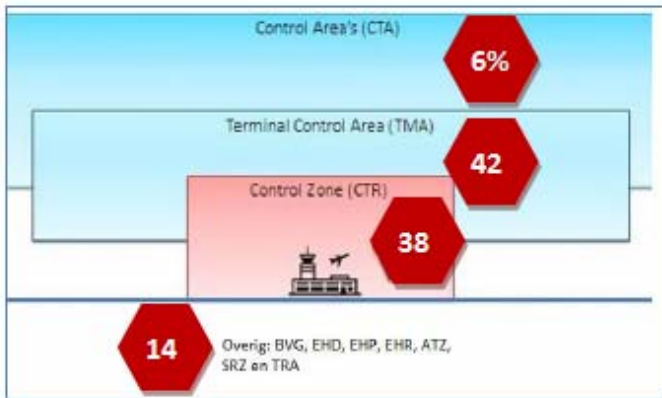
TMA Schiphol

The majority of airspace infringements involve situations where the pilot unknowingly enters the Schiphol TMA. The lower limit for the Schiphol TMA 1 is 1500 feet. Traffic in the TMA can be at 2000 feet, particularly in the close vicinity of the airport itself, where 2000 feet is the default approach altitude for arriving Schiphol traffic.
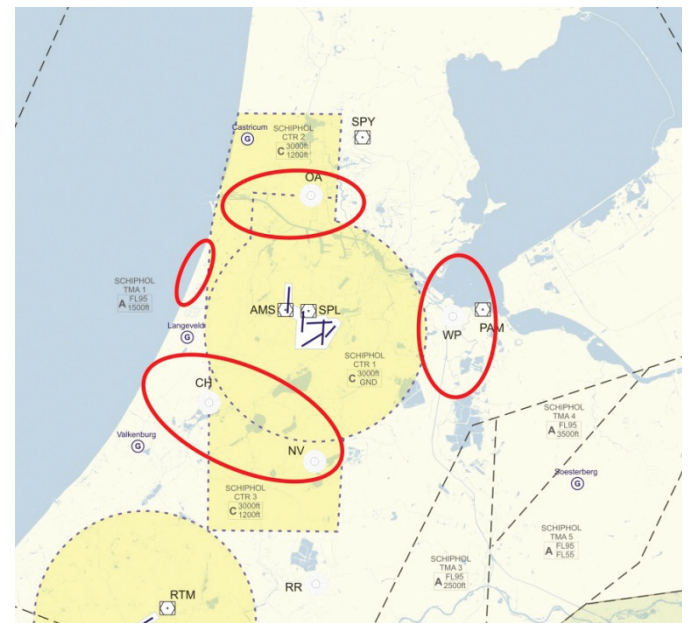

CTR Schiphol

Because of the high traffic density near Schiphol airport, infringements in the CTR will almost immediately pose a threat to flight safety. These infringements are often the result of an incorrect lateral position, caused by the lack of current documentation detailing the Schiphol CTR boundaries, or of insufficient pilot attention during VFR navigation.

Alongside the Schiphol CTR boundary, the most common choke points are:
- *On the north side:* the Noordzeekanaal is a significant VFR landmark. However, the major part of that channel resides inside the Schiphol CTR.

- *Along the coastline:* a lot of VFR operations take place here, all of which can potentially conflict with approaching Schiphol traffic flying towards runway 18R at 2000 feet.

- *East side near Pampus and VRP Victor:* intense VFR traffic from and to Lelystad and Hilversum airports.

Approaching Schiphol traffic for runway 27 is found here at 2000 feet.

- *South side of Schiphol, below the approach route to the Kaagbaan (06) and Aalsmeerbaan (36R).*

Maastricht Aachen Airport
The airspace surrounding Maastricht Aachen airport is complex due to the unique shape of the southern Netherlands state border. It is therefore not fully unexpected that this region is prone to a significant number of infringements.

TMA Maastricht
In the Maastricht airspace, you will encounter a wide diversity of aircraft types (MIL, gliders, free balloons, helicopters, parapenters and even unmanned aircraft), all of which on occasion enter controlled airspace without permission. In the southeast, most infringements occur by aircraft taking shortcuts. North of the CTR, unauthorized traversing of controlled airspace occurs by flights between Belgium and Germany. Causes are often incorrectly set QNH values, where in the southern part (vicinity Eijsden) and in the southwest, causes primarily seem to be navigational errors.

CTR Maastricht
Particularly north and south of the CTR there is a considerable chance of conflicts with approaching traffic for runways 03 or 21. Approaching traffic in that region will typically be at 2000 feet or lower.

TMA Eindhoven
Most infringing aircraft here come from the direction of Tilburg town and are flying in southeasterly direction. Near the southern boundary of the Eindhoven TMA, infringements also frequently occur.

CTR Eindhoven
Infringements for the Eindhoven CTR are commonly located near the towns of Valkenswaard, Boxtel and Bladel. In particular the region near Bladel is considered critical, as it is positioned on the extended Eindhoven runway centerline.

CTR Niederrhein
In the Dutch part of the Niederrhein CTR (Germany), a lot of infringements are made as well. The German Air Safety Office has voiced its concerns on these infringements in the Dutch segment of this CTR. A recurring pattern emerges: pilots follow the outline of the Volkel and de Peel CTR contours closely and wind up in the Niederrhein CTR, which extends from ground up to 3000 feet. Inadvertently they cross the Niederrhein runway centerline.

Preventing airspace infringements

Planning

- Use the most recent maps available. They will prove their money's worth.
- Your electronic maps / databases should be current as well.
- Prepare your flight thoroughly, including the latest weather info, read the NOTAMs and avoid taking risks. Have a 'bad weather route'.
- Plan together with another pilot, and hone your planning and navigation skills frequently.
- Consider alternative routes, and be aware of where they will lead you.
- You cannot expect to receive a CTR crossing clearance at all times! Have a backup plan.
- Share your experiences in your flight club.
- Know your limitations, especially when you are somewhat low on current hours.

Tips for flights around Amsterdam and Rotterdam

Contact Amsterdam Information (124.300), when flying underneath the Schiphol TMA 1 or Rotterdam TMAs.

- You will always receive the latest QNH,
- FIC will alert in case of distress or missing,
- FIC will provide traffic information on other known traffic,
- FIC can provide you with information on active areas, weather conditions and glider activity.

Contact Rotterdam Approach (127.025). For flights within the Rotterdam TMAs (Class E) you will receive flight information on other known traffic.

For crossing CTRs and TMAs / special use airspace

Contact the responsible ATC unit; you will need ATC clearance. Operating hours of MIL CTRs and special use airspaces are found in the AIP and NOTAMs.

When in doubt you can also inquire with Amsterdam Information or Dutch MIL Info.

During flight

- Use a mode S transponder,
- Call Flight Information: that is what they are for!
  - Under Schiphol and Rotterdam TMAs: Amsterdam Information 124.300,
  - In MIL airspace: Dutch MIL Info 132.350,
  - Inside the Rotterdam TMAs: Rotterdam Approach 127.025
- Where possible, avoid flying very close to the boundary of any controlled airspace.
- On approaching a CTR: contact ATC.
- Contact ATC whenever you have problems concerning navigation, transponder settings, when you are uncertain of your position or when you are in distress.

Useful links

Airspace Infringements -Skybrary
www.skybrary.aero/index.php/Airspace_Infringement

Air Safety Institute - AOPA
www.aopa.org/Pilot-Resources/Air-Safety-Institute

Fly On Track - NATS UK
flyontrack.co.uk

Airspace Infringement Initiative - Eurocontrol
www.eurocontrol.int/articles/airspace-infringement-initiative

Link for reporting incidents and accidents
www.ilent.nl/onderwerpen/transport/luchtvaart/ilt_en_luchtvaart/analysebureau_luchtvaartvoorvallen__abl/

AirspaceAVOID – free assistance in preventing airspace infringements

On request of the Dutch government and GA sector parties, the PocketFMS Foundation have developed the *Netherlands AirspaceAVOID* application ("NLAA"). Its purpose is twofold: to reduce amount and severity of airspace infringements, and to make NOTAM information easier to digest. The app is aimed towards all users of the Dutch airspace, and can be downloaded at no cost for your iPhone, iPad and Android devices.

AeroData

The NLAA airspace database is updated **free of charge**. The information is updated every 28 days as part of the AIRAC cycle. In flight, the position of your aircraft is clearly indicated in relation to the airspace that surrounds you, making you a better informed and more aware pilot. You also know which ground based station you should call at your local position, including the proper frequency. With a single tap on the moving map you can see in detail all of the relevant information on an airspace, such as its type, class, lateral and vertical dimensions as well as contact information.

NOTAMs

You can also display the current NOTAMs on the map, making it easy to determine whether or not a specific NOTAM will impact your flight. The NOTAMs in NLAA are close to real-time, due to a direct link with Eurocontrol. Easily applied filters keep you in control; NOTAMs you mark as irrelevant can be hidden permanently. This makes for a compact briefing consisting of only flight relevant NOTAMs. A NOTAM push function ensures you can receive NOTAM updates for the region you selected, even when the NLAA app isn't active on your device at the time.

Download and use

NLAA is very similar to the popular EasyVFR app, a product from the PocketFMS Foundation as well. NLAA however is **free** to download and use for all users of the Dutch airspace. It can be downloaded in the Google Play Store and Apple's AppStore – no registration is required. For more information, please visit **www.airspaceavoid.nl**

AirspaceAVOID
www.pocketfms.com

- Up to date aerodata
- Obstacles
- NOTAMs plotted on map
- NOTAM filtering
- Free of charge