

EUROPEAN GLIDING UNION

Whats' on in the Air? A survey of the developments for the EGU.

The airspace classes A to G and the new traffic categories U, K and N.

In 2003 Eurocontrol was given a mandate by the European Union (EU) to harmonise the airspace structure in Europe. Normally Eurocontrol work only results in recommendations, but when Eurocontrol recommendations are adopted by the EU, they become European law. The member states would therefore be obliged to implement the new airspace structure, regardless of national viewpoints. It was therefore very important that EGU and Europe Air Sports (EAS) were involved in this work.

The proposal concerned was basically to divide airspace into 3 height bands, and to have the same airspace/traffic classification throughout Europe within each height band. After long discussions it was agreed that the Upper Division Level should be FL 195. The final draft of the Eurocontrol report on the harmonisation of the airspace classification in the lower airspace in the context of the Single European Sky, published after the Eurocontrol Notice of Proposed Rule Making (ENPRM) 05-001 (yes, quite a mouthful, read it again) states that the airspace above FL 195 in 22 out of the 25 EU States is Class C. This opens this upper part of the airspace to VFR flights under certain conditions, such as windows for wave flying. Some countries have begun to study the airspace re-organisation that is now required.

The next issue was the famous Lower Division Level ('FL Z'), which is much more important for us, as VFR flights above this division level most probably will have to be controlled or have to take place in special sectors. Three levels were proposed: FL 95, FL 115 and FL 135. The issue of the choice of the this division level has created a fair amount of questions and protests, also from the EGU. The outcome remains undetermined as yet. The recommendation by Eurocontrol now is that this division level is decided on a national basis, that Classes C and D are applied above the level and C, D, E or G below it. Some states have demanded the application of higher classes in high density CTA's and TMA's. In general this means that the status quo will be maintained. From the gliding movement point of view we can only be satisfied with this result, which to a large extent is due to the intervention of EAS and EGU.

In the meantime preparations for the three new traffic categories N (for traffic with known intentions), K (for known traffic) and U (for unknown traffic) are in progress. N could apply to highest band, K to the middle band, and U to the lowest band. The 'old' ICAO airspace classes A to G will continue to exist for the time being, being harmonised and simplified, but in a timescale up to 2015 the three categories N, K and U will be introduced. These three categories will be reduced to N and U only later.

Obviously the categories K and U are of interest to us. K requires radio communication, a transponder and a clearance, U does *not always* require this. What this means precisely is not clear yet, but Transponder Mandatory Zones (TMZ) could well fit here. It is likely that the Category K will encompass the Classes C and D and that that the Category U will encompass the Classes E and G. Class F will not be used. Obviously we will have to work hard to have a maximum of E and G or U.

FLARM

FLARM is more and more successful and spreading its wings, despite frequency problems, as predicted, and despite its non-compatibility with ACAS. Advantages: very economical both in price and power consumption, efficient and inclusion of terrain warning, obviously when properly programmed. It will be interesting to see if FLARM can be integrated with PDA's with See You Mobile, WinPilot etcetera. Website: www.flarm.com.

Transponders and Mode S

Eurocontrol has published its interesting report on the research programme on the detection and recognition of light aircraft. The EGU has compiled an excerpt of it for Europe Air Sports and, after consultation of the EGU Airspace Group, the EGU has recommended actions by EAS, at the same time offering help.

The report mentions the desirability to determine the operational and technical possibilities of low power transponders, an issue that was already raised by the EGU in 2002. The low power transponder, by the way, must not to be confused with the Light Aviation SSR Transponder (LAST). The LAST is ICAO Annex 10 compatible and a 'heavy electron drinker', certainly as long as not all ground stations have been converted to Mode S.

In the report also the Transponder Mandatory Zone (TMZ) is mentioned as a good compromise to keep Class E where the density of IFR traffic requires an increased form of surveillance.

The fact that the change to Mode S is, in fact, operationally and technically justified, is beginning to be understood. The reasons have been explained often enough. The official date of 2008-03-31 can be considered as the date when in fact all transponders have to be of the Mode S type.

In order to cope with this the Airspace Committee of the Gliding Division of the Royal Aero Club of the Netherlands has made up a Road Map, practical plan for the introduction of Mode S transponders in gliding in The Netherlands, but in a fully controlled, step-by-step way, each step terminated with a validation of the results so far. This Road Map is based on the principle that transponders shall only be applied where and when that *demonstrably* contributes to safety. The Road Map has been formally offered to the Dutch authorities and their approval and co-operation has been asked. Also co-operation with Eurocontrol is foreseen.

1090 Extended Squitter ('1090 ES') and 1090 MHz receivers are being introduced in a new generation of transponders. This will make them ACAS and ADS-B compatible. Interesting combinations with PDA's will be possible. 'Squitter boxes' on obstacles could provide terrain warning. These boxes provide ACAS replies, but obviously from fixed positions.

Compared to FLARM 1090 ES transponders will be more expensive, but they will be a more universal tool, especially in the sense of ACAS, TMZ's and controlled airspace in general.

Prices of FLARM vary between EUR 480 and 620, the Filser TRT-600 LAST costs EUR 2800 approximately.

Last but not least transponders should facilitate cloud flying. This was abolished in many countries as contradictory to VFR flight, but transponders should, in principle, make cloud flying possible again, with the proper clearances, gliders, licences and instruments of course.

A special case: Class D airspace.

The EGU has requested EAS to ask the FAI to submit to ICAO a request to consider an abolishment of the requirement in Class D for traffic information VFR-versus-VFR. This requirement is sometimes used by controllers as an argument to refuse clearances for gliders in Class D airspace, because this service keeps them busy without much reason. There is no reaction yet.

There also is a certain trend to upgrade Class E to Class D where ATC gives priority to the (commercial) IFR traffic. That is fair enough where there are good reasons for it, but often a TMZ will do, so that Class E can remain intact. A German criterion for TMZ's is a number of IFR movements between 10.000 and 30.000 per year. This criterion has been accepted in The Netherlands as well for the definition of possible TMZ's.

See-and-Avoid.

This basic principle of VFR flight is as valid as ever, despite more and more attacks on it from certain sides. A recent report by the Royal Netherlands' Air Force confirms the validity of See-and-Avoid. This report can be consulted at

<http://www.luchtruim.zweefportaal.nl/PDF/rapport%20zichtbaarheid%20%20.doc>. It is in Dutch, but the gist is not too difficult to understand. It seems that the French Air Force has come to the same conclusion.

8.33 kHz.

Still not yet for the Lower Airspace. It will be interesting to see if this will be overtaken by the new generation of digital communication, which is beyond the horizon now. Recently Eurocontrol has been reminded of the serious consequences 8.33 will have for sports aviation.

Typical prices: Dittel FSG-2T (25 kHz) EUR 1550, Dittel FSG-90 (8.33 kHz) EUR 3250.

UAV's

Unmanned Aerial Vehicles are just about everywhere nowadays. Their size varies from very big (Boeing 737 size) to very small. They have already flown across the Atlantic and they can land automatically. Until now their use seems to be well controlled and no incidents have happened so far. As a consequence the See-and-Avoid adagio may have to be adapted to "Detect-and-Avoid".

A likely initial civil usage of UAV's is for inspection of power cables, pipelines, supervision of railway tracks etc.. This means that they will share the airspace with us. Ways to do that safely will have to be found. We must make it clear, right from the start, that the airspace is also ours, and that, if UAV's are going to operate amongst us, this shall not be detrimental to us in any way.

Light Jet Aircraft

Manufactures are now prosing these aircraft for about 500.000 USD. Predictions show that with such a relatively low price they will be used for leisure flying as well as "air taxi" purposes, flying in and out of small airports. The problem with the air taxi is that it is a commercial activity, and therefore also requires protection, airspace etc. like other commercial flights. These light jets will typically not operate from big airports, but from small strips close to the final destinations of the customers.

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