



## Safety recommendation no. 522

<b>Date of the publication</b>	12.01.2017
<b>Number of the final report</b>	2294
<b>Safety deficit</b>	<p>On 3 June 2015, an airprox occurred between a commercial aircraft and a hot-air balloon within the terminal control area (TMA) of Zurich Airport. The commercial aircraft was approaching Zurich Airport using radar vectoring. The hot-air balloon had entered the terminal control area several times without clearance from an air traffic control centre because the balloon pilot was insufficiently aware of the risks he was posing even if only entering into such airspace by a short distance. Because the transponder was switched on, the hot-air balloon was in theory visible to air traffic control. However, the display on the air traffic controllers' monitors was so inconspicuous that the unauthorised entry went unnoticed until the airprox.</p> <p>The balloon pilot's inhibition to contact air traffic control was identified as a contributory factor. Furthermore, widespread knowledge deficits regarding the use of altimeters and transponders were found to be a systemic risk. These factors point to opportunities for improvement in training and need to be considered in light of the fact that, after the initial training of balloon pilots, no periodic proficiency check or further training is planned, as is already mandatory and common practice for pilots of gliders and motorised aircraft.</p>
<b>Safety recommendation</b>	The Federal Office of Civil Aviation, together with the relevant aviation associations, should take measures regarding periodic proficiency checks and further training for balloon pilots.
<b>Addressees</b>	BAZL Bundesamt für Zivilluftfahrt
<b>Stage of the implementation</b>	Partially implemented. The Swiss Balloon Association (SBAV) conducts theory courses for balloon pilots on behalf of the FOCA. The SBAV also organises an annual safety seminar in German and French. In this training course, particular emphasis is placed on: airspace knowledge; specific Swiss procedures; the correct use of technical instruments such as transponders; and cooperation with air traffic control. Training materials are available to the public on the SBAV website. The SBAV also organises local refresher courses, thus providing regular training opportunities and helping to prevent airspace violations. The programme of voluntary refresher courses is currently being expanded.
<b>Investigation report concerning the safety recommendation</b>	<u>Schlussbericht</u>