NOTICE

U.S. DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION Air Traffic Organization Policy

N JO 7210.944

Effective Date: July 5, 2023

Cancellation Date: October 5, 2023

SUBJ: Hot Air Balloon LOA for Class C Airspace

1. Purpose of This Notice. Establish requirement for Letter of Agreement (LOA) when conducting Hot Air Balloon operations in Class C airspace.

2. Audience. This notice applies to the following Air Traffic Organization (ATO) service units: Air Traffic Services, Mission Support Services, System Operations Services, Safety and Technical Training, and all associated air traffic facilities.

3. Where Can I Find This Notice? This notice is available on the MyFAA employee website at https://employees.faa.gov/tools_resources/orders_notices/ and on the air traffic publications website at http://www.faa.gov/tools_resources/orders_notices/ and on the air traffic publications website at http://www.faa.gov/tools_resources/orders_notices/ and on the air traffic publications website at http://www.faa.gov/air_traffic/publications/.

4. Cancellation. This notice cancels upon publication of FAA Order JO 7210.3DD, Change 1, effective October 5, 2023.

5. Explanation of Policy Change. This change adds a new paragraph to the order, requiring air traffic managers whose facilities conduct hot air balloon operations within Class C airspace to enter into an agreement with balloon operators or festival representatives. Facilities must utilize a hot air balloon LOA template provided by their respective Operations Support Group upon request.

6. Action. Amend FAA Order JO 7210.3DD by adding paragraph 4-3-7 that reads as follows:

4-3-7. HOT AIR BALLOON LOAS FOR CLASS C AIRSPACE

Air traffic managers at facilities that conduct hot air balloon operations within Class C airspace must enter into an LOA with balloon operators or festival representatives specifying procedures and conditions for operations. The LOA must be developed using a hot air balloon LOA template obtained from the Service Center Operations Support Group.

7. Distribution. This notice is distributed to the following ATO service units: Air Traffic Services, Mission Support Services, System Operations, and Safety and Technical Training; the Air Traffic Safety Oversight Service; the William J. Hughes Technical Center; and the Mike Monroney Aeronautical Center.

8. Background. On January 1, 2020, the FAA mandated that all commercial aircraft and aircraft flying in Class A, B, and C airspace be required to equip with transponders having Automatic Dependent Surveillance-Broadcast (ADS-B) Out capability. Title 14 of the Code of Federal Regulations (14 CFR) §§ 91.215 and 91.225 are the governing Federal Aviation rules that require most aircraft to

07/05/2023

equip with and use transponders and ADS-B Out. Balloons are excluded from these regulations, provided the operations are outside Class A, B, or C airspace (and other stipulations depending on the regulation). To date, some air traffic control facilities have entered into letters of agreement (LOAs) with balloon operators or balloon festival representatives permitting manned balloon operations in Class C airspace, approving deviations from the transponder, and ADS-B Out regulations. These operations typically require a waiver from Flight Standards. On June 21, 2022, a Safety Risk Management panel convened to assess the safety risk associated with hot air balloon operations in Class C airspace. This change is one of four safety recommendations that resulted from the panel's analysis. Additionally, the panel determined that to ensure LOA standardization, and to provide guidance, all existing LOAs associated with hot air balloon operations within Class C airspace, will expire on March 21, 2023. Henceforth, to ensure LOA standardization, and to provide guidance, facilities conducting hot air balloon operations within Class C airspace, when developing their LOAs, must utilize a hot air balloon LOA template provided upon request by their respective Operations Support Group. Please refer to the attached SRMD for additional information.

Michael R. Beckles Digitally signed by Michael R. Beckles Date: 2023.05.22 17:07:57 -04'00'

Michael R. Beckles Director (A), Policy, AJV-P Air Traffic Organization

Attachment: Safety Risk Management Document (SRMD)



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Federal Aviation Administration

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SAFETY REQUIREMENT APPROVALS FOR MANNED BALLOON OPERATIONS IN CLASS C AIRSPACE

Version 3.0 October 3, 2022

Document Change Page

Action/Change Made to Document	Date	Version Number
Initial Document	08/03/2022	Version 1.0
Safety Recommendation 1 responsible organization changed from AJV-P to AJT-2	08/12/2022	Version 2.0
All approvals consolidated, and document change page added	10/03/2022	Version 3.0

Safety Risk Assessment Summary

Title: Manned Balloon Operations in Class C Airspace

Office of Primary Responsibility: Flight Standards Flight Operations Branch (AFS-410)

Summary of Safety Issue:¹ Title 14 of the Code of Federal Regulations (14 CFR) §§ 91.215 and 91.225 require most aircraft to equip with and use transponders and Automatic Dependent Surveillance-Broadcast (ADS-B) Out, Balloons are excluded from these regulations, provided the operations are outside of Class C airspace (and other stipulations depending on the regulation). Some Airport Traffic Control Towers (ATCTs) have entered into Letters of Agreement (LOAs) with balloon operators or balloon festival representatives permitting manned balloon operations in Class C airspace with deviations from both the transponder and ADS-B Out regulations. These include one festival LOA and twenty-one individual or group LOAs at the Albuquerque International Support (ABQ) in Albuquerque. New Mexico: one festival LOA at the Colorado Springs Municipal Airport (COS) in Colorado Springs, Colorado; one LOA at the Reno-Tahoe International Airport (RNO) in Reno, Nevada; one LOA at the Shreveport Regional Airport (SHV) in Shreveport, Louisiana; and one LOA at the Bishop International Airport (FNT) in Flint, Michigan that is under review by the FAA.² All LOAs are scheduled to expire on March 31, 2023, though they may be extended if necessary. However, a long-term solution is desired to address the safe operation of balloons in Class C airspace across the National Airspace System (NAS). It should be noted that regardless of the deviations authorized by an LOA, a balloon festival representative or balloon operator is responsible for contacting Flight Standards (FS) to obtain any necessary waivers prior to those operations or festivals requiring applicable waivers.

On May 3, 2022, the Federal Aviation Administration (FAA) Safety Management System (SMS) Committee was briefed on the Manned Balloon Operations in Class C Airspace safety issue. The FAA SMS Committee requested that the Safety Collaboration Team (SCT) form a Safety Risk Management (SRM) Team to perform a safety risk assessment on manned balloon operations in Class C airspace with and without ADS-B or transponders. The Associate Administrator for Aviation Safety (AVS-1) has requested that the FAA complete this safety risk assessment in less than 6 months due to the March 2023 end date of the current LOAs. The Office of Primary Responsibility (OPR) is the Flight Standards Flight Operations Branch (AFS-410).

The SRM Team included representatives from: FS, Aircraft Certification Service (AIR), Air Traffic Organization (ATO), and the National Air Traffic Controllers Association (NATCA). Observers were present from: FS, Office of Commercial Space Transportation (AST), Air Traffic Safety Oversight (AOV), Balloon Federation of America (BFA), Albuquerque Aerostat Ascension Association (AAAA), Rainbow Ryders, and Colorado Springs Labor Day Liftoff. The SRM Team met June 21–23, 2022, to:

- Perform an analysis of the hazards associated with the manned balloon operations in Class C airspace with and without ADS-B Out/transponders, and
- Document the assessment and deliver it to the FAA SMS Committee.

¹ The full Safety Risk Assessment Report is available upon request.

² This is not an all-inclusive list of LOAs related to balloon operations in Class C airspace across the NAS. The Air Traffic Organization (ATO) has created a National Balloon LOA tracking process, which the SRM Team did not have access to at the time of the safety risk assessment.

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John Murdock	NATCA	JMurdock@natca.org

Table 1. SRM Team Members³

* OPR representative

Methodology for Moving Through the SRM Process: The SRM Team performed their analysis under FAA Order 8040.4B, *Safety Risk Management Policy*. While manned balloons fall into the General Aviation (GA) Operations/Small Aircraft and Rotorcraft category of likelihood definitions within the order, the SRM Team also used the Commercial Operations/Large Transport category to evaluate any hazards that could also affect commercial operations.

Hazards/Risk Assessment: The SRM Team identified two hazards⁴ associated with the manned balloon operations in Class C airspace. The initial hazard identification is outlined in Table 2.

Table 2. Hazard Summary

Hazard	Hazard Description	Effect	Current Risk
BALLC-H01	Manned balloons not	Mid-air collision (MAC)	GA 1E – MEDIUM
	equipped with ADS-B Out or transponder	between other aircraft and balloon	Commercial 1E – MEDIUM

³ Management named responsible for the safety recommendations may reach out to the OPR or the SRM Team member within their organization with any questions regarding the assessment or recommendations.

⁴ FAA Order 8040.4B defines a hazard as a condition that could foreseeably cause or contribute to an aircraft accident.

Hazard	Hazard Description	Effect	Current Risk
BALLC-H02	ADS-B transponder	Other aircraft receiving Traffic Alert and Collision Avoidance System (TCAS) Resolution	GA 4D – LOW
	use in manned balloons within Class C airspace	Advisory (RA), leading to maneuver/compliance with RA	Commercial 4C – MEDIUM
		Increased controller workload and complexity due to additional targets and alerting	GA 5C – LOW

Table 3 shows the safety recommendations identified by the SRM Team and the parties and organizations that would be responsible for implementing each of them. It should be noted that the recommendations only apply to BALLC-H01. Because there are currently no FAA approved ADS-B/transponder installations in certified manned balloons, there is not enough information to propose risk controls for BALLC-H02.

Table 3.	Safety	Recommendations
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	Safety Recommendation	Responsible Organization
1.	Amend FAA Order JO 7210.3, <i>Facility Operation and Administration</i> , to direct facilities to use the LOA template for repetitive, long-term balloon operations and festivals in Class C airspace without ADS-B Out or transponders.	AJT-2
2.	Develop communication procedures to ensure Flight Standards District Offices (FSDOs) understand that requests from balloon operators to operate in Class C airspace without ADS-B Out or transponders should be directed to the Operations Support Group in their area.	AFS-800
3.	Share FAA instructions and LOA template with balloon operators on how to apply for an LOA for repetitive, long-term balloon operations and festivals in Class C airspace without ADS-B Out or transponders, as well as to whom the requests should be directed.	BFA/AAAA
4.	Add information to <u>FAA Balloon Website</u> on when/how to enter into an LOA with the local Air Traffic Control (ATC) facility for Class C operations without ADS-B Out or a transponder.	AIR-600/ AOC-400

Predicted Residual Risk: For BALLC-H01, the SRM Team noted that the severity would not be affected by the recommendations. The SRM Team believes that the LOA template will allow facilities to tailor their LOAs based upon traffic and performance data tools, which in turn will further mitigate the safety risk of non-ADS-B Out or non-transponder equipped manned balloon operations. It should be noted, however, that the likelihood definitions are limited to categories A through E and the current likelihood of BALLC-H01 is already in the lowest category, E. Therefore, the likelihood will be lowered by the recommendations, but the risk level remains **1E, Medium** for both GA and Commercial operations.

As there are no safety recommendations that are applicable to BALLC-H02, the predicted residual risk remains the same as the current risk. However, the Team does recommend

collection of additional data should ADS-B Out/transponder equipage occur (see Table 5, Monitoring Plan for more information).

The predicted residual risk of all hazards is displayed in Table 4 below.

Hazard	Hazard Description	Effect	Current Risk	Predicted Residual Risk
	Manned balloons not	MAC between other	GA 1E – MEDIUM	GA 1E – MEDIUM
BALLC-H01	equipped with ADS-B Out or transponder	aircraft and balloon	Commercial 1E – MEDIUM	Commercial 1E – MEDIUM
	ADS-B transponder	Other aircraft receiving TCAS RA, leading to	GA 4D – LOW	GA 4D – LOW
BALLC-H02	use in manned balloons within	maneuver/compliance with RA	Commercial 4C – MEDIUM	Commercial 4C – MEDIUM
	Class C airspace	Increased controller workload and complexity due to additional targets and alerting	GA 5C – LOW	GA 5C – LOW

Table 4. Predicted Residual Risk

Monitoring Plan: The SRM Team developed a Monitoring Plan (see Table 5 below) for the safety issue. In reference to BALLC-H01, the SRM Team agreed to collect data on manned balloon operations in Class C airspace every six months for two years, with a Safety Performance Target of zero MACs and zero near mid-air collisions (NMACs) involving a manned balloon in Class C airspace for the entire period of data collection.

For BALLC-H02, the SRM Team noted that equipage has not yet occurred and therefore cannot be monitored. For the effect of other aircraft receiving a TCAS RA, leading to maneuver/ compliance with RA, the SRM Team added a note that if ADS-B/transponder equipage occurs, data should be collected on manned balloon operations in Class C airspace. For the effect of increased controller workload and complexity due to additional targets and alerting, the SRM Team did not develop monitoring activities, as the hazard is already at a Low risk level and does not require monitoring per FAA Order 8040.4B.

Hazard ID	Hazard Description	Effect	Initial Risk	Predicted Residual Risk	Monitoring Activities	Reporting Frequency	Reporting Duration	Safety Performance Targets
BALLC- H01	Manned balloons not equipped with ADS-B Out or transponder	MAC between other aircraft and balloon	GA 1E – Medium Comm 1E – Medium	GA 1E – Medium Comm 1E – Medium	Collect data on manned balloon operations in Class C airspace, including: any Mandatory Occurrence Report (MOR) involving manned balloon operations in Class C airspace; NMACs; Aviation Safety Reporting System (ASRS).	Every 6 months	2 years	Zero MACs and zero NMACs ⁵ involving a manned balloon in Class C airspace in the entire period of data collection
BALLC- H02	ADS-B/ transponder use for manned balloons within Class C airspace	Other aircraft receiving TCAS RA, leading to maneuver/ compliance with RA	GA 4D – Low Comm 4C – Medium	GA 4D – Low Comm 4C – Medium	If ADS-B/transponder equipage occurs for manned balloons, collect data on manned balloon operations in Class C airspace regarding TCAS RA alert and pilot response; MORs corresponding with merging target procedure issues; frequency of occurrence of TCAS RA alert; ATC procedures/best practices used within field facilities.	To be determined if ADS-B/ transponder equipage occurs	To be determined if ADS-B/ transponder equipage occurs	Establish baseline, determine frequency, and assess impacts
		Increased controller workload and complexity due to additional targets and alerting	GA 4D – Low	GA 4D – Low	Not applicable (N/A)	N/A	N/A	N/A

Table 5. Monitoring Plan

⁵ The Aeronautical Information Manual (AIM), Section 7-7-3, paragraph b, defines an NMAC as "an incident associated with the operation of an aircraft in which a possibility of collision occurs as a result of proximity of less than 500 feet to another aircraft, or a report is received from a pilot or flight crew member stating that a collision hazard existed between two or more aircraft."

Safety Requirements Signatures

The below signatures convey each organization's agreement to implement the safety recommendations. Agreement to implement the safety recommendation automatically converts the recommendation to a safety requirement. Management may reach out to either the OPR (AFS-410) or the SRM Team Member within their organization (see Table 1 on page 2) with any questions related to the assessment. The full Safety Risk Assessment (SRA) Report is available upon request. If an organization chooses not to implement a recommendation, the Comments box must be utilized to provide a justification.

	Safety Recommendations	Responsible Office	Requirement Accepted?	Estimated Completion Date	Responsible POC Signature	Comments
1.	Amend FAA Order JO 7210.3, <i>Facility</i> <i>Operation and Administration</i> , to direct facilities to use the LOA template for repetitive, long-term balloon operations and festivals in Class C airspace without	AJT-2	Yes No		AJT-2 Director signed for this recommendation via the Electronic Document Management System (EDMS) on October 2, 2022. The signed document can be viewed in the Hazard Identification, Risk Management and Tracking (HIRMT) tool.	
	ADS-B Out or transponders.				Director, Operational Policy & Implementation, Air Traffic Organization, AJT-2	
2.	Develop communication procedures to ensure Flight Standards District Offices (FSDOs) understand that requests from balloon operators to operate in Class C airspace without ADS-B Out or transponders should be directed to the Operations Support Group in their area.	AFS-800	Yes No		AFS-800 Manager signed for this recommendation via EDMS on August 16, 2022. The signed document can be viewed in HIRMT. Manager, General Aviation and Commercial Division Elight Standards AFS-800	Signed 'for' Brad Palmer, Manager, AFS-800, in his absence.
3.	Share FAA instructions and LOA template with balloon operators on how to apply for an LOA for repetitive, long- term balloon operations and festivals in Class C airspace without ADS-B Out or transponders, as well as to whom the requests should be directed.	BFA/AAAA	N/A	N/A	FAA does not require signatures from industry organizations.	N/A
		AIR-600	Yes No		AIR-600 Director signed for this recommendation via EDMS on August 15, 2022. The signed document can be viewed in HIRMT.	
4.	Add information to <u>FAA Balloon Website</u> on when/how to enter into an LOA with				Director, Policy and Innovation Division, Aircraft Certification Service, AIR-600	
	for Class C operations without ADS-B Out or a transponder.	AOC-400	Yes No		AOC-400 Manager signed for this recommendation via EDMS on August 3, 2022. The signed document can be viewed in HIRMT. Manager, Web Division, Office of Communications, AOC-400	

Safety Requirement Approvals: Manned Balloon Operations in Class C Airspace