Amendment to Commission Implementing Regulation (EU) No 923/2012 laying down the common rules of the air and operational provisions regarding services and procedures in air navigation (SERA Part C)

RELATED NPA/CRD 2014-05 — RMT.0609 (ATM.001(A)) AND RMT.0610 (ATM.001(B)) — 16.12.2004

EXECUTIVE SUMMARY

This Opinion addresses safety and regulatory harmonisation issues related to rules of the air and operational procedures for the use of the European airspace.

The main objectives of this Opinion are to maintain a high level of safety and complete the objective of Commission Implementing Regulation (EU) No 923/2012 (hereinafter referred to as the ‘SERA IR Regulation’) which is the harmonisation of the rules of the air and operational procedures for the use of the European airspace. Another objective of this proposal is to maintain the SERA IR Regulation aligned with the developments of the ICAO Annexes in order to ensure seamless operations worldwide. In addition to the harmonisation, the transposition of ICAO provisions into SERA IR supports the Member States in fulfilling their obligations imposed by the Chicago Convention, eliminates the need for Member States to further transpose the related ICAO Standards and Recommended Practices into national legislation and reduces the possibility of making national deviations.

This Opinion proposes an amendment to the SERA IR Regulation.

The proposals aim at:

— the finalisation of the SERA IR Regulation incorporating the relevant complementary material from ICAO Annex 10, Volume II, ICAO Document 4444 (PANS-ATM), ICAO Document 7030 and ICAO Document 8168 (PANS-OPS), in particular but not limited to the additional requirements in Section 11 — Interference, Emergency Contingencies and Interception, as well as the addition of a new Section 13 on the use of Secondary Surveillance Radar (SSR) transponder and a new Section 14 on voice communication procedures;
— the extension of the scope of the Regulation to cover aerodrome operators;
— the introduction of recent amendments to ICAO Annex 2 that affects the requirements in the SERA IR Regulation; and
— the alignment of the SERA IR Regulation with some provisions in Commission Regulation (EU) No 965/2012 (air operations) and in Commission Regulation (EU) No 139/2014 (aerodromes).

### Applicability

**Affected regulations and decisions:**


**Affected stakeholders:**

Member States; competent authorities/national supervisory authorities; ATM/ANS providers; airspace users (e.g. aircraft operators); aerodrome operators; and EASA.

**Driver/origin:**

Legal obligation (Regulation (EC) No 216/2008, EASp, and ICAO SARPs)

**Reference:**

N/A

### Process map

| Concept Paper: | No |
| ToR publication date (Issue 2): | 29.9.2010 |
| Rulemaking group: | Yes |
| RIA type: | Full |
| Technical consultation during NPA drafting: | No |
| Publication date of the NPA: | 18.2.2014 |
| Duration of NPA consultation: | 3 months |
| Review group: | No |
| Focussed consultation: | No |
| Publication date of the Decision (RMT.0610): | 2015/Q4 |
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1. Procedural information

1.1. The rule development procedure

The European Aviation Safety Agency (hereinafter referred to as the ‘Agency’) developed this Opinion in line with Regulation (EC) No 216/20081 (hereinafter referred to as the ‘Basic Regulation’) and the Rulemaking Procedure2.

This rulemaking activity is included in the Agency’s Rulemaking Programme under RMT.0609 (ATM.001(A)) AND RMT.0610 (ATM.001(B)).

The scope and timescale of the task were defined in the related Terms of Reference (see process map on the title page).

All interested parties were consulted through NPA 2014-053. 665 comments were received from interested parties, including industry, national aviation authorities, social partners and individuals.

The Agency has addressed and responded to the comments received on the NPA. The comments received and the Agency’s responses are presented in the related Comment-Response Document ([CRD] 2014-054) published along with this Opinion.

The final text of this Opinion (i.e. Explanatory Note and draft regulation) has been developed by the Agency based on the input of EUROCONTROL and the RMT.0609 (ATM.001(A)) AND RMT.0610 (ATM.001(B)) Rulemaking Group.

1.2. The structure of this Opinion and related documents

Chapter 1 of this Opinion contains the procedural information related to this task. Chapter 2 ‘Explanatory Note’ explains the core technical content. The draft rule text proposed by the Agency is published on the Agency’s website5.

1.3. The next steps in the procedure

This Opinion contains proposed changes to EU regulations. It is addressed to the European Commission, which uses it as a technical basis to prepare a legislative proposal.


2 The Agency is bound to follow a structured rulemaking process as required by Article 52(1) of the Basic Regulation. Such process has been adopted by the Agency’s Management Board and is referred to as the ‘Rulemaking Procedure’. See Management Board Decision concerning the procedure to be applied by the Agency for the issuing of Opinions, Certification Specifications and Guidance Material (Rulemaking Procedure), EASA MB Decision No 01-2012 of 13 March 2012.

3 In accordance with Article 52 of the Basic Regulation and Articles 5(3) and 6 of the Rulemaking Procedure.


5 http://easa.europa.eu/document-library/opinions
2. **Explanatory Note**

2.1. **Issues to be addressed**

Article 2.2(d) of the Basic Regulation mandates the Agency to assist Member States in fulfilling their obligations under the Chicago Convention by providing a basis for a common interpretation and uniform implementation of its provisions and by ensuring that its provisions are duly taken into account in the implementation measures. Said Article mandates the Agency to aim not only at high but also at uniform safety.

In addition, Article 8b of the Basic Regulation and its Essential Requirements contained in paragraph 1(a) of Annex Vb require the Agency to develop detailed operating rules and procedures which ensure the safe conduct of air traffic in a given airspace. Said rules and procedures are related to the safe interaction between aircraft.

Moreover, Article 4 of Regulation (EC) No 551/2004\(^6\) (hereinafter referred to as the ‘SES airspace Regulation’) requires the Commission to adopt Implementing Rules related to the rules of the air and to the uniform application of airspace classification.

The standardised European rules of the air have been developed in two phases:

(a) **Phase I (SERA Part A):** Transposition of ICAO Annex 2 performed by EUROCONTROL with the support of the Agency and ICAO on the basis of a mandate given by the European Commission in 2009. The outcome was the EUROCONTROL Final Report submitted to the European Commission on 30 June 2010.

(b) **Phase II (SERA Part B):** Transposition of the relevant provisions from ICAO Annexes 11 and 3 performed by EUROCONTROL and the Agency with the support of ICAO and the RMT.0148 (ATM.001) Rulemaking Group in accordance with the terms of the amended SERA mandate. The outcome was the Agency’s Opinion No 05/2011\(^7\) which was submitted to the European Commission on 14 November 2011.

The above-mentioned technical proposals were combined by the European Commission in one integrated structure and after some amendments, the Single European Sky Committee gave a positive vote at its 45th meeting that took place on 15–16 March 2012. The adopted Regulation (EU) No 923/2012\(^8\) has already been published in the *Official Journal of the European Union*.

The applicability date of the new Regulation was on 4 December 2012, but almost all of the Member States have opted out based on the possibility given to do so in Article 11 of said Regulation. The final applicability date is on 4 December 2014.

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In order to facilitate the implementation of said Regulation by Member States and other stakeholders (such as air navigation service providers and airspace users), the Agency has issued ED Decision 2013/013/R\(^9\) adopting an initial set of Acceptable Means of Compliance and Guidance Material to the SERA IR Regulation.

The publication of this Opinion represents phase III (SERA Part C — ‘Procedures for Air Navigation Services relative to Air Traffic Management, which are of a ‘rules-of-the-air’ nature’, hereinafter referred to as ‘SERA Part C’) in the development of standardised European rules of the air and aims at completing the already adopted Implementing Regulation.

SERA Part C is the last step of the phased approach in the SERA IR-development process focusing on ‘Procedures’, whereas Part A addressed ‘Generalities’ and Part B ‘Services’ respectively. Therefore, with SERA Part C, said process is concluded and a full set of harmonised European rules of the air is proposed.

The main issues to be addressed by this Opinion are the following:

1. the finalisation of the SERA IR Regulation incorporating the relevant complementary material from ICAO Annex 10, Volume II, Document 4444 (PANS-ATM), ICAO Document 7030 and ICAO Document 8168 (PANS-OPS), in particular but not limited to the additional requirements in Section 11 — Interference, Emergency Contingencies and Interception, the addition of a new Section 13 on the use of SSR transponder and a new Section 14 on voice communication procedures;

2. the extension of the scope of the Regulation to cover aerodrome operators;

3. the introduction of recent amendments to ICAO Annex 2 that affects the requirements in the SERA IR Regulation; and

4. the alignment of the SERA IR Regulation with the provisions in Regulations (EU) Nos 965/2012\(^10\) and 139/2014\(^11\).

The new proposed Section 14 on voice communication procedures intends to harmonise the phraseology and communication procedures used in ATS voice communications.

### 2.2. Objectives

The overall objectives of the EASA system are defined in Article 2 of the Basic Regulation. This Opinion will contribute to the achievement of the overall objectives by addressing the issues outlined in paragraph 2.4.1.

The specific objective of this Opinion is to complete the objective of the SERA IR Regulation, which is the harmonisation of the rules of the air and operational procedures for the use of European airspace.

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\(^9\) [Link to the ED Decision](http://easa.europa.eu/document-library/agency-decisions/ed-decision-2013013r)


In addition, another objective of this Opinion is to maintain the SERA IR Regulation aligned with the developments of ICAO Annexes in order to ensure seamless operations worldwide.

The last, but not least, objective is the alignment between the provisions of the SERA IR Regulation and the provisions in other fields of aviation to ensure a total system approach.

2.3. Outcome of the consultation

NPA 2014-05 on SERA Part C was published on 18 February 2014 and it contained a total of 12 questions for which consolidated views were expected from stakeholders and individuals in order to improve the proposed draft rule. In the majority of the responses received though, the commentators simply expressed either agreement or disagreement. Still, a number of responses provided consolidated comments and more robust justification. In all cases and regarding all questions, the analysis was never limited to an accounting exercise but, on the contrary, all arguments provided were carefully evaluated and weighted before the decisions on the resulting changes to the draft proposal were reached. A summary of the responses received and the subsequent changes made to the draft Implementing Rule is contained in Section 2.1 of CRD to NPA 2014-05.

Other comments not related to the questions posed in the NPA were also taken into account, as indicated in paragraph 2.2 of the CRD, and the additional changes were introduced in the proposed regulatory text.

The distribution of the comments and responses received as well as the statistics are provided in the CRD.

The resulting text has been provided to facilitate the understanding and the evaluation of the changes proposed in the light of the responses to the comments.

The CRD provides the full set of individual comments received on NPA 2014-05 and the responses provided thereto.

2.4. Summary of the Regulatory Impact Assessment

A safety impact assessment process has been carried out during the different phases of the development of the rule (see NPA 2014-05). The application of this structured safety impact assessment process has shown that SERA Part C, will ensure a safer air traffic flow within the EU.

2.4.1 Issues

The main issues addressed by this proposal are the following:

— Safety by complementing the existing SERA IR Regulation with elements such as the procedures for the use of the SSR transponder and the procedures for radiotelephony. While these procedures exist in the ICAO documentation, their use across the European Union varies resulting in the increase in the risk of misunderstanding between the different airspace users. Indeed, this has been one of the contributing factors to some incidents (e.g. the use of non-standard phraseology is one very typical factor).

— Regulatory harmonisation. As explained above, these procedures are already contained in the ICAO SARPs and documentation but their transposition and implementation by the European Union Member States vary, thus not supporting either the implementation of the Functional Airspace Block (FAB) or the Single European Sky.

2.4.2 Who is affected?

The proposal affects airspace users (private pilots, aircraft operators), ANS providers, air traffic controllers and aerodrome operators. It also affects the competent authorities responsible for airspace matters within the Member States as well as the competent authorities responsible for the oversight of the aircraft operations and ANS providers. In addition, the proposal affects Member States.

2.4.3 Options

The possible options for addressing the issues identified above are the following:

Option 0: ‘do nothing’. Through this option, the SERA IR Regulation would remain unchanged. The SERA IR Regulation would neither be complemented, nor amended as proposed. Member States would need to implement their own national procedures for the identified items.

Option 1: ‘making references to ICAO material’. Through this option, the SERA IR Regulation would be amended by making references to the ICAO material. The introduction of these references to ICAO material would still require an amendment to the SERA IR Regulation not only to include the references, but also to amend those elements of the rule that require amendment because of the detected inconsistency with the air operations requirements, to align with the recent amendment to ICAO Annex 2, or to extend the scope of the rule to render it applicable to the aerodrome operators too. Furthermore, such an approach was considered not user-friendly for the affected stakeholders.

Option 2: ‘amend and complement the SERA IR Regulation’. Through this option, the SERA IR Regulation would be amended by providing additional material originating from the ICAO documentation (ICAO Annex 10, Volume II, PANS-ATM, PANS-OPS and ICAO Doc 7030). In addition, by this Option, as by the previous one, the rule would need to be amended in order to ensure consistency with the air operations requirements, to align with the recent amendment to ICAO Annex 2, and to extend the scope of the rule so that it applies to the aerodrome operators too.

While all these three options are feasible, it is important to highlight that Option 1 would not differentiate today’s situation, even though the rule would be amended. Indeed, current Regulation (EU) No 1035/201113 (hereinafter referred to as the ‘common requirements Regulation’) makes reference to ICAO material. However, experience has shown that the way the Member States interpret these references and the way the requirements are implemented varies across the EU, leading to a situation in which the issues identified above remain unresolved. This is the reason why this option has not been retained for the rest of the analysis. Therefore, the preferred option is Option 2.
2.4.4 Summary of the main impacts

The subjects described above lead to potential cost drivers from the aviation stakeholders’ point of view:

— adaptation of the current processes and documentation;
— adaptation of the training; and
— length of the transition period.

Based on the impacts analysis, most of the impacts are positive in Option 2. In case the Member States have notified differences from ICAO standards which now will be harmonised, the only negative impact is the economic one, which is expected due to the initial implementation cost for Member States and the national ATS providers emanated by the necessary changes (in the airspace, procedures, AIP, etc.). In that case, it could also entail additional cost for the competent authorities, aircraft and aerodrome operators and ANS providers to train the relevant personnel.

This negative economic impact is only expected at the beginning of the implementation of the amendment to the SERA IR Regulation. Ways to reduce the effect of this impact could be the following:

— the provision of necessary supportive material, AMC and GM to be proposed by the Agency in a future NPA;
— facilitation of training and also safety promotion campaigns; and
— the provision of the necessary transitional measures and the necessary time for the entry into force of the amended Regulation. The Member States have the possibility to derogate from the application of the rule until 4 November 2016, provided they have duly notified the European Commission and EASA.

Based on the above, the Agency concludes that the concerns raised during the NPA consultation on the potential negative economic impact are well taken into account due to the changes introduced throughout the proposal (see Chapter 2.5 below). After the transition period, this truly harmonised regulatory system throughout the EU will provide for cost-effectiveness, contribute to the reduction of regulatory tasks at national level and ensure ICAO compliance.

2.5. Overview of the proposed amendments

The changes to the SERA IR Regulation laying down the common rules of the air and operational provisions regarding services and procedures in air navigation, which are being proposed by this Opinion, stem mainly from the following sources:

(a) relevant material from ICAO Document 7030, ICAO Document 4444 (PANS-ATM), ICAO Document 8168 (PANS-OPS), Volume I and ICAO Annex 10, Volume II;

(b) the need to apply the rule to aerodrome operators and personnel working at the operation and maintenance of the aerodrome infrastructure and in particular in the manoeuvring area;

(c) the need to clarify paragraph (d)(3) of SERA.3210, which may be considered necessary by the stakeholders;
(d) the need to align the type of lights to be switched on on balloons with the air operations requirements;

(e) the need to align the SERA IR Regulation with the current ICAO Annex 2 (following Amendment 44 thereto); and

(f) the need to align the SERA IR Regulation with other EU regulations.

2.5.1 Proposed amendments originating from the relevant material of ICAO Annex 10 and ICAO Documents

As already explained in NPA 2011-02 on SERA Part B, the SERA IR Regulation has been developed based mainly on the whole ICAO Annex 2 and some parts of Annex 11 and Annex 3 that are considered to be of a ‘rules-of-the-air’ nature following a set of agreed drafting principles.

The intention of this Opinion is to complement the set of requirements considered to be of a ‘rules-of-the-air’ nature with material deriving from ICAO Document 7030, ICAO Document 4444 (PANS-ATM), ICAO Document 8168, Volume I and ICAO Annex 10, Volume II. In most cases, the ICAO provisions have been transposed without any changes to the technical content. In some cases, the provision has been adapted to be placed at Implementing Rule level (e.g. ‘should’ has been replaced by ‘shall’), and, in other cases, some terms have been adapted to the European Regulatory Framework (e.g. ‘ATS authority’ has been replaced by ‘competent authority’, ‘ATS unit’ or ‘Air Navigation Service Provider (ANSP)’). Generally, changes made to the ICAO text have been carefully dealt with so that the original meaning of the ICAO text has not been changed.

In accordance with its Rulemaking Programme, the Agency will propose Part-ATS, which will contain the technical requirements for the provision of ATS deriving from PANS-ATM and ICAO Annex 11, which will further develop Annex III to the common requirements Regulation on the provision of ATM/ANS, as indicated in NPA 2013-08.

Only those provisions which after a very careful evaluation have been considered necessary to complement and complete the existing SERA IR Regulation have been taken into account for transposition.

All the proposed amendments are the following:

(a) Definitions:

(1) Two definitions have been added to reflect the rule text which contains terms not included in the SERA IR Regulation before, namely the definitions of ‘Minimum fuel’ and ‘ATS surveillance service’. Both definitions originate from PANS-ATM.

(2) Some stakeholders requested more clarity on the interpretation of the term ‘mountainous area’ and the definition in PANS-OPS has been proposed for transposition. In addition thereto and in order to provide more clarity, the term ‘mountainous terrain’ used in SERA.5005 is replaced by ‘mountainous area’ which is considered not to change the substance of the original term.

(3) The term ‘safety-sensitive personnel’ has been amended to include the explicit version of ‘aerodrome operations, rescue and firefighting and maintenance personnel, personnel allowed unescorted access on the movement area’.
(b) SERA.5005(e) regarding the Visual Flight Rules (VFR) and Reduced Vertical Separation Minima (RVSM) airspace has been modified to include more specific provisions of ICAO Doc 7030 1.2.1.2. The intent of this new proposed provision is to render the general ICAO provision of Annex 2 more specific to reflect properly the RVSM implementation in the European Union. The proposed amendment indicating the conditions for authorising VFR flights to operate above FL 285 (in restricted airspace) is, in fact, an addition to the existing provisions stemming from Regulation (EC) No 730/2006\(^\text{14}\), in particular Article 4 thereof.

(c) SERA.5015(c)(3) has been added based on the provision in PANS-ATM 4.8.1 as it was considered that the relevant elements, including specific phraseology, should complement the procedure for making acceptable the change from instrument flight rules (IFR) flight to VFR flight.

(d) A new paragraph, SERA.7002 ‘Collision hazard information when ATS based on surveillance are provided’, transposing PANS-ATM 8.8.2 is proposed. The intent is to clarify the provision of collision hazard information in a surveillance environment subject to certain conditions. Based on the comments received on the proposals under SERA Part B, the clarification of this procedure has been considered.

(e) SERA.8012 ‘Application of wake turbulence separation’ has been proposed as a new provision. As a result of the SERA Part B consultation and adoption, the separation minima shall be selected by the ATS provider, based on the result of a safety assessment, which shall be subject to approval from the competent authority. The exact values for separation minima to be applied in each case are not provided in the present text. However, the circumstances where wake turbulence separation must be applied are considered relevant to the rules of the air.

(f) SERA.8015 ‘Air traffic control clearances’, paragraphs (a) and (d) have been modified, and (e) and (f) have been added to complement the explanation of the purpose of the clearances, the content of the clearance related to the route of the flight, changes in clearances regarding route or level, the content of the clearance concerning altimeter setting and the conditional clearances. These provisions originate from PANS-ATM, mainly from Chapters 4.5, 4.10 and 12.2.7.

(g) SERA.8020 has been amended by removing reference to ICAO regional air navigation agreements from paragraph (b)(3). This paragraph has also been modified by replacing the nominal delay of 3 minutes by a delay of 2 minutes, as implemented by Amendment 43 to ICAO Annex 2 applicable as of 15 November 2012.

(h) A new paragraph, SERA.8025(a)(2), has been added to clarify under which conditions the pilots need to resume voice or controller-pilot data link communications (CPDLC) position reporting when exempted from the requirement to report on compulsory reporting points. The proposed provision comes from PANS-ATM 8.6.4.4. Reference to the updated Appendix 5 has been made to clarify the format of the position reports.

(i) Two new paragraphs have been added to SERA.10001 ‘Application’ to require the reporting of the ‘Operations normal’ message when so prescribed by the competent authority. These two

paragraphs come from PANS-ATM 9.2.1.2 and 9.2.1.3. Considering the origin of these provisions from ATM procedures and their normal associated level of flexibility, it was felt necessary to maintain sufficient flexibility in 10001b) in order to reflect the European airspace situation. In particular, the original provision in PANS-ATM was associated with a paragraph subject to ‘requirement by the appropriate ATS authority’. Therefore, ‘When so prescribed by the competent authority’ has been added at the beginning of 10001b); 10001b) is intended to ensure a harmonised implementation of requirements for flight crews to facilitate the provision of alerting services. While flexibility is maintained, this insertion complements the requirements by providing harmonised means for the competent authorities to facilitate, when and where deemed necessary, the provision of alerting services to flights.

(j) In Section 11, SERA.11001 and SERA.11005 have been reorganised in a more logical manner. The title of SERA.11010 has been changed to ‘strayed or unidentified aircraft’ instead of ‘in-flight contingencies’, because it has been considered more suitable for the content of this provision. Furthermore, in this Section, three new provisions have been added.

(1) SERA.11012 ‘Minimum fuel and fuel emergency’ clarifies the actions to be taken by pilots and controllers in case ‘minimum fuel’ is declared by the pilot and also in case of emergency fuel. The provisions come from PANS-ATM 15.5.4.1 and Annex 10, Volume II, 5.3.2.1.1. It is important to highlight that the issue related to minimum fuel and emergency fuel has been the subject of some serious incidents investigation reports, and a number of recommendations have been made to the Agency as well as to other competent authorities, regulators and to ICAO. Through State Letter 10/2012, ICAO announced the adopted Amendment 36 to Annex 6 Part I, effective as of 15 November 2012. This amendment introduced among others new standards for in-flight fuel management and a new fuel-related phraseology. While this amendment will be reflected in the air operations requirements through RMT.0573 & RMT.0574 on fuel planning and management, the Agency has been proactive on the subject and has published SIB 2013-12 ‘In-flight fuel management — phraseology for fuel related messages to ATC’\(^\text{15}\). This proposal already contains the relevant requirements from PANS-ATM and Annex 10 regarding phraseology as already foreseen by the Agency in said SIB.

(2) SERA.11013 ‘Degraded aircraft performance’ provides a general requirement for the pilot on how to act in case of failure of the navigation, communications, altimetry, flight control or other systems, that would affect the performance of the aircraft required to fly in that airspace, and more in particular in case of degradation or failure of the RNAV system and loss of the vertical navigation performance required for RVSM. The requirements originate from PANS-ATM 5.2.2, 12.2.4 and 12.2.5 and also from paragraphs 9.4, 9.5.1.1, 9.5.2, 9.5.3 and 9.5.4 of Doc 7030. In order to better reflect the European practices in SERA.11013(b), besides RNAV, RNP has also been added.

(3) SERA.11014 ‘ACAS resolution advisory (RA)’, which contains the provisions for the pilots and controllers on how to react in the event of an ACAS RA. It was felt necessary to have such provisions in the rules of the air as ACAS RA constitutes a highly safety-sensitive case,
especially regarding the interface between pilots and controllers, and since the current situation, where requirements on pilots appear only in PANS-OPS and requirements on controllers only in PANS-ATM, was considered suboptimal. The present proposal is faithfully aligned with the PANS-OPS and PANS-ATM approach, as recommended by informal consultations and outcomes of other ongoing developments including those of EUROCONTROL working groups, offering in addition the benefit of presenting the whole set of relevant provisions together. The provisions come from paragraph 3.2, Chapter 3, Section III of PANS-OPS and paragraphs 15.7.3.2 and 15.7.3.3 of PANS-ATM.

(k) In SERA.12005 ‘Special aircraft observations’, a new paragraph (c) has been added coming from paragraphs 4.12.4.1, 4.12.4.2 and 4.12.5 of PANS-ATM and making references to Appendix 5, which has been amended in order to be aligned with Appendix 1 to PANS-ATM. These provisions complement the existing ones by adding a reference to the reporting forms included in that Appendix. The title of Appendix 5 has been reworded for editorial reasons to better reflect its content.

(l) A new Section 13 has been added containing provisions governing the use of the Secondary Surveillance Radar (SSR) transponder. The majority of the provisions have been taken from PAN-OPS Volume I, Part III, Section 3, Chapter 1 and PANS-ATM paragraphs in Chapter 8.5.

These provisions have been added to the SERA IR Regulation because they are considered to be of a ‘rules-of-the-air’ nature and also because their introduction has been considered necessary, in particular from the pilot’s point of view, as they contain important requirements to be met by pilots and controllers to ensure safe operation within the European airspace.

The requirements have been grouped in the following provisions:

1. SERA.13001 ‘Operations of SSR transponder’;
2. SERA.13005 ‘SSR transponder Mode A code setting’; and
3. SERA.13010 ‘Pressure altitude-derived information’.

In paragraph (b), a possibility has been given to the competent authority to allow for alternative means for each suitably equipped ATC unit to verify the pressure altitude-derived information. From a technological point of view, the verification should be performed ‘at least once by each suitably equipped ATC unit’. In the past, each ATC unit used to have its own surveillance system. The latest technological developments, like the integration of multiple surveillance sources into one tracker and the sharing of surveillance data, allow for a change in the original requirement to the extent that it is sufficient to perform such verification per ATS system rather than per ATC unit.

From a procedural standpoint, the inclusion of level information in each communication channel changeover, combined with the simultaneous verification of the Mode C being displayed for that aircraft, provide the means for an efficient implementation of this requirement.

Considering that the verification of Mode C information can be performed per ATS system, the competent authorities should be permitted to reconsider in specified circumstances the requirement for the inclusion of the level information in each communication channel.
changeover, subject to a safety assessment carried out by the ATS provider and approved by the competent authority.

This could be considered less demanding than ICAO PANS-ATM as the SERA provision ‘Unless otherwise prescribed’ appears to be more flexible than the ICAO text. On the other hand, the status of ICAO procedures like PANS-ATM is different from the status of standards, and differences could already be applied by Member States and published in their AIP if considered significant, even without notification to ICAO. The following proposed provisions, being binding when adopted, are not less demanding than the ICAO provision:

(i) SERA.13015 ‘SSR transponder Mode S aircraft identification setting’; and

(ii) SERA.13020 ‘SSR transponder failure when the carriage of a functioning transponder is mandatory’.

(m) A new Section 14 on voice communication procedures has been added based mainly on ICAO Annex 10, Volume II, Chapter 5 and on some provisions in PAN-ATM and Annex 11. This Section groups together the various voice communication procedures and phraseology originating from various paragraphs in the ICAO documentation. The standardisation of the voice communication procedures has been identified from the very beginning as one of the most important milestones of the Regulation. Lack of standardisation in voice communication procedures and phraseology has been identified to be one of the contributing factors to some serious incidents and even accidents and, therefore, harmonisation within the European airspace is expected to be of benefit to safety. In addition thereto, and as already explained in Chapter 2.1, the use of the English language in radiotelephony communications has been recommended by some investigation reports on serious incidents and, therefore, a question has been raised in the NPA in this regard. This Section contains the following provisions:

(1) SERA.14001 ‘General’.

(2) SERA.14005 ‘Categories of messages’ proposes an order of priority in the transmission of messages. In the implementation of the requirements in this provision, several national differences were notified in Europe.

(3) SERA.14010 ‘Flight safety messages’.

(4) SERA.14015 ‘Language to be used’. In this provision, it is important to note that the term ‘designated aerodromes’ which appears in the phrase ‘designated aerodromes and routes’ appearing in (b), has a different meaning from that of ‘designated’ as, for example, in ‘designated ANSP’ in the SES context. The term as used in this paragraph refers to aerodromes and routes which are designated as being for international use in a list established by the Member States, which is accordingly published in the national AIPs. This explanation will be used to develop Guidance Material associated with SERA.14015. It also has to be noted that the EUROCONTROL Provisional Council in its 39th meeting has endorsed the recommendation to Member States to consider the extension of the use of the English language by qualified pilots on some critical frequencies at aerodromes with international traffic of more than 50 000 commercial IFR movements per year.
2. Explanatory Note

(5) SERA.14020 ‘Word spelling in radiotelephony’.

(6) SERA.14025 ‘Principles governing the identification of ATS routes other than standard departure and arrival routes’.

(7) SERA.14030 ‘Use of designators for standard instrument departure and arrival routes’.

(8) SERA.14035 ‘Transmission of numbers in radiotelephony’. This Section contains a proposal which creates a difference from ICAO. During the rule development, the significant number of national differences notified on this subject and the associated justification were reviewed, and the conclusion, significantly building on works of EUROCONTROL working groups, was to propose material which reflects the European practice while differing from ICAO’s.

(9) SERA.14040 ‘Pronunciation of numbers’.

(10) SERA.14045 ‘Transmitting techniques’. Regarding this issue, a number of national differences were published, and it is considered that the standardisation of the European understanding and use of the ICAO terms would improve safety. It is proposed to use the ICAO table for SERA as shown in the draft IR, but Member States and stakeholders views are useful to get a clearer picture of how this specific subject is perceived. Here as well, it is essential to bear in mind that sufficient consistency should be maintained with other regions of the world and that any deviation should be justified by a robust safety case.

(11) SERA.14050 ‘Radiotelephony call signs for aircraft’. Regarding this paragraph, existing notified national differences were reviewed and assessed, notably one about call sign Type b), which proposed to use all the characters of the registration markings after the company name instead of only 4. This option was not considered to bring benefits compared to call sign Type a) which uses the characters of the registration markings;

(12) SERA.14055 ‘Radiotelephony procedures’. Here, the draft SERA Part C proposed is identical to the ICAO text.

(13) SERA.14060 ‘Transfer of VHF communications’.

(14) SERA.14065 ‘Radiotelephony procedures for air-ground voice communications channel changeover’.

(15) SERA.14070 ‘Test procedures’.

(16) SERA.14075 ‘Exchange of communications’.

(17) SERA.14080 ‘Communications watch/Hours of service’.

(18) SERA.14085 ‘Voice communications failure’. Some of the provisions are still under review by the ICAO Communication Failure Coordination Group, which has been created by ICAO to review all the communication failure procedures. Depending on the outcome of this group’s work, these provisions may be revisited after the NPA consultation.

(19) SERA.14090 ‘Specific communications procedures’.

(20) SERA.14095 ‘Distress and urgency radiotelephony communication procedures’.
2.5.2 Proposed amendments to apply the rule to aerodrome operators and personnel working on the operation and maintenance of the aerodrome infrastructure and in particular on the manoeuvring area

The rules of the air, as their name indicates, are the rules to be applied by users of the airspace, but also by the personnel on the ground so as to ensure the correct understanding between the personnel on the ground and the personnel on the air.

While the SERA IR Regulation concerns ground personnel engaged in aircraft operations, it does not concern specifically either the aerodrome operators or the personnel working on the operation and maintenance of the aerodrome infrastructure or on the manoeuvring area. That is the reason why paragraph 3 of Article 1 ‘Subject matter and scope’ as well as the definition of the term ‘safety-sensitive personnel’ have been amended.

Since paragraph SERA.2001 of the Annex to the Regulation is a replica of Article 1 in the Cover Regulation, the last paragraph of SERA.2001 has also been amended to reflect the amendment to the scope of the Regulation.

Moreover, based on the recent developments in aerodromes rules and also on the need to clarify the different colours used at taxiways and runways when they are closed, it is proposed to harmonise the existing provision with the clearer wording in ICAO Annex 14. This is the reason why a modification to paragraph 3.2.4. ‘Closed runways or taxiways’ of Appendix 1 to the Regulation has been proposed. Additionally, paragraph 1.1.2 of Appendix 1 has been modified by replacing the reference to ICAO Annex 10, Volume II with a reference to Section 14 of SERA.

These amendments to the Regulation do not represent differences from ICAO Annex 2, but they complement the existing requirements by expanding their application to aerodrome operators or by clarifying the meaning of the existing sentences (marking colours for taxiways/runways).

2.5.3 Need to clarify paragraph SERA.3210(d)(3) so as to implement measures for preventing runway incursion

By reference to NPA 2012-06 on ‘Sterile Flight Deck Procedures’ and the aerodrome operations requirements, the Agency studied the relevant provisions existing across the different regulations being prepared and found inconsistencies in the procedures for taxiing of aircraft on the manoeuvring area. The issue has been dealt with at ICAO level and ICAO published Doc 9870 — Manual on the Prevention of Runway Incursions. The analysis of SERA.3210(d)(3) concluded that the procedure may not be absolutely clear on when an aircraft taxiing on the manoeuvring area shall stop and hold at lighted stop bars which cannot be switched off, for example, or may proceed after an ATC clearance.

2.5.4 Proposed amendments to align the requirements for the type of lights to be used on balloons in the SERA IR Regulation with the air operations requirements

When the SERA IR Regulation was initially developed, the lights requirements for balloons, developed by the Agency as part of the air operations requirements, included anti-collision lights as well as position lights. Those initial proposals were based on existing Canadian and USA requirements for balloons.

However, based on recent developments, it has been found that on balloons, only anti-collision lights, and not position lights, are needed. This reasoning is based on the fact that the balloon’s speed is, in
fact, always approximately equal to the wind speed at the ambient air layer. With respect to its speed, it is, therefore, reasonable to assume that the balloon is an almost static obstacle in the airspace in comparison to the forward speed of an aeroplane or a helicopter. The detection of a balloon by other VFR aircraft and its identification as an obstacle is, therefore, much more important than estimating its trajectory. The performance objective of the requirement for lighting is, therefore, collision avoidance. Moreover, balloons tend to rotate around their z-axis so that no component points permanently in the direction of flight.

Additionally, existing technical solutions for the installation of anti-collision lights on balloons have proven to meet the objective. These developments have recently been reflected in the technical requirements in the respective Certification Specifications (CSs). While the amendment is not yet included in CS-31HB or CS-31GB, there are special conditions published by the Agency that will form the basis for the amendments to the Certification Specifications (CSs).

This amendment does not represent any difference from the ICAO requirements since ICAO Annex 2 does not specify the lights to be displayed by balloons.

2.5.5 Proposed amendments to align the SERA IR Regulation with Amendment 44 to ICAO Annex 2

Amendment 44 to ICAO Annex 2 was adopted by the ICAO Council at the fourth meeting of its 198th Session on 25 February 2013. The effected applicability date was on 13 November 2014. In order to provide an indication of how the amendment could be implemented in the EU regulations, the proposed amendment has been included in this proposal.

Amendment 44 arises from proposals developed by the ICAO Secretariat and supported by the Approach Classification Task Force (ACTF) in coordination with the Aerodromes Panel (AP), the Instrument Flight Procedure Panel (IFPP), the Navigation Systems Panel (NSP) and the Operations Panel (OPSP), regarding the new approach classification and the introduction of approach procedures with vertical guidance (APV) operations. The amendment concerning the new approach classification provisions modifies the existing approach classification in a manner that simplifies and more accurately describes the various types of approach and landing operations, addressing the concerns expressed by Member States and industry since the introduction of the existing classification. The amendment is also related to the harmonisation effort to implement performance-based navigation (PBN) approach operations and vertical guidance, and has the added benefit of optimising runway requirements in relation to the approach operations.

The amendment introduced a new ‘instrument approach operation’ definition (definition (90)) which is then used in the amended definition of ‘instrument approach procedure (IAP)’ (which now becomes definition (91)). The proposed amendment itself does not have an impact on the rule using the definition as the operation will be the same. The only change is in the definition of such an operation.

It is important to highlight that the rulemaking activity to amend the air operations requirements, aerodrome requirements and airworthiness requirements, which are more affected by such a change, is planned to start in 2014. However, the intention is to reflect the ICAO Amendments, therefore, it has been considered necessary to already include the amendment in the SERA IR Regulation.
2.5.6 Proposed amendments for helicopter operations

When the SERA IR Regulation was initially developed, a certain level of flexibility was felt necessary to be maintained with regard to the decisions of the competent authorities in a number of specific cases which may be found throughout the document, including the ones in which ICAO was not specific. However, some of these occurrences have been superseded by evolutions which appeared at a later stage in the process of adoption of the SERA IR Regulation. This is, e.g. the case regarding minimum visibility for helicopter flying VFR at night, which was possible down to 3 km, based on the airspace classification toolbox recommendations.

Moreover, regarding the possibility for the competent authorities to allow helicopter operations with visibility less than 800 m in special cases (‘such as medical flights, search and rescue operations and firefighting’), this specific flexibility was intended for exceptional cases which are better covered by Article 4 of the SERA IR Regulation which was not included in the initial SERA proposal and was developed following discussions in the Single Sky Committee (SSC).

Therefore, it is proposed to remove the last sentence of the text included in Table S5-1 (Visibility and distance from cloud minima), points (c)(3)(iv) and (c)(4) of SERA.5005 (VFR at night), and to adapt the text of SERA.5010 (Special VFR) accordingly.

2.5.7 Proposed amendment to Appendix 4 to Regulation (EU) No 923/2012

Following the work accomplished in preparation for the SERA implementation, some comments indicated that in the current layout of the adopted SERA IR Regulation, the description of some items presented in Appendix 4 might be understood as being slightly different from what is stated in SERA.6001.

In particular, for Class D airspace, SERA.6001 states that ‘...all flights are provided with air traffic control service...’ whilst in Appendix 4, in the column ‘Service provided’, it is indicated that the provision of air traffic control service only relates to IFR flights. The same situation is also applicable to VFR flights in Class C. In this context, it should be noted that in the column ‘Subject to an ATC clearance’, the provisions of SERA.6001 are reflected correctly.

The interpretation should be that all flights are provided with air traffic control service, for the reason that they are subject to air traffic control clearance, even if they are not subject to separation.

In order to avoid any misinterpretation, it is proposed to amend Appendix 4 with regard to the description of the provided services for VFR flights in Classes C and D.

It should also be noted that with this slight amendment, it will be underlined that the understanding of air traffic control service should not be connected with the provision of separation.

2.5.8 Proposed content amending the Supplement to the Annex to Regulation (EU) No 923/2012 (differences between SERA and ICAO as agreed at European level)

SERA.14035 ‘Transmission of numbers in radiotelephony’ introduces a proposal which creates a difference compared to ICAO. The use of the terms ‘hundred’ and ‘thousand’ has been accepted by ICAO as being safe for certain items. The difference created concerns the extension of the pronunciation of numbers containing whole hundreds and whole thousands to be used also for flight levels, transponder codes and barometric pressure. During the rule development, the significant
number of national differences notified on this subject and the associated justifications were reviewed and the conclusion, significantly building on works of EUROCONTROL working groups, was to propose material which reflects the European practice while differing from ICAO’s.

Following comments received from several stakeholders, it is proposed to delete the difference A2-06 and to subsequently modify difference A2-04. The relevant ICAO provision in Annex 2 paragraph 4.3 gives the possibility to the ‘appropriate ATS authority’ to prescribe certain conditions, and SERA.5005(c) prescribes such conditions, which is considered not to constitute a difference.

The numbering of the differences has remained unchanged since some Member States indicated that they use it to make reference to national documents. Otherwise unnecessary burden would be created.

SERA.14065 and SERA.14090 — The term ‘super’ has been introduced in these two paragraphs to reflect the classification for wake turbulence, which may be applied to some aircraft in the ‘heavy’ category. Such classification is subject to the decision of the competent authority, notably considering that it has been described in an ICAO State Letter of 8 July 2008, but not integrated into the ICAO Annexes. This situation has been reflected by the wording used.

2.5.9 Proposal to amend other Regulations

Since the proposal contains the transposition of Regulation (EC) No 730/2006 into SERA (in particular SERA.5005 and SERA.6001), said Regulation should be repealed.

Regulation (EU) No 965/2012 should be amended as follows:

CAT.OP.MPA.295

The operator shall establish operational procedures and training programmes when ACAS is installed and serviceable.

When ACAS II is used, such procedures and training shall be in accordance with Commission Regulation (EU) No 1332/2011.

‘The operator shall establish operational procedures in accordance with Regulation (EU) No 923/2012 and training programmes in accordance with Regulation (EU) No 1332/2011 when ACAS is installed and serviceable so that the flight crew is appropriately trained in the avoidance of collisions and competent in the use of ACAS II equipment.’

SPO.OP.205 (a)

(a) The operator shall establish operational procedures and training programmes when ACAS is installed and serviceable. When ACAS II is used, such procedures and training shall be in accordance with Commission Regulation (EU) No 1332/2011.

‘The operator shall establish operational procedures in accordance with Regulation (EU) No 923/2012 and training programmes in accordance with Regulation (EU) No 1332/2011 when ACAS is installed and

https://www.eurocontrol.int/sites/default/files/field_tabs/content/documents/nm/airports/airports-wake-vortex-aspects-letter-a380-aircraft1.pdf
serviceable so that the flight crew is appropriately trained in the avoidance of collisions and competent in the use of ACAS II equipment.’

NCC.OP.220

The operator shall establish operational procedures and training programs when ACAS is installed and serviceable.

When ACAS II is used, such procedures and training shall be in accordance with Commission Regulation (EU) No 1332/2011.

‘The operator shall establish operational procedures in accordance with Regulation (EU) No 923/2012 and training programs in accordance with Regulation (EU) No 1332/2011 when ACAS is installed and serviceable so that the flight crew is appropriately trained in the avoidance of collisions and competent in the use of ACAS II equipment.’

NCO.OP.220

When ACAS II is used, operational procedures and training shall be in accordance with Commission Regulation (EU) No 1332/2011.

‘When ACAS II is used, operational procedures shall be in accordance with Regulation (EU) No 923/2012 and training in accordance with Regulation (EU) No 1332/2011.’

Furthermore, Regulation (EU) No 1332/2011 should be amended as follows:

**Article 4**


2. Any other obligation imposed on air operators by Regulation (EEC) No 3922/91 Regulations (EU) Nos 965/2012, 800/2013 and 379/2014 as regards the approval, installation or operation of equipment shall continue to apply to ACAS II.

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ANNEX

Airborne collision avoidance systems (ACAS) II

(Part-ACAS)

Section I — ACAS II equipment

AUR.ACAS.1005 Performance requirement

(1) The following turbine-powered aeroplanes shall be equipped with collision avoidance logic version 7.1 of ACAS II:

(a) aeroplanes with a maximum certificated take-off mass exceeding 5 700 kg; or

(b) aeroplanes authorised to carry more than 19 passengers.

(2) Aircraft not referred to in point (1) but which will be equipped on a voluntary basis with ACAS II shall have collision avoidance logic version 7.1.

(3) Point (1) shall not apply to unmanned aircraft systems.

AUR.ACAS.1010 ACAS II training

Operators shall establish ACAS II operational procedures and training programmes so that the flight crew is appropriately trained in the avoidance of collisions and becomes competent in the use of ACAS II equipment.

Section II — Operations

AUR.ACAS.2005 Use of ACAS II

(1) ACAS II shall be used during flight, except as provided in the minimum equipment list as specified in Annex III to Regulation (EEC) No 3922/91, in a mode that enables RA indications to be produced for the flight crew when undue proximity to another aircraft is detected, unless inhibition of RA indication mode (using TA indication only or equivalent) is called for by an abnormal procedure or due to performance limiting conditions.

(2) When an RA indication is produced by ACAS II:

(a) the pilot flying shall immediately conform to the indications of the RA indication, even if this conflicts with an air traffic control (ATC) instruction, unless doing so would jeopardise the safety of the aircraft;

(b) the flight crew, as soon as permitted by workload, shall notify the appropriate ATC unit of any RA which requires a deviation from the current ATC instruction or clearance;

(c) when the conflict is resolved, the aircraft shall:

(i) be promptly returned to the terms of the acknowledged ATC instruction or clearance and ATC notified of the manoeuvre; or

(ii) comply with any amended ATC clearance or instruction issued.

AUR.ACAS.2010 ACAS II training
Operators shall establish ACAS II operational procedures and training programmes so that the flight crew is appropriately trained in the avoidance of collisions and competent in the use of ACAS II equipment.

Done at Cologne, on 16 December 2014.

Patrick Ky
Executive Director
3. References

3.1. Affected regulations


3.2. Affected decisions

None.

3.3. Reference documents

— ICAO Document 4444, PANS-ATM;

— ICAO Document 7030, Regional Supplementary Procedures;

— ICAO Document 8168, PANS-OPS Volume I, Flight Procedures; and

— ICAO Annex 10, Volume II, Communication Procedures including those with PANS status.