

Applicability: All AOC Holders and General Aviation Pilots who Follow Instrument Flight Rules**STANDARD INSTRUMENT DEPARTURE (SID) AND STANDARD ARRIVAL (STAR) CLIMB AND DESCENT PROCEDURES AND PHRASEOLOGY****1 Introduction**

- 1.1 Edition 15 (November 2007) of International Civil Aviation Organization (ICAO) Doc 4444 (PANS-ATM) introduced revised procedures and phraseology associated with climb and descent instructions issued to aircraft following a SID or a STAR. FODCOM 16/2009 informed operators of this change, explained that UK procedures and radiotelephony (RTF) phraseology were different, and provided advice on how UK operators should comply with the ICAO procedures when operating outside of UK airspace.
- 1.2 The purpose of this FODCOM is to re-emphasise UK procedures and guidance, and also to update operators on recent ICAO developments.
- 1.3 Detailed information on the origin of the ICAO procedure change, CAA actions undertaken, and ICAO activity can be found at: www.caa.co.uk/atsdocuments.
- 1.4 This FODCOM replaces FODCOM 16/2009.

2 Procedures and Phraseology within UK Airspace

- 2.1 In the UK, for all stages of flight, instructions to climb or descend cancel any previous restrictions, unless they are reiterated as part of that instruction. Additionally, to emphasise the UK differences from ICAO, when an aircraft is on a SID and is required to climb directly to the cleared level, ignoring the vertical profile of the SID, controllers will include the word 'now'.

e.g. "Jet 123 climb now FL 120" means that the aircraft should climb directly to FL 120, ignoring the vertical profile of SID.

- 2.2 When an instruction is issued that amends a SID route, the level restrictions associated with that SID are no longer applicable. Therefore, in such circumstances, controllers will reiterate the level profile to be followed as part of such an instruction

e.g. "fly heading 095, climb now FL 80" or "route direct EFG, climb now altitude 5,000 feet".

- 2.3 In the UK, levels to be flown on STARs are as directed by Air Traffic Control (ATC), although the relevant charts contain level information for planning purposes.

3 Procedures and Phraseology Outside UK Airspace

- 3.1 Under the revised ICAO procedures, when receiving subsequent climb/descent instructions, aircraft following a SID/STAR shall continue to follow the published vertical profile of the SID/STAR, unless the procedure is explicitly cancelled by ATC. However, the ICAO changes do not affect level clearances provided to aircraft in other phases of flight where, unless reiterated, any new clearance cancels a previously issued level restriction. The ICAO procedures and RTF phraseology are fully detailed in paragraph 4.

- 3.2 A number of States have implemented the revised ICAO procedures, whilst others have not. Outside UK airspace, crews should assume that ICAO-compliant procedures and phraseology are in use unless a notification of a difference is filed in an individual State's Aeronautical Information Publication (AIP). Crews should follow the ICAO procedures unless operating in a State that has notified a difference or

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where the operator has determined that the revised PANS-ATM procedure has not been adopted. (The revised ICAO procedures and RTF phraseology are given below in paragraph 4.)

- 3.3 Guidance to crews should recommend that, in the case of any doubt about the intention of a clearance, they should request clarification from ATC. If doubt arises when airborne, the safest course of action will always be to follow the SID/STAR profile while seeking clarification.

4 Revised ICAO Procedures and RTF Phraseology.

The revised procedures introduced in ICAO Doc 4444 in November 2007 are as follows.

4.1 Aircraft on a SID

- 4.1.1 For a SID ICAO Doc 4444 states (paragraph 6.3.2.4):

'When a departing aircraft on a SID is cleared to climb to a level higher than the initially cleared level or the level(s) specified in a SID, the aircraft shall follow the published vertical profile of a SID, unless such restrictions are explicitly cancelled by ATC.'

- 4.1.2 When the level restrictions are explicitly cancelled, the ICAO phraseology for a SID (paragraph 12.3.1.2(z) of ICAO Doc 4444) is:

"CLIMB TO (level) LEVEL RESTRICTION(S) (SID designator) CANCELLED"

or

"CLIMB TO (level) LEVEL RESTRICTION(S) (SID designator) AT (point) CANCELLED".

e.g. "Jet 123 Climb to FL 100 level restrictions DEVAL 1G cancelled" means that the aircraft should climb directly to FL 100, ignoring the vertical profile of SID DEVAL 1G.

NOTE: In the UK 'to' is not used in connection with flight levels in order to reduce the possibility of misunderstanding in circumstances where the flight level includes the figure two, e.g. flight level 220. (**CAP 413** Appendix 1 refers.)

- 4.1.3 When the level restrictions are not explicitly cancelled, the ICAO phraseology for a SID (paragraph 12.3.1.2(a) of ICAO Doc 4444) is:

"CLIMB TO (level)".

e.g. "Jet 123 Climb to FL 100" means that the aircraft should follow the vertical profile of SID DEVAL 1G to its completion and then climb to FL 100.

4.2 Aircraft on a STAR

- 4.2.1 For a STAR ICAO Doc 4444 (paragraph 6.5.2.4) states:

'When an arriving aircraft on a STAR is cleared to descend to a level lower than the level or the level(s) specified in a STAR, the aircraft shall follow the published vertical profile of a STAR, unless such restrictions are explicitly cancelled by ATC. Published minimum levels based on terrain clearance shall always be applied.'

- 4.2.2 When the level restrictions are explicitly cancelled, the ICAO phraseology for a STAR (paragraph 12.3.1.2(aa) of ICAO Doc 4444) is:

"DESCEND TO (level) LEVEL RESTRICTION(S) (STAR designator) CANCELLED"

or

"DESCEND TO (level) LEVEL RESTRICTION(S) (STAR designator) AT (point) CANCELLED".

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e.g. “Jet 123 Descend to 3000 feet level restrictions GOKUL 2J cancelled” means that the aircraft should descend directly to 3000 feet, ignoring the vertical profile of STAR GOKUL 2J.

- 4.2.3 When the level restrictions are not explicitly cancelled, the ICAO phraseology for a STAR (paragraph 12.3.1.2(a) of ICAO Doc 4444) is:

“DESCEND TO (level)”.

e.g. “Jet 123 Descend to 3000 feet” means that the aircraft should follow the vertical profile of STAR GOKUL 2J to its completion and then descend to 3000 feet.

4.3 Aircraft in Other Phases of Flight

- 4.3.1 In all other phases of flight a climb or descent instruction from ATC automatically cancels any previous ATC instruction.

5 ICAO Safety Review

- 5.1 As a result of safety concerns regarding the revised Doc 4444 procedures, ICAO initiated a review to determine the extent and severity of difficulties being encountered. From the State responses, ICAO has identified that their current provisions have not provided the intended simplicity, efficiency, and global standardisation to ensure flight safety. Consequently ICAO has reported that they will be working expeditiously to determine the optimum solution and will coordinate with States, Air Navigation Service Providers and international organisations. Certain parties may be requested to conduct simulations in support of this effort. Additionally, ICAO has recommended that States promulgate, with urgency, any difference from the PANS-ATM SID/STAR provisions in the national AIP. The UK has published an ICAO difference in the UK AIP [Gen 1.7](#), Doc 4444, Chapter 6/paragraph 6.3.2.4.

- 5.2 The CAA continues to work with the UK aviation industry, with ICAO, and in Europe towards a satisfactory solution. When the proposed ICAO solution is promulgated, a UK review will be undertaken to establish if the current ICAO difference can be removed.

6 Operators' Responsibilities

- 6.1 The revised ICAO procedures represent a significant change to the way crews are expected to respond to climb/descend instructions whilst following a SID or a STAR. There is a potential for confusion, which will have flight safety implications if these new procedures are not followed correctly in each individual State. Operators should ensure that company Standard Operating Procedures are updated, and crews are adequately briefed and appropriately trained. Training personnel should be given guidance on how these changes are to be incorporated into training programmes with particular reference to the correct simulation of ATC phraseology.

- 6.2 Operators flying to destinations outside the UK should ensure that crews are aware of those States whose SID/STAR ATC phraseology does not conform to ICAO Doc 4444. Crews should be required to report any instances of the use of phraseology or procedures that do not correspond to those notified for the State concerned.

7 Recommendation

- 7.1 **Operators should ensure that their crews are reminded that the current UK procedures remain in force (SI 2010/04 refers); that crews are appropriately briefed about, and trained in, the changes to SID/STAR procedures and phraseology that they may encounter outside UK airspace; and that their guidance is amended accordingly.**

8 Queries

- 8.1 Any queries as a result of this Flight Operations Communication should be addressed to the operator's Flight Operations Inspector (FOI), or for those who do not have an assigned FOI to the Head of Flight Operations Policy at the following e-mail address: FOP.Admin@caa.co.uk.

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