

DOCUMENT CHANGE PROPOSAL/BRIEFING SHEET

FINAL DISPOSITION

ORDER/PUBLICATION: 7110.65U

CHANGE: 2

EFFECTIVE DATE: March 7, 2013

TRACKING #: 52- 4-5-7

SPECIALIST/ROUTING: James Arrighi AJV-14 (202) 385-4920

1. PARAGRAPH NUMBER AND TITLE:

4-5-7. ALTITUDE INFORMATION

2. BACKGROUND: The Air Traffic Control Procedures and Phraseology Action Team (ATCPP) is a working group under the Performance Based Operations Aviation Rulemaking Committee (PARC) established to address RNAV and required navigation performance implementation issues and propose action to the FAA. The ATCPP is composed of air traffic, aviation industry, and human factors subject matter experts. The ATCPP reviews, assesses, and proposes changes to ATC procedures and phraseology and is tasked with incorporating those changes into FAA Order JO 7110.65, the AIM, and AIP.

With the increased development of procedures with published speed and altitude restrictions (for example, SIDs and standard terminal arrivals), the ATCPP has validated an operational need to provide expanded guidance on existing route transition procedures using “climb via” phraseology as was previously done for descend via phraseology. This is the result of evaluations of procedure implementations and extensive field input. The “climb via” concept and phraseology were validated through human factors testing at the FAA William J. Hughes Technical Center in 2006. Current phraseology has proved inadequate and cumbersome for ATC to clear aircraft onto a procedure, to resume a procedure, or to simultaneously instruct pilots that compliance with speed and altitude restrictions is required. Assignment of procedures has resulted in misunderstandings, misapplications, and misinterpretations of current guidance for ATC when assigning or terminating speed and altitude adjustments. This frequently results in discussion between pilots and ATC to confirm the intention of clearances.

3. EXPLANATION OF CHANGE: This change incorporates guidance on the use of "Climb via" (CV) phraseology for route transitions and/or the assignment of SID/RNAV SID procedures incorporating speed and altitude restrictions. The CV phraseology is incorporated for departure operations, consistent with existing "descend via" phraseology. This change cancels and incorporates N JO 7110.584, “Climb Via” and “Descend Via” Procedures and Phraseology, effective August 15, 2012.

4. CHANGE:

OLD

NEW

4-5-7. ALTITUDE INFORMATION

4-5-7. ALTITUDE INFORMATION

Title thru g

No change

h. Instructions to vertically navigate on a STAR/RNAV STAR/FMSP with published restrictions.

h. Instructions to vertically navigate on a STAR/RNAV STAR **or SID/RNAV SID** with published restrictions.

PHRASEOLOGY-

DESCEND VIA (STAR/RNAV STAR/FMSP name and number)

PHRASEOLOGY-

DESCEND VIA (STAR/RNAV STAR name and number).

TERMINAL: DESCEND VIA (STAR/RNAV STAR/FMSP name and number and runway number).

TERMINAL: DESCEND VIA (STAR/RNAV STAR name and number and runway number).

Add

CLIMB VIA (SID/RNAV SID)

EXAMPLE-

“Descend via the Mudde One Arrival.”

EXAMPLE-

“Descend via the Mudde One Arrival.”

“Cross JCT at flight level two four zero, then descend via the Coast Two Arrival.”

“Cross JCT at flight level two four zero, then descend via the Coast Two Arrival.”

TERMINAL: “Descend via the Lendy One Arrival, Runway 22 left.”

Add

NOTE-

Clearance to “descend via” authorizes pilots:

1. To vertically and laterally navigate on a STAR/RNAV STAR/FMSP.
2. When cleared to a waypoint depicted on a STAR/RNAV STAR/FMSP, to descend from a previously assigned altitude at pilot's discretion to the altitude depicted for that waypoint, and once established on the depicted arrival, to navigate laterally and vertically to meet all published restrictions. ATC is responsible for obstacle clearance when issuing a “descend via” clearance from a previously assigned altitude.

Add

Add

Add

Add

REFERENCE-

Add

FAAO JO 7110.65, Para 4-5-6, Minimum En Route Altitudes,
FAAO JO 7110.65, Para 5-5-9, Separation From Obstructions,

NOTE-

3. Pilots navigating on a STAR/RNAV STAR/FMSP must maintain last assigned altitude until receiving clearance to “descend via.”
4. Pilots cleared for vertical navigation using the phraseology “descend via” must inform ATC upon initial contact.

EXAMPLE-

“Delta One Twenty One leaving FL 190, descending via the Civit One arrival.”

Add

Add

TERMINAL: “Descend via the Lendy One Arrival, Runway 22 left.”

“Climb via the Dawgs Four Departure”

NOTE-

Clearance to “descend via” authorizes pilots:

1. To vertically and laterally navigate on a STAR/RNAV STAR.
2. When cleared to a waypoint depicted on a STAR/RNAV STAR, to descend from a previously assigned altitude at pilot's discretion to the altitude depicted for that waypoint.

3. Once established on the depicted arrival, to navigate laterally and vertically to meet all published or assigned speed and altitude restrictions. ATC is responsible for obstacle clearance when issuing a “descend via” clearance from a previously assigned altitude.

Clearance to “climb via” authorizes pilots:

4. When cleared to a waypoint depicted on a SID/RNAV SID, to join a procedure after departure or resume a procedure; ATC is responsible for obstacle clearance when issuing a “climb via” clearance until the aircraft is established on the lateral and vertical path of a SID/RNAV SID.

5. When vertical navigation is interrupted and an altitude is assigned to maintain which is not contained on the published procedure, to climb from that previously-assigned altitude at pilot's discretion to the altitude depicted for the next waypoint.

6. Once established on the depicted departure, to navigate laterally and vertically to meet all published or assigned speed and altitude restrictions.

REFERENCE-

FAAO JO 7110.65, Para 4-4-2, Route Structure Transitions
FAAO JO 7110.65, Para 4-5-6, Minimum En Route Altitudes
FAAO JO 7110.65, Para 5-5-9, Separation From Obstructions

NOTE-

7. Pilots navigating on a STAR/RNAV STAR must maintain last assigned altitude until receiving clearance to “descend via.”
8. Pilots cleared for vertical navigation using the phraseology “descend via” or “climb via” must inform ATC, upon initial contact, of the altitude leaving, the runway transition if assigned, and any assigned restrictions not published on the procedure.

EXAMPLE-

“Delta One Twenty One leaving flight level one niner zero, descending via the Riivr Two arrival.”

“Delta One Twenty One leaving flight level one niner zero for one two thousand, descending via the Riivr Two arrival.”

“Cactus Seven Eleven leaving two thousand, climbing via the Laura Two departure.”

Add

“Cactus Seven Eleven leaving two thousand for flight level one-niner-zero, climbing via the Laura Two departure.”

REFERENCE-

Add

REFERENCE-

AIM, Para 5-2-8, Instrument Departure Procedures (DP) – Obstacle Departure Procedures (ODP) and Standard Instrument Departures (SID)

AIM, Para 5-4-1, Standard Terminal Arrival (STAR), Area Navigation (RNAV) STAR, and Flight Management System Procedures (FMSP) for Arrivals.

AIM, Para 5-4-1, Standard Terminal Arrival (STAR) and Area Navigation (RNAV) STAR for Arrivals

1. Assign an altitude to cross the waypoint/fix, if no altitude is depicted at the waypoint/fix, for aircraft on a direct routing to a STAR/RNAV STAR/FMSP.

1. Assign an altitude to cross the waypoint/fix, if no altitude is depicted at the waypoint/fix, for aircraft on a direct routing to a STAR/RNAV STAR or SID/RNAV SID waypoint/fix.

EXAMPLE-

“Proceed direct Luxor, cross Luxor at or above flight level two zero zero, then descend via the Ksino One Arrival.”

EXAMPLE-

“Proceed direct Luxor, cross Luxor at or above flight level two zero zero, then descend via the Ksino One Arrival.”

Add

“Proceed direct Rockr, cross Rockr at or above one-zero thousand, climb via the Bizee Two departure.”

2. A descend via clearance must not be used where procedures contain published “expect” altitude restrictions

2. A “descend via” clearance must not be used where procedures contain published “expect” altitude restrictions.

Add

NOTE-

Pilots are not expected to comply with published “expect” restrictions in the event of lost communications, unless ATC has specifically advised the pilot to expect these restrictions as part of a further clearance.

3. If it is necessary to assign a crossing altitude which differs from the STAR/RNAV STAR/FMSP altitude, emphasize the change to the pilot.

3. If it is necessary to assign a crossing altitude which differs from the STAR/RNAV STAR or SID/RNAV SID altitude, emphasize the change to the pilot.

PHRASEOLOGY-

DESCEND VIA (STAR/FMSP) ARRIVAL EXCEPT CROSS (fix, point, waypoint) (revised altitude information).

PHRASEOLOGY-

DESCEND VIA (STAR/RNAV STAR) ARRIVAL, EXCEPT CROSS (fix, point, waypoint), (revised altitude information).

EXAMPLE thru NOTE

No change

Add

PHRASEOLOGY-

CLIMB VIA (SID), EXCEPT CROSS (fix, point, waypoint), (revised altitude information).

Add

EXAMPLE-

“Climb via the Suzan Two departure, except cross Mkala at or above seven thousand.”

Add

NOTE-

The aircraft should track laterally and vertically on the Suzan Two departure and should climb so as to cross Mkala at or above 7,000; remainder of the departure

must be flown as published.

4. If it is necessary to assign an interim altitude, or assign a final altitude not contained on a STAR/RNAV STAR/FMSP, the provisions of subpara 4-5-7h may be used in conjunction with subpara 4-5-7a.

4. If it is necessary to assign an interim altitude or assign a final altitude not contained on a STAR/RNAV STAR or SID/RNAV SID, the provisions of subpara 4-5-7h may be used in conjunction with subpara 4-5-7a.

PHRASEOLOGY-
DESCEND VIA THE (STAR/RNAV STAR/FMSP) ARRIVAL EXCEPT AFTER (fix) MAINTAIN (revised altitude information).

PHRASEOLOGY-
DESCEND VIA THE (STAR/RNAV STAR) ARRIVAL EXCEPT AFTER (fix) MAINTAIN (revised altitude information).

EXAMPLE thru REFERENCE

No Change

Add

PHRASEOLOGY-
CLIMB VIA (SID name and number), EXCEPT AFTER (waypoint name), MAINTAIN (altitude).

Add

EXAMPLE-
“Climb via the Johnn Two Departure, except after Baret, maintain flight level one niner zero.”

Add

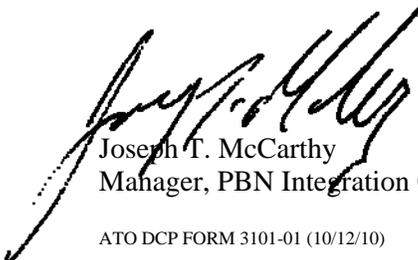
NOTE-
Issuance of “climb via” and assignment of an altitude to maintain while an aircraft is on a SID, without stating a waypoint where the maintain altitude becomes a mandatory restriction, authorizes the pilot to climb unrestricted on the SID. Use “resume” phraseology to rejoin a route and assign a new altitude where compliance with published altitude restrictions is not required.

Add

REFERENCE-
FAAO JO 7110.65, Para 4-2-5, Route or Altitude Amendments
FAAO JO 7110.65, Para 5-6-2, Methods
AIM, Para 5-2-8, Instrument Departure Procedures (DP) – Obstacle Departure Procedures (ODP) and Standard Instrument Departures (SID)

No further changes to paragraph.

- 5. **INDEX CHANGES:** None
- 6. **REFERENCE CHANGES:** None
- 7. **GRAPHICS:** None
- 8. **GENOT/NOTICE:** N JO 7110.584, “Climb Via” and “Descend Via” Procedures and Phraseology, effective August 15, 2012
- 9. **FORMATTING & PLAIN LANGUAGE REVIEW:** HM 10/5/2011
- 10. **SAFETY RISK MANAGEMENT:** (Check appropriate box).
 - SRMD. Proposed change meets full SMS requirements for safety risk assessment.
 - SRMDM. Proposed change is not safety related.
- 11. **ICAO DIFFERENCES:** YES NO


Joseph T. McCarthy
Manager, PBN Integration Group


Date:

ICAO DIFFERENCES IDENTIFICATION FORM

PDG SME: James Arrighi

DATE: January 4, 2011 **ATO DCP #:** 51-4-5-7

ICAO DIFFERENCE SARP/PANS

SPECIFIC US REGULATION AND REFERENCE	PANS ATM, ANNEX PROVISION	DESCRIPTION OF DIFFERENCE	REMARKS
FAAO JO 7110.65 Paragraph 4-5-7	PANS ATM Chapter 6 Paragraph 6.3.2.4 and Paragraph 6.5.2.4	FAA has not adopted Edition 15 (November 2007) PANS ATM change regarding climb or descent instructions for aircraft on a SID/STAR. FAA maintains the position of FAAO JO 7110.65, paragraph 4-2-5 "When route or altitude in a previously issued clearance is ammended, restate all applicable altitude restrictions." FAA position is to not distinguish between charted restrictions and any other clearances.	Climb Via and Descend Via clearances were designed (in conjunction with industry users) to offer greater flexibility and effectiveness in amending restrictions on SIDS/STARS.

DIFFERENCE CATEGORY: B – different in character or other means of compl

DETERMINATION OF DIFFERENCE: YES NO

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