

Procedures for Air Navigation Services – Air Traffic Management (PANS-ATM, Doc 4444)

16th Edition, Amendment 12

Reference	Details of Difference
CHAPTER 1	DEFINITIONS
eFPL	Australia has not yet implemented FF-ICE services nor abbreviations - like eFPL – that are specifically associated with FF-ICE.
Flight and flow — information for a collaborative environment (FF-ICE)	Australia has not yet implemented Flight and flow — information for a collaborative environment (FF-ICE).
Flight and flow — information for a collaborative environment (FF-ICE) services	Australia has not yet implemented FF-ICE services.
Globally unique flight identifier (GUFI)	Australia has not yet implemented the globally unique flight identifier or its abbreviation GUFI.
ITP aircraft	Not used
ITP distance	Not used
Preliminary flight plan (PFP)	Australia has not yet implemented the preliminary flight plan or its abbreviation PFP.
Runway visual range (RVR)	Within Australia, the term ‘RUNWAY VISUAL RANGE’ or ‘RVR’ is used exclusively in relation to RVR measured by an instrumented system. The term ‘RUNWAY VISIBILITY’ or ‘RV’ is used for a report of visibility along a runway as determined by a ground observer.
CHAPTER 3	ATS SYSTEM CAPACITY AND AIR TRAFFIC FLOW MANAGEMENT
3.1.4.2 c)	Australia has not yet implemented an FF-ICE planning service
CHAPTER 4	GENERAL PROVISIONS FOR AIR TRAFFIC SERVICES
4.4.1.4	The intent of paragraph 4.4.1.4 is achieved, but without specific reference to the terms ‘required communications performance’ or ‘required navigation performance’ (or related terms).
4.4.2.1.1	Partially implemented. Filed flight plans shall not be submitted more than 120 hours before the estimated off-block time of a flight. However, Australia has not yet implemented the preliminary flight plan or its abbreviation PFP.
4.5.6.1.3	Cruise climb procedures are not permitted, however may be achieved via a block clearance
4.9.1.1	For wake turbulence separation, ATC treats the Boeing 757, Sikorsky CH-53 and Boeing CH-47 aircraft as ‘HEAVY’-category aircraft when leading and ‘MEDIUM’-category aircraft when following.
4.9.1.2 – 4.9.1.2.1	Wake turbulence groups not implemented in Australia.
4.9.2	“SUPER” or “HEAVY” is only to be used in initial radio telephony contact with each approach, departures, director, ground and tower controller.
4.10.1	A fixed transition altitude of 10 000 ft applies in all Australian FIRs.

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4.10.2	ATS units do not establish transition levels. Instead, pilots and ATS units must self-establish a transition level appropriate to the reported area or local QNH in accordance with the following table: <table> <tr> <th>Area QNH</th><th>Transition level</th></tr> <tr> <td>Equal to, or greater than, 1 013.2 hPa</td><td>FL 110</td></tr> <tr> <td>At least 997 hPa but less than 1 013.2 hPa</td><td>FL 115</td></tr> <tr> <td>At least 980 hPa but less than 997 hPa</td><td>FL 120</td></tr> <tr> <td>At least 963 hPa but less than 980 hPa</td><td>FL 125</td></tr> <tr> <td>Less than 963 hPa</td><td>FL 130</td></tr> </table>	Area QNH	Transition level	Equal to, or greater than, 1 013.2 hPa	FL 110	At least 997 hPa but less than 1 013.2 hPa	FL 115	At least 980 hPa but less than 997 hPa	FL 120	At least 963 hPa but less than 980 hPa	FL 125	Less than 963 hPa	FL 130
Area QNH	Transition level												
Equal to, or greater than, 1 013.2 hPa	FL 110												
At least 997 hPa but less than 1 013.2 hPa	FL 115												
At least 980 hPa but less than 997 hPa	FL 120												
At least 963 hPa but less than 980 hPa	FL 125												
Less than 963 hPa	FL 130												
4.10.4.4	The transition level is not included in approach clearances.												
4.11.3	“SUPER” or “HEAVY” is only to be used in initial radio telephony contact with each approach, departures, director, ground and tower controller.												
4.11.5	Only ADS-C to FANS 1/A standards is useable in Australian FIRs.												
4.12.3.1	Australia has not implemented a special Air-report (AIREP SPECIAL) for when runway braking action encountered is not as good as reported. However, the Australian Aeronautical Information Publication asks pilots to advise ATS about any deterioration or improvement of reported runway surface conditions, deceleration, and/or directional control.												
CHAPTER 5	SEPARATION METHODS AND MINIMA												
5.2.1.1	In Class C, D and E airspace, ATC may assign to the pilot of 1 aircraft responsibility to maintain separation with another aircraft if: (a) the aircraft to be separated are operating at or below 10 000 ft; and (b) the pilot has: (i) reported the other aircraft in sight; and (ii) accepted responsibility to follow, or maintain his or her own separation with, that aircraft.												
5.3.4.1	An aircraft may only be assigned a level vacated by another aircraft if a rate of climb or descent is specified to ensure that the applicable vertical separation minimum is maintained.												
5.4.1.2.1.1	Australia requires the provision of at least one nautical mile displacement between the geographical locations of aircraft.												
5.4.1.2.1.2	1. Australia uses a lateral separation procedure which ensures there is at least one nautical mile displacement between the two aircraft accounting for the accuracy of the navigation aid or method used. 2. In addition to navigation aid combinations mentioned in PANS-ATM, Australia facilitates lateral separation on the basis of dead reckoning tracks, and one aircraft on a VOR radial and the other aircraft on an NDB track.												

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5.4.1.2.1.6	Australia has implemented: - in Airspace where SLOP authorised: 50NM lateral separation using RAV10/RNP10 or RNP4 only, 23NM lateral separation using RNP4 only, RCP240 and RSP180. - In Airspace where SLOP is not authorised: 15NM lateral separation using RNP2 and VHF. Australia applies 30NM lateral separation using ADS-C and CPDLC or VHF. Australia has not implemented lateral separation standards for use while one aircraft climbs/ descends through the level of another aircraft in level flight.
5.4.1.2.1.7	Australia does not use lateral offsets to establish lateral separation.
5.4.1.2.1.8	Australia has not implemented 15 NM lateral separation for RNP 2 operations outside VHF range, but uses 50NM lateral separation for RNP 4/RNAV 10/RNP 10 operations and 23NM lateral separation for RNP 4 operations.
5.4.2.3	Use of off-track DME stations is permitted under specified conditions.
5.4.2.3.4.1	Use of 10NM is only permitted between arriving aircraft, and then only when the preceding aircraft is within 20NM of a controlled aerodrome with DME or a published waypoint. This may be reduced to 5NM where the leading aircraft is within 15NM. Otherwise a minimum of 15NM is used.
5.4.2.5.1	Australia only applies Mach Number Technique to jet aircraft.
5.4.2.6	Reduced longitudinal distance minima are applied to RNP2 and RNP 4 approved aircraft within CTA. The reduced distance minima are not used after pilot advice of continuous operation of GNSS equipment in the DR mode for more than one minute, or non-RAIM operation for more than five minutes.
5.4.2.6.2	Use of off-track waypoint is permitted under specified conditions.
5.4.2.7.1 – 5.4.2.7.3.3	In Trail Procedures (ITP) are not in use in Australia.
5.4.2.8	Australia has not implemented longitudinal separation minima based on distance using ADS-C climb and descend procedure (CDP)
5.4.2.9.1	Australia does not designate airspace or routes with an RSP or RCP specification.
5.4.2.9.2 – 5.4.2.9.3	For the 50NM separation minimum, Australia uses a maximum ADS-C periodic reporting interval of 24 minutes for RNP 10 and RNP 4 operations. - Australia does not use the 30NM separation minimum for RNP 2 operations. - Australia does not use the 5 minute and 20NM RNP separation minima. - Australia has implemented the system of required communication performance and required surveillance performance to the extent required to support the application of the 50NM and 30NM separation minima.
5.4.2.9.4	Not used
5.6	IAS is used instead of TAS for the application of separation between departing aircraft based on speed.

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5.6.1	Additional specified tracking requirements and speed differentials are required for application of the one-minute standard.
5.6.2	In the application of the 2-minute minimum with the following aircraft climbing to a higher or lower level than the preceding aircraft, a speed differential of 10%, but not less than 10 kt, is used. Additionally, if the following aircraft is climbing to the lower level, its cruising IAS or Mach No must not be greater than the climbing IAS or Mach No of the preceding aircraft.
5.8.1.1	VFR aircraft must be provided with wake turbulence separation when following a SUPER aircraft. Wake turbulence separation is not applied: • when a LIGHT aircraft will enter the wake turbulence envelope of a MEDIUM fixed wing aircraft of less than 25 000 kg MTOW. • between an aircraft landing behind an aircraft taking-off on the same runway. • if a pilot has initiated a waiver of the relevant departure wake turbulence separation standard.
5.8.2.1	• A wake turbulence separation of 3 minutes is applied to a HEAVY aircraft landing behind a SUPER aircraft. • Wake Turbulence separation is not applied for a LIGHT aircraft behind a MEDIUM fixed-wing aircraft of less than 25 000 kg maximum certified take-off mass. • Wake turbulence is applied in all controlled airspace, not just on arrival/landing
5.8.3.1; Figure 5 – 42; Figure 5 – 43	• Wake Turbulence separation is not applied for a LIGHT aircraft behind a MEDIUM fixed-wing aircraft of less than 25 000 kg maximum certified take-off mass. • Wake turbulence is applied in all controlled airspace, not just on arrival/landing
5.8.3.2	Wake turbulence groups are not implemented in Australia.
5.8.3.3; Figure 5 – 44	• A wake turbulence separation of 4 minutes is applied to a HEAVY aircraft departing from an intermediate position behind a SUPER aircraft. • Wake Turbulence separation is not applied for a LIGHT aircraft behind a MEDIUM fixed-wing aircraft of less than 25 000 kg maximum certified take-off mass. • Intermediate point is defined as: a point more than 150 m after the take-off commencement point of the preceding aircraft using the runway or the parallel runway
5.8.3.4	Wake turbulence groups not implemented in Australia.
5.8.4.1	• A wake turbulence separation of 3 minutes is applied to a HEAVY aircraft departing behind a SUPER aircraft. • Wake Turbulence separation is not applied for a LIGHT aircraft behind a MEDIUM fixed-wing aircraft of less than 25 000 kg maximum certified take-off mass. • Wake Turbulence separation is not applied when an aircraft is landing behind another aircraft that is taking-off on the same runway.
5.8.4.2 – 5.8.4.3	Wake turbulence groups are not implemented in Australia.
5.8.5.1	• The following wake turbulence separation minima are applied for aircraft using opposite direction runways: - o 3 minutes for a LIGHT or MEDIUM aircraft behind a SUPER aircraft. - o 2 minutes for a LIGHT or MEDIUM aircraft behind a HEAVY aircraft. - o 2 minutes for a LIGHT aircraft behind MEDIUM aircraft. • Wake Turbulence separation is not applied for a LIGHT aircraft behind a MEDIUM fixed-wing aircraft of less than 25 000 kg maximum certified take-off mass.

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Reference	Details of Difference
5.8.5.2	Wake turbulence groups are not implemented in Australia.
5.9	In Class C, D and E airspace, ATC may assign to the pilot of 1 aircraft responsibility to maintain separation with another aircraft if: (a) the aircraft to be separated are operating at or below 10 000 ft; and (b) the pilot has: (i) reported the other aircraft in sight; and (ii) accepted responsibility to follow, or maintain his or her own separation with, that aircraft.
CHAPTER 6	SEPARATION IN THE VICINITY OF AERODROMES
6.3.2.4.1	The phrase 'CLIMB UNRESTRICTED TO (level)' is not used in Australia.
6.3.2.5.1	Clearances for departing aircraft specifying a cleared level other than that indicated in the filed flight plan will be prefixed with the term "AMENDED ..."
6.5.2.4.1	The phrase 'DESCEND UNRESTRICTED TO (level)' is not used in Australia.
6.6.4 (a)	Significant changes in the mean surface wind from the current ATIS broadcast will be advised when a variation in the mean wind results in either a downwind and/or significant crosswind. A crosswind is considered significant when it equals or exceeds 8 kt for civil single engine aircraft, 10 kt for military aircraft, or 12 kt for civil multi-engine aircraft. Unless specifically requested by the pilot ATC will not issue a take-off or landing clearance to a helicopter when the tailwind exceeds 5 kt. Where threshold wind analysers are installed, jet arrivals will be provided with a threshold wind as part of the landing clearance.
CHAPTER 7	PROCEDURES FOR AERODROME CONTROL SERVICE
7.1	Land and Hold Short Operations (LAHSO) is a procedure used at selected airports with intersecting runways whereby aircraft land and depart on one runway while other aircraft simultaneously land on the intersecting runway and hold short of the intersection. Foreign registered aircraft and Australian-registered aircraft operating under a foreign air carriers' flight number callsign only participate in LAHSO if specially authorised by the Civil Aviation Safety Authority. Australian legislation prescribes the requirements for participation in LAHSO by other aircraft.
7.2.6 (e)	ATC will not nominate a particular runway for use if an alternative runway is available, when: (a) for runway conditions that are completely dry, either: (i) the cross-wind component for the particular runway, including gusts, exceeds 20 knots; or (ii) the downwind component for the particular runway, including gusts, exceeds 5 knots; (b) for runway conditions that are not completely dry, either: (i) the cross-wind component for the particular runway, including gusts, exceeds 20 knots; or (ii) there is a downwind component for the particular runway. However, noise abatement legislation may require aircraft to land or take-off on a specified runway or specified runways regardless of ATC runway nomination requirements. In such circumstances, ATC will identify the relevant runway with the phrase: 'CURFEW RUNWAY NOMINATION'.
7.3	The ground controller is not required to include HEAVY/SUPER in the initial call.

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7.9.3.3	At aerodromes where the Australian Defence Force provides aerodrome control service, the phrase 'TAKE-OFF RUN AVAILABLE', instead of 'TORA', is used on the automatic terminal information service ATIS.
7.11	Reduced runway separation minima are used by day and by night.
7.14	This procedure is not used. The decision of a VFR operation to proceed or not to proceed remains a pilot responsibility.
CHAPTER 8	ATS SURVEILLANCE SERVICES
8.6.5.1 (c)	Where boundary divides two sectors: • Where the separation minimum is less than 5NM, Australia vector aircraft no closer to the boundary than half the prescribed separation minimum. • Where different separation minima apply on either side of a boundary, Australia vector aircraft no closer to the boundary than half the larger of the two minima.
8.6.7.1	A radar vectoring service is terminated automatically when the aircraft is transferred to the aerodrome control frequency.
8.7.3.1	The horizontal separation minimum based on surveillance of 5NM or 3NM is not applied when aircraft are on reciprocal tracks. Aircraft are considered separated once surveillance indicates the tracks have passed each other.
8.7.3.4; Figure 8 – 1A; Figure 8 – 1B	• A wake turbulence separation of 6 NM is applied to a HEAVY aircraft behind a SUPER aircraft • Wake Turbulence separation is not applied for a LIGHT aircraft behind a MEDIUM fixed-wing aircraft of less than 25 000 kg maximum certified take-off mass. • Wake turbulence separation is applied in all controlled airspace, not just during the approach/departure phase of flight.
8.7.3.5	Wake turbulence groups not implemented in Australia.
8.7.4	Australia has not implemented the separation minima specified in this section, but does permit the application of surveillance separation to aircraft without direct VHF/UHF communications in special circumstances or where no possible intervention is required.
8.9.6 and 8.9.7	Surveillance radar approaches and precision radar approaches are not available in Australia.
CHAPTER 9	FLIGHT INFORMATION SERVICE AND ALERTING SERVICE
9.1.1	The progress of VFR flights in Classes E and G airspace is not recorded. However, for SAR purposes, VFR flight plan details may be submitted with a time for commencement of SAR alerting, referred to as a SARTIME.
9.1.4	Class F airspace category is not used in Australian Flight Information Regions.
CHAPTER 12	PHRASEOLOGIES
12.3.1.2	The phrases 'CLIMB UNRESTRICTED TO (level)' and 'DESCEND UNRESTRICTED TO (level)' are not used in Australia.
12.3 and 12.4	AIP contains additional phraseologies.

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12.3.2.1	Except where clearance is relayed through a third party, the name of the unit issuing the clearance is omitted.
12.3.4.10	Australia does not reply to indicate confirmation that read back has been received.
CHAPTER 15	PROCEDURES RELATED TO EMERGENCIES, COMMUNICATION FAILURE AND CONTINGENCIES
	Australian procedures contain additional details – refer AIP ERSa – EMERGENCY PROCEDURES
CHAPTER 16	MISCELLANEOUS PROCEDURES
16.5	Strategic lateral offset procedures (SLOP) are only permitted in oceanic controlled airspace – where offsets to the right of the center line up to a maximum of 2 NM are permitted. SLOP is not permitted in continental enroute airspace
CHAPTER 17	FLIGHT AND FLOW — INFORMATION FOR A COLLABORATIVE ENVIRONMENT (FF-ICE) SERVICES
Entire Chapter 17	Australia has not yet implemented flight and flow — information for a collaborative environment (FF-ICE) services.
APPENDIX 2	FLIGHT PLAN
Appendix 2, Subsection 2.2	1. Use of SID/STAR details in Item 15, route details of a Flight Route Notification cannot be accepted for operations within Australian airspace. Databases assisting in the provision of ATS in Australia only recognise designated air route and way-point information. 2. For operations in Australian airspace, aircraft are not required to indicate Required Communication Performance (RCP) capability using P codes. However, operators may declare RCP capability for flights that will operate in airspace administered by States that require it. 3. Aircraft operators should consult the Australian aeronautical information publication: ENR 1.10 Appendix 2 for specific flight notification requirements in relation to PBN operations.
APPENDIX 3	AIR TRAFFIC SERVICES MESSAGES
Appendix 3, Subsection 1.8	For operations in Australian airspace, aircraft are not required to indicate Required Communication Performance (RCP) capability using P codes. However, operators may declare RCP capability for flights that will operate in airspace administered by States that require it.
APPENDIX 5	CONTROLLER-PILOT DATA LINK COMMUNICATIONS (CPDLC) MESSAGE SET
	Australia references the ICAO Doc 10037 Global Operational Data Link (GOLD) Manual for standard message elements. Aircraft operators should consult the Australian aeronautical information publication: GEN 3.4 sub-section 6.15 for free text message elements.