



# Australian Government

---

## Civil Aviation Safety Authority

Instrument number CASA 33/18

I, GRAEME MILLS CRAWFORD, Acting Director of Aviation Safety, on behalf of CASA, make this instrument under the regulation 11.245 of the *Civil Aviation Safety Regulations 1998*.

**[Signed G.M. Crawford]**

Graeme M. Crawford  
Acting Director of Aviation Safety

11 May 2018

### **CASA 33/18 – Required Communication Performance and Required Surveillance Performance (RCP 240 and RSP 180) Capability Declarations – Direction 2018**

---

#### **1 Name of instrument**

This instrument is *CASA 33/18 – Required Communication Performance and Required Surveillance Performance (RCP 240 and RSP 180) Capability Declarations – Direction 2018*.

#### **2 Duration**

The instrument:

- (a) commences on the day after it is registered; and
- (b) is repealed at the end of 30 April 2021.

#### **3 Definitions**

For the purposes of this instrument only:

***aircraft operator*** has the meaning given in section 5.

***aircraft flight manual (AFM)*** means the manual associated with the certificate of airworthiness of a relevant aircraft, containing:

- (a) limitations within which the aircraft is considered airworthy; and
- (b) instructions and information necessary to enable the flight crew members to safely operate the aircraft.

***ATC*** means air traffic control.

***automatic dependent surveillance – contract (ADS-C)*** means a contract between ATC and a relevant aircraft's system:

- (a) for the reporting of aircraft position and other data via a datalink; and
- (b) which specifies:
  - (i) under what conditions ADS-C reports are to be initiated; and
  - (ii) what data is to be contained in the reports.

**communication services provider (CSP)** means any public or private entity which, under a contract or agreement, provides communication services for general air traffic which may include services provided by a satellite service provider (SSP) or services provided by the CSP in its own capacity as an SSP.

**controller-pilot datalink communications (CPDLC)** is the means of communication between ATC and a pilot, using datalink for ATC communications.

**datalink operations** means operations using FANS 1/A avionics.

**FANS 1/A** is a direct datalink communication between the pilot of a relevant aircraft and ATC via FANS 1/A avionics and FANS 1/A ground end systems, based on EUROCAE ED-100A/RTCA DO-258A, or a later version as in force from time to time. References to FANS 1/A are taken to include FANS 1/A+.

**flight plan** means the specified information provided to ATC in relation to an intended flight or portion of a flight of an aircraft.

**master minimum equipment list (MMEL)** means the list:

- (a) established for a relevant aircraft type by the organisation responsible for the type design and approved by the State of Design; and
- (b) containing items, 1 or more of which is permitted to be unserviceable at the commencement of a flight.

*Note* The MMEL may be associated with special operating conditions, limitations or procedures.

**minimum equipment list (MEL)** means the list which:

- (a) provides for the operation of a relevant aircraft with particular equipment inoperative, subject to specified conditions; and
- (b) is prepared by an operator in conformity with, or in terms more restrictive than, the MMEL established for the aircraft type.

**performance-based communication (PBC)** means communication based on performance specifications applied to the provision of air traffic services.

**performance-based communications and surveillance (PBCS)** means the application of required communication performance (RCP) and required surveillance performance (RSP) specifications to ensure appropriate performance levels for relevant air traffic management operations.

**performance-based surveillance (PBS)** means surveillance based on performance specifications applied to the provision of air traffic services.

**RCP 240** is the value for the communication expiry time (namely 240 seconds) after which the initiator of the communication is required to revert to an alternative procedure.

*Note* In the context of RCP, the initiator is normally an air traffic controller.

**RCP allocation** is a portion of an RCP parameter, and is a time value assigned to a specific component of the communication system used for transferring messages between aircraft and ATC.

**RCP parameters** are performance characteristics that:

- (a) provide the basis for developing an RCP specification; and
- (b) include RCP transaction time, RCP continuity, RCP availability and RCP integrity.

**RCP pilot operational response time, or RCP PORT**, is an RCP allocation that specifies the maximum time for the flight crew to recognise and respond to an ATC instruction.

**relevant aircraft** has the meaning given in section 5.

**required communication performance (RCP) specification** means the requirements needed to support PBC, being requirements for the following:

- (a) ATC and associated ground equipment;
- (b) the communication service provider;
- (c) aircraft equipment;
- (d) flight crew.

**required surveillance performance (RSP) specification** means the requirements needed to support PBS, being requirements for the following:

- (a) aircraft equipment;
- (b) the communication service provider;
- (c) ATC and associated ground equipment;

**RSP 180** is the value for the surveillance data delivery time (namely 180 seconds) at which the surveillance data delivery is considered overdue.

*Note* RSP 180 means that 99.9% of surveillance data must be delivered in less than 180 seconds.

**RSP allocation** is a portion of an RSP parameter and is a time value assigned to a specific component of the communication system used for transferring surveillance reports from aircraft to ATC.

**RSP parameters** are performance characteristics that:

- (a) provide the basis for developing an RSP specification; and
- (b) include RSP data delivery time, RSP continuity, RSP availability and RSP integrity.

**satellite service provider (SSP)** means an entity or group of entities that provide the portion of the communication system that involves the operation of 1 or more satellites.

**terms and conditions** means the terms and conditions mentioned in clause 7 of Schedule 1.

#### **4 References to instruments and documents**

In this instrument, unless the contrary intention appears, a reference to an instrument or other document (however described) is a reference to the instrument or document as in force or existing from time to time.

#### **5 Application**

- (1) This instrument applies to an **aircraft operator**:
  - (a) who is the operator of an Australian aircraft; or
  - (b) who is the holder of an air operator's certificate (an **AOC**) for an aircraft issued under Division 2 of Part III of the *Civil Aviation Act 1988*;if the aircraft operator:
  - (c) conducts datalink operations in the aircraft using FANS 1/A; and
  - (d) intends to declare RCP and RSP capabilities for the aircraft in any Australian-administrated, or foreign-administered, airspace.
- (2) An aircraft mentioned in subsection (1) is a **relevant aircraft**.

## 6 Directions

- (1) I direct that an aircraft operator may declare that the relevant aircraft has RCP capability and RSP capability, only if:
  - (a) the declaration relates solely to RCP 240 and RSP 180 capabilities; and
  - (b) the requirements set out in Schedule 1 are complied with at the time of the declaration.

*Note 1* The effect of this instrument is that an aircraft operator to whom the instrument applies – see section 5 – who fully complies with the requirements of the instrument may consider that he or she is authorised to declare RCP 240 and RSP 180 capabilities.

*Note 2* It is ultimately a matter for the relevant aviation authority to be satisfied that an aircraft operator's declaration is, *in actual fact*, valid for the relevant aircraft at the time of any declaration, audit or inspection. A false declaration would constitute an offence under regulation 11.255 of the *Civil Aviation Safety Regulations 1998* and could result in other legal consequences under the *Civil Aviation Act 1988*.

## Schedule 1 — Requirements for a declaration that an aircraft has RCP 240 and RSP 180 capabilities

### EQUIPMENT AND PERFORMANCE

- 1 The aircraft must be equipped with avionics supporting ADS-C and CPDLC applications over FANS 1/A.
- 2 A declaration of RCP 240 and RSP 180 capabilities must not be made if:
  - (a) the aircraft operator has received advice from Airservices Australia that the relevant aircraft has consistently not met the operational criteria of RCP 240 and RSP 180 specifications; and
  - (b) the aircraft operator has failed to ensure that the aircraft does consistently meet the operational criteria of the specifications.

*Note* Airservices Australia monitors datalink communications in Australian-administered airspace and advises when operational criteria of RCP 240 and RSP 180 specifications are consistently not met.

### AIRCRAFT DOCUMENTATION

- 3 Subject to clause 4, one of the following:
  - (a) the AFM;
  - (b) an original equipment manufacturer service letter;
  - (c) any other document from the entity responsible for the design approval of the aircraft datalink communications equipment;must include a statement of compliance (an *SOC*) indicating that:
  - (d) the aircraft system is approved for datalink communications using FANS 1/A avionics; and
  - (e) the aircraft datalink system meets the aircraft-allocated requirements of the RCP 240 and RSP 180 specifications.

- 4 If a document mentioned in paragraph 3 (a), (b) or (c) does not include an SOC, the following may act as a temporary substitute pending the formal issue of the SOC, provided there has been no indication of non-compliance given by the State of Design:
  - a copy of the relevant operator's written and dated request to the appropriate design authority for an SOC which indicates the matters mentioned in paragraphs 3 (d) and (e).

*Note* Allocation requirements for RCP 240 and RSP 180 specifications are as defined in ICAO Doc 9869, *Performance-based Communications and Surveillance (PBCS) Manual*.
- 5 Subject to clause 6, where the aircraft is operated in accordance with a MEL, the information relevant RCP 240 and RSP 180 capabilities must be included in the MEL.
- 6 If a MEL that includes the information relevant RCP 240 and RSP 180 capabilities (a **revised MEL**) is not available, the following may act as a temporary substitute pending the formal issue of the revised MEL:
  - a copy of the relevant operator's written and dated request to the appropriate authority for the information relevant to RCP 240 and RSP 180 capabilities to be included in the MEL.

## **COMMUNICATION SERVICE PROVIDER AGREEMENT**

- 7 The agreement between the aircraft operator and the CSP must include the following terms and conditions:
  - (a) that there is adequate subnetwork coverage in the route flown;
  - (b) that there is to be notification of coverage and performance failures;
  - (c) that there is to be recording of datalink messages for 30 days;
  - (d) that datalink messages mentioned in paragraph (c) will be available on written request by:
    - (i) CASA; or
    - (ii) the national aviation authority to whom the declaration is made;
  - (e) that datalink messages will not be manipulated or altered;
  - (f) that network-allocated requirements for the RCP 240 and RSP 180 specification are met according to the definitions contained in ICAO Doc 9869, *Performance-based Communications and Surveillance (PBCS) Manual*.
- 8 If the agreement between the aircraft operator and the CSP does not include the terms and conditions mentioned in clause 7, the following may act as a temporary substitute pending the formal issue of an agreement that does include the terms and conditions (a **revised agreement**):
  - a copy of the relevant operator's written and dated request to the appropriate CSP for a revised agreement.

## **TRAINING OF PERSONNEL**

- 9 Each member of the flight crew of a relevant aircraft must have appropriate knowledge of the following:
  - (a) the PBCS concept;
  - (b) the definitions of RCP and RSP specifications, and the timing expectations to which they give rise in terms of RCP PORT;
  - (c) the entering of RCP and RSP descriptors in the flight plan;

- (d) applicable ATC procedures for dealing with the following during flight:
  - (i) data link failures;
  - (ii) non-compliance with prescribed RCP and RSP specifications.
- 10 The aircraft operator must ensure that its relevant personnel have appropriate knowledge of the RCP and RSP specifications consistent with the intended operation.

*Note* The following may be used by an aircraft operator in the development of training materials:

  - (a) FAA Advisory Circular (AC) 90-117 — Datalink Communications;
  - (b) FAA Advisory Circular (AC) 20-140 — Guidelines for Design Approval of Aircraft Data Link Communication Systems Supporting Air Traffic Services (ATS);
  - (c) FAA Advisory Circular (AC) 91-70B — Oceanic and Remote Continental Airspace Operations;
  - (d) ICAO Annex 6 — Operation of Aircraft, Parts I and II;
  - (e) ICAO Annex 11 — Air Traffic Services;
  - (f) ICAO Doc 4444 – Procedures for Air Navigation Services – Air Traffic Management (PANS-ATM);
  - (g) ICAO Doc 9869 — Performance-based Communications and Surveillance (PBCS) Manual;
  - (h) ICAO Doc 7030 — Regional Supplementary Procedures.

## **OPERATIONS MANUAL**

- 11 The aircraft operator's operations manual must contain appropriate procedures for the purposes of ensuring that the requirements of this instrument are met.
-