Australian Government
Civil Aviation Safety Authority

Instrument number CASA xx/18

I, SHANE PATRICK CARMODY, Director of Aviation Safety, on behalf of CASA, make this instrument under the regulation 11.245 of the *Civil Aviation Safety Regulations 1998*.

Shane Carmody
Director of Aviation Safety

xx April 2018

CASA xx/18 — Required Communication Performance and Required Surveillance Performance (RCP 240 and RSP 180) Capability Declarations — Direction 2018

1 Name of instrument

The instrument is the CASA xx/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 registration; and

(b) is repealed at the end of 31 March 2021.

3 Definitions

In this instrument:

aircraft operator has the meaning given in section 5.

ATC means air traffic control.

automatic dependent surveillance — contract (ADS-C) means an agreement, between ATC and a relevant aircraft:

(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.

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.

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 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, one 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 surveillance (PBS) means surveillance 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.

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 (comprising a number of allocations), 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 recognize 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 performance-based communication, 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 performance-based surveillance, 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 (comprising a number of allocations), 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

This instrument applies to an ***aircraft operator*** who is:

(a) the operator of an Australian aircraft; or

(b) 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.

Note An aircraft mentioned in section 5 is a ***relevant aircraft***.

6 Directions

(1) I direct that an aircraft operator may declare that the relevant aircraft has required communication performance (***RCP***) capability and required surveillance performance (***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 a notification from Airservices Australia of non-compliance with RCP 240 and RSP 180 capabilities; and

(c) the aircraft operator fails to rectify the non-compliance.

Note Airservices Australia (AA) monitors datalink communications in Australian-administered airspace and issues notifications when there has been consistent non-compliance with the operational end-to-end criteria of RCP 240 and RSP 180.

AIRCRAFT DOCUMENTATION

3 Subject to clause 4, one of the following:

(a) the aircraft flight manual (the ***AFM***);

(b) an original equipment manufacturer (***OEM***) 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:

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 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 communication services provider (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 NAA to whom the declaration is made;

(e) that datalink messages will not be manipulated or altered;

(f) that network-allocated requirements for the following:

(i) the RCP 240 specification transaction time; and

(ii) the RSP 180 specification delivery time;

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.

FLIGHT CREW TRAINING ETC

9 Each member of the flight crew of a relevant aircraft must have been trained on 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; and

(c) the entering of RCP and RSP descriptors in the flight plan.

10 The aircraft operator must establish a PBCS training program for its relevant personnel consistent with the intended operations.

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

(i) FAA Advisory Circular (AC) 90-117 — *Datalink Communications*;

(ii) FAA Advisory Circular (AC) 20-140 — *Guidelines for Design Approval of Aircraft Data Link Communication Systems Supporting Air Traffic Services (ATS)*;

(iii) FAA Advisory Circular (AC) 91-70B — *Oceanic and Remote Continental Airspace Operations*;

(iv) ICAO Annex 6 — *Operation of Aircraft, Parts I and II*;

(v) ICAO Annex 11 — *Air Traffic Services*;

(vi) ICAO Doc 4444 — *Procedures for Air Navigation Services — Air Traffic Management (PANS-ATM)*;

(vii) ICAO Doc 9869 — *Performance-based Communications and Surveillance (PBCS) Manual*;

(viii) 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.