



APPLICATION FOR PERFORMANCE BASED COMMUNICATION AND SURVEILLANCE (PBCS) OPERATIONAL APPROVAL (FOR HONG KONG OPERATORS)

(Foreign Operators shall apply PBCS operational approval from the State of Operator or State of Registry)

Please complete the form in BLOCK CAPITALS using black or dark blue ink.

This form is designed to elicit all the required information from those operators requiring PBCS (RCP 240/RSP 180) operational approvals. The completed form and supporting documentation should be submitted to Civil Aviation Department at the address listed below:

Flight Standards and Airworthiness Division
Civil Aviation Department Headquarters
1 Tung Fai Road, Chek Lap Kok
Lantau, Hong Kong
Email: ops@cad.gov.hk
Fax: (852) 2362 4250

Note: Application submission should be at least 30 days before the start of operations

- | | |
|-------------|--|
| Section I | Operator details and Signature (completion is mandatory) |
| Section II | Notes for completion |
| Section III | Operator's submissions matrix |
| Section IV | Job Aid (completion is mandatory) |



SECTION I. OPERATOR DETAILS AND SIGNATURE

1. <i>Name of Operator</i>		
2. <i>Name of Responsible Person (Title)</i>		
3. <i>Operator's Contact Information</i>	<i>Mail Address</i>	
	<i>Email Address</i>	
	<i>Telephone Number</i>	
	<i>Fax Number</i>	
4. <i>Authorised Signature</i>		
	(Date)	



SECTION II. NOTES FOR COMPLETION

1. Applicability

General description of the operation with references to appropriate standards and guidance material.

2. Operator's submissions matrix

Section III of this application form is to highlight the documents required for submission.

3. Documents to be included with the submission

Copies of all documents referred to in the operator's submissions matrix should be included when returning the completed application form to the Civil Aviation Department. Original documents should not be sent; photocopies are sufficient. Do not send complete manuals, only the relevant sections/pages. Documents may be grouped in a single binder or may be submitted as individual documents.

FAILURE TO INCLUDE ALL RELEVANT DOCUMENTATION MAY DELAY THE PROCESS OF APPLICATION.

4. Submissions and enquiries

Email: ops@cad.gov.hk

Fax: (852) 2362 4250



SECTION III. OPERATOR'S SUBMISSIONS MATRIX

1. Aircraft Eligibility and Airworthiness Compliance	
(A)	<p>Specify to what standards the data link systems comply including any limitation, assumption or specific procedures indicating eligibility of aircraft type(s) for Required Communication Performance (RCP) / Required Surveillance Performance (RSP) applications as stated in:-</p> <ol style="list-style-type: none">(1) the Type Certificate (TC); or(2) Supplementary Type Certificate (STC); or(3) Associated documentation such as the Aircraft Flight Manual (AFM) or equivalent; or(4) Manufacturer compliance statement which has been approved by the State of Design. <p><i>Note: The operator is responsible for all maintenance of data link communication systems. Maintenance procedures for data link communication are approved or accepted as part of an operator's initial maintenance manual approval or as a revision to that manual.</i></p>
(B)	<p>Configuration / Equipment List detailing the pertinent hardware and software components for the aircraft / fleet(s) applicable to the specific RCP/RSP operation; and the configuration control for subnetwork, communication media and routing policies.</p> <p><i>Note: Operators should maintain their aircraft in a configuration of communication media and routing policies which has been shown to provide acceptable data link communication performance. This configuration management should be documented in the control process by the operators.</i></p>
(C)	<p>The aircraft manufacturer or equipment supplier shall identify any specific items related to PBCS capability in the master minimum equipment list (MMEL) and/or MEL.</p> <p><i>Note: MMEL or MEL Provisions for Systems Related to CPDLC/ADS-C Operations. Pilots, dispatchers and maintenance personnel must be familiar with the MEL requirements. For flights that intend to use data link and when required for the intended operation, operators will adopt provisions for certain specific systems to be operational at dispatch. The MEL must be amended to highlight the impact of losing an associated system/subsystem and the affect it has on data link operational capability.</i></p>



(D)	Details of cockpit indication, procedures (including use of message sets) and system description addressed in the AFM or Flight Crew Operational Manual (FCOM) by aircraft types with relevant procedures and limitations.
(E)	<p>Operators should ensure maintenance personnel receive training on their airplane's data link communication equipment. Training would normally include:</p> <ol style="list-style-type: none">1) Installation2) Modification3) Correction of reporting system discrepancies4) Use of test equipment5) MEL relief6) Procedures7) Return to service authorisations <p><i>Note: Operators unsure of required maintenance procedures for data link communication-related equipment should contact their aircraft manufacturer field service representatives.</i></p>
2. Communication Service Provider (CSP)	
(A)	<p>Contracted CSPs should comply with the requirements of the services for RCP/RSP specification, this compliance can be shown either through contracted Service Level Agreements (SLAs) for data link services or through participation in the PBCS charter. Detail service requirement is shown in paragraph 4.3.2 of ICAO Doc 9869 (Second Edition, 2017) – PBCS Manual.</p> <p><i>Note 1: When using PBCS charter as an alternative means of compliance, Operator should present evidence of signing the PBCS charter and evidence their CSP also signed PBCS charter.</i></p> <p><i>Note 2: When using PBCS charter as an alternative means of compliance, Operator shall notify CAD of any change of status regarding PBCS charter.</i></p>



3. Dispatch

(A) Preflight planning requirements including MELs, NOTAMs, eligible flight plan filing and applicable regional requirements.

Note 1: When filing RCP/RSP capabilities, the operator shall ensure that the planned use of associated communication and surveillance capabilities for the flight will be in accordance with regulations, policies and procedures in control areas for the flight as published in the AIP or other state publications.

Note 2: Procedures should include degrading RCP/RSP flight plan codes when a fleet is shown to be below required RCP/RSP performance. Refer detail in ICAO's Performance-based Communications and Surveillance Manual (Doc 9869).

(B) Training for an aircraft dispatcher or other operational control personnel should include:

- 1) Proper use of Datalink and PBCS flight plan designators;
- 2) Air Traffic Services Unit (ATSU) separation criteria and procedures relevant to RCP/RSP criteria;
- 3) MEL remarks or exceptions based on data link communications;
- 4) Procedures for transitioning to voice communication and other contingency procedures related to the operation in the event of abnormal behavior of the data link communication services;
- 5) Coordination with the ATSU related to or following a special data link communication exceptional event; and
- 6) Contingency procedures to transition to a different separation standard when data link communication services fail.

4. Operating Procedures

(A) Preflight planning requirements including MELs, eligible flight plan filing and applicable regional requirements.

(B) Actions to be taken in the data link operation, to include specific RCP/RSP required cases.

(C) Actions to be taken for the loss of data link capability before entering the airspace requiring specific RCP/RSP specification.

(D) Actions to be taken for the loss of data link capability while in the airspace requiring specific RCP/RSP specification.



(E)	Problem reporting procedures to the local/regional monitoring agency (central reporting agency) in the event of data link problem such as: 1) Failure to log on, 2) Disconnects, 3) Corrupted messages, and 4) Excessive delay.
(F)	Regional specific requirements should be addressed in the Operations Manual or other guidance materials for pilots and other operational personnel. <i>Note: For non-AOC operators, suitable procedures/checklists provided by the manufacturer covering all these areas could be considered as alternative means of compliance.</i>
5. Data Link Operational Training	
(A)	AOC Operators should have a training program addressing the operational practices, procedures, and training items related to data link communication operations (e.g., initial, upgrade, or recurrent training for pilots, operational control personnel, and maintenance personnel). Non-AOC Operators should be proficient with the procedures and operations associated with the use of data link communication systems in accordance with their AFM and AFM Supplement if applicable. <i>Note: A separate training program is not required if data link communication training is integrated in the current training program. However, the applicant must identify the training elements for PBCS in the existing training program.</i>



6. Flight Crew Training

- (A) Following subjects should be addressed in data link communications including PBCS training during the initial introduction of a pilot to data link communication systems:
- 1) Normal pilot response to data link communication messages
 - 2) Message elements in the message set;
 - 3) RCP/RSP specifications and their performance requirements;
 - 4) Implementation of reduced separation with associated data communication system requirements to comply with RCP 240 and RSP180 or other possible performance requirements associated with their routes;
 - 5) Data link communications system theory (relevant to operational use);
 - 6) Operations involving data link communication services;
 - 7) Nominal and unacceptable performance;
 - 8) Normal and non-normal use;
 - 9) Data link communication events and reporting;
 - 10) Limitations.

Note 1: If flight crew already has Data link training, only additional training on PBCS (RCP/RSP) related areas are required.

Note 2: Above training items can be trained by Training Material and Simulator or any other means that simulate the functionality.

7. Performance Monitoring and Reporting

- (A) Documented procedures for post-implementation PBCS monitoring (RCP/RSP). Procedures to address the action(s) to be taken for the case of performance non-compliance whether the source is from the operator's own monitoring process, CSP or foreign authority.
- (B) The operator shall facilitate the procedures to access the actual performance of its fleet by Air Navigation Service Providers (ANSPs) through Regional Monitoring Agencies (RMAs), contracted CSPs, or operators' own analysis.

Note: This requirement can be satisfied by providing information through RMAs (e.g. Central Reporting Agency (CRA) or Data Link Monitoring Agency (DLMA) – <http://www.fans-cra.com/>).



<p>(C)</p>	<p>The operator shall establish procedures to report problems identified by the pilot or other personnel, to the regional PBCS monitoring entities identified in Aeronautical Information publications (AIPs) or other state publications associated with the route of flight on which the problem occurred.</p> <p><i>Note: Required reporting items are listed in ICAO's PBCS Manual (Doc 9869, Second Edition) and Global Operational Data Link Document (GOLD).</i></p>
<p>(D)</p>	<p>The operator shall establish a process to investigate and correct the cause of the discrepancy as reported by Local/Regional PBCS monitoring entities and/or CRA about RCP/RSP performance.</p>



SECTION IV. PBCS JOB AID

APPLICATION TO CONDUCT PBCS OPERATIONS

1. Purpose of the Job Aid

- (a) To provide information on the relevant reference documents.
- (b) To provide a record of the operator application, the inspector comments and the operator follow-up action for each relevant paragraph in the reference document(s).

2. Actions recommended for the inspector and operator

- (a) At the pre-application meeting, the operator and the inspector review the approval process events and establish the form and content of the approval application.
- (b) The operator records references to material in company documents for each relevant paragraph in the job aid.
- (c) The operator submits to the inspector the completed job aid with the application at least 30 days prior to intended starting date of PBCS operations.
- (d) The inspector records his/her findings for each relevant paragraph in the job aid indicating compliance or necessary corrective action.
- (e) The inspector informs the operator as soon as possible when a corrective action is required.
- (f) The operator provides the inspector with the revised material when so requested.
- (g) The CAD provides the operator with the Operations Specifications (Ops Specs) and/or a formal approval when the tasks and documents have been completed.



3. Reference Document

<i>Publisher</i>	<i>Reference</i>	<i>Title</i>
ICAO	Doc 9869	Performance-Based Communication and Surveillance (PBCS) Manual (Second Edition, 2017)
ICAO	Doc 10037	Global Operational Data Link (GOLD) Manual
FAA	AC 20-140B	Guidelines for Design Approval of Aircraft Data Link Communication Systems Supporting Air Traffic Services (ATS)
FAA	AC 90-117	Data Link Communications
RTCA/ EUROCAE	RTCA DO-306/ EUROCAE ED-122	Safety and Performance Standard for Air Traffic Data Link Services in Oceanic and Remote Airspace (Oceanic SPR Standard)
RTCA/ EUROCAE	RTCA DO-290/ EUROCAE ED-120	Safety and Performance Standard for Air Traffic Data Link Services in Continental Airspace (Continental SPR Standard, Change 1 and Change 2)
RTCA/ EUROCAE	RTCA DO-258A/ EUROCAE ED-100A	Interoperability Requirements for ATS Applications Using ARINC 622 Data Communications (FANS 1/A INTEROP Standard)
RTCA/ EUROCAE	RTCA DO-280B/ EUROCAE ED-110B	Interoperability Requirements Standard for Aeronautical Telecommunication Network Baseline 1 (ATN B1 INTEROP Standard)
RTCA/ EUROCAE	RTCA DO 305A/ EUROCAE ED 154A	Future Air Navigation System 1/A — Aeronautical Telecommunication Network Interoperability Standard (FANS 1/A — ATN B1 INTEROP Standard).



PART 1. IDENTIFICATION OF OPERATOR AND AIRCRAFT

<i>Name of Operator</i>			
<i>Aircraft manufacturer, model and series</i>	<i>Registration numbers</i> <i>(Attach List of Registration Numbers if necessary)</i>	<i>Serial numbers</i> <i>(Attach List of Serial Numbers if necessary)</i>	<i>Applicable RCP/RSP</i>
			<input type="checkbox"/> <i>RCP 240</i> <input type="checkbox"/> <i>RSP 180</i>

Intended date of commencement of PBCS operations: _____

Date when application received by CAD: _____	FOR OFFICIAL USE
Date of pre-application meeting: _____	



PART 2. DOCUMENT SUBMISSION CHECKLIST

Annex	Required Documents	Reference	Operator's Submission	FOR OFFICIAL USE	
				Signature and Date	Check
A	Request for Operational Approval	****			<input type="checkbox"/>
Aircraft Eligibility					
B	Compliance Statement <i>(Tick where appropriate)</i>				
	<input type="checkbox"/>	<i>RCP/RSP certified on AFM/TC/other supplemental manual.</i>	<i>Document includes RCP/RSP certification</i>	DCA4049(PBCS) Section III Item 1(A) ICAO Doc 9869 (2 nd Ed) Chapter 4, 4.3.3	<input type="checkbox"/>
	<input type="checkbox"/>	<i>Alternate compliance statement by Aircraft manufacturer</i>	<i>Statement document</i>		<input type="checkbox"/>
	<input type="checkbox"/>	<i>All other means of compliance</i>	<i>Supplemental operator document (if applicable)</i>		<input type="checkbox"/>
<p><i>Note1: Above compliance statement should include applicable sub network such as VDLM0/A, VDL M2, HFDL, Inmarsat or Iridium</i></p> <p><i>Note2: Applicable RCP/RSP value would be incorporated into above compliance documents</i></p>					



Annex	Required Documents	Reference	Operator's Submission	FOR OFFICIAL USE	
				Signature and Date	Check
Airworthiness Compliance					
C	Equipment installation or modification records (where applicable) – Documentation of maintenance and manufacturer/model of data link equipment (AFM, Service Bulletins and Aircraft Service Changes (ASC) related to data link communications, Supplemental Type Certificates (STCs) etc.) Provide documentation of the following installed data communication equipment: <ul style="list-style-type: none">FANS 1/A (Satellite, HF, VHF) equipment and/or ATN (VDL 2) VHF equipmentADS-C	DCA4049(PBCS) Section III Items 1(A) & 1(B)			<input type="checkbox"/>
D	Documentation of current configuration (e.g. current avionics software load); aircraft modifications (if applicable, list all Aircraft Service Changes (ASC) specific to data link communications, Service bulletins etc.) <i>Note: The operator must confirm any modifications did not affect the data link system.</i>	DCA4049(PBCS) Section III Item 1(B)			<input type="checkbox"/>



Annex	Required Documents	Reference	Operator's Submission	FOR OFFICIAL USE	
				Signature and Date	Check
E	Documentation or record of configuration of user modifiable software and its control process document. <i>Note: User modifiable software would control communication media and routing policies to meet RCP/RSP criteria.</i>	DCA4049(PBCS) Section III Item 1(B) ICAO Doc 9869 (2nd Ed) Chapter 4, 4.3.4.6			<input type="checkbox"/>
MEL/MMEL					
F	Minimum Equipment List (MEL) and / or Master Minimum Equipment List (MMEL) addressing all data communication equipment which is related to the operation under specific RCP/RSP requirement. <i>Note: The MEL must be amended to include the effect on operation and data link operational capability when any associated system/subsystem is loss.</i>	DCA4049(PBCS) Section III Item 1(C) ICAO Doc 9869 (2nd Ed) Chapter 4, 4.3.4.1			<input type="checkbox"/>
Training Programme for Engineering Personnel					
G	Training programme for engineering personnel addressing the datalink communication operation including PBCS.	DCA4049(PBCS) Section III Item 1(E) & 5(A)			<input type="checkbox"/>



Annex	Required Documents	Reference	Operator's Submission	FOR OFFICIAL USE	
				Signature and Date	Check
Communication Service Provider (CSP)					
H	<p>Documentation of each CSP arrangement</p> <p>The operator is responsible to ensure each CSP service provides the following:</p> <ul style="list-style-type: none"> (1) Failure Notification (2) Recording data link messages (3) CSP Integrity (4) Compliance with CSP allocation for RCP/RSP, and (5) Adequate Subnetwork Coverage for the Route Flown 	<p>DCA4049(PBCS) Section III Item 2(A)</p> <p>ICAO Doc 9869 (2nd Ed) Chapter 4, 4.3.2 4.3.4.3 & 4.3.4.4</p>			<input type="checkbox"/>
I	<p>A record of SLAs for data link services or other equivalent means (e.g. participation in the PBCS Charter with a copy of PBCS Charter web page which includes the name of contracted CSP and the operator).</p>	<p>DCA4049(PBCS) Section III Item 2(A)</p> <p>ICAO Doc 9869 (2nd Ed) Chapter 4, 4.3.4.7 -4.3.4.10 & 4.5</p>			<input type="checkbox"/>



Annex	Required Documents	Reference	Operator's Submission	FOR OFFICIAL USE	
				Signature and Date	Check
Dispatch					
J	Documentation ensuring that proper information indicating PBCS approved capabilities will be included in the ICAO flight plan	DCA4049(PBCS) Section III Item 3(A) ICAO Doc 9869 (2nd Ed) Chapter 4, 4.4			<input type="checkbox"/>
K	Preflight planning requirements and procedures for dispatchers or other operational personnel, including the MEL, flight plan filing requirements and Airspace requirements for applicable regional requirements (e.g. AIP)	DCA4049(PBCS) Section III Item 3(A), 4(A) & 4(F) ICAO Doc 9869 (2nd Ed) Chapter 4, 4.4			<input type="checkbox"/>
L	Training program for dispatch and other operational control personnel addressing the datalink communication operation including PBCS	DCA4049(PBCS) Section III Item 3(B) & 5(A) ICAO Doc 9869 (2nd Ed) Chapter 4, 4.3.4.2			<input type="checkbox"/>



Annex	Required Documents	Reference	Operator's Submission	FOR OFFICIAL USE	
				Signature and Date	Check
Operating Procedures					
M	Attach the AFM (page/paragraph) or OEM checklist/guide, or operations manual page of limitations applicable to the use of your specific data link system(s) by aircraft type.	DCA4049(PBCS) Section III Items 1(D) ICAO Doc 9869 (2nd Ed) Chapter 4, 4.3.4.2			<input type="checkbox"/>
N	Preflight planning requirements and procedures for flight crew including the MEL, flight plan filing requirements and Airspace requirements for applicable regional requirements (e.g. AIP).	DCA4049(PBCS) Section III Item 3(A), 4(A) & 4(F) ICAO Doc 9869 (2nd Ed) Chapter 4, 4.4			<input type="checkbox"/>
O	Normal procedures for flight crew in the datalink operation include specific RCP/RSP requirement.	DCA4049(PBCS) Section III Items 4(B) ICAO Doc 9869 (2nd Ed) Chapter 4, 4.3.4.2			<input type="checkbox"/>



Annex	Required Documents	Reference	Operator's Submission	FOR OFFICIAL USE	
				Signature and Date	Check
P	Non-normal (contingency) procedure to be taken for the case of lost datalink capability before entering the airspace requiring specific RCP/RSP specification.	DCA4049(PBCS) Section III Items 4(C) ICAO Doc 9869 (2nd Ed) Chapter 4, 4.3.4.2			<input type="checkbox"/>
Q	Non-normal (contingency) procedure to be taken for the case of lost datalink capability in the airspace requiring specific RCP/RSP specification.	DCA4049(PBCS) Section III Items 4(D) ICAO Doc 9869 (2nd Ed) Chapter 4, 4.3.4.2			<input type="checkbox"/>
Flight Crew Training					
R	Flight Crew training program addressing the operational practices, procedures and training items related to data link communication and PBCS operations (e.g., initial, upgrade and recurrent training).	DCA4049(PBCS) Section III Items 5(A) & 6(A) ICAO Doc 9869 (2nd Ed) Chapter 4, 4.3.4.2			<input type="checkbox"/>



Annex	Required Documents	Reference	Operator's Submission	FOR OFFICIAL USE	
				Signature and Date	Check
Performance Monitoring and Reporting					
S	Documentation regarding data link monitoring process with procedures to address sub-standard performance.	DCA4049(PBCS) Section III Items 7(A) ICAO Doc 9869 (2nd Ed) Chapter 4, 4.3.4.7 - 4.3.4.10 & 4.5			<input type="checkbox"/>
T	Procedures to report data link communication failures and/or problems.	DCA4049(PBCS) Section III Items 4(E) & 7(C) ICAO Doc 9869 (2nd Ed) Chapter 4, 4.3.4.7 - 4.3.4.10 & 4.3.5			<input type="checkbox"/>
U	Procedures to disclose operational data (Data/System logs), including data from its CSPs/SSPs, in a timely manner, to the appropriate CRA or DLMA, when requested for the purposes of investigating a reported problem.	DCA4049(PBCS) Section III Item 7(B) ICAO Doc 9869 (2nd Ed) Chapter 4, 4.3.4.7 - 4.3.4.10 & 4.3.5			<input type="checkbox"/>



<i>Annex</i>	<i>Required Documents</i>	<i>Reference</i>	<i>Operator's Submission</i>	FOR OFFICIAL USE	
				<i>Signature and Date</i>	<i>Check</i>
V	Procedures to investigate and correct the cause of the discrepancy reported by Local/Regional PBCS monitoring entities and/or CRA for maintaining RCP/RSP performance. This should include the action to be taken in the case of non-performance compliance report by appropriate RMA.	DCA4049(PBCS) Section III Items 7(D) ICAO Doc 9869 (2nd Ed) Chapter 4, 4.3.4.7 - 4.3.4.10 & 4.3.5			<input type="checkbox"/>



Personal Data Collection Statement

1. Purposes of Collection

The personal data provided by means of this form, including all the supporting documents included in the application, will be used by Civil Aviation Department for the following purposes:

- a. Processing of your application in this form;
- b. Carrying out relevant provisions of the Civil Aviation Ordinance (Chapter 448) and its subsidiary Orders / Regulations;
- c. Assisting in the enforcement of any other Ordinances and Regulations by other Government Bureaux and Departments;
- d. For communication purposes between Civil Aviation Department and yourself;
- e. For validation and verification of authenticity of your supporting documents in association with the application;
- f. For statistics and research purposes on the condition that the resulting statistics or results will not be made available in a form which will identify the data subjects.

It is obligatory for you to supply the personal data as required in this form. If you fail to supply the required data, we may not be able to process your application.

2. Classes of Transferees

The personal data you provided by means of this form may be disclosed to:

- a. Other Government Bureaux and Departments for the purposes mentioned in paragraph 1 above;
- b. Other Contracting States of the International Civil Aviation Organisation and Civil Aviation Authorities for the purpose mentioned in paragraph 1 above;

- c. Other organisations or agencies for execution of their duties as required by Civil Aviation Department.

3. Access to Personal Data

You have a right of access and correction with respect to personal data as provided for in Sections 18 and 22 and Principle 6 of Schedule 1 of the Personal Data (Privacy) Ordinance. Your right of access includes the right to obtain a copy of your personal data provided by this form.

4. Enquiries

Enquiries concerning the personal data collected by means of this form, including the making of access and correction, should be addressed to :

Flight Standards Office
Flight Standards and Airworthiness Division
Civil Aviation Department Headquarters
1 Tung Fai Road
Hong Kong International Airport
Lantau, Hong Kong

(Attn.: Safety Officer (Technical Support))

Anti-bribery Reminder:

Anyone, while having dealings of any kind with the Civil Aviation Department (CAD), should not offer advantage to the CAD officers, or else he may commit an offence under section 4(1) and/or section 8 of the Prevention of Bribery Ordinance (Chapter 201 of Laws of Hong Kong), and be liable to a maximum penalty of a fine of \$500,000 and imprisonment for 7 years.