Civil Aviation Safety Authority
of Papua New Guinea

Advisory Circular

AC173-1

Instrument Flight Procedure Application For Certification

Issue 1

06 February 2025

GENERAL

Civil Aviation Authority Advisory Circulars (AC) contain information about standards, practices and procedures that the Director has found to be an Acceptable Means of Compliance (AMC) with the associated rule.

An AMC is not intended to be the only means of compliance with a rule, and consideration will be given to other methods of compliance that may be presented to the Director. When new standards, practices or procedures are found to be acceptable, they will be added to the appropriate Advisory Circular.

PURPOSE

This Advisory Circular provides specific guidance acceptable to the Director, for showing compliance with Civil Aviation Rule 173 Subpart B Certification Requirements and explanatory material to assist in showing compliance.

RELATED CAR

This AC relates to Civil Aviation Rule Part 173, specifically rules:

- Rule 173 Subpart B Certification Requirements

CHANGE NOTICE

This AC replaces Initial Issue 01 March 2018.

APPROVAL

This AC has been approved for publication by the Director of Civil Aviation

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Introduction

CAR Part 173 outlines the certification requirements for organizations providing Instrument Flight Procedure Services in Papua New Guinea. These organizations, which are private enterprises or state-owned enterprise (SOE), offer their services for a fee under a contractual agreement. Before they can operate in Papua New Guinea, they must submit an application for certification in accordance with CAR Part 173. This certification ensures that their services meet the technical standards for instrument flight procedure design and maintenance. The goal is to ensure that these procedures meet or exceed the International Civil Aviation Organisation (ICAO) standards and recommended practices for instrument flight procedures. Once approved, these organizations can integrate into the Papua New Guinea aviation system and provide their services legally

This certification is mandatory for any organisation or individual aiming to design, certify, and/or maintain Instrument Flight Procedures. The regulation stipulates, among other requirements, that form CA 173/01 must be completed and submitted to the Civil Aviation Safety Authority (CASA) at least ninety (90) days prior to the intended start date of operations by the service provider. This advance submission ensures that the provider has ample time to meet all certification criteria and integrate seamlessly into the aviation system of Papua New Guinea.

Alternatively, the form can be downloaded from the CASA website,

The Certification Process

The following certification process ensures continuous interaction from the applicant's initial enquiry to the issuance or denial of the requested certificate by the Civil Aviation Safety Authority (CASA PNG). It guarantees that the applicant's proposed programmes, systems, arrangements, facilities, documentation, personnel, and intended methods of compliance are thoroughly reviewed, evaluated, and tested.

There are five phases in the process for Instrument Flight Procedure Service Organisation certification. Each phase is described in sufficient detail to provide a general understanding of the entire process. During certification, the process is followed in sequence, in the order indicated below. To move to the next phase, the preceding phase must be successfully completed:

1. **Pre-application Phase**: Initial interaction between the applicant and CASA PNG, during which the applicant's intentions and qualifications are assessed.
2. **Formal Application Phase**: Submission of the formal application, including all required documentation, forms, and fees.
3. **Document Evaluation Phase**: Review of the submitted documentation to ensure compliance with regulatory requirements and standards.
4. **Demonstration and Inspection Phase**: On-site inspections and demonstrations to validate the applicant's procedures, equipment, and personnel qualifications.
5. **Certification Phase**: Issuance or denial of the certificate based on the findings from the previous phases, along with any necessary follow-up actions or requirements.

This structured process ensures that only qualified and compliant Organisations are certified to provide Instrument Flight Procedure Services in Papua New Guinea.

Subpart B — Certification Requirements

EM 173.51 Personnel Requirements

Chief Executive

- **Position**: Senior individual identified as the Chief Executive.
- **Responsibilities**:
  - Ensure all activities within the organisation can be financed and executed in accordance with regulations.
  - Ensure organisational compliance with the prescribed standards.

Senior Personnel Reporting to Chief Executive

- **Positions**: Senior individual(s) responsible to the Chief Executive.
- **Responsibilities**:
  - Ensure compliance with the organisation's exposition.
  - Certify each instrument flight procedure according to the procedures outlined in rule 173.57.
  - Oversee the safety management system as required by rule 173.69.
  - Oversee the quality management system as required by rule 173.71.

Sufficient Personnel

- Ensure there are enough qualified personnel to plan, design, verify, and maintain the instrument flight procedures.

Training and Checking Programme

Training Procedures

- Establish procedures as required by rule 173.52 for a training and checking programme. This programme should:
  - Initially assess and train personnel involved in the planning, design, verification, and maintenance of instrument flight procedures.
  - Maintain the competence of these personnel.
  - Ensure personnel authorised to certify instrument flight procedures are competent.

Senior Personnel

- Senior personnel involved in planning, supervising, conducting, or verifying design activities as specified in Appendix C.
- Must be authorised in accordance with rule 173.56 to certify the procedures.

Qualifications and Experience

- The qualifications and experience required for the senior persons mentioned in paragraph (a)(2) are specified in Appendix A.

EM 173.53(a) Resource requirements

Details the resource requirements for Organisations providing instrument flight procedure services. These organizations must have;

1. **Appropriate Equipment:** Applicants must have suitable equipment for the design, verification, certification, flight validation, and maintenance of the specified instrument flight procedures.
2. **Access to Relevant Data:** Ensuring access to these types of data allows an organisation to design and maintain IFPs that are safe, reliable, and compliant with regulatory standards. This includes having access to up-to-date and relevant data, such as;
3. **Documentation:** Applicants must possess or have access to necessary technical standards, practices, instructions, and any other relevant documentation for the design, verification, certification, flight validation, and maintenance of the specified instrument flight procedures.

EM 173.53(b) Resource requirements

The importance of establishing procedures to ensure the integrity and accessibility of aeronautical data throughout the entire process of designing, verifying, certifying, and maintaining instrument flight procedures (IFPs).

1. **Integrity of Aeronautical Data**: Applicants must have procedures in place to ensure the integrity of the aeronautical database and aeronautical data from the initial survey/origin to the certified flight procedure. This means that data must be accurate, consistent, and reliable throughout the design process.
2. **Personnel Access to Data**: It is essential that personnel involved in designing, verifying, certifying, and maintaining IFPs have access to the necessary data. This ensures that they can effectively perform their tasks using accurate and relevant information.
3. **Current, Traceable, and Accurate Data**: The data and database must be current, traceable, and meet the required level of verifiable accuracy. This is crucial for the design, design verification, flight validation, and maintenance of IFPs. Additionally, the data must meet any other requirements acceptable to the Director of the relevant aviation authority.

EM 173.53(c) Resource requirements

Documentation Control must be established to control all relevant documentation (technical standards, practices, instructions, etc.) to ensure:

1. **Review and Authorization**: All documents are reviewed and authorised by the appropriate personnel before use.
2. **Currency**: Current versions are accessible to personnel who need them.
3. **Obsolescence**: Obsolete documents are promptly removed.
4. **Change Control**: Any changes to documentation are reviewed and authorised before being put into use.
5. **Version Identification**: The current version of every document can be clearly identified to prevent use of outdated information

EM 173.69 Safety Management Systems

Mandates that any organisation applying for an instrument flight procedure service certificate must establish, implement, and maintain a Safety Management System (SMS). The organisation must have a formal, proactive system in place to identify, assess, and mitigate safety risks associated with the design, certification, and maintenance of instrument flight procedures.

PNG Advisory Circular 100-1 may be used to provide information and guidance relating to safety management system procedures. AC 100-1 can be downloaded from the CASA website.

EM 173.71(a) Quality Management System

An applicant for an instrument flight procedure service certificate must establish, implement, and maintain a quality management system (QMS) in accordance with Part 100 of the PNG Civil Aviation Rules. The organisation must have a structured system for ensuring that its services consistently meet or exceed defined quality standards. quality management system

The overall aim is to provide confidence that IFPs are designed, verified, and maintained to high standards of accuracy, safety, and consistency, reducing risks to air traffic. This is separate, but complementary, to the Safety Management System (SMS), the SMS focuses on safety risks, while the QMS addresses quality requirements and conformance to standards.

PNG Advisory Circular 100-1 may be used to provide information and guidance relating to quality management system procedures. AC 100-1 can be downloaded from the CASA website.

EM 173.71(b) Quality Management System

An applicant for an instrument flight procedure service certificate must establish and implement a quality management system (QMS) for flight procedure design. QMS must adhere to two key ICAO documents:

1. **ICAO PANS-OPS DOC 8168 Volume II**, **Chapter 4**, **Quality Assurance:** This chapter of the ICAO document outlines general principles and practices for quality assurance within the context of air operations. It provides a framework for establishing and managing a QMS focused on maintaining consistent quality.
2. **ICAO Document 9906, Volume 1, Quality Assurance Manual for Flight Procedure Design:** This document provides specific guidance and procedures tailored to the design of flight procedures. It offers detailed instructions and best practices to ensure that flight procedure design activities are carried out to a high level of quality, precision, and accuracy.

QMS is not merely a generalized approach to quality management, but directly incorporates standards and best practices that are highly relevant and targeted to the accurate and safe design of instrument flight procedures. The overall effect is to improve the reliability and safety of instrument flight procedures produced by organizations certified under Part 173.

EM 173.73 Organisation exposition requirements

Organisational exposition serves as a comprehensive description of the organisation's structure, processes, and capabilities, demonstrating its ability to comply with all relevant regulations. The information referred to in CAR 173.73 and the information referred to in CA173-02 IFP Service Certificate And Operation Compliance Matrix which must be contained in the exposition of the applicant

Key components of the required exposition include:

1. **Statement of Compliance:** A signed statement from the Chief Executive confirming that the exposition accurately reflects the organization's structure and operational methods, and that all personnel will comply with its provisions. This assures the regulatory body that the organization understands and commits to meeting all the rules and standards set by Part 173.

2. **Safety Management System** (**SMS**) **Implementation Plan**: A detailed plan describing how the SMS (as required by 173.69) will be put into practice. This is critical because an effective SMS is crucial for preventing safety incidents. The plan would detail hazard identification processes, risk mitigation strategies, safety reporting methods, and more.

3. **Senior Personnel Identification and Responsibilities**: Names and roles of all senior personnel responsible for the compliance of the organization. It must define the chain of command and specify responsibilities, notably concerning safety management and compliance. Clear lines of authority and accountability are explicitly required.

4. **Scope of Services**: A list of the types of instrument flight procedures that the organization will design, certify, and maintain. This transparency makes clear the extent of operations the organization plans to perform. It helps ensure the appropriate personnel and resources are allocated.

5. **Resource Details**: Information outlining how the organization plans to satisfy the resource requirements of section 173.53 regarding equipment, data access, and documentation. Demonstrating readily available, relevant, and up-to-date resources to produce, maintain, and manage IFPS is vital for compliance.

6. **Procedure Details**: A comprehensive summary of the organization's planned procedures in relation to several crucial operational areas of Part 173 (i.e. personnel assessment, training programs, data access and control, design verification, flight validation procedures, and so forth). It's a vital demonstration of adherence to the required regulatory processes. This indicates compliance with multiple standards and safety-related obligations laid out by Part 173.

7. **Record Management**: A description of the organization's system for managing records, ensuring that it maintains all required documentation according to the provisions outlined in 173.67. Record keeping practices must ensure traceability and auditability across all aspects of its IFP services.

Appendix A: Five (5) Phase Certification Process Job Aid (Sample)

No	Events/Activities	Scheduled Date	Responsibility	CASA Delegate Initial	Date Received/ Accomplished	Date Returned for Changes	REMARKS
PHASE 1 – PRE-APPLICATION							
A.	Initial Orientation: Certification Advisory 173-1 Circular and package provided to applicant.						
B.	Expression of Interest (EOI)						
C.	Reply EOI and schedule pre-application meeting						
D.	Certification Team Designated						
	Name / Title / Signature						
E.	Conduct Pre-application Meeting						
	1. Verify EOI Information						
	2. Overview of Certification Process						
	3. Provide Certification Package Containing:						
	(a) Sample Formal Application Letter						

No	Events/Activities	Scheduled Date	Responsibility	CASA Delegate Initial	Date Received/ Accomplished	Date Returned for Changes	REMARKS
	(b) Form CA173/01 and Fees & Charges						
	(c) CA FPP1 Fit Proper Person Application Form						
	(d) Certification Job Aid						
	(e) Schedule of events						
	(f) Model Operations Specifications						
	(g) Part 173 Compliance Matrix and Applicable CARs						
	4. Explain Formal Application Submissions						
PHASE 2 – FORMAL APPLICATION							
A.	Review Applicant's Submission						
	1. Formal Application Form CA173/01						
	(a) Full and Official name (Legal)						
	(b) Mailing Address						
	(c) Primary Operating Location (d) (Principal Operations/ Maintenance (e) Base)						

No	Events/Activities	Scheduled Date	Responsibility	CASA Delegate Initial	Date Received/ Accomplished	Date Returned for Changes	REMARKS
	(f) Name and address of applicants (g) agent for service						
	(h) Key Management Personnel Names (Senior Persons') CVs, etc.						
	2. Formal Application Attachments						
	(a) Schedule of events (refer to PANS-OPS-01B.Py.Mz						
	(b) Company Operations Manuals						
	i. Part 173 Exposition and Compliance Matrix						
	(c) Management and Senior Persons' qualifications/ resumes						
	(d) Documents of purchase/ contract(s)/lease(s)/letters of intent						
B.	Evaluation of Authority Resources Based on Schedule of Events						
C.	Formal Application Meeting						
	1. Schedule of events – Time:_____						
	2. Meeting minute taker						

No	Events/Activities	Scheduled Date	Responsibility	CASA Delegate Initial	Date Received/ Accomplished	Date Returned for Changes	REMARKS
	3. CASA PNG Fees and Charges						
	4. Discuss each Submission						
	5. Resolve Discrepancies/Open Items						
	6. Review Certification Process						
	7. Review Impact if Schedule of Events items are not met						
	8. Issue meeting minute						
	9. Resolve any action items from minute.						
	10. Issue Letter Accepting/Rejecting Application						
D.	Fit & Proper Person Test						
	1. Completed CA FPP1 Fit Proper Person Application Form for Senior Persons'						
	2. Select panel if outside the CTM & Notify panel to prepare interview questions.						
	3. Confirm FPPT dates with applicant.						
	4. Prepare FPPT Notification						

No	Events/Activities	Scheduled Date	Responsibility	CASA Delegate Initial	Date Received/ Accomplished	Date Returned for Changes	REMARKS
	5. Pre FPP interview brief (review questions).						
	6. Conduct Fit & Proper Person Test						
	(a) Chief Executive						
	(b) Chief Designer						
	(c) Quality Assurance and Safety						
	7. Post interview debrief with FPP panel						
	8. Prepare FPPT Acceptance/Rejection						
	9. If Rejected – FPPT rescheduled date						
PHASE 3 – DOCUMENT COMPLIANCE EVALUATION							
A.	Assessment Of Exposition (refer to PANS-OPS-01D.Py.Mz						
	1. Assessment Of Compliance Matrix Part 173						
	(a) Management Policy Manual						
	(b) Operations Manual						
	(c) Training Manual						

No	Events/Activities	Scheduled Date	Responsibility	CASA Delegate Initial	Date Received/ Accomplished	Date Returned for Changes	REMARKS
	2. Assessment Of Compliance Matrix Part 100						
	Quality Management Systems (QMS) Manual						
	Safety Management Systems (SMS) Manual						
B.	Send a letter on the feedback on Document Evaluation						
C.	Submission of Amendments						
D.	Assessment of Amendments						
E.	Exposition sign off "Acceptance" and notice of inspection						
PHASE 4 – DEMONSTRATION & INSPECTION PHASE							
A.	Confirm Facility Inspection dates with applicant.						
B.	Inspection Notice						
C.	Pre inspection Brief with CTM						
D.	Conduct Entry Compliance Facilities Inspections						
	1. Demonstration of competence Design of (AYXX) RNAV (GNSS)						
	2. Resolve Findings if applicable						
E.	Post inspection de-brief with CTM						

No	Events/Activities	Scheduled Date	Responsibility	CASA Delegate Initial	Date Received/ Accomplished	Date Returned for Changes	REMARKS
PHASE 5 – CERTIFICATION							
A.	Prepare letter, report, 6 Month IFPS Certificate, Ops Spec.						
B.	Report & Recommendation to Director						
C.	Issue of IFP Service Certificate						
D.	AIP Flight Supplement						
	Notification to CASA of promulgation of procedure under CAR Part 95						
E.	Post Certification						
	1. Develop Surveillance Programme						
	(a) Domestic						
	(b) International						

SCHEDULE OF EVENTS AGREED

CASA PNG Team Leader: _____ Signature: _____ Date: _____

Applicant Team Leader: _____ Signature: _____ Date: _____