

Advisory Circular

FLIGHT DISPATCHER TRAINING AND APPOINTMENT

GENERAL	1
PURPOSE	1
APPLICABILITY	1
RELATED REGULATIONS	1
RELATED ADVISORY CIRCULARS	1
CANCELLATION	1
EFFECTIVE DATE	1
OTHER REFERENCES	1
1 GENERAL	2
2 QUALIFICATION OF INSTRUCTOR	2
3 TRAINING AND APPOINTMENT OF FLIGHT DISPATCHERS	2
4 AUTHORISATION BY THE AOC HOLDER	4
5 MAINTAINING CURRENCY	4
6 TRAINING SYLLABUS	4

GENERAL

Advisory Circulars (ACs) are issued by the Director-General of Civil Aviation (DGCA) from time to time to provide practical guidance or certainty in respect of the statutory requirements for aviation safety. ACs contain information about standards, practices and procedures acceptable to CAAS. An AC may be used, in accordance with section 3C of the Air Navigation Act (Cap. 6) (ANA), to demonstrate compliance with a statutory requirement. The revision number of the AC is indicated in parenthesis in the suffix of the AC number.

PURPOSE

This AC provides guidance to demonstrate compliance with, and information related to, requirements regarding the training and appointment of flight dispatchers.

APPLICABILITY

This AC is applicable to a Singapore AOC holder operating in accordance with ANR-121.

RELATED REGULATIONS

This Advisory Circular relates specifically to Regulations 143 and 146 of ANR-121.

RELATED ADVISORY CIRCULARS

- AC 121-9-1 Guidance on Crew Training for ANR-121 Operations

CANCELLATION

This is the first AC on the subject.

EFFECTIVE DATE

This AC is effective from 1 October 2018.

OTHER REFERENCES

Nil.

1 GENERAL

- 1.1 The requirements in Division 9 of ANR-121 are also applicable to ground personnel directly involved with flight operations, in particular those employed in operations and traffic departments. A flight dispatcher (or a flight operations officer) is normally employed to provide supervision of flight and to act as a close link between aircraft in flight and the ground services, and also between the air crew and the AOC holder's ground personnel. Therefore, the AOC holder should establish an appropriate training programme, and incorporated into the Training Manual. An AOC holder should ensure that a flight dispatcher demonstrates knowledge and maintains familiarisation with all features of the operation which are pertinent to such duties, including the knowledge and skills related to human performance. Further training will be necessary from time to time (e.g. when new types of aircraft are acquired) and the arrangements in this connection will be taken into account in the consideration of applications for the variation of certificates.
- 1.2 Singapore does not issue flight dispatcher licences. The AOC holder may follow the guidance in this AC for the training, appointment and authorisation of flight dispatchers.

2 QUALIFICATION OF INSTRUCTOR

- 2.1 A flight dispatcher training should be carried out by a qualified instructor who:
- (a) Has served at least 5 preceding years as a full time qualified flight dispatcher with an airline, or at least the preceding one year as a flight dispatcher instructor in a training establishment that is acceptable to the DGCA, and
 - (b) Completed successfully a flight dispatcher instructor course that is acceptable to the DGCA.

3 TRAINING AND APPOINTMENT OF FLIGHT DISPATCHERS

- 3.1 An AOC holder should only appoint a person as a flight dispatcher if the person satisfies the following basic conditions in terms of age, knowledge, experience and skill.
- 3.1.1 AGE
- The person should not be less than 21 years of age.
- 3.1.2 KNOWLEDGE
- The person should demonstrate an appropriate level of knowledge in at least the subjects specified in paragraph 6 of this AC. The demonstration of knowledge should be by means of satisfactory fulfilment of an examination as part of an approved training or course.
- 3.1.3 EXPERIENCE
- The person should fulfil at least one of the following criteria,
- (a) a total of 2 years of service in any one or in any combination of the capacities specified below, provided that in any combination of experience, completed at least one year of service in one of the capacities:

- (i) a flight crew member in air transportation; or
- (ii) a meteorologist in an organisation, dispatching aircraft for air transportation; or
- (iii) an air traffic controller; or
- (iv) a technical supervisor for flight operations officers or air transportation flight operations systems;

OR

- (b) at least one year as an assistant in the dispatching of air transport aircraft;

OR

- (c) satisfactorily completed a course of approved training.

And have served under the supervision of a qualified flight dispatcher for at least 90 working days within the six months immediately preceding the appointment.

3.1.4 Skills: The person should demonstrate the ability to:

- (a) make an accurate and operationally acceptable weather analysis from a series of daily weather maps and weather reports; provide an operationally valid briefing on weather conditions prevailing in the general neighbourhood of a specific air route; forecast weather trends pertinent to air transportation with particular reference to destination and alternates; and
- (b) determine the optimum flight plan for a given segment, and create accurate manual and/or computer generated flight plans; and provide operating supervision and all other assistance to a flight in actual or simulated adverse weather conditions, as appropriate to the duties of a flight dispatcher.

3.2 In addition to the basic requirements given in paragraph 3.1, the AOC holder should not assign a flight dispatcher to duty unless that person has:

- (a) satisfactorily completed a training course specific to the AOC holder that addresses all the components of the AOC holder's approved method of control and supervision of flight operations;
- (b) made, within the preceding 12 months, at least one qualification flight in the flight crew compartment of an aircraft over any area for which that person is authorised to exercise flight supervision;

Note: For the purpose of the qualification flight, the flight dispatcher should be able to monitor the flight crew intercommunication system and radio communications, and be able to observe the actions of the flight crew from the crew reporting time until the completion of the crew's post-flight duties.

- (c) demonstrated to the AOC holder a knowledge of:
 - (i) the contents of the operations manual;
 - (ii) the radio equipment in the aircraft used; and
 - (iii) the navigation equipment in the aircraft used;
- (d) demonstrated to the AOC holder a knowledge of the following details concerning operations for which the officer is responsible and areas in which that individual is authorised to exercise flight supervision:

- (i) the seasonal meteorological conditions and the sources of meteorological information;
 - (ii) the effects of meteorological conditions on radio reception in the aircraft used;
 - (iii) the peculiarities and limitations of each navigation system which is used by the operation; and
 - (iv) the aircraft loading instructions;
- (e) demonstrated to the AOC holder knowledge and skills related to human performance relevant to dispatch duties; and
- (f) demonstrated to the AOC holder the ability to perform the duties specified in the Operations Manual.

4 AUTHORISATION BY THE AOC HOLDER

- 4.1 The AOC holder should establish a system to ensure that each flight dispatcher when on duty continues to meet all the requirements specified in its Operations Manual.
- 4.2 The AOC holder should ensure that appropriate action is taken to suspend, vary or revoke the authorisation of a flight dispatcher in the event that he or she fails to continue to meet the requirements specified in the Operations Manual.

5 MAINTAINING CURRENCY

- 5.1 To maintain currency, a flight dispatcher should dispatch at least one flight every 90 consecutive days. A flight dispatcher who fails to do so should be required to dispatch at least one flight under the supervision of another flight dispatcher prior to resuming duties.
- 5.2 A flight dispatcher who has not dispatched at least one flight in the preceding 12 months should be required to attend recurrent training, pass a written assessment paper and dispatch at least one flight under the supervision of another flight dispatcher prior to being assigned for duty.
- 5.3 Every flight dispatcher should undergo a recurrent training programme approved by the DGCA and pass a proficiency test conducted by the operator once every 24 months.

6 TRAINING SYLLABUS

- 6.1 An AOC holder intending to develop its course of training for flight dispatchers should submit the basic training syllabus for initial qualification training to the DGCA for approval. The syllabus should constitute part of the AOC holder's Operations Manual and Training Manual.
- 6.2 The training should comprise of two phases which would cover generic and common basic knowledge required of a competent dispatcher in the first phase followed by practical requirements in the second phase which would include operator's specific requirements. An examination at the end of the course shall be conducted to confirm the competency of the dispatcher prior to being assigned for duty.

Phase 1A – Common Basic Knowledge Module

- (a) Civil Air Law and Regulations
- Certification of operators
 - The Convention on International Civil Aviation (The Chicago Convention)
 - International air transport issues addressed by the Chicago Convention
 - Responsibility for aircraft airworthiness
 - Regulatory provisions of the flight manual
 - The aircraft minimum equipment list (MEL)
 - The Operations Manual and its use
 - Rules of the Air
- (b) Aviation Indoctrination
- Regulatory
 - Aviation terminology and terms of reference
 - Theory of flight and flight operations
 - Aircraft propulsion systems
 - Aircraft systems
- (c) Aircraft mass (weight) and performance
- Basic principles for flight safety
 - Basic mass (weight) and speed limitations
 - Take-off runway requirements
 - Climb performance requirements
 - Landing runway requirements
 - Buffet boundary speed limitations
- (d) Air traffic management
- Introduction to air traffic management
 - Controlled airspace
 - Flight rules
 - ATC clearance, ATC requirements for flight plans and aircraft reports
 - Flight information service (FIS)
 - Alerting service and search and rescue
 - Communications services (mobile, fixed)
 - Aeronautical information service (AIS)
 - Aerodrome and airport services
- (e) Meteorology
- Atmosphere, atmospheric temperature and humidity
 - Atmospheric pressure; pressure-wind relationships
 - Winds near the Earth's surface, wind in the free atmosphere, turbulence
 - Vertical motion in the atmosphere, formation of clouds and precipitation
 - Thunderstorms
 - Aircraft icing
 - Visibility and RVR, volcanic ash
 - Surface observations, upper-air observations and station model
 - Air masses and fronts, frontal depressions
 - Weather at fronts and other parts of the frontal depression and other types of pressure systems.
 - General climatology and weather in the tropics

- Aeronautical meteorological reports and analysis of surface and upper-air charts
 - Prognostic charts and aeronautical forecasts
 - Meteorological service for international air navigation
 - Field trip to local meteorological office
- (f) Mass (weight) and balance control and aircraft loading
- Introduction to mass and balance
 - Load planning
 - Calculation of payload and load sheet preparation
 - Aircraft balance and longitudinal stability
 - Moments and balance
 - The structural aspects of aircraft loading
 - Dangerous goods and other special cargo
 - Issuing loading instructions
- (g) Transport of dangerous goods by air
- Introduction
 - Dangerous goods, emergency and abnormal situations
 - Source documents
 - Responsibilities
 - Emergency procedures
- (h) Flight planning
- Introduction to flight planning
 - Turbo-jet aircraft cruise control methods
 - Flight planning charts and tables for turbine engine aircraft
 - Calculation of flight time and minimum fuel for turbine engine aircraft
 - Route selection
 - Flight planning situations
 - Reclearance
 - Phases of flight
 - Documents to be carried on flight
 - Flight planning exercises
 - Threats and hijacking
 - EDTO
 - Navigation
 - Position, distance and time
 - True, magnetic and compass direction, gyro heading reference and grid direction
 - Introduction to chart projection
 - the Mercator projection, including the great circles on Mercator charts
 - other cylindrical projections
 - Lambert conformal conic projections
 - the polar stereographic projection
 - ICAO chart requirements.
 - Charts used by a typical operator
 - Measurement of airspeed, track and ground speed
 - Use of slide-rules, computers and scientific calculators
 - Measurement of aircraft altitude
 - Point of no return, critical point, general determination of aircraft position

- Introduction to radio navigation, ground-based radar and direction-finding stations, relative bearings, VOR/DME-type radio navigation and instrument landing systems
 - Navigation procedures
 - Overview of ICAO CNS/ATM systems
- (i) Flight monitoring
- Position of aircraft
 - Effects of ATC reroutes
 - Flight equipment failures
 - En-route weather changes
 - Emergency situations
 - Flight monitoring and tracking resources
 - Position reports
 - Ground resource availability
- (j) Communications – Radio
- International aeronautical telecommunications service
 - Elementary radio theory
 - Aeronautical fixed service
 - Aeronautical mobile service
 - Radio navigation service
 - Automated aeronautical service
- (k) Human Factors
- The meaning of Human Factors
 - Dispatch resource management (DRM)
 - Awareness
 - Practice and feedback
 - Reinforcement
- (l) Security (emergencies and abnormal situations)
- Familiarity
 - Security measures taken by airlines
 - Procedures for handling threats, bomb scares, etc.
 - Emergency due to dangerous goods
 - Hijacking
 - Emergency procedures
 - Personal security for the flight dispatcher
- (m) Crisis Management
- Emergency Response Plan

Phase 1B – Special Operations (Specific to the operator)

- Performance-based navigation (PBN)
 - RNAV / RNP / RNP AR
- PBCS
- EDTO
- Polar Operations
- Low Visibility Operations
- RVSM
- North Atlantic High Level Airspace (NAT HLA)

Phase 2 – Practical Training

- (a) Applied practical training
 - Applied practical flight operations
 - Simulator LOFT observation and synthetic flight training
 - Flight dispatch practices (on-the-job training)
 - Route familiarisation